



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 20, 2026 – 02:57 AM UTC

PDB ID : 6N9E / pdb_00006n9e
Title : Crystal structure of the *Thermus thermophilus* 70S ribosome in complex with a short substrate mimic CC-Pmn and bound to mRNA and P-site tRNA at 3.7Å resolution
Authors : Melnikov, S.V.; Khabibullina, N.F.; Mairhofer, E.; Vargas-Rodriguez, O.; Reynolds, N.M.; Micura, R.; Soll, D.; Polikanov, Y.S.
Deposited on : 2018-12-03
Resolution : 3.70 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

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

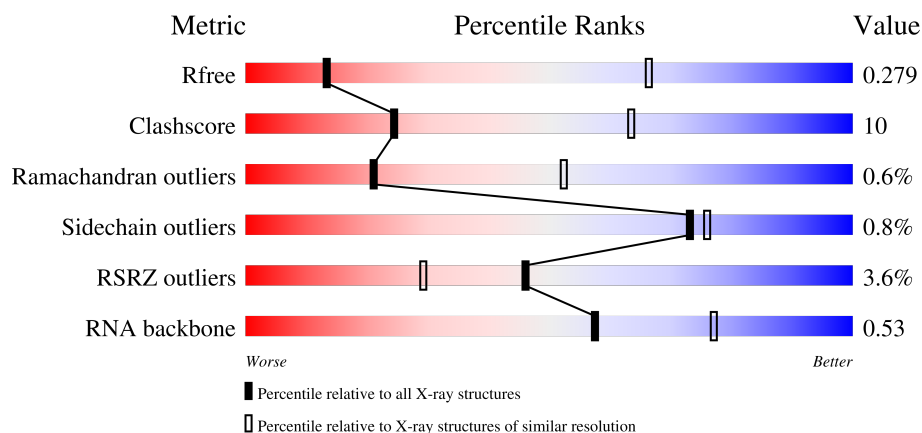
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.70 Å.

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



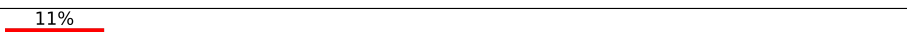
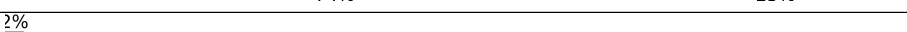
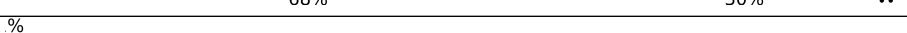
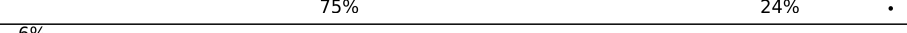
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1131 (3.80-3.60)
Clashscore	190562	1171 (3.80-3.60)
Ramachandran outliers	187476	1129 (3.80-3.60)
Sidechain outliers	187428	1126 (3.80-3.60)
RSRZ outliers	180081	1130 (3.80-3.60)
RNA backbone	3983	1007 (4.30-3.08)

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 $\leq 5\%$. 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	1A	2915	3% 54% 38% 7%
1	2A	2915	3% 54% 36% 6%
2	1B	121	58% 40%

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Mol	Chain	Length	Quality of chain
2	2B	121	
3	1D	276	
3	2D	276	
4	1E	206	
4	2E	206	
5	1F	210	
5	2F	210	
6	1G	182	
6	2G	182	
7	1H	180	
7	2H	180	
8	1I	148	
8	2I	148	
9	1N	140	
9	2N	140	
10	1O	122	
10	2O	122	
11	1P	150	
11	2P	150	
12	1Q	141	
12	2Q	141	
13	1R	118	
13	2R	118	
14	1S	112	
14	2S	112	

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Mol	Chain	Length	Quality of chain
15	1T	146	
15	2T	146	
16	1U	118	
16	2U	118	
17	1V	101	
17	2V	101	
18	1W	113	
18	2W	113	
19	1X	96	
19	2X	96	
20	1Y	110	
20	2Y	110	
21	1Z	206	
21	2Z	206	
22	10	85	
22	20	85	
23	11	98	
23	21	98	
24	12	72	
24	22	72	
25	13	60	
25	23	60	
26	14	71	
26	24	71	
27	15	60	

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Mol	Chain	Length	Quality of chain
27	25	60	8% 75% 23% .
28	16	54	9% 76% 22% .
28	26	54	2% 78% 20% .
29	17	49	12% 82% 16% .
29	27	49	6% 71% 27% .
30	18	65	17% 74% 25% .
30	28	65	5% 75% 23% .
31	19	37	3% 81% 19% .
31	29	37	3% 76% 24% .
32	1a	1521	% 46% 44% 8% .
32	2a	1521	% 50% 42% 7% .
33	1b	256	59% 30% 10% .
33	2b	256	% 61% 27% 10% .
34	1c	239	62% 24% 14% .
34	2c	239	65% 21% 14% .
35	1d	209	9% 70% 29% .
35	2d	209	2% 73% 26% .
36	1e	162	69% 22% 9% .
36	2e	162	4% 60% 31% 9% .
37	1f	101	6% 76% 23% .
37	2f	101	71% 28% .
38	1g	156	3% 77% 21% ..
38	2g	156	3% 74% 25% ..
39	1h	138	72% 27% .
39	2h	138	3% 69% 29% ..

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Mol	Chain	Length	Quality of chain
40	1i	128	
40	2i	128	
41	1j	105	
41	2j	105	
42	1k	129	
42	2k	129	
43	1l	132	
43	2l	132	
44	1m	126	
44	2m	126	
45	1n	61	
45	2n	61	
46	1o	89	
46	2o	89	
47	1p	88	
47	2p	88	
48	1q	105	
48	2q	105	
49	1r	88	
49	2r	88	
50	1s	93	
50	2s	93	
51	1t	106	
51	2t	106	
52	1u	27	

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Mol	Chain	Length	Quality of chain
52	2u	27	
53	1v	24	
53	2v	24	
54	1w	3	
54	2w	3	
55	1x	77	
55	2x	77	

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	1A	3017	-	-	-	X
56	MG	1A	3078	-	-	-	X
56	MG	1A	3137	-	-	-	X
56	MG	1A	3224	-	-	-	X
56	MG	1A	3247	-	-	-	X
56	MG	1A	3304	-	-	-	X
56	MG	1A	3340	-	-	-	X
56	MG	1A	3414	-	-	-	X
56	MG	1A	3415	-	-	-	X
56	MG	1A	3428	-	-	-	X
56	MG	1a	1651	-	-	-	X
56	MG	2A	3141	-	-	-	X
56	MG	2A	3205	-	-	-	X
56	MG	2A	3259	-	-	-	X
56	MG	2A	3276	-	-	-	X
56	MG	2A	3373	-	-	-	X
56	MG	2A	3374	-	-	-	X
58	SF4	1d	302	-	-	X	-
58	SF4	2d	302	-	-	X	-

2 Entry composition

There are 59 unique types of molecules in this entry. The entry contains 287828 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 23S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	1A	2871	Total	C	N	O	P	0	0	0
			61852	27531	11572	19878	2871			
1	2A	2800	Total	C	N	O	P	0	0	0
			60322	26848	11284	19390	2800			

- Molecule 2 is a RNA chain called 5S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	1B	120	Total	C	N	O	P	0	0	0
			2577	1146	476	835	120			
2	2B	120	Total	C	N	O	P	0	0	0
			2575	1146	476	833	120			

- Molecule 3 is a protein called 50S Ribosomal Protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	1D	275	Total	C	N	O	S	0	0	0
			2136	1349	423	361	3			
3	2D	275	Total	C	N	O	S	0	0	0
			2136	1349	423	361	3			

- Molecule 4 is a protein called 50S Ribosomal Protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	1E	204	Total	C	N	O	S	0	0	0
			1559	985	298	270	6			
4	2E	204	Total	C	N	O	S	0	0	0
			1559	985	298	270	6			

- Molecule 5 is a protein called 50S Ribosomal Protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	1F	203	Total	C	N	O	S	0	0	1
			1584	1009	298	275	2			
5	2F	203	Total	C	N	O	S	0	0	1
			1580	1007	297	274	2			

- Molecule 6 is a protein called 50S Ribosomal Protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	1G	181	Total	C	N	O	S	0	0	0
			1423	913	253	253	4			
6	2G	181	Total	C	N	O	S	0	0	0
			1428	913	258	253	4			

- Molecule 7 is a protein called 50S Ribosomal Protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	1H	174	Total	C	N	O	S	0	0	0
			1330	845	248	236	1			
7	2H	174	Total	C	N	O	S	0	0	0
			1330	845	248	236	1			

- Molecule 8 is a protein called 50S Ribosomal Protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	1I	146	Total	C	N	O	S	0	0	0
			1097	701	191	204	1			
8	2I	146	Total	C	N	O	S	0	0	0
			1064	681	186	196	1			

- Molecule 9 is a protein called 50S Ribosomal Protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	1N	140	Total	C	N	O	S	0	0	0
			1117	719	207	187	4			
9	2N	140	Total	C	N	O	S	0	0	0
			1117	719	207	187	4			

- Molecule 10 is a protein called 50S Ribosomal Protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	1O	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	2O	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			

- Molecule 11 is a protein called 50S Ribosomal Protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	1P	149	Total	C	N	O	S	0	0	0
			1135	706	230	196	3			
11	2P	149	Total	C	N	O	S	0	0	0
			1135	706	230	196	3			

- Molecule 12 is a protein called 50S Ribosomal Protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	1Q	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			
12	2Q	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			

- Molecule 13 is a protein called 50S Ribosomal Protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	1R	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			
13	2R	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			

- Molecule 14 is a protein called 50S Ribosomal Protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
14	1S	110	Total	C	N	O	0	0	0
			873	550	174	149			
14	2S	110	Total	C	N	O	0	0	0
			870	549	173	148			

- Molecule 15 is a protein called 50S Ribosomal Protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	1T	131	Total	C	N	O	S	0	0	0
			1091	680	225	185	1			
15	2T	131	Total	C	N	O	S	0	0	0
			1083	675	224	183	1			

- Molecule 16 is a protein called 50S Ribosomal Protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	1U	116	Total	C	N	O	S	0	0	0
			959	608	201	149	1			
16	2U	116	Total	C	N	O	S	0	0	0
			959	608	201	149	1			

- Molecule 17 is a protein called 50S Ribosomal Protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	1V	101	Total	C	N	O	S	0	0	0
			771	495	140	135	1			
17	2V	101	Total	C	N	O	S	0	0	0
			771	495	140	135	1			

- Molecule 18 is a protein called 50S Ribosomal Protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	1W	112	Total	C	N	O	S	0	0	0
			886	557	174	153	2			
18	2W	112	Total	C	N	O	S	0	0	0
			886	557	174	153	2			

- Molecule 19 is a protein called 50S Ribosomal Protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	1X	95	Total	C	N	O	S	0	0	0
			750	488	135	126	1			
19	2X	95	Total	C	N	O	S	0	0	0
			750	488	135	126	1			

- Molecule 20 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	1Y	107	Total	C	N	O	S	0	0	0
			806	517	152	131	6			
20	2Y	107	Total	C	N	O	S	0	0	0
			806	517	152	131	6			

- Molecule 21 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	1Z	154	Total	C	N	O	S	0	0	0
			1240	795	222	220	3			
21	2Z	160	Total	C	N	O	S	0	0	0
			1271	814	228	227	2			

- Molecule 22 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	10	83	Total	C	N	O	S	0	0	0
			653	404	139	109	1			
22	20	83	Total	C	N	O	S	0	0	0
			653	404	139	109	1			

- Molecule 23 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	11	97	Total	C	N	O	S	0	0	0
			755	475	148	131	1			
23	21	97	Total	C	N	O	S	0	0	0
			755	475	148	131	1			

- Molecule 24 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	12	70	Total	C	N	O	S	0	0	0
			588	365	118	103	2			
24	22	70	Total	C	N	O	S	0	0	0
			588	365	118	103	2			

- Molecule 25 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
25	13	59	Total	C	N	O	0	0	0
			469	298	90	81			
25	23	59	Total	C	N	O	0	0	0
			464	296	90	78			

- Molecule 26 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	14	69	Total	C	N	O	S	0	0	0
			552	349	99	99	5			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	24	69	Total	C	N	O	S	0	0	0
			532	339	97	91	5			

- Molecule 27 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	15	59	Total	C	N	O	S	0	0	0
			455	285	89	76	5			
27	25	59	Total	C	N	O	S	0	0	0
			455	285	89	76	5			

- Molecule 28 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	16	53	Total	C	N	O	S	0	0	0
			453	281	91	77	4			
28	26	53	Total	C	N	O	S	0	0	0
			449	279	91	75	4			

- Molecule 29 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	17	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			
29	27	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 30 is a protein called 50S Ribosomal Protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	18	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			
30	28	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			

- Molecule 31 is a protein called 50S Ribosomal Protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	19	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
31	29	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 32 is a RNA chain called 16S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	1a	1500	Total	C	N	O	P	0	0	0
			32246	14358	5975	10413	1500			
32	2a	1503	Total	C	N	O	P	0	0	0
			32327	14396	5990	10438	1503			

- Molecule 33 is a protein called 30S Ribosomal Protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	1b	231	Total	C	N	O	S	0	0	0
			1846	1179	331	331	5			
33	2b	231	Total	C	N	O	S	0	0	0
			1825	1167	326	327	5			

- Molecule 34 is a protein called 30S Ribosomal Protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	1c	206	Total	C	N	O	S	0	0	0
			1548	973	301	273	1			
34	2c	206	Total	C	N	O	S	0	0	0
			1542	968	300	273	1			

- Molecule 35 is a protein called 30S Ribosomal Protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	1d	208	Total	C	N	O	S	0	0	0
			1655	1038	326	284	7			
35	2d	208	Total	C	N	O	S	0	0	0
			1674	1050	333	284	7			

- Molecule 36 is a protein called 30S Ribosomal Protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	1e	148	Total	C	N	O	S	0	0	0
			1129	714	213	198	4			
36	2e	148	Total	C	N	O	S	0	0	0
			1133	716	214	199	4			

- Molecule 37 is a protein called 30S Ribosomal Protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	1f	100	Total	C	N	O	S	0	0	0
			810	514	144	149	3			
37	2f	100	Total	C	N	O	S	0	0	0
			816	516	146	151	3			

- Molecule 38 is a protein called 30S Ribosomal Protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	1g	155	Total	C	N	O	S	0	0	0
			1231	766	243	216	6			
38	2g	155	Total	C	N	O	S	0	0	0
			1235	769	244	216	6			

- Molecule 39 is a protein called 30S Ribosomal Protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	1h	137	Total	C	N	O	S	0	0	0
			1088	689	206	191	2			
39	2h	137	Total	C	N	O	S	0	0	0
			1088	689	206	191	2			

- Molecule 40 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
40	1i	127	Total	C	N	O	0	0	0
			983	623	193	167			
40	2i	127	Total	C	N	O	0	0	0
			978	619	190	169			

- Molecule 41 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
41	1j	97	Total	C	N	O	0	0	0
			709	440	138	131			
41	2j	96	Total	C	N	O	0	0	0
			714	445	138	131			

- Molecule 42 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	1k	114	Total	C	N	O	S	0	0	0
			829	516	155	155	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	2k	114	Total	C	N	O	S	0	0	0
			833	519	156	155	3			

- Molecule 43 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	1l	122	Total	C	N	O	S	0	0	0
			932	586	185	159	2			
43	2l	122	Total	C	N	O	S	0	0	0
			932	586	185	159	2			

- Molecule 44 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	1m	123	Total	C	N	O	S	0	0	0
			958	592	198	166	2			
44	2m	122	Total	C	N	O	S	0	0	0
			950	586	197	165	2			

- Molecule 45 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	1n	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			
45	2n	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

- Molecule 46 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	1o	88	Total	C	N	O	S	0	0	0
			728	456	144	126	2			
46	2o	88	Total	C	N	O	S	0	0	0
			728	456	144	126	2			

- Molecule 47 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	1p	82	Total	C	N	O	S	0	0	0
			681	433	134	113	1			
47	2p	82	Total	C	N	O	S	0	0	0
			677	430	133	113	1			

- Molecule 48 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	1q	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			
48	2q	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			

- Molecule 49 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	1r	68	Total	C	N	O		0	0	0
			555	355	108	92				
49	2r	68	Total	C	N	O		0	0	0
			555	355	108	92				

- Molecule 50 is a protein called 30S Ribosomal Protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	1s	83	Total	C	N	O	S	0	0	0
			652	417	120	113	2			
50	2s	83	Total	C	N	O	S	0	0	0
			646	412	119	113	2			

- Molecule 51 is a protein called 30S Ribosomal Protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	1t	96	Total	C	N	O	S	0	0	0
			728	446	156	124	2			
51	2t	96	Total	C	N	O	S	0	0	0
			727	446	155	124	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
52	1u	23	Total	C	N	O	0	0	0
			199	122	48	29			
52	2u	23	Total	C	N	O	0	0	0
			199	122	48	29			

- Molecule 53 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	1v	6	Total	C	N	O	P	0	0	0
			113	49	22	36	6			
53	2v	6	Total	C	N	O	P	0	0	0
			113	49	22	36	6			

- Molecule 54 is a RNA chain called CC-Pmn.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	1w	3	Total	C	N	O	P	0	0	0
			74	40	13	19	2			
54	2w	3	Total	C	N	O	P	0	0	0
			74	40	13	19	2			

- Molecule 55 is a RNA chain called P-site tRNA, Deacylated Initiator Methionyl-tRNA.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
55	1x	76	Total	C	N	O	P	S	0	0	0
			1625	725	294	529	76	1			
55	2x	76	Total	C	N	O	P	S	0	0	0
			1625	725	294	529	76	1			

- Molecule 56 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	1A	498	Total	Mg	0	0
			498	498		
56	1B	12	Total	Mg	0	0
			12	12		
56	1D	1	Total	Mg	0	0
			1	1		
56	1E	6	Total	Mg	0	0
			6	6		
56	1F	1	Total	Mg	0	0
			1	1		
56	1Q	1	Total	Mg	0	0
			1	1		
56	1S	1	Total	Mg	0	0
			1	1		
56	1U	1	Total	Mg	0	0
			1	1		
56	1V	3	Total	Mg	0	0
			3	3		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	1W	1	Total 1	Mg 1	0	0
56	10	3	Total 3	Mg 3	0	0
56	13	1	Total 1	Mg 1	0	0
56	15	1	Total 1	Mg 1	0	0
56	16	1	Total 1	Mg 1	0	0
56	17	2	Total 2	Mg 2	0	0
56	18	1	Total 1	Mg 1	0	0
56	1a	93	Total 93	Mg 93	0	0
56	1d	1	Total 1	Mg 1	0	0
56	1l	1	Total 1	Mg 1	0	0
56	1r	1	Total 1	Mg 1	0	0
56	1x	2	Total 2	Mg 2	0	0
56	2A	385	Total 385	Mg 385	0	0
56	2B	9	Total 9	Mg 9	0	0
56	2D	1	Total 1	Mg 1	0	0
56	2E	6	Total 6	Mg 6	0	0
56	2O	1	Total 1	Mg 1	0	0
56	2Q	2	Total 2	Mg 2	0	0
56	2R	2	Total 2	Mg 2	0	0
56	2T	2	Total 2	Mg 2	0	0
56	2Y	1	Total 1	Mg 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	20	2	Total 2	Mg 2	0	0
56	21	1	Total 1	Mg 1	0	0
56	23	1	Total 1	Mg 1	0	0
56	25	1	Total 1	Mg 1	0	0
56	27	1	Total 1	Mg 1	0	0
56	28	2	Total 2	Mg 2	0	0
56	2a	103	Total 103	Mg 103	0	0
56	2d	1	Total 1	Mg 1	0	0
56	2f	1	Total 1	Mg 1	0	0
56	2l	1	Total 1	Mg 1	0	0
56	2r	1	Total 1	Mg 1	0	0

- Molecule 57 is ZINC ION (CCD ID: ZN) (formula: Zn).

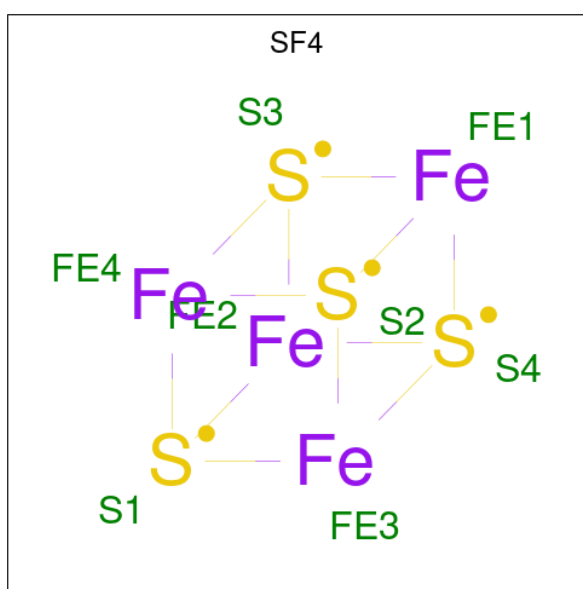
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	1Y	1	Total 1	Zn 1	0	0
57	14	1	Total 1	Zn 1	0	0
57	15	1	Total 1	Zn 1	0	0
57	16	1	Total 1	Zn 1	0	0
57	19	1	Total 1	Zn 1	0	0
57	1n	1	Total 1	Zn 1	0	0
57	2Y	1	Total 1	Zn 1	0	0
57	24	1	Total 1	Zn 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	25	1	Total	Zn	0	0
			1	1		
57	26	1	Total	Zn	0	0
			1	1		
57	29	1	Total	Zn	0	0
			1	1		
57	2n	1	Total	Zn	0	0
			1	1		

- Molecule 58 is IRON/SULFUR CLUSTER (CCD ID: SF4) (formula: Fe_4S_4).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
58	1d	1	Total	Fe	S	0	0
			8	4	4		
58	2d	1	Total	Fe	S	0	0
			8	4	4		

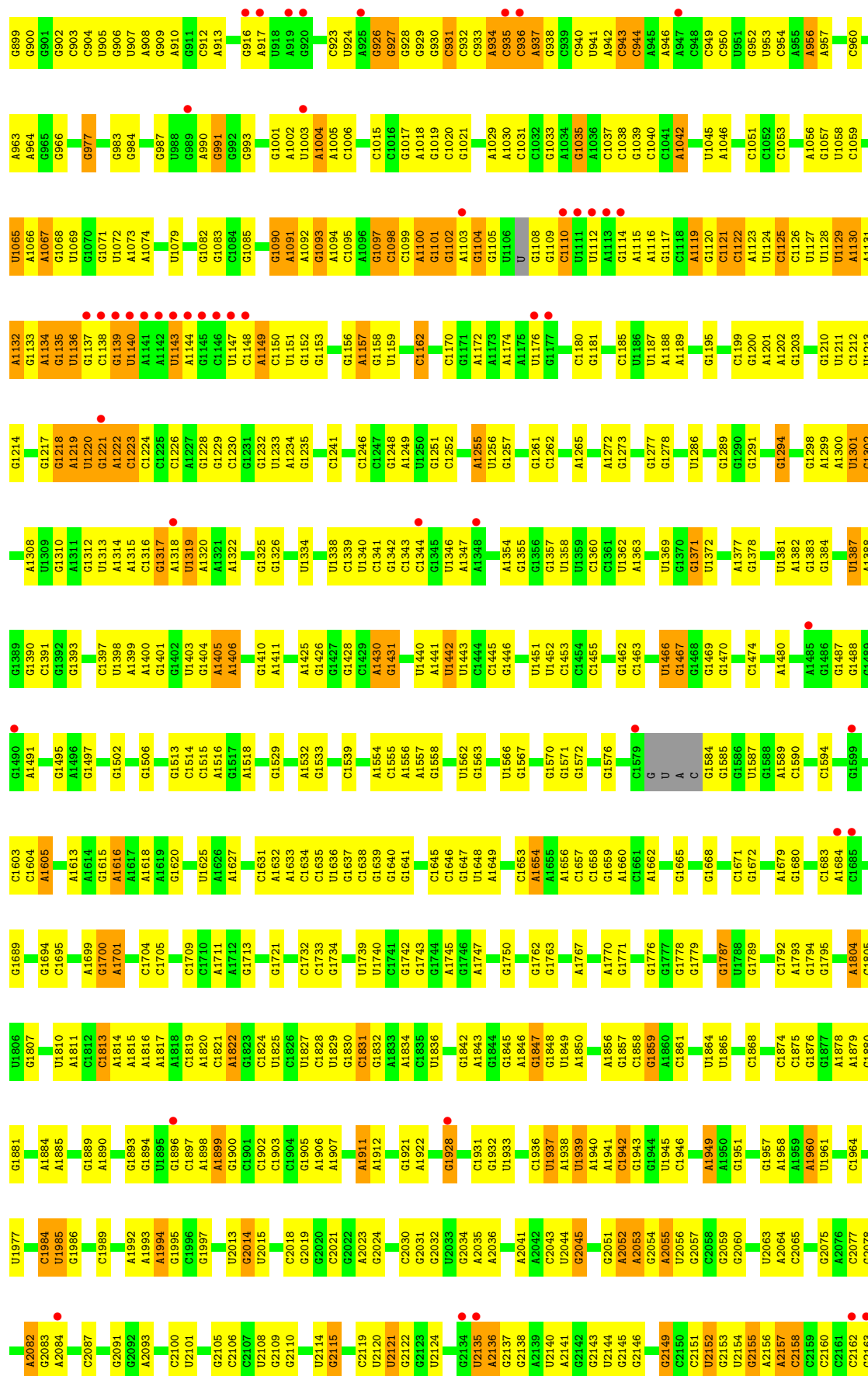
- Molecule 59 is water.

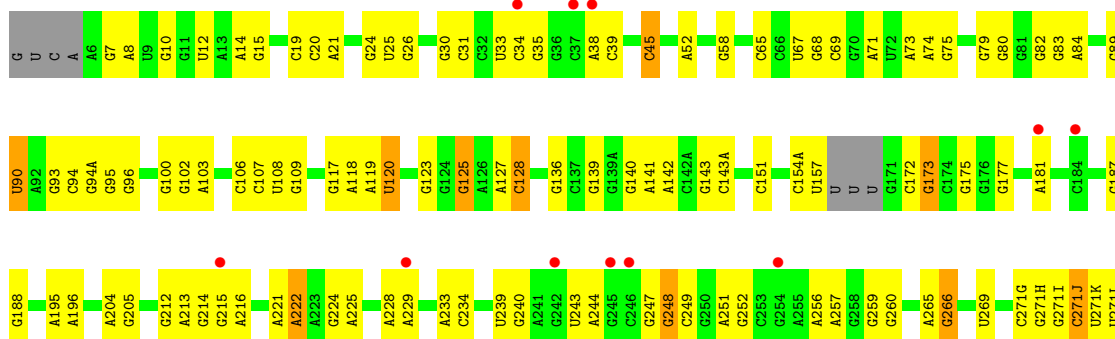
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	1A	53	Total	O	0	0
			53	53		
59	1D	3	Total	O	0	0
			3	3		
59	1a	15	Total	O	0	0
			15	15		

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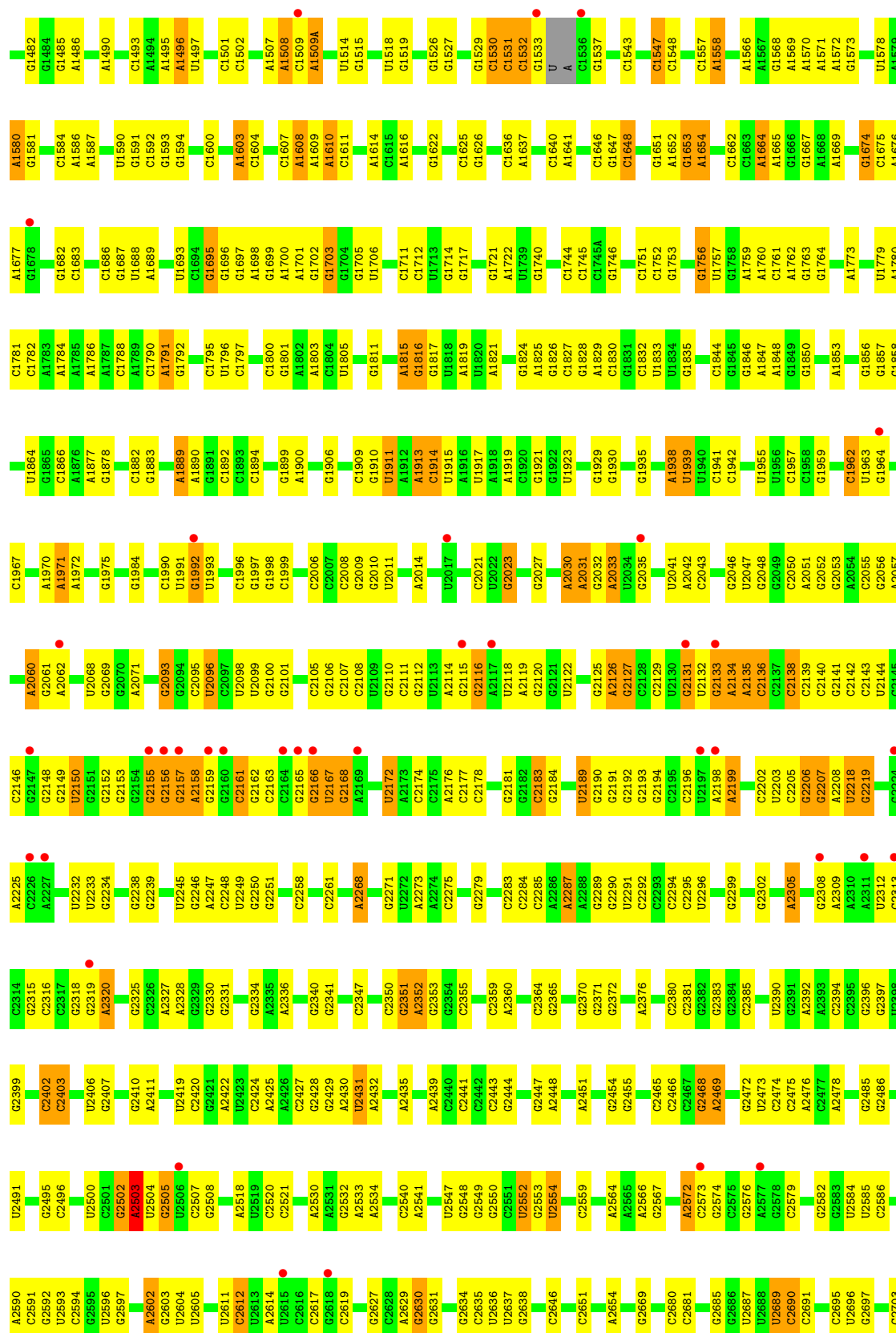
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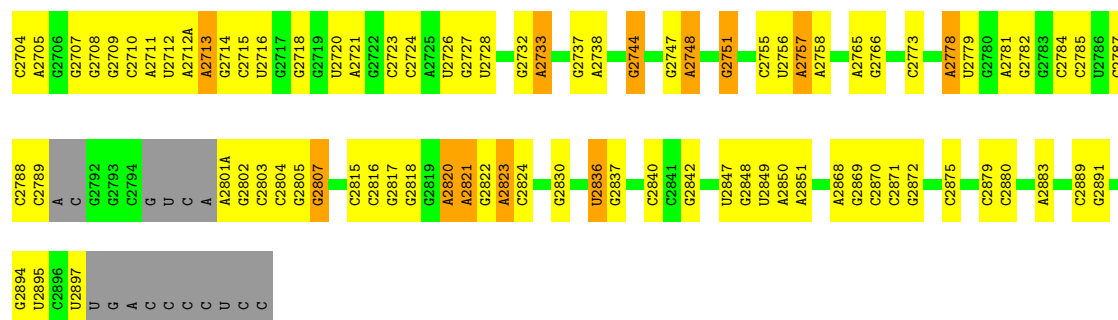
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	1x	2	Total 2	O 2	0	0
59	2A	32	Total 32	O 32	0	0
59	2B	1	Total 1	O 1	0	0
59	2a	19	Total 19	O 19	0	0





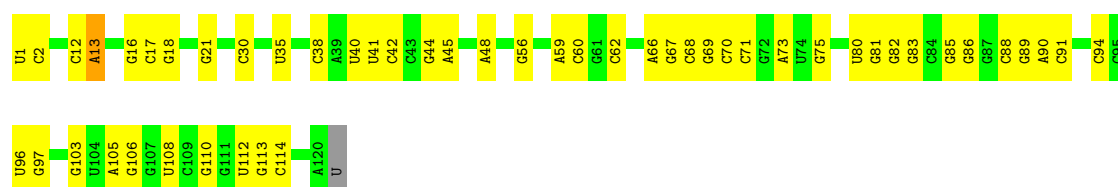






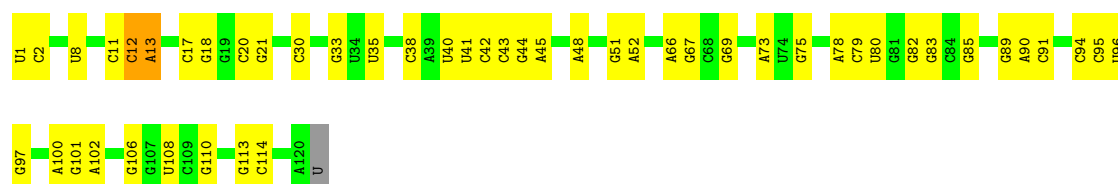
• Molecule 2: 5S Ribosomal RNA

Chain 1B: 58% 40% ..



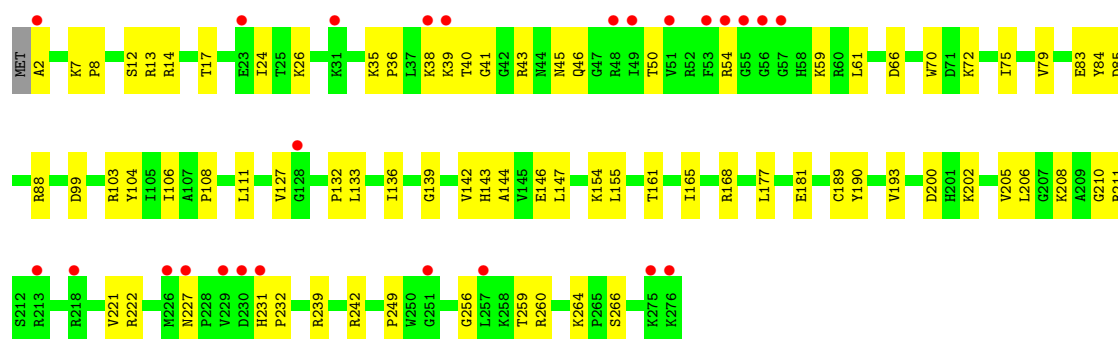
• Molecule 2: 5S Ribosomal RNA

Chain 2B: 59% 39% ..



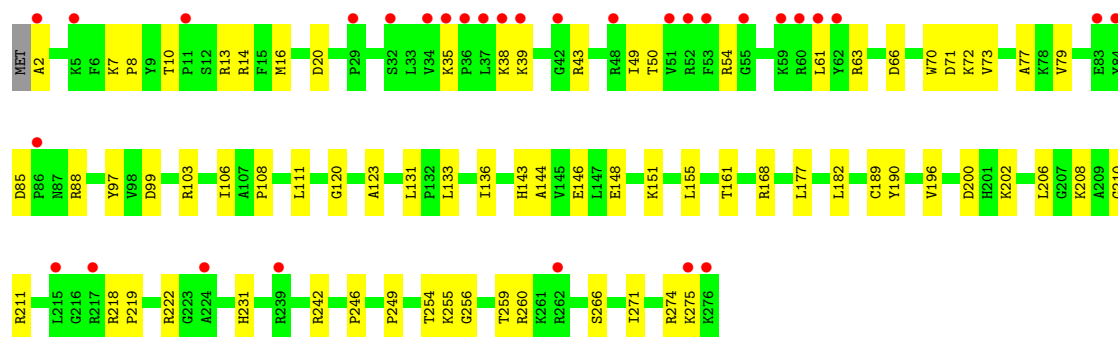
• Molecule 3: 50S Ribosomal Protein L2

Chain 1D: 9% 72% 28%

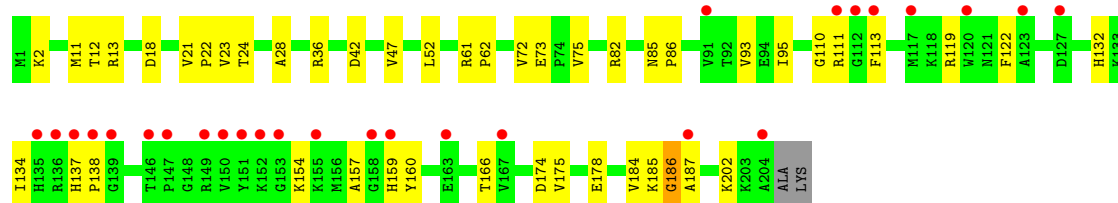
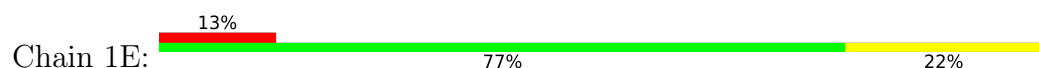


• Molecule 3: 50S Ribosomal Protein L2

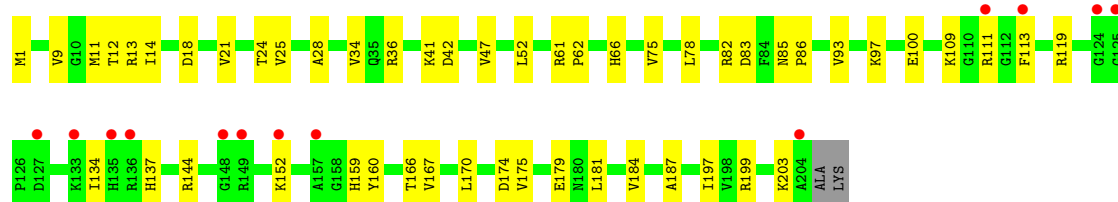
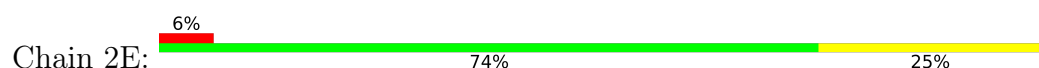
Chain 2D: 11% 74% 26%



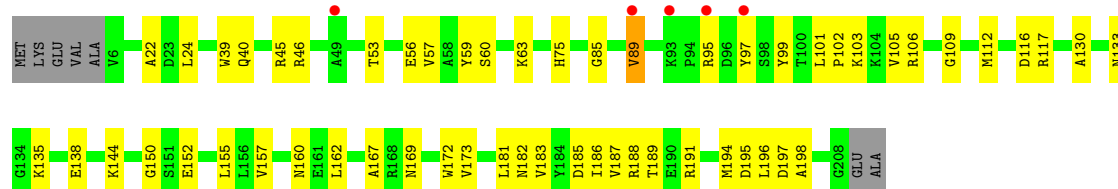
• Molecule 4: 50S Ribosomal Protein L3



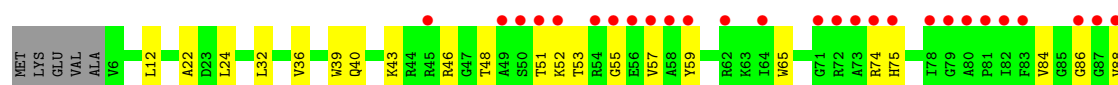
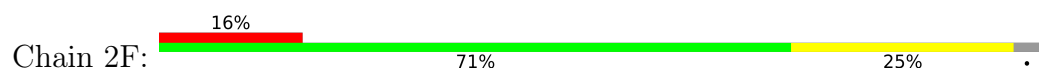
• Molecule 4: 50S Ribosomal Protein L3

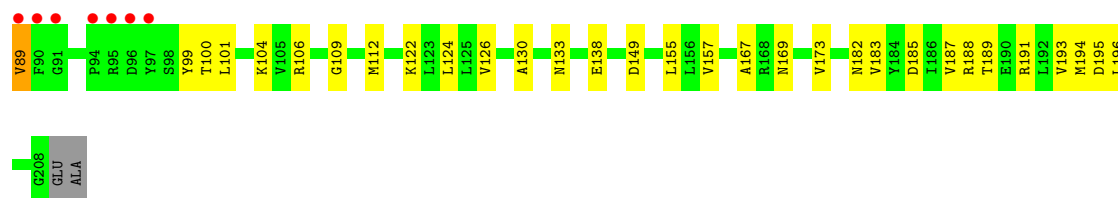


• Molecule 5: 50S Ribosomal Protein L4

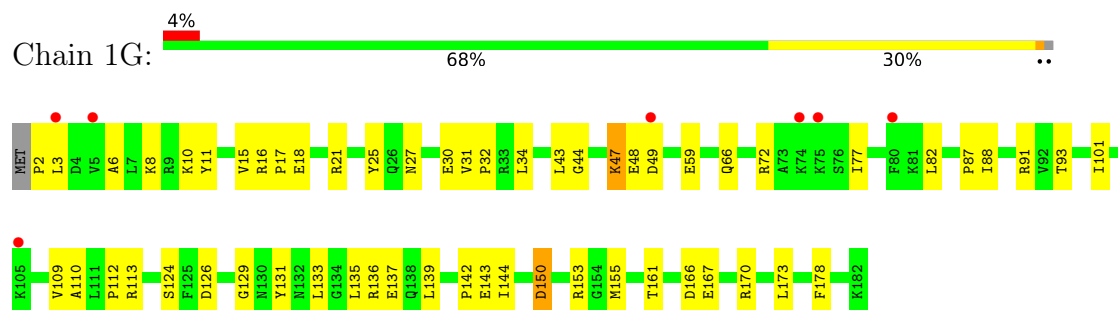


• Molecule 5: 50S Ribosomal Protein L4

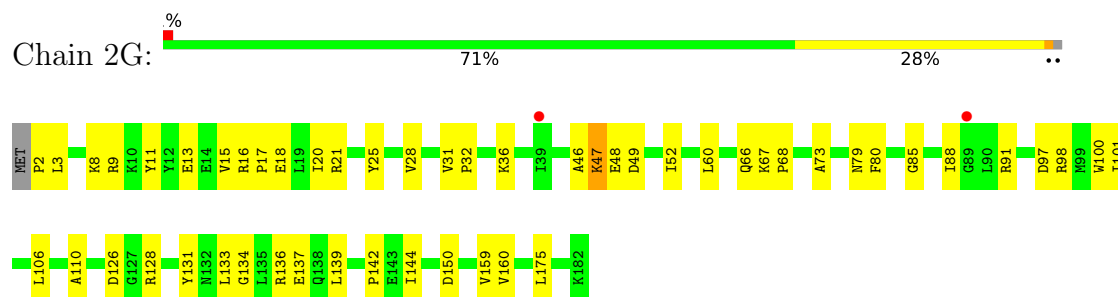




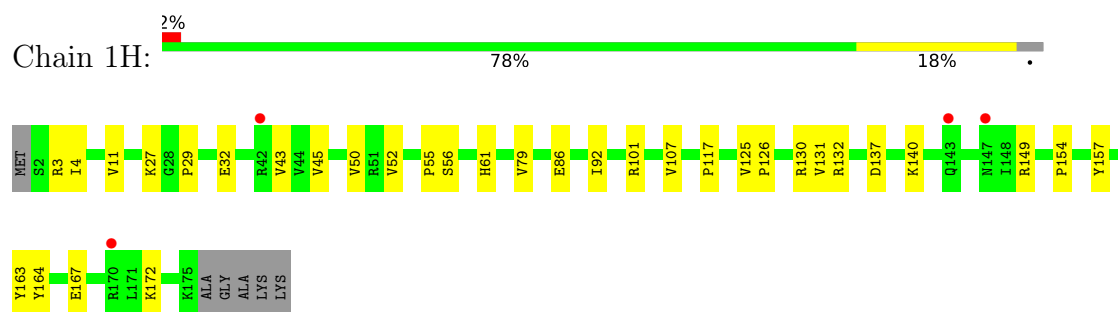
• Molecule 6: 50S Ribosomal Protein L5



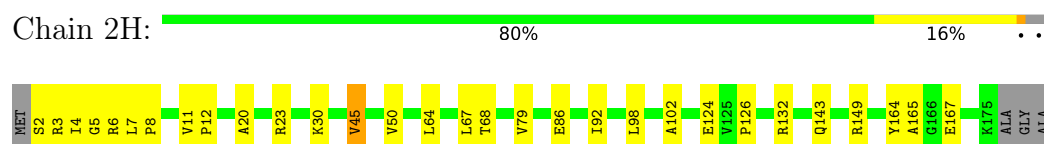
• Molecule 6: 50S Ribosomal Protein L5



• Molecule 7: 50S Ribosomal Protein L6

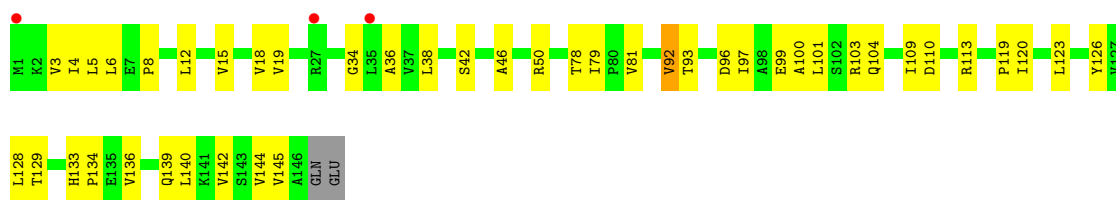


• Molecule 7: 50S Ribosomal Protein L6

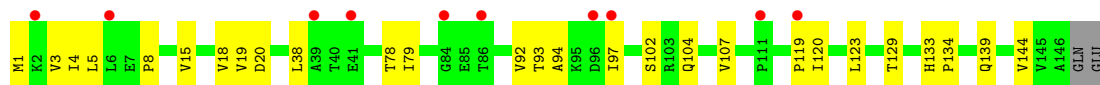
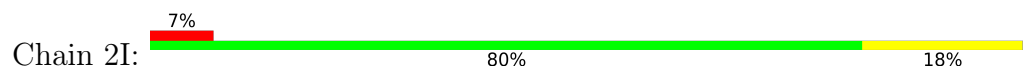


• Molecule 8: 50S Ribosomal Protein L9

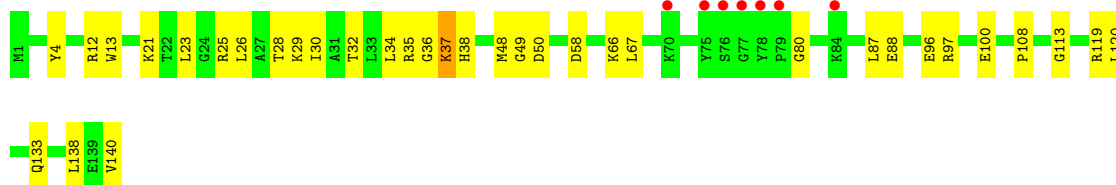
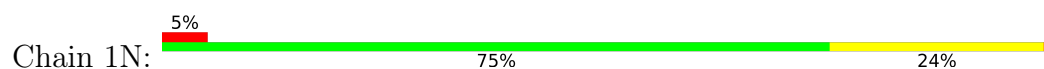




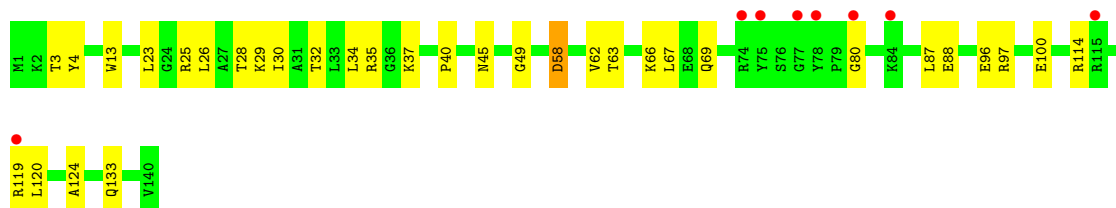
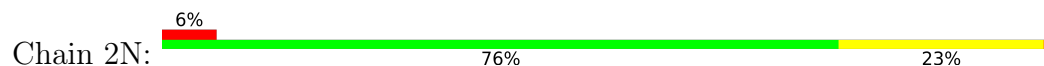
• Molecule 8: 50S Ribosomal Protein L9



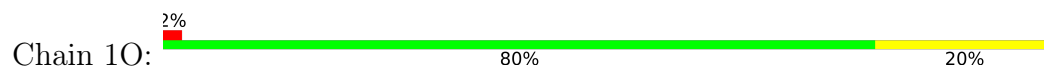
• Molecule 9: 50S Ribosomal Protein L13



• Molecule 9: 50S Ribosomal Protein L13



• Molecule 10: 50S Ribosomal Protein L14

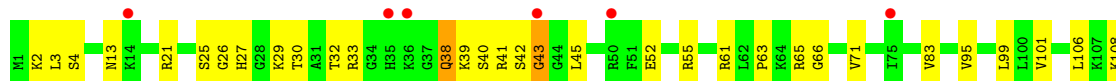


• Molecule 10: 50S Ribosomal Protein L14

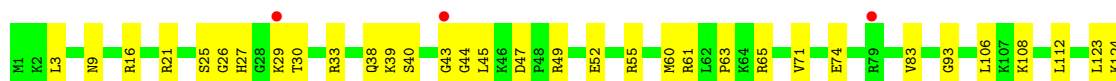
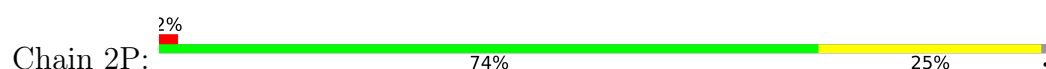




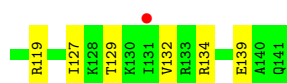
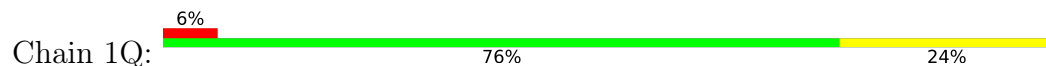
• Molecule 11: 50S Ribosomal Protein L15



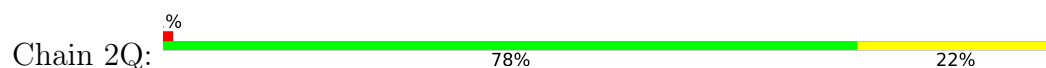
• Molecule 11: 50S Ribosomal Protein L15



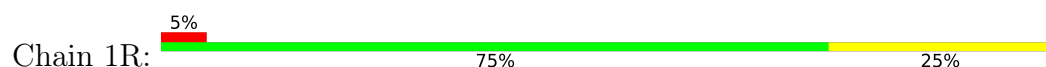
• Molecule 12: 50S Ribosomal Protein L16



• Molecule 12: 50S Ribosomal Protein L16

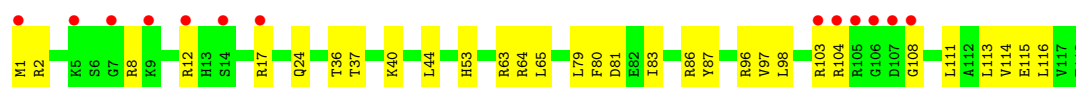
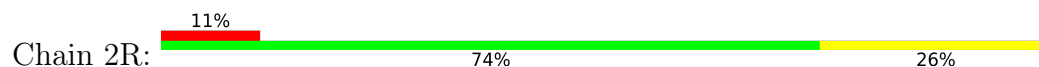


• Molecule 13: 50S Ribosomal Protein L17

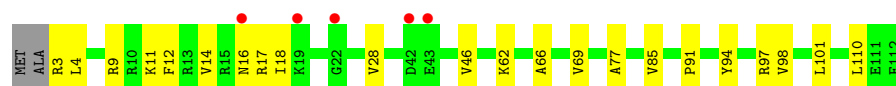
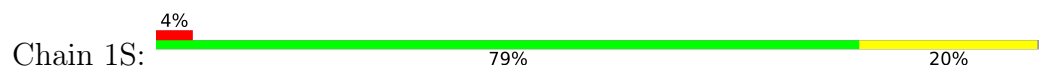


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- Molecule 13: 50S Ribosomal Protein L17



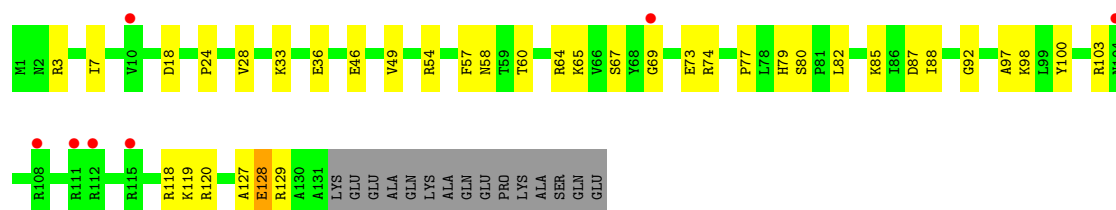
- Molecule 14: 50S Ribosomal Protein L18



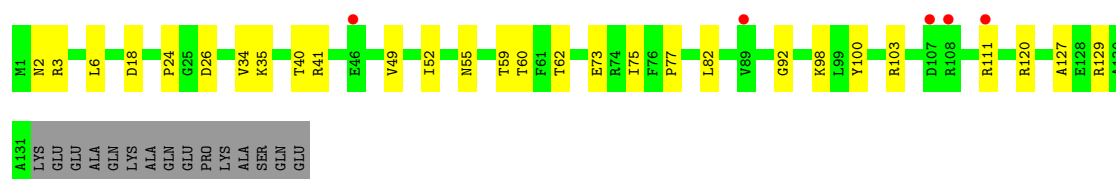
- Molecule 14: 50S Ribosomal Protein L18



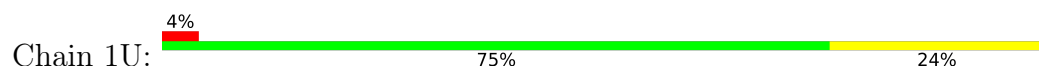
- Molecule 15: 50S Ribosomal Protein L19



- Molecule 15: 50S Ribosomal Protein L19

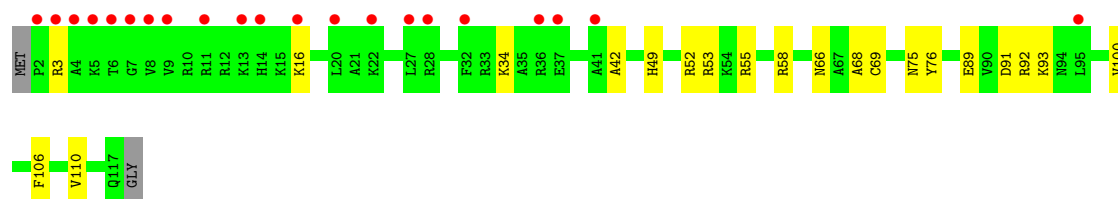
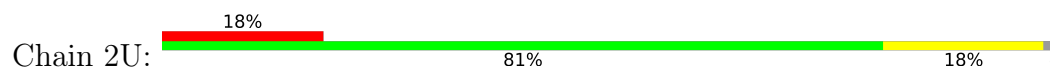


- Molecule 16: 50S Ribosomal Protein L20

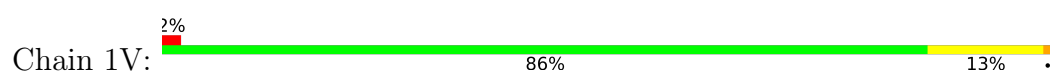




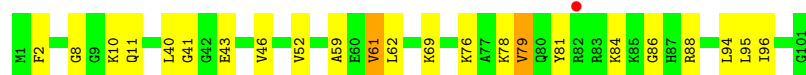
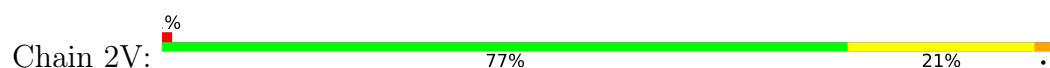
• Molecule 16: 50S Ribosomal Protein L20



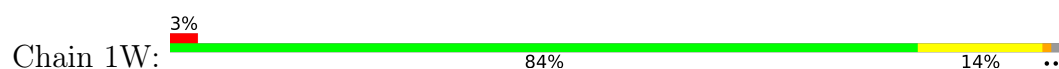
• Molecule 17: 50S Ribosomal Protein L21



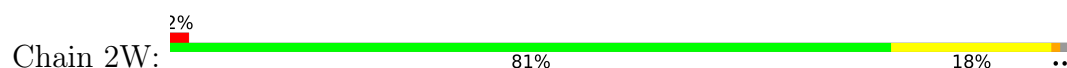
• Molecule 17: 50S Ribosomal Protein L21



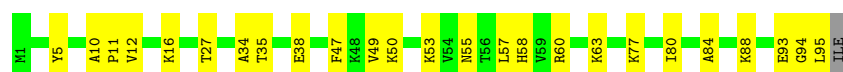
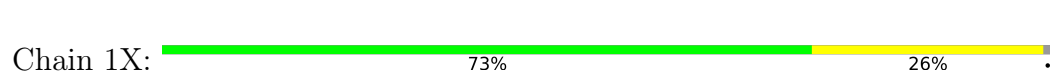
• Molecule 18: 50S Ribosomal Protein L22



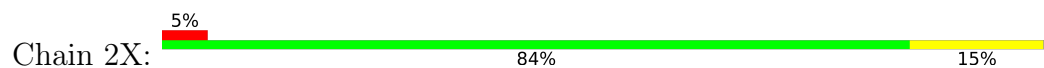
• Molecule 18: 50S Ribosomal Protein L22



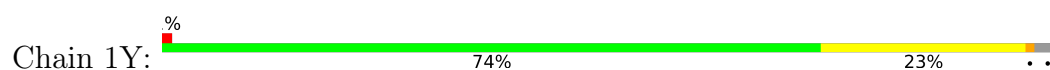
• Molecule 19: 50S Ribosomal Protein L23



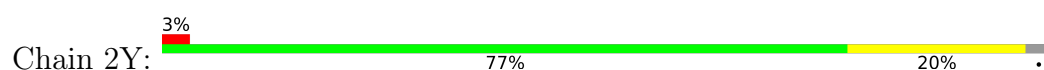
- Molecule 19: 50S Ribosomal Protein L23



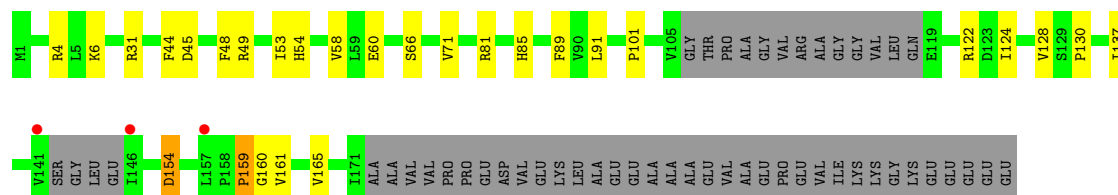
- Molecule 20: 50S ribosomal protein L24



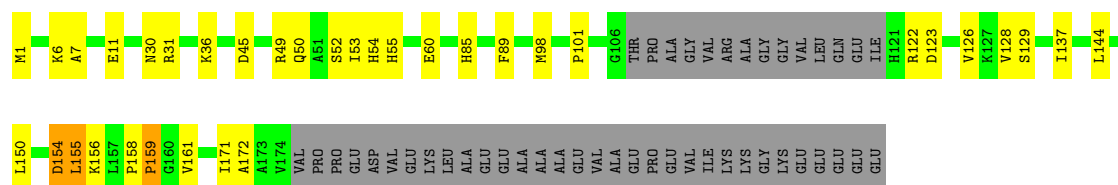
- Molecule 20: 50S ribosomal protein L24



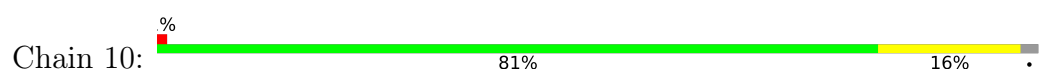
- Molecule 21: 50S ribosomal protein L25



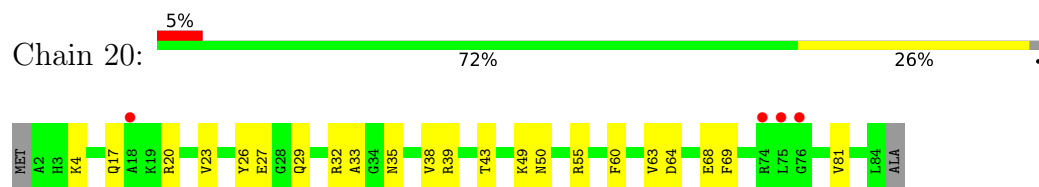
- Molecule 21: 50S ribosomal protein L25



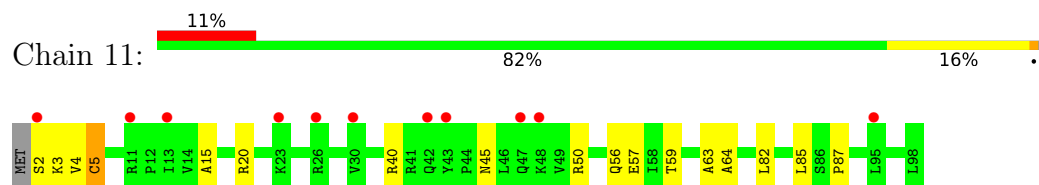
- Molecule 22: 50S ribosomal protein L27



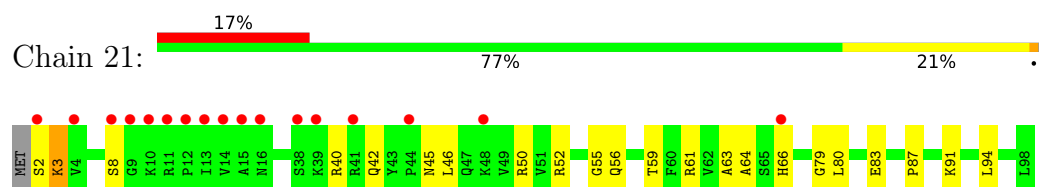
- Molecule 22: 50S ribosomal protein L27



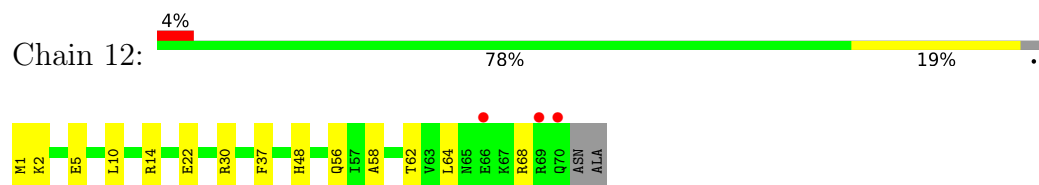
- Molecule 23: 50S ribosomal protein L28



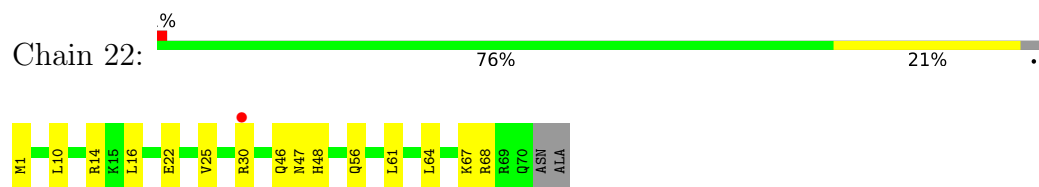
- Molecule 23: 50S ribosomal protein L28



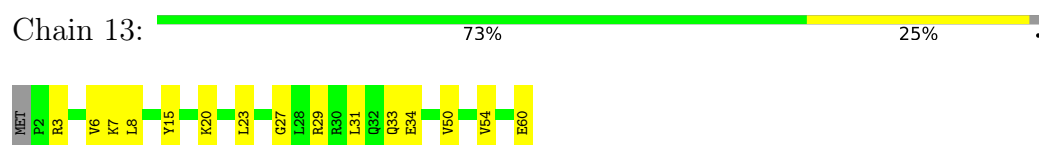
- Molecule 24: 50S ribosomal protein L29



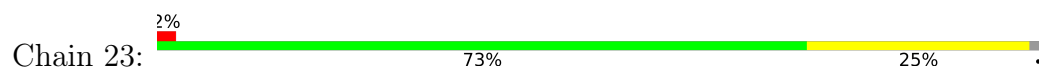
- Molecule 24: 50S ribosomal protein L29



- Molecule 25: 50S ribosomal protein L30



- Molecule 25: 50S ribosomal protein L30





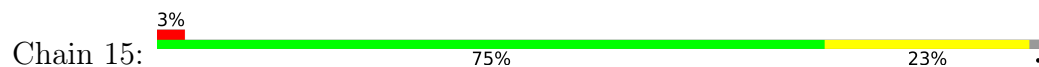
- Molecule 26: 50S ribosomal protein L31



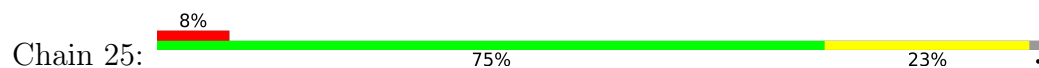
- Molecule 26: 50S ribosomal protein L31



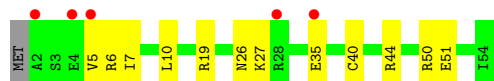
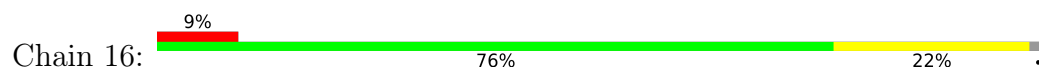
- Molecule 27: 50S ribosomal protein L32



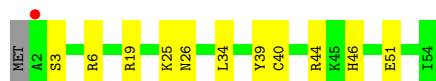
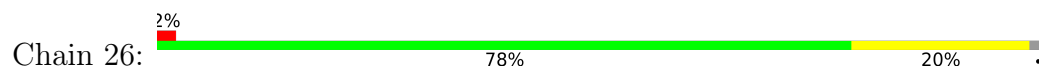
- Molecule 27: 50S ribosomal protein L32



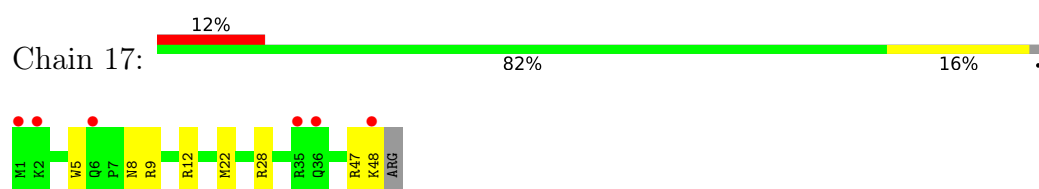
- Molecule 28: 50S ribosomal protein L33



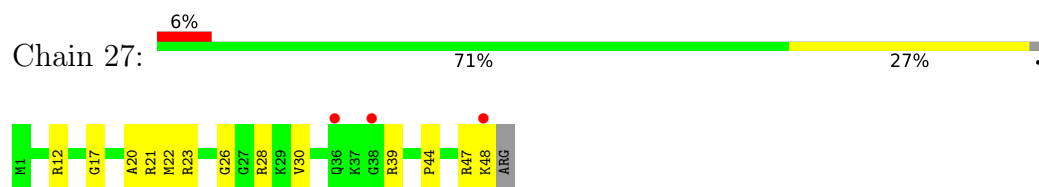
- Molecule 28: 50S ribosomal protein L33



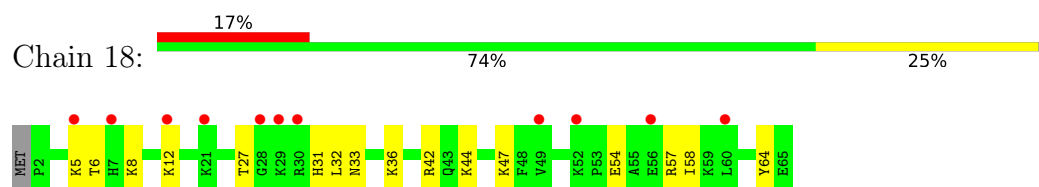
- Molecule 29: 50S ribosomal protein L34



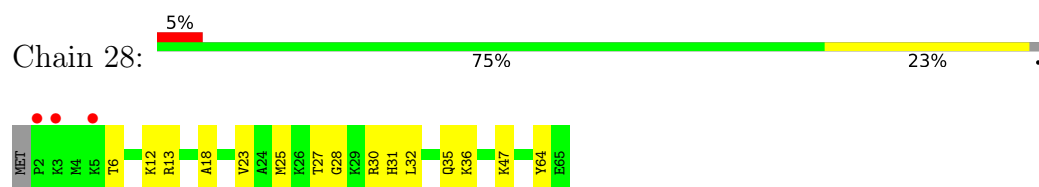
- Molecule 29: 50S ribosomal protein L34



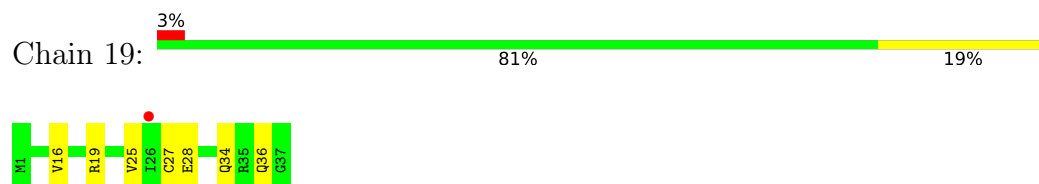
- Molecule 30: 50S Ribosomal Protein L35



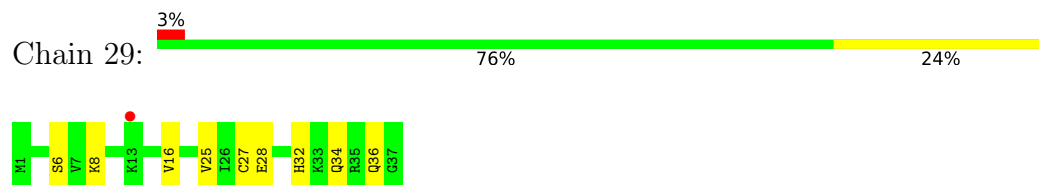
- Molecule 30: 50S Ribosomal Protein L35



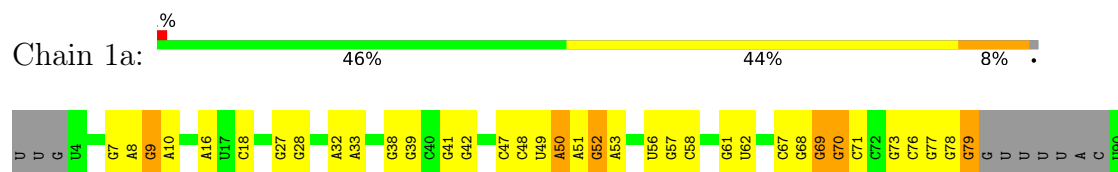
- Molecule 31: 50S Ribosomal Protein L36

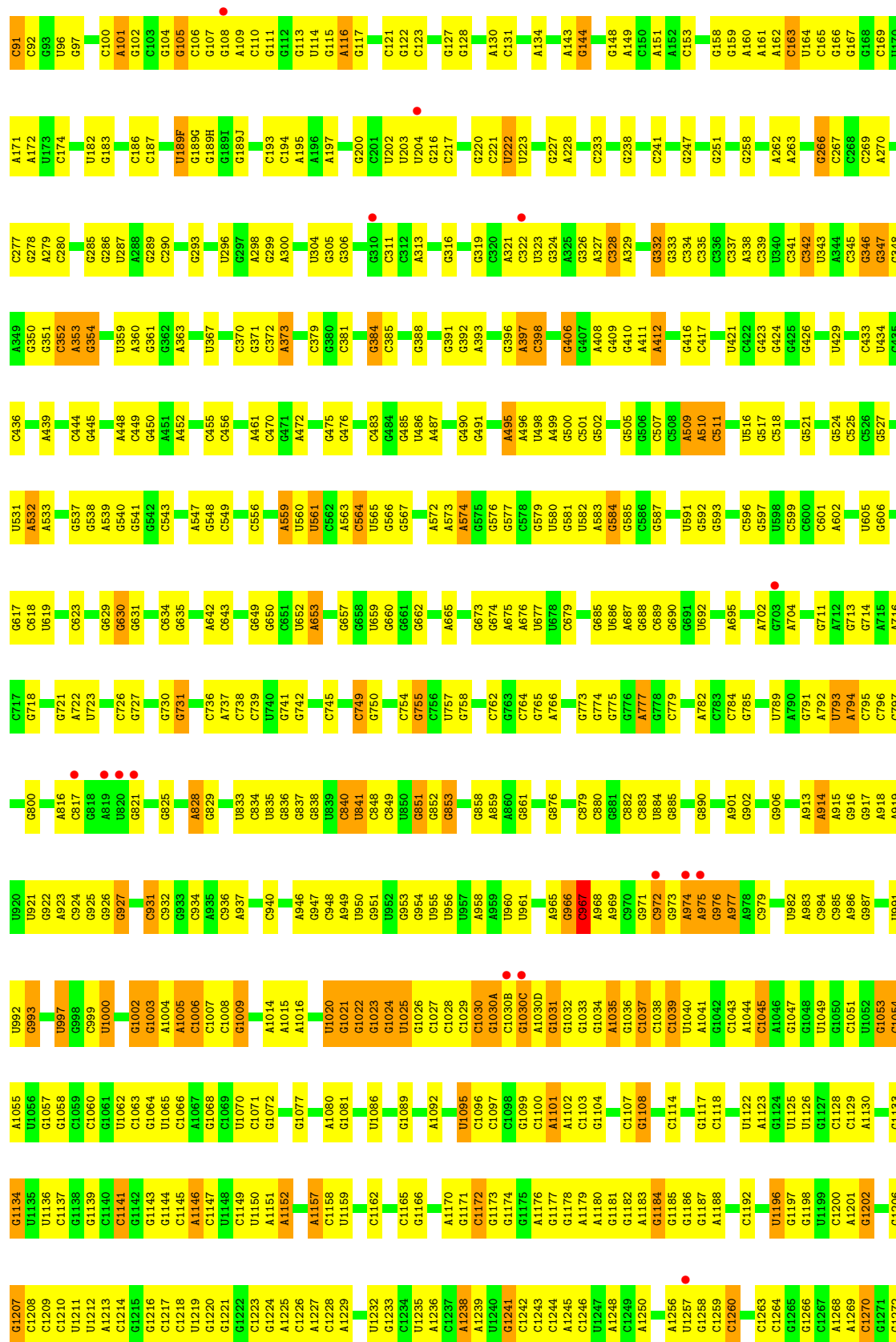


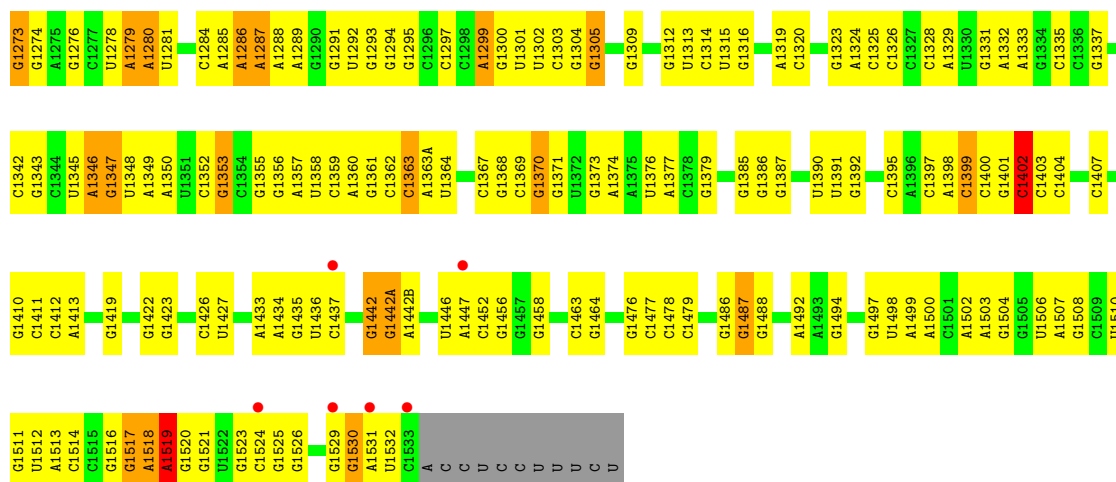
- Molecule 31: 50S Ribosomal Protein L36



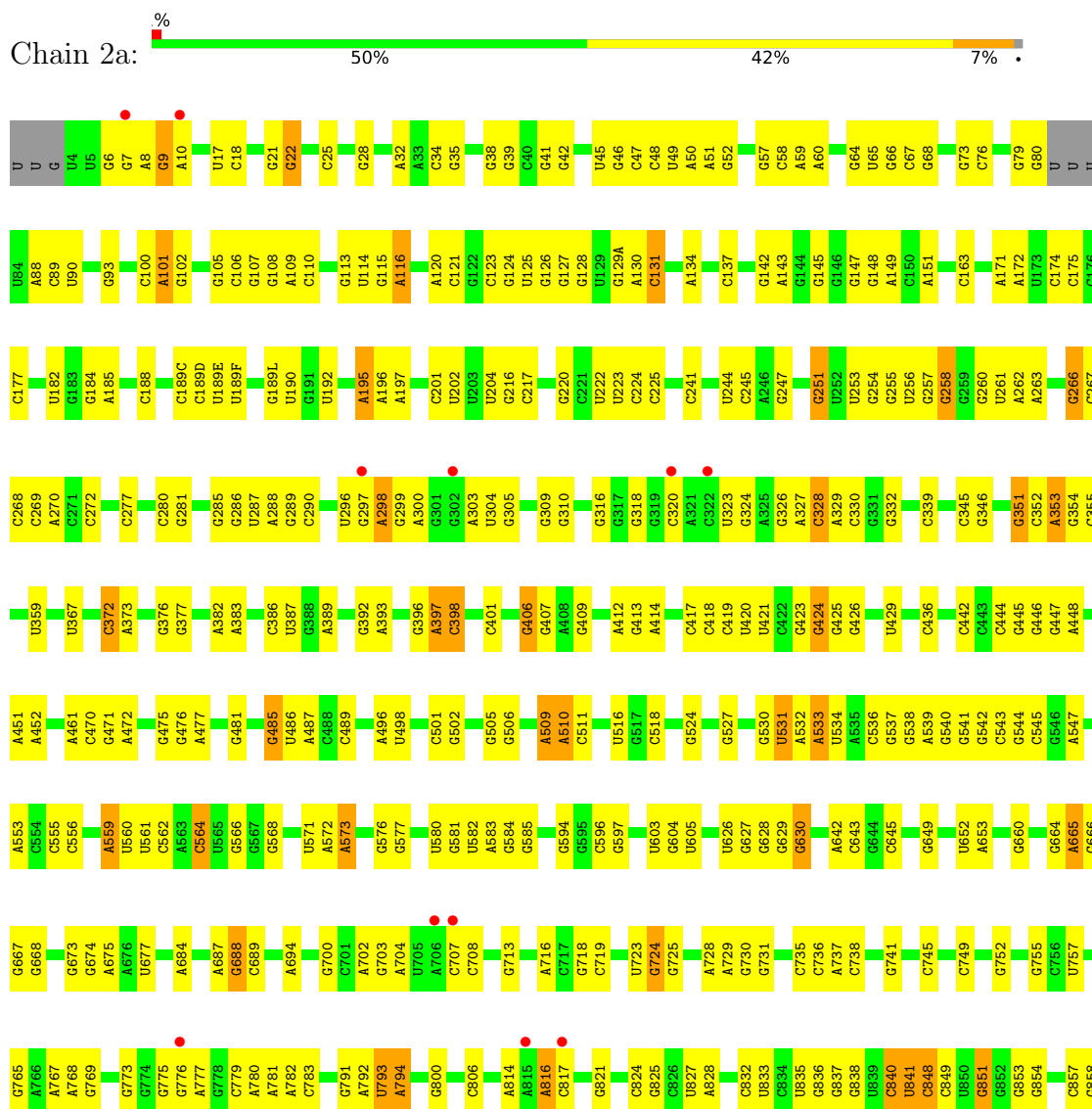
- Molecule 32: 16S Ribosomal RNA

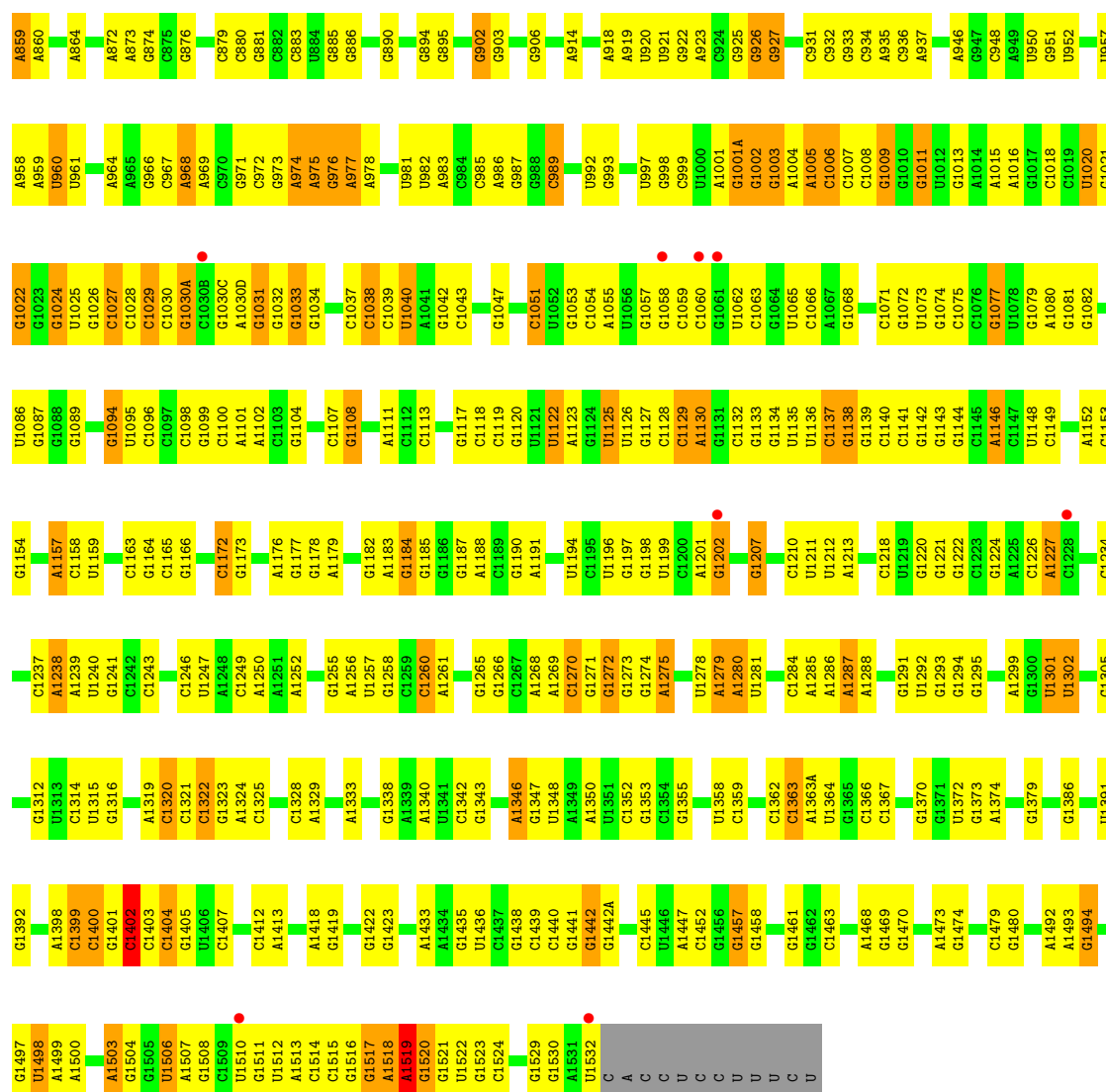






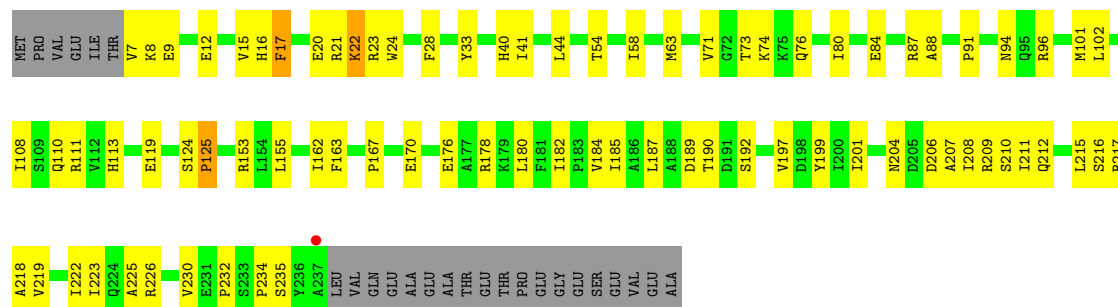
- Molecule 32: 16S Ribosomal RNA

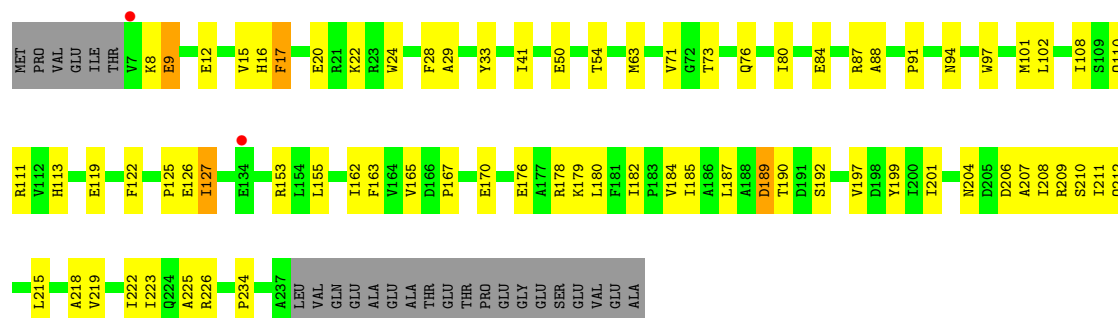




• Molecule 33: 30S Ribosomal Protein S2

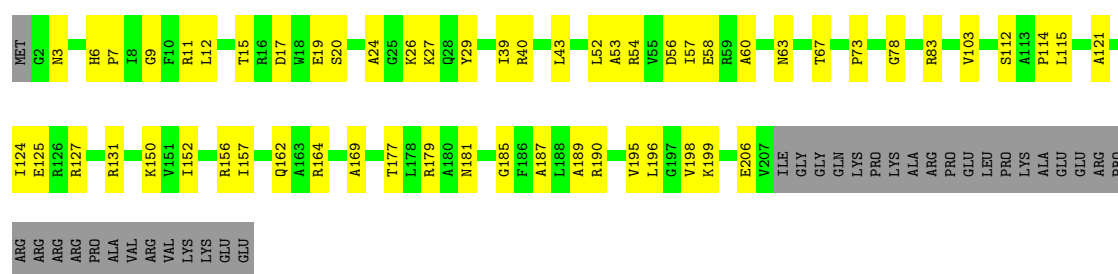
Chain 1b: 59% 30% 10%





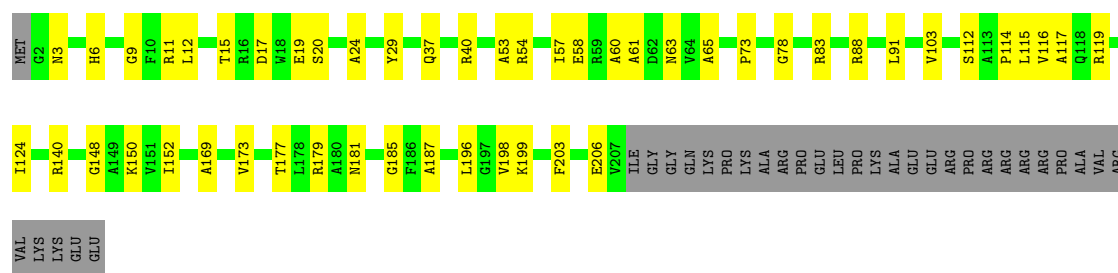
• Molecule 34: 30S Ribosomal Protein S3

Chain 1c: 62% 24% 14%



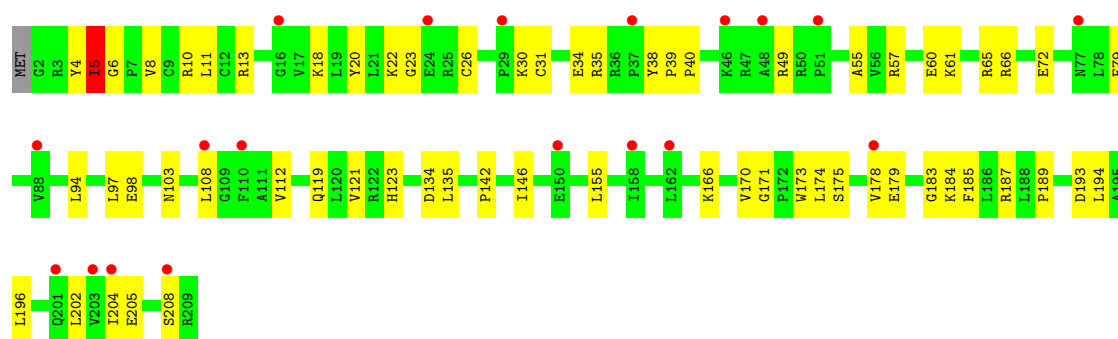
• Molecule 34: 30S Ribosomal Protein S3

Chain 2c: 65% 21% 14%

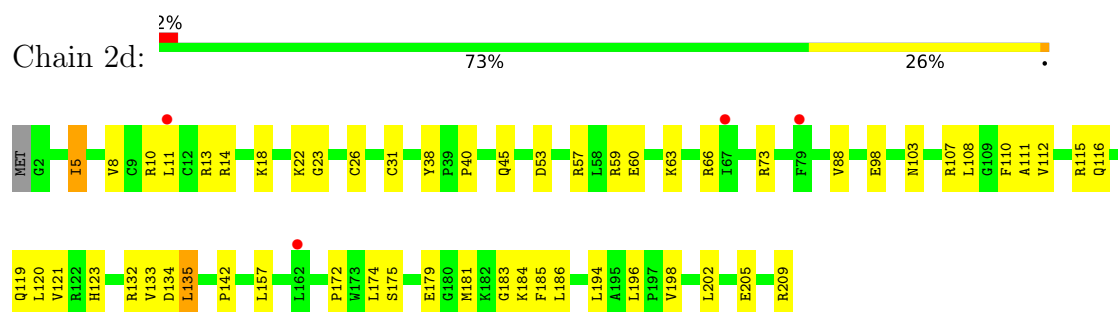


• Molecule 35: 30S Ribosomal Protein S4

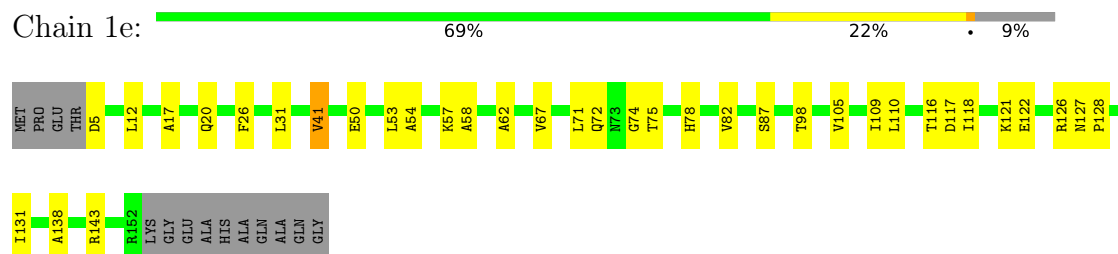
Chain 1d: 9% 70% 29%



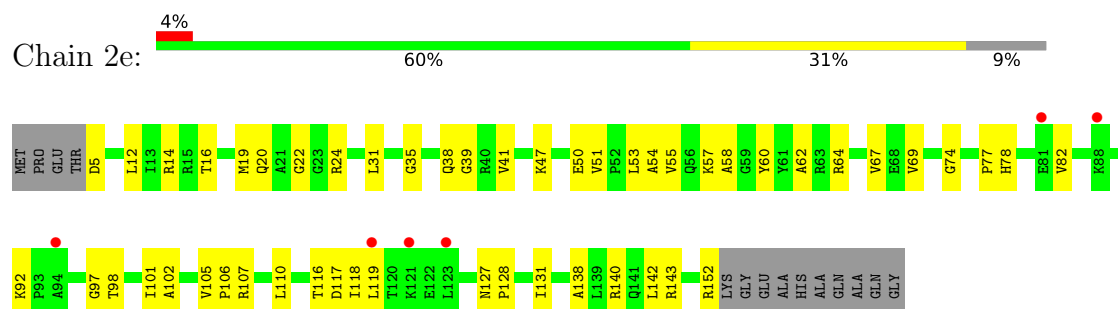
• Molecule 35: 30S Ribosomal Protein S4



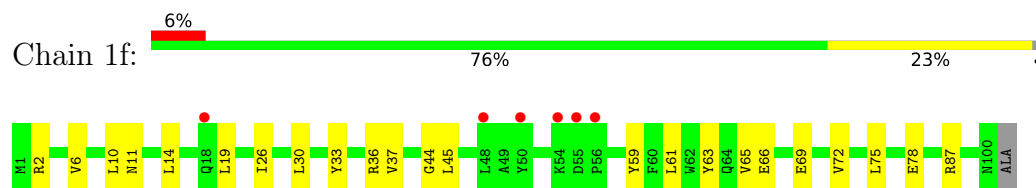
- Molecule 36: 30S Ribosomal Protein S5



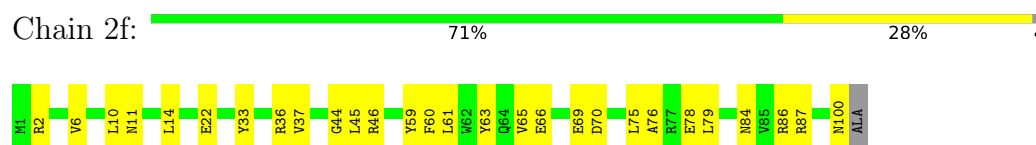
- Molecule 36: 30S Ribosomal Protein S5



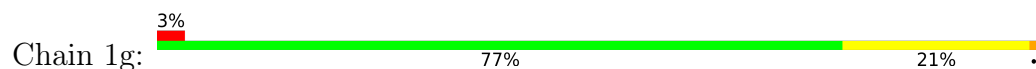
- Molecule 37: 30S Ribosomal Protein S6

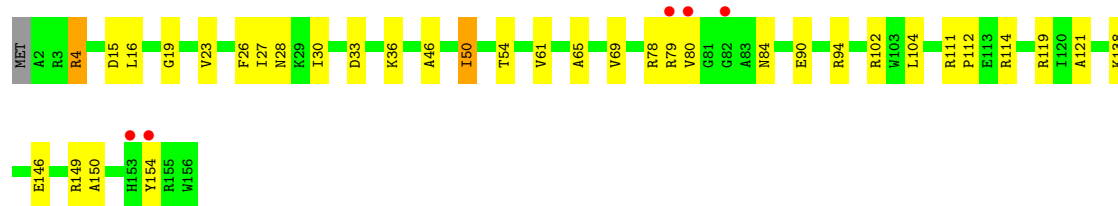


- Molecule 37: 30S Ribosomal Protein S6

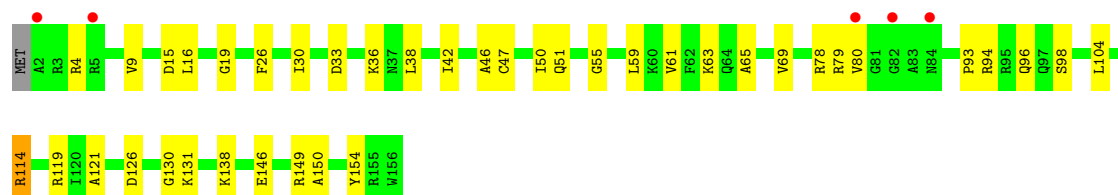
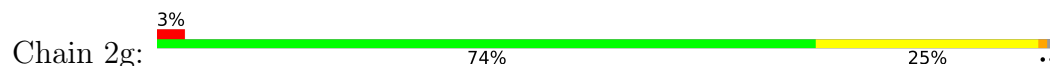


- Molecule 38: 30S Ribosomal Protein S7



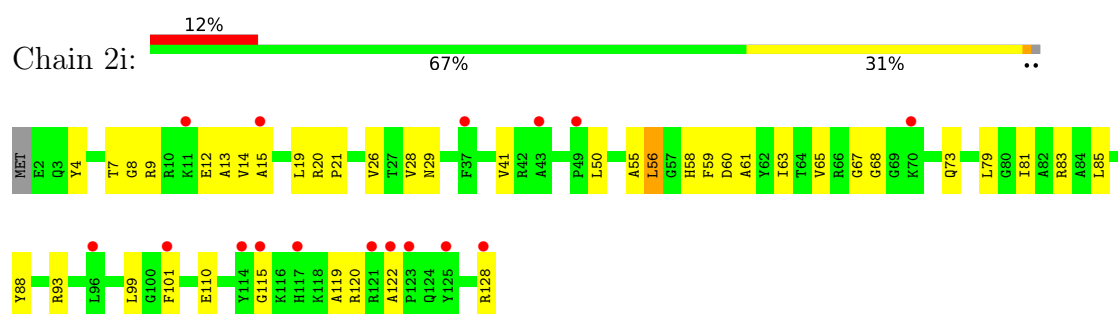


• Molecule 38: 30S Ribosomal Protein S7

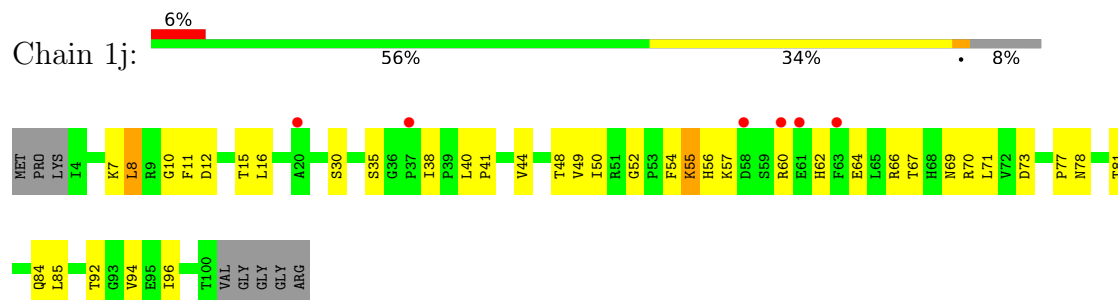


• Molecule 39: 30S Ribosomal Protein S8

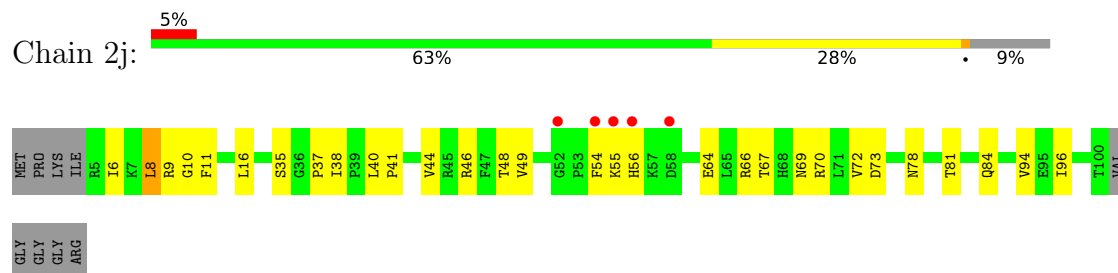




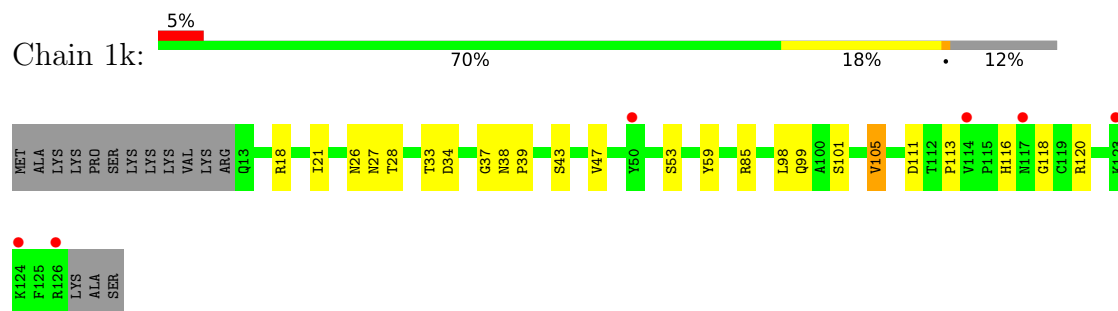
- Molecule 41: 30S ribosomal protein S10



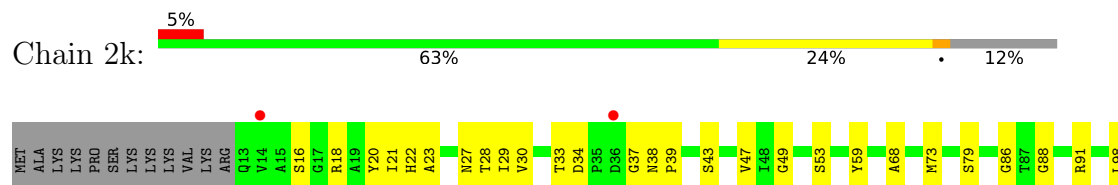
- Molecule 41: 30S ribosomal protein S10

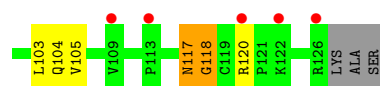


- Molecule 42: 30S ribosomal protein S11

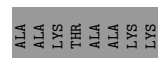


- Molecule 42: 30S ribosomal protein S11

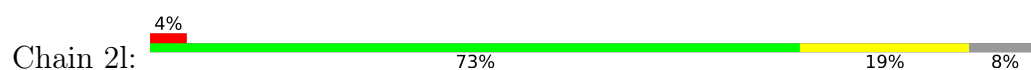




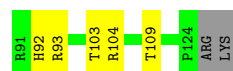
- Molecule 43: 30S ribosomal protein S12



- Molecule 43: 30S ribosomal protein S12



- Molecule 44: 30S ribosomal protein S13



- Molecule 44: 30S ribosomal protein S13

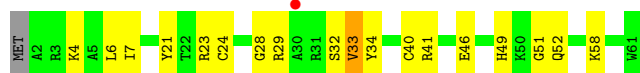


- Molecule 45: 30S ribosomal protein S14 type Z

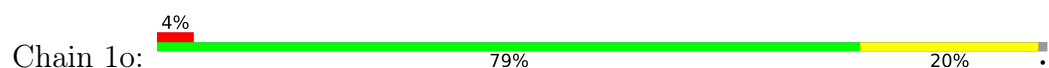




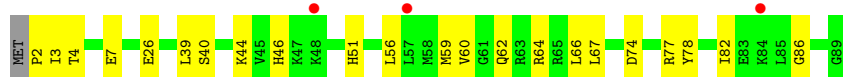
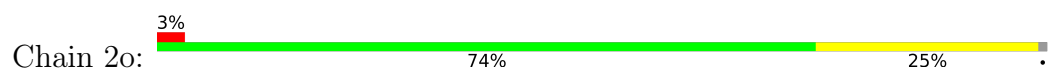
- Molecule 45: 30S ribosomal protein S14 type Z



- Molecule 46: 30S ribosomal protein S15



- Molecule 46: 30S ribosomal protein S15



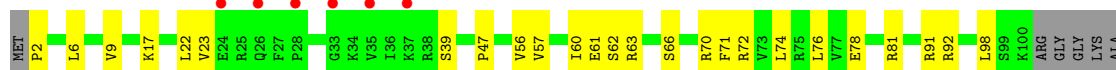
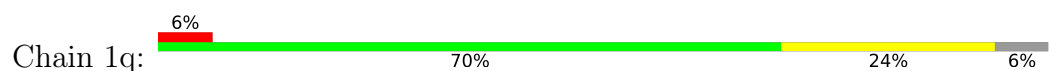
- Molecule 47: 30S ribosomal protein S16



- Molecule 47: 30S ribosomal protein S16



- Molecule 48: 30S ribosomal protein S17



- Molecule 48: 30S ribosomal protein S17



- Molecule 49: 30S ribosomal protein S18



- Molecule 49: 30S ribosomal protein S18



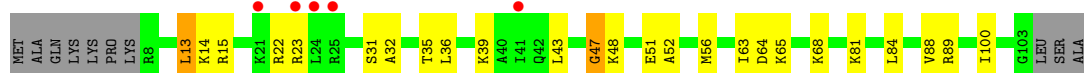
- Molecule 50: 30S Ribosomal Protein S19



- Molecule 50: 30S Ribosomal Protein S19

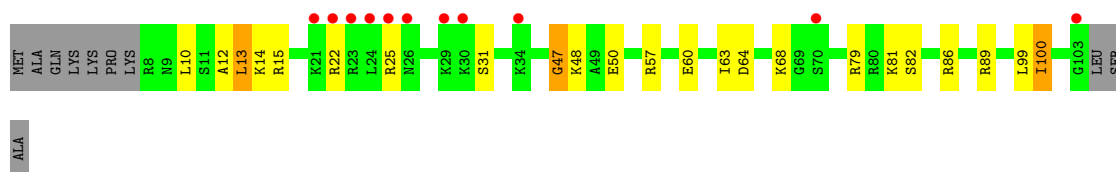


- Molecule 51: 30S Ribosomal Protein S20



- Molecule 51: 30S Ribosomal Protein S20





- Molecule 52: 30S ribosomal protein Thx



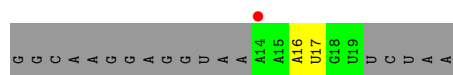
- Molecule 52: 30S ribosomal protein Thx



- Molecule 53: mRNA



- Molecule 53: mRNA



- Molecule 54: CC-Pmn



- Molecule 54: CC-Pmn



- Molecule 55: P-site tRNA, Deacylated Initiator Methionyl-tRNA





● Molecule 55: P-site tRNA, Deacylated Initiator Methionyl-tRNA



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	212.24Å 452.84Å 620.30Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	146.71 – 3.70 146.71 – 3.70	Depositor EDS
% Data completeness (in resolution range)	99.1 (146.71-3.70) 99.1 (146.71-3.70)	Depositor EDS
R_{merge}	0.24	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.31 (at 3.68Å)	Xtriage
Refinement program	PHENIX 1.8.2	Depositor
R, R_{free}	0.237 , 0.278 0.237 , 0.279	Depositor DCC
R_{free} test set	31415 reflections (4.98%)	wwPDB-VP
Wilson B-factor (Å ²)	135.2	Xtriage
Anisotropy	0.099	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.27 , 50.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.42$, $\langle L^2 \rangle = 0.24$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.92	EDS
Total number of atoms	287828	wwPDB-VP
Average B, all atoms (Å ²)	113.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.03% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ 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: PPU, 5MC, SF4, MA6, 5MU, 2MU, M2G, OMG, UR3, 2MA, 4SU, 4OC, 2MG, 0TD, PSU, 7MG, ZN, MG

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	1A	0.20	0/69009	0.32	0/107712
1	2A	0.18	0/67293	0.31	0/105034
2	1B	0.15	0/2882	0.27	0/4494
2	2B	0.15	0/2879	0.27	0/4487
3	1D	0.24	0/2186	0.42	0/2944
3	2D	0.24	1/2186 (0.0%)	0.41	0/2944
4	1E	0.20	0/1592	0.42	1/2149 (0.0%)
4	2E	0.19	0/1592	0.40	0/2149
5	1F	0.20	0/1619	0.42	1/2193 (0.0%)
5	2F	0.18	0/1615	0.38	0/2188
6	1G	0.17	0/1448	0.39	0/1957
6	2G	0.18	0/1453	0.39	0/1963
7	1H	0.17	0/1356	0.34	0/1834
7	2H	0.19	0/1356	0.34	0/1834
8	1I	0.16	0/1112	0.35	0/1514
8	2I	0.18	0/1079	0.34	0/1475
9	1N	0.26	0/1144	0.51	2/1543 (0.1%)
9	2N	0.19	0/1144	0.43	1/1543 (0.1%)
10	1O	0.20	0/943	0.39	0/1269
10	2O	0.19	0/943	0.38	0/1269
11	1P	0.21	0/1152	0.55	3/1533 (0.2%)
11	2P	0.19	0/1152	0.53	3/1533 (0.2%)
12	1Q	0.19	0/1143	0.38	0/1527
12	2Q	0.17	0/1143	0.37	0/1527
13	1R	0.19	0/982	0.42	0/1312
13	2R	0.20	0/982	0.40	0/1312
14	1S	0.17	0/883	0.38	0/1176
14	2S	0.18	0/880	0.39	0/1172
15	1T	0.19	0/1105	0.42	1/1477 (0.1%)
15	2T	0.18	0/1097	0.39	0/1468
16	1U	0.19	0/977	0.35	0/1301

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
16	2U	0.18	0/977	0.35	0/1301
17	1V	0.18	0/782	0.36	0/1049
17	2V	0.19	0/782	0.37	0/1049
18	1W	0.19	0/897	0.36	0/1205
18	2W	0.19	0/897	0.41	0/1205
19	1X	0.20	0/764	0.39	0/1025
19	2X	0.17	0/764	0.36	0/1025
20	1Y	0.19	0/819	0.37	0/1095
20	2Y	0.18	0/819	0.37	0/1095
21	1Z	0.18	0/1267	0.41	0/1717
21	2Z	0.18	0/1299	0.39	0/1763
22	10	0.18	0/662	0.41	0/881
22	20	0.18	0/662	0.41	0/881
23	11	0.21	0/762	0.39	0/1014
23	21	0.18	0/762	0.36	0/1014
24	12	0.20	0/590	0.36	0/781
24	22	0.18	0/590	0.35	0/781
25	13	0.21	0/474	0.40	0/635
25	23	0.19	0/469	0.39	0/630
26	14	0.27	0/565	0.60	0/761
26	24	0.27	0/545	0.54	0/737
27	15	0.24	0/469	0.43	0/635
27	25	0.20	0/469	0.42	0/635
28	16	0.18	0/460	0.39	0/613
28	26	0.16	0/456	0.41	0/608
29	17	0.24	0/426	0.44	0/561
29	27	0.21	0/426	0.43	0/561
30	18	0.20	0/525	0.36	0/691
30	28	0.18	0/525	0.36	0/691
31	19	0.22	0/310	0.45	0/407
31	29	0.19	0/310	0.43	0/407
32	1a	0.17	0/35795	0.31	0/55864
32	2a	0.17	0/35886	0.31	0/56005
33	1b	0.21	0/1881	0.45	0/2542
33	2b	0.22	0/1860	0.42	0/2518
34	1c	0.19	0/1572	0.38	0/2126
34	2c	0.17	0/1566	0.37	0/2119
35	1d	0.25	1/1685 (0.1%)	0.45	0/2262
35	2d	0.19	0/1704	0.42	0/2284
36	1e	0.17	0/1145	0.40	0/1543
36	2e	0.18	0/1149	0.42	0/1548
37	1f	0.16	0/823	0.35	0/1115
37	2f	0.17	0/829	0.37	0/1123

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	1g	0.19	0/1250	0.42	1/1679 (0.1%)
38	2g	0.22	0/1254	0.38	0/1683
39	1h	0.17	0/1108	0.39	0/1494
39	2h	0.18	0/1108	0.39	0/1494
40	1i	0.23	0/1002	0.46	0/1346
40	2i	0.22	0/997	0.45	0/1343
41	1j	0.20	0/722	0.41	0/982
41	2j	0.19	0/727	0.41	0/988
42	1k	0.15	0/844	0.36	0/1145
42	2k	0.16	0/848	0.34	0/1149
43	1l	0.18	0/937	0.40	0/1260
43	2l	0.18	0/937	0.42	0/1260
44	1m	0.18	0/969	0.41	0/1302
44	2m	0.18	0/961	0.39	0/1291
45	1n	0.18	0/501	0.42	0/664
45	2n	0.17	0/501	0.37	0/664
46	1o	0.17	0/739	0.34	0/985
46	2o	0.16	0/739	0.34	0/985
47	1p	0.18	0/697	0.40	0/939
47	2p	0.17	0/693	0.39	0/935
48	1q	0.17	0/836	0.35	0/1117
48	2q	0.17	0/836	0.36	0/1117
49	1r	0.16	0/560	0.32	0/746
49	2r	0.19	0/560	0.36	0/746
50	1s	0.21	0/667	0.43	0/900
50	2s	0.18	0/661	0.42	0/893
51	1t	0.27	0/730	0.40	0/965
51	2t	0.17	0/729	0.40	0/965
52	1u	0.18	0/203	0.41	0/266
52	2u	0.18	0/203	0.38	0/266
53	1v	0.20	0/126	0.27	0/195
53	2v	0.16	0/126	0.27	0/195
54	1w	0.28	0/40	0.51	0/60
54	2w	0.20	0/40	0.48	0/60
55	1x	0.22	0/1725	0.33	0/2689
55	2x	0.21	0/1725	0.31	0/2689
All	All	0.19	2/310047 (0.0%)	0.34	13/463792 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
21	1Z	0	1
21	2Z	0	1
33	2b	0	1
All	All	0	3

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	2D	7	LYS	C-N	-7.02	1.17	1.33
35	1d	39	PRO	CA-C	-5.64	1.48	1.51

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	1N	80	GLY	N-CA-C	-9.08	102.62	115.43
11	1P	26	GLY	N-CA-C	-8.32	104.42	115.40
9	2N	80	GLY	N-CA-C	-8.08	104.03	115.43
38	1g	50	ILE	N-CA-C	-8.04	103.55	112.80
11	2P	26	GLY	N-CA-C	-6.81	106.36	115.21
9	1N	37	LYS	N-CA-C	-6.74	105.18	113.19
11	1P	33	ARG	CA-C-N	-6.45	110.80	121.57
11	1P	33	ARG	C-N-CA	-6.45	110.80	121.57
15	1T	69	GLY	N-CA-C	-5.58	107.54	115.30
5	1F	85	GLY	N-CA-C	-5.32	108.30	115.21
4	1E	186	GLY	N-CA-C	5.26	118.29	110.60
11	2P	33	ARG	CA-C-N	-5.25	112.36	121.39
11	2P	33	ARG	C-N-CA	-5.25	112.36	121.39

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
21	1Z	159	PRO	Peptide
21	2Z	159	PRO	Peptide
33	2b	9	GLU	Peptide

5.2 Too-close contacts ⓘ

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	1A	61852	0	31194	858	0
1	2A	60322	0	30425	776	0
2	1B	2577	0	1305	32	0
2	2B	2575	0	1303	31	0
3	1D	2136	0	2218	62	0
3	2D	2136	0	2218	62	0
4	1E	1559	0	1618	35	0
4	2E	1559	0	1618	35	0
5	1F	1584	0	1625	33	0
5	2F	1580	0	1619	38	0
6	1G	1423	0	1436	39	0
6	2G	1428	0	1438	38	0
7	1H	1330	0	1407	20	0
7	2H	1330	0	1407	19	0
8	1I	1097	0	1140	29	0
8	2I	1064	0	1082	17	0
9	1N	1117	0	1184	21	0
9	2N	1117	0	1184	26	0
10	1O	933	0	996	21	0
10	2O	933	0	996	28	0
11	1P	1135	0	1212	30	0
11	2P	1135	0	1212	27	0
12	1Q	1122	0	1179	25	0
12	2Q	1122	0	1179	30	0
13	1R	968	0	1033	23	0
13	2R	968	0	1033	24	0
14	1S	873	0	927	14	0
14	2S	870	0	923	22	0
15	1T	1091	0	1151	31	0
15	2T	1083	0	1136	25	0
16	1U	959	0	1019	25	0
16	2U	959	0	1019	27	0
17	1V	771	0	830	7	0
17	2V	771	0	830	17	0
18	1W	886	0	940	15	0
18	2W	886	0	940	16	0
19	1X	750	0	814	18	0
19	2X	750	0	814	11	0
20	1Y	806	0	881	20	0
20	2Y	806	0	881	15	0
21	1Z	1240	0	1240	21	0
21	2Z	1271	0	1273	27	0
22	10	653	0	674	12	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	20	653	0	674	17	0
23	11	755	0	826	9	0
23	21	755	0	826	15	0
24	12	588	0	643	12	0
24	22	588	0	643	11	0
25	13	469	0	518	12	0
25	23	464	0	514	9	0
26	14	552	0	533	21	0
26	24	532	0	503	24	0
27	15	455	0	465	10	0
27	25	455	0	465	12	0
28	16	453	0	473	8	0
28	26	449	0	469	8	0
29	17	418	0	467	10	0
29	27	418	0	467	9	0
30	18	517	0	582	14	0
30	28	517	0	582	14	0
31	19	307	0	335	5	0
31	29	307	0	335	7	0
32	1a	32246	0	16296	623	0
32	2a	32327	0	16339	560	0
33	1b	1846	0	1867	62	0
33	2b	1825	0	1828	53	0
34	1c	1548	0	1535	37	0
34	2c	1542	0	1517	33	0
35	1d	1655	0	1672	50	0
35	2d	1674	0	1714	48	0
36	1e	1129	0	1185	24	0
36	2e	1133	0	1191	38	0
37	1f	810	0	804	17	0
37	2f	816	0	808	22	0
38	1g	1231	0	1238	26	0
38	2g	1235	0	1249	27	0
39	1h	1088	0	1126	32	0
39	2h	1088	0	1126	33	0
40	1i	983	0	986	38	0
40	2i	978	0	966	35	0
41	1j	709	0	650	28	0
41	2j	714	0	672	20	0
42	1k	829	0	825	20	0
42	2k	833	0	836	24	0
43	1l	932	0	981	19	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
43	2l	932	0	981	19	0
44	1m	958	0	1002	34	0
44	2m	950	0	988	38	0
45	1n	492	0	529	20	0
45	2n	492	0	529	15	0
46	1o	728	0	760	13	0
46	2o	728	0	760	19	0
47	1p	681	0	697	19	0
47	2p	677	0	686	23	0
48	1q	823	0	891	21	0
48	2q	823	0	891	22	0
49	1r	555	0	618	11	0
49	2r	555	0	618	10	0
50	1s	652	0	662	22	0
50	2s	646	0	644	24	0
51	1t	728	0	798	20	0
51	2t	727	0	796	23	0
52	1u	199	0	208	9	0
52	2u	199	0	208	5	0
53	1v	113	0	54	1	0
53	2v	113	0	54	2	0
54	1w	74	0	51	6	0
54	2w	74	0	50	6	0
55	1x	1625	0	829	21	0
55	2x	1625	0	829	29	0
56	10	3	0	0	0	0
56	13	1	0	0	0	0
56	15	1	0	0	0	0
56	16	1	0	0	0	0
56	17	2	0	0	0	0
56	18	1	0	0	0	0
56	1A	498	0	0	0	0
56	1B	12	0	0	0	0
56	1D	1	0	0	0	0
56	1E	6	0	0	0	0
56	1F	1	0	0	0	0
56	1Q	1	0	0	0	0
56	1S	1	0	0	0	0
56	1U	1	0	0	0	0
56	1V	3	0	0	0	0
56	1W	1	0	0	0	0
56	1a	93	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	1d	1	0	0	0	0
56	1l	1	0	0	0	0
56	1r	1	0	0	0	0
56	1x	2	0	0	0	0
56	20	2	0	0	0	0
56	21	1	0	0	0	0
56	23	1	0	0	0	0
56	25	1	0	0	0	0
56	27	1	0	0	0	0
56	28	2	0	0	0	0
56	2A	385	0	0	0	0
56	2B	9	0	0	0	0
56	2D	1	0	0	0	0
56	2E	6	0	0	0	0
56	2O	1	0	0	0	0
56	2Q	2	0	0	0	0
56	2R	2	0	0	0	0
56	2T	2	0	0	0	0
56	2Y	1	0	0	0	0
56	2a	103	0	0	0	0
56	2d	1	0	0	0	0
56	2f	1	0	0	0	0
56	2l	1	0	0	0	0
56	2r	1	0	0	0	0
57	14	1	0	0	0	0
57	15	1	0	0	0	0
57	16	1	0	0	0	0
57	19	1	0	0	0	0
57	1Y	1	0	0	0	0
57	1n	1	0	0	0	0
57	24	1	0	0	0	0
57	25	1	0	0	0	0
57	26	1	0	0	0	0
57	29	1	0	0	0	0
57	2Y	1	0	0	0	0
57	2n	1	0	0	0	0
58	1d	8	0	0	2	0
58	2d	8	0	0	2	0
59	1A	53	0	0	2	0
59	1D	3	0	0	2	0
59	1a	15	0	0	2	0
59	1x	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
59	2A	32	0	0	2	0
59	2B	1	0	0	0	0
59	2a	19	0	0	1	0
All	All	287828	0	193417	4438	0

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 10.

All (4438) 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)
1:1A:1128:U:H3	1:1A:1132:A:N6	1.47	1.12
32:1a:78:G:N1	32:1a:91:C:C4	2.26	1.03
32:1a:931:C:N4	32:1a:1386:G:H1	1.57	1.01
32:2a:1133:G:H1	32:2a:1141:C:N4	1.56	1.01
32:2a:1352:C:H42	32:2a:1370:G:H1	1.09	1.00
32:2a:1011:G:H1	32:2a:1018:C:H42	1.02	1.00
1:1A:1103:A:N6	1:1A:1127:U:H3	1.59	1.00
1:1A:2121:U:H3	1:1A:2212:G:H1	1.06	1.00
1:1A:1105:G:H1	1:1A:1125:C:H42	1.04	0.98
1:1A:2145:G:H1	1:1A:2197:C:N4	1.61	0.98
32:2a:931:C:N4	32:2a:1386:G:H1	1.61	0.98
32:2a:1011:G:H1	32:2a:1018:C:N4	1.62	0.97
1:1A:1100:A:N6	1:1A:1151:U:H3	1.61	0.97
1:1A:2183:C:HO2'	1:1A:2184:G:H8	1.01	0.97
1:1A:2115:G:H1	1:1A:2218:C:H42	1.07	0.96
1:1A:1104:G:H1	1:1A:1126:C:H42	0.96	0.95
32:1a:984:C:H42	32:1a:1221:G:H1	1.02	0.95
32:2a:1030:C:H42	32:2a:1031:G:H1	1.01	0.94
32:2a:1089:G:H1	32:2a:1096:C:N4	1.65	0.94
32:1a:73:G:H1	32:1a:96:U:H3	0.95	0.93
32:2a:1132:C:H42	32:2a:1142:G:H1	1.14	0.93
1:2A:2108:C:N4	1:2A:2181:G:H1	1.66	0.93
1:1A:1103:A:H61	1:1A:1127:U:H3	0.95	0.92
1:2A:2108:C:H42	1:2A:2181:G:H1	0.92	0.92
1:2A:2138:C:H42	1:2A:2153:G:H1	0.98	0.92
32:1a:1089:G:H1	32:1a:1096:C:H42	1.12	0.92
32:2a:1051:C:H42	32:2a:1207:2MG:HN1	1.18	0.91
32:2a:1030:C:N4	32:2a:1031:G:H1	1.69	0.90
1:1A:1104:G:H1	1:1A:1126:C:N4	1.68	0.90
1:2A:2096:U:H3	1:2A:2193:G:H1	1.19	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:2a:1089:G:H1	32:2a:1096:C:H42	0.92	0.90
32:1a:1162:C:H42	32:1a:1174:G:H1	1.08	0.89
32:2a:931:C:H42	32:2a:1386:G:H1	0.97	0.89
1:2A:2138:C:N4	1:2A:2153:G:H1	1.70	0.89
1:2A:2098:U:H3	1:2A:2191:G:H1	0.89	0.89
32:1a:1162:C:N4	32:1a:1174:G:H1	1.72	0.87
32:1a:1089:G:H1	32:1a:1096:C:N4	1.73	0.87
1:1A:1100:A:H61	1:1A:1151:U:H3	1.15	0.87
1:1A:2145:G:H1	1:1A:2197:C:H42	0.87	0.86
35:1d:18:LYS:NZ	35:1d:31:CYS:SG	2.48	0.86
1:1A:1105:G:H1	1:1A:1125:C:N4	1.72	0.86
1:2A:2139:C:H42	1:2A:2152:G:H1	1.22	0.86
1:1A:2122:G:H1	1:1A:2211:U:H3	1.25	0.85
32:1a:984:C:N4	32:1a:1221:G:H1	1.74	0.85
32:1a:343:U:O2'	32:1a:346:G:O6	1.94	0.85
32:2a:1129:C:O2'	32:2a:1130:A:N7	2.08	0.85
32:1a:927:G:H1	32:1a:1390:U:H3	1.23	0.84
1:2A:2108:C:N3	1:2A:2181:G:N2	2.26	0.84
1:1A:1128:U:O4	1:1A:1132:A:N1	2.10	0.84
33:1b:185:ILE:HG22	33:1b:199:TYR:HB2	1.60	0.83
32:1a:456:C:H42	32:1a:475:G:H1	1.24	0.83
24:22:1:MET:SD	24:22:56:GLN:NE2	2.52	0.82
32:2a:1352:C:N4	32:2a:1370:G:H1	1.76	0.82
32:2a:1274:G:N2	32:2a:1275:A:N7	2.28	0.82
1:1A:2115:G:H1	1:1A:2218:C:N4	1.79	0.81
32:1a:78:G:N2	32:1a:91:C:C2	2.48	0.81
32:2a:773:G:H1	32:2a:806:C:H42	1.28	0.81
14:1S:11:LYS:HG3	14:1S:91:PRO:HD3	1.62	0.81
35:2d:26:CYS:HB3	58:2d:302:SF4:S1	2.20	0.81
55:1x:4:G:H1	55:1x:69:C:H42	1.29	0.81
1:2A:2136:C:C4	1:2A:2155:G:N1	2.48	0.81
1:1A:2135:U:O4	1:1A:2192:A:N6	2.13	0.80
44:2m:34:LEU:HD13	44:2m:41:PRO:HB3	1.63	0.80
1:1A:1057:G:OP2	16:1U:66:ASN:ND2	2.15	0.80
1:1A:2160:C:N4	1:1A:2175:G:H1	1.80	0.80
25:13:6:VAL:HG13	25:13:54:VAL:HG21	1.63	0.80
55:1x:53:G:H1	55:1x:61:C:H42	1.27	0.80
1:2A:2815:C:H5'	27:25:29:THR:HG21	1.63	0.80
32:1a:559:A:H4'	32:1a:560:U:H3'	1.64	0.80
32:1a:949:A:H61	32:1a:1232:U:H3	1.28	0.79
32:2a:1086:U:H3	32:2a:1099:G:H22	1.30	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:2a:1295:G:O2'	44:2m:14:ARG:NH1	2.14	0.79
1:2A:2136:C:N3	1:2A:2155:G:N2	2.30	0.79
32:2a:1133:G:H1	32:2a:1141:C:H42	0.84	0.79
25:23:6:VAL:HG13	25:23:54:VAL:HG21	1.63	0.79
32:2a:1226:C:H41	44:2m:104:ARG:HG2	1.46	0.79
47:1p:51:VAL:HG12	47:1p:53:VAL:H	1.47	0.79
47:2p:51:VAL:HG12	47:2p:53:VAL:H	1.48	0.79
1:1A:1342:G:OP1	1:1A:2721:G:O2'	2.00	0.78
22:10:27:GLU:HG3	22:10:68:GLU:HA	1.65	0.78
32:1a:931:C:N3	32:1a:1386:G:N2	2.31	0.78
32:2a:931:C:N3	32:2a:1386:G:N2	2.31	0.78
1:2A:586:A:H5'	5:2F:89:VAL:HG21	1.65	0.78
32:2a:1002:G:H1	32:2a:1038:C:H42	1.31	0.78
32:2a:1243:C:H42	32:2a:1294:G:H1	1.27	0.78
32:1a:931:C:H42	32:1a:1386:G:H1	0.83	0.78
1:2A:1264:G:OP1	27:25:19:ARG:NH2	2.17	0.78
34:2c:187:ALA:HB3	34:2c:198:VAL:HB	1.64	0.78
1:1A:1102:G:N1	1:1A:1148:C:OP2	2.17	0.78
1:1A:2160:C:N3	1:1A:2175:G:N2	2.32	0.78
32:2a:1373:G:H5''	38:2g:36:LYS:HE2	1.66	0.77
32:1a:1027:C:C4	32:1a:1034:G:C2	2.72	0.77
3:1D:242:ARG:O	59:1D:401:HOH:O	2.02	0.77
32:2a:642:A:N3	39:2h:113:SER:OG	2.17	0.77
1:1A:2801:C:OP1	4:1E:61:ARG:NH2	2.18	0.77
43:1l:71:PRO:O	43:1l:102:ARG:NH2	2.18	0.77
35:2d:175:SER:HB3	35:2d:184:LYS:HB3	1.67	0.77
55:1x:52:G:H1	55:1x:62:C:H42	1.33	0.77
22:20:27:GLU:HG3	22:20:68:GLU:HA	1.65	0.77
36:2e:110:LEU:HD13	36:2e:118:ILE:HD13	1.66	0.77
32:1a:1064:G:O6	32:1a:1192:C:N4	2.16	0.77
40:2i:7:THR:O	40:2i:83:ARG:NH1	2.17	0.77
1:2A:1674:G:O6	1:2A:1990:C:N4	2.17	0.76
32:2a:1051:C:N4	32:2a:1207:2MG:HN1	1.82	0.76
50:1s:41:VAL:HG12	50:1s:44:MET:HG3	1.67	0.76
1:2A:2136:C:N4	1:2A:2155:G:N1	2.34	0.76
41:2j:49:VAL:HG23	45:2n:41:ARG:HB2	1.66	0.76
3:2D:79:VAL:HG21	3:2D:111:LEU:HD11	1.67	0.76
13:2R:12:ARG:O	13:2R:17:ARG:NH1	2.19	0.76
32:2a:1133:G:N2	32:2a:1141:C:N3	2.32	0.76
35:1d:23:GLY:HA3	35:1d:112:VAL:HG12	1.68	0.76
37:2f:6:VAL:HB	37:2f:63:TYR:HB2	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:601:A:OP1	1:1A:1301:U:O2'	2.03	0.75
32:1a:1373:G:H5''	38:1g:36:LYS:HE2	1.68	0.75
1:2A:2502:G:H5''	1:2A:2503:2MA:H5''	1.69	0.75
26:24:16:CYS:SG	26:24:17:GLY:N	2.59	0.75
1:1A:2205:C:H2'	1:1A:2206:G:H8	1.50	0.75
32:1a:993:G:O6	32:1a:1045:C:N4	2.19	0.75
35:2d:18:LYS:NZ	35:2d:31:CYS:SG	2.60	0.75
41:1j:49:VAL:HG23	45:1n:41:ARG:HB2	1.68	0.75
32:2a:668:G:HO2'	46:2o:46:HIS:HD1	1.34	0.75
32:1a:78:G:C6	32:1a:91:C:N4	2.55	0.75
34:2c:152:ILE:HD11	34:2c:199:LYS:HD2	1.68	0.75
1:2A:65:C:O2	1:2A:456:C:N4	2.20	0.75
32:2a:1266:G:N2	32:2a:1269:A:OP2	2.17	0.75
1:1A:2152:U:H2'	1:1A:2180:A:H61	1.52	0.74
32:2a:1520:G:H2'	32:2a:1521:G:H8	1.51	0.74
1:1A:1410:G:OP1	23:11:2:SER:N	2.20	0.74
33:2b:185:ILE:HG22	33:2b:199:TYR:HB2	1.69	0.74
32:1a:1007:C:N3	32:1a:1022:G:O6	2.19	0.74
32:2a:1011:G:N2	32:2a:1018:C:N3	2.35	0.74
32:2a:1029:C:C4	32:2a:1032:G:N1	2.56	0.74
32:1a:200:G:H1	32:1a:217:C:H42	1.34	0.74
1:2A:578:A:OP1	1:2A:1255:U:O2'	2.05	0.74
32:2a:1132:C:N4	32:2a:1142:G:H1	1.86	0.74
32:1a:158:G:N2	32:1a:163:C:O2	2.15	0.74
44:1m:34:LEU:HD13	44:1m:41:PRO:HB3	1.67	0.74
1:2A:1817:G:OP1	3:2D:88:ARG:NH2	2.21	0.74
35:1d:166:LYS:NZ	35:1d:179:GLU:OE2	2.21	0.73
1:2A:630:G:N2	1:2A:633:A:OP2	2.18	0.73
1:1A:542:C:OP1	27:15:16:ARG:NH2	2.21	0.73
32:1a:1027:C:C2	32:1a:1034:G:N2	2.56	0.73
32:2a:1029:C:N3	32:2a:1032:G:N2	2.36	0.73
2:2B:75:G:HO2'	21:2Z:85:HIS:HE2	1.34	0.73
32:2a:1029:C:N4	32:2a:1032:G:N1	2.36	0.73
36:2e:78:HIS:HE1	36:2e:143:ARG:H	1.34	0.73
40:2i:29:ASN:ND2	40:2i:65:VAL:O	2.21	0.73
1:1A:758:G:H1	1:1A:767:C:H42	1.36	0.73
1:2A:1011:G:OP2	16:2U:66:ASN:ND2	2.21	0.73
1:2A:2353:G:O2'	22:20:33:ALA:O	2.07	0.73
6:1G:142:PRO:HB2	26:14:31:ILE:HG21	1.71	0.73
7:1H:27:LYS:NZ	7:1H:32:GLU:OE1	2.22	0.73
32:1a:1027:C:N4	32:1a:1034:G:C6	2.55	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:1a:1402:4OC:HM22	32:1a:1403:C:H5'	1.71	0.73
49:2r:52:PRO:HB2	49:2r:54:ARG:HG2	1.71	0.73
43:1l:27:LEU:O	43:1l:33:ARG:NH2	2.20	0.73
3:2D:2:ALA:N	3:2D:200:ASP:OD2	2.22	0.73
32:1a:1145:C:H4'	32:1a:1146:A:H5'	1.71	0.72
32:1a:1437:C:H42	32:1a:1464:G:H1	1.37	0.72
9:2N:32:THR:HG23	9:2N:37:LYS:HB2	1.71	0.72
23:21:50:ARG:HG2	23:21:59:THR:HG22	1.71	0.72
1:1A:2518:U:H1'	54:1w:76:PPU:HD1	1.71	0.72
1:2A:2006:C:O2'	1:2A:2823:A:N3	2.20	0.72
26:24:61:ARG:HH22	50:2s:9:VAL:HG21	1.54	0.72
32:2a:1001:A:N1	32:2a:1040:U:O4	2.22	0.72
1:2A:2199:A:OP1	23:21:50:ARG:NH2	2.23	0.72
32:1a:78:G:C2	32:1a:91:C:C4	2.77	0.72
32:1a:948:C:H42	32:1a:1233:G:H1	1.36	0.72
32:2a:1030(A):G:N2	32:2a:1030(D):A:OP2	2.22	0.72
1:1A:1085:G:H1	1:1A:1162:C:H42	1.34	0.72
5:1F:63:LYS:NZ	5:1F:75:HIS:O	2.21	0.72
1:2A:910:A:H62	12:2Q:12:GLN:HA	1.53	0.72
18:1W:67:ASP:N	18:1W:67:ASP:OD1	2.22	0.72
48:1q:66:SER:O	48:1q:70:ARG:NH1	2.23	0.72
1:2A:249:C:O2	30:28:12:LYS:NZ	2.22	0.72
32:1a:1147:C:HO2'	40:1i:5:TYR:HH	1.35	0.72
1:2A:955:C:OP1	12:2Q:87:LYS:NZ	2.22	0.72
3:2D:72:LYS:NZ	3:2D:99:ASP:OD2	2.23	0.72
1:1A:1098:C:H42	1:1A:1153:G:H1	1.38	0.72
32:1a:925:G:H1	32:1a:1391:U:H3	1.36	0.72
1:1A:94:G:HO2'	24:12:48:HIS:HD1	1.38	0.71
1:1A:694:G:H1	1:1A:696:C:H42	1.37	0.71
1:1A:931:C:H42	1:1A:938:G:H1	1.38	0.71
19:2X:88:LYS:HE2	19:2X:93:GLU:HG3	1.72	0.71
1:1A:2304:C:OP1	14:1S:17:ARG:NH2	2.24	0.71
1:1A:2520:G:H1	1:1A:2592:U:H3	1.38	0.71
5:2F:40:GLN:HE22	5:2F:182:ASN:HB2	1.55	0.71
15:2T:100:TYR:HD1	15:2T:103:ARG:HH12	1.35	0.71
16:2U:49:HIS:O	16:2U:53:ARG:N	2.21	0.71
10:2O:35:VAL:HG11	10:2O:103:ALA:HB3	1.70	0.71
32:2a:1013:G:N2	32:2a:1016:A:OP2	2.22	0.71
1:1A:2602:A:H5''	3:1D:239:ARG:HG3	1.72	0.71
18:1W:23:LEU:HD11	27:15:25:LEU:HB2	1.73	0.71
32:2a:501:C:OP1	43:2l:117:ARG:NH2	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:1f:33:TYR:HB2	37:1f:75:LEU:HD12	1.72	0.71
1:2A:2060:A:N7	5:2F:74:ARG:NH2	2.39	0.70
1:1A:609:A:H5'	5:1F:89:VAL:HG21	1.73	0.70
32:2a:925:G:O2'	32:2a:927:G:OP1	2.10	0.70
1:1A:1241:C:HO2'	1:1A:1273:G:HO2'	1.38	0.70
5:1F:185:ASP:OD1	5:1F:188:ARG:NH1	2.24	0.70
1:1A:2146:G:H1	1:1A:2196:C:H42	1.36	0.70
1:1A:2741:U:H5'	10:1O:70:LYS:HZ3	1.56	0.70
41:1j:40:LEU:HB2	41:1j:69:ASN:HB2	1.73	0.70
33:1b:110:GLN:HA	33:1b:113:HIS:HD2	1.55	0.70
1:2A:2125:G:N1	1:2A:2172:U:OP1	2.23	0.70
1:2A:2637:U:H5''	4:2E:82:ARG:HH12	1.56	0.70
32:1a:501:C:H1'	32:1a:549:C:H1'	1.72	0.70
32:1a:834:C:O2	32:1a:852:G:N2	2.22	0.70
32:2a:377:G:H1	32:2a:386:C:H42	1.38	0.70
32:2a:1316:G:N7	50:2s:7:LYS:NZ	2.39	0.70
4:1E:119:ARG:NH1	4:1E:159:HIS:O	2.24	0.70
12:1Q:17:LEU:HD21	12:1Q:41:TRP:HE1	1.54	0.70
32:1a:134:A:N1	47:1p:25:ARG:NH1	2.38	0.70
46:1o:74:ASP:OD2	46:1o:77:ARG:NH1	2.25	0.70
32:2a:1047:G:H1	32:2a:1210:C:H42	1.38	0.70
50:2s:41:VAL:HG12	50:2s:44:MET:HG3	1.73	0.70
1:1A:2723:A:H5''	1:1A:2724:U:H5''	1.73	0.70
33:1b:212:GLN:NE2	33:1b:234:PRO:O	2.25	0.70
3:2D:38:LYS:NZ	3:2D:39:LYS:O	2.24	0.70
26:24:14:ILE:HG12	26:24:31:ILE:HB	1.73	0.70
32:1a:1030:C:N4	32:1a:1031:G:H1	1.89	0.70
32:2a:986:A:N3	50:2s:52:TYR:OH	2.23	0.70
32:1a:1000:U:O4	32:1a:1041:A:N1	2.25	0.70
1:2A:2313:C:H5''	6:2G:91:ARG:HD3	1.73	0.70
1:1A:1313:U:OP2	59:1A:3509:HOH:O	2.10	0.69
11:1P:52:GLU:OE1	11:1P:55:ARG:NH1	2.25	0.69
32:2a:1030:C:N3	32:2a:1031:G:N2	2.40	0.69
33:2b:88:ALA:HB2	33:2b:219:VAL:HG13	1.73	0.69
1:1A:2585:C:N4	54:1w:75:C:O2'	2.25	0.69
47:1p:13:HIS:O	47:1p:42:ARG:NH1	2.23	0.69
32:2a:1226:C:N4	44:2m:104:ARG:HG2	2.06	0.69
50:2s:11:VAL:HG12	50:2s:13:ASP:H	1.58	0.69
1:1A:2404:A:OP2	1:1A:2434:A:N6	2.24	0.69
1:1A:1104:G:N2	1:1A:1126:C:N3	2.35	0.69
32:1a:110:C:O2'	47:1p:25:ARG:O	2.11	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:2T:73:GLU:OE2	15:2T:103:ARG:NE	2.22	0.69
36:2e:60:TYR:OH	36:2e:64:ARG:NH2	2.25	0.69
1:1A:2258:G:H2'	1:1A:2259:A:H8	1.57	0.69
12:1Q:116:GLU:OE2	12:1Q:119:ARG:NH2	2.16	0.69
33:1b:7:VAL:O	33:1b:217:ARG:NH1	2.25	0.69
1:1A:1846:A:OP2	3:1D:54:ARG:NH2	2.25	0.69
1:1A:2158:C:N3	1:1A:2177:G:N2	2.40	0.69
1:2A:2100:G:H1	1:2A:2189:U:H3	1.39	0.69
32:2a:417:C:H42	32:2a:426:G:H1	1.39	0.69
1:1A:419:C:H5''	1:1A:436:C:H5''	1.73	0.69
32:1a:1071:C:H2'	32:1a:1072:G:H8	1.58	0.69
1:2A:918:A:N3	2:2B:80:U:O2'	2.25	0.69
1:2A:1674:G:N2	1:2A:1677:A:N1	2.39	0.69
32:2a:946:A:O2'	32:2a:1333:A:N3	2.24	0.69
1:1A:615:G:H1	1:1A:712:C:H42	1.39	0.69
1:1A:1102:G:H1'	1:1A:1149:A:H61	1.56	0.69
1:1A:2145:G:N2	1:1A:2197:C:N3	2.36	0.69
32:1a:1209:C:O2'	32:1a:1214:C:N4	2.26	0.69
1:2A:2138:C:N3	1:2A:2153:G:N2	2.37	0.69
25:23:5:LYS:HG3	25:23:36:VAL:HG22	1.74	0.69
41:2j:40:LEU:HB2	41:2j:69:ASN:HB2	1.75	0.69
1:1A:1100:A:N6	1:1A:1151:U:N3	2.26	0.69
1:2A:1530:C:O2'	1:2A:1531:C:O5'	2.10	0.69
32:2a:1329:A:N7	52:2u:7:ARG:NH2	2.41	0.69
26:14:45:GLY:O	26:14:47:GLN:N	2.24	0.69
1:2A:2127:G:C6	1:2A:2161:C:N4	2.61	0.69
5:2F:157:VAL:HB	5:2F:194:MET:HG2	1.74	0.69
40:2i:28:VAL:HG22	40:2i:63:ILE:HB	1.73	0.69
1:1A:1487:G:H2'	1:1A:1488:G:H8	1.56	0.68
32:1a:532:A:N6	32:1a:1206:G:O2'	2.26	0.68
1:2A:2299:G:N1	1:2A:2318:G:N7	2.41	0.68
32:1a:1246:C:H42	32:1a:1291:G:H1	1.38	0.68
34:1c:20:SER:OG	34:1c:40:ARG:NH2	2.23	0.68
1:2A:1654:A:OP1	13:2R:1:MET:N	2.20	0.68
1:1A:1334:U:H3	1:1A:1372:U:H3	1.40	0.68
18:1W:25:ARG:NH2	18:1W:74:ALA:O	2.26	0.68
1:1A:270:C:O2'	1:1A:272:U:OP2	2.11	0.68
11:1P:106:LEU:HD22	11:1P:112:LEU:HD12	1.75	0.68
32:1a:1030:C:N3	32:1a:1031:G:N2	2.40	0.68
1:2A:2131:G:H1	1:2A:2158:A:H62	1.41	0.68
1:1A:977:G:OP2	25:13:29:ARG:NH2	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:1a:987:G:H1	32:1a:1218:C:H42	1.41	0.68
1:2A:1226:A:OP1	17:2V:84:LYS:NZ	2.20	0.68
1:2A:1312:U:OP2	19:2X:63:LYS:NZ	2.22	0.68
1:1A:1140:U:H1'	1:1A:1143:U:H5	1.59	0.68
3:1D:85:ASP:OD2	3:1D:88:ARG:NH1	2.27	0.68
23:11:50:ARG:HG2	23:11:59:THR:HG22	1.75	0.68
40:1i:28:VAL:HG22	40:1i:63:ILE:HB	1.75	0.68
32:2a:1089:G:N2	32:2a:1096:C:N3	2.36	0.68
1:2A:79:G:H1	1:2A:107:C:H42	1.40	0.68
32:2a:564:C:O2'	39:2h:91:ARG:NH1	2.25	0.68
32:2a:757:U:O2'	32:2a:879:C:O2	2.12	0.68
32:1a:78:G:N1	32:1a:91:C:N4	2.42	0.68
1:2A:572:A:OP2	17:2V:78:LYS:NZ	2.27	0.68
1:2A:1364:G:OP1	23:21:2:SER:N	2.27	0.68
1:1A:2205:C:H2'	1:1A:2206:G:C8	2.29	0.68
36:1e:78:HIS:HE1	36:1e:143:ARG:H	1.41	0.68
1:1A:2794:A:H5''	1:1A:2795:G:H5'	1.76	0.67
44:1m:3:ARG:HG2	44:1m:8:GLU:HA	1.76	0.67
32:2a:987:G:H1	32:2a:1218:C:H42	1.41	0.67
32:2a:1402:4OC:HM22	32:2a:1403:C:H5'	1.76	0.67
1:1A:2158:C:N4	1:1A:2177:G:N1	2.42	0.67
1:1A:2899:C:H3'	1:1A:2900:G:H8	1.57	0.67
32:1a:953:G:N7	44:1m:104:ARG:NH2	2.43	0.67
32:1a:1325:C:OP1	52:1u:15:ARG:NH2	2.27	0.67
36:1e:110:LEU:HD13	36:1e:118:ILE:HD13	1.75	0.67
1:2A:89:G:H3'	1:2A:90:U:H5''	1.76	0.67
1:2A:2139:C:N4	1:2A:2152:G:H1	1.91	0.67
1:2A:2637:U:OP1	4:2E:82:ARG:NH1	2.26	0.67
9:2N:97:ARG:HA	9:2N:100:GLU:HB2	1.75	0.67
47:2p:21:VAL:HG22	47:2p:33:ILE:HD12	1.76	0.67
1:2A:108:U:H2'	1:2A:109:G:H8	1.58	0.67
1:1A:1615:G:H5''	3:1D:61:LEU:HD13	1.76	0.67
1:2A:83:G:OP1	20:2Y:95:LYS:NZ	2.27	0.67
1:1A:1653:C:N4	1:1A:1668:G:OP2	2.27	0.67
32:1a:501:C:OP1	43:1l:117:ARG:NH2	2.27	0.67
32:2a:52:G:H1	32:2a:359:U:H3	1.43	0.67
1:1A:2514:G:H5''	1:1A:2515:2MA:H5''	1.75	0.67
32:1a:299:G:H2'	32:1a:300:A:C8	2.30	0.67
32:1a:1343:G:H4'	40:1i:122:ALA:HB3	1.76	0.67
32:1a:1391:U:H2'	32:1a:1392:G:C8	2.30	0.67
32:2a:958:A:N3	32:2a:985:C:O2'	2.26	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:2i:55:ALA:HA	40:2i:58:HIS:HD2	1.60	0.67
1:1A:1388:A:O2'	1:1A:1390:G:OP2	2.12	0.67
1:2A:2136:C:N4	1:2A:2155:G:H1	1.90	0.67
31:29:25:VAL:HB	31:29:34:GLN:HB2	1.75	0.67
43:2l:71:PRO:O	43:2l:102:ARG:NH2	2.28	0.67
32:1a:1412:C:H2'	32:1a:1413:A:C8	2.30	0.67
32:2a:1328:C:OP1	52:2u:21:TYR:OH	2.12	0.67
1:1A:1810:U:OP2	1:1A:1815:A:N6	2.25	0.67
38:1g:69:VAL:HG21	38:1g:104:LEU:HD11	1.77	0.67
1:2A:309:G:N3	1:2A:329:G:O2'	2.28	0.67
55:2x:52:G:H1	55:2x:62:C:H42	1.40	0.67
1:1A:1711:A:H61	1:1A:2018:C:H42	1.43	0.67
3:1D:38:LYS:NZ	3:1D:39:LYS:O	2.27	0.67
11:1P:38:GLN:O	11:1P:40:SER:N	2.25	0.67
32:1a:304:U:H2'	32:1a:305:G:C8	2.30	0.67
1:2A:557:U:H2'	1:2A:558:G:H8	1.60	0.67
4:2E:28:ALA:HB3	4:2E:93:VAL:HG12	1.77	0.67
32:1a:1510:U:H2'	32:1a:1511:G:C8	2.31	0.66
32:2a:674:G:H2'	32:2a:675:A:H8	1.59	0.66
16:1U:50:ARG:O	16:1U:54:LYS:NZ	2.27	0.66
32:1a:953:G:H5'	32:1a:965:A:H61	1.60	0.66
34:1c:152:ILE:HD11	34:1c:199:LYS:HD2	1.78	0.66
11:2P:106:LEU:HD22	11:2P:112:LEU:HD12	1.76	0.66
1:1A:23:G:OP1	1:1A:529:U:N3	2.18	0.66
32:2a:1005:A:H5''	32:2a:1006:C:C5	2.30	0.66
36:2e:35:GLY:HA3	36:2e:41:VAL:HG12	1.76	0.66
1:1A:655:G:N2	1:1A:658:A:OP2	2.24	0.66
1:1A:2030:C:H2'	1:1A:2031:G:H8	1.60	0.66
32:1a:630:G:H2'	32:1a:631:G:H8	1.60	0.66
1:2A:2110:G:OP1	1:2A:2118:U:N3	2.24	0.66
1:1A:272:U:H5'	8:1I:50:ARG:HH22	1.60	0.66
10:1O:35:VAL:HG11	10:1O:103:ALA:HB3	1.78	0.66
55:2x:14:A:H61	55:2x:21:A:H2	1.42	0.66
1:1A:2325:C:H5''	6:1G:91:ARG:HD3	1.76	0.66
32:2a:1252:A:H61	32:2a:1285:A:H61	1.44	0.66
33:2b:16:HIS:HB3	33:2b:210:SER:HB2	1.78	0.66
5:2F:51:THR:HB	5:2F:88:VAL:HG11	1.77	0.66
5:2F:101:LEU:O	5:2F:106:ARG:NH1	2.29	0.66
1:1A:324:A:OP1	20:1Y:86:ARG:NH2	2.29	0.66
1:2A:729:G:OP2	3:2D:13:ARG:NH2	2.29	0.66
1:2A:2127:G:C2	1:2A:2161:C:N3	2.63	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2A:2127:G:N1	1:2A:2161:C:N4	2.43	0.66
1:2A:2127:G:N2	1:2A:2161:C:C2	2.64	0.66
25:13:27:GLY:O	25:13:33:GLN:NE2	2.29	0.66
6:2G:47:LYS:HG3	6:2G:48:GLU:H	1.60	0.66
32:2a:779:C:O2'	42:2k:120:ARG:NH1	2.29	0.66
31:19:25:VAL:HB	31:19:34:GLN:HB2	1.78	0.66
33:1b:163:PHE:HD1	33:1b:185:ILE:HG13	1.61	0.66
32:2a:1029:C:N4	32:2a:1032:G:C6	2.64	0.66
9:1N:67:LEU:HA	9:1N:87:LEU:HD22	1.76	0.65
50:1s:11:VAL:HG12	50:1s:13:ASP:H	1.60	0.65
1:2A:1043:C:N4	1:2A:1112:G:O6	2.30	0.65
32:2a:559:A:H4'	32:2a:560:U:H3'	1.77	0.65
34:2c:78:GLY:HA3	34:2c:83:ARG:H	1.61	0.65
35:2d:23:GLY:HA3	35:2d:112:VAL:HG12	1.78	0.65
35:2d:53:ASP:HB3	35:2d:57:ARG:HH12	1.61	0.65
3:1D:232:PRO:O	59:1D:402:HOH:O	2.14	0.65
55:1x:53:G:H1	55:1x:61:C:N4	1.95	0.65
32:2a:269:C:H2'	32:2a:270:A:H8	1.62	0.65
35:2d:26:CYS:CB	58:2d:302:SF4:S1	2.83	0.65
41:2j:11:PHE:HE1	41:2j:67:THR:HG22	1.61	0.65
32:2a:309:G:H2'	32:2a:310:G:H8	1.61	0.65
1:1A:2589:A:H5''	1:1A:2590:G:H5'	1.78	0.65
43:1l:32:PHE:HB3	43:1l:84:LEU:HD21	1.79	0.65
1:2A:2302:G:N2	6:2G:126:ASP:OD1	2.27	0.65
25:23:7:LYS:NZ	25:23:32:GLN:O	2.23	0.65
1:1A:1001:G:N2	1:1A:1005:A:OP2	2.29	0.65
1:1A:2610:A:OP1	59:1A:3510:HOH:O	2.14	0.65
5:1F:22:ALA:HB1	5:1F:24:LEU:HD13	1.77	0.65
1:2A:711:G:H1	1:2A:720:C:H42	1.45	0.65
1:2A:1592:C:H2'	1:2A:1593:G:H8	1.61	0.65
23:21:56:GLN:HE21	23:21:87:PRO:HG3	1.61	0.65
1:1A:964:A:N3	2:1B:80:U:O2'	2.25	0.65
21:1Z:154:ASP:OD1	21:1Z:154:ASP:N	2.30	0.65
33:1b:101:MET:HA	33:1b:108:ILE:HG13	1.77	0.65
1:2A:33:U:O4	1:2A:446:G:O2'	2.13	0.65
1:2A:2399:G:O2'	28:26:19:ARG:NH1	2.29	0.65
12:2Q:38:GLU:HG3	12:2Q:127:ILE:HB	1.79	0.65
32:2a:316:G:OP2	32:2a:351:G:O2'	2.14	0.65
32:2a:1075:C:OP1	33:2b:179:LYS:NZ	2.25	0.65
1:2A:1651:G:OP1	13:2R:40:LYS:NZ	2.28	0.65
1:2A:2133:G:O2'	1:2A:2157:G:N2	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:2b:187:LEU:HA	33:2b:201:ILE:HB	1.79	0.65
41:2j:9:ARG:NE	41:2j:69:ASN:OD1	2.30	0.65
1:1A:866:A:OP2	1:1A:1232:G:N2	2.22	0.65
32:1a:958:A:N3	32:1a:985:C:O2'	2.27	0.65
1:2A:2127:G:N1	1:2A:2161:C:C4	2.64	0.65
24:22:16:LEU:O	24:22:67:LYS:NZ	2.30	0.65
50:2s:50:ALA:HB1	50:2s:57:HIS:HB3	1.79	0.65
32:2a:1079:G:O3'	36:2e:14:ARG:NH2	2.30	0.65
7:1H:3:ARG:HH11	7:1H:4:ILE:H	1.44	0.65
32:1a:1295:G:O2'	44:1m:14:ARG:NH1	2.30	0.65
1:2A:1827:C:OP2	3:2D:222:ARG:NH1	2.28	0.65
7:1H:164:TYR:HB2	7:1H:167:GLU:HB2	1.78	0.64
3:2D:106:ILE:HD11	3:2D:144:ALA:HB2	1.79	0.64
20:2Y:102:CYS:SG	20:2Y:103:GLY:N	2.69	0.64
1:1A:1371:G:OP1	1:1A:1694:G:O2'	2.12	0.64
32:1a:426:G:OP1	35:1d:38:TYR:OH	2.12	0.64
32:1a:828:A:H2'	32:1a:829:G:O4'	1.97	0.64
34:1c:187:ALA:HB3	34:1c:198:VAL:HB	1.79	0.64
1:2A:24:G:O2'	18:2W:78:GLU:O	2.13	0.64
38:2g:46:ALA:HB1	38:2g:121:ALA:HB2	1.79	0.64
1:1A:649:C:O2'	1:1A:704:U:OP1	2.15	0.64
1:1A:1199:C:OP1	16:1U:92:ARG:NH2	2.30	0.64
39:1h:110:ALA:HB3	39:1h:121:ASP:HB3	1.79	0.64
32:2a:975:A:H4'	32:2a:976:G:H5''	1.77	0.64
37:2f:33:TYR:HB2	37:2f:75:LEU:HD12	1.78	0.64
1:1A:655:G:OP1	30:18:47:LYS:NZ	2.30	0.64
32:1a:949:A:N6	32:1a:1232:U:H3	1.94	0.64
44:1m:33:ALA:HB1	44:1m:56:LEU:HD11	1.79	0.64
32:2a:110:C:O2'	47:2p:25:ARG:O	2.15	0.64
32:1a:1030:C:H42	32:1a:1031:G:H1	1.43	0.64
32:1a:1178:G:OP1	40:1i:93:ARG:NH2	2.30	0.64
32:1a:1202:G:O3'	45:1n:3:ARG:NH1	2.31	0.64
41:1j:11:PHE:HE1	41:1j:67:THR:HG22	1.62	0.64
1:2A:882:G:H2'	1:2A:883:G:C8	2.31	0.64
32:1a:28:G:O2'	32:1a:296:U:OP1	2.16	0.64
1:2A:1853:A:N3	1:2A:2233:U:O2'	2.24	0.64
3:2D:136:ILE:O	3:2D:168:ARG:NH2	2.30	0.64
1:1A:1093:G:H2'	1:1A:1156:G:H1	1.61	0.64
1:1A:2519:C:O2'	54:1w:75:C:O2	2.16	0.64
32:1a:1030:C:N4	32:1a:1031:G:N1	2.46	0.64
32:2a:297:G:N2	32:2a:300:A:OP2	2.29	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:2a:922:G:H4'	36:2e:20:GLN:HA	1.78	0.64
32:2a:1172:C:H2'	32:2a:1173:G:H8	1.63	0.64
14:2S:66:ALA:HA	14:2S:69:VAL:HG12	1.79	0.64
15:2T:60:THR:HG22	15:2T:77:PRO:HA	1.78	0.64
5:1F:185:ASP:HA	5:1F:188:ARG:HD3	1.78	0.64
32:1a:77:G:H1	32:1a:92:C:H42	1.43	0.64
55:1x:4:G:H1	55:1x:69:C:N4	1.96	0.64
1:2A:1451:C:H42	1:2A:1459:G:H1	1.46	0.64
9:2N:58:ASP:N	9:2N:58:ASP:OD1	2.27	0.64
1:1A:929:G:H1	1:1A:940:C:H42	1.44	0.63
1:1A:2649:U:OP1	4:1E:82:ARG:NH1	2.30	0.63
1:1A:2740:G:O2'	10:1O:70:LYS:NZ	2.31	0.63
32:1a:200:G:H1	32:1a:217:C:N4	1.96	0.63
7:2H:164:TYR:HB2	7:2H:167:GLU:HB2	1.80	0.63
1:1A:231:G:N2	1:1A:244:A:OP2	2.19	0.63
3:1D:2:ALA:N	3:1D:200:ASP:OD2	2.30	0.63
5:2F:12:LEU:HB3	5:2F:126:VAL:HG12	1.79	0.63
33:2b:84:GLU:OE1	33:2b:87:ARG:NH1	2.31	0.63
44:1m:9:ILE:HB	44:1m:18:ALA:HB1	1.79	0.63
10:2O:78:ARG:NH2	15:2T:73:GLU:OE1	2.30	0.63
32:1a:584:G:H5'	48:1q:91:ARG:HH22	1.63	0.63
32:1a:1250:A:H4'	40:1i:68:GLY:N	2.14	0.63
1:2A:1607:C:N4	1:2A:1622:G:OP2	2.31	0.63
34:1c:17:ASP:O	34:1c:54:ARG:NH2	2.30	0.63
32:2a:257:G:H1	32:2a:269:C:H42	1.45	0.63
32:2a:1075:C:H42	32:2a:1082:G:H1	1.46	0.63
32:2a:1243:C:N4	32:2a:1294:G:H1	1.96	0.63
1:1A:2800:C:H1'	4:1E:62:PRO:HG3	1.79	0.63
32:2a:978:A:O2'	32:2a:1322:C:N3	2.31	0.63
34:2c:60:ALA:HB3	34:2c:63:ASN:HD21	1.62	0.63
1:2A:1309:G:O2'	1:2A:1611:C:O2'	2.14	0.63
1:2A:2030:A:H4'	1:2A:2031:A:H8	1.62	0.63
1:1A:1057:G:H4'	16:1U:75:ASN:HD22	1.62	0.63
1:2A:2816:C:O2	1:2A:2883:A:O2'	2.17	0.63
3:2D:133:LEU:HD23	3:2D:136:ILE:HD12	1.81	0.63
11:2P:52:GLU:OE1	11:2P:55:ARG:NH1	2.32	0.63
32:2a:982:U:H5''	45:2n:6:LEU:HD21	1.80	0.63
38:2g:150:ALA:HA	42:2k:59:TYR:HB3	1.81	0.63
1:1A:854:U:H2'	1:1A:855:G:H8	1.64	0.63
3:1D:79:VAL:HG21	3:1D:111:LEU:HD11	1.80	0.63
32:1a:406:G:H1	32:1a:436:C:H42	1.47	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:1a:1243:C:H42	32:1a:1294:G:H1	1.47	0.63
55:1x:8:4SU:O5'	55:1x:8:4SU:H6	1.98	0.63
8:2I:78:THR:O	8:2I:104:GLN:NE2	2.32	0.63
20:2Y:14:LEU:HB2	20:2Y:75:ILE:HD11	1.80	0.63
1:2A:2127:G:N2	1:2A:2161:C:N3	2.46	0.62
3:2D:202:LYS:NZ	32:2a:773:G:O3'	2.32	0.62
32:2a:142:G:H2'	32:2a:143:A:C8	2.34	0.62
44:2m:90:LEU:HD23	44:2m:93:ARG:HD2	1.81	0.62
55:2x:19:G:H1	55:2x:56:C:H42	1.47	0.62
1:1A:2542:A:N7	7:1H:172:LYS:NZ	2.47	0.62
44:1m:58:GLU:O	44:1m:62:ASN:ND2	2.27	0.62
1:2A:467:G:HO2'	1:2A:796:C:HO2'	1.43	0.62
14:2S:28:VAL:HG11	14:2S:98:VAL:HG13	1.81	0.62
1:1A:2227:G:H3'	1:1A:2228:G:N7	2.14	0.62
7:2H:86:GLU:HB2	7:2H:165:ALA:HB2	1.81	0.62
50:2s:27:GLU:HB2	50:2s:28:LYS:HD3	1.81	0.62
1:1A:863:C:O2'	1:1A:977:G:O6	2.16	0.62
1:1A:1358:U:OP2	19:1X:63:LYS:NZ	2.25	0.62
40:1i:55:ALA:HA	40:1i:58:HIS:HD2	1.64	0.62
11:2P:93:GLY:H	11:2P:123:LEU:HD22	1.64	0.62
1:1A:1105:G:N2	1:1A:1125:C:N3	2.46	0.62
1:1A:2272:C:O2'	1:1A:2400:A:O2'	2.18	0.62
32:1a:396:G:O2'	32:1a:398:C:OP1	2.15	0.62
42:1k:34:ASP:OD1	42:1k:37:GLY:N	2.33	0.62
1:2A:117:G:OP2	1:2A:119:A:O2'	2.17	0.62
1:2A:2218:U:H5''	1:2A:2219:G:C8	2.34	0.62
4:2E:36:ARG:NH1	4:2E:85:ASN:OD1	2.33	0.62
32:2a:932:C:H2'	32:2a:933:G:H8	1.63	0.62
32:2a:1312:G:H1	32:2a:1325:C:H42	1.45	0.62
1:1A:2525:G:O2'	4:1E:154:LYS:NZ	2.33	0.62
8:1I:92:VAL:HG13	8:1I:120:ILE:HB	1.82	0.62
32:1a:319:G:H1	32:1a:334:C:H42	1.47	0.62
37:1f:6:VAL:HB	37:1f:63:TYR:HB2	1.80	0.62
2:2B:75:G:O2'	21:2Z:85:HIS:NE2	2.32	0.62
1:1A:2227:G:H3'	1:1A:2228:G:C8	2.34	0.62
37:1f:37:VAL:HA	37:1f:65:VAL:HG12	1.80	0.62
1:2A:599:G:OP1	11:2P:9:ASN:ND2	2.33	0.62
32:2a:1500:A:H5''	32:2a:1508:G:H5''	1.81	0.62
1:1A:1133:G:H2'	1:1A:1135:G:O4'	1.99	0.62
1:1A:1360:C:H42	1:1A:1384:G:H1	1.47	0.62
1:1A:2063:U:H2'	1:1A:2064:A:H8	1.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:1E:134:ILE:HA	4:1E:137:HIS:HD2	1.65	0.62
1:2A:224:G:O6	1:2A:419:C:O2'	2.16	0.62
1:2A:880:G:N2	1:2A:898:C:O2	2.33	0.62
10:2O:97:ARG:NH1	32:2a:339:C:OP2	2.32	0.62
32:2a:584:G:H5'	48:2q:91:ARG:HH22	1.65	0.62
32:1a:1055:A:N7	32:1a:1200:C:N4	2.46	0.62
1:2A:2162:G:H4'	1:2A:2172:U:H2'	1.81	0.62
32:2a:673:G:H2'	32:2a:674:G:C8	2.34	0.62
47:2p:57:ARG:NH2	47:2p:79:VAL:O	2.33	0.62
1:1A:185:A:O2'	1:1A:852:G:O6	2.12	0.61
1:1A:1185:C:OP2	9:1N:66:LYS:NZ	2.32	0.61
1:1A:1308:A:OP1	18:1W:99:ARG:NH1	2.26	0.61
1:1A:2874:G:H5'	32:1a:1442(A):G:H22	1.63	0.61
15:1T:60:THR:HG22	15:1T:77:PRO:HA	1.81	0.61
32:2a:1240:U:N3	38:2g:30:ILE:O	2.24	0.61
14:1S:14:VAL:O	14:1S:18:ILE:HG12	2.00	0.61
32:1a:986:A:N3	50:1s:52:TYR:OH	2.33	0.61
44:1m:47:ASP:OD1	44:1m:47:ASP:N	2.33	0.61
1:2A:314:A:H2'	1:2A:315:G:H8	1.65	0.61
38:2g:79:ARG:HG3	38:2g:80:VAL:H	1.65	0.61
1:1A:2641:A:O2'	1:1A:2642:G:OP2	2.15	0.61
32:1a:677:U:H3	32:1a:713:G:H22	1.47	0.61
36:1e:105:VAL:HG21	36:1e:128:PRO:HB3	1.82	0.61
44:1m:13:LYS:HA	44:1m:44:ARG:HH11	1.66	0.61
1:2A:521:G:H2'	1:2A:522:G:H8	1.66	0.61
21:2Z:159:PRO:HA	21:2Z:161:VAL:HG12	1.82	0.61
32:2a:324:G:N1	32:2a:327:A:OP2	2.33	0.61
1:1A:1228:G:O2'	25:13:29:ARG:NH1	2.31	0.61
1:1A:2155:G:O2'	1:1A:2179:G:N2	2.32	0.61
3:1D:106:ILE:HD11	3:1D:144:ALA:HB2	1.80	0.61
4:1E:47:VAL:HG11	4:1E:86:PRO:HD2	1.82	0.61
23:11:82:LEU:HA	23:11:85:LEU:HD12	1.83	0.61
34:1c:58:GLU:HB3	41:1j:92:THR:HG21	1.82	0.61
1:2A:1255:U:H5''	1:2A:1256:G:H5''	1.81	0.61
1:1A:1004:A:N3	1:1A:2469:U:O2'	2.32	0.61
1:1A:1121:C:H2'	1:1A:1122:C:H2'	1.81	0.61
8:1I:8:PRO:HD3	8:1I:15:VAL:HB	1.82	0.61
28:16:35:GLU:OE2	28:16:50:ARG:NH1	2.34	0.61
1:2A:108:U:H2'	1:2A:109:G:C8	2.35	0.61
1:2A:1532:C:N4	1:2A:1537:G:O6	2.34	0.61
4:2E:134:ILE:HA	4:2E:137:HIS:HD2	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:2c:17:ASP:O	34:2c:54:ARG:NH2	2.33	0.61
9:1N:25:ARG:O	9:1N:29:LYS:NZ	2.32	0.61
32:1a:511:C:OP2	35:1d:49:ARG:NH1	2.32	0.61
32:1a:1089:G:N2	32:1a:1096:C:N3	2.45	0.61
39:1h:69:ARG:NH1	39:1h:73:ASP:O	2.33	0.61
1:2A:953:A:OP1	12:2Q:18:LYS:NZ	2.32	0.61
1:2A:1889:A:H2'	1:2A:1890:A:C8	2.36	0.61
1:1A:153:C:H2'	1:1A:154:G:H8	1.66	0.61
1:1A:2055:A:O2'	1:1A:2057:G:OP2	2.17	0.61
8:1I:78:THR:O	8:1I:104:GLN:NE2	2.34	0.61
1:2A:1697:G:OP2	1:2A:1698:A:O2'	2.19	0.61
1:2A:2312:U:H5'	6:2G:88:ILE:HD11	1.82	0.61
1:2A:2521:C:O2'	1:2A:2564:A:N3	2.33	0.61
33:2b:223:ILE:HA	33:2b:226:ARG:HG2	1.82	0.61
34:2c:9:GLY:HA3	45:2n:49:HIS:HA	1.83	0.61
43:2l:32:PHE:HB3	43:2l:84:LEU:HD21	1.83	0.61
1:1A:811:A:H5'	3:1D:210:GLY:HA2	1.83	0.61
1:1A:1139:G:H3'	1:1A:1140:U:H5''	1.80	0.61
1:1A:2534:U:O2'	1:1A:2659:U:OP1	2.16	0.61
32:1a:78:G:N2	32:1a:91:C:N3	2.49	0.61
32:1a:1412:C:H2'	32:1a:1413:A:H8	1.65	0.61
42:1k:34:ASP:OD1	42:1k:38:ASN:N	2.34	0.61
1:2A:693:C:O2'	1:2A:1353:A:N3	2.30	0.61
1:2A:1007:C:OP1	9:2N:35:ARG:NH1	2.33	0.61
1:2A:1153:C:OP1	16:2U:92:ARG:NH2	2.33	0.61
1:2A:2165:G:H22	1:2A:2172:U:H5	1.48	0.61
1:2A:2787:C:H1'	4:2E:62:PRO:HG3	1.82	0.61
32:2a:835:U:H3	32:2a:851:G:H1	1.48	0.61
32:2a:976:G:OP2	32:2a:1358:U:O2'	2.18	0.61
32:2a:1028:C:N3	32:2a:1033:G:O6	2.34	0.61
1:1A:528:A:H4'	1:1A:529:U:H5''	1.83	0.61
1:1A:1874:C:O2'	3:1D:256:GLY:O	2.18	0.61
1:1A:1884:A:N3	1:1A:2245:U:O2'	2.34	0.61
2:1B:96:U:H2'	2:1B:97:G:H8	1.64	0.61
32:1a:1009:G:O6	32:1a:1020:U:O2	2.19	0.61
1:2A:674:G:H1'	5:2F:74:ARG:HD3	1.83	0.61
1:2A:1124:C:O2	31:29:36:GLN:NE2	2.34	0.61
32:2a:79:G:H1	32:2a:90:U:H3	1.48	0.61
44:2m:58:GLU:O	44:2m:62:ASN:ND2	2.30	0.61
1:1A:907:U:H2'	1:1A:908:A:H8	1.66	0.61
1:1A:1814:A:HO2'	1:1A:2619:G:HO2'	1.47	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:13:15:TYR:O	25:13:20:LYS:NZ	2.33	0.61
32:1a:130:A:H5'	48:1q:63:ARG:HH11	1.65	0.61
32:1a:1144:G:H21	32:1a:1146:A:H62	1.49	0.61
1:2A:721:C:H2'	1:2A:722:A:H8	1.66	0.61
1:2A:721:C:H2'	1:2A:722:A:C8	2.36	0.61
13:2R:97:VAL:HG22	13:2R:114:VAL:HG22	1.83	0.61
32:2a:582:U:OP1	46:2o:64:ARG:NH1	2.32	0.61
1:1A:793:A:O2'	1:1A:2623:U:O2'	2.18	0.60
1:1A:2177:G:H5''	1:1A:2178:G:N7	2.16	0.60
3:1D:17:THR:HG1	3:1D:205:VAL:H	1.46	0.60
7:2H:86:GLU:OE2	7:2H:132:ARG:NH2	2.34	0.60
21:2Z:52:SER:OG	21:2Z:53:ILE:N	2.34	0.60
32:2a:123:C:O2'	32:2a:290:C:O2	2.18	0.60
32:2a:142:G:H2'	32:2a:143:A:H8	1.66	0.60
32:2a:1071:C:H2'	32:2a:1072:G:H8	1.66	0.60
1:1A:1431:G:O2'	1:1A:1442:U:O2	2.18	0.60
1:1A:1513:G:H2'	1:1A:1594:C:H41	1.66	0.60
33:1b:73:THR:OG1	33:1b:170:GLU:OE2	2.18	0.60
1:2A:630:G:OP1	30:28:47:LYS:NZ	2.34	0.60
32:2a:664:G:H22	32:2a:741:G:H1	1.49	0.60
45:2n:21:TYR:HE1	45:2n:23:ARG:HH11	1.49	0.60
32:1a:1348:U:H2'	32:1a:1349:A:H8	1.66	0.60
34:1c:124:ILE:HD13	34:1c:196:LEU:HD12	1.82	0.60
1:2A:621:A:OP2	11:2P:108:LYS:NZ	2.35	0.60
33:2b:16:HIS:HB2	33:2b:204:ASN:HB2	1.83	0.60
1:1A:1338:U:H2'	1:1A:1339:C:C6	2.36	0.60
1:1A:1945:U:OP1	55:1x:24:U:O2'	2.20	0.60
2:1B:96:U:H2'	2:1B:97:G:C8	2.37	0.60
7:1H:3:ARG:NH1	7:1H:4:ILE:H	1.99	0.60
8:1I:4:ILE:HG12	8:1I:18:VAL:HG22	1.83	0.60
32:1a:332:G:H2'	32:1a:333:G:H8	1.66	0.60
32:1a:509:A:H5'	35:1d:55:ALA:HB2	1.83	0.60
1:2A:2549:G:H1	1:2A:2559:C:H42	1.49	0.60
1:1A:1466:U:O2'	1:1A:1467:G:OP1	2.19	0.60
4:1E:28:ALA:HB3	4:1E:93:VAL:HG12	1.82	0.60
12:1Q:75:THR:HG21	12:1Q:87:LYS:HE2	1.82	0.60
1:2A:1788:C:OP1	3:2D:222:ARG:NH2	2.34	0.60
44:2m:23:TYR:HE2	44:2m:70:LEU:HD22	1.65	0.60
17:1V:59:ALA:HB2	17:1V:96:ILE:HD13	1.83	0.60
32:1a:936:C:H42	32:1a:1379:G:H1	1.48	0.60
41:1j:50:ILE:HA	41:1j:60:ARG:HD3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2A:1385:G:O2'	1:2A:1396:U:O2	2.20	0.60
32:2a:1271:G:C2	32:2a:1272:G:N7	2.69	0.60
36:2e:98:THR:HB	36:2e:117:ASP:HB3	1.82	0.60
1:1A:993:G:N2	1:1A:1015:C:O2	2.35	0.60
24:12:1:MET:SD	24:12:56:GLN:NE2	2.74	0.60
32:1a:323:U:H2'	32:1a:324:G:O4'	2.00	0.60
32:1a:1422:G:H2'	32:1a:1423:G:H8	1.64	0.60
1:2A:631:A:OP1	11:2P:65:ARG:NE	2.29	0.60
54:2w:74:C:O2'	54:2w:75:C:OP1	2.19	0.60
1:2A:793:A:OP2	1:2A:2071:A:O2'	2.20	0.60
1:2A:2093:G:H1	1:2A:2196:C:H42	1.49	0.60
1:1A:2885:C:OP1	15:1T:3:ARG:NH1	2.29	0.60
10:1O:87:ILE:HD12	10:1O:91:LEU:HA	1.84	0.60
32:1a:1150:U:O4	32:1a:1151:A:N6	2.35	0.60
32:1a:1162:C:N3	32:1a:1174:G:N2	2.44	0.60
1:2A:2206:G:H8	1:2A:2207:G:N7	2.00	0.60
1:1A:936:C:O2'	1:1A:937:A:O4'	2.19	0.60
1:1A:2198:A:H2'	1:1A:2199:C:C6	2.37	0.60
36:1e:78:HIS:CD2	39:1h:104:ARG:HD2	2.37	0.60
38:1g:114:ARG:O	38:1g:119:ARG:NH1	2.35	0.60
1:2A:2233:U:H2'	1:2A:2234:G:H8	1.67	0.60
1:2A:2785:C:OP1	4:2E:41:LYS:NZ	2.33	0.60
17:2V:40:LEU:HB2	17:2V:46:VAL:HG12	1.83	0.60
32:2a:142:G:O2'	32:2a:196:A:N1	2.28	0.60
32:2a:1497:G:H1'	32:2a:1518:MA6:H2	1.84	0.60
1:1A:1646:C:OP1	19:1X:58:HIS:NE2	2.29	0.59
1:1A:2162:C:H2'	1:1A:2163:G:H8	1.67	0.59
12:1Q:29:PHE:O	21:1Z:122:ARG:NH2	2.35	0.59
32:1a:68:G:N2	32:1a:101:A:N1	2.47	0.59
32:1a:1359:C:OP1	45:1n:22:THR:OG1	2.18	0.59
10:2O:105:GLU:OE1	10:2O:105:GLU:N	2.31	0.59
17:2V:8:GLY:O	17:2V:10:LYS:NZ	2.34	0.59
55:2x:53:G:H1	55:2x:61:C:H42	1.49	0.59
32:1a:296:U:O2'	32:1a:556:C:O2	2.18	0.59
1:2A:2206:G:H3'	1:2A:2207:G:C8	2.37	0.59
1:2A:2552:2MU:H2'	1:2A:2554:U:OP2	2.02	0.59
15:2T:26:ASP:OD1	15:2T:120:ARG:NH2	2.25	0.59
29:27:22:MET:O	29:27:28:ARG:NH1	2.33	0.59
31:29:16:VAL:HG22	31:29:25:VAL:HG22	1.84	0.59
1:1A:1291:G:OP1	11:1P:13:ASN:ND2	2.34	0.59
1:1A:1941:A:O2'	32:1a:1517:G:N3	2.29	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:2013:U:H2'	1:1A:2014:G:H5''	1.84	0.59
1:1A:2210:C:H2'	1:1A:2211:U:O4'	2.01	0.59
1:1A:2542:A:O2'	1:1A:2544:G:OP2	2.13	0.59
1:1A:2588:G:O2'	1:1A:2591:C:OP2	2.18	0.59
26:14:16:CYS:SG	26:14:17:GLY:N	2.76	0.59
31:19:27:CYS:SG	31:19:28:GLU:N	2.76	0.59
32:1a:1518:MA6:N6	32:1a:1519:MA6:H103	2.18	0.59
32:2a:475:G:H2'	32:2a:476:G:H8	1.68	0.59
36:2e:78:HIS:CE1	36:2e:143:ARG:H	2.19	0.59
39:2h:124:ALA:O	39:2h:128:GLY:N	2.34	0.59
1:1A:1249:A:H61	1:1A:1286:U:H2'	1.67	0.59
32:1a:67:C:H2'	32:1a:68:G:C8	2.37	0.59
35:1d:94:LEU:HD23	35:1d:97:LEU:HD12	1.85	0.59
55:2x:4:G:H1	55:2x:69:C:H42	1.49	0.59
1:1A:1426:G:O2'	1:1A:1616:A:N6	2.36	0.59
33:1b:12:GLU:O	33:1b:15:VAL:HG22	2.01	0.59
34:1c:24:ALA:HB3	34:1c:29:TYR:HD1	1.68	0.59
35:1d:98:GLU:HA	35:1d:103:ASN:HD22	1.67	0.59
1:2A:2167:U:H2'	1:2A:2168:G:H21	1.68	0.59
32:2a:1445:C:O2	32:2a:1457:G:N2	2.19	0.59
44:2m:33:ALA:HB1	44:2m:56:LEU:HD11	1.85	0.59
1:1A:362:G:OP1	20:1Y:4:LYS:NZ	2.36	0.59
1:1A:2227:G:H8	1:1A:2228:G:N7	2.00	0.59
2:1B:75:G:HO2'	21:1Z:85:HIS:HE2	1.51	0.59
41:1j:54:PHE:O	41:1j:56:HIS:ND1	2.35	0.59
49:1r:32:ARG:HA	49:1r:69:THR:HG21	1.85	0.59
55:1x:52:G:H1	55:1x:62:C:N4	2.01	0.59
1:2A:248:G:O2'	1:2A:2432:A:OP1	2.15	0.59
1:2A:1165:U:H2'	1:2A:1166:C:C6	2.38	0.59
1:2A:2443:C:H2'	1:2A:2444:G:H8	1.67	0.59
26:14:61:ARG:HH22	50:1s:9:VAL:HG21	1.67	0.59
33:1b:16:HIS:HB3	33:1b:210:SER:HB2	1.85	0.59
43:1l:24:VAL:HB	43:1l:27:LEU:HD13	1.84	0.59
1:2A:1428:C:N4	1:2A:1570:A:OP2	2.35	0.59
32:2a:1250:A:H4'	40:2i:68:GLY:N	2.16	0.59
1:1A:267:C:H2'	1:1A:268:G:C8	2.38	0.59
1:1A:2297:C:OP2	28:16:6:ARG:NH1	2.35	0.59
32:1a:52:G:H2'	32:1a:53:A:H8	1.68	0.59
32:1a:587:G:N2	32:1a:754:C:OP2	2.35	0.59
32:1a:1348:U:H4'	40:1i:120:ARG:HD2	1.84	0.59
1:2A:1991:U:H2'	1:2A:1992:G:H5''	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:2I:8:PRO:HD3	8:2I:15:VAL:HB	1.83	0.59
8:2I:93:THR:HG22	8:2I:119:PRO:HB3	1.85	0.59
1:1A:741:U:OP1	3:1D:59:LYS:NZ	2.30	0.59
1:1A:983:G:H2'	1:1A:984:G:H8	1.67	0.59
32:1a:1286:A:H2'	32:1a:1287:A:H4'	1.84	0.59
35:1d:119:GLN:HG2	35:1d:123:HIS:CD2	2.38	0.59
1:2A:1507:A:O2'	1:2A:1508:A:O5'	2.21	0.59
21:2Z:154:ASP:OD1	21:2Z:154:ASP:N	2.32	0.59
33:2b:163:PHE:HD1	33:2b:185:ILE:HG13	1.68	0.59
1:1A:2649:U:H5''	4:1E:82:ARG:HH12	1.67	0.59
19:1X:94:GLY:HA3	19:1X:95:LEU:HB2	1.84	0.59
32:1a:501:C:H2'	32:1a:502:G:H8	1.68	0.59
1:2A:1568:G:H5''	3:2D:61:LEU:HD13	1.85	0.59
1:2A:2500:U:O2'	1:2A:2504:U:OP1	2.17	0.59
21:2Z:156:LYS:HE3	21:2Z:158:PRO:HD3	1.83	0.59
43:2l:102:ARG:HG2	43:2l:109:GLY:HA2	1.85	0.59
1:1A:1128:U:N3	1:1A:1132:A:N6	2.24	0.58
1:1A:1858:C:OP2	3:1D:222:ARG:NH1	2.36	0.58
3:1D:108:PRO:HB3	3:1D:143:HIS:CE1	2.38	0.58
32:1a:328:C:H4'	32:1a:329:A:H5'	1.85	0.58
1:2A:987:G:O2'	1:2A:1000:A:N3	2.35	0.58
32:2a:41:G:H2'	32:2a:42:G:C8	2.38	0.58
32:2a:222:U:H2'	32:2a:223:U:H6	1.67	0.58
32:2a:674:G:H2'	32:2a:675:A:C8	2.38	0.58
32:2a:767:A:O2'	32:2a:1524:C:O2	2.19	0.58
32:2a:1062:U:H2'	32:2a:1063:C:C6	2.38	0.58
32:2a:1342:C:H2'	32:2a:1343:G:H8	1.68	0.58
40:2i:128:ARG:NH2	55:2x:33:U:OP2	2.25	0.58
44:2m:3:ARG:NH2	44:2m:9:ILE:O	2.35	0.58
1:1A:17:G:HO2'	16:1U:25:TRP:CD1	2.21	0.58
10:1O:97:ARG:NH1	32:1a:339:C:OP2	2.35	0.58
28:16:6:ARG:NH1	28:16:26:ASN:HB2	2.18	0.58
32:1a:104:G:O6	51:1t:14:LYS:NZ	2.35	0.58
32:1a:876:G:OP1	39:1h:14:ARG:NH1	2.35	0.58
35:1d:108:LEU:HD21	35:1d:183:GLY:HA3	1.85	0.58
39:2h:10:LEU:HD22	39:2h:83:ILE:HD11	1.84	0.58
32:1a:1133:G:H1	32:1a:1141:C:H42	1.50	0.58
35:1d:175:SER:HB3	35:1d:184:LYS:HB3	1.86	0.58
1:2A:670:A:H5''	11:2P:43:GLY:H	1.67	0.58
39:2h:21:LYS:O	39:2h:65:TYR:OH	2.14	0.58
1:1A:1372:U:O2'	1:1A:2032:G:O2'	2.21	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:1G:47:LYS:HG3	6:1G:48:GLU:H	1.68	0.58
20:1Y:102:CYS:SG	20:1Y:103:GLY:N	2.77	0.58
35:1d:57:ARG:NH2	35:1d:205:GLU:OE2	2.37	0.58
35:1d:142:PRO:HA	35:1d:185:PHE:HD2	1.69	0.58
5:2F:109:GLY:HA2	5:2F:112:MET:HE3	1.85	0.58
42:2k:73:MET:HG2	42:2k:103:LEU:HD21	1.86	0.58
1:1A:1211:U:H2'	1:1A:1212:C:C6	2.39	0.58
4:1E:11:MET:HG2	4:1E:24:THR:HB	1.86	0.58
4:1E:36:ARG:NH1	4:1E:85:ASN:OD1	2.36	0.58
1:2A:702:G:H1	1:2A:730:C:H42	1.51	0.58
1:2A:2817:G:O2'	1:2A:2836:U:O2	2.19	0.58
10:2O:71:ARG:NE	10:2O:105:GLU:OE2	2.37	0.58
14:2S:14:VAL:O	14:2S:18:ILE:HG12	2.02	0.58
18:2W:23:LEU:HD11	27:25:25:LEU:HB2	1.85	0.58
32:2a:1202:G:N2	45:2n:46:GLU:OE2	2.35	0.58
32:2a:1272:G:N2	32:2a:1273:G:C4	2.70	0.58
44:2m:31:LYS:HA	44:2m:34:LEU:HD12	1.85	0.58
11:1P:63:PRO:HD3	30:18:27:THR:HG22	1.84	0.58
32:1a:1144:G:N2	32:1a:1146:A:H62	2.01	0.58
32:1a:1244:C:H2'	32:1a:1245:A:C8	2.38	0.58
1:2A:463:G:N2	1:2A:466:A:OP2	2.36	0.58
1:2A:1188:U:H2'	1:2A:1189:A:H8	1.67	0.58
1:2A:1714:G:H2'	1:2A:1717:G:H8	1.66	0.58
1:2A:2727:G:O2'	10:2O:70:LYS:NZ	2.34	0.58
26:24:34:GLU:HG3	26:24:35:VAL:HG12	1.85	0.58
35:2d:108:LEU:HD12	35:2d:174:LEU:HD13	1.86	0.58
37:2f:45:LEU:HD12	37:2f:59:TYR:HD1	1.68	0.58
1:1A:1261:G:OP1	16:1U:11:ARG:NH2	2.35	0.58
1:1A:2275:C:H2'	1:1A:2276:C:H6	1.69	0.58
13:1R:12:ARG:O	13:1R:17:ARG:NH1	2.36	0.58
32:1a:68:G:H1	32:1a:101:A:H61	1.51	0.58
32:1a:77:G:H1	32:1a:92:C:N4	2.01	0.58
32:1a:324:G:N1	32:1a:327:A:OP2	2.36	0.58
32:1a:674:G:P	37:1f:87:ARG:HH22	2.26	0.58
1:2A:1441:G:H2'	1:2A:1442:G:H8	1.68	0.58
1:2A:2602:A:N6	54:2w:76:PPU:OP2	2.37	0.58
3:2D:108:PRO:HB3	3:2D:143:HIS:CE1	2.39	0.58
32:2a:171:A:H2'	32:2a:172:A:C8	2.38	0.58
1:1A:221:G:N2	1:1A:447:C:OP1	2.32	0.58
1:1A:231:G:C8	30:18:5:LYS:HG2	2.39	0.58
26:14:14:ILE:HG12	26:14:31:ILE:HB	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:1h:20:TYR:HE2	39:1h:75:ARG:HD2	1.68	0.58
1:2A:922:U:O2'	22:20:29:GLN:NE2	2.37	0.58
35:2d:98:GLU:HA	35:2d:103:ASN:HD22	1.68	0.58
1:1A:360:C:O2'	20:1Y:35:TYR:OH	2.18	0.58
1:1A:2786:C:OP1	4:1E:166:THR:OG1	2.22	0.58
32:1a:975:A:H4'	32:1a:976:G:H5''	1.86	0.58
33:1b:16:HIS:HB2	33:1b:204:ASN:HB2	1.86	0.58
35:1d:173:TRP:CD2	35:1d:189:PRO:HG3	2.39	0.58
1:2A:26:G:H1'	1:2A:515:A:H61	1.68	0.58
32:2a:28:G:O2'	32:2a:296:U:OP1	2.20	0.58
1:1A:934:A:OP1	1:1A:935:C:N4	2.37	0.58
1:1A:1819:C:OP1	3:1D:222:ARG:NH2	2.37	0.58
1:1A:2160:C:N4	1:1A:2175:G:N1	2.42	0.58
32:1a:721:G:H4'	32:1a:722:A:O4'	2.04	0.58
32:1a:1002:G:C5	32:1a:1003:G:H1'	2.39	0.58
34:1c:11:ARG:HB3	34:1c:15:THR:HB	1.86	0.58
12:2Q:39:PRO:HB3	12:2Q:99:PRO:HD3	1.86	0.58
34:2c:117:ALA:HB1	34:2c:187:ALA:HB2	1.86	0.58
42:2k:33:THR:HA	42:2k:39:PRO:HA	1.85	0.58
47:2p:22:THR:HA	47:2p:33:ILE:HG13	1.86	0.58
1:1A:776:G:OP2	3:1D:13:ARG:NH2	2.35	0.57
3:1D:72:LYS:NZ	3:1D:99:ASP:OD2	2.34	0.57
20:1Y:43:ASN:ND2	20:1Y:66:PRO:O	2.37	0.57
1:2A:2108:C:N4	1:2A:2181:G:N1	2.35	0.57
17:2V:43:GLU:OE1	17:2V:43:GLU:N	2.35	0.57
26:24:46:GLN:HE21	26:24:48:ARG:HD3	1.68	0.57
26:24:61:ARG:NH2	50:2s:9:VAL:HG21	2.19	0.57
32:2a:880:C:OP1	43:2l:8:ASN:ND2	2.37	0.57
32:2a:925:G:H1	32:2a:1391:U:H3	1.52	0.57
33:2b:162:ILE:HG23	33:2b:182:ILE:HG21	1.86	0.57
36:2e:143:ARG:NE	39:2h:77:GLU:OE2	2.36	0.57
1:1A:1875:C:H2'	1:1A:1876:G:H8	1.69	0.57
32:1a:444:C:H2'	32:1a:445:G:C8	2.39	0.57
32:1a:1458:G:H5'	51:1t:32:ALA:HB2	1.86	0.57
33:1b:63:MET:HG3	33:1b:225:ALA:HB1	1.85	0.57
35:1d:8:VAL:HG11	35:1d:22:LYS:HD3	1.86	0.57
1:2A:534:U:O2'	16:2U:49:HIS:ND1	2.24	0.57
1:2A:862:G:O2'	2:2B:78:A:N3	2.37	0.57
1:2A:2773:C:OP1	4:2E:166:THR:OG1	2.17	0.57
1:2A:2805:G:H2'	1:2A:2807:G:C8	2.39	0.57
32:2a:1346:A:OP1	40:2i:120:ARG:NH1	2.32	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:2d:98:GLU:OE1	35:2d:103:ASN:ND2	2.33	0.57
1:1A:956:A:H62	12:1Q:12:GLN:HA	1.70	0.57
1:1A:2831:A:OP1	4:1E:110:GLY:N	2.37	0.57
32:1a:737:A:H2'	32:1a:738:C:C6	2.40	0.57
32:1a:1346:A:H61	32:1a:1374:A:H3'	1.69	0.57
1:2A:1592:C:H2'	1:2A:1593:G:C8	2.39	0.57
1:1A:181:C:O2'	1:1A:849:A:N3	2.36	0.57
32:1a:130:A:H5'	48:1q:63:ARG:NH1	2.20	0.57
5:2F:155:LEU:HB2	5:2F:189:THR:HG21	1.85	0.57
16:2U:89:GLU:O	17:2V:11:GLN:NE2	2.30	0.57
32:2a:25:C:H5'	32:2a:524:G:H1'	1.86	0.57
1:1A:2303:U:O2'	1:1A:2386:C:O2	2.20	0.57
2:1B:42:C:N4	6:1G:91:ARG:HH12	2.02	0.57
23:11:56:GLN:HE21	23:11:87:PRO:HG3	1.68	0.57
1:2A:592:G:H1	1:2A:665:C:H42	1.52	0.57
1:2A:2364:C:OP1	22:20:55:ARG:NH1	2.37	0.57
34:2c:11:ARG:NH2	34:2c:177:THR:O	2.36	0.57
39:2h:110:ALA:HB3	39:2h:121:ASP:HB3	1.84	0.57
44:2m:14:ARG:HE	44:2m:42:ALA:HA	1.67	0.57
48:2q:9:VAL:HG12	48:2q:56:VAL:HG22	1.86	0.57
49:2r:38:GLU:HA	49:2r:41:LYS:HE2	1.87	0.57
1:1A:2115:G:N2	1:1A:2218:C:N3	2.44	0.57
1:1A:2801:C:O2'	1:1A:2819:A:N3	2.32	0.57
32:1a:718:G:O6	49:1r:74:ARG:NH1	2.37	0.57
32:1a:1235:U:H5''	52:1u:3:LYS:HD2	1.85	0.57
32:1a:1326:C:OP1	52:1u:12:LYS:NZ	2.34	0.57
44:1m:80:ARG:HD2	50:1s:65:ASN:HB2	1.86	0.57
2:2B:11:C:OP2	2:2B:12:C:N4	2.34	0.57
35:2d:108:LEU:HD21	35:2d:183:GLY:HA3	1.87	0.57
1:1A:250:G:O2'	1:1A:633:G:O2'	2.16	0.57
1:1A:2490:A:O2'	1:1A:2548:G:N2	2.38	0.57
4:1E:111:ARG:HD2	4:1E:160:TYR:CD2	2.39	0.57
32:1a:973:G:H3'	32:1a:974:A:H5''	1.87	0.57
33:1b:219:VAL:HA	33:1b:222:ILE:HD12	1.87	0.57
39:1h:64:LYS:HG2	39:1h:79:VAL:HG21	1.87	0.57
1:2A:854:G:H2'	1:2A:855:G:H8	1.70	0.57
1:2A:2134:A:O2'	1:2A:2159:G:N2	2.37	0.57
32:2a:783:C:OP1	32:2a:1515:C:O2'	2.21	0.57
32:2a:1113:C:H42	32:2a:1187:G:H1	1.51	0.57
38:2g:59:LEU:HD11	38:2g:63:LYS:HE2	1.87	0.57
1:1A:1261:G:OP2	16:1U:12:ARG:NH2	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:1a:579:G:H1	32:1a:762:C:H42	1.51	0.57
32:1a:1246:C:N4	32:1a:1291:G:H1	2.01	0.57
1:2A:52:A:OP2	1:2A:117:G:N1	2.32	0.57
32:2a:396:G:O2'	32:2a:398:C:OP1	2.13	0.57
32:2a:1004:A:N6	32:2a:1037:C:H1'	2.20	0.57
32:2a:1273:G:H3'	32:2a:1274:G:H8	1.70	0.57
32:2a:1422:G:H2'	32:2a:1423:G:C8	2.40	0.57
32:2a:1479:C:H2'	32:2a:1480:G:H8	1.69	0.57
47:2p:13:HIS:O	47:2p:42:ARG:NH1	2.36	0.57
1:1A:1097:G:O2'	1:1A:1098:C:OP1	2.23	0.57
1:1A:1847:G:O6	3:1D:35:LYS:NZ	2.34	0.57
15:1T:118:ARG:HG2	32:1a:1442(A):G:C8	2.40	0.57
32:1a:1346:A:OP1	40:1i:120:ARG:NH1	2.37	0.57
32:2a:1346:A:N1	32:2a:1374:A:H5''	2.20	0.57
32:2a:1520:G:H2'	32:2a:1521:G:C8	2.37	0.57
33:2b:63:MET:HG3	33:2b:225:ALA:HB1	1.87	0.57
40:2i:9:ARG:HG2	40:2i:14:VAL:HG12	1.87	0.57
1:1A:2365:G:O2'	22:10:33:ALA:O	2.18	0.57
1:1A:2389:A:H2'	1:1A:2390:A:C8	2.40	0.57
1:1A:2541:G:H5''	1:1A:2542:A:H5''	1.86	0.57
32:1a:300:A:O2'	32:1a:564:C:N3	2.27	0.57
32:1a:574:A:O2'	32:1a:882:C:O2'	2.23	0.57
1:2A:143(A):C:O2'	19:2X:2:LYS:NZ	2.38	0.57
1:2A:2134:A:H62	1:2A:2157:G:H4'	1.70	0.57
33:2b:101:MET:HA	33:2b:108:ILE:HG13	1.86	0.57
44:2m:34:LEU:HD22	44:2m:41:PRO:HA	1.86	0.57
1:1A:430:U:H4'	1:1A:431:C:H5'	1.87	0.56
1:1A:1928:G:H1	1:1A:1946:C:H42	1.53	0.56
26:14:50:VAL:HG11	44:1m:64:TRP:C	2.30	0.56
32:1a:100:C:H2'	32:1a:101:A:C8	2.40	0.56
35:1d:11:LEU:HD23	35:1d:66:ARG:HB3	1.86	0.56
1:2A:1015:G:H1	1:2A:1147:C:H42	1.53	0.56
7:2H:124:GLU:HG3	7:2H:132:ARG:HB3	1.87	0.56
8:2I:133:HIS:ND1	8:2I:134:PRO:O	2.37	0.56
32:2a:987:G:H1	32:2a:1218:C:N4	2.02	0.56
32:2a:1172:C:H2'	32:2a:1173:G:C8	2.39	0.56
1:1A:751:G:O2'	1:1A:773:G:N2	2.35	0.56
32:1a:62:U:O2'	32:1a:379:C:O2	2.23	0.56
32:1a:597:G:N2	39:1h:94:TYR:OH	2.38	0.56
32:1a:946:A:O2'	32:1a:1333:A:N3	2.33	0.56
35:1d:121:VAL:O	35:1d:134:ASP:HA	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:1s:27:GLU:HB2	50:1s:28:LYS:HA	1.87	0.56
32:2a:145:G:H1	32:2a:177:C:H42	1.52	0.56
32:2a:936:C:H42	32:2a:1379:G:H1	1.53	0.56
55:2x:30:G:H1	55:2x:40:C:H42	1.52	0.56
1:1A:1219:A:H4'	1:1A:1220:U:OP1	2.04	0.56
1:1A:2063:U:H2'	1:1A:2064:A:C8	2.41	0.56
5:1F:95:ARG:HD3	5:1F:97:TYR:CZ	2.41	0.56
16:1U:49:HIS:O	16:1U:53:ARG:N	2.27	0.56
32:1a:1288:A:H4'	52:1u:10:ARG:HH12	1.70	0.56
1:2A:2233:U:H2'	1:2A:2234:G:C8	2.40	0.56
8:2I:123:LEU:HA	8:2I:144:VAL:HG23	1.85	0.56
10:2O:68:GLU:HB3	10:2O:78:ARG:HH11	1.69	0.56
32:2a:539:A:OP2	43:2I:115:LYS:NZ	2.37	0.56
32:2a:1221:G:O3'	50:2s:77:THR:OG1	2.22	0.56
1:1A:1272:A:OP1	17:1V:84:LYS:NZ	2.29	0.56
1:1A:2658:C:OP2	1:1A:2745:G:O2'	2.18	0.56
32:1a:1055:A:H2'	34:1c:156:ARG:HD2	1.87	0.56
33:1b:84:GLU:OE1	33:1b:87:ARG:NH1	2.39	0.56
1:2A:551:G:O2'	1:2A:1220:A:N3	2.37	0.56
35:2d:111:ALA:HB2	35:2d:120:LEU:HD12	1.87	0.56
36:2e:74:GLY:HA3	36:2e:116:THR:HG22	1.88	0.56
1:1A:580:U:H2'	1:1A:581:G:H8	1.70	0.56
4:1E:111:ARG:HD2	4:1E:160:TYR:HD2	1.71	0.56
7:1H:55:PRO:HG2	7:1H:61:HIS:CE1	2.41	0.56
7:1H:56:SER:HB3	7:1H:61:HIS:ND1	2.20	0.56
32:1a:262:A:H2'	32:1a:263:A:C8	2.40	0.56
1:2A:125:G:O3'	29:27:48:LYS:NZ	2.38	0.56
1:2A:2030:A:H4'	1:2A:2031:A:C8	2.41	0.56
32:2a:185:A:N3	51:2t:81:LYS:NZ	2.53	0.56
39:2h:19:VAL:HG23	39:2h:21:LYS:HG2	1.87	0.56
41:2j:44:VAL:HG13	41:2j:66:ARG:HG2	1.87	0.56
1:1A:596:G:O2'	1:1A:597:C:H3'	2.05	0.56
3:1D:136:ILE:O	3:1D:168:ARG:NH2	2.37	0.56
6:1G:167:GLU:HA	6:1G:170:ARG:HB3	1.88	0.56
32:1a:1356:G:H2'	32:1a:1357:A:C8	2.41	0.56
48:1q:62:SER:HB3	48:1q:72:ARG:HE	1.70	0.56
1:2A:276:A:H5''	1:2A:277:C:H5'	1.87	0.56
12:2Q:68:ILE:HG22	12:2Q:101:ARG:HE	1.71	0.56
21:2Z:6:LYS:HA	21:2Z:60:GLU:HB2	1.87	0.56
37:2f:36:ARG:NH2	37:2f:66:GLU:OE1	2.39	0.56
1:1A:1480:A:H61	1:1A:1605:A:H61	1.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:2760:G:N2	1:1A:2761:A:N7	2.53	0.56
8:1I:3:VAL:HA	8:1I:38:LEU:HA	1.88	0.56
32:1a:102:G:O2'	32:1a:151:A:N3	2.34	0.56
32:1a:1210:C:N4	32:1a:1211:U:O4	2.38	0.56
39:1h:9:MET:HG3	39:1h:26:VAL:HG11	1.86	0.56
1:2A:82:G:N1	1:2A:103:A:OP2	2.32	0.56
1:2A:1590:U:H2'	1:2A:1591:G:C8	2.40	0.56
10:2O:48:PRO:HB3	32:2a:1422:G:H5''	1.87	0.56
32:2a:1422:G:H2'	32:2a:1423:G:H8	1.71	0.56
38:2g:114:ARG:O	38:2g:119:ARG:NH1	2.38	0.56
1:1A:1101:G:O2'	1:1A:1130:A:N6	2.37	0.56
1:1A:1101:G:HO2'	1:1A:1130:A:N6	2.04	0.56
11:1P:126:VAL:HG12	11:1P:148:LEU:HD23	1.87	0.56
13:1R:2:ARG:NH1	13:1R:5:LYS:O	2.39	0.56
32:1a:1149:C:OP2	40:1i:9:ARG:NH2	2.38	0.56
32:1a:1530:G:O2'	32:1a:1531:A:O4'	2.21	0.56
38:1g:78:ARG:O	38:1g:84:ASN:HA	2.06	0.56
39:1h:92:ARG:NH1	39:1h:132:GLU:OE2	2.39	0.56
1:2A:243:U:OP1	30:28:6:THR:OG1	2.15	0.56
24:22:10:LEU:HB3	24:22:14:ARG:HH12	1.71	0.56
32:2a:113:G:N3	32:2a:353:A:O2'	2.39	0.56
32:2a:977:A:O2'	32:2a:981:U:N3	2.32	0.56
32:2a:1320:C:H1'	50:2s:73:GLU:HG2	1.88	0.56
38:2g:78:ARG:NH1	38:2g:154:TYR:O	2.35	0.56
1:1A:2146:G:H1	1:1A:2196:C:N4	2.04	0.56
1:1A:2892:A:OP1	13:1R:96:ARG:NE	2.35	0.56
2:1B:86:G:H1	2:1B:91:C:H42	1.54	0.56
5:1F:133:ASN:N	5:1F:138:GLU:OE1	2.35	0.56
15:1T:92:GLY:O	15:1T:120:ARG:NH2	2.39	0.56
32:1a:406:G:N7	32:1a:495:A:O2'	2.38	0.56
32:1a:444:C:H2'	32:1a:445:G:H8	1.71	0.56
32:1a:716:A:H1'	42:1k:118:GLY:HA2	1.88	0.56
32:1a:1151:A:HO2'	32:1a:1152:A:H8	1.52	0.56
34:1c:9:GLY:HA3	45:1n:49:HIS:HA	1.87	0.56
38:1g:79:ARG:HG3	38:1g:80:VAL:H	1.71	0.56
8:2I:1:MET:N	8:2I:20:ASP:OD1	2.38	0.56
32:2a:1002:G:H1	32:2a:1038:C:N4	2.00	0.56
32:2a:1123:A:H4'	41:2j:37:PRO:HD2	1.88	0.56
44:2m:40:ASN:HB3	44:2m:43:THR:HG23	1.88	0.56
32:1a:1021:G:O2'	32:1a:1022:G:O5'	2.21	0.56
32:1a:1316:G:OP1	45:1n:17:LYS:NZ	2.37	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:1b:24:TRP:CD1	33:1b:24:TRP:H	2.24	0.56
38:1g:78:ARG:NH1	38:1g:154:TYR:O	2.34	0.56
44:1m:34:LEU:HD22	44:1m:41:PRO:HA	1.88	0.56
1:2A:521:G:H2'	1:2A:522:G:C8	2.40	0.56
25:23:6:VAL:HG22	25:23:56:VAL:HG22	1.88	0.56
33:2b:162:ILE:HD11	33:2b:184:VAL:HG13	1.88	0.56
44:2m:16:ASP:HB2	44:2m:27:LYS:HE3	1.88	0.56
1:1A:1633:A:H2'	1:1A:1634:C:C6	2.42	0.55
12:1Q:39:PRO:HB3	12:1Q:99:PRO:HD3	1.88	0.55
12:1Q:68:ILE:HG22	12:1Q:101:ARG:HE	1.71	0.55
32:1a:280:C:N3	48:1q:39:SER:N	2.54	0.55
32:1a:1118:C:H1'	32:1a:1179:A:C4	2.41	0.55
32:1a:1435:G:H2'	32:1a:1436:U:C6	2.41	0.55
43:1l:33:ARG:HG2	43:1l:60:LEU:HD23	1.87	0.55
1:2A:2851:A:O3'	13:2R:64:ARG:NH2	2.38	0.55
5:2F:185:ASP:HA	5:2F:188:ARG:HD3	1.88	0.55
28:26:40:CYS:O	28:26:44:ARG:N	2.39	0.55
1:1A:887:C:H42	1:1A:983:G:H1	1.54	0.55
32:1a:352:C:OP2	59:1a:1701:HOH:O	2.18	0.55
47:1p:27:LYS:HG3	47:1p:30:GLY:HA3	1.88	0.55
1:2A:94(A):G:H21	24:22:47:ASN:HD21	1.53	0.55
1:2A:330:A:H2	1:2A:1210:A:HO2'	1.53	0.55
1:2A:2751:G:H5'	7:2H:2:SER:HA	1.87	0.55
26:24:50:VAL:HG11	44:2m:64:TRP:C	2.32	0.55
32:2a:309:G:H2'	32:2a:310:G:C8	2.40	0.55
32:2a:472:A:HO2'	47:2p:82:GLN:H	1.49	0.55
32:2a:833:U:H3	32:2a:853:G:H1	1.53	0.55
32:2a:1510:U:H2'	32:2a:1511:G:C8	2.41	0.55
1:1A:1202:A:OP1	16:1U:55:ARG:NH1	2.35	0.55
17:1V:40:LEU:HB2	17:1V:46:VAL:HG12	1.87	0.55
32:1a:62:U:OP1	32:1a:385:C:O2'	2.24	0.55
1:2A:271(G):C:H42	1:2A:271(Q):G:H1	1.54	0.55
1:2A:272(B):G:H2'	1:2A:272(C):G:H8	1.71	0.55
1:2A:1957:C:O2'	1:2A:1984:G:N2	2.38	0.55
32:2a:652:U:O4	32:2a:752:G:O2'	2.24	0.55
32:2a:735:C:H2'	32:2a:736:C:H6	1.69	0.55
1:1A:1636:U:H2'	1:1A:1637:G:H8	1.70	0.55
32:1a:78:G:C2	32:1a:91:C:N3	2.75	0.55
1:2A:2305:A:H5''	6:2G:134:GLY:HA3	1.88	0.55
12:2Q:10:ARG:HH12	55:2x:64:G:H4'	1.71	0.55
32:2a:1027:C:O2'	32:2a:1034:G:N2	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:662:A:OP1	11:1P:133:SER:OG	2.21	0.55
1:1A:1355:G:HO2'	1:1A:1657:C:HO2'	1.54	0.55
5:1F:155:LEU:HB2	5:1F:189:THR:HG21	1.87	0.55
19:1X:60:ARG:HH22	29:17:47:ARG:NH1	2.03	0.55
32:1a:539:A:H2'	32:1a:540:G:C8	2.42	0.55
32:1a:837:G:H1	32:1a:849:C:H42	1.55	0.55
35:1d:187:ARG:NH2	35:1d:193:ASP:OD2	2.37	0.55
1:2A:1791:A:N6	1:2A:1828:G:O2'	2.40	0.55
8:2I:3:VAL:HA	8:2I:38:LEU:HA	1.89	0.55
26:24:50:VAL:HG11	44:2m:65:LYS:N	2.22	0.55
1:1A:184:A:H61	1:1A:187:C:H3'	1.71	0.55
1:1A:2605:U:H2'	1:1A:2606:C:C6	2.41	0.55
3:1D:147:LEU:HD13	3:1D:155:LEU:HD11	1.89	0.55
12:1Q:34:LEU:HD11	12:1Q:129:THR:HB	1.89	0.55
19:1X:50:LYS:HB3	19:1X:84:ALA:HB2	1.87	0.55
21:1Z:91:LEU:HD23	21:1Z:130:PRO:HB3	1.89	0.55
32:1a:1226:C:H2'	44:1m:103:THR:HB	1.87	0.55
41:1j:8:LEU:HB3	41:1j:96:ILE:HG23	1.88	0.55
48:1q:9:VAL:HG12	48:1q:56:VAL:HG22	1.88	0.55
12:2Q:75:THR:HG21	12:2Q:87:LYS:HE2	1.87	0.55
15:2T:41:ARG:NH1	32:2a:346:G:OP1	2.31	0.55
32:2a:1004:A:C8	32:2a:1005:A:H4'	2.42	0.55
33:2b:212:GLN:NE2	33:2b:234:PRO:O	2.40	0.55
1:1A:1440:U:H4'	1:1A:1649:A:H4'	1.89	0.55
1:1A:1495:G:H4'	1:1A:1589:A:OP1	2.06	0.55
6:1G:25:TYR:CZ	6:1G:32:PRO:HD3	2.42	0.55
9:1N:32:THR:HG23	9:1N:37:LYS:HB2	1.89	0.55
32:1a:316:G:OP2	32:1a:351:G:O2'	2.25	0.55
32:1a:1347:G:N2	32:1a:1373:G:H2'	2.21	0.55
1:2A:1297:C:O2'	1:2A:1302:A:N6	2.40	0.55
32:2a:64:G:H4'	32:2a:65:U:H3'	1.89	0.55
32:2a:736:C:H2'	32:2a:737:A:C8	2.42	0.55
32:2a:923:A:O2'	32:2a:1399:C:OP2	2.20	0.55
1:1A:2351:G:H2'	1:1A:2352:G:H8	1.71	0.55
32:1a:41:G:H2'	32:1a:42:G:H8	1.71	0.55
32:1a:221:C:H2'	32:1a:222:U:H6	1.72	0.55
32:1a:950:U:H2'	32:1a:951:G:H8	1.71	0.55
32:1a:1478:C:H2'	32:1a:1479:C:H6	1.72	0.55
50:1s:38:SER:HB2	50:1s:71:LEU:HD23	1.88	0.55
1:2A:451:C:H4'	5:2F:52:LYS:HE3	1.89	0.55
1:2A:2060:A:H62	5:2F:74:ARG:HH22	1.53	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:2a:542:G:O3'	35:2d:14:ARG:NH2	2.33	0.55
32:2a:827:U:H3	32:2a:872:A:H61	1.55	0.55
32:2a:1075:C:N4	32:2a:1082:G:H1	2.04	0.55
34:2c:3:ASN:N	34:2c:3:ASN:OD1	2.40	0.55
41:2j:8:LEU:HB2	41:2j:96:ILE:HG12	1.89	0.55
1:1A:58:U:H3	1:1A:67:G:H1	1.54	0.55
1:1A:515:G:N7	18:1W:49:LYS:NZ	2.54	0.55
32:1a:1342:C:H2'	32:1a:1343:G:C8	2.42	0.55
1:2A:1662:C:O2'	1:2A:2687:U:OP1	2.24	0.55
1:2A:2116:G:N1	1:2A:2162:G:OP1	2.40	0.55
1:2A:2141:G:O6	1:2A:2150:U:O2	2.25	0.55
32:2a:372:C:H42	32:2a:389:A:H62	1.55	0.55
32:2a:1183:A:O2'	32:2a:1184:G:OP1	2.22	0.55
32:2a:1226:C:O2'	44:2m:111:LYS:NZ	2.20	0.55
11:1P:124:LYS:HA	11:1P:144:GLU:HB3	1.88	0.55
32:1a:392:G:O2'	32:1a:483:C:O2'	2.25	0.55
32:1a:1035:A:N3	32:1a:1036:G:N2	2.55	0.55
32:1a:1071:C:H2'	32:1a:1072:G:C8	2.41	0.55
32:1a:1516:G:N1	32:1a:1519:MA6:OP2	2.37	0.55
33:1b:167:PRO:HG2	33:1b:192:SER:HB2	1.88	0.55
44:1m:33:ALA:O	44:1m:37:THR:OG1	2.19	0.55
46:1o:26:GLU:OE2	46:1o:77:ARG:NE	2.40	0.55
1:2A:2466:C:H5''	31:29:6:SER:HB2	1.89	0.55
32:2a:261:U:OP2	51:2t:79:ARG:NH2	2.40	0.55
1:1A:490:U:H2'	1:1A:491:G:O4'	2.07	0.54
1:1A:1440:U:O2	19:1X:16:LYS:NZ	2.37	0.54
1:1A:2634:C:O2'	1:1A:2835:C:N3	2.40	0.54
4:1E:23:VAL:HG12	4:1E:185:LYS:HA	1.87	0.54
12:1Q:48:GLU:OE2	12:1Q:51:ARG:NH2	2.39	0.54
32:1a:171:A:H2'	32:1a:172:A:C8	2.42	0.54
40:1i:9:ARG:HG2	40:1i:14:VAL:HG12	1.89	0.54
1:2A:2291:U:OP1	1:2A:2380:C:O2'	2.24	0.54
17:2V:76:LYS:HB2	17:2V:81:TYR:HB3	1.88	0.54
32:2a:952:U:H4'	32:2a:964:A:H61	1.70	0.54
32:2a:1002:G:C6	32:2a:1003:G:H8	2.25	0.54
32:2a:1260:C:O5'	32:2a:1284:C:H4'	2.07	0.54
1:1A:1817:A:H1'	1:1A:1960:A:N6	2.22	0.54
5:1F:195:ASP:OD1	5:1F:196:LEU:N	2.40	0.54
32:1a:749:C:H2'	32:1a:750:G:H8	1.72	0.54
32:1a:948:C:N4	32:1a:1233:G:H1	2.04	0.54
34:1c:3:ASN:OD1	34:1c:3:ASN:N	2.39	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2A:438:G:H2'	1:2A:440:G:C8	2.41	0.54
1:2A:1022:G:OP2	9:2N:69:GLN:NE2	2.33	0.54
18:2W:92:ARG:NH1	18:2W:94:ASP:OD1	2.40	0.54
32:2a:1457:G:H2'	32:2a:1458:G:H8	1.72	0.54
46:2o:82:ILE:O	46:2o:86:GLY:N	2.41	0.54
1:1A:1428:G:H4'	1:1A:1620:G:C2	2.42	0.54
1:1A:2768:C:H3'	31:19:19:ARG:HH21	1.72	0.54
32:1a:52:G:H2'	32:1a:53:A:C8	2.42	0.54
1:2A:2296:U:OP2	14:2S:9:ARG:NH2	2.39	0.54
40:2i:13:ALA:HB2	40:2i:68:GLY:HA3	1.89	0.54
1:1A:271:U:O2'	8:1I:50:ARG:NH1	2.41	0.54
1:1A:2175:G:H2'	1:1A:2176:G:C8	2.42	0.54
1:1A:2176:G:C2	1:1A:2177:G:H1'	2.42	0.54
1:1A:2858:G:C8	15:1T:97:ALA:HB2	2.43	0.54
6:1G:18:GLU:OE2	6:1G:21:ARG:NH2	2.40	0.54
9:1N:49:GLY:O	9:1N:119:ARG:NH1	2.40	0.54
31:19:16:VAL:HG22	31:19:25:VAL:HG22	1.90	0.54
32:1a:791:G:O6	32:1a:792:A:N6	2.41	0.54
32:1a:1309:G:OP1	44:1m:88:ARG:NH2	2.41	0.54
34:1c:152:ILE:HG12	34:1c:199:LYS:HB2	1.89	0.54
1:2A:2680:C:H1'	4:2E:187:ALA:HB1	1.88	0.54
17:2V:59:ALA:HB2	17:2V:96:ILE:HD13	1.88	0.54
19:2X:54:VAL:HG22	19:2X:81:VAL:HG12	1.89	0.54
32:2a:1118:C:H1'	32:2a:1179:A:C5	2.42	0.54
33:2b:22:LYS:HA	33:2b:24:TRP:CD1	2.43	0.54
33:2b:33:TYR:N	33:2b:41:ILE:O	2.39	0.54
44:2m:87:TYR:N	50:2s:73:GLU:O	2.40	0.54
46:2o:60:VAL:O	46:2o:64:ARG:N	2.36	0.54
1:1A:549:U:O2'	1:1A:579:G:OP1	2.24	0.54
1:1A:1310:G:OP1	27:15:19:ARG:NH2	2.35	0.54
1:1A:1518:A:OP2	1:1A:1567:G:N1	2.37	0.54
1:1A:1832:G:OP2	3:1D:154:LYS:NZ	2.41	0.54
10:1O:77:ILE:HB	15:1T:74:ARG:HH11	1.73	0.54
32:1a:922:G:H4'	36:1e:20:GLN:HA	1.89	0.54
32:1a:966:M2G:H8	32:1a:966:M2G:OP2	1.90	0.54
34:1c:121:ALA:HB1	34:1c:189:ALA:HB2	1.89	0.54
40:1i:7:THR:O	40:1i:83:ARG:NH1	2.41	0.54
42:1k:21:ILE:HD11	42:1k:98:LEU:HD11	1.88	0.54
1:2A:1190:G:H2'	1:2A:1191:G:H8	1.73	0.54
2:2B:90:A:C5	2:2B:91:C:H1'	2.42	0.54
32:2a:1119:C:H2'	32:2a:1120:G:H8	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:2d:142:PRO:HA	35:2d:185:PHE:HD2	1.71	0.54
1:1A:1040:C:O2'	1:1A:1042:A:OP1	2.20	0.54
3:1D:202:LYS:NZ	32:1a:773:G:O3'	2.35	0.54
6:1G:34:LEU:HD23	6:1G:161:THR:HG22	1.89	0.54
32:1a:953:G:H5'	32:1a:965:A:N6	2.22	0.54
1:2A:637:A:OP1	11:2P:133:SER:OG	2.20	0.54
1:2A:902:C:H2'	1:2A:903:C:C6	2.42	0.54
1:2A:1824:G:N3	3:2D:254:THR:OG1	2.41	0.54
22:20:33:ALA:N	22:20:64:ASP:OD1	2.40	0.54
32:2a:1292:U:H2'	32:2a:1293:G:H8	1.72	0.54
32:2a:1499:A:H1'	32:2a:1520:G:H5'	1.89	0.54
1:1A:1108:G:H22	1:1A:1123:A:H61	1.55	0.54
32:1a:584:G:H5'	48:1q:91:ARG:NH2	2.22	0.54
32:1a:1150:U:H4'	41:1j:41:PRO:HG3	1.90	0.54
32:1a:1259:C:H42	32:1a:1276:G:H1	1.55	0.54
32:1a:1376:U:H2'	32:1a:1377:A:C8	2.42	0.54
33:1b:88:ALA:HB2	33:1b:219:VAL:HG13	1.89	0.54
33:1b:212:GLN:HE21	33:1b:235:SER:HA	1.73	0.54
55:1x:14:A:H61	55:1x:21:A:H2	1.50	0.54
1:2A:314:A:H2'	1:2A:315:G:C8	2.42	0.54
1:2A:503:A:H4'	1:2A:504:U:H5''	1.88	0.54
10:2O:9:GLU:OE2	10:2O:18:LYS:NZ	2.40	0.54
27:25:52:TYR:HB3	27:25:57:VAL:HG21	1.88	0.54
32:2a:585:G:OP1	48:2q:37:LYS:NZ	2.36	0.54
32:2a:1249:C:N4	32:2a:1287:A:H5''	2.22	0.54
1:1A:123:G:H21	29:17:48:LYS:HG2	1.73	0.54
1:1A:303:C:H42	1:1A:385:G:H1	1.55	0.54
1:1A:403:C:H42	1:1A:425:G:H1	1.55	0.54
32:1a:1196:U:H3	34:1c:162:GLN:HE22	1.56	0.54
32:1a:1507:A:H2'	32:1a:1508:G:H8	1.72	0.54
48:1q:60:ILE:HB	48:1q:74:LEU:HD12	1.89	0.54
1:2A:882:G:N2	1:2A:895:U:O2	2.40	0.54
1:2A:2820:A:P	13:2R:2:ARG:HH22	2.31	0.54
9:2N:49:GLY:O	9:2N:119:ARG:NH1	2.41	0.54
17:2V:62:LEU:HD11	17:2V:95:LEU:HB2	1.90	0.54
32:2a:1104:G:H4'	33:2b:111:ARG:NH2	2.22	0.54
43:2l:117:ARG:HG2	43:2l:122:THR:HB	1.90	0.54
1:1A:927:G:H2'	1:1A:928:G:H8	1.72	0.54
1:1A:2145:G:H2'	1:1A:2146:G:C8	2.42	0.54
19:1X:53:LYS:HE3	19:1X:55:ASN:HD21	1.73	0.54
21:1Z:159:PRO:HA	21:1Z:161:VAL:HG12	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:1b:15:VAL:HG12	33:1b:209:ARG:HG3	1.90	0.54
35:1d:134:ASP:OD1	35:1d:134:ASP:N	2.41	0.54
46:1o:4:THR:OG1	46:1o:7:GLU:OE1	2.25	0.54
1:2A:1566:A:OP1	3:2D:211:ARG:NH1	2.41	0.54
1:2A:1600:C:OP1	19:2X:58:HIS:NE2	2.36	0.54
1:2A:1864:U:OP1	1:2A:2410:G:O2'	2.25	0.54
6:2G:131:TYR:HE2	6:2G:133:LEU:HD23	1.72	0.54
18:2W:34:ASN:OD1	18:2W:37:ARG:NH2	2.41	0.54
32:2a:287:U:H2'	32:2a:288:A:C8	2.43	0.54
33:2b:91:PRO:HG2	33:2b:155:LEU:HD13	1.90	0.54
1:1A:171:A:H8	1:1A:171:A:OP2	1.91	0.54
8:1I:93:THR:H	8:1I:96:ASP:HB2	1.72	0.54
32:1a:116:A:H2'	32:1a:117:G:O4'	2.08	0.54
34:1c:11:ARG:NH2	34:1c:177:THR:O	2.40	0.54
1:2A:527:C:N4	1:2A:2779:U:OP2	2.40	0.54
1:2A:1358:G:O2'	1:2A:1373:A:N6	2.41	0.54
1:2A:1683:C:H42	1:2A:1705:G:H1	1.56	0.54
32:2a:486:U:H2'	32:2a:487:A:C8	2.43	0.54
32:2a:537:G:H2'	32:2a:538:G:C8	2.43	0.54
32:2a:1047:G:H1	32:2a:1210:C:N4	2.05	0.54
50:2s:63:THR:OG1	50:2s:65:ASN:OD1	2.21	0.54
55:2x:14:A:N6	55:2x:21:A:H2	2.06	0.54
1:1A:16:G:H2'	1:1A:17:G:H8	1.73	0.53
1:1A:2381:A:H2'	1:1A:2382:G:C8	2.43	0.53
1:1A:2828:G:OP2	13:1R:42:LYS:NZ	2.40	0.53
32:1a:127:G:O2'	48:1q:2:PRO:O	2.27	0.53
32:1a:833:U:H3	32:1a:853:G:H1	1.57	0.53
32:1a:1027:C:N4	32:1a:1034:G:N1	2.55	0.53
35:1d:65:ARG:NH1	35:1d:72:GLU:HB2	2.23	0.53
40:1i:24:GLY:N	40:1i:60:ASP:OD1	2.40	0.53
6:2G:47:LYS:NZ	6:2G:80:PHE:O	2.29	0.53
7:2H:3:ARG:NH1	7:2H:5:GLY:H	2.05	0.53
10:2O:115:VAL:HG13	10:2O:121:VAL:HG21	1.89	0.53
1:1A:1033:G:O2'	1:1A:1046:A:N3	2.34	0.53
1:1A:2750:G:H2'	1:1A:2751:A:H8	1.73	0.53
13:1R:63:ARG:HB2	13:1R:80:PHE:HE2	1.73	0.53
32:1a:410:G:OP1	35:1d:30:LYS:NZ	2.41	0.53
32:1a:501:C:H2'	32:1a:502:G:C8	2.43	0.53
32:1a:1030(C):G:H2'	32:1a:1030(D):A:C8	2.42	0.53
32:1a:1297:C:OP2	44:1m:44:ARG:NH2	2.38	0.53
41:1j:64:GLU:OE2	41:1j:66:ARG:NH1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2A:222:A:H5''	1:2A:421:U:OP1	2.08	0.53
1:2A:1913:A:C6	32:2a:1494:G:H5'	2.43	0.53
1:2A:2033:A:O2'	1:2A:2035:G:OP2	2.22	0.53
1:2A:2327:A:H2'	1:2A:2328:A:C8	2.43	0.53
1:2A:2697:G:O6	59:2A:3403:HOH:O	2.17	0.53
2:2B:33:G:H5'	6:2G:2:PRO:HD3	1.91	0.53
18:2W:86:LEU:HD22	18:2W:96:ILE:HD11	1.90	0.53
32:2a:9:G:H2'	32:2a:10:A:H8	1.72	0.53
48:2q:26:GLN:HG2	48:2q:37:LYS:HG2	1.90	0.53
1:1A:870:G:H2'	1:1A:871:A:C8	2.44	0.53
1:1A:1740:U:H1'	3:1D:14:ARG:NH2	2.24	0.53
1:1A:2023:A:H2'	1:1A:2024:G:C8	2.43	0.53
1:1A:2311:G:H1	1:1A:2329:C:H42	1.56	0.53
1:1A:2374:G:OP1	30:18:44:LYS:NZ	2.35	0.53
32:1a:1049:U:O4	45:1n:3:ARG:NH1	2.41	0.53
32:1a:1117:G:H4'	40:1i:104:ARG:NH1	2.23	0.53
32:1a:1273:G:H3'	32:1a:1274:G:H8	1.72	0.53
43:1l:117:ARG:HG2	43:1l:122:THR:HB	1.90	0.53
1:2A:379:G:O2'	1:2A:2232:U:OP1	2.27	0.53
1:2A:2547:U:O2	10:2O:23:ARG:NH2	2.41	0.53
13:2R:24:GLN:HB3	13:2R:44:LEU:HD11	1.90	0.53
30:28:28:GLY:O	30:28:36:LYS:NZ	2.39	0.53
32:2a:447:G:O6	32:2a:485:G:O2'	2.20	0.53
32:2a:1094:G:O2'	32:2a:1108:G:N1	2.41	0.53
32:2a:1260:C:OP1	32:2a:1284:C:O2'	2.20	0.53
44:2m:15:VAL:HG12	44:2m:45:VAL:HG22	1.90	0.53
47:2p:6:LEU:HD23	47:2p:17:TYR:CG	2.43	0.53
1:1A:511:C:H42	1:1A:520:G:H1	1.55	0.53
1:1A:1098:C:N4	1:1A:1153:G:H1	2.06	0.53
1:1A:1223:C:H2'	1:1A:1224:C:H6	1.73	0.53
1:1A:1301:U:H5''	1:1A:1302:G:H5''	1.91	0.53
7:1H:45:VAL:HG12	7:1H:50:VAL:HG22	1.90	0.53
9:1N:97:ARG:HA	9:1N:100:GLU:HB2	1.89	0.53
33:1b:22:LYS:HA	33:1b:24:TRP:CD1	2.44	0.53
35:1d:13:ARG:HB3	35:1d:38:TYR:O	2.09	0.53
1:2A:249:C:OP2	1:2A:2394:C:O2'	2.18	0.53
1:2A:1022:G:H22	1:2A:1142(A):A:H2	1.56	0.53
1:2A:1796:U:H2'	1:2A:1797:C:C6	2.43	0.53
32:2a:76:C:H42	32:2a:93:G:H1	1.57	0.53
32:2a:328:C:H4'	32:2a:329:A:H5'	1.90	0.53
32:2a:1479:C:H2'	32:2a:1480:G:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:2e:92:LYS:HB3	36:2e:119:LEU:HB2	1.90	0.53
1:1A:38:A:H2'	1:1A:39:C:C6	2.43	0.53
1:1A:2750:G:H2'	1:1A:2751:A:C8	2.43	0.53
32:1a:69:G:H2'	32:1a:70:G:H8	1.74	0.53
32:1a:69:G:H2'	32:1a:70:G:C8	2.43	0.53
32:1a:278:G:OP2	48:1q:92:ARG:NH2	2.41	0.53
32:1a:673:G:H2'	32:1a:674:G:C8	2.43	0.53
1:2A:557:U:H2'	1:2A:558:G:C8	2.41	0.53
1:2A:622:G:H2'	1:2A:623:G:H8	1.73	0.53
1:2A:1434:A:H61	1:2A:1558:A:H62	1.56	0.53
1:2A:1803:A:O2'	3:2D:259:THR:HG21	2.08	0.53
7:2H:30:LYS:HB2	7:2H:79:VAL:HA	1.90	0.53
16:2U:52:ARG:HH11	16:2U:55:ARG:HH21	1.55	0.53
35:2d:57:ARG:NH2	35:2d:205:GLU:OE2	2.42	0.53
48:2q:51:TYR:HE1	48:2q:76:LEU:HB2	1.73	0.53
1:1A:1322:A:N6	1:1A:1341:C:N3	2.56	0.53
1:1A:1836:U:O2	3:1D:50:THR:HB	2.08	0.53
1:1A:2594:G:H21	1:1A:2595:G:H1'	1.73	0.53
1:2A:2747:G:O6	1:2A:2755:C:H5''	2.09	0.53
19:2X:60:ARG:HH22	29:27:47:ARG:NH1	2.07	0.53
21:2Z:98:MET:O	21:2Z:126:VAL:N	2.33	0.53
32:2a:222:U:H2'	32:2a:223:U:C6	2.43	0.53
32:2a:475:G:H2'	32:2a:476:G:C8	2.44	0.53
32:2a:902:G:H2'	32:2a:903:G:H8	1.73	0.53
47:2p:34:GLU:OE1	47:2p:59:TRP:NE1	2.27	0.53
6:1G:166:ASP:O	6:1G:170:ARG:N	2.31	0.53
32:1a:1027:C:C4	32:1a:1034:G:N1	2.76	0.53
1:2A:414:C:O2	1:2A:1864:U:O2'	2.22	0.53
1:2A:827:U:H4'	1:2A:828:U:C5	2.43	0.53
1:2A:1009:A:OP2	9:2N:37:LYS:NZ	2.35	0.53
1:2A:1314:C:H42	1:2A:1338:G:H1	1.56	0.53
6:2G:3:LEU:O	6:2G:8:LYS:NZ	2.33	0.53
7:2H:45:VAL:HG12	7:2H:50:VAL:HG22	1.89	0.53
32:2a:584:G:H5'	48:2q:91:ARG:NH2	2.24	0.53
32:2a:838:G:H1	32:2a:848:C:H42	1.57	0.53
33:2b:24:TRP:CD1	33:2b:24:TRP:H	2.26	0.53
33:2b:110:GLN:HA	33:2b:113:HIS:HD2	1.73	0.53
1:1A:929:G:H1	1:1A:940:C:N4	2.07	0.53
4:1E:12:THR:HG22	4:1E:13:ARG:H	1.73	0.53
10:1O:48:PRO:HB3	32:1a:1422:G:H5''	1.91	0.53
11:1P:38:GLN:HE21	11:1P:45:LEU:H	1.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:1a:148:G:H2'	32:1a:149:A:C8	2.44	0.53
32:1a:1025:U:O2	32:1a:1036:G:O6	2.27	0.53
32:1a:1157:A:H5'	32:1a:1158:C:C6	2.44	0.53
32:1a:1172:C:H2'	32:1a:1173:G:H8	1.74	0.53
32:1a:1219:U:P	45:1n:19:ARG:HH12	2.32	0.53
32:1a:1288:A:H2'	32:1a:1289:A:C8	2.44	0.53
39:1h:120:THR:H	39:1h:123:GLU:HB2	1.74	0.53
1:2A:594:U:H3	1:2A:663:G:H1	1.56	0.53
1:2A:2021:C:OP1	27:25:12:SER:OG	2.25	0.53
4:2E:47:VAL:HG11	4:2E:86:PRO:HD2	1.91	0.53
5:2F:53:THR:HG23	5:2F:55:GLY:H	1.73	0.53
6:2G:101:ILE:HD13	26:24:25:TYR:HB2	1.91	0.53
11:2P:38:GLN:O	11:2P:40:SER:N	2.40	0.53
11:2P:124:LYS:HA	11:2P:144:GLU:HB3	1.90	0.53
36:2e:105:VAL:HG21	36:2e:128:PRO:HB3	1.91	0.53
1:1A:45:C:H42	1:1A:168:G:H1	1.57	0.53
1:1A:715:G:H5'	1:1A:716:G:OP2	2.09	0.53
1:1A:753:A:OP1	3:1D:7:LYS:NZ	2.36	0.53
1:1A:2497:G:H5''	12:1Q:46:GLN:HE21	1.74	0.53
8:1I:100:ALA:HA	8:1I:103:ARG:HG2	1.91	0.53
9:1N:12:ARG:NH2	9:1N:50:ASP:OD2	2.41	0.53
32:1a:1070:U:H2'	32:1a:1071:C:C6	2.44	0.53
32:1a:1305:G:H5''	52:1u:4:GLY:HA3	1.91	0.53
33:1b:71:VAL:N	33:1b:163:PHE:O	2.38	0.53
1:2A:95:G:O2'	24:22:48:HIS:ND1	2.37	0.53
1:2A:1270:C:H5''	1:2A:1271:G:H5'	1.91	0.53
32:2a:8:A:N6	35:2d:209:ARG:HB2	2.24	0.53
32:2a:1073:U:H2'	32:2a:1074:G:H8	1.74	0.53
32:2a:1149:C:O2'	32:2a:1280:A:N1	2.33	0.53
35:2d:121:VAL:O	35:2d:134:ASP:HA	2.08	0.53
1:1A:1827:U:H2'	1:1A:1828:C:C6	2.44	0.53
1:1A:2605:U:H2'	1:1A:2606:C:H6	1.74	0.53
6:1G:44:GLY:N	6:1G:88:ILE:O	2.42	0.53
32:1a:110:C:H2'	32:1a:111:G:O4'	2.09	0.53
35:1d:108:LEU:HD12	35:1d:174:LEU:HD13	1.91	0.53
1:2A:259:G:H2'	1:2A:260:G:H8	1.73	0.53
1:2A:652(B):A:N6	1:2A:655:A:N3	2.56	0.53
3:2D:146:GLU:HB2	3:2D:189:CYS:HB3	1.90	0.53
32:2a:859:A:H2'	32:2a:860:A:O4'	2.09	0.53
32:2a:1148:U:H2'	32:2a:1149:C:O4'	2.09	0.53
32:2a:1299:A:H2'	32:2a:1299:A:N3	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:2h:9:MET:HG3	39:2h:26:VAL:HG11	1.91	0.53
46:2o:26:GLU:OE2	46:2o:77:ARG:NE	2.41	0.53
1:1A:1039:G:OP1	16:1U:50:ARG:HD2	2.10	0.52
6:1G:129:GLY:O	6:1G:161:THR:OG1	2.26	0.52
21:2Z:171:ILE:HG13	21:2Z:172:ALA:H	1.73	0.52
33:2b:73:THR:OG1	33:2b:170:GLU:OE2	2.19	0.52
33:2b:167:PRO:HG2	33:2b:192:SER:HB2	1.90	0.52
34:2c:20:SER:OG	34:2c:40:ARG:NH2	2.36	0.52
11:1P:2:LYS:HG2	11:1P:4:SER:H	1.75	0.52
32:1a:62:U:H5''	32:1a:385:C:H1'	1.91	0.52
32:1a:737:A:H2'	32:1a:738:C:H6	1.73	0.52
32:1a:785:G:H1	32:1a:797:C:H42	1.55	0.52
32:1a:1104:G:H4'	33:1b:111:ARG:NH2	2.24	0.52
36:1e:74:GLY:HA3	36:1e:116:THR:HG22	1.89	0.52
39:1h:10:LEU:HD22	39:1h:83:ILE:HD11	1.90	0.52
1:2A:1714:G:H2'	1:2A:1717:G:C8	2.44	0.52
1:2A:1790:C:H5''	1:2A:1791:A:OP1	2.10	0.52
1:2A:2889:C:H2'	1:2A:2891:G:O4'	2.08	0.52
32:2a:1020:U:H2'	32:2a:1021:G:C8	2.45	0.52
32:2a:1247:U:H1'	32:2a:1291:G:N2	2.24	0.52
32:2a:1518:MA6:N6	32:2a:1519:MA6:H103	2.24	0.52
41:2j:54:PHE:O	41:2j:56:HIS:ND1	2.42	0.52
1:1A:494:G:H5''	5:1F:60:SER:HB3	1.92	0.52
1:1A:1128:U:H3	1:1A:1132:A:H61	0.69	0.52
9:1N:58:ASP:OD1	9:1N:58:ASP:N	2.39	0.52
32:1a:334:C:O2	32:1a:1434:A:O2'	2.25	0.52
32:1a:486:U:H2'	32:1a:487:A:H8	1.74	0.52
32:1a:1037:C:H2'	32:1a:1038:C:H6	1.73	0.52
32:1a:1376:U:H2'	32:1a:1377:A:H8	1.74	0.52
42:2k:43:SER:HB3	42:2k:68:ALA:HB2	1.91	0.52
1:1A:209:G:O2'	1:1A:222:A:N3	2.36	0.52
1:1A:2308:U:OP2	14:1S:9:ARG:NH2	2.39	0.52
34:1c:19:GLU:HG2	34:1c:54:ARG:CZ	2.40	0.52
34:1c:53:ALA:HB2	34:1c:115:LEU:HD11	1.92	0.52
44:1m:23:TYR:HE2	44:1m:70:LEU:HD22	1.74	0.52
6:2G:11:TYR:CZ	6:2G:16:ARG:HD3	2.44	0.52
32:2a:148:G:H2'	32:2a:149:A:H8	1.74	0.52
32:2a:320:C:O2'	32:2a:1435:G:O2'	2.24	0.52
32:2a:1355:G:H1	32:2a:1367:C:H42	1.56	0.52
33:2b:189:ASP:OD1	33:2b:189:ASP:N	2.31	0.52
35:2d:13:ARG:NH2	35:2d:40:PRO:HA	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:2411:G:O2'	28:16:19:ARG:NH1	2.43	0.52
8:1I:93:THR:HG22	8:1I:119:PRO:HB3	1.91	0.52
32:1a:411:A:OP1	35:1d:30:LYS:NZ	2.43	0.52
32:1a:836:G:OP1	49:1r:61:LYS:NZ	2.23	0.52
32:1a:977:A:O2'	32:1a:979:C:OP2	2.26	0.52
41:1j:54:PHE:O	41:1j:56:HIS:N	2.37	0.52
1:2A:822:U:H2'	1:2A:823:G:H8	1.74	0.52
1:2A:1011:G:H4'	16:2U:75:ASN:HD22	1.74	0.52
1:2A:1153:C:H5'	16:2U:76:TYR:HE2	1.74	0.52
1:2A:2870:C:H2'	1:2A:2871:C:O4'	2.09	0.52
32:2a:382:A:H2'	32:2a:383:A:H8	1.75	0.52
32:2a:543:C:OP2	35:2d:10:ARG:NH2	2.43	0.52
32:2a:974:A:OP2	45:2n:29:ARG:NH2	2.43	0.52
37:2f:10:LEU:HD13	37:2f:61:LEU:HD13	1.92	0.52
46:2o:26:GLU:H	46:2o:26:GLU:CD	2.17	0.52
1:1A:276:C:O3'	8:1I:42:SER:OG	2.26	0.52
1:1A:748:G:H1	1:1A:778:C:H42	1.57	0.52
1:1A:1792:C:H42	1:1A:1793:A:H62	1.58	0.52
1:1A:1893:G:H2'	1:1A:1894:G:H8	1.75	0.52
20:1Y:11:ASP:OD1	20:1Y:11:ASP:N	2.42	0.52
32:1a:68:G:H2'	32:1a:69:G:O4'	2.09	0.52
32:1a:73:G:N2	32:1a:96:U:O2	2.31	0.52
32:1a:689:C:OP1	42:1k:27:ASN:ND2	2.37	0.52
35:1d:173:TRP:CD1	35:1d:173:TRP:H	2.27	0.52
1:2A:1791:A:H5'	3:2D:206:LEU:HD12	1.91	0.52
1:2A:2468:G:OP1	31:29:8:LYS:NZ	2.43	0.52
4:2E:111:ARG:HD2	4:2E:160:TYR:CD2	2.45	0.52
8:2I:129:THR:HG22	8:2I:139:GLN:HE22	1.75	0.52
19:2X:5:TYR:CZ	24:22:30:ARG:HB2	2.45	0.52
32:2a:688:G:H2'	32:2a:689:C:H6	1.74	0.52
32:2a:1132:C:N3	32:2a:1142:G:N2	2.51	0.52
32:2a:1370:G:H5''	40:2i:12:GLU:HG3	1.91	0.52
35:2d:11:LEU:HD23	35:2d:66:ARG:HB3	1.92	0.52
46:2o:39:LEU:HD22	46:2o:56:LEU:HD13	1.90	0.52
50:2s:41:VAL:HG13	50:2s:43:GLU:H	1.74	0.52
1:1A:1778:G:H2'	1:1A:1779:G:H8	1.74	0.52
1:1A:2372:A:O2'	11:1P:61:ARG:NH1	2.39	0.52
10:1O:49:ARG:HH12	32:1a:1423:G:P	2.32	0.52
32:1a:134:A:H61	47:1p:25:ARG:HH12	1.57	0.52
32:1a:1007:C:O2	32:1a:1022:G:N1	2.29	0.52
32:1a:1272:G:H2'	32:1a:1273:G:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1e:98:THR:HB	36:1e:117:ASP:HB3	1.91	0.52
49:1r:26:LEU:HD11	49:1r:42:ARG:HD3	1.90	0.52
1:2A:338:G:OP1	20:2Y:4:LYS:NZ	2.43	0.52
1:2A:2271:G:H5'	22:20:20:ARG:HG2	1.91	0.52
1:2A:2530:A:O2'	1:2A:2532:G:OP2	2.26	0.52
2:2B:48:A:P	14:2S:30:ARG:HH22	2.33	0.52
22:20:32:ARG:H	22:20:35:ASN:ND2	2.07	0.52
32:2a:1029:C:C2	32:2a:1032:G:N2	2.76	0.52
32:2a:1338:G:H21	55:2x:41:C:H1'	1.74	0.52
1:1A:943:C:N3	1:1A:944:C:N4	2.57	0.52
1:1A:1430:A:N3	1:1A:1451:U:H1'	2.25	0.52
1:1A:1671:C:H2'	1:1A:1672:G:O4'	2.09	0.52
1:1A:2642:G:H2'	1:1A:2643:G:H8	1.75	0.52
1:1A:2707:C:H2'	1:1A:2708:U:H6	1.74	0.52
6:1G:101:ILE:HD13	26:14:25:TYR:HB2	1.91	0.52
10:1O:17:ARG:HH21	10:1O:47:ILE:HG21	1.73	0.52
10:1O:19:ILE:HG22	10:1O:43:VAL:HA	1.90	0.52
10:1O:115:VAL:HG13	10:1O:121:VAL:HG21	1.91	0.52
32:1a:341:C:O2'	32:1a:342:C:H5'	2.10	0.52
32:1a:913:A:H4'	32:1a:914:A:O5'	2.10	0.52
32:1a:1319:A:H61	32:1a:1361:G:H21	1.58	0.52
35:1d:10:ARG:HB2	35:1d:40:PRO:HG3	1.91	0.52
45:1n:33:VAL:HA	45:1n:40:CYS:HA	1.92	0.52
46:1o:60:VAL:O	46:1o:64:ARG:N	2.40	0.52
1:2A:628:G:H5''	30:28:18:ALA:HB2	1.91	0.52
1:2A:882:G:H2'	1:2A:883:G:H8	1.73	0.52
1:2A:1608:A:H1'	1:2A:1610:A:OP2	2.10	0.52
2:2B:40:U:H1'	2:2B:45:A:H61	1.75	0.52
32:2a:501:C:H2'	32:2a:502:G:C8	2.45	0.52
32:2a:1178:G:OP1	40:2i:93:ARG:NH2	2.34	0.52
32:2a:1435:G:H2'	32:2a:1436:U:C6	2.44	0.52
37:2f:37:VAL:HA	37:2f:65:VAL:HG12	1.92	0.52
1:1A:1040:C:OP1	16:1U:53:ARG:NH2	2.43	0.52
3:1D:66:ASP:OD1	3:1D:103:ARG:NH1	2.43	0.52
32:1a:524:G:H2'	32:1a:525:C:C6	2.45	0.52
32:1a:1024:G:H2'	32:1a:1025:U:H5''	1.92	0.52
36:1e:5:ASP:OD1	36:1e:5:ASP:N	2.43	0.52
1:2A:1815:A:OP2	3:2D:54:ARG:NH2	2.43	0.52
1:2A:2134:A:HO2'	1:2A:2159:G:N2	2.08	0.52
15:2T:55:ASN:H	15:2T:59:THR:HB	1.75	0.52
31:29:27:CYS:SG	31:29:28:GLU:N	2.83	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:2a:251:G:N1	32:2a:266:G:O6	2.42	0.52
37:2f:11:ASN:HB3	37:2f:14:LEU:HG	1.91	0.52
43:2l:102:ARG:HD3	43:2l:110:VAL:HG23	1.92	0.52
1:1A:609:A:N1	1:1A:856:G:O2'	2.42	0.52
1:1A:2203:G:O2'	1:1A:2204:G:OP1	2.26	0.52
8:1I:129:THR:HG22	8:1I:139:GLN:HE22	1.75	0.52
44:1m:31:LYS:HA	44:1m:34:LEU:HD12	1.91	0.52
1:2A:848:G:H2'	1:2A:849:A:C8	2.45	0.52
12:2Q:12:GLN:HE21	12:2Q:72:LYS:HG3	1.75	0.52
26:24:45:GLY:O	26:24:47:GLN:N	2.43	0.52
32:2a:1315:U:H2'	32:2a:1316:G:O4'	2.09	0.52
36:2e:5:ASP:N	36:2e:5:ASP:OD1	2.39	0.52
1:1A:656:A:N3	1:1A:2427:G:O2'	2.41	0.51
1:1A:1390:G:H4'	1:1A:1430:A:N7	2.25	0.51
1:1A:1660:A:P	1:1A:1660:A:H8	2.33	0.51
1:2A:645:C:H5''	1:2A:646:A:OP2	2.10	0.51
1:2A:2098:U:O4	1:2A:2191:G:O6	2.27	0.51
5:2F:183:VAL:O	5:2F:187:VAL:HG23	2.10	0.51
11:2P:47:ASP:CG	11:2P:49:ARG:HE	2.18	0.51
32:2a:998:G:H1	32:2a:1043:C:H42	1.56	0.51
39:2h:20:TYR:HE2	39:2h:75:ARG:HD2	1.75	0.51
1:1A:8:A:H2	1:1A:2904:U:H3	1.58	0.51
1:1A:174:U:H2'	1:1A:175:G:H8	1.75	0.51
1:1A:1128:U:O4	1:1A:1132:A:C6	2.63	0.51
1:1A:2826:C:O2	1:1A:2893:A:O2'	2.27	0.51
6:1G:131:TYR:HE2	6:1G:133:LEU:HD23	1.74	0.51
6:1G:150:ASP:OD1	6:1G:150:ASP:N	2.34	0.51
9:1N:34:LEU:O	9:1N:49:GLY:HA3	2.10	0.51
13:1R:24:GLN:HB3	13:1R:44:LEU:HD11	1.90	0.51
32:1a:41:G:H2'	32:1a:42:G:C8	2.44	0.51
32:1a:984:C:N3	32:1a:1221:G:N2	2.45	0.51
32:1a:1060:C:OP1	45:1n:45:ARG:NH2	2.41	0.51
32:1a:1114:C:H42	32:1a:1186:G:H1	1.57	0.51
33:1b:178:ARG:NH2	39:1h:71:GLY:O	2.42	0.51
34:1c:56:ASP:HB2	34:1c:67:THR:HB	1.91	0.51
1:2A:392:C:H5''	1:2A:409:C:H5''	1.91	0.51
1:2A:451:C:N4	1:2A:454:A:OP2	2.30	0.51
1:2A:1514:U:H2'	1:2A:1515:G:H8	1.74	0.51
1:2A:1819:A:H5''	3:2D:161:THR:HG21	1.91	0.51
32:2a:571:U:O4	32:2a:864:A:N6	2.44	0.51
1:1A:563:G:H2'	1:1A:564:G:H8	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:581:G:H2'	1:1A:582:G:H8	1.75	0.51
1:1A:1515:C:H42	1:1A:1570:G:H1	1.59	0.51
14:1S:85:VAL:HG11	14:1S:110:LEU:HD23	1.91	0.51
32:1a:70:G:H2'	32:1a:71:C:O4'	2.10	0.51
32:1a:795:C:OP2	32:1a:796:C:N4	2.38	0.51
32:1a:1129:C:O2	32:1a:1130:A:N6	2.37	0.51
33:1b:91:PRO:HG2	33:1b:155:LEU:HD13	1.92	0.51
39:1h:19:VAL:HG23	39:1h:21:LYS:HG2	1.93	0.51
1:2A:755:C:H2'	1:2A:756:C:H6	1.74	0.51
1:2A:1693:U:H1'	3:2D:14:ARG:NH2	2.25	0.51
2:2B:82:G:H1	2:2B:95:C:H42	1.59	0.51
32:2a:128:G:O2'	48:2q:3:LYS:NZ	2.43	0.51
1:1A:1098:C:H2'	1:1A:1099:C:C6	2.45	0.51
1:1A:1942:4OC:HM22	1:1A:1943:G:H5'	1.91	0.51
2:1B:90:A:C5	2:1B:91:C:H1'	2.45	0.51
2:1B:112:U:H2'	2:1B:113:G:H8	1.76	0.51
32:1a:10:A:HO2'	32:1a:507:C:HO2'	1.59	0.51
32:1a:954:G:H2'	32:1a:955:U:C6	2.45	0.51
32:1a:966:M2G:HM13	32:1a:967:5MC:H1'	1.92	0.51
1:2A:1003:G:O2'	1:2A:1010:A:N1	2.32	0.51
1:2A:1370:C:HO2'	1:2A:1811:G:HO2'	1.57	0.51
1:2A:1791:A:H3'	1:2A:1792:G:H8	1.76	0.51
1:2A:1830:C:H42	1:2A:1975:G:H1	1.58	0.51
1:2A:2315:G:H2'	1:2A:2316:C:C6	2.46	0.51
8:2I:4:ILE:HG12	8:2I:18:VAL:HG22	1.92	0.51
15:2T:127:ALA:C	15:2T:129:ARG:H	2.17	0.51
42:2k:43:SER:HA	42:2k:47:VAL:HG21	1.92	0.51
1:1A:133:G:H1	1:1A:144:C:H42	1.58	0.51
1:1A:1340:U:O2'	13:1R:23:ASN:OD1	2.20	0.51
15:1T:73:GLU:OE2	15:1T:103:ARG:NE	2.39	0.51
32:1a:421:U:O4	34:1c:127:ARG:NE	2.33	0.51
32:1a:537:G:H2'	32:1a:538:G:H8	1.76	0.51
32:1a:972:C:O2'	41:1j:55:LYS:O	2.28	0.51
32:1a:976:G:OP2	32:1a:1358:U:O2'	2.28	0.51
33:1b:80:ILE:HG12	33:1b:215:LEU:HD23	1.93	0.51
34:1c:112:SER:HB3	34:1c:115:LEU:HD13	1.93	0.51
38:1g:150:ALA:HA	42:1k:59:TYR:HB3	1.92	0.51
41:1j:30:SER:O	41:1j:81:THR:OG1	2.24	0.51
48:1q:6:LEU:HD23	48:1q:23:VAL:HG11	1.91	0.51
1:2A:301:G:OP2	20:2Y:84:ARG:NH2	2.33	0.51
1:2A:1518:U:H2'	1:2A:1519:G:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:2F:22:ALA:HB1	5:2F:24:LEU:HD13	1.92	0.51
6:2G:60:LEU:HD22	6:2G:68:PRO:HB3	1.91	0.51
6:2G:142:PRO:HB2	26:24:31:ILE:HG21	1.91	0.51
21:2Z:1:MET:O	21:2Z:55:HIS:HB3	2.11	0.51
30:28:31:HIS:ND1	30:28:32:LEU:HD13	2.25	0.51
32:2a:594:G:H1	32:2a:645:C:H42	1.58	0.51
38:2g:69:VAL:HG21	38:2g:104:LEU:HD11	1.93	0.51
41:2j:81:THR:HA	41:2j:84:GLN:HB3	1.92	0.51
1:1A:358:C:P	1:1A:359:C:H41	2.33	0.51
1:1A:1319:U:O2'	1:1A:1320:A:H5''	2.10	0.51
1:1A:1733:C:H2'	1:1A:1734:G:O4'	2.10	0.51
1:1A:2188:G:H2'	1:1A:2189:U:C5	2.46	0.51
5:1F:167:ALA:HB1	5:1F:173:VAL:HG11	1.92	0.51
11:1P:95:VAL:HG23	11:1P:99:LEU:HD11	1.92	0.51
32:1a:33:A:O2'	32:1a:363:A:N3	2.41	0.51
32:1a:108:G:OP1	32:1a:326:G:N2	2.40	0.51
32:1a:501:C:O2	32:1a:549:C:O2'	2.26	0.51
32:1a:1316:G:N7	50:1s:7:LYS:NZ	2.58	0.51
32:1a:1371:G:OP2	40:1i:11:LYS:HE2	2.11	0.51
33:1b:119:GLU:HG3	33:1b:153:ARG:HH12	1.76	0.51
1:2A:622:G:H2'	1:2A:623:G:C8	2.46	0.51
5:2F:167:ALA:HB1	5:2F:173:VAL:HG11	1.91	0.51
6:2G:98:ARG:NH1	26:24:1:MET:SD	2.83	0.51
13:2R:79:LEU:HA	13:2R:83:ILE:HD12	1.92	0.51
45:2n:4:LYS:HA	45:2n:7:ILE:HG22	1.93	0.51
1:1A:1045:U:H5''	1:1A:1200:G:O6	2.10	0.51
32:1a:486:U:H2'	32:1a:487:A:C8	2.46	0.51
32:1a:695:A:OP2	42:1k:53:SER:N	2.43	0.51
32:1a:1047:G:H5''	45:1n:4:LYS:HD3	1.93	0.51
32:1a:1266:G:N2	32:1a:1269:A:OP2	2.39	0.51
32:1a:1367:C:OP1	40:1i:115:GLY:N	2.43	0.51
32:1a:1530:G:H2'	32:1a:1531:A:C8	2.46	0.51
1:2A:2294:C:OP1	14:2S:10:ARG:HD2	2.10	0.51
1:2A:2392:A:OP2	1:2A:2422:A:N6	2.43	0.51
2:2B:66:A:H61	2:2B:108:U:H2'	1.76	0.51
26:24:1:MET:HE2	26:24:6:HIS:CD2	2.46	0.51
32:2a:134:A:N6	47:2p:25:ARG:HH12	2.08	0.51
32:2a:445:G:H2'	32:2a:446:G:C8	2.45	0.51
32:2a:629:G:H2'	32:2a:630:G:O4'	2.11	0.51
32:2a:1104:G:H4'	33:2b:111:ARG:HH22	1.76	0.51
32:2a:1457:G:H2'	32:2a:1458:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:2d:8:VAL:HG11	35:2d:22:LYS:HD3	1.93	0.51
50:2s:64:GLU:CD	50:2s:64:GLU:H	2.17	0.51
1:1A:182:U:N3	1:1A:192:C:O2	2.44	0.51
1:1A:2032:G:H5''	18:1W:42:ARG:HB2	1.93	0.51
1:1A:2152:U:H2'	1:1A:2180:A:N6	2.23	0.51
1:1A:2483:C:H2'	1:1A:2484:G:O4'	2.10	0.51
32:1a:113:G:N3	32:1a:353:A:O2'	2.39	0.51
34:1c:60:ALA:HB3	34:1c:63:ASN:HD21	1.76	0.51
40:1i:43:ALA:HA	40:1i:74:ILE:HD13	1.91	0.51
1:2A:2046:G:H5'	27:25:19:ARG:HG3	1.91	0.51
26:24:58:ARG:HB3	50:2s:64:GLU:O	2.11	0.51
32:2a:57:G:H2'	32:2a:58:C:C6	2.46	0.51
32:2a:684:A:H1'	42:2k:39:PRO:HD2	1.93	0.51
32:2a:769:G:H4'	32:2a:1513:A:H4'	1.93	0.51
32:2a:1302:U:OP2	44:2m:21:TYR:OH	2.27	0.51
32:2a:1352:C:OP1	52:2u:3:LYS:NZ	2.32	0.51
1:1A:1343:C:OP1	1:1A:2722:C:H4'	2.10	0.51
2:1B:106:G:H5''	21:1Z:31:ARG:HG2	1.92	0.51
8:1I:110:ASP:OD2	8:1I:113:ARG:N	2.43	0.51
32:1a:1029:C:N3	32:1a:1032:G:O6	2.43	0.51
32:1a:1030:C:N3	32:1a:1031:G:C2	2.79	0.51
33:1b:16:HIS:CG	33:1b:17:PHE:N	2.78	0.51
1:2A:807:U:H2'	1:2A:808:G:H8	1.76	0.51
24:22:64:LEU:HD11	24:22:68:ARG:HE	1.76	0.51
32:2a:1342:C:H2'	32:2a:1343:G:C8	2.45	0.51
38:2g:94:ARG:NH1	38:2g:98:SER:OG	2.44	0.51
38:2g:126:ASP:O	38:2g:131:LYS:N	2.31	0.51
39:2h:92:ARG:NH1	39:2h:132:GLU:OE2	2.43	0.51
46:2o:74:ASP:OD2	46:2o:77:ARG:NH1	2.44	0.51
55:2x:52:G:H1	55:2x:62:C:N4	2.08	0.51
1:1A:854:U:O2'	1:1A:2082:A:N1	2.43	0.51
1:1A:1850:A:H5''	3:1D:161:THR:HG21	1.92	0.51
1:1A:2227:G:H5''	1:1A:2228:G:C5	2.46	0.51
1:1A:2741:U:H5'	10:1O:70:LYS:NZ	2.25	0.51
1:1A:2851:C:H2'	1:1A:2852:G:C8	2.45	0.51
32:1a:999:C:H2'	32:1a:1000:U:O4'	2.10	0.51
36:1e:58:ALA:O	36:1e:62:ALA:N	2.41	0.51
44:1m:16:ASP:HB2	44:1m:27:LYS:HE3	1.93	0.51
1:2A:631:A:OP2	30:28:47:LYS:NZ	2.27	0.51
1:2A:995:C:O2	9:2N:3:THR:OG1	2.29	0.51
6:2G:139:LEU:HA	6:2G:144:ILE:HB	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:2a:791:G:O6	32:2a:792:A:N6	2.41	0.51
32:2a:837:G:H2'	32:2a:838:G:C8	2.46	0.51
32:2a:1030(A):G:N2	32:2a:1030(C):G:H3'	2.26	0.51
32:2a:1352:C:N3	32:2a:1370:G:N2	2.49	0.51
32:2a:1441:G:HO2'	32:2a:1442:G:N2	2.08	0.51
33:2b:184:VAL:HG12	33:2b:197:VAL:HG13	1.91	0.51
1:1A:740:C:O2'	1:1A:1399:A:N3	2.34	0.50
1:1A:927:G:N2	1:1A:944:C:N3	2.59	0.50
1:1A:1405:A:H2'	1:1A:1406:A:H5'	1.92	0.50
1:1A:1864:U:H2'	1:1A:1865:U:H6	1.76	0.50
50:1s:41:VAL:HG13	50:1s:43:GLU:H	1.76	0.50
1:2A:2757:A:N1	7:2H:67:LEU:HD22	2.27	0.50
1:2A:2801(A):A:H1'	1:2A:2895:U:H1'	1.93	0.50
3:2D:70:TRP:NE1	3:2D:146:GLU:OE2	2.44	0.50
32:2a:21:G:H2'	32:2a:22:G:C8	2.46	0.50
36:2e:102:ALA:O	36:2e:107:ARG:NH2	2.44	0.50
40:2i:7:THR:H	40:2i:83:ARG:HD2	1.76	0.50
41:2j:10:GLY:HA3	41:2j:16:LEU:HD11	1.94	0.50
55:2x:50:U:H3	55:2x:64:G:H1	1.58	0.50
1:1A:123:G:O3'	29:17:48:LYS:NZ	2.42	0.50
1:1A:410:U:O2	1:1A:412:C:N4	2.44	0.50
1:1A:1360:C:N4	1:1A:1384:G:H1	2.09	0.50
32:1a:741:G:H2'	32:1a:742:G:H8	1.76	0.50
32:1a:1207:2MG:H2'	32:1a:1208:C:C6	2.46	0.50
32:1a:1217:C:OP1	45:1n:9:LYS:NZ	2.42	0.50
33:1b:21:ARG:O	33:1b:23:ARG:N	2.44	0.50
5:2F:57:VAL:HG12	5:2F:59:TYR:H	1.76	0.50
32:2a:108:G:N1	51:2t:15:ARG:HG2	2.26	0.50
37:2f:33:TYR:CE2	37:2f:78:GLU:HG3	2.46	0.50
1:1A:912:C:N3	1:1A:954:C:N4	2.59	0.50
1:1A:1093:G:H2'	1:1A:1156:G:H22	1.77	0.50
1:1A:1102:G:H5''	1:1A:1103:A:O4'	2.09	0.50
1:1A:1199:C:H5'	16:1U:76:TYR:HE2	1.76	0.50
1:1A:1848:G:OP1	3:1D:88:ARG:NH2	2.44	0.50
1:1A:2043:C:OP1	27:15:12:SER:OG	2.26	0.50
1:1A:2351:G:H2'	1:1A:2352:G:C8	2.46	0.50
5:1F:53:THR:HG22	5:1F:56:GLU:CD	2.36	0.50
5:1F:102:PRO:HB2	5:1F:105:VAL:HG23	1.93	0.50
32:1a:341:C:H2'	32:1a:342:C:C6	2.47	0.50
32:1a:605:U:H2'	32:1a:606:G:C8	2.46	0.50
32:1a:630:G:H2'	32:1a:631:G:C8	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:1a:730:G:C5	32:1a:731:G:H1'	2.46	0.50
46:1o:39:LEU:HD22	46:1o:56:LEU:HD13	1.93	0.50
47:1p:58:TYR:O	47:1p:62:VAL:HG23	2.12	0.50
55:1x:53:G:H2'	55:1x:54:5MU:H6	1.76	0.50
1:2A:859:G:O2'	1:2A:916:G:O6	2.21	0.50
6:2G:106:LEU:O	6:2G:110:ALA:HB3	2.11	0.50
11:2P:63:PRO:HG2	30:28:25:MET:HB2	1.94	0.50
14:2S:71:ARG:O	14:2S:75:GLU:HG2	2.11	0.50
32:2a:597:G:N2	39:2h:94:TYR:OH	2.41	0.50
32:2a:626:U:H2'	32:2a:627:G:H8	1.76	0.50
32:2a:1270:C:H2'	32:2a:1271:G:C8	2.46	0.50
32:2a:1320:C:H2'	32:2a:1321:C:O4'	2.10	0.50
32:2a:1513:A:H2'	32:2a:1514:C:H6	1.76	0.50
33:2b:50:GLU:O	33:2b:54:THR:OG1	2.27	0.50
39:2h:121:ASP:N	39:2h:121:ASP:OD1	2.44	0.50
1:1A:1452:U:H2'	1:1A:1453:C:C6	2.46	0.50
1:1A:1822:A:N6	1:1A:1859:G:O2'	2.39	0.50
1:1A:2310:A:H2'	1:1A:2311:G:O4'	2.11	0.50
3:1D:41:GLY:O	3:1D:43:ARG:NH1	2.44	0.50
5:1F:181:LEU:HD11	5:1F:186:ILE:HD11	1.94	0.50
15:1T:24:PRO:HA	15:1T:49:VAL:HG23	1.93	0.50
32:1a:18:C:P	36:1e:127:ASN:HD21	2.35	0.50
32:1a:227:G:H2'	32:1a:228:A:C8	2.47	0.50
34:1c:12:LEU:HD11	45:1n:51:GLY:HA2	1.93	0.50
1:2A:729:G:C6	3:2D:208:LYS:HB2	2.46	0.50
1:2A:1141:U:OP2	9:2N:63:THR:OG1	2.26	0.50
1:2A:2031:A:N3	1:2A:2455:G:O2'	2.41	0.50
1:2A:2295:C:H5	14:2S:13:ARG:HH12	1.59	0.50
1:2A:2485:G:H5''	12:2Q:46:GLN:HE21	1.75	0.50
3:2D:85:ASP:OD2	3:2D:88:ARG:NH1	2.45	0.50
32:2a:489:C:OP1	35:2d:132:ARG:NH2	2.40	0.50
32:2a:1194:U:H4'	36:2e:22:GLY:O	2.11	0.50
32:2a:1226:C:H4'	50:2s:80:TYR:CZ	2.46	0.50
34:2c:24:ALA:HB3	34:2c:29:TYR:HD1	1.75	0.50
41:2j:46:ARG:HG2	41:2j:64:GLU:HB3	1.92	0.50
1:1A:10:G:H2'	1:1A:11:G:H8	1.75	0.50
1:1A:325:G:OP2	20:1Y:84:ARG:NH2	2.40	0.50
1:1A:2087:C:H4'	1:1A:2263:OMG:HM23	1.93	0.50
3:1D:26:LYS:HB3	3:1D:83:GLU:HG2	1.94	0.50
5:1F:157:VAL:HB	5:1F:194:MET:HG2	1.93	0.50
32:1a:1062:U:H2'	32:1a:1063:C:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:1a:1369:C:H2'	32:1a:1370:G:C8	2.46	0.50
1:2A:1210:A:H5''	1:2A:1212:G:O4'	2.11	0.50
1:2A:1682:G:P	1:2A:1699:G:H22	2.35	0.50
1:2A:2050:C:N4	1:2A:2051:A:N1	2.60	0.50
1:2A:2455:G:H1	1:2A:2496:C:H42	1.59	0.50
3:2D:260:ARG:NH2	3:2D:266:SER:OG	2.45	0.50
13:2R:83:ILE:HG23	13:2R:86:ARG:HH21	1.75	0.50
29:27:20:ALA:HA	29:27:23:ARG:HH21	1.76	0.50
32:2a:148:G:H2'	32:2a:149:A:C8	2.46	0.50
33:2b:8:LYS:HG3	33:2b:9:GLU:H	1.75	0.50
1:1A:876:A:N7	1:1A:2260:C:H5'	2.26	0.50
1:1A:1936:C:H2'	1:1A:1937:5MU:O4'	2.11	0.50
1:1A:2376:C:H2'	1:1A:2377:G:O4'	2.11	0.50
1:1A:2576:A:C2	1:1A:2659:U:H4'	2.46	0.50
5:1F:101:LEU:O	5:1F:106:ARG:NH1	2.45	0.50
8:1I:79:ILE:HB	8:1I:144:VAL:HG12	1.93	0.50
15:1T:127:ALA:O	15:1T:128:GLU:HG2	2.12	0.50
32:1a:335:C:O2'	32:1a:1433:A:N3	2.37	0.50
32:1a:1008:C:N3	32:1a:1021:G:O6	2.45	0.50
32:1a:1027:C:N3	32:1a:1034:G:N2	2.60	0.50
1:2A:1653:G:H3'	13:2R:2:ARG:HB2	1.94	0.50
3:2D:218:ARG:HB3	3:2D:219:PRO:HD2	1.93	0.50
32:2a:127:G:O2'	48:2q:2:PRO:O	2.29	0.50
40:2i:4:TYR:HB2	40:2i:19:LEU:HB2	1.94	0.50
40:2i:99:LEU:HB3	40:2i:101:PHE:CE2	2.47	0.50
1:1A:574:G:O2'	1:1A:1265:A:N3	2.38	0.50
1:1A:2499:G:H2'	1:1A:2500:A:C8	2.47	0.50
44:1m:79:LYS:NZ	44:1m:83:ASP:OD2	2.41	0.50
54:1w:74:C:O2'	54:1w:75:C:OP1	2.27	0.50
1:2A:722:A:H2'	1:2A:723:G:C8	2.46	0.50
1:2A:2842:G:H1	1:2A:2875:C:H42	1.59	0.50
18:2W:67:ASP:OD1	18:2W:67:ASP:N	2.44	0.50
32:2a:109:A:C6	32:2a:326:G:C6	3.00	0.50
32:2a:1513:A:H2'	32:2a:1514:C:C6	2.47	0.50
38:2g:15:ASP:OD1	38:2g:19:GLY:N	2.45	0.50
42:2k:18:ARG:HB2	42:2k:33:THR:OG1	2.12	0.50
1:1A:326:C:H42	1:1A:339:G:H1	1.60	0.50
1:1A:1095:C:O2	1:1A:1159:U:H4'	2.12	0.50
1:1A:2642:G:H2'	1:1A:2643:G:C8	2.46	0.50
1:1A:2745:G:H3'	1:1A:2746:A:O4'	2.11	0.50
2:1B:88:C:H2'	2:1B:89:G:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:1Y:9:LYS:NZ	20:1Y:28:LYS:O	2.37	0.50
27:15:41:PRO:O	27:15:44:THR:OG1	2.29	0.50
55:1x:30:G:H1	55:1x:40:C:H42	1.58	0.50
1:2A:990:A:C6	1:2A:1186:G:H1'	2.46	0.50
1:2A:1394:U:H4'	1:2A:1603:A:H4'	1.93	0.50
1:2A:2218:U:H1'	23:21:52:ARG:HH12	1.76	0.50
2:2B:96:U:H2'	2:2B:97:G:H8	1.77	0.50
3:2D:231:HIS:CD2	3:2D:249:PRO:HG3	2.47	0.50
4:2E:111:ARG:HD2	4:2E:160:TYR:HD2	1.77	0.50
12:2Q:17:LEU:HD21	12:2Q:41:TRP:HE1	1.77	0.50
32:2a:985:C:H2'	32:2a:986:A:C8	2.47	0.50
32:2a:1125:U:O2'	32:2a:1126:U:H2'	2.11	0.50
32:2a:1292:U:H2'	32:2a:1293:G:C8	2.47	0.50
32:2a:1441:G:O2'	32:2a:1442:G:N2	2.45	0.50
51:2t:63:ILE:HG21	51:2t:81:LYS:HG3	1.93	0.50
1:1A:653:G:H2'	1:1A:654:G:H8	1.77	0.50
1:1A:874:U:H1'	1:1A:2258:G:O2'	2.11	0.50
1:1A:1233:U:H4'	17:1V:79:VAL:HG22	1.94	0.50
1:1A:1709:C:O2'	1:1A:2699:U:OP1	2.28	0.50
1:1A:2263:OMG:HN1	55:1x:75:C:H42	1.59	0.50
1:1A:2301:G:N2	1:1A:2356:U:O2	2.45	0.50
1:1A:2342:G:N2	1:1A:2398:C:O2	2.45	0.50
1:1A:2797:C:O2'	4:1E:42:ASP:OD1	2.25	0.50
12:1Q:38:GLU:HG3	12:1Q:127:ILE:HB	1.94	0.50
32:1a:757:U:O2'	32:1a:879:C:O2	2.30	0.50
32:1a:1328:C:OP1	52:1u:21:TYR:OH	2.24	0.50
36:1e:122:GLU:HB2	36:1e:126:ARG:NH1	2.27	0.50
1:2A:345:A:N3	1:2A:347:A:N6	2.60	0.50
1:2A:947:G:H2'	1:2A:948:G:H8	1.77	0.50
1:2A:2052:G:O2'	4:2E:144:ARG:O	2.25	0.50
1:2A:2292:C:OP1	14:2S:17:ARG:NH2	2.44	0.50
23:21:3:LYS:HD3	23:21:61:ARG:HH12	1.77	0.50
29:27:12:ARG:HH21	29:27:44:PRO:HB3	1.77	0.50
32:2a:1024:G:H2'	32:2a:1024:G:N3	2.27	0.50
32:2a:1057:G:H2'	32:2a:1058:G:O4'	2.12	0.50
32:2a:1301:U:O2'	32:2a:1302:U:H5'	2.11	0.50
42:2k:21:ILE:HD11	42:2k:98:LEU:HD11	1.94	0.50
1:1A:709:G:H2'	1:1A:710:G:H8	1.77	0.49
8:1I:5:LEU:HD11	8:1I:19:VAL:HG22	1.93	0.49
32:1a:114:U:H2'	32:1a:115:G:C8	2.47	0.49
1:2A:990:A:N6	1:2A:1186:G:H1'	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2A:1268:A:H2'	1:2A:1269:A:O4'	2.11	0.49
1:2A:2547:U:H2'	1:2A:2548:G:H8	1.77	0.49
1:2A:2801(A):A:H5'	1:2A:2802:G:H8	1.77	0.49
10:2O:24:VAL:HG12	10:2O:33:ALA:HB2	1.93	0.49
32:2a:553:A:H5''	43:2l:24:VAL:HG21	1.93	0.49
32:2a:700:G:H4'	32:2a:704:A:H1'	1.94	0.49
37:2f:84:ASN:O	37:2f:86:ARG:HG3	2.12	0.49
1:1A:481:C:N3	1:1A:498:A:H2'	2.27	0.49
1:1A:793:A:HO2'	1:1A:2623:U:HO2'	1.49	0.49
1:1A:949:C:H2'	1:1A:950:C:C6	2.47	0.49
1:1A:1098:C:H2'	1:1A:1099:C:H6	1.77	0.49
1:1A:2403:G:O2'	1:1A:2434:A:N7	2.45	0.49
1:1A:2699:U:H2'	1:1A:2700:U:O4'	2.12	0.49
11:1P:25:SER:C	11:1P:27:HIS:H	2.20	0.49
32:1a:1279:A:O2'	32:1a:1281:U:OP2	2.26	0.49
1:2A:1342:A:O2'	1:2A:1344:G:OP2	2.30	0.49
3:2D:231:HIS:HD2	3:2D:249:PRO:HG3	1.76	0.49
10:2O:64:ARG:HB2	10:2O:79:PHE:CD2	2.47	0.49
21:2Z:30:ASN:HA	21:2Z:89:PHE:CE1	2.47	0.49
32:2a:976:G:H5'	32:2a:1358:U:O2'	2.11	0.49
32:2a:1080:A:H5'	36:2e:16:THR:HG21	1.94	0.49
37:2f:2:ARG:NH2	46:2o:2:PRO:HD3	2.27	0.49
40:2i:19:LEU:HD21	40:2i:81:ILE:HD11	1.94	0.49
41:2j:16:LEU:HD12	41:2j:94:VAL:HG22	1.94	0.49
1:1A:2731:G:O2'	1:1A:2857:U:OP1	2.29	0.49
10:1O:64:ARG:HB2	10:1O:79:PHE:CD2	2.47	0.49
32:1a:490:G:H2'	32:1a:491:G:C8	2.47	0.49
32:1a:560:U:H4'	32:1a:561:U:O5'	2.11	0.49
32:1a:1184:G:H2'	32:1a:1185:G:H8	1.77	0.49
35:1d:31:CYS:HB3	35:1d:34:GLU:CG	2.43	0.49
43:1l:60:LEU:HD11	43:1l:66:VAL:HG22	1.94	0.49
1:2A:10:G:O2'	1:2A:2801(A):A:N7	2.43	0.49
1:2A:271(T):C:H2'	1:2A:271(U):G:H8	1.76	0.49
1:2A:586:A:N1	1:2A:809:G:O2'	2.42	0.49
1:2A:2285:C:OP2	28:26:6:ARG:NH1	2.44	0.49
1:2A:2711:A:H5''	1:2A:2712:U:H5''	1.94	0.49
5:2F:124:LEU:HB3	5:2F:193:VAL:HG22	1.95	0.49
9:2N:40:PRO:HB3	16:2U:68:ALA:HB2	1.94	0.49
32:2a:885:G:H2'	32:2a:886:G:H8	1.77	0.49
37:2f:46:ARG:HD3	37:2f:60:PHE:CD2	2.47	0.49
1:1A:1122:C:O2'	1:1A:1123:A:N7	2.39	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:1228:G:H2'	1:1A:1229:G:H8	1.76	0.49
1:1A:1377:A:O2'	1:1A:1378:G:N2	2.41	0.49
35:1d:26:CYS:HB3	58:1d:302:SF4:S1	2.51	0.49
55:1x:53:G:H2'	55:1x:54:5MU:C6	2.47	0.49
1:2A:817:C:O2'	1:2A:839:U:OP1	2.29	0.49
11:2P:63:PRO:HD3	30:28:27:THR:HG22	1.93	0.49
38:2g:126:ASP:HB3	38:2g:131:LYS:HB2	1.93	0.49
48:2q:17:LYS:HD2	48:2q:47:PRO:HA	1.93	0.49
32:1a:565:U:H3'	32:1a:566:G:H8	1.77	0.49
32:1a:741:G:H2'	32:1a:742:G:C8	2.47	0.49
32:1a:955:U:H2'	32:1a:956:U:H6	1.77	0.49
33:1b:73:THR:HA	33:1b:94:ASN:O	2.13	0.49
37:1f:45:LEU:HD12	37:1f:59:TYR:HD1	1.78	0.49
38:1g:46:ALA:HB1	38:1g:121:ALA:HB2	1.93	0.49
1:2A:1030:G:H1	1:2A:1124:C:H42	1.60	0.49
1:2A:2011:U:OP2	18:2W:16:LYS:NZ	2.40	0.49
1:2A:2098:U:O2	1:2A:2191:G:N2	2.35	0.49
1:2A:2472:G:H2'	1:2A:2475:C:H42	1.78	0.49
6:2G:150:ASP:OD1	6:2G:150:ASP:N	2.41	0.49
34:2c:179:ARG:O	34:2c:206:GLU:HA	2.12	0.49
38:2g:80:VAL:HG11	38:2g:154:TYR:CZ	2.47	0.49
47:2p:14:ASN:OD1	47:2p:42:ARG:NH2	2.46	0.49
1:1A:615:G:H1	1:1A:712:C:N4	2.08	0.49
1:1A:840:A:OP2	1:1A:2093:A:O2'	2.30	0.49
1:1A:1397:C:O2'	1:1A:1618:A:N3	2.43	0.49
1:1A:1902:C:H2'	1:1A:1903:C:H6	1.77	0.49
1:1A:1911:A:H2'	1:1A:1912:A:C8	2.48	0.49
1:1A:2855:G:H2'	1:1A:2856:G:C8	2.48	0.49
10:1O:80:ASP:OD2	15:1T:64:ARG:NH2	2.46	0.49
32:1a:517:G:H22	32:1a:533:A:P	2.34	0.49
32:1a:1004:A:C5'	32:1a:1024:G:H1	2.26	0.49
32:1a:1287:A:H2'	32:1a:1288:A:C8	2.47	0.49
37:1f:26:ILE:O	37:1f:30:LEU:HG	2.12	0.49
42:1k:27:ASN:OD1	42:1k:28:THR:N	2.45	0.49
1:2A:857:C:OP1	22:20:69:PHE:HD2	1.95	0.49
9:2N:67:LEU:O	9:2N:88:GLU:HG3	2.12	0.49
12:2Q:137:TYR:OH	21:2Z:45:ASP:OD1	2.22	0.49
23:21:91:LYS:HA	23:21:94:LEU:HD12	1.94	0.49
32:2a:1404:5MC:H2'	32:2a:1405:G:C8	2.47	0.49
44:2m:91:ARG:HB2	44:2m:98:VAL:HG22	1.95	0.49
1:1A:402:C:H2'	1:1A:403:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:418:G:O2'	1:1A:437:G:OP1	2.24	0.49
1:1A:1103:A:N6	1:1A:1127:U:N3	2.42	0.49
2:1B:66:A:H61	2:1B:108:U:H2'	1.76	0.49
32:1a:159:G:N2	32:1a:162:A:OP2	2.45	0.49
32:1a:1086:U:H3	32:1a:1099:G:H22	1.60	0.49
32:1a:1488:G:O6	59:1a:1702:HOH:O	2.19	0.49
33:1b:8:LYS:HG3	33:1b:9:GLU:H	1.77	0.49
40:1i:8:GLY:O	40:1i:15:ALA:N	2.45	0.49
42:1k:98:LEU:O	42:1k:101:SER:OG	2.22	0.49
1:2A:807:U:O2'	1:2A:2060:A:N1	2.41	0.49
1:2A:2143:C:H2'	1:2A:2144:U:O4'	2.13	0.49
19:2X:89:ILE:O	19:2X:93:GLU:HG2	2.12	0.49
24:22:22:GLU:OE2	24:22:68:ARG:NH2	2.45	0.49
32:2a:401:C:P	35:2d:73:ARG:HH21	2.35	0.49
32:2a:425:G:O3'	35:2d:45:GLN:NE2	2.45	0.49
35:2d:88:VAL:HA	36:2e:97:GLY:HA3	1.95	0.49
38:2g:65:ALA:O	38:2g:69:VAL:HG23	2.13	0.49
40:2i:21:PRO:HA	40:2i:59:PHE:HA	1.95	0.49
1:1A:29:U:H2'	1:1A:30:G:C8	2.47	0.49
1:1A:414:U:P	23:11:20:ARG:HH12	2.34	0.49
1:1A:555:G:N1	1:1A:2045:G:OP1	2.37	0.49
1:1A:2245:U:H2'	1:1A:2246:G:C8	2.48	0.49
1:1A:2263:OMG:HM22	1:1A:2264:G:H5'	1.94	0.49
15:1T:65:LYS:HE3	15:1T:67:SER:HB2	1.94	0.49
32:1a:324:G:OP1	51:1t:22:ARG:NH2	2.39	0.49
32:1a:674:G:H2'	32:1a:675:A:H8	1.78	0.49
32:1a:1006:C:N3	32:1a:1023:G:C2	2.81	0.49
49:1r:53:ARG:CG	49:1r:63:GLN:HE21	2.26	0.49
55:1x:14:A:N6	55:1x:21:A:H2	2.11	0.49
1:2A:415:A:N6	1:2A:2407:G:O6	2.45	0.49
1:2A:918:A:C2	2:2B:80:U:H4'	2.48	0.49
2:2B:114:C:O2'	14:2S:46:VAL:HG13	2.13	0.49
32:2a:266:G:H2'	32:2a:266:G:N3	2.28	0.49
32:2a:724:G:C2	32:2a:725:G:C8	3.00	0.49
32:2a:781:A:O2'	32:2a:1522:U:O2	2.29	0.49
41:2j:35:SER:HB3	41:2j:73:ASP:HB2	1.94	0.49
51:2t:13:LEU:HD12	51:2t:14:LYS:H	1.77	0.49
1:1A:26:G:C6	1:1A:27:G:N1	2.80	0.49
1:1A:491:G:H21	1:1A:731:G:H1'	1.76	0.49
1:1A:544:U:H2'	1:1A:545:G:H8	1.78	0.49
1:1A:1210:G:H1	1:1A:1230:C:H42	1.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:1636:U:H2'	1:1A:1637:G:C8	2.47	0.49
1:1A:2136:A:H2'	1:1A:2137:G:O4'	2.13	0.49
1:1A:2858:G:H8	15:1T:97:ALA:HB2	1.76	0.49
3:1D:139:GLY:H	3:1D:165:ILE:HB	1.78	0.49
32:1a:642:A:N3	39:1h:113:SER:OG	2.33	0.49
32:1a:714:G:N2	32:1a:777:A:N3	2.59	0.49
32:1a:1478:C:H2'	32:1a:1479:C:C6	2.48	0.49
1:2A:854:G:H2'	1:2A:855:G:C8	2.47	0.49
1:2A:1759:A:H1'	1:2A:2711:A:C2	2.47	0.49
1:2A:2355:C:H1'	22:20:39:ARG:HH21	1.76	0.49
2:2B:96:U:H2'	2:2B:97:G:C8	2.47	0.49
6:2G:97:ASP:HA	6:2G:100:TRP:HD1	1.78	0.49
32:2a:253:U:H2'	32:2a:254:G:C8	2.48	0.49
32:2a:376:G:H5''	47:2p:5:ARG:HB2	1.93	0.49
32:2a:973:G:H3'	32:2a:974:A:H5''	1.94	0.49
40:2i:8:GLY:O	40:2i:15:ALA:N	2.36	0.49
1:1A:2108:U:H2'	1:1A:2109:G:C8	2.47	0.49
21:1Z:54:HIS:HB3	21:1Z:101:PRO:HD3	1.94	0.49
22:10:27:GLU:OE2	22:10:68:GLU:HG3	2.13	0.49
32:1a:652:U:O3'	39:1h:56:LYS:NZ	2.46	0.49
32:1a:1221:G:OP1	32:1a:1320:C:N4	2.37	0.49
40:1i:99:LEU:HB3	40:1i:101:PHE:CE2	2.48	0.49
1:2A:2850:A:N7	1:2A:2868:A:O2'	2.40	0.49
7:2H:7:LEU:HD12	7:2H:8:PRO:HD2	1.94	0.49
32:2a:67:C:H1'	32:2a:171:A:H2	1.78	0.49
32:2a:241:C:H42	32:2a:285:G:H1	1.58	0.49
32:2a:1250:A:OP1	40:2i:67:GLY:N	2.41	0.49
33:2b:73:THR:HA	33:2b:94:ASN:O	2.13	0.49
43:2l:57:LYS:HA	43:2l:67:THR:HA	1.93	0.49
1:1A:39:C:O2	5:1F:46:ARG:NH2	2.45	0.48
1:1A:1316:C:H5''	1:1A:1317:G:H5'	1.95	0.48
1:1A:1931:C:H2'	1:1A:1932:G:H8	1.78	0.48
1:1A:2849:G:H5'	13:1R:46:GLY:HA2	1.94	0.48
3:1D:132:PRO:HG3	3:1D:190:TYR:CE2	2.48	0.48
6:1G:6:ALA:O	6:1G:10:LYS:N	2.39	0.48
7:1H:86:GLU:OE2	7:1H:132:ARG:NH2	2.45	0.48
29:17:22:MET:O	29:17:28:ARG:NH1	2.46	0.48
32:1a:345:C:H4'	32:1a:346:G:H5''	1.95	0.48
32:1a:1027:C:N3	32:1a:1034:G:C2	2.81	0.48
32:1a:1305:G:N2	32:1a:1331:G:H1'	2.28	0.48
33:1b:184:VAL:HG12	33:1b:197:VAL:HG13	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:1b:207:ALA:O	33:1b:211:ILE:HG13	2.13	0.48
40:1i:65:VAL:HG11	40:1i:73:GLN:HB3	1.94	0.48
1:2A:1149:G:H2'	1:2A:1150:C:C6	2.47	0.48
5:2F:182:ASN:ND2	5:2F:185:ASP:OD2	2.34	0.48
22:20:50:ASN:HB2	22:20:81:VAL:HB	1.95	0.48
28:26:25:LYS:NZ	28:26:51:GLU:OE2	2.39	0.48
32:2a:254:G:H1	32:2a:272:C:H42	1.61	0.48
32:2a:782:A:H62	32:2a:800:G:H21	1.61	0.48
1:1A:1334:U:O3'	1:1A:1694:G:N2	2.43	0.48
1:1A:1428:G:O3'	1:1A:1620:G:N2	2.45	0.48
12:1Q:20:ALA:HA	12:1Q:99:PRO:HD2	1.93	0.48
32:1a:10:A:O2'	32:1a:507:C:O2'	2.30	0.48
32:1a:1031:G:H2'	32:1a:1032:G:C8	2.48	0.48
33:1b:187:LEU:HA	33:1b:201:ILE:HB	1.96	0.48
1:2A:855:G:H1	1:2A:922:U:H3	1.61	0.48
1:2A:920:G:H2'	1:2A:921:G:C8	2.47	0.48
1:2A:1270:C:O2'	1:2A:1648:C:OP2	2.25	0.48
1:2A:1386:C:H2'	1:2A:1387:C:C6	2.49	0.48
1:2A:1654:A:O2'	4:2E:113:PHE:O	2.25	0.48
32:2a:67:C:H1'	32:2a:171:A:C2	2.49	0.48
32:2a:1031:G:H2'	32:2a:1032:G:C8	2.48	0.48
32:2a:1227:A:O3'	44:2m:115:LYS:HE2	2.12	0.48
32:2a:1372:U:H2'	32:2a:1373:G:O4'	2.13	0.48
43:2l:77:LEU:HD21	43:2l:107:ALA:HA	1.94	0.48
1:1A:513:C:O2	18:1W:53:SER:OG	2.17	0.48
1:1A:868:A:H2'	1:1A:991:G:H5''	1.94	0.48
7:1H:125:VAL:HG22	7:1H:131:VAL:HG22	1.96	0.48
24:12:22:GLU:OE2	24:12:68:ARG:NH2	2.45	0.48
32:1a:221:C:H2'	32:1a:222:U:C6	2.49	0.48
32:1a:412:A:OP2	35:1d:35:ARG:NH2	2.44	0.48
32:1a:1037:C:H2'	32:1a:1038:C:C6	2.48	0.48
32:1a:1304:G:N2	32:1a:1332:A:OP2	2.41	0.48
32:1a:1512:U:H2'	32:1a:1513:A:C8	2.48	0.48
34:1c:121:ALA:HB2	34:1c:187:ALA:HB1	1.96	0.48
40:1i:13:ALA:HB2	40:1i:68:GLY:HA3	1.96	0.48
41:1j:10:GLY:HA3	41:1j:16:LEU:HD11	1.93	0.48
1:2A:506:G:H5''	1:2A:509:C:O2'	2.13	0.48
32:2a:195:A:H4'	51:2t:68:LYS:HE3	1.95	0.48
32:2a:540:G:H2'	32:2a:541:G:O4'	2.12	0.48
32:2a:1029:C:N3	32:2a:1032:G:C2	2.82	0.48
33:2b:12:GLU:O	33:2b:15:VAL:HG22	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:2c:53:ALA:HB2	34:2c:115:LEU:HD11	1.95	0.48
34:2c:61:ALA:N	34:2c:63:ASN:OD1	2.45	0.48
34:2c:73:PRO:HB3	34:2c:103:VAL:HG11	1.95	0.48
1:1A:2707:C:H2'	1:1A:2708:U:C6	2.48	0.48
3:1D:45:ASN:OD1	3:1D:46:GLN:N	2.46	0.48
16:1U:111:GLU:O	16:1U:115:ALA:N	2.42	0.48
20:1Y:38:ILE:HD13	20:1Y:66:PRO:HA	1.95	0.48
30:18:33:ASN:HA	30:18:36:LYS:HD2	1.95	0.48
32:1a:78:G:N1	32:1a:91:C:C5	2.58	0.48
32:1a:738:C:H2'	32:1a:739:C:C6	2.48	0.48
32:1a:976:G:P	45:1n:32:SER:H	2.36	0.48
32:1a:1029:C:H41	32:1a:1030(A):G:H21	1.62	0.48
32:1a:1426:C:H2'	32:1a:1427:U:H6	1.79	0.48
51:1t:47:GLY:HA2	51:1t:48:LYS:C	2.38	0.48
1:2A:123:G:H1	1:2A:128:C:H42	1.62	0.48
1:2A:151:C:H42	1:2A:175:G:H1	1.60	0.48
1:2A:861:A:N3	2:2B:79:C:O2'	2.39	0.48
1:2A:1183:G:O2'	25:23:29:ARG:NH1	2.46	0.48
4:2E:9:VAL:HG22	4:2E:25:VAL:O	2.12	0.48
18:2W:78:GLU:OE2	18:2W:99:ARG:NH1	2.42	0.48
32:2a:324:G:P	51:2t:22:ARG:HE	2.36	0.48
32:2a:728:A:H2'	32:2a:729:A:C8	2.48	0.48
1:1A:579:G:H2'	1:1A:580:U:C6	2.48	0.48
1:1A:1739:U:O2'	1:1A:1740:U:H2'	2.13	0.48
1:1A:2523:U:O2'	4:1E:138:PRO:O	2.24	0.48
6:1G:3:LEU:O	6:1G:8:LYS:NZ	2.40	0.48
32:1a:143:A:H5''	32:1a:144:G:H5'	1.96	0.48
32:1a:1513:A:H2'	32:1a:1514:C:C6	2.48	0.48
34:1c:179:ARG:O	34:1c:206:GLU:HA	2.13	0.48
1:2A:256:A:H2'	1:2A:257:A:C8	2.49	0.48
1:2A:265:A:H1'	1:2A:266:G:O4'	2.13	0.48
1:2A:403:U:H4'	1:2A:404:C:H5'	1.93	0.48
1:2A:480:A:N3	1:2A:499:U:O2'	2.39	0.48
1:2A:1625:C:H2'	1:2A:1626:G:O4'	2.13	0.48
1:2A:2351:G:O2'	1:2A:2352:A:H8	1.96	0.48
2:2B:83:G:H1	2:2B:94:C:H42	1.61	0.48
5:2F:133:ASN:N	5:2F:138:GLU:OE1	2.38	0.48
10:2O:107:ARG:HG3	10:2O:112:MET:HE1	1.95	0.48
20:2Y:9:LYS:HA	20:2Y:10:GLY:HA2	1.51	0.48
32:2a:986:A:H2'	32:2a:987:G:C8	2.47	0.48
32:2a:1007:C:N3	32:2a:1022:G:O6	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:2t:47:GLY:HA2	51:2t:48:LYS:C	2.38	0.48
1:1A:232:U:OP1	30:18:6:THR:OG1	2.21	0.48
1:1A:929:G:C2	1:1A:930:G:H1'	2.49	0.48
1:1A:2298:A:H4'	1:1A:2299:A:O4'	2.14	0.48
1:1A:2701:U:H4'	1:1A:2702:C:O5'	2.13	0.48
25:13:29:ARG:N	25:13:33:GLN:OE1	2.40	0.48
32:1a:373:A:H61	32:1a:391:G:H1'	1.78	0.48
32:1a:450:G:H1	32:1a:483:C:H42	1.62	0.48
32:1a:617:G:H1	32:1a:623:C:H42	1.60	0.48
1:2A:7:G:H2'	1:2A:8:A:C8	2.49	0.48
1:2A:177:G:OP2	1:2A:177:G:N2	2.42	0.48
1:2A:821:A:H2'	1:2A:946:G:H5''	1.94	0.48
1:2A:1196:C:H2'	1:2A:1197:G:H8	1.78	0.48
1:2A:1434:A:H2'	1:2A:1435:G:C8	2.48	0.48
1:2A:1825:A:H2'	1:2A:1826:G:C8	2.48	0.48
1:2A:2106:G:H2'	1:2A:2107:C:O4'	2.14	0.48
1:2A:2443:C:H2'	1:2A:2444:G:C8	2.47	0.48
4:2E:36:ARG:HG2	4:2E:47:VAL:HG12	1.94	0.48
32:2a:1006:C:N4	32:2a:1022:G:O6	2.47	0.48
32:2a:1261:A:N6	32:2a:1273:G:H1	2.12	0.48
32:2a:1442:G:H2'	32:2a:1442:G:N3	2.29	0.48
1:1A:338:A:H2'	1:1A:339:G:C8	2.49	0.48
1:1A:916:G:O3'	12:1Q:6:ARG:NH2	2.46	0.48
1:1A:1701:A:OP1	13:1R:1:MET:N	2.30	0.48
1:1A:1906:A:H2'	1:1A:1907:A:H8	1.78	0.48
1:1A:2851:C:H2'	1:1A:2852:G:H8	1.76	0.48
16:1U:28:ARG:NH1	16:1U:38:THR:OG1	2.45	0.48
22:10:50:ASN:HB3	22:10:63:VAL:HG22	1.95	0.48
25:13:50:VAL:O	25:13:54:VAL:HG12	2.14	0.48
32:1a:1006:C:N3	32:1a:1023:G:N2	2.62	0.48
1:2A:668:G:H5'	1:2A:669:G:OP2	2.13	0.48
1:2A:902:C:H2'	1:2A:903:C:H6	1.79	0.48
1:2A:1462:C:H4'	1:2A:2703:C:H5'	1.95	0.48
1:2A:2590:A:H2'	1:2A:2591:C:H6	1.78	0.48
32:2a:287:U:H2'	32:2a:288:A:H8	1.79	0.48
32:2a:1077:G:N1	32:2a:1080:A:OP2	2.42	0.48
32:2a:1328:C:O2'	44:2m:29:ARG:NH2	2.47	0.48
32:2a:1412:C:H2'	32:2a:1413:A:C8	2.48	0.48
1:1A:1221:G:H1'	1:1A:1222:A:H5''	1.96	0.48
1:1A:1320:A:N3	1:1A:1343:C:H1'	2.28	0.48
1:1A:2158:C:N4	1:1A:2177:G:H1	2.11	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1T:127:ALA:C	15:1T:129:ARG:H	2.22	0.48
32:1a:266:G:H2'	32:1a:266:G:N3	2.28	0.48
32:1a:455:C:H42	32:1a:476:G:H1	1.61	0.48
40:1i:29:ASN:ND2	40:1i:65:VAL:O	2.44	0.48
40:1i:118:LYS:HB2	40:1i:121:ARG:HB3	1.96	0.48
1:2A:2127:G:C2	1:2A:2161:C:C4	3.02	0.48
11:2P:128:HIS:NE2	11:2P:148:LEU:HD11	2.28	0.48
18:2W:68:ARG:NH1	18:2W:111:HIS:HA	2.29	0.48
32:2a:1002:G:N1	32:2a:1003:G:H8	2.11	0.48
34:2c:119:ARG:HE	34:2c:140:ARG:NH2	2.11	0.48
36:2e:143:ARG:HE	39:2h:77:GLU:CD	2.22	0.48
47:2p:8:ARG:HB3	47:2p:28:ARG:NH1	2.29	0.48
1:1A:1325:G:H2'	1:1A:1326:G:H8	1.78	0.48
1:1A:2216:G:H2'	1:1A:2217:C:H6	1.79	0.48
8:1I:101:LEU:HD23	8:1I:109:ILE:HB	1.95	0.48
15:1T:18:ASP:OD1	15:1T:18:ASP:N	2.47	0.48
32:1a:837:G:H2'	32:1a:838:G:C8	2.49	0.48
32:1a:922:G:H1	32:1a:1395:C:H42	1.61	0.48
36:1e:72:GLN:O	36:1e:75:THR:HG22	2.13	0.48
42:1k:43:SER:HA	42:1k:47:VAL:HG21	1.94	0.48
47:1p:19:ILE:N	47:1p:37:GLY:O	2.46	0.48
1:2A:652(B):A:N6	1:2A:655:A:H1'	2.29	0.48
1:2A:1485:G:H2'	1:2A:1486:A:H8	1.79	0.48
1:2A:1530:C:HO2'	1:2A:1531:C:P	2.35	0.48
1:2A:1669:A:H5''	1:2A:2550:G:OP1	2.14	0.48
1:2A:2206:G:H5''	1:2A:2207:G:N7	2.29	0.48
32:2a:244:U:H4'	32:2a:245:C:H5''	1.96	0.48
32:2a:1226:C:H2'	44:2m:103:THR:HB	1.96	0.48
39:2h:6:ILE:HB	39:2h:85:ARG:NH1	2.29	0.48
1:1A:490:U:O2'	29:17:12:ARG:NH1	2.43	0.48
1:1A:745:C:O2'	1:1A:781:A:N6	2.47	0.48
1:1A:1255:A:H5''	1:1A:1257:G:O4'	2.14	0.48
1:1A:1325:G:H4'	13:1R:31:HIS:CD2	2.49	0.48
1:1A:1654:A:H1'	1:1A:1656:A:OP2	2.14	0.48
1:1A:1679:A:C6	1:1A:1680:G:C6	3.01	0.48
1:1A:2172:U:N3	1:1A:2173:G:N7	2.62	0.48
1:1A:2177:G:H3'	1:1A:2178:G:C8	2.49	0.48
21:1Z:44:PHE:O	21:1Z:48:PHE:N	2.41	0.48
32:1a:673:G:O3'	37:1f:87:ARG:NH2	2.47	0.48
32:1a:1036:G:H3'	32:1a:1037:C:O4'	2.14	0.48
32:1a:1299:A:O2'	32:1a:1301:U:O4'	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:1a:1316:G:N1	32:1a:1319:A:OP2	2.43	0.48
39:1h:20:TYR:CE2	39:1h:75:ARG:HD2	2.48	0.48
41:1j:44:VAL:HG13	41:1j:66:ARG:HG2	1.95	0.48
43:1l:68:ALA:HB1	43:1l:100:ILE:HG13	1.96	0.48
1:2A:996:A:OP2	16:2U:93:LYS:NZ	2.36	0.48
1:2A:1351:C:O2'	1:2A:1571:A:N3	2.42	0.48
1:2A:1508:A:H4'	1:2A:1509(A):A:C5	2.49	0.48
1:2A:1846:G:H1	1:2A:1894:C:H42	1.61	0.48
9:2N:34:LEU:HD21	9:2N:120:LEU:HB2	1.95	0.48
32:2a:1002:G:C2	32:2a:1003:G:H1'	2.49	0.48
34:2c:58:GLU:HB2	34:2c:65:ALA:HB3	1.95	0.48
38:2g:146:GLU:O	38:2g:149:ARG:HB2	2.14	0.48
1:1A:604:C:H2'	1:1A:605:G:C8	2.49	0.47
1:1A:624:C:O2'	1:1A:628:C:OP1	2.31	0.47
1:1A:2564:2MU:O5'	1:1A:2564:2MU:H6	2.14	0.47
10:1O:107:ARG:NH2	15:1T:36:GLU:OE1	2.47	0.47
32:1a:592:G:H2'	32:1a:593:G:H8	1.79	0.47
32:1a:1100:C:O2'	32:1a:1102:A:OP1	2.28	0.47
44:1m:88:ARG:O	44:1m:92:HIS:ND1	2.46	0.47
1:2A:517:C:O2'	18:2W:18:ARG:NH2	2.47	0.47
1:2A:601:C:O2'	1:2A:605:C:OP1	2.32	0.47
1:2A:1816:G:O6	3:2D:35:LYS:NZ	2.47	0.47
1:2A:1825:A:H2'	1:2A:1826:G:H8	1.79	0.47
1:2A:2360:A:O2'	11:2P:61:ARG:NH1	2.33	0.47
1:2A:2646:C:OP2	1:2A:2732:G:O2'	2.22	0.47
32:2a:1343:G:H4'	40:2i:122:ALA:HB3	1.96	0.47
35:2d:60:GLU:HG3	35:2d:202:LEU:HD12	1.96	0.47
40:2i:9:ARG:H	40:2i:79:LEU:HD23	1.78	0.47
1:1A:310:C:H2'	1:1A:311:C:H6	1.79	0.47
1:1A:1085:G:H1	1:1A:1162:C:N4	2.08	0.47
1:1A:1102:G:H5'	1:1A:1131:A:N1	2.28	0.47
1:1A:2145:G:H2'	1:1A:2146:G:H8	1.78	0.47
1:1A:2212:G:H2'	1:1A:2213:G:H8	1.79	0.47
1:1A:2554:A:H4'	1:1A:2555:G:C8	2.50	0.47
3:1D:75:ILE:HG21	3:1D:99:ASP:HB2	1.96	0.47
20:1Y:13:VAL:HG12	20:1Y:74:PRO:HA	1.96	0.47
32:1a:876:G:H4'	39:1h:14:ARG:HH22	1.78	0.47
32:1a:987:G:H1	32:1a:1218:C:N4	2.07	0.47
32:1a:1458:G:OP1	51:1t:35:THR:OG1	2.30	0.47
36:1e:12:LEU:HB3	36:1e:31:LEU:HB3	1.95	0.47
1:2A:506:G:O3'	1:2A:507:A:H8	1.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2A:1190:G:H2'	1:2A:1191:G:C8	2.49	0.47
1:2A:1795:C:O2	3:2D:255:LYS:NZ	2.40	0.47
1:2A:2681:C:OP2	4:2E:109:LYS:NZ	2.33	0.47
12:2Q:29:PHE:O	21:2Z:122:ARG:NH2	2.46	0.47
20:2Y:13:VAL:HG12	20:2Y:74:PRO:HA	1.96	0.47
26:24:33:VAL:HG12	26:24:35:VAL:H	1.80	0.47
32:2a:660:G:H1	32:2a:745:C:H42	1.62	0.47
32:2a:932:C:H2'	32:2a:933:G:C8	2.47	0.47
32:2a:1239:A:H4'	32:2a:1240:U:H5''	1.96	0.47
46:2o:67:LEU:HB3	46:2o:78:TYR:HE1	1.79	0.47
48:2q:61:GLU:HA	48:2q:71:PHE:CD1	2.48	0.47
55:2x:25:C:H2'	55:2x:26:G:O4'	2.14	0.47
1:1A:201:G:H2'	1:1A:202:A:H8	1.79	0.47
1:1A:204:G:H4'	1:1A:205:A:H4'	1.96	0.47
1:1A:353:G:OP2	20:1Y:71:LYS:HD2	2.14	0.47
1:1A:1858:C:H2'	1:1A:1859:G:O4'	2.14	0.47
1:1A:2867:G:N2	1:1A:2870:A:OP2	2.47	0.47
6:1G:59:GLU:CD	6:1G:153:ARG:HH21	2.22	0.47
14:1S:12:PHE:HB3	14:1S:16:ASN:HD21	1.78	0.47
26:14:61:ARG:NH2	50:1s:9:VAL:HG21	2.29	0.47
32:1a:76:C:H2'	32:1a:77:G:H8	1.79	0.47
32:1a:1152:A:OP1	41:1j:70:ARG:NH2	2.40	0.47
32:1a:1243:C:N4	32:1a:1294:G:H1	2.10	0.47
1:2A:994:C:OP1	16:2U:53:ARG:NH2	2.47	0.47
1:2A:2030:A:H5''	1:2A:2031:A:OP1	2.14	0.47
1:2A:2202:C:H2'	1:2A:2203:U:O4'	2.15	0.47
2:2B:106:G:H5''	21:2Z:31:ARG:HG2	1.95	0.47
6:2G:15:VAL:HG22	6:2G:175:LEU:HB3	1.96	0.47
21:2Z:50:GLN:OE1	21:2Z:50:GLN:N	2.47	0.47
24:22:25:VAL:HG11	24:22:61:LEU:HD21	1.96	0.47
32:2a:382:A:H2'	32:2a:383:A:C8	2.48	0.47
1:1A:1893:G:H2'	1:1A:1894:G:C8	2.49	0.47
32:1a:619:U:N3	35:1d:134:ASP:OD1	2.47	0.47
32:1a:675:A:H1'	42:1k:116:HIS:CD2	2.50	0.47
32:1a:997:U:H3	32:1a:1044:A:H61	1.62	0.47
32:1a:1007:C:N3	32:1a:1022:G:C6	2.82	0.47
37:1f:10:LEU:HD13	37:1f:61:LEU:HD13	1.95	0.47
42:1k:18:ARG:HB2	42:1k:33:THR:OG1	2.14	0.47
1:2A:857:C:H1'	22:20:26:TYR:HE1	1.79	0.47
1:2A:911:A:H2'	12:2Q:9:TYR:OH	2.15	0.47
1:2A:1411:C:H42	1:2A:1591:G:H1	1.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2A:2134:A:N6	1:2A:2157:G:H4'	2.29	0.47
1:2A:2245:U:H5''	1:2A:2246:G:H5'	1.97	0.47
1:2A:2290:G:H2'	1:2A:2291:U:O4'	2.14	0.47
1:2A:2801(A):A:H5'	1:2A:2802:G:C8	2.49	0.47
32:2a:189(L):G:H2'	32:2a:190:U:C6	2.50	0.47
32:2a:1119:C:H2'	32:2a:1120:G:C8	2.48	0.47
32:2a:1391:U:H2'	32:2a:1392:G:C8	2.49	0.47
1:1A:353:G:P	1:1A:353:G:H8	2.38	0.47
1:1A:505:A:H4'	1:1A:506:A:OP1	2.15	0.47
1:1A:604:C:H2'	1:1A:605:G:H8	1.80	0.47
1:1A:2044:U:O2'	1:1A:2629:C:H5'	2.14	0.47
1:1A:2212:G:H2'	1:1A:2213:G:C8	2.49	0.47
1:1A:2855:G:H2'	1:1A:2856:G:H8	1.80	0.47
2:1B:42:C:O2'	6:1G:66:GLN:HG2	2.14	0.47
8:1I:99:GLU:HB3	8:1I:103:ARG:NH2	2.28	0.47
26:14:28:LYS:HB2	26:14:31:ILE:HD11	1.96	0.47
32:1a:634:C:H2'	32:1a:635:G:H8	1.80	0.47
32:1a:689:C:H2'	32:1a:690:G:O4'	2.15	0.47
32:1a:825:G:N2	39:1h:11:THR:HG21	2.30	0.47
32:1a:927:G:N2	32:1a:1390:U:O2	2.45	0.47
33:1b:208:ILE:H	33:1b:208:ILE:HD12	1.79	0.47
33:1b:223:ILE:HA	33:1b:226:ARG:HG2	1.96	0.47
1:2A:212:G:H2'	1:2A:213:A:O4'	2.14	0.47
1:2A:1341:U:OP2	1:2A:1394:U:O2'	2.22	0.47
3:2D:70:TRP:CD1	3:2D:70:TRP:H	2.31	0.47
32:2a:67:C:H2'	32:2a:68:G:C8	2.49	0.47
32:2a:115:G:H4'	32:2a:116:A:O5'	2.14	0.47
36:2e:142:LEU:O	36:2e:143:ARG:NH1	2.41	0.47
38:2g:16:LEU:HD22	40:2i:41:VAL:O	2.14	0.47
39:2h:112:LEU:HA	39:2h:134:ILE:HG13	1.96	0.47
47:2p:47:ASP:OD1	47:2p:47:ASP:N	2.48	0.47
1:1A:612:C:H2'	1:1A:613:A:C8	2.49	0.47
1:1A:904:C:H1'	22:10:26:TYR:HE1	1.78	0.47
1:1A:1445:C:N4	1:1A:1446:G:O6	2.48	0.47
1:1A:1822:A:H5'	3:1D:206:LEU:HD12	1.97	0.47
1:1A:1957:G:H3'	1:1A:1984:5MC:HN41	1.79	0.47
1:1A:2694:U:C2	4:1E:22:PRO:HB3	2.50	0.47
5:1F:57:VAL:HG12	5:1F:59:TYR:H	1.80	0.47
6:1G:2:PRO:HB2	6:1G:3:LEU:H	1.51	0.47
32:1a:1107:C:C4	32:1a:1108:G:C8	3.03	0.47
32:1a:1292:U:H2'	32:1a:1293:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:1b:17:PHE:HA	33:1b:44:LEU:HD11	1.96	0.47
1:2A:271(H):G:H2'	1:2A:271(I):G:C8	2.50	0.47
1:2A:1278:A:OP1	13:2R:36:THR:HG23	2.15	0.47
3:2D:202:LYS:HE3	32:2a:773:G:H4'	1.97	0.47
12:2Q:30:GLY:HA2	12:2Q:107:ALA:HB2	1.95	0.47
32:2a:1137:C:H5''	32:2a:1138:G:OP1	2.14	0.47
36:2e:152:ARG:HG2	39:2h:43:GLY:O	2.15	0.47
1:1A:441:C:H2'	1:1A:442:A:C8	2.50	0.47
1:1A:1144:A:H8	1:1A:1144:A:O5'	1.98	0.47
1:1A:1487:G:H2'	1:1A:1488:G:C8	2.42	0.47
1:1A:1532:A:H2'	1:1A:1533:G:H8	1.80	0.47
1:1A:1732:C:H2'	1:1A:1733:C:H6	1.79	0.47
1:1A:2141:A:C2	1:1A:2192:A:H2'	2.50	0.47
1:1A:2671:G:N2	1:1A:2674:A:OP2	2.47	0.47
1:1A:2874:G:H5'	32:1a:1442(A):G:N2	2.29	0.47
20:1Y:83:THR:HG21	20:1Y:99:CYS:HB2	1.95	0.47
32:1a:285:G:H2'	32:1a:286:G:H8	1.80	0.47
32:1a:584:G:H2'	32:1a:585:G:C8	2.50	0.47
32:1a:789:U:N3	32:1a:792:A:OP2	2.36	0.47
32:1a:924:C:O2'	32:1a:1502:A:N1	2.45	0.47
32:1a:1244:C:H2'	32:1a:1245:A:H8	1.79	0.47
34:1c:15:THR:HG21	34:1c:181:ASN:HA	1.96	0.47
44:1m:3:ARG:NH2	44:1m:9:ILE:O	2.35	0.47
44:1m:10:PRO:HG2	44:1m:21:TYR:CE2	2.50	0.47
45:1n:26:ARG:HD3	45:1n:43:CYS:HB3	1.96	0.47
47:1p:48:TRP:HH2	47:1p:76:GLN:HE22	1.63	0.47
1:2A:80:G:H1	1:2A:106:C:H42	1.62	0.47
1:2A:96:G:OP1	24:22:46:GLN:NE2	2.47	0.47
1:2A:573:G:O2'	1:2A:574:C:H3'	2.14	0.47
1:2A:1113:U:H2'	1:2A:1114:G:C8	2.49	0.47
1:2A:1686:C:H2'	1:2A:1687:G:O4'	2.15	0.47
1:2A:1687:G:H2'	1:2A:1688:U:H6	1.80	0.47
1:2A:1913:A:H4'	1:2A:1914:C:C5'	2.45	0.47
1:2A:2359:C:H2'	1:2A:2360:A:O4'	2.15	0.47
1:2A:2469:A:O3'	12:2Q:56:ARG:NH2	2.37	0.47
1:2A:2685:G:H1	1:2A:2724:C:H42	1.61	0.47
1:2A:2785:C:O2'	4:2E:66:HIS:ND1	2.40	0.47
4:2E:97:LYS:H	4:2E:100:GLU:CD	2.23	0.47
10:2O:9:GLU:OE1	10:2O:9:GLU:N	2.47	0.47
12:2Q:10:ARG:HH22	55:2x:64:G:H4'	1.79	0.47
32:2a:107:G:H2'	32:2a:108:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:2a:147:G:H1	32:2a:175:C:H42	1.62	0.47
32:2a:184:G:H2'	32:2a:185:A:H8	1.80	0.47
32:2a:426:G:OP1	35:2d:38:TYR:OH	2.29	0.47
32:2a:673:G:H5''	37:2f:87:ARG:NH1	2.29	0.47
32:2a:814:A:N6	32:2a:816:A:N3	2.63	0.47
32:2a:989:C:H1'	32:2a:1016:A:H2	1.79	0.47
32:2a:1323:G:H4'	32:2a:1363:C:N3	2.30	0.47
35:2d:111:ALA:HB1	35:2d:116:GLN:HG2	1.97	0.47
36:2e:50:GLU:HB2	36:2e:53:LEU:HD13	1.95	0.47
1:1A:525:G:N2	1:1A:527:A:H3'	2.30	0.47
1:1A:1228:G:H2'	1:1A:1229:G:C8	2.50	0.47
1:1A:1946:C:H5'	55:1x:12:G:H21	1.80	0.47
15:1T:57:PHE:CE1	15:1T:79:HIS:HB2	2.50	0.47
32:1a:1320:C:C2	50:1s:72:GLY:HA3	2.50	0.47
33:1b:28:PHE:CD2	33:1b:190:THR:HA	2.49	0.47
35:1d:65:ARG:HH11	35:1d:72:GLU:HB2	1.79	0.47
39:1h:69:ARG:NE	39:1h:75:ARG:O	2.40	0.47
1:2A:7:G:H2'	1:2A:8:A:H8	1.79	0.47
1:2A:398:G:H2'	1:2A:399:G:C8	2.49	0.47
1:2A:839:U:H2'	1:2A:840:C:C6	2.49	0.47
1:2A:934:G:H2'	1:2A:935:C:H6	1.79	0.47
1:2A:947:G:H2'	1:2A:948:G:C8	2.50	0.47
1:2A:1744:C:H2'	1:2A:1745:C:C6	2.50	0.47
5:2F:40:GLN:NE2	5:2F:182:ASN:HB2	2.25	0.47
7:2H:11:VAL:HG21	7:2H:50:VAL:HG23	1.96	0.47
15:2T:41:ARG:NH1	32:2a:345:C:H3'	2.30	0.47
27:25:20:ARG:HG2	27:25:23:HIS:CE1	2.50	0.47
30:28:6:THR:HG23	30:28:64:TYR:HD2	1.80	0.47
32:2a:902:G:H2'	32:2a:903:G:C8	2.50	0.47
32:2a:1142:G:H2'	32:2a:1143:G:O4'	2.15	0.47
1:1A:280:C:H2'	1:1A:281:G:C8	2.50	0.47
1:1A:520:G:N3	18:1W:61:ASN:ND2	2.60	0.47
1:1A:937:A:C2	1:1A:938:G:H1'	2.50	0.47
1:1A:1638:C:H2'	1:1A:1639:G:H8	1.79	0.47
24:12:58:ALA:O	24:12:62:THR:OG1	2.32	0.47
32:1a:153:C:H42	32:1a:169:C:H42	1.62	0.47
32:1a:1258:G:H2'	32:1a:1259:C:C6	2.49	0.47
34:1c:78:GLY:HA3	34:1c:83:ARG:H	1.79	0.47
38:1g:15:ASP:OD1	38:1g:19:GLY:N	2.48	0.47
39:1h:104:ARG:HB3	39:1h:108:GLY:N	2.29	0.47
41:1j:30:SER:OG	41:1j:81:THR:OG1	2.17	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2A:807:U:H2'	1:2A:808:G:C8	2.49	0.47
1:2A:1971:A:OP2	3:2D:242:ARG:NH2	2.48	0.47
1:2A:2451:A:C4	54:2w:76:PPU:HD2	2.50	0.47
9:2N:25:ARG:O	9:2N:29:LYS:NZ	2.37	0.47
16:2U:106:PHE:O	16:2U:110:VAL:HG23	2.15	0.47
32:2a:376:G:H1	32:2a:387:U:H3	1.62	0.47
32:2a:573:A:N3	32:2a:883:C:O2'	2.39	0.47
32:2a:719:C:O2'	49:2r:49:LYS:HB3	2.15	0.47
32:2a:832:C:H42	32:2a:854:G:H1	1.63	0.47
32:2a:922:G:H2'	32:2a:923:A:C8	2.49	0.47
33:2b:207:ALA:O	33:2b:211:ILE:HG13	2.15	0.47
35:2d:98:GLU:HA	35:2d:103:ASN:ND2	2.29	0.47
35:2d:108:LEU:HD23	35:2d:110:PHE:CZ	2.50	0.47
35:2d:119:GLN:HG2	35:2d:123:HIS:CD2	2.50	0.47
49:2r:47:THR:HA	49:2r:83:GLU:HB2	1.96	0.47
1:1A:652:A:C6	11:1P:115:LEU:HD13	2.50	0.47
1:1A:1108:G:H1'	1:1A:1134:A:C8	2.50	0.47
1:1A:1381:U:H2'	1:1A:1382:A:C8	2.50	0.47
1:1A:1659:G:C2	1:1A:1665:G:C6	3.03	0.47
1:1A:1699:A:OP1	13:1R:8:ARG:NH1	2.48	0.47
1:1A:1820:A:H5''	3:1D:221:VAL:HA	1.97	0.47
1:1A:2158:C:N4	1:1A:2177:G:C6	2.81	0.47
1:1A:2216:G:H2'	1:1A:2217:C:C6	2.50	0.47
4:1E:174:ASP:OD1	4:1E:175:VAL:N	2.48	0.47
28:16:7:ILE:HD13	28:16:27:LYS:HD3	1.97	0.47
32:1a:731:G:OP1	32:1a:766:A:H1'	2.15	0.47
32:1a:975:A:H61	41:1j:48:THR:HB	1.79	0.47
32:1a:1326:C:H5''	52:1u:18:TYR:O	2.14	0.47
35:1d:166:LYS:HD2	35:1d:178:VAL:HG11	1.97	0.47
55:1x:14:A:C2	55:1x:15:G:H1'	2.50	0.47
1:2A:269:U:H3	1:2A:370:G:H1	1.63	0.47
1:2A:700:G:O6	1:2A:733:G:N2	2.48	0.47
1:2A:1190:G:OP1	11:2P:30:THR:OG1	2.21	0.47
1:2A:1327:C:H42	1:2A:1647:G:N2	2.13	0.47
1:2A:1386:C:H2'	1:2A:1387:C:H6	1.79	0.47
6:2G:15:VAL:HG13	6:2G:175:LEU:HD23	1.97	0.47
32:2a:626:U:H2'	32:2a:627:G:C8	2.50	0.47
32:2a:876:G:H4'	39:2h:14:ARG:HH22	1.80	0.47
32:2a:926:G:H22	53:2v:16:A:P	2.37	0.47
32:2a:1087:G:H1	32:2a:1098:C:H42	1.62	0.47
1:1A:246:A:H2'	1:1A:247:G:O4'	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:259:A:OP2	1:1A:284:G:N2	2.41	0.46
1:1A:602:G:O2'	1:1A:2041:A:OP1	2.33	0.46
1:1A:876:A:N7	1:1A:2259:A:O2'	2.43	0.46
1:1A:1884:A:H2'	1:1A:1885:A:C8	2.50	0.46
9:1N:108:PRO:O	9:1N:113:GLY:HA3	2.16	0.46
9:1N:138:LEU:HD23	9:1N:138:LEU:HA	1.79	0.46
25:13:3:ARG:HD3	25:13:60:GLU:OE2	2.15	0.46
32:1a:148:G:H2'	32:1a:149:A:H8	1.79	0.46
32:1a:792:A:H4'	32:1a:793:U:C5'	2.44	0.46
32:1a:1362:C:H2'	32:1a:1363:C:H5''	1.97	0.46
33:1b:163:PHE:CD1	33:1b:185:ILE:HG13	2.47	0.46
38:1g:26:PHE:O	38:1g:30:ILE:HD12	2.15	0.46
1:2A:1224:C:O2'	17:2V:86:GLY:N	2.36	0.46
1:2A:1913:A:N1	32:2a:1493:A:H3'	2.30	0.46
1:2A:2010:G:H5''	18:2W:42:ARG:HB2	1.96	0.46
32:2a:505:G:H4'	32:2a:534:U:C4	2.50	0.46
32:2a:737:A:H2'	32:2a:738:C:C6	2.50	0.46
33:2b:16:HIS:CG	33:2b:17:PHE:N	2.82	0.46
37:2f:70:ASP:OD1	37:2f:70:ASP:N	2.44	0.46
49:2r:33:ASP:OD2	49:2r:36:ASN:HB2	2.15	0.46
1:1A:27:G:N2	1:1A:537:G:H1'	2.31	0.46
1:1A:909:G:H2'	1:1A:910:A:O4'	2.16	0.46
1:1A:1515:C:H2'	1:1A:1516:A:H8	1.80	0.46
1:1A:1638:C:H2'	1:1A:1639:G:C8	2.50	0.46
1:1A:1994:A:H2'	1:1A:1995:G:H8	1.80	0.46
6:1G:72:ARG:HA	6:1G:87:PRO:HA	1.97	0.46
9:1N:13:TRP:CE2	9:1N:133:GLN:HG2	2.50	0.46
12:1Q:12:GLN:HE21	12:1Q:72:LYS:HG3	1.81	0.46
15:1T:100:TYR:HD1	15:1T:103:ARG:HH12	1.64	0.46
32:1a:269:C:H2'	32:1a:270:A:C8	2.50	0.46
32:1a:618:C:H5'	32:1a:619:U:H5''	1.98	0.46
32:1a:834:C:H2'	32:1a:835:U:C6	2.50	0.46
32:1a:1051:C:H42	32:1a:1207:2MG:HN1	1.62	0.46
35:1d:61:LYS:NZ	35:1d:72:GLU:OE1	2.47	0.46
37:1f:2:ARG:HD2	37:1f:69:GLU:HB3	1.97	0.46
50:1s:62:ILE:HA	50:1s:66:MET:SD	2.56	0.46
1:2A:1448:G:H2'	1:2A:1449:A:C8	2.50	0.46
1:2A:2875:C:O2'	15:2T:2:ASN:OD1	2.21	0.46
10:2O:22:ILE:HG12	10:2O:40:VAL:O	2.14	0.46
23:21:83:GLU:OE1	23:21:83:GLU:N	2.49	0.46
24:22:10:LEU:HB3	24:22:14:ARG:NH1	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:2e:82:VAL:HG21	36:2e:138:ALA:HA	1.97	0.46
39:2h:104:ARG:HA	39:2h:104:ARG:HD3	1.74	0.46
1:1A:747:G:H1	1:1A:779:C:H42	1.64	0.46
1:1A:1136:U:C2	1:1A:1148:C:H1'	2.51	0.46
1:1A:1613:A:OP1	3:1D:211:ARG:NH1	2.49	0.46
1:1A:2641:A:HO2'	1:1A:2642:G:P	2.36	0.46
6:1G:27:ASN:HB3	6:1G:30:GLU:HB2	1.97	0.46
8:1I:133:HIS:ND1	8:1I:134:PRO:O	2.44	0.46
12:1Q:30:GLY:HA2	12:1Q:107:ALA:HB2	1.96	0.46
23:11:5:CYS:HB2	23:11:63:ALA:HB2	1.97	0.46
26:14:57:GLU:HA	26:14:58:ARG:HA	1.53	0.46
32:1a:8:A:N7	35:1d:208:SER:OG	2.41	0.46
32:1a:128:G:H1	32:1a:233:C:H42	1.63	0.46
41:1j:35:SER:HB3	41:1j:73:ASP:HB2	1.97	0.46
50:1s:50:ALA:HB1	50:1s:57:HIS:HB3	1.97	0.46
1:2A:119:A:H4'	1:2A:120:U:H5'	1.97	0.46
1:2A:755:C:H2'	1:2A:756:C:C6	2.50	0.46
1:2A:1153:C:H5'	16:2U:76:TYR:CE2	2.50	0.46
1:2A:2540:C:H2'	1:2A:2541:A:O4'	2.14	0.46
1:2A:2619:C:OP1	4:2E:152:LYS:NZ	2.39	0.46
4:2E:12:THR:HG22	4:2E:13:ARG:H	1.79	0.46
5:2F:46:ARG:HB3	5:2F:48:THR:HG23	1.97	0.46
15:2T:92:GLY:O	15:2T:120:ARG:NH2	2.49	0.46
30:28:23:VAL:HG13	30:28:47:LYS:HB3	1.97	0.46
32:2a:189(C):C:H2'	32:2a:189(D):C:O4'	2.15	0.46
32:2a:406:G:H1	32:2a:436:C:H42	1.61	0.46
32:2a:1004:A:N6	32:2a:1037:C:O2	2.26	0.46
33:2b:219:VAL:HA	33:2b:222:ILE:HD12	1.97	0.46
1:1A:346:A:OP2	5:1F:169:ASN:HB2	2.15	0.46
1:1A:364:A:H2'	1:1A:365:G:O4'	2.15	0.46
1:1A:1056:A:H1'	1:1A:1199:C:H1'	1.96	0.46
1:1A:1821:C:H5''	1:1A:1822:A:OP1	2.16	0.46
1:1A:1856:A:H2'	1:1A:1857:G:H8	1.80	0.46
1:1A:2692:C:H2'	1:1A:2693:C:C6	2.50	0.46
2:1B:13:A:N1	2:1B:69:G:O2'	2.43	0.46
2:1B:114:C:O2'	14:1S:46:VAL:HG13	2.15	0.46
16:1U:83:LEU:HD12	16:1U:113:ALA:HB2	1.96	0.46
32:1a:183:G:N2	32:1a:223:U:O2'	2.49	0.46
32:1a:332:G:H2'	32:1a:333:G:C8	2.49	0.46
38:1g:80:VAL:HG11	38:1g:154:TYR:CZ	2.51	0.46
44:1m:4:ILE:HG21	44:1m:9:ILE:HG23	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:1s:27:GLU:HB2	50:1s:28:LYS:HD3	1.96	0.46
1:2A:658:C:H2'	1:2A:659:C:C6	2.51	0.46
1:2A:1227:G:OP2	16:2U:16:LYS:NZ	2.45	0.46
1:2A:1434:A:H2'	1:2A:1435:G:H8	1.80	0.46
1:2A:1939:5MU:OP1	1:2A:2604:U:O2'	2.33	0.46
1:2A:2176:A:H2'	1:2A:2177:C:C6	2.51	0.46
4:2E:34:VAL:HG21	4:2E:78:LEU:HD23	1.97	0.46
4:2E:179:GLU:HB3	4:2E:181:LEU:HD13	1.98	0.46
32:2a:376:G:H2'	32:2a:377:G:C8	2.50	0.46
32:2a:918:A:H2'	32:2a:919:A:C8	2.50	0.46
32:2a:1163:C:H42	32:2a:1173:G:H1	1.62	0.46
34:2c:20:SER:HG	34:2c:40:ARG:HH22	1.57	0.46
48:2q:60:ILE:HB	48:2q:74:LEU:HD12	1.98	0.46
21:1Z:124:ILE:HD11	21:1Z:165:VAL:HG21	1.96	0.46
27:15:49:CYS:SG	27:15:51:TYR:HB2	2.56	0.46
32:1a:1422:G:H2'	32:1a:1423:G:C8	2.48	0.46
34:1c:73:PRO:HB3	34:1c:103:VAL:HG11	1.96	0.46
41:1j:81:THR:HA	41:1j:84:GLN:HB3	1.96	0.46
47:1p:39:TYR:HD1	47:1p:49:LEU:HD13	1.80	0.46
1:2A:272:G:H4'	1:2A:272(A):U:H5''	1.96	0.46
1:2A:887:A:H4'	1:2A:888:C:C5	2.51	0.46
1:2A:1923:U:O2'	55:2x:12:G:H1'	2.15	0.46
1:2A:2095:C:H2'	1:2A:2096:U:O4'	2.15	0.46
1:2A:2193:G:H2'	1:2A:2194:G:C8	2.50	0.46
1:2A:2365:G:H4'	22:20:60:PHE:CZ	2.51	0.46
1:2A:2473:U:O2	1:2A:2473:U:H2'	2.16	0.46
32:2a:1015:A:H2'	32:2a:1016:A:C8	2.50	0.46
44:2m:23:TYR:CE2	44:2m:70:LEU:HD22	2.49	0.46
48:2q:62:SER:HB3	48:2q:72:ARG:HE	1.81	0.46
55:2x:53:G:H2'	55:2x:54:5MU:C6	2.51	0.46
1:1A:899:G:H2'	1:1A:900:G:C8	2.51	0.46
1:1A:1053:C:OP1	9:1N:35:ARG:NH1	2.49	0.46
1:1A:1115:A:H2'	1:1A:1119:A:N7	2.30	0.46
1:1A:1251:G:C6	1:1A:1252:C:C4	3.04	0.46
1:1A:2724:U:H1'	1:1A:2725:A:C8	2.50	0.46
1:1A:2847:G:H2'	1:1A:2848:G:H8	1.81	0.46
32:1a:499:A:O3'	32:1a:500:G:H8	1.99	0.46
32:1a:501:C:O2'	32:1a:549:C:O2	2.29	0.46
32:1a:764:C:H2'	32:1a:765:G:O4'	2.14	0.46
32:1a:1039:C:H2'	32:1a:1040:U:H6	1.81	0.46
32:1a:1241:G:H2'	32:1a:1242:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:1a:1323:G:H2'	32:1a:1324:A:C8	2.51	0.46
40:1i:65:VAL:HG21	40:1i:77:ILE:HD11	1.97	0.46
47:1p:22:THR:HA	47:1p:33:ILE:HG13	1.98	0.46
1:2A:248:G:C2	1:2A:2431:U:H4'	2.51	0.46
1:2A:742:G:H2'	1:2A:743:G:H8	1.81	0.46
1:2A:1408:C:H42	1:2A:1594:G:H1	1.64	0.46
1:2A:2784:C:O2'	4:2E:42:ASP:OD1	2.22	0.46
5:2F:32:LEU:HD13	5:2F:112:MET:HE1	1.97	0.46
11:2P:25:SER:C	11:2P:27:HIS:H	2.24	0.46
15:2T:24:PRO:HA	15:2T:49:VAL:HG23	1.98	0.46
15:2T:98:LYS:HB3	15:2T:100:TYR:CE2	2.50	0.46
17:2V:61:VAL:HA	17:2V:94:LEU:HD23	1.98	0.46
32:2a:285:G:H2'	32:2a:286:G:H8	1.80	0.46
32:2a:407:G:OP1	35:2d:115:ARG:HD3	2.14	0.46
32:2a:707:C:H2'	32:2a:708:C:C6	2.51	0.46
32:2a:1314:C:OP2	50:2s:4:SER:OG	2.30	0.46
32:2a:1350:A:O2'	38:2g:33:ASP:OD1	2.33	0.46
33:2b:24:TRP:H	33:2b:24:TRP:HD1	1.64	0.46
33:2b:87:ARG:HD2	33:2b:234:PRO:HD2	1.97	0.46
34:2c:6:HIS:ND1	45:2n:49:HIS:HB3	2.30	0.46
35:2d:13:ARG:HB3	35:2d:38:TYR:O	2.16	0.46
36:2e:127:ASN:O	36:2e:131:ILE:HG12	2.15	0.46
1:1A:1633:A:H2'	1:1A:1634:C:H6	1.80	0.46
1:1A:2519:C:C2	1:1A:2520:G:C8	3.04	0.46
1:1A:2586:G:H2'	1:1A:2587:C:O4'	2.15	0.46
1:1A:2792:U:OP1	1:1A:2793:G:H8	1.99	0.46
2:1B:16:G:C6	2:1B:69:G:C2	3.03	0.46
6:1G:11:TYR:HA	6:1G:15:VAL:HB	1.98	0.46
12:1Q:132:VAL:HB	21:1Z:81:ARG:NH2	2.30	0.46
32:1a:745:C:H5''	32:1a:851:G:O2'	2.16	0.46
34:1c:52:LEU:HD22	34:1c:53:ALA:H	1.79	0.46
35:1d:4:TYR:C	35:1d:6:GLY:H	2.24	0.46
35:1d:4:TYR:O	35:1d:6:GLY:N	2.49	0.46
46:1o:82:ILE:O	46:1o:86:GLY:N	2.49	0.46
1:2A:1165:U:H2'	1:2A:1166:C:H6	1.80	0.46
1:2A:1341:U:O4'	19:2X:57:LEU:HD23	2.15	0.46
1:2A:1580:A:H3'	1:2A:1581:G:C8	2.51	0.46
1:2A:1664:A:H61	1:2A:1996:C:H42	1.63	0.46
1:2A:1667:G:O2'	1:2A:1991:U:O4	2.33	0.46
1:2A:1827:C:H2'	1:2A:1828:G:O4'	2.16	0.46
12:2Q:10:ARG:NH1	55:2x:64:G:H4'	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:2Q:12:GLN:HE21	12:2Q:72:LYS:NZ	2.14	0.46
12:2Q:12:GLN:NE2	12:2Q:72:LYS:HG3	2.31	0.46
32:2a:108:G:H1	51:2t:15:ARG:HG2	1.80	0.46
42:2k:86:GLY:O	42:2k:91:ARG:HD3	2.15	0.46
55:2x:4:G:H1	55:2x:69:C:N4	2.12	0.46
1:1A:310:C:H2'	1:1A:311:C:C6	2.51	0.46
1:1A:525:G:N1	1:1A:528:A:OP2	2.45	0.46
1:1A:1110:C:C1'	1:1A:1122:C:H41	2.29	0.46
22:10:50:ASN:HB2	22:10:81:VAL:HB	1.96	0.46
32:1a:49:U:O2'	32:1a:50:A:H2'	2.15	0.46
32:1a:186:C:H2'	32:1a:187:C:C6	2.51	0.46
32:1a:537:G:H2'	32:1a:538:G:C8	2.51	0.46
32:1a:1103:C:H2'	32:1a:1104:G:O4'	2.15	0.46
32:1a:1350:A:O2'	38:1g:33:ASP:OD1	2.25	0.46
33:1b:218:ALA:O	33:1b:222:ILE:HG13	2.16	0.46
1:2A:483:A:O2'	20:2Y:49:VAL:O	2.27	0.46
1:2A:713:G:H2'	1:2A:714:U:C6	2.50	0.46
1:2A:764:A:H5''	3:2D:210:GLY:HA2	1.97	0.46
1:2A:2126:A:N6	1:2A:2162:G:O2'	2.34	0.46
1:2A:2291:U:H2'	1:2A:2292:C:C6	2.51	0.46
1:2A:2576:G:O2'	1:2A:2579:C:OP2	2.30	0.46
1:2A:2631:G:H1	1:2A:2787:C:H42	1.63	0.46
12:2Q:2:LEU:HD12	12:2Q:69:PHE:CE1	2.51	0.46
16:2U:91:ASP:N	17:2V:11:GLN:OE1	2.39	0.46
17:2V:69:LYS:HA	17:2V:88:ARG:HG2	1.98	0.46
23:21:8:SER:HB3	23:21:66:HIS:CD2	2.51	0.46
26:24:57:GLU:HA	26:24:58:ARG:HA	1.66	0.46
32:2a:130:A:OP2	48:2q:63:ARG:NH1	2.48	0.46
32:2a:376:G:H2'	32:2a:377:G:H8	1.81	0.46
43:2l:33:ARG:HG2	43:2l:60:LEU:HD23	1.98	0.46
48:2q:56:VAL:N	48:2q:78:GLU:O	2.43	0.46
1:1A:24:G:O2'	18:1W:78:GLU:O	2.29	0.46
1:1A:1151:U:H2'	1:1A:1152:G:C8	2.51	0.46
1:1A:1845:G:OP1	3:1D:40:THR:OG1	2.22	0.46
1:1A:2119:C:H2'	1:1A:2120:U:O4'	2.16	0.46
1:1A:2275:C:H2'	1:1A:2276:C:C6	2.48	0.46
32:1a:123:C:H42	32:1a:238:G:H1	1.64	0.46
32:1a:298:A:C6	32:1a:299:G:C2	3.04	0.46
32:1a:456:C:N4	32:1a:475:G:H1	2.03	0.46
32:1a:673:G:H5''	37:1f:87:ARG:NH1	2.31	0.46
32:1a:1143:G:H2'	32:1a:1144:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:1d:30:LYS:HG2	35:1d:35:ARG:NH2	2.31	0.46
38:1g:146:GLU:O	38:1g:149:ARG:HB2	2.16	0.46
1:2A:288:C:H2'	1:2A:289:A:H8	1.80	0.46
1:2A:659:C:H2'	1:2A:660:G:H8	1.81	0.46
1:2A:1023:U:OP2	1:2A:1025:G:O2'	2.29	0.46
1:2A:1850:G:H1	1:2A:1892:C:H42	1.64	0.46
1:2A:2047:U:H2'	1:2A:2048:G:H8	1.80	0.46
32:2a:296:U:O2'	32:2a:556:C:O2	2.34	0.46
32:2a:1111:A:N1	34:2c:177:THR:OG1	2.43	0.46
1:1A:336:G:H5'	1:1A:355:A:O2'	2.16	0.46
1:1A:492:A:N3	1:1A:730:C:H1'	2.31	0.46
1:1A:593:G:H2'	1:1A:2052:A:C6	2.51	0.46
1:1A:1946:C:H4'	55:1x:13:C:O2'	2.16	0.46
1:1A:2735:G:H5'	13:1R:4:LEU:HD12	1.97	0.46
6:1G:66:GLN:NE2	6:1G:93:THR:O	2.40	0.46
11:1P:42:SER:O	11:1P:43:GLY:C	2.58	0.46
16:1U:32:PHE:CZ	16:1U:36:ARG:HD2	2.50	0.46
26:14:50:VAL:O	26:14:52:THR:N	2.49	0.46
32:1a:840:C:H4'	32:1a:841:U:OP1	2.15	0.46
32:1a:936:C:N4	32:1a:1379:G:H1	2.14	0.46
32:1a:1060:C:P	45:1n:45:ARG:HH22	2.39	0.46
32:1a:1523:G:H2'	32:1a:1524:C:H6	1.81	0.46
33:1b:74:LYS:HE2	33:1b:74:LYS:HB3	1.75	0.46
52:1u:20:LYS:HD2	52:1u:21:TYR:CZ	2.51	0.46
1:2A:1441:G:H2'	1:2A:1442:G:C8	2.50	0.46
1:2A:1547:C:H2'	1:2A:1548:C:H6	1.81	0.46
1:2A:1614:A:P	1:2A:1614:A:H8	2.39	0.46
11:2P:39:LYS:HE2	11:2P:45:LEU:HD11	1.98	0.46
15:2T:24:PRO:HD3	15:2T:52:ILE:HD12	1.98	0.46
15:2T:34:VAL:O	15:2T:41:ARG:N	2.44	0.46
32:2a:537:G:H5''	43:2l:113:ARG:NH1	2.30	0.46
32:2a:728:A:H2'	32:2a:729:A:H8	1.81	0.46
32:2a:1280:A:H5'	41:2j:41:PRO:HD2	1.96	0.46
32:2a:1352:C:H2'	32:2a:1353:G:C8	2.50	0.46
36:2e:38:GLN:OE1	36:2e:38:GLN:N	2.49	0.46
44:2m:20:THR:HA	44:2m:25:ILE:HG22	1.98	0.46
1:1A:814:U:H2'	1:1A:815:G:H8	1.80	0.45
1:1A:1387:U:O4'	19:1X:57:LEU:HD23	2.16	0.45
1:1A:2348:A:H61	22:10:43:THR:CG2	2.28	0.45
19:1X:5:TYR:CZ	24:12:30:ARG:HB2	2.51	0.45
19:1X:27:THR:HG23	19:1X:80:ILE:HG12	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:1Z:53:ILE:HG22	21:1Z:71:VAL:HB	1.98	0.45
32:1a:1104:G:H4'	33:1b:111:ARG:HH21	1.81	0.45
32:1a:1342:C:H2'	32:1a:1343:G:H8	1.78	0.45
1:2A:602:G:HO2'	1:2A:604:G:HO2'	1.58	0.45
1:2A:1007:C:H5''	9:2N:35:ARG:NH1	2.31	0.45
1:2A:1568:G:OP2	3:2D:63:ARG:NH2	2.34	0.45
2:2B:8:U:O3'	14:2S:25:ARG:NH2	2.48	0.45
5:2F:84:VAL:C	5:2F:86:GLY:H	2.23	0.45
6:2G:46:ALA:HB1	6:2G:52:ILE:HA	1.98	0.45
32:2a:444:C:H2'	32:2a:445:G:H8	1.81	0.45
32:2a:1323:G:H4'	32:2a:1363:C:C2	2.50	0.45
32:2a:1367:C:OP1	40:2i:115:GLY:N	2.47	0.45
32:2a:1473:A:H2'	32:2a:1474:G:C8	2.50	0.45
37:2f:46:ARG:HD3	37:2f:60:PHE:HD2	1.80	0.45
1:1A:354:A:H8	1:1A:1255:A:C4	2.34	0.45
1:1A:1298:G:H21	16:1U:33:ARG:HH21	1.63	0.45
1:1A:1635:C:H2'	1:1A:1636:U:C6	2.51	0.45
1:1A:2357:G:O2'	1:1A:2393:C:O2	2.33	0.45
1:1A:2520:G:H2'	1:1A:2521:G:H8	1.81	0.45
32:1a:360:A:H2'	32:1a:361:G:C8	2.51	0.45
32:1a:1077:G:N2	32:1a:1080:A:OP2	2.34	0.45
32:1a:1292:U:H2'	32:1a:1293:G:C8	2.52	0.45
32:1a:1355:G:H1	32:1a:1367:C:H42	1.64	0.45
32:1a:1517:G:C6	32:1a:1518:MA6:H103	2.51	0.45
33:1b:16:HIS:CG	33:1b:17:PHE:H	2.34	0.45
35:1d:194:LEU:HB3	35:1d:196:LEU:HD13	1.97	0.45
49:1r:22:VAL:HG23	49:1r:55:ARG:O	2.17	0.45
1:2A:272(B):G:H2'	1:2A:272(C):G:C8	2.51	0.45
1:2A:827:U:O2'	1:2A:2068:U:C2	2.69	0.45
1:2A:2718:G:O2'	1:2A:2847:U:OP1	2.33	0.45
1:2A:2822:G:O2'	1:2A:2824:C:OP2	2.24	0.45
7:2H:3:ARG:HH11	7:2H:4:ILE:H	1.64	0.45
7:2H:149:ARG:NH2	7:2H:167:GLU:OE2	2.48	0.45
8:2I:78:THR:HB	8:2I:104:GLN:HE22	1.81	0.45
8:2I:79:ILE:HB	8:2I:144:VAL:HG12	1.97	0.45
14:2S:43:GLU:OE2	22:20:49:LYS:NZ	2.49	0.45
32:2a:224:C:H2'	32:2a:225:C:H6	1.81	0.45
32:2a:890:G:O2'	32:2a:906:G:O6	2.28	0.45
36:2e:51:VAL:O	36:2e:55:VAL:HG23	2.15	0.45
39:2h:4:ASP:OD2	39:2h:85:ARG:NH1	2.49	0.45
1:1A:248:G:O2'	1:1A:646:A:O2'	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:329:U:H2'	1:1A:330:U:C6	2.50	0.45
1:1A:1804:A:H2'	1:1A:1805:C:O4'	2.17	0.45
1:1A:2825:C:H5'	27:15:29:THR:HG21	1.97	0.45
2:1B:21:G:H1	2:1B:62:C:H42	1.63	0.45
6:1G:139:LEU:HA	6:1G:144:ILE:HB	1.97	0.45
8:1I:6:LEU:HG	8:1I:36:ALA:HA	1.99	0.45
11:1P:39:LYS:HE2	11:1P:45:LEU:HD11	1.98	0.45
15:1T:77:PRO:HB2	15:1T:80:SER:HB2	1.98	0.45
32:1a:1101:A:N6	33:1b:176:GLU:OE2	2.49	0.45
1:2A:710:G:H2'	1:2A:711:G:C8	2.51	0.45
1:2A:958:U:H5''	12:2Q:14:ARG:HD3	1.98	0.45
1:2A:1020:A:P	1:2A:1034:G:H21	2.39	0.45
1:2A:2161:C:H2'	1:2A:2162:G:O4'	2.16	0.45
1:2A:2781:A:H5''	1:2A:2782:G:H5'	1.97	0.45
9:2N:96:GLU:CD	9:2N:96:GLU:H	2.23	0.45
32:2a:45:U:H2'	32:2a:46:G:C8	2.52	0.45
32:2a:171:A:H2'	32:2a:172:A:H8	1.79	0.45
32:2a:668:G:O2'	46:2o:46:HIS:ND1	2.31	0.45
32:2a:1144:G:H21	32:2a:1146:A:H62	1.65	0.45
42:2k:27:ASN:OD1	42:2k:28:THR:N	2.48	0.45
44:2m:33:ALA:O	44:2m:37:THR:OG1	2.25	0.45
47:2p:58:TYR:O	47:2p:62:VAL:HG23	2.16	0.45
1:1A:749:G:C2	1:1A:778:C:N3	2.84	0.45
1:1A:1042:A:OP2	16:1U:93:LYS:NZ	2.45	0.45
1:1A:2552:C:H2'	1:1A:2553:A:O4'	2.17	0.45
3:1D:108:PRO:HB3	3:1D:143:HIS:HE1	1.80	0.45
3:1D:127:VAL:HA	3:1D:193:VAL:HG23	1.99	0.45
30:18:8:LYS:O	30:18:12:LYS:HG3	2.17	0.45
32:1a:685:G:N1	32:1a:704:A:OP2	2.41	0.45
32:1a:841:U:P	32:1a:841:U:H6	2.39	0.45
32:1a:1176:A:H2'	32:1a:1177:G:C8	2.51	0.45
32:1a:1329:A:H5''	44:1m:26:GLY:N	2.31	0.45
33:1b:162:ILE:HD11	33:1b:184:VAL:HG13	1.98	0.45
43:1l:54:LYS:HD2	43:1l:54:LYS:N	2.32	0.45
44:1m:82:MET:HG2	44:1m:89:GLY:O	2.16	0.45
1:2A:69:C:O2	1:2A:73:A:O2'	2.29	0.45
1:2A:577:G:O2'	1:2A:1254:A:OP1	2.34	0.45
1:2A:710:G:H2'	1:2A:711:G:H8	1.81	0.45
1:2A:825:C:H42	1:2A:832:G:H1	1.65	0.45
1:2A:1278:A:H2'	1:2A:1279:G:C8	2.51	0.45
1:2A:2695:C:H2'	1:2A:2696:U:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:2O:90:GLN:OE1	10:2O:90:GLN:N	2.49	0.45
14:2S:30:ARG:HD2	14:2S:97:ARG:HD3	1.99	0.45
22:20:27:GLU:OE2	22:20:68:GLU:HG3	2.16	0.45
23:21:40:ARG:HH12	23:21:42:GLN:HG2	1.81	0.45
28:26:39:TYR:HA	28:26:46:HIS:HA	1.98	0.45
32:2a:59:A:H5''	32:2a:387:U:H5''	1.98	0.45
32:2a:793:U:O2	32:2a:1516:G:H4'	2.16	0.45
33:2b:122:PHE:HE1	33:2b:127:ILE:HD12	1.81	0.45
1:1A:1261:G:P	16:1U:12:ARG:HH21	2.40	0.45
1:1A:2162:C:H2'	1:1A:2163:G:C8	2.48	0.45
1:1A:2384:G:H2'	1:1A:2385:G:H8	1.82	0.45
3:1D:24:ILE:HD13	3:1D:84:TYR:HB2	1.98	0.45
10:1O:4:PRO:HA	10:1O:21:CYS:O	2.16	0.45
32:1a:153:C:H42	32:1a:169:C:N4	2.15	0.45
33:1b:162:ILE:HG23	33:1b:182:ILE:HG21	1.97	0.45
1:2A:336:C:O2'	20:2Y:35:TYR:OH	2.34	0.45
1:2A:605:C:OP1	5:2F:104:LYS:NZ	2.50	0.45
1:2A:662:G:H5''	11:2P:16:ARG:HG2	1.97	0.45
1:2A:1405:U:H2'	1:2A:1406:U:C6	2.51	0.45
1:2A:2099:U:H3	1:2A:2190:G:H1	1.65	0.45
1:2A:2710:C:N4	59:2A:3411:HOH:O	2.49	0.45
14:2S:66:ALA:HB1	14:2S:101:LEU:HB2	1.98	0.45
21:2Z:137:ILE:HG21	21:2Z:155:LEU:HD23	1.98	0.45
26:24:47:GLN:C	26:24:49:PHE:H	2.24	0.45
32:2a:258:G:H1	32:2a:268:C:H42	1.63	0.45
32:2a:407:G:H5''	35:2d:115:ARG:HG2	1.98	0.45
32:2a:735:C:H2'	32:2a:736:C:C6	2.51	0.45
36:2e:78:HIS:CD2	39:2h:104:ARG:HD2	2.51	0.45
37:2f:22:GLU:OE2	37:2f:84:ASN:ND2	2.49	0.45
37:2f:33:TYR:CB	37:2f:75:LEU:HD12	2.47	0.45
40:2i:20:ARG:O	40:2i:60:ASP:N	2.50	0.45
49:2r:22:VAL:O	49:2r:25:THR:HG22	2.16	0.45
1:1A:186:A:O2'	1:1A:2256:U:OP1	2.28	0.45
1:1A:1880:G:H2'	1:1A:1881:G:H8	1.81	0.45
1:1A:2833:A:OP1	4:1E:113:PHE:HB2	2.16	0.45
14:1S:28:VAL:HG11	14:1S:98:VAL:HG13	1.98	0.45
14:1S:66:ALA:HA	14:1S:69:VAL:HG12	1.97	0.45
15:1T:98:LYS:HB3	15:1T:100:TYR:CE2	2.51	0.45
24:12:2:LYS:N	24:12:5:GLU:OE1	2.38	0.45
32:1a:241:C:H42	32:1a:285:G:H1	1.64	0.45
32:1a:976:G:H5'	32:1a:1358:U:O2'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:1a:1002:G:H3'	32:1a:1003:G:H4'	1.98	0.45
32:1a:1263:C:H2'	32:1a:1264:C:C6	2.51	0.45
34:1c:131:ARG:HH21	36:1e:50:GLU:HG3	1.82	0.45
49:1r:66:LEU:O	49:1r:70:ILE:HG13	2.17	0.45
1:2A:1464:C:H2'	1:2A:1465:G:C8	2.51	0.45
1:2A:1913:A:N6	32:2a:1494:G:H5'	2.32	0.45
1:2A:2258:C:O2'	1:2A:2427:C:OP2	2.35	0.45
3:2D:66:ASP:OD1	3:2D:103:ARG:NH1	2.48	0.45
16:2U:75:ASN:OD1	16:2U:75:ASN:N	2.49	0.45
27:25:41:PRO:O	27:25:44:THR:OG1	2.31	0.45
32:2a:105:G:C5	32:2a:106:C:C4	3.05	0.45
32:2a:188:C:O4'	51:2t:89:ARG:NH2	2.49	0.45
32:2a:1255:G:O2'	32:2a:1258:G:N3	2.27	0.45
32:2a:1320:C:C1'	50:2s:73:GLU:HG2	2.47	0.45
35:2d:194:LEU:HB3	35:2d:196:LEU:HD13	1.98	0.45
41:2j:6:ILE:HB	41:2j:72:VAL:HG23	1.99	0.45
41:2j:8:LEU:HG	41:2j:70:ARG:HB2	1.99	0.45
1:1A:96:C:OP1	24:12:2:LYS:NZ	2.37	0.45
1:1A:1133:G:O6	1:1A:1148:C:N3	2.49	0.45
1:1A:1312:G:O2'	1:1A:2034:G:O6	2.31	0.45
1:1A:2021:C:H4'	1:1A:2736:C:O2	2.16	0.45
1:1A:2839:C:H2'	1:1A:2840:G:H8	1.82	0.45
5:1F:187:VAL:HG12	11:1P:3:LEU:HD12	1.98	0.45
20:1Y:88:LYS:NZ	20:1Y:89:PHE:O	2.50	0.45
32:1a:653:A:P	39:1h:56:LYS:HZ1	2.39	0.45
32:1a:659:U:H2'	32:1a:660:G:C8	2.51	0.45
32:1a:674:G:H2'	32:1a:675:A:C8	2.52	0.45
32:1a:1268:A:H2'	32:1a:1269:A:C8	2.51	0.45
32:1a:1273:G:H3'	32:1a:1274:G:C8	2.50	0.45
1:2A:141:A:H8	1:2A:1408:C:HO2'	1.62	0.45
1:2A:247:G:H4'	1:2A:386:G:C5	2.51	0.45
1:2A:528:A:H2'	9:2N:114:ARG:HH22	1.81	0.45
1:2A:842:G:H1	1:2A:936:C:H42	1.65	0.45
1:2A:2372:G:H1	1:2A:2381:C:H42	1.64	0.45
2:2B:20:C:H2'	2:2B:21:G:C8	2.51	0.45
3:2D:246:PRO:O	3:2D:254:THR:HG22	2.17	0.45
32:2a:263:A:OP1	51:2t:79:ARG:NH1	2.48	0.45
32:2a:1498:UR3:O2'	53:2v:17:U:OP1	2.21	0.45
32:2a:1516:G:N1	32:2a:1519:MA6:OP2	2.46	0.45
35:2d:175:SER:HB2	35:2d:186:LEU:HD21	1.99	0.45
1:1A:358:C:OP1	1:1A:359:C:N4	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:952:G:O2'	12:1Q:67:ARG:NH2	2.43	0.45
1:1A:1344:C:H42	1:1A:1689:G:H1	1.64	0.45
13:1R:36:THR:HG22	13:1R:37:THR:N	2.31	0.45
21:1Z:4:ARG:HG2	21:1Z:58:VAL:HB	1.99	0.45
32:1a:1133:G:H1	32:1a:1141:C:N4	2.14	0.45
32:1a:1279:A:H61	34:1c:26:LYS:NZ	2.15	0.45
32:1a:1346:A:H5''	40:1i:120:ARG:HH12	1.82	0.45
32:1a:1456:G:N1	51:1t:51:GLU:OE2	2.48	0.45
1:2A:79:G:H1	1:2A:107:C:N4	2.10	0.45
1:2A:715:G:N2	46:2o:40:SER:OG	2.46	0.45
1:2A:746:A:O2'	1:2A:2611:U:O2'	2.25	0.45
1:2A:1417:C:O2'	1:2A:1587:A:N3	2.45	0.45
1:2A:1803:A:H4'	3:2D:259:THR:HG23	1.99	0.45
1:2A:1899:G:H2'	1:2A:1899:G:N3	2.32	0.45
1:2A:2183:C:H2'	1:2A:2184:G:H8	1.81	0.45
1:2A:2695:C:H2'	1:2A:2696:U:H6	1.82	0.45
19:2X:44:GLU:OE2	19:2X:50:LYS:HD2	2.17	0.45
32:2a:544:G:C6	32:2a:545:C:C4	3.05	0.45
55:2x:30:G:H1	55:2x:40:C:N4	2.14	0.45
1:1A:173:C:O2'	1:1A:206:G:N3	2.45	0.45
1:1A:399:G:O2'	1:1A:427:G:O6	2.33	0.45
4:1E:178:GLU:H	4:1E:178:GLU:CD	2.24	0.45
9:1N:96:GLU:H	9:1N:96:GLU:CD	2.24	0.45
32:1a:27:G:H2'	32:1a:28:G:H8	1.81	0.45
32:1a:69:G:O2'	32:1a:70:G:OP1	2.34	0.45
32:1a:107:G:N7	51:1t:15:ARG:NH2	2.64	0.45
32:1a:406:G:H5'	35:1d:5:ILE:HD11	1.99	0.45
32:1a:1014:A:C2	32:1a:1219:U:H1'	2.52	0.45
32:1a:1348:U:H2'	32:1a:1349:A:C8	2.50	0.45
47:1p:58:TYR:O	47:1p:61:SER:OG	2.25	0.45
1:2A:323:G:H1'	1:2A:1205:U:O2	2.17	0.45
1:2A:1275:A:N1	1:2A:1295:C:O2'	2.48	0.45
1:2A:2218:U:N3	23:21:55:GLY:O	2.50	0.45
1:2A:2247:A:H2'	1:2A:2248:C:H6	1.81	0.45
2:2B:13:A:N1	2:2B:69:G:O2'	2.39	0.45
5:2F:39:TRP:NE1	5:2F:99:TYR:O	2.45	0.45
7:2H:20:ALA:HB3	7:2H:23:ARG:HG3	1.99	0.45
32:2a:544:G:OP2	35:2d:66:ARG:NH2	2.50	0.45
32:2a:781:A:H4'	32:2a:1522:U:O2'	2.17	0.45
32:2a:824:C:H2'	32:2a:825:G:H8	1.82	0.45
32:2a:957:U:H1'	32:2a:960:U:H3	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:2a:1100:C:O2'	32:2a:1102:A:OP1	2.33	0.45
32:2a:1122:U:H2'	32:2a:1123:A:C8	2.52	0.45
32:2a:1338:G:N2	55:2x:41:C:O2	2.50	0.45
36:2e:19:MET:SD	36:2e:24:ARG:HB3	2.56	0.45
1:1A:338:A:H2'	1:1A:339:G:H8	1.82	0.45
1:1A:505:A:N3	1:1A:507:G:H5''	2.32	0.45
1:1A:956:A:C6	1:1A:957:A:C6	3.05	0.45
1:1A:1694:G:H3'	1:1A:1694:G:OP2	2.17	0.45
1:1A:2136:A:H2	1:1A:2190:G:H1'	1.82	0.45
1:1A:2482:G:P	12:1Q:56:ARG:HH21	2.39	0.45
1:1A:2875:U:OP2	15:1T:119:LYS:NZ	2.42	0.45
24:12:64:LEU:HD11	24:12:68:ARG:HE	1.82	0.45
32:1a:73:G:C6	32:1a:76:C:C4	3.04	0.45
32:1a:540:G:H2'	32:1a:541:G:O4'	2.17	0.45
32:1a:1005:A:C2	32:1a:1025:U:H1'	2.52	0.45
32:1a:1288:A:N1	32:1a:1371:G:H1'	2.33	0.45
35:1d:11:LEU:HG	35:1d:66:ARG:HD3	1.98	0.45
43:1l:77:LEU:HD21	43:1l:107:ALA:HA	1.98	0.45
48:1q:22:LEU:HD11	48:1q:39:SER:HB2	1.98	0.45
1:2A:19:C:H42	1:2A:521:G:H1	1.65	0.45
1:2A:520:G:H2'	1:2A:521:G:C8	2.52	0.45
1:2A:1127:A:H2'	1:2A:1128:A:H5''	1.97	0.45
1:2A:2166:G:N7	1:2A:2168:G:N2	2.64	0.45
1:2A:2553:G:H1'	1:2A:2582:G:N3	2.31	0.45
2:2B:113:G:H2'	2:2B:114:C:C6	2.51	0.45
3:2D:2:ALA:O	3:2D:20:ASP:HB3	2.17	0.45
6:2G:136:ARG:HG3	6:2G:137:GLU:HG3	1.97	0.45
32:2a:376:G:H5''	47:2p:5:ARG:HD2	1.99	0.45
32:2a:486:U:H2'	32:2a:487:A:H8	1.81	0.45
32:2a:1107:C:OP1	34:2c:173:VAL:N	2.50	0.45
36:2e:12:LEU:HB3	36:2e:31:LEU:HB3	1.99	0.45
1:1A:7:G:H2'	1:1A:8:A:C8	2.52	0.44
1:1A:54:G:H1	1:1A:113:C:H42	1.64	0.44
1:1A:150:C:H2'	1:1A:151:C:H6	1.81	0.44
1:1A:600:G:O2'	1:1A:1300:A:OP1	2.33	0.44
1:1A:1277:G:H2'	1:1A:1278:G:H8	1.81	0.44
1:1A:1834:A:O3'	3:1D:259:THR:OG1	2.34	0.44
1:1A:2584:A:H5''	1:1A:2586:G:H4'	2.00	0.44
27:15:52:TYR:HB3	27:15:57:VAL:HG21	1.99	0.44
32:1a:96:U:H2'	32:1a:97:G:H8	1.82	0.44
32:1a:792:A:O2'	32:1a:794:A:N7	2.44	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:1a:1220:G:H21	50:1s:54:GLY:HA2	1.82	0.44
34:1c:114:PRO:HA	34:1c:185:GLY:HA3	1.97	0.44
44:1m:90:LEU:HD23	44:1m:93:ARG:HD2	1.98	0.44
1:2A:297:C:H2'	1:2A:298:G:O4'	2.17	0.44
1:2A:307:G:N1	1:2A:310:A:OP2	2.49	0.44
1:2A:1857:G:O6	1:2A:1858:G:N1	2.50	0.44
1:2A:2114:A:H2'	1:2A:2114:A:N3	2.33	0.44
1:2A:2508:G:HO2'	1:2A:2554:U:HO2'	1.59	0.44
12:2Q:31:ASP:OD1	12:2Q:134:ARG:NH1	2.36	0.44
15:2T:111:ARG:NE	32:2a:1463:C:OP1	2.39	0.44
21:2Z:123:ASP:N	21:2Z:123:ASP:OD1	2.50	0.44
32:2a:224:C:H2'	32:2a:225:C:C6	2.52	0.44
32:2a:472:A:H4'	47:2p:80:PHE:O	2.17	0.44
32:2a:1190:G:O2'	34:2c:3:ASN:HB2	2.18	0.44
32:2a:1506:U:O2'	32:2a:1507:A:H5'	2.17	0.44
35:2d:63:LYS:HD2	35:2d:198:VAL:HG22	1.99	0.44
35:2d:103:ASN:O	35:2d:107:ARG:N	2.40	0.44
1:1A:1067:A:H3'	1:1A:1067:A:N3	2.32	0.44
1:1A:1138:C:H2'	1:1A:1139:G:O4'	2.16	0.44
1:1A:1455:C:O2	1:1A:1640:G:N2	2.51	0.44
1:1A:1562:U:H2'	1:1A:1563:G:H8	1.82	0.44
1:1A:1566:U:H2'	1:1A:1567:G:O4'	2.17	0.44
1:1A:1940:A:O2'	1:1A:1942:4OC:N4	2.49	0.44
1:1A:2109:G:H2'	1:1A:2110:G:C8	2.53	0.44
1:1A:2294:G:H5''	1:1A:2295:C:O4'	2.17	0.44
1:1A:2706:G:C6	1:1A:2707:C:C4	3.06	0.44
5:1F:144:LYS:HE3	5:1F:144:LYS:HB2	1.78	0.44
32:1a:838:G:H1	32:1a:848:C:H42	1.66	0.44
32:1a:1201:A:H1'	32:1a:1202:G:OP2	2.17	0.44
32:1a:1386:G:C2	32:1a:1387:G:N7	2.85	0.44
33:1b:119:GLU:CD	33:1b:153:ARG:HH22	2.25	0.44
35:1d:146:ILE:O	35:1d:183:GLY:N	2.48	0.44
38:1g:65:ALA:O	38:1g:69:VAL:HG23	2.17	0.44
38:1g:69:VAL:C	38:1g:138:LYS:HD3	2.43	0.44
42:1k:85:ARG:HE	42:1k:111:ASP:HB3	1.83	0.44
43:1l:102:ARG:HD3	43:1l:110:VAL:HG23	2.00	0.44
51:1t:63:ILE:HG21	51:1t:81:LYS:HG3	1.99	0.44
1:2A:685:A:OP1	1:2A:686:G:N2	2.50	0.44
1:2A:729:G:C8	3:2D:208:LYS:HD2	2.52	0.44
1:2A:819:A:N6	1:2A:1189:A:H1'	2.32	0.44
1:2A:1910:G:H2'	1:2A:1911:PSU:H6	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:2R:87:TYR:OH	13:2R:116:LEU:HB3	2.18	0.44
32:2a:34:C:H2'	32:2a:35:G:C8	2.52	0.44
32:2a:1362:C:H2'	32:2a:1363:C:H5''	1.99	0.44
35:2d:53:ASP:O	35:2d:57:ARG:NH1	2.50	0.44
1:1A:645:G:H5'	1:1A:645:G:N3	2.32	0.44
1:1A:821:A:H2'	1:1A:821:A:N3	2.32	0.44
1:1A:1090:G:H5'	1:1A:1091:A:OP2	2.17	0.44
1:1A:1235:G:H5''	11:1P:32:THR:HA	1.99	0.44
1:1A:1683:C:H2'	1:1A:1684:A:H8	1.82	0.44
1:1A:1700:G:H3'	13:1R:2:ARG:HB2	1.98	0.44
1:1A:2180:A:H1'	1:1A:2181:G:O4'	2.17	0.44
19:1X:47:PHE:O	19:1X:49:VAL:HG13	2.17	0.44
20:1Y:10:GLY:HA2	20:1Y:27:VAL:HB	1.98	0.44
26:14:47:GLN:C	26:14:49:PHE:H	2.25	0.44
32:1a:134:A:N6	47:1p:25:ARG:HH12	2.15	0.44
32:1a:890:G:O2'	32:1a:906:G:O6	2.21	0.44
32:1a:936:C:H2'	32:1a:937:A:O4'	2.16	0.44
32:1a:1179:A:H2'	32:1a:1180:A:O4'	2.17	0.44
32:1a:1268:A:O2'	52:1u:19:GLY:HA2	2.18	0.44
33:1b:33:TYR:N	33:1b:41:ILE:O	2.49	0.44
1:2A:422:A:H2'	1:2A:423:A:C8	2.53	0.44
1:2A:1394:U:O4	1:2A:1395:A:N6	2.50	0.44
1:2A:1782:C:H42	1:2A:2586:C:H42	1.66	0.44
1:2A:2651:C:H42	1:2A:2669:G:H1	1.65	0.44
1:2A:2737:G:H2'	1:2A:2738:A:C8	2.53	0.44
15:2T:26:ASP:HA	15:2T:92:GLY:H	1.83	0.44
32:2a:920:U:H2'	32:2a:921:U:C6	2.53	0.44
32:2a:950:U:H2'	32:2a:951:G:H8	1.82	0.44
32:2a:1234:C:H1'	32:2a:1364:U:C2	2.52	0.44
36:2e:54:ALA:HA	36:2e:57:LYS:HB3	1.99	0.44
39:2h:104:ARG:HB3	39:2h:108:GLY:N	2.32	0.44
40:2i:26:VAL:HG22	40:2i:61:ALA:HB3	1.98	0.44
40:2i:55:ALA:HA	40:2i:58:HIS:CD2	2.47	0.44
49:2r:32:ARG:HA	49:2r:69:THR:HG21	1.99	0.44
1:1A:1658:C:O2'	29:17:5:TRP:O	2.25	0.44
1:1A:1896:G:N2	1:1A:1899:A:OP2	2.44	0.44
1:1A:2638:C:H2'	1:1A:2639:G:C8	2.53	0.44
1:1A:2702:C:N4	1:1A:2726:A:H1'	2.33	0.44
3:1D:70:TRP:NE1	3:1D:146:GLU:OE2	2.50	0.44
7:1H:149:ARG:NH2	7:1H:167:GLU:OE2	2.50	0.44
32:1a:116:A:H61	32:1a:313:A:H1'	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:1a:779:C:O2'	42:1k:120:ARG:NH1	2.50	0.44
32:1a:940:C:OP1	38:1g:102:ARG:NE	2.46	0.44
32:1a:991:U:C4	32:1a:1212:U:H1'	2.52	0.44
1:2A:256:A:H2'	1:2A:257:A:H8	1.82	0.44
1:2A:322:A:OP2	5:2F:169:ASN:HB2	2.17	0.44
1:2A:523:C:O2	1:2A:554:U:O2'	2.34	0.44
1:2A:729:G:O2'	1:2A:763:G:H4'	2.16	0.44
1:2A:1209:G:O2'	1:2A:1237:A:N1	2.50	0.44
1:2A:1260:G:H2'	1:2A:1261:C:C6	2.52	0.44
1:2A:1310:G:H1	1:2A:1604:C:H42	1.66	0.44
1:2A:2060:A:N6	5:2F:74:ARG:HH22	2.14	0.44
1:2A:2402:C:H1'	1:2A:2403:C:H5	1.81	0.44
6:2G:18:GLU:OE2	6:2G:21:ARG:NH2	2.50	0.44
32:2a:533:A:O2'	32:2a:534:U:H5''	2.18	0.44
32:2a:741:G:H5''	46:2o:59:MET:HE1	1.98	0.44
32:2a:775:G:H2'	32:2a:776:G:O4'	2.17	0.44
32:2a:927:G:O2'	32:2a:1503:A:N6	2.50	0.44
33:2b:76:GLN:HE21	33:2b:206:ASP:HA	1.82	0.44
34:2c:19:GLU:HG2	34:2c:54:ARG:CZ	2.47	0.44
1:1A:2121:U:O4	1:1A:2212:G:O6	2.36	0.44
1:1A:2663:C:H42	1:1A:2681:G:H1	1.66	0.44
1:1A:2694:U:O4	1:1A:2741:U:H1'	2.18	0.44
9:1N:26:LEU:O	9:1N:30:ILE:HG13	2.17	0.44
20:1Y:14:LEU:HB2	20:1Y:75:ILE:HD11	2.00	0.44
26:14:62:ARG:HD3	26:14:62:ARG:HA	1.70	0.44
32:1a:565:U:OP2	32:1a:566:G:O2'	2.21	0.44
32:1a:601:C:H2'	32:1a:602:A:C8	2.53	0.44
39:1h:23:SER:HA	39:1h:63:LEU:HD13	1.99	0.44
1:2A:20:C:H2'	1:2A:21:A:H8	1.82	0.44
1:2A:438:G:H2'	1:2A:440:G:H8	1.80	0.44
1:2A:974:G:C6	1:2A:1186:G:C6	3.06	0.44
1:2A:2008:C:H2'	1:2A:2009:G:H8	1.82	0.44
32:2a:7:G:H5'	32:2a:298:A:O4'	2.18	0.44
32:2a:57:G:H1	32:2a:355:C:H42	1.65	0.44
32:2a:406:G:H21	35:2d:119:GLN:HE22	1.63	0.44
32:2a:1512:U:H2'	32:2a:1513:A:H8	1.82	0.44
43:2l:5:PRO:HG2	43:2l:15:ARG:NH2	2.32	0.44
47:2p:39:TYR:HD1	47:2p:49:LEU:HD13	1.82	0.44
1:1A:34:C:N4	1:1A:473:A:H61	2.15	0.44
1:1A:401:A:H62	1:1A:427:G:H21	1.64	0.44
1:1A:656:A:H1'	11:1P:66:GLY:HA2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:830:A:H4'	1:1A:2600:G:H4'	2.00	0.44
1:1A:1513:G:H2'	1:1A:1594:C:N4	2.32	0.44
1:1A:1639:G:H2'	1:1A:1640:G:C8	2.53	0.44
1:1A:2157:A:H2	1:1A:2158:C:C2	2.35	0.44
1:1A:2258:G:H2'	1:1A:2259:A:C8	2.45	0.44
6:1G:11:TYR:CE2	6:1G:16:ARG:HD3	2.52	0.44
6:1G:135:LEU:HB2	6:1G:155:MET:HG2	1.99	0.44
32:1a:901:A:O5'	32:1a:901:A:H8	2.01	0.44
32:1a:914:A:H2'	32:1a:915:A:H8	1.83	0.44
42:1k:99:GLN:HG2	42:1k:105:VAL:HG21	1.99	0.44
1:2A:323:G:HO2'	1:2A:1205:U:H3	1.64	0.44
1:2A:920:G:H2'	1:2A:921:G:H8	1.82	0.44
1:2A:1012:U:O4	9:2N:28:THR:HG21	2.17	0.44
1:2A:1296:G:OP1	1:2A:2709:G:O2'	2.23	0.44
1:2A:1443:G:H1	1:2A:1548:C:H42	1.66	0.44
1:2A:1557:C:OP2	1:2A:1558:A:O2'	2.27	0.44
1:2A:1791:A:N6	1:2A:1828:G:HO2'	2.16	0.44
1:2A:2047:U:H2'	1:2A:2048:G:C8	2.53	0.44
1:2A:2503:2MA:O2'	1:2A:2505:G:OP2	2.21	0.44
32:2a:451:A:N7	32:2a:481:G:N1	2.66	0.44
32:2a:1051:C:N3	32:2a:1207:2MG:N2	2.57	0.44
36:2e:77:PRO:HG2	36:2e:78:HIS:ND1	2.33	0.44
1:1A:16:G:H2'	1:1A:17:G:C8	2.52	0.44
1:1A:469:A:H1'	1:1A:1246:C:O4'	2.17	0.44
1:1A:474:U:O4	1:1A:606:G:H1'	2.18	0.44
1:1A:775:G:C6	1:1A:777:C:C4	3.06	0.44
1:1A:886:U:H2'	1:1A:887:C:C6	2.53	0.44
1:1A:987:G:O2'	1:1A:1234:A:N3	2.41	0.44
1:1A:1834:A:O2'	3:1D:259:THR:HG21	2.17	0.44
1:1A:2283:G:OP1	22:10:18:ALA:HB1	2.18	0.44
1:1A:2283:G:H5'	22:10:20:ARG:HG2	2.00	0.44
1:1A:2760:G:O6	1:1A:2768:C:H5''	2.17	0.44
5:1F:39:TRP:NE1	5:1F:99:TYR:O	2.51	0.44
30:18:6:THR:HG23	30:18:64:TYR:HD2	1.83	0.44
32:1a:1216:G:H5''	45:1n:5:ALA:CB	2.47	0.44
36:1e:50:GLU:HB2	36:1e:53:LEU:HD13	1.99	0.44
50:1s:31:ILE:HB	50:1s:49:ILE:HG12	1.99	0.44
51:1t:52:ALA:O	51:1t:56:MET:N	2.42	0.44
1:2A:271(I):G:N7	1:2A:271(J):C:N4	2.66	0.44
1:2A:615:G:OP2	5:2F:43:LYS:NZ	2.40	0.44
1:2A:631:A:H2'	1:2A:632:A:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2A:1636:C:H2'	1:2A:1637:A:C8	2.53	0.44
1:2A:1821:A:H8	1:2A:1821:A:O5'	2.01	0.44
1:2A:2507:C:H2'	1:2A:2508:G:O4'	2.18	0.44
6:2G:16:ARG:HB2	6:2G:17:PRO:HD3	2.00	0.44
11:2P:93:GLY:N	11:2P:123:LEU:HD22	2.30	0.44
14:2S:51:ALA:HB3	14:2S:73:LEU:HB2	1.99	0.44
15:2T:62:THR:OG1	15:2T:75:ILE:HG12	2.17	0.44
32:2a:262:A:C6	32:2a:263:A:C6	3.05	0.44
32:2a:277:C:H5''	48:2q:68:ARG:NH2	2.33	0.44
32:2a:649:G:N7	59:2a:3201:HOH:O	2.35	0.44
35:2d:179:GLU:C	35:2d:181:MET:H	2.24	0.44
40:2i:26:VAL:HG13	40:2i:61:ALA:HB3	1.99	0.44
47:2p:40:ASP:HB3	47:2p:48:TRP:HB2	2.00	0.44
1:1A:1218:G:N2	1:1A:1222:A:OP2	2.51	0.44
1:1A:1235:G:OP1	11:1P:30:THR:OG1	2.32	0.44
1:1A:1890:A:N6	1:1A:1905:G:O2'	2.50	0.44
1:1A:1902:C:H2'	1:1A:1903:C:C6	2.52	0.44
9:1N:21:LYS:NZ	9:1N:140:VAL:OXT	2.45	0.44
22:10:10:THR:HG22	22:10:12:ASN:H	1.82	0.44
26:14:38:LYS:O	26:14:44:THR:HG21	2.17	0.44
26:14:46:GLN:C	26:14:48:ARG:H	2.26	0.44
26:14:55:ARG:CB	26:14:56:VAL:HA	2.48	0.44
32:1a:7:G:H21	36:1e:121:LYS:HG2	1.83	0.44
32:1a:76:C:H2'	32:1a:77:G:C8	2.52	0.44
32:1a:537:G:H5''	43:1l:113:ARG:NH1	2.33	0.44
32:1a:629:G:H2'	32:1a:630:G:O4'	2.18	0.44
32:1a:755:G:OP2	46:1o:65:ARG:HD2	2.18	0.44
32:1a:883:C:N4	32:1a:884:U:O4	2.51	0.44
32:1a:1100:C:H3'	33:1b:96:ARG:HH21	1.82	0.44
33:1b:102:LEU:HB3	33:1b:180:LEU:HD12	2.00	0.44
44:1m:3:ARG:HG3	44:1m:4:ILE:N	2.32	0.44
44:1m:14:ARG:HE	44:1m:42:ALA:HA	1.82	0.44
1:2A:67:U:H2'	1:2A:68:G:H8	1.81	0.44
1:2A:624:C:O2'	1:2A:657:U:OP1	2.32	0.44
1:2A:1695:G:H8	3:2D:8:PRO:O	2.00	0.44
1:2A:2396:G:H1	1:2A:2420:C:H42	1.66	0.44
9:2N:26:LEU:O	9:2N:30:ILE:HG13	2.18	0.44
14:2S:104:GLY:O	14:2S:108:GLY:N	2.50	0.44
23:21:46:LEU:HD23	23:21:63:ALA:HA	2.00	0.44
32:2a:256:U:H2'	32:2a:257:G:O4'	2.18	0.44
32:2a:501:C:H2'	32:2a:502:G:H8	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:2c:150:LYS:HG3	34:2c:169:ALA:HB2	1.99	0.44
38:2g:78:ARG:HG2	38:2g:79:ARG:H	1.82	0.44
55:2x:53:G:H1	55:2x:61:C:N4	2.14	0.44
1:1A:630:U:OP1	5:1F:103:LYS:N	2.32	0.44
1:1A:1391:C:H42	1:1A:1647:G:H1	1.65	0.44
1:1A:1849:U:O4	3:1D:154:LYS:HD2	2.18	0.44
1:1A:2052:A:H4'	1:1A:2053:A:C8	2.53	0.44
1:1A:2331:G:H1	14:1S:3:ARG:HA	1.83	0.44
1:1A:2519:C:H4'	1:1A:2585:C:N4	2.33	0.44
2:1B:70:C:H2'	2:1B:71:C:C6	2.53	0.44
6:1G:110:ALA:O	6:1G:113:ARG:N	2.49	0.44
6:1G:136:ARG:HG3	6:1G:137:GLU:HG3	1.99	0.44
21:1Z:6:LYS:HA	21:1Z:60:GLU:HB2	1.98	0.44
33:1b:162:ILE:O	33:1b:185:ILE:HG12	2.17	0.44
37:1f:11:ASN:HB3	37:1f:14:LEU:HG	1.99	0.44
41:1j:81:THR:O	41:1j:85:LEU:HG	2.18	0.44
47:1p:8:ARG:HB3	47:1p:28:ARG:NH1	2.33	0.44
1:2A:398:G:H2'	1:2A:399:G:H8	1.83	0.44
1:2A:1882:C:H2'	1:2A:1883:G:O4'	2.18	0.44
1:2A:2093:G:H1	1:2A:2196:C:N4	2.14	0.44
1:2A:2397:G:N2	1:2A:2420:C:H1'	2.33	0.44
1:2A:2689:U:H4'	1:2A:2690:C:O5'	2.17	0.44
1:2A:2704:C:H2'	1:2A:2705:A:O4'	2.18	0.44
1:2A:2820:A:OP2	13:2R:2:ARG:NH2	2.51	0.44
7:2H:98:LEU:HD12	7:2H:102:ALA:O	2.17	0.44
15:2T:18:ASP:OD1	15:2T:18:ASP:N	2.50	0.44
18:2W:1:MET:HE3	18:2W:62:HIS:ND1	2.33	0.44
21:2Z:128:VAL:HG22	21:2Z:129:SER:O	2.18	0.44
32:2a:262:A:H2'	32:2a:263:A:C8	2.52	0.44
32:2a:677:U:H3	32:2a:713:G:H22	1.66	0.44
32:2a:1366:C:H2'	32:2a:1367:C:C6	2.53	0.44
36:2e:58:ALA:O	36:2e:62:ALA:N	2.45	0.44
38:2g:126:ASP:O	38:2g:130:GLY:N	2.51	0.44
44:2m:53:VAL:O	44:2m:57:ARG:N	2.46	0.44
1:1A:70:A:H5''	1:1A:72:A:C8	2.53	0.43
1:1A:923:C:H2'	1:1A:924:U:O4'	2.18	0.43
1:1A:1035:G:OP1	1:1A:1203:G:O2'	2.35	0.43
1:1A:1065:U:H2'	1:1A:1066:A:H8	1.82	0.43
1:1A:1310:G:H2'	1:1A:2036:A:N6	2.33	0.43
1:1A:1357:G:H2'	29:17:47:ARG:NH2	2.33	0.43
1:1A:2273:C:H1'	1:1A:2400:A:N3	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:1D:35:LYS:HB2	3:1D:36:PRO:HD2	1.99	0.43
7:1H:43:VAL:HA	7:1H:52:VAL:HG22	2.00	0.43
8:1I:6:LEU:HD12	8:1I:34:GLY:O	2.18	0.43
20:1Y:17:SER:OG	20:1Y:71:LYS:NZ	2.42	0.43
32:1a:7:G:H5'	32:1a:298:A:O4'	2.18	0.43
32:1a:91:C:H2'	32:1a:92:C:C6	2.53	0.43
32:1a:108:G:P	32:1a:326:G:H22	2.40	0.43
32:1a:1239:A:H62	32:1a:1299:A:H62	1.66	0.43
32:1a:1346:A:N1	32:1a:1374:A:H5''	2.32	0.43
32:1a:1525:G:H2'	32:1a:1526:G:H8	1.83	0.43
33:1b:124:SER:HB3	33:1b:125:PRO:HA	2.00	0.43
35:1d:170:VAL:HG22	35:1d:171:GLY:H	1.83	0.43
42:1k:85:ARG:NH2	42:1k:111:ASP:OD2	2.49	0.43
50:1s:80:TYR:CZ	50:1s:82:GLY:HA2	2.53	0.43
55:1x:48:C:C2	55:1x:59:A:H1'	2.52	0.43
1:2A:742:G:H2'	1:2A:743:G:C8	2.52	0.43
1:2A:1529:G:O6	1:2A:1530:C:N4	2.51	0.43
1:2A:2295:C:OP1	14:2S:10:ARG:NH1	2.51	0.43
1:2A:2485:G:H2'	1:2A:2486:G:H8	1.83	0.43
2:2B:89:G:H2'	2:2B:90:A:C8	2.52	0.43
3:2D:13:ARG:NH1	3:2D:16:MET:SD	2.91	0.43
6:2G:67:LYS:HE3	26:24:5:ILE:HD12	2.00	0.43
32:2a:999:C:H42	32:2a:1042:G:H1	1.66	0.43
32:2a:1246:C:H2'	32:2a:1247:U:O4'	2.18	0.43
32:2a:1271:G:N1	32:2a:1272:G:O6	2.50	0.43
39:2h:69:ARG:NE	39:2h:75:ARG:O	2.46	0.43
1:1A:489:G:N1	1:1A:493:G:C6	2.86	0.43
1:1A:834:U:H5''	1:1A:835:A:H5'	2.00	0.43
1:1A:1713:G:OP1	10:1O:82:ASN:ND2	2.52	0.43
1:1A:1778:G:H2'	1:1A:1779:G:C8	2.52	0.43
1:1A:2157:A:H2'	1:1A:2157:A:N3	2.33	0.43
1:1A:2354:C:O2	1:1A:2386:C:H4'	2.18	0.43
1:1A:2507:G:H5''	12:1Q:82:ARG:HG2	1.98	0.43
1:1A:2849:G:C5'	13:1R:46:GLY:HA2	2.48	0.43
3:1D:133:LEU:HG	3:1D:189:CYS:O	2.18	0.43
32:1a:972:C:H4'	41:1j:57:LYS:HB2	2.00	0.43
32:1a:1053:G:H4'	32:1a:1054:C:H5'	1.99	0.43
32:1a:1219:U:OP1	45:1n:19:ARG:NH1	2.51	0.43
32:1a:1523:G:H2'	32:1a:1524:C:C6	2.53	0.43
41:1j:12:ASP:HB3	41:1j:15:THR:OG1	2.18	0.43
41:1j:40:LEU:HB2	41:1j:69:ASN:CB	2.45	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:1o:2:PRO:HB2	46:1o:3:ILE:H	1.56	0.43
51:1t:43:LEU:O	51:1t:47:GLY:N	2.44	0.43
51:1t:84:LEU:O	51:1t:88:VAL:HG23	2.18	0.43
1:2A:325:G:H2'	1:2A:326:G:C8	2.53	0.43
1:2A:386:G:P	1:2A:388:G:H22	2.41	0.43
1:2A:1786:A:H1'	1:2A:1938:A:N6	2.33	0.43
1:2A:1959:G:H1'	32:2a:1418:A:N3	2.33	0.43
1:2A:2183:C:H2'	1:2A:2184:G:C8	2.52	0.43
1:2A:2250:G:O2'	1:2A:2496:C:OP1	2.32	0.43
1:2A:2296:U:OP2	14:2S:6:ALA:HB2	2.18	0.43
2:2B:42:C:O2'	6:2G:66:GLN:HG2	2.18	0.43
4:2E:167:VAL:HG22	4:2E:170:LEU:HD11	2.00	0.43
4:2E:197:ILE:HG22	4:2E:199:ARG:HG3	2.00	0.43
6:2G:11:TYR:CE2	6:2G:16:ARG:HD3	2.53	0.43
8:2I:102:SER:HA	8:2I:107:VAL:H	1.84	0.43
17:2V:2:PHE:CZ	17:2V:41:GLY:HA3	2.53	0.43
21:2Z:154:ASP:O	21:2Z:155:LEU:HD12	2.18	0.43
32:2a:392:G:H2'	32:2a:393:A:H8	1.83	0.43
32:2a:1279:A:O2'	32:2a:1281:U:OP2	2.22	0.43
33:2b:24:TRP:HZ3	33:2b:29:ALA:HB2	1.83	0.43
35:2d:116:GLN:NE2	35:2d:157:LEU:HD21	2.32	0.43
43:2l:5:PRO:HG2	43:2l:15:ARG:HH22	1.83	0.43
46:2o:40:SER:O	46:2o:44:LYS:HG3	2.18	0.43
55:2x:8:4SU:H1'	55:2x:48:C:H1'	2.00	0.43
1:1A:153:C:H2'	1:1A:154:G:C8	2.49	0.43
1:1A:876:A:C8	1:1A:2260:C:H5'	2.54	0.43
1:1A:1128:U:C4	1:1A:1132:A:N1	2.84	0.43
4:1E:119:ARG:HG3	4:1E:160:TYR:CD1	2.52	0.43
6:1G:77:ILE:HB	6:1G:82:LEU:HB2	1.98	0.43
32:1a:676:A:H5''	42:1k:113:PRO:HB2	2.00	0.43
32:1a:782:A:OP1	32:1a:1521:G:N2	2.47	0.43
32:1a:837:G:H1	32:1a:849:C:N4	2.14	0.43
32:1a:1285:A:H1'	32:1a:1286:A:OP2	2.17	0.43
33:1b:110:GLN:HA	33:1b:113:HIS:CD2	2.45	0.43
36:1e:17:ALA:HB2	36:1e:26:PHE:CD1	2.53	0.43
39:1h:20:TYR:HA	39:1h:65:TYR:CZ	2.53	0.43
40:1i:128:ARG:HD3	55:1x:35:A:OP1	2.18	0.43
46:1o:4:THR:N	46:1o:7:GLU:OE2	2.51	0.43
1:2A:557:U:O2	9:2N:45:ASN:HB2	2.18	0.43
1:2A:1640:C:H5'	1:2A:1641:A:OP2	2.18	0.43
1:2A:1919:A:O3'	32:2a:1517:G:H1'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2A:2023:G:H5'	1:2A:2617:C:H4'	2.00	0.43
2:2B:82:G:H2'	2:2B:83:G:H8	1.82	0.43
4:2E:11:MET:HG2	4:2E:24:THR:HB	2.01	0.43
32:2a:537:G:H2'	32:2a:538:G:H8	1.82	0.43
32:2a:674:G:P	37:2f:87:ARG:HH22	2.41	0.43
32:2a:1128:C:O2'	32:2a:1129:C:OP1	2.36	0.43
32:2a:1178:G:P	40:2i:93:ARG:HH21	2.38	0.43
35:2d:133:VAL:HG12	35:2d:135:LEU:H	1.82	0.43
39:2h:30:ARG:O	39:2h:34:GLU:HG2	2.18	0.43
55:2x:43:A:H2'	55:2x:44:A:C8	2.52	0.43
1:1A:421:A:C6	1:1A:422:U:C4	3.06	0.43
1:1A:1816:A:O2'	1:1A:1817:A:H8	2.01	0.43
1:1A:1884:A:H2'	1:1A:1885:A:H8	1.83	0.43
1:1A:1921:G:N3	1:1A:1921:G:H2'	2.34	0.43
5:1F:40:GLN:HE22	5:1F:182:ASN:HB2	1.83	0.43
5:1F:150:GLY:HA2	5:1F:172:TRP:CD2	2.53	0.43
6:1G:16:ARG:HB2	6:1G:17:PRO:HD3	2.00	0.43
8:1I:123:LEU:HA	8:1I:144:VAL:HG23	1.99	0.43
17:1V:76:LYS:HB2	17:1V:81:TYR:HB3	1.99	0.43
21:1Z:4:ARG:NH2	21:1Z:60:GLU:HG2	2.34	0.43
32:1a:277:C:H2'	32:1a:278:G:H8	1.82	0.43
32:1a:354:G:N2	32:1a:388:G:O2'	2.30	0.43
32:1a:946:A:H2'	32:1a:947:G:H8	1.84	0.43
32:1a:1329:A:P	44:1m:28:ALA:HB3	2.58	0.43
33:1b:163:PHE:HA	33:1b:185:ILE:O	2.18	0.43
36:1e:41:VAL:O	36:1e:67:VAL:HG12	2.18	0.43
40:1i:117:HIS:NE2	40:1i:123:PRO:HB3	2.33	0.43
47:1p:19:ILE:HG22	47:1p:36:ILE:HG13	2.00	0.43
1:2A:1434:A:H61	1:2A:1558:A:N6	2.16	0.43
1:2A:1580:A:H3'	1:2A:1581:G:H8	1.83	0.43
1:2A:2370:G:C6	1:2A:2371:G:C6	3.06	0.43
1:2A:2836:U:H2'	1:2A:2837:G:C8	2.53	0.43
20:2Y:12:THR:N	20:2Y:26:LYS:HZ2	2.16	0.43
32:2a:983:A:N1	32:2a:1222:G:N2	2.65	0.43
33:2b:208:ILE:H	33:2b:208:ILE:HD12	1.83	0.43
34:2c:124:ILE:HD13	34:2c:196:LEU:HD12	2.00	0.43
37:2f:2:ARG:HD2	37:2f:69:GLU:HB3	2.00	0.43
40:2i:4:TYR:CE1	40:2i:88:TYR:HA	2.53	0.43
44:2m:23:TYR:HB3	44:2m:67:GLU:HA	2.00	0.43
1:1A:748:G:H1	1:1A:778:C:N4	2.16	0.43
1:1A:831:A:O4'	3:1D:227:ASN:ND2	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:1129:U:O2	1:1A:1131:A:H5''	2.18	0.43
1:1A:1188:A:O2'	1:1A:1189:A:H3'	2.18	0.43
1:1A:1202:A:P	16:1U:55:ARG:HH11	2.40	0.43
1:1A:1218:G:N1	1:1A:1221:G:OP2	2.52	0.43
1:1A:1387:U:OP1	1:1A:1443:U:N3	2.29	0.43
1:1A:2789:A:C6	1:1A:2795:G:H1'	2.53	0.43
2:1B:112:U:H2'	2:1B:113:G:C8	2.53	0.43
32:1a:1015:A:H2'	32:1a:1016:A:C8	2.54	0.43
32:1a:1376:U:P	38:1g:94:ARG:HH12	2.41	0.43
42:1k:33:THR:HA	42:1k:39:PRO:HA	1.99	0.43
1:2A:1336:A:H2'	1:2A:1337:G:C8	2.53	0.43
1:2A:1669:A:O2'	1:2A:2549:G:OP1	2.34	0.43
1:2A:2870:C:H5''	13:2R:65:LEU:HD21	1.99	0.43
32:2a:60:A:N1	32:2a:107:G:O2'	2.46	0.43
32:2a:1224:G:O2'	32:2a:1322:C:OP1	2.32	0.43
42:2k:23:ALA:HB1	42:2k:88:GLY:HA3	1.99	0.43
43:2l:60:LEU:HD11	43:2l:66:VAL:HG22	2.00	0.43
44:2m:22:ILE:HD12	44:2m:25:ILE:HD12	2.00	0.43
51:2t:82:SER:O	51:2t:86:ARG:HG3	2.18	0.43
54:2w:74:C:HO2'	54:2w:75:C:P	2.40	0.43
1:1A:771:U:H2'	1:1A:772:G:O4'	2.19	0.43
1:1A:904:C:H42	1:1A:966:G:H1	1.66	0.43
1:1A:1037:C:H2'	1:1A:1038:C:C6	2.54	0.43
1:1A:1469:G:H2'	1:1A:1470:G:H8	1.84	0.43
1:1A:2559:U:O2	10:1O:23:ARG:NH2	2.51	0.43
2:1B:40:U:H1'	2:1B:45:A:H61	1.84	0.43
5:1F:183:VAL:O	5:1F:187:VAL:HG23	2.18	0.43
7:1H:11:VAL:HG21	7:1H:50:VAL:HG23	2.01	0.43
26:14:56:VAL:HG23	26:14:57:GLU:H	1.84	0.43
28:16:10:LEU:HD13	28:16:19:ARG:HD3	2.00	0.43
32:1a:143:A:H2	32:1a:220:G:H1	1.67	0.43
32:1a:837:G:H2'	32:1a:838:G:H8	1.83	0.43
32:1a:1060:C:H4'	41:1j:52:GLY:HA2	2.01	0.43
32:1a:1201:A:H4'	32:1a:1202:G:O5'	2.17	0.43
32:1a:1270:C:O2'	32:1a:1313:U:O2'	2.33	0.43
32:1a:1335:C:H5''	32:1a:1337:G:N2	2.33	0.43
39:1h:21:LYS:O	39:1h:65:TYR:OH	2.21	0.43
1:2A:58:G:H1	1:2A:69:C:H42	1.67	0.43
1:2A:67:U:H2'	1:2A:68:G:C8	2.53	0.43
1:2A:374:A:H3'	1:2A:375:C:C6	2.54	0.43
1:2A:517:C:OP1	27:25:16:ARG:NH2	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2A:827:U:H4'	1:2A:828:U:C6	2.54	0.43
1:2A:1019:U:H2'	1:2A:1020:A:H8	1.84	0.43
1:2A:1962:5MC:O2'	1:2A:1964:G:OP2	2.31	0.43
1:2A:2166:G:H3'	1:2A:2167:U:H5''	1.99	0.43
1:2A:2635:C:H2'	1:2A:2636:U:O4'	2.19	0.43
2:2B:43:C:O3'	6:2G:98:ARG:NH2	2.52	0.43
21:2Z:144:LEU:HD12	21:2Z:150:LEU:HD13	2.01	0.43
25:23:8:LEU:HB2	25:23:28:LEU:HD13	2.01	0.43
31:29:32:HIS:O	31:29:34:GLN:HG3	2.19	0.43
32:2a:17:U:H2'	32:2a:18:C:C6	2.53	0.43
32:2a:41:G:H2'	32:2a:42:G:H8	1.79	0.43
32:2a:109:A:H5'	32:2a:110:C:H5	1.84	0.43
32:2a:580:U:H2'	32:2a:581:G:O4'	2.19	0.43
32:2a:857:C:H2'	32:2a:858:G:O4'	2.19	0.43
32:2a:1001(A):G:C6	32:2a:1002:G:C4	3.06	0.43
32:2a:1314:C:H2'	32:2a:1315:U:C6	2.52	0.43
46:2o:62:GLN:O	46:2o:66:LEU:HD13	2.18	0.43
47:2p:27:LYS:HG3	47:2p:30:GLY:HA3	2.00	0.43
1:1A:610:C:OP2	11:1P:21:ARG:NH1	2.48	0.43
1:1A:905:U:O2	1:1A:2280:A:H2'	2.19	0.43
1:1A:1148:C:H2'	1:1A:1149:A:H8	1.84	0.43
1:1A:1325:G:H2'	1:1A:1326:G:C8	2.53	0.43
1:1A:2632:C:O2'	4:1E:157:ALA:O	2.31	0.43
13:1R:79:LEU:HA	13:1R:83:ILE:HD12	2.01	0.43
14:1S:4:LEU:O	14:1S:9:ARG:NH1	2.51	0.43
21:1Z:128:VAL:HG23	21:1Z:160:GLY:O	2.19	0.43
32:1a:1143:G:H2'	32:1a:1144:G:H8	1.84	0.43
34:1c:125:GLU:HG2	34:1c:190:ARG:O	2.19	0.43
1:2A:25:U:H2'	1:2A:26:G:O4'	2.18	0.43
1:2A:30:G:H2'	1:2A:31:C:C6	2.54	0.43
1:2A:68:G:C2	1:2A:69:C:C2	3.06	0.43
1:2A:479:A:O2'	1:2A:481:G:H5'	2.18	0.43
1:2A:568:U:O2'	1:2A:570:G:N7	2.46	0.43
1:2A:811:U:H2'	11:2P:21:ARG:HA	2.00	0.43
1:2A:1004:C:H1'	1:2A:1010:A:C4	2.53	0.43
1:2A:1689:A:H62	1:2A:1698:A:H2	1.65	0.43
9:2N:67:LEU:HA	9:2N:87:LEU:HD22	2.01	0.43
20:2Y:43:ASN:ND2	20:2Y:66:PRO:O	2.52	0.43
32:2a:255:G:H2'	32:2a:256:U:C6	2.54	0.43
32:2a:299:G:N2	32:2a:566:G:O6	2.49	0.43
32:2a:409:G:OP2	35:2d:22:LYS:HB3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:2a:418:C:H2'	32:2a:419:C:C6	2.53	0.43
32:2a:476:G:H2'	32:2a:477:A:H8	1.82	0.43
32:2a:1191:A:P	34:2c:3:ASN:HD22	2.42	0.43
32:2a:1226:C:OP2	44:2m:103:THR:HG21	2.18	0.43
34:2c:15:THR:HG21	34:2c:181:ASN:HA	2.01	0.43
40:2i:50:LEU:HD13	40:2i:56:LEU:HA	2.00	0.43
1:1A:930:G:H2'	1:1A:931:C:H5	1.84	0.43
1:1A:1005:A:H2	1:1A:2507:G:N3	2.16	0.43
1:1A:1742:G:H8	3:1D:8:PRO:O	2.01	0.43
1:1A:2459:G:N2	1:1A:2462:A:OP2	2.49	0.43
8:1I:93:THR:O	8:1I:97:ILE:HG13	2.19	0.43
22:10:18:ALA:O	22:10:20:ARG:NH1	2.52	0.43
30:18:31:HIS:ND1	30:18:32:LEU:HD13	2.34	0.43
32:1a:828:A:H62	32:1a:858:G:H21	1.66	0.43
32:1a:1314:C:H2'	32:1a:1315:U:C6	2.54	0.43
36:1e:54:ALA:HA	36:1e:57:LYS:HB3	2.00	0.43
37:1f:19:LEU:HD11	37:1f:59:TYR:CZ	2.54	0.43
48:1q:57:VAL:HG12	48:1q:76:LEU:HA	2.01	0.43
1:2A:45:C:OP2	1:2A:215:G:H2'	2.19	0.43
1:2A:1202:C:H42	1:2A:1243:G:H1	1.67	0.43
1:2A:2572:A:H5''	1:2A:2574:G:H4'	2.00	0.43
1:2A:2707:G:H2'	1:2A:2708:G:H8	1.83	0.43
20:2Y:2:ARG:NH1	20:2Y:3:VAL:O	2.51	0.43
32:2a:192:U:O3'	51:2t:57:ARG:HD2	2.19	0.43
32:2a:836:G:OP1	49:2r:61:LYS:NZ	2.45	0.43
32:2a:1002:G:N3	32:2a:1003:G:H1'	2.34	0.43
32:2a:1127:G:H5'	32:2a:1280:A:O2'	2.19	0.43
32:2a:1176:A:H2'	32:2a:1177:G:H8	1.84	0.43
32:2a:1271:G:H4'	50:2s:6:LYS:NZ	2.34	0.43
33:2b:15:VAL:HG12	33:2b:209:ARG:HG3	2.00	0.43
42:2k:21:ILE:HG12	42:2k:30:VAL:HG22	2.01	0.43
48:2q:61:GLU:HA	48:2q:71:PHE:CE1	2.54	0.43
50:2s:52:TYR:HA	50:2s:56:GLN:O	2.19	0.43
1:1A:208:G:H2'	1:1A:209:G:O4'	2.19	0.43
1:1A:593:G:H2'	1:1A:2052:A:C5	2.54	0.43
1:1A:758:G:H1	1:1A:767:C:N4	2.08	0.43
1:1A:1003:U:H5'	12:1Q:14:ARG:HD3	2.00	0.43
1:1A:1074:A:N3	1:1A:2498:G:O2'	2.45	0.43
1:1A:1133:G:C4	1:1A:1135:G:H1'	2.54	0.43
1:1A:1576:G:H1	1:1A:1587:U:H3	1.66	0.43
1:1A:1683:C:H2'	1:1A:1684:A:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:1830:G:O2'	3:1D:181:GLU:OE2	2.31	0.43
1:1A:1831:C:OP1	3:1D:264:LYS:NZ	2.47	0.43
1:1A:1985:U:H4'	1:1A:1986:G:OP1	2.19	0.43
1:1A:2880:C:H2'	1:1A:2881:C:O4'	2.19	0.43
3:1D:260:ARG:NH2	3:1D:266:SER:OG	2.52	0.43
8:1I:128:LEU:N	8:1I:140:LEU:O	2.43	0.43
12:1Q:12:GLN:NE2	12:1Q:72:LYS:HG3	2.33	0.43
19:1X:34:ALA:O	19:1X:77:LYS:NZ	2.45	0.43
21:1Z:4:ARG:HH21	21:1Z:60:GLU:HG2	1.84	0.43
32:1a:9:G:H2'	32:1a:10:A:H8	1.84	0.43
32:1a:825:G:H21	39:1h:11:THR:HG21	1.84	0.43
32:1a:880:C:OP1	43:1l:8:ASN:ND2	2.51	0.43
32:1a:923:A:O2'	32:1a:1399:C:OP2	2.35	0.43
32:1a:955:U:O2'	50:1s:83:HIS:HD2	2.02	0.43
32:1a:1002:G:N7	32:1a:1003:G:H1'	2.34	0.43
32:1a:1410:G:H2'	32:1a:1411:C:C6	2.54	0.43
44:1m:30:ALA:O	44:1m:34:LEU:HG	2.18	0.43
1:2A:136:G:H1	1:2A:143(A):C:H42	1.66	0.43
1:2A:1029:A:N3	1:2A:2486:G:H1'	2.33	0.43
1:2A:1186:G:H2'	1:2A:1187:G:O4'	2.18	0.43
1:2A:1358:G:N2	1:2A:1372:U:OP2	2.49	0.43
1:2A:1485:G:H2'	1:2A:1486:A:C8	2.53	0.43
1:2A:2869:G:H2'	1:2A:2870:C:O4'	2.17	0.43
10:2O:87:ILE:HD12	10:2O:91:LEU:HA	2.01	0.43
14:2S:15:ARG:O	14:2S:19:LYS:HG2	2.18	0.43
26:24:53:GLU:HB2	26:24:55:ARG:O	2.18	0.43
32:2a:38:G:C2	32:2a:397:A:C2	3.07	0.43
32:2a:448:A:OP2	32:2a:485:G:N2	2.37	0.43
32:2a:957:U:H2'	32:2a:959:A:OP2	2.19	0.43
32:2a:1286:A:C8	32:2a:1287:A:H4'	2.53	0.43
33:2b:16:HIS:HB3	33:2b:210:SER:CB	2.48	0.43
33:2b:71:VAL:O	33:2b:165:VAL:HG23	2.19	0.43
33:2b:97:TRP:HH2	33:2b:176:GLU:CD	2.27	0.43
42:2k:34:ASP:OD1	42:2k:37:GLY:N	2.52	0.43
1:1A:82:G:N1	1:1A:100:G:O2'	2.41	0.43
1:1A:268:G:H2'	1:1A:269:G:C8	2.54	0.43
1:1A:326:C:H2'	1:1A:327:U:C6	2.54	0.43
1:1A:495:G:O2'	1:1A:496:A:O4'	2.35	0.43
1:1A:538:A:O2'	1:1A:1262:C:OP1	2.27	0.43
1:1A:1563:G:H4'	1:1A:1603:C:O2'	2.19	0.43
1:1A:2052:A:H5''	1:1A:2053:A:OP1	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:2314:G:N2	6:1G:126:ASP:OD1	2.42	0.43
1:1A:2500:A:C6	1:1A:2501:G:C6	3.06	0.43
7:1H:157:TYR:CE1	7:1H:172:LYS:HG3	2.54	0.43
9:1N:67:LEU:O	9:1N:88:GLU:HG3	2.19	0.43
13:1R:33:ARG:HD3	13:1R:115:GLU:HB3	2.01	0.43
19:1X:10:ALA:HA	24:12:37:PHE:CE1	2.54	0.43
32:1a:337:C:H2'	32:1a:338:A:C8	2.54	0.43
32:1a:582:U:OP1	46:1o:64:ARG:NH1	2.51	0.43
32:1a:1029:C:O2	32:1a:1032:G:N1	2.50	0.43
36:1e:109:ILE:HG22	36:1e:110:LEU:HD23	2.00	0.43
47:1p:40:ASP:HB3	47:1p:48:TRP:HB2	2.01	0.43
1:2A:271(H):G:H2'	1:2A:271(I):G:H8	1.84	0.43
1:2A:1011:G:C2	1:2A:1151:G:C2	3.07	0.43
1:2A:1188:U:H4'	17:2V:79:VAL:HG22	2.01	0.43
1:2A:1386:C:OP2	1:2A:1396:U:N3	2.43	0.43
1:2A:2156:G:H2'	1:2A:2157:G:C2	2.54	0.43
1:2A:2203:U:H2'	1:2A:2205:C:C6	2.54	0.43
1:2A:2390:U:P	30:28:35:GLN:HE22	2.41	0.43
1:2A:2410:G:H2'	1:2A:2411:A:O4'	2.19	0.43
2:2B:17:C:H2'	2:2B:18:G:O4'	2.19	0.43
2:2B:38:C:O2	2:2B:48:A:H1'	2.18	0.43
2:2B:101:G:H2'	2:2B:102:A:O4'	2.19	0.43
13:2R:63:ARG:HB2	13:2R:80:PHE:HE2	1.84	0.43
26:24:49:PHE:HB3	26:24:50:VAL:H	1.69	0.43
32:2a:130:A:H5'	48:2q:63:ARG:NH1	2.34	0.43
32:2a:694:A:H5''	42:2k:53:SER:OG	2.18	0.43
32:2a:885:G:H2'	32:2a:886:G:C8	2.54	0.43
32:2a:950:U:H2'	32:2a:951:G:C8	2.54	0.43
32:2a:1287:A:N7	32:2a:1288:A:N6	2.67	0.43
32:2a:1445:C:N3	32:2a:1457:G:N1	2.48	0.43
35:2d:59:ARG:O	35:2d:63:LYS:N	2.49	0.43
40:2i:15:ALA:HA	40:2i:65:VAL:HG22	2.01	0.43
1:1A:83:A:N1	1:1A:97:G:O2'	2.49	0.42
1:1A:478:G:C2	1:1A:484:G:C5	3.07	0.42
1:1A:1362:U:H2'	1:1A:1363:A:C8	2.54	0.42
1:1A:2248:C:H2'	1:1A:2249:G:O4'	2.19	0.42
1:1A:2874:G:OP1	15:1T:119:LYS:HD2	2.19	0.42
6:1G:109:VAL:HG11	26:14:14:ILE:HG21	2.00	0.42
8:1I:126:TYR:O	8:1I:142:VAL:N	2.45	0.42
8:1I:133:HIS:HB3	8:1I:136:VAL:HB	2.01	0.42
28:16:40:CYS:O	28:16:44:ARG:N	2.47	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:18:54:GLU:O	30:18:58:ILE:HG13	2.19	0.42
32:1a:27:G:H2'	32:1a:28:G:C8	2.54	0.42
32:1a:339:C:H42	32:1a:350:G:H1	1.67	0.42
32:1a:649:G:H2'	32:1a:650:G:H8	1.84	0.42
32:1a:1027:C:C5	32:1a:1028:C:C4	3.08	0.42
32:1a:1178:G:N2	32:1a:1180:A:H3'	2.34	0.42
33:1b:24:TRP:H	33:1b:24:TRP:HD1	1.64	0.42
53:1v:14:A:H3'	53:1v:15:A:H8	1.84	0.42
1:2A:172:C:H2'	1:2A:173:G:H8	1.83	0.42
1:2A:380:U:H2'	1:2A:381:G:H8	1.83	0.42
1:2A:1572:A:H2'	1:2A:1573:G:O4'	2.19	0.42
1:2A:2533:A:H2'	1:2A:2534:A:O4'	2.19	0.42
1:2A:2585:U:H4'	1:2A:2586:C:H5'	2.01	0.42
1:2A:2803:C:H2'	1:2A:2804:C:C6	2.54	0.42
1:2A:2840:C:O3'	13:2R:53:HIS:NE2	2.52	0.42
6:2G:18:GLU:HA	6:2G:21:ARG:HG2	2.01	0.42
20:2Y:52:SER:OG	20:2Y:55:TYR:HB2	2.19	0.42
30:28:30:ARG:HD3	30:28:30:ARG:HA	1.82	0.42
32:2a:130:A:N3	32:2a:263:A:O2'	2.47	0.42
32:2a:627:G:H2'	32:2a:628:G:H8	1.83	0.42
32:2a:976:G:P	45:2n:32:SER:H	2.42	0.42
32:2a:998:G:H1	32:2a:1043:C:N4	2.17	0.42
33:2b:102:LEU:HB3	33:2b:180:LEU:HD12	2.01	0.42
33:2b:119:GLU:CD	33:2b:153:ARG:HH22	2.27	0.42
48:2q:66:SER:O	48:2q:70:ARG:NH1	2.52	0.42
1:1A:322:G:OP1	20:1Y:87:LYS:N	2.52	0.42
1:1A:407:U:H2'	1:1A:408:G:H8	1.84	0.42
1:1A:916:G:H2'	1:1A:917:A:H8	1.84	0.42
1:1A:1095:C:H1'	1:1A:1159:U:O2'	2.19	0.42
1:1A:1108:G:H5''	1:1A:1116:A:O2'	2.19	0.42
1:1A:1562:U:H2'	1:1A:1563:G:C8	2.54	0.42
1:1A:1897:C:H2'	1:1A:1898:A:O4'	2.19	0.42
1:1A:2023:A:H2'	1:1A:2024:G:H8	1.85	0.42
1:1A:2100:C:H2'	1:1A:2101:U:C6	2.54	0.42
1:1A:2638:C:H2'	1:1A:2639:G:H8	1.83	0.42
4:1E:2:LYS:NZ	4:1E:95:ILE:O	2.40	0.42
6:1G:43:LEU:HB3	6:1G:88:ILE:O	2.19	0.42
7:1H:3:ARG:HD2	7:1H:3:ARG:HA	1.86	0.42
12:1Q:2:LEU:HD23	12:1Q:2:LEU:HA	1.91	0.42
14:1S:66:ALA:HB1	14:1S:101:LEU:HB2	2.01	0.42
15:1T:85:LYS:NZ	15:1T:87:ASP:OD2	2.43	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:1a:279:A:C5	48:1q:98:LEU:HD23	2.54	0.42
32:1a:1008:C:O2	32:1a:1021:G:N1	2.52	0.42
32:1a:1014:A:H5'	50:1s:14:HIS:CE1	2.55	0.42
33:1b:189:ASP:OD1	33:1b:189:ASP:N	2.39	0.42
35:1d:18:LYS:HD3	35:1d:20:TYR:CE1	2.54	0.42
36:1e:87:SER:HB3	36:1e:131:ILE:HD13	2.01	0.42
38:1g:111:ARG:HG2	38:1g:112:PRO:HD2	2.01	0.42
1:2A:464:U:O2'	29:27:12:ARG:NH1	2.50	0.42
1:2A:887:A:O2'	1:2A:888:C:H3'	2.20	0.42
1:2A:1263:U:O4	1:2A:1264:G:N1	2.52	0.42
1:2A:1580:A:H8	1:2A:1580:A:OP2	2.02	0.42
1:2A:1760:A:H2'	1:2A:1761:C:C6	2.55	0.42
5:2F:149:ASP:OD1	5:2F:149:ASP:N	2.52	0.42
10:2O:64:ARG:HB2	10:2O:79:PHE:CG	2.54	0.42
32:2a:707:C:H4'	42:2k:20:TYR:CG	2.54	0.42
32:2a:1469:G:H2'	32:2a:1470:G:H8	1.85	0.42
33:2b:76:GLN:HG3	33:2b:206:ASP:O	2.19	0.42
39:2h:120:THR:H	39:2h:123:GLU:HB2	1.83	0.42
44:2m:13:LYS:HA	44:2m:44:ARG:HH11	1.83	0.42
1:1A:544:U:H2'	1:1A:545:G:C8	2.54	0.42
1:1A:1122:C:H3'	1:1A:1122:C:OP2	2.18	0.42
1:1A:1248:G:N2	1:1A:1289:G:O6	2.52	0.42
1:1A:1807:G:N3	1:1A:1807:G:H2'	2.34	0.42
1:1A:2524:C:H4'	4:1E:122:PHE:CE2	2.54	0.42
7:1H:101:ARG:O	7:1H:117:PRO:HG3	2.20	0.42
7:1H:154:PRO:HB3	7:1H:163:TYR:CZ	2.54	0.42
8:1I:129:THR:HG22	8:1I:139:GLN:NE2	2.34	0.42
32:1a:324:G:P	51:1t:22:ARG:HE	2.42	0.42
32:1a:726:C:H2'	32:1a:727:G:H8	1.84	0.42
32:1a:1385:G:H2'	32:1a:1386:G:H8	1.83	0.42
34:1c:39:ILE:O	34:1c:43:LEU:HG	2.19	0.42
38:1g:50:ILE:HD11	38:1g:61:VAL:HG11	2.00	0.42
39:1h:14:ARG:O	39:1h:17:THR:OG1	2.35	0.42
55:1x:25:C:H2'	55:1x:26:G:O4'	2.19	0.42
1:2A:877:U:H3	1:2A:899:A:H2	1.66	0.42
1:2A:1007:C:H5''	9:2N:35:ARG:HH11	1.84	0.42
1:2A:1856:G:H2'	1:2A:1857:G:O4'	2.19	0.42
3:2D:133:LEU:HA	3:2D:136:ILE:HD12	2.00	0.42
3:2D:182:LEU:HB2	3:2D:271:ILE:HB	2.00	0.42
10:2O:49:ARG:NH2	32:2a:1423:G:OP1	2.43	0.42
32:2a:1188:A:O2'	45:2n:58:LYS:HE3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:2g:50:ILE:HD11	38:2g:61:VAL:HG11	2.01	0.42
41:2j:48:THR:O	45:2n:34:TYR:OH	2.37	0.42
45:2n:33:VAL:HA	45:2n:40:CYS:HA	2.00	0.42
47:2p:66:PRO:HG2	47:2p:71:ARG:HE	1.83	0.42
1:1A:184:A:H4'	1:1A:240:A:O2'	2.19	0.42
1:1A:1073:A:C2	1:1A:2500:A:H5'	2.54	0.42
1:1A:1382:A:H2'	1:1A:1383:G:C8	2.54	0.42
1:1A:1403:U:H2'	1:1A:1404:G:O4'	2.20	0.42
1:1A:1660:A:C2	18:1W:93:ALA:HB2	2.55	0.42
1:1A:2501:G:C6	1:1A:2502:G:N1	2.87	0.42
1:1A:2524:C:H2'	1:1A:2525:G:O4'	2.19	0.42
7:1H:137:ASP:HB3	7:1H:140:LYS:HB3	2.00	0.42
9:1N:4:TYR:CD2	16:1U:100:VAL:HG11	2.53	0.42
32:1a:1187:G:H2'	32:1a:1188:A:C8	2.54	0.42
32:1a:1352:C:H2'	32:1a:1353:G:C8	2.55	0.42
32:1a:1368:G:OP1	41:1j:62:HIS:NE2	2.48	0.42
32:1a:1516:G:H2'	32:1a:1518:MA6:OP2	2.19	0.42
37:1f:44:GLY:HA2	37:1f:59:TYR:CE1	2.54	0.42
1:2A:286:C:H2'	1:2A:287:C:C6	2.54	0.42
1:2A:297:C:OP1	20:2Y:87:LYS:NZ	2.46	0.42
1:2A:464:U:H2'	1:2A:465:G:O4'	2.19	0.42
1:2A:861:A:H2'	1:2A:862:G:O4'	2.19	0.42
1:2A:938:G:H2'	1:2A:939:G:H8	1.82	0.42
1:2A:1248:G:C2	16:2U:3:ARG:HD2	2.54	0.42
1:2A:2136:C:N4	1:2A:2155:G:C6	2.87	0.42
1:2A:2553:G:N2	54:2w:76:PPU:H2	2.34	0.42
1:2A:2830:G:O2'	1:2A:2883:A:N1	2.49	0.42
5:2F:32:LEU:O	5:2F:36:VAL:HG23	2.20	0.42
12:2Q:34:LEU:HD11	12:2Q:129:THR:HB	2.02	0.42
15:2T:2:ASN:O	15:2T:6:LEU:HD13	2.20	0.42
25:23:15:TYR:O	25:23:20:LYS:NZ	2.53	0.42
26:24:46:GLN:C	26:24:48:ARG:H	2.27	0.42
32:2a:1118:C:H1'	32:2a:1179:A:C4	2.54	0.42
32:2a:1164:G:H1	32:2a:1172:C:H42	1.65	0.42
32:2a:1458:G:H5''	51:2t:31:SER:HB2	2.02	0.42
34:2c:12:LEU:HD11	45:2n:51:GLY:HA2	2.01	0.42
51:2t:64:ASP:O	51:2t:68:LYS:HG3	2.19	0.42
55:2x:53:G:H2'	55:2x:54:5MU:H6	1.83	0.42
1:1A:64:C:H42	1:1A:88:G:H1	1.66	0.42
1:1A:345:G:O2'	1:1A:364:A:N3	2.47	0.42
1:1A:469:A:N7	5:1F:45:ARG:HG2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:776:G:O2'	1:1A:810:G:H4'	2.19	0.42
1:1A:1170:C:O2	31:19:36:GLN:NE2	2.53	0.42
1:1A:2109:G:H2'	1:1A:2110:G:H8	1.84	0.42
1:1A:2645:G:H5''	1:1A:2822:G:H5'	2.01	0.42
2:1B:17:C:H2'	2:1B:18:G:O4'	2.19	0.42
6:1G:143:GLU:O	26:14:28:LYS:NZ	2.48	0.42
8:1I:46:ALA:O	8:1I:50:ARG:HG3	2.19	0.42
32:1a:352:C:O2'	32:1a:354:G:OP1	2.27	0.42
32:1a:917:G:C6	32:1a:918:A:C6	3.07	0.42
32:1a:1260:C:O5'	32:1a:1284:C:H4'	2.20	0.42
33:1b:76:GLN:HG3	33:1b:206:ASP:HA	2.01	0.42
1:2A:571:A:O2'	17:2V:78:LYS:HE2	2.19	0.42
1:2A:601:C:H2'	1:2A:602:G:O4'	2.20	0.42
1:2A:657:U:H2'	1:2A:658:C:C6	2.55	0.42
1:2A:695:G:H2'	1:2A:696:G:H8	1.84	0.42
1:2A:1334:G:C6	1:2A:1335:U:C4	3.07	0.42
1:2A:2309:A:H61	6:2G:79:ASN:ND2	2.17	0.42
3:2D:161:THR:O	3:2D:196:VAL:HG23	2.19	0.42
21:2Z:54:HIS:HB3	21:2Z:101:PRO:HD3	2.00	0.42
22:20:23:VAL:HG13	22:20:38:VAL:HG22	2.00	0.42
32:2a:894:G:H2'	32:2a:895:G:C8	2.55	0.42
32:2a:1001:A:H2'	32:2a:1001(A):G:H8	1.84	0.42
32:2a:1316:G:N1	32:2a:1319:A:OP2	2.52	0.42
39:2h:23:SER:HA	39:2h:63:LEU:HD13	2.00	0.42
49:2r:74:ARG:HB3	49:2r:81:PHE:CE1	2.55	0.42
50:2s:41:VAL:HG22	50:2s:42:PRO:HD2	2.01	0.42
1:1A:331:G:N1	1:1A:334:A:OP2	2.52	0.42
1:1A:1174:A:N7	1:1A:2530:A:N6	2.67	0.42
1:1A:1354:A:H2'	1:1A:1355:G:O4'	2.20	0.42
1:1A:1856:A:H2'	1:1A:1857:G:C8	2.55	0.42
1:1A:2635:G:H2'	1:1A:2636:G:H8	1.83	0.42
1:1A:2885:C:P	15:1T:3:ARG:HH12	2.42	0.42
2:1B:38:C:O2	2:1B:48:A:H1'	2.19	0.42
2:1B:40:U:N3	2:1B:44:G:OP2	2.39	0.42
2:1B:42:C:H42	6:1G:91:ARG:HH12	1.67	0.42
2:1B:56:G:H5'	6:1G:27:ASN:ND2	2.34	0.42
8:1I:81:VAL:HG22	8:1I:145:VAL:O	2.19	0.42
15:1T:33:LYS:HD3	15:1T:82:LEU:HD22	2.01	0.42
19:1X:35:THR:HG23	19:1X:38:GLU:H	1.84	0.42
21:1Z:4:ARG:NH2	21:1Z:66:SER:OG	2.53	0.42
32:1a:50:A:H1'	32:1a:52:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:1a:227:G:H21	47:1p:62:VAL:HG12	1.85	0.42
32:1a:286:G:C6	32:1a:287:U:C4	3.06	0.42
32:1a:322:C:O2'	51:1t:23:ARG:HB2	2.20	0.42
32:1a:782:A:H62	32:1a:800:G:H21	1.67	0.42
32:1a:784:C:H2'	32:1a:785:G:O4'	2.20	0.42
32:1a:1030:C:C2	32:1a:1031:G:N2	2.87	0.42
32:1a:1239:A:H62	32:1a:1299:A:N6	2.17	0.42
32:1a:1442:G:O3'	32:1a:1442(A):G:H3'	2.19	0.42
34:1c:157:ILE:HD12	34:1c:164:ARG:HE	1.85	0.42
35:1d:60:GLU:HG3	35:1d:202:LEU:HD12	2.02	0.42
40:1i:26:VAL:HG13	40:1i:61:ALA:HB3	2.02	0.42
1:2A:127:A:H5''	1:2A:128:C:C6	2.55	0.42
1:2A:139:G:H2'	1:2A:140:G:N7	2.34	0.42
1:2A:143:G:H2'	1:2A:143(A):C:H6	1.85	0.42
1:2A:272(E):G:C2	1:2A:364:C:C2	3.08	0.42
1:2A:760:G:H2'	1:2A:761:A:O4'	2.19	0.42
1:2A:1336:A:H2'	1:2A:1337:G:H8	1.85	0.42
1:2A:1665:A:H4'	10:2O:67:LYS:HB2	2.01	0.42
1:2A:1779:U:OP2	1:2A:1784:A:N6	2.38	0.42
1:2A:1832:C:N4	1:2A:1833:U:C4	2.87	0.42
1:2A:1909:C:H2'	1:2A:1910:G:C8	2.54	0.42
1:2A:2135:A:H5'	1:2A:2159:G:O2'	2.20	0.42
1:2A:2193:G:H2'	1:2A:2194:G:H8	1.83	0.42
3:2D:155:LEU:HD23	3:2D:177:LEU:HD22	2.01	0.42
3:2D:274:ARG:O	3:2D:275:LYS:HD2	2.20	0.42
6:2G:73:ALA:HB3	6:2G:85:GLY:H	1.84	0.42
8:2I:123:LEU:HG	8:2I:144:VAL:O	2.19	0.42
11:2P:60:MET:HA	30:28:13:ARG:NH1	2.35	0.42
16:2U:34:LYS:HA	16:2U:34:LYS:HD3	1.75	0.42
16:2U:52:ARG:NH1	16:2U:55:ARG:HH21	2.16	0.42
18:2W:46:PHE:O	18:2W:50:VAL:HG23	2.19	0.42
32:2a:34:C:H2'	32:2a:35:G:H8	1.85	0.42
32:2a:102:G:O2'	32:2a:151:A:N3	2.49	0.42
32:2a:505:G:H2'	32:2a:506:G:H8	1.85	0.42
32:2a:936:C:H2'	32:2a:937:A:O4'	2.19	0.42
34:2c:114:PRO:HA	34:2c:185:GLY:HA3	2.02	0.42
35:2d:134:ASP:OD1	35:2d:134:ASP:N	2.48	0.42
40:2i:65:VAL:HG11	40:2i:73:GLN:HB3	2.02	0.42
50:2s:62:ILE:HA	50:2s:66:MET:SD	2.59	0.42
55:2x:8:4SU:O5'	55:2x:8:4SU:H6	2.20	0.42
55:2x:51:C:H2'	55:2x:52:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:92:C:H2'	1:1A:93:G:O4'	2.20	0.42
1:1A:312:C:H2'	1:1A:313:A:H8	1.84	0.42
1:1A:605:G:OP1	16:1U:14:HIS:ND1	2.45	0.42
1:1A:653:G:H2'	1:1A:654:G:C8	2.55	0.42
1:1A:926:G:H8	1:1A:926:G:O5'	2.03	0.42
1:1A:1557:A:H2'	1:1A:1558:G:O4'	2.20	0.42
1:1A:1571:G:H2'	1:1A:1572:G:C8	2.55	0.42
1:1A:1817:A:H1'	1:1A:1960:A:H61	1.84	0.42
1:1A:2059:G:H2'	1:1A:2060:G:C8	2.54	0.42
1:1A:2405:A:H5''	11:1P:63:PRO:HB3	2.01	0.42
10:1O:87:ILE:HA	10:1O:93:PRO:HA	2.01	0.42
32:1a:109:A:C6	32:1a:326:G:C6	3.07	0.42
32:1a:563:A:H2'	32:1a:567:G:C8	2.54	0.42
32:1a:1165:C:H42	32:1a:1171:G:H1	1.66	0.42
32:1a:1228:C:H2'	32:1a:1229:A:C8	2.55	0.42
32:1a:1402:4OC:HM43	32:1a:1500:A:N6	2.35	0.42
35:1d:26:CYS:CB	58:1d:302:SF4:S1	3.07	0.42
43:1l:84:LEU:HB2	43:1l:105:TYR:CE2	2.55	0.42
45:1n:14:PRO:HG3	45:1n:20:ALA:HB2	2.02	0.42
1:2A:143:G:H2'	1:2A:143(A):C:C6	2.55	0.42
1:2A:259:G:H2'	1:2A:260:G:C8	2.54	0.42
1:2A:307:G:N2	1:2A:309:G:H3'	2.35	0.42
1:2A:391:G:O2'	1:2A:410:G:OP1	2.34	0.42
1:2A:884:C:H3'	1:2A:885:C:C6	2.55	0.42
1:2A:1392:A:H62	1:2A:1393:A:N6	2.18	0.42
1:2A:2593:U:H2'	1:2A:2594:C:C6	2.55	0.42
1:2A:2629:A:H1'	1:2A:2630:G:H5''	2.02	0.42
3:2D:148:GLU:HB2	3:2D:151:LYS:HD2	2.01	0.42
4:2E:119:ARG:NH1	4:2E:159:HIS:O	2.48	0.42
21:2Z:7:ALA:N	21:2Z:60:GLU:O	2.48	0.42
23:21:45:ASN:O	23:21:64:ALA:N	2.49	0.42
23:21:79:GLY:C	23:21:80:LEU:HD12	2.44	0.42
32:2a:67:C:H2'	32:2a:68:G:H8	1.84	0.42
32:2a:837:G:H1	32:2a:849:C:H42	1.66	0.42
32:2a:1008:C:H3'	32:2a:1009:G:H8	1.85	0.42
32:2a:1201:A:H4'	32:2a:1202:G:O5'	2.20	0.42
37:2f:44:GLY:HA2	37:2f:59:TYR:CE1	2.55	0.42
38:2g:26:PHE:O	38:2g:30:ILE:HD12	2.20	0.42
50:2s:69:HIS:HB3	50:2s:73:GLU:CD	2.45	0.42
1:1A:20:C:H42	1:1A:545:G:H1	1.67	0.42
1:1A:779:C:H2'	1:1A:780:G:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:1098:C:N3	1:1A:1153:G:N2	2.55	0.42
1:1A:1400:A:C8	1:1A:1401:G:C8	3.07	0.42
1:1A:1604:C:H5''	1:1A:1605:A:OP2	2.20	0.42
1:1A:2160:C:C2	1:1A:2175:G:N2	2.87	0.42
1:1A:2565:G:H1	54:1w:75:C:H42	1.68	0.42
2:1B:83:G:H1	2:1B:94:C:H42	1.67	0.42
2:1B:105:A:H4'	21:1Z:89:PHE:CE1	2.54	0.42
4:1E:132:HIS:O	4:1E:134:ILE:HG23	2.20	0.42
19:1X:11:PRO:HD3	24:12:37:PHE:CD1	2.55	0.42
23:11:15:ALA:O	23:11:40:ARG:HG2	2.20	0.42
23:11:45:ASN:O	23:11:64:ALA:N	2.53	0.42
23:11:50:ARG:HD2	23:11:57:GLU:OE2	2.20	0.42
32:1a:9:G:H2'	32:1a:10:A:C8	2.55	0.42
32:1a:359:U:H2'	32:1a:360:A:C8	2.55	0.42
32:1a:1036:G:H5'	32:1a:1037:C:OP2	2.20	0.42
32:1a:1070:U:H2'	32:1a:1071:C:H6	1.85	0.42
32:1a:1305:G:H22	32:1a:1331:G:H1'	1.83	0.42
33:1b:212:GLN:OE1	33:1b:216:SER:HB3	2.20	0.42
36:1e:12:LEU:HB3	36:1e:31:LEU:CB	2.50	0.42
37:1f:36:ARG:NH2	37:1f:66:GLU:OE1	2.53	0.42
38:1g:16:LEU:HD22	40:1i:41:VAL:O	2.20	0.42
51:1t:36:LEU:HA	51:1t:39:LYS:HB3	2.01	0.42
51:1t:65:LYS:HA	51:1t:68:LYS:HD3	2.01	0.42
1:2A:374:A:H3'	1:2A:375:C:H6	1.84	0.42
1:2A:608:A:OP1	5:2F:100:THR:OG1	2.24	0.42
1:2A:1187:G:H5'	17:2V:81:TYR:CE1	2.54	0.42
1:2A:2203:U:H2'	1:2A:2205:C:H6	1.83	0.42
1:2A:2284:C:OP1	28:26:3:SER:OG	2.38	0.42
6:2G:17:PRO:HA	6:2G:20:ILE:HB	2.02	0.42
10:2O:87:ILE:HA	10:2O:93:PRO:HA	2.00	0.42
28:26:34:LEU:HD23	28:26:34:LEU:HA	1.88	0.42
29:27:17:GLY:O	29:27:21:ARG:HG2	2.20	0.42
32:2a:175:C:H4'	51:2t:25:ARG:NE	2.34	0.42
32:2a:673:G:O3'	37:2f:87:ARG:NH2	2.53	0.42
32:2a:768:A:H5'	32:2a:1524:C:H1'	2.02	0.42
32:2a:948:C:OP1	44:2m:109:THR:OG1	2.38	0.42
32:2a:1184:G:H2'	32:2a:1185:G:H8	1.84	0.42
32:2a:1512:U:H2'	32:2a:1513:A:C8	2.54	0.42
38:2g:47:CYS:O	38:2g:50:ILE:HG22	2.20	0.42
1:1A:280:C:H2'	1:1A:281:G:H8	1.84	0.42
1:1A:1355:G:H5''	29:17:9:ARG:HG3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:1906:A:H2'	1:1A:1907:A:C8	2.53	0.42
1:1A:2052:A:H4'	1:1A:2053:A:H8	1.84	0.42
1:1A:2177:G:H5''	1:1A:2178:G:C8	2.55	0.42
1:1A:2361:G:OP2	30:18:42:ARG:NH2	2.53	0.42
11:1P:101:VAL:HG21	11:1P:108:LYS:HG2	2.02	0.42
20:1Y:9:LYS:HA	20:1Y:10:GLY:HA2	1.58	0.42
32:1a:62:U:O3'	32:1a:384:G:N2	2.52	0.42
32:1a:105:G:C5	32:1a:106:C:C4	3.07	0.42
32:1a:162:A:C5	32:1a:163:C:H1'	2.55	0.42
32:1a:521:G:OP2	43:1l:54:LYS:NZ	2.42	0.42
32:1a:582:U:H2'	32:1a:583:A:H8	1.85	0.42
32:1a:1226:C:H4'	50:1s:80:TYR:CZ	2.55	0.42
32:1a:1360:A:H2'	32:1a:1361:G:O4'	2.20	0.42
35:1d:79:PHE:CE1	35:1d:204:ILE:HD13	2.54	0.42
39:1h:121:ASP:OD1	39:1h:121:ASP:N	2.53	0.42
1:2A:534:U:H5'	16:2U:42:ALA:HB1	2.02	0.42
1:2A:602:G:O2'	1:2A:604:G:O2'	2.30	0.42
1:2A:1155:A:OP1	16:2U:55:ARG:HD2	2.19	0.42
1:2A:1751:C:H2'	1:2A:1752:C:H6	1.84	0.42
8:2I:79:ILE:O	8:2I:144:VAL:HA	2.19	0.42
10:2O:73:ASP:HB2	15:2T:82:LEU:HD12	2.02	0.42
32:2a:730:G:N2	32:2a:765:G:H5''	2.34	0.42
32:2a:1177:G:H2'	32:2a:1178:G:O4'	2.20	0.42
33:2b:28:PHE:CD2	33:2b:190:THR:HA	2.55	0.42
42:2k:79:SER:HA	42:2k:104:GLN:HB3	2.01	0.42
46:2o:4:THR:OG1	46:2o:7:GLU:OE1	2.35	0.42
48:2q:57:VAL:HG12	48:2q:76:LEU:HA	2.01	0.42
1:1A:657:A:N3	1:1A:2415:C:O2'	2.42	0.42
1:1A:710:G:C6	1:1A:711:C:C4	3.08	0.42
1:1A:1294:G:C2	16:1U:3:ARG:HD2	2.55	0.42
1:1A:1637:G:H2'	1:1A:1638:C:C6	2.55	0.42
1:1A:1857:G:H4'	3:1D:242:ARG:HH21	1.85	0.42
1:1A:2692:C:H1'	4:1E:187:ALA:HB1	2.01	0.42
4:1E:72:VAL:HG12	4:1E:73:GLU:O	2.20	0.42
9:1N:34:LEU:HD21	9:1N:120:LEU:HB2	2.02	0.42
11:1P:25:SER:C	11:1P:27:HIS:N	2.77	0.42
11:1P:114:ILE:HG13	11:1P:130:PHE:CE1	2.55	0.42
13:1R:44:LEU:HD23	13:1R:44:LEU:HA	1.83	0.42
32:1a:757:U:H2'	32:1a:758:G:O4'	2.19	0.42
32:1a:1226:C:OP2	44:1m:103:THR:HG21	2.20	0.42
32:1a:1343:G:H1'	40:1i:121:ARG:NH1	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:1l:88:GLY:HA3	43:1l:99:HIS:HD2	1.85	0.42
45:1n:21:TYR:HE1	45:1n:23:ARG:HH11	1.68	0.42
1:2A:93:G:H2'	1:2A:94:C:C6	2.54	0.42
1:2A:733:G:O5'	1:2A:733:G:H8	2.03	0.42
1:2A:886:C:H2'	1:2A:887:A:C1'	2.50	0.42
1:2A:1011:G:OP1	16:2U:75:ASN:HB2	2.20	0.42
1:2A:2591:C:H2'	1:2A:2592:G:C8	2.54	0.42
1:2A:2612:C:OP2	27:25:2:ALA:N	2.53	0.42
1:2A:2690:C:N4	1:2A:2713:A:H1'	2.35	0.42
5:2F:187:VAL:HG12	11:2P:3:LEU:HD12	2.02	0.42
11:2P:39:LYS:HG3	11:2P:45:LEU:HD11	2.01	0.42
13:2R:36:THR:HG22	13:2R:37:THR:H	1.85	0.42
19:2X:2:LYS:NZ	19:2X:38:GLU:OE2	2.51	0.42
27:25:42:PRO:HB2	27:25:43:HIS:ND1	2.35	0.42
32:2a:372:C:N4	32:2a:389:A:H62	2.16	0.42
32:2a:530:G:O2'	32:2a:531:U:OP1	2.36	0.42
32:2a:716:A:N3	42:2k:118:GLY:HA2	2.35	0.42
32:2a:1020:U:H2'	32:2a:1021:G:H8	1.84	0.42
32:2a:1220:G:H21	50:2s:54:GLY:HA2	1.85	0.42
38:2g:69:VAL:HA	38:2g:138:LYS:HD3	2.02	0.42
38:2g:93:PRO:HA	38:2g:96:GLN:HB2	2.02	0.42
48:2q:22:LEU:HD11	48:2q:39:SER:HB2	2.00	0.42
51:2t:10:LEU:HD23	51:2t:12:ALA:HB2	2.01	0.42
52:2u:5:ASP:O	52:2u:11:GLY:HA3	2.20	0.42
1:1A:348:A:H2'	1:1A:349:G:O4'	2.20	0.41
1:1A:1466:U:HO2'	1:1A:1467:G:P	2.43	0.41
1:1A:1861:C:H42	1:1A:1997:G:H1	1.68	0.41
1:1A:2418:U:H6	1:1A:2418:U:H2'	1.66	0.41
6:1G:173:LEU:HB3	6:1G:178:PHE:CD2	2.54	0.41
11:1P:38:GLN:NE2	11:1P:45:LEU:H	2.17	0.41
12:1Q:134:ARG:NE	12:1Q:139:GLU:OE2	2.49	0.41
13:1R:57:ARG:NE	13:1R:59:ASP:OD1	2.52	0.41
15:1T:28:VAL:HG23	15:1T:88:ILE:HD13	2.02	0.41
32:1a:38:G:N2	32:1a:397:A:O5'	2.52	0.41
32:1a:448:A:H2'	32:1a:449:C:C6	2.55	0.41
32:1a:634:C:H2'	32:1a:635:G:C8	2.54	0.41
32:1a:861:G:H8	32:1a:861:G:O5'	2.03	0.41
32:1a:921:U:H2'	32:1a:922:G:O4'	2.20	0.41
32:1a:1021:G:N3	32:1a:1022:G:H1'	2.35	0.41
32:1a:1238:A:N7	32:1a:1303:C:H1'	2.35	0.41
33:1b:230:VAL:HG22	33:1b:232:PRO:HD2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:1f:33:TYR:CE2	37:1f:78:GLU:HG3	2.55	0.41
40:1i:46:ALA:HA	40:1i:78:LYS:HB2	2.02	0.41
48:1q:61:GLU:HA	48:1q:71:PHE:CD1	2.55	0.41
1:2A:272(C):G:H2'	1:2A:272(D):G:C8	2.54	0.41
1:2A:1853:A:N7	1:2A:1889:A:N6	2.68	0.41
5:2F:122:LYS:HB3	5:2F:191:ARG:HG2	2.01	0.41
9:2N:67:LEU:H	9:2N:67:LEU:HD12	1.83	0.41
13:2R:98:LEU:O	13:2R:113:LEU:HG	2.20	0.41
25:23:50:VAL:O	25:23:54:VAL:HG12	2.20	0.41
32:2a:137:C:H1'	47:2p:62:VAL:O	2.20	0.41
32:2a:792:A:O2'	32:2a:794:A:N7	2.44	0.41
32:2a:1323:G:H2'	32:2a:1324:A:C8	2.55	0.41
33:2b:125:PRO:O	33:2b:127:ILE:N	2.52	0.41
36:2e:41:VAL:O	36:2e:67:VAL:HG12	2.20	0.41
45:2n:24:CYS:HB3	45:2n:28:GLY:H	1.85	0.41
1:1A:30:G:H2'	1:1A:31:C:C6	2.55	0.41
1:1A:77:A:H2'	1:1A:78:G:C8	2.55	0.41
1:1A:2431:U:H2'	1:1A:2432:C:C6	2.55	0.41
1:1A:2520:G:H2'	1:1A:2521:G:C8	2.55	0.41
1:1A:2839:C:H2'	1:1A:2840:G:C8	2.56	0.41
1:1A:2875:U:OP2	1:1A:2876:U:O2'	2.36	0.41
5:1F:116:ASP:OD2	5:1F:117:ARG:NH1	2.53	0.41
5:1F:197:ASP:OD1	5:1F:198:ALA:N	2.53	0.41
6:1G:124:SER:HB2	6:1G:131:TYR:CE1	2.55	0.41
16:1U:17:ILE:HG23	16:1U:39:LEU:HD12	2.02	0.41
25:13:8:LEU:HD13	25:13:23:LEU:HD21	2.02	0.41
32:1a:189(F):U:O2	48:1q:63:ARG:NH2	2.53	0.41
32:1a:416:G:H2'	32:1a:417:C:O4'	2.20	0.41
32:1a:1039:C:H2'	32:1a:1040:U:C6	2.55	0.41
32:1a:1362:C:C2'	32:1a:1363:C:H5''	2.51	0.41
32:1a:1463:C:H2'	32:1a:1464:G:C8	2.54	0.41
36:1e:82:VAL:HG21	36:1e:138:ALA:HA	2.01	0.41
49:1r:22:VAL:HB	49:1r:56:THR:HA	2.03	0.41
1:2A:494:G:OP1	18:2W:8:ARG:HD3	2.19	0.41
1:2A:523:C:H4'	1:2A:540:C:O2	2.20	0.41
1:2A:700:G:H1	1:2A:732:C:H42	1.67	0.41
1:2A:1526:G:C6	1:2A:1527:G:C2	3.08	0.41
1:2A:2041:U:H2'	1:2A:2042:A:H8	1.86	0.41
1:2A:2261:C:OP1	22:20:17:GLN:HB2	2.20	0.41
3:2D:43:ARG:HG2	3:2D:49:ILE:HG12	2.01	0.41
4:2E:1:MET:HB3	4:2E:83:ASP:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:2E:174:ASP:OD1	4:2E:175:VAL:N	2.51	0.41
7:2H:3:ARG:HG2	7:2H:6:ARG:NE	2.35	0.41
13:2R:103:ARG:HD3	13:2R:108:GLY:O	2.20	0.41
20:2Y:87:LYS:HD2	20:2Y:95:LYS:HD2	2.01	0.41
21:2Z:45:ASP:O	21:2Z:49:ARG:HG3	2.20	0.41
32:2a:667:G:H4'	46:2o:51:HIS:ND1	2.34	0.41
32:2a:881:G:P	43:2l:12:ARG:HH22	2.43	0.41
33:2b:218:ALA:O	33:2b:222:ILE:HG13	2.20	0.41
1:1A:184:A:N6	1:1A:187:C:O5'	2.53	0.41
1:1A:449:A:C6	1:1A:450:A:C6	3.08	0.41
1:1A:535:C:H2'	1:1A:536:U:O4'	2.19	0.41
1:1A:550:U:H5'	1:1A:579:G:OP1	2.20	0.41
1:1A:621:G:H1	1:1A:706:C:H42	1.69	0.41
1:1A:2034:G:OP1	18:1W:11:ARG:NH2	2.47	0.41
1:1A:2187:G:N2	1:1A:2194:U:H5	2.18	0.41
1:1A:2450:U:O2'	1:1A:2452:C:OP1	2.29	0.41
1:1A:2455:C:H2'	1:1A:2456:G:H8	1.84	0.41
1:1A:2742:G:H4'	4:1E:186:GLY:HA2	2.02	0.41
2:1B:75:G:O2'	21:1Z:85:HIS:NE2	2.49	0.41
25:13:7:LYS:HB2	25:13:34:GLU:HG3	2.02	0.41
32:1a:299:G:C6	32:1a:300:A:C6	3.08	0.41
32:1a:472:A:HO2'	47:1p:82:GLN:H	1.66	0.41
32:1a:657:G:H4'	46:1o:28:GLN:HG2	2.02	0.41
32:1a:736:C:H2'	32:1a:737:A:H8	1.85	0.41
32:1a:1006:C:N4	32:1a:1023:G:N1	2.68	0.41
32:1a:1029:C:H41	32:1a:1030(A):G:N2	2.17	0.41
32:1a:1057:G:H2'	32:1a:1058:G:O4'	2.19	0.41
34:1c:6:HIS:HD2	34:1c:7:PRO:HD2	1.84	0.41
46:1o:3:ILE:HD11	46:1o:38:ARG:HG3	2.03	0.41
1:2A:187:G:C6	1:2A:188:G:C5	3.08	0.41
1:2A:304:G:H2'	1:2A:305:U:C6	2.55	0.41
1:2A:324:A:H2'	1:2A:325:G:O4'	2.19	0.41
1:2A:862:G:H2'	1:2A:863:A:O4'	2.20	0.41
1:2A:1501:C:H2'	1:2A:1502:C:C6	2.56	0.41
1:2A:1844:C:H5'	3:2D:256:GLY:O	2.20	0.41
1:2A:1999:C:H4'	1:2A:2723:C:O2	2.19	0.41
8:2I:5:LEU:HD11	8:2I:19:VAL:HG22	2.02	0.41
8:2I:94:ALA:HA	8:2I:97:ILE:HB	2.02	0.41
14:2S:50:SER:O	14:2S:76:LYS:NZ	2.34	0.41
21:2Z:171:ILE:HG13	21:2Z:172:ALA:N	2.35	0.41
26:24:46:GLN:NE2	26:24:48:ARG:HD3	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:26:6:ARG:NH1	28:26:26:ASN:HB2	2.35	0.41
32:2a:260:G:H2'	32:2a:261:U:C6	2.56	0.41
32:2a:509:A:H2'	32:2a:510:A:C8	2.55	0.41
32:2a:872:A:C8	32:2a:874:G:C8	3.09	0.41
32:2a:1134:G:C6	32:2a:1135:U:C2	3.09	0.41
33:2b:178:ARG:NH2	39:2h:71:GLY:O	2.49	0.41
36:2e:105:VAL:HB	36:2e:106:PRO:HD3	2.01	0.41
38:2g:51:GLN:O	38:2g:55:GLY:HA2	2.21	0.41
44:2m:14:ARG:HG3	44:2m:44:ARG:NH1	2.36	0.41
48:2q:45:HIS:CD2	48:2q:47:PRO:HD3	2.55	0.41
51:2t:50:GLU:HG3	51:2t:100:ILE:HD13	2.02	0.41
1:1A:91:G:H2'	1:1A:92:C:H6	1.85	0.41
1:1A:811:A:O2'	1:1A:812:G:H5'	2.20	0.41
1:1A:1093:G:H2'	1:1A:1156:G:N1	2.31	0.41
1:1A:1828:C:O3'	3:1D:259:THR:HG22	2.20	0.41
1:1A:1868:C:O2'	1:1A:1949:A:N3	2.44	0.41
1:1A:2143:G:H1	1:1A:2199:C:H42	1.68	0.41
1:1A:2219:U:H1'	1:1A:2220:A:C8	2.56	0.41
3:1D:83:GLU:OE1	3:1D:104:TYR:OH	2.21	0.41
9:1N:36:GLY:HA2	9:1N:38:HIS:CE1	2.55	0.41
17:1V:2:PHE:CZ	17:1V:41:GLY:HA3	2.55	0.41
32:1a:108:G:N1	51:1t:15:ARG:HG2	2.36	0.41
32:1a:115:G:H4'	32:1a:116:A:O5'	2.20	0.41
32:1a:539:A:H2'	32:1a:540:G:H8	1.84	0.41
32:1a:599:C:H4'	39:1h:130:GLY:C	2.45	0.41
32:1a:1512:U:H2'	32:1a:1513:A:H8	1.84	0.41
34:1c:121:ALA:O	34:1c:124:ILE:HG13	2.21	0.41
40:1i:43:ALA:C	40:1i:45:ALA:H	2.28	0.41
47:1p:23:ASP:OD1	47:1p:24:ALA:N	2.53	0.41
55:1x:30:G:H1	55:1x:40:C:N4	2.17	0.41
1:2A:597:U:H2'	1:2A:598:G:C8	2.56	0.41
1:2A:2032:G:OP2	1:2A:2454:G:O2'	2.34	0.41
1:2A:2051:A:C6	1:2A:2614:A:C5	3.09	0.41
1:2A:2287:A:C8	1:2A:2289:G:C8	3.08	0.41
3:2D:73:VAL:HG13	3:2D:120:GLY:HA2	2.02	0.41
5:2F:195:ASP:OD1	5:2F:196:LEU:N	2.53	0.41
15:2T:35:LYS:HA	15:2T:40:THR:HA	2.02	0.41
32:2a:18:C:P	36:2e:127:ASN:HD21	2.44	0.41
32:2a:664:G:N2	32:2a:741:G:H1	2.16	0.41
32:2a:665:A:C8	32:2a:725:G:C2	3.08	0.41
32:2a:985:C:H2'	32:2a:986:A:H8	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:2a:1176:A:H2'	32:2a:1177:G:C8	2.55	0.41
32:2a:1348:U:H5''	40:2i:119:ALA:HB3	2.03	0.41
32:2a:1439:C:H2'	32:2a:1440:C:H6	1.84	0.41
33:2b:185:ILE:HA	33:2b:199:TYR:O	2.20	0.41
34:2c:88:ARG:HA	34:2c:91:LEU:HB3	2.03	0.41
34:2c:148:GLY:HA3	34:2c:203:PHE:HB3	2.02	0.41
37:2f:100:ASN:HB2	49:2r:27:GLY:O	2.20	0.41
42:2k:38:ASN:HA	42:2k:39:PRO:HD3	1.93	0.41
44:2m:108:ARG:HD3	44:2m:108:ARG:HA	1.84	0.41
51:2t:99:LEU:HB3	51:2t:100:ILE:H	1.69	0.41
1:1A:106:U:H2'	1:1A:107:G:C8	2.56	0.41
1:1A:543:G:H4'	18:1W:18:ARG:NE	2.36	0.41
1:1A:655:G:N2	1:1A:657:A:H3'	2.36	0.41
1:1A:854:U:OP2	11:1P:41:ARG:NH2	2.54	0.41
1:1A:1082:G:H2'	1:1A:1083:G:C8	2.56	0.41
1:1A:1357:G:H2'	29:17:47:ARG:HH22	1.86	0.41
1:1A:1842:G:H2'	1:1A:1843:A:O4'	2.19	0.41
1:1A:2213:G:H2'	1:1A:2214:G:O4'	2.21	0.41
3:1D:26:LYS:NZ	3:1D:83:GLU:OE2	2.47	0.41
4:1E:13:ARG:HG2	15:1T:58:ASN:HD21	1.84	0.41
5:1F:152:GLU:OE1	5:1F:191:ARG:HD2	2.21	0.41
9:1N:48:MET:HE2	9:1N:48:MET:HB3	1.86	0.41
13:1R:72:ASP:O	13:1R:76:VAL:HG23	2.20	0.41
17:1V:37:VAL:HG11	17:1V:40:LEU:HD21	2.02	0.41
32:1a:579:G:H1	32:1a:762:C:N4	2.18	0.41
32:1a:580:U:H2'	32:1a:581:G:O4'	2.20	0.41
32:1a:1097:C:H1'	32:1a:1170:A:H1'	2.02	0.41
32:1a:1518:MA6:H93	32:1a:1519:MA6:H92	2.02	0.41
1:2A:478:A:C6	1:2A:480:A:C6	3.08	0.41
1:2A:858:U:O2	1:2A:2268:A:H2'	2.20	0.41
1:2A:934:G:H2'	1:2A:935:C:C6	2.55	0.41
1:2A:1142(A):A:C5	1:2A:1144:G:N7	2.89	0.41
1:2A:1442:G:H2'	1:2A:1443:G:C8	2.56	0.41
1:2A:2330:G:H2'	1:2A:2331:G:O4'	2.20	0.41
3:2D:70:TRP:HB3	3:2D:190:TYR:CE2	2.56	0.41
4:2E:18:ASP:HB3	15:2T:82:LEU:HD21	2.01	0.41
5:2F:65:TRP:CZ2	5:2F:75:HIS:HD2	2.38	0.41
13:2R:96:ARG:HD2	13:2R:115:GLU:OE2	2.20	0.41
13:2R:104:ARG:HG3	13:2R:111:LEU:HD11	2.03	0.41
32:2a:253:U:H2'	32:2a:254:G:H8	1.84	0.41
32:2a:510:A:O2'	32:2a:542:G:O2'	2.29	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:2a:643:C:H5'	39:2h:31:PHE:CD1	2.55	0.41
32:2a:977:A:H2'	32:2a:978:A:H5''	2.02	0.41
32:2a:1003:G:H2'	32:2a:1004:A:O4'	2.20	0.41
32:2a:1324:A:C4'	32:2a:1362:C:H4'	2.51	0.41
32:2a:1524:C:OP1	42:2k:120:ARG:NH2	2.51	0.41
33:2b:125:PRO:O	33:2b:127:ILE:HG22	2.21	0.41
36:2e:39:GLY:O	36:2e:69:VAL:HG13	2.20	0.41
39:2h:86:ILE:HG13	39:2h:133:LEU:HD22	2.02	0.41
40:2i:28:VAL:HA	40:2i:63:ILE:O	2.20	0.41
42:2k:34:ASP:OD1	42:2k:38:ASN:N	2.49	0.41
55:2x:19:G:H1	55:2x:56:C:N4	2.15	0.41
1:1A:465:G:H2'	1:1A:466:G:C8	2.55	0.41
1:1A:954:C:O2'	12:1Q:71:ASP:OD2	2.23	0.41
1:1A:1065:U:H2'	1:1A:1066:A:C8	2.56	0.41
1:1A:1214:G:H1	1:1A:1226:C:H42	1.68	0.41
1:1A:1584:G:H2'	1:1A:1585:G:H8	1.85	0.41
1:1A:1770:A:H2'	1:1A:1771:G:C8	2.56	0.41
1:1A:1898:A:H2'	1:1A:1899:A:C8	2.56	0.41
1:1A:1938:A:H2'	1:1A:1939:PSU:H6	1.86	0.41
1:1A:2204:G:C2	1:1A:2205:C:C2	3.09	0.41
1:1A:2861:A:O3'	13:1R:64:ARG:NH2	2.54	0.41
6:1G:112:PRO:HG3	26:14:43:TYR:CE2	2.55	0.41
7:1H:29:PRO:HD2	7:1H:79:VAL:O	2.21	0.41
11:1P:52:GLU:HG2	30:18:57:ARG:HH12	1.86	0.41
18:1W:84:ARG:O	18:1W:96:ILE:N	2.46	0.41
28:16:10:LEU:O	28:16:51:GLU:HA	2.21	0.41
32:1a:130:A:OP2	48:1q:63:ARG:HD3	2.20	0.41
32:1a:160:A:N6	32:1a:347:G:H1'	2.36	0.41
32:1a:1402:4OC:H2'	32:1a:1403:C:O4'	2.20	0.41
38:1g:149:ARG:HD3	42:1k:59:TYR:OH	2.21	0.41
40:1i:63:ILE:HG22	40:1i:65:VAL:HG23	2.03	0.41
40:1i:112:LYS:NZ	40:1i:116:LYS:O	2.54	0.41
48:1q:17:LYS:HD2	48:1q:47:PRO:HA	2.02	0.41
48:1q:56:VAL:N	48:1q:78:GLU:O	2.47	0.41
1:2A:323:G:O2'	1:2A:1205:U:N3	2.53	0.41
1:2A:469:G:O6	29:27:39:ARG:NH1	2.54	0.41
1:2A:596:G:C6	1:2A:597:U:C4	3.08	0.41
1:2A:2553:G:H1	54:2w:75:C:H42	1.68	0.41
1:2A:2637:U:H5''	4:2E:82:ARG:NH1	2.29	0.41
9:2N:13:TRP:CE2	9:2N:133:GLN:HG2	2.55	0.41
9:2N:58:ASP:CG	9:2N:124:ALA:HB1	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:2Q:39:PRO:HD3	12:2Q:99:PRO:HG3	2.03	0.41
13:2R:81:ASP:N	13:2R:81:ASP:OD1	2.52	0.41
23:21:40:ARG:NH1	23:21:42:GLN:HG2	2.36	0.41
29:27:26:GLY:O	29:27:30:VAL:HG23	2.20	0.41
32:2a:1015:A:H1'	32:2a:1218:C:O2'	2.21	0.41
36:2e:47:LYS:HE2	36:2e:47:LYS:HB2	1.90	0.41
37:2f:76:ALA:HA	37:2f:79:LEU:HG	2.03	0.41
44:2m:30:ALA:O	44:2m:34:LEU:HG	2.21	0.41
1:1A:501:U:C4	1:1A:507:G:O6	2.74	0.41
1:1A:1030:A:H5''	1:1A:1031:C:H5	1.86	0.41
1:1A:1787:G:H4'	1:1A:1789:G:O4'	2.20	0.41
1:1A:2051:G:H2'	1:1A:2053:A:OP1	2.21	0.41
1:1A:2193:A:O2'	1:1A:2194:U:H5''	2.21	0.41
1:1A:2769:U:H4'	1:1A:2770:A:OP1	2.21	0.41
2:1B:86:G:H1	2:1B:91:C:N4	2.18	0.41
3:1D:231:HIS:CD2	3:1D:249:PRO:HG3	2.56	0.41
14:1S:62:LYS:HB3	14:1S:97:ARG:NE	2.36	0.41
32:1a:408:A:C6	32:1a:409:G:C5	3.09	0.41
32:1a:591:U:H2'	32:1a:592:G:O4'	2.20	0.41
32:1a:793:U:O4	32:1a:1517:G:H8	2.04	0.41
32:1a:977:A:N6	32:1a:1224:G:O5'	2.54	0.41
32:1a:1095:U:OP1	32:1a:1108:G:N1	2.38	0.41
32:1a:1181:G:H1'	32:1a:1182:G:C4	2.55	0.41
46:1o:18:PHE:CZ	46:1o:21:ASP:HB2	2.55	0.41
51:1t:13:LEU:H	51:1t:13:LEU:HG	1.53	0.41
1:2A:38:A:H2'	1:2A:39:C:C6	2.56	0.41
1:2A:271(S):G:C6	1:2A:271(T):C:C4	3.09	0.41
1:2A:528:A:O2'	1:2A:529:A:H5'	2.21	0.41
1:2A:1022:G:C6	1:2A:1140:C:C4	3.09	0.41
1:2A:1702:G:H2'	1:2A:1703:G:O4'	2.20	0.41
1:2A:1998:G:H4'	1:2A:2724:C:O2'	2.21	0.41
1:2A:2148:G:H2'	1:2A:2149:G:C8	2.56	0.41
1:2A:2364:C:H2'	1:2A:2365:G:O4'	2.20	0.41
1:2A:2485:G:H5''	12:2Q:46:GLN:NE2	2.35	0.41
1:2A:2638:G:H21	1:2A:2778:A:H62	1.68	0.41
1:2A:2748:A:H1'	7:2H:67:LEU:HB2	2.02	0.41
1:2A:2802:G:H2'	1:2A:2803:C:O4'	2.20	0.41
3:2D:108:PRO:HB3	3:2D:143:HIS:HE1	1.85	0.41
3:2D:123:ALA:O	3:2D:131:LEU:HD21	2.21	0.41
16:2U:49:HIS:HA	16:2U:52:ARG:HB3	2.03	0.41
21:2Z:50:GLN:H	21:2Z:50:GLN:CD	2.28	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:2a:113:G:H2'	32:2a:114:U:C6	2.56	0.41
32:2a:509:A:H4'	32:2a:510:A:OP1	2.21	0.41
32:2a:1054:C:H4'	32:2a:1055:A:O5'	2.21	0.41
32:2a:1198:G:H2'	32:2a:1199:U:C6	2.55	0.41
39:2h:20:TYR:CE2	39:2h:75:ARG:HD2	2.54	0.41
39:2h:86:ILE:HG21	39:2h:133:LEU:HD22	2.03	0.41
42:2k:16:SER:HA	42:2k:79:SER:O	2.21	0.41
47:2p:19:ILE:N	47:2p:37:GLY:O	2.53	0.41
1:1A:106:U:H2'	1:1A:107:G:H8	1.85	0.41
1:1A:133:G:H2'	1:1A:134:G:H8	1.86	0.41
1:1A:238:C:O2	30:18:12:LYS:NZ	2.37	0.41
1:1A:263:C:H42	1:1A:281:G:H1	1.69	0.41
1:1A:343:C:N4	1:1A:344:A:N1	2.68	0.41
1:1A:864:C:O2'	1:1A:886:U:OP1	2.24	0.41
1:1A:1452:U:H2'	1:1A:1453:C:H6	1.83	0.41
1:1A:1824:C:H2'	1:1A:1825:U:C6	2.56	0.41
1:1A:2288:G:C2	1:1A:2289:G:C8	3.08	0.41
1:1A:2649:U:H5''	4:1E:82:ARG:NH1	2.34	0.41
1:1A:2724:U:OP1	1:1A:2727:G:H4'	2.21	0.41
2:1B:81:G:C6	2:1B:82:G:C5	3.09	0.41
3:1D:12:SER:HB3	3:1D:208:LYS:HB3	2.02	0.41
5:1F:160:ASN:OD1	5:1F:162:LEU:N	2.54	0.41
15:1T:28:VAL:O	15:1T:46:GLU:HA	2.21	0.41
22:10:51:VAL:HG22	22:10:81:VAL:HG23	2.02	0.41
32:1a:164:U:H2'	32:1a:165:C:C6	2.55	0.41
32:1a:974:A:OP1	32:1a:974:A:H8	2.04	0.41
32:1a:1030(B):C:O2	32:1a:1030(B):C:H2'	2.21	0.41
32:1a:1134:G:C2	32:1a:1141:C:C2	3.09	0.41
33:1b:185:ILE:HA	33:1b:199:TYR:O	2.20	0.41
41:1j:16:LEU:HD12	41:1j:94:VAL:HG22	2.02	0.41
43:1l:102:ARG:HG2	43:1l:109:GLY:HA2	2.02	0.41
49:1r:52:PRO:HB2	49:1r:54:ARG:HG2	2.03	0.41
1:2A:239:U:H2'	1:2A:240:G:O4'	2.21	0.41
1:2A:251:A:C5	1:2A:252:G:H1'	2.56	0.41
1:2A:2495:G:H5''	12:2Q:82:ARG:HG2	2.02	0.41
1:2A:2715:C:H2'	1:2A:2716:U:C6	2.55	0.41
1:2A:2849:U:H4'	1:2A:2868:A:C2	2.55	0.41
6:2G:11:TYR:HA	6:2G:15:VAL:HB	2.03	0.41
6:2G:25:TYR:CZ	6:2G:32:PRO:HD3	2.55	0.41
7:2H:64:LEU:O	7:2H:68:THR:OG1	2.27	0.41
10:2O:93:PRO:HG3	10:2O:114:ILE:HG12	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:2P:126:VAL:HG12	11:2P:148:LEU:HD23	2.02	0.41
26:24:47:GLN:O	26:24:49:PHE:N	2.51	0.41
32:2a:8:A:H5'	36:2e:101:ILE:HG22	2.03	0.41
32:2a:100:C:H2'	32:2a:101:A:C8	2.56	0.41
32:2a:741:G:H5'	46:2o:39:LEU:HD12	2.01	0.41
32:2a:1153:C:H2'	32:2a:1154:G:H8	1.85	0.41
32:2a:1271:G:C6	32:2a:1272:G:O6	2.74	0.41
32:2a:1348:U:OP1	40:2i:110:GLU:N	2.49	0.41
44:2m:89:GLY:O	44:2m:93:ARG:HG3	2.21	0.41
1:1A:289:G:H2'	1:1A:290:G:H8	1.85	0.41
1:1A:324:A:P	20:1Y:86:ARG:HH21	2.44	0.41
1:1A:509:A:O2'	20:1Y:49:VAL:O	2.28	0.41
1:1A:817:G:OP1	29:17:8:ASN:ND2	2.50	0.41
1:1A:1093:G:H1'	1:1A:1157:A:N6	2.35	0.41
1:1A:1762:G:H2'	1:1A:1763:G:H8	1.86	0.41
1:1A:1813:C:O2	1:1A:2620:G:O2'	2.34	0.41
1:1A:2149:G:N2	1:1A:2195:A:H1'	2.36	0.41
1:1A:2294:G:N3	1:1A:2437:A:N6	2.68	0.41
1:1A:2548:G:C6	1:1A:2549:U:C4	3.09	0.41
1:1A:2667:G:N2	1:1A:2677:A:OP2	2.54	0.41
1:1A:2784:C:H5''	4:1E:202:LYS:HD3	2.03	0.41
2:1B:75:G:N1	2:1B:103:G:N2	2.68	0.41
3:1D:155:LEU:HD23	3:1D:177:LEU:HD22	2.02	0.41
12:1Q:132:VAL:HB	21:1Z:81:ARG:HH22	1.85	0.41
19:1X:12:VAL:HG21	19:1X:27:THR:HG22	2.03	0.41
24:12:10:LEU:HB3	24:12:14:ARG:NH1	2.35	0.41
26:14:50:VAL:HG11	44:1m:65:LYS:N	2.36	0.41
32:1a:56:U:H2'	32:1a:57:G:C8	2.55	0.41
32:1a:57:G:C5	32:1a:58:C:C4	3.09	0.41
32:1a:122:G:C2	32:1a:123:C:C2	3.09	0.41
32:1a:161:A:H2'	32:1a:162:A:O4'	2.21	0.41
32:1a:193:C:H2'	32:1a:194:C:H6	1.85	0.41
32:1a:509:A:H4'	32:1a:510:A:OP1	2.21	0.41
32:1a:643:C:H5'	39:1h:31:PHE:CD1	2.56	0.41
32:1a:737:A:O2'	37:1f:72:VAL:HG21	2.21	0.41
32:1a:1126:U:O4	41:1j:7:LYS:HD3	2.21	0.41
32:1a:1347:G:HO2'	32:1a:1373:G:H1	1.69	0.41
33:1b:22:LYS:HG2	33:1b:40:HIS:HE1	1.85	0.41
33:1b:80:ILE:HD13	33:1b:211:ILE:HG22	2.03	0.41
33:1b:102:LEU:HB2	33:1b:176:GLU:OE1	2.21	0.41
36:1e:71:LEU:HD13	36:1e:71:LEU:HA	1.90	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:1i:13:ALA:HB1	40:1i:73:GLN:HG2	2.02	0.41
43:1l:51:ALA:C	43:1l:52:LEU:HD12	2.45	0.41
44:1m:40:ASN:HB3	44:1m:43:THR:HG23	2.02	0.41
49:1r:33:ASP:OD2	49:1r:36:ASN:HB2	2.21	0.41
51:1t:31:SER:O	51:1t:35:THR:OG1	2.38	0.41
1:2A:244:A:O2'	11:2P:74:GLU:N	2.33	0.41
1:2A:271(G):C:H2'	1:2A:271(H):G:H8	1.86	0.41
1:2A:489:G:H2'	1:2A:491:G:O4'	2.21	0.41
1:2A:531:C:OP1	1:2A:561:G:N1	2.53	0.41
1:2A:695:G:C2	1:2A:768:G:C5	3.09	0.41
1:2A:882:G:H1	1:2A:894:C:H42	1.68	0.41
1:2A:964:C:O2'	1:2A:2273:A:N3	2.39	0.41
1:2A:1153:C:H2'	1:2A:1154:G:O4'	2.20	0.41
1:2A:1154:G:P	16:2U:58:ARG:HE	2.42	0.41
1:2A:1357:U:H2'	1:2A:1358:G:O4'	2.21	0.41
1:2A:1464:C:H2'	1:2A:1465:G:H8	1.86	0.41
1:2A:1530:C:H1'	1:2A:1531:C:OP1	2.21	0.41
1:2A:1706:U:O2	1:2A:1757:U:H5'	2.21	0.41
1:2A:1827:C:OP2	3:2D:222:ARG:HD2	2.21	0.41
1:2A:1910:G:C6	1:2A:1921:G:C6	3.09	0.41
1:2A:2126:A:N6	1:2A:2163:C:O4'	2.54	0.41
1:2A:2316:C:O2'	6:2G:128:ARG:NH2	2.53	0.41
1:2A:2681:C:O2	1:2A:2724:C:N4	2.54	0.41
1:2A:2720:U:H2'	1:2A:2721:A:O4'	2.21	0.41
1:2A:2788:C:OP1	4:2E:61:ARG:NH2	2.54	0.41
1:2A:2875:C:OP1	15:2T:3:ARG:NH1	2.43	0.41
5:2F:101:LEU:HB3	5:2F:106:ARG:HH11	1.86	0.41
10:2O:111:PHE:O	10:2O:115:VAL:HG23	2.21	0.41
11:2P:44:GLY:O	11:2P:45:LEU:HB2	2.20	0.41
12:2Q:10:ARG:NH2	55:2x:64:G:H4'	2.36	0.41
16:2U:93:LYS:HB3	16:2U:93:LYS:HE2	1.90	0.41
21:2Z:11:GLU:HA	21:2Z:36:LYS:HE3	2.02	0.41
32:2a:49:U:O2'	32:2a:50:A:H2'	2.21	0.41
32:2a:254:G:N2	48:2q:16:GLN:OE1	2.49	0.41
32:2a:303:A:O2'	32:2a:555:C:O2'	2.31	0.41
32:2a:780:A:O2'	32:2a:1523:G:H4'	2.21	0.41
32:2a:918:A:H2'	32:2a:919:A:O4'	2.21	0.41
32:2a:1126:U:H3	41:2j:40:LEU:HD21	1.86	0.41
32:2a:1165:C:H2'	32:2a:1166:G:O4'	2.20	0.41
32:2a:1201:A:H1'	32:2a:1202:G:OP2	2.21	0.41
32:2a:1237:C:H5''	32:2a:1238:A:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:2a:1312:G:H1	32:2a:1325:C:N4	2.13	0.41
32:2a:1438:G:H2'	32:2a:1439:C:C6	2.55	0.41
33:2b:80:ILE:HG12	33:2b:215:LEU:HD23	2.02	0.41
33:2b:178:ARG:HH22	39:2h:74:PRO:HB3	1.86	0.41
41:2j:54:PHE:O	41:2j:55:LYS:HG2	2.20	0.41
42:2k:22:HIS:HB3	42:2k:29:ILE:HB	2.03	0.41
46:2o:2:PRO:HB2	46:2o:3:ILE:H	1.57	0.41
51:2t:50:GLU:HB2	51:2t:99:LEU:HD22	2.03	0.41
51:2t:57:ARG:HH12	51:2t:100:ILE:HD12	1.85	0.41
1:1A:29:U:H2'	1:1A:30:G:H8	1.86	0.41
1:1A:231:G:C5	30:18:5:LYS:HE2	2.55	0.41
1:1A:267:C:H2'	1:1A:268:G:H8	1.85	0.41
1:1A:510:C:H2'	1:1A:511:C:H6	1.86	0.41
1:1A:870:G:H2'	1:1A:871:A:H8	1.86	0.41
1:1A:1316:C:H5''	1:1A:1317:G:C5'	2.51	0.41
1:1A:2302:G:C2	1:1A:2355:C:O2	2.74	0.41
1:1A:2857:U:OP1	15:1T:98:LYS:NZ	2.49	0.41
5:1F:109:GLY:HA2	5:1F:112:MET:HE3	2.03	0.41
10:1O:47:ILE:HB	10:1O:48:PRO:HD2	2.03	0.41
13:1R:26:LYS:HE2	13:1R:70:LEU:O	2.21	0.41
19:1X:5:TYR:CE2	24:12:30:ARG:HB2	2.56	0.41
32:1a:79:G:H1'	32:1a:91:C:O2	2.20	0.41
32:1a:393:A:H5'	32:1a:483:C:O2'	2.21	0.41
34:1c:150:LYS:HG3	34:1c:169:ALA:HB2	2.02	0.41
35:1d:98:GLU:OE1	35:1d:103:ASN:ND2	2.44	0.41
38:1g:23:VAL:O	38:1g:27:ILE:HG13	2.21	0.41
40:1i:11:LYS:C	40:1i:13:ALA:H	2.30	0.41
41:1j:7:LYS:HG2	41:1j:71:LEU:HD13	2.02	0.41
48:1q:78:GLU:OE2	48:1q:81:ARG:HD3	2.21	0.41
1:2A:310:A:H1'	1:2A:311:A:H2'	2.03	0.41
1:2A:662:G:H2'	1:2A:663:G:H8	1.85	0.41
1:2A:729:G:C5	3:2D:208:LYS:HB2	2.56	0.41
1:2A:1260:G:H2'	1:2A:1261:C:H6	1.85	0.41
1:2A:1675:C:H2'	1:2A:1676:A:O4'	2.21	0.41
1:2A:2248:C:H3'	1:2A:2249:U:H6	1.86	0.41
1:2A:2627:G:O2'	1:2A:2781:A:N1	2.47	0.41
3:2D:77:ALA:HB2	3:2D:97:TYR:CD1	2.56	0.41
8:2I:92:VAL:HG13	8:2I:120:ILE:HB	2.03	0.41
14:2S:11:LYS:HG3	14:2S:91:PRO:HD3	2.03	0.41
25:23:43:ILE:O	25:23:47:VAL:HG23	2.21	0.41
26:24:13:ARG:HA	26:24:22:ILE:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:2a:1265:G:C4	32:2a:1271:G:N2	2.89	0.41
32:2a:1433:A:C6	32:2a:1468:A:C4	3.08	0.41
32:2a:1441:G:H1'	32:2a:1461:G:N2	2.36	0.41
34:2c:112:SER:O	34:2c:116:VAL:HG23	2.21	0.41
40:2i:81:ILE:O	40:2i:85:LEU:HG	2.21	0.41
41:2j:46:ARG:HA	41:2j:64:GLU:HA	2.03	0.41
1:1A:10:G:H2'	1:1A:11:G:C8	2.54	0.40
1:1A:239:G:C6	1:1A:240:A:C6	3.09	0.40
1:1A:1213:U:H2'	1:1A:1214:G:H8	1.85	0.40
1:1A:1310:G:H5'	27:15:11:THR:OG1	2.21	0.40
1:1A:2589:A:H1'	27:15:3:LYS:HB2	2.02	0.40
7:1H:86:GLU:OE2	7:1H:130:ARG:NH1	2.54	0.40
13:1R:36:THR:HG22	13:1R:37:THR:H	1.86	0.40
14:1S:77:ALA:HB3	14:1S:110:LEU:HD11	2.03	0.40
21:1Z:45:ASP:O	21:1Z:49:ARG:HG3	2.21	0.40
32:1a:166:G:H2'	32:1a:167:G:C8	2.57	0.40
32:1a:1486:G:C6	32:1a:1487:G:C6	3.08	0.40
33:1b:54:THR:O	33:1b:58:ILE:HG13	2.21	0.40
39:1h:4:ASP:OD2	39:1h:85:ARG:NH1	2.53	0.40
54:1w:75:C:C5	54:1w:76:PPU:H103	2.56	0.40
1:2A:828:U:H2'	1:2A:829:A:C8	2.55	0.40
1:2A:1215:G:O6	1:2A:1235:G:N2	2.55	0.40
1:2A:1590:U:H2'	1:2A:1591:G:H8	1.85	0.40
1:2A:1753:G:N1	1:2A:1756:G:C2	2.89	0.40
1:2A:1805:U:O2	3:2D:50:THR:HB	2.21	0.40
1:2A:2014:A:H4'	18:2W:92:ARG:HH22	1.86	0.40
1:2A:2584:U:O2	1:2A:2585:U:N3	2.54	0.40
1:2A:2596:U:H2'	1:2A:2597:G:O4'	2.20	0.40
1:2A:2603:G:C6	1:2A:2604:U:C4	3.08	0.40
2:2B:51:G:C6	2:2B:52:A:C6	3.09	0.40
6:2G:16:ARG:NH2	6:2G:28:VAL:O	2.38	0.40
12:2Q:34:LEU:HD13	12:2Q:131:ILE:HG12	2.04	0.40
14:2S:5:THR:OG1	14:2S:8:GLU:HG2	2.22	0.40
16:2U:69:CYS:SG	16:2U:106:PHE:HZ	2.44	0.40
32:2a:298:A:H3'	32:2a:299:G:C8	2.56	0.40
32:2a:1059:C:H2'	32:2a:1060:C:H6	1.86	0.40
32:2a:1071:C:H2'	32:2a:1072:G:C8	2.50	0.40
39:2h:29:SER:HB3	39:2h:32:LYS:HD2	2.02	0.40
1:1A:656:A:OP1	11:1P:65:ARG:NE	2.48	0.40
1:1A:1200:G:H8	1:1A:1200:G:O5'	2.03	0.40
1:1A:1203:G:O2'	25:13:31:LEU:HD12	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:1219:A:H1'	1:1A:1220:U:H5''	2.03	0.40
1:1A:2232:G:H2'	1:1A:2233:G:H8	1.85	0.40
1:1A:2294:G:C2	1:1A:2437:A:C6	3.09	0.40
4:1E:18:ASP:HB3	15:1T:82:LEU:HD21	2.03	0.40
5:1F:135:LYS:HB2	5:1F:138:GLU:HG3	2.03	0.40
11:1P:138:LEU:HD23	11:1P:145:PRO:HB3	2.02	0.40
15:1T:3:ARG:O	15:1T:7:ILE:HG12	2.20	0.40
19:1X:88:LYS:HE2	19:1X:93:GLU:HG3	2.04	0.40
32:1a:370:C:H2'	32:1a:371:G:C8	2.56	0.40
32:1a:370:C:H2'	32:1a:371:G:H8	1.87	0.40
32:1a:679:C:H42	32:1a:711:G:H1	1.68	0.40
32:1a:692:U:OP2	42:1k:26:ASN:ND2	2.51	0.40
32:1a:1126:U:O2	32:1a:1280:A:H2'	2.21	0.40
32:1a:1319:A:N6	32:1a:1361:G:H21	2.19	0.40
32:1a:1391:U:H2'	32:1a:1392:G:H8	1.81	0.40
39:1h:11:THR:OG1	39:1h:14:ARG:NH2	2.52	0.40
40:1i:26:VAL:HG22	40:1i:61:ALA:HB3	2.03	0.40
40:1i:55:ALA:HA	40:1i:58:HIS:CD2	2.49	0.40
51:1t:64:ASP:O	51:1t:68:LYS:HG3	2.22	0.40
1:2A:287:C:H2'	1:2A:288:C:C6	2.56	0.40
1:2A:886:C:H2'	1:2A:887:A:O4'	2.21	0.40
1:2A:1407:C:H2'	1:2A:1408:C:C6	2.56	0.40
1:2A:1913:A:N1	32:2a:1493:A:C8	2.89	0.40
1:2A:2320:A:N3	1:2A:2320:A:H2'	2.36	0.40
1:2A:2340:G:H2'	1:2A:2341:G:C8	2.56	0.40
3:2D:71:ASP:HB3	3:2D:103:ARG:HH12	1.86	0.40
6:2G:36:LYS:HE3	6:2G:160:VAL:HG21	2.03	0.40
32:2a:57:G:C5	32:2a:58:C:C4	3.10	0.40
32:2a:124:G:C6	32:2a:125:U:C4	3.09	0.40
32:2a:968:A:C8	32:2a:1062:U:H4'	2.56	0.40
32:2a:1268:A:O2'	52:2u:19:GLY:HA2	2.21	0.40
35:2d:60:GLU:HG3	35:2d:202:LEU:CD1	2.50	0.40
38:2g:38:LEU:O	38:2g:42:ILE:HG13	2.21	0.40
1:1A:471:C:OP1	16:1U:2:PRO:HA	2.21	0.40
1:1A:796:C:H5'	1:1A:1317:G:H1'	2.04	0.40
1:1A:899:G:H2'	1:1A:900:G:H8	1.85	0.40
1:1A:1101:G:HO2'	1:1A:1130:A:H61	1.55	0.40
1:1A:1393:G:H1	1:1A:1645:C:H42	1.68	0.40
1:1A:1495:G:H5''	1:1A:1589:A:OP2	2.21	0.40
1:1A:2105:G:C6	1:1A:2106:C:C4	3.10	0.40
1:1A:2241:C:H2'	1:1A:2242:G:H8	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:2672:A:H2'	1:1A:2673:G:O4'	2.21	0.40
2:1B:68:C:H2'	2:1B:69:G:H8	1.87	0.40
3:1D:17:THR:HG1	3:1D:205:VAL:N	2.16	0.40
32:1a:16:A:N1	32:1a:919:A:H2	2.19	0.40
32:1a:187:C:O2'	51:1t:89:ARG:HD3	2.20	0.40
32:1a:509:A:N3	32:1a:543:C:O2'	2.51	0.40
32:1a:774:G:H2'	32:1a:775:G:O4'	2.21	0.40
32:1a:1312:G:H5'	50:1s:5:LEU:HD23	2.03	0.40
32:1a:1346:A:H5''	40:1i:120:ARG:NH1	2.37	0.40
32:1a:1374:A:O2'	38:1g:28:ASN:HB3	2.21	0.40
32:1a:1476:G:H2'	32:1a:1477:C:C6	2.55	0.40
35:1d:31:CYS:HB3	35:1d:34:GLU:HG2	2.04	0.40
37:1f:69:GLU:O	37:1f:72:VAL:HG22	2.22	0.40
38:1g:90:GLU:H	38:1g:90:GLU:CD	2.29	0.40
38:1g:138:LYS:HE3	38:1g:138:LYS:HB3	1.97	0.40
1:2A:234:C:H42	1:2A:430:G:H22	1.69	0.40
1:2A:271(G):C:H2'	1:2A:271(H):G:C8	2.56	0.40
1:2A:669:G:N1	1:2A:801:G:O6	2.54	0.40
1:2A:1496:A:OP2	1:2A:1496:A:H8	2.04	0.40
1:2A:1711:C:H2'	1:2A:1712:C:H6	1.85	0.40
1:2A:2419:U:H2'	1:2A:2420:C:C6	2.56	0.40
2:2B:20:C:H2'	2:2B:21:G:H8	1.85	0.40
4:2E:9:VAL:HG12	15:2T:3:ARG:HG2	2.02	0.40
13:2R:36:THR:HG22	13:2R:37:THR:N	2.36	0.40
18:2W:19:LEU:HB3	27:25:25:LEU:HD11	2.04	0.40
32:2a:189(D):C:H2'	32:2a:189(E):U:O4'	2.22	0.40
32:2a:304:U:H2'	32:2a:305:G:C8	2.56	0.40
32:2a:420:U:H1'	32:2a:424:G:N2	2.36	0.40
32:2a:603:U:H2'	32:2a:604:G:C8	2.56	0.40
32:2a:1157:A:H5'	32:2a:1158:C:C6	2.56	0.40
32:2a:1273:G:H3'	32:2a:1274:G:C8	2.53	0.40
44:2m:4:ILE:HD13	44:2m:22:ILE:HD11	2.04	0.40
55:2x:67:C:H2'	55:2x:68:C:H6	1.86	0.40
1:1A:144:C:H2'	1:1A:145:G:H8	1.87	0.40
1:1A:963:A:H5''	1:1A:2280:A:H61	1.87	0.40
1:1A:1229:G:H5'	25:13:29:ARG:NH1	2.36	0.40
1:1A:1314:A:H2'	1:1A:1315:A:O4'	2.22	0.40
1:1A:1369:U:OP1	18:1W:98:LYS:NZ	2.43	0.40
1:1A:1660:A:C6	18:1W:87:PRO:HB3	2.57	0.40
1:1A:1704:C:H2'	1:1A:1705:C:C6	2.57	0.40
1:1A:2140:U:O4	1:1A:2171:G:H1'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:2227:G:H5''	1:1A:2228:G:C6	2.56	0.40
1:1A:2703:C:O3'	1:1A:2881:C:H4'	2.22	0.40
1:1A:2855:G:H5''	15:1T:54:ARG:O	2.22	0.40
1:1A:2859:U:H4'	1:1A:2878:A:C2	2.56	0.40
8:1I:12:LEU:HD23	8:1I:12:LEU:HA	1.86	0.40
32:1a:397:A:N7	32:1a:548:G:C8	2.90	0.40
32:1a:685:G:O2'	32:1a:686:U:H5'	2.21	0.40
32:1a:1223:C:P	50:1s:78:ARG:HH21	2.45	0.40
49:1r:51:LEU:HA	49:1r:52:PRO:HD3	1.96	0.40
1:2A:140:G:N2	1:2A:142:A:H62	2.18	0.40
1:2A:358:U:H2'	1:2A:359:A:C8	2.56	0.40
1:2A:910:A:C5	12:2Q:13:GLN:HG3	2.56	0.40
1:2A:1458:C:H4'	1:2A:1459:G:O4'	2.21	0.40
1:2A:1652:A:OP1	13:2R:8:ARG:NH1	2.53	0.40
1:2A:2023:G:H4'	1:2A:2617:C:O3'	2.21	0.40
1:2A:2728:U:H5'	10:2O:70:LYS:NZ	2.37	0.40
1:2A:2820:A:O2'	1:2A:2821:A:OP1	2.29	0.40
3:2D:10:THR:OG1	3:2D:13:ARG:HB2	2.21	0.40
3:2D:16:MET:HG3	3:2D:206:LEU:O	2.21	0.40
21:2Z:150:LEU:HB3	21:2Z:171:ILE:HD11	2.03	0.40
32:2a:126:G:OP1	32:2a:605:U:O2'	2.35	0.40
32:2a:130:A:O2'	32:2a:131:C:O5'	2.32	0.40
32:2a:536:C:N4	32:2a:537:G:O6	2.54	0.40
32:2a:583:A:H2'	32:2a:584:G:O4'	2.22	0.40
32:2a:718:G:H5'	42:2k:117:ASN:ND2	2.36	0.40
34:2c:37:GLN:HE22	45:2n:52:GLN:HB3	1.86	0.40
36:2e:140:ARG:O	36:2e:143:ARG:NH1	2.49	0.40
43:2l:27:LEU:HD23	43:2l:30:ALA:O	2.21	0.40
1:1A:114:C:H2'	1:1A:115:G:O4'	2.21	0.40
1:1A:253:C:O2'	1:1A:254:A:H2'	2.22	0.40
1:1A:426:G:H2'	1:1A:427:G:O4'	2.22	0.40
1:1A:775:G:C2	1:1A:777:C:C2	3.09	0.40
1:1A:1255:A:N3	1:1A:1255:A:H2'	2.37	0.40
1:1A:1584:G:H2'	1:1A:1585:G:C8	2.57	0.40
1:1A:2137:G:O2'	1:1A:2189:U:O4	2.38	0.40
1:1A:2820:A:N6	1:1A:2900:G:O2'	2.54	0.40
2:1B:59:A:H2'	2:1B:60:C:O4'	2.22	0.40
10:1O:103:ALA:HB1	10:1O:105:GLU:OE1	2.22	0.40
32:1a:290:C:H42	32:1a:311:C:H42	1.69	0.40
32:1a:433:C:H2'	32:1a:434:U:C6	2.57	0.40
32:1a:1092:A:H5''	38:1g:4:ARG:NH1	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:1a:1216:G:H5''	45:1n:5:ALA:HB2	2.04	0.40
35:1d:98:GLU:HA	35:1d:103:ASN:ND2	2.34	0.40
35:1d:155:LEU:HA	35:1d:155:LEU:HD23	1.90	0.40
39:1h:29:SER:HB3	39:1h:32:LYS:HD2	2.03	0.40
1:2A:515:A:H1'	1:2A:581:C:H1'	2.03	0.40
1:2A:1410:G:H2'	1:2A:1411:C:C6	2.57	0.40
1:2A:1446:C:H42	1:2A:1465:G:H1	1.69	0.40
1:2A:1935:G:H1'	1:2A:1964:G:N2	2.37	0.40
1:2A:2733:A:N1	4:2E:203:LYS:HA	2.36	0.40
1:2A:2744:G:N2	7:2H:143:GLN:OE1	2.55	0.40
6:2G:9:ARG:HG2	6:2G:13:GLU:CD	2.45	0.40
9:2N:4:TYR:CD2	16:2U:100:VAL:HG11	2.57	0.40
9:2N:62:VAL:CG2	9:2N:66:LYS:HD2	2.51	0.40
10:2O:4:PRO:HA	10:2O:21:CYS:O	2.21	0.40
10:2O:53:LYS:HG2	10:2O:56:ASP:OD2	2.21	0.40
22:20:50:ASN:HB3	22:20:63:VAL:HG22	2.03	0.40
32:2a:323:U:H4'	51:2t:22:ARG:HB2	2.03	0.40
32:2a:840:C:H4'	32:2a:841:U:OP1	2.20	0.40
35:2d:172:PRO:O	35:2d:186:LEU:HD12	2.21	0.40
43:2l:24:VAL:HB	43:2l:27:LEU:HD13	2.02	0.40
51:2t:60:GLU:HA	51:2t:63:ILE:HD12	2.03	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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	
3	1D	273/276 (99%)	262 (96%)	11 (4%)	0	100	100
3	2D	273/276 (99%)	262 (96%)	11 (4%)	0	100	100
4	1E	202/206 (98%)	191 (95%)	10 (5%)	1 (0%)	24	56
4	2E	202/206 (98%)	192 (95%)	9 (4%)	1 (0%)	24	56

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	1F	201/210 (96%)	196 (98%)	3 (2%)	2 (1%)	12	43
5	2F	201/210 (96%)	194 (96%)	5 (2%)	2 (1%)	12	43
6	1G	179/182 (98%)	168 (94%)	9 (5%)	2 (1%)	11	42
6	2G	179/182 (98%)	170 (95%)	7 (4%)	2 (1%)	11	42
7	1H	172/180 (96%)	162 (94%)	8 (5%)	2 (1%)	10	40
7	2H	172/180 (96%)	165 (96%)	4 (2%)	3 (2%)	7	34
8	1I	144/148 (97%)	135 (94%)	9 (6%)	0	100	100
8	2I	144/148 (97%)	132 (92%)	12 (8%)	0	100	100
9	1N	138/140 (99%)	129 (94%)	8 (6%)	1 (1%)	18	50
9	2N	138/140 (99%)	129 (94%)	8 (6%)	1 (1%)	18	50
10	1O	120/122 (98%)	111 (92%)	9 (8%)	0	100	100
10	2O	120/122 (98%)	114 (95%)	6 (5%)	0	100	100
11	1P	147/150 (98%)	136 (92%)	8 (5%)	3 (2%)	6	32
11	2P	147/150 (98%)	136 (92%)	10 (7%)	1 (1%)	18	50
12	1Q	139/141 (99%)	133 (96%)	6 (4%)	0	100	100
12	2Q	139/141 (99%)	131 (94%)	8 (6%)	0	100	100
13	1R	116/118 (98%)	110 (95%)	6 (5%)	0	100	100
13	2R	116/118 (98%)	110 (95%)	6 (5%)	0	100	100
14	1S	108/112 (96%)	104 (96%)	3 (3%)	1 (1%)	14	45
14	2S	108/112 (96%)	104 (96%)	4 (4%)	0	100	100
15	1T	129/146 (88%)	123 (95%)	5 (4%)	1 (1%)	16	48
15	2T	129/146 (88%)	126 (98%)	3 (2%)	0	100	100
16	1U	114/118 (97%)	113 (99%)	1 (1%)	0	100	100
16	2U	114/118 (97%)	114 (100%)	0	0	100	100
17	1V	99/101 (98%)	92 (93%)	6 (6%)	1 (1%)	12	43
17	2V	99/101 (98%)	93 (94%)	6 (6%)	0	100	100
18	1W	110/113 (97%)	105 (96%)	5 (4%)	0	100	100
18	2W	110/113 (97%)	106 (96%)	4 (4%)	0	100	100
19	1X	93/96 (97%)	88 (95%)	5 (5%)	0	100	100
19	2X	93/96 (97%)	90 (97%)	3 (3%)	0	100	100
20	1Y	105/110 (96%)	102 (97%)	3 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
20	2Y	105/110 (96%)	100 (95%)	5 (5%)	0	100	100
21	1Z	148/206 (72%)	130 (88%)	18 (12%)	0	100	100
21	2Z	156/206 (76%)	142 (91%)	14 (9%)	0	100	100
22	10	81/85 (95%)	76 (94%)	4 (5%)	1 (1%)	10	40
22	20	81/85 (95%)	76 (94%)	4 (5%)	1 (1%)	10	40
23	11	95/98 (97%)	94 (99%)	0	1 (1%)	11	42
23	21	95/98 (97%)	93 (98%)	1 (1%)	1 (1%)	11	42
24	12	68/72 (94%)	68 (100%)	0	0	100	100
24	22	68/72 (94%)	68 (100%)	0	0	100	100
25	13	57/60 (95%)	57 (100%)	0	0	100	100
25	23	57/60 (95%)	57 (100%)	0	0	100	100
26	14	67/71 (94%)	51 (76%)	9 (13%)	7 (10%)	0	6
26	24	67/71 (94%)	53 (79%)	9 (13%)	5 (8%)	1	11
27	15	57/60 (95%)	54 (95%)	3 (5%)	0	100	100
27	25	57/60 (95%)	55 (96%)	2 (4%)	0	100	100
28	16	51/54 (94%)	51 (100%)	0	0	100	100
28	26	51/54 (94%)	50 (98%)	1 (2%)	0	100	100
29	17	46/49 (94%)	46 (100%)	0	0	100	100
29	27	46/49 (94%)	45 (98%)	1 (2%)	0	100	100
30	18	62/65 (95%)	60 (97%)	2 (3%)	0	100	100
30	28	62/65 (95%)	61 (98%)	1 (2%)	0	100	100
31	19	35/37 (95%)	34 (97%)	1 (3%)	0	100	100
31	29	35/37 (95%)	34 (97%)	1 (3%)	0	100	100
33	1b	229/256 (90%)	201 (88%)	24 (10%)	4 (2%)	7	34
33	2b	229/256 (90%)	203 (89%)	23 (10%)	3 (1%)	9	38
34	1c	204/239 (85%)	188 (92%)	15 (7%)	1 (0%)	24	56
34	2c	204/239 (85%)	190 (93%)	14 (7%)	0	100	100
35	1d	206/209 (99%)	198 (96%)	7 (3%)	1 (0%)	24	56
35	2d	206/209 (99%)	197 (96%)	8 (4%)	1 (0%)	24	56
36	1e	146/162 (90%)	132 (90%)	14 (10%)	0	100	100
36	2e	146/162 (90%)	138 (94%)	8 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
37	1f	98/101 (97%)	97 (99%)	1 (1%)	0	100	100
37	2f	98/101 (97%)	94 (96%)	4 (4%)	0	100	100
38	1g	153/156 (98%)	139 (91%)	12 (8%)	2 (1%)	9	38
38	2g	153/156 (98%)	139 (91%)	12 (8%)	2 (1%)	9	38
39	1h	135/138 (98%)	127 (94%)	8 (6%)	0	100	100
39	2h	135/138 (98%)	128 (95%)	7 (5%)	0	100	100
40	1i	125/128 (98%)	113 (90%)	11 (9%)	1 (1%)	16	48
40	2i	125/128 (98%)	114 (91%)	10 (8%)	1 (1%)	16	48
41	1j	95/105 (90%)	88 (93%)	4 (4%)	3 (3%)	3	25
41	2j	94/105 (90%)	86 (92%)	7 (7%)	1 (1%)	11	42
42	1k	112/129 (87%)	106 (95%)	5 (4%)	1 (1%)	14	45
42	2k	112/129 (87%)	104 (93%)	4 (4%)	4 (4%)	2	23
43	1l	119/132 (90%)	107 (90%)	12 (10%)	0	100	100
43	2l	119/132 (90%)	109 (92%)	10 (8%)	0	100	100
44	1m	121/126 (96%)	115 (95%)	6 (5%)	0	100	100
44	2m	120/126 (95%)	114 (95%)	6 (5%)	0	100	100
45	1n	58/61 (95%)	56 (97%)	2 (3%)	0	100	100
45	2n	58/61 (95%)	57 (98%)	1 (2%)	0	100	100
46	1o	86/89 (97%)	82 (95%)	4 (5%)	0	100	100
46	2o	86/89 (97%)	83 (96%)	3 (4%)	0	100	100
47	1p	80/88 (91%)	74 (92%)	4 (5%)	2 (2%)	4	29
47	2p	80/88 (91%)	72 (90%)	7 (9%)	1 (1%)	9	38
48	1q	97/105 (92%)	92 (95%)	5 (5%)	0	100	100
48	2q	97/105 (92%)	91 (94%)	6 (6%)	0	100	100
49	1r	66/88 (75%)	66 (100%)	0	0	100	100
49	2r	66/88 (75%)	66 (100%)	0	0	100	100
50	1s	81/93 (87%)	71 (88%)	10 (12%)	0	100	100
50	2s	81/93 (87%)	74 (91%)	6 (7%)	1 (1%)	10	40
51	1t	94/106 (89%)	85 (90%)	7 (7%)	2 (2%)	5	31
51	2t	94/106 (89%)	87 (93%)	5 (5%)	2 (2%)	5	31
52	1u	21/27 (78%)	20 (95%)	1 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
52	2u	21/27 (78%)	20 (95%)	1 (5%)	0	100	100
All	All	11370/12128 (94%)	10706 (94%)	591 (5%)	73 (1%)	21	52

All (73) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
7	1H	92	ILE
26	14	46	GLN
26	14	51	ASP
26	14	57	GLU
33	1b	22	LYS
35	1d	5	ILE
5	2F	89	VAL
5	2F	130	ALA
35	2d	5	ILE
5	1F	130	ALA
23	11	3	LYS
33	1b	17	PHE
47	1p	53	VAL
6	2G	49	ASP
7	2H	92	ILE
23	21	3	LYS
26	24	51	ASP
26	24	56	VAL
33	2b	126	GLU
41	2j	78	ASN
47	2p	53	VAL
5	1F	89	VAL
11	1P	38	GLN
17	1V	53	GLU
26	14	62	ARG
33	1b	20	GLU
41	1j	55	LYS
41	1j	78	ASN
6	2G	47	LYS
9	2N	23	LEU
11	2P	29	LYS
26	24	61	ARG
33	2b	17	PHE
33	2b	20	GLU
38	2g	4	ARG
42	2k	49	GLY

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Mol	Chain	Res	Type
4	1E	52	LEU
6	1G	49	ASP
9	1N	23	LEU
11	1P	29	LYS
14	1S	94	TYR
15	1T	128	GLU
22	10	4	LYS
34	1c	27	LYS
38	1g	54	THR
47	1p	28	ARG
51	1t	47	GLY
4	2E	52	LEU
38	2g	114	ARG
50	2s	81	ARG
51	2t	47	GLY
6	1G	47	LYS
11	1P	43	GLY
26	14	55	ARG
26	14	56	VAL
38	1g	4	ARG
40	1i	119	ALA
22	20	4	LYS
26	24	62	ARG
42	2k	117	ASN
51	2t	100	ILE
7	2H	12	PRO
26	24	45	GLY
40	2i	56	LEU
7	1H	126	PRO
26	14	45	GLY
42	2k	105	VAL
41	1j	77	PRO
42	1k	105	VAL
51	1t	100	ILE
42	2k	118	GLY
7	2H	126	PRO
33	1b	125	PRO

5.3.2 Protein sidechains ⓘ

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	
3	1D	215/218 (99%)	214 (100%)	1 (0%)	81	80
3	2D	215/218 (99%)	215 (100%)	0	100	100
4	1E	164/166 (99%)	161 (98%)	3 (2%)	51	67
4	2E	164/166 (99%)	160 (98%)	4 (2%)	43	61
5	1F	160/166 (96%)	160 (100%)	0	100	100
5	2F	159/166 (96%)	159 (100%)	0	100	100
6	1G	143/156 (92%)	141 (99%)	2 (1%)	59	70
6	2G	143/156 (92%)	141 (99%)	2 (1%)	59	70
7	1H	144/148 (97%)	143 (99%)	1 (1%)	76	77
7	2H	144/148 (97%)	143 (99%)	1 (1%)	76	77
8	1I	113/124 (91%)	112 (99%)	1 (1%)	70	75
8	2I	105/124 (85%)	105 (100%)	0	100	100
9	1N	118/119 (99%)	117 (99%)	1 (1%)	73	76
9	2N	118/119 (99%)	117 (99%)	1 (1%)	73	76
10	1O	100/100 (100%)	100 (100%)	0	100	100
10	2O	100/100 (100%)	99 (99%)	1 (1%)	68	74
11	1P	115/116 (99%)	112 (97%)	3 (3%)	40	60
11	2P	115/116 (99%)	113 (98%)	2 (2%)	53	67
12	1Q	111/111 (100%)	110 (99%)	1 (1%)	70	75
12	2Q	111/111 (100%)	111 (100%)	0	100	100
13	1R	101/101 (100%)	101 (100%)	0	100	100
13	2R	101/101 (100%)	101 (100%)	0	100	100
14	1S	86/88 (98%)	86 (100%)	0	100	100
14	2S	85/88 (97%)	85 (100%)	0	100	100
15	1T	115/127 (91%)	115 (100%)	0	100	100
15	2T	113/127 (89%)	113 (100%)	0	100	100
16	1U	93/94 (99%)	93 (100%)	0	100	100
16	2U	93/94 (99%)	93 (100%)	0	100	100
17	1V	80/82 (98%)	77 (96%)	3 (4%)	29	53

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
17	2V	80/82 (98%)	77 (96%)	3 (4%)	29	53
18	1W	90/92 (98%)	89 (99%)	1 (1%)	65	73
18	2W	90/92 (98%)	89 (99%)	1 (1%)	65	73
19	1X	77/78 (99%)	77 (100%)	0	100	100
19	2X	77/78 (99%)	77 (100%)	0	100	100
20	1Y	85/91 (93%)	84 (99%)	1 (1%)	63	72
20	2Y	85/91 (93%)	85 (100%)	0	100	100
21	1Z	135/179 (75%)	133 (98%)	2 (2%)	57	68
21	2Z	137/179 (76%)	135 (98%)	2 (2%)	57	68
22	10	65/67 (97%)	65 (100%)	0	100	100
22	20	65/67 (97%)	64 (98%)	1 (2%)	57	68
23	11	80/83 (96%)	78 (98%)	2 (2%)	42	61
23	21	80/83 (96%)	80 (100%)	0	100	100
24	12	65/67 (97%)	65 (100%)	0	100	100
24	22	65/67 (97%)	65 (100%)	0	100	100
25	13	51/52 (98%)	51 (100%)	0	100	100
25	23	50/52 (96%)	50 (100%)	0	100	100
26	14	59/63 (94%)	57 (97%)	2 (3%)	32	55
26	24	53/63 (84%)	51 (96%)	2 (4%)	29	53
27	15	50/52 (96%)	49 (98%)	1 (2%)	48	64
27	25	50/52 (96%)	50 (100%)	0	100	100
28	16	51/52 (98%)	50 (98%)	1 (2%)	48	64
28	26	50/52 (96%)	50 (100%)	0	100	100
29	17	41/42 (98%)	41 (100%)	0	100	100
29	27	41/42 (98%)	41 (100%)	0	100	100
30	18	54/55 (98%)	54 (100%)	0	100	100
30	28	54/55 (98%)	54 (100%)	0	100	100
31	19	34/34 (100%)	34 (100%)	0	100	100
31	29	34/34 (100%)	34 (100%)	0	100	100
33	1b	192/220 (87%)	192 (100%)	0	100	100
33	2b	187/220 (85%)	185 (99%)	2 (1%)	65	73

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
34	1c	142/188 (76%)	140 (99%)	2 (1%)	59	70
34	2c	140/188 (74%)	139 (99%)	1 (1%)	76	77
35	1d	169/181 (93%)	167 (99%)	2 (1%)	63	72
35	2d	173/181 (96%)	171 (99%)	2 (1%)	63	72
36	1e	113/123 (92%)	112 (99%)	1 (1%)	70	75
36	2e	114/123 (93%)	114 (100%)	0	100	100
37	1f	84/90 (93%)	84 (100%)	0	100	100
37	2f	85/90 (94%)	85 (100%)	0	100	100
38	1g	119/127 (94%)	119 (100%)	0	100	100
38	2g	120/127 (94%)	119 (99%)	1 (1%)	73	76
39	1h	114/119 (96%)	113 (99%)	1 (1%)	70	75
39	2h	114/119 (96%)	112 (98%)	2 (2%)	51	67
40	1i	90/99 (91%)	90 (100%)	0	100	100
40	2i	89/99 (90%)	89 (100%)	0	100	100
41	1j	66/92 (72%)	64 (97%)	2 (3%)	36	57
41	2j	69/92 (75%)	67 (97%)	2 (3%)	37	57
42	1k	82/99 (83%)	82 (100%)	0	100	100
42	2k	83/99 (84%)	83 (100%)	0	100	100
43	1l	96/108 (89%)	96 (100%)	0	100	100
43	2l	96/108 (89%)	96 (100%)	0	100	100
44	1m	93/101 (92%)	91 (98%)	2 (2%)	45	63
44	2m	92/101 (91%)	91 (99%)	1 (1%)	65	73
45	1n	49/50 (98%)	48 (98%)	1 (2%)	48	64
45	2n	49/50 (98%)	48 (98%)	1 (2%)	48	64
46	1o	78/80 (98%)	78 (100%)	0	100	100
46	2o	78/80 (98%)	78 (100%)	0	100	100
47	1p	69/74 (93%)	69 (100%)	0	100	100
47	2p	68/74 (92%)	67 (98%)	1 (2%)	57	68
48	1q	94/97 (97%)	94 (100%)	0	100	100
48	2q	94/97 (97%)	94 (100%)	0	100	100
49	1r	59/77 (77%)	58 (98%)	1 (2%)	53	67

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
49	2r	59/77 (77%)	59 (100%)	0	100	100
50	1s	69/80 (86%)	67 (97%)	2 (3%)	37	57
50	2s	67/80 (84%)	65 (97%)	2 (3%)	36	57
51	1t	70/82 (85%)	69 (99%)	1 (1%)	59	70
51	2t	70/82 (85%)	69 (99%)	1 (1%)	59	70
52	1u	18/22 (82%)	18 (100%)	0	100	100
52	2u	18/22 (82%)	18 (100%)	0	100	100
All	All	9303/10064 (92%)	9226 (99%)	77 (1%)	73	76

All (77) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	1D	142	VAL
4	1E	21	VAL
4	1E	75	VAL
4	1E	184	VAL
6	1G	31	VAL
6	1G	150	ASP
7	1H	107	VAL
8	1I	92	VAL
9	1N	28	THR
11	1P	71	VAL
11	1P	83	VAL
11	1P	112	LEU
12	1Q	110	THR
17	1V	52	VAL
17	1V	61	VAL
17	1V	79	VAL
18	1W	67	ASP
20	1Y	99	CYS
21	1Z	137	ILE
21	1Z	154	ASP
23	11	4	VAL
23	11	5	CYS
26	14	50	VAL
26	14	56	VAL
27	15	58	LEU
28	16	5	VAL
34	1c	57	ILE
34	1c	195	VAL

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Mol	Chain	Res	Type
35	1d	5	ILE
35	1d	135	LEU
36	1e	41	VAL
39	1h	2	LEU
41	1j	8	LEU
41	1j	38	ILE
44	1m	47	ASP
44	1m	109	THR
45	1n	33	VAL
49	1r	31	LEU
50	1s	41	VAL
50	1s	77	THR
51	1t	13	LEU
4	2E	14	ILE
4	2E	21	VAL
4	2E	75	VAL
4	2E	184	VAL
6	2G	31	VAL
6	2G	159	VAL
7	2H	45	VAL
9	2N	58	ASP
10	2O	61	VAL
11	2P	71	VAL
11	2P	83	VAL
17	2V	52	VAL
17	2V	61	VAL
17	2V	79	VAL
18	2W	67	ASP
21	2Z	154	ASP
21	2Z	155	LEU
22	20	43	THR
26	24	50	VAL
26	24	56	VAL
33	2b	127	ILE
33	2b	189	ASP
34	2c	57	ILE
35	2d	5	ILE
35	2d	135	LEU
38	2g	9	VAL
39	2h	83	ILE
39	2h	112	LEU
41	2j	8	LEU

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Mol	Chain	Res	Type
41	2j	38	ILE
44	2m	109	THR
45	2n	33	VAL
47	2p	21	VAL
50	2s	41	VAL
50	2s	77	THR
51	2t	13	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (106) such sidechains are listed below:

Mol	Chain	Res	Type
3	1D	166	GLN
3	1D	220	HIS
3	1D	227	ASN
4	1E	137	HIS
5	1F	69	HIS
5	1F	75	HIS
5	1F	203	GLN
6	1G	40	ASN
8	1I	139	GLN
9	1N	69	GLN
10	1O	3	GLN
12	1Q	12	GLN
12	1Q	123	HIS
13	1R	13	HIS
13	1R	24	GLN
13	1R	31	HIS
15	1T	58	ASN
17	1V	80	GLN
18	1W	60	ASN
19	1X	31	HIS
19	1X	82	GLN
21	1Z	55	HIS
21	1Z	151	HIS
23	11	56	GLN
24	12	46	GLN
31	19	34	GLN
33	1b	19	HIS
33	1b	40	HIS
33	1b	78	GLN
33	1b	113	HIS
33	1b	212	GLN

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Mol	Chain	Res	Type
34	1c	6	HIS
34	1c	31	HIS
34	1c	162	GLN
35	1d	77	ASN
36	1e	78	HIS
38	1g	37	ASN
38	1g	64	GLN
38	1g	122	HIS
38	1g	148	ASN
39	1h	15	ASN
40	1i	58	HIS
41	1j	21	GLN
41	1j	69	ASN
43	1l	80	HIS
45	1n	49	HIS
46	1o	62	GLN
47	1p	16	HIS
47	1p	76	GLN
49	1r	63	GLN
50	1s	69	HIS
50	1s	83	HIS
51	1t	73	HIS
51	1t	75	ASN
3	2D	227	ASN
4	2E	48	GLN
4	2E	137	HIS
5	2F	40	GLN
5	2F	75	HIS
5	2F	133	ASN
5	2F	203	GLN
6	2G	26	GLN
6	2G	41	GLN
8	2I	11	ASN
8	2I	139	GLN
10	2O	3	GLN
10	2O	89	ASN
12	2Q	12	GLN
12	2Q	123	HIS
13	2R	13	HIS
13	2R	24	GLN
14	2S	68	GLN
16	2U	94	ASN

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Mol	Chain	Res	Type
17	2V	80	GLN
19	2X	82	GLN
21	2Z	55	HIS
21	2Z	132	ASN
23	21	56	GLN
24	22	46	GLN
26	24	46	GLN
33	2b	19	HIS
33	2b	78	GLN
33	2b	94	ASN
33	2b	113	HIS
34	2c	31	HIS
34	2c	37	GLN
34	2c	69	HIS
34	2c	104	GLN
35	2d	77	ASN
35	2d	201	GLN
36	2e	78	HIS
37	2f	73	ASN
37	2f	100	ASN
38	2g	28	ASN
38	2g	122	HIS
38	2g	148	ASN
40	2i	58	HIS
41	2j	21	GLN
41	2j	68	HIS
42	2k	93	GLN
43	2l	80	HIS
43	2l	99	HIS
47	2p	16	HIS
48	2q	45	HIS
50	2s	57	HIS
50	2s	69	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	1A	2865/2915 (98%)	439 (15%)	28 (0%)
1	2A	2791/2915 (95%)	443 (15%)	21 (0%)
2	1B	120/121 (99%)	10 (8%)	1 (0%)
2	2B	119/121 (98%)	12 (10%)	1 (0%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
32	1a	1497/1521 (98%)	245 (16%)	0
32	2a	1501/1521 (98%)	233 (15%)	0
53	1v	4/24 (16%)	0	0
53	2v	4/24 (16%)	0	0
54	1w	1/3 (33%)	1 (100%)	0
54	2w	1/3 (33%)	1 (100%)	0
55	1x	75/77 (97%)	6 (8%)	0
55	2x	75/77 (97%)	7 (9%)	0
All	All	9053/9322 (97%)	1397 (15%)	51 (0%)

All (1397) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	1A	12	U
1	1A	13	A
1	1A	34	C
1	1A	45	C
1	1A	62	U
1	1A	63	A
1	1A	70	A
1	1A	71	U
1	1A	73	A
1	1A	74	G
1	1A	83	A
1	1A	90	A
1	1A	100	G
1	1A	116	A
1	1A	118	U
1	1A	119	G
1	1A	129	G
1	1A	139	A
1	1A	171	A
1	1A	185	A
1	1A	188	A
1	1A	190	C
1	1A	193	A
1	1A	194	G
1	1A	203	G
1	1A	205	A
1	1A	211	A
1	1A	214	A
1	1A	217	A

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Mol	Chain	Res	Type
1	1A	218	A
1	1A	219	U
1	1A	222	A
1	1A	237	G
1	1A	239	G
1	1A	258	U
1	1A	270	C
1	1A	272	U
1	1A	273	G
1	1A	275	C
1	1A	288	U
1	1A	289	G
1	1A	303	C
1	1A	332	G
1	1A	335	A
1	1A	348	A
1	1A	353	G
1	1A	354	A
1	1A	376	G
1	1A	387	G
1	1A	389	G
1	1A	399	G
1	1A	413	G
1	1A	432	U
1	1A	438	G
1	1A	439	A
1	1A	455	A
1	1A	470	C
1	1A	474	U
1	1A	475	A
1	1A	477	C
1	1A	480	A
1	1A	482	C
1	1A	483	A
1	1A	490	U
1	1A	507	G
1	1A	530	A
1	1A	534	C
1	1A	553	A
1	1A	555	G
1	1A	556	C
1	1A	557	A

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Mol	Chain	Res	Type
1	1A	558	G
1	1A	569	G
1	1A	573	G
1	1A	586	G
1	1A	596	G
1	1A	598	A
1	1A	626	A
1	1A	627	G
1	1A	630	U
1	1A	637	U
1	1A	639	G
1	1A	641	G
1	1A	652	A
1	1A	659	C
1	1A	662	A
1	1A	670	C
1	1A	671	A
1	1A	676	G
1	1A	691	G
1	1A	692	C
1	1A	716	G
1	1A	733	G
1	1A	777	C
1	1A	811	A
1	1A	812	G
1	1A	822	G
1	1A	823	G
1	1A	829	A
1	1A	831	A
1	1A	832	G
1	1A	847	A
1	1A	852	G
1	1A	859	C
1	1A	866	A
1	1A	874	U
1	1A	875	U
1	1A	878	G
1	1A	893	C
1	1A	902	G
1	1A	903	C
1	1A	906	G
1	1A	913	A

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Mol	Chain	Res	Type
1	1A	926	G
1	1A	927	G
1	1A	931	C
1	1A	932	C
1	1A	933	C
1	1A	934	A
1	1A	935	C
1	1A	936	C
1	1A	937	A
1	1A	942	A
1	1A	943	C
1	1A	944	C
1	1A	946	A
1	1A	953	U
1	1A	956	A
1	1A	960	C
1	1A	977	G
1	1A	990	A
1	1A	991	G
1	1A	1002	A
1	1A	1004	A
1	1A	1006	C
1	1A	1017	G
1	1A	1018	A
1	1A	1019	G
1	1A	1020	C
1	1A	1021	G
1	1A	1029	A
1	1A	1035	G
1	1A	1042	A
1	1A	1051	C
1	1A	1058	U
1	1A	1059	C
1	1A	1068	G
1	1A	1069	U
1	1A	1071	G
1	1A	1072	U
1	1A	1079	U
1	1A	1090	G
1	1A	1091	A
1	1A	1092	A
1	1A	1093	G

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Mol	Chain	Res	Type
1	1A	1094	A
1	1A	1098	C
1	1A	1100	A
1	1A	1101	G
1	1A	1102	G
1	1A	1104	G
1	1A	1109	G
1	1A	1110	C
1	1A	1112	U
1	1A	1114	G
1	1A	1117	G
1	1A	1119	A
1	1A	1120	G
1	1A	1121	C
1	1A	1122	C
1	1A	1124	U
1	1A	1125	C
1	1A	1129	U
1	1A	1130	A
1	1A	1132	A
1	1A	1134	A
1	1A	1135	G
1	1A	1136	U
1	1A	1137	G
1	1A	1139	G
1	1A	1140	U
1	1A	1143	U
1	1A	1147	U
1	1A	1149	A
1	1A	1150	C
1	1A	1157	A
1	1A	1158	G
1	1A	1162	C
1	1A	1172	A
1	1A	1176	U
1	1A	1180	C
1	1A	1181	G
1	1A	1187	U
1	1A	1195	G
1	1A	1201	A
1	1A	1217	G
1	1A	1218	G

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Mol	Chain	Res	Type
1	1A	1219	A
1	1A	1220	U
1	1A	1221	G
1	1A	1222	A
1	1A	1223	C
1	1A	1256	U
1	1A	1294	G
1	1A	1299	A
1	1A	1301	U
1	1A	1302	G
1	1A	1317	G
1	1A	1318	A
1	1A	1319	U
1	1A	1346	U
1	1A	1347	A
1	1A	1371	G
1	1A	1387	U
1	1A	1398	U
1	1A	1405	A
1	1A	1406	A
1	1A	1411	A
1	1A	1425	A
1	1A	1430	A
1	1A	1431	G
1	1A	1441	A
1	1A	1442	U
1	1A	1462	G
1	1A	1463	C
1	1A	1466	U
1	1A	1467	G
1	1A	1474	C
1	1A	1491	A
1	1A	1497	G
1	1A	1502	G
1	1A	1506	G
1	1A	1514	C
1	1A	1529	G
1	1A	1539	C
1	1A	1554	A
1	1A	1555	C
1	1A	1556	A
1	1A	1590	C

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Mol	Chain	Res	Type
1	1A	1605	A
1	1A	1616	A
1	1A	1625	U
1	1A	1627	A
1	1A	1631	C
1	1A	1632	A
1	1A	1641	G
1	1A	1648	U
1	1A	1654	A
1	1A	1662	A
1	1A	1695	C
1	1A	1701	A
1	1A	1721	G
1	1A	1743	G
1	1A	1745	A
1	1A	1747	A
1	1A	1750	G
1	1A	1767	A
1	1A	1776	G
1	1A	1787	G
1	1A	1794	G
1	1A	1795	G
1	1A	1804	A
1	1A	1811	A
1	1A	1813	C
1	1A	1822	A
1	1A	1829	U
1	1A	1831	C
1	1A	1847	G
1	1A	1859	G
1	1A	1878	A
1	1A	1879	A
1	1A	1889	G
1	1A	1899	A
1	1A	1900	G
1	1A	1911	A
1	1A	1922	A
1	1A	1928	G
1	1A	1949	A
1	1A	1951	G
1	1A	1958	A
1	1A	1960	A

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Mol	Chain	Res	Type
1	1A	1977	U
1	1A	1985	U
1	1A	1989	C
1	1A	1992	A
1	1A	1993	A
1	1A	1994	A
1	1A	2015	U
1	1A	2019	G
1	1A	2035	A
1	1A	2045	G
1	1A	2052	A
1	1A	2053	A
1	1A	2054	G
1	1A	2055	A
1	1A	2056	U
1	1A	2065	C
1	1A	2075	G
1	1A	2077	C
1	1A	2078	G
1	1A	2082	A
1	1A	2083	G
1	1A	2084	A
1	1A	2091	G
1	1A	2114	U
1	1A	2115	G
1	1A	2121	U
1	1A	2124	U
1	1A	2135	U
1	1A	2136	A
1	1A	2138	G
1	1A	2144	U
1	1A	2149	G
1	1A	2151	C
1	1A	2152	U
1	1A	2153	G
1	1A	2154	U
1	1A	2155	G
1	1A	2156	A
1	1A	2157	A
1	1A	2158	C
1	1A	2164	C
1	1A	2166	U

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Mol	Chain	Res	Type
1	1A	2168	C
1	1A	2169	G
1	1A	2172	U
1	1A	2173	G
1	1A	2177	G
1	1A	2178	G
1	1A	2179	G
1	1A	2180	A
1	1A	2181	G
1	1A	2187	G
1	1A	2188	G
1	1A	2189	U
1	1A	2193	A
1	1A	2194	U
1	1A	2195	A
1	1A	2197	C
1	1A	2204	G
1	1A	2206	G
1	1A	2214	G
1	1A	2215	G
1	1A	2220	A
1	1A	2227	G
1	1A	2228	G
1	1A	2229	A
1	1A	2231	G
1	1A	2237	A
1	1A	2250	G
1	1A	2251	G
1	1A	2279	A
1	1A	2281	A
1	1A	2292	G
1	1A	2295	C
1	1A	2299	A
1	1A	2300	A
1	1A	2317	A
1	1A	2320	G
1	1A	2324	U
1	1A	2332	A
1	1A	2337	G
1	1A	2348	A
1	1A	2357	G
1	1A	2359	C

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Mol	Chain	Res	Type
1	1A	2362	C
1	1A	2373	A
1	1A	2377	G
1	1A	2395	G
1	1A	2396	G
1	1A	2397	C
1	1A	2418	U
1	1A	2422	G
1	1A	2436	C
1	1A	2437	A
1	1A	2439	C
1	1A	2440	G
1	1A	2441	G
1	1A	2442	A
1	1A	2446	A
1	1A	2447	A
1	1A	2451	A
1	1A	2453	C
1	1A	2460	A
1	1A	2477	C
1	1A	2480	G
1	1A	2481	A
1	1A	2486	C
1	1A	2488	A
1	1A	2490	A
1	1A	2503	U
1	1A	2514	G
1	1A	2516	U
1	1A	2517	G
1	1A	2530	A
1	1A	2532	C
1	1A	2537	G
1	1A	2541	G
1	1A	2566	U
1	1A	2576	A
1	1A	2578	A
1	1A	2579	G
1	1A	2584	A
1	1A	2585	C
1	1A	2586	G
1	1A	2614	A
1	1A	2621	U

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Mol	Chain	Res	Type
1	1A	2624	C
1	1A	2627	U
1	1A	2633	A
1	1A	2641	A
1	1A	2642	G
1	1A	2666	A
1	1A	2668	U
1	1A	2701	U
1	1A	2702	C
1	1A	2714	U
1	1A	2715	C
1	1A	2725	A
1	1A	2726	A
1	1A	2727	G
1	1A	2739	U
1	1A	2746	A
1	1A	2770	A
1	1A	2771	A
1	1A	2777	A
1	1A	2778	A
1	1A	2791	A
1	1A	2803	A
1	1A	2804	C
1	1A	2813	G
1	1A	2814	C
1	1A	2828	G
1	1A	2830	A
1	1A	2831	A
1	1A	2843	G
1	1A	2882	G
1	1A	2901	A
1	1A	2903	G
2	1B	2	C
2	1B	12	C
2	1B	13	A
2	1B	30	C
2	1B	35	U
2	1B	41	U
2	1B	67	G
2	1B	73	A
2	1B	85	G
2	1B	110	G

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Mol	Chain	Res	Type
32	1a	9	G
32	1a	32	A
32	1a	39	G
32	1a	47	C
32	1a	48	C
32	1a	50	A
32	1a	51	A
32	1a	52	G
32	1a	61	G
32	1a	69	G
32	1a	70	G
32	1a	79	G
32	1a	91	C
32	1a	101	A
32	1a	105	G
32	1a	116	A
32	1a	121	C
32	1a	131	C
32	1a	144	G
32	1a	163	C
32	1a	174	C
32	1a	182	U
32	1a	189(F)	U
32	1a	189(G)	G
32	1a	189(H)	G
32	1a	189(J)	G
32	1a	195	A
32	1a	197	A
32	1a	202	U
32	1a	203	U
32	1a	204	U
32	1a	216	G
32	1a	222	U
32	1a	247	G
32	1a	251	G
32	1a	258	G
32	1a	266	G
32	1a	267	C
32	1a	289	G
32	1a	293	G
32	1a	306	G
32	1a	321	A

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Mol	Chain	Res	Type
32	1a	328	C
32	1a	332	G
32	1a	342	C
32	1a	346	G
32	1a	347	G
32	1a	348	G
32	1a	352	C
32	1a	353	A
32	1a	354	G
32	1a	367	U
32	1a	372	C
32	1a	373	A
32	1a	381	C
32	1a	384	G
32	1a	397	A
32	1a	398	C
32	1a	406	G
32	1a	412	A
32	1a	423	G
32	1a	424	G
32	1a	429	U
32	1a	439	A
32	1a	452	A
32	1a	461	A
32	1a	470	C
32	1a	485	G
32	1a	495	A
32	1a	496	A
32	1a	498	U
32	1a	505	G
32	1a	509	A
32	1a	510	A
32	1a	511	C
32	1a	518	C
32	1a	531	U
32	1a	532	A
32	1a	547	A
32	1a	559	A
32	1a	561	U
32	1a	564	C
32	1a	572	A
32	1a	573	A

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Mol	Chain	Res	Type
32	1a	574	A
32	1a	576	G
32	1a	577	G
32	1a	584	G
32	1a	596	C
32	1a	630	G
32	1a	653	A
32	1a	662	G
32	1a	665	A
32	1a	687	A
32	1a	688	G
32	1a	702	A
32	1a	723	U
32	1a	731	G
32	1a	749	C
32	1a	755	G
32	1a	777	A
32	1a	793	U
32	1a	794	A
32	1a	816	A
32	1a	817	C
32	1a	821	G
32	1a	828	A
32	1a	840	C
32	1a	841	U
32	1a	851	G
32	1a	853	G
32	1a	859	A
32	1a	885	G
32	1a	902	G
32	1a	914	A
32	1a	916	G
32	1a	926	G
32	1a	927	G
32	1a	931	C
32	1a	932	C
32	1a	934	C
32	1a	960	U
32	1a	961	U
32	1a	967	5MC
32	1a	968	A
32	1a	969	A

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Mol	Chain	Res	Type
32	1a	971	G
32	1a	972	C
32	1a	974	A
32	1a	975	A
32	1a	976	G
32	1a	977	A
32	1a	982	U
32	1a	983	A
32	1a	992	U
32	1a	993	G
32	1a	997	U
32	1a	1000	U
32	1a	1002	G
32	1a	1003	G
32	1a	1005	A
32	1a	1006	C
32	1a	1009	G
32	1a	1020	U
32	1a	1021	G
32	1a	1022	G
32	1a	1023	G
32	1a	1024	G
32	1a	1025	U
32	1a	1026	G
32	1a	1030	C
32	1a	1030(A)	G
32	1a	1030(C)	G
32	1a	1031	G
32	1a	1033	G
32	1a	1035	A
32	1a	1037	C
32	1a	1039	C
32	1a	1043	C
32	1a	1045	C
32	1a	1053	G
32	1a	1054	C
32	1a	1065	U
32	1a	1066	C
32	1a	1068	G
32	1a	1081	G
32	1a	1095	U
32	1a	1101	A

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Mol	Chain	Res	Type
32	1a	1108	G
32	1a	1122	U
32	1a	1123	A
32	1a	1125	U
32	1a	1128	C
32	1a	1134	G
32	1a	1136	U
32	1a	1137	C
32	1a	1139	G
32	1a	1141	C
32	1a	1146	A
32	1a	1152	A
32	1a	1157	A
32	1a	1159	U
32	1a	1166	G
32	1a	1172	C
32	1a	1183	A
32	1a	1184	G
32	1a	1196	U
32	1a	1197	G
32	1a	1198	G
32	1a	1202	G
32	1a	1213	A
32	1a	1225	A
32	1a	1227	A
32	1a	1236	A
32	1a	1238	A
32	1a	1241	G
32	1a	1248	A
32	1a	1256	A
32	1a	1257	U
32	1a	1260	C
32	1a	1270	C
32	1a	1273	G
32	1a	1278	U
32	1a	1279	A
32	1a	1280	A
32	1a	1286	A
32	1a	1287	A
32	1a	1299	A
32	1a	1300	G
32	1a	1302	U

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Mol	Chain	Res	Type
32	1a	1305	G
32	1a	1345	U
32	1a	1346	A
32	1a	1347	G
32	1a	1353	G
32	1a	1363	C
32	1a	1363(A)	A
32	1a	1364	U
32	1a	1370	G
32	1a	1397	C
32	1a	1398	A
32	1a	1399	C
32	1a	1401	G
32	1a	1402	4OC
32	1a	1419	G
32	1a	1442	G
32	1a	1442(A)	G
32	1a	1442(B)	A
32	1a	1446	U
32	1a	1447	A
32	1a	1452	C
32	1a	1487	G
32	1a	1492	A
32	1a	1494	G
32	1a	1497	G
32	1a	1499	A
32	1a	1503	A
32	1a	1504	G
32	1a	1506	U
32	1a	1517	G
32	1a	1519	MA6
32	1a	1520	G
32	1a	1529	G
32	1a	1530	G
32	1a	1532	U
54	1w	75	C
55	1x	9	G
55	1x	21	A
55	1x	47	U
55	1x	61	C
55	1x	69	C
55	1x	76	A

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Mol	Chain	Res	Type
1	2A	12	U
1	2A	14	A
1	2A	15	G
1	2A	34	C
1	2A	35	G
1	2A	45	C
1	2A	71	A
1	2A	74	A
1	2A	75	G
1	2A	84	A
1	2A	90	U
1	2A	100	G
1	2A	102	G
1	2A	118	A
1	2A	120	U
1	2A	125	G
1	2A	128	C
1	2A	154(A)	C
1	2A	157	U
1	2A	173	G
1	2A	181	A
1	2A	196	A
1	2A	204	A
1	2A	205	G
1	2A	214	G
1	2A	216	A
1	2A	221	A
1	2A	222	A
1	2A	225	A
1	2A	228	A
1	2A	229	A
1	2A	233	A
1	2A	248	G
1	2A	271(J)	C
1	2A	271(K)	U
1	2A	271(L)	U
1	2A	271(M)	G
1	2A	271(N)	U
1	2A	271(O)	C
1	2A	272(B)	G
1	2A	272(I)	U
1	2A	272(J)	C

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Mol	Chain	Res	Type
1	2A	277	C
1	2A	278	A
1	2A	294	A
1	2A	303	U
1	2A	311	A
1	2A	329	G
1	2A	330	A
1	2A	352	G
1	2A	362	U
1	2A	363	G
1	2A	363(B)	G
1	2A	363(D)	G
1	2A	386	G
1	2A	396	G
1	2A	405	U
1	2A	406	G
1	2A	411	G
1	2A	412	A
1	2A	444	C
1	2A	451	C
1	2A	454	A
1	2A	456	C
1	2A	457	A
1	2A	467	G
1	2A	481	G
1	2A	494	G
1	2A	504	U
1	2A	505	A
1	2A	507	A
1	2A	508	G
1	2A	509	C
1	2A	527	C
1	2A	528	A
1	2A	529	A
1	2A	530	G
1	2A	531	C
1	2A	532	A
1	2A	533	G
1	2A	545	G
1	2A	563	G
1	2A	568	U
1	2A	573	G

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Mol	Chain	Res	Type
1	2A	574	C
1	2A	575	A
1	2A	599	G
1	2A	603	A
1	2A	604	G
1	2A	607	U
1	2A	614(B)	G
1	2A	615	G
1	2A	616	G
1	2A	621	A
1	2A	627	A
1	2A	634	C
1	2A	637	A
1	2A	645	C
1	2A	646	A
1	2A	652(B)	A
1	2A	652(C)	G
1	2A	652(U)	G
1	2A	669	G
1	2A	686	G
1	2A	717	G
1	2A	730	C
1	2A	753	C
1	2A	775	G
1	2A	776	G
1	2A	782	A
1	2A	784	A
1	2A	785	G
1	2A	805	G
1	2A	812	C
1	2A	819	A
1	2A	825	C
1	2A	827	U
1	2A	857	C
1	2A	859	G
1	2A	866	A
1	2A	869	G
1	2A	872	A
1	2A	874	G
1	2A	875	G
1	2A	879	G
1	2A	880	G

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Mol	Chain	Res	Type
1	2A	884	C
1	2A	886	C
1	2A	887	A
1	2A	888	C
1	2A	889	C
1	2A	890	A
1	2A	893	C
1	2A	894	C
1	2A	896	A
1	2A	900	A
1	2A	901	A
1	2A	907	U
1	2A	910	A
1	2A	915	C
1	2A	917	A
1	2A	932	G
1	2A	941	A
1	2A	945	A
1	2A	946	G
1	2A	953	A
1	2A	958	U
1	2A	959	A
1	2A	961	C
1	2A	973	A
1	2A	974	G
1	2A	975	C
1	2A	983	A
1	2A	996	A
1	2A	997	G
1	2A	1005	C
1	2A	1012	U
1	2A	1013	C
1	2A	1021	A
1	2A	1022	G
1	2A	1023	U
1	2A	1025	G
1	2A	1027	A
1	2A	1033	U
1	2A	1038	C
1	2A	1039	G
1	2A	1043	C
1	2A	1116	C

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Mol	Chain	Res	Type
1	2A	1126	A
1	2A	1129	A
1	2A	1130	U
1	2A	1135	C
1	2A	1136	G
1	2A	1139	G
1	2A	1142	U
1	2A	1143	A
1	2A	1144	G
1	2A	1171	G
1	2A	1205	U
1	2A	1211	U
1	2A	1212	G
1	2A	1218	C
1	2A	1220	A
1	2A	1244	G
1	2A	1248	G
1	2A	1253	A
1	2A	1255	U
1	2A	1256	G
1	2A	1271	G
1	2A	1272	A
1	2A	1273	U
1	2A	1274	A
1	2A	1300	U
1	2A	1301	A
1	2A	1302	A
1	2A	1313	U
1	2A	1314	C
1	2A	1341	U
1	2A	1352	U
1	2A	1359	A
1	2A	1360	A
1	2A	1365	A
1	2A	1368	G
1	2A	1370	C
1	2A	1378	A
1	2A	1379	A
1	2A	1384	A
1	2A	1385	G
1	2A	1394	U
1	2A	1411	C

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Mol	Chain	Res	Type
1	2A	1416	G
1	2A	1417	C
1	2A	1421	G
1	2A	1427	A
1	2A	1428	C
1	2A	1437	C
1	2A	1445	A
1	2A	1449	A
1	2A	1450	G
1	2A	1455	G
1	2A	1460	A
1	2A	1467	C
1	2A	1471	A
1	2A	1482	G
1	2A	1490	A
1	2A	1493	C
1	2A	1495	A
1	2A	1496	A
1	2A	1497	U
1	2A	1508	A
1	2A	1509	C
1	2A	1509(A)	A
1	2A	1531	C
1	2A	1532	C
1	2A	1533	G
1	2A	1543	C
1	2A	1547	C
1	2A	1558	A
1	2A	1569	A
1	2A	1578	U
1	2A	1580	A
1	2A	1584	C
1	2A	1586	A
1	2A	1603	A
1	2A	1608	A
1	2A	1609	A
1	2A	1610	A
1	2A	1616	A
1	2A	1646	C
1	2A	1648	C
1	2A	1654	A
1	2A	1664	A

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Mol	Chain	Res	Type
1	2A	1674	G
1	2A	1695	G
1	2A	1696	G
1	2A	1700	A
1	2A	1701	A
1	2A	1703	G
1	2A	1721	G
1	2A	1722	A
1	2A	1740	G
1	2A	1746	G
1	2A	1756	G
1	2A	1762	A
1	2A	1763	G
1	2A	1764	G
1	2A	1773	A
1	2A	1780	A
1	2A	1781	C
1	2A	1791	A
1	2A	1800	C
1	2A	1801	G
1	2A	1815	A
1	2A	1816	G
1	2A	1829	A
1	2A	1835	G
1	2A	1847	A
1	2A	1848	A
1	2A	1866	C
1	2A	1877	A
1	2A	1878	G
1	2A	1889	A
1	2A	1900	A
1	2A	1906	G
1	2A	1913	A
1	2A	1914	C
1	2A	1929	G
1	2A	1930	G
1	2A	1938	A
1	2A	1941	C
1	2A	1955	U
1	2A	1963	U
1	2A	1967	C
1	2A	1970	A

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Mol	Chain	Res	Type
1	2A	1971	A
1	2A	1972	A
1	2A	1993	U
1	2A	1997	G
1	2A	2023	G
1	2A	2027	G
1	2A	2030	A
1	2A	2031	A
1	2A	2033	A
1	2A	2043	C
1	2A	2053	G
1	2A	2055	C
1	2A	2056	G
1	2A	2057	A
1	2A	2060	A
1	2A	2061	G
1	2A	2062	A
1	2A	2069	G
1	2A	2093	G
1	2A	2096	U
1	2A	2101	G
1	2A	2105	C
1	2A	2111	C
1	2A	2112	G
1	2A	2115	G
1	2A	2116	G
1	2A	2120	G
1	2A	2122	U
1	2A	2126	A
1	2A	2127	G
1	2A	2129	C
1	2A	2131	G
1	2A	2132	U
1	2A	2133	G
1	2A	2134	A
1	2A	2135	A
1	2A	2136	C
1	2A	2138	C
1	2A	2140	C
1	2A	2142	C
1	2A	2146	C
1	2A	2150	U

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Mol	Chain	Res	Type
1	2A	2155	G
1	2A	2156	G
1	2A	2157	G
1	2A	2158	A
1	2A	2161	C
1	2A	2166	G
1	2A	2167	U
1	2A	2168	G
1	2A	2172	U
1	2A	2174	C
1	2A	2178	C
1	2A	2183	C
1	2A	2189	U
1	2A	2192	G
1	2A	2198	A
1	2A	2199	A
1	2A	2206	G
1	2A	2207	G
1	2A	2208	A
1	2A	2218	U
1	2A	2219	G
1	2A	2225	A
1	2A	2238	G
1	2A	2239	G
1	2A	2268	A
1	2A	2275	C
1	2A	2279	G
1	2A	2283	C
1	2A	2287	A
1	2A	2305	A
1	2A	2308	G
1	2A	2319	G
1	2A	2320	A
1	2A	2325	G
1	2A	2334	G
1	2A	2336	A
1	2A	2347	C
1	2A	2350	C
1	2A	2352	A
1	2A	2376	A
1	2A	2383	G
1	2A	2385	C

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Mol	Chain	Res	Type
1	2A	2402	C
1	2A	2403	C
1	2A	2406	U
1	2A	2424	C
1	2A	2425	A
1	2A	2428	G
1	2A	2429	G
1	2A	2430	A
1	2A	2431	U
1	2A	2435	A
1	2A	2439	A
1	2A	2441	C
1	2A	2447	G
1	2A	2448	A
1	2A	2465	C
1	2A	2468	G
1	2A	2469	A
1	2A	2474	C
1	2A	2476	A
1	2A	2478	A
1	2A	2491	U
1	2A	2502	G
1	2A	2503	2MA
1	2A	2505	G
1	2A	2518	A
1	2A	2520	C
1	2A	2554	U
1	2A	2566	A
1	2A	2567	G
1	2A	2572	A
1	2A	2573	C
1	2A	2602	A
1	2A	2612	C
1	2A	2630	G
1	2A	2634	G
1	2A	2654	A
1	2A	2689	U
1	2A	2690	C
1	2A	2691	C
1	2A	2712(A)	A
1	2A	2713	A
1	2A	2714	G

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Mol	Chain	Res	Type
1	2A	2726	U
1	2A	2733	A
1	2A	2744	G
1	2A	2748	A
1	2A	2751	G
1	2A	2757	A
1	2A	2758	A
1	2A	2765	A
1	2A	2766	G
1	2A	2778	A
1	2A	2789	C
1	2A	2807	G
1	2A	2818	G
1	2A	2820	A
1	2A	2821	A
1	2A	2823	A
1	2A	2836	U
1	2A	2848	G
1	2A	2872	G
1	2A	2879	C
1	2A	2880	C
1	2A	2894	G
1	2A	2897	U
2	2B	2	C
2	2B	12	C
2	2B	13	A
2	2B	30	C
2	2B	35	U
2	2B	41	U
2	2B	44	G
2	2B	67	G
2	2B	73	A
2	2B	85	G
2	2B	100	A
2	2B	110	G
32	2a	6	G
32	2a	9	G
32	2a	22	G
32	2a	32	A
32	2a	39	G
32	2a	47	C
32	2a	48	C

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Mol	Chain	Res	Type
32	2a	51	A
32	2a	66	G
32	2a	73	G
32	2a	80	G
32	2a	88	A
32	2a	89	C
32	2a	101	A
32	2a	116	A
32	2a	120	A
32	2a	121	C
32	2a	129(A)	G
32	2a	131	C
32	2a	163	C
32	2a	174	C
32	2a	182	U
32	2a	189(F)	U
32	2a	195	A
32	2a	197	A
32	2a	201	C
32	2a	202	U
32	2a	204	U
32	2a	216	G
32	2a	217	C
32	2a	220	G
32	2a	247	G
32	2a	251	G
32	2a	258	G
32	2a	266	G
32	2a	267	C
32	2a	280	C
32	2a	281	G
32	2a	289	G
32	2a	298	A
32	2a	318	G
32	2a	328	C
32	2a	330	C
32	2a	332	G
32	2a	351	G
32	2a	352	C
32	2a	353	A
32	2a	354	G
32	2a	367	U

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Mol	Chain	Res	Type
32	2a	372	C
32	2a	373	A
32	2a	397	A
32	2a	398	C
32	2a	406	G
32	2a	412	A
32	2a	413	G
32	2a	414	A
32	2a	421	U
32	2a	423	G
32	2a	424	G
32	2a	429	U
32	2a	442	C
32	2a	452	A
32	2a	461	A
32	2a	470	C
32	2a	471	G
32	2a	485	G
32	2a	496	A
32	2a	498	U
32	2a	509	A
32	2a	510	A
32	2a	511	C
32	2a	518	C
32	2a	531	U
32	2a	532	A
32	2a	533	A
32	2a	547	A
32	2a	559	A
32	2a	561	U
32	2a	562	C
32	2a	564	C
32	2a	568	G
32	2a	572	A
32	2a	573	A
32	2a	576	G
32	2a	577	G
32	2a	596	C
32	2a	630	G
32	2a	653	A
32	2a	665	A
32	2a	666	G

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Mol	Chain	Res	Type
32	2a	687	A
32	2a	688	G
32	2a	702	A
32	2a	703	G
32	2a	723	U
32	2a	724	G
32	2a	731	G
32	2a	749	C
32	2a	755	G
32	2a	777	A
32	2a	793	U
32	2a	794	A
32	2a	816	A
32	2a	817	C
32	2a	821	G
32	2a	828	A
32	2a	840	C
32	2a	841	U
32	2a	848	C
32	2a	851	G
32	2a	859	A
32	2a	873	A
32	2a	902	G
32	2a	914	A
32	2a	926	G
32	2a	927	G
32	2a	934	C
32	2a	935	A
32	2a	960	U
32	2a	961	U
32	2a	968	A
32	2a	969	A
32	2a	971	G
32	2a	972	C
32	2a	974	A
32	2a	975	A
32	2a	976	G
32	2a	977	A
32	2a	989	C
32	2a	992	U
32	2a	993	G
32	2a	997	U

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Mol	Chain	Res	Type
32	2a	1001(A)	G
32	2a	1002	G
32	2a	1003	G
32	2a	1005	A
32	2a	1006	C
32	2a	1009	G
32	2a	1011	G
32	2a	1020	U
32	2a	1022	G
32	2a	1024	G
32	2a	1025	U
32	2a	1026	G
32	2a	1027	C
32	2a	1029	C
32	2a	1030(A)	G
32	2a	1031	G
32	2a	1033	G
32	2a	1038	C
32	2a	1039	C
32	2a	1040	U
32	2a	1051	C
32	2a	1053	G
32	2a	1065	U
32	2a	1066	C
32	2a	1068	G
32	2a	1077	G
32	2a	1081	G
32	2a	1094	G
32	2a	1095	U
32	2a	1101	A
32	2a	1108	G
32	2a	1117	G
32	2a	1122	U
32	2a	1125	U
32	2a	1129	C
32	2a	1130	A
32	2a	1136	U
32	2a	1137	C
32	2a	1138	G
32	2a	1139	G
32	2a	1140	C
32	2a	1146	A

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Mol	Chain	Res	Type
32	2a	1152	A
32	2a	1157	A
32	2a	1159	U
32	2a	1172	C
32	2a	1182	G
32	2a	1184	G
32	2a	1196	U
32	2a	1197	G
32	2a	1202	G
32	2a	1211	U
32	2a	1212	U
32	2a	1213	A
32	2a	1227	A
32	2a	1238	A
32	2a	1241	G
32	2a	1256	A
32	2a	1257	U
32	2a	1260	C
32	2a	1270	C
32	2a	1272	G
32	2a	1275	A
32	2a	1278	U
32	2a	1279	A
32	2a	1280	A
32	2a	1287	A
32	2a	1301	U
32	2a	1302	U
32	2a	1305	G
32	2a	1320	C
32	2a	1322	C
32	2a	1340	A
32	2a	1346	A
32	2a	1347	G
32	2a	1359	C
32	2a	1363	C
32	2a	1363(A)	A
32	2a	1398	A
32	2a	1399	C
32	2a	1400	5MC
32	2a	1401	G
32	2a	1402	4OC
32	2a	1419	G

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Mol	Chain	Res	Type
32	2a	1442	G
32	2a	1442(A)	G
32	2a	1447	A
32	2a	1452	C
32	2a	1457	G
32	2a	1492	A
32	2a	1494	G
32	2a	1503	A
32	2a	1504	G
32	2a	1506	U
32	2a	1517	G
32	2a	1519	MA6
32	2a	1520	G
32	2a	1529	G
32	2a	1530	G
32	2a	1532	U
54	2w	75	C
55	2x	9	G
55	2x	21	A
55	2x	47	U
55	2x	48	C
55	2x	59	A
55	2x	69	C
55	2x	76	A

All (51) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	1A	69	G
1	1A	115	G
1	1A	302	A
1	1A	509	A
1	1A	572	A
1	1A	913	A
1	1A	941	U
1	1A	1065	U
1	1A	1067	A
1	1A	1093	G
1	1A	1097	G
1	1A	1201	A
1	1A	1219	A
1	1A	1220	U

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Mol	Chain	Res	Type
1	1A	1221	G
1	1A	1255	A
1	1A	1466	U
1	1A	1554	A
1	1A	1700	G
1	1A	2014	G
1	1A	2156	A
1	1A	2203	G
1	1A	2205	C
1	1A	2418	U
1	1A	2485	U
1	1A	2641	A
1	1A	2701	U
1	1A	2769	U
2	1B	1	U
1	2A	195	A
1	2A	228	A
1	2A	266	G
1	2A	271(M)	G
1	2A	277	C
1	2A	528	A
1	2A	752	A
1	2A	856	C
1	2A	900	A
1	2A	1026	U
1	2A	1210	A
1	2A	1442	G
1	2A	1530	C
1	2A	1653	G
1	2A	1913	A
1	2A	1992	G
1	2A	2119	A
1	2A	2126	A
1	2A	2351	G
1	2A	2689	U
1	2A	2756	U
2	2B	1	U

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

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

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z > 2$	Counts	RMSZ	# $ Z > 2$
43	0TD	2l	92	43	8,9,10	4.41	1 (12%)	6,11,13	7.99	2 (33%)
32	4OC	2a	1402	32	20,23,24	0.79	0	25,32,35	0.90	1 (4%)
55	5MC	2x	32	55	19,22,23	1.61	3 (15%)	26,32,35	1.17	3 (11%)
1	PSU	2A	2605	1	18,21,22	1.35	3 (16%)	21,30,33	1.94	5 (23%)
1	5MU	1A	1961	1	19,22,23	1.41	5 (26%)	27,32,35	2.31	6 (22%)
1	2MA	1A	2515	1,56	22,25,26	1.45	4 (18%)	32,37,40	2.37	7 (21%)
1	2MU	1A	2564	1	19,22,24	1.29	3 (15%)	25,31,36	1.78	5 (20%)
1	PSU	1A	1939	1	18,21,22	1.40	2 (11%)	21,30,33	1.97	3 (14%)
32	7MG	1a	527	32	23,26,27	1.35	3 (13%)	27,39,42	2.54	5 (18%)
32	5MC	2a	1407	32	19,22,23	1.66	3 (15%)	26,32,35	1.16	3 (11%)
32	MA6	1a	1519	32	23,26,27	1.52	5 (21%)	33,38,41	2.35	13 (39%)
1	OMG	1A	2263	1,55	23,26,27	1.26	3 (13%)	32,38,41	2.03	6 (18%)
32	UR3	1a	1498	32	19,22,23	1.04	1 (5%)	26,32,35	1.72	4 (15%)
1	5MU	2A	1915	1	19,22,23	1.38	5 (26%)	27,32,35	2.06	6 (22%)
32	5MC	1a	1400	32	19,22,23	1.68	3 (15%)	26,32,35	1.11	3 (11%)
32	5MC	1a	1407	32	19,22,23	1.71	2 (10%)	26,32,35	1.21	3 (11%)
32	5MC	1a	967	32	19,22,23	1.66	2 (10%)	26,32,35	1.12	3 (11%)
55	PSU	2x	55	55	18,21,22	1.38	2 (11%)	21,30,33	2.12	4 (19%)
1	5MC	2A	1942	1	19,22,23	1.61	3 (15%)	26,32,35	1.16	3 (11%)
1	4OC	2A	1920	1	19,22,24	0.80	0	25,31,35	0.86	0
32	5MC	2a	1400	32	19,22,23	1.75	3 (15%)	26,32,35	1.08	2 (7%)
32	PSU	2a	516	32	18,21,22	1.36	2 (11%)	21,30,33	1.95	4 (19%)
32	MA6	2a	1518	32	23,26,27	1.53	5 (21%)	33,38,41	2.30	14 (42%)
32	7MG	2a	527	32	23,26,27	1.35	3 (13%)	27,39,42	2.64	7 (25%)
32	2MG	2a	1207	32	23,26,27	1.23	3 (13%)	33,38,41	2.31	9 (27%)
1	5MU	1A	1937	1	19,22,23	1.46	4 (21%)	27,32,35	2.02	6 (22%)
32	2MG	1a	1207	32	23,26,27	1.24	4 (17%)	33,38,41	2.12	7 (21%)
32	4OC	1a	1402	32	20,23,24	0.76	0	25,32,35	0.82	1 (4%)
1	5MU	2A	1939	1	19,22,23	1.34	4 (21%)	27,32,35	2.16	6 (22%)
1	5MC	2A	1962	1	19,22,23	1.50	3 (15%)	26,32,35	1.25	4 (15%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	2MA	2A	2503	1,56	22,25,26	1.49	4 (18%)	32,37,40	2.31	9 (28%)
54	PPU	2w	76	1,54,56	37,40,41	1.27	4 (10%)	47,57,60	2.18	13 (27%)
32	M2G	1a	966	32	24,27,28	1.32	4 (16%)	33,40,43	1.84	6 (18%)
55	4SU	2x	8	55	18,21,22	2.07	6 (33%)	25,30,33	1.63	5 (20%)
55	PSU	1x	55	55	18,21,22	1.35	2 (11%)	21,30,33	2.06	5 (23%)
32	5MC	1a	1404	32	19,22,23	1.63	3 (15%)	26,32,35	1.11	2 (7%)
32	5MC	2a	1404	32	19,22,23	1.74	3 (15%)	26,32,35	1.09	3 (11%)
1	4OC	1A	1942	1	19,22,24	0.78	0	25,31,35	0.98	1 (4%)
32	MA6	2a	1519	32	23,26,27	1.54	5 (21%)	33,38,41	2.37	13 (39%)
32	M2G	2a	966	32	24,27,28	1.33	4 (16%)	33,40,43	1.81	5 (15%)
43	0TD	1l	92	43	8,9,10	4.37	1 (12%)	6,11,13	7.53	2 (33%)
1	5MC	1A	1964	1	19,22,23	1.61	3 (15%)	26,32,35	1.06	3 (11%)
1	PSU	2A	1911	1	18,21,22	1.40	2 (11%)	21,30,33	2.02	3 (14%)
32	PSU	1a	516	56,32	18,21,22	1.41	2 (11%)	21,30,33	1.92	4 (19%)
55	5MU	2x	54	55	19,22,23	1.37	5 (26%)	27,32,35	2.07	6 (22%)
1	2MU	2A	2552	1	19,22,24	1.28	2 (10%)	25,31,36	1.90	5 (20%)
32	MA6	1a	1518	32	23,26,27	1.52	5 (21%)	33,38,41	2.29	13 (39%)
32	UR3	2a	1498	32	19,22,23	1.01	2 (10%)	26,32,35	1.67	4 (15%)
54	PPU	1w	76	1,54	37,40,41	1.25	4 (10%)	47,57,60	2.19	14 (29%)
1	5MC	1A	1984	1	19,22,23	1.66	3 (15%)	26,32,35	1.29	5 (19%)
32	5MC	2a	967	32	19,22,23	1.73	2 (10%)	26,32,35	1.06	2 (7%)
55	5MC	1x	32	55	19,22,23	1.65	3 (15%)	26,32,35	1.23	3 (11%)
1	OMG	2A	2251	1,55	23,26,27	1.24	3 (13%)	32,38,41	2.02	6 (18%)
55	5MU	1x	54	55	19,22,23	1.43	6 (31%)	27,32,35	1.90	6 (22%)
55	4SU	1x	8	55	18,21,22	1.96	5 (27%)	25,30,33	1.86	6 (24%)
1	PSU	1A	1933	1	18,21,22	1.38	2 (11%)	21,30,33	1.98	3 (14%)
1	PSU	1A	2617	1	18,21,22	1.40	2 (11%)	21,30,33	2.03	4 (19%)
1	PSU	2A	1917	1	18,21,22	1.43	3 (16%)	21,30,33	2.06	5 (23%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
43	0TD	2l	92	43	-	3/7/12/14	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
32	4OC	2a	1402	32	-	2/9/29/30	0/2/2/2
55	5MC	2x	32	55	-	0/7/25/26	0/2/2/2
1	PSU	2A	2605	1	-	0/7/25/26	0/2/2/2
1	5MU	1A	1961	1	-	0/7/25/26	0/2/2/2
1	2MA	1A	2515	1,56	-	0/7/25/26	0/3/3/3
1	2MU	1A	2564	1	-	0/9/27/28	0/2/2/2
1	PSU	1A	1939	1	-	0/7/25/26	0/2/2/2
32	7MG	1a	527	32	-	0/7/37/38	0/3/3/3
32	5MC	2a	1407	32	-	0/7/25/26	0/2/2/2
32	MA6	1a	1519	32	-	4/11/29/30	0/3/3/3
1	OMG	1A	2263	1,55	-	0/9/27/28	0/3/3/3
32	UR3	1a	1498	32	-	0/7/25/26	0/2/2/2
1	5MU	2A	1915	1	-	0/7/25/26	0/2/2/2
32	5MC	1a	1400	32	-	2/7/25/26	0/2/2/2
32	5MC	1a	1407	32	-	0/7/25/26	0/2/2/2
32	5MC	1a	967	32	-	2/7/25/26	0/2/2/2
55	PSU	2x	55	55	-	0/7/25/26	0/2/2/2
1	5MC	2A	1942	1	-	0/7/25/26	0/2/2/2
1	4OC	2A	1920	1	-	0/9/27/30	0/2/2/2
32	5MC	2a	1400	32	-	2/7/25/26	0/2/2/2
32	PSU	2a	516	32	-	0/7/25/26	0/2/2/2
32	MA6	2a	1518	32	-	1/11/29/30	0/3/3/3
32	7MG	2a	527	32	-	0/7/37/38	0/3/3/3
32	2MG	2a	1207	32	-	0/9/27/28	0/3/3/3
1	5MU	1A	1937	1	-	0/7/25/26	0/2/2/2
32	2MG	1a	1207	32	-	0/9/27/28	0/3/3/3
32	4OC	1a	1402	32	-	2/9/29/30	0/2/2/2
1	5MU	2A	1939	1	-	0/7/25/26	0/2/2/2
1	5MC	2A	1962	1	-	0/7/25/26	0/2/2/2
1	2MA	2A	2503	1,56	-	2/7/25/26	0/3/3/3
54	PPU	2w	76	1,54,56	-	5/25/43/44	0/4/4/4
32	M2G	1a	966	32	-	0/11/29/30	0/3/3/3
55	4SU	2x	8	55	-	0/7/25/26	0/2/2/2
55	PSU	1x	55	55	-	0/7/25/26	0/2/2/2
32	5MC	1a	1404	32	-	0/7/25/26	0/2/2/2
32	5MC	2a	1404	32	-	0/7/25/26	0/2/2/2
1	4OC	1A	1942	1	-	1/9/27/30	0/2/2/2
32	MA6	2a	1519	32	-	4/11/29/30	0/3/3/3
32	M2G	2a	966	32	-	4/11/29/30	0/3/3/3
43	0TD	1l	92	43	-	1/7/12/14	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	5MC	1A	1964	1	-	0/7/25/26	0/2/2/2
1	PSU	2A	1911	1	-	0/7/25/26	0/2/2/2
32	PSU	1a	516	56,32	-	2/7/25/26	0/2/2/2
55	5MU	2x	54	55	-	0/7/25/26	0/2/2/2
1	2MU	2A	2552	1	-	0/9/27/28	0/2/2/2
32	MA6	1a	1518	32	-	3/11/29/30	0/3/3/3
32	UR3	2a	1498	32	-	0/7/25/26	0/2/2/2
54	PPU	1w	76	1,54	-	5/25/43/44	0/4/4/4
1	5MC	1A	1984	1	-	0/7/25/26	0/2/2/2
32	5MC	2a	967	32	-	0/7/25/26	0/2/2/2
55	5MC	1x	32	55	-	0/7/25/26	0/2/2/2
1	OMG	2A	2251	1,55	-	0/9/27/28	0/3/3/3
55	5MU	1x	54	55	-	0/7/25/26	0/2/2/2
55	4SU	1x	8	55	-	0/7/25/26	0/2/2/2
1	PSU	1A	1933	1	-	0/7/25/26	0/2/2/2
1	PSU	1A	2617	1	-	0/7/25/26	0/2/2/2
1	PSU	2A	1917	1	-	0/7/25/26	0/2/2/2

All (174) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
43	2l	92	0TD	CB-SB	-12.17	1.70	1.82
43	1l	92	0TD	CB-SB	-12.03	1.70	1.82
32	2a	1400	5MC	C5-C4	6.46	1.49	1.44
32	2a	1404	5MC	C5-C4	6.41	1.49	1.44
32	2a	967	5MC	C5-C4	6.29	1.48	1.44
32	1a	1407	5MC	C5-C4	6.15	1.48	1.44
32	1a	1400	5MC	C5-C4	6.13	1.48	1.44
1	1A	1984	5MC	C5-C4	5.98	1.48	1.44
32	2a	1407	5MC	C5-C4	5.91	1.48	1.44
55	1x	32	5MC	C5-C4	5.89	1.48	1.44
32	1a	967	5MC	C5-C4	5.88	1.48	1.44
32	1a	1404	5MC	C5-C4	5.87	1.48	1.44
1	1A	1964	5MC	C5-C4	5.76	1.48	1.44
55	2x	32	5MC	C5-C4	5.75	1.48	1.44
1	2A	1942	5MC	C5-C4	5.72	1.48	1.44
1	2A	1962	5MC	C5-C4	5.20	1.48	1.44
55	1x	8	4SU	C4-S4	-5.05	1.59	1.68
55	2x	8	4SU	C4-S4	-4.85	1.60	1.68
54	2w	76	PPU	C5-C4	4.82	1.47	1.39
32	2a	1519	MA6	C5-C4	4.78	1.47	1.39
32	1a	1519	MA6	C5-C4	4.69	1.47	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	1a	1518	MA6	C5-C4	4.62	1.47	1.39
32	2a	1518	MA6	C5-C4	4.62	1.47	1.39
54	1w	76	PPU	C5-C4	4.62	1.47	1.39
1	2A	2503	2MA	C5-C4	4.50	1.47	1.39
55	2x	8	4SU	C4-N3	-4.32	1.33	1.37
1	1A	2515	2MA	C5-C4	4.25	1.46	1.39
1	2A	1911	PSU	C6-C5	3.76	1.39	1.35
55	2x	55	PSU	C6-C5	3.65	1.39	1.35
32	1a	516	PSU	C6-C5	3.60	1.39	1.35
1	2A	1917	PSU	C6-C5	3.59	1.39	1.35
55	1x	8	4SU	C4-N3	-3.59	1.33	1.37
1	1A	1939	PSU	C6-C5	3.57	1.39	1.35
32	2a	527	7MG	C4-N9	-3.57	1.33	1.37
1	1A	2617	PSU	C6-C5	3.49	1.39	1.35
32	2a	516	PSU	C6-C5	3.48	1.39	1.35
55	1x	8	4SU	C5-C4	-3.45	1.38	1.42
55	1x	55	PSU	C6-C5	3.39	1.39	1.35
32	2a	966	M2G	C5-C4	3.38	1.48	1.38
32	1a	527	7MG	C5-C4	3.36	1.48	1.37
1	2A	2605	PSU	C6-C5	3.34	1.39	1.35
1	2A	2251	OMG	C5-C4	3.25	1.47	1.38
1	1A	1933	PSU	C6-C5	3.25	1.38	1.35
32	1a	966	M2G	C5-C4	3.22	1.47	1.38
1	1A	2263	OMG	C5-C4	3.21	1.47	1.38
32	2a	527	7MG	C5-C4	3.19	1.47	1.37
55	2x	8	4SU	C5-C4	-3.19	1.38	1.42
32	1a	1207	2MG	C5-C4	3.19	1.47	1.38
32	2a	1207	2MG	C5-C4	3.18	1.47	1.38
32	1a	966	M2G	C2-N2	3.11	1.40	1.35
54	2w	76	PPU	C5-C6	3.04	1.49	1.41
32	1a	967	5MC	C6-C5	3.04	1.39	1.34
32	1a	1407	5MC	C6-C5	3.03	1.39	1.34
55	1x	32	5MC	C6-C5	3.02	1.39	1.34
55	2x	8	4SU	C2-N3	-3.02	1.32	1.38
32	2a	967	5MC	C6-C5	2.99	1.39	1.34
1	2A	2552	2MU	C4-N3	-2.96	1.33	1.38
32	1a	1518	MA6	C5-C6	2.93	1.48	1.41
32	2a	1407	5MC	C6-C5	2.93	1.39	1.34
1	1A	1937	5MU	C6-C5	2.89	1.39	1.34
32	1a	527	7MG	C4-N9	-2.89	1.34	1.37
32	1a	1519	MA6	C5-C6	2.88	1.48	1.41
32	2a	1518	MA6	C5-C6	2.84	1.48	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	2x	32	5MC	C6-C5	2.84	1.39	1.34
1	2A	1939	5MU	C6-C5	2.84	1.39	1.34
1	1A	1961	5MU	C4-N3	-2.82	1.33	1.38
1	1A	2564	2MU	C4-N3	-2.82	1.33	1.38
1	2A	1915	5MU	C6-C5	2.82	1.39	1.34
1	1A	2263	OMG	C6-N1	-2.82	1.33	1.38
1	2A	1942	5MC	C6-C5	2.81	1.39	1.34
32	2a	1404	5MC	C6-C5	2.80	1.39	1.34
1	2A	1917	PSU	C4-N3	-2.80	1.33	1.38
32	2a	1519	MA6	C5-C6	2.79	1.48	1.41
32	2a	966	M2G	C2-N2	2.78	1.40	1.35
1	1A	1964	5MC	C6-C5	2.76	1.39	1.34
1	1A	1937	5MU	C2-N1	2.75	1.42	1.38
32	1a	1404	5MC	C6-C5	2.72	1.39	1.34
55	1x	54	5MU	C6-C5	2.71	1.39	1.34
55	2x	55	PSU	C4-N3	-2.71	1.33	1.38
54	1w	76	PPU	C5-C6	2.69	1.48	1.41
1	1A	2617	PSU	C4-N3	-2.69	1.33	1.38
32	2a	1400	5MC	C6-C5	2.69	1.39	1.34
32	1a	1400	5MC	C6-C5	2.68	1.39	1.34
1	1A	1984	5MC	C6-N1	-2.68	1.33	1.38
55	1x	55	PSU	C4-N3	-2.67	1.33	1.38
55	2x	54	5MU	C6-C5	2.66	1.39	1.34
1	2A	2503	2MA	C5-C6	2.66	1.48	1.41
1	2A	2251	OMG	C6-N1	-2.65	1.33	1.38
1	1A	1937	5MU	C4-C5	2.62	1.49	1.44
1	1A	2515	2MA	C5-N7	-2.60	1.34	1.39
1	2A	2605	PSU	C4-N3	-2.60	1.34	1.38
55	1x	54	5MU	C4-N3	-2.60	1.34	1.38
1	1A	1961	5MU	C6-C5	2.59	1.38	1.34
32	2a	966	M2G	C6-N1	-2.56	1.34	1.38
1	1A	1937	5MU	C4-N3	-2.55	1.34	1.38
32	1a	527	7MG	C6-N1	-2.54	1.34	1.38
1	1A	1933	PSU	C4-N3	-2.51	1.34	1.38
1	2A	1962	5MC	C6-C5	2.49	1.38	1.34
1	1A	2515	2MA	C5-C6	2.49	1.47	1.41
1	1A	1961	5MU	C6-N1	-2.48	1.33	1.38
1	1A	2263	OMG	C5-N7	-2.47	1.34	1.39
1	2A	1962	5MC	C6-N1	-2.47	1.33	1.38
32	1a	1207	2MG	C6-N1	-2.47	1.34	1.38
54	1w	76	PPU	C5-N7	-2.46	1.34	1.39
55	1x	54	5MU	C4-C5	2.46	1.48	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	2a	516	PSU	C4-N3	-2.43	1.34	1.38
1	1A	1939	PSU	C4-N3	-2.43	1.34	1.38
1	2A	1915	5MU	C4-C5	2.42	1.48	1.44
55	1x	8	4SU	C2-N3	-2.42	1.33	1.38
55	2x	54	5MU	C4-C5	2.41	1.48	1.44
32	2a	1207	2MG	C2-N3	2.39	1.36	1.32
1	2A	2503	2MA	C5-N7	-2.38	1.34	1.39
32	1a	1518	MA6	C4-N9	-2.37	1.32	1.37
1	1A	1961	5MU	C4-C5	2.37	1.48	1.44
1	2A	1915	5MU	C2-N1	2.37	1.42	1.38
1	2A	1915	5MU	C4-N3	-2.36	1.34	1.38
1	2A	1911	PSU	C4-N3	-2.36	1.34	1.38
55	2x	54	5MU	C4-N3	-2.36	1.34	1.38
1	2A	2251	OMG	C5-N7	-2.36	1.34	1.39
55	1x	54	5MU	C6-N1	-2.35	1.34	1.38
32	2a	1519	MA6	C5-N7	-2.34	1.34	1.39
1	1A	1984	5MC	C6-C5	2.34	1.38	1.34
32	1a	1498	UR3	C2-N1	2.34	1.41	1.38
55	2x	8	4SU	C2-N1	2.34	1.42	1.38
1	2A	1939	5MU	C4-N3	-2.34	1.34	1.38
32	1a	516	PSU	C4-N3	-2.32	1.34	1.38
32	2a	1518	MA6	C4-N9	-2.32	1.32	1.37
32	2a	1518	MA6	C5-N7	-2.30	1.34	1.39
1	2A	2503	2MA	C8-N7	2.29	1.36	1.31
32	1a	1519	MA6	C5-N7	-2.29	1.34	1.39
1	1A	1961	5MU	C2-N3	-2.27	1.34	1.38
32	2a	527	7MG	C6-N1	-2.25	1.34	1.38
32	1a	1207	2MG	C2-N3	2.25	1.36	1.32
32	2a	1400	5MC	C6-N1	-2.24	1.34	1.38
32	1a	966	M2G	C5-N7	-2.24	1.34	1.39
54	2w	76	PPU	C5-N7	-2.24	1.35	1.39
32	2a	1518	MA6	C8-N7	2.23	1.36	1.31
32	1a	966	M2G	C6-N1	-2.23	1.34	1.38
55	2x	54	5MU	C2-N1	2.21	1.41	1.38
32	1a	1400	5MC	C6-N1	-2.21	1.34	1.38
32	2a	1407	5MC	C6-N1	-2.21	1.34	1.38
55	2x	54	5MU	C6-N1	-2.20	1.34	1.38
1	1A	2564	2MU	C2-N1	2.20	1.41	1.38
1	1A	2564	2MU	C5-C4	2.19	1.48	1.43
55	1x	54	5MU	C2-N1	2.19	1.41	1.38
32	1a	1518	MA6	C8-N7	2.18	1.35	1.31
54	2w	76	PPU	C8-N7	2.17	1.35	1.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	2a	966	M2G	C5-N7	-2.17	1.34	1.39
32	1a	1404	5MC	C6-N1	-2.16	1.34	1.38
55	1x	54	5MU	C2-N3	-2.16	1.34	1.38
1	2A	1939	5MU	C6-N1	-2.15	1.34	1.38
1	1A	1964	5MC	C6-N1	-2.15	1.34	1.38
1	2A	2605	PSU	C2-N3	-2.13	1.34	1.37
32	2a	1498	UR3	C2-N1	2.13	1.41	1.38
54	1w	76	PPU	C8-N7	2.12	1.35	1.31
32	2a	1404	5MC	C6-N1	-2.11	1.34	1.38
1	2A	2552	2MU	C5-C4	2.11	1.48	1.43
1	2A	1942	5MC	C6-N1	-2.10	1.34	1.38
32	2a	1519	MA6	C4-N9	-2.10	1.33	1.37
1	2A	1939	5MU	C2-N1	2.10	1.41	1.38
32	1a	1518	MA6	C5-N7	-2.09	1.35	1.39
55	1x	32	5MC	C6-N1	-2.09	1.34	1.38
32	2a	1519	MA6	C8-N7	2.09	1.35	1.31
32	1a	1519	MA6	C8-N7	2.08	1.35	1.31
32	2a	1498	UR3	C6-C5	2.08	1.39	1.35
1	2A	1915	5MU	C6-N1	-2.07	1.34	1.38
1	2A	1917	PSU	C2-N3	-2.07	1.34	1.37
32	1a	1519	MA6	C4-N9	-2.06	1.33	1.37
55	2x	32	5MC	C6-N1	-2.05	1.34	1.38
32	2a	1207	2MG	C6-N1	-2.04	1.35	1.38
55	1x	8	4SU	C2-N1	2.04	1.41	1.38
55	2x	8	4SU	O2-C2	2.03	1.26	1.23
1	1A	2515	2MA	C8-N7	2.03	1.35	1.31
32	1a	1207	2MG	C5-N7	-2.02	1.35	1.39

All (301) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
43	2l	92	0TD	CSB-SB-CB	-19.22	67.82	102.36
43	1l	92	0TD	CSB-SB-CB	-18.13	69.78	102.36
32	2a	527	7MG	N9-C4-N3	8.94	138.56	125.46
1	1A	2515	2MA	C5-C4-N3	-8.79	117.92	127.18
32	1a	527	7MG	N9-C4-N3	8.73	138.25	125.46
1	2A	2503	2MA	C5-C4-N3	-8.31	118.42	127.18
32	2a	1207	2MG	C2-N3-C4	7.51	121.40	112.00
1	1A	2515	2MA	N3-C4-N9	7.01	135.89	126.99
1	1A	2263	OMG	C5-C4-N3	-6.87	117.46	128.39
32	1a	1498	UR3	C4-N3-C2	-6.80	119.11	124.58
1	2A	2251	OMG	C5-C4-N3	-6.77	117.61	128.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	1a	1207	2MG	C2-N3-C4	6.75	120.44	112.00
55	2x	55	PSU	N1-C2-N3	6.67	122.20	115.17
1	2A	1917	PSU	N1-C2-N3	6.64	122.17	115.17
54	2w	76	PPU	C5-C4-N3	-6.61	117.62	126.72
32	2a	1498	UR3	C4-N3-C2	-6.55	119.31	124.58
1	2A	2503	2MA	N3-C4-N9	6.41	135.13	126.99
32	2a	1207	2MG	C5-C4-N3	-6.39	118.21	128.39
55	1x	55	PSU	N1-C2-N3	6.38	121.90	115.17
1	1A	2617	PSU	N1-C2-N3	6.28	121.79	115.17
1	1A	1933	PSU	N1-C2-N3	6.27	121.78	115.17
1	2A	1911	PSU	N1-C2-N3	6.27	121.78	115.17
32	2a	966	M2G	C5-C4-N3	-6.16	118.59	128.39
1	1A	1939	PSU	N1-C2-N3	6.15	121.66	115.17
32	1a	966	M2G	C5-C4-N3	-6.14	118.63	128.39
32	1a	1207	2MG	C5-C4-N3	-6.13	118.63	128.39
54	1w	76	PPU	C5-C4-N3	-6.12	118.28	126.72
32	2a	516	PSU	N1-C2-N3	5.93	121.43	115.17
1	1A	1961	5MU	C4-N3-C2	-5.77	119.78	127.34
32	1a	516	PSU	N1-C2-N3	5.75	121.23	115.17
32	1a	1519	MA6	C5-C4-N3	-5.66	118.93	126.72
1	2A	2605	PSU	N1-C2-N3	5.65	121.13	115.17
32	2a	527	7MG	N9-C8-N7	-5.64	95.39	103.37
32	1a	527	7MG	C5-C4-N3	-5.51	117.78	128.13
1	1A	1961	5MU	N3-C2-N1	5.48	122.03	114.89
32	2a	1519	MA6	C5-C4-N3	-5.44	119.22	126.72
1	2A	1939	5MU	O4-C4-C5	-5.28	118.88	124.92
1	1A	2263	OMG	N9-C4-N3	5.27	136.49	125.95
1	2A	2251	OMG	N9-C4-N3	5.22	136.39	125.95
32	2a	527	7MG	C5-C4-N3	-5.17	118.42	128.13
32	1a	527	7MG	N9-C8-N7	-5.16	96.06	103.37
1	2A	2251	OMG	C2-N3-C4	5.14	121.16	112.30
55	1x	8	4SU	C5-C4-N3	5.12	119.51	114.75
1	2A	1939	5MU	C4-N3-C2	-5.09	120.66	127.34
1	2A	2552	2MU	N3-C2-N1	5.09	121.51	114.89
32	1a	1518	MA6	C5-C4-N3	-5.06	119.75	126.72
1	1A	1937	5MU	N3-C2-N1	5.03	121.44	114.89
55	2x	54	5MU	C4-N3-C2	-5.01	120.78	127.34
32	2a	1518	MA6	C5-C4-N3	-5.00	119.83	126.72
1	1A	2564	2MU	N3-C2-N1	4.95	121.34	114.89
1	2A	1915	5MU	C4-N3-C2	-4.95	120.85	127.34
1	1A	2263	OMG	C2-N3-C4	4.89	120.73	112.30
32	1a	966	M2G	N9-C4-N3	4.83	135.62	125.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	2a	966	M2G	N9-C4-N3	4.82	135.58	125.95
55	2x	54	5MU	N3-C2-N1	4.79	121.12	114.89
1	2A	1915	5MU	N3-C2-N1	4.76	121.08	114.89
1	1A	1937	5MU	C4-N3-C2	-4.74	121.12	127.34
32	2a	1207	2MG	N9-C4-N3	4.71	135.37	125.95
54	2w	76	PPU	N3-C4-N9	4.70	135.16	127.17
54	1w	76	PPU	C9-N6-C6	-4.68	108.61	120.52
1	2A	2552	2MU	C4-N3-C2	-4.68	120.81	126.61
54	2w	76	PPU	C9-N6-C6	-4.67	108.64	120.52
32	1a	1518	MA6	C9-N6-C6	-4.67	108.65	120.52
55	1x	54	5MU	N3-C2-N1	4.63	120.92	114.89
1	1A	1961	5MU	C5-C6-N1	-4.60	118.32	123.31
54	1w	76	PPU	N3-C4-N9	4.57	134.93	127.17
1	2A	1939	5MU	N3-C2-N1	4.56	120.83	114.89
32	1a	966	M2G	C2-N3-C4	4.56	120.94	112.51
1	1A	1961	5MU	C5-C4-N3	4.54	119.27	115.32
32	2a	1519	MA6	N3-C4-N9	4.50	134.82	127.17
32	2a	1518	MA6	C2-N1-C6	4.48	122.78	111.83
32	1a	1207	2MG	N9-C4-N3	4.48	134.92	125.95
1	2A	1939	5MU	C5-C4-N3	4.48	119.22	115.32
54	1w	76	PPU	C3'-N3'-C	-4.48	116.39	123.20
55	1x	54	5MU	C4-N3-C2	-4.44	121.52	127.34
1	2A	1915	5MU	O4-C4-C5	-4.41	119.87	124.92
32	1a	1519	MA6	C9-N6-C6	-4.39	109.36	120.52
32	1a	1518	MA6	C2-N1-C6	4.38	122.53	111.83
1	1A	2564	2MU	C4-N3-C2	-4.38	121.18	126.61
32	1a	1519	MA6	N3-C4-N9	4.37	134.60	127.17
1	2A	1915	5MU	C5-C4-N3	4.37	119.12	115.32
32	2a	1518	MA6	C9-N6-C6	-4.36	109.43	120.52
32	2a	527	7MG	C2-N3-C4	4.34	119.77	112.30
55	1x	55	PSU	C4-N3-C2	-4.34	120.39	126.37
32	2a	1519	MA6	C2-N1-C6	4.32	122.39	111.83
32	1a	527	7MG	C2-N3-C4	4.29	119.69	112.30
32	1a	1519	MA6	C2-N1-C6	4.28	122.29	111.83
1	1A	1937	5MU	C5-C4-N3	4.24	119.01	115.32
55	2x	54	5MU	C5-C4-N3	4.22	118.99	115.32
1	1A	2617	PSU	C4-N3-C2	-4.21	120.57	126.37
55	2x	8	4SU	C5-C4-N3	4.21	118.67	114.75
55	2x	55	PSU	C4-N3-C2	-4.19	120.60	126.37
32	2a	1519	MA6	C9-N6-C6	-4.17	109.90	120.52
32	2a	966	M2G	C2-N3-C4	4.17	120.22	112.51
1	2A	2605	PSU	C4-N3-C2	-4.16	120.64	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	2A	1917	PSU	C4-N3-C2	-4.15	120.66	126.37
54	2w	76	PPU	C4-C5-N7	-4.14	105.85	110.58
55	2x	54	5MU	O4-C4-C5	-4.11	120.22	124.92
32	1a	1518	MA6	C4-C5-N7	-4.09	105.91	110.58
54	2w	76	PPU	C2-N3-C4	4.02	121.65	111.83
1	2A	1911	PSU	O2-C2-N1	-4.02	118.64	122.79
32	1a	1519	MA6	C4-C5-N7	-4.00	106.01	110.58
1	1A	1933	PSU	O2-C2-N1	-3.99	118.67	122.79
54	1w	76	PPU	C2-N1-C6	3.92	121.40	111.83
1	2A	1939	5MU	C5-C6-N1	-3.90	119.08	123.31
54	2w	76	PPU	C2-N1-C6	3.89	121.32	111.83
32	1a	1518	MA6	N3-C4-N9	3.87	133.74	127.17
1	1A	1984	5MC	C5-C6-N1	-3.84	119.15	123.31
1	2A	1911	PSU	C4-N3-C2	-3.83	121.10	126.37
32	2a	1518	MA6	N3-C4-N9	3.82	133.67	127.17
54	1w	76	PPU	C2-N3-C4	3.82	121.16	111.83
55	2x	55	PSU	O2-C2-N1	-3.80	118.88	122.79
32	2a	516	PSU	O2-C2-N1	-3.77	118.90	122.79
54	1w	76	PPU	C10-N6-C6	-3.77	110.94	120.52
1	1A	1939	PSU	O2-C2-N1	-3.76	118.91	122.79
32	2a	1518	MA6	C4-C5-N7	-3.75	106.29	110.58
1	1A	1933	PSU	C4-N3-C2	-3.75	121.21	126.37
32	2a	516	PSU	C4-N3-C2	-3.73	121.24	126.37
1	1A	1961	5MU	O4-C4-C5	-3.72	120.66	124.92
1	1A	1939	PSU	C4-N3-C2	-3.71	121.26	126.37
55	1x	8	4SU	C5-C4-S4	-3.68	120.10	124.31
55	1x	54	5MU	C5-C4-N3	3.64	118.49	115.32
32	2a	1407	5MC	C5-C6-N1	-3.64	119.36	123.31
54	2w	76	PPU	C10-N6-C6	-3.63	111.29	120.52
32	1a	1400	5MC	C5-C6-N1	-3.63	119.37	123.31
32	2a	1519	MA6	C4-C5-N7	-3.63	106.43	110.58
32	2a	1519	MA6	N1-C6-N6	3.61	121.26	116.86
1	2A	2503	2MA	C4-C5-N7	-3.60	106.47	110.58
32	1a	516	PSU	C4-N3-C2	-3.59	121.43	126.37
32	2a	1518	MA6	N1-C2-N3	-3.58	123.17	128.58
32	1a	1518	MA6	C2-N3-C4	3.56	120.53	111.83
32	2a	1518	MA6	C2-N3-C4	3.55	120.51	111.83
1	2A	1962	5MC	C5-C6-N1	-3.54	119.47	123.31
54	1w	76	PPU	C4-C5-N7	-3.53	106.54	110.58
1	1A	1961	5MU	O2-C2-N1	-3.53	118.20	122.80
32	1a	1519	MA6	C2-N3-C4	3.52	120.44	111.83
55	1x	8	4SU	C4-N3-C2	-3.49	123.97	127.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	1a	1518	MA6	N1-C2-N3	-3.46	123.34	128.58
55	2x	8	4SU	C1'-N1-C2	3.42	123.74	117.59
1	1A	1937	5MU	O4-C4-C5	-3.42	121.00	124.92
55	2x	54	5MU	C5-C6-N1	-3.41	119.61	123.31
55	1x	54	5MU	O4-C4-C5	-3.39	121.04	124.92
32	1a	1404	5MC	C5-C6-N1	-3.35	119.67	123.31
32	2a	1519	MA6	C2-N3-C4	3.34	119.99	111.83
32	1a	516	PSU	O2-C2-N1	-3.31	119.37	122.79
55	1x	32	5MC	C5-C6-N1	-3.30	119.72	123.31
55	1x	8	4SU	C1'-N1-C2	3.30	123.52	117.59
32	2a	1518	MA6	C10-N6-C6	-3.30	112.13	120.52
32	2a	1400	5MC	C5-C6-N1	-3.30	119.73	123.31
1	2A	1915	5MU	C5-C6-N1	-3.29	119.74	123.31
32	2a	1207	2MG	C6-C5-N7	3.27	136.24	130.29
1	1A	2617	PSU	O2-C2-N1	-3.27	119.42	122.79
32	1a	1518	MA6	C4-N9-C8	3.27	109.17	105.74
55	1x	32	5MC	C5-C4-N3	-3.25	118.42	121.75
1	1A	1964	5MC	C5-C6-N1	-3.24	119.79	123.31
55	1x	55	PSU	O2-C2-N1	-3.24	119.45	122.79
32	2a	1404	5MC	C5-C6-N1	-3.23	119.81	123.31
32	2a	1519	MA6	C10-N6-C6	-3.23	112.32	120.52
55	2x	32	5MC	C5-C6-N1	-3.22	119.82	123.31
32	2a	1519	MA6	C4-N9-C8	3.21	109.11	105.74
32	1a	1498	UR3	C5-C4-N3	3.18	119.23	115.04
55	1x	54	5MU	C5-C6-N1	-3.16	119.88	123.31
54	1w	76	PPU	N3-C2-N1	-3.15	123.81	128.58
1	2A	1939	5MU	O2-C2-N1	-3.13	118.72	122.80
1	1A	2515	2MA	C4-C5-N7	-3.13	107.00	110.58
54	2w	76	PPU	CG-CB-CA	-3.12	107.74	114.13
32	1a	1519	MA6	N1-C2-N3	-3.11	123.88	128.58
1	2A	1942	5MC	C5-C6-N1	-3.10	119.94	123.31
54	2w	76	PPU	N3-C2-N1	-3.06	123.95	128.58
32	2a	1519	MA6	N1-C2-N3	-3.04	123.98	128.58
1	2A	1942	5MC	C5-C4-N3	-3.02	118.65	121.75
32	2a	967	5MC	C5-C6-N1	-3.02	120.03	123.31
32	1a	1207	2MG	C6-C5-N7	3.01	135.77	130.29
32	1a	1407	5MC	C5-C6-N1	-3.00	120.05	123.31
1	2A	1917	PSU	O2-C2-N1	-2.99	119.70	122.79
32	1a	1407	5MC	O2-C2-N3	-2.99	117.62	122.33
32	1a	516	PSU	C6-C5-C4	-2.99	116.16	118.17
32	1a	1519	MA6	C10-N6-C6	-2.98	112.93	120.52
54	1w	76	PPU	CG-CB-CA	-2.98	108.03	114.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	2A	2552	2MU	C5-C4-N3	2.94	118.92	114.80
54	1w	76	PPU	N1-C6-N6	2.92	120.41	116.86
1	2A	2503	2MA	N6-C6-N1	2.90	120.94	117.03
32	2a	1518	MA6	C4-N9-C8	2.90	108.78	105.74
54	2w	76	PPU	C3'-N3'-C	-2.86	118.85	123.20
32	1a	1519	MA6	C5-N7-C8	2.85	107.93	103.45
32	2a	1498	UR3	C5-C4-N3	2.85	118.79	115.04
32	1a	1518	MA6	C5-N7-C8	2.84	107.92	103.45
55	2x	32	5MC	C5-C4-N3	-2.83	118.85	121.75
55	1x	8	4SU	C6-C5-C4	-2.83	117.50	119.95
32	1a	1519	MA6	C4-N9-C8	2.83	108.70	105.74
1	1A	2564	2MU	C5-C4-N3	2.82	118.75	114.80
32	2a	527	7MG	C5-C6-N1	2.80	115.86	110.94
32	1a	967	5MC	C5-C4-N3	-2.80	118.89	121.75
32	1a	967	5MC	C5-C6-N1	-2.79	120.28	123.31
32	1a	1404	5MC	C5-C4-N3	-2.78	118.90	121.75
1	2A	2552	2MU	O2-C2-N1	-2.78	119.18	122.80
32	2a	1207	2MG	C4-C5-N7	-2.78	106.27	110.67
32	2a	1407	5MC	C5-C4-N3	-2.76	118.93	121.75
54	2w	76	PPU	C5-N7-C8	2.75	107.77	103.45
32	2a	1519	MA6	C5-N7-C8	2.74	107.75	103.45
43	2l	92	0TD	OD2-CG-CB	2.74	119.06	113.15
1	2A	2552	2MU	O4-C4-C5	-2.73	120.45	125.16
32	1a	1518	MA6	C10-N6-C6	-2.73	113.59	120.52
1	1A	1937	5MU	C5-C6-N1	-2.72	120.36	123.31
1	1A	2515	2MA	N6-C6-N1	2.72	120.69	117.03
32	1a	1407	5MC	C5-C4-N3	-2.70	118.99	121.75
32	2a	1518	MA6	N1-C6-N6	2.69	120.14	116.86
32	2a	967	5MC	C5-C4-N3	-2.69	119.00	121.75
55	2x	54	5MU	O2-C2-N1	-2.65	119.34	122.80
55	2x	8	4SU	C6-C5-C4	-2.65	117.66	119.95
1	2A	2605	PSU	O2-C2-N1	-2.64	120.07	122.79
32	2a	1518	MA6	C5-N7-C8	2.63	107.58	103.45
1	2A	2503	2MA	C4-N9-C8	2.62	108.49	105.74
32	1a	1518	MA6	C6-C5-N7	2.62	137.62	133.43
1	2A	1962	5MC	C5-C4-N3	-2.62	119.07	121.75
32	2a	966	M2G	C6-C5-N7	2.61	135.05	130.29
32	2a	527	7MG	C5-C4-N9	-2.61	102.99	106.33
1	2A	2503	2MA	C5-N7-C8	2.61	107.55	103.45
32	1a	1207	2MG	C4-C5-N7	-2.60	106.55	110.67
32	1a	1519	MA6	N1-C6-N6	2.59	120.01	116.86
32	1a	966	M2G	C6-C5-N7	2.58	134.99	130.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	2A	1915	5MU	O2-C2-N1	-2.54	119.49	122.80
55	2x	8	4SU	O2-C2-N3	-2.54	116.81	121.49
1	1A	2564	2MU	O4-C4-C5	-2.53	120.81	125.16
55	2x	8	4SU	O2-C2-N1	2.53	126.08	122.80
1	2A	2503	2MA	C2-N1-C6	2.52	121.97	118.10
32	1a	527	7MG	C5-C6-N1	2.52	115.37	110.94
54	2w	76	PPU	C10-N6-C9	-2.51	108.11	116.18
43	1l	92	0TD	OD2-CG-CB	2.50	118.56	113.15
32	1a	966	M2G	O6-C6-C5	-2.50	119.92	126.53
55	1x	32	5MC	O2-C2-N3	-2.49	118.41	122.33
32	2a	1400	5MC	C5-C4-N3	-2.46	119.23	121.75
1	1A	1937	5MU	C5M-C5-C4	2.44	121.39	118.78
32	1a	967	5MC	O2-C2-N3	-2.44	118.48	122.33
32	2a	1404	5MC	C5-C4-N3	-2.42	119.27	121.75
32	1a	1518	MA6	N9-C8-N7	-2.42	110.50	113.94
54	1w	76	PPU	C5-N7-C8	2.41	107.23	103.45
55	1x	55	PSU	C5-C6-N1	-2.40	118.81	122.14
1	1A	2515	2MA	C4-N9-C8	2.38	108.24	105.74
54	2w	76	PPU	N1-C6-N6	2.38	119.76	116.86
1	1A	2515	2MA	C5-N7-C8	2.37	107.17	103.45
1	2A	2251	OMG	C6-C5-N7	2.36	134.58	130.29
1	1A	1984	5MC	C5-C4-N3	-2.34	119.35	121.75
1	1A	1942	4OC	O2-C2-N3	-2.34	118.64	122.33
54	1w	76	PPU	C5-C6-N6	-2.31	121.68	125.33
1	1A	2564	2MU	O2-C2-N1	-2.30	119.80	122.80
1	1A	2263	OMG	C4-C5-N7	-2.29	107.04	110.67
1	1A	1964	5MC	O2-C2-N3	-2.28	118.73	122.33
32	2a	966	M2G	C4-C5-N7	-2.28	107.06	110.67
1	1A	2263	OMG	C6-C5-N7	2.27	134.43	130.29
55	1x	8	4SU	N3-C2-N1	2.27	117.85	114.89
1	2A	1942	5MC	O2-C2-N3	-2.26	118.77	122.33
32	2a	1518	MA6	C6-C5-N7	2.26	137.04	133.43
1	1A	1964	5MC	C5-C4-N3	-2.26	119.44	121.75
32	2a	1207	2MG	C2-N1-C6	-2.25	121.82	124.55
32	2a	1519	MA6	N9-C8-N7	-2.25	110.74	113.94
55	1x	54	5MU	C5M-C5-C4	2.25	121.19	118.78
1	1A	2515	2MA	C2-N1-C6	2.24	121.55	118.10
32	2a	527	7MG	O6-C6-C5	-2.24	122.12	127.62
32	2a	1207	2MG	O6-C6-C5	-2.24	120.63	126.53
1	1A	1984	5MC	O2-C2-N3	-2.22	118.83	122.33
32	2a	1518	MA6	C10-N6-C9	-2.22	109.05	116.18
32	2a	1402	4OC	C6-C5-C4	2.22	119.67	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	2A	1917	PSU	C5-C6-N1	-2.20	119.09	122.14
1	2A	2251	OMG	C4-C5-N7	-2.20	107.19	110.67
32	1a	1498	UR3	C3U-N3-C2	2.19	121.15	117.33
32	2a	1518	MA6	N9-C8-N7	-2.18	110.84	113.94
32	1a	1400	5MC	C5-C4-N3	-2.18	119.52	121.75
32	2a	1404	5MC	O2-C2-N3	-2.18	118.89	122.33
55	2x	32	5MC	O2-C2-N3	-2.18	118.90	122.33
32	2a	1207	2MG	N1-C2-N2	2.16	118.76	116.56
32	1a	1519	MA6	N9-C8-N7	-2.15	110.88	113.94
55	2x	55	PSU	C5-C6-N1	-2.14	119.17	122.14
32	2a	1498	UR3	C3U-N3-C4	2.14	120.83	117.87
1	2A	1962	5MC	O2-C2-N3	-2.13	118.97	122.33
1	1A	2617	PSU	C5-C6-N1	-2.13	119.18	122.14
32	2a	516	PSU	O4'-C1'-C2'	2.13	108.09	105.15
1	1A	1984	5MC	C1'-N1-C6	-2.12	117.66	121.15
1	2A	2605	PSU	C6-C5-C4	-2.12	116.75	118.17
1	2A	2605	PSU	C5-C6-N1	-2.11	119.21	122.14
1	2A	1917	PSU	O2-C2-N3	-2.10	118.13	121.86
32	1a	1518	MA6	C10-N6-C9	-2.09	109.46	116.18
1	1A	2263	OMG	O6-C6-C5	-2.08	121.04	126.53
32	2a	1498	UR3	C6-N1-C2	-2.08	120.10	121.80
1	1A	1984	5MC	CM5-C5-C6	-2.08	120.04	122.85
32	1a	1498	UR3	C6-N1-C2	-2.07	120.11	121.80
32	1a	1207	2MG	C2-N1-C6	-2.07	122.05	124.55
1	2A	2251	OMG	O6-C6-C5	-2.07	121.07	126.53
32	2a	1519	MA6	C5-C6-N6	-2.06	122.06	125.33
1	2A	1962	5MC	C1'-N1-C6	-2.06	117.76	121.15
32	1a	1207	2MG	O6-C6-C5	-2.05	121.13	126.53
55	1x	55	PSU	O4'-C1'-C2'	2.04	107.98	105.15
1	2A	2503	2MA	N9-C8-N7	-2.04	111.04	113.94
32	1a	1402	4OC	C6-C5-C4	2.04	119.45	117.00
54	1w	76	PPU	C10-N6-C9	-2.03	109.65	116.18
32	1a	1519	MA6	C10-N6-C9	-2.03	109.67	116.18
32	2a	1407	5MC	O2-C2-N3	-2.03	119.14	122.33
32	1a	966	M2G	C4-C5-N7	-2.02	107.46	110.67
32	1a	1400	5MC	O2-C2-N3	-2.02	119.14	122.33
1	2A	2503	2MA	C6-C5-N7	2.02	135.99	132.09
32	2a	1207	2MG	CM2-N2-C2	-2.01	119.33	123.65

There are no chirality outliers.

All (45) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
43	2l	92	0TD	O-C-CA-CB
32	1a	516	PSU	C2'-C1'-C5-C4
32	1a	516	PSU	C2'-C1'-C5-C6
32	2a	966	M2G	N1-C2-N2-CM2
32	2a	966	M2G	N3-C2-N2-CM1
32	2a	966	M2G	N3-C2-N2-CM2
32	1a	967	5MC	O4'-C4'-C5'-O5'
32	2a	1400	5MC	O4'-C4'-C5'-O5'
32	1a	1402	4OC	O4'-C4'-C5'-O5'
32	2a	1402	4OC	O4'-C4'-C5'-O5'
32	1a	1519	MA6	O4'-C4'-C5'-O5'
32	2a	1519	MA6	O4'-C4'-C5'-O5'
54	1w	76	PPU	C3'-C4'-C5'-O5'
32	1a	1402	4OC	C3'-C4'-C5'-O5'
32	2a	1402	4OC	C3'-C4'-C5'-O5'
32	2a	1519	MA6	C3'-C4'-C5'-O5'
54	1w	76	PPU	O4'-C4'-C5'-O5'
32	1a	967	5MC	C3'-C4'-C5'-O5'
54	2w	76	PPU	C3'-C4'-C5'-O5'
32	2a	1400	5MC	C3'-C4'-C5'-O5'
32	1a	1519	MA6	C3'-C4'-C5'-O5'
32	1a	1400	5MC	O4'-C4'-C5'-O5'
32	1a	1518	MA6	C5-C6-N6-C9
54	2w	76	PPU	O4'-C4'-C5'-O5'
32	2a	966	M2G	N1-C2-N2-CM1
32	1a	1518	MA6	C5-C6-N6-C10
32	2a	1518	MA6	C5-C6-N6-C10
54	1w	76	PPU	C5-C6-N6-C10
43	2l	92	0TD	SB-CB-CG-OD1
54	1w	76	PPU	N-CA-CB-CG
54	2w	76	PPU	N-CA-CB-CG
32	2a	1519	MA6	C4'-C5'-O5'-P
32	1a	1519	MA6	C5-C6-N6-C10
32	2a	1519	MA6	C5-C6-N6-C10
54	2w	76	PPU	C5-C6-N6-C10
32	1a	1518	MA6	N1-C6-N6-C9
32	1a	1400	5MC	C3'-C4'-C5'-O5'
32	1a	1519	MA6	C4'-C5'-O5'-P
54	1w	76	PPU	C-CA-CB-CG
54	2w	76	PPU	C-CA-CB-CG
43	1l	92	0TD	CG-CB-SB-CSB
43	2l	92	0TD	CG-CB-SB-CSB
1	2A	2503	2MA	O4'-C1'-N9-C8

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Mol	Chain	Res	Type	Atoms
1	1A	1942	4OC	C2'-C1'-N1-C2
1	2A	2503	2MA	O4'-C4'-C5'-O5'

There are no ring outliers.

30 monomers are involved in 49 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
32	2a	1402	4OC	1	0
1	1A	2515	2MA	1	0
1	1A	2564	2MU	1	0
1	1A	1939	PSU	1	0
32	1a	1519	MA6	3	0
1	1A	2263	OMG	3	0
32	1a	967	5MC	1	0
32	2a	1518	MA6	2	0
32	2a	1207	2MG	3	0
1	1A	1937	5MU	1	0
32	1a	1207	2MG	2	0
32	1a	1402	4OC	3	0
1	2A	1939	5MU	1	0
1	2A	1962	5MC	1	0
1	2A	2503	2MA	2	0
54	2w	76	PPU	3	0
32	1a	966	M2G	2	0
55	2x	8	4SU	2	0
32	2a	1404	5MC	1	0
1	1A	1942	4OC	2	0
32	2a	1519	MA6	2	0
1	2A	1911	PSU	1	0
55	2x	54	5MU	2	0
1	2A	2552	2MU	1	0
32	1a	1518	MA6	4	0
32	2a	1498	UR3	1	0
54	1w	76	PPU	2	0
1	1A	1984	5MC	1	0
55	1x	54	5MU	2	0
55	1x	8	4SU	1	0

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 1170 ligands modelled in this entry, 1168 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
58	SF4	1d	302	35	0,12,12	-	-	-		
58	SF4	2d	302	35	0,12,12	-	-	-		

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
58	SF4	1d	302	35	-	-	0/6/5/5
58	SF4	2d	302	35	-	-	0/6/5/5

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.

2 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
58	1d	302	SF4	2	0
58	2d	302	SF4	2	0

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
3	2D	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	2D	7:LYS	C	8:PRO	N	1.17

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, 95th 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	1A	2860/2915 (98%)	0.14	95 (3%)	49	31	82, 102, 143, 157	0
1	2A	2789/2915 (95%)	-0.01	81 (2%)	53	33	88, 107, 136, 157	0
2	1B	120/121 (99%)	-0.41	0	100	100	104, 121, 132, 134	0
2	2B	120/121 (99%)	-0.28	0	100	100	111, 125, 135, 152	0
3	1D	275/276 (99%)	0.59	25 (9%)	15	13	84, 95, 108, 127	0
3	2D	275/276 (99%)	0.82	31 (11%)	10	11	88, 104, 114, 123	0
4	1E	204/206 (99%)	0.55	27 (13%)	7	9	86, 108, 122, 131	0
4	2E	204/206 (99%)	0.05	13 (6%)	25	18	88, 105, 119, 129	0
5	1F	203/210 (96%)	-0.07	5 (2%)	58	36	79, 102, 120, 137	0
5	2F	203/210 (96%)	0.64	34 (16%)	4	6	90, 108, 122, 130	0
6	1G	181/182 (99%)	0.24	7 (3%)	43	28	112, 122, 131, 139	0
6	2G	181/182 (99%)	0.08	2 (1%)	78	53	113, 126, 136, 149	0
7	1H	174/180 (96%)	0.11	4 (2%)	61	38	96, 113, 124, 131	0
7	2H	174/180 (96%)	-0.15	0	100	100	105, 125, 134, 142	0
8	1I	146/148 (98%)	-0.10	3 (2%)	63	40	102, 115, 124, 134	0
8	2I	146/148 (98%)	0.55	10 (6%)	23	17	109, 124, 138, 143	0
9	1N	140/140 (100%)	0.19	7 (5%)	34	22	93, 106, 119, 122	0
9	2N	140/140 (100%)	0.49	8 (5%)	29	20	97, 111, 122, 135	0
10	1O	122/122 (100%)	0.32	2 (1%)	70	45	90, 108, 122, 128	0
10	2O	122/122 (100%)	0.36	3 (2%)	58	36	87, 102, 113, 118	0
11	1P	149/150 (99%)	0.40	6 (4%)	42	27	85, 109, 124, 130	0
11	2P	149/150 (99%)	-0.04	3 (2%)	65	41	90, 115, 126, 134	0
12	1Q	141/141 (100%)	0.34	8 (5%)	29	20	89, 108, 119, 127	0
12	2Q	141/141 (100%)	-0.09	1 (0%)	84	63	96, 110, 122, 130	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	1R	118/118 (100%)	0.33	6 (5%) 33 22	94, 104, 116, 125	0
13	2R	118/118 (100%)	0.57	13 (11%) 10 11	89, 103, 111, 118	0
14	1S	110/112 (98%)	0.18	5 (4%) 38 24	106, 116, 125, 131	0
14	2S	110/112 (98%)	0.17	2 (1%) 67 42	106, 119, 127, 130	0
15	1T	131/146 (89%)	0.21	7 (5%) 32 21	95, 110, 123, 138	0
15	2T	131/146 (89%)	0.14	5 (3%) 44 28	92, 106, 121, 129	0
16	1U	116/118 (98%)	0.31	5 (4%) 40 25	86, 105, 119, 134	0
16	2U	116/118 (98%)	0.84	21 (18%) 3 4	94, 109, 121, 125	0
17	1V	101/101 (100%)	0.00	2 (1%) 65 41	88, 106, 120, 127	0
17	2V	101/101 (100%)	0.02	1 (0%) 79 55	93, 114, 127, 136	0
18	1W	112/113 (99%)	0.27	3 (2%) 56 35	88, 101, 120, 131	0
18	2W	112/113 (99%)	0.06	2 (1%) 67 42	87, 101, 113, 129	0
19	1X	95/96 (98%)	0.12	0 100 100	87, 98, 116, 125	0
19	2X	95/96 (98%)	0.51	5 (5%) 32 21	98, 107, 127, 132	0
20	1Y	107/110 (97%)	0.23	1 (0%) 81 58	86, 108, 121, 126	0
20	2Y	107/110 (97%)	0.31	3 (2%) 55 34	91, 113, 126, 133	0
21	1Z	154/206 (74%)	-0.02	3 (1%) 66 42	109, 120, 132, 138	0
21	2Z	160/206 (77%)	-0.28	0 100 100	111, 123, 131, 135	0
22	10	83/85 (97%)	0.21	1 (1%) 76 51	94, 108, 116, 124	0
22	20	83/85 (97%)	0.29	4 (4%) 35 23	101, 114, 122, 125	0
23	11	97/98 (98%)	0.69	11 (11%) 10 11	87, 101, 121, 131	0
23	21	97/98 (98%)	1.13	17 (17%) 4 5	92, 110, 124, 130	0
24	12	70/72 (97%)	0.19	3 (4%) 40 25	87, 101, 111, 128	0
24	22	70/72 (97%)	0.29	1 (1%) 73 48	106, 116, 126, 129	0
25	13	59/60 (98%)	0.07	0 100 100	86, 107, 121, 139	0
25	23	59/60 (98%)	-0.01	1 (1%) 69 43	99, 108, 131, 143	0
26	14	69/71 (97%)	0.14	0 100 100	121, 130, 141, 147	0
26	24	69/71 (97%)	-0.17	0 100 100	117, 128, 137, 144	0
27	15	59/60 (98%)	0.24	2 (3%) 48 30	89, 103, 117, 122	0
27	25	59/60 (98%)	0.34	5 (8%) 16 14	90, 103, 117, 125	0
28	16	53/54 (98%)	0.34	5 (9%) 14 13	95, 108, 120, 126	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	26	53/54 (98%)	-0.18	1 (1%) 66 42	105, 114, 124, 134	0
29	17	48/49 (97%)	0.94	6 (12%) 8 10	82, 90, 107, 119	0
29	27	48/49 (97%)	0.67	3 (6%) 26 18	86, 99, 116, 124	0
30	18	64/65 (98%)	1.06	11 (17%) 4 5	89, 100, 111, 120	0
30	28	64/65 (98%)	0.37	3 (4%) 36 23	98, 106, 114, 120	0
31	19	37/37 (100%)	0.25	1 (2%) 56 35	99, 108, 113, 117	0
31	29	37/37 (100%)	0.24	1 (2%) 56 35	105, 116, 127, 130	0
32	1a	1488/1521 (97%)	-0.08	21 (1%) 73 48	92, 123, 141, 160	0
32	2a	1491/1521 (98%)	-0.14	19 (1%) 75 50	97, 119, 138, 155	0
33	1b	231/256 (90%)	-0.03	1 (0%) 88 72	113, 127, 135, 144	0
33	2b	231/256 (90%)	0.10	2 (0%) 81 58	105, 126, 137, 143	0
34	1c	206/239 (86%)	-0.03	0 100 100	113, 129, 137, 141	0
34	2c	206/239 (86%)	-0.25	0 100 100	115, 124, 132, 141	0
35	1d	208/209 (99%)	0.65	19 (9%) 15 13	104, 121, 131, 137	0
35	2d	208/209 (99%)	0.13	4 (1%) 66 42	104, 117, 128, 136	0
36	1e	148/162 (91%)	-0.03	0 100 100	103, 119, 127, 133	0
36	2e	148/162 (91%)	0.17	6 (4%) 41 26	107, 117, 128, 136	0
37	1f	100/101 (99%)	0.22	6 (6%) 27 19	101, 117, 126, 133	0
37	2f	100/101 (99%)	0.03	0 100 100	105, 118, 127, 132	0
38	1g	155/156 (99%)	-0.08	5 (3%) 50 31	111, 125, 135, 141	0
38	2g	155/156 (99%)	-0.17	5 (3%) 50 31	112, 124, 135, 145	0
39	1h	137/138 (99%)	-0.12	0 100 100	108, 122, 129, 134	0
39	2h	137/138 (99%)	0.16	4 (2%) 53 33	103, 118, 127, 135	0
40	1i	127/128 (99%)	0.60	12 (9%) 14 13	114, 128, 135, 139	0
40	2i	127/128 (99%)	0.83	16 (12%) 8 9	115, 127, 135, 144	0
41	1j	97/105 (92%)	0.44	6 (6%) 26 18	121, 131, 138, 143	0
41	2j	96/105 (91%)	0.54	5 (5%) 33 22	118, 129, 137, 142	0
42	1k	114/129 (88%)	0.22	6 (5%) 32 21	103, 117, 126, 130	0
42	2k	114/129 (88%)	0.40	7 (6%) 27 18	107, 120, 129, 137	0
43	1l	121/132 (91%)	0.09	5 (4%) 41 26	103, 117, 124, 136	0
43	2l	121/132 (91%)	0.07	5 (4%) 41 26	100, 112, 122, 128	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	1m	123/126 (97%)	0.04	0 100 100	113, 125, 133, 139	0
44	2m	122/126 (96%)	0.67	12 (9%) 13 13	111, 125, 136, 147	0
45	1n	60/61 (98%)	0.37	0 100 100	118, 128, 137, 144	0
45	2n	60/61 (98%)	0.13	1 (1%) 69 43	114, 124, 130, 134	0
46	1o	88/89 (98%)	0.30	4 (4%) 38 24	101, 116, 122, 124	0
46	2o	88/89 (98%)	0.25	3 (3%) 48 30	101, 119, 127, 132	0
47	1p	82/88 (93%)	0.39	2 (2%) 59 37	115, 124, 131, 137	0
47	2p	82/88 (93%)	0.09	3 (3%) 45 28	99, 111, 118, 123	0
48	1q	99/105 (94%)	0.28	6 (6%) 27 18	103, 118, 125, 131	0
48	2q	99/105 (94%)	0.03	3 (3%) 52 32	102, 113, 122, 126	0
49	1r	68/88 (77%)	-0.15	0 100 100	109, 116, 125, 130	0
49	2r	68/88 (77%)	-0.07	0 100 100	109, 119, 126, 131	0
50	1s	83/93 (89%)	0.37	4 (4%) 35 23	117, 128, 136, 143	0
50	2s	83/93 (89%)	0.18	1 (1%) 76 51	116, 126, 135, 137	0
51	1t	96/106 (90%)	0.42	5 (5%) 33 22	111, 122, 128, 132	0
51	2t	96/106 (90%)	0.46	11 (11%) 9 11	101, 116, 126, 129	0
52	1u	23/27 (85%)	0.30	0 100 100	119, 126, 129, 131	0
52	2u	23/27 (85%)	0.29	0 100 100	123, 127, 131, 133	0
53	1v	6/24 (25%)	0.55	0 100 100	110, 116, 131, 136	0
53	2v	6/24 (25%)	0.63	1 (16%) 4 6	113, 116, 131, 147	0
54	1w	2/3 (66%)	-0.46	0 100 100	88, 88, 88, 89	0
54	2w	2/3 (66%)	2.08	1 (50%) 0 0	103, 103, 103, 106	0
55	1x	72/77 (93%)	-0.61	0 100 100	90, 118, 130, 140	0
55	2x	72/77 (93%)	-0.09	0 100 100	96, 123, 134, 144	0
All	All	20600/21450 (96%)	0.13	746 (3%) 46 29	79, 114, 134, 160	0

All (746) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
44	2m	124	PRO	9.4
5	2F	87	GLY	9.3
23	21	39	LYS	7.7
23	21	4	VAL	7.4
5	2F	52	LYS	7.3

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Mol	Chain	Res	Type	RSRZ
42	1k	126	ARG	7.3
5	2F	56	GLU	7.1
23	21	11	ARG	6.8
48	1q	37	LYS	6.8
1	1A	1138	C	6.7
5	2F	88	VAL	6.6
24	12	69	ARG	6.5
5	2F	51	THR	6.2
1	1A	1141	A	6.1
13	2R	9	LYS	6.1
23	21	9	GLY	6.0
1	1A	1146	C	5.9
42	2k	126	ARG	5.8
3	1D	56	GLY	5.7
1	1A	1140	U	5.6
1	1A	1145	G	5.4
29	27	36	GLN	5.4
51	2t	23	ARG	5.4
16	2U	3	ARG	5.4
9	1N	77	GLY	5.4
1	1A	1139	G	5.4
3	2D	276	LYS	5.3
1	1A	2322	A	5.3
37	1f	18	GLN	5.3
40	1i	115	GLY	5.3
40	1i	121	ARG	5.3
1	1A	1176	U	5.2
4	1E	149	ARG	5.1
41	1j	58	ASP	5.1
43	1l	16	GLU	5.1
1	2A	34	C	5.1
1	1A	1113	A	5.1
3	2D	2	ALA	5.1
32	1a	1531	A	5.0
14	1S	43	GLU	4.9
5	2F	50	SER	4.9
3	2D	5	LYS	4.8
36	2e	88	LYS	4.8
1	1A	1144	A	4.8
16	2U	7	GLY	4.8
9	2N	78	TYR	4.8
29	27	38	GLY	4.8

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Mol	Chain	Res	Type	RSRZ
4	1E	151	TYR	4.7
23	11	2	SER	4.7
3	2D	37	LEU	4.7
9	1N	75	TYR	4.7
44	2m	104	ARG	4.7
32	1a	975	A	4.7
5	2F	81	PRO	4.6
1	2A	1248	G	4.6
1	2A	2035	G	4.6
3	2D	35	LYS	4.6
27	25	9	LYS	4.5
5	2F	72	ARG	4.5
1	1A	2084	A	4.4
44	2m	123	ALA	4.4
1	1A	696	C	4.4
4	1E	152	LYS	4.4
4	1E	155	LYS	4.3
1	2A	1536	C	4.3
23	21	16	ASN	4.3
1	1A	2320	G	4.3
3	2D	36	PRO	4.3
3	1D	275	LYS	4.3
43	2l	23	LYS	4.3
38	2g	84	ASN	4.3
1	1A	935	C	4.3
16	2U	5	LYS	4.3
5	2F	83	PHE	4.2
1	2A	669	G	4.2
44	2m	102	ARG	4.2
1	1A	2634	C	4.2
44	2m	116	THR	4.2
4	1E	117	MET	4.2
20	1Y	41	GLY	4.2
16	2U	37	GLU	4.2
1	1A	2163	G	4.2
4	2E	125	GLY	4.2
5	2F	82	ILE	4.2
1	1A	2166	U	4.2
38	1g	79	ARG	4.2
9	1N	78	TYR	4.1
4	1E	153	GLY	4.1
40	2i	121	ARG	4.1

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Mol	Chain	Res	Type	RSRZ
5	2F	90	PHE	4.1
32	2a	7	G	4.1
32	1a	1030(B)	C	4.1
5	2F	95	ARG	4.1
16	2U	4	ALA	4.1
4	1E	112	GLY	4.1
1	2A	1026	U	4.0
23	2I	2	SER	4.0
32	2a	1532	U	4.0
43	2I	91	LYS	4.0
37	1f	56	PRO	4.0
43	2I	89	ARG	4.0
3	1D	229	VAL	4.0
48	1q	35	VAL	4.0
3	2D	84	TYR	4.0
30	18	52	LYS	4.0
4	1E	147	PRO	4.0
3	2D	38	LYS	3.9
27	25	15	ARG	3.9
32	2a	815	A	3.9
1	2A	1509	C	3.9
51	2t	25	ARG	3.8
3	2D	34	VAL	3.8
20	2Y	107	ASP	3.8
5	2F	86	GLY	3.8
40	1i	114	TYR	3.8
40	1i	124	GLN	3.8
30	28	3	LYS	3.8
1	1A	699	C	3.8
1	1A	2135	U	3.8
16	2U	36	ARG	3.7
35	1d	158	ILE	3.7
3	2D	275	LYS	3.7
3	2D	32	SER	3.7
4	2E	149	ARG	3.7
40	2i	125	TYR	3.7
51	2t	29	LYS	3.7
3	1D	48	ARG	3.7
31	29	13	LYS	3.7
1	1A	1112	U	3.6
3	1D	276	LYS	3.6
30	18	5	LYS	3.6

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Mol	Chain	Res	Type	RSRZ
1	1A	1137	G	3.6
23	2I	14	VAL	3.6
11	1P	36	LYS	3.6
23	1I	23	LYS	3.6
6	1G	80	PHE	3.6
1	1A	1114	G	3.6
3	1D	38	LYS	3.6
15	1T	111	ARG	3.6
22	20	76	GLY	3.6
41	2j	54	PHE	3.6
1	2A	1533	G	3.6
38	1g	80	VAL	3.6
8	2I	96	ASP	3.6
5	2F	64	ILE	3.5
1	1A	989	G	3.5
44	2m	92	HIS	3.5
1	1A	838	C	3.5
1	2A	451	C	3.5
13	2R	5	LYS	3.5
40	1i	127	LYS	3.5
37	1f	55	ASP	3.5
35	2d	11	LEU	3.5
1	1A	700	A	3.5
1	1A	1147	U	3.5
16	2U	16	LYS	3.5
15	1T	104	ASN	3.5
13	1R	104	ARG	3.5
27	25	7	PRO	3.5
41	2j	58	ASP	3.5
1	1A	1148	C	3.5
1	2A	589	C	3.5
11	1P	43	GLY	3.5
40	1i	116	LYS	3.5
3	2D	217	ARG	3.5
28	16	4	GLU	3.5
48	1q	26	GLN	3.4
1	2A	2159	G	3.4
1	2A	2166	G	3.4
3	2D	39	LYS	3.4
23	2I	41	ARG	3.4
35	1d	162	LEU	3.4
46	1o	48	LYS	3.4

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Mol	Chain	Res	Type	RSRZ
3	2D	11	PRO	3.4
35	1d	29	PRO	3.4
1	2A	2313	C	3.4
1	1A	919	A	3.4
32	1a	1447	A	3.4
15	2T	111	ARG	3.4
4	1E	120	TRP	3.4
1	1A	2165	C	3.4
29	17	36	GLN	3.3
29	17	1	MET	3.3
1	1A	698	G	3.3
22	20	74	ARG	3.3
5	2F	55	GLY	3.3
1	2A	1118	C	3.3
9	1N	79	PRO	3.3
36	2e	121	LYS	3.3
35	1d	16	GLY	3.3
23	11	42	GLN	3.3
5	2F	54	ARG	3.3
5	2F	57	VAL	3.3
53	2v	14	A	3.3
3	1D	23	GLU	3.3
51	1t	23	ARG	3.3
16	1U	37	GLU	3.3
1	1A	2164	C	3.3
8	2I	39	ALA	3.3
13	2R	1	MET	3.3
23	21	10	LYS	3.3
27	25	8	LYS	3.3
36	2e	123	LEU	3.2
1	1A	738	C	3.2
24	12	66	GLU	3.2
50	1s	16	LEU	3.2
5	2F	89	VAL	3.2
40	2i	123	PRO	3.2
28	16	2	ALA	3.2
42	1k	114	VAL	3.2
1	1A	639	G	3.2
38	1g	154	TYR	3.2
13	2R	7	GLY	3.2
1	1A	1344	C	3.2
48	2q	35	VAL	3.2

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Mol	Chain	Res	Type	RSRZ
23	21	13	ILE	3.2
3	1D	213	ARG	3.2
9	2N	75	TYR	3.2
1	2A	1273	U	3.2
4	1E	187	ALA	3.2
23	21	12	PRO	3.2
1	2A	2311	A	3.1
39	2h	84	ARG	3.1
3	1D	226	MET	3.1
40	2i	115	GLY	3.1
1	1A	1348	A	3.1
35	2d	67	ILE	3.1
4	2E	133	LYS	3.1
4	2E	152	LYS	3.1
15	1T	69	GLY	3.1
1	2A	242	G	3.1
29	17	2	LYS	3.1
23	21	8	SER	3.1
32	1a	1524	C	3.1
30	28	2	PRO	3.1
7	1H	42	ARG	3.1
30	28	5	LYS	3.1
40	2i	11	LYS	3.1
43	1l	89	ARG	3.1
1	1A	916	G	3.1
4	2E	136	ARG	3.1
1	1A	2321	A	3.1
36	2e	119	LEU	3.0
3	2D	52	ARG	3.0
13	2R	104	ARG	3.0
42	2k	120	ARG	3.0
28	16	35	GLU	3.0
1	1A	832	G	3.0
1	1A	2134	G	3.0
1	2A	801	G	3.0
1	1A	1103	A	3.0
3	1D	230	ASP	3.0
8	1I	27	ARG	3.0
23	11	26	ARG	3.0
30	18	60	LEU	3.0
18	1W	90	ARG	3.0
1	2A	2165	G	3.0

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Mol	Chain	Res	Type	RSRZ
40	2i	49	PRO	3.0
35	1d	77	ASN	2.9
13	1R	111	LEU	2.9
4	1E	135	HIS	2.9
5	2F	75	HIS	2.9
6	1G	74	LYS	2.9
11	1P	75	ILE	2.9
20	2Y	62	GLU	2.9
22	20	75	LEU	2.9
51	2t	24	LEU	2.9
3	2D	51	VAL	2.9
16	2U	9	VAL	2.9
1	2A	587	C	2.9
1	1A	1143	U	2.9
12	1Q	131	ILE	2.9
4	2E	148	GLY	2.9
1	1A	1142	A	2.9
1	2A	2062	A	2.9
16	2U	27	LEU	2.9
12	1Q	93	TYR	2.9
13	2R	12	ARG	2.9
1	1A	936	C	2.9
1	1A	920	G	2.9
3	2D	59	LYS	2.9
8	2I	2	LYS	2.9
4	1E	204	ALA	2.9
3	2D	48	ARG	2.9
23	11	11	ARG	2.9
24	22	30	ARG	2.9
14	1S	19	LYS	2.9
17	1V	84	LYS	2.9
1	1A	2323	A	2.8
3	1D	55	GLY	2.8
1	2A	673	C	2.8
27	25	19	ARG	2.8
1	1A	1177	G	2.8
1	2A	215	G	2.8
1	2A	304	G	2.8
51	1t	21	LYS	2.8
41	2j	52	GLY	2.8
5	2F	49	ALA	2.8
40	2i	15	ALA	2.8

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Mol	Chain	Res	Type	RSRZ
13	2R	103	ARG	2.8
1	1A	1579	C	2.8
1	2A	277	C	2.8
1	1A	290	G	2.8
1	2A	1117	G	2.8
5	1F	95	ARG	2.8
14	1S	22	GLY	2.8
23	2I	66	HIS	2.8
32	2a	10	A	2.8
11	1P	50	ARG	2.8
13	2R	105	ARG	2.8
1	1A	1111	U	2.8
5	2F	78	ILE	2.8
13	1R	73	VAL	2.8
15	2T	89	VAL	2.8
16	2U	2	PRO	2.8
11	2P	29	LYS	2.8
1	2A	1250	G	2.8
1	2A	2157	G	2.8
9	1N	76	SER	2.8
37	1f	54	LYS	2.8
28	16	28	ARG	2.7
38	1g	82	GLY	2.7
1	1A	1928	G	2.7
3	2D	215	LEU	2.7
8	1I	35	LEU	2.7
1	1A	2633	A	2.7
10	2O	22	ILE	2.7
32	1a	204	U	2.7
4	1E	167	VAL	2.7
16	2U	8	VAL	2.7
40	1i	49	PRO	2.7
1	1A	2289	G	2.7
16	2U	6	THR	2.7
30	18	56	GLU	2.7
32	1a	1257	U	2.7
5	2F	96	ASP	2.7
32	1a	972	C	2.7
16	1U	36	ARG	2.7
46	1o	69	TYR	2.7
48	1q	33	GLY	2.7
16	2U	32	PHE	2.7

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Mol	Chain	Res	Type	RSRZ
1	2A	563	G	2.7
29	17	6	GLN	2.7
40	2i	128	ARG	2.7
5	1F	97	TYR	2.7
12	1Q	11	LYS	2.7
16	1U	15	LYS	2.7
32	2a	706	A	2.6
1	1A	1003	U	2.6
1	1A	1221	G	2.6
32	1a	108	G	2.6
32	2a	1202	G	2.6
40	2i	117	HIS	2.6
51	2t	22	ARG	2.6
40	2i	43	ALA	2.6
42	2k	36	ASP	2.6
1	2A	2577	A	2.6
4	1E	136	ARG	2.6
3	2D	29	PRO	2.6
35	1d	201	GLN	2.6
21	1Z	157	LEU	2.6
44	2m	98	VAL	2.6
1	2A	2164	C	2.6
4	1E	138	PRO	2.6
1	2A	590	A	2.6
4	2E	127	ASP	2.6
18	1W	85	VAL	2.6
30	18	21	LYS	2.6
51	2t	30	LYS	2.6
5	2F	73	ALA	2.6
40	1i	117	HIS	2.6
1	2A	2156	G	2.6
32	2a	302	G	2.6
12	1Q	9	TYR	2.6
35	1d	208	SER	2.6
13	2R	17	ARG	2.6
42	2k	14	VAL	2.6
51	2t	21	LYS	2.6
3	2D	61	LEU	2.6
1	1A	882	A	2.6
3	1D	39	LYS	2.5
40	2i	96	LEU	2.5
4	2E	204	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
32	1a	310	G	2.5
47	2p	82	GLN	2.5
42	1k	123	LYS	2.5
44	2m	122	LYS	2.5
14	2S	49	VAL	2.5
20	2Y	29	GLU	2.5
5	1F	49	ALA	2.5
40	2i	37	PHE	2.5
5	2F	94	PRO	2.5
8	2I	111	PRO	2.5
23	21	44	PRO	2.5
41	1j	37	PRO	2.5
9	2N	77	GLY	2.5
29	27	48	LYS	2.5
13	1R	98	LEU	2.5
16	2U	20	LEU	2.5
1	2A	1678	G	2.5
32	2a	1061	G	2.5
1	2A	584	C	2.5
32	2a	322	C	2.5
42	2k	113	PRO	2.5
6	1G	105	LYS	2.5
13	2R	106	GLY	2.5
31	19	26	ILE	2.5
1	2A	670	A	2.5
1	2A	810	U	2.5
1	2A	1226	A	2.5
1	2A	2117	A	2.5
4	1E	159	HIS	2.5
43	2l	11	VAL	2.5
3	2D	83	GLU	2.5
3	1D	49	ILE	2.5
5	2F	58	ALA	2.5
9	2N	80	GLY	2.5
11	1P	35	HIS	2.5
1	2A	1119	C	2.5
32	2a	1030(B)	C	2.5
54	2w	74	C	2.5
1	2A	1992	G	2.5
35	1d	24	GLU	2.5
39	2h	99	GLU	2.5
23	21	15	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
44	2m	94	ARG	2.5
38	2g	80	VAL	2.5
43	1l	23	LYS	2.4
46	2o	84	LYS	2.4
42	1k	117	ASN	2.4
4	1E	139	GLY	2.4
1	1A	2522	C	2.4
1	2A	588	U	2.4
46	1o	25	THR	2.4
1	2A	1964	G	2.4
23	1l	43	TYR	2.4
13	2R	107	ASP	2.4
35	1d	110	PHE	2.4
23	1l	47	GLN	2.4
32	2a	320	C	2.4
1	1A	829	A	2.4
1	1A	917	A	2.4
1	1A	1684	A	2.4
1	1A	2340	A	2.4
1	2A	2227	A	2.4
18	1W	91	GLY	2.4
1	1A	2521	G	2.4
1	2A	2319	G	2.4
13	2R	14	SER	2.4
32	1a	703	G	2.4
32	1a	1529	G	2.4
30	18	29	LYS	2.4
8	2I	41	GLU	2.4
36	2e	81	GLU	2.4
48	1q	24	GLU	2.4
14	1S	16	ASN	2.4
43	1l	22	SER	2.4
1	2A	2017	U	2.4
1	2A	435	C	2.4
1	2A	2226	C	2.4
3	2D	60	ARG	2.4
51	1t	25	ARG	2.4
41	1j	20	ALA	2.4
1	1A	291	G	2.4
1	1A	827	G	2.4
48	1q	28	PRO	2.4
16	2U	95	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
39	2h	94	TYR	2.4
25	23	42	ALA	2.4
17	1V	80	GLN	2.3
1	2A	2197	U	2.3
16	2U	14	HIS	2.3
3	2D	86	PRO	2.3
5	2F	91	GLY	2.3
43	2l	5	PRO	2.3
1	1A	925	A	2.3
1	1A	947	A	2.3
3	1D	257	LEU	2.3
32	1a	322	C	2.3
32	1a	974	A	2.3
32	1a	1437	C	2.3
35	1d	203	VAL	2.3
3	1D	218	ARG	2.3
5	2F	59	TYR	2.3
15	2T	107	ASP	2.3
27	15	10	LYS	2.3
3	2D	224	ALA	2.3
4	1E	163	GLU	2.3
4	2E	113	PHE	2.3
8	2I	119	PRO	2.3
35	1d	108	LEU	2.3
38	1g	153	HIS	2.3
5	1F	93	LYS	2.3
9	2N	84	LYS	2.3
16	2U	13	LYS	2.3
32	1a	817	C	2.3
33	1b	237	ALA	2.3
3	1D	53	PHE	2.3
35	1d	204	ILE	2.3
4	1E	158	GLY	2.3
48	2q	30	PRO	2.3
4	1E	91	VAL	2.3
5	2F	45	ARG	2.3
1	1A	1599	G	2.3
1	1A	2370	G	2.3
1	2A	245	G	2.3
1	2A	468	G	2.3
1	2A	2133	G	2.3
1	2A	2618	G	2.3

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Mol	Chain	Res	Type	RSRZ
35	1d	48	ALA	2.3
3	1D	251	GLY	2.3
11	2P	43	GLY	2.3
35	1d	178	VAL	2.3
47	1p	2	VAL	2.3
1	1A	701	A	2.3
18	2W	90	ARG	2.3
19	2X	73	ARG	2.3
23	11	48	LYS	2.3
1	1A	242	C	2.3
1	1A	697	C	2.3
1	1A	2815	C	2.3
1	2A	37	C	2.3
32	2a	1060	C	2.3
4	2E	157	ALA	2.3
51	1t	41	ILE	2.3
5	2F	62	ARG	2.3
15	1T	112	ARG	2.3
15	2T	108	ARG	2.3
1	1A	299	G	2.3
1	2A	1252	G	2.3
1	2A	2147	G	2.3
1	2A	2224	G	2.3
51	1t	24	LEU	2.3
1	1A	2339	A	2.3
1	2A	38	A	2.3
1	2A	578	A	2.3
41	1j	61	GLU	2.3
11	1P	14	LYS	2.3
19	2X	49	VAL	2.3
12	1Q	3	MET	2.3
3	1D	227	ASN	2.2
51	2t	26	ASN	2.2
10	1O	32	TYR	2.2
41	2j	55	LYS	2.2
42	2k	122	LYS	2.2
51	2t	34	LYS	2.2
1	2A	2160	G	2.2
3	2D	42	GLY	2.2
4	1E	111	ARG	2.2
9	2N	119	ARG	2.2
30	18	49	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
32	2a	1510	U	2.2
35	1d	37	PRO	2.2
40	1i	120	ARG	2.2
50	1s	78	ARG	2.2
4	1E	146	THR	2.2
6	2G	39	ILE	2.2
1	1A	2725	A	2.2
1	2A	2169	A	2.2
38	2g	2	ALA	2.2
1	1A	837	C	2.2
23	21	38	SER	2.2
14	2S	3	ARG	2.2
15	1T	115	ARG	2.2
16	1U	33	ARG	2.2
19	2X	68	ARG	2.2
35	1d	51	PRO	2.2
3	1D	231	HIS	2.2
19	2X	31	HIS	2.2
4	1E	123	ALA	2.2
22	20	18	ALA	2.2
1	2A	577	G	2.2
3	1D	54	ARG	2.2
3	2D	239	ARG	2.2
11	2P	79	ARG	2.2
5	2F	79	GLY	2.2
1	2A	572	A	2.2
1	1A	394	C	2.2
1	1A	2162	C	2.2
1	2A	184	C	2.2
32	2a	707	C	2.2
4	1E	137	HIS	2.2
42	1k	124	LYS	2.2
3	1D	57	GLY	2.2
4	2E	124	GLY	2.2
5	2F	71	GLY	2.2
19	2X	67	GLY	2.2
40	1i	123	PRO	2.2
51	2t	103	GLY	2.2
1	2A	2506	U	2.2
3	1D	2	ALA	2.2
13	1R	1	MET	2.2
41	2j	56	HIS	2.2

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Mol	Chain	Res	Type	RSRZ
1	1A	824	A	2.2
32	2a	297	G	2.2
37	1f	48	LEU	2.2
40	1i	126	SER	2.2
44	2m	19	LEU	2.2
15	1T	108	ARG	2.2
23	1l	30	VAL	2.2
1	2A	574	C	2.2
16	1U	106	PHE	2.2
33	2b	134	GLU	2.2
35	2d	79	PHE	2.2
30	18	12	LYS	2.2
36	2e	94	ALA	2.1
1	2A	2615	U	2.1
3	2D	262	ARG	2.1
9	2N	115	ARG	2.1
16	2U	11	ARG	2.1
17	2V	82	ARG	2.1
39	2h	82	HIS	2.1
5	2F	97	TYR	2.1
12	1Q	68	ILE	2.1
21	1Z	141	VAL	2.1
28	16	5	VAL	2.1
4	1E	113	PHE	2.1
40	1i	110	GLU	2.1
32	1a	819	A	2.1
1	2A	254	G	2.1
1	2A	2308	G	2.1
32	1a	821	G	2.1
32	1a	1030(C)	G	2.1
44	2m	30	ALA	2.1
4	2E	111	ARG	2.1
1	2A	246	C	2.1
1	2A	672	C	2.1
32	2a	1228	C	2.1
10	2O	19	ILE	2.1
9	1N	84	LYS	2.1
29	17	48	LYS	2.1
40	2i	70	LYS	2.1
40	2i	114	TYR	2.1
15	2T	46	GLU	2.1
8	2I	6	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
16	2U	28	ARG	2.1
16	2U	41	ALA	2.1
7	1H	143	GLN	2.1
10	2O	5	GLN	2.1
21	1Z	146	ILE	2.1
4	1E	150	VAL	2.1
12	1Q	8	LYS	2.1
43	1l	20	LYS	2.1
1	1A	1485	A	2.1
6	1G	3	LEU	2.1
23	1l	95	LEU	2.1
1	1A	1896	G	2.1
1	1A	2169	G	2.1
1	2A	614(B)	G	2.1
1	2A	1171	G	2.1
1	2A	2155	G	2.1
8	2I	86	THR	2.1
32	2a	1058	G	2.1
1	1A	463	C	2.1
1	1A	1110	C	2.1
1	2A	2573	C	2.1
45	2n	30	ALA	2.1
7	1H	147	ASN	2.1
1	2A	1130	U	2.1
5	1F	89	VAL	2.1
6	1G	5	VAL	2.1
33	2b	7	VAL	2.1
46	1o	45	VAL	2.1
12	2Q	79	LEU	2.1
42	1k	50	TYR	2.1
50	2s	34	TRP	2.1
8	1I	1	MET	2.1
12	1Q	4	PRO	2.1
27	15	5	PRO	2.1
7	1H	170	ARG	2.1
47	2p	18	ARG	2.1
1	1A	2626	A	2.1
1	2A	181	A	2.1
1	2A	229	A	2.1
3	1D	31	LYS	2.1
5	2F	80	ALA	2.1
22	10	36	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
16	2U	22	LYS	2.1
46	2o	57	LEU	2.1
1	1A	800	C	2.1
1	1A	2167	C	2.1
1	1A	2583	C	2.1
4	2E	135	HIS	2.1
32	1a	1533	C	2.1
1	1A	1490	G	2.1
6	1G	49	ASP	2.1
32	2a	776	G	2.1
47	2p	29	ASP	2.1
8	2I	97	ILE	2.1
9	1N	70	LYS	2.1
10	1O	26	LYS	2.1
46	2o	48	LYS	2.1
47	1p	56	ALA	2.1
3	2D	53	PHE	2.1
50	1s	20	LEU	2.1
3	2D	55	GLY	2.0
6	2G	89	GLY	2.0
30	18	7	HIS	2.0
37	1f	50	TYR	2.0
4	1E	127	ASP	2.0
5	2F	74	ARG	2.0
35	1d	46	LYS	2.0
35	1d	150	GLU	2.0
48	2q	38	ARG	2.0
6	1G	75	LYS	2.0
18	2W	96	ILE	2.0
23	11	13	ILE	2.0
28	26	2	ALA	2.0
40	2i	122	ALA	2.0
40	2i	101	PHE	2.0
41	1j	63	PHE	2.0
1	1A	238	C	2.0
1	1A	833	C	2.0
3	1D	51	VAL	2.0
15	1T	10	VAL	2.0
32	2a	817	C	2.0
35	1d	88	VAL	2.0
42	2k	109	VAL	2.0
44	2m	106	ASN	2.0

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Mol	Chain	Res	Type	RSRZ
1	1A	2619	G	2.0
1	2A	2115	G	2.0
1	2A	2131	G	2.0
1	1A	2369	U	2.0
32	1a	820	U	2.0
30	18	28	GLY	2.0
38	2g	82	GLY	2.0
9	2N	74	ARG	2.0
29	17	35	ARG	2.0
30	18	30	ARG	2.0
41	1j	60	ARG	2.0
14	1S	42	ASP	2.0
1	1A	1318	A	2.0
1	2A	2198	A	2.0
24	12	70	GLN	2.0
50	1s	11	VAL	2.0
3	1D	128	GLY	2.0
8	2I	84	GLY	2.0
13	1R	105	ARG	2.0
13	2R	108	GLY	2.0
23	21	48	LYS	2.0
3	2D	62	TYR	2.0
38	2g	5	ARG	2.0
1	1A	470	C	2.0
1	1A	1685	C	2.0
35	2d	162	LEU	2.0
51	2t	70	SER	2.0

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

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
1	5MU	2A	1915	21/22	0.78	0.09	114,120,131,143	0
55	4SU	2x	8	20/21	0.78	0.07	120,133,139,140	0
55	PSU	1x	55	20/21	0.78	0.08	109,117,129,133	0
32	PSU	1a	516	20/21	0.81	0.07	113,120,128,129	0
55	PSU	2x	55	20/21	0.83	0.10	114,125,136,143	0
1	PSU	1A	1933	20/21	0.84	0.08	90,105,108,109	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
1	5MU	2A	1939	21/22	0.84	0.15	89,98,104,114	0
55	5MU	1x	54	21/22	0.85	0.07	111,118,130,131	0
55	5MU	2x	54	21/22	0.86	0.10	108,120,136,142	0
55	5MC	1x	32	21/22	0.86	0.10	99,116,123,128	0
32	2MG	2a	1207	24/25	0.86	0.10	114,124,129,137	0
1	5MU	1A	1937	21/22	0.88	0.08	115,126,133,144	0
1	PSU	2A	1911	20/21	0.88	0.10	96,105,117,118	0
32	PSU	2a	516	20/21	0.88	0.07	117,122,126,128	0
32	5MC	2a	967	21/22	0.88	0.13	102,116,124,125	0
1	PSU	2A	1917	20/21	0.88	0.09	106,110,120,127	0
55	4SU	1x	8	20/21	0.88	0.06	111,122,128,128	0
32	5MC	1a	967	21/22	0.89	0.10	104,115,127,130	0
32	7MG	1a	527	24/25	0.89	0.10	101,115,123,126	0
1	5MC	1A	1964	21/22	0.90	0.09	82,93,104,111	0
32	5MC	1a	1407	21/22	0.90	0.09	100,110,116,121	0
32	2MG	1a	1207	24/25	0.90	0.07	114,124,132,136	0
1	4OC	2A	1920	21/23	0.91	0.11	94,114,119,120	0
32	5MC	1a	1400	21/22	0.91	0.09	106,115,124,131	0
32	5MC	2a	1400	21/22	0.91	0.13	101,114,128,132	0
32	4OC	2a	1402	22/23	0.91	0.10	104,109,115,116	0
1	4OC	1A	1942	21/23	0.91	0.09	96,108,120,123	0
32	7MG	2a	527	24/25	0.91	0.10	99,117,123,125	0
32	M2G	1a	966	25/26	0.92	0.09	104,110,120,121	0
1	5MC	2A	1962	21/22	0.92	0.15	79,100,106,110	0
1	PSU	2A	2605	20/21	0.92	0.10	81,91,98,102	0
1	5MC	2A	1942	21/22	0.92	0.11	88,97,104,108	0
1	5MU	1A	1961	21/22	0.93	0.09	85,92,100,103	0
55	5MC	2x	32	21/22	0.93	0.10	110,118,124,126	0
1	PSU	1A	2617	20/21	0.93	0.11	81,90,100,100	0
32	UR3	1a	1498	21/22	0.93	0.09	96,107,111,114	0
32	M2G	2a	966	25/26	0.93	0.14	107,119,123,126	0
32	4OC	1a	1402	22/23	0.93	0.09	104,112,120,123	0
32	MA6	2a	1518	24/25	0.94	0.13	100,109,116,117	0
54	PPU	2w	76	37/38	0.94	0.16	86,100,107,111	0
1	PSU	1A	1939	20/21	0.94	0.05	95,110,117,117	0
1	2MU	1A	2564	21/23	0.94	0.10	85,95,105,109	0
1	2MU	2A	2552	21/23	0.94	0.09	84,90,101,104	0
1	5MC	1A	1984	21/22	0.95	0.08	87,96,104,106	0
43	0TD	1l	92	10/11	0.95	0.09	110,119,124,142	0
32	5MC	1a	1404	21/22	0.95	0.09	95,106,113,115	0
32	5MC	2a	1404	21/22	0.95	0.09	101,111,116,121	0
1	2MA	1A	2515	23/24	0.95	0.12	76,84,97,103	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
32	5MC	2a	1407	21/22	0.95	0.09	90,106,116,118	0
1	2MA	2A	2503	23/24	0.95	0.13	81,92,103,114	0
43	0TD	2l	92	10/11	0.95	0.12	117,123,129,141	0
32	MA6	1a	1519	24/25	0.95	0.11	93,107,119,119	0
54	PPU	1w	76	37/38	0.96	0.12	84,91,103,108	0
32	MA6	1a	1518	24/25	0.96	0.10	103,109,113,116	0
1	OMG	1A	2263	24/25	0.96	0.10	70,88,102,105	0
32	UR3	2a	1498	21/22	0.96	0.09	95,105,114,115	0
32	MA6	2a	1519	24/25	0.96	0.11	93,107,112,116	0
1	OMG	2A	2251	24/25	0.97	0.08	85,96,109,111	0

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1A	3416	1/1	0.17	0.30	103,103,103,103	0
56	MG	1a	1607	1/1	0.27	0.36	100,100,100,100	0
56	MG	1A	3426	1/1	0.32	0.37	89,89,89,89	0
56	MG	1A	3172	1/1	0.37	0.40	96,96,96,96	0
56	MG	1a	1629	1/1	0.38	0.13	94,94,94,94	0
56	MG	1A	3072	1/1	0.41	0.20	79,79,79,79	0
56	MG	1B	202	1/1	0.42	0.26	80,80,80,80	0
56	MG	1A	3008	1/1	0.43	0.25	109,109,109,109	0
56	MG	1a	1669	1/1	0.44	0.09	102,102,102,102	0
56	MG	2A	3037	1/1	0.45	0.30	90,90,90,90	0
56	MG	2A	3305	1/1	0.45	0.36	83,83,83,83	0
56	MG	2a	3011	1/1	0.46	0.25	94,94,94,94	0
56	MG	1A	3396	1/1	0.48	0.36	84,84,84,84	0
56	MG	2A	3098	1/1	0.49	0.22	97,97,97,97	0
56	MG	2A	3181	1/1	0.50	0.18	101,101,101,101	0
56	MG	1A	3263	1/1	0.50	0.29	105,105,105,105	0
56	MG	1a	1617	1/1	0.50	0.21	91,91,91,91	0
56	MG	2a	3046	1/1	0.50	0.19	99,99,99,99	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	2A	3245	1/1	0.51	0.38	64,64,64,64	0
56	MG	1B	203	1/1	0.51	0.19	106,106,106,106	0
56	MG	2A	3150	1/1	0.51	0.17	101,101,101,101	0
56	MG	1A	3059	1/1	0.51	0.33	92,92,92,92	0
56	MG	2A	3114	1/1	0.52	0.33	75,75,75,75	0
56	MG	2A	3205	1/1	0.52	0.41	81,81,81,81	0
56	MG	1A	3397	1/1	0.52	0.28	84,84,84,84	0
56	MG	2A	3094	1/1	0.53	0.33	83,83,83,83	0
56	MG	1a	1633	1/1	0.53	0.31	97,97,97,97	0
56	MG	2A	3151	1/1	0.53	0.23	109,109,109,109	0
56	MG	2a	3088	1/1	0.53	0.35	83,83,83,83	0
56	MG	1A	3138	1/1	0.54	0.17	108,108,108,108	0
56	MG	1a	1611	1/1	0.55	0.20	93,93,93,93	0
56	MG	2A	3078	1/1	0.55	0.35	79,79,79,79	0
56	MG	1A	3347	1/1	0.56	0.20	90,90,90,90	0
56	MG	1A	3102	1/1	0.56	0.34	74,74,74,74	0
56	MG	1A	3034	1/1	0.56	0.26	91,91,91,91	0
56	MG	2a	3008	1/1	0.57	0.14	102,102,102,102	0
56	MG	1a	1631	1/1	0.57	0.15	97,97,97,97	0
56	MG	2A	3259	1/1	0.57	0.46	72,72,72,72	0
56	MG	2A	3155	1/1	0.57	0.26	92,92,92,92	0
56	MG	1a	1647	1/1	0.58	0.13	106,106,106,106	0
56	MG	1B	201	1/1	0.58	0.20	82,82,82,82	0
56	MG	2A	3175	1/1	0.58	0.23	107,107,107,107	0
56	MG	2A	3373	1/1	0.58	0.42	69,69,69,69	0
56	MG	1A	3240	1/1	0.58	0.39	66,66,66,66	0
56	MG	2A	3198	1/1	0.58	0.26	96,96,96,96	0
56	MG	1A	3352	1/1	0.58	0.24	101,101,101,101	0
56	MG	2A	3239	1/1	0.58	0.29	68,68,68,68	0
56	MG	1A	3115	1/1	0.59	0.13	89,89,89,89	0
56	MG	2A	3336	1/1	0.59	0.31	91,91,91,91	0
56	MG	1A	3027	1/1	0.59	0.28	78,78,78,78	0
56	MG	1A	3258	1/1	0.59	0.27	98,98,98,98	0
56	MG	1A	3358	1/1	0.59	0.38	75,75,75,75	0
56	MG	2A	3157	1/1	0.59	0.32	88,88,88,88	0
56	MG	1A	3479	1/1	0.59	0.38	72,72,72,72	0
56	MG	1A	3124	1/1	0.60	0.20	75,75,75,75	0
56	MG	1a	1671	1/1	0.60	0.27	99,99,99,99	0
56	MG	1a	1674	1/1	0.60	0.23	92,92,92,92	0
56	MG	2A	3014	1/1	0.60	0.15	90,90,90,90	0
56	MG	2A	3315	1/1	0.60	0.37	68,68,68,68	0
56	MG	2A	3031	1/1	0.60	0.25	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1a	1640	1/1	0.60	0.16	91,91,91,91	0
56	MG	2A	3039	1/1	0.60	0.30	93,93,93,93	0
56	MG	2A	3049	1/1	0.60	0.23	73,73,73,73	0
56	MG	1A	3159	1/1	0.60	0.17	81,81,81,81	0
56	MG	1a	1665	1/1	0.60	0.19	74,74,74,74	0
56	MG	1A	3377	1/1	0.61	0.30	77,77,77,77	0
56	MG	1A	3322	1/1	0.61	0.22	94,94,94,94	0
56	MG	1A	3313	1/1	0.61	0.31	70,70,70,70	0
56	MG	1A	3360	1/1	0.61	0.30	82,82,82,82	0
56	MG	2A	3101	1/1	0.61	0.36	80,80,80,80	0
56	MG	2A	3294	1/1	0.61	0.22	87,87,87,87	0
56	MG	1A	3370	1/1	0.61	0.23	88,88,88,88	0
56	MG	1A	3444	1/1	0.62	0.09	109,109,109,109	0
56	MG	1B	212	1/1	0.62	0.23	83,83,83,83	0
56	MG	2B	202	1/1	0.62	0.21	87,87,87,87	0
56	MG	1A	3289	1/1	0.62	0.28	84,84,84,84	0
56	MG	1A	3410	1/1	0.62	0.32	83,83,83,83	0
56	MG	1A	3438	1/1	0.62	0.36	84,84,84,84	0
56	MG	2A	3090	1/1	0.62	0.09	110,110,110,110	0
56	MG	2A	3208	1/1	0.63	0.18	82,82,82,82	0
56	MG	2A	3337	1/1	0.63	0.17	87,87,87,87	0
56	MG	2A	3352	1/1	0.63	0.16	107,107,107,107	0
56	MG	1A	3245	1/1	0.63	0.20	81,81,81,81	0
56	MG	1A	3343	1/1	0.63	0.32	80,80,80,80	0
56	MG	1A	3211	1/1	0.63	0.24	93,93,93,93	0
56	MG	1A	3434	1/1	0.63	0.29	72,72,72,72	0
56	MG	1A	3308	1/1	0.63	0.23	76,76,76,76	0
56	MG	2a	3066	1/1	0.63	0.22	86,86,86,86	0
56	MG	1A	3262	1/1	0.63	0.18	82,82,82,82	0
56	MG	1A	3009	1/1	0.64	0.23	84,84,84,84	0
56	MG	1A	3020	1/1	0.64	0.19	84,84,84,84	0
56	MG	1A	3001	1/1	0.64	0.16	80,80,80,80	0
56	MG	2a	3022	1/1	0.64	0.22	81,81,81,81	0
56	MG	2A	3351	1/1	0.64	0.25	94,94,94,94	0
56	MG	1a	1678	1/1	0.64	0.17	89,89,89,89	0
56	MG	1a	1681	1/1	0.64	0.35	79,79,79,79	0
56	MG	1a	1632	1/1	0.65	0.34	88,88,88,88	0
56	MG	1A	3443	1/1	0.65	0.20	91,91,91,91	0
56	MG	1A	3039	1/1	0.65	0.16	71,71,71,71	0
56	MG	2A	3097	1/1	0.65	0.20	93,93,93,93	0
56	MG	2A	3235	1/1	0.65	0.31	75,75,75,75	0
56	MG	1A	3414	1/1	0.65	0.46	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1A	3369	1/1	0.65	0.29	76,76,76,76	0
56	MG	2A	3258	1/1	0.65	0.40	80,80,80,80	0
56	MG	2a	3097	1/1	0.65	0.19	74,74,74,74	0
56	MG	1A	3187	1/1	0.66	0.15	83,83,83,83	0
56	MG	1A	3040	1/1	0.66	0.36	79,79,79,79	0
56	MG	2A	3019	1/1	0.66	0.31	69,69,69,69	0
56	MG	2a	3029	1/1	0.66	0.21	104,104,104,104	0
56	MG	1A	3341	1/1	0.66	0.25	77,77,77,77	0
56	MG	1A	3051	1/1	0.66	0.17	89,89,89,89	0
56	MG	1a	1679	1/1	0.66	0.18	107,107,107,107	0
56	MG	2A	3306	1/1	0.66	0.28	80,80,80,80	0
56	MG	15	101	1/1	0.67	0.27	70,70,70,70	0
56	MG	2a	3041	1/1	0.67	0.15	80,80,80,80	0
56	MG	1a	1641	1/1	0.67	0.21	82,82,82,82	0
56	MG	1A	3095	1/1	0.67	0.24	69,69,69,69	0
56	MG	1A	3129	1/1	0.67	0.11	77,77,77,77	0
56	MG	1A	3260	1/1	0.67	0.26	81,81,81,81	0
56	MG	1A	3236	1/1	0.68	0.28	102,102,102,102	0
56	MG	1A	3180	1/1	0.68	0.30	61,61,61,61	0
56	MG	1A	3390	1/1	0.68	0.31	61,61,61,61	0
56	MG	2D	3100	1/1	0.68	0.25	83,83,83,83	0
56	MG	1A	3068	1/1	0.68	0.36	75,75,75,75	0
56	MG	2A	3052	1/1	0.68	0.25	86,86,86,86	0
56	MG	1A	3088	1/1	0.68	0.26	74,74,74,74	0
56	MG	1A	3361	1/1	0.68	0.24	94,94,94,94	0
56	MG	2A	3004	1/1	0.68	0.24	88,88,88,88	0
56	MG	2A	3095	1/1	0.68	0.24	81,81,81,81	0
56	MG	1A	3453	1/1	0.68	0.23	80,80,80,80	0
56	MG	1A	3303	1/1	0.68	0.21	83,83,83,83	0
56	MG	2A	3209	1/1	0.68	0.13	77,77,77,77	0
56	MG	1A	3252	1/1	0.69	0.30	80,80,80,80	0
56	MG	1a	1618	1/1	0.69	0.13	96,96,96,96	0
56	MG	1A	3219	1/1	0.69	0.27	90,90,90,90	0
56	MG	1A	3140	1/1	0.69	0.24	73,73,73,73	0
56	MG	1A	3400	1/1	0.69	0.21	87,87,87,87	0
56	MG	1A	3405	1/1	0.69	0.30	93,93,93,93	0
56	MG	1a	1634	1/1	0.69	0.21	102,102,102,102	0
56	MG	1a	1686	1/1	0.69	0.27	76,76,76,76	0
56	MG	2A	3229	1/1	0.69	0.25	72,72,72,72	0
56	MG	1a	1687	1/1	0.69	0.15	100,100,100,100	0
56	MG	1a	1689	1/1	0.69	0.30	78,78,78,78	0
56	MG	1A	3086	1/1	0.69	0.21	90,90,90,90	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	2A	3254	1/1	0.69	0.32	82,82,82,82	0
56	MG	2A	3107	1/1	0.69	0.37	81,81,81,81	0
56	MG	1A	3065	1/1	0.69	0.29	88,88,88,88	0
56	MG	2A	3266	1/1	0.69	0.23	69,69,69,69	0
56	MG	1A	3464	1/1	0.69	0.19	95,95,95,95	0
56	MG	1a	1649	1/1	0.69	0.24	106,106,106,106	0
56	MG	1A	3469	1/1	0.70	0.29	88,88,88,88	0
56	MG	2A	3030	1/1	0.70	0.09	91,91,91,91	0
56	MG	1A	3109	1/1	0.70	0.26	92,92,92,92	0
56	MG	2A	3171	1/1	0.70	0.19	94,94,94,94	0
56	MG	2A	3267	1/1	0.70	0.30	81,81,81,81	0
56	MG	1A	3454	1/1	0.70	0.22	73,73,73,73	0
56	MG	1A	3188	1/1	0.70	0.34	62,62,62,62	0
56	MG	2a	3071	1/1	0.70	0.31	75,75,75,75	0
56	MG	2B	207	1/1	0.70	0.28	84,84,84,84	0
56	MG	2A	3042	1/1	0.70	0.18	75,75,75,75	0
56	MG	1r	101	1/1	0.71	0.23	81,81,81,81	0
56	MG	2A	3001	1/1	0.71	0.29	80,80,80,80	0
56	MG	1A	3234	1/1	0.71	0.37	85,85,85,85	0
56	MG	1A	3477	1/1	0.71	0.34	61,61,61,61	0
56	MG	2A	3357	1/1	0.71	0.28	69,69,69,69	0
56	MG	2A	3371	1/1	0.71	0.27	62,62,62,62	0
56	MG	1A	3130	1/1	0.71	0.23	84,84,84,84	0
56	MG	2A	3027	1/1	0.71	0.27	83,83,83,83	0
56	MG	2A	3238	1/1	0.71	0.33	67,67,67,67	0
56	MG	1A	3137	1/1	0.71	0.40	61,61,61,61	0
56	MG	1A	3017	1/1	0.71	0.41	61,61,61,61	0
56	MG	1A	3048	1/1	0.71	0.34	69,69,69,69	0
56	MG	1B	209	1/1	0.71	0.10	122,122,122,122	0
56	MG	1A	3194	1/1	0.71	0.09	92,92,92,92	0
56	MG	10	102	1/1	0.71	0.11	73,73,73,73	0
56	MG	2A	3166	1/1	0.71	0.16	94,94,94,94	0
56	MG	1A	3113	1/1	0.71	0.10	77,77,77,77	0
56	MG	2A	3173	1/1	0.71	0.32	78,78,78,78	0
56	MG	2A	3055	1/1	0.71	0.27	82,82,82,82	0
56	MG	1A	3167	1/1	0.71	0.23	80,80,80,80	0
56	MG	1B	207	1/1	0.72	0.16	106,106,106,106	0
56	MG	2A	3369	1/1	0.72	0.24	70,70,70,70	0
56	MG	1A	3449	1/1	0.72	0.30	83,83,83,83	0
56	MG	1A	3014	1/1	0.72	0.13	86,86,86,86	0
56	MG	1A	3118	1/1	0.72	0.26	75,75,75,75	0
56	MG	1A	3171	1/1	0.72	0.26	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1a	1603	1/1	0.72	0.20	94,94,94,94	0
56	MG	1A	3375	1/1	0.72	0.27	95,95,95,95	0
56	MG	2A	3015	1/1	0.72	0.32	76,76,76,76	0
56	MG	2A	3186	1/1	0.72	0.26	92,92,92,92	0
56	MG	1A	3349	1/1	0.72	0.17	80,80,80,80	0
56	MG	1A	3083	1/1	0.72	0.22	83,83,83,83	0
56	MG	2A	3206	1/1	0.72	0.19	78,78,78,78	0
56	MG	1A	3491	1/1	0.72	0.19	91,91,91,91	0
56	MG	1A	3355	1/1	0.72	0.13	71,71,71,71	0
56	MG	2a	3085	1/1	0.72	0.23	92,92,92,92	0
56	MG	1A	3114	1/1	0.72	0.32	82,82,82,82	0
56	MG	1A	3157	1/1	0.72	0.32	79,79,79,79	0
56	MG	2A	3093	1/1	0.73	0.25	82,82,82,82	0
56	MG	2A	3243	1/1	0.73	0.28	64,64,64,64	0
56	MG	1B	210	1/1	0.73	0.15	96,96,96,96	0
56	MG	1A	3316	1/1	0.73	0.22	63,63,63,63	0
56	MG	1A	3047	1/1	0.73	0.27	67,67,67,67	0
56	MG	2B	206	1/1	0.73	0.23	89,89,89,89	0
56	MG	1A	3447	1/1	0.73	0.30	78,78,78,78	0
56	MG	1A	3424	1/1	0.73	0.34	61,61,61,61	0
56	MG	2a	3001	1/1	0.73	0.16	80,80,80,80	0
56	MG	1A	3077	1/1	0.73	0.33	81,81,81,81	0
56	MG	2A	3281	1/1	0.73	0.24	73,73,73,73	0
56	MG	2a	3014	1/1	0.73	0.15	81,81,81,81	0
56	MG	1A	3383	1/1	0.73	0.17	73,73,73,73	0
56	MG	2A	3141	1/1	0.73	0.47	81,81,81,81	0
56	MG	2a	3034	1/1	0.73	0.15	78,78,78,78	0
56	MG	2A	3147	1/1	0.73	0.28	75,75,75,75	0
56	MG	2A	3310	1/1	0.73	0.27	67,67,67,67	0
56	MG	1A	3437	1/1	0.73	0.11	99,99,99,99	0
56	MG	2A	3084	1/1	0.73	0.17	79,79,79,79	0
56	MG	1A	3144	1/1	0.73	0.32	87,87,87,87	0
56	MG	2A	3236	1/1	0.73	0.34	66,66,66,66	0
56	MG	2a	3092	1/1	0.73	0.13	82,82,82,82	0
56	MG	2A	3092	1/1	0.73	0.27	75,75,75,75	0
56	MG	2a	3099	1/1	0.73	0.23	79,79,79,79	0
56	MG	2A	3022	1/1	0.74	0.30	66,66,66,66	0
56	MG	1A	3189	1/1	0.74	0.26	82,82,82,82	0
56	MG	1A	3407	1/1	0.74	0.24	94,94,94,94	0
56	MG	1A	3339	1/1	0.74	0.25	73,73,73,73	0
56	MG	2A	3275	1/1	0.74	0.29	62,62,62,62	0
56	MG	2A	3153	1/1	0.74	0.12	100,100,100,100	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	2A	3291	1/1	0.74	0.24	78,78,78,78	0
56	MG	2A	3293	1/1	0.74	0.24	77,77,77,77	0
56	MG	1A	3456	1/1	0.74	0.32	68,68,68,68	0
56	MG	2A	3301	1/1	0.74	0.16	77,77,77,77	0
56	MG	2A	3003	1/1	0.74	0.29	73,73,73,73	0
56	MG	1A	3241	1/1	0.74	0.31	61,61,61,61	0
56	MG	2A	3009	1/1	0.74	0.12	110,110,110,110	0
56	MG	2A	3314	1/1	0.74	0.24	78,78,78,78	0
56	MG	1A	3202	1/1	0.74	0.14	85,85,85,85	0
56	MG	2A	3318	1/1	0.74	0.29	62,62,62,62	0
56	MG	2a	3061	1/1	0.74	0.24	72,72,72,72	0
56	MG	2A	3334	1/1	0.74	0.29	77,77,77,77	0
56	MG	1A	3420	1/1	0.74	0.29	70,70,70,70	0
56	MG	2A	3180	1/1	0.74	0.16	76,76,76,76	0
56	MG	1A	3290	1/1	0.74	0.21	80,80,80,80	0
56	MG	2A	3247	1/1	0.74	0.23	81,81,81,81	0
56	MG	2a	3095	1/1	0.74	0.11	84,84,84,84	0
56	MG	2A	3185	1/1	0.74	0.20	72,72,72,72	0
56	MG	2A	3359	1/1	0.74	0.14	74,74,74,74	0
56	MG	2A	3377	1/1	0.75	0.12	92,92,92,92	0
56	MG	1A	3237	1/1	0.75	0.26	79,79,79,79	0
56	MG	2A	3202	1/1	0.75	0.27	70,70,70,70	0
56	MG	2A	3034	1/1	0.75	0.18	94,94,94,94	0
56	MG	1B	206	1/1	0.75	0.18	89,89,89,89	0
56	MG	2A	3129	1/1	0.75	0.34	61,61,61,61	0
56	MG	1A	3079	1/1	0.75	0.14	78,78,78,78	0
56	MG	1A	3398	1/1	0.75	0.32	70,70,70,70	0
56	MG	2A	3309	1/1	0.75	0.17	61,61,61,61	0
56	MG	2a	3015	1/1	0.75	0.13	80,80,80,80	0
56	MG	1A	3457	1/1	0.75	0.38	62,62,62,62	0
56	MG	1A	3075	1/1	0.75	0.10	72,72,72,72	0
56	MG	1A	3292	1/1	0.75	0.23	75,75,75,75	0
56	MG	1A	3471	1/1	0.75	0.31	75,75,75,75	0
56	MG	2A	3083	1/1	0.75	0.19	77,77,77,77	0
56	MG	16	101	1/1	0.75	0.30	75,75,75,75	0
56	MG	1A	3069	1/1	0.75	0.23	81,81,81,81	0
56	MG	1A	3340	1/1	0.75	0.41	61,61,61,61	0
56	MG	1a	1609	1/1	0.75	0.10	103,103,103,103	0
56	MG	1A	3387	1/1	0.75	0.22	80,80,80,80	0
56	MG	2A	3261	1/1	0.75	0.31	72,72,72,72	0
56	MG	1A	3415	1/1	0.75	0.51	80,80,80,80	0
56	MG	2A	3029	1/1	0.75	0.25	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1A	3304	1/1	0.75	0.41	61,61,61,61	0
56	MG	2d	301	1/1	0.75	0.07	81,81,81,81	0
56	MG	1a	1652	1/1	0.76	0.18	74,74,74,74	0
56	MG	1A	3423	1/1	0.76	0.34	62,62,62,62	0
56	MG	2A	3063	1/1	0.76	0.20	79,79,79,79	0
56	MG	1B	208	1/1	0.76	0.13	81,81,81,81	0
56	MG	2A	3081	1/1	0.76	0.30	76,76,76,76	0
56	MG	2A	3152	1/1	0.76	0.31	81,81,81,81	0
56	MG	1A	3329	1/1	0.76	0.20	74,74,74,74	0
56	MG	1a	1621	1/1	0.76	0.31	73,73,73,73	0
56	MG	2A	3311	1/1	0.76	0.28	79,79,79,79	0
56	MG	1A	3445	1/1	0.76	0.34	78,78,78,78	0
56	MG	1A	3044	1/1	0.76	0.16	83,83,83,83	0
56	MG	1V	202	1/1	0.76	0.29	68,68,68,68	0
56	MG	2A	3320	1/1	0.76	0.26	74,74,74,74	0
56	MG	1A	3428	1/1	0.76	0.48	61,61,61,61	0
56	MG	1A	3433	1/1	0.76	0.35	75,75,75,75	0
56	MG	1A	3078	1/1	0.76	0.42	80,80,80,80	0
56	MG	1A	3032	1/1	0.76	0.21	77,77,77,77	0
56	MG	2A	3184	1/1	0.76	0.36	70,70,70,70	0
56	MG	2a	3073	1/1	0.76	0.14	76,76,76,76	0
56	MG	1x	102	1/1	0.76	0.12	85,85,85,85	0
56	MG	1A	3228	1/1	0.76	0.30	77,77,77,77	0
56	MG	2A	3365	1/1	0.76	0.38	67,67,67,67	0
56	MG	1A	3461	1/1	0.76	0.35	83,83,83,83	0
56	MG	2A	3276	1/1	0.76	0.43	74,74,74,74	0
56	MG	2A	3122	1/1	0.76	0.36	85,85,85,85	0
56	MG	2A	3376	1/1	0.76	0.17	72,72,72,72	0
56	MG	1A	3452	1/1	0.77	0.23	76,76,76,76	0
56	MG	1A	3291	1/1	0.77	0.21	77,77,77,77	0
56	MG	1A	3101	1/1	0.77	0.16	74,74,74,74	0
56	MG	2Q	202	1/1	0.77	0.12	69,69,69,69	0
56	MG	1A	3226	1/1	0.77	0.12	79,79,79,79	0
56	MG	1A	3165	1/1	0.77	0.16	84,84,84,84	0
56	MG	1A	3231	1/1	0.77	0.20	65,65,65,65	0
56	MG	1A	3143	1/1	0.77	0.20	62,62,62,62	0
56	MG	2A	3007	1/1	0.77	0.22	78,78,78,78	0
56	MG	1A	3465	1/1	0.77	0.27	61,61,61,61	0
56	MG	1A	3004	1/1	0.77	0.13	89,89,89,89	0
56	MG	1a	1662	1/1	0.77	0.16	94,94,94,94	0
56	MG	1A	3435	1/1	0.77	0.23	90,90,90,90	0
56	MG	1a	1667	1/1	0.77	0.17	78,78,78,78	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1A	3154	1/1	0.77	0.14	77,77,77,77	0
56	MG	1A	3406	1/1	0.77	0.27	76,76,76,76	0
56	MG	1A	3325	1/1	0.77	0.39	70,70,70,70	0
56	MG	2A	3271	1/1	0.77	0.26	63,63,63,63	0
56	MG	2A	3100	1/1	0.77	0.34	74,74,74,74	0
56	MG	1A	3279	1/1	0.77	0.25	65,65,65,65	0
56	MG	1A	3336	1/1	0.77	0.31	64,64,64,64	0
56	MG	2A	3111	1/1	0.77	0.09	76,76,76,76	0
56	MG	1A	3239	1/1	0.77	0.09	90,90,90,90	0
56	MG	1A	3100	1/1	0.77	0.21	86,86,86,86	0
56	MG	2A	3297	1/1	0.77	0.30	77,77,77,77	0
56	MG	2A	3193	1/1	0.78	0.10	87,87,87,87	0
56	MG	2A	3374	1/1	0.78	0.40	62,62,62,62	0
56	MG	1A	3186	1/1	0.78	0.21	84,84,84,84	0
56	MG	1A	3264	1/1	0.78	0.18	83,83,83,83	0
56	MG	2A	3126	1/1	0.78	0.17	76,76,76,76	0
56	MG	1A	3270	1/1	0.78	0.27	62,62,62,62	0
56	MG	1A	3274	1/1	0.78	0.24	74,74,74,74	0
56	MG	1a	1651	1/1	0.78	0.42	71,71,71,71	0
56	MG	2A	3221	1/1	0.78	0.23	80,80,80,80	0
56	MG	1A	3106	1/1	0.78	0.25	73,73,73,73	0
56	MG	1a	1655	1/1	0.78	0.22	84,84,84,84	0
56	MG	1A	3285	1/1	0.78	0.23	83,83,83,83	0
56	MG	2A	3087	1/1	0.78	0.18	68,68,68,68	0
56	MG	1A	3247	1/1	0.78	0.42	69,69,69,69	0
56	MG	1A	3099	1/1	0.78	0.18	98,98,98,98	0
56	MG	2a	3025	1/1	0.78	0.34	81,81,81,81	0
56	MG	1A	3221	1/1	0.78	0.33	86,86,86,86	0
56	MG	1A	3028	1/1	0.78	0.16	107,107,107,107	0
56	MG	1A	3378	1/1	0.78	0.22	77,77,77,77	0
56	MG	1A	3293	1/1	0.78	0.24	84,84,84,84	0
56	MG	2a	3056	1/1	0.78	0.21	82,82,82,82	0
56	MG	2A	3176	1/1	0.78	0.15	79,79,79,79	0
56	MG	2A	3340	1/1	0.78	0.21	86,86,86,86	0
56	MG	2a	3070	1/1	0.78	0.09	78,78,78,78	0
56	MG	1a	1630	1/1	0.78	0.14	80,80,80,80	0
56	MG	2A	3263	1/1	0.78	0.28	70,70,70,70	0
56	MG	2a	3077	1/1	0.78	0.13	95,95,95,95	0
56	MG	1A	3385	1/1	0.78	0.21	63,63,63,63	0
56	MG	2A	3358	1/1	0.78	0.29	81,81,81,81	0
56	MG	1A	3299	1/1	0.78	0.19	83,83,83,83	0
56	MG	2A	3364	1/1	0.78	0.19	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	2A	3268	1/1	0.78	0.33	68,68,68,68	0
56	MG	1A	3122	1/1	0.78	0.16	106,106,106,106	0
56	MG	1A	3391	1/1	0.78	0.23	66,66,66,66	0
56	MG	2A	3146	1/1	0.79	0.36	79,79,79,79	0
56	MG	1d	301	1/1	0.79	0.21	91,91,91,91	0
56	MG	2A	3328	1/1	0.79	0.27	68,68,68,68	0
56	MG	2A	3330	1/1	0.79	0.14	82,82,82,82	0
56	MG	1A	3371	1/1	0.79	0.25	75,75,75,75	0
56	MG	1A	3210	1/1	0.79	0.30	81,81,81,81	0
56	MG	1A	3451	1/1	0.79	0.17	77,77,77,77	0
56	MG	2A	3002	1/1	0.79	0.20	70,70,70,70	0
56	MG	2A	3348	1/1	0.79	0.30	77,77,77,77	0
56	MG	1A	3253	1/1	0.79	0.13	79,79,79,79	0
56	MG	1A	3257	1/1	0.79	0.17	82,82,82,82	0
56	MG	2a	3037	1/1	0.79	0.06	84,84,84,84	0
56	MG	1A	3002	1/1	0.79	0.13	94,94,94,94	0
56	MG	2A	3054	1/1	0.79	0.10	78,78,78,78	0
56	MG	1a	1636	1/1	0.79	0.07	93,93,93,93	0
56	MG	1A	3046	1/1	0.79	0.20	78,78,78,78	0
56	MG	1A	3082	1/1	0.79	0.22	74,74,74,74	0
56	MG	2A	3367	1/1	0.79	0.34	62,62,62,62	0
56	MG	2A	3304	1/1	0.79	0.32	63,63,63,63	0
56	MG	1A	3224	1/1	0.79	0.44	76,76,76,76	0
56	MG	2A	3372	1/1	0.79	0.27	70,70,70,70	0
56	MG	2A	3124	1/1	0.79	0.11	94,94,94,94	0
56	MG	2A	3308	1/1	0.79	0.30	85,85,85,85	0
56	MG	2A	3248	1/1	0.79	0.28	78,78,78,78	0
56	MG	1A	3151	1/1	0.79	0.23	76,76,76,76	0
56	MG	1A	3096	1/1	0.79	0.22	76,76,76,76	0
56	MG	2A	3139	1/1	0.79	0.18	64,64,64,64	0
56	MG	1A	3031	1/1	0.79	0.19	69,69,69,69	0
56	MG	2A	3212	1/1	0.80	0.14	78,78,78,78	0
56	MG	2A	3219	1/1	0.80	0.21	75,75,75,75	0
56	MG	1A	3018	1/1	0.80	0.21	77,77,77,77	0
56	MG	2A	3160	1/1	0.80	0.21	75,75,75,75	0
56	MG	2A	3354	1/1	0.80	0.27	65,65,65,65	0
56	MG	1A	3062	1/1	0.80	0.14	89,89,89,89	0
56	MG	1A	3093	1/1	0.80	0.29	76,76,76,76	0
56	MG	1A	3024	1/1	0.80	0.28	85,85,85,85	0
56	MG	2A	3123	1/1	0.80	0.28	78,78,78,78	0
56	MG	1A	3321	1/1	0.80	0.30	67,67,67,67	0
56	MG	2A	3244	1/1	0.80	0.28	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	2A	3177	1/1	0.80	0.29	63,63,63,63	0
56	MG	2A	3125	1/1	0.80	0.11	82,82,82,82	0
56	MG	1A	3058	1/1	0.80	0.34	73,73,73,73	0
56	MG	1A	3178	1/1	0.80	0.27	65,65,65,65	0
56	MG	2A	3091	1/1	0.80	0.27	75,75,75,75	0
56	MG	1A	3216	1/1	0.80	0.31	65,65,65,65	0
56	MG	1A	3097	1/1	0.80	0.23	77,77,77,77	0
56	MG	1A	3338	1/1	0.80	0.38	61,61,61,61	0
56	MG	13	101	1/1	0.80	0.28	72,72,72,72	0
56	MG	2A	3005	1/1	0.80	0.16	85,85,85,85	0
56	MG	1A	3450	1/1	0.80	0.17	75,75,75,75	0
56	MG	2E	302	1/1	0.80	0.16	80,80,80,80	0
56	MG	1A	3156	1/1	0.80	0.20	78,78,78,78	0
56	MG	1A	3084	1/1	0.80	0.15	79,79,79,79	0
56	MG	1A	3026	1/1	0.81	0.21	75,75,75,75	0
56	MG	1A	3269	1/1	0.81	0.24	92,92,92,92	0
56	MG	2A	3174	1/1	0.81	0.12	80,80,80,80	0
56	MG	1a	1602	1/1	0.81	0.18	74,74,74,74	0
56	MG	2A	3016	1/1	0.81	0.11	72,72,72,72	0
56	MG	1A	3010	1/1	0.81	0.21	72,72,72,72	0
56	MG	2A	3179	1/1	0.81	0.28	93,93,93,93	0
56	MG	1A	3271	1/1	0.81	0.27	75,75,75,75	0
56	MG	1A	3408	1/1	0.81	0.41	61,61,61,61	0
56	MG	1A	3478	1/1	0.81	0.25	76,76,76,76	0
56	MG	2A	3103	1/1	0.81	0.22	78,78,78,78	0
56	MG	2E	301	1/1	0.81	0.11	87,87,87,87	0
56	MG	2A	3105	1/1	0.81	0.16	74,74,74,74	0
56	MG	1A	3199	1/1	0.81	0.15	84,84,84,84	0
56	MG	20	102	1/1	0.81	0.15	75,75,75,75	0
56	MG	1a	1677	1/1	0.81	0.20	85,85,85,85	0
56	MG	2A	3113	1/1	0.81	0.20	70,70,70,70	0
56	MG	1A	3123	1/1	0.81	0.34	81,81,81,81	0
56	MG	1A	3206	1/1	0.81	0.31	76,76,76,76	0
56	MG	1A	3448	1/1	0.81	0.26	74,74,74,74	0
56	MG	2a	3020	1/1	0.81	0.11	105,105,105,105	0
56	MG	1a	1683	1/1	0.81	0.16	118,118,118,118	0
56	MG	1A	3353	1/1	0.81	0.12	62,62,62,62	0
56	MG	2a	3028	1/1	0.81	0.13	83,83,83,83	0
56	MG	1A	3054	1/1	0.81	0.11	75,75,75,75	0
56	MG	1A	3422	1/1	0.81	0.34	61,61,61,61	0
56	MG	2A	3133	1/1	0.81	0.28	77,77,77,77	0
56	MG	1A	3127	1/1	0.81	0.17	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	2A	3056	1/1	0.81	0.11	79,79,79,79	0
56	MG	2A	3057	1/1	0.81	0.11	91,91,91,91	0
56	MG	1A	3395	1/1	0.81	0.23	67,67,67,67	0
56	MG	2a	3065	1/1	0.81	0.15	75,75,75,75	0
56	MG	2A	3148	1/1	0.81	0.27	72,72,72,72	0
56	MG	2A	3071	1/1	0.81	0.22	61,61,61,61	0
56	MG	1A	3425	1/1	0.81	0.33	67,67,67,67	0
56	MG	2A	3246	1/1	0.81	0.20	79,79,79,79	0
56	MG	2a	3075	1/1	0.81	0.11	92,92,92,92	0
56	MG	1B	211	1/1	0.81	0.10	72,72,72,72	0
56	MG	1A	3042	1/1	0.81	0.23	79,79,79,79	0
56	MG	2A	3253	1/1	0.81	0.26	62,62,62,62	0
56	MG	1a	1644	1/1	0.81	0.23	76,76,76,76	0
56	MG	2a	3093	1/1	0.81	0.12	77,77,77,77	0
56	MG	1A	3217	1/1	0.81	0.22	65,65,65,65	0
56	MG	1A	3460	1/1	0.81	0.32	67,67,67,67	0
56	MG	2A	3162	1/1	0.81	0.23	90,90,90,90	0
56	MG	1A	3150	1/1	0.81	0.31	90,90,90,90	0
56	MG	1A	3288	1/1	0.82	0.28	78,78,78,78	0
56	MG	2A	3045	1/1	0.82	0.13	74,74,74,74	0
56	MG	2A	3190	1/1	0.82	0.16	82,82,82,82	0
56	MG	1A	3327	1/1	0.82	0.23	83,83,83,83	0
56	MG	1A	3374	1/1	0.82	0.24	62,62,62,62	0
56	MG	2A	3339	1/1	0.82	0.10	85,85,85,85	0
56	MG	2A	3200	1/1	0.82	0.22	74,74,74,74	0
56	MG	2a	3019	1/1	0.82	0.20	77,77,77,77	0
56	MG	2A	3341	1/1	0.82	0.21	76,76,76,76	0
56	MG	1A	3043	1/1	0.82	0.08	76,76,76,76	0
56	MG	2A	3350	1/1	0.82	0.10	93,93,93,93	0
56	MG	1a	1643	1/1	0.82	0.14	71,71,71,71	0
56	MG	1A	3446	1/1	0.82	0.26	77,77,77,77	0
56	MG	1A	3333	1/1	0.82	0.23	68,68,68,68	0
56	MG	2A	3058	1/1	0.82	0.30	82,82,82,82	0
56	MG	1a	1648	1/1	0.82	0.12	100,100,100,100	0
56	MG	2A	3282	1/1	0.82	0.17	74,74,74,74	0
56	MG	2A	3069	1/1	0.82	0.20	83,83,83,83	0
56	MG	2A	3021	1/1	0.82	0.13	90,90,90,90	0
56	MG	1A	3334	1/1	0.82	0.20	62,62,62,62	0
56	MG	2A	3234	1/1	0.82	0.25	68,68,68,68	0
56	MG	1A	3379	1/1	0.82	0.17	80,80,80,80	0
56	MG	1A	3111	1/1	0.82	0.30	78,78,78,78	0
56	MG	1E	303	1/1	0.82	0.31	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1A	3261	1/1	0.82	0.13	77,77,77,77	0
56	MG	1A	3011	1/1	0.82	0.29	72,72,72,72	0
56	MG	1A	3173	1/1	0.82	0.29	87,87,87,87	0
56	MG	2A	3136	1/1	0.82	0.30	78,78,78,78	0
56	MG	1A	3223	1/1	0.82	0.18	64,64,64,64	0
56	MG	2A	3182	1/1	0.82	0.18	76,76,76,76	0
56	MG	2A	3183	1/1	0.82	0.19	81,81,81,81	0
56	MG	2A	3250	1/1	0.82	0.35	62,62,62,62	0
56	MG	2A	3041	1/1	0.82	0.26	91,91,91,91	0
56	MG	2Q	201	1/1	0.82	0.09	93,93,93,93	0
56	MG	2l	201	1/1	0.82	0.12	80,80,80,80	0
56	MG	2r	101	1/1	0.82	0.19	77,77,77,77	0
56	MG	2A	3099	1/1	0.83	0.26	81,81,81,81	0
56	MG	2A	3194	1/1	0.83	0.15	79,79,79,79	0
56	MG	2a	3003	1/1	0.83	0.16	90,90,90,90	0
56	MG	1A	3198	1/1	0.83	0.20	64,64,64,64	0
56	MG	1A	3337	1/1	0.83	0.15	79,79,79,79	0
56	MG	1A	3357	1/1	0.83	0.10	68,68,68,68	0
56	MG	2A	3203	1/1	0.83	0.27	61,61,61,61	0
56	MG	1A	3468	1/1	0.83	0.21	63,63,63,63	0
56	MG	1A	3142	1/1	0.83	0.13	71,71,71,71	0
56	MG	2A	3158	1/1	0.83	0.10	73,73,73,73	0
56	MG	2a	3023	1/1	0.83	0.17	72,72,72,72	0
56	MG	2A	3110	1/1	0.83	0.07	88,88,88,88	0
56	MG	2a	3027	1/1	0.83	0.22	79,79,79,79	0
56	MG	1A	3050	1/1	0.83	0.12	83,83,83,83	0
56	MG	1A	3204	1/1	0.83	0.20	72,72,72,72	0
56	MG	2A	3355	1/1	0.83	0.09	86,86,86,86	0
56	MG	2A	3356	1/1	0.83	0.20	68,68,68,68	0
56	MG	1a	1624	1/1	0.83	0.09	109,109,109,109	0
56	MG	2A	3118	1/1	0.83	0.15	71,71,71,71	0
56	MG	2A	3082	1/1	0.83	0.23	79,79,79,79	0
56	MG	1A	3363	1/1	0.83	0.34	77,77,77,77	0
56	MG	1A	3177	1/1	0.83	0.17	62,62,62,62	0
56	MG	2A	3237	1/1	0.83	0.15	82,82,82,82	0
56	MG	2A	3086	1/1	0.83	0.16	77,77,77,77	0
56	MG	1A	3481	1/1	0.83	0.22	68,68,68,68	0
56	MG	2A	3240	1/1	0.83	0.36	61,61,61,61	0
56	MG	1A	3121	1/1	0.83	0.30	79,79,79,79	0
56	MG	1A	3280	1/1	0.83	0.20	64,64,64,64	0
56	MG	1a	1668	1/1	0.83	0.33	78,78,78,78	0
56	MG	1A	3190	1/1	0.83	0.34	79,79,79,79	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1A	3134	1/1	0.83	0.23	80,80,80,80	0
56	MG	1a	1637	1/1	0.83	0.14	89,89,89,89	0
56	MG	2A	3317	1/1	0.83	0.24	65,65,65,65	0
56	MG	2A	3012	1/1	0.83	0.24	66,66,66,66	0
56	MG	2A	3251	1/1	0.83	0.26	75,75,75,75	0
56	MG	2A	3323	1/1	0.83	0.12	64,64,64,64	0
56	MG	2A	3324	1/1	0.83	0.17	82,82,82,82	0
56	MG	1a	1638	1/1	0.83	0.21	75,75,75,75	0
56	MG	1A	3169	1/1	0.84	0.14	62,62,62,62	0
56	MG	1A	3411	1/1	0.84	0.31	75,75,75,75	0
56	MG	1A	3365	1/1	0.84	0.24	69,69,69,69	0
56	MG	2A	3242	1/1	0.84	0.29	61,61,61,61	0
56	MG	1A	3366	1/1	0.84	0.25	61,61,61,61	0
56	MG	2A	3138	1/1	0.84	0.04	76,76,76,76	0
56	MG	2A	3044	1/1	0.84	0.14	81,81,81,81	0
56	MG	1A	3135	1/1	0.84	0.23	80,80,80,80	0
56	MG	1A	3392	1/1	0.84	0.26	73,73,73,73	0
56	MG	2A	3006	1/1	0.84	0.09	76,76,76,76	0
56	MG	2a	3030	1/1	0.84	0.11	74,74,74,74	0
56	MG	1A	3473	1/1	0.84	0.28	61,61,61,61	0
56	MG	1a	1670	1/1	0.84	0.14	97,97,97,97	0
56	MG	1A	3238	1/1	0.84	0.28	75,75,75,75	0
56	MG	10	103	1/1	0.84	0.20	69,69,69,69	0
56	MG	2A	3104	1/1	0.84	0.17	80,80,80,80	0
56	MG	2A	3375	1/1	0.84	0.17	66,66,66,66	0
56	MG	1A	3161	1/1	0.84	0.11	65,65,65,65	0
56	MG	1A	3373	1/1	0.84	0.29	61,61,61,61	0
56	MG	1A	3356	1/1	0.84	0.19	61,61,61,61	0
56	MG	2A	3159	1/1	0.84	0.13	83,83,83,83	0
56	MG	2a	3072	1/1	0.84	0.11	72,72,72,72	0
56	MG	2A	3333	1/1	0.84	0.72	74,74,74,74	0
56	MG	1A	3488	1/1	0.84	0.20	69,69,69,69	0
56	MG	2a	3076	1/1	0.84	0.07	82,82,82,82	0
56	MG	1A	3091	1/1	0.84	0.19	77,77,77,77	0
56	MG	2A	3025	1/1	0.84	0.14	89,89,89,89	0
56	MG	2E	303	1/1	0.84	0.26	81,81,81,81	0
56	MG	2a	3090	1/1	0.84	0.23	73,73,73,73	0
56	MG	2a	3091	1/1	0.84	0.18	79,79,79,79	0
56	MG	1A	3402	1/1	0.84	0.35	62,62,62,62	0
56	MG	2A	3120	1/1	0.84	0.17	78,78,78,78	0
56	MG	1A	3232	1/1	0.84	0.18	77,77,77,77	0
56	MG	25	101	1/1	0.84	0.20	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1A	3310	1/1	0.84	0.75	62,62,62,62	0
56	MG	2A	3349	1/1	0.84	0.30	76,76,76,76	0
56	MG	1A	3087	1/1	0.84	0.13	82,82,82,82	0
56	MG	1A	3362	1/1	0.84	0.37	62,62,62,62	0
56	MG	2A	3213	1/1	0.85	0.19	67,67,67,67	0
56	MG	1A	3126	1/1	0.85	0.33	80,80,80,80	0
56	MG	2A	3284	1/1	0.85	0.23	71,71,71,71	0
56	MG	1A	3297	1/1	0.85	0.28	79,79,79,79	0
56	MG	1A	3298	1/1	0.85	0.23	71,71,71,71	0
56	MG	1A	3155	1/1	0.85	0.28	73,73,73,73	0
56	MG	1A	3409	1/1	0.85	0.28	82,82,82,82	0
56	MG	1A	3323	1/1	0.85	0.43	62,62,62,62	0
56	MG	1A	3227	1/1	0.85	0.11	71,71,71,71	0
56	MG	1A	3203	1/1	0.85	0.29	72,72,72,72	0
56	MG	2a	3033	1/1	0.85	0.08	72,72,72,72	0
56	MG	1A	3328	1/1	0.85	0.19	61,61,61,61	0
56	MG	2A	3178	1/1	0.85	0.16	75,75,75,75	0
56	MG	2A	3130	1/1	0.85	0.34	63,63,63,63	0
56	MG	1a	1650	1/1	0.85	0.07	82,82,82,82	0
56	MG	1a	1619	1/1	0.85	0.13	92,92,92,92	0
56	MG	2A	3137	1/1	0.85	0.36	62,62,62,62	0
56	MG	1A	3348	1/1	0.85	0.33	79,79,79,79	0
56	MG	1a	1654	1/1	0.85	0.17	71,71,71,71	0
56	MG	1A	3307	1/1	0.85	0.18	71,71,71,71	0
56	MG	2A	3145	1/1	0.85	0.20	79,79,79,79	0
56	MG	1a	1660	1/1	0.85	0.40	61,61,61,61	0
56	MG	1A	3330	1/1	0.85	0.18	69,69,69,69	0
56	MG	1A	3474	1/1	0.85	0.16	70,70,70,70	0
56	MG	2A	3257	1/1	0.85	0.24	84,84,84,84	0
56	MG	2A	3195	1/1	0.85	0.22	66,66,66,66	0
56	MG	2a	3079	1/1	0.85	0.13	62,62,62,62	0
56	MG	1S	201	1/1	0.85	0.10	78,78,78,78	0
56	MG	2A	3335	1/1	0.85	0.18	68,68,68,68	0
56	MG	2A	3008	1/1	0.85	0.20	69,69,69,69	0
56	MG	1A	3372	1/1	0.85	0.14	72,72,72,72	0
56	MG	2I	101	1/1	0.85	0.24	63,63,63,63	0
56	MG	2A	3011	1/1	0.85	0.09	82,82,82,82	0
56	MG	1A	3331	1/1	0.85	0.20	63,63,63,63	0
56	MG	2A	3156	1/1	0.85	0.10	63,63,63,63	0
56	MG	1A	3266	1/1	0.85	0.10	77,77,77,77	0
56	MG	1a	1635	1/1	0.85	0.07	84,84,84,84	0
56	MG	2f	201	1/1	0.85	0.21	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	2a	3012	1/1	0.85	0.09	104,104,104,104	0
56	MG	1A	3268	1/1	0.85	0.17	68,68,68,68	0
56	MG	2A	3112	1/1	0.86	0.15	68,68,68,68	0
56	MG	23	101	1/1	0.86	0.18	68,68,68,68	0
56	MG	1A	3430	1/1	0.86	0.19	68,68,68,68	0
56	MG	1A	3294	1/1	0.86	0.20	75,75,75,75	0
56	MG	2A	3115	1/1	0.86	0.18	84,84,84,84	0
56	MG	1A	3359	1/1	0.86	0.14	78,78,78,78	0
56	MG	2a	3009	1/1	0.86	0.13	79,79,79,79	0
56	MG	1A	3296	1/1	0.86	0.19	73,73,73,73	0
56	MG	1A	3105	1/1	0.86	0.06	108,108,108,108	0
56	MG	2a	3013	1/1	0.86	0.07	80,80,80,80	0
56	MG	1A	3248	1/1	0.86	0.17	68,68,68,68	0
56	MG	1A	3005	1/1	0.86	0.14	82,82,82,82	0
56	MG	2A	3010	1/1	0.86	0.15	87,87,87,87	0
56	MG	2A	3255	1/1	0.86	0.25	71,71,71,71	0
56	MG	1A	3484	1/1	0.86	0.18	67,67,67,67	0
56	MG	2A	3079	1/1	0.86	0.07	79,79,79,79	0
56	MG	1A	3364	1/1	0.86	0.12	81,81,81,81	0
56	MG	2a	3026	1/1	0.86	0.31	76,76,76,76	0
56	MG	2A	3131	1/1	0.86	0.19	63,63,63,63	0
56	MG	2A	3262	1/1	0.86	0.21	80,80,80,80	0
56	MG	2A	3132	1/1	0.86	0.21	71,71,71,71	0
56	MG	2A	3353	1/1	0.86	0.24	70,70,70,70	0
56	MG	2a	3032	1/1	0.86	0.08	75,75,75,75	0
56	MG	2A	3265	1/1	0.86	0.27	73,73,73,73	0
56	MG	1A	3302	1/1	0.86	0.21	62,62,62,62	0
56	MG	1a	1622	1/1	0.86	0.10	66,66,66,66	0
56	MG	1A	3015	1/1	0.86	0.19	62,62,62,62	0
56	MG	2a	3043	1/1	0.86	0.29	62,62,62,62	0
56	MG	1A	3277	1/1	0.86	0.28	61,61,61,61	0
56	MG	2a	3052	1/1	0.86	0.10	68,68,68,68	0
56	MG	1A	3306	1/1	0.86	0.53	61,61,61,61	0
56	MG	2A	3361	1/1	0.86	0.22	62,62,62,62	0
56	MG	2A	3088	1/1	0.86	0.17	76,76,76,76	0
56	MG	1A	3074	1/1	0.86	0.15	77,77,77,77	0
56	MG	2a	3067	1/1	0.86	0.07	96,96,96,96	0
56	MG	1a	1675	1/1	0.86	0.08	110,110,110,110	0
56	MG	1A	3061	1/1	0.86	0.20	71,71,71,71	0
56	MG	1A	3283	1/1	0.86	0.29	61,61,61,61	0
56	MG	1A	3312	1/1	0.86	0.21	65,65,65,65	0
56	MG	2A	3210	1/1	0.86	0.30	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1A	3098	1/1	0.86	0.13	81,81,81,81	0
56	MG	2A	3032	1/1	0.86	0.06	85,85,85,85	0
56	MG	2a	3078	1/1	0.86	0.21	62,62,62,62	0
56	MG	1A	3152	1/1	0.86	0.19	64,64,64,64	0
56	MG	1A	3320	1/1	0.86	0.26	74,74,74,74	0
56	MG	2a	3087	1/1	0.86	0.17	61,61,61,61	0
56	MG	2A	3227	1/1	0.86	0.20	62,62,62,62	0
56	MG	2a	3089	1/1	0.86	0.20	79,79,79,79	0
56	MG	2B	203	1/1	0.86	0.20	75,75,75,75	0
56	MG	1A	3023	1/1	0.86	0.08	73,73,73,73	0
56	MG	1A	3045	1/1	0.86	0.20	74,74,74,74	0
56	MG	1A	3384	1/1	0.86	0.12	71,71,71,71	0
56	MG	1A	3090	1/1	0.86	0.12	75,75,75,75	0
56	MG	1A	3386	1/1	0.86	0.15	77,77,77,77	0
56	MG	2A	3161	1/1	0.86	0.13	72,72,72,72	0
56	MG	2E	304	1/1	0.86	0.15	63,63,63,63	0
56	MG	1A	3012	1/1	0.86	0.14	75,75,75,75	0
56	MG	2A	3051	1/1	0.86	0.33	79,79,79,79	0
56	MG	1A	3246	1/1	0.86	0.20	77,77,77,77	0
56	MG	2A	3286	1/1	0.87	0.20	62,62,62,62	0
56	MG	1A	3441	1/1	0.87	0.15	76,76,76,76	0
56	MG	1A	3071	1/1	0.87	0.14	75,75,75,75	0
56	MG	2O	201	1/1	0.87	0.18	73,73,73,73	0
56	MG	2A	3197	1/1	0.87	0.20	61,61,61,61	0
56	MG	2A	3059	1/1	0.87	0.21	82,82,82,82	0
56	MG	2O	101	1/1	0.87	0.11	75,75,75,75	0
56	MG	2A	3199	1/1	0.87	0.14	83,83,83,83	0
56	MG	2A	3302	1/1	0.87	0.15	82,82,82,82	0
56	MG	2A	3127	1/1	0.87	0.16	93,93,93,93	0
56	MG	2A	3062	1/1	0.87	0.18	72,72,72,72	0
56	MG	27	101	1/1	0.87	0.20	69,69,69,69	0
56	MG	28	101	1/1	0.87	0.07	80,80,80,80	0
56	MG	1A	3220	1/1	0.87	0.17	85,85,85,85	0
56	MG	2A	3307	1/1	0.87	0.15	77,77,77,77	0
56	MG	2A	3204	1/1	0.87	0.20	68,68,68,68	0
56	MG	2A	3064	1/1	0.87	0.12	101,101,101,101	0
56	MG	2A	3066	1/1	0.87	0.20	85,85,85,85	0
56	MG	2A	3067	1/1	0.87	0.12	73,73,73,73	0
56	MG	2A	3134	1/1	0.87	0.19	82,82,82,82	0
56	MG	1A	3160	1/1	0.87	0.21	67,67,67,67	0
56	MG	1A	3354	1/1	0.87	0.16	61,61,61,61	0
56	MG	1A	3314	1/1	0.87	0.26	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1A	3281	1/1	0.87	0.27	63,63,63,63	0
56	MG	1A	3319	1/1	0.87	0.20	61,61,61,61	0
56	MG	1A	3033	1/1	0.87	0.10	86,86,86,86	0
56	MG	2a	3024	1/1	0.87	0.15	83,83,83,83	0
56	MG	1A	3249	1/1	0.87	0.05	90,90,90,90	0
56	MG	1A	3251	1/1	0.87	0.18	82,82,82,82	0
56	MG	1A	3003	1/1	0.87	0.42	68,68,68,68	0
56	MG	1A	3191	1/1	0.87	0.22	70,70,70,70	0
56	MG	1A	3455	1/1	0.87	0.32	63,63,63,63	0
56	MG	1A	3326	1/1	0.87	0.22	63,63,63,63	0
56	MG	1A	3067	1/1	0.87	0.20	64,64,64,64	0
56	MG	2A	3020	1/1	0.87	0.13	88,88,88,88	0
56	MG	1a	1663	1/1	0.87	0.21	68,68,68,68	0
56	MG	1A	3041	1/1	0.87	0.20	69,69,69,69	0
56	MG	1A	3128	1/1	0.87	0.19	77,77,77,77	0
56	MG	1A	3037	1/1	0.87	0.17	68,68,68,68	0
56	MG	1A	3089	1/1	0.87	0.16	74,74,74,74	0
56	MG	2a	3047	1/1	0.87	0.09	77,77,77,77	0
56	MG	2a	3051	1/1	0.87	0.14	79,79,79,79	0
56	MG	1A	3235	1/1	0.87	0.21	77,77,77,77	0
56	MG	1A	3116	1/1	0.87	0.22	68,68,68,68	0
56	MG	2A	3249	1/1	0.87	0.18	74,74,74,74	0
56	MG	2A	3165	1/1	0.87	0.26	73,73,73,73	0
56	MG	1A	3335	1/1	0.87	0.14	85,85,85,85	0
56	MG	2A	3252	1/1	0.87	0.16	77,77,77,77	0
56	MG	2A	3169	1/1	0.87	0.27	69,69,69,69	0
56	MG	2A	3102	1/1	0.87	0.05	73,73,73,73	0
56	MG	1A	3070	1/1	0.87	0.15	87,87,87,87	0
56	MG	1A	3300	1/1	0.87	0.25	63,63,63,63	0
56	MG	2A	3362	1/1	0.87	0.14	80,80,80,80	0
56	MG	1A	3136	1/1	0.87	0.22	76,76,76,76	0
56	MG	1A	3181	1/1	0.87	0.22	73,73,73,73	0
56	MG	2A	3108	1/1	0.87	0.12	67,67,67,67	0
56	MG	2A	3368	1/1	0.87	0.40	62,62,62,62	0
56	MG	1A	3183	1/1	0.87	0.23	74,74,74,74	0
56	MG	1A	3480	1/1	0.87	0.37	69,69,69,69	0
56	MG	2A	3264	1/1	0.87	0.15	70,70,70,70	0
56	MG	1A	3305	1/1	0.87	0.32	61,61,61,61	0
56	MG	1A	3081	1/1	0.87	0.17	65,65,65,65	0
56	MG	1A	3346	1/1	0.87	0.28	65,65,65,65	0
56	MG	1A	3272	1/1	0.87	0.18	70,70,70,70	0
56	MG	2A	3117	1/1	0.87	0.16	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	2a	3094	1/1	0.87	0.16	66,66,66,66	0
56	MG	2A	3053	1/1	0.87	0.14	74,74,74,74	0
56	MG	1A	3243	1/1	0.87	0.21	71,71,71,71	0
56	MG	1x	101	1/1	0.87	0.10	92,92,92,92	0
56	MG	2A	3191	1/1	0.87	0.07	78,78,78,78	0
56	MG	2B	209	1/1	0.87	0.10	91,91,91,91	0
56	MG	2A	3283	1/1	0.87	0.18	61,61,61,61	0
56	MG	1A	3388	1/1	0.87	0.20	71,71,71,71	0
56	MG	2A	3170	1/1	0.88	0.16	67,67,67,67	0
56	MG	1a	1676	1/1	0.88	0.13	77,77,77,77	0
56	MG	2A	3321	1/1	0.88	0.22	81,81,81,81	0
56	MG	1A	3060	1/1	0.88	0.20	79,79,79,79	0
56	MG	2A	3013	1/1	0.88	0.20	73,73,73,73	0
56	MG	2B	201	1/1	0.88	0.22	80,80,80,80	0
56	MG	2A	3327	1/1	0.88	0.23	70,70,70,70	0
56	MG	2a	3035	1/1	0.88	0.35	73,73,73,73	0
56	MG	1A	3367	1/1	0.88	0.20	61,61,61,61	0
56	MG	1A	3282	1/1	0.88	0.21	70,70,70,70	0
56	MG	1A	3149	1/1	0.88	0.22	72,72,72,72	0
56	MG	2a	3044	1/1	0.88	0.11	75,75,75,75	0
56	MG	1a	1616	1/1	0.88	0.20	69,69,69,69	0
56	MG	2A	3272	1/1	0.88	0.16	62,62,62,62	0
56	MG	2a	3048	1/1	0.88	0.17	80,80,80,80	0
56	MG	1A	3301	1/1	0.88	0.14	82,82,82,82	0
56	MG	1A	3267	1/1	0.88	0.16	70,70,70,70	0
56	MG	2a	3053	1/1	0.88	0.08	74,74,74,74	0
56	MG	1A	3467	1/1	0.88	0.24	66,66,66,66	0
56	MG	2a	3058	1/1	0.88	0.19	73,73,73,73	0
56	MG	2A	3023	1/1	0.88	0.08	73,73,73,73	0
56	MG	2E	305	1/1	0.88	0.08	67,67,67,67	0
56	MG	1A	3164	1/1	0.88	0.27	69,69,69,69	0
56	MG	2A	3342	1/1	0.88	0.11	85,85,85,85	0
56	MG	2A	3345	1/1	0.88	0.29	62,62,62,62	0
56	MG	2R	202	1/1	0.88	0.27	67,67,67,67	0
56	MG	1A	3229	1/1	0.88	0.09	75,75,75,75	0
56	MG	1A	3421	1/1	0.88	0.17	65,65,65,65	0
56	MG	2a	3074	1/1	0.88	0.24	76,76,76,76	0
56	MG	1A	3472	1/1	0.88	0.25	67,67,67,67	0
56	MG	1A	3254	1/1	0.88	0.19	77,77,77,77	0
56	MG	2A	3073	1/1	0.88	0.19	73,73,73,73	0
56	MG	2A	3295	1/1	0.88	0.10	76,76,76,76	0
56	MG	2A	3076	1/1	0.88	0.14	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	2A	3300	1/1	0.88	0.12	74,74,74,74	0
56	MG	1E	304	1/1	0.88	0.14	78,78,78,78	0
56	MG	1A	3230	1/1	0.88	0.26	79,79,79,79	0
56	MG	2A	3080	1/1	0.88	0.25	69,69,69,69	0
56	MG	1A	3141	1/1	0.88	0.18	83,83,83,83	0
56	MG	1A	3006	1/1	0.88	0.12	72,72,72,72	0
56	MG	1A	3403	1/1	0.88	0.20	87,87,87,87	0
56	MG	2A	3119	1/1	0.88	0.29	63,63,63,63	0
56	MG	1A	3168	1/1	0.88	0.15	71,71,71,71	0
56	MG	2A	3366	1/1	0.88	0.29	63,63,63,63	0
56	MG	2a	3096	1/1	0.88	0.14	70,70,70,70	0
56	MG	2A	3085	1/1	0.88	0.38	71,71,71,71	0
56	MG	2a	3098	1/1	0.88	0.15	85,85,85,85	0
56	MG	1A	3035	1/1	0.88	0.22	75,75,75,75	0
56	MG	1A	3431	1/1	0.88	0.17	62,62,62,62	0
56	MG	2A	3370	1/1	0.88	0.20	75,75,75,75	0
56	MG	1A	3192	1/1	0.88	0.28	61,61,61,61	0
56	MG	2A	3050	1/1	0.88	0.16	76,76,76,76	0
56	MG	1A	3259	1/1	0.89	0.11	73,73,73,73	0
56	MG	1A	3389	1/1	0.89	0.20	71,71,71,71	0
56	MG	1A	3419	1/1	0.89	0.32	72,72,72,72	0
56	MG	1a	1601	1/1	0.89	0.21	72,72,72,72	0
56	MG	2A	3313	1/1	0.89	0.17	76,76,76,76	0
56	MG	2A	3189	1/1	0.89	0.33	75,75,75,75	0
56	MG	1A	3344	1/1	0.89	0.23	73,73,73,73	0
56	MG	2A	3140	1/1	0.89	0.15	73,73,73,73	0
56	MG	2a	3038	1/1	0.89	0.08	80,80,80,80	0
56	MG	2a	3039	1/1	0.89	0.32	79,79,79,79	0
56	MG	1A	3007	1/1	0.89	0.08	74,74,74,74	0
56	MG	1A	3482	1/1	0.89	0.24	61,61,61,61	0
56	MG	1A	3201	1/1	0.89	0.19	69,69,69,69	0
56	MG	2a	3045	1/1	0.89	0.12	79,79,79,79	0
56	MG	1A	3182	1/1	0.89	0.12	69,69,69,69	0
56	MG	1a	1659	1/1	0.89	0.32	67,67,67,67	0
56	MG	1a	1613	1/1	0.89	0.12	87,87,87,87	0
56	MG	1a	1661	1/1	0.89	0.18	72,72,72,72	0
56	MG	1A	3158	1/1	0.89	0.10	75,75,75,75	0
56	MG	1A	3350	1/1	0.89	0.18	78,78,78,78	0
56	MG	2a	3055	1/1	0.89	0.06	79,79,79,79	0
56	MG	1A	3120	1/1	0.89	0.28	61,61,61,61	0
56	MG	1A	3055	1/1	0.89	0.08	83,83,83,83	0
56	MG	1B	205	1/1	0.89	0.07	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1A	3429	1/1	0.89	0.18	79,79,79,79	0
56	MG	1a	1623	1/1	0.89	0.12	79,79,79,79	0
56	MG	1A	3030	1/1	0.89	0.28	76,76,76,76	0
56	MG	1a	1672	1/1	0.89	0.07	104,104,104,104	0
56	MG	2T	202	1/1	0.89	0.28	82,82,82,82	0
56	MG	2A	3274	1/1	0.89	0.21	61,61,61,61	0
56	MG	2A	3344	1/1	0.89	0.12	78,78,78,78	0
56	MG	2A	3116	1/1	0.89	0.25	72,72,72,72	0
56	MG	2A	3346	1/1	0.89	0.14	86,86,86,86	0
56	MG	2A	3074	1/1	0.89	0.16	71,71,71,71	0
56	MG	2A	3277	1/1	0.89	0.26	70,70,70,70	0
56	MG	2A	3278	1/1	0.89	0.23	61,61,61,61	0
56	MG	1A	3174	1/1	0.89	0.21	73,73,73,73	0
56	MG	2a	3081	1/1	0.89	0.15	64,64,64,64	0
56	MG	2A	3222	1/1	0.89	0.15	75,75,75,75	0
56	MG	2a	3005	1/1	0.89	0.08	87,87,87,87	0
56	MG	1A	3432	1/1	0.89	0.29	68,68,68,68	0
56	MG	1A	3250	1/1	0.89	0.20	71,71,71,71	0
56	MG	2A	3231	1/1	0.89	0.24	74,74,74,74	0
56	MG	1A	3175	1/1	0.89	0.14	62,62,62,62	0
56	MG	1A	3176	1/1	0.89	0.22	75,75,75,75	0
56	MG	1A	3436	1/1	0.89	0.37	61,61,61,61	0
56	MG	1A	3104	1/1	0.89	0.14	69,69,69,69	0
56	MG	2a	3016	1/1	0.89	0.16	84,84,84,84	0
56	MG	1A	3021	1/1	0.89	0.14	73,73,73,73	0
56	MG	1V	201	1/1	0.89	0.21	80,80,80,80	0
56	MG	2A	3035	1/1	0.89	0.16	76,76,76,76	0
56	MG	2A	3241	1/1	0.89	0.22	65,65,65,65	0
56	MG	1A	3275	1/1	0.89	0.30	63,63,63,63	0
56	MG	1V	203	1/1	0.89	0.18	81,81,81,81	0
56	MG	1A	3195	1/1	0.89	0.26	71,71,71,71	0
56	MG	1A	3013	1/1	0.89	0.14	83,83,83,83	0
56	MG	1A	3218	1/1	0.90	0.22	66,66,66,66	0
56	MG	1A	3345	1/1	0.90	0.14	72,72,72,72	0
56	MG	2A	3385	1/1	0.90	0.12	76,76,76,76	0
56	MG	2A	3319	1/1	0.90	0.24	64,64,64,64	0
56	MG	2a	3036	1/1	0.90	0.14	76,76,76,76	0
56	MG	1A	3139	1/1	0.90	0.22	70,70,70,70	0
56	MG	1A	3076	1/1	0.90	0.30	65,65,65,65	0
56	MG	1A	3442	1/1	0.90	0.18	61,61,61,61	0
56	MG	2a	3040	1/1	0.90	0.23	78,78,78,78	0
56	MG	2A	3163	1/1	0.90	0.27	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	2A	3207	1/1	0.90	0.11	89,89,89,89	0
56	MG	2A	3164	1/1	0.90	0.23	68,68,68,68	0
56	MG	1A	3418	1/1	0.90	0.25	76,76,76,76	0
56	MG	1D	301	1/1	0.90	0.14	73,73,73,73	0
56	MG	2A	3211	1/1	0.90	0.24	63,63,63,63	0
56	MG	2A	3167	1/1	0.90	0.22	72,72,72,72	0
56	MG	1A	3170	1/1	0.90	0.23	79,79,79,79	0
56	MG	2A	3273	1/1	0.90	0.19	62,62,62,62	0
56	MG	2A	3214	1/1	0.90	0.17	82,82,82,82	0
56	MG	2A	3046	1/1	0.90	0.17	65,65,65,65	0
56	MG	2A	3048	1/1	0.90	0.06	82,82,82,82	0
56	MG	1A	3256	1/1	0.90	0.20	78,78,78,78	0
56	MG	2a	3059	1/1	0.90	0.07	80,80,80,80	0
56	MG	1A	3394	1/1	0.90	0.30	61,61,61,61	0
56	MG	2a	3064	1/1	0.90	0.17	67,67,67,67	0
56	MG	1A	3476	1/1	0.90	0.20	62,62,62,62	0
56	MG	1A	3179	1/1	0.90	0.09	64,64,64,64	0
56	MG	1A	3351	1/1	0.90	0.09	64,64,64,64	0
56	MG	1A	3332	1/1	0.90	0.18	74,74,74,74	0
56	MG	2A	3285	1/1	0.90	0.29	73,73,73,73	0
56	MG	1A	3107	1/1	0.90	0.07	64,64,64,64	0
56	MG	2A	3288	1/1	0.90	0.17	66,66,66,66	0
56	MG	2a	3002	1/1	0.90	0.08	65,65,65,65	0
56	MG	2A	3290	1/1	0.90	0.34	72,72,72,72	0
56	MG	1A	3205	1/1	0.90	0.20	74,74,74,74	0
56	MG	2a	3007	1/1	0.90	0.07	73,73,73,73	0
56	MG	1A	3315	1/1	0.90	0.19	80,80,80,80	0
56	MG	1A	3049	1/1	0.90	0.09	104,104,104,104	0
56	MG	2a	3010	1/1	0.90	0.21	70,70,70,70	0
56	MG	1a	1639	1/1	0.90	0.13	77,77,77,77	0
56	MG	1A	3208	1/1	0.90	0.10	62,62,62,62	0
56	MG	2A	3298	1/1	0.90	0.17	69,69,69,69	0
56	MG	1A	3209	1/1	0.90	0.34	61,61,61,61	0
56	MG	1a	1642	1/1	0.90	0.11	81,81,81,81	0
56	MG	2A	3188	1/1	0.90	0.20	74,74,74,74	0
56	MG	2a	3017	1/1	0.90	0.06	87,87,87,87	0
56	MG	1A	3073	1/1	0.90	0.12	86,86,86,86	0
56	MG	1A	3025	1/1	0.90	0.15	77,77,77,77	0
56	MG	2A	3024	1/1	0.90	0.06	73,73,73,73	0
56	MG	2A	3192	1/1	0.90	0.21	79,79,79,79	0
56	MG	1A	3196	1/1	0.90	0.18	65,65,65,65	0
56	MG	1A	3063	1/1	0.90	0.22	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1a	1612	1/1	0.90	0.10	97,97,97,97	0
56	MG	2A	3196	1/1	0.90	0.11	78,78,78,78	0
56	MG	1a	1690	1/1	0.90	0.15	84,84,84,84	0
56	MG	1A	3463	1/1	0.90	0.29	72,72,72,72	0
56	MG	1l	201	1/1	0.90	0.06	80,80,80,80	0
56	MG	1a	1615	1/1	0.91	0.13	83,83,83,83	0
56	MG	2A	3299	1/1	0.91	0.21	78,78,78,78	0
56	MG	1a	1684	1/1	0.91	0.28	74,74,74,74	0
56	MG	1E	301	1/1	0.91	0.11	71,71,71,71	0
56	MG	1A	3287	1/1	0.91	0.28	63,63,63,63	0
56	MG	1A	3197	1/1	0.91	0.29	71,71,71,71	0
56	MG	2a	3049	1/1	0.91	0.08	80,80,80,80	0
56	MG	1E	305	1/1	0.91	0.16	72,72,72,72	0
56	MG	1a	1653	1/1	0.91	0.30	63,63,63,63	0
56	MG	1F	301	1/1	0.91	0.11	72,72,72,72	0
56	MG	2A	3142	1/1	0.91	0.26	73,73,73,73	0
56	MG	1A	3404	1/1	0.91	0.20	81,81,81,81	0
56	MG	1a	1656	1/1	0.91	0.12	82,82,82,82	0
56	MG	2A	3224	1/1	0.91	0.21	61,61,61,61	0
56	MG	2a	3004	1/1	0.91	0.11	91,91,91,91	0
56	MG	2a	3062	1/1	0.91	0.14	68,68,68,68	0
56	MG	2A	3225	1/1	0.91	0.13	62,62,62,62	0
56	MG	1A	3255	1/1	0.91	0.13	77,77,77,77	0
56	MG	2A	3269	1/1	0.91	0.25	62,62,62,62	0
56	MG	1A	3276	1/1	0.91	0.18	75,75,75,75	0
56	MG	2A	3077	1/1	0.91	0.10	62,62,62,62	0
56	MG	1A	3376	1/1	0.91	0.20	61,61,61,61	0
56	MG	2A	3038	1/1	0.91	0.23	77,77,77,77	0
56	MG	1W	201	1/1	0.91	0.09	65,65,65,65	0
56	MG	2A	3322	1/1	0.91	0.09	89,89,89,89	0
56	MG	2A	3154	1/1	0.91	0.24	68,68,68,68	0
56	MG	1A	3497	1/1	0.91	0.24	65,65,65,65	0
56	MG	2A	3325	1/1	0.91	0.26	67,67,67,67	0
56	MG	2A	3326	1/1	0.91	0.21	74,74,74,74	0
56	MG	1A	3148	1/1	0.91	0.30	79,79,79,79	0
56	MG	2a	3080	1/1	0.91	0.09	74,74,74,74	0
56	MG	2A	3280	1/1	0.91	0.30	61,61,61,61	0
56	MG	2a	3084	1/1	0.91	0.17	72,72,72,72	0
56	MG	2A	3382	1/1	0.91	0.11	124,124,124,124	0
56	MG	2a	3086	1/1	0.91	0.23	74,74,74,74	0
56	MG	2A	3329	1/1	0.91	0.07	82,82,82,82	0
56	MG	1A	3393	1/1	0.91	0.25	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	2A	3332	1/1	0.91	0.31	80,80,80,80	0
56	MG	1A	3185	1/1	0.91	0.30	62,62,62,62	0
56	MG	2B	204	1/1	0.91	0.15	80,80,80,80	0
56	MG	2B	205	1/1	0.91	0.14	89,89,89,89	0
56	MG	1A	3470	1/1	0.91	0.15	68,68,68,68	0
56	MG	17	102	1/1	0.91	0.10	83,83,83,83	0
56	MG	1A	3022	1/1	0.91	0.07	89,89,89,89	0
56	MG	1A	3412	1/1	0.91	0.22	65,65,65,65	0
56	MG	1A	3413	1/1	0.91	0.19	68,68,68,68	0
56	MG	1A	3066	1/1	0.91	0.18	72,72,72,72	0
56	MG	1A	3166	1/1	0.91	0.26	69,69,69,69	0
56	MG	1A	3212	1/1	0.91	0.20	62,62,62,62	0
56	MG	1A	3057	1/1	0.91	0.07	73,73,73,73	0
56	MG	1A	3401	1/1	0.91	0.23	64,64,64,64	0
56	MG	1a	1614	1/1	0.91	0.20	76,76,76,76	0
56	MG	1a	1688	1/1	0.92	0.08	80,80,80,80	0
56	MG	1a	1657	1/1	0.92	0.11	93,93,93,93	0
56	MG	2a	3063	1/1	0.92	0.21	61,61,61,61	0
56	MG	1A	3265	1/1	0.92	0.20	72,72,72,72	0
56	MG	1A	3108	1/1	0.92	0.13	75,75,75,75	0
56	MG	2B	208	1/1	0.92	0.21	62,62,62,62	0
56	MG	1A	3440	1/1	0.92	0.27	70,70,70,70	0
56	MG	2A	3270	1/1	0.92	0.10	80,80,80,80	0
56	MG	1A	3213	1/1	0.92	0.09	72,72,72,72	0
56	MG	1A	3295	1/1	0.92	0.13	69,69,69,69	0
56	MG	1A	3019	1/1	0.92	0.12	80,80,80,80	0
56	MG	1A	3193	1/1	0.92	0.18	71,71,71,71	0
56	MG	2A	3316	1/1	0.92	0.16	62,62,62,62	0
56	MG	1A	3200	1/1	0.92	0.07	69,69,69,69	0
56	MG	1E	306	1/1	0.92	0.20	72,72,72,72	0
56	MG	1A	3466	1/1	0.92	0.17	61,61,61,61	0
56	MG	2A	3072	1/1	0.92	0.11	96,96,96,96	0
56	MG	2A	3201	1/1	0.92	0.11	75,75,75,75	0
56	MG	1Q	201	1/1	0.92	0.11	75,75,75,75	0
56	MG	2a	3083	1/1	0.92	0.37	61,61,61,61	0
56	MG	1A	3110	1/1	0.92	0.22	70,70,70,70	0
56	MG	2A	3172	1/1	0.92	0.04	87,87,87,87	0
56	MG	2A	3106	1/1	0.92	0.04	83,83,83,83	0
56	MG	1A	3286	1/1	0.92	0.14	76,76,76,76	0
56	MG	1A	3184	1/1	0.92	0.19	69,69,69,69	0
56	MG	1A	3273	1/1	0.92	0.18	80,80,80,80	0
56	MG	28	102	1/1	0.92	0.24	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1B	204	1/1	0.92	0.10	66,66,66,66	0
56	MG	1A	3380	1/1	0.92	0.17	73,73,73,73	0
56	MG	2A	3331	1/1	0.92	0.11	73,73,73,73	0
56	MG	1A	3381	1/1	0.92	0.20	63,63,63,63	0
56	MG	1A	3064	1/1	0.92	0.17	79,79,79,79	0
56	MG	1a	1682	1/1	0.92	0.11	96,96,96,96	0
56	MG	1a	1627	1/1	0.92	0.14	80,80,80,80	0
56	MG	2A	3218	1/1	0.92	0.07	72,72,72,72	0
56	MG	1A	3242	1/1	0.92	0.19	61,61,61,61	0
56	MG	2a	3100	1/1	0.92	0.12	95,95,95,95	0
56	MG	2A	3017	1/1	0.92	0.19	69,69,69,69	0
56	MG	1A	3222	1/1	0.92	0.22	71,71,71,71	0
56	MG	2A	3223	1/1	0.92	0.16	70,70,70,70	0
56	MG	17	101	1/1	0.92	0.09	66,66,66,66	0
56	MG	2A	3226	1/1	0.93	0.12	82,82,82,82	0
56	MG	1A	3153	1/1	0.93	0.11	72,72,72,72	0
56	MG	1A	3495	1/1	0.93	0.13	98,98,98,98	0
56	MG	2A	3040	1/1	0.93	0.09	95,95,95,95	0
56	MG	2A	3232	1/1	0.93	0.17	66,66,66,66	0
56	MG	1A	3427	1/1	0.93	0.30	61,61,61,61	0
56	MG	1A	3056	1/1	0.93	0.07	85,85,85,85	0
56	MG	1A	3207	1/1	0.93	0.24	62,62,62,62	0
56	MG	1A	3214	1/1	0.93	0.33	69,69,69,69	0
56	MG	1A	3458	1/1	0.93	0.13	79,79,79,79	0
56	MG	1a	1685	1/1	0.93	0.10	76,76,76,76	0
56	MG	1A	3094	1/1	0.93	0.05	84,84,84,84	0
56	MG	1A	3317	1/1	0.93	0.08	77,77,77,77	0
56	MG	2a	3069	1/1	0.93	0.17	104,104,104,104	0
56	MG	2A	3018	1/1	0.93	0.18	73,73,73,73	0
56	MG	1A	3462	1/1	0.93	0.23	79,79,79,79	0
56	MG	1A	3318	1/1	0.93	0.24	75,75,75,75	0
56	MG	2A	3287	1/1	0.93	0.33	66,66,66,66	0
56	MG	1a	1664	1/1	0.93	0.09	67,67,67,67	0
56	MG	1A	3085	1/1	0.93	0.12	79,79,79,79	0
56	MG	1a	1666	1/1	0.93	0.07	94,94,94,94	0
56	MG	2A	3292	1/1	0.93	0.20	64,64,64,64	0
56	MG	1A	3233	1/1	0.93	0.19	76,76,76,76	0
56	MG	1A	3309	1/1	0.93	0.13	62,62,62,62	0
56	MG	2A	3026	1/1	0.93	0.17	76,76,76,76	0
56	MG	2A	3060	1/1	0.93	0.07	88,88,88,88	0
56	MG	2a	3082	1/1	0.93	0.36	66,66,66,66	0
56	MG	2A	3061	1/1	0.93	0.10	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	2A	3135	1/1	0.93	0.08	111,111,111,111	0
56	MG	2a	3031	1/1	0.93	0.06	76,76,76,76	0
56	MG	1a	1620	1/1	0.93	0.07	81,81,81,81	0
56	MG	1A	3132	1/1	0.93	0.05	74,74,74,74	0
56	MG	1A	3485	1/1	0.93	0.13	72,72,72,72	0
56	MG	2A	3303	1/1	0.93	0.13	76,76,76,76	0
56	MG	2A	3065	1/1	0.93	0.17	68,68,68,68	0
56	MG	1A	3311	1/1	0.93	0.25	62,62,62,62	0
56	MG	2A	3215	1/1	0.93	0.14	61,61,61,61	0
56	MG	1a	1673	1/1	0.93	0.08	99,99,99,99	0
56	MG	2A	3068	1/1	0.93	0.11	90,90,90,90	0
56	MG	2Y	201	1/1	0.93	0.21	71,71,71,71	0
56	MG	2a	3042	1/1	0.93	0.06	91,91,91,91	0
56	MG	2A	3220	1/1	0.93	0.27	64,64,64,64	0
56	MG	2A	3144	1/1	0.93	0.19	83,83,83,83	0
56	MG	1E	302	1/1	0.93	0.10	76,76,76,76	0
56	MG	2A	3312	1/1	0.93	0.15	64,64,64,64	0
56	MG	18	101	1/1	0.93	0.38	65,65,65,65	0
56	MG	2A	3360	1/1	0.93	0.16	61,61,61,61	0
56	MG	2A	3036	1/1	0.93	0.12	77,77,77,77	0
56	MG	1a	1628	1/1	0.93	0.31	61,61,61,61	0
56	MG	2A	3043	1/1	0.94	0.08	70,70,70,70	0
56	MG	1A	3439	1/1	0.94	0.22	67,67,67,67	0
56	MG	1a	1680	1/1	0.94	0.14	73,73,73,73	0
56	MG	1A	3163	1/1	0.94	0.07	78,78,78,78	0
56	MG	1A	3053	1/1	0.94	0.29	77,77,77,77	0
56	MG	1A	3038	1/1	0.94	0.09	61,61,61,61	0
56	MG	1A	3382	1/1	0.94	0.07	91,91,91,91	0
56	MG	1a	1605	1/1	0.94	0.06	99,99,99,99	0
56	MG	1a	1606	1/1	0.94	0.16	69,69,69,69	0
56	MG	1A	3342	1/1	0.94	0.24	62,62,62,62	0
56	MG	1A	3036	1/1	0.94	0.05	83,83,83,83	0
56	MG	2A	3216	1/1	0.94	0.17	62,62,62,62	0
56	MG	1A	3399	1/1	0.94	0.23	73,73,73,73	0
56	MG	2A	3143	1/1	0.94	0.24	69,69,69,69	0
56	MG	2A	3121	1/1	0.94	0.13	66,66,66,66	0
56	MG	1A	3244	1/1	0.94	0.13	77,77,77,77	0
56	MG	2E	306	1/1	0.94	0.16	64,64,64,64	0
56	MG	1A	3103	1/1	0.94	0.28	64,64,64,64	0
56	MG	2a	3021	1/1	0.94	0.10	82,82,82,82	0
56	MG	1A	3112	1/1	0.94	0.25	63,63,63,63	0
56	MG	1A	3131	1/1	0.94	0.05	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	2A	3149	1/1	0.94	0.14	82,82,82,82	0
56	MG	1A	3225	1/1	0.94	0.08	90,90,90,90	0
56	MG	1A	3215	1/1	0.94	0.12	67,67,67,67	0
56	MG	2A	3343	1/1	0.94	0.12	73,73,73,73	0
56	MG	2A	3228	1/1	0.94	0.12	67,67,67,67	0
56	MG	2A	3128	1/1	0.94	0.52	61,61,61,61	0
56	MG	2A	3230	1/1	0.94	0.18	62,62,62,62	0
56	MG	1A	3145	1/1	0.94	0.08	79,79,79,79	0
56	MG	2a	3103	1/1	0.94	0.06	101,101,101,101	0
56	MG	2a	3068	1/1	0.94	0.19	81,81,81,81	0
56	MG	2A	3379	1/1	0.94	0.14	77,77,77,77	0
56	MG	2A	3380	1/1	0.94	0.05	85,85,85,85	0
56	MG	1A	3162	1/1	0.94	0.13	65,65,65,65	0
57	ZN	2Y	202	1/1	0.94	0.16	176,176,176,176	0
56	MG	1A	3146	1/1	0.95	0.06	64,64,64,64	0
56	MG	2A	3279	1/1	0.95	0.21	80,80,80,80	0
56	MG	2A	3233	1/1	0.95	0.16	70,70,70,70	0
56	MG	2A	3168	1/1	0.95	0.09	68,68,68,68	0
56	MG	1A	3483	1/1	0.95	0.07	68,68,68,68	0
56	MG	2A	3109	1/1	0.95	0.22	63,63,63,63	0
56	MG	1a	1658	1/1	0.95	0.09	75,75,75,75	0
56	MG	1a	1625	1/1	0.95	0.12	102,102,102,102	0
56	MG	1A	3147	1/1	0.95	0.30	76,76,76,76	0
56	MG	1A	3324	1/1	0.95	0.07	67,67,67,67	0
56	MG	2A	3363	1/1	0.95	0.34	65,65,65,65	0
56	MG	1A	3052	1/1	0.95	0.10	85,85,85,85	0
56	MG	1a	1646	1/1	0.95	0.06	71,71,71,71	0
56	MG	2A	3096	1/1	0.95	0.06	92,92,92,92	0
56	MG	1A	3489	1/1	0.95	0.07	78,78,78,78	0
56	MG	1A	3029	1/1	0.95	0.10	86,86,86,86	0
56	MG	1A	3494	1/1	0.95	0.07	85,85,85,85	0
56	MG	1A	3080	1/1	0.95	0.07	82,82,82,82	0
56	MG	2A	3296	1/1	0.95	0.15	66,66,66,66	0
56	MG	1A	3368	1/1	0.95	0.15	77,77,77,77	0
56	MG	2A	3347	1/1	0.95	0.28	61,61,61,61	0
56	MG	2a	3102	1/1	0.95	0.04	127,127,127,127	0
56	MG	1A	3119	1/1	0.95	0.16	64,64,64,64	0
56	MG	1a	1604	1/1	0.95	0.04	107,107,107,107	0
56	MG	2a	3018	1/1	0.95	0.09	86,86,86,86	0
56	MG	1A	3278	1/1	0.95	0.13	63,63,63,63	0
56	MG	2A	3047	1/1	0.95	0.10	81,81,81,81	0
56	MG	10	101	1/1	0.95	0.06	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	2A	3187	1/1	0.96	0.08	74,74,74,74	0
56	MG	1A	3498	1/1	0.96	0.06	74,74,74,74	0
56	MG	2A	3089	1/1	0.96	0.06	87,87,87,87	0
56	MG	1a	1645	1/1	0.96	0.06	90,90,90,90	0
56	MG	1a	1608	1/1	0.96	0.10	73,73,73,73	0
56	MG	1a	1626	1/1	0.96	0.03	81,81,81,81	0
56	MG	2R	201	1/1	0.96	0.11	64,64,64,64	0
56	MG	2A	3378	1/1	0.96	0.07	83,83,83,83	0
56	MG	2a	3060	1/1	0.96	0.09	120,120,120,120	0
56	MG	1A	3092	1/1	0.96	0.08	71,71,71,71	0
56	MG	2A	3033	1/1	0.96	0.10	82,82,82,82	0
56	MG	2A	3256	1/1	0.96	0.30	66,66,66,66	0
56	MG	1A	3417	1/1	0.96	0.11	64,64,64,64	0
56	MG	2A	3070	1/1	0.96	0.10	81,81,81,81	0
56	MG	2T	201	1/1	0.97	0.06	63,63,63,63	0
56	MG	2a	3054	1/1	0.97	0.04	69,69,69,69	0
56	MG	1A	3133	1/1	0.97	0.08	72,72,72,72	0
56	MG	2A	3260	1/1	0.97	0.12	70,70,70,70	0
56	MG	2a	3057	1/1	0.97	0.05	101,101,101,101	0
56	MG	1A	3284	1/1	0.97	0.09	76,76,76,76	0
56	MG	2A	3338	1/1	0.97	0.22	75,75,75,75	0
56	MG	1A	3125	1/1	0.97	0.06	62,62,62,62	0
56	MG	2A	3384	1/1	0.97	0.04	91,91,91,91	0
56	MG	1A	3117	1/1	0.97	0.17	63,63,63,63	0
57	ZN	1Y	501	1/1	0.97	0.04	156,156,156,156	0
56	MG	2a	3006	1/1	0.97	0.05	76,76,76,76	0
56	MG	2A	3289	1/1	0.98	0.07	77,77,77,77	0
56	MG	1a	1693	1/1	0.98	0.03	127,127,127,127	0
56	MG	1A	3475	1/1	0.98	0.20	65,65,65,65	0
56	MG	2A	3383	1/1	0.98	0.05	76,76,76,76	0
56	MG	1U	201	1/1	0.98	0.11	67,67,67,67	0
56	MG	1A	3486	1/1	0.98	0.04	78,78,78,78	0
56	MG	1A	3016	1/1	0.98	0.04	95,95,95,95	0
56	MG	2a	3050	1/1	0.98	0.05	88,88,88,88	0
56	MG	2A	3028	1/1	0.98	0.07	91,91,91,91	0
56	MG	1a	1610	1/1	0.98	0.06	104,104,104,104	0
57	ZN	1n	501	1/1	0.98	0.04	148,148,148,148	0
56	MG	1a	1692	1/1	0.98	0.04	114,114,114,114	0
57	ZN	24	501	1/1	0.98	0.06	182,182,182,182	0
58	SF4	1d	302	8/8	0.98	0.04	111,128,150,164	0
58	SF4	2d	302	8/8	0.98	0.06	99,114,123,127	0
56	MG	1A	3493	1/1	0.99	0.03	97,97,97,97	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	2A	3217	1/1	0.99	0.06	78,78,78,78	0
56	MG	1A	3487	1/1	0.99	0.09	74,74,74,74	0
56	MG	1a	1691	1/1	0.99	0.05	94,94,94,94	0
56	MG	1A	3459	1/1	0.99	0.07	76,76,76,76	0
57	ZN	14	501	1/1	0.99	0.07	166,166,166,166	0
57	ZN	16	102	1/1	0.99	0.06	102,102,102,102	0
57	ZN	19	501	1/1	0.99	0.07	104,104,104,104	0
56	MG	2A	3381	1/1	0.99	0.04	76,76,76,76	0
56	MG	1A	3496	1/1	0.99	0.03	94,94,94,94	0
56	MG	2a	3101	1/1	0.99	0.03	102,102,102,102	0
57	ZN	25	102	1/1	0.99	0.04	104,104,104,104	0
57	ZN	26	501	1/1	0.99	0.03	107,107,107,107	0
57	ZN	29	501	1/1	0.99	0.05	114,114,114,114	0
57	ZN	2n	501	1/1	0.99	0.03	118,118,118,118	0
56	MG	1A	3492	1/1	0.99	0.03	95,95,95,95	0
56	MG	2A	3075	1/1	0.99	0.07	95,95,95,95	0
57	ZN	15	102	1/1	1.00	0.02	106,106,106,106	0
56	MG	1A	3490	1/1	1.00	0.03	79,79,79,79	0

6.5 Other polymers [i](#)

There are no such residues in this entry.