



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 6, 2026 – 04:51 AM UTC

PDB ID : 4WRO / pdb_00004wro
Title : Complex of 70S ribosome with tRNA-Phe and mRNA with C-A mismatch in the second position in the A-site
Authors : Rozov, A.; Demeshkina, N.; Yusupov, M.; Yusupova, G.
Deposited on : 2014-10-24
Resolution : 3.05 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

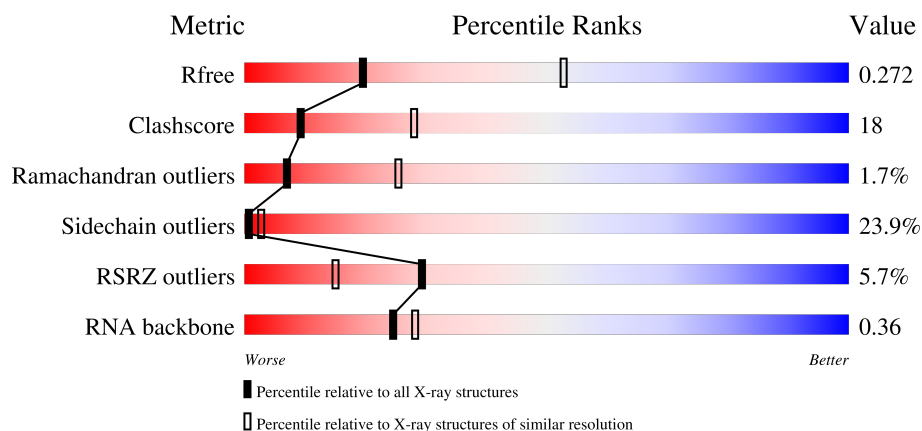
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.05 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.



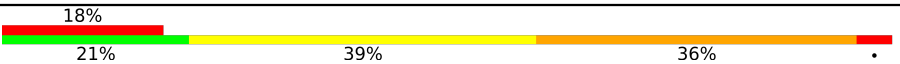
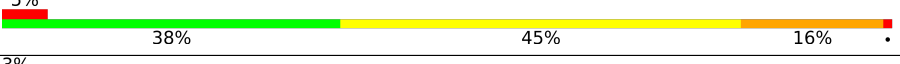
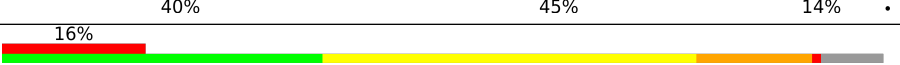
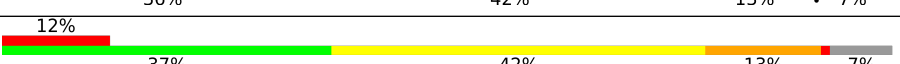
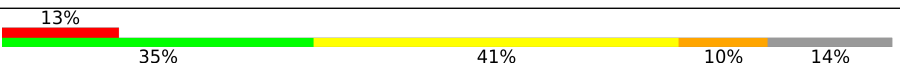
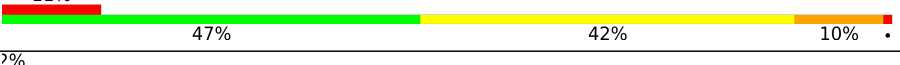
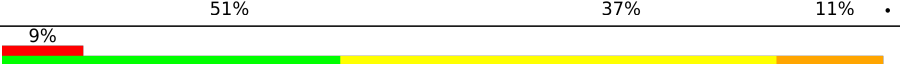
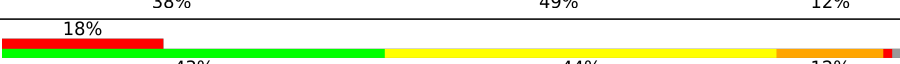
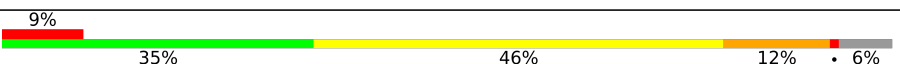
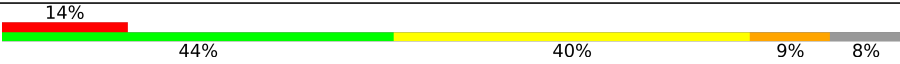
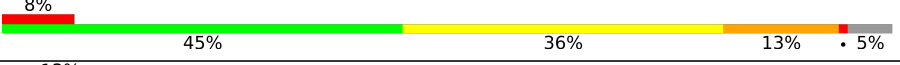
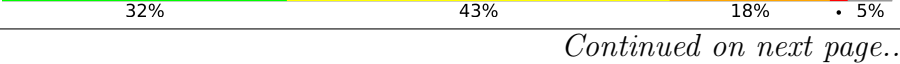
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	2469 (3.10-3.02)
Clashscore	190562	2569 (3.10-3.02)
Ramachandran outliers	187476	2424 (3.10-3.02)
Sidechain outliers	187428	2423 (3.10-3.02)
RSRZ outliers	180081	2469 (3.10-3.02)
RNA backbone	3983	1079 (3.30-2.82)

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	13	1522	3% 35% 48% 15% ..
1	1G	1522	5% 36% 46% 16% .
2	1L	76	12% 29% 39% 26% 5%
2	3K	76	20% 18% 43% 34% .

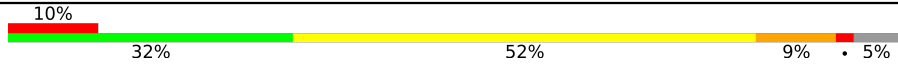
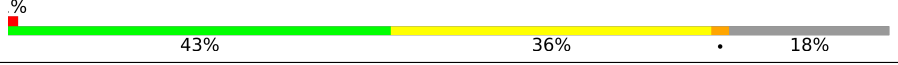
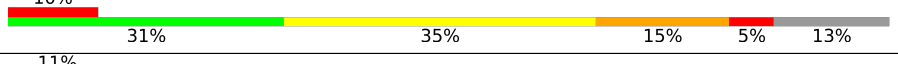
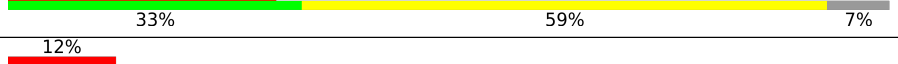
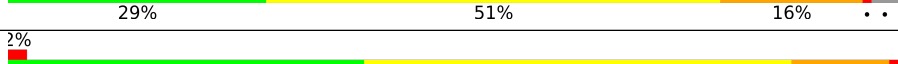
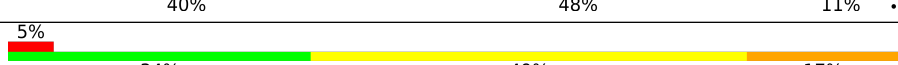
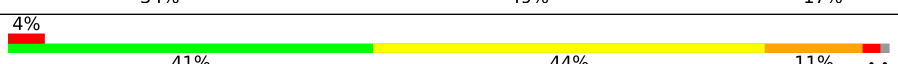
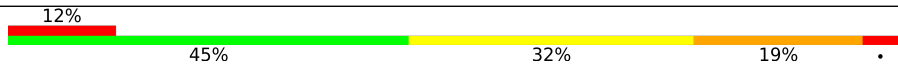
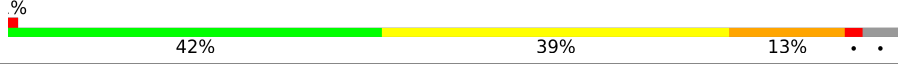
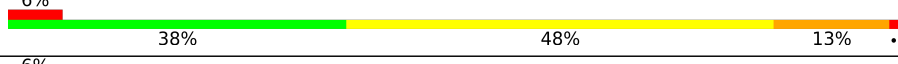
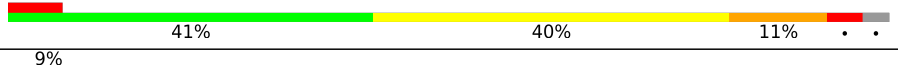
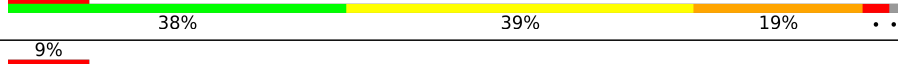
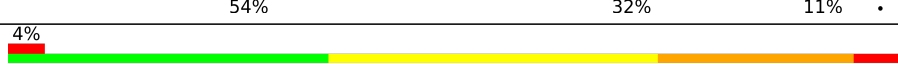
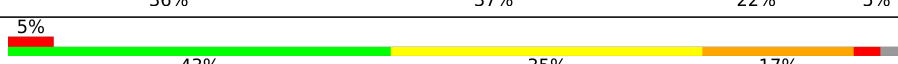
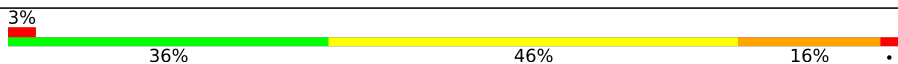
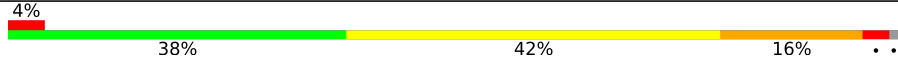
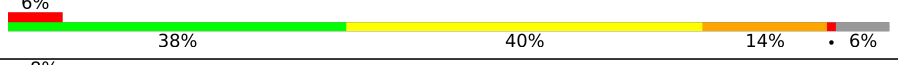
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Mol	Chain	Length	Quality of chain
2	3L	76	
3	2K	77	
3	2L	77	
4	4K	30	
4	4L	30	
5	14	2917	
5	1H	2917	
6	12	256	
6	1E	256	
7	22	239	
7	2E	239	
8	32	209	
8	3E	209	
9	4E	162	
10	5E	101	
11	6E	156	
12	7E	138	
13	8E	128	
14	1I	105	
15	2I	129	
16	3I	132	
17	4I	126	
18	5I	61	
19	6I	89	
20	7I	88	

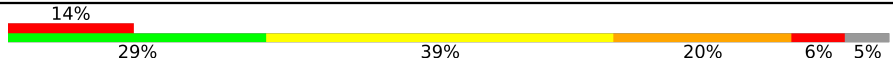
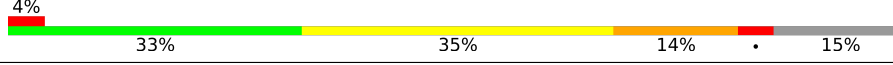
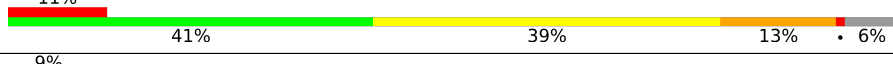
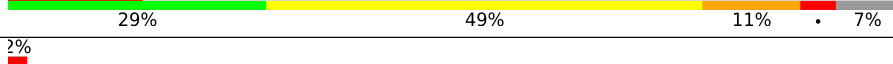
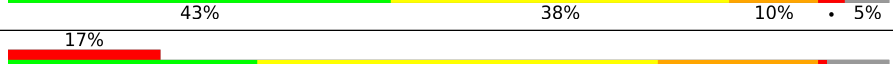
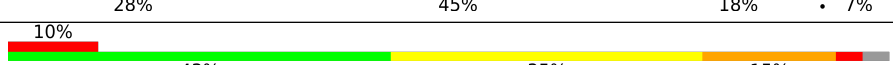
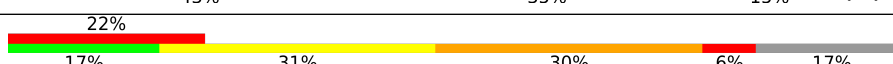
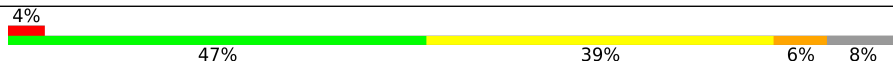
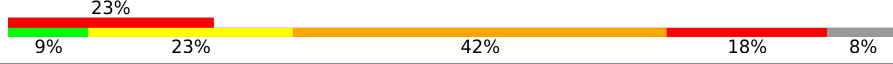
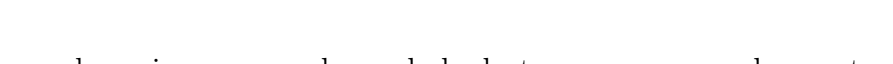
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Mol	Chain	Length	Quality of chain
21	8I	105	
22	9I	88	
23	AI	93	
24	BI	106	
25	1F	27	
26	1K	76	
27	16	122	
27	1J	122	
28	11	276	
29	21	206	
30	31	210	
31	41	182	
32	51	180	
33	61	148	
34	58	140	
35	68	122	
36	78	150	
37	88	141	
38	98	118	
39	A8	112	
40	B8	146	
41	C8	118	
42	D8	101	
43	E8	113	
44	F8	96	

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Mol	Chain	Length	Quality of chain
45	G8	110	
46	H8	206	
47	I8	85	
48	J8	98	
49	K8	72	
50	L8	60	
51	M8	71	
52	N8	60	
53	O8	54	
54	P8	49	
55	Q8	65	

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	13	1607	-	-	-	X
56	MG	13	1654	-	-	-	X
56	MG	13	1681	-	-	-	X
56	MG	13	1683	-	-	-	X
56	MG	13	1688	-	-	-	X
56	MG	13	1690	-	-	-	X
56	MG	13	1695	-	-	-	X
56	MG	14	3045	-	-	-	X
56	MG	14	3140	-	-	-	X
56	MG	14	3185	-	-	-	X
56	MG	14	3219	-	-	-	X
56	MG	14	3255	-	-	-	X
56	MG	1G	1616	-	-	-	X
56	MG	1G	1621	-	-	-	X
56	MG	1G	1646	-	-	-	X
56	MG	1G	1651	-	-	-	X
56	MG	1H	3105	-	-	-	X
56	MG	1H	3176	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
56	MG	1H	3199	-	-	-	X
56	MG	1H	3203	-	-	-	X
56	MG	1H	3222	-	-	-	X
56	MG	1H	3263	-	-	-	X
56	MG	1H	3277	-	-	-	X
56	MG	1H	3301	-	-	-	X
56	MG	1H	3311	-	-	-	X
56	MG	1H	3315	-	-	-	X
56	MG	2I	302	-	-	-	X

2 Entry composition

There are 58 unique types of molecules in this entry. The entry contains 260090 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	13	1497	Total	C	N	O	P	0	0	0
			32185	14324	5968	10396	1497			
1	1G	1497	Total	C	N	O	P	0	0	0
			32182	14324	5968	10394	1496			

- Molecule 2 is a RNA chain called tRNA-Phe.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
2	1L	76	Total	C	N	O	P	S	0	0	0
			1627	730	290	530	75	2			
2	3L	76	Total	C	N	O	P	S	0	0	0
			1627	730	290	530	75	2			
2	3K	76	Total	C	N	O	P	S	0	0	0
			1627	730	290	530	75	2			

- Molecule 3 is a RNA chain called tRNA-fMet.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
3	2L	77	Total	C	N	O	P	S	0	0	0
			1645	734	298	535	77	1			
3	2K	77	Total	C	N	O	P	S	0	0	0
			1645	734	298	535	77	1			

- Molecule 4 is a RNA chain called RNA (30-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	4L	9	Total	C	N	O	P	0	0	0
			191	86	35	61	9			
4	4K	13	Total	C	N	O	P	0	0	0
			279	126	55	85	13			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	14	2909	Total	C	N	O	P	0	0	0
			62647	27884	11716	20139	2908			
5	1H	2912	Total	C	N	O	P	0	0	0
			62707	27911	11722	20163	2911			

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
14	161	U	-	insertion	GB 48268
14	493	G	-	insertion	GB 48268
14	1228	G	-	insertion	GB 48268
1H	161	U	-	insertion	GB 48268
1H	493	G	-	insertion	GB 48268
1H	1228	G	-	insertion	GB 48268

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	1E	237	Total	C	N	O	S	0	0	0
			1924	1228	344	347	5			
6	12	237	Total	C	N	O	S	0	0	0
			1924	1228	344	347	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	2E	205	Total	C	N	O	S	0	0	0
			1605	1011	313	280	1			
7	22	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	3E	208	Total	C	N	O	S	0	0	0
			1702	1066	339	290	7			
8	32	208	Total	C	N	O	S	0	0	0
			1702	1066	339	290	7			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	4E	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	5E	101	Total	C	N	O	S	0	0	0
			842	531	155	153	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	6E	155	Total	C	N	O	S	0	0	0
			1256	781	252	217	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	7E	138	Total	C	N	O	S	0	0	0
			1115	705	215	192	3			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
13	8E	127	Total	C	N	O	0	0	0
			1009	639	197	173			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	1I	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	2I	119	Total	C	N	O	S	0	0	0
			884	549	168	164	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	3I	125	Total	C	N	O	S	0	0	0
			975	614	196	164	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	4I	118	Total	C	N	O	S	0	0	0
			938	580	193	163	2			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
4I	119	ALA	GLY	conflict	UNP P80377

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	5I	60	Total	C	N	O	S	0	0	0
			491	312	104	71	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	6I	88	Total	C	N	O	S	0	0	0
			733	459	147	125	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	7I	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	8I	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
22	9I	72	Total	C	N	O	0	0	0
			590	376	117	97			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AI	81	Total	C	N	O	S	0	0	0
			647	413	119	113	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	BI	99	Total	C	N	O	S	0	0	0
			762	470	162	128	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
25	1F	25	Total	C	N	O	0	0	0
			217	134	52	31			

- Molecule 26 is a RNA chain called tRNA-Phe.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
26	1K	74	Total	C	N	O	P	S	0	0	0
			1587	712	286	514	73	2			

- Molecule 27 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	1J	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			
27	16	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			

- Molecule 28 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	11	272	Total	C	N	O	S	0	0	0
			2115	1335	420	357	3			

- Molecule 29 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	21	205	Total	C	N	O	S	0	0	0
			1568	991	300	271	6			

- Molecule 30 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	31	202	Total	C	N	O	S	0	0	0
			1585	1011	297	275	2			

- Molecule 31 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	41	181	Total	C	N	O	S	0	0	0
			1473	942	268	259	4			

- Molecule 32 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	51	174	Total	C	N	O	S	0	0	0
			1336	848	251	236	1			

- Molecule 33 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	61	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	58	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	68	122	Total	C	N	O	S	0	0	0
			932	588	171	169	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	78	150	Total	C	N	O	S	0	0	0
			1144	712	232	197	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	88	138	Total	C	N	O	S	0	0	0
			1086	693	208	179	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	98	118	Total	C	N	O	S	0	0	0
			967	604	203	159	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	A8	111	Total	C	N	O	S	0	0	0
			881	556	176	149				

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	B8	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	C8	117	Total	C	N	O	S	0	0	0
			963	610	202	150	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	D8	101	Total	C	N	O	S	0	0	0
			778	501	142	134	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	E8	113	Total	C	N	O	S	0	0	0
			899	566	177	154	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	F8	94	Total	C	N	O	S	0	0	0
			742	482	134	125	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	G8	104	Total	C	N	O	S	0	0	0
			791	510	149	127	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	H8	175	Total	C	N	O	S	0	0	0
			1397	892	251	251	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	I8	80	Total	C	N	O	S	0	0	0
			626	388	132	105	1			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
I8	6	ALA	GLY	conflict	UNP P60493
I8	8	ALA	GLY	conflict	UNP P60493

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	J8	97	Total	C	N	O	S	0	0	0
			762	481	150	130	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	K8	67	Total	C	N	O	S	0	0	0
			563	349	114	99	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	L8	57	Total	C	N	O		0	0	0
			452	288	88	76				

- Molecule 51 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	M8	66	Total	C	N	O	S	0	0	0
			533	335	96	97	5			

- Molecule 52 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	N8	58	Total	C	N	O	S	0	0	0
			453	285	89	74	5			

- Molecule 53 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	O8	45	Total	C	N	O	S	0	0	0
			389	241	79	65	4			

- Molecule 54 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	P8	45	Total	C	N	O	S	0	0	0
			391	240	97	52	2			

- Molecule 55 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	Q8	60	Total	C	N	O	S	0	0	0
			480	306	98	74	2			

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	13	149	Total Mg 149 149	0	0
56	1L	1	Total Mg 1 1	0	0
56	2L	4	Total Mg 4 4	0	0
56	3L	3	Total Mg 3 3	0	0
56	14	421	Total Mg 421 421	0	0
56	3E	2	Total Mg 2 2	0	0
56	5E	1	Total Mg 1 1	0	0
56	3I	1	Total Mg 1 1	0	0
56	5I	1	Total Mg 1 1	0	0
56	1K	2	Total Mg 2 2	0	0
56	2K	8	Total Mg 8 8	0	0
56	1H	537	Total Mg 537 537	0	0
56	1J	7	Total Mg 7 7	0	0
56	16	13	Total Mg 13 13	0	0
56	11	2	Total Mg 2 2	0	0
56	21	2	Total Mg 2 2	0	0
56	41	2	Total Mg 2 2	0	0
56	78	1	Total Mg 1 1	0	0
56	88	2	Total Mg 2 2	0	0
56	I8	1	Total Mg 1 1	0	0
56	J8	1	Total Mg 1 1	0	0
56	L8	1	Total Mg 1 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	P8	1	Total 1	Mg 1	0	0
56	1G	96	Total 96	Mg 96	0	0

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	14	1	Total 1	Zn 1	0	0
57	3E	1	Total 1	Zn 1	0	0
57	5I	1	Total 1	Zn 1	0	0
57	G8	1	Total 1	Zn 1	0	0
57	1G	1	Total 1	Zn 1	0	0
57	32	1	Total 1	Zn 1	0	0

- Molecule 58 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	13	230	Total 230	O 230	0	0
58	2L	1	Total 1	O 1	0	0
58	4L	2	Total 2	O 2	0	0
58	14	863	Total 863	O 863	0	0
58	3E	1	Total 1	O 1	0	0
58	4E	3	Total 3	O 3	0	0
58	8E	2	Total 2	O 2	0	0
58	1I	1	Total 1	O 1	0	0
58	3I	1	Total 1	O 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	5I	1	Total 1	O 1	0	0
58	6I	1	Total 1	O 1	0	0
58	7I	1	Total 1	O 1	0	0
58	BI	1	Total 1	O 1	0	0
58	1K	6	Total 6	O 6	0	0
58	2K	8	Total 8	O 8	0	0
58	3K	1	Total 1	O 1	0	0
58	4K	4	Total 4	O 4	0	0
58	1H	1212	Total 1212	O 1212	0	0
58	1J	12	Total 12	O 12	0	0
58	16	21	Total 21	O 21	0	0
58	11	9	Total 9	O 9	0	0
58	21	3	Total 3	O 3	0	0
58	31	8	Total 8	O 8	0	0
58	58	3	Total 3	O 3	0	0
58	78	6	Total 6	O 6	0	0
58	98	1	Total 1	O 1	0	0
58	B8	1	Total 1	O 1	0	0
58	C8	3	Total 3	O 3	0	0
58	D8	1	Total 1	O 1	0	0
58	E8	2	Total 2	O 2	0	0

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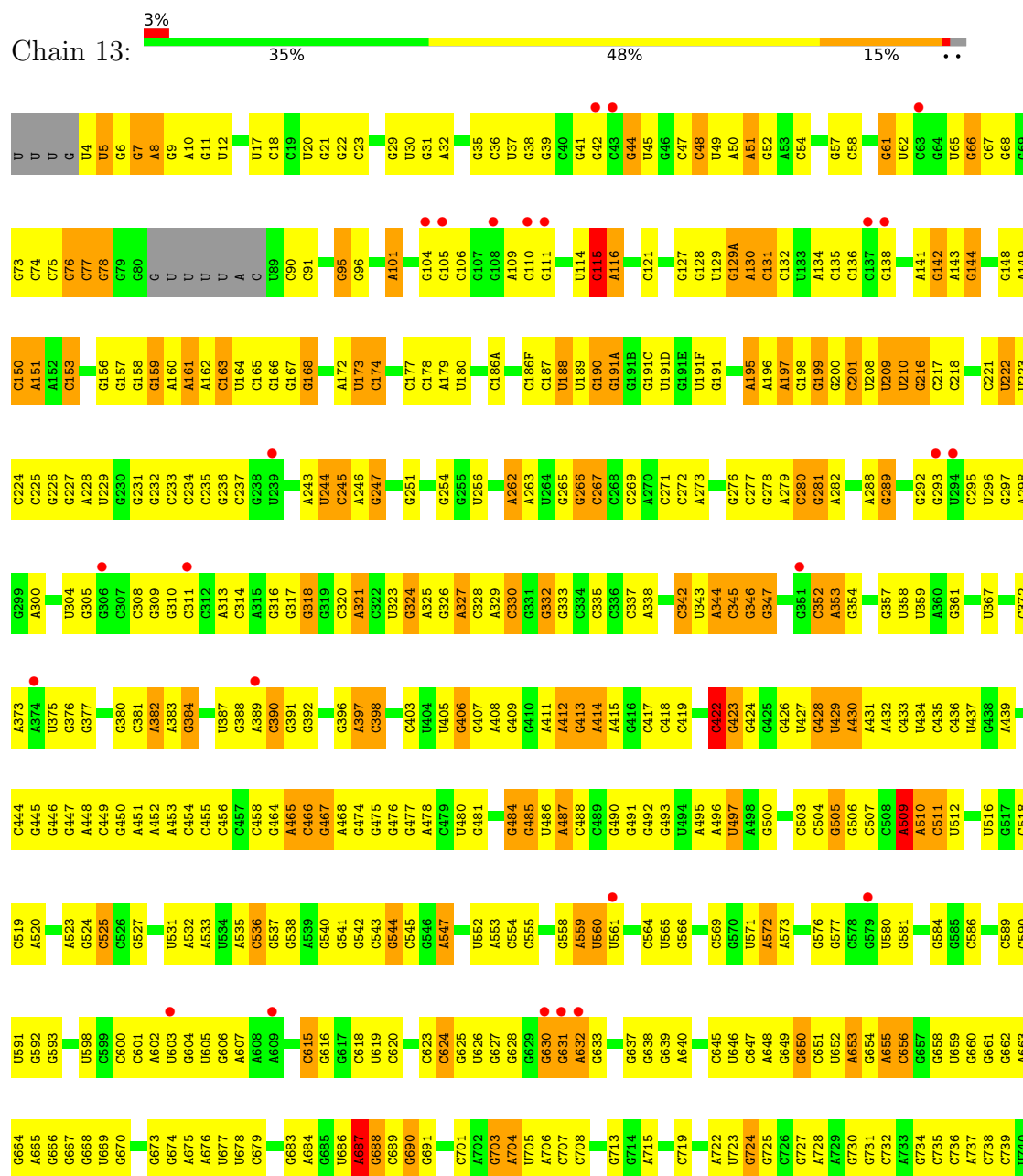
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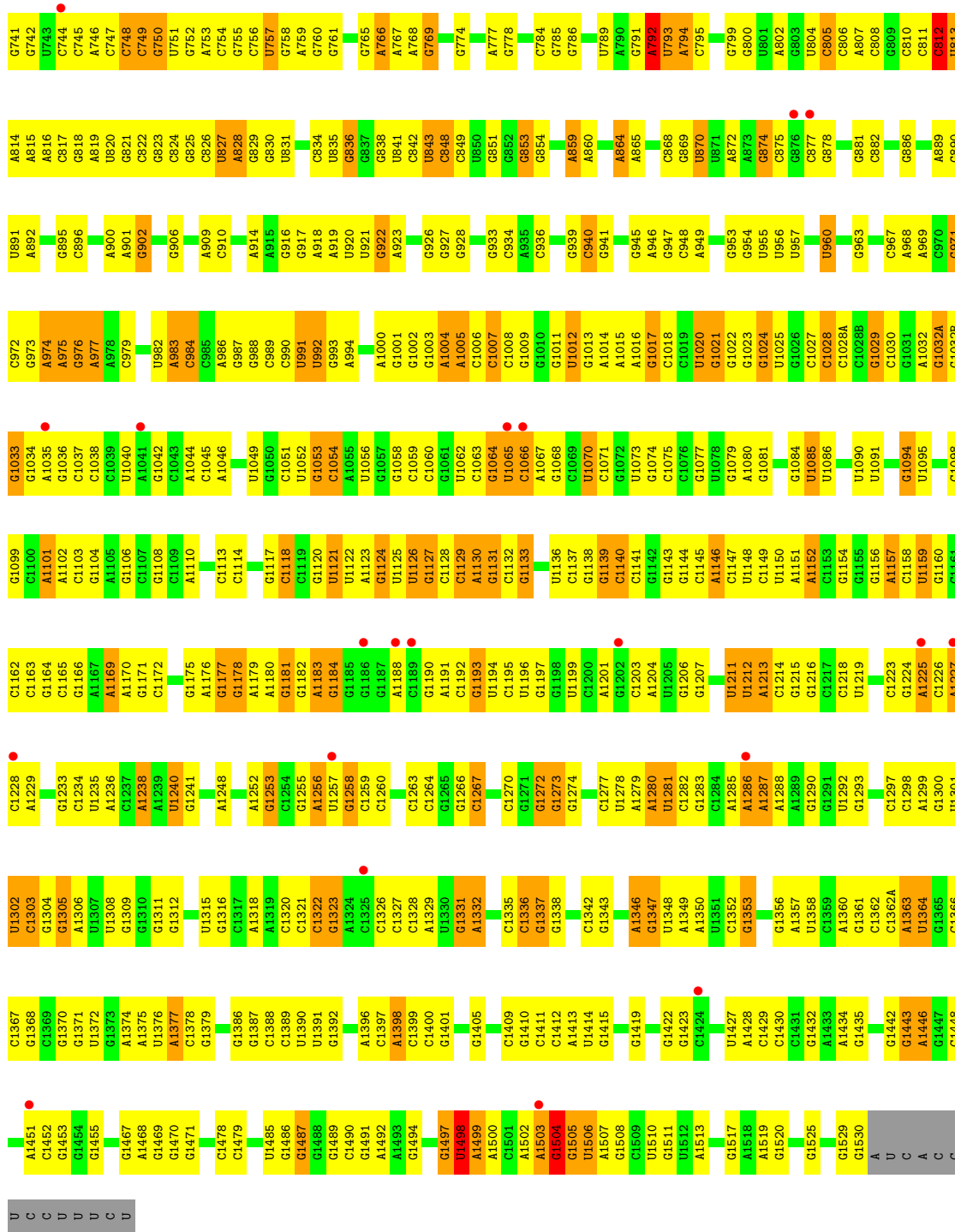
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	F8	2	Total	O	0	0
			2	2		
58	G8	3	Total	O	0	0
			3	3		
58	I8	5	Total	O	0	0
			5	5		
58	J8	1	Total	O	0	0
			1	1		
58	L8	1	Total	O	0	0
			1	1		
58	P8	4	Total	O	0	0
			4	4		
58	Q8	1	Total	O	0	0
			1	1		
58	1G	106	Total	O	0	0
			106	106		

3 Residue-property plots

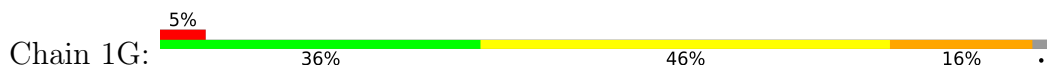
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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

• Molecule 1: 16S ribosomal RNA

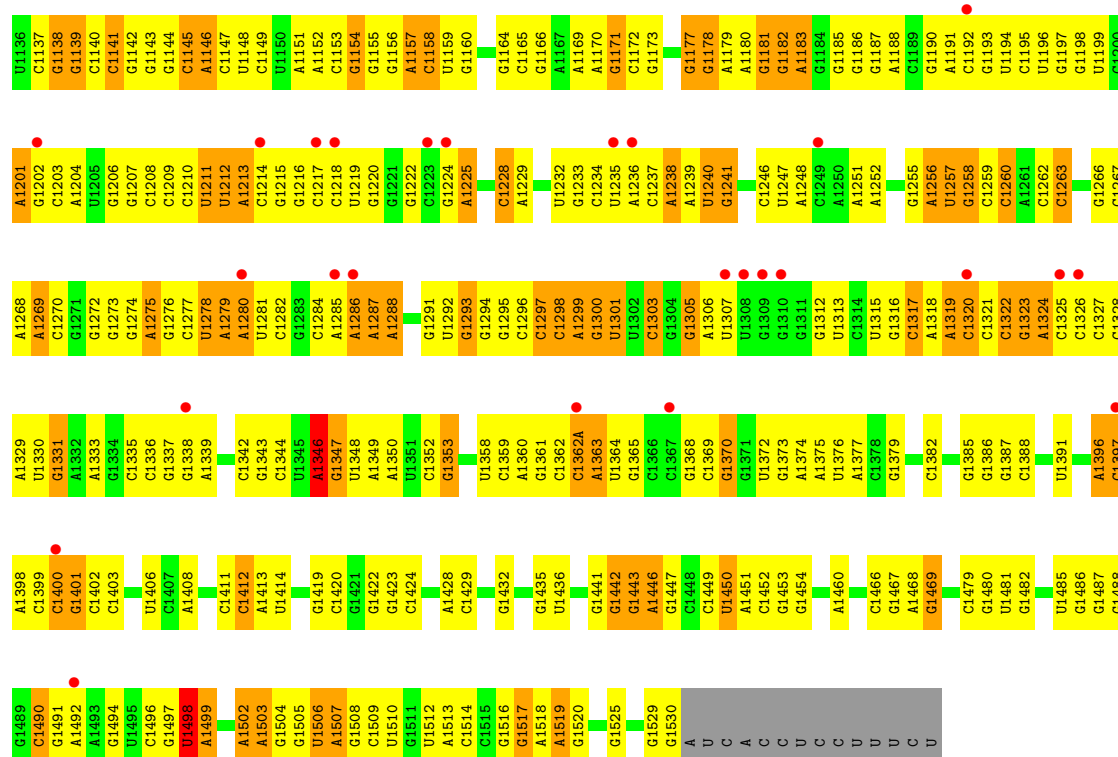




- Molecule 1: 16S ribosomal RNA



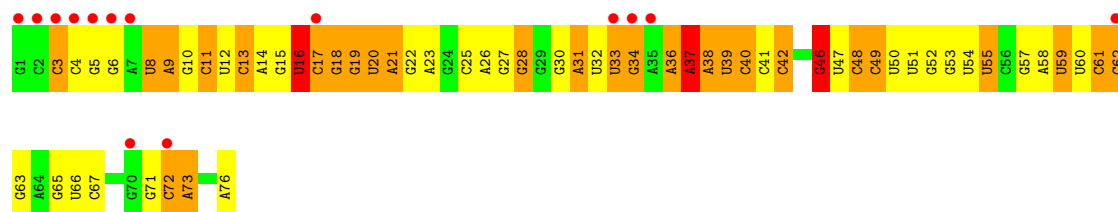
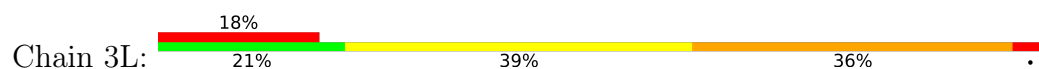
G1064	G1065	G1066	G1067	G1068	G1069	G1070	G1071	G1072	G1073	G1074	G1075	G1081	G1082	G1085	G1086	G1087	G1092	G1093	G1094	G1095	G1096	G1097	G1098	G1099	G1100	G1101	G1104	G1105	G1106	G1107	G1108	G1109	G1110	G1111	G1112	G1113	G1114	G1117	G1118	G1119	G1120	G1121	G1122	G1123	G1124	G1125	G1126	G1127	G1128	G1129	G1130	G1131	G1132	G1133	G1134	G1135	G1136	G1137	G1138	G1139	G1140	G1141	G1142	G1143	G1144	G1145	G1146	G1147	G1148	G1149	G1150	G1151	G1152	G1153	G1154	G1155	G1156	G1157	G1158																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
U1066	U1067	U1068	U1069	U1070	U1071	U1072	U1073	U1074	U1075	U1076	U1077	U1078	U1079	U1080	U1081	U1082	U1083	U1084	U1085	U1086	U1087	U1088	U1089	U1090	U1091	U1092	U1093	U1094	U1095	U1096	U1097	U1098	U1099	U1100	U1101	U1102	U1103	U1104	U1105	U1106	U1107	U1108	U1109	U1110	U1111	U1112	U1113	U1114	U1115	U1116	U1117	U1118	U1119	U1120	U1121	U1122	U1123	U1124	U1125	U1126	U1127	U1128	U1129	U1130	U1131	U1132	U1133	U1134	U1135	U1136	U1137	U1138	U1139	U1140	U1141	U1142	U1143	U1144	U1145	U1146	U1147	U1148	U1149	U1150	U1151	U1152	U1153	U1154	U1155	U1156	U1157	U1158																																																																																																																																																																																																																																																																																																																																																																																																																																																											
C940	C941	C942	C943	C944	C945	C946	C947	C948	C949	C950	C951	C952	C953	C954	C955	C956	C957	C958	C959	C960	C961	C962	C963	C964	C965	C966	C967	C968	C969	C970	C971	C972	C973	C974	C975	C976	C977	C978	C979	C980	C981	C982	C983	C984	C985	C986	C987	C988	C989	C990	C991	C992	C993	C994	C995	C996	C997	C998	C999	C1000	C1001	C1002	C1003	C1004	C1005	C1006	C1007	C1008	C1009	C1010	C1011	C1012	C1013	C1014	C1015	C1016	C1017	C1018	C1019	C1020	C1021	C1022	C1023	C1024	C1025	C1026	C1027	C1028	C1029	C1030	C1031	C1032	C1033	C1034	C1035	C1036	C1037	C1038	C1039	C1040	C1041	C1042	C1043	C1044	C1045	C1046	C1047	C1048	C1049	C1050	C1051	C1052	C1053	C1054	C1055	C1056	C1057	C1058	C1059	C1060	C1061	C1062	C1063	C1064	C1065	C1066	C1067	C1068	C1069	C1070	C1071	C1072	C1073	C1074	C1075	C1076	C1077	C1078	C1079	C1080	C1081	C1082	C1083	C1084	C1085	C1086	C1087	C1088	C1089	C1090	C1091	C1092	C1093	C1094	C1095	C1096	C1097	C1098	C1099	C1100	C1101	C1102	C1103	C1104	C1105	C1106	C1107	C1108	C1109	C1110	C1111	C1112	C1113	C1114	C1115	C1116	C1117	C1118	C1119	C1120	C1121	C1122	C1123	C1124	C1125	C1126	C1127	C1128	C1129	C1130	C1131	C1132	C1133	C1134	C1135	C1136	C1137	C1138	C1139	C1140	C1141	C1142	C1143	C1144	C1145	C1146	C1147	C1148	C1149	C1150	C1151	C1152	C1153	C1154	C1155	C1156	C1157	C1158																																																																																																																																																																																																																																																																																																																													
U863	U864	U865	U866	U867	U868	U869	U870	U871	U872	U873	U874	U875	U876	U877	U878	U879	U880	U881	U882	U883	U884	U885	U886	U887	U888	U889	U890	U891	U892	U893	U894	U895	U896	U897	U898	U899	U900	U901	U902	U903	U904	U905	U906	U907	U908	U909	U910	U911	U912	U913	U914	U915	U916	U917	U918	U919	U920	U921	U922	U923	U924	U925	U926	U927	U928	U929	U930	U931	U932	U933	U934	U935	U936	U937	U938	U939	U940	U941	U942	U943	U944	U945	U946	U947	U948	U949	U950	U951	U952	U953	U954	U955	U956	U957	U958	U959	U960	U961	U962	U963	U964	U965	U966	U967	U968	U969	U970	U971	U972	U973	U974	U975	U976	U977	U978	U979	U980	U981	U982	U983	U984	U985	U986	U987	U988	U989	U990	U991	U992	U993	U994	U995	U996	U997	U998	U999	U1000	U1001	U1002	U1003	U1004	U1005	U1006	U1007	U1008	U1009	U1010	U1011	U1012	U1013	U1014	U1015	U1016	U1017	U1018	U1019	U1020	U1021	U1022	U1023	U1024	U1025	U1026	U1027	U1028	U1029	U1030	U1031	U1032	U1033	U1034	U1035	U1036	U1037	U1038	U1039	U1040	U1041	U1042	U1043	U1044	U1045	U1046	U1047	U1048	U1049	U1050	U1051	U1052	U1053	U1054	U1055	U1056	U1057	U1058	U1059	U1060	U1061	U1062	U1063	U1064	U1065	U1066	U1067	U1068	U1069	U1070	U1071	U1072	U1073	U1074	U1075	U1076	U1077	U1078	U1079	U1080	U1081	U1082	U1083	U1084	U1085	U1086	U1087	U1088	U1089	U1090	U1091	U1092	U1093	U1094	U1095	U1096	U1097	U1098	U1099	U1100	U1101	U1102	U1103	U1104	U1105	U1106	U1107	U1108	U1109	U1110	U1111	U1112	U1113	U1114	U1115	U1116	U1117	U1118	U1119	U1120	U1121	U1122	U1123	U1124	U1125	U1126	U1127	U1128	U1129	U1130	U1131	U1132	U1133	U1134	U1135	U1136	U1137	U1138	U1139	U1140	U1141	U1142	U1143	U1144	U1145	U1146	U1147	U1148	U1149	U1150	U1151	U1152	U1153	U1154	U1155	U1156	U1157	U1158																																																																																																																																																																																																																																																
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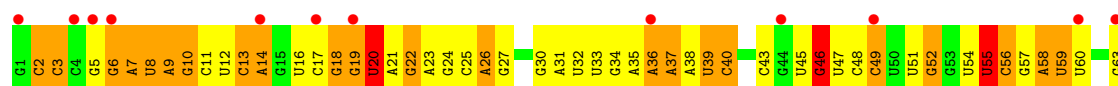
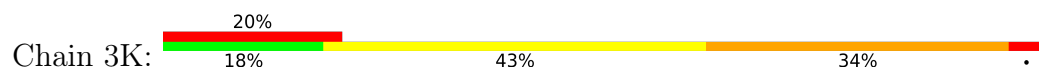
• Molecule 2: tRNA-Phe



• Molecule 2: tRNA-Phe

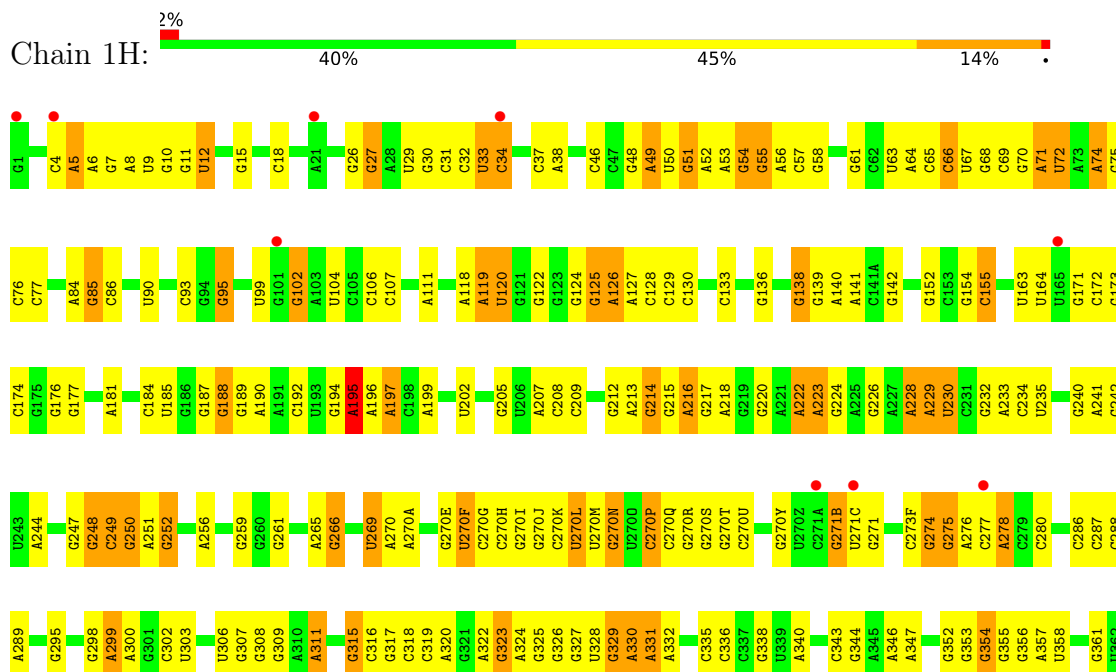
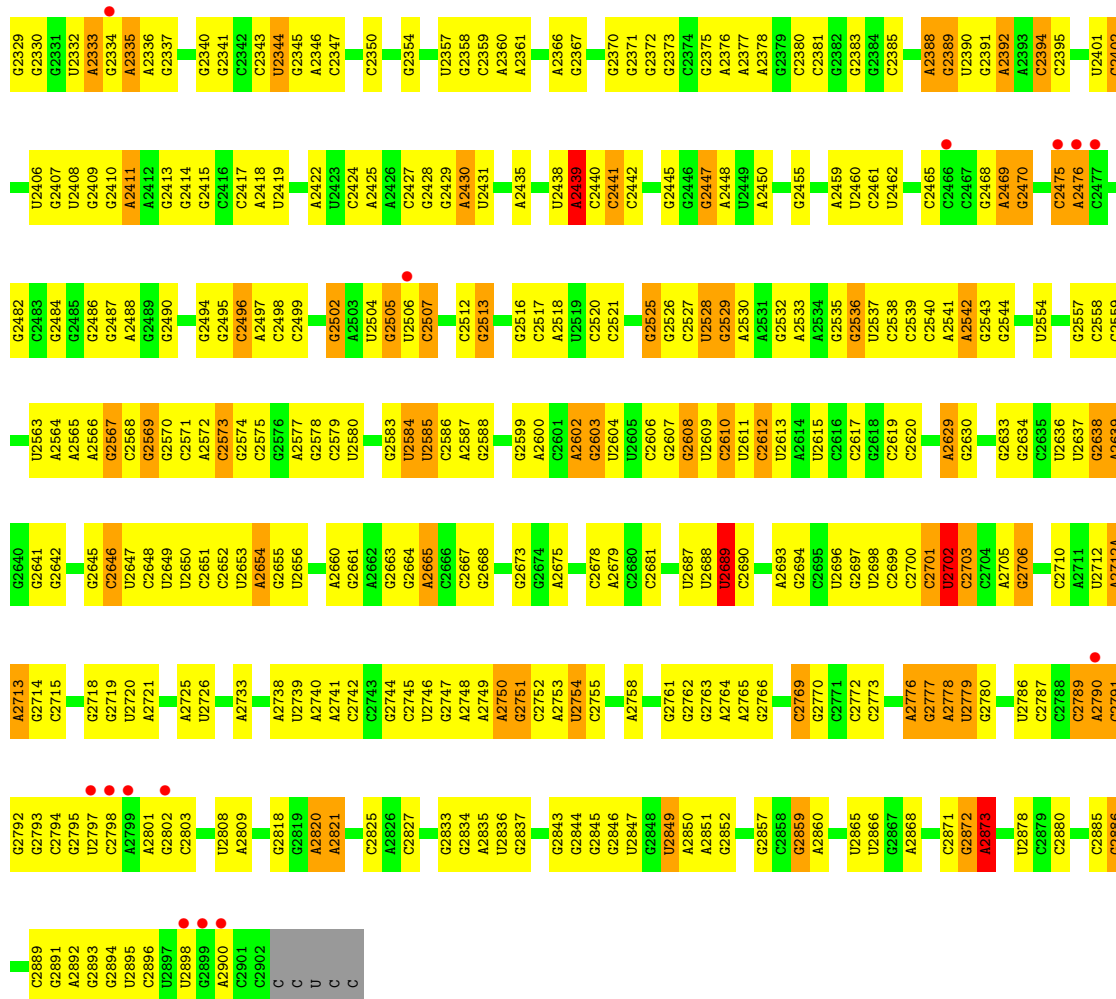


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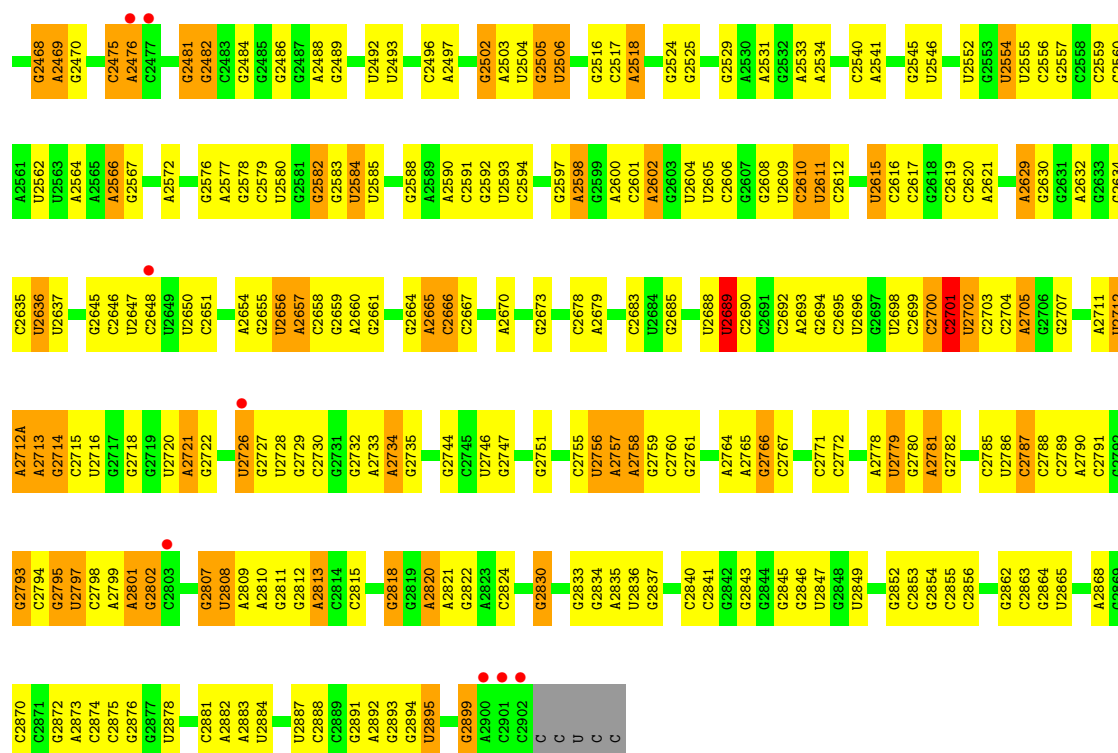
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G1151	A301	C302	G363D	A457	C546	U614	U657	G741	A819	A887	A953	U1019	U1081	G1151
C1152	G260	G303	U363E	A458	A547	G617	C658	A746	A820	C888	G954	A1021	U1082	C1152
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U1198	C273C	C336	C414	C510	G585	G649	A706	G786	G860	C921	A990	U1055	A1054	U1198
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C1217	C288	U448	A448	G526	G603	C654F	G725	A802	G872	C931	C996	U1065	U1065	C1217
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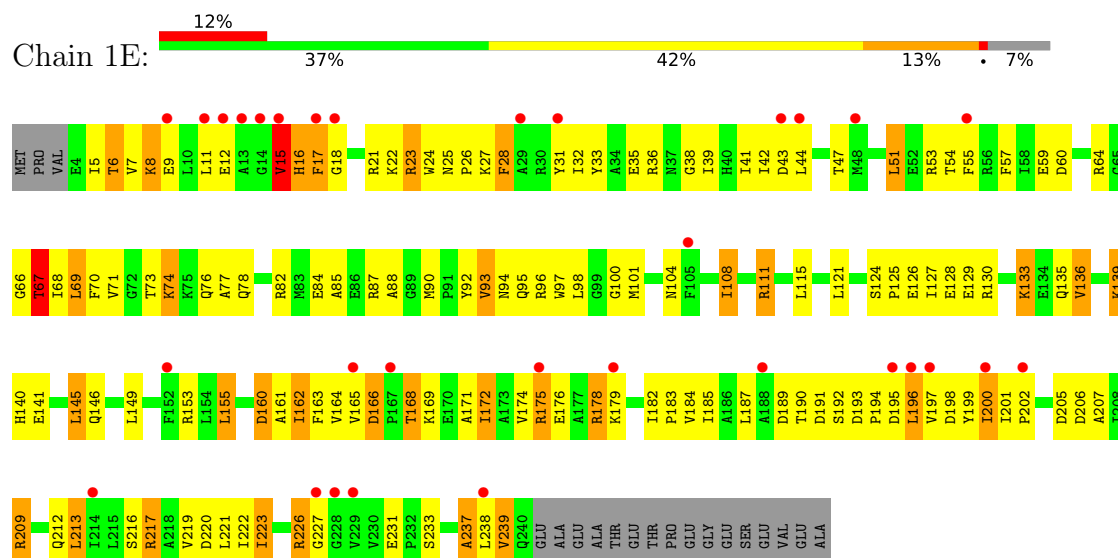


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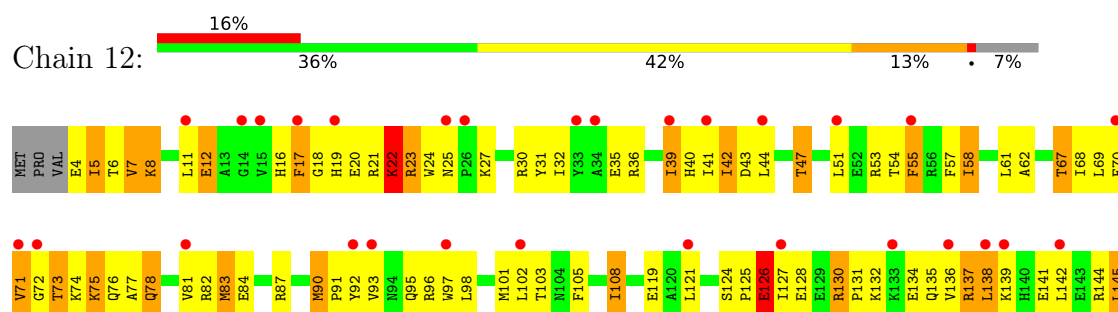
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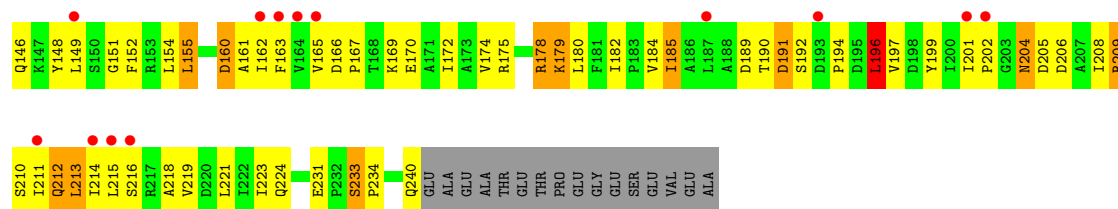


- Molecule 6: 30S ribosomal protein S2

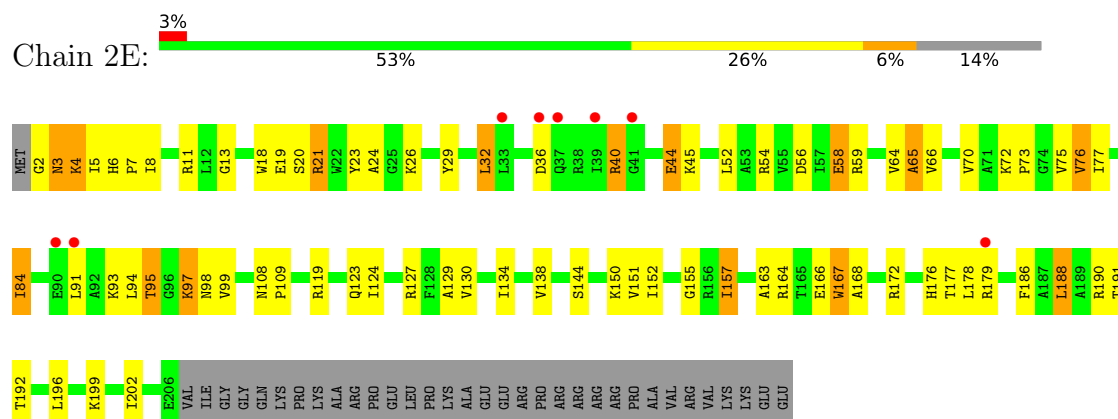


- Molecule 6: 30S ribosomal protein S2

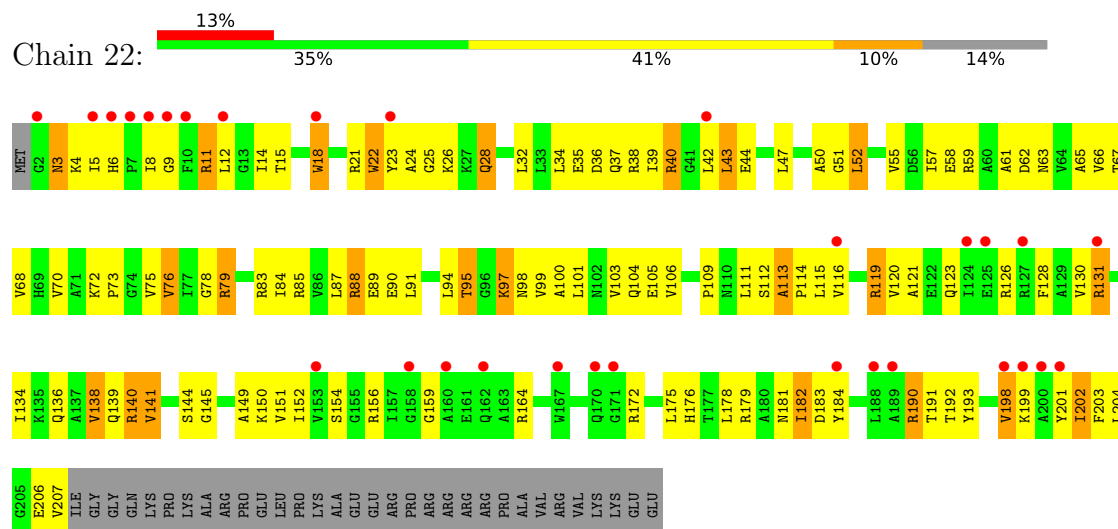




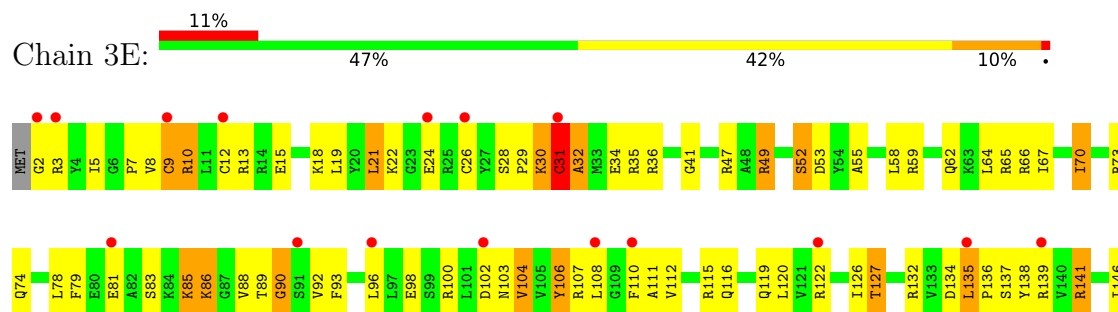
• Molecule 7: 30S ribosomal protein S3



• Molecule 8: 30S ribosomal protein S4

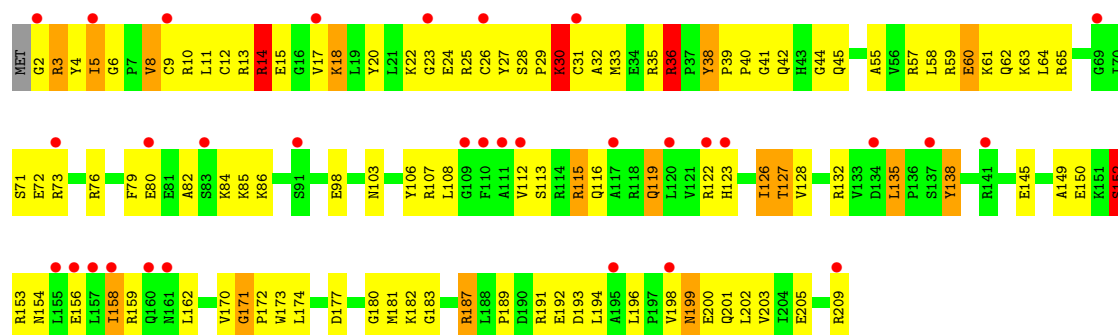


• Molecule 8: 30S ribosomal protein S4

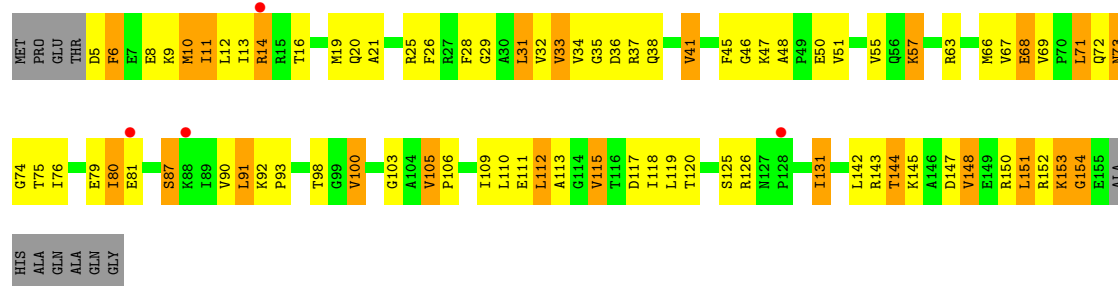
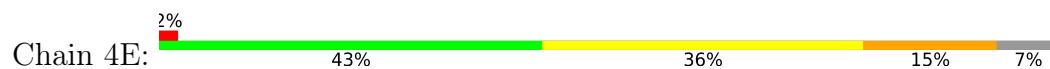




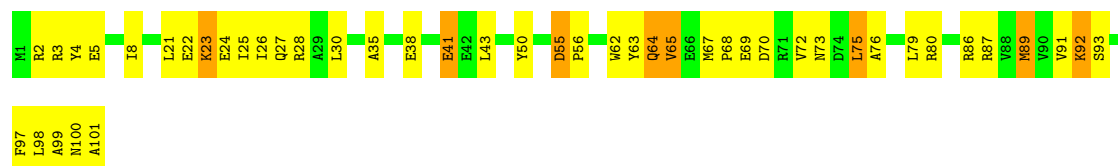
• Molecule 8: 30S ribosomal protein S4



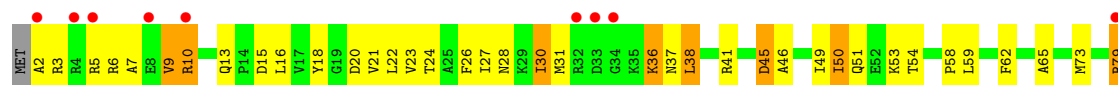
• Molecule 9: 30S ribosomal protein S5

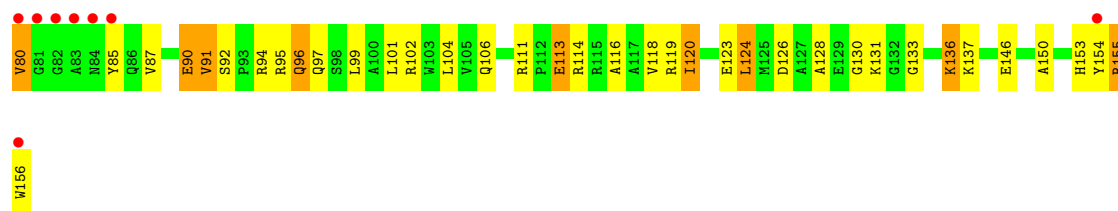


• Molecule 10: 30S ribosomal protein S6

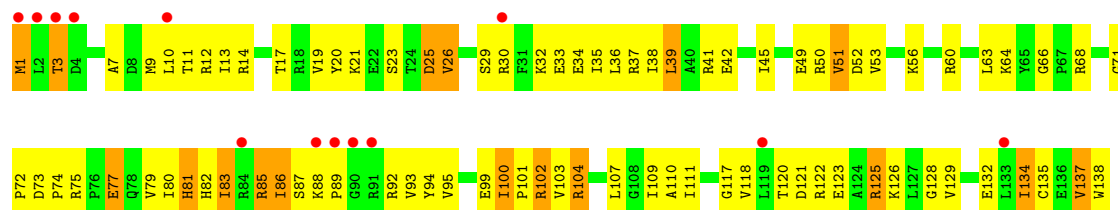


• Molecule 11: 30S ribosomal protein S7

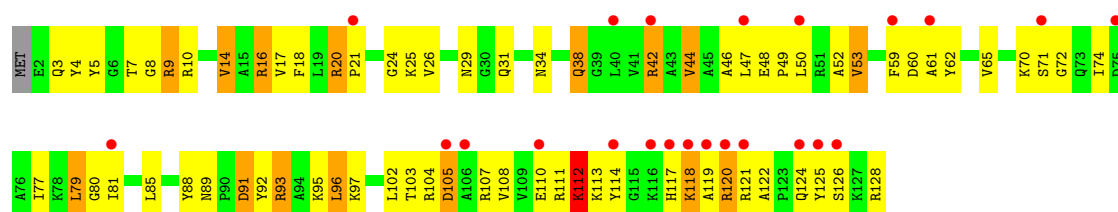
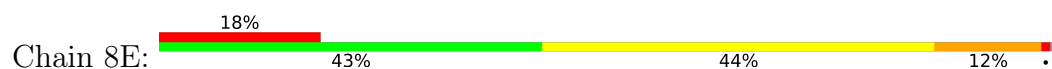




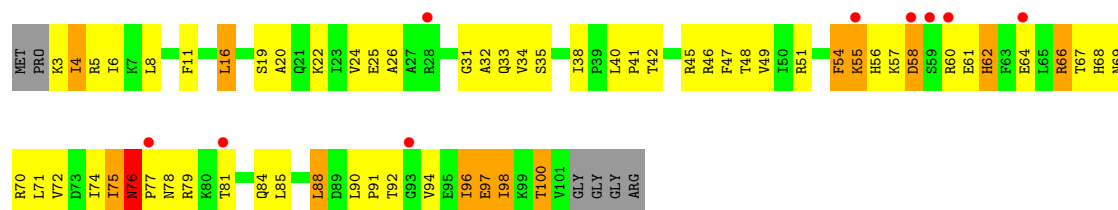
• Molecule 12: 30S ribosomal protein S8



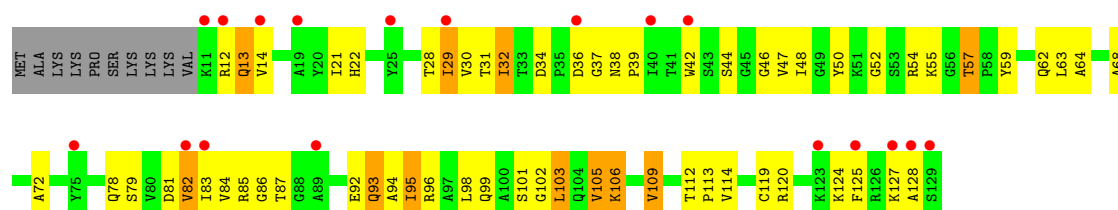
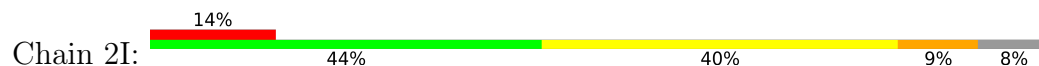
• Molecule 13: 30S ribosomal protein S9



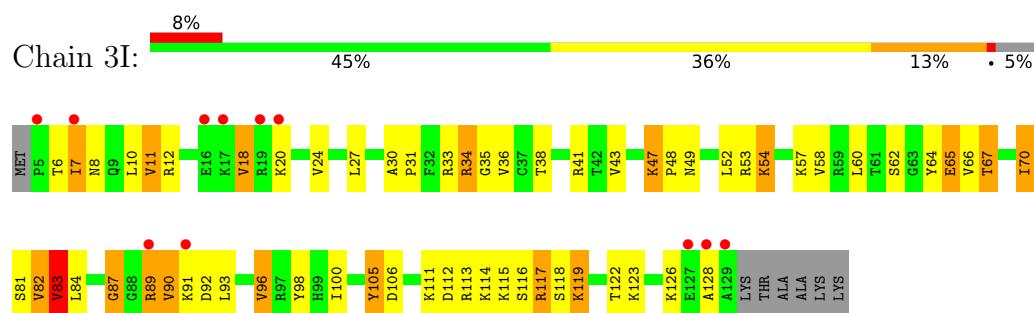
• Molecule 14: 30S ribosomal protein S10



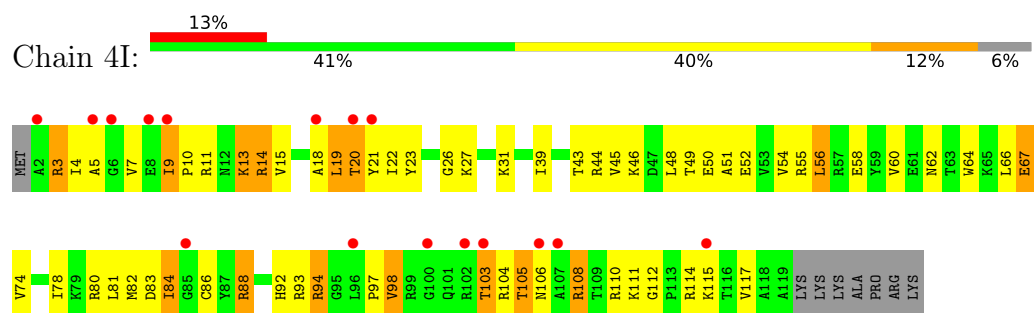
• Molecule 15: 30S ribosomal protein S11



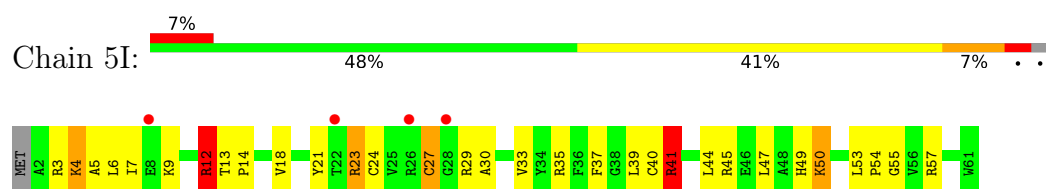
- Molecule 16: 30S ribosomal protein S12



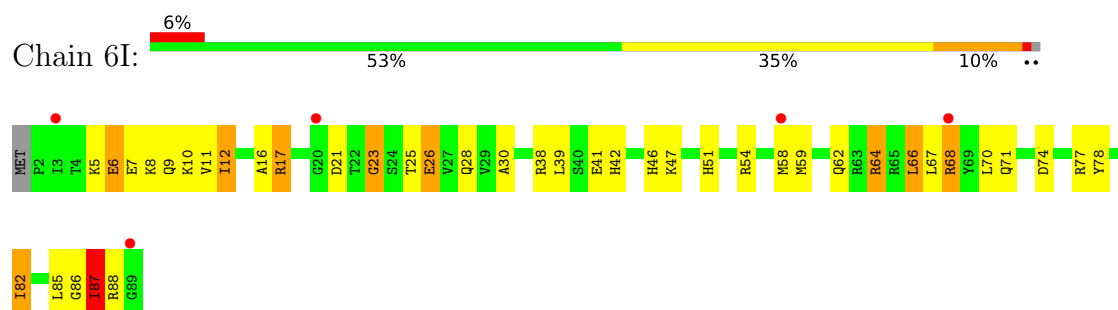
- Molecule 17: 30S ribosomal protein S13



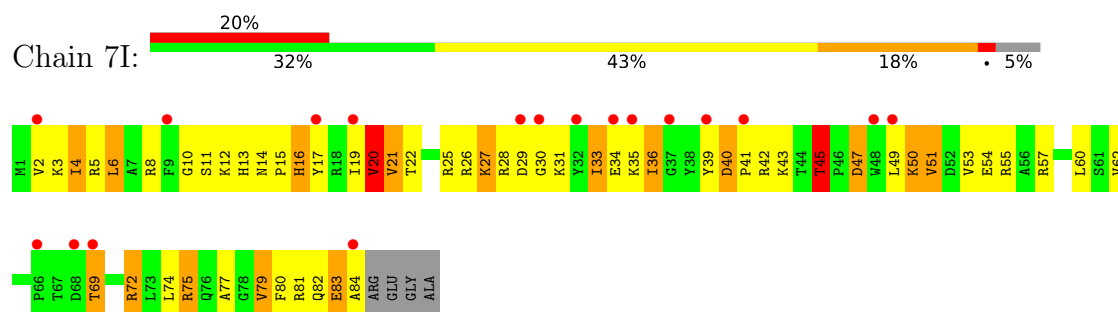
- Molecule 18: 30S ribosomal protein S14 type Z



- Molecule 19: 30S ribosomal protein S15

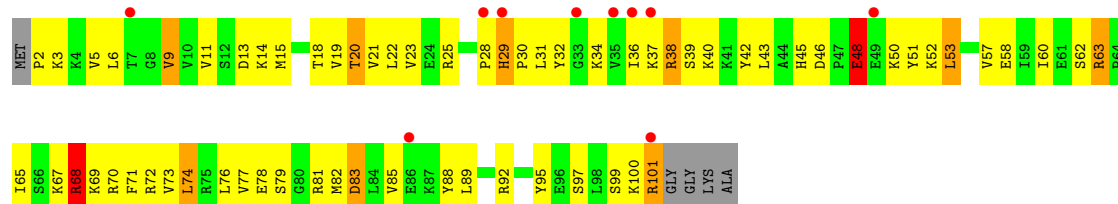


- Molecule 20: 30S ribosomal protein S16



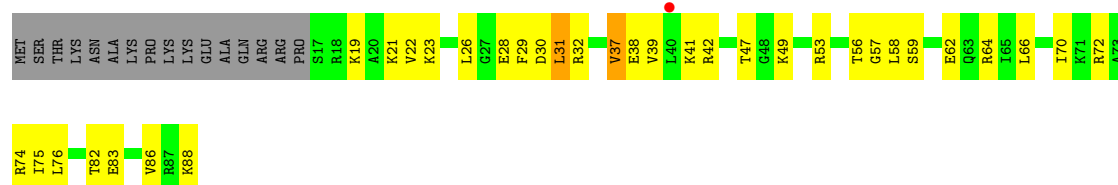
- Molecule 21: 30S ribosomal protein S17

Chain 8I: 

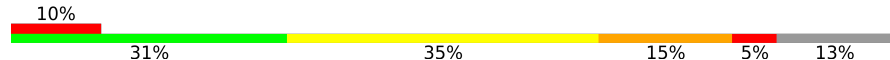


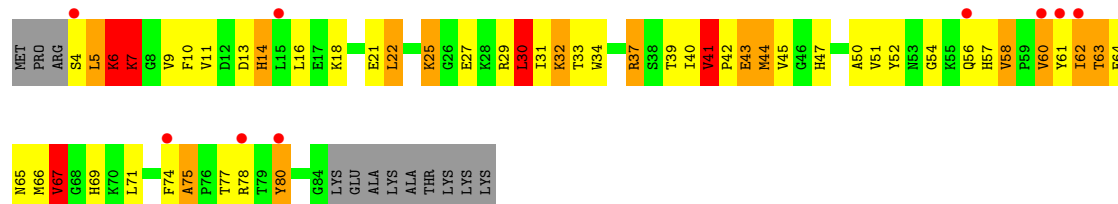
- Molecule 22: 30S ribosomal protein S18

Chain 9I: 



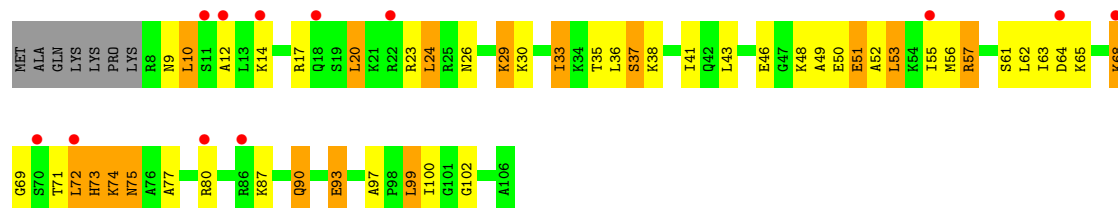
- Molecule 23: 30S ribosomal protein S19

Chain AI: 



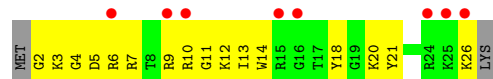
- Molecule 24: 30S ribosomal protein S20

Chain BI: 

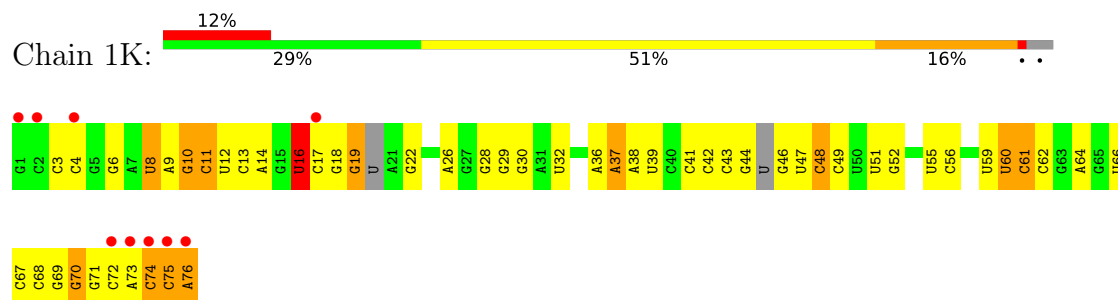


- Molecule 25: 30S ribosomal protein Thx

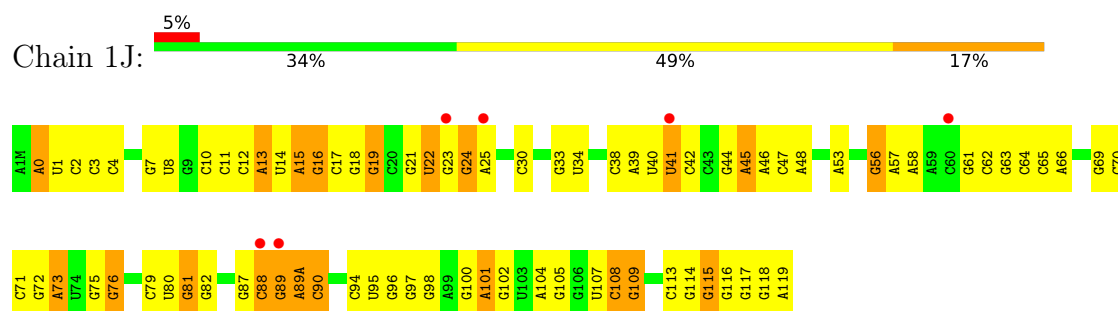
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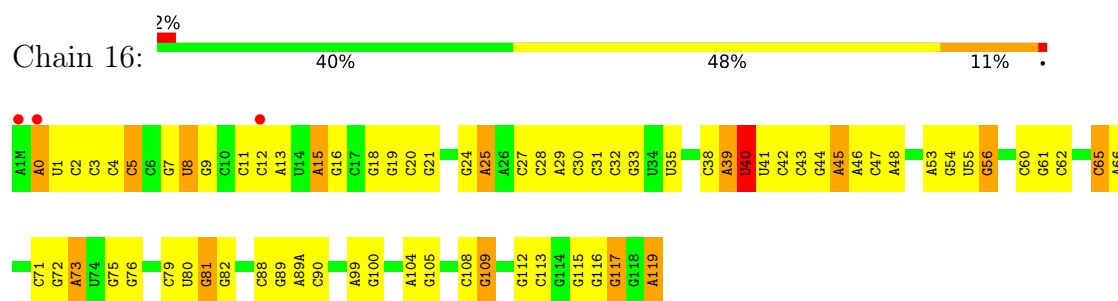
- Molecule 26: tRNA-Phe



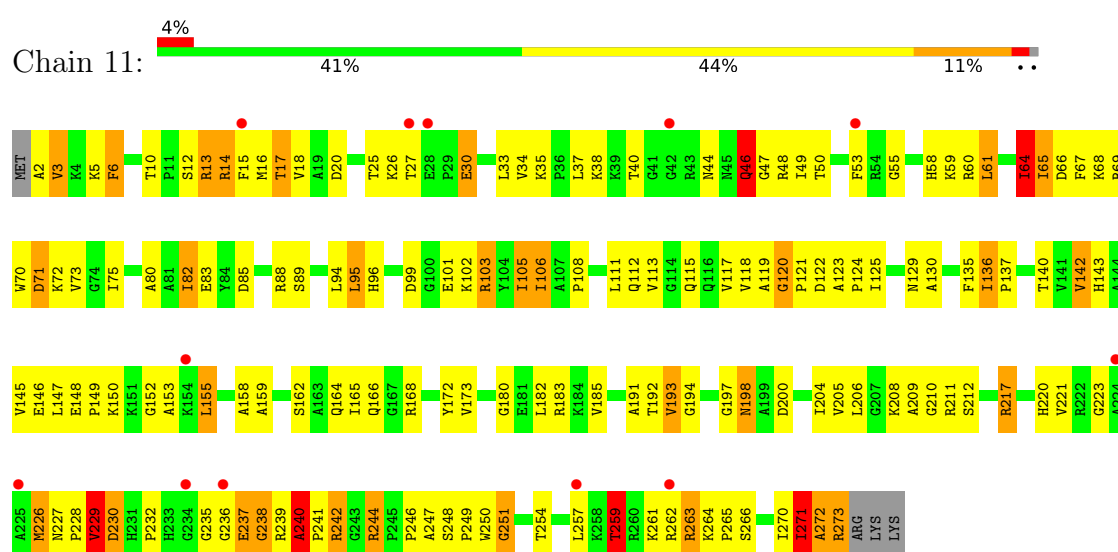
- Molecule 27: 5S ribosomal RNA



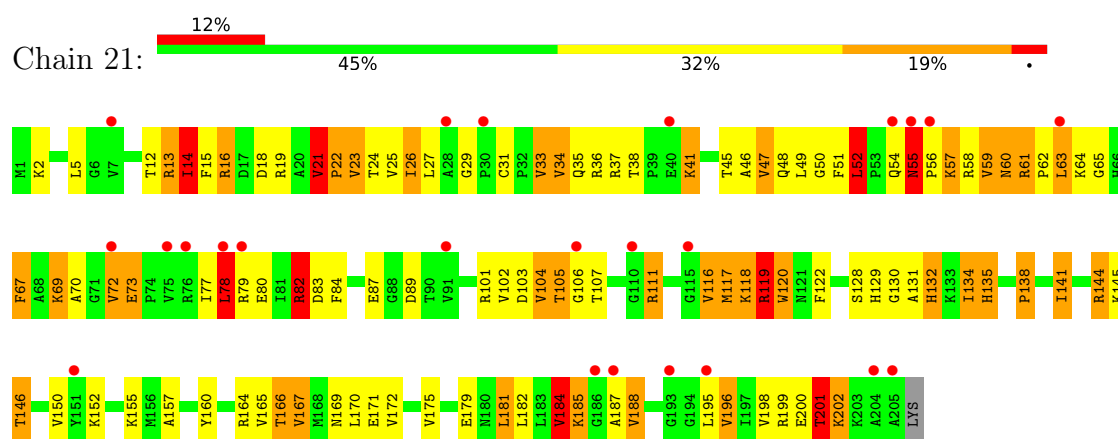
- Molecule 27: 5S ribosomal RNA



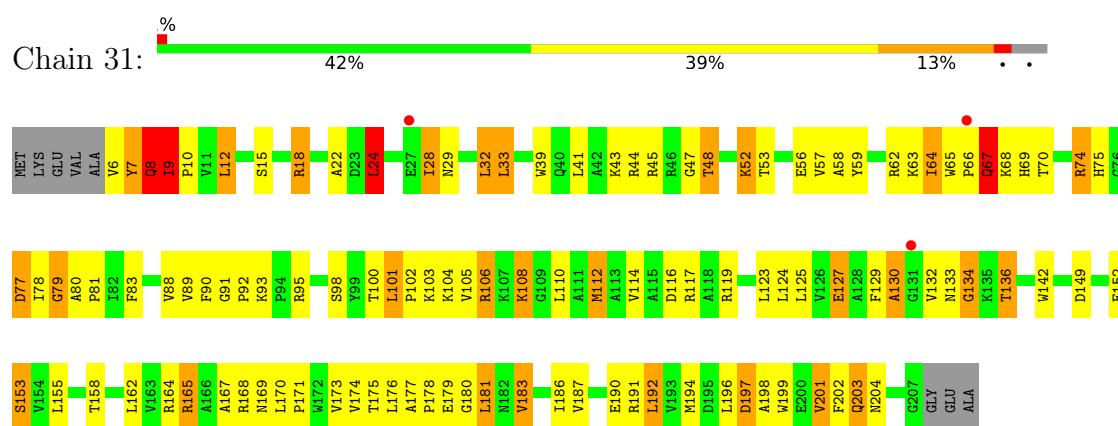
- Molecule 28: 50S ribosomal protein L2



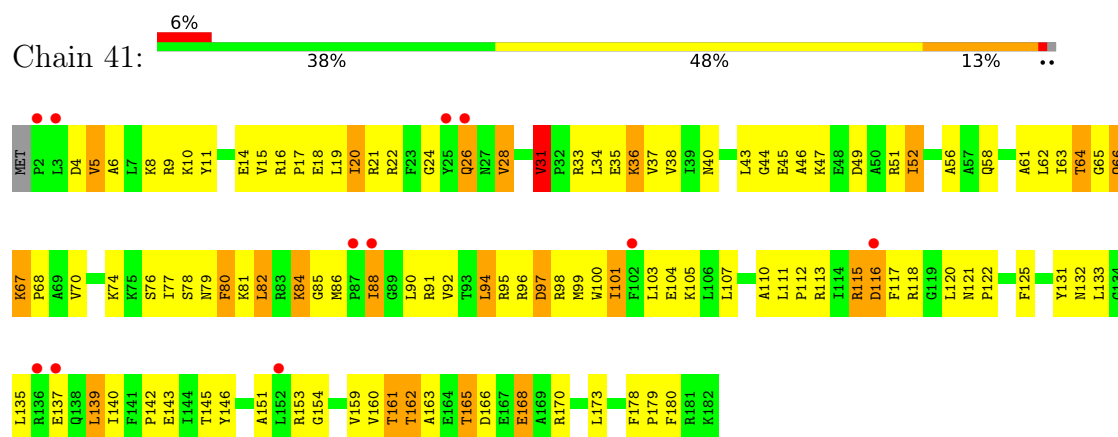
- Molecule 29: 50S ribosomal protein L3



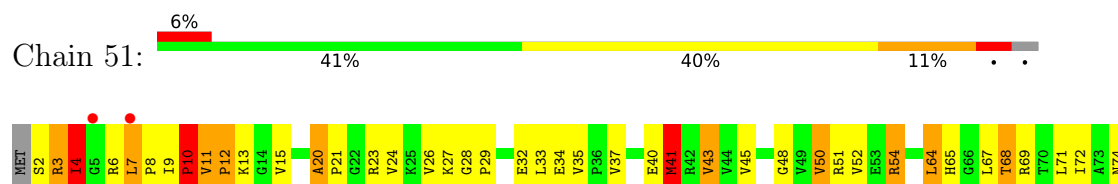
• Molecule 30: 50S ribosomal protein L4

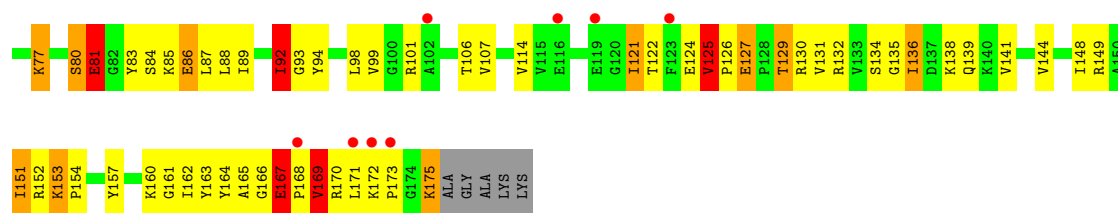


• Molecule 31: 50S ribosomal protein L5



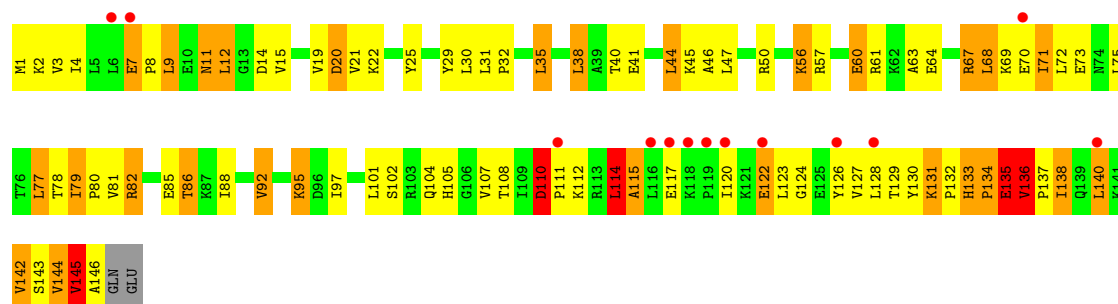
• Molecule 32: 50S ribosomal protein L6





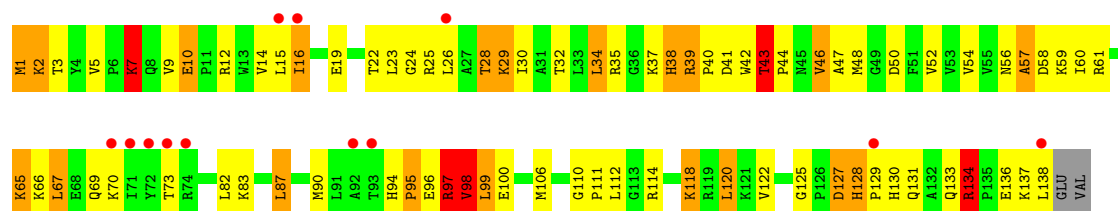
• Molecule 33: 50S ribosomal protein L9

Chain 61: 9% 38% 39% 19% ..



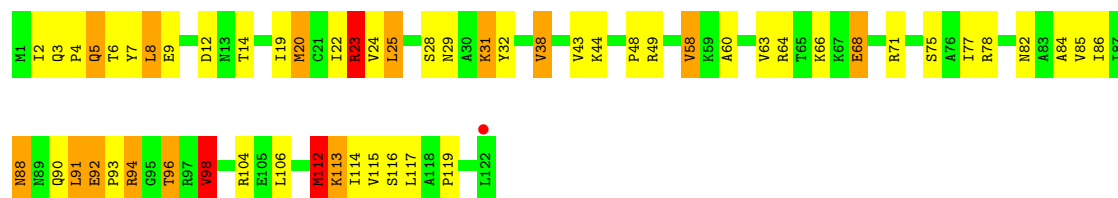
• Molecule 34: 50S ribosomal protein L13

Chain 58: 9% 42% 39% 14% ..



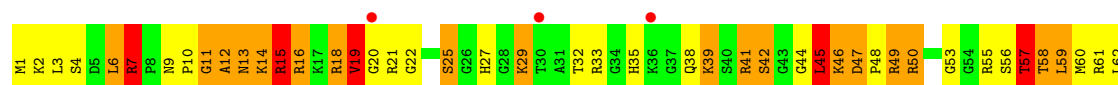
• Molecule 35: 50S ribosomal protein L14

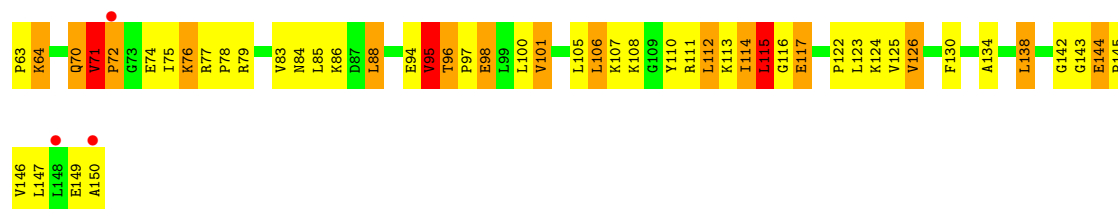
Chain 68: % 54% 32% 11% .



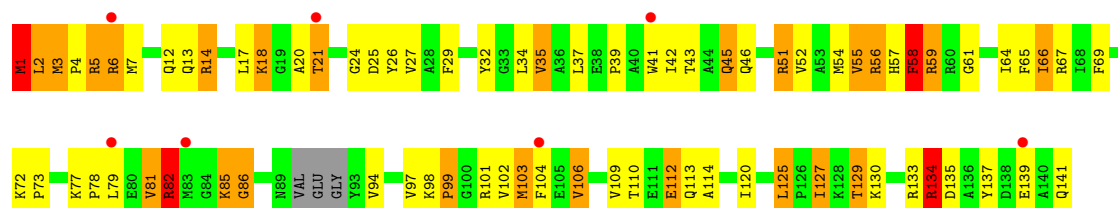
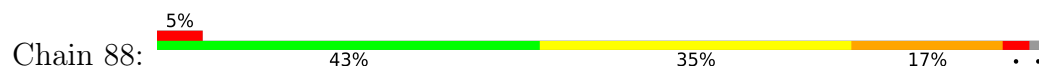
• Molecule 36: 50S ribosomal protein L15

Chain 78: 4% 36% 37% 22% 5%

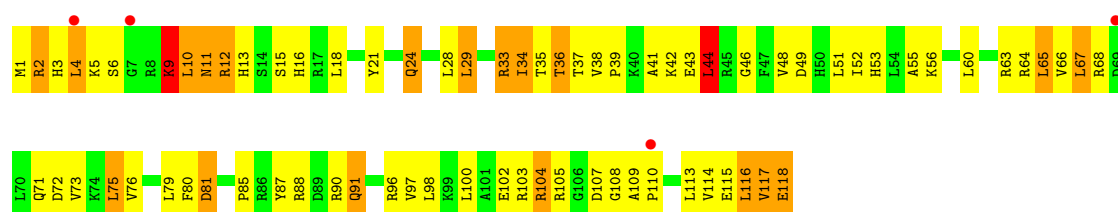




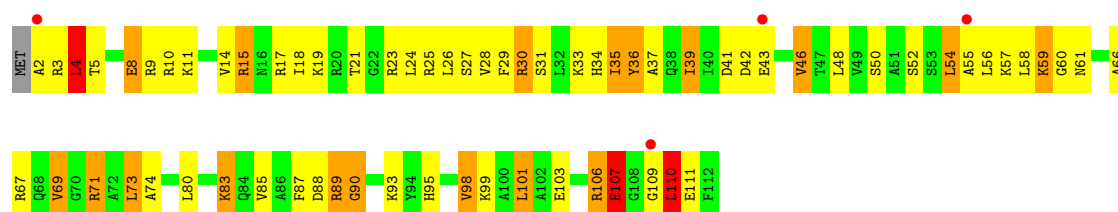
• Molecule 37: 50S ribosomal protein L16



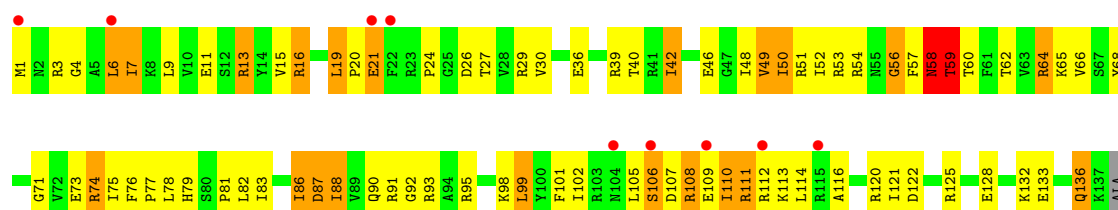
• Molecule 38: 50S ribosomal protein L17



• Molecule 39: 50S ribosomal protein L18



• Molecule 40: 50S ribosomal protein L19



GLN
GLU
PRO
LYS
ALA
SER
GLN
GLU

• Molecule 41: 50S ribosomal protein L20

Chain C8:  8% 38% 50% 10% ..

MET P2 R3 A4 LYS T6 G7 V8 V9 R10 R11 R12 K13 K14 K15 K16 I17 K18 K19 K22 G23 Y24 Y25 G26 L27 R28 S29 K30 R33 K34 A35 T38 L39 F40 A41 A42 Y47 A48 H49 R50 K51 R52 R53 K54 R58 R59 L60 W61 I62 V63 R64 I65 N66 A67 A68

G59 R70 L74 N75 Y76 S77 T78 F79 H80 H81 K85 A86 G87 T88 E89 V90 P91 R92 R93 N94 L95 A96 G97 L98 A99 V100 R101 E102 P103 Q104 V105 F106 A107 E108 L109 V110 R111 R112 A113 K114 A115 A116 Q117 G118

• Molecule 42: 50S ribosomal protein L21

Chain D8:  11% 48% 40% 10% .

M1 F2 A3 I4 V5 K6 T7 G8 G9 R10 Q11 Q12 Y13 R14 L18 L19 L20 L21 V22 E23 L24 L25 E34 L36 P36 V37 L38 L39 L40 G41 G42 E43 K44 T45 V46 V47 G48 T49 P50 E53 G54 L62 G65 R66 G67 T70 L71 V72 V73 S74 R75 F76 A77 K78

V79 R82 R83 K84 R88 Y91 T92 E93 L94 L95 G101

• Molecule 43: 50S ribosomal protein L22

Chain E8:  2% 55% 35% 9% .

M1 R11 I12 I13 S14 S15 R18 L19 V20 L23 T24 K27 E30 E31 E32 R33 L36 R37 Y38 T39 N40 K41 L51 E52 N57 A58 N61 R62 D63 R64 L65 E66 D67 R68 L69 Y70 V71 V76 D77 E78 G79 L82 K83 R84 R85 L86 R87 R88 A89

R90 G91 R92 I96 K97 K98 R99 T100 I103 L107 K110 H111 G112 K113

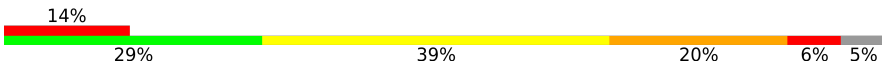
• Molecule 44: 50S ribosomal protein L23

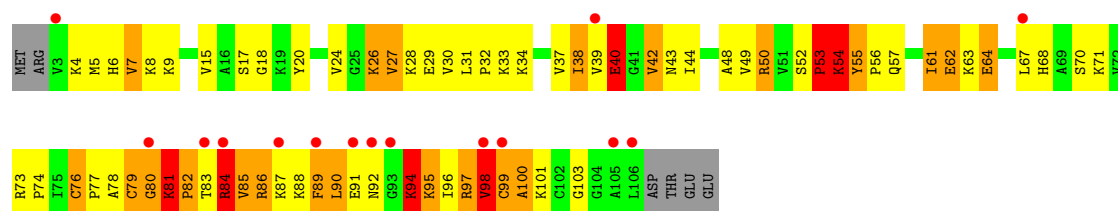
Chain F8:  2% 43% 40% 15% ..

M1 K2 T3 A4 Y5 D6 P11 V12 L13 S14 E15 K16 A17 Y18 A19 G20 F21 A22 E23 G24 K25 Y26 T27 H31 P32 K33 A34 A35 K36 T37 T38 E38 I39 K40 N41 E44 T45 V49 K50 V51 V54 L57 R60 G61 R65 L66 G67 R68 Y69 P74 D75 R76

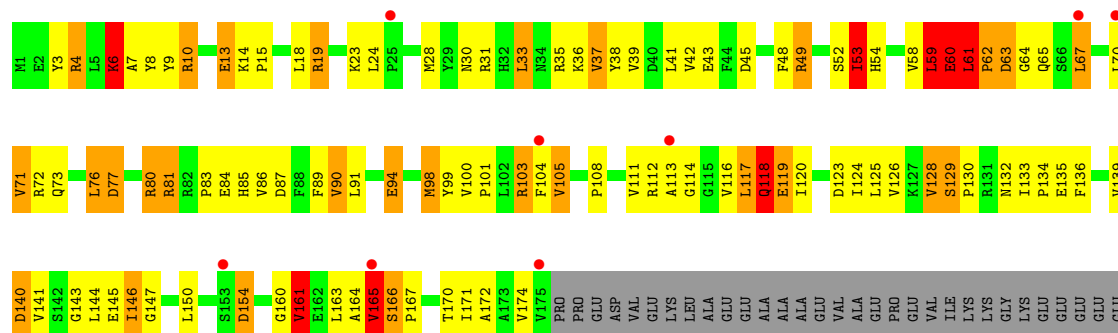
I80 V81 Q82 V83 Q87 K88 R89 L92 E93 G94 LEU ILE

• Molecule 45: 50S ribosomal protein L24

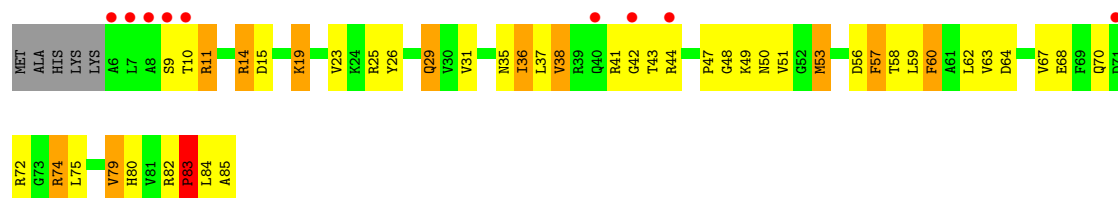
Chain G8:  14% 29% 39% 20% 6% 5%



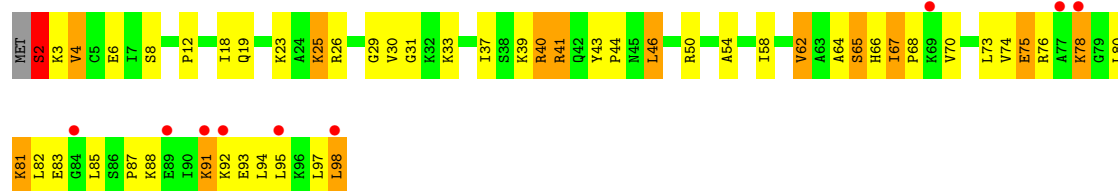
• Molecule 46: 50S ribosomal protein L25



• Molecule 47: 50S ribosomal protein L27

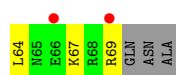


• Molecule 48: 50S ribosomal protein L28

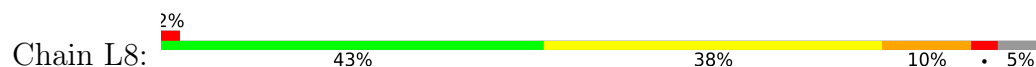


• Molecule 49: 50S ribosomal protein L29

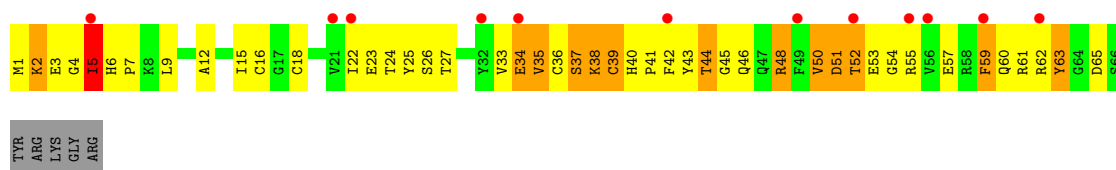




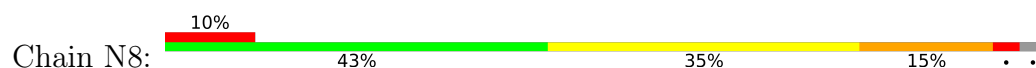
- Molecule 50: 50S ribosomal protein L30



- Molecule 51: 50S ribosomal protein L31



- Molecule 52: 50S ribosomal protein L32



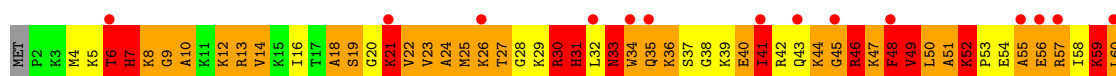
- Molecule 53: 50S ribosomal protein L33



- Molecule 54: 50S ribosomal protein L34



- Molecule 55: 50S ribosomal protein L35



LEU
PRO
TYR
GLU

4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	209.40Å 447.70Å 619.40Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	151.96 – 3.05 151.96 – 3.05	Depositor EDS
% Data completeness (in resolution range)	99.9 (151.96-3.05) 92.8 (151.96-3.05)	Depositor EDS
R_{merge}	0.33	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	0.76 (at 3.07Å)	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.193 , 0.231 0.249 , 0.272	Depositor DCC
R_{free} test set	2000 reflections (0.18%)	wwPDB-VP
Wilson B-factor (Å ²)	89.4	Xtriage
Anisotropy	0.247	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.28 , 67.1	EDS
L-test for twinning ²	$\langle L \rangle = 0.45$, $\langle L^2 \rangle = 0.27$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.92	EDS
Total number of atoms	260090	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 1.46% 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: 7MG, 4SU, OMC, MG, H2U, ZN, PSU, MIA

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	13	0.48	0/36028	0.75	14/56231 (0.0%)
1	1G	0.42	0/36025	0.68	9/56227 (0.0%)
2	1L	0.31	1/1625 (0.1%)	0.46	0/2531
2	3K	0.38	1/1625 (0.1%)	0.58	0/2531
2	3L	0.39	1/1625 (0.1%)	0.53	0/2531
3	2K	0.57	1/1721 (0.1%)	0.80	0/2682
3	2L	0.44	0/1721	0.71	0/2682
4	4K	0.53	0/313	0.63	0/485
4	4L	0.75	0/213	0.96	0/329
5	14	0.54	0/70167	0.80	20/109541 (0.0%)
5	1H	0.66	0/70233	0.89	57/109643 (0.1%)
6	12	0.56	0/1959	1.11	13/2642 (0.5%)
6	1E	0.61	0/1959	1.11	6/2642 (0.2%)
7	22	0.59	0/1636	1.07	8/2205 (0.4%)
7	2E	0.73	0/1629	1.10	3/2195 (0.1%)
8	32	0.66	0/1732	1.21	18/2318 (0.8%)
8	3E	0.75	0/1732	1.18	10/2318 (0.4%)
9	4E	0.79	0/1171	1.18	8/1576 (0.5%)
10	5E	0.78	0/855	1.13	1/1154 (0.1%)
11	6E	0.68	0/1275	1.07	4/1709 (0.2%)
12	7E	0.72	0/1135	1.26	11/1527 (0.7%)
13	8E	0.66	0/1028	1.11	3/1379 (0.2%)
14	1I	0.77	0/814	1.16	9/1095 (0.8%)
15	2I	0.85	0/899	1.33	8/1213 (0.7%)
16	3I	1.00	0/991	1.41	7/1327 (0.5%)
17	4I	0.74	0/948	1.11	1/1272 (0.1%)
18	5I	0.87	1/500 (0.2%)	1.23	4/664 (0.6%)
19	6I	0.80	0/744	1.19	2/992 (0.2%)
20	7I	0.72	0/721	1.15	6/970 (0.6%)
21	8I	0.71	0/847	1.21	7/1131 (0.6%)
22	9I	0.71	0/595	1.12	3/790 (0.4%)
23	AI	0.73	1/661 (0.2%)	1.28	13/890 (1.5%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
24	BI	0.59	0/764	1.11	4/1007 (0.4%)
25	1F	0.58	0/221	1.12	0/288
26	1K	0.34	0/1602	0.52	0/2493
27	16	0.53	0/2928	0.87	1/4568 (0.0%)
27	1J	0.44	0/2928	0.71	0/4568
28	11	1.18	5/2165 (0.2%)	1.56	43/2919 (1.5%)
29	21	0.95	1/1601 (0.1%)	1.53	29/2160 (1.3%)
30	31	1.07	1/1620 (0.1%)	1.39	20/2194 (0.9%)
31	41	0.79	1/1498 (0.1%)	1.25	10/2016 (0.5%)
32	51	0.86	1/1362 (0.1%)	1.42	18/1841 (1.0%)
33	61	0.79	0/1151	1.24	10/1558 (0.6%)
34	58	0.86	0/1131	1.30	12/1525 (0.8%)
35	68	0.92	0/942	1.24	7/1269 (0.6%)
36	78	1.04	2/1161 (0.2%)	1.54	25/1544 (1.6%)
37	88	1.20	5/1106 (0.5%)	1.60	26/1478 (1.8%)
38	98	0.89	0/981	1.30	7/1312 (0.5%)
39	A8	0.87	0/891	1.41	9/1187 (0.8%)
40	B8	0.93	0/1155	1.32	9/1542 (0.6%)
41	C8	1.00	1/981 (0.1%)	1.20	3/1306 (0.2%)
42	D8	0.83	0/789	1.34	7/1057 (0.7%)
43	E8	1.03	0/910	1.30	2/1220 (0.2%)
44	F8	1.10	0/756	1.36	5/1014 (0.5%)
45	G8	1.05	1/804 (0.1%)	1.57	21/1073 (2.0%)
46	H8	0.72	2/1427 (0.1%)	1.28	10/1935 (0.5%)
47	I8	1.03	1/634 (0.2%)	1.40	8/847 (0.9%)
48	J8	1.01	0/769	1.37	11/1022 (1.1%)
49	K8	1.06	1/565 (0.2%)	1.47	8/748 (1.1%)
50	L8	0.91	0/457	1.58	10/613 (1.6%)
51	M8	0.73	0/545	1.26	4/733 (0.5%)
52	N8	0.91	0/467	1.74	11/632 (1.7%)
53	O8	1.07	1/396 (0.3%)	1.51	8/529 (1.5%)
54	P8	1.20	0/399	1.38	2/526 (0.4%)
55	Q8	1.60	5/486 (1.0%)	2.27	28/638 (4.4%)
All	All	0.62	34/280719 (0.0%)	0.90	613/426784 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
6	12	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
6	1E	0	3
8	32	0	2
8	3E	0	1
13	8E	0	1
16	3I	0	1
17	4I	0	1
20	7I	0	1
23	AI	0	2
28	11	0	1
29	21	0	3
30	31	0	2
31	41	0	2
33	61	0	4
36	78	0	3
37	88	0	1
38	98	0	1
39	A8	0	1
40	B8	0	1
41	C8	0	1
45	G8	0	4
46	H8	0	2
47	I8	0	2
48	J8	0	1
49	K8	0	2
51	M8	0	1
52	N8	0	2
53	O8	0	3
55	Q8	0	8
All	All	0	58

All (34) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	Q8	25	MET	CA-C	8.17	1.63	1.52
55	Q8	6	THR	CA-CB	8.04	1.66	1.53
28	11	271	ILE	CA-C	7.66	1.62	1.52
37	88	82	ARG	CA-C	7.58	1.63	1.52
37	88	79	LEU	N-CA	7.14	1.55	1.46
36	78	18	ARG	CA-C	-7.09	1.44	1.52
53	O8	15	GLU	CA-C	6.41	1.55	1.52
28	11	122	ASP	CB-CG	6.30	1.67	1.52
55	Q8	31	HIS	CA-C	6.24	1.59	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	88	21	THR	CA-CB	6.09	1.63	1.53
55	Q8	51	ALA	CA-C	6.02	1.60	1.52
46	H8	165	VAL	CA-CB	5.97	1.62	1.54
23	AI	41	VAL	CA-CB	5.93	1.61	1.54
18	5I	27	CYS	CB-SG	-5.91	1.61	1.81
2	3L	8	4SU	O3'-P	5.91	1.62	1.56
28	11	272	ALA	CA-C	5.82	1.60	1.53
3	2K	8	4SU	O3'-P	5.79	1.62	1.56
55	Q8	60	LEU	CA-C	5.58	1.60	1.53
36	78	19	VAL	CA-CB	5.50	1.61	1.54
2	1L	8	4SU	O3'-P	5.47	1.61	1.56
2	3K	8	4SU	O3'-P	5.42	1.61	1.56
29	21	131	ALA	CA-CB	-5.38	1.44	1.53
47	I8	79	VAL	CA-CB	5.38	1.61	1.54
49	K8	5	GLU	CG-CD	5.23	1.65	1.52
28	11	247	ALA	CA-CB	-5.22	1.44	1.54
45	G8	79	CYS	CA-C	5.22	1.59	1.52
28	11	64	ILE	CA-CB	5.20	1.60	1.54
37	88	82	ARG	N-CA	5.18	1.55	1.46
31	41	31	VAL	CA-CB	5.14	1.61	1.53
46	H8	165	VAL	CA-C	5.12	1.59	1.52
41	C8	48	ALA	CA-CB	-5.09	1.45	1.53
30	31	92	PRO	C-O	-5.03	1.18	1.23
37	88	78	PRO	CA-C	5.02	1.61	1.52
32	51	9	ILE	CA-CB	5.00	1.60	1.54

All (613) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	Q8	49	VAL	N-CA-C	14.23	125.67	112.29
28	11	271	ILE	N-CA-C	13.56	125.06	112.17
39	A8	110	LEU	N-CA-C	12.66	126.73	108.00
52	N8	41	PRO	CA-C-N	12.59	135.58	119.84
52	N8	41	PRO	C-N-CA	12.59	135.58	119.84
52	N8	40	LYS	CA-C-N	-12.54	107.47	120.38
52	N8	40	LYS	C-N-CA	-12.54	107.47	120.38
55	Q8	28	GLY	N-CA-C	12.45	130.43	114.25
50	L8	11	SER	CA-C-N	12.38	132.74	119.87
50	L8	11	SER	C-N-CA	12.38	132.74	119.87
15	2I	102	GLY	N-CA-C	-12.32	93.94	110.58
55	Q8	25	MET	N-CA-C	12.18	136.75	110.80
29	21	52	LEU	CA-C-N	11.77	134.56	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	21	52	LEU	C-N-CA	11.77	134.56	119.84
28	11	272	ALA	N-CA-C	11.76	124.46	108.23
46	H8	161	VAL	N-CA-C	11.48	121.70	107.70
37	88	86	GLY	N-CA-C	-11.41	97.10	111.70
32	51	125	VAL	CA-C-N	11.12	133.74	119.84
32	51	125	VAL	C-N-CA	11.12	133.74	119.84
37	88	82	ARG	N-CA-C	10.58	135.21	113.20
18	5I	27	CYS	N-CA-C	10.23	122.39	111.03
37	88	125	LEU	CA-C-N	10.09	129.71	119.82
37	88	125	LEU	C-N-CA	10.09	129.71	119.82
42	D8	35	LEU	CA-C-N	10.06	132.42	119.84
42	D8	35	LEU	C-N-CA	10.06	132.42	119.84
32	51	167	GLU	CA-C-N	-10.04	107.29	119.84
32	51	167	GLU	C-N-CA	-10.04	107.29	119.84
12	7E	100	ILE	CA-C-N	9.82	129.90	119.78
12	7E	100	ILE	C-N-CA	9.82	129.90	119.78
49	K8	5	GLU	N-CA-C	-9.74	90.05	110.80
29	21	119	ARG	N-CA-C	-9.67	96.05	111.04
7	22	6	HIS	CA-C-N	9.59	129.84	119.87
7	22	6	HIS	C-N-CA	9.59	129.84	119.87
32	51	4	ILE	N-CA-C	9.39	122.51	109.55
52	N8	50	GLY	N-CA-C	9.39	123.39	112.50
31	41	44	GLY	N-CA-C	-9.28	100.94	113.37
28	11	248	SER	CA-C-N	-9.24	110.23	119.56
28	11	248	SER	C-N-CA	-9.24	110.23	119.56
29	21	188	VAL	N-CA-C	9.12	117.50	109.02
28	11	235	GLY	N-CA-C	8.76	123.41	110.97
55	Q8	60	LEU	N-CA-C	8.68	123.41	111.17
46	H8	161	VAL	CB-CA-C	-8.62	103.64	111.74
42	D8	49	THR	CA-C-N	-8.54	110.09	118.97
42	D8	49	THR	C-N-CA	-8.54	110.09	118.97
30	31	7	TYR	N-CA-C	8.53	121.80	111.40
6	12	25	ASN	CA-C-N	8.50	128.15	119.82
6	12	25	ASN	C-N-CA	8.50	128.15	119.82
15	2I	52	GLY	N-CA-C	8.37	121.72	110.43
1	13	1498	U	C2'-C3'-O3'	8.32	121.98	109.50
50	L8	15	TYR	CA-C-N	-8.31	111.80	120.03
50	L8	15	TYR	C-N-CA	-8.31	111.80	120.03
22	9I	19	LYS	N-CA-C	8.29	120.27	108.00
32	51	11	VAL	CA-C-N	8.29	130.20	119.84
32	51	11	VAL	C-N-CA	8.29	130.20	119.84
53	O8	48	VAL	N-CA-C	8.29	118.32	110.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
45	G8	73	ARG	CA-C-N	8.23	128.29	119.90
45	G8	73	ARG	C-N-CA	8.23	128.29	119.90
40	B8	4	GLY	N-CA-C	-8.21	102.82	112.83
29	21	58	ARG	N-CA-C	-8.19	102.33	113.30
37	88	78	PRO	N-CA-C	8.18	124.09	114.03
8	32	36	ARG	CA-C-N	-8.13	113.44	121.65
8	32	36	ARG	C-N-CA	-8.13	113.44	121.65
5	1H	271(B)	G	P-O3'-C3'	8.05	129.36	119.70
30	31	91	GLY	CA-C-N	8.02	127.78	119.76
30	31	91	GLY	C-N-CA	8.02	127.78	119.76
46	H8	67	LEU	CA-C-N	8.00	129.84	119.84
46	H8	67	LEU	C-N-CA	8.00	129.84	119.84
43	E8	92	ARG	N-CA-C	7.96	121.48	111.69
36	78	15	ARG	N-CA-C	7.96	120.58	110.24
6	12	17	PHE	N-CA-C	7.90	122.33	109.85
36	78	25	SER	N-CA-C	-7.90	103.10	112.89
45	G8	7	VAL	N-CA-C	7.86	120.39	109.55
45	G8	79	CYS	N-CA-C	7.84	127.50	110.80
29	21	21	VAL	CA-C-N	7.81	129.61	119.84
29	21	21	VAL	C-N-CA	7.81	129.61	119.84
53	O8	24	GLU	N-CA-C	7.80	118.27	108.45
28	11	75	ILE	CA-C-N	-7.76	110.14	119.84
28	11	75	ILE	C-N-CA	-7.76	110.14	119.84
37	88	106	VAL	CB-CA-C	-7.72	101.33	111.13
49	K8	4	SER	CA-C-N	7.72	136.29	121.54
49	K8	4	SER	C-N-CA	7.72	136.29	121.54
8	3E	12	CYS	N-CA-C	-7.62	101.96	111.11
30	31	134	GLY	N-CA-C	7.59	122.82	110.97
5	14	2439	A	P-O3'-C3'	7.59	131.58	120.20
55	Q8	31	HIS	N-CA-C	7.58	120.08	107.20
8	32	28	SER	N-CA-C	7.58	114.95	108.13
6	1E	166	ASP	CA-C-N	-7.56	111.71	121.91
6	1E	166	ASP	C-N-CA	-7.56	111.71	121.91
55	Q8	21	LYS	N-CA-C	7.55	120.80	108.26
32	51	54	ARG	CA-C-N	7.55	127.08	118.85
32	51	54	ARG	C-N-CA	7.55	127.08	118.85
21	8I	29	HIS	CA-C-N	7.54	127.08	119.24
21	8I	29	HIS	C-N-CA	7.54	127.08	119.24
5	1H	752	A	C2'-C3'-O3'	7.50	120.75	109.50
24	BI	74	LYS	CB-CA-C	-7.46	107.97	116.63
53	O8	21	TYR	N-CA-C	7.44	120.65	108.08
40	B8	13	ARG	N-CA-C	-7.43	103.95	113.16

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	12	23	ARG	N-CA-C	-7.41	94.83	108.02
45	G8	81	LYS	N-CA-C	-7.37	93.52	109.81
30	31	9	ILE	N-CA-C	7.37	115.92	107.89
6	12	8	LYS	CB-CA-C	-7.36	108.09	116.63
29	21	61	ARG	CA-C-N	-7.36	111.17	120.23
29	21	61	ARG	C-N-CA	-7.36	111.17	120.23
45	G8	81	LYS	CA-C-N	7.35	144.65	127.00
45	G8	81	LYS	C-N-CA	7.35	144.65	127.00
9	4E	67	VAL	N-CA-C	7.33	118.03	108.35
39	A8	90	GLY	CA-C-N	-7.30	110.72	119.84
39	A8	90	GLY	C-N-CA	-7.30	110.72	119.84
16	3I	18	VAL	N-CA-C	7.28	121.19	111.44
34	58	7	LYS	N-CA-C	-7.24	99.24	110.17
8	32	171	GLY	CA-C-N	7.23	126.93	119.56
8	32	171	GLY	C-N-CA	7.23	126.93	119.56
53	O8	28	ARG	N-CA-C	7.20	121.23	109.85
53	O8	21	TYR	CB-CA-C	-7.18	108.30	116.63
5	14	2447	G	P-O3'-C3'	7.18	130.97	120.20
8	3E	32	ALA	N-CA-C	-7.17	95.53	110.80
30	31	24	LEU	CA-C-N	7.17	128.80	119.84
30	31	24	LEU	C-N-CA	7.17	128.80	119.84
45	G8	5	MET	CB-CA-C	-7.17	106.43	115.89
16	3I	70	ILE	CA-C-N	7.16	127.73	120.14
16	3I	70	ILE	C-N-CA	7.16	127.73	120.14
34	58	24	GLY	N-CA-C	-7.16	104.14	112.73
38	98	9	LYS	CA-C-N	-7.15	111.60	123.33
38	98	9	LYS	C-N-CA	-7.15	111.60	123.33
48	J8	2	SER	CA-C-N	-7.15	112.19	122.77
48	J8	2	SER	C-N-CA	-7.15	112.19	122.77
33	61	144	VAL	N-CA-C	7.15	118.64	108.42
44	F8	3	THR	CA-C-N	7.15	134.56	121.70
44	F8	3	THR	C-N-CA	7.15	134.56	121.70
20	7I	16	HIS	N-CA-C	-7.12	98.58	109.41
5	14	752	A	C2'-C3'-O3'	7.08	120.11	109.50
36	78	71	VAL	N-CA-C	7.03	124.07	108.88
8	32	38	TYR	CA-C-N	7.02	127.61	120.38
8	32	38	TYR	C-N-CA	7.02	127.61	120.38
50	L8	53	LEU	N-CA-C	-7.00	95.89	110.80
5	1H	1558	A	P-O3'-C3'	6.98	130.67	120.20
37	88	106	VAL	N-CA-C	6.97	120.55	110.09
29	21	134	ILE	N-CA-C	6.96	118.78	112.17
37	88	77	LYS	CA-C-N	6.95	127.10	119.87

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	88	77	LYS	C-N-CA	6.95	127.10	119.87
12	7E	66	GLY	CA-C-N	6.95	127.50	120.14
12	7E	66	GLY	C-N-CA	6.95	127.50	120.14
44	F8	5	TYR	N-CA-C	-6.94	104.55	113.16
17	4I	84	ILE	N-CA-C	-6.94	102.14	111.44
1	13	509	A	C2'-C3'-O3'	6.94	124.11	113.70
55	Q8	30	ARG	N-CA-C	6.92	119.78	107.80
37	88	2	LEU	N-CA-C	-6.92	96.06	110.80
50	L8	40	THR	CA-C-N	-6.90	111.88	119.19
50	L8	40	THR	C-N-CA	-6.90	111.88	119.19
8	3E	90	GLY	N-CA-C	6.90	120.98	112.64
38	98	9	LYS	N-CA-C	-6.89	97.97	109.07
5	14	1786	A	N9-C1'-C2'	6.89	124.33	114.00
9	4E	154	GLY	N-CA-C	-6.87	105.42	111.95
12	7E	73	ASP	CA-C-N	6.83	126.53	119.56
12	7E	73	ASP	C-N-CA	6.83	126.53	119.56
31	41	121	ASN	CA-C-N	-6.81	111.33	119.84
31	41	121	ASN	C-N-CA	-6.81	111.33	119.84
44	F8	67	GLY	N-CA-C	-6.78	97.12	113.18
39	A8	110	LEU	CB-CA-C	-6.76	106.87	116.34
34	58	57	ALA	N-CA-C	-6.76	102.10	110.41
5	1H	2701	C	O3'-P-O5'	6.75	114.12	104.00
1	1G	1498	U	C2'-C3'-O3'	6.71	119.57	109.50
33	61	135	GLU	N-CA-C	6.71	116.85	108.19
34	58	39	ARG	CA-C-N	-6.66	111.52	119.84
34	58	39	ARG	C-N-CA	-6.66	111.52	119.84
5	1H	2689	U	P-O3'-C3'	6.65	130.18	120.20
34	58	98	VAL	N-CA-C	-6.65	103.75	111.00
29	21	31	CYS	CA-C-N	6.65	128.15	119.84
29	21	31	CYS	C-N-CA	6.65	128.15	119.84
5	1H	2468	G	O4'-C1'-N9	6.64	118.16	108.20
50	L8	54	VAL	N-CA-C	6.63	123.14	109.34
18	5I	27	CYS	CB-CA-C	-6.61	100.70	110.95
5	1H	974(A)	C	P-O3'-C3'	6.61	130.12	120.20
49	K8	17	SER	N-CA-C	6.61	124.42	109.81
8	32	6	GLY	CA-C-N	6.58	128.07	119.84
8	32	6	GLY	C-N-CA	6.58	128.07	119.84
55	Q8	23	VAL	N-CA-C	6.58	117.09	107.75
28	11	220	HIS	CA-C-N	-6.56	114.00	123.06
28	11	220	HIS	C-N-CA	-6.56	114.00	123.06
35	68	29	ASN	N-CA-C	6.56	120.59	112.59
37	88	65	PHE	N-CA-C	6.55	122.24	113.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	78	20	GLY	N-CA-C	6.55	132.29	113.30
36	78	71	VAL	CA-C-N	-6.54	112.96	119.56
36	78	71	VAL	C-N-CA	-6.54	112.96	119.56
33	61	136	VAL	CA-C-N	6.53	127.06	120.14
33	61	136	VAL	C-N-CA	6.53	127.06	120.14
7	22	78	GLY	N-CA-C	-6.50	102.47	111.76
6	1E	66	GLY	N-CA-C	-6.47	102.09	110.38
32	51	28	GLY	CA-C-N	6.47	127.92	119.84
32	51	28	GLY	C-N-CA	6.47	127.92	119.84
48	J8	2	SER	N-CA-C	6.46	129.09	111.00
30	31	59	TYR	N-CA-C	6.45	118.18	110.19
29	21	14	ILE	N-CA-C	6.44	116.70	111.62
34	58	46	VAL	N-CA-C	6.43	117.09	111.56
43	E8	64	MET	N-CA-C	6.42	121.91	113.30
10	5E	65	VAL	N-CA-C	6.42	122.69	109.34
28	11	237	GLU	CA-C-N	-6.42	115.20	120.98
28	11	237	GLU	C-N-CA	-6.42	115.20	120.98
51	M8	63	TYR	N-CA-C	6.40	118.13	111.03
5	14	2702	U	N1-C1'-C2'	6.39	121.58	112.00
37	88	81	VAL	N-CA-C	6.39	118.23	107.18
55	Q8	52	LYS	C-N-CD	-6.37	106.58	120.60
15	2I	38	ASN	CA-C-N	6.37	126.75	119.93
15	2I	38	ASN	C-N-CA	6.37	126.75	119.93
30	31	8	GLN	N-CA-C	6.37	120.16	107.62
8	32	180	GLY	N-CA-C	-6.36	104.32	113.86
40	B8	19	LEU	CA-C-N	6.36	126.12	119.76
40	B8	19	LEU	C-N-CA	6.36	126.12	119.76
6	1E	23	ARG	N-CA-C	-6.35	105.59	113.15
7	2E	66	VAL	N-CA-C	6.35	117.62	109.30
28	11	240	ALA	CA-C-N	6.35	127.77	119.84
28	11	240	ALA	C-N-CA	6.35	127.77	119.84
36	78	46	LYS	N-CA-C	6.34	119.95	112.72
9	4E	148	VAL	N-CA-C	6.34	116.38	110.42
5	1H	271(B)	G	C2'-C3'-O3'	6.33	119.00	109.50
55	Q8	10	ALA	N-CA-C	-6.33	104.30	111.14
21	8I	48	GLU	CA-C-N	-6.33	113.10	122.41
21	8I	48	GLU	C-N-CA	-6.33	113.10	122.41
6	12	90	MET	CA-C-N	6.31	126.33	119.89
6	12	90	MET	C-N-CA	6.31	126.33	119.89
14	1I	58	ASP	N-CA-C	-6.31	102.20	110.53
30	31	197	ASP	N-CA-C	-6.30	97.39	110.80
19	6I	87	ILE	N-CA-C	6.28	122.41	109.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	1H	1639	U	O5'-P-OP2	-6.28	89.15	108.00
55	Q8	7	HIS	N-CA-C	6.28	124.18	110.80
29	21	201	THR	N-CA-C	6.28	118.82	110.53
36	78	45	LEU	N-CA-C	6.26	117.95	110.19
51	M8	51	ASP	N-CA-C	6.25	119.06	110.24
5	1H	587	C	C4'-C3'-O3'	6.25	118.78	109.40
28	11	46	GLN	N-CA-C	-6.25	102.73	110.41
8	32	201	GLN	N-CA-C	-6.24	105.30	113.17
28	11	251	GLY	N-CA-C	6.23	122.10	114.69
29	21	135	HIS	N-CA-C	6.22	118.57	111.11
12	7E	75	ARG	CA-C-N	6.22	127.07	120.11
12	7E	75	ARG	C-N-CA	6.22	127.07	120.11
45	G8	89	PHE	CB-CA-C	-6.21	109.40	116.54
55	Q8	24	ALA	CA-C-O	-6.21	113.85	121.67
1	13	1504	G	C4'-C3'-O3'	6.20	118.71	109.40
5	14	1141	U	P-O3'-C3'	6.19	129.49	120.20
29	21	73	GLU	CA-C-N	6.18	127.56	119.84
29	21	73	GLU	C-N-CA	6.18	127.56	119.84
12	7E	117	GLY	N-CA-C	6.17	120.58	111.76
5	1H	222	A	C2'-C3'-O3'	6.16	118.74	109.50
33	61	143	SER	N-CA-C	6.14	123.87	110.80
6	12	231	GLU	CA-C-N	6.13	126.14	119.89
6	12	231	GLU	C-N-CA	6.13	126.14	119.89
5	1H	2060	A	C4'-C3'-O3'	6.12	118.58	109.40
23	AI	62	ILE	N-CA-C	6.11	116.67	107.75
9	4E	105	VAL	CA-C-N	-6.10	113.40	119.56
9	4E	105	VAL	C-N-CA	-6.10	113.40	119.56
55	Q8	46	ARG	CA-C-N	6.09	132.67	121.70
55	Q8	46	ARG	C-N-CA	6.09	132.67	121.70
5	1H	752	A	P-O3'-C3'	6.09	129.34	120.20
45	G8	99	CYS	N-CA-C	6.06	118.67	111.33
8	32	30	LYS	CA-C-N	-6.06	112.31	122.92
8	32	30	LYS	C-N-CA	-6.06	112.31	122.92
30	31	80	ALA	CA-C-N	6.06	125.74	119.56
30	31	80	ALA	C-N-CA	6.06	125.74	119.56
45	G8	74	PRO	CA-C-O	-6.05	114.52	121.36
32	51	81	GLU	N-CA-C	6.04	118.57	111.02
36	78	116	GLY	N-CA-C	6.03	122.40	110.77
35	68	112	MET	N-CA-C	6.02	120.09	112.87
5	1H	945	A	C4-N9-C1'	6.02	144.35	126.30
52	N8	26	THR	CA-C-N	-6.01	114.19	120.38
52	N8	26	THR	C-N-CA	-6.01	114.19	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
45	G8	17	SER	N-CA-C	6.01	117.99	108.79
5	1H	49	A	O5'-P-OP2	-6.00	90.01	108.00
39	A8	107	GLU	N-CA-C	-5.99	103.53	111.02
23	AI	25	LYS	N-CA-C	-5.99	98.04	110.80
31	41	88	ILE	N-CA-C	5.99	116.63	110.82
55	Q8	52	LYS	CA-C-N	5.98	141.36	127.00
55	Q8	52	LYS	C-N-CA	5.98	141.36	127.00
16	3I	117	ARG	N-CA-C	5.98	120.11	112.34
29	21	120	TRP	N-CA-C	5.97	120.69	113.17
28	11	35	LYS	CA-C-N	-5.96	114.47	120.31
28	11	35	LYS	C-N-CA	-5.96	114.47	120.31
5	1H	2598	A	O5'-P-OP2	5.96	125.87	108.00
30	31	93	LYS	CA-C-N	-5.95	113.57	119.93
30	31	93	LYS	C-N-CA	-5.95	113.57	119.93
32	51	92	ILE	N-CA-C	5.95	121.71	109.34
45	G8	80	GLY	N-CA-C	5.94	127.26	113.18
24	BI	24	LEU	N-CA-C	-5.93	104.81	111.28
53	O8	45	LYS	N-CA-C	5.93	118.16	108.55
33	61	110	ASP	N-CA-C	5.92	120.29	112.35
37	88	26	TYR	N-CA-C	5.92	120.52	112.88
42	D8	34	GLU	N-CA-C	-5.92	100.01	109.96
20	7I	45	THR	N-CA-C	5.91	115.10	108.25
55	Q8	22	VAL	N-CA-C	5.90	117.25	108.46
48	J8	6	GLU	CA-C-N	-5.90	117.19	122.97
48	J8	6	GLU	C-N-CA	-5.90	117.19	122.97
5	1H	1204	A	O4'-C1'-N9	5.90	117.04	108.20
28	11	152	GLY	N-CA-C	5.88	119.42	111.72
9	4E	103	GLY	N-CA-C	-5.88	104.14	112.37
53	O8	23	THR	N-CA-C	5.86	119.02	109.06
22	9I	19	LYS	CB-CA-C	-5.86	108.14	116.34
52	N8	59	GLU	N-CA-C	-5.85	105.72	112.92
1	13	792	A	N9-C1'-C2'	5.85	122.77	114.00
36	78	96	THR	CA-C-N	-5.84	112.53	119.84
36	78	96	THR	C-N-CA	-5.84	112.53	119.84
28	11	180	GLY	N-CA-C	-5.84	106.59	115.00
13	8E	114	TYR	N-CA-C	-5.83	101.65	110.28
5	1H	2346	A	O4'-C1'-N9	5.83	116.94	108.20
47	I8	14	ARG	N-CA-C	5.83	118.39	110.35
28	11	247	ALA	N-CA-C	5.82	118.02	109.24
52	N8	38	ALA	N-CA-C	5.82	118.38	110.35
5	14	195	A	P-O3'-C3'	5.82	128.93	120.20
28	11	236	GLY	N-CA-C	5.81	124.49	115.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	78	35	HIS	N-CA-C	5.80	123.16	110.80
34	58	43	THR	CA-C-N	5.80	125.93	119.32
34	58	43	THR	C-N-CA	5.80	125.93	119.32
36	78	115	LEU	N-CA-C	5.80	117.35	108.42
5	1H	2689	U	C2'-C3'-O3'	5.79	118.19	109.50
29	21	65	GLY	N-CA-C	-5.79	99.45	113.18
5	14	1602	U	O5'-P-OP2	5.79	125.36	108.00
13	8E	112	LYS	N-CA-C	-5.79	98.47	110.80
11	6E	9	VAL	N-CA-C	5.79	116.91	108.58
5	1H	1829	A	O5'-P-OP1	-5.78	90.66	108.00
5	1H	799	G	OP1-P-O3'	-5.78	90.67	108.00
55	Q8	12	LYS	CA-C-N	-5.77	113.55	122.49
55	Q8	12	LYS	C-N-CA	-5.77	113.55	122.49
5	1H	2387	U	OP2-P-O3'	5.76	125.29	108.00
28	11	246	PRO	CA-C-O	-5.76	114.77	121.34
41	C8	19	LYS	N-CA-C	-5.76	104.92	111.14
6	1E	16	HIS	N-CA-C	5.75	120.41	113.17
45	G8	92	ASN	N-CA-C	5.75	115.83	108.24
28	11	120	GLY	CA-C-N	5.74	125.42	119.56
28	11	120	GLY	C-N-CA	5.74	125.42	119.56
41	C8	95	LEU	CA-C-O	5.74	126.89	120.92
5	1H	1786	A	N9-C1'-C2'	5.74	122.61	114.00
30	31	18	ARG	N-CA-C	5.74	117.70	110.24
8	32	12	CYS	N-CA-C	-5.74	104.39	111.33
39	A8	5	THR	N-CA-C	5.74	117.94	110.43
28	11	83	GLU	N-CA-C	5.73	118.89	109.72
8	3E	28	SER	CA-C-N	-5.73	114.07	119.85
8	3E	28	SER	C-N-CA	-5.73	114.07	119.85
49	K8	4	SER	CA-C-O	5.72	127.99	121.58
45	G8	81	LYS	C-N-CD	-5.72	108.02	120.60
39	A8	59	LYS	N-CA-C	5.71	117.53	108.79
37	88	57	HIS	CA-C-N	-5.71	114.51	123.13
37	88	57	HIS	C-N-CA	-5.71	114.51	123.13
28	11	244	ARG	CA-C-N	-5.70	114.51	120.38
28	11	244	ARG	C-N-CA	-5.70	114.51	120.38
30	31	79	GLY	N-CA-C	-5.70	107.85	115.32
5	1H	2275	C	OP1-P-O3'	5.69	125.07	108.00
5	14	1816	G	O5'-P-OP1	-5.67	91.00	108.00
28	11	223	GLY	N-CA-C	-5.67	105.79	112.64
36	78	84	ASN	N-CA-C	5.66	117.83	110.53
51	M8	4	GLY	N-CA-C	-5.66	102.79	110.43
48	J8	2	SER	CB-CA-C	-5.65	99.36	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	32	86	LYS	N-CA-C	-5.65	101.28	109.59
5	14	2701	C	O3'-P-O5'	5.65	112.47	104.00
23	AI	80	TYR	N-CA-C	5.64	122.81	110.80
5	1H	1022	G	C2'-C3'-O3'	5.63	117.95	109.50
7	22	149	ALA	N-CA-C	5.63	117.09	108.42
47	I8	82	ARG	CA-C-N	5.63	126.88	119.84
47	I8	82	ARG	C-N-CA	5.63	126.88	119.84
5	1H	212	G	OP1-P-O3'	-5.63	91.12	108.00
5	1H	2389	G	O3'-P-O5'	-5.62	95.58	104.00
35	68	96	THR	N-CA-C	-5.62	102.45	110.59
46	H8	129	SER	CA-C-N	5.61	125.72	119.32
46	H8	129	SER	C-N-CA	5.61	125.72	119.32
1	13	792	A	O4'-C1'-N9	5.60	116.60	108.20
28	11	53	PHE	N-CA-C	5.60	119.41	112.58
20	7I	20	VAL	N-CA-C	5.60	116.81	108.46
14	1I	54	PHE	CA-C-N	-5.59	113.64	122.76
14	1I	54	PHE	C-N-CA	-5.59	113.64	122.76
35	68	5	GLN	N-CA-CB	-5.59	108.50	114.10
55	Q8	45	GLY	N-CA-C	5.58	126.41	113.18
32	51	20	ALA	N-CA-C	-5.58	103.62	110.31
5	1H	1427	A	C4'-C3'-O3'	5.57	117.76	109.40
5	1H	1899	G	N3-C4-N9	-5.57	109.29	126.00
46	H8	118	GLN	N-CA-C	5.57	117.43	110.91
37	88	82	ARG	N-CA-CB	-5.57	105.77	114.45
9	4E	69	VAL	CA-C-N	5.56	126.79	119.84
9	4E	69	VAL	C-N-CA	5.56	126.79	119.84
55	Q8	41	ILE	N-CA-C	-5.55	107.34	112.83
1	13	812	C	P-O3'-C3'	5.54	128.52	120.20
1	1G	812	C	C4'-C3'-O3'	5.54	117.72	109.40
36	78	58	THR	N-CA-C	-5.54	105.30	113.61
27	16	40	U	C2'-C3'-O3'	5.54	117.81	109.50
37	88	98	LYS	CA-C-N	-5.54	114.26	119.85
37	88	98	LYS	C-N-CA	-5.54	114.26	119.85
5	14	1399	C	OP1-P-O3'	-5.54	91.39	108.00
5	1H	1799	G	C2'-C3'-O3'	5.54	117.80	109.50
37	88	79	LEU	CA-C-N	5.54	130.49	121.74
37	88	79	LEU	C-N-CA	5.54	130.49	121.74
23	AI	30	LEU	N-CA-C	5.53	117.72	109.25
14	1I	33	GLN	N-CA-C	5.53	118.25	110.23
47	I8	35	ASN	CA-C-N	-5.53	115.96	122.93
47	I8	35	ASN	C-N-CA	-5.53	115.96	122.93
55	Q8	31	HIS	N-CA-CB	-5.51	102.37	110.86

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	88	29	PHE	N-CA-C	5.50	120.88	113.72
29	21	55	ASN	CA-C-N	-5.50	112.96	119.84
29	21	55	ASN	C-N-CA	-5.50	112.96	119.84
5	1H	1379	A	N9-C1'-C2'	5.49	122.24	114.00
28	11	230	ASP	N-CA-C	5.49	118.45	111.69
5	14	2225	A	C4'-C3'-O3'	5.49	117.63	109.40
28	11	106	ILE	CB-CA-C	5.49	118.50	110.98
1	1G	812	C	P-O3'-C3'	5.49	128.44	120.20
7	2E	65	ALA	N-CA-C	5.49	119.67	112.92
5	14	2447	G	C4'-C3'-O3'	5.49	117.63	109.40
29	21	184	VAL	CA-C-N	-5.49	115.02	123.14
29	21	184	VAL	C-N-CA	-5.49	115.02	123.14
32	51	85	LYS	N-CA-C	5.48	122.48	110.80
36	78	98	GLU	N-CA-C	-5.48	102.69	111.02
29	21	141	ILE	N-CA-C	5.46	118.14	112.90
30	31	95	ARG	N-CA-C	5.46	117.37	109.07
1	13	115	G	P-O3'-C3'	5.46	128.39	120.20
28	11	198	ASN	N-CA-C	-5.46	103.86	111.39
40	B8	113	LYS	N-CA-C	-5.46	104.26	111.96
46	H8	61	LEU	CA-C-N	5.46	126.66	119.84
46	H8	61	LEU	C-N-CA	5.46	126.66	119.84
28	11	229	VAL	CB-CA-C	-5.45	104.90	112.04
50	L8	54	VAL	CB-CA-C	-5.44	102.36	111.29
5	1H	1337	G	OP2-P-O3'	-5.44	91.68	108.00
49	K8	11	GLU	N-CA-C	-5.44	105.44	111.36
1	1G	1297	C	P-O3'-C3'	5.44	128.35	120.20
1	13	687	A	P-O3'-C3'	5.43	128.35	120.20
35	68	98	VAL	N-CA-C	5.43	117.05	109.55
39	A8	46	VAL	N-CA-C	5.42	115.70	108.27
42	D8	45	THR	N-CA-C	5.42	122.35	110.80
41	C8	9	VAL	N-CA-C	5.42	115.62	110.42
21	8I	68	ARG	N-CA-CB	-5.42	107.99	114.17
5	1H	963	U	O5'-P-OP2	5.42	124.25	108.00
55	Q8	26	LYS	N-CA-C	5.42	122.24	114.39
8	3E	13	ARG	N-CA-C	5.41	116.87	110.97
45	G8	98	VAL	N-CA-C	-5.41	107.47	112.83
40	B8	56	GLY	N-CA-C	5.41	121.09	111.73
1	1G	509	A	C2'-C3'-O3'	5.41	121.81	113.70
5	1H	1259	G	OP2-P-O3'	5.41	124.22	108.00
16	3I	119	LYS	N-CA-C	-5.40	103.40	110.53
36	78	15	ARG	CA-C-N	5.39	131.41	121.70
36	78	15	ARG	C-N-CA	5.39	131.41	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	78	9	ASN	CA-C-N	5.39	126.58	119.84
36	78	9	ASN	C-N-CA	5.39	126.58	119.84
29	21	104	VAL	N-CA-C	5.38	115.74	107.77
6	12	130	ARG	CA-C-N	5.38	125.38	119.90
6	12	130	ARG	C-N-CA	5.38	125.38	119.90
1	13	792	A	C3'-C2'-C1'	-5.37	96.13	101.50
11	6E	85	TYR	N-CA-C	5.37	117.68	109.95
5	1H	1900	A	C5'-C4'-O4'	-5.36	101.06	109.10
28	11	238	GLY	N-CA-C	5.36	119.33	110.97
37	88	24	GLY	N-CA-C	-5.36	102.05	111.80
5	1H	945	A	O4'-C1'-N9	5.35	116.22	108.20
5	1H	1517	G	OP1-P-O3'	5.35	124.05	108.00
1	1G	1346	A	P-O3'-C3'	5.35	128.22	120.20
15	2I	119	CYS	N-CA-C	5.34	117.77	110.24
28	11	259	THR	N-CA-C	5.34	120.66	113.72
46	H8	6	LYS	N-CA-C	-5.33	99.44	110.80
1	1G	243	A	P-O3'-C3'	5.33	128.20	120.20
48	J8	31	GLY	CA-C-O	-5.33	118.31	122.52
8	32	135	LEU	CA-C-N	5.33	126.50	119.84
8	32	135	LEU	C-N-CA	5.33	126.50	119.84
36	78	72	PRO	N-CA-C	-5.33	107.20	113.86
49	K8	4	SER	O-C-N	5.33	129.36	122.43
1	13	812	C	C2'-C3'-O3'	5.33	117.49	109.50
5	1H	974(A)	C	C4'-C3'-O3'	5.32	117.39	109.40
5	14	856	C	O5'-P-OP1	-5.31	92.06	108.00
7	22	4	LYS	N-CA-C	5.31	116.78	110.19
37	88	58	PHE	N-CA-C	5.31	118.36	107.69
28	11	226	MET	N-CA-C	5.31	117.38	110.53
32	51	41	MET	N-CA-C	5.31	117.12	110.91
23	AI	60	VAL	CA-C-N	5.30	128.63	121.05
23	AI	60	VAL	C-N-CA	5.30	128.63	121.05
8	3E	188	LEU	CA-C-N	5.30	125.55	119.83
8	3E	188	LEU	C-N-CA	5.30	125.55	119.83
5	1H	1273	U	P-O3'-C3'	5.29	128.14	120.20
16	3I	83	VAL	N-CA-C	5.29	115.27	107.75
32	51	86	GLU	N-CA-C	5.28	122.06	110.80
52	N8	46	CYS	N-CA-C	5.28	116.54	109.83
55	Q8	59	LYS	N-CA-C	-5.28	103.42	110.55
18	5I	12	ARG	N-CA-C	-5.28	107.37	112.97
24	BI	9	ASN	N-CA-C	5.27	116.86	108.79
34	58	134	ARG	N-CA-C	5.27	121.46	109.81
5	1H	48	G	OP2-P-O3'	5.27	123.81	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	68	23	ARG	CA-C-N	-5.27	116.29	122.93
35	68	23	ARG	C-N-CA	-5.27	116.29	122.93
28	11	191	ALA	CA-C-N	-5.26	114.54	122.81
28	11	191	ALA	C-N-CA	-5.26	114.54	122.81
20	7I	40	ASP	CA-C-N	5.26	126.41	119.84
20	7I	40	ASP	C-N-CA	5.26	126.41	119.84
47	I8	70	GLN	CA-C-N	-5.26	115.54	122.85
47	I8	70	GLN	C-N-CA	-5.26	115.54	122.85
14	1I	54	PHE	N-CA-C	5.25	117.14	108.48
48	J8	54	ALA	CB-CA-C	-5.24	110.51	116.54
11	6E	87	VAL	N-CA-C	5.24	113.60	107.89
14	1I	31	GLY	N-CA-C	5.24	119.33	111.42
29	21	185	LYS	N-CA-C	5.24	117.94	107.62
1	1G	115	G	C4'-C3'-O3'	5.24	117.26	109.40
5	14	49	A	P-O3'-C3'	5.23	128.04	120.20
45	G8	99	CYS	CA-C-N	5.23	131.11	121.70
45	G8	99	CYS	C-N-CA	5.23	131.11	121.70
6	12	196	LEU	CA-CB-CG	5.23	134.60	116.30
28	11	55	GLY	CA-C-O	-5.23	118.56	122.37
18	5I	41	ARG	N-CA-C	5.22	117.72	111.71
55	Q8	33	ASN	CA-C-N	5.22	131.51	121.54
55	Q8	33	ASN	C-N-CA	5.22	131.51	121.54
23	AI	67	VAL	N-CA-C	5.22	120.20	109.34
7	22	113	ALA	CA-C-N	-5.22	114.71	119.82
7	22	113	ALA	C-N-CA	-5.22	114.71	119.82
53	O8	46	HIS	N-CA-C	5.21	121.90	110.80
23	AI	34	TRP	CA-C-N	-5.21	115.61	122.85
23	AI	34	TRP	C-N-CA	-5.21	115.61	122.85
28	11	264	LYS	CA-C-N	5.21	125.51	119.47
28	11	264	LYS	C-N-CA	5.21	125.51	119.47
5	14	2689	U	C2'-C3'-O3'	5.20	117.31	109.50
5	1H	202	U	O3'-P-O5'	-5.20	96.21	104.00
5	1H	222	A	P-O3'-C3'	5.19	127.99	120.20
29	21	23	VAL	CB-CA-C	-5.19	104.47	111.63
44	F8	25	LYS	N-CA-C	5.19	117.17	107.99
48	J8	62	VAL	CB-CA-C	-5.18	102.40	110.69
21	8I	83	ASP	N-CA-C	-5.18	105.28	111.03
30	31	58	ALA	N-CA-C	5.18	117.60	111.33
45	G8	100	ALA	CA-C-N	5.18	131.03	121.70
45	G8	100	ALA	C-N-CA	5.18	131.03	121.70
8	3E	9	CYS	N-CA-C	-5.18	106.22	112.54
19	6I	23	GLY	N-CA-C	5.17	125.44	113.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
51	M8	45	GLY	N-CA-C	-5.17	100.92	113.18
1	13	5	U	P-O3'-C3'	5.17	127.96	120.20
14	1I	76	ASN	CA-C-N	5.17	125.33	119.90
14	1I	76	ASN	C-N-CA	5.17	125.33	119.90
5	1H	1786	A	OP1-P-O3'	5.16	123.49	108.00
37	88	69	PHE	CA-C-N	5.16	126.30	119.84
37	88	69	PHE	C-N-CA	5.16	126.30	119.84
5	14	2873	A	N9-C1'-C2'	5.16	121.74	114.00
33	61	110	ASP	CA-C-N	5.16	139.38	127.00
33	61	110	ASP	C-N-CA	5.16	139.38	127.00
29	21	132	HIS	N-CA-C	5.16	116.95	110.91
5	1H	2712	U	P-O3'-C3'	5.16	125.89	119.70
13	8E	91	ASP	N-CA-C	-5.16	106.67	113.17
5	14	2275	C	C4'-C3'-O3'	5.15	117.13	109.40
49	K8	5	GLU	CB-CG-CD	5.15	121.35	112.60
5	1H	2566	A	C4'-C3'-O3'	5.15	117.12	109.40
5	14	2225	A	N9-C1'-C2'	-5.15	106.28	114.00
37	88	82	ARG	CB-CA-C	-5.15	102.27	110.04
47	I8	84	LEU	N-CA-C	-5.14	99.85	110.80
5	1H	593	G	O5'-P-OP2	-5.14	92.59	108.00
32	51	4	ILE	CB-CA-C	-5.13	104.55	111.63
12	7E	3	THR	N-CA-C	5.13	117.54	111.33
54	P8	44	PRO	CA-C-O	-5.13	115.51	122.08
30	31	75	HIS	N-CA-C	5.13	116.78	109.14
34	58	10	GLU	CA-C-N	5.13	125.04	119.76
34	58	10	GLU	C-N-CA	5.13	125.04	119.76
1	1G	1346	A	C2'-C3'-O3'	5.12	117.18	109.50
12	7E	81	HIS	N-CA-C	-5.12	105.61	111.14
15	2I	57	THR	CA-C-N	5.12	124.73	119.05
15	2I	57	THR	C-N-CA	5.12	124.73	119.05
24	BI	93	GLU	N-CA-C	-5.11	105.89	111.82
8	3E	174	LEU	N-CA-C	5.11	117.17	109.41
36	78	59	LEU	N-CA-C	-5.11	107.00	113.43
5	1H	138	G	N9-C1'-C2'	5.10	119.66	112.00
5	1H	2598	A	OP2-P-O3'	5.10	123.31	108.00
54	P8	8	ASN	CB-CA-C	5.10	118.00	110.14
6	1E	67	THR	N-CA-C	5.10	116.95	109.24
5	1H	740	U	OP1-P-O3'	-5.10	92.71	108.00
36	78	47	ASP	CA-C-N	5.10	125.17	119.87
36	78	47	ASP	C-N-CA	5.10	125.17	119.87
30	31	47	GLY	CA-C-O	5.09	125.94	119.72
38	98	72	ASP	N-CA-C	5.09	117.37	108.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	22	145	GLY	N-CA-C	5.09	120.79	114.37
29	21	52	LEU	N-CA-C	5.09	121.06	109.81
33	61	67	ARG	N-CA-C	-5.09	107.07	113.28
55	Q8	13	ARG	N-CA-C	5.09	120.12	113.30
23	AI	54	GLY	N-CA-C	-5.08	107.97	114.37
52	N8	19	ARG	N-CA-C	-5.08	105.66	111.14
5	1H	1255	U	N1-C1'-C2'	5.07	119.61	112.00
5	1H	195	A	P-O3'-C3'	5.07	127.81	120.20
45	G8	95	LYS	N-CA-C	-5.07	100.81	108.52
23	AI	75	ALA	CA-C-N	5.07	124.97	119.85
23	AI	75	ALA	C-N-CA	5.07	124.97	119.85
15	2I	82	VAL	N-CA-C	5.07	119.88	109.34
31	41	36	LYS	CA-C-N	-5.07	116.30	122.93
31	41	36	LYS	C-N-CA	-5.07	116.30	122.93
31	41	31	VAL	CA-C-N	5.06	125.35	119.93
31	41	31	VAL	C-N-CA	5.06	125.35	119.93
7	2E	124	ILE	N-CA-C	5.06	115.73	110.82
5	1H	1377	G	C4'-C3'-O3'	-5.06	105.41	113.00
6	12	126	GLU	N-CA-C	-5.06	106.95	113.02
23	AI	6	LYS	N-CA-C	5.06	121.57	110.80
1	13	690	G	O4'-C1'-N9	5.05	116.08	108.50
33	61	115	ALA	N-CA-C	-5.05	99.04	108.02
31	41	8	LYS	N-CA-C	-5.04	105.06	111.11
11	6E	96	GLN	N-CA-C	-5.04	105.78	111.28
5	1H	508	G	C4'-C3'-C2'	-5.04	97.56	102.60
48	J8	40	ARG	CA-C-N	-5.04	114.35	122.82
48	J8	40	ARG	C-N-CA	-5.04	114.35	122.82
21	8I	99	SER	N-CA-C	5.04	117.65	109.79
22	9I	21	LYS	N-CA-C	5.04	119.48	113.23
38	98	75	LEU	N-CA-C	-5.04	106.39	112.54
40	B8	59	THR	N-CA-C	-5.04	103.75	110.55
42	D8	41	GLY	N-CA-C	-5.04	103.19	110.90
5	14	1342	A	N9-C1'-C2'	5.04	121.56	114.00
20	7I	79	VAL	N-CA-C	5.04	115.71	110.82
40	B8	6	LEU	CA-C-N	-5.04	113.54	120.74
40	B8	6	LEU	C-N-CA	-5.04	113.54	120.74
1	13	422	C	P-O3'-C3'	5.03	127.75	120.20
55	Q8	20	GLY	N-CA-C	5.03	125.10	113.18
28	11	254	THR	N-CA-C	5.03	119.51	113.17
1	13	687	A	C4'-C3'-O3'	5.02	116.94	109.40
5	1H	1799	G	P-O3'-C3'	5.02	127.73	120.20
36	78	53	GLY	N-CA-C	-5.02	108.31	115.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
39	A8	71	ARG	N-CA-C	-5.02	105.89	111.36
28	11	194	GLY	N-CA-C	5.02	118.40	112.33
14	1I	54	PHE	CB-CA-C	-5.01	105.44	114.52
8	32	196	LEU	N-CA-C	5.01	115.37	109.60
38	98	116	LEU	CA-C-N	-5.01	116.91	122.27
38	98	116	LEU	C-N-CA	-5.01	116.91	122.27
50	L8	55	ARG	N-CA-C	5.01	117.78	109.46
5	1H	512	G	O4'-C1'-N9	5.01	115.72	108.20
5	1H	609	A	OP1-P-O3'	-5.01	94.18	105.20
31	41	40	ASN	N-CA-C	5.01	116.57	108.41
5	1H	1574	C	OP1-P-O3'	-5.00	92.98	108.00
16	3I	105	TYR	CB-CA-C	-5.00	109.34	116.34

There are no chirality outliers.

All (58) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
28	11	197	GLY	Peptide
6	12	22	LYS	Peptide
6	1E	15	VAL	Peptide
6	1E	169	LYS	Peptide
6	1E	237	ALA	Peptide
29	21	57	LYS	Peptide
29	21	78	LEU	Peptide
29	21	82	ARG	Peptide
30	31	130	ALA	Peptide
30	31	133	ASN	Peptide
8	32	152	SER	Peptide
8	32	30	LYS	Peptide
8	3E	31	CYS	Peptide
16	3I	87	GLY	Peptide
31	41	85	GLY	Peptide
31	41	95	ARG	Peptide
17	4I	105	THR	Peptide
33	61	11	ASN	Peptide
33	61	114	LEU	Peptide
33	61	134	PRO	Peptide
33	61	82	ARG	Peptide
36	78	11	GLY	Peptide
36	78	14	LYS	Peptide
36	78	70	GLN	Peptide
20	7I	75	ARG	Peptide

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Mol	Chain	Res	Type	Group
37	88	1	MET	Peptide
13	8E	110	GLU	Peptide
38	98	44	LEU	Peptide
39	A8	110	LEU	Peptide
23	AI	6	LYS	Peptide
23	AI	7	LYS	Peptide
40	B8	58	ASN	Peptide
41	C8	92	ARG	Peptide
45	G8	53	PRO	Peptide
45	G8	54	LYS	Peptide
45	G8	80	GLY	Peptide
45	G8	94	LYS	Peptide
46	H8	59	LEU	Peptide
46	H8	63	ASP	Peptide
47	I8	83	PRO	Peptide
47	I8	9	SER	Peptide
48	J8	75	GLU	Peptide
49	K8	17	SER	Peptide
49	K8	46	GLN	Peptide
51	M8	40	HIS	Peptide
52	N8	41	PRO	Peptide
52	N8	58	LEU	Peptide
53	O8	15	GLU	Peptide
53	O8	16	CYS	Peptide
53	O8	27	LYS	Peptide
55	Q8	18	ALA	Peptide
55	Q8	19	SER	Peptide
55	Q8	27	THR	Peptide
55	Q8	48	PHE	Peptide
55	Q8	56	GLU	Peptide
55	Q8	6	THR	Peptide
55	Q8	7	HIS	Peptide
55	Q8	9	GLY	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	13	32185	0	16244	836	0
1	1G	32182	0	16243	769	1
2	1L	1627	0	842	40	0
2	3K	1627	0	842	52	0
2	3L	1627	0	842	52	0
3	2K	1645	0	845	23	0
3	2L	1645	0	845	38	0
4	4K	279	0	142	6	0
4	4L	191	0	98	9	0
5	14	62647	0	31582	1222	0
5	1H	62707	0	31606	1589	1
6	12	1924	0	1975	120	0
6	1E	1924	0	1975	113	0
7	22	1612	0	1677	88	0
7	2E	1605	0	1668	48	0
8	32	1702	0	1763	90	0
8	3E	1702	0	1763	86	0
9	4E	1155	0	1213	68	0
10	5E	842	0	857	32	0
11	6E	1256	0	1296	52	0
12	7E	1115	0	1177	63	0
13	8E	1009	0	1037	59	0
14	1I	801	0	849	59	0
15	2I	884	0	904	40	0
16	3I	975	0	1062	48	0
17	4I	938	0	997	57	0
18	5I	491	0	529	27	0
19	6I	733	0	771	35	0
20	7I	705	0	725	53	0
21	8I	834	0	904	63	0
22	9I	590	0	662	27	0
23	AI	647	0	665	53	0
24	BI	762	0	861	36	0
25	1F	217	0	234	18	0
26	1K	1587	0	822	25	0
27	16	2617	0	1328	73	0
27	1J	2617	0	1328	82	0
28	11	2115	0	2195	107	0
29	21	1568	0	1634	95	0
30	31	1585	0	1632	94	0
31	41	1473	0	1535	100	0
32	51	1336	0	1418	75	0
33	61	1136	0	1223	67	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
34	58	1104	0	1180	63	0
35	68	932	0	996	44	0
36	78	1144	0	1228	97	0
37	88	1086	0	1129	61	0
38	98	967	0	1033	64	0
39	A8	881	0	943	61	0
40	B8	1141	0	1202	72	0
41	C8	963	0	1022	73	0
42	D8	778	0	852	42	0
43	E8	899	0	964	32	0
44	F8	742	0	803	47	0
45	G8	791	0	881	61	0
46	H8	1397	0	1430	79	0
47	I8	626	0	642	40	0
48	J8	762	0	848	40	0
49	K8	563	0	612	31	0
50	L8	452	0	503	24	0
51	M8	533	0	526	39	0
52	N8	453	0	475	29	0
53	O8	389	0	404	35	0
54	P8	391	0	432	20	0
55	Q8	480	0	549	112	0
56	11	2	0	0	0	0
56	13	149	0	0	0	0
56	14	421	0	0	0	0
56	16	13	0	0	0	0
56	1G	96	0	0	0	0
56	1H	537	0	0	0	0
56	1J	7	0	0	0	0
56	1K	2	0	0	0	0
56	1L	1	0	0	0	0
56	21	2	0	0	0	0
56	2K	8	0	0	0	0
56	2L	4	0	0	0	0
56	3E	2	0	0	0	0
56	3I	1	0	0	0	0
56	3L	3	0	0	0	0
56	41	2	0	0	0	0
56	5E	1	0	0	0	0
56	5I	1	0	0	0	0
56	78	1	0	0	0	0
56	88	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	I8	1	0	0	0	0
56	J8	1	0	0	0	0
56	L8	1	0	0	0	0
56	P8	1	0	0	0	0
57	14	1	0	0	0	0
57	1G	1	0	0	0	0
57	32	1	0	0	0	0
57	3E	1	0	0	0	0
57	5I	1	0	0	0	0
57	G8	1	0	0	0	0
58	11	9	0	0	3	0
58	13	230	0	0	36	0
58	14	863	0	0	119	0
58	16	21	0	0	3	0
58	1G	106	0	0	22	0
58	1H	1212	0	0	257	0
58	1I	1	0	0	1	0
58	1J	12	0	0	4	0
58	1K	6	0	0	0	0
58	21	3	0	0	2	0
58	2K	8	0	0	1	0
58	2L	1	0	0	0	0
58	31	8	0	0	0	0
58	3E	1	0	0	0	0
58	3I	1	0	0	0	0
58	3K	1	0	0	0	0
58	4E	3	0	0	0	0
58	4K	4	0	0	0	0
58	4L	2	0	0	0	0
58	58	3	0	0	0	0
58	5I	1	0	0	0	0
58	6I	1	0	0	0	0
58	78	6	0	0	0	0
58	7I	1	0	0	0	0
58	8E	2	0	0	0	0
58	98	1	0	0	1	0
58	B8	1	0	0	0	0
58	BI	1	0	0	0	0
58	C8	3	0	0	2	0
58	D8	1	0	0	0	0
58	E8	2	0	0	0	0
58	F8	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	G8	3	0	0	0	0
58	I8	5	0	0	1	0
58	J8	1	0	0	0	0
58	L8	1	0	0	1	0
58	P8	4	0	0	0	0
58	Q8	1	0	0	0	0
All	All	260090	0	157464	7204	1

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 18.

All (7204) 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)
30:31:29:ASN:H	30:31:112:MET:HE1	1.13	1.11
5:1H:567:A:OP1	58:1H:3610:HOH:O	1.72	1.07
5:1H:987:G:OP2	58:1H:4091:HOH:O	1.74	1.03
5:1H:2714:G:OP2	58:1H:3679:HOH:O	1.74	1.03
36:78:19:VAL:HG12	36:78:21:ARG:H	1.24	1.02
5:1H:945:A:OP1	58:1H:4240:HOH:O	1.80	1.00
5:1H:810:U:OP1	58:1H:3734:HOH:O	1.79	1.00
5:1H:2248:C:OP2	58:1H:3743:HOH:O	1.78	0.99
27:1J:15:A:H5'	27:1J:16:G:H8	1.28	0.99
5:1H:1359:A:N1	5:1H:1372:U:N3	2.11	0.98
5:1H:730:C:OP2	58:1H:3701:HOH:O	1.80	0.98
5:1H:778:G:O6	58:1H:4193:HOH:O	1.81	0.98
5:14:2701:C:H3'	5:14:2702:U:H5''	1.46	0.98
5:1H:943:U:OP2	58:1H:4764:HOH:O	1.81	0.98
6:12:42:ILE:HD11	6:12:202:PRO:HB2	1.45	0.97
8:3E:26:CYS:HA	8:3E:31:CYS:HB2	1.46	0.97
5:14:249:C:OP1	58:14:3521:HOH:O	1.82	0.97
5:1H:763:G:OP1	58:1H:3703:HOH:O	1.81	0.97
5:1H:585:G:OP2	58:1H:3903:HOH:O	1.81	0.97
5:1H:1190:G:N7	58:1H:3945:HOH:O	1.97	0.96
5:1H:1614:A:OP1	58:1H:4006:HOH:O	1.82	0.96
5:14:676:A:H8	5:14:2069:G:H21	1.12	0.96
5:1H:220:G:O6	58:1H:3821:HOH:O	1.83	0.96
1:1G:1305:G:H22	1:1G:1331:G:H2'	1.26	0.96
5:14:1496:A:H8	5:14:1577:C:HO2'	1.02	0.96
5:1H:71:A:H2	44:F8:31:HIS:HE1	1.06	0.96
5:14:2588:G:OP1	58:14:3611:HOH:O	1.83	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1265:A:OP2	58:1H:3620:HOH:O	1.82	0.96
5:14:1771:C:HO2'	5:14:1786:A:H8	0.99	0.96
5:14:2502:G:OP2	58:14:3867:HOH:O	1.83	0.95
5:1H:2701:C:H3'	5:1H:2702:U:H5''	1.48	0.95
5:14:1614:A:OP1	58:14:3516:HOH:O	1.83	0.94
5:1H:2588:G:OP1	58:1H:3999:HOH:O	1.85	0.94
5:1H:187:G:OP2	58:1H:4595:HOH:O	1.84	0.94
5:1H:399:G:OP2	58:1H:4157:HOH:O	1.83	0.94
5:14:1839:G:OP2	58:14:4298:HOH:O	1.85	0.94
36:78:47:ASP:OD2	36:78:50:ARG:NH2	2.01	0.94
40:B8:50:ILE:HD11	40:B8:102:ILE:HD11	1.49	0.94
5:1H:2057:A:OP2	58:1H:3625:HOH:O	1.85	0.94
5:1H:2308:G:H1	5:1H:2311:A:H2	1.02	0.93
5:1H:1636:C:OP2	58:1H:3613:HOH:O	1.86	0.93
8:32:26:CYS:HA	8:32:31:CYS:HB3	1.51	0.93
5:1H:809:G:OP1	58:1H:3791:HOH:O	1.86	0.92
5:1H:2432:A:OP2	58:1H:3988:HOH:O	1.87	0.92
5:14:495:G:O6	58:14:3951:HOH:O	1.87	0.92
5:14:1689:A:H62	5:14:1698:A:H2	1.12	0.92
5:14:1757:U:H3	5:14:1762:A:H2	1.15	0.92
5:1H:330:A:H2	5:1H:1210:A:HO2'	1.05	0.92
36:78:58:THR:HG21	55:Q8:52:LYS:HE2	1.51	0.92
5:1H:1013:C:OP2	58:1H:3808:HOH:O	1.86	0.92
5:1H:31:C:OP1	58:1H:3827:HOH:O	1.87	0.92
14:1I:61:GLU:OE2	18:5I:45:ARG:NH1	2.01	0.91
5:14:1332:G:N2	5:14:1609:A:O2'	2.03	0.91
2:3L:71:G:O2'	5:14:1851:U:O2'	1.86	0.91
30:31:29:ASN:N	30:31:112:MET:HE1	1.86	0.91
5:14:2035:G:OP1	58:14:3778:HOH:O	1.89	0.91
5:1H:1639:U:OP1	58:1H:3684:HOH:O	1.88	0.91
27:1J:18:G:N2	27:1J:65:C:N3	2.19	0.91
5:1H:2033:A:OP1	58:1H:4172:HOH:O	1.88	0.91
5:14:1616:A:O2'	58:14:3708:HOH:O	1.88	0.90
5:1H:607:U:H3	5:1H:621:A:H2	1.17	0.90
46:H8:76:LEU:H	46:H8:76:LEU:HD22	1.36	0.90
1:13:1348:U:H3	1:13:1374:A:H2	1.19	0.90
5:14:397:G:N7	58:14:4232:HOH:O	2.04	0.90
5:14:2505:G:O6	58:14:3941:HOH:O	1.88	0.90
5:1H:2712(A):A:OP2	58:1H:3679:HOH:O	1.88	0.90
36:78:138:LEU:HD12	36:78:144:GLU:HG3	1.51	0.90
23:AI:5:LEU:HB3	23:AI:10:PHE:HE1	1.37	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1670:C:OP1	58:1H:3678:HOH:O	1.88	0.90
5:1H:1771:C:HO2'	5:1H:1786:A:H8	0.92	0.90
1:13:972:C:OP1	58:13:1831:HOH:O	1.90	0.89
5:14:802:A:OP1	58:14:4189:HOH:O	1.90	0.89
36:78:15:ARG:HB2	36:78:16:ARG:HB2	1.55	0.89
5:14:1533:C:H42	5:14:1538:G:H1	1.19	0.89
5:1H:1678:G:H22	5:1H:1989:G:H22	1.15	0.89
5:1H:882:G:H22	5:1H:894:C:H42	1.16	0.89
5:1H:450:G:OP2	58:1H:3976:HOH:O	1.90	0.89
5:1H:1009:A:OP2	58:1H:4296:HOH:O	1.90	0.89
5:1H:2452:C:OP1	58:1H:4626:HOH:O	1.89	0.89
5:14:1899:G:H21	5:14:1902:C:N4	1.71	0.89
5:1H:1525:G:H2'	5:1H:1526:G:H8	1.37	0.89
5:14:1359:A:H62	5:14:1372:U:H3	1.16	0.88
5:1H:1036:G:H1	5:1H:1119:C:H42	1.21	0.88
20:7I:74:LEU:HA	20:7I:77:ALA:HB2	1.54	0.88
1:13:262:A:H2'	1:13:263:A:C8	2.09	0.88
41:C8:6:THR:OG1	58:C8:203:HOH:O	1.91	0.88
5:14:2016:U:OP1	58:14:4025:HOH:O	1.92	0.88
5:1H:2074:U:OP1	58:1H:3696:HOH:O	1.91	0.88
5:1H:2431:U:OP2	58:1H:3991:HOH:O	1.91	0.88
1:13:1110:A:OP2	58:13:1971:HOH:O	1.90	0.88
5:1H:1253:A:N7	58:1H:3734:HOH:O	2.07	0.88
31:41:64:THR:HG22	31:41:66:GLN:H	1.39	0.88
5:1H:192:C:OP1	58:1H:3726:HOH:O	1.92	0.88
1:13:538:G:H5''	16:3I:114:LYS:HB2	1.57	0.87
30:31:66:PRO:O	30:31:67:GLN:HB3	1.72	0.87
5:1H:124:G:N7	58:1H:4722:HOH:O	2.07	0.87
12:7E:41:ARG:NH2	12:7E:123:GLU:OE1	2.07	0.87
5:1H:801:G:OP2	58:1H:4320:HOH:O	1.92	0.87
45:G8:30:VAL:HG22	45:G8:37:VAL:HG12	1.55	0.87
1:13:1505:G:OP1	58:13:1804:HOH:O	1.93	0.87
5:1H:429:A:OP2	58:1H:3798:HOH:O	1.90	0.87
5:1H:2781:A:H5''	5:1H:2782:G:H5'	1.56	0.87
1:13:21:G:OP1	58:13:1837:HOH:O	1.93	0.87
5:14:1899:G:H21	5:14:1902:C:H41	1.17	0.87
5:1H:1623:G:O6	58:1H:4023:HOH:O	1.92	0.86
5:1H:571:A:OP2	58:1H:3939:HOH:O	1.93	0.86
5:1H:846:C:O2'	58:1H:3778:HOH:O	1.92	0.86
27:1J:80:U:H2'	27:1J:81:G:H21	1.38	0.86
55:Q8:27:THR:HG22	55:Q8:29:LYS:HB3	1.57	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1500:A:OP1	58:13:1804:HOH:O	1.93	0.86
5:14:67:U:H3	5:14:74:A:H2	1.18	0.86
5:1H:1975:G:OP2	58:1H:4080:HOH:O	1.92	0.86
40:B8:57:PHE:O	40:B8:58:ASN:ND2	2.09	0.86
6:1E:178:ARG:HG3	12:7E:72:PRO:HA	1.56	0.86
5:1H:1622:G:OP2	58:1H:4473:HOH:O	1.94	0.86
5:1H:2292:C:OP1	39:A8:17:ARG:NH2	2.08	0.86
5:1H:2392:A:OP2	55:Q8:30:ARG:NH2	2.08	0.86
32:51:77:LYS:HE2	32:51:138:LYS:HD2	1.57	0.86
1:13:1305:G:H21	1:13:1331:G:H2'	1.39	0.86
37:88:51:ARG:HH12	37:88:52:VAL:HG23	1.40	0.86
55:Q8:46:ARG:HH21	55:Q8:48:PHE:HA	1.40	0.86
5:1H:49:A:N7	5:1H:120:U:H5	1.74	0.85
5:1H:141:A:H8	5:1H:1595:G:H21	1.24	0.85
8:3E:22:LYS:HB2	8:3E:26:CYS:SG	2.15	0.85
29:21:135:HIS:NE2	58:21:401:HOH:O	2.08	0.85
39:A8:93:LYS:HG2	39:A8:95:HIS:HB2	1.59	0.85
6:12:12:GLU:HB3	6:12:213:LEU:HD22	1.57	0.85
5:14:635:C:O2'	5:14:639:U:OP1	1.94	0.85
5:1H:574:C:OP1	58:1H:3844:HOH:O	1.95	0.85
5:14:2304:G:N2	5:14:2312:U:O4	2.09	0.85
5:1H:2419:U:O4	55:Q8:29:LYS:NZ	2.10	0.85
6:12:131:PRO:HG2	6:12:134:GLU:HB2	1.57	0.85
5:14:900:A:H3'	5:14:901:A:H8	1.41	0.84
50:L8:13:ILE:O	58:L8:201:HOH:O	1.94	0.84
5:1H:1113:U:H5'	32:51:2:SER:HB2	1.57	0.84
5:1H:2615:U:OP1	58:1H:3620:HOH:O	1.95	0.84
30:31:6:VAL:N	30:31:24:LEU:O	2.10	0.84
1:13:785:G:N7	58:13:2017:HOH:O	2.08	0.84
5:1H:1689:A:H62	5:1H:1698:A:H2	1.24	0.84
5:1H:2577:A:OP1	58:1H:3852:HOH:O	1.94	0.84
5:14:259:G:H21	5:14:621:A:H8	1.23	0.84
5:1H:1007:C:OP2	58:1H:4295:HOH:O	1.94	0.84
1:1G:324:G:N7	58:1G:1785:HOH:O	2.11	0.84
5:14:654(I):C:N3	5:14:654(M):C:N4	2.24	0.84
5:14:1658:C:OP1	58:14:3646:HOH:O	1.94	0.84
1:13:1505:G:H5'	58:13:1801:HOH:O	1.77	0.84
5:1H:1780:A:OP1	58:1H:3631:HOH:O	1.95	0.84
5:1H:1997:G:OP2	58:1H:4102:HOH:O	1.93	0.84
6:12:91:PRO:HG3	6:12:154:LEU:HB2	1.56	0.84
5:1H:1138:G:H21	34:58:106:MET:HE3	1.42	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:286:G:N7	58:1G:1779:HOH:O	2.10	0.84
1:1G:961:U:O2	1:1G:1201:A:N6	2.11	0.84
1:13:1311:G:N2	1:13:1326:C:O2	2.10	0.84
16:3I:76:ASN:ND2	16:3I:106:ASP:O	2.10	0.84
19:6I:17:ARG:HH11	19:6I:17:ARG:HG3	1.41	0.84
5:1H:1006:C:OP2	58:1H:4297:HOH:O	1.93	0.84
5:1H:1332:G:N2	5:1H:1609:A:O2'	2.10	0.83
5:1H:1639:U:OP2	58:1H:3655:HOH:O	1.97	0.83
5:14:780:G:H21	5:14:783:A:H62	1.22	0.83
7:2E:40:ARG:HH11	7:2E:40:ARG:HG3	1.42	0.83
5:14:2499:C:OP1	58:14:3767:HOH:O	1.95	0.83
5:1H:71:A:H2	44:F8:31:HIS:CE1	1.96	0.83
30:31:130:ALA:H	30:31:132:VAL:HG13	1.41	0.83
1:13:1372:U:H5''	13:8E:71:SER:HB2	1.61	0.83
5:1H:741:G:OP1	58:1H:4066:HOH:O	1.96	0.83
1:13:1213:A:O2'	1:13:1215:G:N7	2.12	0.83
1:1G:1141:C:H2'	1:1G:1142:G:H8	1.43	0.83
5:14:120:U:OP1	58:14:4319:HOH:O	1.96	0.83
5:14:2361:A:N7	58:14:4293:HOH:O	2.11	0.83
17:4I:108:ARG:HG3	17:4I:108:ARG:HH11	1.44	0.83
34:58:34:LEU:HD21	34:58:120:LEU:HB2	1.61	0.83
1:13:455:C:H42	1:13:477:G:H1	1.26	0.83
1:13:967:C:HO2'	13:8E:125:TYR:HH	1.21	0.83
2:1L:19:G:N2	2:1L:56:C:N3	2.27	0.83
5:14:1043:C:N3	5:14:1112:G:N2	2.26	0.83
5:1H:620:G:H4'	5:1H:621:A:H5''	1.61	0.83
1:13:737:A:H2'	1:13:738:C:H6	1.42	0.82
5:1H:602:G:HO2'	5:1H:604:G:HO2'	1.24	0.82
5:1H:1676:A:OP2	58:1H:3720:HOH:O	1.95	0.82
5:14:1485:G:H1	5:14:1504:C:H42	1.27	0.82
4:4L:13:A:O2'	4:4L:14:A:OP1	1.97	0.82
5:14:531:C:OP1	5:14:561:G:N2	2.12	0.82
5:1H:566:U:OP1	36:78:29:LYS:NZ	2.12	0.82
5:1H:761:A:OP1	58:1H:3701:HOH:O	1.97	0.82
1:1G:976:G:N2	1:1G:1362(A):C:OP2	2.12	0.82
5:14:458:G:O6	58:14:3932:HOH:O	1.97	0.82
5:1H:780:G:H21	5:1H:783:A:H62	1.27	0.82
5:1H:2126:A:N6	5:1H:2163:C:O2	2.12	0.82
48:J8:83:GLU:HG2	48:J8:85:LEU:H	1.42	0.82
1:13:1130:A:O2'	13:8E:3:GLN:NE2	2.12	0.82
9:4E:11:ILE:HG13	9:4E:31:LEU:HD13	1.62	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:22:141:VAL:HA	7:22:144:SER:HB3	1.60	0.82
5:14:2256:G:O6	58:14:3878:HOH:O	1.96	0.82
1:13:1029:G:H1'	1:13:1032(A):G:H22	1.42	0.82
5:14:1324:G:N7	58:14:3721:HOH:O	2.11	0.82
24:BI:46:GLU:HB2	24:BI:48:LYS:HG2	1.62	0.82
5:1H:2243:U:OP1	58:1H:3726:HOH:O	1.97	0.82
5:14:1664:A:OP2	58:14:3653:HOH:O	1.97	0.82
5:14:2074:U:OP1	58:14:3509:HOH:O	1.98	0.82
5:14:578:A:OP2	58:14:3741:HOH:O	1.96	0.81
5:14:2134:A:O2'	5:14:2159:G:N2	2.13	0.81
1:1G:21:G:OP1	58:1G:1766:HOH:O	1.97	0.81
5:1H:392:C:OP1	58:1H:3770:HOH:O	1.98	0.81
27:1J:3:C:N3	27:1J:117:G:N2	2.28	0.81
1:13:446:G:H1	1:13:488:C:H42	1.26	0.81
1:13:1432:G:N2	58:13:1980:HOH:O	2.14	0.81
1:13:1502:A:H2	1:13:1505:G:H1	1.25	0.81
5:1H:1386:C:H2'	5:1H:1387:C:H6	1.45	0.81
1:1G:998:G:N2	1:1G:1043:C:N3	2.29	0.81
5:1H:2270:G:OP2	58:1H:4408:HOH:O	1.96	0.81
1:1G:587:G:N2	1:1G:754:C:OP2	2.13	0.81
27:16:100:G:OP1	58:16:320:HOH:O	1.97	0.81
5:14:2681:C:H5	5:14:2725:A:H62	1.29	0.81
5:14:2763:G:OP2	58:14:4072:HOH:O	1.99	0.81
5:1H:2656:U:H3	5:1H:2665:A:H2	1.25	0.81
6:12:70:PHE:HB2	6:12:92:TYR:HB2	1.63	0.81
1:13:1508:G:OP1	58:13:1802:HOH:O	1.99	0.81
5:14:1168:G:O6	5:14:1181:C:N4	2.14	0.81
5:14:1342:A:H2	5:14:1602:U:H3	1.24	0.81
5:14:2738:A:OP2	58:14:4073:HOH:O	1.99	0.81
16:3I:89:ARG:HG3	16:3I:89:ARG:HH11	1.44	0.81
23:AI:40:ILE:HG23	23:AI:41:VAL:HG13	1.62	0.81
5:1H:860:U:H5	5:1H:917:A:C2	1.98	0.81
5:1H:1778:U:H2'	5:1H:1784:A:N6	1.96	0.81
5:1H:860:U:C5	5:1H:917:A:H2	1.99	0.81
40:B8:111:ARG:HD3	40:B8:111:ARG:H	1.46	0.81
1:13:601:C:H2'	1:13:602:A:H8	1.45	0.81
5:1H:846:C:O3'	58:1H:3781:HOH:O	1.99	0.81
46:H8:62:PRO:C	46:H8:64:GLY:HA2	2.06	0.81
1:1G:1256:A:N6	1:1G:1278:U:OP2	2.13	0.81
10:5E:101:ALA:HB2	22:9I:28:GLU:HG2	1.61	0.81
5:1H:751:A:OP1	58:1H:4007:HOH:O	1.99	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:751:A:OP1	58:1H:4008:HOH:O	1.99	0.81
41:C8:8:VAL:HG23	41:C8:11:ARG:HH21	1.44	0.81
5:14:1665:A:OP2	58:14:3662:HOH:O	1.98	0.80
5:1H:2562:U:H1'	35:68:23:ARG:HH11	1.46	0.80
31:41:82:LEU:HD21	31:41:88:ILE:HD11	1.63	0.80
5:14:1434:A:H61	5:14:1558:A:N6	1.78	0.80
5:1H:946:G:OP2	58:1H:4235:HOH:O	1.99	0.80
5:1H:2597:G:O3'	58:1H:4808:HOH:O	1.99	0.80
33:61:7:GLU:HA	33:61:15:VAL:HG22	1.63	0.80
1:13:1129:C:H4'	1:13:1130:A:H5'	1.61	0.80
8:3E:9:CYS:HB3	8:3E:32:ALA:HB2	1.63	0.80
5:1H:76:C:O2'	49:K8:62:THR:HG21	1.82	0.80
36:78:115:LEU:HA	36:78:134:ALA:HB2	1.63	0.80
1:1G:1126:U:H4'	1:1G:1127:G:C8	2.17	0.80
11:6E:15:ASP:HB3	11:6E:20:ASP:H	1.47	0.80
5:14:854:G:H2'	5:14:855:G:H8	1.47	0.80
5:1H:563:G:OP2	58:1H:3641:HOH:O	1.97	0.80
1:1G:1181:G:N7	1:1G:1182:G:N2	2.30	0.80
5:1H:2608:G:N7	58:1H:3866:HOH:O	2.13	0.80
44:F8:1:MET:HG2	44:F8:2:LYS:H	1.47	0.80
6:1E:33:TYR:HB2	6:1E:43:ASP:HB2	1.64	0.80
5:1H:1287:A:N7	38:98:107:ASP:HB2	1.95	0.80
40:B8:108:ARG:HA	40:B8:111:ARG:HE	1.46	0.80
52:N8:50:GLY:H	52:N8:56:LYS:HG3	1.46	0.80
33:61:132:PRO:O	33:61:133:HIS:ND1	2.15	0.79
1:13:1422:G:H5''	35:68:48:PRO:HB3	1.65	0.79
6:12:185:ILE:HG22	6:12:199:TYR:HB2	1.65	0.79
5:14:1771:C:OP1	58:14:3626:HOH:O	2.00	0.79
5:14:1864:U:OP1	5:14:2410:G:O2'	1.99	0.79
9:4E:126:ARG:HG3	9:4E:126:ARG:HH11	1.47	0.79
1:13:353:A:H8	1:13:353:A:H5'	1.47	0.79
13:8E:3:GLN:OE1	13:8E:20:ARG:NH1	2.12	0.79
38:98:55:ALA:HA	38:98:80:PHE:HE2	1.46	0.79
1:1G:1316:G:H22	1:1G:1319:A:H5''	1.48	0.79
3:2L:8:4SU:O2	3:2L:14:A:N6	2.16	0.79
14:1I:48:THR:HA	14:1I:62:HIS:HB3	1.62	0.79
5:1H:500:G:N7	58:1H:4519:HOH:O	2.15	0.79
30:31:8:GLN:H	30:31:8:GLN:CD	1.90	0.79
1:1G:576:G:N2	1:1G:759:A:OP1	2.16	0.79
5:14:1263:U:OP2	58:14:4209:HOH:O	2.01	0.79
52:N8:41:PRO:HD2	52:N8:44:THR:HG21	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:988:G:N2	1:1G:1217:C:O2	2.15	0.79
1:1G:1502:A:H2	1:1G:1505:G:H1	1.30	0.79
5:14:751:A:OP1	58:14:3517:HOH:O	2.01	0.79
5:1H:2685:G:N7	58:1H:4210:HOH:O	2.14	0.79
55:Q8:50:LEU:C	55:Q8:52:LYS:H	1.90	0.79
13:8E:50:LEU:HD23	13:8E:85:LEU:HD11	1.65	0.78
5:1H:428:A:OP1	58:1H:3818:HOH:O	2.01	0.78
27:1J:40:U:O2	27:1J:45:A:N6	2.16	0.78
29:21:57:LYS:HG3	29:21:59:VAL:HG12	1.63	0.78
31:41:179:PRO:HG3	51:M8:38:LYS:HE3	1.65	0.78
38:98:55:ALA:HA	38:98:80:PHE:CE2	2.19	0.78
1:13:673:G:H2'	1:13:674:G:C8	2.18	0.78
11:6E:155:ARG:O	11:6E:155:ARG:NH2	2.16	0.78
27:1J:46:A:H2'	27:1J:47:C:H6	1.46	0.78
27:16:21:G:H1	27:16:62:C:H42	1.31	0.78
40:B8:54:ARG:HA	40:B8:59:THR:HB	1.65	0.78
5:1H:71:A:C2	44:F8:31:HIS:HE1	1.96	0.78
5:1H:1314:C:OP1	58:1H:4040:HOH:O	2.01	0.78
1:13:975:A:H4'	1:13:976:G:H5''	1.63	0.78
5:1H:2299:G:N7	58:1H:4566:HOH:O	2.16	0.78
31:41:67:LYS:HE2	51:M8:6:HIS:CE1	2.19	0.78
43:E8:1:MET:HE3	43:E8:62:HIS:HB3	1.65	0.78
7:22:138:VAL:HG23	7:22:151:VAL:HG23	1.66	0.78
1:13:36:C:OP1	16:3I:123:LYS:NZ	2.16	0.78
1:13:247:G:OP2	21:8I:100:LYS:N	2.16	0.78
1:13:559:A:OP1	9:4E:126:ARG:NH2	2.16	0.78
5:14:1061:U:H4'	5:14:1070:A:H1'	1.66	0.78
5:1H:1249:U:OP1	58:1H:3969:HOH:O	1.99	0.78
1:1G:1435:G:H2'	1:1G:1436:U:C6	2.19	0.78
8:3E:30:LYS:HB2	8:3E:35:ARG:HE	1.48	0.78
5:1H:731:C:OP2	58:1H:3701:HOH:O	2.01	0.78
5:14:382:G:O6	58:14:4201:HOH:O	2.01	0.78
5:1H:1156:A:C8	41:C8:51:LYS:HD3	2.19	0.78
32:51:169:VAL:O	32:51:170:ARG:NE	2.16	0.78
40:B8:6:LEU:HA	40:B8:9:LEU:HB2	1.65	0.78
1:13:1160:G:H1	1:13:1177:G:H22	1.30	0.78
5:1H:1364:G:N7	48:J8:2:SER:HB3	1.98	0.78
1:13:664:G:H22	1:13:741:G:H1	1.32	0.77
5:14:945:A:OP1	58:14:3882:HOH:O	2.02	0.77
5:1H:138:G:N2	44:F8:44:GLU:OE2	2.16	0.77
5:1H:1678:G:H22	5:1H:1989:G:N2	1.80	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1J:15:A:H5'	27:1J:16:G:C8	2.16	0.77
27:1J:18:G:H1	27:1J:65:C:H42	1.31	0.77
5:1H:816:C:OP2	58:1H:3952:HOH:O	2.01	0.77
5:1H:1900:A:H5'	5:1H:1900:A:H8	1.49	0.77
46:H8:126:VAL:HG12	46:H8:163:LEU:HA	1.65	0.77
5:1H:2334:G:O6	47:I8:74:ARG:NH2	2.17	0.77
5:14:1729:A:H2'	5:14:1731:G:N2	2.00	0.77
1:1G:456:C:N3	1:1G:476:G:N2	2.30	0.77
5:1H:676:A:H8	5:1H:2069:G:H21	1.31	0.77
8:32:23:GLY:H	8:32:26:CYS:HB2	1.49	0.77
5:1H:1891:G:N7	58:1H:4492:HOH:O	2.16	0.77
24:BI:69:GLY:O	24:BI:73:HIS:NE2	2.17	0.77
5:1H:2318:G:H22	39:A8:2:ALA:N	1.83	0.77
1:1G:1348:U:H3	1:1G:1374:A:H2	1.31	0.77
5:1H:654(E):C:N3	5:1H:654(P):G:N2	2.31	0.77
5:1H:2035:G:OP1	58:1H:3838:HOH:O	2.03	0.77
5:1H:2594:C:N4	58:1H:3691:HOH:O	2.17	0.77
53:O8:26:ASN:ND2	53:O8:35:GLU:OE2	2.16	0.77
1:1G:1132:C:H2'	1:1G:1133:G:H8	1.49	0.77
1:1G:1154:G:H2'	1:1G:1155:G:H8	1.49	0.77
5:14:1627:G:OP2	58:14:4087:HOH:O	2.01	0.76
5:14:1891:G:O6	58:14:4194:HOH:O	2.02	0.76
26:1K:6:G:H1	26:1K:67:C:H42	1.33	0.76
5:1H:2502:G:OP2	58:1H:3636:HOH:O	2.03	0.76
1:13:352:C:OP2	58:13:1896:HOH:O	2.03	0.76
1:13:1506:U:O2'	58:13:1803:HOH:O	2.01	0.76
5:14:2048:G:N7	58:14:3728:HOH:O	2.18	0.76
1:13:838:G:H1	1:13:848:C:N4	1.83	0.76
5:14:570:G:O6	58:14:3765:HOH:O	2.02	0.76
5:1H:879:G:N1	5:1H:898:C:N3	2.33	0.76
27:1J:101:A:OP2	58:1J:311:HOH:O	2.03	0.76
8:32:98:GLU:OE2	8:32:103:ASN:ND2	2.18	0.76
9:4E:45:PHE:CE2	9:4E:47:LYS:HD2	2.21	0.76
3:2K:16:C:OP2	3:2K:17:C:N4	2.17	0.76
5:1H:2058:A:OP1	58:1H:4395:HOH:O	2.04	0.76
1:1G:407:G:OP1	8:32:115:ARG:NH2	2.18	0.76
33:61:3:VAL:HG12	33:61:38:LEU:HA	1.68	0.76
1:1G:456:C:H42	1:1G:476:G:H1	1.33	0.76
1:13:505:G:N7	58:13:1883:HOH:O	2.17	0.76
5:14:1794:U:H2'	5:14:1795:C:H6	1.49	0.76
29:21:116:VAL:HG11	29:21:138:PRO:HB3	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:Q8:5:LYS:H	55:Q8:59:LYS:HZ2	1.33	0.76
2:1L:53:G:N2	2:1L:61:C:N3	2.33	0.76
2:3K:6:G:N2	2:3K:67:C:O2	2.15	0.76
5:1H:2593:U:O4	58:1H:3691:HOH:O	2.03	0.76
45:G8:76:CYS:O	45:G8:78:ALA:N	2.19	0.76
1:1G:588:G:H1	1:1G:651:C:H42	1.31	0.76
5:1H:2419:U:H5'	53:O8:23:THR:HG21	1.67	0.76
1:13:974:A:OP2	18:5I:41:ARG:NH1	2.19	0.76
3:2K:47:7MG:H81	3:2K:48:U:H5	1.51	0.76
32:51:4:ILE:HG21	32:51:6:ARG:NH1	2.01	0.76
14:1I:58:ASP:OD1	58:1I:201:HOH:O	2.04	0.75
30:31:7:TYR:O	30:31:22:ALA:N	2.17	0.75
45:G8:76:CYS:SG	45:G8:97:ARG:HG2	2.26	0.75
1:1G:803:G:OP1	58:1G:1722:HOH:O	2.04	0.75
1:13:1286:A:C8	1:13:1287:A:H4'	2.21	0.75
3:2L:24:C:H2'	3:2L:25:U:H6	1.50	0.75
5:14:1970:A:OP2	58:14:3592:HOH:O	2.03	0.75
5:1H:808:G:O3'	58:1H:3793:HOH:O	2.03	0.75
45:G8:100:ALA:HB1	45:G8:101:LYS:HB2	1.67	0.75
5:14:2878:U:O4	58:14:4107:HOH:O	2.05	0.75
40:B8:26:ASP:HB3	40:B8:92:GLY:H	1.51	0.75
45:G8:87:LYS:H	45:G8:94:LYS:HG2	1.50	0.75
46:H8:4:ARG:HB3	46:H8:58:VAL:HG23	1.66	0.75
2:3L:9:A:H8	2:3L:11:C:H41	1.34	0.75
5:14:193:U:OP2	58:14:3789:HOH:O	2.04	0.75
5:14:1327:C:OP2	58:14:3722:HOH:O	2.02	0.75
5:1H:598:G:H5'	36:78:11:GLY:HA3	1.69	0.75
5:1H:2032:G:H21	29:21:146:THR:HG23	1.50	0.75
1:13:144:G:N2	1:13:178:C:O2	2.17	0.75
27:16:40:U:H1'	27:16:45:A:H61	1.52	0.75
1:13:153:C:H42	1:13:168:G:H1	1.33	0.75
5:14:323:G:HO2'	5:14:1205:U:H3	1.33	0.75
5:14:2298:A:H61	5:14:2318:G:H2'	1.51	0.75
17:4I:88:ARG:HH11	17:4I:88:ARG:HG3	1.52	0.75
1:13:201:C:N4	1:13:209:U:O2	2.19	0.75
8:3E:83:SER:HA	8:3E:89:THR:HG23	1.67	0.75
2:3K:3:C:N4	2:3K:70:G:O6	2.20	0.75
5:1H:999:U:OP2	58:1H:4096:HOH:O	2.03	0.75
36:78:50:ARG:HH21	36:78:50:ARG:HG3	1.52	0.75
55:Q8:48:PHE:HE1	55:Q8:53:PRO:HD3	1.50	0.75
1:1G:371:G:H1	1:1G:390:C:H42	1.35	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:438:G:H4'	8:32:123:HIS:HD2	1.50	0.75
7:22:35:GLU:OE2	7:22:59:ARG:NH2	2.20	0.75
5:1H:2469:A:H61	5:1H:2481:G:H1'	1.50	0.75
2:3L:5:G:H2'	2:3L:6:G:H8	1.50	0.75
5:1H:416:C:N4	5:1H:2407:G:O6	2.19	0.75
5:1H:2271:G:N7	58:1H:4406:HOH:O	2.19	0.75
1:13:963:G:H1	1:13:972:C:H42	1.33	0.74
6:1E:111:ARG:HG2	6:1E:111:ARG:HH11	1.50	0.74
5:1H:993:G:OP1	41:C8:50:ARG:NH2	2.20	0.74
5:14:863:A:H2'	5:14:864:G:H8	1.50	0.74
5:1H:2878:U:O4	58:1H:4411:HOH:O	2.05	0.74
35:68:2:ILE:HD12	35:68:6:THR:HG21	1.67	0.74
8:32:119:GLN:O	8:32:123:HIS:ND1	2.19	0.74
1:13:406:G:N7	1:13:495:A:O2'	2.19	0.74
5:14:1778:U:H2'	5:14:1784:A:N6	2.02	0.74
6:1E:67:THR:HG21	6:1E:155:LEU:HG	1.69	0.74
24:BI:71:THR:HG22	24:BI:72:LEU:H	1.50	0.74
5:1H:1165:U:H2'	5:1H:1166:C:C6	2.22	0.74
5:1H:1064:C:N4	5:1H:1070:A:OP1	2.21	0.74
49:K8:47:ASN:O	49:K8:49:LYS:N	2.18	0.74
1:13:601:C:H2'	1:13:602:A:C8	2.21	0.74
2:3L:5:G:H2'	2:3L:6:G:C8	2.23	0.74
5:14:2373:G:N2	5:14:2380:C:O2	2.17	0.74
15:2I:21:ILE:HG12	15:2I:30:VAL:HG12	1.69	0.74
24:BI:53:LEU:HD23	24:BI:100:ILE:HG22	1.70	0.74
5:1H:654(D):G:N2	5:1H:654(R):C:N3	2.35	0.74
5:1H:2199:A:H5'	5:1H:2205:C:OP2	1.86	0.74
1:1G:545:C:OP1	8:32:61:LYS:NZ	2.20	0.74
1:1G:673:G:H2'	1:1G:674:G:C8	2.22	0.74
1:1G:827:U:H3	1:1G:872:A:H62	1.36	0.74
1:13:737:A:H2'	1:13:738:C:C6	2.22	0.74
2:3L:20:H2U:O2'	2:3L:21:A:O5'	2.04	0.74
5:14:2343:C:O2'	5:14:2373:G:O2'	2.05	0.74
5:14:2689:U:OP2	5:14:2719:G:N2	2.20	0.74
5:1H:1900:A:H5'	5:1H:1900:A:C8	2.22	0.74
31:41:135:LEU:HD23	31:41:140:ILE:HD11	1.69	0.74
55:Q8:39:LYS:O	55:Q8:40:GLU:HB3	1.87	0.74
1:1G:458:C:N3	1:1G:474:G:N2	2.36	0.74
1:1G:1157:A:H61	1:1G:1178:G:H21	1.31	0.74
2:3L:6:G:H22	2:3L:67:C:H2'	1.52	0.74
5:14:450:G:O6	58:14:3808:HOH:O	2.04	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:3K:10:G:H22	2:3K:25:C:H42	1.33	0.74
5:1H:259:G:H21	5:1H:621:A:H8	1.33	0.74
5:1H:450:G:O6	58:1H:3979:HOH:O	2.06	0.74
5:1H:606:U:OP2	30:31:104:LYS:NZ	2.20	0.74
5:1H:1316:U:H2'	5:1H:1317:A:H8	1.52	0.74
5:1H:1386:C:H2'	5:1H:1387:C:C6	2.22	0.74
5:1H:1857:G:N7	58:1H:4644:HOH:O	2.20	0.74
5:1H:1899:G:H22	5:1H:1902:C:H41	1.36	0.74
5:1H:2255:G:OP2	58:1H:4248:HOH:O	2.05	0.74
48:J8:91:LYS:O	48:J8:94:LEU:N	2.18	0.74
55:Q8:23:VAL:HG13	55:Q8:46:ARG:HG3	1.70	0.74
2:3L:72:C:H3'	2:3L:73:A:H5''	1.68	0.74
5:14:2134:A:H62	5:14:2157:G:H1'	1.52	0.74
47:I8:53:MET:HG3	47:I8:59:LEU:HD23	1.68	0.74
49:K8:4:SER:HA	49:K8:6:VAL:HG22	1.70	0.74
1:1G:1004:A:OP1	1:1G:1024:G:N1	2.20	0.74
4:4L:18:G:O2'	1:1G:1401:G:OP1	2.05	0.74
5:14:1729:A:H2'	5:14:1731:G:H22	1.52	0.74
9:4E:91:LEU:HD12	9:4E:120:THR:HG22	1.70	0.74
5:1H:1153:C:OP2	58:1H:4100:HOH:O	2.05	0.74
31:41:37:VAL:HG22	31:41:159:VAL:HG12	1.69	0.74
1:1G:975:A:H4'	1:1G:976:G:H5''	1.69	0.74
1:1G:1014:A:H2'	1:1G:1015:A:C8	2.23	0.74
6:12:18:GLY:O	6:12:204:ASN:ND2	2.21	0.74
5:14:2528:U:O2'	5:14:2530:A:OP1	2.05	0.74
1:1G:60:A:N6	1:1G:110:C:N3	2.35	0.74
1:1G:957:U:H1'	1:1G:960:U:H5	1.53	0.74
1:13:1348:U:H2'	1:13:1349:A:H8	1.53	0.73
5:14:1647:G:OP2	58:14:3710:HOH:O	2.06	0.73
17:4I:10:PRO:HB2	17:4I:18:ALA:HB1	1.68	0.73
55:Q8:53:PRO:HA	55:Q8:55:ALA:N	2.03	0.73
1:1G:578:C:OP1	58:1G:1725:HOH:O	2.05	0.73
1:1G:957:U:O2'	1:1G:959:A:N7	2.21	0.73
14:1I:6:ILE:HG22	14:1I:98:ILE:HG13	1.69	0.73
2:1L:51:U:H3	2:1L:63:G:H1	1.33	0.73
21:8I:76:LEU:HD11	21:8I:79:SER:HB3	1.68	0.73
55:Q8:57:ARG:HD3	55:Q8:57:ARG:N	2.04	0.73
1:1G:156:G:N2	1:1G:165:C:O2	2.20	0.73
1:1G:1028:C:H42	1:1G:1033:G:H1	1.36	0.73
8:32:173:TRP:CZ3	8:32:193:ASP:HB3	2.23	0.73
5:14:330:A:H2	5:14:1210:A:HO2'	1.35	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:3I:47:LYS:HA	16:3I:49:ASN:H	1.52	0.73
5:1H:376:C:OP2	58:1H:3775:HOH:O	2.07	0.73
46:H8:129:SER:H	46:H8:161:VAL:HG11	1.53	0.73
5:1H:10:G:N2	5:1H:2801:A:O2'	2.21	0.73
5:1H:452:G:OP2	58:1H:3974:HOH:O	2.06	0.73
5:1H:2249:U:O4	58:1H:3743:HOH:O	2.04	0.73
41:C8:92:ARG:O	41:C8:94:ASN:N	2.21	0.73
5:14:2705:A:OP2	58:14:3684:HOH:O	2.06	0.73
15:2I:79:SER:OG	15:2I:106:LYS:NZ	2.20	0.73
21:8I:22:LEU:HD11	21:8I:39:SER:HB3	1.69	0.73
5:1H:1496:A:H8	5:1H:1577:C:HO2'	1.36	0.73
1:1G:1411:C:H2'	1:1G:1412:C:H6	1.54	0.73
5:1H:1479:G:N7	5:1H:1510:A:N6	2.37	0.73
5:1H:2056:G:OP2	58:1H:3628:HOH:O	2.05	0.73
36:78:39:LYS:HG3	36:78:45:LEU:HD22	1.70	0.73
5:1H:2134:A:OP2	5:1H:2157:G:N2	2.22	0.73
55:Q8:48:PHE:CE1	55:Q8:53:PRO:HD3	2.24	0.73
1:13:886:G:N7	58:13:1937:HOH:O	2.22	0.73
5:14:5:A:H2'	5:14:6:A:H8	1.54	0.73
5:14:2228:G:O6	58:14:4163:HOH:O	2.03	0.73
5:1H:732:C:OP2	58:1H:4186:HOH:O	2.07	0.73
5:1H:1315:C:OP2	58:1H:4040:HOH:O	2.06	0.73
29:21:38:THR:HG23	29:21:41:LYS:H	1.54	0.73
31:41:47:LYS:HD3	31:41:81:LYS:HB2	1.71	0.73
51:M8:38:LYS:NZ	51:M8:44:THR:OG1	2.21	0.73
1:1G:377:G:H1	1:1G:386:C:H42	1.37	0.73
1:1G:474:G:H2'	1:1G:475:G:C8	2.24	0.73
8:32:173:TRP:CD1	8:32:174:LEU:HG	2.24	0.73
1:13:1129:C:N4	1:13:1139:G:H1	1.87	0.73
1:13:1297:C:OP1	17:4I:13:LYS:NZ	2.22	0.73
5:14:453:C:OP1	58:14:3810:HOH:O	2.06	0.73
5:14:2720:U:H3	5:14:2873:A:H2	1.36	0.73
5:1H:330:A:HO2'	5:1H:331:A:H8	1.37	0.73
5:1H:881:G:O6	5:1H:895:U:N3	2.20	0.73
5:1H:1021:A:H8	5:1H:1022:G:H5''	1.54	0.73
29:21:82:ARG:O	29:21:84:PHE:N	2.21	0.73
1:1G:590:C:O2	1:1G:649:G:N2	2.20	0.73
5:14:1824:G:N7	58:14:3985:HOH:O	2.21	0.72
5:14:2115:G:O2'	5:14:2171:A:N6	2.21	0.72
5:1H:878:A:N6	5:1H:899:A:O2'	2.22	0.72
5:1H:1171:G:N2	5:1H:1178:C:N3	2.32	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1569:A:H5'	28:11:61:LEU:HD21	1.70	0.72
1:1G:1106:G:H5''	7:22:172:ARG:HG2	1.71	0.72
5:14:1936:A:OP1	58:14:3629:HOH:O	2.07	0.72
5:1H:860:U:H5	5:1H:917:A:H2	1.33	0.72
34:58:96:GLU:O	34:58:98:VAL:N	2.18	0.72
44:F8:36:LYS:HG2	44:F8:54:VAL:HB	1.71	0.72
46:H8:10:ARG:HG3	46:H8:36:LYS:HB3	1.72	0.72
1:13:983:A:OP1	18:5I:3:ARG:NH2	2.22	0.72
1:13:1218:C:H2'	1:13:1219:U:C6	2.23	0.72
12:7E:42:GLU:HG3	12:7E:109:ILE:HD12	1.71	0.72
5:1H:1388:G:H2'	5:1H:1389:G:H8	1.54	0.72
5:14:2642:G:N2	5:14:2772:C:O2	2.19	0.72
5:1H:450:G:O6	58:1H:3982:HOH:O	2.06	0.72
35:68:112:MET:HA	35:68:115:VAL:HG22	1.69	0.72
46:H8:19:ARG:NH1	46:H8:84:GLU:O	2.22	0.72
1:1G:56:U:H2'	1:1G:57:G:C8	2.25	0.72
6:12:19:HIS:HE1	6:12:206:ASP:HB2	1.54	0.72
5:14:2000:G:OP2	58:14:4252:HOH:O	2.07	0.72
6:1E:69:LEU:HB3	6:1E:162:ILE:HG22	1.72	0.72
26:1K:37:MIA:H112	26:1K:38:A:H1'	1.70	0.72
5:1H:1786:A:H2	5:1H:2606:C:H1'	1.53	0.72
39:A8:27:SER:HA	39:A8:88:ASP:HB3	1.71	0.72
46:H8:13:GLU:HB3	46:H8:18:LEU:HD11	1.71	0.72
7:22:76:VAL:HG21	7:22:103:VAL:HG11	1.71	0.72
1:13:1177:G:OP1	1:13:1177:G:H4'	1.89	0.72
14:1I:40:LEU:HB2	14:1I:69:ASN:HB2	1.69	0.72
5:1H:1364:G:OP2	48:J8:2:SER:OG	2.08	0.72
5:1H:1607:C:O2	58:1H:4534:HOH:O	2.07	0.72
5:1H:2758:A:OP2	58:1H:4680:HOH:O	2.06	0.72
1:13:1060:C:C5	7:2E:2:GLY:HA3	2.25	0.72
1:13:1305:G:O2'	1:13:1331:G:N2	2.22	0.72
5:14:2210:G:H3'	5:14:2211:G:C2	2.24	0.72
15:2I:99:GLN:HA	15:2I:105:VAL:HG11	1.69	0.72
5:1H:1327:C:OP2	58:1H:3650:HOH:O	2.06	0.72
34:58:73:THR:HB	34:58:82:LEU:HD11	1.72	0.72
5:14:1828:G:OP1	58:14:3581:HOH:O	2.07	0.72
5:1H:1153:C:OP2	58:1H:4099:HOH:O	2.07	0.72
5:1H:1856:G:OP2	58:1H:4646:HOH:O	2.07	0.72
5:14:39:C:H2'	5:14:40:C:C6	2.25	0.72
12:7E:87:SER:HB2	12:7E:93:VAL:HB	1.72	0.72
5:1H:1601:G:N7	58:1H:4122:HOH:O	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1803:A:O2'	28:11:259:THR:HG21	1.90	0.72
1:1G:979:C:H3'	1:1G:980:C:H5''	1.72	0.72
1:13:1226:C:O2'	17:4I:111:LYS:NZ	2.23	0.72
28:11:10:THR:OG1	28:11:13:ARG:HB2	1.90	0.72
3:2L:24:C:H2'	3:2L:25:U:C6	2.25	0.71
33:61:29:TYR:HD2	33:61:30:LEU:HD23	1.52	0.71
36:78:19:VAL:HB	36:78:27:HIS:HB2	1.72	0.71
5:14:779:U:O4	58:14:4266:HOH:O	2.03	0.71
13:8E:26:VAL:HG13	13:8E:61:ALA:HB3	1.70	0.71
5:1H:1516:U:H2'	5:1H:1517:G:H8	1.55	0.71
31:41:65:GLY:HA2	51:M8:7:PRO:HG2	1.72	0.71
55:Q8:6:THR:H	55:Q8:59:LYS:HZ2	1.39	0.71
1:1G:631:G:H3'	1:1G:632:A:H8	1.55	0.71
23:AI:5:LEU:HD13	23:AI:10:PHE:HD1	1.55	0.71
5:1H:1056:G:H21	5:1H:1103:A:H62	1.38	0.71
1:1G:895:G:H1	1:1G:904:C:H42	1.38	0.71
1:1G:1513:A:H2'	1:1G:1514:C:C6	2.25	0.71
6:12:75:LYS:HA	6:12:78:GLN:HB2	1.72	0.71
32:51:83:TYR:HB2	32:51:134:SER:HA	1.70	0.71
45:G8:38:ILE:HD11	45:G8:64:GLU:HG3	1.72	0.71
1:1G:41:G:H2'	1:1G:42:G:C8	2.25	0.71
1:1G:1157:A:N6	1:1G:1178:G:H21	1.88	0.71
1:13:963:G:N3	14:1I:55:LYS:NZ	2.38	0.71
5:14:801:G:OP2	58:14:3967:HOH:O	2.08	0.71
6:1E:5:ILE:HG13	6:1E:6:THR:HG22	1.73	0.71
19:6I:17:ARG:HD3	19:6I:26:GLU:HG3	1.71	0.71
2:3K:5:G:N2	2:3K:68:C:N3	2.38	0.71
5:1H:1253:A:C8	58:1H:3734:HOH:O	2.43	0.71
28:11:182:LEU:H	28:11:272:ALA:HB3	1.55	0.71
30:31:179:GLU:OE1	30:31:179:GLU:N	2.23	0.71
52:N8:30:LEU:HD23	52:N8:41:PRO:HA	1.72	0.71
1:13:1240:U:OP2	11:6E:116:ALA:N	2.23	0.71
2:3L:6:G:N2	2:3L:67:C:H2'	2.06	0.71
2:3L:34:G:N7	1:1G:1382:C:O2'	2.21	0.71
5:14:2645:G:H3'	5:14:2646:C:H5'	1.72	0.71
9:4E:11:ILE:HD13	9:4E:33:VAL:HG22	1.73	0.71
4:4K:24:A:H2'	4:4K:25:A:C8	2.26	0.71
1:1G:560:U:O2'	1:1G:561:U:OP2	2.07	0.71
1:13:1256:A:OP2	7:2E:26:LYS:NZ	2.22	0.71
32:51:4:ILE:HD13	32:51:4:ILE:H	1.54	0.71
32:51:4:ILE:HG13	32:51:6:ARG:NE	2.06	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:98:91:GLN:O	38:98:91:GLN:NE2	2.22	0.71
5:14:1174:A:N6	5:14:1176:G:O2'	2.23	0.71
5:14:1977:A:OP2	58:14:4315:HOH:O	2.08	0.71
8:3E:90:GLY:HA3	8:3E:204:ILE:HD11	1.73	0.71
5:1H:2636:U:OP1	29:21:79:ARG:HA	1.89	0.71
1:1G:243:A:H4'	1:1G:244:U:O5'	1.90	0.71
8:32:26:CYS:HA	8:32:31:CYS:CB	2.21	0.71
8:32:31:CYS:C	8:32:33:MET:H	1.99	0.71
1:13:877:C:OP1	12:7E:88:LYS:NZ	2.23	0.71
1:13:1497:G:H2'	1:13:1498:U:H5'	1.72	0.71
5:14:248:G:OP1	58:14:4218:HOH:O	2.08	0.71
5:14:1022:G:O2'	5:14:1023:U:OP2	2.08	0.71
5:1H:760:G:OP1	58:1H:3881:HOH:O	2.08	0.71
27:1J:14:U:HO2'	27:1J:107:U:HO2'	1.22	0.71
34:58:67:LEU:HA	34:58:87:LEU:HD12	1.72	0.71
37:88:82:ARG:HD2	37:88:82:ARG:N	2.05	0.71
55:Q8:7:HIS:ND1	55:Q8:7:HIS:O	2.22	0.71
1:1G:666:G:OP2	1:1G:725:G:N2	2.23	0.71
6:12:67:THR:HG21	6:12:155:LEU:HG	1.73	0.71
1:13:827:U:H5	1:13:872:A:N1	1.88	0.71
5:1H:155:C:H42	5:1H:171:G:H1	1.36	0.71
5:1H:2576:G:OP1	58:1H:3850:HOH:O	2.09	0.71
31:41:66:GLN:OE1	31:41:98:ARG:NH1	2.23	0.71
34:58:12:ARG:HH21	34:58:14:VAL:HG22	1.56	0.71
41:C8:69:CYS:SG	41:C8:79:PHE:HD2	2.14	0.71
1:13:1263:C:H2'	1:13:1264:C:H6	1.56	0.70
5:1H:2657:A:O3'	32:51:160:LYS:NZ	2.24	0.70
1:1G:1423:G:H2'	1:1G:1424:C:H6	1.56	0.70
1:13:504:C:OP1	58:13:1881:HOH:O	2.07	0.70
11:6E:94:ARG:O	11:6E:97:GLN:HB3	1.91	0.70
5:1H:392:C:OP2	58:1H:3773:HOH:O	2.08	0.70
2:1L:58:A:O2'	2:1L:61:C:N4	2.24	0.70
5:1H:442:G:H1'	30:31:48:THR:HG21	1.73	0.70
5:1H:2308:G:N1	5:1H:2311:A:H2	1.84	0.70
38:98:12:ARG:HG2	38:98:12:ARG:HH11	1.55	0.70
1:13:1145:C:H4'	1:13:1146:A:H5'	1.73	0.70
5:14:2689:U:P	5:14:2719:G:H22	2.14	0.70
5:1H:2000:G:N7	58:1H:4664:HOH:O	2.25	0.70
38:98:97:VAL:HG22	38:98:114:VAL:HG22	1.71	0.70
1:1G:1411:C:H2'	1:1G:1412:C:C6	2.27	0.70
1:13:1321:C:H3'	1:13:1322:C:H5''	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:882:G:H22	5:14:894:C:H42	1.37	0.70
5:1H:1061:U:H4'	5:1H:1070:A:H1'	1.72	0.70
5:1H:2849:U:OP2	40:B8:95:ARG:NH1	2.24	0.70
49:K8:17:SER:HB3	49:K8:67:LYS:HE3	1.73	0.70
1:13:619:U:H3	8:3E:134:ASP:HB2	1.57	0.70
5:14:387:U:OP1	58:14:4217:HOH:O	2.08	0.70
5:14:1717:G:H1	5:14:1742:C:H42	1.39	0.70
5:14:2528:U:O3'	5:14:2529:G:N2	2.20	0.70
5:1H:1465:G:H2'	5:1H:1466:G:H8	1.54	0.70
27:1J:46:A:H2'	27:1J:47:C:C6	2.26	0.70
39:A8:106:ARG:NH2	39:A8:107:GLU:HB2	2.05	0.70
1:13:345:C:O2'	1:13:346:G:N2	2.25	0.70
5:14:2131:G:H5''	5:14:2158:A:H61	1.56	0.70
6:1E:8:LYS:HG2	6:1E:9:GLU:H	1.56	0.70
9:4E:100:VAL:HG22	9:4E:118:ILE:HG22	1.73	0.70
2:3K:20:H2U:H61	2:3K:20:H2U:H5''	1.72	0.70
5:1H:862:G:OP2	58:1H:4089:HOH:O	2.08	0.70
5:14:1022:G:H22	5:14:1142(A):A:H2	1.40	0.70
5:14:2210:G:O5'	5:14:2211:G:N2	2.21	0.70
6:1E:53:ARG:NH2	6:1E:198:ASP:O	2.21	0.70
29:21:77:ILE:O	29:21:79:ARG:N	2.24	0.70
37:88:66:ILE:O	37:88:104:PHE:N	2.23	0.70
39:A8:26:LEU:HD12	39:A8:39:ILE:HD11	1.72	0.70
5:14:2327:A:H2'	5:14:2328:A:C8	2.27	0.70
23:AI:41:VAL:HG21	23:AI:67:VAL:HG12	1.74	0.70
5:1H:2074:U:P	58:1H:3696:HOH:O	2.48	0.70
39:A8:52:SER:HB2	39:A8:55:ALA:H	1.56	0.70
46:H8:126:VAL:HA	46:H8:164:ALA:H	1.57	0.70
5:14:1971:A:OP1	58:14:3589:HOH:O	2.10	0.70
5:14:2191:G:O2'	5:14:2192:G:OP1	2.10	0.70
5:1H:187:G:N7	58:1H:4591:HOH:O	2.25	0.70
1:13:973:G:H3'	1:13:974:A:H5''	1.74	0.69
5:1H:217:G:OP2	58:1H:3796:HOH:O	2.09	0.69
5:1H:1253:A:N7	58:1H:3731:HOH:O	2.25	0.69
5:1H:1332:G:N2	5:1H:1610:A:C8	2.60	0.69
1:1G:938:A:N3	1:1G:1376:U:O2'	2.23	0.69
5:14:1970:A:OP1	58:14:3589:HOH:O	2.09	0.69
45:G8:29:GLU:HB3	45:G8:38:ILE:HG23	1.74	0.69
46:H8:108:PRO:HB2	46:H8:112:ARG:HA	1.74	0.69
55:Q8:59:LYS:H	55:Q8:59:LYS:HD2	1.57	0.69
1:13:1423:G:OP1	35:68:49:ARG:NH2	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:31:C:OP1	58:14:3962:HOH:O	2.10	0.69
5:14:67:U:H2'	5:14:68:G:H8	1.57	0.69
5:1H:1164:G:H2'	5:1H:1165:U:C6	2.26	0.69
5:1H:2489:G:OP2	58:1H:4345:HOH:O	2.10	0.69
38:98:12:ARG:HD3	38:98:16:HIS:CG	2.26	0.69
1:1G:1300:G:O2'	1:1G:1301:U:O5'	2.10	0.69
6:12:137:ARG:NH2	6:12:141:GLU:OE1	2.25	0.69
5:1H:1434:A:H61	5:1H:1558:A:N6	1.90	0.69
5:14:698:C:O2'	5:14:734:A:N6	2.26	0.69
8:3E:160:GLN:NE2	8:3E:160:GLN:O	2.25	0.69
5:1H:338:G:OP2	58:1H:4286:HOH:O	2.09	0.69
46:H8:31:ARG:NH1	46:H8:94:GLU:OE2	2.25	0.69
1:1G:785:G:N7	58:1G:1802:HOH:O	2.25	0.69
1:1G:1069:C:O2'	1:1G:1192:C:O2	2.09	0.69
8:32:14:ARG:HH11	8:32:14:ARG:HG3	1.57	0.69
1:13:209:U:H5'	1:13:210:U:OP2	1.92	0.69
17:4I:23:TYR:HD2	17:4I:67:GLU:HA	1.58	0.69
5:1H:2111:C:O2'	5:1H:2119:A:OP1	2.09	0.69
5:1H:2447:G:OP2	58:1H:3918:HOH:O	2.10	0.69
5:1H:2685:G:O6	58:1H:4207:HOH:O	2.10	0.69
1:1G:1294:G:H2'	1:1G:1295:G:H8	1.57	0.69
5:14:848:G:H2'	5:14:849:A:C8	2.26	0.69
5:1H:256:A:OP2	58:1H:4653:HOH:O	2.11	0.69
5:1H:1349:A:OP1	58:1H:4251:HOH:O	2.10	0.69
37:88:12:GLN:HG2	37:88:73:PRO:HD2	1.74	0.69
39:A8:37:ALA:HB2	39:A8:101:LEU:HD21	1.73	0.69
55:Q8:34:TRP:C	55:Q8:34:TRP:CD1	2.71	0.69
1:1G:192:U:H2'	1:1G:193:C:H6	1.57	0.69
1:13:1122:U:O4	1:13:1123:A:N6	2.26	0.69
5:14:355:G:H2'	5:14:356:G:H8	1.57	0.69
9:4E:142:LEU:O	9:4E:143:ARG:NH1	2.25	0.69
5:1H:270(E):G:H1	5:1H:270(U):C:H42	1.39	0.69
43:E8:70:TYR:HD1	43:E8:70:TYR:H	1.40	0.69
55:Q8:32:LEU:HG	55:Q8:33:ASN:N	2.08	0.69
55:Q8:34:TRP:CZ3	55:Q8:39:LYS:HB2	2.27	0.69
7:22:3:ASN:HD22	7:22:3:ASN:H	1.41	0.69
1:13:1062:U:H2'	1:13:1063:C:C6	2.28	0.69
5:14:395:U:H2'	5:14:396:G:N7	2.08	0.69
5:14:1327:C:OP2	58:14:3717:HOH:O	2.11	0.69
5:14:2324:C:H5''	5:14:2325:G:H5'	1.75	0.69
5:1H:731:C:H5''	58:1H:3879:HOH:O	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:945:A:OP1	58:1H:4242:HOH:O	2.11	0.69
5:1H:1006:C:OP1	58:1H:4298:HOH:O	2.10	0.69
5:1H:1871:A:H2'	5:1H:1872:A:C8	2.28	0.69
5:1H:639:U:O2'	5:1H:640:C:H5'	1.92	0.69
55:Q8:54:GLU:O	55:Q8:56:GLU:N	2.25	0.69
7:22:70:VAL:HG12	7:22:72:LYS:H	1.58	0.69
5:1H:646:A:H2'	5:1H:647:G:O4'	1.94	0.68
5:1H:1377:G:OP2	58:1H:4252:HOH:O	2.10	0.68
5:1H:2058:A:N6	58:1H:3623:HOH:O	2.10	0.68
29:21:101:ARG:O	29:21:201:THR:OG1	2.11	0.68
45:G8:90:LEU:HD23	45:G8:91:GLU:HA	1.74	0.68
1:13:262:A:H2'	1:13:263:A:H8	1.58	0.68
1:13:342:C:H2'	1:13:343:U:O4'	1.93	0.68
5:14:34:C:O2'	5:14:35:G:OP1	2.11	0.68
17:4I:23:TYR:HB3	17:4I:67:GLU:HB2	1.74	0.68
5:1H:1855:G:N7	58:1H:4448:HOH:O	2.24	0.68
5:1H:1899:G:H22	5:1H:1902:C:N4	1.91	0.68
1:1G:411:A:H62	1:1G:413:G:H21	1.41	0.68
6:12:5:ILE:HA	6:12:221:LEU:HD21	1.74	0.68
5:14:323:G:O2'	5:14:1205:U:N3	2.25	0.68
5:14:1386:C:OP2	5:14:1396:U:H5	1.76	0.68
5:14:2074:U:OP1	58:14:3511:HOH:O	2.11	0.68
5:14:2287:A:H62	5:14:2344:U:H3	1.41	0.68
5:1H:1021:A:H62	5:1H:1141:U:H3	1.38	0.68
27:1J:100:G:O5'	58:1J:309:HOH:O	2.10	0.68
40:B8:26:ASP:HB2	40:B8:91:ARG:HA	1.74	0.68
45:G8:30:VAL:HG12	45:G8:32:PRO:HD3	1.76	0.68
13:8E:46:ALA:HB2	13:8E:74:ILE:HG23	1.76	0.68
5:1H:122:G:N7	58:1H:4261:HOH:O	2.25	0.68
5:1H:1516:U:H2'	5:1H:1517:G:C8	2.29	0.68
5:1H:1534:G:H2'	5:1H:1535:U:H4'	1.75	0.68
5:1H:1849:G:OP2	58:1H:4443:HOH:O	2.10	0.68
5:1H:2502:G:N7	58:1H:3920:HOH:O	2.26	0.68
32:51:149:ARG:NH1	32:51:167:GLU:OE2	2.26	0.68
1:13:660:G:H2'	1:13:661:G:H8	1.58	0.68
1:13:738:C:OP1	10:5E:2:ARG:NH1	2.26	0.68
1:13:1305:G:N2	1:13:1331:G:H2'	2.09	0.68
5:14:1329:U:H5''	5:14:1330:C:H5	1.58	0.68
5:14:1857:G:O2'	5:14:1885:A:N6	2.26	0.68
5:1H:120:U:OP2	58:1H:4263:HOH:O	2.11	0.68
31:41:161:THR:HG23	31:41:163:ALA:H	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:H8:63:ASP:HB2	46:H8:65:GLN:HG3	1.74	0.68
53:O8:32:ASN:OD1	53:O8:32:ASN:N	2.26	0.68
6:1E:11:LEU:HD13	6:1E:217:ARG:HH12	1.59	0.68
11:6E:95:ARG:HH21	11:6E:99:LEU:HD11	1.58	0.68
5:1H:581:C:OP1	41:C8:33:ARG:HG3	1.94	0.68
5:1H:1331:A:O3'	58:1H:4043:HOH:O	2.10	0.68
5:1H:1354:A:H4'	28:11:38:LYS:HE3	1.74	0.68
5:1H:2061:G:H5'	58:1H:3638:HOH:O	1.94	0.68
35:68:88:ASN:ND2	35:68:92:GLU:H	1.92	0.68
1:1G:620:C:OP1	58:1G:1770:HOH:O	2.11	0.68
7:22:182:ILE:HG22	7:22:203:PHE:HA	1.73	0.68
1:13:129(A):G:H4'	1:13:130:A:H5''	1.76	0.68
5:14:1434:A:H61	5:14:1558:A:H62	1.39	0.68
43:E8:97:LYS:HE2	43:E8:99:ARG:NH2	2.08	0.68
44:F8:1:MET:C	44:F8:3:THR:H	2.00	0.68
48:J8:92:LYS:HA	48:J8:95:LEU:HB2	1.75	0.68
1:1G:352:C:O5'	58:1G:1741:HOH:O	2.11	0.68
6:1E:185:ILE:HG22	6:1E:199:TYR:HB2	1.76	0.68
13:8E:121:ARG:NH1	13:8E:122:ALA:O	2.26	0.68
5:1H:761:A:H5''	58:1H:3698:HOH:O	1.94	0.68
5:1H:929:G:O6	58:1H:3779:HOH:O	2.11	0.68
5:1H:2392:A:H2	5:1H:2424:C:H42	1.42	0.68
5:1H:2759:G:OP2	58:1H:4675:HOH:O	2.11	0.68
27:1J:11:C:OP2	27:1J:12:C:N4	2.20	0.68
37:88:5:ARG:HD3	37:88:5:ARG:N	2.09	0.68
52:N8:42:PRO:HB2	52:N8:43:HIS:ND1	2.08	0.68
1:1G:452:A:O2'	1:1G:453:A:O4'	2.08	0.68
1:1G:1279:A:O2'	1:1G:1282:C:N4	2.27	0.68
7:22:25:GLY:H	7:22:28:GLN:HE22	1.42	0.68
1:13:376:G:O3'	20:7I:5:ARG:NH1	2.25	0.68
5:14:1048:A:N6	5:14:1112:G:O2'	2.21	0.68
6:1E:27:LYS:NZ	6:1E:193:ASP:OD2	2.24	0.68
5:1H:459:U:H5''	54:P8:40:TRP:CD2	2.28	0.68
5:1H:2127:G:H22	5:1H:2162:G:H1'	1.58	0.68
1:13:1023:G:H3'	1:13:1024:G:H5''	1.76	0.68
5:14:273(C):C:H42	5:14:363(C):G:H1	1.39	0.68
5:14:2392:A:H2	5:14:2424:C:H42	1.41	0.68
5:1H:216:A:H3'	58:1H:3796:HOH:O	1.94	0.68
5:1H:2533:A:OP2	58:1H:4613:HOH:O	2.12	0.68
51:M8:12:ALA:HB3	51:M8:24:THR:HB	1.75	0.68
1:1G:512:U:H2'	1:1G:513:C:H6	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:881:G:O6	5:14:882:G:N2	2.27	0.67
5:14:1187:G:OP2	58:14:3752:HOH:O	2.12	0.67
5:14:1794:U:H2'	5:14:1795:C:C6	2.28	0.67
13:8E:125:TYR:HD1	13:8E:126:SER:H	1.43	0.67
16:3I:52:LEU:O	16:3I:54:LYS:NZ	2.27	0.67
2:3K:5:G:H22	2:3K:68:C:H42	1.42	0.67
5:1H:1634:A:OP2	58:1H:4403:HOH:O	2.11	0.67
5:1H:2199:A:H5''	5:1H:2205:C:H5	1.59	0.67
17:4I:82:MET:HE3	17:4I:93:ARG:HG2	1.77	0.67
22:9I:26:LEU:HD22	22:9I:42:ARG:HH22	1.59	0.67
5:1H:839:U:OP2	58:1H:3956:HOH:O	2.11	0.67
5:1H:2033:A:H8	58:1H:4172:HOH:O	1.76	0.67
5:1H:2057:A:P	58:1H:3625:HOH:O	2.52	0.67
5:1H:2346:A:O2'	53:O8:24:GLU:OE2	2.12	0.67
5:1H:2593:U:H2'	5:1H:2594:C:C6	2.29	0.67
5:1H:2688:U:H5	5:1H:2720:U:OP2	1.76	0.67
1:1G:957:U:H1'	1:1G:960:U:C5	2.29	0.67
1:1G:1154:G:H2'	1:1G:1155:G:C8	2.28	0.67
1:13:786:G:N7	58:13:2022:HOH:O	2.28	0.67
1:13:1118:C:H1'	1:13:1179:A:C4	2.29	0.67
1:13:1124:G:O2'	1:13:1145:C:N4	2.27	0.67
5:1H:1359:A:H2'	5:1H:1360:A:H5'	1.76	0.67
31:4I:37:VAL:HG21	31:4I:103:LEU:HD21	1.76	0.67
37:88:112:GLU:H	37:88:112:GLU:CD	2.01	0.67
1:1G:1095:U:P	1:1G:1108:G:H1	2.17	0.67
5:14:1040:C:O2	5:14:1115:G:N2	2.20	0.67
5:14:1828:G:OP1	58:14:3583:HOH:O	2.12	0.67
8:3E:106:TYR:HE2	8:3E:107:ARG:HH11	1.41	0.67
5:1H:586:A:OP2	58:1H:3968:HOH:O	2.12	0.67
5:1H:599:G:N2	5:1H:658:C:O2	2.19	0.67
5:1H:624:C:OP1	58:1H:4469:HOH:O	2.13	0.67
5:1H:817:C:OP2	58:1H:3948:HOH:O	2.11	0.67
1:1G:426:G:OP1	8:32:36:ARG:NH2	2.26	0.67
5:14:1962:C:O2'	5:14:1964:G:OP2	2.13	0.67
9:4E:10:MET:HB2	9:4E:32:VAL:HG22	1.77	0.67
16:3I:66:VAL:HG22	16:3I:67:THR:H	1.59	0.67
5:1H:1520:U:H2'	5:1H:1521:G:O4'	1.95	0.67
5:1H:1605:C:O3'	58:1H:3890:HOH:O	2.12	0.67
5:1H:2062:A:H2'	5:1H:2062:A:N3	2.10	0.67
5:1H:176:G:O2'	5:1H:177:G:H5'	1.95	0.67
5:1H:1406:U:H2'	5:1H:1407:C:C6	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:41:35:GLU:HG3	31:41:36:LYS:HB2	1.77	0.67
45:G8:97:ARG:NH1	45:G8:103:GLY:O	2.28	0.67
1:1G:512:U:H2'	1:1G:513:C:C6	2.29	0.67
8:32:55:ALA:O	8:32:59:ARG:HG2	1.94	0.67
5:14:270(W):G:N7	58:14:4350:HOH:O	2.28	0.67
9:4E:8:GLU:OE1	9:4E:63:ARG:NH2	2.27	0.67
19:6I:6:GLU:HA	19:6I:9:GLN:HB2	1.76	0.67
5:1H:229:A:H4'	5:1H:230:U:H5'	1.76	0.67
5:1H:1798:U:C5'	28:11:259:THR:HG22	2.25	0.67
5:1H:2445:G:OP1	30:31:74:ARG:NH2	2.28	0.67
36:78:114:ILE:HD11	36:78:130:PHE:HD2	1.60	0.67
39:A8:89:ARG:HG2	39:A8:89:ARG:O	1.93	0.67
1:1G:561:U:O2'	1:1G:562:C:OP2	2.12	0.67
1:1G:735:C:H2'	1:1G:736:C:H6	1.60	0.67
1:13:598:U:H4'	12:7E:94:TYR:CD2	2.30	0.67
5:1H:2583:G:OP1	58:1H:4711:HOH:O	2.11	0.67
29:21:135:HIS:CD2	29:21:135:HIS:H	2.11	0.67
31:41:77:ILE:HG22	31:41:82:LEU:HD12	1.76	0.67
1:13:674:G:H2'	1:13:675:A:H8	1.58	0.67
1:13:1192:C:OP2	7:2E:4:LYS:NZ	2.28	0.67
1:13:1503:A:N3	4:4K:13:A:N6	2.43	0.67
5:14:30:G:O6	58:14:4168:HOH:O	2.10	0.67
5:14:446:G:OP2	58:14:3913:HOH:O	2.12	0.67
5:14:854:G:H2'	5:14:855:G:C8	2.28	0.67
5:14:2037:G:H2'	5:14:2038:G:C8	2.30	0.67
5:1H:879:G:O6	5:1H:898:C:N4	2.19	0.67
33:61:12:LEU:HG	33:61:19:VAL:HG21	1.77	0.67
34:58:96:GLU:O	34:58:98:VAL:HG12	1.95	0.67
46:H8:163:LEU:HB3	46:H8:165:VAL:H	1.59	0.67
50:L8:7:LYS:HB2	50:L8:34:GLU:HG2	1.75	0.67
1:13:413:G:H22	1:13:428:G:H1'	1.60	0.67
5:14:450:G:O6	58:14:3813:HOH:O	2.12	0.67
5:14:1997:G:OP2	58:14:3650:HOH:O	2.11	0.67
15:2I:12:ARG:HG2	15:2I:14:VAL:HG13	1.76	0.67
1:1G:316:G:OP2	1:1G:351:G:O2'	2.11	0.67
1:1G:978:A:O2'	1:1G:1322:C:N3	2.28	0.67
6:12:178:ARG:NH1	6:12:196:LEU:O	2.27	0.67
1:13:1352:C:OP1	25:1F:3:LYS:NZ	2.19	0.66
5:14:2610:C:O2'	58:14:3940:HOH:O	2.03	0.66
11:6E:5:ARG:CZ	11:6E:7:ALA:HA	2.24	0.66
5:1H:33:U:H4'	5:1H:34:C:OP1	1.93	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:330:A:O2'	5:1H:331:A:H8	1.77	0.66
5:1H:1525:G:H2'	5:1H:1526:G:C8	2.25	0.66
38:98:41:ALA:O	38:98:44:LEU:N	2.23	0.66
41:C8:92:ARG:HD2	42:D8:11:GLN:HB2	1.76	0.66
1:1G:1213:A:N6	1:1G:1215:G:N3	2.43	0.66
1:13:448:A:OP2	1:13:485:G:N2	2.21	0.66
1:13:649:G:H2'	1:13:650:G:H8	1.59	0.66
21:8I:18:THR:OG1	21:8I:69:LYS:NZ	2.25	0.66
5:1H:248:G:H5'	5:1H:250:G:N7	2.09	0.66
5:1H:547:A:H2'	5:1H:548:A:C8	2.30	0.66
5:1H:730:C:H3'	58:1H:3699:HOH:O	1.94	0.66
5:1H:2212:A:H1'	5:1H:2215:G:C5	2.30	0.66
8:32:199:ASN:HB3	8:32:202:LEU:HG	1.76	0.66
5:14:987:G:O2'	5:14:1000:A:N3	2.23	0.66
44:F8:25:LYS:HG3	44:F8:82:GLN:OE1	1.95	0.66
47:I8:11:ARG:O	47:I8:14:ARG:NH2	2.28	0.66
1:1G:728:A:H2'	1:1G:729:A:C8	2.30	0.66
1:1G:804:U:H5''	1:1G:805:C:OP2	1.94	0.66
1:1G:1469:G:O6	58:1G:1800:HOH:O	2.12	0.66
23:AI:40:ILE:HA	23:AI:44:MET:HE3	1.76	0.66
5:1H:784:A:OP1	58:1H:4003:HOH:O	2.13	0.66
5:1H:973:A:OP2	58:1H:3944:HOH:O	2.11	0.66
5:1H:1405:U:H2'	5:1H:1406:U:C6	2.30	0.66
5:1H:1899:G:N2	5:1H:1902:C:H5	1.93	0.66
5:1H:2074:U:H2'	5:1H:2075:U:C6	2.30	0.66
1:1G:572:A:OP1	58:1G:1743:HOH:O	2.14	0.66
1:1G:1072:G:H2'	1:1G:1073:U:H6	1.59	0.66
1:13:177:C:OP1	24:BI:65:LYS:NZ	2.26	0.66
5:14:731:C:OP1	58:14:3830:HOH:O	2.14	0.66
11:6E:111:ARG:NH1	11:6E:113:GLU:OE2	2.29	0.66
5:1H:2287:A:H62	5:1H:2344:U:H3	1.40	0.66
47:I8:37:LEU:HD22	47:I8:67:VAL:HG11	1.77	0.66
49:K8:50:ILE:HD12	49:K8:51:ARG:H	1.60	0.66
53:O8:9:LEU:N	53:O8:27:LYS:HA	2.10	0.66
1:13:1346:A:H5''	13:8E:120:ARG:NH1	2.10	0.66
5:14:141:A:H8	5:14:1595:G:H21	1.42	0.66
5:14:1900:A:OP2	58:14:3595:HOH:O	2.13	0.66
16:3I:49:ASN:ND2	16:3I:92:ASP:OD2	2.26	0.66
5:1H:577:G:H1'	58:1H:3788:HOH:O	1.94	0.66
5:1H:607:U:N3	5:1H:621:A:H2	1.90	0.66
39:A8:34:HIS:HB2	39:A8:36:TYR:HE1	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:C8:69:CYS:HG	41:C8:79:PHE:HD2	1.41	0.66
6:12:92:TYR:CD1	6:12:151:GLY:HA3	2.31	0.66
5:14:279:C:H42	5:14:361:G:H1	1.41	0.66
5:14:1537:C:H2'	5:14:1538:G:C8	2.31	0.66
14:1I:22:LYS:NZ	14:1I:88:LEU:O	2.27	0.66
16:3I:58:VAL:O	16:3I:65:GLU:HA	1.95	0.66
5:1H:625:G:O6	36:78:107:LYS:NZ	2.21	0.66
5:1H:1994:C:OP1	58:1H:4103:HOH:O	2.12	0.66
5:1H:2582:G:OP2	58:1H:3864:HOH:O	2.13	0.66
5:1H:2632:A:HO2'	5:1H:2811:G:HO2'	1.39	0.66
33:61:110:ASP:HB2	33:61:112:LYS:H	1.61	0.66
1:13:411:A:C4	1:13:413:G:H1'	2.30	0.66
6:1E:21:ARG:HB2	6:1E:39:ILE:HG12	1.78	0.66
6:1E:126:GLU:HA	6:1E:129:GLU:HG2	1.77	0.66
5:1H:761:A:N7	58:1H:4185:HOH:O	2.27	0.66
5:1H:882:G:N2	5:1H:894:C:H42	1.93	0.66
53:O8:10:LEU:HD23	55:Q8:32:LEU:HD22	1.76	0.66
1:1G:179:A:H2'	1:1G:180:U:C6	2.30	0.66
1:13:74:C:H42	1:13:96:G:H1	1.42	0.66
1:13:591:U:H2'	1:13:592:G:H8	1.61	0.66
5:14:491:G:H2'	5:14:492:A:C8	2.31	0.66
5:14:1942:C:OP2	5:14:1943:U:O2'	2.14	0.66
5:14:2291:U:H5''	5:14:2380:C:O2'	1.96	0.66
5:1H:957:A:N1	5:1H:2458:G:H4'	2.11	0.66
5:1H:2359:C:H4'	55:Q8:49:VAL:HG11	1.76	0.66
31:41:64:THR:HG22	31:41:66:GLN:N	2.10	0.66
1:13:1160:G:H22	1:13:1177:G:N2	1.94	0.66
1:13:1304:G:N1	1:13:1332:A:OP2	2.26	0.66
5:14:738:G:O3'	58:14:3825:HOH:O	2.13	0.66
5:14:2239:G:OP2	58:14:3510:HOH:O	2.14	0.66
24:BI:53:LEU:HD12	24:BI:56:MET:HE3	1.78	0.66
5:1H:587:C:OP2	36:78:21:ARG:NH2	2.28	0.66
5:1H:1278:A:N7	58:1H:4756:HOH:O	2.27	0.66
40:B8:16:ARG:HE	40:B8:19:LEU:HD11	1.61	0.66
1:1G:1278:U:H5'	1:1G:1279:A:H5'	1.77	0.66
1:13:504:C:OP1	58:13:1885:HOH:O	2.14	0.65
1:13:1194:U:H2'	1:13:1195:C:C6	2.30	0.65
5:14:38:A:H2'	5:14:39:C:C6	2.30	0.65
5:1H:588:U:H2'	5:1H:589:C:C6	2.31	0.65
5:1H:722:A:H2'	5:1H:723:G:C8	2.31	0.65
5:1H:958:U:OP2	37:88:14:ARG:NH1	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:58:15:LEU:HD12	34:58:136:GLU:HG2	1.77	0.65
34:58:56:ASN:N	34:58:125:GLY:O	2.15	0.65
55:Q8:18:ALA:O	55:Q8:19:SER:OG	2.12	0.65
1:1G:888:G:HO2'	1:1G:1488:G:HO2'	1.40	0.65
5:14:1579:A:H2'	5:14:1580:A:C8	2.32	0.65
5:14:1975:G:OP2	58:14:3625:HOH:O	2.14	0.65
8:3E:30:LYS:CB	8:3E:35:ARG:HE	2.09	0.65
5:1H:1021:A:C8	5:1H:1022:G:H5''	2.30	0.65
5:1H:1658:C:OP1	58:21:401:HOH:O	2.13	0.65
5:1H:2032:G:H21	29:21:146:THR:CG2	2.09	0.65
5:1H:2168:G:OP1	5:1H:2168:G:H4'	1.95	0.65
37:88:51:ARG:NH1	37:88:52:VAL:HG23	2.11	0.65
1:1G:793:U:OP1	58:1G:1801:HOH:O	2.13	0.65
2:3L:37:MIA:S10	2:3L:38:A:H1'	2.37	0.65
5:14:1058:U:H2'	5:14:1059:G:C8	2.32	0.65
5:14:2273:A:H2'	5:14:2274:A:C8	2.32	0.65
5:1H:298:G:N7	58:1H:4289:HOH:O	2.29	0.65
5:1H:2127:G:H1	5:1H:2162:G:H1'	1.61	0.65
52:N8:42:PRO:O	52:N8:44:THR:HB	1.97	0.65
1:1G:958:A:N3	1:1G:985:C:O2'	2.29	0.65
1:13:17:U:H2'	1:13:18:C:C6	2.32	0.65
1:13:963:G:H21	14:1I:55:LYS:HE2	1.62	0.65
1:13:1301:U:O2'	1:13:1302:U:H5'	1.96	0.65
5:14:30:G:H2'	5:14:31:C:C6	2.32	0.65
5:14:597:U:H2'	5:14:598:G:C8	2.32	0.65
5:14:889:C:H2'	5:14:890:A:H4'	1.79	0.65
5:14:972:G:OP2	5:14:973:A:O2'	2.15	0.65
8:3E:31:CYS:SG	8:3E:32:ALA:N	2.68	0.65
5:1H:265:A:C8	5:1H:266:G:H1'	2.32	0.65
5:1H:1265:A:H3'	52:N8:19:ARG:NH1	2.11	0.65
5:1H:1968:G:OP2	58:1H:4324:HOH:O	2.14	0.65
5:1H:2217:G:O6	58:1H:4337:HOH:O	2.13	0.65
1:1G:971:G:N2	1:1G:1363:A:OP2	2.27	0.65
1:13:223:U:H2'	1:13:224:C:H6	1.61	0.65
1:13:254:G:O3'	21:8I:69:LYS:NZ	2.29	0.65
5:14:93:C:H5'	5:14:94:G:OP2	1.95	0.65
6:1E:16:HIS:HE1	6:1E:213:LEU:HD13	1.61	0.65
5:1H:67:U:H3	5:1H:74:A:H2	1.44	0.65
55:Q8:5:LYS:H	55:Q8:59:LYS:NZ	1.95	0.65
1:1G:1131:G:H2'	1:1G:1132:C:H6	1.61	0.65
1:13:390:C:O3'	20:7I:28:ARG:NH2	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:624:C:O3'	20:7I:10:GLY:HA2	1.97	0.65
5:14:403:U:H4'	5:14:404:C:H5'	1.79	0.65
1:13:1446:A:O2'	40:B8:125:ARG:NH2	2.30	0.65
5:14:176:G:O6	58:14:4178:HOH:O	2.09	0.65
27:16:15:A:H5'	27:16:16:G:C8	2.32	0.65
55:Q8:46:ARG:CZ	55:Q8:46:ARG:HA	2.27	0.65
1:1G:1274:G:H2'	1:1G:1275:A:H8	1.61	0.65
5:1H:761:A:OP1	58:1H:3698:HOH:O	2.13	0.65
30:31:29:ASN:H	30:31:112:MET:CE	1.99	0.65
1:1G:1305:G:N2	1:1G:1331:G:H2'	2.08	0.65
1:1G:1376:U:H2'	1:1G:1377:A:C8	2.32	0.65
1:13:637:G:H2'	1:13:638:G:H8	1.62	0.65
1:13:1139:G:H4'	1:13:1140:C:H5'	1.77	0.65
5:14:2275:C:H6	5:14:2275:C:H5'	1.62	0.65
5:1H:1332:G:OP1	58:1H:4040:HOH:O	2.14	0.65
55:Q8:6:THR:H	55:Q8:59:LYS:NZ	1.95	0.65
6:12:145:LEU:O	6:12:149:LEU:HB2	1.97	0.65
1:13:1368:G:OP2	13:8E:112:LYS:HD2	1.97	0.65
5:14:824:A:H1'	5:14:2358:G:N7	2.12	0.65
5:14:2318:G:H5'	5:14:2319:G:OP2	1.97	0.65
6:1E:88:ALA:HB2	6:1E:219:VAL:HG13	1.77	0.65
5:1H:2635:C:H5''	29:21:78:LEU:HA	1.79	0.65
5:1H:2855:C:H2'	5:1H:2856:C:H6	1.62	0.65
1:1G:1324:A:H4'	1:1G:1362:C:H4'	1.77	0.65
8:32:106:TYR:HE1	8:32:112:VAL:O	1.80	0.65
1:13:1149:C:H2'	1:13:1150:U:H6	1.63	0.64
16:3I:24:VAL:HB	16:3I:27:LEU:HD12	1.78	0.64
5:1H:1021:A:H8	5:1H:1021:A:H3'	1.62	0.64
5:1H:1320:C:H4'	5:1H:1321:A:OP1	1.96	0.64
5:1H:2702:U:H6	5:1H:2702:U:OP1	1.80	0.64
28:11:3:VAL:HG13	28:11:17:THR:HG23	1.80	0.64
37:88:51:ARG:HB3	37:88:51:ARG:HH11	1.60	0.64
1:1G:359:U:H2'	1:1G:360:A:C8	2.33	0.64
1:1G:1347:G:O2'	1:1G:1373:G:O6	2.13	0.64
1:13:1028:C:H42	1:13:1033:G:H1	1.44	0.64
1:13:1318:A:H1'	23:AI:37:ARG:HH21	1.62	0.64
5:14:5:A:H2'	5:14:6:A:C8	2.32	0.64
5:1H:443:A:H1'	5:1H:1201:C:O4'	1.96	0.64
5:1H:907:U:O2'	37:88:101:ARG:NH2	2.30	0.64
5:14:39:C:H2'	5:14:40:C:H6	1.60	0.64
5:14:67:U:H2'	5:14:68:G:C8	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:796:C:H2'	5:14:797:C:C6	2.32	0.64
6:1E:21:ARG:HB2	6:1E:39:ILE:HA	1.77	0.64
5:1H:1228:G:OP2	41:C8:16:LYS:NZ	2.30	0.64
5:1H:1533:C:H3'	5:1H:1534:G:H5''	1.78	0.64
5:1H:2287:A:N6	5:1H:2344:U:H3	1.95	0.64
1:1G:532:A:H2	7:22:156:ARG:HH22	1.43	0.64
5:14:1678:G:N2	5:14:1989:G:H22	1.95	0.64
5:14:2712(A):A:H5''	5:14:2713:A:OP2	1.97	0.64
5:1H:761:A:OP2	58:1H:3882:HOH:O	2.15	0.64
5:1H:1509:C:H3'	5:1H:1510:A:H5''	1.77	0.64
5:1H:2317:C:H2'	5:1H:2318:G:H5'	1.80	0.64
27:1J:13:A:N1	27:1J:69:G:O2'	2.27	0.64
1:13:812:C:N3	58:13:1809:HOH:O	2.30	0.64
5:14:1997:G:OP2	58:14:3648:HOH:O	2.15	0.64
19:6I:7:GLU:OE1	19:6I:38:ARG:NH2	2.30	0.64
5:1H:1324:G:N7	58:1H:3647:HOH:O	2.29	0.64
5:1H:2572:A:N7	29:21:145:LYS:HB2	2.13	0.64
27:1J:80:U:H2'	27:1J:81:G:N2	2.09	0.64
39:A8:24:LEU:HB2	39:A8:85:VAL:HG12	1.79	0.64
51:M8:24:THR:OG1	51:M8:25:TYR:N	2.27	0.64
13:8E:9:ARG:HD2	13:8E:14:VAL:HG13	1.79	0.64
5:1H:287:C:H2'	5:1H:288:C:H6	1.62	0.64
5:1H:1021:A:C8	5:1H:1021:A:H3'	2.33	0.64
5:1H:2027:G:N7	58:1H:4175:HOH:O	2.30	0.64
31:41:4:ASP:OD1	31:41:9:ARG:NH1	2.30	0.64
49:K8:14:ARG:HB3	49:K8:15:LYS:HE3	1.79	0.64
1:1G:680:C:H42	1:1G:710:G:H1	1.44	0.64
1:13:584:G:N7	58:13:1920:HOH:O	2.30	0.64
2:3L:52:G:N2	2:3L:63:G:N7	2.46	0.64
5:14:140:A:H8	5:14:1408:C:HO2'	1.42	0.64
5:14:273(C):C:N4	5:14:363(C):G:H1	1.96	0.64
11:6E:18:TYR:HB3	11:6E:59:LEU:HD12	1.79	0.64
5:1H:226:G:H21	5:1H:228:A:H2	1.46	0.64
5:1H:1388:G:H2'	5:1H:1389:G:C8	2.32	0.64
55:Q8:45:GLY:N	55:Q8:46:ARG:O	2.31	0.64
1:1G:433:C:H2'	1:1G:434:U:H6	1.62	0.64
1:1G:1151:A:O2'	1:1G:1152:A:O5'	2.16	0.64
1:13:674:G:H2'	1:13:675:A:C8	2.33	0.64
1:13:859:A:H2'	1:13:860:A:H8	1.63	0.64
5:1H:768:G:O2'	5:1H:1379:A:N6	2.30	0.64
33:61:38:LEU:H	33:61:38:LEU:HD12	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:Q8:37:SER:HA	55:Q8:39:LYS:O	1.98	0.64
8:32:4:TYR:CE2	8:32:11:LEU:HD11	2.33	0.64
8:32:31:CYS:C	8:32:33:MET:N	2.54	0.64
8:32:127:THR:HG21	8:32:149:ALA:HB2	1.79	0.64
1:13:1060:C:O2'	14:1I:56:HIS:ND1	2.31	0.64
5:14:602:G:O2'	5:14:604:G:O2'	2.16	0.64
5:14:996:A:H2'	5:14:997:G:H8	1.63	0.64
5:14:1043:C:H42	5:14:1112:G:H1	1.45	0.64
5:1H:1062:G:N2	5:1H:1076:C:N3	2.38	0.64
5:1H:1287:A:C8	38:98:107:ASP:HB2	2.33	0.64
27:1J:15:A:H3'	27:1J:16:G:H5'	1.80	0.64
31:41:97:ASP:O	31:41:100:TRP:N	2.31	0.64
38:98:100:LEU:HD11	38:98:113:LEU:HD13	1.80	0.64
43:E8:37:ARG:HD3	43:E8:38:TYR:CE2	2.32	0.64
48:J8:23:LYS:HB3	48:J8:29:GLY:HA3	1.80	0.64
1:1G:411:A:C5	1:1G:413:G:H1'	2.33	0.64
1:1G:1258:G:H2'	1:1G:1259:C:H6	1.63	0.64
1:13:1133:G:N2	1:13:1141:C:N3	2.42	0.64
5:14:749:C:OP2	58:14:3863:HOH:O	2.15	0.64
5:14:1060:U:H4'	5:14:1061:U:H5''	1.80	0.64
5:14:2020:A:O2'	5:14:2021:C:H5'	1.97	0.64
23:AI:41:VAL:HG11	23:AI:67:VAL:HA	1.78	0.64
39:A8:28:VAL:HG11	39:A8:98:VAL:HG13	1.80	0.64
1:13:237:C:H5''	21:8I:25:ARG:CZ	2.28	0.63
1:13:330:C:O2	58:13:1901:HOH:O	2.14	0.63
5:14:607:U:H3	5:14:621:A:H2	1.44	0.63
5:1H:400:G:O6	58:1H:4154:HOH:O	2.10	0.63
5:1H:1496:A:H8	5:1H:1577:C:O2'	1.81	0.63
27:1J:104:A:H2'	27:1J:105:G:O4'	1.98	0.63
1:1G:1286:A:C8	1:1G:1287:A:H4'	2.32	0.63
1:13:728:A:C5	19:6I:54:ARG:HD2	2.33	0.63
1:13:735:C:H2'	1:13:736:C:H6	1.63	0.63
1:13:854:G:N7	58:13:1927:HOH:O	2.30	0.63
3:2K:62:C:H2'	3:2K:63:C:H6	1.63	0.63
5:1H:1858:G:H2'	5:1H:1883:G:N2	2.14	0.63
5:1H:2002:G:N7	58:1H:4385:HOH:O	2.30	0.63
30:31:9:ILE:HD12	30:31:125:LEU:HG	1.80	0.63
31:41:112:PRO:HB3	51:M8:37:SER:H	1.63	0.63
37:88:104:PHE:HE2	37:88:125:LEU:HD11	1.63	0.63
44:F8:3:THR:OG1	44:F8:4:ALA:HA	1.98	0.63
1:1G:539:A:H2'	1:1G:540:G:C8	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1002:G:H2'	1:1G:1003:G:H8	1.63	0.63
1:13:150:C:H2'	1:13:151:A:O4'	1.98	0.63
5:14:55:G:O6	5:14:115:C:N4	2.17	0.63
5:14:882:G:H22	5:14:894:C:N4	1.97	0.63
16:3I:83:VAL:HG21	16:3I:100:ILE:HD13	1.79	0.63
3:2K:8:4SU:O5'	3:2K:8:4SU:H6	1.99	0.63
5:1H:900:A:H3'	5:1H:901:A:H8	1.63	0.63
1:1G:985:C:N3	1:1G:1220:G:N2	2.44	0.63
1:13:505:G:OP1	58:13:1881:HOH:O	2.15	0.63
1:13:536:C:H2'	1:13:537:G:C8	2.33	0.63
42:D8:41:GLY:O	42:D8:45:THR:HA	1.98	0.63
51:M8:39:CYS:SG	51:M8:41:PRO:HD3	2.39	0.63
6:12:162:ILE:O	6:12:185:ILE:HG12	1.99	0.63
1:13:156:G:H1'	1:13:166:G:N2	2.13	0.63
1:13:272:C:H2'	1:13:273:A:C8	2.34	0.63
1:13:1000:A:H2'	1:13:1001:G:C8	2.33	0.63
5:14:2125:G:N2	5:14:2172:U:OP1	2.32	0.63
20:7I:26:ARG:HH21	20:7I:31:LYS:HD3	1.62	0.63
5:1H:634:C:H2'	5:1H:635:C:C6	2.33	0.63
5:1H:746:A:C6	5:1H:2611:U:H5''	2.33	0.63
5:1H:1022:G:N2	5:1H:1142(A):A:N1	2.46	0.63
27:16:40:U:H1'	27:16:45:A:N6	2.13	0.63
37:88:81:VAL:O	37:88:82:ARG:HB2	1.98	0.63
6:1E:100:GLY:O	6:1E:104:ASN:N	2.29	0.63
6:1E:219:VAL:HA	6:1E:222:ILE:HD12	1.81	0.63
5:1H:85:G:OP2	45:G8:9:LYS:HB2	1.98	0.63
5:1H:639:U:H2'	5:1H:640:C:C6	2.33	0.63
5:1H:2053:G:OP2	58:1H:3853:HOH:O	2.15	0.63
46:H8:9:TYR:CE1	46:H8:35:ARG:HD3	2.33	0.63
1:1G:1239:A:H4'	1:1G:1240:U:H5'	1.81	0.63
1:1G:1255:G:O2'	1:1G:1258:G:O2'	2.10	0.63
7:22:22:TRP:HB3	7:22:59:ARG:HB2	1.79	0.63
1:13:130:A:OP2	21:8I:63:ARG:NH2	2.32	0.63
1:13:187:C:O2	1:13:191(A):G:N1	2.32	0.63
1:13:272:C:H2'	1:13:273:A:H8	1.62	0.63
1:13:524:G:H2'	1:13:525:C:C6	2.34	0.63
2:1L:10:G:H2'	2:1L:11:C:C6	2.34	0.63
5:14:479:A:N3	5:14:481:G:H5''	2.13	0.63
23:AI:40:ILE:HD11	23:AI:62:ILE:HD13	1.80	0.63
23:AI:63:THR:HG22	23:AI:66:MET:HE3	1.80	0.63
5:1H:1794:U:H2'	5:1H:1795:C:H6	1.61	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:11:68:LYS:HB3	28:11:70:TRP:CH2	2.34	0.63
34:58:38:HIS:O	41:C8:67:ALA:HB1	1.98	0.63
47:I8:53:MET:HG3	47:I8:59:LEU:CD2	2.28	0.63
1:1G:54:C:N4	1:1G:353:A:OP2	2.30	0.63
1:1G:542:G:OP1	8:32:10:ARG:NH2	2.32	0.63
1:1G:1268:A:H2'	1:1G:1269:A:C8	2.34	0.63
1:13:1306:A:H61	1:13:1331:G:H1'	1.64	0.63
5:14:19:C:H2'	5:14:20:C:C6	2.34	0.63
8:3E:162:LEU:O	8:3E:165:MET:HB3	1.99	0.63
22:9I:56:THR:HB	22:9I:58:LEU:HD13	1.81	0.63
30:31:6:VAL:HG21	30:31:119:ARG:HB2	1.79	0.63
31:41:56:ALA:HB2	31:41:153:ARG:HE	1.64	0.63
37:88:66:ILE:HG22	37:88:67:ARG:N	2.12	0.63
46:H8:28:MET:HB2	46:H8:37:VAL:HG11	1.81	0.63
1:13:412:A:H4'	1:13:413:G:O5'	1.98	0.63
1:13:1224:G:C6	1:13:1322:C:H1'	2.34	0.63
6:1E:15:VAL:HG21	6:1E:209:ARG:HB3	1.81	0.63
15:2I:78:GLN:O	15:2I:103:LEU:HA	1.98	0.63
23:AI:6:LYS:O	23:AI:7:LYS:HB3	1.97	0.63
5:1H:1189:A:OP2	58:1H:3945:HOH:O	2.15	0.63
44:F8:3:THR:HA	44:F8:6:ASP:OD2	1.99	0.63
1:1G:888:G:O2'	1:1G:1488:G:O2'	2.13	0.63
5:14:1420:U:O2'	5:14:1421:G:OP1	2.16	0.62
7:2E:40:ARG:HG3	7:2E:40:ARG:NH1	2.11	0.62
25:1F:9:ARG:O	25:1F:13:ILE:HG13	1.99	0.62
5:1H:1093:G:O2'	5:1H:1099:G:N2	2.32	0.62
5:1H:2788:C:O2'	5:1H:2809:A:N3	2.32	0.62
27:16:44:G:H1'	27:16:47:C:H42	1.63	0.62
33:61:92:VAL:HG13	33:61:120:ILE:HG23	1.81	0.62
1:1G:664:G:H22	1:1G:741:G:H1	1.47	0.62
1:1G:976:G:H5'	1:1G:1358:U:O2'	1.99	0.62
5:14:1019:U:H2'	5:14:1020:A:C8	2.35	0.62
7:2E:32:LEU:HD13	7:2E:59:ARG:HH11	1.64	0.62
20:7I:77:ALA:HB3	20:7I:79:VAL:H	1.62	0.62
21:8I:67:LYS:HA	21:8I:70:ARG:HH12	1.64	0.62
32:51:27:LYS:HA	32:51:32:GLU:HA	1.80	0.62
33:61:144:VAL:HG22	33:61:145:VAL:HG22	1.81	0.62
45:G8:49:VAL:HG21	45:G8:55:TYR:CE2	2.34	0.62
1:1G:1072:G:H2'	1:1G:1073:U:C6	2.34	0.62
1:1G:1288:A:N3	1:1G:1352:C:O2'	2.31	0.62
1:13:536:C:H2'	1:13:537:G:H8	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1188:U:O2'	5:14:1189:A:H5'	1.99	0.62
5:14:1340:U:H4'	5:14:1394:U:O2'	2.00	0.62
5:1H:1165:U:H2'	5:1H:1166:C:H6	1.64	0.62
5:1H:1221:C:H2'	5:1H:1222:C:H6	1.64	0.62
37:88:135:ASP:HB3	37:88:137:TYR:H	1.62	0.62
1:1G:464:G:O6	1:1G:466:C:H5'	1.99	0.62
7:22:113:ALA:HA	7:22:202:ILE:HD11	1.82	0.62
8:32:4:TYR:HE2	8:32:11:LEU:HD11	1.64	0.62
1:13:474:G:H2'	1:13:475:G:C8	2.35	0.62
1:13:1288:A:N1	1:13:1371:G:H1'	2.15	0.62
5:14:2096:U:H3	5:14:2193:G:H1	1.46	0.62
6:1E:174:VAL:HG13	6:1E:184:VAL:HG11	1.82	0.62
31:41:143:GLU:OE1	51:M8:26:SER:OG	2.17	0.62
33:61:4:ILE:HG21	33:61:47:LEU:HD22	1.81	0.62
1:1G:682:G:H1	1:1G:708:C:H42	1.45	0.62
7:22:91:LEU:HB2	7:22:99:VAL:HG11	1.80	0.62
8:32:20:TYR:HA	8:32:26:CYS:HB3	1.81	0.62
1:13:156:G:H1'	1:13:166:G:H22	1.63	0.62
1:13:453:A:O3'	20:7I:75:ARG:NH1	2.33	0.62
1:13:1312:G:O3'	23:AI:6:LYS:NZ	2.26	0.62
5:14:259:G:N2	5:14:621:A:H8	1.96	0.62
5:14:1935:G:H1'	5:14:1964:G:N2	2.14	0.62
6:1E:73:THR:O	6:1E:78:GLN:NE2	2.31	0.62
9:4E:143:ARG:NE	12:7E:77:GLU:OE1	2.32	0.62
23:AI:63:THR:OG1	23:AI:64:GLU:N	2.31	0.62
5:1H:302:C:H2'	5:1H:303:U:C6	2.33	0.62
5:1H:2882:A:OP1	38:98:96:ARG:NH1	2.30	0.62
35:68:2:ILE:HG13	35:68:8:LEU:HD11	1.80	0.62
48:J8:18:ILE:HG12	48:J8:37:ILE:HG12	1.82	0.62
6:12:190:THR:O	6:12:191:ASP:HB3	1.98	0.62
5:14:2262:U:H4'	5:14:2328:A:C2	2.35	0.62
5:14:2272:U:O4	58:14:4061:HOH:O	2.16	0.62
5:14:2335:A:C8	5:14:2337:G:C5	2.87	0.62
24:BI:26:ASN:HB2	24:BI:71:THR:HG23	1.81	0.62
5:1H:956:G:OP2	37:88:14:ARG:NH2	2.33	0.62
5:1H:2334:G:H5'	39:A8:9:ARG:HG2	1.81	0.62
29:21:167:VAL:HG21	29:21:187:ALA:HB3	1.82	0.62
46:H8:30:ASN:HA	46:H8:89:PHE:HE1	1.64	0.62
55:Q8:27:THR:O	55:Q8:29:LYS:HA	2.00	0.62
55:Q8:50:LEU:O	55:Q8:52:LYS:N	2.30	0.62
1:1G:1057:G:H1	1:1G:1203:C:H42	1.47	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:22:91:LEU:HD11	7:22:101:LEU:HD12	1.80	0.62
5:14:863:A:H2'	5:14:864:G:C8	2.33	0.62
5:14:1024:G:H8	5:14:1024:G:O5'	1.83	0.62
5:14:2297:C:O2	5:14:2321:G:N2	2.25	0.62
21:8I:100:LYS:HB3	21:8I:101:ARG:NH1	2.14	0.62
5:1H:573:G:O2'	5:1H:574:C:H3'	1.99	0.62
5:1H:1899:G:N2	5:1H:1902:C:C5	2.66	0.62
41:C8:90:VAL:HG22	42:D8:39:LEU:HG	1.82	0.62
1:1G:1423:G:H2'	1:1G:1424:C:C6	2.35	0.62
1:1G:1446:A:OP1	1:1G:1446:A:H4'	2.00	0.62
1:13:1177:G:O2'	1:13:1178:G:O4'	2.18	0.62
1:13:1504:G:OP1	1:13:1507:A:H4'	2.00	0.62
5:14:2638:G:O2'	5:14:2639:A:O5'	2.16	0.62
5:14:2701:C:H3'	5:14:2702:U:C5'	2.26	0.62
5:1H:1486:A:H2'	5:1H:1487:G:H8	1.65	0.62
5:1H:1771:C:O2'	5:1H:1786:A:H8	1.72	0.62
2:3L:9:A:H4'	2:3L:46:7MG:H5'	1.81	0.62
5:14:2123:G:H2'	5:14:2124:G:H8	1.65	0.62
5:1H:270(P):C:H2'	5:1H:270(Q):C:C6	2.35	0.62
5:1H:1556:C:H2'	5:1H:1557:C:H6	1.64	0.62
33:61:31:LEU:HD21	33:61:38:LEU:HG	1.81	0.62
1:13:396:G:O2'	1:13:398:C:OP1	2.15	0.62
2:3L:19:G:OP2	2:3L:57:G:N2	2.32	0.62
5:14:1678:G:H22	5:14:1989:G:H22	1.48	0.62
11:6E:16:LEU:HD13	13:8E:44:VAL:HG22	1.82	0.62
5:1H:1062:G:H2'	5:1H:1063:G:C8	2.35	0.62
31:41:11:TYR:OH	31:41:16:ARG:NH1	2.32	0.62
33:61:71:ILE:HG12	33:61:72:LEU:HD12	1.82	0.62
44:F8:41:ASN:O	44:F8:45:THR:HG23	2.00	0.62
55:Q8:50:LEU:C	55:Q8:52:LYS:N	2.54	0.62
1:1G:1235:U:O2'	1:1G:1305:G:O5'	2.17	0.62
1:13:516:U:O4	58:13:1873:HOH:O	2.16	0.61
5:14:802:A:H4'	58:14:3801:HOH:O	2.00	0.61
5:14:1332:G:H22	5:14:1609:A:HO2'	1.47	0.61
5:1H:376:C:P	58:1H:3775:HOH:O	2.58	0.61
5:1H:1557:C:OP2	5:1H:1558:A:O2'	2.12	0.61
5:1H:1711:C:H2'	5:1H:1712:C:H6	1.65	0.61
1:13:719:C:H1'	22:9I:49:LYS:HB3	1.81	0.61
5:14:1963:U:H5''	5:14:1963:U:O2	1.98	0.61
5:1H:458:G:O2'	5:1H:469:G:O6	2.10	0.61
5:1H:2079:U:O4	58:1H:4489:HOH:O	2.13	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:12:84:GLU:HB3	6:12:219:VAL:HG11	1.82	0.61
4:4L:15:A:H8	4:4L:15:A:O5'	1.83	0.61
5:14:82:G:N2	5:14:103:A:OP2	2.29	0.61
5:14:751:A:P	58:14:3517:HOH:O	2.58	0.61
5:14:1342:A:H2	5:14:1602:U:N3	1.97	0.61
14:1I:8:LEU:HD12	14:1I:20:ALA:HB2	1.82	0.61
5:1H:270(L):U:O2	33:61:50:ARG:HG2	2.00	0.61
5:1H:2593:U:H2'	5:1H:2594:C:H6	1.65	0.61
32:51:98:LEU:HD22	32:51:125:VAL:HG23	1.81	0.61
46:H8:103:ARG:HG3	46:H8:136:PHE:CD2	2.34	0.61
48:J8:58:ILE:HG23	48:J8:87:PRO:HG3	1.83	0.61
1:1G:1126:U:H5''	1:1G:1280:A:N7	2.16	0.61
1:1G:1294:G:H2'	1:1G:1295:G:C8	2.35	0.61
1:1G:1316:G:N2	1:1G:1319:A:H5''	2.15	0.61
1:13:917:G:H2'	1:13:918:A:C8	2.34	0.61
5:14:270(K):C:O2	5:14:270(N):G:N2	2.27	0.61
5:14:1047:G:H2'	5:14:1110:G:H1	1.66	0.61
7:2E:73:PRO:O	7:2E:76:VAL:HG13	1.99	0.61
11:6E:111:ARG:HD2	11:6E:123:GLU:HB2	1.82	0.61
21:8I:68:ARG:H	21:8I:70:ARG:HH11	1.45	0.61
5:1H:2327:A:H2'	5:1H:2328:A:C8	2.36	0.61
5:1H:2492:U:H2'	5:1H:2493:U:C6	2.36	0.61
32:51:12:PRO:HG2	32:51:13:LYS:HE2	1.82	0.61
1:13:820:U:H4'	1:13:821:G:OP2	2.00	0.61
1:13:1278:U:H5''	1:13:1279:A:O4'	2.01	0.61
6:1E:51:LEU:HG	6:1E:201:ILE:HD12	1.82	0.61
6:1E:185:ILE:CG2	6:1E:199:TYR:HB2	2.30	0.61
5:1H:1381:G:N7	58:1H:4123:HOH:O	2.31	0.61
5:1H:2576:G:OP1	58:1H:3852:HOH:O	2.16	0.61
46:H8:4:ARG:NH1	46:H8:60:GLU:OE2	2.33	0.61
54:P8:11:LYS:HE3	54:P8:15:THR:OG1	2.00	0.61
1:13:523:A:H61	16:3I:92:ASP:HB2	1.65	0.61
5:14:630:G:N2	5:14:633:A:OP2	2.29	0.61
5:14:1141:U:O2'	5:14:1142:U:OP2	2.18	0.61
27:16:0:A:N6	27:16:119:A:N1	2.48	0.61
28:11:17:THR:HG22	28:11:204:ILE:HA	1.81	0.61
29:21:51:PHE:CE2	29:21:52:LEU:HG	2.35	0.61
30:31:22:ALA:HB1	30:31:24:LEU:HD13	1.82	0.61
8:3E:108:LEU:HD23	8:3E:110:PHE:HE1	1.65	0.61
16:3I:89:ARG:HG3	16:3I:89:ARG:NH1	2.16	0.61
23:AI:41:VAL:O	51:M8:63:TYR:OH	2.19	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:353:G:H2'	5:1H:354:G:H8	1.64	0.61
5:1H:533:G:H5'	41:C8:24:TYR:CE1	2.35	0.61
5:1H:1997:G:OP2	58:1H:4104:HOH:O	2.15	0.61
46:H8:45:ASP:OD2	46:H8:49:ARG:NH1	2.34	0.61
49:K8:32:LEU:HD11	49:K8:54:LYS:HG3	1.82	0.61
8:32:177:ASP:OD2	8:32:182:LYS:NZ	2.33	0.61
1:13:1124:G:H5'	14:1I:35:SER:HB2	1.83	0.61
5:14:140:A:C8	5:14:1408:C:O2'	2.54	0.61
19:6I:17:ARG:HG3	19:6I:17:ARG:NH1	2.15	0.61
5:1H:2801:A:H5'	5:1H:2895:U:H1'	1.80	0.61
31:41:35:GLU:OE1	31:41:36:LYS:N	2.33	0.61
35:68:71:ARG:HH21	35:68:77:ILE:HG21	1.65	0.61
46:H8:53:ILE:HA	46:H8:71:VAL:HG13	1.83	0.61
52:N8:40:LYS:HG3	52:N8:47:PRO:HD2	1.81	0.61
55:Q8:7:HIS:HD1	55:Q8:10:ALA:H	1.48	0.61
1:1G:1385:G:H2'	1:1G:1386:G:H8	1.65	0.61
1:1G:1490:C:H2'	1:1G:1491:G:O4'	2.00	0.61
8:32:24:GLU:N	8:32:24:GLU:OE2	2.33	0.61
5:14:235:U:H2'	5:14:236:C:C6	2.36	0.61
5:14:1664:A:OP2	58:14:3658:HOH:O	2.16	0.61
6:1E:141:GLU:O	6:1E:145:LEU:HB2	2.01	0.61
8:3E:186:LEU:HB2	8:3E:187:ARG:HG2	1.83	0.61
9:4E:8:GLU:HG2	9:4E:34:VAL:HG22	1.81	0.61
11:6E:27:ILE:HA	11:6E:30:ILE:HD12	1.81	0.61
15:2I:32:ILE:HD12	15:2I:72:ALA:HB2	1.83	0.61
2:3K:18:G:N2	2:3K:55:PSU:HN3	1.99	0.61
5:1H:2179:C:H2'	5:1H:2180:U:C6	2.36	0.61
39:A8:106:ARG:HH22	39:A8:107:GLU:HB2	1.64	0.61
1:1G:21:G:OP1	58:1G:1764:HOH:O	2.16	0.61
1:13:1151:A:O2'	1:13:1152:A:O5'	2.12	0.61
5:14:996:A:N6	5:14:1160:G:C6	2.69	0.61
5:14:1592:C:H2'	5:14:1593:G:H8	1.64	0.61
16:3I:90:VAL:O	16:3I:91:LYS:HB3	2.01	0.61
5:1H:517:C:OP1	52:N8:16:ARG:NH2	2.29	0.61
5:1H:1113:U:OP1	32:51:2:SER:N	2.34	0.61
5:1H:2140:C:O2	5:1H:2151:G:N2	2.32	0.61
5:1H:2378:A:H2'	39:A8:21:THR:HG21	1.82	0.61
29:21:70:ALA:O	29:21:73:GLU:N	2.34	0.61
29:21:128:SER:OG	29:21:129:HIS:N	2.32	0.61
1:13:1226:C:H2'	17:4I:103:THR:HB	1.81	0.60
5:14:406:G:N2	5:14:421:U:O2	2.23	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2287:A:N6	5:14:2344:U:H3	1.97	0.60
5:14:2850:A:C2	5:14:2851:A:C4	2.89	0.60
5:1H:302:C:H2'	5:1H:303:U:H6	1.66	0.60
5:1H:582:G:H2'	5:1H:583:G:C8	2.36	0.60
5:1H:2135:A:N6	5:1H:2156:G:O2'	2.34	0.60
35:68:88:ASN:HD21	35:68:92:GLU:H	1.49	0.60
47:I8:23:VAL:HG13	47:I8:38:VAL:HG23	1.83	0.60
1:1G:662:G:O2'	1:1G:836:G:OP1	2.19	0.60
1:1G:1257:U:H5'	1:1G:1258:G:C8	2.36	0.60
6:12:163:PHE:CD2	6:12:185:ILE:HG13	2.36	0.60
5:14:586:A:N1	5:14:809:G:O2'	2.27	0.60
5:14:2557:G:H2'	5:14:2558:C:H6	1.66	0.60
5:14:2777:G:H5''	5:14:2778:A:H5'	1.83	0.60
5:1H:1088:A:H5'	5:1H:1089:G:H5'	1.82	0.60
5:1H:1859:A:N6	5:1H:1883:G:O2'	2.34	0.60
5:1H:2062:A:N6	5:1H:2503:A:H62	2.00	0.60
30:31:134:GLY:H	30:31:162:LEU:HB3	1.65	0.60
37:88:43:THR:HG22	37:88:94:VAL:HG12	1.83	0.60
43:E8:79:GLY:HA3	43:E8:100:THR:HG22	1.83	0.60
46:H8:104:PHE:CE2	46:H8:119:GLU:HB3	2.35	0.60
1:1G:144:G:H1	1:1G:178:C:H42	1.49	0.60
5:14:1056:G:H4'	5:14:1086:A:H1'	1.83	0.60
5:14:2126:A:N1	5:14:2163:C:H1'	2.16	0.60
5:14:2375:G:N7	58:14:3923:HOH:O	2.31	0.60
5:14:2693:A:H2'	5:14:2694:G:H8	1.66	0.60
8:3E:98:GLU:O	8:3E:103:ASN:ND2	2.33	0.60
13:8E:21:PRO:HA	13:8E:59:PHE:HA	1.84	0.60
5:1H:1102:C:H2'	5:1H:1103:A:H8	1.65	0.60
5:1H:1509:C:H2'	5:1H:1511:A:C8	2.36	0.60
5:1H:2698:U:H2'	5:1H:2699:C:C6	2.36	0.60
33:61:21:VAL:HG21	33:61:25:TYR:HD2	1.66	0.60
39:A8:66:ALA:HA	39:A8:69:VAL:HG12	1.82	0.60
1:1G:999:U:H2'	1:1G:1000:A:C8	2.37	0.60
1:13:1160:G:H1	1:13:1177:G:N2	1.98	0.60
5:14:898:C:H3'	5:14:899:A:H5''	1.82	0.60
5:1H:796:C:H2'	5:1H:797:C:C6	2.36	0.60
30:31:33:LEU:HD23	36:78:1:MET:HG3	1.82	0.60
49:K8:47:ASN:C	49:K8:49:LYS:H	2.07	0.60
8:32:9:CYS:SG	8:32:22:LYS:HD2	2.41	0.60
8:32:108:LEU:HD21	8:32:183:GLY:HA3	1.83	0.60
1:13:127:G:O2'	21:8I:2:PRO:O	2.19	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:327:A:HO2'	1:13:329:A:H8	1.50	0.60
5:14:1041:C:H42	5:14:1114:G:H1	1.49	0.60
5:14:1593:G:H2'	5:14:1594:G:C8	2.37	0.60
5:14:2402:C:H5	5:14:2415:G:H22	1.48	0.60
13:8E:18:PHE:HD2	13:8E:62:TYR:HD2	1.48	0.60
5:1H:529:A:H8	5:1H:530:G:C6	2.19	0.60
5:1H:1102:C:H2'	5:1H:1103:A:C8	2.35	0.60
5:1H:1510:A:OP1	5:1H:1511:A:H5'	2.01	0.60
5:1H:2591:C:P	28:11:239:ARG:HG3	2.41	0.60
28:11:238:GLY:O	58:11:402:HOH:O	2.16	0.60
29:21:64:LYS:O	29:21:70:ALA:HB2	2.01	0.60
30:31:32:LEU:HD21	30:31:105:VAL:HG13	1.83	0.60
36:78:1:MET:HE2	36:78:6:LEU:HD13	1.83	0.60
1:1G:1224:G:N1	1:1G:1322:C:H1'	2.17	0.60
6:12:144:ARG:HH21	6:12:148:TYR:HD2	1.48	0.60
1:13:660:G:H2'	1:13:661:G:C8	2.36	0.60
2:1L:8:4SU:H5	2:1L:13:C:N3	2.16	0.60
5:1H:686:G:OP1	54:P8:11:LYS:NZ	2.34	0.60
5:1H:1641:A:H5''	5:1H:1642:G:OP2	2.02	0.60
5:1H:2610:C:H4'	5:1H:2611:U:OP2	2.00	0.60
51:M8:18:CYS:HB3	51:M8:39:CYS:SG	2.41	0.60
1:1G:1057:G:H5''	7:22:154:SER:O	2.01	0.60
1:13:1060:C:C4	7:2E:2:GLY:HA3	2.37	0.60
5:14:214:G:H4'	5:14:214:G:OP1	2.01	0.60
5:14:588:U:H2'	5:14:589:C:C6	2.37	0.60
5:14:1093:G:O2'	5:14:1099:G:N2	2.35	0.60
5:14:1416:G:O2'	5:14:1417:C:O5'	2.18	0.60
17:4I:39:ILE:HD12	17:4I:56:LEU:HD23	1.84	0.60
20:7I:19:ILE:HB	20:7I:36:ILE:O	2.01	0.60
21:8I:53:LEU:HB3	21:8I:82:MET:HE1	1.83	0.60
21:8I:68:ARG:H	21:8I:70:ARG:NH1	1.99	0.60
5:1H:286:C:H2'	5:1H:287:C:H6	1.67	0.60
5:1H:654(A):A:H2	5:1H:654(T):A:N1	1.99	0.60
5:1H:1790:C:H5''	5:1H:1791:A:OP1	2.01	0.60
1:1G:457:C:H2'	1:1G:458:C:C6	2.37	0.60
1:13:179:A:H2'	1:13:180:U:C6	2.36	0.60
1:13:838:G:H1	1:13:848:C:H42	1.50	0.60
5:14:619:G:H5''	5:14:620:G:N2	2.16	0.60
5:14:1316:U:O2'	5:14:1317:A:H5'	2.02	0.60
5:14:1428:C:N4	5:14:1570:A:OP2	2.23	0.60
5:14:2299:G:N1	5:14:2318:G:H8	1.99	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:1I:38:ILE:HG23	14:1I:71:LEU:HB3	1.83	0.60
23:AI:41:VAL:HB	23:AI:42:PRO:HA	1.84	0.60
5:1H:974(A):C:OP1	58:1H:4332:HOH:O	2.17	0.60
5:1H:1168:G:C2	5:1H:1182:A:C2	2.89	0.60
5:1H:2124:G:N2	5:1H:2174:C:O2	2.35	0.60
34:58:15:LEU:HB2	34:58:134:ARG:HB3	1.84	0.60
5:14:1464:C:HO2'	5:14:1528:A:H8	1.48	0.60
5:1H:446:G:OP2	58:1H:3712:HOH:O	2.16	0.60
30:31:9:ILE:HG12	30:31:10:PRO:HD2	1.84	0.60
34:58:26:LEU:O	34:58:30:ILE:HG13	2.00	0.60
44:F8:24:GLY:O	44:F8:83:VAL:HG22	2.02	0.60
1:1G:1002:G:H2'	1:1G:1003:G:C8	2.37	0.60
8:32:150:GLU:C	8:32:152:SER:H	2.10	0.60
1:13:890:G:O2'	1:13:906:G:O6	2.14	0.60
1:13:939:G:H5''	11:6E:102:ARG:NH2	2.17	0.60
3:2L:22:A:N6	3:2L:47:7MG:H2'	2.17	0.60
5:14:1443:G:O6	58:14:4003:HOH:O	2.11	0.60
12:7E:7:ALA:HB2	12:7E:85:ARG:HH11	1.67	0.60
22:9I:31:LEU:H	22:9I:31:LEU:HD23	1.67	0.60
5:1H:136:G:N7	58:1H:4283:HOH:O	2.31	0.60
5:1H:782:A:C2	28:11:226:MET:HG2	2.37	0.60
5:1H:1024:G:H3'	5:1H:1025:G:H5''	1.83	0.60
46:H8:7:ALA:HB2	46:H8:59:LEU:HD22	1.84	0.60
1:1G:837:G:H1	1:1G:849:C:H42	1.49	0.60
1:1G:1141:C:H2'	1:1G:1142:G:C8	2.31	0.60
1:1G:1263:C:N3	1:1G:1273:G:N2	2.50	0.60
6:12:19:HIS:CG	6:12:20:GLU:H	2.20	0.60
6:12:179:LYS:HD3	6:12:180:LEU:HG	1.84	0.60
1:13:38:G:C2	1:13:397:A:C2	2.90	0.59
1:13:1064:G:OP1	1:13:1386:G:H4'	2.01	0.59
5:14:176:G:O2'	5:14:177:G:H5'	2.02	0.59
6:1E:84:GLU:HB3	6:1E:219:VAL:HG21	1.84	0.59
5:1H:128:C:H2'	5:1H:129:C:H6	1.67	0.59
5:1H:250:G:H2'	5:1H:251:A:C8	2.36	0.59
5:1H:1359:A:C2	5:1H:1372:U:O4	2.55	0.59
5:1H:2611:U:H2'	52:N8:3:LYS:HD3	1.83	0.59
40:B8:21:GLU:OE1	40:B8:91:ARG:NH2	2.36	0.59
51:M8:52:THR:OG1	51:M8:53:GLU:N	2.30	0.59
1:1G:451:A:N6	1:1G:480:U:H2'	2.16	0.59
6:12:174:VAL:HG11	6:12:196:LEU:HD13	1.84	0.59
1:13:429:U:H1'	1:13:430:A:H5''	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:804:U:H5''	1:13:805:C:OP2	2.03	0.59
5:14:1027:A:H5'	27:1J:88:C:H41	1.65	0.59
5:14:2190:G:H2'	5:14:2191:G:O4'	2.03	0.59
6:1E:76:GLN:NE2	6:1E:207:ALA:H	2.00	0.59
35:68:93:PRO:HG3	35:68:114:ILE:HG12	1.84	0.59
38:98:81:ASP:OD1	38:98:81:ASP:N	2.34	0.59
1:1G:17:U:H2'	1:1G:18:C:C6	2.37	0.59
1:1G:192:U:H2'	1:1G:193:C:C6	2.36	0.59
1:1G:749:C:H2'	1:1G:750:G:H8	1.67	0.59
1:1G:960:U:H3	1:1G:1225:A:H1'	1.66	0.59
1:13:21:G:OP1	58:13:1839:HOH:O	2.17	0.59
5:14:823:G:H2'	5:14:824:A:C8	2.37	0.59
21:8I:6:LEU:HD22	21:8I:23:VAL:HG11	1.84	0.59
5:1H:654(G):C:O2	5:1H:654(N):G:N2	2.34	0.59
5:1H:1010:A:OP2	58:1H:4294:HOH:O	2.17	0.59
5:1H:2150:U:H2'	5:1H:2151:G:C8	2.38	0.59
5:1H:2584:U:H2'	5:1H:2585:U:H2'	1.83	0.59
30:31:101:LEU:O	30:31:106:ARG:NH1	2.35	0.59
31:41:107:LEU:HD21	31:41:178:PHE:CD1	2.37	0.59
36:78:60:MET:HA	55:Q8:13:ARG:NH1	2.18	0.59
48:J8:73:LEU:HD11	48:J8:95:LEU:HD21	1.83	0.59
55:Q8:38:GLY:HA2	55:Q8:39:LYS:C	2.28	0.59
1:1G:661:G:H1	1:1G:744:C:H42	1.48	0.59
1:1G:765:G:N2	1:1G:813:U:OP2	2.26	0.59
1:13:631:G:H2'	1:13:632:A:N3	2.18	0.59
1:13:1510:U:H2'	1:13:1511:G:C8	2.38	0.59
5:14:1041:C:H42	5:14:1114:G:H22	1.50	0.59
4:4K:13:A:O2'	4:4K:14:A:OP1	2.20	0.59
5:1H:34:C:OP2	5:1H:34:C:H6	1.86	0.59
5:1H:363(B):G:H2'	5:1H:363(C):G:H8	1.66	0.59
5:1H:1588:C:H2'	5:1H:1589:C:H6	1.68	0.59
34:58:127:ASP:OD1	34:58:127:ASP:N	2.36	0.59
45:G8:9:LYS:HA	45:G8:27:VAL:HG22	1.83	0.59
1:13:142:G:H2'	1:13:143:A:C8	2.38	0.59
1:13:630:G:H2'	1:13:631:G:O4'	2.02	0.59
1:13:677:U:H3	1:13:713:G:H22	1.49	0.59
5:14:239:U:H2'	5:14:240:G:O4'	2.02	0.59
5:14:469:G:OP2	58:14:3933:HOH:O	2.15	0.59
5:14:2564:A:OP1	5:14:2648:C:H4'	2.03	0.59
8:3E:65:ARG:HG3	8:3E:70:ILE:HG22	1.85	0.59
11:6E:73:MET:HG2	11:6E:90:GLU:HA	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:8E:112:LYS:HD3	13:8E:113:LYS:H	1.67	0.59
23:AI:44:MET:O	23:AI:47:HIS:HB2	2.03	0.59
5:1H:270:A:OP1	58:1H:4271:HOH:O	2.16	0.59
5:1H:618:G:H2'	5:1H:618(A):C:H6	1.67	0.59
5:1H:1049:C:H2'	5:1H:1050:A:H5'	1.84	0.59
5:1H:1798:U:H5''	28:11:259:THR:HG22	1.84	0.59
1:1G:825:G:H1	1:1G:875:C:H42	1.48	0.59
1:1G:890:G:O2'	1:1G:906:G:O6	2.16	0.59
1:1G:1028(A):C:H5	1:1G:1029:G:C5	2.21	0.59
1:1G:1051:C:O2	1:1G:1207:G:N2	2.27	0.59
1:1G:1512:U:H2'	1:1G:1513:A:C8	2.38	0.59
2:1L:37:MIA:H111	4:4L:19:U:N3	2.17	0.59
5:1H:620:G:H4'	5:1H:621:A:C5'	2.32	0.59
5:1H:1265:A:H8	5:1H:1265:A:OP1	1.85	0.59
5:1H:1899:G:N2	5:1H:1902:C:H41	2.00	0.59
5:1H:2317:C:C2'	5:1H:2318:G:H5'	2.32	0.59
29:21:119:ARG:HD2	29:21:120:TRP:CE2	2.37	0.59
34:58:133:GLN:HG2	34:58:134:ARG:H	1.68	0.59
41:C8:92:ARG:CZ	42:D8:11:GLN:H	2.16	0.59
45:G8:49:VAL:HG21	45:G8:55:TYR:HE2	1.67	0.59
46:H8:9:TYR:HE1	46:H8:35:ARG:HD3	1.68	0.59
1:1G:624:C:H2'	1:1G:625:G:H8	1.67	0.59
1:1G:1002:G:H22	1:1G:1038:C:H42	1.50	0.59
1:1G:1262:C:O2	1:1G:1273:G:N2	2.24	0.59
5:14:107:C:H2'	5:14:108:U:H6	1.67	0.59
5:14:2128:C:H1'	5:14:2173:A:H2	1.68	0.59
6:1E:178:ARG:NH1	6:1E:196:LEU:O	2.33	0.59
14:1I:6:ILE:HG12	14:1I:72:VAL:O	2.02	0.59
15:2I:57:THR:HG22	15:2I:59:TYR:H	1.67	0.59
5:1H:1331:A:O2'	5:1H:1332:G:H8	1.85	0.59
5:1H:1512:G:H2'	5:1H:1513:C:C6	2.38	0.59
5:1H:1711:C:H2'	5:1H:1712:C:C6	2.38	0.59
5:1H:2028:U:O4	58:1H:4175:HOH:O	2.17	0.59
38:98:56:LYS:NZ	38:98:90:ARG:O	2.34	0.59
40:B8:108:ARG:HA	40:B8:111:ARG:NE	2.15	0.59
1:1G:108:G:H5'	1:1G:109:A:H5''	1.84	0.59
1:1G:181:G:O2'	1:1G:183:G:O6	2.18	0.59
1:1G:405:U:O4	8:32:2:GLY:N	2.36	0.59
1:1G:448:A:P	1:1G:485:G:H22	2.25	0.59
1:1G:600:C:H2'	1:1G:601:C:C6	2.37	0.59
1:13:1003:G:N2	1:13:1037:C:O2	2.28	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1128:C:O2'	1:13:1139:G:O6	2.20	0.59
5:14:19:C:H2'	5:14:20:C:H6	1.66	0.59
5:14:2270:G:OP2	58:14:4062:HOH:O	2.17	0.59
5:14:2340:G:H2'	5:14:2341:G:C8	2.38	0.59
11:6E:92:SER:O	11:6E:96:GLN:HG3	2.02	0.59
13:8E:89:ASN:O	13:8E:89:ASN:ND2	2.36	0.59
18:5I:37:PHE:CE2	18:5I:53:LEU:HD13	2.37	0.59
23:AI:78:ARG:HD2	23:AI:78:ARG:C	2.28	0.59
5:1H:286:C:H2'	5:1H:287:C:C6	2.38	0.59
5:1H:2836:U:H2'	5:1H:2837:G:C8	2.38	0.59
29:21:101:ARG:CZ	29:21:171:GLU:HB2	2.33	0.59
46:H8:67:LEU:HD22	46:H8:90:VAL:HG11	1.84	0.59
1:1G:297:G:N2	1:1G:300:A:OP2	2.32	0.59
1:1G:1194:U:H2'	1:1G:1195:C:H6	1.66	0.59
6:12:21:ARG:HA	6:12:39:ILE:HA	1.85	0.59
1:13:974:A:OP2	18:5I:29:ARG:NH2	2.36	0.59
1:13:1302:U:OP2	17:4I:21:TYR:OH	2.18	0.59
5:14:2801:A:H5''	5:14:2895:U:H4'	1.84	0.59
5:1H:484:C:H2'	5:1H:485:C:C6	2.38	0.59
5:1H:1613:G:O2'	54:P8:3:ARG:NE	2.35	0.59
27:16:42:C:H4'	31:41:67:LYS:HD2	1.84	0.59
28:11:147:LEU:HD13	28:11:155:LEU:HD21	1.83	0.59
28:11:228:PRO:O	58:11:404:HOH:O	2.17	0.59
37:88:133:ARG:O	37:88:134:ARG:HB2	2.03	0.59
1:1G:987:G:H22	1:1G:1218:C:H42	1.51	0.59
1:13:933:G:OP2	11:6E:3:ARG:HB2	2.02	0.59
5:14:597:U:H2'	5:14:598:G:H8	1.67	0.59
5:14:654(B):C:H2'	5:14:654(C):G:C8	2.38	0.59
5:14:1949:G:O6	58:14:4055:HOH:O	2.14	0.59
18:5I:4:LYS:O	18:5I:7:ILE:HG13	2.03	0.59
5:1H:637:A:H2'	36:78:117:GLU:OE1	2.03	0.59
5:1H:1429:G:H2'	5:1H:1430:C:C6	2.38	0.59
35:68:98:VAL:HG13	35:68:117:LEU:HB2	1.84	0.59
49:K8:35:LEU:HD12	49:K8:53:LEU:HD12	1.84	0.59
6:12:102:LEU:HD21	6:12:162:ILE:HG21	1.83	0.59
6:12:132:LYS:HA	6:12:135:GLN:HB2	1.84	0.59
1:13:1286:A:H5''	25:1F:26:LYS:HG2	1.85	0.58
5:14:1033:U:H3'	5:14:1033:U:H6	1.68	0.58
5:14:2572:A:OP1	5:14:2574:G:O2'	2.20	0.58
5:1H:860:U:C5	5:1H:917:A:C2	2.79	0.58
5:1H:996:A:OP2	41:C8:92:ARG:NH2	2.35	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1678:G:N2	5:1H:1989:G:N2	2.50	0.58
5:1H:2562:U:H1'	35:68:23:ARG:NH1	2.16	0.58
29:21:116:VAL:O	29:21:117:MET:HB3	2.01	0.58
42:D8:19:LYS:HG3	42:D8:95:LEU:HD23	1.85	0.58
49:K8:58:ALA:O	49:K8:62:THR:HG22	2.03	0.58
1:1G:632:A:H1'	1:1G:633:G:OP2	2.02	0.58
1:1G:1194:U:H2'	1:1G:1195:C:C6	2.38	0.58
1:13:659:U:H2'	1:13:660:G:C8	2.38	0.58
2:1L:19:G:O2'	2:1L:57:G:N2	2.36	0.58
5:14:519:U:H2'	5:14:520:G:C8	2.39	0.58
5:1H:270(N):G:OP2	33:61:57:ARG:NH2	2.37	0.58
1:1G:1190:G:H5'	7:22:176:HIS:HE2	1.67	0.58
6:12:19:HIS:CE1	6:12:206:ASP:HB2	2.35	0.58
21:8I:70:ARG:C	21:8I:71:PHE:HD1	2.11	0.58
5:1H:1290:C:H2'	5:1H:1291:C:C6	2.39	0.58
5:1H:2402:C:H5	5:1H:2415:G:H22	1.50	0.58
45:G8:83:THR:HG22	45:G8:84:ARG:HG3	1.85	0.58
48:J8:64:ALA:HA	48:J8:67:ILE:HG13	1.85	0.58
1:13:1148:U:H2'	1:13:1149:C:O4'	2.04	0.58
1:13:1327:C:OP2	25:1F:12:LYS:NZ	2.37	0.58
1:13:1372:U:OP1	13:8E:72:GLY:N	2.36	0.58
5:14:1171:G:O2'	5:14:1173:G:N3	2.35	0.58
5:1H:997:G:OP1	41:C8:93:LYS:HD2	2.04	0.58
5:1H:1798:U:H5'	28:11:259:THR:HG22	1.85	0.58
29:21:103:ASP:OD1	29:21:201:THR:HG23	2.03	0.58
38:98:67:LEU:HD22	38:98:76:VAL:HG21	1.85	0.58
41:C8:85:LYS:HA	41:C8:85:LYS:NZ	2.17	0.58
45:G8:40:GLU:HB2	45:G8:64:GLU:OE1	2.02	0.58
1:1G:421:U:O2'	1:1G:423:G:N7	2.37	0.58
1:1G:490:G:OP2	8:32:132:ARG:NH2	2.36	0.58
1:1G:1298:C:H4'	1:1G:1299:A:C8	2.39	0.58
7:22:75:VAL:O	7:22:83:ARG:NH2	2.36	0.58
1:13:581:G:N2	1:13:760:G:N7	2.51	0.58
1:13:600:C:H2'	1:13:601:C:C6	2.38	0.58
1:13:686:U:O4	1:13:703:G:H1'	2.03	0.58
1:13:741:G:H2'	1:13:742:G:O4'	2.04	0.58
1:13:1002:G:H2'	1:13:1003:G:H8	1.68	0.58
5:14:330:A:H2	5:14:1210:A:O2'	1.86	0.58
5:14:2836:U:H2'	5:14:2837:G:C8	2.39	0.58
7:2E:77:ILE:HA	7:2E:84:ILE:HD12	1.84	0.58
13:8E:112:LYS:HD3	13:8E:113:LYS:N	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:2I:22:HIS:HB3	15:2I:29:ILE:HG23	1.85	0.58
21:8I:20:THR:HG23	21:8I:43:LEU:HD23	1.85	0.58
2:3K:72:C:H2'	2:3K:73:A:O4'	2.04	0.58
5:1H:252:G:OP2	36:78:50:ARG:NH1	2.37	0.58
5:1H:535:C:O3'	41:C8:53:ARG:NH1	2.36	0.58
5:1H:2431:U:H3'	58:1H:3988:HOH:O	2.03	0.58
5:1H:2534:A:N6	58:1H:4612:HOH:O	2.36	0.58
5:1H:2577:A:H5''	5:1H:2578:G:H5'	1.85	0.58
27:1J:56:G:H4'	27:1J:57:A:C8	2.38	0.58
32:51:125:VAL:HG12	32:51:127:GLU:O	2.04	0.58
40:B8:58:ASN:C	40:B8:58:ASN:HD22	2.12	0.58
5:14:1013:C:H42	5:14:1149:G:H1	1.51	0.58
15:2I:124:LYS:HB3	15:2I:125:PHE:CD2	2.39	0.58
5:1H:125:G:C6	54:P8:10:ARG:HG3	2.39	0.58
5:1H:269:U:OP1	58:1H:4353:HOH:O	2.17	0.58
5:1H:2179:C:H2'	5:1H:2180:U:H6	1.67	0.58
28:11:206:LEU:HD22	28:11:211:ARG:HG2	1.85	0.58
33:61:56:LYS:O	33:61:60:GLU:HB3	2.04	0.58
1:1G:353:A:H5'	1:1G:353:A:H8	1.67	0.58
1:13:1318:A:H5''	23:AI:10:PHE:CD2	2.38	0.58
1:13:1346:A:H5''	13:8E:120:ARG:HH12	1.69	0.58
5:14:1354:A:OP2	58:14:3562:HOH:O	2.17	0.58
5:14:1520:U:H2'	5:14:1521:G:O4'	2.04	0.58
5:14:2098:U:N3	5:14:2191:G:O6	2.16	0.58
5:14:2638:G:O2'	5:14:2639:A:H8	1.85	0.58
6:1E:179:LYS:HA	12:7E:72:PRO:HG3	1.84	0.58
8:3E:30:LYS:HA	8:3E:35:ARG:HG3	1.84	0.58
12:7E:122:ARG:O	12:7E:126:LYS:HG3	2.03	0.58
23:AI:40:ILE:HD11	23:AI:62:ILE:HG23	1.85	0.58
5:1H:2146:C:H4'	5:1H:2147:G:N7	2.19	0.58
27:1J:94:C:H2'	27:1J:95:U:C6	2.39	0.58
6:12:7:VAL:HG22	6:12:8:LYS:H	1.68	0.58
7:22:61:ALA:C	7:22:63:ASN:H	2.11	0.58
8:32:13:ARG:C	8:32:15:GLU:H	2.12	0.58
1:13:1468:A:OP2	58:13:1980:HOH:O	2.16	0.58
5:14:1260:G:H2'	5:14:1261:C:C6	2.39	0.58
5:14:2655:G:N2	5:14:2665:A:OP2	2.21	0.58
9:4E:153:LYS:HD3	9:4E:154:GLY:H	1.68	0.58
10:5E:30:LEU:HB3	10:5E:35:ALA:HB3	1.84	0.58
33:61:8:PRO:HA	33:61:14:ASP:HA	1.84	0.58
41:C8:19:LYS:O	41:C8:22:LYS:HG3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:Q8:53:PRO:HA	55:Q8:54:GLU:C	2.29	0.58
1:1G:1059:C:H42	1:1G:1198:G:H1	1.51	0.58
1:1G:1329:A:H2'	1:1G:1330:U:O4'	2.04	0.58
6:12:22:LYS:NZ	6:12:35:GLU:OE1	2.36	0.58
8:32:59:ARG:O	8:32:63:LYS:N	2.21	0.58
1:13:323:U:H2'	1:13:324:G:O4'	2.03	0.58
1:13:376:G:H1	1:13:387:U:H3	1.52	0.58
1:13:1260:C:H3'	1:13:1260:C:H6	1.69	0.58
5:14:270(H):C:H2'	5:14:270(I):G:H8	1.69	0.58
5:14:1325:G:OP1	5:14:1647:G:O2'	2.17	0.58
5:14:1859:A:N6	5:14:1883:G:O2'	2.37	0.58
17:4I:4:ILE:HG22	17:4I:5:ALA:H	1.69	0.58
27:1J:38:C:H42	27:1J:44:G:H1	1.50	0.58
32:51:4:ILE:HD11	32:51:7:LEU:HD11	1.86	0.58
1:1G:179:A:H2'	1:1G:180:U:H6	1.68	0.58
3:2L:4:G:H1	3:2L:70:C:H42	1.52	0.58
5:14:582:G:H2'	5:14:583:G:C8	2.39	0.58
5:14:923:C:H2'	5:14:924:C:C6	2.39	0.58
7:2E:6:HIS:CD2	18:5I:49:HIS:HB3	2.39	0.58
9:4E:12:LEU:HD21	9:4E:14:ARG:HB2	1.86	0.58
17:4I:97:PRO:HA	17:4I:110:ARG:HD3	1.85	0.58
5:1H:960:A:H61	37:88:82:ARG:NH2	2.02	0.58
5:1H:1249:U:OP1	58:1H:3970:HOH:O	2.17	0.58
5:1H:2032:G:N2	29:21:146:THR:HG23	2.18	0.58
29:21:111:ARG:HD2	29:21:160:TYR:CD2	2.39	0.58
40:B8:64:ARG:HB2	40:B8:73:GLU:HG2	1.85	0.58
47:I8:25:ARG:HD3	47:I8:29:GLN:NE2	2.18	0.58
1:1G:313:A:H2'	1:1G:314:C:C6	2.38	0.58
1:1G:565:U:OP2	1:1G:566:G:O2'	2.18	0.58
1:1G:591:U:H2'	1:1G:592:G:C8	2.38	0.58
8:32:24:GLU:HG2	8:32:25:ARG:H	1.68	0.58
5:14:515:A:N1	5:14:1260:G:O2'	2.37	0.57
5:14:1188:U:C2'	5:14:1189:A:H5'	2.33	0.57
5:14:2262:U:H4'	5:14:2328:A:H2	1.68	0.57
5:1H:155:C:N4	5:1H:171:G:H1	2.02	0.57
5:1H:1022:G:O6	34:58:66:LYS:NZ	2.37	0.57
5:1H:1453:A:O2'	5:1H:1454:U:H2'	2.04	0.57
5:1H:1799:G:H5'	5:1H:1819:A:H61	1.68	0.57
5:1H:1805:U:O2	28:11:50:THR:HB	2.04	0.57
27:16:42:C:O3'	31:41:67:LYS:NZ	2.37	0.57
38:98:3:HIS:O	38:98:5:LYS:N	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:L8:31:LEU:O	50:L8:32:GLN:HB2	2.04	0.57
52:N8:40:LYS:HZ3	52:N8:46:CYS:HB3	1.69	0.57
1:1G:125:U:O4	58:1G:1711:HOH:O	2.15	0.57
1:1G:186(D):C:H2'	1:1G:186(E):C:C6	2.39	0.57
1:1G:408:A:H2'	1:1G:409:G:O4'	2.04	0.57
1:13:736:C:H2'	1:13:737:A:C8	2.39	0.57
1:13:963:G:H21	14:1I:55:LYS:CE	2.16	0.57
5:14:332:A:O2'	5:14:334:C:OP2	2.22	0.57
5:14:1485:G:H1	5:14:1504:C:N4	1.98	0.57
6:1E:74:LYS:O	6:1E:78:GLN:NE2	2.37	0.57
5:1H:533:G:H5'	41:C8:24:TYR:CD1	2.39	0.57
5:1H:1055:G:H1'	5:1H:1085:A:C2	2.39	0.57
5:1H:1430:C:H2'	5:1H:1431:U:C6	2.38	0.57
5:1H:2593:U:O4	58:1H:3690:HOH:O	2.16	0.57
28:11:17:THR:HG22	28:11:205:VAL:H	1.69	0.57
1:1G:984:C:H2'	1:1G:985:C:C6	2.40	0.57
1:13:554:C:H2'	1:13:555:C:H6	1.70	0.57
1:13:963:G:H5'	58:13:1953:HOH:O	2.03	0.57
5:14:235:U:H2'	5:14:236:C:H6	1.68	0.57
9:4E:33:VAL:HG11	9:4E:109:ILE:HA	1.86	0.57
14:1I:78:ASN:HB2	14:1I:81:THR:HG23	1.85	0.57
3:2K:16:C:O2'	3:2K:62:C:OP1	2.20	0.57
5:1H:2807:G:H3'	5:1H:2808:U:H5''	1.86	0.57
29:21:29:GLY:H	29:21:51:PHE:HE1	1.51	0.57
39:A8:42:ASP:O	39:A8:43:GLU:HB2	2.03	0.57
1:1G:111:G:H8	1:1G:111:G:O5'	1.86	0.57
1:1G:1481:U:H2'	1:1G:1482:G:C8	2.39	0.57
6:12:119:GLU:HG3	6:12:142:LEU:HD11	1.85	0.57
8:32:173:TRP:HZ3	8:32:193:ASP:HB3	1.67	0.57
3:2L:48:U:O2'	3:2L:49:C:OP2	2.20	0.57
6:1E:12:GLU:HA	6:1E:16:HIS:ND1	2.19	0.57
5:1H:1111:A:N3	5:1H:1112:G:H1'	2.19	0.57
5:1H:1187:G:OP2	58:1H:3949:HOH:O	2.17	0.57
5:1H:1769:G:O2'	5:1H:1958:C:OP1	2.17	0.57
32:51:4:ILE:HB	32:51:6:ARG:HG3	1.87	0.57
41:C8:47:TYR:C	41:C8:47:TYR:CD2	2.83	0.57
1:1G:992:U:H3	1:1G:1044:A:H62	1.53	0.57
6:12:221:LEU:HA	6:12:224:GLN:HB2	1.86	0.57
3:2L:62:C:H2'	3:2L:63:C:H6	1.68	0.57
5:14:1688:U:O2	5:14:1700:A:H5'	2.05	0.57
5:14:2074:U:H2'	5:14:2075:U:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:1I:26:ALA:HB1	14:1I:84:GLN:HG2	1.87	0.57
17:4I:3:ARG:HE	17:4I:9:ILE:HD11	1.68	0.57
17:4I:82:MET:O	17:4I:84:ILE:N	2.35	0.57
5:1H:142:G:H1'	44:F8:37:THR:HG21	1.87	0.57
5:1H:322:A:P	30:31:168:ARG:HH21	2.28	0.57
5:1H:1093:G:HO2'	5:1H:1099:G:N2	2.01	0.57
5:1H:1264:G:H3'	5:1H:1265:A:H5''	1.87	0.57
5:1H:2262:U:O2'	5:1H:2263:C:H5'	2.05	0.57
37:88:39:PRO:HA	37:88:97:VAL:O	2.04	0.57
44:F8:51:VAL:HG13	44:F8:81:VAL:HG23	1.87	0.57
1:1G:1274:G:H2'	1:1G:1275:A:C8	2.39	0.57
1:1G:1386:G:C2	1:1G:1387:G:N7	2.71	0.57
1:13:793:U:H5'	1:13:794:A:H5''	1.87	0.57
5:14:739:G:P	58:14:3825:HOH:O	2.62	0.57
5:14:2542:A:H4'	5:14:2542:A:OP1	2.05	0.57
7:2E:95:THR:HB	7:2E:97:LYS:H	1.69	0.57
15:2I:21:ILE:HB	15:2I:84:VAL:HG12	1.85	0.57
15:2I:86:GLY:N	15:2I:112:THR:OG1	2.26	0.57
25:1F:3:LYS:HB3	25:1F:14:TRP:CD1	2.39	0.57
2:3K:64:A:C2	2:3K:65:G:H1'	2.40	0.57
5:1H:1298:C:OP2	58:1H:3654:HOH:O	2.17	0.57
30:31:103:LYS:HA	30:31:106:ARG:HG3	1.86	0.57
38:98:52:ILE:O	38:98:55:ALA:N	2.34	0.57
40:B8:26:ASP:OD2	40:B8:120:ARG:NH1	2.36	0.57
1:1G:1016:A:O2'	1:1G:1217:C:O2'	2.21	0.57
6:12:77:ALA:O	6:12:81:VAL:HG23	2.04	0.57
1:13:1120:G:H2'	1:13:1121:U:H6	1.68	0.57
1:13:1124:G:HO2'	1:13:1145:C:N4	2.01	0.57
1:13:1259:C:N4	1:13:1260:C:O2	2.38	0.57
5:14:1359:A:N6	5:14:1372:U:H3	1.96	0.57
5:14:2130:U:H2'	5:14:2158:A:N1	2.20	0.57
6:1E:94:ASN:OD1	6:1E:95:GLN:N	2.33	0.57
16:3I:117:ARG:HB3	16:3I:122:THR:HB	1.86	0.57
5:1H:1433:U:O2	5:1H:1561:G:C2	2.57	0.57
5:1H:1533:C:H3'	5:1H:1534:G:C5'	2.35	0.57
30:31:162:LEU:HA	30:31:165:ARG:HG3	1.86	0.57
39:A8:26:LEU:HD22	39:A8:87:PHE:HD1	1.70	0.57
41:C8:112:ARG:NH2	42:D8:47:VAL:HG13	2.19	0.57
1:1G:114:U:H2'	1:1G:115:G:C8	2.40	0.57
1:1G:940:C:H2'	1:1G:941:G:H8	1.69	0.57
1:1G:1412:C:H2'	1:1G:1413:A:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:179:A:H2'	1:13:180:U:H6	1.69	0.57
1:13:413:G:N2	1:13:428:G:H1'	2.18	0.57
1:13:748:C:H6	1:13:748:C:O5'	1.88	0.57
1:13:1130:A:N6	1:13:1144:G:H21	2.03	0.57
1:13:1368:G:H5''	13:8E:112:LYS:HB3	1.87	0.57
1:13:1497:G:C2'	1:13:1498:U:H5'	2.34	0.57
5:14:363(E):U:H5'	5:14:363(F):A:OP2	2.05	0.57
13:8E:49:PRO:O	13:8E:53:VAL:HB	2.05	0.57
16:3I:53:ARG:HG3	16:3I:93:LEU:HD21	1.87	0.57
24:BI:57:ARG:NH1	24:BI:102:GLY:HA2	2.19	0.57
5:1H:2830:G:H5''	5:1H:2830:G:H8	1.70	0.57
30:31:167:ALA:HB1	30:31:173:VAL:HG11	1.87	0.57
31:41:131:TYR:O	31:41:159:VAL:HG22	2.04	0.57
39:A8:99:LYS:O	39:A8:103:GLU:HG2	2.05	0.57
46:H8:58:VAL:O	46:H8:60:GLU:N	2.37	0.57
1:1G:176:C:H2'	1:1G:177:C:H6	1.69	0.57
1:1G:1055:A:N3	7:22:156:ARG:NH1	2.53	0.57
1:1G:1142:G:H3'	1:1G:1143:G:C8	2.40	0.57
1:13:953:G:H2'	1:13:954:G:O4'	2.04	0.57
1:13:1120:G:H2'	1:13:1121:U:C6	2.40	0.57
3:2L:41:C:H2'	3:2L:42:C:H6	1.69	0.57
5:14:1441:G:H2'	5:14:1442:G:H8	1.70	0.57
5:14:2776:A:OP1	5:14:2776:A:H3'	2.05	0.57
14:1I:84:GLN:HG3	14:1I:88:LEU:HD23	1.87	0.57
17:4I:20:THR:HG23	17:4I:26:GLY:HA3	1.87	0.57
3:2K:62:C:H2'	3:2K:63:C:C6	2.39	0.57
5:1H:1316:U:H2'	5:1H:1317:A:C8	2.36	0.57
5:1H:1403:C:H5''	5:1H:1471:A:H1'	1.86	0.57
5:1H:2683:C:OP1	40:B8:53:ARG:NH2	2.37	0.57
30:31:129:PHE:HA	30:31:142:TRP:NE1	2.19	0.57
55:Q8:30:ARG:HB2	55:Q8:30:ARG:CZ	2.34	0.57
1:1G:222:U:H2'	1:1G:223:U:H6	1.69	0.57
1:1G:433:C:H2'	1:1G:434:U:C6	2.38	0.57
1:1G:994:A:C5	1:1G:1216:G:H4'	2.40	0.57
7:22:11:ARG:HB2	7:22:11:ARG:HH11	1.70	0.57
1:13:701:C:O2	1:13:703:G:N1	2.38	0.57
1:13:1170:A:C8	1:13:1171:G:C8	2.93	0.57
1:13:1183:A:O2'	1:13:1184:G:OP1	2.19	0.57
21:8I:76:LEU:HD12	21:8I:77:VAL:N	2.19	0.57
5:1H:674:G:H1'	30:31:74:ARG:HD3	1.85	0.57
5:1H:1338:G:H2'	5:1H:1339:G:H8	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2636:U:P	29:21:79:ARG:HA	2.45	0.57
55:Q8:25:MET:HG2	55:Q8:46:ARG:HG2	1.87	0.57
1:1G:1216:G:H2'	1:1G:1217:C:C6	2.40	0.57
8:32:76:ARG:HH21	8:32:80:GLU:HG2	1.70	0.57
1:13:153:C:N4	1:13:168:G:H1	2.00	0.56
1:13:1190:G:OP1	7:2E:4:LYS:HA	2.05	0.56
5:14:654(E):C:H42	5:14:654(P):G:H22	1.53	0.56
5:14:706:A:H2'	5:14:707:G:O4'	2.05	0.56
5:14:1913:A:H4'	5:14:1914:C:H5''	1.86	0.56
5:14:2150:U:H2'	5:14:2151:G:H8	1.69	0.56
8:3E:92:VAL:HG12	8:3E:96:LEU:HD21	1.87	0.56
10:5E:3:ARG:HB3	10:5E:93:SER:HB2	1.87	0.56
15:2I:98:LEU:O	15:2I:101:SER:OG	2.14	0.56
5:1H:1310:G:OP2	54:P8:9:ARG:NH1	2.37	0.56
5:1H:1676:A:N7	58:1H:3722:HOH:O	2.33	0.56
5:1H:1794:U:H2'	5:1H:1795:C:C6	2.39	0.56
5:1H:2275:C:H5'	5:1H:2275:C:H6	1.69	0.56
5:1H:2341:G:H2'	5:1H:2342:C:C6	2.39	0.56
5:1H:2580:U:H4'	29:21:130:GLY:HA3	1.87	0.56
27:1J:70:C:H2'	27:1J:71:C:H6	1.70	0.56
31:41:151:ALA:O	31:41:153:ARG:NH1	2.38	0.56
33:61:29:TYR:O	33:61:32:PRO:HD2	2.05	0.56
45:G8:87:LYS:HD2	45:G8:96:ILE:HD11	1.85	0.56
1:13:558:G:H5''	1:13:559:A:OP2	2.05	0.56
1:13:963:G:H21	14:1I:55:LYS:NZ	2.02	0.56
2:3L:33:U:N3	2:3L:36:A:OP2	2.38	0.56
5:14:654(J):A:N7	5:14:654(K):C:N4	2.53	0.56
5:14:2120:G:H2'	5:14:2121:G:C8	2.40	0.56
6:1E:16:HIS:CE1	6:1E:213:LEU:HD13	2.41	0.56
7:2E:52:LEU:HA	7:2E:70:VAL:HG12	1.86	0.56
11:6E:120:ILE:O	11:6E:124:LEU:HB2	2.05	0.56
5:1H:336:C:OP1	45:G8:83:THR:HG23	2.05	0.56
5:1H:760:G:H5''	58:1H:3878:HOH:O	2.05	0.56
5:1H:792:G:H5''	5:1H:793:A:H5'	1.87	0.56
5:1H:848:G:H2'	5:1H:849:A:C8	2.40	0.56
5:1H:1069:A:H4'	5:1H:1070:A:H5''	1.87	0.56
5:1H:2128:C:N4	5:1H:2160:G:H1	2.03	0.56
27:16:5:C:O2'	27:16:27:C:O2	2.21	0.56
29:21:50:GLY:HA2	29:21:77:ILE:HA	1.87	0.56
38:98:63:ARG:HG2	38:98:67:LEU:HD23	1.87	0.56
44:F8:80:ILE:HG13	44:F8:80:ILE:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:I8:63:VAL:HG23	47:I8:64:ASP:O	2.04	0.56
55:Q8:48:PHE:CZ	55:Q8:52:LYS:HB2	2.39	0.56
1:1G:280:C:H3'	1:1G:281:G:H5'	1.87	0.56
1:1G:1177:G:O2'	1:1G:1178:G:O4'	2.23	0.56
1:1G:1210:C:H3'	1:1G:1211:U:H5''	1.86	0.56
1:13:31:G:O2'	1:13:48:C:N4	2.38	0.56
1:13:271:C:H2'	1:13:272:C:H6	1.70	0.56
1:13:864:A:H2'	1:13:865:A:C8	2.40	0.56
1:13:971:G:N2	1:13:1363:A:OP2	2.33	0.56
1:13:1525:G:OP1	15:2I:120:ARG:NH2	2.39	0.56
5:14:30:G:H2'	5:14:31:C:H6	1.68	0.56
5:14:1981:A:OP1	58:14:3544:HOH:O	2.17	0.56
8:3E:108:LEU:HD23	8:3E:110:PHE:CE1	2.41	0.56
23:AI:51:VAL:HG12	23:AI:52:TYR:H	1.70	0.56
5:1H:192:C:P	58:1H:3729:HOH:O	2.64	0.56
5:1H:1036:G:H1	5:1H:1119:C:N4	1.96	0.56
5:1H:1312:U:H4'	5:1H:1313:U:O5'	2.04	0.56
5:1H:1639:U:O2'	5:1H:1640:C:H5'	2.05	0.56
5:1H:2299:G:O6	58:1H:4565:HOH:O	2.18	0.56
5:1H:2636:U:H2'	5:1H:2637:U:C6	2.40	0.56
5:1H:2830:G:H5''	5:1H:2830:G:C8	2.40	0.56
27:16:42:C:O2'	31:41:67:LYS:HE3	2.06	0.56
28:11:71:ASP:N	28:11:71:ASP:OD1	2.34	0.56
29:21:167:VAL:HG21	29:21:187:ALA:CB	2.35	0.56
32:51:83:TYR:HB3	32:51:135:GLY:H	1.70	0.56
34:58:7:LYS:H	34:58:7:LYS:NZ	2.03	0.56
49:K8:59:ARG:O	49:K8:62:THR:HG23	2.06	0.56
1:1G:108:G:H5'	1:1G:109:A:C5'	2.36	0.56
1:1G:438:G:H4'	8:32:123:HIS:CD2	2.38	0.56
1:1G:868:C:H2'	1:1G:869:G:O4'	2.04	0.56
1:1G:977:A:HO2'	1:1G:981:U:H3	1.52	0.56
1:1G:1058:G:H1	1:1G:1199:U:H3	1.53	0.56
7:22:32:LEU:O	7:22:36:ASP:HB2	2.05	0.56
1:13:156:G:H1	1:13:165:C:H42	1.52	0.56
1:13:580:U:OP1	19:6I:54:ARG:NH2	2.37	0.56
1:13:1015:A:H2'	1:13:1016:A:C8	2.40	0.56
5:14:1939:U:OP1	5:14:2604:U:O2'	2.22	0.56
6:1E:115:LEU:HD13	6:1E:145:LEU:HB3	1.88	0.56
10:5E:86:ARG:O	10:5E:87:ARG:HG2	2.05	0.56
16:3I:70:ILE:HD13	16:3I:77:LEU:HD12	1.86	0.56
18:5I:9:LYS:HA	18:5I:12:ARG:HG2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:827:U:H5'	5:1H:828:U:O5'	2.04	0.56
5:1H:888:C:H2'	5:1H:889:C:C2	2.41	0.56
5:1H:1026:U:H1'	5:1H:1027:A:O5'	2.05	0.56
5:1H:1178:C:H4'	5:1H:1179:C:OP1	2.05	0.56
5:1H:2068:U:N3	5:1H:2430:A:C2	2.73	0.56
34:58:19:GLU:HG3	34:58:59:LYS:HB3	1.88	0.56
35:68:63:VAL:HG12	35:68:106:LEU:HD11	1.87	0.56
38:98:38:VAL:HB	38:98:39:PRO:HD3	1.86	0.56
44:F8:3:THR:HB	44:F8:6:ASP:HB2	1.87	0.56
1:1G:1241:G:H1	1:1G:1296:C:H42	1.51	0.56
1:1G:1360:A:H8	1:1G:1360:A:OP1	1.89	0.56
1:13:376:G:H5''	20:7I:5:ARG:HD2	1.87	0.56
1:13:553:A:H5''	16:3I:24:VAL:HG21	1.86	0.56
1:13:1508:G:P	58:13:1803:HOH:O	2.64	0.56
5:14:2646:C:H2'	5:14:2647:U:O4'	2.05	0.56
6:1E:111:ARG:HG2	6:1E:111:ARG:NH1	2.18	0.56
5:1H:600:G:N2	5:1H:605:C:O3'	2.38	0.56
5:1H:1835:G:H5'	5:1H:1836:C:OP2	2.06	0.56
27:16:11:C:OP2	47:I8:72:ARG:NH2	2.39	0.56
33:61:131:LYS:HB3	33:61:132:PRO:HA	1.88	0.56
37:88:54:MET:HE3	37:88:64:ILE:HD13	1.87	0.56
38:98:12:ARG:HG2	38:98:12:ARG:NH1	2.21	0.56
39:A8:24:LEU:HD12	39:A8:41:ASP:HB2	1.88	0.56
47:I8:14:ARG:NH1	58:I8:202:HOH:O	2.38	0.56
1:1G:401:C:H2'	1:1G:402:G:C8	2.41	0.56
1:1G:1004:A:H2	1:1G:1024:G:C8	2.23	0.56
1:13:637:G:H2'	1:13:638:G:C8	2.41	0.56
1:13:1086:U:O4	1:13:1099:G:N2	2.30	0.56
1:13:1336:C:C6	1:13:1336:C:H5''	2.41	0.56
5:14:309:G:N3	5:14:329:G:O2'	2.38	0.56
5:14:1011:G:C2	5:14:1151:G:C2	2.94	0.56
5:14:1819:A:H4'	5:14:1820:U:O5'	2.04	0.56
5:14:2317:C:H2'	5:14:2318:G:O4'	2.04	0.56
5:14:2507:C:H5''	5:14:2573:C:N4	2.20	0.56
10:5E:100:ASN:H	22:9I:23:LYS:HZ2	1.53	0.56
3:2K:52:C:H2'	3:2K:53:G:O4'	2.06	0.56
5:1H:234:C:H2'	5:1H:235:U:H6	1.70	0.56
5:1H:607:U:N3	5:1H:621:A:C2	2.70	0.56
5:1H:1427:A:H4'	5:1H:1428:C:O5'	2.04	0.56
29:21:101:ARG:HG2	29:21:169:ASN:OD1	2.05	0.56
48:J8:8:SER:HB3	48:J8:66:HIS:CD2	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:L8:9:VAL:HG22	50:L8:54:VAL:HA	1.88	0.56
1:13:405:U:O4	8:3E:2:GLY:N	2.39	0.56
1:13:1149:C:H2'	1:13:1150:U:C6	2.41	0.56
2:1L:18:G:O2'	2:1L:19:G:OP1	2.19	0.56
2:3L:48:C:H41	2:3L:59:U:H1'	1.69	0.56
5:14:400:G:N7	58:14:3921:HOH:O	2.33	0.56
5:14:519:U:H2'	5:14:520:G:H8	1.69	0.56
5:14:2749:A:N1	5:14:2750:A:N6	2.53	0.56
8:3E:173:TRP:CD1	8:3E:174:LEU:HG	2.40	0.56
16:3I:47:LYS:HB2	16:3I:48:PRO:HA	1.88	0.56
17:4I:52:GLU:O	17:4I:56:LEU:HB2	2.06	0.56
5:1H:1049:C:C2'	5:1H:1050:A:H5'	2.35	0.56
5:1H:1514:U:H2'	5:1H:1515:C:C6	2.40	0.56
55:Q8:35:GLN:C	55:Q8:37:SER:H	2.14	0.56
55:Q8:48:PHE:CE2	55:Q8:52:LYS:HG3	2.41	0.56
6:12:53:ARG:HH12	6:12:199:TYR:HA	1.69	0.56
8:32:82:ALA:HA	8:32:85:LYS:HB2	1.88	0.56
1:13:57:G:H2'	1:13:58:C:C6	2.41	0.56
5:14:639:U:H2'	5:14:640:C:C6	2.41	0.56
5:14:696:G:H2'	5:14:697:C:H6	1.71	0.56
5:14:2127:G:O2'	5:14:2173:A:N1	2.33	0.56
5:14:2542:A:N3	5:14:2542:A:H5''	2.21	0.56
32:51:20:ALA:HB3	32:51:23:ARG:HG3	1.88	0.56
34:58:96:GLU:C	34:58:98:VAL:H	2.11	0.56
37:88:59:ARG:C	37:88:61:GLY:H	2.14	0.56
41:C8:8:VAL:O	41:C8:12:ARG:HG3	2.05	0.56
44:F8:1:MET:C	44:F8:3:THR:N	2.64	0.56
49:K8:55:ARG:O	49:K8:58:ALA:HB3	2.05	0.56
55:Q8:8:LYS:H	55:Q8:8:LYS:HD2	1.70	0.56
1:1G:302:G:O2'	1:1G:556:C:H5''	2.06	0.56
1:1G:1278:U:H5'	1:1G:1279:A:C5'	2.36	0.56
1:13:142:G:H2'	1:13:143:A:H8	1.69	0.56
1:13:750:G:N3	19:6I:23:GLY:HA3	2.21	0.56
5:14:363:G:H2'	5:14:363(A):A:H8	1.69	0.56
5:14:621:A:H3'	5:14:622:G:H8	1.71	0.56
5:14:656:G:H2'	5:14:657:U:O4'	2.06	0.56
5:14:1470:G:N2	5:14:1522:G:OP2	2.39	0.56
5:14:1849:G:H2'	5:14:1850:G:H8	1.69	0.56
5:14:2054:A:H5''	5:14:2055:C:O5'	2.05	0.56
5:1H:2392:A:H2	5:1H:2424:C:N4	2.03	0.56
5:1H:2862:G:H2'	5:1H:2863:C:H6	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:51:20:ALA:HB1	32:51:21:PRO:HD2	1.88	0.56
32:51:86:GLU:HG3	32:51:165:ALA:H	1.69	0.56
36:78:38:GLN:O	36:78:44:GLY:HA2	2.06	0.56
54:P8:15:THR:HG22	54:P8:16:HIS:CE1	2.40	0.56
1:1G:1498:U:O2'	1:1G:1499:A:OP2	2.18	0.56
6:12:212:GLN:O	6:12:216:SER:N	2.28	0.56
8:32:59:ARG:HA	8:32:62:GLN:HB2	1.87	0.56
8:32:112:VAL:HG12	8:32:116:GLN:OE1	2.05	0.56
1:13:429:U:OP2	8:3E:36:ARG:NH2	2.35	0.56
1:13:1226:C:H4'	23:AI:80:TYR:OH	2.06	0.56
2:3L:37:MIA:H2'	2:3L:38:A:H8	1.71	0.56
5:14:1450:C:H2'	5:14:1451:C:C6	2.41	0.56
5:14:2275:C:H5'	5:14:2275:C:C6	2.39	0.56
14:1I:57:LYS:HD2	14:1I:60:ARG:HH12	1.71	0.56
5:1H:459:U:H2'	5:1H:460:A:H8	1.71	0.56
5:1H:563:G:OP2	58:1H:3640:HOH:O	2.18	0.56
5:1H:1140:C:OP1	34:58:23:LEU:HB3	2.06	0.56
5:1H:1359:A:H2	5:1H:1372:U:O4	1.89	0.56
5:1H:2164:C:OP2	5:1H:2166:G:N2	2.39	0.56
28:11:71:ASP:OD2	28:11:103:ARG:NH2	2.39	0.56
29:21:48:GLN:OE1	29:21:77:ILE:HG21	2.06	0.56
32:51:136:ILE:H	32:51:136:ILE:HD12	1.70	0.56
32:51:154:PRO:HB3	32:51:163:TYR:CE2	2.41	0.56
1:1G:188:U:O2'	1:1G:189:U:H5'	2.06	0.56
1:13:37:U:O2'	1:13:500:G:H4'	2.05	0.55
1:13:859:A:H2'	1:13:860:A:C8	2.41	0.55
3:2L:10:G:N2	3:2L:27:G:H1'	2.21	0.55
5:14:2808:U:H2'	5:14:2809:A:H8	1.72	0.55
13:8E:8:GLY:HA3	13:8E:79:LEU:HB3	1.87	0.55
5:1H:213:A:H5''	5:1H:214:G:OP2	2.06	0.55
5:1H:534:U:H5'	41:C8:42:ALA:HB1	1.88	0.55
5:1H:1570:A:H2'	5:1H:1571:A:C8	2.40	0.55
27:1J:44:G:H5''	27:1J:45:A:OP1	2.06	0.55
28:11:102:LYS:C	28:11:103:ARG:HG2	2.31	0.55
29:21:78:LEU:O	29:21:79:ARG:HB2	2.05	0.55
29:21:105:THR:OG1	29:21:199:ARG:NH2	2.38	0.55
32:51:86:GLU:HG3	32:51:165:ALA:HB3	1.88	0.55
1:1G:1134:G:H1	1:1G:1140:C:H42	1.54	0.55
1:1G:1422:G:H2'	1:1G:1423:G:H8	1.71	0.55
1:13:221:C:H2'	1:13:222:U:H6	1.71	0.55
1:13:1346:A:N1	1:13:1374:A:H5''	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1021:A:H2'	5:14:1023:U:H5'	1.87	0.55
5:14:1053:C:H2'	5:14:1054:A:O4'	2.06	0.55
5:14:1270:C:H5''	5:14:1271:G:O5'	2.06	0.55
5:14:1359:A:N7	5:14:1372:U:O4	2.40	0.55
5:14:2652:C:H42	5:14:2668:G:H1	1.52	0.55
6:1E:124:SER:HB2	6:1E:125:PRO:HD2	1.89	0.55
8:3E:107:ARG:HH21	8:3E:194:LEU:HD22	1.71	0.55
5:1H:483:A:OP1	45:G8:50:ARG:NH2	2.39	0.55
5:1H:565:C:H4'	58:1H:3733:HOH:O	2.06	0.55
5:1H:607:U:OP1	30:31:102:PRO:HA	2.06	0.55
5:1H:1013:C:C2'	5:1H:1014:U:H5'	2.36	0.55
5:1H:1534:G:H22	5:1H:1538:G:N2	2.03	0.55
5:1H:2131:G:H5''	5:1H:2133:G:H4'	1.88	0.55
5:1H:2313:C:H4'	31:41:91:ARG:HG3	1.87	0.55
42:D8:65:GLY:HA3	42:D8:91:TYR:CE1	2.40	0.55
49:K8:42:GLY:C	49:K8:44:LEU:H	2.12	0.55
55:Q8:6:THR:HA	55:Q8:58:ILE:H	1.71	0.55
1:1G:983:A:N1	1:1G:1222:G:N2	2.55	0.55
1:13:160:A:H1'	1:13:344:A:C8	2.41	0.55
5:14:279:C:N4	5:14:361:G:H1	2.05	0.55
5:14:1921:G:H2'	5:14:1922:G:H8	1.71	0.55
5:14:2134:A:OP2	5:14:2157:G:N2	2.30	0.55
23:AI:51:VAL:O	23:AI:57:HIS:HA	2.07	0.55
5:1H:654:A:H3'	5:1H:654:A:N3	2.21	0.55
5:1H:1250:G:OP2	36:78:18:ARG:NH1	2.39	0.55
5:1H:1400:G:H2'	5:1H:1401:G:C8	2.42	0.55
5:1H:1667:G:O2'	5:1H:1991:U:O4	2.22	0.55
5:1H:2324:C:H5''	5:1H:2325:G:H5'	1.88	0.55
5:1H:2766:G:H2'	5:1H:2766:G:N3	2.22	0.55
27:16:44:G:H1'	27:16:47:C:N4	2.20	0.55
33:61:9:LEU:HD21	33:61:35:LEU:HD13	1.89	0.55
41:C8:92:ARG:NH1	42:D8:11:GLN:O	2.39	0.55
52:N8:40:LYS:NZ	52:N8:46:CYS:HB3	2.22	0.55
1:1G:57:G:H2'	1:1G:58:C:C6	2.41	0.55
1:1G:741:G:H2'	1:1G:742:G:O4'	2.06	0.55
1:1G:865:A:N3	1:1G:918:A:O2'	2.30	0.55
1:1G:940:C:H2'	1:1G:941:G:C8	2.41	0.55
1:1G:991:U:O4	1:1G:1212:U:O2'	2.16	0.55
1:1G:1251:A:H2'	1:1G:1252:A:C8	2.42	0.55
1:1G:1326:C:H2'	1:1G:1327:C:C6	2.42	0.55
1:13:1366:C:H2'	1:13:1367:C:H6	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:581:C:H2'	5:14:582:G:H8	1.70	0.55
5:14:848:G:H2'	5:14:849:A:H8	1.70	0.55
5:14:1058:U:H2'	5:14:1059:G:H8	1.71	0.55
12:7E:25:ASP:OD1	12:7E:60:ARG:HG3	2.07	0.55
12:7E:87:SER:HB2	12:7E:93:VAL:CB	2.36	0.55
22:9I:59:SER:OG	22:9I:62:GLU:HB2	2.06	0.55
5:1H:729:G:OP2	28:11:13:ARG:NH1	2.36	0.55
5:1H:1216:G:OP2	41:C8:12:ARG:NH2	2.35	0.55
5:1H:1408:C:C2	5:1H:1595:G:N2	2.74	0.55
31:41:84:LYS:O	31:41:84:LYS:HG3	2.05	0.55
32:51:101:ARG:NH2	32:51:121:ILE:O	2.40	0.55
33:61:29:TYR:CD2	33:61:30:LEU:HD23	2.38	0.55
36:78:50:ARG:HD3	55:Q8:7:HIS:NE2	2.21	0.55
1:1G:994:A:N7	1:1G:1216:G:H4'	2.21	0.55
7:22:50:ALA:HB1	7:22:70:VAL:HG11	1.88	0.55
1:13:105:G:H2'	1:13:106:C:C6	2.41	0.55
1:13:730:G:C5	1:13:731:G:H1'	2.42	0.55
5:14:71:A:H5'	5:14:71:A:C8	2.41	0.55
5:14:343:C:H2'	5:14:344:G:C8	2.41	0.55
5:14:918:A:O2'	27:1J:96:G:N2	2.39	0.55
15:2I:127:LYS:HD3	15:2I:128:ALA:H	1.70	0.55
16:3I:126:LYS:HG3	16:3I:128:ALA:H	1.71	0.55
5:1H:1113:U:H2'	5:1H:1114:G:C8	2.41	0.55
5:1H:2843:G:H1	5:1H:2874:C:H42	1.53	0.55
27:1J:88:C:H3'	27:1J:89:G:C8	2.41	0.55
55:Q8:57:ARG:HA	55:Q8:58:ILE:C	2.31	0.55
1:1G:1043:C:H2'	1:1G:1044:A:H8	1.72	0.55
1:13:77:C:H2'	1:13:78:G:H5''	1.88	0.55
1:13:683:G:C6	1:13:684:A:C6	2.95	0.55
5:14:2461:C:H2'	5:14:2462:U:H6	1.72	0.55
7:2E:3:ASN:N	7:2E:3:ASN:OD1	2.40	0.55
8:3E:141:ARG:HB2	8:3E:141:ARG:NH1	2.22	0.55
9:4E:11:ILE:HG13	9:4E:31:LEU:HB3	1.88	0.55
13:8E:112:LYS:HA	13:8E:119:ALA:HB2	1.89	0.55
15:2I:103:LEU:O	15:2I:105:VAL:HG12	2.07	0.55
5:1H:280:C:N3	5:1H:361:G:C2	2.75	0.55
5:1H:1392:A:C6	5:1H:1393:A:N1	2.75	0.55
5:1H:1443:G:C2	5:1H:1549:C:N3	2.75	0.55
5:1H:1598:C:H2'	5:1H:1599:C:H6	1.71	0.55
5:1H:2028:U:H2'	5:1H:2029:G:O4'	2.07	0.55
5:1H:2345:G:N3	5:1H:2381:C:H2'	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:16:15:A:H5'	27:16:16:G:H8	1.71	0.55
28:11:164:GLN:OE1	28:11:166:GLN:NE2	2.39	0.55
40:B8:93:ARG:HG3	40:B8:93:ARG:HH11	1.72	0.55
42:D8:25:LEU:H	42:D8:92:THR:CG2	2.20	0.55
49:K8:28:LYS:HA	49:K8:31:GLU:HB2	1.89	0.55
1:13:390:C:H2'	1:13:391:G:C8	2.42	0.55
1:13:452:A:OP1	20:7I:43:LYS:NZ	2.39	0.55
1:13:979:C:N4	58:13:1828:HOH:O	2.39	0.55
1:13:1486:G:H2'	1:13:1487:G:O4'	2.07	0.55
5:14:2114:A:N6	5:14:2119:A:N7	2.55	0.55
5:1H:1637:A:H4'	5:1H:2711:A:O2'	2.07	0.55
27:1J:13:A:H5''	27:1J:15:A:C6	2.42	0.55
28:11:12:SER:HB2	28:11:208:LYS:HB3	1.87	0.55
29:21:105:THR:HG22	29:21:106:GLY:H	1.71	0.55
55:Q8:34:TRP:CD1	55:Q8:36:LYS:H	2.25	0.55
1:13:1015:A:H2'	1:13:1016:A:H8	1.70	0.55
2:1L:46:7MG:H5''	2:1L:46:7MG:H82	1.89	0.55
5:14:288:C:H2'	5:14:289:A:C8	2.41	0.55
5:14:890:A:H2'	5:14:892:G:C8	2.42	0.55
5:14:1069:A:H4'	5:14:1070:A:H5''	1.88	0.55
5:14:2745:C:H2'	5:14:2746:U:O4'	2.07	0.55
6:1E:212:GLN:OE1	6:1E:216:SER:OG	2.25	0.55
9:4E:87:SER:HB3	9:4E:125:SER:O	2.07	0.55
25:1F:9:ARG:HG3	25:1F:13:ILE:HD11	1.89	0.55
5:1H:698:C:O2'	5:1H:734:A:N6	2.40	0.55
5:1H:2210:G:H3'	5:1H:2211:G:C8	2.42	0.55
35:68:58:VAL:HG21	35:68:86:ILE:HG12	1.88	0.55
39:A8:14:VAL:O	39:A8:18:ILE:HD13	2.06	0.55
42:D8:45:THR:O	42:D8:45:THR:OG1	2.17	0.55
46:H8:126:VAL:HA	46:H8:164:ALA:N	2.20	0.55
52:N8:41:PRO:CD	52:N8:44:THR:HG21	2.36	0.55
1:1G:4:U:H3'	1:1G:5:U:H5'	1.89	0.55
1:1G:191(F):U:H2'	1:1G:191:G:C8	2.42	0.55
1:1G:410:G:N1	1:1G:429:U:O2	2.39	0.55
1:1G:1062:U:H2'	1:1G:1063:C:C6	2.42	0.55
1:13:1020:U:H2'	1:13:1021:G:C8	2.42	0.55
1:13:1292:U:H5'	13:8E:38:GLN:OE1	2.06	0.55
5:14:509:C:OP1	58:14:4154:HOH:O	2.18	0.55
2:3K:5:G:H22	2:3K:68:C:N4	2.05	0.55
5:1H:1013:C:O2'	5:1H:1014:U:H5'	2.06	0.55
5:1H:2418:A:OP1	55:Q8:39:LYS:HD3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2711:A:OP2	58:1H:3683:HOH:O	2.18	0.55
32:51:10:PRO:HB2	32:51:50:VAL:HG13	1.89	0.55
32:51:43:VAL:HB	32:51:52:VAL:HG22	1.89	0.55
37:88:32:TYR:CE2	37:88:133:ARG:HG3	2.42	0.55
46:H8:24:LEU:HB3	46:H8:39:VAL:HG23	1.89	0.55
1:13:353:A:H5'	1:13:353:A:C8	2.37	0.55
5:14:251:A:C5	5:14:252:G:H1'	2.42	0.55
5:14:1054:A:H62	5:14:1104:C:H42	1.53	0.55
5:14:1496:A:H8	5:14:1577:C:O2'	1.79	0.55
5:14:2602:A:H4'	5:14:2603:G:O5'	2.06	0.55
5:14:2849:U:H4'	5:14:2868:A:C2	2.42	0.55
8:3E:64:LEU:HD22	8:3E:198:VAL:HG11	1.89	0.55
15:2I:50:TYR:CD1	15:2I:54:ARG:HB3	2.42	0.55
17:4I:23:TYR:CE2	17:4I:71:ARG:HG3	2.42	0.55
17:4I:88:ARG:HH11	17:4I:88:ARG:CG	2.19	0.55
23:AI:67:VAL:HG21	51:M8:59:PHE:HB3	1.88	0.55
5:1H:599:G:N1	5:1H:658:C:N3	2.44	0.55
27:1J:16:G:H2'	27:1J:17:C:C6	2.42	0.55
40:B8:3:ARG:HD2	40:B8:6:LEU:HB3	1.89	0.55
46:H8:165:VAL:HB	46:H8:166:SER:HA	1.87	0.55
55:Q8:14:VAL:HG21	55:Q8:21:LYS:HZ2	1.71	0.55
1:1G:32:A:H2'	1:1G:33:A:C8	2.42	0.55
1:1G:688:G:H2'	1:1G:689:C:H6	1.71	0.55
1:1G:1320:C:H2'	1:1G:1321:C:C6	2.42	0.55
1:1G:1372:U:H2'	1:1G:1373:G:O4'	2.07	0.55
1:13:128:G:H5'	21:8I:2:PRO:O	2.06	0.54
1:13:1056:U:H5'	7:2E:163:ALA:HB2	1.89	0.54
3:2L:24:C:C2	3:2L:25:U:C5	2.95	0.54
5:14:273(F):C:H3'	5:14:274:G:H5''	1.89	0.54
5:14:1754:C:H2'	5:14:1755:A:C8	2.42	0.54
5:14:1927:A:H2'	5:14:1928:A:C8	2.42	0.54
7:2E:21:ARG:NH2	7:2E:56:ASP:OD1	2.40	0.54
8:3E:111:ALA:HB2	8:3E:120:LEU:HD11	1.89	0.54
5:1H:250:G:P	36:78:60:MET:HE1	2.47	0.54
5:1H:732:C:H3'	58:1H:4182:HOH:O	2.07	0.54
5:1H:945:A:P	58:1H:4233:HOH:O	2.65	0.54
5:1H:1174:A:C4	5:1H:1178:C:N4	2.75	0.54
5:1H:1257:C:H4'	30:31:83:PHE:CD1	2.42	0.54
5:1H:1264:G:OP1	52:N8:19:ARG:NH2	2.37	0.54
5:1H:1680:U:H2'	5:1H:1681:G:O4'	2.07	0.54
5:1H:1728:G:H3'	5:1H:1729:A:H5''	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1803:A:H4'	28:11:259:THR:HG23	1.89	0.54
5:1H:2061:G:OP2	5:1H:2502:G:H5'	2.06	0.54
5:1H:2564:A:C2	5:1H:2647:U:H4'	2.41	0.54
31:41:47:LYS:NZ	31:41:80:PHE:HD2	2.05	0.54
32:51:152:ARG:HG3	32:51:161:GLY:HA2	1.88	0.54
46:H8:130:PRO:O	46:H8:133:ILE:HG13	2.08	0.54
1:1G:1401:G:C2	1:1G:1402:C:H1'	2.42	0.54
8:32:199:ASN:HD22	8:32:199:ASN:C	2.14	0.54
1:13:67:C:H2'	1:13:68:G:C8	2.41	0.54
5:14:2037:G:H2'	5:14:2038:G:H8	1.71	0.54
8:3E:85:LYS:HG3	8:3E:86:LYS:N	2.22	0.54
13:8E:17:VAL:HG11	13:8E:81:ILE:HD13	1.89	0.54
5:1H:270(L):U:H3	33:61:50:ARG:NE	2.05	0.54
5:1H:581:C:H2'	5:1H:582:G:H8	1.72	0.54
5:1H:2310:A:N6	31:41:79:ASN:HB2	2.22	0.54
5:1H:2780:G:OP1	34:58:118:LYS:NZ	2.36	0.54
29:21:37:ARG:O	29:21:45:THR:HA	2.08	0.54
34:58:137:LYS:HE3	34:58:138:LEU:C	2.32	0.54
40:B8:16:ARG:NH2	40:B8:83:ILE:O	2.39	0.54
1:1G:872:A:O2'	1:1G:873:A:H5''	2.07	0.54
1:1G:1095:U:OP1	1:1G:1108:G:N1	2.39	0.54
1:13:586:C:O2'	1:13:878:G:H4'	2.08	0.54
1:13:872:A:C5	1:13:874:G:C8	2.96	0.54
1:13:928:G:H1	1:13:1389:C:H42	1.55	0.54
1:13:1366:C:H2'	1:13:1367:C:C6	2.43	0.54
5:14:2280:G:O2'	5:14:2388:A:N1	2.38	0.54
5:1H:443:A:N7	30:31:45:ARG:HG2	2.22	0.54
5:1H:664:C:H4'	5:1H:941:A:OP1	2.08	0.54
5:1H:996:A:H4'	41:C8:92:ARG:HE	1.72	0.54
5:1H:1006:C:O2	34:58:106:MET:HG2	2.08	0.54
5:1H:1786:A:C2	5:1H:2606:C:H1'	2.38	0.54
5:1H:1827:C:C2'	5:1H:1828:G:H5'	2.38	0.54
5:1H:2103:C:O2	5:1H:2186:G:N2	2.34	0.54
27:1J:44:G:H1'	27:1J:47:C:H42	1.72	0.54
27:16:8:U:O2	27:16:112:G:N1	2.20	0.54
36:78:94:GLU:OE2	36:78:124:LYS:HD3	2.07	0.54
40:B8:99:LEU:HB3	40:B8:101:PHE:CE2	2.42	0.54
43:E8:33:ARG:NE	43:E8:52:GLU:OE1	2.39	0.54
49:K8:48:HIS:N	49:K8:50:ILE:HD11	2.22	0.54
1:1G:559:A:H4'	1:1G:560:U:C5'	2.38	0.54
1:1G:1037:C:H2'	1:1G:1038:C:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:12:105:PHE:HA	6:12:108:ILE:HB	1.88	0.54
1:13:444:C:H2'	1:13:445:G:H8	1.71	0.54
1:13:464:G:C6	1:13:466:C:H5'	2.43	0.54
1:13:1034:G:N2	1:13:1035:A:N7	2.56	0.54
1:13:1147:C:O2	13:8E:16:ARG:NH1	2.37	0.54
1:13:1478:C:H2'	1:13:1479:C:C6	2.43	0.54
5:14:195:A:H61	5:14:198:C:H3'	1.73	0.54
5:14:445:C:O2'	5:14:446:G:H5'	2.08	0.54
8:3E:106:TYR:HE2	8:3E:107:ARG:NH1	2.04	0.54
19:6I:70:LEU:HD11	19:6I:77:ARG:HG3	1.89	0.54
21:8I:13:ASP:HA	21:8I:19:VAL:HG12	1.90	0.54
23:AI:78:ARG:HD2	23:AI:78:ARG:O	2.07	0.54
5:1H:1204:A:C2	5:1H:1241:A:N1	2.76	0.54
5:1H:1550:C:H2'	5:1H:1551:C:H6	1.73	0.54
5:1H:2364:C:H4'	47:I8:56:ASP:OD1	2.08	0.54
29:21:104:VAL:HG22	29:21:198:VAL:HG22	1.89	0.54
37:88:35:VAL:HA	37:88:101:ARG:O	2.06	0.54
41:C8:88:ILE:C	41:C8:90:VAL:H	2.16	0.54
43:E8:18:ARG:HD3	43:E8:76:VAL:HG13	1.90	0.54
44:F8:1:MET:HG2	44:F8:2:LYS:N	2.19	0.54
47:I8:26:TYR:O	47:I8:29:GLN:HB2	2.08	0.54
52:N8:50:GLY:N	52:N8:56:LYS:HG3	2.18	0.54
1:1G:519:C:H2'	1:1G:520:A:O4'	2.07	0.54
1:13:1004:A:H8	1:13:1036:G:N2	2.05	0.54
1:13:1316:G:N2	1:13:1318:A:H3'	2.22	0.54
1:13:1443:G:O2'	40:B8:122:ASP:OD2	2.21	0.54
5:14:362:U:H3'	5:14:363:G:H5''	1.90	0.54
5:14:585:G:OP2	58:14:4270:HOH:O	2.18	0.54
5:14:1445:C:H2'	5:14:1446:C:H6	1.72	0.54
5:14:1542:G:O6	5:14:1543:A:N6	2.41	0.54
12:7E:36:LEU:HA	12:7E:39:LEU:HB2	1.90	0.54
16:3I:111:LYS:O	16:3I:112:ASP:HB2	2.06	0.54
17:4I:7:VAL:HB	31:4I:115:ARG:NH2	2.22	0.54
5:1H:10:G:O2'	5:1H:2801:A:N3	2.40	0.54
5:1H:719:C:H2'	5:1H:720:C:H6	1.73	0.54
5:1H:997:G:OP1	41:C8:93:LYS:N	2.38	0.54
5:1H:1358:G:N2	5:1H:1372:U:C5	2.76	0.54
28:11:65:ILE:HD11	28:11:67:PHE:CE1	2.43	0.54
34:58:65:LYS:HB3	34:58:69:GLN:HG3	1.88	0.54
35:68:19:ILE:HG22	35:68:43:VAL:HA	1.89	0.54
51:M8:54:GLY:HA2	51:M8:57:GLU:HB3	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:Q8:53:PRO:HB3	55:Q8:56:GLU:N	2.23	0.54
1:1G:980:C:H3'	1:1G:981:U:C6	2.42	0.54
1:1G:1287:A:H2'	1:1G:1288:A:C8	2.43	0.54
6:12:67:THR:H	6:12:160:ASP:HB2	1.72	0.54
7:22:84:ILE:HG23	7:22:85:ARG:HD2	1.89	0.54
1:13:661:G:H1	1:13:744:C:H42	1.56	0.54
1:13:667:G:H4'	19:6I:51:HIS:CE1	2.42	0.54
1:13:1175:G:H2'	1:13:1176:A:C8	2.42	0.54
5:14:433:C:C4	5:14:434:U:O4	2.61	0.54
5:14:649:G:H2'	5:14:650:C:C6	2.42	0.54
22:9I:58:LEU:HB3	22:9I:62:GLU:HB3	1.89	0.54
2:3K:18:G:H1'	2:3K:58:A:C2	2.43	0.54
5:1H:1101:U:H2'	5:1H:1102:C:C6	2.43	0.54
5:1H:1107:G:H2'	5:1H:1108:U:C6	2.43	0.54
5:1H:1339:G:H21	5:1H:1603:A:H1'	1.72	0.54
5:1H:1565:C:O2'	5:1H:1567:A:N7	2.35	0.54
5:1H:2001:A:OP1	38:98:9:LYS:NZ	2.41	0.54
27:1J:15:A:H1'	27:1J:109:G:C5	2.43	0.54
35:68:104:ARG:HD3	40:B8:36:GLU:HG2	1.89	0.54
46:H8:60:GLU:O	46:H8:61:LEU:HB3	2.07	0.54
1:1G:977:A:O2'	1:1G:981:U:N3	2.40	0.54
1:1G:1387:G:H2'	1:1G:1388:C:C6	2.42	0.54
7:22:44:GLU:HA	7:22:52:LEU:HD11	1.90	0.54
5:14:337:C:H2'	5:14:338:G:O4'	2.05	0.54
5:14:1657:C:H2'	5:14:1658:C:C6	2.43	0.54
5:14:1786:A:C2	5:14:2606:C:H1'	2.43	0.54
5:14:2557:G:H2'	5:14:2558:C:C6	2.42	0.54
6:1E:223:ILE:HA	6:1E:226:ARG:HG2	1.89	0.54
15:2I:92:GLU:HA	15:2I:95:ILE:HG13	1.90	0.54
16:3I:89:ARG:HG2	16:3I:90:VAL:N	2.22	0.54
17:4I:27:LYS:HA	17:4I:31:LYS:NZ	2.21	0.54
5:1H:5:A:H2'	5:1H:6:A:H8	1.72	0.54
5:1H:192:C:O2'	5:1H:802:A:N3	2.39	0.54
32:51:6:ARG:HB3	32:51:65:HIS:CG	2.42	0.54
1:1G:300:A:H1'	1:1G:565:U:O2	2.07	0.54
1:1G:674:G:H2'	1:1G:675:A:C8	2.42	0.54
1:1G:677:U:H3	1:1G:713:G:H22	1.54	0.54
1:1G:984:C:H2'	1:1G:985:C:H6	1.73	0.54
1:1G:1466:C:H2'	1:1G:1467:G:O4'	2.08	0.54
6:12:12:GLU:HB2	6:12:16:HIS:CG	2.43	0.54
2:3L:37:MIA:H112	2:3L:38:A:N3	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:355:G:H2'	5:14:356:G:C8	2.41	0.54
5:14:1461:G:H2'	5:14:1462:C:C6	2.42	0.54
5:14:2299:G:N1	5:14:2318:G:C8	2.76	0.54
5:14:2753:A:H2'	5:14:2754:U:O4'	2.07	0.54
12:7E:17:THR:O	12:7E:20:TYR:N	2.33	0.54
17:4I:52:GLU:HA	17:4I:55:ARG:HB2	1.89	0.54
5:1H:671:C:OP1	36:78:42:SER:O	2.26	0.54
5:1H:784:A:C5	28:11:229:VAL:HG21	2.43	0.54
5:1H:1159:U:P	50:L8:30:ARG:HH12	2.31	0.54
5:1H:1534:G:H3'	5:1H:1534:G:N3	2.23	0.54
36:78:38:GLN:O	36:78:41:ARG:HB2	2.08	0.54
45:G8:82:PRO:HG3	45:G8:97:ARG:HG3	1.90	0.54
49:K8:23:LYS:O	49:K8:27:GLU:HG3	2.08	0.54
1:1G:56:U:H2'	1:1G:57:G:H8	1.68	0.54
1:1G:1075:C:H5'	6:12:103:THR:HG21	1.88	0.54
1:1G:1131:G:C8	1:1G:1132:C:H5	2.25	0.54
1:13:198:G:H2'	1:13:199:G:H8	1.73	0.54
1:13:1455:G:OP1	24:BI:35:THR:OG1	2.13	0.54
2:3L:20:H2U:H52	2:3L:59:U:C2	2.43	0.54
5:14:491:G:H2'	5:14:492:A:H8	1.72	0.54
5:14:774:A:H2	5:14:787:U:O2'	1.91	0.54
5:14:1011:G:N3	5:14:1151:G:N2	2.56	0.54
5:14:1292:U:H2'	5:14:1293:C:C6	2.42	0.54
5:14:2392:A:H2	5:14:2424:C:N4	2.06	0.54
5:1H:779:U:H5''	28:11:49:ILE:HD12	1.90	0.54
5:1H:1657:C:H2'	5:1H:1658:C:C6	2.43	0.54
5:1H:2244:U:O2'	5:1H:2245:U:H5'	2.07	0.54
27:1J:88:C:H3'	27:1J:89:G:N7	2.22	0.54
31:41:110:ALA:HA	31:41:140:ILE:O	2.07	0.54
31:41:135:LEU:O	31:41:154:GLY:HA3	2.07	0.54
40:B8:26:ASP:O	40:B8:49:VAL:HG13	2.08	0.54
1:1G:538:G:O6	58:1G:1755:HOH:O	2.14	0.54
1:1G:624:C:H2'	1:1G:625:G:C8	2.43	0.54
1:1G:866:C:O2'	1:1G:919:A:OP1	2.26	0.54
1:13:651:C:H2'	1:13:652:U:C6	2.42	0.54
1:13:1157:A:N6	1:13:1178:G:H21	2.06	0.54
5:14:981:A:N1	5:14:2027:G:O2'	2.27	0.54
5:14:1331:A:O2'	5:14:1332:G:H8	1.91	0.54
5:14:2340:G:H2'	5:14:2341:G:H8	1.72	0.54
5:1H:90:U:H6	5:1H:90:U:OP1	1.91	0.54
5:1H:325:G:H2'	5:1H:326:G:H8	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1914:C:H2'	5:1H:1915:U:O4'	2.08	0.54
27:1J:62:C:H2'	27:1J:63:G:C8	2.43	0.54
28:11:182:LEU:O	28:11:271:ILE:HG13	2.07	0.54
30:31:134:GLY:HA3	30:31:162:LEU:O	2.08	0.54
1:1G:1009:G:C2	1:1G:1010:G:C8	2.97	0.54
1:1G:1126:U:N3	1:1G:1281:U:O4'	2.40	0.54
8:32:126:ILE:HG22	8:32:127:THR:H	1.71	0.54
1:13:233:C:H2'	1:13:234:C:H6	1.74	0.53
1:13:278:G:N2	21:8I:95:TYR:HB3	2.23	0.53
1:13:377:G:OP1	20:7I:3:LYS:HD2	2.07	0.53
1:13:503:C:OP2	16:3I:116:SER:OG	2.25	0.53
1:13:625:G:H2'	1:13:626:U:H6	1.72	0.53
1:13:991:U:O2'	1:13:992:U:O5'	2.24	0.53
3:2L:20:G:OP1	3:2L:61:U:N3	2.41	0.53
9:4E:37:ARG:HH12	9:4E:111:GLU:HG2	1.73	0.53
12:7E:103:VAL:HG21	12:7E:110:ALA:HB2	1.89	0.53
3:2K:54:G:H2'	3:2K:55:U:H6	1.72	0.53
2:3K:36:A:C2	2:3K:37:MIA:H1'	2.42	0.53
5:1H:1298:C:P	58:1H:3656:HOH:O	2.65	0.53
37:88:51:ARG:HD2	37:88:66:ILE:HD11	1.90	0.53
6:12:130:ARG:H	6:12:130:ARG:HE	1.56	0.53
1:13:973:G:OP1	14:1I:57:LYS:NZ	2.29	0.53
5:14:527:C:OP2	5:14:2779:U:H5	1.91	0.53
5:14:1420:U:HO2'	5:14:1421:G:P	2.31	0.53
5:14:2802:G:H2'	5:14:2803:C:O4'	2.08	0.53
6:1E:212:GLN:O	6:1E:216:SER:OG	2.15	0.53
8:3E:30:LYS:H	8:3E:34:GLU:HB2	1.73	0.53
12:7E:1:MET:HE1	12:7E:3:THR:HG23	1.90	0.53
13:8E:29:ASN:OD1	13:8E:65:VAL:N	2.39	0.53
24:BI:90:GLN:HA	24:BI:93:GLU:HB2	1.89	0.53
26:1K:74:C:N4	5:1H:2555:U:H1'	2.24	0.53
5:1H:111:A:H4'	49:K8:69:ARG:NH2	2.23	0.53
5:1H:322:A:OP1	30:31:168:ARG:NH2	2.40	0.53
5:1H:833:U:O2	36:78:55:ARG:NH2	2.39	0.53
5:1H:1142:U:H5'	5:1H:1142(A):A:H8	1.72	0.53
5:1H:1300:U:H3'	58:1H:3612:HOH:O	2.09	0.53
27:16:12:C:O2	47:I8:74:ARG:NH1	2.38	0.53
27:16:15:A:H1'	27:16:109:G:C4	2.44	0.53
41:C8:101:ARG:C	41:C8:103:PRO:HD3	2.33	0.53
41:C8:110:VAL:O	41:C8:114:LYS:N	2.38	0.53
47:I8:49:LYS:HB2	47:I8:80:HIS:HB3	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:J8:3:LYS:HG2	48:J8:46:LEU:HD22	1.90	0.53
1:1G:959:A:HO2'	1:1G:984:C:HO2'	1.56	0.53
1:1G:1074:G:O2'	1:1G:1101:A:N1	2.34	0.53
8:32:57:ARG:NH2	8:32:205:GLU:OE2	2.39	0.53
1:13:1238:A:N3	1:13:1241:G:O2'	2.39	0.53
2:1L:11:C:H2'	2:1L:12:U:H6	1.74	0.53
5:14:1430:C:H2'	5:14:1431:U:C6	2.44	0.53
5:14:1945:G:H2'	5:14:1946:U:C6	2.43	0.53
5:14:2461:C:H2'	5:14:2462:U:C6	2.42	0.53
5:14:2791:C:H2'	5:14:2792:G:H8	1.74	0.53
9:4E:48:ALA:HB2	9:4E:57:LYS:HD3	1.90	0.53
9:4E:73:ASN:O	9:4E:73:ASN:ND2	2.29	0.53
12:7E:10:LEU:HB3	12:7E:83:ILE:HD11	1.90	0.53
14:1I:54:PHE:CZ	14:1I:55:LYS:NZ	2.71	0.53
3:2K:76:C:H4'	58:2K:208:HOH:O	2.07	0.53
5:1H:67:U:H2'	5:1H:68:G:H8	1.73	0.53
5:1H:746:A:C5	5:1H:2611:U:H5''	2.43	0.53
5:1H:1103:A:H3'	5:1H:1104:C:H6	1.73	0.53
5:1H:1221:C:H2'	5:1H:1222:C:C6	2.42	0.53
5:1H:1535:U:N3	5:1H:1537:C:H1'	2.23	0.53
27:16:90:C:H5'	37:88:18:LYS:HA	1.91	0.53
36:78:96:THR:C	36:78:98:GLU:H	2.15	0.53
36:78:149:GLU:HG2	36:78:150:ALA:H	1.73	0.53
45:G8:20:TYR:CE1	45:G8:43:ASN:HA	2.42	0.53
1:1G:434:U:H2'	1:1G:435:C:C6	2.43	0.53
1:1G:476:G:H2'	1:1G:477:G:H8	1.74	0.53
1:1G:493:G:H8	1:1G:493:G:O5'	1.91	0.53
1:1G:500:G:H2'	1:1G:501:C:C6	2.44	0.53
1:1G:517:G:N2	1:1G:530:G:OP1	2.33	0.53
1:1G:1126:U:H4'	1:1G:1127:G:H8	1.71	0.53
6:12:141:GLU:O	6:12:145:LEU:HB2	2.07	0.53
5:14:805:G:OP2	5:14:806:C:N4	2.41	0.53
5:14:853:G:H2'	5:14:854:G:C8	2.43	0.53
8:3E:62:GLN:O	8:3E:66:ARG:HB2	2.09	0.53
8:3E:153:ARG:O	8:3E:181:MET:HE1	2.07	0.53
17:4I:58:GLU:O	17:4I:62:ASN:ND2	2.37	0.53
26:1K:70:G:C2	26:1K:71:G:H1'	2.43	0.53
2:3K:34:G:H2'	2:3K:35:A:C8	2.44	0.53
5:1H:139:G:N3	5:1H:141:A:N1	2.56	0.53
5:1H:950:G:H2'	5:1H:951:C:C6	2.42	0.53
5:1H:1268:A:H2'	5:1H:1269:A:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1796:U:H2'	5:1H:1797:C:C6	2.43	0.53
32:51:157:TYR:CE1	32:51:172:LYS:HB2	2.44	0.53
1:1G:895:G:H1	1:1G:904:C:N4	2.07	0.53
1:1G:1134:G:H2'	1:1G:1135:U:O4'	2.09	0.53
1:1G:1238:A:N3	1:1G:1241:G:O2'	2.32	0.53
7:22:152:ILE:HB	7:22:199:LYS:HB2	1.90	0.53
1:13:392:G:H5''	20:7I:12:LYS:HD2	1.90	0.53
1:13:403:C:OP1	8:3E:137:SER:OG	2.24	0.53
1:13:1525:G:P	15:2I:120:ARG:HH22	2.32	0.53
2:3L:71:G:H2'	2:3L:72:C:H5''	1.90	0.53
5:14:194:G:H2'	5:14:195:A:O4'	2.08	0.53
5:14:247:G:H4'	5:14:386:G:C5	2.44	0.53
5:14:360:G:H2'	5:14:361:G:H8	1.73	0.53
10:5E:50:TYR:OH	22:9I:74:ARG:O	2.16	0.53
14:1I:4:ILE:HG13	14:1I:100:THR:HA	1.90	0.53
16:3I:93:LEU:O	16:3I:96:VAL:HG13	2.09	0.53
5:1H:76:C:HO2'	49:K8:62:THR:HG21	1.73	0.53
5:1H:503:A:H4'	5:1H:504:U:H5''	1.91	0.53
5:1H:995:C:O2	34:58:3:THR:OG1	2.21	0.53
5:1H:2572:A:N7	29:21:144:ARG:HD2	2.24	0.53
28:11:17:THR:CG2	28:11:204:ILE:HA	2.38	0.53
44:F8:1:MET:O	44:F8:3:THR:N	2.41	0.53
44:F8:67:GLY:C	44:F8:69:TYR:H	2.16	0.53
1:1G:340:U:H2'	1:1G:341:C:C6	2.43	0.53
1:1G:1326:C:H2'	1:1G:1327:C:H6	1.74	0.53
1:13:1060:C:H5''	14:1I:51:ARG:HG2	1.91	0.53
1:13:1117:G:H5''	13:8E:104:ARG:NH1	2.24	0.53
1:13:1348:U:H4'	13:8E:120:ARG:HD2	1.91	0.53
1:13:1399:C:C2	1:13:1502:A:N6	2.77	0.53
1:13:1429:C:H2'	1:13:1430:C:H6	1.73	0.53
5:14:1011:G:H2'	5:14:1013:C:O4'	2.08	0.53
5:14:1204:A:H2	5:14:1241:A:N1	2.06	0.53
5:14:1288:U:C2	5:14:1327:C:O2	2.62	0.53
5:14:2439:A:H5'	5:14:2439:A:C8	2.43	0.53
11:6E:31:MET:HE1	11:6E:36:LYS:HZ2	1.74	0.53
13:8E:17:VAL:HG21	13:8E:80:GLY:HA3	1.88	0.53
5:1H:37:C:H2'	5:1H:38:A:C8	2.43	0.53
5:1H:999:U:P	58:1H:4096:HOH:O	2.67	0.53
5:1H:2309:A:C5	5:1H:2310:A:C8	2.97	0.53
5:1H:2331:G:O3'	47:I8:43:THR:HG22	2.08	0.53
30:31:199:TRP:NE1	30:31:203:GLN:HE22	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:41:16:ARG:O	31:41:20:ILE:HG13	2.08	0.53
46:H8:154:ASP:OD1	46:H8:154:ASP:N	2.26	0.53
48:J8:83:GLU:C	48:J8:85:LEU:H	2.17	0.53
49:K8:47:ASN:HB2	49:K8:50:ILE:HD11	1.91	0.53
1:1G:322:C:H41	1:1G:328:C:H6	1.56	0.53
1:1G:843:U:H3'	1:1G:848:C:O4'	2.09	0.53
1:1G:979:C:H5	1:1G:980:C:C6	2.27	0.53
6:12:87:ARG:HH21	6:12:233:SER:H	1.57	0.53
1:13:280:C:H3'	1:13:281:G:H5'	1.91	0.53
1:13:323:U:H5'	24:BI:23:ARG:HB2	1.90	0.53
5:14:49:A:H5''	5:14:51:G:O4'	2.08	0.53
5:14:1027:A:C2	5:14:2488:A:H5'	2.43	0.53
5:14:2520:C:H41	5:14:2542:A:H62	1.57	0.53
5:14:2537:U:H2'	5:14:2538:C:C6	2.43	0.53
5:14:2772:C:H2'	5:14:2773:C:C6	2.44	0.53
5:14:2865:U:C4	5:14:2866:U:C4	2.97	0.53
6:1E:97:TRP:CZ3	6:1E:172:ILE:HB	2.44	0.53
5:1H:353:G:H2'	5:1H:354:G:C8	2.44	0.53
5:1H:459:U:H2'	5:1H:460:A:C8	2.43	0.53
5:1H:460:A:H5''	5:1H:461:C:OP2	2.08	0.53
5:1H:1432:C:H2'	5:1H:1433:U:O4'	2.08	0.53
5:1H:1494:A:O2'	5:1H:1495:A:H5'	2.08	0.53
5:1H:1903:G:OP1	28:11:241:PRO:HB2	2.09	0.53
5:1H:2864:G:H2'	5:1H:2865:U:C6	2.44	0.53
27:1J:4:C:H42	27:1J:116:G:H1	1.54	0.53
1:1G:979:C:H3'	1:1G:980:C:C5'	2.37	0.53
1:1G:1321:C:N4	1:1G:1322:C:N4	2.57	0.53
1:13:474:G:H2'	1:13:475:G:H8	1.73	0.53
1:13:659:U:H2'	1:13:660:G:H8	1.72	0.53
5:14:1614:A:H5''	5:14:1615:C:OP2	2.09	0.53
5:14:2059:A:H5''	5:14:2060:A:OP2	2.07	0.53
2:3K:7:A:C6	2:3K:49:C:C2	2.96	0.53
5:1H:507:A:H5''	5:1H:508:G:H3'	1.90	0.53
5:1H:581:C:H2'	5:1H:582:G:C8	2.44	0.53
5:1H:880:G:O2'	5:1H:881:G:O5'	2.17	0.53
5:1H:2659:G:H4'	32:51:175:LYS:HD2	1.90	0.53
27:1J:38:C:N3	27:1J:44:G:N2	2.44	0.53
28:11:12:SER:O	28:11:16:MET:HB2	2.08	0.53
28:11:69:ARG:HD3	28:11:105:ILE:HD11	1.89	0.53
29:21:166:THR:HG21	29:21:199:ARG:HH22	1.73	0.53
1:1G:222:U:H2'	1:1G:223:U:C6	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1118:C:H1'	1:1G:1179:A:C4	2.44	0.53
7:22:159:GLY:HA2	7:22:193:TYR:CD1	2.43	0.53
1:13:627:G:H2'	1:13:628:G:H8	1.74	0.53
1:13:919:A:O2'	1:13:920:U:H5'	2.08	0.53
5:14:221:A:C4	5:14:266:G:N7	2.77	0.53
5:14:877:U:O4	5:14:899:A:N6	2.42	0.53
5:14:1260:G:H2'	5:14:1261:C:H6	1.74	0.53
5:14:2104:G:H2'	5:14:2105:C:C6	2.43	0.53
7:2E:7:PRO:O	7:2E:11:ARG:HG2	2.09	0.53
18:5I:3:ARG:HH21	18:5I:6:LEU:HD11	1.74	0.53
20:7I:74:LEU:CA	20:7I:77:ALA:HB2	2.34	0.53
5:1H:569:U:C4	5:1H:570:G:C6	2.97	0.53
33:6I:69:LYS:HG3	33:6I:136:VAL:HB	1.91	0.53
34:58:30:ILE:HG23	34:58:52:VAL:HG11	1.91	0.53
39:A8:88:ASP:O	39:A8:90:GLY:N	2.41	0.53
42:D8:9:GLY:O	42:D8:10:LYS:HG3	2.08	0.53
50:L8:38:GLU:OE2	50:L8:38:GLU:N	2.24	0.53
1:1G:1346:A:H3'	1:1G:1346:A:OP2	2.08	0.53
5:14:34:C:HO2'	5:14:35:G:P	2.32	0.53
5:14:1425:G:N2	5:14:1573:G:N7	2.56	0.53
5:14:2062:A:O2'	5:14:2063:C:OP1	2.26	0.53
5:14:2648:C:H2'	5:14:2649:U:C6	2.44	0.53
11:6E:79:ARG:NH1	11:6E:80:VAL:O	2.42	0.53
5:1H:120:U:OP2	58:1H:4262:HOH:O	2.18	0.53
5:1H:863:A:H2'	5:1H:864:G:H8	1.74	0.53
5:1H:1230:C:H2'	5:1H:1231:G:C8	2.44	0.53
5:1H:1359:A:N1	5:1H:1372:U:C4	2.76	0.53
5:1H:1441:G:H2'	5:1H:1442:G:H8	1.74	0.53
5:1H:1466:G:N2	5:1H:1547:C:N3	2.57	0.53
5:1H:2127:G:H2'	5:1H:2128:C:O4'	2.08	0.53
5:1H:2347:C:OP1	53:O8:39:TYR:OH	2.23	0.53
5:1H:2689:U:H5''	5:1H:2713:A:C2	2.44	0.53
53:O8:16:CYS:O	53:O8:17:LYS:HB2	2.09	0.53
1:1G:837:G:H1	1:1G:849:C:N4	2.07	0.53
7:22:8:ILE:HD11	7:22:184:TYR:HB3	1.90	0.53
1:13:110:C:H2'	1:13:111:G:O4'	2.09	0.52
1:13:227:G:N2	20:7I:62:VAL:O	2.40	0.52
2:1L:8:4SU:H5	2:1L:13:C:C4	2.43	0.52
5:14:990:A:H5'	5:14:990:A:H8	1.73	0.52
5:14:1204:A:O2'	5:14:1205:U:OP2	2.26	0.52
5:14:1533:C:C4	5:14:1534:G:H1'	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2031:A:C6	5:14:2498:C:H1'	2.44	0.52
6:1E:28:PHE:O	6:1E:32:ILE:HG22	2.09	0.52
17:4I:7:VAL:HB	31:41:115:ARG:CZ	2.39	0.52
2:3K:30:G:N2	2:3K:40:C:O2	2.42	0.52
5:1H:1329:U:H5''	5:1H:1330:C:H5	1.72	0.52
5:1H:1639:U:P	58:1H:3655:HOH:O	2.65	0.52
5:1H:2056:G:C2	5:1H:2057:A:C8	2.97	0.52
5:1H:2171:A:O2'	5:1H:2172:U:O5'	2.26	0.52
5:1H:2308:G:N1	5:1H:2311:A:C2	2.64	0.52
5:1H:2579:C:H2'	5:1H:2580:U:O4'	2.10	0.52
32:51:12:PRO:HG2	32:51:13:LYS:HG2	1.90	0.52
32:51:12:PRO:HB3	32:51:48:GLY:HA2	1.91	0.52
36:78:13:ASN:ND2	36:78:15:ARG:HD3	2.23	0.52
42:D8:65:GLY:HA3	42:D8:91:TYR:CZ	2.44	0.52
46:H8:124:ILE:HD12	46:H8:125:LEU:H	1.73	0.52
49:K8:33:MET:HG2	49:K8:37:PHE:CE1	2.44	0.52
55:Q8:9:GLY:H	55:Q8:12:LYS:H	1.57	0.52
1:1G:518:C:H5''	1:1G:519:C:C6	2.44	0.52
7:22:65:ALA:HA	7:22:100:ALA:HB3	1.90	0.52
1:13:1002:G:H1	1:13:1038:C:H42	1.57	0.52
1:13:1178:G:P	13:8E:93:ARG:HH21	2.32	0.52
1:13:1502:A:H2	1:13:1505:G:N1	2.03	0.52
5:14:212:G:H2'	5:14:213:A:O4'	2.09	0.52
5:14:270(H):C:H2'	5:14:270(I):G:C8	2.44	0.52
5:14:654(A):A:H2'	5:14:654(B):C:C6	2.45	0.52
5:14:1636:C:H2'	5:14:1637:A:C8	2.45	0.52
5:14:2656:U:H3	5:14:2665:A:H2	1.57	0.52
6:1E:166:ASP:C	6:1E:168:THR:H	2.16	0.52
7:2E:19:GLU:HG3	7:2E:54:ARG:NH1	2.24	0.52
8:3E:104:VAL:O	8:3E:107:ARG:N	2.42	0.52
8:3E:112:VAL:HG12	8:3E:116:GLN:OE1	2.09	0.52
10:5E:23:LYS:HG2	10:5E:27:GLN:NE2	2.23	0.52
12:7E:9:MET:SD	12:7E:32:LYS:HG2	2.49	0.52
12:7E:95:VAL:HB	12:7E:99:GLU:HB2	1.91	0.52
13:8E:4:TYR:CE1	13:8E:88:TYR:HB2	2.44	0.52
23:AI:39:THR:HG22	23:AI:40:ILE:H	1.75	0.52
5:1H:247:G:H4'	5:1H:386:G:C5	2.44	0.52
5:1H:2126:A:H62	5:1H:2163:C:H1'	1.73	0.52
27:16:15:A:H4'	27:16:15:A:OP1	2.10	0.52
28:11:108:PRO:HG3	28:11:143:HIS:CE1	2.43	0.52
55:Q8:53:PRO:CB	55:Q8:56:GLU:HG3	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:164:U:H2'	1:1G:165:C:C6	2.44	0.52
1:1G:604:G:H2'	1:1G:605:U:O4'	2.09	0.52
1:1G:607:A:H2'	1:1G:608:A:O4'	2.08	0.52
8:32:14:ARG:HG3	8:32:14:ARG:NH1	2.19	0.52
8:32:153:ARG:NH1	8:32:181:MET:SD	2.82	0.52
1:13:878:G:H5'	12:7E:89:PRO:HG2	1.90	0.52
1:13:1263:C:H2'	1:13:1264:C:C6	2.39	0.52
1:13:1303:C:N4	1:13:1304:G:C6	2.77	0.52
5:14:208:C:H2'	5:14:209:C:H6	1.75	0.52
5:14:459:U:H2'	5:14:460:A:H8	1.73	0.52
5:14:1027:A:H5'	27:1J:88:C:N4	2.24	0.52
6:1E:82:ARG:NE	6:1E:92:TYR:OH	2.42	0.52
9:4E:98:THR:HB	9:4E:117:ASP:HB3	1.91	0.52
9:4E:148:VAL:HG21	12:7E:107:LEU:HD22	1.91	0.52
11:6E:5:ARG:HG2	11:6E:7:ALA:H	1.74	0.52
21:8I:28:PRO:HA	21:8I:34:LYS:O	2.09	0.52
5:1H:355:G:H2'	5:1H:356:G:C8	2.44	0.52
5:1H:1931:U:H5	5:1H:1969:A:N7	2.08	0.52
5:1H:2080:G:H5''	5:1H:2080:G:H8	1.72	0.52
5:1H:2115:G:N2	5:1H:2172:U:O2	2.42	0.52
5:1H:2402:C:H2'	5:1H:2403:C:H5'	1.90	0.52
46:H8:53:ILE:HG22	46:H8:71:VAL:HG22	1.90	0.52
1:1G:1053:G:O6	1:1G:1199:U:H2'	2.09	0.52
1:1G:1057:G:H1	1:1G:1203:C:N4	2.06	0.52
1:13:509:A:H5''	8:3E:55:ALA:HB2	1.91	0.52
1:13:1124:G:C2	1:13:1127:G:N2	2.77	0.52
1:13:1412:C:H2'	1:13:1413:A:C8	2.45	0.52
5:14:249:C:H5''	58:14:3521:HOH:O	2.07	0.52
5:14:900:A:H3'	5:14:901:A:C8	2.33	0.52
5:14:903:C:H2'	5:14:904:C:C6	2.44	0.52
5:14:1087:G:H2'	5:14:1089:G:H1'	1.92	0.52
5:14:1087:G:H1	5:14:1102:C:H42	1.56	0.52
5:14:1786:A:H2	5:14:2606:C:H1'	1.74	0.52
5:14:2533:A:O4'	5:14:2664:G:H4'	2.10	0.52
8:3E:74:GLN:O	8:3E:78:LEU:HD13	2.10	0.52
17:4I:108:ARG:NH1	17:4I:112:GLY:O	2.43	0.52
24:BI:75:ASN:OD1	24:BI:75:ASN:N	2.40	0.52
26:1K:19:G:H5'	26:1K:60:U:O4	2.10	0.52
5:1H:70:G:H21	5:1H:71:A:N6	2.08	0.52
5:1H:574:C:H4'	5:1H:575:A:O5'	2.10	0.52
5:1H:973:A:OP2	58:1H:3942:HOH:O	2.19	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2123:G:H1	5:1H:2175:C:H42	1.57	0.52
27:1J:62:C:H2'	27:1J:63:G:H8	1.74	0.52
28:11:94:LEU:HD23	28:11:95:LEU:N	2.24	0.52
31:41:5:VAL:H	51:M8:25:TYR:HE2	1.57	0.52
39:A8:30:ARG:HG3	39:A8:30:ARG:O	2.10	0.52
1:1G:345:C:O2'	1:1G:346:G:O5'	2.25	0.52
1:1G:646:U:H2'	1:1G:647:C:C6	2.45	0.52
1:1G:722:A:C8	1:1G:724:G:H1'	2.44	0.52
1:1G:1327:C:H2'	1:1G:1328:C:C6	2.44	0.52
6:12:47:THR:HG23	6:12:202:PRO:HG2	1.90	0.52
1:13:337:C:H2'	1:13:338:A:C8	2.44	0.52
1:13:375:U:O3'	20:7I:6:LEU:HB2	2.09	0.52
1:13:626:U:C2	1:13:627:G:C8	2.98	0.52
5:14:259:G:O2'	5:14:621:A:O2'	2.24	0.52
5:14:1149:G:H2'	5:14:1150:C:C6	2.44	0.52
5:14:1657:C:H2'	5:14:1658:C:H6	1.74	0.52
6:1E:6:THR:OG1	6:1E:7:VAL:N	2.41	0.52
6:1E:87:ARG:NH1	6:1E:220:ASP:OD1	2.35	0.52
21:8I:48:GLU:O	21:8I:50:LYS:HG2	2.09	0.52
3:2K:17:C:H2'	3:2K:18:C:H2'	1.92	0.52
5:1H:847:U:C5	5:1H:933:A:N1	2.78	0.52
5:1H:863:A:H2'	5:1H:864:G:C8	2.44	0.52
5:1H:1426:G:OP2	5:1H:1427:A:O2'	2.27	0.52
5:1H:1523:U:C2	5:1H:1524:G:C8	2.97	0.52
5:1H:1969:A:O2'	5:1H:1972:A:N3	2.35	0.52
5:1H:2128:C:H2'	5:1H:2129:C:H6	1.74	0.52
31:41:122:PRO:HB3	31:41:180:PHE:HD1	1.75	0.52
38:98:10:LEU:O	38:98:12:ARG:HG2	2.10	0.52
1:1G:769:G:H4'	1:1G:1513:A:H4'	1.91	0.52
1:1G:1028:C:H2'	1:1G:1028(A):C:O4'	2.10	0.52
6:12:98:LEU:O	6:12:101:MET:HG2	2.09	0.52
1:13:591:U:H2'	1:13:592:G:C8	2.44	0.52
5:14:581:C:H2'	5:14:582:G:C8	2.45	0.52
5:14:1187:G:H8	5:14:1187:G:O5'	1.93	0.52
5:14:1485:G:H2'	5:14:1486:A:C8	2.45	0.52
6:1E:54:THR:O	6:1E:57:PHE:N	2.41	0.52
8:3E:108:LEU:HD12	8:3E:174:LEU:HD13	1.90	0.52
23:AI:5:LEU:HD13	23:AI:10:PHE:CD1	2.40	0.52
24:BI:43:LEU:HD13	24:BI:51:GLU:HB3	1.91	0.52
5:1H:71:A:C2	44:F8:31:HIS:CE1	2.82	0.52
5:1H:431:U:O2'	5:1H:432:A:H5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1588:C:H2'	5:1H:1589:C:C6	2.45	0.52
5:1H:1688:U:O2	5:1H:1700:A:H5''	2.09	0.52
5:1H:2388:A:C2'	5:1H:2389:G:H5'	2.40	0.52
27:1J:76:G:N7	58:1J:302:HOH:O	2.34	0.52
27:16:44:G:C2	27:16:48:A:C2	2.97	0.52
33:61:57:ARG:O	33:61:61:ARG:HG2	2.09	0.52
36:78:78:PRO:HB3	36:78:111:ARG:HH21	1.75	0.52
36:78:79:ARG:HB2	36:78:110:TYR:HD1	1.75	0.52
1:1G:591:U:H2'	1:1G:592:G:H8	1.74	0.52
1:1G:1053:G:O2'	1:1G:1054:C:P	2.68	0.52
1:1G:1127:G:H22	1:1G:1144:G:N2	2.07	0.52
1:1G:1171:G:H2'	1:1G:1172:C:C6	2.44	0.52
1:13:475:G:H2'	1:13:476:G:O4'	2.09	0.52
3:2L:8:4SU:O5'	3:2L:8:4SU:H6	2.10	0.52
2:3L:11:C:H2'	2:3L:12:U:C6	2.43	0.52
5:14:290:G:H2'	5:14:291:C:O4'	2.10	0.52
5:14:2153:G:N2	5:14:2154:G:O6	2.42	0.52
5:14:2720:U:N3	5:14:2873:A:H2	2.04	0.52
5:14:2791:C:H2'	5:14:2792:G:C8	2.45	0.52
14:1I:6:ILE:HD11	14:1I:72:VAL:HB	1.90	0.52
22:9I:26:LEU:HD22	22:9I:42:ARG:NH2	2.25	0.52
2:3K:18:G:H22	2:3K:55:PSU:HN3	1.58	0.52
27:1J:7:G:H1	27:1J:113:C:H42	1.56	0.52
36:78:50:ARG:HH21	36:78:50:ARG:CG	2.22	0.52
37:88:14:ARG:HG2	37:88:41:TRP:HH2	1.75	0.52
1:13:1162:C:H2'	1:13:1163:C:C6	2.44	0.52
2:1L:55:PSU:H5''	2:1L:56:C:OP2	2.09	0.52
5:14:2184:G:H2'	5:14:2185:C:C6	2.45	0.52
5:14:2388:A:C2'	5:14:2389:G:H5'	2.40	0.52
5:14:2889:C:H3'	5:14:2891:G:C8	2.45	0.52
6:1E:17:PHE:HB3	6:1E:44:LEU:HD11	1.92	0.52
7:2E:40:ARG:O	7:2E:44:GLU:HG2	2.09	0.52
8:3E:19:LEU:HB3	8:3E:21:LEU:HD21	1.92	0.52
19:6I:16:ALA:HB1	19:6I:21:ASP:HB3	1.92	0.52
5:1H:242:G:H5'	55:Q8:60:LEU:CD1	2.39	0.52
28:11:108:PRO:HD2	28:11:111:LEU:HG	1.92	0.52
1:1G:625:G:H2'	1:1G:626:U:H6	1.74	0.52
6:12:84:GLU:O	6:12:219:VAL:HG21	2.10	0.52
1:13:407:G:OP1	8:3E:115:ARG:NH1	2.43	0.52
1:13:1044:A:C5	1:13:1045:C:H1'	2.45	0.52
5:14:249:C:H4'	5:14:250:G:O5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:997:G:H2'	5:14:998:C:C6	2.45	0.52
5:14:1035:U:H2'	5:14:1036:G:C8	2.45	0.52
5:14:2092:U:H4'	5:14:2093:G:O5'	2.10	0.52
20:7I:8:ARG:HB3	20:7I:28:ARG:NH1	2.24	0.52
20:7I:26:ARG:HE	20:7I:31:LYS:HB3	1.75	0.52
5:1H:1138:G:N2	34:58:106:MET:HE3	2.20	0.52
5:1H:1198:U:H2'	5:1H:1199:U:C6	2.45	0.52
5:1H:1203:G:H3'	5:1H:1204:A:H5''	1.92	0.52
5:1H:1728:G:H3'	5:1H:1729:A:C5'	2.40	0.52
5:1H:2111:C:H2'	5:1H:2118:U:H4'	1.92	0.52
5:1H:2650:U:H2'	5:1H:2651:C:C6	2.44	0.52
28:11:125:ILE:HG13	28:11:137:PRO:HD3	1.91	0.52
36:78:18:ARG:C	36:78:19:VAL:HG22	2.34	0.52
48:J8:87:PRO:O	48:J8:91:LYS:HB2	2.09	0.52
49:K8:42:GLY:O	49:K8:44:LEU:N	2.43	0.52
1:1G:429:U:H1'	1:1G:430:A:H5''	1.92	0.52
1:1G:559:A:H4'	1:1G:560:U:H5''	1.90	0.52
1:13:605:U:C2	1:13:606:G:H8	2.28	0.52
1:13:688:G:H2'	1:13:689:C:H6	1.75	0.52
1:13:738:C:H2'	1:13:739:C:C6	2.44	0.52
1:13:1228:C:H2'	1:13:1229:A:H8	1.74	0.52
2:3L:26:A:H2'	2:3L:27:G:H5'	1.91	0.52
5:14:342:G:H2'	5:14:343:C:H6	1.74	0.52
5:14:1926:U:H2'	5:14:1928:A:OP2	2.10	0.52
5:14:2158:A:H1'	5:14:2159:G:C8	2.44	0.52
5:14:2849:U:H1'	5:14:2866:U:O2	2.10	0.52
10:5E:22:GLU:O	10:5E:26:ILE:HG13	2.09	0.52
11:6E:15:ASP:OD1	11:6E:16:LEU:N	2.43	0.52
5:1H:86:C:H4'	5:1H:104:U:H1'	1.91	0.52
5:1H:1728:G:O6	5:1H:1730:U:H5''	2.10	0.52
5:1H:2329:G:H2'	5:1H:2330:G:C8	2.45	0.52
40:B8:26:ASP:HB3	40:B8:120:ARG:HH22	1.75	0.52
40:B8:42:ILE:HD12	40:B8:42:ILE:H	1.75	0.52
44:F8:3:THR:CB	44:F8:4:ALA:HA	2.40	0.52
1:1G:1132:C:H2'	1:1G:1133:G:C8	2.39	0.52
6:12:30:ARG:HH21	6:12:194:PRO:HG2	1.75	0.52
3:2L:44:A:H2'	3:2L:45:A:C8	2.45	0.51
5:14:107:C:H2'	5:14:108:U:C6	2.44	0.51
5:14:796:C:H2'	5:14:797:C:H6	1.72	0.51
7:2E:58:GLU:H	7:2E:65:ALA:HB3	1.74	0.51
8:3E:148:VAL:HG12	8:3E:149:ALA:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1K:10:G:O2'	26:1K:11:C:OP1	2.26	0.51
5:1H:1109:C:O2'	5:1H:1110:G:O4'	2.27	0.51
5:1H:1338:G:H2'	5:1H:1339:G:C8	2.44	0.51
5:1H:2492:U:H2'	5:1H:2493:U:H6	1.73	0.51
27:16:15:A:H1'	27:16:109:G:N9	2.25	0.51
30:31:8:GLN:CD	30:31:8:GLN:N	2.62	0.51
33:61:104:GLN:HG2	33:61:105:HIS:ND1	2.26	0.51
34:58:57:ALA:C	34:58:59:LYS:H	2.17	0.51
38:98:33:ARG:HG3	38:98:115:GLU:HB3	1.90	0.51
39:A8:15:ARG:HD2	39:A8:88:ASP:OD2	2.10	0.51
41:C8:28:ARG:NH1	41:C8:38:THR:OG1	2.35	0.51
46:H8:120:ILE:HG13	46:H8:170:THR:HG22	1.91	0.51
48:J8:93:GLU:O	48:J8:97:LEU:HB2	2.10	0.51
55:Q8:49:VAL:O	55:Q8:49:VAL:HG13	2.08	0.51
1:1G:1347:G:N2	1:1G:1373:G:H2'	2.25	0.51
1:1G:1397:C:OP2	1:1G:1397:C:H4'	2.10	0.51
1:13:195:A:C2	1:13:196:A:H2	2.27	0.51
2:1L:49:C:H42	2:1L:65:G:H1	1.58	0.51
3:2L:35:C:H1'	1:1G:1400:C:N4	2.25	0.51
5:14:2207:C:H42	5:14:2217:G:H1	1.59	0.51
20:7I:49:LEU:HD12	20:7I:50:LYS:H	1.75	0.51
2:3K:71:G:O2'	5:1H:1851:U:O2'	2.28	0.51
5:1H:277:C:H3'	5:1H:278:A:O4'	2.11	0.51
5:1H:1729:A:C6	5:1H:1731:G:C2	2.98	0.51
5:1H:2137:C:N3	5:1H:2138:C:N4	2.57	0.51
46:H8:124:ILE:HG13	46:H8:126:VAL:HG13	1.91	0.51
1:1G:589:C:H42	1:1G:650:G:H1	1.58	0.51
1:1G:1059:C:OP2	7:22:199:LYS:NZ	2.41	0.51
1:13:67:C:H2'	1:13:68:G:H8	1.74	0.51
1:13:114:U:H2'	1:13:115:G:C8	2.45	0.51
1:13:1375:A:OP1	11:6E:28:ASN:ND2	2.38	0.51
5:14:1581:G:H2'	5:14:1582:C:O4'	2.11	0.51
5:14:1890:A:OP2	58:14:4195:HOH:O	2.19	0.51
8:3E:150:GLU:HA	8:3E:153:ARG:HG3	1.93	0.51
12:7E:29:SER:OG	12:7E:32:LYS:N	2.39	0.51
16:3I:38:THR:HB	16:3I:57:LYS:HB3	1.92	0.51
21:8I:31:LEU:HD23	21:8I:32:TYR:CZ	2.46	0.51
5:1H:370:G:H4'	5:1H:371:A:OP2	2.10	0.51
5:1H:529:A:H4'	5:1H:530:G:H5'	1.91	0.51
5:1H:710:G:H2'	5:1H:711:G:C8	2.45	0.51
5:1H:2115:G:H1'	5:1H:2171:A:N1	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2235:G:H2'	5:1H:2236:C:C6	2.45	0.51
5:1H:2341:G:H2'	5:1H:2342:C:H6	1.75	0.51
5:1H:2598:A:OP1	58:1H:4808:HOH:O	2.18	0.51
5:1H:2678:C:H2'	5:1H:2679:A:O4'	2.10	0.51
38:98:48:VAL:HA	38:98:51:LEU:HB2	1.92	0.51
40:B8:56:GLY:O	40:B8:59:THR:HG22	2.10	0.51
1:1G:186(D):C:H2'	1:1G:186(E):C:H6	1.73	0.51
1:1G:250:A:H1'	1:1G:251:G:OP2	2.10	0.51
1:1G:328:C:H4'	1:1G:329:A:C5'	2.40	0.51
1:1G:646:U:H2'	1:1G:647:C:H6	1.75	0.51
1:1G:1172:C:H2'	1:1G:1173:G:H8	1.74	0.51
6:12:11:LEU:HD23	6:12:213:LEU:HD11	1.91	0.51
1:13:828:A:H2'	1:13:829:G:O4'	2.09	0.51
1:13:1286:A:H8	1:13:1287:A:H4'	1.71	0.51
2:3L:52:G:H1	2:3L:62:C:N4	2.09	0.51
5:14:31:C:N4	58:14:4168:HOH:O	2.43	0.51
5:14:1268:A:H2'	5:14:1269:A:O4'	2.10	0.51
5:14:2323:G:H1	5:14:2332:U:H3	1.58	0.51
6:1E:17:PHE:HD1	6:1E:17:PHE:H	1.58	0.51
5:1H:1614:A:H61	43:E8:88:ARG:H	1.58	0.51
5:1H:2105:C:H2'	5:1H:2106:G:H8	1.76	0.51
27:16:7:G:H4'	39:A8:29:PHE:CD2	2.45	0.51
27:16:104:A:OP1	46:H8:72:ARG:NE	2.43	0.51
36:78:15:ARG:CB	36:78:16:ARG:HB2	2.34	0.51
45:G8:29:GLU:HB3	45:G8:38:ILE:CG2	2.41	0.51
1:1G:736:C:H2'	1:1G:737:A:C8	2.45	0.51
1:1G:952:U:H4'	1:1G:964:A:N1	2.26	0.51
1:1G:1109:C:H2'	1:1G:1110:A:O4'	2.10	0.51
1:1G:1343:G:H2'	1:1G:1344:C:C6	2.46	0.51
6:12:8:LYS:HE2	6:12:213:LEU:HD21	1.92	0.51
6:12:22:LYS:HB3	6:12:40:HIS:CD2	2.45	0.51
6:12:95:GLN:HB2	6:12:148:TYR:HA	1.93	0.51
6:12:125:PRO:HA	6:12:127:ILE:HG12	1.93	0.51
1:13:1396:A:H4'	1:13:1397:C:H5''	1.92	0.51
5:14:548:A:C5	5:14:549:G:H1'	2.45	0.51
5:14:606:U:H4'	5:14:658:C:H4'	1.91	0.51
5:14:839:U:H2'	5:14:840:C:H6	1.76	0.51
5:14:1057:A:H2'	5:14:1058:U:O4'	2.11	0.51
5:14:1199:U:O3'	58:14:3914:HOH:O	2.19	0.51
5:14:1485:G:H2'	5:14:1486:A:H8	1.75	0.51
5:14:2394:C:H1'	58:14:3523:HOH:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:4E:63:ARG:HA	9:4E:66:MET:HE2	1.91	0.51
21:8I:70:ARG:O	21:8I:71:PHE:HD1	1.94	0.51
5:1H:5:A:H2'	5:1H:6:A:C8	2.46	0.51
5:1H:357:A:H2'	5:1H:358:U:C6	2.46	0.51
5:1H:860:U:C4	5:1H:917:A:H2	2.28	0.51
5:1H:2343:C:O2'	5:1H:2373:G:O2'	2.25	0.51
28:11:33:LEU:O	28:11:64:ILE:HG23	2.10	0.51
28:11:136:ILE:HG22	28:11:137:PRO:HD2	1.92	0.51
29:21:15:PHE:HB3	40:B8:81:PRO:HG3	1.93	0.51
31:41:107:LEU:O	51:M8:38:LYS:HD3	2.10	0.51
39:A8:34:HIS:HB2	39:A8:36:TYR:CE1	2.42	0.51
43:E8:110:LYS:HG3	43:E8:111:HIS:H	1.75	0.51
46:H8:30:ASN:OD1	46:H8:33:LEU:N	2.41	0.51
52:N8:33:CYS:SG	52:N8:40:LYS:HD3	2.50	0.51
55:Q8:24:ALA:O	55:Q8:46:ARG:HG2	2.10	0.51
1:1G:342:C:H2'	1:1G:343:U:O4'	2.11	0.51
1:1G:589:C:N3	1:1G:650:G:N2	2.47	0.51
1:1G:748:C:H6	1:1G:748:C:O5'	1.91	0.51
1:1G:975:A:H4'	1:1G:976:G:C5'	2.40	0.51
1:1G:1013:G:N2	1:1G:1017:G:O6	2.44	0.51
1:1G:1516:G:N2	1:1G:1519:A:OP2	2.43	0.51
1:13:1160:G:H22	1:13:1177:G:H22	1.58	0.51
2:3L:15:G:H2'	2:3L:16:H2U:H51	1.92	0.51
5:14:861:A:C2	5:14:917:A:C4	2.99	0.51
5:14:1366:A:H2'	5:14:1367:A:O4'	2.10	0.51
5:14:1374:G:H2'	5:14:1375:C:C6	2.45	0.51
5:14:1432:C:H2'	5:14:1433:U:O4'	2.09	0.51
5:14:1527:G:H5''	5:14:1528:A:OP1	2.11	0.51
5:14:1757:U:N3	5:14:1762:A:H2	1.97	0.51
5:14:2142:C:H2'	5:14:2143:C:C6	2.45	0.51
8:3E:107:ARG:NH2	8:3E:194:LEU:HD22	2.26	0.51
15:2I:59:TYR:CZ	15:2I:63:LEU:HD11	2.45	0.51
5:1H:265:A:H1'	5:1H:266:G:O4'	2.10	0.51
5:1H:1188:U:H4'	42:D8:79:VAL:HG22	1.91	0.51
5:1H:2849:U:H4'	5:1H:2868:A:C2	2.45	0.51
28:11:145:VAL:HG12	28:11:146:GLU:O	2.10	0.51
30:31:192:LEU:HD21	30:31:194:MET:HE2	1.93	0.51
43:E8:82:LEU:HD13	43:E8:84:ARG:NH2	2.25	0.51
45:G8:15:VAL:HG21	45:G8:42:VAL:HG21	1.93	0.51
1:1G:468:A:C5	1:1G:474:G:H1'	2.45	0.51
1:1G:1004:A:H8	1:1G:1036:G:N2	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1298:C:H1'	1:1G:1299:A:C6	2.46	0.51
1:1G:1306:A:N6	1:1G:1331:G:O2'	2.44	0.51
6:12:68:ILE:HG12	6:12:161:ALA:HB3	1.92	0.51
2:3L:53:G:N2	2:3L:61:C:N3	2.56	0.51
5:14:819:A:OP2	5:14:1187:G:N2	2.42	0.51
5:14:1445:C:H2'	5:14:1446:C:C6	2.45	0.51
5:14:1810:A:H2'	5:14:1811:G:O4'	2.11	0.51
5:14:2027:G:H2'	5:14:2028:U:O4'	2.10	0.51
5:14:2239:G:P	58:14:3510:HOH:O	2.68	0.51
6:1E:25:ASN:ND2	6:1E:193:ASP:HB3	2.26	0.51
6:1E:53:ARG:NH1	6:1E:200:ILE:HD12	2.25	0.51
7:2E:130:VAL:O	7:2E:134:ILE:HG12	2.10	0.51
7:2E:134:ILE:HG22	7:2E:168:ALA:HB3	1.92	0.51
9:4E:11:ILE:HB	9:4E:105:VAL:HG22	1.93	0.51
3:2K:47:7MG:O2'	3:2K:48:U:O5'	2.27	0.51
2:3K:18:G:O2'	2:3K:19:G:OP1	2.26	0.51
5:1H:1438:U:H2'	5:1H:1439:A:H8	1.76	0.51
5:1H:2155:G:H2'	5:1H:2156:G:H5'	1.91	0.51
5:1H:2378:A:H4'	39:A8:23:ARG:NH1	2.25	0.51
5:1H:2781:A:C5'	5:1H:2782:G:H5'	2.36	0.51
32:51:86:GLU:HG3	32:51:165:ALA:N	2.26	0.51
35:68:25:LEU:HD12	35:68:38:VAL:HG22	1.93	0.51
36:78:95:VAL:HG21	36:78:123:LEU:HD13	1.92	0.51
36:78:114:ILE:HD11	36:78:130:PHE:CD2	2.43	0.51
37:88:3:MET:HG2	37:88:4:PRO:O	2.10	0.51
45:G8:76:CYS:C	45:G8:78:ALA:H	2.17	0.51
50:L8:37:LEU:HD12	50:L8:43:ILE:HD13	1.91	0.51
55:Q8:29:LYS:O	55:Q8:30:ARG:HG3	2.10	0.51
1:1G:458:C:H2'	1:1G:464:G:H8	1.75	0.51
1:1G:1502:A:H4'	1:1G:1503:A:OP2	2.11	0.51
7:22:11:ARG:NH2	7:22:182:ILE:HD11	2.25	0.51
1:13:452:A:O2'	20:7I:72:ARG:HG3	2.11	0.51
1:13:1159:U:O4'	1:13:1182:G:N2	2.44	0.51
5:14:21:A:H61	5:14:519:U:H3	1.59	0.51
5:14:274:G:H2'	5:14:275:G:H4'	1.92	0.51
5:14:654(E):C:N4	5:14:654(P):G:H22	2.07	0.51
5:14:674:G:OP2	58:14:4186:HOH:O	2.19	0.51
5:14:2638:G:HO2'	5:14:2639:A:P	2.34	0.51
9:4E:126:ARG:HG3	9:4E:126:ARG:NH1	2.23	0.51
5:1H:1803:A:H4'	28:11:259:THR:CG2	2.41	0.51
5:1H:2108:C:H2'	5:1H:2109:U:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2810:A:H2'	5:1H:2811:G:O4'	2.11	0.51
32:51:144:VAL:O	32:51:148:ILE:HG12	2.10	0.51
32:51:154:PRO:HD3	32:51:162:ILE:O	2.11	0.51
42:D8:46:VAL:C	42:D8:47:VAL:HG12	2.36	0.51
1:1G:631:G:C3'	1:1G:632:A:H8	2.21	0.51
1:1G:1266:G:N2	1:1G:1270:C:N3	2.58	0.51
6:12:57:PHE:HD2	6:12:58:ILE:HD13	1.75	0.51
6:12:72:GLY:O	6:12:74:LYS:N	2.44	0.51
1:13:452:A:H2'	1:13:453:A:C8	2.46	0.51
1:13:991:U:C4	1:13:1212:U:H1'	2.46	0.51
2:1L:26:A:H3'	2:1L:27:G:H8	1.74	0.51
5:14:196:A:N3	5:14:196:A:H2'	2.26	0.51
5:14:270:A:OP2	5:14:270(Y):G:N2	2.40	0.51
5:14:619:G:H5''	5:14:620:G:H21	1.75	0.51
5:14:807:U:H2'	5:14:808:G:H8	1.76	0.51
5:14:839:U:H3	5:14:939:G:H1	1.58	0.51
5:14:1592:C:H2'	5:14:1593:G:C8	2.44	0.51
5:14:1776:G:OP2	58:14:3543:HOH:O	2.20	0.51
18:5I:21:TYR:HE2	18:5I:23:ARG:NE	2.07	0.51
22:9I:26:LEU:HD11	22:9I:29:PHE:CG	2.45	0.51
5:1H:2392:A:H8	36:78:61:ARG:HG2	1.75	0.51
5:1H:2602:A:OP1	58:1H:4741:HOH:O	2.18	0.51
28:11:69:ARG:HH11	28:11:69:ARG:HG3	1.76	0.51
33:61:110:ASP:H	33:61:130:TYR:HH	1.59	0.51
36:78:15:ARG:HH21	36:78:15:ARG:HG3	1.76	0.51
36:78:49:ARG:NE	55:Q8:57:ARG:HG2	2.26	0.51
45:G8:97:ARG:H	45:G8:97:ARG:HD2	1.75	0.51
1:1G:40:C:H42	1:1G:402:G:H1	1.59	0.51
1:1G:665:A:H1'	1:1G:733:A:O4'	2.11	0.51
1:1G:1129:C:C4	1:1G:1139:G:N1	2.78	0.51
6:12:209:ARG:HD3	6:12:240:GLN:OE1	2.10	0.51
7:22:9:GLY:HA2	7:22:12:LEU:HG	1.92	0.51
1:13:49:U:C2	1:13:361:G:N2	2.79	0.51
5:14:861:A:N3	27:1J:79:C:O2'	2.44	0.51
5:14:1328:G:H2'	5:14:1330:C:C5	2.46	0.51
5:1H:232:G:N2	5:1H:420:C:OP1	2.32	0.51
5:1H:754:C:H2'	5:1H:755:C:H6	1.76	0.51
5:1H:1125:G:OP2	5:1H:1126:A:O2'	2.29	0.51
5:1H:1556:C:H2'	5:1H:1557:C:C6	2.46	0.51
5:1H:1693:U:H1'	28:11:14:ARG:NH2	2.26	0.51
5:1H:1925:C:C2'	5:1H:1926:U:H5'	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2127:G:N2	5:1H:2162:G:H1'	2.24	0.51
5:1H:2147:G:H2'	5:1H:2148:G:H4'	1.93	0.51
5:1H:2383:G:O2'	5:1H:2384:G:H5'	2.11	0.51
5:1H:2540:C:H2'	5:1H:2541:A:O4'	2.10	0.51
5:1H:2746:U:O4	5:1H:2755:C:H4'	2.11	0.51
5:1H:2795:G:H3'	5:1H:2797:U:C5'	2.41	0.51
30:31:114:VAL:HG21	30:31:202:PHE:CZ	2.46	0.51
40:B8:105:LEU:C	40:B8:107:ASP:H	2.18	0.51
1:1G:532:A:H61	7:22:193:TYR:HA	1.75	0.51
1:1G:1002:G:H22	1:1G:1038:C:N4	2.09	0.51
1:13:1145:C:H4'	1:13:1146:A:H8	1.76	0.50
1:13:1423:G:P	35:68:49:ARG:HH22	2.33	0.50
5:14:35:G:H2'	5:14:36:G:O4'	2.11	0.50
5:14:110:G:C2	5:14:111:A:C8	2.99	0.50
5:14:601:C:O2	5:14:605:C:H4'	2.11	0.50
5:14:1358:G:N2	5:14:1372:U:C5	2.79	0.50
5:14:2390:U:O2'	5:14:2391:G:H5'	2.11	0.50
5:14:2394:C:H2'	5:14:2395:C:H6	1.76	0.50
26:1K:8:4SU:H1'	26:1K:48:C:O2'	2.10	0.50
3:2K:44:A:C2	3:2K:45:A:C4	2.99	0.50
5:1H:102:G:OP1	49:K8:7:ARG:NH2	2.44	0.50
5:1H:275:G:N7	5:1H:363:G:C4	2.79	0.50
5:1H:1486:A:H2'	5:1H:1487:G:C8	2.46	0.50
5:1H:1997:G:H5''	58:1H:4102:HOH:O	2.09	0.50
5:1H:2096:U:H3	5:1H:2193:G:H1	1.59	0.50
5:1H:2619:C:H5''	29:21:152:LYS:HA	1.93	0.50
29:21:23:VAL:HA	29:21:185:LYS:HA	1.93	0.50
34:58:39:ARG:NH2	34:58:41:ASP:OD2	2.43	0.50
40:B8:62:THR:HG22	40:B8:75:ILE:HG12	1.92	0.50
44:F8:11:PRO:HG2	44:F8:13:LEU:HD21	1.92	0.50
44:F8:31:HIS:CD2	44:F8:33:LYS:HB2	2.46	0.50
53:O8:26:ASN:OD1	53:O8:28:ARG:HB2	2.11	0.50
1:1G:1145:C:H4'	1:1G:1146:A:OP1	2.10	0.50
8:32:13:ARG:O	8:32:15:GLU:N	2.41	0.50
1:13:868:C:H2'	1:13:869:G:O4'	2.11	0.50
1:13:954:G:H2'	1:13:955:U:C6	2.45	0.50
2:3L:8:4SU:O5'	2:3L:8:4SU:H6	2.11	0.50
5:14:353:G:H2'	5:14:354:G:H8	1.75	0.50
5:14:1482:U:H3	5:14:1512:G:H1	1.59	0.50
5:14:2031:A:N3	5:14:2455:G:O2'	2.38	0.50
5:14:2648:C:H2'	5:14:2649:U:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2749:A:H62	5:14:2753:A:H61	1.59	0.50
6:1E:226:ARG:HG3	6:1E:227:GLY:H	1.76	0.50
8:3E:102:ASP:HB3	8:3E:136:PRO:HB3	1.92	0.50
8:3E:150:GLU:HG3	8:3E:153:ARG:HE	1.76	0.50
10:5E:69:GLU:O	10:5E:72:VAL:HG12	2.11	0.50
11:6E:50:ILE:HB	11:6E:58:PRO:HB3	1.93	0.50
16:3I:7:ILE:CD1	21:8I:32:TYR:HB3	2.42	0.50
5:1H:475:U:C4	5:1H:481:G:O6	2.65	0.50
5:1H:1508:A:O2'	5:1H:1509:C:O4'	2.17	0.50
5:1H:2729:G:H2'	5:1H:2730:C:C6	2.46	0.50
5:1H:2815:C:H5'	52:N8:29:THR:HG21	1.93	0.50
27:1J:24:G:H4'	27:1J:25:A:H5'	1.92	0.50
28:11:2:ALA:HA	28:11:20:ASP:HB2	1.93	0.50
28:11:25:THR:HB	28:11:82:ILE:H	1.75	0.50
28:11:249:PRO:HD2	28:11:250:TRP:CZ3	2.46	0.50
40:B8:26:ASP:CB	40:B8:92:GLY:H	2.24	0.50
46:H8:81:ARG:HG3	46:H8:81:ARG:O	2.10	0.50
53:O8:51:GLU:HG2	53:O8:52:VAL:N	2.26	0.50
1:1G:408:A:OP2	58:1G:1751:HOH:O	2.18	0.50
1:1G:526:C:C4	1:1G:527:G:H1'	2.46	0.50
1:1G:1512:U:H2'	1:1G:1513:A:H8	1.75	0.50
8:32:33:MET:O	8:32:35:ARG:HG3	2.12	0.50
1:13:678:U:H2'	1:13:679:C:C6	2.47	0.50
2:3L:3:C:H2'	2:3L:4:C:O4'	2.12	0.50
5:14:172:C:H2'	5:14:173:G:H8	1.76	0.50
5:14:320:A:H4'	5:14:322:A:C8	2.47	0.50
5:14:654(D):G:H22	5:14:654(Q):C:H42	1.59	0.50
5:14:1849:G:H2'	5:14:1850:G:C8	2.46	0.50
10:5E:41:GLU:HB2	10:5E:62:TRP:CE3	2.46	0.50
12:7E:13:ILE:O	12:7E:17:THR:HG23	2.11	0.50
19:6I:74:ASP:HB3	19:6I:77:ARG:HG2	1.92	0.50
5:1H:270(J):G:H1	5:1H:270(P):C:H42	1.60	0.50
5:1H:415:A:H2'	5:1H:416:C:O4'	2.12	0.50
5:1H:606:U:H4'	5:1H:658:C:H4'	1.94	0.50
5:1H:654(H):G:H2'	5:1H:654(H):G:N3	2.26	0.50
5:1H:1086:A:H1'	5:1H:1103:A:H61	1.76	0.50
5:1H:1303:G:OP2	58:1H:4736:HOH:O	2.19	0.50
5:1H:2887:U:H2'	5:1H:2888:C:C6	2.46	0.50
27:1J:66:A:N6	27:1J:107:U:H2'	2.26	0.50
27:16:89:G:H2'	27:16:89(A):A:C8	2.47	0.50
31:41:46:ALA:HB1	31:41:49:ASP:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:78:78:PRO:HB3	36:78:111:ARG:NH2	2.25	0.50
41:C8:69:CYS:HB2	41:C8:74:LEU:HD13	1.92	0.50
42:D8:24:LYS:HA	42:D8:92:THR:HG23	1.92	0.50
44:F8:15:GLU:HG3	44:F8:16:LYS:N	2.26	0.50
53:O8:9:LEU:HB3	53:O8:26:ASN:O	2.11	0.50
6:12:32:ILE:HD12	6:12:41:ILE:O	2.11	0.50
1:13:10:A:OP2	9:4E:126:ARG:HD3	2.12	0.50
1:13:300:A:H1'	1:13:565:U:O2	2.12	0.50
1:13:1117:G:O3'	13:8E:104:ARG:HD3	2.12	0.50
5:14:442:G:C6	5:14:444:C:N4	2.79	0.50
5:14:1025:G:O2'	5:14:1026:U:OP1	2.24	0.50
5:14:1271:G:O3'	5:14:1272:A:H4'	2.11	0.50
5:14:1417:C:H42	5:14:1581:G:H1	1.59	0.50
5:14:1598:C:OP2	5:14:1598:C:H6	1.94	0.50
7:2E:32:LEU:HD13	7:2E:59:ARG:NH1	2.27	0.50
8:3E:98:GLU:HG2	8:3E:189:PRO:HG2	1.93	0.50
24:BI:49:ALA:O	24:BI:52:ALA:N	2.44	0.50
2:3K:69:G:H2'	2:3K:70:G:C8	2.47	0.50
5:1H:242:G:OP1	58:1H:4468:HOH:O	2.20	0.50
5:1H:654(D):G:H22	5:1H:654(Q):C:N4	2.09	0.50
5:1H:1016:G:N7	58:1H:4462:HOH:O	2.34	0.50
5:1H:1278:A:OP1	38:98:36:THR:HG22	2.11	0.50
5:1H:1748:G:H2'	5:1H:1749:A:C8	2.45	0.50
5:1H:2061:G:H5''	5:1H:2503:A:C2	2.47	0.50
27:1J:15:A:H1'	27:1J:109:G:C4	2.46	0.50
41:C8:95:LEU:HG	42:D8:4:ILE:HD13	1.93	0.50
41:C8:107:ALA:O	41:C8:111:GLU:HG2	2.10	0.50
45:G8:77:PRO:HD2	45:G8:97:ARG:HD3	1.94	0.50
55:Q8:23:VAL:HG22	55:Q8:24:ALA:N	2.26	0.50
1:1G:424:G:H2'	1:1G:425:G:H8	1.76	0.50
1:1G:991:U:O2	1:1G:993:G:H8	1.94	0.50
1:1G:1055:A:N6	1:1G:1206:G:N7	2.60	0.50
1:13:552:U:O2'	1:13:553:A:H5'	2.12	0.50
5:14:603:A:H8	5:14:604:G:H1'	1.76	0.50
5:14:902:C:H2'	5:14:903:C:C6	2.47	0.50
5:14:1040:C:H2'	5:14:1041:C:C6	2.47	0.50
5:14:2320:A:N6	5:14:2333:A:H2'	2.27	0.50
5:14:2394:C:H2'	5:14:2395:C:C6	2.46	0.50
5:14:2845:G:OP2	58:14:3679:HOH:O	2.19	0.50
14:1I:90:LEU:N	14:1I:91:PRO:HD3	2.26	0.50
20:7I:4:ILE:HA	20:7I:20:VAL:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AI:50:ALA:HA	23:AI:58:VAL:O	2.12	0.50
23:AI:58:VAL:HG11	23:AI:75:ALA:HB1	1.93	0.50
5:1H:130:C:O3'	5:1H:1349:A:H1'	2.12	0.50
5:1H:474:G:O6	58:1H:4558:HOH:O	2.19	0.50
5:1H:2453:A:H2'	5:1H:2454:G:O4'	2.12	0.50
5:1H:2620:C:H2'	5:1H:2621:A:O4'	2.12	0.50
27:16:15:A:O2'	27:16:109:G:C8	2.54	0.50
31:41:112:PRO:HG3	51:M8:38:LYS:HD2	1.93	0.50
47:I8:36:ILE:O	47:I8:36:ILE:HD13	2.11	0.50
1:1G:167:G:H2'	1:1G:168:G:H8	1.76	0.50
1:1G:960:U:H4'	1:1G:961:U:H5''	1.94	0.50
1:1G:1432:G:N2	58:1G:1800:HOH:O	2.43	0.50
1:1G:1449:C:H3'	1:1G:1450:U:H4'	1.93	0.50
8:32:126:ILE:HG22	8:32:127:THR:N	2.26	0.50
1:13:138:G:H1	1:13:225:C:H42	1.60	0.50
1:13:446:G:H1	1:13:488:C:N4	2.02	0.50
1:13:1014:A:H4'	23:AI:14:HIS:CD2	2.47	0.50
1:13:1386:G:O2'	1:13:1387:G:H5'	2.11	0.50
5:14:276:A:H2'	5:14:277:C:C5	2.46	0.50
5:14:1021:A:H8	5:14:1021:A:H3'	1.77	0.50
5:14:2475:C:H5'	5:14:2476:A:O5'	2.12	0.50
6:1E:18:GLY:N	6:1E:42:ILE:HG22	2.27	0.50
18:5I:6:LEU:HB3	18:5I:23:ARG:HH22	1.76	0.50
20:7I:45:THR:HB	20:7I:47:ASP:H	1.76	0.50
24:BI:30:LYS:NZ	24:BI:80:ARG:HH12	2.10	0.50
5:1H:2094:G:O2'	5:1H:2095:C:H5'	2.11	0.50
5:1H:2298:A:H62	5:1H:2318:G:H8	1.60	0.50
5:1H:2388:A:H2'	5:1H:2389:G:H5'	1.94	0.50
5:1H:2679:A:H4'	29:21:165:VAL:HG11	1.92	0.50
5:1H:2712:U:OP1	5:1H:2714:G:H4'	2.11	0.50
5:1H:2756:U:H4'	5:1H:2757:A:OP1	2.11	0.50
27:1J:100:G:P	58:1J:309:HOH:O	2.68	0.50
31:41:28:VAL:O	31:41:31:VAL:HG13	2.12	0.50
33:61:8:PRO:HG3	33:61:14:ASP:HB2	1.93	0.50
36:78:39:LYS:HG3	36:78:45:LEU:CD2	2.41	0.50
40:B8:111:ARG:H	40:B8:111:ARG:CD	2.17	0.50
51:M8:34:GLU:HG2	51:M8:35:VAL:N	2.25	0.50
55:Q8:56:GLU:O	55:Q8:57:ARG:HG3	2.11	0.50
1:1G:382:A:H2'	1:1G:383:A:H8	1.77	0.50
1:1G:520:A:N1	1:1G:536:C:H1'	2.27	0.50
1:1G:561:U:HO2'	1:1G:562:C:P	2.35	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:690:G:H2'	1:1G:691:G:O4'	2.11	0.50
1:1G:841:U:H4'	1:1G:842:C:C6	2.46	0.50
1:13:738:C:H2'	1:13:739:C:H6	1.75	0.50
2:1L:39:PSU:H2'	2:1L:40:C:C6	2.47	0.50
5:14:654(C):G:H2'	5:14:654(D):G:O4'	2.11	0.50
5:14:1167:U:C2	5:14:1183:G:N2	2.80	0.50
5:14:1784:A:H4'	5:14:1785:A:O5'	2.12	0.50
10:5E:38:GLU:HB2	10:5E:64:GLN:HB3	1.94	0.50
11:6E:95:ARG:NH2	11:6E:99:LEU:HD21	2.27	0.50
23:AI:42:PRO:O	23:AI:45:VAL:HG22	2.12	0.50
5:1H:84:A:OP2	45:G8:8:LYS:NZ	2.27	0.50
5:1H:190:A:OP2	48:J8:39:LYS:HE3	2.11	0.50
5:1H:270(G):C:H2'	5:1H:270(H):C:H6	1.76	0.50
5:1H:2116:G:O6	5:1H:2172:U:N3	2.45	0.50
5:1H:2232:U:P	48:J8:40:ARG:HH12	2.34	0.50
27:1J:18:G:H1	27:1J:65:C:N4	2.05	0.50
28:11:112:GLN:O	28:11:115:GLN:HG2	2.12	0.50
30:31:62:ARG:HB3	30:31:62:ARG:NH1	2.27	0.50
45:G8:38:ILE:CD1	45:G8:64:GLU:HG3	2.40	0.50
47:I8:42:GLY:C	47:I8:57:PHE:HD2	2.19	0.50
1:1G:216:G:O2'	1:1G:217:C:O4'	2.30	0.50
1:1G:942:G:C2	1:1G:1342:C:C2	2.99	0.50
1:13:165:C:H2'	1:13:166:G:C8	2.46	0.50
5:14:17:G:H2'	5:14:18:C:C6	2.47	0.50
5:14:311:A:C6	5:14:328:U:C4	3.00	0.50
5:14:406:G:H1	5:14:421:U:H3	1.57	0.50
5:14:1590:U:H2'	5:14:1591:G:C8	2.47	0.50
5:14:1788:C:C2	5:14:1789:A:C8	3.00	0.50
5:14:1828:G:P	58:14:3533:HOH:O	2.70	0.50
5:14:2130:U:O2'	5:14:2134:A:O4'	2.29	0.50
8:3E:154:ASN:CG	8:3E:155:LEU:H	2.20	0.50
23:AI:40:ILE:O	23:AI:41:VAL:HG22	2.11	0.50
24:BI:49:ALA:CB	24:BI:99:LEU:HB2	2.42	0.50
26:1K:19:G:H22	26:1K:56:C:H42	1.60	0.50
5:1H:582:G:H2'	5:1H:583:G:H8	1.76	0.50
5:1H:2344:U:O2'	53:O8:37:ARG:HG2	2.12	0.50
34:58:35:ARG:O	34:58:42:TRP:HZ3	1.94	0.50
37:88:52:VAL:O	37:88:56:ARG:HB2	2.12	0.50
38:98:46:GLY:HA2	38:98:49:ASP:HB2	1.92	0.50
41:C8:50:ARG:NH2	42:D8:72:VAL:HG12	2.27	0.50
55:Q8:53:PRO:HB3	55:Q8:56:GLU:HG3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:828:A:H2'	1:1G:829:G:O4'	2.11	0.50
6:12:71:VAL:HG23	6:12:163:PHE:O	2.11	0.50
6:12:91:PRO:HG2	6:12:155:LEU:HB2	1.94	0.50
1:13:1007:C:H42	1:13:1022:G:H1	1.59	0.50
5:14:1062:G:H2'	5:14:1063:G:H8	1.76	0.50
5:14:2340:G:O2'	5:14:2341:G:H5'	2.12	0.50
5:14:2408:U:H2'	5:14:2409:G:C8	2.47	0.50
8:3E:64:LEU:O	8:3E:67:ILE:HB	2.12	0.50
11:6E:45:ASP:O	11:6E:49:ILE:HG12	2.11	0.50
13:8E:125:TYR:CD1	13:8E:126:SER:N	2.79	0.50
17:4I:11:ARG:HB2	17:4I:11:ARG:HH11	1.75	0.50
22:9I:38:GLU:HA	22:9I:41:LYS:NZ	2.27	0.50
5:1H:184:C:H2'	5:1H:185:U:C6	2.47	0.50
5:1H:782:A:H5'	5:1H:783:A:C2	2.47	0.50
5:1H:963:U:OP1	58:1H:3922:HOH:O	2.18	0.50
5:1H:1026:U:H1'	5:1H:1027:A:P	2.52	0.50
5:1H:1181:C:O2'	5:1H:1182:A:H5'	2.12	0.50
5:1H:1213:A:H1'	5:1H:1238:G:N3	2.27	0.50
5:1H:1766:U:O2'	5:1H:1767:C:H5'	2.12	0.50
5:1H:1814:G:P	28:11:40:THR:HG21	2.51	0.50
5:1H:2224:G:H4'	5:1H:2226:C:C2	2.47	0.50
5:1H:2429:G:O6	36:78:61:ARG:NH1	2.45	0.50
5:1H:2771:C:H2'	5:1H:2772:C:H6	1.77	0.50
29:21:16:ARG:O	29:21:16:ARG:HG3	2.12	0.50
36:78:18:ARG:O	36:78:19:VAL:HG22	2.11	0.50
36:78:124:LYS:HA	36:78:143:GLY:O	2.11	0.50
36:78:126:VAL:HG13	36:78:145:PRO:HB2	1.94	0.50
49:K8:18:PRO:O	49:K8:21:LEU:HB2	2.11	0.50
1:1G:374:A:N3	1:1G:374:A:H2'	2.26	0.50
1:1G:1048:G:O4'	1:1G:1215:G:H4'	2.12	0.50
7:22:112:SER:O	7:22:116:VAL:HG23	2.12	0.50
1:13:413:G:N7	8:3E:35:ARG:NH1	2.60	0.49
1:13:625:G:H4'	20:7I:16:HIS:ND1	2.26	0.49
5:14:451:C:OP2	58:14:3807:HOH:O	2.18	0.49
5:14:736:C:OP1	58:14:4131:HOH:O	2.19	0.49
5:14:951:C:O2'	5:14:952:G:H5'	2.12	0.49
5:14:1176:G:H5'	5:14:1177:A:OP1	2.12	0.49
5:14:2459:A:C5	5:14:2460:U:C5	3.00	0.49
6:1E:238:LEU:H	6:1E:238:LEU:HD12	1.76	0.49
17:4I:3:ARG:HH22	31:41:139:LEU:HD13	1.76	0.49
5:1H:530:G:N3	5:1H:530:G:O4'	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1465:G:H2'	5:1H:1466:G:C8	2.41	0.49
5:1H:1542:G:OP2	5:1H:1543:A:O2'	2.30	0.49
5:1H:2151:G:H2'	5:1H:2152:G:H8	1.77	0.49
5:1H:2257:U:O2'	5:1H:2258:C:H5'	2.12	0.49
5:1H:2505:G:O6	5:1H:2576:G:H2'	2.12	0.49
29:21:60:ASN:OD1	29:21:62:PRO:HD2	2.12	0.49
33:61:1:MET:O	33:61:20:ASP:HA	2.12	0.49
38:98:24:GLN:HE22	38:98:36:THR:HG21	1.76	0.49
38:98:60:LEU:O	38:98:64:ARG:HG3	2.12	0.49
40:B8:26:ASP:CB	40:B8:91:ARG:HA	2.41	0.49
45:G8:97:ARG:HD2	45:G8:97:ARG:N	2.26	0.49
47:I8:25:ARG:HD3	47:I8:29:GLN:HE22	1.77	0.49
1:13:44:G:C2	1:13:45:U:H1'	2.47	0.49
1:13:320:C:H42	1:13:333:G:H1	1.60	0.49
1:13:1118:C:OP1	13:8E:104:ARG:NH1	2.37	0.49
1:13:1500:A:P	58:13:1804:HOH:O	2.63	0.49
5:14:223:A:N1	5:14:407:G:O2'	2.42	0.49
5:14:1538:G:H2'	5:14:1539:G:H8	1.78	0.49
5:14:2162:G:H4'	5:14:2173:A:OP2	2.12	0.49
16:3I:82:VAL:HG13	16:3I:105:TYR:HB3	1.94	0.49
18:5I:24:CYS:HB2	18:5I:40:CYS:HB3	1.94	0.49
26:1K:52:G:N2	26:1K:62:C:O2	2.35	0.49
5:1H:234:C:O2'	5:1H:235:U:H5'	2.12	0.49
5:1H:270(J):G:H2'	5:1H:270(K):C:O4'	2.13	0.49
5:1H:1429:G:O2'	5:1H:1430:C:H5'	2.11	0.49
5:1H:2272:U:H5''	5:1H:2273:A:OP1	2.12	0.49
5:1H:2399:G:O3'	53:O8:19:ARG:NH1	2.44	0.49
5:1H:2432:A:C4	48:J8:33:LYS:HG2	2.46	0.49
5:1H:2771:C:H2'	5:1H:2772:C:C6	2.48	0.49
27:1J:44:G:H1'	27:1J:47:C:N4	2.26	0.49
29:21:33:VAL:O	29:21:69:LYS:HD2	2.12	0.49
30:31:149:ASP:OD1	30:31:149:ASP:N	2.31	0.49
34:58:66:LYS:O	34:58:70:LYS:HB3	2.12	0.49
37:88:58:PHE:O	37:88:61:GLY:N	2.45	0.49
55:Q8:42:ARG:HG2	55:Q8:42:ARG:O	2.11	0.49
1:1G:575:G:OP1	1:1G:575:G:H4'	2.13	0.49
1:1G:838:G:N2	1:1G:849:C:N3	2.61	0.49
1:1G:957:U:H2'	1:1G:959:A:OP2	2.11	0.49
1:1G:1262:C:H2'	1:1G:1263:C:C6	2.46	0.49
1:13:35:G:O2'	16:3I:118:SER:O	2.19	0.49
1:13:765:G:H5''	1:13:766:A:OP1	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1367:C:H5'	14:1I:60:ARG:HE	1.77	0.49
1:13:1429:C:H2'	1:13:1430:C:C6	2.47	0.49
3:2L:32:G:C5	3:2L:33:OMC:C5	3.00	0.49
3:2L:54:G:H2'	3:2L:55:U:C6	2.47	0.49
5:14:71:A:H4'	5:14:72:U:H5''	1.95	0.49
5:14:831:G:H5''	5:14:832:G:OP2	2.11	0.49
5:14:957:A:N6	5:14:2459:A:C8	2.80	0.49
5:14:997:G:H2'	5:14:998:C:H6	1.77	0.49
5:14:2056:G:C2	5:14:2057:A:C8	3.00	0.49
9:4E:71:LEU:HD22	9:4E:115:VAL:H	1.77	0.49
11:6E:150:ALA:HB2	15:2I:50:TYR:OH	2.12	0.49
12:7E:21:LYS:O	12:7E:63:LEU:HD23	2.11	0.49
14:1I:32:ALA:HB3	14:1I:76:ASN:O	2.12	0.49
15:2I:44:SER:OG	15:2I:47:VAL:HG23	2.12	0.49
21:8I:11:VAL:HG23	21:8I:20:THR:HB	1.94	0.49
5:1H:286:C:O2'	5:1H:287:C:H5'	2.12	0.49
5:1H:945:A:OP2	5:1H:945:A:H4'	2.12	0.49
5:1H:1038:C:H2'	5:1H:1039:G:O4'	2.11	0.49
5:1H:1187:G:P	58:1H:3949:HOH:O	2.69	0.49
5:1H:2655:G:O2'	5:1H:2664:G:O6	2.26	0.49
27:16:28:C:OP1	39:A8:31:SER:OG	2.24	0.49
27:16:54:G:H2'	27:16:55:U:H6	1.78	0.49
32:51:124:GLU:HG2	32:51:126:PRO:HG3	1.94	0.49
33:61:95:LYS:HA	33:61:111:PRO:HG3	1.94	0.49
36:78:19:VAL:CB	36:78:27:HIS:HB2	2.39	0.49
39:A8:39:ILE:HD12	39:A8:73:LEU:HD22	1.94	0.49
46:H8:70:LEU:HD11	46:H8:98:MET:HE3	1.93	0.49
1:1G:222:U:C2	1:1G:223:U:C5	3.00	0.49
1:1G:458:C:H2'	1:1G:464:G:C8	2.48	0.49
1:1G:601:C:H2'	1:1G:602:A:C8	2.47	0.49
7:22:190:ARG:H	7:22:190:ARG:HD2	1.77	0.49
1:13:1410:G:O6	58:13:2024:HOH:O	2.19	0.49
4:4L:13:A:HO2'	4:4L:14:A:P	2.29	0.49
5:14:234:C:H2'	5:14:235:U:C6	2.47	0.49
5:14:305:U:H2'	5:14:306:U:C6	2.48	0.49
5:14:343:C:H2'	5:14:344:G:H8	1.77	0.49
5:14:446:G:H8	58:14:3913:HOH:O	1.94	0.49
5:14:1758:G:C2	5:14:2696:U:H5'	2.47	0.49
5:14:1937:A:H5'	58:14:3633:HOH:O	2.12	0.49
9:4E:113:ALA:O	9:4E:115:VAL:HG23	2.12	0.49
12:7E:134:ILE:HG22	12:7E:135:CYS:SG	2.53	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1K:51:U:H2'	26:1K:52:G:C8	2.47	0.49
5:1H:586:A:P	58:1H:3968:HOH:O	2.70	0.49
5:1H:754:C:H2'	5:1H:755:C:C6	2.48	0.49
5:1H:882:G:H22	5:1H:894:C:N4	1.97	0.49
5:1H:972:G:H8	5:1H:972:G:O5'	1.95	0.49
5:1H:1441:G:H2'	5:1H:1442:G:C8	2.47	0.49
5:1H:1776:G:OP2	58:1H:3665:HOH:O	2.20	0.49
5:1H:2314:C:H5''	31:41:38:VAL:HG21	1.94	0.49
40:B8:105:LEU:O	40:B8:107:ASP:N	2.45	0.49
55:Q8:6:THR:HG22	55:Q8:59:LYS:HD2	1.93	0.49
1:1G:143:A:O3'	1:1G:144:G:H8	1.95	0.49
1:1G:158:G:H1	1:1G:163:C:H42	1.60	0.49
1:1G:648:A:H2'	1:1G:649:G:H8	1.75	0.49
1:1G:857:C:H2'	1:1G:858:G:O4'	2.11	0.49
1:1G:1028:C:N4	1:1G:1033:G:H1	2.08	0.49
6:12:55:PHE:HZ	6:12:218:ALA:HA	1.77	0.49
1:13:428:G:C8	1:13:430:A:C4	3.00	0.49
5:14:108:U:H2'	5:14:109:G:H8	1.77	0.49
5:14:1165:U:H2'	5:14:1166:C:C6	2.47	0.49
5:14:1858:G:H1'	5:14:1884:A:N6	2.27	0.49
5:14:2536:G:C6	5:14:2537:U:C4	3.01	0.49
11:6E:26:PHE:CE2	11:6E:30:ILE:HD11	2.47	0.49
15:2I:85:ARG:HD3	15:2I:113:PRO:HD3	1.94	0.49
17:4I:80:ARG:NH1	23:AI:65:ASN:O	2.46	0.49
5:1H:618:G:H2'	5:1H:618(A):C:C6	2.48	0.49
5:1H:1621:U:H5''	5:1H:1622:G:OP1	2.12	0.49
5:1H:1889:A:N1	5:1H:2234:G:H1'	2.27	0.49
5:1H:2069:G:H4'	58:1H:4258:HOH:O	2.11	0.49
5:1H:2262:U:OP1	5:1H:2387:U:O2'	2.23	0.49
5:1H:2559:C:O2'	5:1H:2560:C:H5'	2.12	0.49
27:1J:115:G:H8	27:1J:115:G:OP2	1.96	0.49
29:21:27:LEU:HD13	40:B8:1:MET:HE1	1.94	0.49
40:B8:24:PRO:HA	40:B8:49:VAL:HG22	1.95	0.49
50:L8:8:LEU:HD22	50:L8:31:LEU:HD22	1.95	0.49
1:13:690:G:H2'	1:13:691:G:O4'	2.13	0.49
1:13:791:G:C6	1:13:792:A:C2	3.00	0.49
1:13:1007:C:N4	1:13:1022:G:H1	2.10	0.49
1:13:1098:C:C2	1:13:1099:G:C8	3.00	0.49
2:1L:10:G:O2'	2:1L:11:C:OP1	2.29	0.49
2:3L:18:G:O2'	2:3L:60:U:O4	2.29	0.49
5:14:287:C:H2'	5:14:288:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:459:U:H2'	5:14:460:A:C8	2.48	0.49
5:14:1278:A:N7	58:14:4068:HOH:O	2.34	0.49
5:14:1894:C:O2'	5:14:1895:C:H5'	2.12	0.49
5:14:2134:A:C2	5:14:2159:G:H1'	2.46	0.49
7:2E:129:ALA:HB2	8:3E:47:ARG:HH22	1.78	0.49
10:5E:27:GLN:HA	10:5E:30:LEU:HD12	1.95	0.49
20:7I:17:TYR:HE2	20:7I:41:PRO:HG3	1.77	0.49
23:AI:30:LEU:HD22	23:AI:30:LEU:H	1.78	0.49
24:BI:26:ASN:O	24:BI:30:LYS:HB2	2.13	0.49
2:3K:19:G:N1	5:1H:2112:G:H1'	2.28	0.49
5:1H:1204:A:H2	5:1H:1241:A:N1	2.10	0.49
5:1H:1389:G:C2	5:1H:1399:C:O2	2.65	0.49
5:1H:1412:A:H2'	5:1H:1413:G:C8	2.48	0.49
5:1H:2032:G:C4	29:21:145:LYS:HD3	2.48	0.49
5:1H:2318:G:H1	39:A8:2:ALA:HA	1.77	0.49
27:1J:3:C:H2'	27:1J:4:C:C6	2.48	0.49
27:1J:4:C:H42	27:1J:116:G:H22	1.59	0.49
27:16:73:A:C4	27:16:104:A:C2	3.00	0.49
28:11:121:PRO:HB3	28:11:135:PHE:CE2	2.47	0.49
29:21:63:LEU:HD23	29:21:63:LEU:O	2.11	0.49
31:41:37:VAL:HG23	31:41:99:MET:CE	2.43	0.49
31:41:49:ASP:OD2	31:41:51:ARG:NH2	2.46	0.49
35:68:63:VAL:HG11	35:68:85:VAL:HG23	1.94	0.49
36:78:122:PRO:HA	36:78:142:GLY:HA3	1.94	0.49
41:C8:29:SER:OG	41:C8:30:LYS:HE2	2.13	0.49
44:F8:61:GLY:N	44:F8:75:ASP:OD1	2.31	0.49
49:K8:42:GLY:O	49:K8:44:LEU:HD23	2.11	0.49
1:1G:79:G:H2'	1:1G:79:G:N3	2.28	0.49
1:1G:440:A:H8	1:1G:440:A:OP2	1.95	0.49
1:1G:674:G:H2'	1:1G:675:A:H8	1.76	0.49
1:1G:1071:C:H2'	1:1G:1072:G:H8	1.78	0.49
1:1G:1374:A:H2'	1:1G:1375:A:H5'	1.94	0.49
6:12:196:LEU:HD12	6:12:197:VAL:HG23	1.94	0.49
7:22:11:ARG:HB2	7:22:11:ARG:NH1	2.27	0.49
1:13:186(F):C:H2'	1:13:187:C:O4'	2.12	0.49
1:13:201:C:N4	1:13:209:U:H1'	2.27	0.49
1:13:428:G:C8	1:13:430:A:C5	3.01	0.49
1:13:486:U:H2'	1:13:487:A:H8	1.77	0.49
1:13:1113:C:H2'	1:13:1114:C:H6	1.77	0.49
2:1L:11:C:H2'	2:1L:12:U:C6	2.48	0.49
3:2L:54:G:H2'	3:2L:55:U:H6	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2261:C:O2'	5:14:2262:U:H5'	2.13	0.49
5:14:2540:C:O2'	5:14:2740:A:N3	2.41	0.49
26:1K:16:H2U:O2	26:1K:16:H2U:H2'	2.12	0.49
5:1H:142:G:H1'	44:F8:37:THR:CG2	2.43	0.49
5:1H:325:G:H2'	5:1H:326:G:C8	2.47	0.49
5:1H:821:A:H2'	5:1H:946:G:H5''	1.93	0.49
5:1H:847:U:P	58:1H:3781:HOH:O	2.70	0.49
5:1H:1022:G:N2	5:1H:1023:U:O4	2.40	0.49
5:1H:1683:C:H2'	5:1H:1684:C:C6	2.48	0.49
5:1H:2314:C:H2'	5:1H:2315:G:H8	1.76	0.49
5:1H:2481:G:O2'	5:1H:2482:G:O5'	2.29	0.49
5:1H:2862:G:H2'	5:1H:2863:C:C6	2.48	0.49
29:21:24:THR:HG21	29:21:188:VAL:HG21	1.95	0.49
31:41:63:ILE:HG22	31:41:143:GLU:HB2	1.94	0.49
33:61:11:ASN:O	33:61:12:LEU:HB2	2.13	0.49
33:61:38:LEU:HD12	33:61:38:LEU:N	2.28	0.49
33:61:69:LYS:O	33:61:73:GLU:HB2	2.13	0.49
34:58:12:ARG:HH21	34:58:14:VAL:CG2	2.24	0.49
36:78:2:LYS:HG2	36:78:4:SER:H	1.78	0.49
46:H8:143:GLY:O	46:H8:145:GLU:HG2	2.13	0.49
53:O8:17:LYS:C	53:O8:19:ARG:H	2.20	0.49
55:Q8:59:LYS:H	55:Q8:59:LYS:CD	2.22	0.49
1:1G:851:G:H2'	1:1G:852:G:H8	1.77	0.49
1:1G:983:A:O2'	1:1G:1050:G:OP2	2.21	0.49
1:1G:1255:G:O3'	1:1G:1258:G:H1'	2.12	0.49
6:12:214:ILE:O	6:12:218:ALA:HB2	2.12	0.49
5:14:141:A:C8	5:14:1408:C:H1'	2.48	0.49
5:14:1000:A:C6	5:14:1001:A:N1	2.81	0.49
5:14:2187:G:C6	5:14:2188:C:N3	2.80	0.49
5:14:2306:C:H3'	5:14:2307:G:H5''	1.95	0.49
9:4E:153:LYS:HD3	9:4E:154:GLY:N	2.28	0.49
12:7E:83:ILE:HB	12:7E:137:VAL:HG13	1.95	0.49
20:7I:53:VAL:HG22	20:7I:79:VAL:HG23	1.94	0.49
24:BI:14:LYS:HG3	24:BI:17:ARG:HH21	1.77	0.49
5:1H:357:A:H2'	5:1H:358:U:H6	1.77	0.49
5:1H:1021:A:C8	5:1H:1021:A:C3'	2.95	0.49
5:1H:1443:G:N2	5:1H:1549:C:C2	2.81	0.49
5:1H:1532:C:H2'	5:1H:1533:C:O4'	2.13	0.49
5:1H:1980:G:H4'	58:1H:3664:HOH:O	2.13	0.49
5:1H:2154:G:H2'	5:1H:2155:G:C8	2.48	0.49
27:1J:89(A):A:C8	27:1J:90:C:H1'	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:41:112:PRO:HB3	51:M8:36:CYS:HA	1.95	0.49
32:51:92:ILE:CD1	32:51:93:GLY:H	2.25	0.49
35:68:98:VAL:HG11	35:68:114:ILE:HG23	1.94	0.49
36:78:106:LEU:O	36:78:107:LYS:C	2.55	0.49
38:98:65:LEU:O	38:98:68:ARG:HB2	2.13	0.49
46:H8:111:VAL:HG11	46:H8:146:ILE:HD11	1.94	0.49
53:O8:20:ASN:C	53:O8:21:TYR:CG	2.91	0.49
1:1G:909:A:H2'	1:1G:910:C:O4'	2.12	0.49
1:13:765:G:N2	1:13:813:U:OP2	2.45	0.49
1:13:827:U:H5''	1:13:828:A:OP2	2.13	0.49
1:13:1160:G:H1	1:13:1177:G:H1	1.59	0.49
5:14:108:U:H2'	5:14:109:G:C8	2.48	0.49
5:14:959:A:N6	5:14:960:A:N1	2.61	0.49
5:14:1486:A:O2'	5:14:1487:G:H5'	2.12	0.49
5:14:2146:C:H4'	5:14:2147:G:C8	2.48	0.49
10:5E:99:ALA:HB3	22:9I:29:PHE:CE1	2.48	0.49
14:1I:46:ARG:NH2	14:1I:64:GLU:OE1	2.46	0.49
18:5I:39:LEU:HD11	18:5I:47:LEU:HD12	1.93	0.49
26:1K:76:A:O2'	5:1H:2506:U:H1'	2.12	0.49
3:2K:20:G:C2	3:2K:58:A:N3	2.80	0.49
5:1H:844:C:H3'	5:1H:845:G:C8	2.48	0.49
5:1H:1009:A:OP1	34:58:37:LYS:NZ	2.39	0.49
5:1H:2154:G:H2'	5:1H:2155:G:H8	1.77	0.49
5:1H:2615:U:H2'	5:1H:2616:C:H6	1.77	0.49
37:88:55:VAL:HG12	37:88:64:ILE:HD12	1.95	0.49
43:E8:37:ARG:HD3	43:E8:38:TYR:HE2	1.77	0.49
51:M8:38:LYS:HD2	51:M8:38:LYS:H	1.77	0.49
52:N8:40:LYS:HE2	52:N8:47:PRO:HD2	1.95	0.49
1:1G:626:U:C2	1:1G:627:G:C8	3.01	0.49
1:1G:1291:G:H2'	1:1G:1292:U:C6	2.47	0.49
7:22:87:LEU:HA	7:22:90:GLU:HG2	1.95	0.49
1:13:727:G:N2	1:13:730:G:OP2	2.36	0.49
1:13:957:U:N3	1:13:960:U:OP2	2.41	0.49
2:3L:25:C:H2'	2:3L:26:A:O4'	2.13	0.49
5:14:315:G:H2'	5:14:316:C:C6	2.48	0.49
5:14:2122:U:H2'	5:14:2123:G:O4'	2.13	0.49
5:14:2697:G:H2'	5:14:2698:U:O4'	2.12	0.49
11:6E:26:PHE:CD2	11:6E:30:ILE:HD11	2.47	0.49
23:AI:42:PRO:HD3	51:M8:63:TYR:HE2	1.78	0.49
24:BI:50:GLU:HG3	24:BI:100:ILE:HD13	1.94	0.49
5:1H:392:C:P	58:1H:3773:HOH:O	2.71	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1047:G:O2'	5:1H:1111:A:N6	2.46	0.49
5:1H:1152:C:H3'	58:1H:4100:HOH:O	2.12	0.49
5:1H:1210:A:H5'	5:1H:1210:A:H8	1.76	0.49
5:1H:2646:C:OP2	5:1H:2732:G:O2'	2.22	0.49
5:1H:2695:C:H2'	5:1H:2696:U:H6	1.77	0.49
28:11:149:PRO:O	28:11:150:LYS:HB2	2.12	0.49
28:11:182:LEU:N	28:11:272:ALA:HB3	2.24	0.49
32:51:54:ARG:HD3	32:51:65:HIS:ND1	2.28	0.49
33:61:110:ASP:OD1	33:61:130:TYR:OH	2.21	0.49
40:B8:26:ASP:OD2	40:B8:120:ARG:NH2	2.45	0.49
43:E8:14:PRO:O	43:E8:18:ARG:HB2	2.12	0.49
44:F8:2:LYS:HG2	49:K8:26:ARG:HE	1.77	0.49
55:Q8:39:LYS:HG3	55:Q8:40:GLU:H	1.78	0.49
1:1G:167:G:O2'	1:1G:168:G:H5'	2.13	0.49
1:1G:187:C:H2'	1:1G:188:U:O4'	2.13	0.49
1:1G:411:A:H62	1:1G:413:G:N2	2.07	0.49
1:1G:641:U:O3'	1:1G:642:A:H8	1.96	0.49
1:1G:1062:U:H2'	1:1G:1063:C:C5	2.48	0.49
1:1G:1376:U:H2'	1:1G:1377:A:H8	1.78	0.49
1:13:57:G:H2'	1:13:58:C:H6	1.77	0.48
1:13:292:G:N7	1:13:293:G:H1'	2.28	0.48
1:13:547:A:OP1	8:3E:73:ARG:NH2	2.46	0.48
1:13:834:C:C2	1:13:853:G:C2	3.01	0.48
1:13:1286:A:H5''	25:1F:26:LYS:CG	2.43	0.48
5:14:37:C:H2'	5:14:38:A:C8	2.47	0.48
5:14:120:U:C2	5:14:149:A:C6	3.00	0.48
5:14:580:C:H2'	5:14:581:C:H6	1.78	0.48
5:14:912:C:C6	5:14:913:U:H5	2.30	0.48
5:14:1021:A:H3'	5:14:1021:A:C8	2.48	0.48
5:14:1026:U:H2'	27:1J:88:C:H42	1.78	0.48
5:14:1510:A:H2'	5:14:1511:A:O4'	2.13	0.48
5:14:2638:G:O2'	5:14:2639:A:C8	2.66	0.48
12:7E:35:ILE:HD12	12:7E:118:VAL:HG11	1.94	0.48
12:7E:121:ASP:HB2	12:7E:125:ARG:NH2	2.28	0.48
13:8E:128:ARG:NH2	3:2K:36:A:OP2	2.38	0.48
20:7I:39:TYR:HB2	20:7I:49:LEU:HD13	1.94	0.48
2:3K:24:G:C6	2:3K:25:C:N4	2.81	0.48
2:3K:52:G:N2	2:3K:63:G:N7	2.60	0.48
5:1H:975:G:H1'	5:1H:990:A:C2	2.48	0.48
5:1H:1142:U:H5'	5:1H:1142(A):A:C8	2.48	0.48
5:1H:1858:G:H8	5:1H:1858:G:OP2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1J:18:G:H2'	27:1J:19:G:C8	2.48	0.48
35:68:7:TYR:CZ	35:68:44:LYS:HG3	2.48	0.48
37:88:5:ARG:O	37:88:6:ARG:C	2.55	0.48
38:98:87:TYR:HE1	38:98:117:VAL:HG12	1.77	0.48
39:A8:34:HIS:CE1	39:A8:54:LEU:HD23	2.48	0.48
39:A8:59:LYS:HG2	39:A8:60:GLY:H	1.77	0.48
40:B8:110:ILE:HG23	40:B8:111:ARG:HD3	1.94	0.48
48:J8:41:ARG:HG3	48:J8:43:TYR:CZ	2.48	0.48
55:Q8:13:ARG:O	55:Q8:23:VAL:HG23	2.13	0.48
55:Q8:25:MET:HE3	55:Q8:46:ARG:HH11	1.78	0.48
1:1G:474:G:H2'	1:1G:475:G:H8	1.73	0.48
1:13:114:U:O2'	1:13:115:G:H5'	2.13	0.48
1:13:191(C):G:H2'	1:13:191(D):U:O4'	2.13	0.48
1:13:329:A:C5	1:13:332:G:C6	3.01	0.48
1:13:541:G:N7	58:13:1999:HOH:O	2.35	0.48
1:13:571:U:O2	1:13:918:A:H5'	2.13	0.48
1:13:600:C:H4'	12:7E:128:GLY:O	2.12	0.48
1:13:724:G:C2	1:13:725:G:C8	3.01	0.48
1:13:1002:G:C4	1:13:1003:G:C8	3.01	0.48
5:14:270(T):G:C6	5:14:270(U):C:C4	3.00	0.48
5:14:659:C:H2'	5:14:660:G:H8	1.78	0.48
5:14:867:C:C5	5:14:868:U:C5	3.01	0.48
5:14:1496:A:O3'	5:14:1497:U:H6	1.96	0.48
5:14:2529:G:H21	5:14:2529:G:P	2.37	0.48
5:14:2633:G:H2'	5:14:2634:G:O4'	2.13	0.48
9:4E:29:GLY:HA2	9:4E:46:GLY:O	2.12	0.48
17:4I:60:VAL:HG12	17:4I:66:LEU:HD11	1.95	0.48
23:AI:5:LEU:HB3	23:AI:10:PHE:CE1	2.29	0.48
2:3K:13:C:H2'	2:3K:14:A:H8	1.78	0.48
5:1H:778:G:N7	58:1H:4188:HOH:O	2.35	0.48
5:1H:1416:G:H2'	5:1H:1417:C:C5	2.47	0.48
5:1H:2105:C:H2'	5:1H:2106:G:C8	2.48	0.48
5:1H:2157:G:O2'	5:1H:2158:A:O5'	2.29	0.48
5:1H:2176:A:H2'	5:1H:2177:C:H6	1.78	0.48
28:11:239:ARG:O	28:11:240:ALA:CB	2.61	0.48
30:31:68:LYS:O	30:31:69:HIS:HB2	2.12	0.48
39:A8:35:ILE:HD11	39:A8:101:LEU:HD23	1.95	0.48
40:B8:16:ARG:HD3	40:B8:79:HIS:HA	1.95	0.48
43:E8:24:ILE:HG12	43:E8:36:LEU:HD21	1.94	0.48
45:G8:83:THR:HG22	45:G8:84:ARG:HE	1.78	0.48
51:M8:43:TYR:O	51:M8:46:GLN:HA	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:328:C:O2	1:1G:328:C:H2'	2.13	0.48
1:1G:390:C:H2'	1:1G:391:G:C8	2.48	0.48
1:1G:616:G:N3	1:1G:616:G:H2'	2.28	0.48
1:1G:730:G:C5	1:1G:731:G:H1'	2.48	0.48
1:1G:1396:A:H4'	1:1G:1397:C:OP2	2.13	0.48
1:13:173:U:C6	1:13:197:A:C2	3.01	0.48
1:13:223:U:H2'	1:13:224:C:C6	2.47	0.48
1:13:375:U:OP1	20:7I:69:THR:HG21	2.13	0.48
1:13:872:A:C4	1:13:874:G:N7	2.80	0.48
1:13:918:A:H2'	1:13:919:A:C8	2.48	0.48
1:13:939:G:H2'	1:13:940:C:C6	2.48	0.48
1:13:1218:C:OP2	18:5I:9:LYS:NZ	2.45	0.48
1:13:1280:A:H3'	1:13:1281:U:H5'	1.94	0.48
5:14:6:A:H2'	5:14:7:G:H5'	1.95	0.48
5:14:533:G:H2'	5:14:534:U:O4'	2.13	0.48
5:14:634:C:H2'	5:14:635:C:C6	2.48	0.48
5:14:1093:G:H22	5:14:1097:U:H5''	1.78	0.48
5:14:2233:U:H2'	5:14:2234:G:C8	2.49	0.48
5:14:2315:G:H2'	5:14:2316:C:C6	2.48	0.48
6:1E:237:ALA:O	6:1E:239:VAL:N	2.47	0.48
8:3E:7:PRO:HB2	8:3E:10:ARG:HG2	1.96	0.48
14:1I:34:VAL:HG12	14:1I:74:ILE:HG23	1.94	0.48
16:3I:75:HIS:ND1	16:3I:75:HIS:O	2.46	0.48
18:5I:6:LEU:HB3	18:5I:23:ARG:NH2	2.29	0.48
5:1H:397:G:H1'	5:1H:2231:C:O2'	2.13	0.48
5:1H:453:C:OP1	58:1H:3979:HOH:O	2.20	0.48
5:1H:994:C:OP1	41:C8:53:ARG:NH2	2.46	0.48
5:1H:2692:C:O2'	5:1H:2693:A:H5'	2.13	0.48
27:16:15:A:H3'	27:16:16:G:H5'	1.95	0.48
37:88:85:LYS:HG3	37:88:86:GLY:N	2.28	0.48
37:88:135:ASP:HB3	37:88:137:TYR:N	2.28	0.48
48:J8:78:LYS:HD3	48:J8:78:LYS:N	2.28	0.48
1:1G:157:G:H1	1:1G:164:U:H3	1.61	0.48
8:32:13:ARG:HD2	8:32:38:TYR:O	2.13	0.48
1:13:222:U:H2'	1:13:223:U:C6	2.48	0.48
1:13:343:U:O2'	1:13:346:G:O6	2.28	0.48
1:13:444:C:H2'	1:13:445:G:C8	2.48	0.48
1:13:1347:G:O2'	1:13:1348:U:OP2	2.31	0.48
2:1L:8:4SU:H6	2:1L:13:C:H42	1.77	0.48
2:3L:30:G:N2	2:3L:40:C:O2	2.47	0.48
5:14:890:A:H2'	5:14:892:G:H8	1.76	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1003:G:N2	5:14:1153:C:C2	2.81	0.48
5:14:2650:U:H2'	5:14:2651:C:H6	1.79	0.48
8:3E:8:VAL:HG13	8:3E:21:LEU:HB2	1.95	0.48
8:3E:102:ASP:OD1	8:3E:103:ASN:N	2.46	0.48
17:4I:88:ARG:HG3	17:4I:88:ARG:NH1	2.26	0.48
19:6I:26:GLU:OE2	19:6I:77:ARG:NH1	2.46	0.48
21:8I:62:SER:HB3	21:8I:72:ARG:HE	1.78	0.48
24:BI:61:SER:O	24:BI:65:LYS:HB2	2.14	0.48
5:1H:661:C:HO2'	36:78:14:LYS:H	1.57	0.48
5:1H:1068:G:H1'	5:1H:1096:A:N3	2.28	0.48
5:1H:1942:C:OP2	5:1H:1943:U:O2'	2.24	0.48
5:1H:2010:G:N7	58:1H:4632:HOH:O	2.35	0.48
5:1H:2168:G:O2'	5:1H:2169:A:H5'	2.14	0.48
5:1H:2256:G:N7	58:1H:4246:HOH:O	2.35	0.48
5:1H:2855:C:H2'	5:1H:2856:C:C6	2.47	0.48
29:21:172:VAL:HG13	29:21:182:LEU:HD11	1.94	0.48
30:31:78:ILE:HA	30:31:83:PHE:CD2	2.48	0.48
30:31:124:LEU:HD12	30:31:125:LEU:O	2.12	0.48
36:78:97:PRO:HB3	36:78:112:LEU:HD12	1.96	0.48
38:98:15:SER:HB2	58:98:201:HOH:O	2.12	0.48
39:A8:87:PHE:CE2	39:A8:89:ARG:HB2	2.48	0.48
41:C8:88:ILE:O	41:C8:90:VAL:N	2.46	0.48
43:E8:38:TYR:OH	52:N8:47:PRO:HG3	2.12	0.48
44:F8:18:TYR:O	44:F8:20:GLY:N	2.47	0.48
1:1G:241:C:C2	1:1G:286:G:C2	3.01	0.48
1:1G:1086:U:H2'	1:1G:1087:G:H8	1.78	0.48
1:1G:1142:G:H3'	1:1G:1143:G:H8	1.78	0.48
1:1G:1152:A:H2'	1:1G:1153:C:H6	1.78	0.48
1:13:116:A:H61	1:13:313:A:H1'	1.78	0.48
1:13:282:A:N3	1:13:282:A:H2'	2.27	0.48
1:13:560:U:H5'	1:13:566:G:N2	2.28	0.48
1:13:1053:G:H4'	1:13:1054:C:O5'	2.13	0.48
5:14:128:C:H2'	5:14:129:C:H6	1.79	0.48
5:14:528:A:C2	5:14:2043:C:H4'	2.49	0.48
5:14:1019:U:H3	5:14:1142(A):A:H62	1.61	0.48
5:14:1069:A:H2'	5:14:1073:A:N7	2.28	0.48
5:14:1899:G:N2	5:14:1902:C:N4	2.51	0.48
15:2I:21:ILE:HD13	15:2I:94:ALA:HB1	1.95	0.48
2:3K:18:G:HO2'	2:3K:19:G:P	2.37	0.48
2:3K:19:G:O2'	2:3K:57:G:N3	2.46	0.48
5:1H:470:A:O3'	58:1H:3823:HOH:O	2.20	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:883:G:H2'	5:1H:884:C:H4'	1.96	0.48
5:1H:1252:G:H5''	58:1H:3785:HOH:O	2.12	0.48
5:1H:1533:C:H2'	5:1H:1534:G:C5	2.48	0.48
5:1H:2199:A:H3'	5:1H:2205:C:H6	1.77	0.48
5:1H:2562:U:C1'	35:68:23:ARG:HH11	2.22	0.48
27:16:1:U:H2'	27:16:2:C:C6	2.49	0.48
27:16:76:G:N7	58:16:315:HOH:O	2.35	0.48
28:11:68:LYS:HB3	28:11:70:TRP:CZ3	2.49	0.48
35:68:88:ASN:OD1	35:68:90:GLN:HB2	2.13	0.48
36:78:71:VAL:HG12	36:78:72:PRO:HD3	1.96	0.48
48:J8:3:LYS:O	48:J8:12:PRO:HD3	2.13	0.48
53:O8:25:LYS:HB2	55:Q8:32:LEU:HD12	1.95	0.48
53:O8:47:THR:HG22	53:O8:48:VAL:HG23	1.96	0.48
7:22:47:LEU:O	7:22:51:GLY:N	2.42	0.48
7:22:57:ILE:HG12	7:22:66:VAL:HG13	1.94	0.48
7:22:111:LEU:HD11	7:22:144:SER:O	2.13	0.48
1:13:7:G:H5'	1:13:298:A:O4'	2.13	0.48
1:13:244:U:H4'	1:13:245:C:O5'	2.12	0.48
1:13:510:A:OP2	8:3E:49:ARG:NH2	2.47	0.48
1:13:540:G:H2'	1:13:541:G:O4'	2.13	0.48
1:13:658:G:H2'	1:13:659:U:C6	2.49	0.48
1:13:1013:G:N2	1:13:1016:A:OP2	2.47	0.48
1:13:1028:C:N4	1:13:1033:G:H1	2.11	0.48
1:13:1063:C:H3'	1:13:1064:G:H2'	1.95	0.48
5:14:29:U:O4	58:14:4172:HOH:O	2.20	0.48
5:14:142:G:H5''	5:14:1598:C:O2'	2.12	0.48
5:14:1233:C:H2'	5:14:1234:U:H6	1.78	0.48
5:14:1669:A:H5''	5:14:1670:C:OP2	2.13	0.48
5:14:1777:U:O2'	5:14:1778:U:H5'	2.13	0.48
5:14:1965:C:OP1	5:14:1966:A:O2'	2.31	0.48
2:3K:9:A:H5'	2:3K:10:G:OP2	2.14	0.48
5:1H:483:A:O4'	45:G8:48:ALA:HB1	2.14	0.48
5:1H:1454:U:H5'	38:98:63:ARG:CZ	2.43	0.48
5:1H:1602:U:O4	58:1H:4120:HOH:O	2.18	0.48
5:1H:1607:C:H4'	5:1H:1608:A:O5'	2.13	0.48
5:1H:1839:G:OP2	58:1H:4547:HOH:O	2.20	0.48
5:1H:2331:G:H4'	47:I8:42:GLY:HA3	1.96	0.48
5:1H:2347:C:P	53:O8:39:TYR:OH	2.71	0.48
5:1H:2729:G:H2'	5:1H:2730:C:H6	1.78	0.48
27:1J:44:G:O2'	27:1J:48:A:N6	2.47	0.48
33:61:8:PRO:CA	33:61:14:ASP:HA	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:C8:85:LYS:HA	41:C8:85:LYS:HZ2	1.77	0.48
46:H8:30:ASN:HA	46:H8:89:PHE:CE1	2.48	0.48
46:H8:73:GLN:HB2	46:H8:87:ASP:HB2	1.94	0.48
50:L8:35:ARG:HB3	50:L8:37:LEU:HD22	1.96	0.48
1:1G:12:U:O2'	1:1G:526:C:H4'	2.13	0.48
1:1G:1068:G:N7	1:1G:1094:G:C8	2.81	0.48
1:1G:1258:G:H2'	1:1G:1259:C:C6	2.47	0.48
1:1G:1349:A:H2'	1:1G:1350:A:C8	2.49	0.48
8:32:30:LYS:HD3	8:32:30:LYS:N	2.29	0.48
1:13:631:G:C8	1:13:632:A:C2	3.02	0.48
1:13:1128:C:H6	1:13:1139:G:C6	2.30	0.48
2:1L:63:G:H2'	2:1L:64:A:C8	2.49	0.48
2:3L:40:C:H2'	2:3L:41:C:H6	1.78	0.48
5:14:322:A:H5'	5:14:340:A:H1'	1.94	0.48
5:14:530:G:C6	5:14:2022:U:H5''	2.48	0.48
5:14:1386:C:H2'	5:14:1387:C:C6	2.49	0.48
5:14:2103:C:O2	5:14:2186:G:N2	2.30	0.48
6:1E:101:MET:HG2	6:1E:108:ILE:HG13	1.95	0.48
8:3E:62:GLN:HB3	8:3E:66:ARG:NH1	2.28	0.48
12:7E:38:ILE:HD11	12:7E:118:VAL:O	2.13	0.48
5:1H:311:A:C6	5:1H:328:U:C4	3.02	0.48
5:1H:547:A:C6	5:1H:548:A:C6	3.01	0.48
5:1H:654(L):G:H3'	5:1H:654(M):C:H5''	1.95	0.48
5:1H:654(M):C:H3'	5:1H:654(N):G:C8	2.49	0.48
5:1H:1103:A:H3'	5:1H:1104:C:C6	2.49	0.48
5:1H:1541:U:H2'	5:1H:1542:G:O4'	2.14	0.48
5:1H:1889:A:H2'	5:1H:1890:A:C8	2.48	0.48
5:1H:2295:C:OP1	39:A8:10:ARG:NH1	2.47	0.48
5:1H:2793:G:H8	5:1H:2793:G:OP2	1.96	0.48
28:11:242:ARG:O	58:11:409:HOH:O	2.20	0.48
29:21:134:ILE:C	29:21:134:ILE:HD12	2.39	0.48
37:88:66:ILE:HG22	37:88:67:ARG:H	1.76	0.48
42:D8:93:GLU:O	42:D8:94:LEU:HD23	2.13	0.48
44:F8:3:THR:CB	44:F8:6:ASP:HB2	2.43	0.48
44:F8:36:LYS:HA	44:F8:39:ILE:HD12	1.96	0.48
51:M8:9:LEU:HD12	51:M8:27:THR:N	2.27	0.48
1:1G:456:C:N4	1:1G:476:G:H1	2.04	0.48
1:1G:501:C:H2'	1:1G:502:G:H8	1.78	0.48
1:1G:980:C:H5'	1:1G:981:U:C5	2.49	0.48
7:22:18:TRP:H	7:22:18:TRP:HE3	1.61	0.48
1:13:344:A:O2'	1:13:346:G:N7	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:491:G:H2'	1:13:492:G:O4'	2.13	0.48
1:13:947:G:H2'	1:13:948:C:C6	2.48	0.48
1:13:1226:C:OP2	17:4I:103:THR:OG1	2.21	0.48
1:13:1260:C:H3'	1:13:1260:C:C6	2.47	0.48
1:13:1280:A:C3'	1:13:1281:U:H5'	2.43	0.48
5:14:270(I):G:H2'	5:14:270(J):G:H8	1.79	0.48
5:14:693:C:O2'	5:14:1353:A:O2'	2.26	0.48
5:14:817:C:H2'	5:14:818:G:O4'	2.13	0.48
5:14:1338:G:N3	5:14:1393:A:H2	2.12	0.48
6:1E:16:HIS:N	6:1E:16:HIS:CD2	2.82	0.48
24:BI:63:ILE:HG22	24:BI:77:ALA:HB1	1.95	0.48
2:3K:63:G:N2	2:3K:64:A:H1'	2.29	0.48
5:1H:660:G:H21	36:78:12:ALA:HA	1.79	0.48
5:1H:1124:C:H2'	5:1H:1125:G:O4'	2.14	0.48
5:1H:1332:G:H5'	5:1H:1332:G:C8	2.49	0.48
5:1H:2061:G:P	58:1H:3638:HOH:O	2.71	0.48
5:1H:2818:G:OP2	38:98:42:LYS:NZ	2.44	0.48
5:1H:2822:G:O2'	5:1H:2824:C:OP2	2.27	0.48
27:1J:66:A:C2	27:1J:108:C:C4	3.01	0.48
28:11:155:LEU:HD13	28:11:155:LEU:N	2.29	0.48
31:41:64:THR:HG23	31:41:94:LEU:HD22	1.95	0.48
32:51:83:TYR:CB	32:51:134:SER:HA	2.42	0.48
33:61:7:GLU:O	33:61:9:LEU:HD13	2.13	0.48
34:58:42:TRP:HA	34:58:48:MET:HE1	1.95	0.48
41:C8:69:CYS:HB2	41:C8:74:LEU:CD1	2.43	0.48
46:H8:77:ASP:OD2	46:H8:80:ARG:NH1	2.46	0.48
47:I8:60:PHE:CD1	47:I8:60:PHE:N	2.80	0.48
53:O8:51:GLU:HG2	53:O8:52:VAL:H	1.77	0.48
1:1G:281:G:H8	1:1G:281:G:OP2	1.96	0.48
1:1G:1049:U:H4'	1:1G:1050:G:H5''	1.95	0.48
1:1G:1158:C:H2'	1:1G:1158:C:O2	2.14	0.48
7:22:179:ARG:O	7:22:206:GLU:HA	2.14	0.48
1:13:452:A:O2'	1:13:453:A:O4'	2.29	0.48
1:13:901:A:C5	1:13:902:G:H1'	2.49	0.48
1:13:1206:G:C6	1:13:1207:G:C5	3.02	0.48
1:13:1273:G:H3'	1:13:1274:G:H8	1.78	0.48
3:2L:41:C:H2'	3:2L:42:C:C6	2.48	0.48
5:14:899:A:H2'	5:14:900:A:H8	1.79	0.48
5:14:1759:A:H4'	5:14:2715:C:O4'	2.14	0.48
5:14:1950:G:C2	5:14:1951:U:C5	3.02	0.48
5:14:2131:G:C5'	5:14:2158:A:H61	2.23	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2520:C:H41	5:14:2542:A:N6	2.12	0.48
9:4E:28:PHE:O	9:4E:47:LYS:HA	2.13	0.48
10:5E:67:MET:HE1	10:5E:75:LEU:HG	1.94	0.48
5:1H:733:G:C8	58:1H:4185:HOH:O	2.64	0.48
5:1H:910:A:H62	37:88:12:GLN:HA	1.79	0.48
5:1H:1087:G:H2'	5:1H:1089:G:H4'	1.95	0.48
5:1H:1292:U:H2'	5:1H:1293:C:C6	2.49	0.48
5:1H:2604:U:C2'	5:1H:2605:U:H5'	2.44	0.48
30:31:178:PRO:HB3	30:31:198:ALA:HA	1.94	0.48
32:51:4:ILE:H	32:51:4:ILE:CD1	2.26	0.48
35:68:12:ASP:HB3	35:68:85:VAL:HG13	1.95	0.48
38:98:104:ARG:HD2	38:98:107:ASP:OD2	2.14	0.48
41:C8:6:THR:N	58:C8:203:HOH:O	2.40	0.48
41:C8:34:LYS:H	41:C8:34:LYS:HG2	1.39	0.48
42:D8:75:PHE:HD1	42:D8:82:ARG:HG3	1.78	0.48
46:H8:128:VAL:HG23	46:H8:161:VAL:HG21	1.96	0.48
1:1G:90:C:H2'	1:1G:91:C:C6	2.48	0.48
1:1G:588:G:H1	1:1G:651:C:N4	2.07	0.48
1:1G:1095:U:OP1	1:1G:1108:G:N2	2.47	0.48
1:1G:1203:C:H2'	1:1G:1204:A:C8	2.48	0.48
1:1G:1259:C:N4	1:1G:1260:C:O2	2.47	0.48
1:13:66:G:O4'	1:13:173:U:C4	2.67	0.48
1:13:296:U:H2'	1:13:297:G:C8	2.49	0.48
1:13:618:C:H5''	1:13:619:U:H5''	1.96	0.48
1:13:807:A:H2'	1:13:808:C:C6	2.48	0.48
1:13:973:G:OP1	14:1I:57:LYS:HD3	2.14	0.48
1:13:1255:G:C2	1:13:1283:G:C2	3.02	0.48
5:14:270(Z):U:O3'	5:14:271(A):C:H6	1.97	0.48
5:14:342:G:H2'	5:14:343:C:C6	2.49	0.48
5:14:696:G:O2'	5:14:697:C:H5'	2.13	0.48
5:14:1742:C:H5'	5:14:1743:G:OP2	2.14	0.48
5:14:1786:A:H1'	5:14:1938:A:N6	2.29	0.48
13:8E:97:LYS:HB2	13:8E:102:LEU:HD12	1.95	0.48
14:1I:48:THR:OG1	14:1I:62:HIS:ND1	2.40	0.48
5:1H:128:C:H2'	5:1H:129:C:C6	2.47	0.48
5:1H:270(E):G:C6	5:1H:270(F):U:C4	3.02	0.48
5:1H:306:U:H2'	5:1H:307:G:O4'	2.14	0.48
5:1H:579:G:H2'	5:1H:580:C:C6	2.49	0.48
5:1H:1296:G:O2'	5:1H:1297:C:H5'	2.13	0.48
5:1H:1332:G:P	58:1H:4043:HOH:O	2.70	0.48
5:1H:1439:A:H2'	5:1H:1440:G:O4'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2243:U:H2'	5:1H:2244:U:C6	2.48	0.48
5:1H:2556:C:H2'	5:1H:2557:G:O4'	2.13	0.48
5:1H:2845:G:O2'	5:1H:2846:G:H5'	2.14	0.48
5:1H:2883:A:H5'	5:1H:2884:U:H5'	1.96	0.48
31:41:49:ASP:OD1	31:41:51:ARG:HB3	2.13	0.48
35:68:4:PRO:O	35:68:5:GLN:HB2	2.13	0.48
41:C8:88:ILE:C	41:C8:90:VAL:N	2.70	0.48
1:1G:755:G:H2'	1:1G:756:C:H6	1.79	0.48
1:1G:858:G:OP2	1:1G:858:G:H8	1.96	0.48
1:1G:1004:A:C6	1:1G:1025:U:H1'	2.49	0.48
1:1G:1071:C:H2'	1:1G:1072:G:C8	2.49	0.48
1:1G:1105:A:H2'	1:1G:1106:G:H8	1.78	0.48
1:1G:1217:C:H2'	1:1G:1218:C:C6	2.49	0.48
1:1G:1286:A:C8	1:1G:1286:A:H3'	2.49	0.48
1:13:295:C:H2'	1:13:296:U:O4'	2.14	0.47
1:13:1074:G:H4'	6:1E:104:ASN:HB2	1.94	0.47
1:13:1117:G:H5''	13:8E:104:ARG:CZ	2.44	0.47
1:13:1233:G:H2'	1:13:1234:C:C6	2.48	0.47
4:4L:20:C:H2'	4:4L:21:C:C6	2.48	0.47
5:14:2078:C:C4	5:14:2079:U:C4	3.02	0.47
5:14:2285:C:C2'	5:14:2286:A:H5''	2.44	0.47
6:1E:237:ALA:O	6:1E:239:VAL:HG23	2.14	0.47
7:2E:29:TYR:OH	18:5I:54:PRO:HD2	2.14	0.47
8:3E:92:VAL:O	8:3E:96:LEU:HD22	2.14	0.47
9:4E:36:ASP:CG	9:4E:38:GLN:HB2	2.38	0.47
17:4I:50:GLU:O	17:4I:54:VAL:HG23	2.14	0.47
17:4I:88:ARG:HD2	17:4I:98:VAL:HG22	1.96	0.47
19:6I:6:GLU:CD	19:6I:6:GLU:H	2.22	0.47
5:1H:287:C:H2'	5:1H:288:C:C6	2.45	0.47
5:1H:300:A:N3	5:1H:319:C:H1'	2.29	0.47
5:1H:459:U:H5''	54:P8:40:TRP:CG	2.49	0.47
5:1H:525:U:H5''	5:1H:556:G:H5''	1.96	0.47
5:1H:588:U:C2	30:31:90:PHE:CE1	3.01	0.47
5:1H:710:G:H2'	5:1H:711:G:H8	1.79	0.47
5:1H:1139:G:O2'	5:1H:1143:A:N1	2.42	0.47
5:1H:2689:U:H5''	5:1H:2713:A:H2	1.78	0.47
44:F8:14:SER:O	44:F8:15:GLU:C	2.57	0.47
50:L8:54:VAL:O	50:L8:54:VAL:HG13	2.14	0.47
1:1G:256:U:H2'	1:1G:257:G:C8	2.49	0.47
1:1G:373:A:N3	1:1G:374:A:C8	2.82	0.47
1:1G:1203:C:H2'	1:1G:1204:A:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1298:C:O2'	1:1G:1299:A:OP2	2.29	0.47
7:22:70:VAL:HG12	7:22:72:LYS:N	2.28	0.47
8:32:138:TYR:C	8:32:138:TYR:CD2	2.92	0.47
1:13:458:C:H2'	1:13:464:G:O4'	2.14	0.47
1:13:1234:C:H2'	1:13:1235:U:C6	2.49	0.47
2:3L:8:4SU:H5''	2:3L:49:C:OP2	2.14	0.47
6:1E:47:THR:O	6:1E:51:LEU:HB2	2.14	0.47
7:2E:19:GLU:HG3	7:2E:54:ARG:CZ	2.44	0.47
7:2E:72:LYS:HB3	7:2E:75:VAL:HG23	1.96	0.47
11:6E:101:LEU:HD23	11:6E:101:LEU:HA	1.70	0.47
16:3I:8:ASN:O	16:3I:11:VAL:HG23	2.14	0.47
5:1H:758:C:O2	5:1H:1981:A:H2	1.96	0.47
5:1H:996:A:O2'	41:C8:92:ARG:HG3	2.14	0.47
5:1H:1110:G:O2'	5:1H:1111:A:O5'	2.31	0.47
5:1H:2065:C:H2'	5:1H:2066:C:C6	2.49	0.47
5:1H:2685:G:OP2	40:B8:51:ARG:NH2	2.46	0.47
27:16:11:C:H5''	27:16:12:C:OP2	2.13	0.47
29:21:78:LEU:O	29:21:78:LEU:HD23	2.14	0.47
34:58:42:TRP:HA	34:58:48:MET:CE	2.44	0.47
40:B8:136:GLN:H	40:B8:136:GLN:HG2	1.48	0.47
42:D8:2:PHE:CE1	42:D8:42:GLY:HA3	2.49	0.47
49:K8:15:LYS:H	49:K8:67:LYS:HZ3	1.62	0.47
1:1G:147:G:H1	1:1G:175:C:H42	1.61	0.47
1:1G:540:G:H2'	1:1G:541:G:C8	2.49	0.47
1:1G:616:G:C2	1:1G:617:G:C8	3.02	0.47
1:1G:1385:G:C4	1:1G:1386:G:C8	3.02	0.47
1:1G:1387:G:H2'	1:1G:1388:C:H6	1.79	0.47
6:12:178:ARG:HH11	6:12:178:ARG:HB2	1.79	0.47
1:13:101:A:H8	1:13:101:A:OP2	1.96	0.47
1:13:407:G:H2'	1:13:408:A:C8	2.49	0.47
1:13:431:A:H2'	1:13:432:A:O4'	2.14	0.47
1:13:814:A:N7	1:13:816:A:C4	2.82	0.47
1:13:977:A:C8	1:13:1223:C:N3	2.82	0.47
2:3L:19:G:C6	5:14:2112:G:H4'	2.49	0.47
2:3L:28:G:O6	2:3L:42:C:N4	2.46	0.47
2:3L:54:U:H6	2:3L:54:U:O5'	1.97	0.47
5:14:580:C:H2'	5:14:581:C:C6	2.50	0.47
5:14:1441:G:H2'	5:14:1442:G:C8	2.47	0.47
9:4E:106:PRO:O	9:4E:110:LEU:HG	2.14	0.47
11:6E:113:GLU:CG	11:6E:119:ARG:HG2	2.44	0.47
3:2K:47:7MG:H81	3:2K:48:U:C5	2.41	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:3K:58:A:O2'	2:3K:59:U:OP1	2.29	0.47
5:1H:57:C:H2'	5:1H:58:G:O4'	2.14	0.47
5:1H:399:G:OP2	58:1H:4155:HOH:O	2.20	0.47
5:1H:880:G:H22	5:1H:897:C:N4	2.13	0.47
5:1H:1111:A:H5'	32:51:3:ARG:HD3	1.95	0.47
5:1H:1164:G:H2'	5:1H:1165:U:H6	1.76	0.47
5:1H:1206:G:C6	5:1H:1207:C:C4	3.02	0.47
5:1H:1808:U:H2'	5:1H:1809:A:O4'	2.14	0.47
5:1H:2127:G:N1	5:1H:2162:G:H1'	2.28	0.47
27:16:119:A:H2'	27:16:119:A:N3	2.29	0.47
39:A8:88:ASP:C	39:A8:90:GLY:H	2.22	0.47
42:D8:21:ARG:HG2	42:D8:91:TYR:CD2	2.49	0.47
44:F8:12:VAL:HG13	44:F8:27:THR:O	2.15	0.47
1:1G:79:G:H1	1:1G:90:C:N4	2.12	0.47
1:1G:151:A:H2'	1:1G:152:A:O4'	2.15	0.47
1:1G:547:A:H5'	58:1G:1704:HOH:O	2.14	0.47
6:12:75:LYS:HA	6:12:78:GLN:CB	2.43	0.47
7:22:21:ARG:O	7:22:58:GLU:HA	2.15	0.47
1:13:928:G:C2	1:13:1390:U:O2	2.67	0.47
1:13:990:C:H2'	1:13:991:U:C6	2.50	0.47
1:13:1225:A:H2'	1:13:1225:A:N3	2.28	0.47
1:13:1256:A:H4'	1:13:1258:G:C4	2.48	0.47
1:13:1277:C:H1'	1:13:1282:C:O2	2.14	0.47
5:14:820:A:N3	5:14:943:U:H4'	2.29	0.47
5:14:1919:A:O3'	1:1G:1517:G:H1'	2.14	0.47
5:14:2250:G:O2'	5:14:2496:C:OP1	2.19	0.47
5:14:2291:U:H2'	5:14:2292:C:C6	2.50	0.47
15:2I:62:GLN:HB2	15:2I:93:GLN:HE21	1.80	0.47
24:BI:26:ASN:HB2	24:BI:71:THR:CG2	2.44	0.47
5:1H:6:A:O2'	34:58:129:PRO:HB3	2.14	0.47
5:1H:197:A:N6	5:1H:2430:A:H2'	2.29	0.47
5:1H:731:C:P	58:1H:3701:HOH:O	2.67	0.47
5:1H:742:G:H2'	5:1H:743:G:C8	2.50	0.47
5:1H:858:U:O2	5:1H:2268:A:H2'	2.13	0.47
5:1H:1055:G:O6	5:1H:1056:G:N1	2.47	0.47
5:1H:2163:C:H2'	5:1H:2164:C:O4'	2.13	0.47
5:1H:2428:G:N3	36:78:61:ARG:NH1	2.62	0.47
31:41:36:LYS:HG2	31:41:38:VAL:HG23	1.96	0.47
31:41:67:LYS:HG2	51:M8:5:ILE:HG22	1.96	0.47
35:68:63:VAL:HG23	35:68:64:ARG:HG3	1.96	0.47
47:I8:50:ASN:ND2	47:I8:83:PRO:HD3	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:M8:12:ALA:O	51:M8:24:THR:HG21	2.14	0.47
1:1G:303:A:H2'	1:1G:304:U:O4'	2.14	0.47
1:1G:778:G:H2'	1:1G:779:C:O4'	2.14	0.47
1:1G:1218:C:H2'	1:1G:1219:U:C6	2.49	0.47
6:12:149:LEU:HD23	6:12:152:PHE:HB3	1.96	0.47
1:13:279:A:H4'	1:13:280:C:H5''	1.95	0.47
1:13:703:G:H4'	1:13:704:A:O5'	2.15	0.47
1:13:1379:G:N7	11:6E:2:ALA:HB3	2.29	0.47
1:13:1409:C:H2'	1:13:1410:G:H8	1.79	0.47
2:1L:8:4SU:H6	2:1L:13:C:N4	2.30	0.47
5:14:1024:G:H3'	5:14:1025:G:H5''	1.96	0.47
5:14:1033:U:H3'	5:14:1033:U:C6	2.49	0.47
5:14:1860:G:H1	5:14:1882:C:H42	1.62	0.47
5:14:2377:A:H2'	5:14:2378:A:C8	2.49	0.47
5:14:2527:C:N4	5:14:2528:U:C4	2.82	0.47
5:14:2544:G:H1'	5:14:2646:C:H4'	1.97	0.47
7:2E:3:ASN:O	7:2E:4:LYS:HG2	2.14	0.47
11:6E:113:GLU:HB2	11:6E:118:VAL:HG13	1.96	0.47
16:3I:66:VAL:HG22	16:3I:67:THR:N	2.29	0.47
19:6I:25:THR:HG21	19:6I:70:LEU:HB2	1.95	0.47
24:BI:53:LEU:HA	24:BI:56:MET:HB3	1.97	0.47
5:1H:363(B):G:H2'	5:1H:363(C):G:C8	2.47	0.47
5:1H:1639:U:H4'	5:1H:2699:C:H4'	1.96	0.47
34:58:73:THR:HA	34:58:83:LYS:O	2.14	0.47
35:68:119:PRO:HB2	40:B8:68:TYR:CE2	2.49	0.47
41:C8:78:THR:O	41:C8:81:HIS:N	2.46	0.47
42:D8:1:MET:HA	42:D8:43:GLU:HB3	1.95	0.47
55:Q8:57:ARG:HD3	55:Q8:57:ARG:H	1.76	0.47
1:1G:129(A):G:C2	1:1G:191(A):G:C8	3.02	0.47
1:1G:1305:G:H22	1:1G:1331:G:C2'	2.13	0.47
1:13:236:G:H5''	21:8I:42:TYR:OH	2.14	0.47
1:13:592:G:C2	1:13:593:G:C8	3.02	0.47
1:13:656:C:O3'	19:6I:62:GLN:NE2	2.48	0.47
1:13:963:G:N2	1:13:972:C:N3	2.43	0.47
1:13:1375:A:P	11:6E:28:ASN:HD22	2.36	0.47
5:14:818:G:H4'	5:14:838:C:O3'	2.14	0.47
5:14:1885:A:H3'	5:14:1886:C:H6	1.79	0.47
5:14:2441:C:O2'	5:14:2442:C:H5'	2.15	0.47
5:14:2747:G:O6	5:14:2755:C:H5''	2.15	0.47
6:1E:21:ARG:C	6:1E:23:ARG:H	2.22	0.47
6:1E:171:ALA:O	6:1E:175:ARG:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:1I:16:LEU:HD23	14:1I:94:VAL:HG13	1.96	0.47
24:BI:73:HIS:HB3	24:BI:74:LYS:HG3	1.96	0.47
5:1H:533:G:OP1	41:C8:25:TRP:N	2.38	0.47
5:1H:2391:G:O6	5:1H:2425:A:H8	1.98	0.47
5:1H:2881:C:C2	5:1H:2882:A:C8	3.02	0.47
31:41:112:PRO:HB3	51:M8:37:SER:N	2.28	0.47
32:51:129:THR:O	32:51:129:THR:OG1	2.27	0.47
33:61:46:ALA:O	33:61:50:ARG:HD3	2.15	0.47
55:Q8:8:LYS:HD2	55:Q8:8:LYS:N	2.30	0.47
1:1G:1010:G:C2	1:1G:1020:U:H1'	2.49	0.47
1:1G:1051:C:H2'	1:1G:1052:U:C6	2.49	0.47
1:1G:1097:C:H1'	1:1G:1169:A:C2	2.49	0.47
1:1G:1317:C:H5''	1:1G:1318:A:OP2	2.15	0.47
6:12:101:MET:O	6:12:105:PHE:HB2	2.15	0.47
7:22:32:LEU:HD22	7:22:59:ARG:CZ	2.44	0.47
7:22:91:LEU:O	7:22:95:THR:OG1	2.24	0.47
1:13:167:G:H2'	1:13:168:G:C8	2.50	0.47
1:13:652:U:C4	1:13:752:G:N3	2.82	0.47
1:13:826:C:H4'	12:7E:12:ARG:HG2	1.97	0.47
1:13:1151:A:O2'	1:13:1152:A:O4'	2.33	0.47
1:13:1489:G:H2'	1:13:1490:C:O4'	2.14	0.47
5:14:271(B):G:N7	5:14:421:U:H2'	2.30	0.47
5:14:873:G:N2	5:14:905:U:C2	2.83	0.47
5:14:973:A:O4'	5:14:1188:U:C6	2.68	0.47
5:14:1159:U:O2'	5:14:1160:G:H5'	2.15	0.47
5:14:1321:A:H2'	5:14:1322:A:O4'	2.15	0.47
5:14:1423:G:H2'	5:14:1424:G:H8	1.80	0.47
5:14:1830:C:O5'	5:14:1830:C:H6	1.98	0.47
5:14:2062:A:HO2'	5:14:2063:C:P	2.38	0.47
5:14:2241:A:H2'	5:14:2242:G:C8	2.50	0.47
7:2E:155:GLY:O	7:2E:157:ILE:HG12	2.14	0.47
8:3E:96:LEU:HD12	8:3E:139:ARG:HH11	1.80	0.47
9:4E:151:LEU:HD11	12:7E:77:GLU:OE2	2.15	0.47
10:5E:76:ALA:O	10:5E:80:ARG:HG3	2.15	0.47
11:6E:20:ASP:HB3	11:6E:23:VAL:HG23	1.96	0.47
17:4I:27:LYS:HA	17:4I:31:LYS:HZ2	1.77	0.47
17:4I:27:LYS:HD3	17:4I:31:LYS:NZ	2.29	0.47
19:6I:82:ILE:O	19:6I:86:GLY:N	2.45	0.47
21:8I:29:HIS:N	21:8I:34:LYS:O	2.46	0.47
23:AI:41:VAL:H	23:AI:44:MET:HG3	1.79	0.47
25:1F:10:ARG:HA	25:1F:13:ILE:HD12	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1K:42:C:H2'	26:1K:43:C:C6	2.49	0.47
3:2K:45:A:H2'	3:2K:46:G:O4'	2.13	0.47
5:1H:29:U:H2'	5:1H:30:G:C8	2.49	0.47
5:1H:442:G:C4	5:1H:444:C:C5	3.02	0.47
5:1H:780:G:N2	5:1H:783:A:H62	2.03	0.47
5:1H:850:C:H5''	50:L8:18:ASP:HB2	1.97	0.47
5:1H:944:G:H5''	5:1H:945:A:H5'	1.96	0.47
5:1H:1107:G:H2'	5:1H:1108:U:H6	1.80	0.47
5:1H:1298:C:C5'	5:1H:1299:G:OP2	2.63	0.47
5:1H:1317:A:H2'	5:1H:1318:C:H6	1.79	0.47
5:1H:1547:C:H2'	5:1H:1548:C:C6	2.50	0.47
5:1H:1677:A:H2'	5:1H:1678:G:C8	2.50	0.47
5:1H:2054:A:OP1	5:1H:2055:C:O2'	2.33	0.47
5:1H:2123:G:H22	5:1H:2175:C:N4	2.13	0.47
5:1H:2335:A:C8	5:1H:2337:G:C5	3.03	0.47
27:1J:0:A:H2'	27:1J:1:U:C6	2.49	0.47
27:1J:40:U:H1'	27:1J:46:A:N1	2.30	0.47
27:16:80:U:O2'	27:16:81:G:H5'	2.15	0.47
29:21:117:MET:O	29:21:117:MET:HG2	2.14	0.47
29:21:144:ARG:HB3	29:21:145:LYS:H	1.57	0.47
30:31:12:LEU:O	30:31:127:GLU:N	2.48	0.47
30:31:198:ALA:O	30:31:201:VAL:N	2.46	0.47
31:41:17:PRO:HA	31:41:20:ILE:HD12	1.97	0.47
33:61:110:ASP:HB2	33:61:112:LYS:HG2	1.96	0.47
35:68:86:ILE:HG22	35:68:94:ARG:HB2	1.97	0.47
40:B8:20:PRO:HG2	40:B8:86:ILE:O	2.15	0.47
45:G8:34:LYS:O	45:G8:34:LYS:HG2	2.15	0.47
48:J8:58:ILE:CG2	48:J8:87:PRO:HG3	2.44	0.47
55:Q8:44:LYS:HG3	55:Q8:45:GLY:N	2.29	0.47
1:1G:322:C:H5	1:1G:328:C:H5	1.61	0.47
1:1G:359:U:H2'	1:1G:360:A:H8	1.76	0.47
1:1G:1359:C:O2'	1:1G:1361:G:N7	2.48	0.47
6:12:75:LYS:HD2	6:12:75:LYS:O	2.14	0.47
6:12:182:ILE:H	6:12:182:ILE:HD12	1.80	0.47
8:32:30:LYS:CB	8:32:35:ARG:HD2	2.44	0.47
1:13:266:G:H5''	1:13:267:C:C5	2.50	0.47
1:13:535:A:H5''	58:13:1877:HOH:O	2.14	0.47
1:13:872:A:C8	1:13:874:G:C8	3.03	0.47
1:13:1079:G:C6	1:13:1080:A:N6	2.83	0.47
3:2L:26:C:H2'	3:2L:27:G:O4'	2.14	0.47
5:14:68:G:H2'	5:14:69:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:68:G:H2'	5:14:69:C:H6	1.80	0.47
5:14:139:G:N2	5:14:141:A:N1	2.62	0.47
5:14:273(F):C:H3'	5:14:274:G:C5'	2.45	0.47
5:14:1056:G:H1'	5:14:1103:A:H61	1.79	0.47
5:14:1344:G:H4'	5:14:1384:A:C5	2.50	0.47
5:14:2260:C:C2'	5:14:2261:C:H5'	2.45	0.47
5:14:2575:C:H2'	5:14:2578:G:O6	2.14	0.47
6:1E:17:PHE:HB3	6:1E:44:LEU:HD21	1.96	0.47
6:1E:98:LEU:HD12	6:1E:108:ILE:HD11	1.96	0.47
9:4E:81:GLU:HB3	9:4E:90:VAL:HG23	1.97	0.47
20:7I:53:VAL:HG13	20:7I:79:VAL:HG22	1.97	0.47
5:1H:95:G:O2'	49:K8:48:HIS:HB3	2.14	0.47
5:1H:106:C:H2'	5:1H:107:C:H6	1.80	0.47
5:1H:194:G:H2'	5:1H:195:A:O4'	2.14	0.47
5:1H:270(A):A:N3	5:1H:365:C:O2'	2.45	0.47
5:1H:558:G:P	34:58:111:PRO:HD2	2.55	0.47
5:1H:598:G:H2'	5:1H:599:G:O4'	2.15	0.47
5:1H:1063:G:N2	5:1H:1076:C:O2	2.48	0.47
5:1H:2111:C:H5	5:1H:2147:G:C6	2.33	0.47
27:1J:2:C:H2'	27:1J:3:C:C6	2.49	0.47
27:1J:13:A:H5''	27:1J:15:A:N6	2.29	0.47
27:16:42:C:O2'	31:41:67:LYS:O	2.23	0.47
36:78:57:THR:HB	36:78:59:LEU:H	1.79	0.47
42:D8:53:GLU:HG2	42:D8:54:GLY:N	2.30	0.47
48:J8:25:LYS:HE2	48:J8:25:LYS:HB3	1.73	0.47
49:K8:31:GLU:HB3	49:K8:53:LEU:HD11	1.97	0.47
51:M8:12:ALA:C	51:M8:24:THR:HG21	2.40	0.47
55:Q8:5:LYS:N	55:Q8:59:LYS:HZ2	2.07	0.47
1:1G:393:A:O2'	1:1G:394:G:H5'	2.15	0.47
1:1G:947:G:H2'	1:1G:948:C:O4'	2.14	0.47
1:1G:998:G:H2'	1:1G:998(A):C:C6	2.50	0.47
1:1G:1428:A:H2'	1:1G:1429:C:C6	2.49	0.47
7:22:138:VAL:HG23	7:22:151:VAL:CG2	2.41	0.47
1:13:920:U:H2'	1:13:921:U:C6	2.50	0.47
2:1L:30:G:H2'	2:1L:31:A:H8	1.80	0.47
2:3L:13:C:H2'	2:3L:14:A:H8	1.80	0.47
4:4L:18:G:O3'	4:4L:19:U:H6	1.98	0.47
5:14:236:C:H2'	5:14:237:C:H6	1.80	0.47
5:14:353:G:H2'	5:14:354:G:C8	2.49	0.47
5:14:868:U:H2'	5:14:869:G:C8	2.50	0.47
5:14:869:G:C2	5:14:870:A:C8	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:921:G:C6	5:14:922:U:C4	3.02	0.47
5:14:1071:G:H1'	5:14:1089:G:H2'	1.97	0.47
5:14:1198:U:H2'	5:14:1199:U:C6	2.49	0.47
6:1E:35:GLU:OE1	6:1E:38:GLY:HA2	2.15	0.47
6:1E:162:ILE:O	6:1E:185:ILE:HG13	2.15	0.47
10:5E:97:PHE:N	22:9I:30:ASP:OD1	2.46	0.47
15:2I:32:ILE:HD11	15:2I:68:ALA:C	2.39	0.47
15:2I:46:GLY:HA2	15:2I:50:TYR:O	2.15	0.47
17:4I:94:ARG:NH1	5:1H:888:C:OP1	2.47	0.47
20:7I:28:ARG:HG3	20:7I:29:ASP:OD1	2.15	0.47
2:3K:71:G:HO2'	5:1H:1851:U:HO2'	1.59	0.47
5:1H:524:U:H2'	5:1H:525:U:C6	2.50	0.47
5:1H:910:A:C5	37:88:13:GLN:HG3	2.50	0.47
5:1H:1299:G:H3'	5:1H:1639:U:O4	2.15	0.47
5:1H:1337:G:H2'	5:1H:1338:G:H8	1.80	0.47
5:1H:1417:C:P	58:1H:4133:HOH:O	2.72	0.47
5:1H:1575:C:H2'	5:1H:1576:U:C6	2.49	0.47
5:1H:2349:G:OP1	53:O8:42:TRP:CH2	2.68	0.47
5:1H:2863:C:O2'	5:1H:2864:G:H5'	2.15	0.47
27:1J:118:G:O6	27:1J:119:A:N6	2.48	0.47
36:78:115:LEU:HA	36:78:134:ALA:CB	2.38	0.47
40:B8:87:ASP:OD1	40:B8:87:ASP:N	2.47	0.47
40:B8:91:ARG:O	40:B8:116:ALA:HA	2.15	0.47
41:C8:62:ILE:HG23	41:C8:76:TYR:CE1	2.50	0.47
45:G8:84:ARG:HD2	45:G8:84:ARG:C	2.39	0.47
45:G8:89:PHE:O	45:G8:90:LEU:HG	2.15	0.47
50:L8:31:LEU:HB3	50:L8:32:GLN:OE1	2.15	0.47
53:O8:17:LYS:O	53:O8:19:ARG:N	2.47	0.47
1:1G:731:G:H5'	1:1G:766:A:H4'	1.96	0.47
1:13:232:G:H2'	1:13:233:C:H6	1.79	0.47
1:13:1002:G:H2'	1:13:1003:G:C8	2.50	0.47
1:13:1499:A:C8	1:13:1499:A:OP2	2.68	0.47
2:1L:39:PSU:H2'	2:1L:40:C:H6	1.79	0.47
5:14:244:A:C2	5:14:255:A:C4	3.03	0.47
5:14:739:G:OP1	58:14:3825:HOH:O	2.20	0.47
5:14:816:C:N4	5:14:1192:G:C6	2.83	0.47
5:14:1071:G:O2'	5:14:1089:G:H3'	2.15	0.47
5:14:1309:G:O2'	5:14:1611:C:O2'	2.29	0.47
5:14:2468:G:H3'	5:14:2476:A:N1	2.30	0.47
14:1I:57:LYS:CD	14:1I:60:ARG:HH12	2.27	0.47
23:AI:32:LYS:HE3	23:AI:57:HIS:CD2	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:3K:19:G:C6	5:1H:2112:G:H1'	2.50	0.47
5:1H:438:G:H2'	5:1H:439:G:H8	1.80	0.47
5:1H:465:G:O5'	5:1H:465:G:H8	1.98	0.47
5:1H:962:G:H2'	5:1H:963:U:C6	2.50	0.47
5:1H:1077:A:H3'	5:1H:1078:U:C5'	2.45	0.47
28:11:70:TRP:CH2	28:11:150:LYS:HA	2.50	0.47
28:11:70:TRP:CD1	28:11:70:TRP:C	2.93	0.47
29:21:13:ARG:HG2	29:21:13:ARG:HH11	1.79	0.47
33:61:2:LYS:HA	33:61:20:ASP:HB2	1.96	0.47
33:61:134:PRO:HA	33:61:135:GLU:HG3	1.96	0.47
34:58:12:ARG:HB2	34:58:50:ASP:OD1	2.14	0.47
37:88:35:VAL:HG13	37:88:130:LYS:HB3	1.96	0.47
38:98:103:ARG:NH1	38:98:110:PRO:HD3	2.30	0.47
43:E8:40:ASN:O	43:E8:41:LYS:HG2	2.14	0.47
46:H8:14:LYS:HA	46:H8:15:PRO:HD2	1.73	0.47
46:H8:165:VAL:HB	46:H8:166:SER:CA	2.44	0.47
48:J8:83:GLU:C	48:J8:85:LEU:N	2.70	0.47
55:Q8:45:GLY:CA	55:Q8:46:ARG:C	2.88	0.47
1:1G:328:C:H4'	1:1G:329:A:H5''	1.97	0.47
1:1G:828:A:H5''	1:1G:859:A:N1	2.30	0.47
1:1G:1171:G:H2'	1:1G:1172:C:H6	1.78	0.47
6:12:54:THR:HG23	6:12:199:TYR:HB3	1.96	0.47
7:22:150:LYS:HB3	7:22:201:TYR:HB2	1.96	0.47
8:32:8:VAL:HA	8:32:11:LEU:HD12	1.97	0.47
1:13:232:G:H2'	1:13:233:C:C6	2.50	0.46
1:13:603:U:H2'	1:13:604:G:C8	2.49	0.46
1:13:669:U:C2	1:13:670:G:C8	3.02	0.46
1:13:1024:G:H4'	1:13:1024:G:OP1	2.14	0.46
2:1L:38:A:H2'	2:1L:39:PSU:C6	2.50	0.46
2:3L:52:G:H1	2:3L:62:C:H42	1.62	0.46
2:3L:53:G:N2	2:3L:61:C:O2	2.48	0.46
5:14:176:G:C2'	5:14:177:G:H5'	2.45	0.46
5:14:642:G:H3'	5:14:642:G:C8	2.50	0.46
5:14:1403:C:OP1	5:14:1522:G:N2	2.34	0.46
5:14:1848:A:C4	5:14:1849:G:C8	3.03	0.46
5:14:1970:A:P	58:14:3592:HOH:O	2.73	0.46
5:14:2130:U:H2'	5:14:2158:A:C6	2.50	0.46
6:1E:36:ARG:HA	6:1E:36:ARG:HD2	1.75	0.46
7:2E:3:ASN:C	7:2E:4:LYS:HG2	2.40	0.46
9:4E:41:VAL:HG13	9:4E:113:ALA:HB2	1.97	0.46
12:7E:23:SER:OG	12:7E:60:ARG:HG2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:4I:15:VAL:HG23	17:4I:43:THR:O	2.15	0.46
5:1H:99:U:C6	5:1H:102:G:C2	3.02	0.46
5:1H:616:A:C4	30:31:180:GLY:HA2	2.50	0.46
5:1H:634:C:H2'	5:1H:635:C:H6	1.77	0.46
5:1H:831:G:H8	5:1H:831:G:O5'	1.98	0.46
5:1H:1045:A:H1'	5:1H:1047:G:N3	2.30	0.46
5:1H:1204:A:H61	5:1H:1240:U:H2'	1.79	0.46
5:1H:1222:C:H2'	5:1H:1223:C:H6	1.80	0.46
5:1H:1525:G:C4	5:1H:1526:G:C8	3.03	0.46
5:1H:1784:A:H5''	58:1H:4063:HOH:O	2.15	0.46
5:1H:2128:C:H2'	5:1H:2129:C:C6	2.49	0.46
5:1H:2787:C:H1'	29:21:62:PRO:HG3	1.96	0.46
30:31:81:PRO:HB3	30:31:89:VAL:HG23	1.97	0.46
36:78:98:GLU:O	36:78:101:VAL:HG13	2.14	0.46
38:98:13:HIS:ND1	38:98:15:SER:HB3	2.30	0.46
45:G8:85:VAL:HG23	45:G8:96:ILE:O	2.15	0.46
46:H8:116:VAL:H	46:H8:174:VAL:HG13	1.80	0.46
47:I8:51:VAL:N	47:I8:62:LEU:HD12	2.30	0.46
55:Q8:27:THR:HG21	55:Q8:39:LYS:NZ	2.31	0.46
1:1G:757:U:O2'	1:1G:879:C:H1'	2.15	0.46
1:1G:962:C:H42	1:1G:973:G:H1	1.63	0.46
1:1G:1129:C:H5	1:1G:1141:C:H42	1.63	0.46
7:22:40:ARG:HA	7:22:43:LEU:HB2	1.96	0.46
7:22:61:ALA:O	7:22:63:ASN:N	2.47	0.46
1:13:757:U:H2'	1:13:758:G:O4'	2.16	0.46
1:13:1016:A:H2'	1:13:1017:G:O4'	2.15	0.46
1:13:1122:U:C4	1:13:1123:A:N7	2.83	0.46
1:13:1376:U:H2'	1:13:1377:A:C8	2.49	0.46
5:14:78:A:H2'	5:14:79:G:C8	2.50	0.46
5:14:588:U:O4	5:14:670:A:H1'	2.15	0.46
5:14:590:A:H2'	5:14:591:C:C6	2.49	0.46
5:14:2740:A:H2'	5:14:2741:A:C8	2.51	0.46
5:14:2748:A:H2'	5:14:2749:A:C8	2.50	0.46
6:1E:28:PHE:CD1	6:1E:194:PRO:HD3	2.49	0.46
6:1E:77:ALA:HB1	6:1E:165:VAL:HG11	1.98	0.46
7:2E:152:ILE:HB	7:2E:199:LYS:HB2	1.97	0.46
14:1I:49:VAL:CG2	18:5I:41:ARG:HB2	2.46	0.46
2:3K:18:G:H21	2:3K:58:A:N6	2.14	0.46
5:1H:320:A:H2'	30:31:136:THR:HG21	1.96	0.46
5:1H:1413:G:N2	5:1H:1589:C:O2	2.44	0.46
5:1H:1575:C:H2'	5:1H:1576:U:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1614:A:N6	43:E8:88:ARG:H	2.12	0.46
5:1H:1644:C:H2'	5:1H:1645:G:H5'	1.98	0.46
5:1H:2126:A:H2'	5:1H:2126:A:N3	2.31	0.46
5:1H:2239:G:H5'	28:11:251:GLY:HA3	1.97	0.46
5:1H:2427:C:H5''	5:1H:2428:G:OP1	2.14	0.46
30:31:155:LEU:HD13	30:31:174:VAL:HG23	1.98	0.46
34:58:1:MET:HE2	42:D8:12:TYR:HA	1.97	0.46
39:A8:83:LYS:O	39:A8:109:GLY:HA2	2.14	0.46
50:L8:38:GLU:H	50:L8:38:GLU:CD	2.16	0.46
50:L8:43:ILE:O	50:L8:47:VAL:HG23	2.15	0.46
55:Q8:4:MET:HE2	55:Q8:59:LYS:HE2	1.97	0.46
1:1G:108:G:OP1	1:1G:326:G:N2	2.41	0.46
1:1G:424:G:H2'	1:1G:425:G:C8	2.50	0.46
1:1G:637:G:H2'	1:1G:638:G:H8	1.80	0.46
1:1G:1082:G:H8	1:1G:1082:G:OP2	1.97	0.46
6:12:128:GLU:O	6:12:130:ARG:HG2	2.16	0.46
6:12:136:VAL:O	6:12:139:LYS:HB3	2.16	0.46
7:22:84:ILE:HG12	7:22:88:ARG:NH2	2.31	0.46
8:32:30:LYS:HB2	8:32:35:ARG:HD2	1.96	0.46
1:13:109:A:C6	1:13:326:G:C6	3.03	0.46
1:13:174:C:H5'	1:13:174:C:H6	1.80	0.46
1:13:358:U:H2'	1:13:359:U:O4'	2.16	0.46
1:13:1178:G:N2	1:13:1181:G:H8	2.13	0.46
1:13:1240:U:O2'	11:6E:38:LEU:HG	2.15	0.46
1:13:1448:C:H42	1:13:1455:G:H1	1.63	0.46
3:2L:63:C:H2'	3:2L:64:G:C8	2.50	0.46
3:2L:73:A:C6	3:2L:74:A:C6	3.02	0.46
5:14:2231:C:H2'	5:14:2232:U:O4'	2.15	0.46
5:14:2647:U:H2'	5:14:2648:C:C6	2.50	0.46
12:7E:51:VAL:HG23	12:7E:52:ASP:N	2.31	0.46
13:8E:105:ASP:OD1	13:8E:107:ARG:HD3	2.15	0.46
16:3I:91:LYS:HG3	16:3I:91:LYS:O	2.14	0.46
19:6I:59:MET:HE2	19:6I:59:MET:HB2	1.76	0.46
22:9I:37:VAL:O	22:9I:41:LYS:HB3	2.15	0.46
26:1K:37:MIA:H8	26:1K:37:MIA:O5'	2.15	0.46
2:3K:25:C:N4	2:3K:26:A:C8	2.83	0.46
5:1H:821:A:H5''	5:1H:822:U:H6	1.80	0.46
5:1H:890:A:H3'	5:1H:892:G:H8	1.79	0.46
5:1H:1280:G:N2	5:1H:1291:C:C2	2.83	0.46
5:1H:1405:U:H2'	5:1H:1406:U:H6	1.74	0.46
5:1H:2051:A:H4'	29:21:141:ILE:HG12	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2291:U:H2'	5:1H:2292:C:C6	2.50	0.46
5:1H:2658:C:P	32:51:160:LYS:HZ1	2.39	0.46
27:1J:21:G:H2'	27:1J:22:U:O4'	2.14	0.46
29:21:117:MET:HA	29:21:122:PHE:N	2.29	0.46
30:31:168:ARG:HG2	30:31:175:THR:HG21	1.98	0.46
30:31:196:LEU:C	30:31:197:ASP:O	2.55	0.46
45:G8:28:LYS:CE	45:G8:40:GLU:HG2	2.44	0.46
55:Q8:38:GLY:HA2	55:Q8:39:LYS:O	2.16	0.46
1:1G:1055:A:N6	1:1G:1206:G:C5	2.83	0.46
1:1G:1135:U:O2'	1:1G:1138:G:O6	2.30	0.46
1:13:447:G:H8	1:13:447:G:O5'	1.99	0.46
1:13:917:G:H2'	1:13:918:A:H8	1.77	0.46
1:13:960:U:C2	1:13:1225:A:N7	2.84	0.46
2:3L:9:A:O2'	2:3L:10:G:N7	2.33	0.46
5:14:57:C:H2'	5:14:58:G:O4'	2.15	0.46
5:14:530:G:O6	5:14:2023:G:OP1	2.34	0.46
5:14:592:G:H1	5:14:665:C:H42	1.64	0.46
5:14:1001:A:H2'	5:14:1002:G:O4'	2.15	0.46
5:14:1059:G:C8	5:14:1060:U:H2'	2.51	0.46
5:14:1936:A:C8	5:14:1940:U:O2	2.68	0.46
5:14:1945:G:H2'	5:14:1946:U:H6	1.81	0.46
5:14:2540:C:H2'	5:14:2541:A:O4'	2.16	0.46
9:4E:68:GLU:O	9:4E:68:GLU:HG3	2.15	0.46
12:7E:53:VAL:O	12:7E:56:LYS:HG3	2.16	0.46
14:1I:81:THR:O	14:1I:85:LEU:HG	2.16	0.46
16:3I:47:LYS:HA	16:3I:49:ASN:N	2.26	0.46
26:1K:29:G:H2'	26:1K:30:G:H8	1.81	0.46
5:1H:240:G:H8	5:1H:240:G:O5'	1.99	0.46
5:1H:580:C:H2'	5:1H:581:C:C6	2.50	0.46
5:1H:880:G:H1	5:1H:897:C:H42	1.64	0.46
5:1H:899:A:H8	5:1H:899:A:O5'	1.98	0.46
5:1H:1387:C:O2	5:1H:1388:G:C8	2.69	0.46
5:1H:1746:G:H2'	5:1H:1747:G:H8	1.80	0.46
5:1H:1813:G:H1'	28:11:50:THR:OG1	2.16	0.46
5:1H:2262:U:H4'	5:1H:2328:A:C2	2.50	0.46
5:1H:2404:C:O3'	36:78:77:ARG:NH2	2.47	0.46
5:1H:2475:C:H4'	5:1H:2476:A:OP1	2.16	0.46
5:1H:2698:U:H2'	5:1H:2699:C:H6	1.79	0.46
5:1H:2721:A:H2'	5:1H:2722:G:O4'	2.16	0.46
5:1H:2795:G:H3'	5:1H:2797:U:H5''	1.98	0.46
27:16:7:G:O5'	39:A8:29:PHE:CE2	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:16:31:C:H2'	27:16:32:C:C6	2.50	0.46
30:31:41:LEU:HA	30:31:44:ARG:HD3	1.97	0.46
35:68:64:ARG:O	35:68:82:ASN:HA	2.16	0.46
36:78:59:LEU:O	55:Q8:13:ARG:HD2	2.16	0.46
36:78:88:LEU:HD12	36:78:95:VAL:HG11	1.98	0.46
38:98:12:ARG:HH11	38:98:12:ARG:CG	2.27	0.46
43:E8:79:GLY:N	43:E8:100:THR:O	2.37	0.46
1:1G:577:G:H2'	1:1G:578:C:H6	1.81	0.46
1:1G:655:A:H61	1:1G:751:U:H3	1.62	0.46
1:1G:770:C:O2'	1:1G:771:G:H5'	2.16	0.46
1:1G:861:G:H2'	1:1G:862:C:H6	1.80	0.46
1:1G:1190:G:H3'	7:22:3:ASN:OD1	2.16	0.46
1:1G:1236:A:H2'	1:1G:1237:C:C6	2.51	0.46
6:12:70:PHE:O	6:12:93:VAL:N	2.39	0.46
6:12:72:GLY:C	6:12:74:LYS:H	2.23	0.46
6:12:73:THR:HG21	6:12:97:TRP:N	2.30	0.46
1:13:276:G:O3'	21:8I:68:ARG:NH1	2.48	0.46
1:13:411:A:C5	1:13:413:G:H1'	2.51	0.46
1:13:538:G:OP2	16:3I:115:LYS:HG3	2.16	0.46
1:13:592:G:N3	1:13:593:G:C8	2.84	0.46
1:13:746:A:H2'	1:13:747:C:H6	1.80	0.46
1:13:1169:A:N6	1:13:1170:A:N1	2.63	0.46
1:13:1336:C:H1'	1:13:1337:G:C6	2.51	0.46
5:14:171:G:H2'	5:14:172:C:C6	2.51	0.46
5:14:690:G:H2'	5:14:691:C:C6	2.51	0.46
5:14:830:G:H4'	5:14:831:G:OP2	2.15	0.46
5:14:1260:G:C6	5:14:1261:C:C4	3.03	0.46
5:14:1716:U:H2'	5:14:1717:G:H8	1.80	0.46
6:1E:22:LYS:C	6:1E:24:TRP:H	2.19	0.46
15:2I:112:THR:HA	15:2I:113:PRO:HD3	1.73	0.46
5:1H:381:G:C4	5:1H:394:A:C2	3.04	0.46
5:1H:757:U:H2'	5:1H:758:C:O4'	2.15	0.46
5:1H:937:U:H2'	5:1H:938:G:O4'	2.15	0.46
5:1H:1756:G:H4'	5:1H:1758:G:O4'	2.16	0.46
5:1H:1965:C:H3'	5:1H:1966:A:H2'	1.97	0.46
5:1H:2249:U:O4	58:1H:3745:HOH:O	2.16	0.46
32:51:4:ILE:C	32:51:6:ARG:H	2.23	0.46
33:61:110:ASP:OD1	33:61:110:ASP:N	2.39	0.46
38:98:34:ILE:HG22	38:98:114:VAL:HB	1.98	0.46
38:98:109:ALA:HA	38:98:110:PRO:HD2	1.74	0.46
41:C8:79:PHE:HE2	41:C8:106:PHE:CZ	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:E8:57:ASN:HA	43:E8:61:ASN:HD22	1.81	0.46
46:H8:76:LEU:H	46:H8:76:LEU:CD2	2.14	0.46
1:1G:617:G:H1	1:1G:623:C:H42	1.62	0.46
1:1G:637:G:H2'	1:1G:638:G:C8	2.51	0.46
6:12:16:HIS:HA	6:12:209:ARG:HG2	1.98	0.46
7:22:70:VAL:O	7:22:106:VAL:HG23	2.14	0.46
7:22:113:ALA:HB3	7:22:114:PRO:HD3	1.98	0.46
8:32:15:GLU:OE1	8:32:59:ARG:NH2	2.46	0.46
8:32:158:ILE:H	8:32:158:ILE:HG12	1.48	0.46
1:13:554:C:H2'	1:13:555:C:C6	2.51	0.46
1:13:739:C:O2	19:6I:42:HIS:HE1	1.96	0.46
1:13:1179:A:O3'	13:8E:103:THR:HG23	2.16	0.46
1:13:1286:A:OP1	25:1F:26:LYS:HG2	2.15	0.46
5:14:1287:A:C5	5:14:1288:U:C4	3.04	0.46
5:14:1439:A:H2'	5:14:1440:G:O4'	2.16	0.46
5:14:2488:A:H8	5:14:2488:A:O5'	1.99	0.46
5:14:2845:G:N2	5:14:2871:C:O2	2.38	0.46
9:4E:131:ILE:HD13	9:4E:131:ILE:HA	1.82	0.46
11:6E:65:ALA:HB2	11:6E:128:ALA:HB2	1.96	0.46
11:6E:133:GLY:HA2	11:6E:136:LYS:HG3	1.98	0.46
19:6I:30:ALA:HB2	19:6I:85:LEU:HD11	1.97	0.46
2:3K:22:G:N7	2:3K:46:7MG:HM72	2.30	0.46
5:1H:249:C:O2	55:Q8:12:LYS:NZ	2.45	0.46
5:1H:249:C:O2'	36:78:64:LYS:HE3	2.16	0.46
5:1H:430:G:H5''	5:1H:431:U:OP2	2.15	0.46
5:1H:743:G:O3'	58:1H:3715:HOH:O	2.21	0.46
5:1H:960:A:H2'	5:1H:962:G:H5'	1.97	0.46
5:1H:1543:A:H3'	5:1H:1543:A:OP2	2.15	0.46
5:1H:1649:G:O2'	38:98:107:ASP:OD1	2.16	0.46
5:1H:2053:G:P	58:1H:3853:HOH:O	2.73	0.46
5:1H:2275:C:H5'	5:1H:2275:C:C6	2.49	0.46
5:1H:2438:U:O2'	5:1H:2440:C:OP1	2.28	0.46
5:1H:2747:G:O6	5:1H:2755:C:H5''	2.15	0.46
27:1J:10:C:C4	27:1J:11:C:C5	3.04	0.46
27:16:48:A:H4'	39:A8:95:HIS:HD2	1.81	0.46
28:11:72:LYS:HA	28:11:72:LYS:HD2	1.85	0.46
29:21:77:ILE:C	29:21:79:ARG:H	2.23	0.46
29:21:116:VAL:H	29:21:157:ALA:HB2	1.81	0.46
30:31:39:TRP:O	30:31:43:LYS:HG2	2.15	0.46
30:31:52:LYS:HA	30:31:56:GLU:OE1	2.15	0.46
33:61:79:ILE:HA	33:61:80:PRO:HD2	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:88:1:MET:HE1	37:88:45:GLN:HB3	1.98	0.46
37:88:17:LEU:HD13	37:88:39:PRO:HB2	1.97	0.46
1:1G:166:G:H2'	1:1G:167:G:C8	2.51	0.46
1:1G:532:A:N6	1:1G:1206:G:O2'	2.49	0.46
1:1G:728:A:C2	1:1G:729:A:C5	3.04	0.46
1:1G:735:C:H2'	1:1G:736:C:C6	2.46	0.46
1:1G:920:U:H2'	1:1G:921:U:C6	2.51	0.46
1:1G:983:A:H2	1:1G:984:C:C6	2.34	0.46
1:1G:1131:G:N7	1:1G:1132:C:H5	2.13	0.46
6:12:166:ASP:CG	6:12:169:LYS:HB2	2.40	0.46
8:32:3:ARG:HH22	8:32:5:ILE:HG23	1.80	0.46
1:13:474:G:H5''	20:7I:81:ARG:CZ	2.46	0.46
1:13:590:C:H2'	1:13:591:U:H6	1.81	0.46
1:13:825:G:C6	1:13:826:C:C4	3.03	0.46
1:13:1004:A:H2'	1:13:1005:A:O4'	2.16	0.46
1:13:1132:C:H2'	1:13:1133:G:C8	2.50	0.46
1:13:1346:A:C4	11:6E:10:ARG:NH1	2.83	0.46
1:13:1478:C:H2'	1:13:1479:C:H6	1.81	0.46
2:1L:7:A:H61	2:1L:66:U:H3	1.63	0.46
5:14:248:G:H5'	5:14:250:G:N7	2.30	0.46
5:14:300:A:H1'	5:14:319:C:H1'	1.96	0.46
5:14:962:G:C2	5:14:963:U:C2	3.03	0.46
5:14:998:C:H2'	5:14:999:U:O4'	2.15	0.46
5:14:2079:U:O4	58:14:4179:HOH:O	2.20	0.46
5:14:2150:U:H2'	5:14:2151:G:C8	2.50	0.46
5:14:2285:C:H2'	5:14:2286:A:H5''	1.96	0.46
5:14:2526:G:H5'	5:14:2742:C:O2'	2.16	0.46
10:5E:89:MET:HG3	22:9I:76:LEU:HD21	1.98	0.46
18:5I:21:TYR:OH	18:5I:23:ARG:NH2	2.49	0.46
21:8I:29:HIS:CD2	21:8I:30:PRO:HD2	2.51	0.46
24:BI:33:ILE:O	24:BI:37:SER:OG	2.33	0.46
25:1F:2:GLY:O	25:1F:4:GLY:N	2.49	0.46
5:1H:1142(A):A:C2	5:1H:1144:G:C8	3.04	0.46
5:1H:1332:G:N2	5:1H:1609:A:HO2'	2.13	0.46
5:1H:1469:A:N1	5:1H:1524:G:C6	2.83	0.46
5:1H:2443:C:H2'	5:1H:2444:G:H8	1.81	0.46
5:1H:2496:C:OP1	37:88:82:ARG:HD3	2.16	0.46
27:16:60:C:C2	27:16:61:G:C8	3.04	0.46
30:31:101:LEU:HD22	30:31:102:PRO:CD	2.45	0.46
38:98:81:ASP:O	38:98:85:PRO:HG2	2.16	0.46
45:G8:94:LYS:HG3	45:G8:95:LYS:H	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:I8:23:VAL:HG13	47:I8:38:VAL:CG2	2.46	0.46
54:P8:37:LYS:HG3	54:P8:37:LYS:O	2.16	0.46
1:1G:243:A:C2	1:1G:245:C:C2	3.04	0.46
1:1G:501:C:H2'	1:1G:502:G:C8	2.51	0.46
1:1G:1190:G:H5'	7:22:176:HIS:NE2	2.31	0.46
1:1G:1191:A:OP1	7:22:3:ASN:ND2	2.33	0.46
1:1G:1239:A:O2'	1:1G:1298:C:N4	2.48	0.46
1:1G:1268:A:H2'	1:1G:1269:A:H8	1.78	0.46
1:1G:1286:A:H3'	1:1G:1286:A:H8	1.81	0.46
6:12:215:LEU:HA	6:12:218:ALA:HB3	1.97	0.46
7:22:55:VAL:HG22	7:22:68:VAL:HG13	1.98	0.46
7:22:79:ARG:HB3	7:22:79:ARG:NH1	2.31	0.46
8:32:23:GLY:O	8:32:27:TYR:HD1	1.98	0.46
1:13:134:A:H61	20:7I:25:ARG:NH1	2.14	0.46
5:14:277:C:OP2	5:14:278:A:N6	2.49	0.46
5:14:528:A:H2	5:14:2043:C:H5'	1.79	0.46
5:14:817:C:H5	58:14:3751:HOH:O	1.98	0.46
5:14:1050:A:N3	5:14:2751:G:H2'	2.30	0.46
5:14:1110:G:O2'	5:14:1111:A:O4'	2.19	0.46
6:1E:70:PHE:O	6:1E:93:VAL:N	2.36	0.46
8:3E:166:LYS:HG2	8:3E:178:VAL:HG11	1.98	0.46
15:2I:79:SER:CB	15:2I:106:LYS:HZ2	2.27	0.46
20:7I:83:GLU:HB3	20:7I:84:ALA:H	1.66	0.46
24:BI:53:LEU:O	24:BI:57:ARG:NH1	2.49	0.46
2:3K:26:A:H2'	2:3K:27:G:H5'	1.96	0.46
2:3K:66:U:H2'	2:3K:67:C:O4'	2.16	0.46
5:1H:363(E):U:H5'	5:1H:363(F):A:OP2	2.15	0.46
5:1H:1290:C:H2'	5:1H:1291:C:H6	1.77	0.46
5:1H:1434:A:H61	5:1H:1558:A:H61	1.63	0.46
5:1H:2365:G:H4'	47:I8:60:PHE:CZ	2.51	0.46
27:16:21:G:H1	27:16:62:C:N4	2.07	0.46
27:16:29:A:H2'	27:16:30:C:C6	2.51	0.46
28:11:66:ASP:HB3	28:11:105:ILE:CD1	2.46	0.46
29:21:119:ARG:HG2	29:21:160:TYR:HB2	1.96	0.46
36:78:39:LYS:CG	36:78:45:LEU:HD22	2.43	0.46
38:98:12:ARG:HD3	38:98:16:HIS:CD2	2.50	0.46
41:C8:92:ARG:HB3	42:D8:11:GLN:OE1	2.15	0.46
1:1G:426:G:OP1	8:32:38:TYR:OH	2.29	0.46
1:1G:801:U:H2'	1:1G:802:A:C8	2.50	0.46
1:1G:867:G:O2'	1:1G:868:C:H5'	2.16	0.46
1:1G:1170:A:H8	1:1G:1170:A:O5'	1.99	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:22:140:ARG:NE	7:22:140:ARG:HA	2.30	0.46
1:13:972:C:OP1	58:13:1830:HOH:O	2.20	0.46
1:13:1346:A:C5	11:6E:10:ARG:NH1	2.84	0.46
2:3L:17:C:N4	5:14:2112:G:OP1	2.48	0.46
5:14:755:C:H2'	5:14:756:C:C6	2.51	0.46
5:14:921:G:H2'	5:14:922:U:C6	2.50	0.46
5:14:1427:A:H4'	5:14:1428:C:O5'	2.16	0.46
5:14:1436:G:O2'	5:14:1477:A:H4'	2.16	0.46
5:14:1973:G:H2'	5:14:1974:C:C6	2.50	0.46
5:14:2567:G:H2'	5:14:2568:C:C6	2.51	0.46
5:14:2772:C:H2'	5:14:2773:C:H6	1.81	0.46
5:14:2779:U:O2	5:14:2779:U:O4'	2.34	0.46
9:4E:51:VAL:O	9:4E:55:VAL:HG23	2.16	0.46
10:5E:24:GLU:CG	10:5E:28:ARG:HH22	2.29	0.46
19:6I:17:ARG:HA	19:6I:17:ARG:HD2	1.78	0.46
21:8I:45:HIS:O	21:8I:73:VAL:HG23	2.16	0.46
5:1H:636:G:N7	36:78:113:LYS:HE2	2.30	0.46
5:1H:803:U:C4	5:1H:804:A:N7	2.84	0.46
5:1H:806:C:C2	5:1H:807:U:C5	3.04	0.46
5:1H:1006:C:H5'	34:58:28:THR:HG23	1.98	0.46
5:1H:1046:A:O2'	5:1H:1047:G:OP1	2.33	0.46
5:1H:1591:G:H2'	5:1H:1592:C:C6	2.51	0.46
5:1H:1657:C:H2'	5:1H:1658:C:H6	1.81	0.46
5:1H:2040:C:H2'	5:1H:2041:U:O4'	2.15	0.46
5:1H:2092:U:H4'	5:1H:2093:G:O5'	2.16	0.46
5:1H:2401:U:H2'	5:1H:2402:C:H5''	1.98	0.46
27:16:29:A:H2'	27:16:30:C:O4'	2.15	0.46
27:16:48:A:H4'	39:A8:95:HIS:CD2	2.51	0.46
28:11:124:PRO:HG2	28:11:129:ASN:HD21	1.81	0.46
38:98:51:LEU:HD22	38:98:66:VAL:HG13	1.97	0.46
39:A8:67:ARG:NH1	39:A8:67:ARG:HB2	2.31	0.46
39:A8:103:GLU:O	39:A8:106:ARG:HD3	2.16	0.46
41:C8:92:ARG:HD3	41:C8:94:ASN:HB3	1.97	0.46
42:D8:67:GLY:O	42:D8:88:ARG:HG2	2.16	0.46
42:D8:76:LYS:O	42:D8:79:VAL:HG12	2.16	0.46
55:Q8:33:ASN:O	55:Q8:34:TRP:CG	2.69	0.46
1:1G:35:G:C2	1:1G:550:G:N3	2.84	0.46
1:1G:391:G:C6	1:1G:392:G:C5	3.04	0.46
1:1G:1280:A:H5'	1:1G:1281:U:OP2	2.16	0.46
1:1G:1292:U:H2'	1:1G:1293:G:C8	2.51	0.46
6:12:19:HIS:CG	6:12:20:GLU:N	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:163:C:O2'	1:13:164:U:O4'	2.24	0.46
1:13:484:G:O2'	1:13:485:G:OP2	2.27	0.46
1:13:493:G:O5'	1:13:493:G:H8	1.98	0.46
1:13:654:G:C2'	1:13:655:A:H5'	2.46	0.46
1:13:658:G:H2'	1:13:659:U:H6	1.81	0.46
1:13:909:A:H2'	1:13:910:C:O4'	2.16	0.46
1:13:1145:C:H5''	1:13:1146:A:OP1	2.16	0.46
1:13:1165:C:H2'	1:13:1166:G:O4'	2.15	0.46
1:13:1485:U:O2'	1:13:1486:G:H5'	2.16	0.46
2:1L:68:C:H2'	2:1L:69:G:C8	2.51	0.46
5:14:120:U:H4'	5:14:121:G:H5''	1.97	0.46
5:14:208:C:H2'	5:14:209:C:C6	2.50	0.46
5:14:444:C:O2'	5:14:445:C:H5'	2.16	0.46
5:14:797:C:H2'	5:14:798:G:O4'	2.16	0.46
5:14:982:C:OP1	58:14:4327:HOH:O	2.21	0.46
5:14:986:C:O2'	5:14:1001:A:O2'	2.27	0.46
5:14:1678:G:N2	5:14:1989:G:N2	2.62	0.46
5:14:2261:C:H1'	5:14:2388:A:N3	2.31	0.46
5:14:2469:A:C2	5:14:2470:G:C5	3.04	0.46
5:14:2647:U:H2'	5:14:2648:C:H6	1.81	0.46
9:4E:36:ASP:OD2	9:4E:38:GLN:HB2	2.16	0.46
14:1I:11:PHE:HB3	18:5I:55:GLY:HA3	1.97	0.46
19:6I:71:GLN:O	19:6I:71:GLN:HG2	2.16	0.46
5:1H:172:C:H2'	5:1H:173:G:C8	2.51	0.46
5:1H:207:A:H2'	5:1H:208:C:O4'	2.15	0.46
5:1H:315:G:C6	5:1H:316:C:C4	3.04	0.46
5:1H:343:C:O2'	5:1H:344:G:H5'	2.16	0.46
5:1H:528:A:C2	5:1H:2043:C:H4'	2.51	0.46
5:1H:832:G:H5'	36:78:45:LEU:HD11	1.98	0.46
5:1H:2287:A:C2	5:1H:2289:G:C8	3.04	0.46
5:1H:2345:G:H4'	5:1H:2346:A:O5'	2.16	0.46
5:1H:2688:U:C5	5:1H:2720:U:OP2	2.64	0.46
28:11:172:TYR:HD2	28:11:185:VAL:C	2.23	0.46
30:31:183:VAL:O	30:31:187:VAL:HG23	2.16	0.46
37:88:37:LEU:HD23	37:88:37:LEU:HA	1.77	0.46
40:B8:48:ILE:HD13	40:B8:114:LEU:HD12	1.97	0.46
41:C8:50:ARG:HH22	42:D8:72:VAL:HG12	1.81	0.46
43:E8:24:ILE:HD12	43:E8:24:ILE:O	2.15	0.46
1:1G:20:U:H2'	1:1G:21:G:O4'	2.15	0.46
1:1G:382:A:H2'	1:1G:383:A:C8	2.51	0.46
1:1G:397:A:H3'	1:1G:397:A:N3	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:616:G:C2	1:1G:617:G:N7	2.84	0.46
1:1G:731:G:OP1	1:1G:766:A:H1'	2.16	0.46
1:1G:818:G:O2'	1:1G:819:A:H5'	2.16	0.46
1:1G:899:C:H5''	1:1G:900:A:OP2	2.15	0.46
1:1G:1013:G:O2'	1:1G:1014:A:N7	2.39	0.46
1:1G:1306:A:C6	1:1G:1307:U:C2	3.04	0.46
1:1G:1315:U:H2'	1:1G:1316:G:O4'	2.15	0.46
1:1G:1352:C:H42	1:1G:1370:G:H1	1.64	0.46
6:12:16:HIS:O	6:12:210:SER:HB2	2.15	0.46
1:13:414:A:H2'	1:13:415:A:O4'	2.16	0.45
1:13:454:C:H41	1:13:478:A:H2	1.63	0.45
1:13:632:A:H8	1:13:633:G:C8	2.34	0.45
1:13:1256:A:N3	1:13:1277:C:N4	2.63	0.45
2:3L:46:7MG:O2'	2:3L:48:C:H1'	2.15	0.45
5:14:71:A:H5'	5:14:71:A:H8	1.81	0.45
5:14:646:A:H2'	5:14:647:G:O4'	2.16	0.45
5:14:1404:C:O2'	5:14:1405:U:H5'	2.16	0.45
5:14:1449:A:H5'	5:14:1449(A):G:OP2	2.16	0.45
5:14:2857:G:N2	5:14:2859:G:H3'	2.31	0.45
7:2E:119:ARG:O	7:2E:123:GLN:HG3	2.16	0.45
12:7E:107:LEU:HD23	12:7E:107:LEU:HA	1.69	0.45
20:7I:49:LEU:HD12	20:7I:50:LYS:N	2.31	0.45
21:8I:43:LEU:O	21:8I:69:LYS:HG3	2.16	0.45
21:8I:58:GLU:O	21:8I:74:LEU:N	2.41	0.45
21:8I:100:LYS:HB3	21:8I:101:ARG:CZ	2.46	0.45
22:9I:66:LEU:O	22:9I:70:ILE:HG13	2.15	0.45
2:3K:33:U:H1'	2:3K:37:MIA:H121	1.98	0.45
5:1H:289:A:C4	5:1H:353:G:N2	2.84	0.45
5:1H:425:G:H2'	5:1H:426:C:H6	1.81	0.45
5:1H:860:U:H5	5:1H:917:A:N1	2.13	0.45
5:1H:910:A:N7	37:88:13:GLN:HG3	2.31	0.45
5:1H:1047:G:H2'	5:1H:1110:G:C2	2.49	0.45
5:1H:1380:G:N2	5:1H:1570:A:C2	2.84	0.45
5:1H:1478:G:H2'	5:1H:1479:G:H8	1.80	0.45
5:1H:2019:A:H4'	41:C8:34:LYS:HD3	1.97	0.45
5:1H:2248:C:H2'	5:1H:2249:U:O4'	2.16	0.45
5:1H:2488:A:H2'	5:1H:2489:G:O4'	2.16	0.45
5:1H:2583:G:OP2	58:1H:3864:HOH:O	2.21	0.45
5:1H:2726:U:O2'	5:1H:2727:G:H8	1.98	0.45
27:16:11:C:O5'	27:16:12:C:H5	2.00	0.45
30:31:32:LEU:CD2	30:31:105:VAL:HG13	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:51:64:LEU:O	32:51:68:THR:OG1	2.34	0.45
34:58:16:ILE:HB	34:58:54:VAL:HG22	1.97	0.45
34:58:95:PRO:O	34:58:96:GLU:CD	2.59	0.45
35:68:68:GLU:OE2	35:68:78:ARG:NH1	2.49	0.45
40:B8:60:THR:HG22	40:B8:77:PRO:HA	1.97	0.45
40:B8:107:ASP:CG	40:B8:109:GLU:HG3	2.41	0.45
42:D8:25:LEU:H	42:D8:92:THR:HG21	1.81	0.45
42:D8:82:ARG:N	42:D8:82:ARG:HD2	2.31	0.45
45:G8:87:LYS:HB3	45:G8:94:LYS:HG2	1.98	0.45
52:N8:46:CYS:HA	52:N8:47:PRO:HD2	1.79	0.45
53:O8:30:THR:HA	53:O8:31:PRO:C	2.39	0.45
1:1G:142:G:H2'	1:1G:143:A:H8	1.80	0.45
1:1G:345:C:H1'	1:1G:346:G:C2	2.50	0.45
1:1G:542:G:H5'	8:32:41:GLY:HA3	1.98	0.45
6:12:73:THR:HB	6:12:96:ARG:H	1.79	0.45
1:13:948:C:O2'	1:13:949:A:H5'	2.17	0.45
1:13:1322:C:O2'	1:13:1323:G:O5'	2.32	0.45
1:13:1409:C:H2'	1:13:1410:G:C8	2.51	0.45
2:3L:10:G:H2'	2:3L:11:C:O4'	2.17	0.45
2:3L:20:H2U:H62	2:3L:21:A:C1'	2.47	0.45
5:14:360:G:H2'	5:14:361:G:C8	2.49	0.45
5:14:511:U:C5	5:14:512:G:C5	3.04	0.45
5:14:632:A:H2'	5:14:633:A:C8	2.51	0.45
5:14:1572:A:H8	5:14:1572:A:O5'	1.98	0.45
5:14:2689:U:H6	5:14:2689:U:H5'	1.81	0.45
10:5E:5:GLU:HB3	10:5E:62:TRP:NE1	2.31	0.45
11:6E:16:LEU:HD12	13:8E:42:ARG:HA	1.99	0.45
26:1K:74:C:H1'	26:1K:75:C:H5'	1.99	0.45
5:1H:6:A:C2	34:58:131:GLN:HG3	2.51	0.45
5:1H:822:U:O2'	5:1H:823:G:H5'	2.16	0.45
5:1H:1385:G:O2'	5:1H:1396:U:C6	2.63	0.45
5:1H:1537:C:H2'	5:1H:1538:G:O4'	2.16	0.45
5:1H:2379:G:O2'	39:A8:17:ARG:NH1	2.42	0.45
5:1H:2780:G:OP2	34:58:118:LYS:HD3	2.15	0.45
27:1J:72:G:O2'	27:1J:104:A:N6	2.45	0.45
27:1J:117:G:O5'	27:1J:117:G:H8	1.99	0.45
27:16:31:C:H2'	27:16:32:C:H6	1.81	0.45
30:31:108:LYS:HE2	30:31:108:LYS:HB3	1.75	0.45
31:41:137:GLU:HG3	31:41:140:ILE:HG23	1.98	0.45
39:A8:67:ARG:O	39:A8:71:ARG:HG3	2.17	0.45
46:H8:105:VAL:HG13	46:H8:139:VAL:C	2.40	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:198:G:H2'	1:1G:199:G:H8	1.81	0.45
1:1G:284:G:H2'	1:1G:285:G:H8	1.81	0.45
1:1G:590:C:H2'	1:1G:591:U:C6	2.50	0.45
1:1G:728:A:H2'	1:1G:729:A:H8	1.76	0.45
1:1G:1067:A:H1'	1:1G:1068:G:C8	2.51	0.45
1:1G:1215:G:C5	1:1G:1216:G:N7	2.85	0.45
7:22:23:TYR:CD1	7:22:24:ALA:N	2.84	0.45
1:13:129(A):G:N2	1:13:188:U:O2'	2.49	0.45
1:13:280:C:O2	21:8L:38:ARG:HG3	2.16	0.45
1:13:381:C:H2'	1:13:382:A:O4'	2.17	0.45
1:13:872:A:N7	1:13:874:G:C8	2.84	0.45
1:13:1298:C:C5	11:6E:114:ARG:HD3	2.51	0.45
3:2L:33:OMC:HM22	3:2L:34:U:H5'	1.99	0.45
5:14:944:G:H5''	5:14:945:A:O5'	2.17	0.45
5:14:1486:A:H2'	5:14:1487:G:C8	2.52	0.45
5:14:2123:G:H1	5:14:2175:C:H42	1.65	0.45
5:14:2655:G:H1'	5:14:2656:U:H5	1.81	0.45
8:3E:7:PRO:CB	8:3E:10:ARG:HG2	2.46	0.45
13:8E:92:TYR:O	13:8E:96:LEU:HB2	2.16	0.45
2:3K:56:C:N3	5:1H:2112:G:N2	2.64	0.45
5:1H:26:G:C6	5:1H:27:G:N1	2.84	0.45
5:1H:50:U:H3'	5:1H:51:G:H5'	1.98	0.45
5:1H:141:A:C8	5:1H:1408:C:H1'	2.52	0.45
5:1H:189:G:H2'	5:1H:205:G:N2	2.31	0.45
5:1H:323:G:C8	30:31:171:PRO:HG3	2.51	0.45
5:1H:389:G:H22	36:78:72:PRO:HD3	1.81	0.45
5:1H:1163:G:C2	5:1H:1164:G:C8	3.04	0.45
5:1H:1170:G:N2	5:1H:1180:C:C2	2.85	0.45
5:1H:1188:U:C4'	42:D8:79:VAL:HG22	2.46	0.45
5:1H:1205:U:H4'	5:1H:1206:G:OP2	2.15	0.45
5:1H:1354:A:H8	5:1H:1354:A:O5'	2.00	0.45
5:1H:1996:C:OP1	35:68:31:LYS:HE3	2.16	0.45
5:1H:2303:G:O2'	31:41:132:ASN:HB2	2.17	0.45
30:31:129:PHE:O	30:31:130:ALA:HB3	2.16	0.45
31:41:11:TYR:O	31:41:16:ARG:HG3	2.16	0.45
34:58:46:VAL:CG1	34:58:48:MET:HG3	2.47	0.45
36:78:49:ARG:HE	55:Q8:57:ARG:HG2	1.79	0.45
37:88:127:ILE:H	37:88:127:ILE:HG13	1.67	0.45
38:98:21:TYR:OH	38:98:43:GLU:HG2	2.16	0.45
40:B8:24:PRO:HD3	40:B8:52:ILE:HD12	1.97	0.45
1:1G:41:G:H2'	1:1G:42:G:H8	1.76	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:590:C:H2'	1:1G:591:U:H6	1.80	0.45
1:1G:680:C:N4	1:1G:710:G:H1	2.12	0.45
1:1G:1256:A:N6	1:1G:1277:C:H3'	2.30	0.45
6:12:102:LEU:H	6:12:102:LEU:HD12	1.82	0.45
6:12:124:SER:OG	6:12:126:GLU:HB2	2.16	0.45
8:32:22:LYS:HD2	8:32:26:CYS:SG	2.56	0.45
1:13:271:C:H2'	1:13:272:C:C6	2.51	0.45
1:13:447:G:C6	1:13:485:G:H1'	2.51	0.45
1:13:881:G:OP2	16:3I:12:ARG:NH2	2.50	0.45
5:14:117:G:C6	5:14:119:A:C6	3.04	0.45
5:14:691:C:H2'	5:14:692:C:H6	1.81	0.45
5:14:977:G:C6	5:14:987:G:C6	3.05	0.45
5:14:1386:C:OP2	5:14:1396:U:C5	2.64	0.45
5:14:1430:C:H2'	5:14:1431:U:H6	1.79	0.45
5:14:1788:C:H2'	5:14:1789:A:H8	1.81	0.45
5:14:1856:G:H1	5:14:1886:C:H42	1.63	0.45
5:14:2115:G:H2'	5:14:2116:G:N7	2.32	0.45
5:14:2693:A:H2'	5:14:2694:G:C8	2.49	0.45
8:3E:100:ARG:O	8:3E:103:ASN:N	2.49	0.45
12:7E:7:ALA:HB2	12:7E:85:ARG:HD2	1.98	0.45
14:1I:3:LYS:N	14:1I:75:ILE:HA	2.31	0.45
14:1I:57:LYS:HD2	14:1I:60:ARG:NH1	2.30	0.45
18:5I:23:ARG:HH11	18:5I:30:ALA:HB2	1.81	0.45
21:8I:9:VAL:O	21:8I:21:VAL:HA	2.17	0.45
26:1K:51:U:H2'	26:1K:52:G:H8	1.81	0.45
5:1H:7:G:H2'	5:1H:8:A:O4'	2.16	0.45
5:1H:773:U:C4'	28:11:47:GLY:HA3	2.47	0.45
5:1H:1640:C:H2'	5:1H:1641:A:C8	2.51	0.45
5:1H:1644:C:C2'	5:1H:1645:G:H5'	2.47	0.45
5:1H:1899:G:H1	5:1H:1902:C:H41	1.63	0.45
5:1H:2469:A:H2	5:1H:2481:G:H21	1.62	0.45
5:1H:2887:U:H2'	5:1H:2888:C:H6	1.81	0.45
32:51:51:ARG:HG2	32:51:52:VAL:H	1.82	0.45
34:58:23:LEU:HD12	34:58:23:LEU:HA	1.72	0.45
36:78:50:ARG:HD3	55:Q8:7:HIS:CD2	2.52	0.45
40:B8:3:ARG:O	40:B8:7:ILE:N	2.49	0.45
46:H8:99:TYR:HD1	46:H8:123:ASP:HB3	1.81	0.45
50:L8:40:THR:O	50:L8:44:ARG:HB2	2.17	0.45
1:1G:999:U:H2'	1:1G:1000:A:H8	1.80	0.45
1:1G:1014:A:P	1:1G:1014:A:H8	2.39	0.45
1:1G:1092:A:C2	1:1G:1183:A:H2	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1260:C:H3'	1:1G:1260:C:H6	1.81	0.45
6:12:74:LYS:NZ	6:12:166:ASP:OD2	2.41	0.45
6:12:201:ILE:HA	6:12:202:PRO:HD2	1.88	0.45
7:22:119:ARG:HH22	7:22:140:ARG:HG2	1.81	0.45
1:13:11:G:C5	1:13:12:U:C5	3.05	0.45
1:13:195:A:H4'	24:BI:68:LYS:HD3	1.99	0.45
1:13:201:C:H42	1:13:216:G:H1	1.64	0.45
1:13:397:A:H5'	1:13:398:C:OP1	2.16	0.45
1:13:417:C:H2'	1:13:418:C:H6	1.82	0.45
1:13:490:G:OP2	8:3E:132:ARG:NH2	2.49	0.45
1:13:663:A:H2'	1:13:664:G:O4'	2.16	0.45
1:13:745:C:OP1	1:13:851:G:O2'	2.34	0.45
1:13:1139:G:H4'	1:13:1140:C:C5'	2.45	0.45
1:13:1308:U:OP1	17:4I:98:VAL:N	2.40	0.45
1:13:1414:U:H2'	1:13:1415:G:H8	1.80	0.45
2:1L:51:U:O5'	2:1L:51:U:H6	2.00	0.45
5:14:308:G:C8	5:14:501:A:H1'	2.52	0.45
5:14:470:A:H2'	5:14:471:A:O4'	2.17	0.45
5:14:493:G:H8	5:14:493:G:O5'	2.00	0.45
5:14:654(D):G:H22	5:14:654(Q):C:N4	2.15	0.45
5:14:993:G:C5	5:14:994:C:C5	3.05	0.45
5:14:1041:C:N4	5:14:1114:G:H1	2.12	0.45
5:14:1423:G:C4	5:14:1424:G:C8	3.04	0.45
5:14:2111:C:N1	5:14:2118:U:H4'	2.32	0.45
8:3E:52:SER:O	8:3E:55:ALA:HB3	2.16	0.45
9:4E:63:ARG:HA	9:4E:66:MET:CE	2.46	0.45
14:1I:66:ARG:HB2	14:1I:68:HIS:CE1	2.52	0.45
18:5I:50:LYS:HE2	18:5I:50:LYS:HB3	1.69	0.45
20:7I:27:LYS:H	20:7I:27:LYS:HG2	1.44	0.45
2:3K:2:C:H2'	2:3K:3:C:C6	2.51	0.45
5:1H:298:G:N7	58:1H:4288:HOH:O	2.47	0.45
5:1H:493:G:H2'	5:1H:494:G:O4'	2.16	0.45
5:1H:657:U:H2'	5:1H:658:C:C6	2.51	0.45
5:1H:784:A:O4'	28:11:227:ASN:ND2	2.49	0.45
5:1H:1175:U:O3'	5:1H:1176:G:H4'	2.16	0.45
5:1H:1345:C:H2'	5:1H:1346:G:H8	1.82	0.45
5:1H:2315:G:H2'	5:1H:2316:C:C6	2.51	0.45
5:1H:2854:G:C2	5:1H:2855:C:C2	3.05	0.45
30:31:28:ILE:HA	30:31:112:MET:CE	2.47	0.45
30:31:114:VAL:HG11	30:31:202:PHE:HE2	1.81	0.45
30:31:177:ALA:HB1	30:31:178:PRO:HD2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:68:113:LYS:HE2	35:68:117:LEU:HD21	1.98	0.45
38:98:98:LEU:HD23	38:98:98:LEU:HA	1.84	0.45
38:98:118:GLU:OE1	38:98:118:GLU:HA	2.16	0.45
41:C8:34:LYS:HA	41:C8:34:LYS:HE3	1.99	0.45
43:E8:88:ARG:HB3	43:E8:92:ARG:CB	2.47	0.45
47:I8:19:LYS:HD3	47:I8:19:LYS:HA	1.49	0.45
55:Q8:6:THR:N	55:Q8:59:LYS:HZ2	2.08	0.45
55:Q8:47:LYS:HA	55:Q8:47:LYS:HD3	1.47	0.45
1:1G:655:A:N6	1:1G:751:U:H3	2.15	0.45
1:1G:953:G:H5'	1:1G:965:A:H61	1.82	0.45
1:1G:1014:A:C6	1:1G:1015:A:N6	2.85	0.45
6:12:142:LEU:O	6:12:142:LEU:HD23	2.16	0.45
1:13:422:C:H1'	1:13:423:G:C2	2.51	0.45
1:13:592:G:H2'	1:13:593:G:H8	1.82	0.45
1:13:707:C:O2'	1:13:708:C:H5'	2.17	0.45
1:13:976:G:H5'	1:13:1358:U:O2'	2.17	0.45
1:13:1103:C:H5''	6:1E:98:LEU:HD13	1.97	0.45
1:13:1290:G:O3'	11:6E:37:ASN:ND2	2.50	0.45
1:13:1316:G:H2'	1:13:1318:A:OP2	2.15	0.45
1:13:1508:G:O5'	1:13:1508:G:H8	1.99	0.45
5:14:17:G:H2'	5:14:18:C:H6	1.80	0.45
5:14:637:A:H4'	5:14:638:G:O5'	2.17	0.45
5:14:839:U:H2'	5:14:840:C:C6	2.50	0.45
5:14:1322:A:N1	5:14:1333:C:O2'	2.41	0.45
5:14:1331:A:O2'	5:14:1332:G:C8	2.69	0.45
5:14:1464:C:O2'	5:14:1528:A:C8	2.68	0.45
5:14:2257:U:O2'	5:14:2258:C:H5'	2.17	0.45
5:14:2563:U:O2	5:14:2565:A:C8	2.70	0.45
6:1E:195:ASP:O	12:7E:74:PRO:HG3	2.17	0.45
10:5E:76:ALA:HA	10:5E:79:LEU:HD12	1.99	0.45
14:1I:42:THR:HG23	14:1I:67:THR:O	2.17	0.45
14:1I:77:PRO:HB2	14:1I:79:ARG:NH1	2.31	0.45
17:4I:3:ARG:CZ	17:4I:7:VAL:HG13	2.46	0.45
19:6I:66:LEU:HD12	19:6I:66:LEU:HA	1.74	0.45
5:1H:729:G:C6	28:11:208:LYS:HB2	2.52	0.45
5:1H:1108:U:O4	5:1H:1109:C:N4	2.49	0.45
5:1H:1239:G:H5''	58:1H:3830:HOH:O	2.17	0.45
5:1H:1257:C:H4'	30:31:83:PHE:CE1	2.51	0.45
5:1H:1494:A:C2'	5:1H:1495:A:H5'	2.46	0.45
5:1H:1607:C:H1'	58:1H:4534:HOH:O	2.16	0.45
5:1H:1858:G:H2'	5:1H:1883:G:H22	1.78	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2396:G:O2'	5:1H:2397:G:H5'	2.16	0.45
27:16:71:C:C2	27:16:72:G:C8	3.05	0.45
29:21:38:THR:CG2	29:21:41:LYS:HB2	2.47	0.45
33:61:126:TYR:HB2	33:61:140:LEU:HD11	1.98	0.45
34:58:94:HIS:C	34:58:95:PRO:O	2.59	0.45
40:B8:74:ARG:HD3	40:B8:76:PHE:CZ	2.52	0.45
40:B8:107:ASP:N	40:B8:107:ASP:OD1	2.42	0.45
55:Q8:35:GLN:C	55:Q8:37:SER:N	2.75	0.45
55:Q8:45:GLY:N	55:Q8:46:ARG:HB3	2.31	0.45
1:1G:109:A:H2'	1:1G:326:G:N2	2.32	0.45
1:1G:547:A:OP1	58:1G:1704:HOH:O	2.21	0.45
6:12:19:HIS:CE1	6:12:206:ASP:H	2.34	0.45
6:12:92:TYR:CE1	6:12:151:GLY:HA3	2.51	0.45
7:22:104:GLN:OE1	7:22:105:GLU:N	2.27	0.45
1:13:1391:U:H2'	1:13:1392:G:C8	2.51	0.45
1:13:1428:A:H2'	1:13:1429:C:C6	2.51	0.45
2:1L:76:A:C8	5:14:2583:G:N2	2.85	0.45
5:14:16:G:H2'	5:14:17:G:H8	1.82	0.45
5:14:565:C:H4'	5:14:1253:A:C6	2.52	0.45
5:14:807:U:C2	5:14:808:G:C8	3.04	0.45
5:14:1628:G:H2'	5:14:1629:U:C6	2.52	0.45
5:14:2688:U:C5	5:14:2720:U:OP2	2.70	0.45
5:14:2885:C:N3	5:14:2886:G:H1'	2.31	0.45
14:1I:3:LYS:N	14:1I:74:ILE:O	2.50	0.45
3:2K:20:G:C4	3:2K:58:A:C2	3.05	0.45
5:1H:172:C:H2'	5:1H:173:G:H8	1.80	0.45
5:1H:632:A:H8	5:1H:632:A:O5'	1.99	0.45
5:1H:654(A):A:H2	5:1H:654(T):A:H61	1.65	0.45
5:1H:1243:G:H4'	36:78:7:ARG:NH2	2.31	0.45
5:1H:1474:C:H2'	5:1H:1475:G:C8	2.51	0.45
5:1H:1843:C:O5'	5:1H:1843:C:H6	1.98	0.45
5:1H:2035:G:P	58:1H:3838:HOH:O	2.71	0.45
5:1H:2383:G:C2'	5:1H:2384:G:H5'	2.47	0.45
30:31:64:ILE:HG23	30:31:65:TRP:CD1	2.52	0.45
30:31:68:LYS:HB3	30:31:68:LYS:HE3	1.85	0.45
33:61:129:THR:HG22	33:61:137:PRO:HB3	1.99	0.45
35:68:7:TYR:HE1	35:68:20:MET:HE3	1.81	0.45
48:J8:50:ARG:HE	48:J8:50:ARG:HB2	1.61	0.45
1:1G:560:U:HO2'	1:1G:561:U:P	2.39	0.45
1:1G:625:G:C4	1:1G:626:U:C5	3.05	0.45
1:1G:882:C:O2'	1:1G:883:C:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1256:A:OP2	7:22:26:LYS:NZ	2.39	0.45
6:12:83:MET:SD	6:12:234:PRO:HB2	2.57	0.45
6:12:167:PRO:HD2	6:12:192:SER:OG	2.17	0.45
7:22:73:PRO:O	7:22:76:VAL:HG22	2.16	0.45
1:13:11:G:C6	1:13:12:U:C4	3.05	0.45
1:13:44:G:C6	1:13:45:U:C2	3.05	0.45
4:4L:13:A:N7	1:1G:1503:A:C2	2.85	0.45
5:14:270(L):U:O2'	5:14:270(M):U:OP1	2.33	0.45
5:14:699:A:H2'	5:14:700:G:O4'	2.16	0.45
5:14:783:A:H8	5:14:784:A:H4'	1.82	0.45
5:14:916:G:C2'	5:14:917:A:H5''	2.46	0.45
5:14:1062:G:H2'	5:14:1063:G:C8	2.52	0.45
5:14:1128:A:O4'	5:14:2516:G:O2'	2.34	0.45
5:14:1147:C:H2'	5:14:1148:A:C8	2.52	0.45
5:14:1426:G:C2'	5:14:1572:A:H61	2.29	0.45
5:14:1680:U:N3	5:14:1764:G:OP2	2.35	0.45
5:14:2068:U:H3	5:14:2430:A:H2	1.56	0.45
9:4E:11:ILE:HD11	9:4E:31:LEU:HD22	1.98	0.45
12:7E:86:ILE:O	12:7E:88:LYS:HG2	2.17	0.45
12:7E:104:ARG:O	12:7E:107:LEU:HB2	2.17	0.45
13:8E:5:TYR:HE1	13:8E:16:ARG:HG2	1.81	0.45
13:8E:34:ASN:O	13:8E:38:GLN:HB2	2.16	0.45
13:8E:118:LYS:O	13:8E:119:ALA:HB3	2.16	0.45
23:AI:43:GLU:H	23:AI:43:GLU:HG2	1.45	0.45
24:BI:10:LEU:HG	24:BI:12:ALA:H	1.81	0.45
5:1H:719:C:H2'	5:1H:720:C:C6	2.51	0.45
5:1H:836:G:C5	5:1H:837:C:C4	3.05	0.45
5:1H:996:A:C5	5:1H:1160:G:N2	2.85	0.45
5:1H:1042:G:H1	5:1H:1113:U:H3	1.63	0.45
5:1H:2138:C:N4	5:1H:2153:G:H1	2.14	0.45
5:1H:2228:G:OP2	28:11:263:ARG:NH2	2.50	0.45
5:1H:2376:A:H2'	5:1H:2377:A:O4'	2.16	0.45
5:1H:2705:A:O2'	5:1H:2852:G:OP1	2.26	0.45
27:16:42:C:C5	27:16:43:C:C5	3.05	0.45
28:11:206:LEU:HA	28:11:206:LEU:HD23	1.76	0.45
30:31:153:SER:OG	30:31:190:GLU:HG3	2.16	0.45
31:41:145:THR:O	31:41:146:TYR:HB3	2.17	0.45
33:61:75:LEU:HB3	33:61:105:HIS:HD2	1.82	0.45
37:88:137:TYR:CE1	46:H8:83:PRO:HG3	2.52	0.45
44:F8:65:ARG:HB3	44:F8:65:ARG:HH11	1.81	0.45
46:H8:7:ALA:HB3	46:H8:61:LEU:CB	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:H8:59:LEU:HA	46:H8:59:LEU:HD23	1.70	0.45
50:L8:5:LYS:HD2	50:L8:34:GLU:OE1	2.16	0.45
51:M8:42:PHE:O	51:M8:43:TYR:HB3	2.17	0.45
55:Q8:54:GLU:C	55:Q8:56:GLU:N	2.75	0.45
1:1G:21:G:H2'	1:1G:22:G:C8	2.52	0.45
1:1G:195:A:N7	1:1G:196:A:C6	2.84	0.45
1:1G:1275:A:H2'	1:1G:1276:G:O4'	2.17	0.45
6:12:166:ASP:HB3	6:12:169:LYS:HB3	1.99	0.45
8:32:31:CYS:SG	8:32:31:CYS:O	2.74	0.45
1:13:408:A:H2'	1:13:409:G:C8	2.52	0.45
1:13:874:G:C4	1:13:875:C:C5	3.05	0.45
1:13:963:G:N2	14:1I:55:LYS:NZ	2.65	0.45
1:13:1058:G:H2'	1:13:1059:C:O4'	2.16	0.45
1:13:1315:U:HO2'	1:13:1360:A:HO2'	1.62	0.45
2:1L:53:G:H2'	2:1L:54:U:C6	2.51	0.45
5:14:286:C:H2'	5:14:287:C:H6	1.81	0.45
5:14:623:G:H2'	5:14:624:C:C6	2.52	0.45
5:14:1028:A:N6	5:14:1125:G:H2'	2.31	0.45
5:14:1032:A:N1	5:14:1122:G:O6	2.50	0.45
5:14:2055:C:H4'	5:14:2056:G:H5''	1.99	0.45
5:14:2135:A:HO2'	5:14:2160:G:HO2'	1.59	0.45
6:1E:36:ARG:C	6:1E:38:GLY:H	2.24	0.45
6:1E:189:ASP:HB3	6:1E:191:ASP:HB2	1.99	0.45
24:BI:64:ASP:OD1	24:BI:64:ASP:N	2.50	0.45
5:1H:978:G:C2	5:1H:986:C:C2	3.05	0.45
5:1H:1591:G:H2'	5:1H:1592:C:H6	1.81	0.45
5:1H:1800:C:OP2	28:11:183:ARG:NH2	2.35	0.45
5:1H:2126:A:C8	5:1H:2127:G:N2	2.85	0.45
5:1H:2311:A:H8	31:41:88:ILE:HD12	1.82	0.45
5:1H:2393:A:H5'	36:78:63:PRO:HB3	1.98	0.45
28:11:71:ASP:HB2	28:11:103:ARG:HH22	1.82	0.45
36:78:113:LYS:HG2	36:78:115:LEU:HD23	1.98	0.45
43:E8:88:ARG:HB3	43:E8:92:ARG:HB2	1.99	0.45
45:G8:28:LYS:HD2	45:G8:40:GLU:HG2	1.99	0.45
45:G8:68:HIS:HB3	45:G8:71:LYS:HG2	1.98	0.45
47:I8:23:VAL:HA	47:I8:38:VAL:HG22	1.99	0.45
1:1G:32:A:C2	1:1G:33:A:C4	3.04	0.45
1:1G:618:C:H5'	1:1G:619:U:H5''	1.99	0.45
1:1G:920:U:H2'	1:1G:921:U:H6	1.81	0.45
1:1G:976:G:OP2	1:1G:1358:U:O2'	2.35	0.45
1:1G:1130:A:N6	1:1G:1131:G:O6	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:667:G:OP1	1:13:732:C:O2'	2.26	0.45
1:13:730:G:C6	1:13:731:G:H1'	2.51	0.45
1:13:1106:G:H5''	7:2E:172:ARG:HG2	1.99	0.45
1:13:1399:C:H4'	1:13:1400:C:H5''	1.98	0.45
5:14:38:A:H2'	5:14:39:C:H6	1.76	0.45
5:14:140:A:H8	5:14:1408:C:O2'	1.93	0.45
5:14:363:G:H2'	5:14:363(A):A:C8	2.50	0.45
5:14:1097:U:H2'	5:14:1098:A:O4'	2.16	0.45
5:14:1790:C:H2'	5:14:1791:A:C5	2.52	0.45
5:14:2212:A:H1'	5:14:2215:G:C5	2.52	0.45
5:14:2329:G:H2'	5:14:2330:G:C8	2.51	0.45
7:2E:18:TRP:HB3	7:2E:20:SER:O	2.16	0.45
9:4E:12:LEU:HD21	9:4E:14:ARG:HD3	1.99	0.45
15:2I:93:GLN:OE1	15:2I:96:ARG:HD3	2.16	0.45
18:5I:35:ARG:HG2	18:5I:35:ARG:HH11	1.79	0.45
5:1H:416:C:N3	5:1H:2407:G:N1	2.53	0.45
5:1H:466:A:N3	5:1H:683:C:H1'	2.32	0.45
5:1H:518:G:H2'	5:1H:519:U:C6	2.52	0.45
5:1H:1442:G:C2	5:1H:1550:C:O2	2.70	0.45
5:1H:2068:U:N3	5:1H:2430:A:H2	2.15	0.45
5:1H:2070:G:C2	5:1H:2442:C:C2	3.05	0.45
5:1H:2694:G:C6	5:1H:2695:C:C4	3.05	0.45
30:31:53:THR:O	30:31:56:GLU:N	2.42	0.45
31:41:64:THR:CG2	31:41:66:GLN:HB2	2.47	0.45
31:41:98:ARG:HA	31:41:101:ILE:HG23	1.98	0.45
31:41:125:PHE:CZ	31:41:170:ARG:HA	2.51	0.45
35:68:60:ALA:HB1	35:68:84:ALA:HB1	1.99	0.45
37:88:103:MET:HE1	37:88:127:ILE:HD11	1.99	0.45
38:98:4:LEU:HA	38:98:4:LEU:HD13	1.34	0.45
38:98:60:LEU:HD12	38:98:60:LEU:HA	1.70	0.45
39:A8:74:ALA:HB1	39:A8:107:GLU:O	2.16	0.45
45:G8:85:VAL:O	45:G8:86:ARG:HD3	2.17	0.45
46:H8:113:ALA:N	46:H8:114:GLY:HA2	2.32	0.45
47:I8:64:ASP:HB2	47:I8:85:ALA:HB1	1.97	0.45
55:Q8:16:ILE:HD13	55:Q8:56:GLU:OE2	2.17	0.45
55:Q8:39:LYS:CG	55:Q8:40:GLU:H	2.30	0.45
1:1G:147:G:O2'	1:1G:148:G:H5'	2.17	0.45
1:1G:373:A:C2	1:1G:374:A:C8	3.04	0.45
1:1G:583:A:H2'	1:1G:584:G:O4'	2.16	0.45
1:1G:995:C:H6	1:1G:995:C:O5'	2.00	0.45
7:22:3:ASN:H	7:22:3:ASN:ND2	2.10	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:22:40:ARG:H	7:22:40:ARG:HG3	1.47	0.45
1:13:131:C:O2	1:13:131:C:H2'	2.17	0.44
1:13:135:C:H2'	1:13:136:C:H5'	1.99	0.44
1:13:686:U:O2'	1:13:687:A:OP2	2.33	0.44
1:13:1073:U:H2'	1:13:1074:G:H8	1.81	0.44
1:13:1292:U:H2'	1:13:1293:G:C8	2.51	0.44
2:1L:18:G:HO2'	2:1L:19:G:P	2.38	0.44
2:1L:41:C:H2'	2:1L:42:C:C6	2.52	0.44
2:1L:46:7MG:H5''	2:1L:46:7MG:C8	2.52	0.44
5:14:460:A:H5''	5:14:461:C:OP2	2.17	0.44
5:14:691:C:H2'	5:14:692:C:C6	2.53	0.44
5:14:984:A:H5''	5:14:985:C:H5	1.82	0.44
5:14:1001:A:C8	5:14:1002:G:C8	3.05	0.44
5:14:1034:G:H2'	5:14:1035:U:O4'	2.17	0.44
5:14:1465:G:H5'	5:14:1528:A:O2'	2.16	0.44
5:14:2321:G:N3	5:14:2321:G:H2'	2.31	0.44
6:1E:87:ARG:HH11	6:1E:219:VAL:HB	1.81	0.44
8:3E:85:LYS:HE2	8:3E:85:LYS:HB2	1.65	0.44
15:2I:83:ILE:HG12	15:2I:109:VAL:HG23	1.98	0.44
5:1H:18:C:O3'	41:C8:23:GLY:HA2	2.17	0.44
5:1H:658:C:H2'	5:1H:659:C:C6	2.52	0.44
5:1H:851:U:OP1	50:L8:49:LYS:NZ	2.45	0.44
5:1H:1001:A:H2'	5:1H:1002:G:O4'	2.16	0.44
5:1H:1012:U:O4	34:58:25:ARG:HA	2.17	0.44
5:1H:2001:A:H2'	5:1H:2002:G:C8	2.53	0.44
5:1H:2259:G:C2	5:1H:2282:G:C6	3.04	0.44
29:21:135:HIS:CD2	29:21:135:HIS:N	2.82	0.44
30:31:117:ARG:HD2	30:31:117:ARG:HA	1.61	0.44
40:B8:26:ASP:HB2	40:B8:90:GLN:O	2.16	0.44
40:B8:58:ASN:ND2	40:B8:58:ASN:O	2.50	0.44
40:B8:88:ILE:HD12	40:B8:90:GLN:H	1.81	0.44
41:C8:58:ARG:O	41:C8:62:ILE:HG13	2.17	0.44
42:D8:82:ARG:HH11	42:D8:82:ARG:HD3	1.56	0.44
46:H8:63:ASP:CB	46:H8:65:GLN:HG3	2.43	0.44
1:1G:67:C:H2'	1:1G:68:G:C8	2.52	0.44
1:1G:244:U:H6	1:1G:244:U:H5'	1.82	0.44
1:1G:543:C:OP1	8:32:14:ARG:HD2	2.16	0.44
1:1G:964:A:N3	1:1G:969:A:O2'	2.49	0.44
1:1G:1054:C:O2'	1:1G:1055:A:O5'	2.28	0.44
1:1G:1208:C:H2'	1:1G:1209:C:C6	2.52	0.44
1:1G:1320:C:C4	1:1G:1321:C:N4	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1321:C:H3'	1:1G:1322:C:H5''	1.98	0.44
1:1G:1505:G:H4'	1:1G:1506:U:H5''	1.99	0.44
6:12:138:LEU:H	6:12:138:LEU:HG	1.59	0.44
6:12:138:LEU:O	6:12:141:GLU:HB3	2.16	0.44
6:12:146:GLN:O	6:12:149:LEU:N	2.49	0.44
6:12:208:ILE:HA	6:12:211:ILE:HD12	1.99	0.44
8:32:22:LYS:O	8:32:113:SER:HB3	2.17	0.44
1:13:830:G:H2'	1:13:831:U:O4'	2.17	0.44
5:14:484:C:H2'	5:14:485:C:C6	2.52	0.44
5:14:819:A:H2'	5:14:820:A:H5'	1.99	0.44
5:14:1016:G:H2'	5:14:1017:G:O4'	2.17	0.44
5:14:1275:A:N1	5:14:1295:C:O2'	2.46	0.44
5:14:2637:U:H2'	5:14:2638:G:O4'	2.17	0.44
6:1E:178:ARG:HB2	6:1E:178:ARG:HH11	1.83	0.44
11:6E:5:ARG:NE	11:6E:7:ALA:HA	2.32	0.44
16:3I:43:VAL:HG23	16:3I:93:LEU:HD22	1.99	0.44
17:4I:49:THR:HB	17:4I:52:GLU:HG2	1.99	0.44
20:7I:34:GLU:HG2	20:7I:35:LYS:N	2.32	0.44
21:8I:11:VAL:HG22	21:8I:20:THR:O	2.17	0.44
24:BI:29:LYS:HE3	24:BI:29:LYS:HB2	1.63	0.44
2:3K:35:A:H2'	2:3K:36:A:H8	1.82	0.44
5:1H:234:C:H2'	5:1H:235:U:C6	2.50	0.44
5:1H:736:C:O5'	5:1H:736:C:H6	2.00	0.44
5:1H:916:G:C2'	5:1H:917:A:H5''	2.48	0.44
5:1H:1061:U:O2'	5:1H:1070:A:O4'	2.31	0.44
5:1H:1530:G:O6	5:1H:1542:G:N2	2.50	0.44
5:1H:1750:G:C2	5:1H:1751:C:C5	3.05	0.44
5:1H:2360:A:OP1	55:Q8:49:VAL:HB	2.17	0.44
5:1H:2364:C:H2'	5:1H:2365:G:O4'	2.17	0.44
5:1H:2592:G:C5	5:1H:2593:U:C4	3.05	0.44
27:1J:45:A:N3	27:1J:45:A:H2'	2.32	0.44
28:11:119:ALA:CB	28:11:130:ALA:HB3	2.46	0.44
28:11:217:ARG:H	28:11:217:ARG:HG2	1.51	0.44
29:21:15:PHE:HA	29:21:19:ARG:O	2.17	0.44
31:41:68:PRO:HB3	31:41:92:VAL:HB	1.99	0.44
32:51:32:GLU:O	32:51:33:LEU:HD23	2.17	0.44
35:68:68:GLU:CD	35:68:68:GLU:H	2.26	0.44
38:98:103:ARG:HD2	38:98:108:GLY:O	2.17	0.44
44:F8:3:THR:HA	44:F8:6:ASP:HB2	1.99	0.44
46:H8:3:TYR:O	46:H8:58:VAL:HG22	2.18	0.44
47:I8:42:GLY:C	47:I8:57:PHE:CD2	2.94	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:L8:12:PRO:O	50:L8:20:LYS:NZ	2.51	0.44
1:1G:76:G:C6	1:1G:77:C:C4	3.05	0.44
1:1G:849:C:H2'	1:1G:850:U:O4'	2.17	0.44
6:12:27:LYS:HB2	6:12:194:PRO:HD2	1.99	0.44
6:12:82:ARG:NH1	6:12:92:TYR:OH	2.50	0.44
1:13:130:A:O2'	1:13:131:C:O5'	2.31	0.44
1:13:592:G:C6	1:13:648:A:C6	3.05	0.44
1:13:662:G:O2'	1:13:836:G:OP1	2.33	0.44
1:13:760:G:H2'	1:13:761:G:H5'	1.99	0.44
1:13:1074:G:N3	1:13:1102:A:C2	2.86	0.44
2:3L:50:U:H2'	2:3L:51:U:C6	2.52	0.44
5:14:7:G:H2'	5:14:8:A:C8	2.52	0.44
5:14:234:C:H2'	5:14:235:U:H6	1.82	0.44
5:14:266:G:H2'	5:14:267:C:O5'	2.17	0.44
5:14:270(Y):G:C2	5:14:270(Z):U:O4	2.70	0.44
5:14:524:U:H2'	5:14:525:U:H6	1.82	0.44
5:14:1921:G:H2'	5:14:1922:G:C8	2.52	0.44
5:14:2329:G:H2'	5:14:2330:G:O4'	2.18	0.44
5:14:2712:U:O2'	5:14:2712(A):A:P	2.75	0.44
22:9I:53:ARG:NE	22:9I:58:LEU:O	2.50	0.44
5:1H:71:A:OP1	5:1H:72:U:H2'	2.18	0.44
5:1H:242:G:H5'	55:Q8:60:LEU:HD13	2.00	0.44
5:1H:309:G:N3	5:1H:329:G:O2'	2.50	0.44
5:1H:1202:C:N4	5:1H:1203:G:C6	2.85	0.44
5:1H:1387:C:C2	5:1H:1388:G:C8	3.06	0.44
5:1H:1514:U:H2'	5:1H:1515:C:H6	1.80	0.44
5:1H:1665:A:N7	58:1H:4205:HOH:O	2.36	0.44
5:1H:2318:G:H22	39:A8:2:ALA:CA	2.29	0.44
28:11:5:LYS:C	28:11:6:PHE:CD1	2.95	0.44
29:21:21:VAL:HA	29:21:22:PRO:HD3	1.58	0.44
32:51:15:VAL:HG12	32:51:29:PRO:HD2	1.99	0.44
37:88:5:ARG:HD3	37:88:5:ARG:H	1.79	0.44
46:H8:124:ILE:HD12	46:H8:125:LEU:N	2.32	0.44
1:1G:570:G:H2'	1:1G:571:U:C6	2.52	0.44
1:1G:648:A:H2'	1:1G:649:G:C8	2.52	0.44
1:1G:1112:C:C4	7:22:178:LEU:HD23	2.53	0.44
1:1G:1369:C:H2'	1:1G:1370:G:O4'	2.17	0.44
7:22:21:ARG:HB3	7:22:21:ARG:NH1	2.32	0.44
7:22:136:GLN:O	7:22:139:GLN:N	2.51	0.44
1:13:824:C:O2'	12:7E:1:MET:HB3	2.18	0.44
5:14:37:C:H2'	5:14:38:A:H8	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:270(E):G:H2'	5:14:270(F):U:C6	2.52	0.44
5:14:327:G:N2	5:14:336:C:C2	2.85	0.44
5:14:600:G:N2	5:14:605:C:O3'	2.50	0.44
5:14:654:A:H8	5:14:654:A:OP1	2.00	0.44
5:14:1039:G:H1'	5:14:1117:G:N2	2.32	0.44
5:14:2569:G:C2	5:14:2570:G:C8	3.05	0.44
6:1E:68:ILE:HG12	6:1E:161:ALA:HB3	1.99	0.44
22:9I:47:THR:O	22:9I:83:GLU:N	2.30	0.44
5:1H:7:G:N2	5:1H:8:A:N3	2.66	0.44
5:1H:11:G:H2'	5:1H:12:U:H5'	1.99	0.44
5:1H:68:G:H2'	5:1H:69:C:O4'	2.17	0.44
5:1H:154:G:H2'	5:1H:155:C:O4'	2.17	0.44
5:1H:188:G:H1	5:1H:208:C:H42	1.64	0.44
5:1H:1296:G:C2'	5:1H:1297:C:H5'	2.47	0.44
5:1H:1337:G:H2'	5:1H:1338:G:C8	2.52	0.44
5:1H:1478:G:O2'	5:1H:1479:G:H5'	2.17	0.44
5:1H:1889:A:H2'	5:1H:1890:A:O4'	2.17	0.44
5:1H:2053:G:OP1	29:21:144:ARG:HD3	2.16	0.44
5:1H:2080:G:H5''	5:1H:2080:G:C8	2.52	0.44
5:1H:2109:U:N3	5:1H:2110:G:O6	2.50	0.44
5:1H:2286:A:OP1	53:O8:28:ARG:NH2	2.45	0.44
5:1H:2592:G:C6	5:1H:2593:U:C4	3.06	0.44
28:11:158:ALA:O	28:11:159:ALA:C	2.58	0.44
29:21:46:ALA:HB1	29:21:80:GLU:HB3	1.99	0.44
33:61:9:LEU:HD12	33:61:9:LEU:HA	1.75	0.44
33:61:86:THR:O	33:61:122:GLU:HG3	2.17	0.44
34:58:37:LYS:HE2	34:58:37:LYS:HB3	1.80	0.44
34:58:47:ALA:HB2	34:58:112:LEU:HD11	2.00	0.44
35:68:91:LEU:HD12	35:68:91:LEU:HA	1.72	0.44
37:88:17:LEU:HD23	37:88:17:LEU:HA	1.58	0.44
37:88:20:ALA:HB2	37:88:99:PRO:HD2	1.99	0.44
39:A8:36:TYR:N	39:A8:36:TYR:CD1	2.86	0.44
43:E8:86:LEU:HD12	43:E8:87:PRO:HD2	1.98	0.44
51:M8:38:LYS:O	51:M8:39:CYS:HB3	2.18	0.44
1:1G:191(F):U:H2'	1:1G:191:G:H8	1.81	0.44
1:13:757:U:H5''	1:13:822:C:O2	2.17	0.44
1:13:983:A:H2	1:13:984:C:C6	2.36	0.44
1:13:1068:G:N7	1:13:1094:G:H2'	2.32	0.44
1:13:1434:A:H2'	1:13:1435:G:O4'	2.18	0.44
3:2L:14:A:C2	3:2L:23:G:C4	3.06	0.44
5:14:49:A:H4'	5:14:50:U:H5''	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1183:G:OP2	5:14:1183:G:H8	2.01	0.44
5:14:1966:A:H4'	5:14:1967:C:OP1	2.17	0.44
5:14:2372:G:H2'	5:14:2373:G:C8	2.52	0.44
5:14:2851:A:C5	5:14:2852:G:C5	3.06	0.44
8:3E:29:PRO:HA	8:3E:34:GLU:HG3	1.99	0.44
17:4I:82:MET:C	17:4I:84:ILE:H	2.22	0.44
3:2K:59:A:H4'	3:2K:60:A:OP1	2.18	0.44
2:3K:70:G:C5	2:3K:71:G:N7	2.86	0.44
5:1H:270(J):G:H1	5:1H:270(P):C:N4	2.14	0.44
5:1H:761:A:C8	58:1H:4181:HOH:O	2.56	0.44
5:1H:906:G:OP1	37:88:141:GLN:HG2	2.18	0.44
5:1H:1389:G:C2	5:1H:1390:U:C2	3.06	0.44
5:1H:1533:C:H2'	5:1H:1534:G:C6	2.52	0.44
5:1H:2714:G:P	58:1H:3681:HOH:O	2.76	0.44
28:11:226:MET:HB3	28:11:230:ASP:HB2	1.99	0.44
29:21:61:ARG:O	29:21:63:LEU:HD22	2.17	0.44
32:51:166:GLY:O	32:51:167:GLU:HG2	2.18	0.44
34:58:97:ARG:H	34:58:100:GLU:HG3	1.81	0.44
36:78:138:LEU:HD12	36:78:144:GLU:CG	2.37	0.44
39:A8:8:GLU:HA	39:A8:11:LYS:HB3	2.00	0.44
45:G8:89:PHE:CD2	45:G8:90:LEU:N	2.86	0.44
46:H8:8:TYR:HB2	46:H8:38:TYR:CE1	2.53	0.44
46:H8:165:VAL:HB	46:H8:167:PRO:HD3	1.98	0.44
47:I8:47:PRO:CB	47:I8:51:VAL:HG12	2.48	0.44
52:N8:20:ARG:HG2	52:N8:23:HIS:CE1	2.53	0.44
1:1G:5:U:O2'	8:32:84:LYS:HG3	2.18	0.44
1:1G:195:A:C6	1:1G:196:A:N1	2.86	0.44
1:1G:589:C:C2	1:1G:650:G:N2	2.82	0.44
1:1G:1399:C:C2	1:1G:1502:A:N6	2.86	0.44
1:13:590:C:H2'	1:13:591:U:C6	2.52	0.44
1:13:1305:G:N2	1:13:1331:G:C4	2.86	0.44
5:14:960:A:C8	5:14:962:G:C8	3.06	0.44
5:14:1451:C:H3'	5:14:1453:A:H5'	1.99	0.44
5:14:1453:A:O2'	5:14:1454:U:H2'	2.17	0.44
5:14:1795:C:H2'	5:14:1796:U:H6	1.83	0.44
5:14:2026:C:N4	5:14:2027:G:C5	2.86	0.44
5:14:2105:C:H2'	5:14:2106:G:O4'	2.18	0.44
6:1E:168:THR:OG1	6:1E:192:SER:HB2	2.18	0.44
17:4I:49:THR:C	17:4I:51:ALA:N	2.74	0.44
25:1F:5:ASP:O	25:1F:11:GLY:HA3	2.17	0.44
26:1K:38:A:H5'	5:1H:1913:A:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:3K:54:U:H2'	2:3K:55:PSU:O4'	2.18	0.44
5:1H:34:C:OP2	5:1H:34:C:C6	2.68	0.44
5:1H:74:A:H8	5:1H:74:A:O5'	2.00	0.44
5:1H:500:G:N2	5:1H:502:A:H3'	2.32	0.44
5:1H:1287:A:C5	5:1H:1288:U:C4	3.05	0.44
5:1H:1479:G:C4	5:1H:1480:G:C8	3.05	0.44
5:1H:1509:C:N4	5:1H:1511:A:H62	2.15	0.44
5:1H:1952:A:C6	35:68:22:ILE:HD12	2.53	0.44
5:1H:2320:A:H8	5:1H:2321:G:O6	2.01	0.44
27:1J:97:G:H2'	27:1J:98:G:O4'	2.17	0.44
28:11:69:ARG:HG3	28:11:69:ARG:NH1	2.32	0.44
28:11:118:VAL:HG22	28:11:119:ALA:N	2.33	0.44
28:11:159:ALA:HB1	28:11:198:ASN:O	2.17	0.44
30:31:77:ASP:OD1	30:31:77:ASP:N	2.25	0.44
31:41:61:ALA:HA	31:41:66:GLN:O	2.18	0.44
33:61:86:THR:HA	33:61:123:LEU:HD13	2.00	0.44
33:61:114:LEU:HB3	33:61:115:ALA:H	1.61	0.44
34:58:2:LYS:N	34:58:2:LYS:HD2	2.33	0.44
42:D8:3:ALA:HB3	42:D8:14:VAL:HG23	1.98	0.44
55:Q8:34:TRP:CH2	55:Q8:39:LYS:HB2	2.52	0.44
1:1G:91:C:H2'	1:1G:92:G:C8	2.53	0.44
1:1G:540:G:H2'	1:1G:541:G:O4'	2.18	0.44
1:1G:959:A:O2'	1:1G:984:C:O2'	2.29	0.44
1:1G:1028(A):C:O2	1:1G:1033:G:N2	2.50	0.44
1:1G:1043:C:H2'	1:1G:1044:A:C8	2.52	0.44
1:1G:1073:U:H2'	1:1G:1074:G:C8	2.52	0.44
1:1G:1179:A:H2'	1:1G:1180:A:O4'	2.18	0.44
1:1G:1260:C:OP1	1:1G:1284:C:H4'	2.17	0.44
1:13:41:G:H2'	1:13:42:G:C8	2.53	0.44
1:13:159:G:O2'	1:13:161:A:N7	2.39	0.44
1:13:511:C:C2	1:13:512:U:C6	3.06	0.44
1:13:1011:G:H2'	1:13:1012:U:O4'	2.17	0.44
1:13:1028(A):C:H42	1:13:1032(A):G:H1	1.66	0.44
1:13:1347:G:OP2	13:8E:107:ARG:HG2	2.18	0.44
5:14:68:G:H2'	5:14:69:C:O4'	2.17	0.44
5:14:318:C:H2'	5:14:319:C:H6	1.83	0.44
5:14:522:G:H2'	5:14:523:C:C6	2.52	0.44
5:14:523:C:H4'	5:14:541:C:O2	2.18	0.44
5:14:719:C:H6	5:14:719:C:O5'	2.00	0.44
5:14:746:A:H2'	5:14:2612:C:H5''	1.99	0.44
5:14:959:A:C6	5:14:960:A:N1	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1316:U:C2'	5:14:1317:A:H5'	2.47	0.44
5:14:1451:C:H42	5:14:1459:G:H1	1.65	0.44
5:14:2079:U:H2'	5:14:2080:G:O4'	2.18	0.44
5:14:2272:U:H5''	5:14:2273:A:OP1	2.18	0.44
8:3E:141:ARG:HB2	8:3E:141:ARG:CZ	2.47	0.44
3:2K:9:G:H1'	3:2K:47:7MG:H5'	1.99	0.44
5:1H:500:G:N1	5:1H:503:A:OP2	2.49	0.44
5:1H:845:G:H8	5:1H:845:G:OP2	2.00	0.44
5:1H:1288:U:C2	5:1H:1327:C:O2	2.71	0.44
5:1H:1342:A:OP1	44:F8:36:LYS:NZ	2.38	0.44
5:1H:1423:G:C4	5:1H:1424:G:C8	3.06	0.44
5:1H:1590:U:H2'	5:1H:1591:G:C8	2.52	0.44
5:1H:1598:C:H2'	5:1H:1599:C:C6	2.52	0.44
5:1H:1932:A:H2'	5:1H:1933:G:O4'	2.18	0.44
5:1H:2014:A:H2'	5:1H:2015:A:C8	2.53	0.44
5:1H:2212:A:HO2'	5:1H:2213:U:P	2.40	0.44
5:1H:2489:G:O2'	5:1H:2518:A:N6	2.51	0.44
5:1H:2766:G:H5''	5:1H:2767:C:OP2	2.17	0.44
5:1H:2870:C:H5''	38:98:65:LEU:HD21	2.00	0.44
29:21:24:THR:HG21	29:21:188:VAL:CG2	2.48	0.44
31:41:165:THR:HG23	31:41:168:GLU:OE1	2.17	0.44
32:51:94:TYR:HA	32:51:106:THR:O	2.18	0.44
33:61:120:ILE:HG12	33:61:126:TYR:CE2	2.53	0.44
33:61:123:LEU:HD23	33:61:142:VAL:O	2.16	0.44
36:78:57:THR:HB	36:78:60:MET:H	1.82	0.44
42:D8:46:VAL:HG12	42:D8:47:VAL:H	1.82	0.44
43:E8:27:LYS:HB3	43:E8:31:GLU:HG3	1.98	0.44
45:G8:81:LYS:HB3	45:G8:82:PRO:HA	1.99	0.44
1:1G:35:G:C2	1:1G:550:G:C2	3.05	0.44
1:1G:620:C:H3'	1:1G:621:A:H8	1.83	0.44
1:13:318:G:H1	1:13:335:C:H42	1.65	0.44
1:13:342:C:N4	1:13:347:G:H1	2.15	0.44
1:13:436:C:H2'	1:13:437:U:O4'	2.18	0.44
1:13:456:C:H42	1:13:476:G:H1	1.65	0.44
1:13:1272:G:C6	1:13:1273:G:C4	3.06	0.44
1:13:1507:A:C2	1:13:1508:G:C4	3.06	0.44
2:1L:14:A:C2	2:1L:22:G:H1'	2.53	0.44
4:4L:20:C:H2'	4:4L:21:C:H6	1.83	0.44
5:14:198:C:H5'	5:14:2244:U:OP1	2.17	0.44
5:14:198:C:O2'	5:14:199:A:H5'	2.17	0.44
5:14:455:C:N3	5:14:473:G:H5'	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:579:G:H2'	5:14:580:C:C6	2.53	0.44
5:14:769:G:H2'	5:14:770:G:H8	1.82	0.44
5:14:968:G:H2'	5:14:969:U:O4'	2.18	0.44
5:14:1399:C:H2'	5:14:1400:G:H8	1.83	0.44
5:14:1575:C:H2'	5:14:1576:U:H6	1.83	0.44
5:14:2270:G:H2'	5:14:2271:G:H5'	2.00	0.44
5:14:2438:U:H5''	5:14:2600:A:OP1	2.18	0.44
5:14:2696:U:H2'	5:14:2697:G:C8	2.53	0.44
6:1E:136:VAL:HA	6:1E:139:LYS:HB2	2.00	0.44
6:1E:239:VAL:O	6:1E:239:VAL:HG12	2.18	0.44
9:4E:76:ILE:HG13	9:4E:93:PRO:HB3	2.00	0.44
9:4E:147:ASP:HA	9:4E:150:ARG:NH1	2.33	0.44
11:6E:126:ASP:O	11:6E:130:GLY:N	2.51	0.44
12:7E:34:GLU:HB3	12:7E:118:VAL:HG21	1.98	0.44
16:3I:24:VAL:CB	16:3I:27:LEU:HD12	2.47	0.44
19:6I:10:LYS:HA	19:6I:10:LYS:HD2	1.82	0.44
19:6I:64:ARG:O	19:6I:68:ARG:HB2	2.18	0.44
23:AI:40:ILE:HD11	23:AI:62:ILE:CG2	2.48	0.44
5:1H:844:C:H3'	5:1H:845:G:H8	1.81	0.44
5:1H:1019:U:O2'	5:1H:1021:A:C2	2.70	0.44
5:1H:1389:G:O2'	5:1H:1390:U:H5'	2.18	0.44
5:1H:1971:A:C4	28:11:241:PRO:HD3	2.53	0.44
5:1H:2199:A:H5''	5:1H:2205:C:C5	2.47	0.44
27:16:25:A:OP1	58:16:301:HOH:O	2.20	0.44
30:31:33:LEU:HB3	36:78:6:LEU:HD11	1.98	0.44
36:78:1:MET:CE	36:78:6:LEU:HD13	2.47	0.44
39:A8:66:ALA:HA	39:A8:69:VAL:CG1	2.46	0.44
41:C8:17:ILE:HG23	41:C8:39:LEU:HD12	2.00	0.44
41:C8:28:ARG:O	41:C8:35:ALA:HA	2.18	0.44
43:E8:23:LEU:HD11	52:N8:27:PRO:HA	2.00	0.44
46:H8:105:VAL:HG22	46:H8:140:ASP:HB3	1.99	0.44
1:1G:166:G:H2'	1:1G:167:G:H8	1.83	0.44
1:1G:601:C:H2'	1:1G:602:A:H8	1.83	0.44
1:1G:757:U:H2'	1:1G:758:G:O4'	2.17	0.44
7:22:131:ARG:HG3	7:22:131:ARG:HH11	1.83	0.44
7:22:181:ASN:OD1	7:22:204:LEU:HB2	2.18	0.44
1:13:148:G:H2'	1:13:149:A:H8	1.83	0.44
1:13:406:G:H21	8:3E:119:GLN:HE22	1.66	0.44
1:13:668:G:O2'	19:6I:46:HIS:HB3	2.17	0.44
1:13:736:C:H2'	1:13:737:A:H8	1.83	0.44
1:13:891:U:H2'	1:13:892:A:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:922:G:C6	1:13:923:A:C6	3.06	0.44
1:13:1182:G:H4'	1:13:1183:A:H5''	1.99	0.44
1:13:1203:C:H2'	1:13:1204:A:O4'	2.17	0.44
1:13:1342:C:H2'	1:13:1343:G:C8	2.53	0.44
5:14:414:C:O2'	5:14:415:A:H5'	2.18	0.44
5:14:686:G:H2'	5:14:788:A:N1	2.33	0.44
5:14:1249:U:O2	5:14:1249:U:H2'	2.18	0.44
5:14:1492:G:OP1	5:14:2210:G:N1	2.50	0.44
5:14:1507:A:C4	5:14:1508:A:H1'	2.53	0.44
5:14:2343:C:O3'	5:14:2373:G:H4'	2.18	0.44
5:14:2653:U:H3'	5:14:2654:A:C8	2.52	0.44
6:1E:15:VAL:H	6:1E:16:HIS:CD2	2.35	0.44
6:1E:226:ARG:HG3	6:1E:227:GLY:N	2.32	0.44
7:2E:91:LEU:HB2	7:2E:99:VAL:HG21	1.99	0.44
9:4E:147:ASP:O	9:4E:151:LEU:HB2	2.18	0.44
11:6E:22:LEU:HG	11:6E:62:PHE:HE2	1.83	0.44
13:8E:18:PHE:CD2	13:8E:62:TYR:HD2	2.33	0.44
21:8I:22:LEU:HD22	21:8I:88:TYR:CD1	2.53	0.44
5:1H:127:A:H5''	5:1H:128:C:C6	2.52	0.44
5:1H:1332:G:N2	5:1H:1610:A:H8	2.10	0.44
5:1H:1519:G:O2'	5:1H:1520:U:H5'	2.18	0.44
5:1H:1728:G:H8	5:1H:1732:A:H62	1.66	0.44
5:1H:1885:A:H2'	5:1H:1886:C:O4'	2.18	0.44
5:1H:2053:G:H5'	29:21:144:ARG:O	2.18	0.44
5:1H:2144:U:N3	5:1H:2146:C:O2	2.51	0.44
5:1H:2327:A:H2'	5:1H:2328:A:H8	1.82	0.44
5:1H:2330:G:H2'	5:1H:2331:G:O4'	2.18	0.44
5:1H:2371:G:C4'	53:O8:45:LYS:HG3	2.48	0.44
5:1H:2545:G:H2'	5:1H:2546:U:O4'	2.17	0.44
27:16:24:G:N7	27:16:56:G:H2'	2.33	0.44
30:31:164:ARG:HG3	30:31:175:THR:OG1	2.17	0.44
31:41:47:LYS:O	31:41:86:MET:HE2	2.18	0.44
36:78:19:VAL:HG11	36:78:25:SER:OG	2.18	0.44
37:88:43:THR:O	37:88:46:GLN:N	2.48	0.44
39:A8:109:GLY:C	39:A8:110:LEU:HG	2.43	0.44
41:C8:79:PHE:CD1	41:C8:79:PHE:C	2.96	0.44
42:D8:39:LEU:O	42:D8:40:LEU:HD23	2.18	0.44
44:F8:1:MET:O	44:F8:3:THR:HG23	2.18	0.44
44:F8:49:VAL:HG22	44:F8:50:LYS:N	2.32	0.44
45:G8:87:LYS:N	45:G8:94:LYS:HG2	2.24	0.44
45:G8:94:LYS:HD2	45:G8:94:LYS:HA	1.72	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:J8:85:LEU:HA	48:J8:85:LEU:HD13	1.65	0.44
53:O8:21:TYR:HB2	53:O8:22:ALA:H	1.56	0.44
53:O8:41:PRO:HB2	53:O8:43:CYS:H	1.83	0.44
1:1G:571:U:O2	1:1G:918:A:H5'	2.18	0.44
6:12:77:ALA:HB2	6:12:211:ILE:HD13	2.00	0.44
8:32:60:GLU:OE2	8:32:198:VAL:HA	2.18	0.44
8:32:150:GLU:C	8:32:152:SER:N	2.73	0.44
1:13:187:C:O2	1:13:191(A):G:C2	2.71	0.43
1:13:352:C:P	58:13:1900:HOH:O	2.76	0.43
1:13:465:A:N7	1:13:467:G:C6	2.86	0.43
1:13:756:C:H2'	1:13:757:U:O4'	2.18	0.43
1:13:793:U:OP1	58:13:2018:HOH:O	2.21	0.43
1:13:1103:C:H2'	1:13:1104:G:O4'	2.18	0.43
1:13:1470:G:H2'	1:13:1471:G:O4'	2.18	0.43
1:13:1505:G:P	58:13:1804:HOH:O	2.70	0.43
3:2L:44:A:C2	3:2L:45:A:C5	3.06	0.43
3:2L:56:PSU:N3	3:2L:59:A:OP2	2.42	0.43
5:14:407:G:H2'	5:14:408:G:H8	1.83	0.43
5:14:740:U:H2'	5:14:741:G:C8	2.53	0.43
5:14:1196:C:O4'	5:14:1227:A:C2	2.71	0.43
5:14:1270:C:H5''	5:14:1271:G:C5'	2.48	0.43
5:14:1668:A:N3	5:14:1670:C:C4	2.86	0.43
5:14:2287:A:C2	5:14:2289:G:C8	3.06	0.43
5:14:2302:G:H2'	5:14:2303:G:O4'	2.18	0.43
5:14:2850:A:H5'	5:14:2868:A:C2	2.53	0.43
6:1E:8:LYS:H	6:1E:8:LYS:HE2	1.82	0.43
8:3E:138:TYR:CD1	8:3E:138:TYR:C	2.95	0.43
11:6E:46:ALA:O	11:6E:49:ILE:N	2.49	0.43
12:7E:81:HIS:HB2	12:7E:138:TRP:CE3	2.53	0.43
17:4I:19:LEU:HD21	17:4I:56:LEU:HD11	2.00	0.43
5:1H:31:C:O2'	5:1H:32:C:H5'	2.18	0.43
5:1H:216:A:H5'	58:1H:3796:HOH:O	2.16	0.43
5:1H:675:A:C8	5:1H:804:A:C6	3.06	0.43
5:1H:1523:U:H2'	5:1H:1524:G:O4'	2.18	0.43
5:1H:1728:G:H5'	5:1H:1729:A:OP2	2.17	0.43
5:1H:2782:G:C8	5:1H:2782:G:O5'	2.71	0.43
28:11:105:ILE:HD12	28:11:105:ILE:HA	1.83	0.43
29:21:24:THR:N	29:21:184:VAL:O	2.48	0.43
31:41:16:ARG:O	31:41:19:LEU:HB2	2.18	0.43
31:41:18:GLU:O	31:41:22:ARG:HG3	2.18	0.43
32:51:12:PRO:CG	32:51:13:LYS:HE2	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:51:83:TYR:CB	32:51:135:GLY:H	2.31	0.43
35:68:4:PRO:O	35:68:5:GLN:CB	2.66	0.43
42:D8:6:LYS:O	42:D8:6:LYS:HG3	2.17	0.43
1:1G:547:A:OP1	58:1G:1701:HOH:O	2.21	0.43
1:1G:854:G:C2	1:1G:855:G:C8	3.06	0.43
1:1G:953:G:C6	1:1G:954:G:C4	3.06	0.43
1:1G:1122:U:N3	1:1G:1123:A:N7	2.66	0.43
1:1G:1368:G:O2'	1:1G:1369:C:H5'	2.18	0.43
8:32:8:VAL:O	8:32:11:LEU:N	2.44	0.43
1:13:750:G:C4	1:13:751:U:C5	3.06	0.43
1:13:986:A:H2'	1:13:987:G:C8	2.53	0.43
1:13:988:G:H2'	1:13:989:C:O4'	2.18	0.43
1:13:1304:G:OP1	25:1F:2:GLY:N	2.51	0.43
3:2L:73:A:N6	3:2L:74:A:C6	2.86	0.43
5:14:341:G:C6	5:14:342:G:C5	3.06	0.43
5:14:678:C:H2'	5:14:679:C:C6	2.52	0.43
5:14:864:G:C6	5:14:865:C:N4	2.86	0.43
5:14:895:U:H4'	5:14:896:A:C4	2.53	0.43
5:14:1112:G:H2'	5:14:1113:U:C6	2.53	0.43
5:14:1448:G:H1'	5:14:1528:A:H62	1.83	0.43
5:14:1496:A:H2'	5:14:1498:C:C5	2.53	0.43
5:14:1688:U:H2'	5:14:1698:A:N6	2.33	0.43
5:14:1820:U:H4'	5:14:1821:A:OP2	2.18	0.43
5:14:2291:U:H3	5:14:2341:G:H1	1.64	0.43
8:3E:126:ILE:HG22	8:3E:127:THR:N	2.33	0.43
8:3E:148:VAL:HG21	8:3E:158:ILE:HG21	2.01	0.43
9:4E:35:GLY:H	9:4E:112:LEU:HD13	1.83	0.43
12:7E:86:ILE:HG22	12:7E:87:SER:H	1.82	0.43
21:8I:13:ASP:OD1	21:8I:14:LYS:NZ	2.51	0.43
22:9I:66:LEU:HD11	22:9I:70:ILE:HD11	1.99	0.43
26:1K:66:U:H2'	26:1K:67:C:C6	2.53	0.43
2:3K:24:G:H2'	2:3K:25:C:C6	2.53	0.43
5:1H:125:G:H5'	5:1H:125:G:C8	2.53	0.43
5:1H:295:G:C5	5:1H:344:G:C2	3.06	0.43
5:1H:405:U:H4'	5:1H:406:G:OP2	2.18	0.43
5:1H:722:A:H2'	5:1H:723:G:H8	1.76	0.43
5:1H:1665:A:N6	58:1H:4205:HOH:O	2.50	0.43
5:1H:2027:G:C2'	5:1H:2028:U:H5'	2.49	0.43
5:1H:2695:C:H2'	5:1H:2696:U:C6	2.53	0.43
5:1H:2699:C:H2'	5:1H:2700:C:O4'	2.18	0.43
30:31:28:ILE:HG21	30:31:116:ASP:HB2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:31:130:ALA:N	30:31:132:VAL:HG13	2.22	0.43
38:98:2:ARG:HB3	38:98:3:HIS:H	1.53	0.43
41:C8:105:VAL:HG22	42:D8:45:THR:HG21	2.01	0.43
42:D8:49:THR:O	42:D8:50:PRO:C	2.58	0.43
44:F8:34:ALA:HA	44:F8:38:GLU:OE1	2.18	0.43
50:L8:35:ARG:HB3	50:L8:37:LEU:CD2	2.49	0.43
51:M8:1:MET:SD	51:M8:6:HIS:CE1	3.11	0.43
1:1G:862:C:O2'	1:1G:863:U:H5'	2.18	0.43
1:1G:1053:G:O2'	1:1G:1054:C:O5'	2.33	0.43
1:1G:1157:A:O2'	1:1G:1158:C:P	2.77	0.43
6:12:130:ARG:HE	6:12:130:ARG:N	2.17	0.43
7:22:62:ASP:C	7:22:97:LYS:HZ3	2.26	0.43
8:32:18:LYS:N	8:32:33:MET:HE2	2.33	0.43
1:13:266:G:O3'	21:8I:67:LYS:HB2	2.18	0.43
1:13:484:G:H5'	1:13:486:U:O4'	2.18	0.43
1:13:589:C:H42	1:13:650:G:H1	1.66	0.43
1:13:963:G:H1	1:13:972:C:N4	2.08	0.43
1:13:1348:U:H2'	1:13:1349:A:C8	2.44	0.43
1:13:1398:A:N1	9:4E:19:MET:HE2	2.33	0.43
2:3L:15:G:N1	2:3L:48:C:N4	2.67	0.43
5:14:931:G:H3'	5:14:931:G:C8	2.53	0.43
5:14:1060:U:H5'	5:14:1061:U:C5	2.53	0.43
5:14:1133:U:O2	5:14:1137:G:H5'	2.18	0.43
5:14:1716:U:H2'	5:14:1717:G:C8	2.52	0.43
5:14:2366:A:H2'	5:14:2367:G:O4'	2.18	0.43
6:1E:60:ASP:HB3	6:1E:64:ARG:NH1	2.33	0.43
8:3E:8:VAL:CG1	8:3E:21:LEU:HB2	2.48	0.43
8:3E:62:GLN:O	8:3E:66:ARG:HD3	2.19	0.43
5:1H:322:A:H5'	5:1H:340:A:H1'	1.99	0.43
5:1H:775:G:C4	5:1H:794:G:C8	3.06	0.43
5:1H:969:U:H2'	5:1H:970:C:C6	2.54	0.43
5:1H:1438:U:H2'	5:1H:1439:A:C8	2.53	0.43
5:1H:1790:C:H2'	5:1H:1791:A:C5	2.54	0.43
5:1H:1878:G:H2'	5:1H:1879:C:C6	2.53	0.43
5:1H:2093:G:O2'	5:1H:2198:A:N1	2.47	0.43
5:1H:2127:G:H1	5:1H:2162:G:C1'	2.29	0.43
5:1H:2248:C:C5	5:1H:2249:U:C4	3.07	0.43
5:1H:2356:C:H2'	5:1H:2357:U:O4'	2.17	0.43
5:1H:2552:U:H2'	5:1H:2554:U:OP2	2.18	0.43
27:1J:56:G:H4'	27:1J:57:A:H8	1.84	0.43
27:1J:81:G:H2'	27:1J:82:G:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:11:136:ILE:O	28:11:168:ARG:NH2	2.51	0.43
29:21:35:GLN:HG3	29:21:36:ARG:H	1.83	0.43
31:41:20:ILE:HG13	31:41:20:ILE:H	1.47	0.43
32:51:107:VAL:HB	32:51:152:ARG:HG2	2.00	0.43
33:61:127:VAL:HA	33:61:138:ILE:O	2.18	0.43
34:58:28:THR:HA	34:58:106:MET:HE2	2.00	0.43
36:78:96:THR:HG22	36:78:126:VAL:HB	2.01	0.43
37:88:59:ARG:C	37:88:61:GLY:N	2.76	0.43
38:98:10:LEU:O	38:98:11:ASN:C	2.61	0.43
40:B8:107:ASP:C	40:B8:109:GLU:N	2.76	0.43
40:B8:114:LEU:HD23	40:B8:114:LEU:HA	1.79	0.43
43:E8:70:TYR:N	43:E8:70:TYR:CD1	2.84	0.43
54:P8:30:VAL:O	54:P8:34:ARG:HG3	2.18	0.43
55:Q8:53:PRO:HB3	55:Q8:56:GLU:H	1.83	0.43
1:1G:197:A:H3'	1:1G:197:A:OP2	2.17	0.43
1:1G:407:G:O2'	8:32:116:GLN:HG3	2.18	0.43
1:1G:617:G:C2	1:1G:618:C:C5	3.06	0.43
1:1G:631:G:H3'	1:1G:632:A:C8	2.45	0.43
1:1G:1057:G:H2'	1:1G:1058:G:C8	2.52	0.43
1:1G:1420:C:O5'	1:1G:1420:C:H6	2.02	0.43
1:1G:1443:G:H3'	1:1G:1446:A:C5'	2.49	0.43
1:1G:1507:A:H2'	1:1G:1508:G:C8	2.53	0.43
8:32:108:LEU:HD13	8:32:174:LEU:HD22	2.00	0.43
1:13:22:G:C6	1:13:23:C:C4	3.06	0.43
1:13:165:C:H2'	1:13:166:G:H8	1.82	0.43
1:13:198:G:H2'	1:13:199:G:C8	2.53	0.43
1:13:342:C:H42	1:13:347:G:H1	1.66	0.43
1:13:922:G:H1'	9:4E:19:MET:HB2	2.00	0.43
1:13:963:G:C2	14:1I:55:LYS:NZ	2.85	0.43
1:13:983:A:H1'	1:13:1049:U:O2	2.18	0.43
1:13:1252:A:H2'	1:13:1253:G:O4'	2.18	0.43
5:14:296:C:H42	5:14:342:G:H1	1.66	0.43
5:14:1163:G:H2'	5:14:1164:G:H8	1.83	0.43
5:14:1260:G:C5	5:14:1261:C:C5	3.06	0.43
5:14:2157:G:O2'	5:14:2158:A:C8	2.71	0.43
5:14:2317:C:N3	5:14:2318:G:C8	2.86	0.43
17:4I:84:ILE:HG13	23:AI:74:PHE:HE1	1.84	0.43
19:6I:9:GLN:HA	19:6I:12:ILE:HG13	2.01	0.43
2:3K:36:A:C6	2:3K:37:MIA:C4	3.01	0.43
5:1H:492:A:H2'	5:1H:493:G:O4'	2.18	0.43
5:1H:587:C:N3	36:78:33:ARG:NH1	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:638:G:C5	5:1H:651:G:C2	3.07	0.43
5:1H:880:G:H2'	5:1H:881:G:H8	1.82	0.43
5:1H:1340:U:H4'	5:1H:1341:U:OP2	2.19	0.43
5:1H:1528:A:O2'	5:1H:1529:A:H5'	2.17	0.43
5:1H:1727:U:H2'	5:1H:1728:G:O4'	2.18	0.43
5:1H:2022:U:O2'	5:1H:2617:C:H5'	2.19	0.43
5:1H:2035:G:H4'	5:1H:2036:C:OP2	2.19	0.43
5:1H:2137:C:H42	5:1H:2154:G:H22	1.66	0.43
5:1H:2369:A:H2'	5:1H:2370:G:H8	1.82	0.43
5:1H:2436:G:C6	5:1H:2437:U:C4	3.06	0.43
5:1H:2516:G:O2'	5:1H:2517:C:H5'	2.18	0.43
5:1H:2629:A:O2'	5:1H:2630:G:H5''	2.17	0.43
5:1H:2852:G:C6	5:1H:2853:C:N3	2.86	0.43
30:31:63:LYS:HG2	30:31:65:TRP:O	2.18	0.43
31:41:16:ARG:N	31:41:17:PRO:HD2	2.33	0.43
31:41:37:VAL:O	31:41:94:LEU:HG	2.18	0.43
31:41:52:ILE:HD13	31:41:52:ILE:HA	1.84	0.43
32:51:8:PRO:HG2	32:51:69:ARG:NH2	2.33	0.43
41:C8:87:GLY:C	41:C8:89:GLU:H	2.27	0.43
44:F8:65:ARG:HB3	44:F8:65:ARG:NH1	2.34	0.43
46:H8:125:LEU:HG	46:H8:164:ALA:HB3	2.00	0.43
48:J8:83:GLU:CD	48:J8:85:LEU:HB2	2.44	0.43
53:O8:23:THR:OG1	55:Q8:36:LYS:NZ	2.51	0.43
53:O8:44:ARG:O	53:O8:45:LYS:HG2	2.19	0.43
1:1G:406:G:H1	1:1G:436:C:H42	1.67	0.43
1:1G:692:U:O2'	1:1G:694:A:N7	2.46	0.43
1:1G:793:U:O2	1:1G:1516:G:H4'	2.19	0.43
1:1G:821:G:H2'	1:1G:822:C:H6	1.82	0.43
1:13:881:G:P	16:3I:12:ARG:HH22	2.40	0.43
1:13:994:A:N7	1:13:1216:G:H4'	2.33	0.43
1:13:1157:A:C6	1:13:1180:A:C5	3.07	0.43
1:13:1162:C:O5'	1:13:1162:C:H6	2.00	0.43
1:13:1273:G:H5'	1:13:1274:G:OP2	2.18	0.43
1:13:1328:C:OP1	25:1F:21:TYR:OH	2.34	0.43
1:13:1362:C:O2	1:13:1362(A):C:H5	2.02	0.43
3:2L:56:PSU:O4	3:2L:58:A:C8	2.71	0.43
3:2L:65:G:C6	3:2L:66:C:C4	3.06	0.43
2:3L:20:H2U:H51	2:3L:21:A:C8	2.54	0.43
5:14:1056:G:H5'	5:14:1086:A:N3	2.34	0.43
5:14:1187:G:P	58:14:3754:HOH:O	2.76	0.43
5:14:2128:C:H1'	5:14:2173:A:C2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:1E:155:LEU:HD22	6:1E:155:LEU:HA	1.75	0.43
11:6E:51:GLN:OE1	11:6E:51:GLN:HA	2.19	0.43
11:6E:113:GLU:HG2	11:6E:119:ARG:HG2	2.00	0.43
12:7E:25:ASP:C	12:7E:26:VAL:HG12	2.43	0.43
22:9I:53:ARG:HH21	22:9I:59:SER:HA	1.83	0.43
26:1K:10:G:H2'	26:1K:11:C:C6	2.53	0.43
5:1H:1062:G:H1'	5:1H:1088:A:C5	2.53	0.43
5:1H:1339:G:N2	5:1H:1603:A:H1'	2.33	0.43
5:1H:1675:C:H2'	5:1H:1676:A:O4'	2.19	0.43
5:1H:1834:U:H4'	5:1H:1969:A:C6	2.53	0.43
5:1H:2002:G:C5	58:1H:4385:HOH:O	2.71	0.43
5:1H:2712:U:O2'	5:1H:2713:A:H5'	2.18	0.43
5:1H:2801:A:H2'	5:1H:2802:G:H4'	2.00	0.43
27:16:112:G:H2'	27:16:113:C:H6	1.83	0.43
29:21:101:ARG:NH1	29:21:171:GLU:HB2	2.32	0.43
35:68:31:LYS:HB3	35:68:32:TYR:CE2	2.53	0.43
36:78:114:ILE:HD12	36:78:134:ALA:HB1	1.99	0.43
41:C8:101:ARG:O	41:C8:103:PRO:HD3	2.18	0.43
43:E8:79:GLY:CA	43:E8:100:THR:HG22	2.48	0.43
1:1G:536:C:H2'	1:1G:537:G:C8	2.54	0.43
1:1G:827:U:H5''	1:1G:828:A:OP2	2.19	0.43
1:1G:848:C:H2'	1:1G:849:C:C6	2.54	0.43
1:1G:1028(A):C:H42	1:1G:1032(B):G:H22	1.65	0.43
1:1G:1331:G:OP1	1:1G:1331:G:H4'	2.18	0.43
7:22:121:ALA:HB2	7:22:198:VAL:HG21	2.01	0.43
1:13:141:A:H2'	1:13:142:G:H8	1.84	0.43
1:13:590:C:H42	1:13:649:G:H1	1.67	0.43
1:13:649:G:H2'	1:13:650:G:C8	2.47	0.43
5:14:608:A:H2'	5:14:609:A:O4'	2.19	0.43
5:14:1078:U:H1'	5:14:1088:A:C2	2.53	0.43
5:14:1389:G:H2'	5:14:1390:U:O4'	2.18	0.43
5:14:2068:U:N3	5:14:2430:A:H2	2.16	0.43
5:14:2285:C:C3'	5:14:2286:A:H5''	2.49	0.43
5:14:2286:A:H4'	5:14:2287:A:O4'	2.18	0.43
5:14:2850:A:N7	5:14:2868:A:O2'	2.38	0.43
6:1E:23:ARG:HB3	6:1E:23:ARG:NH1	2.34	0.43
19:6I:71:GLN:HG3	19:6I:78:TYR:CE2	2.54	0.43
21:8I:22:LEU:HD12	21:8I:40:LYS:O	2.19	0.43
3:2K:17:C:OP2	3:2K:18:C:O2'	2.28	0.43
5:1H:53:A:C8	5:1H:54:G:C8	3.07	0.43
5:1H:546:C:N4	5:1H:547:A:N1	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:852:G:O2'	5:1H:853:G:H5'	2.18	0.43
5:1H:1301:A:H2	5:1H:1626:G:N3	2.17	0.43
5:1H:2468:G:H5''	37:88:120:ILE:HD12	1.99	0.43
5:1H:2564:A:OP1	5:1H:2648:C:H4'	2.19	0.43
27:16:40:U:O2'	27:16:43:C:H5	2.02	0.43
31:41:61:ALA:O	31:41:65:GLY:N	2.36	0.43
41:C8:30:LYS:HA	41:C8:30:LYS:HD3	1.76	0.43
45:G8:89:PHE:HD2	45:G8:90:LEU:N	2.16	0.43
47:I8:11:ARG:H	47:I8:11:ARG:HG3	1.59	0.43
48:J8:44:PRO:HB2	48:J8:46:LEU:HD13	2.00	0.43
1:1G:620:C:H5'	58:1G:1770:HOH:O	2.18	0.43
1:1G:683:G:H2'	1:1G:684:A:C8	2.54	0.43
1:1G:1468:A:H5''	1:1G:1469:G:OP2	2.17	0.43
1:1G:1509:C:H2'	1:1G:1510:U:O4'	2.18	0.43
1:13:110:C:O2'	20:7I:25:ARG:O	2.31	0.43
1:13:190:G:HO2'	1:13:191(A):G:P	2.42	0.43
1:13:277:C:H2'	1:13:278:G:H8	1.84	0.43
1:13:664:G:N2	1:13:741:G:H1	2.07	0.43
1:13:1074:G:O2'	1:13:1101:A:N1	2.51	0.43
1:13:1179:A:H2'	1:13:1180:A:O4'	2.19	0.43
1:13:1199:U:H4'	14:1I:54:PHE:CE2	2.53	0.43
5:14:51:G:N3	5:14:119:A:C2	2.87	0.43
5:14:638:G:C5	5:14:651:G:C2	3.07	0.43
5:14:717:G:H2'	5:14:718:A:O4'	2.19	0.43
5:14:909:A:C6	5:14:912:C:C2	3.07	0.43
5:14:962:G:H2'	5:14:963:U:C6	2.54	0.43
5:14:1412:A:H2'	5:14:1413:G:C8	2.53	0.43
5:14:2111:C:C6	5:14:2118:U:H4'	2.54	0.43
5:14:2238:G:H2'	5:14:2238:G:N3	2.34	0.43
7:2E:167:TRP:CD1	7:2E:168:ALA:N	2.86	0.43
12:7E:120:THR:OG1	12:7E:123:GLU:HG3	2.18	0.43
14:1I:34:VAL:HG12	14:1I:74:ILE:HG12	2.00	0.43
23:AI:13:ASP:HA	23:AI:16:LEU:HB3	2.01	0.43
24:BI:97:ALA:O	24:BI:99:LEU:N	2.52	0.43
5:1H:208:C:H2'	5:1H:209:C:C6	2.54	0.43
5:1H:241:A:H5''	58:1H:4470:HOH:O	2.19	0.43
5:1H:438:G:H2'	5:1H:439:G:C8	2.54	0.43
5:1H:654(C):G:H2'	5:1H:654(D):G:O4'	2.18	0.43
5:1H:805:G:H4'	5:1H:806:C:OP2	2.19	0.43
5:1H:1019:U:HO2'	5:1H:1021:A:H2	1.65	0.43
5:1H:1404:C:O2'	5:1H:1405:U:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1666:G:OP1	35:68:66:LYS:HE2	2.19	0.43
5:1H:1814:G:OP2	5:1H:1815:A:O2'	2.33	0.43
5:1H:2286:A:H4'	5:1H:2287:A:O4'	2.19	0.43
5:1H:2577:A:H1'	52:N8:3:LYS:HA	2.00	0.43
5:1H:2693:A:H2'	5:1H:2694:G:H8	1.83	0.43
27:1J:14:U:O2'	27:1J:107:U:O2'	2.02	0.43
29:21:119:ARG:HH11	29:21:119:ARG:HG3	1.83	0.43
33:61:124:GLY:H	33:61:142:VAL:HG23	1.84	0.43
40:B8:81:PRO:HG2	40:B8:82:LEU:HD12	2.01	0.43
40:B8:132:LYS:HE2	40:B8:133:GLU:HG3	2.00	0.43
43:E8:58:ALA:O	43:E8:64:MET:HB2	2.18	0.43
44:F8:11:PRO:HB3	44:F8:92:LEU:HD21	2.00	0.43
53:O8:12:GLU:H	53:O8:12:GLU:HG2	1.64	0.43
1:1G:373:A:H2'	1:1G:374:A:H8	1.83	0.43
1:1G:542:G:P	8:32:10:ARG:HH22	2.41	0.43
1:1G:793:U:H5'	1:1G:794:A:O5'	2.19	0.43
1:1G:881:G:C6	1:1G:882:C:C4	3.07	0.43
1:1G:956:U:C2	1:1G:1225:A:C2	3.07	0.43
1:1G:1312:G:H2'	1:1G:1313:U:O4'	2.19	0.43
7:22:37:GLN:O	7:22:40:ARG:HG3	2.17	0.43
7:22:40:ARG:O	7:22:44:GLU:N	2.51	0.43
1:13:647:C:C4	1:13:648:A:N7	2.87	0.43
1:13:688:G:H2'	1:13:689:C:C6	2.54	0.43
5:14:224:G:H2'	5:14:225:A:O4'	2.18	0.43
5:14:1399:C:O2'	5:14:1400:G:H5'	2.19	0.43
5:14:1795:C:H2'	5:14:1796:U:C6	2.54	0.43
5:14:1860:G:H8	5:14:1860:G:O5'	2.01	0.43
5:14:2320:A:H1'	5:14:2321:G:C6	2.53	0.43
5:14:2438:U:O3'	5:14:2439:A:H3'	2.18	0.43
5:14:2441:C:OP2	5:14:2586:C:O2'	2.31	0.43
6:1E:136:VAL:O	6:1E:140:HIS:N	2.50	0.43
9:4E:152:ARG:HA	12:7E:64:LYS:HE2	1.99	0.43
10:5E:4:TYR:CD1	10:5E:92:LYS:HA	2.54	0.43
21:8I:15:MET:HE3	21:8I:15:MET:HB2	1.78	0.43
21:8I:78:GLU:HG2	21:8I:81:ARG:HD2	2.00	0.43
24:BI:35:THR:HA	24:BI:38:LYS:HD3	2.00	0.43
2:3K:39:PSU:C2'	2:3K:40:C:H5'	2.48	0.43
5:1H:234:C:C2	5:1H:235:U:C5	3.07	0.43
5:1H:572:A:H5''	5:1H:573:G:OP2	2.17	0.43
5:1H:660:G:N2	36:78:12:ALA:HA	2.34	0.43
5:1H:742:G:H2'	5:1H:743:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:784:A:C8	5:1H:792:G:C5	3.07	0.43
5:1H:818:G:H4'	5:1H:838:C:O3'	2.19	0.43
5:1H:880:G:H22	5:1H:897:C:H42	1.67	0.43
5:1H:1179:C:H2'	5:1H:1180:C:C6	2.53	0.43
5:1H:1654:A:OP2	38:98:1:MET:N	2.47	0.43
5:1H:1922:G:H2'	5:1H:1923:U:C6	2.53	0.43
5:1H:2012:G:H8	5:1H:2012:G:O5'	2.02	0.43
5:1H:2093:G:C6	5:1H:2225:A:C8	3.07	0.43
5:1H:2309:A:C6	5:1H:2310:A:C8	3.07	0.43
5:1H:2414:G:N3	5:1H:2414:G:H2'	2.33	0.43
5:1H:2715:C:C2'	5:1H:2716:U:H5'	2.49	0.43
27:16:19:G:H2'	27:16:20:C:O4'	2.18	0.43
27:16:43:C:OP1	31:41:67:LYS:NZ	2.51	0.43
27:16:112:G:H2'	27:16:113:C:C6	2.54	0.43
31:41:142:PRO:HG2	31:41:143:GLU:OE2	2.19	0.43
33:61:77:LEU:H	33:61:77:LEU:HD12	1.84	0.43
34:58:29:LYS:H	34:58:29:LYS:HG2	1.54	0.43
34:58:96:GLU:HB2	34:58:122:VAL:HG12	2.01	0.43
36:78:144:GLU:HA	36:78:145:PRO:HD3	1.89	0.43
39:A8:3:ARG:HG2	39:A8:4:LEU:N	2.33	0.43
40:B8:19:LEU:HA	40:B8:20:PRO:HD3	1.79	0.43
48:J8:91:LYS:O	48:J8:93:GLU:N	2.52	0.43
51:M8:2:LYS:HD3	51:M8:2:LYS:HA	1.74	0.43
1:1G:539:A:H2'	1:1G:540:G:H8	1.80	0.43
1:1G:918:A:H2'	1:1G:919:A:O4'	2.18	0.43
6:12:19:HIS:CD2	6:12:20:GLU:H	2.37	0.43
6:12:166:ASP:OD2	6:12:169:LYS:HB2	2.19	0.43
8:32:39:PRO:O	8:32:44:GLY:HA3	2.19	0.43
8:32:64:LEU:HB2	8:32:198:VAL:HG11	1.99	0.43
8:32:154:ASN:O	8:32:159:ARG:HD2	2.19	0.43
1:13:265:G:H5''	21:8I:65:ILE:O	2.18	0.43
1:13:519:C:H2'	1:13:520:A:O4'	2.19	0.43
1:13:1065:U:H4'	1:13:1066:C:O5'	2.19	0.43
1:13:1159:U:C2	1:13:1182:G:C2	3.06	0.43
1:13:1331:G:OP2	17:4I:23:TYR:HD1	2.02	0.43
1:13:1342:C:O2'	13:8E:124:GLN:HG2	2.18	0.43
3:2L:44:A:H2'	3:2L:45:A:H8	1.83	0.43
5:14:236:C:H2'	5:14:237:C:C6	2.53	0.43
5:14:480:A:H2	5:14:499:U:O2	2.02	0.43
5:14:670:A:H4'	5:14:671:C:O5'	2.19	0.43
5:14:1216:G:C4	5:14:1217:C:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1310:G:H2'	5:14:1311:G:H5'	2.01	0.43
5:14:1442:G:H2'	5:14:1443:G:C8	2.54	0.43
5:14:1461:G:H2'	5:14:1462:C:H6	1.83	0.43
5:14:1484:G:C6	5:14:1485:G:C5	3.07	0.43
5:14:1485:G:N2	5:14:1504:C:N3	2.54	0.43
5:14:1511:A:H3'	5:14:1512:G:H8	1.83	0.43
5:14:1677:A:H2'	5:14:1678:G:C8	2.54	0.43
5:14:2064:C:H1'	5:14:2450:A:C2	2.54	0.43
5:14:2119:A:N6	5:14:2170:A:N7	2.66	0.43
6:1E:85:ALA:O	6:1E:90:MET:N	2.51	0.43
6:1E:98:LEU:HG	6:1E:101:MET:HE3	2.00	0.43
7:2E:150:LYS:HE3	7:2E:150:LYS:HB2	1.69	0.43
8:3E:90:GLY:O	8:3E:93:PHE:HB3	2.19	0.43
10:5E:75:LEU:HD22	10:5E:79:LEU:HD11	2.01	0.43
13:8E:48:GLU:N	13:8E:49:PRO:HD2	2.33	0.43
2:3K:33:U:H2'	2:3K:35:A:OP2	2.18	0.43
5:1H:66:C:C4	5:1H:67:U:C4	3.07	0.43
5:1H:74:A:O5'	5:1H:74:A:C8	2.72	0.43
5:1H:298:G:H5''	5:1H:299:A:OP1	2.19	0.43
5:1H:470:A:H2'	5:1H:471:A:C8	2.53	0.43
5:1H:973:A:P	58:1H:3944:HOH:O	2.76	0.43
5:1H:1047:G:H2'	5:1H:1110:G:N1	2.34	0.43
5:1H:1142(A):A:C4	5:1H:1144:G:N7	2.86	0.43
5:1H:1890:A:H2	5:1H:2235:G:O4'	2.02	0.43
5:1H:2184:G:C6	5:1H:2185:C:C4	3.06	0.43
5:1H:2636:U:H2'	5:1H:2637:U:H6	1.82	0.43
5:1H:2700:C:C2'	5:1H:2701:C:H5'	2.47	0.43
28:11:59:LYS:HD2	28:11:60:ARG:H	1.83	0.43
28:11:101:GLU:OE1	28:11:103:ARG:HD3	2.19	0.43
29:21:34:VAL:HG22	29:21:48:GLN:HB3	2.00	0.43
31:41:111:LEU:HD21	31:41:120:LEU:HD21	2.01	0.43
32:51:86:GLU:HG2	32:51:87:LEU:H	1.82	0.43
33:61:60:GLU:O	33:61:63:ALA:HB3	2.18	0.43
34:58:43:THR:HA	34:58:44:PRO:HD2	1.68	0.43
37:88:110:THR:HG23	37:88:113:GLN:OE1	2.18	0.43
38:98:34:ILE:O	38:98:114:VAL:N	2.41	0.43
40:B8:101:PHE:O	40:B8:105:LEU:HD13	2.19	0.43
50:L8:2:PRO:HB2	50:L8:3:ARG:H	1.55	0.43
51:M8:23:GLU:OE1	51:M8:24:THR:N	2.52	0.43
1:1G:279:A:C8	1:1G:281:G:C2	3.07	0.43
1:1G:284:G:H2'	1:1G:285:G:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:567:G:N2	58:1G:1763:HOH:O	2.41	0.43
1:1G:1061:G:C5	1:1G:1062:U:C5	3.07	0.43
1:1G:1134:G:C6	1:1G:1135:U:C2	3.07	0.43
1:13:191(F):U:H2'	1:13:191:G:C8	2.54	0.43
1:13:1331:G:O2'	1:13:1332:A:O5'	2.35	0.43
5:14:286:C:H2'	5:14:287:C:C6	2.53	0.43
5:14:358:U:H6	5:14:358:U:O5'	2.02	0.43
5:14:363(A):A:H2'	5:14:363(A):A:N3	2.33	0.43
5:14:610:C:H2'	5:14:611:C:C6	2.54	0.43
5:14:1024:G:C8	5:14:1025:G:H2'	2.54	0.43
5:14:2107:C:N3	5:14:2182:G:N2	2.66	0.43
5:14:2370:G:H2'	5:14:2371:G:O4'	2.18	0.43
5:14:2660:A:H2'	5:14:2661:G:O4'	2.19	0.43
5:14:2702:U:HO2'	5:14:2703:C:H5	1.54	0.43
6:1E:60:ASP:O	6:1E:64:ARG:HG2	2.18	0.43
6:1E:160:ASP:O	6:1E:183:PRO:HD2	2.19	0.43
6:1E:182:ILE:HA	6:1E:183:PRO:HD3	1.93	0.43
8:3E:135:LEU:HA	8:3E:136:PRO:HD2	1.83	0.43
10:5E:97:PHE:O	22:9I:31:LEU:HD23	2.19	0.43
16:3I:117:ARG:C	16:3I:119:LYS:O	2.62	0.43
17:4I:92:HIS:HA	17:4I:110:ARG:NH2	2.34	0.43
5:1H:1510:A:H2'	5:1H:1510:A:N3	2.32	0.43
5:1H:1936:A:C8	5:1H:1940:U:O2	2.72	0.43
5:1H:2227:A:H4'	28:11:265:PRO:HD3	2.00	0.43
5:1H:2418:A:H5''	5:1H:2419:U:OP2	2.19	0.43
29:21:102:VAL:O	29:21:170:LEU:N	2.46	0.43
30:31:62:ARG:HH21	30:31:64:ILE:HD13	1.84	0.43
30:31:178:PRO:HB2	30:31:201:VAL:HG21	2.01	0.43
31:41:111:LEU:HD22	31:41:117:PHE:CZ	2.54	0.43
32:51:152:ARG:HD3	32:51:152:ARG:HA	1.83	0.43
39:A8:14:VAL:HG11	39:A8:90:GLY:O	2.18	0.43
43:E8:71:VAL:HA	43:E8:107:LEU:HD12	2.00	0.43
44:F8:49:VAL:HG23	44:F8:87:GLN:HG2	2.01	0.43
45:G8:61:ILE:HG23	45:G8:62:GLU:N	2.33	0.43
46:H8:100:VAL:HG12	46:H8:101:PRO:O	2.19	0.43
46:H8:117:LEU:HD22	46:H8:118:GLN:N	2.34	0.43
54:P8:22:MET:HE3	54:P8:22:MET:HB3	1.89	0.43
55:Q8:27:THR:HG23	55:Q8:31:HIS:NE2	2.34	0.43
1:1G:445:G:H1	1:1G:489:C:H42	1.67	0.43
1:1G:446:G:H2'	1:1G:447:G:O4'	2.19	0.43
1:1G:579:G:C4	1:1G:580:U:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:592:G:N2	1:1G:647:C:N3	2.62	0.43
1:1G:1287:A:H2	1:1G:1353:G:N3	2.17	0.43
1:1G:1322:C:O2'	1:1G:1323:G:H5'	2.19	0.43
1:13:254:G:OP1	21:8I:67:LYS:O	2.36	0.42
1:13:426:G:H2'	1:13:427:U:C6	2.54	0.42
1:13:542:G:H5'	8:3E:41:GLY:HA3	2.00	0.42
1:13:625:G:H4'	20:7I:16:HIS:CG	2.54	0.42
1:13:704:A:H5''	1:13:705:U:OP2	2.18	0.42
1:13:724:G:H2'	1:13:725:G:H8	1.84	0.42
1:13:799:G:C6	1:13:800:G:C4	3.07	0.42
1:13:1075:C:OP1	6:1E:179:LYS:HE2	2.19	0.42
1:13:1367:C:H5'	14:1I:60:ARG:NE	2.34	0.42
1:13:1386:G:C2	1:13:1387:G:C8	3.07	0.42
5:14:514:A:C2	5:14:515:A:C4	3.07	0.42
5:14:629:G:H5''	5:14:650:C:O2'	2.19	0.42
5:14:1014:U:N3	5:14:1015:G:N7	2.66	0.42
5:14:1018:C:H2'	5:14:1019:U:H6	1.84	0.42
5:14:1380:G:C8	5:14:1380:G:O5'	2.72	0.42
5:14:1709:U:H2'	5:14:1710:C:C6	2.54	0.42
5:14:2333:A:H5''	5:14:2335:A:H5''	2.00	0.42
5:14:2345:G:N3	5:14:2381:C:H2'	2.34	0.42
5:14:2516:G:C6	5:14:2517:C:N4	2.87	0.42
6:1E:70:PHE:HB2	6:1E:92:TYR:HB2	2.01	0.42
6:1E:162:ILE:HD11	6:1E:184:VAL:HG22	2.01	0.42
9:4E:10:MET:HB3	9:4E:10:MET:HE2	1.40	0.42
9:4E:145:LYS:HA	12:7E:107:LEU:HD21	2.01	0.42
10:5E:4:TYR:HD1	10:5E:92:LYS:HA	1.83	0.42
13:8E:49:PRO:HA	13:8E:52:ALA:HB3	2.00	0.42
15:2I:48:ILE:HD11	15:2I:64:ALA:HA	2.01	0.42
18:5I:27:CYS:HB2	18:5I:29:ARG:H	1.84	0.42
2:3K:59:U:H3'	2:3K:60:U:C6	2.53	0.42
5:1H:481:G:H1'	5:1H:507:A:N1	2.34	0.42
5:1H:659:C:H4'	30:31:100:THR:O	2.19	0.42
5:1H:729:G:O5'	28:11:208:LYS:NZ	2.51	0.42
5:1H:747:U:O2	5:1H:2014:A:H1'	2.18	0.42
5:1H:1106:G:H2'	5:1H:1107:G:O4'	2.19	0.42
5:1H:2054:A:H5''	5:1H:2055:C:O5'	2.19	0.42
5:1H:2164:C:H5	5:1H:2165:G:C6	2.36	0.42
5:1H:2179:C:O5'	5:1H:2179:C:H6	2.01	0.42
27:1J:44:G:C2	27:1J:48:A:C2	3.07	0.42
29:21:120:TRP:CD1	29:21:155:LYS:HB3	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:31:9:ILE:HG13	30:31:123:LEU:HG	2.01	0.42
32:51:126:PRO:HG2	32:51:130:ARG:HH12	1.83	0.42
38:98:48:VAL:O	38:98:51:LEU:N	2.51	0.42
39:A8:36:TYR:N	39:A8:36:TYR:HD1	2.17	0.42
53:O8:34:LEU:H	53:O8:34:LEU:HD22	1.84	0.42
55:Q8:7:HIS:O	55:Q8:8:LYS:C	2.62	0.42
1:1G:160:A:H1'	1:1G:344:A:C5	2.54	0.42
1:1G:409:G:O6	1:1G:433:C:N4	2.50	0.42
1:1G:859:A:H2'	1:1G:860:A:O4'	2.19	0.42
8:32:76:ARG:HH21	8:32:80:GLU:CG	2.32	0.42
1:13:115:G:C2	1:13:289:G:N7	2.87	0.42
1:13:235:C:H5'	21:8I:70:ARG:HG2	2.00	0.42
1:13:734:G:C2	1:13:735:C:C2	3.08	0.42
1:13:895:G:H2'	1:13:896:C:C6	2.54	0.42
1:13:1084:G:C5	1:13:1085:U:C4	3.07	0.42
1:13:1156:G:H2'	1:13:1157:A:H5''	2.01	0.42
5:14:200:U:O2	5:14:386:G:N2	2.52	0.42
5:14:1059:G:H1	5:14:1079:C:H42	1.66	0.42
5:14:1138:G:C2	5:14:1139:G:H1'	2.54	0.42
5:14:1280:G:C6	5:14:1281:G:C5	3.07	0.42
5:14:2427:C:H5''	5:14:2428:G:OP1	2.19	0.42
5:14:2535:G:H2'	5:14:2536:G:H8	1.84	0.42
5:14:2872:G:C4	5:14:2873:A:C2	3.07	0.42
6:1E:145:LEU:HD12	6:1E:149:LEU:HD12	2.01	0.42
9:4E:9:LYS:HB2	9:4E:9:LYS:HE3	1.87	0.42
9:4E:144:THR:OG1	9:4E:147:ASP:OD1	2.33	0.42
19:6I:26:GLU:H	19:6I:26:GLU:HG2	1.51	0.42
22:9I:26:LEU:HD13	22:9I:42:ARG:NH2	2.35	0.42
2:3K:37:MIA:H2'	2:3K:38:A:C8	2.55	0.42
4:4K:13:A:HO2'	4:4K:14:A:P	2.40	0.42
5:1H:49:A:N7	5:1H:120:U:C5	2.67	0.42
5:1H:244:A:H4'	36:78:74:GLU:HB3	2.01	0.42
5:1H:621:A:OP2	36:78:108:LYS:NZ	2.51	0.42
5:1H:687:C:H2'	5:1H:688:U:O4'	2.18	0.42
5:1H:1025:G:C4	5:1H:1135:C:H1'	2.53	0.42
5:1H:1478:G:C2	5:1H:1479:G:C8	3.07	0.42
5:1H:1497:U:H3'	5:1H:1498:C:H6	1.84	0.42
5:1H:1726:G:H2'	5:1H:1727:U:O4'	2.18	0.42
5:1H:2728:U:H2'	5:1H:2729:G:H8	1.84	0.42
5:1H:2840:C:H2'	5:1H:2841:C:C6	2.55	0.42
29:21:14:ILE:HD13	29:21:14:ILE:HA	1.71	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:41:22:ARG:HE	31:41:22:ARG:HB3	1.45	0.42
32:51:164:TYR:N	32:51:167:GLU:OE1	2.53	0.42
41:C8:39:LEU:O	41:C8:40:PHE:C	2.62	0.42
43:E8:90:ARG:HH11	43:E8:90:ARG:HD2	1.65	0.42
45:G8:94:LYS:HG3	45:G8:95:LYS:N	2.34	0.42
46:H8:52:SER:O	46:H8:52:SER:OG	2.27	0.42
47:I8:47:PRO:HB3	47:I8:51:VAL:HG12	2.02	0.42
48:J8:65:SER:HB2	48:J8:66:HIS:ND1	2.34	0.42
55:Q8:34:TRP:HE1	55:Q8:36:LYS:HE3	1.83	0.42
1:1G:255:G:O6	1:1G:270:A:N6	2.52	0.42
1:1G:322:C:H5	1:1G:328:C:C5	2.37	0.42
1:1G:803:G:C6	1:1G:804:U:C4	3.07	0.42
1:1G:1127:G:N2	1:1G:1144:G:N2	2.67	0.42
1:1G:1247:U:H2'	1:1G:1248:A:O4'	2.20	0.42
1:13:639:G:C2	1:13:640:A:C5	3.07	0.42
1:13:673:G:H5''	10:5E:87:ARG:NH1	2.34	0.42
1:13:881:G:H2'	1:13:882:C:O4'	2.20	0.42
1:13:922:G:O2'	1:13:1398:A:N1	2.44	0.42
1:13:1363:A:H4'	1:13:1364:U:O5'	2.19	0.42
1:13:1427:U:H2'	1:13:1428:A:C8	2.54	0.42
2:1L:65:G:N2	2:1L:66:U:H1'	2.34	0.42
5:14:396:G:H8	5:14:396:G:O5'	2.03	0.42
5:14:991:C:O2	5:14:1164:G:C2	2.72	0.42
5:14:1293:C:H6	5:14:1293:C:O5'	2.03	0.42
5:14:1519:G:C6	5:14:1520:U:C4	3.07	0.42
5:14:1647:G:P	58:14:3707:HOH:O	2.77	0.42
5:14:2490:G:H2'	5:14:2490:G:N3	2.34	0.42
5:14:2718:G:O2'	5:14:2847:U:OP1	2.33	0.42
8:3E:155:LEU:HD23	8:3E:155:LEU:HA	1.72	0.42
9:4E:71:LEU:HA	9:4E:75:THR:O	2.18	0.42
12:7E:33:GLU:OE2	12:7E:50:ARG:NH1	2.52	0.42
14:1I:57:LYS:HE3	14:1I:60:ARG:HH12	1.83	0.42
5:1H:299:A:H5'	5:1H:300:A:OP2	2.20	0.42
5:1H:566:U:H1'	58:1H:3789:HOH:O	2.19	0.42
5:1H:902:C:H2'	5:1H:903:C:H6	1.84	0.42
5:1H:1057:A:N7	5:1H:1086:A:H3'	2.34	0.42
5:1H:1338:G:O2'	5:1H:1393:A:N1	2.52	0.42
5:1H:2301:C:H2'	5:1H:2302:G:H8	1.84	0.42
27:16:42:C:O2	31:41:92:VAL:HA	2.18	0.42
29:21:13:ARG:HH11	29:21:13:ARG:CG	2.32	0.42
29:21:18:ASP:HB3	40:B8:82:LEU:HD11	1.99	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:21:26:ILE:O	29:21:26:ILE:HG12	2.17	0.42
33:61:104:GLN:O	33:61:105:HIS:HB2	2.20	0.42
34:58:110:GLY:O	34:58:114:ARG:HG3	2.19	0.42
41:C8:11:ARG:O	41:C8:15:LYS:HG3	2.20	0.42
55:Q8:7:HIS:CD2	55:Q8:57:ARG:HH22	2.37	0.42
1:1G:129(A):G:C6	1:1G:188:U:H4'	2.54	0.42
1:1G:262:A:C6	1:1G:263:A:N6	2.87	0.42
1:1G:371:G:H1	1:1G:390:C:N4	2.09	0.42
1:1G:623:C:N4	1:1G:624:C:C4	2.87	0.42
1:1G:1152:A:H2'	1:1G:1153:C:C6	2.54	0.42
1:1G:1307:U:O5'	1:1G:1307:U:H6	2.02	0.42
6:12:54:THR:O	6:12:57:PHE:HB3	2.19	0.42
6:12:134:GLU:O	6:12:138:LEU:HG	2.20	0.42
6:12:174:VAL:HG13	6:12:184:VAL:HG11	2.01	0.42
1:13:433:C:H2'	1:13:434:U:C6	2.54	0.42
1:13:468:A:H5''	20:7I:80:PHE:HB3	2.01	0.42
1:13:956:U:H2'	1:13:957:U:O4'	2.19	0.42
1:13:977:A:C8	1:13:1223:C:C4	3.08	0.42
5:14:274:G:H2'	5:14:275:G:C4'	2.48	0.42
5:14:725:G:H8	5:14:725:G:O5'	2.02	0.42
5:14:1628:G:H2'	5:14:1629:U:H6	1.84	0.42
5:14:2120:G:N2	5:14:2121:G:C6	2.87	0.42
5:14:2129:C:H2'	5:14:2130:U:O4'	2.20	0.42
5:14:2300:G:C2	5:14:2301:C:C2	3.07	0.42
5:14:2769:C:H2'	5:14:2770:G:O4'	2.20	0.42
9:4E:35:GLY:HA3	9:4E:112:LEU:O	2.19	0.42
17:4I:54:VAL:HG12	17:4I:58:GLU:HG3	2.00	0.42
5:1H:51:G:N3	5:1H:119:A:C2	2.87	0.42
5:1H:67:U:H2'	5:1H:68:G:C8	2.54	0.42
5:1H:586:A:OP2	58:1H:3971:HOH:O	2.22	0.42
5:1H:818:G:N7	5:1H:1187:G:C6	2.88	0.42
5:1H:930:U:O2	5:1H:930:U:O4'	2.35	0.42
5:1H:1045:A:H4'	5:1H:1045:A:OP1	2.20	0.42
5:1H:1069:A:O2'	5:1H:1072:C:OP2	2.37	0.42
5:1H:1317:A:H2'	5:1H:1318:C:C6	2.54	0.42
5:1H:2199:A:H3'	5:1H:2205:C:C6	2.55	0.42
5:1H:2347:C:H4'	53:O8:39:TYR:CE2	2.54	0.42
5:1H:2666:C:H5''	5:1H:2667:C:OP2	2.19	0.42
27:1J:2:C:H2'	27:1J:3:C:C5	2.54	0.42
27:1J:23:G:C2	27:1J:24:G:O6	2.73	0.42
29:21:111:ARG:HD2	29:21:160:TYR:CE2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:51:3:ARG:CZ	32:51:3:ARG:HA	2.50	0.42
33:61:21:VAL:HG22	33:61:22:LYS:N	2.35	0.42
37:88:20:ALA:CB	37:88:99:PRO:HD2	2.49	0.42
45:G8:96:ILE:HG22	45:G8:97:ARG:O	2.19	0.42
47:I8:23:VAL:HB	47:I8:26:TYR:HE1	1.83	0.42
49:K8:47:ASN:O	49:K8:49:LYS:HG3	2.19	0.42
54:P8:26:GLY:O	54:P8:30:VAL:HG23	2.20	0.42
55:Q8:23:VAL:O	55:Q8:44:LYS:HB2	2.19	0.42
1:1G:35:G:N1	1:1G:550:G:C2	2.86	0.42
1:1G:622:A:C8	1:1G:623:C:C6	3.06	0.42
1:1G:830:G:H2'	1:1G:831:U:O4'	2.19	0.42
1:1G:836:G:C6	1:1G:851:G:C6	3.08	0.42
1:1G:1047:G:H8	1:1G:1047:G:O5'	2.02	0.42
6:12:43:ASP:O	6:12:47:THR:OG1	2.38	0.42
6:12:54:THR:CG2	6:12:199:TYR:HB3	2.49	0.42
1:13:246:A:C2	1:13:282:A:C5	3.07	0.42
1:13:380:G:C2	1:13:384:G:C6	3.08	0.42
1:13:452:A:H62	1:13:480:U:H3	1.66	0.42
1:13:819:A:H4'	1:13:820:U:OP2	2.19	0.42
1:13:1171:G:O2'	1:13:1172:C:H5'	2.19	0.42
5:14:407:G:H2'	5:14:408:G:C8	2.55	0.42
5:14:881:G:H5'	5:14:882:G:OP2	2.20	0.42
5:14:929:G:H8	5:14:929:G:O5'	2.02	0.42
5:14:2062:A:H2'	5:14:2063:C:O5'	2.19	0.42
5:14:2619:C:H2'	5:14:2620:C:C6	2.54	0.42
6:1E:70:PHE:HB2	6:1E:92:TYR:CB	2.50	0.42
8:3E:30:LYS:O	8:3E:31:CYS:C	2.62	0.42
8:3E:108:LEU:HD11	8:3E:174:LEU:HD22	2.01	0.42
11:6E:153:HIS:CE1	15:2I:57:THR:HG23	2.55	0.42
16:3I:34:ARG:HG3	16:3I:35:GLY:N	2.33	0.42
5:1H:6:A:N3	34:58:131:GLN:HG3	2.35	0.42
5:1H:52:A:O2'	5:1H:53:A:H5'	2.20	0.42
5:1H:229:A:OP2	36:78:150:ALA:HB1	2.19	0.42
5:1H:1021:A:H3'	5:1H:1022:G:H5''	2.01	0.42
5:1H:1028:A:N3	5:1H:2486:G:O2'	2.45	0.42
5:1H:1330:C:O2'	5:1H:1331:A:H5'	2.19	0.42
5:1H:1705:G:C6	5:1H:1706:U:N3	2.88	0.42
5:1H:1820:U:H4'	5:1H:1821:A:OP2	2.20	0.42
5:1H:2331:G:O2'	5:1H:2336:A:N1	2.39	0.42
27:16:8:U:H5''	39:A8:15:ARG:HH12	1.84	0.42
28:11:272:ALA:HB1	28:11:273:ARG:H	1.69	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:61:4:ILE:HD11	33:61:44:LEU:HD13	2.01	0.42
34:58:130:HIS:HA	34:58:134:ARG:HH22	1.85	0.42
37:88:42:ILE:HD12	37:88:97:VAL:HG21	2.02	0.42
47:I8:75:LEU:HA	47:I8:75:LEU:HD23	1.58	0.42
54:P8:1:MET:HE2	54:P8:1:MET:HB3	1.80	0.42
55:Q8:41:ILE:HG22	55:Q8:41:ILE:O	2.20	0.42
1:1G:25:C:H5'	1:1G:524:G:H1'	2.01	0.42
1:1G:117:G:H2'	1:1G:118:U:O4'	2.20	0.42
1:1G:149:A:O2'	1:1G:150:C:H5'	2.20	0.42
1:1G:298:A:H5''	1:1G:299:G:OP2	2.19	0.42
1:1G:791:G:C6	1:1G:792:A:N7	2.88	0.42
1:1G:981:U:O5'	1:1G:981:U:H6	2.02	0.42
1:1G:1058:G:H2'	1:1G:1059:C:C6	2.55	0.42
1:1G:1064:G:C8	1:1G:1066:C:C2	3.07	0.42
1:1G:1155:G:H2'	1:1G:1156:G:O4'	2.20	0.42
1:1G:1325:C:H2'	1:1G:1326:C:C6	2.55	0.42
1:1G:1496:C:H2'	1:1G:1497:G:C8	2.54	0.42
1:1G:1517:G:C6	1:1G:1518:A:C5	3.08	0.42
6:12:185:ILE:CG2	6:12:199:TYR:HB2	2.43	0.42
6:12:212:GLN:O	6:12:215:LEU:N	2.53	0.42
8:32:79:PHE:C	8:32:79:PHE:CD2	2.97	0.42
8:32:108:LEU:HD12	8:32:108:LEU:HA	1.85	0.42
1:13:11:G:H2'	1:13:12:U:H6	1.84	0.42
1:13:20:U:C4	1:13:21:G:C5	3.08	0.42
1:13:329:A:C4	1:13:332:G:C5	3.07	0.42
1:13:606:G:N3	1:13:606:G:H2'	2.35	0.42
1:13:843:U:H5'	1:13:848:C:C5	2.55	0.42
1:13:1037:C:H2'	1:13:1038:C:H6	1.83	0.42
1:13:1164:G:C6	1:13:1165:C:C4	3.08	0.42
2:1L:76:A:H8	5:14:2583:G:H21	1.64	0.42
3:2L:32:G:C4	3:2L:33:OMC:C5	3.07	0.42
5:14:451:C:H41	5:14:454:A:H5'	1.85	0.42
5:14:931:G:H3'	5:14:931:G:H8	1.85	0.42
5:14:1028:A:H2'	5:14:1029:A:C8	2.55	0.42
5:14:1171:G:N2	5:14:1174:A:N1	2.68	0.42
5:14:1421:G:C2	5:14:1422:G:C8	3.08	0.42
5:14:1582:C:HO2'	5:14:1586:A:H8	1.67	0.42
5:14:1726:G:H1	5:14:1734:C:H42	1.66	0.42
5:14:2057:A:O2'	5:14:2058:A:H5'	2.19	0.42
5:14:2465:C:O2	5:14:2486:G:C2	2.72	0.42
5:14:2712:U:H2'	5:14:2714:G:H5''	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:6E:102:ARG:O	11:6E:106:GLN:HG3	2.20	0.42
14:1I:47:PHE:CE2	18:5I:37:PHE:HE1	2.37	0.42
15:2I:50:TYR:O	15:2I:55:LYS:HD3	2.20	0.42
23:AI:18:LYS:O	23:AI:22:LEU:HD22	2.20	0.42
2:3K:2:C:H4'	2:3K:3:C:OP1	2.19	0.42
5:1H:65:C:H2'	5:1H:66:C:C6	2.55	0.42
5:1H:71:A:H4'	5:1H:72:U:H5''	2.02	0.42
5:1H:317:G:N2	5:1H:318:C:C2	2.87	0.42
5:1H:389:G:O5'	5:1H:389:G:H8	2.02	0.42
5:1H:404:C:H1'	5:1H:405:U:OP2	2.19	0.42
5:1H:625:G:N7	36:78:107:LYS:NZ	2.67	0.42
5:1H:817:C:H2'	5:1H:818:G:O4'	2.20	0.42
5:1H:1024:G:C3'	5:1H:1025:G:H5''	2.48	0.42
5:1H:1298:C:H5''	5:1H:1299:G:OP2	2.19	0.42
5:1H:1378:A:O2'	5:1H:1380:G:N7	2.46	0.42
5:1H:1771:C:H1'	5:1H:1786:A:C8	2.55	0.42
5:1H:2619:C:H5'	29:21:150:VAL:O	2.20	0.42
5:1H:2757:A:N1	32:51:67:LEU:HD22	2.35	0.42
5:1H:2785:C:H2'	5:1H:2786:U:O4'	2.19	0.42
29:21:67:PHE:C	29:21:69:LYS:H	2.28	0.42
31:41:105:LYS:HD3	51:M8:26:SER:HB2	2.01	0.42
31:41:107:LEU:HD11	31:41:178:PHE:CD1	2.54	0.42
31:41:113:ARG:HD2	51:M8:33:VAL:HG13	2.01	0.42
33:61:128:LEU:O	33:61:138:ILE:N	2.49	0.42
36:78:85:LEU:HA	36:78:88:LEU:HD22	2.00	0.42
38:98:117:VAL:O	38:98:118:GLU:HB2	2.18	0.42
46:H8:141:VAL:HG21	46:H8:150:LEU:CD1	2.50	0.42
47:I8:49:LYS:NZ	47:I8:68:GLU:OE2	2.42	0.42
55:Q8:21:LYS:HA	55:Q8:21:LYS:HD2	1.65	0.42
1:1G:409:G:H2'	1:1G:410:G:O4'	2.20	0.42
1:1G:553:A:H2'	1:1G:554:C:H6	1.85	0.42
1:1G:1073:U:H2'	1:1G:1074:G:H8	1.84	0.42
1:13:76:G:H1'	1:13:95:G:N2	2.35	0.42
1:13:537:G:H5''	16:3I:113:ARG:NH1	2.34	0.42
1:13:652:U:HO2'	1:13:653:A:P	2.42	0.42
1:13:823:G:C2	1:13:878:G:C2	3.07	0.42
1:13:1226:C:H4'	1:13:1227:A:OP1	2.20	0.42
1:13:1366:C:O3'	14:1I:60:ARG:NH2	2.53	0.42
2:1L:37:MIA:H122	2:1L:37:MIA:H162	1.72	0.42
2:3L:30:G:C2	2:3L:31:A:C5	3.08	0.42
5:14:118:A:N3	5:14:178:G:H1'	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:300:A:H2'	5:14:334:C:H1'	2.01	0.42
5:14:301:G:C4	5:14:302:C:C5	3.07	0.42
5:14:631:A:H2'	5:14:632:A:O4'	2.19	0.42
5:14:950:G:C5	5:14:951:C:C4	3.08	0.42
5:14:999:U:O2'	5:14:1000:A:H5'	2.20	0.42
5:14:1203:G:H3'	5:14:1204:A:H5''	2.01	0.42
5:14:1328:G:H2'	5:14:1330:C:C4	2.55	0.42
5:14:2075:U:H2'	5:14:2238:G:N2	2.34	0.42
5:14:2277:G:C6	5:14:2278:A:N7	2.87	0.42
5:14:2607:G:H2'	5:14:2608:G:O4'	2.19	0.42
6:1E:26:PRO:C	6:1E:28:PHE:H	2.28	0.42
12:7E:10:LEU:HD22	12:7E:83:ILE:HD11	2.02	0.42
12:7E:11:THR:HA	12:7E:14:ARG:NH1	2.34	0.42
14:1I:6:ILE:HG22	14:1I:98:ILE:CG1	2.43	0.42
20:7I:21:VAL:O	20:7I:33:ILE:N	2.46	0.42
20:7I:55:ARG:HD2	20:7I:55:ARG:HA	1.71	0.42
23:AI:41:VAL:N	23:AI:44:MET:HG3	2.34	0.42
5:1H:185:U:H4'	5:1H:218:A:H4'	2.01	0.42
5:1H:250:G:OP1	36:78:60:MET:HE1	2.19	0.42
5:1H:973:A:O4'	5:1H:1188:U:C6	2.72	0.42
5:1H:1050:A:C8	5:1H:2751:G:C5	3.08	0.42
5:1H:1207:C:H2'	5:1H:1208:C:H6	1.84	0.42
5:1H:1313:U:H2'	5:1H:1610:A:C2	2.54	0.42
5:1H:1856:G:H2'	5:1H:1857:G:H5'	2.02	0.42
5:1H:2241:A:O2'	5:1H:2242:G:H5'	2.20	0.42
5:1H:2259:G:N1	5:1H:2282:G:O6	2.53	0.42
5:1H:2359:C:C4'	55:Q8:49:VAL:HG11	2.46	0.42
5:1H:2830:G:N3	5:1H:2883:A:H2	2.17	0.42
30:31:101:LEU:HD13	30:31:102:PRO:HD2	2.02	0.42
33:61:110:ASP:CB	33:61:112:LYS:H	2.32	0.42
37:88:34:LEU:HD23	37:88:104:PHE:HD2	1.85	0.42
40:B8:76:PHE:HA	40:B8:77:PRO:HD2	1.82	0.42
41:C8:105:VAL:O	41:C8:109:LEU:HD12	2.19	0.42
45:G8:54:LYS:O	45:G8:55:TYR:CG	2.73	0.42
46:H8:28:MET:HB2	46:H8:37:VAL:CG1	2.48	0.42
1:1G:141:A:H1'	1:1G:182:U:O2	2.19	0.42
1:1G:987:G:H22	1:1G:1218:C:N4	2.14	0.42
1:1G:1004:A:H8	1:1G:1036:G:H22	1.65	0.42
1:1G:1333:A:O5'	1:1G:1333:A:H8	2.02	0.42
1:1G:1411:C:C2	1:1G:1412:C:C5	3.07	0.42
7:22:39:ILE:O	7:22:43:LEU:HB2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:108:U:C2	5:14:109:G:C8	3.08	0.42
5:14:621:A:H3'	5:14:622:G:C8	2.53	0.42
5:14:872:A:C6	5:14:906:G:C2	3.08	0.42
5:14:1299:G:H5'	5:14:1301:A:O4'	2.19	0.42
5:14:1388:G:H2'	5:14:1389:G:H8	1.85	0.42
5:14:1429:G:H2'	5:14:1430:C:C6	2.54	0.42
5:14:1753:G:N1	5:14:1756:G:C2	2.87	0.42
5:14:2168:G:H2'	5:14:2168:G:N3	2.34	0.42
5:14:2525:G:N2	5:14:2539:C:C2	2.88	0.42
6:1E:11:LEU:O	6:1E:16:HIS:CE1	2.73	0.42
15:2I:31:THR:HA	15:2I:42:TRP:HA	2.01	0.42
16:3I:41:ARG:HE	16:3I:41:ARG:HB2	1.65	0.42
17:4I:13:LYS:HB3	17:4I:14:ARG:H	1.55	0.42
5:1H:223:A:N1	5:1H:407:G:O2'	2.46	0.42
5:1H:270(G):C:H2'	5:1H:270(H):C:C6	2.55	0.42
5:1H:468:G:N7	54:P8:39:ARG:NH2	2.67	0.42
5:1H:562:U:O4	5:1H:2036:C:H1'	2.19	0.42
5:1H:601:C:O2	5:1H:605:C:H4'	2.19	0.42
5:1H:822:U:C2'	5:1H:823:G:H5'	2.50	0.42
5:1H:996:A:C6	5:1H:1160:G:C2	3.08	0.42
5:1H:1558:A:H3'	5:1H:1558:A:OP2	2.20	0.42
5:1H:2611:U:OP2	5:1H:2611:U:H6	2.03	0.42
5:1H:2615:U:H2'	5:1H:2616:C:C6	2.54	0.42
5:1H:2751:G:C2	32:51:3:ARG:HB3	2.55	0.42
27:16:3:C:H2'	27:16:4:C:H6	1.85	0.42
28:11:142:VAL:HG23	28:11:193:VAL:HA	2.01	0.42
29:21:47:VAL:O	29:21:80:GLU:HA	2.19	0.42
29:21:105:THR:O	29:21:196:VAL:HB	2.19	0.42
31:41:166:ASP:N	31:41:166:ASP:OD1	2.53	0.42
33:61:95:LYS:HE2	33:61:95:LYS:HB3	1.83	0.42
41:C8:79:PHE:C	41:C8:79:PHE:HD1	2.27	0.42
42:D8:35:LEU:C	42:D8:37:VAL:H	2.26	0.42
44:F8:18:TYR:O	44:F8:21:PHE:N	2.29	0.42
45:G8:39:VAL:O	45:G8:39:VAL:HG12	2.20	0.42
48:J8:78:LYS:O	48:J8:78:LYS:HG2	2.19	0.42
50:L8:8:LEU:HD13	50:L8:31:LEU:HA	2.01	0.42
1:1G:476:G:H2'	1:1G:477:G:C8	2.54	0.42
1:1G:631:G:H8	1:1G:631:G:O5'	2.03	0.42
1:1G:934:C:O2'	1:1G:1344:C:OP2	2.26	0.42
1:1G:1104:G:C4	1:1G:1105:A:C8	3.08	0.42
1:1G:1441:G:H5''	1:1G:1442:G:H5'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:12:16:HIS:CD2	6:12:209:ARG:HG3	2.55	0.42
7:22:79:ARG:H	7:22:79:ARG:HG2	1.64	0.42
8:32:14:ARG:HA	8:32:39:PRO:HB3	2.00	0.42
1:13:247:G:OP2	21:8I:100:LYS:HB2	2.20	0.42
1:13:321:A:C2	1:13:333:G:C2	3.08	0.42
1:13:791:G:C6	1:13:792:A:N1	2.88	0.42
1:13:1410:G:H2'	1:13:1411:C:C6	2.55	0.42
5:14:443:A:H1'	5:14:1201:C:O4'	2.20	0.42
5:14:618:G:H2'	5:14:618(A):C:O4'	2.20	0.42
5:14:729:G:H2'	5:14:1775:U:H1'	2.01	0.42
5:14:1139:G:H8	5:14:1139:G:O5'	2.03	0.42
5:14:1425:G:H2'	5:14:1426:G:O4'	2.20	0.42
5:14:1464:C:O2'	5:14:1528:A:H8	1.99	0.42
5:14:1495:A:H2'	5:14:1496:A:N3	2.35	0.42
5:14:1689:A:N6	5:14:1698:A:H2	1.96	0.42
5:14:2176:A:H2'	5:14:2177:C:C6	2.55	0.42
5:14:2227:A:OP2	58:14:4162:HOH:O	2.21	0.42
6:1E:97:TRP:CH2	6:1E:176:GLU:OE2	2.73	0.42
11:6E:150:ALA:O	15:2I:57:THR:HG21	2.20	0.42
13:8E:89:ASN:O	13:8E:91:ASP:N	2.52	0.42
17:4I:94:ARG:HH22	5:1H:887:A:H5''	1.84	0.42
21:8I:36:ILE:O	21:8I:36:ILE:HG13	2.20	0.42
23:AI:64:GLU:HB2	51:M8:60:GLN:NE2	2.35	0.42
26:1K:43:C:O5'	26:1K:43:C:H6	2.01	0.42
3:2K:63:C:O2	3:2K:64:G:C8	2.72	0.42
5:1H:329:G:H4'	5:1H:330:A:OP2	2.19	0.42
5:1H:346:A:H2'	5:1H:346:A:N3	2.34	0.42
5:1H:816:C:H4'	58:1H:3962:HOH:O	2.20	0.42
5:1H:917:A:N6	27:16:80:U:H4'	2.35	0.42
5:1H:1469:A:C2	5:1H:1524:G:C2	3.08	0.42
5:1H:2138:C:H42	5:1H:2153:G:H1	1.68	0.42
5:1H:2159:G:H2'	5:1H:2160:G:O4'	2.20	0.42
5:1H:2760:C:O2'	5:1H:2761:G:H5'	2.20	0.42
5:1H:2864:G:H2'	5:1H:2865:U:H6	1.83	0.42
27:16:43:C:P	31:41:67:LYS:HZ1	2.43	0.42
27:16:75:G:H21	46:H8:85:HIS:CE1	2.37	0.42
27:16:88:C:H2'	27:16:89:G:O4'	2.19	0.42
27:16:99:A:C4	27:16:100:G:C8	3.08	0.42
29:21:181:LEU:HA	29:21:181:LEU:HD12	1.79	0.42
32:51:4:ILE:HG13	32:51:6:ARG:HB2	2.01	0.42
32:51:40:GLU:H	32:51:40:GLU:HG3	1.69	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:68:113:LYS:O	35:68:116:SER:HB3	2.20	0.42
36:78:3:LEU:HD23	36:78:3:LEU:HA	1.83	0.42
36:78:76:LYS:HD3	36:78:76:LYS:HA	1.71	0.42
45:G8:76:CYS:HB2	45:G8:82:PRO:HD3	2.01	0.42
1:1G:216:G:O2'	1:1G:217:C:O5'	2.36	0.42
1:1G:279:A:H5''	1:1G:281:G:O4'	2.20	0.42
1:1G:666:G:N2	1:1G:740:U:O2	2.51	0.42
1:1G:894:G:C6	1:1G:895:G:C5	3.08	0.42
1:1G:1050:G:C6	1:1G:1051:C:C4	3.07	0.42
1:1G:1067:A:H4'	1:1G:1068:G:O5'	2.18	0.42
8:32:156:GLU:H	8:32:156:GLU:HG3	1.56	0.42
8:32:189:PRO:HB2	8:32:194:LEU:HD21	2.02	0.42
1:13:160:A:H2'	1:13:161:A:O4'	2.19	0.42
1:13:405:U:O2'	1:13:497:U:H5'	2.20	0.42
1:13:656:C:H2'	19:6I:28:GLN:NE2	2.35	0.42
1:13:953:G:N7	17:4I:104:ARG:NH2	2.67	0.42
1:13:1353:G:OP1	25:1F:10:ARG:NH2	2.52	0.42
2:3L:18:G:N2	2:3L:55:PSU:C4	2.88	0.42
6:1E:5:ILE:HG13	6:1E:6:THR:H	1.84	0.42
6:1E:59:GLU:HB2	6:1E:221:LEU:HD11	2.02	0.42
6:1E:178:ARG:HD2	12:7E:71:GLY:O	2.20	0.42
6:1E:189:ASP:HB2	6:1E:205:ASP:HB3	2.01	0.42
9:4E:74:GLY:O	9:4E:115:VAL:HA	2.20	0.42
21:8I:67:LYS:O	21:8I:68:ARG:HB3	2.19	0.42
21:8I:83:ASP:OD1	21:8I:83:ASP:N	2.43	0.42
5:1H:270(T):G:C5	5:1H:270(U):C:C5	3.08	0.42
5:1H:309:G:H4'	45:G8:18:GLY:HA2	2.02	0.42
5:1H:332:A:C2	5:1H:335:C:C5	3.08	0.42
5:1H:458:G:O2'	54:P8:39:ARG:HD3	2.19	0.42
5:1H:812:C:H5''	5:1H:1250:G:O2'	2.20	0.42
5:1H:1243:G:H4'	36:78:7:ARG:HH21	1.85	0.42
5:1H:1668:A:H4'	5:1H:1669:A:O5'	2.19	0.42
5:1H:2056:G:N3	5:1H:2056:G:H2'	2.35	0.42
5:1H:2290:G:C6	5:1H:2291:U:N3	2.88	0.42
5:1H:2875:C:H2'	5:1H:2876:G:O4'	2.20	0.42
27:1J:4:C:N4	27:1J:116:G:H22	2.17	0.42
27:16:24:G:C2	27:16:56:G:C2	3.08	0.42
30:31:6:VAL:HG11	30:31:119:ARG:CA	2.50	0.42
31:41:6:ALA:HB3	51:M8:23:GLU:HG3	2.01	0.42
32:51:4:ILE:HG21	32:51:6:ARG:CZ	2.49	0.42
32:51:74:ASN:ND2	32:51:138:LYS:HD3	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:51:154:PRO:HB3	32:51:163:TYR:CZ	2.55	0.42
33:61:63:ALA:O	33:61:67:ARG:HB2	2.19	0.42
36:78:47:ASP:HA	36:78:48:PRO:HD3	1.74	0.42
37:88:34:LEU:HD23	37:88:104:PHE:CD2	2.54	0.42
42:D8:35:LEU:HA	42:D8:36:PRO:HD3	1.82	0.42
45:G8:40:GLU:HA	45:G8:42:VAL:H	1.85	0.42
1:1G:352:C:P	58:1G:1741:HOH:O	2.77	0.42
1:1G:352:C:O2'	1:1G:354:G:OP1	2.27	0.42
1:1G:442:C:H2'	1:1G:443:C:C6	2.55	0.42
1:1G:595:G:O5'	1:1G:595:G:H8	2.02	0.42
1:1G:596:C:H2'	1:1G:597:G:H8	1.84	0.42
1:1G:790:A:H8	1:1G:790:A:O5'	2.03	0.42
1:1G:793:U:O4	1:1G:1517:G:H5''	2.20	0.42
1:1G:1053:G:HO2'	1:1G:1054:C:P	2.42	0.42
1:1G:1113:C:H2'	1:1G:1114:C:C6	2.55	0.42
1:1G:1306:A:C2	1:1G:1307:U:H1'	2.55	0.42
7:22:73:PRO:HA	7:22:76:VAL:HG13	2.01	0.42
1:13:129:U:N3	1:13:131:C:N4	2.68	0.41
1:13:177:C:H2'	1:13:178:C:H6	1.84	0.41
1:13:304:U:H2'	1:13:305:G:C8	2.55	0.41
1:13:945:G:C2	1:13:946:A:C8	3.08	0.41
1:13:1032(A):G:H2'	1:13:1032(B):G:N7	2.35	0.41
1:13:1108:G:H5'	7:2E:176:HIS:CE1	2.55	0.41
1:13:1191:A:OP2	7:2E:3:ASN:ND2	2.53	0.41
1:13:1506:U:H2'	58:13:1805:HOH:O	2.20	0.41
3:2L:62:C:H2'	3:2L:63:C:C6	2.53	0.41
5:14:139:G:N2	5:14:1596:A:H4'	2.35	0.41
5:14:751:A:H2'	5:14:789:A:C2	2.55	0.41
5:14:1200:C:P	58:14:3958:HOH:O	2.78	0.41
5:14:1291:C:H2'	5:14:1292:U:C6	2.54	0.41
5:14:1360:A:H2'	5:14:1361:G:O4'	2.20	0.41
5:14:1422:G:C1'	5:14:1495:A:H61	2.33	0.41
5:14:1593:G:C2	5:14:1594:G:C4	3.08	0.41
5:14:1767:C:H2'	5:14:1768:U:O4'	2.20	0.41
5:14:2512:C:H5''	5:14:2513:G:OP2	2.20	0.41
5:14:2650:U:H2'	5:14:2651:C:C6	2.55	0.41
5:14:2789:C:H2'	5:14:2790:A:O4'	2.20	0.41
9:4E:11:ILE:O	9:4E:12:LEU:HB2	2.20	0.41
9:4E:20:GLN:HG2	9:4E:21:ALA:H	1.85	0.41
10:5E:55:ASP:HA	10:5E:56:PRO:HD2	1.77	0.41
10:5E:62:TRP:C	10:5E:63:TYR:CD2	2.98	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:5E:72:VAL:HG13	10:5E:73:ASN:N	2.35	0.41
15:2I:12:ARG:HG3	15:2I:13:GLN:N	2.35	0.41
2:3K:6:G:C6	2:3K:7:A:C6	3.08	0.41
5:1H:4:C:H42	5:1H:2899:G:H1	1.68	0.41
5:1H:265:A:H8	5:1H:266:G:H1'	1.82	0.41
5:1H:602:G:N2	5:1H:655:A:C8	2.75	0.41
5:1H:916:G:H2'	5:1H:917:A:H5''	2.02	0.41
5:1H:1019:U:O2'	5:1H:1021:A:H2	2.03	0.41
5:1H:1253:A:N6	58:1H:3731:HOH:O	2.41	0.41
5:1H:1264:G:OP1	52:N8:19:ARG:NH1	2.53	0.41
5:1H:1328:G:H2'	5:1H:1330:C:C4	2.54	0.41
5:1H:1799:G:H5'	5:1H:1819:A:N6	2.34	0.41
5:1H:2111:C:HO2'	5:1H:2119:A:P	2.41	0.41
5:1H:2298:A:H2'	5:1H:2299:G:O4'	2.20	0.41
5:1H:2306:C:H3'	5:1H:2307:G:H5'	2.02	0.41
5:1H:2443:C:O2'	5:1H:2444:G:H5'	2.19	0.41
5:1H:2524:G:C2	5:1H:2525:G:H1'	2.55	0.41
30:31:101:LEU:HD22	30:31:101:LEU:HA	1.76	0.41
32:51:35:VAL:HG12	32:51:37:VAL:HG23	2.02	0.41
36:78:62:LEU:O	55:Q8:13:ARG:HD3	2.20	0.41
38:98:10:LEU:O	38:98:12:ARG:N	2.53	0.41
38:98:116:LEU:HD23	38:98:116:LEU:HA	1.91	0.41
41:C8:66:ASN:ND2	41:C8:76:TYR:HB3	2.34	0.41
45:G8:85:VAL:HG22	45:G8:98:VAL:HB	2.02	0.41
46:H8:120:ILE:HG12	46:H8:172:ALA:HA	2.01	0.41
46:H8:128:VAL:CB	46:H8:161:VAL:HG21	2.50	0.41
47:I8:72:ARG:O	47:I8:75:LEU:HB2	2.20	0.41
55:Q8:52:LYS:HB3	55:Q8:52:LYS:HE3	1.65	0.41
1:1G:109:A:H2'	1:1G:326:G:H21	1.83	0.41
1:1G:255:G:H2'	1:1G:256:U:C6	2.55	0.41
1:1G:456:C:H2'	1:1G:457:C:H6	1.85	0.41
1:1G:683:G:C6	1:1G:684:A:C6	3.08	0.41
1:1G:1148:U:H2'	1:1G:1149:C:O4'	2.20	0.41
1:1G:1286:A:C8	1:1G:1286:A:C3'	3.03	0.41
1:1G:1481:U:H2'	1:1G:1482:G:H8	1.83	0.41
6:12:67:THR:HA	6:12:90:MET:HE1	2.02	0.41
7:22:106:VAL:HB	7:22:109:PRO:HB3	2.02	0.41
1:13:683:G:C6	1:13:684:A:C5	3.08	0.41
1:13:955:U:H1'	1:13:1227:A:N6	2.35	0.41
1:13:1073:U:H2'	1:13:1074:G:C8	2.55	0.41
1:13:1128:C:C6	1:13:1139:G:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1143:G:N2	1:13:1144:G:C2	2.88	0.41
1:13:1356:G:H2'	1:13:1357:A:C8	2.56	0.41
5:14:332:A:C2	5:14:335:C:C5	3.08	0.41
5:14:521:G:H2'	5:14:522:G:H8	1.86	0.41
5:14:819:A:C4	5:14:1189:A:C2	3.09	0.41
5:14:979:G:H3'	5:14:980:A:C5'	2.49	0.41
5:14:1338:G:O2'	5:14:1393:A:N1	2.48	0.41
5:14:2014:A:H2'	5:14:2015:A:C8	2.55	0.41
5:14:2301:C:H2'	5:14:2302:G:H8	1.86	0.41
5:14:2820:A:O2'	5:14:2821:A:OP1	2.37	0.41
9:4E:91:LEU:CD1	9:4E:120:THR:HG22	2.45	0.41
9:4E:152:ARG:HB2	12:7E:64:LYS:HZ3	1.84	0.41
14:1I:76:ASN:HA	14:1I:77:PRO:HD2	1.80	0.41
16:3I:82:VAL:CG1	16:3I:105:TYR:HB3	2.50	0.41
23:AI:21:GLU:HG2	23:AI:22:LEU:HD13	2.02	0.41
23:AI:32:LYS:HA	23:AI:50:ALA:HB3	2.02	0.41
5:1H:355:G:H2'	5:1H:356:G:H8	1.83	0.41
5:1H:466:A:H4'	54:P8:30:VAL:HG13	2.00	0.41
5:1H:712:G:C6	5:1H:713:G:C5	3.07	0.41
5:1H:932:G:N7	58:1H:3965:HOH:O	2.37	0.41
5:1H:2262:U:C2'	5:1H:2263:C:H5'	2.50	0.41
27:16:39:A:H2'	27:16:40:U:C6	2.54	0.41
28:11:64:ILE:HD13	28:11:64:ILE:HG21	1.84	0.41
30:31:116:ASP:OD2	36:78:1:MET:HB2	2.20	0.41
31:41:33:ARG:O	31:41:162:THR:HG23	2.21	0.41
31:41:67:LYS:HE2	31:41:67:LYS:H	1.84	0.41
32:51:41:MET:HE3	32:51:41:MET:HB2	1.65	0.41
32:51:80:SER:C	32:51:81:GLU:HG3	2.45	0.41
40:B8:88:ILE:O	40:B8:88:ILE:HG13	2.20	0.41
45:G8:9:LYS:HA	45:G8:27:VAL:CG2	2.50	0.41
47:I8:48:GLY:N	47:I8:79:VAL:O	2.52	0.41
1:1G:259:G:H1	1:1G:267:C:H42	1.67	0.41
1:1G:1054:C:H5''	1:1G:1197:G:OP1	2.21	0.41
1:1G:1099:G:OP1	6:12:148:TYR:OH	2.38	0.41
1:1G:1224:G:N2	1:1G:1322:C:O2'	2.52	0.41
1:1G:1413:A:C2	1:1G:1414:U:H1'	2.55	0.41
7:22:126:ARG:HD2	7:22:128:PHE:HE2	1.85	0.41
1:13:131:C:H2'	1:13:132:C:C6	2.55	0.41
1:13:228:A:H2'	1:13:229:U:O4'	2.20	0.41
1:13:308:C:H2'	1:13:309:G:C8	2.54	0.41
1:13:749:C:H2'	1:13:750:G:H8	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1131:G:H2'	1:13:1132:C:C6	2.54	0.41
1:13:1211:U:H4'	1:13:1212:U:O5'	2.20	0.41
2:1L:76:A:H8	5:14:2583:G:N2	2.18	0.41
5:14:29:U:H2'	5:14:30:G:C8	2.56	0.41
5:14:185:U:H2'	5:14:186:G:O4'	2.20	0.41
5:14:734:A:O2'	5:14:1635:G:H5'	2.20	0.41
5:14:917:A:N1	5:14:918:A:N3	2.68	0.41
5:14:1131:G:C2	5:14:1132:A:C4	3.08	0.41
5:14:1194:A:H2'	5:14:1195:G:O4'	2.20	0.41
5:14:1418:G:H8	5:14:1418:G:O5'	2.04	0.41
5:14:1542:G:H3'	5:14:1543:A:H5''	2.03	0.41
5:14:2516:G:C5	5:14:2517:C:C4	3.08	0.41
7:2E:13:GLY:HA3	18:5I:57:ARG:HH11	1.85	0.41
17:4I:69:GLU:HG3	31:4I:118:ARG:NH2	2.35	0.41
20:7I:50:LYS:HA	20:7I:50:LYS:HD3	1.86	0.41
21:8I:46:ASP:CG	21:8I:51:TYR:HD2	2.29	0.41
23:AI:37:ARG:H	23:AI:37:ARG:HG3	1.36	0.41
26:1K:60:U:H5'	26:1K:61:C:OP2	2.19	0.41
5:1H:880:G:HO2'	5:1H:881:G:C5'	2.28	0.41
5:1H:1018:C:O2'	5:1H:1019:U:H5'	2.21	0.41
5:1H:1188:U:O2'	5:1H:1189:A:H5'	2.20	0.41
5:1H:1279:G:N2	5:1H:1292:U:C2	2.88	0.41
5:1H:1454:U:O2'	5:1H:1455:G:N7	2.45	0.41
5:1H:2302:G:C6	5:1H:2315:G:C6	3.09	0.41
5:1H:2503:A:H3'	5:1H:2503:A:OP2	2.21	0.41
5:1H:2598:A:P	58:1H:4808:HOH:O	2.69	0.41
5:1H:2660:A:H2'	5:1H:2661:G:O4'	2.20	0.41
27:16:79:C:O5'	27:16:79:C:H6	2.03	0.41
28:11:3:VAL:HA	28:11:18:VAL:O	2.20	0.41
29:21:67:PHE:O	29:21:69:LYS:HE2	2.20	0.41
29:21:116:VAL:HG13	29:21:122:PHE:CD2	2.54	0.41
33:61:145:VAL:HB	33:61:146:ALA:H	1.56	0.41
36:78:100:LEU:HD12	36:78:100:LEU:HA	1.84	0.41
37:88:34:LEU:HD11	37:88:129:THR:HB	2.01	0.41
39:A8:29:PHE:CD1	39:A8:30:ARG:N	2.89	0.41
40:B8:102:ILE:HA	40:B8:105:LEU:HD22	2.02	0.41
46:H8:6:LYS:HE3	46:H8:8:TYR:OH	2.20	0.41
46:H8:98:MET:O	46:H8:125:LEU:HA	2.20	0.41
49:K8:33:MET:O	49:K8:37:PHE:HD1	2.02	0.41
1:1G:123:C:H2'	1:1G:124:G:C8	2.55	0.41
1:1G:422:C:H6	1:1G:422:C:H2'	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:773:G:C2	1:1G:807:A:C2	3.08	0.41
6:12:24:TRP:CD1	6:12:24:TRP:C	2.98	0.41
7:22:183:ASP:HB3	7:22:202:ILE:HG13	2.02	0.41
8:32:127:THR:OG1	8:32:128:VAL:N	2.53	0.41
8:32:170:VAL:HG12	8:32:171:GLY:H	1.85	0.41
1:13:158:G:H21	1:13:162:A:H62	1.69	0.41
1:13:645:C:C4	1:13:646:U:C4	3.09	0.41
1:13:778:G:H8	1:13:778:G:O5'	2.04	0.41
1:13:835:U:OP1	22:9I:64:ARG:NH2	2.41	0.41
1:13:874:G:C6	1:13:875:C:C4	3.08	0.41
5:14:14:A:H5''	5:14:15:G:OP2	2.20	0.41
5:14:341:G:H2'	5:14:342:G:O4'	2.19	0.41
5:14:530:G:O2'	5:14:531:C:P	2.78	0.41
5:14:695:G:C2	5:14:768:G:C5	3.08	0.41
5:14:882:G:N2	5:14:894:C:H42	2.12	0.41
5:14:952:G:C6	5:14:966:G:C6	3.08	0.41
5:14:1505:C:H2'	5:14:1506:C:C6	2.55	0.41
5:14:1858:G:H2'	5:14:1883:G:H22	1.85	0.41
5:14:2111:C:C2	5:14:2118:U:H4'	2.56	0.41
5:14:2211:G:O2'	5:14:2212:A:P	2.79	0.41
5:14:2303:G:C2'	5:14:2304:G:H5'	2.50	0.41
5:14:2629:A:N3	5:14:2629:A:H2'	2.35	0.41
5:14:2845:G:H2'	5:14:2846:G:C8	2.56	0.41
6:1E:5:ILE:HG13	6:1E:6:THR:N	2.35	0.41
6:1E:97:TRP:HH2	6:1E:176:GLU:OE2	2.03	0.41
7:2E:4:LYS:HE3	7:2E:4:LYS:HB3	1.78	0.41
8:3E:79:PHE:O	8:3E:83:SER:HB2	2.20	0.41
9:4E:26:PHE:HE1	4:4K:25:A:C2	2.38	0.41
9:4E:80:ILE:HG12	9:4E:81:GLU:N	2.35	0.41
12:7E:51:VAL:HG11	12:7E:60:ARG:HB2	2.03	0.41
13:8E:25:LYS:O	13:8E:61:ALA:N	2.52	0.41
21:8I:53:LEU:HD23	21:8I:82:MET:HE1	2.02	0.41
23:AI:7:LYS:HB3	23:AI:7:LYS:NZ	2.35	0.41
5:1H:639:U:H2'	5:1H:640:C:H6	1.82	0.41
5:1H:1359:A:N3	5:1H:1359:A:O4'	2.53	0.41
5:1H:2239:G:P	58:1H:3697:HOH:O	2.78	0.41
5:1H:2261:C:O2'	5:1H:2262:U:H5'	2.19	0.41
5:1H:2576:G:P	58:1H:3850:HOH:O	2.76	0.41
27:1J:70:C:H2'	27:1J:71:C:O4'	2.19	0.41
27:1J:79:C:H2'	27:1J:80:U:O4'	2.21	0.41
27:16:29:A:OP2	39:A8:31:SER:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:11:232:PRO:HB3	28:11:244:ARG:NH1	2.36	0.41
31:41:122:PRO:HB3	31:41:180:PHE:CD1	2.55	0.41
32:51:92:ILE:H	32:51:92:ILE:HG13	1.54	0.41
45:G8:55:TYR:N	45:G8:56:PRO:HD3	2.35	0.41
48:J8:3:LYS:C	48:J8:4:VAL:HG12	2.44	0.41
51:M8:48:ARG:O	51:M8:51:ASP:HB3	2.20	0.41
52:N8:22:HIS:CD2	52:N8:22:HIS:N	2.87	0.41
55:Q8:33:ASN:O	55:Q8:34:TRP:CD1	2.73	0.41
1:1G:52:G:C4	1:1G:53:A:C8	3.08	0.41
1:1G:1015:A:H8	1:1G:1015:A:O5'	2.04	0.41
1:1G:1132:C:O2'	1:1G:1133:G:H5'	2.20	0.41
1:1G:1246:C:H2'	1:1G:1247:U:O4'	2.19	0.41
1:1G:1516:G:H2'	1:1G:1518:A:OP2	2.20	0.41
8:32:172:PRO:HB2	8:32:187:ARG:HH12	1.85	0.41
1:13:4:U:H3	12:7E:102:ARG:HG3	1.85	0.41
1:13:51:A:OP2	1:13:52:G:H8	2.01	0.41
1:13:324:G:N2	1:13:326:G:H3'	2.35	0.41
1:13:376:G:H5''	20:7I:5:ARG:HB2	2.01	0.41
1:13:448:A:H2'	1:13:449:C:O2	2.20	0.41
1:13:960:U:C2	1:13:1225:A:C5	3.08	0.41
1:13:963:G:N2	14:1I:55:LYS:HZ1	2.17	0.41
1:13:1017:G:H2'	1:13:1018:C:C6	2.56	0.41
1:13:1160:G:N2	1:13:1177:G:H22	2.18	0.41
1:13:1248:A:H2	13:8E:70:LYS:HD2	1.86	0.41
1:13:1273:G:H3'	1:13:1274:G:C8	2.55	0.41
1:13:1312:G:H5'	23:AI:6:LYS:CD	2.51	0.41
1:13:1405:G:O4'	1:13:1519:A:H4'	2.20	0.41
5:14:1480:G:C6	5:14:1482:U:C4	3.07	0.41
5:14:1871:A:H2'	5:14:1872:A:C8	2.54	0.41
5:14:2077:A:O2'	5:14:2078:C:H5'	2.20	0.41
5:14:2358:G:C5	5:14:2359:C:C5	3.08	0.41
5:14:2370:G:C6	5:14:2371:G:C6	3.09	0.41
5:14:2541:A:H5''	5:14:2542:A:OP2	2.20	0.41
5:14:2570:G:H2'	5:14:2571:C:O4'	2.20	0.41
5:14:2687:U:C4	5:14:2688:U:C5	3.08	0.41
7:2E:11:ARG:NH2	7:2E:177:THR:O	2.51	0.41
12:7E:85:ARG:NH2	12:7E:87:SER:O	2.49	0.41
13:8E:102:LEU:HD23	13:8E:102:LEU:HA	1.89	0.41
16:3I:10:LEU:HD13	21:8I:32:TYR:CE1	2.55	0.41
20:7I:50:LYS:HD3	20:7I:51:VAL:H	1.86	0.41
3:2K:57:C:H5''	3:2K:58:A:OP2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:124:G:N2	5:1H:126:A:O2'	2.53	0.41
5:1H:657:U:H2'	5:1H:658:C:H6	1.85	0.41
5:1H:994:C:H5''	5:1H:995:C:OP1	2.20	0.41
5:1H:1195:G:N3	5:1H:1227:A:H2	2.17	0.41
5:1H:1266:G:O4'	43:E8:15:ARG:NH2	2.53	0.41
5:1H:1431:U:C2	5:1H:1563:G:N2	2.89	0.41
5:1H:1954:G:H1'	5:1H:1956:U:O4	2.20	0.41
27:1J:73:A:C4	27:1J:104:A:C2	3.09	0.41
27:1J:118:G:C5	27:1J:119:A:N7	2.88	0.41
31:41:37:VAL:HG23	31:41:99:MET:HE3	2.02	0.41
37:88:72:LYS:HA	37:88:73:PRO:HD3	1.96	0.41
41:C8:54:LYS:H	41:C8:54:LYS:HG3	1.52	0.41
53:O8:45:LYS:HA	53:O8:45:LYS:HD3	1.78	0.41
1:1G:266:G:H2'	1:1G:266:G:N3	2.35	0.41
1:1G:540:G:H2'	1:1G:541:G:H8	1.84	0.41
1:1G:755:G:H2'	1:1G:756:C:C6	2.55	0.41
1:1G:857:C:C4	1:1G:858:G:C5	3.08	0.41
1:1G:1164:G:C2	1:1G:1173:G:C6	3.09	0.41
1:1G:1228:C:H2'	1:1G:1229:A:H8	1.83	0.41
1:1G:1260:C:H3'	1:1G:1260:C:C6	2.55	0.41
1:13:598:U:H4'	12:7E:94:TYR:CG	2.54	0.41
1:13:706:A:N7	1:13:707:C:H5	2.18	0.41
1:13:728:A:N7	19:6I:54:ARG:HD2	2.35	0.41
1:13:753:A:H4'	1:13:754:C:C5'	2.50	0.41
2:1L:16:H2U:H3'	2:1L:16:H2U:O2	2.21	0.41
3:2L:63:C:H2'	3:2L:64:G:H8	1.85	0.41
2:3L:53:G:N2	2:3L:61:C:C2	2.88	0.41
5:14:248:G:OP1	5:14:248:G:H4'	2.21	0.41
5:14:260:G:O4'	5:14:621:A:H1'	2.19	0.41
5:14:376:C:H2'	5:14:377:C:C6	2.56	0.41
5:14:447:A:C8	5:14:473:G:C6	3.09	0.41
5:14:910:A:N3	5:14:2264:C:O2'	2.46	0.41
5:14:1054:A:H2'	5:14:1055:G:C8	2.56	0.41
5:14:1318:C:H5''	5:14:1319:G:OP2	2.21	0.41
5:14:1374:G:H2'	5:14:1375:C:H6	1.84	0.41
5:14:2244:U:O5'	5:14:2244:U:H6	2.03	0.41
5:14:2584:U:H5''	5:14:2585:U:OP2	2.21	0.41
7:2E:186:PHE:CE2	7:2E:188:LEU:HD23	2.54	0.41
15:2I:32:ILE:HD11	15:2I:68:ALA:HB1	2.02	0.41
17:4I:11:ARG:HB2	17:4I:11:ARG:NH1	2.36	0.41
23:AI:25:LYS:HD3	23:AI:27:GLU:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:14:LYS:HE2	24:BI:14:LYS:HB3	1.86	0.41
5:1H:529:A:C8	5:1H:530:G:C6	3.06	0.41
5:1H:821:A:C2'	5:1H:946:G:H5''	2.50	0.41
5:1H:844:C:H2'	5:1H:845:G:O4'	2.20	0.41
5:1H:1387:C:O2	5:1H:1387:C:H2'	2.21	0.41
5:1H:1544:C:O2	5:1H:1544:C:H2'	2.20	0.41
5:1H:1861:G:C2	5:1H:1862:G:C8	3.08	0.41
5:1H:2159:G:H2'	5:1H:2160:G:C8	2.56	0.41
5:1H:2377:A:H2'	5:1H:2378:A:C8	2.55	0.41
5:1H:2396:G:OP1	48:J8:25:LYS:HD2	2.19	0.41
5:1H:2443:C:OP1	30:31:68:LYS:HD3	2.20	0.41
5:1H:2503:A:H4'	5:1H:2504:U:OP1	2.20	0.41
5:1H:2812:G:C2	5:1H:2813:A:C4	3.09	0.41
34:58:34:LEU:HD12	34:58:34:LEU:HA	1.87	0.41
37:88:106:VAL:HG21	37:88:114:ALA:HB1	2.01	0.41
40:B8:29:ARG:NH1	40:B8:46:GLU:OE2	2.54	0.41
40:B8:62:THR:CG2	40:B8:75:ILE:HG12	2.50	0.41
44:F8:67:GLY:O	44:F8:69:TYR:N	2.49	0.41
46:H8:48:PHE:HE1	46:H8:71:VAL:HG11	1.86	0.41
48:J8:83:GLU:HG2	48:J8:85:LEU:N	2.21	0.41
55:Q8:18:ALA:C	55:Q8:19:SER:HG	2.21	0.41
55:Q8:46:ARG:NH2	55:Q8:48:PHE:HA	2.21	0.41
1:1G:9:G:H1	1:1G:25:C:H42	1.69	0.41
1:1G:376:G:H1	1:1G:387:U:H3	1.67	0.41
6:12:8:LYS:HE3	6:12:11:LEU:HD23	2.03	0.41
6:12:54:THR:HG22	6:12:58:ILE:HD11	2.02	0.41
6:12:108:ILE:HD13	6:12:108:ILE:HA	1.85	0.41
7:22:37:GLN:O	7:22:40:ARG:N	2.54	0.41
8:32:14:ARG:HB2	8:32:40:PRO:CD	2.51	0.41
1:13:266:G:H8	1:13:266:G:H2'	1.72	0.41
1:13:572:A:C2	1:13:864:A:C6	3.09	0.41
1:13:789:U:H5	1:13:792:A:OP2	2.04	0.41
1:13:1216:G:H5''	18:5I:5:ALA:HB2	2.03	0.41
1:13:1309:G:C6	1:13:1329:A:C2	3.08	0.41
1:13:1374:A:O2'	11:6E:28:ASN:HB3	2.21	0.41
3:2L:66:C:O2'	3:2L:67:C:H5'	2.21	0.41
5:14:27:G:O2'	5:14:28:A:OP2	2.26	0.41
5:14:111:A:C2	5:14:112:U:C2	3.09	0.41
5:14:843:G:H1	5:14:935:C:H42	1.68	0.41
5:14:1263:U:H2'	5:14:1264:G:C8	2.55	0.41
5:14:1507:A:C5	5:14:1508:A:H1'	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1774:C:O5'	5:14:1774:C:H6	2.04	0.41
5:14:1838:C:N4	5:14:1898:U:H2'	2.36	0.41
5:14:1858:G:H1'	5:14:1884:A:H62	1.84	0.41
5:14:2533:A:O5'	5:14:2533:A:H8	2.02	0.41
6:1E:178:ARG:HA	6:1E:178:ARG:HD3	1.78	0.41
9:4E:118:ILE:HG12	9:4E:119:LEU:N	2.35	0.41
16:3I:84:LEU:HB2	16:3I:105:TYR:CE2	2.56	0.41
20:7I:40:ASP:HA	20:7I:41:PRO:HD2	1.80	0.41
21:8I:68:ARG:HG3	21:8I:68:ARG:O	2.20	0.41
24:BI:33:ILE:H	24:BI:33:ILE:HG12	1.60	0.41
26:1K:37:MIA:O2'	5:1H:1913:A:N1	2.48	0.41
5:1H:273(F):C:H3'	5:1H:274:G:H5''	2.02	0.41
5:1H:654(J):A:N1	5:1H:654(M):C:N4	2.69	0.41
5:1H:761:A:N7	58:1H:4181:HOH:O	2.53	0.41
5:1H:1400:G:C6	5:1H:1401:G:C6	3.09	0.41
5:1H:1540:G:H2'	5:1H:1541:U:O4'	2.20	0.41
5:1H:1567:A:H5'	28:11:58:HIS:ND1	2.35	0.41
5:1H:1689:A:H2'	5:1H:1690:A:C8	2.55	0.41
5:1H:2060:A:OP1	30:31:69:HIS:N	2.37	0.41
5:1H:2148:G:H2'	5:1H:2149:G:O4'	2.21	0.41
5:1H:2160:G:C2	5:1H:2161:C:H1'	2.55	0.41
5:1H:2315:G:OP1	31:41:36:LYS:NZ	2.38	0.41
5:1H:2400:G:H2'	5:1H:2401:U:C6	2.56	0.41
27:1J:22:U:H3	27:1J:61:G:H1	1.69	0.41
27:16:18:G:H1	27:16:65:C:H42	1.68	0.41
27:16:116:G:H2'	27:16:117:G:O4'	2.20	0.41
29:21:170:LEU:HD21	29:21:187:ALA:HB3	2.03	0.41
39:A8:9:ARG:HH11	39:A8:9:ARG:HD2	1.67	0.41
40:B8:16:ARG:NE	40:B8:19:LEU:HD11	2.33	0.41
40:B8:90:GLN:HG3	40:B8:91:ARG:N	2.34	0.41
48:J8:81:LYS:N	48:J8:81:LYS:HD2	2.35	0.41
50:L8:30:ARG:H	50:L8:30:ARG:HG3	1.68	0.41
52:N8:41:PRO:HB2	52:N8:42:PRO:CD	2.50	0.41
54:P8:1:MET:O	54:P8:3:ARG:HG2	2.21	0.41
54:P8:25:PRO:O	54:P8:26:GLY:C	2.63	0.41
55:Q8:53:PRO:HA	55:Q8:55:ALA:H	1.81	0.41
55:Q8:59:LYS:HB2	55:Q8:60:LEU:HG	2.03	0.41
1:1G:115:G:C2	1:1G:289:G:N7	2.88	0.41
1:1G:131:C:H2'	1:1G:132:C:C6	2.56	0.41
1:1G:1041:A:N6	1:1G:1042:G:C2	2.89	0.41
1:1G:1058:G:H8	1:1G:1058:G:O5'	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1375:A:H2'	1:1G:1376:U:O4'	2.20	0.41
1:1G:1479:C:O2'	1:1G:1480:G:H5'	2.21	0.41
6:12:7:VAL:HG13	6:12:8:LYS:HG3	2.03	0.41
6:12:67:THR:HG23	6:12:90:MET:HE2	2.02	0.41
7:22:14:ILE:HG23	7:22:15:THR:OG1	2.19	0.41
8:32:61:LYS:N	8:32:203:VAL:HG22	2.35	0.41
8:32:162:LEU:HD13	8:32:181:MET:HE2	2.03	0.41
1:13:22:G:H2'	1:13:23:C:C6	2.56	0.41
1:13:266:G:N2	1:13:269:C:H5	2.18	0.41
1:13:667:G:H4'	19:6I:51:HIS:ND1	2.36	0.41
1:13:784:C:H2'	1:13:785:G:C8	2.55	0.41
1:13:963:G:H21	14:1I:55:LYS:HZ1	1.67	0.41
1:13:1277:C:O2'	1:13:1279:A:H1'	2.21	0.41
1:13:1499:A:O2'	1:13:1520:G:H5'	2.20	0.41
2:1L:30:G:H2'	2:1L:31:A:C8	2.55	0.41
3:2L:22:A:H61	3:2L:47:7MG:H2'	1.85	0.41
2:3L:40:C:H2'	2:3L:41:C:C6	2.55	0.41
5:14:524:U:H2'	5:14:525:U:C6	2.55	0.41
5:14:581:C:C2	5:14:582:G:C8	3.09	0.41
5:14:817:C:H4'	5:14:932:G:C5	2.55	0.41
5:14:836:G:H2'	5:14:837:C:C6	2.56	0.41
5:14:857:C:H2'	5:14:858:U:C6	2.56	0.41
5:14:1115:G:H2'	5:14:1116:C:C6	2.56	0.41
5:14:1475:G:H5'	5:14:1476:C:OP2	2.20	0.41
5:14:2052:G:H2'	5:14:2053:G:H8	1.85	0.41
5:14:2273:A:H2'	5:14:2274:A:H8	1.81	0.41
5:14:2748:A:H2'	5:14:2749:A:H8	1.85	0.41
5:14:2850:A:H5'	5:14:2868:A:H2	1.85	0.41
6:1E:31:TYR:O	6:1E:42:ILE:HG13	2.21	0.41
8:3E:154:ASN:OD1	8:3E:154:ASN:N	2.50	0.41
13:8E:24:GLY:HA2	13:8E:59:PHE:O	2.21	0.41
15:2I:34:ASP:OD1	15:2I:36:ASP:HB2	2.21	0.41
21:8I:88:TYR:CD2	21:8I:88:TYR:C	2.99	0.41
5:1H:7:G:C2	5:1H:8:A:C4	3.08	0.41
5:1H:728:G:H4'	28:11:13:ARG:HD3	2.03	0.41
5:1H:731:C:H5	58:1H:3699:HOH:O	2.04	0.41
5:1H:744:G:OP1	29:21:132:HIS:ND1	2.50	0.41
5:1H:825:C:H5''	58:1H:3874:HOH:O	2.20	0.41
5:1H:910:A:N3	5:1H:2264:C:O2'	2.47	0.41
5:1H:1519:G:C2'	5:1H:1520:U:H5'	2.51	0.41
5:1H:2051:A:OP2	58:1H:4167:HOH:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2728:U:H2'	5:1H:2729:G:C8	2.56	0.41
27:1J:40:U:H3'	27:1J:41:U:H5'	2.03	0.41
27:16:43:C:H5''	51:M8:1:MET:HG2	2.02	0.41
29:21:144:ARG:HH11	29:21:144:ARG:HG3	1.86	0.41
32:51:7:LEU:N	32:51:8:PRO:HD3	2.35	0.41
32:51:153:LYS:H	32:51:153:LYS:CD	2.32	0.41
39:A8:3:ARG:HG2	39:A8:4:LEU:H	1.85	0.41
46:H8:7:ALA:HB3	46:H8:61:LEU:HB2	2.02	0.41
46:H8:165:VAL:HB	46:H8:167:PRO:CD	2.51	0.41
47:I8:36:ILE:HA	47:I8:60:PHE:HA	2.01	0.41
48:J8:37:ILE:HG21	48:J8:37:ILE:HD13	1.68	0.41
55:Q8:42:ARG:N	55:Q8:42:ARG:HD2	2.35	0.41
55:Q8:48:PHE:CE2	55:Q8:52:LYS:HB2	2.56	0.41
1:1G:66:G:C2	1:1G:67:C:C6	3.09	0.41
1:1G:260:G:H2'	1:1G:261:U:C6	2.56	0.41
1:1G:562:C:H4'	1:1G:563:A:O5'	2.20	0.41
1:1G:677:U:O2'	1:1G:678:U:H5'	2.21	0.41
1:1G:793:U:O4	1:1G:1517:G:H8	2.04	0.41
1:1G:1165:C:H2'	1:1G:1166:G:O4'	2.19	0.41
1:1G:1338:G:C6	1:1G:1339:A:N1	2.89	0.41
1:13:29:G:O2'	1:13:30:U:H5'	2.21	0.41
1:13:61:G:H2'	1:13:62:U:O4'	2.20	0.41
1:13:104:G:C2	1:13:105:G:C8	3.08	0.41
1:13:128:G:H4'	21:8I:3:LYS:HG2	2.01	0.41
1:13:200:G:N2	1:13:218:C:C2	2.88	0.41
1:13:222:U:H2'	1:13:223:U:H6	1.84	0.41
1:13:266:G:H5''	1:13:267:C:H5	1.84	0.41
1:13:325:A:H2'	1:13:326:G:O4'	2.21	0.41
1:13:543:C:C2'	1:13:544:G:H5'	2.50	0.41
1:13:639:G:N2	1:13:640:A:C4	2.89	0.41
1:13:811:C:H4'	1:13:900:A:N6	2.36	0.41
1:13:940:C:H2'	1:13:941:G:C8	2.56	0.41
1:13:1077:G:N2	1:13:1080:A:OP2	2.48	0.41
1:13:1130:A:C6	1:13:1146:A:C6	3.09	0.41
1:13:1212:U:H4'	1:13:1213:A:C8	2.56	0.41
1:13:1320:C:H2'	1:13:1321:C:O4'	2.21	0.41
1:13:1329:A:N7	25:1F:7:ARG:NH2	2.69	0.41
1:13:1362(A):C:H5'	1:13:1363:A:O5'	2.21	0.41
3:2L:20:G:C2	3:2L:58:A:C2	3.09	0.41
3:2L:66:C:H2'	3:2L:67:C:H6	1.86	0.41
5:14:55:G:O2'	5:14:127:A:N1	2.37	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:74:A:C8	5:14:74:A:O5'	2.74	0.41
5:14:83:G:N2	5:14:102:G:H2'	2.35	0.41
5:14:265:A:N6	5:14:427:U:O2'	2.50	0.41
5:14:273(C):C:H5'	5:14:273(D):C:OP2	2.19	0.41
5:14:374:A:C2	5:14:401:A:C4	3.08	0.41
5:14:805:G:H4'	5:14:806:C:OP2	2.21	0.41
5:14:1142:U:O2	5:14:1142:U:H2'	2.20	0.41
5:14:1332:G:N2	5:14:1610:A:C8	2.89	0.41
5:14:1425:G:H2'	5:14:1426:G:C8	2.56	0.41
5:14:1542:G:O5'	5:14:1543:A:H5''	2.21	0.41
5:14:1551:C:C4	5:14:1552:G:C5	3.09	0.41
5:14:1859:A:N6	5:14:1883:G:HO2'	2.19	0.41
5:14:1906:G:C2	5:14:1907:G:C8	3.09	0.41
5:14:2579:C:H2'	5:14:2580:U:O4'	2.21	0.41
5:14:2588:G:OP2	58:14:3613:HOH:O	2.21	0.41
5:14:2699:C:H2'	5:14:2700:C:O4'	2.21	0.41
5:14:2749:A:H62	5:14:2753:A:N6	2.19	0.41
5:14:2843:G:N7	58:14:3675:HOH:O	2.36	0.41
6:1E:108:ILE:HA	6:1E:108:ILE:HD13	1.77	0.41
7:2E:157:ILE:HG13	7:2E:164:ARG:HG2	2.03	0.41
8:3E:9:CYS:SG	8:3E:31:CYS:O	2.79	0.41
9:4E:11:ILE:H	9:4E:11:ILE:HG12	1.46	0.41
12:7E:88:LYS:O	12:7E:92:ARG:HD3	2.21	0.41
12:7E:100:ILE:HA	12:7E:101:PRO:HD3	1.79	0.41
14:1I:78:ASN:O	14:1I:81:THR:OG1	2.31	0.41
15:2I:37:GLY:O	15:2I:39:PRO:HD3	2.20	0.41
17:4I:74:VAL:O	17:4I:78:ILE:HG13	2.21	0.41
17:4I:108:ARG:HG3	17:4I:108:ARG:NH1	2.21	0.41
19:6I:86:GLY:C	19:6I:87:ILE:HG12	2.45	0.41
20:7I:13:HIS:C	20:7I:15:PRO:HD3	2.46	0.41
20:7I:40:ASP:C	20:7I:42:ARG:H	2.28	0.41
23:AI:40:ILE:HG12	23:AI:41:VAL:N	2.36	0.41
23:AI:63:THR:CG2	23:AI:66:MET:HE3	2.49	0.41
2:3K:5:G:H2'	2:3K:6:G:C8	2.56	0.41
2:3K:11:C:H2'	2:3K:12:U:C6	2.56	0.41
5:1H:152:G:H1	5:1H:174:C:H42	1.68	0.41
5:1H:208:C:H2'	5:1H:209:C:H6	1.85	0.41
5:1H:214:G:N2	5:1H:216:A:N3	2.66	0.41
5:1H:469:G:C6	54:P8:39:ARG:NH1	2.89	0.41
5:1H:567:A:OP1	58:1H:3606:HOH:O	2.21	0.41
5:1H:817:C:H4'	5:1H:932:G:C5	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:993:G:C4	5:1H:994:C:C5	3.09	0.41
5:1H:1000:A:C8	5:1H:1154:G:N2	2.89	0.41
5:1H:1035:U:H2'	5:1H:1036:G:C8	2.56	0.41
5:1H:1055:G:O2'	5:1H:1086:A:N6	2.54	0.41
5:1H:1100:C:H2'	5:1H:1101:U:C6	2.55	0.41
5:1H:1301:A:OP1	58:1H:3612:HOH:O	2.21	0.41
5:1H:1582:C:O2'	5:1H:1586:A:C8	2.72	0.41
5:1H:1956:U:C2'	5:1H:1957:C:H5'	2.51	0.41
5:1H:1976:U:H6	5:1H:1976:U:O5'	2.03	0.41
5:1H:2123:G:H2'	5:1H:2124:G:H8	1.85	0.41
5:1H:2582:G:H2'	5:1H:2582:G:N3	2.34	0.41
5:1H:2779:U:O2	5:1H:2779:U:O4'	2.38	0.41
5:1H:2802:G:OP2	5:1H:2802:G:H8	2.04	0.41
5:1H:2841:C:O5'	5:1H:2841:C:H6	2.04	0.41
5:1H:2881:C:O2'	38:98:96:ARG:HA	2.21	0.41
27:1J:34:U:O4	27:1J:44:G:H2'	2.21	0.41
27:1J:87:G:H3'	27:1J:88:C:C5'	2.48	0.41
28:11:26:LYS:NZ	28:11:30:GLU:OE2	2.48	0.41
28:11:44:ASN:O	28:11:46:GLN:O	2.38	0.41
28:11:67:PHE:HB3	28:11:153:ALA:H	1.86	0.41
28:11:85:ASP:OD2	28:11:88:ARG:NH1	2.45	0.41
31:41:11:TYR:HA	31:41:15:VAL:HB	2.03	0.41
31:41:20:ILE:O	31:41:24:GLY:HA2	2.19	0.41
31:41:173:LEU:O	31:41:178:PHE:HB2	2.20	0.41
31:41:173:LEU:HD22	31:41:178:PHE:CE2	2.55	0.41
33:61:68:LEU:HA	33:61:68:LEU:HD12	1.75	0.41
37:88:51:ARG:O	37:88:55:VAL:HG13	2.20	0.41
39:A8:25:ARG:O	39:A8:39:ILE:HA	2.21	0.41
40:B8:108:ARG:O	40:B8:111:ARG:HG2	2.20	0.41
42:D8:40:LEU:HD22	42:D8:47:VAL:HA	2.03	0.41
45:G8:52:SER:HB3	45:G8:53:PRO:HD2	2.02	0.41
48:J8:87:PRO:O	48:J8:88:LYS:C	2.62	0.41
48:J8:92:LYS:HA	48:J8:95:LEU:CB	2.48	0.41
51:M8:22:ILE:C	51:M8:24:THR:HG23	2.46	0.41
52:N8:40:LYS:CE	52:N8:46:CYS:HB3	2.50	0.41
53:O8:28:ARG:CZ	53:O8:30:THR:HG23	2.50	0.41
55:Q8:7:HIS:O	55:Q8:10:ALA:N	2.42	0.41
55:Q8:21:LYS:HB3	55:Q8:48:PHE:HD1	1.85	0.41
55:Q8:54:GLU:C	55:Q8:56:GLU:H	2.28	0.41
1:1G:8:A:C5	8:32:209:ARG:HA	2.56	0.41
1:1G:830:G:N1	1:1G:831:U:O2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1015:A:C6	1:1G:1016:A:C5	3.09	0.41
1:1G:1028(A):C:N4	1:1G:1032(B):G:H22	2.18	0.41
1:1G:1126:U:H1'	1:1G:1127:G:OP2	2.21	0.41
1:1G:1198:G:H2'	1:1G:1199:U:C6	2.56	0.41
1:1G:1206:G:H4'	7:22:192:THR:O	2.21	0.41
1:1G:1263:C:H42	1:1G:1272:G:H1	1.68	0.41
7:22:134:ILE:HD12	7:22:151:VAL:HG11	2.02	0.41
1:13:109:A:N7	1:13:326:G:H2'	2.35	0.41
1:13:128:G:O2'	21:8I:3:LYS:HE2	2.20	0.41
1:13:222:U:C2	1:13:223:U:C5	3.09	0.41
1:13:313:A:O2'	1:13:314:C:H5'	2.20	0.41
1:13:317:G:C6	1:13:318:G:C5	3.09	0.41
1:13:434:U:H2'	1:13:435:C:C6	2.56	0.41
1:13:805:C:H2'	1:13:806:C:H6	1.86	0.41
1:13:875:C:O2'	12:7E:14:ARG:NH1	2.54	0.41
1:13:1279:A:O2'	1:13:1281:U:OP2	2.31	0.41
1:13:1413:A:H2'	1:13:1414:U:O4'	2.21	0.41
3:2L:3:C:H5'	5:14:2255:G:O2'	2.21	0.41
5:14:10:G:C6	5:14:2629:A:N7	2.88	0.41
5:14:1138:G:H2'	5:14:1139:G:O4'	2.20	0.41
5:14:1161:C:H2'	5:14:1162:G:C8	2.56	0.41
5:14:1213:A:N3	5:14:1238:G:O2'	2.47	0.41
5:14:1387:C:C2	5:14:1388:G:C8	3.09	0.41
5:14:1572:A:H2'	5:14:1573:G:O4'	2.21	0.41
5:14:1581:G:H8	5:14:1581:G:O5'	2.04	0.41
5:14:1847:A:C3'	5:14:1848:A:H5'	2.51	0.41
5:14:2166:G:N2	5:14:2171:A:N7	2.69	0.41
5:14:2297:C:H2'	5:14:2298:A:H8	1.85	0.41
5:14:2494:G:O2'	5:14:2495:G:H5'	2.21	0.41
5:14:2558:C:H2'	5:14:2559:C:O4'	2.21	0.41
8:3E:21:LEU:H	8:3E:21:LEU:HG	1.70	0.41
8:3E:108:LEU:HB3	8:3E:110:PHE:CE1	2.56	0.41
14:1I:6:ILE:HA	14:1I:97:GLU:O	2.20	0.41
16:3I:30:ALA:HB1	16:3I:31:PRO:HD2	2.02	0.41
16:3I:82:VAL:HG22	16:3I:83:VAL:H	1.86	0.41
22:9I:26:LEU:HD11	22:9I:29:PHE:CD2	2.56	0.41
5:1H:394:A:O2'	5:1H:395:U:H5'	2.20	0.41
5:1H:405:U:O2	5:1H:405:U:H2'	2.21	0.41
5:1H:528:A:N1	5:1H:2042:A:H2'	2.36	0.41
5:1H:532:A:N7	5:1H:2021:C:O2'	2.38	0.41
5:1H:551:G:H8	5:1H:551:G:O5'	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:705:A:C8	5:1H:727:A:C2	3.09	0.41
5:1H:878:A:C2	5:1H:879:G:C5	3.09	0.41
5:1H:972:G:OP2	5:1H:973:A:O2'	2.25	0.41
5:1H:1153:C:P	58:1H:4097:HOH:O	2.79	0.41
5:1H:1535:U:H5'	5:1H:1537:C:C4	2.56	0.41
5:1H:1671:U:O2'	5:1H:1673:U:H5	2.04	0.41
5:1H:1682:G:C6	5:1H:1683:C:C4	3.09	0.41
5:1H:2264:C:N4	47:I8:15:ASP:OD2	2.48	0.41
5:1H:2279:G:O6	47:I8:14:ARG:HD2	2.21	0.41
5:1H:2591:C:H2'	5:1H:2592:G:C8	2.55	0.41
5:1H:2734:A:H3'	5:1H:2735:G:H8	1.86	0.41
5:1H:2863:C:C2	5:1H:2864:G:C8	3.09	0.41
27:1J:70:C:H2'	27:1J:71:C:C6	2.52	0.41
30:31:197:ASP:O	30:31:199:TRP:N	2.53	0.41
32:51:37:VAL:HG13	32:51:68:THR:HG21	2.03	0.41
32:51:151:ILE:H	32:51:151:ILE:HG13	1.50	0.41
35:68:75:SER:CB	40:B8:74:ARG:HH12	2.34	0.41
39:A8:56:LEU:CB	39:A8:58:LEU:HD22	2.51	0.41
45:G8:20:TYR:CG	45:G8:42:VAL:HG23	2.55	0.41
48:J8:98:LEU:HD23	48:J8:98:LEU:HA	1.95	0.41
1:1G:49:U:C2	1:1G:361:G:N2	2.89	0.41
1:1G:158:G:H1	1:1G:163:C:N4	2.19	0.41
1:1G:887:G:H1	1:1G:910:C:H42	1.68	0.41
1:1G:974:A:H5'	1:1G:975:A:OP1	2.21	0.41
1:1G:1164:G:H1	1:1G:1172:C:H42	1.68	0.41
1:1G:1342:C:H2'	1:1G:1343:G:H8	1.86	0.41
7:22:175:LEU:HD12	7:22:175:LEU:H	1.86	0.41
8:32:29:PRO:HD2	8:32:30:LYS:HE2	2.03	0.41
1:13:73:G:H2'	1:13:74:C:C6	2.55	0.40
1:13:178:C:C2	1:13:179:A:C8	3.09	0.40
1:13:564:C:C6	21:8I:31:LEU:HD11	2.56	0.40
1:13:827:U:C5	1:13:870:U:C4	3.09	0.40
1:13:1090:U:H2'	1:13:1091:U:H6	1.86	0.40
1:13:1129:C:OP1	1:13:1130:A:H8	2.04	0.40
1:13:1145:C:C4'	1:13:1146:A:H5'	2.46	0.40
1:13:1286:A:C2	25:1F:18:TYR:OH	2.71	0.40
2:1L:24:G:C6	2:1L:25:C:C4	3.08	0.40
5:14:50:U:H4'	5:14:51:G:OP2	2.21	0.40
5:14:335:C:H2'	5:14:336:C:C6	2.56	0.40
5:14:530:G:O2'	5:14:531:C:O5'	2.39	0.40
5:14:553:U:C4	5:14:554:U:C4	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:816:C:P	58:14:3753:HOH:O	2.79	0.40
5:14:1028:A:N3	5:14:2486:G:O2'	2.50	0.40
5:14:1404:C:C2'	5:14:1405:U:H5'	2.50	0.40
5:14:1477:A:H2'	5:14:1478:G:O4'	2.20	0.40
5:14:1638:C:H5''	5:14:2710:C:O2'	2.21	0.40
5:14:2074:U:P	58:14:3509:HOH:O	2.74	0.40
5:14:2299:G:C6	5:14:2318:G:C8	3.08	0.40
5:14:2808:U:H5''	5:14:2891:G:O6	2.21	0.40
6:1E:17:PHE:N	6:1E:17:PHE:CD1	2.89	0.40
12:7E:87:SER:OG	12:7E:92:ARG:HA	2.20	0.40
13:8E:25:LYS:N	13:8E:60:ASP:OD1	2.48	0.40
14:1I:47:PHE:CZ	18:5I:37:PHE:HE1	2.38	0.40
14:1I:96:ILE:C	14:1I:97:GLU:HG2	2.46	0.40
15:2I:59:TYR:CE2	15:2I:63:LEU:HD11	2.56	0.40
17:4I:3:ARG:HB3	17:4I:9:ILE:HG12	2.02	0.40
17:4I:92:HIS:HA	17:4I:110:ARG:HH21	1.86	0.40
20:7I:26:ARG:NH2	20:7I:31:LYS:HD3	2.34	0.40
2:3K:6:G:O6	2:3K:7:A:N6	2.53	0.40
5:1H:270(I):G:H8	5:1H:270(I):G:O5'	2.04	0.40
5:1H:586:A:HO2'	5:1H:671:C:HO2'	1.68	0.40
5:1H:619:G:H3'	5:1H:620:G:N2	2.36	0.40
5:1H:643:A:O2'	5:1H:644:A:H5'	2.21	0.40
5:1H:989:G:N7	50:L8:13:ILE:HD11	2.36	0.40
5:1H:1011:G:OP1	41:C8:75:ASN:HB3	2.21	0.40
5:1H:1204:A:N1	5:1H:1241:A:C2	2.89	0.40
5:1H:1324:G:O2'	5:1H:1326:U:OP2	2.30	0.40
5:1H:1514:U:C4	5:1H:1515:C:N4	2.89	0.40
5:1H:1664:A:H5''	5:1H:1665:A:OP2	2.22	0.40
5:1H:1857:G:H8	5:1H:1857:G:O5'	2.04	0.40
5:1H:2339:G:H2'	5:1H:2340:G:C8	2.56	0.40
5:1H:2342:C:O2'	5:1H:2374:C:H5''	2.21	0.40
5:1H:2820:A:OP2	38:98:2:ARG:NH2	2.53	0.40
27:16:54:G:H2'	27:16:55:U:C6	2.56	0.40
29:21:105:THR:HG21	29:21:164:ARG:CZ	2.51	0.40
29:21:201:THR:HG22	29:21:202:LYS:N	2.36	0.40
33:61:29:TYR:C	33:61:32:PRO:HD2	2.45	0.40
38:98:2:ARG:HH11	38:98:2:ARG:HG2	1.86	0.40
38:98:12:ARG:HD3	38:98:16:HIS:ND1	2.36	0.40
44:F8:5:TYR:HB3	49:K8:33:MET:HB2	2.03	0.40
46:H8:160:GLY:O	46:H8:161:VAL:HG13	2.21	0.40
53:O8:15:GLU:CG	53:O8:16:CYS:H	2.34	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:115:G:H4'	1:1G:116:A:O5'	2.21	0.40
1:1G:522:C:H2'	1:1G:523:A:O4'	2.21	0.40
1:1G:561:U:O2'	1:1G:562:C:P	2.79	0.40
1:1G:881:G:C5	1:1G:882:C:C5	3.09	0.40
1:1G:962:C:C2	1:1G:963:G:C8	3.09	0.40
1:1G:1166:G:N2	1:1G:1171:G:C6	2.89	0.40
1:1G:1238:A:N7	1:1G:1303:C:H1'	2.36	0.40
1:1G:1376:U:C2	1:1G:1377:A:N7	2.89	0.40
1:1G:1402:C:H2'	1:1G:1403:C:O4'	2.21	0.40
6:12:144:ARG:HG3	6:12:145:LEU:N	2.35	0.40
1:13:8:A:N7	8:3E:208:SER:HB3	2.36	0.40
1:13:74:C:H2'	1:13:75:C:O4'	2.21	0.40
1:13:389:A:H2'	1:13:390:C:C5'	2.50	0.40
1:13:452:A:P	20:7I:43:LYS:HZ1	2.44	0.40
1:13:615:C:C2	1:13:616:G:C8	3.09	0.40
1:13:687:A:C2	1:13:704:A:C5	3.10	0.40
1:13:742:G:H4'	19:6I:58:MET:HE1	2.04	0.40
1:13:769:G:H4'	1:13:1513:A:H4'	2.03	0.40
1:13:848:C:H2'	1:13:849:C:O4'	2.20	0.40
1:13:1000:A:H4'	5:14:2137:C:OP1	2.22	0.40
1:13:1034:G:N2	1:13:1035:A:C5	2.90	0.40
1:13:1177:G:O6	1:13:1181:G:N7	2.54	0.40
1:13:1192:C:C5	1:13:1193:G:C8	3.09	0.40
1:13:1267:C:O2	25:1F:20:LYS:HD2	2.20	0.40
1:13:1286:A:H2	25:1F:18:TYR:HH	1.64	0.40
2:3L:66:U:H2'	2:3L:67:C:O4'	2.21	0.40
5:14:24:G:H2'	5:14:25:U:O4'	2.21	0.40
5:14:150:C:H2'	5:14:151:C:C6	2.56	0.40
5:14:273(D):C:H42	5:14:363(B):G:H1	1.69	0.40
5:14:455:C:N3	5:14:472:A:H2'	2.35	0.40
5:14:559:G:H2'	5:14:560:C:O4'	2.21	0.40
5:14:565:C:H2'	5:14:566:U:O4'	2.22	0.40
5:14:1104:C:H2'	5:14:1105:U:C6	2.56	0.40
5:14:1771:C:H1'	5:14:1786:A:C8	2.57	0.40
5:14:2070:G:C2	5:14:2442:C:C2	3.10	0.40
5:14:2417:C:H2'	5:14:2418:A:H8	1.86	0.40
6:1E:42:ILE:HD11	6:1E:202:PRO:HB2	2.03	0.40
9:4E:6:PHE:HD1	9:4E:6:PHE:HA	1.77	0.40
10:5E:2:ARG:HD2	10:5E:69:GLU:HB3	2.03	0.40
10:5E:67:MET:HB2	10:5E:68:PRO:HD2	2.04	0.40
13:8E:77:ILE:O	13:8E:81:ILE:HG12	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:7I:57:ARG:O	20:7I:60:LEU:N	2.53	0.40
20:7I:77:ALA:CB	20:7I:79:VAL:H	2.33	0.40
22:9I:57:GLY:C	22:9I:58:LEU:HD12	2.46	0.40
24:BI:68:LYS:HB2	24:BI:68:LYS:HE3	1.86	0.40
26:1K:10:G:HO2'	26:1K:11:C:P	2.43	0.40
3:2K:57:C:O2'	31:41:78:SER:HB2	2.21	0.40
5:1H:270:A:H1'	5:1H:370:G:C2	2.56	0.40
5:1H:270(F):U:H2'	5:1H:270(G):C:C6	2.56	0.40
5:1H:821:A:H5''	5:1H:822:U:C6	2.56	0.40
5:1H:1419:A:C8	5:1H:1421:G:C6	3.08	0.40
5:1H:1666:G:H1'	35:68:3:GLN:HE21	1.86	0.40
5:1H:1786:A:H1'	5:1H:1938:A:N6	2.37	0.40
5:1H:2371:G:H4'	53:O8:45:LYS:HG3	2.04	0.40
5:1H:2413:G:O6	58:1H:3756:HOH:O	2.22	0.40
5:1H:2592:G:C6	5:1H:2593:U:N3	2.89	0.40
27:1J:65:C:C4	27:1J:108:C:C5	3.09	0.40
27:16:2:C:H2'	27:16:3:C:C6	2.57	0.40
27:16:38:C:H2'	27:16:39:A:H5''	2.03	0.40
28:11:119:ALA:HB1	28:11:130:ALA:HB3	2.01	0.40
28:11:120:GLY:N	28:11:130:ALA:O	2.54	0.40
28:11:164:GLN:HB3	28:11:166:GLN:NE2	2.37	0.40
30:31:6:VAL:HG11	30:31:119:ARG:HA	2.03	0.40
30:31:24:LEU:HD21	30:31:114:VAL:HG12	2.02	0.40
30:31:77:ASP:HB2	30:31:79:GLY:H	1.87	0.40
34:58:40:PRO:HB3	41:C8:67:ALA:HB3	2.03	0.40
36:78:144:GLU:N	36:78:144:GLU:CD	2.77	0.40
43:E8:14:PRO:HG2	43:E8:78:GLU:HB2	2.02	0.40
47:I8:36:ILE:HD13	47:I8:36:ILE:C	2.45	0.40
48:J8:94:LEU:HD23	48:J8:94:LEU:HA	1.78	0.40
50:L8:4:LEU:HD21	50:L8:39:ASP:OD2	2.22	0.40
1:1G:12:U:H4'	1:1G:526:C:O2'	2.21	0.40
1:1G:95:G:C6	1:1G:96:G:C5	3.09	0.40
1:1G:200:G:H1	1:1G:217:C:H42	1.69	0.40
1:1G:448:A:OP2	1:1G:485:G:N2	2.45	0.40
1:1G:560:U:H5'	1:1G:566:G:N2	2.36	0.40
1:1G:1277:C:O2'	1:1G:1279:A:H1'	2.21	0.40
6:12:61:LEU:HD12	6:12:61:LEU:HA	1.90	0.40
1:13:506:G:H2'	1:13:507:C:O4'	2.21	0.40
1:13:1014:A:H2'	1:13:1015:A:C8	2.56	0.40
1:13:1051:C:H2'	1:13:1052:U:C6	2.57	0.40
1:13:1151:A:H5'	14:1I:41:PRO:HA	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1321:C:C3'	1:13:1322:C:H5''	2.47	0.40
1:13:1410:G:C4	1:13:1491:G:N2	2.89	0.40
1:13:1503:A:C2	4:4K:13:A:N7	2.90	0.40
3:2L:19:G:C2	3:2L:59:A:C4	3.09	0.40
2:3L:48:C:H5	2:3L:59:U:O4'	2.04	0.40
5:14:26:G:C6	5:14:27:G:N1	2.89	0.40
5:14:235:U:C2	5:14:236:C:C5	3.10	0.40
5:14:479:A:H4'	5:14:480:A:OP1	2.21	0.40
5:14:608:A:H2'	5:14:609:A:C8	2.56	0.40
5:14:827:U:H2'	5:14:2430:A:H2	1.85	0.40
5:14:1060:U:H5'	5:14:1061:U:C6	2.56	0.40
5:14:1063:G:C4	5:14:1076:C:N4	2.90	0.40
5:14:1148:A:O2'	5:14:1149:G:H5'	2.21	0.40
5:14:1401:G:H2'	5:14:1402:C:O4'	2.21	0.40
5:14:1448:G:O2'	5:14:1528:A:N6	2.55	0.40
5:14:1515:C:H2'	5:14:1516:U:H6	1.86	0.40
5:14:2185:C:H2'	5:14:2186:G:O4'	2.21	0.40
5:14:2245:U:H5''	5:14:2246:G:H5'	2.04	0.40
5:14:2273:A:O2'	5:14:2274:A:H5'	2.21	0.40
5:14:2320:A:C6	5:14:2333:A:C8	3.09	0.40
5:14:2418:A:H2'	5:14:2419:U:C6	2.57	0.40
5:14:2535:G:N3	5:14:2536:G:C8	2.90	0.40
5:14:2688:U:H1'	5:14:2721:A:N6	2.37	0.40
6:1E:126:GLU:HA	6:1E:129:GLU:CG	2.49	0.40
7:2E:91:LEU:O	7:2E:94:LEU:HG	2.22	0.40
10:5E:89:MET:HE1	22:9I:72:ARG:HG2	2.02	0.40
12:7E:94:TYR:HE1	12:7E:132:GLU:HB2	1.85	0.40
17:4I:81:LEU:O	17:4I:84:ILE:HG22	2.21	0.40
20:7I:11:SER:HB2	20:7I:14:ASN:HB3	2.03	0.40
20:7I:12:LYS:C	20:7I:14:ASN:H	2.28	0.40
20:7I:27:LYS:HG3	20:7I:30:GLY:HA3	2.03	0.40
21:8I:29:HIS:HA	21:8I:30:PRO:HD2	1.87	0.40
24:BI:20:LEU:O	24:BI:23:ARG:HB3	2.22	0.40
26:1K:3:C:O5'	26:1K:3:C:H6	2.05	0.40
5:1H:58:G:H5'	44:F8:74:PRO:HB3	2.03	0.40
5:1H:275:G:N2	5:1H:276:A:C6	2.89	0.40
5:1H:564:C:H2'	5:1H:565:C:O4'	2.21	0.40
5:1H:1197:G:H5'	5:1H:1228:G:O2'	2.21	0.40
5:1H:2106:G:C6	5:1H:2107:C:C4	3.09	0.40
5:1H:2107:C:O2	5:1H:2182:G:N2	2.23	0.40
5:1H:2124:G:H2'	5:1H:2125:G:H5'	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2758:A:C4	32:51:67:LEU:HD21	2.57	0.40
5:1H:2843:G:H1	5:1H:2874:C:N4	2.19	0.40
27:16:89:G:C6	27:16:89(A):A:C6	3.10	0.40
28:11:46:GLN:HB2	28:11:48:ARG:HG2	2.04	0.40
28:11:89:SER:HG	28:11:159:ALA:H	1.69	0.40
28:11:209:ALA:O	28:11:210:GLY:C	2.64	0.40
30:31:110:LEU:HD12	30:31:110:LEU:HA	1.78	0.40
31:41:107:LEU:HA	31:41:107:LEU:HD23	1.83	0.40
33:61:79:ILE:HA	33:61:79:ILE:HD13	1.69	0.40
34:58:99:LEU:HD23	34:58:99:LEU:HA	1.80	0.40
35:68:113:LYS:O	35:68:113:LYS:HD3	2.21	0.40
38:98:29:LEU:HD12	38:98:29:LEU:HA	1.76	0.40
38:98:48:VAL:O	38:98:49:ASP:C	2.63	0.40
39:A8:83:LYS:HE3	39:A8:109:GLY:O	2.21	0.40
41:C8:96:ALA:O	41:C8:100:VAL:HG23	2.21	0.40
42:D8:38:LEU:HD21	42:D8:40:LEU:O	2.21	0.40
44:F8:26:TYR:CD2	44:F8:89:ILE:HG13	2.56	0.40
45:G8:40:GLU:HA	45:G8:42:VAL:N	2.36	0.40
46:H8:147:GLY:N	46:H8:174:VAL:O	2.50	0.40
52:N8:3:LYS:HB3	52:N8:3:LYS:HE3	1.29	0.40
52:N8:56:LYS:N	52:N8:56:LYS:HD2	2.36	0.40
55:Q8:57:ARG:N	55:Q8:57:ARG:CD	2.74	0.40
55:Q8:58:ILE:O	55:Q8:58:ILE:HG22	2.21	0.40
1:1G:18:C:O5'	1:1G:18:C:H6	2.05	0.40
1:1G:96:G:C2	1:1G:97:U:C2	3.10	0.40
1:1G:376:G:O2'	1:1G:377:G:H5'	2.20	0.40
1:1G:500:G:O2'	1:1G:501:C:H5'	2.21	0.40
1:1G:719:C:C5	1:1G:720:C:C4	3.09	0.40
1:1G:1233:G:H2'	1:1G:1234:C:C6	2.56	0.40
6:12:124:SER:C	6:12:126:GLU:H	2.29	0.40
1:13:254:G:H1'	21:8I:15:MET:HG2	2.04	0.40
1:13:377:G:H5'	20:7I:5:ARG:NH1	2.36	0.40
1:13:1003:G:N2	1:13:1004:A:O2'	2.55	0.40
1:13:1126:U:O2'	1:13:1127:G:OP1	2.35	0.40
1:13:1129:C:O2	1:13:1130:A:N7	2.54	0.40
5:14:16:G:O2'	5:14:17:G:H5'	2.20	0.40
5:14:21:A:C2	5:14:520:G:C2	3.09	0.40
5:14:142:G:OP1	5:14:1598:C:H1'	2.21	0.40
5:14:218:A:C2	5:14:235:U:H4'	2.56	0.40
5:14:270(P):C:H2'	5:14:270(Q):C:C6	2.57	0.40
5:14:447:A:C5	5:14:473:G:C4	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:747:U:O2	5:14:2014:A:H1'	2.22	0.40
5:14:884:C:H5	5:14:885:C:C4	2.40	0.40
5:14:1204:A:C2	5:14:1241:A:N1	2.87	0.40
5:14:1357:U:H2'	5:14:1358:G:O4'	2.21	0.40
5:14:1405:U:H2'	5:14:1406:U:C6	2.56	0.40
5:14:1486:A:H2'	5:14:1487:G:H8	1.85	0.40
5:14:1828:G:OP2	58:14:3533:HOH:O	2.22	0.40
5:14:2076:U:H6	5:14:2076:U:O5'	2.05	0.40
5:14:2115:G:N2	5:14:2172:U:H3	2.19	0.40
5:14:2154:G:H2'	5:14:2155:G:O4'	2.21	0.40
5:14:2280:G:N3	5:14:2280:G:H2'	2.35	0.40
5:14:2300:G:H2'	5:14:2301:C:O4'	2.22	0.40
5:14:2411:A:H8	5:14:2411:A:OP2	2.05	0.40
5:14:2459:A:H5''	5:14:2460:U:OP2	2.21	0.40
5:14:2537:U:H2'	5:14:2538:C:H6	1.86	0.40
6:1E:53:ARG:HH12	6:1E:199:TYR:HA	1.87	0.40
6:1E:163:PHE:HA	6:1E:185:ILE:O	2.21	0.40
7:2E:108:ASN:HA	7:2E:109:PRO:HD2	1.96	0.40
8:3E:108:LEU:CD1	8:3E:174:LEU:HD13	2.51	0.40
8:3E:172:PRO:O	8:3E:186:LEU:HD12	2.20	0.40
11:6E:91:VAL:HG12	11:6E:95:ARG:HB3	2.04	0.40
12:7E:39:LEU:HD12	12:7E:39:LEU:HA	1.77	0.40
16:3I:87:GLY:HA2	16:3I:98:TYR:HA	2.03	0.40
19:6I:5:LYS:O	19:6I:8:LYS:HB3	2.21	0.40
21:8I:101:ARG:HH21	21:8I:101:ARG:HB2	1.87	0.40
23:AI:40:ILE:HG22	23:AI:69:HIS:O	2.21	0.40
23:AI:51:VAL:HG12	23:AI:52:TYR:N	2.33	0.40
5:1H:76:C:O2'	5:1H:77:C:H5'	2.22	0.40
5:1H:250:G:H5'	36:78:60:MET:SD	2.62	0.40
5:1H:270(R):G:H2'	5:1H:270(S):G:C8	2.56	0.40
5:1H:322:A:OP2	30:31:169:ASN:HB2	2.21	0.40
5:1H:811:U:H3'	36:78:22:GLY:CA	2.52	0.40
5:1H:1062:G:O2'	5:1H:1077:A:N6	2.55	0.40
5:1H:1291:C:O2'	5:1H:1292:U:H5'	2.22	0.40
5:1H:1444:G:C2	5:1H:1548:C:N3	2.89	0.40
5:1H:2600:A:N7	28:11:237:GLU:HG3	2.37	0.40
5:1H:2864:G:C6	5:1H:2865:U:C4	3.10	0.40
27:1J:13:A:H2'	27:1J:70:C:O2'	2.22	0.40
27:1J:38:C:O2	27:1J:48:A:H1'	2.21	0.40
28:11:80:ALA:HB2	28:11:96:HIS:CD2	2.57	0.40
28:11:172:TYR:CD2	28:11:185:VAL:C	3.00	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:31:7:TYR:HA	30:31:22:ALA:O	2.21	0.40
30:31:28:ILE:HA	30:31:112:MET:HE3	2.02	0.40
30:31:181:LEU:HD22	30:31:186:ILE:HD11	2.04	0.40
31:41:26:GLN:HE21	31:41:26:GLN:HB2	1.74	0.40
33:61:56:LYS:HG3	33:61:57:ARG:N	2.35	0.40
34:58:29:LYS:O	34:58:30:ILE:C	2.63	0.40
41:C8:75:ASN:HB2	41:C8:78:THR:H	1.86	0.40
43:E8:86:LEU:HD12	43:E8:86:LEU:C	2.46	0.40
45:G8:26:LYS:HE2	45:G8:26:LYS:HA	2.02	0.40
46:H8:98:MET:HG3	46:H8:99:TYR:N	2.37	0.40
46:H8:133:ILE:HA	46:H8:134:PRO:HD2	1.91	0.40
54:P8:10:ARG:O	54:P8:14:LYS:HB2	2.21	0.40
1:1G:165:C:H2'	1:1G:166:G:C8	2.56	0.40
1:1G:407:G:P	8:32:115:ARG:HH21	2.41	0.40
1:1G:927:G:C2	1:1G:1391:U:H1'	2.56	0.40
1:1G:1129:C:O5'	1:1G:1130:A:H5'	2.21	0.40
8:32:119:GLN:HG2	8:32:123:HIS:HE1	1.87	0.40
1:13:450:G:N7	1:13:481:G:C6	2.90	0.40
1:13:625:G:O2'	1:13:626:U:H5'	2.21	0.40
1:13:1070:U:H2'	1:13:1071:C:H6	1.86	0.40
1:13:1260:C:C6	1:13:1260:C:C3'	3.05	0.40
2:3L:48:C:H5	2:3L:59:U:C1'	2.35	0.40
5:14:25:U:C4	5:14:26:G:C6	3.09	0.40
5:14:184:C:H2'	5:14:185:U:C6	2.57	0.40
5:14:270(J):G:N2	5:14:270(K):C:O2	2.54	0.40
5:14:389:G:H8	5:14:389:G:O5'	2.05	0.40
5:14:513:A:C2	5:14:514:A:C4	3.10	0.40
5:14:552:G:C5	5:14:553:U:C5	3.10	0.40
5:14:1017:G:C2	5:14:1018:C:C2	3.09	0.40
5:14:1022:G:C6	5:14:1140:C:C4	3.10	0.40
5:14:1142:U:H5''	5:14:1142(A):A:H5'	2.03	0.40
5:14:1427:A:H4'	5:14:1428:C:O4'	2.22	0.40
5:14:2461:C:C2	5:14:2462:U:C5	3.09	0.40
5:14:2525:G:N2	5:14:2538:C:O2	2.49	0.40
5:14:2577:A:H5''	5:14:2578:G:H5'	2.04	0.40
5:14:2706:G:N7	58:14:3685:HOH:O	2.36	0.40
5:14:2844:G:H3'	5:14:2845:G:H8	1.87	0.40
7:2E:23:TYR:CD2	7:2E:24:ALA:N	2.89	0.40
7:2E:58:GLU:N	7:2E:65:ALA:HB3	2.36	0.40
8:3E:86:LYS:HE2	8:3E:86:LYS:HB3	1.78	0.40
9:4E:14:ARG:HH11	9:4E:14:ARG:HD2	1.71	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:4E:63:ARG:H	9:4E:63:ARG:HG2	1.55	0.40
13:8E:118:LYS:HB3	13:8E:118:LYS:HE2	1.37	0.40
21:8I:76:LEU:HD12	21:8I:77:VAL:H	1.85	0.40
5:1H:55:G:N3	5:1H:56:A:C8	2.90	0.40
5:1H:270(L):U:O5'	5:1H:270(L):U:H6	2.05	0.40
5:1H:308:G:C6	5:1H:309:G:C6	3.09	0.40
5:1H:763:G:O2'	5:1H:764:A:H3'	2.22	0.40
5:1H:863:A:H2	5:1H:914:C:H41	1.70	0.40
5:1H:1164:G:C6	5:1H:1165:U:C4	3.10	0.40
5:1H:1239:G:H2'	5:1H:1240:U:O4'	2.21	0.40
5:1H:1401:G:H2'	5:1H:1402:C:C6	2.56	0.40
5:1H:1515:C:H2'	5:1H:1516:U:C6	2.57	0.40
5:1H:1919:A:H5''	5:1H:1920:C:OP2	2.21	0.40
5:1H:2114:A:N3	5:1H:2114:A:H2'	2.36	0.40
5:1H:2212:A:O2'	5:1H:2213:U:O5'	2.39	0.40
5:1H:2233:U:H2'	5:1H:2234:G:C8	2.55	0.40
5:1H:2392:A:N1	5:1H:2424:C:N3	2.70	0.40
5:1H:2393:A:H2'	5:1H:2394:C:H6	1.86	0.40
5:1H:2444:G:OP2	30:31:68:LYS:HD2	2.21	0.40
5:1H:2572:A:C4	29:21:144:ARG:NH1	2.90	0.40
5:1H:2645:G:C3'	5:1H:2646:C:H5'	2.51	0.40
5:1H:2840:C:O3'	38:98:53:HIS:NE2	2.53	0.40
5:1H:2853:C:H2'	5:1H:2854:G:C8	2.57	0.40
28:11:101:GLU:HG3	28:11:102:LYS:N	2.37	0.40
31:41:116:ASP:HB3	31:41:117:PHE:H	1.46	0.40
33:61:114:LEU:HD13	33:61:130:TYR:CD1	2.56	0.40
40:B8:66:VAL:HA	40:B8:71:GLY:HA2	2.03	0.40
52:N8:30:LEU:HA	52:N8:41:PRO:O	2.21	0.40
1:1G:73:G:H1	1:1G:97:U:H3	1.70	0.40
1:1G:713:G:H2'	1:1G:714:G:C8	2.57	0.40
1:1G:1128:C:C2	1:1G:1139:G:C6	3.09	0.40
1:1G:1141:C:H6	1:1G:1141:C:O5'	2.04	0.40
1:1G:1157:A:H8	1:1G:1158:C:N4	2.19	0.40
1:1G:1273:G:H3'	1:1G:1274:G:H8	1.86	0.40
1:1G:1349:A:H2'	1:1G:1350:A:H8	1.84	0.40
1:1G:1486:G:H2'	1:1G:1487:G:C1'	2.52	0.40
6:12:58:ILE:O	6:12:62:ALA:N	2.42	0.40
6:12:98:LEU:HD23	6:12:98:LEU:HA	1.91	0.40
6:12:189:ASP:H	6:12:192:SER:HB2	1.86	0.40
7:22:47:LEU:HB2	7:22:52:LEU:HD13	2.04	0.40
7:22:112:SER:HB3	7:22:115:LEU:HD12	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:22:120:VAL:O	7:22:123:GLN:HB3	2.22	0.40
8:32:65:ARG:HD2	8:32:72:GLU:HA	2.03	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2137:C:OP1	1:1G:999:U:O2'[4_555]	2.11	0.09

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
6	12	235/256 (92%)	196 (83%)	35 (15%)	4 (2%)	7	25
6	1E	235/256 (92%)	199 (85%)	33 (14%)	3 (1%)	9	31
7	22	204/239 (85%)	185 (91%)	19 (9%)	0	100	100
7	2E	203/239 (85%)	182 (90%)	21 (10%)	0	100	100
8	32	206/209 (99%)	181 (88%)	23 (11%)	2 (1%)	12	37
8	3E	206/209 (99%)	186 (90%)	18 (9%)	2 (1%)	12	37
9	4E	149/162 (92%)	138 (93%)	10 (7%)	1 (1%)	18	45
10	5E	99/101 (98%)	93 (94%)	6 (6%)	0	100	100
11	6E	153/156 (98%)	145 (95%)	8 (5%)	0	100	100
12	7E	136/138 (99%)	125 (92%)	10 (7%)	1 (1%)	18	45
13	8E	125/128 (98%)	105 (84%)	20 (16%)	0	100	100
14	1I	97/105 (92%)	89 (92%)	8 (8%)	0	100	100
15	2I	117/129 (91%)	102 (87%)	14 (12%)	1 (1%)	14	39
16	3I	123/132 (93%)	103 (84%)	20 (16%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
17	4I	116/126 (92%)	97 (84%)	18 (16%)	1 (1%)	14	39
18	5I	58/61 (95%)	47 (81%)	9 (16%)	2 (3%)	3	13
19	6I	86/89 (97%)	79 (92%)	7 (8%)	0	100	100
20	7I	82/88 (93%)	76 (93%)	6 (7%)	0	100	100
21	8I	98/105 (93%)	94 (96%)	4 (4%)	0	100	100
22	9I	70/88 (80%)	60 (86%)	8 (11%)	2 (3%)	3	16
23	AI	79/93 (85%)	66 (84%)	9 (11%)	4 (5%)	1	8
24	BI	97/106 (92%)	80 (82%)	17 (18%)	0	100	100
25	1F	23/27 (85%)	21 (91%)	2 (9%)	0	100	100
28	11	270/276 (98%)	252 (93%)	15 (6%)	3 (1%)	11	34
29	21	203/206 (98%)	164 (81%)	29 (14%)	10 (5%)	1	8
30	31	200/210 (95%)	182 (91%)	16 (8%)	2 (1%)	12	37
31	41	179/182 (98%)	156 (87%)	20 (11%)	3 (2%)	7	25
32	51	172/180 (96%)	143 (83%)	22 (13%)	7 (4%)	2	10
33	61	144/148 (97%)	117 (81%)	24 (17%)	3 (2%)	5	21
34	58	136/140 (97%)	117 (86%)	15 (11%)	4 (3%)	3	16
35	68	120/122 (98%)	112 (93%)	8 (7%)	0	100	100
36	78	148/150 (99%)	116 (78%)	27 (18%)	5 (3%)	3	13
37	88	134/141 (95%)	110 (82%)	20 (15%)	4 (3%)	3	15
38	98	116/118 (98%)	100 (86%)	15 (13%)	1 (1%)	14	39
39	A8	109/112 (97%)	89 (82%)	19 (17%)	1 (1%)	14	39
40	B8	135/146 (92%)	120 (89%)	14 (10%)	1 (1%)	18	45
41	C8	115/118 (98%)	107 (93%)	5 (4%)	3 (3%)	4	17
42	D8	99/101 (98%)	92 (93%)	6 (6%)	1 (1%)	12	37
43	E8	111/113 (98%)	101 (91%)	10 (9%)	0	100	100
44	F8	92/96 (96%)	83 (90%)	7 (8%)	2 (2%)	5	20
45	G8	102/110 (93%)	80 (78%)	16 (16%)	6 (6%)	1	6
46	H8	173/206 (84%)	141 (82%)	24 (14%)	8 (5%)	2	9
47	I8	78/85 (92%)	66 (85%)	11 (14%)	1 (1%)	9	31
48	J8	95/98 (97%)	85 (90%)	8 (8%)	2 (2%)	5	21
49	K8	65/72 (90%)	57 (88%)	6 (9%)	2 (3%)	3	14

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
50	L8	55/60 (92%)	50 (91%)	4 (7%)	1 (2%)	6	24
51	M8	64/71 (90%)	40 (62%)	22 (34%)	2 (3%)	3	14
52	N8	56/60 (93%)	46 (82%)	8 (14%)	2 (4%)	2	12
53	O8	43/54 (80%)	28 (65%)	13 (30%)	2 (5%)	2	9
54	P8	43/49 (88%)	41 (95%)	2 (5%)	0	100	100
55	Q8	58/65 (89%)	33 (57%)	19 (33%)	6 (10%)	0	2
All	All	6312/6731 (94%)	5477 (87%)	730 (12%)	105 (2%)	7	25

All (105) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
29	21	83	ASP
32	51	169	VAL
36	78	57	THR
45	G8	54	LYS
49	K8	48	HIS
52	N8	41	PRO
52	N8	42	PRO
55	Q8	51	ALA
12	7E	86	ILE
18	5I	13	THR
18	5I	14	PRO
22	9I	22	VAL
28	11	240	ALA
29	21	60	ASN
29	21	78	LEU
32	51	168	PRO
33	61	145	VAL
37	88	66	ILE
41	C8	89	GLU
41	C8	93	LYS
46	H8	6	LYS
46	H8	60	GLU
46	H8	165	VAL
50	L8	54	VAL
51	M8	50	VAL
53	O8	17	LYS
55	Q8	55	ALA
6	12	7	VAL
17	4I	83	ASP

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Mol	Chain	Res	Type
29	21	21	VAL
32	51	10	PRO
34	58	97	ARG
34	58	128	HIS
38	98	11	ASN
44	F8	2	LYS
45	G8	53	PRO
48	J8	75	GLU
49	K8	47	ASN
55	Q8	8	LYS
55	Q8	44	LYS
6	12	73	THR
8	32	32	ALA
8	3E	30	LYS
8	3E	155	LEU
23	AI	7	LYS
29	21	82	ARG
31	41	97	ASP
34	58	22	THR
36	78	42	SER
37	88	6	ARG
39	A8	4	LEU
40	B8	106	SER
45	G8	40	GLU
45	G8	81	LYS
46	H8	59	LEU
47	I8	83	PRO
55	Q8	7	HIS
55	Q8	33	ASN
6	1E	133	LYS
6	1E	135	GLN
15	2I	82	VAL
23	AI	67	VAL
29	21	56	PRO
29	21	118	LYS
30	31	67	GLN
31	41	5	VAL
32	51	12	PRO
33	61	12	LEU
33	61	133	HIS
36	78	95	VAL
37	88	3	MET

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Mol	Chain	Res	Type
37	88	134	ARG
44	F8	68	ARG
45	G8	84	ARG
46	H8	62	PRO
46	H8	81	ARG
48	J8	76	ARG
6	12	6	THR
8	32	14	ARG
29	21	22	PRO
29	21	55	ASN
31	41	96	ARG
32	51	167	GLU
36	78	7	ARG
36	78	12	ALA
53	O8	18	ARG
9	4E	115	VAL
28	11	3	VAL
28	11	123	ALA
30	31	24	LEU
41	C8	88	ILE
6	1E	239	VAL
23	AI	41	VAL
22	9I	39	VAL
23	AI	9	VAL
42	D8	49	THR
45	G8	76	CYS
6	12	39	ILE
29	21	72	VAL
46	H8	53	ILE
46	H8	61	LEU
32	51	127	GLU
34	58	95	PRO
51	M8	5	ILE
32	51	173	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	
6	12	205/220 (93%)	160 (78%)	45 (22%)	1	4
6	1E	205/220 (93%)	158 (77%)	47 (23%)	1	3
7	22	160/188 (85%)	126 (79%)	34 (21%)	1	4
7	2E	159/188 (85%)	126 (79%)	33 (21%)	1	4
8	32	180/181 (99%)	150 (83%)	30 (17%)	2	8
8	3E	180/181 (99%)	143 (79%)	37 (21%)	1	4
9	4E	116/123 (94%)	88 (76%)	28 (24%)	1	2
10	5E	90/90 (100%)	75 (83%)	15 (17%)	2	8
11	6E	126/127 (99%)	97 (77%)	29 (23%)	1	3
12	7E	119/119 (100%)	95 (80%)	24 (20%)	1	4
13	8E	98/99 (99%)	75 (76%)	23 (24%)	1	3
14	1I	89/92 (97%)	70 (79%)	19 (21%)	1	4
15	2I	90/99 (91%)	77 (86%)	13 (14%)	3	12
16	3I	104/109 (95%)	83 (80%)	21 (20%)	1	4
17	4I	94/101 (93%)	68 (72%)	26 (28%)	0	1
18	5I	49/50 (98%)	41 (84%)	8 (16%)	2	9
19	6I	79/80 (99%)	64 (81%)	15 (19%)	1	6
20	7I	72/74 (97%)	54 (75%)	18 (25%)	0	2
21	8I	95/97 (98%)	77 (81%)	18 (19%)	1	6
22	9I	63/77 (82%)	56 (89%)	7 (11%)	6	21
23	AI	70/80 (88%)	46 (66%)	24 (34%)	0	0
24	BI	76/82 (93%)	56 (74%)	20 (26%)	0	2
25	1F	20/22 (91%)	19 (95%)	1 (5%)	22	49
28	11	214/218 (98%)	166 (78%)	48 (22%)	1	3
29	21	165/166 (99%)	121 (73%)	44 (27%)	0	1
30	31	161/166 (97%)	123 (76%)	38 (24%)	1	3
31	41	155/156 (99%)	120 (77%)	35 (23%)	1	3
32	51	145/148 (98%)	106 (73%)	39 (27%)	0	1
33	61	122/124 (98%)	81 (66%)	41 (34%)	0	0
34	58	117/119 (98%)	89 (76%)	28 (24%)	1	3
35	68	100/100 (100%)	80 (80%)	20 (20%)	1	5
36	78	116/116 (100%)	77 (66%)	39 (34%)	0	0

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
37	88	104/111 (94%)	77 (74%)	27 (26%)	0	2
38	98	101/101 (100%)	71 (70%)	30 (30%)	0	1
39	A8	87/88 (99%)	62 (71%)	25 (29%)	0	1
40	B8	120/127 (94%)	88 (73%)	32 (27%)	0	1
41	C8	93/94 (99%)	74 (80%)	19 (20%)	1	4
42	D8	82/82 (100%)	62 (76%)	20 (24%)	1	2
43	E8	92/92 (100%)	69 (75%)	23 (25%)	0	2
44	F8	76/78 (97%)	59 (78%)	17 (22%)	1	3
45	G8	85/91 (93%)	52 (61%)	33 (39%)	0	0
46	H8	154/179 (86%)	114 (74%)	40 (26%)	0	2
47	I8	61/67 (91%)	47 (77%)	14 (23%)	1	3
48	J8	82/83 (99%)	62 (76%)	20 (24%)	1	2
49	K8	62/67 (92%)	41 (66%)	21 (34%)	0	0
50	L8	49/52 (94%)	40 (82%)	9 (18%)	1	7
51	M8	59/63 (94%)	40 (68%)	19 (32%)	0	0
52	N8	51/52 (98%)	36 (71%)	15 (29%)	0	1
53	O8	44/52 (85%)	30 (68%)	14 (32%)	0	0
54	P8	38/42 (90%)	31 (82%)	7 (18%)	1	7
55	Q8	50/55 (91%)	30 (60%)	20 (40%)	0	0
All	All	5324/5588 (95%)	4052 (76%)	1272 (24%)	1	3

All (1272) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
6	1E	6	THR
6	1E	8	LYS
6	1E	15	VAL
6	1E	17	PHE
6	1E	28	PHE
6	1E	41	ILE
6	1E	51	LEU
6	1E	55	PHE
6	1E	67	THR
6	1E	69	LEU
6	1E	71	VAL

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Mol	Chain	Res	Type
6	1E	74	LYS
6	1E	93	VAL
6	1E	96	ARG
6	1E	108	ILE
6	1E	111	ARG
6	1E	121	LEU
6	1E	127	ILE
6	1E	128	GLU
6	1E	130	ARG
6	1E	133	LYS
6	1E	136	VAL
6	1E	139	LYS
6	1E	145	LEU
6	1E	146	GLN
6	1E	153	ARG
6	1E	155	LEU
6	1E	160	ASP
6	1E	162	ILE
6	1E	164	VAL
6	1E	168	THR
6	1E	172	ILE
6	1E	175	ARG
6	1E	178	ARG
6	1E	187	LEU
6	1E	190	THR
6	1E	196	LEU
6	1E	197	VAL
6	1E	200	ILE
6	1E	206	ASP
6	1E	209	ARG
6	1E	213	LEU
6	1E	217	ARG
6	1E	223	ILE
6	1E	226	ARG
6	1E	231	GLU
6	1E	233	SER
7	2E	3	ASN
7	2E	4	LYS
7	2E	5	ILE
7	2E	8	ILE
7	2E	21	ARG
7	2E	32	LEU

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Mol	Chain	Res	Type
7	2E	36	ASP
7	2E	40	ARG
7	2E	44	GLU
7	2E	45	LYS
7	2E	58	GLU
7	2E	64	VAL
7	2E	76	VAL
7	2E	84	ILE
7	2E	93	LYS
7	2E	95	THR
7	2E	97	LYS
7	2E	98	ASN
7	2E	127	ARG
7	2E	138	VAL
7	2E	144	SER
7	2E	151	VAL
7	2E	157	ILE
7	2E	166	GLU
7	2E	167	TRP
7	2E	178	LEU
7	2E	179	ARG
7	2E	188	LEU
7	2E	190	ARG
7	2E	191	THR
7	2E	192	THR
7	2E	196	LEU
7	2E	202	ILE
8	3E	3	ARG
8	3E	5	ILE
8	3E	10	ARG
8	3E	15	GLU
8	3E	18	LYS
8	3E	21	LEU
8	3E	24	GLU
8	3E	31	CYS
8	3E	49	ARG
8	3E	52	SER
8	3E	53	ASP
8	3E	58	LEU
8	3E	59	ARG
8	3E	70	ILE
8	3E	81	GLU

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Mol	Chain	Res	Type
8	3E	85	LYS
8	3E	86	LYS
8	3E	88	VAL
8	3E	104	VAL
8	3E	106	TYR
8	3E	122	ARG
8	3E	127	THR
8	3E	135	LEU
8	3E	141	ARG
8	3E	146	ILE
8	3E	151	LYS
8	3E	153	ARG
8	3E	155	LEU
8	3E	160	GLN
8	3E	168	ARG
8	3E	170	VAL
8	3E	179	GLU
8	3E	184	LYS
8	3E	188	LEU
8	3E	190	ASP
8	3E	193	ASP
8	3E	194	LEU
9	4E	5	ASP
9	4E	6	PHE
9	4E	10	MET
9	4E	11	ILE
9	4E	13	ILE
9	4E	14	ARG
9	4E	16	THR
9	4E	25	ARG
9	4E	31	LEU
9	4E	33	VAL
9	4E	41	VAL
9	4E	50	GLU
9	4E	57	LYS
9	4E	68	GLU
9	4E	71	LEU
9	4E	72	GLN
9	4E	73	ASN
9	4E	79	GLU
9	4E	80	ILE
9	4E	87	SER

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Mol	Chain	Res	Type
9	4E	91	LEU
9	4E	92	LYS
9	4E	100	VAL
9	4E	112	LEU
9	4E	131	ILE
9	4E	144	THR
9	4E	151	LEU
9	4E	153	LYS
10	5E	8	ILE
10	5E	21	LEU
10	5E	23	LYS
10	5E	25	ILE
10	5E	41	GLU
10	5E	43	LEU
10	5E	55	ASP
10	5E	64	GLN
10	5E	65	VAL
10	5E	70	ASP
10	5E	75	LEU
10	5E	89	MET
10	5E	91	VAL
10	5E	92	LYS
10	5E	98	LEU
11	6E	6	ARG
11	6E	9	VAL
11	6E	10	ARG
11	6E	13	GLN
11	6E	21	VAL
11	6E	24	THR
11	6E	30	ILE
11	6E	36	LYS
11	6E	38	LEU
11	6E	41	ARG
11	6E	45	ASP
11	6E	50	ILE
11	6E	53	LYS
11	6E	54	THR
11	6E	79	ARG
11	6E	80	VAL
11	6E	90	GLU
11	6E	91	VAL
11	6E	104	LEU

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Mol	Chain	Res	Type
11	6E	113	GLU
11	6E	120	ILE
11	6E	124	LEU
11	6E	131	LYS
11	6E	136	LYS
11	6E	137	LYS
11	6E	146	GLU
11	6E	154	TYR
11	6E	155	ARG
11	6E	156	TRP
12	7E	1	MET
12	7E	19	VAL
12	7E	25	ASP
12	7E	26	VAL
12	7E	30	ARG
12	7E	37	ARG
12	7E	39	LEU
12	7E	45	ILE
12	7E	49	GLU
12	7E	51	VAL
12	7E	68	ARG
12	7E	77	GLU
12	7E	79	VAL
12	7E	80	ILE
12	7E	82	HIS
12	7E	83	ILE
12	7E	85	ARG
12	7E	102	ARG
12	7E	104	ARG
12	7E	111	ILE
12	7E	125	ARG
12	7E	129	VAL
12	7E	134	ILE
12	7E	137	VAL
13	8E	7	THR
13	8E	9	ARG
13	8E	10	ARG
13	8E	14	VAL
13	8E	16	ARG
13	8E	20	ARG
13	8E	31	GLN
13	8E	38	GLN

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Mol	Chain	Res	Type
13	8E	42	ARG
13	8E	44	VAL
13	8E	47	LEU
13	8E	53	VAL
13	8E	79	LEU
13	8E	93	ARG
13	8E	95	LYS
13	8E	96	LEU
13	8E	105	ASP
13	8E	108	VAL
13	8E	111	ARG
13	8E	112	LYS
13	8E	117	HIS
13	8E	118	LYS
13	8E	120	ARG
14	1I	4	ILE
14	1I	5	ARG
14	1I	16	LEU
14	1I	19	SER
14	1I	24	VAL
14	1I	25	GLU
14	1I	45	ARG
14	1I	55	LYS
14	1I	62	HIS
14	1I	66	ARG
14	1I	70	ARG
14	1I	75	ILE
14	1I	76	ASN
14	1I	88	LEU
14	1I	92	THR
14	1I	96	ILE
14	1I	97	GLU
14	1I	98	ILE
14	1I	100	THR
15	2I	13	GLN
15	2I	28	THR
15	2I	29	ILE
15	2I	32	ILE
15	2I	81	ASP
15	2I	87	THR
15	2I	93	GLN
15	2I	95	ILE

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Mol	Chain	Res	Type
15	2I	103	LEU
15	2I	105	VAL
15	2I	106	LYS
15	2I	109	VAL
15	2I	114	VAL
16	3I	6	THR
16	3I	7	ILE
16	3I	11	VAL
16	3I	18	VAL
16	3I	20	LYS
16	3I	33	ARG
16	3I	34	ARG
16	3I	36	VAL
16	3I	47	LYS
16	3I	54	LYS
16	3I	60	LEU
16	3I	62	SER
16	3I	64	TYR
16	3I	65	GLU
16	3I	67	THR
16	3I	81	SER
16	3I	82	VAL
16	3I	83	VAL
16	3I	89	ARG
16	3I	90	VAL
16	3I	96	VAL
17	4I	3	ARG
17	4I	9	ILE
17	4I	13	LYS
17	4I	14	ARG
17	4I	19	LEU
17	4I	20	THR
17	4I	22	ILE
17	4I	44	ARG
17	4I	45	VAL
17	4I	46	LYS
17	4I	48	LEU
17	4I	56	LEU
17	4I	64	TRP
17	4I	67	GLU
17	4I	70	LEU
17	4I	86	CYS

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Mol	Chain	Res	Type
17	4I	88	ARG
17	4I	94	ARG
17	4I	98	VAL
17	4I	103	THR
17	4I	105	THR
17	4I	106	ASN
17	4I	108	ARG
17	4I	114	ARG
17	4I	115	LYS
17	4I	117	VAL
18	5I	4	LYS
18	5I	12	ARG
18	5I	18	VAL
18	5I	23	ARG
18	5I	33	VAL
18	5I	41	ARG
18	5I	44	LEU
18	5I	50	LYS
19	6I	6	GLU
19	6I	11	VAL
19	6I	12	ILE
19	6I	17	ARG
19	6I	26	GLU
19	6I	39	LEU
19	6I	41	GLU
19	6I	47	LYS
19	6I	64	ARG
19	6I	66	LEU
19	6I	67	LEU
19	6I	68	ARG
19	6I	82	ILE
19	6I	87	ILE
19	6I	88	ARG
20	7I	2	VAL
20	7I	4	ILE
20	7I	6	LEU
20	7I	20	VAL
20	7I	21	VAL
20	7I	22	THR
20	7I	27	LYS
20	7I	33	ILE
20	7I	36	ILE

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Mol	Chain	Res	Type
20	7I	45	THR
20	7I	47	ASP
20	7I	50	LYS
20	7I	51	VAL
20	7I	54	GLU
20	7I	69	THR
20	7I	72	ARG
20	7I	82	GLN
20	7I	83	GLU
21	8I	5	VAL
21	8I	9	VAL
21	8I	20	THR
21	8I	37	LYS
21	8I	38	ARG
21	8I	48	GLU
21	8I	52	LYS
21	8I	53	LEU
21	8I	57	VAL
21	8I	60	ILE
21	8I	63	ARG
21	8I	68	ARG
21	8I	74	LEU
21	8I	85	VAL
21	8I	89	LEU
21	8I	92	ARG
21	8I	97	SER
21	8I	101	ARG
22	9I	31	LEU
22	9I	32	ARG
22	9I	37	VAL
22	9I	75	ILE
22	9I	82	THR
22	9I	86	VAL
22	9I	88	LYS
23	AI	4	SER
23	AI	5	LEU
23	AI	6	LYS
23	AI	7	LYS
23	AI	11	VAL
23	AI	14	HIS
23	AI	22	LEU
23	AI	29	ARG

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Mol	Chain	Res	Type
23	AI	30	LEU
23	AI	31	ILE
23	AI	32	LYS
23	AI	33	THR
23	AI	37	ARG
23	AI	41	VAL
23	AI	43	GLU
23	AI	44	MET
23	AI	56	GLN
23	AI	58	VAL
23	AI	60	VAL
23	AI	61	TYR
23	AI	63	THR
23	AI	67	VAL
23	AI	71	LEU
23	AI	77	THR
24	BI	10	LEU
24	BI	20	LEU
24	BI	24	LEU
24	BI	29	LYS
24	BI	33	ILE
24	BI	36	LEU
24	BI	37	SER
24	BI	41	ILE
24	BI	51	GLU
24	BI	53	LEU
24	BI	55	ILE
24	BI	57	ARG
24	BI	62	LEU
24	BI	68	LYS
24	BI	72	LEU
24	BI	73	HIS
24	BI	75	ASN
24	BI	87	LYS
24	BI	90	GLN
24	BI	99	LEU
25	1F	6	ARG
28	11	6	PHE
28	11	13	ARG
28	11	14	ARG
28	11	15	PHE
28	11	17	THR

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Mol	Chain	Res	Type
28	11	27	THR
28	11	30	GLU
28	11	34	VAL
28	11	37	LEU
28	11	46	GLN
28	11	61	LEU
28	11	64	ILE
28	11	65	ILE
28	11	71	ASP
28	11	73	VAL
28	11	82	ILE
28	11	95	LEU
28	11	99	ASP
28	11	103	ARG
28	11	105	ILE
28	11	106	ILE
28	11	113	VAL
28	11	117	VAL
28	11	136	ILE
28	11	140	THR
28	11	142	VAL
28	11	148	GLU
28	11	155	LEU
28	11	162	SER
28	11	165	ILE
28	11	173	VAL
28	11	192	THR
28	11	193	VAL
28	11	200	ASP
28	11	212	SER
28	11	217	ARG
28	11	221	VAL
28	11	229	VAL
28	11	242	ARG
28	11	257	LEU
28	11	259	THR
28	11	261	LYS
28	11	262	ARG
28	11	263	ARG
28	11	266	SER
28	11	270	ILE
28	11	271	ILE

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Mol	Chain	Res	Type
28	11	273	ARG
29	21	2	LYS
29	21	5	LEU
29	21	12	THR
29	21	13	ARG
29	21	14	ILE
29	21	16	ARG
29	21	25	VAL
29	21	26	ILE
29	21	33	VAL
29	21	34	VAL
29	21	41	LYS
29	21	47	VAL
29	21	49	LEU
29	21	52	LEU
29	21	54	GLN
29	21	55	ASN
29	21	59	VAL
29	21	63	LEU
29	21	67	PHE
29	21	69	LYS
29	21	72	VAL
29	21	87	GLU
29	21	89	ASP
29	21	105	THR
29	21	107	THR
29	21	111	ARG
29	21	116	VAL
29	21	117	MET
29	21	118	LYS
29	21	119	ARG
29	21	138	PRO
29	21	144	ARG
29	21	146	THR
29	21	166	THR
29	21	167	VAL
29	21	175	VAL
29	21	179	GLU
29	21	181	LEU
29	21	184	VAL
29	21	195	LEU
29	21	196	VAL

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Mol	Chain	Res	Type
29	21	200	GLU
29	21	201	THR
29	21	202	LYS
30	31	8	GLN
30	31	9	ILE
30	31	12	LEU
30	31	15	SER
30	31	18	ARG
30	31	24	LEU
30	31	28	ILE
30	31	32	LEU
30	31	33	LEU
30	31	48	THR
30	31	52	LYS
30	31	57	VAL
30	31	64	ILE
30	31	67	GLN
30	31	70	THR
30	31	74	ARG
30	31	77	ASP
30	31	88	VAL
30	31	98	SER
30	31	101	LEU
30	31	106	ARG
30	31	108	LYS
30	31	112	MET
30	31	127	GLU
30	31	136	THR
30	31	152	GLU
30	31	153	SER
30	31	158	THR
30	31	165	ARG
30	31	170	LEU
30	31	176	LEU
30	31	181	LEU
30	31	183	VAL
30	31	191	ARG
30	31	192	LEU
30	31	201	VAL
30	31	203	GLN
30	31	204	ASN
31	41	10	LYS

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Mol	Chain	Res	Type
31	41	14	GLU
31	41	20	ILE
31	41	21	ARG
31	41	26	GLN
31	41	28	VAL
31	41	31	VAL
31	41	34	LEU
31	41	43	LEU
31	41	45	GLU
31	41	52	ILE
31	41	58	GLN
31	41	62	LEU
31	41	64	THR
31	41	66	GLN
31	41	67	LYS
31	41	70	VAL
31	41	74	LYS
31	41	76	SER
31	41	80	PHE
31	41	82	LEU
31	41	84	LYS
31	41	90	LEU
31	41	94	LEU
31	41	101	ILE
31	41	104	GLU
31	41	115	ARG
31	41	116	ASP
31	41	133	LEU
31	41	139	LEU
31	41	160	VAL
31	41	161	THR
31	41	162	THR
31	41	165	THR
31	41	168	GLU
32	51	3	ARG
32	51	4	ILE
32	51	7	LEU
32	51	10	PRO
32	51	11	VAL
32	51	24	VAL
32	51	26	VAL
32	51	34	GLU

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Mol	Chain	Res	Type
32	51	41	MET
32	51	43	VAL
32	51	45	VAL
32	51	50	VAL
32	51	64	LEU
32	51	68	THR
32	51	71	LEU
32	51	72	ILE
32	51	77	LYS
32	51	80	SER
32	51	81	GLU
32	51	84	SER
32	51	88	LEU
32	51	89	ILE
32	51	92	ILE
32	51	99	VAL
32	51	114	VAL
32	51	121	ILE
32	51	122	THR
32	51	125	VAL
32	51	129	THR
32	51	131	VAL
32	51	132	ARG
32	51	136	ILE
32	51	139	GLN
32	51	141	VAL
32	51	151	ILE
32	51	153	LYS
32	51	169	VAL
32	51	171	LEU
32	51	175	LYS
33	61	7	GLU
33	61	9	LEU
33	61	20	ASP
33	61	35	LEU
33	61	38	LEU
33	61	40	THR
33	61	41	GLU
33	61	44	LEU
33	61	45	LYS
33	61	56	LYS
33	61	60	GLU

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Mol	Chain	Res	Type
33	61	64	GLU
33	61	68	LEU
33	61	70	GLU
33	61	71	ILE
33	61	77	LEU
33	61	78	THR
33	61	79	ILE
33	61	81	VAL
33	61	82	ARG
33	61	85	GLU
33	61	86	THR
33	61	88	ILE
33	61	92	VAL
33	61	95	LYS
33	61	97	ILE
33	61	101	LEU
33	61	102	SER
33	61	107	VAL
33	61	108	THR
33	61	110	ASP
33	61	114	LEU
33	61	117	GLU
33	61	122	GLU
33	61	131	LYS
33	61	135	GLU
33	61	136	VAL
33	61	138	ILE
33	61	140	LEU
33	61	142	VAL
33	61	145	VAL
34	58	1	MET
34	58	2	LYS
34	58	5	VAL
34	58	7	LYS
34	58	9	VAL
34	58	10	GLU
34	58	16	ILE
34	58	28	THR
34	58	29	LYS
34	58	32	THR
34	58	34	LEU
34	58	38	HIS

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Mol	Chain	Res	Type
34	58	43	THR
34	58	58	ASP
34	58	60	ILE
34	58	61	ARG
34	58	65	LYS
34	58	67	LEU
34	58	87	LEU
34	58	90	MET
34	58	97	ARG
34	58	98	VAL
34	58	99	LEU
34	58	118	LYS
34	58	120	LEU
34	58	127	ASP
34	58	128	HIS
34	58	134	ARG
35	68	8	LEU
35	68	9	GLU
35	68	14	THR
35	68	20	MET
35	68	23	ARG
35	68	24	VAL
35	68	25	LEU
35	68	28	SER
35	68	31	LYS
35	68	38	VAL
35	68	58	VAL
35	68	68	GLU
35	68	88	ASN
35	68	91	LEU
35	68	92	GLU
35	68	94	ARG
35	68	96	THR
35	68	98	VAL
35	68	112	MET
35	68	113	LYS
36	78	6	LEU
36	78	7	ARG
36	78	10	PRO
36	78	13	ASN
36	78	15	ARG
36	78	16	ARG

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Mol	Chain	Res	Type
36	78	19	VAL
36	78	29	LYS
36	78	32	THR
36	78	39	LYS
36	78	41	ARG
36	78	45	LEU
36	78	46	LYS
36	78	49	ARG
36	78	50	ARG
36	78	56	SER
36	78	57	THR
36	78	64	LYS
36	78	70	GLN
36	78	71	VAL
36	78	75	ILE
36	78	76	LYS
36	78	83	VAL
36	78	86	LYS
36	78	88	LEU
36	78	95	VAL
36	78	101	VAL
36	78	105	LEU
36	78	106	LEU
36	78	112	LEU
36	78	114	ILE
36	78	115	LEU
36	78	117	GLU
36	78	125	VAL
36	78	126	VAL
36	78	138	LEU
36	78	144	GLU
36	78	146	VAL
36	78	147	LEU
37	88	1	MET
37	88	2	LEU
37	88	5	ARG
37	88	7	MET
37	88	14	ARG
37	88	18	LYS
37	88	21	THR
37	88	25	ASP
37	88	27	VAL

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Mol	Chain	Res	Type
37	88	35	VAL
37	88	45	GLN
37	88	51	ARG
37	88	55	VAL
37	88	56	ARG
37	88	58	PHE
37	88	59	ARG
37	88	82	ARG
37	88	85	LYS
37	88	99	PRO
37	88	102	VAL
37	88	103	MET
37	88	109	VAL
37	88	112	GLU
37	88	127	ILE
37	88	129	THR
37	88	134	ARG
37	88	139	GLU
38	98	2	ARG
38	98	4	LEU
38	98	6	SER
38	98	9	LYS
38	98	10	LEU
38	98	12	ARG
38	98	18	LEU
38	98	24	GLN
38	98	28	LEU
38	98	29	LEU
38	98	33	ARG
38	98	34	ILE
38	98	35	THR
38	98	36	THR
38	98	37	THR
38	98	44	LEU
38	98	65	LEU
38	98	67	LEU
38	98	71	GLN
38	98	73	VAL
38	98	75	LEU
38	98	79	LEU
38	98	81	ASP
38	98	88	ARG

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Mol	Chain	Res	Type
38	98	91	GLN
38	98	102	GLU
38	98	104	ARG
38	98	105	ARG
38	98	117	VAL
38	98	118	GLU
39	A8	4	LEU
39	A8	8	GLU
39	A8	15	ARG
39	A8	19	LYS
39	A8	30	ARG
39	A8	33	LYS
39	A8	35	ILE
39	A8	36	TYR
39	A8	39	ILE
39	A8	46	VAL
39	A8	48	LEU
39	A8	50	SER
39	A8	54	LEU
39	A8	57	LYS
39	A8	61	ASN
39	A8	69	VAL
39	A8	73	LEU
39	A8	80	LEU
39	A8	83	LYS
39	A8	89	ARG
39	A8	98	VAL
39	A8	101	LEU
39	A8	106	ARG
39	A8	107	GLU
39	A8	111	GLU
40	B8	7	ILE
40	B8	11	GLU
40	B8	13	ARG
40	B8	15	VAL
40	B8	16	ARG
40	B8	21	GLU
40	B8	27	THR
40	B8	30	VAL
40	B8	39	ARG
40	B8	40	THR
40	B8	42	ILE

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Mol	Chain	Res	Type
40	B8	49	VAL
40	B8	50	ILE
40	B8	58	ASN
40	B8	59	THR
40	B8	64	ARG
40	B8	65	LYS
40	B8	74	ARG
40	B8	78	LEU
40	B8	86	ILE
40	B8	87	ASP
40	B8	88	ILE
40	B8	98	LYS
40	B8	99	LEU
40	B8	106	SER
40	B8	108	ARG
40	B8	110	ILE
40	B8	111	ARG
40	B8	112	ARG
40	B8	121	ILE
40	B8	128	GLU
40	B8	136	GLN
41	C8	3	ARG
41	C8	5	LYS
41	C8	13	LYS
41	C8	27	LEU
41	C8	34	LYS
41	C8	47	TYR
41	C8	60	LEU
41	C8	64	ARG
41	C8	70	ARG
41	C8	74	LEU
41	C8	79	PHE
41	C8	85	LYS
41	C8	89	GLU
41	C8	98	LEU
41	C8	100	VAL
41	C8	104	GLN
41	C8	108	GLU
41	C8	109	LEU
41	C8	117	GLN
42	D8	6	LYS
42	D8	7	THR

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Mol	Chain	Res	Type
42	D8	18	LEU
42	D8	20	LEU
42	D8	22	VAL
42	D8	24	LYS
42	D8	34	GLU
42	D8	35	LEU
42	D8	37	VAL
42	D8	39	LEU
42	D8	40	LEU
42	D8	44	LYS
42	D8	45	THR
42	D8	47	VAL
42	D8	62	LEU
42	D8	70	ILE
42	D8	73	SER
42	D8	78	LYS
42	D8	79	VAL
42	D8	95	LEU
43	E8	11	ARG
43	E8	12	ILE
43	E8	14	PRO
43	E8	19	LEU
43	E8	20	VAL
43	E8	24	ILE
43	E8	30	GLU
43	E8	39	THR
43	E8	51	LEU
43	E8	52	GLU
43	E8	62	HIS
43	E8	63	ASP
43	E8	66	GLU
43	E8	68	ARG
43	E8	69	LEU
43	E8	70	TYR
43	E8	76	VAL
43	E8	92	ARG
43	E8	96	ILE
43	E8	97	LYS
43	E8	100	THR
43	E8	103	ILE
43	E8	107	LEU
44	F8	1	MET

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Mol	Chain	Res	Type
44	F8	2	LYS
44	F8	12	VAL
44	F8	15	GLU
44	F8	23	GLU
44	F8	27	THR
44	F8	40	LYS
44	F8	45	THR
44	F8	54	VAL
44	F8	57	LEU
44	F8	60	ARG
44	F8	65	ARG
44	F8	76	ARG
44	F8	80	ILE
44	F8	81	VAL
44	F8	87	GLN
44	F8	88	LYS
45	G8	4	LYS
45	G8	6	HIS
45	G8	7	VAL
45	G8	24	VAL
45	G8	26	LYS
45	G8	27	VAL
45	G8	31	LEU
45	G8	33	LYS
45	G8	38	ILE
45	G8	40	GLU
45	G8	42	VAL
45	G8	44	ILE
45	G8	50	ARG
45	G8	54	LYS
45	G8	55	TYR
45	G8	57	GLN
45	G8	61	ILE
45	G8	62	GLU
45	G8	63	LYS
45	G8	64	GLU
45	G8	67	LEU
45	G8	70	SER
45	G8	79	CYS
45	G8	82	PRO
45	G8	84	ARG
45	G8	85	VAL

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Mol	Chain	Res	Type
45	G8	86	ARG
45	G8	88	LYS
45	G8	90	LEU
45	G8	94	LYS
45	G8	97	ARG
45	G8	98	VAL
45	G8	99	CYS
46	H8	4	ARG
46	H8	6	LYS
46	H8	10	ARG
46	H8	13	GLU
46	H8	19	ARG
46	H8	23	LYS
46	H8	33	LEU
46	H8	37	VAL
46	H8	41	LEU
46	H8	42	VAL
46	H8	43	GLU
46	H8	49	ARG
46	H8	53	ILE
46	H8	54	HIS
46	H8	60	GLU
46	H8	61	LEU
46	H8	71	VAL
46	H8	76	LEU
46	H8	77	ASP
46	H8	80	ARG
46	H8	86	VAL
46	H8	90	VAL
46	H8	91	LEU
46	H8	94	GLU
46	H8	98	MET
46	H8	103	ARG
46	H8	105	VAL
46	H8	117	LEU
46	H8	118	GLN
46	H8	119	GLU
46	H8	128	VAL
46	H8	132	ASN
46	H8	135	GLU
46	H8	140	ASP
46	H8	144	LEU

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Mol	Chain	Res	Type
46	H8	146	ILE
46	H8	154	ASP
46	H8	161	VAL
46	H8	166	SER
46	H8	171	ILE
47	I8	10	THR
47	I8	11	ARG
47	I8	19	LYS
47	I8	29	GLN
47	I8	31	VAL
47	I8	36	ILE
47	I8	38	VAL
47	I8	41	ARG
47	I8	44	ARG
47	I8	53	MET
47	I8	57	PHE
47	I8	58	THR
47	I8	60	PHE
47	I8	74	ARG
48	J8	2	SER
48	J8	4	VAL
48	J8	19	GLN
48	J8	25	LYS
48	J8	26	ARG
48	J8	30	VAL
48	J8	41	ARG
48	J8	46	LEU
48	J8	62	VAL
48	J8	65	SER
48	J8	67	ILE
48	J8	68	PRO
48	J8	70	VAL
48	J8	74	VAL
48	J8	78	LYS
48	J8	80	LEU
48	J8	81	LYS
48	J8	82	LEU
48	J8	91	LYS
48	J8	98	LEU
49	K8	5	GLU
49	K8	8	LYS
49	K8	15	LYS

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Mol	Chain	Res	Type
49	K8	16	LEU
49	K8	17	SER
49	K8	19	VAL
49	K8	20	GLU
49	K8	24	LEU
49	K8	29	LYS
49	K8	31	GLU
49	K8	32	LEU
49	K8	40	SER
49	K8	41	ILE
49	K8	45	SER
49	K8	47	ASN
49	K8	48	HIS
49	K8	50	ILE
49	K8	53	LEU
49	K8	60	LEU
49	K8	62	THR
49	K8	64	LEU
50	L8	8	LEU
50	L8	13	ILE
50	L8	30	ARG
50	L8	31	LEU
50	L8	36	VAL
50	L8	37	LEU
50	L8	40	THR
50	L8	55	ARG
50	L8	58	VAL
51	M8	2	LYS
51	M8	3	GLU
51	M8	5	ILE
51	M8	15	ILE
51	M8	16	CYS
51	M8	34	GLU
51	M8	35	VAL
51	M8	37	SER
51	M8	38	LYS
51	M8	39	CYS
51	M8	44	THR
51	M8	48	ARG
51	M8	50	VAL
51	M8	52	THR
51	M8	55	ARG

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Mol	Chain	Res	Type
51	M8	59	PHE
51	M8	61	ARG
51	M8	62	ARG
51	M8	65	ASP
52	N8	3	LYS
52	N8	6	VAL
52	N8	11	THR
52	N8	16	ARG
52	N8	29	THR
52	N8	31	VAL
52	N8	35	GLU
52	N8	36	CYS
52	N8	40	LYS
52	N8	44	THR
52	N8	48	GLU
52	N8	49	CYS
52	N8	51	TYR
52	N8	56	LYS
52	N8	57	VAL
53	O8	9	LEU
53	O8	10	LEU
53	O8	12	GLU
53	O8	13	CYS
53	O8	15	GLU
53	O8	24	GLU
53	O8	26	ASN
53	O8	27	LYS
53	O8	30	THR
53	O8	32	ASN
53	O8	33	LYS
53	O8	37	ARG
53	O8	39	TYR
53	O8	47	THR
54	P8	4	THR
54	P8	8	ASN
54	P8	9	ARG
54	P8	14	LYS
54	P8	19	ARG
54	P8	23	ARG
54	P8	43	THR
55	Q8	14	VAL
55	Q8	21	LYS

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Mol	Chain	Res	Type
55	Q8	22	VAL
55	Q8	26	LYS
55	Q8	30	ARG
55	Q8	31	HIS
55	Q8	34	TRP
55	Q8	35	GLN
55	Q8	36	LYS
55	Q8	40	GLU
55	Q8	41	ILE
55	Q8	43	GLN
55	Q8	46	ARG
55	Q8	47	LYS
55	Q8	48	PHE
55	Q8	49	VAL
55	Q8	50	LEU
55	Q8	52	LYS
55	Q8	57	ARG
55	Q8	59	LYS
6	12	4	GLU
6	12	5	ILE
6	12	12	GLU
6	12	17	PHE
6	12	22	LYS
6	12	23	ARG
6	12	31	TYR
6	12	36	ARG
6	12	42	ILE
6	12	44	LEU
6	12	47	THR
6	12	51	LEU
6	12	55	PHE
6	12	58	ILE
6	12	67	THR
6	12	69	LEU
6	12	71	VAL
6	12	75	LYS
6	12	76	GLN
6	12	78	GLN
6	12	83	MET
6	12	108	ILE
6	12	121	LEU
6	12	126	GLU

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Mol	Chain	Res	Type
6	12	137	ARG
6	12	138	LEU
6	12	145	LEU
6	12	155	LEU
6	12	160	ASP
6	12	165	VAL
6	12	170	GLU
6	12	172	ILE
6	12	175	ARG
6	12	178	ARG
6	12	179	LYS
6	12	185	ILE
6	12	191	ASP
6	12	196	LEU
6	12	204	ASN
6	12	205	ASP
6	12	209	ARG
6	12	212	GLN
6	12	213	LEU
6	12	223	ILE
6	12	233	SER
7	22	3	ASN
7	22	5	ILE
7	22	11	ARG
7	22	18	TRP
7	22	22	TRP
7	22	28	GLN
7	22	34	LEU
7	22	38	ARG
7	22	40	ARG
7	22	42	LEU
7	22	43	LEU
7	22	52	LEU
7	22	67	THR
7	22	76	VAL
7	22	79	ARG
7	22	88	ARG
7	22	89	GLU
7	22	94	LEU
7	22	95	THR
7	22	97	LYS
7	22	98	ASN

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Mol	Chain	Res	Type
7	22	119	ARG
7	22	130	VAL
7	22	131	ARG
7	22	138	VAL
7	22	140	ARG
7	22	141	VAL
7	22	164	ARG
7	22	182	ILE
7	22	190	ARG
7	22	191	THR
7	22	198	VAL
7	22	202	ILE
7	22	207	VAL
8	32	3	ARG
8	32	5	ILE
8	32	8	VAL
8	32	14	ARG
8	32	17	VAL
8	32	18	LYS
8	32	30	LYS
8	32	36	ARG
8	32	42	GLN
8	32	45	GLN
8	32	58	LEU
8	32	60	GLU
8	32	71	SER
8	32	73	ARG
8	32	107	ARG
8	32	115	ARG
8	32	119	GLN
8	32	122	ARG
8	32	126	ILE
8	32	127	THR
8	32	135	LEU
8	32	138	TYR
8	32	145	GLU
8	32	152	SER
8	32	158	ILE
8	32	187	ARG
8	32	191	ARG
8	32	192	GLU
8	32	199	ASN

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Mol	Chain	Res	Type
8	32	200	GLU

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

Mol	Chain	Res	Type
6	1E	16	HIS
7	2E	98	ASN
8	3E	160	GLN
9	4E	56	GLN
10	5E	7	ASN
11	6E	86	GLN
13	8E	117	HIS
15	2I	62	GLN
15	2I	93	GLN
15	2I	116	HIS
23	AI	56	GLN
24	BI	16	HIS
28	11	129	ASN
28	11	227	ASN
29	21	121	ASN
29	21	135	HIS
30	31	203	GLN
31	41	27	ASN
32	51	158	HIS
33	61	11	ASN
33	61	28	ASN
36	78	13	ASN
37	88	13	GLN
37	88	57	HIS
37	88	113	GLN
40	B8	55	ASN
40	B8	58	ASN
40	B8	84	GLN
43	E8	60	ASN
44	F8	31	HIS
47	I8	29	GLN
49	K8	38	GLN
49	K8	56	GLN
6	12	19	HIS
7	22	28	GLN
7	22	98	ASN
7	22	139	GLN

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Mol	Chain	Res	Type
7	22	170	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	13	1495/1522 (98%)	355 (23%)	38 (2%)
1	1G	1495/1522 (98%)	376 (25%)	37 (2%)
2	1L	75/76 (98%)	33 (44%)	3 (4%)
2	3K	75/76 (98%)	36 (48%)	5 (6%)
2	3L	75/76 (98%)	33 (44%)	1 (1%)
26	1K	71/76 (93%)	32 (45%)	2 (2%)
27	16	121/122 (99%)	26 (21%)	3 (2%)
27	1J	121/122 (99%)	31 (25%)	3 (2%)
3	2K	76/77 (98%)	15 (19%)	2 (2%)
3	2L	76/77 (98%)	17 (22%)	3 (3%)
4	4K	12/30 (40%)	2 (16%)	0
4	4L	9/30 (30%)	4 (44%)	2 (22%)
5	14	2908/2917 (99%)	756 (25%)	46 (1%)
5	1H	2911/2917 (99%)	688 (23%)	62 (2%)
All	All	9520/9640 (98%)	2404 (25%)	207 (2%)

All (2404) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	13	5	U
1	13	6	G
1	13	7	G
1	13	8	A
1	13	9	G
1	13	32	A
1	13	39	G
1	13	44	G
1	13	47	C
1	13	48	C
1	13	50	A
1	13	51	A
1	13	54	C
1	13	61	G
1	13	65	U
1	13	66	G
1	13	76	G

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Mol	Chain	Res	Type
1	13	77	C
1	13	78	G
1	13	90	C
1	13	91	C
1	13	95	G
1	13	101	A
1	13	116	A
1	13	121	C
1	13	129(A)	G
1	13	130	A
1	13	131	C
1	13	142	G
1	13	144	G
1	13	150	C
1	13	151	A
1	13	153	C
1	13	157	G
1	13	159	G
1	13	161	A
1	13	163	C
1	13	168	G
1	13	172	A
1	13	173	U
1	13	174	C
1	13	186(A)	C
1	13	188	U
1	13	189	U
1	13	190	G
1	13	191(A)	G
1	13	195	A
1	13	197	A
1	13	199	G
1	13	201	C
1	13	208	U
1	13	209	U
1	13	210	U
1	13	216	G
1	13	217	C
1	13	222	U
1	13	226	G
1	13	231	G
1	13	243	A

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Mol	Chain	Res	Type
1	13	244	U
1	13	245	C
1	13	247	G
1	13	251	G
1	13	256	U
1	13	262	A
1	13	266	G
1	13	267	C
1	13	280	C
1	13	281	G
1	13	288	A
1	13	289	G
1	13	310	G
1	13	311	C
1	13	316	G
1	13	318	G
1	13	321	A
1	13	324	G
1	13	327	A
1	13	328	C
1	13	330	C
1	13	332	G
1	13	342	C
1	13	344	A
1	13	345	C
1	13	346	G
1	13	347	G
1	13	352	C
1	13	353	A
1	13	354	G
1	13	357	G
1	13	367	U
1	13	372	C
1	13	373	A
1	13	382	A
1	13	383	A
1	13	384	G
1	13	388	G
1	13	390	C
1	13	397	A
1	13	398	C
1	13	406	G

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Mol	Chain	Res	Type
1	13	412	A
1	13	413	G
1	13	414	A
1	13	419	C
1	13	422	C
1	13	423	G
1	13	424	G
1	13	429	U
1	13	430	A
1	13	439	A
1	13	451	A
1	13	465	A
1	13	466	C
1	13	467	G
1	13	485	G
1	13	487	A
1	13	496	A
1	13	497	U
1	13	505	G
1	13	509	A
1	13	510	A
1	13	511	C
1	13	518	C
1	13	525	C
1	13	527	G
1	13	531	U
1	13	532	A
1	13	533	A
1	13	536	C
1	13	544	G
1	13	545	C
1	13	547	A
1	13	559	A
1	13	561	U
1	13	569	C
1	13	572	A
1	13	573	A
1	13	576	G
1	13	577	G
1	13	607	A
1	13	615	C
1	13	620	C

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Mol	Chain	Res	Type
1	13	623	C
1	13	624	C
1	13	630	G
1	13	631	G
1	13	632	A
1	13	650	G
1	13	653	A
1	13	655	A
1	13	656	C
1	13	665	A
1	13	666	G
1	13	676	A
1	13	687	A
1	13	688	G
1	13	703	G
1	13	704	A
1	13	715	A
1	13	722	A
1	13	723	U
1	13	724	G
1	13	748	C
1	13	749	C
1	13	750	G
1	13	755	G
1	13	757	U
1	13	759	A
1	13	766	A
1	13	767	A
1	13	768	A
1	13	769	G
1	13	774	G
1	13	777	A
1	13	792	A
1	13	793	U
1	13	794	A
1	13	795	C
1	13	802	A
1	13	805	C
1	13	810	C
1	13	813	U
1	13	815	A
1	13	817	C

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Mol	Chain	Res	Type
1	13	818	G
1	13	827	U
1	13	828	A
1	13	836	G
1	13	841	U
1	13	842	C
1	13	843	U
1	13	848	C
1	13	853	G
1	13	859	A
1	13	864	A
1	13	870	U
1	13	874	G
1	13	889	A
1	13	902	G
1	13	914	A
1	13	916	G
1	13	922	G
1	13	926	G
1	13	927	G
1	13	934	C
1	13	936	C
1	13	940	C
1	13	960	U
1	13	968	A
1	13	969	A
1	13	971	G
1	13	974	A
1	13	975	A
1	13	976	G
1	13	977	A
1	13	982	U
1	13	983	A
1	13	984	C
1	13	991	U
1	13	992	U
1	13	993	G
1	13	1004	A
1	13	1005	A
1	13	1006	C
1	13	1007	C
1	13	1008	C

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Mol	Chain	Res	Type
1	13	1009	G
1	13	1012	U
1	13	1017	G
1	13	1020	U
1	13	1021	G
1	13	1024	G
1	13	1025	U
1	13	1028	C
1	13	1029	G
1	13	1030	C
1	13	1032	A
1	13	1032(A)	G
1	13	1033	G
1	13	1040	U
1	13	1042	G
1	13	1046	A
1	13	1053	G
1	13	1054	C
1	13	1064	G
1	13	1065	U
1	13	1066	C
1	13	1067	A
1	13	1070	U
1	13	1081	G
1	13	1085	U
1	13	1094	G
1	13	1095	U
1	13	1101	A
1	13	1118	C
1	13	1121	U
1	13	1124	G
1	13	1125	U
1	13	1126	U
1	13	1127	G
1	13	1129	C
1	13	1130	A
1	13	1131	G
1	13	1133	G
1	13	1136	U
1	13	1137	C
1	13	1138	G
1	13	1139	G

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Mol	Chain	Res	Type
1	13	1140	C
1	13	1146	A
1	13	1152	A
1	13	1154	G
1	13	1157	A
1	13	1158	C
1	13	1159	U
1	13	1169	A
1	13	1177	G
1	13	1178	G
1	13	1181	G
1	13	1184	G
1	13	1188	A
1	13	1193	G
1	13	1196	U
1	13	1197	G
1	13	1201	A
1	13	1212	U
1	13	1213	A
1	13	1214	C
1	13	1225	A
1	13	1227	A
1	13	1236	A
1	13	1238	A
1	13	1240	U
1	13	1253	G
1	13	1256	A
1	13	1257	U
1	13	1258	G
1	13	1266	G
1	13	1267	C
1	13	1270	C
1	13	1272	G
1	13	1273	G
1	13	1280	A
1	13	1281	U
1	13	1286	A
1	13	1287	A
1	13	1299	A
1	13	1300	G
1	13	1302	U
1	13	1303	C

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Mol	Chain	Res	Type
1	13	1305	G
1	13	1322	C
1	13	1323	G
1	13	1331	G
1	13	1332	A
1	13	1335	C
1	13	1336	C
1	13	1337	G
1	13	1338	G
1	13	1346	A
1	13	1347	G
1	13	1350	A
1	13	1353	G
1	13	1361	G
1	13	1363	A
1	13	1364	U
1	13	1370	G
1	13	1377	A
1	13	1378	C
1	13	1388	C
1	13	1398	A
1	13	1401	G
1	13	1419	G
1	13	1442	G
1	13	1443	G
1	13	1446	A
1	13	1451	A
1	13	1452	C
1	13	1453	G
1	13	1467	G
1	13	1469	G
1	13	1487	G
1	13	1492	A
1	13	1494	G
1	13	1497	G
1	13	1498	U
1	13	1499	A
1	13	1503	A
1	13	1504	G
1	13	1505	G
1	13	1506	U
1	13	1517	G

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Mol	Chain	Res	Type
1	13	1529	G
1	13	1530	G
2	1L	4	C
2	1L	8	4SU
2	1L	9	A
2	1L	10	G
2	1L	11	C
2	1L	16	H2U
2	1L	17	C
2	1L	19	G
2	1L	20	H2U
2	1L	21	A
2	1L	22	G
2	1L	25	C
2	1L	26	A
2	1L	27	G
2	1L	36	A
2	1L	37	MIA
2	1L	41	C
2	1L	46	7MG
2	1L	47	U
2	1L	48	C
2	1L	49	C
2	1L	52	G
2	1L	53	G
2	1L	56	C
2	1L	57	G
2	1L	61	C
2	1L	64	A
2	1L	69	G
2	1L	70	G
2	1L	73	A
2	1L	74	C
2	1L	75	C
2	1L	76	A
3	2L	2	G
3	2L	6	G
3	2L	9	G
3	2L	15	G
3	2L	16	C
3	2L	20	G
3	2L	21	H2U

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Mol	Chain	Res	Type
3	2L	22	A
3	2L	32	G
3	2L	45	A
3	2L	47	7MG
3	2L	48	U
3	2L	49	C
3	2L	50	G
3	2L	55	U
3	2L	57	C
3	2L	77	A
2	3L	3	C
2	3L	9	A
2	3L	11	C
2	3L	13	C
2	3L	16	H2U
2	3L	17	C
2	3L	18	G
2	3L	19	G
2	3L	21	A
2	3L	22	G
2	3L	23	A
2	3L	28	G
2	3L	31	A
2	3L	33	U
2	3L	34	G
2	3L	36	A
2	3L	37	MIA
2	3L	38	A
2	3L	39	PSU
2	3L	40	C
2	3L	42	C
2	3L	46	7MG
2	3L	47	U
2	3L	48	C
2	3L	49	C
2	3L	58	A
2	3L	59	U
2	3L	61	C
2	3L	62	C
2	3L	65	G
2	3L	72	C
2	3L	73	A

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Mol	Chain	Res	Type
2	3L	76	A
4	4L	14	A
4	4L	18	G
4	4L	19	U
4	4L	20	C
5	14	2	G
5	14	3	U
5	14	4	C
5	14	5	A
5	14	9	U
5	14	15	G
5	14	34	C
5	14	35	G
5	14	46	C
5	14	49	A
5	14	50	U
5	14	54	G
5	14	55	G
5	14	58	G
5	14	71	A
5	14	72	U
5	14	74	A
5	14	75	G
5	14	82	G
5	14	84	A
5	14	88	G
5	14	93	C
5	14	95	G
5	14	99	U
5	14	102	G
5	14	118	A
5	14	119	A
5	14	120	U
5	14	121	G
5	14	125	G
5	14	129	C
5	14	138	G
5	14	139	G
5	14	140	A
5	14	153	C
5	14	154	G
5	14	155	C

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Mol	Chain	Res	Type
5	14	161	U
5	14	162	U
5	14	173	G
5	14	174	C
5	14	181	A
5	14	182	A
5	14	184	C
5	14	196	A
5	14	199	A
5	14	205	G
5	14	213	A
5	14	214	G
5	14	215	G
5	14	216	A
5	14	221	A
5	14	222	A
5	14	229	A
5	14	233	A
5	14	245	G
5	14	248	G
5	14	249	C
5	14	250	G
5	14	252	G
5	14	265	A
5	14	267	C
5	14	270(K)	C
5	14	270(L)	U
5	14	270(M)	U
5	14	270(O)	U
5	14	271(B)	G
5	14	271	G
5	14	273(C)	C
5	14	273(D)	C
5	14	274	G
5	14	275	G
5	14	276	A
5	14	277	C
5	14	278	A
5	14	279	C
5	14	289	A
5	14	294	A
5	14	299	A

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Mol	Chain	Res	Type
5	14	303	U
5	14	308	G
5	14	310	A
5	14	311	A
5	14	312	G
5	14	324	A
5	14	327	G
5	14	329	G
5	14	330	A
5	14	333	G
5	14	352	G
5	14	362	U
5	14	363	G
5	14	363(A)	A
5	14	363(E)	U
5	14	372	G
5	14	382	G
5	14	386	G
5	14	395	U
5	14	396	G
5	14	405	U
5	14	406	G
5	14	411	G
5	14	412	A
5	14	428	A
5	14	443	A
5	14	444	C
5	14	447	A
5	14	448	U
5	14	449	A
5	14	452	G
5	14	454	A
5	14	455	C
5	14	457	A
5	14	470	A
5	14	471	A
5	14	472	A
5	14	481	G
5	14	501	A
5	14	504	U
5	14	505	A
5	14	509	C

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Mol	Chain	Res	Type
5	14	529	A
5	14	531	C
5	14	532	A
5	14	533	G
5	14	537	C
5	14	546	C
5	14	549	G
5	14	556	G
5	14	563	G
5	14	573	G
5	14	575	A
5	14	584	C
5	14	602	G
5	14	603	A
5	14	607	U
5	14	609(A)	G
5	14	614	U
5	14	617	G
5	14	619	G
5	14	620	G
5	14	621	A
5	14	622	G
5	14	626	U
5	14	627	A
5	14	637	A
5	14	641	C
5	14	645	C
5	14	646	A
5	14	651	G
5	14	654	A
5	14	654(E)	C
5	14	654(G)	C
5	14	654(I)	C
5	14	654(O)	G
5	14	654(T)	A
5	14	656	G
5	14	666	G
5	14	669	G
5	14	686	G
5	14	689	A
5	14	699	A
5	14	715	G

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Mol	Chain	Res	Type
5	14	717	G
5	14	722	A
5	14	730	C
5	14	749	C
5	14	752	A
5	14	753	C
5	14	758	C
5	14	764	A
5	14	765	G
5	14	770	G
5	14	771	G
5	14	775	G
5	14	776	G
5	14	779	U
5	14	782	A
5	14	784	A
5	14	785	G
5	14	792	G
5	14	797	C
5	14	805	G
5	14	812	C
5	14	816	C
5	14	819	A
5	14	820	A
5	14	827	U
5	14	828	U
5	14	830	G
5	14	831	G
5	14	832	G
5	14	845	G
5	14	846	C
5	14	848	G
5	14	859	G
5	14	860	U
5	14	863	A
5	14	865	C
5	14	866	A
5	14	869	G
5	14	878	A
5	14	880	G
5	14	881	G
5	14	882	G

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Mol	Chain	Res	Type
5	14	885	C
5	14	886	C
5	14	888	C
5	14	889	C
5	14	890	A
5	14	894	C
5	14	896	A
5	14	897	C
5	14	899	A
5	14	900	A
5	14	901	A
5	14	903	C
5	14	904	C
5	14	906	G
5	14	907	U
5	14	910	A
5	14	911	A
5	14	914	C
5	14	917	A
5	14	924	C
5	14	925	C
5	14	926	A
5	14	928	G
5	14	932	G
5	14	933	A
5	14	934	G
5	14	935	C
5	14	937	U
5	14	941	A
5	14	945	A
5	14	946	G
5	14	958	U
5	14	959	A
5	14	961	C
5	14	974	G
5	14	977	G
5	14	980	A
5	14	981	A
5	14	983	A
5	14	989	G
5	14	990	A
5	14	991	C

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Mol	Chain	Res	Type
5	14	993	G
5	14	996	A
5	14	1005	C
5	14	1012	U
5	14	1013	C
5	14	1014	U
5	14	1016	G
5	14	1020	A
5	14	1022	G
5	14	1023	U
5	14	1025	G
5	14	1026	U
5	14	1028	A
5	14	1029	A
5	14	1032	A
5	14	1037	G
5	14	1040	C
5	14	1044	G
5	14	1045	A
5	14	1047	G
5	14	1048	A
5	14	1051	G
5	14	1054	A
5	14	1056	G
5	14	1057	A
5	14	1060	U
5	14	1061	U
5	14	1062	G
5	14	1064	C
5	14	1065	U
5	14	1067	A
5	14	1068	G
5	14	1070	A
5	14	1072	C
5	14	1073	A
5	14	1077	A
5	14	1079	C
5	14	1081	U
5	14	1082	U
5	14	1085	A
5	14	1086	A
5	14	1087	G

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Mol	Chain	Res	Type
5	14	1088	A
5	14	1090	U
5	14	1091	G
5	14	1095	A
5	14	1096	A
5	14	1098	A
5	14	1100	C
5	14	1105	U
5	14	1111	A
5	14	1112	G
5	14	1128	A
5	14	1129	A
5	14	1130	U
5	14	1135	C
5	14	1136	G
5	14	1137	G
5	14	1139	G
5	14	1142	U
5	14	1142(A)	A
5	14	1143	A
5	14	1148	A
5	14	1151	G
5	14	1155	A
5	14	1160	G
5	14	1167	U
5	14	1170	G
5	14	1171	G
5	14	1173	G
5	14	1174	A
5	14	1175	U
5	14	1177	A
5	14	1178	C
5	14	1189	A
5	14	1195	G
5	14	1204	A
5	14	1205	U
5	14	1210	A
5	14	1213	A
5	14	1220	A
5	14	1230	C
5	14	1237	A
5	14	1240	U

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Mol	Chain	Res	Type
5	14	1244	G
5	14	1247	A
5	14	1248	G
5	14	1249	U
5	14	1253	A
5	14	1256	G
5	14	1269	A
5	14	1271	G
5	14	1272	A
5	14	1273	U
5	14	1287	A
5	14	1298	C
5	14	1300	U
5	14	1301	A
5	14	1303	G
5	14	1312	U
5	14	1314	C
5	14	1317	A
5	14	1318	C
5	14	1319	G
5	14	1320	C
5	14	1321	A
5	14	1329	U
5	14	1332	G
5	14	1342	A
5	14	1345	C
5	14	1348	G
5	14	1349	A
5	14	1352	U
5	14	1359	A
5	14	1360	A
5	14	1365	A
5	14	1368	G
5	14	1370	C
5	14	1378	A
5	14	1379	A
5	14	1383	C
5	14	1384	A
5	14	1385	G
5	14	1386	C
5	14	1395	A
5	14	1403	C

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Mol	Chain	Res	Type
5	14	1404	C
5	14	1407	C
5	14	1408	C
5	14	1416	G
5	14	1417	C
5	14	1419	A
5	14	1420	U
5	14	1421	G
5	14	1427	A
5	14	1428	C
5	14	1437	C
5	14	1444(A)	A
5	14	1445	C
5	14	1449	A
5	14	1449(A)	G
5	14	1453	A
5	14	1455	G
5	14	1459	G
5	14	1460	A
5	14	1461	G
5	14	1467	C
5	14	1471	A
5	14	1474	C
5	14	1475	G
5	14	1478	G
5	14	1482	U
5	14	1483	G
5	14	1487	G
5	14	1488	G
5	14	1490	A
5	14	1493	C
5	14	1494	A
5	14	1497	U
5	14	1508	A
5	14	1509	C
5	14	1510	A
5	14	1515	C
5	14	1522	G
5	14	1533	C
5	14	1534	G
5	14	1535	U
5	14	1537	C

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Mol	Chain	Res	Type
5	14	1543	A
5	14	1547	C
5	14	1558	A
5	14	1559	G
5	14	1560	G
5	14	1566	A
5	14	1569	A
5	14	1578	U
5	14	1583	A
5	14	1585	C
5	14	1586	A
5	14	1588	C
5	14	1589	C
5	14	1598	C
5	14	1608	A
5	14	1609	A
5	14	1610	A
5	14	1614	A
5	14	1616	A
5	14	1617	C
5	14	1618	A
5	14	1620	G
5	14	1625	C
5	14	1628	G
5	14	1631	A
5	14	1640	C
5	14	1644	C
5	14	1648	C
5	14	1660	C
5	14	1669	A
5	14	1671	U
5	14	1674	G
5	14	1680	U
5	14	1693	U
5	14	1696	G
5	14	1697	G
5	14	1698	A
5	14	1700	A
5	14	1701	A
5	14	1725	G
5	14	1726	G
5	14	1729	A

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Mol	Chain	Res	Type
5	14	1731	G
5	14	1742	C
5	14	1743	G
5	14	1756	G
5	14	1762	A
5	14	1763	G
5	14	1764	G
5	14	1773	A
5	14	1774	C
5	14	1780	A
5	14	1782	C
5	14	1786	A
5	14	1791	A
5	14	1800	C
5	14	1801	G
5	14	1802	A
5	14	1816	G
5	14	1819	A
5	14	1820	U
5	14	1829	A
5	14	1839	G
5	14	1847	A
5	14	1848	A
5	14	1851	U
5	14	1858	G
5	14	1878	G
5	14	1885	A
5	14	1888	G
5	14	1889	A
5	14	1900	A
5	14	1906	G
5	14	1909	C
5	14	1913	A
5	14	1916	A
5	14	1929	G
5	14	1930	G
5	14	1933	G
5	14	1936	A
5	14	1937	A
5	14	1938	A
5	14	1952	A
5	14	1955	U

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Mol	Chain	Res	Type
5	14	1960	A
5	14	1963	U
5	14	1964	G
5	14	1965	C
5	14	1967	C
5	14	1968	G
5	14	1970	A
5	14	1971	A
5	14	1972	A
5	14	1976	U
5	14	1985	G
5	14	1986	A
5	14	1991	U
5	14	1993	U
5	14	2016	U
5	14	2018	G
5	14	2023	G
5	14	2031	A
5	14	2032	G
5	14	2033	A
5	14	2043	C
5	14	2049	G
5	14	2055	C
5	14	2056	G
5	14	2059	A
5	14	2060	A
5	14	2061	G
5	14	2063	C
5	14	2069	G
5	14	2071	A
5	14	2076	U
5	14	2082	A
5	14	2096	U
5	14	2099	U
5	14	2100	G
5	14	2108	C
5	14	2111	C
5	14	2112	G
5	14	2113	U
5	14	2114	A
5	14	2117	A
5	14	2118	U

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Mol	Chain	Res	Type
5	14	2125	G
5	14	2126	A
5	14	2127	G
5	14	2128	C
5	14	2131	G
5	14	2132	U
5	14	2133	G
5	14	2136	C
5	14	2137	C
5	14	2140	C
5	14	2144	U
5	14	2145	C
5	14	2146	C
5	14	2147	G
5	14	2148	G
5	14	2158	A
5	14	2165	G
5	14	2166	G
5	14	2167	U
5	14	2173	A
5	14	2174	C
5	14	2175	C
5	14	2189	U
5	14	2191	G
5	14	2192	G
5	14	2198	A
5	14	2207	C
5	14	2210	G
5	14	2211	G
5	14	2212	A
5	14	2213	U
5	14	2215	G
5	14	2225	A
5	14	2226	C
5	14	2228	G
5	14	2234	G
5	14	2238	G
5	14	2239	G
5	14	2240	C
5	14	2249	U
5	14	2251	G
5	14	2252	G

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Mol	Chain	Res	Type
5	14	2261	C
5	14	2267	A
5	14	2268	A
5	14	2269	A
5	14	2273	A
5	14	2275	C
5	14	2276	G
5	14	2278	A
5	14	2280	G
5	14	2281	C
5	14	2283	C
5	14	2286	A
5	14	2287	A
5	14	2288	A
5	14	2294	C
5	14	2303	G
5	14	2305	A
5	14	2307	G
5	14	2308	G
5	14	2310	A
5	14	2311	A
5	14	2312	U
5	14	2318	G
5	14	2325	G
5	14	2326	C
5	14	2327	A
5	14	2333	A
5	14	2334	G
5	14	2335	A
5	14	2336	A
5	14	2344	U
5	14	2346	A
5	14	2347	C
5	14	2350	C
5	14	2354	G
5	14	2357	U
5	14	2360	A
5	14	2376	A
5	14	2383	G
5	14	2385	C
5	14	2388	A
5	14	2389	G

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Mol	Chain	Res	Type
5	14	2392	A
5	14	2394	C
5	14	2401	U
5	14	2402	C
5	14	2406	U
5	14	2407	G
5	14	2411	A
5	14	2413	G
5	14	2414	G
5	14	2422	A
5	14	2425	A
5	14	2429	G
5	14	2430	A
5	14	2431	U
5	14	2435	A
5	14	2439	A
5	14	2440	C
5	14	2441	C
5	14	2445	G
5	14	2448	A
5	14	2469	A
5	14	2470	G
5	14	2475	C
5	14	2476	A
5	14	2482	G
5	14	2484	G
5	14	2487	G
5	14	2496	C
5	14	2497	A
5	14	2502	G
5	14	2504	U
5	14	2505	G
5	14	2506	U
5	14	2507	C
5	14	2513	G
5	14	2518	A
5	14	2521	C
5	14	2525	G
5	14	2528	U
5	14	2529	G
5	14	2532	G
5	14	2536	G

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Mol	Chain	Res	Type
5	14	2542	A
5	14	2543	G
5	14	2554	U
5	14	2566	A
5	14	2567	G
5	14	2569	G
5	14	2573	C
5	14	2584	U
5	14	2585	U
5	14	2587	A
5	14	2599	G
5	14	2602	A
5	14	2603	G
5	14	2608	G
5	14	2609	U
5	14	2610	C
5	14	2611	U
5	14	2612	C
5	14	2613	U
5	14	2615	U
5	14	2617	C
5	14	2630	G
5	14	2636	U
5	14	2639	A
5	14	2641	G
5	14	2646	C
5	14	2654	A
5	14	2663	G
5	14	2665	A
5	14	2667	C
5	14	2673	G
5	14	2675	A
5	14	2678	C
5	14	2679	A
5	14	2689	U
5	14	2690	C
5	14	2702	U
5	14	2703	C
5	14	2706	G
5	14	2712(A)	A
5	14	2713	A
5	14	2726	U

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Mol	Chain	Res	Type
5	14	2733	A
5	14	2739	U
5	14	2744	G
5	14	2750	A
5	14	2751	G
5	14	2752	C
5	14	2754	U
5	14	2758	A
5	14	2761	G
5	14	2762	G
5	14	2764	A
5	14	2765	A
5	14	2766	G
5	14	2769	C
5	14	2777	G
5	14	2778	A
5	14	2779	U
5	14	2780	G
5	14	2786	U
5	14	2787	C
5	14	2789	C
5	14	2790	A
5	14	2791	C
5	14	2793	G
5	14	2794	C
5	14	2795	G
5	14	2797	U
5	14	2798	C
5	14	2818	G
5	14	2820	A
5	14	2821	A
5	14	2825	C
5	14	2827	C
5	14	2833	G
5	14	2834	G
5	14	2835	A
5	14	2849	U
5	14	2860	A
5	14	2872	G
5	14	2873	A
5	14	2880	C
5	14	2886	G

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Mol	Chain	Res	Type
5	14	2892	A
5	14	2894	G
5	14	2896	C
5	14	2898	U
5	14	2900	A
26	1K	4	C
26	1K	9	A
26	1K	10	G
26	1K	11	C
26	1K	12	U
26	1K	13	C
26	1K	14	A
26	1K	16	H2U
26	1K	17	C
26	1K	18	G
26	1K	19	G
26	1K	22	G
26	1K	26	A
26	1K	28	G
26	1K	36	A
26	1K	41	C
26	1K	44	G
26	1K	47	U
26	1K	48	C
26	1K	49	C
26	1K	59	U
26	1K	60	U
26	1K	61	C
26	1K	64	A
26	1K	68	C
26	1K	69	G
26	1K	70	G
26	1K	72	C
26	1K	73	A
26	1K	74	C
26	1K	75	C
26	1K	76	A
3	2K	6	G
3	2K	9	G
3	2K	13	C
3	2K	18	C
3	2K	20	G

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Mol	Chain	Res	Type
3	2K	21	H2U
3	2K	22	A
3	2K	48	U
3	2K	49	C
3	2K	50	G
3	2K	53	G
3	2K	57	C
3	2K	62	C
3	2K	70	C
3	2K	77	A
2	3K	2	C
2	3K	3	C
2	3K	6	G
2	3K	7	A
2	3K	8	4SU
2	3K	9	A
2	3K	10	G
2	3K	13	C
2	3K	14	A
2	3K	17	C
2	3K	19	G
2	3K	20	H2U
2	3K	21	A
2	3K	22	G
2	3K	23	A
2	3K	26	A
2	3K	31	A
2	3K	36	A
2	3K	40	C
2	3K	43	C
2	3K	45	U
2	3K	46	7MG
2	3K	47	U
2	3K	48	C
2	3K	49	C
2	3K	51	U
2	3K	52	G
2	3K	55	PSU
2	3K	56	C
2	3K	58	A
2	3K	59	U
2	3K	65	G

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Mol	Chain	Res	Type
2	3K	66	U
2	3K	70	G
2	3K	73	A
2	3K	76	A
4	4K	14	A
4	4K	25	A
5	1H	5	A
5	1H	9	U
5	1H	12	U
5	1H	15	G
5	1H	27	G
5	1H	34	C
5	1H	46	C
5	1H	51	G
5	1H	54	G
5	1H	55	G
5	1H	61	G
5	1H	63	U
5	1H	64	A
5	1H	66	C
5	1H	71	A
5	1H	72	U
5	1H	74	A
5	1H	75	G
5	1H	85	G
5	1H	93	C
5	1H	95	G
5	1H	102	G
5	1H	118	A
5	1H	119	A
5	1H	120	U
5	1H	125	G
5	1H	126	A
5	1H	133	C
5	1H	140	A
5	1H	155	C
5	1H	163	U
5	1H	164	U
5	1H	181	A
5	1H	188	G
5	1H	196	A
5	1H	197	A

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Mol	Chain	Res	Type
5	1H	199	A
5	1H	214	G
5	1H	215	G
5	1H	216	A
5	1H	222	A
5	1H	223	A
5	1H	224	G
5	1H	228	A
5	1H	229	A
5	1H	230	U
5	1H	233	A
5	1H	248	G
5	1H	250	G
5	1H	252	G
5	1H	261	G
5	1H	266	G
5	1H	269	U
5	1H	270(F)	U
5	1H	270(L)	U
5	1H	270(M)	U
5	1H	270(N)	G
5	1H	270(P)	C
5	1H	270(Y)	G
5	1H	271(B)	G
5	1H	271(C)	U
5	1H	271	G
5	1H	274	G
5	1H	275	G
5	1H	278	A
5	1H	299	A
5	1H	311	A
5	1H	315	G
5	1H	323	G
5	1H	324	A
5	1H	327	G
5	1H	329	G
5	1H	330	A
5	1H	331	A
5	1H	347	A
5	1H	352	G
5	1H	354	G
5	1H	363	G

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Mol	Chain	Res	Type
5	1H	363(D)	G
5	1H	363(E)	U
5	1H	364	C
5	1H	372	G
5	1H	382	G
5	1H	386	G
5	1H	389	G
5	1H	396	G
5	1H	404	C
5	1H	405	U
5	1H	406	G
5	1H	411	G
5	1H	412	A
5	1H	428	A
5	1H	443	A
5	1H	444	C
5	1H	447	A
5	1H	448	U
5	1H	451	C
5	1H	454	A
5	1H	455	C
5	1H	457	A
5	1H	460	A
5	1H	470	A
5	1H	471	A
5	1H	481	G
5	1H	482	A
5	1H	491	G
5	1H	501	A
5	1H	505	A
5	1H	508	G
5	1H	509	C
5	1H	529	A
5	1H	530	G
5	1H	531	C
5	1H	532	A
5	1H	533	G
5	1H	545	G
5	1H	546	C
5	1H	547	A
5	1H	549	G
5	1H	556	G

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Mol	Chain	Res	Type
5	1H	563	G
5	1H	564	C
5	1H	567	A
5	1H	570	G
5	1H	573	G
5	1H	575	A
5	1H	583	G
5	1H	586	A
5	1H	587	C
5	1H	588	U
5	1H	603	A
5	1H	607	U
5	1H	613	U
5	1H	614	U
5	1H	615	G
5	1H	617	G
5	1H	618(A)	C
5	1H	621	A
5	1H	622	G
5	1H	627	A
5	1H	637	A
5	1H	640	C
5	1H	641	C
5	1H	645	C
5	1H	646	A
5	1H	649	G
5	1H	654	A
5	1H	654(B)	C
5	1H	654(C)	G
5	1H	654(G)	C
5	1H	654(I)	C
5	1H	654(J)	A
5	1H	654(K)	C
5	1H	654(M)	C
5	1H	654(O)	G
5	1H	654(T)	A
5	1H	669	G
5	1H	678	C
5	1H	686	G
5	1H	695	G
5	1H	699	A
5	1H	704	G

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Mol	Chain	Res	Type
5	1H	715	G
5	1H	717	G
5	1H	730	C
5	1H	731	C
5	1H	752	A
5	1H	753	C
5	1H	762	U
5	1H	764	A
5	1H	765	G
5	1H	775	G
5	1H	776	G
5	1H	779	U
5	1H	782	A
5	1H	784	A
5	1H	785	G
5	1H	790	C
5	1H	791	C
5	1H	792	G
5	1H	793	A
5	1H	801	G
5	1H	802	A
5	1H	805	G
5	1H	812	C
5	1H	824	A
5	1H	827	U
5	1H	828	U
5	1H	845	G
5	1H	846	C
5	1H	847	U
5	1H	855	G
5	1H	859	G
5	1H	864	G
5	1H	866	A
5	1H	879	G
5	1H	880	G
5	1H	881	G
5	1H	882	G
5	1H	884	C
5	1H	885	C
5	1H	886	C
5	1H	887	A
5	1H	888	C

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Mol	Chain	Res	Type
5	1H	890	A
5	1H	892	G
5	1H	893	C
5	1H	894	C
5	1H	895	U
5	1H	896	A
5	1H	897	C
5	1H	900	A
5	1H	901	A
5	1H	907	U
5	1H	910	A
5	1H	917	A
5	1H	918	A
5	1H	932	G
5	1H	941	A
5	1H	946	G
5	1H	953	A
5	1H	959	A
5	1H	961	C
5	1H	962	G
5	1H	968	G
5	1H	974	G
5	1H	974(A)	C
5	1H	975	G
5	1H	983	A
5	1H	990	A
5	1H	996	A
5	1H	997	G
5	1H	1003	G
5	1H	1005	C
5	1H	1011	G
5	1H	1012	U
5	1H	1013	C
5	1H	1014	U
5	1H	1015	G
5	1H	1016	G
5	1H	1020	A
5	1H	1022	G
5	1H	1023	U
5	1H	1025	G
5	1H	1026	U
5	1H	1027	A

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Mol	Chain	Res	Type
5	1H	1028	A
5	1H	1033	U
5	1H	1037	G
5	1H	1046	A
5	1H	1047	G
5	1H	1057	A
5	1H	1061	U
5	1H	1062	G
5	1H	1064	C
5	1H	1067	A
5	1H	1068	G
5	1H	1070	A
5	1H	1071	G
5	1H	1072	C
5	1H	1076	C
5	1H	1078	U
5	1H	1079	C
5	1H	1082	U
5	1H	1085	A
5	1H	1086	A
5	1H	1087	G
5	1H	1088	A
5	1H	1090	U
5	1H	1095	A
5	1H	1096	A
5	1H	1097	U
5	1H	1104	C
5	1H	1106	G
5	1H	1109	C
5	1H	1111	A
5	1H	1112	G
5	1H	1121	C
5	1H	1128	A
5	1H	1129	A
5	1H	1130	U
5	1H	1131	G
5	1H	1135	C
5	1H	1136	G
5	1H	1138	G
5	1H	1139	G
5	1H	1142	U
5	1H	1142(A)	A

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Mol	Chain	Res	Type
5	1H	1145	C
5	1H	1150	C
5	1H	1151	G
5	1H	1155	A
5	1H	1156	A
5	1H	1169	G
5	1H	1171	G
5	1H	1176	G
5	1H	1178	C
5	1H	1179	C
5	1H	1192	G
5	1H	1195	G
5	1H	1204	A
5	1H	1205	U
5	1H	1218	C
5	1H	1220	A
5	1H	1221	C
5	1H	1229(A)	G
5	1H	1237	A
5	1H	1244	G
5	1H	1249	U
5	1H	1253	A
5	1H	1256	G
5	1H	1265	A
5	1H	1267	U
5	1H	1268	A
5	1H	1271	G
5	1H	1272	A
5	1H	1273	U
5	1H	1274	A
5	1H	1285	G
5	1H	1292	U
5	1H	1298	C
5	1H	1300	U
5	1H	1301	A
5	1H	1305	C
5	1H	1313	U
5	1H	1314	C
5	1H	1329	U
5	1H	1344	G
5	1H	1345	C
5	1H	1348	G

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Mol	Chain	Res	Type
5	1H	1349	A
5	1H	1352	U
5	1H	1359	A
5	1H	1360	A
5	1H	1365	A
5	1H	1368	G
5	1H	1379	A
5	1H	1380	G
5	1H	1384	A
5	1H	1385	G
5	1H	1386	C
5	1H	1393	A
5	1H	1395	A
5	1H	1396	U
5	1H	1397	U
5	1H	1404	C
5	1H	1407	C
5	1H	1416	G
5	1H	1417	C
5	1H	1420	U
5	1H	1421	G
5	1H	1428	C
5	1H	1431	U
5	1H	1444(A)	A
5	1H	1449	A
5	1H	1449(A)	G
5	1H	1453	A
5	1H	1455	G
5	1H	1456	G
5	1H	1458	C
5	1H	1459	G
5	1H	1460	A
5	1H	1461	G
5	1H	1467	C
5	1H	1471	A
5	1H	1473	G
5	1H	1478	G
5	1H	1483	G
5	1H	1490	A
5	1H	1493	C
5	1H	1494	A
5	1H	1495	A

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Mol	Chain	Res	Type
5	1H	1496	A
5	1H	1497	U
5	1H	1507	A
5	1H	1508	A
5	1H	1509	C
5	1H	1510	A
5	1H	1511	A
5	1H	1517	G
5	1H	1520	U
5	1H	1522	G
5	1H	1526	G
5	1H	1534	G
5	1H	1535	U
5	1H	1536	A
5	1H	1537	C
5	1H	1538	G
5	1H	1540	G
5	1H	1543	A
5	1H	1544	C
5	1H	1545	A
5	1H	1547	C
5	1H	1548	C
5	1H	1554	A
5	1H	1556	C
5	1H	1558	A
5	1H	1559	G
5	1H	1560	G
5	1H	1562	A
5	1H	1566	A
5	1H	1569	A
5	1H	1578	U
5	1H	1580	A
5	1H	1586	A
5	1H	1587	A
5	1H	1595	G
5	1H	1608	A
5	1H	1609	A
5	1H	1610	A
5	1H	1617	C
5	1H	1618	A
5	1H	1634	A
5	1H	1641	A

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Mol	Chain	Res	Type
5	1H	1645	G
5	1H	1647	G
5	1H	1648	C
5	1H	1651	G
5	1H	1654	A
5	1H	1664	A
5	1H	1674	G
5	1H	1675	C
5	1H	1695	G
5	1H	1700	A
5	1H	1701	A
5	1H	1728	G
5	1H	1729	A
5	1H	1731	G
5	1H	1732	A
5	1H	1756	G
5	1H	1758	G
5	1H	1763	G
5	1H	1764	G
5	1H	1773	A
5	1H	1782	C
5	1H	1791	A
5	1H	1799	G
5	1H	1800	C
5	1H	1801	G
5	1H	1802	A
5	1H	1816	G
5	1H	1819	A
5	1H	1826	G
5	1H	1829	A
5	1H	1835	G
5	1H	1839	G
5	1H	1847	A
5	1H	1853	A
5	1H	1858	G
5	1H	1870	C
5	1H	1878	G
5	1H	1889	A
5	1H	1900	A
5	1H	1901	A
5	1H	1905	C
5	1H	1906	G

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Mol	Chain	Res	Type
5	1H	1914	C
5	1H	1919	A
5	1H	1926	U
5	1H	1929	G
5	1H	1930	G
5	1H	1931	U
5	1H	1935	G
5	1H	1938	A
5	1H	1941	C
5	1H	1955	U
5	1H	1961	C
5	1H	1963	U
5	1H	1967	C
5	1H	1969	A
5	1H	1970	A
5	1H	1971	A
5	1H	1972	A
5	1H	1974	C
5	1H	1982	C
5	1H	1983	C
5	1H	1993	U
5	1H	1994	C
5	1H	2004	G
5	1H	2020	A
5	1H	2021	C
5	1H	2023	G
5	1H	2031	A
5	1H	2032	G
5	1H	2033	A
5	1H	2035	G
5	1H	2043	C
5	1H	2049	G
5	1H	2051	A
5	1H	2054	A
5	1H	2055	C
5	1H	2056	G
5	1H	2060	A
5	1H	2061	G
5	1H	2062	A
5	1H	2063	C
5	1H	2069	G
5	1H	2070	G

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Mol	Chain	Res	Type
5	1H	2080	G
5	1H	2100	G
5	1H	2108	C
5	1H	2111	C
5	1H	2112	G
5	1H	2113	U
5	1H	2114	A
5	1H	2115	G
5	1H	2116	G
5	1H	2118	U
5	1H	2126	A
5	1H	2127	G
5	1H	2128	C
5	1H	2129	C
5	1H	2131	G
5	1H	2132	U
5	1H	2133	G
5	1H	2135	A
5	1H	2136	C
5	1H	2139	C
5	1H	2147	G
5	1H	2148	G
5	1H	2157	G
5	1H	2158	A
5	1H	2161	C
5	1H	2166	G
5	1H	2167	U
5	1H	2168	G
5	1H	2170	A
5	1H	2171	A
5	1H	2172	U
5	1H	2173	A
5	1H	2174	C
5	1H	2176	A
5	1H	2190	G
5	1H	2198	A
5	1H	2205	C
5	1H	2210	G
5	1H	2212	A
5	1H	2213	U
5	1H	2215	G
5	1H	2224	G

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Mol	Chain	Res	Type
5	1H	2225	A
5	1H	2226	C
5	1H	2236	C
5	1H	2238	G
5	1H	2240	C
5	1H	2267	A
5	1H	2275	C
5	1H	2280	G
5	1H	2283	C
5	1H	2285	C
5	1H	2286	A
5	1H	2287	A
5	1H	2288	A
5	1H	2305	A
5	1H	2307	G
5	1H	2308	G
5	1H	2309	A
5	1H	2312	U
5	1H	2314	C
5	1H	2319	G
5	1H	2320	A
5	1H	2325	G
5	1H	2326	C
5	1H	2327	A
5	1H	2334	G
5	1H	2336	A
5	1H	2343	C
5	1H	2345	G
5	1H	2346	A
5	1H	2347	C
5	1H	2350	C
5	1H	2376	A
5	1H	2377	A
5	1H	2383	G
5	1H	2385	C
5	1H	2389	G
5	1H	2390	U
5	1H	2391	G
5	1H	2393	A
5	1H	2402	C
5	1H	2403	C
5	1H	2405	G

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Mol	Chain	Res	Type
5	1H	2406	U
5	1H	2410	G
5	1H	2418	A
5	1H	2425	A
5	1H	2427	C
5	1H	2428	G
5	1H	2429	G
5	1H	2430	A
5	1H	2431	U
5	1H	2435	A
5	1H	2439	A
5	1H	2440	C
5	1H	2441	C
5	1H	2447	G
5	1H	2448	A
5	1H	2469	A
5	1H	2470	G
5	1H	2475	C
5	1H	2476	A
5	1H	2482	G
5	1H	2484	G
5	1H	2497	A
5	1H	2502	G
5	1H	2505	G
5	1H	2506	U
5	1H	2518	A
5	1H	2529	G
5	1H	2531	A
5	1H	2554	U
5	1H	2566	A
5	1H	2567	G
5	1H	2582	G
5	1H	2584	U
5	1H	2590	A
5	1H	2601	C
5	1H	2602	A
5	1H	2609	U
5	1H	2611	U
5	1H	2612	C
5	1H	2615	U
5	1H	2629	A
5	1H	2634	G

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Mol	Chain	Res	Type
5	1H	2636	U
5	1H	2654	A
5	1H	2656	U
5	1H	2657	A
5	1H	2665	A
5	1H	2666	C
5	1H	2670	A
5	1H	2673	G
5	1H	2689	U
5	1H	2690	C
5	1H	2700	C
5	1H	2701	C
5	1H	2702	U
5	1H	2703	C
5	1H	2704	C
5	1H	2705	A
5	1H	2707	G
5	1H	2712(A)	A
5	1H	2713	A
5	1H	2714	G
5	1H	2718	G
5	1H	2721	A
5	1H	2726	U
5	1H	2733	A
5	1H	2734	A
5	1H	2744	G
5	1H	2757	A
5	1H	2758	A
5	1H	2764	A
5	1H	2765	A
5	1H	2766	G
5	1H	2778	A
5	1H	2779	U
5	1H	2781	A
5	1H	2787	C
5	1H	2789	C
5	1H	2790	A
5	1H	2791	C
5	1H	2793	G
5	1H	2794	C
5	1H	2795	G
5	1H	2797	U

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Mol	Chain	Res	Type
5	1H	2798	C
5	1H	2799	A
5	1H	2801	A
5	1H	2802	G
5	1H	2807	G
5	1H	2808	U
5	1H	2813	A
5	1H	2818	G
5	1H	2820	A
5	1H	2821	A
5	1H	2830	G
5	1H	2833	G
5	1H	2834	G
5	1H	2835	A
5	1H	2847	U
5	1H	2872	G
5	1H	2891	G
5	1H	2892	A
5	1H	2893	G
5	1H	2894	G
5	1H	2895	U
5	1H	2899	G
27	1J	0	A
27	1J	8	U
27	1J	13	A
27	1J	15	A
27	1J	16	G
27	1J	19	G
27	1J	22	U
27	1J	24	G
27	1J	30	C
27	1J	33	G
27	1J	39	A
27	1J	41	U
27	1J	42	C
27	1J	45	A
27	1J	53	A
27	1J	58	A
27	1J	64	C
27	1J	73	A
27	1J	75	G
27	1J	76	G

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Mol	Chain	Res	Type
27	1J	81	G
27	1J	88	C
27	1J	89	G
27	1J	89(A)	A
27	1J	90	C
27	1J	101	A
27	1J	102	G
27	1J	108	C
27	1J	109	G
27	1J	114	G
27	1J	115	G
27	16	0	A
27	16	5	C
27	16	8	U
27	16	9	G
27	16	13	A
27	16	15	A
27	16	25	A
27	16	33	G
27	16	35	U
27	16	39	A
27	16	40	U
27	16	41	U
27	16	45	A
27	16	46	A
27	16	53	A
27	16	56	G
27	16	65	C
27	16	66	A
27	16	73	A
27	16	81	G
27	16	82	G
27	16	105	G
27	16	109	G
27	16	115	G
27	16	117	G
27	16	119	A
1	1G	5	U
1	1G	7	G
1	1G	9	G
1	1G	22	G
1	1G	31	G

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Mol	Chain	Res	Type
1	1G	32	A
1	1G	39	G
1	1G	41	G
1	1G	47	C
1	1G	48	C
1	1G	50	A
1	1G	51	A
1	1G	53	A
1	1G	65	U
1	1G	73	G
1	1G	76	G
1	1G	79	G
1	1G	80	G
1	1G	90	C
1	1G	91	C
1	1G	95	G
1	1G	116	A
1	1G	120	A
1	1G	121	C
1	1G	131	C
1	1G	146	G
1	1G	154	C
1	1G	163	C
1	1G	167	G
1	1G	168	G
1	1G	173	U
1	1G	174	C
1	1G	182	U
1	1G	186	C
1	1G	187	C
1	1G	188	U
1	1G	189	U
1	1G	190	G
1	1G	191(A)	G
1	1G	191(D)	U
1	1G	191(E)	G
1	1G	195	A
1	1G	197	A
1	1G	198	G
1	1G	210	U
1	1G	216	G
1	1G	241	C

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Mol	Chain	Res	Type
1	1G	242	C
1	1G	243	A
1	1G	244	U
1	1G	247	G
1	1G	250	A
1	1G	251	G
1	1G	266	G
1	1G	267	C
1	1G	270	A
1	1G	274	A
1	1G	281	G
1	1G	283	C
1	1G	289	G
1	1G	290	C
1	1G	298	A
1	1G	318	G
1	1G	321	A
1	1G	327	A
1	1G	328	C
1	1G	329	A
1	1G	330	C
1	1G	332	G
1	1G	345	C
1	1G	346	G
1	1G	347	G
1	1G	350	G
1	1G	351	G
1	1G	352	C
1	1G	353	A
1	1G	354	G
1	1G	366	C
1	1G	367	U
1	1G	369	C
1	1G	372	C
1	1G	384	G
1	1G	397	A
1	1G	398	C
1	1G	406	G
1	1G	409	G
1	1G	411	A
1	1G	412	A
1	1G	413	G

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Mol	Chain	Res	Type
1	1G	414	A
1	1G	421	U
1	1G	422	C
1	1G	423	G
1	1G	424	G
1	1G	429	U
1	1G	430	A
1	1G	439	A
1	1G	442	C
1	1G	465	A
1	1G	466	C
1	1G	467	G
1	1G	475	G
1	1G	478	A
1	1G	482	A
1	1G	483	C
1	1G	484	G
1	1G	485	G
1	1G	486	U
1	1G	496	A
1	1G	497	U
1	1G	502	G
1	1G	505	G
1	1G	510	A
1	1G	511	C
1	1G	518	C
1	1G	519	C
1	1G	521	G
1	1G	527	G
1	1G	529	G
1	1G	530	G
1	1G	531	U
1	1G	532	A
1	1G	533	A
1	1G	536	C
1	1G	547	A
1	1G	549	C
1	1G	554	C
1	1G	555	C
1	1G	559	A
1	1G	561	U
1	1G	562	C

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Mol	Chain	Res	Type
1	1G	564	C
1	1G	566	G
1	1G	567	G
1	1G	572	A
1	1G	573	A
1	1G	575	G
1	1G	576	G
1	1G	577	G
1	1G	581	G
1	1G	596	C
1	1G	608	A
1	1G	614	A
1	1G	618	C
1	1G	620	C
1	1G	630	G
1	1G	632	A
1	1G	633	G
1	1G	640	A
1	1G	646	U
1	1G	651	C
1	1G	652	U
1	1G	653	A
1	1G	654	G
1	1G	660	G
1	1G	661	G
1	1G	665	A
1	1G	687	A
1	1G	688	G
1	1G	702	A
1	1G	724	G
1	1G	731	G
1	1G	734	G
1	1G	749	C
1	1G	755	G
1	1G	759	A
1	1G	760	G
1	1G	769	G
1	1G	777	A
1	1G	792	A
1	1G	794	A
1	1G	803	G
1	1G	804	U

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Mol	Chain	Res	Type
1	1G	805	C
1	1G	813	U
1	1G	816	A
1	1G	817	C
1	1G	820	U
1	1G	821	G
1	1G	827	U
1	1G	828	A
1	1G	842	C
1	1G	843	U
1	1G	848	C
1	1G	859	A
1	1G	873	A
1	1G	884	U
1	1G	885	G
1	1G	913	A
1	1G	914	A
1	1G	916	G
1	1G	926	G
1	1G	927	G
1	1G	934	C
1	1G	935	A
1	1G	936	C
1	1G	954	G
1	1G	958	A
1	1G	960	U
1	1G	961	U
1	1G	963	G
1	1G	966	G
1	1G	967	C
1	1G	968	A
1	1G	969	A
1	1G	971	G
1	1G	972	C
1	1G	974	A
1	1G	975	A
1	1G	976	G
1	1G	977	A
1	1G	978	A
1	1G	980	C
1	1G	984	C
1	1G	991	U

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Mol	Chain	Res	Type
1	1G	992	U
1	1G	993	G
1	1G	995	C
1	1G	1000	A
1	1G	1003	G
1	1G	1004	A
1	1G	1006	C
1	1G	1009	G
1	1G	1013	G
1	1G	1023	G
1	1G	1024	G
1	1G	1025	U
1	1G	1028	C
1	1G	1028(B)	C
1	1G	1029	G
1	1G	1031	G
1	1G	1032(A)	G
1	1G	1033	G
1	1G	1035	A
1	1G	1036	G
1	1G	1038	C
1	1G	1040	U
1	1G	1042	G
1	1G	1043	C
1	1G	1046	A
1	1G	1048	G
1	1G	1053	G
1	1G	1054	C
1	1G	1055	A
1	1G	1056	U
1	1G	1064	G
1	1G	1081	G
1	1G	1085	U
1	1G	1086	U
1	1G	1092	A
1	1G	1094	G
1	1G	1095	U
1	1G	1101	A
1	1G	1111	A
1	1G	1113	C
1	1G	1118	C
1	1G	1124	G

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Mol	Chain	Res	Type
1	1G	1125	U
1	1G	1127	G
1	1G	1128	C
1	1G	1129	C
1	1G	1131	G
1	1G	1135	U
1	1G	1137	C
1	1G	1138	G
1	1G	1139	G
1	1G	1141	C
1	1G	1146	A
1	1G	1147	C
1	1G	1154	G
1	1G	1157	A
1	1G	1158	C
1	1G	1159	U
1	1G	1160	G
1	1G	1171	G
1	1G	1177	G
1	1G	1178	G
1	1G	1181	G
1	1G	1182	G
1	1G	1183	A
1	1G	1185	G
1	1G	1186	G
1	1G	1187	G
1	1G	1188	A
1	1G	1193	G
1	1G	1196	U
1	1G	1201	A
1	1G	1202	G
1	1G	1211	U
1	1G	1212	U
1	1G	1213	A
1	1G	1214	C
1	1G	1225	A
1	1G	1228	C
1	1G	1232	U
1	1G	1238	A
1	1G	1240	U
1	1G	1241	G
1	1G	1256	A

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Mol	Chain	Res	Type
1	1G	1257	U
1	1G	1258	G
1	1G	1260	C
1	1G	1263	C
1	1G	1267	C
1	1G	1269	A
1	1G	1275	A
1	1G	1278	U
1	1G	1279	A
1	1G	1280	A
1	1G	1286	A
1	1G	1287	A
1	1G	1288	A
1	1G	1293	G
1	1G	1297	C
1	1G	1298	C
1	1G	1299	A
1	1G	1300	G
1	1G	1301	U
1	1G	1303	C
1	1G	1305	G
1	1G	1317	C
1	1G	1319	A
1	1G	1320	C
1	1G	1322	C
1	1G	1323	G
1	1G	1324	A
1	1G	1331	G
1	1G	1335	C
1	1G	1336	C
1	1G	1337	G
1	1G	1346	A
1	1G	1347	G
1	1G	1353	G
1	1G	1362(A)	C
1	1G	1363	A
1	1G	1364	U
1	1G	1365	G
1	1G	1370	G
1	1G	1379	G
1	1G	1396	A
1	1G	1397	C

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Mol	Chain	Res	Type
1	1G	1398	A
1	1G	1400	C
1	1G	1401	G
1	1G	1406	U
1	1G	1408	A
1	1G	1412	C
1	1G	1419	G
1	1G	1442	G
1	1G	1443	G
1	1G	1446	A
1	1G	1447	G
1	1G	1450	U
1	1G	1451	A
1	1G	1452	C
1	1G	1453	G
1	1G	1454	G
1	1G	1460	A
1	1G	1469	G
1	1G	1485	U
1	1G	1490	C
1	1G	1492	A
1	1G	1494	G
1	1G	1498	U
1	1G	1499	A
1	1G	1502	A
1	1G	1503	A
1	1G	1504	G
1	1G	1506	U
1	1G	1507	A
1	1G	1517	G
1	1G	1519	A
1	1G	1520	G
1	1G	1525	G
1	1G	1529	G
1	1G	1530	G

All (207) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	13	5	U
1	13	50	A
1	13	115	G

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Mol	Chain	Res	Type
1	13	190	G
1	13	244	U
1	13	266	G
1	13	327	A
1	13	412	A
1	13	422	C
1	13	428	G
1	13	429	U
1	13	484	G
1	13	509	A
1	13	560	U
1	13	631	G
1	13	687	A
1	13	703	G
1	13	748	C
1	13	793	U
1	13	812	C
1	13	991	U
1	13	992	U
1	13	1027	C
1	13	1053	G
1	13	1064	G
1	13	1065	U
1	13	1126	U
1	13	1183	A
1	13	1211	U
1	13	1213	A
1	13	1225	A
1	13	1285	A
1	13	1302	U
1	13	1331	G
1	13	1336	C
1	13	1452	C
1	13	1498	U
1	13	1504	G
2	1L	10	G
2	1L	18	G
2	1L	46	7MG
3	2L	19	G
3	2L	47	7MG
3	2L	48	U
2	3L	16	H2U

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Mol	Chain	Res	Type
4	4L	13	A
4	4L	19	U
5	14	34	C
5	14	49	A
5	14	101	G
5	14	128	C
5	14	196	A
5	14	197	A
5	14	278	A
5	14	310	A
5	14	503	A
5	14	685	A
5	14	752	A
5	14	764	A
5	14	893	C
5	14	960	A
5	14	1022	G
5	14	1085	A
5	14	1141	U
5	14	1378	A
5	14	1396	U
5	14	1416	G
5	14	1420	U
5	14	1427	A
5	14	1460	A
5	14	1558	A
5	14	1608	A
5	14	1799	G
5	14	1819	A
5	14	1899	G
5	14	1963	U
5	14	2062	A
5	14	2157	G
5	14	2191	G
5	14	2211	G
5	14	2225	A
5	14	2275	C
5	14	2406	U
5	14	2439	A
5	14	2447	G
5	14	2602	A
5	14	2611	U

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Mol	Chain	Res	Type
5	14	2629	A
5	14	2638	G
5	14	2689	U
5	14	2776	A
5	14	2859	G
5	14	2893	G
26	1K	10	G
26	1K	13	C
3	2K	21	H2U
3	2K	48	U
2	3K	2	C
2	3K	18	G
2	3K	20	H2U
2	3K	46	7MG
2	3K	58	A
5	1H	33	U
5	1H	125	G
5	1H	195	A
5	1H	196	A
5	1H	222	A
5	1H	229	A
5	1H	249	C
5	1H	271(B)	G
5	1H	404	C
5	1H	481	G
5	1H	508	G
5	1H	528	A
5	1H	587	C
5	1H	685	A
5	1H	752	A
5	1H	764	A
5	1H	800	A
5	1H	880	G
5	1H	961	C
5	1H	974(A)	C
5	1H	1022	G
5	1H	1026	U
5	1H	1060	U
5	1H	1085	A
5	1H	1095	A
5	1H	1110	G
5	1H	1178	C

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Mol	Chain	Res	Type
5	1H	1273	U
5	1H	1312	U
5	1H	1396	U
5	1H	1420	U
5	1H	1427	A
5	1H	1493	C
5	1H	1508	A
5	1H	1558	A
5	1H	1608	A
5	1H	1609	A
5	1H	1617	C
5	1H	1678	G
5	1H	1694	C
5	1H	1757	U
5	1H	1762	A
5	1H	1799	G
5	1H	1900	A
5	1H	2060	A
5	1H	2062	A
5	1H	2080	G
5	1H	2157	G
5	1H	2167	U
5	1H	2171	A
5	1H	2212	A
5	1H	2225	A
5	1H	2389	G
5	1H	2428	G
5	1H	2447	G
5	1H	2475	C
5	1H	2481	G
5	1H	2566	A
5	1H	2610	C
5	1H	2689	U
5	1H	2756	U
5	1H	2873	A
27	1J	56	G
27	1J	88	C
27	1J	89	G
27	16	40	U
27	16	81	G
27	16	108	C
1	1G	64	G

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Mol	Chain	Res	Type
1	1G	115	G
1	1G	197	A
1	1G	243	A
1	1G	244	U
1	1G	250	A
1	1G	266	G
1	1G	327	A
1	1G	328	C
1	1G	345	C
1	1G	412	A
1	1G	421	U
1	1G	429	U
1	1G	509	A
1	1G	535	A
1	1G	560	U
1	1G	632	A
1	1G	687	A
1	1G	723	U
1	1G	748	C
1	1G	793	U
1	1G	812	C
1	1G	884	U
1	1G	913	A
1	1G	992	U
1	1G	1053	G
1	1G	1054	C
1	1G	1126	U
1	1G	1128	C
1	1G	1145	C
1	1G	1157	A
1	1G	1285	A
1	1G	1297	C
1	1G	1300	G
1	1G	1346	A
1	1G	1453	G
1	1G	1498	U

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

41 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
2	H2U	3K	20	2	18,21,22	2.25	4 (22%)	19,30,33	1.75	4 (21%)
2	PSU	3L	32	2	18,21,22	1.33	2 (11%)	21,30,33	1.64	3 (14%)
3	OMC	2K	33	3	19,22,23	1.87	3 (15%)	25,31,34	0.92	2 (8%)
3	4SU	2L	8	3	18,21,22	2.11	4 (22%)	25,30,33	2.60	5 (20%)
2	H2U	1L	16	2	18,21,22	2.33	4 (22%)	19,30,33	1.74	4 (21%)
26	MIA	1K	37	26	28,31,32	2.35	4 (14%)	38,44,47	2.63	11 (28%)
3	PSU	2K	56	3	18,21,22	1.21	2 (11%)	21,30,33	2.10	5 (23%)
2	PSU	1L	39	2	18,21,22	1.19	1 (5%)	21,30,33	1.63	4 (19%)
2	MIA	1L	37	2	28,31,32	2.33	5 (17%)	38,44,47	2.67	12 (31%)
2	PSU	3L	55	2	18,21,22	1.19	1 (5%)	21,30,33	1.68	3 (14%)
3	PSU	2L	56	3	18,21,22	1.56	2 (11%)	21,30,33	1.81	3 (14%)
26	4SU	1K	8	26	18,21,22	1.85	4 (22%)	25,30,33	2.38	5 (20%)
3	OMC	2L	33	3	19,22,23	1.74	3 (15%)	25,31,34	1.08	2 (8%)
2	PSU	3K	32	2	18,21,22	1.28	1 (5%)	21,30,33	1.81	4 (19%)
2	H2U	3L	16	2	18,21,22	2.22	4 (22%)	19,30,33	1.62	3 (15%)
2	MIA	3L	37	2	28,31,32	2.75	5 (17%)	38,44,47	3.71	14 (36%)
2	4SU	1L	8	2	18,21,22	1.90	4 (22%)	25,30,33	2.14	5 (20%)
26	PSU	1K	55	26	18,21,22	1.36	2 (11%)	21,30,33	1.63	4 (19%)
2	7MG	1L	46	2	23,26,27	3.16	9 (39%)	27,39,42	2.72	9 (33%)
2	PSU	3K	55	2	18,21,22	1.21	1 (5%)	21,30,33	2.05	6 (28%)
26	7MG	1K	46	26	23,26,27	3.00	7 (30%)	27,39,42	2.87	10 (37%)
2	7MG	3K	46	2	23,26,27	3.04	7 (30%)	27,39,42	2.81	10 (37%)
3	7MG	2K	47	3	23,26,27	2.97	8 (34%)	27,39,42	2.78	9 (33%)
2	4SU	3K	8	2	18,21,22	2.00	3 (16%)	25,30,33	2.53	5 (20%)
26	H2U	1K	16	26	18,21,22	2.59	3 (16%)	19,30,33	1.57	4 (21%)
2	PSU	3L	39	2	18,21,22	1.18	1 (5%)	21,30,33	1.75	4 (19%)
3	4SU	2K	8	3	18,21,22	2.01	3 (16%)	25,30,33	2.74	5 (20%)
3	7MG	2L	47	3	23,26,27	3.13	8 (34%)	27,39,42	2.86	10 (37%)
2	4SU	3L	8	2	18,21,22	2.01	5 (27%)	25,30,33	2.03	5 (20%)
3	H2U	2K	21	3	18,21,22	2.88	4 (22%)	19,30,33	1.61	3 (15%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	H2U	2L	21	3	18,21,22	2.17	4 (22%)	19,30,33	1.50	3 (15%)
2	H2U	3K	16	2	18,21,22	2.26	4 (22%)	19,30,33	1.70	4 (21%)
2	H2U	3L	20	2	18,21,22	2.29	4 (22%)	19,30,33	1.66	4 (21%)
2	PSU	3K	39	2	18,21,22	1.37	1 (5%)	21,30,33	1.59	3 (14%)
2	PSU	1L	32	2	18,21,22	1.33	1 (5%)	21,30,33	1.59	5 (23%)
2	MIA	3K	37	2	28,31,32	2.45	4 (14%)	38,44,47	3.76	14 (36%)
2	7MG	3L	46	2	23,26,27	3.23	7 (30%)	27,39,42	2.77	9 (33%)
26	PSU	1K	39	26	18,21,22	1.14	2 (11%)	21,30,33	1.77	3 (14%)
26	PSU	1K	32	26,56	18,21,22	1.48	3 (16%)	21,30,33	1.69	4 (19%)
2	PSU	1L	55	2	18,21,22	1.43	1 (5%)	21,30,33	1.57	4 (19%)
2	H2U	1L	20	2	18,21,22	2.21	4 (22%)	19,30,33	1.73	4 (21%)

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
2	H2U	3K	20	2	-	0/7/38/39	0/2/2/2
2	PSU	3L	32	2	-	1/7/25/26	0/2/2/2
3	OMC	2K	33	3	-	0/9/27/28	0/2/2/2
3	4SU	2L	8	3	-	0/7/25/26	0/2/2/2
2	H2U	1L	16	2	-	5/7/38/39	0/2/2/2
26	MIA	1K	37	26	-	7/15/33/34	0/3/3/3
3	PSU	2K	56	3	-	0/7/25/26	0/2/2/2
2	PSU	1L	39	2	-	0/7/25/26	0/2/2/2
2	MIA	1L	37	2	-	6/15/33/34	0/3/3/3
2	PSU	3L	55	2	-	2/7/25/26	0/2/2/2
3	PSU	2L	56	3	-	0/7/25/26	0/2/2/2
26	4SU	1K	8	26	-	1/7/25/26	0/2/2/2
3	OMC	2L	33	3	-	1/9/27/28	0/2/2/2
2	PSU	3K	32	2	-	0/7/25/26	0/2/2/2
2	H2U	3L	16	2	-	3/7/38/39	0/2/2/2
2	MIA	3L	37	2	-	8/15/33/34	0/3/3/3
2	4SU	1L	8	2	-	7/7/25/26	0/2/2/2
26	PSU	1K	55	26	-	2/7/25/26	0/2/2/2
2	7MG	1L	46	2	-	4/7/37/38	0/3/3/3
2	PSU	3K	55	2	-	4/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
26	7MG	1K	46	26	-	2/7/37/38	0/3/3/3
2	7MG	3K	46	2	-	2/7/37/38	0/3/3/3
3	7MG	2K	47	3	-	5/7/37/38	0/3/3/3
2	4SU	3K	8	2	-	5/7/25/26	0/2/2/2
26	H2U	1K	16	26	-	3/7/38/39	0/2/2/2
2	PSU	3L	39	2	-	2/7/25/26	0/2/2/2
3	4SU	2K	8	3	-	0/7/25/26	0/2/2/2
3	7MG	2L	47	3	-	4/7/37/38	0/3/3/3
2	4SU	3L	8	2	-	1/7/25/26	0/2/2/2
3	H2U	2K	21	3	-	2/7/38/39	0/2/2/2
3	H2U	2L	21	3	-	4/7/38/39	0/2/2/2
2	H2U	3K	16	2	-	0/7/38/39	0/2/2/2
2	H2U	3L	20	2	-	6/7/38/39	0/2/2/2
2	PSU	3K	39	2	-	0/7/25/26	0/2/2/2
2	PSU	1L	32	2	-	3/7/25/26	0/2/2/2
2	MIA	3K	37	2	-	6/15/33/34	0/3/3/3
2	7MG	3L	46	2	-	2/7/37/38	0/3/3/3
26	PSU	1K	39	26	-	0/7/25/26	0/2/2/2
26	PSU	1K	32	26,56	-	0/7/25/26	0/2/2/2
2	PSU	1L	55	2	-	0/7/25/26	0/2/2/2
2	H2U	1L	20	2	-	4/7/38/39	0/2/2/2

All (149) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	3L	46	7MG	C5-N7	9.21	1.47	1.35
3	2K	21	H2U	C2-N1	8.98	1.48	1.35
2	3K	46	7MG	C5-N7	8.81	1.46	1.35
26	1K	37	MIA	C13-C14	8.64	1.58	1.32
2	1L	46	7MG	C5-N7	8.53	1.46	1.35
26	1K	16	H2U	C2-N1	8.44	1.47	1.35
2	3L	37	MIA	C13-C14	8.34	1.57	1.32
3	2L	47	7MG	C5-N7	8.30	1.46	1.35
2	1L	37	MIA	C13-C14	8.24	1.57	1.32
2	3K	37	MIA	C13-C14	7.99	1.56	1.32
26	1K	46	7MG	C5-N7	7.94	1.45	1.35
3	2K	47	7MG	C5-N7	7.73	1.45	1.35
2	3L	37	MIA	C2-S10	7.70	1.82	1.75
2	3L	37	MIA	C6-N6	7.52	1.46	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	1L	16	H2U	C2-N1	7.44	1.45	1.35
3	2L	47	7MG	C4-N9	-7.32	1.28	1.37
26	1K	37	MIA	C6-N6	7.32	1.45	1.34
2	3L	20	H2U	C2-N1	7.21	1.45	1.35
2	1L	46	7MG	C4-N9	-7.14	1.29	1.37
2	3L	46	7MG	C4-N9	-7.09	1.29	1.37
2	3K	16	H2U	C2-N1	6.97	1.45	1.35
2	3L	16	H2U	C2-N1	6.84	1.45	1.35
3	2L	8	4SU	C5-C4	6.76	1.50	1.42
3	2K	8	4SU	C5-C4	6.75	1.50	1.42
2	3K	37	MIA	C6-N6	6.70	1.44	1.34
2	1L	20	H2U	C2-N1	6.61	1.44	1.35
2	3K	20	H2U	C2-N1	6.52	1.44	1.35
26	1K	46	7MG	C4-N9	-6.47	1.29	1.37
3	2K	47	7MG	C4-N9	-6.42	1.30	1.37
2	3K	37	MIA	C2-S10	6.27	1.80	1.75
2	3L	46	7MG	C4-N3	6.25	1.48	1.34
2	1L	46	7MG	C4-N3	6.19	1.48	1.34
26	1K	46	7MG	C4-N3	6.14	1.48	1.34
2	3K	46	7MG	C4-N3	6.13	1.48	1.34
2	3L	8	4SU	C5-C4	6.07	1.49	1.42
2	3K	46	7MG	C4-N9	-6.06	1.30	1.37
2	3K	8	4SU	C5-C4	6.02	1.49	1.42
3	2K	47	7MG	C4-N3	5.97	1.47	1.34
2	1L	37	MIA	C6-N6	5.91	1.43	1.34
3	2K	21	H2U	C2-N3	5.84	1.48	1.38
26	1K	8	4SU	C5-C4	5.82	1.49	1.42
3	2L	47	7MG	C4-N3	5.81	1.47	1.34
3	2L	21	H2U	C2-N1	5.81	1.43	1.35
2	1L	8	4SU	C5-C4	5.69	1.49	1.42
2	1L	37	MIA	C2-S10	5.23	1.80	1.75
3	2L	56	PSU	C6-C5	5.22	1.41	1.35
3	2K	33	OMC	C2-N3	5.08	1.46	1.36
3	2K	21	H2U	C4-N3	4.96	1.45	1.37
2	3K	39	PSU	C6-C5	4.82	1.40	1.35
3	2L	33	OMC	C2-N3	4.82	1.45	1.36
2	1L	55	PSU	C6-C5	4.77	1.40	1.35
3	2L	21	H2U	C2-N3	4.76	1.46	1.38
26	1K	32	PSU	C6-C5	4.76	1.40	1.35
26	1K	16	H2U	C2-N3	4.73	1.46	1.38
3	2K	47	7MG	C8-N7	4.70	1.65	1.42
2	3L	46	7MG	C8-N7	4.69	1.65	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1K	46	7MG	C8-N7	4.63	1.64	1.42
2	1L	32	PSU	C6-C5	4.63	1.40	1.35
26	1K	55	PSU	C6-C5	4.61	1.40	1.35
2	1L	46	7MG	C8-N7	4.60	1.64	1.42
2	3K	46	7MG	C8-N7	4.58	1.64	1.42
2	1L	20	H2U	C2-N3	4.57	1.45	1.38
2	3L	32	PSU	C6-C5	4.56	1.40	1.35
3	2L	47	7MG	C8-N7	4.56	1.64	1.42
26	1K	46	7MG	C5-C4	-4.52	1.24	1.37
2	3L	46	7MG	C5-C4	-4.48	1.24	1.37
2	1L	46	7MG	C5-C4	-4.46	1.24	1.37
2	3K	16	H2U	C2-N3	4.43	1.45	1.38
2	3K	32	PSU	C6-C5	4.42	1.40	1.35
2	3K	20	H2U	C2-N3	4.41	1.45	1.38
3	2K	33	OMC	C4-N4	4.39	1.44	1.33
2	3L	20	H2U	C2-N3	4.37	1.45	1.38
3	2K	47	7MG	C5-C4	-4.35	1.24	1.37
2	3L	16	H2U	C2-N3	4.30	1.45	1.38
2	3K	46	7MG	C5-C4	-4.29	1.24	1.37
3	2L	21	H2U	C4-N3	4.29	1.44	1.37
2	3K	20	H2U	C4-N3	4.27	1.44	1.37
26	1K	16	H2U	C4-N3	4.26	1.44	1.37
3	2L	47	7MG	C5-C4	-4.25	1.24	1.37
2	3K	8	4SU	C2-N1	4.24	1.45	1.38
2	1L	16	H2U	C2-N3	4.19	1.45	1.38
2	3L	55	PSU	C6-C5	4.10	1.39	1.35
2	1L	39	PSU	C6-C5	4.03	1.39	1.35
3	2L	33	OMC	C4-N4	4.02	1.43	1.33
2	3L	8	4SU	C2-N1	4.01	1.44	1.38
2	1L	8	4SU	C2-N1	3.99	1.44	1.38
2	3L	39	PSU	C6-C5	3.92	1.39	1.35
2	3K	55	PSU	C6-C5	3.91	1.39	1.35
3	2K	56	PSU	C6-C5	3.91	1.39	1.35
2	1L	20	H2U	C4-N3	3.82	1.44	1.37
3	2K	33	OMC	C5-C4	3.78	1.51	1.42
2	3L	16	H2U	C4-N3	3.73	1.43	1.37
26	1K	39	PSU	C6-C5	3.67	1.39	1.35
2	3K	16	H2U	C4-N3	3.54	1.43	1.37
2	1L	16	H2U	C4-N3	3.42	1.43	1.37
26	1K	8	4SU	C2-N1	3.40	1.43	1.38
2	3L	20	H2U	C4-N3	3.35	1.43	1.37
3	2K	8	4SU	C2-N1	3.34	1.43	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	2L	8	4SU	C6-N1	3.27	1.45	1.38
26	1K	46	7MG	C2-N2	3.25	1.41	1.34
3	2L	33	OMC	C5-C4	3.17	1.50	1.42
3	2L	47	7MG	C2-N2	3.12	1.41	1.34
3	2L	8	4SU	C2-N1	3.07	1.43	1.38
2	3L	46	7MG	C2-N2	3.04	1.41	1.34
2	3K	46	7MG	C2-N2	3.00	1.41	1.34
2	3K	8	4SU	C6-N1	2.99	1.45	1.38
2	3L	8	4SU	C6-N1	2.91	1.45	1.38
3	2L	47	7MG	C8-N9	2.89	1.47	1.45
3	2K	47	7MG	C2-N2	2.89	1.40	1.34
3	2L	56	PSU	C2-N1	2.88	1.40	1.36
2	1L	46	7MG	C2-N2	2.81	1.40	1.34
3	2L	8	4SU	C4-N3	2.79	1.40	1.37
2	1L	8	4SU	C6-N1	2.65	1.44	1.38
3	2K	8	4SU	C6-N1	2.64	1.44	1.38
2	1L	46	7MG	C8-N9	2.63	1.47	1.45
26	1K	32	PSU	C2-N1	2.58	1.40	1.36
3	2K	47	7MG	C8-N9	2.56	1.47	1.45
2	3L	20	H2U	C6-N1	-2.51	1.42	1.47
2	3L	46	7MG	C5-C6	2.50	1.49	1.43
26	1K	8	4SU	C6-N1	2.49	1.44	1.38
2	1L	16	H2U	C6-N1	-2.46	1.42	1.47
2	1L	37	MIA	C5-N7	-2.42	1.34	1.39
26	1K	37	MIA	C5-N7	-2.39	1.34	1.39
2	3L	8	4SU	C2-N3	2.34	1.42	1.38
2	3L	37	MIA	C5-C4	2.31	1.43	1.39
2	3K	46	7MG	C5-C6	2.30	1.49	1.43
2	3K	20	H2U	C6-N1	-2.30	1.43	1.47
3	2K	56	PSU	C4-C5	-2.25	1.38	1.44
2	3L	16	H2U	C6-N1	-2.23	1.43	1.47
2	3K	16	H2U	C6-N1	-2.23	1.43	1.47
2	1L	8	4SU	C2-N3	2.23	1.41	1.38
26	1K	46	7MG	C5-C6	2.18	1.48	1.43
2	3L	32	PSU	C2-N1	2.17	1.39	1.36
2	1L	46	7MG	C5-C6	2.16	1.48	1.43
2	3L	8	4SU	C4-N3	2.16	1.39	1.37
26	1K	8	4SU	C4-N3	2.13	1.39	1.37
3	2L	47	7MG	C6-N1	-2.10	1.34	1.38
3	2K	47	7MG	C5-C6	2.09	1.48	1.43
3	2L	21	H2U	C6-N1	-2.09	1.43	1.47
26	1K	39	PSU	C4-C5	-2.09	1.38	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	1L	37	MIA	C5-C4	2.08	1.42	1.39
26	1K	37	MIA	C4-N3	-2.07	1.31	1.34
2	1L	46	7MG	C6-N1	-2.07	1.35	1.38
3	2K	21	H2U	C5-C4	2.07	1.54	1.50
2	3K	37	MIA	C5-C4	2.06	1.42	1.39
2	3L	37	MIA	C5-N7	-2.06	1.35	1.39
26	1K	55	PSU	C2-N1	2.06	1.39	1.36
2	1L	20	H2U	C6-N1	-2.05	1.43	1.47
26	1K	32	PSU	O4'-C1'	-2.02	1.41	1.43

All (230) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	3K	37	MIA	C11-S10-C2	14.86	113.40	102.25
2	3L	37	MIA	C11-S10-C2	14.32	113.00	102.25
26	1K	37	MIA	C12-C13-C14	-10.37	108.41	127.01
2	3K	37	MIA	C12-C13-C14	-9.55	109.87	127.01
3	2K	8	4SU	C4-N3-C2	-9.34	118.36	127.31
2	3L	37	MIA	C12-C13-C14	-9.22	110.47	127.01
3	2L	47	7MG	C4-C5-N7	8.85	115.84	105.38
2	1L	37	MIA	C12-C13-C14	-8.48	111.80	127.01
3	2L	8	4SU	C4-N3-C2	-8.30	119.36	127.31
2	3K	8	4SU	C4-N3-C2	-8.26	119.40	127.31
3	2K	47	7MG	C4-C5-N7	8.24	115.12	105.38
2	1L	46	7MG	C4-C5-N7	8.01	114.85	105.38
2	3L	37	MIA	C5-C4-N3	-7.97	118.78	127.18
26	1K	46	7MG	C4-C5-N7	7.85	114.66	105.38
26	1K	8	4SU	C4-N3-C2	-7.81	119.83	127.31
2	3K	46	7MG	C4-C5-N7	7.52	114.27	105.38
2	1L	37	MIA	C5-C4-N3	-7.44	119.34	127.18
2	3L	46	7MG	C4-C5-N7	7.30	114.00	105.38
2	3K	37	MIA	C5-C4-N3	-7.24	119.55	127.18
2	1L	8	4SU	C4-N3-C2	-7.06	120.54	127.31
3	2L	8	4SU	C5-C4-N3	6.57	120.86	114.75
2	3L	37	MIA	N3-C4-N9	6.54	135.28	126.99
2	3L	8	4SU	C4-N3-C2	-6.46	121.12	127.31
26	1K	37	MIA	C5-C4-N3	-6.27	120.57	127.18
2	3K	8	4SU	C5-C4-N3	6.23	120.55	114.75
26	1K	46	7MG	C5-C4-N9	5.86	113.85	106.33
2	3L	46	7MG	C5-C4-N9	5.83	113.80	106.33
3	2K	47	7MG	C6-C5-N7	-5.67	123.15	131.93
2	3K	46	7MG	C5-C4-N9	5.63	113.54	106.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	1L	46	7MG	C5-C4-N9	5.62	113.53	106.33
3	2K	8	4SU	N3-C2-N1	5.57	122.14	114.89
3	2K	8	4SU	C5-C4-N3	5.51	119.88	114.75
3	2L	47	7MG	C5-C4-N9	5.51	113.39	106.33
26	1K	8	4SU	C5-C4-N3	5.45	119.82	114.75
3	2K	47	7MG	C5-C4-N9	5.44	113.31	106.33
2	1L	37	MIA	N3-C4-N9	5.34	133.77	126.99
2	3L	46	7MG	C5-C6-N1	5.32	120.30	110.94
2	3K	37	MIA	N3-C4-N9	5.28	133.69	126.99
3	2L	47	7MG	C6-C5-N7	-5.13	123.98	131.93
3	2K	56	PSU	N1-C2-N3	4.97	120.41	115.17
26	1K	46	7MG	C2-N3-C4	4.94	120.80	112.30
2	3K	46	7MG	C5-C6-N1	4.90	119.56	110.94
2	3K	37	MIA	C15-C14-C13	-4.89	107.97	122.66
26	1K	46	7MG	C5-C6-N1	4.89	119.55	110.94
2	3K	55	PSU	N1-C2-N3	4.89	120.32	115.17
2	3K	55	PSU	C4-N3-C2	-4.85	119.69	126.37
2	3K	46	7MG	C2-N3-C4	4.78	120.54	112.30
2	1L	20	H2U	C5-C4-N3	4.78	121.77	116.69
2	3K	8	4SU	N3-C2-N1	4.77	121.10	114.89
2	1L	46	7MG	C5-C6-N1	4.75	119.31	110.94
26	1K	8	4SU	C5-C4-S4	-4.73	118.90	124.31
2	3L	46	7MG	C2-N3-C4	4.71	120.42	112.30
2	3K	32	PSU	C4-N3-C2	-4.70	119.89	126.37
3	2L	8	4SU	C5-C4-S4	-4.67	118.97	124.31
2	3L	32	PSU	C4-N3-C2	-4.65	119.97	126.37
3	2L	56	PSU	C4-N3-C2	-4.64	119.97	126.37
2	3L	55	PSU	C4-N3-C2	-4.58	120.06	126.37
2	3K	16	H2U	N3-C2-N1	4.58	121.25	116.65
26	1K	46	7MG	C5-C4-N3	-4.51	119.67	128.13
26	1K	46	7MG	C6-C5-N7	-4.49	124.97	131.93
2	3K	46	7MG	C5-C4-N3	-4.48	119.72	128.13
3	2L	47	7MG	C5-C6-N1	4.47	118.80	110.94
3	2K	21	H2U	N3-C2-N1	4.45	121.12	116.65
2	3L	8	4SU	C5-C4-N3	4.44	118.88	114.75
2	3K	37	MIA	C16-C14-C13	-4.42	109.39	122.66
2	1L	8	4SU	N3-C2-N1	4.37	120.59	114.89
26	1K	39	PSU	C4-N3-C2	-4.32	120.41	126.37
26	1K	39	PSU	N1-C2-N3	4.27	119.67	115.17
2	1L	37	MIA	C15-C14-C13	-4.22	110.00	122.66
26	1K	32	PSU	N1-C2-N3	4.21	119.61	115.17
3	2K	56	PSU	C4-N3-C2	-4.21	120.57	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	1L	16	H2U	N3-C2-N1	4.19	120.86	116.65
26	1K	37	MIA	N3-C4-N9	4.18	132.29	126.99
2	3L	37	MIA	C16-C14-C13	-4.17	110.15	122.66
2	1L	46	7MG	C6-C5-N7	-4.15	125.50	131.93
2	3L	46	7MG	C5-C4-N3	-4.15	120.34	128.13
3	2L	56	PSU	N1-C2-N3	4.14	119.53	115.17
2	3L	16	H2U	C5-C4-N3	4.13	121.08	116.69
2	3K	46	7MG	C6-C5-N7	-4.12	125.54	131.93
3	2K	47	7MG	C5-C4-N3	-4.11	120.41	128.13
2	3L	39	PSU	N1-C2-N3	4.10	119.49	115.17
3	2K	56	PSU	C6-N1-C2	-4.08	118.91	122.69
3	2L	8	4SU	N3-C2-N1	4.07	120.19	114.89
2	1L	39	PSU	C4-N3-C2	-4.05	120.78	126.37
3	2K	47	7MG	C5-C6-N1	4.05	118.07	110.94
2	3L	37	MIA	C5-N7-C8	4.05	109.81	103.45
2	3K	37	MIA	C5-N7-C8	4.05	109.81	103.45
2	3K	37	MIA	C6-C5-N7	4.04	136.83	132.43
2	3K	20	H2U	C5-C4-N3	4.02	120.96	116.69
3	2K	8	4SU	C5-C4-S4	-4.01	119.73	124.31
26	1K	16	H2U	C5-C4-N3	3.98	120.92	116.69
2	3L	39	PSU	C4-N3-C2	-3.98	120.89	126.37
2	3L	20	H2U	C5-C6-N1	3.98	123.55	111.52
26	1K	32	PSU	C4-N3-C2	-3.98	120.89	126.37
2	1L	8	4SU	C5-C4-N3	3.97	118.44	114.75
2	1L	37	MIA	C11-S10-C2	-3.96	99.28	102.25
3	2K	56	PSU	O2-C2-N1	-3.96	118.71	122.79
2	1L	46	7MG	C2-N3-C4	3.95	119.11	112.30
2	3K	32	PSU	N1-C2-N3	3.94	119.33	115.17
2	3L	55	PSU	N1-C2-N3	3.94	119.32	115.17
26	1K	37	MIA	C16-C14-C13	-3.89	110.98	122.66
2	1L	37	MIA	C16-C14-C13	-3.86	111.07	122.66
2	3L	8	4SU	N3-C2-N1	3.86	119.91	114.89
2	3K	39	PSU	C4-N3-C2	-3.84	121.08	126.37
3	2L	47	7MG	C2-N3-C4	3.79	118.82	112.30
26	1K	8	4SU	N3-C2-N1	3.76	119.79	114.89
2	1L	46	7MG	C5-C4-N3	-3.76	121.08	128.13
26	1K	55	PSU	C4-N3-C2	-3.73	121.23	126.37
2	1L	32	PSU	C4-N3-C2	-3.72	121.25	126.37
3	2L	47	7MG	C5-C4-N3	-3.71	121.16	128.13
2	1L	16	H2U	C5-C4-N3	3.71	120.63	116.69
26	1K	16	H2U	C5-C6-N1	3.71	122.73	111.52
26	1K	55	PSU	N1-C2-N3	3.69	119.06	115.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	3K	37	MIA	C2-N3-C4	3.65	121.85	112.29
2	3K	37	MIA	C4-C5-N7	-3.65	106.41	110.58
26	1K	37	MIA	C5-N7-C8	3.62	109.15	103.45
2	3K	20	H2U	C5-C6-N1	3.61	122.43	111.52
3	2L	8	4SU	O2-C2-N1	-3.59	118.12	122.80
3	2K	21	H2U	C5-C6-N1	3.56	122.28	111.52
2	1L	16	H2U	C5-C6-N1	3.54	122.24	111.52
2	3K	16	H2U	C5-C6-N1	3.53	122.21	111.52
2	3L	37	MIA	C15-C14-C13	-3.52	112.10	122.66
2	3K	39	PSU	N1-C2-N3	3.51	118.87	115.17
2	1L	39	PSU	N1-C2-N3	3.50	118.86	115.17
3	2K	8	4SU	O2-C2-N1	-3.50	118.24	122.80
2	1L	8	4SU	C5-C4-S4	-3.49	120.32	124.31
3	2L	21	H2U	N3-C2-N1	3.47	120.14	116.65
2	3L	32	PSU	N1-C2-N3	3.47	118.83	115.17
2	3L	37	MIA	C2-N3-C4	3.46	121.36	112.29
3	2L	21	H2U	C5-C6-N1	3.46	121.99	111.52
2	3K	37	MIA	N3-C2-N1	-3.39	120.80	127.00
2	3L	46	7MG	C6-C5-N7	-3.39	126.67	131.93
2	3K	8	4SU	C5-C4-S4	-3.39	120.43	124.31
3	2K	47	7MG	C2-N3-C4	3.39	118.14	112.30
2	1L	55	PSU	N1-C2-N3	3.38	118.73	115.17
26	1K	37	MIA	C4-C5-N7	-3.37	106.73	110.58
2	1L	55	PSU	C4-N3-C2	-3.35	121.75	126.37
2	1L	37	MIA	C5-N7-C8	3.35	108.72	103.45
2	3L	37	MIA	N3-C2-N1	-3.35	120.89	127.00
2	3L	16	H2U	C5-C6-N1	3.33	121.61	111.52
2	3L	39	PSU	O2-C2-N1	-3.33	119.35	122.79
2	3L	37	MIA	C4-C5-N7	-3.30	106.81	110.58
2	3K	55	PSU	C6-C5-C4	3.30	120.40	118.17
2	3L	46	7MG	N9-C8-N7	-3.29	98.71	103.37
3	2L	21	H2U	O2-C2-N1	-3.27	119.17	123.10
26	1K	37	MIA	C15-C14-C13	-3.26	112.88	122.66
2	1L	37	MIA	C2-N3-C4	3.25	120.80	112.29
2	3L	8	4SU	C5-C4-S4	-3.22	120.63	124.31
2	3L	20	H2U	N3-C2-N1	3.21	119.88	116.65
26	1K	32	PSU	C6-N1-C2	-3.21	119.71	122.69
2	3K	20	H2U	N3-C2-N1	3.21	119.88	116.65
2	3L	16	H2U	N3-C2-N1	3.20	119.86	116.65
2	3K	37	MIA	N9-C8-N7	-3.11	109.52	113.94
2	3L	39	PSU	C6-N1-C2	-3.11	119.81	122.69
3	2K	47	7MG	N9-C8-N7	-3.09	99.00	103.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	1L	55	PSU	O2-C2-N1	-3.09	119.61	122.79
2	3K	16	H2U	C5-C4-N3	3.08	119.97	116.69
2	1L	32	PSU	N1-C2-N3	3.07	118.41	115.17
2	1L	20	H2U	N3-C2-N1	3.07	119.74	116.65
3	2K	47	7MG	O6-C6-C5	-3.07	120.09	127.62
2	1L	46	7MG	N9-C8-N7	-3.06	99.03	103.37
26	1K	37	MIA	N9-C8-N7	-3.06	109.59	113.94
2	3K	46	7MG	O6-C6-C5	-3.05	120.13	127.62
2	3L	20	H2U	C5-C4-N3	3.05	119.93	116.69
2	1L	37	MIA	C4-C5-N7	-3.05	107.10	110.58
3	2K	47	7MG	C2-N1-C6	-3.04	119.59	125.11
2	1L	20	H2U	O2-C2-N1	-2.96	119.54	123.10
2	3L	46	7MG	C2-N1-C6	-2.95	119.77	125.11
2	1L	32	PSU	O2-C2-N1	-2.93	119.76	122.79
2	1L	20	H2U	C5-C6-N1	2.92	120.36	111.52
2	3K	46	7MG	C2-N1-C6	-2.92	119.82	125.11
3	2L	47	7MG	O6-C6-C5	-2.91	120.48	127.62
2	1L	55	PSU	C6-N1-C2	-2.90	120.00	122.69
26	1K	46	7MG	N9-C8-N7	-2.88	99.29	103.37
2	3K	32	PSU	O2-C2-N1	-2.86	119.84	122.79
2	1L	39	PSU	O2-C2-N1	-2.84	119.86	122.79
26	1K	39	PSU	C6-N1-C2	-2.84	120.06	122.69
2	1L	37	MIA	N3-C2-N1	-2.82	121.86	127.00
2	3K	46	7MG	N9-C8-N7	-2.81	99.39	103.37
26	1K	55	PSU	C6-N1-C2	-2.80	120.09	122.69
2	3L	46	7MG	O6-C6-C5	-2.80	120.75	127.62
2	1L	46	7MG	O6-C6-C5	-2.80	120.76	127.62
26	1K	46	7MG	O6-C6-C5	-2.79	120.77	127.62
26	1K	46	7MG	C2-N1-C6	-2.79	120.05	125.11
2	3L	37	MIA	N9-C8-N7	-2.79	109.98	113.94
26	1K	37	MIA	C4-C5-C6	2.67	119.00	116.78
2	1L	46	7MG	C2-N1-C6	-2.62	120.36	125.11
2	3K	55	PSU	O2-C2-N1	-2.61	120.10	122.79
2	3K	20	H2U	O2-C2-N1	-2.60	119.97	123.10
26	1K	16	H2U	N3-C2-N1	2.60	119.27	116.65
3	2L	47	7MG	C2-N1-C6	-2.55	120.49	125.11
2	3L	55	PSU	O2-C2-N1	-2.54	120.17	122.79
26	1K	55	PSU	O2-C2-N1	-2.54	120.17	122.79
2	1L	16	H2U	O2-C2-N3	-2.52	116.84	121.49
2	1L	39	PSU	C6-N1-C2	-2.50	120.37	122.69
2	3L	37	MIA	C2-N1-C6	2.48	122.24	117.54
2	1L	8	4SU	O2-C2-N1	-2.47	119.58	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	3L	37	MIA	C4-C5-C6	2.44	118.81	116.78
2	1L	37	MIA	C6-C5-N7	2.39	135.03	132.43
2	3K	39	PSU	C6-N1-C2	-2.37	120.49	122.69
3	2L	33	OMC	N4-C4-N3	2.36	122.12	117.91
3	2L	47	7MG	O4'-C1'-N9	2.30	112.44	109.30
2	3K	32	PSU	O4-C4-C5	-2.29	118.31	124.01
2	3K	55	PSU	C6-N1-C2	-2.28	120.57	122.69
26	1K	16	H2U	O2-C2-N3	-2.28	117.29	121.49
2	3K	8	4SU	O2-C2-N1	-2.27	119.84	122.80
3	2K	21	H2U	O2-C2-N3	-2.26	117.31	121.49
3	2L	33	OMC	C1'-N1-C2	2.26	123.42	118.44
2	3K	55	PSU	O4'-C1'-C2'	2.25	108.26	105.15
3	2L	56	PSU	C6-C5-C4	2.24	119.69	118.17
26	1K	37	MIA	C2-N3-C4	2.21	118.07	112.29
2	3K	37	MIA	C16-C14-C15	-2.20	109.53	114.59
2	1L	32	PSU	C6-N1-C2	-2.18	120.67	122.69
3	2K	56	PSU	C6-C5-C4	2.16	119.63	118.17
2	3L	37	MIA	C16-C14-C15	-2.15	109.64	114.59
2	3K	16	H2U	O2-C2-N1	-2.14	120.54	123.10
3	2L	47	7MG	N9-C8-N7	-2.11	100.38	103.37
3	2K	33	OMC	N4-C4-N3	2.10	121.67	117.91
2	3L	20	H2U	O2-C2-N3	-2.08	117.64	121.49
26	1K	32	PSU	O2-C2-N3	-2.08	118.17	121.86
2	3L	32	PSU	C5-C4-N3	2.07	121.11	116.55
2	3L	8	4SU	O2-C2-N1	-2.07	120.11	122.80
26	1K	46	7MG	N1-C2-N3	-2.06	119.55	123.32
2	1L	37	MIA	N9-C8-N7	-2.05	111.03	113.94
2	3K	46	7MG	N2-C2-N1	2.05	121.08	116.76
26	1K	37	MIA	N6-C6-N1	2.04	121.08	118.33
26	1K	8	4SU	O2-C2-N1	-2.04	120.14	122.80
2	3K	37	MIA	C2-N1-C6	2.04	121.41	117.54
2	1L	32	PSU	C6-C5-C4	-2.01	116.82	118.17
3	2K	33	OMC	C6-C5-C4	2.01	120.83	117.53

There are no chirality outliers.

All (102) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	1L	8	4SU	C2'-C1'-N1-C2
2	1L	8	4SU	C2'-C1'-N1-C6
2	3K	8	4SU	C2'-C1'-N1-C2
2	3K	8	4SU	C2'-C1'-N1-C6

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Mol	Chain	Res	Type	Atoms
2	1L	16	H2U	O4'-C1'-N1-C6
2	3L	16	H2U	O4'-C4'-C5'-O5'
2	1L	20	H2U	O4'-C1'-N1-C6
2	3L	20	H2U	O4'-C1'-N1-C6
2	1L	32	PSU	O4'-C1'-C5-C4
2	1L	32	PSU	O4'-C1'-C5-C6
2	1L	37	MIA	O4'-C4'-C5'-O5'
2	1L	37	MIA	C3'-C4'-C5'-O5'
2	1L	37	MIA	N1-C2-S10-C11
2	1L	37	MIA	N3-C2-S10-C11
2	1L	37	MIA	C12-C13-C14-C15
2	3L	37	MIA	O4'-C4'-C5'-O5'
2	3L	37	MIA	N1-C2-S10-C11
2	3L	37	MIA	N3-C2-S10-C11
2	3L	37	MIA	C12-C13-C14-C15
2	3L	37	MIA	C12-C13-C14-C16
2	3K	37	MIA	C5-C6-N6-C12
2	3K	37	MIA	N1-C2-S10-C11
2	3K	37	MIA	N3-C2-S10-C11
2	3K	37	MIA	C12-C13-C14-C15
2	3K	37	MIA	C12-C13-C14-C16
2	1L	46	7MG	C4'-C5'-O5'-P
2	3K	55	PSU	C2'-C1'-C5-C4
3	2L	47	7MG	O4'-C4'-C5'-O5'
26	1K	16	H2U	C4'-C5'-O5'-P
26	1K	37	MIA	C5-C6-N6-C12
26	1K	37	MIA	N1-C6-N6-C12
26	1K	37	MIA	N1-C2-S10-C11
26	1K	37	MIA	N3-C2-S10-C11
26	1K	37	MIA	N6-C12-C13-C14
26	1K	37	MIA	C12-C13-C14-C15
26	1K	37	MIA	C12-C13-C14-C16
2	1L	16	H2U	C3'-C4'-C5'-O5'
2	3L	16	H2U	C3'-C4'-C5'-O5'
2	3L	37	MIA	C3'-C4'-C5'-O5'
2	3L	39	PSU	C3'-C4'-C5'-O5'
2	3L	39	PSU	O4'-C4'-C5'-O5'
2	3L	46	7MG	O4'-C4'-C5'-O5'
2	3K	46	7MG	C3'-C4'-C5'-O5'
2	3K	55	PSU	C3'-C4'-C5'-O5'
2	3L	20	H2U	C2'-C1'-N1-C2
2	1L	8	4SU	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
2	1L	16	H2U	O4'-C4'-C5'-O5'
2	3K	55	PSU	O4'-C4'-C5'-O5'
3	2L	21	H2U	O4'-C4'-C5'-O5'
3	2L	21	H2U	C3'-C4'-C5'-O5'
3	2K	21	H2U	O4'-C4'-C5'-O5'
3	2K	21	H2U	C3'-C4'-C5'-O5'
2	1L	16	H2U	O4'-C1'-N1-C2
2	3K	37	MIA	N1-C6-N6-C12
2	1L	20	H2U	C2'-C1'-N1-C6
26	1K	16	H2U	C2'-C1'-N1-C2
3	2L	47	7MG	C3'-C4'-C5'-O5'
26	1K	46	7MG	O4'-C1'-N9-C4
2	1L	8	4SU	O4'-C4'-C5'-O5'
2	3L	20	H2U	O4'-C4'-C5'-O5'
2	3L	20	H2U	C3'-C4'-C5'-O5'
2	3K	46	7MG	O4'-C4'-C5'-O5'
3	2K	47	7MG	C2'-C1'-N9-C8
2	3L	37	MIA	C5-C6-N6-C12
2	3L	46	7MG	C3'-C4'-C5'-O5'
26	1K	46	7MG	O4'-C1'-N9-C8
2	3L	20	H2U	C2'-C1'-N1-C6
26	1K	16	H2U	C2'-C1'-N1-C6
2	3L	37	MIA	N1-C6-N6-C12
2	1L	46	7MG	C2'-C1'-N9-C8
2	1L	16	H2U	C4'-C5'-O5'-P
2	3K	8	4SU	O4'-C4'-C5'-O5'
2	1L	20	H2U	C2'-C1'-N1-C2
2	1L	37	MIA	C12-C13-C14-C16
3	2L	47	7MG	O4'-C1'-N9-C4
2	3K	8	4SU	O4'-C1'-N1-C6
2	1L	20	H2U	O4'-C1'-N1-C2
2	3K	8	4SU	O4'-C1'-N1-C2
3	2K	47	7MG	C3'-C4'-C5'-O5'
2	3L	20	H2U	O4'-C1'-N1-C2
3	2K	47	7MG	C4'-C5'-O5'-P
2	3L	32	PSU	O4'-C1'-C5-C4
2	3L	55	PSU	O4'-C1'-C5-C4
26	1K	55	PSU	O4'-C1'-C5-C4
2	1L	8	4SU	O4'-C1'-N1-C6
3	2K	47	7MG	O4'-C4'-C5'-O5'
2	3L	16	H2U	C4'-C5'-O5'-P
3	2L	47	7MG	O4'-C1'-N9-C8

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Mol	Chain	Res	Type	Atoms
2	1L	8	4SU	O4'-C1'-N1-C2
2	3L	55	PSU	O4'-C1'-C5-C6
2	3K	55	PSU	O4'-C1'-C5-C6
26	1K	55	PSU	O4'-C1'-C5-C6
2	1L	8	4SU	C4'-C5'-O5'-P
2	1L	46	7MG	O4'-C1'-N9-C8
2	1L	32	PSU	C2'-C1'-C5-C6
2	1L	46	7MG	C3'-C4'-C5'-O5'
3	2K	47	7MG	O4'-C1'-N9-C8
26	1K	8	4SU	O4'-C4'-C5'-O5'
2	3L	8	4SU	C4'-C5'-O5'-P
3	2L	21	H2U	O4'-C1'-N1-C6
3	2L	21	H2U	C2'-C1'-N1-C2
3	2L	33	OMC	C2'-C1'-N1-C2

There are no ring outliers.

26 monomers are involved in 55 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	3K	20	H2U	1	0
3	2L	8	4SU	2	0
2	1L	16	H2U	1	0
26	1K	37	MIA	3	0
2	1L	39	PSU	3	0
2	1L	37	MIA	2	0
2	3L	55	PSU	1	0
3	2L	56	PSU	2	0
26	1K	8	4SU	1	0
3	2L	33	OMC	3	0
2	3L	16	H2U	1	0
2	3L	37	MIA	3	0
2	1L	8	4SU	4	0
2	1L	46	7MG	2	0
2	3K	55	PSU	3	0
2	3K	46	7MG	1	0
3	2K	47	7MG	4	0
26	1K	16	H2U	1	0
3	2K	8	4SU	1	0
3	2L	47	7MG	2	0
2	3L	8	4SU	2	0
2	3L	20	H2U	4	0
2	3K	39	PSU	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	3K	37	MIA	4	0
2	3L	46	7MG	2	0
2	1L	55	PSU	1	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 1265 ligands modelled in this entry, 1265 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 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	13	1497/1522 (98%)	0.26	45 (3%)	52	30	62, 106, 190, 319	0
1	1G	1497/1522 (98%)	0.49	81 (5%)	31	16	78, 126, 199, 313	0
2	1L	68/76 (89%)	1.11	9 (13%)	7	4	144, 237, 271, 321	0
2	3K	68/76 (89%)	1.24	15 (22%)	2	1	76, 227, 273, 285	0
2	3L	68/76 (89%)	1.16	14 (20%)	2	1	95, 217, 254, 268	0
3	2K	72/77 (93%)	-0.04	0	100	100	74, 96, 125, 136	0
3	2L	72/77 (93%)	0.37	4 (5%)	30	15	87, 122, 154, 170	0
4	4K	13/30 (43%)	0.59	1 (7%)	19	10	74, 92, 138, 142	0
4	4L	9/30 (30%)	1.25	1 (11%)	10	5	104, 111, 123, 125	0
5	14	2909/2917 (99%)	0.09	70 (2%)	59	37	59, 96, 254, 399	0
5	1H	2912/2917 (99%)	-0.17	57 (1%)	65	42	45, 78, 243, 371	0
6	12	237/256 (92%)	1.11	42 (17%)	4	2	143, 177, 205, 218	0
6	1E	237/256 (92%)	0.89	31 (13%)	7	4	114, 148, 178, 191	0
7	22	206/239 (86%)	1.05	30 (14%)	6	3	139, 159, 187, 204	0
7	2E	205/239 (85%)	0.48	8 (3%)	43	23	92, 114, 150, 155	0
8	32	208/209 (99%)	1.10	32 (15%)	5	2	103, 127, 150, 155	0
8	3E	208/209 (99%)	0.74	24 (11%)	9	5	87, 115, 142, 155	0
9	4E	151/162 (93%)	0.43	4 (2%)	57	34	82, 104, 128, 177	0
10	5E	101/101 (100%)	0.20	0	100	100	85, 108, 131, 146	0
11	6E	155/156 (99%)	0.72	17 (10%)	10	5	104, 120, 156, 189	0
12	7E	138/138 (100%)	0.61	13 (9%)	14	7	98, 116, 128, 138	0
13	8E	127/128 (99%)	1.11	23 (18%)	3	2	91, 137, 163, 179	0
14	1I	99/105 (94%)	0.98	9 (9%)	15	8	86, 134, 171, 177	0
15	2I	119/129 (92%)	0.90	18 (15%)	5	3	79, 110, 145, 183	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
16	3I	125/132 (94%)	0.47	11 (8%) 15 8	73, 84, 121, 204	0
17	4I	118/126 (93%)	0.97	16 (13%) 7 4	85, 123, 147, 162	0
18	5I	60/61 (98%)	0.69	4 (6%) 24 12	91, 103, 123, 133	0
19	6I	88/89 (98%)	0.62	5 (5%) 29 15	85, 109, 123, 143	0
20	7I	84/88 (95%)	1.45	18 (21%) 2 1	108, 119, 153, 170	0
21	8I	100/105 (95%)	0.77	10 (10%) 12 6	96, 114, 125, 128	0
22	9I	72/88 (81%)	0.34	1 (1%) 73 51	93, 111, 145, 177	0
23	AI	81/93 (87%)	0.91	9 (11%) 10 5	99, 123, 149, 161	0
24	BI	99/106 (93%)	0.99	12 (12%) 8 5	113, 127, 166, 172	0
25	1F	25/27 (92%)	1.38	8 (32%) 1 0	99, 111, 125, 154	0
26	1K	67/76 (88%)	0.80	9 (13%) 7 4	92, 192, 262, 271	0
27	16	122/122 (100%)	-0.22	3 (2%) 58 35	73, 96, 118, 204	0
27	1J	122/122 (100%)	0.58	6 (4%) 35 17	94, 140, 168, 212	0
28	11	272/276 (98%)	0.18	12 (4%) 39 20	46, 70, 87, 96	0
29	21	205/206 (99%)	0.71	24 (11%) 9 5	56, 97, 145, 164	0
30	31	202/210 (96%)	0.16	3 (1%) 72 50	52, 80, 120, 139	0
31	41	181/182 (99%)	0.46	11 (6%) 27 14	84, 107, 142, 155	0
32	51	174/180 (96%)	0.55	10 (5%) 29 15	86, 110, 126, 154	0
33	61	146/148 (98%)	0.67	13 (8%) 15 8	81, 136, 154, 161	0
34	58	138/140 (98%)	0.70	12 (8%) 16 9	71, 96, 137, 154	0
35	68	122/122 (100%)	0.16	1 (0%) 82 63	64, 83, 101, 116	0
36	78	150/150 (100%)	0.51	6 (4%) 42 23	51, 84, 109, 169	0
37	88	138/141 (97%)	0.40	7 (5%) 33 17	58, 84, 104, 139	0
38	98	118/118 (100%)	0.38	4 (3%) 48 27	70, 90, 114, 121	0
39	A8	111/112 (99%)	0.35	4 (3%) 46 25	78, 94, 125, 141	0
40	B8	137/146 (93%)	0.60	9 (6%) 24 12	79, 99, 157, 179	0
41	C8	117/118 (99%)	0.59	9 (7%) 19 10	60, 83, 118, 150	0
42	D8	101/101 (100%)	0.87	11 (10%) 10 5	63, 106, 143, 159	0
43	E8	113/113 (100%)	0.18	2 (1%) 67 45	64, 80, 116, 169	0
44	F8	94/96 (97%)	0.08	2 (2%) 63 40	59, 75, 98, 115	0
45	G8	104/110 (94%)	0.81	15 (14%) 6 3	76, 98, 138, 169	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
46	H8	175/206 (84%)	0.64	8 (4%) 37 19	88, 128, 212, 220	0
47	I8	80/85 (94%)	0.52	9 (11%) 10 5	61, 76, 110, 122	0
48	J8	97/98 (98%)	0.59	9 (9%) 14 7	57, 77, 129, 175	0
49	K8	67/72 (93%)	0.62	11 (16%) 4 2	66, 84, 101, 143	0
50	L8	57/60 (95%)	0.15	1 (1%) 67 45	66, 85, 111, 117	0
51	M8	66/71 (92%)	1.03	12 (18%) 3 2	119, 163, 218, 238	0
52	N8	58/60 (96%)	0.85	6 (10%) 12 6	57, 104, 194, 203	0
53	O8	45/54 (83%)	1.45	12 (26%) 1 1	115, 146, 171, 183	0
54	P8	45/49 (91%)	-0.07	2 (4%) 39 20	46, 55, 70, 82	0
55	Q8	60/65 (92%)	1.41	15 (25%) 2 1	62, 77, 102, 118	0
All	All	15912/16371 (97%)	0.35	900 (5%) 29 15	45, 103, 202, 399	0

All (900) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
5	1H	2116	G	9.6
5	1H	2113	U	8.8
26	1K	73	A	8.7
5	1H	2477	C	8.5
17	4I	8	GLU	8.0
5	1H	2117	A	7.9
17	4I	2	ALA	7.9
2	3L	34	G	7.5
32	51	171	LEU	7.3
6	12	14	GLY	7.3
15	2I	11	LYS	7.3
55	Q8	34	TRP	7.1
7	22	9	GLY	7.0
2	1L	76	A	7.0
1	1G	966	G	6.8
49	K8	15	LYS	6.5
15	2I	12	ARG	6.5
41	C8	118	GLY	6.4
1	1G	1032(B)	G	6.4
15	2I	129	SER	6.3
2	3K	17	C	6.2
24	BI	18	GLN	6.1
53	O8	22	ALA	6.1

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Mol	Chain	Res	Type	RSRZ
27	1J	88	C	6.0
55	Q8	61	LEU	6.0
5	14	2146	C	5.9
5	1H	2114	A	5.8
6	12	163	PHE	5.7
39	A8	43	GLU	5.7
15	2I	25	TYR	5.6
8	32	161	ASN	5.4
40	B8	109	GLU	5.4
5	14	1537	C	5.3
12	7E	4	ASP	5.3
46	H8	25	PRO	5.3
11	6E	81	GLY	5.2
40	B8	104	ASN	5.2
33	61	118	LYS	5.2
48	J8	95	LEU	5.2
5	14	2145	C	5.1
1	1G	1032(A)	G	5.1
5	1H	654(I)	C	5.0
5	14	1026	U	5.0
8	3E	167	GLY	4.9
11	6E	82	GLY	4.8
7	22	160	ALA	4.8
6	1E	15	VAL	4.8
13	8E	120	ARG	4.8
2	3L	17	C	4.8
5	1H	2119	A	4.8
48	J8	98	LEU	4.8
6	1E	196	LEU	4.8
6	12	33	TYR	4.7
20	7I	84	ALA	4.7
9	4E	128	PRO	4.7
20	7I	66	PRO	4.7
6	12	165	VAL	4.7
5	1H	2476	A	4.7
7	22	167	TRP	4.7
6	1E	55	PHE	4.6
28	11	234	GLY	4.6
7	22	198	VAL	4.6
8	32	120	LEU	4.5
1	1G	1033	G	4.5
2	1L	1	G	4.5

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Mol	Chain	Res	Type	RSRZ
8	3E	139	ARG	4.5
6	12	214	ILE	4.5
7	22	158	GLY	4.4
33	61	117	GLU	4.4
40	B8	1	MET	4.4
29	21	195	LEU	4.4
16	3I	19	ARG	4.4
17	4I	102	ARG	4.4
8	32	5	ILE	4.4
41	C8	91	ASP	4.3
6	12	34	ALA	4.3
13	8E	75	ASP	4.3
1	1G	969	A	4.3
17	4I	100	GLY	4.3
1	13	1189	C	4.3
24	BI	14	LYS	4.2
29	21	193	GLY	4.2
6	12	25	ASN	4.2
11	6E	5	ARG	4.2
26	1K	76	A	4.2
5	1H	2112	G	4.2
1	1G	994	A	4.2
1	1G	1286	A	4.2
1	1G	1028(B)	C	4.2
1	13	631	G	4.2
15	2I	42	TRP	4.2
34	58	138	LEU	4.2
6	12	70	PHE	4.2
47	I8	8	ALA	4.2
15	2I	127	LYS	4.1
31	41	2	PRO	4.1
6	1E	14	GLY	4.1
6	1E	9	GLU	4.1
5	14	2899	G	4.1
5	1H	615	G	4.1
53	O8	42	TRP	4.1
13	8E	117	HIS	4.1
25	1F	25	LYS	4.1
29	21	79	ARG	4.1
5	14	1084	A	4.1
5	1H	654(J)	A	4.1
1	1G	1320	C	4.1

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Mol	Chain	Res	Type	RSRZ
16	3I	16	GLU	4.1
33	6I	7	GLU	4.1
5	14	2334	G	4.0
51	M8	59	PHE	4.0
31	4I	26	GLN	4.0
11	6E	79	ARG	4.0
40	B8	21	GLU	4.0
6	12	93	VAL	4.0
49	K8	13	ALA	3.9
6	1E	12	GLU	3.9
12	7E	89	PRO	3.9
24	BI	86	ARG	3.9
13	8E	126	SER	3.9
8	3E	9	CYS	3.9
20	7I	29	ASP	3.9
21	8I	37	LYS	3.9
21	8I	7	THR	3.8
1	1G	965	A	3.8
1	1G	1397	C	3.8
26	1K	72	C	3.8
1	13	293	G	3.8
11	6E	4	ARG	3.8
13	8E	125	TYR	3.8
6	1E	228	GLY	3.8
27	16	1(M)	A	3.8
23	AI	60	VAL	3.8
5	1H	2115	G	3.8
16	3I	128	ALA	3.8
7	22	6	HIS	3.8
12	7E	88	LYS	3.8
11	6E	85	TYR	3.8
17	4I	21	TYR	3.8
21	8I	86	GLU	3.8
32	51	173	PRO	3.8
46	H8	113	ALA	3.7
7	22	199	LYS	3.7
9	4E	88	LYS	3.7
16	3I	17	LYS	3.7
55	Q8	45	GLY	3.7
1	1G	1235	U	3.7
8	3E	122	ARG	3.7
34	58	16	ILE	3.7

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Mol	Chain	Res	Type	RSRZ
1	1G	413	G	3.7
5	14	1816	G	3.7
8	3E	24	GLU	3.7
15	2I	128	ALA	3.7
7	22	5	ILE	3.7
9	4E	81	GLU	3.6
5	14	966	G	3.6
13	8E	105	ASP	3.6
2	3K	19	G	3.6
17	4I	6	GLY	3.6
5	14	970	C	3.6
7	22	7	PRO	3.6
20	7I	41	PRO	3.6
21	8I	28	PRO	3.6
29	21	72	VAL	3.6
52	N8	60	VAL	3.6
5	14	952	G	3.6
6	1E	31	TYR	3.6
6	12	44	LEU	3.6
48	J8	92	LYS	3.6
8	32	83	SER	3.6
24	BI	70	SER	3.6
21	8I	35	VAL	3.6
5	14	958	U	3.6
16	3I	91	LYS	3.6
32	51	172	LYS	3.6
1	13	1286	A	3.5
2	1L	73	A	3.5
6	1E	18	GLY	3.5
5	14	2209	C	3.5
6	12	41	ILE	3.5
16	3I	127	GLU	3.5
6	1E	179	LYS	3.5
5	14	2476	A	3.5
11	6E	83	ALA	3.5
17	4I	5	ALA	3.5
2	3K	64	A	3.5
6	12	81	VAL	3.5
8	32	160	GLN	3.5
8	32	157	LEU	3.5
31	41	137	GLU	3.5
7	22	10	PHE	3.5

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Mol	Chain	Res	Type	RSRZ
8	3E	31	CYS	3.5
30	31	131	GLY	3.5
55	Q8	32	LEU	3.5
1	1G	973	G	3.5
37	88	41	TRP	3.5
34	58	72	TYR	3.4
5	14	4	C	3.4
13	8E	110	GLU	3.4
41	C8	90	VAL	3.4
6	1E	188	ALA	3.4
1	1G	1362(A)	C	3.4
5	14	822	U	3.4
1	1G	377	G	3.4
8	3E	108	LEU	3.4
22	9I	40	LEU	3.4
29	21	76	ARG	3.4
33	61	119	PRO	3.4
14	1I	60	ARG	3.4
5	14	446	G	3.4
6	1E	227	GLY	3.4
28	11	225	ALA	3.4
41	C8	117	GLN	3.4
11	6E	84	ASN	3.3
11	6E	156	TRP	3.3
33	61	140	LEU	3.3
20	7I	30	GLY	3.3
20	7I	39	TYR	3.3
55	Q8	26	LYS	3.3
2	1L	34	G	3.3
5	14	2147	G	3.3
1	1G	1400	C	3.3
53	O8	23	THR	3.3
37	88	104	PHE	3.3
46	H8	67	LEU	3.3
41	C8	116	ALA	3.3
49	K8	7	ARG	3.3
11	6E	80	VAL	3.3
5	1H	1559	G	3.3
5	1H	2168	G	3.3
12	7E	2	LEU	3.3
24	BI	72	LEU	3.3
1	13	1227	A	3.3

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Mol	Chain	Res	Type	RSRZ
1	13	877	C	3.3
49	K8	14	ARG	3.2
48	J8	69	LYS	3.2
13	8E	81	ILE	3.2
1	13	111	G	3.2
1	13	306	G	3.2
27	1J	89	G	3.2
52	N8	59	GLU	3.2
45	G8	105	ALA	3.2
24	BI	22	ARG	3.2
45	G8	93	GLY	3.2
6	12	215	LEU	3.2
8	3E	169	LYS	3.2
42	D8	84	LYS	3.2
51	M8	56	VAL	3.2
1	1G	1066	C	3.2
51	M8	52	THR	3.2
54	P8	45	ALA	3.2
51	M8	34	GLU	3.2
49	K8	4	SER	3.2
8	32	134	ASP	3.2
1	13	1188	A	3.2
2	3K	5	G	3.2
12	7E	90	GLY	3.2
5	1H	271(A)	C	3.2
33	61	128	LEU	3.2
20	7I	2	VAL	3.2
50	L8	2	PRO	3.2
7	2E	179	ARG	3.2
21	8I	36	ILE	3.2
33	61	6	LEU	3.1
53	O8	10	LEU	3.1
7	22	184	TYR	3.1
42	D8	36	PRO	3.1
5	1H	2165	G	3.1
8	32	141	ARG	3.1
15	2I	75	TYR	3.1
1	1G	10	A	3.1
25	1F	26	LYS	3.1
55	Q8	43	GLN	3.1
1	1G	967	C	3.1
2	1L	72	C	3.1

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Mol	Chain	Res	Type	RSRZ
2	1L	75	C	3.1
5	1H	1383	C	3.1
13	8E	71	SER	3.1
52	N8	17	ASP	3.1
8	32	156	GLU	3.1
5	14	2506	U	3.1
35	68	122	LEU	3.1
47	I8	10	THR	3.1
6	12	71	VAL	3.1
8	32	73	ARG	3.1
18	5I	26	ARG	3.1
53	O8	53	LYS	3.1
1	13	630	G	3.1
1	1G	1061	G	3.1
2	3K	44	G	3.1
19	6I	58	MET	3.1
39	A8	2	ALA	3.1
6	12	202	PRO	3.1
34	58	71	ILE	3.1
1	1G	1367	C	3.0
23	AI	56	GLN	3.0
1	1G	1310	G	3.0
24	BI	80	ARG	3.0
6	12	97	TRP	3.0
53	O8	21	TYR	3.0
8	32	31	CYS	3.0
11	6E	34	GLY	3.0
5	14	2900	A	3.0
5	14	2798	C	3.0
17	4I	9	ILE	3.0
34	58	15	LEU	3.0
8	3E	168	ARG	3.0
8	32	195	ALA	3.0
13	8E	106	ALA	3.0
16	3I	89	ARG	3.0
1	1G	1308	U	3.0
1	1G	1117	G	3.0
2	3L	6	G	3.0
6	1E	17	PHE	3.0
15	2I	83	ILE	3.0
1	1G	1285	A	3.0
11	6E	10	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
6	1E	29	ALA	3.0
26	1K	17	C	3.0
15	2I	36	ASP	3.0
34	58	73	THR	3.0
28	11	28	GLU	2.9
2	3K	6	G	2.9
46	H8	153	SER	2.9
47	I8	9	SER	2.9
25	1F	16	GLY	2.9
15	2I	125	PHE	2.9
34	58	93	THR	2.9
45	G8	106	LEU	2.9
8	32	109	GLY	2.9
1	13	632	A	2.9
1	1G	632	A	2.9
34	58	74	ARG	2.9
32	51	119	GLU	2.9
37	88	139	GLU	2.9
5	1H	2118	U	2.9
6	12	92	TYR	2.9
7	22	170	GLN	2.9
5	1H	101	G	2.9
2	1L	17	C	2.9
11	6E	32	ARG	2.9
7	22	8	ILE	2.9
7	2E	37	GLN	2.9
29	21	106	GLY	2.9
32	51	5	GLY	2.9
5	1H	1888	G	2.9
16	3I	20	LYS	2.9
7	22	189	ALA	2.8
47	I8	71	ASP	2.8
32	51	116	GLU	2.8
6	12	136	VAL	2.8
8	3E	209	ARG	2.8
8	3E	26	CYS	2.8
19	6I	89	GLY	2.8
6	1E	48	MET	2.8
1	1G	974	A	2.8
1	1G	259	G	2.8
2	1L	71	G	2.8
5	14	2120	G	2.8

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Mol	Chain	Res	Type	RSRZ
5	1H	1816	G	2.8
38	98	110	PRO	2.8
1	1G	1030	C	2.8
12	7E	84	ARG	2.8
6	12	39	ILE	2.8
8	32	69	GLY	2.8
12	7E	91	ARG	2.8
25	1F	15	ARG	2.8
15	2I	82	VAL	2.8
55	Q8	6	THR	2.8
5	14	2797	U	2.8
29	21	78	LEU	2.8
28	11	42	GLY	2.8
1	13	105	G	2.8
1	1G	824	C	2.8
1	1G	1218	C	2.8
26	1K	75	C	2.8
8	32	9	CYS	2.8
39	A8	55	ALA	2.8
49	K8	69	ARG	2.8
15	2I	123	LYS	2.8
23	AI	4	SER	2.8
6	12	187	LEU	2.8
51	M8	5	ILE	2.8
1	13	1257	U	2.8
5	1H	2726	U	2.8
5	14	967	C	2.8
5	1H	2902	C	2.8
11	6E	2	ALA	2.8
1	13	579	G	2.8
29	21	30	PRO	2.8
29	21	40	GLU	2.8
45	G8	92	ASN	2.7
8	32	122	ARG	2.7
1	1G	26	A	2.7
31	41	3	LEU	2.7
2	3K	72	C	2.7
12	7E	1	MET	2.7
42	D8	7	THR	2.7
6	12	164	VAL	2.7
42	D8	37	VAL	2.7
7	2E	91	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
5	1H	271(C)	U	2.7
48	J8	89	GLU	2.7
49	K8	66	GLU	2.7
17	4I	115	LYS	2.7
2	1L	74	C	2.7
5	14	1735	C	2.7
1	13	1202	G	2.7
1	1G	825	G	2.7
1	1G	1202	G	2.7
5	14	281	G	2.7
8	32	110	PHE	2.7
45	G8	99	CYS	2.7
8	3E	3	ARG	2.7
19	6I	20	GLY	2.7
37	88	6	ARG	2.7
38	98	7	GLY	2.7
28	11	27	THR	2.7
1	13	389	A	2.7
1	13	1503	A	2.7
5	14	1085	A	2.7
13	8E	61	ALA	2.7
23	AI	61	TYR	2.7
8	3E	176	LEU	2.7
45	G8	98	VAL	2.7
17	4I	106	ASN	2.7
1	1G	1249	C	2.7
33	6I	111	PRO	2.7
7	2E	90	GLU	2.7
17	4I	103	THR	2.7
1	1G	568	G	2.7
5	1H	1630	G	2.7
1	13	1065	U	2.7
6	1E	11	LEU	2.7
14	1I	58	ASP	2.7
13	8E	59	PHE	2.6
13	8E	116	LYS	2.6
13	8E	118	LYS	2.6
6	12	102	LEU	2.6
8	32	17	VAL	2.6
16	3I	129	ALA	2.6
24	BI	11	SER	2.6
20	7I	17	TYR	2.6

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Mol	Chain	Res	Type	RSRZ
1	1G	506	G	2.6
1	1G	630	G	2.6
1	1G	1224	G	2.6
7	22	2	GLY	2.6
1	1G	553	A	2.6
5	14	1536	A	2.6
5	14	2790	A	2.6
15	2I	14	VAL	2.6
17	4I	107	ALA	2.6
45	G8	67	LEU	2.6
5	14	2466	C	2.6
5	1H	1404	C	2.6
26	1K	74	C	2.6
16	3I	5	PRO	2.6
31	4I	102	PHE	2.6
55	Q8	35	GLN	2.6
33	6I	122	GLU	2.6
1	1G	1017	G	2.6
55	Q8	60	LEU	2.6
29	2I	75	VAL	2.6
36	78	150	ALA	2.6
42	D8	46	VAL	2.6
46	H8	165	VAL	2.6
1	1G	968	A	2.6
1	1G	975	A	2.6
14	1I	55	LYS	2.6
6	12	26	PRO	2.6
5	14	1656	C	2.6
39	A8	109	GLY	2.6
53	O8	20	ASN	2.6
6	12	51	LEU	2.6
8	3E	162	LEU	2.6
11	6E	8	GLU	2.6
8	32	117	ALA	2.6
12	7E	3	THR	2.6
44	F8	4	ALA	2.6
5	1H	1026	U	2.6
1	1G	1003	G	2.6
5	14	2110	G	2.6
34	58	129	PRO	2.6
5	1H	1384	A	2.6
5	1H	1536	A	2.6

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Mol	Chain	Res	Type	RSRZ
3	2L	40	C	2.6
6	12	139	LYS	2.6
15	2I	89	ALA	2.6
23	AI	78	ARG	2.6
28	11	262	ARG	2.6
29	21	204	ALA	2.6
36	78	36	LYS	2.6
14	1I	59	SER	2.5
5	1H	2125	G	2.5
20	7I	34	GLU	2.5
46	H8	175	VAL	2.5
2	3L	7	A	2.5
5	14	1177	A	2.5
8	32	158	ILE	2.5
1	13	1424	C	2.5
1	1G	507	C	2.5
3	2L	1	C	2.5
5	14	2477	C	2.5
1	1G	950	U	2.5
28	11	236	GLY	2.5
53	O8	9	LEU	2.5
6	1E	175	ARG	2.5
48	J8	91	LYS	2.5
51	M8	62	ARG	2.5
18	5I	8	GLU	2.5
47	I8	6	ALA	2.5
15	2I	40	ILE	2.5
1	13	1451	A	2.5
5	14	1762	A	2.5
27	1J	25	A	2.5
27	16	0	A	2.5
1	13	42	G	2.5
5	14	530	G	2.5
27	1J	23	G	2.5
7	22	188	LEU	2.5
1	13	110	C	2.5
1	1G	526	C	2.5
1	1G	1325	C	2.5
5	1H	2901	C	2.5
8	32	91	SER	2.5
6	1E	229	VAL	2.5
1	13	239	U	2.5

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Mol	Chain	Res	Type	RSRZ
17	4I	20	THR	2.5
20	7I	48	TRP	2.5
42	D8	74	LYS	2.5
1	1G	814	A	2.5
5	1H	887	A	2.5
5	1H	2170	A	2.5
52	N8	57	VAL	2.5
1	1G	265	G	2.5
5	14	867	C	2.5
8	3E	102	ASP	2.5
11	6E	33	ASP	2.5
5	14	2144	U	2.5
34	58	70	LYS	2.5
29	21	63	LEU	2.5
8	3E	2	GLY	2.5
24	BI	55	ILE	2.4
19	6I	68	ARG	2.4
1	13	138	G	2.4
5	14	589	C	2.4
5	14	1248	G	2.4
5	1H	1830	C	2.4
5	1H	2648	C	2.4
8	32	155	LEU	2.4
32	51	168	PRO	2.4
5	1H	1083	U	2.4
27	1J	41	U	2.4
15	2I	29	ILE	2.4
43	E8	103	ILE	2.4
8	32	80	GLU	2.4
20	7I	35	LYS	2.4
23	AI	74	PHE	2.4
53	O8	27	LYS	2.4
7	22	12	LEU	2.4
2	3K	14	A	2.4
5	14	957	A	2.4
5	14	2799	A	2.4
24	BI	64	ASP	2.4
29	21	186	GLY	2.4
1	13	104	G	2.4
2	3L	33	U	2.4
3	2L	25	U	2.4
5	14	1622	G	2.4

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Mol	Chain	Res	Type	RSRZ
7	22	124	ILE	2.4
7	22	200	ALA	2.4
23	AI	15	LEU	2.4
20	7I	69	THR	2.4
36	78	30	THR	2.4
8	32	23	GLY	2.4
11	6E	154	TYR	2.4
29	21	110	GLY	2.4
33	61	126	TYR	2.4
13	8E	121	ARG	2.4
1	1G	875	C	2.4
1	1G	1192	C	2.4
52	N8	25	LEU	2.4
7	22	18	TRP	2.4
40	B8	115	ARG	2.4
5	14	2119	A	2.4
5	14	2274	A	2.4
5	1H	1032	A	2.4
41	C8	89	GLU	2.4
5	14	2898	U	2.4
45	G8	39	VAL	2.4
5	14	2111	C	2.3
5	1H	4	C	2.3
5	1H	34	C	2.3
5	1H	277	C	2.3
5	1H	1537	C	2.3
26	1K	2	C	2.3
21	8I	33	GLY	2.3
13	8E	119	ALA	2.3
21	8I	101	ARG	2.3
31	41	88	ILE	2.3
6	1E	195	ASP	2.3
31	41	116	ASP	2.3
1	1G	963	G	2.3
5	14	2101	G	2.3
12	7E	10	LEU	2.3
43	E8	23	LEU	2.3
5	14	8	A	2.3
6	12	133	LYS	2.3
36	78	20	GLY	2.3
40	B8	112	ARG	2.3
29	21	205	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
4	4L	19	U	2.3
1	13	1325	C	2.3
20	7I	68	ASP	2.3
26	1K	4	C	2.3
32	51	123	PHE	2.3
5	14	954	G	2.3
5	14	2182	G	2.3
5	14	2319	G	2.3
14	1I	77	PRO	2.3
31	41	152	LEU	2.3
49	K8	16	LEU	2.3
1	1G	1492	A	2.3
5	14	1046	A	2.3
6	12	55	PHE	2.3
28	11	15	PHE	2.3
1	13	603	U	2.3
13	8E	124	GLN	2.3
21	8I	49	GLU	2.3
1	1G	1217	C	2.3
1	1G	1223	C	2.3
24	BI	68	LYS	2.3
8	32	209	ARG	2.3
25	1F	24	ARG	2.3
16	3I	7	ILE	2.3
36	78	72	PRO	2.3
6	12	216	SER	2.3
5	14	2802	G	2.3
5	1H	2190	G	2.3
52	N8	51	TYR	2.3
51	M8	49	PHE	2.3
47	I8	40	GLN	2.3
49	K8	8	LYS	2.3
6	12	15	VAL	2.3
9	4E	14	ARG	2.3
13	8E	42	ARG	2.3
44	F8	68	ARG	2.3
6	12	127	ILE	2.3
1	13	63	C	2.3
1	1G	883	C	2.3
1	1G	924	C	2.3
2	3L	3	C	2.3
2	3L	4	C	2.3

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Mol	Chain	Res	Type	RSRZ
5	14	665	C	2.3
6	1E	44	LEU	2.3
8	3E	135	LEU	2.3
23	AI	80	TYR	2.3
25	1F	6	ARG	2.3
51	M8	55	ARG	2.3
54	P8	36	GLN	2.3
6	1E	197	VAL	2.3
49	K8	5	GLU	2.2
1	13	1186	G	2.2
1	1G	1309	G	2.2
3	2L	71	G	2.2
5	1H	1093	G	2.2
6	12	162	ILE	2.2
19	6I	3	ILE	2.2
20	7I	19	ILE	2.2
6	1E	167	PRO	2.2
29	21	56	PRO	2.2
4	4K	15	A	2.2
12	7E	133	LEU	2.2
40	B8	6	LEU	2.2
28	11	53	PHE	2.2
40	B8	106	SER	2.2
1	1G	1214	C	2.2
2	3L	72	C	2.2
5	1H	1463	C	2.2
55	Q8	57	ARG	2.2
42	D8	70	ILE	2.2
51	M8	22	ILE	2.2
6	12	121	LEU	2.2
20	7I	49	LEU	2.2
1	13	351	G	2.2
1	1G	1002	G	2.2
2	3K	63	G	2.2
48	J8	78	LYS	2.2
1	1G	607	A	2.2
5	14	1444(A)	A	2.2
8	3E	12	CYS	2.2
8	32	26	CYS	2.2
14	1I	64	GLU	2.2
30	31	27	GLU	2.2
53	O8	15	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
55	Q8	56	GLU	2.2
1	1G	989	C	2.2
1	1G	995	C	2.2
5	1H	2161	C	2.2
13	8E	47	LEU	2.2
38	98	69	ASP	2.2
34	58	92	ALA	2.2
46	H8	70	LEU	2.2
6	12	17	PHE	2.2
55	Q8	48	PHE	2.2
7	22	116	VAL	2.2
1	13	561	U	2.2
1	1G	89	U	2.2
6	1E	214	ILE	2.2
5	1H	21	A	2.2
6	12	11	LEU	2.2
13	8E	50	LEU	2.2
42	D8	43	GLU	2.2
20	7I	37	GLY	2.2
29	21	187	ALA	2.2
41	C8	86	ALA	2.2
7	22	131	ARG	2.2
25	1F	10	ARG	2.2
46	H8	104	PHE	2.2
2	3L	2	C	2.2
2	3L	62	C	2.2
5	14	2475	C	2.2
5	1H	884	C	2.2
18	5I	22	THR	2.2
7	22	23	TYR	2.2
20	7I	32	TYR	2.2
31	41	25	TYR	2.2
7	2E	39	ILE	2.2
8	3E	91	SER	2.2
8	32	137	SER	2.2
23	AI	62	ILE	2.2
41	C8	18	LEU	2.2
6	1E	13	ALA	2.2
7	22	125	GLU	2.2
29	21	28	ALA	2.2
33	61	70	GLU	2.2
2	3K	60	U	2.2

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Mol	Chain	Res	Type	RSRZ
29	21	115	GLY	2.2
14	1I	28	ARG	2.2
6	1E	152	PHE	2.2
51	M8	42	PHE	2.2
1	13	609	A	2.2
1	1G	1092	A	2.2
5	14	196	A	2.2
5	14	229	A	2.2
1	13	108	G	2.2
1	13	876	G	2.2
1	1G	1338	G	2.2
8	32	123	HIS	2.2
53	O8	52	VAL	2.1
51	M8	32	TYR	2.1
1	1G	1326	C	2.1
5	14	31	C	2.1
6	1E	200	ILE	2.1
8	3E	96	LEU	2.1
36	78	148	LEU	2.1
38	98	4	LEU	2.1
45	G8	87	LYS	2.1
55	Q8	21	LYS	2.1
6	1E	202	PRO	2.1
13	8E	21	PRO	2.1
14	1I	93	GLY	2.1
47	I8	44	ARG	2.1
6	1E	105	PHE	2.1
5	14	614	U	2.1
5	1H	165	U	2.1
5	1H	614	U	2.1
6	12	19	HIS	2.1
29	21	7	VAL	2.1
1	13	374	A	2.1
1	13	1225	A	2.1
5	1H	2173	A	2.1
6	12	142	LEU	2.1
17	4I	96	LEU	2.1
28	11	154	LYS	2.1
32	51	7	LEU	2.1
1	1G	9	G	2.1
1	1G	306	G	2.1
1	1G	587	G	2.1

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Mol	Chain	Res	Type	RSRZ
2	3L	5	G	2.1
5	14	944	G	2.1
5	14	2318	G	2.1
12	7E	30	ARG	2.1
26	1K	1	G	2.1
55	Q8	55	ALA	2.1
31	41	87	PRO	2.1
42	D8	8	GLY	2.1
5	14	2174	C	2.1
5	14	2294	C	2.1
8	3E	110	PHE	2.1
8	32	198	VAL	2.1
1	13	294	U	2.1
5	1H	958	U	2.1
37	88	79	LEU	2.1
7	22	127	ARG	2.1
25	1F	9	ARG	2.1
7	22	162	GLN	2.1
29	21	54	GLN	2.1
1	1G	1280	A	2.1
5	14	2051	A	2.1
1	1G	524	G	2.1
2	3K	71	G	2.1
42	D8	79	VAL	2.1
1	13	1228	C	2.1
5	14	654(I)	C	2.1
5	1H	2803	C	2.1
6	1E	43	ASP	2.1
6	12	211	ILE	2.1
45	G8	83	THR	2.1
32	51	102	ALA	2.1
1	1G	789	U	2.1
5	1H	2167	U	2.1
7	2E	41	GLY	2.1
7	22	171	GLY	2.1
8	32	2	GLY	2.1
40	B8	22	PHE	2.1
7	22	153	VAL	2.1
1	1G	263	A	2.1
1	1G	781	A	2.1
41	C8	15	LYS	2.1
6	12	201	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
12	7E	119	LEU	2.1
33	61	116	LEU	2.1
33	61	120	ILE	2.1
34	58	26	LEU	2.1
7	2E	36	ASP	2.1
14	1I	81	THR	2.1
37	88	83	MET	2.1
7	22	201	TYR	2.1
1	13	311	C	2.1
1	1G	586	C	2.1
2	3K	4	C	2.1
2	3K	49	C	2.1
5	14	2314	C	2.1
15	2I	19	ALA	2.1
17	4I	18	ALA	2.1
27	1J	60	C	2.1
2	3L	70	G	2.1
2	3K	1	G	2.1
5	1H	2147	G	2.1
48	J8	77	ALA	2.1
47	I8	42	GLY	2.1
48	J8	84	GLY	2.1
8	3E	81	GLU	2.1
42	D8	75	PHE	2.1
45	G8	91	GLU	2.1
1	1G	1307	U	2.0
29	21	91	VAL	2.0
6	12	149	LEU	2.0
7	2E	33	LEU	2.0
29	21	55	ASN	2.0
21	8I	29	HIS	2.0
1	13	1035	A	2.0
2	3K	36	A	2.0
5	1H	2900	A	2.0
6	12	193	ASP	2.0
24	BI	12	ALA	2.0
28	11	224	ALA	2.0
29	21	151	TYR	2.0
37	88	21	THR	2.0
17	4I	85	GLY	2.0
18	5I	28	GLY	2.0
30	31	66	PRO	2.0

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Mol	Chain	Res	Type	RSRZ
49	K8	12	GLU	2.0
1	13	1066	C	2.0
8	3E	170	VAL	2.0
51	M8	21	VAL	2.0
2	3L	1	G	2.0
5	14	798	G	2.0
5	1H	1	G	2.0
7	22	42	LEU	2.0
28	11	257	LEU	2.0
31	41	136	ARG	2.0
45	G8	84	ARG	2.0
5	14	1535	U	2.0
8	32	111	ALA	2.0
13	8E	114	TYR	2.0
53	O8	14	THR	2.0
6	12	72	GLY	2.0
20	7I	9	PHE	2.0
45	G8	80	GLY	2.0
45	G8	89	PHE	2.0
1	13	1041	A	2.0
1	1G	1032	A	2.0
1	1G	1236	A	2.0
2	3L	35	A	2.0
5	1H	1084	A	2.0
6	1E	165	VAL	2.0
8	3E	198	VAL	2.0
8	32	112	VAL	2.0
45	G8	3	VAL	2.0
6	1E	238	LEU	2.0
6	12	138	LEU	2.0
13	8E	40	LEU	2.0
47	I8	7	LEU	2.0
55	Q8	41	ILE	2.0
1	13	43	C	2.0
1	13	137	C	2.0
1	13	744	C	2.0
27	16	12	C	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
2	PSU	1L	55	20/21	0.45	0.13	165,197,211,225	0
2	PSU	3L	55	20/21	0.46	0.13	180,202,212,213	0
2	PSU	3K	55	20/21	0.51	0.12	190,210,228,233	0
2	7MG	1L	46	24/25	0.52	0.11	172,200,218,231	0
2	H2U	1L	20	20/21	0.52	0.14	141,165,187,195	0
2	7MG	3K	46	24/25	0.53	0.14	193,206,217,221	0
2	H2U	3L	20	20/21	0.60	0.12	180,188,201,202	0
2	7MG	3L	46	24/25	0.60	0.13	190,197,206,218	0
2	PSU	3L	32	20/21	0.61	0.15	133,144,152,153	0
2	H2U	3K	20	20/21	0.62	0.24	140,167,205,206	0
3	H2U	2L	21	20/21	0.63	0.12	135,143,147,157	0
2	H2U	1L	16	20/21	0.65	0.16	157,192,217,227	0
2	H2U	3K	16	20/21	0.66	0.14	165,195,210,211	0
26	7MG	1K	46	24/25	0.66	0.09	149,160,172,176	0
2	H2U	3L	16	20/21	0.67	0.14	181,194,205,211	0
26	4SU	1K	8	20/21	0.68	0.11	164,174,189,190	0
2	4SU	3L	8	20/21	0.68	0.11	191,196,208,218	0
2	PSU	3L	39	20/21	0.70	0.13	134,144,154,160	0
2	4SU	3K	8	20/21	0.70	0.11	200,207,220,233	0
2	MIA	3L	37	29/30	0.71	0.19	148,168,178,187	0
26	H2U	1K	16	20/21	0.72	0.16	122,160,190,196	0
26	PSU	1K	55	20/21	0.72	0.11	133,151,166,168	0
2	4SU	1L	8	20/21	0.75	0.09	185,201,207,213	0
3	7MG	2L	47	24/25	0.76	0.12	126,134,139,140	0
3	H2U	2K	21	20/21	0.77	0.12	114,124,134,134	0
2	PSU	3K	32	20/21	0.79	0.14	127,135,142,151	0
2	PSU	1L	32	20/21	0.81	0.17	149,152,163,169	0
2	MIA	3K	37	29/30	0.85	0.20	123,142,147,157	0
3	PSU	2L	56	20/21	0.85	0.10	123,130,136,139	0
3	4SU	2L	8	20/21	0.86	0.11	115,120,123,126	0
3	7MG	2K	47	24/25	0.87	0.10	97,106,114,116	0
2	PSU	3K	39	20/21	0.88	0.10	117,127,130,138	0
2	PSU	1L	39	20/21	0.88	0.09	140,150,158,160	0
3	4SU	2K	8	20/21	0.88	0.12	89,95,103,105	0
3	PSU	2K	56	20/21	0.89	0.10	101,106,113,119	0
2	MIA	1L	37	29/30	0.92	0.15	131,147,155,157	0
26	PSU	1K	32	20/21	0.92	0.15	107,112,124,131	0
26	PSU	1K	39	20/21	0.94	0.09	86,100,107,110	0
3	OMC	2K	33	21/22	0.95	0.12	75,80,86,87	0
26	MIA	1K	37	29/30	0.96	0.11	84,92,107,113	0
3	OMC	2L	33	21/22	0.96	0.10	104,109,112,118	0

6.3 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

6.4 Ligands ⓘ

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
56	MG	14	3241	1/1	0.09	0.28	139,139,139,139	0
56	MG	13	1699	1/1	0.27	0.23	146,146,146,146	0
56	MG	14	3255	1/1	0.31	0.54	102,102,102,102	0
56	MG	14	3140	1/1	0.36	0.56	113,113,113,113	0
57	ZN	14	3422	1/1	0.38	0.18	181,181,181,181	0
56	MG	1H	3316	1/1	0.39	0.34	102,102,102,102	0
56	MG	1G	1621	1/1	0.42	0.45	122,122,122,122	0
56	MG	13	1708	1/1	0.44	0.38	112,112,112,112	0
56	MG	13	1681	1/1	0.46	0.48	116,116,116,116	0
56	MG	13	1702	1/1	0.46	0.34	109,109,109,109	0
56	MG	13	1690	1/1	0.46	0.62	109,109,109,109	0
56	MG	1H	3248	1/1	0.47	0.33	82,82,82,82	0
56	MG	1H	3255	1/1	0.48	0.26	110,110,110,110	0
56	MG	1H	3271	1/1	0.50	0.40	100,100,100,100	0
56	MG	13	1679	1/1	0.51	0.35	94,94,94,94	0
56	MG	13	1688	1/1	0.52	0.55	106,106,106,106	0
56	MG	1G	1663	1/1	0.52	0.32	120,120,120,120	0
56	MG	1H	3323	1/1	0.52	0.31	100,100,100,100	0
56	MG	13	1607	1/1	0.55	0.41	88,88,88,88	0
56	MG	13	1643	1/1	0.55	0.33	96,96,96,96	0
56	MG	13	1700	1/1	0.56	0.33	103,103,103,103	0
56	MG	14	3266	1/1	0.56	0.24	107,107,107,107	0
56	MG	14	3228	1/1	0.57	0.33	109,109,109,109	0
56	MG	1G	1661	1/1	0.57	0.22	104,104,104,104	0
56	MG	14	3118	1/1	0.58	0.34	110,110,110,110	0
56	MG	1G	1634	1/1	0.59	0.38	114,114,114,114	0
56	MG	14	3217	1/1	0.59	0.18	159,159,159,159	0
56	MG	3E	302	1/1	0.60	0.32	121,121,121,121	0
56	MG	1H	3222	1/1	0.60	0.42	97,97,97,97	0
56	MG	14	3119	1/1	0.60	0.32	97,97,97,97	0
56	MG	1H	3283	1/1	0.61	0.21	103,103,103,103	0
56	MG	14	3243	1/1	0.61	0.35	93,93,93,93	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
56	MG	13	1684	1/1	0.61	0.37	108,108,108,108	0
56	MG	1J	204	1/1	0.61	0.34	108,108,108,108	0
56	MG	1G	1616	1/1	0.61	0.47	97,97,97,97	0
56	MG	13	1675	1/1	0.62	0.18	131,131,131,131	0
56	MG	13	1654	1/1	0.62	0.49	125,125,125,125	0
56	MG	3L	101	1/1	0.62	0.24	116,116,116,116	0
56	MG	14	3225	1/1	0.63	0.33	103,103,103,103	0
56	MG	1H	3205	1/1	0.63	0.38	78,78,78,78	0
56	MG	13	1685	1/1	0.63	0.37	91,91,91,91	0
56	MG	1G	1623	1/1	0.63	0.35	108,108,108,108	0
56	MG	14	3227	1/1	0.64	0.34	106,106,106,106	0
56	MG	1H	3109	1/1	0.64	0.32	79,79,79,79	0
56	MG	14	3101	1/1	0.64	0.25	99,99,99,99	0
56	MG	1H	3217	1/1	0.64	0.32	96,96,96,96	0
56	MG	14	3259	1/1	0.64	0.20	104,104,104,104	0
56	MG	14	3059	1/1	0.64	0.34	83,83,83,83	0
56	MG	1G	1607	1/1	0.64	0.26	96,96,96,96	0
56	MG	1G	1649	1/1	0.65	0.36	84,84,84,84	0
56	MG	1H	3301	1/1	0.65	0.48	110,110,110,110	0
56	MG	14	3221	1/1	0.65	0.29	99,99,99,99	0
56	MG	14	3198	1/1	0.65	0.30	90,90,90,90	0
56	MG	1G	1602	1/1	0.66	0.28	76,76,76,76	0
56	MG	14	3219	1/1	0.66	0.57	100,100,100,100	0
56	MG	14	3244	1/1	0.66	0.29	82,82,82,82	0
56	MG	14	3050	1/1	0.66	0.32	74,74,74,74	0
56	MG	2K	103	1/1	0.66	0.33	88,88,88,88	0
56	MG	1H	3286	1/1	0.67	0.32	88,88,88,88	0
56	MG	13	1698	1/1	0.67	0.30	91,91,91,91	0
56	MG	1H	3266	1/1	0.67	0.29	94,94,94,94	0
56	MG	14	3216	1/1	0.67	0.33	106,106,106,106	0
56	MG	14	3016	1/1	0.67	0.27	65,65,65,65	0
56	MG	1H	3227	1/1	0.68	0.29	77,77,77,77	0
56	MG	1G	1645	1/1	0.68	0.24	102,102,102,102	0
56	MG	14	3183	1/1	0.68	0.28	74,74,74,74	0
56	MG	2K	105	1/1	0.68	0.39	102,102,102,102	0
56	MG	14	3070	1/1	0.68	0.37	92,92,92,92	0
56	MG	1G	1625	1/1	0.68	0.33	108,108,108,108	0
56	MG	13	1703	1/1	0.69	0.32	105,105,105,105	0
56	MG	1H	3273	1/1	0.69	0.39	101,101,101,101	0
56	MG	1H	3277	1/1	0.69	0.43	98,98,98,98	0
56	MG	13	1667	1/1	0.69	0.29	91,91,91,91	0
56	MG	1G	1657	1/1	0.69	0.19	112,112,112,112	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1H	3125	1/1	0.69	0.22	97,97,97,97	0
56	MG	13	1648	1/1	0.69	0.33	91,91,91,91	0
56	MG	13	1642	1/1	0.69	0.39	76,76,76,76	0
56	MG	1G	1635	1/1	0.70	0.32	82,82,82,82	0
56	MG	1H	3315	1/1	0.70	0.40	93,93,93,93	0
56	MG	1H	3263	1/1	0.70	0.46	87,87,87,87	0
56	MG	13	1706	1/1	0.70	0.28	93,93,93,93	0
56	MG	1H	3117	1/1	0.70	0.11	57,57,57,57	0
56	MG	16	207	1/1	0.70	0.24	96,96,96,96	0
56	MG	1G	1678	1/1	0.70	0.32	98,98,98,98	0
56	MG	14	3162	1/1	0.70	0.26	107,107,107,107	0
56	MG	14	3121	1/1	0.71	0.20	91,91,91,91	0
56	MG	14	3185	1/1	0.71	0.40	80,80,80,80	0
56	MG	14	3197	1/1	0.71	0.23	83,83,83,83	0
56	MG	13	1617	1/1	0.71	0.31	85,85,85,85	0
56	MG	1G	1612	1/1	0.71	0.28	109,109,109,109	0
56	MG	1H	3260	1/1	0.71	0.37	93,93,93,93	0
56	MG	14	3209	1/1	0.71	0.36	71,71,71,71	0
56	MG	14	3045	1/1	0.71	0.43	82,82,82,82	0
56	MG	14	3238	1/1	0.71	0.21	94,94,94,94	0
56	MG	14	3263	1/1	0.72	0.24	97,97,97,97	0
56	MG	14	3230	1/1	0.72	0.32	86,86,86,86	0
56	MG	14	3376	1/1	0.72	0.18	122,122,122,122	0
56	MG	1G	1632	1/1	0.72	0.37	92,92,92,92	0
56	MG	13	1704	1/1	0.72	0.31	113,113,113,113	0
56	MG	14	3074	1/1	0.72	0.21	89,89,89,89	0
56	MG	13	1693	1/1	0.72	0.16	86,86,86,86	0
56	MG	1H	3261	1/1	0.72	0.32	98,98,98,98	0
56	MG	1H	3105	1/1	0.72	0.45	89,89,89,89	0
56	MG	13	1653	1/1	0.72	0.31	91,91,91,91	0
56	MG	14	3248	1/1	0.72	0.32	91,91,91,91	0
56	MG	1G	1669	1/1	0.72	0.35	105,105,105,105	0
56	MG	1G	1676	1/1	0.72	0.19	113,113,113,113	0
56	MG	1G	1677	1/1	0.72	0.31	96,96,96,96	0
56	MG	13	1683	1/1	0.72	0.45	101,101,101,101	0
56	MG	14	3229	1/1	0.72	0.40	107,107,107,107	0
56	MG	16	210	1/1	0.73	0.14	105,105,105,105	0
56	MG	1G	1641	1/1	0.73	0.39	92,92,92,92	0
56	MG	21	302	1/1	0.73	0.44	84,84,84,84	0
56	MG	14	3038	1/1	0.73	0.26	96,96,96,96	0
56	MG	1H	3311	1/1	0.73	0.42	93,93,93,93	0
56	MG	13	1626	1/1	0.73	0.28	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1H	3181	1/1	0.73	0.27	84,84,84,84	0
56	MG	1G	1665	1/1	0.73	0.32	99,99,99,99	0
56	MG	1H	3318	1/1	0.73	0.23	101,101,101,101	0
56	MG	14	3192	1/1	0.73	0.28	102,102,102,102	0
56	MG	1J	202	1/1	0.73	0.29	93,93,93,93	0
56	MG	14	3143	1/1	0.73	0.38	88,88,88,88	0
56	MG	13	1610	1/1	0.73	0.29	86,86,86,86	0
56	MG	1H	3186	1/1	0.74	0.17	74,74,74,74	0
56	MG	1H	3191	1/1	0.74	0.23	83,83,83,83	0
56	MG	1G	1639	1/1	0.74	0.25	104,104,104,104	0
56	MG	1G	1640	1/1	0.74	0.26	107,107,107,107	0
56	MG	1H	3203	1/1	0.74	0.49	101,101,101,101	0
56	MG	14	3246	1/1	0.74	0.23	97,97,97,97	0
56	MG	1H	3216	1/1	0.74	0.40	87,87,87,87	0
56	MG	14	3261	1/1	0.74	0.28	91,91,91,91	0
56	MG	14	3133	1/1	0.74	0.37	82,82,82,82	0
56	MG	1H	3122	1/1	0.74	0.20	77,77,77,77	0
56	MG	1H	3294	1/1	0.74	0.38	88,88,88,88	0
56	MG	1H	3234	1/1	0.74	0.29	96,96,96,96	0
56	MG	14	3148	1/1	0.74	0.20	96,96,96,96	0
56	MG	1H	3254	1/1	0.74	0.27	90,90,90,90	0
56	MG	1H	3137	1/1	0.74	0.29	87,87,87,87	0
56	MG	1H	3030	1/1	0.74	0.22	87,87,87,87	0
57	ZN	1G	1697	1/1	0.74	0.27	149,149,149,149	0
56	MG	1G	1618	1/1	0.75	0.17	102,102,102,102	0
56	MG	1H	3293	1/1	0.75	0.27	95,95,95,95	0
56	MG	13	1692	1/1	0.75	0.20	85,85,85,85	0
56	MG	1H	3239	1/1	0.75	0.24	88,88,88,88	0
56	MG	1H	3009	1/1	0.75	0.27	58,58,58,58	0
56	MG	14	3030	1/1	0.75	0.32	84,84,84,84	0
56	MG	1G	1674	1/1	0.75	0.39	92,92,92,92	0
56	MG	1G	1601	1/1	0.75	0.27	90,90,90,90	0
56	MG	14	3396	1/1	0.75	0.19	101,101,101,101	0
56	MG	14	3170	1/1	0.75	0.19	77,77,77,77	0
56	MG	14	3130	1/1	0.75	0.32	98,98,98,98	0
56	MG	1J	201	1/1	0.75	0.15	123,123,123,123	0
56	MG	1G	1646	1/1	0.76	0.48	108,108,108,108	0
56	MG	14	3153	1/1	0.76	0.27	82,82,82,82	0
56	MG	14	3135	1/1	0.76	0.23	84,84,84,84	0
56	MG	14	3203	1/1	0.76	0.26	103,103,103,103	0
56	MG	14	3164	1/1	0.76	0.19	76,76,76,76	0
56	MG	16	201	1/1	0.76	0.28	91,91,91,91	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	14	3139	1/1	0.76	0.35	97,97,97,97	0
56	MG	1H	3262	1/1	0.76	0.19	86,86,86,86	0
56	MG	14	3069	1/1	0.76	0.32	73,73,73,73	0
56	MG	13	1651	1/1	0.76	0.25	76,76,76,76	0
56	MG	13	1663	1/1	0.76	0.18	107,107,107,107	0
56	MG	1H	3247	1/1	0.76	0.39	105,105,105,105	0
56	MG	1H	3319	1/1	0.76	0.32	87,87,87,87	0
56	MG	14	3097	1/1	0.77	0.25	71,71,71,71	0
56	MG	14	3236	1/1	0.77	0.19	92,92,92,92	0
56	MG	1H	3149	1/1	0.77	0.28	60,60,60,60	0
56	MG	13	1615	1/1	0.77	0.35	100,100,100,100	0
56	MG	1H	3324	1/1	0.77	0.24	81,81,81,81	0
56	MG	14	3112	1/1	0.77	0.37	85,85,85,85	0
56	MG	1H	3042	1/1	0.77	0.34	62,62,62,62	0
56	MG	1H	3291	1/1	0.77	0.25	93,93,93,93	0
56	MG	1J	205	1/1	0.77	0.28	113,113,113,113	0
56	MG	1H	3062	1/1	0.77	0.21	61,61,61,61	0
56	MG	14	3132	1/1	0.77	0.20	84,84,84,84	0
56	MG	14	3204	1/1	0.77	0.38	87,87,87,87	0
56	MG	14	3147	1/1	0.77	0.23	93,93,93,93	0
56	MG	13	1687	1/1	0.77	0.40	94,94,94,94	0
56	MG	13	1652	1/1	0.78	0.28	83,83,83,83	0
56	MG	14	3021	1/1	0.78	0.31	81,81,81,81	0
56	MG	1H	3139	1/1	0.78	0.21	70,70,70,70	0
56	MG	13	1623	1/1	0.78	0.35	98,98,98,98	0
56	MG	1H	3320	1/1	0.78	0.13	95,95,95,95	0
56	MG	1H	3174	1/1	0.78	0.23	63,63,63,63	0
56	MG	14	3190	1/1	0.78	0.23	90,90,90,90	0
56	MG	13	1695	1/1	0.78	0.47	100,100,100,100	0
56	MG	14	3233	1/1	0.78	0.18	77,77,77,77	0
56	MG	1H	3197	1/1	0.78	0.36	101,101,101,101	0
56	MG	1H	3199	1/1	0.78	0.59	101,101,101,101	0
56	MG	1H	3032	1/1	0.78	0.27	79,79,79,79	0
56	MG	1G	1651	1/1	0.78	0.58	95,95,95,95	0
56	MG	16	206	1/1	0.78	0.16	88,88,88,88	0
56	MG	14	3260	1/1	0.78	0.18	112,112,112,112	0
56	MG	14	3015	1/1	0.78	0.25	83,83,83,83	0
56	MG	14	3220	1/1	0.78	0.34	108,108,108,108	0
56	MG	14	3240	1/1	0.78	0.40	90,90,90,90	0
56	MG	1H	3115	1/1	0.78	0.22	78,78,78,78	0
56	MG	14	3272	1/1	0.78	0.13	100,100,100,100	0
56	MG	14	3094	1/1	0.78	0.26	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	1H	3308	1/1	0.78	0.26	85,85,85,85	0
56	MG	1G	1617	1/1	0.78	0.37	90,90,90,90	0
57	ZN	G8	201	1/1	0.78	0.21	176,176,176,176	0
56	MG	1H	3242	1/1	0.78	0.32	82,82,82,82	0
56	MG	1H	3304	1/1	0.79	0.38	94,94,94,94	0
56	MG	14	3029	1/1	0.79	0.28	86,86,86,86	0
56	MG	13	1676	1/1	0.79	0.27	89,89,89,89	0
56	MG	3L	103	1/1	0.79	0.18	99,99,99,99	0
56	MG	13	1665	1/1	0.79	0.20	90,90,90,90	0
56	MG	14	3157	1/1	0.79	0.23	68,68,68,68	0
56	MG	1H	3171	1/1	0.79	0.32	65,65,65,65	0
56	MG	1H	3054	1/1	0.79	0.32	67,67,67,67	0
56	MG	1H	3178	1/1	0.79	0.17	61,61,61,61	0
56	MG	1H	3278	1/1	0.79	0.20	74,74,74,74	0
56	MG	1G	1667	1/1	0.79	0.31	124,124,124,124	0
56	MG	1G	1620	1/1	0.79	0.28	93,93,93,93	0
56	MG	1H	3325	1/1	0.79	0.19	96,96,96,96	0
56	MG	1H	3240	1/1	0.79	0.29	82,82,82,82	0
56	MG	14	3226	1/1	0.79	0.24	83,83,83,83	0
56	MG	13	1659	1/1	0.79	0.37	94,94,94,94	0
56	MG	14	3106	1/1	0.79	0.17	93,93,93,93	0
56	MG	13	1616	1/1	0.79	0.21	95,95,95,95	0
56	MG	14	3028	1/1	0.79	0.29	101,101,101,101	0
56	MG	13	1646	1/1	0.80	0.33	80,80,80,80	0
56	MG	1H	3213	1/1	0.80	0.42	78,78,78,78	0
56	MG	1H	3267	1/1	0.80	0.25	96,96,96,96	0
56	MG	14	3120	1/1	0.80	0.12	82,82,82,82	0
56	MG	1H	3134	1/1	0.80	0.32	90,90,90,90	0
56	MG	1H	3025	1/1	0.80	0.13	67,67,67,67	0
56	MG	13	1611	1/1	0.80	0.23	79,79,79,79	0
56	MG	14	3201	1/1	0.80	0.29	86,86,86,86	0
56	MG	13	1696	1/1	0.80	0.18	91,91,91,91	0
56	MG	1H	3288	1/1	0.80	0.24	73,73,73,73	0
56	MG	14	3372	1/1	0.80	0.20	114,114,114,114	0
56	MG	1H	3176	1/1	0.80	0.41	76,76,76,76	0
56	MG	1H	3055	1/1	0.80	0.23	77,77,77,77	0
56	MG	11	301	1/1	0.80	0.33	78,78,78,78	0
56	MG	1H	3298	1/1	0.80	0.10	71,71,71,71	0
56	MG	1H	3060	1/1	0.80	0.18	56,56,56,56	0
56	MG	1H	3253	1/1	0.80	0.39	87,87,87,87	0
56	MG	1H	3306	1/1	0.80	0.29	81,81,81,81	0
56	MG	14	3189	1/1	0.80	0.20	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1G	1615	1/1	0.80	0.14	86,86,86,86	0
56	MG	1H	3310	1/1	0.80	0.23	84,84,84,84	0
56	MG	13	1633	1/1	0.80	0.15	84,84,84,84	0
56	MG	14	3258	1/1	0.80	0.22	80,80,80,80	0
56	MG	2K	102	1/1	0.80	0.16	92,92,92,92	0
56	MG	14	3239	1/1	0.80	0.26	92,92,92,92	0
56	MG	14	3262	1/1	0.81	0.21	101,101,101,101	0
56	MG	13	1670	1/1	0.81	0.27	95,95,95,95	0
56	MG	14	3186	1/1	0.81	0.33	84,84,84,84	0
56	MG	14	3027	1/1	0.81	0.40	89,89,89,89	0
56	MG	14	3080	1/1	0.81	0.28	96,96,96,96	0
56	MG	1H	3130	1/1	0.81	0.19	83,83,83,83	0
56	MG	1G	1622	1/1	0.81	0.20	128,128,128,128	0
56	MG	13	1662	1/1	0.81	0.25	94,94,94,94	0
56	MG	2L	102	1/1	0.81	0.36	85,85,85,85	0
56	MG	14	3237	1/1	0.81	0.34	85,85,85,85	0
56	MG	13	1650	1/1	0.81	0.18	105,105,105,105	0
56	MG	1H	3151	1/1	0.81	0.20	60,60,60,60	0
56	MG	14	3103	1/1	0.81	0.30	84,84,84,84	0
56	MG	14	3144	1/1	0.81	0.41	83,83,83,83	0
56	MG	3L	102	1/1	0.81	0.10	146,146,146,146	0
56	MG	1H	3422	1/1	0.81	0.17	99,99,99,99	0
56	MG	1H	3022	1/1	0.81	0.26	89,89,89,89	0
56	MG	14	3040	1/1	0.81	0.39	86,86,86,86	0
56	MG	1G	1650	1/1	0.81	0.20	91,91,91,91	0
56	MG	14	3210	1/1	0.81	0.22	100,100,100,100	0
56	MG	14	3152	1/1	0.81	0.16	67,67,67,67	0
56	MG	13	1694	1/1	0.81	0.27	94,94,94,94	0
56	MG	14	3008	1/1	0.81	0.35	61,61,61,61	0
56	MG	1H	3282	1/1	0.81	0.25	60,60,60,60	0
56	MG	13	1608	1/1	0.81	0.30	79,79,79,79	0
56	MG	13	1649	1/1	0.81	0.27	102,102,102,102	0
56	MG	1G	1670	1/1	0.81	0.31	96,96,96,96	0
56	MG	1G	1672	1/1	0.81	0.34	98,98,98,98	0
56	MG	14	3128	1/1	0.81	0.36	91,91,91,91	0
56	MG	41	202	1/1	0.81	0.20	85,85,85,85	0
56	MG	1H	3214	1/1	0.81	0.15	101,101,101,101	0
56	MG	14	3129	1/1	0.81	0.21	89,89,89,89	0
56	MG	1H	3107	1/1	0.81	0.23	84,84,84,84	0
56	MG	1G	1611	1/1	0.81	0.18	89,89,89,89	0
56	MG	1H	3108	1/1	0.81	0.36	44,44,44,44	0
56	MG	13	1622	1/1	0.82	0.24	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	1H	3158	1/1	0.82	0.26	64,64,64,64	0
56	MG	13	1707	1/1	0.82	0.28	98,98,98,98	0
56	MG	14	3169	1/1	0.82	0.23	65,65,65,65	0
56	MG	13	1664	1/1	0.82	0.29	88,88,88,88	0
56	MG	14	3176	1/1	0.82	0.33	88,88,88,88	0
56	MG	1G	1633	1/1	0.82	0.36	101,101,101,101	0
56	MG	1H	3180	1/1	0.82	0.21	63,63,63,63	0
56	MG	1H	3095	1/1	0.82	0.28	87,87,87,87	0
56	MG	14	3180	1/1	0.82	0.29	104,104,104,104	0
56	MG	1H	3190	1/1	0.82	0.41	85,85,85,85	0
56	MG	1H	3444	1/1	0.82	0.16	119,119,119,119	0
56	MG	14	3382	1/1	0.82	0.26	94,94,94,94	0
56	MG	14	3087	1/1	0.82	0.38	89,89,89,89	0
56	MG	1G	1647	1/1	0.82	0.35	102,102,102,102	0
56	MG	14	3088	1/1	0.82	0.29	88,88,88,88	0
56	MG	1H	3113	1/1	0.82	0.32	84,84,84,84	0
56	MG	13	1614	1/1	0.82	0.33	98,98,98,98	0
56	MG	13	1638	1/1	0.82	0.29	68,68,68,68	0
56	MG	1G	1658	1/1	0.82	0.48	91,91,91,91	0
56	MG	1G	1660	1/1	0.82	0.34	105,105,105,105	0
56	MG	13	1641	1/1	0.82	0.35	80,80,80,80	0
56	MG	13	1697	1/1	0.82	0.20	92,92,92,92	0
56	MG	1H	3289	1/1	0.82	0.14	79,79,79,79	0
56	MG	1G	1666	1/1	0.82	0.51	101,101,101,101	0
56	MG	1H	3126	1/1	0.82	0.36	96,96,96,96	0
56	MG	1H	3129	1/1	0.82	0.13	57,57,57,57	0
56	MG	1H	3014	1/1	0.82	0.37	62,62,62,62	0
56	MG	14	3131	1/1	0.82	0.46	89,89,89,89	0
56	MG	1G	1673	1/1	0.82	0.30	93,93,93,93	0
56	MG	1H	3299	1/1	0.82	0.25	83,83,83,83	0
56	MG	1G	1675	1/1	0.82	0.38	93,93,93,93	0
56	MG	14	3105	1/1	0.82	0.26	60,60,60,60	0
56	MG	1H	3303	1/1	0.82	0.27	84,84,84,84	0
56	MG	14	3160	1/1	0.82	0.31	81,81,81,81	0
56	MG	1H	3143	1/1	0.82	0.24	81,81,81,81	0
56	MG	1H	3243	1/1	0.82	0.45	85,85,85,85	0
56	MG	14	3231	1/1	0.82	0.17	79,79,79,79	0
56	MG	1H	3295	1/1	0.83	0.22	72,72,72,72	0
56	MG	1H	3296	1/1	0.83	0.15	71,71,71,71	0
56	MG	1G	1619	1/1	0.83	0.48	87,87,87,87	0
56	MG	1H	3215	1/1	0.83	0.37	88,88,88,88	0
56	MG	1H	3124	1/1	0.83	0.28	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	14	3188	1/1	0.83	0.25	83,83,83,83	0
56	MG	1H	3218	1/1	0.83	0.31	91,91,91,91	0
56	MG	14	3251	1/1	0.83	0.14	83,83,83,83	0
56	MG	1H	3128	1/1	0.83	0.24	69,69,69,69	0
56	MG	14	3253	1/1	0.83	0.12	73,73,73,73	0
56	MG	14	3254	1/1	0.83	0.33	91,91,91,91	0
56	MG	1H	3132	1/1	0.83	0.18	71,71,71,71	0
56	MG	1H	3023	1/1	0.83	0.27	85,85,85,85	0
56	MG	14	3058	1/1	0.83	0.23	89,89,89,89	0
56	MG	13	1629	1/1	0.83	0.40	84,84,84,84	0
56	MG	1G	1644	1/1	0.83	0.36	102,102,102,102	0
56	MG	1H	3140	1/1	0.83	0.25	87,87,87,87	0
56	MG	14	3060	1/1	0.83	0.25	84,84,84,84	0
56	MG	1H	3147	1/1	0.83	0.13	69,69,69,69	0
56	MG	1H	3038	1/1	0.83	0.26	78,78,78,78	0
56	MG	1H	3041	1/1	0.83	0.30	75,75,75,75	0
56	MG	14	3036	1/1	0.83	0.32	80,80,80,80	0
56	MG	1H	3163	1/1	0.83	0.27	82,82,82,82	0
56	MG	14	3037	1/1	0.83	0.22	62,62,62,62	0
56	MG	1H	3264	1/1	0.83	0.22	68,68,68,68	0
56	MG	14	3071	1/1	0.83	0.17	63,63,63,63	0
56	MG	14	3165	1/1	0.83	0.20	69,69,69,69	0
56	MG	14	3107	1/1	0.83	0.26	74,74,74,74	0
56	MG	1H	3272	1/1	0.83	0.25	92,92,92,92	0
56	MG	1H	3092	1/1	0.83	0.17	66,66,66,66	0
56	MG	14	3270	1/1	0.83	0.45	98,98,98,98	0
56	MG	13	1655	1/1	0.83	0.23	68,68,68,68	0
56	MG	1H	3280	1/1	0.83	0.29	101,101,101,101	0
56	MG	14	3175	1/1	0.83	0.13	83,83,83,83	0
56	MG	13	1689	1/1	0.83	0.34	92,92,92,92	0
56	MG	13	1644	1/1	0.83	0.29	87,87,87,87	0
56	MG	13	1631	1/1	0.83	0.24	62,62,62,62	0
56	MG	14	3090	1/1	0.83	0.20	87,87,87,87	0
56	MG	14	3125	1/1	0.83	0.23	77,77,77,77	0
56	MG	1G	1613	1/1	0.83	0.22	98,98,98,98	0
56	MG	1H	3119	1/1	0.83	0.35	70,70,70,70	0
56	MG	14	3223	1/1	0.83	0.33	60,60,60,60	0
56	MG	1H	3204	1/1	0.84	0.35	70,70,70,70	0
56	MG	1H	3269	1/1	0.84	0.30	78,78,78,78	0
56	MG	1G	1626	1/1	0.84	0.20	99,99,99,99	0
56	MG	1G	1628	1/1	0.84	0.39	83,83,83,83	0
56	MG	1H	3322	1/1	0.84	0.37	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	1H	3058	1/1	0.84	0.34	80,80,80,80	0
56	MG	14	3116	1/1	0.84	0.32	75,75,75,75	0
56	MG	1H	3136	1/1	0.84	0.31	69,69,69,69	0
56	MG	13	1674	1/1	0.84	0.30	83,83,83,83	0
56	MG	1H	3091	1/1	0.84	0.27	65,65,65,65	0
56	MG	1H	3488	1/1	0.84	0.09	134,134,134,134	0
56	MG	14	3154	1/1	0.84	0.22	59,59,59,59	0
56	MG	14	3051	1/1	0.84	0.36	83,83,83,83	0
56	MG	1J	203	1/1	0.84	0.20	96,96,96,96	0
56	MG	1H	3221	1/1	0.84	0.57	88,88,88,88	0
56	MG	1H	3099	1/1	0.84	0.24	74,74,74,74	0
56	MG	14	3056	1/1	0.84	0.32	69,69,69,69	0
56	MG	1H	3229	1/1	0.84	0.31	82,82,82,82	0
56	MG	2L	103	1/1	0.84	0.20	85,85,85,85	0
56	MG	1H	3292	1/1	0.84	0.30	80,80,80,80	0
56	MG	1H	3237	1/1	0.84	0.36	82,82,82,82	0
56	MG	14	3081	1/1	0.84	0.47	90,90,90,90	0
56	MG	1G	1662	1/1	0.84	0.16	81,81,81,81	0
56	MG	14	3191	1/1	0.84	0.22	90,90,90,90	0
56	MG	14	3127	1/1	0.84	0.21	88,88,88,88	0
56	MG	1H	3026	1/1	0.84	0.20	61,61,61,61	0
56	MG	1H	3029	1/1	0.84	0.26	91,91,91,91	0
56	MG	1G	1608	1/1	0.84	0.25	86,86,86,86	0
56	MG	1H	3300	1/1	0.84	0.23	102,102,102,102	0
56	MG	1H	3118	1/1	0.84	0.33	87,87,87,87	0
56	MG	13	1624	1/1	0.84	0.32	89,89,89,89	0
56	MG	14	3146	1/1	0.84	0.33	91,91,91,91	0
56	MG	14	3336	1/1	0.84	0.32	114,114,114,114	0
56	MG	14	3247	1/1	0.84	0.30	89,89,89,89	0
56	MG	14	3174	1/1	0.84	0.31	82,82,82,82	0
56	MG	1H	3193	1/1	0.84	0.31	89,89,89,89	0
56	MG	1G	1696	1/1	0.84	0.12	113,113,113,113	0
56	MG	1H	3044	1/1	0.84	0.28	76,76,76,76	0
56	MG	13	1620	1/1	0.84	0.20	81,81,81,81	0
56	MG	14	3017	1/1	0.84	0.25	70,70,70,70	0
56	MG	1G	1631	1/1	0.85	0.29	88,88,88,88	0
56	MG	1H	3078	1/1	0.85	0.39	80,80,80,80	0
56	MG	14	3199	1/1	0.85	0.30	83,83,83,83	0
56	MG	1H	3475	1/1	0.85	0.19	114,114,114,114	0
56	MG	1H	3279	1/1	0.85	0.13	80,80,80,80	0
56	MG	14	3034	1/1	0.85	0.24	78,78,78,78	0
56	MG	14	3014	1/1	0.85	0.14	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1H	3144	1/1	0.85	0.17	63,63,63,63	0
56	MG	1H	3097	1/1	0.85	0.12	76,76,76,76	0
56	MG	1H	3223	1/1	0.85	0.18	88,88,88,88	0
56	MG	1H	3225	1/1	0.85	0.41	87,87,87,87	0
56	MG	13	1731	1/1	0.85	0.12	115,115,115,115	0
56	MG	1H	3103	1/1	0.85	0.28	60,60,60,60	0
56	MG	14	3177	1/1	0.85	0.12	81,81,81,81	0
56	MG	13	1637	1/1	0.85	0.17	71,71,71,71	0
56	MG	1G	1656	1/1	0.85	0.24	112,112,112,112	0
56	MG	1H	3165	1/1	0.85	0.22	45,45,45,45	0
56	MG	14	3214	1/1	0.85	0.37	88,88,88,88	0
56	MG	14	3073	1/1	0.85	0.24	64,64,64,64	0
56	MG	13	1672	1/1	0.85	0.16	103,103,103,103	0
56	MG	1H	3177	1/1	0.85	0.41	72,72,72,72	0
56	MG	14	3268	1/1	0.85	0.20	96,96,96,96	0
56	MG	1G	1610	1/1	0.85	0.16	103,103,103,103	0
56	MG	13	1705	1/1	0.85	0.17	82,82,82,82	0
56	MG	14	3158	1/1	0.85	0.57	83,83,83,83	0
56	MG	1H	3185	1/1	0.85	0.25	70,70,70,70	0
56	MG	1H	3039	1/1	0.85	0.18	87,87,87,87	0
56	MG	14	3114	1/1	0.85	0.24	69,69,69,69	0
56	MG	13	1677	1/1	0.85	0.44	96,96,96,96	0
56	MG	14	3374	1/1	0.85	0.10	131,131,131,131	0
56	MG	13	1668	1/1	0.85	0.10	98,98,98,98	0
56	MG	13	1691	1/1	0.85	0.29	87,87,87,87	0
56	MG	1H	3056	1/1	0.85	0.23	74,74,74,74	0
56	MG	14	3250	1/1	0.85	0.14	98,98,98,98	0
56	MG	14	3009	1/1	0.85	0.21	73,73,73,73	0
56	MG	14	3032	1/1	0.85	0.27	87,87,87,87	0
56	MG	1H	3063	1/1	0.85	0.21	54,54,54,54	0
56	MG	1H	3276	1/1	0.85	0.15	87,87,87,87	0
56	MG	1H	3007	1/1	0.86	0.25	58,58,58,58	0
56	MG	1H	3188	1/1	0.86	0.26	67,67,67,67	0
56	MG	1H	3244	1/1	0.86	0.49	85,85,85,85	0
56	MG	14	3053	1/1	0.86	0.51	78,78,78,78	0
56	MG	14	3104	1/1	0.86	0.27	78,78,78,78	0
56	MG	14	3242	1/1	0.86	0.33	89,89,89,89	0
56	MG	14	3265	1/1	0.86	0.36	96,96,96,96	0
56	MG	13	1680	1/1	0.86	0.23	107,107,107,107	0
56	MG	14	3057	1/1	0.86	0.25	74,74,74,74	0
56	MG	14	3013	1/1	0.86	0.21	65,65,65,65	0
56	MG	14	3200	1/1	0.86	0.30	94,94,94,94	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1H	3208	1/1	0.86	0.16	53,53,53,53	0
56	MG	14	3109	1/1	0.86	0.23	67,67,67,67	0
56	MG	1H	3265	1/1	0.86	0.28	94,94,94,94	0
56	MG	14	3178	1/1	0.86	0.22	86,86,86,86	0
56	MG	14	3111	1/1	0.86	0.37	98,98,98,98	0
56	MG	1H	3152	1/1	0.86	0.39	75,75,75,75	0
56	MG	1G	1614	1/1	0.86	0.28	92,92,92,92	0
56	MG	1H	3040	1/1	0.86	0.32	72,72,72,72	0
56	MG	14	3019	1/1	0.86	0.26	73,73,73,73	0
56	MG	14	3041	1/1	0.86	0.19	59,59,59,59	0
56	MG	14	3063	1/1	0.86	0.29	70,70,70,70	0
56	MG	1H	3051	1/1	0.86	0.12	71,71,71,71	0
56	MG	1H	3175	1/1	0.86	0.32	69,69,69,69	0
56	MG	14	3410	1/1	0.86	0.19	112,112,112,112	0
56	MG	14	3257	1/1	0.86	0.17	93,93,93,93	0
56	MG	1H	3231	1/1	0.86	0.32	92,92,92,92	0
56	MG	1H	3468	1/1	0.86	0.11	115,115,115,115	0
56	MG	1K	101	1/1	0.86	0.15	91,91,91,91	0
56	MG	13	1673	1/1	0.86	0.26	84,84,84,84	0
56	MG	1H	3529	1/1	0.86	0.11	113,113,113,113	0
56	MG	1H	3238	1/1	0.86	0.20	98,98,98,98	0
56	MG	14	3025	1/1	0.86	0.20	87,87,87,87	0
56	MG	13	1656	1/1	0.86	0.25	84,84,84,84	0
56	MG	14	3123	1/1	0.87	0.42	93,93,93,93	0
56	MG	14	3124	1/1	0.87	0.33	80,80,80,80	0
56	MG	1H	3246	1/1	0.87	0.26	81,81,81,81	0
56	MG	16	203	1/1	0.87	0.33	82,82,82,82	0
56	MG	1H	3021	1/1	0.87	0.41	84,84,84,84	0
56	MG	14	3166	1/1	0.87	0.21	85,85,85,85	0
56	MG	1G	1642	1/1	0.87	0.16	130,130,130,130	0
56	MG	1G	1643	1/1	0.87	0.24	147,147,147,147	0
56	MG	16	208	1/1	0.87	0.26	88,88,88,88	0
56	MG	13	1701	1/1	0.87	0.11	71,71,71,71	0
56	MG	13	1630	1/1	0.87	0.15	80,80,80,80	0
56	MG	1H	3138	1/1	0.87	0.26	72,72,72,72	0
56	MG	14	3033	1/1	0.87	0.14	63,63,63,63	0
56	MG	78	201	1/1	0.87	0.32	79,79,79,79	0
56	MG	14	3076	1/1	0.87	0.24	60,60,60,60	0
56	MG	1G	1653	1/1	0.87	0.18	99,99,99,99	0
56	MG	14	3115	1/1	0.87	0.23	82,82,82,82	0
56	MG	14	3007	1/1	0.87	0.16	69,69,69,69	0
56	MG	14	3202	1/1	0.87	0.13	106,106,106,106	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	13	1634	1/1	0.87	0.15	76,76,76,76	0
56	MG	1H	3150	1/1	0.87	0.46	86,86,86,86	0
56	MG	14	3155	1/1	0.87	0.13	68,68,68,68	0
56	MG	1H	3111	1/1	0.87	0.17	67,67,67,67	0
56	MG	14	3256	1/1	0.87	0.33	86,86,86,86	0
56	MG	1H	3220	1/1	0.87	0.50	82,82,82,82	0
56	MG	1H	3161	1/1	0.87	0.32	101,101,101,101	0
56	MG	1H	3114	1/1	0.87	0.40	75,75,75,75	0
56	MG	14	3416	1/1	0.87	0.16	116,116,116,116	0
56	MG	1G	1671	1/1	0.87	0.10	92,92,92,92	0
56	MG	14	3083	1/1	0.87	0.32	86,86,86,86	0
56	MG	1H	3172	1/1	0.87	0.19	60,60,60,60	0
56	MG	1H	3047	1/1	0.87	0.25	62,62,62,62	0
56	MG	13	1640	1/1	0.87	0.22	81,81,81,81	0
56	MG	1H	3120	1/1	0.87	0.24	89,89,89,89	0
56	MG	14	3211	1/1	0.87	0.12	94,94,94,94	0
56	MG	14	3212	1/1	0.87	0.36	85,85,85,85	0
56	MG	14	3137	1/1	0.87	0.14	96,96,96,96	0
56	MG	1G	1629	1/1	0.87	0.25	75,75,75,75	0
56	MG	1H	3003	1/1	0.87	0.29	60,60,60,60	0
56	MG	14	3018	1/1	0.87	0.23	96,96,96,96	0
56	MG	1G	1630	1/1	0.88	0.52	92,92,92,92	0
56	MG	1H	3212	1/1	0.88	0.27	79,79,79,79	0
56	MG	14	3378	1/1	0.88	0.09	126,126,126,126	0
56	MG	14	3234	1/1	0.88	0.41	81,81,81,81	0
56	MG	16	202	1/1	0.88	0.23	68,68,68,68	0
56	MG	1H	3259	1/1	0.88	0.29	79,79,79,79	0
56	MG	1G	1636	1/1	0.88	0.23	89,89,89,89	0
56	MG	1H	3052	1/1	0.88	0.26	77,77,77,77	0
56	MG	14	3039	1/1	0.88	0.17	81,81,81,81	0
56	MG	13	1602	1/1	0.88	0.19	70,70,70,70	0
56	MG	14	3052	1/1	0.88	0.24	75,75,75,75	0
56	MG	14	3215	1/1	0.88	0.41	91,91,91,91	0
56	MG	21	301	1/1	0.88	0.28	56,56,56,56	0
56	MG	14	3089	1/1	0.88	0.12	54,54,54,54	0
56	MG	41	201	1/1	0.88	0.20	85,85,85,85	0
56	MG	1H	3307	1/1	0.88	0.35	86,86,86,86	0
56	MG	14	3179	1/1	0.88	0.09	71,71,71,71	0
56	MG	L8	101	1/1	0.88	0.20	81,81,81,81	0
56	MG	1H	3035	1/1	0.88	0.23	76,76,76,76	0
56	MG	1H	3268	1/1	0.88	0.33	84,84,84,84	0
56	MG	1G	1654	1/1	0.88	0.14	115,115,115,115	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1G	1603	1/1	0.88	0.17	77,77,77,77	0
56	MG	1G	1605	1/1	0.88	0.24	95,95,95,95	0
56	MG	1G	1606	1/1	0.88	0.14	102,102,102,102	0
56	MG	1G	1659	1/1	0.88	0.17	150,150,150,150	0
56	MG	14	3271	1/1	0.88	0.18	99,99,99,99	0
56	MG	1H	3080	1/1	0.88	0.23	76,76,76,76	0
56	MG	1G	1609	1/1	0.88	0.22	96,96,96,96	0
56	MG	1H	3317	1/1	0.88	0.21	75,75,75,75	0
56	MG	14	3001	1/1	0.88	0.27	62,62,62,62	0
56	MG	1H	3230	1/1	0.88	0.24	73,73,73,73	0
56	MG	13	1604	1/1	0.88	0.20	80,80,80,80	0
56	MG	1H	3194	1/1	0.88	0.20	83,83,83,83	0
56	MG	1H	3236	1/1	0.88	0.31	72,72,72,72	0
56	MG	1H	3093	1/1	0.88	0.18	56,56,56,56	0
56	MG	14	3232	1/1	0.88	0.28	100,100,100,100	0
56	MG	1H	3420	1/1	0.88	0.09	114,114,114,114	0
56	MG	1H	3281	1/1	0.88	0.37	85,85,85,85	0
56	MG	1H	3200	1/1	0.88	0.15	77,77,77,77	0
56	MG	1H	3202	1/1	0.88	0.30	87,87,87,87	0
56	MG	14	3245	1/1	0.88	0.14	83,83,83,83	0
56	MG	14	3047	1/1	0.88	0.25	68,68,68,68	0
56	MG	1H	3167	1/1	0.88	0.27	59,59,59,59	0
56	MG	1H	3207	1/1	0.88	0.35	76,76,76,76	0
56	MG	1H	3045	1/1	0.88	0.33	66,66,66,66	0
56	MG	1H	3210	1/1	0.88	0.25	71,71,71,71	0
56	MG	16	205	1/1	0.89	0.16	87,87,87,87	0
56	MG	13	1657	1/1	0.89	0.61	84,84,84,84	0
56	MG	1H	3004	1/1	0.89	0.21	63,63,63,63	0
56	MG	14	3046	1/1	0.89	0.26	70,70,70,70	0
56	MG	13	1636	1/1	0.89	0.27	74,74,74,74	0
56	MG	1H	3166	1/1	0.89	0.31	53,53,53,53	0
56	MG	14	3273	1/1	0.89	0.16	106,106,106,106	0
56	MG	1H	3015	1/1	0.89	0.27	54,54,54,54	0
56	MG	1H	3016	1/1	0.89	0.17	61,61,61,61	0
56	MG	1H	3173	1/1	0.89	0.20	73,73,73,73	0
56	MG	1H	3313	1/1	0.89	0.18	86,86,86,86	0
56	MG	14	3134	1/1	0.89	0.19	82,82,82,82	0
56	MG	14	3235	1/1	0.89	0.37	92,92,92,92	0
56	MG	14	3096	1/1	0.89	0.18	64,64,64,64	0
56	MG	1H	3073	1/1	0.89	0.30	55,55,55,55	0
56	MG	14	3218	1/1	0.89	0.33	95,95,95,95	0
56	MG	14	3136	1/1	0.89	0.20	92,92,92,92	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1H	3321	1/1	0.89	0.43	93,93,93,93	0
56	MG	1H	3089	1/1	0.89	0.22	56,56,56,56	0
56	MG	1H	3183	1/1	0.89	0.10	61,61,61,61	0
56	MG	14	3156	1/1	0.89	0.32	92,92,92,92	0
56	MG	13	1669	1/1	0.89	0.20	78,78,78,78	0
56	MG	1H	3403	1/1	0.89	0.13	78,78,78,78	0
56	MG	14	3113	1/1	0.89	0.13	57,57,57,57	0
56	MG	1H	3189	1/1	0.89	0.40	67,67,67,67	0
56	MG	1H	3033	1/1	0.89	0.24	72,72,72,72	0
56	MG	1H	3458	1/1	0.89	0.13	126,126,126,126	0
56	MG	13	1618	1/1	0.89	0.23	67,67,67,67	0
56	MG	1H	3287	1/1	0.89	0.21	88,88,88,88	0
56	MG	1H	3484	1/1	0.89	0.10	105,105,105,105	0
56	MG	1H	3037	1/1	0.89	0.26	51,51,51,51	0
56	MG	14	3141	1/1	0.89	0.32	72,72,72,72	0
56	MG	1H	3531	1/1	0.89	0.09	109,109,109,109	0
56	MG	1H	3535	1/1	0.89	0.09	115,115,115,115	0
56	MG	3I	201	1/1	0.89	0.26	68,68,68,68	0
56	MG	14	3206	1/1	0.89	0.22	86,86,86,86	0
56	MG	2K	101	1/1	0.89	0.21	74,74,74,74	0
56	MG	13	1625	1/1	0.89	0.20	74,74,74,74	0
56	MG	13	1635	1/1	0.89	0.30	85,85,85,85	0
56	MG	13	1645	1/1	0.89	0.25	94,94,94,94	0
56	MG	1H	3153	1/1	0.89	0.21	77,77,77,77	0
56	MG	1H	3156	1/1	0.89	0.40	85,85,85,85	0
56	MG	1G	1627	1/1	0.90	0.34	83,83,83,83	0
56	MG	1H	3123	1/1	0.90	0.26	90,90,90,90	0
56	MG	14	3282	1/1	0.90	0.11	76,76,76,76	0
56	MG	1H	3232	1/1	0.90	0.22	46,46,46,46	0
56	MG	14	3159	1/1	0.90	0.19	64,64,64,64	0
56	MG	1H	3019	1/1	0.90	0.13	48,48,48,48	0
56	MG	1H	3020	1/1	0.90	0.31	67,67,67,67	0
56	MG	13	1619	1/1	0.90	0.27	71,71,71,71	0
56	MG	1H	3184	1/1	0.90	0.41	73,73,73,73	0
56	MG	1H	3064	1/1	0.90	0.11	52,52,52,52	0
56	MG	14	3161	1/1	0.90	0.13	100,100,100,100	0
56	MG	1H	3075	1/1	0.90	0.27	52,52,52,52	0
56	MG	1H	3076	1/1	0.90	0.14	64,64,64,64	0
56	MG	1H	3302	1/1	0.90	0.28	88,88,88,88	0
56	MG	16	209	1/1	0.90	0.14	74,74,74,74	0
56	MG	14	3213	1/1	0.90	0.31	76,76,76,76	0
56	MG	13	1632	1/1	0.90	0.22	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	11	302	1/1	0.90	0.12	42,42,42,42	0
56	MG	1H	3084	1/1	0.90	0.27	64,64,64,64	0
56	MG	13	1671	1/1	0.90	0.14	92,92,92,92	0
56	MG	14	3145	1/1	0.90	0.16	57,57,57,57	0
56	MG	14	3402	1/1	0.90	0.10	105,105,105,105	0
56	MG	14	3072	1/1	0.90	0.24	82,82,82,82	0
56	MG	1H	3148	1/1	0.90	0.22	65,65,65,65	0
56	MG	14	3195	1/1	0.90	0.11	51,51,51,51	0
56	MG	14	3419	1/1	0.90	0.07	135,135,135,135	0
56	MG	14	3048	1/1	0.90	0.17	63,63,63,63	0
56	MG	5E	201	1/1	0.90	0.19	93,93,93,93	0
56	MG	14	3010	1/1	0.90	0.14	65,65,65,65	0
56	MG	1H	3209	1/1	0.90	0.17	68,68,68,68	0
56	MG	14	3150	1/1	0.90	0.21	57,57,57,57	0
56	MG	14	3264	1/1	0.90	0.10	78,78,78,78	0
56	MG	1G	1664	1/1	0.90	0.35	90,90,90,90	0
56	MG	1H	3160	1/1	0.90	0.20	81,81,81,81	0
56	MG	13	1682	1/1	0.90	0.23	135,135,135,135	0
56	MG	1H	3162	1/1	0.90	0.19	69,69,69,69	0
56	MG	1H	3358	1/1	0.90	0.34	65,65,65,65	0
56	MG	1H	3043	1/1	0.90	0.34	62,62,62,62	0
56	MG	1H	3164	1/1	0.90	0.18	56,56,56,56	0
56	MG	14	3061	1/1	0.90	0.19	49,49,49,49	0
56	MG	14	3062	1/1	0.90	0.11	70,70,70,70	0
56	MG	14	3269	1/1	0.90	0.12	84,84,84,84	0
56	MG	14	3035	1/1	0.90	0.27	68,68,68,68	0
56	MG	14	3084	1/1	0.90	0.25	70,70,70,70	0
56	MG	1H	3053	1/1	0.90	0.20	56,56,56,56	0
56	MG	14	3086	1/1	0.90	0.22	72,72,72,72	0
56	MG	1H	3525	1/1	0.90	0.11	113,113,113,113	0
56	MG	1G	1624	1/1	0.90	0.18	88,88,88,88	0
56	MG	1H	3228	1/1	0.90	0.19	67,67,67,67	0
56	MG	14	3067	1/1	0.90	0.26	76,76,76,76	0
56	MG	14	3361	1/1	0.91	0.10	119,119,119,119	0
56	MG	14	3252	1/1	0.91	0.08	74,74,74,74	0
56	MG	14	3011	1/1	0.91	0.26	65,65,65,65	0
56	MG	14	3208	1/1	0.91	0.12	69,69,69,69	0
56	MG	13	1730	1/1	0.91	0.10	111,111,111,111	0
56	MG	13	1647	1/1	0.91	0.11	83,83,83,83	0
56	MG	1H	3305	1/1	0.91	0.33	76,76,76,76	0
56	MG	14	3393	1/1	0.91	0.08	111,111,111,111	0
56	MG	1H	3067	1/1	0.91	0.34	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	14	3142	1/1	0.91	0.18	89,89,89,89	0
56	MG	1H	3309	1/1	0.91	0.32	94,94,94,94	0
56	MG	14	3126	1/1	0.91	0.26	80,80,80,80	0
56	MG	14	3020	1/1	0.91	0.28	62,62,62,62	0
56	MG	1H	3077	1/1	0.91	0.34	81,81,81,81	0
56	MG	1H	3314	1/1	0.91	0.17	81,81,81,81	0
56	MG	14	3163	1/1	0.91	0.14	109,109,109,109	0
56	MG	14	3079	1/1	0.91	0.23	83,83,83,83	0
56	MG	1H	3133	1/1	0.91	0.46	69,69,69,69	0
56	MG	1G	1648	1/1	0.91	0.44	85,85,85,85	0
56	MG	14	3095	1/1	0.91	0.20	87,87,87,87	0
56	MG	1H	3135	1/1	0.91	0.18	74,74,74,74	0
56	MG	88	201	1/1	0.91	0.20	73,73,73,73	0
56	MG	1H	3274	1/1	0.91	0.33	87,87,87,87	0
56	MG	P8	101	1/1	0.91	0.24	76,76,76,76	0
56	MG	1H	3275	1/1	0.91	0.32	83,83,83,83	0
56	MG	13	1621	1/1	0.91	0.46	64,64,64,64	0
56	MG	14	3167	1/1	0.91	0.23	67,67,67,67	0
56	MG	14	3196	1/1	0.91	0.18	69,69,69,69	0
56	MG	14	3022	1/1	0.91	0.18	83,83,83,83	0
56	MG	14	3098	1/1	0.91	0.20	53,53,53,53	0
56	MG	1H	3363	1/1	0.91	0.08	83,83,83,83	0
56	MG	1H	3141	1/1	0.91	0.22	78,78,78,78	0
56	MG	1H	3187	1/1	0.91	0.27	72,72,72,72	0
56	MG	14	3172	1/1	0.91	0.36	87,87,87,87	0
56	MG	1H	3433	1/1	0.91	0.11	92,92,92,92	0
56	MG	14	3100	1/1	0.91	0.31	69,69,69,69	0
56	MG	14	3043	1/1	0.91	0.16	52,52,52,52	0
56	MG	1H	3466	1/1	0.91	0.10	105,105,105,105	0
56	MG	14	3102	1/1	0.91	0.32	73,73,73,73	0
56	MG	1H	3006	1/1	0.91	0.33	48,48,48,48	0
56	MG	1H	3483	1/1	0.91	0.09	116,116,116,116	0
56	MG	14	3249	1/1	0.91	0.18	89,89,89,89	0
56	MG	14	3024	1/1	0.91	0.24	64,64,64,64	0
56	MG	1H	3515	1/1	0.91	0.12	107,107,107,107	0
56	MG	1H	3517	1/1	0.91	0.09	105,105,105,105	0
56	MG	1H	3198	1/1	0.91	0.32	82,82,82,82	0
56	MG	1G	1684	1/1	0.91	0.08	121,121,121,121	0
56	MG	1G	1690	1/1	0.91	0.08	120,120,120,120	0
56	MG	1G	1694	1/1	0.91	0.13	105,105,105,105	0
56	MG	1H	3010	1/1	0.91	0.24	46,46,46,46	0
56	MG	1H	3012	1/1	0.91	0.18	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1H	3155	1/1	0.91	0.14	65,65,65,65	0
56	MG	13	1725	1/1	0.91	0.14	114,114,114,114	0
56	MG	1H	3069	1/1	0.92	0.28	53,53,53,53	0
56	MG	1H	3520	1/1	0.92	0.24	91,91,91,91	0
56	MG	1H	3524	1/1	0.92	0.12	104,104,104,104	0
56	MG	1H	3024	1/1	0.92	0.08	61,61,61,61	0
56	MG	1H	3182	1/1	0.92	0.33	69,69,69,69	0
56	MG	1H	3530	1/1	0.92	0.08	111,111,111,111	0
56	MG	14	3091	1/1	0.92	0.13	64,64,64,64	0
56	MG	1H	3534	1/1	0.92	0.13	101,101,101,101	0
56	MG	13	1747	1/1	0.92	0.10	107,107,107,107	0
56	MG	1L	101	1/1	0.92	0.16	94,94,94,94	0
56	MG	14	3077	1/1	0.92	0.28	68,68,68,68	0
56	MG	14	3078	1/1	0.92	0.22	67,67,67,67	0
56	MG	13	1612	1/1	0.92	0.23	68,68,68,68	0
56	MG	1H	3085	1/1	0.92	0.24	64,64,64,64	0
56	MG	14	3193	1/1	0.92	0.30	78,78,78,78	0
56	MG	14	3099	1/1	0.92	0.29	82,82,82,82	0
56	MG	14	3292	1/1	0.92	0.08	73,73,73,73	0
56	MG	14	3319	1/1	0.92	0.09	86,86,86,86	0
56	MG	1H	3195	1/1	0.92	0.17	91,91,91,91	0
56	MG	2K	108	1/1	0.92	0.11	92,92,92,92	0
56	MG	1H	3257	1/1	0.92	0.24	85,85,85,85	0
56	MG	1H	3096	1/1	0.92	0.27	66,66,66,66	0
56	MG	13	1660	1/1	0.92	0.31	76,76,76,76	0
56	MG	1H	3312	1/1	0.92	0.42	83,83,83,83	0
56	MG	14	3349	1/1	0.92	0.20	82,82,82,82	0
56	MG	1H	3102	1/1	0.92	0.12	45,45,45,45	0
56	MG	1H	3005	1/1	0.92	0.20	51,51,51,51	0
56	MG	14	3358	1/1	0.92	0.18	98,98,98,98	0
56	MG	13	1639	1/1	0.92	0.17	87,87,87,87	0
56	MG	14	3364	1/1	0.92	0.08	132,132,132,132	0
56	MG	1H	3050	1/1	0.92	0.32	62,62,62,62	0
56	MG	1H	3157	1/1	0.92	0.22	57,57,57,57	0
56	MG	14	3366	1/1	0.92	0.08	90,90,90,90	0
56	MG	1H	3270	1/1	0.92	0.28	75,75,75,75	0
56	MG	13	1613	1/1	0.92	0.30	79,79,79,79	0
56	MG	1H	3013	1/1	0.92	0.24	59,59,59,59	0
56	MG	13	1601	1/1	0.92	0.17	71,71,71,71	0
56	MG	1H	3328	1/1	0.92	0.11	75,75,75,75	0
56	MG	1H	3116	1/1	0.92	0.10	66,66,66,66	0
56	MG	13	1606	1/1	0.92	0.20	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1H	3375	1/1	0.92	0.08	103,103,103,103	0
56	MG	14	3006	1/1	0.92	0.26	68,68,68,68	0
56	MG	1H	3018	1/1	0.92	0.16	67,67,67,67	0
56	MG	14	3054	1/1	0.92	0.35	70,70,70,70	0
56	MG	1H	3168	1/1	0.92	0.30	77,77,77,77	0
56	MG	1H	3121	1/1	0.92	0.17	59,59,59,59	0
56	MG	14	3224	1/1	0.92	0.12	66,66,66,66	0
56	MG	1H	3459	1/1	0.92	0.08	101,101,101,101	0
56	MG	1H	3224	1/1	0.92	0.23	67,67,67,67	0
56	MG	14	3181	1/1	0.92	0.08	84,84,84,84	0
56	MG	13	1658	1/1	0.92	0.23	79,79,79,79	0
56	MG	1H	3066	1/1	0.92	0.11	48,48,48,48	0
56	MG	14	3042	1/1	0.92	0.36	69,69,69,69	0
56	MG	1H	3127	1/1	0.92	0.24	64,64,64,64	0
56	MG	1H	3504	1/1	0.92	0.07	117,117,117,117	0
56	MG	1H	3068	1/1	0.92	0.36	68,68,68,68	0
56	MG	1H	3284	1/1	0.93	0.14	81,81,81,81	0
56	MG	1H	3354	1/1	0.93	0.07	106,106,106,106	0
56	MG	1G	1637	1/1	0.93	0.18	89,89,89,89	0
56	MG	13	1749	1/1	0.93	0.11	107,107,107,107	0
56	MG	14	3412	1/1	0.93	0.13	93,93,93,93	0
56	MG	14	3138	1/1	0.93	0.09	71,71,71,71	0
56	MG	1H	3389	1/1	0.93	0.21	98,98,98,98	0
56	MG	1H	3392	1/1	0.93	0.10	67,67,67,67	0
56	MG	1H	3396	1/1	0.93	0.14	61,61,61,61	0
56	MG	1H	3087	1/1	0.93	0.18	69,69,69,69	0
56	MG	1H	3411	1/1	0.93	0.08	80,80,80,80	0
56	MG	14	3005	1/1	0.93	0.18	59,59,59,59	0
56	MG	13	1723	1/1	0.93	0.08	85,85,85,85	0
56	MG	1H	3249	1/1	0.93	0.16	75,75,75,75	0
56	MG	1H	3252	1/1	0.93	0.16	82,82,82,82	0
56	MG	14	3351	1/1	0.93	0.16	70,70,70,70	0
56	MG	1H	3131	1/1	0.93	0.09	71,71,71,71	0
56	MG	2L	101	1/1	0.93	0.18	86,86,86,86	0
56	MG	1H	3256	1/1	0.93	0.17	83,83,83,83	0
56	MG	1H	3474	1/1	0.93	0.10	103,103,103,103	0
56	MG	5I	101	1/1	0.93	0.08	82,82,82,82	0
56	MG	14	3049	1/1	0.93	0.13	60,60,60,60	0
56	MG	13	1628	1/1	0.93	0.10	51,51,51,51	0
56	MG	13	1686	1/1	0.93	0.15	84,84,84,84	0
56	MG	13	1609	1/1	0.93	0.11	83,83,83,83	0
56	MG	14	3117	1/1	0.93	0.33	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	13	1733	1/1	0.93	0.07	102,102,102,102	0
56	MG	1H	3061	1/1	0.93	0.14	52,52,52,52	0
56	MG	1H	3521	1/1	0.93	0.14	89,89,89,89	0
56	MG	1H	3001	1/1	0.93	0.22	49,49,49,49	0
56	MG	1G	1668	1/1	0.93	0.28	90,90,90,90	0
56	MG	1H	3002	1/1	0.93	0.16	43,43,43,43	0
56	MG	14	3092	1/1	0.93	0.07	61,61,61,61	0
56	MG	1H	3146	1/1	0.93	0.30	81,81,81,81	0
56	MG	1H	3112	1/1	0.93	0.20	72,72,72,72	0
56	MG	1H	3226	1/1	0.93	0.22	87,87,87,87	0
56	MG	1H	3065	1/1	0.93	0.18	51,51,51,51	0
56	MG	14	3093	1/1	0.93	0.19	58,58,58,58	0
56	MG	1H	3034	1/1	0.93	0.19	46,46,46,46	0
56	MG	14	3187	1/1	0.93	0.25	63,63,63,63	0
56	MG	1H	3036	1/1	0.93	0.15	59,59,59,59	0
56	MG	1H	3072	1/1	0.93	0.28	52,52,52,52	0
56	MG	14	3394	1/1	0.93	0.13	102,102,102,102	0
56	MG	1G	1693	1/1	0.93	0.07	109,109,109,109	0
56	MG	13	1678	1/1	0.93	0.11	85,85,85,85	0
56	MG	14	3122	1/1	0.93	0.21	77,77,77,77	0
56	MG	14	3405	1/1	0.93	0.10	93,93,93,93	0
56	MG	1H	3159	1/1	0.93	0.19	53,53,53,53	0
56	MG	1H	3011	1/1	0.93	0.23	51,51,51,51	0
56	MG	14	3399	1/1	0.94	0.10	116,116,116,116	0
56	MG	1H	3235	1/1	0.94	0.09	61,61,61,61	0
56	MG	14	3400	1/1	0.94	0.09	112,112,112,112	0
56	MG	1H	3074	1/1	0.94	0.20	46,46,46,46	0
56	MG	1H	3196	1/1	0.94	0.09	56,56,56,56	0
56	MG	1H	3008	1/1	0.94	0.17	41,41,41,41	0
56	MG	14	3325	1/1	0.94	0.06	110,110,110,110	0
56	MG	1H	3241	1/1	0.94	0.14	87,87,87,87	0
56	MG	16	204	1/1	0.94	0.09	68,68,68,68	0
56	MG	13	1726	1/1	0.94	0.09	96,96,96,96	0
56	MG	1H	3285	1/1	0.94	0.10	82,82,82,82	0
56	MG	14	3342	1/1	0.94	0.09	79,79,79,79	0
56	MG	14	3068	1/1	0.94	0.58	64,64,64,64	0
56	MG	1H	3376	1/1	0.94	0.13	88,88,88,88	0
56	MG	1H	3381	1/1	0.94	0.12	78,78,78,78	0
56	MG	1H	3245	1/1	0.94	0.19	73,73,73,73	0
56	MG	14	3415	1/1	0.94	0.06	121,121,121,121	0
56	MG	14	3026	1/1	0.94	0.16	55,55,55,55	0
56	MG	1H	3086	1/1	0.94	0.19	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1H	3046	1/1	0.94	0.14	46,46,46,46	0
56	MG	1H	3419	1/1	0.94	0.11	86,86,86,86	0
56	MG	1H	3250	1/1	0.94	0.18	78,78,78,78	0
56	MG	14	3267	1/1	0.94	0.27	79,79,79,79	0
56	MG	88	202	1/1	0.94	0.14	60,60,60,60	0
56	MG	1H	3429	1/1	0.94	0.09	64,64,64,64	0
56	MG	1H	3090	1/1	0.94	0.22	65,65,65,65	0
56	MG	1H	3437	1/1	0.94	0.10	70,70,70,70	0
56	MG	1H	3297	1/1	0.94	0.25	79,79,79,79	0
56	MG	1H	3453	1/1	0.94	0.09	83,83,83,83	0
56	MG	1H	3048	1/1	0.94	0.27	52,52,52,52	0
56	MG	14	3420	1/1	0.94	0.10	91,91,91,91	0
56	MG	1H	3463	1/1	0.94	0.09	81,81,81,81	0
56	MG	14	3359	1/1	0.94	0.07	117,117,117,117	0
56	MG	13	1603	1/1	0.94	0.23	67,67,67,67	0
56	MG	14	3363	1/1	0.94	0.06	120,120,120,120	0
56	MG	13	1741	1/1	0.94	0.11	99,99,99,99	0
56	MG	14	3194	1/1	0.94	0.12	73,73,73,73	0
56	MG	14	3368	1/1	0.94	0.07	105,105,105,105	0
56	MG	1H	3179	1/1	0.94	0.28	75,75,75,75	0
56	MG	1H	3501	1/1	0.94	0.09	81,81,81,81	0
56	MG	1H	3057	1/1	0.94	0.23	64,64,64,64	0
56	MG	1H	3508	1/1	0.94	0.06	117,117,117,117	0
56	MG	14	3023	1/1	0.94	0.29	67,67,67,67	0
56	MG	14	3184	1/1	0.94	0.11	79,79,79,79	0
56	MG	14	3044	1/1	0.94	0.18	52,52,52,52	0
56	MG	1H	3028	1/1	0.94	0.23	59,59,59,59	0
56	MG	1G	1680	1/1	0.94	0.06	126,126,126,126	0
56	MG	2K	106	1/1	0.94	0.13	94,94,94,94	0
56	MG	13	1744	1/1	0.94	0.12	112,112,112,112	0
56	MG	14	3031	1/1	0.94	0.16	83,83,83,83	0
56	MG	14	3301	1/1	0.94	0.11	87,87,87,87	0
56	MG	14	3314	1/1	0.94	0.07	59,59,59,59	0
56	MG	1H	3532	1/1	0.94	0.12	116,116,116,116	0
57	ZN	3E	303	1/1	0.94	0.31	127,127,127,127	0
56	MG	14	3066	1/1	0.94	0.15	62,62,62,62	0
56	MG	14	3397	1/1	0.94	0.12	94,94,94,94	0
56	MG	1H	3502	1/1	0.95	0.06	109,109,109,109	0
56	MG	14	3417	1/1	0.95	0.05	118,118,118,118	0
56	MG	1H	3219	1/1	0.95	0.09	73,73,73,73	0
56	MG	1H	3513	1/1	0.95	0.10	104,104,104,104	0
56	MG	1H	3049	1/1	0.95	0.13	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1H	3516	1/1	0.95	0.07	114,114,114,114	0
56	MG	14	3075	1/1	0.95	0.09	83,83,83,83	0
56	MG	1H	3518	1/1	0.95	0.11	89,89,89,89	0
56	MG	1H	3519	1/1	0.95	0.10	93,93,93,93	0
56	MG	14	3182	1/1	0.95	0.10	66,66,66,66	0
56	MG	14	3421	1/1	0.95	0.08	136,136,136,136	0
56	MG	14	3064	1/1	0.95	0.26	60,60,60,60	0
56	MG	1H	3094	1/1	0.95	0.15	65,65,65,65	0
56	MG	14	3149	1/1	0.95	0.16	58,58,58,58	0
56	MG	14	3065	1/1	0.95	0.05	71,71,71,71	0
56	MG	14	3370	1/1	0.95	0.07	90,90,90,90	0
56	MG	1H	3098	1/1	0.95	0.24	63,63,63,63	0
56	MG	1G	1638	1/1	0.95	0.14	89,89,89,89	0
56	MG	14	3371	1/1	0.95	0.06	102,102,102,102	0
56	MG	1H	3101	1/1	0.95	0.24	57,57,57,57	0
56	MG	1K	102	1/1	0.95	0.19	107,107,107,107	0
56	MG	1H	3059	1/1	0.95	0.28	70,70,70,70	0
56	MG	1H	3330	1/1	0.95	0.08	53,53,53,53	0
56	MG	1H	3333	1/1	0.95	0.07	64,64,64,64	0
56	MG	1H	3345	1/1	0.95	0.07	66,66,66,66	0
56	MG	1J	206	1/1	0.95	0.06	106,106,106,106	0
56	MG	1H	3347	1/1	0.95	0.07	54,54,54,54	0
56	MG	13	1742	1/1	0.95	0.05	124,124,124,124	0
56	MG	1H	3027	1/1	0.95	0.28	58,58,58,58	0
56	MG	1H	3360	1/1	0.95	0.12	94,94,94,94	0
56	MG	1H	3361	1/1	0.95	0.08	103,103,103,103	0
56	MG	14	3373	1/1	0.95	0.05	138,138,138,138	0
56	MG	1H	3366	1/1	0.95	0.09	74,74,74,74	0
56	MG	1H	3192	1/1	0.95	0.12	81,81,81,81	0
56	MG	13	1711	1/1	0.95	0.07	106,106,106,106	0
56	MG	1H	3110	1/1	0.95	0.31	75,75,75,75	0
56	MG	14	3298	1/1	0.95	0.11	79,79,79,79	0
56	MG	14	3002	1/1	0.95	0.12	62,62,62,62	0
56	MG	14	3379	1/1	0.95	0.06	126,126,126,126	0
56	MG	1H	3290	1/1	0.95	0.32	82,82,82,82	0
56	MG	1H	3405	1/1	0.95	0.07	78,78,78,78	0
56	MG	14	3012	1/1	0.95	0.26	54,54,54,54	0
56	MG	1H	3412	1/1	0.95	0.07	70,70,70,70	0
56	MG	1H	3415	1/1	0.95	0.11	94,94,94,94	0
56	MG	14	3383	1/1	0.95	0.08	114,114,114,114	0
56	MG	14	3173	1/1	0.95	0.17	66,66,66,66	0
56	MG	1H	3201	1/1	0.95	0.25	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	1H	3071	1/1	0.95	0.14	38,38,38,38	0
56	MG	14	3324	1/1	0.95	0.07	63,63,63,63	0
56	MG	14	3082	1/1	0.95	0.17	75,75,75,75	0
56	MG	14	3328	1/1	0.95	0.12	73,73,73,73	0
56	MG	14	3004	1/1	0.95	0.18	61,61,61,61	0
56	MG	14	3340	1/1	0.95	0.11	104,104,104,104	0
56	MG	13	1732	1/1	0.95	0.08	99,99,99,99	0
56	MG	14	3085	1/1	0.95	0.20	70,70,70,70	0
56	MG	1H	3211	1/1	0.95	0.44	69,69,69,69	0
56	MG	1H	3258	1/1	0.95	0.42	63,63,63,63	0
56	MG	1G	1683	1/1	0.95	0.08	97,97,97,97	0
56	MG	2L	104	1/1	0.95	0.14	95,95,95,95	0
56	MG	1G	1688	1/1	0.95	0.07	122,122,122,122	0
56	MG	1H	3082	1/1	0.95	0.15	40,40,40,40	0
56	MG	1G	1691	1/1	0.95	0.06	98,98,98,98	0
56	MG	1H	3479	1/1	0.95	0.09	72,72,72,72	0
56	MG	1H	3170	1/1	0.95	0.10	71,71,71,71	0
56	MG	1G	1695	1/1	0.95	0.07	94,94,94,94	0
56	MG	14	3355	1/1	0.95	0.10	78,78,78,78	0
56	MG	1H	3485	1/1	0.95	0.12	105,105,105,105	0
56	MG	1H	3486	1/1	0.95	0.06	97,97,97,97	0
56	MG	13	1718	1/1	0.95	0.07	108,108,108,108	0
56	MG	13	1661	1/1	0.95	0.08	75,75,75,75	0
56	MG	14	3388	1/1	0.96	0.06	90,90,90,90	0
56	MG	14	3392	1/1	0.96	0.13	77,77,77,77	0
56	MG	14	3207	1/1	0.96	0.21	72,72,72,72	0
56	MG	1H	3494	1/1	0.96	0.05	107,107,107,107	0
56	MG	1H	3498	1/1	0.96	0.07	74,74,74,74	0
56	MG	1H	3500	1/1	0.96	0.11	82,82,82,82	0
56	MG	14	3341	1/1	0.96	0.09	65,65,65,65	0
56	MG	1H	3088	1/1	0.96	0.15	71,71,71,71	0
56	MG	13	1627	1/1	0.96	0.13	64,64,64,64	0
56	MG	14	3348	1/1	0.96	0.05	111,111,111,111	0
56	MG	1H	3326	1/1	0.96	0.08	54,54,54,54	0
56	MG	14	3151	1/1	0.96	0.14	56,56,56,56	0
56	MG	1H	3329	1/1	0.96	0.10	52,52,52,52	0
56	MG	14	3222	1/1	0.96	0.10	62,62,62,62	0
56	MG	14	3353	1/1	0.96	0.14	94,94,94,94	0
56	MG	14	3285	1/1	0.96	0.06	68,68,68,68	0
56	MG	14	3408	1/1	0.96	0.06	96,96,96,96	0
56	MG	1H	3352	1/1	0.96	0.08	106,106,106,106	0
56	MG	1H	3522	1/1	0.96	0.21	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	1H	3523	1/1	0.96	0.07	115,115,115,115	0
56	MG	1H	3353	1/1	0.96	0.06	100,100,100,100	0
56	MG	14	3409	1/1	0.96	0.05	109,109,109,109	0
56	MG	1H	3527	1/1	0.96	0.11	103,103,103,103	0
56	MG	14	3286	1/1	0.96	0.09	62,62,62,62	0
56	MG	1H	3359	1/1	0.96	0.07	93,93,93,93	0
56	MG	1H	3142	1/1	0.96	0.22	82,82,82,82	0
56	MG	14	3168	1/1	0.96	0.20	58,58,58,58	0
56	MG	14	3413	1/1	0.96	0.13	100,100,100,100	0
56	MG	1H	3145	1/1	0.96	0.13	70,70,70,70	0
56	MG	1H	3368	1/1	0.96	0.07	58,58,58,58	0
56	MG	1H	3369	1/1	0.96	0.07	58,58,58,58	0
56	MG	1H	3373	1/1	0.96	0.09	75,75,75,75	0
56	MG	1H	3100	1/1	0.96	0.10	48,48,48,48	0
56	MG	14	3414	1/1	0.96	0.06	99,99,99,99	0
56	MG	1G	1652	1/1	0.96	0.15	81,81,81,81	0
56	MG	1H	3378	1/1	0.96	0.18	77,77,77,77	0
56	MG	14	3296	1/1	0.96	0.10	97,97,97,97	0
56	MG	1G	1655	1/1	0.96	0.09	127,127,127,127	0
56	MG	1H	3388	1/1	0.96	0.08	90,90,90,90	0
56	MG	13	1743	1/1	0.96	0.06	125,125,125,125	0
56	MG	1H	3104	1/1	0.96	0.21	57,57,57,57	0
56	MG	14	3110	1/1	0.96	0.07	61,61,61,61	0
56	MG	1H	3400	1/1	0.96	0.12	72,72,72,72	0
56	MG	1H	3401	1/1	0.96	0.06	87,87,87,87	0
56	MG	14	3365	1/1	0.96	0.05	89,89,89,89	0
56	MG	14	3305	1/1	0.96	0.08	89,89,89,89	0
56	MG	1H	3154	1/1	0.96	0.33	77,77,77,77	0
56	MG	14	3306	1/1	0.96	0.10	66,66,66,66	0
56	MG	3E	301	1/1	0.96	0.08	116,116,116,116	0
56	MG	14	3309	1/1	0.96	0.08	53,53,53,53	0
56	MG	14	3311	1/1	0.96	0.06	62,62,62,62	0
56	MG	14	3171	1/1	0.96	0.07	84,84,84,84	0
56	MG	1H	3423	1/1	0.96	0.07	77,77,77,77	0
56	MG	14	3055	1/1	0.96	0.13	59,59,59,59	0
56	MG	14	3322	1/1	0.96	0.07	80,80,80,80	0
56	MG	14	3375	1/1	0.96	0.12	92,92,92,92	0
56	MG	J8	101	1/1	0.96	0.32	67,67,67,67	0
56	MG	1H	3439	1/1	0.96	0.06	77,77,77,77	0
56	MG	1H	3442	1/1	0.96	0.12	74,74,74,74	0
56	MG	13	1605	1/1	0.96	0.09	82,82,82,82	0
56	MG	13	1713	1/1	0.96	0.06	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	1H	3455	1/1	0.96	0.05	101,101,101,101	0
56	MG	14	3205	1/1	0.96	0.14	99,99,99,99	0
56	MG	2K	104	1/1	0.96	0.26	88,88,88,88	0
56	MG	13	1748	1/1	0.96	0.08	96,96,96,96	0
56	MG	14	3337	1/1	0.96	0.05	90,90,90,90	0
56	MG	1H	3169	1/1	0.96	0.06	49,49,49,49	0
56	MG	1G	1692	1/1	0.96	0.06	106,106,106,106	0
56	MG	1H	3473	1/1	0.96	0.09	109,109,109,109	0
56	MG	2K	107	1/1	0.96	0.22	86,86,86,86	0
56	MG	14	3384	1/1	0.96	0.08	98,98,98,98	0
56	MG	1H	3081	1/1	0.96	0.15	54,54,54,54	0
56	MG	1H	3480	1/1	0.96	0.05	100,100,100,100	0
56	MG	1H	3482	1/1	0.96	0.14	81,81,81,81	0
56	MG	14	3386	1/1	0.96	0.07	96,96,96,96	0
56	MG	1H	3083	1/1	0.96	0.12	51,51,51,51	0
56	MG	14	3003	1/1	0.97	0.12	49,49,49,49	0
56	MG	14	3279	1/1	0.97	0.04	115,115,115,115	0
56	MG	1H	3335	1/1	0.97	0.05	45,45,45,45	0
56	MG	1H	3430	1/1	0.97	0.11	50,50,50,50	0
56	MG	1H	3431	1/1	0.97	0.05	71,71,71,71	0
56	MG	1H	3337	1/1	0.97	0.07	65,65,65,65	0
56	MG	1H	3436	1/1	0.97	0.06	73,73,73,73	0
56	MG	1H	3533	1/1	0.97	0.06	106,106,106,106	0
56	MG	1H	3342	1/1	0.97	0.11	60,60,60,60	0
56	MG	1H	3438	1/1	0.97	0.08	63,63,63,63	0
56	MG	13	1739	1/1	0.97	0.06	103,103,103,103	0
56	MG	14	3343	1/1	0.97	0.10	81,81,81,81	0
56	MG	1H	3348	1/1	0.97	0.09	60,60,60,60	0
56	MG	1H	3451	1/1	0.97	0.10	88,88,88,88	0
56	MG	1H	3233	1/1	0.97	0.11	65,65,65,65	0
56	MG	1H	3454	1/1	0.97	0.08	87,87,87,87	0
56	MG	14	3307	1/1	0.97	0.07	81,81,81,81	0
56	MG	1H	3457	1/1	0.97	0.13	81,81,81,81	0
56	MG	14	3284	1/1	0.97	0.06	104,104,104,104	0
56	MG	1H	3106	1/1	0.97	0.28	70,70,70,70	0
56	MG	13	1745	1/1	0.97	0.07	104,104,104,104	0
56	MG	14	3352	1/1	0.97	0.07	91,91,91,91	0
56	MG	14	3312	1/1	0.97	0.07	93,93,93,93	0
56	MG	1H	3471	1/1	0.97	0.10	91,91,91,91	0
56	MG	1H	3472	1/1	0.97	0.07	95,95,95,95	0
56	MG	1H	3017	1/1	0.97	0.07	63,63,63,63	0
56	MG	16	211	1/1	0.97	0.06	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	16	213	1/1	0.97	0.07	102,102,102,102	0
56	MG	1H	3079	1/1	0.97	0.16	46,46,46,46	0
56	MG	14	3390	1/1	0.97	0.05	111,111,111,111	0
56	MG	1H	3476	1/1	0.97	0.07	95,95,95,95	0
56	MG	1H	3477	1/1	0.97	0.05	114,114,114,114	0
56	MG	14	3391	1/1	0.97	0.04	96,96,96,96	0
56	MG	1H	3371	1/1	0.97	0.06	73,73,73,73	0
56	MG	14	3108	1/1	0.97	0.07	68,68,68,68	0
56	MG	14	3315	1/1	0.97	0.06	76,76,76,76	0
56	MG	14	3318	1/1	0.97	0.06	69,69,69,69	0
56	MG	I8	101	1/1	0.97	0.09	89,89,89,89	0
56	MG	1H	3377	1/1	0.97	0.06	90,90,90,90	0
56	MG	14	3287	1/1	0.97	0.11	70,70,70,70	0
56	MG	1H	3487	1/1	0.97	0.05	101,101,101,101	0
56	MG	1H	3380	1/1	0.97	0.05	44,44,44,44	0
56	MG	1H	3489	1/1	0.97	0.12	89,89,89,89	0
56	MG	1H	3490	1/1	0.97	0.11	147,147,147,147	0
56	MG	1G	1604	1/1	0.97	0.08	90,90,90,90	0
56	MG	1H	3492	1/1	0.97	0.08	90,90,90,90	0
56	MG	14	3289	1/1	0.97	0.06	77,77,77,77	0
56	MG	1H	3385	1/1	0.97	0.07	62,62,62,62	0
56	MG	1H	3499	1/1	0.97	0.09	66,66,66,66	0
56	MG	14	3290	1/1	0.97	0.07	68,68,68,68	0
56	MG	13	1720	1/1	0.97	0.05	105,105,105,105	0
56	MG	14	3326	1/1	0.97	0.06	58,58,58,58	0
56	MG	1G	1679	1/1	0.97	0.06	109,109,109,109	0
56	MG	14	3403	1/1	0.97	0.18	70,70,70,70	0
56	MG	1G	1681	1/1	0.97	0.06	93,93,93,93	0
56	MG	1H	3507	1/1	0.97	0.05	101,101,101,101	0
56	MG	14	3367	1/1	0.97	0.05	115,115,115,115	0
56	MG	1G	1685	1/1	0.97	0.05	91,91,91,91	0
56	MG	1H	3509	1/1	0.97	0.06	91,91,91,91	0
56	MG	1G	1689	1/1	0.97	0.06	114,114,114,114	0
56	MG	1H	3510	1/1	0.97	0.07	99,99,99,99	0
56	MG	14	3327	1/1	0.97	0.05	70,70,70,70	0
56	MG	1H	3031	1/1	0.97	0.24	58,58,58,58	0
56	MG	14	3293	1/1	0.97	0.05	73,73,73,73	0
56	MG	1H	3408	1/1	0.97	0.07	60,60,60,60	0
56	MG	14	3331	1/1	0.97	0.06	73,73,73,73	0
56	MG	14	3411	1/1	0.97	0.06	106,106,106,106	0
56	MG	13	1724	1/1	0.97	0.11	116,116,116,116	0
56	MG	1H	3417	1/1	0.97	0.07	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	13	1738	1/1	0.97	0.04	109,109,109,109	0
56	MG	14	3338	1/1	0.97	0.05	62,62,62,62	0
56	MG	1H	3070	1/1	0.98	0.31	61,61,61,61	0
56	MG	1H	3491	1/1	0.98	0.06	99,99,99,99	0
56	MG	14	3389	1/1	0.98	0.05	72,72,72,72	0
56	MG	13	1709	1/1	0.98	0.06	72,72,72,72	0
56	MG	1H	3495	1/1	0.98	0.20	75,75,75,75	0
56	MG	1H	3497	1/1	0.98	0.04	64,64,64,64	0
56	MG	1H	3393	1/1	0.98	0.04	51,51,51,51	0
56	MG	1H	3394	1/1	0.98	0.06	58,58,58,58	0
56	MG	1H	3395	1/1	0.98	0.04	59,59,59,59	0
56	MG	14	3313	1/1	0.98	0.05	65,65,65,65	0
56	MG	13	1666	1/1	0.98	0.03	86,86,86,86	0
56	MG	1H	3503	1/1	0.98	0.17	64,64,64,64	0
56	MG	14	3288	1/1	0.98	0.07	78,78,78,78	0
56	MG	1H	3402	1/1	0.98	0.04	102,102,102,102	0
56	MG	13	1719	1/1	0.98	0.07	100,100,100,100	0
56	MG	14	3395	1/1	0.98	0.04	105,105,105,105	0
56	MG	1H	3407	1/1	0.98	0.12	59,59,59,59	0
56	MG	1H	3511	1/1	0.98	0.06	84,84,84,84	0
56	MG	13	1735	1/1	0.98	0.05	78,78,78,78	0
56	MG	1H	3409	1/1	0.98	0.04	50,50,50,50	0
56	MG	14	3321	1/1	0.98	0.15	62,62,62,62	0
56	MG	14	3398	1/1	0.98	0.05	76,76,76,76	0
56	MG	14	3291	1/1	0.98	0.04	52,52,52,52	0
56	MG	1H	3416	1/1	0.98	0.10	48,48,48,48	0
56	MG	14	3362	1/1	0.98	0.12	101,101,101,101	0
56	MG	1H	3418	1/1	0.98	0.04	77,77,77,77	0
56	MG	14	3401	1/1	0.98	0.04	90,90,90,90	0
56	MG	13	1737	1/1	0.98	0.06	116,116,116,116	0
56	MG	1H	3332	1/1	0.98	0.05	64,64,64,64	0
56	MG	13	1712	1/1	0.98	0.04	84,84,84,84	0
56	MG	1H	3426	1/1	0.98	0.05	59,59,59,59	0
56	MG	1H	3528	1/1	0.98	0.06	61,61,61,61	0
56	MG	1H	3206	1/1	0.98	0.31	76,76,76,76	0
56	MG	1H	3336	1/1	0.98	0.06	53,53,53,53	0
56	MG	14	3404	1/1	0.98	0.05	97,97,97,97	0
56	MG	1H	3432	1/1	0.98	0.06	69,69,69,69	0
56	MG	1H	3338	1/1	0.98	0.07	64,64,64,64	0
56	MG	1H	3434	1/1	0.98	0.03	107,107,107,107	0
56	MG	1H	3340	1/1	0.98	0.04	76,76,76,76	0
56	MG	1H	3537	1/1	0.98	0.06	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	14	3294	1/1	0.98	0.05	59,59,59,59	0
56	MG	14	3406	1/1	0.98	0.18	84,84,84,84	0
56	MG	1H	3346	1/1	0.98	0.08	58,58,58,58	0
56	MG	1H	3440	1/1	0.98	0.10	98,98,98,98	0
56	MG	1H	3441	1/1	0.98	0.08	73,73,73,73	0
56	MG	1H	3251	1/1	0.98	0.10	115,115,115,115	0
56	MG	1J	207	1/1	0.98	0.05	100,100,100,100	0
56	MG	1H	3443	1/1	0.98	0.09	111,111,111,111	0
56	MG	14	3407	1/1	0.98	0.06	110,110,110,110	0
56	MG	1H	3446	1/1	0.98	0.10	87,87,87,87	0
56	MG	1H	3449	1/1	0.98	0.06	91,91,91,91	0
56	MG	1H	3450	1/1	0.98	0.04	88,88,88,88	0
56	MG	14	3295	1/1	0.98	0.08	90,90,90,90	0
56	MG	14	3276	1/1	0.98	0.05	85,85,85,85	0
56	MG	14	3329	1/1	0.98	0.06	88,88,88,88	0
56	MG	1H	3355	1/1	0.98	0.07	72,72,72,72	0
56	MG	1H	3356	1/1	0.98	0.04	81,81,81,81	0
56	MG	13	1727	1/1	0.98	0.06	111,111,111,111	0
56	MG	16	212	1/1	0.98	0.07	84,84,84,84	0
56	MG	14	3332	1/1	0.98	0.06	94,94,94,94	0
56	MG	1H	3462	1/1	0.98	0.07	106,106,106,106	0
56	MG	14	3334	1/1	0.98	0.05	111,111,111,111	0
56	MG	1H	3464	1/1	0.98	0.04	90,90,90,90	0
56	MG	14	3299	1/1	0.98	0.05	68,68,68,68	0
56	MG	14	3280	1/1	0.98	0.06	64,64,64,64	0
56	MG	1H	3469	1/1	0.98	0.07	95,95,95,95	0
56	MG	1H	3470	1/1	0.98	0.06	81,81,81,81	0
56	MG	1H	3364	1/1	0.98	0.11	71,71,71,71	0
56	MG	14	3281	1/1	0.98	0.05	74,74,74,74	0
56	MG	1G	1682	1/1	0.98	0.04	86,86,86,86	0
56	MG	1H	3367	1/1	0.98	0.05	50,50,50,50	0
56	MG	13	1728	1/1	0.98	0.05	80,80,80,80	0
56	MG	14	3418	1/1	0.98	0.07	128,128,128,128	0
56	MG	1G	1686	1/1	0.98	0.06	117,117,117,117	0
56	MG	1G	1687	1/1	0.98	0.09	134,134,134,134	0
56	MG	14	3283	1/1	0.98	0.04	78,78,78,78	0
56	MG	1H	3372	1/1	0.98	0.05	65,65,65,65	0
56	MG	14	3308	1/1	0.98	0.06	69,69,69,69	0
56	MG	14	3381	1/1	0.98	0.05	110,110,110,110	0
56	MG	1H	3481	1/1	0.98	0.04	76,76,76,76	0
56	MG	13	1729	1/1	0.98	0.04	73,73,73,73	0
56	MG	14	3344	1/1	0.98	0.10	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	14	3346	1/1	0.98	0.07	88,88,88,88	0
56	MG	1H	3379	1/1	0.98	0.11	90,90,90,90	0
56	MG	14	3385	1/1	0.98	0.04	83,83,83,83	0
56	MG	14	3347	1/1	0.98	0.06	88,88,88,88	0
56	MG	1H	3382	1/1	0.98	0.09	55,55,55,55	0
56	MG	13	1721	1/1	0.98	0.05	99,99,99,99	0
57	ZN	32	301	1/1	0.98	0.22	119,119,119,119	0
56	MG	1H	3370	1/1	0.99	0.06	67,67,67,67	0
56	MG	14	3297	1/1	0.99	0.04	80,80,80,80	0
56	MG	14	3316	1/1	0.99	0.04	57,57,57,57	0
56	MG	14	3317	1/1	0.99	0.08	98,98,98,98	0
56	MG	1H	3374	1/1	0.99	0.04	70,70,70,70	0
56	MG	13	1710	1/1	0.99	0.03	61,61,61,61	0
56	MG	14	3377	1/1	0.99	0.04	88,88,88,88	0
56	MG	1H	3327	1/1	0.99	0.04	61,61,61,61	0
56	MG	14	3345	1/1	0.99	0.03	82,82,82,82	0
56	MG	1H	3445	1/1	0.99	0.04	81,81,81,81	0
56	MG	1H	3526	1/1	0.99	0.14	78,78,78,78	0
56	MG	13	1714	1/1	0.99	0.04	79,79,79,79	0
56	MG	1H	3447	1/1	0.99	0.04	74,74,74,74	0
56	MG	1H	3448	1/1	0.99	0.03	75,75,75,75	0
56	MG	14	3380	1/1	0.99	0.03	87,87,87,87	0
56	MG	1H	3331	1/1	0.99	0.04	49,49,49,49	0
56	MG	14	3320	1/1	0.99	0.10	84,84,84,84	0
56	MG	1H	3452	1/1	0.99	0.04	50,50,50,50	0
56	MG	1H	3383	1/1	0.99	0.05	59,59,59,59	0
56	MG	1H	3384	1/1	0.99	0.05	50,50,50,50	0
56	MG	1H	3536	1/1	0.99	0.10	43,43,43,43	0
56	MG	14	3300	1/1	0.99	0.04	69,69,69,69	0
56	MG	1H	3386	1/1	0.99	0.04	58,58,58,58	0
56	MG	1H	3387	1/1	0.99	0.04	63,63,63,63	0
56	MG	13	1740	1/1	0.99	0.02	83,83,83,83	0
56	MG	1H	3460	1/1	0.99	0.04	81,81,81,81	0
56	MG	1H	3461	1/1	0.99	0.03	89,89,89,89	0
56	MG	14	3350	1/1	0.99	0.04	64,64,64,64	0
56	MG	1H	3390	1/1	0.99	0.03	61,61,61,61	0
56	MG	1H	3391	1/1	0.99	0.03	58,58,58,58	0
56	MG	1H	3465	1/1	0.99	0.04	85,85,85,85	0
56	MG	14	3323	1/1	0.99	0.06	59,59,59,59	0
56	MG	14	3302	1/1	0.99	0.07	76,76,76,76	0
56	MG	1H	3339	1/1	0.99	0.06	60,60,60,60	0
56	MG	14	3387	1/1	0.99	0.08	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	14	3303	1/1	0.99	0.03	92,92,92,92	0
56	MG	1H	3397	1/1	0.99	0.04	52,52,52,52	0
56	MG	1H	3398	1/1	0.99	0.06	58,58,58,58	0
56	MG	1H	3399	1/1	0.99	0.07	50,50,50,50	0
56	MG	1H	3343	1/1	0.99	0.07	52,52,52,52	0
56	MG	1H	3344	1/1	0.99	0.06	69,69,69,69	0
56	MG	14	3354	1/1	0.99	0.07	90,90,90,90	0
56	MG	14	3304	1/1	0.99	0.05	89,89,89,89	0
56	MG	1H	3404	1/1	0.99	0.03	74,74,74,74	0
56	MG	14	3356	1/1	0.99	0.05	85,85,85,85	0
56	MG	1H	3406	1/1	0.99	0.03	76,76,76,76	0
56	MG	14	3357	1/1	0.99	0.05	82,82,82,82	0
56	MG	1H	3350	1/1	0.99	0.04	52,52,52,52	0
56	MG	1H	3351	1/1	0.99	0.07	65,65,65,65	0
56	MG	1H	3410	1/1	0.99	0.10	66,66,66,66	0
56	MG	13	1715	1/1	0.99	0.06	85,85,85,85	0
56	MG	14	3277	1/1	0.99	0.07	54,54,54,54	0
56	MG	1H	3413	1/1	0.99	0.04	82,82,82,82	0
56	MG	1H	3414	1/1	0.99	0.06	67,67,67,67	0
56	MG	14	3360	1/1	0.99	0.04	104,104,104,104	0
56	MG	14	3278	1/1	0.99	0.05	62,62,62,62	0
56	MG	13	1716	1/1	0.99	0.04	58,58,58,58	0
56	MG	1H	3357	1/1	0.99	0.07	72,72,72,72	0
56	MG	1H	3496	1/1	0.99	0.04	103,103,103,103	0
56	MG	13	1734	1/1	0.99	0.04	79,79,79,79	0
56	MG	14	3333	1/1	0.99	0.02	74,74,74,74	0
56	MG	1H	3421	1/1	0.99	0.02	74,74,74,74	0
56	MG	14	3310	1/1	0.99	0.04	65,65,65,65	0
56	MG	14	3335	1/1	0.99	0.08	89,89,89,89	0
56	MG	1H	3425	1/1	0.99	0.04	77,77,77,77	0
56	MG	1H	3362	1/1	0.99	0.07	68,68,68,68	0
56	MG	1H	3428	1/1	0.99	0.04	56,56,56,56	0
56	MG	1H	3505	1/1	0.99	0.05	78,78,78,78	0
56	MG	1H	3506	1/1	0.99	0.04	57,57,57,57	0
56	MG	13	1722	1/1	0.99	0.11	87,87,87,87	0
56	MG	13	1736	1/1	0.99	0.05	95,95,95,95	0
56	MG	14	3369	1/1	0.99	0.06	73,73,73,73	0
56	MG	13	1746	1/1	0.99	0.04	102,102,102,102	0
56	MG	14	3339	1/1	0.99	0.05	56,56,56,56	0
56	MG	1H	3512	1/1	0.99	0.03	80,80,80,80	0
57	ZN	5I	102	1/1	0.99	0.03	96,96,96,96	0
56	MG	13	1717	1/1	0.99	0.08	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	1H	3514	1/1	0.99	0.03	96,96,96,96	0
56	MG	1H	3435	1/1	0.99	0.03	52,52,52,52	0
56	MG	1H	3467	1/1	1.00	0.04	57,57,57,57	0
56	MG	1H	3341	1/1	1.00	0.03	43,43,43,43	0
56	MG	1H	3493	1/1	1.00	0.02	68,68,68,68	0
56	MG	1H	3365	1/1	1.00	0.06	71,71,71,71	0
56	MG	14	3274	1/1	1.00	0.04	69,69,69,69	0
56	MG	1H	3334	1/1	1.00	0.07	56,56,56,56	0
56	MG	1H	3424	1/1	1.00	0.03	92,92,92,92	0
56	MG	1H	3349	1/1	1.00	0.03	68,68,68,68	0
56	MG	14	3275	1/1	1.00	0.02	58,58,58,58	0
56	MG	1H	3427	1/1	1.00	0.03	56,56,56,56	0
56	MG	14	3330	1/1	1.00	0.01	50,50,50,50	0
56	MG	1H	3456	1/1	1.00	0.02	69,69,69,69	0
56	MG	1H	3478	1/1	1.00	0.02	65,65,65,65	0

6.5 Other polymers [i](#)

There are no such residues in this entry.