



# Full wwPDB X-ray Structure Validation Report ⓘ

May 15, 2020 – 02:34 pm BST

PDB ID : 4WU1  
Title : Complex of 70S ribosome with tRNA-Tyr and mRNA with G-U mismatch in the second position in the P-site  
Authors : Rozov, A.; Demeshkina, N.; Yusupov, M.; Yusupova, G.  
Deposited on : 2014-10-30  
Resolution : 3.20 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](mailto: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.

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

MolProbity : 4.02b-467  
Mogul : 1.8.5 (274361), CSD as541be (2020)  
Xtriage (Phenix) : 1.13  
EDS : 2.11  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Refmac : 5.8.0158  
CCP4 : 7.0.044 (Gargrove)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.11

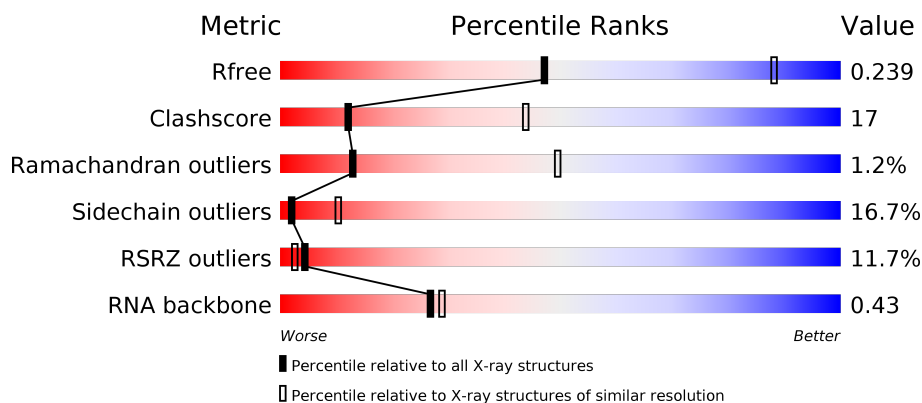
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.20 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	130704	1133 (3.20-3.20)
Clashscore	141614	1253 (3.20-3.20)
Ramachandran outliers	138981	1234 (3.20-3.20)
Sidechain outliers	138945	1233 (3.20-3.20)
RSRZ outliers	127900	1095 (3.20-3.20)
RNA backbone	3102	1010 (3.50-2.90)

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 on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 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	<div> <div>2%</div> <div>33%</div> <div>46%</div> <div>17%</div> <div>..</div> </div>
2	12	256	<div> <div>12%</div> <div>42%</div> <div>42%</div> <div>8%</div> <div>7%</div> </div>
2	1E	256	<div> <div>15%</div> <div>43%</div> <div>38%</div> <div>12%</div> <div>7%</div> </div>
3	22	239	<div> <div>12%</div> <div>49%</div> <div>29%</div> <div>8%</div> <div>14%</div> </div>

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Mol	Chain	Length	Quality of chain
3	2E	239	
4	32	209	
4	3E	209	
5	42	162	
5	4E	162	
6	52	101	
6	5E	101	
7	62	156	
7	6E	156	
8	72	138	
8	7E	138	
9	82	128	
9	8E	128	
10	1A	105	
10	1I	105	
11	2A	129	
11	2I	129	
12	3A	132	
12	3I	132	
13	4A	126	
13	4I	126	
14	5A	61	
14	5I	61	
15	6A	89	
15	6I	89	

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Mol	Chain	Length	Quality of chain
16	7A	88	
16	7I	88	
17	8A	105	
17	8I	105	
18	9A	88	
18	9I	88	
19	AA	93	
19	AI	93	
20	BA	106	
20	BI	106	
21	1B	27	
21	1F	27	
22	2K	85	
22	2L	85	
22	3K	85	
22	3L	85	
23	4K	27	
23	4L	27	
24	14	2917	
24	1H	2917	
25	16	122	
25	1J	122	
26	71	229	
26	79	229	
27	11	276	

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Mol	Chain	Length	Quality of chain
27	19	276	
28	21	206	
28	29	206	
29	31	210	
29	39	210	
30	41	182	
30	49	182	
31	51	180	
31	59	180	
32	61	148	
32	69	148	
33	15	140	
33	58	140	
34	25	122	
34	68	122	
35	35	150	
35	78	150	
36	45	141	
36	88	141	
37	55	118	
37	98	118	
38	65	112	
38	A8	112	
39	75	146	
39	B8	146	

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Mol	Chain	Length	Quality of chain
40	85	118	
40	C8	118	
41	95	101	
41	D8	101	
42	A5	113	
42	E8	113	
43	B5	96	
43	F8	96	
44	C5	110	
44	G8	110	
45	D5	206	
45	H8	206	
46	E5	85	
46	I8	85	
47	F5	98	
47	J8	98	
48	G5	72	
48	K8	72	
49	H5	60	
49	L8	60	
50	I5	71	
50	M8	71	
51	J5	60	
51	N8	60	
52	L5	49	

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Mol	Chain	Length	Quality of chain
52	P8	49	
53	M5	65	
53	Q8	65	
54	1G	1522	

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
55	MG	13	1635	-	-	-	X
55	MG	13	1686	-	-	-	X
55	MG	13	1694	-	-	-	X
55	MG	14	3029	-	-	-	X
55	MG	14	3098	-	-	-	X
55	MG	14	3264	-	-	-	X
55	MG	14	3271	-	-	-	X
55	MG	14	3295	-	-	-	X
55	MG	14	3299	-	-	-	X
55	MG	14	3306	-	-	-	X
55	MG	14	3326	-	-	-	X
55	MG	14	3339	-	-	-	X
55	MG	14	3446	-	-	-	X
55	MG	1G	1628	-	-	-	X
55	MG	1G	1678	-	-	-	X
55	MG	1G	1692	-	-	-	X
55	MG	1G	1693	-	-	-	X
55	MG	1G	1711	-	-	-	X
55	MG	1G	1740	-	-	-	X
55	MG	1H	3051	-	-	-	X
55	MG	1H	3071	-	-	-	X
55	MG	1H	3131	-	-	-	X
55	MG	1H	3135	-	-	-	X
55	MG	1H	3139	-	-	-	X
55	MG	1H	3158	-	-	-	X
55	MG	1H	3175	-	-	-	X
55	MG	1H	3178	-	-	-	X
55	MG	1H	3192	-	-	-	X
55	MG	1H	3208	-	-	-	X
55	MG	1H	3227	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
55	MG	1H	3253	-	-	-	X
55	MG	1H	3256	-	-	-	X
55	MG	1H	3273	-	-	-	X
55	MG	1H	3294	-	-	-	X
55	MG	1H	3314	-	-	-	X
55	MG	1H	3332	-	-	-	X
55	MG	1H	3333	-	-	-	X
55	MG	1H	3342	-	-	-	X
55	MG	1H	3344	-	-	-	X
55	MG	1H	3351	-	-	-	X
55	MG	1H	3353	-	-	-	X
55	MG	1H	3358	-	-	-	X
55	MG	1H	3370	-	-	-	X
55	MG	1H	3505	-	-	-	X
55	MG	29	303	-	-	-	X
55	MG	78	202	-	-	-	X



## 2 Entry composition

There are 57 unique types of molecules in this entry. The entry contains 299678 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	1501	Total	C	N	O	P	0	3	0
			32334	14391	5996	10443	1504			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	1E	237	Total	C	N	O	S	0	0	0
			1924	1228	344	347	5			
2	12	237	Total	C	N	O	S	0	0	0
			1924	1228	344	347	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	2E	205	Total	C	N	O	S	0	0	0
			1605	1011	313	280	1			
3	22	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	3E	208	Total	C	N	O	S	0	0	0
			1702	1066	339	290	7			
4	32	208	Total	C	N	O	S	0	0	0
			1702	1066	339	290	7			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	4E	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	42	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	5E	101	Total	C	N	O	S	0	0	0
			842	531	155	153	3			
6	52	101	Total	C	N	O	S	0	0	0
			842	531	155	153	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	6E	155	Total	C	N	O	S	0	0	0
			1256	781	252	217	6			
7	62	155	Total	C	N	O	S	0	0	0
			1256	781	252	217	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	7E	138	Total	C	N	O	S	0	0	0
			1115	705	215	192	3			
8	72	138	Total	C	N	O	S	0	0	0
			1115	705	215	192	3			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	8E	127	Total	C	N	O	0	0	0
			1009	639	197	173			
9	82	126	Total	C	N	O	0	0	0
			998	633	193	172			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	1I	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			
10	1A	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	2I	116	Total	C	N	O	S	0	0	0
			864	537	164	160	3			
11	2A	119	Total	C	N	O	S	0	0	0
			884	549	168	164	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	3I	125	Total	C	N	O	S	0	0	0
			975	614	196	164	1			
12	3A	125	Total	C	N	O	S	0	0	0
			975	614	196	164	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	4I	116	Total	C	N	O	S	0	0	0
			928	574	191	161	2			
13	4A	117	Total	C	N	O	S	0	0	0
			933	577	192	162	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	5I	60	Total	C	N	O	S	0	0	0
			491	312	104	71	4			
14	5A	60	Total	C	N	O	S	0	0	0
			491	312	104	71	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	6I	88	Total	C	N	O	S	0	0	0
			733	459	147	125	2			
15	6A	88	Total	C	N	O	S	0	0	0
			733	459	147	125	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	7I	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			
16	7A	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	8I	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			
17	8A	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	9I	72	Total	C	N	O	0	0	0
			590	376	117	97			
18	9A	72	Total	C	N	O	0	0	0
			590	376	117	97			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AI	83	Total	C	N	O	S	0	0	0
			665	424	124	115	2			
19	AA	82	Total	C	N	O	S	0	0	0
			644	410	119	113	2			

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

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

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	1F	25	Total	C	N	O	0	0	0
			217	134	52	31			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	1B	25	Total	C	N	O	0	0	0
			217	134	52	31			

- Molecule 22 is a RNA chain called tRNA-Tyr.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
22	2K	82	Total	C	N	O	P	S	0	0	0
			1765	795	315	571	82	2			
22	3K	85	Total	C	N	O	P	S	0	0	0
			1825	822	323	593	85	2			
22	2L	78	Total	C	N	O	P	S	0	0	0
			1678	756	297	545	78	2			
22	3L	85	Total	C	N	O	P	S	0	0	0
			1825	822	323	593	85	2			

- Molecule 23 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	4K	11	Total	C	N	O	P	0	0	0
			239	108	50	70	11			
23	4L	6	Total	C	N	O	P	0	0	0
			129	58	25	40	6			

- Molecule 24 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	1H	2912	Total	C	N	O	P	0	1	0
			62729	27921	11727	20169	2912			
24	14	2909	Total	C	N	O	P	0	1	0
			62669	27894	11721	20145	2909			

There are 6 discrepancies between the modelled and reference sequences:

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

- Molecule 25 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	16	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			
25	1J	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			

- Molecule 26 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	71	135	Total	C	N	O	S	0	0	0
			1049	662	197	189	1			
26	79	135	Total	C	N	O	S	0	0	0
			1049	662	197	189	1			

- Molecule 27 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	11	272	Total	C	N	O	S	0	0	0
			2115	1335	420	357	3			
27	19	273	Total	C	N	O	S	0	0	0
			2120	1338	421	358	3			

- Molecule 28 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	21	205	Total	C	N	O	S	0	0	0
			1568	991	300	271	6			
28	29	205	Total	C	N	O	S	0	0	0
			1568	991	300	271	6			

- Molecule 29 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	31	202	Total	C	N	O	S	0	0	0
			1585	1011	297	275	2			
29	39	208	Total	C	N	O	S	0	0	0
			1627	1037	304	283	3			

- Molecule 30 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	41	181	Total	C	N	O	S	0	0	0
			1473	942	268	259	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	49	181	Total	C	N	O	S	0	0	0
			1473	942	268	259	4			

- Molecule 31 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	51	174	Total	C	N	O	S	0	0	0
			1336	848	251	236	1			
31	59	171	Total	C	N	O	S	0	0	0
			1312	832	246	233	1			

- Molecule 32 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	61	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			
32	69	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			

- Molecule 33 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	58	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			
33	15	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

- Molecule 34 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	68	122	Total	C	N	O	S	0	0	0
			932	588	171	169	4			
34	25	122	Total	C	N	O	S	0	0	0
			932	588	171	169	4			

- Molecule 35 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	78	150	Total	C	N	O	S	0	0	0
			1144	712	232	197	3			
35	35	150	Total	C	N	O	S	0	0	0
			1144	712	232	197	3			

- Molecule 36 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	88	141	Total	C	N	O	S	0	0	0
			1121	715	212	187	7			
36	45	141	Total	C	N	O	S	0	0	0
			1121	715	212	187	7			

- Molecule 37 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	98	118	Total	C	N	O	S	0	0	0
			967	604	203	159	1			
37	55	117	Total	C	N	O		0	0	0
			959	599	202	158				

- Molecule 38 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
38	A8	111	Total	C	N	O	0	0	0
			881	556	176	149			
38	65	111	Total	C	N	O	0	0	0
			881	556	176	149			

- Molecule 39 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	B8	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			
39	75	137	Total	C	N	O		0	0	0
			1131	704	232	195				

- Molecule 40 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	C8	117	Total	C	N	O	S	0	0	0
			963	610	202	150	1			
40	85	117	Total	C	N	O	S	0	0	0
			963	610	202	150	1			

- Molecule 41 is a protein called 50S ribosomal protein L21.



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	D8	101	Total	C	N	O	S	0	0	0
			778	501	142	134	1			
41	95	101	Total	C	N	O	S	0	0	0
			778	501	142	134	1			

- Molecule 42 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	E8	113	Total	C	N	O	S	0	0	0
			899	566	177	154	2			
42	A5	113	Total	C	N	O	S	0	0	0
			899	566	177	154	2			

- Molecule 43 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	F8	94	Total	C	N	O		0	0	0
			738	480	133	125				
43	B5	93	Total	C	N	O		0	0	0
			730	474	132	124				

- Molecule 44 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	G8	104	Total	C	N	O	S	0	0	0
			791	510	149	127	5			
44	C5	104	Total	C	N	O	S	0	0	0
			794	510	152	127	5			

- Molecule 45 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	H8	175	Total	C	N	O	S	0	0	0
			1397	892	251	251	3			
45	D5	179	Total	C	N	O	S	0	0	0
			1428	911	255	259	3			

- Molecule 46 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	I8	83	Total	C	N	O	S	0	0	0
			639	395	135	108	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	E5	77	Total	C	N	O	S	0	0	0
			612	379	129	103	1			

- Molecule 47 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	J8	97	Total	C	N	O	S	0	0	0
			762	481	150	130	1			
47	F5	97	Total	C	N	O	S	0	0	0
			762	481	150	130	1			

- Molecule 48 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	K8	66	Total	C	N	O	S	0	0	0
			558	346	113	98	1			
48	G5	69	Total	C	N	O	S	0	0	0
			580	358	118	103	1			

- Molecule 49 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	L8	59	Total	C	N	O	0	0	0
			468	298	90	80			
49	H5	59	Total	C	N	O	0	0	0
			468	298	90	80			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	M8	66	Total	C	N	O	S	0	0	0
			533	335	96	97	5			
50	I5	63	Total	C	N	O	S	0	0	0
			515	326	93	91	5			

- Molecule 51 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	N8	59	Total	C	N	O	S	0	0	0
			458	288	90	75	5			
51	J5	59	Total	C	N	O	S	0	0	0
			458	288	90	75	5			

- Molecule 52 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	P8	47	Total	C	N	O	S	0	0	0
			409	251	102	54	2			
52	L5	49	Total	C	N	O	S	0	0	0
			429	263	108	56	2			

- Molecule 53 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	Q8	62	Total	C	N	O	S	0	0	0
			495	317	100	76	2			
53	M5	63	Total	C	N	O	S	0	0	0
			507	326	101	78	2			

- Molecule 54 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	1G	1504	Total	C	N	O	P	0	0	0
			32329	14390	5993	10443	1503			

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	45	1	Total	Mg	0	0
			1	1		
55	55	3	Total	Mg	0	0
			3	3		
55	32	1	Total	Mg	0	0
			1	1		
55	C5	1	Total	Mg	0	0
			1	1		
55	13	129	Total	Mg	0	0
			129	129		
55	1J	11	Total	Mg	0	0
			11	11		
55	16	12	Total	Mg	0	0
			12	12		
55	42	1	Total	Mg	0	0
			1	1		
55	25	1	Total	Mg	0	0
			1	1		
55	M5	1	Total	Mg	0	0
			1	1		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	21	1	Total 1	Mg 1	0	0
55	2K	4	Total 4	Mg 4	0	0
55	Q8	1	Total 1	Mg 1	0	0
55	15	1	Total 1	Mg 1	0	0
55	3I	1	Total 1	Mg 1	0	0
55	I8	3	Total 3	Mg 3	0	0
55	5E	2	Total 2	Mg 2	0	0
55	29	5	Total 5	Mg 5	0	0
55	78	2	Total 2	Mg 2	0	0
55	J8	1	Total 1	Mg 1	0	0
55	39	1	Total 1	Mg 1	0	0
55	1G	147	Total 147	Mg 147	0	0
55	11	2	Total 2	Mg 2	0	0
55	1H	548	Total 548	Mg 548	0	0
55	F5	1	Total 1	Mg 1	0	0
55	E5	2	Total 2	Mg 2	0	0
55	88	2	Total 2	Mg 2	0	0
55	49	1	Total 1	Mg 1	0	0
55	14	489	Total 489	Mg 489	0	0
55	19	1	Total 1	Mg 1	0	0
55	3L	2	Total 2	Mg 2	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	2L	3	Total	Mg	0	0
			3	3		

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	32	1	Total	Zn	0	0
			1	1		
56	3E	1	Total	Zn	0	0
			1	1		
56	5I	1	Total	Zn	0	0
			1	1		
56	5A	1	Total	Zn	0	0
			1	1		
56	G8	1	Total	Zn	0	0
			1	1		
56	C5	1	Total	Zn	0	0
			1	1		

- Molecule 57 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	13	3	Total	O	0	0
			3	3		
57	13	6	Total	O	0	0
			6	6		
57	13	6	Total	O	0	0
			6	6		
57	13	6	Total	O	0	0
			6	6		
57	13	6	Total	O	0	0
			6	6		
57	13	6	Total	O	0	0
			6	6		
57	13	6	Total	O	0	0
			6	6		
57	13	6	Total	O	0	0
			6	6		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	5	Total O 5 5	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
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57	1H	6	Total O 6 6	0	0
57	1H	4	Total O 4 4	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	16	6	Total O 6 6	0	0
57	16	6	Total O 6 6	0	0
57	J8	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	2L	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	4	Total O 4 4	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	5	Total O 5 5	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	4	Total O 4 4	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	4	Total O 4 4	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0

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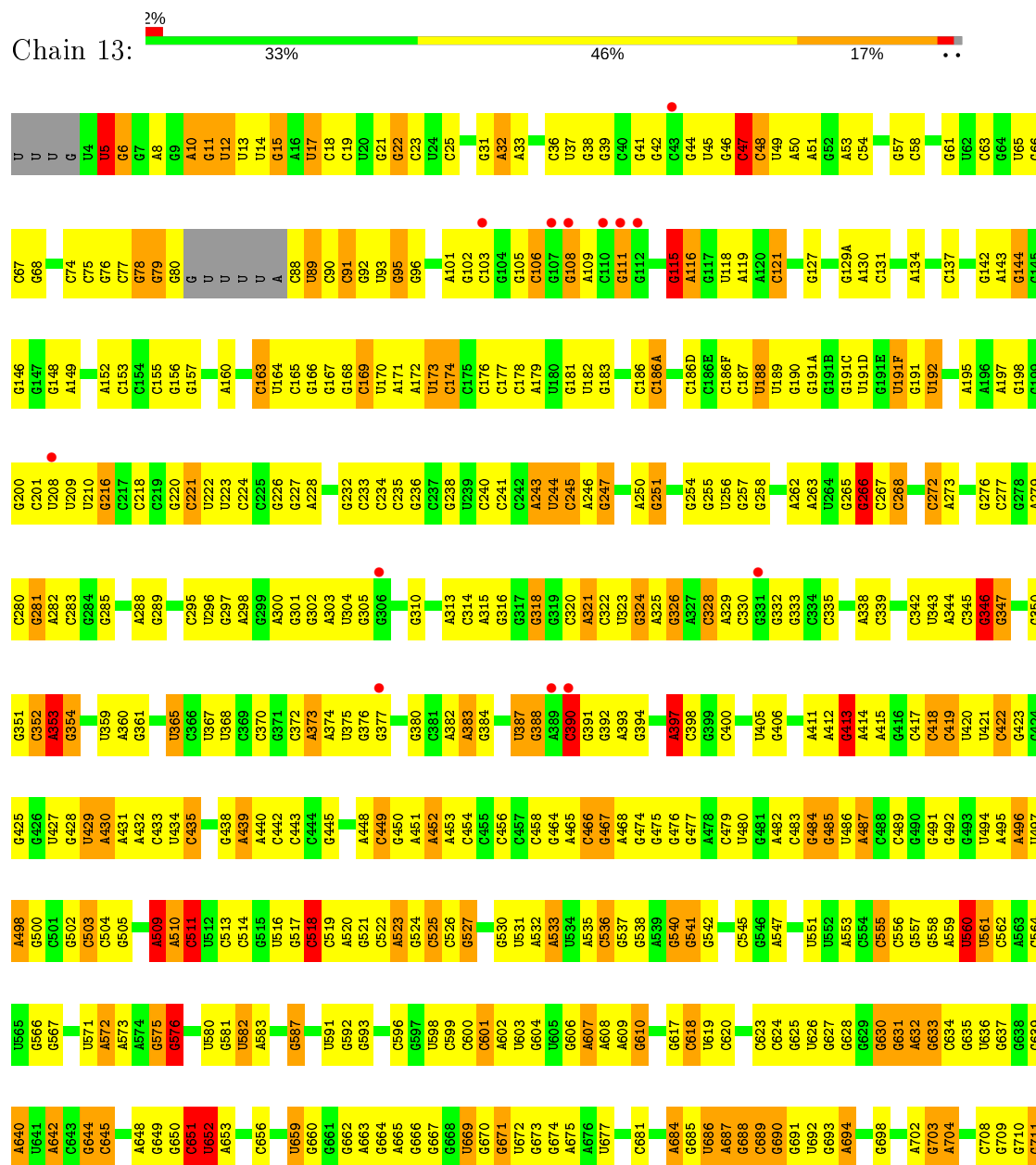
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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
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57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
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57	1J	6	Total O 6 6	0	0
57	1J	6	Total O 6 6	0	0
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57	E5	6	Total O 6 6	0	0

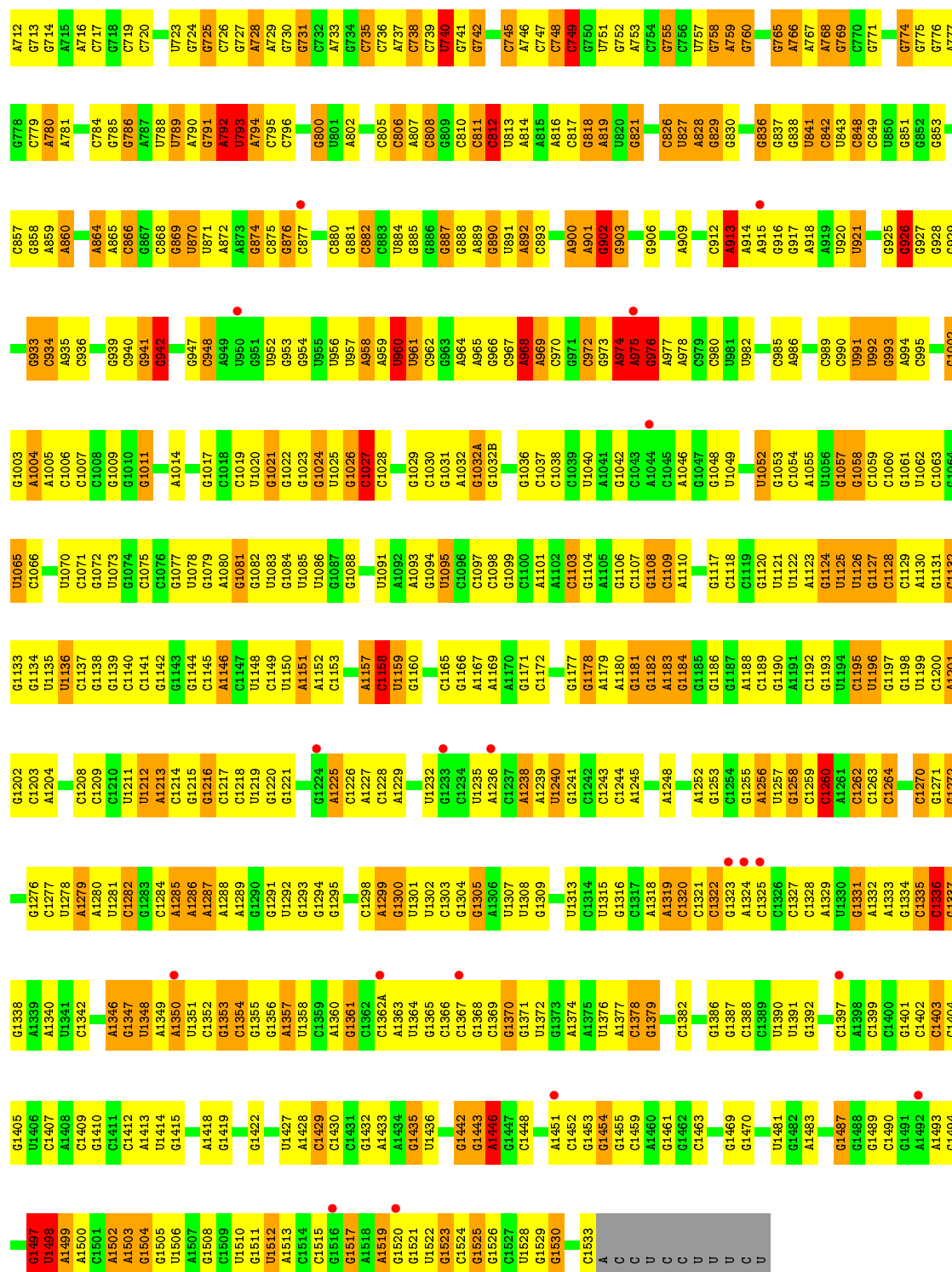
### 3 Residue-property plots

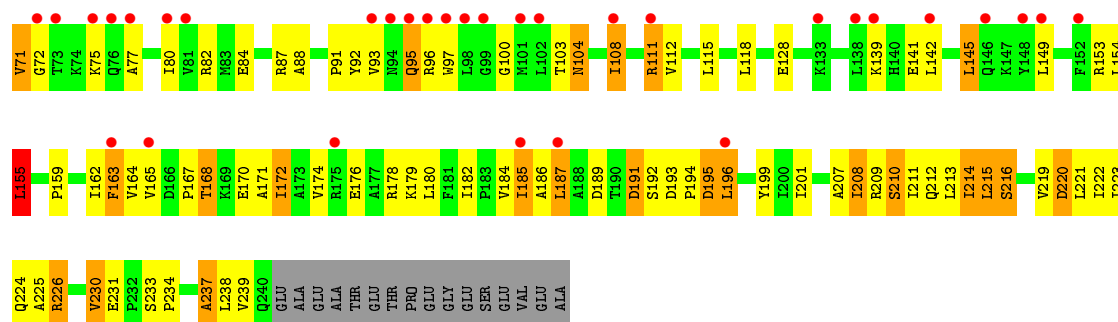
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are 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

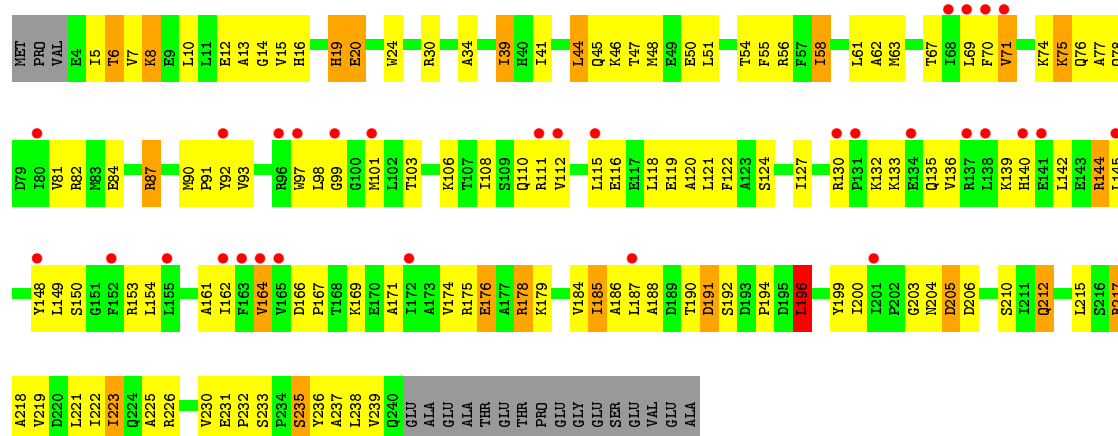




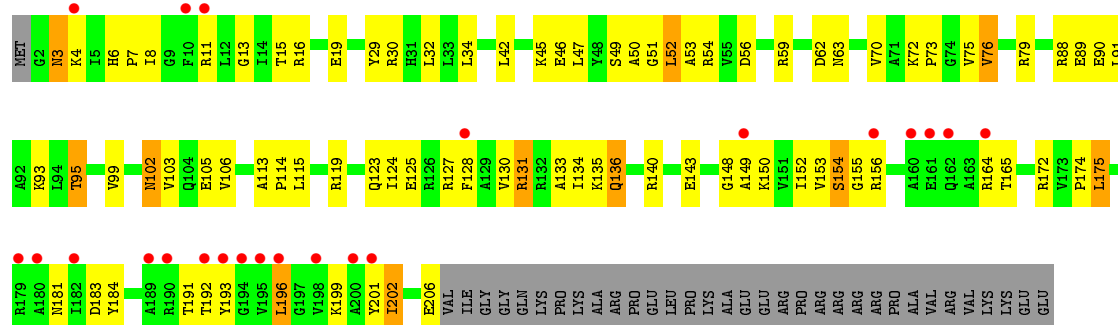




• Molecule 2: 30S ribosomal protein S2

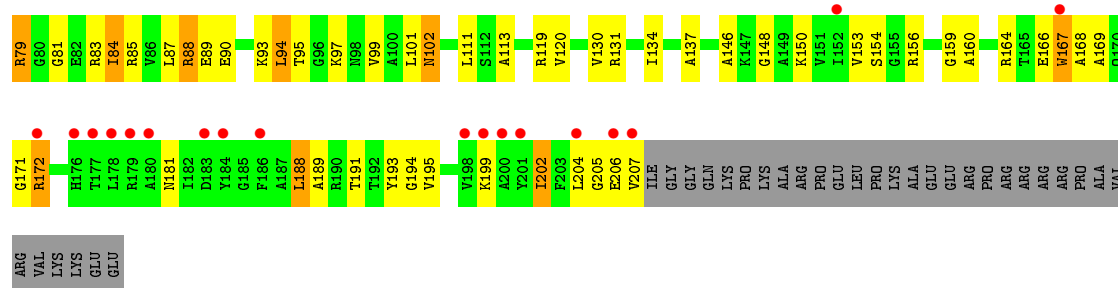


• Molecule 3: 30S ribosomal protein S3

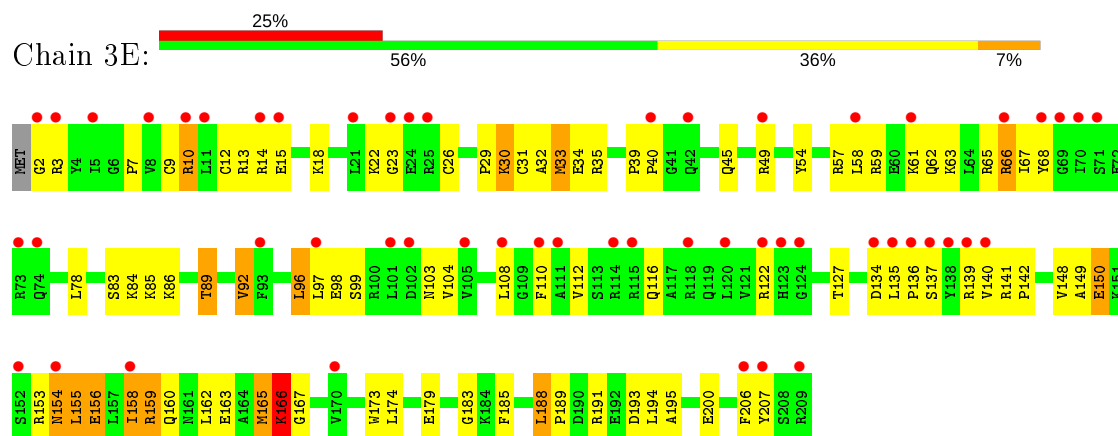


• Molecule 3: 30S ribosomal protein S3

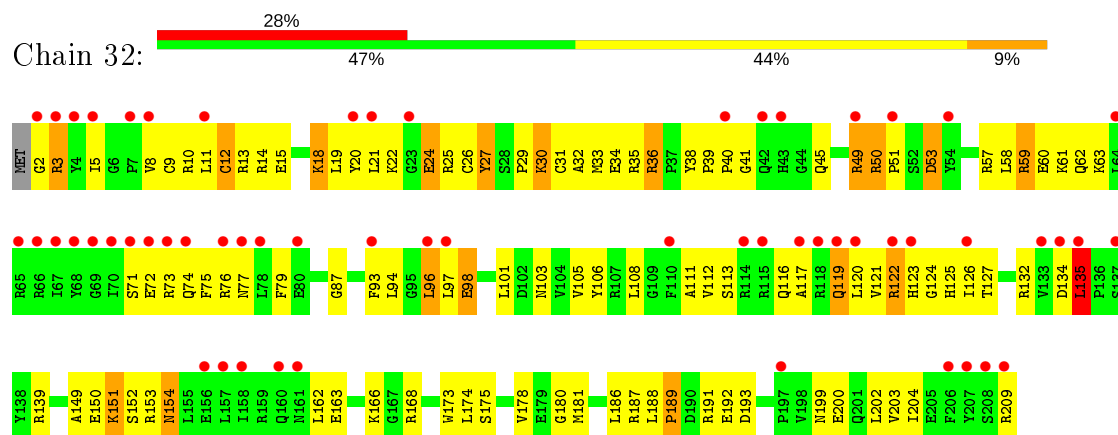




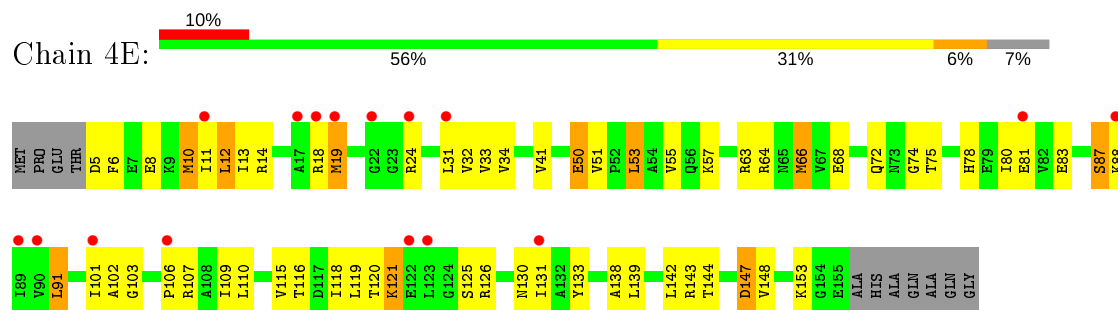
• Molecule 4: 30S ribosomal protein S4



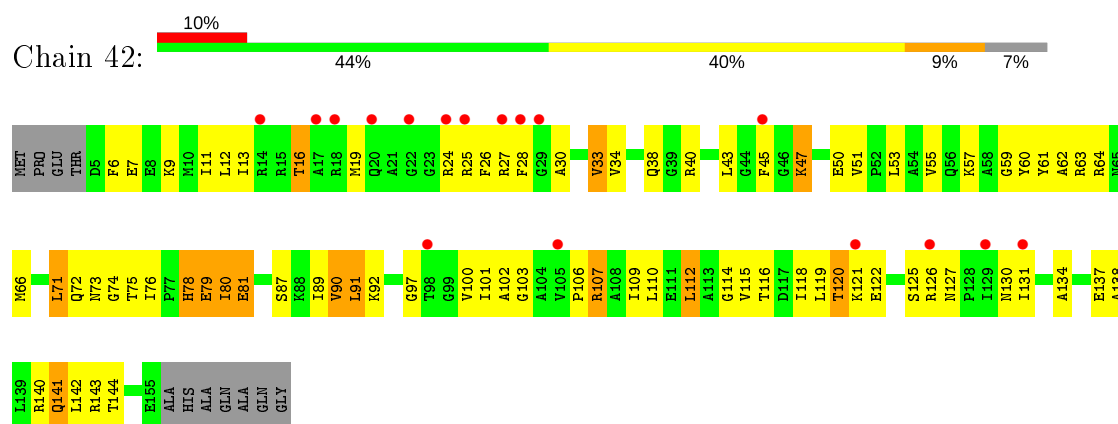
• Molecule 4: 30S ribosomal protein S4



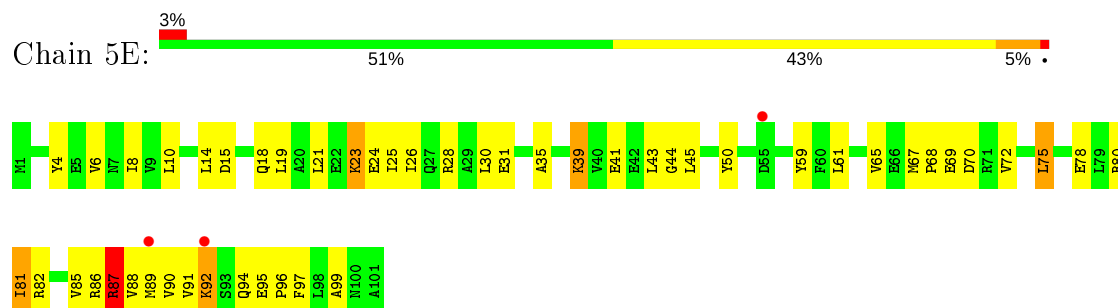
• Molecule 5: 30S ribosomal protein S5



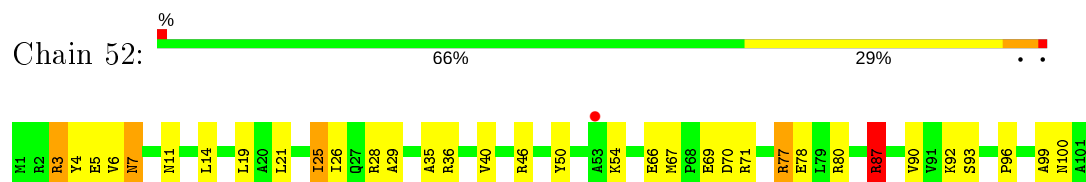
• Molecule 5: 30S ribosomal protein S5



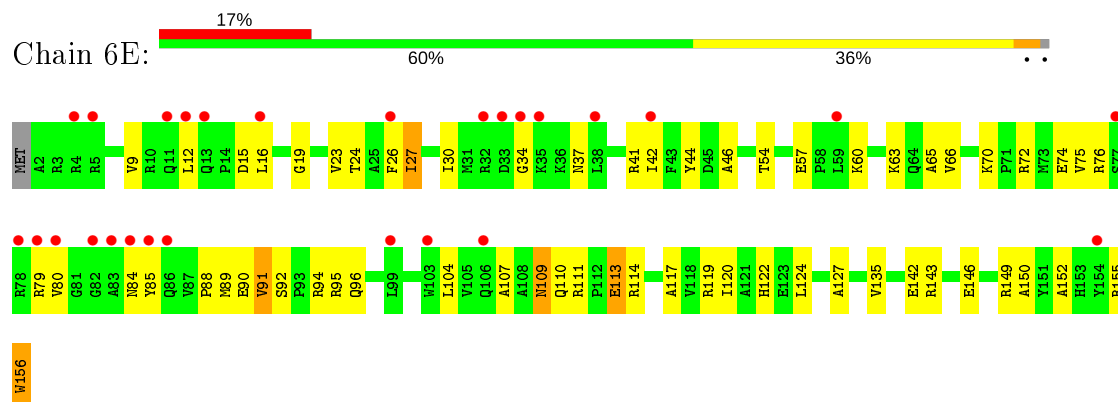
- Molecule 6: 30S ribosomal protein S6



- Molecule 6: 30S ribosomal protein S6

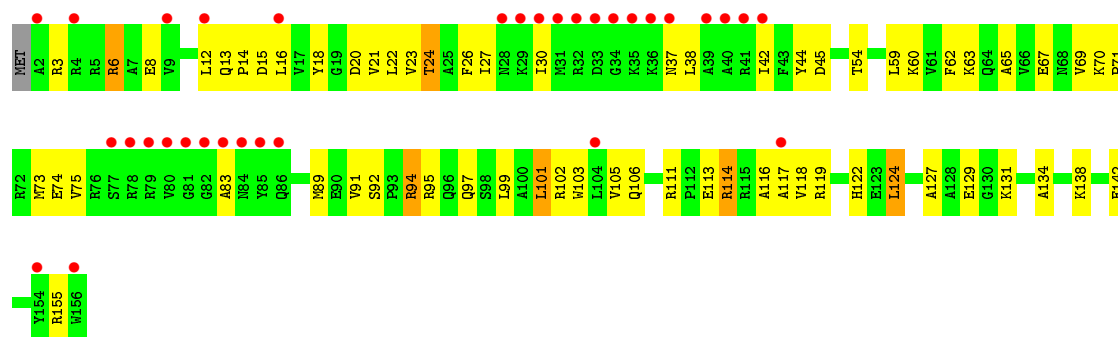


- Molecule 7: 30S ribosomal protein S7

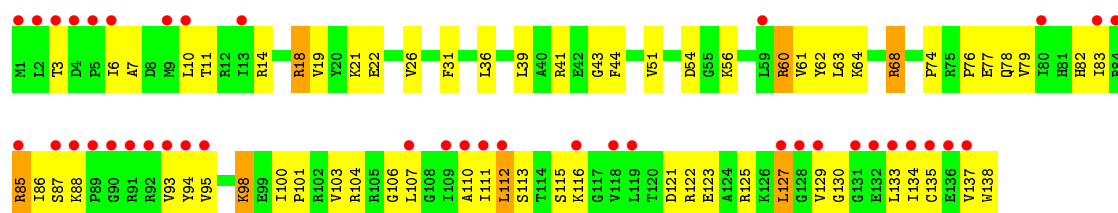


- Molecule 7: 30S ribosomal protein S7

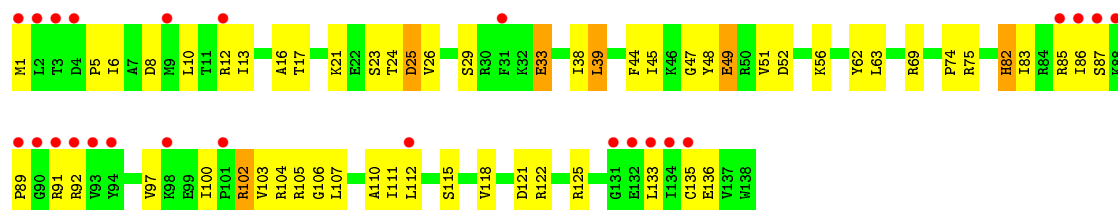




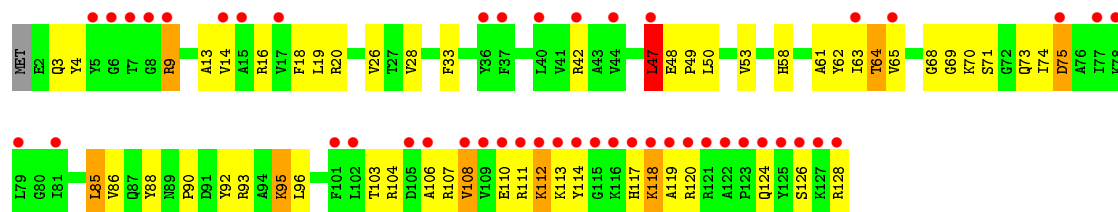
• Molecule 8: 30S ribosomal protein S8



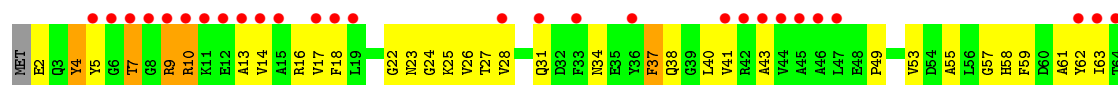
• Molecule 8: 30S ribosomal protein S8

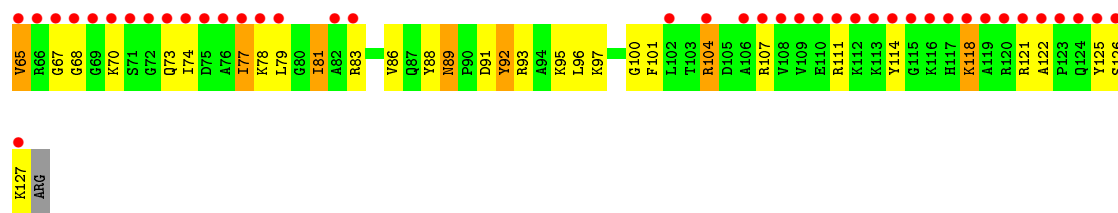


• Molecule 9: 30S ribosomal protein S9

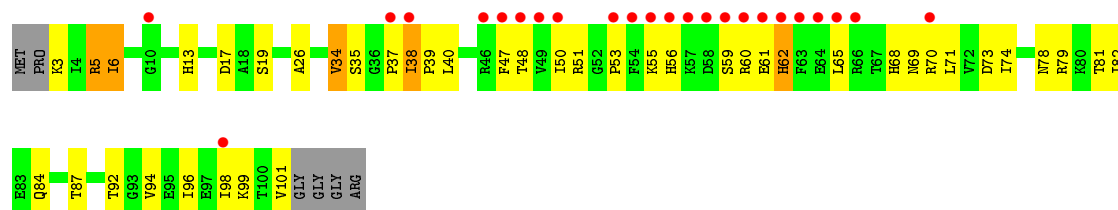


• Molecule 9: 30S ribosomal protein S9

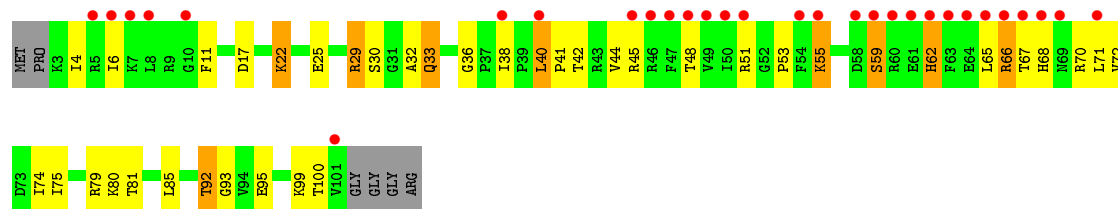




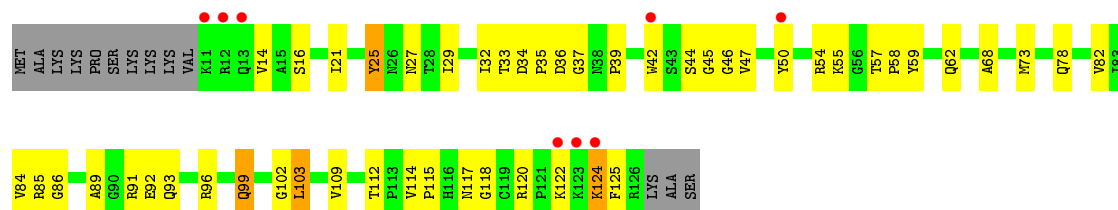
- Molecule 10: 30S ribosomal protein S10



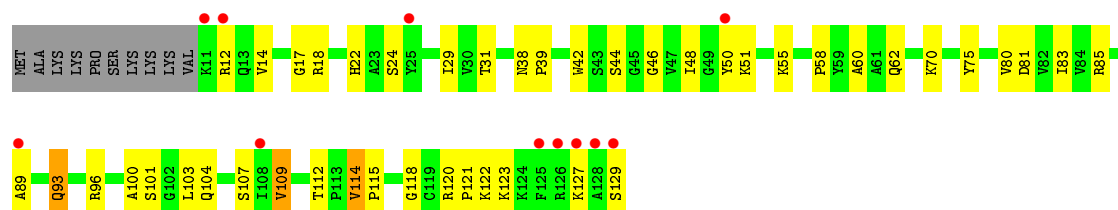
- Molecule 10: 30S ribosomal protein S10



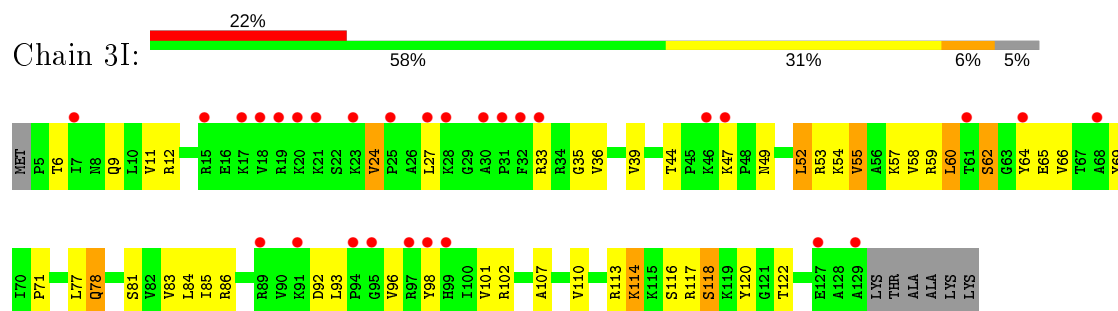
- Molecule 11: 30S ribosomal protein S11



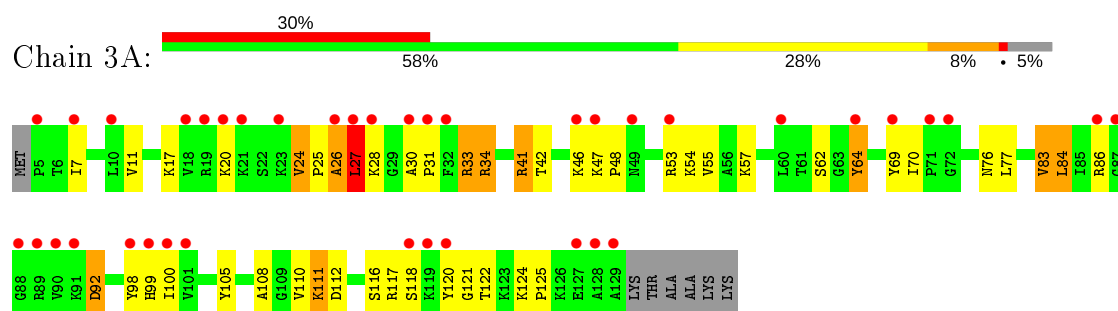
- Molecule 11: 30S ribosomal protein S11



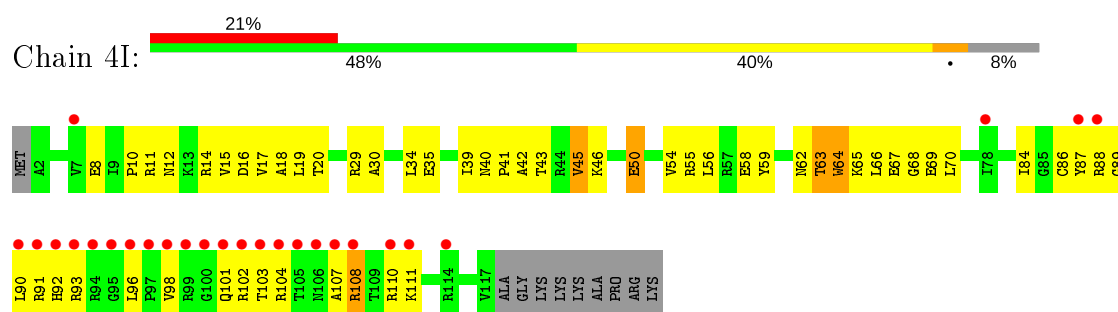
- Molecule 12: 30S ribosomal protein S12



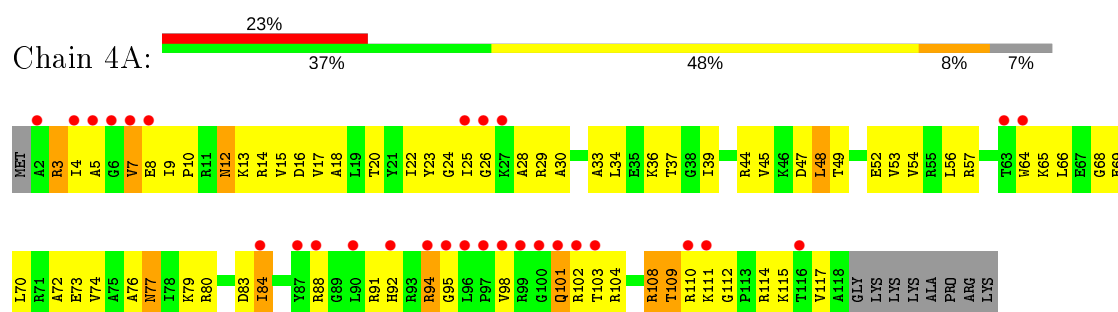
- Molecule 12: 30S ribosomal protein S12



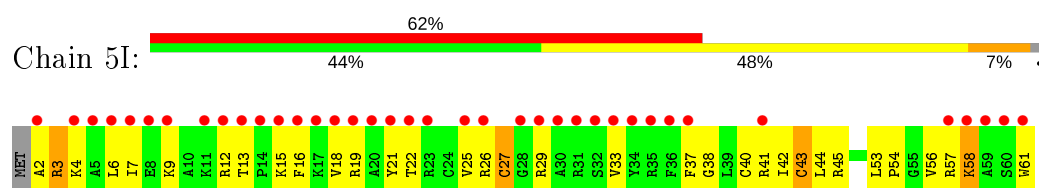
- Molecule 13: 30S ribosomal protein S13



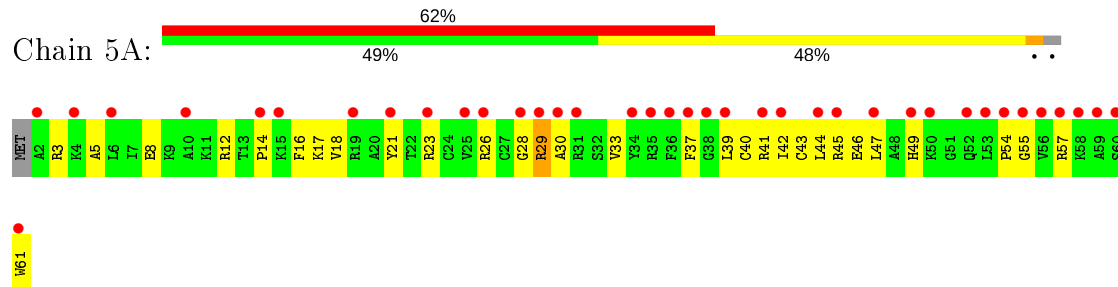
- Molecule 13: 30S ribosomal protein S13



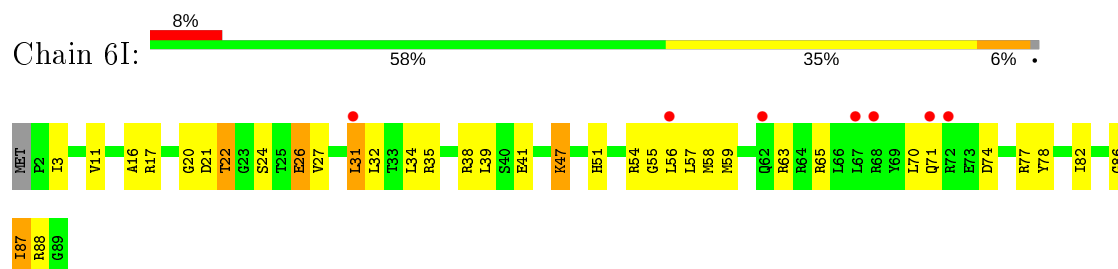
- Molecule 14: 30S ribosomal protein S14 type Z



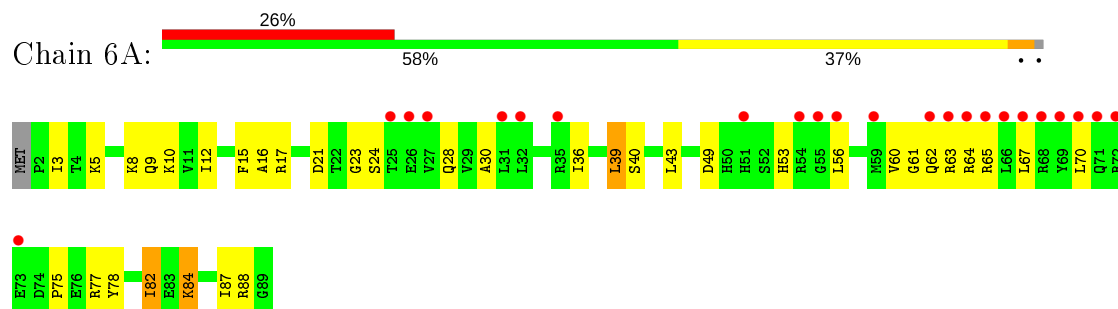
- Molecule 14: 30S ribosomal protein S14 type Z



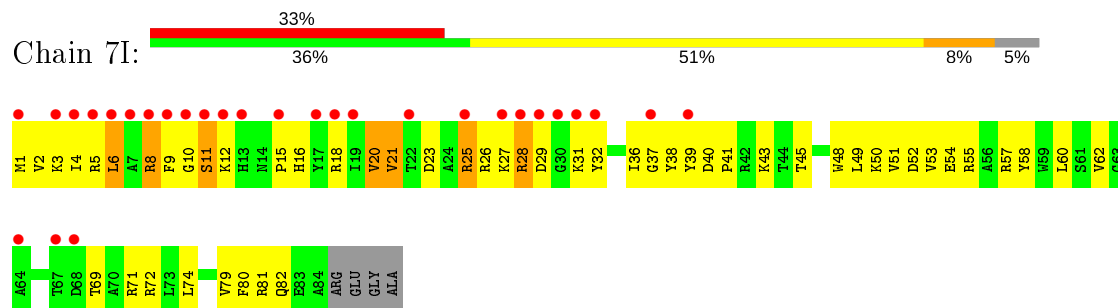
- Molecule 15: 30S ribosomal protein S15



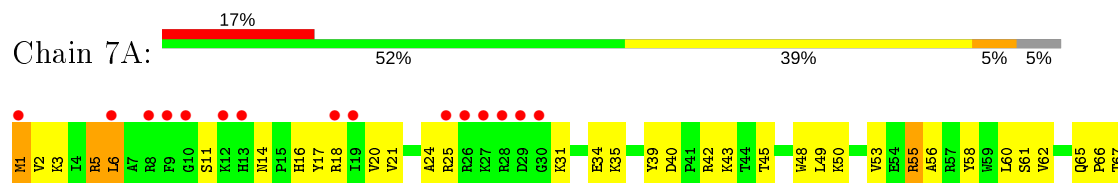
- Molecule 15: 30S ribosomal protein S15



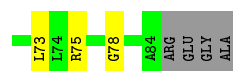
- Molecule 16: 30S ribosomal protein S16



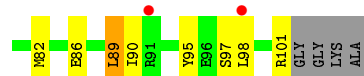
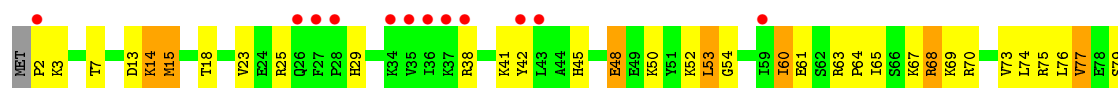
- Molecule 16: 30S ribosomal protein S16



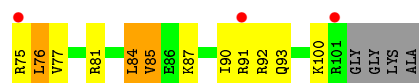
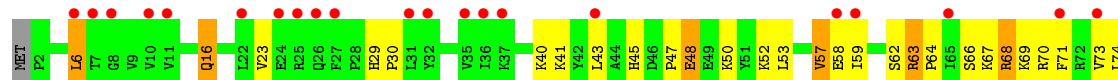




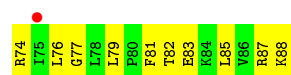
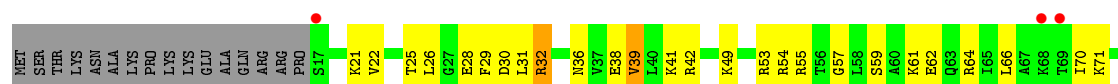
- Molecule 17: 30S ribosomal protein S17



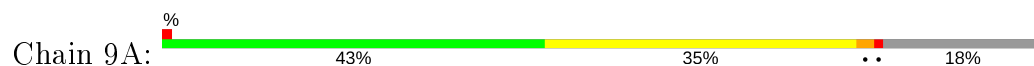
- Molecule 17: 30S ribosomal protein S17



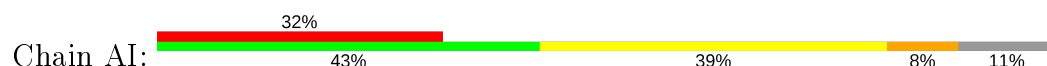
- Molecule 18: 30S ribosomal protein S18

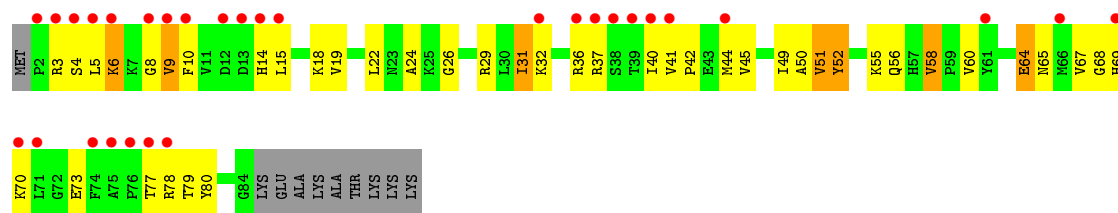


- Molecule 18: 30S ribosomal protein S18

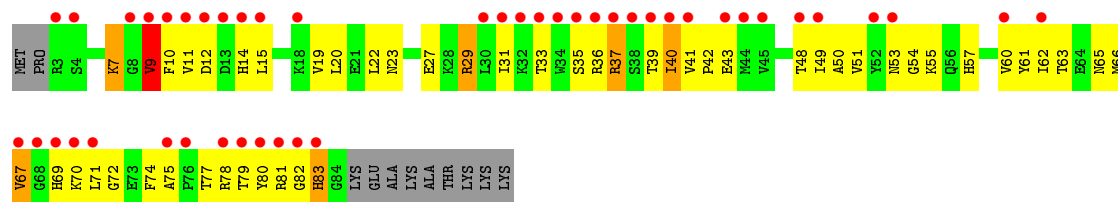


- Molecule 19: 30S ribosomal protein S19

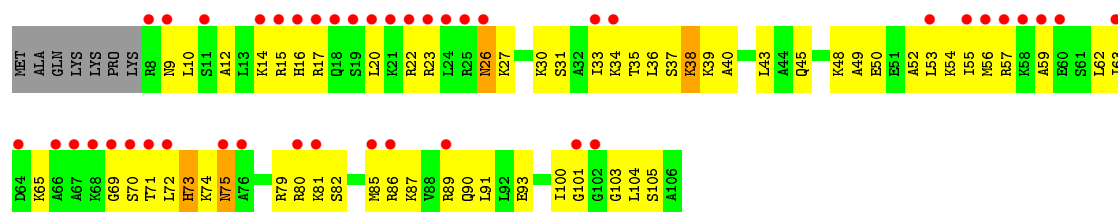




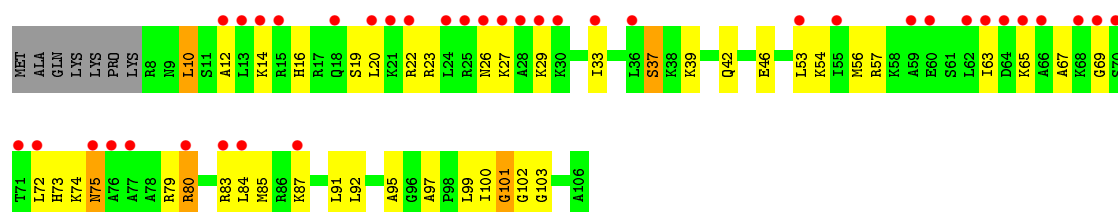
• Molecule 19: 30S ribosomal protein S19



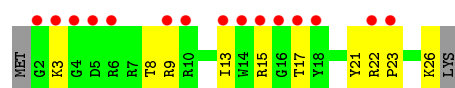
• Molecule 20: 30S ribosomal protein S20



• Molecule 20: 30S ribosomal protein S20



• Molecule 21: 30S ribosomal protein Thx

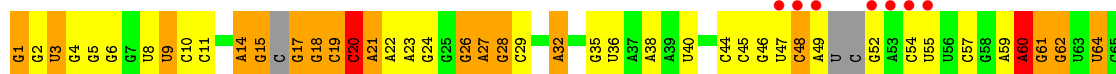


• Molecule 21: 30S ribosomal protein Thx

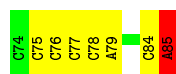




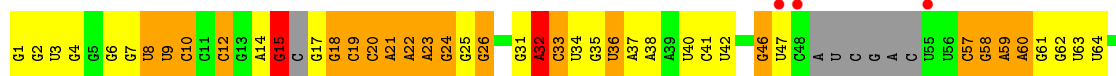
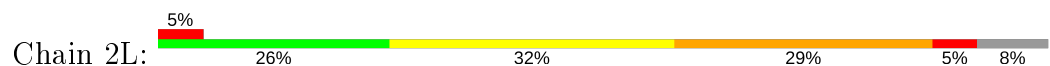
- Molecule 22: tRNA-Tyr



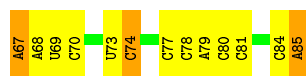
- Molecule 22: tRNA-Tyr



- Molecule 22: tRNA-Tyr

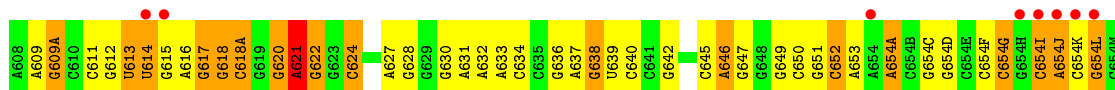


- Molecule 22: tRNA-Tyr



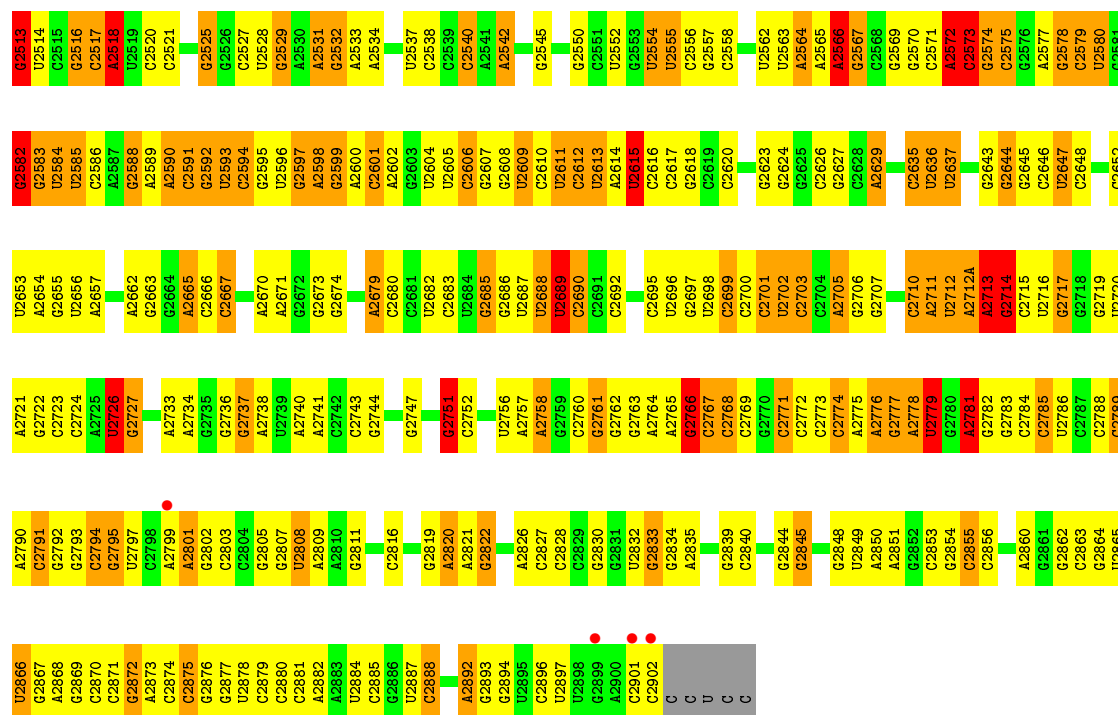
- Molecule 23: mRNA



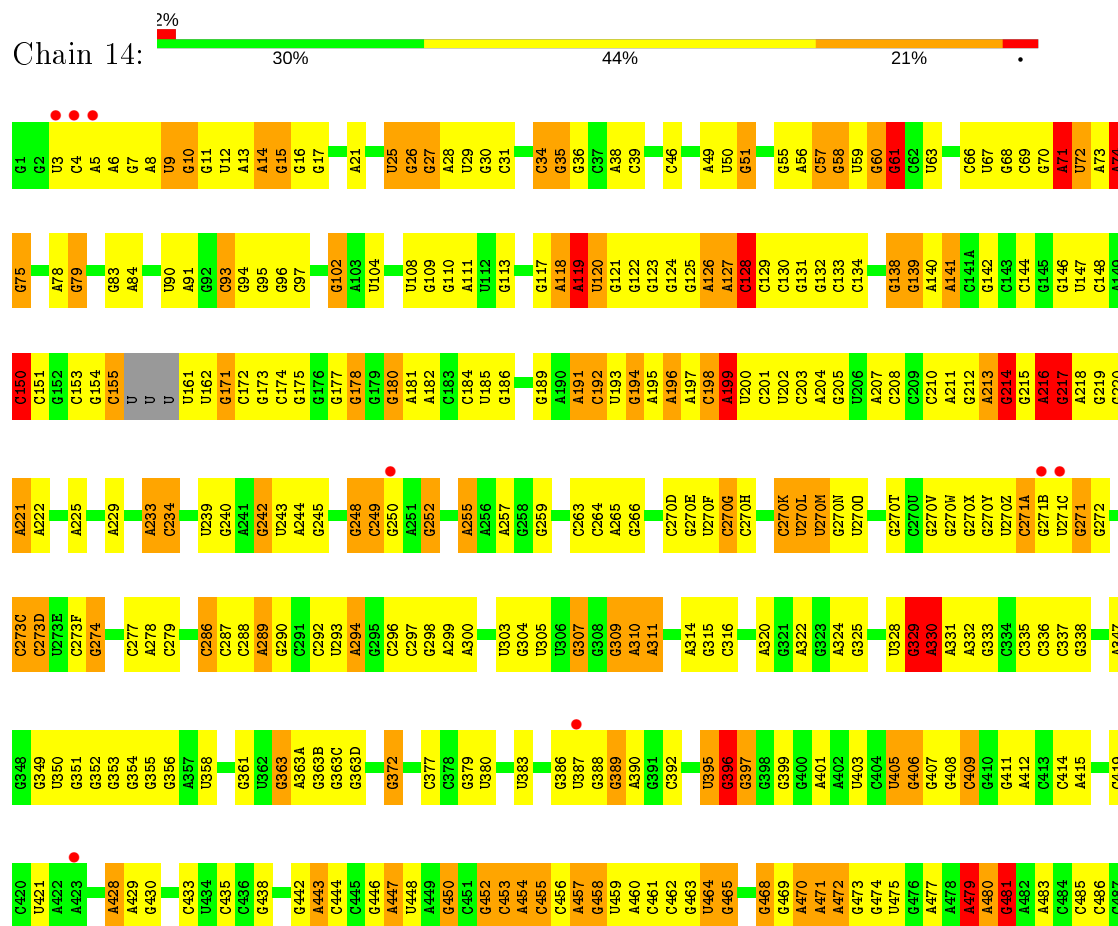


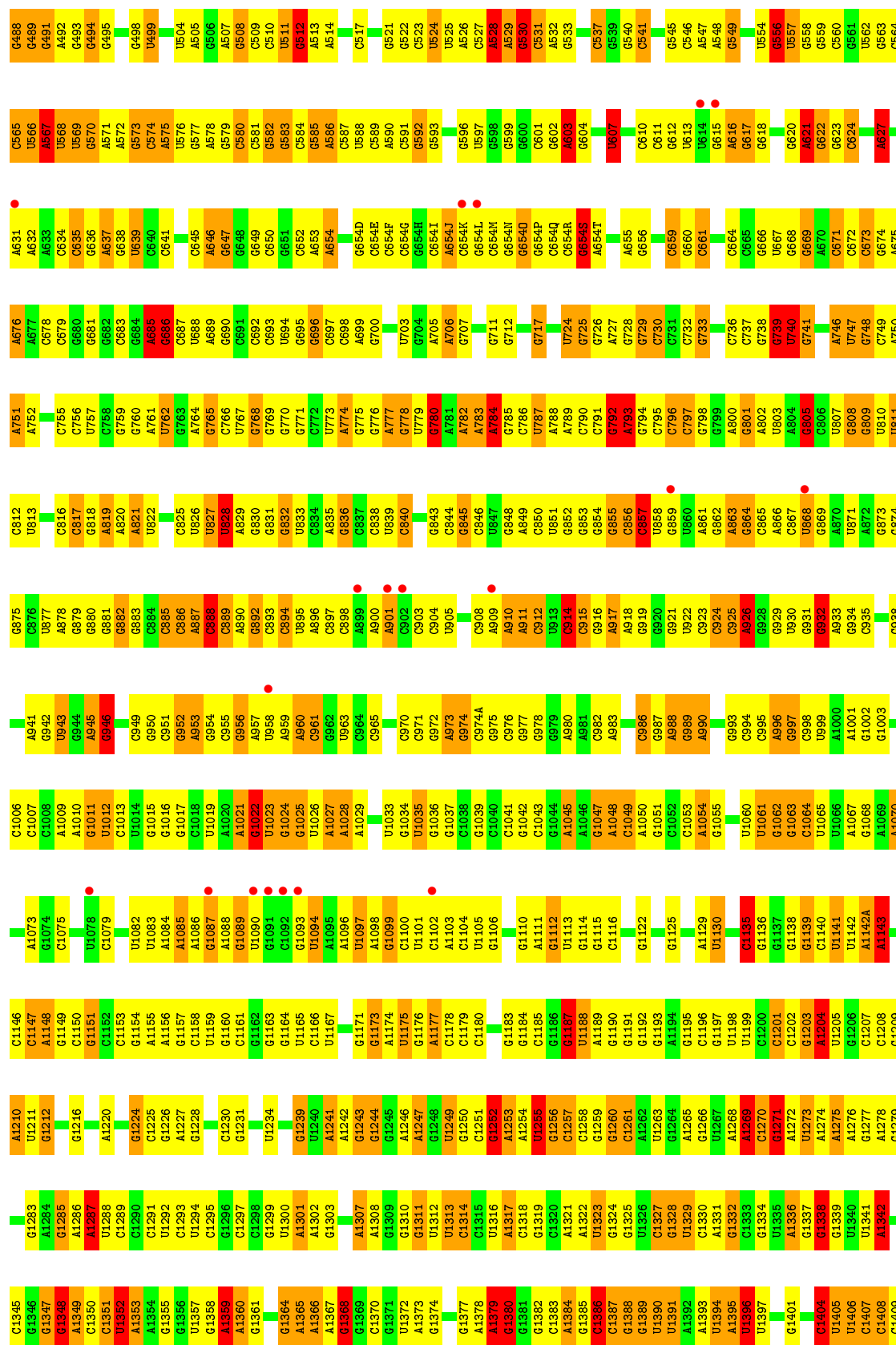
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A2439	A2439	G2379	C2306	G2246	U2172	C2108	G2038	U1820	C1906	G1756			
G2440	G2440	G2380	C2307	A2247	A2173	U2109	C2039	A1821	C1907				
C2441	C2441	C2381	G2308	G2248	C2174	G2110		G1824		A1760			
C2442	C2442	G2382	A2309	U2249	C2175	C2111	A2042	A1825	U1911	C1761			
C2443	C2443	G2383	U2249	G2250	A2176	U1976	C2043	A1826	A1912	G1762			
G2444	G2444	A2311	G2251	U2113	C2177	A1977	U2043	C1827	A1913	G1763			
G2445	G2445	C2312	G2252	A2114	C2178	A1978	G2046	G1828	C1914	G1764			
G2446	G2446	U2312	G2253	C2179	C2179	C1979	U2947	U1915	U1915	G1765			
G2447	G2447	C2313	G2254	U2180	C2179	G1980	U2947	A1916	A1916	U1766			
U2510	G2447	C2314	G2255	G2181	A2117	A1981	G2048	C1830	U1917	G1767			
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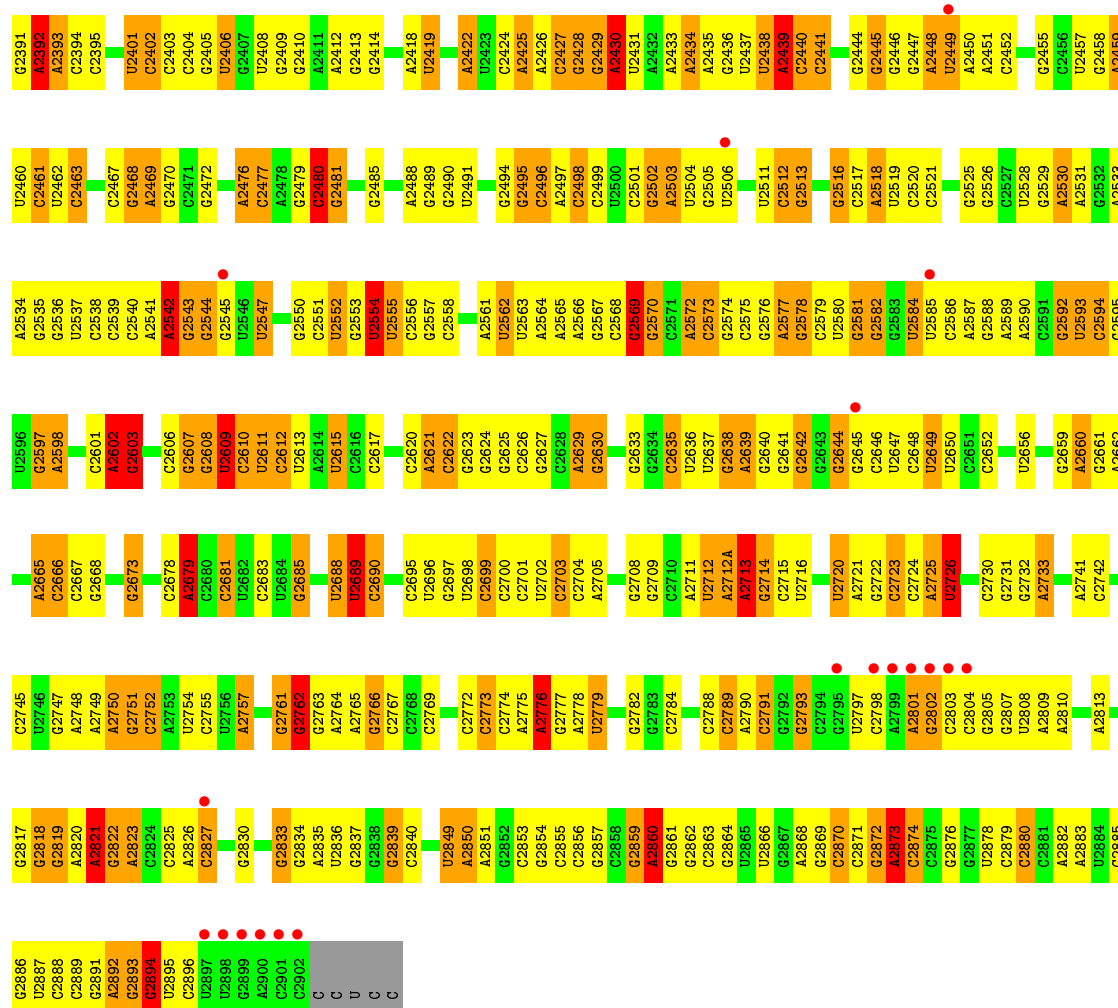
• Molecule 24: 23S ribosomal RNA



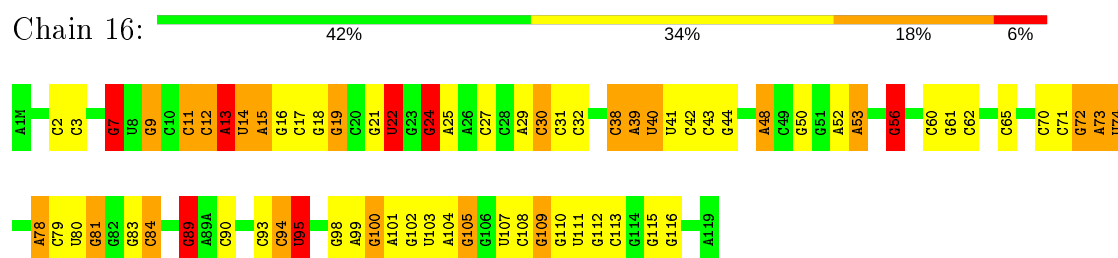




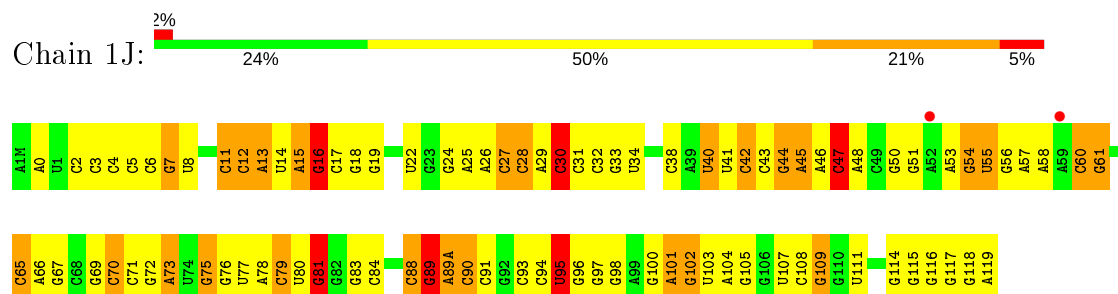
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G2329	G2191	G2055	G2125	G2056	G1983	U1916	G1831	G1765	G1673	G1612	A1544	A1477	G1417
G2330	G2192	G2056	A2126	G2056	G1984	U1917	C1832	U1766	G1674	G1613	A1545	G1478	G1418
G2331	A2267	A2057	G2127	A2057	G1985	C1920	U1834	G1767	A1676	A1614	A1546A	G1479	G1419
G2332	A2268	A2058	C2128	A2058	G1988	G1920	G1835	G1768	A1677	A1615	G1549	G1480	A1418
A2333	A2269	A2059	C2129	A2059	G1989	U1923	G1836	G1769	G1678	A1616	C1549	U1482	U1420
G2334	G2270	C2196	U2130	A2060	G1990	G1924	G1837	G1770	A1678	C1617	G1550	G1483	G1421
G2335	U2197	A2198	G2131	G2061	G1991	U1925	G1838	C1771	U1679	G1618	C1551	G1486	G1422
A2336	A2273	A2199	U2132	A2062	G1992	U1926	G1839	G1772	G1680	G1619	G1552	G1487	G1423
G2337	G2274	G2205	C2133	C2063	G1993	U1927	A1773	A1773	G1681	G1620	A1553	G1488	G1424
G2338	A2275	C2206	A2134	G2064	U1993	A1927	G1840	G1774	U1682	U1621	G1557	G1498	G1425
G2339	G2276	C2065	A2135	G2065	G1994	U1928	U1841	U1775	G1682	U1622	G1558	A1499	G1426
G2340	G2277	U2208	C2136	C2066	G1997	G1929	G1842	G1776	C1686	G1623	A1559	A1490	A1427
G2341	A2278	C2209	C2137	U2067	G1998	U1930	G1845	U1777	G1687	G1624	G1560	G1491	C1428
C2342	G2210	G2210	C2138	G2068	G1999	U1931	G1846	U1778	U1688	C1625	G1561	G1492	G1429
C2343	G2211	G2211	C2142	G2069	G2000	G1932	G1847	U1779	A1689	G1626	G1564	G1493	C1430
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C2347	C2285	U2074	C2146	U2074	C2008	A1938	G1851	U1783	G1695	G1630A	A1567	U1497	A1434
C2350	A2286	G2078	G2147	G2078	U2011	U1940	A1853	A1785	G1696	A1631	G1568	G1500	G1436
G2351	G2224	U2079	G2148	U2079	A2014	G1945	G1854	A1786	G1697	A1632	A1569	C1501	C1437
A2352	A2287	G2080	U2150	G2080	A2015	U1946	G1855	A1787	A1698	G1633	A1570	C1502	U1438
G2353	C2288	C2081	G2151	C2081	U2016	U1947	G1856	C1788	G1699	A1634	A1571	U1503	A1439
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C2355	G2229	G2083	C2156	G2083	U2018	G1949	G1858	C1789	A1701	C1636	G1576	C1505	G1441
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U2357	G2231	G2085	C2158	G2087	A2020	U1951	C1870	U1794	G1707	U1638	C1577	A1507	G1443
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C2362	G2237	G2094	G2163	G2094	G2024	U1956	A1884	G1801	G1725	G1645	A1586	C1513	A1449
C2363	G2238	C2095	G2164	C2095	G2027	G1959	A1885	A1802	G1728	C1646	A1587	U1514	G1450
G2364	C2239	U2096	U2172	U2096	U2028	A1960	A1886	G1806	U1729	U1647	C1588	C1515	C1451
G2365	G2240	C2097	G2173	C2097	G2029	C1961	G1896	C1807	U1730	G1648	C1589	G1516	A1453
A2366	A2241	U2098	A2174	U2098	A2030	G1962	A1889	C1807	G1731	G1649	U1590	C1518	U1454
A2369	U2244	G2100	A2175	G2100	A2031	U1963	A1890	G1807	A1732	G1651	G1592	U1519	G1455
G2370	G2245	G2101	C2171	G2101	A2033	U1964	G1891	A1810	G1732	A1652	G1593	U1520	G1458
G2373	A2246	U2102	U2172	U2102	U2034	C1965	A1899	G1811	C1742	G1653	G1594	G1521	G1459
C2374	A2247	C2103	A2173	C2103	G2035	U1966	A1895	A1812	G1743	A1654	G1595	G1522	A1460
A2375	G2248	G2104	C2174	G2104	G2036	C1967	G1899	G1813	G1746	A1655	A1596	G1525	G1461
A2376	U2249	G2104	C2175	G2104	C2037	G1968	A1900	G1814	G1750	C1656	A1597	G1526	C1462
A2377	G2250	G2038	C2176	G2038	G2038	A1969	A1901	A1815	C1751	U1658	C1598	G1527	C1463
A2378	G2251	U2109	C2177	U2109	C2039	A1970	G1902	G1816	G1752	U1659	C1600	A1528	C1464
G2381	G2252	G2110	C2178	G2110	C2040	A1971	G1903	U1820	C1753	G1660	G1601	G1529	G1465
C2382	G2253	G2111	C2179	G2111	U2041	A1972	G1906	G1817	G1754	C1661	U1602	G1534	G1466
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G2384	G2255	C2043	C2043	C2043	G2044	C1974	G1907	G1823	G1756	G1663	G1604	A1536	A1469
C2385	U2257	G2115	C2044	G2115	G2044	G1975	G1907	G1824	U1757	G1664	G1605	G1537	G1470
C2386	G2258	G2116	G2049	G2116	G2049	U1976	G1910	G1825	G1758	A1665	G1606	G1538	A1471
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A2388	G2260	C2185	C2051	U2118	A2051	A1978	G1911	C1827	A1762	G1667	A1609	G1473	C1474
G2389	C2261	G2186	G2187	U2118	C2187	A1979	A1913	G1828					
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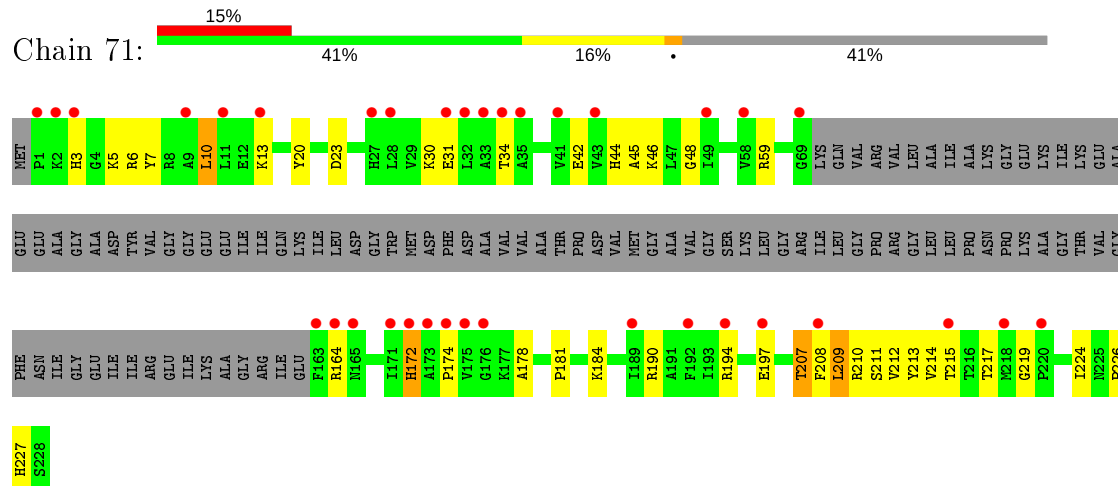
• Molecule 25: 5S ribosomal RNA



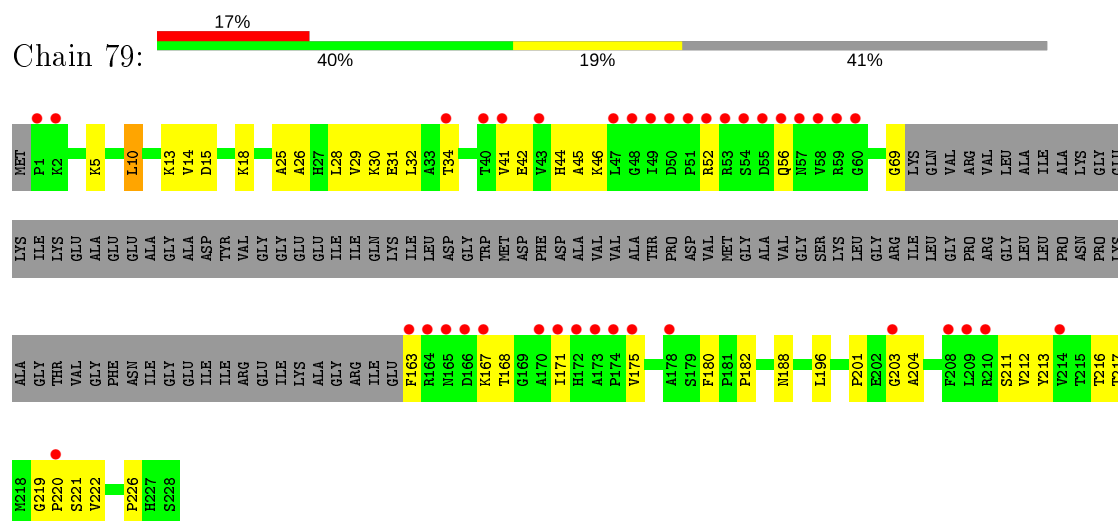
• Molecule 25: 5S ribosomal RNA



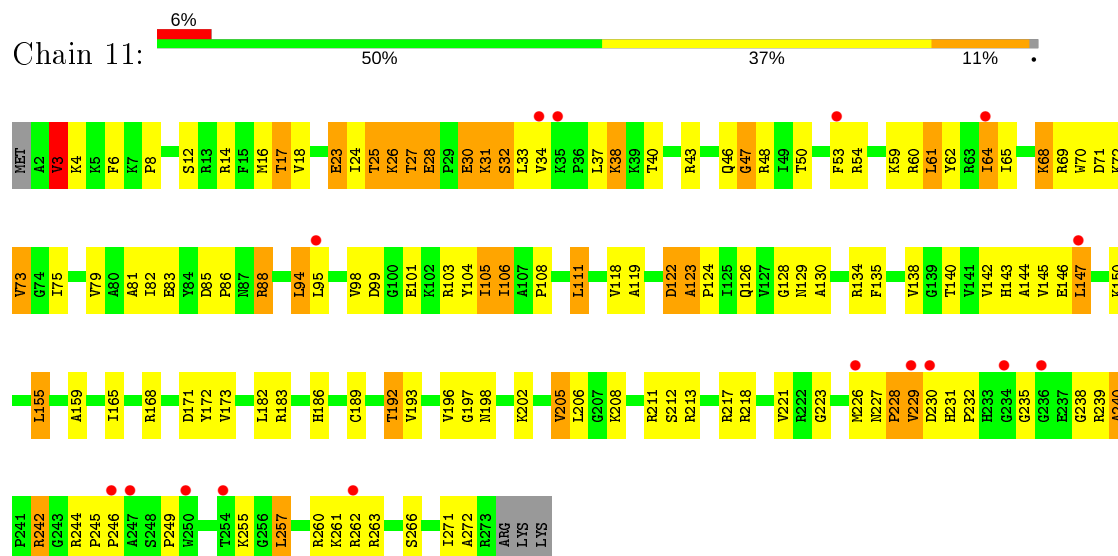
- Molecule 26: 50S ribosomal protein L1



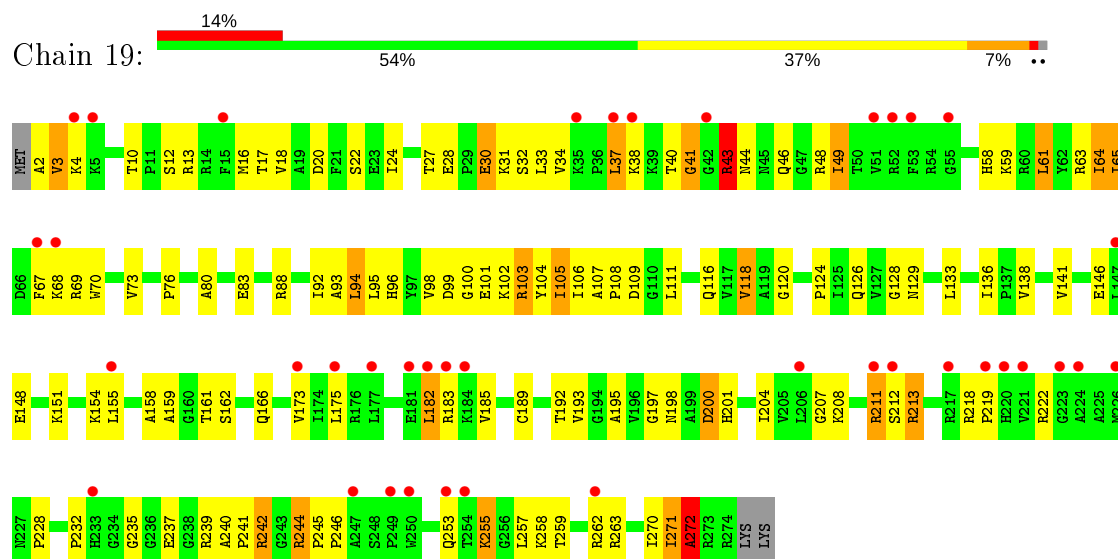
- Molecule 26: 50S ribosomal protein L1



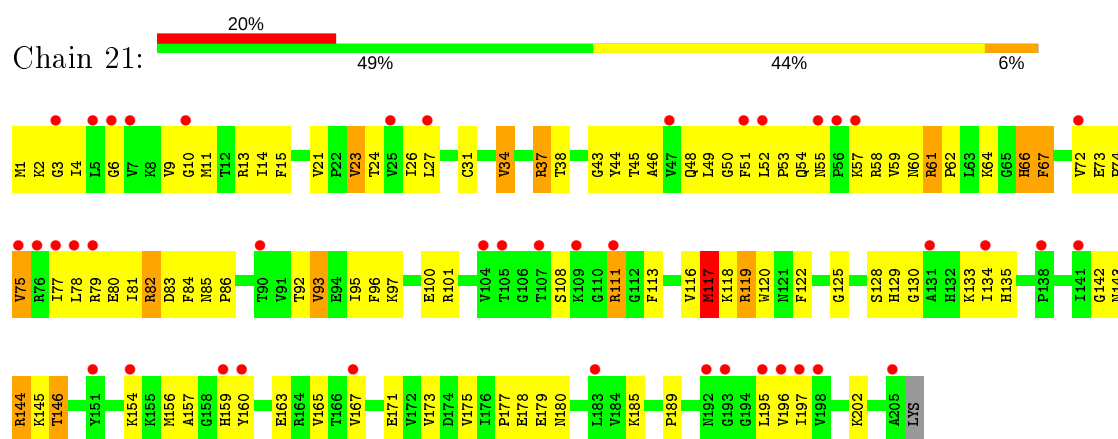
- Molecule 27: 50S ribosomal protein L2



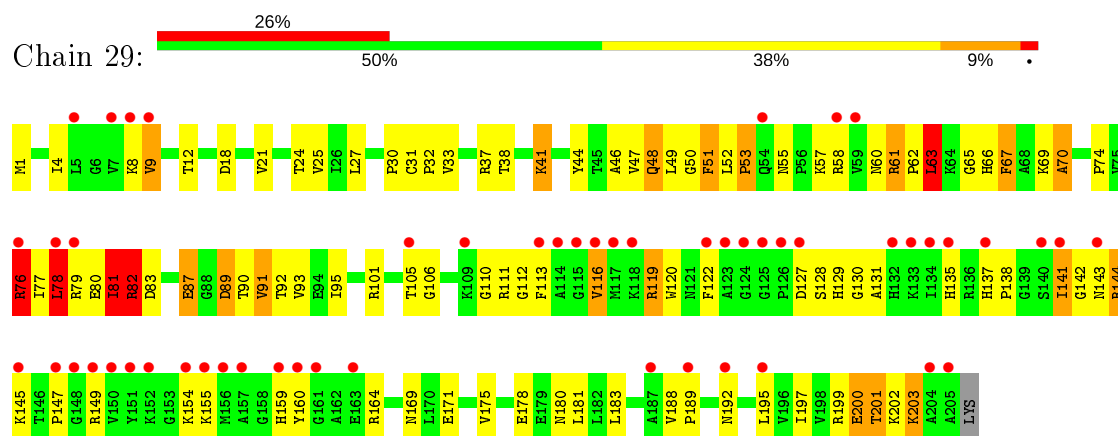
- Molecule 27: 50S ribosomal protein L2



- Molecule 28: 50S ribosomal protein L3

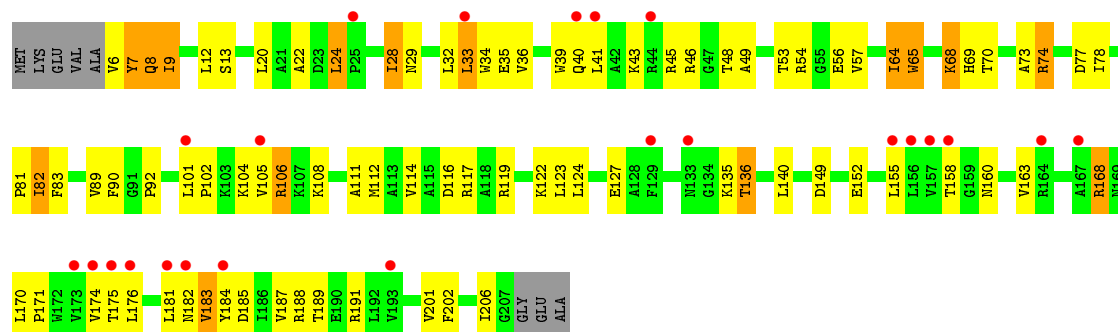


- Molecule 28: 50S ribosomal protein L3

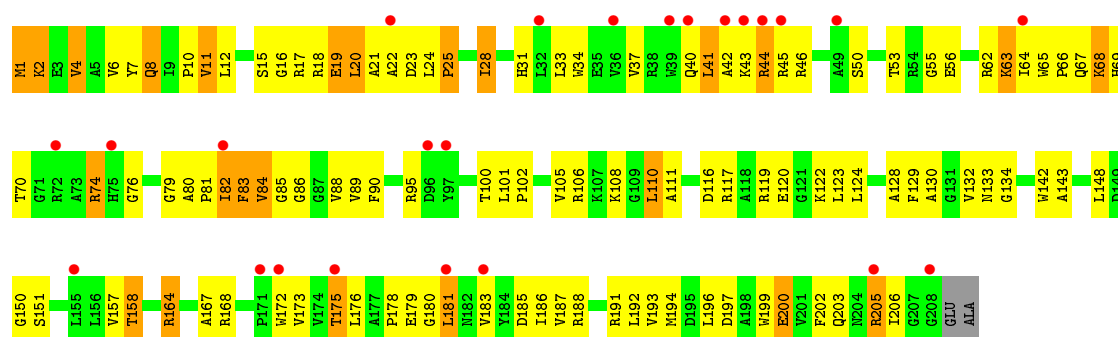
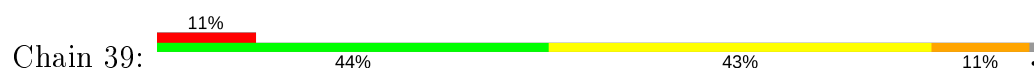


- Molecule 29: 50S ribosomal protein L4

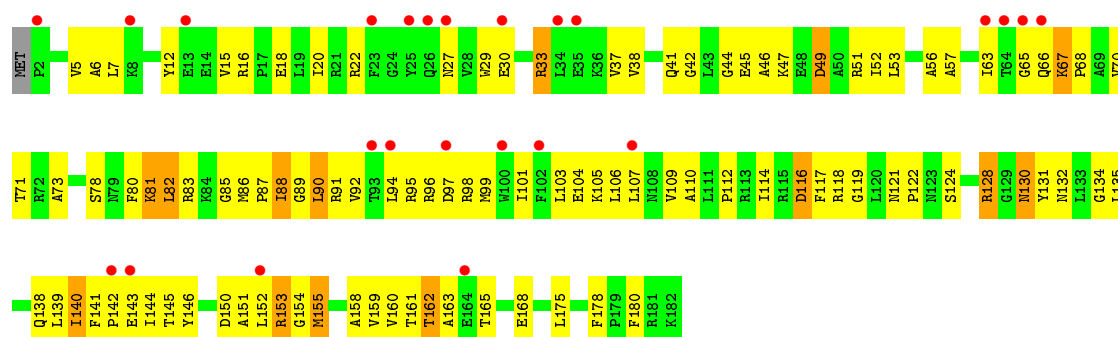




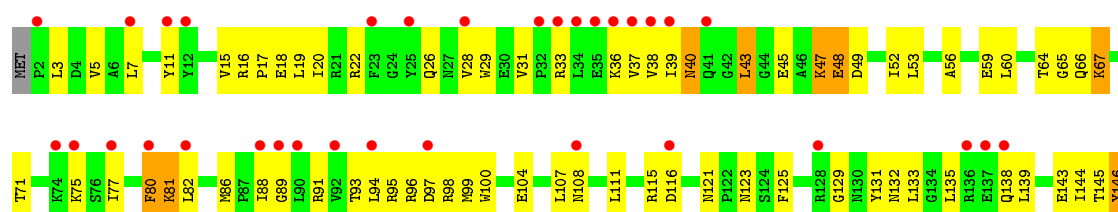
• Molecule 29: 50S ribosomal protein L4

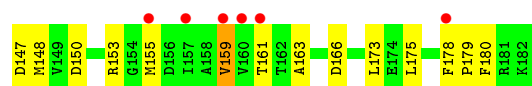


• Molecule 30: 50S ribosomal protein L5

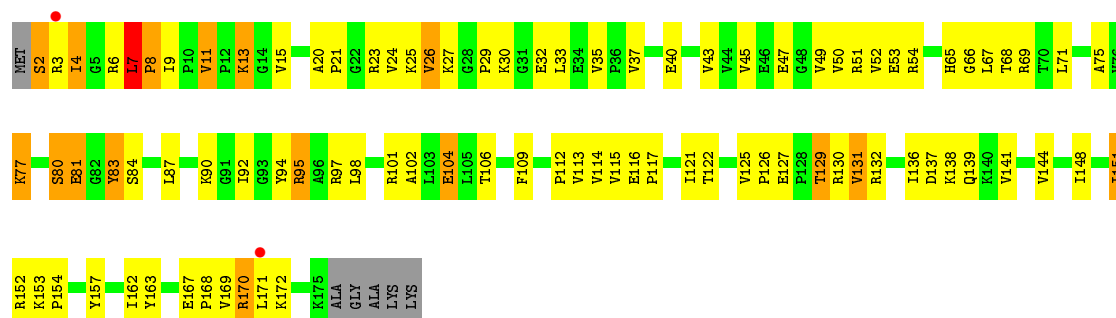


• Molecule 30: 50S ribosomal protein L5

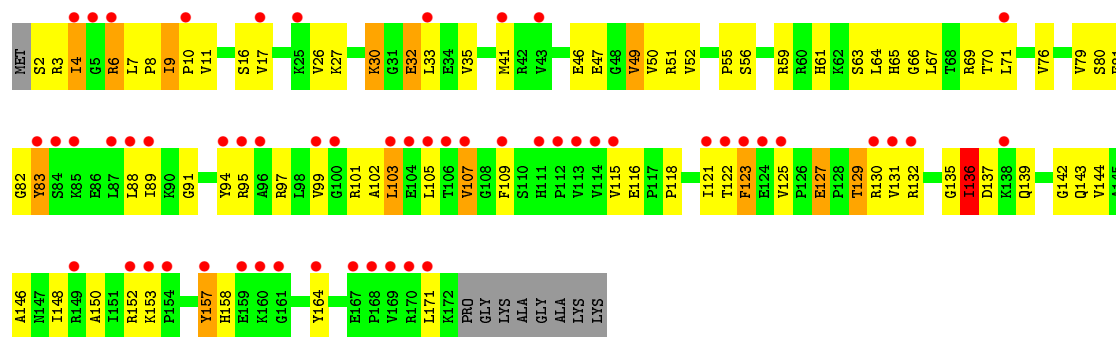




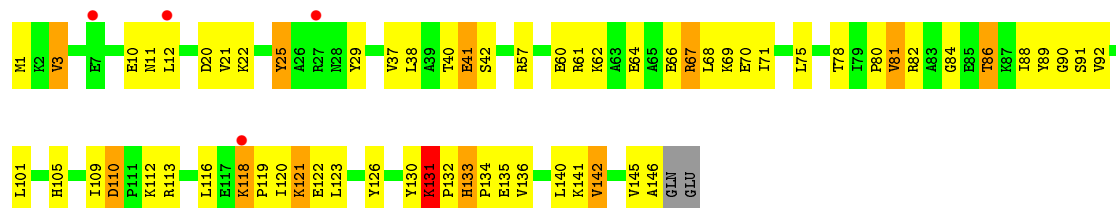
- Molecule 31: 50S ribosomal protein L6



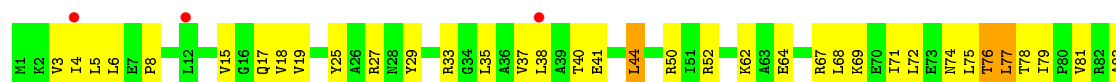
- Molecule 31: 50S ribosomal protein L6



- Molecule 32: 50S ribosomal protein L9

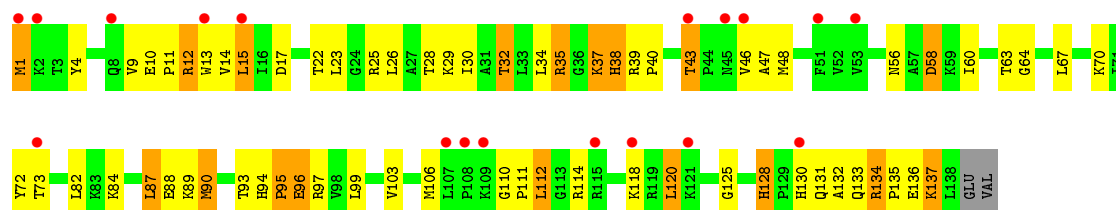


- Molecule 32: 50S ribosomal protein L9

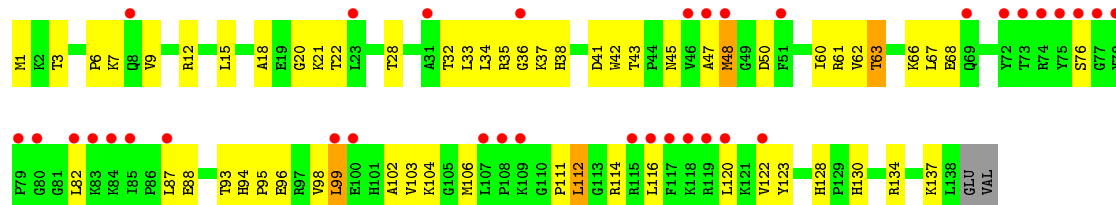




• Molecule 33: 50S ribosomal protein L13



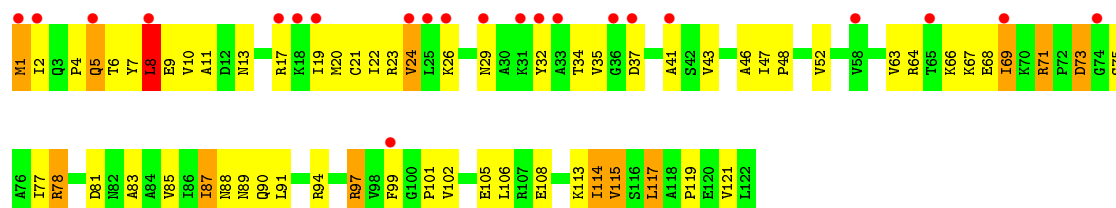
• Molecule 33: 50S ribosomal protein L13



• Molecule 34: 50S ribosomal protein L14

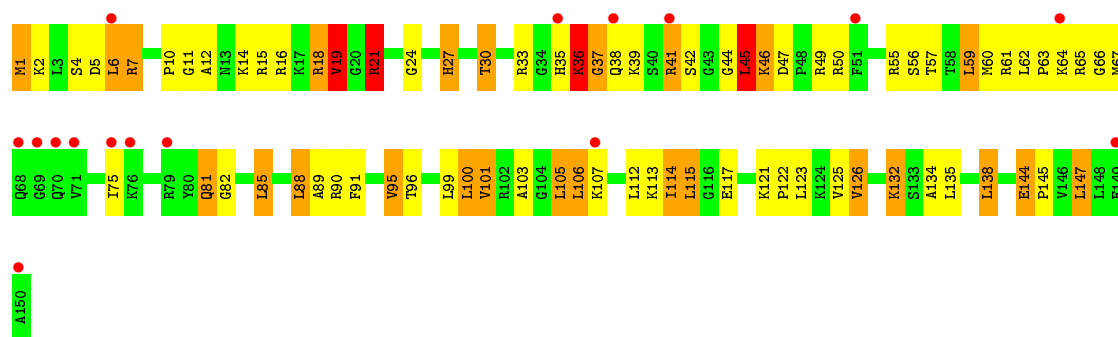


• Molecule 34: 50S ribosomal protein L14

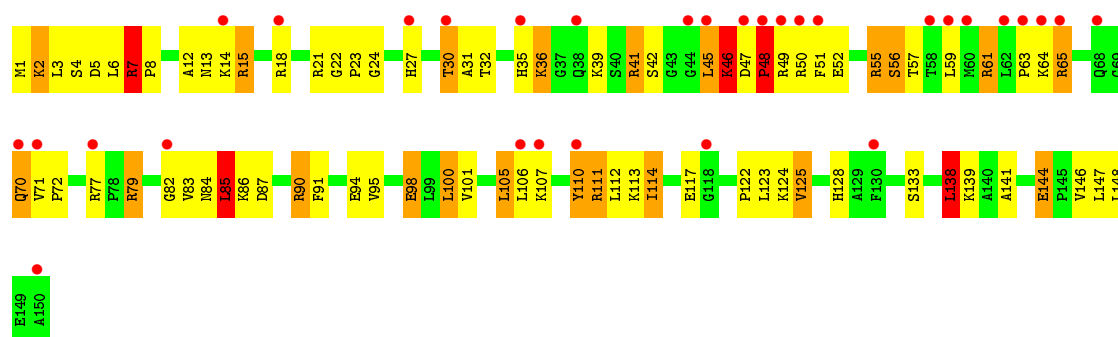


• Molecule 35: 50S ribosomal protein L15

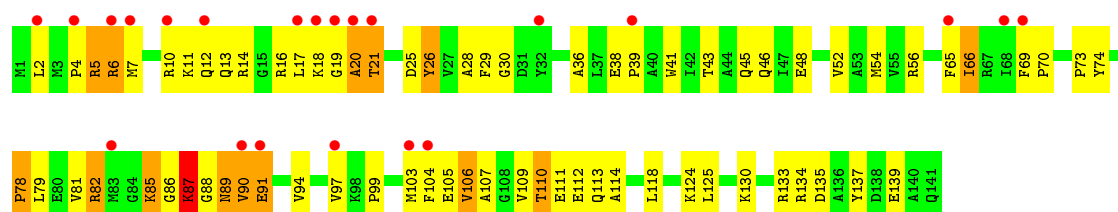




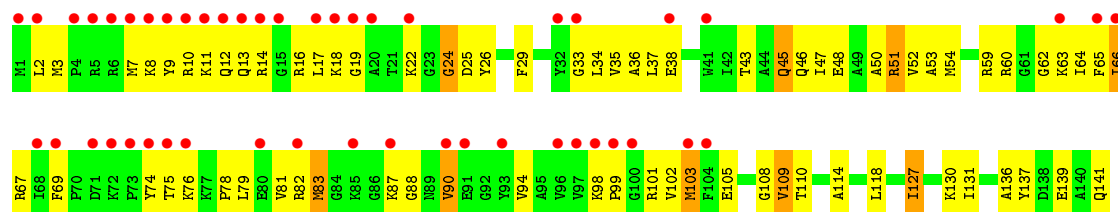
• Molecule 35: 50S ribosomal protein L15



• Molecule 36: 50S ribosomal protein L16



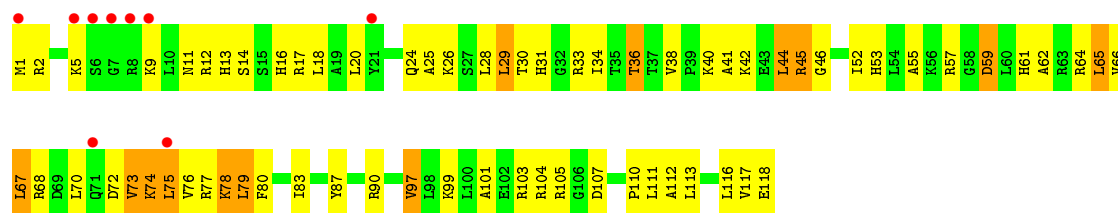
• Molecule 36: 50S ribosomal protein L16



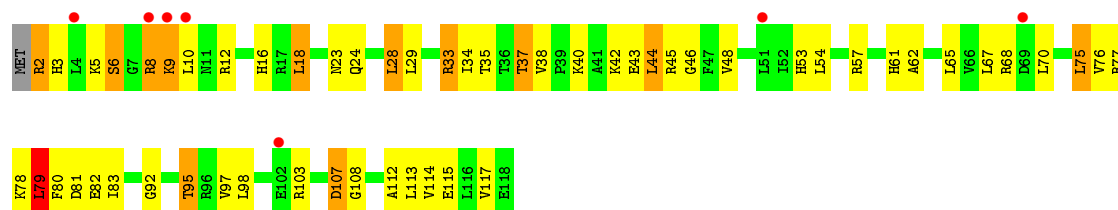
• Molecule 37: 50S ribosomal protein L17



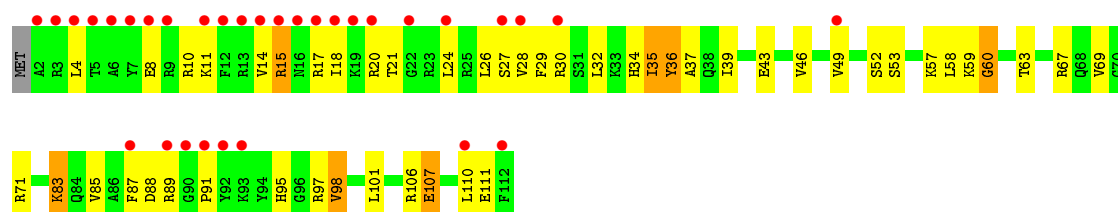




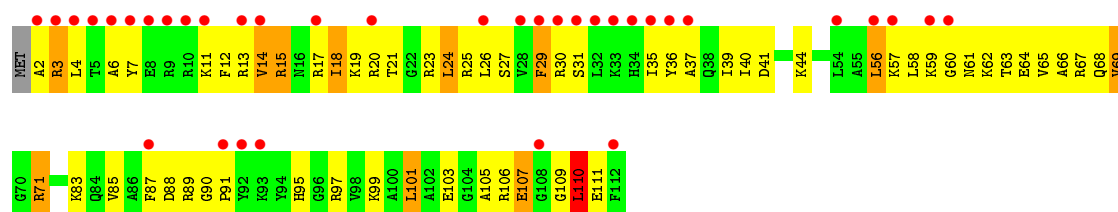
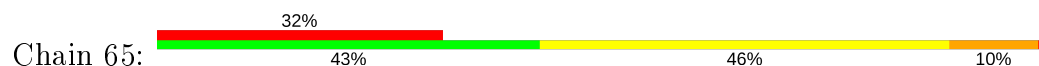
• Molecule 37: 50S ribosomal protein L17



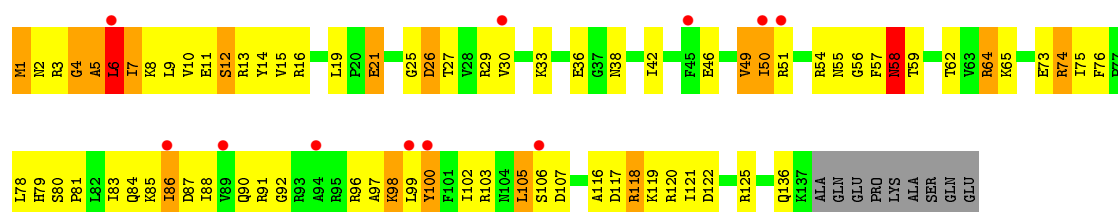
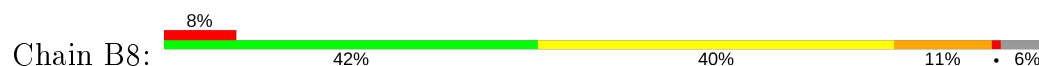
• Molecule 38: 50S ribosomal protein L18



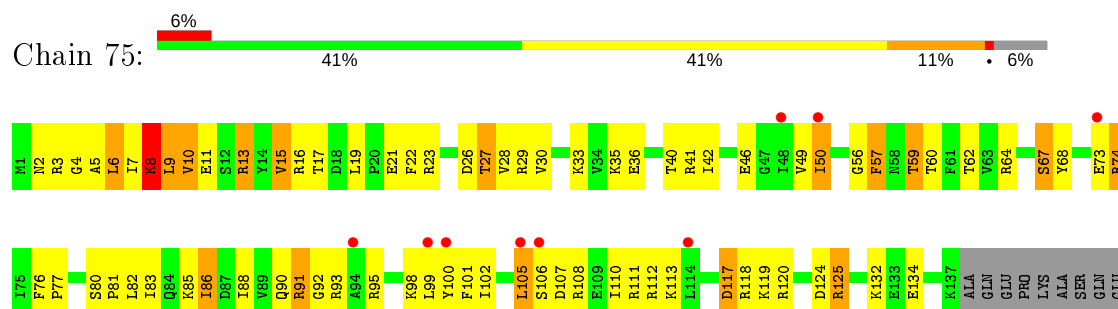
• Molecule 38: 50S ribosomal protein L18



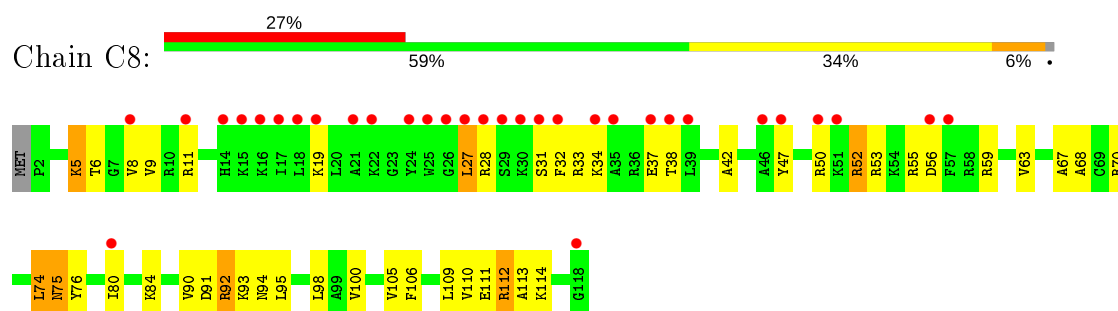
• Molecule 39: 50S ribosomal protein L19



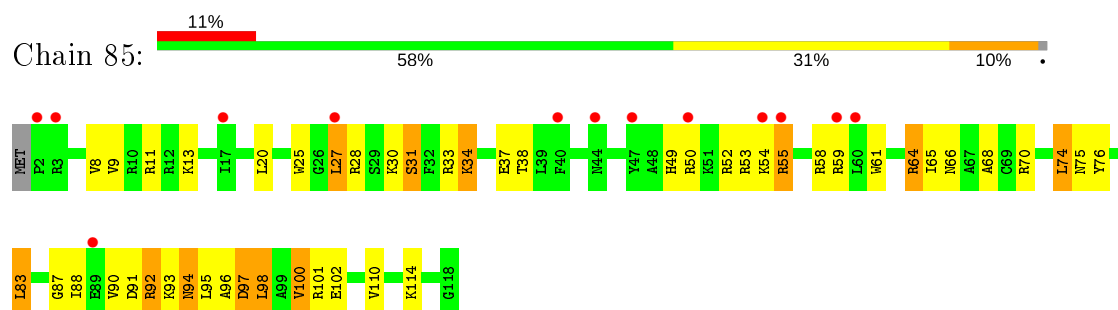
- Molecule 39: 50S ribosomal protein L19



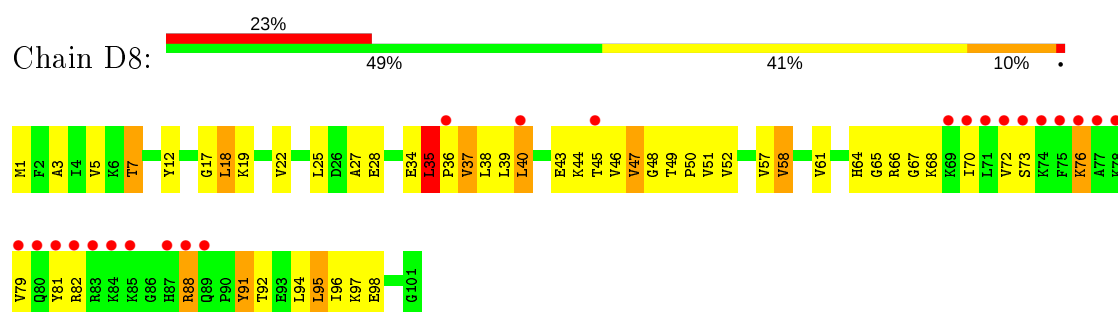
- Molecule 40: 50S ribosomal protein L20



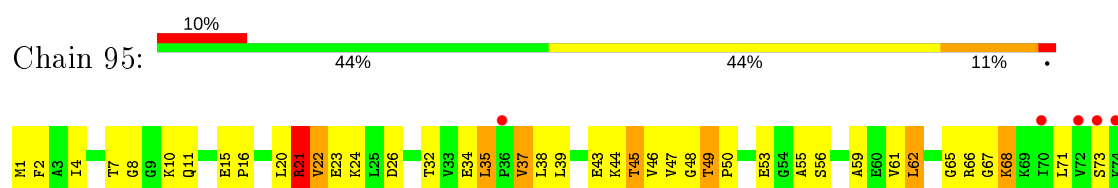
- Molecule 40: 50S ribosomal protein L20

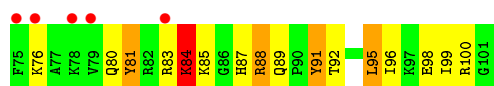


- Molecule 41: 50S ribosomal protein L21

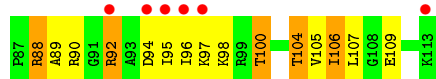
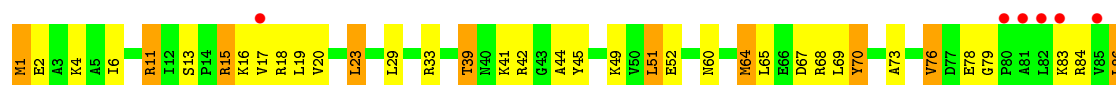


- Molecule 41: 50S ribosomal protein L21

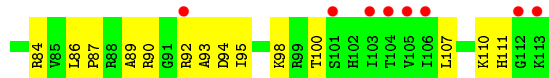
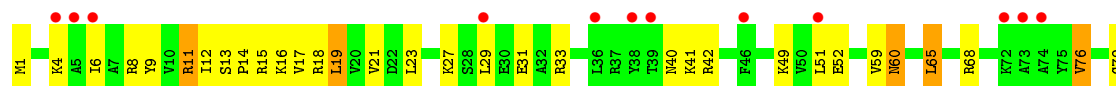




- Molecule 42: 50S ribosomal protein L22



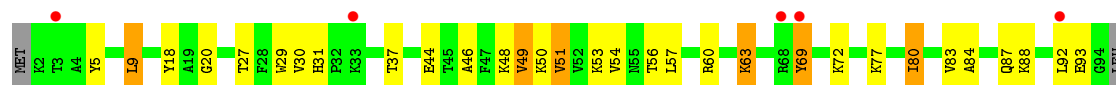
- Molecule 42: 50S ribosomal protein L22



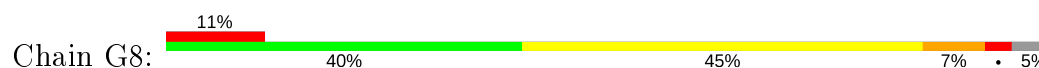
- Molecule 43: 50S ribosomal protein L23

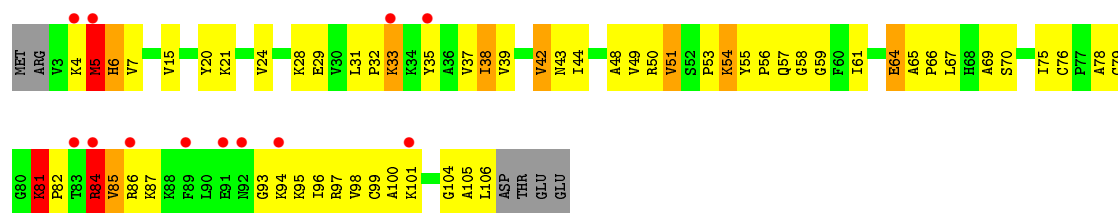


- Molecule 43: 50S ribosomal protein L23

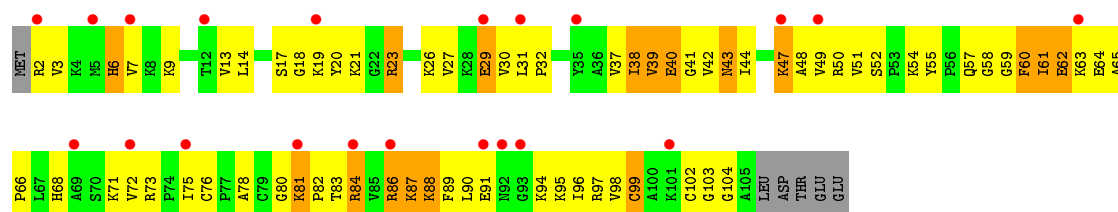


- Molecule 44: 50S ribosomal protein L24

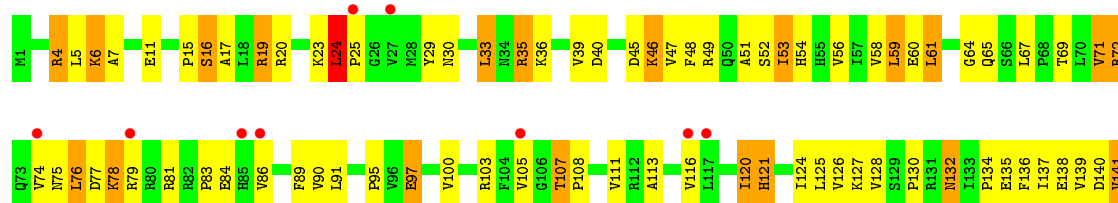




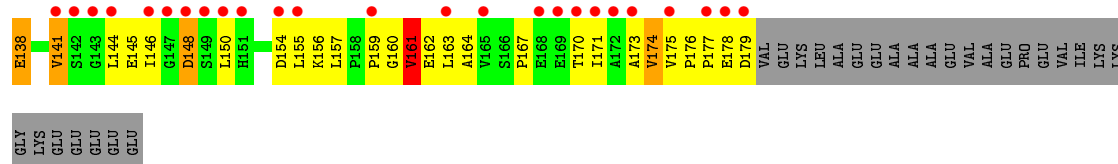
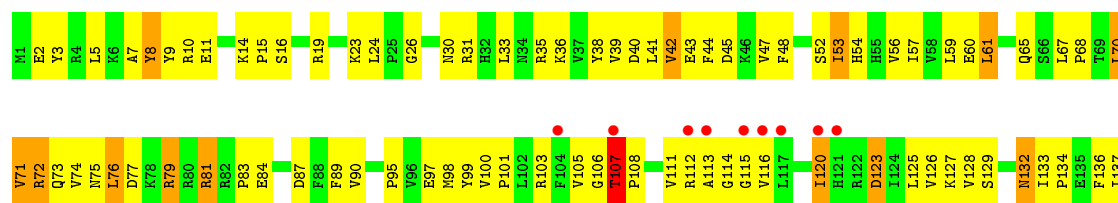
• Molecule 44: 50S ribosomal protein L24



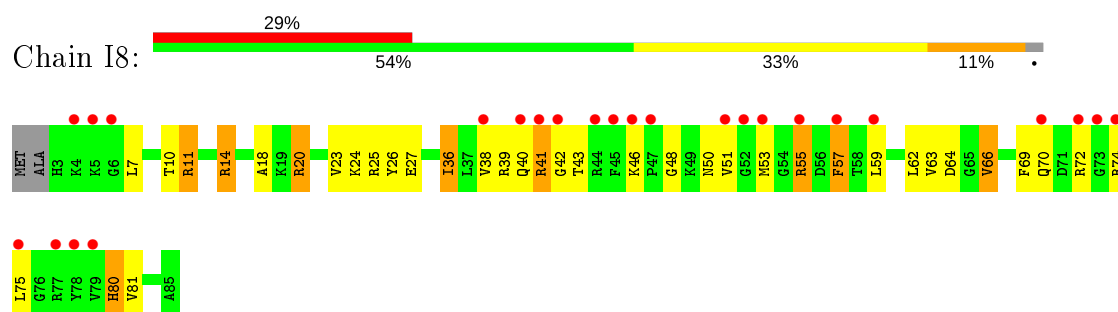
• Molecule 45: 50S ribosomal protein L25



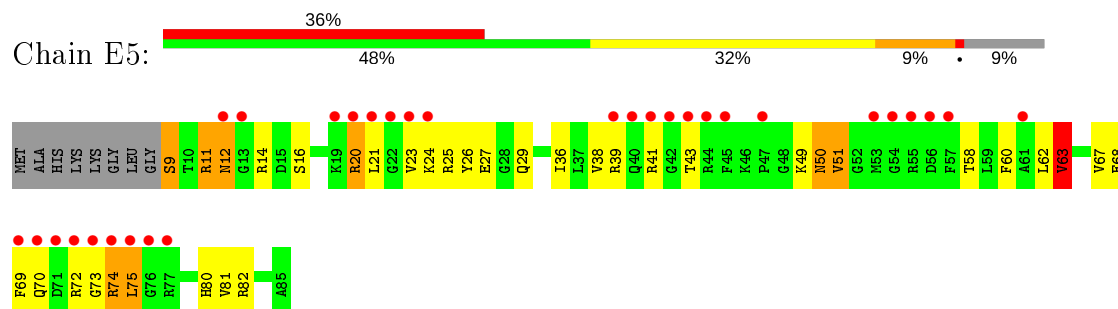
• Molecule 45: 50S ribosomal protein L25



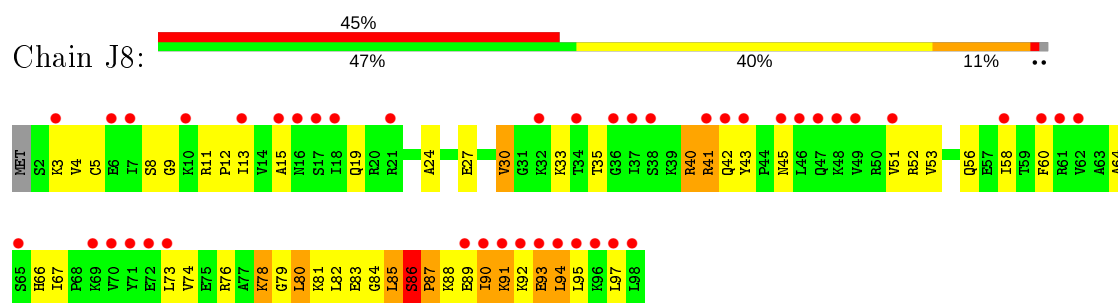
• Molecule 46: 50S ribosomal protein L27



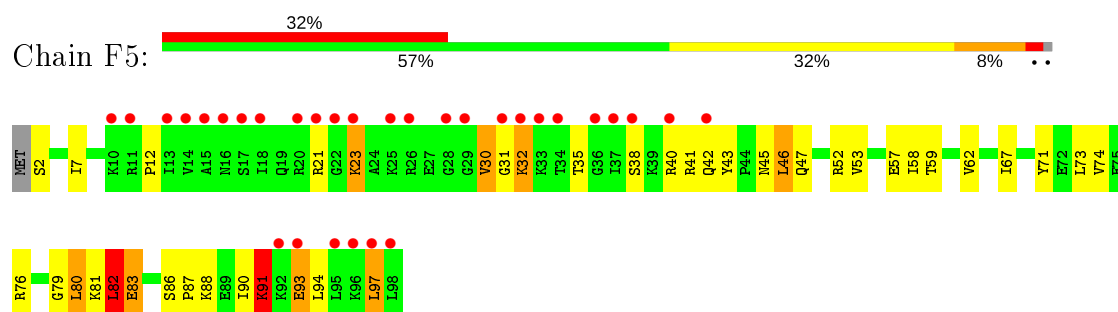
- Molecule 46: 50S ribosomal protein L27



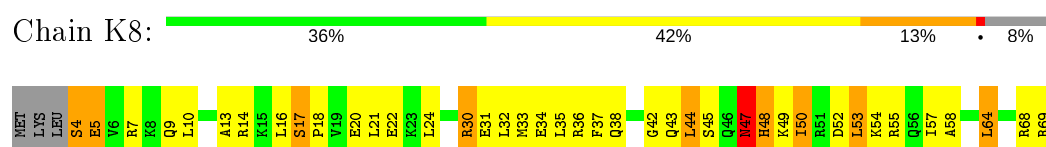
- Molecule 47: 50S ribosomal protein L28



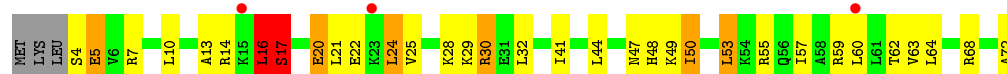
- Molecule 47: 50S ribosomal protein L28



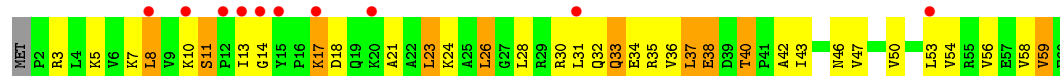
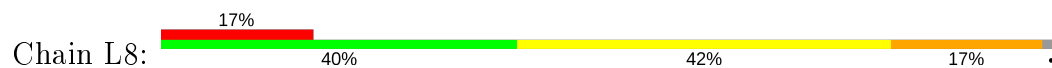
- Molecule 48: 50S ribosomal protein L29



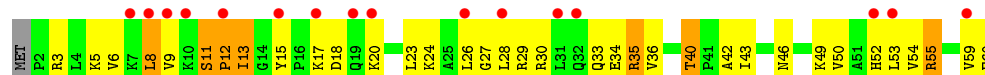
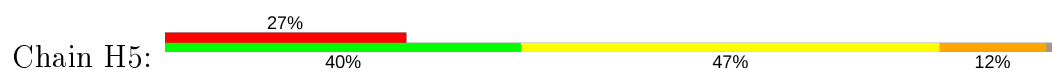
- Molecule 48: 50S ribosomal protein L29



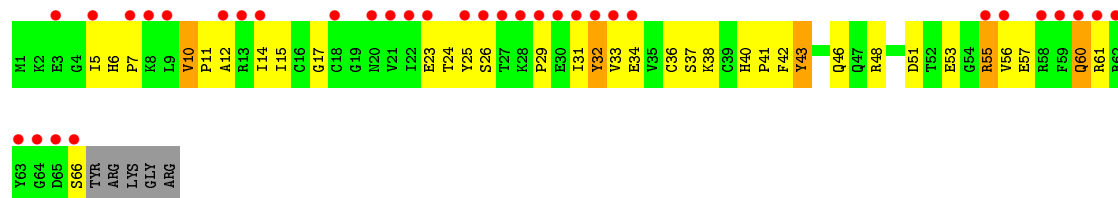
- Molecule 49: 50S ribosomal protein L30



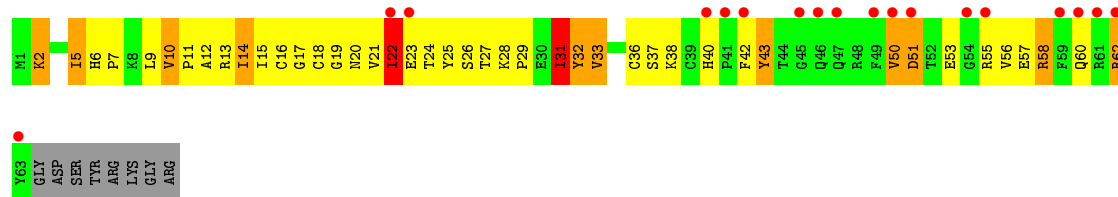
- Molecule 49: 50S ribosomal protein L30



- Molecule 50: 50S ribosomal protein L31



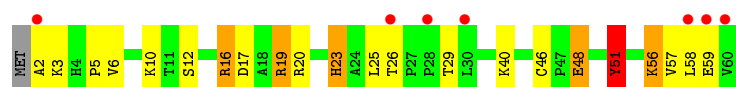
- Molecule 50: 50S ribosomal protein L31



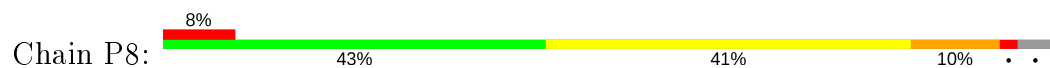
- Molecule 51: 50S ribosomal protein L32



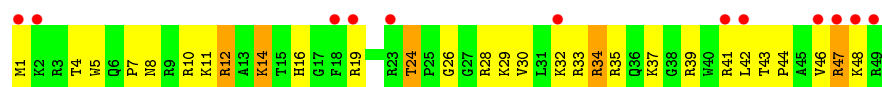
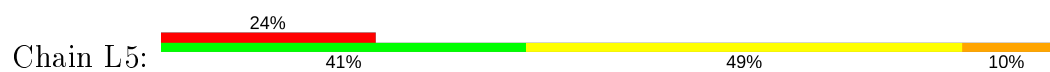
- Molecule 51: 50S ribosomal protein L32



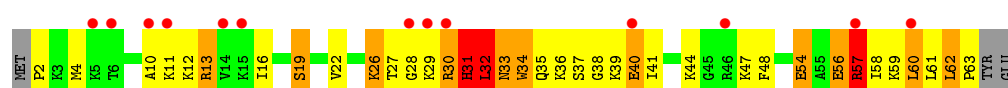
- Molecule 52: 50S ribosomal protein L34



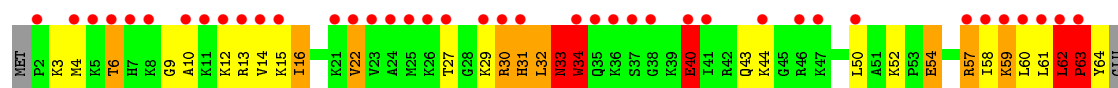
- Molecule 52: 50S ribosomal protein L34



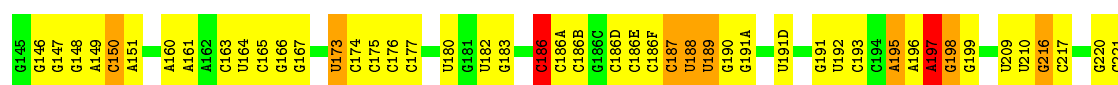
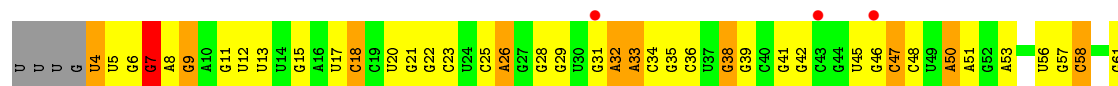
- Molecule 53: 50S ribosomal protein L35



- Molecule 53: 50S ribosomal protein L35

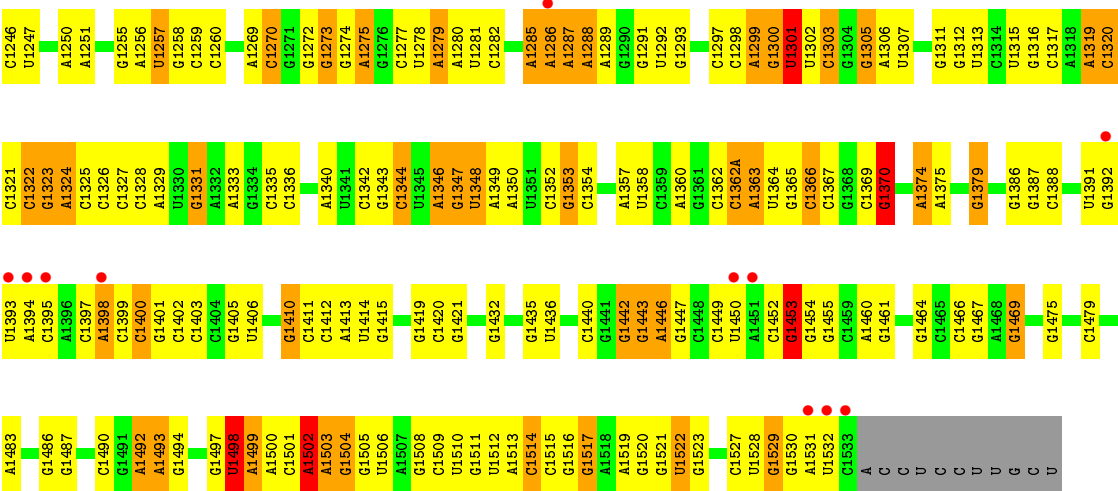


- Molecule 54: 16S ribosomal RNA



A1183	G1048	A986	G924	G837	G756	C679	U603	U534	G445	U367	U304	U222
G1184	U1052	C989	G925	G838	U757	G653	U604	A535	G446	U368	G305	U223
G1185	G1053	C990	G926	U841	G758	A684	U605	C536	G447	C389	G306	C224
G1186	G1054	U991	G927	C842	A759	G654	U606	G537	C448	C370	C307	C225
G1187	C1055	U992	G928	U843	G760	G655	G607	G538	C449	G371	C308	
A1188	A1055	U993	G929	C848	G761	U656	A607	G539	A452	C372	G309	G231
C1189	U1056	G993	C932	C849	G762	A657	A608	G540	A453	A373	C233	G232
G1190	G1057	A994	C933	G853	G765	G658	A609	G541	A454	U374	C310	C234
A1191	G1058	C995	G934	U844	A766	C659	G612	G542	C456	U375	A313	C242
C1192	C1059	A996	C935	G854	A767	G690	C613	G543	C457	G376	C314	A243
G1193	C1060	U997	A935	G855	A768	G691	C614	G544	C458	C377	A315	U244
U1194	G998	U998	C936	C856	G769	U692	A614	G545	C459	G380	G316	A246
C1195	C998A	U999	A937	C857	U772	G693	G617	G546	A465	C381	C247	G247
U1196	U999	A938	A938	G858	U773	C699	U619	A547	C466	G382	G317	C248
G1197	A1000	G939	G940	A859	G774	C699	C618	G548	C467	A383	G318	A249
G1198	G1001	C940	G941	A860	G775	A702	U620	G549	C468	G384	C320	U245
U1199	A1002	G942	G943	C861	A777	G703	A621	C552	A468	G388	A321	A246
C1200	G1003	G944	G945	C862	U778	C706	A622	G553	G474	G389	C322	G247
A1201	A1004	G946	G947	A865	C783	A706	C623	G554	G475	G391	U323	C248
G1202	C1008	G948	G949	C866	G784	C707	G624	C555	G476	G392	G324	U249
C1203	G1009	A946	G947	U867	G785	C708	U626	C556	G477	G393	A325	A250
A1204	U1010	G947	G947	C868	U786	G711	G627	G557	A481	A397	G326	C251
U1205	G1011	U950	U950	C869	U787	A716	G628	G558	A482	C398	U327	G254
G1206	U1012	G951	G951	A872	U789	U789	G629	A559	A483	C399	A329	G255
C1207	G1013	G952	G952	A873	G791	A716	G630	U560	G484	C400	C330	U256
U1208	A1014	G953	G953	C874	U792	C719	G631	C562	G485	G401	G331	U257
G1209	A1015	G954	G954	C875	A793	U723	A632	C563	G486	G402	G332	G258
C1210	A1016	U955	U955	C876	U794	A722	G633	C564	A487	C403	G333	C259
U1211	G1017	U956	U956	C879	A794	U723	G634	G565	G491	G406	C334	U261
A1212	U1018	U957	U957	C880	G798	G724	U636	G566	G492	G407	C335	A262
C1213	G1019	A958	A958	C883	G799	G725	G637	G567	A496	A408	C336	G266
U1214	U1020	G959	G959	U884	G800	A728	U646	G568	U497	G409	C337	G267
G1215	G1021	U960	U960	C885	U801	A729	G651	C569	G501	G410	A338	C268
C1216	A1022	U961	U961	C886	A802	G730	U652	G570	G502	A411	U340	C269
U1217	U1023	C962	C962	C887	G803	G731	A653	U571	G503	G412	C341	A270
G1218	G1024	G963	G963	C889	U804	C732	G654	A572	C504	G413	C342	G271
U1219	A1025	A964	A964	C890	C805	A733	C656	A574	G505	C417	U343	A273
C1220	U1026	G965	G965	C891	C811	G734	U657	G575	A509	C418	A344	A274
G1221	G1027	A966	A966	C892	C812	C735	U659	G576	A510	C419	G345	G278
U1222	C1028	G967	G967	C893	C813	C736	G660	G577	A511	U420	G346	A279
C1223	A1028A	C968	C968	C894	C814	A737	G661	C578	G512	U421	C280	C280
G1224	G1029	A969	A969	C895	C815	C738	U662	G579	U512	C422	G281	G281
U1225	U1030	G970	G970	C896	C816	C739	G663	U580	C513	G423	G286	G286
C1226	G1031	C971	C971	C897	C817	U740	A664	U581	C514	U429	G289	G289
U1227	A1032	G972	G972	C898	C818	G741	A665	U582	C515	A430	C290	C290
G1228	G1032A	C973	C973	C899	C819	G742	G668	A583	G518	C433	C295	C295
A1229	U1033	A974	A974	C900	C820	C743	U669	G584	A523	U434	U296	U296
C1230	G1034	G975	G975	C901	C821	C744	G670	G585	G524	C435	C297	C297
U1231	A1035	A976	A976	C902	C822	C745	U671	C586	G525	G436	A298	A298
G1232	G1036	G977	G977	C903	C823	C746	U672	G587	C526	G437	G299	G299
C1233	U1037	A978	A978	C904	C824	C747	G673	G588	G527	G438	G361	G361
U1234	A1038	C979	C979	C905	C825	C748	A674	G593	G530	A439	A363	A363
G1235	G1039	U980	U980	C906	C826	C749	A675	G594	G531	U440	A364	A364
U1236	C1040	C981	C981	C907	C827	C750	U677	G595	A532	C442	U365	U365
C1237	A1041	A981	A981	C908	C828	C751	U678	G596	A533	C443	G302	G302
U1238	U1042	G982	G982	C909	C829	C752	G679	G597	A534	C444	A303	A303
A1239	G1043	U983	U983	C910	C830	C753	U680					
U1240	A1044	C984	C984	C911	C831	C754	U681					
C1243	U1045	G985	G985	C912	C832	C755	U682					
G1244	A1046	C986	C986	C913	C833							
A1245	G1047	C987	C987	C914	C834							





## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	210.00 Å   451.50 Å   616.70 Å 90.00°   90.00°   90.00°	Depositor
Resolution (Å)	198.79 – 3.20 254.63 – 3.20	Depositor EDS
% Data completeness (in resolution range)	100.0 (198.79-3.20) 92.9 (254.63-3.20)	Depositor EDS
$R_{merge}$	0.37	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	0.96 (at 3.19 Å)	Xtriage
Refinement program	PHENIX	Depositor
R, $R_{free}$	0.188   ,   0.238 0.188   ,   0.239	Depositor DCC
$R_{free}$ test set	2000 reflections (0.21%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	99.4	Xtriage
Anisotropy	0.200	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.26 , 83.7	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.44$ , $\langle L^2 \rangle = 0.27$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
$F_o, F_c$ correlation	0.89	EDS
Total number of atoms	299678	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	126.0	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.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical 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: 5MU, ZN, OMG, MIA, MG, 4SU, QUO, PSU

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	0.73	3/36195 (0.0%)	1.37	334/56491 (0.6%)
2	12	0.38	0/1959	0.63	1/2642 (0.0%)
2	1E	0.42	0/1959	0.65	2/2642 (0.1%)
3	22	0.43	0/1636	0.62	0/2205
3	2E	0.45	0/1629	0.62	0/2195
4	32	0.52	0/1732	0.74	1/2318 (0.0%)
4	3E	0.58	1/1732 (0.1%)	0.74	1/2318 (0.0%)
5	42	0.53	0/1171	0.72	0/1576
5	4E	0.52	0/1171	0.71	0/1576
6	52	0.54	0/855	0.74	2/1154 (0.2%)
6	5E	0.56	0/855	0.70	1/1154 (0.1%)
7	62	0.45	0/1275	0.59	0/1709
7	6E	0.44	0/1275	0.60	0/1709
8	72	0.48	0/1135	0.68	0/1527
8	7E	0.49	0/1135	0.71	0/1527
9	82	0.45	0/1017	0.62	0/1365
9	8E	0.43	0/1028	0.61	1/1379 (0.1%)
10	1A	0.39	0/814	0.60	0/1095
10	1I	0.41	0/814	0.60	0/1095
11	2A	0.50	0/899	0.66	0/1213
11	2I	0.54	0/879	0.69	0/1187
12	3A	0.60	0/991	0.81	0/1327
12	3I	0.63	0/991	0.83	0/1327
13	4A	0.35	0/943	0.60	0/1265
13	4I	0.38	0/938	0.62	0/1258
14	5A	0.47	0/500	0.65	0/664
14	5I	0.62	2/500 (0.4%)	0.67	0/664
15	6A	0.53	0/744	0.64	0/992
15	6I	0.53	0/744	0.74	0/992
16	7A	0.54	0/721	0.73	0/970
16	7I	0.47	0/721	0.71	0/970
17	8A	0.54	0/847	0.71	0/1131

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	8I	0.53	0/847	0.66	0/1131
18	9A	0.50	0/595	0.68	1/790 (0.1%)
18	9I	0.51	0/595	0.68	0/790
19	AA	0.39	0/658	0.70	0/888
19	AI	0.38	0/680	0.67	0/915
20	BA	0.52	0/764	0.76	1/1007 (0.1%)
20	BI	0.42	0/764	0.70	0/1007
21	1B	0.41	0/221	0.56	0/288
21	1F	0.41	0/221	0.59	0/288
22	2K	0.72	0/1784	1.40	18/2771 (0.6%)
22	2L	0.68	0/1686	1.32	12/2618 (0.5%)
22	3K	0.46	0/1851	1.01	3/2877 (0.1%)
22	3L	0.47	0/1851	1.07	5/2877 (0.2%)
23	4K	0.92	1/269 (0.4%)	1.43	8/417 (1.9%)
23	4L	0.81	0/144	1.51	4/222 (1.8%)
24	14	0.99	89/70192 (0.1%)	1.66	1744/109580 (1.6%)
24	1H	1.08	133/70258 (0.2%)	1.78	2275/109682 (2.1%)
25	16	0.81	0/2928	1.50	41/4568 (0.9%)
25	1J	0.77	0/2928	1.47	35/4568 (0.8%)
26	71	0.29	0/1072	0.48	0/1447
26	79	0.29	0/1072	0.48	0/1447
27	11	0.83	0/2165	1.01	6/2919 (0.2%)
27	19	0.79	2/2170 (0.1%)	0.94	4/2926 (0.1%)
28	21	0.71	0/1601	0.89	1/2160 (0.0%)
28	29	0.69	0/1601	0.93	3/2160 (0.1%)
29	31	0.78	1/1620 (0.1%)	0.91	1/2194 (0.0%)
29	39	0.67	0/1662	0.87	0/2249
30	41	0.44	0/1498	0.65	1/2016 (0.0%)
30	49	0.40	0/1498	0.63	0/2016
31	51	0.60	0/1362	0.86	2/1841 (0.1%)
31	59	0.39	0/1337	0.68	0/1809
32	61	0.53	0/1151	0.78	3/1558 (0.2%)
32	69	0.51	0/1151	0.72	1/1558 (0.1%)
33	15	0.55	0/1131	0.73	0/1525
33	58	0.63	0/1131	0.82	1/1525 (0.1%)
34	25	0.74	0/942	0.82	1/1269 (0.1%)
34	68	0.70	0/942	0.79	0/1269
35	35	0.61	0/1161	0.92	2/1544 (0.1%)
35	78	0.73	0/1161	1.07	3/1544 (0.2%)
36	45	0.63	0/1142	0.88	1/1527 (0.1%)
36	88	0.78	2/1142 (0.2%)	0.97	3/1527 (0.2%)
37	55	0.73	0/973	0.99	2/1302 (0.2%)
37	98	0.61	0/981	0.82	0/1312

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
38	65	0.57	0/891	0.85	1/1187 (0.1%)
38	A8	0.64	0/891	0.87	1/1187 (0.1%)
39	75	0.64	0/1145	0.82	0/1531
39	B8	0.65	0/1155	0.89	0/1542
40	85	0.64	1/981 (0.1%)	0.77	1/1306 (0.1%)
40	C8	0.70	0/981	0.79	0/1306
41	95	4.11	8/789 (1.0%)	1.36	6/1057 (0.6%)
41	D8	0.69	0/789	0.88	3/1057 (0.3%)
42	A5	0.70	0/910	0.85	1/1220 (0.1%)
42	E8	0.74	0/910	1.02	4/1220 (0.3%)
43	B5	0.76	0/744	0.80	0/1000
43	F8	0.83	0/752	0.94	1/1011 (0.1%)
44	C5	0.67	0/807	0.86	0/1076
44	G8	0.74	0/804	0.98	2/1073 (0.2%)
45	D5	0.43	0/1460	0.66	0/1982
45	H8	0.45	0/1427	0.71	3/1935 (0.2%)
46	E5	0.69	0/620	0.86	0/827
46	I8	0.73	0/647	0.89	0/864
47	F5	0.69	0/769	0.87	3/1022 (0.3%)
47	J8	0.73	0/769	0.93	0/1022
48	G5	0.60	0/582	0.78	0/771
48	K8	0.85	2/560 (0.4%)	0.95	0/741
49	H5	0.51	0/473	0.70	0/635
49	L8	0.61	0/473	0.79	0/635
50	I5	0.43	0/527	0.64	0/709
50	M8	0.36	0/545	0.56	0/733
51	J5	0.68	0/472	0.83	1/639 (0.2%)
51	N8	0.67	0/472	0.88	0/639
52	L5	0.75	0/437	0.95	2/575 (0.3%)
52	P8	0.89	0/417	1.17	1/550 (0.2%)
53	M5	0.99	1/515 (0.2%)	1.11	2/679 (0.3%)
53	Q8	0.90	1/502 (0.2%)	1.12	5/661 (0.8%)
54	1G	0.72	1/36189 (0.0%)	1.34	311/56482 (0.6%)
All	All	0.87	248/321112 (0.1%)	1.42	4873/480439 (1.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
2	12	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
2	1E	0	1
4	3E	0	1
10	1A	0	1
12	3A	0	2
14	5I	0	1
19	AI	0	2
20	BA	0	1
27	11	0	4
27	19	0	4
28	29	0	9
31	59	0	1
32	61	0	1
35	35	0	6
35	78	0	3
36	45	0	2
36	88	0	2
38	65	0	1
39	75	0	3
39	B8	0	4
40	85	0	1
41	95	0	2
44	C5	0	1
45	D5	0	1
47	F5	0	1
48	G5	0	2
48	K8	0	1
49	H5	0	1
51	J5	0	1
52	P8	0	1
53	M5	0	5
53	Q8	0	1
All	All	0	68

All (248) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
41	95	91	TYR	CD1-CE1	60.61	2.30	1.39
41	95	91	TYR	CD2-CE2	59.53	2.28	1.39
41	95	91	TYR	CE1-CZ	39.54	1.90	1.38
41	95	91	TYR	CE2-CZ	38.39	1.88	1.38
41	95	91	TYR	CG-CD1	31.53	1.80	1.39
41	95	91	TYR	CG-CD2	30.86	1.79	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
41	95	21	ARG	CD-NE	23.29	1.86	1.46
41	95	21	ARG	NE-CZ	14.81	1.52	1.33
24	1H	774	A	N9-C4	-13.10	1.29	1.37
24	1H	676	A	N9-C4	-12.81	1.30	1.37
24	14	783	A	N9-C4	-11.25	1.31	1.37
24	14	774	A	N9-C4	-10.96	1.31	1.37
24	1H	783	A	N9-C4	-10.66	1.31	1.37
24	14	528	A	N9-C4	-10.30	1.31	1.37
24	1H	2430	A	N9-C4	-10.13	1.31	1.37
24	14	1786	A	N9-C4	-10.11	1.31	1.37
24	1H	71	A	N9-C4	-9.86	1.31	1.37
24	1H	1142(A)	A	N9-C4	-9.85	1.31	1.37
24	1H	784	A	N3-C4	-9.60	1.29	1.34
24	1H	330	A	N9-C4	-9.07	1.32	1.37
53	M5	34	TRP	CB-CG	9.04	1.66	1.50
24	1H	784	A	C6-N1	-8.76	1.29	1.35
24	14	1786	A	N3-C4	-8.69	1.29	1.34
24	1H	1786	A	N3-C4	-8.68	1.29	1.34
24	1H	1614	A	N9-C4	-8.64	1.32	1.37
24	1H	1332	G	N9-C4	-8.61	1.31	1.38
24	14	2287	A	N9-C4	-8.50	1.32	1.37
24	1H	74	A	N9-C4	-8.43	1.32	1.37
24	1H	783	A	N3-C4	-8.37	1.29	1.34
24	14	2688	U	N3-C4	-8.17	1.31	1.38
24	14	71	A	N9-C4	-8.04	1.33	1.37
24	1H	678	C	N1-C6	-7.74	1.32	1.37
24	1H	574	C	N1-C6	-7.73	1.32	1.37
24	14	1142(A)	A	N9-C4	-7.63	1.33	1.37
24	1H	1960	A	N7-C5	-7.54	1.34	1.39
24	1H	1204	A	N9-C4	-7.48	1.33	1.37
24	1H	140	A	C5-C6	-7.44	1.34	1.41
24	1H	676	A	N9-C8	7.39	1.43	1.37
48	K8	5	GLU	CG-CD	7.38	1.63	1.51
24	14	676	A	N9-C8	7.36	1.43	1.37
24	1H	676	A	C5-C4	7.32	1.43	1.38
24	14	1616	A	N9-C4	-7.29	1.33	1.37
24	1H	1308	A	C6-N1	-7.25	1.30	1.35
24	1H	2287	A	N9-C4	-7.22	1.33	1.37
24	14	1681	G	N9-C4	-7.19	1.32	1.38
24	14	204	A	N3-C4	-7.18	1.30	1.34
24	14	528	A	N3-C4	-7.16	1.30	1.34
24	14	828	U	N3-C4	-7.13	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	14	1988	C	N1-C6	-7.11	1.32	1.37
24	14	1786	A	C5-C6	-7.10	1.34	1.41
24	1H	140	A	N9-C4	-7.09	1.33	1.37
24	14	676	A	C5-C4	7.09	1.43	1.38
24	14	783	A	N7-C5	-7.05	1.35	1.39
24	1H	1786	A	C5-C6	-7.03	1.34	1.41
24	1H	2346	A	N9-C4	-7.00	1.33	1.37
24	14	74	A	N9-C4	-6.94	1.33	1.37
14	5I	43	CYS	CB-SG	-6.91	1.70	1.82
24	14	752	A	N9-C4	-6.87	1.33	1.37
24	1H	330	A	N3-C4	-6.85	1.30	1.34
24	1H	1332	G	N3-C4	-6.84	1.30	1.35
24	1H	1786	A	N9-C4	-6.82	1.33	1.37
24	1H	1210	A	N9-C4	-6.82	1.33	1.37
24	14	2430	A	N9-C4	-6.79	1.33	1.37
24	1H	775	G	N9-C8	-6.72	1.33	1.37
24	1H	2688	U	N3-C4	-6.71	1.32	1.38
24	1H	528	A	N9-C4	-6.66	1.33	1.37
24	1H	236	C	N1-C6	-6.65	1.33	1.37
24	1H	1379	A	N7-C5	-6.57	1.35	1.39
36	88	91	GLU	CG-CD	6.54	1.61	1.51
24	1H	783	A	C5-C6	-6.53	1.35	1.41
24	1H	828	U	N3-C4	-6.51	1.32	1.38
24	1H	2506	U	N1-C2	6.46	1.44	1.38
24	1H	784	A	N9-C4	-6.45	1.33	1.37
24	1H	2490	G	N9-C8	6.43	1.42	1.37
24	14	528	A	C5-C6	-6.43	1.35	1.41
24	1H	138	G	N9-C8	6.40	1.42	1.37
24	1H	1346	G	N1-C2	-6.39	1.32	1.37
24	1H	2346	A	N3-C4	-6.37	1.31	1.34
24	14	746	A	N3-C4	-6.37	1.31	1.34
24	14	1021	A	N9-C4	-6.35	1.34	1.37
24	1H	1366	A	C5-C6	-6.34	1.35	1.41
24	1H	2713	A	N9-C4	-6.32	1.34	1.37
24	14	1678	G	N9-C4	-6.32	1.32	1.38
24	14	2518	A	N9-C4	-6.31	1.34	1.37
48	K8	5	GLU	CB-CG	6.29	1.64	1.52
24	1H	1616	A	C5-C6	-6.28	1.35	1.41
24	14	2542	A	N7-C5	6.26	1.43	1.39
24	1H	1660	C	N3-C4	-6.26	1.29	1.33
24	1H	1616	A	N9-C4	-6.25	1.34	1.37
24	1H	1899	G	N9-C4	-6.25	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	1H	448	U	N1-C6	-6.23	1.32	1.38
24	1H	1614	A	N7-C5	-6.21	1.35	1.39
24	1H	196	A	C6-N1	-6.20	1.31	1.35
24	1H	1950	G	N3-C4	-6.20	1.31	1.35
24	1H	739	G	C5-C4	-6.18	1.34	1.38
24	1H	453	C	N1-C6	-6.17	1.33	1.37
24	14	197	A	N9-C4	-6.17	1.34	1.37
24	14	74	A	N3-C4	-6.17	1.31	1.34
24	14	676	A	N9-C4	-6.14	1.34	1.37
24	1H	2451	A	C6-N1	-6.14	1.31	1.35
27	19	28	GLU	CG-CD	6.12	1.61	1.51
24	14	1698	A	N9-C4	-6.12	1.34	1.37
24	14	783	A	C5-C6	-6.12	1.35	1.41
24	14	2873	A	N7-C5	-6.11	1.35	1.39
24	14	1142(A)	A	N3-C4	-6.10	1.31	1.34
24	14	201	C	N1-C6	-6.06	1.33	1.37
24	14	2441	C	N3-C4	-6.02	1.29	1.33
24	1H	1251	C	N1-C6	-6.00	1.33	1.37
24	1H	783	A	N7-C5	-5.99	1.35	1.39
24	1H	696	G	N7-C5	5.97	1.42	1.39
24	14	1786	A	N7-C5	-5.97	1.35	1.39
24	1H	197	A	N3-C4	-5.96	1.31	1.34
24	1H	1313	U	C4-C5	-5.96	1.38	1.43
24	14	774	A	C5-C6	-5.94	1.35	1.41
24	1H	2590	A	N9-C4	-5.92	1.34	1.37
24	14	2518	A	C5-C6	-5.92	1.35	1.41
24	1H	2287	A	N3-C4	-5.91	1.31	1.34
24	14	1342	A	C5-C6	-5.89	1.35	1.41
24	1H	621	A	N9-C4	-5.87	1.34	1.37
24	1H	2455	G	N7-C5	5.86	1.42	1.39
24	1H	774	A	C5-C6	-5.85	1.35	1.41
24	14	2346	A	N3-C4	-5.85	1.31	1.34
24	14	1600	C	N1-C6	-5.83	1.33	1.37
24	1H	1960	A	C5-C6	-5.80	1.35	1.41
24	1H	621	A	N7-C5	-5.78	1.35	1.39
24	14	1332	G	N3-C4	-5.78	1.31	1.35
24	1H	784	A	C5-C4	-5.76	1.34	1.38
24	1H	451	C	N1-C6	-5.75	1.33	1.37
24	14	1204	A	N9-C4	-5.75	1.34	1.37
24	1H	2448	A	C5-C4	-5.74	1.34	1.38
24	1H	1142(A)	A	N3-C4	-5.72	1.31	1.34
24	1H	2249	U	C2-N3	-5.72	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	1H	1969	A	N9-C8	-5.70	1.33	1.37
24	14	1616	A	C5-C6	-5.69	1.35	1.41
24	1H	1624	G	N9-C8	-5.68	1.33	1.37
24	1H	140	A	N7-C5	-5.68	1.35	1.39
24	14	2688	U	C2-N3	-5.65	1.33	1.37
24	1H	2064	C	N1-C6	-5.64	1.33	1.37
24	1H	2058	A	N9-C4	-5.64	1.34	1.37
24	1H	534	U	N1-C2	-5.63	1.33	1.38
24	1H	621	A	C5-C6	-5.60	1.36	1.41
24	1H	1678	G	N9-C8	5.60	1.41	1.37
24	1H	1021	A	N9-C4	-5.60	1.34	1.37
24	1H	71	A	C5-C6	-5.59	1.36	1.41
24	1H	727	A	N3-C4	-5.59	1.31	1.34
24	14	2595	G	N9-C4	-5.58	1.33	1.38
27	19	28	GLU	CB-CG	5.58	1.62	1.52
24	1H	775	G	N7-C5	-5.58	1.35	1.39
24	1H	1365	A	N3-C4	-5.57	1.31	1.34
24	1H	1614	A	N3-C4	-5.56	1.31	1.34
29	31	65	TRP	CB-CG	-5.56	1.40	1.50
24	14	2287	A	N3-C4	-5.55	1.31	1.34
24	1H	1332	G	C5-C4	5.55	1.42	1.38
24	1H	1202	C	C4-C5	-5.53	1.38	1.43
1	13	808	C	N1-C6	-5.53	1.33	1.37
24	1H	1826	G	N7-C5	-5.51	1.35	1.39
24	14	189	G	C6-N1	-5.51	1.35	1.39
53	Q8	56	GLU	CG-CD	5.50	1.60	1.51
24	1H	1271	G	N9-C8	-5.49	1.34	1.37
24	1H	1366	A	N7-C5	-5.48	1.35	1.39
24	1H	1349	A	N9-C8	5.48	1.42	1.37
24	1H	2597	G	C6-N1	-5.47	1.35	1.39
24	1H	1899	G	N3-C4	-5.46	1.31	1.35
24	1H	2610	C	N3-C4	-5.46	1.30	1.33
24	1H	1786	A	N7-C5	-5.45	1.35	1.39
24	14	795	C	N3-C4	-5.45	1.30	1.33
4	3E	12	CYS	CB-SG	5.44	1.91	1.82
24	1H	1626	G	N3-C4	-5.44	1.31	1.35
24	1H	74	A	C5-C6	-5.43	1.36	1.41
24	14	2623	G	N3-C4	-5.42	1.31	1.35
24	14	821	A	N7-C5	-5.42	1.36	1.39
54	1G	690	G	N9-C4	-5.41	1.33	1.38
24	14	1323	U	N1-C2	-5.38	1.33	1.38
1	13	810	C	N1-C6	-5.38	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	1H	567	A	N9-C4	-5.37	1.34	1.37
24	14	1988	C	C4-C5	-5.36	1.38	1.43
24	14	2392	A	C5-C4	5.36	1.42	1.38
24	14	512	G	N9-C4	-5.35	1.33	1.38
24	14	2713	A	N3-C4	-5.35	1.31	1.34
24	1H	2507	C	N3-C4	-5.35	1.30	1.33
24	1H	2490	G	N9-C4	-5.34	1.33	1.38
24	14	216	A	N3-C4	-5.34	1.31	1.34
24	1H	2273	A	C5-C4	-5.34	1.35	1.38
24	1H	2550	G	C2-N3	-5.33	1.28	1.32
24	1H	759	G	N7-C5	-5.32	1.36	1.39
24	1H	1614	A	C5-C6	-5.32	1.36	1.41
24	14	2023	G	N3-C4	-5.31	1.31	1.35
24	14	2713	A	N9-C8	5.31	1.42	1.37
24	14	2639	A	N9-C4	-5.30	1.34	1.37
24	14	1645	G	N9-C8	-5.29	1.34	1.37
23	4K	19	A	N9-C4	5.28	1.41	1.37
14	5I	27	CYS	CB-SG	-5.26	1.73	1.81
24	14	2713	A	N9-C4	-5.26	1.34	1.37
24	14	2058	A	C5-C4	-5.25	1.35	1.38
24	1H	1967	C	N3-C4	-5.25	1.30	1.33
24	14	805	G	N7-C5	-5.25	1.36	1.39
24	1H	1332	G	N9-C8	5.22	1.41	1.37
24	14	2232	U	C4-O4	5.20	1.27	1.23
24	1H	2031	A	N9-C4	5.20	1.41	1.37
36	88	91	GLU	CB-CG	5.20	1.62	1.52
24	1H	2020	A	N7-C5	-5.19	1.36	1.39
24	1H	2503	A	C5-C6	-5.18	1.36	1.41
24	14	752	A	N3-C4	-5.18	1.31	1.34
24	1H	2606	C	N1-C6	-5.18	1.34	1.37
24	1H	1347	G	C5-C4	-5.17	1.34	1.38
24	14	1559	G	N9-C4	-5.17	1.33	1.38
24	14	1807	G	N7-C5	-5.17	1.36	1.39
24	14	2450	A	C6-N1	-5.16	1.31	1.35
1	13	1523	G	N3-C4	-5.15	1.31	1.35
24	1H	1204	A	C5-C6	-5.15	1.36	1.41
24	14	1966	A	N9-C4	-5.14	1.34	1.37
24	14	2681	C	N3-C4	-5.14	1.30	1.33
24	1H	1378	A	N9-C4	-5.14	1.34	1.37
24	1H	431	U	C2-N3	-5.14	1.34	1.37
24	1H	751	A	P-OP1	-5.14	1.40	1.49
24	1H	1269	A	C6-N1	-5.14	1.31	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	1H	2442	C	N1-C6	-5.14	1.34	1.37
24	1H	1967	C	N1-C6	-5.14	1.34	1.37
24	14	2070	G	N7-C5	-5.14	1.36	1.39
24	1H	695	G	C2-N3	-5.13	1.28	1.32
24	1H	766	C	N1-C6	-5.11	1.34	1.37
24	1H	1366	A	C5-C4	-5.11	1.35	1.38
24	1H	1698	A	N3-C4	-5.11	1.31	1.34
24	1H	2070	G	N9-C8	-5.11	1.34	1.37
24	1H	2573	C	N1-C2	5.11	1.45	1.40
24	1H	1973	G	N1-C2	-5.09	1.33	1.37
24	1H	1698	A	C5-C6	-5.08	1.36	1.41
24	14	587	C	N1-C6	-5.08	1.34	1.37
24	14	2690	C	N1-C6	-5.08	1.34	1.37
24	14	783	A	N3-C4	-5.08	1.31	1.34
24	1H	663	G	N3-C4	-5.07	1.31	1.35
24	14	2430	A	C5-C6	-5.07	1.36	1.41
24	14	472	A	N3-C4	-5.06	1.31	1.34
24	14	1807	G	N9-C8	-5.06	1.34	1.37
24	14	796	C	N1-C6	-5.05	1.34	1.37
24	1H	2336	A	N3-C4	5.05	1.37	1.34
24	14	676	A	C5-C6	-5.04	1.36	1.41
24	1H	2434	A	N9-C4	-5.04	1.34	1.37
24	14	74	A	N7-C5	-5.04	1.36	1.39
24	14	1890	A	N9-C4	-5.04	1.34	1.37
24	1H	1969	A	N7-C5	-5.03	1.36	1.39
24	14	1605	C	N1-C6	-5.02	1.34	1.37
24	14	329	G	C6-O6	-5.02	1.19	1.24
24	14	471	A	N9-C4	-5.02	1.34	1.37
40	85	25	TRP	CB-CG	5.01	1.59	1.50
24	14	204	A	N9-C4	-5.01	1.34	1.37
24	1H	2246	G	C8-N7	-5.01	1.27	1.30
24	14	2639	A	C5-C6	-5.00	1.36	1.41

All (4873) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
41	95	21	ARG	CD-NE-CZ	22.50	155.09	123.60
41	95	21	ARG	NE-CZ-NH1	22.20	131.40	120.30
24	1H	676	A	C2-N3-C4	-19.76	100.72	110.60
24	1H	783	A	C2-N3-C4	-18.90	101.15	110.60
24	1H	1332	G	C2-N3-C4	-18.73	102.53	111.90
24	1H	774	A	C2-N3-C4	-18.27	101.46	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1332	G	C5-N7-C8	-17.61	95.49	104.30
24	14	1786	A	N7-C8-N9	17.58	122.59	113.80
24	14	1786	A	C5-N7-C8	-17.47	95.17	103.90
24	1H	2430	A	C2-N3-C4	-17.45	101.87	110.60
24	1H	1899	G	N3-C4-N9	-17.40	115.56	126.00
24	14	1786	A	C2-N3-C4	-17.23	101.98	110.60
24	1H	1786	A	C2-N3-C4	-16.34	102.43	110.60
24	14	774	A	C2-N3-C4	-16.28	102.46	110.60
24	1H	676	A	C5-N7-C8	-16.25	95.77	103.90
24	1H	140	A	C5-N7-C8	-16.22	95.79	103.90
24	1H	74	A	C2-N3-C4	-16.20	102.50	110.60
24	1H	1617	C	O5'-P-OP1	-15.93	91.37	105.70
24	1H	783	A	C5-N7-C8	-15.77	96.02	103.90
24	1H	1786	A	N7-C8-N9	15.51	121.56	113.80
24	1H	676	A	N3-C4-C5	15.37	137.56	126.80
24	1H	1332	G	N1-C6-O6	15.33	129.10	119.90
24	14	676	A	C2-N3-C4	-15.27	102.96	110.60
24	14	828	U	C5-C4-O4	14.85	134.81	125.90
24	14	676	A	C5-N7-C8	-14.81	96.50	103.90
24	14	2699	C	C6-N1-C2	14.69	126.17	120.30
24	1H	1786	A	C5-N7-C8	-14.67	96.57	103.90
24	1H	71	A	C2-N3-C4	-14.66	103.27	110.60
24	14	783	A	C5-N7-C8	-14.60	96.60	103.90
24	1H	621	A	C2-N3-C4	-14.60	103.30	110.60
24	1H	1332	G	C4-C5-N7	14.49	116.60	110.80
24	14	528	A	C2-N3-C4	-14.46	103.37	110.60
24	14	783	A	C2-N3-C4	-14.15	103.52	110.60
24	1H	828	U	C5-C4-O4	14.15	134.39	125.90
24	14	1616	A	C5-N7-C8	-14.13	96.84	103.90
24	14	774	A	N1-C6-N6	13.98	126.99	118.60
24	1H	1204	A	C2-N3-C4	-13.74	103.73	110.60
24	1H	140	A	N7-C8-N9	13.71	120.66	113.80
24	1H	1332	G	N7-C8-N9	13.65	119.92	113.10
24	1H	1332	G	C6-C5-N7	-13.44	122.33	130.40
24	14	71	A	C2-N3-C4	-13.41	103.89	110.60
24	1H	783	A	N7-C8-N9	13.33	120.46	113.80
24	1H	330	A	C2-N3-C4	-13.26	103.97	110.60
24	1H	783	A	N1-C6-N6	13.22	126.53	118.60
24	1H	2331	G	N1-C6-O6	13.21	127.83	119.90
24	1H	1356	G	O5'-P-OP1	-13.18	93.84	105.70
24	14	676	A	N7-C8-N9	13.17	120.38	113.80
24	1H	784	A	N1-C6-N6	-13.14	110.71	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	676	A	N3-C4-N9	-13.08	116.93	127.40
24	1H	676	A	N7-C8-N9	12.98	120.29	113.80
24	14	2688	U	C5-C4-O4	12.97	133.68	125.90
24	1H	71	A	C5-N7-C8	-12.96	97.42	103.90
24	1H	774	A	N3-C4-C5	12.93	135.85	126.80
24	1H	1616	A	N1-C6-N6	12.89	126.34	118.60
24	14	1616	A	C4-C5-N7	12.83	117.11	110.70
24	1H	2503	A	C5-C6-N6	-12.75	113.50	123.70
24	1H	593	G	O5'-P-OP2	-12.71	94.26	105.70
24	1H	1899	G	N3-C4-C5	12.71	134.95	128.60
24	1H	140	A	C4-C5-N7	12.69	117.05	110.70
24	14	2430	A	N1-C6-N6	12.65	126.19	118.60
24	14	827	U	O5'-P-OP2	-12.59	94.37	105.70
24	1H	2503	A	N1-C6-N6	12.46	126.07	118.60
24	14	1678	G	N3-C4-C5	12.42	134.81	128.60
24	1H	2509	G	C5-C6-O6	-12.37	121.18	128.60
24	1H	2688	U	C5-C4-O4	12.35	133.31	125.90
24	14	2287	A	C2-N3-C4	-12.33	104.44	110.60
24	14	74	A	C2-N3-C4	-12.24	104.48	110.60
24	14	1328	G	C5-C6-O6	-12.23	121.26	128.60
24	1H	2507	C	N3-C2-O2	-12.17	113.38	121.90
24	1H	2238	G	O5'-P-OP2	-12.13	94.78	105.70
24	1H	2490	G	N3-C4-C5	12.13	134.66	128.60
24	1H	1332	G	N3-C4-C5	12.09	134.64	128.60
24	1H	784	A	N9-C4-C5	12.03	110.61	105.80
24	14	774	A	N3-C4-C5	12.03	135.22	126.80
24	14	2518	A	N1-C6-N6	12.03	125.82	118.60
24	14	2688	U	N3-C2-O2	-11.96	113.83	122.20
24	1H	31	C	O5'-P-OP1	-11.91	94.98	105.70
24	1H	1786	A	C8-N9-C4	-11.88	101.05	105.80
24	14	2542	A	N7-C8-N9	-11.79	107.90	113.80
24	1H	1616	A	C5-N7-C8	-11.76	98.02	103.90
24	14	2873	A	N1-C2-N3	11.73	135.17	129.30
24	1H	241	A	O5'-P-OP2	-11.70	95.17	105.70
24	14	1786	A	C8-N9-C4	-11.68	101.13	105.80
24	14	1332	G	C2-N3-C4	-11.68	106.06	111.90
24	14	2032	G	N1-C6-O6	11.66	126.89	119.90
24	14	2688	U	N3-C4-O4	-11.63	111.26	119.40
24	14	1616	A	N1-C6-N6	11.62	125.57	118.60
24	1H	140	A	N1-C6-N6	11.48	125.49	118.60
24	1H	774	A	C5-C6-N1	-11.48	111.96	117.70
24	1H	1899	G	C2-N3-C4	-11.48	106.16	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2036	C	O5'-P-OP2	-11.48	95.37	105.70
24	1H	1192	G	O5'-P-OP2	-11.44	95.40	105.70
24	1H	2490	G	C5-N7-C8	-11.44	98.58	104.30
24	1H	120	U	C5-C6-N1	-11.42	116.99	122.70
24	14	2542	A	C8-N9-C4	11.40	110.36	105.80
24	14	2713	A	C5-N7-C8	-11.40	98.20	103.90
24	1H	752	A	N1-C2-N3	11.39	135.00	129.30
24	1H	2507	C	C6-N1-C2	-11.38	115.75	120.30
24	14	783	A	N7-C8-N9	11.36	119.48	113.80
24	14	2873	A	C2-N3-C4	-11.36	104.92	110.60
24	14	621	A	C2-N3-C4	-11.33	104.93	110.60
53	M5	62	LEU	CA-CB-CG	-11.32	89.25	115.30
24	14	1829	A	O5'-P-OP2	-11.32	95.51	105.70
24	1H	124	G	N1-C6-O6	11.26	126.66	119.90
24	1H	2490	G	C4-C5-N7	11.25	115.30	110.80
24	1H	1950	G	C5-N7-C8	-11.23	98.68	104.30
24	1H	917	A	C2-N3-C4	-11.23	104.99	110.60
24	1H	1899	G	C8-N9-C1'	11.22	141.59	127.00
24	1H	1786	A	N1-C2-N3	11.21	134.91	129.30
24	1H	2374	C	O5'-P-OP2	-11.21	95.61	105.70
24	1H	189	G	C8-N9-C4	11.19	110.87	106.40
24	14	1965	C	N3-C4-C5	11.18	126.37	121.90
24	1H	2554	U	O5'-P-OP1	-11.17	95.64	105.70
24	1H	1678	G	C2-N3-C4	-11.17	106.32	111.90
24	1H	991	C	O5'-P-OP1	-11.15	95.67	105.70
24	14	783	A	N1-C6-N6	11.15	125.29	118.60
24	1H	2439	A	O5'-P-OP2	-11.15	95.67	105.70
24	14	71	A	C5-N7-C8	-11.13	98.34	103.90
24	14	2827	C	C6-N1-C2	11.07	124.73	120.30
24	1H	676	A	C5-C6-N1	-11.01	112.19	117.70
24	14	2713	A	N7-C8-N9	10.98	119.29	113.80
24	14	774	A	C5-N7-C8	-10.94	98.43	103.90
24	1H	774	A	N1-C6-N6	10.91	125.15	118.60
24	14	2689	U	N3-C4-O4	-10.89	111.78	119.40
24	1H	2450	A	O5'-P-OP2	-10.88	95.91	105.70
24	14	1970	A	O5'-P-OP2	-10.88	95.91	105.70
24	1H	2509	G	N1-C6-O6	10.88	126.43	119.90
24	14	330	A	C2-N3-C4	-10.80	105.20	110.60
24	1H	783	A	C4-C5-N7	10.79	116.09	110.70
24	1H	1616	A	C4-C5-N7	10.77	116.09	110.70
24	1H	1496	A	N7-C8-N9	10.76	119.18	113.80
24	1H	1210	A	C5-N7-C8	-10.72	98.54	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	783	A	C4-C5-N7	10.71	116.06	110.70
24	14	774	A	C4-C5-N7	10.71	116.06	110.70
24	14	828	U	N3-C4-O4	-10.71	111.90	119.40
24	14	676	A	C4-C5-N7	10.70	116.05	110.70
24	1H	2403	C	C6-N1-C2	-10.69	116.03	120.30
24	14	1271	G	O5'-P-OP2	-10.67	96.10	105.70
24	14	2569	G	O5'-P-OP2	-10.67	96.10	105.70
24	1H	943	U	O5'-P-OP1	-10.66	96.11	105.70
1	13	758	G	N1-C6-O6	10.65	126.29	119.90
24	1H	140	A	C2-N3-C4	-10.65	105.27	110.60
24	14	1342	A	C2-N3-C4	-10.63	105.29	110.60
24	14	2873	A	C6-C5-N7	-10.62	124.86	132.30
24	1H	2331	G	C8-N9-C4	10.61	110.64	106.40
24	1H	614	U	N3-C2-O2	-10.60	114.78	122.20
24	14	2741	A	C8-N9-C4	10.60	110.04	105.80
24	14	2430	A	C2-N3-C4	-10.56	105.32	110.60
24	1H	746	A	C8-N9-C4	-10.54	101.58	105.80
24	1H	2712	U	N3-C4-O4	-10.52	112.04	119.40
24	1H	1021	A	C2-N3-C4	-10.52	105.34	110.60
24	1H	120	U	C4-C5-C6	10.50	126.00	119.70
24	14	1790	C	N1-C2-O2	-10.49	112.60	118.90
24	1H	853	G	C8-N9-C4	10.47	110.59	106.40
24	14	2346	A	C2-N3-C4	-10.47	105.36	110.60
24	14	1678	G	C2-N3-C4	-10.46	106.67	111.90
24	1H	2327	A	N1-C6-N6	-10.45	112.33	118.60
24	1H	71	A	C4-C5-N7	10.45	115.92	110.70
54	1G	197	A	C8-N9-C4	-10.45	101.62	105.80
24	14	1379	A	N1-C6-N6	10.42	124.85	118.60
24	1H	783	A	C6-C5-N7	-10.41	125.01	132.30
24	1H	2008	C	O5'-P-OP2	-10.41	96.33	105.70
24	14	676	A	N3-C4-C5	10.41	134.09	126.80
24	1H	1602	U	C5-C6-N1	-10.40	117.50	122.70
24	14	1496	A	C5-N7-C8	-10.38	98.71	103.90
24	14	1758	G	N9-C4-C5	10.38	109.55	105.40
24	1H	141	A	C5-N7-C8	-10.37	98.72	103.90
24	1H	2346	A	C2-N3-C4	-10.37	105.42	110.60
24	14	1899	G	C2-N3-C4	-10.35	106.73	111.90
24	1H	2688	U	N3-C2-O2	-10.34	114.96	122.20
54	1G	623	C	C6-N1-C2	-10.34	116.17	120.30
24	1H	1332	G	N1-C2-N3	10.33	130.10	123.90
24	1H	1496	A	C8-N9-C4	-10.32	101.67	105.80
24	14	689	A	O5'-P-OP2	-10.32	96.41	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1496	A	N7-C8-N9	10.30	118.95	113.80
24	14	1786	A	C6-C5-N7	-10.27	125.11	132.30
24	1H	2392	A	N7-C8-N9	10.25	118.92	113.80
22	2K	85	A	N1-C6-N6	10.23	124.74	118.60
24	1H	1899	G	N9-C4-C5	10.20	109.48	105.40
24	14	528	A	C5-N7-C8	-10.20	98.80	103.90
24	1H	74	A	N1-C6-N6	10.18	124.71	118.60
24	14	2699	C	C5-C6-N1	-10.18	115.91	121.00
24	14	1021	A	C2-N3-C4	-10.16	105.52	110.60
24	1H	1698	A	C2-N3-C4	-10.16	105.52	110.60
24	1H	2513	G	C5-C6-O6	-10.16	122.50	128.60
24	14	2346	A	N1-C2-N3	10.13	134.37	129.30
24	14	1790	C	N3-C2-O2	10.13	128.99	121.90
24	1H	1606	G	N9-C4-C5	-10.12	101.35	105.40
24	1H	2037	G	O5'-P-OP2	-10.12	96.60	105.70
24	1H	575	A	C8-N9-C4	10.09	109.84	105.80
24	14	1698	A	C2-N3-C4	-10.09	105.56	110.60
24	1H	51	G	O5'-P-OP1	-10.09	96.62	105.70
24	1H	1614	A	C5-N7-C8	-10.09	98.86	103.90
24	14	2713	A	C8-N9-C4	-10.09	101.77	105.80
24	14	1758	G	N1-C6-O6	-10.08	113.85	119.90
24	14	863	A	O5'-P-OP2	-10.07	96.64	105.70
24	1H	774	A	N3-C4-N9	-10.06	119.35	127.40
24	14	2609	U	O5'-P-OP2	-10.05	96.66	105.70
24	1H	2430	A	N1-C2-N3	10.04	134.32	129.30
24	1H	784	A	C5-C6-N6	10.04	131.73	123.70
24	1H	140	A	C8-N9-C4	-10.03	101.79	105.80
24	1H	2584	U	N3-C2-O2	-9.99	115.21	122.20
24	14	1902	C	N3-C4-N4	-9.99	111.01	118.00
23	4L	18	C	C6-N1-C2	-9.98	116.31	120.30
24	1H	1950	G	C4-C5-N7	9.97	114.79	110.80
24	1H	2712	U	C5-C4-O4	9.96	131.88	125.90
24	14	1786	A	C4-C5-N7	9.95	115.67	110.70
24	1H	783	A	N3-C4-C5	9.93	133.75	126.80
24	1H	676	A	C4-C5-N7	9.90	115.65	110.70
24	1H	2430	A	C5-C6-N1	-9.90	112.75	117.70
24	14	1328	G	C4-C5-N7	9.90	114.76	110.80
24	14	2363	C	C6-N1-C2	9.90	124.26	120.30
24	14	140	A	C5-N7-C8	-9.90	98.95	103.90
24	1H	1193	G	C8-N9-C4	9.89	110.36	106.40
24	1H	2591	C	N1-C2-O2	-9.89	112.97	118.90
24	14	1698	A	C5-N7-C8	-9.87	98.96	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	621	A	N1-C6-N6	9.86	124.52	118.60
24	1H	1957	C	O5'-P-OP2	-9.86	96.82	105.70
24	14	783	A	N3-C4-C5	9.86	133.70	126.80
24	1H	567	A	O5'-P-OP1	-9.86	96.83	105.70
24	1H	1678	G	N3-C4-C5	9.85	133.53	128.60
24	1H	140	A	C6-C5-N7	-9.84	125.41	132.30
24	1H	2362	G	C8-N9-C4	9.82	110.33	106.40
24	14	2639	A	N1-C6-N6	9.81	124.49	118.60
54	1G	337	C	C6-N1-C2	-9.81	116.38	120.30
24	1H	621	A	C5-N7-C8	-9.80	99.00	103.90
24	14	2232	U	N3-C4-C5	-9.79	108.73	114.60
24	14	2688	U	C5-C6-N1	-9.77	117.81	122.70
24	1H	675	A	O5'-P-OP2	-9.77	96.91	105.70
24	1H	124	G	C5-C6-O6	-9.77	122.74	128.60
24	14	827	U	O5'-P-OP1	9.76	122.41	110.70
25	16	81	G	C4-C5-N7	9.76	114.70	110.80
24	1H	1786	A	C6-C5-N7	-9.75	125.47	132.30
24	14	1786	A	N1-C2-N3	9.75	134.18	129.30
24	1H	2331	G	C5-C6-O6	-9.74	122.75	128.60
24	14	1678	G	N3-C4-N9	-9.74	120.16	126.00
24	1H	783	A	C5-C6-N1	-9.73	112.83	117.70
24	1H	783	A	C8-N9-C4	-9.73	101.91	105.80
24	1H	2507	C	N1-C2-O2	9.72	124.73	118.90
24	1H	1614	A	N1-C6-N6	9.72	124.43	118.60
24	1H	783	A	N1-C2-N3	9.70	134.15	129.30
24	1H	2503	A	C4-C5-N7	9.69	115.55	110.70
24	14	750	A	N7-C8-N9	9.67	118.64	113.80
24	1H	71	A	N1-C6-N6	9.65	124.39	118.60
24	1H	973	A	C2-N3-C4	-9.65	105.77	110.60
24	14	621	A	C5-C6-N1	-9.65	112.88	117.70
24	14	2873	A	N1-C6-N6	9.64	124.38	118.60
24	1H	774	A	C5-N7-C8	-9.63	99.08	103.90
24	14	2392	A	C2-N3-C4	-9.63	105.78	110.60
24	14	801	G	C6-C5-N7	9.63	136.18	130.40
1	13	542	G	O5'-P-OP1	-9.60	97.06	105.70
24	1H	1606	G	C8-N9-C4	9.60	110.24	106.40
24	14	783	A	C5-C6-N1	-9.60	112.90	117.70
54	1G	26	A	O5'-P-OP2	-9.59	97.07	105.70
24	14	2873	A	N7-C8-N9	9.57	118.59	113.80
1	13	720	C	C6-N1-C2	-9.57	116.47	120.30
24	1H	743	G	C8-N9-C4	-9.53	102.59	106.40
24	14	2873	A	C4-C5-C6	9.52	121.76	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1950	G	C6-C5-N7	-9.52	124.69	130.40
1	13	1336	C	N1-C2-O2	9.50	124.60	118.90
24	14	211	A	N1-C6-N6	9.50	124.30	118.60
24	1H	746	A	O4'-C1'-N9	9.48	115.78	108.20
24	1H	2571	C	N1-C2-O2	9.48	124.59	118.90
54	1G	300	A	O5'-P-OP1	-9.47	97.18	105.70
24	1H	1204	A	C5-C6-N1	-9.44	112.98	117.70
24	1H	1210	A	N7-C8-N9	9.44	118.52	113.80
24	14	801	G	N1-C6-O6	-9.43	114.24	119.90
24	14	750	A	C5-N7-C8	-9.42	99.19	103.90
1	13	115	G	P-O3'-C3'	9.42	131.00	119.70
24	1H	1899	G	N3-C2-N2	-9.41	113.31	119.90
24	1H	2430	A	N1-C6-N6	9.41	124.24	118.60
24	14	1379	A	C5-N7-C8	-9.40	99.20	103.90
24	1H	946	G	C8-N9-C4	9.40	110.16	106.40
24	1H	1974	C	O5'-P-OP2	-9.38	97.26	105.70
24	14	74	A	C5-C6-N1	-9.37	113.02	117.70
24	1H	613	U	C5-C4-O4	9.36	131.52	125.90
24	14	1786	A	C5-C6-N1	-9.36	113.02	117.70
24	1H	2597	G	N9-C4-C5	-9.33	101.67	105.40
54	1G	197	A	N7-C8-N9	9.31	118.45	113.80
24	1H	2287	A	C2-N3-C4	-9.30	105.95	110.60
24	1H	2571	C	N3-C2-O2	-9.30	115.39	121.90
24	1H	2430	A	N3-C4-C5	9.30	133.31	126.80
24	1H	1950	G	N7-C8-N9	9.29	117.75	113.10
24	14	676	A	C8-N9-C4	-9.29	102.08	105.80
24	1H	1698	A	N1-C6-N6	9.27	124.16	118.60
24	14	752	A	N1-C2-N3	9.26	133.93	129.30
24	1H	2620	C	N3-C4-N4	9.25	124.47	118.00
24	14	801	G	O5'-P-OP2	-9.24	97.38	105.70
24	14	242	G	N1-C6-O6	9.23	125.44	119.90
25	1J	95	U	N1-C2-O2	-9.23	116.33	122.80
24	1H	329	G	O5'-P-OP2	-9.23	97.40	105.70
24	1H	2361	A	O5'-P-OP2	-9.23	97.40	105.70
24	14	1609	A	N1-C6-N6	-9.22	113.07	118.60
24	1H	74	A	C5-N7-C8	-9.22	99.29	103.90
24	14	530	G	C4-C5-N7	9.21	114.48	110.80
24	14	1342	A	N1-C6-N6	9.20	124.12	118.60
24	14	1950	G	C5-N7-C8	-9.20	99.70	104.30
24	14	242	G	C8-N9-C4	9.20	110.08	106.40
24	14	1558	A	C2-N3-C4	-9.18	106.01	110.60
24	14	2503	A	C5-C6-N6	-9.18	116.36	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1332	G	N7-C8-N9	9.17	117.69	113.10
24	14	2078	C	O5'-P-OP2	9.17	121.70	110.70
24	14	2542	A	C5-N7-C8	9.17	108.48	103.90
24	1H	2392	A	C5-N7-C8	-9.16	99.32	103.90
24	1H	2330	G	C8-N9-C4	9.16	110.06	106.40
24	14	1786	A	N1-C6-N6	9.16	124.09	118.60
24	1H	1607	C	O5'-P-OP2	-9.15	97.46	105.70
24	1H	1965	C	N3-C4-C5	9.15	125.56	121.90
54	1G	525	C	C5-C6-N1	9.15	125.57	121.00
24	1H	860	U	C4-C5-C6	9.14	125.19	119.70
24	14	783	A	C6-C5-N7	-9.14	125.90	132.30
24	14	1616	A	N7-C8-N9	9.13	118.37	113.80
24	14	2518	A	C5-N7-C8	-9.12	99.34	103.90
24	1H	189	G	C5-C6-O6	-9.09	123.14	128.60
24	14	74	A	N1-C6-N6	9.08	124.05	118.60
24	1H	260	G	C5-C6-O6	-9.07	123.16	128.60
22	2K	85	A	C5-C6-N6	-9.07	116.45	123.70
24	14	1821	A	C6-N1-C2	-9.07	113.16	118.60
24	14	508	G	O5'-P-OP1	-9.06	97.54	105.70
24	1H	788	A	N1-C6-N6	9.05	124.03	118.60
25	16	81	G	C6-C5-N7	-9.05	124.97	130.40
24	1H	1251	C	C4-C5-C6	9.04	121.92	117.40
24	1H	930	U	C5-C4-O4	9.03	131.31	125.90
24	1H	141	A	C4-C5-N7	9.02	115.21	110.70
24	14	1528	A	N7-C8-N9	9.02	118.31	113.80
24	14	128	C	C6-N1-C2	-9.01	116.70	120.30
24	14	988	A	N1-C6-N6	9.01	124.00	118.60
24	1H	1543	A	N1-C6-N6	9.00	124.00	118.60
1	13	690	G	C2-N3-C4	-8.99	107.40	111.90
24	1H	966	G	O5'-P-OP2	-8.99	97.61	105.70
24	1H	1895	C	C6-N1-C2	-8.99	116.70	120.30
24	1H	2427	C	N1-C2-O2	-8.98	113.51	118.90
24	1H	330	A	N1-C2-N3	8.97	133.79	129.30
24	14	2518	A	C2-N3-C4	-8.97	106.11	110.60
2	1E	155	LEU	CA-CB-CG	8.96	135.91	115.30
1	13	1336	C	C2-N1-C1'	8.96	128.66	118.80
24	1H	2429	G	O5'-P-OP1	8.94	121.42	110.70
24	1H	204	A	N1-C2-N3	8.93	133.77	129.30
24	1H	1600	C	O5'-P-OP2	-8.93	97.66	105.70
24	14	71	A	N1-C6-N6	8.92	123.95	118.60
1	13	251	G	N1-C6-O6	8.91	125.25	119.90
24	1H	453	C	C5-C4-N4	-8.91	113.96	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2331	G	N9-C4-C5	-8.91	101.83	105.40
24	14	1681	G	C5-N7-C8	-8.91	99.84	104.30
24	1H	330	A	C5-N7-C8	-8.90	99.45	103.90
24	1H	2271	G	N3-C4-N9	8.89	131.34	126.00
24	1H	2713	A	N7-C8-N9	8.89	118.25	113.80
24	1H	1204	A	N1-C6-N6	8.88	123.93	118.60
1	13	254	G	O5'-P-OP1	-8.88	97.71	105.70
1	13	1158	C	C2-N1-C1'	8.87	128.55	118.80
24	14	2032	G	C6-C5-N7	-8.87	125.08	130.40
24	1H	1781	C	N3-C4-N4	-8.85	111.80	118.00
24	14	2689	U	C5-C4-O4	8.85	131.21	125.90
24	1H	1786	A	C4-C5-N7	8.85	115.12	110.70
24	1H	444	C	C6-N1-C2	-8.85	116.76	120.30
54	1G	899	C	N1-C2-O2	8.85	124.21	118.90
24	14	1681	G	N3-C4-C5	8.84	133.02	128.60
24	1H	1602	U	O5'-P-OP2	8.82	121.28	110.70
24	1H	1614	A	C2-N3-C4	-8.82	106.19	110.60
24	14	2685	G	C8-N9-C4	8.82	109.93	106.40
24	14	1694	C	C6-N1-C2	8.81	123.82	120.30
24	1H	2029	G	O5'-P-OP1	-8.80	97.78	105.70
24	1H	189	G	N1-C6-O6	8.79	125.18	119.90
24	1H	2713	A	C5-N7-C8	-8.79	99.50	103.90
24	1H	1227	A	C8-N9-C4	8.79	109.31	105.80
24	14	2438	U	O5'-P-OP2	-8.78	97.79	105.70
24	1H	1404	C	O5'-P-OP1	-8.78	97.80	105.70
24	14	2375	G	C8-N9-C4	8.77	109.91	106.40
24	1H	1798	U	O5'-P-OP2	-8.77	97.81	105.70
24	1H	1663	C	C6-N1-C2	8.76	123.80	120.30
24	14	140	A	C4-C5-N7	8.76	115.08	110.70
24	14	1328	G	N1-C6-O6	8.75	125.15	119.90
24	1H	2430	A	O5'-P-OP1	-8.75	97.83	105.70
24	14	2439	A	O5'-P-OP2	-8.75	97.83	105.70
24	14	1903	G	O5'-P-OP1	-8.74	97.83	105.70
24	14	1332	G	C5-N7-C8	-8.74	99.93	104.30
24	1H	1142(A)	A	C2-N3-C4	-8.74	106.23	110.60
24	14	2503	A	N1-C6-N6	8.74	123.84	118.60
24	1H	1332	G	N3-C4-N9	-8.73	120.76	126.00
24	14	621	A	N1-C6-N6	8.73	123.84	118.60
24	1H	1393	A	O5'-P-OP2	-8.73	97.84	105.70
24	1H	946	G	N7-C8-N9	-8.72	108.74	113.10
24	14	453	C	C6-N1-C2	8.71	123.79	120.30
24	14	1332	G	C8-N9-C4	-8.72	102.91	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2699	C	N3-C4-C5	8.71	125.38	121.90
24	14	510	C	O5'-P-OP2	-8.71	97.87	105.70
24	14	1649	G	C8-N9-C4	-8.70	102.92	106.40
1	13	690	G	O4'-C1'-N9	8.69	115.15	108.20
24	14	208	C	N1-C2-O2	-8.69	113.68	118.90
24	1H	621	A	N7-C8-N9	8.69	118.14	113.80
24	14	528	A	N3-C4-C5	8.69	132.88	126.80
24	1H	71	A	N1-C2-N3	8.68	133.64	129.30
24	1H	74	A	C5-C6-N1	-8.68	113.36	117.70
24	1H	1772	G	N1-C6-O6	-8.68	114.69	119.90
24	14	1342	A	C6-C5-N7	-8.66	126.24	132.30
24	14	856	C	O5'-P-OP1	-8.66	97.91	105.70
24	1H	978	G	C2-N3-C4	-8.65	107.57	111.90
24	14	1579	A	N1-C6-N6	8.65	123.79	118.60
24	1H	1366	A	N1-C6-N6	8.65	123.79	118.60
24	14	213	A	C5-C6-N6	-8.64	116.78	123.70
24	1H	1564	C	C6-N1-C2	-8.64	116.84	120.30
24	1H	1614	A	C6-C5-N7	-8.64	126.25	132.30
24	1H	736	C	N1-C2-O2	-8.63	113.72	118.90
24	14	489	G	C8-N9-C4	-8.63	102.95	106.40
1	13	974	A	O4'-C1'-N9	8.63	115.10	108.20
54	1G	1502	A	N1-C2-N3	8.63	133.61	129.30
24	1H	1298	C	N1-C2-O2	8.63	124.08	118.90
24	14	141	A	C5-N7-C8	-8.63	99.59	103.90
24	14	530	G	C5-N7-C8	-8.60	100.00	104.30
25	16	14	U	O5'-P-OP2	-8.60	97.97	105.70
24	1H	1616	A	C6-C5-N7	-8.59	126.28	132.30
24	1H	593	G	C6-C5-N7	-8.59	125.25	130.40
24	14	1373	A	C8-N9-C4	8.59	109.24	105.80
24	1H	1786	A	N1-C6-N6	8.59	123.75	118.60
24	1H	676	A	O4'-C1'-N9	8.58	115.07	108.20
24	1H	1616	A	N7-C8-N9	8.57	118.09	113.80
24	1H	1307	A	N1-C6-N6	8.56	123.74	118.60
24	1H	757	U	O5'-P-OP2	-8.55	98.00	105.70
24	14	330	A	N1-C2-N3	8.55	133.58	129.30
24	1H	1899	G	C4-N9-C1'	-8.55	115.39	126.50
54	1G	690	G	N3-C4-C5	8.55	132.87	128.60
24	1H	1306	C	O5'-P-OP1	-8.55	98.01	105.70
1	13	1499	A	C8-N9-C4	8.54	109.22	105.80
24	1H	1624	G	C8-N9-C4	8.54	109.82	106.40
24	1H	2689	U	N3-C4-O4	-8.54	113.42	119.40
24	14	2029	G	N1-C6-O6	-8.54	114.78	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2430	A	C6-C5-N7	-8.54	126.33	132.30
24	1H	1989	G	N3-C2-N2	-8.53	113.93	119.90
24	14	1899	G	N3-C4-N9	-8.52	120.89	126.00
24	1H	1613	G	N3-C2-N2	8.51	125.86	119.90
24	14	213	A	N1-C6-N6	8.51	123.70	118.60
24	1H	1178	C	N1-C2-O2	8.50	124.00	118.90
1	13	1158	C	N1-C2-O2	8.49	124.00	118.90
24	14	330	A	N1-C6-N6	8.49	123.70	118.60
24	14	783	A	C8-N9-C4	-8.49	102.40	105.80
24	1H	1604	C	N1-C2-O2	-8.49	113.81	118.90
24	14	1950	G	N7-C8-N9	8.48	117.34	113.10
24	14	661	C	N3-C4-C5	-8.48	118.51	121.90
24	1H	2247	A	O5'-P-OP1	-8.48	98.07	105.70
24	1H	1309	G	O5'-P-OP1	8.47	120.86	110.70
1	13	745	C	C6-N1-C2	-8.47	116.91	120.30
24	1H	1899	G	C8-N9-C4	-8.46	103.01	106.40
24	14	2822	G	N3-C4-N9	8.46	131.07	126.00
24	1H	662	G	C4-C5-N7	-8.46	107.42	110.80
24	1H	1313	U	C5-C6-N1	8.43	126.92	122.70
24	14	71	A	N1-C2-N3	8.43	133.52	129.30
24	1H	125	G	C5-C6-O6	-8.43	123.54	128.60
24	14	2518	A	C4-C5-N7	8.43	114.91	110.70
24	1H	2503	A	N9-C4-C5	-8.42	102.43	105.80
24	14	1950	G	C4-C5-N7	8.41	114.17	110.80
24	1H	691	C	N3-C2-O2	8.40	127.78	121.90
24	14	1520	U	C5-C4-O4	8.40	130.94	125.90
24	14	1285	G	C5-C6-O6	-8.40	123.56	128.60
1	13	690	G	C8-N9-C4	-8.40	103.04	106.40
24	14	329	G	C5-C6-N1	8.40	115.70	111.50
24	1H	1568	G	N1-C6-O6	8.39	124.94	119.90
24	1H	917	A	N1-C6-N6	8.39	123.63	118.60
24	1H	1332	G	C5-C6-N1	-8.39	107.31	111.50
24	1H	1989	G	N1-C6-O6	8.39	124.94	119.90
24	1H	120	U	C5-C4-O4	8.38	130.93	125.90
24	14	1332	G	N1-C2-N3	8.38	128.93	123.90
24	1H	222	A	P-O3'-C3'	8.38	129.76	119.70
24	1H	1368	G	O5'-P-OP2	-8.38	98.16	105.70
24	14	1142(A)	A	C2-N3-C4	-8.37	106.41	110.60
24	1H	1250	G	N1-C6-O6	-8.37	114.88	119.90
24	1H	1942	C	C5-C6-N1	8.36	125.18	121.00
24	1H	2422	A	C8-N9-C4	-8.36	102.45	105.80
24	14	2001	A	C5-N7-C8	-8.36	99.72	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2584	U	N3-C2-O2	-8.36	116.35	122.20
24	1H	859	G	N3-C4-C5	8.36	132.78	128.60
24	14	2859	G	C8-N9-C4	-8.35	103.06	106.40
24	1H	2490	G	N3-C4-N9	-8.35	120.99	126.00
24	1H	1332	G	C5-C6-O6	-8.35	123.59	128.60
54	1G	366	C	C6-N1-C2	8.34	123.64	120.30
24	14	512	G	O5'-P-OP1	-8.34	98.20	105.70
24	14	621	A	C5-N7-C8	-8.33	99.73	103.90
24	1H	210	C	C6-N1-C2	8.33	123.63	120.30
24	14	1348	G	O5'-P-OP2	8.32	120.69	110.70
24	1H	2446	G	N1-C6-O6	8.32	124.89	119.90
24	1H	783	A	N3-C4-N9	-8.32	120.75	127.40
24	14	2545	G	N1-C6-O6	8.32	124.89	119.90
24	1H	26	G	O5'-P-OP2	-8.31	98.22	105.70
24	1H	1379	A	N1-C6-N6	8.31	123.59	118.60
24	14	583	G	C5-C6-O6	-8.31	123.61	128.60
24	1H	1950	G	C2-N3-C4	-8.31	107.75	111.90
54	1G	690	G	C5-N7-C8	-8.31	100.14	104.30
24	1H	863	A	O5'-P-OP2	-8.30	98.23	105.70
24	1H	1337	G	OP1-P-O3'	8.30	123.46	105.20
24	1H	1611	C	C6-N1-C2	8.29	123.62	120.30
24	1H	1821	A	N1-C2-N3	8.29	133.44	129.30
24	1H	659	C	C5-C6-N1	-8.28	116.86	121.00
24	14	1241	A	C2-N3-C4	-8.28	106.46	110.60
24	1H	930	U	O5'-P-OP2	-8.28	98.25	105.70
54	1G	309	G	N1-C6-O6	8.28	124.87	119.90
24	1H	2573	C	C2-N1-C1'	8.27	127.90	118.80
24	1H	252	G	O5'-P-OP2	-8.27	98.26	105.70
24	1H	1193	G	O5'-P-OP2	-8.27	98.26	105.70
24	1H	2679	A	O5'-P-OP2	-8.27	98.26	105.70
36	88	88	GLY	N-CA-C	-8.27	92.44	113.10
24	1H	461	C	N1-C2-O2	-8.26	113.94	118.90
24	14	2463	C	C6-N1-C2	8.26	123.61	120.30
24	14	2518	A	C6-C5-N7	-8.26	126.52	132.30
24	1H	1496	A	C5-N7-C8	-8.26	99.77	103.90
24	1H	510	C	C6-N1-C2	8.26	123.60	120.30
54	1G	1517	G	O5'-P-OP2	-8.25	98.27	105.70
24	14	1790	C	C6-N1-C2	8.25	123.60	120.30
24	1H	2392	A	C8-N9-C4	-8.25	102.50	105.80
24	1H	508	G	C4-C5-N7	8.24	114.10	110.80
24	14	2439	A	P-O3'-C3'	8.24	129.59	119.70
24	1H	621	A	C5-C6-N1	-8.24	113.58	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2513	G	O5'-P-OP2	-8.23	98.29	105.70
24	14	1260	G	N1-C6-O6	8.23	124.84	119.90
24	14	1644	C	N1-C2-O2	8.23	123.84	118.90
24	1H	226	G	N1-C6-O6	8.23	124.84	119.90
24	1H	930	U	N3-C4-O4	-8.23	113.64	119.40
24	1H	2527	C	C5-C6-N1	8.22	125.11	121.00
24	1H	1178	C	N3-C2-O2	-8.22	116.15	121.90
24	14	2253	G	O5'-P-OP2	-8.22	98.30	105.70
41	D8	18	LEU	CA-CB-CG	8.21	134.18	115.30
24	1H	621	A	C6-C5-N7	-8.20	126.56	132.30
24	14	2273	A	O5'-P-OP2	-8.20	98.32	105.70
24	14	2688	U	N1-C2-N3	8.19	119.82	114.90
24	14	805	G	C8-N9-C4	-8.19	103.12	106.40
24	14	676	A	O4'-C1'-N9	8.19	114.75	108.20
24	14	1528	A	C5-N7-C8	-8.18	99.81	103.90
24	14	383	U	C5-C6-N1	-8.18	118.61	122.70
24	14	562	U	N1-C2-N3	8.18	119.81	114.90
24	1H	1669	A	N7-C8-N9	8.18	117.89	113.80
24	1H	1786	A	C5-C6-N1	-8.17	113.62	117.70
24	14	582	G	N1-C6-O6	8.17	124.80	119.90
24	1H	672	C	O5'-P-OP1	8.16	120.50	110.70
24	1H	2012	G	O5'-P-OP1	-8.16	98.36	105.70
24	14	783	A	N3-C4-N9	-8.15	120.88	127.40
24	14	1931	U	C5-C6-N1	8.14	126.77	122.70
24	1H	1021	A	C5-N7-C8	-8.14	99.83	103.90
24	14	1758	G	C8-N9-C4	-8.13	103.15	106.40
24	1H	2590	A	C2-N3-C4	-8.12	106.54	110.60
24	14	71	A	C4-C5-N7	8.12	114.76	110.70
24	14	1681	G	C2-N3-C4	-8.12	107.84	111.90
24	1H	481	G	O4'-C1'-N9	8.12	114.70	108.20
24	1H	71	A	N3-C4-C5	8.11	132.48	126.80
24	14	566	U	C5-C6-N1	-8.11	118.64	122.70
24	14	676	A	N3-C4-N9	-8.11	120.91	127.40
24	14	1323	U	N3-C2-O2	8.10	127.87	122.20
24	1H	1829	A	O5'-P-OP1	-8.10	98.41	105.70
24	1H	1413	G	C8-N9-C4	-8.10	103.16	106.40
24	1H	729	G	C8-N9-C4	-8.10	103.16	106.40
24	1H	2331	G	N3-C4-C5	8.10	132.65	128.60
24	1H	1327	C	O5'-P-OP2	-8.09	98.42	105.70
24	14	140	A	N1-C6-N6	8.09	123.45	118.60
24	1H	1210	A	N1-C6-N6	8.09	123.45	118.60
24	1H	2443	C	O5'-P-OP2	8.09	120.41	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	725	G	O5'-P-OP1	-8.08	98.43	105.70
24	1H	1331	A	N1-C6-N6	-8.07	113.75	118.60
24	14	687	C	O5'-P-OP1	-8.07	98.43	105.70
24	14	1950	G	C6-C5-N7	-8.07	125.56	130.40
24	1H	1275	A	C5-C6-N6	-8.07	117.25	123.70
24	1H	831	G	C8-N9-C4	8.06	109.63	106.40
24	1H	2705	A	C8-N9-C4	8.06	109.03	105.80
24	14	1379	A	C4-C5-N7	8.06	114.73	110.70
24	14	1764	G	C5-C6-N1	8.06	115.53	111.50
24	1H	396	G	N3-C2-N2	-8.06	114.26	119.90
24	1H	840	C	C6-N1-C2	8.05	123.52	120.30
24	1H	38	A	C8-N9-C4	-8.05	102.58	105.80
24	14	1899	G	N1-C2-N3	8.05	128.73	123.90
24	1H	74	A	N1-C2-N3	8.05	133.32	129.30
24	1H	1616	A	O4'-C1'-N9	8.05	114.64	108.20
24	1H	2573	C	N3-C2-O2	-8.05	116.27	121.90
24	14	1187	G	C8-N9-C4	-8.05	103.18	106.40
24	1H	189	G	N9-C4-C5	-8.04	102.18	105.40
24	1H	2688	U	N1-C2-N3	8.04	119.72	114.90
24	1H	1950	G	C8-N9-C4	-8.04	103.19	106.40
1	13	882	C	C6-N1-C2	-8.03	117.09	120.30
24	1H	1965	C	C4-C5-C6	-8.03	113.39	117.40
24	14	1616	A	O4'-C1'-N9	8.03	114.62	108.20
24	1H	1385	G	N3-C4-N9	-8.02	121.19	126.00
24	1H	2271	G	C5-C6-O6	-8.02	123.79	128.60
24	1H	445	C	C6-N1-C2	-8.02	117.09	120.30
24	1H	1616	A	C5-C6-N6	-8.02	117.28	123.70
25	16	81	G	C5-N7-C8	-8.02	100.29	104.30
24	1H	1807	G	C8-N9-C4	8.01	109.61	106.40
24	1H	2688	U	C6-N1-C2	-8.01	116.19	121.00
24	1H	71	A	N7-C8-N9	8.01	117.81	113.80
24	1H	1513	C	C6-N1-C2	-8.01	117.10	120.30
24	1H	380	U	O5'-P-OP2	-8.01	98.49	105.70
24	14	1830	C	C5-C4-N4	-8.00	114.60	120.20
24	14	2779	U	N3-C4-O4	-8.00	113.80	119.40
24	14	583	G	C4-C5-N7	7.99	114.00	110.80
24	1H	773	U	N1-C2-N3	7.99	119.69	114.90
24	1H	1629	U	N3-C4-C5	-7.99	109.81	114.60
24	1H	575	A	N7-C8-N9	-7.98	109.81	113.80
24	14	2584	U	C2-N1-C1'	7.98	127.27	117.70
24	1H	2713	A	C8-N9-C4	-7.98	102.61	105.80
54	1G	579	G	O5'-P-OP2	-7.98	98.52	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1698	A	C6-C5-N7	-7.97	126.72	132.30
25	1J	61	G	O5'-P-OP1	-7.97	98.53	105.70
24	1H	978	G	N3-C4-C5	7.96	132.58	128.60
24	14	1616	A	N9-C4-C5	-7.96	102.61	105.80
22	2L	10	C	N3-C2-O2	-7.96	116.33	121.90
24	14	1758	G	C5-C6-O6	7.96	133.37	128.60
24	1H	2211	G	N1-C6-O6	7.95	124.67	119.90
24	1H	2439	A	C8-N9-C4	-7.95	102.62	105.80
24	1H	1936	A	C5-C6-N6	-7.95	117.34	123.70
24	1H	2518	A	C5-N7-C8	-7.95	99.92	103.90
24	1H	736	C	N3-C2-O2	7.95	127.46	121.90
24	1H	1250	G	C5-C6-O6	7.95	133.37	128.60
24	1H	2346	A	C5-C6-N1	-7.95	113.73	117.70
24	14	1332	G	N3-C4-N9	-7.94	121.23	126.00
24	1H	1298	C	C5-C6-N1	7.94	124.97	121.00
24	1H	1142(A)	A	N3-C4-N9	-7.93	121.05	127.40
24	1H	1812	A	N1-C2-N3	7.93	133.27	129.30
24	1H	74	A	C6-C5-N7	-7.93	126.75	132.30
24	1H	917	A	N1-C2-N3	7.93	133.26	129.30
24	1H	2347	C	O5'-P-OP2	-7.93	98.57	105.70
24	14	1614	A	N7-C8-N9	7.92	117.76	113.80
24	14	1681	G	C4-C5-N7	7.92	113.97	110.80
24	1H	2685	G	C5-C6-N1	-7.92	107.54	111.50
24	1H	2434	A	C8-N9-C4	7.91	108.97	105.80
24	14	2723	C	C6-N1-C2	-7.91	117.13	120.30
24	14	912	C	C6-N1-C2	-7.91	117.14	120.30
24	1H	1950	G	O4'-C1'-N9	7.91	114.53	108.20
1	13	689	C	C6-N1-C2	-7.91	117.14	120.30
24	14	1602	U	N3-C4-C5	-7.90	109.86	114.60
24	1H	1528	A	N7-C8-N9	7.90	117.75	113.80
24	14	192	C	C2-N3-C4	7.90	123.85	119.90
24	1H	621	A	N1-C2-N3	7.90	133.25	129.30
25	16	22	U	C5-C6-N1	7.90	126.65	122.70
24	14	954	G	O5'-P-OP2	7.90	120.18	110.70
24	14	922	U	O5'-P-OP1	-7.88	98.60	105.70
54	1G	13	U	C5-C6-N1	-7.88	118.76	122.70
24	1H	752	A	C6-N1-C2	-7.88	113.87	118.60
24	14	797	C	C5-C4-N4	-7.87	114.69	120.20
24	14	943	U	O5'-P-OP1	-7.87	98.62	105.70
24	14	676	A	N1-C6-N6	7.87	123.32	118.60
24	1H	839	U	O5'-P-OP2	-7.86	98.63	105.70
24	1H	853	G	N9-C4-C5	-7.86	102.26	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	617	G	C8-N9-C4	7.85	109.54	106.40
24	1H	141	A	N7-C8-N9	7.85	117.72	113.80
24	14	2498	C	C6-N1-C2	7.85	123.44	120.30
24	14	528	A	N3-C4-N9	-7.84	121.13	127.40
24	1H	933	A	C8-N9-C4	-7.84	102.67	105.80
24	14	2502	G	O5'-P-OP1	-7.84	98.64	105.70
24	1H	2779	U	C5-C4-O4	7.83	130.60	125.90
24	1H	71	A	O4'-C1'-N9	-7.83	101.93	108.20
24	14	1319	G	C8-N9-C4	-7.83	103.27	106.40
24	1H	2238	G	C8-N9-C4	7.83	109.53	106.40
24	14	974(A)	C	N3-C2-O2	-7.83	116.42	121.90
24	1H	109	G	N1-C6-O6	-7.83	115.20	119.90
24	14	71	A	N7-C8-N9	7.83	117.71	113.80
24	14	2822	G	N3-C4-C5	-7.81	124.69	128.60
24	1H	1296	G	OP2-P-O3'	7.81	122.38	105.20
24	1H	2689	U	C5-C4-O4	7.81	130.58	125.90
24	1H	1202	C	N3-C2-O2	7.80	127.36	121.90
24	1H	1614	A	C4-C5-N7	7.80	114.60	110.70
24	14	2032	G	C4-C5-N7	7.80	113.92	110.80
24	14	1773	A	O5'-P-OP1	7.80	120.06	110.70
24	1H	920	G	C8-N9-C4	7.79	109.52	106.40
24	14	2375	G	N9-C4-C5	-7.79	102.28	105.40
24	1H	1383	C	N1-C2-O2	-7.79	114.22	118.90
24	14	1496	A	N1-C6-N6	7.79	123.27	118.60
24	1H	954	G	O5'-P-OP2	7.79	120.05	110.70
24	14	2477	C	C2-N1-C1'	7.79	127.37	118.80
54	1G	1200	C	N1-C2-O2	7.79	123.57	118.90
24	14	2387	U	C5-C6-N1	-7.78	118.81	122.70
24	14	2429	G	C8-N9-C4	-7.78	103.29	106.40
24	1H	2618	G	N3-C4-C5	-7.78	124.71	128.60
24	1H	2584	U	C2-N1-C1'	7.78	127.04	117.70
24	1H	1463	C	C6-N1-C2	-7.77	117.19	120.30
24	1H	2232	U	C6-N1-C2	-7.77	116.34	121.00
24	14	1302	A	OP1-P-OP2	7.77	131.26	119.60
22	2K	85	A	C4-C5-N7	7.77	114.58	110.70
24	1H	1790	C	C6-N1-C2	7.77	123.41	120.30
24	14	1698	A	N7-C8-N9	7.77	117.68	113.80
1	13	1433	A	N1-C2-N3	7.77	133.18	129.30
24	1H	1518	C	C5-C6-N1	7.76	124.88	121.00
24	1H	2417	C	O5'-P-OP2	-7.76	98.71	105.70
24	14	1353	A	N9-C4-C5	7.76	108.91	105.80
24	1H	513	A	C8-N9-C4	-7.76	102.70	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	113	G	C8-N9-C4	7.76	109.50	106.40
24	1H	1678	G	N3-C4-N9	-7.76	121.34	126.00
24	14	1790	C	C5-C4-N4	-7.76	114.77	120.20
24	1H	40	C	O5'-P-OP2	-7.76	98.72	105.70
24	1H	2085	C	O5'-P-OP2	-7.76	98.72	105.70
24	14	1260	G	C5-C6-O6	-7.76	123.95	128.60
22	3L	33	C	C6-N1-C2	-7.75	117.20	120.30
24	14	774	A	N3-C4-N9	-7.75	121.20	127.40
24	1H	1626	G	N3-C2-N2	-7.75	114.48	119.90
1	13	866	C	N1-C2-O2	-7.74	114.26	118.90
24	1H	1614	A	N7-C8-N9	7.73	117.67	113.80
1	13	690	G	N7-C8-N9	7.73	116.97	113.10
24	14	1678	G	C5-N7-C8	-7.73	100.44	104.30
24	1H	2618	G	C8-N9-C4	-7.73	103.31	106.40
25	16	81	G	C5-C6-O6	-7.72	123.97	128.60
24	14	583	G	N1-C6-O6	7.72	124.53	119.90
24	1H	1204	A	N3-C4-C5	7.72	132.20	126.80
24	1H	705	A	N1-C6-N6	7.71	123.23	118.60
1	13	789	U	N3-C2-O2	-7.71	116.81	122.20
24	1H	264	C	N1-C2-O2	7.71	123.52	118.90
24	1H	719	C	C6-N1-C2	-7.70	117.22	120.30
25	16	81	G	N1-C6-O6	7.69	124.52	119.90
24	14	2032	G	C5-C6-O6	-7.69	123.98	128.60
24	1H	2573	C	C6-N1-C2	-7.69	117.22	120.30
24	14	1997	G	C8-N9-C4	7.69	109.48	106.40
24	1H	2054	A	OP2-P-O3'	7.68	122.10	105.20
24	1H	2430	A	C5-N7-C8	-7.68	100.06	103.90
24	14	1500	G	C6-C5-N7	-7.68	125.79	130.40
1	13	1354	C	C6-N1-C2	-7.68	117.23	120.30
1	13	1517	G	O5'-P-OP2	-7.68	98.79	105.70
24	14	2699	C	C2-N3-C4	-7.67	116.06	119.90
24	1H	1611	C	C5-C6-N1	-7.67	117.16	121.00
24	14	2818	G	C5-C6-O6	-7.67	124.00	128.60
24	14	2342	C	C6-N1-C2	-7.66	117.23	120.30
24	14	2455	G	C5-C6-O6	-7.66	124.00	128.60
24	1H	49	A	C5-N7-C8	7.66	107.73	103.90
24	1H	2023	G	N3-C2-N2	-7.66	114.54	119.90
24	1H	74	A	N3-C4-C5	7.66	132.16	126.80
24	14	1192	G	C5-C6-N1	-7.66	107.67	111.50
24	1H	1428	C	O5'-P-OP2	7.64	119.87	110.70
24	1H	772	C	N3-C4-C5	-7.64	118.84	121.90
24	14	138	G	C8-N9-C4	-7.64	103.35	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2550	G	N3-C2-N2	-7.63	114.56	119.90
24	1H	2455	G	C8-N9-C4	7.63	109.45	106.40
24	14	1614	A	C8-N9-C4	-7.63	102.75	105.80
24	14	1022	G	N3-C2-N2	-7.63	114.56	119.90
24	14	1616	A	N3-C4-C5	7.62	132.14	126.80
24	1H	1299	G	N7-C8-N9	7.62	116.91	113.10
24	14	140	A	N7-C8-N9	7.62	117.61	113.80
24	1H	1204	A	C5-N7-C8	-7.62	100.09	103.90
24	14	2542	A	O5'-P-OP2	-7.62	98.85	105.70
24	1H	2502	G	O5'-P-OP2	-7.61	98.85	105.70
54	1G	904	C	O5'-P-OP1	-7.61	98.85	105.70
25	1J	55	U	O5'-P-OP1	-7.60	98.86	105.70
24	14	138	G	N3-C4-C5	-7.60	124.80	128.60
24	14	2001	A	C4-C5-N7	7.60	114.50	110.70
54	1G	1200	C	C2-N1-C1'	7.59	127.15	118.80
24	14	692	C	N3-C4-C5	7.59	124.94	121.90
24	1H	248	G	O5'-P-OP2	-7.59	98.87	105.70
24	14	1698	A	C4-C5-N7	7.59	114.50	110.70
24	1H	746	A	N9-C4-C5	7.58	108.83	105.80
24	1H	1413	G	N7-C8-N9	7.58	116.89	113.10
24	1H	2330	G	N1-C6-O6	7.58	124.45	119.90
24	1H	508	G	C5-N7-C8	-7.58	100.51	104.30
24	1H	676	A	C8-N9-C4	-7.58	102.77	105.80
24	1H	2287	A	N1-C2-N3	7.58	133.09	129.30
24	1H	2497	A	C6-N1-C2	-7.58	114.06	118.60
24	1H	2451	A	N1-C6-N6	-7.57	114.06	118.60
24	1H	2554	U	N1-C2-O2	-7.57	117.50	122.80
24	14	197	A	C2-N3-C4	-7.57	106.82	110.60
24	14	1610	A	O5'-P-OP2	-7.57	98.89	105.70
24	1H	1005	C	O5'-P-OP1	-7.56	98.89	105.70
1	13	826	C	C6-N1-C2	-7.56	117.28	120.30
24	1H	2714	G	N1-C6-O6	7.56	124.44	119.90
24	14	148	C	C6-N1-C2	7.56	123.32	120.30
24	14	1698	A	N3-C4-C5	7.56	132.09	126.80
24	14	2029	G	N9-C4-C5	7.56	108.42	105.40
24	14	2724	C	C6-N1-C2	7.55	123.32	120.30
24	1H	2509	G	O5'-P-OP1	-7.55	98.90	105.70
24	1H	1379	A	C6-C5-N7	-7.55	127.02	132.30
24	1H	1313	U	C2-N1-C1'	7.54	126.75	117.70
24	14	2060	A	C8-N9-C4	-7.54	102.78	105.80
24	1H	201	C	N3-C4-N4	7.54	123.28	118.00
24	14	1786	A	N3-C4-C5	7.54	132.08	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	730	C	O5'-P-OP2	-7.54	98.92	105.70
24	1H	614	U	N1-C2-O2	7.54	128.07	122.80
24	1H	1672	C	O5'-P-OP1	-7.54	98.92	105.70
24	1H	49	A	N7-C8-N9	-7.53	110.03	113.80
24	1H	1669	A	C8-N9-C4	-7.53	102.79	105.80
24	1H	1882	C	C5-C6-N1	7.52	124.76	121.00
24	14	528	A	N1-C6-N6	7.52	123.11	118.60
24	14	2502	G	N3-C4-C5	-7.52	124.84	128.60
24	1H	528	A	C2-N3-C4	-7.51	106.84	110.60
24	1H	1332	G	C8-N9-C4	-7.51	103.39	106.40
24	1H	2573	C	N1-C2-O2	7.51	123.41	118.90
24	14	377	C	N1-C2-O2	-7.51	114.39	118.90
24	14	139	G	N1-C6-O6	-7.51	115.40	119.90
24	1H	621	A	C4-C5-N7	7.50	114.45	110.70
24	1H	1210	A	C4-C5-N7	7.50	114.45	110.70
24	1H	2232	U	N3-C4-C5	-7.50	110.10	114.60
24	1H	790	C	N3-C2-O2	7.49	127.14	121.90
24	1H	913	U	O5'-P-OP2	-7.49	98.96	105.70
24	14	1500	G	N1-C6-O6	7.49	124.39	119.90
24	14	2023	G	O5'-P-OP2	-7.49	98.96	105.70
24	1H	719	C	C5-C6-N1	7.49	124.74	121.00
24	1H	1698	A	C4-C5-N7	7.49	114.44	110.70
24	14	1528	A	C8-N9-C4	-7.49	102.81	105.80
24	14	2307	G	O4'-C1'-N9	7.49	114.19	108.20
24	1H	2362	G	N7-C8-N9	-7.48	109.36	113.10
24	14	2554	U	O5'-P-OP1	-7.48	98.97	105.70
24	1H	2597	G	C4-C5-N7	7.47	113.79	110.80
24	1H	2737	G	N1-C6-O6	7.47	124.39	119.90
24	1H	471	A	N1-C6-N6	7.47	123.08	118.60
24	1H	1513	C	C5-C6-N1	7.47	124.73	121.00
24	1H	676	A	C6-N1-C2	7.47	123.08	118.60
24	14	1259	G	C8-N9-C4	7.47	109.39	106.40
1	13	601	C	C6-N1-C2	-7.46	117.31	120.30
24	14	565	C	OP1-P-OP2	7.46	130.79	119.60
24	14	1313	U	C2-N1-C1'	7.46	126.65	117.70
24	14	2056	G	C5-C6-O6	-7.46	124.12	128.60
24	1H	1969	A	OP1-P-OP2	-7.46	108.42	119.60
24	14	2000	G	O5'-P-OP1	7.45	119.64	110.70
24	1H	1250	G	C4-C5-N7	-7.45	107.82	110.80
24	14	1379	A	N7-C8-N9	7.45	117.52	113.80
24	1H	204	A	C6-N1-C2	-7.44	114.14	118.60
24	14	1241	A	N1-C6-N6	7.44	123.06	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	972	G	N1-C6-O6	-7.44	115.44	119.90
54	1G	1519	A	C5-C6-N6	7.44	129.65	123.70
25	16	7	G	C5-C6-O6	-7.44	124.14	128.60
24	14	949	C	C5-C6-N1	-7.44	117.28	121.00
24	14	2873	A	C5-N7-C8	-7.43	100.19	103.90
24	14	2592	G	O5'-P-OP2	-7.43	99.02	105.70
24	14	213	A	N9-C4-C5	-7.43	102.83	105.80
22	2K	60	A	O4'-C1'-N9	7.42	114.14	108.20
24	14	1616	A	C5-C6-N6	-7.42	117.76	123.70
24	1H	1373	A	N7-C8-N9	-7.42	110.09	113.80
1	13	1158	C	N3-C2-O2	-7.42	116.71	121.90
24	14	197	A	C5-N7-C8	-7.42	100.19	103.90
24	1H	2318	G	N7-C8-N9	7.42	116.81	113.10
24	14	2287	A	N1-C2-N3	7.41	133.01	129.30
24	1H	2518	A	N7-C8-N9	7.41	117.50	113.80
24	1H	774	A	C4-C5-N7	7.41	114.40	110.70
24	1H	1936	A	N1-C6-N6	7.41	123.05	118.60
24	1H	2438	U	C5-C6-N1	-7.41	119.00	122.70
24	14	74	A	O4'-C1'-N9	-7.41	102.28	108.20
24	1H	727	A	C2-N3-C4	-7.40	106.90	110.60
41	95	21	ARG	NE-CZ-NH2	-7.40	116.60	120.30
24	1H	62	C	C5-C6-N1	-7.40	117.30	121.00
24	14	1342	A	N1-C2-N3	7.39	133.00	129.30
24	14	1679	U	C5-C6-N1	-7.39	119.00	122.70
24	1H	1266	G	C5-C6-O6	-7.39	124.17	128.60
54	1G	557	G	N3-C4-N9	7.39	130.43	126.00
24	14	122	G	N1-C6-O6	7.39	124.33	119.90
24	1H	1385	G	N3-C4-C5	7.39	132.29	128.60
24	1H	2377	A	C8-N9-C4	7.39	108.75	105.80
24	14	2639	A	C5-N7-C8	-7.39	100.21	103.90
24	14	1241	A	C5-C6-N1	-7.38	114.01	117.70
24	1H	2219	G	O5'-P-OP2	-7.38	99.06	105.70
24	1H	2713	A	C2-N3-C4	-7.38	106.91	110.60
1	13	1524	C	C6-N1-C2	7.38	123.25	120.30
24	1H	1253	A	C8-N9-C4	7.38	108.75	105.80
24	1H	1994	C	N3-C2-O2	-7.38	116.73	121.90
24	14	141	A	C4-C5-N7	7.38	114.39	110.70
24	1H	2620	C	N3-C4-C5	-7.37	118.95	121.90
24	1H	580	C	C6-N1-C2	-7.37	117.35	120.30
24	1H	568	U	N3-C4-C5	-7.37	110.18	114.60
24	1H	1791	A	OP1-P-OP2	-7.37	108.55	119.60
24	1H	382	G	C4-C5-N7	7.36	113.75	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	74	A	C4-C5-N7	7.36	114.38	110.70
24	1H	397	G	N1-C6-O6	7.36	124.32	119.90
38	65	110	LEU	CA-CB-CG	7.36	132.22	115.30
24	1H	198	C	C5-C4-N4	-7.35	115.05	120.20
1	13	729	A	N1-C6-N6	7.35	123.01	118.60
1	13	789	U	C5-C4-O4	7.35	130.31	125.90
24	1H	684	G	C8-N9-C4	-7.34	103.46	106.40
24	14	494	G	N1-C6-O6	7.34	124.30	119.90
24	1H	1654	A	OP1-P-OP2	-7.33	108.60	119.60
24	1H	2005	A	N1-C6-N6	7.33	123.00	118.60
24	14	1786	A	N9-C1'-C2'	7.33	123.52	114.00
24	1H	593	G	O5'-P-OP1	7.32	119.49	110.70
24	14	1410	G	O5'-P-OP1	7.32	119.49	110.70
1	13	1058	G	C8-N9-C4	7.32	109.33	106.40
1	13	251	G	C5-C6-O6	-7.31	124.21	128.60
24	14	2335	A	O4'-C1'-N9	7.31	114.05	108.20
24	14	2501	C	C2-N1-C1'	-7.31	110.76	118.80
24	1H	1784	A	C5-C6-N6	7.30	129.54	123.70
24	14	1204	A	N1-C6-N6	7.30	122.98	118.60
24	1H	839	U	OP1-P-OP2	7.30	130.55	119.60
24	14	805	G	N3-C4-C5	-7.30	124.95	128.60
24	1H	1678	G	C5-N7-C8	-7.30	100.65	104.30
24	1H	34	C	O5'-P-OP1	-7.29	99.13	105.70
24	14	530	G	N7-C8-N9	7.29	116.75	113.10
24	14	2238	G	O5'-P-OP2	-7.29	99.14	105.70
24	1H	1626	G	C8-N9-C4	-7.29	103.48	106.40
24	14	1273	U	C2-N3-C4	-7.29	122.62	127.00
23	4K	17	G	C6-C5-N7	-7.29	126.03	130.40
24	1H	38	A	N7-C8-N9	7.29	117.44	113.80
24	1H	2392	A	C5-C6-N1	-7.28	114.06	117.70
24	14	738	G	O5'-P-OP2	-7.28	99.14	105.70
24	1H	28	A	C5-N7-C8	-7.28	100.26	103.90
24	1H	1193	G	O5'-P-OP1	7.28	119.44	110.70
24	1H	330	A	N3-C4-C5	7.27	131.89	126.80
24	14	1383	C	N3-C2-O2	7.27	126.99	121.90
24	14	2545	G	C5-C6-O6	-7.27	124.24	128.60
24	1H	2513	G	N1-C6-O6	7.27	124.26	119.90
24	14	1785	A	O5'-P-OP2	-7.27	99.16	105.70
24	14	2392	A	C5-N7-C8	-7.27	100.27	103.90
1	13	449	C	C6-N1-C2	-7.27	117.39	120.30
24	1H	561	G	C8-N9-C4	7.27	109.31	106.40
24	14	217	G	O5'-P-OP1	-7.26	99.16	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	778	G	N3-C2-N2	-7.26	114.82	119.90
24	1H	930	U	N3-C2-O2	-7.26	117.12	122.20
24	14	528	A	N1-C2-N3	7.26	132.93	129.30
24	1H	691	C	N3-C4-N4	7.26	123.08	118.00
24	14	201	C	C6-N1-C2	7.26	123.20	120.30
24	1H	1613	G	N1-C2-N2	-7.26	109.67	116.20
24	1H	691	C	C5-C4-N4	-7.26	115.12	120.20
24	1H	828	U	N3-C4-O4	-7.26	114.32	119.40
24	14	1816	G	O5'-P-OP1	-7.26	99.17	105.70
54	1G	251	G	N1-C6-O6	7.25	124.25	119.90
24	1H	790	C	N1-C2-O2	-7.25	114.55	118.90
24	14	1327	C	N1-C2-O2	-7.25	114.55	118.90
24	1H	675	A	C8-N9-C4	7.25	108.70	105.80
24	1H	1332	G	N3-C2-N2	-7.25	114.83	119.90
24	1H	1793	C	O5'-P-OP2	-7.25	99.18	105.70
24	14	265	A	C2-N3-C4	-7.25	106.98	110.60
24	1H	2503	A	N1-C2-N3	-7.24	125.68	129.30
24	14	2441	C	N3-C4-N4	-7.24	112.93	118.00
24	14	1342	A	C4-C5-N7	7.24	114.32	110.70
24	1H	659	C	C2-N3-C4	-7.24	116.28	119.90
24	1H	1349	A	C2-N3-C4	-7.24	106.98	110.60
24	1H	1604	C	N3-C2-O2	7.24	126.97	121.90
24	1H	1829	A	N1-C6-N6	-7.23	114.26	118.60
24	14	139	G	C4-C5-N7	-7.23	107.91	110.80
24	1H	728	G	N1-C6-O6	7.22	124.23	119.90
24	1H	2374	C	C5-C6-N1	-7.22	117.39	121.00
24	14	71	A	O4'-C1'-N9	-7.22	102.42	108.20
24	14	528	A	C4-C5-N7	7.22	114.31	110.70
24	14	1559	G	N1-C6-O6	7.22	124.23	119.90
24	1H	743	G	N7-C8-N9	7.21	116.71	113.10
24	1H	1528	A	C5-N7-C8	-7.21	100.29	103.90
24	14	242	G	N9-C4-C5	-7.21	102.52	105.40
24	14	1902	C	N3-C4-C5	7.21	124.78	121.90
24	1H	125	G	N1-C6-O6	7.20	124.22	119.90
24	1H	596	G	N3-C2-N2	-7.19	114.86	119.90
24	1H	2726	U	C5-C4-O4	7.19	130.22	125.90
24	14	2587	A	N1-C6-N6	7.19	122.92	118.60
1	13	1497	G	O5'-P-OP2	-7.19	99.23	105.70
24	1H	1383	C	N3-C2-O2	7.19	126.93	121.90
24	1H	1790	C	N1-C2-O2	-7.19	114.59	118.90
24	14	1821	A	C5-C6-N1	7.19	121.29	117.70
24	14	2444	G	N3-C2-N2	-7.19	114.87	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	140	A	C2-N3-C4	-7.19	107.01	110.60
24	1H	1698	A	O4'-C1'-N9	7.18	113.95	108.20
24	14	1373	A	N7-C8-N9	-7.18	110.21	113.80
1	13	880	C	C6-N1-C2	7.18	123.17	120.30
24	1H	633	A	O5'-P-OP1	-7.18	99.24	105.70
24	1H	248	G	N1-C6-O6	7.18	124.21	119.90
24	1H	1660	C	N3-C4-N4	-7.18	112.97	118.00
24	1H	912	C	C6-N1-C2	-7.18	117.43	120.30
24	14	752	A	C6-N1-C2	-7.18	114.29	118.60
24	1H	2270	G	C6-C5-N7	-7.18	126.09	130.40
24	1H	1353	A	C5-C6-N6	-7.17	117.96	123.70
24	14	372	G	O4'-C1'-N9	7.17	113.94	108.20
25	1J	114	G	C8-N9-C4	7.17	109.27	106.40
24	1H	71	A	C6-C5-N7	-7.17	127.28	132.30
25	1J	81	G	C4-C5-N7	7.17	113.67	110.80
32	61	110	ASP	C-N-CD	-7.17	104.83	120.60
24	1H	566	U	C5-C4-O4	-7.16	121.60	125.90
24	1H	1819	A	C5-C6-N6	-7.16	117.97	123.70
24	1H	529	A	N1-C6-N6	7.16	122.90	118.60
24	14	1342	A	C5-N7-C8	-7.16	100.32	103.90
24	14	1558	A	C5-C6-N1	-7.16	114.12	117.70
24	1H	1626	G	N9-C4-C5	7.16	108.26	105.40
24	14	1441	G	O5'-P-OP1	-7.16	99.26	105.70
24	1H	2597	G	C8-N9-C4	7.15	109.26	106.40
24	14	1988	C	C5-C4-N4	-7.15	115.19	120.20
24	14	792	G	N3-C4-C5	-7.15	125.03	128.60
24	1H	688	U	O5'-P-OP2	-7.15	99.27	105.70
24	1H	2028	U	N3-C4-C5	-7.15	110.31	114.60
54	1G	121	C	N1-C2-O2	7.14	123.19	118.90
24	14	1328	G	N9-C4-C5	-7.14	102.54	105.40
24	1H	661	C	N1-C2-O2	-7.14	114.61	118.90
24	14	74	A	N1-C2-N3	7.14	132.87	129.30
24	1H	756	C	N1-C2-O2	-7.14	114.62	118.90
24	1H	1782	C	O5'-P-OP2	-7.14	99.27	105.70
24	1H	1799	G	P-O3'-C3'	7.14	128.26	119.70
54	1G	603	U	C6-N1-C2	-7.13	116.72	121.00
24	14	130	C	C6-N1-C2	7.13	123.15	120.30
24	14	2001	A	N1-C6-N6	7.13	122.88	118.60
1	13	452	A	C8-N9-C4	7.13	108.65	105.80
24	14	1204	A	C2-N3-C4	-7.13	107.03	110.60
24	1H	1252	G	O4'-C1'-N9	-7.13	102.50	108.20
24	14	1890	A	C8-N9-C4	7.13	108.65	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1800	C	O5'-P-OP2	7.12	119.25	110.70
24	1H	949	C	N1-C2-O2	-7.12	114.63	118.90
24	1H	1942	C	C4-C5-C6	-7.12	113.84	117.40
24	14	1379	A	C6-C5-N7	-7.12	127.31	132.30
24	1H	64	A	N1-C6-N6	-7.12	114.33	118.60
24	1H	2394	C	O5'-P-OP2	-7.11	99.30	105.70
24	1H	2592	G	O5'-P-OP2	-7.11	99.30	105.70
54	1G	1346	A	P-O3'-C3'	7.11	128.23	119.70
24	1H	1187	G	N1-C6-O6	7.11	124.17	119.90
1	13	810	C	N1-C2-O2	-7.11	114.64	118.90
24	14	801	G	N3-C4-N9	-7.11	121.74	126.00
24	1H	62	C	C6-N1-C2	7.11	123.14	120.30
24	14	1635	G	OP1-P-O3'	7.11	120.83	105.20
54	1G	509	A	C8-N9-C4	-7.10	102.96	105.80
6	52	87	ARG	NE-CZ-NH1	7.10	123.85	120.30
24	14	395	U	C6-N1-C2	7.10	125.26	121.00
24	14	2389	G	C8-N9-C4	-7.10	103.56	106.40
24	14	2712	U	C5-C6-N1	-7.10	119.15	122.70
24	1H	1800	C	N3-C4-C5	-7.10	119.06	121.90
24	14	1644	C	N3-C2-O2	-7.10	116.93	121.90
54	1G	557	G	N9-C4-C5	-7.09	102.56	105.40
1	13	1158	C	C6-N1-C2	-7.09	117.46	120.30
24	1H	1006	C	N1-C2-O2	-7.09	114.64	118.90
24	14	2741	A	N7-C8-N9	-7.09	110.25	113.80
24	14	2601	C	N3-C2-O2	-7.09	116.94	121.90
24	14	2607	G	N9-C4-C5	-7.08	102.57	105.40
1	13	511	C	N1-C2-O2	-7.08	114.65	118.90
24	14	2598	A	N9-C4-C5	-7.08	102.97	105.80
24	14	234	C	N1-C2-O2	7.08	123.15	118.90
24	14	2029	G	C5-C6-O6	7.07	132.84	128.60
24	1H	70	G	P-O3'-C3'	7.07	128.19	119.70
24	1H	1193	G	N7-C8-N9	-7.07	109.56	113.10
24	1H	1562	A	C2-N3-C4	-7.07	107.06	110.60
24	1H	2205	C	O5'-P-OP2	-7.07	99.34	105.70
24	14	736	C	N3-C2-O2	7.07	126.85	121.90
24	14	801	G	C8-N9-C1'	7.07	136.19	127.00
24	14	1204	A	C5-N7-C8	-7.07	100.36	103.90
24	1H	1837	C	O5'-P-OP1	-7.07	99.34	105.70
24	14	607	U	O5'-P-OP2	-7.06	99.35	105.70
24	14	2873	A	C5-C6-N1	-7.05	114.17	117.70
25	1J	54	G	C8-N9-C4	-7.05	103.58	106.40
27	19	43	ARG	NE-CZ-NH2	-7.05	116.77	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1364	G	N1-C6-O6	7.05	124.13	119.90
25	1J	102	G	C4-C5-N7	-7.05	107.98	110.80
24	1H	260	G	N3-C2-N2	-7.05	114.97	119.90
24	14	801	G	C4-N9-C1'	-7.05	117.34	126.50
24	1H	1819	A	N1-C6-N6	7.05	122.83	118.60
24	1H	2355	C	C2-N1-C1'	7.04	126.55	118.80
24	14	1682	G	O5'-P-OP2	-7.04	99.36	105.70
24	1H	1807	G	C5-C6-O6	-7.04	124.38	128.60
24	1H	965	C	C6-N1-C2	-7.04	117.48	120.30
24	14	1011	G	C8-N9-C4	7.04	109.22	106.40
1	13	1530	G	N3-C4-C5	7.04	132.12	128.60
24	1H	115	C	O5'-P-OP1	-7.04	99.37	105.70
24	1H	186	G	C5-C6-N1	7.04	115.02	111.50
24	1H	574	C	O5'-P-OP2	-7.04	99.36	105.70
54	1G	559	A	N1-C2-N3	7.04	132.82	129.30
24	1H	1516	U	N3-C2-O2	-7.04	117.27	122.20
24	14	1564	C	C6-N1-C2	-7.04	117.48	120.30
24	1H	1694	C	P-O3'-C3'	7.03	128.14	119.70
24	14	330	A	C5-N7-C8	-7.03	100.38	103.90
24	14	1614	A	O4'-C1'-N9	7.03	113.83	108.20
24	1H	1972	A	C2-N3-C4	7.03	114.12	110.60
24	14	1950	G	O4'-C1'-N9	7.03	113.83	108.20
24	1H	2330	G	C5-C6-O6	-7.03	124.38	128.60
24	14	2779	U	N3-C2-O2	-7.03	117.28	122.20
1	13	12	U	O5'-P-OP1	-7.03	99.38	105.70
54	1G	1344	C	C6-N1-C2	-7.03	117.49	120.30
24	1H	1606	G	C5-C6-O6	-7.02	124.39	128.60
24	14	139	G	C5-C6-O6	7.02	132.81	128.60
24	14	1678	G	C4-C5-N7	7.02	113.61	110.80
24	14	242	G	C5-C6-O6	-7.02	124.39	128.60
24	1H	803	U	C5-C6-N1	-7.02	119.19	122.70
24	14	2503	A	N1-C2-N3	-7.02	125.79	129.30
24	14	2477	C	N1-C2-O2	7.01	123.11	118.90
24	1H	1476	C	N1-C2-O2	-7.01	114.69	118.90
54	1G	18	C	O5'-P-OP1	-7.01	99.39	105.70
24	14	774	A	C5-C6-N1	-7.01	114.19	117.70
24	14	2490	G	C8-N9-C4	-7.01	103.60	106.40
24	14	57	C	C6-N1-C2	7.01	123.10	120.30
24	1H	1465	G	N1-C6-O6	7.00	124.10	119.90
24	1H	1568	G	C5-C6-O6	-7.00	124.40	128.60
24	1H	1021	A	C5-C6-N1	-7.00	114.20	117.70
24	14	1496	A	C4-C5-N7	7.00	114.20	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1500	G	C5-C6-O6	-7.00	124.40	128.60
24	1H	2452	C	C5-C4-N4	-7.00	115.30	120.20
24	14	1953	A	O5'-P-OP2	7.00	119.10	110.70
24	1H	2446	G	C4-C5-N7	6.99	113.60	110.80
24	1H	2688	U	C4-C5-C6	6.99	123.90	119.70
24	14	307	G	O5'-P-OP2	-6.99	99.41	105.70
24	1H	2428	G	C5-C6-N1	-6.99	108.00	111.50
24	14	798	G	C5-C6-N1	-6.99	108.01	111.50
24	14	801	G	C5-C6-O6	6.99	132.79	128.60
24	1H	677	A	C6-N1-C2	-6.98	114.41	118.60
24	14	74	A	C6-C5-N7	-6.98	127.41	132.30
24	1H	2506	U	N1-C2-O2	6.98	127.68	122.80
24	14	2607	G	C6-C5-N7	-6.98	126.21	130.40
24	1H	2565	A	C8-N9-C4	6.97	108.59	105.80
24	14	707	G	N1-C6-O6	6.97	124.08	119.90
24	1H	190	A	N1-C6-N6	6.97	122.78	118.60
24	1H	1025	G	N1-C6-O6	-6.97	115.72	119.90
24	14	128	C	N3-C4-C5	-6.97	119.11	121.90
24	1H	1633	G	N9-C4-C5	-6.97	102.61	105.40
24	1H	2443	C	O5'-P-OP1	-6.97	99.43	105.70
24	1H	784	A	C4-C5-N7	-6.96	107.22	110.70
24	1H	1142(A)	A	N3-C4-C5	6.96	131.67	126.80
24	1H	120	U	O5'-P-OP2	6.96	119.05	110.70
24	1H	333	G	C4-N9-C1'	6.96	135.55	126.50
24	1H	1501	C	C6-N1-C2	-6.96	117.52	120.30
24	14	2589	A	C2-N3-C4	-6.96	107.12	110.60
54	1G	1519	A	C8-N9-C4	-6.95	103.02	105.80
24	14	2001	A	C5-C6-N6	-6.95	118.14	123.70
24	1H	2363	C	OP2-P-O3'	6.95	120.50	105.20
24	1H	1204	A	C4-C5-N7	6.95	114.17	110.70
24	14	442	G	N7-C8-N9	6.95	116.58	113.10
24	14	2496	C	OP1-P-O3'	6.95	120.49	105.20
24	1H	859	G	N3-C4-N9	-6.95	121.83	126.00
24	14	1924	C	N1-C2-O2	-6.95	114.73	118.90
1	13	525	C	C6-N1-C2	-6.95	117.52	120.30
1	13	687	A	P-O3'-C3'	6.95	128.03	119.70
24	1H	630	G	C8-N9-C4	6.95	109.18	106.40
24	14	1988	C	N3-C4-N4	6.95	122.86	118.00
24	14	2712	U	N3-C4-O4	-6.95	114.54	119.40
24	14	2713	A	C4-C5-N7	6.95	114.17	110.70
24	1H	265	A	C2-N3-C4	-6.94	107.13	110.60
24	1H	775	G	O4'-C1'-N9	6.94	113.75	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1629	U	C2-N3-C4	6.94	131.16	127.00
24	1H	2583	G	N9-C4-C5	6.94	108.17	105.40
24	14	1135	C	N1-C2-O2	6.94	123.06	118.90
24	14	1323	U	N1-C2-O2	-6.94	117.94	122.80
24	14	1339	G	O5'-P-OP2	6.94	119.03	110.70
24	14	673	C	O5'-P-OP1	6.93	119.02	110.70
24	1H	2318	G	O4'-C1'-N9	6.93	113.74	108.20
24	14	395	U	C5-C6-N1	-6.93	119.23	122.70
24	14	1359	A	C8-N9-C4	6.93	108.57	105.80
24	14	2228	G	N3-C4-C5	-6.93	125.14	128.60
24	14	963	U	O5'-P-OP1	-6.92	99.47	105.70
24	14	668	G	C8-N9-C4	6.92	109.17	106.40
24	1H	609	A	N1-C6-N6	6.92	122.75	118.60
24	14	585	G	C5-N7-C8	-6.92	100.84	104.30
24	14	2822	G	C8-N9-C1'	-6.92	118.00	127.00
1	13	300	A	O5'-P-OP1	-6.92	99.47	105.70
24	1H	1192	G	O5'-P-OP1	6.92	119.00	110.70
24	1H	1241	A	C5-C6-N1	-6.92	114.24	117.70
54	1G	345	C	C6-N1-C2	-6.92	117.53	120.30
24	14	1779	U	O5'-P-OP1	-6.92	99.47	105.70
24	14	2436	G	N3-C2-N2	-6.92	115.06	119.90
24	14	213	A	C4-C5-N7	6.92	114.16	110.70
24	1H	1678	G	C4-C5-N7	6.91	113.57	110.80
24	1H	1681	G	N3-C4-C5	6.91	132.06	128.60
24	1H	2441	C	N3-C4-C5	6.91	124.67	121.90
1	13	413	G	N1-C6-O6	-6.91	115.75	119.90
54	1G	1522	U	N3-C4-C5	-6.91	110.45	114.60
24	1H	528	A	N3-C4-N9	-6.91	121.87	127.40
27	11	111	LEU	CA-CB-CG	6.91	131.19	115.30
54	1G	449	C	C6-N1-C2	-6.91	117.54	120.30
24	1H	831	G	N7-C8-N9	-6.91	109.65	113.10
24	14	2822	G	C4-N9-C1'	6.90	135.48	126.50
24	1H	782	A	N1-C6-N6	-6.90	114.46	118.60
24	1H	1275	A	N1-C6-N6	6.90	122.74	118.60
54	1G	723	U	P-O3'-C3'	6.90	127.98	119.70
24	1H	1023	U	O5'-P-OP1	-6.90	99.49	105.70
24	1H	252	G	O5'-P-OP1	6.89	118.97	110.70
24	1H	200	U	C5-C6-N1	-6.89	119.25	122.70
24	14	2593	U	N3-C4-C5	6.89	118.73	114.60
24	1H	1518	C	C6-N1-C2	-6.89	117.55	120.30
1	13	503	C	C6-N1-C2	-6.89	117.55	120.30
24	1H	662	G	N9-C4-C5	6.89	108.16	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	463	G	C8-N9-C4	-6.89	103.64	106.40
24	14	2779	U	C5-C6-N1	-6.89	119.26	122.70
1	13	1515	C	C6-N1-C2	6.88	123.05	120.30
24	1H	1210	A	C8-N9-C4	-6.88	103.05	105.80
24	14	57	C	N3-C4-C5	6.88	124.65	121.90
24	14	2430	A	C4-C5-N7	6.88	114.14	110.70
24	14	1825	A	N1-C6-N6	-6.88	114.47	118.60
24	14	621	A	N7-C8-N9	6.88	117.24	113.80
24	14	2087	G	C8-N9-C4	6.88	109.15	106.40
24	1H	692	C	N3-C4-C5	6.88	124.65	121.90
24	1H	877	U	C5-C6-N1	6.88	126.14	122.70
1	13	745	C	C5-C6-N1	6.87	124.44	121.00
24	1H	1624	G	N7-C8-N9	-6.87	109.66	113.10
24	14	1559	G	C4-C5-N7	6.87	113.55	110.80
24	14	2724	C	C5-C6-N1	-6.87	117.56	121.00
24	1H	396	G	N1-C6-O6	6.87	124.02	119.90
24	1H	1241	A	C2-N3-C4	-6.87	107.17	110.60
54	1G	249	U	O5'-P-OP2	-6.87	99.52	105.70
54	1G	251	G	O4'-C1'-N9	-6.86	102.71	108.20
24	1H	1021	A	N3-C4-C5	6.86	131.60	126.80
24	14	311	A	N1-C6-N6	6.86	122.72	118.60
24	14	974(A)	C	C6-N1-C2	-6.86	117.56	120.30
24	1H	2579	C	O5'-P-OP2	-6.86	99.53	105.70
24	1H	2087	G	N9-C4-C5	-6.86	102.66	105.40
24	14	2497	A	C8-N9-C4	6.86	108.54	105.80
24	1H	1528	A	O4'-C1'-N9	6.86	113.68	108.20
1	13	819	A	O5'-P-OP1	-6.85	99.53	105.70
24	14	1696	G	C5-C6-N1	6.85	114.93	111.50
24	14	730	C	C6-N1-C2	-6.85	117.56	120.30
24	14	1698	A	C8-N9-C4	-6.85	103.06	105.80
28	29	78	LEU	CA-CB-CG	6.85	131.06	115.30
1	13	1058	G	N9-C4-C5	-6.85	102.66	105.40
24	1H	165	U	C2-N1-C1'	6.84	125.91	117.70
24	14	211	A	C5-C6-N6	-6.84	118.22	123.70
24	14	2386	C	C2-N3-C4	-6.84	116.48	119.90
36	88	87	LYS	N-CA-C	-6.84	92.53	111.00
24	14	1021	A	N3-C4-N9	-6.84	121.93	127.40
1	13	758	G	N3-C4-C5	6.84	132.02	128.60
24	14	795	C	O5'-P-OP2	-6.84	99.55	105.70
24	14	1249	U	O5'-P-OP1	-6.84	99.55	105.70
24	1H	248	G	C5-C6-O6	-6.84	124.50	128.60
24	1H	918	A	O5'-P-OP1	-6.84	99.55	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1227	A	N9-C4-C5	-6.84	103.06	105.80
1	13	1502	A	C8-N9-C4	-6.83	103.07	105.80
24	1H	1742	C	C5-C6-N1	6.83	124.42	121.00
24	1H	125	G	C4-C5-N7	6.83	113.53	110.80
24	1H	975	G	C5-C6-O6	-6.83	124.50	128.60
24	1H	2574	G	N9-C4-C5	-6.83	102.67	105.40
24	14	1950	G	C8-N9-C4	-6.83	103.67	106.40
24	14	932	G	N1-C6-O6	-6.83	115.80	119.90
24	14	2199	A	O5'-P-OP1	-6.83	99.56	105.70
24	1H	452	G	N1-C6-O6	-6.83	115.81	119.90
24	1H	813	U	O5'-P-OP2	-6.83	99.56	105.70
1	13	806	C	C6-N1-C2	-6.82	117.57	120.30
24	1H	2569	G	C4-N9-C1'	6.82	135.37	126.50
24	14	750	A	C8-N9-C4	-6.82	103.07	105.80
54	1G	1522	U	C6-N1-C2	-6.82	116.91	121.00
22	2L	10	C	N1-C2-O2	6.82	122.99	118.90
24	14	71	A	N3-C4-C5	6.82	131.57	126.80
24	14	2639	A	C4-C5-N7	6.82	114.11	110.70
24	14	786	C	OP2-P-O3'	6.82	120.20	105.20
24	14	1988	C	C6-N1-C2	6.82	123.03	120.30
24	14	2276	G	O5'-P-OP1	-6.82	99.56	105.70
24	14	2406	U	O4'-C1'-N1	-6.82	102.74	108.20
24	1H	1004	C	N3-C4-C5	-6.82	119.17	121.90
24	1H	1604	C	C5-C4-N4	-6.82	115.43	120.20
24	14	1353	A	N1-C6-N6	-6.82	114.51	118.60
24	14	2374	C	N3-C4-C5	6.82	124.63	121.90
24	1H	260	G	N1-C6-O6	6.82	123.99	119.90
24	1H	837	C	C6-N1-C2	-6.82	117.57	120.30
24	14	113	G	N3-C4-C5	6.82	132.01	128.60
24	1H	453	C	C6-N1-C2	6.81	123.03	120.30
24	1H	804	A	N9-C4-C5	6.81	108.53	105.80
1	13	1502	A	N7-C8-N9	6.81	117.21	113.80
24	1H	474	G	N3-C4-N9	-6.81	121.91	126.00
1	13	1336	C	N3-C2-O2	-6.81	117.13	121.90
24	14	2857	G	N9-C4-C5	-6.81	102.68	105.40
24	1H	910	A	O5'-P-OP2	-6.81	99.57	105.70
24	1H	1489	U	C5-C4-O4	6.81	129.98	125.90
24	1H	1821	A	C6-N1-C2	-6.81	114.52	118.60
24	1H	978	G	C8-N9-C4	6.80	109.12	106.40
24	1H	188	G	C5-C6-O6	-6.80	124.52	128.60
24	1H	443	A	O5'-P-OP2	-6.80	99.58	105.70
24	1H	464	U	O5'-P-OP2	6.80	118.86	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1663	C	O5'-P-OP2	-6.80	99.58	105.70
24	1H	2601	C	C6-N1-C2	-6.80	117.58	120.30
24	1H	1336	A	O5'-P-OP2	-6.80	99.58	105.70
24	14	130	C	N3-C4-C5	6.79	124.62	121.90
24	1H	1392	A	OP2-P-O3'	6.79	120.14	105.20
41	95	21	ARG	NH1-CZ-NH2	-6.79	111.93	119.40
1	13	63	C	C6-N1-C2	-6.79	117.58	120.30
24	14	2271	G	C5-C6-O6	-6.79	124.53	128.60
24	1H	1971	A	O5'-P-OP2	-6.79	99.59	105.70
24	14	929	G	C5-C6-O6	-6.79	124.53	128.60
1	13	1336	C	C6-N1-C2	-6.79	117.59	120.30
24	1H	568	U	N3-C4-O4	6.78	124.15	119.40
24	14	71	A	C6-C5-N7	-6.78	127.55	132.30
24	1H	2275	C	OP1-P-O3'	6.78	120.12	105.20
24	14	198	C	N3-C2-O2	-6.78	117.15	121.90
24	1H	1313	U	C6-N1-C2	-6.78	116.93	121.00
24	14	1396	U	N3-C2-O2	-6.78	117.46	122.20
24	1H	917	A	C5-C6-N1	-6.78	114.31	117.70
24	1H	1211	U	N1-C2-N3	-6.78	110.83	114.90
24	1H	684	G	N7-C8-N9	6.77	116.49	113.10
24	14	1497	U	O5'-P-OP2	-6.77	99.61	105.70
24	1H	219	G	C5-C6-N1	6.77	114.89	111.50
24	1H	529	A	C4-C5-N7	6.77	114.08	110.70
24	1H	1364	G	C5-C6-O6	-6.77	124.54	128.60
24	1H	2779	U	N1-C2-N3	6.76	118.96	114.90
24	14	2082	A	O5'-P-OP2	-6.76	99.61	105.70
1	13	1502	A	N1-C2-N3	6.76	132.68	129.30
24	1H	1698	A	C5-N7-C8	-6.76	100.52	103.90
24	14	141	A	N7-C8-N9	6.76	117.18	113.80
24	14	1982	C	C2-N1-C1'	6.76	126.24	118.80
24	1H	965	C	N3-C4-C5	-6.76	119.20	121.90
24	14	128	C	N3-C2-O2	-6.75	117.17	121.90
24	14	2593	U	N1-C2-O2	6.75	127.53	122.80
24	14	2430	A	C5-C6-N1	-6.75	114.32	117.70
24	14	2437	U	OP2-P-O3'	6.75	120.05	105.20
22	2K	3	U	N1-C2-O2	6.75	127.52	122.80
24	1H	1465	G	C5-C6-O6	-6.75	124.55	128.60
24	14	1609	A	C5-C6-N6	6.75	129.10	123.70
24	14	2440	C	O5'-P-OP2	6.75	118.80	110.70
24	1H	1626	G	N3-C4-N9	-6.75	121.95	126.00
1	13	690	G	N3-C4-N9	-6.74	121.95	126.00
24	1H	250	G	C8-N9-C4	-6.74	103.70	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2331	G	C4-C5-N7	6.74	113.50	110.80
24	14	737	C	N1-C2-O2	-6.74	114.86	118.90
1	13	1354	C	C5-C6-N1	6.74	124.37	121.00
54	1G	47	C	N1-C2-O2	-6.74	114.86	118.90
24	14	698	C	C4-C5-C6	6.74	120.77	117.40
24	1H	133	C	C6-N1-C2	6.73	122.99	120.30
24	14	685	A	O4'-C1'-N9	6.73	113.59	108.20
24	1H	839	U	C5-C6-N1	-6.73	119.33	122.70
24	1H	1297	C	C6-N1-C2	-6.73	117.61	120.30
24	14	1798	U	C2-N3-C4	-6.73	122.96	127.00
24	1H	585	G	N1-C6-O6	6.73	123.94	119.90
1	13	888	G	C8-N9-C4	6.73	109.09	106.40
24	14	932	G	C5-C6-O6	6.73	132.64	128.60
24	14	2490	G	N7-C8-N9	6.73	116.46	113.10
54	1G	337	C	C5-C6-N1	6.72	124.36	121.00
24	1H	1633	G	N3-C4-N9	6.72	130.03	126.00
24	1H	2503	A	C5-N7-C8	-6.72	100.54	103.90
54	1G	904	C	N3-C4-C5	6.72	124.59	121.90
24	14	1475	G	C8-N9-C4	-6.72	103.71	106.40
1	13	912	C	C6-N1-C2	6.72	122.99	120.30
24	1H	404	C	P-O3'-C3'	6.72	127.76	119.70
1	13	903	G	O5'-P-OP2	-6.72	99.66	105.70
24	1H	1939	U	N3-C4-C5	6.72	118.63	114.60
24	1H	1993	U	N1-C2-N3	6.72	118.93	114.90
24	1H	1790	C	OP1-P-O3'	6.71	119.97	105.20
24	14	2880	C	C6-N1-C2	-6.71	117.61	120.30
24	14	746	A	O5'-P-OP2	6.71	118.76	110.70
24	1H	593	G	C2-N3-C4	-6.71	108.54	111.90
24	1H	473	G	O5'-P-OP2	-6.71	99.66	105.70
24	1H	1653	G	N3-C4-N9	6.71	130.03	126.00
24	1H	203	C	C5-C4-N4	-6.71	115.51	120.20
24	1H	1637	A	C8-N9-C4	-6.71	103.12	105.80
24	1H	1784	A	N1-C6-N6	-6.71	114.58	118.60
24	14	2352	A	O5'-P-OP1	-6.71	99.67	105.70
1	13	717	C	C6-N1-C2	-6.70	117.62	120.30
24	1H	2674	G	N7-C8-N9	-6.70	109.75	113.10
24	14	1790	C	C2-N3-C4	-6.70	116.55	119.90
24	1H	1025	G	C5-C6-O6	6.70	132.62	128.60
24	1H	2424	C	OP1-P-OP2	6.70	129.65	119.60
24	1H	2430	A	N3-C4-N9	-6.70	122.04	127.40
24	1H	675	A	N9-C4-C5	-6.70	103.12	105.80
24	1H	1831	G	C8-N9-C4	-6.70	103.72	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	1G	690	G	C4-C5-N7	6.70	113.48	110.80
24	14	784	A	C6-N1-C2	6.70	122.62	118.60
54	1G	764	C	C6-N1-C2	-6.70	117.62	120.30
24	1H	1690	A	C4-C5-C6	6.70	120.35	117.00
24	1H	1929	G	C8-N9-C4	6.70	109.08	106.40
24	14	465	G	O5'-P-OP2	6.70	118.73	110.70
24	1H	786	C	C4-C5-C6	6.69	120.75	117.40
24	14	688	U	OP2-P-O3'	6.69	119.93	105.20
54	1G	53	A	N1-C6-N6	6.69	122.62	118.60
24	14	2216	G	N3-C2-N2	-6.69	115.22	119.90
24	14	2713	A	C2-N3-C4	-6.69	107.26	110.60
1	13	1336	C	C5-C6-N1	6.69	124.34	121.00
24	14	428	A	C8-N9-C4	-6.68	103.13	105.80
24	14	1821	A	N1-C2-N3	6.68	132.64	129.30
24	1H	382	G	N1-C6-O6	6.68	123.91	119.90
24	1H	2415	G	N7-C8-N9	6.68	116.44	113.10
24	14	1651	G	C4-C5-N7	6.68	113.47	110.80
24	1H	2320	A	C8-N9-C4	-6.68	103.13	105.80
24	14	1380	G	O5'-P-OP2	-6.68	99.69	105.70
24	1H	1353	A	N1-C6-N6	6.68	122.61	118.60
24	1H	1365	A	N1-C2-N3	6.68	132.64	129.30
24	1H	634	C	O5'-P-OP2	-6.68	99.69	105.70
24	14	450	G	N1-C6-O6	6.67	123.90	119.90
24	14	569	U	C5-C6-N1	-6.67	119.36	122.70
24	1H	1254	A	N1-C6-N6	6.67	122.60	118.60
24	1H	1790	C	C2-N3-C4	-6.67	116.56	119.90
24	1H	1633	G	C5-C6-O6	-6.67	124.60	128.60
24	14	1700	A	O5'-P-OP2	6.67	118.70	110.70
24	1H	825	C	N3-C2-O2	6.67	126.57	121.90
24	1H	2447	G	C5-C6-O6	-6.67	124.60	128.60
24	14	1614	A	C5-N7-C8	-6.67	100.57	103.90
24	14	583	G	C5-N7-C8	-6.67	100.97	104.30
24	14	929	G	N1-C6-O6	6.67	123.90	119.90
1	13	640	A	O5'-P-OP1	-6.66	99.70	105.70
24	14	2386	C	C5-C4-N4	-6.66	115.54	120.20
24	1H	1021	A	N1-C6-N6	6.66	122.60	118.60
24	1H	2392	A	C2-N3-C4	-6.66	107.27	110.60
24	14	1783	A	C8-N9-C4	-6.66	103.14	105.80
1	13	758	G	C5-C6-N1	-6.66	108.17	111.50
24	1H	1606	G	N1-C6-O6	6.66	123.89	119.90
24	14	122	G	C5-C6-O6	-6.66	124.61	128.60
25	1J	16	G	N1-C6-O6	6.66	123.89	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1J	30	C	C6-N1-C2	-6.66	117.64	120.30
24	14	574	C	O5'-P-OP2	-6.65	99.71	105.70
24	14	1468	C	C6-N1-C2	-6.65	117.64	120.30
24	1H	572	A	OP1-P-OP2	-6.65	109.62	119.60
24	1H	739	G	O5'-P-OP1	-6.65	99.71	105.70
24	1H	1573	G	C8-N9-C4	6.65	109.06	106.40
24	14	1193	G	N1-C6-O6	6.65	123.89	119.90
24	14	1658	C	N3-C4-C5	-6.65	119.24	121.90
25	16	48	A	O5'-P-OP1	-6.65	99.72	105.70
24	14	2595	G	C4-C5-C6	-6.65	114.81	118.80
24	14	1275	A	O5'-P-OP1	-6.64	99.72	105.70
24	1H	386	G	C5-C6-O6	-6.64	124.62	128.60
24	1H	2262	U	N1-C2-O2	6.64	127.45	122.80
24	1H	2512	C	N3-C4-C5	6.64	124.56	121.90
24	1H	1366	A	O5'-P-OP1	6.64	118.66	110.70
24	1H	2392	A	N1-C6-N6	6.64	122.58	118.60
24	14	1572	A	N1-C6-N6	6.64	122.58	118.60
24	14	1653	G	P-O3'-C3'	6.64	127.66	119.70
54	1G	557	G	C8-N9-C4	6.63	109.05	106.40
24	14	2562	U	O5'-P-OP2	-6.63	99.73	105.70
24	14	196	A	O4'-C1'-N9	6.63	113.50	108.20
24	1H	982	C	OP1-P-O3'	6.63	119.78	105.20
24	1H	1807	G	N9-C4-C5	-6.63	102.75	105.40
24	1H	2374	C	C6-N1-C2	6.63	122.95	120.30
1	13	1515	C	C5-C6-N1	-6.62	117.69	121.00
24	1H	804	A	N1-C6-N6	-6.62	114.62	118.60
54	1G	1469	G	N1-C6-O6	6.62	123.88	119.90
24	14	2776	A	P-O3'-C3'	6.62	127.65	119.70
1	13	728	A	N1-C6-N6	6.62	122.58	118.60
24	1H	1559	G	N1-C6-O6	6.62	123.87	119.90
24	14	330	A	C6-C5-N7	-6.62	127.66	132.30
24	14	2032	G	C5-N7-C8	-6.62	100.99	104.30
24	1H	2571	C	C2-N1-C1'	6.62	126.08	118.80
25	16	7	G	N1-C6-O6	6.62	123.87	119.90
54	1G	623	C	C5-C6-N1	6.62	124.31	121.00
24	1H	973	A	N1-C2-N3	6.62	132.61	129.30
24	1H	1644	C	N1-C2-O2	6.62	122.87	118.90
54	1G	197	A	P-O3'-C3'	6.62	127.64	119.70
24	14	768	G	N1-C2-N2	-6.61	110.25	116.20
24	1H	2086	U	O5'-P-OP2	-6.61	99.75	105.70
24	14	740	U	O5'-P-OP1	6.61	118.63	110.70
24	14	1779	U	C2-N1-C1'	6.61	125.63	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2212	A	O4'-C1'-N9	6.61	113.49	108.20
24	14	1758	G	C2-N3-C4	6.61	115.20	111.90
24	1H	138	G	N7-C8-N9	6.61	116.40	113.10
24	1H	949	C	C2-N1-C1'	-6.61	111.53	118.80
1	13	690	G	C5-N7-C8	-6.60	101.00	104.30
24	1H	1787	A	O4'-C1'-N9	-6.60	102.92	108.20
24	14	2827	C	N3-C2-O2	6.60	126.52	121.90
24	1H	1821	A	N1-C6-N6	-6.60	114.64	118.60
24	14	1834	U	N3-C4-O4	6.60	124.02	119.40
24	1H	201	C	C5-C4-N4	-6.60	115.58	120.20
54	1G	1499	A	O5'-P-OP1	-6.60	99.76	105.70
24	14	1386	C	C6-N1-C2	-6.60	117.66	120.30
24	1H	575	A	N9-C4-C5	-6.59	103.16	105.80
24	1H	1254	A	C5-C6-N6	-6.59	118.42	123.70
24	14	857	C	C6-N1-C2	-6.59	117.66	120.30
24	14	1559	G	N9-C4-C5	-6.59	102.76	105.40
24	1H	117	G	C5-N7-C8	-6.59	101.00	104.30
24	1H	2054	A	OP1-P-O3'	-6.59	90.70	105.20
24	1H	2710	C	C6-N1-C2	6.59	122.94	120.30
35	78	45	LEU	CA-CB-CG	6.59	130.46	115.30
42	E8	23	LEU	CA-CB-CG	6.59	130.46	115.30
24	14	2683	C	N3-C4-C5	-6.59	119.26	121.90
24	1H	2295	C	C6-N1-C2	-6.59	117.67	120.30
24	1H	2771	C	C6-N1-C2	-6.59	117.67	120.30
24	14	1823	G	N3-C4-N9	-6.59	122.05	126.00
1	13	1530	G	C8-N9-C4	6.58	109.03	106.40
24	1H	2465	C	C5-C6-N1	-6.58	117.71	121.00
54	1G	309	G	C6-C5-N7	-6.58	126.45	130.40
1	13	990	C	C6-N1-C2	-6.58	117.67	120.30
24	1H	273(F)	C	N1-C2-O2	6.58	122.85	118.90
24	1H	752	A	C2-N3-C4	-6.58	107.31	110.60
1	13	766	A	O5'-P-OP2	-6.58	99.78	105.70
24	1H	2261	C	C6-N1-C2	-6.58	117.67	120.30
54	1G	609	A	O5'-P-OP1	-6.58	99.78	105.70
24	14	767	U	C5-C4-O4	6.58	129.85	125.90
24	14	1698	A	N3-C4-N9	-6.58	122.14	127.40
24	14	2070	G	C2-N3-C4	-6.58	108.61	111.90
24	14	1022	G	N9-C4-C5	6.58	108.03	105.40
24	1H	2439	A	P-O3'-C3'	6.58	127.59	119.70
54	1G	769	G	C8-N9-C1'	-6.57	118.45	127.00
24	1H	265	A	N1-C6-N6	6.57	122.54	118.60
24	14	1308	A	N9-C4-C5	6.57	108.43	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1647	G	O4'-C1'-N9	-6.57	102.94	108.20
24	1H	1299	G	C5-N7-C8	-6.57	101.02	104.30
24	14	211	A	N9-C4-C5	-6.57	103.17	105.80
24	1H	1971	A	C5-C6-N1	6.56	120.98	117.70
24	1H	1784	A	O4'-C1'-N9	-6.56	102.95	108.20
24	14	1142(A)	A	N3-C4-N9	-6.56	122.15	127.40
24	14	1395	A	O4'-C1'-N9	6.56	113.45	108.20
24	14	828	U	N3-C2-O2	-6.56	117.61	122.20
24	14	2590	A	N1-C2-N3	6.56	132.58	129.30
1	13	576	G	N1-C6-O6	6.55	123.83	119.90
24	14	784	A	O5'-P-OP1	-6.55	99.80	105.70
24	14	2555	U	O5'-P-OP1	-6.55	99.80	105.70
24	14	2586	C	C5-C4-N4	-6.55	115.61	120.20
24	14	1379	A	C5-C6-N6	-6.55	118.46	123.70
24	14	2011	U	N3-C2-O2	6.55	126.79	122.20
24	1H	1261	C	C6-N1-C2	6.55	122.92	120.30
54	1G	754	C	N1-C2-O2	6.55	122.83	118.90
54	1G	1375	A	N1-C6-N6	-6.55	114.67	118.60
24	1H	1674	G	C8-N9-C4	-6.55	103.78	106.40
1	13	902	G	O5'-P-OP2	-6.55	99.81	105.70
24	1H	530	G	C2-N3-C4	-6.55	108.63	111.90
24	1H	1269	A	C5-N7-C8	-6.55	100.63	103.90
24	1H	2012	G	N3-C4-N9	6.55	129.93	126.00
1	13	1403	C	C6-N1-C2	6.54	122.92	120.30
24	1H	241	A	OP1-P-OP2	6.54	129.41	119.60
24	1H	2554	U	O5'-P-OP2	6.54	118.55	110.70
24	14	1639	U	N3-C2-O2	-6.54	117.62	122.20
24	1H	140	A	N3-C4-C5	6.54	131.38	126.80
24	1H	2584	U	N1-C2-N3	6.54	118.82	114.90
24	14	201	C	C5-C6-N1	-6.54	117.73	121.00
24	1H	456	C	O5'-P-OP2	-6.53	99.82	105.70
24	14	1430	C	O5'-P-OP1	-6.53	99.82	105.70
24	14	2297	C	OP1-P-OP2	6.53	129.40	119.60
24	1H	2490	G	N7-C8-N9	6.53	116.36	113.10
24	1H	1269	A	C2-N3-C4	-6.53	107.33	110.60
24	1H	1307	A	N9-C4-C5	-6.53	103.19	105.80
24	14	566	U	C6-N1-C2	6.53	124.92	121.00
24	14	738	G	C5-C6-O6	-6.53	124.68	128.60
24	1H	1308	A	C5-C6-N6	6.53	128.92	123.70
24	1H	2645	G	C5-C6-O6	6.53	132.51	128.60
24	1H	2737	G	C5-C6-O6	-6.53	124.68	128.60
25	1J	102	G	C5-C6-O6	6.53	132.51	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1606	G	N3-C4-N9	6.52	129.91	126.00
1	13	892	A	N1-C6-N6	6.52	122.51	118.60
25	16	7	G	C4-C5-N7	6.52	113.41	110.80
24	1H	613	U	N3-C4-O4	-6.52	114.84	119.40
24	1H	1776	G	C5-C6-O6	-6.52	124.69	128.60
24	14	1327	C	N3-C2-O2	6.52	126.46	121.90
1	13	33	A	O5'-P-OP1	-6.51	99.84	105.70
24	1H	239	U	C5-C6-N1	-6.51	119.44	122.70
24	1H	1346	G	N1-C6-O6	-6.51	115.99	119.90
24	14	2570	G	C5-C6-N1	-6.51	108.24	111.50
24	14	2392	A	C5-C6-N1	-6.51	114.44	117.70
24	1H	214	G	O4'-C1'-N9	6.51	113.41	108.20
24	1H	2550	G	C8-N9-C4	-6.51	103.80	106.40
24	14	489	G	N9-C4-C5	6.51	108.00	105.40
24	1H	686	G	N9-C4-C5	-6.51	102.80	105.40
24	14	197	A	C4-C5-N7	6.51	113.95	110.70
24	1H	2778	A	O5'-P-OP2	-6.51	99.84	105.70
1	13	318	G	N1-C6-O6	6.51	123.80	119.90
24	1H	1642	G	O5'-P-OP1	-6.51	99.84	105.70
45	H8	64	GLY	N-CA-C	-6.50	96.84	113.10
1	13	792	A	O4'-C1'-N9	6.50	113.40	108.20
24	1H	203	C	O5'-P-OP2	6.50	118.50	110.70
24	1H	285	C	C6-N1-C2	-6.50	117.70	120.30
24	1H	1277	G	N1-C6-O6	-6.50	116.00	119.90
24	1H	2496	C	OP1-P-OP2	-6.50	109.84	119.60
24	14	2554	U	O5'-P-OP2	6.50	118.50	110.70
24	1H	662	G	N1-C6-O6	-6.50	116.00	119.90
24	1H	1634	A	N1-C6-N6	6.50	122.50	118.60
1	13	888	G	N9-C4-C5	-6.50	102.80	105.40
24	1H	2031	A	C2-N3-C4	6.50	113.85	110.60
54	1G	525	C	C2-N3-C4	6.50	123.15	119.90
24	14	574	C	C6-N1-C2	6.50	122.90	120.30
24	14	2426	A	N7-C8-N9	6.50	117.05	113.80
24	1H	305	U	C5-C6-N1	6.50	125.95	122.70
24	14	1899	G	C5-C6-N1	-6.49	108.25	111.50
24	1H	1698	A	N1-C2-N3	6.49	132.55	129.30
24	1H	529	A	N9-C4-C5	-6.49	103.20	105.80
25	16	81	G	N7-C8-N9	6.49	116.35	113.10
24	14	2467	C	C6-N1-C2	-6.49	117.70	120.30
24	14	141	A	C2-N3-C4	-6.49	107.36	110.60
24	14	1930	G	C4-C5-N7	-6.49	108.20	110.80
24	14	2870	C	C6-N1-C2	-6.49	117.70	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	115	C	C5-C4-N4	-6.49	115.66	120.20
24	1H	1769	G	N3-C4-N9	6.49	129.89	126.00
24	1H	1543	A	N9-C4-C5	-6.49	103.21	105.80
24	1H	2039	C	C2-N3-C4	6.49	123.14	119.90
24	14	438	G	C6-C5-N7	-6.49	126.51	130.40
24	14	1678	G	N1-C6-O6	6.49	123.79	119.90
24	1H	755	C	C5-C4-N4	-6.48	115.66	120.20
24	14	2452	C	N3-C2-O2	6.48	126.44	121.90
24	1H	317	G	OP1-P-O3'	6.48	119.46	105.20
24	1H	834	C	OP2-P-O3'	6.48	119.46	105.20
24	14	1204	A	C4-C5-N7	6.48	113.94	110.70
24	14	119	A	N1-C2-N3	6.48	132.54	129.30
1	13	555	C	C6-N1-C2	-6.48	117.71	120.30
22	2K	3	U	N3-C2-O2	-6.48	117.67	122.20
24	1H	859	G	C4-N9-C1'	-6.48	118.08	126.50
24	1H	444	C	O5'-P-OP1	6.48	118.47	110.70
24	1H	1781	C	N3-C4-C5	6.48	124.49	121.90
24	14	2357	U	O5'-P-OP2	-6.48	99.87	105.70
24	1H	1204	A	C6-C5-N7	-6.47	127.77	132.30
24	1H	851	U	N1-C2-O2	-6.47	118.27	122.80
24	14	2051	A	N1-C6-N6	6.47	122.48	118.60
24	1H	2346	A	O4'-C1'-N9	6.47	113.38	108.20
24	14	2617	C	O5'-P-OP2	-6.47	99.88	105.70
24	1H	245	G	O5'-P-OP1	-6.47	99.88	105.70
24	1H	453	C	N3-C4-N4	6.47	122.53	118.00
54	1G	754	C	C2-N1-C1'	6.47	125.91	118.80
24	14	2271	G	C8-N9-C4	6.47	108.99	106.40
24	1H	382	G	C6-C5-N7	-6.46	126.52	130.40
1	13	1519	A	C5-C6-N6	6.46	128.87	123.70
24	1H	1021	A	C4-C5-N7	6.46	113.93	110.70
24	1H	2647	U	C5-C6-N1	-6.46	119.47	122.70
24	1H	2785	C	C6-N1-C2	-6.46	117.72	120.30
24	14	693	C	C5-C6-N1	-6.46	117.77	121.00
52	L5	34	ARG	NE-CZ-NH1	-6.46	117.07	120.30
1	13	689	C	O5'-P-OP1	-6.46	99.89	105.70
24	1H	814	C	C5-C6-N1	-6.46	117.77	121.00
54	1G	1203	C	C6-N1-C2	6.46	122.88	120.30
1	13	1128	C	C5-C6-N1	6.46	124.23	121.00
24	1H	2050	C	N3-C4-C5	-6.46	119.32	121.90
24	1H	2232	U	N1-C2-N3	6.46	118.77	114.90
24	1H	2318	G	C5-N7-C8	-6.46	101.07	104.30
24	14	808	G	O5'-P-OP2	-6.46	99.89	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1782	C	C6-N1-C2	6.46	122.88	120.30
24	1H	727	A	C5-C6-N1	-6.45	114.47	117.70
24	1H	1653	G	N3-C4-C5	-6.45	125.37	128.60
54	1G	1519	A	N9-C4-C5	6.45	108.38	105.80
24	14	139	G	N9-C4-C5	6.45	107.98	105.40
24	1H	463	G	O5'-P-OP2	-6.45	99.89	105.70
24	14	664	C	C2-N3-C4	-6.45	116.67	119.90
24	14	1825	A	C5-C6-N1	6.45	120.92	117.70
24	14	2607	G	N1-C6-O6	6.45	123.77	119.90
24	1H	124	G	C4-C5-N7	6.45	113.38	110.80
24	1H	127	A	N1-C6-N6	6.45	122.47	118.60
24	1H	1300	U	OP1-P-O3'	6.45	119.38	105.20
24	14	2720	U	O5'-P-OP1	-6.45	99.90	105.70
24	1H	768	G	C6-C5-N7	-6.44	126.53	130.40
24	1H	2330	G	N3-C4-C5	6.44	131.82	128.60
24	1H	2451	A	C5-C6-N6	6.44	128.85	123.70
54	1G	1502	A	C2-N3-C4	-6.44	107.38	110.60
24	14	1776	G	O5'-P-OP1	6.44	118.43	110.70
24	1H	1825	A	N1-C6-N6	-6.44	114.74	118.60
24	14	728	G	N3-C4-N9	6.44	129.87	126.00
24	14	2519	U	C5-C6-N1	-6.44	119.48	122.70
24	14	1702	G	N3-C2-N2	-6.44	115.39	119.90
24	1H	323	G	O5'-P-OP1	-6.44	99.91	105.70
25	16	53	A	N7-C8-N9	6.44	117.02	113.80
24	14	1858	G	C8-N9-C4	-6.44	103.83	106.40
24	14	1971	A	O5'-P-OP1	-6.44	99.91	105.70
24	14	471	A	C2-N3-C4	-6.44	107.38	110.60
24	1H	445	C	O5'-P-OP1	-6.43	99.91	105.70
24	1H	801	G	N3-C4-N9	-6.43	122.14	126.00
24	1H	2022	U	OP1-P-OP2	-6.43	109.95	119.60
1	13	1519	A	C8-N9-C4	-6.43	103.23	105.80
24	1H	2540	C	N3-C4-C5	6.43	124.47	121.90
24	14	1606	G	O5'-P-OP1	6.43	118.42	110.70
24	14	1681	G	N1-C6-O6	6.43	123.76	119.90
24	14	2040	C	O5'-P-OP1	-6.43	99.91	105.70
54	1G	1200	C	C6-N1-C1'	-6.43	113.09	120.80
24	14	1500	G	C4-N9-C1'	6.43	134.86	126.50
24	1H	858	U	N3-C2-O2	-6.43	117.70	122.20
24	14	1543	A	O5'-P-OP1	6.43	118.41	110.70
54	1G	135	C	N1-C2-O2	-6.42	115.05	118.90
24	1H	566	U	C6-N1-C2	6.42	124.85	121.00
24	1H	593	G	N1-C2-N2	-6.42	110.42	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1609	A	N9-C4-C5	6.42	108.37	105.80
1	13	365	U	N3-C4-O4	6.42	123.89	119.40
24	14	1258	C	OP2-P-O3'	6.42	119.32	105.20
24	1H	207	A	N1-C6-N6	6.42	122.45	118.60
24	1H	684	G	N1-C6-O6	-6.42	116.05	119.90
24	1H	1251	C	N3-C4-N4	6.42	122.49	118.00
24	1H	1950	G	N3-C4-C5	6.42	131.81	128.60
24	1H	2555	U	O5'-P-OP1	-6.42	99.93	105.70
1	13	812	C	P-O3'-C3'	6.42	127.40	119.70
22	2K	85	A	N9-C4-C5	-6.42	103.23	105.80
24	14	1500	G	C8-N9-C1'	-6.41	118.66	127.00
24	1H	1274	A	N1-C6-N6	6.41	122.45	118.60
24	1H	1751	C	C6-N1-C2	6.41	122.86	120.30
1	13	1498	U	P-O3'-C3'	6.41	127.39	119.70
24	1H	2265	U	O5'-P-OP1	-6.41	99.93	105.70
24	1H	2327	A	N9-C4-C5	6.41	108.36	105.80
54	1G	53	A	C4-C5-N7	6.41	113.90	110.70
24	14	676	A	C5-C6-N1	-6.41	114.50	117.70
24	1H	689	A	N1-C6-N6	6.41	122.44	118.60
24	1H	1653	G	P-O3'-C3'	6.40	127.39	119.70
24	1H	528	A	N3-C4-C5	6.40	131.28	126.80
54	1G	1469	G	C6-C5-N7	-6.40	126.56	130.40
24	14	857	C	N3-C4-C5	-6.40	119.34	121.90
1	13	365	U	C5-C4-O4	-6.40	122.06	125.90
24	1H	138	G	C5-C6-N1	6.40	114.70	111.50
24	1H	189	G	N7-C8-N9	-6.40	109.90	113.10
24	1H	1216	G	O5'-P-OP1	-6.40	99.94	105.70
24	1H	1551	C	N1-C2-O2	-6.40	115.06	118.90
54	1G	487	A	N1-C6-N6	6.40	122.44	118.60
24	1H	1373	A	C8-N9-C4	6.40	108.36	105.80
54	1G	1498	U	C6-N1-C2	-6.40	117.16	121.00
24	14	1636	C	C5-C6-N1	6.40	124.20	121.00
54	1G	121	C	C2-N1-C1'	6.40	125.84	118.80
1	13	765	G	C4-C5-N7	6.40	113.36	110.80
54	1G	1405	G	N1-C6-O6	-6.40	116.06	119.90
24	14	2374	C	C6-N1-C2	6.40	122.86	120.30
24	1H	2271	G	N9-C4-C5	-6.39	102.84	105.40
24	1H	2503	A	C2-N3-C4	6.39	113.80	110.60
1	13	1128	C	C6-N1-C2	-6.39	117.74	120.30
24	1H	1019	U	N3-C2-O2	-6.39	117.73	122.20
24	1H	115	C	N1-C2-O2	-6.39	115.07	118.90
1	13	301	G	N1-C6-O6	6.39	123.73	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	1G	1475	G	C8-N9-C4	-6.39	103.84	106.40
54	1G	1410	G	O5'-P-OP2	-6.38	99.95	105.70
24	14	1254	A	C5-C6-N6	-6.38	118.59	123.70
24	14	2584	U	N1-C2-O2	6.38	127.27	122.80
24	14	2873	A	C4-N9-C1'	6.38	137.79	126.30
24	1H	1263	U	C6-N1-C2	-6.38	117.17	121.00
24	14	750	A	C4-C5-N7	6.38	113.89	110.70
24	14	1377	G	C6-C5-N7	-6.38	126.57	130.40
24	14	1766	U	N1-C2-N3	6.38	118.73	114.90
25	1J	22	U	C5-C6-N1	6.38	125.89	122.70
24	14	203	C	N3-C2-O2	6.38	126.36	121.90
24	14	1899	G	N3-C2-N2	-6.38	115.44	119.90
24	14	2595	G	C4-N9-C1'	-6.38	118.21	126.50
24	1H	690	G	N1-C6-O6	6.37	123.72	119.90
24	1H	1365	A	C2-N3-C4	-6.37	107.41	110.60
24	1H	1267	U	OP2-P-O3'	6.37	119.22	105.20
24	1H	2433	A	N1-C6-N6	6.37	122.42	118.60
25	16	81	G	O4'-C1'-N9	6.37	113.30	108.20
24	14	2857	G	N1-C6-O6	6.37	123.72	119.90
1	13	900	A	C8-N9-C4	6.37	108.35	105.80
24	1H	25	U	C5-C4-O4	-6.37	122.08	125.90
24	1H	814	C	C6-N1-C2	6.37	122.85	120.30
24	14	1204	A	O4'-C1'-N9	6.37	113.29	108.20
24	1H	182	A	N1-C6-N6	6.36	122.42	118.60
24	1H	828	U	N3-C2-O2	-6.36	117.75	122.20
24	1H	2274	A	C2-N3-C4	-6.36	107.42	110.60
24	1H	2287	A	N3-C4-N9	-6.36	122.31	127.40
24	14	488	G	N3-C4-N9	6.36	129.82	126.00
24	14	949	C	C6-N1-C2	6.36	122.84	120.30
24	1H	839	U	N1-C2-N3	6.36	118.72	114.90
24	1H	1423	G	O5'-P-OP2	-6.36	99.98	105.70
24	1H	2271	G	C6-C5-N7	-6.36	126.58	130.40
24	14	733	G	N3-C4-N9	6.36	129.81	126.00
24	1H	185	U	OP2-P-O3'	6.36	119.19	105.20
25	1J	116	G	N3-C4-N9	-6.36	122.19	126.00
24	1H	117	G	C5-C6-O6	-6.36	124.79	128.60
24	1H	330	A	N3-C4-N9	-6.36	122.32	127.40
1	13	251	G	C4-C5-N7	6.35	113.34	110.80
24	14	1982	C	C5-C6-N1	6.35	124.18	121.00
24	14	2054	A	N1-C6-N6	6.35	122.41	118.60
24	1H	956	G	O5'-P-OP2	-6.35	99.99	105.70
54	1G	1528	U	C6-N1-C2	6.35	124.81	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2755	C	C5-C6-N1	6.35	124.17	121.00
24	14	2726	U	N3-C4-O4	-6.35	114.96	119.40
24	1H	1559	G	C5-N7-C8	-6.35	101.13	104.30
24	14	208	C	N3-C2-O2	6.34	126.34	121.90
24	14	616	A	N1-C6-N6	6.34	122.41	118.60
24	14	1307	A	N1-C6-N6	-6.34	114.79	118.60
24	14	1332	G	N3-C2-N2	-6.34	115.46	119.90
24	1H	1426	G	N3-C4-C5	-6.34	125.43	128.60
24	1H	47	C	OP1-P-OP2	6.34	129.11	119.60
24	1H	837	C	N3-C4-N4	6.34	122.44	118.00
24	14	1496	A	C8-N9-C4	-6.34	103.26	105.80
24	14	1603	A	C8-N9-C4	-6.34	103.26	105.80
24	14	2595	G	N3-C4-C5	6.34	131.77	128.60
24	14	698	C	OP1-P-OP2	6.34	129.11	119.60
24	14	2389	G	N7-C8-N9	6.34	116.27	113.10
24	14	2822	G	C4-C5-C6	6.34	122.60	118.80
1	13	768	A	C6-N1-C2	-6.34	114.80	118.60
24	1H	784	A	N3-C4-N9	-6.34	122.33	127.40
24	1H	1249	U	OP1-P-OP2	6.34	129.10	119.60
24	1H	1960	A	C5-C6-N6	-6.34	118.63	123.70
24	1H	2452	C	C6-N1-C1'	-6.34	113.20	120.80
24	14	2232	U	N1-C2-O2	-6.34	118.36	122.80
24	1H	256	A	O5'-P-OP1	-6.33	100.00	105.70
24	1H	636	G	O5'-P-OP1	-6.33	100.00	105.70
24	1H	1598	C	O5'-P-OP2	6.33	118.30	110.70
24	1H	2452	C	N3-C4-N4	6.33	122.43	118.00
24	14	2730	C	N3-C4-C5	-6.33	119.37	121.90
24	1H	2059	A	C8-N9-C4	6.33	108.33	105.80
24	1H	2503	A	N3-C4-N9	6.33	132.47	127.40
24	14	2598	A	O5'-P-OP2	6.33	118.30	110.70
24	14	2278	A	N9-C4-C5	6.33	108.33	105.80
24	1H	448	U	C4-C5-C6	6.33	123.50	119.70
24	14	380	U	C6-N1-C2	-6.33	117.20	121.00
24	14	1564	C	N3-C4-C5	-6.33	119.37	121.90
24	14	1766	U	C2-N3-C4	-6.33	123.20	127.00
24	14	2264	C	O5'-P-OP2	6.33	118.29	110.70
1	13	121	C	N1-C2-O2	6.33	122.69	118.90
24	1H	36	G	N3-C2-N2	-6.33	115.47	119.90
24	1H	236	C	C6-N1-C2	6.33	122.83	120.30
54	1G	50	A	N1-C2-N3	6.33	132.46	129.30
54	1G	1499	A	C8-N9-C4	6.33	108.33	105.80
24	14	210	C	OP2-P-O3'	6.33	119.12	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1350	C	N1-C2-O2	-6.32	115.11	118.90
23	4K	17	G	N1-C6-O6	6.32	123.69	119.90
24	14	671	C	O5'-P-OP2	-6.32	100.01	105.70
24	14	1364	G	N3-C4-N9	6.32	129.79	126.00
24	14	1404	C	N1-C2-O2	6.32	122.69	118.90
24	1H	2779	U	N3-C2-O2	-6.32	117.78	122.20
25	16	100	G	C8-N9-C4	6.32	108.93	106.40
54	1G	197	A	C4-C5-C6	6.32	120.16	117.00
24	14	856	C	C6-N1-C2	-6.32	117.77	120.30
24	14	2241	A	C2-N3-C4	-6.32	107.44	110.60
54	1G	1301	U	C2-N1-C1'	6.31	125.28	117.70
1	13	717	C	C5-C6-N1	6.31	124.16	121.00
24	1H	53	A	OP1-P-O3'	6.31	119.09	105.20
24	1H	2438	U	N3-C2-O2	-6.31	117.78	122.20
54	1G	1498	U	C2-N1-C1'	6.31	125.27	117.70
24	14	1816	G	N1-C6-O6	-6.31	116.11	119.90
24	1H	396	G	N1-C2-N2	6.31	121.88	116.20
24	1H	2527	C	C2-N3-C4	6.31	123.05	119.90
24	14	2413	G	C5-C6-O6	-6.31	124.81	128.60
24	1H	702	G	O5'-P-OP2	-6.31	100.02	105.70
24	1H	943	U	N1-C2-O2	-6.31	118.39	122.80
24	1H	1911	U	N3-C2-O2	-6.31	117.78	122.20
54	1G	913	A	P-O3'-C3'	6.31	127.27	119.70
24	14	2392	A	N7-C8-N9	6.31	116.95	113.80
24	14	2609	U	C2-N3-C4	-6.31	123.22	127.00
24	1H	2457	U	OP2-P-O3'	6.31	119.07	105.20
24	1H	676	A	OP1-P-OP2	6.30	129.06	119.60
24	1H	1021	A	N7-C8-N9	6.30	116.95	113.80
24	1H	333	G	C8-N9-C1'	-6.30	118.81	127.00
24	1H	1385	G	N3-C2-N2	-6.30	115.49	119.90
24	14	390	A	C2-N3-C4	-6.30	107.45	110.60
24	14	1277	G	C8-N9-C4	6.30	108.92	106.40
24	1H	703	U	C5-C6-N1	-6.30	119.55	122.70
24	14	2609	U	C5-C6-N1	-6.30	119.55	122.70
1	13	111	G	N1-C6-O6	6.30	123.68	119.90
24	1H	76	C	N3-C4-C5	-6.30	119.38	121.90
24	1H	1786	A	N9-C1'-C2'	6.30	122.19	114.00
24	1H	1975	G	C4-C5-N7	6.30	113.32	110.80
43	F8	67	GLY	N-CA-C	-6.29	97.37	113.10
24	14	2547	U	O5'-P-OP1	6.29	118.25	110.70
24	1H	1241	A	C5-N7-C8	-6.29	100.75	103.90
27	11	257	LEU	CA-CB-CG	6.29	129.77	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1653	G	C5-N7-C8	6.29	107.45	104.30
24	1H	141	A	N1-C6-N6	6.29	122.37	118.60
24	1H	512	G	O4'-C1'-N9	6.29	113.23	108.20
1	13	681	C	C6-N1-C2	-6.29	117.78	120.30
24	1H	784	A	O5'-P-OP1	-6.29	100.04	105.70
24	1H	1004	C	O5'-P-OP2	6.29	118.25	110.70
24	1H	1967	C	O5'-P-OP2	-6.29	100.04	105.70
24	1H	2247	A	C8-N9-C4	-6.29	103.28	105.80
24	14	641	C	C6-N1-C2	6.29	122.81	120.30
25	16	18	G	N1-C6-O6	6.29	123.67	119.90
24	14	1806	C	C6-N1-C2	6.29	122.81	120.30
24	14	2489	G	N1-C6-O6	6.29	123.67	119.90
1	13	811	C	C6-N1-C1'	-6.28	113.26	120.80
24	1H	974(A)	C	N1-C2-O2	6.28	122.67	118.90
24	1H	1197	G	N1-C6-O6	-6.28	116.13	119.90
24	1H	2451	A	N9-C4-C5	6.28	108.31	105.80
1	13	587	G	N1-C6-O6	6.28	123.67	119.90
24	1H	1528	A	C8-N9-C4	-6.28	103.29	105.80
24	1H	2058	A	C5-N7-C8	-6.28	100.76	103.90
24	1H	2434	A	N7-C8-N9	-6.28	110.66	113.80
24	14	771	G	N3-C2-N2	-6.28	115.51	119.90
24	1H	2552	U	N3-C4-O4	6.28	123.79	119.40
54	1G	766	A	O5'-P-OP2	-6.27	100.06	105.70
24	14	1558	A	N1-C6-N6	6.27	122.36	118.60
24	14	2644	G	C5-N7-C8	-6.27	101.16	104.30
24	1H	1565	C	N3-C4-C5	6.27	124.41	121.90
54	1G	612	C	C6-N1-C2	6.27	122.81	120.30
24	14	1697	G	N1-C6-O6	6.27	123.66	119.90
24	14	801	G	C4-C5-N7	-6.27	108.29	110.80
24	14	2033	A	C6-N1-C2	-6.27	114.84	118.60
54	1G	1053	G	C8-N9-C1'	6.27	135.15	127.00
24	14	1355	G	C8-N9-C4	-6.27	103.89	106.40
24	14	211	A	C6-C5-N7	-6.26	127.91	132.30
24	1H	2042	A	C2-N3-C4	-6.26	107.47	110.60
24	14	1779	U	C6-N1-C1'	-6.26	112.43	121.20
24	1H	2689	U	P-O3'-C3'	6.26	127.21	119.70
24	1H	120	U	N3-C2-O2	-6.26	117.82	122.20
24	14	415	A	O5'-P-OP2	-6.26	100.07	105.70
24	14	2347	C	N3-C2-O2	-6.26	117.52	121.90
24	1H	236	C	C5-C6-N1	-6.26	117.87	121.00
24	1H	613	U	N3-C2-O2	-6.26	117.82	122.20
24	14	695	G	OP1-P-OP2	-6.26	110.21	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2857	G	C4-C5-N7	6.26	113.30	110.80
24	14	2859	G	N7-C8-N9	6.26	116.23	113.10
24	1H	1294	U	N1-C2-O2	-6.26	118.42	122.80
24	1H	2496	C	OP1-P-O3'	6.26	118.96	105.20
24	14	738	G	O5'-P-OP1	6.26	118.21	110.70
24	14	570	G	N3-C2-N2	6.25	124.28	119.90
22	2K	20	C	N1-C2-O2	6.25	122.65	118.90
24	14	1252	G	O4'-C1'-N9	-6.25	103.20	108.20
23	4K	17	G	N9-C4-C5	-6.25	102.90	105.40
24	14	797	C	C6-N1-C2	6.25	122.80	120.30
24	14	2318	G	O4'-C1'-N9	6.25	113.20	108.20
24	1H	964	C	O5'-P-OP1	-6.25	100.08	105.70
24	1H	2714	G	C6-C5-N7	-6.25	126.65	130.40
24	1H	2888	C	C6-N1-C2	-6.25	117.80	120.30
24	14	2822	G	C6-C5-N7	-6.25	126.65	130.40
24	1H	1618	A	O5'-P-OP1	-6.25	100.08	105.70
24	1H	138	G	C5-N7-C8	-6.24	101.18	104.30
54	1G	372	C	N1-C2-O2	6.24	122.65	118.90
54	1G	23	C	N3-C4-N4	6.24	122.37	118.00
24	14	970	C	O5'-P-OP1	-6.24	100.08	105.70
24	14	2392	A	C4-C5-N7	6.24	113.82	110.70
24	14	2689	U	P-O3'-C3'	6.24	127.19	119.70
24	1H	1362	C	N1-C2-O2	-6.24	115.16	118.90
24	1H	2779	U	C5-C6-N1	-6.24	119.58	122.70
1	13	518	C	N3-C2-O2	-6.24	117.53	121.90
24	1H	1888	G	N3-C4-C5	-6.24	125.48	128.60
24	1H	1913	A	N1-C2-N3	-6.24	126.18	129.30
24	1H	705	A	C5-C6-N6	-6.23	118.71	123.70
24	14	1698	A	C5-C6-N1	-6.23	114.58	117.70
24	1H	946	G	C5-N7-C8	6.23	107.42	104.30
24	1H	2503	A	C6-C5-N7	-6.23	127.94	132.30
24	1H	2609	U	C6-N1-C2	6.23	124.74	121.00
24	14	632	A	C4-C5-N7	6.23	113.81	110.70
24	14	1270	C	OP2-P-O3'	6.23	118.91	105.20
24	14	1351	C	N1-C2-O2	-6.23	115.16	118.90
24	1H	1182	A	C8-N9-C4	-6.23	103.31	105.80
24	14	1780	A	N9-C4-C5	6.23	108.29	105.80
24	1H	2431	U	N3-C4-O4	-6.23	115.04	119.40
24	1H	2609	U	C5-C4-O4	-6.23	122.16	125.90
24	1H	933	A	N9-C4-C5	6.23	108.29	105.80
24	1H	2072	G	OP1-P-O3'	6.22	118.89	105.20
24	1H	802	A	OP2-P-O3'	6.22	118.89	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2355	C	C6-N1-C1'	-6.22	113.33	120.80
54	1G	886	G	N9-C4-C5	-6.22	102.91	105.40
24	14	2430	A	N9-C4-C5	-6.22	103.31	105.80
54	1G	1053	G	C4-N9-C1'	-6.22	118.42	126.50
24	1H	85	G	O5'-P-OP1	6.22	118.16	110.70
24	1H	740	U	OP2-P-O3'	6.22	118.88	105.20
24	1H	117	G	C4-C5-N7	6.22	113.29	110.80
24	1H	130	C	C5-C4-N4	-6.22	115.85	120.20
24	1H	2331	G	C2-N3-C4	-6.22	108.79	111.90
54	1G	449	C	C5-C4-N4	6.22	124.55	120.20
35	78	37	GLY	N-CA-C	-6.21	97.56	113.10
24	14	1644	C	N3-C4-N4	-6.21	113.65	118.00
24	1H	197	A	N1-C2-N3	6.21	132.41	129.30
24	1H	767	U	O5'-P-OP1	-6.21	100.11	105.70
24	1H	770	G	C8-N9-C4	-6.21	103.92	106.40
24	14	801	G	N9-C4-C5	6.21	107.88	105.40
24	14	2392	A	N1-C6-N6	6.21	122.33	118.60
1	13	735	C	C6-N1-C2	-6.21	117.82	120.30
24	1H	621	A	C8-N9-C4	-6.21	103.32	105.80
24	1H	802	A	N1-C2-N3	6.21	132.41	129.30
24	1H	1611	C	N1-C2-O2	-6.21	115.17	118.90
24	1H	1839	G	N1-C2-N2	-6.21	110.61	116.20
24	14	774	A	C6-C5-N7	-6.21	127.95	132.30
24	1H	398	G	O5'-P-OP2	-6.21	100.11	105.70
24	1H	676	A	N1-C6-N6	6.21	122.32	118.60
24	1H	1793	C	N1-C2-O2	-6.21	115.18	118.90
24	1H	2662	A	N1-C6-N6	6.21	122.32	118.60
1	13	972	C	C6-N1-C2	-6.20	117.82	120.30
24	1H	2019	A	N1-C6-N6	6.20	122.32	118.60
24	1H	2574	G	C5-C6-O6	-6.20	124.88	128.60
24	14	911	A	OP1-P-O3'	6.20	118.85	105.20
24	1H	1022	G	P-O3'-C3'	6.20	127.14	119.70
24	1H	1036	G	C8-N9-C4	6.20	108.88	106.40
24	1H	1763	G	O5'-P-OP1	6.20	118.14	110.70
24	14	1659	U	N1-C2-O2	-6.20	118.46	122.80
24	14	2320	A	P-O3'-C3'	6.20	127.14	119.70
24	1H	561	G	N7-C8-N9	-6.20	110.00	113.10
24	1H	1202	C	N1-C2-O2	-6.20	115.18	118.90
54	1G	322	C	N3-C2-O2	6.20	126.24	121.90
24	14	1274	A	O5'-P-OP2	-6.20	100.12	105.70
24	14	1653	G	N3-C4-C5	-6.20	125.50	128.60
24	14	2334	G	C8-N9-C4	6.20	108.88	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	581	C	C6-N1-C2	-6.20	117.82	120.30
24	1H	1606	G	N7-C8-N9	-6.20	110.00	113.10
25	1J	54	G	N7-C8-N9	6.20	116.20	113.10
24	1H	99	U	N3-C2-O2	-6.20	117.86	122.20
24	1H	2713	A	N3-C4-N9	-6.20	122.44	127.40
24	14	1374	G	N7-C8-N9	6.20	116.20	113.10
24	14	1758	G	C6-C5-N7	6.20	134.12	130.40
25	1J	75	G	O5'-P-OP2	-6.20	100.12	105.70
24	1H	808	G	OP1-P-OP2	6.19	128.89	119.60
24	1H	2564	A	C5-C6-N6	-6.19	118.75	123.70
24	14	1787	A	N7-C8-N9	6.19	116.90	113.80
24	1H	508	G	N7-C8-N9	6.19	116.20	113.10
24	1H	2032	G	C2-N3-C4	-6.19	108.80	111.90
24	14	2713	A	N1-C6-N6	6.19	122.32	118.60
24	1H	774	A	C6-N1-C2	6.19	122.31	118.60
24	1H	828	U	C2-N3-C4	6.19	130.72	127.00
24	1H	1528	A	C6-C5-N7	-6.19	127.97	132.30
24	1H	2584	U	C2-N3-C4	-6.19	123.28	127.00
24	14	1994	C	N3-C4-N4	-6.19	113.67	118.00
24	1H	2240	C	C6-N1-C2	6.19	122.78	120.30
24	1H	2458	G	N1-C6-O6	-6.19	116.19	119.90
24	14	2246	G	C5-C6-O6	-6.19	124.89	128.60
24	14	2610	C	N1-C2-O2	6.19	122.61	118.90
24	14	836	G	C5-C6-N1	6.18	114.59	111.50
24	14	1813	G	O5'-P-OP1	-6.18	100.13	105.70
24	1H	165	U	N1-C2-O2	6.18	127.13	122.80
24	1H	2271	G	C8-N9-C1'	-6.18	118.96	127.00
54	1G	449	C	N3-C2-O2	-6.18	117.57	121.90
24	1H	1806	C	O5'-P-OP2	-6.18	100.14	105.70
24	1H	1960	A	N1-C6-N6	6.18	122.31	118.60
35	35	138	LEU	CA-CB-CG	6.18	129.51	115.30
1	13	15	G	C4-N9-C1'	6.18	134.53	126.50
24	1H	265	A	C6-C5-N7	-6.17	127.98	132.30
24	1H	529	A	C5-N7-C8	-6.17	100.81	103.90
24	1H	1616	A	C2-N3-C4	-6.17	107.51	110.60
24	1H	2699	C	C6-N1-C2	6.17	122.77	120.30
54	1G	572	A	N1-C6-N6	6.17	122.30	118.60
24	14	632	A	C5-N7-C8	-6.17	100.81	103.90
1	13	111	G	C8-N9-C4	6.17	108.87	106.40
24	1H	2361	A	C8-N9-C4	6.17	108.27	105.80
24	14	59	U	N3-C4-C5	-6.17	110.90	114.60
24	14	1022	G	P-O3'-C3'	6.17	127.11	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2731	G	C8-N9-C4	-6.17	103.93	106.40
24	14	2339	G	O5'-P-OP2	-6.17	100.15	105.70
1	13	758	G	C2-N3-C4	-6.17	108.82	111.90
24	14	1903	G	OP1-P-OP2	6.17	128.85	119.60
24	1H	1315	C	C4-C5-C6	6.17	120.48	117.40
24	14	929	G	C6-C5-N7	-6.17	126.70	130.40
24	14	1224	G	C5-C6-O6	6.17	132.30	128.60
24	14	1350	C	N3-C2-O2	6.17	126.22	121.90
24	1H	1217	C	N3-C2-O2	6.16	126.22	121.90
24	1H	2433	A	C2-N3-C4	-6.16	107.52	110.60
24	14	1391	U	O5'-P-OP2	6.16	118.10	110.70
24	1H	701	G	OP2-P-O3'	6.16	118.75	105.20
24	1H	2066	C	OP1-P-O3'	6.16	118.76	105.20
24	14	512	G	N3-C4-C5	6.16	131.68	128.60
24	14	762	U	C5-C6-N1	6.16	125.78	122.70
24	14	1907	G	O5'-P-OP1	-6.16	100.15	105.70
24	1H	1940	U	O5'-P-OP2	-6.16	100.16	105.70
24	1H	2477	C	N1-C2-O2	6.16	122.60	118.90
24	14	635	C	N3-C2-O2	-6.16	117.59	121.90
24	14	1328	G	C5-N7-C8	-6.16	101.22	104.30
24	14	2712	U	C5-C4-O4	6.16	129.59	125.90
24	1H	2439	A	N7-C8-N9	6.16	116.88	113.80
24	1H	686	G	C8-N9-C4	6.16	108.86	106.40
24	1H	2374	C	OP1-P-OP2	6.16	128.83	119.60
24	14	25	U	C6-N1-C2	6.16	124.69	121.00
24	14	1377	G	N1-C6-O6	6.16	123.59	119.90
24	14	1758	G	C4-C5-N7	-6.16	108.34	110.80
24	14	562	U	C2-N3-C4	-6.15	123.31	127.00
24	1H	815	C	C6-N1-C2	6.15	122.76	120.30
24	1H	1899	G	N1-C2-N3	6.15	127.59	123.90
24	1H	1312	U	O5'-P-OP1	-6.15	100.17	105.70
24	14	817	C	N1-C2-O2	6.15	122.59	118.90
24	14	2351	G	N3-C4-C5	-6.15	125.52	128.60
24	14	2688	U	C4-C5-C6	6.15	123.39	119.70
24	1H	728	G	N9-C4-C5	-6.15	102.94	105.40
24	1H	949	C	C5-C6-N1	-6.15	117.93	121.00
24	14	988	A	C5-C6-N6	-6.15	118.78	123.70
24	14	1496	A	C6-C5-N7	-6.15	128.00	132.30
24	14	1696	G	N1-C6-O6	-6.15	116.21	119.90
24	14	2708	G	O5'-P-OP2	-6.15	100.17	105.70
24	1H	28	A	C4-C5-N7	6.15	113.77	110.70
24	1H	2375	G	C8-N9-C4	6.15	108.86	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2387	U	C2-N3-C4	-6.15	123.31	127.00
24	14	2260	C	C6-N1-C2	6.14	122.76	120.30
24	1H	1318	C	O5'-P-OP1	-6.14	100.17	105.70
24	1H	2644	G	N3-C4-N9	-6.14	122.31	126.00
24	1H	2525	G	C8-N9-C4	6.14	108.86	106.40
24	1H	636	G	O5'-P-OP2	6.14	118.07	110.70
24	14	2587	A	N9-C4-C5	-6.14	103.34	105.80
25	1J	102	G	N1-C6-O6	-6.14	116.22	119.90
24	1H	2726	U	O5'-P-OP1	-6.14	100.18	105.70
24	1H	1975	G	N9-C4-C5	-6.14	102.94	105.40
54	1G	1475	G	N7-C8-N9	6.14	116.17	113.10
1	13	888	G	N1-C6-O6	6.13	123.58	119.90
24	1H	375	C	O5'-P-OP1	6.13	118.06	110.70
24	14	205	G	N3-C4-N9	6.13	129.68	126.00
24	14	2351	G	N3-C4-N9	6.13	129.68	126.00
24	1H	2585	U	C5-C4-O4	-6.13	122.22	125.90
24	1H	1669	A	C5-N7-C8	-6.13	100.84	103.90
24	14	210	C	C6-N1-C2	6.13	122.75	120.30
25	1J	114	G	N3-C4-C5	6.13	131.66	128.60
1	13	925	G	O5'-P-OP2	-6.13	100.19	105.70
24	1H	55	G	O5'-P-OP1	-6.12	100.19	105.70
24	1H	376	C	O5'-P-OP1	-6.12	100.19	105.70
24	1H	1306	C	N1-C2-O2	-6.12	115.22	118.90
24	14	774	A	C5-C6-N6	-6.12	118.80	123.70
24	14	1664	A	C8-N9-C4	-6.12	103.35	105.80
22	2K	1	G	N3-C4-C5	-6.12	125.54	128.60
24	1H	470	A	N1-C2-N3	6.12	132.36	129.30
24	14	2434	A	C8-N9-C4	6.12	108.25	105.80
24	1H	2574	G	C8-N9-C4	6.12	108.85	106.40
24	14	796	C	C5-C6-N1	-6.12	117.94	121.00
24	1H	2431	U	C5-C4-O4	6.12	129.57	125.90
24	14	1955	U	N1-C2-N3	6.12	118.57	114.90
24	1H	920	G	N7-C8-N9	-6.12	110.04	113.10
24	1H	2232	U	C5-C4-O4	6.12	129.57	125.90
24	14	671	C	C2-N3-C4	-6.12	116.84	119.90
24	1H	564	C	C6-N1-C2	-6.12	117.85	120.30
24	1H	566	U	C5-C6-N1	-6.12	119.64	122.70
24	1H	2265	U	N3-C4-O4	6.12	123.68	119.40
24	1H	2337	G	N7-C8-N9	6.12	116.16	113.10
24	1H	250	G	N7-C8-N9	6.11	116.16	113.10
24	1H	2274	A	OP1-P-OP2	-6.11	110.43	119.60
24	1H	2490	G	C2-N3-C4	-6.11	108.84	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2346	A	C5-C6-N1	-6.11	114.64	117.70
25	1J	47	C	OP1-P-O3'	6.11	118.64	105.20
24	14	74	A	C5-N7-C8	-6.11	100.84	103.90
24	1H	1379	A	C4-C5-C6	6.11	120.05	117.00
24	1H	2445	G	C8-N9-C4	-6.11	103.96	106.40
24	14	1824	G	N1-C6-O6	6.11	123.56	119.90
1	13	1512	U	O5'-P-OP2	-6.11	100.20	105.70
24	1H	1141	U	O4'-C1'-N1	6.11	113.08	108.20
24	14	1566	A	N9-C4-C5	-6.11	103.36	105.80
24	1H	202	U	N1-C2-N3	-6.10	111.24	114.90
24	1H	582	G	C5-N7-C8	-6.10	101.25	104.30
24	1H	2391	G	O4'-C1'-N9	6.10	113.08	108.20
24	1H	2674	G	N3-C2-N2	-6.10	115.63	119.90
24	1H	539	G	O5'-P-OP1	6.10	118.02	110.70
24	1H	1600	C	OP1-P-O3'	6.10	118.62	105.20
24	1H	564	C	N3-C4-C5	-6.10	119.46	121.90
24	1H	1204	A	N9-C1'-C2'	6.10	121.93	114.00
24	1H	2741	A	C8-N9-C4	6.10	108.24	105.80
54	1G	1498	U	O4'-C1'-N1	-6.10	103.32	108.20
24	1H	621	A	O4'-C1'-N9	6.10	113.08	108.20
24	14	784	A	P-O3'-C3'	6.10	127.02	119.70
24	1H	1827	C	N1-C2-O2	6.09	122.56	118.90
24	14	330	A	C4-C5-N7	6.09	113.75	110.70
24	1H	124	G	C6-C5-N7	-6.09	126.74	130.40
24	1H	1019	U	C5-C4-O4	6.09	129.56	125.90
54	1G	535	A	N1-C6-N6	-6.09	114.94	118.60
24	14	2366	A	O5'-P-OP2	-6.09	100.22	105.70
24	14	2518	A	C5-C6-N6	-6.09	118.83	123.70
25	1J	27	C	C6-N1-C2	-6.09	117.86	120.30
24	1H	1790	C	N3-C4-C5	6.09	124.34	121.90
25	16	72	G	O5'-P-OP1	-6.09	100.22	105.70
24	14	203	C	N1-C2-O2	-6.09	115.25	118.90
1	13	576	G	C8-N9-C1'	-6.09	119.09	127.00
24	1H	1333	C	C5-C4-N4	-6.09	115.94	120.20
24	1H	1994	C	N1-C2-O2	6.09	122.55	118.90
24	1H	1807	G	O5'-P-OP1	-6.08	100.22	105.70
24	14	2590	A	C2-N3-C4	-6.08	107.56	110.60
24	1H	202	U	N3-C4-C5	6.08	118.25	114.60
24	1H	2429	G	OP1-P-OP2	-6.08	110.47	119.60
54	1G	58	C	C5-C6-N1	6.08	124.04	121.00
24	1H	999	U	O5'-P-OP2	6.08	118.00	110.70
24	1H	2741	A	N7-C8-N9	-6.08	110.76	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2618	G	C5-C6-O6	6.08	132.25	128.60
24	14	1241	A	C5-N7-C8	-6.08	100.86	103.90
24	1H	25	U	C6-N1-C2	6.08	124.65	121.00
24	14	733	G	N3-C4-C5	-6.08	125.56	128.60
24	1H	1815	A	C8-N9-C4	6.08	108.23	105.80
24	1H	1394	U	O5'-P-OP2	6.08	117.99	110.70
24	14	138	G	N7-C8-N9	6.08	116.14	113.10
24	14	930	U	N3-C2-O2	-6.08	117.95	122.20
24	14	2430	A	N1-C2-N3	6.08	132.34	129.30
1	13	684	A	C8-N9-C4	-6.07	103.37	105.80
1	13	738	C	C5-C6-N1	6.07	124.04	121.00
1	13	1084	G	N3-C4-N9	6.07	129.64	126.00
24	1H	791	C	P-O3'-C3'	6.07	126.99	119.70
54	1G	322	C	C6-N1-C2	6.07	122.73	120.30
24	1H	1353	A	C4-C5-N7	6.07	113.74	110.70
24	14	1130	U	O5'-P-OP1	-6.07	100.24	105.70
24	14	737	C	N3-C2-O2	6.07	126.15	121.90
25	1J	70	C	C6-N1-C2	-6.07	117.87	120.30
24	14	435	C	N1-C2-O2	6.07	122.54	118.90
24	14	2253	G	C5-C6-O6	-6.07	124.96	128.60
24	1H	1263	U	C2-N1-C1'	6.06	124.97	117.70
24	1H	1677	A	C2-N3-C4	-6.06	107.57	110.60
24	1H	1994	C	C6-N1-C2	-6.06	117.88	120.30
24	14	748	G	O4'-C1'-N9	6.06	113.05	108.20
24	1H	1754	C	N3-C4-C5	-6.06	119.48	121.90
24	1H	2264	C	OP1-P-O3'	6.06	118.53	105.20
24	14	389	G	N9-C4-C5	-6.06	102.98	105.40
24	14	811	U	N1-C2-N3	6.06	118.54	114.90
24	14	2593	U	N3-C4-O4	-6.06	115.16	119.40
24	1H	246	C	C2-N1-C1'	-6.06	112.14	118.80
24	1H	860	U	O5'-P-OP1	6.06	117.97	110.70
24	1H	924	C	C6-N1-C2	6.06	122.72	120.30
24	1H	1471	A	N7-C8-N9	6.06	116.83	113.80
24	1H	569	U	C5-C6-N1	-6.05	119.67	122.70
24	14	1666	G	C5-C6-O6	6.05	132.23	128.60
24	1H	1931	U	N3-C2-O2	-6.05	117.96	122.20
1	13	567	G	O5'-P-OP1	-6.05	100.25	105.70
24	14	583	G	C6-C5-N7	-6.05	126.77	130.40
24	14	621	A	N3-C4-C5	6.05	131.04	126.80
24	1H	2278	A	N9-C4-C5	6.05	108.22	105.80
24	1H	1574	C	N1-C2-O2	-6.05	115.27	118.90
24	1H	2385	C	C5-C6-N1	-6.05	117.98	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2514	U	C2-N1-C1'	-6.05	110.44	117.70
54	1G	514	C	C5-C6-N1	6.05	124.02	121.00
24	14	1930	G	N9-C4-C5	6.05	107.82	105.40
24	14	2008	C	N1-C2-O2	-6.04	115.27	118.90
24	14	2501	C	N3-C2-O2	6.04	126.13	121.90
24	1H	609	A	N9-C4-C5	-6.04	103.38	105.80
24	1H	1022	G	N3-C2-N2	-6.04	115.67	119.90
24	1H	1211	U	C6-N1-C2	6.04	124.63	121.00
22	2L	10	C	C5-C4-N4	6.04	124.43	120.20
24	14	471	A	C8-N9-C4	6.04	108.22	105.80
24	14	479	A	P-O3'-C3'	6.04	126.95	119.70
24	14	681	G	N1-C2-N2	-6.04	110.76	116.20
24	14	1616	A	C6-C5-N7	-6.04	128.07	132.30
24	14	2624	G	N1-C6-O6	6.04	123.53	119.90
1	13	186(A)	C	C2-N1-C1'	6.04	125.45	118.80
24	1H	609(A)	G	N1-C6-O6	6.04	123.53	119.90
24	1H	1178	C	C2-N1-C1'	6.04	125.45	118.80
24	1H	2584	U	C6-N1-C1'	-6.04	112.74	121.20
24	1H	2710	C	N3-C4-C5	6.04	124.32	121.90
24	14	1336	A	C6-N1-C2	-6.04	114.97	118.60
24	14	2873	A	C8-N9-C4	-6.04	103.38	105.80
24	14	621	A	C4-C5-N7	6.04	113.72	110.70
24	1H	453	C	C2-N3-C4	-6.04	116.88	119.90
24	1H	1312	U	P-O3'-C3'	6.04	126.95	119.70
24	1H	1786	A	N3-C4-C5	6.04	131.03	126.80
24	1H	1805	U	N3-C4-O4	6.04	123.63	119.40
24	14	1557	C	N3-C4-C5	6.04	124.32	121.90
24	14	2329	G	C5-C6-O6	-6.04	124.98	128.60
24	1H	273	G	C8-N9-C4	6.04	108.81	106.40
24	14	1615	C	N1-C2-O2	-6.04	115.28	118.90
24	14	1786	A	C4-N9-C1'	6.04	137.17	126.30
24	14	541	C	C6-N1-C2	-6.04	117.89	120.30
24	14	2859	G	P-O3'-C3'	6.04	126.94	119.70
24	1H	698	C	C4-C5-C6	6.03	120.42	117.40
24	1H	770	G	OP1-P-OP2	-6.03	110.55	119.60
24	1H	1798	U	C5-C4-O4	-6.03	122.28	125.90
25	16	53	A	C8-N9-C4	-6.03	103.39	105.80
54	1G	690	G	N3-C4-N9	-6.03	122.38	126.00
24	1H	2449	U	OP2-P-O3'	6.03	118.47	105.20
24	14	127	A	C8-N9-C4	6.03	108.21	105.80
24	1H	1373	A	N1-C6-N6	-6.03	114.98	118.60
24	14	1210	A	C5-N7-C8	-6.03	100.89	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	760	G	N1-C6-O6	6.03	123.52	119.90
24	1H	2572	A	C4-C5-C6	6.03	120.01	117.00
24	1H	1653	G	C4-N9-C1'	6.03	134.33	126.50
24	1H	2327	A	C6-C5-N7	6.03	136.52	132.30
24	14	2060	A	N7-C8-N9	6.03	116.81	113.80
24	1H	632	A	OP1-P-OP2	-6.02	110.56	119.60
24	1H	936	C	C6-N1-C2	6.02	122.71	120.30
24	14	1786	A	N3-C4-N9	-6.02	122.58	127.40
24	1H	375	C	O5'-P-OP2	-6.02	100.28	105.70
24	1H	1193	G	N3-C4-C5	6.02	131.61	128.60
24	1H	1379	A	C8-N9-C4	-6.02	103.39	105.80
24	1H	1397	U	C5-C4-O4	6.02	129.51	125.90
24	14	2455	G	N1-C6-O6	6.02	123.51	119.90
24	14	2586	C	C5-C6-N1	6.02	124.01	121.00
24	14	110	G	C8-N9-C4	6.02	108.81	106.40
24	14	698	C	C6-N1-C2	6.02	122.71	120.30
1	13	720	C	N3-C2-O2	-6.02	117.69	121.90
24	1H	928	G	N1-C6-O6	6.02	123.51	119.90
24	14	686	G	N3-C2-N2	6.02	124.11	119.90
2	12	196	LEU	CA-CB-CG	6.02	129.14	115.30
24	14	2375	G	C5-C6-O6	-6.02	124.99	128.60
24	14	2620	C	C6-N1-C1'	-6.02	113.58	120.80
24	14	784	A	OP1-P-O3'	6.01	118.43	105.20
24	14	2441	C	N3-C4-C5	6.01	124.31	121.90
1	13	1528	U	C6-N1-C2	6.01	124.61	121.00
24	1H	2564	A	N1-C6-N6	6.01	122.21	118.60
24	14	1928	A	C8-N9-C4	6.01	108.20	105.80
24	1H	528	A	C5-N7-C8	-6.01	100.90	103.90
24	1H	1236	G	O5'-P-OP2	6.01	117.91	110.70
24	1H	1413	G	N1-C6-O6	6.01	123.51	119.90
24	1H	784	A	C6-C5-N7	6.01	136.50	132.30
24	1H	1690	A	C8-N9-C4	-6.01	103.40	105.80
24	14	654(S)	G	P-O3'-C3'	6.01	126.91	119.70
24	14	1839	G	C8-N9-C1'	-6.01	119.19	127.00
24	14	2412	A	C6-N1-C2	-6.01	115.00	118.60
1	13	283	C	N1-C2-O2	6.00	122.50	118.90
54	1G	686	U	O4'-C1'-N1	6.00	113.00	108.20
24	14	621	A	C6-C5-N7	-6.00	128.10	132.30
24	1H	575	A	C5-C6-N6	-6.00	118.90	123.70
24	1H	1647	G	O5'-P-OP1	-6.00	100.30	105.70
24	1H	1762[A]	A	C8-N9-C4	-6.00	103.40	105.80
24	1H	1762[B]	A	C8-N9-C4	-6.00	103.40	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1277	G	C5-C6-O6	6.00	132.20	128.60
24	1H	1971	A	C6-N1-C2	-6.00	115.00	118.60
24	1H	2401	U	C5-C6-N1	6.00	125.70	122.70
24	14	155	C	C6-N1-C2	-6.00	117.90	120.30
24	14	672	C	O5'-P-OP2	-6.00	100.30	105.70
24	14	1316	U	C5-C6-N1	6.00	125.70	122.70
24	14	2573	C	C5-C4-N4	-6.00	116.00	120.20
24	1H	2605	U	N1-C2-N3	6.00	118.50	114.90
24	14	580	C	N1-C2-O2	-6.00	115.30	118.90
24	1H	677	A	C5-C6-N6	-6.00	118.90	123.70
24	1H	693	C	C4-C5-C6	6.00	120.40	117.40
24	1H	2518	A	C8-N9-C4	-6.00	103.40	105.80
24	14	1653	G	N3-C4-N9	6.00	129.60	126.00
24	14	1468	C	N3-C4-C5	-6.00	119.50	121.90
24	14	1352	U	O5'-P-OP2	-6.00	100.31	105.70
24	1H	261	G	N1-C6-O6	5.99	123.50	119.90
24	1H	2385	C	C6-N1-C2	5.99	122.70	120.30
24	1H	2443	C	C5-C4-N4	-5.99	116.00	120.20
24	14	2251	G	C8-N9-C1'	-5.99	119.21	127.00
24	1H	473	G	C8-N9-C4	5.99	108.80	106.40
24	14	2644	G	N7-C8-N9	5.99	116.10	113.10
24	1H	140	A	O4'-C1'-N9	5.99	112.99	108.20
24	1H	1800	C	OP1-P-OP2	-5.99	110.61	119.60
24	14	2880	C	N3-C4-C5	-5.99	119.50	121.90
1	13	418	C	C6-N1-C2	-5.99	117.91	120.30
24	1H	1200	C	C6-N1-C2	5.99	122.69	120.30
24	1H	1311	G	OP1-P-O3'	5.99	118.38	105.20
54	1G	768	A	C2-N3-C4	-5.99	107.61	110.60
24	14	2329	G	C8-N9-C4	5.99	108.80	106.40
24	1H	1543	A	C4-C5-N7	5.99	113.69	110.70
24	14	1702	G	N1-C6-O6	5.99	123.49	119.90
24	14	2823	A	C2-N3-C4	-5.99	107.61	110.60
22	2K	32	A	N1-C6-N6	5.98	122.19	118.60
24	1H	787	U	N1-C2-O2	-5.98	118.61	122.80
24	1H	1408	C	N1-C2-O2	-5.98	115.31	118.90
54	1G	754	C	N3-C2-O2	-5.98	117.71	121.90
24	14	726	G	N3-C2-N2	5.98	124.09	119.90
24	14	1965	C	C4-C5-C6	-5.98	114.41	117.40
24	14	2713	A	C6-C5-N7	-5.98	128.11	132.30
1	13	690	G	N1-C2-N3	5.98	127.49	123.90
24	14	428	A	C2-N3-C4	5.98	113.59	110.60
24	14	2620	C	C5-C4-N4	-5.98	116.01	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2502	G	C5-C6-O6	-5.98	125.01	128.60
24	14	585	G	N7-C8-N9	5.98	116.09	113.10
24	14	1742	C	C5-C6-N1	5.98	123.99	121.00
24	14	2386	C	C6-N1-C2	5.98	122.69	120.30
24	1H	472	A	N1-C6-N6	-5.98	115.02	118.60
24	14	2681	C	N3-C4-N4	-5.97	113.82	118.00
1	13	644	G	C8-N9-C4	5.97	108.79	106.40
24	1H	252	G	C5-C6-O6	-5.97	125.02	128.60
24	1H	1971	A	C2-N3-C4	5.97	113.59	110.60
24	14	1328	G	C6-C5-N7	-5.97	126.82	130.40
24	14	1332	G	N3-C4-C5	5.97	131.59	128.60
24	14	1390	U	N3-C2-O2	-5.97	118.02	122.20
24	14	2502	G	N3-C4-N9	5.97	129.58	126.00
24	1H	64	A	N7-C8-N9	-5.97	110.81	113.80
24	1H	1898	U	N3-C2-O2	-5.97	118.02	122.20
24	1H	2420	C	C4-C5-C6	-5.97	114.42	117.40
24	14	1978	A	OP2-P-O3'	5.97	118.34	105.20
24	1H	1128	A	C8-N9-C4	-5.97	103.41	105.80
24	1H	1912	A	N1-C6-N6	-5.97	115.02	118.60
24	1H	2688	U	N3-C4-O4	-5.97	115.22	119.40
24	14	2495	G	N1-C6-O6	5.97	123.48	119.90
24	1H	2392	A	C6-C5-N7	-5.97	128.12	132.30
24	14	1475	G	N7-C8-N9	5.97	116.08	113.10
1	13	690	G	N3-C2-N2	-5.97	115.72	119.90
1	13	888	G	C6-C5-N7	-5.97	126.82	130.40
24	1H	1310	G	N1-C6-O6	5.97	123.48	119.90
24	14	1616	A	N1-C2-N3	-5.97	126.32	129.30
24	14	2278	A	N1-C6-N6	-5.97	115.02	118.60
54	1G	135	C	N3-C2-O2	5.96	126.08	121.90
24	14	2573	C	C2-N1-C1'	5.96	125.36	118.80
24	1H	1142(A)	A	C5-C6-N1	-5.96	114.72	117.70
24	1H	1781	C	N3-C2-O2	-5.96	117.73	121.90
24	1H	1792	G	C8-N9-C4	5.96	108.78	106.40
25	16	102	G	N3-C4-N9	-5.96	122.42	126.00
24	1H	55	G	O5'-P-OP2	5.96	117.85	110.70
24	1H	207	A	C2-N3-C4	-5.96	107.62	110.60
24	14	1679	U	C2-N3-C4	-5.96	123.42	127.00
24	1H	1210	A	C6-C5-N7	-5.96	128.13	132.30
24	1H	1318	C	N1-C2-O2	5.96	122.47	118.90
24	1H	2346	A	N1-C2-N3	5.96	132.28	129.30
54	1G	719	C	N3-C4-C5	-5.96	119.52	121.90
24	1H	97	C	C6-N1-C2	5.96	122.68	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1671	U	N3-C4-O4	5.96	123.57	119.40
24	14	1378	A	C8-N9-C4	5.96	108.18	105.80
24	1H	72	U	C2-N3-C4	-5.95	123.43	127.00
24	1H	537	C	N1-C2-O2	5.95	122.47	118.90
24	14	1308	A	N1-C2-N3	5.95	132.28	129.30
24	1H	2238	G	OP1-P-OP2	5.95	128.53	119.60
24	1H	2446	G	C5-N7-C8	-5.95	101.32	104.30
24	14	1972	A	OP2-P-O3'	5.95	118.30	105.20
1	13	169	C	C6-N1-C2	-5.95	117.92	120.30
24	14	1816	G	C5-C6-N1	5.95	114.47	111.50
24	14	2700	C	C6-N1-C2	5.95	122.68	120.30
24	1H	848	G	C8-N9-C4	5.95	108.78	106.40
24	1H	1786	A	O4'-C1'-N9	5.95	112.96	108.20
54	1G	1374	A	C2-N3-C4	-5.95	107.63	110.60
24	14	389	G	N3-C4-N9	5.95	129.57	126.00
24	14	2351	G	C4-N9-C1'	5.95	134.23	126.50
24	14	2544	G	C5-C6-O6	-5.95	125.03	128.60
1	13	1336	C	C6-N1-C1'	-5.95	113.66	120.80
25	16	38	C	O5'-P-OP2	-5.95	100.35	105.70
24	14	593	G	N1-C2-N3	5.95	127.47	123.90
24	14	752	A	C2-N3-C4	-5.95	107.63	110.60
24	1H	38	A	C5-N7-C8	-5.95	100.93	103.90
24	1H	109	G	C5-C6-O6	5.95	132.17	128.60
24	1H	1780	A	N1-C2-N3	5.95	132.27	129.30
24	14	464	U	C6-N1-C2	-5.95	117.43	121.00
24	14	1241	A	C4-C5-N7	5.95	113.67	110.70
24	14	2263	C	C2-N1-C1'	5.95	125.34	118.80
1	13	738	C	C6-N1-C2	-5.94	117.92	120.30
24	1H	345	A	C8-N9-C4	-5.94	103.42	105.80
24	1H	1385	G	C4-N9-C1'	-5.94	118.77	126.50
24	1H	1448	G	O5'-P-OP1	-5.94	100.35	105.70
24	1H	2393	A	N1-C6-N6	-5.94	115.03	118.60
54	1G	603	U	C5-C6-N1	5.94	125.67	122.70
24	14	2813	A	C8-N9-C4	-5.94	103.42	105.80
24	1H	988	A	OP2-P-O3'	5.94	118.27	105.20
24	1H	1772	G	C5-C6-O6	5.94	132.16	128.60
24	1H	2776	A	C8-N9-C4	5.94	108.18	105.80
54	1G	402	G	C8-N9-C4	5.94	108.78	106.40
24	14	1444(A)	A	C8-N9-C4	5.94	108.18	105.80
1	13	523	A	C2-N3-C4	-5.94	107.63	110.60
24	1H	445	C	OP1-P-OP2	-5.94	110.69	119.60
54	1G	687	A	P-O3'-C3'	5.94	126.83	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1959	G	OP2-P-O3'	5.94	118.26	105.20
24	1H	2010	G	O5'-P-OP2	5.94	117.82	110.70
24	1H	638	G	O5'-P-OP1	-5.93	100.36	105.70
24	1H	729	G	N7-C8-N9	5.93	116.07	113.10
25	16	98	G	OP1-P-OP2	5.93	128.50	119.60
24	14	2620	C	N3-C4-C5	5.93	124.27	121.90
24	1H	30	G	OP1-P-OP2	-5.93	110.70	119.60
24	14	1021	A	N3-C4-C5	5.93	130.95	126.80
24	14	1991	U	N3-C2-O2	-5.93	118.05	122.20
1	13	811	C	C2-N1-C1'	5.93	125.32	118.80
24	1H	138	G	C8-N9-C4	-5.93	104.03	106.40
24	1H	2624	G	C8-N9-C4	5.93	108.77	106.40
24	14	2351	G	C8-N9-C1'	-5.93	119.29	127.00
24	14	2818	G	N1-C6-O6	5.93	123.46	119.90
24	1H	1564	C	N3-C2-O2	-5.92	117.75	121.90
54	1G	1375	A	C8-N9-C4	-5.92	103.43	105.80
24	14	1353	A	N1-C2-N3	5.92	132.26	129.30
36	45	62	GLY	N-CA-C	-5.92	98.29	113.10
24	1H	816	C	N3-C2-O2	5.92	126.05	121.90
24	14	1407	C	C5-C6-N1	5.92	123.96	121.00
24	14	1558	A	P-O3'-C3'	5.92	126.80	119.70
24	1H	2270	G	C8-N9-C1'	-5.92	119.31	127.00
24	1H	2509	G	N9-C4-C5	-5.92	103.03	105.40
54	1G	740	U	O5'-P-OP2	-5.92	100.37	105.70
24	14	2593	U	C6-N1-C2	5.92	124.55	121.00
24	14	2040	C	C4-C5-C6	5.92	120.36	117.40
24	1H	2433	A	C6-C5-N7	-5.91	128.16	132.30
24	14	265	A	C6-C5-N7	-5.91	128.16	132.30
24	14	811	U	C5-C4-O4	5.91	129.45	125.90
25	1J	79	C	C6-N1-C2	-5.91	117.94	120.30
24	14	1347	G	C4-C5-N7	5.91	113.17	110.80
24	1H	130	C	C6-N1-C2	5.91	122.66	120.30
24	1H	1931	U	N1-C2-N3	5.91	118.45	114.90
1	13	1446	A	O5'-P-OP1	5.91	117.79	110.70
24	1H	938	G	N1-C6-O6	-5.91	116.36	119.90
24	1H	1259	G	OP2-P-O3'	5.91	118.20	105.20
24	1H	2210	G	C4-N9-C1'	5.91	134.18	126.50
54	1G	525	C	N3-C4-N4	5.91	122.13	118.00
54	1G	932	C	N1-C2-O2	5.91	122.44	118.90
24	14	1567	A	N1-C2-N3	5.91	132.25	129.30
54	1G	769	G	N3-C4-N9	5.90	129.54	126.00
1	13	733	A	N9-C4-C5	-5.90	103.44	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	465	G	N3-C2-N2	5.90	124.03	119.90
24	1H	828	U	C6-N1-C2	-5.90	117.46	121.00
24	14	747	U	C5-C4-O4	-5.90	122.36	125.90
24	14	193	U	N1-C2-O2	-5.90	118.67	122.80
24	1H	755	C	N3-C4-N4	5.90	122.13	118.00
24	1H	2712	U	C5-C6-N1	-5.90	119.75	122.70
24	14	419	C	C6-N1-C2	-5.90	117.94	120.30
24	14	524	U	C6-N1-C2	-5.90	117.46	121.00
24	14	1338	G	OP1-P-O3'	5.90	118.17	105.20
24	14	2042	A	C4-C5-C6	-5.90	114.05	117.00
24	1H	397	G	C5-C6-O6	-5.90	125.06	128.60
24	14	1616	A	C6-N1-C2	5.90	122.14	118.60
24	1H	70	G	C5-C6-O6	5.89	132.14	128.60
24	1H	74	A	N7-C8-N9	5.89	116.75	113.80
24	1H	839	U	C4-C5-C6	5.89	123.24	119.70
24	14	1780	A	N1-C2-N3	5.89	132.25	129.30
24	14	2021	C	N3-C2-O2	-5.89	117.78	121.90
24	14	2029	G	C6-C5-N7	5.89	133.94	130.40
24	14	2726	U	C5-C4-O4	5.89	129.44	125.90
24	14	2779	U	C2-N3-C4	-5.89	123.46	127.00
24	1H	1124	C	N1-C2-O2	-5.89	115.37	118.90
24	1H	1637	A	N7-C8-N9	5.89	116.75	113.80
24	1H	125	G	O4'-C1'-N9	-5.89	103.49	108.20
24	1H	529	A	C6-C5-N7	-5.89	128.18	132.30
24	14	955	C	OP1-P-O3'	5.89	118.15	105.20
24	1H	2726	U	N3-C2-O2	-5.89	118.08	122.20
24	14	1187	G	N9-C4-C5	5.89	107.75	105.40
24	14	1649	G	N7-C8-N9	5.89	116.04	113.10
24	1H	2442	C	N1-C2-O2	-5.88	115.37	118.90
24	14	442	G	C8-N9-C4	-5.88	104.05	106.40
24	1H	1409	C	C5-C6-N1	-5.88	118.06	121.00
1	13	921	U	C5-C4-O4	-5.88	122.37	125.90
1	13	913	A	P-O3'-C3'	5.88	126.75	119.70
24	1H	845	G	P-O3'-C3'	5.88	126.75	119.70
24	1H	2751	G	N3-C4-C5	5.88	131.54	128.60
24	14	2060	A	N1-C6-N6	-5.88	115.07	118.60
24	14	294	A	N1-C6-N6	-5.88	115.07	118.60
24	14	499	U	O5'-P-OP1	-5.88	100.41	105.70
24	14	1899	G	N3-C4-C5	5.88	131.54	128.60
24	1H	691	C	N1-C2-O2	-5.87	115.38	118.90
24	1H	2260	C	OP2-P-O3'	5.87	118.12	105.20
24	1H	2271	G	C6-N1-C2	-5.87	121.58	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2571	C	O5'-P-OP1	5.87	117.75	110.70
54	1G	758	G	C4-C5-N7	5.87	113.15	110.80
24	14	698	C	C5-C6-N1	-5.87	118.06	121.00
24	14	737	C	C6-N1-C2	5.87	122.65	120.30
54	1G	576	G	N1-C6-O6	5.87	123.42	119.90
24	14	2503	A	C2-N3-C4	5.87	113.53	110.60
24	1H	511	U	OP2-P-O3'	5.87	118.11	105.20
24	1H	1567	A	OP1-P-O3'	5.87	118.11	105.20
24	1H	2059	A	N1-C6-N6	5.87	122.12	118.60
24	1H	2489	G	C6-C5-N7	-5.87	126.88	130.40
24	1H	2566	A	P-O3'-C3'	5.87	126.74	119.70
24	1H	2591	C	N3-C4-N4	5.87	122.11	118.00
24	1H	2700	C	N1-C2-O2	-5.87	115.38	118.90
24	14	1786	A	OP1-P-O3'	5.87	118.11	105.20
24	14	2226	C	N3-C4-C5	5.87	124.25	121.90
24	14	2607	G	C4-C5-N7	5.87	113.15	110.80
24	1H	458	G	O4'-C1'-N9	5.87	112.89	108.20
24	1H	659	C	C6-N1-C2	5.87	122.65	120.30
24	14	133	C	C6-N1-C2	5.87	122.65	120.30
24	1H	860	U	C2-N1-C1'	5.86	124.74	117.70
24	1H	1806	C	OP1-P-OP2	5.86	128.40	119.60
24	1H	2360	A	C2-N3-C4	-5.86	107.67	110.60
54	1G	121	C	C6-N1-C1'	-5.86	113.76	120.80
24	14	582	G	N3-C4-C5	5.86	131.53	128.60
24	1H	1899	G	P-O3'-C3'	5.86	126.73	119.70
24	1H	2243	U	C4-C5-C6	5.86	123.22	119.70
24	14	1695	G	C4-N9-C1'	5.86	134.12	126.50
1	13	698	G	C8-N9-C4	-5.86	104.06	106.40
24	1H	828	U	N1-C2-O2	5.86	126.90	122.80
24	1H	1956	U	OP2-P-O3'	5.86	118.09	105.20
24	1H	190	A	C5-C6-N6	-5.86	119.02	123.70
25	16	11	C	N1-C2-O2	5.86	122.41	118.90
24	14	585	G	C2-N3-C4	-5.86	108.97	111.90
54	1G	352	C	N1-C2-O2	-5.85	115.39	118.90
24	14	1135	C	O5'-P-OP2	-5.85	100.43	105.70
1	13	733	A	N1-C6-N6	5.85	122.11	118.60
24	1H	305	U	C6-N1-C2	-5.85	117.49	121.00
24	1H	1365	A	N9-C4-C5	5.85	108.14	105.80
24	1H	1690	A	N1-C2-N3	5.85	132.23	129.30
54	1G	320	C	C2-N1-C1'	-5.85	112.36	118.80
24	14	1779	U	C5-C4-O4	-5.85	122.39	125.90
24	1H	62	C	C2-N1-C1'	-5.85	112.36	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2466	C	C6-N1-C2	5.85	122.64	120.30
24	14	1930	G	O5'-P-OP1	-5.85	100.43	105.70
24	14	2762	G	C5-C6-O6	-5.85	125.09	128.60
24	1H	2280	G	C5-C6-N1	-5.85	108.58	111.50
54	1G	903	G	O5'-P-OP2	-5.85	100.44	105.70
24	14	150	C	N3-C4-N4	-5.85	113.91	118.00
24	14	1602	U	O5'-P-OP2	5.85	117.72	110.70
24	14	1926	U	N3-C2-O2	-5.85	118.11	122.20
24	1H	1405	U	C5-C6-N1	-5.85	119.78	122.70
54	1G	898	G	C6-C5-N7	5.85	133.91	130.40
24	14	403	U	C5-C6-N1	-5.85	119.78	122.70
24	1H	816	C	C5-C4-N4	-5.84	116.11	120.20
24	1H	1528	A	N1-C6-N6	5.84	122.11	118.60
24	1H	2258	C	C5-C4-N4	-5.84	116.11	120.20
24	14	1902	C	C4-C5-C6	-5.84	114.48	117.40
24	1H	1158	C	C5-C6-N1	-5.84	118.08	121.00
24	1H	1400	G	C8-N9-C4	-5.84	104.06	106.40
54	1G	898	G	O5'-P-OP2	-5.84	100.44	105.70
25	1J	102	G	C5-N7-C8	5.84	107.22	104.30
1	13	514	C	C6-N1-C2	5.84	122.64	120.30
24	1H	621	A	N3-C4-C5	5.84	130.89	126.80
24	14	567	A	N1-C6-N6	5.84	122.11	118.60
24	14	792	G	C4-C5-C6	5.84	122.31	118.80
1	13	575	G	C5-C6-O6	5.84	132.10	128.60
54	1G	320	C	N1-C2-O2	-5.84	115.40	118.90
24	14	1382	G	C5-C6-N1	5.84	114.42	111.50
24	14	2335	A	N1-C6-N6	-5.84	115.10	118.60
24	1H	227	A	N1-C2-N3	5.84	132.22	129.30
24	1H	1558	A	C2-N3-C4	-5.84	107.68	110.60
22	2K	26	G	N1-C6-O6	5.84	123.40	119.90
24	1H	859	G	C8-N9-C1'	5.83	134.59	127.00
24	14	1462	C	C6-N1-C2	-5.83	117.97	120.30
24	14	2271	G	N9-C4-C5	-5.83	103.07	105.40
24	14	2477	C	C6-N1-C1'	-5.83	113.80	120.80
22	3L	74	C	C6-N1-C2	-5.83	117.97	120.30
24	14	133	C	N3-C4-C5	5.83	124.23	121.90
24	14	2441	C	N3-C2-O2	-5.83	117.82	121.90
1	13	1429	C	C6-N1-C2	5.83	122.63	120.30
24	1H	1226	G	N3-C4-N9	-5.83	122.50	126.00
24	1H	2407	G	OP2-P-O3'	5.83	118.03	105.20
24	14	664	C	C5-C6-N1	-5.83	118.08	121.00
24	14	1930	G	C6-C5-N7	5.83	133.90	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2332	U	C5-C6-N1	-5.83	119.78	122.70
24	14	2859	G	N3-C4-C5	-5.83	125.69	128.60
24	1H	75	G	C2-N3-C4	5.83	114.81	111.90
24	14	729	G	N1-C6-O6	5.83	123.40	119.90
24	14	2779	U	C5-C4-O4	5.83	129.40	125.90
1	13	975	A	N7-C8-N9	5.83	116.71	113.80
24	1H	1670	C	N3-C4-C5	-5.83	119.57	121.90
24	1H	2828	C	C5-C6-N1	-5.83	118.09	121.00
24	14	66	C	C5-C6-N1	5.83	123.91	121.00
24	14	140	A	C6-C5-N7	-5.82	128.22	132.30
24	14	1491	G	C8-N9-C4	5.82	108.73	106.40
24	14	2356	C	OP2-P-O3'	5.82	118.01	105.20
24	1H	2387	U	OP2-P-O3'	5.82	118.00	105.20
54	1G	886	G	C8-N9-C4	5.82	108.73	106.40
24	14	1353	A	C8-N9-C4	-5.82	103.47	105.80
24	14	2051	A	C6-C5-N7	-5.82	128.22	132.30
24	14	2236	C	C6-N1-C2	5.82	122.63	120.30
24	1H	945	A	OP2-P-O3'	5.82	118.00	105.20
24	1H	2355	C	C5-C4-N4	-5.82	116.13	120.20
24	14	1265	A	O5'-P-OP2	-5.82	100.46	105.70
24	14	2827	C	C2-N1-C1'	-5.82	112.40	118.80
24	1H	617	G	N7-C8-N9	-5.82	110.19	113.10
54	1G	1086	U	C5-C6-N1	5.82	125.61	122.70
24	14	2355	C	C2-N1-C1'	5.82	125.20	118.80
23	4L	18	C	N3-C4-C5	-5.82	119.57	121.90
24	14	2050	C	C6-N1-C2	-5.82	117.97	120.30
24	14	2430	A	C5-N7-C8	-5.81	100.99	103.90
24	1H	683	C	C6-N1-C1'	-5.81	113.83	120.80
24	14	79	G	C5-C6-O6	-5.81	125.11	128.60
24	14	1814	G	O5'-P-OP2	-5.81	100.47	105.70
24	14	1997	G	N7-C8-N9	-5.81	110.19	113.10
24	1H	1164	G	C5-C6-O6	5.81	132.09	128.60
54	1G	309	G	C5-C6-O6	-5.81	125.11	128.60
54	1G	413	G	C8-N9-C4	5.81	108.72	106.40
24	14	635	C	N1-C2-O2	5.81	122.39	118.90
24	1H	848	G	N3-C4-N9	5.81	129.48	126.00
24	14	855	G	C8-N9-C4	-5.81	104.08	106.40
24	14	1612	C	C6-N1-C2	5.81	122.62	120.30
24	14	1780	A	N1-C6-N6	-5.81	115.12	118.60
24	14	2587	A	C5-C6-N6	-5.81	119.05	123.70
24	14	126	A	OP2-P-O3'	5.81	117.97	105.20
24	1H	1147	C	O5'-P-OP2	-5.80	100.48	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1614	A	O4'-C1'-N9	5.80	112.84	108.20
24	1H	243	U	N3-C2-O2	-5.80	118.14	122.20
24	14	582	G	C2-N3-C4	-5.80	109.00	111.90
24	14	2001	A	C6-C5-N7	-5.80	128.24	132.30
24	1H	265	A	N7-C8-N9	5.80	116.70	113.80
24	14	1930	G	C8-N9-C1'	5.80	134.54	127.00
24	1H	59	U	C6-N1-C2	-5.80	117.52	121.00
24	1H	2296	U	N3-C4-O4	5.80	123.46	119.40
24	1H	2337	G	C8-N9-C4	-5.80	104.08	106.40
24	1H	2779	U	C4-C5-C6	5.80	123.18	119.70
25	16	30	C	C6-N1-C2	-5.80	117.98	120.30
54	1G	678	U	O5'-P-OP2	-5.80	100.48	105.70
24	14	982	C	C5-C6-N1	5.80	123.90	121.00
24	14	1695	G	C6-C5-N7	-5.80	126.92	130.40
24	1H	1763	G	O5'-P-OP2	-5.80	100.48	105.70
24	1H	2489	G	N1-C6-O6	5.80	123.38	119.90
24	1H	2768	C	C6-N1-C2	-5.80	117.98	120.30
24	14	1155	A	N1-C6-N6	-5.80	115.12	118.60
24	14	1285	G	N3-C2-N2	-5.80	115.84	119.90
53	Q8	34	TRP	N-CA-C	5.80	126.65	111.00
54	1G	557	G	C8-N9-C1'	-5.80	119.47	127.00
24	14	1614	A	O5'-P-OP1	-5.80	100.48	105.70
22	2K	85	A	C5-N7-C8	-5.79	101.00	103.90
24	1H	730	C	C5-C4-N4	-5.79	116.14	120.20
24	1H	730	C	N3-C4-N4	5.79	122.06	118.00
24	1H	2051	A	C6-C5-N7	-5.79	128.24	132.30
24	1H	2329	G	N3-C4-N9	-5.79	122.52	126.00
24	14	750	A	OP1-P-O3'	5.79	117.95	105.20
24	14	1359	A	N7-C8-N9	-5.79	110.90	113.80
24	14	564	C	N3-C4-N4	5.79	122.05	118.00
24	14	2078	C	C6-N1-C2	-5.79	117.98	120.30
40	85	11	ARG	NE-CZ-NH1	-5.79	117.40	120.30
24	1H	1544	C	N1-C2-O2	5.79	122.37	118.90
24	14	2490	G	C5-N7-C8	-5.79	101.41	104.30
1	13	301	G	C5-C6-O6	-5.79	125.13	128.60
1	13	821	G	N1-C6-O6	-5.79	116.43	119.90
24	1H	786	C	C5-C6-N1	-5.79	118.11	121.00
24	1H	982	C	C6-N1-C2	-5.79	117.98	120.30
24	1H	1931	U	C4-C5-C6	5.79	123.17	119.70
24	1H	2239	G	OP2-P-O3'	5.79	117.94	105.20
24	1H	2781	A	O5'-P-OP1	-5.79	100.49	105.70
24	14	21	A	C2-N3-C4	-5.79	107.71	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2513	G	O5'-P-OP1	5.79	117.64	110.70
25	1J	60	C	C6-N1-C2	-5.79	117.98	120.30
1	13	690	G	C5-C6-N1	-5.79	108.61	111.50
24	1H	318	C	O5'-P-OP1	-5.79	100.49	105.70
24	1H	540	G	C5-C6-O6	-5.79	125.13	128.60
24	14	1798	U	C5-C6-N1	-5.79	119.81	122.70
24	14	2055	C	N1-C2-O2	5.79	122.37	118.90
1	13	740	U	O5'-P-OP2	-5.78	100.50	105.70
29	31	168	ARG	NE-CZ-NH1	5.78	123.19	120.30
24	14	960	A	C8-N9-C4	5.78	108.11	105.80
24	14	1691	C	O5'-P-OP1	-5.78	100.50	105.70
1	13	390	C	C6-N1-C2	-5.78	117.99	120.30
24	14	383	U	C2-N1-C1'	-5.78	110.76	117.70
24	1H	809	G	O5'-P-OP2	-5.78	100.50	105.70
24	14	1937	A	C8-N9-C4	5.78	108.11	105.80
24	14	2741	A	N9-C4-C5	-5.78	103.49	105.80
24	1H	1993	U	N1-C2-O2	-5.78	118.76	122.80
24	1H	1995	U	C6-N1-C2	5.78	124.47	121.00
24	14	2642	G	N1-C6-O6	5.78	123.37	119.90
24	1H	2580	U	OP2-P-O3'	5.78	117.91	105.20
24	14	479	A	N1-C6-N6	-5.78	115.14	118.60
24	14	868	U	C4-C5-C6	5.78	123.17	119.70
24	1H	1236	G	C2-N3-C4	-5.77	109.01	111.90
24	14	2029	G	C4-C5-N7	-5.77	108.49	110.80
24	1H	924	C	N1-C2-O2	5.77	122.36	118.90
24	1H	1781	C	N1-C2-O2	5.77	122.36	118.90
24	1H	2228	G	C6-C5-N7	-5.77	126.94	130.40
24	14	27	G	N3-C4-N9	-5.77	122.54	126.00
24	14	788	A	O5'-P-OP1	-5.77	100.50	105.70
24	14	2377	A	C8-N9-C4	5.77	108.11	105.80
24	1H	28	A	C2-N3-C4	5.77	113.48	110.60
24	1H	265	A	N1-C2-N3	5.77	132.18	129.30
24	1H	974	G	O4'-C1'-N9	-5.77	103.58	108.20
24	14	729	G	C5-C6-O6	-5.77	125.14	128.60
24	14	1391	U	O5'-P-OP1	-5.77	100.51	105.70
24	14	2287	A	N3-C4-C5	5.77	130.84	126.80
24	1H	634	C	C6-N1-C2	-5.77	117.99	120.30
24	1H	736	C	C5-C4-N4	-5.77	116.16	120.20
24	1H	2711	A	OP1-P-O3'	5.77	117.89	105.20
24	14	1994	C	C5-C4-N4	5.77	124.24	120.20
24	1H	698	C	C5-C6-N1	-5.77	118.12	121.00
24	1H	1821	A	N9-C4-C5	5.77	108.11	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	1520	G	C4-C5-N7	5.76	113.11	110.80
24	1H	793	A	C5-C6-N6	-5.76	119.09	123.70
24	1H	2820	A	OP1-P-O3'	5.76	117.88	105.20
54	1G	925	G	C8-N9-C4	5.76	108.71	106.40
24	14	954	G	O5'-P-OP1	-5.76	100.51	105.70
24	1H	1298	C	C2-N3-C4	5.76	122.78	119.90
24	14	1673	U	C5-C6-N1	-5.76	119.82	122.70
24	14	1994	C	O5'-P-OP2	-5.76	100.51	105.70
1	13	687	A	C8-N9-C4	-5.76	103.50	105.80
24	1H	1032	A	N1-C6-N6	5.76	122.06	118.60
24	14	1599	C	C6-N1-C2	-5.76	118.00	120.30
24	1H	716	A	O5'-P-OP2	5.76	117.61	110.70
24	1H	810	U	C5-C4-O4	-5.76	122.44	125.90
24	1H	1653	G	C8-N9-C1'	-5.76	119.51	127.00
24	1H	2452	C	N1-C2-N3	-5.76	115.17	119.20
24	1H	2569	G	C6-C5-N7	-5.76	126.94	130.40
54	1G	1082	G	N3-C4-C5	5.76	131.48	128.60
24	14	139	G	O5'-P-OP1	-5.76	100.52	105.70
24	14	388	G	N3-C2-N2	-5.76	115.87	119.90
24	14	774	A	O5'-P-OP1	5.76	117.61	110.70
1	13	31	G	C5-C6-O6	-5.76	125.14	128.60
24	14	2730	C	C4-C5-C6	5.76	120.28	117.40
24	1H	662	G	C5-C6-O6	5.76	132.05	128.60
24	14	396	G	N7-C8-N9	5.76	115.98	113.10
24	14	1241	A	C6-C5-N7	-5.76	128.27	132.30
24	14	2437	U	N1-C2-N3	5.76	118.35	114.90
24	1H	2436	G	N3-C2-N2	-5.75	115.87	119.90
24	1H	2490	G	C4-C5-C6	-5.75	115.35	118.80
54	1G	576	G	C6-C5-N7	-5.75	126.95	130.40
24	14	140	A	O4'-C1'-N9	5.75	112.80	108.20
24	1H	614	U	C6-N1-C2	-5.75	117.55	121.00
24	1H	2270	G	N1-C6-O6	5.75	123.35	119.90
24	1H	1819	A	C6-N1-C2	-5.75	115.15	118.60
24	14	1615	C	N3-C2-O2	5.75	125.92	121.90
24	14	1950	G	C4-N9-C1'	5.75	133.97	126.50
24	1H	713	G	N9-C4-C5	-5.75	103.10	105.40
24	1H	1283	G	N3-C4-N9	5.75	129.45	126.00
24	1H	1888	G	C2-N3-C4	5.75	114.77	111.90
24	1H	566	U	C2-N3-C4	-5.75	123.55	127.00
24	1H	1898	U	C6-N1-C2	-5.75	117.55	121.00
24	1H	2278	A	N1-C6-N6	-5.75	115.15	118.60
24	14	845	G	C2-N3-C4	-5.75	109.03	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2251	G	C8-N9-C4	-5.74	104.10	106.40
24	14	97	C	O5'-P-OP2	-5.74	100.53	105.70
24	14	438	G	C8-N9-C4	-5.74	104.10	106.40
24	14	2401	U	N1-C2-O2	-5.74	118.78	122.80
1	13	36	C	C6-N1-C2	-5.74	118.00	120.30
24	1H	1365	A	C8-N9-C4	-5.74	103.50	105.80
24	14	2610	C	P-O3'-C3'	5.74	126.59	119.70
24	1H	115	C	N3-C2-O2	5.74	125.92	121.90
24	1H	2700	C	C6-N1-C2	5.74	122.60	120.30
24	14	840	C	N1-C2-O2	-5.74	115.46	118.90
24	1H	568	U	C4-C5-C6	5.74	123.14	119.70
24	1H	575	A	N1-C6-N6	5.74	122.04	118.60
24	1H	747	U	OP1-P-O3'	5.74	117.82	105.20
24	1H	845	G	N3-C2-N2	5.74	123.91	119.90
24	1H	964	C	C2-N1-C1'	5.74	125.11	118.80
24	1H	1308	A	N1-C6-N6	-5.74	115.16	118.60
24	1H	1425	G	N1-C2-N2	-5.74	111.04	116.20
24	14	2386	C	N3-C4-N4	5.74	122.02	118.00
24	1H	214	G	C5-C6-O6	-5.73	125.16	128.60
24	1H	2329	G	N3-C4-C5	5.73	131.47	128.60
24	1H	1626	G	N7-C8-N9	5.73	115.97	113.10
24	14	1285	G	N1-C2-N2	5.73	121.36	116.20
24	14	789	A	N1-C2-N3	5.73	132.16	129.30
24	14	2024	G	C6-C5-N7	-5.73	126.96	130.40
1	13	1463	C	C6-N1-C2	-5.73	118.01	120.30
24	1H	860	U	N3-C2-O2	-5.73	118.19	122.20
24	1H	2329	G	OP1-P-OP2	5.73	128.19	119.60
54	1G	483	C	C6-N1-C2	5.73	122.59	120.30
24	14	127	A	C5-C6-N6	-5.73	119.12	123.70
1	13	652	U	C5-C6-N1	5.73	125.56	122.70
24	14	1787	A	C5-N7-C8	-5.73	101.04	103.90
22	3K	9	U	C2-N1-C1'	5.72	124.57	117.70
24	1H	591	C	C4-C5-C6	5.72	120.26	117.40
24	1H	2590	A	C8-N9-C4	5.72	108.09	105.80
24	14	934	G	O5'-P-OP2	-5.72	100.55	105.70
24	14	1902	C	C5-C4-N4	5.72	124.21	120.20
24	1H	673	C	C5-C4-N4	-5.72	116.19	120.20
24	1H	1364	G	N9-C4-C5	-5.72	103.11	105.40
24	1H	2828	C	C6-N1-C2	5.72	122.59	120.30
25	1J	116	G	N3-C4-C5	5.72	131.46	128.60
24	1H	2743	C	N1-C2-O2	-5.72	115.47	118.90
1	13	551	U	C5-C6-N1	-5.72	119.84	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2070	G	N1-C2-N3	5.72	127.33	123.90
24	1H	2430	A	C6-C5-N7	-5.72	128.30	132.30
54	1G	53	A	C5-N7-C8	-5.72	101.04	103.90
1	13	433	C	N3-C2-O2	-5.72	117.90	121.90
24	1H	1789	A	O5'-P-OP2	-5.72	100.55	105.70
54	1G	711	G	C8-N9-C4	5.72	108.69	106.40
24	1H	130	C	N3-C4-N4	5.72	122.00	118.00
24	1H	1326	U	N3-C2-O2	-5.72	118.20	122.20
54	1G	559	A	N7-C8-N9	5.72	116.66	113.80
24	14	1528	A	C4-C5-N7	5.72	113.56	110.70
24	1H	127	A	C2-N3-C4	-5.71	107.74	110.60
24	1H	501	A	N1-C2-N3	5.71	132.16	129.30
24	1H	1942	C	C6-N1-C2	-5.71	118.01	120.30
25	16	95	U	C5-C4-O4	5.71	129.33	125.90
24	1H	948	G	C5-N7-C8	-5.71	101.44	104.30
24	1H	1229(A)	G	N3-C2-N2	-5.71	115.90	119.90
24	14	310	A	O5'-P-OP1	-5.71	100.56	105.70
1	13	1158	C	C6-N1-C1'	-5.71	113.95	120.80
24	1H	136	G	C5-C6-N1	-5.71	108.65	111.50
24	1H	1911	U	N1-C2-O2	5.71	126.80	122.80
24	14	1835	G	O5'-P-OP1	5.71	117.55	110.70
24	14	2288	A	N1-C6-N6	5.71	122.03	118.60
24	14	2455	G	C4-C5-N7	5.71	113.08	110.80
24	1H	117	G	N1-C6-O6	5.71	123.32	119.90
24	1H	1013	C	C6-N1-C2	5.71	122.58	120.30
24	14	932	G	C6-C5-N7	5.71	133.82	130.40
24	14	1437	C	C6-N1-C2	-5.71	118.02	120.30
24	1H	1036	G	N9-C4-C5	-5.71	103.12	105.40
24	1H	1193	G	N9-C4-C5	-5.71	103.12	105.40
24	1H	1602	U	C4-C5-C6	5.70	123.12	119.70
24	14	528	A	O4'-C1'-N9	-5.70	103.64	108.20
24	1H	1200	C	C5-C6-N1	-5.70	118.15	121.00
24	1H	1260	G	N1-C6-O6	5.70	123.32	119.90
24	1H	459	U	N3-C4-C5	-5.70	111.18	114.60
24	1H	942	G	N3-C2-N2	-5.70	115.91	119.90
24	1H	2392	A	C4-C5-N7	5.70	113.55	110.70
54	1G	251	G	C5-C6-O6	-5.70	125.18	128.60
1	13	795	C	N1-C2-O2	-5.70	115.48	118.90
24	1H	58	G	C5-C6-N1	-5.70	108.65	111.50
24	14	2232	U	C6-N1-C1'	5.70	129.18	121.20
25	1J	89	G	C2-N3-C4	5.70	114.75	111.90
24	1H	624	C	N3-C2-O2	5.70	125.89	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2051	A	C4-C5-C6	5.70	119.85	117.00
24	1H	2246	G	OP1-P-O3'	5.70	117.73	105.20
24	1H	1751	C	N3-C2-O2	5.70	125.89	121.90
24	1H	2018	G	C8-N9-C4	-5.70	104.12	106.40
22	2K	1	G	N3-C4-N9	5.69	129.42	126.00
24	1H	2276	G	O5'-P-OP2	-5.69	100.58	105.70
24	1H	2499	C	C6-N1-C2	-5.69	118.02	120.30
24	1H	2645	G	O5'-P-OP2	-5.69	100.58	105.70
54	1G	817	C	C5-C6-N1	-5.69	118.15	121.00
24	14	1830	C	N3-C4-C5	5.69	124.18	121.90
47	F5	82	LEU	CA-CB-CG	5.69	128.40	115.30
24	1H	974	G	OP1-P-OP2	5.69	128.14	119.60
24	1H	1779	U	OP1-P-OP2	5.69	128.14	119.60
24	1H	2259	G	OP1-P-OP2	-5.69	111.06	119.60
24	1H	2589	A	C8-N9-C4	5.69	108.08	105.80
54	1G	485	G	N3-C4-N9	-5.69	122.58	126.00
24	14	863	A	C8-N9-C4	-5.69	103.52	105.80
1	13	1378	C	N1-C2-O2	-5.69	115.49	118.90
24	1H	522	G	OP1-P-OP2	-5.69	111.06	119.60
24	1H	2058	A	C8-N9-C4	-5.69	103.52	105.80
54	1G	559	A	C4-C5-C6	5.69	119.84	117.00
25	1J	95	U	N3-C2-O2	5.69	126.18	122.20
24	1H	2017	U	N3-C4-O4	5.69	123.38	119.40
24	1H	2422	A	N9-C4-C5	5.69	108.08	105.80
22	2L	15	G	C4-N9-C1'	5.69	133.90	126.50
24	14	767	U	N1-C2-N3	5.69	118.31	114.90
54	1G	815	A	C8-N9-C4	5.69	108.08	105.80
22	2L	85	A	N1-C6-N6	5.69	122.01	118.60
1	13	1357	A	O5'-P-OP2	5.69	117.52	110.70
24	1H	1226	G	N3-C4-C5	5.69	131.44	128.60
24	1H	2327	A	C5-C6-N6	5.69	128.25	123.70
24	14	177	G	C8-N9-C1'	-5.69	119.61	127.00
24	14	568	U	O5'-P-OP1	-5.69	100.58	105.70
24	1H	165	U	N3-C2-O2	-5.68	118.22	122.20
24	1H	974	G	O5'-P-OP2	-5.68	100.58	105.70
24	1H	1201	C	C5-C4-N4	-5.68	116.22	120.20
24	14	681	G	N1-C2-N3	5.68	127.31	123.90
24	14	786	C	C5-C6-N1	-5.68	118.16	121.00
24	14	1319	G	N7-C8-N9	5.68	115.94	113.10
24	14	2594	C	C5-C4-N4	-5.68	116.22	120.20
1	13	651	C	C6-N1-C2	-5.68	118.03	120.30
24	1H	140	A	C5-C6-N6	-5.68	119.16	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1912	A	P-O3'-C3'	5.68	126.52	119.70
24	1H	1943	U	O5'-P-OP2	-5.68	100.59	105.70
24	1H	2674	G	N1-C2-N2	5.68	121.31	116.20
24	14	461	C	N3-C4-C5	-5.68	119.63	121.90
24	1H	391	G	N1-C6-O6	5.68	123.31	119.90
25	16	60	C	C5-C6-N1	5.68	123.84	121.00
24	1H	1672	C	N3-C2-O2	5.68	125.88	121.90
24	14	1988	C	N3-C2-O2	5.68	125.88	121.90
24	14	2369	A	C8-N9-C4	-5.68	103.53	105.80
24	14	2518	A	N7-C8-N9	5.68	116.64	113.80
24	14	73	A	C8-N9-C4	-5.68	103.53	105.80
1	13	266	G	O4'-C1'-N9	-5.68	103.66	108.20
24	1H	955	C	OP1-P-O3'	5.68	117.69	105.20
54	1G	1519	A	N1-C6-N6	-5.68	115.19	118.60
24	14	531	C	C6-N1-C2	5.68	122.57	120.30
24	14	593	G	C6-N1-C2	-5.68	121.69	125.10
24	14	1022	G	C4-C5-N7	-5.68	108.53	110.80
24	14	1313	U	C6-N1-C2	-5.68	117.59	121.00
1	13	320	C	C6-N1-C2	5.67	122.57	120.30
24	1H	557	U	C5-C6-N1	-5.67	119.86	122.70
24	1H	1320	C	C6-N1-C2	-5.67	118.03	120.30
24	1H	1950	G	N3-C4-N9	-5.67	122.59	126.00
24	1H	2618	G	N1-C6-O6	-5.67	116.50	119.90
24	14	207	A	N1-C6-N6	5.67	122.00	118.60
1	13	452	A	N7-C8-N9	-5.67	110.96	113.80
24	1H	944	G	O5'-P-OP2	-5.67	100.59	105.70
24	14	864	G	C8-N9-C4	-5.67	104.13	106.40
24	1H	2686	G	C8-N9-C4	-5.67	104.13	106.40
24	14	673	C	O5'-P-OP2	-5.67	100.59	105.70
1	13	15	G	C8-N9-C1'	-5.67	119.63	127.00
1	13	789	U	N1-C2-N3	5.67	118.30	114.90
24	1H	1366	A	C6-C5-N7	-5.67	128.33	132.30
24	1H	2018	G	O5'-P-OP2	-5.67	100.60	105.70
24	14	569	U	C6-N1-C2	5.67	124.40	121.00
24	14	652	C	N1-C2-O2	-5.67	115.50	118.90
1	13	689	C	N3-C4-C5	-5.67	119.63	121.90
24	1H	791	C	OP2-P-O3'	5.67	117.67	105.20
24	1H	1517	G	OP1-P-O3'	5.67	117.67	105.20
24	1H	1663	C	C5-C6-N1	-5.67	118.17	121.00
54	1G	1406	U	N3-C2-O2	-5.67	118.23	122.20
24	14	204	A	N1-C2-N3	5.67	132.13	129.30
24	14	2573	C	N3-C4-N4	5.67	121.97	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	221	C	C6-N1-C2	-5.67	118.03	120.30
24	1H	923	C	N3-C4-C5	-5.67	119.63	121.90
24	14	1500	G	N3-C4-N9	5.67	129.40	126.00
24	14	1698	A	N1-C6-N6	5.67	122.00	118.60
24	14	1770	G	N1-C6-O6	5.67	123.30	119.90
1	13	575	G	N3-C2-N2	5.67	123.86	119.90
24	1H	1373	A	C5-N7-C8	5.67	106.73	103.90
24	1H	473	G	N1-C2-N2	-5.66	111.10	116.20
24	1H	1415	U	N3-C2-O2	-5.66	118.24	122.20
24	1H	2232	U	C6-N1-C1'	5.66	129.13	121.20
54	1G	747	C	C6-N1-C2	5.66	122.56	120.30
24	14	177	G	N3-C4-N9	5.66	129.40	126.00
24	14	457	A	C8-N9-C4	-5.66	103.53	105.80
24	1H	662	G	OP1-P-OP2	5.66	128.09	119.60
24	14	803	U	C2-N3-C4	-5.66	123.60	127.00
24	14	1979	C	O5'-P-OP2	-5.66	100.60	105.70
1	13	888	G	C8-N9-C1'	-5.66	119.64	127.00
54	1G	197	A	C6-C5-N7	-5.66	128.34	132.30
24	14	530	G	C6-C5-N7	-5.66	127.00	130.40
1	13	1097	C	C6-N1-C2	-5.66	118.04	120.30
1	13	1470	G	N3-C2-N2	-5.66	115.94	119.90
24	1H	822	U	N3-C2-O2	-5.66	118.24	122.20
24	1H	620	G	N1-C6-O6	5.66	123.29	119.90
24	1H	1799	G	C2-N3-C4	5.66	114.73	111.90
24	1H	2597	G	N3-C4-N9	5.66	129.39	126.00
24	1H	1963	U	C5-C6-N1	5.66	125.53	122.70
24	14	265	A	N1-C6-N6	5.66	121.99	118.60
24	1H	132	G	C5-C6-N1	-5.65	108.67	111.50
24	1H	677	A	N1-C2-N3	5.65	132.13	129.30
24	14	1559	G	C8-N9-C4	5.65	108.66	106.40
24	1H	678	C	C6-N1-C2	5.65	122.56	120.30
54	1G	969	A	N1-C6-N6	-5.65	115.21	118.60
54	1G	1126	U	P-O3'-C3'	5.65	126.48	119.70
24	14	2426	A	C5-N7-C8	-5.65	101.08	103.90
1	13	541	G	C5-C6-O6	-5.65	125.21	128.60
45	H8	61	LEU	CA-CB-CG	5.65	128.29	115.30
24	1H	322	A	O5'-P-OP2	5.65	117.48	110.70
24	1H	2597	G	N3-C2-N2	5.65	123.85	119.90
24	14	669	G	N9-C4-C5	5.65	107.66	105.40
24	14	1142(A)	A	C5-N7-C8	-5.65	101.08	103.90
24	1H	28	A	N7-C8-N9	5.65	116.62	113.80
24	1H	2866	U	O4'-C1'-N1	5.65	112.72	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	797	C	N3-C4-N4	5.65	121.95	118.00
24	14	2232	U	OP2-P-O3'	5.65	117.62	105.20
1	13	1403	C	C2-N1-C1'	-5.64	112.59	118.80
24	1H	1382	G	C8-N9-C4	5.64	108.66	106.40
24	1H	1994	C	C5-C4-N4	5.64	124.15	120.20
24	14	789	A	C2-N3-C4	-5.64	107.78	110.60
24	14	1742	C	C6-N1-C2	-5.64	118.04	120.30
24	14	2375	G	N1-C6-O6	5.64	123.29	119.90
24	1H	382	G	N9-C4-C5	-5.64	103.14	105.40
24	1H	2588	G	N1-C6-O6	-5.64	116.51	119.90
24	1H	2644	G	N3-C2-N2	-5.64	115.95	119.90
18	9A	31	LEU	CA-CB-CG	5.64	128.28	115.30
24	14	1314	C	N3-C4-C5	5.64	124.16	121.90
24	14	2318	G	N7-C8-N9	5.64	115.92	113.10
24	1H	568	U	N1-C2-O2	-5.64	118.85	122.80
24	14	2386	C	C5-C6-N1	-5.64	118.18	121.00
24	1H	693	C	N1-C2-O2	-5.64	115.52	118.90
24	14	926	A	C5-C6-N6	-5.64	119.19	123.70
24	14	1241	A	C6-N1-C2	5.64	121.98	118.60
24	1H	209	C	N3-C4-C5	5.64	124.16	121.90
28	29	63	LEU	CA-CB-CG	-5.64	102.33	115.30
1	13	496	A	N1-C6-N6	-5.64	115.22	118.60
24	1H	1364	G	C6-C5-N7	-5.64	127.02	130.40
24	14	1297	C	O5'-P-OP2	-5.64	100.63	105.70
24	14	2198	A	O4'-C1'-N9	5.64	112.71	108.20
25	1J	102	G	N7-C8-N9	-5.64	110.28	113.10
24	1H	31	C	C5-C4-N4	-5.63	116.26	120.20
24	1H	1850	G	N3-C2-N2	-5.63	115.96	119.90
24	1H	1927	A	N1-C6-N6	-5.63	115.22	118.60
24	1H	2451	A	C8-N9-C4	-5.63	103.55	105.80
24	14	599	G	N9-C4-C5	-5.63	103.15	105.40
24	14	741	G	OP1-P-OP2	-5.63	111.15	119.60
24	14	1387	C	C6-N1-C2	-5.63	118.05	120.30
1	13	111	G	N9-C4-C5	-5.63	103.15	105.40
24	1H	387	U	O5'-P-OP2	-5.63	100.63	105.70
24	1H	1559	G	C4-C5-N7	5.63	113.05	110.80
25	16	13	A	O5'-P-OP2	-5.63	100.63	105.70
24	14	1924	C	N3-C2-O2	5.63	125.84	121.90
24	14	2278	A	C6-N1-C2	-5.63	115.22	118.60
24	1H	1657	C	OP1-P-O3'	5.63	117.59	105.20
24	1H	2273	A	N1-C2-N3	-5.63	126.48	129.30
24	14	1779	U	N3-C4-O4	5.63	123.34	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2050	C	N3-C4-C5	-5.63	119.65	121.90
24	14	921	G	C8-N9-C4	-5.63	104.15	106.40
24	14	956	G	N1-C6-O6	5.63	123.28	119.90
24	14	2074	U	OP2-P-O3'	5.63	117.58	105.20
24	14	740	U	OP2-P-O3'	5.63	117.58	105.20
24	1H	575	A	C5-N7-C8	5.62	106.71	103.90
24	14	1652	A	O5'-P-OP1	-5.62	100.64	105.70
24	1H	678	C	C5-C6-N1	-5.62	118.19	121.00
24	1H	727	A	N1-C6-N6	5.62	121.97	118.60
24	1H	1601	G	OP1-P-O3'	5.62	117.57	105.20
24	14	971	C	OP2-P-O3'	5.62	117.57	105.20
1	13	1519	A	N9-C4-C5	5.62	108.05	105.80
24	1H	845	G	N3-C4-C5	5.62	131.41	128.60
54	1G	671	G	O5'-P-OP2	-5.62	100.64	105.70
24	1H	584	C	N3-C2-O2	5.62	125.83	121.90
24	14	1474	C	C5-C6-N1	5.62	123.81	121.00
54	1G	108	G	C8-N9-C4	-5.62	104.15	106.40
24	14	138	G	C4-N9-C1'	5.62	133.80	126.50
24	14	855	G	N7-C8-N9	5.62	115.91	113.10
24	14	2261	C	O5'-P-OP1	5.62	117.44	110.70
1	13	23	C	C5-C6-N1	5.62	123.81	121.00
24	1H	262	A	C5-C6-N6	-5.62	119.21	123.70
24	1H	529	A	C5-C6-N6	-5.62	119.21	123.70
54	1G	353	A	C5-N7-C8	-5.62	101.09	103.90
24	14	447	A	O5'-P-OP1	-5.62	100.65	105.70
24	14	511	U	C6-N1-C2	-5.62	117.63	121.00
24	14	1796	U	O5'-P-OP1	-5.62	100.65	105.70
24	14	2263	C	N1-C2-O2	5.62	122.27	118.90
24	1H	1204	A	O4'-C1'-N9	5.61	112.69	108.20
24	1H	2199	A	OP2-P-O3'	5.61	117.55	105.20
24	1H	2429	G	OP2-P-O3'	5.61	117.55	105.20
24	14	191	A	OP1-P-O3'	-5.61	92.85	105.20
24	14	458	G	O4'-C1'-N9	5.61	112.69	108.20
24	14	472	A	C6-N1-C2	-5.61	115.23	118.60
24	14	2542	A	C6-C5-N7	5.61	136.23	132.30
24	1H	1356	G	C4-C5-N7	5.61	113.04	110.80
24	1H	1752	C	N3-C2-O2	5.61	125.83	121.90
24	1H	1931	U	O5'-P-OP1	5.61	117.43	110.70
24	1H	2280	G	OP1-P-O3'	5.61	117.54	105.20
24	14	1823	G	N3-C4-C5	5.61	131.41	128.60
24	14	2776	A	C8-N9-C4	-5.61	103.56	105.80
24	1H	2362	G	N9-C4-C5	-5.61	103.16	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1603	A	N7-C8-N9	5.61	116.60	113.80
25	1J	72	G	C8-N9-C4	5.61	108.64	106.40
24	1H	846	C	O5'-P-OP2	-5.61	100.65	105.70
24	1H	1963	U	C6-N1-C2	-5.61	117.64	121.00
24	1H	2705	A	N9-C4-C5	-5.61	103.56	105.80
53	M5	32	LEU	CA-CB-CG	5.61	128.20	115.30
1	13	435	C	C5-C6-N1	5.61	123.80	121.00
24	1H	181	A	N1-C6-N6	-5.61	115.24	118.60
24	14	2685	G	N7-C8-N9	-5.61	110.30	113.10
1	13	326	G	C4-C5-N7	-5.60	108.56	110.80
1	13	913	A	C8-N9-C4	-5.60	103.56	105.80
24	1H	669	G	O5'-P-OP2	-5.60	100.66	105.70
24	1H	2714	G	C5-C6-O6	-5.60	125.24	128.60
1	13	965	A	N1-C6-N6	5.60	121.96	118.60
24	1H	382	G	C5-C6-O6	-5.60	125.24	128.60
24	1H	1426	G	N3-C4-N9	5.60	129.36	126.00
24	1H	2875	C	N1-C2-O2	5.60	122.26	118.90
24	14	747	U	N1-C2-N3	-5.60	111.54	114.90
1	13	656	C	C5-C6-N1	5.60	123.80	121.00
24	1H	188	G	N9-C4-C5	-5.60	103.16	105.40
24	1H	1125	G	N7-C8-N9	-5.60	110.30	113.10
54	1G	61	G	N1-C6-O6	5.60	123.26	119.90
54	1G	687	A	C8-N9-C4	-5.60	103.56	105.80
24	1H	2277	G	N3-C4-N9	5.60	129.36	126.00
24	1H	848	G	N3-C2-N2	5.60	123.82	119.90
24	14	623	G	N1-C6-O6	5.60	123.26	119.90
24	1H	273(F)	C	N3-C2-O2	-5.59	117.98	121.90
24	1H	1182	A	N7-C8-N9	5.59	116.60	113.80
27	11	235	GLY	N-CA-C	5.59	127.08	113.10
24	1H	719	C	N1-C2-O2	5.59	122.26	118.90
24	1H	1648	C	C5-C6-N1	-5.59	118.20	121.00
42	E8	64	MET	N-CA-C	5.59	126.10	111.00
24	1H	138	G	C4-C5-N7	5.59	113.04	110.80
24	1H	596	G	N9-C4-C5	5.59	107.64	105.40
24	1H	2243	U	N3-C2-O2	-5.59	118.29	122.20
24	1H	2489	G	C5-C6-O6	-5.59	125.25	128.60
24	14	409	C	C6-N1-C2	5.59	122.54	120.30
24	14	656	G	N1-C6-O6	5.59	123.25	119.90
24	14	1516	U	C5-C4-O4	5.59	129.25	125.90
24	1H	230	U	O5'-P-OP2	-5.59	100.67	105.70
24	1H	2554	U	C5-C4-O4	-5.59	122.55	125.90
24	1H	2582	G	N3-C4-C5	-5.59	125.81	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2598	A	C8-N9-C4	5.59	108.04	105.80
24	1H	2004	G	C4-C5-N7	5.59	113.03	110.80
24	1H	2457	U	O5'-P-OP2	-5.59	100.67	105.70
24	14	1769	G	C6-C5-N7	-5.59	127.05	130.40
24	14	1775	U	N3-C4-O4	-5.59	115.49	119.40
24	1H	124	G	N9-C4-C5	-5.59	103.17	105.40
24	1H	2499	C	O5'-P-OP1	5.59	117.40	110.70
24	14	178	G	O5'-P-OP1	-5.59	100.67	105.70
24	14	751	A	C6-N1-C2	-5.59	115.25	118.60
24	1H	2272	U	O5'-P-OP1	5.58	117.40	110.70
24	14	724	U	O5'-P-OP1	-5.58	100.67	105.70
24	14	784	A	C5-C6-N6	5.58	128.17	123.70
24	14	1758	G	N3-C4-N9	-5.58	122.65	126.00
24	14	2361	A	C2-N3-C4	-5.58	107.81	110.60
24	1H	758	C	N3-C4-C5	5.58	124.13	121.90
24	1H	2457	U	C4-C5-C6	-5.58	116.35	119.70
24	14	270(K)	C	N1-C2-O2	5.58	122.25	118.90
24	14	780	G	C2-N3-C4	-5.58	109.11	111.90
24	14	1646	C	OP1-P-O3'	5.58	117.48	105.20
24	14	2250	G	C8-N9-C4	-5.58	104.17	106.40
24	14	2390	U	O5'-P-OP1	-5.58	100.67	105.70
24	1H	247	G	N3-C2-N2	5.58	123.81	119.90
24	1H	1313	U	N3-C4-C5	-5.58	111.25	114.60
24	1H	2024	G	OP2-P-O3'	5.58	117.48	105.20
24	1H	2072	G	N1-C6-O6	-5.58	116.55	119.90
24	1H	2589	A	C5-C6-N6	-5.58	119.23	123.70
24	14	747	U	N3-C2-O2	5.58	126.11	122.20
24	14	1208	C	C5-C6-N1	5.58	123.79	121.00
24	1H	199	A	C2-N3-C4	5.58	113.39	110.60
24	1H	728	G	C5-C6-O6	-5.58	125.25	128.60
32	61	110	ASP	C-N-CA	5.58	145.43	122.00
1	13	795	C	C6-N1-C1'	5.58	127.49	120.80
24	1H	1254	A	C8-N9-C4	5.58	108.03	105.80
24	1H	2700	C	C5-C6-N1	-5.58	118.21	121.00
24	14	2561	A	OP1-P-OP2	5.58	127.97	119.60
24	1H	15	G	N1-C6-O6	5.58	123.25	119.90
24	1H	141	A	C6-C5-N7	-5.58	128.40	132.30
54	1G	568	G	C8-N9-C4	-5.58	104.17	106.40
54	1G	1500	A	C5-N7-C8	-5.58	101.11	103.90
20	BA	10	LEU	CA-CB-CG	5.58	128.12	115.30
24	14	1021	A	C5-C6-N1	-5.58	114.91	117.70
24	14	2069	G	N1-C6-O6	-5.58	116.56	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2441	C	N1-C2-O2	5.58	122.25	118.90
24	1H	805	G	OP1-P-O3'	5.57	117.46	105.20
24	1H	1694	C	OP2-P-O3'	5.57	117.46	105.20
24	1H	2318	G	C8-N9-C4	-5.57	104.17	106.40
24	14	2445	G	C6-C5-N7	-5.57	127.06	130.40
24	1H	1962	C	C5-C6-N1	5.57	123.79	121.00
24	14	603	A	N7-C8-N9	5.57	116.59	113.80
24	14	2228	G	N1-C6-O6	-5.57	116.56	119.90
24	1H	26	G	C2-N3-C4	5.57	114.69	111.90
24	1H	1425	G	N3-C2-N2	5.57	123.80	119.90
24	1H	1989	G	C5-C6-N1	-5.57	108.71	111.50
24	14	202	U	OP1-P-OP2	5.57	127.96	119.60
24	14	453	C	C5-C6-N1	-5.57	118.22	121.00
24	14	676	A	C6-C5-N7	-5.57	128.40	132.30
24	14	1143	A	O5'-P-OP2	-5.57	100.69	105.70
1	13	11	G	O5'-P-OP1	-5.57	100.69	105.70
24	1H	575	A	O5'-P-OP1	-5.57	100.69	105.70
45	H8	24	LEU	CA-CB-CG	5.57	128.11	115.30
54	1G	774	G	N3-C4-C5	5.57	131.38	128.60
24	14	1914	C	C6-N1-C2	-5.57	118.07	120.30
1	13	509	A	P-O3'-C3'	5.57	126.38	119.70
24	1H	1308	A	C2-N3-C4	-5.57	107.82	110.60
25	16	89	G	C8-N9-C4	-5.57	104.17	106.40
44	G8	81	LYS	C-N-CD	-5.57	108.35	120.60
24	14	1564	C	N1-C2-N3	5.57	123.10	119.20
24	1H	942	G	OP1-P-O3'	5.57	117.44	105.20
24	1H	1950	G	N1-C6-O6	5.57	123.24	119.90
24	1H	2578	G	OP2-P-O3'	5.57	117.44	105.20
54	1G	742	G	N1-C6-O6	5.57	123.24	119.90
24	14	194	G	C8-N9-C4	5.56	108.63	106.40
24	14	494	G	C5-C6-O6	-5.56	125.26	128.60
1	13	1519	A	C5-C6-N1	-5.56	114.92	117.70
24	1H	119	A	OP1-P-O3'	5.56	117.44	105.20
24	1H	2360	A	C5-C6-N1	-5.56	114.92	117.70
24	14	1449(A)	G	N1-C2-N3	5.56	127.24	123.90
24	14	2365	G	N3-C4-N9	5.56	129.34	126.00
24	14	2502	G	C6-C5-N7	-5.56	127.06	130.40
24	1H	2271	G	N3-C4-C5	-5.56	125.82	128.60
24	14	74	A	C4-C5-C6	5.56	119.78	117.00
24	14	774	A	N9-C4-C5	-5.56	103.58	105.80
24	14	2762	G	C6-C5-N7	-5.56	127.06	130.40
24	1H	853	G	N7-C8-N9	-5.56	110.32	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2446	G	N3-C4-C5	5.56	131.38	128.60
54	1G	1346	A	OP2-P-O3'	5.56	117.43	105.20
54	1G	1455	G	N1-C6-O6	5.56	123.23	119.90
24	14	177	G	C4-N9-C1'	5.56	133.73	126.50
24	14	472	A	N9-C4-C5	5.56	108.02	105.80
1	13	749	C	C2-N1-C1'	5.56	124.91	118.80
24	1H	1307	A	C5-C6-N6	-5.56	119.25	123.70
24	1H	1766	U	C5-C6-N1	-5.56	119.92	122.70
24	1H	2247	A	N1-C2-N3	5.56	132.08	129.30
25	16	102	G	N3-C4-C5	5.56	131.38	128.60
24	14	1289	C	N1-C2-O2	-5.56	115.57	118.90
24	14	1950	G	N3-C2-N2	5.56	123.79	119.90
24	14	2251	G	C4-N9-C1'	5.56	133.73	126.50
24	1H	265	A	C5-N7-C8	-5.56	101.12	103.90
24	1H	780	G	C4-N9-C1'	5.56	133.72	126.50
24	1H	2532	G	N1-C6-O6	5.56	123.23	119.90
24	14	1976	U	N3-C4-C5	-5.56	111.27	114.60
24	14	787	U	O5'-P-OP1	-5.55	100.70	105.70
1	13	1065	U	P-O3'-C3'	5.55	126.36	119.70
24	14	453	C	N3-C2-O2	5.55	125.78	121.90
24	14	1254	A	C6-N1-C2	-5.55	115.27	118.60
24	14	1383	C	N1-C2-O2	-5.55	115.57	118.90
24	1H	474	G	N9-C4-C5	5.55	107.62	105.40
24	1H	2540	C	C2-N3-C4	-5.55	117.13	119.90
24	1H	2766	G	N9-C4-C5	-5.55	103.18	105.40
22	2L	26	G	N3-C4-C5	5.55	131.38	128.60
24	14	1378	A	N1-C2-N3	-5.55	126.53	129.30
1	13	575	G	N1-C6-O6	-5.55	116.57	119.90
1	13	435	C	C6-N1-C2	-5.55	118.08	120.30
1	13	1502	A	C6-N1-C2	-5.55	115.27	118.60
24	1H	2588	G	C5-C6-N1	5.55	114.27	111.50
24	14	786	C	C2-N3-C4	-5.55	117.13	119.90
24	14	2598	A	OP2-P-O3'	5.55	117.40	105.20
1	13	353	A	OP2-P-O3'	5.54	117.40	105.20
24	1H	1390	U	OP1-P-O3'	5.54	117.40	105.20
24	1H	2347	C	OP2-P-O3'	5.54	117.40	105.20
24	1H	1314	C	C6-N1-C1'	-5.54	114.15	120.80
24	1H	1393	A	OP1-P-O3'	5.54	117.40	105.20
54	1G	1112	C	C6-N1-C2	-5.54	118.08	120.30
54	1G	1502	A	N7-C8-N9	5.54	116.57	113.80
24	14	1968	G	C5-N7-C8	-5.54	101.53	104.30
24	1H	260	G	N1-C2-N2	5.54	121.19	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	436	C	C6-N1-C2	5.54	122.52	120.30
24	1H	1742	C	C6-N1-C2	-5.54	118.08	120.30
24	1H	2509	G	N3-C4-N9	5.54	129.32	126.00
24	1H	2571	C	C6-N1-C1'	-5.54	114.15	120.80
24	14	1801	G	O5'-P-OP1	-5.54	100.71	105.70
24	14	2598	A	N1-C6-N6	5.54	121.92	118.60
24	1H	1528	A	C4-C5-N7	5.54	113.47	110.70
24	1H	1790	C	N3-C2-O2	5.54	125.78	121.90
54	1G	115	G	P-O3'-C3'	5.54	126.35	119.70
24	1H	65	C	C6-N1-C2	-5.54	118.08	120.30
24	1H	788	A	OP2-P-O3'	5.54	117.38	105.20
24	1H	1826	G	N1-C6-O6	5.54	123.22	119.90
24	1H	2585	U	N3-C4-O4	5.54	123.28	119.40
54	1G	122	G	O5'-P-OP1	-5.54	100.72	105.70
54	1G	703	G	N3-C4-C5	-5.54	125.83	128.60
22	2L	6	G	C8-N9-C4	5.54	108.61	106.40
24	14	632	A	N1-C6-N6	5.54	121.92	118.60
24	14	1254	A	N1-C6-N6	5.54	121.92	118.60
54	1G	34	C	C6-N1-C2	5.54	122.52	120.30
24	14	1203	G	N1-C6-O6	-5.54	116.58	119.90
24	14	1842	G	C8-N9-C4	5.54	108.61	106.40
24	1H	2504	U	N1-C2-O2	5.54	126.67	122.80
53	Q8	34	TRP	CA-CB-CG	-5.54	103.18	113.70
24	14	1368	G	N1-C6-O6	-5.54	116.58	119.90
24	14	2595	G	C5-C6-N1	5.54	114.27	111.50
24	1H	70	G	OP1-P-OP2	-5.53	111.30	119.60
24	1H	458	G	C5-C6-O6	5.53	131.92	128.60
24	1H	2016	U	C2-N1-C1'	-5.53	111.06	117.70
24	14	1287	A	C8-N9-C4	-5.53	103.59	105.80
24	14	2388	A	O5'-P-OP2	-5.53	100.72	105.70
24	14	2709	G	N9-C4-C5	-5.53	103.19	105.40
24	1H	458	G	C8-N9-C4	-5.53	104.19	106.40
24	14	623	G	C5-C6-O6	-5.53	125.28	128.60
1	13	990	C	C5-C6-N1	5.53	123.77	121.00
24	1H	512	G	C5-C6-O6	-5.53	125.28	128.60
24	1H	578	A	O5'-P-OP1	5.53	117.34	110.70
24	1H	788	A	C5-C6-N1	-5.53	114.93	117.70
24	1H	943	U	N3-C2-O2	5.53	126.07	122.20
24	14	1156	A	O4'-C1'-N9	-5.53	103.78	108.20
24	14	1679	U	O5'-P-OP1	-5.53	100.72	105.70
25	1J	114	G	C4-N9-C1'	-5.53	119.31	126.50
24	1H	465	G	C8-N9-C4	5.53	108.61	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	126	A	C8-N9-C4	-5.53	103.59	105.80
24	1H	202	U	C4-C5-C6	-5.53	116.38	119.70
24	1H	792	G	O4'-C1'-N9	-5.53	103.78	108.20
24	1H	828	U	N3-C4-C5	-5.53	111.28	114.60
24	1H	1310	G	C5-C6-O6	-5.53	125.28	128.60
24	1H	1321	A	N1-C2-N3	5.53	132.06	129.30
24	1H	1629	U	C5-C6-N1	5.53	125.46	122.70
54	1G	699	C	O5'-P-OP1	-5.53	100.73	105.70
24	14	442	G	C4-N9-C1'	5.53	133.69	126.50
24	14	2324	C	C6-N1-C2	5.53	122.51	120.30
24	1H	582	G	C4-C5-N7	5.53	113.01	110.80
24	14	191	A	N3-C4-N9	-5.53	122.98	127.40
24	14	961	C	O5'-P-OP1	-5.53	100.73	105.70
24	14	1961	C	O5'-P-OP1	5.53	117.33	110.70
24	1H	92	G	N1-C6-O6	5.52	123.21	119.90
24	1H	773	U	N1-C2-O2	-5.52	118.93	122.80
24	1H	1379	A	C5-N7-C8	-5.52	101.14	103.90
24	14	2501	C	C6-N1-C2	5.52	122.51	120.30
24	1H	788	A	N9-C4-C5	-5.52	103.59	105.80
42	E8	19	LEU	CB-CG-CD2	-5.52	101.61	111.00
24	14	454	A	C8-N9-C4	5.52	108.01	105.80
24	14	1712	C	C6-N1-C2	-5.52	118.09	120.30
24	14	2365	G	OP2-P-O3'	5.52	117.35	105.20
24	14	2480	C	C6-N1-C2	-5.52	118.09	120.30
24	1H	664	C	O5'-P-OP2	-5.52	100.73	105.70
24	1H	1365	A	C5-C6-N1	-5.52	114.94	117.70
24	1H	1728	G	C4-C5-N7	5.52	113.01	110.80
54	1G	337	C	C5-C4-N4	-5.52	116.34	120.20
24	14	1513	C	C6-N1-C2	-5.52	118.09	120.30
24	1H	829	A	C8-N9-C4	5.52	108.01	105.80
24	1H	2609	U	O5'-P-OP1	-5.52	100.73	105.70
24	14	952	G	OP1-P-O3'	5.52	117.34	105.20
24	14	2060	A	N9-C4-C5	5.52	108.01	105.80
24	14	2253	G	O5'-P-OP1	5.52	117.32	110.70
24	1H	1253	A	N1-C2-N3	-5.51	126.54	129.30
24	1H	1287	A	C8-N9-C4	-5.51	103.59	105.80
24	1H	2420	C	N3-C4-C5	5.51	124.11	121.90
24	14	929	G	C4-C5-N7	5.51	113.01	110.80
24	14	945	A	C8-N9-C4	5.51	108.01	105.80
24	14	2288	A	N9-C4-C5	-5.51	103.59	105.80
24	14	2530	A	N1-C6-N6	5.51	121.91	118.60
24	1H	1349	A	N3-C4-C5	5.51	130.66	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2449	U	N3-C4-O4	5.51	123.26	119.40
24	1H	2509	G	C6-C5-N7	-5.51	127.09	130.40
24	14	270(G)	C	C5-C6-N1	5.51	123.76	121.00
24	14	1474	C	O5'-P-OP1	-5.51	100.74	105.70
24	14	2250	G	C5-C6-O6	5.51	131.91	128.60
24	1H	70	G	N3-C4-C5	-5.51	125.84	128.60
24	1H	1251	C	C5-C6-N1	-5.51	118.24	121.00
24	1H	2274	A	N9-C4-C5	-5.51	103.59	105.80
24	14	679	C	C5-C6-N1	-5.51	118.24	121.00
24	1H	777	A	C5-N7-C8	-5.51	101.14	103.90
24	1H	1603	A	C8-N9-C4	-5.51	103.60	105.80
24	1H	2241	A	N1-C2-N3	5.51	132.05	129.30
24	1H	2540	C	C5-C6-N1	-5.51	118.25	121.00
24	1H	2550	G	N1-C2-N2	5.51	121.16	116.20
24	1H	2574	G	N1-C6-O6	5.51	123.21	119.90
24	14	197	A	N3-C4-C5	5.51	130.66	126.80
24	14	452	G	C8-N9-C4	5.51	108.60	106.40
24	14	1899	G	C8-N9-C4	-5.51	104.20	106.40
27	19	43	ARG	CG-CD-NE	5.51	123.37	111.80
1	13	1084	G	N3-C4-C5	-5.51	125.85	128.60
24	1H	2012	G	N9-C4-C5	-5.51	103.20	105.40
24	1H	2257	U	OP2-P-O3'	5.51	117.32	105.20
24	14	1135	C	N3-C2-O2	-5.51	118.04	121.90
24	1H	1829	A	OP1-P-OP2	5.51	127.86	119.60
24	1H	2430	A	C4-C5-N7	5.51	113.45	110.70
54	1G	1528	U	C5-C6-N1	-5.51	119.95	122.70
24	14	1187	G	N3-C2-N2	-5.51	116.05	119.90
24	1H	931	G	N3-C4-C5	-5.50	125.85	128.60
24	1H	978	G	C5-C6-N1	-5.50	108.75	111.50
24	1H	1364	G	C4-C5-N7	5.50	113.00	110.80
24	1H	1996	C	N3-C4-N4	-5.50	114.15	118.00
24	1H	2288	A	N1-C6-N6	5.50	121.90	118.60
54	1G	943	U	O5'-P-OP1	-5.50	100.75	105.70
24	14	494	G	C6-C5-N7	-5.50	127.10	130.40
24	14	798	G	N1-C6-O6	5.50	123.20	119.90
1	13	806	C	N3-C2-O2	-5.50	118.05	121.90
1	13	1521	G	N1-C6-O6	5.50	123.20	119.90
24	1H	2288	A	C5-C6-N6	-5.50	119.30	123.70
25	1J	81	G	C5-N7-C8	-5.50	101.55	104.30
24	1H	1379	A	N7-C8-N9	5.50	116.55	113.80
23	4K	19	A	O4'-C1'-N9	5.50	112.60	108.20
24	1H	541	C	N3-C4-C5	-5.50	119.70	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1123	C	N3-C4-C5	-5.50	119.70	121.90
24	1H	2713	A	N3-C4-C5	5.50	130.65	126.80
24	1H	2737	G	C4-C5-N7	5.50	113.00	110.80
54	1G	758	G	C5-C6-O6	-5.50	125.30	128.60
24	14	2056	G	N1-C6-O6	5.50	123.20	119.90
24	14	2284	C	C6-N1-C2	5.50	122.50	120.30
1	13	13	U	C5-C6-N1	-5.50	119.95	122.70
24	1H	204	A	N9-C4-C5	5.50	108.00	105.80
1	13	1528	U	C5-C6-N1	-5.49	119.95	122.70
24	1H	1674	G	N7-C8-N9	5.49	115.85	113.10
54	1G	1394	A	N1-C6-N6	-5.49	115.30	118.60
24	1H	735	A	C8-N9-C4	5.49	108.00	105.80
24	1H	2686	G	N3-C4-C5	-5.49	125.85	128.60
24	14	2258	C	C5-C4-N4	-5.49	116.36	120.20
24	14	2592	G	C2-N3-C4	5.49	114.65	111.90
24	1H	132	G	C8-N9-C1'	-5.49	119.86	127.00
24	1H	1637	A	N9-C4-C5	5.49	108.00	105.80
54	1G	53	A	C5-C6-N6	-5.49	119.31	123.70
54	1G	665	A	OP1-P-OP2	5.49	127.83	119.60
24	14	452	G	O5'-P-OP2	-5.49	100.76	105.70
1	13	812	C	C2-N3-C4	5.49	122.64	119.90
24	1H	377	C	C6-N1-C2	5.49	122.50	120.30
54	1G	950	U	C5-C6-N1	5.49	125.44	122.70
24	14	528	A	N7-C8-N9	5.49	116.54	113.80
42	A5	19	LEU	CA-CB-CG	-5.49	102.68	115.30
24	1H	1187	G	OP2-P-O3'	5.49	117.27	105.20
24	1H	2734	A	C8-N9-C4	5.49	107.99	105.80
54	1G	50	A	C2-N3-C4	-5.49	107.86	110.60
24	14	603	A	N1-C6-N6	5.49	121.89	118.60
1	13	789	U	C4-C5-C6	5.48	122.99	119.70
24	1H	1620	G	C5-C6-O6	-5.48	125.31	128.60
24	14	2860	A	N1-C6-N6	5.48	121.89	118.60
24	1H	1804	C	C5-C4-N4	-5.48	116.36	120.20
24	14	1586	A	N7-C8-N9	5.48	116.54	113.80
24	14	1925	C	C6-N1-C2	-5.48	118.11	120.30
24	14	2271	G	OP2-P-O3'	5.48	117.26	105.20
1	13	890	G	O4'-C1'-N9	5.48	112.58	108.20
24	1H	772	C	C4-C5-C6	5.48	120.14	117.40
24	1H	2674	G	C4-C5-N7	-5.48	108.61	110.80
54	1G	1415	G	N1-C6-O6	5.48	123.19	119.90
24	1H	129	C	C6-N1-C2	5.48	122.49	120.30
24	1H	1300	U	N1-C2-N3	5.48	118.19	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1882	C	C6-N1-C2	-5.48	118.11	120.30
24	1H	2037	G	O5'-P-OP1	5.48	117.28	110.70
24	14	1543	A	N1-C2-N3	5.48	132.04	129.30
24	1H	330	A	N7-C8-N9	5.48	116.54	113.80
24	1H	1520	U	N3-C2-O2	-5.48	118.37	122.20
24	14	270(T)	G	N1-C6-O6	5.48	123.19	119.90
24	14	1158	C	C6-N1-C2	-5.48	118.11	120.30
24	1H	61	G	C8-N9-C4	5.48	108.59	106.40
24	1H	566	U	N3-C2-O2	5.48	126.03	122.20
24	1H	1227	A	N7-C8-N9	-5.48	111.06	113.80
24	14	1410	G	O5'-P-OP2	-5.48	100.77	105.70
24	14	1766	U	C5-C6-N1	-5.48	119.96	122.70
24	1H	728	G	C6-C5-N7	-5.47	127.11	130.40
24	1H	2620	C	C6-N1-C1'	-5.47	114.23	120.80
1	13	346	G	C4-N9-C1'	5.47	133.61	126.50
24	1H	1470	G	OP2-P-O3'	5.47	117.24	105.20
24	1H	1656	C	N3-C4-C5	-5.47	119.71	121.90
24	1H	2662	A	C5-C6-N6	-5.47	119.32	123.70
24	14	1462	C	N3-C4-C5	-5.47	119.71	121.90
24	14	2252	G	N1-C6-O6	5.47	123.18	119.90
24	14	843	G	O5'-P-OP2	-5.47	100.78	105.70
54	1G	61	G	C6-C5-N7	-5.47	127.12	130.40
24	14	356	G	N1-C6-O6	5.47	123.18	119.90
24	1H	2598	A	O5'-P-OP1	-5.47	100.78	105.70
24	14	2263	C	N3-C2-O2	-5.47	118.07	121.90
1	13	121	C	C2-N1-C1'	5.46	124.81	118.80
1	13	560	U	C5-C6-N1	5.46	125.43	122.70
24	1H	2584	U	C4-C5-C6	5.46	122.98	119.70
24	14	1662	C	N3-C2-O2	-5.46	118.08	121.90
24	14	1952	A	O5'-P-OP1	-5.46	100.78	105.70
24	1H	237	C	N1-C2-O2	-5.46	115.62	118.90
24	1H	2314	C	O5'-P-OP2	-5.46	100.78	105.70
24	14	389	G	C5-C6-O6	-5.46	125.32	128.60
24	14	2419	U	OP1-P-O3'	5.46	117.22	105.20
24	1H	1800	C	C5-C4-N4	5.46	124.02	120.20
24	1H	2065	C	OP1-P-OP2	-5.46	111.41	119.60
24	1H	2569	G	C8-N9-C4	-5.46	104.22	106.40
24	1H	2599	G	N1-C2-N3	5.46	127.18	123.90
24	14	1528	A	C6-C5-N7	-5.46	128.48	132.30
24	14	1550	C	N1-C2-O2	-5.46	115.62	118.90
24	14	1599	C	N3-C2-O2	-5.46	118.08	121.90
1	13	14	U	O5'-P-OP1	-5.46	100.79	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	1264	C	C6-N1-C2	-5.46	118.12	120.30
9	8E	47	LEU	CA-CB-CG	5.46	127.85	115.30
24	1H	1621	U	N3-C4-C5	-5.46	111.33	114.60
24	1H	1902	C	N1-C2-O2	5.46	122.17	118.90
24	1H	2822	G	C6-C5-N7	-5.46	127.12	130.40
24	1H	2855	C	C5-C6-N1	5.46	123.73	121.00
24	14	1598	C	N3-C4-C5	5.46	124.08	121.90
24	14	1773	A	O5'-P-OP2	-5.46	100.79	105.70
1	13	720	C	N1-C2-O2	5.46	122.17	118.90
1	13	1481	U	N3-C4-C5	-5.46	111.33	114.60
24	1H	150	C	N1-C2-O2	5.46	122.17	118.90
24	1H	514	A	OP1-P-O3'	5.46	117.20	105.20
24	1H	728	G	O5'-P-OP2	-5.46	100.79	105.70
24	1H	838	C	O5'-P-OP1	-5.46	100.79	105.70
24	1H	1805	U	C5-C4-O4	-5.46	122.63	125.90
1	13	53	A	N1-C6-N6	5.46	121.87	118.60
24	1H	949	C	C6-N1-C2	5.46	122.48	120.30
24	1H	954	G	OP1-P-O3'	5.46	117.20	105.20
24	1H	1018	C	C5-C6-N1	5.46	123.73	121.00
24	1H	964	C	N3-C4-N4	5.45	121.82	118.00
24	1H	1825	A	O5'-P-OP2	-5.45	100.79	105.70
24	14	1930	G	C4-N9-C1'	-5.45	119.41	126.50
24	14	2827	C	C5-C6-N1	-5.45	118.27	121.00
1	13	765	G	C6-C5-N7	-5.45	127.13	130.40
24	1H	816	C	C6-N1-C2	5.45	122.48	120.30
24	14	801	G	C4-C5-C6	-5.45	115.53	118.80
25	1J	114	G	N7-C8-N9	-5.45	110.37	113.10
1	13	915	A	N1-C6-N6	-5.45	115.33	118.60
22	2K	11	C	C5-C6-N1	5.45	123.72	121.00
24	1H	127	A	N9-C4-C5	-5.45	103.62	105.80
24	1H	1780	A	N1-C6-N6	-5.45	115.33	118.60
24	1H	2039	C	C5-C6-N1	5.45	123.72	121.00
24	14	180	G	N1-C6-O6	5.45	123.17	119.90
24	14	452	G	N9-C4-C5	-5.45	103.22	105.40
24	14	1349	A	O4'-C1'-N9	5.45	112.56	108.20
23	4K	17	G	N3-C4-N9	5.45	129.27	126.00
54	1G	1498	U	P-O3'-C3'	5.45	126.24	119.70
24	14	205	G	N3-C2-N2	5.45	123.71	119.90
24	14	1559	G	N3-C4-C5	5.45	131.32	128.60
24	14	2228	G	C2-N3-C4	5.45	114.62	111.90
1	13	866	C	N3-C4-C5	-5.45	119.72	121.90
24	1H	1501	C	C5-C6-N1	5.45	123.72	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2503	A	C5-C6-N1	5.45	120.42	117.70
24	1H	578	A	O5'-P-OP2	-5.45	100.80	105.70
24	1H	1621	U	N3-C4-O4	5.45	123.21	119.40
24	14	25	U	N3-C2-O2	5.45	126.01	122.20
24	14	1496	A	C5-C6-N6	-5.45	119.34	123.70
24	14	1664	A	C4-C5-C6	5.45	119.72	117.00
24	14	1939	U	C2-N1-C1'	-5.45	111.17	117.70
24	14	2724	C	C2-N1-C1'	-5.45	112.81	118.80
24	1H	1594	G	O5'-P-OP1	-5.44	100.80	105.70
24	1H	188	G	C5-C6-N1	5.44	114.22	111.50
24	1H	1695	G	N7-C8-N9	5.44	115.82	113.10
25	1J	11	C	N3-C2-O2	-5.44	118.09	121.90
1	13	758	G	C4-C5-N7	5.44	112.98	110.80
24	1H	680	G	N3-C4-N9	-5.44	122.74	126.00
24	1H	1377	G	O5'-P-OP2	-5.44	100.80	105.70
24	14	817	C	C5-C6-N1	5.44	123.72	121.00
24	14	2073	C	C2-N3-C4	-5.44	117.18	119.90
24	1H	2726	U	N3-C4-O4	-5.44	115.59	119.40
24	14	2491	U	C6-N1-C2	5.44	124.26	121.00
1	13	1524	C	N3-C2-O2	5.44	125.71	121.90
24	1H	381	G	C8-N9-C4	5.44	108.58	106.40
54	1G	18	C	O5'-P-OP2	5.44	117.22	110.70
54	1G	768	A	N1-C2-N3	5.44	132.02	129.30
24	14	689	A	C5-C6-N6	-5.44	119.35	123.70
1	13	36	C	N3-C4-C5	-5.43	119.73	121.90
24	1H	698	C	OP1-P-OP2	5.43	127.75	119.60
24	1H	1565	C	N3-C2-O2	5.43	125.70	121.90
24	1H	2683	C	C6-N1-C2	5.43	122.47	120.30
54	1G	303	A	N1-C6-N6	5.43	121.86	118.60
24	14	1285	G	C5-C6-N1	5.43	114.22	111.50
24	14	1636	C	C6-N1-C2	-5.43	118.13	120.30
24	1H	2264	C	O5'-P-OP2	5.43	117.22	110.70
54	1G	23	C	C5-C6-N1	5.43	123.72	121.00
24	1H	1366	A	C5-C6-N6	-5.43	119.36	123.70
24	1H	1952	A	C5-C6-N6	-5.43	119.36	123.70
54	1G	769	G	C4-N9-C1'	5.43	133.56	126.50
24	14	1811	G	C5-N7-C8	-5.43	101.58	104.30
24	14	1899	G	N9-C4-C5	5.43	107.57	105.40
24	14	2078	C	N3-C4-C5	-5.43	119.73	121.90
24	14	2866	U	C5-C4-O4	5.43	129.16	125.90
1	13	452	A	C4-N9-C1'	-5.43	116.53	126.30
1	13	1158	C	C5-C6-N1	5.43	123.72	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	657	U	C5-C6-N1	-5.43	119.99	122.70
24	14	667	U	O5'-P-OP1	5.43	117.21	110.70
24	14	1761	C	C6-N1-C2	5.43	122.47	120.30
24	1H	1556	C	C2-N3-C4	5.43	122.61	119.90
24	1H	2445	G	N7-C8-N9	5.43	115.81	113.10
24	1H	2512	C	C6-N1-C2	5.43	122.47	120.30
24	14	1394	U	O5'-P-OP2	5.43	117.21	110.70
24	14	2359	C	N1-C2-O2	-5.43	115.64	118.90
1	13	690	G	N1-C6-O6	5.43	123.16	119.90
24	1H	2028	U	C6-N1-C2	-5.43	117.74	121.00
27	11	28	GLU	C-N-CD	5.43	139.80	128.40
54	1G	900	A	O5'-P-OP1	-5.43	100.81	105.70
24	14	613	U	N3-C2-O2	-5.43	118.40	122.20
24	14	1243	G	N1-C6-O6	5.43	123.16	119.90
24	14	1308	A	C8-N9-C4	-5.43	103.63	105.80
24	14	2581	G	N3-C4-N9	5.43	129.26	126.00
1	13	1487	G	O5'-P-OP2	-5.42	100.82	105.70
24	1H	955	C	N1-C2-O2	-5.42	115.64	118.90
24	1H	1956	U	O5'-P-OP2	-5.42	100.82	105.70
54	1G	733	A	O4'-C1'-N9	5.42	112.54	108.20
24	14	468	G	C8-N9-C4	5.42	108.57	106.40
24	1H	679	C	N1-C2-O2	-5.42	115.65	118.90
24	1H	2241	A	C2-N3-C4	-5.42	107.89	110.60
24	1H	2508	G	C5-C6-O6	5.42	131.85	128.60
54	1G	823	G	C5-C6-O6	-5.42	125.35	128.60
54	1G	897	C	N3-C4-C5	-5.42	119.73	121.90
24	14	659	C	C5-C6-N1	-5.42	118.29	121.00
1	13	1499	A	N7-C8-N9	-5.42	111.09	113.80
24	1H	1249	U	O5'-P-OP1	-5.42	100.82	105.70
54	1G	1432	G	O5'-P-OP1	-5.42	100.82	105.70
24	14	2001	A	N7-C8-N9	5.42	116.51	113.80
24	1H	1160	G	C8-N9-C4	-5.42	104.23	106.40
24	1H	1405	U	O5'-P-OP2	-5.42	100.82	105.70
24	14	270(Z)	U	C5-C4-O4	5.42	129.15	125.90
24	14	2262	U	OP1-P-O3'	5.42	117.12	105.20
24	14	2418	A	N1-C6-N6	5.42	121.85	118.60
1	13	970	C	N1-C2-O2	5.42	122.15	118.90
24	1H	77	C	C5-C4-N4	-5.42	116.41	120.20
24	1H	836	G	OP1-P-OP2	-5.42	111.48	119.60
24	1H	1836	C	OP1-P-O3'	5.42	117.12	105.20
25	16	81	G	C4-N9-C1'	5.42	133.54	126.50
54	1G	345	C	P-O3'-C3'	5.42	126.20	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2457	U	OP2-P-O3'	5.42	117.12	105.20
24	14	2821	A	C2-N3-C4	-5.42	107.89	110.60
24	1H	1275	A	N9-C4-C5	-5.42	103.63	105.80
24	1H	2701	C	P-O3'-C3'	5.42	126.20	119.70
24	1H	444	C	N1-C2-N3	5.41	122.99	119.20
24	1H	1377	G	C6-C5-N7	-5.41	127.15	130.40
24	14	12	U	N3-C2-O2	-5.41	118.41	122.20
24	14	557	U	C5-C6-N1	-5.41	119.99	122.70
24	14	1695	G	C5-C6-N1	-5.41	108.79	111.50
24	14	1848	A	C8-N9-C4	5.41	107.97	105.80
24	1H	1516	U	N1-C2-O2	5.41	126.59	122.80
24	1H	862	G	C5-C6-O6	5.41	131.85	128.60
24	1H	1241	A	C6-N1-C2	5.41	121.85	118.60
24	1H	2280	G	C8-N9-C4	-5.41	104.24	106.40
24	14	686	G	N1-C6-O6	-5.41	116.65	119.90
24	14	717	G	N1-C6-O6	5.41	123.15	119.90
24	14	1902	C	C6-N1-C2	5.41	122.46	120.30
24	14	2882	A	O5'-P-OP2	-5.41	100.83	105.70
24	1H	2302	G	N1-C6-O6	-5.41	116.66	119.90
24	1H	189	G	N3-C4-C5	5.41	131.30	128.60
24	1H	305	U	C2-N3-C4	5.41	130.24	127.00
24	1H	2762	G	N1-C2-N2	-5.41	111.33	116.20
54	1G	297	G	C8-N9-C4	5.41	108.56	106.40
24	14	213	A	C8-N9-C4	5.41	107.96	105.80
24	1H	203	C	N3-C4-N4	5.41	121.78	118.00
24	14	601	C	N1-C2-O2	-5.41	115.66	118.90
24	14	2250	G	N1-C6-O6	-5.41	116.66	119.90
24	1H	856	C	C6-N1-C2	-5.40	118.14	120.30
24	14	144	C	N3-C2-O2	-5.40	118.12	121.90
24	1H	513	A	N1-C6-N6	-5.40	115.36	118.60
24	1H	570	G	C5-C6-N1	-5.40	108.80	111.50
24	1H	806	C	N3-C4-C5	5.40	124.06	121.90
24	1H	1691	C	C6-N1-C2	-5.40	118.14	120.30
24	1H	2238	G	N7-C8-N9	-5.40	110.40	113.10
54	1G	242	C	C6-N1-C2	-5.40	118.14	120.30
24	14	1443	G	N1-C6-O6	5.40	123.14	119.90
1	13	245	C	C2-N1-C1'	-5.40	112.86	118.80
24	1H	1917	U	OP1-P-O3'	5.40	117.08	105.20
24	1H	2023	G	N9-C4-C5	5.40	107.56	105.40
24	1H	2293	C	N3-C2-O2	-5.40	118.12	121.90
24	14	514	A	C8-N9-C4	5.40	107.96	105.80
24	14	1645	G	N1-C6-O6	-5.40	116.66	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	5E	87	ARG	NE-CZ-NH1	5.40	123.00	120.30
24	1H	1598	C	C5-C6-N1	5.40	123.70	121.00
1	13	268	C	O5'-P-OP1	-5.40	100.84	105.70
1	13	422	C	C6-N1-C2	-5.40	118.14	120.30
24	1H	2572	A	C5-N7-C8	5.40	106.60	103.90
25	16	105	G	C8-N9-C4	-5.40	104.24	106.40
54	1G	898	G	N1-C6-O6	-5.40	116.66	119.90
24	14	2595	G	C8-N9-C1'	5.40	134.02	127.00
24	1H	265	A	C8-N9-C4	-5.39	103.64	105.80
24	1H	1620	G	OP1-P-OP2	-5.39	111.51	119.60
24	1H	2364	C	OP2-P-O3'	5.39	117.07	105.20
24	14	2561	A	N1-C6-N6	-5.39	115.36	118.60
1	13	5	U	N3-C2-O2	-5.39	118.42	122.20
1	13	558	G	N1-C6-O6	5.39	123.14	119.90
1	13	795	C	C2-N1-C1'	-5.39	112.87	118.80
54	1G	725	G	O5'-P-OP1	-5.39	100.85	105.70
24	14	1201	C	C5-C6-N1	-5.39	118.30	121.00
24	14	1659	U	C4-C5-C6	5.39	122.94	119.70
47	F5	80	LEU	CA-CB-CG	5.39	127.70	115.30
24	14	2395	C	C5-C4-N4	-5.39	116.43	120.20
1	13	960	U	C2-N3-C4	5.39	130.23	127.00
24	1H	952	G	C2-N3-C4	5.39	114.59	111.90
24	1H	1489	U	C6-N1-C1'	5.39	128.75	121.20
54	1G	719	C	C4-C5-C6	5.39	120.09	117.40
24	14	1276	A	C5-N7-C8	-5.39	101.20	103.90
24	1H	1768	U	C2-N1-C1'	-5.39	111.23	117.70
24	1H	1829	A	N9-C4-C5	5.39	107.95	105.80
54	1G	656	C	C5-C6-N1	5.39	123.69	121.00
22	2L	85	A	C4-C5-N7	5.39	113.39	110.70
24	1H	1132	A	OP2-P-O3'	5.39	117.05	105.20
24	1H	1159	U	O5'-P-OP1	5.39	117.17	110.70
24	1H	1353	A	N9-C4-C5	-5.39	103.64	105.80
31	51	171	LEU	CA-CB-CG	5.39	127.69	115.30
1	13	793	U	C6-N1-C2	-5.38	117.77	121.00
24	1H	305	U	N3-C4-C5	-5.38	111.37	114.60
24	1H	816	C	N1-C2-N3	-5.38	115.43	119.20
24	1H	1431	U	C5-C6-N1	5.38	125.39	122.70
24	1H	2509	G	C8-N9-C4	5.38	108.55	106.40
30	41	42	GLY	N-CA-C	-5.38	99.64	113.10
54	1G	31	G	N3-C4-C5	5.38	131.29	128.60
24	14	379	G	C2-N3-C4	-5.38	109.21	111.90
24	14	2275	C	C5-C6-N1	5.38	123.69	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2328	A	C5-C6-N6	-5.38	119.39	123.70
24	14	2545	G	N3-C2-N2	-5.38	116.13	119.90
24	1H	1387	C	C6-N1-C2	-5.38	118.15	120.30
24	1H	1476	C	C6-N1-C2	-5.38	118.15	120.30
54	1G	26	A	C6-N1-C2	-5.38	115.37	118.60
54	1G	1059	C	C6-N1-C2	-5.38	118.15	120.30
24	1H	750	A	OP2-P-O3'	5.38	117.04	105.20
1	13	397	A	N1-C2-N3	5.38	131.99	129.30
1	13	830	G	O5'-P-OP1	-5.38	100.86	105.70
24	1H	1674	G	C4-N9-C1'	5.38	133.49	126.50
53	Q8	31	HIS	CB-CA-C	5.38	121.16	110.40
54	1G	815	A	N7-C8-N9	-5.38	111.11	113.80
24	1H	1235	G	C8-N9-C1'	-5.38	120.01	127.00
24	1H	1562	A	N1-C2-N3	5.38	131.99	129.30
24	1H	2062	A	N1-C2-N3	-5.38	126.61	129.30
24	1H	2374	C	N3-C4-N4	-5.38	114.23	118.00
54	1G	553	A	O5'-P-OP2	-5.38	100.86	105.70
54	1G	1453	G	O4'-C1'-N9	5.38	112.50	108.20
24	14	1368	G	C5-N7-C8	5.38	106.99	104.30
24	14	2392	A	N3-C4-C5	5.38	130.56	126.80
24	1H	330	A	C4-C5-N7	5.38	113.39	110.70
24	1H	732	C	OP1-P-O3'	5.38	117.03	105.20
24	1H	1346	G	C2-N3-C4	5.38	114.59	111.90
24	1H	1385	G	C8-N9-C1'	5.38	133.99	127.00
24	1H	2496	C	N1-C2-O2	5.38	122.13	118.90
54	1G	772	U	O5'-P-OP2	-5.38	100.86	105.70
24	14	1276	A	C4-C5-N7	5.38	113.39	110.70
24	1H	2361	A	C2-N3-C4	-5.38	107.91	110.60
54	1G	413	G	N7-C8-N9	-5.38	110.41	113.10
54	1G	732	C	OP2-P-O3'	5.38	117.03	105.20
24	14	531	C	C5-C6-N1	-5.38	118.31	121.00
24	1H	598	G	OP1-P-OP2	5.37	127.66	119.60
24	1H	1471	A	C8-N9-C4	-5.37	103.65	105.80
24	1H	2067	G	N9-C4-C5	5.37	107.55	105.40
31	51	7	LEU	C-N-CD	5.37	139.69	128.40
1	13	623	C	C5-C6-N1	5.37	123.69	121.00
1	13	710	G	C6-C5-N7	-5.37	127.18	130.40
1	13	786	G	C8-N9-C4	5.37	108.55	106.40
24	1H	1463	C	C5-C6-N1	5.37	123.69	121.00
24	1H	2105	C	C6-N1-C2	-5.37	118.15	120.30
24	1H	2330	G	N9-C4-C5	-5.37	103.25	105.40
24	1H	2582	G	N3-C4-N9	5.37	129.22	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	1G	916	G	C2-N3-C4	5.37	114.59	111.90
24	14	791	C	N3-C4-C5	5.37	124.05	121.90
24	1H	463	G	N1-C2-N2	-5.37	111.37	116.20
24	1H	485	C	N1-C2-O2	-5.37	115.68	118.90
24	1H	2346	A	N3-C4-N9	-5.37	123.10	127.40
24	14	676	A	N1-C2-N3	5.37	131.99	129.30
24	14	757	U	N1-C2-N3	5.37	118.12	114.90
24	1H	1927	A	O5'-P-OP2	-5.37	100.87	105.70
24	1H	2329	G	N3-C2-N2	-5.37	116.14	119.90
54	1G	942	G	N3-C4-N9	5.37	129.22	126.00
24	14	946	G	C2-N3-C4	-5.37	109.22	111.90
24	14	1401	G	N3-C4-N9	-5.37	122.78	126.00
24	14	1666	G	C5-N7-C8	5.37	106.98	104.30
24	14	2552	U	C2-N3-C4	-5.37	123.78	127.00
24	1H	427	U	C2-N1-C1'	5.37	124.14	117.70
24	1H	2438	U	C4-C5-C6	5.37	122.92	119.70
54	1G	783	C	O5'-P-OP1	-5.37	100.87	105.70
24	14	661	C	C6-N1-C2	-5.37	118.15	120.30
1	13	765	G	C5-C6-O6	-5.37	125.38	128.60
24	1H	569	U	C2-N3-C4	-5.37	123.78	127.00
24	1H	577	G	OP1-P-OP2	-5.37	111.55	119.60
24	14	871	U	N3-C2-O2	5.37	125.95	122.20
24	14	1386	C	N3-C4-N4	5.37	121.76	118.00
24	1H	2465	C	C6-N1-C2	5.36	122.45	120.30
54	1G	748	C	P-O3'-C3'	5.36	126.14	119.70
22	2L	12	C	C2-N1-C1'	5.36	124.70	118.80
24	14	74	A	N3-C4-C5	5.36	130.56	126.80
24	14	214	G	O4'-C1'-N9	5.36	112.49	108.20
24	1H	1296	G	O5'-P-OP2	-5.36	100.87	105.70
24	1H	1474	C	C6-N1-C2	-5.36	118.16	120.30
24	1H	1808	U	N3-C2-O2	5.36	125.95	122.20
24	14	205	G	N9-C4-C5	-5.36	103.25	105.40
24	1H	2595	G	C4-N9-C1'	-5.36	119.53	126.50
24	14	2439	A	C8-N9-C4	-5.36	103.66	105.80
24	1H	2021	C	OP2-P-O3'	5.36	116.99	105.20
24	1H	2210	G	C6-C5-N7	-5.36	127.19	130.40
24	1H	2582	G	C2-N3-C4	5.36	114.58	111.90
24	14	2594	C	N3-C4-N4	5.36	121.75	118.00
24	1H	1262	A	C8-N9-C4	5.36	107.94	105.80
24	1H	2521	C	O5'-P-OP2	5.36	117.13	110.70
24	1H	2542	A	O5'-P-OP1	-5.36	100.88	105.70
54	1G	758	G	N1-C6-O6	5.36	123.11	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	288	C	N1-C2-O2	5.36	122.11	118.90
24	14	474	G	O4'-C1'-N9	5.36	112.48	108.20
24	14	2207	C	C2-N1-C1'	5.36	124.69	118.80
24	1H	213	A	N1-C6-N6	5.36	121.81	118.60
1	13	720	C	C2-N1-C1'	5.35	124.69	118.80
1	13	976	G	N3-C4-N9	-5.35	122.79	126.00
24	1H	662	G	C6-C5-N7	5.35	133.61	130.40
54	1G	481	G	N3-C4-N9	5.35	129.21	126.00
54	1G	801	U	N1-C2-O2	5.35	126.55	122.80
24	1H	917	A	C6-C5-N7	-5.35	128.55	132.30
24	1H	2278	A	C8-N9-C4	-5.35	103.66	105.80
24	1H	2605	U	N3-C2-O2	-5.35	118.45	122.20
24	1H	2610	C	OP1-P-O3'	5.35	116.97	105.20
24	1H	2647	U	C6-N1-C2	5.35	124.21	121.00
24	14	177	G	N3-C4-C5	-5.35	125.92	128.60
1	13	106	C	C6-N1-C2	-5.35	118.16	120.30
24	1H	1629	U	C6-N1-C2	-5.35	117.79	121.00
24	1H	1691	C	O5'-P-OP1	-5.35	100.89	105.70
24	1H	2270	G	C4-N9-C1'	5.35	133.46	126.50
24	1H	2403	C	N1-C2-O2	-5.35	115.69	118.90
24	1H	2410	G	O5'-P-OP2	5.35	117.12	110.70
24	1H	2766	G	N3-C4-N9	5.35	129.21	126.00
24	14	1673	U	N1-C2-O2	-5.35	119.06	122.80
24	14	2873	A	C4-C5-N7	5.35	113.38	110.70
24	1H	193	U	C5-C6-N1	-5.35	120.03	122.70
24	1H	1660	C	C5-C4-N4	5.35	123.94	120.20
24	1H	2545	G	C5-C6-N1	5.35	114.17	111.50
54	1G	1502	A	C4-C5-C6	5.35	119.67	117.00
24	14	631	A	OP1-P-O3'	5.35	116.96	105.20
24	14	777	A	C6-N1-C2	-5.35	115.39	118.60
24	14	912	C	C5-C6-N1	5.35	123.67	121.00
24	14	2422	A	O5'-P-OP2	-5.35	100.89	105.70
1	13	758	G	C6-C5-N7	-5.35	127.19	130.40
24	14	2581	G	C4-N9-C1'	5.35	133.45	126.50
41	95	21	ARG	CG-CD-NE	5.35	123.03	111.80
47	F5	79	GLY	N-CA-C	5.35	126.46	113.10
24	1H	749	C	C6-N1-C2	5.34	122.44	120.30
24	1H	1307	A	C4-C5-N7	5.34	113.37	110.70
54	1G	397	A	C8-N9-C4	-5.34	103.66	105.80
24	14	988	A	N9-C4-C5	-5.34	103.66	105.80
24	1H	1202	C	N3-C4-N4	5.34	121.74	118.00
24	1H	1261	C	C5-C6-N1	-5.34	118.33	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1899	G	C5-N7-C8	-5.34	101.63	104.30
22	3L	55	U	C2-N1-C1'	5.34	124.11	117.70
24	14	1247	A	N1-C2-N3	5.34	131.97	129.30
24	14	1277	G	N3-C4-C5	5.34	131.27	128.60
24	14	2544	G	C5-C6-N1	5.34	114.17	111.50
24	14	2731	G	N7-C8-N9	5.34	115.77	113.10
1	13	186(A)	C	C5-C6-N1	5.34	123.67	121.00
54	1G	108	G	N7-C8-N9	5.34	115.77	113.10
24	14	693	C	N1-C2-O2	-5.34	115.70	118.90
24	14	1639	U	O5'-P-OP2	-5.34	100.89	105.70
24	14	2839	G	N3-C4-C5	-5.34	125.93	128.60
24	1H	1661	G	N3-C2-N2	-5.34	116.16	119.90
24	1H	2431	U	C5-C6-N1	-5.34	120.03	122.70
24	14	1407	C	N3-C4-N4	5.34	121.74	118.00
24	14	1512	G	N7-C8-N9	5.34	115.77	113.10
24	14	1956	U	C2-N3-C4	-5.34	123.80	127.00
24	1H	226	G	C5-C6-O6	-5.33	125.40	128.60
24	1H	2550	G	N9-C4-C5	5.33	107.53	105.40
24	14	1933	G	N1-C6-O6	5.33	123.10	119.90
1	13	1407	C	N3-C4-C5	5.33	124.03	121.90
24	1H	458	G	N9-C4-C5	5.33	107.53	105.40
24	1H	803	U	C6-N1-C2	5.33	124.20	121.00
24	1H	1774	C	C6-N1-C2	-5.33	118.17	120.30
24	1H	1786	A	O5'-P-OP2	-5.33	100.90	105.70
4	3E	167	GLY	N-CA-C	-5.33	99.77	113.10
22	3K	85	A	C5-C6-N6	-5.33	119.44	123.70
24	1H	58	G	C4-N9-C1'	5.33	133.43	126.50
24	1H	1931	U	O5'-P-OP2	-5.33	100.90	105.70
24	1H	2262	U	N3-C2-O2	-5.33	118.47	122.20
24	14	494	G	O5'-P-OP2	5.33	117.10	110.70
24	1H	2444	G	O5'-P-OP1	-5.33	100.90	105.70
24	1H	2598	A	OP2-P-O3'	5.33	116.93	105.20
24	1H	746	A	N7-C8-N9	5.33	116.46	113.80
24	1H	1263	U	N3-C2-O2	-5.33	118.47	122.20
24	1H	1625	C	OP2-P-O3'	5.33	116.92	105.20
24	1H	1931	U	C5-C6-N1	-5.33	120.04	122.70
24	14	817	C	C2-N3-C4	5.33	122.56	119.90
24	14	1988	C	N1-C2-N3	-5.33	115.47	119.20
24	14	2437	U	C6-N1-C2	-5.33	117.80	121.00
24	14	2550	G	C4-N9-C1'	5.33	133.43	126.50
1	13	1407	C	C4-C5-C6	-5.33	114.74	117.40
24	1H	71	A	N3-C4-N9	-5.33	123.14	127.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	4L	18	C	C2-N1-C1'	5.33	124.66	118.80
24	14	2860	A	N9-C4-C5	-5.33	103.67	105.80
24	14	2872	G	C8-N9-C4	-5.33	104.27	106.40
1	13	121	C	N3-C2-O2	-5.33	118.17	121.90
24	1H	182	A	C4-C5-N7	5.33	113.36	110.70
24	1H	189	G	C4-C5-N7	5.33	112.93	110.80
24	1H	628	G	N3-C4-N9	5.33	129.19	126.00
24	1H	1543	A	C6-C5-N7	-5.33	128.57	132.30
33	58	112	LEU	CB-CG-CD1	-5.33	101.95	111.00
24	14	794	G	OP2-P-O3'	5.33	116.92	105.20
24	14	1597	A	N1-C2-N3	5.33	131.96	129.30
24	1H	594	U	C2-N1-C1'	-5.32	111.31	117.70
24	1H	1007	C	C4-C5-C6	5.32	120.06	117.40
24	1H	2484	G	C4-C5-N7	5.32	112.93	110.80
54	1G	403	C	O5'-P-OP2	-5.32	100.91	105.70
54	1G	706	A	C8-N9-C4	-5.32	103.67	105.80
24	14	110	G	N9-C4-C5	-5.32	103.27	105.40
24	1H	593	G	C4-C5-N7	5.32	112.93	110.80
24	14	997	G	OP1-P-O3'	5.32	116.91	105.20
24	14	1308	A	N1-C6-N6	-5.32	115.41	118.60
34	25	8	LEU	CA-CB-CG	5.32	127.54	115.30
24	1H	202	U	N1-C2-O2	5.32	126.52	122.80
24	1H	1275	A	N3-C4-N9	5.32	131.66	127.40
54	1G	38	G	N3-C4-N9	-5.32	122.81	126.00
24	14	1159	U	OP1-P-O3'	5.32	116.91	105.20
24	14	2361	A	O5'-P-OP2	-5.32	100.91	105.70
24	1H	835	A	OP2-P-O3'	5.32	116.90	105.20
24	1H	1660	C	N3-C2-O2	-5.32	118.18	121.90
54	1G	231	G	C4-N9-C1'	-5.32	119.58	126.50
54	1G	783	C	C6-N1-C2	-5.32	118.17	120.30
23	4K	17	G	C5-C6-O6	-5.32	125.41	128.60
24	1H	785	G	N9-C4-C5	5.32	107.53	105.40
24	1H	1826	G	C4-C5-C6	5.32	121.99	118.80
24	1H	1901	A	C5-C6-N1	5.32	120.36	117.70
24	1H	2440	C	C5-C4-N4	5.32	123.92	120.20
24	1H	2499	C	N3-C4-C5	-5.32	119.77	121.90
24	14	71	A	C5-C6-N1	-5.32	115.04	117.70
24	14	955	C	N3-C4-N4	-5.32	114.28	118.00
24	14	1021	A	C5-C6-N6	5.32	127.95	123.70
24	14	2326	C	C6-N1-C2	-5.32	118.17	120.30
24	1H	49	A	O5'-P-OP2	-5.32	100.92	105.70
24	1H	70	G	N1-C6-O6	-5.32	116.71	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	471	A	N9-C4-C5	-5.32	103.67	105.80
24	1H	530	G	C4-C5-N7	5.32	112.93	110.80
54	1G	1514	C	N1-C2-O2	-5.32	115.71	118.90
24	14	1496	A	O4'-C1'-N9	5.32	112.45	108.20
24	1H	464	U	OP1-P-OP2	-5.31	111.63	119.60
24	1H	1413	G	N3-C2-N2	-5.31	116.18	119.90
24	14	752	A	C5-N7-C8	-5.31	101.24	103.90
24	14	1142(A)	A	C5-C6-N1	-5.31	115.04	117.70
24	14	2287	A	O4'-C1'-N9	-5.31	103.95	108.20
24	1H	24	G	N3-C4-N9	-5.31	122.81	126.00
24	1H	818	G	OP2-P-O3'	5.31	116.89	105.20
24	1H	1660	C	C5-C6-N1	-5.31	118.34	121.00
24	1H	2297	C	N3-C4-C5	-5.31	119.78	121.90
24	1H	2674	G	C5-N7-C8	5.31	106.96	104.30
6	52	21	LEU	CA-CB-CG	5.31	127.52	115.30
24	14	973	A	C8-N9-C4	5.31	107.92	105.80
24	1H	1827	C	N3-C2-O2	-5.31	118.18	121.90
24	1H	1982	C	O5'-P-OP2	-5.31	100.92	105.70
24	14	1616	A	C2-N3-C4	-5.31	107.94	110.60
24	1H	36	G	OP2-P-O3'	5.31	116.88	105.20
24	1H	397	G	C8-N9-C4	5.31	108.52	106.40
24	1H	557	U	N1-C2-N3	5.31	118.09	114.90
24	1H	1912	A	O5'-P-OP1	-5.31	100.92	105.70
54	1G	1370	G	C5-C6-N1	-5.31	108.84	111.50
24	14	845	G	N3-C4-C5	5.31	131.25	128.60
24	14	2364	C	OP2-P-O3'	5.31	116.88	105.20
24	1H	75	G	N3-C4-C5	-5.31	125.95	128.60
54	1G	1414	U	O5'-P-OP1	-5.31	100.92	105.70
24	14	104	U	N3-C2-O2	5.31	125.92	122.20
24	14	211	A	C4-C5-N7	5.31	113.35	110.70
24	1H	137(A)	G	O5'-P-OP1	-5.31	100.92	105.70
24	14	616	A	C5-C6-N6	-5.31	119.46	123.70
24	14	2346	A	O4'-C1'-N9	5.31	112.44	108.20
1	13	413	G	C5-C6-O6	5.30	131.78	128.60
24	1H	528	A	C5-C6-N1	-5.30	115.05	117.70
24	1H	1229(A)	G	N3-C4-C5	5.30	131.25	128.60
24	1H	1603	A	OP1-P-O3'	5.30	116.87	105.20
24	14	1902	C	N1-C2-O2	5.30	122.08	118.90
24	1H	2270	G	C4-C5-C6	5.30	121.98	118.80
24	14	855	G	OP1-P-O3'	5.30	116.87	105.20
24	14	1780	A	C5-C6-N6	5.30	127.94	123.70
24	14	1831	G	C8-N9-C4	-5.30	104.28	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	138	G	O4'-C1'-N9	5.30	112.44	108.20
54	1G	1374	A	O4'-C1'-N9	5.30	112.44	108.20
24	14	805	G	N7-C8-N9	5.30	115.75	113.10
24	14	2633	G	C8-N9-C4	5.30	108.52	106.40
23	4K	17	G	C4-C5-N7	5.30	112.92	110.80
24	1H	471	A	C4-C5-N7	5.30	113.35	110.70
24	1H	673	C	O5'-P-OP1	5.30	117.06	110.70
24	1H	1427	A	N9-C4-C5	5.30	107.92	105.80
24	1H	2507	C	C5-C4-N4	5.30	123.91	120.20
24	1H	2717	G	N3-C4-C5	-5.30	125.95	128.60
24	14	2253	G	N1-C6-O6	5.30	123.08	119.90
24	14	2405	G	OP1-P-O3'	5.30	116.86	105.20
1	13	769	G	O5'-P-OP2	-5.30	100.93	105.70
24	1H	261	G	C5-C6-O6	-5.30	125.42	128.60
24	1H	840	C	N3-C2-O2	5.30	125.61	121.90
24	1H	2010	G	OP1-P-O3'	5.30	116.86	105.20
24	14	2762	G	N1-C6-O6	5.30	123.08	119.90
1	13	250	A	C8-N9-C4	5.30	107.92	105.80
24	1H	1035	U	O5'-P-OP2	-5.30	100.93	105.70
24	1H	2448	A	C5-C6-N6	-5.30	119.46	123.70
24	1H	2767	C	C2-N1-C1'	5.30	124.63	118.80
54	1G	146	G	N1-C6-O6	5.30	123.08	119.90
24	14	13	A	C8-N9-C4	-5.30	103.68	105.80
24	14	401	A	N1-C6-N6	-5.30	115.42	118.60
24	14	694	U	OP2-P-O3'	5.30	116.85	105.20
24	14	840	C	N3-C2-O2	5.30	125.61	121.90
24	14	1251	C	N1-C2-O2	5.30	122.08	118.90
1	13	891	U	OP2-P-O3'	5.29	116.85	105.20
24	1H	450	G	N1-C6-O6	5.29	123.08	119.90
24	1H	862	G	N1-C6-O6	-5.29	116.72	119.90
24	1H	1212	G	N1-C2-N2	5.29	120.97	116.20
24	14	2857	G	C5-C6-O6	-5.29	125.42	128.60
24	1H	20	C	C2-N3-C4	-5.29	117.25	119.90
24	1H	56	A	C2-N3-C4	-5.29	107.95	110.60
24	1H	1343	G	O5'-P-OP1	-5.29	100.94	105.70
24	1H	1454	U	N3-C2-O2	-5.29	118.50	122.20
24	1H	2056	G	O4'-C1'-N9	-5.29	103.97	108.20
24	1H	2715	C	N3-C4-C5	5.29	124.02	121.90
54	1G	963	G	N3-C4-N9	5.29	129.18	126.00
24	14	675	A	C5-N7-C8	-5.29	101.25	103.90
24	14	1768	U	C2-N1-C1'	-5.29	111.35	117.70
24	14	2461	C	O5'-P-OP2	-5.29	100.94	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2377	A	O5'-P-OP1	5.29	117.05	110.70
24	14	121	G	C5-C6-O6	-5.29	125.42	128.60
24	14	780	G	C5-C6-N1	-5.29	108.86	111.50
24	14	934	G	OP1-P-OP2	5.29	127.54	119.60
24	1H	338	G	OP2-P-O3'	5.29	116.84	105.20
24	14	1769	G	C4-N9-C1'	5.29	133.38	126.50
24	14	1779	U	OP1-P-OP2	5.29	127.53	119.60
24	14	1940	U	O5'-P-OP1	5.29	117.05	110.70
24	1H	670	A	N1-C2-N3	-5.29	126.66	129.30
24	1H	843	G	OP1-P-OP2	-5.29	111.67	119.60
24	1H	1299	G	C8-N9-C4	-5.29	104.28	106.40
36	88	106	VAL	CB-CA-C	-5.29	101.35	111.40
24	14	1239	G	C5-C6-N1	5.29	114.14	111.50
1	13	805	C	C6-N1-C2	-5.29	118.19	120.30
24	1H	967	C	N1-C2-N3	5.29	122.90	119.20
24	1H	2046	G	N1-C6-O6	-5.29	116.73	119.90
54	1G	336	C	N3-C2-O2	5.29	125.60	121.90
24	1H	328	U	N3-C4-C5	-5.29	111.43	114.60
24	1H	1558	A	O5'-P-OP1	-5.29	100.94	105.70
54	1G	337	C	N3-C4-N4	5.29	121.70	118.00
24	14	178	G	OP1-P-OP2	5.29	127.53	119.60
24	14	462	C	O5'-P-OP2	-5.29	100.94	105.70
24	14	1656	C	C6-N1-C2	-5.29	118.19	120.30
1	13	866	C	C4-C5-C6	5.28	120.04	117.40
24	1H	1800	C	C2-N3-C4	5.28	122.54	119.90
24	1H	2618	G	N9-C4-C5	5.28	107.51	105.40
54	1G	777	A	O5'-P-OP1	5.28	117.04	110.70
54	1G	906	G	N1-C6-O6	5.28	123.07	119.90
24	14	974(A)	C	N1-C2-N3	5.28	122.90	119.20
24	14	1981	A	N1-C6-N6	5.28	121.77	118.60
24	14	2056	G	N3-C2-N2	-5.28	116.20	119.90
24	14	2290	G	N1-C6-O6	5.28	123.07	119.90
24	1H	837	C	C5-C4-N4	-5.28	116.50	120.20
24	1H	1341	U	C5-C4-O4	-5.28	122.73	125.90
24	1H	1599	C	OP2-P-O3'	5.28	116.82	105.20
24	1H	2228	G	N9-C4-C5	-5.28	103.29	105.40
24	1H	2375	G	N7-C8-N9	-5.28	110.46	113.10
24	1H	2591	C	N3-C2-O2	5.28	125.60	121.90
54	1G	23	C	C5-C4-N4	-5.28	116.50	120.20
24	1H	821	A	N1-C2-N3	5.28	131.94	129.30
24	1H	2050	C	C4-C5-C6	5.28	120.04	117.40
24	1H	2508	G	N1-C6-O6	-5.28	116.73	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2689	U	OP2-P-O3'	5.28	116.81	105.20
1	13	32	A	OP1-P-O3'	5.28	116.81	105.20
1	13	1058	G	N3-C4-N9	5.28	129.17	126.00
24	1H	575	A	N3-C4-N9	5.28	131.62	127.40
1	13	320	C	C2-N1-C1'	-5.28	113.00	118.80
1	13	335	C	N1-C2-O2	-5.28	115.73	118.90
1	13	645	C	C6-N1-C2	-5.28	118.19	120.30
1	13	860	A	C5-N7-C8	-5.28	101.26	103.90
24	1H	2403	C	O5'-P-OP2	-5.28	100.95	105.70
24	1H	2497	A	C5-C6-N6	-5.28	119.48	123.70
25	16	93	C	C6-N1-C2	-5.28	118.19	120.30
24	14	639	U	O5'-P-OP2	-5.28	100.95	105.70
24	14	1673	U	C2-N1-C1'	-5.28	111.37	117.70
54	1G	108	G	O5'-P-OP1	5.27	117.03	110.70
24	1H	728	G	C8-N9-C4	5.27	108.51	106.40
24	1H	1513	C	C2-N3-C4	5.27	122.54	119.90
24	1H	2302	G	N3-C4-C5	-5.27	125.96	128.60
54	1G	1395	C	O5'-P-OP1	-5.27	100.95	105.70
24	14	1239	G	C5-C6-O6	-5.27	125.44	128.60
24	14	1297	C	OP2-P-O3'	-5.27	93.60	105.20
24	14	1855	G	N3-C4-N9	5.27	129.16	126.00
24	1H	2316	C	O5'-P-OP1	-5.27	100.96	105.70
24	14	491	G	N1-C6-O6	-5.27	116.74	119.90
24	14	757	U	N1-C2-O2	-5.27	119.11	122.80
24	14	2232	U	C5-C4-O4	5.27	129.06	125.90
24	14	2342	C	N3-C2-O2	-5.27	118.21	121.90
22	2K	1	G	C4-N9-C1'	5.27	133.35	126.50
24	1H	775	G	N3-C4-N9	5.27	129.16	126.00
24	1H	1197	G	C6-C5-N7	5.27	133.56	130.40
24	1H	1595	G	O5'-P-OP1	-5.27	100.96	105.70
24	14	488	G	C8-N9-C1'	-5.27	120.15	127.00
24	14	2430	A	C5-C6-N6	-5.27	119.48	123.70
24	14	2502	G	P-O3'-C3'	5.27	126.02	119.70
24	1H	2246	G	N3-C4-N9	5.27	129.16	126.00
24	1H	2360	A	C4-C5-C6	5.27	119.63	117.00
24	1H	2438	U	C2-N3-C4	-5.27	123.84	127.00
25	16	78	A	C8-N9-C4	5.27	107.91	105.80
24	14	888	C	P-O3'-C3'	5.27	126.02	119.70
24	14	1606	G	C5-C6-O6	-5.27	125.44	128.60
24	14	2384	G	N3-C4-C5	5.27	131.23	128.60
54	1G	1202	G	C5-C6-O6	5.27	131.76	128.60
24	14	696	G	C5-C6-N1	5.27	114.13	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2602	A	P-O3'-C3'	5.27	126.02	119.70
1	13	769	G	O4'-C1'-N9	5.26	112.41	108.20
1	13	1276	G	C8-N9-C4	-5.26	104.29	106.40
24	1H	15	G	C6-C5-N7	-5.26	127.24	130.40
24	1H	1060	U	P-O3'-C3'	5.26	126.02	119.70
24	1H	2293	C	C6-N1-C2	-5.26	118.19	120.30
24	1H	2461	C	O5'-P-OP2	-5.26	100.96	105.70
24	14	199	A	N1-C2-N3	-5.26	126.67	129.30
24	14	725	G	O5'-P-OP1	-5.26	100.96	105.70
24	14	2595	G	N3-C4-N9	-5.26	122.84	126.00
1	13	669	U	C6-N1-C2	-5.26	117.84	121.00
24	14	1210	A	C2-N3-C4	-5.26	107.97	110.60
24	14	1673	U	C2-N3-C4	-5.26	123.84	127.00
24	14	2389	G	C6-C5-N7	-5.26	127.24	130.40
1	13	13	U	OP1-P-O3'	5.26	116.78	105.20
1	13	1285	A	P-O3'-C3'	5.26	126.01	119.70
24	1H	1898	U	C5-C4-O4	5.26	129.06	125.90
24	14	1204	A	C5-C6-N1	-5.26	115.07	117.70
37	55	107	ASP	CB-CG-OD1	-5.26	113.56	118.30
24	1H	77	C	N3-C4-N4	5.26	121.68	118.00
24	1H	1280	G	N3-C4-C5	5.26	131.23	128.60
24	1H	1970	A	C8-N9-C4	-5.26	103.70	105.80
24	1H	2281	C	C5-C4-N4	-5.26	116.52	120.20
54	1G	1469	G	C4-C5-C6	5.26	121.95	118.80
24	14	1207	C	N3-C4-C5	-5.26	119.80	121.90
24	14	1239	G	C4-C5-N7	5.26	112.90	110.80
24	14	1639	U	O5'-P-OP1	5.26	117.01	110.70
24	14	1673	U	N3-C2-O2	5.26	125.88	122.20
22	2K	11	C	C6-N1-C2	-5.26	118.20	120.30
24	1H	680	G	N9-C4-C5	5.26	107.50	105.40
24	1H	2031	A	N3-C4-N9	5.26	131.61	127.40
24	1H	2395	C	C5-C4-N4	-5.26	116.52	120.20
24	1H	2527	C	C6-N1-C2	-5.26	118.20	120.30
24	1H	838	C	C4-C5-C6	5.26	120.03	117.40
24	1H	1556	C	C5-C6-N1	5.26	123.63	121.00
24	1H	1633	G	C8-N9-C4	5.26	108.50	106.40
24	14	113	G	N7-C8-N9	-5.26	110.47	113.10
24	14	1286	A	OP2-P-O3'	5.26	116.77	105.20
22	2L	10	C	N3-C4-N4	-5.25	114.32	118.00
24	14	585	G	C4-C5-N7	5.25	112.90	110.80
1	13	387	U	OP1-P-O3'	5.25	116.76	105.20
24	1H	258	G	C8-N9-C4	5.25	108.50	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	826	U	OP1-P-OP2	5.25	127.48	119.60
24	1H	945	A	C5-C6-N1	5.25	120.33	117.70
24	1H	1981	A	C5-C6-N1	5.25	120.33	117.70
24	14	739	G	N1-C6-O6	5.25	123.05	119.90
24	14	1294	U	N1-C2-O2	-5.25	119.12	122.80
24	14	1407	C	C5-C4-N4	-5.25	116.52	120.20
24	14	2228	G	C5-C6-N1	5.25	114.13	111.50
24	1H	956	G	C5-N7-C8	5.25	106.93	104.30
24	1H	1461	G	C6-C5-N7	-5.25	127.25	130.40
24	1H	2286	A	C8-N9-C4	-5.25	103.70	105.80
25	16	99	A	OP1-P-OP2	5.25	127.48	119.60
54	1G	742	G	C5-C6-O6	-5.25	125.45	128.60
54	1G	932	C	N3-C2-O2	-5.25	118.22	121.90
24	14	1269	A	C5-N7-C8	-5.25	101.28	103.90
24	14	1566	A	N1-C6-N6	5.25	121.75	118.60
24	1H	271	G	N3-C4-C5	5.25	131.22	128.60
25	16	22	U	C6-N1-C2	-5.25	117.85	121.00
54	1G	1483	A	O5'-P-OP1	-5.25	100.97	105.70
24	14	1483	G	O5'-P-OP2	-5.25	100.97	105.70
24	14	1666	G	O4'-C1'-N9	5.25	112.40	108.20
24	14	2690	C	C5-C6-N1	-5.25	118.38	121.00
24	1H	845	G	C4-C5-N7	5.25	112.90	110.80
24	1H	1226	G	C2-N3-C4	-5.25	109.28	111.90
24	1H	2261	C	O5'-P-OP1	5.25	117.00	110.70
24	14	1318	C	N3-C2-O2	5.25	125.57	121.90
24	14	1839	G	C4-N9-C1'	5.25	133.32	126.50
24	14	2081	C	O5'-P-OP2	-5.25	100.98	105.70
24	14	2271	G	N1-C6-O6	5.25	123.05	119.90
24	1H	2075	U	OP2-P-O3'	5.25	116.74	105.20
24	1H	2596	U	OP1-P-OP2	5.25	127.47	119.60
54	1G	1415	G	C5-C6-N1	-5.25	108.88	111.50
24	14	664	C	N1-C2-O2	-5.25	115.75	118.90
24	14	726	G	N3-C4-N9	5.25	129.15	126.00
24	14	2024	G	N1-C6-O6	5.25	123.05	119.90
24	1H	2828	C	N3-C4-C5	5.25	124.00	121.90
24	14	990	A	C5-N7-C8	-5.25	101.28	103.90
24	1H	1159	U	O5'-P-OP2	-5.24	100.98	105.70
24	1H	1607	C	OP1-P-OP2	5.24	127.46	119.60
24	1H	1620	G	N1-C6-O6	5.24	123.05	119.90
24	1H	2454	G	N7-C8-N9	-5.24	110.48	113.10
24	1H	2827	C	C6-N1-C2	5.24	122.40	120.30
24	1H	195	A	P-O3'-C3'	5.24	125.99	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	61	131	LYS	C-N-CD	-5.24	109.07	120.60
24	14	1666	G	C4-C5-N7	-5.24	108.70	110.80
24	14	1694	C	C2-N1-C1'	-5.24	113.03	118.80
24	14	2639	A	C5-C6-N6	-5.24	119.51	123.70
24	14	2688	U	C2-N3-C4	-5.24	123.86	127.00
24	14	2722	G	OP1-P-O3'	5.24	116.73	105.20
24	1H	291	C	N3-C2-O2	5.24	125.57	121.90
24	1H	731	C	N1-C2-O2	-5.24	115.75	118.90
24	1H	1283	G	N3-C4-C5	-5.24	125.98	128.60
24	1H	1333	C	N3-C2-O2	5.24	125.57	121.90
24	1H	2299	G	N7-C8-N9	5.24	115.72	113.10
24	1H	2520	C	N1-C2-O2	-5.24	115.76	118.90
24	14	2542	A	N1-C6-N6	-5.24	115.46	118.60
1	13	365	U	C2-N1-C1'	5.24	123.99	117.70
24	1H	833	U	OP2-P-O3'	5.24	116.72	105.20
24	14	409	C	C5-C4-N4	-5.24	116.53	120.20
24	14	1021	A	N1-C2-N3	5.24	131.92	129.30
24	14	1682	G	OP1-P-OP2	5.24	127.46	119.60
24	14	1842	G	N9-C4-C5	-5.24	103.31	105.40
24	14	2709	G	C8-N9-C4	5.24	108.50	106.40
1	13	805	C	OP1-P-OP2	-5.24	111.74	119.60
24	1H	2236	C	N1-C2-O2	-5.24	115.76	118.90
1	13	889	A	OP1-P-OP2	5.24	127.45	119.60
24	1H	2429	G	C8-N9-C4	-5.24	104.31	106.40
52	L5	12	ARG	NE-CZ-NH1	-5.24	117.68	120.30
1	13	186(A)	C	C6-N1-C2	-5.23	118.21	120.30
24	1H	1624	G	C5-N7-C8	5.23	106.92	104.30
24	1H	1973	G	N3-C2-N2	5.23	123.56	119.90
54	1G	1486	G	C8-N9-C4	5.23	108.49	106.40
24	14	2024	G	C2-N3-C4	-5.23	109.28	111.90
1	13	733	A	C8-N9-C4	5.23	107.89	105.80
1	13	810	C	C4-C5-C6	5.23	120.02	117.40
24	1H	1642	G	N1-C6-O6	-5.23	116.76	119.90
24	1H	2420	C	N3-C2-O2	5.23	125.56	121.90
24	1H	2594	C	C2-N3-C4	-5.23	117.28	119.90
24	14	792	G	N3-C4-N9	5.23	129.14	126.00
24	14	1361	G	O5'-P-OP1	-5.23	100.99	105.70
24	14	1839	G	N3-C4-N9	5.23	129.14	126.00
24	14	2460	U	O5'-P-OP1	-5.23	100.99	105.70
1	13	1052	U	N3-C2-O2	-5.23	118.54	122.20
24	1H	589	C	O5'-P-OP2	-5.23	100.99	105.70
24	1H	676	A	N1-C2-N3	5.23	131.91	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	727	A	N1-C2-N3	5.23	131.91	129.30
24	1H	1185	C	O5'-P-OP2	-5.23	100.99	105.70
54	1G	1195	C	C6-N1-C2	-5.23	118.21	120.30
24	14	2550	G	C6-C5-N7	-5.23	127.26	130.40
24	1H	1690	A	C6-N1-C2	-5.23	115.46	118.60
24	14	28	A	C2-N3-C4	5.23	113.21	110.60
23	4K	17	G	C8-N9-C1'	-5.23	120.20	127.00
24	1H	1819	A	N1-C2-N3	5.23	131.91	129.30
35	78	66	GLY	N-CA-C	-5.23	100.03	113.10
24	1H	141(A)	C	OP1-P-O3'	-5.23	93.70	105.20
24	1H	2032	G	C8-N9-C4	5.23	108.49	106.40
24	1H	2415	G	C8-N9-C4	-5.23	104.31	106.40
24	14	671	C	O5'-P-OP1	5.23	116.97	110.70
24	14	2542	A	O5'-P-OP1	5.23	116.97	110.70
24	1H	719	C	C2-N1-C1'	5.22	124.55	118.80
24	1H	1769	G	N3-C4-C5	-5.22	125.99	128.60
24	14	124	G	N9-C4-C5	-5.22	103.31	105.40
24	1H	46	C	OP1-P-O3'	-5.22	93.71	105.20
24	1H	2413	G	C2-N3-C4	-5.22	109.29	111.90
54	1G	898	G	C8-N9-C4	5.22	108.49	106.40
24	14	935	C	N3-C4-N4	-5.22	114.34	118.00
24	14	1261	C	N1-C2-O2	-5.22	115.77	118.90
24	14	2860	A	C5-C6-N6	-5.22	119.52	123.70
1	13	576	G	C4-N9-C1'	5.22	133.29	126.50
54	1G	690	G	C2-N3-C4	-5.22	109.29	111.90
24	1H	2061	G	N3-C2-N2	5.22	123.55	119.90
24	1H	2615	U	C5-C6-N1	5.22	125.31	122.70
54	1G	251	G	N3-C4-C5	5.22	131.21	128.60
24	14	1939	U	N3-C2-O2	5.22	125.85	122.20
24	14	2260	C	C5-C6-N1	-5.22	118.39	121.00
1	13	926	G	N9-C4-C5	5.22	107.49	105.40
24	1H	508	G	C6-C5-N7	-5.22	127.27	130.40
24	1H	2325	G	C8-N9-C4	-5.22	104.31	106.40
24	1H	2688	U	N3-C4-C5	-5.22	111.47	114.60
24	14	2385	C	C6-N1-C2	5.22	122.39	120.30
24	14	2451	A	C2-N3-C4	-5.22	107.99	110.60
24	1H	1401	G	C8-N9-C4	-5.22	104.31	106.40
24	1H	2183	C	C6-N1-C2	-5.22	118.21	120.30
24	1H	2472	G	N1-C6-O6	5.22	123.03	119.90
24	1H	2583	G	N3-C2-N2	-5.22	116.25	119.90
25	16	48	A	O5'-P-OP2	5.22	116.96	110.70
54	1G	180	U	C5-C6-N1	5.22	125.31	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	1G	1354	C	C5-C6-N1	5.22	123.61	121.00
24	14	26	G	N3-C4-C5	-5.22	125.99	128.60
24	14	1254	A	C8-N9-C4	5.22	107.89	105.80
24	14	1629	U	N3-C4-C5	-5.22	111.47	114.60
1	13	191(F)	U	C6-N1-C2	-5.21	117.87	121.00
1	13	665	A	C2-N3-C4	5.21	113.21	110.60
1	13	888	G	N3-C4-N9	5.21	129.13	126.00
24	1H	593	G	N9-C4-C5	-5.21	103.31	105.40
24	1H	945	A	C6-N1-C2	-5.21	115.47	118.60
24	1H	1235	G	C6-C5-N7	-5.21	127.27	130.40
24	1H	1671	U	N3-C4-C5	-5.21	111.47	114.60
24	1H	2542	A	C8-N9-C4	5.21	107.89	105.80
54	1G	1115	C	C6-N1-C2	-5.21	118.21	120.30
35	35	85	LEU	CA-CB-CG	5.21	127.29	115.30
24	1H	781	A	C6-N1-C2	-5.21	115.47	118.60
54	1G	525	C	N3-C2-O2	5.21	125.55	121.90
24	14	1567	A	C8-N9-C4	-5.21	103.72	105.80
24	1H	263	C	N1-C2-O2	5.21	122.03	118.90
24	1H	446	G	C5-C6-N1	-5.21	108.89	111.50
24	1H	1790	C	C5-C6-N1	-5.21	118.39	121.00
24	1H	2635	C	C5-C6-N1	-5.21	118.39	121.00
24	1H	2879	C	N3-C4-C5	-5.21	119.81	121.90
54	1G	186	C	C6-N1-C2	-5.21	118.22	120.30
24	14	730	C	C5-C4-N4	-5.21	116.55	120.20
24	1H	1804	C	N3-C4-N4	5.21	121.65	118.00
24	14	1829	A	OP1-P-OP2	5.21	127.41	119.60
24	14	2328	A	C6-N1-C2	-5.21	115.47	118.60
24	1H	1656	C	OP2-P-O3'	5.21	116.66	105.20
54	1G	250	A	C2-N3-C4	-5.21	108.00	110.60
54	1G	333	G	OP2-P-O3'	5.21	116.66	105.20
24	14	678	C	C5-C6-N1	-5.21	118.39	121.00
24	1H	579	G	N1-C6-O6	5.21	123.02	119.90
24	1H	2063	C	C6-N1-C2	5.21	122.38	120.30
24	14	685	A	C8-N9-C4	-5.21	103.72	105.80
24	14	1930	G	N1-C6-O6	-5.21	116.78	119.90
24	1H	246	C	C6-N1-C2	5.21	122.38	120.30
24	1H	581	C	N1-C2-O2	-5.21	115.78	118.90
24	1H	2300	G	O5'-P-OP2	5.21	116.95	110.70
24	1H	226	G	C6-C5-N7	-5.20	127.28	130.40
24	1H	2253	G	N3-C4-N9	-5.20	122.88	126.00
24	14	50	U	C5-C4-O4	5.20	129.02	125.90
24	14	624	C	O5'-P-OP1	5.20	116.94	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1389	G	OP1-P-O3'	5.20	116.65	105.20
24	14	1801	G	C8-N9-C4	-5.20	104.32	106.40
24	14	2613	U	OP1-P-OP2	5.20	127.40	119.60
25	1J	111	U	C5-C4-O4	5.20	129.02	125.90
24	1H	931	G	N1-C6-O6	-5.20	116.78	119.90
24	1H	2662	A	C4-C5-N7	5.20	113.30	110.70
24	14	1421	G	C8-N9-C4	-5.20	104.32	106.40
24	14	2239	G	P-O3'-C3'	5.20	125.94	119.70
1	13	995	C	C6-N1-C2	-5.20	118.22	120.30
24	1H	918	A	C5-N7-C8	-5.20	101.30	103.90
24	1H	1647	G	C5-C6-O6	5.20	131.72	128.60
24	1H	1812	A	OP1-P-OP2	5.20	127.40	119.60
24	1H	2071	A	N1-C6-N6	5.20	121.72	118.60
54	1G	606	G	C8-N9-C4	-5.20	104.32	106.40
24	14	706	A	C2-N3-C4	-5.20	108.00	110.60
24	14	1246	A	N1-C6-N6	-5.20	115.48	118.60
24	14	1566	A	C5-C6-N6	-5.20	119.54	123.70
24	14	1785	A	C8-N9-C4	-5.20	103.72	105.80
24	14	1940	U	C5-C6-N1	-5.20	120.10	122.70
24	1H	1198	U	N1-C2-N3	5.20	118.02	114.90
24	1H	2620	C	C2-N1-C1'	5.20	124.52	118.80
54	1G	803	G	N1-C6-O6	5.20	123.02	119.90
24	14	2518	A	O5'-P-OP1	-5.20	101.02	105.70
24	14	2586	C	N3-C2-O2	5.20	125.54	121.90
1	13	541	G	N1-C6-O6	5.20	123.02	119.90
54	1G	362	G	N3-C2-N2	-5.20	116.26	119.90
24	14	2726	U	N3-C2-O2	-5.20	118.56	122.20
1	13	733	A	O4'-C1'-N9	5.20	112.36	108.20
24	1H	2391	G	N1-C6-O6	-5.20	116.78	119.90
54	1G	290	C	N3-C2-O2	5.20	125.54	121.90
24	14	1594	G	O5'-P-OP1	-5.20	101.02	105.70
24	14	1620	G	OP1-P-OP2	-5.20	111.81	119.60
24	14	1640	C	O4'-C1'-N1	5.20	112.36	108.20
24	14	2712	U	C6-N1-C2	5.20	124.12	121.00
24	1H	372	G	N9-C4-C5	5.19	107.48	105.40
24	1H	1244	G	C4-C5-N7	5.19	112.88	110.80
24	1H	1476	C	C6-N1-C1'	5.19	127.03	120.80
54	1G	1502	A	C5-C6-N1	-5.19	115.10	117.70
24	14	978	G	OP1-P-O3'	5.19	116.63	105.20
24	14	1011	G	N7-C8-N9	-5.19	110.50	113.10
24	14	1855	G	C4-N9-C1'	5.19	133.25	126.50
24	1H	31	C	N3-C4-N4	5.19	121.63	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	62	C	N1-C2-O2	-5.19	115.78	118.90
24	1H	1812	A	OP2-P-O3'	5.19	116.62	105.20
24	1H	2078	C	C6-N1-C2	-5.19	118.22	120.30
24	1H	2478	A	O4'-C1'-N9	5.19	112.35	108.20
24	1H	2637	U	C5-C4-O4	-5.19	122.78	125.90
24	14	567	A	C5-C6-N6	-5.19	119.55	123.70
24	14	1993	U	OP2-P-O3'	5.19	116.62	105.20
1	13	975	A	C5-N7-C8	-5.19	101.31	103.90
24	1H	780	G	C8-N9-C1'	-5.19	120.25	127.00
24	1H	848	G	C8-N9-C1'	-5.19	120.25	127.00
24	1H	853	G	N1-C6-O6	5.19	123.01	119.90
24	1H	942	G	N1-C2-N2	5.19	120.87	116.20
24	1H	1215	G	C8-N9-C4	-5.19	104.32	106.40
24	1H	1253	A	C4-C5-C6	-5.19	114.40	117.00
24	1H	1778	U	C5-C4-O4	-5.19	122.79	125.90
24	1H	2263	C	N1-C2-O2	-5.19	115.78	118.90
24	1H	2774	C	N1-C2-O2	-5.19	115.78	118.90
24	14	1667	G	O5'-P-OP1	-5.19	101.03	105.70
24	14	2207	C	C6-N1-C1'	-5.19	114.57	120.80
1	13	560	U	N1-C1'-C2'	-5.19	106.29	112.00
24	1H	609	A	C5-C6-N6	-5.19	119.55	123.70
54	1G	13	U	C4-C5-C6	5.19	122.81	119.70
24	14	211	A	C8-N9-C4	5.19	107.88	105.80
24	1H	136	G	N1-C6-O6	5.19	123.01	119.90
24	1H	1382	G	N7-C8-N9	-5.19	110.51	113.10
24	1H	2422	A	N1-C6-N6	-5.19	115.49	118.60
24	1H	2845	G	O5'-P-OP2	-5.19	101.03	105.70
24	14	793	A	C5-C6-N6	-5.19	119.55	123.70
24	14	1386	C	C5-C6-N1	5.19	123.59	121.00
24	14	1448	G	OP2-P-O3'	5.19	116.61	105.20
24	14	2069	G	C4-N9-C1'	-5.19	119.76	126.50
24	14	2502	G	C2-N3-C4	5.19	114.49	111.90
24	1H	979	G	C8-N9-C4	-5.19	104.33	106.40
24	1H	2573	C	C6-N1-C1'	-5.19	114.58	120.80
27	11	54	ARG	NE-CZ-NH1	-5.19	117.71	120.30
24	14	575	A	O4'-C1'-N9	5.19	112.35	108.20
24	14	654(S)	G	OP1-P-O3'	5.19	116.61	105.20
24	14	1441	G	N1-C6-O6	5.19	123.01	119.90
1	13	900	A	N9-C4-C5	-5.18	103.73	105.80
24	1H	2620	C	C5-C4-N4	-5.18	116.57	120.20
53	Q8	57	ARG	NE-CZ-NH1	5.18	122.89	120.30
24	14	1765	C	C6-N1-C2	5.18	122.37	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2640	G	N7-C8-N9	5.18	115.69	113.10
24	1H	2023	G	N1-C2-N2	5.18	120.86	116.20
54	1G	979	C	C6-N1-C2	-5.18	118.23	120.30
24	14	926	A	N9-C4-C5	-5.18	103.73	105.80
24	14	1394	U	OP1-P-OP2	-5.18	111.83	119.60
24	14	1613	G	N3-C4-C5	-5.18	126.01	128.60
24	14	1855	G	C8-N9-C1'	-5.18	120.26	127.00
25	16	17	C	N3-C2-O2	-5.18	118.27	121.90
24	14	747	U	C6-N1-C2	5.18	124.11	121.00
24	14	768	G	N3-C4-N9	5.18	129.11	126.00
24	14	1588	C	C5-C6-N1	5.18	123.59	121.00
24	14	1920	C	O5'-P-OP2	-5.18	101.04	105.70
24	14	2413	G	N9-C4-C5	-5.18	103.33	105.40
24	14	2622	C	C6-N1-C2	5.18	122.37	120.30
24	1H	71	A	C5-C6-N6	-5.18	119.56	123.70
24	1H	1528	A	C5-C6-N1	-5.18	115.11	117.70
24	1H	2324	C	N3-C4-C5	5.18	123.97	121.90
24	14	942	G	OP1-P-O3'	5.18	116.59	105.20
24	14	1187	G	N7-C8-N9	5.18	115.69	113.10
24	14	1257	C	C6-N1-C2	-5.18	118.23	120.30
24	14	2681	C	C5-C6-N1	-5.18	118.41	121.00
1	13	576	G	C5-C6-N1	-5.18	108.91	111.50
24	1H	1518	C	O5'-P-OP2	5.18	116.91	110.70
24	1H	1558	A	N1-C2-N3	5.18	131.89	129.30
24	1H	1957	C	O5'-P-OP1	5.18	116.91	110.70
54	1G	1515	C	C6-N1-C2	5.18	122.37	120.30
24	14	329	G	N3-C4-N9	5.18	129.11	126.00
24	14	2281	C	N1-C2-O2	-5.18	115.79	118.90
24	14	2401	U	C6-N1-C1'	5.18	128.45	121.20
24	14	2586	C	N3-C4-N4	5.18	121.62	118.00
1	13	1199	U	C5-C4-O4	5.17	129.00	125.90
24	1H	729	G	OP2-P-O3'	5.17	116.58	105.20
24	1H	837	C	C5-C6-N1	5.17	123.59	121.00
24	1H	2357	U	C2-N3-C4	5.17	130.10	127.00
24	1H	2428	G	C5-C6-O6	5.17	131.71	128.60
22	2L	75	C	N3-C2-O2	-5.17	118.28	121.90
24	14	255	A	OP2-P-O3'	5.17	116.58	105.20
24	14	2251	G	N1-C2-N3	5.17	127.00	123.90
24	1H	1271	G	N3-C4-N9	5.17	129.10	126.00
54	1G	50	A	C8-N9-C4	-5.17	103.73	105.80
24	14	727	A	O5'-P-OP1	-5.17	101.04	105.70
1	13	610	G	O5'-P-OP2	-5.17	101.05	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2084	C	O5'-P-OP1	-5.17	101.05	105.70
24	1H	2511	U	C4-C5-C6	5.17	122.80	119.70
24	1H	2874	C	N3-C4-N4	5.17	121.62	118.00
54	1G	535	A	C5-C6-N6	5.17	127.84	123.70
24	14	1766	U	C4-C5-C6	5.17	122.80	119.70
24	14	2297	C	N3-C2-O2	-5.17	118.28	121.90
24	1H	562	U	OP1-P-OP2	5.17	127.36	119.60
24	1H	2284	C	N3-C2-O2	5.17	125.52	121.90
24	14	389	G	C4-C5-N7	5.17	112.87	110.80
1	13	186(A)	C	N1-C2-O2	5.17	122.00	118.90
24	1H	654(S)	G	P-O3'-C3'	5.17	125.90	119.70
24	1H	705	A	N9-C4-C5	-5.17	103.73	105.80
24	1H	812	C	N1-C2-O2	-5.17	115.80	118.90
54	1G	594	G	C8-N9-C4	-5.17	104.33	106.40
54	1G	1275	A	C8-N9-C4	-5.17	103.73	105.80
24	14	1255	U	N3-C4-O4	5.17	123.02	119.40
24	14	2570	G	C2-N3-C4	-5.17	109.31	111.90
24	1H	307	G	N7-C8-N9	5.17	115.68	113.10
24	1H	2264	C	O5'-P-OP1	-5.17	101.05	105.70
54	1G	1202	G	C4-C5-N7	-5.17	108.73	110.80
24	14	447	A	O5'-P-OP2	5.17	116.90	110.70
24	14	1564	C	C4-C5-C6	5.17	119.98	117.40
25	1J	75	G	N9-C4-C5	-5.17	103.33	105.40
24	1H	1197	G	C4-C5-N7	-5.17	108.73	110.80
24	1H	1824	G	OP2-P-O3'	5.17	116.56	105.20
24	1H	2717	G	N3-C4-N9	5.17	129.10	126.00
24	1H	2783	G	C6-C5-N7	-5.17	127.30	130.40
24	1H	1444(A)	A	O4'-C1'-N9	5.16	112.33	108.20
24	1H	2316	C	O5'-P-OP2	5.16	116.90	110.70
24	1H	1021	A	C6-N1-C2	5.16	121.70	118.60
24	1H	1603	A	N7-C8-N9	5.16	116.38	113.80
25	16	56	G	C8-N9-C4	-5.16	104.33	106.40
24	14	2450	A	N1-C2-N3	5.16	131.88	129.30
1	13	720	C	C5-C6-N1	5.16	123.58	121.00
24	1H	1562	A	N1-C6-N6	5.16	121.70	118.60
53	Q8	60	LEU	CA-CB-CG	5.16	127.17	115.30
24	14	2270	G	OP2-P-O3'	5.16	116.55	105.20
51	J5	19	ARG	NE-CZ-NH1	-5.16	117.72	120.30
24	1H	593	G	OP2-P-O3'	5.16	116.55	105.20
54	1G	671	G	C8-N9-C4	5.16	108.46	106.40
24	14	669	G	N1-C6-O6	-5.16	116.81	119.90
24	14	2577	A	C4-C5-C6	5.16	119.58	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	19	41	GLY	N-CA-C	-5.16	100.20	113.10
24	1H	213	A	C5-C6-N6	-5.16	119.57	123.70
24	1H	340	A	C8-N9-C4	-5.16	103.74	105.80
24	1H	1936	A	N3-C4-N9	5.16	131.53	127.40
24	14	2458	G	N3-C2-N2	-5.16	116.29	119.90
24	14	2603	G	N1-C6-O6	5.16	122.99	119.90
1	13	1502	A	C5-N7-C8	-5.16	101.32	103.90
24	1H	1409	C	C6-N1-C2	5.16	122.36	120.30
24	1H	2590	A	N3-C4-C5	5.16	130.41	126.80
24	14	565	C	C6-N1-C2	5.16	122.36	120.30
24	14	796	C	C4-C5-C6	5.16	119.98	117.40
24	14	2681	C	C5-C4-N4	5.16	123.81	120.20
54	1G	402	G	O5'-P-OP2	-5.15	101.06	105.70
23	4L	18	C	N3-C2-O2	-5.15	118.29	121.90
1	13	1407	C	N1-C2-O2	5.15	121.99	118.90
24	1H	113	G	N3-C4-C5	5.15	131.18	128.60
24	1H	2403	C	N3-C4-C5	-5.15	119.84	121.90
24	1H	2705	A	N1-C6-N6	5.15	121.69	118.60
24	14	603	A	C6-C5-N7	-5.15	128.69	132.30
24	14	2297	C	N1-C2-O2	5.15	121.99	118.90
2	1E	196	LEU	CA-CB-CG	5.15	127.15	115.30
22	3K	18	G	C4-N9-C1'	-5.15	119.81	126.50
24	1H	208	C	OP2-P-O3'	5.15	116.53	105.20
24	1H	1461	G	C4-N9-C1'	5.15	133.19	126.50
24	1H	1692	U	C5-C4-O4	-5.15	122.81	125.90
24	1H	2582	G	N3-C2-N2	5.15	123.51	119.90
54	1G	438	G	O5'-P-OP2	-5.15	101.06	105.70
24	14	679	C	C6-N1-C2	5.15	122.36	120.30
24	14	2081	C	O5'-P-OP1	5.15	116.88	110.70
24	14	2581	G	C5-C6-N1	-5.15	108.92	111.50
1	13	433	C	N1-C2-O2	5.15	121.99	118.90
24	1H	1645	G	C8-N9-C4	-5.15	104.34	106.40
24	1H	1681	G	N3-C4-N9	-5.15	122.91	126.00
24	14	1143	A	C2-N3-C4	-5.15	108.03	110.60
24	14	2679	A	O5'-P-OP2	-5.15	101.07	105.70
24	1H	127	A	OP1-P-O3'	5.15	116.53	105.20
24	1H	258	G	O5'-P-OP2	-5.15	101.07	105.70
24	1H	1017	G	C8-N9-C4	-5.15	104.34	106.40
27	11	147	LEU	CA-CB-CG	5.15	127.14	115.30
24	14	270(Y)	G	C4-C5-N7	-5.15	108.74	110.80
24	14	786	C	N3-C4-C5	5.15	123.96	121.90
24	14	2362	G	C8-N9-C4	5.15	108.46	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2433	A	C8-N9-C4	-5.15	103.74	105.80
24	14	2447	G	P-O3'-C3'	5.15	125.88	119.70
24	1H	2239	G	P-O3'-C3'	5.15	125.88	119.70
24	1H	2389	G	N1-C6-O6	-5.15	116.81	119.90
54	1G	7	G	C8-N9-C1'	5.14	133.69	127.00
54	1G	421	U	C5-C6-N1	5.14	125.27	122.70
54	1G	900	A	O5'-P-OP2	5.14	116.87	110.70
24	14	463	G	N7-C8-N9	5.14	115.67	113.10
54	1G	503	C	C5-C6-N1	5.14	123.57	121.00
54	1G	1529	G	C5-C6-N1	5.14	114.07	111.50
24	14	1255	U	N3-C4-C5	-5.14	111.51	114.60
24	1H	131	G	O5'-P-OP1	5.14	116.87	110.70
24	1H	1565	C	N1-C2-O2	-5.14	115.82	118.90
24	1H	2692	C	N3-C2-O2	-5.14	118.30	121.90
24	14	17	G	C5-C6-O6	-5.14	125.52	128.60
24	14	2323	G	C8-N9-C4	5.14	108.46	106.40
24	14	2455	G	C5-N7-C8	-5.14	101.73	104.30
24	14	2516	G	N9-C4-C5	5.14	107.46	105.40
1	13	394	G	N3-C2-N2	-5.14	116.30	119.90
24	1H	175	G	C8-N9-C4	5.14	108.46	106.40
24	1H	841	A	C2-N3-C4	-5.14	108.03	110.60
24	1H	1453	A	C8-N9-C4	5.14	107.86	105.80
38	A8	60	GLY	N-CA-C	5.14	125.95	113.10
54	1G	1502	A	C4-N9-C1'	5.14	135.55	126.30
24	14	672	C	O5'-P-OP1	5.14	116.87	110.70
24	14	2019	A	C8-N9-C4	5.14	107.86	105.80
24	1H	2692	C	N1-C2-O2	5.14	121.98	118.90
54	1G	511	C	C2-N1-C1'	-5.14	113.15	118.80
24	14	1157	G	C8-N9-C1'	-5.14	120.32	127.00
24	14	2685	G	N9-C4-C5	-5.14	103.34	105.40
1	13	690	G	C6-C5-N7	-5.14	127.32	130.40
24	1H	238	C	N1-C2-O2	-5.14	115.82	118.90
24	1H	578	A	C4-C5-C6	5.14	119.57	117.00
24	1H	2819	G	C8-N9-C4	5.14	108.45	106.40
54	1G	505	G	C4-N9-C1'	5.14	133.18	126.50
24	14	438	G	N7-C8-N9	5.14	115.67	113.10
24	1H	1398	C	C6-N1-C2	5.13	122.35	120.30
24	1H	2288	A	N9-C4-C5	-5.13	103.75	105.80
24	14	27	G	N3-C4-C5	5.13	131.17	128.60
24	1H	975	G	N1-C6-O6	5.13	122.98	119.90
24	1H	2490	G	C5-C6-O6	-5.13	125.52	128.60
54	1G	412	A	P-O3'-C3'	5.13	125.86	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	1G	1469	G	C4-N9-C1'	5.13	133.17	126.50
24	14	2624	G	C4-C5-N7	5.13	112.85	110.80
1	13	571	U	N3-C4-O4	5.13	122.99	119.40
24	1H	512	G	C4-C5-N7	5.13	112.85	110.80
4	32	135	LEU	CA-CB-CG	5.13	127.10	115.30
24	14	16	G	N1-C6-O6	5.13	122.98	119.90
24	14	2318	G	C4-N9-C1'	5.13	133.17	126.50
24	14	2649	U	N3-C4-O4	5.13	122.99	119.40
24	14	1316	U	C2-N1-C1'	5.13	123.86	117.70
24	14	1569	A	OP1-P-O3'	5.13	116.49	105.20
24	14	1602	U	O5'-P-OP1	-5.13	101.08	105.70
24	1H	585	G	C5-C6-O6	-5.13	125.52	128.60
24	1H	674	G	C8-N9-C4	5.13	108.45	106.40
24	1H	1138	G	C8-N9-C1'	-5.13	120.33	127.00
54	1G	919	A	N1-C6-N6	-5.13	115.52	118.60
24	14	396	G	C5-N7-C8	-5.13	101.74	104.30
24	14	453	C	N1-C2-O2	-5.13	115.82	118.90
24	14	2700	C	N3-C4-C5	5.13	123.95	121.90
24	1H	501	A	C2-N3-C4	-5.13	108.04	110.60
24	1H	1426	G	C4-N9-C1'	5.13	133.16	126.50
24	1H	2575	C	C6-N1-C2	-5.13	118.25	120.30
54	1G	183	G	N3-C4-N9	5.13	129.07	126.00
24	14	733	G	C4-N9-C1'	5.13	133.16	126.50
24	14	1783	A	C2-N3-C4	-5.13	108.04	110.60
24	14	1783	A	N1-C2-N3	5.13	131.86	129.30
24	14	2689	U	C2-N1-C1'	-5.13	111.55	117.70
28	29	80	GLU	N-CA-C	5.13	124.84	111.00
24	1H	1226	G	C5-C6-O6	5.12	131.68	128.60
24	14	1142(A)	A	N3-C4-C5	5.12	130.39	126.80
24	14	1295	C	N1-C2-O2	-5.12	115.83	118.90
1	13	780	A	N1-C6-N6	5.12	121.67	118.60
24	1H	1252	G	C4-C5-N7	-5.12	108.75	110.80
24	1H	1986	A	N1-C2-N3	5.12	131.86	129.30
24	1H	2593	U	C5-C4-O4	-5.12	122.83	125.90
25	16	94	C	N3-C4-C5	-5.12	119.85	121.90
54	1G	769	G	N3-C4-C5	-5.12	126.04	128.60
24	14	146	G	C2-N3-C4	-5.12	109.34	111.90
24	14	556	G	N3-C4-N9	5.12	129.07	126.00
24	1H	733	G	N3-C4-N9	5.12	129.07	126.00
24	1H	1257	C	C4-C5-C6	5.12	119.96	117.40
24	1H	2225	A	C5-C6-N1	5.12	120.26	117.70
24	1H	2318	G	C4-C5-N7	5.12	112.85	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2578	G	C8-N9-C4	5.12	108.45	106.40
54	1G	783	C	C5-C6-N1	5.12	123.56	121.00
22	3L	33	C	N3-C4-C5	-5.12	119.85	121.90
24	14	180	G	C6-C5-N7	-5.12	127.33	130.40
24	14	1342	A	N7-C8-N9	5.12	116.36	113.80
24	14	1440	G	N1-C6-O6	5.12	122.97	119.90
1	13	780	A	OP1-P-OP2	-5.12	111.92	119.60
1	13	1498	U	O4'-C1'-N1	-5.12	104.10	108.20
24	1H	911	A	OP1-P-O3'	5.12	116.46	105.20
24	14	1642	G	N7-C8-N9	5.12	115.66	113.10
1	13	742	G	C8-N9-C4	5.12	108.45	106.40
24	1H	606	U	O5'-P-OP2	-5.12	101.09	105.70
24	1H	1025	G	C8-N9-C4	-5.12	104.35	106.40
24	1H	2258	C	O5'-P-OP1	-5.12	101.09	105.70
24	1H	2402	C	C6-N1-C2	-5.12	118.25	120.30
41	D8	35	LEU	CA-CB-CG	5.12	127.07	115.30
24	14	1317	A	O5'-P-OP2	-5.12	101.09	105.70
24	1H	558	G	C5-C6-N1	-5.12	108.94	111.50
24	1H	669	G	OP1-P-OP2	5.12	127.28	119.60
24	1H	691	C	C6-N1-C2	5.12	122.35	120.30
24	1H	2586	C	C5-C4-N4	-5.12	116.62	120.20
24	14	616	A	C5-N7-C8	-5.12	101.34	103.90
24	14	1028	A	OP2-P-O3'	5.12	116.46	105.20
1	13	272	C	C6-N1-C2	-5.12	118.25	120.30
24	1H	527	C	C6-N1-C2	5.12	122.35	120.30
24	1H	692	C	C6-N1-C2	5.12	122.35	120.30
24	1H	2375	G	C5-C6-O6	-5.12	125.53	128.60
24	14	477	A	OP1-P-O3'	5.12	116.45	105.20
24	14	2638	G	C5-C6-O6	-5.12	125.53	128.60
24	1H	307	G	C8-N9-C4	-5.11	104.36	106.40
24	1H	1620	G	C6-C5-N7	-5.11	127.33	130.40
54	1G	1415	G	C8-N9-C1'	-5.11	120.35	127.00
24	1H	652	C	C6-N1-C2	-5.11	118.25	120.30
54	1G	944	G	N3-C4-C5	-5.11	126.04	128.60
24	14	1500	G	C4-C5-C6	5.11	121.87	118.80
1	13	17	U	O5'-P-OP1	-5.11	101.10	105.70
24	1H	2058	A	N1-C2-N3	-5.11	126.75	129.30
24	1H	2341	G	N3-C4-N9	5.11	129.07	126.00
25	16	24	G	N3-C4-C5	-5.11	126.04	128.60
24	14	1366	A	C5-C6-N6	-5.11	119.61	123.70
24	14	1528	A	N1-C6-N6	5.11	121.67	118.60
24	14	1649	G	N3-C4-C5	-5.11	126.05	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1J	101	A	N1-C6-N6	5.11	121.67	118.60
24	1H	2417	C	N3-C4-C5	-5.11	119.86	121.90
24	14	2287	A	N1-C6-N6	5.11	121.67	118.60
24	14	2773	C	N1-C2-O2	5.11	121.97	118.90
32	69	131	LYS	C-N-CD	-5.11	109.36	120.60
1	13	758	G	C5-C6-O6	-5.11	125.54	128.60
1	13	760	G	C5-C6-O6	-5.11	125.54	128.60
24	1H	769	G	OP1-P-OP2	-5.11	111.94	119.60
24	1H	2427	C	C2-N1-C1'	-5.11	113.18	118.80
24	14	349	G	N1-C6-O6	5.11	122.97	119.90
24	1H	504	U	C2-N1-C1'	5.11	123.83	117.70
24	1H	2272	U	O5'-P-OP2	-5.11	101.10	105.70
24	1H	2450	A	N1-C2-N3	5.11	131.85	129.30
54	1G	1502	A	C6-C5-N7	-5.11	128.73	132.30
24	14	134	C	C5-C6-N1	-5.11	118.45	121.00
24	14	1216	G	N1-C6-O6	5.11	122.96	119.90
24	1H	1911	U	C6-N1-C2	-5.10	117.94	121.00
24	1H	2497	A	OP1-P-OP2	-5.10	111.94	119.60
24	14	933	A	C5-N7-C8	-5.10	101.35	103.90
1	13	1502	A	C6-C5-N7	-5.10	128.73	132.30
24	1H	1219	G	C5-C6-O6	-5.10	125.54	128.60
24	14	397	G	C5-C6-O6	-5.10	125.54	128.60
24	1H	445	C	N3-C4-C5	-5.10	119.86	121.90
24	14	1579	A	N9-C4-C5	-5.10	103.76	105.80
24	14	1790	C	N3-C4-C5	5.10	123.94	121.90
24	1H	373	U	N1-C2-O2	5.10	126.37	122.80
24	1H	1637	A	N1-C6-N6	-5.10	115.54	118.60
24	1H	2462	U	OP1-P-OP2	5.10	127.25	119.60
54	1G	1519	A	C5-C6-N1	-5.10	115.15	117.70
24	14	1604	C	N1-C2-O2	-5.10	115.84	118.90
24	14	2252	G	C4-C5-C6	5.10	121.86	118.80
1	13	346	G	C8-N9-C1'	-5.10	120.37	127.00
24	1H	772	C	N3-C4-N4	5.10	121.57	118.00
24	1H	1400	G	O4'-C1'-N9	5.10	112.28	108.20
24	1H	1812	A	C4-C5-C6	5.10	119.55	117.00
24	1H	2569	G	C8-N9-C1'	-5.10	120.37	127.00
24	14	481	G	O5'-P-OP1	5.10	116.82	110.70
24	14	1764	G	C8-N9-C4	5.10	108.44	106.40
24	14	2237	G	OP1-P-OP2	5.10	127.25	119.60
1	13	1057	G	N3-C4-C5	-5.10	126.05	128.60
24	1H	208	C	N3-C2-O2	5.10	125.47	121.90
24	1H	770	G	N7-C8-N9	5.10	115.65	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2454	G	C5-N7-C8	5.10	106.85	104.30
24	14	389	G	C6-C5-N7	-5.10	127.34	130.40
24	14	1566	A	C8-N9-C4	5.10	107.84	105.80
1	13	560	U	C3'-C2'-C1'	5.09	105.58	101.50
24	1H	1936	A	N9-C4-C5	-5.09	103.76	105.80
28	21	117	MET	CA-CB-CG	5.09	121.96	113.30
54	1G	1096	C	C6-N1-C2	-5.09	118.26	120.30
24	14	79	G	N1-C6-O6	5.09	122.96	119.90
24	14	784	A	O4'-C1'-N9	5.09	112.28	108.20
24	14	1204	A	N3-C4-C5	5.09	130.37	126.80
24	14	1349	A	C2-N3-C4	-5.09	108.05	110.60
24	14	1656	C	OP1-P-OP2	-5.09	111.96	119.60
24	14	1725	G	C8-N9-C4	-5.09	104.36	106.40
1	13	1520	G	C5-C6-O6	-5.09	125.54	128.60
24	1H	614	U	C2-N1-C1'	5.09	123.81	117.70
24	14	419	C	N3-C4-C5	-5.09	119.86	121.90
24	14	1559	G	C5-N7-C8	-5.09	101.75	104.30
1	13	827	U	C2-N1-C1'	5.09	123.81	117.70
24	1H	793	A	N1-C6-N6	5.09	121.66	118.60
24	1H	930	U	N1-C2-O2	5.09	126.36	122.80
24	1H	1279	G	O5'-P-OP1	5.09	116.81	110.70
54	1G	578	C	N3-C2-O2	-5.09	118.34	121.90
24	14	1594	G	O5'-P-OP2	5.09	116.81	110.70
1	13	540	G	N1-C6-O6	5.09	122.95	119.90
24	1H	929	G	N1-C6-O6	5.09	122.95	119.90
24	1H	949	C	N3-C2-O2	5.09	125.46	121.90
24	1H	2033	A	O4'-C1'-N9	5.09	112.27	108.20
54	1G	514	C	C6-N1-C2	-5.09	118.26	120.30
24	14	271(A)	C	C6-N1-C2	-5.09	118.26	120.30
24	14	683	C	N1-C2-O2	-5.09	115.85	118.90
24	14	2762	G	C4-C5-N7	5.09	112.84	110.80
1	13	1027	C	P-O3'-C3'	5.09	125.81	119.70
1	13	1525	G	N3-C4-C5	5.09	131.14	128.60
24	1H	535	C	OP2-P-O3'	5.09	116.39	105.20
24	1H	863	A	OP2-P-O3'	5.09	116.39	105.20
24	1H	1606	G	C8-N9-C1'	-5.09	120.39	127.00
24	1H	2019	A	C5-C6-N6	-5.09	119.63	123.70
24	1H	2270	G	N3-C4-N9	5.09	129.05	126.00
54	1G	1060	C	C6-N1-C2	-5.09	118.27	120.30
24	14	1643	G	O5'-P-OP1	-5.09	101.12	105.70
24	1H	611	C	C6-N1-C2	5.09	122.33	120.30
24	1H	1314	C	C2-N1-C1'	5.09	124.40	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1616	A	C8-N9-C4	-5.09	103.77	105.80
24	1H	1768	U	OP2-P-O3'	5.09	116.39	105.20
54	1G	1529	G	C2-N3-C4	5.09	114.44	111.90
24	14	679	C	N1-C2-O2	-5.09	115.85	118.90
24	14	1834	U	C2-N1-C1'	5.09	123.81	117.70
24	1H	2030	A	C5-C6-N6	-5.08	119.63	123.70
24	14	442	G	C5-N7-C8	-5.08	101.76	104.30
24	14	666	G	O5'-P-OP1	5.08	116.80	110.70
24	14	778	G	C2-N3-C4	-5.08	109.36	111.90
25	1J	31	C	N1-C2-O2	-5.08	115.85	118.90
24	1H	52	A	C2-N3-C4	5.08	113.14	110.60
24	1H	452	G	C5-C6-O6	5.08	131.65	128.60
24	1H	596	G	C4-C5-N7	-5.08	108.77	110.80
24	1H	1192	G	C6-C5-N7	-5.08	127.35	130.40
24	1H	1428	C	OP1-P-OP2	-5.08	111.98	119.60
24	1H	2697	G	OP1-P-OP2	5.08	127.23	119.60
24	14	388	G	N1-C2-N2	5.08	120.77	116.20
24	14	671	C	N1-C2-N3	5.08	122.76	119.20
24	14	1334	G	C4-N9-C1'	5.08	133.11	126.50
1	13	518	C	N1-C2-O2	5.08	121.95	118.90
24	1H	70	G	C8-N9-C4	-5.08	104.37	106.40
24	1H	788	A	C6-C5-N7	-5.08	128.74	132.30
24	1H	794	G	N1-C2-N3	5.08	126.95	123.90
24	1H	1244	G	C5-N7-C8	-5.08	101.76	104.30
24	1H	1543	A	C2-N3-C4	-5.08	108.06	110.60
54	1G	421	U	C2-N1-C1'	5.08	123.80	117.70
54	1G	1469	G	C5-C6-N1	-5.08	108.96	111.50
24	14	234	C	N3-C2-O2	-5.08	118.34	121.90
24	14	2568	C	OP2-P-O3'	5.08	116.38	105.20
24	14	2621	A	N1-C6-N6	-5.08	115.55	118.60
24	1H	2069	G	C5-C6-N1	5.08	114.04	111.50
24	14	1553	A	C2-N3-C4	-5.08	108.06	110.60
24	1H	210	C	N3-C4-C5	5.08	123.93	121.90
24	1H	964	C	C6-N1-C2	-5.08	118.27	120.30
24	1H	1250	G	C6-C5-N7	5.08	133.45	130.40
24	1H	1402	C	C5-C4-N4	-5.08	116.64	120.20
24	1H	2869	G	C8-N9-C4	-5.08	104.37	106.40
24	14	2360	A	N1-C6-N6	5.08	121.65	118.60
24	14	2701	C	OP2-P-O3'	5.08	116.37	105.20
24	1H	2516	G	C5-C6-N1	5.08	114.04	111.50
24	1H	2766	G	C8-N9-C1'	-5.08	120.40	127.00
24	14	2584	U	C6-N1-C1'	-5.08	114.09	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	942	G	C8-N9-C4	-5.08	104.37	106.40
1	13	1260	C	C6-N1-C2	-5.08	118.27	120.30
54	1G	322	C	C5-C4-N4	-5.08	116.65	120.20
24	14	925	C	C6-N1-C2	-5.08	118.27	120.30
24	14	1790	C	OP1-P-O3'	5.08	116.37	105.20
24	14	2688	U	N1-C2-O2	5.08	126.35	122.80
24	1H	122	G	C5-C6-O6	-5.07	125.56	128.60
24	1H	347	A	N1-C6-N6	5.07	121.64	118.60
24	1H	2501	C	C2-N1-C1'	-5.07	113.22	118.80
24	1H	2583	G	N3-C4-N9	-5.07	122.96	126.00
24	14	2087	G	N9-C4-C5	-5.07	103.37	105.40
54	1G	1081	G	O5'-P-OP2	-5.07	101.14	105.70
24	14	1242	A	N1-C2-N3	5.07	131.84	129.30
24	14	2595	G	C6-C5-N7	5.07	133.44	130.40
24	14	2755	C	C6-N1-C2	-5.07	118.27	120.30
1	13	285	G	N3-C4-C5	-5.07	126.06	128.60
24	1H	1313	U	C2-N3-C4	5.07	130.04	127.00
24	1H	1815	A	N7-C8-N9	-5.07	111.27	113.80
24	1H	1938	A	O4'-C1'-N9	5.07	112.26	108.20
24	1H	2589	A	C5-C6-N1	5.07	120.23	117.70
24	14	1318	C	C5-C6-N1	5.07	123.53	121.00
24	14	2051	A	C4-C5-N7	5.07	113.23	110.70
24	1H	1261	C	N3-C2-O2	5.07	125.45	121.90
24	1H	2077	A	C8-N9-C4	-5.07	103.77	105.80
24	1H	2623	G	N3-C4-C5	-5.07	126.06	128.60
24	14	2021	C	C6-N1-C2	-5.07	118.27	120.30
22	2K	20	C	N3-C2-O2	-5.07	118.35	121.90
24	1H	1241	A	C4-C5-N7	5.07	113.23	110.70
24	1H	1953	A	C5-C6-N1	5.07	120.23	117.70
24	1H	2277	G	C5-C6-O6	-5.07	125.56	128.60
24	14	2386	C	N1-C2-O2	-5.07	115.86	118.90
24	1H	724	U	C5-C6-N1	-5.07	120.17	122.70
24	1H	2512	C	C5-C4-N4	-5.07	116.66	120.20
24	14	977	G	N1-C6-O6	-5.07	116.86	119.90
24	14	2275	C	O4'-C1'-N1	-5.07	104.15	108.20
1	13	449	C	C2-N1-C1'	5.06	124.37	118.80
24	1H	530	G	N3-C4-C5	5.06	131.13	128.60
24	1H	1630(A)	C	O5'-P-OP1	-5.06	101.14	105.70
24	1H	2082	A	O5'-P-OP2	-5.06	101.14	105.70
24	1H	2272	U	N3-C4-O4	-5.06	115.86	119.40
54	1G	1420	C	C5-C6-N1	5.06	123.53	121.00
24	14	1594	G	N7-C8-N9	5.06	115.63	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2430	A	C4-C5-C6	5.06	119.53	117.00
24	1H	61	G	O5'-P-OP1	-5.06	101.14	105.70
24	1H	1365	A	C4-C5-C6	5.06	119.53	117.00
24	1H	1820	U	C5-C6-N1	-5.06	120.17	122.70
24	1H	2752	C	C6-N1-C2	-5.06	118.28	120.30
24	1H	2779	U	N3-C4-O4	-5.06	115.86	119.40
52	P8	23	ARG	NE-CZ-NH1	5.06	122.83	120.30
54	1G	1366	C	O5'-P-OP1	-5.06	101.14	105.70
24	14	868	U	N3-C4-C5	-5.06	111.56	114.60
24	14	1814	G	OP1-P-OP2	5.06	127.19	119.60
24	1H	918	A	N7-C8-N9	5.06	116.33	113.80
24	1H	1331	A	C5-C6-N6	5.06	127.75	123.70
24	1H	2342	C	C5-C6-N1	5.06	123.53	121.00
24	1H	2441	C	C6-N1-C2	5.06	122.32	120.30
24	14	627	A	N1-C6-N6	5.06	121.64	118.60
1	13	137	C	C6-N1-C2	5.06	122.32	120.30
24	1H	1285	G	O5'-P-OP1	-5.06	101.15	105.70
54	1G	866	C	C6-N1-C2	-5.06	118.28	120.30
24	14	669	G	C5-C6-O6	5.06	131.63	128.60
24	14	1477	A	O5'-P-OP2	-5.06	101.15	105.70
1	13	968	A	N1-C6-N6	5.06	121.64	118.60
24	1H	1786	A	C4-N9-C1'	5.06	135.40	126.30
54	1G	33	A	OP1-P-O3'	5.06	116.33	105.20
54	1G	1516	G	N3-C2-N2	-5.06	116.36	119.90
24	14	955	C	C5-C4-N4	5.06	123.74	120.20
1	13	694	A	O5'-P-OP2	5.06	116.77	110.70
24	1H	1366	A	C4-C5-C6	5.06	119.53	117.00
54	1G	545	C	O5'-P-OP2	-5.06	101.15	105.70
24	14	809	G	N1-C2-N3	5.06	126.93	123.90
1	13	765	G	N9-C4-C5	-5.05	103.38	105.40
1	13	858	G	C5-C6-O6	5.05	131.63	128.60
24	1H	339	U	N1-C2-N3	5.05	117.93	114.90
24	1H	848	G	N7-C8-N9	-5.05	110.57	113.10
24	1H	863	A	C8-N9-C4	5.05	107.82	105.80
24	1H	1025	G	N9-C4-C5	5.05	107.42	105.40
24	1H	2496	C	N3-C4-C5	5.05	123.92	121.90
24	1H	582	G	N7-C8-N9	5.05	115.63	113.10
24	1H	1663	C	O5'-P-OP1	5.05	116.76	110.70
24	1H	2574	G	C4-C5-N7	5.05	112.82	110.80
54	1G	150	C	C6-N1-C2	-5.05	118.28	120.30
54	1G	481	G	N3-C4-C5	-5.05	126.07	128.60
24	14	1256	G	C5-C6-N1	5.05	114.03	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1474	C	C2-N3-C4	5.05	122.43	119.90
24	14	2511	U	O5'-P-OP2	-5.05	101.15	105.70
41	95	91	TYR	CB-CG-CD2	-5.05	117.97	121.00
22	2K	29	C	C6-N1-C2	5.05	122.32	120.30
24	1H	2569	G	N3-C4-C5	-5.05	126.08	128.60
24	1H	2773	C	C5-C6-N1	-5.05	118.47	121.00
54	1G	758	G	C6-C5-N7	-5.05	127.37	130.40
24	14	914	C	N1-C2-O2	5.05	121.93	118.90
24	14	1915	U	N3-C2-O2	-5.05	118.67	122.20
24	14	2036	C	OP2-P-O3'	5.05	116.31	105.20
24	14	2819	G	C5-C6-O6	-5.05	125.57	128.60
24	1H	188	G	C4-C5-N7	5.05	112.82	110.80
54	1G	898	G	N7-C8-N9	-5.05	110.58	113.10
24	1H	222	A	O4'-C1'-N9	-5.05	104.16	108.20
24	1H	299	A	OP2-P-O3'	5.05	116.30	105.20
24	1H	1252	G	C4-N9-C1'	-5.05	119.94	126.50
24	1H	1559	G	C5-C6-O6	-5.05	125.57	128.60
24	1H	2346	A	O5'-P-OP1	-5.05	101.16	105.70
24	1H	2510	C	N1-C2-O2	-5.05	115.87	118.90
44	G8	81	LYS	C-N-CA	5.05	143.20	122.00
24	14	2592	G	N3-C4-C5	-5.05	126.08	128.60
24	14	2894	G	N3-C4-N9	-5.05	122.97	126.00
24	1H	748	G	O4'-C1'-N9	5.04	112.24	108.20
24	1H	990	A	OP2-P-O3'	5.04	116.30	105.20
24	1H	1307	A	C8-N9-C4	5.04	107.82	105.80
24	1H	2318	G	C4-N9-C1'	5.04	133.06	126.50
25	16	60	C	N3-C4-N4	5.04	121.53	118.00
24	14	1984	G	C8-N9-C4	5.04	108.42	106.40
24	1H	688	U	N3-C2-O2	5.04	125.73	122.20
24	1H	1125	G	C4-C5-N7	-5.04	108.78	110.80
24	1H	1989	G	C4-C5-C6	5.04	121.83	118.80
24	1H	2012	G	C8-N9-C4	5.04	108.42	106.40
24	1H	2335	A	O4'-C1'-N9	5.04	112.23	108.20
54	1G	1348	U	C5-C4-O4	5.04	128.93	125.90
54	1G	1414	U	C5-C4-O4	5.04	128.93	125.90
24	14	623	G	C4-C5-N7	5.04	112.82	110.80
24	14	1209	G	O5'-P-OP2	-5.04	101.16	105.70
24	14	2857	G	C6-C5-N7	-5.04	127.37	130.40
37	55	79	LEU	CA-CB-CG	5.04	126.90	115.30
24	1H	593	G	C4-C5-C6	5.04	121.83	118.80
24	1H	1229(A)	G	C2-N3-C4	-5.04	109.38	111.90
41	D8	40	LEU	CA-CB-CG	5.04	126.89	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	1G	783	C	N3-C4-C5	-5.04	119.88	121.90
24	14	737	C	C2-N1-C1'	-5.04	113.25	118.80
24	14	1311	G	C8-N9-C4	5.04	108.42	106.40
24	14	1463	C	C6-N1-C2	-5.04	118.28	120.30
24	14	1985	G	C4-C5-N7	-5.04	108.78	110.80
24	1H	889	C	C2-N1-C1'	5.04	124.34	118.80
24	1H	1400	G	N9-C4-C5	5.04	107.42	105.40
24	1H	1689	A	O5'-P-OP2	-5.04	101.16	105.70
24	1H	2016	U	C5-C6-N1	-5.04	120.18	122.70
24	14	110	G	N1-C6-O6	5.04	122.92	119.90
24	1H	774	A	C6-C5-N7	-5.04	128.77	132.30
24	14	383	U	C5-C4-O4	5.04	128.92	125.90
24	14	558	G	C8-N9-C4	5.04	108.42	106.40
24	14	1141	U	O4'-C1'-N1	5.04	112.23	108.20
24	14	1234	U	O5'-P-OP2	-5.04	101.17	105.70
24	14	2011	U	N1-C2-O2	-5.04	119.27	122.80
24	14	2615	U	C5-C6-N1	5.04	125.22	122.70
24	1H	2455	G	N3-C4-C5	5.04	131.12	128.60
24	14	632	A	N7-C8-N9	5.04	116.32	113.80
24	14	1940	U	C4-C5-C6	5.04	122.72	119.70
24	14	2874	C	C6-N1-C1'	-5.04	114.76	120.80
24	1H	528	A	C8-N9-C1'	5.04	136.76	127.70
24	1H	683	C	C2-N1-C1'	5.04	124.34	118.80
24	1H	1888	G	N1-C6-O6	-5.04	116.88	119.90
24	1H	1953	A	C6-N1-C2	-5.04	115.58	118.60
24	14	270(X)	G	N1-C6-O6	5.04	122.92	119.90
1	13	901	A	N3-C4-C5	5.03	130.32	126.80
24	1H	731	C	OP1-P-O3'	5.03	116.27	105.20
24	1H	1437	C	C6-N1-C2	-5.03	118.29	120.30
24	1H	1446	C	C6-N1-C2	-5.03	118.29	120.30
24	1H	1850	G	O5'-P-OP2	5.03	116.74	110.70
24	1H	2251	G	N9-C4-C5	5.03	107.41	105.40
24	1H	2569	G	OP1-P-OP2	5.03	127.15	119.60
22	2L	32	A	N1-C6-N6	5.03	121.62	118.60
24	1H	2598	A	C5-N7-C8	-5.03	101.38	103.90
24	1H	273(F)	C	C6-N1-C2	-5.03	118.29	120.30
24	1H	292	C	C6-N1-C2	-5.03	118.29	120.30
24	1H	1431	U	C5-C4-O4	-5.03	122.88	125.90
24	1H	1907	G	N7-C8-N9	5.03	115.61	113.10
24	1H	2346	A	N3-C4-C5	5.03	130.32	126.80
54	1G	1149	C	C6-N1-C2	-5.03	118.29	120.30
24	14	2390	U	C6-N1-C2	-5.03	117.98	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2731	G	OP2-P-O3'	5.03	116.27	105.20
24	1H	1225	C	N3-C4-C5	-5.03	119.89	121.90
24	1H	1308	A	OP1-P-OP2	5.03	127.14	119.60
24	1H	1970	A	O4'-C1'-N9	-5.03	104.18	108.20
24	14	1251	C	C2-N1-C1'	5.03	124.33	118.80
24	14	1383	C	C5-C4-N4	-5.03	116.68	120.20
24	14	1975	G	N1-C6-O6	5.03	122.92	119.90
24	14	2598	A	C5-C6-N6	-5.03	119.68	123.70
24	14	2699	C	C2-N1-C1'	-5.03	113.27	118.80
24	1H	67	U	C6-N1-C2	-5.03	117.98	121.00
24	1H	2877	G	C5-C6-N1	-5.03	108.99	111.50
54	1G	1498	U	N3-C2-O2	-5.03	118.68	122.20
24	14	177	G	C4-C5-C6	5.03	121.82	118.80
24	14	965	C	C6-N1-C2	-5.03	118.29	120.30
27	19	48	ARG	NE-CZ-NH1	-5.03	117.79	120.30
24	1H	210	C	C5-C6-N1	-5.03	118.49	121.00
24	1H	468	G	N9-C4-C5	-5.03	103.39	105.40
24	1H	775	G	C4-C5-C6	5.03	121.82	118.80
24	1H	2604	U	N1-C2-N3	-5.03	111.88	114.90
24	14	2250	G	OP1-P-OP2	5.03	127.14	119.60
1	13	1216	G	C8-N9-C4	-5.02	104.39	106.40
24	1H	179	G	C5-C6-N1	-5.02	108.99	111.50
54	1G	485	G	N3-C2-N2	-5.02	116.38	119.90
24	14	566	U	C2-N3-C4	-5.02	123.98	127.00
24	14	1566	A	O4'-C1'-N9	-5.02	104.18	108.20
24	14	1802	A	C6-N1-C2	-5.02	115.58	118.60
1	13	47	C	N1-C2-O2	-5.02	115.89	118.90
1	13	266	G	P-O3'-C3'	5.02	125.73	119.70
1	13	926	G	N3-C4-N9	-5.02	122.99	126.00
24	1H	113	G	N3-C4-N9	-5.02	122.99	126.00
24	1H	1266	G	N3-C4-N9	5.02	129.01	126.00
24	1H	1287	A	N7-C8-N9	5.02	116.31	113.80
25	16	24	G	C4-N9-C1'	5.02	133.03	126.50
24	14	738	G	N1-C6-O6	5.02	122.91	119.90
24	14	2597	G	OP2-P-O3'	5.02	116.25	105.20
24	1H	1611	C	C2-N3-C4	-5.02	117.39	119.90
24	1H	2062	A	C2-N3-C4	5.02	113.11	110.60
54	1G	7	G	C4-N9-C1'	-5.02	119.97	126.50
24	14	2413	G	N1-C6-O6	5.02	122.91	119.90
1	13	583	A	O5'-P-OP1	-5.02	101.18	105.70
24	1H	513	A	N9-C4-C5	5.02	107.81	105.80
24	1H	1786	A	N3-C4-N9	-5.02	123.39	127.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1917	U	C6-N1-C2	-5.02	117.99	121.00
24	14	150	C	C5-C4-N4	5.02	123.71	120.20
24	14	1559	G	C6-C5-N7	-5.02	127.39	130.40
24	14	2392	A	C6-C5-N7	-5.02	128.79	132.30
1	13	1052	U	N1-C2-O2	5.02	126.31	122.80
1	13	1058	G	OP1-P-O3'	5.02	116.24	105.20
1	13	1348	U	N1-C2-N3	5.02	117.91	114.90
24	1H	1332	G	O4'-C1'-N9	-5.02	104.19	108.20
24	1H	1826	G	C6-C5-N7	-5.02	127.39	130.40
24	1H	2595	G	N1-C6-O6	-5.02	116.89	119.90
24	14	141	A	N1-C6-N6	5.02	121.61	118.60
24	14	726	G	N3-C4-C5	-5.02	126.09	128.60
24	14	749	C	N1-C2-O2	5.02	121.91	118.90
24	1H	2595	G	C4-C5-C6	-5.02	115.79	118.80
24	14	1837	C	C6-N1-C2	-5.02	118.29	120.30
24	14	2481	G	N3-C4-C5	5.02	131.11	128.60
1	13	1338	G	N3-C4-C5	-5.01	126.09	128.60
24	1H	1250	G	C5-N7-C8	5.01	106.81	104.30
42	E8	15	ARG	NE-CZ-NH2	-5.01	117.79	120.30
54	1G	735	C	C6-N1-C2	-5.01	118.29	120.30
24	14	310	A	N1-C6-N6	-5.01	115.59	118.60
24	14	2035	G	O4'-C1'-N9	5.01	112.21	108.20
24	14	2073	C	N3-C4-C5	5.01	123.91	121.90
24	14	2211	G	C4-N9-C1'	5.01	133.02	126.50
24	1H	59	U	N3-C4-C5	-5.01	111.59	114.60
24	1H	620	G	N3-C2-N2	-5.01	116.39	119.90
24	1H	757	U	C5-C6-N1	-5.01	120.19	122.70
24	1H	2248	C	OP1-P-O3'	5.01	116.23	105.20
54	1G	1067	A	C8-N9-C4	-5.01	103.80	105.80
22	3L	79	A	C8-N9-C4	5.01	107.81	105.80
24	14	599	G	C8-N9-C4	5.01	108.41	106.40
24	14	1276	A	N1-C6-N6	5.01	121.61	118.60
24	1H	1333	C	N3-C4-N4	5.01	121.51	118.00
24	1H	1428	C	C4-C5-C6	5.01	119.91	117.40
24	1H	1594	G	N1-C6-O6	5.01	122.91	119.90
54	1G	1313	U	C5-C6-N1	5.01	125.20	122.70
54	1G	1498	U	C5-C6-N1	5.01	125.21	122.70
24	14	1348	G	O5'-P-OP1	-5.01	101.19	105.70
1	13	254	G	O5'-P-OP2	5.01	116.71	110.70
1	13	532	A	O5'-P-OP1	-5.01	101.19	105.70
24	1H	1202	C	O5'-P-OP2	-5.01	101.19	105.70
24	1H	1299	G	O5'-P-OP2	5.01	116.71	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1344	G	C4-C5-N7	5.01	112.80	110.80
24	1H	1781	C	C5-C4-N4	5.01	123.71	120.20
24	1H	1792	G	OP2-P-O3'	5.01	116.22	105.20
24	14	2818	G	C4-C5-N7	5.01	112.80	110.80
1	13	887	G	C8-N9-C4	5.01	108.40	106.40
24	1H	2597	G	C8-N9-C1'	-5.01	120.49	127.00
24	1H	2615	U	C4-C5-C6	-5.01	116.69	119.70
1	13	749	C	N1-C2-O2	5.01	121.90	118.90
24	1H	387	U	OP1-P-O3'	5.01	116.22	105.20
24	1H	1244	G	N3-C4-C5	5.01	131.10	128.60
24	1H	1253	A	N9-C4-C5	-5.01	103.80	105.80
24	1H	1280	G	N3-C4-N9	-5.01	123.00	126.00
24	1H	1760	A	C6-N1-C2	-5.01	115.60	118.60
24	1H	2265	U	O5'-P-OP2	5.01	116.71	110.70
24	14	703	U	C2-N3-C4	5.01	130.00	127.00
24	14	1781	C	O4'-C1'-N1	5.01	112.21	108.20
24	14	2078	C	O5'-P-OP1	-5.01	101.19	105.70
24	1H	713	G	N1-C6-O6	5.00	122.90	119.90
24	1H	1327	C	OP2-P-O3'	5.00	116.21	105.20
24	14	1035	U	N3-C2-O2	-5.00	118.70	122.20
1	13	829	G	O5'-P-OP2	-5.00	101.20	105.70
1	13	1487	G	N3-C2-N2	-5.00	116.40	119.90
24	1H	2502	G	C5-C6-N1	5.00	114.00	111.50
54	1G	584	G	N1-C6-O6	5.00	122.90	119.90
54	1G	898	G	C4-N9-C1'	-5.00	120.00	126.50
24	14	61	G	N3-C4-N9	5.00	129.00	126.00
24	14	530	G	N3-C2-N2	5.00	123.40	119.90
24	14	2639	A	C6-C5-N7	-5.00	128.80	132.30
1	13	5	U	O4'-C1'-N1	5.00	112.20	108.20
24	1H	19	C	C4-C5-C6	5.00	119.90	117.40
24	1H	575	A	C6-N1-C2	-5.00	115.60	118.60
24	1H	829	A	OP1-P-OP2	5.00	127.10	119.60
24	1H	2261	C	C5-C6-N1	5.00	123.50	121.00
54	1G	363	A	N1-C6-N6	-5.00	115.60	118.60
54	1G	542	G	O5'-P-OP1	-5.00	101.20	105.70
24	14	1949	G	C5-C6-O6	5.00	131.60	128.60
24	14	2427	C	OP2-P-O3'	5.00	116.20	105.20

There are no chirality outliers.

All (68) planarity outliers are listed below:



Mol	Chain	Res	Type	Group
27	11	197	GLY	Peptide
27	11	27	THR	Peptide
27	11	32	SER	Peptide
27	11	47	GLY	Peptide
2	12	71	VAL	Peptide
27	19	197	GLY	Peptide
27	19	270	ILE	Peptide
27	19	272	ALA	Peptide
27	19	37	LEU	Peptide
10	1A	55	LYS	Peptide
2	1E	71	VAL	Peptide
28	29	130	GLY	Peptide
28	29	202	LYS	Peptide
28	29	53	PRO	Peptide
28	29	61	ARG	Peptide
28	29	65	GLY	Peptide
28	29	67	PHE	Peptide
28	29	70	ALA	Peptide
28	29	76	ARG	Peptide
28	29	81	ILE	Peptide
35	35	110	TYR	Peptide
35	35	22	GLY	Peptide
35	35	24	GLY	Peptide
35	35	36	LYS	Peptide
35	35	48	PRO	Peptide
35	35	70	GLN	Peptide
12	3A	26	ALA	Peptide
12	3A	46	LYS	Peptide
4	3E	166	LYS	Peptide
36	45	24	GLY	Peptide
36	45	59	ARG	Peptide
31	59	123	PHE	Peptide
14	5I	13	THR	Peptide
32	61	134	PRO	Peptide
38	65	56	LEU	Peptide
39	75	105	LEU	Peptide
39	75	6	LEU	Peptide
39	75	8	LYS	Peptide
35	78	21	ARG	Peptide
35	78	24	GLY	Peptide
35	78	36	LYS	Peptide
40	85	98	LEU	Peptide
36	88	20	ALA	Peptide

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Mol	Chain	Res	Type	Group
36	88	21	THR	Peptide
41	95	48	GLY	Peptide
41	95	49	THR	Peptide
19	AI	6	LYS	Peptide
19	AI	64	GLU	Peptide
39	B8	4	GLY	Peptide
39	B8	5	ALA	Peptide
39	B8	58	ASN	Peptide
39	B8	6	LEU	Peptide
20	BA	101	GLY	Peptide
44	C5	81	LYS	Peptide
45	D5	107	THR	Peptide
47	F5	91	LYS	Peptide
48	G5	16	LEU	Peptide
48	G5	17	SER	Peptide
49	H5	12	PRO	Peptide
51	J5	51	TYR	Peptide
48	K8	4	SER	Peptide
53	M5	30	ARG	Peptide
53	M5	33	ASN	Peptide
53	M5	34	TRP	Peptide
53	M5	40	GLU	Peptide
53	M5	54	GLU	Peptide
52	P8	46	VAL	Peptide
53	Q8	54	GLU	Peptide

## 5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	13	32334	0	16320	769	0
2	12	1924	0	1975	86	0
2	1E	1924	0	1975	110	0
3	22	1612	0	1677	65	0
3	2E	1605	0	1668	66	0
4	32	1702	0	1763	97	1
4	3E	1702	0	1762	58	0
5	42	1155	0	1213	59	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	4E	1155	0	1213	42	0
6	52	842	0	857	26	0
6	5E	842	0	857	46	1
7	62	1256	0	1296	41	0
7	6E	1256	0	1296	44	0
8	72	1115	0	1177	32	0
8	7E	1115	0	1177	43	0
9	82	998	0	1024	59	0
9	8E	1009	0	1037	50	0
10	1A	801	0	849	36	0
10	1I	801	0	849	31	0
11	2A	884	0	904	28	0
11	2I	864	0	881	35	0
12	3A	975	0	1062	37	0
12	3I	975	0	1062	40	0
13	4A	933	0	992	56	0
13	4I	928	0	987	44	0
14	5A	491	0	529	30	0
14	5I	491	0	529	31	0
15	6A	733	0	771	26	0
15	6I	733	0	771	29	0
16	7A	705	0	725	27	0
16	7I	705	0	725	48	0
17	8A	834	0	904	32	0
17	8I	834	0	904	36	0
18	9A	590	0	662	24	0
18	9I	590	0	662	27	0
19	AA	644	0	644	48	0
19	AI	665	0	686	34	0
20	BA	762	0	861	35	0
20	BI	762	0	861	48	0
21	1B	217	0	234	13	0
21	1F	217	0	234	10	0
22	2K	1765	0	916	56	0
22	2L	1678	0	872	69	0
22	3K	1825	0	946	61	0
22	3L	1825	0	946	51	0
23	4K	239	0	121	12	0
23	4L	129	0	66	3	0
24	14	62669	0	31591	1357	0
24	1H	62729	0	31622	1439	1
25	16	2617	0	1328	59	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
25	1J	2617	0	1328	90	0
26	71	1049	0	1071	32	0
26	79	1049	0	1071	32	0
27	11	2115	0	2195	103	0
27	19	2120	0	2197	103	0
28	21	1568	0	1634	90	0
28	29	1568	0	1634	87	0
29	31	1585	0	1632	70	0
29	39	1627	0	1680	89	0
30	41	1473	0	1535	76	0
30	49	1473	0	1535	72	0
31	51	1336	0	1418	72	0
31	59	1312	0	1384	57	0
32	61	1136	0	1223	41	0
32	69	1136	0	1223	67	0
33	15	1104	0	1180	35	0
33	58	1104	0	1180	54	0
34	25	932	0	996	46	0
34	68	932	0	996	29	0
35	35	1144	0	1228	76	0
35	78	1144	0	1228	83	0
36	45	1121	0	1179	59	0
36	88	1121	0	1179	59	0
37	55	959	0	1021	44	0
37	98	967	0	1033	58	0
38	65	881	0	943	62	0
38	A8	881	0	943	34	0
39	75	1131	0	1180	69	0
39	B8	1141	0	1202	75	0
40	85	963	0	1022	48	0
40	C8	963	0	1022	36	0
41	95	778	0	852	85	0
41	D8	778	0	852	29	0
42	A5	899	0	964	34	0
42	E8	899	0	964	30	0
43	B5	730	0	780	23	0
43	F8	738	0	791	41	0
44	C5	794	0	884	70	0
44	G8	791	0	881	44	0
45	D5	1428	0	1454	96	0
45	H8	1397	0	1430	58	0
46	E5	612	0	633	38	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
46	I8	639	0	644	41	0
47	F5	762	0	848	26	0
47	J8	762	0	848	43	0
48	G5	580	0	629	28	1
48	K8	558	0	610	29	0
49	H5	468	0	518	27	0
49	L8	468	0	518	20	0
50	I5	515	0	514	46	0
50	M8	533	0	526	29	0
51	J5	458	0	480	25	0
51	N8	458	0	480	32	0
52	L5	429	0	480	30	0
52	P8	409	0	454	20	0
53	M5	507	0	576	35	0
53	Q8	495	0	567	47	0
54	1G	32329	0	16319	734	0
55	11	2	0	0	0	0
55	13	129	0	0	0	0
55	14	489	0	0	0	0
55	15	1	0	0	0	0
55	16	12	0	0	0	0
55	19	1	0	0	0	0
55	1G	147	0	0	0	0
55	1H	548	0	0	0	0
55	1J	11	0	0	0	0
55	21	1	0	0	0	0
55	25	1	0	0	0	0
55	29	5	0	0	0	0
55	2K	4	0	0	0	0
55	2L	3	0	0	0	0
55	32	1	0	0	0	0
55	39	1	0	0	0	0
55	3I	1	0	0	0	0
55	3L	2	0	0	0	0
55	42	1	0	0	0	0
55	45	1	0	0	0	0
55	49	1	0	0	0	0
55	55	3	0	0	0	0
55	5E	2	0	0	0	0
55	78	2	0	0	0	0
55	88	2	0	0	0	0
55	C5	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
55	E5	2	0	0	0	0
55	F5	1	0	0	0	0
55	I8	3	0	0	0	0
55	J8	1	0	0	0	0
55	M5	1	0	0	0	0
55	Q8	1	0	0	0	0
56	32	1	0	0	0	0
56	3E	1	0	0	0	0
56	5A	1	0	0	0	0
56	5I	1	0	0	0	0
56	C5	1	0	0	0	0
56	G8	1	0	0	0	0
57	13	188	0	0	32	0
57	14	821	0	0	195	0
57	16	12	0	0	2	0
57	1G	156	0	0	26	0
57	1H	1038	0	0	252	0
57	1J	24	0	0	3	0
57	25	6	0	0	0	0
57	2K	6	0	0	0	0
57	2L	6	0	0	0	0
57	E5	6	0	0	0	0
57	J8	6	0	0	0	0
All	All	299678	0	200771	8223	2

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 17.

All (8223) 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)
41:95:91:TYR:CD2	41:95:91:TYR:CG	1.79	1.66
41:95:91:TYR:CD1	41:95:91:TYR:CG	1.80	1.63
41:95:91:TYR:CZ	41:95:91:TYR:CE1	1.90	1.59
41:95:91:TYR:CZ	41:95:91:TYR:CE2	1.88	1.58
22:3K:35:QUO:C4	22:3K:35:QUO:N3	1.71	1.53
22:2K:35:QUO:N3	22:2K:35:QUO:C4	1.70	1.51
22:3L:35:QUO:N3	22:3L:35:QUO:C4	1.71	1.51
22:2L:35:QUO:N3	22:2L:35:QUO:C4	1.72	1.49
41:95:21:ARG:NE	41:95:91:TYR:CD1	1.85	1.38
41:95:21:ARG:CD	41:95:21:ARG:NE	1.86	1.38

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:95:21:ARG:NE	41:95:91:TYR:CE1	1.89	1.38
41:95:21:ARG:NE	41:95:91:TYR:CG	2.03	1.25
41:95:21:ARG:NE	41:95:91:TYR:CZ	2.05	1.22
41:95:91:TYR:CD2	41:95:91:TYR:CE2	2.28	1.22
41:95:21:ARG:NE	41:95:91:TYR:CD2	2.07	1.21
41:95:91:TYR:CD1	41:95:91:TYR:CE1	2.30	1.19
41:95:21:ARG:NE	41:95:91:TYR:CE2	2.14	1.15
57:14:3529:HOH:O	37:55:3:HIS:NE2	1.82	1.11
24:1H:1632:A:N7	57:1H:3691:HOH:O	1.85	1.09
24:1H:2701:C:H3'	24:1H:2702:U:H5''	1.27	1.08
41:95:21:ARG:CD	41:95:91:TYR:CE2	2.38	1.07
24:1H:2392:A:H8	35:78:61:ARG:HG2	1.18	1.06
24:14:192:C:N3	57:14:3799:HOH:O	1.87	1.06
24:1H:741:G:OP1	57:1H:3931:HOH:O	1.73	1.05
41:95:21:ARG:HD2	41:95:91:TYR:CE2	1.92	1.04
24:1H:2714:G:OP2	57:1H:3625:HOH:O	1.73	1.04
24:14:2821:A:OP2	57:14:3529:HOH:O	1.75	1.04
33:58:47:ALA:HB2	33:58:112:LEU:HD11	1.38	1.02
24:1H:1496:A:H8	24:1H:1577:C:HO2'	1.05	1.01
24:1H:1273:U:OP2	57:1H:4454:HOH:O	1.78	1.01
54:1G:448:A:OP2	54:1G:485:G:N2	1.93	1.00
9:82:89:ASN:HB3	9:82:92:TYR:HB2	1.41	1.00
54:1G:827:U:H3	54:1G:872:A:H62	1.09	1.00
24:14:2714:G:OP2	57:14:3566:HOH:O	1.78	0.99
28:29:66:HIS:HB3	28:29:70:ALA:HB3	1.41	0.99
24:14:2711:A:OP2	57:14:3566:HOH:O	1.80	0.98
1:13:1182:G:H4'	1:13:1183:A:H5'	1.45	0.98
24:14:2593:U:O4	57:14:3627:HOH:O	1.82	0.98
24:14:2705:A:OP2	57:14:3676:HOH:O	1.82	0.98
4:32:18:LYS:NZ	4:32:31:CYS:SG	2.37	0.98
41:95:21:ARG:CZ	41:95:91:TYR:CE2	2.47	0.98
24:14:2448:A:OP2	57:14:3519:HOH:O	1.82	0.98
24:1H:567:A:OP1	57:1H:3552:HOH:O	1.79	0.98
5:42:101:ILE:HD11	5:42:119:LEU:HD23	1.43	0.97
24:1H:730:C:OP2	57:1H:3638:HOH:O	1.80	0.97
24:14:1647:G:OP2	57:14:3710:HOH:O	1.80	0.97
4:32:9:CYS:SG	4:32:22:LYS:NZ	2.38	0.97
54:1G:243:A:H4'	54:1G:244:U:H5'	1.44	0.97
24:14:676:A:H8	24:14:2069:G:H21	1.00	0.96
28:29:1:MET:N	28:29:200:GLU:OE2	1.97	0.96
41:95:21:ARG:CD	41:95:91:TYR:CD2	2.48	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2711:A:OP2	57:1H:3625:HOH:O	1.83	0.96
24:14:1899:G:N2	24:14:1902:C:H41	1.61	0.95
24:14:2068:U:H3	24:14:2430:A:H2	1.08	0.95
45:H8:24:LEU:HD11	45:H8:86:VAL:HG23	1.49	0.95
38:A8:11:LYS:HD3	38:A8:91:PRO:HD3	1.47	0.94
33:15:47:ALA:HB2	33:15:112:LEU:HD11	1.46	0.94
24:1H:192:C:OP2	57:1H:4043:HOH:O	1.82	0.94
24:1H:676:A:H8	24:1H:2069:G:H21	1.09	0.94
41:95:21:ARG:CZ	41:95:91:TYR:CD2	2.49	0.94
54:1G:1348:U:H3	54:1G:1374:A:H2	1.15	0.94
39:B8:2:ASN:HB2	39:B8:5:ALA:H	1.33	0.93
40:85:90:VAL:HG22	41:95:39:LEU:HB3	1.50	0.93
24:14:1496:A:H8	24:14:1577:C:HO2'	1.16	0.93
24:1H:2582:G:OP2	57:1H:3767:HOH:O	1.85	0.93
24:1H:409:C:OP1	57:1H:3697:HOH:O	1.84	0.93
25:1J:5:C:H42	25:1J:115:G:H1	1.04	0.93
24:14:751:A:OP1	57:14:3499:HOH:O	1.84	0.93
24:1H:450:G:OP2	57:1H:3853:HOH:O	1.86	0.93
24:1H:2248:C:OP2	57:1H:3675:HOH:O	1.87	0.92
24:1H:2068:U:H3	24:1H:2430:A:H2	1.18	0.92
24:14:2062:A:OP2	57:14:3857:HOH:O	1.87	0.92
54:1G:1492:A:N3	24:14:1913:A:N6	2.18	0.92
24:14:741:G:OP1	57:14:3585:HOH:O	1.86	0.92
24:1H:1899:G:H22	24:1H:1902:C:H41	1.08	0.92
24:1H:2615:U:OP1	57:1H:3565:HOH:O	1.85	0.92
53:Q8:29:LYS:HB2	53:Q8:44:LYS:HB3	1.51	0.92
24:1H:1601:G:N7	57:1H:4010:HOH:O	2.03	0.92
24:1H:2006:C:OP1	57:1H:3597:HOH:O	1.86	0.92
24:1H:1771:C:HO2'	24:1H:1786:A:H8	1.02	0.92
24:1H:620:G:H4'	24:1H:621:A:H5''	1.51	0.92
54:1G:1127:G:N3	54:1G:1147:C:N4	2.17	0.92
27:11:182:LEU:H	27:11:272:ALA:HB3	1.34	0.91
24:1H:298:G:N7	57:1H:4142:HOH:O	2.03	0.91
54:1G:286:G:N7	57:1G:1814:HOH:O	2.03	0.91
41:95:21:ARG:CD	41:95:91:TYR:CZ	2.53	0.91
39:B8:7:ILE:HB	39:B8:10:VAL:H	1.35	0.91
54:1G:1502:A:H2	54:1G:1505:G:H1	1.19	0.91
45:H8:103:ARG:HB2	45:H8:138:GLU:HA	1.52	0.91
47:J8:91:LYS:HA	47:J8:91:LYS:HZ3	1.35	0.91
20:BI:22:ARG:O	20:BI:26:ASN:ND2	2.04	0.91
24:1H:2392:A:H2	24:1H:2424:C:H42	1.18	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:95:21:ARG:CZ	41:95:91:TYR:CZ	2.55	0.90
1:13:837:G:H1	1:13:849:C:H42	1.16	0.90
39:B8:64:ARG:HB2	39:B8:73:GLU:HG2	1.53	0.90
54:1G:1340:A:O2'	22:2L:32:A:O2'	1.89	0.90
24:1H:1385:G:O2'	24:1H:1396:U:O2	1.88	0.90
24:1H:1479:G:N7	24:1H:1510:A:N6	2.20	0.90
24:1H:2593:U:O4	57:1H:3629:HOH:O	1.89	0.90
54:1G:1305:G:H22	54:1G:1331:G:H2'	1.36	0.90
24:1H:71:A:H2	43:F8:31:HIS:HE2	1.20	0.90
24:14:1970:A:OP1	57:14:3600:HOH:O	1.90	0.90
24:1H:1828:G:OP2	57:1H:3666:HOH:O	1.88	0.90
24:14:67:U:H3	24:14:74:A:H2	1.19	0.89
24:1H:790:C:OP2	57:1H:3879:HOH:O	1.88	0.89
24:1H:574:C:OP2	57:1H:4003:HOH:O	1.90	0.89
39:B8:5:ALA:O	39:B8:7:ILE:HA	1.72	0.89
24:14:2597:G:O3'	57:14:4308:HOH:O	1.89	0.89
24:1H:49:A:N7	24:1H:120:U:H5	1.71	0.89
7:6E:42:ILE:HG23	7:6E:117:ALA:HB2	1.53	0.89
24:1H:1614:A:OP1	57:1H:3887:HOH:O	1.89	0.88
24:1H:805:G:OP1	57:1H:3775:HOH:O	1.90	0.88
40:85:92:ARG:HD3	40:85:95:LEU:HD12	1.52	0.88
54:1G:330:C:O2	57:1G:1774:HOH:O	1.91	0.88
24:1H:1138:G:H21	33:58:106:MET:HE3	1.38	0.88
24:1H:2701:C:H3'	24:1H:2702:U:C5'	2.03	0.88
51:J5:16:ARG:NH1	51:J5:17:ASP:OD1	2.06	0.88
24:14:1771:C:HO2'	24:14:1786:A:H8	1.21	0.88
25:1J:15:A:H5'	25:1J:16:G:C8	2.09	0.88
24:1H:2061:G:OP2	57:1H:3576:HOH:O	1.89	0.88
24:1H:1187:G:OP2	57:1H:3842:HOH:O	1.91	0.88
24:1H:2392:A:C8	35:78:61:ARG:HG2	2.07	0.88
1:13:766:A:OP2	57:13:1735:HOH:O	1.90	0.87
24:14:2499:C:OP2	57:14:3519:HOH:O	1.91	0.87
10:1A:48:THR:HA	10:1A:62:HIS:HB3	1.57	0.87
22:2K:19:C:H3'	22:2K:20:C:H2'	1.55	0.87
22:2K:15:G:H22	22:2K:57:C:H5	1.22	0.87
13:4I:107:ALA:HB3	13:4I:111:LYS:HE2	1.56	0.87
54:1G:504:C:OP1	57:1G:1754:HOH:O	1.92	0.87
24:14:1959:G:N7	57:14:4274:HOH:O	2.07	0.87
41:95:21:ARG:NH1	41:95:91:TYR:CE2	2.43	0.87
40:C8:8:VAL:HG23	40:C8:11:ARG:HH21	1.39	0.87
1:13:1503:A:H61	23:4K:12:A:H2'	1.40	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2576:G:OP1	57:14:3536:HOH:O	1.93	0.87
42:A5:41:LYS:HE3	51:J5:25:LEU:HD11	1.57	0.87
47:J8:87:PRO:HG2	47:J8:90:ILE:HD11	1.57	0.87
24:1H:2032:G:N7	57:1H:4558:HOH:O	2.07	0.86
24:1H:1357:U:OP2	57:1H:4034:HOH:O	1.93	0.86
22:2K:1:G:H2'	22:2K:2:G:H8	1.38	0.86
24:14:780:G:H21	24:14:783:A:H62	1.21	0.86
24:1H:787:U:OP1	57:1H:3881:HOH:O	1.91	0.86
43:B5:27:THR:HG22	43:B5:80:ILE:HB	1.56	0.86
24:14:1263:U:OP2	57:14:4132:HOH:O	1.92	0.86
57:14:4309:HOH:O	27:19:242:ARG:O	1.91	0.86
45:D5:157:LEU:HB3	45:D5:161:VAL:HA	1.56	0.86
1:13:673:G:H2'	1:13:674:G:C8	2.11	0.86
27:19:95:LEU:HD11	27:19:105:ILE:HD12	1.56	0.85
24:14:574:C:OP2	57:14:3736:HOH:O	1.92	0.85
39:75:6:LEU:H	39:75:9:LEU:HB3	1.37	0.85
27:19:37:LEU:HA	27:19:38:LYS:HG2	1.59	0.85
24:1H:2588:G:OP2	57:1H:3618:HOH:O	1.94	0.85
1:13:1159:U:O4'	1:13:1182:G:N2	2.10	0.85
1:13:310:G:OP2	16:7I:27:LYS:NZ	2.09	0.85
24:14:2822:G:OP2	57:14:3525:HOH:O	1.93	0.85
4:32:53:ASP:O	4:32:57:ARG:NH1	2.09	0.85
24:14:2255:G:OP2	57:14:3864:HOH:O	1.94	0.85
24:1H:2580:U:H4'	28:21:130:GLY:HA3	1.59	0.85
24:14:1359:A:H62	24:14:1372:U:H3	1.18	0.85
24:14:2712(A):A:OP2	57:14:3569:HOH:O	1.93	0.85
54:1G:664:G:H22	54:1G:741:G:H1	1.23	0.85
35:35:146:VAL:HG13	35:35:147:LEU:HG	1.58	0.85
24:14:1899:G:H22	24:14:1902:C:H41	1.20	0.85
24:14:2157:G:H2'	24:14:2158:A:H8	1.42	0.85
24:1H:2307:G:H1	30:41:44:GLY:HA2	1.42	0.85
24:14:1970:A:OP2	57:14:3607:HOH:O	1.95	0.85
24:14:2287:A:N6	24:14:2344:U:H3	1.75	0.85
54:1G:976:G:N2	54:1G:1362(A):C:OP2	2.11	0.84
24:1H:1899:G:H22	24:1H:1902:C:N4	1.74	0.84
6:52:87:ARG:HH11	6:52:87:ARG:HG3	1.42	0.84
41:95:21:ARG:HD3	41:95:91:TYR:CD2	2.12	0.84
37:98:24:GLN:HE22	37:98:36:THR:HG21	1.43	0.84
44:C5:39:VAL:O	44:C5:41:GLY:N	2.10	0.84
24:1H:2314:C:H2'	24:1H:2315:G:H8	1.41	0.84
22:2K:36:U:H3	23:4K:17:G:H1	1.26	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:993:G:OP1	40:C8:50:ARG:NH2	2.10	0.84
27:11:223:GLY:HA3	27:11:231:HIS:ND1	1.91	0.84
57:1H:4581:HOH:O	27:11:242:ARG:O	1.93	0.84
1:13:509:A:OP2	57:13:1750:HOH:O	1.96	0.84
24:1H:2485:G:H5''	36:88:46:GLN:HE21	1.42	0.84
24:14:2343:C:O2'	24:14:2373:G:O2'	1.94	0.84
54:1G:963:G:H21	10:1A:55:LYS:HE2	1.42	0.84
24:1H:1678:G:N2	24:1H:1989:G:H22	1.76	0.84
24:1H:67:U:H3	24:1H:74:A:H2	1.24	0.84
24:1H:945:A:OP1	57:1H:4116:HOH:O	1.96	0.84
39:B8:2:ASN:CB	39:B8:5:ALA:H	1.91	0.84
24:14:2269:A:OP1	57:14:4116:HOH:O	1.94	0.84
54:1G:766:A:OP2	57:1G:1752:HOH:O	1.96	0.84
24:1H:1764:G:OP2	57:1H:3986:HOH:O	1.95	0.84
1:13:768:A:OP2	57:13:1773:HOH:O	1.94	0.83
1:13:1348:U:H2'	1:13:1349:A:H8	1.42	0.83
1:13:686:U:H1'	11:2I:42:TRP:HE1	1.44	0.83
24:14:450:G:O6	57:14:3809:HOH:O	1.95	0.83
24:1H:1346:G:OP2	57:1H:4501:HOH:O	1.97	0.83
24:14:2588:G:OP1	57:14:3619:HOH:O	1.95	0.83
24:1H:607:U:H3	24:1H:621:A:H2	1.24	0.83
24:1H:2420:C:H41	53:Q8:31:HIS:HB3	1.43	0.83
22:3L:15:G:N1	22:3L:57:C:O2	2.12	0.83
54:1G:957:U:OP1	19:AA:81:ARG:NH2	2.11	0.83
28:29:33:VAL:HG12	28:29:89:ASP:HA	1.60	0.83
24:14:833:U:O2	35:35:55:ARG:NH1	2.11	0.83
24:14:987:G:OP2	57:14:4149:HOH:O	1.95	0.83
44:G8:100:ALA:HB1	44:G8:101:LYS:HB2	1.58	0.83
24:1H:598:G:H5'	35:78:11:GLY:HA3	1.60	0.83
24:1H:987:G:OP2	57:1H:3978:HOH:O	1.97	0.83
5:42:100:VAL:O	5:42:107:ARG:NH2	2.12	0.83
24:1H:2499:C:N3	57:1H:4557:HOH:O	2.10	0.82
27:11:26:LYS:O	27:11:27:THR:OG1	1.97	0.82
1:13:1352:C:OP1	21:1F:3:LYS:NZ	2.12	0.82
24:1H:218:A:N7	57:1H:3712:HOH:O	2.11	0.82
25:1J:66:A:H61	25:1J:108:C:H5''	1.44	0.82
5:42:102:ALA:HB1	5:42:106:PRO:HG2	1.61	0.82
39:75:107:ASP:O	39:75:111:ARG:NH1	2.11	0.82
12:3I:39:VAL:HG22	12:3I:57:LYS:HB2	1.60	0.82
24:1H:1057:A:N6	24:1H:1087:G:N7	2.27	0.82
14:5I:26:ARG:HH11	14:5I:43:CYS:HB2	1.45	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:J8:56:GLN:HG3	47:J8:84:GLY:H	1.44	0.82
24:14:1012:U:H3	24:14:1143:A:H2	1.28	0.82
24:14:1614:A:OP1	57:14:3497:HOH:O	1.97	0.82
24:14:2582:G:OP1	57:14:4242:HOH:O	1.98	0.82
24:1H:330:A:HO2'	24:1H:331:A:H8	1.23	0.82
24:14:660:G:H21	35:35:12:ALA:HA	1.45	0.82
36:88:104:PHE:HE2	36:88:125:LEU:HD11	1.45	0.82
24:14:1633:G:O6	57:14:3549:HOH:O	1.95	0.81
24:14:511:U:H3'	24:14:512:G:H5''	1.60	0.81
24:1H:1370:C:OP2	57:1H:4029:HOH:O	1.97	0.81
24:1H:453:C:OP1	57:1H:3855:HOH:O	1.97	0.81
19:AA:50:ALA:HB1	19:AA:57:HIS:HB3	1.60	0.81
24:14:1266:G:O5'	42:A5:15:ARG:NH2	2.13	0.81
24:14:761:A:N7	57:14:4299:HOH:O	2.13	0.81
24:1H:1664:A:OP2	57:1H:4084:HOH:O	1.97	0.81
1:13:411:A:H62	1:13:413:G:H21	1.28	0.81
24:14:1357:U:O4	57:14:4024:HOH:O	1.97	0.81
24:14:452:G:OP2	57:14:3805:HOH:O	1.97	0.81
24:14:654(E):C:H42	24:14:654(P):G:H1	1.27	0.81
24:14:1332:G:N2	24:14:1609:A:O2'	2.13	0.81
39:B8:2:ASN:HB3	39:B8:4:GLY:H	1.45	0.81
24:14:1019:U:H3	24:14:1142(A):A:H62	1.26	0.81
24:14:1632:A:N7	57:14:3550:HOH:O	2.12	0.81
24:1H:1970:A:OP2	57:1H:3952:HOH:O	1.98	0.81
24:1H:881:G:O6	24:1H:882:G:N2	2.10	0.81
38:65:3:ARG:HE	38:65:4:LEU:N	1.79	0.81
29:39:53:THR:HG23	29:39:55:GLY:H	1.44	0.81
1:13:504:C:OP1	57:13:1798:HOH:O	1.98	0.81
24:14:2685:G:O6	57:14:3655:HOH:O	1.99	0.81
24:14:2807:G:N1	24:14:2893:G:O6	2.11	0.81
54:1G:1324:A:H4'	54:1G:1362:C:H4'	1.61	0.81
24:1H:2789:C:O2	24:1H:2894:G:N2	2.14	0.81
24:1H:400:G:N7	57:1H:4037:HOH:O	2.14	0.81
12:3A:62:SER:HB2	12:3A:64:TYR:HB2	1.63	0.81
54:1G:57:G:H2'	54:1G:58:C:C6	2.15	0.81
24:1H:2327:A:H2'	24:1H:2328:A:C8	2.15	0.81
33:58:132:ALA:O	33:58:134:ARG:NH2	2.14	0.81
47:J8:85:LEU:HB2	47:J8:86:SER:HB2	1.61	0.81
2:12:127:ILE:O	2:12:135:GLN:NE2	2.14	0.81
2:12:74:LYS:NZ	2:12:205:ASP:OD2	2.14	0.81
1:13:1003:G:N1	1:13:1036:G:O6	2.14	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1006:C:OP2	57:1H:4154:HOH:O	1.98	0.81
42:E8:6:ILE:HG12	42:E8:104:THR:HG23	1.63	0.81
24:1H:1264:G:OP1	51:N8:19:ARG:NH2	2.11	0.81
24:1H:2249:U:O4	57:1H:3675:HOH:O	1.98	0.81
24:1H:2597:G:O3'	57:1H:4585:HOH:O	1.98	0.81
24:1H:751:A:OP1	57:1H:3889:HOH:O	1.98	0.81
5:4E:143:ARG:NE	8:7E:77:GLU:OE1	2.13	0.81
24:1H:2781:A:H5''	24:1H:2782:G:H5'	1.63	0.80
1:13:1368:G:H5''	9:8E:112:LYS:HB3	1.63	0.80
45:H8:147:GLY:H	45:H8:174:VAL:HB	1.43	0.80
27:11:8:PRO:HB3	27:11:14:ARG:HB3	1.64	0.80
9:82:126:SER:OG	9:82:127:LYS:N	2.11	0.80
18:9A:33:ASP:OD2	18:9A:36:ASN:ND2	2.14	0.80
43:B5:63:LYS:HE3	43:B5:63:LYS:H	1.46	0.80
24:14:1488:G:O6	57:14:4083:HOH:O	1.98	0.80
24:14:2782:G:OP2	57:14:3999:HOH:O	1.97	0.80
24:14:2793:G:N2	24:14:2804:C:O2	2.14	0.80
24:14:397:G:N7	57:14:4145:HOH:O	2.13	0.80
54:1G:446:G:N7	57:1G:1899:HOH:O	2.15	0.80
1:13:456:C:N3	1:13:476:G:N2	2.30	0.80
24:14:1428:C:N4	24:14:1570:A:OP2	2.14	0.80
7:6E:143:ARG:NH2	22:3K:43:G:OP1	2.15	0.80
1:13:954:G:O6	1:13:1225:A:N6	2.14	0.80
54:1G:56:U:H2'	54:1G:57:G:H8	1.47	0.80
51:J5:16:ARG:HG2	51:J5:16:ARG:HH11	1.46	0.80
24:14:123:G:O6	57:14:3543:HOH:O	2.00	0.80
54:1G:1316:G:H5''	14:5A:17:LYS:HD3	1.64	0.80
25:1J:80:U:H2'	25:1J:81:G:H21	1.44	0.80
39:75:93:ARG:HB2	39:75:117:ASP:HB3	1.63	0.80
42:E8:73:ALA:HB3	42:E8:106:ILE:HG23	1.64	0.80
1:13:1110:A:OP2	57:13:1866:HOH:O	1.99	0.80
24:14:888:C:H4'	24:14:889:C:H5'	1.63	0.80
24:1H:1268:A:OP1	57:1H:3598:HOH:O	2.00	0.80
39:B8:26:ASP:HB3	39:B8:91:ARG:HA	1.63	0.80
53:M5:30:ARG:O	53:M5:32:LEU:N	2.14	0.80
24:1H:259:G:O2'	24:1H:621:A:O2'	1.96	0.80
41:95:21:ARG:CZ	41:95:91:TYR:CE1	2.65	0.80
24:14:592:G:H21	53:M5:4:MET:HE1	1.45	0.80
24:1H:259:G:HO2'	24:1H:621:A:HO2'	1.24	0.80
22:2L:34:U:O2'	22:2L:35:QUO:O5'	1.99	0.80
32:61:78:THR:OG1	32:61:141:LYS:NZ	2.14	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2713:A:OP2	57:14:3571:HOH:O	1.99	0.79
24:14:636:G:HO2'	24:14:638:G:HO2'	1.30	0.79
24:1H:2057:A:OP2	57:1H:3571:HOH:O	1.99	0.79
31:59:64:LEU:HA	31:59:67:LEU:HD12	1.64	0.79
41:95:35:LEU:O	41:95:37:VAL:HG22	1.82	0.79
24:14:1022:G:H22	24:14:1142(A):A:H2	1.29	0.79
24:14:2268:A:OP1	57:14:4116:HOH:O	1.98	0.79
24:1H:2406:U:OP1	57:1H:3680:HOH:O	2.00	0.79
11:2A:29:ILE:HG22	11:2A:44:SER:HB2	1.64	0.79
12:3A:41:ARG:HD2	12:3A:42:THR:H	1.46	0.79
40:C8:34:LYS:NZ	40:C8:37:GLU:OE1	2.14	0.79
24:14:577:G:O6	57:14:3737:HOH:O	2.01	0.79
24:1H:1533:C:O2	24:1H:1539:G:N2	2.15	0.79
24:1H:2017:U:OP1	57:1H:4548:HOH:O	2.00	0.79
24:1H:2502:G:OP2	57:1H:3573:HOH:O	1.99	0.79
24:1H:252:G:OP2	35:78:50:ARG:NH1	2.16	0.79
24:1H:330:A:O2'	24:1H:331:A:H8	1.64	0.79
33:15:38:HIS:NE2	33:15:50:ASP:OD2	2.15	0.79
54:1G:731:G:OP2	57:1G:1873:HOH:O	2.00	0.79
24:1H:763:G:OP1	57:1H:3643:HOH:O	1.99	0.79
47:F5:87:PRO:HA	47:F5:90:ILE:HG22	1.65	0.79
2:1E:69:LEU:HB3	2:1E:162:ILE:HG22	1.63	0.79
24:1H:761:A:OP1	57:1H:3638:HOH:O	2.01	0.79
39:B8:2:ASN:H	39:B8:5:ALA:HB3	1.46	0.79
36:88:90:VAL:HG23	36:88:91:GLU:H	1.48	0.79
24:14:1139:G:O2'	24:14:1143:A:N6	2.15	0.79
24:14:1992:G:N7	57:14:3652:HOH:O	2.14	0.79
38:65:3:ARG:HH21	38:65:4:LEU:HB2	1.48	0.79
1:13:974:A:OP2	14:5I:41:ARG:NH1	2.16	0.78
6:5E:87:ARG:HH11	6:5E:87:ARG:HG3	1.47	0.78
25:1J:48:A:H4'	38:65:95:HIS:HD2	1.48	0.78
1:13:1157:A:H62	1:13:1178:G:N2	1.81	0.78
1:13:812:C:N3	57:13:1734:HOH:O	2.14	0.78
28:29:77:ILE:HG22	28:29:79:ARG:HE	1.48	0.78
12:3A:28:LYS:HD3	12:3A:30:ALA:HB2	1.65	0.78
22:3L:35:QUO:O6	22:3L:35:QUO:N11	2.15	0.78
36:45:43:THR:HB	36:45:45:GLN:HE21	1.46	0.78
24:14:574:C:OP2	57:14:3738:HOH:O	1.99	0.78
24:14:39:C:O2	29:39:46:ARG:NH2	2.16	0.78
5:42:6:PHE:HZ	5:42:40:ARG:HH21	1.31	0.78
50:I5:16:CYS:SG	50:I5:17:GLY:N	2.55	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1249:U:OP1	57:14:3515:HOH:O	2.01	0.78
24:14:2592:G:N7	57:14:3629:HOH:O	2.16	0.78
24:1H:2052:G:H4'	28:21:143:ASN:O	1.82	0.78
1:13:272:C:H2'	1:13:273:A:H8	1.48	0.78
54:1G:620:C:OP1	57:1G:1798:HOH:O	2.01	0.78
24:1H:187:G:OP2	57:1H:4325:HOH:O	2.00	0.78
24:14:2392:A:H8	35:35:61:ARG:HB3	1.46	0.78
2:1E:82:ARG:NH1	2:1E:92:TYR:OH	2.16	0.78
54:1G:992:U:H3	54:1G:1044:A:H62	1.30	0.78
24:1H:1221:C:H2'	24:1H:1222:C:H6	1.47	0.78
39:B8:57:PHE:O	39:B8:58:ASN:ND2	2.14	0.78
27:11:30:GLU:HA	27:11:30:GLU:OE2	1.83	0.78
24:1H:1265:A:OP2	57:1H:3561:HOH:O	2.02	0.78
1:13:1189:C:O2	57:13:1864:HOH:O	1.98	0.78
24:14:273(D):C:N4	24:14:363(B):G:O6	2.15	0.78
13:4I:15:VAL:HA	13:4I:45:VAL:HG12	1.66	0.78
24:1H:1313:U:OP1	57:1H:3916:HOH:O	2.01	0.78
24:1H:2210:G:H3'	24:1H:2211:G:C8	2.19	0.78
24:14:84:A:N6	24:14:102:G:O2'	2.16	0.78
24:1H:2598:A:OP1	57:1H:4582:HOH:O	2.00	0.78
30:41:112:PRO:HB3	50:M8:37:SER:H	1.48	0.78
24:14:2327:A:H2'	24:14:2328:A:C8	2.19	0.77
24:1H:399:G:OP2	57:1H:4039:HOH:O	2.03	0.77
24:1H:884:C:N3	24:1H:892:G:N2	2.31	0.77
1:13:1500:A:OP1	57:13:1730:HOH:O	2.02	0.77
24:14:862:G:OP2	57:14:3927:HOH:O	2.00	0.77
54:1G:1105:A:H2'	54:1G:1106:G:H8	1.49	0.77
24:1H:802:A:OP1	57:1H:4298:HOH:O	2.02	0.77
1:13:538:G:H5''	12:3I:114:LYS:HB2	1.67	0.77
31:51:15:VAL:HG12	31:51:29:PRO:HD2	1.67	0.77
24:14:2102:U:H3	24:14:2187:G:H1	1.30	0.77
24:14:2227:A:OP2	57:14:4101:HOH:O	2.03	0.77
24:14:2748:A:H2'	24:14:2749:A:H8	1.50	0.77
24:1H:142:G:H1'	43:F8:37:THR:HG21	1.67	0.77
24:1H:801:G:OP2	57:1H:4170:HOH:O	2.03	0.77
33:58:70:LYS:HE3	33:58:72:TYR:CE1	2.19	0.77
39:75:8:LYS:N	39:75:11:GLU:OE1	2.15	0.77
37:98:67:LEU:HD13	37:98:76:VAL:HG21	1.67	0.77
1:13:177:C:OP1	20:BI:65:LYS:NZ	2.12	0.77
54:1G:1151:A:H5''	10:1A:42:THR:HG23	1.66	0.77
24:1H:2582:G:OP2	57:1H:3763:HOH:O	2.02	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:14:3529:HOH:O	28:29:110:GLY:O	2.03	0.77
22:2K:17:OMG:HN21	22:2K:64:PSU:H6	1.29	0.77
50:I5:37:SER:OG	50:I5:38:LYS:N	2.17	0.77
24:14:2228:G:O6	57:14:4102:HOH:O	2.02	0.77
24:14:567:A:OP1	57:14:3749:HOH:O	2.02	0.77
54:1G:505:G:N7	57:1G:1759:HOH:O	2.17	0.77
22:2K:10:C:H42	22:2K:26:G:H1	1.30	0.77
5:4E:101:ILE:O	5:4E:120:THR:OG1	2.02	0.77
54:1G:1291:G:OP1	7:62:37:ASN:ND2	2.17	0.77
54:1G:1342:C:H4'	9:82:125:TYR:HB3	1.67	0.77
41:95:21:ARG:CZ	41:95:91:TYR:CG	2.67	0.77
1:13:1124:G:H21	1:13:1125:U:H3	1.33	0.77
53:Q8:34:TRP:CE3	53:Q8:34:TRP:HA	2.19	0.77
54:1G:741:G:N7	57:1G:1843:HOH:O	2.18	0.76
38:65:107:GLU:H	38:65:110:LEU:HD21	1.49	0.76
28:29:58:ARG:O	28:29:60:ASN:ND2	2.18	0.76
29:39:117:ARG:NH1	29:39:120:GLU:OE1	2.18	0.76
14:5I:3:ARG:HA	14:5I:3:ARG:HH11	1.50	0.76
48:G5:68:ARG:HA	48:G5:72:ALA:HB2	1.66	0.76
4:32:98:GLU:OE2	4:32:103:ASN:ND2	2.16	0.76
4:32:30:LYS:HG3	4:32:35:ARG:HB2	1.66	0.76
24:14:1105:U:H2'	24:14:1106:G:H8	1.50	0.76
24:14:2681:C:H5	24:14:2725:A:H62	1.32	0.76
24:1H:2608:G:N7	57:1H:3764:HOH:O	2.19	0.76
24:1H:654(G):C:N4	24:1H:654(L):G:OP2	2.18	0.76
25:1J:18:G:H1	25:1J:65:C:H42	1.32	0.76
28:21:128:SER:OG	28:21:129:HIS:N	2.15	0.76
24:14:2533:A:OP2	57:14:4238:HOH:O	2.02	0.76
24:1H:733:G:OP2	57:1H:4066:HOH:O	2.02	0.76
30:49:121:ASN:HD21	30:49:123:ASN:HB2	1.49	0.76
37:55:78:LYS:HE2	37:55:83:ILE:HD11	1.67	0.76
1:13:617:G:N7	57:13:1906:HOH:O	2.18	0.76
54:1G:1162:C:H42	54:1G:1174:G:H1	1.31	0.76
24:1H:2032:G:N7	57:1H:4560:HOH:O	2.19	0.76
22:3L:52:G:H2'	22:3L:53:A:C8	2.20	0.76
8:72:102:ARG:HD3	8:72:105:ARG:HD3	1.67	0.76
45:D5:30:ASN:HD22	45:D5:90:VAL:HB	1.51	0.76
24:14:2178:C:H4'	26:79:46:LYS:HD3	1.68	0.76
24:1H:2298:A:H62	24:1H:2318:G:H8	1.33	0.76
24:1H:2447:G:OP2	57:1H:3809:HOH:O	2.02	0.76
29:39:79:GLY:HA2	29:39:86:GLY:HA2	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:201:C:H42	1:13:216:G:H1	1.32	0.76
24:14:2588:G:OP1	57:14:3615:HOH:O	2.03	0.76
24:1H:2607:G:O3'	57:1H:3927:HOH:O	2.03	0.76
9:8E:26:VAL:HG13	9:8E:61:ALA:HB3	1.67	0.76
46:E5:12:ASN:HA	46:E5:14:ARG:HH21	1.48	0.76
24:1H:2115:G:N3	24:1H:2171:A:N6	2.33	0.76
24:1H:563:G:OP2	57:1H:3583:HOH:O	2.04	0.76
15:6I:56:LEU:HA	15:6I:59:MET:HE2	1.66	0.76
24:1H:2056:G:OP2	57:1H:3570:HOH:O	2.04	0.76
12:3A:41:ARG:HB3	12:3A:41:ARG:HH11	1.50	0.76
24:1H:1828:G:OP1	57:1H:3947:HOH:O	2.03	0.75
24:1H:2032:G:H21	28:21:146:THR:HG23	1.50	0.75
22:3K:24:G:H2'	22:3K:25:G:H8	1.51	0.75
36:88:14:ARG:HG2	36:88:41:TRP:HH2	1.50	0.75
54:1G:56:U:H2'	54:1G:57:G:C8	2.21	0.75
22:3K:8:4SU:S4	22:3K:14:A:N6	2.58	0.75
1:13:920:U:H2'	1:13:921:U:C6	2.20	0.75
24:14:1616:A:O2'	57:14:3711:HOH:O	2.04	0.75
54:1G:1069:C:O2'	54:1G:1192:C:O2	2.05	0.75
24:1H:2404:C:OP2	57:1H:4220:HOH:O	2.03	0.75
3:22:81:GLY:HA2	3:22:85:ARG:HH21	1.51	0.75
17:8I:18:THR:OG1	17:8I:69:LYS:NZ	2.19	0.75
24:14:2212:A:H4'	24:14:2213:U:H5	1.51	0.75
24:14:910:A:H62	36:45:12:GLN:HA	1.50	0.75
54:1G:1076:C:OP1	2:12:175:ARG:NH1	2.19	0.75
1:13:1508:G:OP1	57:13:1730:HOH:O	2.04	0.75
24:14:1828:G:OP1	57:14:3594:HOH:O	2.05	0.75
28:21:9:VAL:HG13	39:B8:3:ARG:HG2	1.68	0.75
24:14:2582:G:OP1	57:14:4239:HOH:O	2.04	0.75
4:32:22:LYS:NZ	4:32:26:CYS:SG	2.59	0.75
54:1G:1386:G:H2'	54:1G:1387:G:H8	1.52	0.75
37:55:97:VAL:HG22	37:55:114:VAL:HG22	1.69	0.75
6:5E:23:LYS:HZ3	6:5E:23:LYS:HB2	1.52	0.75
36:88:43:THR:HG22	36:88:94:VAL:HG12	1.67	0.75
4:32:61:LYS:HB2	4:32:203:VAL:HG13	1.68	0.75
45:D5:10:ARG:NH2	45:D5:26:GLY:O	2.20	0.75
1:13:674:G:H2'	1:13:675:A:H8	1.51	0.75
4:32:31:CYS:C	4:32:33:MET:H	1.90	0.75
9:82:9:ARG:HH22	9:82:104:ARG:HD3	1.52	0.75
1:13:736:C:H2'	1:13:737:A:C8	2.21	0.74
54:1G:1527:C:OP1	57:1G:1872:HOH:O	2.04	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2701:C:C3'	24:1H:2702:U:H5''	2.15	0.74
31:59:9:ILE:HG23	31:59:51:ARG:HB3	1.69	0.74
9:82:53:VAL:HG23	9:82:55:ALA:H	1.51	0.74
24:14:363:G:H2'	24:14:363(A):A:H8	1.52	0.74
2:1E:185:ILE:HB	2:1E:199:TYR:HB2	1.69	0.74
24:1H:2788:C:O2'	24:1H:2809:A:N3	2.20	0.74
24:1H:981:A:OP1	57:1H:3757:HOH:O	2.05	0.74
22:2L:40:PSU:HO2'	22:3L:36:U:HO2'	1.25	0.74
36:45:24:GLY:HA3	36:45:25:ASP:HB2	1.67	0.74
40:85:28:ARG:NH1	40:85:38:THR:OG1	2.20	0.74
41:95:21:ARG:CD	41:95:91:TYR:CE1	2.70	0.74
24:1H:102:G:OP1	48:K8:7:ARG:NH2	2.20	0.74
24:14:1416:G:O2'	24:14:1417:C:O5'	2.04	0.74
24:14:739:G:OP1	57:14:3819:HOH:O	2.05	0.74
24:1H:363(B):G:H2'	24:1H:363(C):G:C8	2.21	0.74
24:1H:963:U:OP1	57:1H:3816:HOH:O	2.05	0.74
34:25:63:VAL:HG12	34:25:106:LEU:HD11	1.67	0.74
47:F5:7:ILE:HG12	47:F5:62:VAL:HG11	1.69	0.74
24:14:1855:G:N7	57:14:4090:HOH:O	2.20	0.74
24:14:2822:G:OP2	57:14:3526:HOH:O	2.05	0.74
24:14:602:G:O2'	24:14:604:G:O2'	2.05	0.74
24:1H:1534:G:O2'	24:1H:1535:U:O4'	2.06	0.74
1:13:468:A:H5''	16:7I:80:PHE:HB3	1.68	0.74
44:G8:82:PRO:HG3	44:G8:97:ARG:HD2	1.70	0.74
35:78:63:PRO:HB2	53:Q8:30:ARG:HH21	1.53	0.74
1:13:1062:U:H2'	1:13:1063:C:C6	2.22	0.74
1:13:450:G:OP1	16:7I:43:LYS:NZ	2.20	0.74
54:1G:536:C:OP2	57:1G:1791:HOH:O	2.06	0.74
24:1H:2213:U:O2	47:J8:52:ARG:NH2	2.20	0.74
29:39:181:LEU:HD11	29:39:186:ILE:HD11	1.67	0.74
27:11:68:LYS:HB3	27:11:70:TRP:CH2	2.23	0.74
24:14:733:G:OP2	57:14:4303:HOH:O	2.04	0.74
24:1H:534:U:H5'	40:C8:42:ALA:HB1	1.69	0.74
28:21:73:GLU:HG3	28:21:74:PRO:HD2	1.69	0.74
33:58:134:ARG:HB3	33:58:134:ARG:HH11	1.51	0.74
24:14:773:U:OP1	57:14:4098:HOH:O	2.05	0.74
24:1H:1271:G:OP2	57:1H:4449:HOH:O	2.05	0.74
24:1H:1975:G:OP2	57:1H:3964:HOH:O	2.06	0.74
39:B8:10:VAL:HA	39:B8:11:GLU:C	2.08	0.74
24:1H:862:G:OP2	57:1H:3973:HOH:O	2.04	0.74
33:58:95:PRO:O	33:58:97:ARG:N	2.21	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:750:G:N3	15:6A:23:GLY:HA3	2.02	0.74
40:85:98:LEU:HB2	40:85:102:GLU:HB2	1.68	0.74
53:Q8:32:LEU:O	53:Q8:33:ASN:ND2	2.20	0.74
24:14:1073:A:OP2	24:14:1094:U:N3	2.17	0.74
24:1H:815:C:O2	24:1H:1192:G:N2	2.18	0.74
22:3K:48:C:H42	22:3K:52:G:H1	1.34	0.74
24:14:1771:C:H1'	24:14:1786:A:C8	2.22	0.74
4:32:26:CYS:HA	4:32:31:CYS:HB2	1.69	0.74
35:35:79:ARG:HG3	35:35:110:TYR:HB2	1.70	0.74
43:B5:46:ALA:O	48:G5:30:ARG:NH1	2.21	0.74
2:12:167:PRO:O	2:12:171:ALA:N	2.21	0.73
24:14:1604:C:OP1	57:14:3915:HOH:O	2.06	0.73
24:14:2123:G:O6	24:14:2174:C:N4	2.20	0.73
27:19:31:LYS:HD2	27:19:32:SER:H	1.52	0.73
24:1H:1417:C:OP2	57:1H:4019:HOH:O	2.05	0.73
36:88:111:GLU:OE1	36:88:133:ARG:NH2	2.21	0.73
48:G5:13:ALA:HA	48:G5:16:LEU:HD21	1.69	0.73
50:M8:37:SER:HB3	50:M8:42:PHE:HB3	1.70	0.73
24:14:732:C:OP2	57:14:4300:HOH:O	2.07	0.73
25:16:101:A:OP2	57:16:215:HOH:O	2.06	0.73
25:1J:45:A:O4'	30:49:95:ARG:NH1	2.20	0.73
3:2E:150:LYS:HE3	3:2E:152:ILE:HD11	1.70	0.73
29:39:37:VAL:HG21	35:35:6:LEU:HD21	1.69	0.73
32:61:110:ASP:N	32:61:130:TYR:OH	2.20	0.73
24:14:2611:U:H2'	51:J5:2:ALA:O	1.87	0.73
24:1H:1365:A:OP1	47:J8:41:ARG:NH2	2.22	0.73
24:14:141:A:H8	24:14:1595:G:H21	1.36	0.73
24:14:1689:A:H62	24:14:1698:A:H2	1.36	0.73
24:14:483:A:H4'	44:C5:49:VAL:HA	1.70	0.73
31:59:3:ARG:HG2	31:59:4:ILE:HG13	1.68	0.73
16:7A:43:LYS:HA	16:7A:48:TRP:HB3	1.71	0.73
24:1H:2125:G:O2'	24:1H:2173:A:N6	2.20	0.73
35:35:48:PRO:O	35:35:50:ARG:N	2.14	0.73
22:3L:24:G:H2'	22:3L:25:G:H8	1.52	0.73
5:4E:110:LEU:HD13	5:4E:118:ILE:HG21	1.70	0.73
31:51:4:ILE:HG21	31:51:6:ARG:NH1	2.04	0.73
1:13:1376:U:H2'	1:13:1377:A:H8	1.53	0.73
1:13:877:C:OP1	8:7E:88:LYS:NZ	2.21	0.73
24:14:994:C:OP2	40:85:54:LYS:NZ	2.18	0.73
2:1E:16:HIS:HD2	2:1E:210:SER:HA	1.54	0.73
28:21:119:ARG:HG2	28:21:160:TYR:HB2	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:72:10:LEU:HD22	8:72:83:ILE:HD11	1.70	0.73
24:1H:1774:C:OP1	57:1H:3745:HOH:O	2.06	0.73
24:1H:1771:C:H1'	24:1H:1786:A:C8	2.24	0.73
41:95:21:ARG:CZ	41:95:91:TYR:CD1	2.71	0.73
24:14:1639:U:OP1	57:14:3572:HOH:O	2.05	0.73
24:1H:340:A:OP2	57:1H:3735:HOH:O	2.05	0.73
24:1H:2305:A:H5''	30:41:134:GLY:HA3	1.69	0.73
41:95:10:LYS:NZ	41:95:23:GLU:OE1	2.22	0.73
42:A5:18:ARG:NH2	42:A5:76:VAL:O	2.19	0.73
1:13:736:C:H2'	1:13:737:A:H8	1.53	0.73
24:1H:1495:A:OP2	57:1H:4333:HOH:O	2.05	0.73
24:1H:249:C:OP1	57:1H:3613:HOH:O	2.06	0.73
12:3I:52:LEU:O	12:3I:54:LYS:NZ	2.22	0.73
9:82:28:VAL:HG22	9:82:63:ILE:HB	1.69	0.73
1:13:649:G:H2'	1:13:650:G:H8	1.54	0.73
24:14:585:G:OP2	57:14:4163:HOH:O	2.06	0.73
17:8A:66:SER:O	17:8A:70:ARG:NH1	2.20	0.73
1:13:601:C:H2'	1:13:602:A:C8	2.24	0.72
2:1E:7:VAL:HG21	2:1E:11:LEU:HD22	1.70	0.72
24:1H:1268:A:OP1	57:1H:3600:HOH:O	2.06	0.72
24:14:960:A:H61	36:45:83:MET:HE2	1.54	0.72
8:72:49:GLU:OE2	8:72:62:TYR:OH	2.07	0.72
24:1H:1333:C:OP2	57:1H:3909:HOH:O	2.06	0.72
24:1H:1774:C:OP1	57:1H:3746:HOH:O	2.07	0.72
14:5A:40:CYS:H	14:5A:43:CYS:HB2	1.54	0.72
24:1H:450:G:O6	57:1H:3857:HOH:O	2.06	0.72
24:1H:1156:A:OP2	57:1H:3753:HOH:O	2.06	0.72
24:1H:1290:C:H2'	24:1H:1291:C:C6	2.25	0.72
24:1H:2270:G:OP2	57:1H:4235:HOH:O	2.07	0.72
39:B8:11:GLU:HB3	39:B8:13:ARG:HG2	1.71	0.72
2:12:71:VAL:HB	2:12:164:VAL:HG12	1.71	0.72
24:14:1239:G:O6	57:14:4278:HOH:O	2.04	0.72
25:16:21:G:H1	25:16:62:C:H42	1.36	0.72
54:1G:57:G:H2'	54:1G:58:C:H6	1.53	0.72
24:1H:1434:A:H61	24:1H:1558:A:N6	1.86	0.72
24:1H:1633:G:O6	57:1H:3696:HOH:O	2.06	0.72
24:1H:1704:G:O6	57:1H:4468:HOH:O	2.04	0.72
24:1H:800:A:OP1	57:1H:3591:HOH:O	2.06	0.72
24:1H:860:U:H5	24:1H:917:A:C2	2.06	0.72
22:2K:60:A:O2'	22:2K:61:G:O5'	2.07	0.72
24:14:1828:G:OP2	57:14:3532:HOH:O	2.06	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1891:G:O6	57:14:4128:HOH:O	2.06	0.72
24:1H:732:C:OP2	57:1H:4070:HOH:O	2.06	0.72
34:68:2:ILE:HD12	34:68:6:THR:HG21	1.72	0.72
45:D5:163:LEU:HD11	45:D5:167:PRO:HG3	1.71	0.72
47:J8:78:LYS:HE2	47:J8:79:GLY:H	1.53	0.72
24:1H:1403:C:H5''	24:1H:1471:A:H1'	1.70	0.72
11:2I:86:GLY:N	11:2I:112:THR:OG1	2.20	0.72
8:72:51:VAL:HG22	8:72:52:ASP:H	1.55	0.72
9:8E:13:ALA:HB2	9:8E:68:GLY:HA3	1.70	0.72
54:1G:1133:G:H1	54:1G:1141:C:H42	1.36	0.72
24:1H:516:C:OP1	51:N8:13:LYS:NZ	2.23	0.72
35:78:39:LYS:HD2	35:78:45:LEU:HD21	1.70	0.72
1:13:737:A:H2'	1:13:738:C:C6	2.25	0.72
24:1H:761:A:OP1	57:1H:3642:HOH:O	2.08	0.72
19:AA:60:VAL:HG21	19:AA:74:PHE:HB3	1.72	0.72
2:12:178:ARG:NH1	2:12:196:LEU:O	2.20	0.72
1:13:1146:A:OP2	57:13:1897:HOH:O	2.08	0.72
24:14:739:G:OP1	57:14:3822:HOH:O	2.07	0.72
54:1G:1289:A:OP1	21:1B:10:ARG:NH1	2.21	0.72
24:1H:1642:G:N7	57:1H:3903:HOH:O	2.23	0.72
25:1J:5:C:O2'	25:1J:27:C:O2	2.06	0.72
28:29:49:LEU:O	28:29:78:LEU:HB3	1.89	0.72
7:62:20:ASP:HB3	7:62:23:VAL:HG23	1.71	0.72
50:I5:13:ARG:HE	50:I5:22:ILE:HG23	1.55	0.72
2:1E:84:GLU:HB3	2:1E:219:VAL:HG21	1.71	0.71
24:1H:1981:A:OP1	57:1H:3606:HOH:O	2.07	0.71
30:49:40:ASN:HB2	30:49:91:ARG:HG3	1.72	0.71
41:95:21:ARG:CD	41:95:91:TYR:CG	2.73	0.71
39:B8:25:GLY:H	39:B8:49:VAL:HG23	1.55	0.71
1:13:745:C:H2'	1:13:746:A:C8	2.25	0.71
24:14:810:U:O4	57:14:3746:HOH:O	2.06	0.71
54:1G:1182:G:H5'	54:1G:1183:A:H5'	1.71	0.71
24:1H:456:C:H2'	43:F8:68:ARG:HH22	1.54	0.71
24:1H:969:U:O4	57:1H:4347:HOH:O	2.08	0.71
27:11:31:LYS:HD2	27:11:94:LEU:HD11	1.71	0.71
24:14:2652:C:H42	24:14:2668:G:H1	1.38	0.71
24:14:800:A:OP1	57:14:3800:HOH:O	2.07	0.71
24:1H:446:G:OP2	57:1H:3649:HOH:O	2.08	0.71
24:1H:731:C:H5''	57:1H:3781:HOH:O	1.89	0.71
22:3K:35:QUO:H8	22:3K:35:QUO:H5'	1.72	0.71
5:4E:126:ARG:HH11	5:4E:126:ARG:HG3	1.54	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:F8:60:ARG:NH2	52:P8:47:ARG:HH12	1.87	0.71
27:11:25:THR:HG21	27:11:81:ALA:HA	1.71	0.71
24:14:1525:G:H2'	24:14:1526:G:H8	1.56	0.71
2:1E:115:LEU:HD13	2:1E:145:LEU:HB3	1.72	0.71
54:1G:1435:G:H2'	54:1G:1436:U:C6	2.24	0.71
24:1H:2418:A:OP2	53:Q8:29:LYS:NZ	2.23	0.71
24:1H:70:G:H21	24:1H:71:A:H62	1.38	0.71
45:D5:132:ASN:N	45:D5:132:ASN:OD1	2.23	0.71
47:J8:51:VAL:HG11	47:J8:74:VAL:HG11	1.71	0.71
2:12:130:ARG:HB2	2:12:135:GLN:HE21	1.55	0.71
24:14:1667:G:O2'	24:14:1991:U:O4	2.06	0.71
24:1H:1521:G:N7	57:1H:4415:HOH:O	2.23	0.71
24:1H:574:C:OP2	57:1H:4002:HOH:O	2.08	0.71
24:1H:918:A:N3	25:16:80:U:O2'	2.24	0.71
34:25:75:SER:OG	39:75:74:ARG:NH1	2.23	0.71
41:95:21:ARG:HD2	41:95:91:TYR:CZ	2.25	0.71
54:1G:957:U:H1'	54:1G:960:U:H5	1.55	0.71
29:31:6:VAL:HG21	29:31:119:ARG:HB2	1.71	0.71
24:14:2343:C:HO2'	24:14:2373:G:HO2'	1.34	0.71
24:14:571:A:OP2	57:14:3772:HOH:O	2.08	0.71
2:1E:189:ASP:HB3	2:1E:191:ASP:HB2	1.72	0.71
54:1G:741:G:O6	57:1G:1841:HOH:O	2.07	0.71
24:1H:1728:G:H8	24:1H:1732:A:H62	1.39	0.71
10:1I:38:ILE:HG23	10:1I:71:LEU:HB3	1.71	0.71
22:2L:1:G:H2'	22:2L:2:G:H8	1.53	0.71
39:B8:10:VAL:HA	39:B8:12:SER:N	2.06	0.71
24:1H:259:G:H21	24:1H:621:A:H8	1.35	0.71
3:22:20:SER:HB3	3:22:22:TRP:HE1	1.54	0.71
15:6I:26:GLU:OE2	15:6I:77:ARG:NH1	2.20	0.71
24:1H:956:G:OP2	36:88:14:ARG:NH2	2.24	0.71
45:D5:33:LEU:HD23	45:D5:90:VAL:HG21	1.72	0.71
52:P8:10:ARG:O	52:P8:14:LYS:HB2	1.91	0.71
1:13:677:U:H3	1:13:713:G:H22	1.37	0.71
24:14:2353:G:N7	57:14:4207:HOH:O	2.24	0.71
24:14:493:G:N7	57:14:3923:HOH:O	2.22	0.71
26:71:45:ALA:HB2	26:71:212:VAL:HG22	1.72	0.71
19:AA:22:LEU:HB3	19:AA:27:GLU:HG3	1.71	0.71
53:Q8:36:LYS:HG2	53:Q8:37:SER:H	1.54	0.71
24:14:1093:G:H22	24:14:1097:U:H5''	1.55	0.71
24:1H:136:G:N7	57:1H:4132:HOH:O	2.24	0.71
4:32:18:LYS:NZ	4:32:26:CYS:HB3	2.06	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:30:LYS:HA	4:32:31:CYS:HB3	1.73	0.71
30:41:112:PRO:HG3	50:M8:38:LYS:HB2	1.73	0.71
24:1H:2315:G:N3	30:41:128:ARG:NH2	2.37	0.71
42:E8:45:TYR:OH	42:E8:49:LYS:NZ	2.16	0.71
24:14:120:U:OP2	57:14:3547:HOH:O	2.08	0.70
24:14:273(C):C:H42	24:14:363(C):G:H1	1.37	0.70
24:1H:2518:A:OP2	57:1H:4063:HOH:O	2.09	0.70
36:88:20:ALA:HB1	36:88:99:PRO:HD2	1.73	0.70
41:95:38:LEU:HD13	41:95:55:ALA:HB1	1.73	0.70
45:D5:103:ARG:HG2	45:D5:136:PHE:HB2	1.71	0.70
1:13:108:G:H5''	1:13:109:A:H5''	1.70	0.70
24:14:2598:A:OP1	57:14:4310:HOH:O	2.09	0.70
10:1A:32:ALA:HB2	10:1A:81:THR:HG21	1.73	0.70
24:1H:2017:U:OP2	57:1H:4546:HOH:O	2.08	0.70
24:1H:2878:U:O4	57:1H:4242:HOH:O	2.07	0.70
44:G8:76:CYS:SG	44:G8:97:ARG:HG3	2.31	0.70
47:J8:73:LEU:HB3	47:J8:90:ILE:HG22	1.73	0.70
24:14:270(L):U:H3'	24:14:270(M):U:H5''	1.71	0.70
24:14:1007:C:OP1	33:15:35:ARG:NH1	2.23	0.70
25:16:40:U:H3	25:16:43:C:H5''	1.56	0.70
24:1H:1381:G:N7	57:1H:4011:HOH:O	2.24	0.70
35:35:57:THR:HG22	35:35:59:LEU:H	1.55	0.70
45:H8:16:SER:O	45:H8:20:ARG:NH1	2.22	0.70
24:14:2306:C:H3'	24:14:2307:G:H5''	1.73	0.70
2:1E:178:ARG:NH1	2:1E:196:LEU:O	2.22	0.70
24:1H:787:U:OP1	57:1H:3880:HOH:O	2.09	0.70
57:1H:3653:HOH:O	28:21:135:HIS:NE2	2.24	0.70
24:1H:2572:A:N7	28:21:144:ARG:HD2	2.06	0.70
31:51:54:ARG:HD3	31:51:65:HIS:ND1	2.06	0.70
38:65:35:ILE:HD11	38:65:97:ARG:HE	1.56	0.70
43:B5:51:VAL:H	43:B5:83:VAL:HG23	1.57	0.70
24:14:2419:U:OP1	53:M5:34:TRP:HE3	1.74	0.70
1:13:1281:U:OP2	1:13:1282:C:N4	2.19	0.70
24:14:2255:G:H21	46:E5:9:SER:HB2	1.55	0.70
24:14:31:C:OP1	57:14:3947:HOH:O	2.08	0.70
24:1H:1383:C:O2	57:1H:4502:HOH:O	2.09	0.70
28:29:55:ASN:O	28:29:57:LYS:NZ	2.25	0.70
13:4A:66:LEU:HA	13:4A:70:LEU:HB2	1.72	0.70
6:52:7:ASN:HD21	18:9A:34:TYR:HE1	1.39	0.70
44:C5:47:LYS:H	44:C5:60:PHE:HB3	1.57	0.70
40:C8:5:LYS:NZ	40:C8:5:LYS:HB2	2.07	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:D8:1:MET:HE3	41:D8:43:GLU:H	1.57	0.70
43:F8:60:ARG:HH22	52:P8:47:ARG:HH12	1.36	0.70
47:J8:3:LYS:O	47:J8:12:PRO:HD3	1.90	0.70
24:14:1386:C:H2'	24:14:1387:C:H6	1.56	0.70
24:14:1417:C:OP2	57:14:3893:HOH:O	2.08	0.70
24:14:1623:G:N7	57:14:3695:HOH:O	2.24	0.70
24:14:674:G:O2'	29:39:74:ARG:HG3	1.91	0.70
24:1H:1593:G:H2'	24:1H:1594:G:C8	2.26	0.70
24:1H:1689:A:H62	24:1H:1698:A:H2	1.39	0.70
24:1H:2056:G:N7	57:1H:4207:HOH:O	2.22	0.70
24:1H:583:G:N7	57:1H:3705:HOH:O	2.24	0.70
24:1H:784:A:OP1	57:1H:3874:HOH:O	2.09	0.70
35:35:122:PRO:HB3	35:35:141:ALA:HB1	1.72	0.70
29:39:20:LEU:HD13	29:39:199:TRP:HH2	1.57	0.70
12:3I:71:PRO:O	12:3I:102:ARG:NH1	2.25	0.70
30:49:47:LYS:HG3	30:49:81:LYS:HG2	1.71	0.70
13:4A:108:ARG:HD3	13:4A:114:ARG:HE	1.55	0.70
24:1H:2469:A:O2'	36:88:56:ARG:NE	2.24	0.70
53:M5:40:GLU:HA	53:M5:43:GLN:HB2	1.73	0.70
24:14:2534:A:N7	57:14:4237:HOH:O	2.25	0.70
24:1H:1510:A:O2'	24:1H:1512:G:N7	2.21	0.70
24:1H:790:C:H5'	57:1H:3879:HOH:O	1.91	0.70
25:1J:28:C:H42	25:1J:56:G:H1	1.38	0.70
24:1H:363(B):G:H2'	24:1H:363(C):G:H8	1.57	0.70
24:1H:862:G:OP2	57:1H:3972:HOH:O	2.09	0.70
22:3L:21:A:H61	22:3L:55:U:H3	1.37	0.70
33:58:73:THR:HG22	33:58:84:LYS:HG2	1.74	0.70
24:14:2318:G:H1	38:65:2:ALA:HB1	1.57	0.70
35:78:19:VAL:HG23	35:78:27:HIS:HB2	1.73	0.70
24:14:1063:G:O6	24:14:1075:C:N4	2.24	0.70
33:15:18:ALA:HA	33:15:21:LYS:HG3	1.74	0.70
54:1G:766:A:OP2	57:1G:1750:HOH:O	2.09	0.70
24:1H:804:A:OP1	57:1H:3776:HOH:O	2.08	0.70
3:22:47:LEU:O	3:22:50:ALA:N	2.25	0.70
45:D5:105:VAL:HG22	45:D5:107:THR:H	1.56	0.70
1:13:737:A:H2'	1:13:738:C:H6	1.54	0.70
24:14:83:G:N2	24:14:102:G:O2'	2.24	0.70
54:1G:971:G:N2	54:1G:1363:A:OP2	2.24	0.70
54:1G:315:A:OP1	57:1G:1894:HOH:O	2.09	0.70
54:1G:617:G:N7	57:1G:1796:HOH:O	2.25	0.70
30:49:107:LEU:HA	30:49:111:LEU:HD12	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:1I:61:GLU:OE2	14:5I:45:ARG:NH1	2.25	0.70
43:F8:36:LYS:HG2	43:F8:54:VAL:HB	1.73	0.70
1:13:768:A:OP2	57:13:1771:HOH:O	2.10	0.69
25:16:7:G:H4'	38:A8:29:PHE:CD2	2.26	0.69
54:1G:353:A:H8	54:1G:353:A:H5'	1.57	0.69
8:7E:19:VAL:HG23	8:7E:21:LYS:HG3	1.74	0.69
37:98:33:ARG:HH22	51:N8:55:ARG:HG2	1.57	0.69
38:A8:26:LEU:HD23	38:A8:87:PHE:HD1	1.56	0.69
57:1H:4144:HOH:O	44:G8:84:ARG:NH2	2.24	0.69
1:13:452:A:H62	1:13:480:U:H3	1.37	0.69
1:13:576:G:OP1	57:13:1827:HOH:O	2.09	0.69
24:14:2577:A:OP1	57:14:3541:HOH:O	2.10	0.69
24:1H:1997:G:OP2	57:1H:3991:HOH:O	2.10	0.69
24:1H:563:G:OP2	57:1H:3580:HOH:O	2.08	0.69
24:1H:946:G:OP2	57:1H:4112:HOH:O	2.09	0.69
24:1H:981:A:OP1	57:1H:3761:HOH:O	2.10	0.69
36:45:19:GLY:H	36:45:98:LYS:NZ	1.90	0.69
1:13:1291:G:OP1	7:6E:37:ASN:ND2	2.21	0.69
24:14:446:G:OP2	57:14:3899:HOH:O	2.09	0.69
10:1A:33:GLN:HB3	10:1A:75:ILE:HG12	1.74	0.69
54:1G:552:U:H2'	54:1G:553:A:H8	1.55	0.69
54:1G:920:U:H2'	54:1G:921:U:C6	2.27	0.69
39:75:56:GLY:O	39:75:59:THR:HG22	1.93	0.69
54:1G:1305:G:N2	54:1G:1331:G:H2'	2.05	0.69
24:1H:1021:A:H62	24:1H:1141:U:H3	1.40	0.69
24:1H:1636:C:OP2	57:1H:3555:HOH:O	2.09	0.69
24:1H:2588:G:OP1	57:1H:3876:HOH:O	2.10	0.69
32:61:110:ASP:OD2	32:61:113:ARG:NH1	2.25	0.69
26:79:13:LYS:NZ	26:79:31:GLU:O	2.24	0.69
41:95:81:TYR:HD1	41:95:83:ARG:HH12	1.40	0.69
25:1J:102:G:N2	45:D5:73:GLN:OE1	2.22	0.69
1:13:1305:G:N2	1:13:1331:G:H2'	2.07	0.69
24:14:1394:U:OP1	57:14:3917:HOH:O	2.10	0.69
24:14:300:A:N6	57:14:3846:HOH:O	2.16	0.69
24:14:603:A:H8	24:14:604:G:H1'	1.57	0.69
54:1G:1322:C:O2'	54:1G:1323:G:O5'	2.10	0.69
54:1G:324:G:OP2	57:1G:1823:HOH:O	2.11	0.69
25:1J:73:A:OP2	57:1J:227:HOH:O	2.11	0.69
44:G8:97:ARG:NH2	44:G8:104:GLY:O	2.25	0.69
27:11:79:VAL:HG21	27:11:111:LEU:HD21	1.74	0.69
2:12:76:GLN:NE2	2:12:206:ASP:OD1	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2878:U:O4	57:14:4080:HOH:O	2.10	0.69
24:14:361:G:OP1	57:14:4212:HOH:O	2.09	0.69
54:1G:1161:C:H42	54:1G:1175:G:H1	1.40	0.69
24:1H:1633:G:O6	57:1H:3694:HOH:O	2.07	0.69
24:1H:675:A:OP2	57:1H:4294:HOH:O	2.09	0.69
54:1G:261:U:OP2	20:BA:79:ARG:NH2	2.25	0.69
24:1H:593:G:H4'	53:Q8:62:LEU:HD22	1.73	0.69
1:13:1213:A:O2'	1:13:1215:G:N7	2.21	0.69
24:14:1633:G:OP2	57:14:4245:HOH:O	2.10	0.69
24:14:2611:U:C4	51:J5:3:LYS:HG3	2.28	0.69
57:14:3620:HOH:O	27:19:237:GLU:OE2	2.09	0.69
29:39:2:LYS:H	29:39:2:LYS:HD3	1.57	0.69
37:98:103:ARG:HH21	37:98:110:PRO:HD3	1.57	0.69
19:AI:40:ILE:HG23	19:AI:41:VAL:HG13	1.74	0.69
24:1H:138:G:N2	43:F8:44:GLU:OE2	2.21	0.69
24:14:1353:A:OP2	57:14:3578:HOH:O	2.11	0.69
24:14:2002:G:N7	57:14:4013:HOH:O	2.26	0.69
24:1H:768:G:O2'	24:1H:1379:A:N6	2.25	0.69
22:2L:24:G:H2'	22:2L:25:G:H8	1.56	0.69
45:H8:19:ARG:NH1	45:H8:84:GLU:O	2.25	0.69
24:1H:2035:G:OP1	57:1H:3740:HOH:O	2.10	0.69
24:1H:2712(A):A:OP2	57:1H:3625:HOH:O	2.11	0.69
3:22:72:LYS:HD2	3:22:75:VAL:HG23	1.73	0.69
22:3L:36:U:H3'	22:3L:37:A:H8	1.56	0.69
30:41:122:PRO:HB3	30:41:180:PHE:HD1	1.55	0.69
54:1G:1302:U:OP1	13:4A:13:LYS:NZ	2.26	0.69
24:1H:910:A:H62	36:88:12:GLN:HA	1.57	0.69
1:13:1182:G:C4'	1:13:1183:A:H5'	2.22	0.69
1:13:748:C:H4'	1:13:749:C:O5'	1.91	0.69
54:1G:352:C:OP2	57:1G:1775:HOH:O	2.10	0.69
54:1G:963:G:N3	10:1A:55:LYS:NZ	2.34	0.69
24:1H:1053:C:H42	24:1H:1106:G:H1	1.40	0.69
24:1H:1771:C:OP1	57:1H:3967:HOH:O	2.10	0.69
24:1H:676:A:H8	24:1H:2069:G:N2	1.88	0.69
24:1H:821:A:N1	57:1H:3830:HOH:O	2.26	0.69
32:61:132:PRO:O	32:61:133:HIS:ND1	2.25	0.69
44:G8:85:VAL:HG23	44:G8:96:ILE:HB	1.74	0.69
1:13:352:C:O2'	1:13:354:G:OP1	2.08	0.69
24:14:1828:G:OP2	57:14:3530:HOH:O	2.12	0.69
24:1H:978:G:OP2	57:1H:3760:HOH:O	2.10	0.69
24:14:770:G:OP2	57:14:4043:HOH:O	2.11	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:382:A:H2'	54:1G:383:A:C8	2.29	0.68
54:1G:953:G:H5'	54:1G:965:A:H61	1.57	0.68
24:1H:1349:A:OP1	57:1H:4125:HOH:O	2.11	0.68
24:1H:2849:U:H4'	24:1H:2868:A:C2	2.28	0.68
35:78:88:LEU:HD12	35:78:95:VAL:HG11	1.74	0.68
17:8A:87:LYS:HE2	17:8A:91:ARG:HH21	1.58	0.68
20:BA:75:ASN:N	20:BA:75:ASN:OD1	2.25	0.68
20:BI:10:LEU:HG	20:BI:12:ALA:H	1.58	0.68
35:78:49:ARG:HG3	53:Q8:60:LEU:HD12	1.75	0.68
1:13:1135:U:H4'	1:13:1136:U:H5	1.57	0.68
1:13:690:G:H2'	1:13:691:G:O4'	1.93	0.68
24:14:102:G:OP1	48:G5:7:ARG:NH2	2.17	0.68
24:14:1633:G:O6	57:14:3552:HOH:O	2.07	0.68
24:14:270(W):G:N7	57:14:4225:HOH:O	2.26	0.68
24:1H:1658:C:OP1	57:1H:3653:HOH:O	2.11	0.68
29:39:101:LEU:O	29:39:106:ARG:NH1	2.27	0.68
22:3K:18:G:H4'	22:3K:19:C:O5'	1.93	0.68
1:13:148:G:H2'	1:13:149:A:H8	1.58	0.68
24:14:2576:G:OP1	57:14:3541:HOH:O	2.09	0.68
24:1H:1899:G:N2	24:1H:1902:C:H41	1.87	0.68
24:1H:2023:G:H5'	24:1H:2617:C:H4'	1.75	0.68
24:1H:2154:G:H2'	24:1H:2155:G:H8	1.59	0.68
35:35:39:LYS:HG3	35:35:45:LEU:HD22	1.76	0.68
9:8E:9:ARG:HB3	9:8E:14:VAL:HG13	1.74	0.68
1:13:975:A:H8	1:13:975:A:H5''	1.59	0.68
24:14:2821:A:H3'	57:14:3526:HOH:O	1.94	0.68
2:1E:100:GLY:O	2:1E:104:ASN:N	2.24	0.68
54:1G:683:G:N2	54:1G:707:C:O2	2.22	0.68
24:1H:1828:G:OP1	57:1H:3950:HOH:O	2.11	0.68
54:1G:1228:C:OP1	13:4A:115:LYS:N	2.23	0.68
1:13:1179:A:H4'	9:8E:103:THR:HA	1.75	0.68
1:13:1412:C:H2'	1:13:1413:A:C8	2.28	0.68
24:14:1676:A:OP2	57:14:3561:HOH:O	2.12	0.68
24:14:2287:A:H62	24:14:2344:U:H3	1.38	0.68
24:14:578:A:OP2	57:14:3739:HOH:O	2.11	0.68
27:19:146:GLU:HB2	27:19:189:CYS:HB3	1.75	0.68
24:1H:1013:C:H42	24:1H:1149:G:H1	1.42	0.68
24:1H:2314:C:H2'	24:1H:2315:G:C8	2.27	0.68
22:3K:17:OMG:N2	22:3K:64:PSU:O4	2.26	0.68
5:4E:91:LEU:HD12	5:4E:120:THR:HG22	1.74	0.68
44:G8:81:LYS:HB3	44:G8:82:PRO:HA	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:978:A:OP2	1:13:1362(A):C:N4	2.25	0.68
24:1H:423:A:OP1	57:1H:3720:HOH:O	2.12	0.68
24:1H:733:G:N7	57:1H:4067:HOH:O	2.26	0.68
37:98:2:ARG:HA	37:98:5:LYS:HD2	1.76	0.68
43:B5:50:LYS:N	43:B5:87:GLN:OE1	2.26	0.68
39:B8:107:ASP:OD1	39:B8:107:ASP:N	2.25	0.68
45:D5:111:VAL:HG13	45:D5:113:ALA:H	1.59	0.68
1:13:1023:G:H3'	1:13:1024:G:H5''	1.75	0.68
27:19:65:ILE:HD11	27:19:67:PHE:CE1	2.28	0.68
24:1H:1665:A:N7	57:1H:4086:HOH:O	2.25	0.68
35:35:63:PRO:HB3	53:M5:30:ARG:HH21	1.59	0.68
12:3A:70:ILE:HD13	12:3A:77:LEU:HD12	1.75	0.68
38:65:109:GLY:O	38:65:111:GLU:N	2.23	0.68
8:7E:116:LYS:HG3	8:7E:127:LEU:HD22	1.76	0.68
16:7I:53:VAL:HG13	16:7I:79:VAL:HG22	1.76	0.68
9:8E:42:ARG:NH2	9:8E:75:ASP:OD2	2.27	0.68
1:13:276:G:O2'	17:8I:68:ARG:NH1	2.27	0.68
1:13:1320:C:N3	19:AI:36:ARG:NH1	2.42	0.68
20:BI:82:SER:O	20:BI:86:ARG:HB2	1.93	0.68
27:11:142:VAL:HG23	27:11:193:VAL:HA	1.75	0.68
24:14:399:G:OP2	57:14:3903:HOH:O	2.11	0.68
24:1H:1386:C:H2'	24:1H:1387:C:H6	1.59	0.68
7:62:92:SER:HB2	7:62:94:ARG:HE	1.59	0.68
54:1G:581:G:OP1	15:6A:61:GLY:HA3	1.93	0.68
40:85:92:ARG:HG3	40:85:94:ASN:HB3	1.76	0.68
20:BA:97:ALA:O	20:BA:99:LEU:HG	1.94	0.68
1:13:191(F):U:O2	20:BI:105:SER:OG	2.10	0.68
24:1H:1430:C:H2'	24:1H:1431:U:C6	2.28	0.68
24:1H:1676:A:OP2	57:1H:3658:HOH:O	2.11	0.68
14:5I:29:ARG:HD3	14:5I:40:CYS:SG	2.33	0.68
16:7A:3:LYS:HG3	16:7A:24:ALA:HB2	1.76	0.68
41:95:21:ARG:CD	41:95:91:TYR:CD1	2.76	0.68
1:13:1320:C:OP2	19:AI:3:ARG:NH2	2.26	0.68
1:13:601:C:H2'	1:13:602:A:H8	1.57	0.67
24:14:586:A:OP2	57:14:3517:HOH:O	2.11	0.67
10:1A:92:THR:HG23	10:1A:93:GLY:H	1.59	0.67
24:1H:2406:U:OP1	57:1H:3683:HOH:O	2.13	0.67
24:1H:428:A:OP1	57:1H:3709:HOH:O	2.11	0.67
4:32:24:GLU:OE1	4:32:24:GLU:N	2.26	0.67
31:59:103:LEU:HD22	31:59:121:ILE:HG21	1.76	0.67
16:7I:23:ASP:OD2	16:7I:25:ARG:NH1	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:J8:93:GLU:OE2	47:J8:94:LEU:N	2.27	0.67
1:13:1348:U:H3	1:13:1374:A:H2	1.40	0.67
24:14:2143:C:H2'	24:14:2144:U:O4'	1.94	0.67
54:1G:1095:U:P	54:1G:1108:G:H1	2.16	0.67
24:1H:273(F):C:H3'	24:1H:274:G:H5''	1.77	0.67
3:22:27:LYS:NZ	3:22:28:GLN:OE1	2.27	0.67
40:C8:105:VAL:HG22	41:D8:44:LYS:HG2	1.76	0.67
54:1G:866:C:O2'	54:1G:919:A:OP1	2.12	0.67
3:2E:127:ARG:NH2	3:2E:192:THR:OG1	2.27	0.67
1:13:468:A:H1'	16:7I:82:GLN:HE22	1.59	0.67
6:5E:97:PHE:HB2	18:9I:32:ARG:HE	1.59	0.67
38:A8:34:HIS:HB2	38:A8:36:TYR:HE1	1.59	0.67
1:13:511:C:OP2	4:3E:49:ARG:NH2	2.27	0.67
54:1G:690:G:H2'	54:1G:691:G:O4'	1.95	0.67
34:25:47:ILE:HG13	34:25:48:PRO:HD2	1.75	0.67
4:32:163:GLU:OE2	4:32:166:LYS:NZ	2.28	0.67
30:41:130:ASN:HB3	30:41:160:VAL:HA	1.77	0.67
33:58:35:ARG:HG3	33:58:37:LYS:HG3	1.77	0.67
1:13:1504:G:OP1	57:13:1732:HOH:O	2.13	0.67
24:14:2251:G:OP1	36:45:82:ARG:NH1	2.28	0.67
54:1G:1014:A:H2'	54:1G:1015:A:C8	2.29	0.67
54:1G:593:G:H1	54:1G:646:U:H3	1.42	0.67
24:1H:1690:A:N1	57:1H:4484:HOH:O	2.27	0.67
24:1H:270(V):G:H2'	24:1H:270(W):G:H8	1.59	0.67
24:1H:2445:G:OP1	29:31:74:ARG:NH2	2.28	0.67
53:M5:54:GLU:HG2	53:M5:57:ARG:HH22	1.59	0.67
1:13:262:A:H2'	1:13:263:A:C8	2.30	0.67
24:14:1828:G:OP1	57:14:3592:HOH:O	2.12	0.67
54:1G:1076:C:P	2:12:175:ARG:HH12	2.18	0.67
35:35:47:ASP:OD2	35:35:50:ARG:NH2	2.26	0.67
54:1G:582:U:OP1	15:6A:64:ARG:NH1	2.26	0.67
43:F8:67:GLY:O	43:F8:69:TYR:N	2.28	0.67
50:I5:37:SER:O	50:I5:40:HIS:N	2.27	0.67
24:1H:517:C:OP1	51:N8:16:ARG:NH2	2.27	0.67
1:13:560:U:H5'	1:13:566:G:N2	2.10	0.67
24:1H:2791:C:N3	24:1H:2807:G:N2	2.41	0.67
24:1H:761:A:N7	57:1H:4069:HOH:O	2.28	0.67
3:22:32:LEU:HD22	3:22:59:ARG:HH12	1.59	0.67
22:2L:62:G:H3'	22:2L:63:5MU:H71	1.77	0.67
32:69:103:ARG:H	32:69:103:ARG:HE	1.41	0.67
39:B8:7:ILE:HG22	39:B8:9:LEU:HD23	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BA:57:ARG:NE	20:BA:102:GLY:HA3	2.10	0.67
2:12:236:TYR:HB3	2:12:239:VAL:HG22	1.77	0.67
1:13:1129:C:N4	1:13:1133:G:N7	2.42	0.67
24:14:1257:C:H4'	29:39:83:PHE:CE1	2.30	0.67
24:14:751:A:OP1	57:14:3496:HOH:O	2.13	0.67
54:1G:1281:U:OP2	54:1G:1282:C:N4	2.26	0.67
24:1H:2345:G:H1'	24:1H:2382:G:H5'	1.76	0.67
24:1H:2314:C:H5'	30:41:38:VAL:HG11	1.76	0.67
38:65:14:VAL:HG11	38:65:89:ARG:HH11	1.60	0.67
19:AI:19:VAL:HG11	19:AI:44:MET:HG2	1.77	0.67
1:13:887:G:N7	57:13:1834:HOH:O	2.27	0.67
54:1G:1391:U:H2'	54:1G:1392:G:C8	2.29	0.67
12:3I:62:SER:HB2	12:3I:64:TYR:HD1	1.59	0.67
28:29:181:LEU:HD21	39:75:5:ALA:HB1	1.75	0.67
24:14:243:U:OP1	53:M5:6:THR:OG1	2.09	0.67
24:1H:450:G:O6	57:1H:3859:HOH:O	2.12	0.67
22:2K:10:C:N3	22:2K:26:G:N2	2.36	0.67
45:D5:148:ASP:OD2	45:D5:170:THR:OG1	2.09	0.67
24:14:1250:G:OP1	57:14:4166:HOH:O	2.12	0.66
24:14:2404:C:O3'	35:35:77:ARG:NH2	2.27	0.66
24:14:399:G:OP2	57:14:3906:HOH:O	2.12	0.66
2:1E:21:ARG:HB3	2:1E:39:ILE:HA	1.75	0.66
54:1G:736:C:H2'	54:1G:737:A:C8	2.30	0.66
24:1H:1251:C:H5	57:1H:3801:HOH:O	1.77	0.66
24:1H:2588:G:OP1	57:1H:3874:HOH:O	2.13	0.66
4:3E:30:LYS:C	4:3E:32:ALA:H	1.95	0.66
22:3L:51:C:OP2	22:3L:52:G:N2	2.29	0.66
38:65:29:PHE:HD1	38:65:30:ARG:N	1.94	0.66
1:13:693:G:H2'	1:13:694:A:C8	2.30	0.66
1:13:771:G:N7	57:13:1776:HOH:O	2.27	0.66
24:14:2748:A:H2'	24:14:2749:A:C8	2.30	0.66
24:14:1800:C:OP2	27:19:183:ARG:NH2	2.28	0.66
54:1G:1178:G:H22	54:1G:1181:G:H5''	1.60	0.66
35:35:47:ASP:HB3	35:35:48:PRO:O	1.95	0.66
24:14:2531:A:H5'	31:59:157:TYR:CZ	2.30	0.66
8:72:85:ARG:NH1	8:72:87:SER:O	2.27	0.66
49:H5:8:LEU:HB2	49:H5:28:LEU:HD22	1.75	0.66
1:13:343:U:O2	1:13:346:G:N2	2.25	0.66
24:14:1352:U:OP1	57:14:3884:HOH:O	2.12	0.66
54:1G:1105:A:H2'	54:1G:1106:G:C8	2.29	0.66
54:1G:1502:A:H2	54:1G:1505:G:N1	1.90	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2E:175:LEU:HD21	3:2E:201:TYR:HE2	1.60	0.66
4:32:149:ALA:O	4:32:153:ARG:NE	2.28	0.66
12:3A:34:ARG:HH11	12:3A:34:ARG:HB3	1.61	0.66
24:1H:1010:A:HO2'	24:1H:1152:C:HO2'	1.43	0.66
24:1H:392:C:OP1	57:1H:3697:HOH:O	2.12	0.66
3:2E:113:ALA:HB2	3:2E:202:ILE:HG13	1.77	0.66
29:39:41:LEU:HB3	29:39:44:ARG:HD3	1.77	0.66
7:62:113:GLU:HB2	7:62:119:ARG:HG2	1.76	0.66
9:82:9:ARG:NH1	9:82:9:ARG:O	2.26	0.66
24:14:1614:A:H62	42:A5:93:ALA:HB2	1.61	0.66
1:13:1058:G:OP1	3:2E:199:LYS:NZ	2.28	0.66
1:13:129(A):G:H4'	1:13:130:A:H5''	1.76	0.66
24:14:1464:C:HO2'	24:14:1528:A:H8	1.41	0.66
24:14:2320:A:H1'	24:14:2321:G:C6	2.31	0.66
2:1E:24:TRP:CZ3	2:1E:26:PRO:HA	2.30	0.66
54:1G:827:U:H3	54:1G:872:A:N6	1.88	0.66
24:1H:1:G:H1	24:1H:2902:C:H42	1.43	0.66
24:1H:442:G:H4'	29:31:46:ARG:HG3	1.76	0.66
57:1H:3651:HOH:O	28:21:135:HIS:NE2	2.28	0.66
4:3E:98:GLU:OE2	4:3E:103:ASN:ND2	2.27	0.66
13:4I:58:GLU:O	13:4I:62:ASN:ND2	2.26	0.66
31:51:8:PRO:HD2	31:51:69:ARG:HE	1.60	0.66
35:78:38:GLN:HG2	35:78:45:LEU:HD13	1.78	0.66
41:95:67:GLY:O	41:95:88:ARG:HD2	1.96	0.66
45:D5:128:VAL:HG23	45:D5:160:GLY:HA3	1.77	0.66
42:E8:13:SER:HB3	42:E8:16:LYS:HG3	1.76	0.66
24:14:1352:U:OP1	57:14:3882:HOH:O	2.13	0.66
24:1H:2428:G:N7	57:1H:3770:HOH:O	2.29	0.66
22:3K:24:G:H2'	22:3K:25:G:C8	2.28	0.66
22:3L:36:U:H3'	22:3L:37:A:C8	2.29	0.66
13:4A:8:GLU:HG3	13:4A:22:ILE:HG23	1.76	0.66
39:75:6:LEU:N	39:75:9:LEU:HB3	2.09	0.66
24:14:2577:A:O4'	51:J5:3:LYS:HB2	1.96	0.66
1:13:223:U:H2'	1:13:224:C:H6	1.58	0.66
24:14:1997:G:OP2	57:14:3645:HOH:O	2.14	0.66
2:1E:87:ARG:NH1	2:1E:220:ASP:OD1	2.29	0.66
54:1G:1298:C:H41	7:62:114:ARG:HB3	1.60	0.66
54:1G:975:A:H4'	54:1G:976:G:H5''	1.78	0.66
24:1H:1221:C:H2'	24:1H:1222:C:C6	2.29	0.66
54:1G:1192:C:OP2	3:22:4:LYS:NZ	2.29	0.66
4:3E:18:LYS:HE3	4:3E:31:CYS:HB2	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:75:88:ILE:HD11	39:75:91:ARG:CZ	2.26	0.66
26:79:56:GLN:NE2	26:79:203:GLY:O	2.28	0.66
45:H8:69:THR:HG22	45:H8:90:VAL:HG22	1.78	0.66
24:14:854:G:H2'	24:14:855:G:C8	2.30	0.66
27:19:93:ALA:HB3	27:19:105:ILE:HG22	1.77	0.66
2:1E:219:VAL:HA	2:1E:222:ILE:HD12	1.78	0.66
54:1G:1399:C:H4'	54:1G:1400:C:H5''	1.78	0.66
24:1H:397:G:N7	57:1H:4464:HOH:O	2.29	0.66
11:2I:124:LYS:HB3	11:2I:125:PHE:CD1	2.30	0.66
29:31:29:ASN:H	29:31:112:MET:CE	2.09	0.66
8:7E:10:LEU:HD22	8:7E:83:ILE:HD11	1.78	0.66
25:1J:83:G:H4'	49:H5:52:HIS:CG	2.31	0.66
50:I5:31:ILE:HG23	50:I5:32:TYR:HB2	1.78	0.66
2:12:144:ARG:HE	2:12:148:TYR:HE2	1.44	0.66
1:13:1145:C:H4'	1:13:1146:A:C8	2.31	0.66
24:14:1977:A:OP2	57:14:4195:HOH:O	2.13	0.66
24:14:249:C:OP1	57:14:3506:HOH:O	2.12	0.66
24:14:259:G:H21	24:14:621:A:H8	1.43	0.66
24:1H:2867:G:OP2	39:B8:119:LYS:NZ	2.25	0.66
24:1H:585:G:OP2	57:1H:3803:HOH:O	2.12	0.66
24:1H:760:G:OP2	57:1H:4068:HOH:O	2.12	0.66
28:21:101:ARG:HD2	28:21:171:GLU:HA	1.78	0.66
4:32:73:ARG:O	4:32:77:ASN:ND2	2.26	0.66
15:6I:17:ARG:HD3	15:6I:26:GLU:HG3	1.77	0.66
8:7E:64:LYS:HB3	8:7E:79:VAL:HG21	1.77	0.66
44:C5:47:LYS:N	44:C5:60:PHE:HB3	2.09	0.66
2:12:166:ASP:HB3	2:12:169:LYS:HB2	1.78	0.66
24:14:1050:A:N6	24:14:2751:G:N7	2.43	0.66
24:14:1332:G:H5'	24:14:1332:G:C8	2.31	0.66
54:1G:1028:C:H42	54:1G:1033:G:H1	1.43	0.66
54:1G:1454:G:OP1	20:BA:39:LYS:NZ	2.26	0.66
24:1H:1800:C:OP2	27:11:183:ARG:NH2	2.28	0.66
24:1H:2150:U:H2'	24:1H:2151:G:C8	2.31	0.66
24:1H:219:G:O6	57:1H:3709:HOH:O	2.10	0.66
24:1H:2402:C:H2'	24:1H:2403:C:C5	2.31	0.66
24:1H:730:C:H3'	57:1H:3641:HOH:O	1.94	0.66
22:3K:13:G:H2'	22:3K:14:A:H8	1.61	0.66
8:72:45:ILE:HG22	8:72:47:GLY:H	1.59	0.66
17:8A:58:GLU:OE1	17:8A:75:ARG:NH2	2.29	0.66
40:C8:5:LYS:HZ2	40:C8:5:LYS:HB2	1.61	0.66
45:D5:144:LEU:HB2	45:D5:174:VAL:HG11	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:3K:84:C:H5'	47:J8:30:VAL:HG21	1.78	0.66
1:13:747:C:OP2	1:13:748:C:N4	2.25	0.65
24:14:1786:A:H2	24:14:2606:C:H1'	1.59	0.65
24:14:2531:A:H5'	31:59:157:TYR:CE2	2.31	0.65
24:14:943:U:O4	57:14:4058:HOH:O	2.12	0.65
34:25:4:PRO:O	34:25:5:GLN:HB2	1.95	0.65
39:75:134:GLU:CD	39:75:134:GLU:H	1.99	0.65
39:B8:7:ILE:H	39:B8:10:VAL:HG22	1.61	0.65
24:14:2074:U:O5'	57:14:3494:HOH:O	2.15	0.65
24:14:2324:C:H5''	24:14:2325:G:H5'	1.78	0.65
54:1G:1274:G:H2'	54:1G:1275:A:C8	2.31	0.65
24:1H:1664:A:OP2	57:1H:4088:HOH:O	2.13	0.65
24:1H:341:G:N7	57:1H:3736:HOH:O	2.29	0.65
28:29:8:LYS:HB3	28:29:192:ASN:HA	1.76	0.65
31:59:91:GLY:HA3	31:59:94:TYR:CE2	2.31	0.65
45:H8:139:VAL:HG22	45:H8:155:LEU:HD21	1.78	0.65
1:13:1346:A:OP1	9:8E:120:ARG:NH1	2.28	0.65
24:14:1771:C:OP1	57:14:3634:HOH:O	2.13	0.65
24:14:861:A:N6	24:14:916:G:O2'	2.29	0.65
54:1G:1226:C:O2'	13:4A:111:LYS:NZ	2.23	0.65
54:1G:324:G:N7	57:1G:1825:HOH:O	2.29	0.65
54:1G:659:U:OP1	15:6A:9:GLN:NE2	2.30	0.65
24:1H:1425:G:O6	57:1H:4197:HOH:O	2.08	0.65
24:1H:2035:G:OP1	57:1H:3743:HOH:O	2.13	0.65
28:29:111:ARG:HA	37:55:2:ARG:HH12	1.60	0.65
36:88:66:ILE:O	36:88:104:PHE:N	2.29	0.65
39:B8:7:ILE:C	39:B8:9:LEU:H	2.00	0.65
44:C5:40:GLU:OE2	44:C5:40:GLU:N	2.28	0.65
1:13:576:G:OP1	57:13:1823:HOH:O	2.15	0.65
24:14:686:G:OP2	57:14:4044:HOH:O	2.13	0.65
54:1G:1259:C:N4	54:1G:1260:C:O2	2.30	0.65
24:1H:1517:G:H2'	24:1H:1518:C:C6	2.32	0.65
24:1H:2375:G:N7	57:1H:4387:HOH:O	2.29	0.65
35:78:47:ASP:OD2	35:78:50:ARG:NH2	2.29	0.65
44:C5:19:LYS:HG3	44:C5:20:TYR:H	1.61	0.65
45:D5:59:LEU:O	45:D5:61:LEU:N	2.26	0.65
1:13:323:U:H2'	1:13:324:G:O4'	1.97	0.65
24:14:1190:G:N7	57:14:3751:HOH:O	2.28	0.65
2:1E:71:VAL:HG12	2:1E:93:VAL:HB	1.77	0.65
24:1H:1190:G:N7	57:1H:3836:HOH:O	2.29	0.65
5:42:126:ARG:HG2	5:42:126:ARG:HH11	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1073:U:OP2	5:4E:57:LYS:NZ	2.30	0.65
38:65:64:GLU:OE2	38:65:67:ARG:NH1	2.30	0.65
1:13:1329:A:H5'	13:4I:29:ARG:HD2	1.79	0.65
1:13:272:C:H2'	1:13:273:A:C8	2.31	0.65
1:13:339:C:OP2	34:68:97:ARG:NH1	2.30	0.65
24:14:1636:C:OP2	57:14:3683:HOH:O	2.13	0.65
24:14:2124:G:H1	26:79:217:THR:HA	1.61	0.65
24:14:2562:U:H1'	34:25:23:ARG:HH11	1.62	0.65
24:1H:2593:U:O4	57:1H:3631:HOH:O	2.11	0.65
34:25:68:GLU:HB3	34:25:78:ARG:NH1	2.10	0.65
22:2K:48:C:N3	22:2K:52:G:N1	2.44	0.65
44:G8:53:PRO:HA	44:G8:56:PRO:HG3	1.79	0.65
1:13:1321:C:H3'	1:13:1322:C:H5''	1.79	0.65
1:13:247:G:N2	1:13:277:C:O2	2.27	0.65
24:14:1105:U:H2'	24:14:1106:G:C8	2.31	0.65
24:14:78:A:H2'	24:14:79:G:C8	2.32	0.65
27:19:253:GLN:HB3	27:19:255:LYS:HZ3	1.62	0.65
24:1H:71:A:H5'	24:1H:73:A:C8	2.32	0.65
24:1H:831:G:OP1	57:1H:3826:HOH:O	2.14	0.65
25:1J:80:U:H2'	25:1J:81:G:N2	2.10	0.65
28:21:111:ARG:HD3	28:21:160:TYR:CD2	2.32	0.65
1:13:1307:U:OP1	13:4I:101:GLN:NE2	2.29	0.65
24:14:1112:G:H5'	31:59:3:ARG:HD3	1.79	0.65
39:75:33:LYS:HE3	39:75:40:THR:HG21	1.77	0.65
24:1H:1243:G:O2'	35:78:7:ARG:NH2	2.29	0.65
40:85:97:ASP:OD1	40:85:98:LEU:N	2.29	0.65
24:1H:2295:C:OP1	38:A8:10:ARG:NH1	2.29	0.65
51:N8:40:LYS:NZ	51:N8:48:GLU:OE1	2.28	0.65
1:13:21:G:OP1	57:13:1763:HOH:O	2.15	0.65
24:14:1975:G:OP2	57:14:3631:HOH:O	2.15	0.65
54:1G:1392:G:H21	54:1G:1502:A:H8	1.43	0.65
24:1H:1345:C:OP2	57:1H:4501:HOH:O	2.14	0.65
24:1H:2635:C:H5''	28:21:78:LEU:HA	1.78	0.65
30:49:108:ASN:HA	50:I5:37:SER:HB3	1.78	0.65
3:2E:131:ARG:HH11	5:4E:50:GLU:HG2	1.61	0.65
17:8A:53:LEU:HD21	17:8A:85:VAL:HG11	1.79	0.65
9:8E:18:PHE:HD2	9:8E:62:TYR:HD2	1.42	0.65
1:13:1325:C:OP1	21:1F:15:ARG:NH2	2.27	0.65
1:13:266:G:H5''	1:13:268:C:H41	1.59	0.65
24:14:248:G:OP1	57:14:4142:HOH:O	2.15	0.65
24:14:2711:A:OP2	57:14:3569:HOH:O	2.14	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2776:A:OP1	24:14:2776:A:H3'	1.97	0.65
54:1G:422:C:O2'	54:1G:423:G:N2	2.30	0.65
24:1H:1537:C:H2'	24:1H:1538:G:C8	2.31	0.65
24:1H:2061:G:P	57:1H:3576:HOH:O	2.53	0.65
24:1H:2331:G:O3'	46:18:43:THR:HG22	1.95	0.65
22:2L:62:G:C5	22:2L:63:5MU:H72	2.32	0.65
35:35:52:GLU:OE2	35:35:55:ARG:NH2	2.30	0.65
12:3A:117:ARG:HB3	12:3A:122:THR:HB	1.79	0.65
22:3L:42:U:H2'	22:3L:43:G:C8	2.31	0.65
24:14:987:G:OP2	57:14:4152:HOH:O	2.14	0.65
54:1G:411:A:C5	54:1G:413:G:H1'	2.32	0.65
24:1H:988:A:P	49:L8:11:SER:HB2	2.37	0.65
22:2L:21:A:N6	22:2L:46:G:O2'	2.30	0.65
15:6A:36:ILE:HD12	15:6A:63:ARG:HD3	1.79	0.65
51:N8:41:PRO:O	51:N8:44:THR:OG1	2.15	0.65
24:14:1021:A:H62	24:14:1141:U:H3	1.44	0.64
54:1G:588:G:H1	54:1G:651:C:H42	1.45	0.64
28:21:167:VAL:HG12	28:21:189:PRO:HD3	1.78	0.64
24:1H:2784:C:O2	28:21:37:ARG:NH2	2.30	0.64
22:2L:7:G:N2	22:2L:76:C:O2	2.31	0.64
30:49:49:ASP:OD1	30:49:52:ILE:N	2.30	0.64
49:L8:26:LEU:HD21	49:L8:46:ASN:HB3	1.80	0.64
24:14:2656:U:H3	24:14:2665:A:H2	1.43	0.64
24:14:2822:G:N7	57:14:3528:HOH:O	2.29	0.64
24:14:958:U:O2	25:1J:89(A):A:O2'	2.14	0.64
2:1E:67:THR:HG21	2:1E:155:LEU:HB3	1.80	0.64
54:1G:501:C:H2'	54:1G:502:G:C8	2.32	0.64
24:1H:2362:G:OP1	53:Q8:44:LYS:NZ	2.28	0.64
9:8E:3:GLN:OE1	9:8E:20:ARG:NH1	2.30	0.64
27:11:17:THR:HG22	27:11:205:VAL:H	1.62	0.64
24:14:995:C:O2	33:15:3:THR:OG1	2.15	0.64
27:19:31:LYS:CD	27:19:32:SER:H	2.09	0.64
54:1G:1086:U:O5'	54:1G:1086:U:H6	1.81	0.64
54:1G:1171:G:H2'	54:1G:1172:C:C6	2.33	0.64
12:3I:117:ARG:HB3	12:3I:122:THR:HB	1.78	0.64
30:41:105:LYS:HD3	50:M8:26:SER:HB2	1.78	0.64
13:4I:90:LEU:HA	13:4I:93:ARG:HG2	1.79	0.64
7:62:15:ASP:OD1	7:62:44:TYR:OH	2.16	0.64
42:A5:65:LEU:HB3	42:A5:68:ARG:HD2	1.80	0.64
39:B8:2:ASN:HB2	39:B8:5:ALA:N	2.11	0.64
44:G8:94:LYS:HA	44:G8:94:LYS:HZ3	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:P8:12:ARG:HH21	52:P8:44:PRO:HB3	1.62	0.64
54:1G:1122:U:O4	54:1G:1123:A:N6	2.27	0.64
28:21:61:ARG:HH11	28:21:61:ARG:HB3	1.62	0.64
22:2K:35:QUO:C2	22:2K:35:QUO:C4	2.70	0.64
22:3L:8:4SU:HN3	22:3L:14:A:H62	1.45	0.64
45:H8:125:LEU:HG	45:H8:164:ALA:HB3	1.80	0.64
2:12:82:ARG:NH1	2:12:92:TYR:OH	2.31	0.64
24:14:1196:C:HO2'	24:14:1228:G:HO2'	1.42	0.64
54:1G:1286:A:C8	54:1G:1287:A:H4'	2.32	0.64
24:1H:880:G:H1	24:1H:897:C:H42	1.46	0.64
54:1G:1191:A:OP2	3:22:3:ASN:ND2	2.31	0.64
46:E5:49:LYS:HB3	46:E5:80:HIS:HB3	1.79	0.64
47:J8:85:LEU:CB	47:J8:86:SER:HB2	2.27	0.64
1:13:1145:C:H4'	1:13:1146:A:H8	1.62	0.64
1:13:1167:A:OP1	1:13:1167:A:H8	1.80	0.64
27:19:2:ALA:N	27:19:200:ASP:OD2	2.31	0.64
54:1G:974:A:OP2	14:5A:41:ARG:NH1	2.30	0.64
24:1H:1024:G:H3'	24:1H:1025:G:H5''	1.78	0.64
24:1H:192:C:N3	57:1H:3593:HOH:O	2.29	0.64
24:1H:270(K):C:O2	24:1H:270(N):G:N1	2.29	0.64
38:65:41:ASP:OD2	38:65:44:LYS:HG2	1.98	0.64
35:78:19:VAL:HG12	35:78:21:ARG:HB2	1.79	0.64
48:K8:33:MET:O	48:K8:37:PHE:HD1	1.80	0.64
24:14:1427:A:H4'	24:14:1428:C:O5'	1.98	0.64
27:19:242:ARG:HG2	27:19:246:PRO:HG3	1.80	0.64
54:1G:1086:U:H3	54:1G:1099:G:H22	1.46	0.64
24:1H:1533:C:H2'	24:1H:1534:G:C8	2.32	0.64
36:88:14:ARG:HG2	36:88:41:TRP:CH2	2.32	0.64
1:13:1318:A:H1'	19:AI:37:ARG:HH21	1.61	0.64
1:13:474:G:H2'	1:13:475:G:C8	2.32	0.64
24:14:2122:U:H2'	24:14:2123:G:O4'	1.98	0.64
24:14:617:G:OP1	29:39:40:GLN:NE2	2.31	0.64
24:14:654(J):A:OP2	24:14:654(M):C:N4	2.30	0.64
54:1G:1015:A:H2'	54:1G:1016:A:C8	2.33	0.64
54:1G:41:G:H2'	54:1G:42:G:C8	2.33	0.64
24:1H:1533:C:N4	24:1H:1538:G:H1	1.96	0.64
24:1H:1614:A:OP1	57:1H:3890:HOH:O	2.14	0.64
25:1J:42:C:O2	30:49:93:THR:N	2.21	0.64
28:21:92:THR:O	28:21:95:ILE:HG12	1.98	0.64
22:2K:27:A:H3'	22:2K:28:G:H8	1.60	0.64
30:49:75:LYS:HE3	30:49:77:ILE:HD11	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:55:2:ARG:N	37:55:5:LYS:HE3	2.13	0.64
15:6I:47:LYS:HD2	15:6I:47:LYS:H	1.62	0.64
41:95:35:LEU:HB2	41:95:37:VAL:HG13	1.78	0.64
6:52:100:ASN:ND2	18:9A:23:LYS:O	2.31	0.64
48:G5:17:SER:HB2	48:G5:20:GLU:H	1.62	0.64
48:K8:48:HIS:O	48:K8:52:ASP:HB2	1.98	0.64
24:14:1386:C:H2'	24:14:1387:C:C6	2.33	0.64
24:14:2074:U:OP1	57:14:3493:HOH:O	2.15	0.64
27:19:182:LEU:H	27:19:272:ALA:HB3	1.63	0.64
54:1G:1205:U:H4'	3:22:195:VAL:HG11	1.78	0.64
24:1H:1786:A:H2	24:1H:2606:C:H1'	1.63	0.64
24:1H:2706:G:N7	57:1H:4090:HOH:O	2.29	0.64
30:49:161:THR:HG22	30:49:163:ALA:H	1.61	0.64
8:72:86:ILE:HG21	8:72:133:LEU:HD22	1.79	0.64
39:75:27:THR:HG23	39:75:90:GLN:HB3	1.80	0.64
1:13:411:A:H62	1:13:413:G:N2	1.96	0.64
54:1G:345:C:H1'	54:1G:346:G:C2	2.33	0.64
24:1H:323:G:HO2'	24:1H:1205:U:H3	1.46	0.64
24:1H:331:A:N3	57:1H:4486:HOH:O	2.30	0.64
24:1H:587:C:OP2	35:78:21:ARG:NH2	2.31	0.64
24:1H:809:G:N7	57:1H:3551:HOH:O	2.30	0.64
35:35:105:LEU:O	35:35:106:LEU:HB3	1.97	0.64
22:3K:46:G:N2	22:3K:54:C:O2	2.31	0.64
22:3L:35:QUO:C2	22:3L:35:QUO:C4	2.73	0.64
1:13:1503:A:O2'	23:4K:13:A:N1	2.25	0.64
26:79:69:GLY:HA3	26:79:180:PHE:HZ	1.63	0.64
18:9A:22:VAL:HG22	18:9A:23:LYS:H	1.63	0.64
2:12:10:LEU:HA	2:12:13:ALA:HB2	1.80	0.63
24:14:1489:U:O4	57:14:4087:HOH:O	2.14	0.63
2:1E:14:GLY:H	2:1E:16:HIS:HE1	1.46	0.63
54:1G:1250:A:OP1	9:82:67:GLY:N	2.28	0.63
54:1G:962:C:H42	54:1G:973:G:H1	1.46	0.63
24:1H:1010:A:O2'	24:1H:1152:C:O2'	2.14	0.63
24:1H:1086:A:O2'	24:1H:1103:A:N1	2.27	0.63
35:35:84:ASN:HD22	35:35:117:GLU:HB3	1.63	0.63
43:F8:41:ASN:O	43:F8:45:THR:HG23	1.97	0.63
50:I5:12:ALA:HB1	50:I5:29:PRO:HA	1.80	0.63
1:13:5:U:O2'	1:13:6:G:O5'	2.14	0.63
27:19:228:PRO:HD3	27:19:235:GLY:HA3	1.80	0.63
24:1H:1430:C:H2'	24:1H:1431:U:H6	1.63	0.63
24:1H:1588:C:H2'	24:1H:1589:C:H6	1.61	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:39:42:ALA:O	29:39:45:ARG:HB3	1.98	0.63
22:3L:14:A:H3'	22:3L:15:G:H5''	1.80	0.63
37:55:29:LEU:HB3	37:55:75:LEU:HD11	1.81	0.63
44:C5:17:SER:O	44:C5:21:LYS:HB2	1.99	0.63
45:H8:30:ASN:OD1	45:H8:33:LEU:N	2.29	0.63
30:49:67:LYS:H	50:I5:6:HIS:CE1	2.15	0.63
2:12:101:MET:HA	2:12:108:ILE:HG13	1.79	0.63
24:14:2352:A:OP2	57:14:4207:HOH:O	2.15	0.63
2:1E:33:TYR:HB2	2:1E:43:ASP:HB2	1.78	0.63
54:1G:1228:C:H2'	54:1G:1229:A:H8	1.62	0.63
24:1H:2016:U:OP1	57:1H:4229:HOH:O	2.15	0.63
33:58:70:LYS:HE3	33:58:72:TYR:HE1	1.62	0.63
32:69:41:GLU:HA	32:69:44:LEU:HB2	1.79	0.63
8:7E:103:VAL:HG21	8:7E:110:ALA:HB2	1.80	0.63
20:BI:75:ASN:N	20:BI:75:ASN:OD1	2.32	0.63
57:14:4153:HOH:O	49:H5:13:ILE:O	2.16	0.63
50:I5:16:CYS:HA	50:I5:33:VAL:HG13	1.80	0.63
24:14:1084:A:N7	24:14:1085:A:N6	2.46	0.63
24:14:1467:C:H42	24:14:1525:G:H1	1.45	0.63
24:14:479:A:H4'	24:14:480:A:OP1	1.97	0.63
24:14:620:G:H4'	24:14:621:A:H5''	1.79	0.63
54:1G:1128:C:H1'	54:1G:1146:A:H61	1.64	0.63
54:1G:324:G:N7	57:1G:1820:HOH:O	2.31	0.63
24:1H:1534:G:N1	24:1H:1539:G:H1'	2.12	0.63
24:1H:2131:G:O2'	24:1H:2133:G:N3	2.31	0.63
24:1H:2287:A:N6	24:1H:2344:U:H3	1.97	0.63
24:1H:748:G:OP2	57:1H:4356:HOH:O	2.15	0.63
24:1H:674:G:H1'	29:31:74:ARG:HD2	1.81	0.63
24:14:2392:A:C8	35:35:61:ARG:HB3	2.32	0.63
22:3L:17:OMG:N2	22:3L:67:A:OP2	2.32	0.63
46:I8:24:LYS:O	46:I8:25:ARG:NH1	2.31	0.63
1:13:890:G:O2'	1:13:906:G:O6	2.11	0.63
24:14:1047:G:H21	24:14:1111:A:H62	1.45	0.63
54:1G:1002:G:H22	54:1G:1038:C:H42	1.46	0.63
54:1G:920:U:H2'	54:1G:921:U:H6	1.63	0.63
24:1H:1853:A:H2'	24:1H:1854:A:C8	2.34	0.63
24:1H:631:A:OP1	35:78:65:ARG:NH1	2.31	0.63
24:1H:833:U:O2	35:78:55:ARG:NH2	2.32	0.63
22:2L:36:U:H3	23:4L:17:G:H1	1.46	0.63
19:AA:7:LYS:HD3	19:AA:7:LYS:H	1.62	0.63
2:12:130:ARG:O	2:12:135:GLN:NE2	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1224:G:OP2	41:95:66:ARG:NH2	2.30	0.63
54:1G:1256:A:H62	54:1G:1277:C:H3'	1.64	0.63
54:1G:512:U:H2'	54:1G:513:C:H6	1.63	0.63
24:1H:739:G:OP1	57:1H:3934:HOH:O	2.14	0.63
25:1J:6:C:H2'	25:1J:7:G:H5''	1.81	0.63
4:32:12:CYS:SG	4:32:18:LYS:NZ	2.72	0.63
6:5E:6:VAL:HG22	6:5E:90:VAL:HG22	1.81	0.63
34:68:86:ILE:HG22	34:68:94:ARG:HG3	1.79	0.63
1:13:929:G:H1	1:13:1388:C:H42	1.46	0.63
24:14:1771:C:C1'	24:14:1786:A:H8	2.12	0.63
24:14:2052:G:C8	28:29:141:ILE:HD11	2.33	0.63
21:1B:6:ARG:HH21	21:1B:15:ARG:HH22	1.47	0.63
54:1G:1116:C:H42	54:1G:1184:G:H1	1.45	0.63
24:1H:2887:U:H2'	24:1H:2888:C:H6	1.63	0.63
13:4A:54:VAL:HA	13:4A:57:ARG:HB3	1.80	0.63
39:75:108:ARG:HA	39:75:111:ARG:HD2	1.79	0.63
27:11:17:THR:HG22	27:11:205:VAL:N	2.14	0.63
24:14:1291:C:H2'	24:14:1292:U:H6	1.64	0.63
24:14:634:C:H2'	24:14:635:C:C6	2.33	0.63
2:1E:21:ARG:HH21	2:1E:23:ARG:HG3	1.62	0.63
54:1G:1095:U:OP1	54:1G:1108:G:N2	2.31	0.63
24:1H:1520:U:OP2	57:1H:4413:HOH:O	2.15	0.63
24:1H:1593:G:H2'	24:1H:1594:G:H8	1.62	0.63
24:1H:2408:U:OP2	57:1H:3681:HOH:O	2.16	0.63
24:1H:2495:G:H5''	36:88:82:ARG:HB3	1.81	0.63
24:1H:836:G:H5''	24:1H:837:C:OP2	1.99	0.63
25:16:31:C:H4'	30:41:29:TRP:CH2	2.34	0.63
39:75:91:ARG:NH1	39:75:124:ASP:OD2	2.26	0.63
39:75:2:ASN:O	39:75:4:GLY:HA3	1.99	0.63
45:D5:97:GLU:HB3	45:D5:125:LEU:HD11	1.80	0.63
1:13:1127:G:N2	1:13:1145:C:H1'	2.14	0.63
1:13:1157:A:O2'	1:13:1181:G:N2	2.32	0.63
1:13:77:C:N4	1:13:89:U:O4	2.30	0.63
24:14:289:A:H5'	24:14:290:G:OP2	1.99	0.63
24:14:93:C:H5'	24:14:94:G:OP2	1.99	0.63
2:1E:27:LYS:NZ	2:1E:193:ASP:OD2	2.23	0.63
29:39:68:LYS:HB3	29:39:69:HIS:CD2	2.33	0.63
4:3E:14:ARG:HB2	4:3E:40:PRO:HD2	1.80	0.63
22:3K:20:C:H5''	22:3K:68:A:H62	1.63	0.63
31:51:8:PRO:HG2	31:51:69:ARG:HH21	1.63	0.63
33:58:43:THR:HB	33:58:46:VAL:HG23	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:B8:7:ILE:HG13	39:B8:10:VAL:HG22	1.81	0.63
1:13:1435:G:H2'	1:13:1436:U:C6	2.34	0.62
24:14:1171:G:OP2	24:14:1173:G:N2	2.32	0.62
24:14:1997:G:H5''	57:14:3644:HOH:O	1.99	0.62
3:2E:76:VAL:HG21	3:2E:103:VAL:HG21	1.79	0.62
3:2E:89:GLU:HG2	3:2E:93:LYS:HE3	1.81	0.62
22:3L:15:G:H4'	22:3L:15:G:OP1	1.99	0.62
31:51:20:ALA:HB1	31:51:21:PRO:HD2	1.80	0.62
15:6I:32:LEU:O	15:6I:35:ARG:N	2.32	0.62
19:AI:69:HIS:HB3	19:AI:73:GLU:HG3	1.81	0.62
19:AI:6:LYS:HG3	19:AI:9:VAL:HG22	1.81	0.62
52:P8:46:VAL:HG13	52:P8:47:ARG:HB3	1.80	0.62
24:14:1364:G:OP2	47:F5:2:SER:N	2.31	0.62
24:14:78:A:H2'	24:14:79:G:H8	1.64	0.62
54:1G:15:G:O6	54:1G:920:U:N3	2.18	0.62
54:1G:278:G:N7	17:8A:92:ARG:NH1	2.47	0.62
24:1H:1211:U:OP2	57:1H:4526:HOH:O	2.15	0.62
24:1H:579:G:H2'	24:1H:580:C:C6	2.35	0.62
3:22:79:ARG:NE	3:22:79:ARG:H	1.97	0.62
31:59:30:LYS:NZ	31:59:79:VAL:O	2.32	0.62
9:82:9:ARG:HB3	9:82:14:VAL:HG13	1.81	0.62
1:13:1443:G:O2'	39:B8:122:ASP:OD2	2.16	0.62
20:BA:22:ARG:O	20:BA:26:ASN:ND2	2.31	0.62
46:I8:38:VAL:HG12	46:I8:40:GLN:HG2	1.81	0.62
27:11:25:THR:HG23	27:11:26:LYS:N	2.13	0.62
1:13:243:A:H4'	1:13:244:U:H5''	1.81	0.62
24:14:1164:G:H1	24:14:1185:C:H42	1.46	0.62
24:14:2062:A:OP2	57:14:3860:HOH:O	2.15	0.62
54:1G:1224:G:C6	54:1G:1322:C:H1'	2.35	0.62
54:1G:1126:U:N3	54:1G:1281:U:O4'	2.31	0.62
54:1G:1326:C:H2'	54:1G:1327:C:C6	2.33	0.62
54:1G:539:A:H2'	54:1G:540:G:C8	2.34	0.62
24:1H:2420:C:N4	53:Q8:31:HIS:HB3	2.13	0.62
24:1H:2420:C:P	53:Q8:34:TRP:H	2.22	0.62
28:29:24:THR:HG21	28:29:188:VAL:HB	1.80	0.62
18:9I:66:LEU:O	18:9I:70:ILE:HG13	2.00	0.62
27:11:70:TRP:CH2	27:11:150:LYS:HA	2.34	0.62
24:14:2068:U:N3	24:14:2430:A:H2	1.90	0.62
24:1H:111:A:H4'	48:K8:69:ARG:NH2	2.15	0.62
24:14:832:G:H5'	35:35:45:LEU:HD11	1.81	0.62
30:41:27:ASN:HB3	30:41:30:GLU:HG3	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4E:10:MET:HB3	5:4E:32:VAL:HG22	1.80	0.62
13:4I:91:ARG:HB2	13:4I:98:VAL:HG12	1.82	0.62
31:51:98:LEU:HD22	31:51:125:VAL:HG23	1.81	0.62
42:A5:17:VAL:HG23	42:A5:76:VAL:HG11	1.81	0.62
19:AA:48:THR:HA	19:AA:61:TYR:HA	1.82	0.62
45:D5:70:LEU:O	45:D5:89:PHE:N	2.31	0.62
27:11:59:LYS:HD2	27:11:60:ARG:H	1.64	0.62
3:22:134:ILE:HG21	3:22:168:ALA:HB3	1.81	0.62
4:32:111:ALA:HB2	4:32:120:LEU:HD12	1.81	0.62
7:62:111:ARG:NH2	7:62:122:HIS:HB3	2.14	0.62
48:G5:24:LEU:HD13	48:G5:60:LEU:HD21	1.82	0.62
24:14:517:C:OP1	51:J5:16:ARG:NH2	2.32	0.62
7:6E:26:PHE:CE2	7:6E:30:ILE:HD11	2.34	0.62
20:BA:29:LYS:O	20:BA:33:ILE:HG12	2.00	0.62
1:13:1132:C:H2'	1:13:1133:G:H8	1.64	0.62
24:14:1778:U:H2'	24:14:1784:A:N6	2.15	0.62
24:14:2720:U:H3	24:14:2873:A:H2	1.48	0.62
2:1E:18:GLY:HA3	2:1E:41:ILE:HD12	1.81	0.62
54:1G:1004:A:H1'	54:1G:1025:U:C2	2.35	0.62
54:1G:992:U:H3	54:1G:1044:A:N6	1.97	0.62
54:1G:1052:U:H5''	54:1G:1053:G:OP2	1.99	0.62
54:1G:542:G:P	4:32:10:ARG:HH22	2.22	0.62
3:22:94:LEU:HD13	3:22:95:THR:HG23	1.82	0.62
54:1G:542:G:OP1	4:32:10:ARG:NH2	2.33	0.62
4:32:3:ARG:HG3	4:32:5:ILE:HD11	1.82	0.62
40:85:34:LYS:NZ	40:85:37:GLU:OE1	2.27	0.62
18:9A:53:ARG:HD2	18:9A:59:SER:O	2.00	0.62
45:D5:72:ARG:N	45:D5:87:ASP:O	2.25	0.62
1:13:1212:U:H4'	1:13:1213:A:C8	2.35	0.62
1:13:1319:A:O2'	1:13:1323:G:N7	2.29	0.62
1:13:171:A:H2'	1:13:172:A:C8	2.35	0.62
24:14:1054:A:H3'	24:14:1055:G:H8	1.64	0.62
24:14:1599:C:H2'	24:14:1600:C:H6	1.64	0.62
24:14:581:C:H2'	24:14:582:G:H8	1.65	0.62
24:14:610:C:O2	24:14:618:G:N2	2.20	0.62
27:19:69:ARG:NH2	27:19:128:GLY:O	2.33	0.62
25:1J:7:G:H4'	38:65:29:PHE:CD2	2.33	0.62
3:22:3:ASN:N	3:22:3:ASN:OD1	2.33	0.62
26:79:201:PRO:HG2	26:79:204:ALA:HB2	1.82	0.62
46:E5:11:ARG:O	46:E5:14:ARG:NH2	2.32	0.62
46:I8:70:GLN:NE2	46:I8:72:ARG:HD3	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:861:A:N3	25:1J:79:C:O2'	2.33	0.62
24:1H:1942:C:OP2	24:1H:1943:U:O2'	2.12	0.62
29:39:111:ALA:HB2	29:39:206:ILE:HG21	1.81	0.62
31:59:52:VAL:HG11	31:59:69:ARG:HB2	1.82	0.62
20:BA:69:GLY:O	20:BA:73:HIS:NE2	2.31	0.62
45:H8:95:PRO:HA	45:H8:130:PRO:HD3	1.80	0.62
27:11:24:ILE:HG22	27:11:25:THR:O	1.98	0.62
2:12:50:GLU:O	2:12:54:THR:OG1	2.12	0.62
1:13:1347:G:H22	1:13:1374:A:P	2.23	0.62
1:13:1502:A:H2	1:13:1505:G:H1	1.47	0.62
1:13:738:C:H2'	1:13:739:C:H6	1.65	0.62
24:14:1441:G:H2'	24:14:1442:G:H8	1.63	0.62
24:14:1511:A:H2'	24:14:1512:G:C8	2.35	0.62
24:14:2099:U:H3	24:14:2190:G:H1	1.47	0.62
24:14:918:A:O2'	25:1J:96:G:N2	2.31	0.62
2:1E:72:GLY:HA3	2:1E:165:VAL:HG22	1.81	0.62
54:1G:1104:G:OP1	2:12:144:ARG:NH1	2.32	0.62
24:1H:2019:A:N7	51:N8:9:LYS:HE3	2.15	0.62
34:25:64:ARG:NH1	34:25:81:ASP:OD1	2.33	0.62
3:2E:49:SER:O	3:2E:72:LYS:NZ	2.33	0.62
24:14:2757:A:H61	31:59:67:LEU:HD21	1.65	0.62
45:D5:30:ASN:OD1	45:D5:31:ARG:N	2.30	0.62
54:1G:1279:A:O2'	54:1G:1281:U:OP2	2.14	0.61
54:1G:678:U:H2'	54:1G:679:C:C6	2.35	0.61
24:1H:107:C:H2'	24:1H:108:U:H6	1.64	0.61
24:1H:2212:A:H1'	24:1H:2215:G:C5	2.34	0.61
24:1H:2667:C:H1'	31:51:109:PHE:CD1	2.34	0.61
24:1H:424:G:N7	57:1H:3717:HOH:O	2.31	0.61
24:1H:631:A:OP2	53:Q8:47:LYS:NZ	2.24	0.61
24:1H:442:G:H1'	29:31:48:THR:HG21	1.82	0.61
4:32:60:GLU:OE2	4:32:199:ASN:N	2.33	0.61
29:39:185:ASP:CG	29:39:188:ARG:HH21	2.02	0.61
30:49:64:THR:HB	30:49:94:LEU:HD21	1.82	0.61
13:4I:92:HIS:CE1	13:4I:98:VAL:HG11	2.35	0.61
31:51:4:ILE:HG13	31:51:6:ARG:NE	2.14	0.61
7:62:97:GLN:NE2	7:62:101:LEU:HD11	2.15	0.61
38:65:106:ARG:NH1	38:65:107:GLU:OE1	2.32	0.61
32:69:86:THR:HG23	32:69:87:LYS:HE3	1.82	0.61
46:E5:49:LYS:O	46:E5:50:ASN:ND2	2.33	0.61
24:14:1839:G:OP2	57:14:3936:HOH:O	2.16	0.61
25:16:15:A:H1'	25:16:109:G:C4	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:956:U:H1'	54:1G:1225:A:H2	1.65	0.61
54:1G:327:A:HO2'	54:1G:329:A:H8	1.47	0.61
24:1H:1022:G:N2	24:1H:1142(A):A:N1	2.47	0.61
24:1H:1645:G:H5''	24:1H:1646:C:H5'	1.82	0.61
24:1H:71:A:H2	43:F8:31:HIS:NE2	1.94	0.61
22:3K:18:G:O4'	22:3K:66:G:N2	2.33	0.61
31:51:4:ILE:HB	31:51:6:ARG:HG3	1.82	0.61
32:69:135:GLU:OE2	32:69:135:GLU:N	2.33	0.61
7:6E:109:ASN:ND2	7:6E:109:ASN:O	2.32	0.61
15:6I:16:ALA:HB1	15:6I:21:ASP:HB3	1.81	0.61
16:7A:6:LEU:HG	16:7A:17:TYR:HB3	1.82	0.61
1:13:980:C:O2	57:13:1760:HOH:O	2.15	0.61
24:14:1165:U:H2'	24:14:1166:C:C6	2.35	0.61
24:14:2335:A:C8	24:14:2337:G:C5	2.88	0.61
24:14:1567:A:H5'	27:19:58:HIS:ND1	2.14	0.61
5:42:122:GLU:O	5:42:126:ARG:NH1	2.25	0.61
6:52:77:ARG:HH12	6:52:78:GLU:HG2	1.65	0.61
37:98:24:GLN:NE2	37:98:36:THR:HG21	2.13	0.61
44:G8:29:GLU:HB3	44:G8:38:ILE:CG2	2.30	0.61
24:14:1141:U:OP2	33:15:63:THR:OG1	2.16	0.61
54:1G:1321:C:H3'	54:1G:1322:C:H5''	1.82	0.61
54:1G:501:C:H2'	54:1G:502:G:H8	1.65	0.61
54:1G:957:U:H1'	54:1G:960:U:C5	2.35	0.61
24:1H:2178:C:H4'	26:71:46:LYS:HD3	1.80	0.61
24:1H:948:G:O6	57:1H:4351:HOH:O	2.14	0.61
29:31:185:ASP:OD1	29:31:188:ARG:NH1	2.27	0.61
30:41:114:ILE:HD13	30:41:140:ILE:HG21	1.82	0.61
30:41:65:GLY:HA2	50:M8:7:PRO:HG2	1.80	0.61
24:14:2053:G:H5'	28:29:144:ARG:O	2.00	0.61
54:1G:1052:U:O2'	54:1G:1055:A:OP2	2.11	0.61
54:1G:236:G:OP1	17:8A:40:LYS:NZ	2.26	0.61
54:1G:258:G:N7	57:1G:1887:HOH:O	2.31	0.61
24:1H:1520:U:H2'	24:1H:1521:G:O4'	2.01	0.61
12:3A:28:LYS:HD2	12:3A:33:ARG:CZ	2.31	0.61
22:3K:52:G:H2'	22:3K:53:A:C8	2.35	0.61
5:4E:102:ALA:HB1	5:4E:106:PRO:HG2	1.82	0.61
37:98:55:ALA:HA	37:98:80:PHE:CE2	2.34	0.61
44:C5:87:LYS:H	44:C5:94:LYS:HB3	1.65	0.61
42:E8:68:ARG:NH1	42:E8:109:GLU:OE1	2.32	0.61
48:G5:41:ILE:HD11	48:G5:44:LEU:HD22	1.82	0.61
2:12:164:VAL:HG23	2:12:186:ALA:HB2	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2889:C:H2'	24:14:2891:G:O4'	2.01	0.61
24:1H:2132:U:N3	26:71:5:LYS:HB3	2.15	0.61
24:1H:2210:G:H2'	24:1H:2211:G:N7	2.16	0.61
24:1H:878:A:N6	24:1H:899:A:O2'	2.34	0.61
25:1J:7:G:H4'	38:65:29:PHE:HD2	1.64	0.61
30:41:138:GLN:NE2	30:41:151:ALA:O	2.33	0.61
16:7I:49:LEU:HD12	16:7I:50:LYS:N	2.15	0.61
39:B8:100:TYR:HB3	39:B8:103:ARG:NH1	2.16	0.61
43:F8:57:LEU:HD23	43:F8:57:LEU:N	2.16	0.61
1:13:1049:U:OP1	14:5I:3:ARG:HB2	2.00	0.61
1:13:1295:G:O2'	13:4I:14:ARG:NH1	2.26	0.61
24:14:162:U:H4'	24:14:171:G:C8	2.35	0.61
24:14:784:A:OP1	57:14:3616:HOH:O	2.16	0.61
24:1H:1175:U:H1'	24:1H:1176:G:N3	2.16	0.61
24:1H:1329:U:H5''	24:1H:1330:C:H5	1.64	0.61
10:1I:48:THR:HG23	10:1I:62:HIS:HB3	1.81	0.61
13:4A:91:ARG:HB2	13:4A:98:VAL:HG22	1.81	0.61
34:68:76:ALA:HB3	39:B8:75:ILE:HB	1.82	0.61
19:AI:68:GLY:H	50:M8:55:ARG:HH21	1.48	0.61
1:13:1122:U:O4	1:13:1123:A:N6	2.34	0.61
1:13:1132:C:H2'	1:13:1133:G:C8	2.36	0.61
1:13:1429:C:H2'	1:13:1430:C:H6	1.65	0.61
1:13:411:A:C5	1:13:413:G:H1'	2.35	0.61
1:13:688:G:H2'	1:13:689:C:H6	1.64	0.61
24:14:1210:A:H5''	24:14:1211:U:H3'	1.83	0.61
24:14:61:G:H1	24:14:93:C:H42	1.49	0.61
27:19:255:LYS:H	27:19:255:LYS:NZ	1.97	0.61
21:1B:6:ARG:HE	21:1B:15:ARG:HH12	1.46	0.61
24:1H:1021:A:H3'	24:1H:1022:G:H5''	1.82	0.61
32:69:101:LEU:HD12	32:69:109:ILE:HD12	1.83	0.61
1:13:1378:C:O2	7:6E:76:ARG:NH1	2.33	0.61
24:14:138:G:N2	43:B5:44:GLU:OE2	2.30	0.61
49:H5:27:GLY:HA3	49:H5:35:ARG:NH2	2.16	0.61
52:L5:8:ASN:OD1	52:L5:11:LYS:HB2	2.01	0.61
1:13:1128:C:H5'	9:8E:16:ARG:HH22	1.64	0.61
1:13:192:U:O2	20:BI:57:ARG:NH1	2.32	0.61
24:14:1174:A:N6	24:14:1177:A:O2'	2.34	0.61
24:14:2575:C:H2'	24:14:2578:G:O6	2.01	0.61
54:1G:1095:U:OP2	54:1G:1108:G:N1	2.30	0.61
54:1G:17:U:H2'	54:1G:18:C:C6	2.36	0.61
54:1G:587:G:N2	54:1G:754:C:OP2	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2255:G:OP2	57:1H:4124:HOH:O	2.16	0.61
31:59:16:SER:HB2	31:59:27:LYS:HB3	1.83	0.61
9:82:83:ARG:HA	9:82:86:VAL:HG12	1.83	0.61
41:D8:35:LEU:HB3	41:D8:37:VAL:HG23	1.82	0.61
46:E5:51:VAL:HG23	46:E5:81:VAL:HG23	1.82	0.61
47:F5:82:LEU:HD23	47:F5:82:LEU:H	1.65	0.61
27:11:70:TRP:CE2	27:11:150:LYS:HD2	2.36	0.61
1:13:1304:G:N2	1:13:1332:A:OP2	2.33	0.61
1:13:1376:U:H2'	1:13:1377:A:C8	2.34	0.61
24:14:1771:C:H1'	24:14:1786:A:H8	1.63	0.61
2:1E:145:LEU:HD12	2:1E:149:LEU:HD12	1.82	0.61
54:1G:102:G:O2'	54:1G:151:A:N3	2.34	0.61
34:25:2:ILE:HG13	34:25:8:LEU:HD11	1.82	0.61
4:32:18:LYS:NZ	4:32:19:LEU:O	2.34	0.61
6:5E:89:MET:HE3	18:9I:76:LEU:HD13	1.83	0.61
38:65:11:LYS:HD3	38:65:91:PRO:HG3	1.82	0.61
6:5E:50:TYR:OH	18:9I:74:ARG:O	2.12	0.61
39:B8:7:ILE:HB	39:B8:10:VAL:N	2.13	0.61
45:D5:39:VAL:HG21	45:D5:44:PHE:CD2	2.36	0.61
50:M8:37:SER:HA	50:M8:41:PRO:HG2	1.82	0.61
24:14:1676:A:OP2	57:14:3565:HOH:O	2.16	0.60
24:14:2733:A:N1	28:29:203:LYS:HA	2.16	0.60
24:14:686:G:H5''	52:L5:11:LYS:HZ1	1.65	0.60
24:14:848:G:H2'	24:14:849:A:C8	2.36	0.60
27:19:255:LYS:CE	27:19:255:LYS:H	2.14	0.60
54:1G:147:G:H1	54:1G:175:C:H42	1.49	0.60
54:1G:545:C:OP1	4:32:61:LYS:NZ	2.34	0.60
24:1H:1681:G:N2	57:1H:3983:HOH:O	2.33	0.60
24:1H:607:U:OP1	29:31:102:PRO:HA	2.01	0.60
25:1J:101:A:N7	57:1J:223:HOH:O	2.31	0.60
28:21:38:THR:O	28:21:43:GLY:N	2.28	0.60
22:2K:1:G:H2'	22:2K:2:G:C8	2.28	0.60
30:41:161:THR:HG22	30:41:163:ALA:H	1.66	0.60
31:51:125:VAL:HG12	31:51:127:GLU:O	2.01	0.60
7:62:129:GLU:OE2	7:62:131:LYS:NZ	2.33	0.60
35:78:50:ARG:HH21	35:78:50:ARG:HG3	1.66	0.60
44:C5:88:LYS:O	44:C5:89:PHE:HB3	2.01	0.60
44:G8:15:VAL:HG21	44:G8:42:VAL:HG21	1.81	0.60
1:13:277:C:OP2	17:8I:41:LYS:NZ	2.33	0.60
24:14:2537:U:H2'	24:14:2538:C:C6	2.36	0.60
24:14:2602:A:H4'	24:14:2603:G:O5'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:567:A:P	57:14:3749:HOH:O	2.58	0.60
54:1G:885:G:O2'	54:1G:914:A:N1	2.31	0.60
24:1H:1359:A:H2'	24:1H:1360:A:H5'	1.83	0.60
17:8A:45:HIS:CD2	17:8A:47:PRO:HG3	2.36	0.60
17:8I:48:GLU:OE1	17:8I:50:LYS:HE2	2.01	0.60
1:13:322:C:O2'	20:BI:23:ARG:HD2	2.01	0.60
20:BI:53:LEU:HB2	20:BI:100:ILE:HG22	1.84	0.60
1:13:157:G:H1	1:13:164:U:H3	1.49	0.60
1:13:321:A:H62	1:13:328:C:H1'	1.66	0.60
24:14:2293:C:O3'	38:65:89:ARG:NH2	2.33	0.60
24:14:2294:C:P	38:65:89:ARG:HH22	2.23	0.60
25:1J:11:C:H3'	25:1J:12:C:H6	1.65	0.60
28:21:111:ARG:HD3	28:21:160:TYR:CE2	2.35	0.60
22:2L:24:G:H2'	22:2L:25:G:C8	2.34	0.60
4:3E:104:VAL:HG21	4:3E:140:VAL:HG21	1.83	0.60
39:75:105:LEU:O	39:75:107:ASP:N	2.34	0.60
50:M8:17:GLY:H	50:M8:36:CYS:HB3	1.66	0.60
42:E8:41:LYS:HE3	51:N8:25:LEU:HD21	1.82	0.60
1:13:1502:A:H5'	1:13:1504:G:N7	2.15	0.60
1:13:992:U:H4'	1:13:993:G:O5'	2.00	0.60
24:14:831:G:OP1	57:14:3871:HOH:O	2.15	0.60
24:1H:2324:C:H5''	24:1H:2325:G:H5'	1.84	0.60
28:21:53:PRO:HA	28:21:74:PRO:HA	1.83	0.60
28:29:120:TRP:CD1	28:29:155:LYS:HB3	2.36	0.60
3:2E:102:ASN:N	3:2E:102:ASN:OD1	2.34	0.60
33:58:13:TRP:O	33:58:135:PRO:HD2	2.01	0.60
24:1H:1005:C:O2'	33:58:28:THR:HG21	2.01	0.60
32:69:144:VAL:HG22	32:69:145:VAL:HG22	1.83	0.60
24:14:854:G:H2'	24:14:855:G:H8	1.67	0.60
54:1G:1399:C:H4'	54:1G:1400:C:C5'	2.32	0.60
54:1G:316:G:OP2	54:1G:351:G:O2'	2.18	0.60
24:1H:2584:U:H2'	24:1H:2585:U:H2'	1.82	0.60
24:1H:271(B):G:H1	24:1H:404:C:H42	1.48	0.60
24:1H:443:A:H1'	24:1H:1201:C:O4'	2.01	0.60
36:45:19:GLY:H	36:45:98:LYS:HZ1	1.50	0.60
7:62:67:GLU:OE2	7:62:70:LYS:NZ	2.31	0.60
15:6A:82:ILE:HB	15:6A:87:ILE:HB	1.82	0.60
8:72:39:LEU:HB3	8:72:45:ILE:HG12	1.83	0.60
24:1H:598:G:C5'	35:78:11:GLY:HA3	2.30	0.60
35:78:39:LYS:HB2	35:78:45:LEU:HD11	1.83	0.60
26:79:212:VAL:HG11	26:79:226:PRO:HD3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:95:37:VAL:CG2	41:95:56:SER:HA	2.31	0.60
19:AA:11:VAL:HG12	19:AA:12:ASP:H	1.66	0.60
24:14:1270:C:H5''	24:14:1271:G:H5'	1.83	0.60
24:14:1430:C:H2'	24:14:1431:U:C6	2.37	0.60
24:14:2695:C:H2'	24:14:2696:U:H6	1.66	0.60
54:1G:1316:G:OP1	14:5A:17:LYS:NZ	2.34	0.60
24:1H:1588:C:H2'	24:1H:1589:C:C6	2.37	0.60
24:1H:1935:G:H1'	24:1H:1964:G:N2	2.17	0.60
24:1H:2096:U:H2'	24:1H:2097:C:C6	2.36	0.60
4:32:9:CYS:HA	4:32:12:CYS:HB2	1.83	0.60
1:13:881:G:OP2	12:3I:12:ARG:NH2	2.34	0.60
13:4A:70:LEU:O	13:4A:74:VAL:HG23	2.01	0.60
35:78:49:ARG:HG3	53:Q8:60:LEU:CD1	2.31	0.60
28:21:10:GLY:HA3	39:B8:8:LYS:HD2	1.82	0.60
42:E8:29:LEU:HD21	42:E8:33:ARG:NH2	2.16	0.60
45:H8:97:GLU:HA	45:H8:127:LYS:HA	1.82	0.60
27:11:71:ASP:OD1	27:11:103:ARG:NH2	2.35	0.60
1:13:1129:C:N4	1:13:1134:G:N7	2.49	0.60
24:14:1969:A:H3'	57:14:3607:HOH:O	2.02	0.60
24:14:2887:U:H2'	24:14:2888:C:H6	1.65	0.60
24:14:993:G:OP1	40:85:50:ARG:NH2	2.34	0.60
24:1H:2392:A:H2	24:1H:2424:C:N4	1.96	0.60
24:1H:529:A:H4'	24:1H:530:G:H5'	1.83	0.60
24:1H:70:G:H21	24:1H:71:A:N6	1.99	0.60
28:29:169:ASN:HA	28:29:201:THR:HG21	1.82	0.60
35:35:30:THR:HG21	35:35:35:HIS:H	1.67	0.60
22:3K:33:C:H2'	22:3K:34:U:H5''	1.84	0.60
24:14:960:A:H61	36:45:83:MET:CE	2.14	0.60
13:4A:65:LYS:HB2	13:4A:69:GLU:HG3	1.83	0.60
32:69:76:THR:HG21	32:69:140:LEU:HD22	1.84	0.60
15:6I:3:ILE:HD13	15:6I:34:LEU:HD23	1.84	0.60
9:82:24:GLY:HA2	9:82:59:PHE:O	2.01	0.60
9:82:26:VAL:HG13	9:82:61:ALA:HB3	1.83	0.60
2:12:132:LYS:HA	2:12:135:GLN:HB2	1.84	0.60
54:1G:603:U:H2'	54:1G:604:G:H8	1.65	0.60
24:1H:2540:C:OP2	57:1H:4062:HOH:O	2.16	0.60
28:21:2:LYS:HA	28:21:84:PHE:CD1	2.36	0.60
13:4A:80:ARG:NH1	19:AA:66:MET:SD	2.75	0.60
31:51:6:ARG:HD2	31:51:65:HIS:HB3	1.84	0.60
37:55:57:ARG:NH2	37:55:62:ALA:HB2	2.17	0.60
33:58:89:LYS:O	33:58:93:THR:OG1	2.18	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:59:103:LEU:HG	31:59:115:VAL:HB	1.82	0.60
26:79:15:ASP:HB3	26:79:18:LYS:HB3	1.83	0.60
16:7I:49:LEU:HD12	16:7I:50:LYS:H	1.66	0.60
42:A5:60:ASN:OD1	42:A5:60:ASN:N	2.34	0.60
42:E8:88:ARG:HB3	42:E8:92:ARG:HB2	1.84	0.60
44:G8:28:LYS:NZ	44:G8:64:GLU:OE2	2.23	0.60
2:12:223:ILE:HA	2:12:226:ARG:HB2	1.84	0.60
1:13:74:C:H42	1:13:96:G:H1	1.48	0.60
24:14:2520:C:H41	24:14:2542:A:H62	1.50	0.60
24:14:997:G:O2'	24:14:998:C:H5'	2.02	0.60
2:1E:174:VAL:HG13	2:1E:184:VAL:HG11	1.84	0.60
24:1H:1209:G:O6	57:1H:4486:HOH:O	2.17	0.60
24:1H:249:C:O5'	57:1H:3613:HOH:O	2.16	0.60
24:1H:2795:G:N2	24:1H:2801:A:OP2	2.35	0.60
12:3A:110:VAL:HG23	12:3A:120:TYR:HB3	1.82	0.60
12:3A:24:VAL:HB	12:3A:27:LEU:HD12	1.82	0.60
22:3K:33:C:N4	22:3K:34:U:O4	2.35	0.60
46:I8:40:GLN:NE2	46:I8:42:GLY:O	2.35	0.60
1:13:664:G:H22	1:13:741:G:H1	1.47	0.60
24:14:2224:G:H4'	24:14:2226:C:C2	2.35	0.60
24:14:328:U:H4'	44:C5:68:HIS:CD2	2.37	0.60
25:16:111:U:H2'	25:16:112:G:H8	1.67	0.60
27:19:17:THR:O	27:19:211:ARG:NH2	2.35	0.60
25:1J:89:G:O6	25:1J:89(A):A:N6	2.35	0.60
31:59:56:SER:HG	31:59:61:HIS:HD1	1.49	0.60
9:8E:50:LEU:HD23	9:8E:85:LEU:HD22	1.83	0.60
1:13:719:C:O2'	18:9I:49:LYS:HB3	2.02	0.60
44:C5:19:LYS:HG3	44:C5:20:TYR:HD1	1.65	0.60
24:14:483:A:H5'	44:C5:49:VAL:HG22	1.82	0.60
50:I5:56:VAL:HG22	50:I5:57:GLU:H	1.67	0.60
48:K8:47:ASN:C	48:K8:49:LYS:H	2.06	0.60
53:Q8:34:TRP:HE3	53:Q8:34:TRP:HA	1.67	0.60
1:13:368:U:OP1	32:69:91:SER:OG	2.20	0.59
1:13:517:G:N1	1:13:533:A:OP2	2.32	0.59
1:13:636:U:H2'	1:13:637:G:C8	2.37	0.59
24:14:142:G:H1'	43:B5:37:THR:HG21	1.83	0.59
24:14:1786:A:C2	24:14:2606:C:H1'	2.37	0.59
24:14:1840:G:OP2	57:14:3934:HOH:O	2.16	0.59
24:14:2176:A:H2'	24:14:2177:C:C6	2.37	0.59
25:16:73:A:C2'	25:16:74:U:H5'	2.32	0.59
54:1G:1011:G:H22	54:1G:1018:C:N4	2.00	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:581:C:H2'	24:1H:582:G:C8	2.36	0.59
3:2E:90:GLU:HA	3:2E:93:LYS:HD2	1.84	0.59
3:2E:88:ARG:HB3	3:2E:99:VAL:HG21	1.83	0.59
22:2L:10:C:N4	22:2L:26:G:H1	2.00	0.59
22:2L:72:U:OP1	22:2L:72:U:H2'	2.02	0.59
29:39:67:GLN:HG3	29:39:67:GLN:O	2.02	0.59
24:14:910:A:C5	36:45:13:GLN:HG3	2.36	0.59
13:4A:108:ARG:HH11	13:4A:108:ARG:HG3	1.67	0.59
13:4A:16:ASP:OD1	13:4A:17:VAL:N	2.33	0.59
5:4E:53:LEU:HD12	5:4E:53:LEU:H	1.67	0.59
24:1H:2415:G:H4'	35:78:67:MET:N	2.17	0.59
38:A8:37:ALA:HB2	38:A8:101:LEU:HD21	1.83	0.59
47:J8:4:VAL:HG12	47:J8:11:ARG:HB2	1.84	0.59
1:13:1070:U:OP1	5:4E:18:ARG:NH1	2.27	0.59
24:14:2557:G:H2'	24:14:2558:C:C6	2.37	0.59
24:14:524:U:H2'	24:14:525:U:C6	2.37	0.59
24:1H:602:G:HO2'	24:1H:604:G:HO2'	1.50	0.59
3:22:47:LEU:HB3	3:22:52:LEU:HD22	1.82	0.59
13:4I:17:VAL:O	13:4I:20:THR:OG1	2.15	0.59
14:5A:39:LEU:HD13	14:5A:47:LEU:HD12	1.85	0.59
24:14:2319:G:N7	38:65:3:ARG:HG3	2.17	0.59
45:D5:19:ARG:HH21	45:D5:84:GLU:HB3	1.66	0.59
24:14:1372:U:OP2	57:14:4027:HOH:O	2.16	0.59
24:14:273(C):C:N4	24:14:363(C):G:H1	2.00	0.59
24:14:2836:U:H2'	24:14:2837:G:C8	2.36	0.59
24:1H:1065:U:O2	24:1H:1074:G:N2	2.35	0.59
22:2K:36:U:O2	23:4K:17:G:N2	2.28	0.59
31:59:122:THR:O	31:59:131:VAL:HG13	2.01	0.59
24:1H:598:G:H1'	35:78:12:ALA:HB2	1.84	0.59
46:E5:70:GLN:NE2	46:E5:72:ARG:HD2	2.17	0.59
43:F8:89:ILE:HG22	43:F8:92:LEU:H	1.67	0.59
50:I5:18:CYS:H	50:I5:19:GLY:HA2	1.66	0.59
1:13:105:G:H2'	1:13:106:C:C6	2.37	0.59
1:13:603:U:H2'	1:13:604:G:H8	1.68	0.59
1:13:659:U:H2'	1:13:660:G:C8	2.37	0.59
24:14:1810:A:H2'	24:14:1811:G:O4'	2.03	0.59
24:14:2761:G:O2'	31:59:143:GLN:NE2	2.34	0.59
24:14:527:C:OP2	24:14:2779:U:H5	1.86	0.59
33:15:20:GLY:HA2	33:15:61:ARG:HG2	1.83	0.59
2:1E:51:LEU:HD22	2:1E:55:PHE:HE1	1.67	0.59
2:1E:88:ALA:HB2	2:1E:219:VAL:HG13	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:959:A:HO2'	54:1G:984:C:HO2'	1.50	0.59
24:1H:1334:G:N7	57:1H:3913:HOH:O	2.31	0.59
24:1H:1650:G:O6	57:1H:4192:HOH:O	2.15	0.59
24:1H:1778:U:H2'	24:1H:1784:A:N6	2.17	0.59
24:1H:2068:U:N3	24:1H:2430:A:H2	1.94	0.59
24:1H:2853:C:H2'	24:1H:2854:G:H8	1.67	0.59
22:2L:71:C:O2'	22:2L:72:U:OP1	2.20	0.59
35:35:2:LYS:NZ	35:35:4:SER:OG	2.35	0.59
20:BI:73:HIS:HB3	20:BI:74:LYS:HG2	1.85	0.59
44:C5:6:HIS:ND1	44:C5:7:VAL:HG13	2.17	0.59
30:41:66:GLN:HA	50:M8:6:HIS:CE1	2.37	0.59
2:12:185:ILE:HG22	2:12:199:TYR:HB2	1.83	0.59
2:12:8:LYS:HG2	2:12:217:ARG:HE	1.67	0.59
24:14:1776:G:OP2	57:14:3558:HOH:O	2.16	0.59
24:14:607:U:H3	24:14:621:A:H2	1.47	0.59
24:14:819:A:OP2	24:14:1187:G:N2	2.28	0.59
27:19:69:ARG:HD3	27:19:105:ILE:HD11	1.85	0.59
54:1G:1300:G:O2'	54:1G:1301:U:O5'	2.20	0.59
24:1H:2126:A:O2'	24:1H:2162:G:N2	2.35	0.59
4:32:2:GLY:N	4:32:71:SER:HB3	2.18	0.59
5:42:110:LEU:O	5:42:115:VAL:HG12	2.02	0.59
5:4E:80:ILE:HD13	8:7E:104:ARG:HH21	1.65	0.59
6:5E:10:LEU:HD13	6:5E:61:LEU:HD13	1.85	0.59
14:5I:26:ARG:NH1	14:5I:43:CYS:HB2	2.15	0.59
32:61:131:LYS:HB3	32:61:132:PRO:HA	1.84	0.59
38:65:106:ARG:HA	38:65:110:LEU:HD11	1.83	0.59
15:6A:21:ASP:OD2	15:6A:24:SER:OG	2.12	0.59
20:BI:45:GLN:HB2	20:BI:91:LEU:HD13	1.83	0.59
50:I5:58:ARG:HH12	50:I5:62:ARG:HB2	1.66	0.59
50:M8:24:THR:OG1	50:M8:25:TYR:N	2.36	0.59
27:19:76:PRO:HA	27:19:118:VAL:HG23	1.85	0.59
21:1B:6:ARG:NE	21:1B:15:ARG:HH12	2.01	0.59
2:1E:14:GLY:H	2:1E:16:HIS:CE1	2.20	0.59
54:1G:114:U:H2'	54:1G:115:G:C8	2.38	0.59
54:1G:177:C:OP1	20:BA:65:LYS:NZ	2.35	0.59
22:2L:32:A:H2'	22:2L:33:C:H6	1.67	0.59
4:32:139:ARG:HG3	4:32:139:ARG:HH11	1.68	0.59
32:69:130:TYR:HB3	32:69:136:VAL:HG13	1.85	0.59
35:78:126:VAL:HG12	35:78:147:LEU:HD22	1.85	0.59
40:85:110:VAL:O	40:85:114:LYS:HG3	2.03	0.59
45:H8:142:SER:HB2	45:H8:143:GLY:HA2	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:I8:72:ARG:HB3	46:I8:75:LEU:HB2	1.84	0.59
24:14:468:G:N7	52:L5:39:ARG:NH2	2.47	0.59
51:N8:31:VAL:HG13	51:N8:42:PRO:HG3	1.85	0.59
1:13:603:U:H2'	1:13:604:G:C8	2.38	0.59
24:14:548:A:C5	24:14:549:G:H1'	2.37	0.59
22:2L:41:C:H2'	22:2L:42:U:H6	1.68	0.59
13:4A:14:ARG:H	13:4A:44:ARG:HH11	1.50	0.59
5:4E:147:ASP:OD1	5:4E:147:ASP:N	2.36	0.59
32:69:3:VAL:HG12	32:69:38:LEU:HA	1.84	0.59
54:1G:235:C:H5'	17:8A:70:ARG:HG2	1.84	0.59
9:8E:16:ARG:HB2	9:8E:64:THR:HG23	1.84	0.59
40:C8:110:VAL:HG12	40:C8:114:LYS:HE3	1.85	0.59
44:G8:104:GLY:H	44:G8:105:ALA:HB3	1.67	0.59
46:I8:23:VAL:HG13	46:I8:38:VAL:HG22	1.84	0.59
2:12:118:LEU:HB3	2:12:142:LEU:HD12	1.83	0.59
24:14:729:G:C6	27:19:208:LYS:HB2	2.37	0.59
24:14:958:U:OP2	36:45:14:ARG:NH1	2.36	0.59
54:1G:983:A:N1	54:1G:1222:G:N2	2.51	0.59
24:1H:2002:G:O6	57:1H:4226:HOH:O	2.17	0.59
24:1H:2292:C:P	38:A8:17:ARG:HH22	2.25	0.59
24:1H:2688:U:OP1	24:1H:2713:A:N6	2.36	0.59
24:1H:50:U:H3'	24:1H:51:G:H5'	1.85	0.59
24:1H:796:C:H2'	24:1H:797:C:C6	2.37	0.59
4:32:75:PHE:CE1	4:32:93:PHE:HZ	2.21	0.59
22:3K:17:OMG:O2'	22:3K:66:G:N2	2.36	0.59
30:49:56:ALA:HA	30:49:153:ARG:HH21	1.67	0.59
34:68:65:THR:OG1	34:68:69:ILE:HD11	2.03	0.59
41:D8:44:LYS:O	41:D8:46:VAL:N	2.34	0.59
1:13:201:C:N4	1:13:216:G:H1	2.00	0.59
1:13:735:C:H2'	1:13:736:C:H6	1.67	0.59
54:1G:1347:G:O6	9:82:10:ARG:NH2	2.36	0.59
24:1H:1399:C:N4	57:1H:4494:HOH:O	2.34	0.59
24:1H:1434:A:H61	24:1H:1558:A:H61	1.48	0.59
24:1H:761:A:OP2	57:1H:4065:HOH:O	2.17	0.59
22:2L:19:C:O2'	22:2L:21:A:OP1	2.14	0.59
24:1H:321:G:O3'	29:31:168:ARG:NH2	2.35	0.59
29:39:18:ARG:HG2	29:39:19:GLU:H	1.68	0.59
32:69:72:LEU:HD11	32:69:107:VAL:HG11	1.84	0.59
26:71:20:TYR:HB2	26:71:224:ILE:HG22	1.85	0.59
37:98:79:LEU:HA	37:98:83:ILE:HD12	1.85	0.59
41:D8:91:TYR:HD1	41:D8:91:TYR:H	1.50	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:75:G:H4'	48:G5:55:ARG:HH21	1.67	0.59
35:35:63:PRO:HD3	53:M5:27:THR:HG22	1.83	0.59
24:14:1454:U:OP1	37:55:77:ARG:NH1	2.29	0.59
54:1G:1298:C:H4'	54:1G:1299:A:C8	2.38	0.59
54:1G:547:A:OP2	4:32:2:GLY:HA2	2.02	0.59
24:1H:1013:C:N4	24:1H:1149:G:H1	2.01	0.59
24:1H:1406:U:H2'	24:1H:1407:C:C6	2.38	0.59
24:1H:805:G:O4'	35:78:38:GLN:NE2	2.36	0.59
1:13:667:G:H4'	15:6I:51:HIS:CE1	2.38	0.59
35:78:19:VAL:CG2	35:78:27:HIS:HB2	2.33	0.59
20:BI:49:ALA:HA	20:BI:52:ALA:HB3	1.85	0.59
41:D8:19:LYS:HG3	41:D8:95:LEU:HD23	1.85	0.59
42:E8:1:MET:HB3	42:E8:64:MET:HE2	1.85	0.59
27:19:201:HIS:O	27:19:204:ILE:HG13	2.02	0.58
54:1G:1076:C:H42	54:1G:1081:G:H1	1.50	0.58
54:1G:1142:G:H3'	54:1G:1143:G:H8	1.68	0.58
54:1G:1306:A:N6	54:1G:1331:G:O2'	2.36	0.58
54:1G:501:C:OP1	12:3A:117:ARG:NH2	2.33	0.58
54:1G:603:U:H2'	54:1G:604:G:C8	2.37	0.58
28:21:31:CYS:HB3	28:21:49:LEU:HB3	1.84	0.58
3:2E:72:LYS:HZ3	3:2E:75:VAL:HG21	1.68	0.58
35:35:39:LYS:HA	35:35:45:LEU:HD13	1.85	0.58
29:39:123:LEU:O	29:39:124:LEU:HB3	2.03	0.58
12:3A:53:ARG:HH12	12:3A:92:ASP:HB3	1.68	0.58
4:3E:13:ARG:HB3	4:3E:33:MET:HE3	1.85	0.58
1:13:1226:C:H5''	13:4I:96:LEU:HD11	1.85	0.58
15:6A:16:ALA:HB1	15:6A:21:ASP:HB3	1.85	0.58
26:71:7:TYR:HA	26:71:10:LEU:HD22	1.85	0.58
19:AA:10:PHE:HB2	19:AA:39:THR:OG1	2.03	0.58
48:G5:4:SER:HB3	48:G5:5:GLU:OE2	2.03	0.58
30:49:143:GLU:HA	50:I5:28:LYS:HD2	1.85	0.58
24:14:1110:G:H2'	24:14:1111:A:H8	1.68	0.58
24:14:654(D):G:H1	24:14:654(Q):C:H42	1.50	0.58
54:1G:1057:G:OP1	3:22:154:SER:OG	2.20	0.58
54:1G:108:G:H5''	54:1G:109:A:H5''	1.84	0.58
24:1H:1141:U:H6	33:58:63:THR:HG1	1.50	0.58
24:1H:459:U:H5''	52:P8:40:TRP:CD2	2.37	0.58
34:25:4:PRO:HA	34:25:21:CYS:O	2.03	0.58
5:42:43:LEU:HD13	5:42:109:ILE:HD11	1.84	0.58
13:4I:59:TYR:O	13:4I:63:THR:OG1	2.17	0.58
39:75:64:ARG:HD2	39:75:73:GLU:HG3	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A8:11:LYS:HD2	38:A8:15:ARG:NH2	2.17	0.58
45:H8:107:THR:OG1	45:H8:144:LEU:N	2.33	0.58
49:L8:43:ILE:O	49:L8:47:VAL:HG23	2.03	0.58
1:13:431:A:H2'	1:13:432:A:O4'	2.04	0.58
24:14:957:A:N6	24:14:2459:A:C8	2.71	0.58
25:16:15:A:H1'	25:16:109:G:C5	2.37	0.58
1:13:1075:C:H5'	2:1E:103:THR:HG21	1.85	0.58
2:1E:17:PHE:HA	2:1E:44:LEU:HD11	1.84	0.58
24:1H:2137:C:H42	24:1H:2154:G:H1	1.50	0.58
24:1H:2303:G:O2'	30:41:132:ASN:HB2	2.02	0.58
30:49:135:LEU:HB2	30:49:155:MET:HG2	1.86	0.58
7:6E:46:ALA:HB2	7:6E:117:ALA:HB1	1.84	0.58
33:58:40:PRO:HB3	40:C8:68:ALA:HB2	1.85	0.58
44:G8:49:VAL:HG21	44:G8:55:TYR:HE1	1.68	0.58
1:13:673:G:H5''	6:5E:87:ARG:NH1	2.18	0.58
24:14:298:G:H5''	24:14:299:A:OP1	2.03	0.58
21:1F:9:ARG:HH22	21:1F:23:PRO:HD2	1.69	0.58
54:1G:1226:C:H4'	19:AA:80:TYR:OH	2.02	0.58
54:1G:1412:C:H2'	54:1G:1413:A:C8	2.39	0.58
24:1H:185:U:H4'	24:1H:218:A:H4'	1.85	0.58
3:22:130:VAL:O	3:22:134:ILE:HG12	2.04	0.58
36:45:47:ILE:O	36:45:50:ALA:N	2.36	0.58
32:61:57:ARG:HA	32:61:60:GLU:HB2	1.84	0.58
9:82:5:TYR:HE1	9:82:16:ARG:HG2	1.68	0.58
40:85:91:ASP:O	40:85:92:ARG:HG2	2.03	0.58
1:13:127:G:O2'	17:8I:2:PRO:O	2.19	0.58
45:H8:4:ARG:HA	45:H8:58:VAL:HB	1.85	0.58
48:K8:42:GLY:O	48:K8:44:LEU:N	2.37	0.58
52:L5:10:ARG:O	52:L5:14:LYS:HG2	2.03	0.58
49:L8:35:ARG:HG2	49:L8:37:LEU:HD23	1.85	0.58
24:14:1019:U:HO2'	24:14:1021:A:H2	1.52	0.58
24:14:273(F):C:H3'	24:14:274:G:H5''	1.85	0.58
54:1G:382:A:H2'	54:1G:383:A:H8	1.67	0.58
54:1G:707:C:H2'	54:1G:708:C:C6	2.38	0.58
54:1G:859:A:H2'	54:1G:860:A:O4'	2.03	0.58
24:1H:1639:U:H4'	24:1H:2699:C:H4'	1.86	0.58
24:1H:827:U:H5'	24:1H:828:U:O5'	2.02	0.58
25:1J:93:C:H2'	25:1J:94:C:H6	1.67	0.58
3:22:181:ASN:HB3	3:22:205:GLY:O	2.04	0.58
34:25:113:LYS:HE3	34:25:117:LEU:HD11	1.86	0.58
22:2K:15:G:H21	22:2K:20:C:N4	2.01	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:49:108:ASN:OD1	50:I5:37:SER:OG	2.20	0.58
31:59:46:GLU:HB2	31:59:49:VAL:HG23	1.85	0.58
26:71:212:VAL:HG21	26:71:226:PRO:HB3	1.86	0.58
16:7A:14:ASN:OD1	16:7A:42:ARG:NH2	2.36	0.58
20:BA:33:ILE:O	20:BA:37:SER:OG	2.20	0.58
46:E5:27:GLU:OE1	46:E5:69:PHE:N	2.30	0.58
35:78:50:ARG:HD3	53:Q8:60:LEU:HD21	1.86	0.58
24:14:2114:A:H2'	24:14:2168:G:O2'	2.03	0.58
24:14:2142:C:H2'	24:14:2143:C:C6	2.39	0.58
24:14:2212:A:H1'	24:14:2215:G:C4	2.39	0.58
54:1G:1273:G:H3'	54:1G:1274:G:H8	1.68	0.58
54:1G:411:A:C6	54:1G:413:G:H1'	2.38	0.58
24:1H:2228:G:OP1	27:11:261:LYS:NZ	2.37	0.58
4:3E:156:GLU:O	4:3E:160:GLN:HG3	2.03	0.58
22:3L:57:C:H5''	22:3L:59:A:OP2	2.04	0.58
36:45:109:VAL:HG23	36:45:114:ALA:HB2	1.85	0.58
35:78:18:ARG:O	35:78:19:VAL:HG13	2.03	0.58
16:7A:75:ARG:O	16:7A:78:GLY:N	2.32	0.58
35:35:23:PRO:HB3	41:95:80:GLN:HG3	1.85	0.58
27:11:206:LEU:O	27:11:211:ARG:HD3	2.04	0.58
2:12:70:PHE:O	2:12:93:VAL:N	2.33	0.58
1:13:1221:G:H4'	19:AI:77:THR:HG21	1.84	0.58
24:14:1678:G:N2	24:14:1989:G:H22	2.02	0.58
24:14:242:G:O5'	53:M5:3:LYS:HE3	2.03	0.58
24:14:576:U:H5	57:14:3733:HOH:O	1.86	0.58
54:1G:1289:A:OP1	21:1B:9:ARG:NH2	2.37	0.58
2:1E:6:THR:OG1	2:1E:7:VAL:N	2.37	0.58
54:1G:352:C:O2'	54:1G:354:G:OP1	2.21	0.58
24:1H:1019:U:OP1	24:1H:1035:U:O2'	2.14	0.58
24:1H:2291:U:H5''	24:1H:2380:C:O2'	2.03	0.58
24:1H:2712:U:H1'	24:1H:2712(A):A:C8	2.38	0.58
24:1H:751:A:OP1	57:1H:3886:HOH:O	2.16	0.58
25:1J:15:A:H5'	25:1J:16:G:N7	2.18	0.58
22:2L:17:OMG:N2	22:2L:64:PSU:O4	2.36	0.58
26:71:44:HIS:CE1	26:71:172:HIS:HB3	2.38	0.58
26:79:25:ALA:HA	26:79:28:LEU:HB3	1.86	0.58
8:7E:129:VAL:HG23	8:7E:130:GLY:H	1.69	0.58
9:8E:4:TYR:CZ	9:8E:88:TYR:HB2	2.39	0.58
9:8E:93:ARG:HA	9:8E:96:LEU:HB2	1.86	0.58
39:B8:74:ARG:HB3	39:B8:74:ARG:HH11	1.69	0.58
49:H5:26:LEU:HD21	49:H5:46:ASN:HB2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1202:C:H42	24:14:1243:G:H1	1.51	0.58
27:19:148:GLU:HB2	27:19:151:LYS:HD2	1.85	0.58
54:1G:1004:A:O4'	54:1G:1024:G:O2'	2.22	0.58
24:1H:532:A:N7	24:1H:2021:C:O2'	2.25	0.58
22:3K:13:G:H2'	22:3K:14:A:C8	2.39	0.58
9:82:9:ARG:NH2	9:82:104:ARG:HD3	2.19	0.58
9:8E:110:GLU:OE2	9:8E:113:LYS:NZ	2.36	0.58
39:B8:7:ILE:CG2	39:B8:9:LEU:HB2	2.33	0.58
44:G8:29:GLU:HB3	44:G8:38:ILE:HG23	1.86	0.58
25:16:104:A:OP1	45:H8:72:ARG:NH1	2.37	0.58
50:I5:56:VAL:HG13	50:I5:57:GLU:HG3	1.86	0.58
1:13:375:U:O2'	16:7I:6:LEU:O	2.22	0.58
24:14:1871:A:H2'	24:14:1872:A:C8	2.39	0.58
24:14:1871:A:H2'	24:14:1872:A:H8	1.68	0.58
24:14:2183:C:H2'	24:14:2184:G:H8	1.69	0.58
24:14:31:C:OP1	57:14:3946:HOH:O	2.17	0.58
24:14:817:C:OP2	57:14:3761:HOH:O	2.17	0.58
54:1G:1003:G:O6	54:1G:1035:A:N6	2.37	0.58
54:1G:1469:G:N7	57:1G:1813:HOH:O	2.32	0.58
54:1G:868:C:H2'	54:1G:869:G:O4'	2.04	0.58
24:1H:1021:A:C8	24:1H:1021:A:H3'	2.38	0.58
24:1H:2175:C:OP1	26:7I:3:HIS:ND1	2.31	0.58
3:22:32:LEU:HD22	3:22:59:ARG:HH22	1.68	0.58
24:14:2445:G:OP1	29:39:74:ARG:NH2	2.36	0.58
1:13:502:G:OP1	12:3I:118:SER:HB3	2.04	0.58
22:3L:14:A:H3'	22:3L:15:G:C5'	2.34	0.58
24:14:2839:G:H5'	37:55:46:GLY:HA2	1.84	0.58
31:59:144:VAL:O	31:59:148:ILE:HG12	2.04	0.58
6:5E:41:GLU:HG2	6:5E:43:LEU:HD11	1.85	0.58
10:1I:51:ARG:HG3	14:5I:45:ARG:NH1	2.19	0.58
15:6A:39:LEU:HD12	15:6A:56:LEU:HB2	1.86	0.58
38:A8:106:ARG:O	38:A8:107:GLU:HG3	2.03	0.58
39:B8:98:LYS:HB3	39:B8:100:TYR:CE2	2.38	0.58
44:G8:94:LYS:HZ2	44:G8:95:LYS:H	1.52	0.58
50:M8:10:VAL:HG22	50:M8:11:PRO:HD2	1.85	0.58
24:14:1688:U:O2	24:14:1700:A:H5'	2.04	0.58
24:14:363(B):G:H2'	24:14:363(C):G:H8	1.69	0.58
33:15:62:VAL:HG22	33:15:66:LYS:HD2	1.85	0.58
54:1G:1095:U:H5''	54:1G:1109:C:O2	2.04	0.58
54:1G:660:G:H2'	54:1G:661:G:O4'	2.04	0.58
24:1H:2199:A:H5'	24:1H:2205:C:OP2	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2695:C:H2'	24:1H:2696:U:H6	1.68	0.58
24:1H:2884:U:H2'	24:1H:2885:C:O4'	2.04	0.58
24:1H:581:C:H2'	24:1H:582:G:H8	1.69	0.58
24:1H:607:U:N3	24:1H:621:A:H2	1.99	0.58
24:1H:780:G:H21	24:1H:783:A:H62	1.50	0.58
28:29:101:ARG:HD2	28:29:169:ASN:ND2	2.19	0.58
12:3I:93:LEU:HB2	12:3I:96:VAL:CG1	2.34	0.58
22:3L:57:C:H4'	22:3L:58:G:O5'	2.03	0.58
24:1H:2312:U:H5'	30:41:88:ILE:HG21	1.86	0.58
26:79:41:VAL:HG22	26:79:216:THR:HG22	1.86	0.58
8:7E:86:ILE:HG21	8:7E:133:LEU:HD22	1.85	0.58
17:8I:15:MET:HB3	17:8I:18:THR:HB	1.86	0.58
24:1H:2840:C:H5''	37:98:53:HIS:CD2	2.38	0.58
43:B5:63:LYS:HE3	43:B5:63:LYS:N	2.16	0.58
24:14:309:G:H4'	44:C5:18:GLY:HA3	1.86	0.58
49:H5:59:VAL:HG22	49:H5:60:GLU:H	1.69	0.58
27:11:182:LEU:H	27:11:272:ALA:CB	2.12	0.57
24:14:1175:U:O2'	24:14:1176:G:N3	2.33	0.57
24:14:2134:A:C2	24:14:2159:G:H1'	2.38	0.57
24:14:2261:C:O2'	24:14:2262:U:H5'	2.04	0.57
24:14:2031:A:C6	24:14:2498:C:H1'	2.39	0.57
24:14:2887:U:H2'	24:14:2888:C:C6	2.39	0.57
27:19:76:PRO:HB2	27:19:116:GLN:HE21	1.69	0.57
54:1G:20:U:H2'	54:1G:21:G:O4'	2.04	0.57
54:1G:636:U:H2'	54:1G:637:G:C8	2.39	0.57
24:1H:1678:G:O5'	24:1H:1678:G:H8	1.86	0.57
24:1H:2443:C:OP1	29:31:68:LYS:HD3	2.04	0.57
24:1H:2031:A:C6	24:1H:2498:C:H1'	2.38	0.57
3:22:14:ILE:HD13	3:22:15:THR:HB	1.86	0.57
5:42:6:PHE:HB3	5:42:34:VAL:HG13	1.86	0.57
32:61:10:GLU:O	32:61:11:ASN:ND2	2.37	0.57
7:62:23:VAL:O	7:62:27:ILE:HG13	2.04	0.57
36:88:39:PRO:HA	36:88:97:VAL:O	2.04	0.57
18:9I:53:ARG:HH21	18:9I:59:SER:HA	1.68	0.57
45:D5:52:SER:O	45:D5:52:SER:OG	2.15	0.57
1:13:939:G:H2'	1:13:940:C:C6	2.39	0.57
24:14:191:A:H2'	24:14:192:C:C6	2.39	0.57
24:14:271:G:H2'	24:14:272:G:H8	1.69	0.57
54:1G:250:A:H1'	54:1G:251:G:OP2	2.04	0.57
24:1H:1170:G:O6	24:1H:1179:C:N4	2.28	0.57
24:1H:181:A:H1'	24:1H:435:C:H5'	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:654(D):G:H1	24:1H:654(Q):C:H42	1.52	0.57
14:5A:26:ARG:HD3	14:5A:43:CYS:SG	2.44	0.57
24:1H:2685:G:OP1	34:68:78:ARG:NH2	2.37	0.57
7:6E:120:ILE:HG22	7:6E:124:LEU:HD12	1.86	0.57
18:9A:61:LYS:O	18:9A:65:ILE:HG13	2.04	0.57
53:M5:9:GLY:O	53:M5:13:ARG:HD2	2.04	0.57
1:13:1007:C:H42	1:13:1022:G:H1	1.51	0.57
1:13:1226:C:OP2	13:4I:103:THR:OG1	2.13	0.57
1:13:735:C:H2'	1:13:736:C:C6	2.39	0.57
25:16:15:A:O2'	25:16:109:G:N7	2.29	0.57
2:1E:15:VAL:HG23	2:1E:210:SER:HB2	1.85	0.57
54:1G:660:G:H1	54:1G:745:C:H42	1.52	0.57
24:1H:1250:G:N7	35:78:18:ARG:NH2	2.50	0.57
22:2L:73:U:H2'	22:2L:74:C:C6	2.40	0.57
4:3E:92:VAL:O	4:3E:96:LEU:HD22	2.04	0.57
13:4I:50:GLU:N	13:4I:50:GLU:OE2	2.37	0.57
31:51:113:VAL:HG21	31:51:151:ILE:HG21	1.86	0.57
8:7E:121:ASP:HB2	8:7E:125:ARG:NH2	2.20	0.57
24:1H:871:U:OP2	36:88:5:ARG:NE	2.36	0.57
39:B8:4:GLY:O	39:B8:7:ILE:HG23	2.04	0.57
20:BA:10:LEU:HG	20:BA:12:ALA:H	1.68	0.57
46:I8:53:MET:HG3	46:I8:59:LEU:HD23	1.85	0.57
27:11:260:ARG:HG2	27:11:261:LYS:O	2.04	0.57
1:13:1128:C:HO2'	1:13:1130:A:H8	1.51	0.57
1:13:280:C:H3'	1:13:281:G:H5'	1.86	0.57
24:14:654(O):G:N2	24:14:654(P):G:O6	2.37	0.57
54:1G:1129:C:N4	54:1G:1141:C:H41	2.02	0.57
54:1G:28:G:H21	54:1G:296:U:H4'	1.69	0.57
54:1G:963:G:H21	10:1A:55:LYS:CE	2.16	0.57
24:1H:1587:A:H2'	24:1H:1588:C:C6	2.40	0.57
24:1H:249:C:P	57:1H:3613:HOH:O	2.62	0.57
24:1H:950:G:H2'	24:1H:951:C:C6	2.40	0.57
12:3A:83:VAL:HG21	12:3A:100:ILE:HD13	1.86	0.57
4:3E:155:LEU:HB3	4:3E:158:ILE:HB	1.86	0.57
4:3E:61:LYS:HD2	4:3E:207:TYR:OH	2.04	0.57
12:3I:93:LEU:HB2	12:3I:96:VAL:HG12	1.87	0.57
36:45:75:THR:HA	36:45:90:VAL:H	1.69	0.57
31:59:109:PHE:CZ	31:59:152:ARG:HB2	2.38	0.57
16:7A:14:ASN:OD1	16:7A:16:HIS:NE2	2.35	0.57
54:1G:110:C:O2'	16:7A:25:ARG:O	2.22	0.57
45:D5:126:VAL:HG12	45:D5:163:LEU:HA	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:D5:54:HIS:HB3	45:D5:101:PRO:HD3	1.86	0.57
44:G8:55:TYR:HB2	44:G8:58:GLY:HA3	1.85	0.57
24:14:125:G:H5'	52:L5:19:ARG:HD3	1.86	0.57
1:13:1348:U:H4'	9:8E:120:ARG:HD2	1.85	0.57
24:14:1187:G:OP2	57:14:3762:HOH:O	2.17	0.57
24:14:1291:C:H2'	24:14:1292:U:C6	2.39	0.57
24:14:1337:G:H2'	24:14:1338:G:H8	1.70	0.57
24:14:2788:C:O2'	24:14:2809:A:N3	2.36	0.57
33:15:68:GLU:HG2	33:15:88:GLU:OE1	2.05	0.57
27:19:253:GLN:HB3	27:19:255:LYS:NZ	2.19	0.57
54:1G:166:G:H2'	54:1G:167:G:H8	1.69	0.57
24:1H:1174:A:H62	24:1H:1175:U:H5	1.51	0.57
24:1H:1533:C:H42	24:1H:1538:G:H1	1.53	0.57
3:2E:172:ARG:HH21	3:2E:174:PRO:HG3	1.69	0.57
29:31:122:LYS:NZ	29:31:152:GLU:OE2	2.35	0.57
35:35:82:GLY:HA2	35:35:113:LYS:O	2.05	0.57
16:7I:43:LYS:HG3	16:7I:48:TRP:CZ3	2.39	0.57
36:88:106:VAL:HG21	36:88:114:ALA:HB1	1.86	0.57
41:95:44:LYS:O	41:95:46:VAL:HG12	2.05	0.57
39:B8:92:GLY:HA2	39:B8:117:ASP:H	1.70	0.57
48:G5:22:GLU:HG2	48:G5:64:LEU:HD11	1.87	0.57
46:I8:36:ILE:CD1	46:I8:39:ARG:HG2	2.35	0.57
24:14:2855:C:H2'	24:14:2856:C:H6	1.68	0.57
33:15:15:LEU:HB2	33:15:134:ARG:HG2	1.87	0.57
54:1G:674:G:H2'	54:1G:675:A:C8	2.39	0.57
24:1H:1657:C:H2'	24:1H:1658:C:C6	2.40	0.57
5:42:87:SER:HB3	5:42:125:SER:O	2.05	0.57
13:4A:12:ASN:O	13:4A:12:ASN:ND2	2.36	0.57
13:4A:77:ASN:HD22	13:4A:80:ARG:HH21	1.52	0.57
1:13:926:G:N2	23:4K:15:A:OP2	2.37	0.57
33:58:58:ASP:OD1	33:58:58:ASP:N	2.24	0.57
37:98:74:LYS:C	37:98:76:VAL:H	2.08	0.57
1:13:17:U:H2'	1:13:18:C:C6	2.38	0.57
24:14:1535:U:C5	24:14:1536:A:H1'	2.40	0.57
24:14:2849:U:OP1	39:75:95:ARG:NH1	2.37	0.57
24:14:71:A:H2	43:B5:31:HIS:HE2	1.47	0.57
54:1G:533:A:O2'	54:1G:535:A:OP2	2.14	0.57
24:1H:1021:A:H61	24:1H:1142(A):A:H61	1.51	0.57
24:1H:860:U:C5	24:1H:917:A:C2	2.91	0.57
4:32:18:LYS:HZ1	4:32:26:CYS:HB3	1.68	0.57
32:61:80:PRO:HB2	32:61:146:ALA:HB2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:75:5:ALA:O	39:75:6:LEU:HB3	2.05	0.57
16:7I:39:TYR:OH	16:7I:41:PRO:HB3	2.05	0.57
9:82:4:TYR:OH	9:82:88:TYR:O	2.22	0.57
36:88:86:GLY:HA3	36:88:87:LYS:HG3	1.85	0.57
18:9I:85:LEU:HD23	18:9I:88:LYS:HB2	1.86	0.57
13:4A:84:ILE:HG12	19:AA:63:THR:HB	1.85	0.57
42:E8:70:TYR:H	42:E8:70:TYR:HD1	1.51	0.57
47:F5:21:ARG:HD3	47:F5:35:THR:HG21	1.86	0.57
49:L8:50:VAL:O	49:L8:54:VAL:HG12	2.05	0.57
51:N8:40:LYS:HG2	51:N8:46:CYS:HA	1.85	0.57
43:F8:60:ARG:HH12	52:P8:47:ARG:HH22	1.52	0.57
53:Q8:37:SER:OG	53:Q8:38:GLY:N	2.35	0.57
24:14:1434:A:H61	24:14:1558:A:N6	2.03	0.57
24:14:1777:U:O2'	24:14:1778:U:H5'	2.05	0.57
24:14:646:A:H2'	24:14:647:G:O4'	2.05	0.57
2:1E:82:ARG:NH1	2:1E:92:TYR:HH	2.01	0.57
28:29:37:ARG:HB2	28:29:46:ALA:H	1.70	0.57
29:31:32:LEU:HD21	29:31:105:VAL:HG13	1.85	0.57
29:39:132:VAL:O	29:39:134:GLY:N	2.37	0.57
1:13:537:G:H5''	12:3I:113:ARG:HH12	1.70	0.57
24:14:912:C:OP1	36:45:8:LYS:NZ	2.35	0.57
33:58:15:LEU:HB2	33:58:134:ARG:HB2	1.87	0.57
34:68:52:VAL:HG12	34:68:94:ARG:HH21	1.70	0.57
8:72:86:ILE:HD11	8:72:136:GLU:HG2	1.87	0.57
17:8A:48:GLU:HG3	17:8A:50:LYS:HB2	1.86	0.57
41:95:16:PRO:HA	41:95:96:ILE:HG22	1.86	0.57
42:A5:86:LEU:HD12	42:A5:87:PRO:HD2	1.85	0.57
48:G5:53:LEU:O	48:G5:57:ILE:HG13	2.04	0.57
46:I8:50:ASN:HB2	46:I8:81:VAL:HG13	1.87	0.57
2:12:162:ILE:HD11	2:12:184:VAL:HG22	1.85	0.57
1:13:1256:A:H4'	1:13:1258:G:C4	2.40	0.57
24:14:1525:G:H2'	24:14:1526:G:C8	2.40	0.57
24:14:69:C:H2'	24:14:70:G:C8	2.40	0.57
24:14:864:G:C6	24:14:865:C:N4	2.73	0.57
54:1G:1123:A:H4'	10:1A:36:GLY:HA3	1.85	0.57
54:1G:1246:C:O2	54:1G:1291:G:N2	2.31	0.57
24:1H:1036:G:N2	24:1H:1119:C:O2	2.36	0.57
24:1H:2147:G:H2'	24:1H:2148:G:O4'	2.05	0.57
24:1H:2855:C:H2'	24:1H:2856:C:H6	1.68	0.57
24:14:2622:C:H5'	28:29:159:HIS:ND1	2.19	0.57
11:2A:31:THR:HG22	11:2A:42:TRP:HB2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:51:4:ILE:HD11	31:51:7:LEU:HD11	1.87	0.57
9:82:88:TYR:O	9:82:89:ASN:ND2	2.36	0.57
24:14:494:G:OP1	42:A5:8:ARG:NH1	2.38	0.57
38:A8:28:VAL:HG11	38:A8:98:VAL:HG13	1.86	0.57
44:C5:26:LYS:O	44:C5:39:VAL:HG12	2.04	0.57
35:78:59:LEU:HD23	53:Q8:13:ARG:HD2	1.86	0.57
1:13:1429:C:H2'	1:13:1430:C:C6	2.40	0.57
24:14:1048:A:H61	24:14:1112:G:HO2'	1.53	0.57
24:14:1359:A:N7	24:14:1372:U:O4	2.38	0.57
24:14:1742:C:H5'	24:14:1743:G:OP2	2.04	0.57
24:14:2131:G:H5'	24:14:2132:U:H5''	1.85	0.57
24:14:363(B):G:H2'	24:14:363(C):G:C8	2.40	0.57
54:1G:142:G:H1	54:1G:221:C:H42	1.52	0.57
24:1H:300:A:H2'	24:1H:334:C:H1'	1.87	0.57
22:2K:64:PSU:O2'	22:2K:66:G:N7	2.34	0.57
29:31:29:ASN:H	29:31:112:MET:HE3	1.68	0.57
22:3L:62:G:N2	22:3L:70:C:O2	2.33	0.57
31:59:10:PRO:HG2	31:59:50:VAL:HG13	1.87	0.57
31:59:8:PRO:HG2	31:59:69:ARG:HH21	1.68	0.57
14:5I:27:CYS:HB2	14:5I:29:ARG:HG2	1.87	0.57
14:5I:37:PHE:CE1	14:5I:53:LEU:HD13	2.40	0.57
32:69:87:LYS:O	32:69:87:LYS:HD2	2.04	0.57
39:75:10:VAL:HG12	39:75:11:GLU:H	1.69	0.57
8:7E:77:GLU:HG2	8:7E:78:GLN:H	1.69	0.57
17:8I:68:ARG:H	17:8I:70:ARG:NH1	2.03	0.57
20:BA:67:ALA:HA	20:BA:73:HIS:H	1.70	0.57
24:14:989:G:OP2	49:H5:11:SER:OG	2.23	0.57
24:1H:1365:A:P	47:J8:41:ARG:HH22	2.28	0.57
24:14:1416:G:HO2'	24:14:1417:C:P	2.27	0.56
24:1H:1435:G:H1	24:1H:1557:C:H42	1.50	0.56
24:1H:320:A:OP1	29:31:135:LYS:NZ	2.38	0.56
24:1H:651:G:OP1	53:Q8:19:SER:HB3	2.04	0.56
3:2E:47:LEU:HD11	3:2E:76:VAL:HG12	1.86	0.56
4:32:173:TRP:CD1	4:32:174:LEU:HG	2.40	0.56
29:39:122:LYS:HD2	29:39:191:ARG:HB3	1.87	0.56
16:7I:39:TYR:CZ	16:7I:41:PRO:HB3	2.40	0.56
41:95:37:VAL:HG21	41:95:56:SER:HA	1.86	0.56
19:AA:9:VAL:HB	19:AA:11:VAL:HG23	1.87	0.56
45:D5:141:VAL:HG13	45:D5:150:LEU:HD12	1.87	0.56
24:1H:773:U:C4'	27:11:47:GLY:HA3	2.34	0.56
1:13:738:C:H2'	1:13:739:C:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:788:U:H3	1:13:792:A:HO2'	1.54	0.56
1:13:22:G:O2'	1:13:913:A:N1	2.36	0.56
24:14:1048:A:H2	24:14:1112:G:H21	1.51	0.56
24:14:1593:G:H2'	24:14:1594:G:C8	2.40	0.56
24:14:1945:G:H2'	24:14:1946:U:C6	2.40	0.56
24:14:2239:G:OP2	57:14:3492:HOH:O	2.17	0.56
24:14:780:G:N2	24:14:783:A:H62	1.98	0.56
54:1G:1190:G:OP2	3:22:5:ILE:HD13	2.04	0.56
54:1G:1365:G:H2'	54:1G:1366:C:H6	1.69	0.56
24:1H:1102:C:H2'	24:1H:1103:A:C8	2.40	0.56
24:1H:314:A:C2'	24:1H:315:G:H5'	2.35	0.56
24:1H:320:A:H2'	29:31:136:THR:HG21	1.86	0.56
11:2A:51:LYS:HA	11:2A:55:LYS:HD3	1.85	0.56
11:2I:32:ILE:HD11	11:2I:68:ALA:HB1	1.87	0.56
35:35:39:LYS:CG	35:35:45:LEU:HD22	2.35	0.56
35:78:19:VAL:HG12	35:78:21:ARG:N	2.20	0.56
26:79:175:VAL:O	26:79:188:ASN:ND2	2.37	0.56
39:B8:42:ILE:HG12	39:B8:84:GLN:NE2	2.21	0.56
24:14:336:C:H5''	44:C5:6:HIS:HD2	1.70	0.56
43:F8:64:LYS:HD2	43:F8:73:ARG:NH2	2.20	0.56
49:L8:21:ALA:O	49:L8:24:LYS:HB2	2.05	0.56
53:Q8:29:LYS:HD3	53:Q8:44:LYS:O	2.05	0.56
27:11:8:PRO:HB3	27:11:14:ARG:CB	2.34	0.56
2:12:12:GLU:OE1	2:12:15:VAL:N	2.37	0.56
24:14:1268:A:H2'	24:14:1269:A:O4'	2.05	0.56
24:14:330:A:H2	24:14:1210:A:HO2'	1.51	0.56
24:14:1568:G:P	27:19:63:ARG:HH12	2.27	0.56
10:1A:4:ILE:HB	10:1A:74:ILE:HB	1.87	0.56
2:1E:77:ALA:HB2	2:1E:211:ILE:HD13	1.86	0.56
24:1H:2656:U:H3	24:1H:2665:A:H2	1.52	0.56
10:1I:48:THR:HA	10:1I:62:HIS:HB3	1.87	0.56
11:2I:58:PRO:HD3	11:2I:89:ALA:HB1	1.87	0.56
22:2L:71:C:H1'	22:2L:72:U:OP2	2.04	0.56
4:3E:154:ASN:O	4:3E:159:ARG:HG3	2.04	0.56
13:4A:15:VAL:HG12	13:4A:45:VAL:HG22	1.87	0.56
8:72:12:ARG:HD3	8:72:26:VAL:HG12	1.87	0.56
36:88:89:ASN:HB2	36:88:90:VAL:HG13	1.87	0.56
24:14:751:A:H4'	42:A5:90:ARG:NH1	2.20	0.56
38:A8:34:HIS:HB2	38:A8:36:TYR:CE1	2.39	0.56
45:D5:125:LEU:HG	45:D5:164:ALA:HB3	1.87	0.56
50:I5:9:LEU:HD12	50:I5:26:SER:HA	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:L5:34:ARG:NH1	52:L5:39:ARG:HD2	2.20	0.56
1:13:902:G:H2'	1:13:903:G:H8	1.71	0.56
24:14:1115:G:H2'	24:14:1116:C:C6	2.41	0.56
24:14:1358:G:O2'	24:14:1359:A:H5''	2.05	0.56
24:14:1537:C:H2'	24:14:1538:G:O4'	2.05	0.56
24:14:1771:C:C1'	24:14:1786:A:C8	2.87	0.56
24:14:479:A:N3	24:14:481:G:H5''	2.19	0.56
24:14:579:G:H2'	24:14:580:C:C6	2.41	0.56
25:16:21:G:H1	25:16:62:C:N4	2.03	0.56
54:1G:1072:G:H2'	54:1G:1073:U:C6	2.40	0.56
24:1H:2502:G:H5''	24:1H:2503:A:H5''	1.87	0.56
4:32:29:PRO:HG2	4:32:30:LYS:HD3	1.86	0.56
38:65:59:LYS:HG2	38:65:60:GLY:H	1.68	0.56
34:68:4:PRO:O	34:68:5:GLN:HB2	2.04	0.56
26:79:213:TYR:CD2	26:79:221:SER:HB2	2.40	0.56
8:7E:6:ILE:HD11	8:7E:31:PHE:HD2	1.70	0.56
24:1H:871:U:P	36:88:5:ARG:HE	2.29	0.56
37:98:74:LYS:H	37:98:74:LYS:HD2	1.70	0.56
20:BI:14:LYS:HA	20:BI:17:ARG:HE	1.71	0.56
44:C5:38:ILE:HD13	44:C5:66:PRO:HA	1.86	0.56
1:13:939:G:H2'	1:13:940:C:H6	1.70	0.56
24:14:2688:U:H1'	24:14:2721:A:N6	2.21	0.56
10:1A:99:LYS:HD3	10:1A:100:THR:H	1.71	0.56
2:1E:141:GLU:O	2:1E:145:LEU:HB2	2.05	0.56
54:1G:1118:C:O5'	54:1G:1118:C:H6	1.89	0.56
24:1H:1446:C:H2'	24:1H:1447:G:H8	1.69	0.56
24:1H:2:G:H22	24:1H:2901:C:H42	1.53	0.56
24:1H:573:G:O2'	24:1H:574:C:H3'	2.05	0.56
24:1H:589:C:H2'	24:1H:590:A:C8	2.40	0.56
28:29:92:THR:O	28:29:95:ILE:HG13	2.04	0.56
4:32:5:ILE:HG22	4:32:5:ILE:O	2.05	0.56
31:51:92:ILE:H	31:51:92:ILE:HD12	1.70	0.56
37:55:37:THR:OG1	37:55:40:LYS:HE3	2.05	0.56
31:59:129:THR:OG1	31:59:130:ARG:N	2.32	0.56
14:5A:40:CYS:HB2	14:5A:43:CYS:H	1.70	0.56
19:AA:40:ILE:HD11	19:AA:69:HIS:HB2	1.88	0.56
24:1H:2355:C:H1'	46:I8:39:ARG:HH21	1.70	0.56
53:Q8:54:GLU:OE2	53:Q8:57:ARG:NH2	2.38	0.56
24:14:2419:U:H5''	53:M5:34:TRP:HB3	1.87	0.56
24:14:2563:U:O2	24:14:2565:A:H8	1.88	0.56
25:16:65:C:N4	25:16:108:C:H2'	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1272:G:H2'	54:1G:1273:G:O4'	2.06	0.56
54:1G:176:C:H2'	54:1G:177:C:H6	1.70	0.56
24:1H:172:C:H2'	24:1H:173:G:H8	1.70	0.56
24:1H:2005:A:H5'	24:1H:2006:C:OP2	2.06	0.56
24:1H:2688:U:H5	24:1H:2720:U:OP2	1.88	0.56
32:61:126:TYR:HB2	32:61:140:LEU:O	2.05	0.56
32:61:88:ILE:HG22	32:61:90:GLY:H	1.69	0.56
40:85:92:ARG:HD2	41:95:11:GLN:CD	2.26	0.56
1:13:448:A:OP2	1:13:485:G:N2	2.28	0.56
1:13:639:G:H2'	1:13:640:A:H8	1.70	0.56
24:14:581:C:H2'	24:14:582:G:C8	2.41	0.56
24:1H:248:G:H5'	24:1H:250:G:N7	2.20	0.56
24:14:2572:A:H62	28:29:145:LYS:HD2	1.71	0.56
35:35:94:GLU:HG3	35:35:124:LYS:HD3	1.88	0.56
30:41:66:GLN:OE1	30:41:98:ARG:NH1	2.39	0.56
36:45:43:THR:HB	36:45:45:GLN:NE2	2.20	0.56
6:5E:82:ARG:HB2	6:5E:85:VAL:HG23	1.87	0.56
8:7E:54:ASP:O	8:7E:56:LYS:NZ	2.37	0.56
40:85:52:ARG:HH11	40:85:52:ARG:HB3	1.71	0.56
40:85:92:ARG:C	40:85:94:ASN:H	2.08	0.56
52:L5:5:TRP:CD1	52:L5:7:PRO:HG3	2.41	0.56
2:12:7:VAL:HG13	2:12:8:LYS:H	1.69	0.56
1:13:1103:C:H2'	1:13:1104:G:O4'	2.05	0.56
1:13:191(F):U:H2'	1:13:191:G:C8	2.41	0.56
1:13:491:G:H2'	1:13:492:G:H8	1.70	0.56
1:13:626:U:H2'	1:13:627:G:H8	1.70	0.56
24:14:2563:U:O2	24:14:2565:A:C8	2.58	0.56
24:14:755:C:H2'	24:14:756:C:C6	2.41	0.56
24:14:1007:C:OP1	33:15:37:LYS:NZ	2.38	0.56
24:1H:2591:C:H2'	24:1H:2592:G:C8	2.41	0.56
24:1H:459:U:H2'	24:1H:460:A:C8	2.40	0.56
24:1H:575:A:OP2	24:1H:2055:C:N4	2.33	0.56
4:32:31:CYS:C	4:32:33:MET:N	2.59	0.56
36:45:108:GLY:HA3	45:D5:116:VAL:HG22	1.86	0.56
30:49:56:ALA:HA	30:49:59:GLU:HG2	1.87	0.56
39:75:29:ARG:NH1	39:75:46:GLU:OE1	2.39	0.56
44:C5:39:VAL:C	44:C5:41:GLY:H	2.06	0.56
49:H5:27:GLY:HA3	49:H5:35:ARG:HH21	1.70	0.56
1:13:439:A:H2'	1:13:440:A:O4'	2.06	0.56
1:13:666:G:H8	1:13:666:G:OP1	1.89	0.56
24:14:1359:A:H2'	24:14:1360:A:H5'	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1751:C:H2'	24:14:1752:C:C6	2.41	0.56
24:14:2130:U:O2'	24:14:2134:A:O4'	2.23	0.56
24:14:271:G:H2'	24:14:272:G:C8	2.39	0.56
24:14:488:G:N2	24:14:492:A:OP2	2.39	0.56
24:14:49:A:H5''	24:14:51:G:O4'	2.05	0.56
24:14:755:C:H2'	24:14:756:C:H6	1.70	0.56
24:1H:578:A:OP2	57:1H:4547:HOH:O	2.18	0.56
24:1H:731:C:OP2	57:1H:3638:HOH:O	2.18	0.56
24:1H:956:G:N2	24:1H:959:A:H3'	2.21	0.56
3:2E:15:THR:HG21	3:2E:181:ASN:HA	1.87	0.56
13:4A:49:THR:N	13:4A:52:GLU:OE1	2.30	0.56
13:4A:77:ASN:ND2	13:4A:80:ARG:HH21	2.03	0.56
31:51:83:TYR:HD2	31:51:84:SER:H	1.54	0.56
6:52:35:ALA:HB2	6:52:67:MET:HE3	1.88	0.56
45:D5:161:VAL:HG23	45:D5:162:GLU:HG2	1.87	0.56
45:D5:23:LYS:NZ	45:D5:40:ASP:HB2	2.21	0.56
45:D5:76:LEU:HD23	45:D5:76:LEU:H	1.71	0.56
1:13:1352:C:H2'	1:13:1353:G:C8	2.40	0.56
1:13:313:A:H2'	1:13:314:C:C6	2.40	0.56
24:14:132:G:H1	24:14:147:U:H3	1.53	0.56
24:14:1899:G:H22	24:14:1902:C:N4	1.97	0.56
24:14:30:G:H2'	24:14:31:C:C6	2.41	0.56
54:1G:1239:A:H4'	54:1G:1240:U:H5''	1.88	0.56
54:1G:585:G:N3	54:1G:879:C:H4'	2.21	0.56
24:1H:2058:A:N6	57:1H:3568:HOH:O	2.19	0.56
24:1H:2564:A:C2	24:1H:2647:U:H4'	2.40	0.56
24:1H:947:G:N7	57:1H:4348:HOH:O	2.33	0.56
22:2K:35:QUO:H5''	22:2K:36:U:OP2	2.05	0.56
22:2L:41:C:H2'	22:2L:42:U:C6	2.41	0.56
13:4I:107:ALA:CB	13:4I:111:LYS:HE2	2.33	0.56
24:14:1287:A:N7	37:55:107:ASP:HB2	2.21	0.56
7:62:26:PHE:CE2	7:62:30:ILE:HD11	2.41	0.56
32:69:117:GLU:CD	32:69:118:LYS:H	2.08	0.56
37:98:97:VAL:HA	37:98:113:LEU:O	2.06	0.56
18:9A:58:LEU:HD22	18:9A:62:GLU:HB3	1.88	0.56
47:J8:80:LEU:H	47:J8:80:LEU:HD22	1.71	0.56
27:11:223:GLY:HA3	27:11:231:HIS:CE1	2.41	0.56
1:13:1260:C:O5'	1:13:1284:C:H4'	2.06	0.56
1:13:1347:G:C8	9:8E:107:ARG:HB3	2.41	0.56
1:13:390:C:O2'	16:7I:28:ARG:NH2	2.39	0.56
24:14:2720:U:N3	24:14:2873:A:H2	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:732:C:H3'	57:1H:4066:HOH:O	2.05	0.56
25:1J:11:C:H3'	25:1J:12:C:C6	2.41	0.56
25:1J:18:G:H2'	25:1J:19:G:C8	2.41	0.56
24:1H:2788:C:OP1	28:21:61:ARG:NH2	2.39	0.56
29:39:132:VAL:HG13	29:39:133:ASN:HB2	1.87	0.56
22:3K:38:MIA:H2'	22:3K:39:A:C8	2.41	0.56
7:6E:57:GLU:O	7:6E:60:LYS:HG2	2.06	0.56
16:7I:26:ARG:NH1	16:7I:31:LYS:HB3	2.21	0.56
9:82:26:VAL:HG22	9:82:61:ALA:HB3	1.87	0.56
17:8I:67:LYS:O	17:8I:68:ARG:HB3	2.05	0.56
24:1H:1011:G:H4'	40:C8:75:ASN:ND2	2.21	0.56
45:D5:53:ILE:HA	45:D5:71:VAL:HG13	1.88	0.56
2:12:63:MET:HG3	2:12:225:ALA:HB1	1.87	0.55
1:13:1149:C:H2'	1:13:1150:U:H6	1.70	0.55
1:13:1427:U:H2'	1:13:1428:A:C8	2.41	0.55
1:13:491:G:H2'	1:13:492:G:C8	2.41	0.55
24:14:2230:G:H1'	47:F5:45:ASN:HB2	1.87	0.55
21:1B:6:ARG:HH21	21:1B:15:ARG:NH2	2.03	0.55
54:1G:934:C:O2'	54:1G:1344:C:OP2	2.23	0.55
54:1G:165:C:H2'	54:1G:166:G:C8	2.41	0.55
54:1G:474:G:H2'	54:1G:475:G:H8	1.71	0.55
24:1H:699:A:H2'	24:1H:700:G:O4'	2.06	0.55
24:1H:723:G:H2'	24:1H:724:U:O4'	2.06	0.55
29:31:12:LEU:HD13	29:31:124:LEU:HD11	1.88	0.55
29:31:6:VAL:HG12	29:31:7:TYR:H	1.70	0.55
29:39:158:THR:HG23	29:39:164:ARG:HG3	1.88	0.55
31:51:106:THR:HG22	31:51:112:PRO:HB3	1.87	0.55
1:13:1202:G:O2'	14:5I:27:CYS:HB3	2.06	0.55
7:62:71:PRO:HD3	7:62:103:TRP:HZ3	1.70	0.55
35:78:126:VAL:HG13	35:78:145:PRO:HG2	1.88	0.55
35:78:15:ARG:HA	35:78:16:ARG:HB2	1.88	0.55
45:D5:30:ASN:ND2	45:D5:90:VAL:O	2.39	0.55
52:L5:19:ARG:HG2	52:L5:19:ARG:HH11	1.71	0.55
27:11:124:PRO:HG2	27:11:129:ASN:HD21	1.70	0.55
1:13:576:G:N2	1:13:759:A:OP1	2.38	0.55
24:14:1328:G:H2'	24:14:1330:C:C5	2.41	0.55
24:14:2157:G:H2'	24:14:2158:A:C8	2.33	0.55
54:1G:923:A:O2'	54:1G:1399:C:OP2	2.21	0.55
54:1G:438:G:H4'	4:32:123:HIS:ND1	2.21	0.55
24:1H:1010:A:OP2	57:1H:4153:HOH:O	2.18	0.55
24:1H:2144:U:H1'	24:1H:2148:G:N2	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2737:G:H2'	24:1H:2738:A:H8	1.69	0.55
24:1H:483:A:N7	24:1H:497:A:H2	2.04	0.55
28:29:76:ARG:HG2	28:29:195:LEU:HD22	1.88	0.55
29:39:130:ALA:H	29:39:142:TRP:HD1	1.55	0.55
22:3L:18:G:H4'	22:3L:19:C:O5'	2.05	0.55
17:8A:63:ARG:HG2	17:8A:64:PRO:HD2	1.88	0.55
19:AI:5:LEU:HD22	19:AI:70:LYS:NZ	2.21	0.55
46:E5:26:TYR:O	46:E5:29:GLN:HB2	2.05	0.55
45:H8:171:ILE:HG23	45:H8:172:ALA:H	1.71	0.55
50:I5:57:GLU:O	50:I5:60:GLN:NE2	2.40	0.55
24:1H:2392:A:OP2	53:Q8:32:LEU:HD12	2.07	0.55
1:13:1055:A:H2'	3:2E:156:ARG:HD2	1.88	0.55
1:13:1369:C:H2'	1:13:1370:G:C8	2.41	0.55
1:13:411:A:N7	1:13:413:G:N3	2.53	0.55
1:13:631:G:O2'	1:13:632:A:O4'	2.14	0.55
1:13:807:A:H2'	1:13:808:C:C6	2.41	0.55
24:14:2276:G:C2	24:14:2277:G:C8	2.94	0.55
24:14:2695:C:H2'	24:14:2696:U:C6	2.41	0.55
24:14:296:C:H2'	24:14:297:C:H6	1.72	0.55
25:16:112:G:H2'	25:16:113:C:C6	2.41	0.55
54:1G:464:G:C6	54:1G:466:C:H5'	2.42	0.55
54:1G:757:U:H2'	54:1G:758:G:O4'	2.07	0.55
24:1H:1021:A:H8	24:1H:1021:A:H3'	1.72	0.55
24:1H:1857:G:N7	57:1H:4346:HOH:O	2.33	0.55
22:2L:12:C:H5	22:2L:24:G:H22	1.53	0.55
30:49:64:THR:OG1	30:49:65:GLY:N	2.37	0.55
31:59:116:GLU:O	31:59:118:PRO:HD3	2.06	0.55
37:98:87:TYR:HE1	37:98:117:VAL:HG12	1.71	0.55
46:I8:27:GLU:HG3	46:I8:69:PHE:H	1.70	0.55
24:1H:2334:G:O6	46:I8:74:ARG:NH2	2.38	0.55
1:13:67:C:H2'	1:13:68:G:C8	2.42	0.55
24:14:1054:A:H3'	24:14:1055:G:C8	2.41	0.55
24:14:1505:C:H2'	24:14:1506:C:C6	2.42	0.55
24:14:2273:A:O2'	24:14:2274:A:H5'	2.07	0.55
24:14:2376:A:OP1	24:14:2376:A:H8	1.90	0.55
27:19:255:LYS:H	27:19:255:LYS:HZ1	1.53	0.55
54:1G:1386:G:H2'	54:1G:1387:G:C8	2.39	0.55
24:1H:1113:U:H2'	24:1H:1114:G:C8	2.41	0.55
24:1H:1472:A:H2'	24:1H:1473:G:O4'	2.06	0.55
24:1H:1878:G:H2'	24:1H:1879:C:C6	2.41	0.55
24:1H:1950:G:N2	57:1H:3995:HOH:O	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1J:29:A:H2'	25:1J:30:C:O4'	2.07	0.55
11:2I:73:MET:SD	11:2I:102:GLY:HA3	2.46	0.55
4:3E:108:LEU:HB3	4:3E:110:PHE:CD1	2.41	0.55
24:14:908:C:OP1	36:45:22:LYS:HD2	2.07	0.55
32:61:120:ILE:HD12	32:61:126:TYR:CE2	2.42	0.55
16:7A:18:ARG:HD3	16:7A:35:LYS:HD2	1.87	0.55
17:8A:87:LYS:HE2	17:8A:91:ARG:NH2	2.21	0.55
37:98:75:LEU:HA	37:98:78:LYS:HB3	1.88	0.55
24:1H:1188:U:H4'	41:D8:79:VAL:HG22	1.88	0.55
1:13:304:U:H2'	1:13:305:G:C8	2.42	0.55
1:13:536:C:H2'	1:13:537:G:C8	2.41	0.55
1:13:814:A:N7	1:13:816:A:C4	2.74	0.55
1:13:93:U:H2'	1:13:95:G:O4'	2.06	0.55
24:14:1021:A:H61	24:14:1142(A):A:H61	1.55	0.55
24:14:2037:G:H2'	24:14:2038:G:C8	2.41	0.55
24:14:2130:U:H2'	24:14:2158:A:N1	2.21	0.55
24:14:882:G:O6	24:14:894:C:N4	2.39	0.55
24:14:924:C:H2'	24:14:925:C:C6	2.41	0.55
54:1G:1250:A:H2'	54:1G:1251:A:C8	2.42	0.55
54:1G:1273:G:H3'	54:1G:1274:G:C8	2.42	0.55
54:1G:996:A:H2'	54:1G:997:U:O4'	2.07	0.55
24:1H:1607:C:H4'	24:1H:1608:A:O5'	2.07	0.55
24:1H:1332:G:H21	24:1H:1610:A:H8	1.54	0.55
24:1H:2402:C:H2'	24:1H:2403:C:H5	1.70	0.55
25:1J:119:A:H8	25:1J:119:A:O5'	1.89	0.55
28:21:108:SER:OG	28:21:163:GLU:HG2	2.06	0.55
4:32:153:ARG:HH12	4:32:181:MET:HB2	1.72	0.55
29:39:8:GLN:HG2	29:39:124:LEU:HD11	1.88	0.55
12:3I:93:LEU:O	12:3I:96:VAL:HG12	2.06	0.55
24:1H:2175:C:O2'	26:71:219:GLY:O	2.25	0.55
8:72:16:ALA:HB2	8:72:24:THR:HG21	1.87	0.55
45:D5:120:ILE:HG23	45:D5:173:ALA:HB2	1.89	0.55
24:1H:2230:G:H1'	47:J8:45:ASN:HB2	1.86	0.55
1:13:1070:U:H2'	1:13:1071:C:H6	1.71	0.55
1:13:1335:C:H5''	1:13:1336:C:OP1	2.06	0.55
1:13:1448:C:H42	1:13:1455:G:H1	1.53	0.55
24:14:1327:C:OP2	57:14:3721:HOH:O	2.18	0.55
24:14:2808:U:H5''	24:14:2891:G:O6	2.06	0.55
24:14:75:G:H4'	48:G5:55:ARG:NH2	2.22	0.55
10:1A:17:ASP:OD2	10:1A:70:ARG:NH1	2.40	0.55
2:1E:71:VAL:HG23	2:1E:164:VAL:HG22	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1033:G:H2'	54:1G:1034:G:H8	1.72	0.55
54:1G:129(A):G:C6	54:1G:188:U:H4'	2.42	0.55
54:1G:728:A:H2'	54:1G:729:A:C8	2.42	0.55
24:1H:1435:G:H8	24:1H:1435:G:O5'	1.90	0.55
24:1H:1762[B]:A:N1	57:1H:3693:HOH:O	2.33	0.55
24:1H:1786:A:C2	24:1H:2606:C:H1'	2.40	0.55
24:1H:1929:G:H4'	24:1H:1930:G:OP1	2.06	0.55
22:2L:74:C:H2'	22:2L:75:C:H6	1.72	0.55
6:5E:30:LEU:HB3	6:5E:35:ALA:HB3	1.88	0.55
32:61:123:LEU:HD23	32:61:142:VAL:HB	1.89	0.55
37:98:117:VAL:HG22	37:98:118:GLU:H	1.71	0.55
45:H8:48:PHE:HA	45:H8:51:ALA:HB3	1.88	0.55
46:I8:23:VAL:HB	46:I8:26:TYR:HE1	1.72	0.55
1:13:353:A:H5'	1:13:353:A:H8	1.70	0.55
24:14:330:A:H2	24:14:1210:A:O2'	1.89	0.55
24:14:2542:A:H4'	24:14:2542:A:OP1	2.06	0.55
2:1E:237:ALA:O	2:1E:239:VAL:N	2.39	0.55
54:1G:986:A:H1'	19:AA:54:GLY:O	2.06	0.55
24:1H:176:G:O2'	24:1H:177:G:H5'	2.07	0.55
22:3K:75:C:H2'	22:3K:76:C:C6	2.41	0.55
26:79:163:PHE:HB2	26:79:171:ILE:HD11	1.89	0.55
36:88:17:LEU:HB3	36:88:39:PRO:HB2	1.88	0.55
37:98:70:LEU:O	37:98:72:ASP:N	2.39	0.55
42:A5:29:LEU:HD21	42:A5:33:ARG:NH2	2.20	0.55
39:B8:21:GLU:OE1	39:B8:91:ARG:NH2	2.40	0.55
44:C5:97:ARG:CZ	44:C5:104:GLY:H	2.19	0.55
40:C8:106:PHE:HA	40:C8:109:LEU:HD12	1.89	0.55
24:14:988:A:P	49:H5:11:SER:HB2	2.47	0.55
35:78:59:LEU:HD11	53:Q8:10:ALA:HB2	1.88	0.55
53:Q8:54:GLU:HB3	53:Q8:57:ARG:HH21	1.71	0.55
1:13:1292:U:OP1	7:6E:41:ARG:NH2	2.34	0.55
1:13:383:A:OP1	1:13:454:C:O2'	2.21	0.55
24:14:1379:A:H4'	24:14:1380:G:OP2	2.06	0.55
24:14:1678:G:H22	24:14:1989:G:H1	1.55	0.55
21:1B:9:ARG:O	21:1B:13:ILE:HG13	2.06	0.55
54:1G:1002:G:H1	54:1G:1037:C:H42	1.53	0.55
54:1G:937:A:H1'	54:1G:1379:G:N2	2.22	0.55
54:1G:538:G:O6	57:1G:1790:HOH:O	2.17	0.55
24:1H:1025:G:C4	24:1H:1135:C:H1'	2.42	0.55
24:1H:1064:C:N4	24:1H:1075:C:N3	2.54	0.55
24:1H:2361:A:OP1	53:Q8:27:THR:OG1	2.16	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1J:15:A:H1'	25:1J:109:G:C4	2.42	0.55
3:22:150:LYS:HG3	3:22:169:ALA:HB2	1.88	0.55
11:2A:12:ARG:HB2	11:2A:75:TYR:CD2	2.42	0.55
31:51:4:ILE:HD13	31:51:4:ILE:H	1.71	0.55
15:6I:55:GLY:HA2	15:6I:58:MET:HE3	1.89	0.55
35:78:121:LYS:O	35:78:123:LEU:N	2.38	0.55
35:78:27:HIS:N	35:78:27:HIS:CD2	2.73	0.55
1:13:377:G:OP1	16:7I:3:LYS:HD2	2.06	0.55
37:98:12:ARG:HG2	37:98:16:HIS:ND1	2.22	0.55
20:BI:20:LEU:O	20:BI:23:ARG:HB3	2.07	0.55
44:C5:3:VAL:HG11	44:C5:32:PRO:HB2	1.88	0.55
41:D8:35:LEU:C	41:D8:37:VAL:H	2.10	0.55
52:L5:29:LYS:O	52:L5:33:ARG:HG3	2.07	0.55
27:11:146:GLU:HB2	27:11:189:CYS:HB3	1.89	0.55
1:13:674:G:H2'	1:13:675:A:C8	2.38	0.55
1:13:806:C:H2'	1:13:807:A:H8	1.72	0.55
24:14:1012:U:OP1	40:85:70:ARG:NH1	2.32	0.55
24:14:2020:A:O2'	24:14:2021:C:H5'	2.06	0.55
24:1H:1371:G:H2'	24:1H:1372:U:H5	1.70	0.55
25:1J:55:U:HO2'	30:49:29:TRP:HD1	1.55	0.55
29:39:4:VAL:HA	29:39:19:GLU:HB3	1.89	0.55
4:3E:134:ASP:O	4:3E:136:PRO:HD3	2.07	0.55
30:49:121:ASN:O	30:49:131:TYR:OH	2.22	0.55
6:5E:87:ARG:HG2	6:5E:88:VAL:H	1.70	0.55
24:14:2378:A:H4'	38:65:23:ARG:NH1	2.21	0.55
26:71:48:GLY:HA3	26:71:207:THR:O	2.06	0.55
41:95:21:ARG:NH2	41:95:91:TYR:CD1	2.75	0.55
20:BA:54:LYS:HA	20:BA:57:ARG:NH2	2.22	0.55
20:BA:79:ARG:HH21	20:BA:80:ARG:NH1	2.05	0.55
1:13:1240:U:H5''	1:13:1241:G:C8	2.42	0.55
1:13:419:C:H5'	1:13:420:U:OP2	2.07	0.55
24:14:1048:A:N6	24:14:1112:G:HO2'	2.05	0.55
24:14:2270:G:OP2	57:14:4060:HOH:O	2.18	0.55
54:1G:828:A:N6	54:1G:858:G:O2'	2.33	0.55
54:1G:963:G:N2	54:1G:972:C:N3	2.54	0.55
24:1H:1177:A:H5'	24:1H:1178:C:C2	2.42	0.55
24:1H:1290:C:H2'	24:1H:1291:C:H6	1.70	0.55
24:1H:620:G:H4'	24:1H:621:A:C5'	2.29	0.55
24:1H:982:C:O5'	24:1H:982:C:H6	1.90	0.55
25:1J:60:C:H2'	25:1J:61:G:H8	1.72	0.55
22:2K:40:PSU:HO2'	22:3K:36:U:HO2'	1.44	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:2L:35:QUO:N11	22:2L:36:U:O4	2.40	0.55
35:35:86:LYS:HB2	35:35:117:GLU:O	2.06	0.55
35:35:138:LEU:HD21	35:35:144:GLU:HG3	1.89	0.55
35:35:48:PRO:C	35:35:50:ARG:H	2.08	0.55
29:39:124:LEU:O	29:39:124:LEU:HG	2.06	0.55
22:3K:49:A:H1'	22:3K:52:G:H22	1.72	0.55
30:41:49:ASP:OD2	30:41:51:ARG:NE	2.36	0.55
13:4A:17:VAL:O	13:4A:20:THR:OG1	2.14	0.55
37:55:10:LEU:O	37:55:12:ARG:HG3	2.07	0.55
39:75:64:ARG:HD2	39:75:73:GLU:OE1	2.06	0.55
9:82:7:THR:O	9:82:83:ARG:NH1	2.39	0.55
49:H5:6:VAL:O	49:H5:34:GLU:HA	2.07	0.55
1:13:994:A:N7	1:13:1216:G:H4'	2.22	0.54
1:13:686:U:O4	1:13:703:G:H1'	2.07	0.54
24:14:1050:A:H2'	24:14:1051:G:O4'	2.07	0.54
24:14:1678:G:H22	24:14:1989:G:H22	1.55	0.54
54:1G:1238:A:H62	54:1G:1301:U:H3	1.54	0.54
24:1H:1265:A:H8	24:1H:1265:A:OP1	1.90	0.54
24:1H:2557:G:H2'	24:1H:2558:C:C6	2.41	0.54
3:22:67:THR:HG23	3:22:102:ASN:HB3	1.89	0.54
24:14:661:C:O2'	35:35:13:ASN:O	2.24	0.54
4:3E:7:PRO:HB2	4:3E:10:ARG:HG2	1.88	0.54
38:65:62:LYS:HB3	38:65:97:ARG:CD	2.37	0.54
24:14:2124:G:N2	26:79:217:THR:OG1	2.40	0.54
37:98:33:ARG:HD3	37:98:113:LEU:HD11	1.88	0.54
39:B8:74:ARG:HD3	39:B8:76:PHE:CZ	2.43	0.54
20:BI:26:ASN:HD22	20:BI:26:ASN:H	1.55	0.54
24:14:2271:G:H5''	46:E5:20:ARG:NE	2.22	0.54
1:13:1264:C:O2	1:13:1272:G:N1	2.40	0.54
1:13:321:A:N6	1:13:328:C:H1'	2.22	0.54
24:14:1061:U:O2'	24:14:1064:C:N4	2.41	0.54
24:14:1341:U:OP1	24:14:1397:U:N3	2.35	0.54
25:16:71:C:C2	25:16:72:G:C8	2.96	0.54
2:1E:12:GLU:HB3	2:1E:213:LEU:HD23	1.89	0.54
54:1G:1228:C:H2'	54:1G:1229:A:C8	2.42	0.54
54:1G:1326:C:H2'	54:1G:1327:C:H6	1.73	0.54
54:1G:266:G:H3'	17:8A:67:LYS:HB2	1.89	0.54
54:1G:748:C:H4'	54:1G:749:C:O5'	2.06	0.54
54:1G:955:U:O2'	19:AA:83:HIS:ND1	2.33	0.54
24:1H:1771:C:P	57:1H:3967:HOH:O	2.65	0.54
28:29:87:GLU:H	28:29:87:GLU:CD	2.10	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:31:114:VAL:HG21	29:31:202:PHE:CZ	2.43	0.54
4:32:101:LEU:HD23	4:32:121:VAL:HG11	1.88	0.54
5:4E:78:HIS:CE1	5:4E:142:LEU:HD23	2.41	0.54
31:59:26:VAL:HG21	31:59:76:VAL:HA	1.88	0.54
14:5I:16:PHE:HB2	14:5I:19:ARG:HD3	1.89	0.54
5:42:78:HIS:HD2	8:72:107:LEU:HD22	1.71	0.54
9:82:23:ASN:ND2	9:82:25:LYS:HG2	2.23	0.54
9:82:70:LYS:O	9:82:74:ILE:HG13	2.07	0.54
44:C5:75:ILE:O	44:C5:80:GLY:N	2.40	0.54
24:14:931:G:O2'	49:H5:24:LYS:HE3	2.07	0.54
45:H8:45:ASP:O	45:H8:49:ARG:HG2	2.07	0.54
27:11:71:ASP:CG	27:11:103:ARG:HH22	2.10	0.54
1:13:344:A:H2'	1:13:346:G:N7	2.22	0.54
24:14:1889:A:H2'	24:14:1890:A:C8	2.42	0.54
33:15:103:VAL:HG11	33:15:120:LEU:HD22	1.90	0.54
54:1G:1512:U:H2'	54:1G:1513:A:C8	2.43	0.54
24:1H:1026:U:H1'	24:1H:1027:A:O5'	2.07	0.54
24:1H:2074:U:OP1	57:1H:3636:HOH:O	2.18	0.54
24:1H:588:U:H2'	24:1H:589:C:C6	2.42	0.54
29:31:160:ASN:OD1	29:31:163:VAL:HG23	2.08	0.54
5:42:74:GLY:HA3	5:42:116:THR:OG1	2.07	0.54
13:4A:92:HIS:CE1	13:4A:98:VAL:HG21	2.42	0.54
24:14:2293:C:H5''	38:65:89:ARG:NH2	2.23	0.54
40:85:49:HIS:O	40:85:53:ARG:N	2.39	0.54
6:52:7:ASN:HD22	18:9A:76:LEU:HD11	1.72	0.54
45:D5:39:VAL:HG21	45:D5:44:PHE:HD2	1.71	0.54
19:AA:42:PRO:HD3	50:I5:60:GLN:HG3	1.89	0.54
1:13:518:C:H2'	1:13:530[B]:G:C8	2.43	0.54
54:1G:1292:U:H2'	54:1G:1293:G:C8	2.41	0.54
54:1G:1512:U:H2'	54:1G:1513:A:H8	1.72	0.54
24:1H:2287:A:H62	24:1H:2344:U:H3	1.54	0.54
24:1H:2393:A:H2'	24:1H:2394:C:H6	1.71	0.54
24:1H:612:G:O2'	24:1H:616:A:N1	2.29	0.54
25:1J:13:A:H2'	25:1J:70:C:O2'	2.08	0.54
1:13:881:G:P	12:3I:12:ARG:HH22	2.29	0.54
54:1G:15:G:H4'	5:42:24:ARG:NH1	2.22	0.54
15:6A:39:LEU:CD1	15:6A:56:LEU:HB2	2.38	0.54
39:75:77:PRO:HB2	39:75:80:SER:HB2	1.89	0.54
24:1H:661:C:O2'	35:78:14:LYS:N	2.33	0.54
54:1G:254:G:N2	17:8A:16:GLN:OE1	2.35	0.54
41:D8:1:MET:SD	41:D8:43:GLU:HG2	2.48	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:E8:51:LEU:HD23	42:E8:105:VAL:HG11	1.88	0.54
1:13:108:G:P	1:13:326:G:H22	2.29	0.54
1:13:79:G:H22	1:13:88:C:H2'	1.71	0.54
24:14:1230:C:H2'	24:14:1231:G:C8	2.43	0.54
24:14:2161:C:H2'	24:14:2162:G:H8	1.73	0.54
24:14:2723:C:OP1	37:55:3:HIS:ND1	2.40	0.54
24:14:31:C:N4	57:14:4108:HOH:O	2.40	0.54
33:15:42:TRP:O	40:85:64:ARG:NH2	2.40	0.54
54:1G:1008:C:O2	54:1G:1022:G:N2	2.41	0.54
54:1G:1162:C:N4	54:1G:1174:G:H1	2.04	0.54
54:1G:78:G:O6	54:1G:91:C:N4	2.39	0.54
24:1H:1680:U:O2	24:1H:1763:G:H3'	2.08	0.54
24:1H:1919:A:H5''	24:1H:1920:C:OP2	2.08	0.54
4:32:59:ARG:O	4:32:63:LYS:N	2.34	0.54
22:3K:43:G:H2'	22:3K:44:C:H6	1.71	0.54
15:6I:87:ILE:HG22	15:6I:88:ARG:H	1.72	0.54
24:1H:2484:G:H1'	36:88:124:LYS:HG3	1.90	0.54
18:9I:26:LEU:HB3	18:9I:42:ARG:NH2	2.22	0.54
45:D5:138:GLU:O	45:D5:156:LYS:NZ	2.24	0.54
25:1J:91:C:OP1	45:D5:79:ARG:NH2	2.40	0.54
46:E5:27:GLU:HB2	46:E5:69:PHE:HD1	1.71	0.54
24:1H:2271:G:H5''	46:I8:20:ARG:HD2	1.89	0.54
1:13:115:G:H4'	1:13:116:A:O5'	2.07	0.54
1:13:1346:A:N1	1:13:1374:A:H5''	2.23	0.54
1:13:975:A:H4'	1:13:976:G:H5''	1.88	0.54
24:14:1388:G:O2'	24:14:1389:G:H5'	2.08	0.54
24:14:1931:U:H6	24:14:1931:U:H5'	1.73	0.54
24:14:2027:G:H2'	24:14:2028:U:O4'	2.06	0.54
24:14:973:A:H5'	24:14:1188:U:H1'	1.89	0.54
24:1H:1412:A:H2'	24:1H:1413:G:C8	2.42	0.54
24:1H:2557:G:H2'	24:1H:2558:C:H6	1.73	0.54
25:1J:84:C:OP1	49:H5:15:TYR:OH	2.21	0.54
22:2K:21:A:H2'	22:2K:46:G:N7	2.23	0.54
4:32:32:ALA:O	4:32:36:ARG:N	2.37	0.54
22:3K:38:MIA:H2'	22:3K:39:A:H8	1.71	0.54
5:4E:83:GLU:HG2	5:4E:88:LYS:HG3	1.88	0.54
7:6E:24:THR:HA	7:6E:27:ILE:HB	1.89	0.54
7:6E:70:LYS:HD3	7:6E:96:GLN:OE1	2.08	0.54
39:75:26:ASP:OD1	39:75:120:ARG:NH2	2.37	0.54
18:9A:22:VAL:HG12	18:9A:56:THR:HA	1.90	0.54
46:E5:51:VAL:N	46:E5:62:LEU:HD12	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:49:104:GLU:OE1	50:I5:23:GLU:HG2	2.08	0.54
51:J5:16:ARG:CG	51:J5:16:ARG:HH11	2.15	0.54
51:N8:40:LYS:HD3	51:N8:46:CYS:SG	2.47	0.54
51:N8:40:LYS:HE2	51:N8:47:PRO:HG2	1.90	0.54
1:13:1286:A:H5'	21:1F:26:LYS:HD3	1.89	0.54
24:14:1198:U:H2'	24:14:1199:U:C6	2.42	0.54
54:1G:791:G:C6	54:1G:792:A:N7	2.75	0.54
24:1H:1175:U:O2	24:1H:1176:G:N2	2.40	0.54
24:1H:1844:C:H2'	24:1H:1845:G:H8	1.72	0.54
24:1H:848:G:H2'	24:1H:849:A:C8	2.42	0.54
29:39:7:TYR:HE2	29:39:10:PRO:HG3	1.71	0.54
22:3L:21:A:N6	22:3L:55:U:H3	2.06	0.54
38:65:3:ARG:NH2	38:65:4:LEU:HB2	2.19	0.54
34:68:71:ARG:HH11	39:B8:74:ARG:HH21	1.55	0.54
42:A5:11:ARG:CZ	42:A5:98:LYS:HB3	2.37	0.54
39:B8:102:ILE:HA	39:B8:105:LEU:HD22	1.89	0.54
39:B8:16:ARG:NH2	39:B8:83:ILE:O	2.41	0.54
54:1G:1460:A:OP2	20:BA:27:LYS:NZ	2.40	0.54
44:C5:61:ILE:HD12	44:C5:63:LYS:HE2	1.90	0.54
44:C5:87:LYS:N	44:C5:94:LYS:HB3	2.22	0.54
45:D5:9:TYR:CE1	45:D5:35:ARG:HD3	2.43	0.54
44:G8:85:VAL:HG22	44:G8:98:VAL:HB	1.88	0.54
49:L8:31:LEU:O	49:L8:32:GLN:HB2	2.08	0.54
1:13:475:G:H2'	1:13:476:G:O4'	2.07	0.54
24:14:1184:G:OP2	49:H5:30:ARG:NH2	2.40	0.54
27:19:10:THR:OG1	27:19:13:ARG:HB2	2.07	0.54
54:1G:1411:C:H2'	54:1G:1412:C:C6	2.43	0.54
54:1G:67:C:H2'	54:1G:68:G:C8	2.43	0.54
24:1H:1510:A:OP1	24:1H:1511:A:H5'	2.08	0.54
24:1H:1859:A:N6	24:1H:1883:G:O2'	2.40	0.54
24:1H:2689:U:OP2	24:1H:2719:G:N2	2.36	0.54
28:21:34:VAL:HG22	28:21:48:GLN:HG2	1.90	0.54
29:39:129:PHE:HA	29:39:142:TRP:CD1	2.42	0.54
30:41:124:SER:HB2	30:41:131:TYR:CE1	2.42	0.54
13:4A:22:ILE:HB	13:4A:25:ILE:HG13	1.90	0.54
32:61:11:ASN:OD1	32:61:12:LEU:N	2.40	0.54
38:65:7:TYR:HE2	38:65:11:LYS:NZ	2.06	0.54
16:7I:3:LYS:O	16:7I:21:VAL:HA	2.07	0.54
9:8E:18:PHE:CD2	9:8E:62:TYR:HD2	2.24	0.54
17:8I:75:ARG:HH12	17:8I:77:VAL:HG13	1.72	0.54
45:D5:30:ASN:N	45:D5:33:LEU:O	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1901:A:OP2	27:11:255:LYS:HE2	2.08	0.54
1:13:1512:U:H3	1:13:1523:G:H1	1.54	0.54
1:13:618:C:H5''	1:13:619:U:H5''	1.88	0.54
24:14:1858:G:H8	24:14:1858:G:OP2	1.90	0.54
24:14:320:A:H4'	24:14:322:A:C8	2.43	0.54
54:1G:999:U:H2'	54:1G:1000:A:C8	2.43	0.54
24:1H:1970:A:H5''	24:1H:1970:A:H8	1.73	0.54
28:21:167:VAL:CG1	28:21:189:PRO:HD3	2.37	0.54
38:65:26:LEU:HD22	38:65:87:PHE:CD1	2.43	0.54
1:13:581:G:OP1	15:6I:65:ARG:NH1	2.41	0.54
40:85:92:ARG:NH2	41:95:11:GLN:H	2.05	0.54
38:A8:15:ARG:HD2	38:A8:88:ASP:OD2	2.08	0.54
1:13:978:A:O2'	1:13:1322:C:N3	2.35	0.54
24:14:1858:G:O2'	24:14:1884:A:N6	2.40	0.54
24:14:2393:A:H5'	35:35:63:PRO:HG3	1.90	0.54
24:14:956:G:OP2	36:45:14:ARG:NH2	2.38	0.54
25:16:44:G:C2	25:16:48:A:C2	2.96	0.54
27:19:37:LEU:HA	27:19:38:LYS:CG	2.36	0.54
24:1H:459:U:H2'	24:1H:460:A:H8	1.73	0.54
24:1H:671:C:OP1	35:78:42:SER:O	2.26	0.54
4:32:36:ARG:HG3	4:32:38:TYR:CE2	2.43	0.54
29:39:53:THR:HG23	29:39:55:GLY:N	2.19	0.54
4:3E:191:ARG:HD3	4:3E:200:GLU:OE1	2.08	0.54
31:51:23:ARG:HH12	31:51:25:LYS:HG3	1.73	0.54
39:75:106:SER:HA	39:75:110:ILE:HD11	1.90	0.54
8:7E:112:LEU:HB3	8:7E:133:LEU:HA	1.89	0.54
36:88:110:THR:HG23	36:88:113:GLN:OE1	2.07	0.54
1:13:986:A:H1'	19:AI:55:LYS:HA	1.88	0.54
30:41:143:GLU:OE1	50:M8:26:SER:OG	2.25	0.54
1:13:1126:U:OP2	1:13:1281:U:H1'	2.07	0.53
1:13:37:U:O2'	1:13:500:G:H4'	2.07	0.53
1:13:841:U:H5'	1:13:842:C:H5''	1.90	0.53
24:14:1062:G:OP1	24:14:1070:A:O2'	2.15	0.53
24:14:1324:G:N7	57:14:3723:HOH:O	2.41	0.53
24:14:213:A:H2'	24:14:214:G:O4'	2.08	0.53
24:14:2392:A:H2	24:14:2424:C:H42	1.55	0.53
24:14:2408:U:H2'	24:14:2409:G:C8	2.43	0.53
24:14:882:G:OP2	24:14:882:G:H8	1.91	0.53
33:15:67:LEU:O	33:15:88:GLU:HG3	2.08	0.53
27:19:228:PRO:HD3	27:19:235:GLY:CA	2.37	0.53
54:1G:1129:C:H42	54:1G:1141:C:H41	1.54	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2339:G:H2'	24:1H:2340:G:H8	1.73	0.53
24:1H:2488:A:H2'	24:1H:2489:G:O4'	2.08	0.53
24:1H:71:A:H5''	24:1H:72:U:H3'	1.88	0.53
25:1J:14:U:H5'	25:1J:71:C:H1'	1.88	0.53
28:29:112:GLY:O	28:29:159:HIS:HA	2.08	0.53
22:2K:38:MIA:HN6	22:2K:38:MIA:H162	1.73	0.53
29:39:20:LEU:HD13	29:39:199:TRP:CH2	2.39	0.53
5:42:127:ASN:OD1	5:42:130:ASN:ND2	2.32	0.53
36:45:74:TYR:O	36:45:90:VAL:HA	2.08	0.53
54:1G:1443:G:N2	39:75:119:LYS:HB2	2.23	0.53
41:95:2:PHE:HB3	41:95:15:GLU:HG2	1.89	0.53
20:BA:92:LEU:HA	20:BA:95:ALA:HB3	1.90	0.53
45:D5:111:VAL:HG11	45:D5:177:PRO:HD2	1.89	0.53
1:13:1118:C:OP1	9:8E:104:ARG:NH1	2.40	0.53
1:13:223:U:H2'	1:13:224:C:C6	2.41	0.53
1:13:519:C:H2'	1:13:520:A:C8	2.43	0.53
24:14:1062:G:N2	24:14:1089:G:OP2	2.42	0.53
24:14:1257:C:H4'	29:39:83:PHE:CD1	2.43	0.53
2:1E:100:GLY:HA2	2:1E:103:THR:HB	1.90	0.53
2:1E:111:ARG:HG2	2:1E:111:ARG:HH11	1.73	0.53
54:1G:552:U:H2'	54:1G:553:A:C8	2.41	0.53
24:1H:724:U:H2'	24:1H:725:G:O4'	2.08	0.53
24:14:1665:A:H1'	34:25:1:MET:HG3	1.90	0.53
30:41:29:TRP:O	30:41:33:ARG:NH1	2.38	0.53
1:13:1307:U:H5''	13:4I:101:GLN:HE22	1.74	0.53
32:61:109:ILE:HB	32:61:130:TYR:CZ	2.43	0.53
9:82:49:PRO:HD2	9:82:81:ILE:HD11	1.89	0.53
41:95:87:HIS:NE2	41:95:89:GLN:HB2	2.22	0.53
25:16:7:G:H4'	38:A8:29:PHE:HD2	1.73	0.53
24:14:336:C:H5''	44:C5:6:HIS:CD2	2.44	0.53
45:H8:5:LEU:HD21	45:H8:39:VAL:HB	1.90	0.53
50:I5:2:LYS:HG3	50:I5:6:HIS:CG	2.43	0.53
2:12:19:HIS:NE2	2:12:206:ASP:HB2	2.23	0.53
1:13:1077:G:N2	1:13:1080:A:OP2	2.41	0.53
1:13:1179:A:H2'	1:13:1180:A:O4'	2.08	0.53
1:13:359:U:OP1	32:69:87:LYS:HE2	2.08	0.53
1:13:540:G:H2'	1:13:541:G:O4'	2.08	0.53
1:13:859:A:H2'	1:13:860:A:H8	1.73	0.53
24:14:1164:G:H2'	24:14:1165:U:C6	2.44	0.53
24:14:1409:C:O2	24:14:1594:G:N2	2.41	0.53
24:14:2512:C:H5''	24:14:2513:G:OP2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:861:A:C2	24:14:917:A:C4	2.96	0.53
24:14:975:G:H1'	24:14:990:A:C2	2.43	0.53
57:14:4306:HOH:O	27:19:232:PRO:O	2.19	0.53
27:19:34:VAL:HG13	27:19:61:LEU:HG	1.91	0.53
2:1E:51:LEU:HD21	2:1E:201:ILE:HG23	1.89	0.53
54:1G:555:C:H2'	54:1G:556:C:C6	2.44	0.53
24:1H:1111:A:O2'	24:1H:1112:G:H4'	2.09	0.53
24:1H:1032:A:H2	24:1H:1122:G:H22	1.57	0.53
24:1H:213:A:H2'	24:1H:214:G:O4'	2.08	0.53
3:2E:45:LYS:NZ	3:2E:45:LYS:HB2	2.23	0.53
36:45:36:ALA:HB2	36:45:103:MET:SD	2.48	0.53
6:52:7:ASN:ND2	18:9A:76:LEU:HD11	2.24	0.53
17:8A:43:LEU:HD12	17:8A:68:ARG:HG2	1.90	0.53
17:8I:3:LYS:HD2	17:8I:60:ILE:HD11	1.89	0.53
20:BI:26:ASN:HB2	20:BI:71:THR:OG1	2.08	0.53
44:C5:23:ARG:HH11	44:C5:23:ARG:HG3	1.74	0.53
24:14:1187:G:P	57:14:3762:HOH:O	2.65	0.53
24:14:1448:G:O2'	24:14:1529:A:N1	2.36	0.53
24:14:1970:A:H4'	24:14:1971:A:OP1	2.09	0.53
24:14:2542:A:H5''	24:14:2542:A:N3	2.23	0.53
24:14:2697:G:H2'	24:14:2698:U:O4'	2.08	0.53
24:14:494:G:O6	57:14:3921:HOH:O	2.19	0.53
54:1G:298:A:H5''	54:1G:299:G:OP2	2.07	0.53
24:1H:1533:C:H2'	24:1H:1534:G:H8	1.73	0.53
24:1H:2695:C:H2'	24:1H:2696:U:C6	2.43	0.53
34:25:68:GLU:HB3	34:25:78:ARG:HH11	1.71	0.53
28:29:47:VAL:HG22	28:29:48:GLN:H	1.74	0.53
22:2L:1:G:H2'	22:2L:2:G:C8	2.41	0.53
4:32:187:ARG:NH2	4:32:193:ASP:OD2	2.40	0.53
4:32:49:ARG:NE	4:32:49:ARG:HA	2.24	0.53
12:3A:28:LYS:HD2	12:3A:33:ARG:NH2	2.23	0.53
13:4I:87:TYR:O	13:4I:91:ARG:HG2	2.09	0.53
6:5E:97:PHE:HD1	18:9I:31:LEU:HD12	1.73	0.53
32:61:67:ARG:NH2	32:61:68:LEU:HB2	2.24	0.53
34:68:75:SER:HB2	39:B8:74:ARG:HH12	1.72	0.53
54:1G:664:G:P	18:9A:64:ARG:HH21	2.32	0.53
42:A5:27:LYS:NZ	42:A5:31:GLU:OE2	2.42	0.53
30:49:98:ARG:NH2	50:I5:2:LYS:HE2	2.23	0.53
50:M8:12:ALA:HA	50:M8:29:PRO:HB3	1.91	0.53
52:P8:11:LYS:HE3	52:P8:15:THR:OG1	2.08	0.53
27:11:83:GLU:OE2	27:11:104:TYR:OH	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1022:G:H2'	1:13:1023:G:H8	1.74	0.53
1:13:1323:G:H2'	1:13:1324:A:C8	2.44	0.53
1:13:451:A:N6	1:13:480:U:H2'	2.24	0.53
1:13:666:G:H5'	1:13:726:C:H1'	1.90	0.53
24:14:1250:G:OP2	35:35:21:ARG:NH1	2.42	0.53
24:14:1519:G:H2'	24:14:1520:U:O4'	2.08	0.53
24:14:2370:G:N7	57:14:4202:HOH:O	2.33	0.53
24:14:307:G:H8	24:14:307:G:O5'	1.91	0.53
24:14:805:G:O5'	35:35:41:ARG:HG2	2.08	0.53
24:14:863:A:H2'	24:14:864:G:C8	2.43	0.53
54:1G:622:A:C8	54:1G:623:C:C6	2.96	0.53
24:1H:1693:U:OP2	24:1H:1694:C:N4	2.27	0.53
24:1H:2737:G:H2'	24:1H:2738:A:C8	2.44	0.53
24:1H:795:C:H2'	24:1H:796:C:C6	2.44	0.53
24:1H:919:G:N2	24:1H:2269:A:OP2	2.41	0.53
22:2L:37:A:N6	22:2L:38:MIA:H122	2.24	0.53
12:3A:76:ASN:HD21	12:3A:108:ALA:N	2.06	0.53
37:55:103:ARG:HD3	37:55:108:GLY:O	2.08	0.53
24:14:2873:A:C8	37:55:5:LYS:O	2.62	0.53
32:69:103:ARG:HE	32:69:104:GLN:H	1.56	0.53
18:9A:22:VAL:C	18:9A:24:ALA:H	2.12	0.53
20:BA:100:ILE:HD12	20:BA:100:ILE:H	1.74	0.53
25:1J:12:C:H2'	46:E5:73:GLY:HA3	1.90	0.53
42:E8:2:GLU:HB2	42:E8:106:ILE:HD11	1.90	0.53
45:H8:126:VAL:HG12	45:H8:163:LEU:HA	1.90	0.53
53:M5:14:VAL:HG13	53:M5:22:VAL:HG23	1.90	0.53
27:11:138:VAL:HG23	27:11:168:ARG:NH2	2.24	0.53
27:11:226:MET:HB3	27:11:230:ASP:HB2	1.89	0.53
2:12:145:LEU:O	2:12:149:LEU:HB2	2.08	0.53
1:13:1397:C:H42	23:4K:22:A:H3'	1.72	0.53
1:13:247:G:OP2	17:8I:101:ARG:HG2	2.09	0.53
1:13:452:A:O2'	1:13:453:A:O5'	2.26	0.53
1:13:49:U:C2	1:13:361:G:N2	2.77	0.53
25:16:24:G:N7	25:16:56:G:H2'	2.22	0.53
54:1G:1142:G:H3'	54:1G:1143:G:C8	2.43	0.53
54:1G:278:G:OP2	17:8A:41:LYS:NZ	2.29	0.53
54:1G:631:G:H2'	54:1G:632:A:C8	2.44	0.53
54:1G:686:U:H1'	11:2A:42:TRP:HE1	1.74	0.53
24:1H:1198:U:H2'	24:1H:1199:U:C6	2.43	0.53
24:1H:2054:A:H5''	24:1H:2055:C:O5'	2.08	0.53
24:1H:2110:G:C6	24:1H:2120:G:C8	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:638:G:C5	24:1H:651:G:C2	2.97	0.53
22:2K:15:G:N2	22:2K:57:C:H5	2.00	0.53
30:49:150:ASP:N	30:49:150:ASP:OD1	2.41	0.53
33:58:73:THR:HB	33:58:82:LEU:HD11	1.90	0.53
9:82:121:ARG:NH1	9:82:122:ALA:O	2.41	0.53
9:82:73:GLN:O	9:82:77:ILE:HG23	2.09	0.53
37:98:104:ARG:HB2	37:98:111:LEU:HD11	1.90	0.53
37:98:14:SER:HA	37:98:17:ARG:HH12	1.73	0.53
19:AA:7:LYS:N	19:AA:7:LYS:HD3	2.23	0.53
39:B8:50:ILE:HD11	39:B8:102:ILE:HD11	1.90	0.53
52:P8:12:ARG:NH2	52:P8:44:PRO:HB3	2.22	0.53
2:12:12:GLU:OE1	2:12:16:HIS:N	2.36	0.53
24:14:2556:C:H2'	24:14:2557:G:O4'	2.09	0.53
24:14:2608:G:OP1	57:14:4241:HOH:O	2.19	0.53
33:15:15:LEU:HG	33:15:134:ARG:HD3	1.91	0.53
27:19:246:PRO:HD2	27:19:255:LYS:HD3	1.90	0.53
21:1B:8:THR:HG22	21:1B:10:ARG:H	1.73	0.53
54:1G:340:U:H2'	54:1G:341:C:C6	2.44	0.53
54:1G:476:G:O2'	54:1G:477:G:H5'	2.08	0.53
24:1H:1007:C:OP1	33:58:35:ARG:NH1	2.41	0.53
24:1H:1328:G:H2'	24:1H:1330:C:C5	2.44	0.53
24:1H:2807:G:H3'	24:1H:2808:U:H5''	1.89	0.53
24:1H:376:C:OP2	57:1H:3698:HOH:O	2.19	0.53
24:1H:748:G:C8	42:E8:89:ALA:HB1	2.44	0.53
28:29:32:PRO:HD2	28:29:50:GLY:HA3	1.89	0.53
22:2L:14:A:H2'	22:2L:15:G:C8	2.43	0.53
35:35:84:ASN:ND2	35:35:117:GLU:HB3	2.23	0.53
7:6E:84:ASN:ND2	22:3K:33:C:O3'	2.41	0.53
39:75:4:GLY:O	39:75:5:ALA:HB3	2.08	0.53
1:13:1086:U:H3	1:13:1099:G:H22	1.56	0.53
1:13:1127:G:H22	1:13:1145:C:H1'	1.73	0.53
1:13:1348:U:H2'	1:13:1349:A:C8	2.32	0.53
1:13:78:G:O6	1:13:91:C:N4	2.40	0.53
24:14:1974:C:OP2	57:14:3635:HOH:O	2.18	0.53
24:14:2298:A:H1'	24:14:2321:G:N2	2.24	0.53
54:1G:1442:G:N7	54:1G:1446:A:N6	2.56	0.53
54:1G:973:G:O4'	10:1A:55:LYS:HG2	2.08	0.53
24:1H:107:C:H2'	24:1H:108:U:C6	2.43	0.53
24:1H:1441:G:H2'	24:1H:1442:G:C8	2.44	0.53
24:1H:1534:G:H2'	24:1H:1538:G:N2	2.24	0.53
24:1H:2256:G:N7	57:1H:4122:HOH:O	2.34	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2432:A:C5	47:J8:33:LYS:HG2	2.42	0.53
24:1H:2722:G:H2'	24:1H:2723:C:C6	2.43	0.53
24:1H:795:C:H2'	24:1H:796:C:H6	1.74	0.53
22:2K:19:C:C3'	22:2K:20:C:H2'	2.34	0.53
35:35:100:LEU:HD12	35:35:112:LEU:HD11	1.91	0.53
31:51:67:LEU:O	31:51:71:LEU:HB2	2.09	0.53
31:51:95:ARG:HB3	31:51:95:ARG:HH11	1.74	0.53
31:59:109:PHE:HE1	31:59:152:ARG:HE	1.55	0.53
32:69:25:TYR:CE1	32:69:29:TYR:CD2	2.97	0.53
32:69:79:ILE:HD11	32:69:140:LEU:HD21	1.90	0.53
15:6A:15:PHE:HD2	15:6A:30:ALA:HB2	1.73	0.53
15:6I:11:VAL:HG21	15:6I:34:LEU:HD13	1.90	0.53
26:71:30:LYS:NZ	26:71:178:ALA:O	2.40	0.53
16:7A:34:GLU:OE1	16:7A:55:ARG:NH1	2.41	0.53
35:35:23:PRO:HB3	41:95:80:GLN:CG	2.39	0.53
38:A8:36:TYR:N	38:A8:36:TYR:CD1	2.77	0.53
20:BI:73:HIS:HB3	20:BI:74:LYS:HE2	1.90	0.53
47:F5:93:GLU:HA	47:F5:97:LEU:HD22	1.90	0.53
48:K8:21:LEU:HD13	48:K8:64:LEU:HA	1.90	0.53
1:13:1304:G:H22	1:13:1332:A:P	2.31	0.53
1:13:243:A:H4'	1:13:244:U:H3'	1.91	0.53
1:13:431:A:OP2	57:13:1799:HOH:O	2.19	0.53
1:13:786:G:N7	57:13:1888:HOH:O	2.34	0.53
24:14:2176:A:H2'	24:14:2177:C:H6	1.73	0.53
24:14:2557:G:H2'	24:14:2558:C:H6	1.74	0.53
24:14:588:U:H2'	24:14:589:C:C6	2.44	0.53
24:14:796:C:H2'	24:14:797:C:C6	2.44	0.53
24:14:867:C:C5	24:14:868:U:C5	2.97	0.53
54:1G:1058:G:H1	54:1G:1199:U:H3	1.57	0.53
24:1H:2098:U:H2'	24:1H:2099:U:O4'	2.09	0.53
24:1H:2255:G:OP2	57:1H:4120:HOH:O	2.18	0.53
24:1H:524:U:H4'	24:1H:554:U:H4'	1.91	0.53
29:39:84:VAL:O	29:39:86:GLY:N	2.41	0.53
13:4A:3:ARG:HB3	13:4A:9:ILE:HG12	1.91	0.53
34:68:113:LYS:O	34:68:117:LEU:HD13	2.09	0.53
32:69:98:ALA:HA	32:69:109:ILE:HD11	1.90	0.53
39:75:13:ARG:NH1	39:75:15:VAL:O	2.41	0.53
37:98:65:LEU:O	37:98:68:ARG:HB2	2.09	0.53
39:B8:91:ARG:O	39:B8:116:ALA:HA	2.09	0.53
46:E5:72:ARG:HH21	46:E5:75:LEU:HD12	1.74	0.53
53:Q8:39:LYS:HG2	53:Q8:40:GLU:N	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:11:6:PHE:HE1	27:11:18:VAL:HG23	1.74	0.53
1:13:1195:C:H5''	1:13:1196:U:O5'	2.09	0.53
1:13:1218:C:H2'	1:13:1219:U:C5	2.44	0.53
1:13:781:A:OP2	1:13:800:G:N1	2.27	0.53
24:14:1505:C:H2'	24:14:1506:C:H6	1.74	0.53
24:14:2646:C:H2'	24:14:2647:U:O4'	2.09	0.53
24:14:304:G:H2'	24:14:305:U:C6	2.44	0.53
24:14:729:G:O5'	27:19:208:LYS:NZ	2.42	0.53
24:1H:1359:A:N1	24:1H:1372:U:C4	2.76	0.53
24:1H:1826:G:H4'	27:11:242:ARG:HH21	1.74	0.53
24:1H:2017:U:P	57:1H:4546:HOH:O	2.65	0.53
24:1H:2533:A:OP1	24:1H:2665:A:H1'	2.08	0.53
24:1H:330:A:O2'	24:1H:331:A:C8	2.52	0.53
24:1H:751:A:OP1	57:1H:3888:HOH:O	2.18	0.53
25:1J:45:A:H1'	30:49:95:ARG:HH22	1.74	0.53
28:29:61:ARG:HA	28:29:63:LEU:HD23	1.89	0.53
3:2E:131:ARG:NH1	5:4E:50:GLU:HG2	2.24	0.53
29:31:9:ILE:HG12	29:31:20:LEU:O	2.09	0.53
7:6E:80:VAL:HB	7:6E:85:TYR:HE1	1.74	0.53
47:F5:7:ILE:HG12	47:F5:62:VAL:CG1	2.35	0.53
49:H5:3:ARG:HD2	49:H5:60:GLU:O	2.09	0.53
27:11:85:ASP:OD2	27:11:88:ARG:HD2	2.09	0.52
1:13:1218:C:H2'	1:13:1219:U:C6	2.44	0.52
1:13:1371:G:O3'	9:8E:69:GLY:HA3	2.09	0.52
1:13:359:U:H2'	1:13:360:A:C8	2.44	0.52
1:13:828:A:H2'	1:13:829:G:O4'	2.09	0.52
24:14:1028:A:H2'	24:14:1029:A:C8	2.44	0.52
24:14:1466:G:H5'	24:14:1467:C:OP1	2.09	0.52
24:14:1729:A:O2'	24:14:1731:G:N2	2.42	0.52
24:14:2129:C:H2'	24:14:2130:U:O4'	2.09	0.52
24:14:2291:U:O2'	24:14:2374:C:O2	2.27	0.52
24:14:2689:U:H5''	24:14:2713:A:C2	2.45	0.52
24:14:568:U:H5''	24:14:568:U:H6	1.74	0.52
54:1G:583:A:H2'	54:1G:584:G:O4'	2.09	0.52
24:1H:1800:C:OP1	27:11:266:SER:OG	2.14	0.52
10:1I:5:ARG:HH21	10:1I:99:LYS:HD2	1.75	0.52
24:1H:2822:G:OP1	28:21:159:HIS:NE2	2.39	0.52
28:29:105:THR:OG1	28:29:199:ARG:NH2	2.42	0.52
22:2K:20:C:O2'	22:2K:21:A:OP2	2.22	0.52
22:2K:72:U:H2'	22:2K:73:U:C6	2.45	0.52
22:2L:12:C:H1'	24:14:1923:U:O2'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:2L:40:PSU:O2'	22:3L:36:U:O2'	2.03	0.52
29:31:64:ILE:HG23	29:31:65:TRP:CD1	2.44	0.52
29:31:7:TYR:HA	29:31:22:ALA:O	2.09	0.52
24:1H:1257:C:H4'	29:31:83:PHE:CD1	2.44	0.52
12:3I:86:ARG:HG3	12:3I:101:VAL:HG22	1.91	0.52
5:4E:53:LEU:O	5:4E:57:LYS:HG2	2.08	0.52
8:72:86:ILE:HG12	8:72:135:CYS:HA	1.90	0.52
35:78:114:ILE:HD13	35:78:125:VAL:HG11	1.90	0.52
8:7E:113:SER:HB2	8:7E:134:ILE:HD11	1.91	0.52
1:13:376:G:O3'	16:7I:5:ARG:NH1	2.41	0.52
16:7I:57:ARG:HA	16:7I:60:LEU:HD12	1.92	0.52
1:13:453:A:H4'	16:7I:72:ARG:HB2	1.91	0.52
41:95:35:LEU:CB	41:95:37:VAL:HG13	2.39	0.52
20:BI:90:GLN:HA	20:BI:93:GLU:HG2	1.91	0.52
44:C5:43:ASN:HB3	44:C5:64:GLU:HA	1.91	0.52
40:C8:59:ARG:O	40:C8:63:VAL:HG23	2.10	0.52
47:J8:64:ALA:HA	47:J8:67:ILE:HG13	1.89	0.52
1:13:474:G:H5''	16:7I:81:ARG:CZ	2.40	0.52
1:13:609:A:H2'	1:13:610:G:H5'	1.90	0.52
1:13:626:U:C2	1:13:627:G:C8	2.97	0.52
1:13:712:A:O2'	1:13:713:G:H5'	2.09	0.52
1:13:767:A:H3'	57:13:1773:HOH:O	2.09	0.52
24:14:1050:A:C2	24:14:1051:G:H1'	2.43	0.52
24:14:1351:C:H5''	57:14:3880:HOH:O	2.09	0.52
24:14:304:G:H2'	24:14:305:U:H6	1.74	0.52
24:14:886:C:O2'	24:14:887:A:O5'	2.26	0.52
25:16:89:G:H8	25:16:89:G:OP2	1.92	0.52
54:1G:993:G:H1	54:1G:1045:C:H42	1.56	0.52
54:1G:741:G:H2'	54:1G:742:G:O4'	2.09	0.52
24:1H:2572:A:C8	28:21:144:ARG:HD2	2.45	0.52
34:25:85:VAL:HG11	34:25:114:ILE:HD13	1.90	0.52
22:2L:84:C:H2'	22:2L:85:A:C2	2.45	0.52
5:42:80:ILE:HD12	5:42:91:LEU:HB2	1.90	0.52
4:32:204:ILE:HD13	5:42:97:GLY:O	2.08	0.52
30:49:180:PHE:O	50:I5:43:TYR:OH	2.27	0.52
31:59:125:VAL:HG12	31:59:127:GLU:H	1.73	0.52
31:59:82:GLY:HA3	31:59:135:GLY:O	2.09	0.52
24:14:2745:C:H4'	31:59:142:GLY:O	2.08	0.52
31:59:80:SER:OG	31:59:81:GLU:N	2.43	0.52
6:5E:35:ALA:HA	6:5E:67:MET:HB3	1.91	0.52
9:82:22:GLY:N	9:82:58:HIS:O	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9I:59:SER:HB3	18:9I:62:GLU:HG3	1.90	0.52
38:A8:26:LEU:HD23	38:A8:87:PHE:CD1	2.41	0.52
19:AI:8:GLY:HA2	50:M8:66:SER:HB3	1.91	0.52
39:B8:7:ILE:C	39:B8:9:LEU:N	2.63	0.52
44:C5:47:LYS:HA	44:C5:60:PHE:HD2	1.74	0.52
1:13:727:G:N2	1:13:730:G:OP2	2.39	0.52
24:14:1899:G:O2'	24:14:1900:A:H5''	2.10	0.52
24:14:2064:C:H2'	24:14:2065:C:C6	2.44	0.52
24:14:10:G:N2	24:14:2802:G:OP1	2.42	0.52
33:15:98:VAL:HG23	33:15:99:LEU:N	2.24	0.52
54:1G:1170:A:N6	54:1G:1171:G:N3	2.56	0.52
24:1H:1167:U:H2'	24:1H:1168:G:C8	2.44	0.52
24:1H:784:A:O4'	27:11:227:ASN:ND2	2.42	0.52
24:1H:821:A:H5''	24:1H:822:U:H6	1.74	0.52
28:29:38:THR:HG23	28:29:41:LYS:HB3	1.91	0.52
3:2E:7:PRO:O	3:2E:11:ARG:HG2	2.09	0.52
24:1H:1257:C:O2'	29:31:83:PHE:HA	2.09	0.52
13:4A:10:PRO:HB2	13:4A:18:ALA:HB1	1.90	0.52
8:72:121:ASP:HB2	8:72:125:ARG:HH21	1.75	0.52
9:82:37:PHE:CD2	9:82:43:ALA:HB2	2.45	0.52
40:85:65:ILE:HD11	40:85:93:LYS:HA	1.91	0.52
17:8A:75:ARG:HH12	17:8A:77:VAL:HG22	1.74	0.52
41:95:44:LYS:C	41:95:46:VAL:H	2.13	0.52
19:AI:52:TYR:HA	19:AI:56:GLN:O	2.09	0.52
1:13:1454:G:OP1	20:BI:39:LYS:NZ	2.43	0.52
24:14:2357:U:OP1	46:E5:20:ARG:HD2	2.09	0.52
47:J8:86:SER:HB3	47:J8:87:PRO:HA	1.90	0.52
2:12:212:GLN:OE1	2:12:235:SER:OG	2.25	0.52
2:12:237:ALA:C	2:12:239:VAL:H	2.12	0.52
24:14:1163:G:O2'	24:14:1164:G:H5'	2.10	0.52
24:14:1450:C:H2'	24:14:1451:C:C6	2.45	0.52
24:14:1751:C:H2'	24:14:1752:C:H6	1.73	0.52
24:14:2830:G:O2'	24:14:2883:A:N1	2.30	0.52
54:1G:1001:G:H1	54:1G:1039:C:H42	1.58	0.52
54:1G:568:G:N3	54:1G:574:A:H2	2.08	0.52
24:1H:1371:G:H2'	24:1H:1372:U:C5	2.45	0.52
24:1H:2439:A:C8	24:1H:2439:A:H5'	2.44	0.52
24:1H:2507:C:H5'	24:1H:2573:C:N4	2.24	0.52
24:1H:2689:U:P	24:1H:2719:G:H22	2.32	0.52
22:3L:24:G:H2'	22:3L:25:G:C8	2.41	0.52
30:41:85:GLY:O	30:41:86:MET:HB2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:10:A:OP2	5:4E:126:ARG:HD3	2.10	0.52
13:4I:64:TRP:HD1	13:4I:66:LEU:HD11	1.74	0.52
38:65:7:TYR:O	38:65:11:LYS:HB2	2.09	0.52
32:69:93:THR:HG22	32:69:119:PRO:HG3	1.91	0.52
16:7A:56:ALA:O	16:7A:60:LEU:HG	2.09	0.52
8:7E:106:GLY:HA2	8:7E:122:ARG:HH12	1.74	0.52
54:1G:1231:G:H5''	9:82:127:LYS:HA	1.91	0.52
36:88:90:VAL:HG23	36:88:91:GLU:N	2.20	0.52
41:D8:65:GLY:O	41:D8:91:TYR:HD1	1.92	0.52
46:E5:12:ASN:HA	46:E5:14:ARG:NH2	2.20	0.52
1:13:975:A:H5''	1:13:975:A:C8	2.41	0.52
24:14:1098:A:H3'	24:14:1099:G:H5'	1.92	0.52
24:14:1536:A:H5''	24:14:1537:C:C6	2.44	0.52
10:1A:4:ILE:HD13	10:1A:100:THR:HG22	1.92	0.52
54:1G:1002:G:H22	54:1G:1038:C:N4	2.08	0.52
54:1G:1117:G:N2	54:1G:1180:A:H1'	2.24	0.52
24:1H:1688:U:H2'	24:1H:1698:A:N6	2.25	0.52
24:1H:2262:U:H4'	24:1H:2328:A:C2	2.45	0.52
24:1H:2832:U:H4'	24:1H:2833:G:H5''	1.92	0.52
24:1H:247:G:H4'	24:1H:386:G:C5	2.45	0.52
24:1H:1993:U:H4'	28:21:128:SER:HB3	1.91	0.52
3:2E:73:PRO:HG3	3:2E:105:GLU:HB2	1.91	0.52
24:14:659:C:H4'	29:39:100:THR:O	2.09	0.52
6:5E:19:LEU:HD23	6:5E:23:LYS:NZ	2.25	0.52
32:61:67:ARG:O	32:61:71:ILE:HG23	2.09	0.52
32:69:103:ARG:H	32:69:103:ARG:NE	2.08	0.52
43:B5:56:THR:HB	43:B5:77:LYS:HE2	1.91	0.52
43:F8:31:HIS:CE1	43:F8:33:LYS:HB2	2.45	0.52
1:13:1349:A:H2'	1:13:1350:A:C8	2.43	0.52
54:1G:1015:A:H2'	54:1G:1016:A:H8	1.75	0.52
54:1G:540:G:H2'	54:1G:541:G:O4'	2.10	0.52
54:1G:559:A:H4'	54:1G:560:U:H5''	1.92	0.52
24:1H:1266:G:O2'	24:1H:2012:G:O6	2.21	0.52
24:1H:2287:A:N3	24:1H:2289:G:C8	2.77	0.52
25:1J:88:C:N3	25:1J:89:G:N3	2.58	0.52
28:21:60:ASN:OD1	28:21:62:PRO:HD2	2.09	0.52
11:2A:62:GLN:HB2	11:2A:93:GLN:OE1	2.09	0.52
29:31:8:GLN:OE1	29:31:8:GLN:N	2.38	0.52
24:14:1287:A:C8	37:55:107:ASP:HB2	2.45	0.52
39:75:91:ARG:HD2	39:75:124:ASP:OD2	2.10	0.52
39:75:16:ARG:HH12	39:75:83:ILE:HB	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:587:C:O2	35:78:33:ARG:NH1	2.43	0.52
9:8E:28:VAL:HG22	9:8E:63:ILE:HB	1.91	0.52
19:AA:63:THR:OG1	19:AA:65:ASN:OD1	2.19	0.52
44:C5:62:GLU:CD	44:C5:63:LYS:H	2.12	0.52
1:13:170:U:H2'	1:13:171:A:H8	1.75	0.52
24:14:1292:U:H2'	24:14:1293:C:C6	2.43	0.52
24:14:1496:A:H8	24:14:1577:C:O2'	1.85	0.52
24:14:1857:G:O2'	24:14:1885:A:N6	2.42	0.52
24:14:1899:G:N2	24:14:1902:C:N4	2.44	0.52
24:14:2113:U:C5	24:14:2114:A:H1'	2.45	0.52
24:14:481:G:OP2	44:C5:47:LYS:HB2	2.10	0.52
24:14:821:A:H2'	24:14:946:G:H5''	1.92	0.52
24:14:988:A:N6	57:14:4150:HOH:O	2.33	0.52
25:16:29:A:P	38:A8:32:LEU:HD13	2.50	0.52
54:1G:1357:A:N7	54:1G:1358:U:C5	2.78	0.52
24:1H:1771:C:H1'	24:1H:1786:A:H8	1.73	0.52
24:1H:2339:G:H2'	24:1H:2340:G:C8	2.44	0.52
24:1H:32:C:O2'	24:1H:33:U:H5'	2.10	0.52
24:1H:761:A:H5''	57:1H:3640:HOH:O	2.10	0.52
11:2A:12:ARG:HB2	11:2A:75:TYR:HD2	1.75	0.52
35:35:47:ASP:HB3	35:35:48:PRO:C	2.30	0.52
30:49:11:TYR:OH	30:49:16:ARG:NH2	2.43	0.52
24:14:2178:C:O2'	26:79:168:THR:O	2.26	0.52
26:79:26:ALA:O	26:79:29:VAL:HG12	2.10	0.52
37:98:41:ALA:O	37:98:44:LEU:N	2.39	0.52
38:A8:39:ILE:HD13	38:A8:85:VAL:HG11	1.90	0.52
38:A8:67:ARG:O	38:A8:71:ARG:HG3	2.10	0.52
43:F8:26:TYR:CD1	43:F8:89:ILE:HD13	2.44	0.52
24:14:999:U:C5	24:14:1154:G:C5	2.97	0.52
24:14:1336:A:H2'	24:14:1337:G:C8	2.44	0.52
24:14:1671:U:HO2'	24:14:1673:U:H5	1.57	0.52
24:14:2660:A:H2'	24:14:2661:G:O4'	2.10	0.52
24:14:270(D):C:H2'	24:14:270(E):G:C8	2.45	0.52
27:19:58:HIS:HD2	27:19:59:LYS:H	1.57	0.52
54:1G:192:U:H2'	54:1G:193:C:H6	1.75	0.52
54:1G:79:G:H1	54:1G:90:C:H42	1.57	0.52
24:1H:1515:C:H2'	24:1H:1516:U:H6	1.75	0.52
24:1H:774:A:H2	24:1H:787:U:HO2'	1.56	0.52
22:2K:4:G:N2	22:2K:78:C:O2	2.43	0.52
22:2L:34:U:HO2'	22:2L:35:QUO:P	2.31	0.52
24:14:826:U:H4'	35:35:55:ARG:HA	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:39:25:PRO:CG	29:39:119:ARG:HB2	2.39	0.52
1:13:553:A:H5'	12:3I:24:VAL:HG21	1.90	0.52
7:6E:111:ARG:NH1	7:6E:113:GLU:OE2	2.42	0.52
7:6E:9:VAL:HG13	7:6E:94:ARG:HE	1.74	0.52
35:78:59:LEU:CD2	53:Q8:13:ARG:HD2	2.40	0.52
16:7A:43:LYS:HA	16:7A:48:TRP:CB	2.37	0.52
36:88:135:ASP:HB3	36:88:137:TYR:H	1.74	0.52
9:8E:86:VAL:O	9:8E:90:PRO:HA	2.09	0.52
25:16:30:C:OP2	38:A8:32:LEU:HD11	2.10	0.52
45:D5:10:ARG:HD2	45:D5:36:LYS:HE2	1.91	0.52
51:N8:40:LYS:CG	51:N8:47:PRO:HD2	2.40	0.52
1:13:1216:G:H2'	1:13:1217:C:C6	2.45	0.52
1:13:760:G:O2'	17:8I:98:LEU:HD22	2.10	0.52
1:13:859:A:H2'	1:13:860:A:C8	2.44	0.52
24:14:1187:G:H8	24:14:1187:G:O5'	1.92	0.52
24:14:2018:G:O2'	40:85:34:LYS:HE3	2.09	0.52
24:14:2123:G:N2	26:79:42:GLU:OE1	2.42	0.52
24:14:2823:A:OP1	28:29:159:HIS:NE2	2.32	0.52
24:14:932:G:OP1	49:H5:29:ARG:NH2	2.43	0.52
10:1A:11:PHE:CE1	10:1A:67:THR:HG22	2.45	0.52
54:1G:1321:C:C4	54:1G:1322:C:C4	2.98	0.52
24:1H:182:A:O2'	24:1H:183:C:H5'	2.10	0.52
24:1H:284:U:H2'	24:1H:285:C:C6	2.45	0.52
25:1J:44:G:H1'	25:1J:47:C:N4	2.25	0.52
35:35:30:THR:CG2	35:35:35:HIS:H	2.23	0.52
31:51:168:PRO:HB2	31:51:170:ARG:HE	1.75	0.52
37:55:24:GLN:HB3	37:55:44:LEU:HD11	1.92	0.52
8:7E:87:SER:HA	8:7E:93:VAL:HG23	1.91	0.52
9:82:17:VAL:HA	9:82:63:ILE:HG12	1.92	0.52
36:88:2:LEU:H	36:88:2:LEU:HD12	1.75	0.52
37:98:75:LEU:O	37:98:79:LEU:HB2	2.09	0.52
24:1H:1252:G:N3	40:C8:33:ARG:HD2	2.25	0.52
43:F8:15:GLU:CD	43:F8:15:GLU:H	2.14	0.52
1:13:146:G:N2	1:13:176:C:O2	2.42	0.52
1:13:692:U:O2'	1:13:694:A:N7	2.32	0.52
24:14:2469:A:H2'	24:14:2470:G:O4'	2.09	0.52
24:14:298:G:N7	57:14:3842:HOH:O	2.34	0.52
24:14:1568:G:OP2	27:19:63:ARG:NH2	2.43	0.52
1:13:1284:C:OP1	21:1F:26:LYS:NZ	2.43	0.52
54:1G:1014:A:H4'	19:AA:14:HIS:CD2	2.45	0.52
24:1H:1153:C:H2'	24:1H:1154:G:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1274:A:N1	24:1H:1644:C:O2'	2.37	0.52
24:1H:1339:G:H21	24:1H:1603:A:H1'	1.75	0.52
24:1H:1899:G:N2	24:1H:1902:C:C5	2.77	0.52
24:1H:2248:C:OP2	57:1H:3674:HOH:O	2.19	0.52
24:1H:270(V):G:H2'	24:1H:270(W):G:C8	2.42	0.52
24:1H:275:G:N2	24:1H:278:A:N1	2.57	0.52
22:2L:21:A:H1'	22:2L:22:A:H2'	1.92	0.52
4:32:112:VAL:HG12	4:32:116:GLN:OE1	2.10	0.52
4:32:30:LYS:CG	4:32:35:ARG:HB2	2.39	0.52
35:35:57:THR:O	35:35:61:ARG:HG2	2.10	0.52
4:3E:57:ARG:HB3	4:3E:206:PHE:HB2	1.92	0.52
31:51:104:GLU:HG3	31:51:114:VAL:HG22	1.92	0.52
31:51:6:ARG:O	31:51:69:ARG:HB2	2.10	0.52
40:85:110:VAL:HG12	40:85:114:LYS:HE2	1.90	0.52
44:C5:27:VAL:HA	44:C5:39:VAL:HG13	1.92	0.52
44:G8:104:GLY:N	44:G8:105:ALA:HB3	2.24	0.52
47:J8:78:LYS:HE2	47:J8:79:GLY:N	2.21	0.52
24:1H:94:G:H21	48:K8:47:ASN:ND2	2.08	0.52
1:13:1107:C:C4	1:13:1108:G:C8	2.98	0.51
1:13:757:U:H2'	1:13:758:G:O4'	2.09	0.51
24:14:1607:C:H4'	24:14:1608:A:O5'	2.09	0.51
24:14:1952:A:C2	34:25:22:ILE:HG23	2.45	0.51
24:14:2355:C:H5''	24:14:2356:C:OP2	2.10	0.51
24:14:573:G:O2'	24:14:574:C:H3'	2.10	0.51
27:19:80:ALA:HB3	27:19:94:LEU:HB3	1.92	0.51
54:1G:148:G:N2	54:1G:149:A:C2	2.78	0.51
54:1G:328:C:H4'	54:1G:329:A:H5'	1.92	0.51
54:1G:536:C:OP1	57:1G:1755:HOH:O	2.19	0.51
54:1G:673:G:H2'	54:1G:674:G:C8	2.45	0.51
24:1H:1914:C:H2'	24:1H:1915:U:C6	2.46	0.51
24:1H:1974:C:H3'	57:1H:3968:HOH:O	2.09	0.51
24:1H:2048:G:N7	57:1H:4047:HOH:O	2.34	0.51
24:1H:2115:G:H1'	24:1H:2171:A:N6	2.25	0.51
28:21:50:GLY:HA2	28:21:77:ILE:HA	1.92	0.51
24:14:2562:U:H1'	34:25:23:ARG:NH1	2.24	0.51
11:2A:127:LYS:H	11:2A:127:LYS:HD2	1.74	0.51
3:2E:130:VAL:O	3:2E:134:ILE:HG12	2.10	0.51
3:2E:135:LYS:NZ	5:4E:53:LEU:HD11	2.26	0.51
29:39:25:PRO:HG3	29:39:119:ARG:HB2	1.92	0.51
22:3K:35:QUO:C4	22:3K:35:QUO:C2	2.73	0.51
22:3L:62:G:C5	22:3L:63:5MU:H72	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2316:C:H1'	30:41:128:ARG:HH21	1.75	0.51
24:1H:1668:A:OP1	34:68:5:GLN:HG3	2.10	0.51
32:69:109:ILE:HB	32:69:130:TYR:CZ	2.44	0.51
35:78:59:LEU:HD21	53:Q8:10:ALA:HA	1.91	0.51
35:78:91:PHE:O	35:78:121:LYS:NZ	2.40	0.51
45:D5:99:TYR:HD2	45:D5:123:ASP:HB2	1.75	0.51
24:14:1337:G:H2'	24:14:1338:G:C8	2.45	0.51
24:14:192:C:O2'	24:14:802:A:N3	2.38	0.51
33:15:95:PRO:O	33:15:98:VAL:HG22	2.09	0.51
25:16:73:A:C4	25:16:104:A:C2	2.99	0.51
27:19:4:LYS:HB3	27:19:18:VAL:HG23	1.91	0.51
54:1G:636:U:H2'	54:1G:637:G:H8	1.74	0.51
24:1H:1525:G:H2'	24:1H:1526:G:H8	1.74	0.51
24:1H:1653:G:H8	24:1H:1653:G:O5'	1.94	0.51
24:1H:191:A:H2'	24:1H:192:C:C6	2.45	0.51
24:1H:2261:C:O2'	24:1H:2262:U:H5'	2.10	0.51
24:1H:2473:U:O2'	24:1H:2474:C:O4'	2.22	0.51
24:1H:855:G:H5''	24:1H:856:C:OP2	2.11	0.51
3:22:90:GLU:HA	3:22:93:LYS:HB2	1.90	0.51
22:2K:15:G:H21	22:2K:20:C:H41	1.56	0.51
33:58:14:VAL:HG12	33:58:15:LEU:H	1.75	0.51
1:13:235:C:H5'	17:8I:70:ARG:HG2	1.92	0.51
17:8I:54:GLY:HA3	17:8I:82:MET:HG2	1.92	0.51
40:C8:52:ARG:HA	40:C8:55:ARG:HG3	1.91	0.51
45:D5:73:GLN:H	45:D5:87:ASP:HB2	1.75	0.51
45:H8:137:ILE:HG21	45:H8:155:LEU:HD13	1.91	0.51
27:11:75:ILE:H	27:11:75:ILE:HD12	1.76	0.51
2:12:45:GLN:O	2:12:48:MET:HB3	2.10	0.51
1:13:1133:G:H2'	1:13:1134:G:O4'	2.10	0.51
1:13:1347:G:N2	1:13:1374:A:OP2	2.40	0.51
1:13:598:U:H4'	8:7E:94:TYR:CD2	2.46	0.51
1:13:89:U:O2'	1:13:90:C:H5''	2.11	0.51
24:14:1022:G:C6	24:14:1140:C:C4	2.99	0.51
24:14:1538:G:H2'	24:14:1539:G:H8	1.75	0.51
24:14:405:U:O2'	24:14:406:G:OP1	2.23	0.51
24:14:676:A:H8	24:14:2069:G:N2	1.85	0.51
24:14:769:G:H2'	24:14:770:G:H8	1.76	0.51
27:19:40:THR:OG1	27:19:41:GLY:N	2.42	0.51
54:1G:1244:C:H42	54:1G:1293:G:H1	1.58	0.51
54:1G:1319:A:OP1	19:AA:10:PHE:HB3	2.11	0.51
54:1G:575:G:O2'	54:1G:821:G:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1279:G:H4'	37:98:31:HIS:ND1	2.24	0.51
24:1H:2218:G:N7	57:1H:4554:HOH:O	2.34	0.51
24:1H:2679:A:H4'	28:21:165:VAL:HG11	1.93	0.51
24:1H:455:C:N3	24:1H:473:G:H5'	2.25	0.51
24:1H:654(V):A:H2	24:1H:655:A:C2	2.28	0.51
24:14:2733:A:C2	28:29:203:LYS:HA	2.45	0.51
22:3K:20:C:H5''	22:3K:68:A:N6	2.24	0.51
24:1H:2758:A:C4	31:51:67:LEU:HD21	2.46	0.51
14:5I:4:LYS:O	14:5I:7:ILE:HG12	2.10	0.51
32:61:88:ILE:HG22	32:61:90:GLY:N	2.26	0.51
34:68:101:PRO:HB3	34:68:122:LEU:CD1	2.39	0.51
32:69:69:LYS:O	32:69:72:LEU:N	2.43	0.51
16:7I:15:PRO:C	16:7I:16:HIS:HD1	2.11	0.51
40:85:83:LEU:HG	40:85:88:ILE:HD12	1.91	0.51
39:B8:7:ILE:HG21	39:B8:9:LEU:HB2	1.92	0.51
45:H8:53:ILE:HG22	45:H8:71:VAL:HG22	1.92	0.51
50:I5:14:ILE:HG22	50:I5:20:ASN:HB3	1.93	0.51
52:P8:8:ASN:C	52:P8:8:ASN:OD1	2.48	0.51
27:11:231:HIS:CD2	27:11:249:PRO:HA	2.46	0.51
1:13:1409:C:H2'	1:13:1410:G:H8	1.76	0.51
24:14:1771:C:O2'	24:14:1786:A:H8	1.88	0.51
24:14:363:G:H2'	24:14:363(A):A:C8	2.40	0.51
24:14:874:G:N2	24:14:904:C:C2	2.79	0.51
27:19:24:ILE:HG23	27:19:83:GLU:HA	1.92	0.51
27:19:65:ILE:HD13	27:19:106:ILE:HG13	1.91	0.51
54:1G:1070:U:H2'	54:1G:1071:C:H6	1.74	0.51
54:1G:512:U:H2'	54:1G:513:C:C6	2.45	0.51
24:1H:2327:A:H2'	24:1H:2328:A:H8	1.73	0.51
3:22:50:ALA:HB2	3:22:75:VAL:HB	1.92	0.51
34:25:2:ILE:HD12	34:25:6:THR:HG21	1.93	0.51
29:31:39:TRP:CH2	29:31:106:ARG:HD2	2.45	0.51
12:3A:110:VAL:CG2	12:3A:120:TYR:HB3	2.41	0.51
30:49:95:ARG:O	30:49:99:MET:HG2	2.10	0.51
7:62:60:LYS:HD2	7:62:63:LYS:HZ1	1.76	0.51
38:65:3:ARG:HE	38:65:4:LEU:H	1.57	0.51
7:6E:15:ASP:HB3	7:6E:19:GLY:N	2.25	0.51
16:7I:74:LEU:HD22	16:7I:79:VAL:HG21	1.93	0.51
24:1H:2470:G:H5'	36:88:56:ARG:NH2	2.24	0.51
17:8A:57:VAL:HG12	17:8A:76:LEU:HA	1.93	0.51
1:13:958:A:OP1	19:AI:79:THR:HG21	2.10	0.51
24:1H:1266:G:O5'	42:E8:15:ARG:NH2	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:H5:28:LEU:HA	49:H5:33:GLN:OE1	2.10	0.51
1:13:1219:U:H2'	1:13:1220:G:H8	1.74	0.51
1:13:321:A:C2	1:13:333:G:C2	2.98	0.51
24:14:2774:C:H2'	24:14:2775:A:O4'	2.11	0.51
24:14:353:G:H2'	24:14:354:G:H8	1.76	0.51
24:14:528:A:O2'	24:14:529:A:H5'	2.10	0.51
25:16:40:U:N3	25:16:43:C:H5''	2.25	0.51
10:1A:25:GLU:O	10:1A:29:ARG:HB3	2.10	0.51
54:1G:1402:C:H2'	54:1G:1403:C:O4'	2.11	0.51
24:1H:2208:U:O2'	24:1H:2209:C:H5'	2.10	0.51
24:1H:760:G:OP1	57:1H:3784:HOH:O	2.18	0.51
24:1H:945:A:OP2	57:1H:4109:HOH:O	2.19	0.51
10:1I:6:ILE:HG22	10:1I:98:ILE:HG23	1.92	0.51
28:21:119:ARG:HD2	28:21:120:TRP:CE2	2.45	0.51
34:25:11:ALA:HB1	34:25:99:PHE:HB2	1.93	0.51
3:2E:53:ALA:HB2	3:2E:115:LEU:HD13	1.93	0.51
22:2L:32:A:H2'	22:2L:33:C:C6	2.45	0.51
31:51:4:ILE:O	31:51:4:ILE:HG12	2.09	0.51
57:14:3527:HOH:O	37:55:3:HIS:CD2	2.64	0.51
24:14:2880:C:H1'	37:55:92:GLY:HA3	1.91	0.51
39:75:3:ARG:HA	39:75:4:GLY:O	2.10	0.51
35:78:1:MET:HE3	35:78:1:MET:O	2.09	0.51
1:13:1346:A:H5''	9:8E:120:ARG:NH1	2.25	0.51
46:E5:21:LEU:HD21	46:E5:41:ARG:NH2	2.25	0.51
24:1H:484:C:OP1	44:G8:51:VAL:HG22	2.10	0.51
44:G8:55:TYR:CZ	44:G8:61:ILE:HD11	2.45	0.51
45:H8:163:LEU:HD23	45:H8:163:LEU:H	1.76	0.51
46:I8:53:MET:HG3	46:I8:59:LEU:CD2	2.41	0.51
2:12:116:GLU:HG2	2:12:153:ARG:NH2	2.26	0.51
1:13:648:A:H2'	1:13:649:G:C8	2.46	0.51
24:14:1146:C:H2'	24:14:1147:C:H6	1.76	0.51
24:14:1630(A):C:H2'	57:14:3553:HOH:O	2.11	0.51
24:14:1956:U:H1'	24:14:2552:U:OP1	2.11	0.51
24:14:565:C:H4'	24:14:1253:A:N6	2.26	0.51
10:1A:44:VAL:HG22	10:1A:66:ARG:HB3	1.93	0.51
2:1E:187:LEU:HD23	2:1E:201:ILE:O	2.10	0.51
54:1G:1028:C:N3	54:1G:1033:G:N2	2.47	0.51
54:1G:1097:C:O2'	54:1G:1169:A:N3	2.36	0.51
54:1G:1508:G:H2'	54:1G:1509:C:O4'	2.10	0.51
54:1G:32:A:C2	54:1G:33:A:C4	2.98	0.51
24:1H:1113:U:H5'	31:51:2:SER:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:7:G:H1	24:1H:2896:C:H42	1.58	0.51
24:1H:80:G:N7	57:1H:3724:HOH:O	2.34	0.51
11:2I:33:THR:OG1	11:2I:34:ASP:O	2.26	0.51
22:2L:10:C:H41	22:2L:26:G:H1	1.57	0.51
12:3I:11:VAL:HG13	17:8I:29:HIS:CD2	2.46	0.51
15:6I:70:LEU:HD11	15:6I:77:ARG:HG3	1.93	0.51
24:14:748:G:C8	42:A5:89:ALA:HB1	2.45	0.51
45:D5:7:ALA:O	45:D5:8:TYR:CG	2.63	0.51
1:13:263:A:OP2	20:BI:79:ARG:NH1	2.44	0.51
1:13:745:C:H2'	1:13:746:A:H8	1.72	0.51
24:14:1389:G:H2'	24:14:1390:U:C6	2.46	0.51
24:14:2537:U:H2'	24:14:2538:C:H6	1.75	0.51
24:14:2638:G:O2'	24:14:2639:A:H8	1.94	0.51
24:14:26:G:C6	24:14:27:G:N1	2.78	0.51
24:14:620:G:H5'	24:14:620:G:N3	2.26	0.51
24:14:780:G:H21	24:14:783:A:N6	2.00	0.51
27:19:70:TRP:C	27:19:70:TRP:CD1	2.84	0.51
54:1G:1109:C:H2'	54:1G:1110:A:O4'	2.10	0.51
24:1H:1508:A:H4'	24:1H:1509:C:C1'	2.41	0.51
24:1H:1771:C:C1'	24:1H:1786:A:H8	2.24	0.51
24:1H:2388:A:H2'	24:1H:2389:G:H5'	1.92	0.51
24:1H:2442:C:H2'	24:1H:2443:C:C6	2.46	0.51
24:1H:2583:G:OP2	57:1H:3765:HOH:O	2.19	0.51
24:1H:2776:A:H4'	24:1H:2777:G:H5''	1.93	0.51
24:1H:2791:C:H2'	24:1H:2792:G:C8	2.46	0.51
3:22:111:LEU:HD22	3:22:146:ALA:HB2	1.93	0.51
34:25:73:ASP:OD1	34:25:75:SER:HB3	2.10	0.51
3:2E:13:GLY:CA	14:5I:57:ARG:HE	2.24	0.51
29:39:168:ARG:HG2	29:39:175:THR:HG21	1.93	0.51
12:3I:6:THR:OG1	12:3I:9:GLN:HG3	2.11	0.51
31:51:154:PRO:HB3	31:51:163:TYR:CE2	2.45	0.51
32:69:76:THR:HG23	32:69:140:LEU:HD13	1.93	0.51
15:6A:70:LEU:HD11	15:6A:77:ARG:HG3	1.92	0.51
40:85:49:HIS:HA	40:85:52:ARG:HB2	1.93	0.51
37:98:30:THR:HG22	37:98:31:HIS:CD2	2.46	0.51
18:9I:36:ASN:ND2	18:9I:39:VAL:HG21	2.25	0.51
43:F8:5:TYR:O	48:K8:36:ARG:NH2	2.44	0.51
1:13:376:G:H1	1:13:387:U:H3	1.59	0.51
1:13:95:G:H3'	1:13:96:G:C8	2.46	0.51
24:14:1389:G:H2'	24:14:1390:U:H6	1.75	0.51
24:14:2808:U:H3	24:14:2892:A:H62	1.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:71:A:C8	24:14:71:A:H5'	2.46	0.51
10:1A:40:LEU:HD13	10:1A:71:LEU:HB2	1.92	0.51
2:1E:208:ILE:HD12	2:1E:209:ARG:H	1.76	0.51
2:1E:214:ILE:HG23	2:1E:215:LEU:HD22	1.91	0.51
54:1G:1086:U:H2'	54:1G:1087:G:O4'	2.11	0.51
24:1H:1316:U:H2'	24:1H:1317:A:C8	2.45	0.51
24:1H:2271:G:H5''	46:I8:20:ARG:NH1	2.26	0.51
24:1H:2839:G:H5'	37:98:46:GLY:HA2	1.93	0.51
28:29:128:SER:O	28:29:129:HIS:HB2	2.09	0.51
11:2I:46:GLY:HA2	11:2I:50:TYR:O	2.11	0.51
22:2K:48:C:O2	22:2K:52:G:N2	2.42	0.51
29:31:53:THR:HG23	29:31:56:GLU:OE1	2.11	0.51
30:41:41:GLN:HG2	30:41:155:MET:HB3	1.93	0.51
33:58:96:GLU:OE1	33:58:96:GLU:N	2.44	0.51
32:61:84:GLY:N	32:61:89:TYR:HE1	2.09	0.51
38:65:62:LYS:O	38:65:65:VAL:HG22	2.11	0.51
37:98:101:ALA:HA	51:N8:44:THR:HG21	1.93	0.51
1:13:1313:U:O4	19:AI:4:SER:HB3	2.10	0.51
1:13:255:G:H2'	1:13:256:U:H6	1.76	0.51
24:14:1510:A:H3'	24:14:1511:A:H8	1.76	0.51
24:14:1627:G:OP1	57:14:4252:HOH:O	2.20	0.51
24:14:1827:C:OP2	27:19:222:ARG:NH1	2.43	0.51
24:14:554:U:O2'	24:14:556:G:N7	2.38	0.51
10:1A:6:ILE:HG23	10:1A:72:VAL:HB	1.91	0.51
54:1G:79:G:N2	54:1G:91:C:N3	2.59	0.51
24:1H:1324:G:O6	57:1H:4566:HOH:O	2.17	0.51
24:1H:1512:G:H2'	24:1H:1513:C:C6	2.46	0.51
24:1H:273(D):C:H2'	24:1H:273(E):U:H6	1.76	0.51
24:1H:739:G:P	57:1H:3934:HOH:O	2.68	0.51
24:1H:924:C:H2'	24:1H:925:C:C6	2.46	0.51
22:2L:8:4SU:O2'	22:2L:22:A:N1	2.40	0.51
22:2L:57:C:H2'	22:2L:68:A:H4'	1.92	0.51
4:32:71:SER:OG	4:32:74:GLN:HG3	2.11	0.51
12:3A:24:VAL:HG12	12:3A:98:TYR:CE1	2.46	0.51
24:1H:1111:A:OP1	31:51:3:ARG:NH1	2.43	0.51
32:69:77:LEU:HD21	32:69:141:LYS:HD3	1.93	0.51
1:13:1239:A:O2'	7:6E:114:ARG:O	2.16	0.51
35:78:30:THR:HG21	35:78:35:HIS:H	1.75	0.51
16:7A:25:ARG:HH11	16:7A:25:ARG:HG3	1.76	0.51
45:D5:155:LEU:HD12	45:D5:163:LEU:HD13	1.93	0.51
50:I5:25:TYR:O	50:I5:26:SER:OG	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1503:A:O2'	1:13:1504:G:O5'	2.29	0.51
1:13:118:U:H3'	1:13:288:A:H61	1.75	0.51
1:13:649:G:H2'	1:13:650:G:C8	2.41	0.51
24:14:1570:A:H2'	24:14:1571:A:C8	2.46	0.51
24:14:2017:U:OP1	57:14:3742:HOH:O	2.19	0.51
24:14:2469:A:OP2	24:14:2476:A:N6	2.27	0.51
24:14:270(M):U:H1'	24:14:270(N):G:C6	2.46	0.51
24:14:443:A:H1'	24:14:1201:C:O4'	2.11	0.51
24:14:69:C:H2'	24:14:70:G:H8	1.75	0.51
25:16:14:U:OP2	25:16:70:C:O2'	2.24	0.51
54:1G:186(D):C:H2'	54:1G:186(E):C:C6	2.46	0.51
54:1G:46:G:O2'	54:1G:365:U:H1'	2.11	0.51
54:1G:422:C:HO2'	54:1G:423:G:N2	2.09	0.51
54:1G:612:C:O2	54:1G:629:G:N2	2.43	0.51
24:1H:2388:A:C2'	24:1H:2389:G:H5'	2.41	0.51
24:1H:654(D):G:N2	24:1H:654(Q):C:N3	2.44	0.51
24:1H:7:G:H2'	24:1H:8:A:O4'	2.10	0.51
28:29:55:ASN:O	28:29:57:LYS:N	2.41	0.51
22:3K:37:A:H2'	22:3K:38:MIA:O4'	2.11	0.51
33:58:103:VAL:HG21	33:58:120:LEU:HD11	1.93	0.51
38:65:99:LYS:HE2	38:65:103:GLU:OE1	2.12	0.51
38:65:71:ARG:HD2	38:65:106:ARG:NH2	2.26	0.51
19:AI:5:LEU:HD22	19:AI:70:LYS:HZ1	1.76	0.51
41:D8:7:THR:HG23	41:D8:12:TYR:HE1	1.74	0.51
41:D8:76:LYS:HG3	41:D8:81:TYR:CD2	2.46	0.51
46:E5:29:GLN:O	46:E5:67:VAL:HG23	2.10	0.51
45:H8:76:LEU:HA	45:H8:83:PRO:HA	1.91	0.51
24:1H:2329:G:H21	46:I8:41:ARG:HG3	1.76	0.51
1:13:178:C:H2'	1:13:179:A:O4'	2.11	0.50
1:13:67:C:H2'	1:13:68:G:H8	1.74	0.50
1:13:957:U:H1'	1:13:960:U:C5	2.46	0.50
24:14:2102:U:O2	24:14:2187:G:N2	2.42	0.50
24:14:2124:G:H2'	24:14:2124:G:N3	2.26	0.50
24:14:38:A:H2'	24:14:39:C:C6	2.46	0.50
33:15:21:LYS:O	33:15:60:ILE:HG13	2.11	0.50
57:14:3493:HOH:O	27:19:228:PRO:O	2.19	0.50
54:1G:1145:C:H4'	54:1G:1146:A:H8	1.75	0.50
54:1G:553:A:O4'	12:3A:31:PRO:HA	2.11	0.50
24:1H:38:A:H2'	24:1H:39:C:C6	2.46	0.50
22:3K:51:C:H3'	22:3K:52:G:O4'	2.11	0.50
22:3L:62:G:H3'	22:3L:63:5MU:H71	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:4A:108:ARG:NH1	13:4A:112:GLY:O	2.44	0.50
5:4E:6:PHE:HB3	5:4E:34:VAL:HG13	1.93	0.50
31:51:137:ASP:OD1	31:51:138:LYS:N	2.38	0.50
32:69:140:LEU:HD12	32:69:141:LYS:N	2.26	0.50
32:69:25:TYR:HE1	32:69:29:TYR:CD2	2.28	0.50
37:98:42:LYS:O	37:98:45:ARG:HD2	2.11	0.50
39:B8:55:ASN:H	39:B8:59:THR:HB	1.76	0.50
54:1G:1453:G:H2'	20:BA:39:LYS:NZ	2.26	0.50
46:E5:70:GLN:HE22	46:E5:72:ARG:HD2	1.76	0.50
47:F5:87:PRO:O	47:F5:91:LYS:HB2	2.11	0.50
49:H5:40:THR:HG23	49:H5:43:ILE:HG12	1.92	0.50
52:P8:45:ALA:O	52:P8:46:VAL:HB	2.10	0.50
1:13:626:U:H2'	1:13:627:G:C8	2.46	0.50
24:14:1639:U:H4'	24:14:2699:C:H4'	1.93	0.50
24:14:2750:A:H8	24:14:2752:C:H42	1.57	0.50
24:14:760:G:H2'	24:14:761:A:O4'	2.12	0.50
21:1B:2:GLY:O	21:1B:4:GLY:N	2.44	0.50
54:1G:573:A:N3	54:1G:883:C:O2'	2.40	0.50
54:1G:64:G:H4'	54:1G:65:U:H3'	1.92	0.50
54:1G:861:G:O2'	54:1G:874:G:O2'	2.23	0.50
24:1H:1065:U:N3	24:1H:1070:A:OP1	2.40	0.50
24:1H:1448:G:O2'	24:1H:1529:A:N1	2.39	0.50
24:1H:1528:A:C2	24:1H:1542:G:C2	2.99	0.50
24:1H:1590:U:H2'	24:1H:1591:G:C8	2.46	0.50
24:1H:1997:G:H5''	57:1H:3991:HOH:O	2.10	0.50
24:1H:934:G:H2'	24:1H:935:C:H6	1.76	0.50
22:2K:71:C:C2	22:2K:72:U:C5	2.99	0.50
5:42:92:LYS:HB3	5:42:119:LEU:HB2	1.94	0.50
30:49:82:LEU:HA	30:49:86:MET:SD	2.51	0.50
32:61:91:SER:HB3	32:61:121:LYS:HD2	1.93	0.50
36:88:133:ARG:O	36:88:134:ARG:HB2	2.11	0.50
49:H5:8:LEU:HD11	49:H5:23:LEU:HD13	1.92	0.50
49:L8:7:LYS:HB2	49:L8:34:GLU:HG2	1.93	0.50
1:13:142:G:H2'	1:13:143:A:C8	2.45	0.50
1:13:642:A:N3	8:7E:113:SER:OG	2.35	0.50
24:14:1278:A:O3'	37:55:34:ILE:HG13	2.11	0.50
24:14:1341:U:C5	24:14:1395:A:H2	2.30	0.50
24:14:1423:G:H2'	24:14:1424:G:H8	1.76	0.50
24:14:337:C:H2'	24:14:338:G:O4'	2.11	0.50
24:14:635:C:H2'	24:14:636:G:O4'	2.12	0.50
25:16:100:G:H5''	57:16:220:HOH:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:12:GLU:HB2	2:1E:16:HIS:CG	2.46	0.50
54:1G:977:A:H2'	54:1G:978:A:H5''	1.94	0.50
24:1H:839:U:O2'	24:1H:1191:G:N3	2.41	0.50
24:1H:1213:A:H1'	24:1H:1238:G:N3	2.26	0.50
24:1H:1525:G:H2'	24:1H:1526:G:C8	2.46	0.50
24:1H:2128:C:H2'	24:1H:2129:C:H6	1.77	0.50
24:1H:2721:A:H2'	24:1H:2722:G:O4'	2.11	0.50
25:1J:70:C:H2'	25:1J:71:C:H6	1.76	0.50
29:39:110:LEU:HD12	29:39:202:PHE:CE1	2.46	0.50
13:4I:10:PRO:HB2	13:4I:18:ALA:HB1	1.92	0.50
31:51:27:LYS:HA	31:51:32:GLU:HA	1.94	0.50
33:58:90:MET:HG3	33:58:94:HIS:O	2.11	0.50
14:5A:45:ARG:HG3	14:5A:49:HIS:HE1	1.76	0.50
38:65:24:LEU:HB2	38:65:85:VAL:HG12	1.94	0.50
34:68:47:ILE:HG13	34:68:48:PRO:HD2	1.93	0.50
1:13:836:G:OP1	18:9I:61:LYS:NZ	2.45	0.50
38:A8:101:LEU:HD12	38:A8:101:LEU:O	2.11	0.50
25:16:7:G:O5'	38:A8:29:PHE:CE2	2.65	0.50
45:D5:105:VAL:HG13	45:D5:106:GLY:H	1.76	0.50
45:D5:59:LEU:C	45:D5:61:LEU:H	2.13	0.50
45:H8:128:VAL:HG11	45:H8:134:PRO:HD2	1.93	0.50
50:I5:21:VAL:HG22	50:I5:22:ILE:H	1.75	0.50
52:L5:12:ARG:NH2	52:L5:44:PRO:HB3	2.26	0.50
27:11:70:TRP:CD1	27:11:70:TRP:C	2.85	0.50
1:13:1459:C:OP1	20:BI:31:SER:OG	2.16	0.50
1:13:1503:A:O2'	23:4K:13:A:N6	2.44	0.50
1:13:152:A:N6	1:13:170:U:C2	2.80	0.50
1:13:322:C:H5	1:13:328:C:H5	1.58	0.50
1:13:957:U:O2'	1:13:959:A:N7	2.36	0.50
24:14:1113:U:OP1	31:59:3:ARG:HG3	2.10	0.50
24:14:2147:G:C2	24:14:2148:G:H1'	2.47	0.50
24:14:2749:A:O4'	31:59:63:SER:HA	2.11	0.50
24:14:529:A:H4'	24:14:530:G:H5'	1.92	0.50
24:14:801:G:OP2	57:14:3954:HOH:O	2.19	0.50
27:19:43:ARG:HD2	27:19:49:ILE:HB	1.93	0.50
54:1G:1122:U:N3	54:1G:1123:A:N7	2.59	0.50
54:1G:125:U:H2'	54:1G:126:G:C8	2.47	0.50
54:1G:1366:C:H2'	54:1G:1367:C:C6	2.46	0.50
54:1G:1442:G:O2'	54:1G:1443:G:OP1	2.25	0.50
24:1H:577:G:O2'	24:1H:1254:A:OP1	2.26	0.50
24:1H:1655:A:H1'	28:21:113:PHE:CD1	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2345:G:N3	24:1H:2381:C:H2'	2.27	0.50
24:1H:2572:A:H5''	24:1H:2574:G:H4'	1.93	0.50
24:1H:2853:C:H2'	24:1H:2854:G:C8	2.45	0.50
7:6E:150:ALA:HB2	11:2I:50:TYR:OH	2.10	0.50
29:31:64:ILE:HG23	29:31:65:TRP:NE1	2.27	0.50
4:32:175:SER:HB3	4:32:186:LEU:HD11	1.92	0.50
35:35:14:LYS:HG2	35:35:15:ARG:H	1.75	0.50
24:14:389:G:H22	35:35:72:PRO:HD3	1.76	0.50
31:51:129:THR:OG1	31:51:129:THR:O	2.29	0.50
1:13:338:A:OP2	34:68:97:ARG:NH2	2.45	0.50
39:75:107:ASP:C	39:75:111:ARG:NH1	2.64	0.50
39:75:92:GLY:HA2	39:75:117:ASP:H	1.75	0.50
17:8A:59:ILE:CG2	17:8A:71:PHE:HB3	2.41	0.50
41:95:21:ARG:HD3	41:95:91:TYR:CG	2.45	0.50
20:BA:16:HIS:O	20:BA:19:SER:OG	2.28	0.50
20:BI:10:LEU:HG	20:BI:12:ALA:N	2.27	0.50
47:J8:73:LEU:HD21	47:J8:95:LEU:HD23	1.94	0.50
57:1H:3633:HOH:O	27:11:228:PRO:O	2.20	0.50
1:13:1418:A:C2	1:13:1483:A:C2	3.00	0.50
1:13:413:G:H2'	1:13:428:G:N2	2.26	0.50
24:14:1142:U:H5''	24:14:1142(A):A:H5'	1.93	0.50
24:14:1299:G:H5'	24:14:1301:A:O4'	2.11	0.50
54:1G:1442:G:N7	54:1G:1446:A:N1	2.59	0.50
24:1H:1053:C:N4	24:1H:1106:G:H1	2.08	0.50
24:1H:1267:U:O3'	57:1H:3600:HOH:O	2.19	0.50
24:1H:1313:U:H4'	24:1H:1332:G:H4'	1.93	0.50
24:1H:155:C:H42	24:1H:171:G:H1	1.60	0.50
24:1H:2111:C:H5	24:1H:2147:G:H22	1.60	0.50
24:1H:931:G:C4	24:1H:933:A:C8	2.99	0.50
24:1H:945:A:N7	57:1H:3822:HOH:O	2.35	0.50
28:29:120:TRP:CG	28:29:155:LYS:HB3	2.47	0.50
3:2E:123:GLN:O	3:2E:128:PHE:HB2	2.11	0.50
29:39:102:PRO:HB2	29:39:105:VAL:HG23	1.94	0.50
4:3E:150:GLU:HA	4:3E:153:ARG:HG2	1.94	0.50
22:3K:62:G:C5	22:3K:63:5MU:H72	2.46	0.50
31:59:107:VAL:HG11	31:59:152:ARG:HB3	1.94	0.50
14:5A:23:ARG:HB2	14:5A:28:GLY:O	2.11	0.50
39:75:74:ARG:HD3	39:75:76:PHE:CZ	2.47	0.50
16:7I:43:LYS:HG3	16:7I:48:TRP:CE3	2.47	0.50
17:8A:45:HIS:O	17:8A:73:VAL:HG12	2.12	0.50
18:9A:84:LYS:H	18:9A:84:LYS:HD3	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:B8:2:ASN:HB3	39:B8:5:ALA:H	1.76	0.50
47:J8:8:SER:HB3	47:J8:66:HIS:CD2	2.47	0.50
48:K8:31:GLU:HB2	48:K8:53:LEU:HD11	1.93	0.50
1:13:186(F):C:H2'	1:13:187:C:O4'	2.11	0.50
24:14:1540:G:H2'	24:14:1541:U:O4'	2.12	0.50
24:14:249:C:P	57:14:3506:HOH:O	2.70	0.50
24:14:2688:U:H1'	24:14:2721:A:H61	1.76	0.50
54:1G:1513:A:H2'	54:1G:1514:C:C6	2.47	0.50
54:1G:352:C:P	57:1G:1777:HOH:O	2.68	0.50
24:1H:1771:C:C1'	24:1H:1786:A:C8	2.94	0.50
24:1H:2387:U:OP1	46:I8:55:ARG:NH1	2.28	0.50
28:21:84:PHE:CE2	28:21:86:PRO:HG3	2.47	0.50
3:22:78:GLY:HA3	3:22:79:ARG:NH2	2.27	0.50
22:2K:22:A:N3	22:2K:22:A:H2'	2.25	0.50
22:2K:48:C:N4	22:2K:52:G:O6	2.40	0.50
4:32:18:LYS:CE	4:32:26:CYS:HB3	2.41	0.50
25:16:31:C:H4'	30:41:29:TRP:HH2	1.76	0.50
24:1H:2313:C:H4'	30:41:91:ARG:HG3	1.93	0.50
31:51:144:VAL:O	31:51:148:ILE:HG12	2.11	0.50
34:68:107:ARG:NH1	39:B8:36:GLU:HG2	2.27	0.50
9:8E:4:TYR:HB2	9:8E:19:LEU:HB2	1.93	0.50
9:8E:33:PHE:CE2	9:8E:47:LEU:HD12	2.47	0.50
42:A5:14:PRO:O	42:A5:18:ARG:HG3	2.11	0.50
45:H8:35:ARG:HB3	45:H8:35:ARG:HH11	1.76	0.50
49:L8:23:LEU:HD12	49:L8:23:LEU:H	1.76	0.50
2:12:5:ILE:HA	2:12:221:LEU:HD13	1.91	0.50
1:13:1260:C:H4'	1:13:1284:C:H5'	1.94	0.50
1:13:1292:U:H2'	1:13:1293:G:C8	2.46	0.50
1:13:77:C:H2'	1:13:78:G:C8	2.47	0.50
1:13:960:U:N3	1:13:1225:A:H1'	2.27	0.50
24:14:565:C:H4'	24:14:1253:A:C6	2.47	0.50
24:14:458:G:O2'	24:14:469:G:O6	2.23	0.50
24:14:774:A:H2	24:14:787:U:HO2'	1.58	0.50
24:14:849:A:H5''	24:14:850:C:OP2	2.11	0.50
25:16:110:G:C6	25:16:111:U:C4	3.00	0.50
54:1G:998:G:N2	54:1G:1043:C:O2	2.44	0.50
54:1G:1369:C:H2'	54:1G:1370:G:O4'	2.12	0.50
54:1G:618:C:H5'	54:1G:619:U:H5''	1.93	0.50
54:1G:811:C:H5''	54:1G:898:G:H4'	1.94	0.50
54:1G:986:A:O2'	19:AA:55:LYS:HA	2.11	0.50
24:1H:1176:G:H3'	24:1H:1177:A:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1409:C:H42	24:1H:1593:G:H1	1.60	0.50
24:1H:2171:A:H2'	24:1H:2172:U:O4'	2.12	0.50
24:1H:2212:A:H1'	24:1H:2215:G:C4	2.47	0.50
24:1H:2341:G:H2'	24:1H:2342:C:C6	2.47	0.50
24:1H:2533:A:H2'	24:1H:2534:A:O4'	2.10	0.50
24:1H:395:U:H1'	24:1H:396:G:N7	2.26	0.50
24:1H:606:U:H4'	24:1H:658:C:H4'	1.93	0.50
24:1H:998:C:P	40:C8:92:ARG:HH22	2.35	0.50
10:1I:13:HIS:HB3	10:1I:68:HIS:CD2	2.47	0.50
28:21:165:VAL:O	28:21:189:PRO:HG2	2.12	0.50
29:31:108:LYS:O	29:31:112:MET:HG3	2.11	0.50
24:14:586:A:H5'	29:39:89:VAL:HG21	1.94	0.50
30:41:12:TYR:HD1	30:41:16:ARG:HD2	1.77	0.50
30:41:138:GLN:HE22	30:41:152:LEU:HA	1.77	0.50
32:69:87:LYS:H	32:69:87:LYS:HE3	1.76	0.50
16:7I:36:ILE:HG13	16:7I:36:ILE:O	2.11	0.50
37:98:57:ARG:HB3	37:98:59:ASP:OD1	2.11	0.50
45:D5:163:LEU:HD23	45:D5:163:LEU:H	1.77	0.50
41:D8:7:THR:HG23	41:D8:12:TYR:CE1	2.46	0.50
24:14:2355:C:H1'	46:E5:39:ARG:HH21	1.76	0.50
1:13:434:U:H2'	1:13:435:C:C6	2.47	0.50
1:13:600:C:H2'	1:13:601:C:C6	2.47	0.50
24:14:829:A:N7	24:14:2248:C:H5'	2.27	0.50
24:14:2790:A:H3'	24:14:2791:C:H5'	1.94	0.50
2:1E:164:VAL:HB	2:1E:186:ALA:HB1	1.94	0.50
54:1G:280:C:H3'	54:1G:281:G:H5'	1.93	0.50
54:1G:281:G:OP2	54:1G:281:G:H8	1.94	0.50
54:1G:440:A:H8	54:1G:440:A:OP2	1.95	0.50
54:1G:938:A:N6	54:1G:939:G:C6	2.80	0.50
24:1H:1021:A:H61	24:1H:1142(A):A:N6	2.10	0.50
24:1H:1298:C:H5''	24:1H:1299:G:OP2	2.11	0.50
24:1H:1405:U:H2'	24:1H:1406:U:C6	2.45	0.50
24:1H:1778:U:P	57:1H:3938:HOH:O	2.69	0.50
24:1H:2275:C:H5'	24:1H:2275:C:H6	1.77	0.50
24:1H:2287:A:N6	24:1H:2344:U:N3	2.59	0.50
24:1H:234:C:H2'	24:1H:235:U:H6	1.77	0.50
24:1H:2655:G:N2	24:1H:2665:A:OP2	2.44	0.50
24:1H:314:A:H2'	24:1H:315:G:H5'	1.93	0.50
24:1H:483:A:O4'	44:G8:48:ALA:HB1	2.12	0.50
3:22:5:ILE:HD11	10:1A:51:ARG:NH1	2.27	0.50
3:22:54:ARG:HB2	3:22:69:HIS:ND1	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:716:A:N3	11:2A:118:GLY:HA2	2.27	0.50
11:2I:125:PHE:CD1	11:2I:125:PHE:N	2.79	0.50
22:2K:76:C:H2'	22:2K:77:C:C6	2.47	0.50
35:35:59:LEU:HD23	53:M5:57:ARG:HE	1.76	0.50
13:4I:89:GLY:HA2	13:4I:92:HIS:HD2	1.77	0.50
7:62:24:THR:HA	7:62:27:ILE:HD12	1.93	0.50
1:13:1432:G:OP1	39:B8:107:ASP:HB2	2.11	0.50
24:14:686:G:H1	52:L5:16:HIS:CD2	2.30	0.50
1:13:1005:A:H1'	1:13:1036:G:H22	1.77	0.50
1:13:940:C:H2'	1:13:941:G:C8	2.46	0.50
24:14:1016:G:H2'	24:14:1017:G:H8	1.77	0.50
24:14:297:C:H4'	44:C5:86:ARG:HD2	1.94	0.50
24:14:654(F):C:O2	24:14:654(P):G:N2	2.45	0.50
24:14:765:G:H2'	24:14:766:C:C6	2.47	0.50
27:19:31:LYS:HD2	27:19:32:SER:N	2.23	0.50
2:1E:233:SER:HB2	2:1E:234:PRO:HD2	1.93	0.50
54:1G:1048:G:O4'	54:1G:1215:G:H4'	2.12	0.50
54:1G:674:G:H2'	54:1G:675:A:H8	1.77	0.50
24:1H:1899:G:N2	24:1H:1902:C:H5	2.10	0.50
24:1H:2287:A:C2	24:1H:2289:G:C8	3.00	0.50
24:1H:2774:C:H2'	24:1H:2775:A:O4'	2.12	0.50
24:1H:500:G:N2	24:1H:502:A:H3'	2.27	0.50
28:29:201:THR:HB	28:29:203:LYS:HZ1	1.76	0.50
12:3I:77:LEU:HD21	12:3I:107:ALA:HB2	1.93	0.50
31:51:6:ARG:HA	31:51:66:GLY:HA2	1.93	0.50
33:58:103:VAL:O	33:58:106:MET:N	2.35	0.50
39:75:11:GLU:HA	39:75:15:VAL:HG13	1.93	0.50
16:7A:58:TYR:O	16:7A:62:VAL:HG22	2.11	0.50
16:7I:9:PHE:CZ	16:7I:18:ARG:HD2	2.47	0.50
1:13:186:C:O2'	20:BI:85:MET:SD	2.56	0.50
36:45:136:ALA:HB1	45:D5:48:PHE:CE1	2.47	0.50
46:E5:27:GLU:HG3	46:E5:68:GLU:HA	1.94	0.50
46:I8:18:ALA:HB3	46:I8:20:ARG:HH11	1.76	0.50
27:11:69:ARG:HD3	27:11:105:ILE:HD11	1.93	0.49
1:13:1134:G:H1	1:13:1140:C:H42	1.60	0.49
1:13:811:C:H4'	1:13:900:A:N6	2.27	0.49
24:14:9:U:H2'	24:14:10:G:C8	2.47	0.49
24:14:1885:A:H2'	24:14:1886:C:O4'	2.11	0.49
24:14:1926:U:H2'	24:14:1928:A:OP2	2.12	0.49
24:14:248:G:OP1	57:14:4140:HOH:O	2.19	0.49
24:14:2750:A:H8	24:14:2752:C:N4	2.10	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:303:U:H2'	24:14:304:G:C8	2.47	0.49
24:14:602:G:OP2	24:14:602:G:H8	1.95	0.49
24:14:673:C:H5''	29:39:81:PRO:HD2	1.94	0.49
24:14:1568:G:H21	27:19:58:HIS:HE1	1.60	0.49
54:1G:1073:U:H2'	54:1G:1074:G:C8	2.47	0.49
54:1G:11:G:C5	54:1G:12:U:C5	3.00	0.49
54:1G:1326:C:OP1	21:1B:17:THR:OG1	2.17	0.49
54:1G:1347:G:C8	9:82:107:ARG:HB3	2.46	0.49
54:1G:1365:G:H2'	54:1G:1366:C:C6	2.46	0.49
54:1G:552:U:H4'	12:3A:86:ARG:HG2	1.92	0.49
24:1H:1359:A:C2	24:1H:1372:U:O4	2.65	0.49
24:1H:1570:A:H2'	24:1H:1571:A:C8	2.47	0.49
24:1H:1638:C:H5''	24:1H:2710:C:O2'	2.11	0.49
24:1H:412:A:H5''	24:1H:413:C:OP2	2.12	0.49
34:25:115:VAL:HG12	34:25:121:VAL:HG21	1.93	0.49
12:3I:24:VAL:HB	12:3I:27:LEU:HD12	1.94	0.49
30:41:114:ILE:HG22	30:41:117:PHE:HB2	1.94	0.49
36:45:75:THR:HG21	36:45:87:LYS:HE3	1.93	0.49
31:59:35:VAL:HB	31:59:71:LEU:HD21	1.94	0.49
14:5A:12:ARG:HH22	14:5A:14:PRO:HG3	1.77	0.49
17:8I:76:LEU:HD21	17:8I:79:SER:OG	2.12	0.49
19:AA:48:THR:HG22	19:AA:61:TYR:HB2	1.93	0.49
19:AA:66:MET:HB3	19:AA:69:HIS:CD2	2.47	0.49
19:AI:50:ALA:HA	19:AI:58:VAL:O	2.12	0.49
39:B8:51:ARG:HG3	39:B8:98:LYS:HE3	1.94	0.49
42:E8:92:ARG:NH1	42:E8:94:ASP:OD1	2.45	0.49
44:G8:82:PRO:CG	44:G8:97:ARG:HD2	2.40	0.49
45:H8:17:ALA:HA	45:H8:20:ARG:HD2	1.94	0.49
2:12:103:THR:HG23	2:12:176:GLU:OE1	2.11	0.49
1:13:624:C:H4'	16:7I:11:SER:N	2.27	0.49
24:14:1146:C:C2'	24:14:1147:C:H5'	2.42	0.49
24:14:1404:C:C2'	24:14:1405:U:H5'	2.42	0.49
24:14:2298:A:H2'	24:14:2299:G:O4'	2.12	0.49
27:19:64:ILE:O	27:19:64:ILE:HG12	2.12	0.49
2:1E:155:LEU:HD22	2:1E:159:PRO:HD3	1.93	0.49
54:1G:1011:G:H22	54:1G:1018:C:H42	1.58	0.49
54:1G:295:C:H2'	54:1G:296:U:O4'	2.11	0.49
24:1H:1062:G:N1	24:1H:1076:C:O2	2.44	0.49
24:1H:1171:G:N7	24:1H:1174:A:N6	2.60	0.49
24:1H:277:C:H3'	24:1H:278:A:O4'	2.12	0.49
24:1H:2854:G:H2'	24:1H:2855:C:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2690:C:H5''	24:1H:2872:G:N2	2.28	0.49
24:1H:2789:C:H1'	24:1H:2892:A:H2	1.77	0.49
24:1H:370:G:H4'	24:1H:371:A:OP2	2.12	0.49
24:1H:414:C:H2'	24:1H:415:A:C8	2.47	0.49
24:1H:433:C:H2'	24:1H:434:U:C6	2.47	0.49
24:1H:844:C:H2'	24:1H:845:G:O4'	2.12	0.49
3:2E:135:LYS:HZ2	5:4E:53:LEU:HD11	1.77	0.49
29:39:80:ALA:O	29:39:83:PHE:HB2	2.12	0.49
4:3E:15:GLU:OE1	4:3E:66:ARG:NH1	2.45	0.49
36:45:26:TYR:OH	36:45:141:GLN:HB2	2.11	0.49
13:4I:107:ALA:O	13:4I:110:ARG:N	2.45	0.49
14:5A:40:CYS:N	14:5A:43:CYS:HB2	2.26	0.49
17:8A:6:LEU:HD13	17:8A:23:VAL:HG21	1.93	0.49
9:8E:33:PHE:HE2	9:8E:47:LEU:HD12	1.77	0.49
48:G5:10:LEU:O	48:G5:14:ARG:HB2	2.12	0.49
44:G8:87:LYS:H	44:G8:94:LYS:HB3	1.77	0.49
24:1H:2271:G:H5''	46:I8:20:ARG:HH11	1.76	0.49
1:13:1404:C:H6	1:13:1404:C:O5'	1.95	0.49
24:14:1167:U:C2	24:14:1183:G:N2	2.80	0.49
24:14:314:A:H2'	24:14:315:G:C8	2.46	0.49
24:14:764:A:O4'	27:19:213:ARG:HG3	2.12	0.49
24:14:994:C:H3'	40:85:54:LYS:HE3	1.94	0.49
54:1G:1288:A:H4'	21:1B:13:ILE:HD13	1.95	0.49
2:1E:230:VAL:HG12	2:1E:231:GLU:H	1.77	0.49
54:1G:625:G:C6	54:1G:626:U:C4	3.00	0.49
54:1G:922:G:N3	54:1G:1398:A:H2	2.10	0.49
24:1H:1403:C:H5''	24:1H:1471:A:C1'	2.41	0.49
24:1H:988:A:H8	24:1H:988:A:O5'	1.95	0.49
28:21:1:MET:N	28:21:83:ASP:O	2.41	0.49
3:2E:119:ARG:HD3	3:2E:140:ARG:NH2	2.28	0.49
29:31:101:LEU:O	29:31:106:ARG:NH1	2.43	0.49
30:41:138:GLN:O	30:41:144:ILE:HG13	2.11	0.49
30:49:66:GLN:NE2	30:49:93:THR:O	2.46	0.49
13:4A:48:LEU:HD11	13:4A:53:VAL:HG22	1.93	0.49
31:59:158:HIS:ND1	31:59:158:HIS:O	2.42	0.49
32:61:86:THR:HA	32:61:123:LEU:HD12	1.93	0.49
32:69:123:LEU:HD22	32:69:143:SER:HA	1.94	0.49
17:8I:86:GLU:O	17:8I:90:ILE:HG13	2.12	0.49
18:9A:73:ALA:HB3	18:9A:79:LEU:HD12	1.93	0.49
19:AA:80:TYR:CZ	19:AA:82:GLY:HA2	2.48	0.49
47:F5:86:SER:N	47:F5:87:PRO:HD2	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:G8:20:TYR:CE2	44:G8:43:ASN:HA	2.47	0.49
1:13:1120:G:H2'	1:13:1121:U:C6	2.47	0.49
1:13:393:A:OP2	16:7I:12:LYS:NZ	2.31	0.49
1:13:960:U:H3	1:13:1225:A:H1'	1.76	0.49
24:14:1486:A:H2'	24:14:1487:G:H8	1.78	0.49
24:14:2165:G:O2'	24:14:2166:G:H5'	2.12	0.49
27:19:92:ILE:HD12	27:19:104:TYR:CD1	2.47	0.49
54:1G:1127:G:H21	54:1G:1147:C:H5	1.60	0.49
54:1G:960:U:N3	54:1G:1225:A:C4	2.80	0.49
54:1G:346:G:N2	54:1G:347:G:C8	2.81	0.49
54:1G:438:G:OP1	4:32:125:HIS:HE1	1.95	0.49
24:1H:1517:G:H2'	24:1H:1518:C:H6	1.76	0.49
24:1H:1408:C:C2	24:1H:1595:G:N2	2.80	0.49
24:1H:2211:G:H4'	24:1H:2212:A:OP2	2.11	0.49
24:1H:527:C:OP2	24:1H:2779:U:H5	1.96	0.49
24:1H:861:A:N3	25:16:79:C:O2'	2.43	0.49
25:1J:24:G:H21	25:1J:27:C:H42	1.58	0.49
11:2I:27:ASN:ND2	11:2I:55:LYS:HD2	2.27	0.49
29:39:167:ALA:HB1	29:39:173:VAL:HG11	1.95	0.49
4:3E:59:ARG:HH21	4:3E:66:ARG:HH12	1.60	0.49
10:1I:47:PHE:CE2	14:5I:37:PHE:HE2	2.29	0.49
7:6E:15:ASP:OD1	7:6E:44:TYR:OH	2.29	0.49
9:82:16:ARG:O	9:82:63:ILE:HG23	2.12	0.49
44:C5:17:SER:HB2	44:C5:71:LYS:HD2	1.93	0.49
46:I8:36:ILE:HD11	46:I8:39:ARG:HG2	1.94	0.49
51:N8:56:LYS:HE3	51:N8:58:LEU:HG	1.93	0.49
1:13:630:G:H2'	1:13:631:G:O4'	2.12	0.49
1:13:953:G:H2'	1:13:954:G:O4'	2.12	0.49
24:14:1588:C:H5'	24:14:1589:C:OP2	2.12	0.49
24:14:2062:A:P	57:14:3857:HOH:O	2.64	0.49
24:14:2608:G:H5''	24:14:2609:U:OP1	2.12	0.49
24:14:71:A:H2	43:B5:31:HIS:NE2	2.11	0.49
24:14:747:U:O2	24:14:2014:A:H1'	2.11	0.49
24:14:811:U:H2'	35:35:21:ARG:HA	1.94	0.49
2:1E:30:ARG:HG3	2:1E:31:TYR:CD1	2.47	0.49
54:1G:1349:A:P	9:82:118:LYS:HZ3	2.35	0.49
54:1G:503:C:OP2	12:3A:116:SER:OG	2.15	0.49
24:1H:1375:C:H2'	24:1H:1376:C:H6	1.78	0.49
24:1H:1388:G:H2'	24:1H:1389:G:C8	2.47	0.49
24:1H:1705:G:C2'	24:1H:1706:U:H5'	2.42	0.49
3:22:134:ILE:O	3:22:137:ALA:N	2.40	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:25:7:TYR:HE1	34:25:20:MET:HE3	1.78	0.49
1:13:716:A:N3	11:21:118:GLY:HA2	2.27	0.49
22:2K:18:G:N2	22:2K:66:G:H1'	2.26	0.49
29:39:143:ALA:HB1	29:39:148:LEU:HB2	1.94	0.49
36:45:66:ILE:O	36:45:67:ARG:HB2	2.12	0.49
37:55:78:LYS:O	37:55:82:GLU:HB3	2.12	0.49
54:1G:247:G:OP2	17:8A:100:LYS:N	2.44	0.49
38:A8:11:LYS:HD2	38:A8:15:ARG:CZ	2.42	0.49
45:D5:30:ASN:HB3	45:D5:33:LEU:H	1.77	0.49
53:M5:34:TRP:C	53:M5:34:TRP:CD1	2.86	0.49
53:Q8:33:ASN:O	53:Q8:33:ASN:ND2	2.45	0.49
1:13:838:G:OP2	1:13:842:C:N4	2.46	0.49
24:14:1433:U:O2	24:14:1561:G:C2	2.66	0.49
24:14:2607:G:H2'	24:14:2608:G:O4'	2.12	0.49
24:14:972:G:OP2	24:14:973:A:O2'	2.16	0.49
33:15:120:LEU:HG	33:15:122:VAL:HG23	1.94	0.49
2:1E:223:ILE:HA	2:1E:226:ARG:HG2	1.93	0.49
54:1G:111:G:H8	54:1G:111:G:O5'	1.95	0.49
54:1G:785:G:N2	54:1G:798:G:C4	2.81	0.49
24:1H:1047:G:HO2'	24:1H:1048:A:H8	1.57	0.49
24:1H:298:G:C5	57:1H:4137:HOH:O	2.66	0.49
24:1H:725:G:C6	24:1H:726:G:N1	2.81	0.49
24:1H:787:U:OP2	57:1H:3884:HOH:O	2.20	0.49
28:21:119:ARG:HB3	28:21:120:TRP:CD1	2.47	0.49
34:25:101:PRO:HG3	39:75:67:SER:OG	2.12	0.49
28:29:9:VAL:HG13	39:75:3:ARG:HD3	1.95	0.49
54:1G:542:G:H5'	4:32:41:GLY:HA3	1.94	0.49
36:45:38:GLU:HB2	36:45:127:ILE:HG22	1.95	0.49
30:49:18:GLU:O	30:49:22:ARG:HG2	2.12	0.49
30:49:43:LEU:H	30:49:89:GLY:HA2	1.77	0.49
13:4A:73:GLU:O	13:4A:77:ASN:HB2	2.12	0.49
13:4I:65:LYS:HE3	13:4I:69:GLU:HG2	1.95	0.49
6:5E:70:ASP:N	6:5E:70:ASP:OD1	2.44	0.49
8:7E:51:VAL:HG21	8:7E:60:ARG:HD2	1.94	0.49
16:7I:20:VAL:HG21	16:7I:32:TYR:CD2	2.47	0.49
46:E5:26:TYR:HB2	46:E5:29:GLN:OE1	2.13	0.49
47:F5:12:PRO:HB3	47:F5:43:TYR:HD1	1.77	0.49
27:11:25:THR:CG2	27:11:82:ILE:H	2.25	0.49
1:13:1023:G:H3'	1:13:1024:G:C5'	2.42	0.49
1:13:109:A:C6	1:13:326:G:C6	3.01	0.49
1:13:148:G:H2'	1:13:149:A:C8	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:671:G:C2	1:13:672:U:C2	3.00	0.49
24:14:1915:U:H2'	24:14:1916:A:O4'	2.11	0.49
24:14:2335:A:C8	24:14:2337:G:N7	2.81	0.49
24:14:2479:G:H2'	24:14:2480:C:O4'	2.12	0.49
24:14:2521:C:O2'	24:14:2564:A:N3	2.39	0.49
33:15:111:PRO:HA	33:15:114:ARG:NH1	2.28	0.49
54:1G:89:U:O2'	54:1G:90:C:O5'	2.25	0.49
24:1H:1278:A:OP1	37:98:36:THR:HG22	2.13	0.49
24:1H:1292:U:H2'	24:1H:1293:C:C6	2.48	0.49
24:1H:2227:A:OP1	27:11:263:ARG:HD2	2.13	0.49
24:1H:974(A):C:OP1	57:1H:4175:HOH:O	2.20	0.49
25:1J:15:A:H1'	25:1J:109:G:N9	2.28	0.49
3:22:20:SER:HB3	3:22:22:TRP:NE1	2.25	0.49
29:31:40:GLN:NE2	29:31:184:TYR:HB3	2.27	0.49
4:32:188:LEU:HD23	4:32:189:PRO:HD2	1.94	0.49
4:32:94:LEU:O	4:32:97:LEU:N	2.44	0.49
35:35:111:ARG:HG2	35:35:128:HIS:CD2	2.47	0.49
24:14:616:A:C8	29:39:176:LEU:HD11	2.47	0.49
22:3K:47:U:H2'	22:3K:48:C:C6	2.48	0.49
36:45:37:LEU:HD21	36:45:130:LYS:HB2	1.94	0.49
24:14:1252:G:O4'	40:85:33:ARG:HD2	2.12	0.49
38:A8:36:TYR:N	38:A8:36:TYR:HD1	2.09	0.49
45:D5:138:GLU:HG2	45:D5:156:LYS:HE2	1.94	0.49
50:I5:16:CYS:SG	50:I5:36:CYS:HB2	2.53	0.49
1:13:956:U:C2	1:13:1225:A:C2	3.01	0.49
1:13:510:A:H8	57:13:1748:HOH:O	1.95	0.49
24:14:67:U:H2'	24:14:68:G:H8	1.78	0.49
54:1G:142:G:H2'	54:1G:143:A:H8	1.77	0.49
54:1G:983:A:H2	54:1G:984:C:C6	2.30	0.49
24:1H:2629:A:OP1	24:1H:2629:A:H4'	2.11	0.49
24:1H:2791:C:H2'	24:1H:2792:G:H8	1.77	0.49
24:1H:2794:C:OP2	24:1H:2797:U:H4'	2.13	0.49
25:1J:3:C:H2'	25:1J:4:C:C6	2.47	0.49
24:1H:2636:U:OP1	28:21:79:ARG:HA	2.12	0.49
34:25:68:GLU:OE2	34:25:78:ARG:NH1	2.45	0.49
29:39:116:ASP:OD2	35:35:1:MET:HB2	2.12	0.49
29:39:148:LEU:HD11	29:39:193:VAL:HG21	1.94	0.49
4:3E:14:ARG:HB2	4:3E:40:PRO:CD	2.42	0.49
22:3K:26:G:H2'	22:3K:27:A:C8	2.48	0.49
30:41:119:GLY:HA2	50:M8:43:TYR:HE2	1.78	0.49
30:41:16:ARG:O	30:41:20:ILE:HG13	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:41:68:PRO:HA	30:41:92:VAL:HB	1.95	0.49
5:4E:87:SER:HB3	5:4E:125:SER:O	2.12	0.49
5:4E:72:GLN:O	5:4E:75:THR:HG22	2.11	0.49
31:59:35:VAL:HG11	31:59:71:LEU:HD11	1.95	0.49
6:5E:19:LEU:HD23	6:5E:23:LYS:HZ2	1.78	0.49
7:6E:113:GLU:CG	7:6E:119:ARG:HG2	2.43	0.49
8:72:6:ILE:O	8:72:10:LEU:HG	2.13	0.49
9:8E:118:LYS:O	9:8E:119:ALA:HB3	2.13	0.49
19:AA:63:THR:HG23	19:AA:65:ASN:O	2.12	0.49
41:D8:27:ALA:HB1	41:D8:61:VAL:HG21	1.95	0.49
41:D8:44:LYS:C	41:D8:46:VAL:H	2.15	0.49
44:G8:93:GLY:O	44:G8:94:LYS:HB2	2.12	0.49
45:H8:141:VAL:HB	45:H8:144:LEU:HG	1.95	0.49
50:I5:21:VAL:HG22	50:I5:22:ILE:HG13	1.94	0.49
46:I8:42:GLY:C	46:I8:57:PHE:HD2	2.16	0.49
1:13:1165:C:H2'	1:13:1166:G:O4'	2.12	0.49
1:13:580:U:H2'	1:13:581:G:O4'	2.13	0.49
1:13:871:U:OP1	57:13:1831:HOH:O	2.20	0.49
24:14:1198:U:H2'	24:14:1199:U:H6	1.77	0.49
24:14:1845:G:OP1	27:19:258:LYS:NZ	2.35	0.49
24:14:2233:U:H2'	24:14:2234:G:C8	2.47	0.49
24:14:2659:G:O2'	24:14:2661:G:N7	2.25	0.49
24:14:273(C):C:N3	24:14:363(C):G:N2	2.53	0.49
24:14:324:A:H2'	24:14:325:G:O4'	2.12	0.49
24:14:586:A:P	57:14:3512:HOH:O	2.70	0.49
25:16:80:U:H2'	25:16:81:G:H21	1.77	0.49
27:19:108:PRO:HG2	27:19:111:LEU:HB2	1.94	0.49
54:1G:1096:C:H2'	54:1G:1097:C:H6	1.77	0.49
54:1G:197:A:H1'	54:1G:198:G:O4'	2.13	0.49
24:1H:1317:A:H2'	24:1H:1318:C:H6	1.77	0.49
24:1H:1516:U:C2	24:1H:1517:G:C8	3.00	0.49
24:1H:2094:G:P	32:61:22:LYS:HD2	2.53	0.49
24:1H:2517:C:C2	24:1H:2542:A:N6	2.81	0.49
24:1H:2518:A:H5'	24:1H:2518:A:C8	2.47	0.49
25:1J:48:A:H4'	38:65:95:HIS:CD2	2.38	0.49
28:21:66:HIS:CG	28:21:67:PHE:N	2.81	0.49
33:58:134:ARG:O	33:58:136:GLU:N	2.45	0.49
7:62:95:ARG:NH2	7:62:99:LEU:HD21	2.28	0.49
32:69:85:GLU:OE1	32:69:86:THR:HG22	2.13	0.49
26:71:181:PRO:HD2	26:71:184:LYS:HB2	1.94	0.49
35:78:39:LYS:CD	35:78:45:LEU:HD21	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:D5:127:LYS:HB3	45:D5:162:GLU:HB3	1.94	0.49
45:H8:48:PHE:CE1	45:H8:71:VAL:HG21	2.48	0.49
24:14:2017:U:O2	51:J5:10:LYS:HB2	2.13	0.49
48:K8:55:ARG:O	48:K8:58:ALA:HB3	2.12	0.49
24:14:180:G:OP2	52:L5:32:LYS:HE2	2.13	0.49
35:78:60:MET:HA	53:Q8:13:ARG:NH1	2.28	0.49
27:11:85:ASP:OD1	27:11:86:PRO:HD2	2.13	0.49
1:13:1037:C:H2'	1:13:1038:C:C6	2.48	0.49
1:13:853:G:O6	57:13:1830:HOH:O	2.20	0.49
22:3L:85:A:O2'	24:14:2394:C:O2	2.30	0.49
27:19:12:SER:HB2	27:19:208:LYS:HB3	1.94	0.49
24:1H:1094:U:O2'	24:1H:1096:A:OP1	2.27	0.49
24:1H:1039:G:H1	24:1H:1116:C:H42	1.61	0.49
24:1H:2154:G:H2'	24:1H:2155:G:C8	2.43	0.49
24:1H:2438:U:O3'	24:1H:2439:A:H3'	2.13	0.49
24:1H:2555:U:C5	24:1H:2556:C:C2	3.01	0.49
24:1H:382:G:H1	24:1H:392:C:H42	1.59	0.49
24:1H:451:C:N4	24:1H:454:A:OP2	2.31	0.49
24:1H:642:G:H21	24:1H:646:A:H2	1.60	0.49
3:22:159:GLY:HA2	3:22:193:TYR:CE1	2.48	0.49
28:29:30:PRO:HD3	28:29:180:ASN:ND2	2.28	0.49
22:2K:17:OMG:O2'	22:2K:66:G:N2	2.45	0.49
22:2L:22:A:N6	22:2L:57:C:C2	2.81	0.49
5:42:75:THR:HG23	5:42:76:ILE:N	2.28	0.49
31:51:102:ALA:HA	31:51:117:PRO:HD3	1.95	0.49
24:1H:2531:A:H5'	31:51:157:TYR:CZ	2.48	0.49
24:14:2757:A:N1	31:59:67:LEU:HD11	2.28	0.49
32:61:41:GLU:OE2	32:61:42:SER:N	2.45	0.49
38:65:31:SER:O	38:65:97:ARG:NH2	2.41	0.49
32:69:128:LEU:O	32:69:137:PRO:HA	2.13	0.49
35:78:90:ARG:HH21	35:78:103:ALA:HB1	1.78	0.49
25:16:90:C:H5'	36:88:18:LYS:HA	1.94	0.49
18:9A:19:LYS:HG2	18:9A:20:ALA:H	1.78	0.49
39:B8:90:GLN:HG3	39:B8:91:ARG:N	2.28	0.49
44:C5:17:SER:CB	44:C5:71:LYS:HD2	2.43	0.49
24:14:1639:U:P	57:14:3572:HOH:O	2.71	0.48
22:3L:85:A:O2'	24:14:2394:C:N3	2.40	0.48
24:14:2801:A:C8	24:14:2895:U:H4'	2.47	0.48
24:14:2869:G:H2'	24:14:2870:C:O4'	2.12	0.48
24:14:879:G:C2	24:14:880:G:H1'	2.48	0.48
2:1E:187:LEU:HA	2:1E:201:ILE:HB	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1189:C:H4'	3:22:10:PHE:HE1	1.78	0.48
54:1G:730:G:C5	54:1G:731:G:H1'	2.48	0.48
24:1H:2186:G:H2'	24:1H:2187:G:H8	1.78	0.48
24:1H:2427:C:H5''	24:1H:2428:G:OP1	2.12	0.48
24:1H:2711:A:P	57:1H:3622:HOH:O	2.69	0.48
24:1H:274:G:H2'	24:1H:275:G:C1'	2.43	0.48
24:1H:503:A:H4'	24:1H:504:U:H5''	1.95	0.48
24:1H:529:A:H8	24:1H:530:G:C6	2.30	0.48
24:1H:67:U:H2'	24:1H:68:G:H8	1.76	0.48
24:1H:934:G:H2'	24:1H:935:C:C6	2.47	0.48
29:39:4:VAL:HB	29:39:17:ARG:HH11	1.78	0.48
22:3K:21:A:N6	22:3K:56:U:O2	2.45	0.48
22:3L:42:U:H2'	22:3L:43:G:H8	1.75	0.48
36:45:43:THR:OG1	36:45:45:GLN:HG2	2.13	0.48
30:49:80:PHE:HD1	30:49:81:LYS:H	1.61	0.48
5:4E:148:VAL:HG21	8:7E:107:LEU:HD22	1.93	0.48
6:52:7:ASN:N	6:52:7:ASN:OD1	2.45	0.48
14:5A:45:ARG:O	14:5A:49:HIS:ND1	2.46	0.48
14:5I:2:ALA:HB1	14:5I:6:LEU:HD12	1.95	0.48
38:65:7:TYR:HE2	38:65:11:LYS:HZ3	1.60	0.48
34:68:37:ASP:O	34:68:61:VAL:HG23	2.13	0.48
35:78:63:PRO:HD3	53:Q8:27:THR:HG22	1.95	0.48
36:88:20:ALA:HB1	36:88:99:PRO:CD	2.42	0.48
1:13:127:G:N2	17:8I:61:GLU:OE1	2.41	0.48
41:95:98:GLU:OE1	41:95:100:ARG:NH1	2.45	0.48
42:A5:40:ASN:O	42:A5:41:LYS:HG2	2.13	0.48
39:B8:30:VAL:HG11	39:B8:76:PHE:CE2	2.48	0.48
46:E5:27:GLU:HB2	46:E5:69:PHE:CD1	2.47	0.48
24:14:94:G:N2	48:G5:47:ASN:OD1	2.31	0.48
47:J8:88:LYS:HA	47:J8:90:ILE:HD12	1.95	0.48
52:L5:26:GLY:O	52:L5:30:VAL:HG23	2.13	0.48
1:13:108:G:OP2	1:13:326:G:N2	2.44	0.48
1:13:758:G:O5'	1:13:758:G:H8	1.96	0.48
24:14:249:C:OP1	57:14:3502:HOH:O	2.20	0.48
24:14:2849:U:O4	39:75:23:ARG:NH2	2.47	0.48
24:14:2789:C:C2	24:14:2894:G:N2	2.81	0.48
24:14:724:U:H2'	24:14:725:G:O4'	2.12	0.48
33:15:6:PRO:HB3	33:15:41:ASP:OD1	2.13	0.48
24:14:1491:G:O2'	27:19:101:GLU:HB2	2.13	0.48
10:1A:53:PRO:HA	14:5A:42:ILE:HG13	1.95	0.48
2:1E:167:PRO:HG2	2:1E:192:SER:HB3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1033:G:H2'	54:1G:1034:G:C8	2.48	0.48
54:1G:997:U:H2'	54:1G:998:G:C8	2.48	0.48
24:1H:1044:G:H4'	24:1H:1048:A:H1'	1.95	0.48
24:1H:248:G:H5''	24:1H:386:G:N2	2.28	0.48
11:2I:78:GLN:O	11:2I:103:LEU:HA	2.12	0.48
4:32:162:LEU:HD13	4:32:181:MET:HG2	1.96	0.48
30:41:122:PRO:HB3	30:41:180:PHE:CD1	2.42	0.48
8:72:25:ASP:N	8:72:25:ASP:OD1	2.46	0.48
8:72:33:GLU:HG3	8:72:48:TYR:CE2	2.48	0.48
1:13:1014:A:H4'	19:AI:14:HIS:NE2	2.28	0.48
45:D5:11:GLU:O	45:D5:36:LYS:NZ	2.42	0.48
1:13:1023:G:OP2	1:13:1024:G:N2	2.30	0.48
1:13:1085:U:H3'	1:13:1086:U:H5	1.78	0.48
1:13:1270:C:H2'	1:13:1271:G:O4'	2.13	0.48
24:14:582:G:H2'	24:14:583:G:C8	2.49	0.48
24:14:914:C:N3	24:14:915:C:H1'	2.28	0.48
9:82:114:TYR:HE2	10:1A:59:SER:HA	1.78	0.48
2:1E:162:ILE:HD11	2:1E:184:VAL:HG22	1.94	0.48
54:1G:1002:G:H1	54:1G:1037:C:N4	2.10	0.48
54:1G:1129:C:H41	54:1G:1140:C:N4	2.12	0.48
24:1H:1464:C:HO2'	24:1H:1528:A:H8	1.60	0.48
24:1H:1657:C:H2'	24:1H:1658:C:H6	1.76	0.48
24:1H:2082:A:H2'	24:1H:2083:G:O4'	2.13	0.48
24:1H:2615:U:H2'	24:1H:2616:C:H6	1.77	0.48
24:1H:273(D):C:H2'	24:1H:273(E):U:C6	2.48	0.48
28:21:6:GLY:HA2	28:21:51:PHE:CZ	2.48	0.48
54:1G:619:U:C4	4:32:135:LEU:HD11	2.48	0.48
5:42:81:GLU:HA	5:42:89:ILE:O	2.13	0.48
54:1G:711:G:OP1	6:52:54:LYS:NZ	2.46	0.48
32:61:82:ARG:O	32:61:89:TYR:HD1	1.96	0.48
38:65:23:ARG:NH1	38:65:85:VAL:O	2.46	0.48
9:82:125:TYR:CD1	9:82:126:SER:N	2.80	0.48
40:85:52:ARG:HB3	40:85:52:ARG:NH1	2.28	0.48
20:BA:67:ALA:O	20:BA:73:HIS:ND1	2.46	0.48
45:H8:75:ASN:O	45:H8:84:GLU:N	2.45	0.48
24:1H:1805:U:O2	27:11:50:THR:HB	2.13	0.48
1:13:227:G:H2'	1:13:228:A:O4'	2.14	0.48
1:13:652:U:O4	1:13:752:G:O2'	2.16	0.48
1:13:669:U:O2	1:13:670:G:C8	2.66	0.48
24:14:2150:U:H2'	24:14:2151:G:C8	2.48	0.48
24:14:2340:G:O2'	24:14:2341:G:H5'	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1983:C:H4'	24:14:2606:C:H4'	1.95	0.48
2:1E:167:PRO:O	2:1E:171:ALA:N	2.46	0.48
2:1E:80:ILE:O	2:1E:84:GLU:HG2	2.13	0.48
54:1G:1277:C:O2'	54:1G:1279:A:C8	2.67	0.48
54:1G:764:C:H2'	54:1G:765:G:O4'	2.12	0.48
24:1H:164:U:H5''	24:1H:165:U:C6	2.48	0.48
24:1H:1762[B]:A:N6	57:1H:3693:HOH:O	2.40	0.48
24:1H:2111:C:H5	24:1H:2147:G:N2	2.11	0.48
24:1H:2611:U:C4	51:N8:3:LYS:HG2	2.47	0.48
10:1I:40:LEU:HB2	10:1I:69:ASN:HB2	1.95	0.48
25:1J:66:A:H61	25:1J:107:U:H2'	1.78	0.48
3:2E:133:ALA:O	3:2E:136:GLN:HG3	2.13	0.48
3:2E:32:LEU:HD13	3:2E:59:ARG:HD3	1.95	0.48
5:42:80:ILE:HD13	5:42:138:ALA:HB1	1.95	0.48
36:45:67:ARG:NH1	36:45:105:GLU:OE2	2.39	0.48
13:4A:108:ARG:NH1	13:4A:108:ARG:HG3	2.28	0.48
26:71:48:GLY:N	26:71:208:PHE:O	2.46	0.48
35:78:19:VAL:HG12	35:78:21:ARG:H	1.77	0.48
8:7E:98:LYS:HG2	8:7E:98:LYS:H	1.47	0.48
17:8A:67:LYS:O	17:8A:69:LYS:N	2.46	0.48
41:95:59:ALA:HB2	41:95:96:ILE:HD13	1.95	0.48
18:9I:70:ILE:HG23	18:9I:79:LEU:HD12	1.95	0.48
42:A5:18:ARG:HG2	42:A5:76:VAL:HG13	1.94	0.48
24:1H:2864:G:OP1	39:B8:119:LYS:HD2	2.12	0.48
20:BI:10:LEU:HD21	20:BI:12:ALA:HB3	1.94	0.48
27:11:108:PRO:HG3	27:11:143:HIS:CE1	2.49	0.48
1:13:1167:A:H2'	1:13:1169:A:C8	2.48	0.48
1:13:1493[B]:A:H5''	1:13:1494:G:OP2	2.14	0.48
24:14:1138:G:H5''	24:14:1139:G:OP2	2.13	0.48
24:14:732:C:H3'	57:14:4303:HOH:O	2.13	0.48
24:14:851:U:OP1	49:H5:49:LYS:HE2	2.14	0.48
25:16:27:C:O3'	38:A8:36:TYR:OH	2.31	0.48
24:14:1798:U:H5'	27:19:259:THR:OG1	2.13	0.48
2:1E:180:LEU:C	2:1E:182:ILE:H	2.16	0.48
2:1E:84:GLU:HB3	2:1E:219:VAL:CG2	2.41	0.48
54:1G:1176:A:H2'	54:1G:1177:G:O4'	2.14	0.48
54:1G:1510:U:H2'	54:1G:1511:G:C8	2.48	0.48
54:1G:197:A:C8	54:1G:198:G:H1'	2.49	0.48
24:1H:1164:G:H2'	24:1H:1165:U:C6	2.47	0.48
24:1H:2281:C:O2'	24:1H:2282:G:H5'	2.14	0.48
24:1H:880:G:H1	24:1H:897:C:N4	2.08	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:21:46:ALA:HB2	28:21:82:ARG:HA	1.95	0.48
22:2K:27:A:H3'	22:2K:28:G:C8	2.46	0.48
4:32:8:VAL:HG13	4:32:21:LEU:HD12	1.96	0.48
22:3K:35:QUO:C5'	22:3K:35:QUO:H8	2.42	0.48
22:3L:13:G:H1'	22:3L:23:A:H61	1.78	0.48
31:51:4:ILE:C	31:51:6:ARG:H	2.16	0.48
37:55:79:LEU:HA	37:55:83:ILE:HB	1.96	0.48
15:6I:74:ASP:HB3	15:6I:77:ARG:HG2	1.95	0.48
35:78:46:LYS:O	35:78:47:ASP:HB3	2.14	0.48
40:85:58:ARG:HA	40:85:61:TRP:CE3	2.49	0.48
24:14:486:C:O2'	42:A5:60:ASN:ND2	2.47	0.48
39:B8:19:LEU:HD22	39:B8:86:ILE:HG23	1.95	0.48
45:D5:19:ARG:NE	45:D5:84:GLU:OE2	2.47	0.48
41:D8:25:LEU:HD11	41:D8:94:LEU:HD11	1.95	0.48
46:E5:23:VAL:HG22	46:E5:38:VAL:HG22	1.95	0.48
42:E8:83:LYS:O	42:E8:84:ARG:HD3	2.12	0.48
47:F5:53:VAL:HG22	47:F5:74:VAL:HG13	1.96	0.48
43:F8:27:THR:HG23	43:F8:80:ILE:HB	1.96	0.48
50:I5:18:CYS:N	50:I5:19:GLY:HA2	2.27	0.48
51:J5:56:LYS:HZ1	51:J5:58:LEU:HD12	1.78	0.48
48:K8:64:LEU:O	48:K8:68:ARG:HG3	2.13	0.48
1:13:1151:A:H2'	1:13:1152:A:C8	2.49	0.48
1:13:346:G:N2	1:13:347:G:C4	2.80	0.48
24:14:1011:G:C2	24:14:1151:G:C2	3.01	0.48
24:14:139:G:N3	24:14:141:A:N1	2.62	0.48
24:14:1542:G:O5'	24:14:1543:A:H5''	2.13	0.48
24:14:2016:U:H1'	51:J5:6:VAL:HG13	1.95	0.48
24:14:2096:U:H2'	24:14:2097:C:C6	2.48	0.48
22:3L:18:G:N1	24:14:2169:A:N1	2.57	0.48
24:14:2762:G:H5'	24:14:2763:G:OP2	2.14	0.48
24:14:55:G:H2'	24:14:56:A:H8	1.78	0.48
24:14:761:A:C5	57:14:4299:HOH:O	2.63	0.48
54:1G:1025:U:H2'	54:1G:1026:G:C8	2.48	0.48
54:1G:1497:G:H2'	54:1G:1498:U:H5'	1.96	0.48
54:1G:187:C:H2'	54:1G:188:U:O4'	2.13	0.48
54:1G:69:G:C2	54:1G:73:G:C8	3.02	0.48
24:1H:2330:G:H2'	24:1H:2331:G:O4'	2.13	0.48
24:1H:2575:C:H2'	24:1H:2578:G:O6	2.14	0.48
24:1H:2591:C:OP1	27:11:239:ARG:HG3	2.13	0.48
24:1H:307:G:N2	24:1H:310:A:O5'	2.44	0.48
24:1H:325:G:O2'	24:1H:326:G:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:654(C):G:N2	24:1H:654(R):C:O2	2.44	0.48
25:1J:3:C:H2'	25:1J:4:C:H6	1.79	0.48
28:29:106:GLY:HA3	28:29:189:PRO:HB2	1.95	0.48
13:4I:84:ILE:HG21	19:AI:65:ASN:HB2	1.96	0.48
6:5E:41:GLU:HG2	6:5E:43:LEU:CD1	2.43	0.48
7:62:74:GLU:HG2	7:62:91:VAL:HG22	1.94	0.48
15:6I:17:ARG:HH11	15:6I:17:ARG:HG3	1.78	0.48
40:85:92:ARG:CZ	41:95:11:GLN:H	2.26	0.48
41:95:16:PRO:HA	41:95:96:ILE:CG2	2.44	0.48
18:9A:41:LYS:O	18:9A:41:LYS:HD3	2.13	0.48
44:G8:78:ALA:HB3	44:G8:79:CYS:SG	2.54	0.48
50:I5:14:ILE:HG23	50:I5:33:VAL:HG11	1.96	0.48
35:35:65:ARG:HH22	53:M5:15:LYS:HB2	1.78	0.48
1:13:1298:C:H2'	7:6E:114:ARG:NH2	2.28	0.48
1:13:1309:G:C6	1:13:1329:A:C2	3.02	0.48
24:14:1171:G:O2'	24:14:1173:G:O4'	2.27	0.48
24:14:1470:G:N2	24:14:1522:G:OP2	2.46	0.48
24:14:2115:G:O2'	24:14:2165:G:N2	2.47	0.48
24:14:2427:C:H5''	24:14:2428:G:OP1	2.13	0.48
24:14:336:C:OP1	44:C5:83:THR:HG23	2.13	0.48
24:14:96:G:H4'	48:G5:48:HIS:CD2	2.48	0.48
10:1A:48:THR:CA	10:1A:62:HIS:HB3	2.36	0.48
10:1A:65:LEU:HD12	14:5A:55:GLY:O	2.13	0.48
54:1G:1046:A:H3'	54:1G:1047:G:H8	1.78	0.48
54:1G:1279:A:O2'	54:1G:1282:C:N4	2.47	0.48
24:1H:1388:G:H2'	24:1H:1389:G:H8	1.79	0.48
24:1H:1424:G:H2'	24:1H:1425:G:O4'	2.14	0.48
24:1H:2724:C:OP1	28:21:118:LYS:HE3	2.13	0.48
28:29:31:CYS:HB2	28:29:91:VAL:HG23	1.96	0.48
54:1G:619:U:C2	4:32:135:LEU:HD21	2.48	0.48
4:32:61:LYS:CB	4:32:203:VAL:HG13	2.42	0.48
35:35:59:LEU:HD21	53:M5:10:ALA:HA	1.95	0.48
29:39:74:ARG:HG2	29:39:74:ARG:O	2.11	0.48
30:41:12:TYR:HA	30:41:16:ARG:HG3	1.95	0.48
30:41:37:VAL:HG22	30:41:159:VAL:HG12	1.96	0.48
24:14:2751:G:N2	31:59:2:SER:O	2.46	0.48
38:65:19:LYS:O	38:65:20:ARG:HB2	2.13	0.48
38:65:66:ALA:HA	38:65:69:VAL:HG12	1.94	0.48
16:7A:34:GLU:OE2	16:7A:55:ARG:HD3	2.13	0.48
16:7I:28:ARG:HG3	16:7I:29:ASP:N	2.28	0.48
40:85:87:GLY:O	41:95:50:PRO:HD3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:A5:84:ARG:HG3	42:A5:98:LYS:HZ2	1.78	0.48
19:AI:40:ILE:HG12	19:AI:41:VAL:N	2.29	0.48
39:B8:56:GLY:O	39:B8:59:THR:HG22	2.14	0.48
41:D8:3:ALA:HB1	41:D8:38:LEU:HD11	1.95	0.48
46:E5:72:ARG:HE	46:E5:75:LEU:HD12	1.79	0.48
27:11:134:ARG:HG3	27:11:135:PHE:CE1	2.48	0.48
1:13:350:G:H2'	1:13:351:G:C8	2.48	0.48
1:13:640:A:N3	8:7E:115:SER:OG	2.36	0.48
24:14:1154:G:P	40:85:58:ARG:HE	2.37	0.48
24:14:2074:U:P	57:14:3494:HOH:O	2.72	0.48
54:1G:1124:G:H2'	54:1G:1145:C:C4	2.48	0.48
54:1G:1189:C:H4'	3:22:10:PHE:CE1	2.48	0.48
54:1G:913:A:H1'	54:1G:914:A:O4'	2.13	0.48
54:1G:978:A:H61	54:1G:1316:G:H1'	1.79	0.48
24:1H:1336:A:OP2	43:F8:64:LYS:NZ	2.42	0.48
24:1H:1341:U:OP1	24:1H:1397:U:N3	2.39	0.48
24:1H:1355:G:OP1	27:11:38:LYS:NZ	2.42	0.48
24:1H:1526:G:H2'	24:1H:1527:G:O4'	2.14	0.48
24:1H:176:G:C2'	24:1H:177:G:H5'	2.43	0.48
24:1H:1997:G:P	57:1H:3991:HOH:O	2.72	0.48
24:1H:2035:G:H5''	57:1H:3740:HOH:O	2.13	0.48
24:1H:722:A:C2	24:1H:723:G:C4	3.01	0.48
24:1H:77:C:H5''	48:K8:10:LEU:HD11	1.95	0.48
24:1H:960:A:C8	24:1H:962:G:C8	3.02	0.48
24:1H:969:U:O3'	49:L8:14:GLY:HA2	2.14	0.48
28:21:79:ARG:HH21	28:21:195:LEU:HD22	1.79	0.48
3:22:22:TRP:HA	10:1A:93:GLY:HA3	1.95	0.48
28:29:63:LEU:HA	28:29:63:LEU:HD22	1.52	0.48
11:2A:17:GLY:O	11:2A:80:VAL:HA	2.13	0.48
4:32:119:GLN:O	4:32:123:HIS:HD2	1.96	0.48
12:3I:55:VAL:HG12	12:3I:69:TYR:HA	1.95	0.48
30:41:53:LEU:HD22	30:41:87:PRO:HG3	1.95	0.48
31:59:94:TYR:CD1	31:59:94:TYR:N	2.79	0.48
14:5A:12:ARG:NH2	14:5A:14:PRO:HG3	2.29	0.48
54:1G:974:A:P	14:5A:41:ARG:HH12	2.36	0.48
3:22:29:TYR:OH	14:5A:54:PRO:HD2	2.14	0.48
24:1H:1665:A:H4'	34:68:67:LYS:HB2	1.96	0.48
32:69:114:LEU:HD23	32:69:114:LEU:O	2.13	0.48
32:69:118:LYS:HD2	32:69:119:PRO:HD2	1.94	0.48
9:82:40:LEU:O	9:82:40:LEU:HD12	2.14	0.48
25:16:50:G:OP1	38:A8:63:THR:HG23	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:986:A:O2'	19:AA:55:LYS:HD2	2.13	0.48
19:AI:51:VAL:HG13	19:AI:58:VAL:HG13	1.95	0.48
43:B5:50:LYS:HG2	43:B5:84:ALA:HB2	1.96	0.48
39:B8:26:ASP:OD2	39:B8:120:ARG:NH1	2.41	0.48
25:1J:103:U:O2'	45:D5:72:ARG:HG3	2.14	0.48
43:F8:11:PRO:HD3	48:K8:37:PHE:CD2	2.48	0.48
44:G8:6:HIS:HE1	44:G8:69:ALA:O	1.97	0.48
46:I8:57:PHE:HD1	46:I8:57:PHE:N	2.12	0.48
1:13:108:G:OP2	1:13:326:G:N1	2.39	0.48
1:13:1333:A:C8	1:13:1334:G:C8	3.01	0.48
1:13:659:U:H2'	1:13:660:G:H8	1.78	0.48
1:13:784:C:H2'	1:13:785:G:C8	2.49	0.48
1:13:865:A:H2	1:13:918:A:H4'	1.79	0.48
24:14:118:A:N3	24:14:178:G:H1'	2.28	0.48
24:14:2273:A:H2'	24:14:2274:A:C8	2.48	0.48
24:14:2885:C:N3	24:14:2886:G:H1'	2.29	0.48
24:14:881:G:C2	24:14:882:G:H1'	2.49	0.48
33:15:48:MET:HE2	33:15:48:MET:HB3	1.78	0.48
2:1E:195:ASP:N	2:1E:195:ASP:OD1	2.46	0.48
54:1G:1393:U:HO2'	54:1G:1501:C:HO2'	1.60	0.48
24:1H:1810:A:H2'	24:1H:1811:G:O4'	2.14	0.48
24:1H:2119:A:N1	24:1H:2170:A:N6	2.62	0.48
24:1H:2698:U:H2'	24:1H:2699:C:C6	2.49	0.48
24:1H:30:G:H2'	24:1H:31:C:C6	2.49	0.48
24:1H:33:U:H4'	24:1H:34:C:OP1	2.13	0.48
24:1H:882:G:H1'	24:1H:883:G:N7	2.28	0.48
24:1H:979:G:N7	57:1H:3761:HOH:O	2.35	0.48
24:14:673:C:H4'	29:39:82:ILE:HG12	1.96	0.48
22:3L:31:G:H2'	22:3L:32:A:C8	2.48	0.48
30:49:37:VAL:HG22	30:49:159:VAL:HG12	1.95	0.48
30:49:47:LYS:HG2	30:49:48:GLU:H	1.78	0.48
13:4I:39:ILE:HD12	13:4I:56:LEU:HD22	1.94	0.48
31:59:102:ALA:HB1	31:59:115:VAL:O	2.14	0.48
32:61:75:LEU:HD11	32:61:105:HIS:CD2	2.49	0.48
15:6A:5:LYS:O	15:6A:9:GLN:HG2	2.14	0.48
35:78:45:LEU:N	35:78:45:LEU:HD22	2.29	0.48
26:79:52:ARG:HE	26:79:167:LYS:HB2	1.78	0.48
1:13:468:A:H4'	16:7I:80:PHE:O	2.13	0.48
9:8E:71:SER:HA	9:8E:74:ILE:HG13	1.96	0.48
1:13:130:A:C8	17:8I:63:ARG:HB2	2.49	0.48
40:85:92:ARG:NH1	41:95:11:GLN:O	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1161:C:H1'	41:95:8:GLY:O	2.13	0.48
24:1H:1188:U:C4'	41:D8:79:VAL:HG22	2.43	0.48
46:E5:25:ARG:HG3	46:E5:29:GLN:NE2	2.29	0.48
1:13:1489:G:H2'	1:13:1490:C:O4'	2.14	0.48
1:13:606:G:O2'	1:13:632:A:N6	2.45	0.48
24:14:1441:G:H2'	24:14:1442:G:C8	2.47	0.48
24:14:2341:G:H2'	24:14:2342:C:C6	2.49	0.48
24:14:464:U:H2'	24:14:465:G:O4'	2.13	0.48
24:14:522:G:H2'	24:14:523:C:C6	2.49	0.48
24:14:817:C:H2'	24:14:818:G:H8	1.79	0.48
24:14:863:A:H2'	24:14:864:G:H8	1.79	0.48
25:16:83:G:C6	25:16:84:C:C5	3.02	0.48
54:1G:222:U:H2'	54:1G:223:U:C6	2.49	0.48
54:1G:308:C:H2'	54:1G:309:G:C8	2.49	0.48
54:1G:449:C:H6	16:7A:42:ARG:HD2	1.79	0.48
24:1H:2186:G:H2'	24:1H:2187:G:C8	2.49	0.48
24:1H:906:G:OP1	36:88:26:TYR:OH	2.23	0.48
24:14:616:A:C5	29:39:180:GLY:HA3	2.49	0.48
12:3A:55:VAL:HG23	12:3A:69:TYR:HA	1.94	0.48
22:3K:14:A:H2'	22:3K:14:A:N3	2.29	0.48
5:4E:139:LEU:HA	5:4E:142:LEU:HD12	1.94	0.48
38:65:83:LYS:HB3	38:65:109:GLY:H	1.79	0.48
15:6A:15:PHE:CZ	15:6A:84:LYS:HG2	2.48	0.48
35:78:90:ARG:HH22	35:78:105:LEU:HD21	1.78	0.48
40:85:66:ASN:HD21	40:85:70:ARG:HE	1.62	0.48
37:98:33:ARG:NH1	51:N8:57:VAL:HG22	2.29	0.48
46:I8:57:PHE:N	46:I8:57:PHE:CD1	2.81	0.48
53:M5:59:LYS:HE3	53:M5:59:LYS:HB2	1.49	0.48
27:11:8:PRO:CB	27:11:14:ARG:HB3	2.40	0.47
1:13:1505:G:OP1	57:13:1730:HOH:O	2.20	0.47
1:13:503:C:OP2	12:3I:116:SER:OG	2.22	0.47
24:14:2377:A:O3'	38:65:111:GLU:HG2	2.14	0.47
24:14:303:U:H2'	24:14:304:G:H8	1.79	0.47
24:14:705:A:H2'	24:14:706:A:O4'	2.13	0.47
27:19:124:PRO:HG2	27:19:129:ASN:ND2	2.28	0.47
54:1G:1327:C:H2'	54:1G:1328:C:C6	2.49	0.47
54:1G:448:A:H2'	54:1G:449:C:O2	2.14	0.47
54:1G:857:C:H2'	54:1G:858:G:O4'	2.14	0.47
54:1G:980:C:H5'	54:1G:981:U:OP2	2.13	0.47
24:1H:1726:G:C6	24:1H:1727:U:C4	3.02	0.47
24:1H:2224:G:H4'	24:1H:2226:C:C2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:527:C:H4'	24:1H:528:A:O5'	2.14	0.47
25:1J:89:G:C6	25:1J:89(A):A:C6	3.02	0.47
11:2I:85:ARG:HA	11:2I:112:THR:OG1	2.13	0.47
4:32:30:LYS:HA	4:32:31:CYS:CB	2.41	0.47
1:13:523:A:H61	12:3I:92:ASP:HB2	1.79	0.47
6:52:96:PRO:HB3	18:9A:30:ASP:CG	2.34	0.47
34:68:76:ALA:HB3	39:B8:75:ILE:HD13	1.96	0.47
45:H8:53:ILE:HA	45:H8:71:VAL:HG13	1.96	0.47
52:L5:47:ARG:HH11	52:L5:47:ARG:HG3	1.78	0.47
53:M5:29:LYS:HB2	53:M5:44:LYS:HB3	1.95	0.47
24:1H:2419:U:O4	53:Q8:31:HIS:CD2	2.66	0.47
27:11:3:VAL:HG12	27:11:17:THR:HG23	1.96	0.47
1:13:1124:G:N2	1:13:1125:U:H3	2.08	0.47
1:13:1228:C:H2'	1:13:1229:A:H8	1.79	0.47
1:13:1239:A:O2'	1:13:1298:C:N4	2.44	0.47
1:13:1399:C:C2	1:13:1502:A:N6	2.83	0.47
24:14:1114:G:H2'	24:14:1115:G:C8	2.48	0.47
24:14:1247:A:OP1	29:39:95:ARG:NH2	2.45	0.47
24:14:1311:G:O2'	52:L5:47:ARG:NH2	2.46	0.47
24:14:1408:C:C2	24:14:1595:G:N2	2.82	0.47
24:14:195:A:H2'	24:14:198:C:N4	2.28	0.47
24:14:2335:A:N7	24:14:2337:G:C5	2.82	0.47
24:14:271(B):G:N7	24:14:421:U:H2'	2.29	0.47
27:19:245:PRO:HA	27:19:246:PRO:HD3	1.74	0.47
2:1E:55:PHE:CD2	2:1E:58:ILE:HD12	2.49	0.47
54:1G:1305:G:O2'	54:1G:1306:A:H8	1.97	0.47
54:1G:443:C:H42	54:1G:491:G:H1	1.61	0.47
24:1H:1448:G:N2	24:1H:1449:A:N6	2.62	0.47
24:1H:1510:A:N3	24:1H:1510:A:H2'	2.29	0.47
24:1H:2298:A:H2'	24:1H:2299:G:O4'	2.13	0.47
24:1H:2887:U:H2'	24:1H:2888:C:C6	2.45	0.47
24:1H:49:A:N7	24:1H:120:U:C5	2.63	0.47
22:2K:59:A:C2'	22:2K:60:A:H5'	2.44	0.47
29:31:122:LYS:HD2	29:31:191:ARG:HG2	1.96	0.47
5:42:51:VAL:O	5:42:55:VAL:HG23	2.14	0.47
13:4A:3:ARG:HE	13:4A:9:ILE:HD11	1.79	0.47
31:51:115:VAL:HG11	31:51:148:ILE:HD11	1.96	0.47
31:51:154:PRO:HB3	31:51:163:TYR:CZ	2.49	0.47
33:58:26:LEU:O	33:58:30:ILE:HG13	2.13	0.47
38:65:103:GLU:O	38:65:106:ARG:HG2	2.14	0.47
17:8A:62:SER:OG	17:8A:63:ARG:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:8E:47:LEU:H	9:8E:47:LEU:HD13	1.79	0.47
39:B8:2:ASN:HB3	39:B8:4:GLY:N	2.24	0.47
44:C5:81:LYS:HB2	44:C5:99:CYS:SG	2.54	0.47
46:I8:50:ASN:HB3	46:I8:63:VAL:HG22	1.97	0.47
27:11:106:ILE:HD11	27:11:196:VAL:HG22	1.95	0.47
1:13:1372:U:H5''	9:8E:71:SER:HB3	1.97	0.47
1:13:265:G:H5''	17:8I:65:ILE:O	2.15	0.47
1:13:323:U:O3'	20:BI:22:ARG:HD3	2.14	0.47
1:13:784:C:H2'	1:13:785:G:H8	1.79	0.47
24:14:1110:G:H2'	24:14:1111:A:C8	2.47	0.47
24:14:1794:U:H2'	24:14:1795:C:H6	1.79	0.47
24:14:185:U:H4'	24:14:218:A:H4'	1.96	0.47
25:16:78:A:H2'	25:16:79:C:O4'	2.15	0.47
27:19:76:PRO:HB2	27:19:116:GLN:NE2	2.28	0.47
2:1E:14:GLY:N	2:1E:16:HIS:CE1	2.82	0.47
54:1G:1129:C:C2	54:1G:1139:G:C6	3.02	0.47
54:1G:149:A:H2'	54:1G:150:C:C6	2.48	0.47
54:1G:542:G:N2	54:1G:543:C:C2	2.82	0.47
24:1H:2199:A:H3'	24:1H:2205:C:H6	1.79	0.47
24:1H:2636:U:H2'	24:1H:2637:U:C6	2.49	0.47
24:1H:763:G:O2'	24:1H:764:A:H3'	2.14	0.47
24:1H:787:U:P	57:1H:3880:HOH:O	2.70	0.47
28:29:183:LEU:HD21	39:75:9:LEU:HD21	1.95	0.47
28:29:67:PHE:H	28:29:70:ALA:HB3	1.78	0.47
4:3E:22:LYS:HB2	4:3E:26:CYS:SG	2.55	0.47
4:3E:23:GLY:HA2	4:3E:112:VAL:HG22	1.96	0.47
22:3K:25:G:H2'	22:3K:26:G:C8	2.49	0.47
22:3K:63:5MU:H2'	22:3K:64:PSU:H5''	1.97	0.47
30:41:135:LEU:HD23	30:41:140:ILE:HD11	1.94	0.47
30:41:150:ASP:OD1	30:41:153:ARG:NH2	2.48	0.47
36:45:43:THR:HA	36:45:94:VAL:HG12	1.96	0.47
37:55:57:ARG:HH21	37:55:62:ALA:HB2	1.79	0.47
31:59:27:LYS:HA	31:59:27:LYS:HD2	1.70	0.47
1:13:1202:G:H1'	14:5I:29:ARG:HD2	1.96	0.47
24:1H:2094:G:OP1	32:61:22:LYS:HD2	2.14	0.47
7:6E:113:GLU:HG3	7:6E:119:ARG:HG2	1.96	0.47
39:75:74:ARG:HH11	39:75:74:ARG:HG2	1.79	0.47
16:7A:58:TYR:O	16:7A:61:SER:HB3	2.14	0.47
41:95:81:TYR:HD1	41:95:83:ARG:NH1	2.12	0.47
38:A8:18:ILE:O	38:A8:21:THR:HG22	2.14	0.47
38:A8:35:ILE:HG22	38:A8:97:ARG:HH21	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:C5:42:VAL:O	44:C5:65:ALA:N	2.36	0.47
1:13:881:G:H2'	1:13:882:C:O4'	2.15	0.47
24:14:1028:A:N6	24:14:1125:G:H2'	2.29	0.47
24:14:446:G:OP2	57:14:3901:HOH:O	2.20	0.47
24:14:485:C:H42	24:14:495:G:H1	1.62	0.47
24:14:610:C:H2'	24:14:611:C:C6	2.50	0.47
2:1E:15:VAL:HG22	2:1E:209:ARG:HB2	1.96	0.47
54:1G:1136:U:H5''	54:1G:1137:C:C5	2.49	0.47
54:1G:1360:A:C4	14:5A:18:VAL:HG11	2.50	0.47
54:1G:620:C:H2'	54:1G:621:A:O4'	2.15	0.47
54:1G:804:U:H5''	54:1G:805:C:OP2	2.14	0.47
24:1H:1662:C:O2'	24:1H:2687:U:H5''	2.14	0.47
24:1H:1731:G:H8	24:1H:1731:G:OP2	1.97	0.47
24:1H:1916:A:H2'	24:1H:1917:U:O4'	2.14	0.47
24:1H:2238:G:H2'	24:1H:2238:G:N3	2.28	0.47
24:1H:2408:U:O2'	24:1H:2409:G:H5'	2.13	0.47
24:1H:2863:C:H2'	24:1H:2864:G:C8	2.49	0.47
28:21:50:GLY:HA3	28:21:74:PRO:HG3	1.97	0.47
28:21:52:LEU:O	28:21:75:VAL:HG22	2.14	0.47
3:2E:50:ALA:HB1	3:2E:70:VAL:HG11	1.96	0.47
11:2I:124:LYS:HB3	11:2I:125:PHE:CE1	2.48	0.47
4:32:154:ASN:N	4:32:154:ASN:OD1	2.48	0.47
22:3L:38:MIA:H2'	22:3L:39:A:O4'	2.14	0.47
30:41:145:THR:O	30:41:146:TYR:HB3	2.14	0.47
30:49:95:ARG:O	30:49:99:MET:N	2.42	0.47
31:59:83:TYR:OH	31:59:132:ARG:NH2	2.47	0.47
32:61:110:ASP:HB3	32:61:112:LYS:N	2.29	0.47
32:69:8:PRO:HD3	32:69:15:VAL:HG22	1.95	0.47
39:75:106:SER:HA	39:75:110:ILE:CD1	2.45	0.47
26:79:32:LEU:HD13	26:79:220:PRO:HD2	1.97	0.47
1:13:1128:C:C5'	9:8E:16:ARG:HH22	2.28	0.47
6:5E:50:TYR:CZ	18:9I:77:GLY:HA2	2.50	0.47
42:A5:59:VAL:HG12	42:A5:60:ASN:OD1	2.14	0.47
19:AA:41:VAL:HB	19:AA:42:PRO:HD2	1.97	0.47
39:B8:1:MET:N	39:B8:2:ASN:HA	2.27	0.47
20:BA:53:LEU:HD12	20:BA:101:GLY:HA3	1.96	0.47
45:H8:165:VAL:HB	45:H8:166:SER:H	1.49	0.47
2:12:8:LYS:HG2	2:12:217:ARG:NE	2.30	0.47
1:13:838:G:H1	1:13:848:C:H42	1.62	0.47
24:14:1045:A:N3	24:14:1045:A:H2'	2.30	0.47
24:14:1224:G:N2	24:14:1227:A:OP2	2.41	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1453:A:O2'	24:14:1454:U:H2'	2.14	0.47
24:14:1839:G:C8	24:14:1927:A:H1'	2.49	0.47
24:14:2536:G:C6	24:14:2537:U:C4	3.03	0.47
24:14:2646:C:OP2	24:14:2732:G:O2'	2.22	0.47
24:14:2648:C:H2'	24:14:2649:U:C6	2.50	0.47
24:14:2649:U:H2'	24:14:2650:U:C6	2.50	0.47
24:14:2833:G:OP1	24:14:2833:G:H8	1.97	0.47
21:1B:9:ARG:HH11	21:1B:13:ILE:HD11	1.79	0.47
2:1E:21:ARG:C	2:1E:23:ARG:H	2.18	0.47
2:1E:30:ARG:HG3	2:1E:31:TYR:CE1	2.50	0.47
54:1G:1440:C:O2'	54:1G:1442:G:N2	2.48	0.47
54:1G:448:A:H62	54:1G:486:U:H3	1.61	0.47
54:1G:7:G:H21	5:42:121:LYS:HG2	1.79	0.47
24:1H:2478:A:C8	24:1H:2529:G:H2'	2.50	0.47
24:1H:747:U:O2	24:1H:2014:A:H1'	2.14	0.47
22:2L:35:QUO:H162	22:2L:35:QUO:H101	1.53	0.47
22:2L:72:U:O2'	22:2L:73:U:OP2	2.26	0.47
4:32:108:LEU:HD13	4:32:174:LEU:HD13	1.97	0.47
35:35:27:HIS:O	35:35:31:ALA:HA	2.15	0.47
4:3E:108:LEU:HB3	4:3E:110:PHE:HD1	1.80	0.47
13:4A:7:VAL:HG11	30:49:115:ARG:HH21	1.79	0.47
30:49:36:LYS:HG2	30:49:38:VAL:HG23	1.97	0.47
6:52:3:ARG:HB2	6:52:93:SER:HB2	1.97	0.47
24:1H:558:G:P	33:58:111:PRO:HD2	2.54	0.47
35:78:37:GLY:HA2	35:78:41:ARG:NH2	2.30	0.47
54:1G:135:C:O2	16:7A:1:MET:HB3	2.15	0.47
36:88:36:ALA:O	36:88:99:PRO:HA	2.14	0.47
17:8I:67:LYS:HA	17:8I:70:ARG:HH12	1.80	0.47
17:8I:74:LEU:HA	17:8I:74:LEU:HD23	1.68	0.47
38:A8:35:ILE:HD11	38:A8:101:LEU:HD22	1.97	0.47
20:BA:54:LYS:HE3	20:BA:54:LYS:HB2	1.65	0.47
41:D8:79:VAL:HG13	41:D8:81:TYR:HB3	1.95	0.47
48:G5:17:SER:HB3	48:G5:20:GLU:HB2	1.96	0.47
2:12:178:ARG:NH2	8:72:74:PRO:HG3	2.30	0.47
1:13:1503:A:H61	23:4K:12:A:C2'	2.18	0.47
1:13:1525:G:OP1	11:2I:120:ARG:NH2	2.48	0.47
1:13:15:G:H4'	5:4E:24:ARG:NH1	2.30	0.47
1:13:498:A:H4'	1:13:500:G:OP1	2.15	0.47
1:13:537:G:OP1	12:3I:113:ARG:NH2	2.34	0.47
1:13:765:G:H5''	1:13:766:A:OP1	2.14	0.47
1:13:767:A:H2'	1:13:768:A:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1149:G:H2'	24:14:1150:C:C6	2.50	0.47
24:14:1448:G:H1'	24:14:1528:A:H62	1.78	0.47
24:14:1688:U:H1'	24:14:1701:A:C6	2.49	0.47
24:14:1785:A:H4'	24:14:1982:C:O2'	2.14	0.47
24:14:1820:U:O2	27:19:201:HIS:HB3	2.14	0.47
24:14:2287:A:N1	24:14:2346:A:H2	2.12	0.47
24:14:2666:C:H5''	24:14:2667:C:OP2	2.14	0.47
2:1E:178:ARG:HH12	2:1E:196:LEU:C	2.16	0.47
54:1G:109:A:C6	54:1G:326:G:C6	3.03	0.47
54:1G:456:C:H42	54:1G:476:G:H1	1.63	0.47
54:1G:523:A:H61	12:3A:53:ARG:NH1	2.13	0.47
54:1G:933:G:O6	7:62:3:ARG:NH2	2.44	0.47
24:1H:1014:U:H3	24:1H:1148:A:H61	1.61	0.47
24:1H:1332:G:H5'	24:1H:1332:G:C8	2.50	0.47
24:1H:1427:A:H4'	24:1H:1428:C:O5'	2.14	0.47
24:1H:1609:A:H5'	24:1H:1617:C:OP1	2.14	0.47
24:1H:2845:G:OP2	57:1H:4380:HOH:O	2.20	0.47
24:1H:354:G:H2'	24:1H:355:G:H8	1.79	0.47
24:1H:528:A:O2'	24:1H:529:A:H5''	2.14	0.47
24:1H:540:G:C8	24:1H:540:G:H5''	2.49	0.47
24:1H:2052:G:O4'	28:21:142:GLY:HA3	2.13	0.47
11:2A:85:ARG:HA	11:2A:112:THR:OG1	2.14	0.47
1:13:1340:A:O2'	22:2K:32:A:O2'	2.14	0.47
29:31:32:LEU:O	29:31:36:VAL:HG23	2.15	0.47
29:31:78:ILE:HA	29:31:83:PHE:CD2	2.49	0.47
4:32:178:VAL:C	4:32:180:GLY:H	2.17	0.47
4:32:31:CYS:O	4:32:33:MET:N	2.48	0.47
29:39:18:ARG:HG2	29:39:19:GLU:N	2.29	0.47
6:52:4:TYR:CE1	6:52:92:LYS:HG3	2.49	0.47
6:52:87:ARG:HG3	6:52:87:ARG:NH1	2.14	0.47
1:13:1186:G:H21	14:5I:61:TRP:C	2.17	0.47
32:69:77:LEU:HD22	32:69:141:LYS:HB3	1.96	0.47
32:69:38:LEU:HD12	32:69:38:LEU:H	1.80	0.47
24:1H:910:A:C5	36:88:13:GLN:HG3	2.49	0.47
20:BA:95:ALA:C	20:BA:97:ALA:H	2.16	0.47
24:14:329:G:O6	44:C5:19:LYS:HG2	2.14	0.47
51:N8:16:ARG:HG3	51:N8:17:ASP:N	2.29	0.47
53:Q8:26:LYS:HD3	53:Q8:48:PHE:CD1	2.50	0.47
2:12:10:LEU:HD12	2:12:13:ALA:HB2	1.97	0.47
1:13:1286:A:C8	1:13:1287:A:H4'	2.49	0.47
1:13:391:G:O3'	16:7I:8:ARG:NH2	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:79:G:H2'	1:13:79:G:N3	2.30	0.47
1:13:572:A:N3	1:13:917:G:H1'	2.30	0.47
24:14:1342:A:C2	24:14:1397:U:C2	3.02	0.47
24:14:1464:C:O2'	24:14:1528:A:H8	1.97	0.47
24:14:2629:A:O2'	24:14:2630:G:H4'	2.15	0.47
27:19:102:LYS:C	27:19:103:ARG:HG2	2.34	0.47
54:1G:571:U:O2	54:1G:918:A:H5'	2.14	0.47
54:1G:952:U:H2'	54:1G:953:G:C8	2.50	0.47
24:1H:1497:U:H5''	24:1H:1498:C:H5	1.80	0.47
24:1H:1575:C:H2'	24:1H:1576:U:O4'	2.15	0.47
24:1H:2023:G:H4'	24:1H:2617:C:O3'	2.15	0.47
24:1H:2502:G:H5''	24:1H:2503:A:C5'	2.45	0.47
24:1H:251:A:C5	24:1H:252:G:H1'	2.49	0.47
24:1H:270(Y):G:C2	24:1H:270(Z):U:O4	2.67	0.47
24:1H:26:G:C6	24:1H:27:G:N1	2.82	0.47
24:1H:2854:G:H2'	24:1H:2855:C:H6	1.80	0.47
24:1H:372:G:H22	24:1H:400:G:H2'	1.80	0.47
24:1H:528:A:N1	24:1H:2042:A:H2'	2.29	0.47
24:1H:639:U:H2'	24:1H:640:C:C6	2.49	0.47
24:1H:792:G:H5''	24:1H:793:A:H5'	1.96	0.47
24:1H:963:U:H2'	24:1H:964:C:C6	2.49	0.47
1:13:1123:A:H4'	10:1I:37:PRO:HD2	1.97	0.47
24:1H:2680:C:OP2	28:21:111:ARG:NH2	2.48	0.47
34:25:71:ARG:NH2	34:25:105:GLU:OE1	2.43	0.47
22:2L:59:A:H61	22:2L:60:A:N6	2.12	0.47
4:32:18:LYS:HE2	4:32:20:TYR:CD2	2.49	0.47
22:3K:14:A:H3'	22:3K:15:G:H5''	1.96	0.47
22:3L:64:PSU:O2'	22:3L:66:G:N7	2.39	0.47
14:5A:45:ARG:HG3	14:5A:49:HIS:CE1	2.50	0.47
34:68:20:MET:O	34:68:22:ILE:HD13	2.14	0.47
32:69:75:LEU:HG	32:69:76:THR:N	2.30	0.47
39:75:16:ARG:NH2	39:75:19:LEU:HD21	2.30	0.47
39:75:60:THR:HG22	39:75:77:PRO:HA	1.95	0.47
39:75:6:LEU:H	39:75:9:LEU:CB	2.18	0.47
39:75:9:LEU:HD22	39:75:9:LEU:O	2.15	0.47
35:78:106:LEU:O	35:78:106:LEU:HD22	2.14	0.47
35:78:125:VAL:O	35:78:144:GLU:HB2	2.15	0.47
41:95:22:VAL:HG22	41:95:23:GLU:H	1.80	0.47
41:95:84:LYS:HE3	41:95:85:LYS:H	1.79	0.47
41:95:21:ARG:HG2	41:95:91:TYR:CE1	2.49	0.47
19:AA:7:LYS:HE2	19:AA:7:LYS:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:D5:5:LEU:HD13	45:D5:47:VAL:HG21	1.97	0.47
46:I8:23:VAL:HG13	46:I8:38:VAL:CG2	2.44	0.47
43:F8:60:ARG:NH1	52:P8:47:ARG:HH22	2.11	0.47
27:11:182:LEU:HA	27:11:182:LEU:HD23	1.64	0.47
2:12:58:ILE:HA	2:12:61:LEU:HB3	1.96	0.47
1:13:1232:U:H5''	9:8E:124:GLN:HB3	1.97	0.47
1:13:774:G:OP1	27:11:202:LYS:NZ	2.46	0.47
1:13:947:G:H2'	1:13:948:C:C6	2.49	0.47
24:14:1323:U:H2'	24:14:1324:G:H5'	1.96	0.47
24:14:1716:U:H1'	24:14:1746:G:N2	2.29	0.47
24:14:740:U:O4'	24:14:1981:A:C4	2.68	0.47
24:14:2050:C:H2'	24:14:2051:A:C8	2.49	0.47
24:14:315:G:H2'	24:14:316:C:C6	2.49	0.47
33:15:6:PRO:HG3	33:15:41:ASP:O	2.15	0.47
2:1E:145:LEU:O	2:1E:149:LEU:HB2	2.15	0.47
54:1G:412:A:O2'	54:1G:413:G:OP2	2.21	0.47
54:1G:677:U:H2'	54:1G:678:U:C6	2.50	0.47
24:1H:2151:G:H2'	24:1H:2152:G:H8	1.78	0.47
24:1H:2252:G:H2'	24:1H:2253:G:O4'	2.14	0.47
24:1H:2340:G:O2'	24:1H:2341:G:H5'	2.14	0.47
10:1I:3:LYS:HB3	10:1I:101:VAL:O	2.15	0.47
28:21:15:PHE:HB3	39:B8:81:PRO:HG2	1.95	0.47
28:29:32:PRO:HA	28:29:90:THR:H	1.78	0.47
22:2L:36:U:H2'	22:2L:37:A:C8	2.49	0.47
4:32:30:LYS:HB2	4:32:32:ALA:N	2.29	0.47
29:39:28:ILE:HD12	29:39:119:ARG:HE	1.79	0.47
4:3E:13:ARG:O	4:3E:14:ARG:HB3	2.15	0.47
30:41:97:ASP:O	30:41:101:ILE:HG12	2.15	0.47
31:59:27:LYS:HA	31:59:32:GLU:HB3	1.95	0.47
6:5E:67:MET:HB2	6:5E:68:PRO:HD2	1.96	0.47
6:5E:69:GLU:O	6:5E:72:VAL:HG12	2.15	0.47
34:68:63:VAL:HG12	34:68:106:LEU:HD11	1.95	0.47
32:69:6:LEU:O	32:69:15:VAL:HG13	2.15	0.47
7:6E:88:PRO:HD2	7:6E:152:ALA:HA	1.96	0.47
1:13:376:G:H4'	16:7I:5:ARG:HH11	1.80	0.47
9:8E:53:VAL:HB	9:8E:95:LYS:HE2	1.96	0.47
27:11:147:LEU:HD22	27:11:155:LEU:HD11	1.97	0.47
2:12:58:ILE:O	2:12:62:ALA:N	2.33	0.47
1:13:1141:C:H2'	1:13:1142:G:H8	1.79	0.47
24:14:996:A:N6	24:14:1160:G:C6	2.82	0.47
24:14:1313:U:H2'	24:14:1610:A:C2	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1404:C:O2'	24:14:1405:U:H5'	2.15	0.47
24:14:2704:C:H2'	24:14:2705:A:O4'	2.14	0.47
24:14:903:C:H2'	24:14:904:C:C6	2.50	0.47
54:1G:1106:G:H4'	3:22:171:GLY:O	2.15	0.47
54:1G:1216:G:H2'	54:1G:1217:C:C6	2.50	0.47
54:1G:979:C:OP1	54:1G:1223:C:N4	2.48	0.47
54:1G:166:G:H2'	54:1G:167:G:C8	2.49	0.47
54:1G:359:U:H2'	54:1G:360:A:C8	2.49	0.47
24:1H:1471:A:C2	24:1H:1472:A:C4	3.02	0.47
24:1H:141:A:H8	24:1H:1595:G:H21	1.59	0.47
24:1H:2136:C:H2'	24:1H:2137:C:C6	2.50	0.47
24:1H:2235:G:H2'	24:1H:2236:C:C6	2.50	0.47
24:1H:2442:C:H2'	24:1H:2443:C:H6	1.77	0.47
24:1H:2864:G:H2'	24:1H:2865:U:C6	2.50	0.47
24:1H:2863:C:H2'	24:1H:2864:G:H8	1.80	0.47
24:1H:600:G:N2	24:1H:605:C:O3'	2.48	0.47
24:1H:956:G:H2'	24:1H:957:A:H2'	1.96	0.47
28:21:55:ASN:HA	28:21:58:ARG:HD2	1.95	0.47
24:14:2635:C:OP1	28:29:77:ILE:HG21	2.15	0.47
4:32:94:LEU:HA	4:32:97:LEU:HD12	1.96	0.47
22:3L:26:G:H2'	22:3L:27:A:O4'	2.14	0.47
5:42:30:ALA:O	5:42:45:PHE:HD1	1.98	0.47
33:58:56:ASN:N	33:58:125:GLY:O	2.39	0.47
7:62:114:ARG:H	7:62:114:ARG:HG2	1.47	0.47
7:62:26:PHE:O	7:62:30:ILE:HG13	2.14	0.47
32:69:140:LEU:HD12	32:69:141:LYS:H	1.80	0.47
15:6A:56:LEU:O	15:6A:60:VAL:HG23	2.15	0.47
54:1G:878:G:H5'	8:72:89:PRO:HG2	1.96	0.47
8:7E:43:GLY:O	8:7E:64:LYS:HD2	2.15	0.47
9:82:24:GLY:HA3	9:82:57:GLY:HA2	1.96	0.47
37:98:87:TYR:HD1	37:98:90:ARG:HD2	1.80	0.47
19:AA:15:LEU:O	19:AA:19:VAL:HG23	2.15	0.47
39:B8:2:ASN:HB2	39:B8:5:ALA:CB	2.45	0.47
20:BA:63:ILE:HD13	20:BA:80:ARG:HB3	1.95	0.47
45:D5:100:VAL:HG11	45:D5:134:PRO:HG2	1.97	0.47
50:I5:10:VAL:HG22	50:I5:11:PRO:HD2	1.96	0.47
53:Q8:41:ILE:HD13	53:Q8:41:ILE:HA	1.82	0.47
1:13:342:C:H2'	1:13:343:U:O4'	2.15	0.47
1:13:445:G:H1	1:13:489:C:H42	1.62	0.47
1:13:713:G:H2'	1:13:714:G:C8	2.50	0.47
24:14:1488:G:H5'	24:14:1489:U:OP2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1753:G:N1	24:14:1756:G:C2	2.83	0.47
2:1E:55:PHE:CD2	2:1E:221:LEU:HG	2.50	0.47
2:1E:87:ARG:HH11	2:1E:219:VAL:HB	1.79	0.47
54:1G:1084:G:H5'	54:1G:1102:A:OP2	2.15	0.47
54:1G:1399:C:H4'	54:1G:1400:C:O5'	2.14	0.47
54:1G:57:G:C2	54:1G:58:C:C2	3.03	0.47
24:1H:1006:C:C2	24:1H:1138:G:N2	2.83	0.47
24:1H:2123:G:H2'	24:1H:2124:G:O4'	2.15	0.47
24:1H:2331:G:H4'	46:I8:42:GLY:HA3	1.97	0.47
3:2E:52:LEU:HA	3:2E:70:VAL:HG22	1.97	0.47
22:2L:3:U:H2'	22:2L:4:G:C8	2.50	0.47
4:3E:112:VAL:HG12	4:3E:116:GLN:OE1	2.14	0.47
22:3K:22:A:N3	22:3K:22:A:H2'	2.30	0.47
36:45:87:LYS:HG3	36:45:88:GLY:N	2.30	0.47
37:55:33:ARG:HB3	37:55:115:GLU:HG3	1.97	0.47
15:6A:67:LEU:HD23	15:6A:67:LEU:HA	1.77	0.47
26:71:45:ALA:CB	26:71:212:VAL:HG22	2.41	0.47
35:78:138:LEU:HD12	35:78:144:GLU:OE2	2.14	0.47
26:79:14:VAL:HG11	26:79:222:VAL:HA	1.95	0.47
40:85:61:TRP:CZ3	40:85:94:ASN:HB2	2.50	0.47
1:13:265:G:H5'	17:8I:64:PRO:O	2.15	0.47
18:9I:38:GLU:HA	18:9I:41:LYS:HG2	1.96	0.47
1:13:651:C:H5''	1:13:652:U:OP2	2.15	0.47
1:13:745:C:H5'	1:13:851:G:H21	1.80	0.47
1:13:789:U:H2'	1:13:791:G:OP2	2.15	0.47
24:14:1634:A:N1	57:14:3687:HOH:O	2.36	0.47
24:14:2537:U:C2	24:14:2538:C:C5	3.03	0.47
24:14:270(V):G:H2'	24:14:270(W):G:H8	1.80	0.47
24:14:2870:C:H2'	24:14:2871:C:O4'	2.15	0.47
54:1G:1178:G:OP2	9:82:93:ARG:NH2	2.47	0.47
24:1H:1169:G:H1	24:1H:1180:C:H42	1.63	0.47
24:1H:198:C:H2'	24:1H:199:A:H5''	1.96	0.47
24:1H:2130:U:O2'	24:1H:2158:A:N6	2.47	0.47
24:1H:270(T):G:C6	24:1H:270(U):C:C4	3.03	0.47
24:1H:667:U:O2	53:Q8:2:PRO:HD2	2.15	0.47
24:1H:59:U:O2'	24:1H:73:A:H2'	2.15	0.47
24:1H:935:C:H2'	24:1H:936:C:H6	1.80	0.47
28:21:101:ARG:NH1	28:21:171:GLU:HB2	2.29	0.47
28:21:21:VAL:HG13	28:21:185:LYS:HG3	1.96	0.47
28:29:67:PHE:H	28:29:70:ALA:CB	2.28	0.47
22:2L:70:C:HO2'	22:2L:71:C:H2'	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:33:MET:O	4:32:34:GLU:HB2	2.15	0.47
4:3E:141:ARG:HH11	4:3E:142:PRO:HD2	1.80	0.47
12:3I:110:VAL:HG23	12:3I:120:TYR:HB3	1.96	0.47
5:42:57:LYS:HG2	5:42:61:TYR:HE1	1.80	0.47
31:51:90:LYS:NZ	31:51:169:VAL:HG21	2.30	0.47
33:58:47:ALA:CB	33:58:112:LEU:HD11	2.27	0.47
26:71:46:LYS:NZ	26:71:210:ARG:HH21	2.12	0.47
28:29:18:ASP:HB3	39:75:82:LEU:HD11	1.96	0.47
36:88:30:GLY:HA2	36:88:107:ALA:HB2	1.96	0.47
37:98:13:HIS:CE1	37:98:16:HIS:HB2	2.50	0.47
43:B5:9:LEU:HB2	43:B5:29:TRP:O	2.15	0.47
45:H8:143:GLY:HA2	45:H8:144:LEU:HA	1.50	0.47
50:M8:55:ARG:HD2	50:M8:55:ARG:HA	1.52	0.47
24:1H:2577:A:HO2'	51:N8:2:ALA:N	2.13	0.47
1:13:164:U:H2'	1:13:165:C:C6	2.50	0.46
1:13:874:G:C5	1:13:875:C:C5	3.03	0.46
1:13:865:A:C2	1:13:918:A:H4'	2.50	0.46
24:14:182:A:N3	24:14:433:C:O2'	2.44	0.46
24:14:2337:G:H5''	24:14:2338:G:OP2	2.15	0.46
24:14:2698:U:H2'	24:14:2699:C:C6	2.51	0.46
24:14:540:G:H2'	24:14:541:C:C6	2.50	0.46
24:14:863:A:C2	24:14:864:G:C4	3.03	0.46
27:19:43:ARG:HH11	27:19:43:ARG:CG	2.28	0.46
2:1E:164:VAL:HB	2:1E:186:ALA:CB	2.44	0.46
54:1G:391:G:C6	54:1G:392:G:C5	3.03	0.46
24:1H:2231:C:H2'	24:1H:2232:U:O4'	2.15	0.46
24:1H:2432:A:C4	47:J8:33:LYS:HG2	2.50	0.46
24:1H:274:G:H2'	24:1H:275:G:H1'	1.97	0.46
24:1H:654(A):A:H2	24:1H:654(T):A:N1	2.13	0.46
24:1H:911:A:H5''	24:1H:912:C:C5'	2.45	0.46
10:1I:26:ALA:HB1	10:1I:84:GLN:HG3	1.96	0.46
34:25:68:GLU:HB3	34:25:78:ARG:HB3	1.97	0.46
34:25:90:GLN:O	34:25:91:LEU:HB2	2.14	0.46
29:31:6:VAL:HG11	29:31:119:ARG:HA	1.96	0.46
29:39:150:GLY:HA2	29:39:172:TRP:CD2	2.50	0.46
13:4I:84:ILE:HG13	13:4I:86:CYS:H	1.80	0.46
31:51:101:ARG:NH2	31:51:122:THR:HA	2.30	0.46
31:59:79:VAL:HA	31:59:136:ILE:HG22	1.97	0.46
32:69:120:ILE:HG21	32:69:126:TYR:HE2	1.81	0.46
15:6A:15:PHE:HZ	15:6A:84:LYS:HG2	1.80	0.46
24:14:2175:C:H1'	26:79:217:THR:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:79:25:ALA:O	26:79:29:VAL:N	2.47	0.46
41:95:91:TYR:CD2	41:95:91:TYR:CB	2.85	0.46
42:A5:95:ILE:HG13	42:A5:95:ILE:O	2.14	0.46
24:1H:2378:A:O2'	38:A8:21:THR:HG21	2.15	0.46
44:C5:84:ARG:HG3	44:C5:95:LYS:HG3	1.97	0.46
24:1H:2228:G:P	27:11:263:ARG:HH12	2.38	0.46
1:13:1277:C:O2'	1:13:1279:A:H1'	2.14	0.46
1:13:1363:A:H1'	1:13:1365:G:N7	2.29	0.46
1:13:200:G:N2	1:13:218:C:O2	2.48	0.46
24:14:2516:G:C6	24:14:2517:C:C4	3.03	0.46
24:14:2626:C:H2'	24:14:2627:G:O4'	2.15	0.46
24:14:2638:G:HO2'	24:14:2639:A:H8	1.57	0.46
24:14:2805:G:O2'	24:14:2807:G:O4'	2.33	0.46
24:14:286:C:H2'	24:14:287:C:C6	2.49	0.46
24:14:55:G:H2'	24:14:56:A:C8	2.50	0.46
24:14:782:A:H5'	24:14:783:A:C2	2.50	0.46
24:14:1806:C:O2'	27:19:46:GLN:OE1	2.24	0.46
54:1G:364:A:O2'	54:1G:365:U:H5'	2.15	0.46
54:1G:630:G:H5'	54:1G:631:G:OP2	2.15	0.46
54:1G:737:A:H2'	54:1G:738:C:C6	2.50	0.46
54:1G:980:C:H3'	54:1G:981:U:C6	2.50	0.46
24:1H:1029:A:H62	24:1H:1125:G:H21	1.64	0.46
24:1H:1635:G:H2'	24:1H:1636:C:C6	2.51	0.46
24:1H:174:C:H2'	24:1H:175:G:O4'	2.16	0.46
24:1H:1853:A:H2'	24:1H:1854:A:H8	1.77	0.46
24:1H:2593:U:H2'	24:1H:2594:C:C6	2.50	0.46
24:1H:2607:G:H2'	24:1H:2608:G:O4'	2.14	0.46
24:1H:2626:C:H2'	24:1H:2627:G:O4'	2.16	0.46
25:1J:89:G:C6	25:1J:89(A):A:N1	2.83	0.46
25:1J:93:C:H2'	25:1J:94:C:C6	2.48	0.46
28:29:119:ARG:HG2	28:29:160:TYR:HB2	1.98	0.46
24:14:2635:C:OP1	28:29:77:ILE:HG12	2.15	0.46
22:2L:15:G:O5'	22:2L:15:G:H8	1.98	0.46
29:31:102:PRO:HB2	29:31:105:VAL:HG23	1.97	0.46
35:35:128:HIS:HA	35:35:147:LEU:HA	1.97	0.46
4:3E:179:GLU:CD	4:3E:179:GLU:H	2.18	0.46
12:3I:35:GLY:HA2	12:3I:60:LEU:HA	1.96	0.46
30:41:109:VAL:HG21	50:M8:14:ILE:HD13	1.96	0.46
5:42:140:ARG:O	5:42:143:ARG:NH2	2.49	0.46
5:42:72:GLN:O	5:42:75:THR:N	2.43	0.46
13:4I:67:GLU:CD	13:4I:68:GLY:H	2.19	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:5E:14:LEU:HB3	6:5E:19:LEU:HD12	1.97	0.46
6:5E:4:TYR:HD1	6:5E:92:LYS:HA	1.79	0.46
7:62:116:ALA:HA	7:62:119:ARG:HG3	1.97	0.46
7:62:13:GLN:HA	7:62:14:PRO:HD3	1.78	0.46
35:78:64:LYS:O	53:Q8:30:ARG:NH2	2.48	0.46
44:C5:42:VAL:HG13	44:C5:65:ALA:HB3	1.97	0.46
45:D5:77:ASP:HB2	45:D5:84:GLU:HG2	1.98	0.46
42:E8:11:ARG:CZ	42:E8:98:LYS:HB3	2.46	0.46
48:G5:22:GLU:HA	48:G5:25:VAL:HG22	1.97	0.46
47:J8:15:ALA:O	47:J8:40:ARG:HG3	2.15	0.46
52:P8:35:ARG:HG3	52:P8:42:LEU:HD11	1.97	0.46
1:13:1003:G:H2'	1:13:1004:A:H4'	1.96	0.46
1:13:1391:U:H2'	1:13:1392:G:C8	2.51	0.46
1:13:359:U:H2'	1:13:360:A:H8	1.80	0.46
24:14:1012:U:N3	24:14:1143:A:H2	2.06	0.46
24:14:11:G:N2	24:14:2627:G:O3'	2.48	0.46
24:14:2210:G:H3'	24:14:2211:G:C5	2.50	0.46
24:14:2439:A:C8	24:14:2439:A:H5'	2.50	0.46
33:15:99:LEU:HD22	33:15:103:VAL:HG23	1.97	0.46
27:19:69:ARG:CD	27:19:105:ILE:HD11	2.45	0.46
2:1E:9:GLU:HA	2:1E:12:GLU:OE2	2.15	0.46
1:13:828:A:N3	2:1E:26:PRO:HG3	2.30	0.46
54:1G:165:C:H2'	54:1G:166:G:H8	1.80	0.46
54:1G:355:C:C4	54:1G:356:A:N7	2.84	0.46
54:1G:419:C:H5'	54:1G:513:C:H4'	1.97	0.46
24:1H:1213:A:N3	24:1H:1238:G:O2'	2.42	0.46
24:1H:1339:G:H5''	43:F8:16:LYS:HD2	1.98	0.46
24:1H:1742:C:H5'	24:1H:1743:G:OP2	2.15	0.46
24:1H:322:A:P	29:31:168:ARG:HH21	2.39	0.46
3:22:34:LEU:O	3:22:38:ARG:HG3	2.15	0.46
28:29:76:ARG:CG	28:29:195:LEU:HD22	2.46	0.46
22:2K:38:MIA:H161	23:4K:15:A:C2	2.50	0.46
22:2L:20:C:O2'	22:2L:22:A:H5'	2.15	0.46
22:2L:72:U:O2'	22:2L:73:U:P	2.74	0.46
29:39:178:PRO:HG2	29:39:179:GLU:OE1	2.15	0.46
54:1G:523:A:H61	12:3A:92:ASP:HB2	1.79	0.46
4:3E:84:LYS:HD2	4:3E:84:LYS:HA	1.61	0.46
37:55:77:ARG:O	37:55:80:PHE:N	2.49	0.46
38:65:62:LYS:HB3	38:65:97:ARG:HD3	1.97	0.46
24:14:1226:G:C4'	41:95:84:LYS:HA	2.45	0.46
44:C5:20:TYR:CZ	44:C5:42:VAL:HA	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:C5:87:LYS:O	44:C5:94:LYS:HG2	2.15	0.46
45:D5:132:ASN:HD22	45:D5:159:PRO:HB2	1.79	0.46
24:1H:456:C:C2'	43:F8:68:ARG:HH22	2.25	0.46
48:G5:17:SER:HB2	48:G5:20:GLU:N	2.29	0.46
54:1G:1158:C:O3'	2:12:133:LYS:NZ	2.49	0.46
1:13:1238:A:N7	1:13:1303:C:H1'	2.30	0.46
1:13:793:U:H5'	1:13:794:A:H5''	1.98	0.46
1:13:929:G:H1	1:13:1388:C:N4	2.13	0.46
24:14:999:U:H5	24:14:1154:G:N7	2.14	0.46
24:14:1591:G:H2'	24:14:1592:C:C6	2.50	0.46
24:14:1728:G:C2	24:14:1730:U:OP2	2.69	0.46
24:14:2317:C:H2'	24:14:2318:G:O4'	2.14	0.46
24:14:2893:G:H4'	24:14:2894:G:O5'	2.15	0.46
24:14:470:A:H2'	24:14:471:A:O4'	2.14	0.46
2:1E:80:ILE:HD12	2:1E:211:ILE:HB	1.98	0.46
54:1G:1073:U:H2'	54:1G:1074:G:H8	1.79	0.46
54:1G:1069:C:N4	54:1G:1094:G:O6	2.48	0.46
54:1G:1147:C:O2	9:82:16:ARG:NE	2.48	0.46
54:1G:1272:G:C6	54:1G:1273:G:C5	3.03	0.46
54:1G:300:A:H2'	54:1G:301:G:O4'	2.15	0.46
54:1G:457:C:H2'	54:1G:458:C:C6	2.51	0.46
54:1G:683:G:C6	54:1G:684:A:C6	3.03	0.46
24:1H:2022:U:O2'	24:1H:2617:C:H5'	2.16	0.46
24:1H:885:C:H2'	24:1H:886:C:H5''	1.97	0.46
24:1H:873:G:H1	24:1H:904:C:H42	1.62	0.46
25:1J:53:A:H2'	25:1J:54:G:O4'	2.15	0.46
25:1J:66:A:N6	25:1J:107:U:H2'	2.31	0.46
24:1H:2574:G:N3	28:21:143:ASN:ND2	2.62	0.46
3:22:206:GLU:HG3	3:22:207:VAL:H	1.78	0.46
28:29:131:ALA:HB1	28:29:135:HIS:CE1	2.50	0.46
3:2E:150:LYS:HB3	3:2E:201:TYR:HB2	1.97	0.46
11:2I:92:GLU:O	11:2I:96:ARG:HG3	2.16	0.46
22:2K:9:U:O2'	22:2K:10:C:H5	1.98	0.46
24:14:2394:C:H5''	35:35:64:LYS:CD	2.45	0.46
30:41:18:GLU:O	30:41:22:ARG:HB2	2.15	0.46
5:42:90:VAL:O	5:42:91:LEU:HD13	2.16	0.46
13:4A:14:ARG:N	13:4A:44:ARG:HH11	2.11	0.46
6:5E:97:PHE:O	18:9I:31:LEU:N	2.27	0.46
54:1G:1239:A:O2'	7:62:114:ARG:O	2.31	0.46
15:6I:39:LEU:HD13	15:6I:56:LEU:HB2	1.97	0.46
43:B5:63:LYS:HA	43:B5:72:LYS:HA	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:C8:47:TYR:C	40:C8:47:TYR:CD1	2.89	0.46
40:C8:80:ILE:O	40:C8:84:LYS:HB2	2.15	0.46
47:F5:40:ARG:NH2	47:F5:42:GLN:HG2	2.31	0.46
25:1J:43:C:OP1	50:I5:2:LYS:HB3	2.15	0.46
50:I5:32:TYR:HB3	50:I5:33:VAL:H	1.35	0.46
30:49:66:GLN:HG2	50:I5:6:HIS:CE1	2.51	0.46
46:I8:72:ARG:CB	46:I8:75:LEU:HB2	2.44	0.46
52:L5:12:ARG:HH21	52:L5:44:PRO:HB3	1.81	0.46
53:M5:62:LEU:HA	53:M5:62:LEU:HD23	1.39	0.46
1:13:148:G:H1	1:13:174:C:H42	1.62	0.46
1:13:295:C:H2'	1:13:296:U:O4'	2.15	0.46
1:13:465:A:H2'	1:13:467:G:N7	2.30	0.46
24:14:1036:G:H2'	24:14:1037:G:O4'	2.14	0.46
24:14:75:G:H1	24:14:111:A:H61	1.64	0.46
24:14:1516:U:H2'	24:14:1517:G:H8	1.81	0.46
24:14:1545:A:H2'	24:14:1545(A):A:O4'	2.16	0.46
24:14:2230:G:H1'	47:F5:45:ASN:CB	2.46	0.46
24:14:685:A:C8	24:14:774:A:C6	3.03	0.46
24:14:1500:G:O2'	27:19:100:GLY:O	2.21	0.46
54:1G:1446:A:N3	54:1G:1446:A:H3'	2.30	0.46
54:1G:32:A:C2	54:1G:33:A:C5	3.02	0.46
54:1G:38:G:C2	54:1G:397:A:C2	3.04	0.46
54:1G:445:G:C4	54:1G:446:G:C8	3.03	0.46
54:1G:553:A:H2'	54:1G:554:C:H6	1.80	0.46
24:1H:1516:U:N3	24:1H:1517:G:N7	2.63	0.46
24:1H:1763:G:OP1	24:1H:1763:G:H4'	2.15	0.46
24:1H:1697:G:O2'	24:1H:1978:A:OP1	2.27	0.46
24:1H:2491:U:O2'	24:1H:2570:G:OP1	2.29	0.46
25:1J:12:C:H6	25:1J:12:C:OP2	1.97	0.46
34:25:19:ILE:HG22	34:25:43:VAL:HA	1.97	0.46
4:32:96:LEU:HD13	4:32:139:ARG:NH2	2.31	0.46
4:3E:63:LYS:O	4:3E:67:ILE:HG13	2.16	0.46
36:45:48:GLU:O	36:45:48:GLU:HG3	2.16	0.46
31:51:7:LEU:HD23	31:51:65:HIS:HE1	1.81	0.46
34:68:22:ILE:HD12	34:68:22:ILE:HA	1.75	0.46
24:14:142:G:H1'	43:B5:37:THR:CG2	2.46	0.46
43:B5:88:LYS:HD2	43:B5:93:GLU:HG3	1.98	0.46
20:BA:42:GLN:O	20:BA:46:GLU:HG3	2.15	0.46
44:G8:5:MET:HE1	44:G8:32:PRO:HB3	1.98	0.46
53:M5:16:ILE:HD13	53:M5:58:ILE:HG12	1.97	0.46
53:M5:57:ARG:HH11	53:M5:57:ARG:CA	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:11:239:ARG:O	27:11:240:ALA:HB3	2.15	0.46
1:13:111:G:H5''	16:7I:27:LYS:HG3	1.97	0.46
1:13:1118:C:H1'	1:13:1179:A:C4	2.51	0.46
1:13:976:G:H5'	1:13:1358:U:O2'	2.16	0.46
1:13:314:C:O2'	1:13:315:A:H5'	2.15	0.46
1:13:38:G:C2	1:13:397:A:C2	3.03	0.46
24:14:1093:G:N1	24:14:1097:U:OP2	2.49	0.46
24:14:1204:A:C2	24:14:1241:A:N1	2.84	0.46
24:14:1329:U:H5''	24:14:1330:C:H5	1.81	0.46
24:14:1788:C:H2'	24:14:1789:A:O4'	2.16	0.46
24:14:57:C:H2'	24:14:58:G:O4'	2.16	0.46
25:16:12:C:O2'	25:16:13:A:OP2	2.23	0.46
2:1E:108:ILE:O	2:1E:108:ILE:HG13	2.16	0.46
54:1G:1104:G:C2	54:1G:1105:A:C4	3.04	0.46
54:1G:1306:A:H62	54:1G:1331:G:H1'	1.80	0.46
54:1G:1352:C:H2'	54:1G:1353:G:C8	2.51	0.46
54:1G:1387:G:H2'	54:1G:1388:C:C6	2.51	0.46
54:1G:192:U:H2'	54:1G:193:C:C6	2.50	0.46
54:1G:243:A:C4'	54:1G:244:U:H5'	2.30	0.46
54:1G:256:U:H2'	54:1G:257:G:C8	2.51	0.46
54:1G:865:A:H5'	54:1G:1078:U:C5	2.51	0.46
24:1H:1629:U:O2'	24:1H:1630:G:H5'	2.15	0.46
24:1H:1888:G:H5''	24:1H:1888:G:N3	2.30	0.46
24:1H:54:G:O6	57:1H:4186:HOH:O	2.18	0.46
24:1H:598:G:H2'	24:1H:599:G:O4'	2.15	0.46
24:1H:900:A:H3'	24:1H:901:A:H8	1.81	0.46
3:22:35:GLU:O	3:22:39:ILE:HD13	2.15	0.46
22:2L:15:G:H1	22:2L:57:C:H5	1.63	0.46
24:1H:323:G:C8	29:31:171:PRO:HG3	2.50	0.46
29:39:66:PRO:O	29:39:67:GLN:HB3	2.16	0.46
12:3I:44:THR:HG22	12:3I:52:LEU:HD22	1.96	0.46
22:3K:41:C:H2'	22:3K:42:U:H6	1.80	0.46
5:42:103:GLY:O	5:42:106:PRO:HD2	2.15	0.46
36:45:34:LEU:HD12	36:45:130:LYS:O	2.16	0.46
54:1G:1228:C:OP2	13:4A:108:ARG:NH2	2.48	0.46
31:51:4:ILE:HG21	31:51:6:ARG:CZ	2.46	0.46
6:5E:99:ALA:O	18:9I:28:GLU:HA	2.15	0.46
35:78:134:ALA:O	35:78:138:LEU:HB2	2.16	0.46
26:79:45:ALA:HA	26:79:211:SER:O	2.16	0.46
37:98:38:VAL:HG22	37:98:112:ALA:HB2	1.98	0.46
42:E8:33:ARG:HE	42:E8:52:GLU:CD	2.19	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:F5:94:LEU:HA	47:F5:94:LEU:HD23	1.67	0.46
24:14:932:G:P	49:H5:29:ARG:HH22	2.38	0.46
45:H8:100:VAL:HG21	45:H8:134:PRO:HG2	1.98	0.46
27:11:25:THR:HG22	27:11:82:ILE:H	1.80	0.46
1:13:1007:C:N3	1:13:1022:G:N2	2.60	0.46
1:13:10:A:H2'	1:13:11:G:H8	1.81	0.46
1:13:129(A):G:C2	1:13:188:U:O2'	2.68	0.46
1:13:405:U:O4	4:3E:2:GLY:N	2.49	0.46
1:13:591:U:C2	1:13:592:G:C8	3.04	0.46
1:13:575:G:C5	1:13:881:G:C2	3.04	0.46
1:13:973:G:H3'	1:13:974:A:H5''	1.97	0.46
24:14:1416:G:O2'	24:14:1417:C:H6	1.99	0.46
22:3L:85:A:N6	24:14:2422:A:H5''	2.30	0.46
24:14:885:C:H1'	24:14:892:G:H1	1.80	0.46
54:1G:304:U:H2'	54:1G:305:G:C8	2.51	0.46
24:1H:1019:U:N3	24:1H:1020:A:N7	2.64	0.46
24:1H:118:A:C8	24:1H:119:A:C8	3.03	0.46
24:1H:1486:A:H2'	24:1H:1487:G:H8	1.81	0.46
24:1H:2233:U:H2'	24:1H:2234:G:C8	2.51	0.46
24:1H:2262:U:H4'	24:1H:2328:A:H2	1.81	0.46
24:1H:2481:G:HO2'	24:1H:2482:G:P	2.39	0.46
24:1H:2615:U:H2'	24:1H:2616:C:C6	2.51	0.46
24:1H:557:U:C2	24:1H:558:G:C8	3.04	0.46
24:1H:805:G:O5'	35:78:41:ARG:HG2	2.16	0.46
1:13:1060:C:C5'	10:1I:51:ARG:HG2	2.46	0.46
28:21:117:MET:O	28:21:117:MET:HG3	2.16	0.46
3:2E:70:VAL:N	3:2E:106:VAL:HG23	2.31	0.46
22:2K:19:C:H4'	22:2K:19:C:OP1	2.09	0.46
22:2L:85:A:N3	22:2L:85:A:H5'	2.31	0.46
5:42:27:ARG:HH11	5:42:47:LYS:HZ1	1.63	0.46
30:49:47:LYS:HG2	30:49:48:GLU:N	2.31	0.46
30:49:7:LEU:HD22	30:49:100:TRP:CE3	2.51	0.46
31:51:9:ILE:O	31:51:11:VAL:HG22	2.16	0.46
6:5E:23:LYS:HB2	6:5E:23:LYS:NZ	2.21	0.46
35:78:135:LEU:HA	35:78:135:LEU:HD23	1.82	0.46
16:7I:51:VAL:HG12	16:7I:52:ASP:C	2.36	0.46
9:82:125:TYR:HD1	9:82:126:SER:H	1.63	0.46
54:1G:1148:U:OP1	9:82:7:THR:HG21	2.15	0.46
43:B5:18:TYR:C	43:B5:20:GLY:N	2.68	0.46
20:BI:36:LEU:HA	20:BI:36:LEU:HD13	1.72	0.46
20:BI:72:LEU:HD12	20:BI:72:LEU:HA	1.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:P8:24:THR:HG23	52:P8:27:GLY:H	1.81	0.46
53:Q8:36:LYS:NZ	53:Q8:40:GLU:HG2	2.31	0.46
1:13:1171:G:H2'	1:13:1172:C:C6	2.51	0.46
1:13:1502:A:H2	1:13:1505:G:N1	2.13	0.46
1:13:240:C:H2'	1:13:241:C:C6	2.49	0.46
1:13:671:G:H2'	1:13:672:U:C6	2.50	0.46
24:14:1050:A:O2'	24:14:2752:C:H1'	2.15	0.46
24:14:1542:G:O6	24:14:1543:A:N6	2.49	0.46
24:14:1729:A:O2'	24:14:1730:U:H5''	2.16	0.46
24:14:1967:C:H2'	24:14:1968:G:O4'	2.16	0.46
24:14:2320:A:C6	24:14:2333:A:C8	3.04	0.46
24:14:2438:U:O3'	24:14:2439:A:H3'	2.15	0.46
24:14:2625:G:H2'	24:14:2626:C:O4'	2.16	0.46
24:14:459:U:H2'	24:14:460:A:C8	2.51	0.46
24:14:611:C:H2'	24:14:612:G:O4'	2.16	0.46
24:14:857:C:H2'	24:14:858:U:C6	2.50	0.46
25:16:22:U:H3	25:16:61:G:H1	1.64	0.46
10:1A:22:LYS:HB3	10:1A:22:LYS:HE3	1.75	0.46
2:1E:91:PRO:HB3	2:1E:154:LEU:HB2	1.98	0.46
2:1E:168:THR:OG1	2:1E:191:ASP:HB3	2.16	0.46
54:1G:976:G:H5'	54:1G:1358:U:O2'	2.15	0.46
54:1G:356:A:N3	54:1G:368:U:O2'	2.40	0.46
54:1G:370:C:H2'	54:1G:371:G:C8	2.51	0.46
24:1H:1055:G:O6	24:1H:1056:G:N1	2.49	0.46
24:1H:1332:G:N2	24:1H:1609:A:O2'	2.49	0.46
24:1H:1641:A:H2'	24:1H:1642:G:O4'	2.16	0.46
24:1H:2104:G:C2	24:1H:2186:G:C2	3.04	0.46
24:1H:2785:C:H2'	24:1H:2786:U:O4'	2.15	0.46
24:1H:557:U:H2'	24:1H:558:G:H8	1.81	0.46
28:21:179:GLU:O	28:21:180:ASN:HB2	2.16	0.46
3:22:32:LEU:HD22	3:22:59:ARG:NH1	2.30	0.46
3:22:79:ARG:NH2	3:22:83:ARG:H	2.13	0.46
34:25:9:GLU:O	34:25:83:ALA:HA	2.16	0.46
28:29:27:LEU:O	28:29:27:LEU:HG	2.15	0.46
22:2K:1:G:N3	22:2K:2:G:C8	2.83	0.46
29:31:68:LYS:HB3	29:31:68:LYS:HE3	1.69	0.46
36:45:24:GLY:HA3	36:45:25:ASP:CB	2.36	0.46
9:82:18:PHE:HB2	9:82:62:TYR:O	2.15	0.46
9:82:96:LEU:HA	9:82:96:LEU:HD12	1.71	0.46
18:9I:26:LEU:HD11	18:9I:29:PHE:CG	2.50	0.46
44:C5:73:ARG:NH2	44:C5:81:LYS:O	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:E8:23:LEU:HD13	51:N8:25:LEU:HB2	1.96	0.46
1:13:1011:G:N2	1:13:1019:C:O2	2.49	0.46
1:13:1149:C:H2'	1:13:1150:U:C6	2.50	0.46
1:13:1239:A:H62	1:13:1299:A:H62	1.62	0.46
1:13:1305:G:H21	1:13:1331:G:H2'	1.81	0.46
1:13:57:G:H2'	1:13:58:C:C6	2.51	0.46
1:13:816:A:OP1	1:13:1526:G:O2'	2.31	0.46
1:13:976:G:C8	1:13:1358:U:C2	3.04	0.46
24:14:1084:A:O2'	24:14:1105:U:O2'	2.05	0.46
24:14:1101:U:H2'	24:14:1102:C:C6	2.50	0.46
24:14:1173:G:H2'	24:14:1175:U:OP2	2.15	0.46
24:14:51:G:N3	24:14:119:A:C2	2.84	0.46
24:14:1331:A:O2'	24:14:1332:G:H8	1.98	0.46
24:14:1659:U:C4	24:14:1660:C:C5	3.04	0.46
24:14:1964:G:H4'	24:14:1965:C:OP2	2.16	0.46
24:14:2002:G:OP2	37:55:9:LYS:NZ	2.49	0.46
24:14:2113:U:H3'	24:14:2114:A:H4'	1.98	0.46
24:14:2503:A:H4'	24:14:2504:U:OP1	2.16	0.46
24:14:2630:G:H21	24:14:2892:A:H1'	1.79	0.46
24:14:602:G:O2'	24:14:655:A:N6	2.49	0.46
24:14:792:G:H5''	24:14:793:A:H5'	1.97	0.46
2:1E:112:VAL:O	2:1E:115:LEU:N	2.49	0.46
54:1G:1291:G:H4'	9:82:38:GLN:O	2.16	0.46
54:1G:160:A:H1'	54:1G:344:A:C5	2.51	0.46
54:1G:25:C:H2'	54:1G:26:A:C8	2.51	0.46
54:1G:688:G:H2'	54:1G:689:C:H6	1.81	0.46
24:1H:106:C:H2'	24:1H:107:C:C6	2.51	0.46
24:1H:1299:G:H3'	24:1H:1639:U:O4	2.16	0.46
24:1H:1636:C:P	57:1H:3558:HOH:O	2.74	0.46
24:1H:2032:G:C8	57:1H:4560:HOH:O	2.66	0.46
24:1H:2590:A:H2'	24:1H:2591:C:C6	2.51	0.46
24:1H:624:C:O2'	24:1H:657:U:H5''	2.15	0.46
3:22:113:ALA:HB2	3:22:202:ILE:HG13	1.98	0.46
3:22:9:GLY:HA3	14:5A:49:HIS:HA	1.98	0.46
22:2K:70:C:H2'	22:2K:71:C:H6	1.81	0.46
35:35:55:ARG:HG2	35:35:56:SER:N	2.30	0.46
29:39:63:LYS:HZ1	29:39:67:GLN:HB2	1.81	0.46
30:41:63:ILE:HB	30:41:141:PHE:CD2	2.51	0.46
30:49:28:VAL:HG13	30:49:31:VAL:HG11	1.98	0.46
5:4E:12:LEU:HB3	5:4E:31:LEU:HB2	1.97	0.46
31:51:13:LYS:HE3	31:51:13:LYS:HB3	1.61	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:58:67:LEU:HA	33:58:87:LEU:HD12	1.97	0.46
14:5A:28:GLY:C	14:5A:29:ARG:HG3	2.36	0.46
8:7E:100:ILE:HA	8:7E:101:PRO:HD3	1.64	0.46
17:8A:59:ILE:HG22	17:8A:71:PHE:HD2	1.81	0.46
37:98:52:ILE:O	37:98:55:ALA:N	2.46	0.46
43:B5:63:LYS:H	43:B5:63:LYS:CE	2.24	0.46
36:45:63:LYS:HB2	45:D5:116:VAL:HG11	1.98	0.46
43:F8:30:VAL:HG23	43:F8:31:HIS:O	2.16	0.46
50:I5:7:PRO:HB2	50:I5:27:THR:HG22	1.98	0.46
22:3K:85:A:H5'	47:J8:30:VAL:HG11	1.98	0.46
27:11:144:ALA:HB3	27:11:192:THR:HG23	1.98	0.46
27:11:68:LYS:HB3	27:11:70:TRP:CZ3	2.51	0.46
1:13:257:G:C4	1:13:258:G:C8	3.04	0.46
1:13:741:G:H2'	1:13:742:G:O4'	2.16	0.46
24:14:1504:C:H2'	24:14:1505:C:C6	2.51	0.46
24:14:1514:U:H2'	24:14:1515:C:C6	2.51	0.46
24:14:2059:A:H5'	24:14:2060:A:OP2	2.15	0.46
24:14:2086:U:H2'	24:14:2087:G:C8	2.51	0.46
24:14:2496:C:OP1	36:45:82:ARG:HB3	2.16	0.46
24:14:2540:C:H2'	24:14:2541:A:O4'	2.15	0.46
24:14:2579:C:H2'	24:14:2580:U:O4'	2.16	0.46
24:14:2638:G:O2'	24:14:2639:A:C8	2.65	0.46
24:14:270(L):U:O2'	24:14:270(M):U:OP1	2.30	0.46
24:14:2747:G:O3'	31:59:70:THR:HG21	2.15	0.46
24:14:839:U:H2'	24:14:840:C:C6	2.51	0.46
25:16:38:C:H2'	25:16:39:A:O4'	2.16	0.46
10:1A:81:THR:O	10:1A:85:LEU:HG	2.16	0.46
54:1G:1002:G:H2'	54:1G:1003:G:C8	2.51	0.46
54:1G:1226:C:C5	13:4A:104:ARG:HA	2.51	0.46
54:1G:342:C:C2'	54:1G:343:U:H5'	2.46	0.46
54:1G:834:C:C4	54:1G:835:U:C4	3.04	0.46
54:1G:961:U:OP2	54:1G:1223:C:O2'	2.17	0.46
24:1H:2286:A:H4'	24:1H:2287:A:O4'	2.16	0.46
24:1H:2483:C:N3	36:88:124:LYS:HE3	2.30	0.46
24:1H:2566:A:H4'	24:1H:2567:G:O5'	2.15	0.46
24:1H:551:G:OP1	41:D8:68:LYS:NZ	2.48	0.46
24:1H:580:C:H2'	24:1H:581:C:C6	2.51	0.46
24:1H:768:G:C4	24:1H:769:G:C8	3.05	0.46
28:21:119:ARG:HD2	28:21:120:TRP:NE1	2.31	0.46
34:25:23:ARG:HG3	34:25:24:VAL:N	2.31	0.46
22:2K:2:G:H2'	22:2K:3:U:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:2L:31:G:H2'	22:2L:32:A:H8	1.80	0.46
24:14:389:G:H1	35:35:71:VAL:HG12	1.81	0.46
29:39:128:ALA:O	29:39:142:TRP:NE1	2.49	0.46
22:3K:71:C:H2'	22:3K:72:U:C6	2.51	0.46
30:41:15:VAL:HG13	30:41:175:LEU:HB2	1.98	0.46
30:49:104:GLU:CD	50:I5:23:GLU:HG2	2.37	0.46
25:1J:43:C:H4'	30:49:66:GLN:OE1	2.16	0.46
31:51:101:ARG:HE	31:51:101:ARG:HB3	1.58	0.46
33:58:73:THR:CG2	33:58:84:LYS:HG2	2.41	0.46
6:5E:28:ARG:O	6:5E:31:GLU:HB3	2.15	0.46
8:72:5:PRO:O	8:72:8:ASP:HB3	2.16	0.46
36:88:48:GLU:O	36:88:48:GLU:HG3	2.15	0.46
17:8I:75:ARG:HH22	17:8I:77:VAL:HG13	1.80	0.46
19:AI:31:ILE:HD13	19:AI:49:ILE:HG12	1.97	0.46
20:BA:20:LEU:O	20:BA:23:ARG:HB3	2.16	0.46
20:BA:73:HIS:HB3	20:BA:74:LYS:H	1.49	0.46
44:C5:86:ARG:NH2	44:C5:91:GLU:OE2	2.46	0.46
45:D5:103:ARG:HB2	45:D5:138:GLU:HA	1.98	0.46
47:F5:88:LYS:HE2	47:F5:88:LYS:HB3	1.69	0.46
45:H8:142:SER:CB	45:H8:143:GLY:HA2	2.45	0.46
24:14:592:G:N2	53:M5:4:MET:HE1	2.23	0.46
52:P8:26:GLY:O	52:P8:30:VAL:HG23	2.16	0.46
24:1H:764:A:OP1	27:11:208:LYS:HE2	2.16	0.45
2:12:97:TRP:CZ3	2:12:99:GLY:HA2	2.51	0.45
1:13:1129:C:H4'	1:13:1130:A:H5'	1.98	0.45
1:13:155:C:H1'	1:13:167:G:N2	2.31	0.45
1:13:143:A:H2	1:13:220:G:H1	1.64	0.45
1:13:785:G:N7	57:13:1890:HOH:O	2.36	0.45
1:13:902:G:H2'	1:13:903:G:C8	2.51	0.45
24:14:1141:U:H2'	33:15:63:THR:HG21	1.97	0.45
24:14:1443:G:N2	24:14:1549:C:C2	2.85	0.45
25:16:15:A:H5'	25:16:16:G:C8	2.51	0.45
2:1E:95:GLN:O	2:1E:96:ARG:HD2	2.15	0.45
54:1G:1349:A:H2'	54:1G:1350:A:O4'	2.16	0.45
54:1G:197:A:OP2	54:1G:197:A:H3'	2.16	0.45
24:1H:1296:G:O2'	24:1H:1297:C:H5'	2.16	0.45
24:1H:2129:C:H2'	24:1H:2130:U:O4'	2.17	0.45
24:1H:2209:C:O2	24:1H:2216:G:C2	2.68	0.45
24:1H:2470:G:H5'	36:88:56:ARG:HH21	1.81	0.45
25:1J:13:A:N1	25:1J:69:G:O2'	2.36	0.45
25:1J:15:A:H1'	25:1J:109:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:22:24:ALA:HB1	3:22:28:GLN:HB2	1.97	0.45
28:29:77:ILE:CG2	28:29:79:ARG:HE	2.21	0.45
11:2A:22:HIS:HB3	11:2A:29:ILE:HG12	1.97	0.45
22:2K:18:G:H5''	22:2K:19:C:H1'	1.98	0.45
12:3A:69:TYR:HD2	12:3A:99:HIS:CD2	2.35	0.45
4:3E:29:PRO:C	4:3E:30:LYS:HD3	2.36	0.45
30:41:80:PHE:O	30:41:81:LYS:HB2	2.17	0.45
5:42:79:GLU:OE1	8:72:104:ARG:HA	2.16	0.45
30:49:125:PHE:HB3	30:49:166:ASP:OD2	2.16	0.45
13:4I:14:ARG:HB3	13:4I:17:VAL:HG12	1.98	0.45
35:78:6:LEU:O	35:78:7:ARG:HG2	2.16	0.45
16:7A:49:LEU:HD12	16:7A:50:LYS:H	1.81	0.45
18:9A:29:PHE:CD2	18:9A:39:VAL:HG11	2.51	0.45
39:B8:50:ILE:HG12	39:B8:64:ARG:HB3	1.98	0.45
40:C8:112:ARG:NH2	41:D8:48:GLY:H	2.13	0.45
45:H8:124:ILE:HD12	45:H8:125:LEU:H	1.81	0.45
45:H8:132:ASN:N	45:H8:132:ASN:OD1	2.50	0.45
50:I5:20:ASN:CG	50:I5:21:VAL:H	2.19	0.45
50:I5:60:GLN:CD	50:I5:60:GLN:H	2.19	0.45
52:P8:5:TRP:NE1	52:P8:7:PRO:HG3	2.31	0.45
27:11:101:GLU:OE1	27:11:103:ARG:HD3	2.16	0.45
27:11:213:ARG:HA	27:11:213:ARG:HD2	1.51	0.45
2:12:136:VAL:HG13	2:12:139:LYS:NZ	2.31	0.45
2:12:174:VAL:HG13	2:12:184:VAL:HG11	1.98	0.45
2:12:34:ALA:O	2:12:41:ILE:N	2.33	0.45
1:13:1281:U:P	1:13:1282:C:H41	2.34	0.45
1:13:1405:G:O4'	1:13:1519:A:H4'	2.16	0.45
1:13:48:C:H5''	1:13:365:U:O4	2.15	0.45
1:13:376:G:H5''	16:7I:5:ARG:HB2	1.98	0.45
1:13:418:C:O2'	1:13:540:G:H1'	2.15	0.45
1:13:627:G:H2'	1:13:628:G:H8	1.81	0.45
1:13:664:G:OP1	18:9I:64:ARG:NE	2.39	0.45
24:14:1024:G:H5''	24:14:1025:G:H5''	1.97	0.45
24:14:1113:U:H2'	24:14:1114:G:O4'	2.15	0.45
24:14:1288:U:C2	24:14:1327:C:O2	2.69	0.45
24:14:1479:G:O2'	24:14:1558:A:H5'	2.15	0.45
24:14:2187:G:C5	24:14:2188:C:C4	3.04	0.45
27:19:70:TRP:O	27:19:73:VAL:HG23	2.16	0.45
54:1G:991:U:H3	54:1G:1212:U:HO2'	1.61	0.45
54:1G:946:A:H61	54:1G:1234:C:H42	1.63	0.45
54:1G:327:A:C5	54:1G:329:A:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1178:C:O2	24:1H:1178:C:H2'	2.15	0.45
24:1H:1413:G:H8	24:1H:1413:G:O5'	2.00	0.45
24:1H:1776:G:OP2	57:1H:3604:HOH:O	2.20	0.45
24:1H:280:C:N4	24:1H:360:G:H1	2.15	0.45
24:1H:698:C:O2'	24:1H:734:A:N6	2.49	0.45
28:21:2:LYS:HD2	28:21:95:ILE:HG22	1.98	0.45
3:22:131:ARG:NH1	3:22:164:ARG:HH22	2.14	0.45
11:2A:50:TYR:HD2	11:2A:60:ALA:HB2	1.81	0.45
3:2E:3:ASN:OD1	3:2E:3:ASN:N	2.49	0.45
29:39:84:VAL:C	29:39:86:GLY:H	2.19	0.45
12:3A:111:LYS:O	12:3A:112:ASP:HB2	2.16	0.45
12:3I:53:ARG:HH12	12:3I:92:ASP:CB	2.29	0.45
22:3K:43:G:H2'	22:3K:44:C:C6	2.50	0.45
30:41:103:LEU:HD23	30:41:106:LEU:HD23	1.98	0.45
30:41:81:LYS:N	30:41:81:LYS:HD3	2.31	0.45
13:4A:29:ARG:HD3	13:4A:64:TRP:CZ2	2.51	0.45
31:51:26:VAL:HG11	31:51:75:ALA:O	2.17	0.45
33:58:17:ASP:O	33:58:56:ASN:HB2	2.16	0.45
33:58:25:ARG:O	33:58:29:LYS:HG3	2.15	0.45
1:13:368:U:P	32:69:91:SER:HG	2.39	0.45
7:6E:89:MET:SD	7:6E:156:TRP:HD1	2.39	0.45
39:75:22:PHE:HA	39:75:91:ARG:HH21	1.81	0.45
8:7E:104:ARG:HD2	8:7E:138:TRP:CG	2.51	0.45
9:8E:65:VAL:HG21	9:8E:73:GLN:HB3	1.98	0.45
41:95:1:MET:SD	41:95:43:GLU:HB2	2.56	0.45
45:D5:56:VAL:HG23	45:D5:133:ILE:HD13	1.98	0.45
52:L5:35:ARG:HG3	52:L5:42:LEU:HD11	1.98	0.45
27:11:12:SER:O	27:11:16:MET:HB2	2.16	0.45
1:13:1244:C:H2'	1:13:1245:A:C8	2.52	0.45
1:13:1446:A:OP1	1:13:1446:A:H4'	2.15	0.45
24:14:1045:A:O2'	24:14:1047:G:O4'	2.31	0.45
24:14:2151:G:H2'	24:14:2152:G:C8	2.51	0.45
24:14:729:G:OP2	27:19:13:ARG:NH1	2.49	0.45
2:1E:21:ARG:CB	2:1E:39:ILE:HA	2.44	0.45
2:1E:5:ILE:HG13	2:1E:6:THR:H	1.81	0.45
54:1G:338:A:OP1	34:25:97:ARG:NH2	2.49	0.45
54:1G:683:G:H2'	54:1G:684:A:C8	2.52	0.45
54:1G:998(A):C:H2'	54:1G:999:U:O4'	2.16	0.45
24:1H:1170:G:N2	24:1H:1180:C:C2	2.83	0.45
24:1H:1339:G:N2	24:1H:1603:A:H1'	2.30	0.45
24:1H:1799:G:H5''	24:1H:1819:A:N6	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2133:G:O2'	24:1H:2158:A:N1	2.43	0.45
24:1H:2532:G:H4'	24:1H:2657:A:C2	2.51	0.45
24:1H:280:C:H42	24:1H:360:G:H1	1.63	0.45
24:1H:990:A:H1'	24:1H:1156:A:N3	2.31	0.45
28:29:116:VAL:HG13	28:29:122:PHE:HB2	1.99	0.45
11:2A:46:GLY:HA2	11:2A:50:TYR:O	2.17	0.45
11:2A:58:PRO:HG3	11:2A:89:ALA:O	2.16	0.45
12:3I:58:VAL:O	12:3I:65:GLU:HA	2.17	0.45
36:45:136:ALA:O	36:45:139:GLU:HG2	2.15	0.45
30:49:121:ASN:ND2	30:49:123:ASN:HB2	2.24	0.45
14:5I:58:LYS:HB3	14:5I:58:LYS:HE2	1.68	0.45
32:61:69:LYS:HG2	32:61:69:LYS:O	2.16	0.45
38:65:14:VAL:O	38:65:18:ILE:HG23	2.16	0.45
9:82:13:ALA:HB2	9:82:68:GLY:HA3	1.98	0.45
40:85:65:ILE:O	40:85:68:ALA:N	2.50	0.45
17:8A:81:ARG:NH2	17:8A:84:LEU:HD21	2.32	0.45
24:14:25:U:H5'	42:A5:79:GLY:HA2	1.99	0.45
19:AA:66:MET:HB3	19:AA:69:HIS:CG	2.52	0.45
24:1H:64:A:O3'	43:F8:71:GLY:HA3	2.17	0.45
45:H8:30:ASN:HA	45:H8:89:PHE:HE1	1.82	0.45
24:14:2577:A:H5'	51:J5:3:LYS:HD3	1.99	0.45
1:13:1014:A:H4'	19:AI:14:HIS:CD2	2.51	0.45
1:13:633:G:H5'	1:13:634:C:OP2	2.16	0.45
24:14:1949:G:H2'	24:14:1950:G:O4'	2.17	0.45
24:14:2238:G:N3	24:14:2238:G:H2'	2.30	0.45
24:14:2350:C:H2'	24:14:2351:G:O4'	2.17	0.45
24:14:2853:C:H2'	24:14:2854:G:C8	2.52	0.45
24:14:807:U:H2'	24:14:808:G:H8	1.80	0.45
54:1G:1329:A:O2'	13:4A:24:GLY:HA2	2.16	0.45
54:1G:607:A:H2'	54:1G:608:A:O4'	2.17	0.45
24:1H:1021:A:C8	24:1H:1022:G:H5''	2.52	0.45
24:1H:1553:A:C6	24:1H:1555:G:H1'	2.52	0.45
24:1H:2572:A:OP1	24:1H:2574:G:H4'	2.16	0.45
24:1H:746:A:H2'	24:1H:2612:C:H5''	1.99	0.45
24:1H:2816:C:O3'	37:98:99:LYS:HE2	2.17	0.45
24:1H:2862:G:C6	24:1H:2863:C:C4	3.04	0.45
24:1H:299:A:H5'	24:1H:300:A:OP2	2.16	0.45
24:1H:415:A:H2'	24:1H:416:C:C6	2.50	0.45
24:1H:67:U:H2'	24:1H:68:G:C8	2.52	0.45
28:29:127:ASP:HA	28:29:135:HIS:ND1	2.32	0.45
3:2E:50:ALA:HA	3:2E:72:LYS:NZ	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:25:ARG:HG3	4:32:31:CYS:H	1.82	0.45
4:32:50:ARG:HA	4:32:51:PRO:HD3	1.78	0.45
5:42:131:ILE:O	5:42:134:ALA:HB3	2.16	0.45
13:4A:34:LEU:HD23	13:4A:56:LEU:HD21	1.99	0.45
31:51:157:TYR:CE1	31:51:172:LYS:HB2	2.51	0.45
31:59:146:ALA:O	31:59:150:ALA:N	2.47	0.45
7:62:102:ARG:O	7:62:106:GLN:HG3	2.16	0.45
38:65:88:ASP:OD1	38:65:90:GLY:N	2.47	0.45
34:68:52:VAL:HG12	34:68:94:ARG:NH2	2.31	0.45
39:75:108:ARG:HA	39:75:111:ARG:NH1	2.31	0.45
35:78:81:GLN:HG2	35:78:106:LEU:HD23	1.98	0.45
24:1H:1250:G:OP2	35:78:21:ARG:HD3	2.17	0.45
16:7A:39:TYR:HB2	16:7A:49:LEU:HD13	1.98	0.45
8:7E:11:THR:HG23	8:7E:14:ARG:HH12	1.80	0.45
9:82:34:ASN:HA	9:82:37:PHE:HD1	1.82	0.45
41:95:1:MET:HG3	41:95:43:GLU:N	2.30	0.45
41:95:76:LYS:HD2	41:95:80:GLN:O	2.17	0.45
39:B8:11:GLU:HB2	39:B8:14:TYR:CE2	2.50	0.45
45:D5:72:ARG:HD3	45:D5:72:ARG:HA	1.61	0.45
48:G5:10:LEU:HD13	48:G5:59:ARG:HD2	1.98	0.45
45:H8:29:TYR:HA	45:H8:33:LEU:O	2.16	0.45
51:J5:56:LYS:NZ	51:J5:58:LEU:HB2	2.30	0.45
24:14:125:G:C6	52:L5:10:ARG:HG3	2.52	0.45
49:L8:38:GLU:HB3	49:L8:40:THR:HG22	1.98	0.45
1:13:1091:U:H2'	1:13:1093:A:OP2	2.15	0.45
1:13:746:A:O5'	1:13:746:A:H8	2.00	0.45
1:13:89:U:C2	1:13:90:C:H5	2.35	0.45
24:14:2262:U:O2'	24:14:2263:C:H5'	2.17	0.45
24:14:2401:U:O2	24:14:2402:C:C5	2.70	0.45
24:14:2817:G:OP1	37:55:42:LYS:NZ	2.48	0.45
24:14:332:A:C2	24:14:335:C:C5	3.04	0.45
24:14:653:A:H5''	24:14:654:A:C8	2.51	0.45
33:15:36:GLY:HA3	33:15:48:MET:HG2	1.98	0.45
54:1G:433:C:O2'	54:1G:434:U:H5'	2.16	0.45
54:1G:731:G:OP1	54:1G:766:A:H1'	2.16	0.45
24:1H:1344:G:H4'	24:1H:1384:A:C5	2.51	0.45
24:1H:1635:G:H2'	24:1H:1636:C:H6	1.81	0.45
24:1H:2399:G:H2'	24:1H:2400:G:O4'	2.16	0.45
24:1H:2670:A:C2	24:1H:2671:A:C4	3.05	0.45
24:1H:2726:U:O2'	24:1H:2727:G:H5'	2.17	0.45
24:1H:511:U:C5	24:1H:512:G:C5	3.03	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2621:A:P	28:29:119:ARG:HH22	2.40	0.45
28:29:37:ARG:HG3	28:29:44:TYR:CZ	2.52	0.45
11:2A:100:ALA:O	11:2A:101:SER:OG	2.27	0.45
11:2I:33:THR:HA	11:2I:39:PRO:HA	1.97	0.45
22:2K:38:MIA:H161	23:4K:15:A:H2	1.81	0.45
23:4K:14:A:N6	23:4K:15:A:N1	2.63	0.45
23:4L:13:A:H2'	23:4L:13:A:N3	2.31	0.45
37:55:38:VAL:HG22	37:55:112:ALA:HB2	1.98	0.45
14:5A:21:TYR:HE2	14:5A:23:ARG:CZ	2.30	0.45
6:5E:18:GLN:O	6:5E:21:LEU:HB2	2.17	0.45
38:65:15:ARG:O	38:65:19:LYS:HD2	2.17	0.45
25:1J:38:C:O4'	38:65:95:HIS:NE2	2.49	0.45
26:71:194:ARG:HA	26:71:197:GLU:HG3	1.97	0.45
37:98:87:TYR:OH	37:98:116:LEU:HB3	2.17	0.45
19:AI:18:LYS:O	19:AI:22:LEU:HG	2.17	0.45
39:B8:54:ARG:HA	39:B8:59:THR:OG1	2.16	0.45
20:BI:33:ILE:O	20:BI:37:SER:OG	2.20	0.45
44:C5:17:SER:OG	44:C5:18:GLY:N	2.48	0.45
45:D5:112:ARG:HA	45:D5:112:ARG:HD2	1.71	0.45
45:D5:115:GLY:HA2	45:D5:179:ASP:HB2	1.98	0.45
45:D5:98:MET:HB2	45:D5:98:MET:HE3	1.84	0.45
44:G8:54:LYS:O	44:G8:55:TYR:CG	2.69	0.45
24:14:2612:C:OP2	51:J5:2:ALA:HA	2.17	0.45
24:1H:96:G:H4'	48:K8:48:HIS:CE1	2.52	0.45
53:Q8:16:ILE:HD13	53:Q8:58:ILE:HG12	1.98	0.45
27:11:32:SER:HA	27:11:34:VAL:HG22	1.99	0.45
1:13:1305:G:H22	1:13:1331:G:H2'	1.82	0.45
1:13:1504:G:H3'	57:13:1732:HOH:O	2.16	0.45
1:13:1510:U:H2'	1:13:1511:G:C8	2.51	0.45
1:13:144:G:N2	1:13:179:A:H1'	2.32	0.45
1:13:509:A:H5'	4:3E:54:TYR:HD2	1.81	0.45
1:13:865:A:H5'	1:13:1078:U:O4	2.17	0.45
24:14:1203:G:H3'	24:14:1204:A:H5''	1.98	0.45
24:14:1226:G:H4'	41:95:84:LYS:HA	1.99	0.45
24:14:244:A:C2	24:14:255:A:C4	3.05	0.45
24:14:2685:G:O2'	24:14:2726:U:H5	1.99	0.45
24:14:395:U:O2'	24:14:396:G:C8	2.66	0.45
24:14:491:G:H2'	24:14:492:A:C8	2.51	0.45
25:16:71:C:C4	25:16:72:G:N7	2.85	0.45
27:19:58:HIS:CD2	27:19:59:LYS:H	2.35	0.45
54:1G:1300:G:HO2'	54:1G:1301:U:P	2.39	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1167:U:O2	24:1H:1183:G:N2	2.49	0.45
24:1H:1189:A:OP2	57:1H:3838:HOH:O	2.19	0.45
24:1H:142:G:H1'	43:F8:37:THR:CG2	2.44	0.45
24:1H:2317:C:H2'	24:1H:2318:G:O4'	2.16	0.45
24:1H:2388:A:N7	24:1H:2389:G:C6	2.84	0.45
24:1H:2:G:N2	24:1H:2901:C:H42	2.14	0.45
24:1H:459:U:H4'	52:P8:40:TRP:CZ3	2.51	0.45
24:1H:489:G:N7	42:E8:49:LYS:NZ	2.60	0.45
3:22:131:ARG:NH2	3:22:164:ARG:HH22	2.14	0.45
34:25:113:LYS:O	34:25:117:LEU:HD13	2.17	0.45
3:2E:148:GLY:HA3	3:2E:172:ARG:O	2.15	0.45
4:32:76:ARG:O	4:32:79:PHE:HB3	2.16	0.45
35:35:71:VAL:HG13	35:35:72:PRO:HD3	1.98	0.45
4:3E:155:LEU:O	4:3E:158:ILE:N	2.49	0.45
4:3E:85:LYS:O	4:3E:89:THR:OG1	2.22	0.45
5:42:81:GLU:N	5:42:81:GLU:CD	2.70	0.45
24:14:956:G:OP1	36:45:88:GLY:N	2.50	0.45
33:58:32:THR:HG22	33:58:37:LYS:HB2	1.99	0.45
6:5E:23:LYS:HA	6:5E:26:ILE:HD12	1.99	0.45
38:65:21:THR:HG23	38:65:23:ARG:H	1.82	0.45
2:1E:178:ARG:NH2	8:7E:74:PRO:HB3	2.32	0.45
19:AA:20:LEU:O	19:AA:23:ASN:HB2	2.17	0.45
20:BI:69:GLY:O	20:BI:73:HIS:NE2	2.49	0.45
45:D5:40:ASP:OD2	45:D5:42:VAL:HG23	2.16	0.45
45:D5:5:LEU:HD12	45:D5:5:LEU:HA	1.70	0.45
42:E8:4:LYS:HB3	42:E8:106:ILE:HB	1.97	0.45
47:F5:46:LEU:O	47:F5:47:GLN:NE2	2.50	0.45
50:I5:58:ARG:HH22	50:I5:62:ARG:HB2	1.81	0.45
24:1H:784:A:C5	27:11:229:VAL:HG21	2.51	0.45
2:12:169:LYS:HE3	2:12:169:LYS:HB3	1.59	0.45
2:12:190:THR:O	2:12:191:ASP:HB3	2.16	0.45
2:12:19:HIS:CE1	2:12:204:ASN:HB3	2.52	0.45
2:12:74:LYS:O	2:12:78:GLN:HB3	2.16	0.45
1:13:1079:G:C6	1:13:1080:A:N6	2.85	0.45
1:13:1300:G:O2'	1:13:1301:U:OP2	2.35	0.45
1:13:1459:C:H5''	20:BI:27:LYS:HE3	1.98	0.45
1:13:45:U:H2'	1:13:46:G:C8	2.52	0.45
1:13:5:U:HO2'	1:13:6:G:P	2.40	0.45
1:13:602:A:H2'	1:13:603:U:O4'	2.15	0.45
1:13:953:G:N7	13:4I:104:ARG:NH2	2.64	0.45
24:14:1198:U:C2	24:14:1199:U:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1283:G:N2	24:14:1285:G:H3'	2.32	0.45
24:14:1910:G:H1	24:14:1920:C:H42	1.65	0.45
24:14:2208:U:H4'	27:19:151:LYS:HG2	1.99	0.45
27:19:271:ILE:O	27:19:272:ALA:HB2	2.17	0.45
54:1G:1116:C:H2'	54:1G:1117:G:O4'	2.17	0.45
54:1G:1321:C:N3	54:1G:1322:C:N4	2.65	0.45
54:1G:1421:G:H1	54:1G:1479:C:H42	1.64	0.45
54:1G:1522:U:H2'	54:1G:1523:G:C8	2.52	0.45
54:1G:803:G:H2'	54:1G:804:U:C6	2.52	0.45
24:1H:1502:C:O2'	24:1H:1503:U:H5'	2.17	0.45
24:1H:1568:G:H5''	27:11:61:LEU:HD23	1.98	0.45
24:1H:1844:C:H2'	24:1H:1845:G:C8	2.51	0.45
24:1H:1951:U:O2	24:1H:1953:A:H8	2.00	0.45
24:1H:2115:G:O2'	24:1H:2165:G:N2	2.48	0.45
24:1H:2532:G:C6	24:1H:2533:A:C6	3.05	0.45
24:1H:273(F):C:O2	24:1H:273(F):C:H2'	2.17	0.45
24:1H:484:C:H2'	24:1H:485:C:C6	2.51	0.45
24:1H:618:G:H2'	24:1H:618(A):C:O4'	2.17	0.45
28:29:105:THR:HG21	28:29:164:ARG:NE	2.31	0.45
3:2E:149:ALA:HA	3:2E:201:TYR:O	2.17	0.45
24:1H:606:U:OP2	29:31:104:LYS:HE3	2.17	0.45
29:39:110:LEU:HD12	29:39:202:PHE:HE1	1.81	0.45
24:14:2315:G:OP1	30:49:36:LYS:NZ	2.50	0.45
13:4A:57:ARG:HH12	50:I5:17:GLY:HA3	1.82	0.45
6:5E:67:MET:SD	6:5E:75:LEU:HD12	2.57	0.45
32:69:68:LEU:HA	32:69:71:ILE:HG22	1.98	0.45
7:6E:72:ARG:HG3	7:6E:142:GLU:OE1	2.16	0.45
16:7A:1:MET:HE1	16:7A:65:GLN:HB2	1.98	0.45
41:95:21:ARG:HH22	41:95:65:GLY:C	2.20	0.45
37:98:20:LEU:HD21	37:98:40:LYS:HD3	1.99	0.45
39:B8:29:ARG:HB2	39:B8:46:GLU:HB2	1.99	0.45
45:H8:52:SER:C	45:H8:54:HIS:H	2.18	0.45
24:14:1311:G:C2'	52:L5:47:ARG:HH21	2.30	0.45
53:Q8:30:ARG:HG3	53:Q8:30:ARG:O	2.16	0.45
1:13:1252:A:H2'	1:13:1253:G:O4'	2.17	0.45
1:13:191(F):U:H2'	1:13:191:G:H8	1.81	0.45
1:13:233:C:H2'	1:13:234:C:H6	1.82	0.45
1:13:688:G:H2'	1:13:689:C:C6	2.50	0.45
24:14:1504:C:H2'	24:14:1505:C:H6	1.82	0.45
24:14:2274:A:C6	24:14:2276:G:C8	3.04	0.45
24:14:455:C:N3	24:14:473:G:H5'	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:540:G:H2'	24:14:541:C:H6	1.81	0.45
24:14:892:G:N7	24:14:893:C:C4	2.85	0.45
27:19:159:ALA:HB1	27:19:198:ASN:O	2.17	0.45
27:19:218:ARG:HB3	27:19:219:PRO:HD2	1.98	0.45
54:1G:972:C:O2	10:1A:55:LYS:HD3	2.17	0.45
2:1E:172:ILE:O	2:1E:176:GLU:HG3	2.17	0.45
54:1G:803:G:C5	54:1G:804:U:C4	3.04	0.45
24:1H:2074:U:H2'	24:1H:2075:U:C6	2.51	0.45
24:1H:2181:G:C2	24:1H:2182:G:C5	3.05	0.45
24:1H:2290:G:C6	24:1H:2291:U:N3	2.85	0.45
24:1H:2590:A:O2'	24:1H:2591:C:H5'	2.16	0.45
24:1H:2808:U:H2'	24:1H:2809:A:H8	1.82	0.45
28:29:135:HIS:CD2	28:29:135:HIS:H	2.33	0.45
11:2I:16:SER:O	11:2I:35:PRO:HG3	2.15	0.45
22:2L:17:OMG:O2'	22:2L:18:G:H5'	2.17	0.45
22:2L:1:G:N3	22:2L:2:G:C8	2.85	0.45
22:2L:59:A:H61	22:2L:60:A:H62	1.64	0.45
22:2L:81:C:C4	22:2L:82:A:N7	2.84	0.45
35:35:101:VAL:HG22	35:35:107:LYS:O	2.17	0.45
4:3E:86:LYS:HG2	4:3E:86:LYS:H	1.65	0.45
30:49:11:TYR:HA	30:49:15:VAL:HB	1.99	0.45
24:14:2311:A:H1'	30:49:82:LEU:HD11	1.98	0.45
7:62:38:LEU:O	7:62:42:ILE:HG13	2.17	0.45
7:6E:15:ASP:HB3	7:6E:19:GLY:H	1.82	0.45
8:72:17:THR:HG22	8:72:63:LEU:HG	1.98	0.45
39:75:9:LEU:C	39:75:9:LEU:HD13	2.37	0.45
36:88:2:LEU:HB3	36:88:69:PHE:CE1	2.52	0.45
7:6E:16:LEU:HG	9:8E:42:ARG:HA	1.98	0.45
42:A5:15:ARG:O	42:A5:19:LEU:HD13	2.16	0.45
25:1J:12:C:O2	46:E5:74:ARG:NH1	2.50	0.45
47:F5:32:LYS:HB3	47:F5:32:LYS:HE2	1.75	0.45
44:G8:7:VAL:CG2	44:G8:37:VAL:HG11	2.46	0.45
49:H5:40:THR:HG23	49:H5:43:ILE:CG1	2.47	0.45
51:J5:20:ARG:HA	51:J5:23:HIS:ND1	2.32	0.45
53:M5:40:GLU:H	53:M5:43:GLN:HG3	1.82	0.45
51:N8:58:LEU:H	51:N8:58:LEU:HD12	1.81	0.45
24:1H:780:G:OP1	27:11:218:ARG:NH2	2.50	0.45
1:13:1032(A):G:H2'	1:13:1032(B):G:H8	1.81	0.45
1:13:1355:G:H2'	1:13:1356:G:H8	1.82	0.45
1:13:391:G:C6	1:13:392:G:C5	3.05	0.45
1:13:690:G:H22	11:2I:55:LYS:HZ2	1.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:127:A:H5''	24:14:128:C:C6	2.51	0.45
24:14:1678:G:N2	24:14:1989:G:N2	2.64	0.45
24:14:1849:G:H2'	24:14:1850:G:H8	1.81	0.45
24:14:2209:C:O2	24:14:2216:G:C2	2.70	0.45
24:14:2516:G:C5	24:14:2517:C:C5	3.05	0.45
24:14:545:G:H8	24:14:545:G:O5'	2.00	0.45
24:14:900:A:H3'	24:14:901:A:H8	1.81	0.45
27:19:93:ALA:HB2	27:19:107:ALA:HB2	1.99	0.45
54:1G:1036:G:H3'	54:1G:1037:C:C6	2.52	0.45
54:1G:1046:A:H3'	54:1G:1047:G:C8	2.51	0.45
54:1G:1466:C:H2'	54:1G:1467:G:O4'	2.17	0.45
54:1G:188:U:O2'	54:1G:189:U:H5'	2.17	0.45
54:1G:273:A:N6	54:1G:274:A:C6	2.84	0.45
54:1G:41:G:H2'	54:1G:42:G:H8	1.82	0.45
54:1G:434:U:H2'	54:1G:435:C:C6	2.52	0.45
54:1G:562:C:H4'	54:1G:563:A:O5'	2.16	0.45
54:1G:873:A:H8	54:1G:873:A:OP1	2.00	0.45
24:1H:1509:C:H3'	24:1H:1510:A:H5''	1.98	0.45
24:1H:1639:U:H2'	24:1H:1640:C:H5''	1.99	0.45
24:1H:1894:C:O2'	24:1H:1895:C:H5'	2.16	0.45
24:1H:1769:G:O2'	24:1H:1958:C:OP1	2.18	0.45
24:1H:2740:A:OP2	24:1H:2763:G:N1	2.38	0.45
24:1H:997:G:C2'	24:1H:998:C:H5'	2.47	0.45
3:22:83:ARG:NH1	3:22:87:LEU:HD11	2.32	0.45
24:14:2673:G:O3'	34:25:26:LYS:NZ	2.50	0.45
22:2K:59:A:O2'	22:2K:60:A:H5'	2.17	0.45
29:31:29:ASN:HB3	29:31:112:MET:HE1	1.98	0.45
29:39:120:GLU:HG3	29:39:122:LYS:HG2	1.98	0.45
22:3K:15:G:N2	22:3K:68:A:H1'	2.31	0.45
22:3K:8:4SU:H1'	22:3K:9:U:OP1	2.17	0.45
22:3L:31:G:H2'	22:3L:32:A:H8	1.81	0.45
30:41:135:LEU:O	30:41:154:GLY:HA3	2.16	0.45
13:4A:20:THR:HG22	13:4A:26:GLY:O	2.16	0.45
1:13:947:G:OP1	13:4I:108:ARG:HB3	2.17	0.45
3:2E:13:GLY:HA2	14:5I:57:ARG:HE	1.80	0.45
32:69:101:LEU:HA	32:69:105:HIS:HB2	1.99	0.45
15:6A:75:PRO:O	15:6A:78:TYR:HB3	2.15	0.45
37:98:25:ALA:O	37:98:26:LYS:C	2.55	0.45
39:B8:26:ASP:O	39:B8:49:VAL:HG22	2.16	0.45
44:C5:57:GLN:HB3	44:C5:58:GLY:H	1.63	0.45
41:D8:51:VAL:HG12	41:D8:52:VAL:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:F8:32:PRO:HA	43:F8:77:LYS:HD2	1.97	0.45
47:J8:12:PRO:HB3	47:J8:43:TYR:CD1	2.52	0.45
49:L8:5:LYS:HD2	49:L8:34:GLU:OE1	2.16	0.45
52:P8:19:ARG:NH2	52:P8:23:ARG:HH22	2.15	0.45
27:11:172:TYR:CD2	27:11:186:HIS:HA	2.52	0.45
2:12:161:ALA:HB1	2:12:185:ILE:HD11	1.98	0.45
1:13:1288:A:H2'	1:13:1289:A:O4'	2.17	0.45
1:13:163:C:H2'	1:13:164:U:C6	2.51	0.45
1:13:187:C:O2	1:13:191(A):G:N1	2.50	0.45
24:14:1754:C:OP2	39:75:113:LYS:NZ	2.47	0.45
24:14:2209:C:O2'	24:14:2211:G:N2	2.50	0.45
24:14:2773:C:H2'	24:14:2774:C:H6	1.83	0.45
24:14:314:A:H2'	24:14:315:G:H8	1.82	0.45
24:14:820:A:N3	24:14:943:U:H4'	2.32	0.45
24:14:952:G:C6	24:14:953:A:N7	2.85	0.45
33:15:137:LYS:HD3	33:15:137:LYS:HA	1.48	0.45
54:1G:1103:C:H5''	2:12:98:LEU:HD13	1.98	0.45
54:1G:1143:G:H2'	54:1G:1144:G:C8	2.52	0.45
54:1G:1270:C:OP2	21:1B:24:ARG:NH2	2.49	0.45
54:1G:1323:G:H2'	54:1G:1324:A:O4'	2.17	0.45
54:1G:1342:C:H2'	54:1G:1343:G:H8	1.82	0.45
54:1G:1386:G:C2	54:1G:1387:G:N7	2.85	0.45
54:1G:313:A:H2'	54:1G:314:C:C6	2.52	0.45
54:1G:464:G:N2	54:1G:467:G:C8	2.85	0.45
54:1G:854:G:C2	54:1G:855:G:C8	3.04	0.45
54:1G:993:G:H2'	54:1G:995:C:H41	1.82	0.45
24:1H:1239:G:H2'	24:1H:1240:U:O4'	2.17	0.45
24:1H:1268:A:H2'	24:1H:1269:A:O4'	2.16	0.45
24:1H:139:G:N3	24:1H:141:A:N1	2.64	0.45
24:1H:172:C:H2'	24:1H:173:G:C8	2.51	0.45
24:1H:2272:U:H5''	24:1H:2273:A:OP1	2.17	0.45
24:1H:2582:G:N2	24:1H:2583:G:H1'	2.31	0.45
24:1H:270(X):G:C6	24:1H:270(Y):G:N1	2.85	0.45
24:1H:273(F):C:H3'	24:1H:274:G:C5'	2.46	0.45
24:1H:2830:G:C8	24:1H:2830:G:H5''	2.51	0.45
24:1H:547:A:C5	24:1H:548:A:C6	3.05	0.45
24:1H:601:C:OP1	29:31:108:LYS:HE3	2.17	0.45
24:1H:607:U:N3	24:1H:621:A:C2	2.80	0.45
28:21:116:VAL:HG13	28:21:122:PHE:CG	2.51	0.45
28:29:53:PRO:HA	28:29:74:PRO:HB3	1.99	0.45
29:39:187:VAL:HG12	35:35:3:LEU:HG	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:41:56:ALA:HB2	30:41:153:ARG:NE	2.32	0.45
33:58:133:GLN:O	33:58:134:ARG:NH1	2.50	0.45
6:5E:44:GLY:HA2	6:5E:59:TYR:CE1	2.52	0.45
32:61:130:TYR:HB3	32:61:136:VAL:HG13	1.99	0.45
32:69:75:LEU:HD12	32:69:139:GLN:O	2.17	0.45
16:7A:65:GLN:HA	16:7A:66:PRO:HD3	1.78	0.45
1:13:310:G:P	16:7I:27:LYS:HZ1	2.32	0.45
40:85:83:LEU:CD2	40:85:88:ILE:HB	2.46	0.45
36:88:78:PRO:HG2	36:88:81:VAL:HG11	1.99	0.45
19:AI:18:LYS:NZ	19:AI:22:LEU:HD21	2.32	0.45
19:AI:40:ILE:O	19:AI:41:VAL:HG22	2.17	0.45
45:H8:19:ARG:NH1	45:H8:84:GLU:HB2	2.32	0.45
2:12:91:PRO:HG3	2:12:154:LEU:HB2	1.99	0.44
2:12:222:ILE:HG22	2:12:226:ARG:HD2	1.99	0.44
1:13:1414:U:H2'	1:13:1415:G:H8	1.82	0.44
1:13:1525:G:P	11:2I:120:ARG:HH22	2.40	0.44
1:13:232:G:C6	1:13:233:C:C4	3.05	0.44
1:13:738:C:C2	1:13:739:C:C5	3.05	0.44
1:13:827:U:C5	1:13:870:U:C5	3.05	0.44
24:14:1410:G:N2	24:14:1593:G:C4	2.85	0.44
24:14:1971:A:H5''	57:14:3597:HOH:O	2.16	0.44
24:14:212:G:H2'	24:14:213:A:C8	2.52	0.44
24:14:2538:C:H2'	24:14:2539:C:H6	1.82	0.44
24:14:654(D):G:N2	24:14:654(Q):C:N3	2.47	0.44
24:14:71:A:H5'	24:14:71:A:H8	1.82	0.44
2:1E:208:ILE:H	2:1E:208:ILE:HG13	1.58	0.44
54:1G:186:C:H42	54:1G:191:G:H1	1.65	0.44
54:1G:577:G:H2'	54:1G:578:C:H6	1.82	0.44
54:1G:582:U:H5''	15:6A:64:ARG:NH2	2.32	0.44
54:1G:735:C:H2'	54:1G:736:C:H6	1.83	0.44
24:1H:1079:C:N4	24:1H:1088:A:OP1	2.49	0.44
24:1H:1077:A:H2	24:1H:1088:A:N6	2.15	0.44
24:1H:1176:G:H5''	24:1H:1177:A:N7	2.33	0.44
24:1H:1275:A:N1	24:1H:1295:C:O2'	2.43	0.44
24:1H:1359:A:N6	24:1H:1372:U:H3	2.13	0.44
24:1H:1443:G:N7	57:1H:3688:HOH:O	2.36	0.44
24:1H:1479:G:H5'	24:1H:1558:A:H2	1.81	0.44
24:1H:1491:G:O2'	24:1H:1492:G:H5'	2.17	0.44
24:1H:173:G:H2'	24:1H:174:C:C6	2.51	0.44
24:1H:825:C:H4'	24:1H:2428:G:C5	2.52	0.44
24:1H:2760:C:O2'	24:1H:2761:G:H5'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:654(N):G:H2'	24:1H:654(O):G:C8	2.52	0.44
24:1H:736:C:O5'	24:1H:736:C:H6	1.99	0.44
24:1H:749:C:OP2	57:1H:4354:HOH:O	2.21	0.44
12:3A:53:ARG:HH12	12:3A:92:ASP:CB	2.30	0.44
30:41:33:ARG:O	30:41:162:THR:HG23	2.17	0.44
54:1G:15:G:H4'	5:42:24:ARG:HH12	1.80	0.44
33:58:37:LYS:O	40:C8:67:ALA:HB2	2.17	0.44
31:59:26:VAL:HG13	31:59:27:LYS:H	1.82	0.44
38:65:25:ARG:O	38:65:39:ILE:HA	2.17	0.44
24:1H:1952:A:C4	34:68:22:ILE:HG13	2.52	0.44
32:69:103:ARG:HH21	32:69:104:GLN:HB3	1.81	0.44
32:69:97:ILE:O	32:69:100:ALA:HB3	2.16	0.44
8:72:82:HIS:C	8:72:82:HIS:CD2	2.91	0.44
39:75:19:LEU:HD22	39:75:86:ILE:HG23	1.98	0.44
26:79:30:LYS:HD2	26:79:182:PRO:HD3	1.98	0.44
40:85:92:ARG:HD2	41:95:11:GLN:OE1	2.18	0.44
19:AA:81:ARG:HE	19:AA:81:ARG:HB2	1.34	0.44
40:C8:47:TYR:HA	40:C8:50:ARG:CZ	2.47	0.44
45:D5:76:LEU:HA	45:D5:83:PRO:HA	1.99	0.44
44:G8:21:LYS:HE2	44:G8:21:LYS:HB3	1.36	0.44
45:H8:7:ALA:HB2	45:H8:59:LEU:HD13	1.99	0.44
1:13:1071:C:H2'	1:13:1072:G:H8	1.82	0.44
1:13:1151:A:N6	1:13:1152:A:N6	2.65	0.44
1:13:21:G:OP1	57:13:1766:HOH:O	2.20	0.44
1:13:989:C:H42	1:13:1216:G:H1	1.64	0.44
24:14:1503:U:H2'	24:14:1504:C:C6	2.52	0.44
24:14:526:A:N3	24:14:2044:C:H1'	2.33	0.44
24:14:2081:C:H2'	24:14:2082:A:C8	2.52	0.44
24:14:2136:C:N4	24:14:2156:G:H22	2.16	0.44
24:14:2168:G:H21	24:14:2169:A:H8	1.66	0.44
24:14:527:C:OP2	24:14:2779:U:C5	2.70	0.44
24:14:844:C:H3'	24:14:845:G:C8	2.52	0.44
10:1A:11:PHE:HE1	10:1A:67:THR:HG22	1.82	0.44
54:1G:1213:A:N6	54:1G:1215:G:N3	2.64	0.44
54:1G:1522:U:H2'	54:1G:1523:G:H8	1.82	0.44
24:1H:1036:G:H2'	24:1H:1037:G:O4'	2.18	0.44
24:1H:1062:G:OP1	24:1H:1070:A:H4'	2.16	0.44
24:1H:141:A:C8	24:1H:1408:C:H1'	2.52	0.44
24:1H:1545(A):A:H2'	24:1H:1546:C:O4'	2.17	0.44
24:1H:1815:A:C5	24:1H:1817:G:C6	3.06	0.44
24:1H:182:A:H2'	24:1H:183:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1965:C:H3'	24:1H:1966:A:H2'	1.99	0.44
24:1H:458:G:O2'	24:1H:469:G:O6	2.26	0.44
24:1H:860:U:C5	24:1H:917:A:H2	2.33	0.44
10:1I:40:LEU:HB2	10:1I:69:ASN:CB	2.47	0.44
25:1J:40:U:H1'	25:1J:46:A:N1	2.32	0.44
25:1J:56:G:H4'	25:1J:57:A:H8	1.83	0.44
3:22:148:GLY:HA3	3:22:172:ARG:O	2.16	0.44
11:2A:120:ARG:HA	11:2A:121:PRO:HD3	1.70	0.44
3:2E:47:LEU:HG	3:2E:50:ALA:HB3	2.00	0.44
29:39:157:VAL:HB	29:39:194:MET:HB3	1.98	0.44
22:3L:11:C:H42	22:3L:25:G:H1	1.64	0.44
13:4I:50:GLU:O	13:4I:54:VAL:HG23	2.17	0.44
23:4L:15:A:O5'	23:4L:15:A:H8	2.00	0.44
31:51:95:ARG:NH1	31:51:95:ARG:HB3	2.32	0.44
6:52:5:GLU:HG3	6:52:93:SER:OG	2.17	0.44
33:58:67:LEU:O	33:58:88:GLU:HG3	2.17	0.44
31:59:7:LEU:HA	31:59:65:HIS:CE1	2.53	0.44
6:5E:97:PHE:HB3	18:9I:31:LEU:HB2	1.99	0.44
32:61:75:LEU:HD11	32:61:105:HIS:CE1	2.51	0.44
15:6I:82:ILE:O	15:6I:86:GLY:N	2.44	0.44
24:1H:811:U:H2'	35:78:21:ARG:HA	1.98	0.44
35:78:59:LEU:O	35:78:61:ARG:N	2.47	0.44
35:78:89:ALA:HA	35:78:121:LYS:HD3	1.98	0.44
39:B8:50:ILE:O	39:B8:99:LEU:HB2	2.17	0.44
20:BI:14:LYS:HB2	20:BI:17:ARG:NH2	2.32	0.44
20:BI:56:MET:O	20:BI:59:ALA:HB3	2.16	0.44
44:C5:61:ILE:HB	44:C5:63:LYS:HD3	2.00	0.44
45:H8:97:GLU:HB2	45:H8:125:LEU:HD11	1.99	0.44
52:L5:43:THR:HG23	52:L5:44:PRO:HD2	1.99	0.44
1:13:1200:C:H4'	1:13:1201:A:H5''	2.00	0.44
1:13:1243:C:O2	1:13:1295:G:N2	2.51	0.44
1:13:1293:G:H2'	1:13:1294:G:O4'	2.17	0.44
1:13:380:G:N2	1:13:384:G:C5	2.85	0.44
1:13:448:A:H2'	1:13:449:C:O2	2.18	0.44
1:13:575:G:C8	1:13:881:G:N2	2.85	0.44
1:13:730:G:C5	1:13:731:G:H1'	2.52	0.44
1:13:751:U:O4'	15:6I:24:SER:HA	2.18	0.44
24:14:1225:C:O2'	41:95:85:LYS:N	2.50	0.44
24:14:1833:U:H2'	24:14:1834:U:H6	1.83	0.44
24:14:2535:G:H2'	24:14:2536:G:O4'	2.18	0.44
24:14:455:C:N3	24:14:472:A:H2'	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:566:U:H2'	24:14:567:A:O4'	2.17	0.44
25:16:94:C:H2'	25:16:95:U:H6	1.82	0.44
2:1E:111:ARG:NH1	2:1E:111:ARG:HG2	2.31	0.44
2:1E:22:LYS:HD3	2:1E:40:HIS:HE1	1.81	0.44
54:1G:243:A:C2	54:1G:245:C:C2	3.05	0.44
54:1G:687:A:H4'	54:1G:688:G:O5'	2.17	0.44
24:1H:1021:A:C2	24:1H:1023:U:C2	3.05	0.44
24:1H:1021:A:C3'	24:1H:1021:A:C8	3.00	0.44
24:1H:1140:C:OP1	33:58:23:LEU:HB3	2.17	0.44
24:1H:1728:G:H5'	24:1H:1729:A:OP2	2.17	0.44
24:1H:1748:G:H2'	24:1H:1749:A:C8	2.52	0.44
24:1H:2180:U:H2'	24:1H:2181:G:O4'	2.17	0.44
24:1H:2420:C:OP1	53:Q8:33:ASN:HA	2.17	0.44
24:1H:2799:A:H2'	24:1H:2801:A:H8	1.83	0.44
28:21:57:LYS:C	28:21:59:VAL:H	2.21	0.44
11:2A:114:VAL:HA	11:2A:115:PRO:HD3	1.84	0.44
57:1G:1876:HOH:O	4:32:151:LYS:NZ	2.27	0.44
4:3E:194:LEU:HD12	4:3E:195:ALA:N	2.32	0.44
12:3I:36:VAL:O	12:3I:59:ARG:N	2.45	0.44
5:42:78:HIS:CE1	5:42:142:LEU:HD23	2.52	0.44
5:42:71:LEU:HD11	5:42:114:GLY:O	2.16	0.44
6:52:11:ASN:HB3	6:52:14:LEU:HG	2.00	0.44
24:1H:1006:C:O2	33:58:106:MET:HG2	2.17	0.44
32:61:1:MET:O	32:61:20:ASP:HA	2.17	0.44
7:62:138:LYS:HE2	7:62:142:GLU:CD	2.37	0.44
7:62:22:LEU:HD12	7:62:97:GLN:HE21	1.82	0.44
54:1G:1118:C:H5'	9:82:104:ARG:HG2	1.99	0.44
42:A5:18:ARG:HA	42:A5:21:VAL:HB	1.98	0.44
19:AA:11:VAL:HG12	19:AA:12:ASP:N	2.31	0.44
19:AA:71:LEU:HA	19:AA:71:LEU:HD23	1.78	0.44
20:BI:30:LYS:NZ	20:BI:80:ARG:HH12	2.15	0.44
45:D5:14:LYS:HA	45:D5:15:PRO:HD3	1.72	0.44
42:E8:18:ARG:HD3	42:E8:76:VAL:HG13	1.99	0.44
36:88:20:ALA:HB3	45:H8:79:ARG:HH12	1.82	0.44
50:I5:50:VAL:HG23	50:I5:51:ASP:H	1.83	0.44
46:I8:48:GLY:HA3	46:I8:80:HIS:ND1	2.32	0.44
51:J5:48:GLU:OE1	51:J5:48:GLU:N	2.50	0.44
53:Q8:54:GLU:HA	53:Q8:54:GLU:OE2	2.16	0.44
2:12:87:ARG:CZ	2:12:232:PRO:HA	2.47	0.44
1:13:1081:G:H2'	1:13:1082:G:C8	2.52	0.44
1:13:1198:G:O2'	10:1I:55:LYS:HD3	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1203:C:H2'	1:13:1204:A:O4'	2.18	0.44
1:13:134:A:H1'	1:13:325:A:C5	2.52	0.44
1:13:1367:C:H5'	10:1I:60:ARG:CZ	2.48	0.44
1:13:1392:G:H8	1:13:1392:G:O5'	1.99	0.44
1:13:186(D):C:H42	1:13:191(C):G:H1	1.65	0.44
1:13:373:A:C2	1:13:482:A:C6	3.06	0.44
1:13:428:G:C8	1:13:430:A:C4	3.06	0.44
1:13:561:U:HO2'	1:13:562:C:P	2.41	0.44
1:13:625:G:C4	1:13:626:U:C5	3.05	0.44
1:13:826:C:C2	1:13:827:U:O2	2.71	0.44
24:14:1754:C:N3	24:14:2716:U:O2'	2.47	0.44
24:14:1879:C:H6	24:14:1879:C:O5'	2.01	0.44
24:14:2151:G:H2'	24:14:2152:G:H8	1.81	0.44
24:14:2297:C:C2	24:14:2298:A:C8	3.05	0.44
24:14:2303:G:O2'	30:49:132:ASN:HB2	2.17	0.44
24:14:395:U:H2'	57:14:4144:HOH:O	2.18	0.44
24:14:972:G:OP2	24:14:974:G:H5''	2.17	0.44
24:14:973:A:H5'	24:14:1188:U:C1'	2.47	0.44
54:1G:1117:G:O3'	9:82:9:ARG:NH2	2.35	0.44
54:1G:1224:G:N1	54:1G:1322:C:H1'	2.31	0.44
54:1G:1232:U:H2'	54:1G:1233:G:O4'	2.16	0.44
54:1G:333:G:O2'	54:1G:334:C:H5'	2.18	0.44
54:1G:827:U:H2'	54:1G:859:A:H61	1.81	0.44
24:1H:1417:C:H2'	24:1H:1418:G:O4'	2.17	0.44
24:1H:2184:G:C6	24:1H:2185:C:C4	3.05	0.44
24:1H:2283:C:N3	24:1H:2389:G:C2	2.86	0.44
24:1H:2032:G:O2'	28:21:145:LYS:HE3	2.17	0.44
28:21:21:VAL:HG12	28:21:23:VAL:HG13	2.00	0.44
3:22:6:HIS:HA	3:22:7:PRO:HD3	1.83	0.44
3:2E:51:GLY:O	3:2E:115:LEU:HD11	2.18	0.44
29:31:65:TRP:HZ3	29:31:73:ALA:O	2.00	0.44
4:32:18:LYS:HE2	4:32:26:CYS:HB3	1.99	0.44
22:3K:72:U:H2'	22:3K:73:U:O4'	2.17	0.44
22:3L:80:C:H2'	22:3L:81:C:C6	2.52	0.44
5:42:50:GLU:CB	5:42:53:LEU:HD13	2.47	0.44
36:45:98:LYS:HB3	36:45:99:PRO:HD2	2.00	0.44
13:4I:8:GLU:O	13:4I:10:PRO:HD3	2.17	0.44
13:4I:11:ARG:NH1	13:4I:12:ASN:HB2	2.33	0.44
33:58:28:THR:HA	33:58:106:MET:HE2	1.99	0.44
38:65:15:ARG:HD2	38:65:88:ASP:OD2	2.18	0.44
8:72:121:ASP:OD2	8:72:125:ARG:NH2	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:79:213:TYR:HD2	26:79:221:SER:HB2	1.82	0.44
9:82:25:LYS:HA	9:82:25:LYS:HD3	1.66	0.44
42:A5:29:LEU:HD21	42:A5:33:ARG:HH21	1.80	0.44
38:A8:59:LYS:HG2	38:A8:60:GLY:H	1.81	0.44
19:AI:42:PRO:O	19:AI:45:VAL:HG13	2.18	0.44
20:BI:57:ARG:HH11	20:BI:103:GLY:HA2	1.83	0.44
45:D5:105:VAL:O	45:D5:108:PRO:HD2	2.17	0.44
43:F8:31:HIS:HA	43:F8:32:PRO:HD3	1.75	0.44
43:F8:67:GLY:C	43:F8:69:TYR:H	2.19	0.44
49:H5:12:PRO:O	49:H5:15:TYR:HB2	2.17	0.44
52:L5:24:THR:O	52:L5:28:ARG:HG3	2.18	0.44
1:13:74:C:H2'	1:13:75:C:O4'	2.16	0.44
1:13:731:G:H5'	1:13:766:A:H4'	2.00	0.44
24:14:1285:G:C5	24:14:1329:U:C4	3.06	0.44
24:14:1511:A:H2'	24:14:1512:G:H8	1.79	0.44
24:14:2584:U:H2'	24:14:2585:U:C6	2.53	0.44
24:14:270(F):U:H2'	24:14:270(G):C:C6	2.53	0.44
24:14:821:A:C2'	24:14:946:G:H5''	2.48	0.44
24:14:853:G:H2'	24:14:854:G:H8	1.83	0.44
25:16:19:G:N2	25:16:65:C:C2	2.86	0.44
54:1G:1257:U:H5'	54:1G:1258:G:C8	2.53	0.44
54:1G:353:A:H5'	54:1G:353:A:C8	2.44	0.44
24:1H:198:C:C2'	24:1H:199:A:H5''	2.47	0.44
24:1H:2074:U:P	57:1H:3636:HOH:O	2.75	0.44
24:1H:2110:G:C2	24:1H:2120:G:H1'	2.53	0.44
24:1H:2393:A:H2'	24:1H:2394:C:C6	2.51	0.44
24:1H:2420:C:P	53:Q8:33:ASN:HA	2.57	0.44
24:1H:2508:G:C4	24:1H:2509:G:C8	3.05	0.44
3:22:191:THR:OG1	3:22:194:GLY:O	2.30	0.44
11:2I:21:ILE:HB	11:2I:84:VAL:HG12	1.99	0.44
4:32:119:GLN:O	4:32:123:HIS:CD2	2.70	0.44
4:32:38:TYR:HA	4:32:39:PRO:HD3	1.84	0.44
24:14:943:U:OP2	35:35:36:LYS:HE2	2.17	0.44
30:41:107:LEU:HD22	30:41:178:PHE:HA	2.00	0.44
13:4A:30:ALA:O	13:4A:34:LEU:HG	2.17	0.44
1:13:1048:G:OP1	14:5I:3:ARG:HB3	2.18	0.44
8:7E:104:ARG:HD2	8:7E:138:TRP:CD2	2.53	0.44
1:13:624:C:O3'	16:7I:10:GLY:HA2	2.18	0.44
16:7I:23:ASP:OD1	16:7I:25:ARG:HD3	2.18	0.44
17:8I:75:ARG:NH1	17:8I:77:VAL:HG22	2.32	0.44
41:95:21:ARG:NH2	41:95:65:GLY:O	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:B5:18:TYR:C	43:B5:20:GLY:H	2.20	0.44
20:BA:53:LEU:HD12	20:BA:101:GLY:CA	2.47	0.44
20:BI:100:ILE:HG12	20:BI:101:GLY:H	1.83	0.44
24:1H:997:G:OP1	40:C8:92:ARG:HB2	2.18	0.44
45:D5:43:GLU:O	45:D5:47:VAL:HG23	2.18	0.44
41:D8:34:GLU:O	41:D8:36:PRO:HD3	2.17	0.44
45:H8:24:LEU:HA	45:H8:25:PRO:HD3	1.71	0.44
50:M8:43:TYR:HA	50:M8:46:GLN:HG3	2.00	0.44
2:12:204:ASN:HB2	2:12:210:SER:HB3	1.97	0.44
1:13:1021:G:C2	1:13:1022:G:H1'	2.52	0.44
1:13:1336:C:H1'	1:13:1337:G:N2	2.33	0.44
1:13:142:G:H2'	1:13:143:A:H8	1.82	0.44
1:13:464:G:H2'	1:13:467:G:O6	2.18	0.44
1:13:587:G:C2	1:13:755:G:C6	3.05	0.44
1:13:644:G:H2'	1:13:645:C:O4'	2.18	0.44
24:14:1021:A:H2'	24:14:1023:U:H5'	1.98	0.44
24:14:1043:C:H42	24:14:1112:G:H1	1.64	0.44
24:14:1426:G:H8	24:14:1426:G:O5'	2.00	0.44
24:14:150:C:H2'	24:14:151:C:C6	2.53	0.44
24:14:2081:C:O2'	24:14:2082:A:H5'	2.18	0.44
24:14:2712(A):A:O5'	57:14:3571:HOH:O	2.21	0.44
24:14:2784:C:H1'	28:29:37:ARG:NH1	2.32	0.44
24:14:807:U:O2'	24:14:808:G:H5'	2.17	0.44
25:16:24:G:O6	25:16:56:G:O2'	2.25	0.44
2:1E:15:VAL:HG11	2:1E:207:ALA:HB1	1.99	0.44
54:1G:1117:G:H2'	9:82:104:ARG:NH1	2.32	0.44
54:1G:147:G:N2	54:1G:148:G:C4	2.86	0.44
54:1G:837:G:H1	54:1G:849:C:N4	2.16	0.44
54:1G:940:C:C2	54:1G:941:G:C8	3.05	0.44
24:1H:1923:U:H2'	24:1H:1924:C:C6	2.53	0.44
24:1H:1956:U:H2'	24:1H:1957:C:H5'	1.98	0.44
24:1H:1992:G:N2	24:1H:1996:C:O2'	2.51	0.44
24:1H:2002:G:C6	57:1H:4226:HOH:O	2.69	0.44
24:1H:2052:G:C2	24:1H:2053:G:C8	3.06	0.44
24:1H:2115:G:O3'	24:1H:2165:G:N2	2.51	0.44
24:1H:2291:U:O2'	24:1H:2374:C:O2	2.32	0.44
24:1H:817:C:H4'	24:1H:932:G:C5	2.52	0.44
24:1H:823:G:H2'	24:1H:824:A:C8	2.53	0.44
24:1H:943:U:OP2	35:78:36:LYS:HG3	2.18	0.44
24:1H:2572:A:N7	28:21:145:LYS:HB2	2.32	0.44
3:22:131:ARG:HH22	3:22:164:ARG:HH22	1.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2547:U:O2	34:25:23:ARG:NH2	2.51	0.44
3:2E:19:GLU:HG3	3:2E:54:ARG:CZ	2.47	0.44
11:2I:54:ARG:O	11:2I:57:THR:OG1	2.30	0.44
29:31:101:LEU:HA	29:31:101:LEU:HD12	1.78	0.44
12:3A:76:ASN:N	12:3A:76:ASN:OD1	2.43	0.44
4:3E:99:SER:HB3	4:3E:139:ARG:HG3	1.98	0.44
12:3I:62:SER:HB2	12:3I:64:TYR:CD1	2.46	0.44
5:42:11:ILE:HG22	5:42:12:LEU:HB2	1.99	0.44
5:42:102:ALA:HB2	5:42:120:THR:HG21	1.98	0.44
5:42:9:LYS:O	5:42:33:VAL:HG23	2.18	0.44
30:49:29:TRP:HE3	30:49:33:ARG:NH1	2.15	0.44
37:55:103:ARG:HD2	42:A5:40:ASN:ND2	2.33	0.44
37:55:78:LYS:O	37:55:83:ILE:HG13	2.18	0.44
33:58:1:MET:HE3	33:58:1:MET:HB3	1.91	0.44
14:5I:37:PHE:HE1	14:5I:53:LEU:HD22	1.82	0.44
14:5I:53:LEU:HA	14:5I:53:LEU:HD23	1.71	0.44
26:71:226:PRO:HG2	26:71:227:HIS:ND1	2.33	0.44
40:85:27:LEU:HD13	40:85:31:SER:HB3	1.98	0.44
40:85:55:ARG:O	40:85:59:ARG:HB2	2.17	0.44
41:95:21:ARG:CG	41:95:91:TYR:CE1	3.00	0.44
19:AI:24:ALA:C	19:AI:26:GLY:H	2.21	0.44
44:C5:89:PHE:O	44:C5:89:PHE:CG	2.69	0.44
45:D5:161:VAL:HB	45:D5:162:GLU:H	1.54	0.44
45:H8:108:PRO:HD2	45:H8:113:ALA:H	1.82	0.44
2:12:115:LEU:HB2	2:12:145:LEU:HD23	1.99	0.44
1:13:1208:C:H2'	1:13:1209:C:C6	2.53	0.44
1:13:1360:A:H2'	1:13:1361:G:O4'	2.18	0.44
1:13:44:G:C2	1:13:45:U:H1'	2.52	0.44
1:13:874:G:C4	1:13:875:C:C5	3.06	0.44
24:14:1635:G:N2	24:14:1636:C:C2	2.86	0.44
24:14:1638:C:H1'	24:14:2698:U:O2'	2.18	0.44
24:14:1754:C:H2'	24:14:1755:A:C8	2.52	0.44
24:14:1858:G:H2'	24:14:1883:G:H22	1.83	0.44
24:14:2150:U:H2'	24:14:2151:G:H8	1.83	0.44
24:14:858:U:H1'	24:14:2268:A:H2'	2.00	0.44
24:14:2291:U:OP1	24:14:2381:C:H5'	2.18	0.44
24:14:233:A:H2'	24:14:234:C:H6	1.82	0.44
24:14:586:A:N1	24:14:809:G:O2'	2.45	0.44
24:14:686:G:H5''	52:L5:11:LYS:NZ	2.32	0.44
24:14:923:C:H2'	24:14:924:C:C6	2.53	0.44
25:16:72:G:N2	25:16:103:U:C5	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1122:U:C4	54:1G:1123:A:N7	2.85	0.44
54:1G:1320:C:C4	54:1G:1321:C:C4	3.06	0.44
54:1G:186(A):C:H2'	54:1G:186(B):C:C6	2.52	0.44
54:1G:542:G:H2'	54:1G:543:C:C6	2.53	0.44
54:1G:853:G:H2'	54:1G:854:G:H8	1.82	0.44
24:1H:1069:A:H2'	24:1H:1073:A:H62	1.83	0.44
24:1H:114:U:O2'	43:F8:33:LYS:NZ	2.49	0.44
24:1H:1222:C:C2	24:1H:1223:C:C5	3.05	0.44
24:1H:1436:G:C6	24:1H:1437:C:C4	3.06	0.44
24:1H:1475:G:C2	24:1H:1519:G:C2	3.06	0.44
24:1H:184:C:H2'	24:1H:185:U:C6	2.53	0.44
24:1H:2315:G:N2	30:41:128:ARG:HH22	2.16	0.44
24:1H:2364:C:H2'	24:1H:2365:G:O4'	2.18	0.44
24:1H:2562:U:H1'	34:68:23:ARG:HE	1.82	0.44
24:1H:371:A:H8	24:1H:423:A:C2	2.35	0.44
24:1H:654(F):C:N3	24:1H:654(P):G:N2	2.66	0.44
34:25:1:MET:H1	34:25:67:LYS:HB3	1.82	0.44
28:29:77:ILE:C	28:29:78:LEU:HG	2.38	0.44
54:1G:8:A:N6	4:32:209:ARG:HB2	2.33	0.44
22:3K:55:U:C4	22:3K:56:U:H1'	2.52	0.44
13:4I:14:ARG:HH21	13:4I:42:ALA:HA	1.83	0.44
31:51:35:VAL:HG12	31:51:37:VAL:HG23	1.99	0.44
32:69:113:ARG:HG3	32:69:131:LYS:HD2	2.00	0.44
35:78:132:LYS:HB3	35:78:132:LYS:HE3	1.58	0.44
35:78:2:LYS:NZ	35:78:5:ASP:OD1	2.50	0.44
24:14:2177:C:H5''	26:79:213:TYR:CD1	2.53	0.44
45:D5:178:GLU:HG2	45:D5:178:GLU:H	1.61	0.44
24:14:2232:U:P	47:F5:40:ARG:HH12	2.41	0.44
44:G8:39:VAL:O	44:G8:42:VAL:HG13	2.18	0.44
27:11:145:VAL:HG12	27:11:146:GLU:O	2.18	0.44
27:11:30:GLU:OE1	27:11:104:TYR:OH	2.36	0.44
2:12:119:GLU:O	2:12:122:PHE:HB3	2.17	0.44
2:12:179:LYS:HE3	2:12:179:LYS:HB2	1.85	0.44
1:13:1024:G:OP1	1:13:1024:G:H4'	2.18	0.44
1:13:1098:C:C2	1:13:1099:G:C8	3.06	0.44
1:13:1299:A:C8	1:13:1301:U:H1'	2.53	0.44
1:13:1315:U:H2'	1:13:1316:G:O4'	2.17	0.44
1:13:41:G:H2'	1:13:42:G:C8	2.53	0.44
1:13:458:C:H2'	1:13:464:G:O4'	2.18	0.44
24:14:1437:C:H6	24:14:1437:C:H5''	1.83	0.44
24:14:1853:A:N1	24:14:2087:G:H1'	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:249:C:O2	53:M5:12:LYS:NZ	2.49	0.44
24:14:263:C:H2'	24:14:264:C:O4'	2.18	0.44
54:1G:1202:G:H22	14:5A:46:GLU:CD	2.22	0.44
54:1G:123:C:O5'	54:1G:123:C:H6	2.00	0.44
54:1G:828:A:H2'	54:1G:829:G:O4'	2.18	0.44
54:1G:842:C:H5'	54:1G:843:U:OP1	2.18	0.44
24:1H:1496:A:H5'	24:1H:1497:U:OP1	2.18	0.44
24:1H:1762[B]:A:C6	57:1H:3693:HOH:O	2.69	0.44
24:1H:1870:C:H2'	24:1H:1871:A:O4'	2.18	0.44
24:1H:249:C:O2	53:Q8:12:LYS:NZ	2.39	0.44
24:1H:2689:U:H4'	24:1H:2690:C:H5'	2.00	0.44
24:1H:646:A:H2'	24:1H:647:G:O4'	2.18	0.44
24:1H:722:A:H2'	24:1H:723:G:C8	2.53	0.44
24:1H:846:C:C4	24:1H:930:U:C4	3.05	0.44
10:1I:78:ASN:HB2	10:1I:81:THR:HG23	1.99	0.44
25:1J:32:C:C2	25:1J:51:G:N2	2.85	0.44
29:31:24:LEU:HA	29:31:24:LEU:HD13	1.84	0.44
29:31:68:LYS:O	29:31:69:HIS:HB2	2.18	0.44
12:3A:124:LYS:HG3	12:3A:125:PRO:HD2	2.00	0.44
1:13:509:A:H5'	4:3E:54:TYR:CD2	2.53	0.44
22:3K:34:U:H6	22:3K:34:U:H5'	1.81	0.44
22:3L:8:4SU:H1'	22:3L:57:C:O2	2.17	0.44
36:45:51:ARG:O	36:45:54:MET:N	2.49	0.44
31:51:77:LYS:HD2	31:51:138:LYS:NZ	2.32	0.44
31:51:27:LYS:HG3	31:51:32:GLU:HB3	1.99	0.44
37:55:70:LEU:HA	37:55:70:LEU:HD23	1.81	0.44
24:14:2749:A:N3	31:59:59:ARG:NH1	2.66	0.44
9:8E:111:ARG:HD2	14:5I:61:TRP:C	2.38	0.44
26:79:10:LEU:HD11	26:79:34:THR:HG23	2.00	0.44
8:7E:22:GLU:O	8:7E:62:TYR:HA	2.18	0.44
9:82:97:LYS:O	9:82:100:GLY:N	2.43	0.44
40:85:9:VAL:O	40:85:13:LYS:HG3	2.18	0.44
41:95:68:LYS:HA	41:95:68:LYS:HD3	1.86	0.44
24:1H:1287:A:N7	37:98:107:ASP:HB2	2.33	0.44
41:D8:58:VAL:O	41:D8:97:LYS:HB2	2.18	0.44
48:G5:47:ASN:HD22	48:G5:47:ASN:N	2.15	0.44
48:G5:14:ARG:HD3	48:G5:63:VAL:HG22	1.99	0.44
45:H8:23:LYS:HA	45:H8:40:ASP:HA	2.00	0.44
45:H8:65:GLN:HE21	45:H8:67:LEU:HD21	1.83	0.44
51:J5:19:ARG:HH11	51:J5:19:ARG:HD2	1.67	0.44
47:J8:89:GLU:C	47:J8:91:LYS:H	2.21	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:J8:88:LYS:O	47:J8:91:LYS:HB2	2.17	0.44
47:J8:93:GLU:O	47:J8:97:LEU:HA	2.17	0.44
53:M5:62:LEU:HB3	53:M5:63:PRO:HD2	2.00	0.44
24:1H:2419:U:O4	53:Q8:31:HIS:CG	2.70	0.44
27:11:122:ASP:CG	27:11:123:ALA:H	2.20	0.44
27:11:238:GLY:O	27:11:239:ARG:C	2.54	0.44
2:12:112:VAL:O	2:12:115:LEU:HB3	2.18	0.44
1:13:12:U:H4'	1:13:526:C:H4'	1.99	0.44
1:13:684:A:C6	1:13:685:G:C5	3.06	0.44
1:13:693:G:H2'	1:13:694:A:H8	1.82	0.44
1:13:728:A:O5'	1:13:728:A:H8	2.01	0.44
1:13:664:G:N2	1:13:741:G:H1	2.13	0.44
1:13:902:G:O2'	1:13:903:G:H5'	2.18	0.44
24:14:547:A:N7	24:14:548:A:N6	2.66	0.44
33:15:96:GLU:HB2	33:15:122:VAL:HG12	1.99	0.44
27:19:3:VAL:HG12	27:19:17:THR:HB	2.00	0.44
27:19:30:GLU:HG3	27:19:31:LYS:O	2.18	0.44
54:1G:1151:A:C5	54:1G:1152:A:N7	2.86	0.44
54:1G:1342:C:H2'	54:1G:1343:G:C8	2.53	0.44
54:1G:1349:A:O2'	54:1G:1350:A:H5'	2.18	0.44
54:1G:191:G:O2'	20:BA:103:GLY:HA3	2.17	0.44
54:1G:458:C:H2'	54:1G:464:G:C8	2.52	0.44
54:1G:7:G:H5'	54:1G:298:A:O4'	2.18	0.44
24:1H:1057:A:N1	24:1H:1086:A:H2'	2.33	0.44
24:1H:1312:U:H6	24:1H:1312:U:H5'	1.82	0.44
24:1H:1477:A:C6	24:1H:1517:G:C6	3.06	0.44
24:1H:1831:G:H2'	24:1H:1832:C:H6	1.82	0.44
24:1H:2848:G:C8	39:B8:97:ALA:HB2	2.52	0.44
24:1H:354:G:H2'	24:1H:355:G:C8	2.52	0.44
24:1H:649:G:C5	24:1H:650:C:C4	3.06	0.44
24:1H:674:G:O2'	29:31:74:ARG:HD3	2.18	0.44
4:32:105:VAL:HG12	4:32:117:ALA:HB1	2.00	0.44
29:39:1:MET:HB2	29:39:2:LYS:HD3	1.99	0.44
30:49:17:PRO:HA	30:49:20:ILE:HG22	1.99	0.44
31:51:97:ARG:HB3	31:51:97:ARG:HE	1.50	0.44
32:61:3:VAL:HG12	32:61:38:LEU:HA	2.00	0.44
24:14:2296:U:OP2	38:65:6:ALA:HB2	2.18	0.44
32:69:6:LEU:HD11	32:69:37:VAL:HG13	1.99	0.44
26:71:44:HIS:O	26:71:212:VAL:HA	2.17	0.44
39:75:10:VAL:HG11	39:75:57:PHE:CG	2.52	0.44
35:78:1:MET:HG2	35:78:5:ASP:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2132:U:C4	26:79:5:LYS:HE2	2.53	0.44
8:7E:36:LEU:O	8:7E:39:LEU:N	2.50	0.44
9:82:27:THR:HG23	9:82:31:GLN:O	2.18	0.44
40:85:91:ASP:OD2	40:85:96:ALA:HB2	2.18	0.44
17:8A:59:ILE:HG22	17:8A:71:PHE:HB3	1.99	0.44
37:98:29:LEU:HB3	37:98:75:LEU:HD21	1.98	0.44
41:D8:66:ARG:CZ	41:D8:88:ARG:HD3	2.48	0.44
27:11:6:PHE:CE1	27:11:18:VAL:HG23	2.52	0.43
2:12:30:ARG:HH21	2:12:194:PRO:HB2	1.83	0.43
1:13:1026:G:C6	1:13:1027:C:N4	2.85	0.43
1:13:102:G:C6	1:13:103:C:C4	3.06	0.43
1:13:1336:C:H1'	1:13:1337:G:C2	2.53	0.43
1:13:1356:G:H2'	1:13:1357:A:C8	2.53	0.43
1:13:448:A:P	1:13:485:G:H22	2.40	0.43
1:13:581:G:O2'	1:13:582:U:H5'	2.18	0.43
1:13:635:G:C5	1:13:636:U:C5	3.06	0.43
1:13:874:G:H2'	1:13:875:C:H6	1.82	0.43
24:14:1019:U:OP1	24:14:1035:U:O2'	2.33	0.43
24:14:1179:C:H2'	24:14:1180:C:H6	1.83	0.43
24:14:1210:A:H5'	24:14:1212:G:O4'	2.18	0.43
24:14:1462:C:H4'	24:14:2703:C:O4'	2.19	0.43
24:14:1512:G:C6	24:14:1513:C:C4	3.06	0.43
24:14:1418:G:H2'	24:14:1579:A:N6	2.32	0.43
24:14:1837:C:H2'	24:14:1838:C:H5'	1.98	0.43
24:14:195:A:H61	24:14:198:C:H3'	1.82	0.43
24:14:30:G:H2'	24:14:31:C:H6	1.82	0.43
24:14:259:G:N2	24:14:621:A:H8	2.15	0.43
24:14:830:G:H4'	24:14:831:G:OP2	2.18	0.43
33:15:61:ARG:HE	33:15:61:ARG:HA	1.83	0.43
54:1G:1288:A:H2'	54:1G:1289:A:H8	1.83	0.43
54:1G:458:C:H2'	54:1G:464:G:H8	1.82	0.43
54:1G:604:G:C5	54:1G:605:U:C5	3.06	0.43
54:1G:604:G:H2'	54:1G:605:U:O4'	2.18	0.43
54:1G:89:U:HO2'	54:1G:90:C:P	2.38	0.43
24:1H:1111:A:O2'	31:51:2:SER:OG	2.36	0.43
24:1H:1652:A:C2'	24:1H:1653:G:H5'	2.48	0.43
24:1H:921:G:H4'	24:1H:2269:A:C5	2.53	0.43
24:1H:2308:G:H2'	24:1H:2308:G:N3	2.33	0.43
24:1H:2811:G:OP1	28:21:61:ARG:HB2	2.18	0.43
24:1H:483:A:O2'	44:G8:59:GLY:HA2	2.17	0.43
24:1H:950:G:H2'	24:1H:951:C:H6	1.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:1I:38:ILE:HA	10:1I:39:PRO:HD3	1.66	0.43
25:1J:104:A:H2'	25:1J:105:G:O4'	2.18	0.43
28:21:14:ILE:HB	28:21:21:VAL:HB	2.00	0.43
24:1H:2635:C:C5'	28:21:78:LEU:HA	2.45	0.43
3:22:131:ARG:HH12	3:22:164:ARG:HH22	1.66	0.43
34:25:34:THR:O	34:25:37:ASP:HB2	2.18	0.43
34:25:69:ILE:HD12	34:25:77:ILE:O	2.18	0.43
28:29:113:PHE:N	28:29:159:HIS:HD2	2.16	0.43
11:2A:123:LYS:HB3	11:2A:123:LYS:HE2	1.66	0.43
3:2E:131:ARG:NH1	3:2E:135:LYS:HZ3	2.16	0.43
3:2E:79:ARG:NH1	18:9A:87:ARG:HH12	2.15	0.43
3:2E:91:LEU:O	3:2E:95:THR:OG1	2.25	0.43
29:31:34:TRP:CZ3	29:31:35:GLU:HG2	2.52	0.43
5:42:50:GLU:HB2	5:42:53:LEU:HD13	2.00	0.43
54:1G:1302:U:C6	13:4A:17:VAL:HG11	2.53	0.43
5:4E:102:ALA:HB3	5:4E:107:ARG:HB2	1.98	0.43
31:51:152:ARG:HD3	31:51:152:ARG:HA	1.77	0.43
7:6E:127:ALA:HA	7:6E:135:VAL:HG21	1.99	0.43
8:72:110:ALA:HB3	8:72:121:ASP:HB3	2.01	0.43
41:95:85:LYS:HD3	41:95:85:LYS:HA	1.86	0.43
38:A8:83:LYS:NZ	38:A8:110:LEU:HB2	2.33	0.43
44:G8:53:PRO:O	44:G8:54:LYS:HG2	2.17	0.43
24:1H:483:A:H1'	44:G8:59:GLY:O	2.18	0.43
44:G8:75:ILE:HG23	44:G8:76:CYS:O	2.17	0.43
50:I5:22:ILE:HG22	50:I5:23:GLU:H	1.83	0.43
46:I8:14:ARG:HH11	46:I8:14:ARG:HD3	1.67	0.43
49:L8:3:ARG:HB2	49:L8:59:VAL:HG13	1.99	0.43
27:11:43:ARG:HA	27:11:48:ARG:O	2.19	0.43
2:12:132:LYS:HD3	2:12:132:LYS:O	2.18	0.43
1:13:221:C:H2'	1:13:222:U:C6	2.53	0.43
1:13:781:A:H4'	1:13:1522:U:O2'	2.18	0.43
24:14:1022:G:C6	24:14:1140:C:N3	2.86	0.43
24:14:117:G:C6	24:14:119:A:C6	3.06	0.43
24:14:1658:C:H2'	24:14:1659:U:C6	2.53	0.43
24:14:2819:G:H1	24:14:2827:C:H42	1.66	0.43
24:14:2853:C:O2'	24:14:2854:G:H5'	2.18	0.43
24:14:863:A:H2	24:14:914:C:H41	1.65	0.43
25:16:108:C:H5'	25:16:109:G:O5'	2.18	0.43
27:19:58:HIS:CD2	27:19:59:LYS:N	2.86	0.43
2:1E:30:ARG:HG2	2:1E:30:ARG:H	1.58	0.43
21:1F:9:ARG:O	21:1F:13:ILE:HG13	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1217:C:H2'	54:1G:1218:C:O4'	2.18	0.43
54:1G:833:U:H2'	54:1G:834:C:H6	1.82	0.43
24:1H:1515:C:H2'	24:1H:1516:U:C6	2.53	0.43
24:1H:1932:A:H2'	24:1H:1933:G:O4'	2.19	0.43
24:1H:1651:G:N2	24:1H:2007:C:C2	2.86	0.43
24:1H:2137:C:N4	24:1H:2154:G:H1	2.15	0.43
24:1H:2528:U:O2'	24:1H:2529:G:H3'	2.19	0.43
24:1H:2563:U:O2'	34:68:28:SER:HB3	2.18	0.43
24:1H:322:A:C5	24:1H:340:A:C2	3.06	0.43
25:1J:33:G:C6	25:1J:34:U:N3	2.87	0.43
25:1J:89:G:C5	25:1J:89(A):A:C6	3.06	0.43
28:21:81:ILE:HG22	28:21:81:ILE:O	2.18	0.43
28:29:46:ALA:HB2	28:29:82:ARG:HA	2.00	0.43
3:2E:155:GLY:HA3	3:2E:196:LEU:HB3	2.00	0.43
29:31:183:VAL:O	29:31:187:VAL:HG23	2.18	0.43
4:32:119:GLN:HA	4:32:122:ARG:HB2	2.00	0.43
4:3E:162:LEU:O	4:3E:165:MET:HB2	2.18	0.43
12:3I:78:GLN:N	12:3I:81:SER:OG	2.49	0.43
22:3K:52:G:H2'	22:3K:53:A:H8	1.78	0.43
5:42:7:GLU:O	5:42:34:VAL:HA	2.17	0.43
5:42:60:TYR:CZ	5:42:64:ARG:NH2	2.86	0.43
36:45:75:THR:HA	36:45:90:VAL:HA	1.98	0.43
31:51:67:LEU:HD12	31:51:71:LEU:HD13	2.00	0.43
6:52:69:GLU:H	6:52:69:GLU:CD	2.21	0.43
6:5E:94:GLN:OE1	18:9I:32:ARG:NH1	2.51	0.43
7:62:69:VAL:HG13	7:62:134:ALA:O	2.18	0.43
32:69:77:LEU:HD12	32:69:78:THR:H	1.83	0.43
15:6A:10:LYS:HD2	15:6A:10:LYS:HA	1.76	0.43
15:6A:15:PHE:HD2	15:6A:30:ALA:CB	2.30	0.43
7:6E:26:PHE:O	7:6E:30:ILE:HG13	2.18	0.43
17:8I:45:HIS:O	17:8I:73:VAL:HG23	2.18	0.43
37:98:74:LYS:C	37:98:76:VAL:N	2.71	0.43
38:A8:35:ILE:HD11	38:A8:101:LEU:CD2	2.48	0.43
44:C5:13:VAL:HB	44:C5:72:VAL:HB	2.00	0.43
44:C5:54:LYS:HA	44:C5:54:LYS:HD3	1.69	0.43
44:C5:82:PRO:HB3	44:C5:99:CYS:HB3	2.00	0.43
40:C8:74:LEU:HA	40:C8:74:LEU:HD22	1.66	0.43
45:D5:70:LEU:HA	45:D5:70:LEU:HD23	1.85	0.43
46:E5:49:LYS:NZ	46:E5:82:ARG:HG2	2.33	0.43
47:F5:57:GLU:O	47:F5:58:ILE:HD13	2.18	0.43
47:J8:73:LEU:HD13	47:J8:90:ILE:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:11:81:ALA:HB3	27:11:94:LEU:HB2	2.00	0.43
1:13:1060:C:H2'	1:13:1061:G:H8	1.83	0.43
1:13:218:C:H4'	1:13:466:C:H42	1.83	0.43
1:13:735:C:H5'	18:9I:71:LYS:HD3	2.00	0.43
24:14:108:U:C2	24:14:109:G:C8	3.06	0.43
24:14:1406:U:N3	24:14:1597:A:C2	2.86	0.43
24:14:1647:G:OP2	24:14:1647:G:H3'	2.18	0.43
24:14:1677:A:H2'	24:14:1678:G:C8	2.53	0.43
24:14:1690:A:H5''	24:14:1691:C:OP2	2.18	0.43
24:14:2244:U:H6	24:14:2244:U:O5'	2.01	0.43
24:14:2790:A:OP2	24:14:2790:A:H8	2.00	0.43
24:14:777:A:O2'	24:14:778:G:H5'	2.18	0.43
27:19:175:LEU:HD12	27:19:185:VAL:HG21	1.99	0.43
2:1E:172:ILE:H	2:1E:172:ILE:HG13	1.44	0.43
54:1G:1287:A:H2'	54:1G:1288:A:C8	2.53	0.43
54:1G:946:A:O2'	54:1G:1333:A:N3	2.46	0.43
54:1G:628:G:H2'	54:1G:629:G:C8	2.53	0.43
54:1G:963:G:H1	54:1G:972:C:H42	1.64	0.43
24:1H:1045:A:OP1	24:1H:1045:A:H4'	2.19	0.43
24:1H:1300:U:H4'	24:1H:1301:A:H5'	2.00	0.43
24:1H:2230:G:H1'	47:J8:45:ASN:CB	2.48	0.43
24:1H:2244:U:H2'	24:1H:2245:U:O4'	2.18	0.43
24:1H:2479:G:H8	24:1H:2479:G:O5'	2.01	0.43
24:1H:71:A:OP1	24:1H:72:U:H2'	2.19	0.43
1:13:1059:C:O2'	10:1I:53:PRO:HD3	2.17	0.43
25:1J:44:G:H5''	25:1J:45:A:OP1	2.18	0.43
3:22:166:GLU:HG3	3:22:167:TRP:H	1.83	0.43
3:2E:76:VAL:HG21	3:2E:103:VAL:HG11	2.01	0.43
3:2E:124:ILE:HG22	3:2E:191:THR:HG21	2.00	0.43
22:2L:18:G:H4'	22:2L:19:C:OP1	2.12	0.43
22:2L:8:4SU:H5'	22:2L:9:U:OP1	2.18	0.43
29:31:112:MET:HB3	29:31:112:MET:HE3	1.86	0.43
24:14:637:A:H2'	35:35:117:GLU:OE2	2.18	0.43
24:14:943:U:OP2	35:35:36:LYS:HG3	2.18	0.43
29:39:132:VAL:HG22	29:39:133:ASN:N	2.33	0.43
12:3A:47:LYS:HB3	12:3A:48:PRO:HD3	1.99	0.43
22:3K:33:C:C4	22:3K:34:U:C5	3.05	0.43
30:41:57:ALA:HB2	30:41:90:LEU:HG	2.00	0.43
36:45:51:ARG:O	36:45:53:ALA:N	2.50	0.43
5:4E:126:ARG:NH1	5:4E:126:ARG:HG3	2.26	0.43
1:13:1078:U:O2'	5:4E:130:ASN:OD1	2.09	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:4I:56:LEU:HD12	13:4I:56:LEU:HA	1.79	0.43
31:51:30:LYS:HD2	31:51:81:GLU:H	1.83	0.43
31:59:97:ARG:HB3	31:59:97:ARG:NH1	2.34	0.43
39:75:99:LEU:HD23	39:75:99:LEU:HA	1.76	0.43
20:BI:89:ARG:HB2	20:BI:104:LEU:HD21	2.01	0.43
44:C5:48:ALA:HB3	44:C5:59:GLY:HA2	1.99	0.43
24:14:329:G:OP2	44:C5:71:LYS:HD3	2.19	0.43
50:I5:14:ILE:O	50:I5:20:ASN:HB3	2.17	0.43
2:12:106:LYS:O	2:12:110:GLN:HG3	2.19	0.43
2:12:218:ALA:O	2:12:221:LEU:N	2.51	0.43
1:13:1184:G:O5'	1:13:1184:G:H8	2.01	0.43
1:13:1308:U:H5''	13:4I:98:VAL:HG22	1.98	0.43
1:13:47:C:O2	1:13:49:U:C5	2.72	0.43
1:13:740:U:O2'	1:13:741:G:H5'	2.18	0.43
1:13:909:A:N3	1:13:1413:A:O2'	2.47	0.43
24:14:1366:A:H2'	24:14:1367:A:O4'	2.18	0.43
24:14:1516:U:H2'	24:14:1517:G:C8	2.53	0.43
24:14:1728:G:N1	24:14:1730:U:OP2	2.51	0.43
24:14:2091:U:O2'	47:F5:47:GLN:HG3	2.18	0.43
24:14:2184:G:H2'	24:14:2185:C:C6	2.53	0.43
24:14:2525:G:N2	24:14:2539:C:C2	2.87	0.43
24:14:2889:C:H3'	24:14:2891:G:H8	1.82	0.43
24:14:627:A:O4'	24:14:637:A:N6	2.51	0.43
24:14:699:A:H2'	24:14:700:G:O4'	2.17	0.43
25:16:9:G:H8	25:16:9:G:H5''	1.83	0.43
54:1G:1072:G:H2'	54:1G:1073:U:H6	1.83	0.43
54:1G:1181:G:O2'	54:1G:1182:G:O5'	2.28	0.43
54:1G:1227:A:H8	54:1G:1227:A:H3'	1.83	0.43
54:1G:1298:C:H5	7:62:114:ARG:HD2	1.84	0.43
54:1G:1442:G:N7	54:1G:1446:A:C6	2.86	0.43
54:1G:565:U:H3'	54:1G:566:G:H2'	2.00	0.43
54:1G:746:A:H2'	54:1G:747:C:C6	2.54	0.43
24:1H:1125:G:C6	24:1H:1126:A:N6	2.86	0.43
24:1H:1354:A:H2'	24:1H:1355:G:O4'	2.19	0.43
24:1H:1533:C:C2	24:1H:1534:G:C8	3.06	0.43
24:1H:1649:G:C6	24:1H:2009:G:C6	3.07	0.43
24:1H:2591:C:H6	24:1H:2591:C:O5'	2.01	0.43
24:1H:1783:A:H5'	24:1H:2608:G:H4'	2.01	0.43
24:1H:2771:C:H2'	24:1H:2772:C:C6	2.54	0.43
24:1H:420:C:H2'	24:1H:421:U:C6	2.53	0.43
24:1H:458:G:C8	52:P8:37:LYS:HG2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:870:A:C5'	36:88:5:ARG:HH21	2.31	0.43
24:1H:911:A:H5''	24:1H:912:C:H5''	2.01	0.43
28:29:137:HIS:HB3	28:29:138:PRO:HD2	2.00	0.43
24:14:2052:G:O4'	28:29:142:GLY:HA3	2.18	0.43
1:13:1057:G:H5''	3:2E:154:SER:O	2.18	0.43
22:2K:14:A:N1	22:2K:22:A:O2'	2.33	0.43
22:2K:19:C:H3'	22:2K:20:C:C2'	2.37	0.43
29:31:28:ILE:HD12	29:31:116:ASP:HB2	1.99	0.43
4:3E:173:TRP:CD1	4:3E:174:LEU:HG	2.53	0.43
4:3E:61:LYS:HD3	4:3E:206:PHE:CE2	2.53	0.43
22:3L:84:C:O5'	22:3L:84:C:H6	2.01	0.43
30:41:110:ALA:HA	30:41:140:ILE:O	2.18	0.43
5:42:126:ARG:HH11	5:42:126:ARG:CG	2.30	0.43
30:49:138:GLN:HG3	30:49:139:LEU:N	2.33	0.43
13:4A:36:LYS:HE2	13:4A:36:LYS:HB3	1.62	0.43
31:51:4:ILE:HG13	31:51:6:ARG:CZ	2.48	0.43
14:5I:25:VAL:HG13	14:5I:38:GLY:O	2.18	0.43
32:69:84:GLY:O	32:69:85:GLU:HB3	2.17	0.43
39:75:108:ARG:HA	39:75:111:ARG:HH11	1.84	0.43
34:25:119:PRO:HB2	39:75:68:TYR:CE2	2.53	0.43
16:7I:4:ILE:HA	16:7I:20:VAL:O	2.18	0.43
16:7I:9:PHE:HB2	16:7I:16:HIS:O	2.18	0.43
40:85:74:LEU:HD11	40:85:110:VAL:HG13	1.99	0.43
19:AA:29:ARG:HB3	19:AA:31:ILE:HG22	2.00	0.43
44:C5:30:VAL:HG12	44:C5:31:LEU:N	2.32	0.43
45:D5:99:TYR:CD2	45:D5:123:ASP:HB2	2.52	0.43
45:D5:127:LYS:HB2	45:D5:127:LYS:HE3	1.79	0.43
45:D5:145:GLU:O	45:D5:174:VAL:HB	2.18	0.43
41:D8:47:VAL:HG22	41:D8:48:GLY:N	2.32	0.43
24:14:1368:G:OP1	52:L5:28:ARG:NH2	2.51	0.43
27:11:69:ARG:NH2	27:11:128:GLY:O	2.44	0.43
2:12:6:THR:OG1	2:12:7:VAL:N	2.50	0.43
1:13:769:G:H4'	1:13:1513:A:H4'	2.01	0.43
1:13:277:C:OP1	17:8I:68:ARG:NH2	2.32	0.43
1:13:322:C:H5	1:13:328:C:C5	2.36	0.43
24:14:1001:A:H2'	24:14:1002:G:O4'	2.19	0.43
24:14:1015:G:C6	24:14:1148:A:C2	3.07	0.43
24:14:1508:A:H4'	24:14:1510:A:C6	2.53	0.43
24:14:2065:C:H1'	24:14:2449:U:O2	2.19	0.43
24:14:219:G:H2'	24:14:220:G:C8	2.54	0.43
24:14:2291:U:H2'	24:14:2292:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2334:G:O6	46:E5:74:ARG:NH2	2.51	0.43
24:14:2365:G:H2'	24:14:2366:A:C8	2.54	0.43
24:14:2494:G:C4	24:14:2495:G:C8	3.07	0.43
24:14:2678:C:H2'	24:14:2679:A:O4'	2.18	0.43
24:14:621:A:H3'	24:14:622:G:H8	1.83	0.43
25:16:14:U:O3'	25:16:107:U:O2'	2.31	0.43
21:1F:9:ARG:NH2	21:1F:23:PRO:HD2	2.32	0.43
54:1G:1145:C:H4'	54:1G:1146:A:C8	2.52	0.43
24:1H:1198:U:H2'	24:1H:1199:U:H6	1.82	0.43
24:1H:1658:C:H2'	24:1H:1659:U:C6	2.53	0.43
24:1H:2238:G:H4'	24:1H:2239:G:OP1	2.18	0.43
24:1H:323:G:O2'	24:1H:1205:U:N3	2.42	0.43
24:1H:475:U:C4	24:1H:481:G:O6	2.72	0.43
24:1H:529:A:C8	24:1H:530:G:C6	3.07	0.43
25:1J:100:G:OP2	57:1J:219:HOH:O	2.21	0.43
25:1J:76:G:H2'	25:1J:77:U:O4'	2.19	0.43
34:25:113:LYS:O	34:25:117:LEU:HD22	2.18	0.43
28:29:178:GLU:CD	28:29:178:GLU:H	2.21	0.43
3:2E:19:GLU:O	3:2E:56:ASP:HA	2.18	0.43
22:2L:33:C:H2'	22:2L:34:U:H5'	2.00	0.43
29:31:123:LEU:HD12	29:31:124:LEU:H	1.84	0.43
29:39:11:VAL:HG23	29:39:12:LEU:H	1.84	0.43
4:3E:29:PRO:HA	4:3E:34:GLU:HG3	2.00	0.43
5:42:101:ILE:HG12	5:42:118:ILE:O	2.18	0.43
31:51:33:LEU:HD21	31:51:136:ILE:HG22	2.01	0.43
37:55:28:LEU:O	37:55:28:LEU:HD22	2.19	0.43
24:1H:1012:U:O4	33:58:25:ARG:HA	2.18	0.43
33:58:94:HIS:HA	33:58:95:PRO:HD2	1.65	0.43
31:59:6:ARG:O	31:59:69:ARG:HG2	2.19	0.43
26:71:46:LYS:HE3	26:71:210:ARG:HE	1.84	0.43
8:72:51:VAL:HG22	8:72:52:ASP:N	2.29	0.43
9:82:77:ILE:O	9:82:81:ILE:HG23	2.18	0.43
40:85:92:ARG:NH2	41:95:10:LYS:HB3	2.33	0.43
17:8I:48:GLU:HG3	17:8I:48:GLU:H	1.50	0.43
41:95:53:GLU:C	41:95:55:ALA:H	2.22	0.43
20:BI:53:LEU:HB2	20:BI:100:ILE:CG2	2.47	0.43
48:G5:64:LEU:O	48:G5:64:LEU:HD23	2.19	0.43
52:L5:47:ARG:HG3	52:L5:47:ARG:NH1	2.33	0.43
49:L8:8:LEU:HD22	49:L8:31:LEU:HD22	2.00	0.43
50:M8:38:LYS:HA	50:M8:38:LYS:HD2	1.72	0.43
51:N8:40:LYS:HE2	51:N8:47:PRO:CG	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:11:72:LYS:NZ	27:11:101:GLU:OE2	2.32	0.43
2:12:185:ILE:CG2	2:12:199:TYR:HB2	2.46	0.43
1:13:1002:G:H2'	1:13:1003:G:O4'	2.19	0.43
1:13:68:G:HO2'	1:13:152:A:H2	1.64	0.43
1:13:735:C:C2	1:13:736:C:C5	3.07	0.43
1:13:868:C:H2'	1:13:869:G:O4'	2.19	0.43
24:14:1164:G:H1	24:14:1185:C:N4	2.16	0.43
24:14:331:A:N6	24:14:1210:A:OP2	2.43	0.43
24:14:1418:G:OP1	24:14:1588:C:O2'	2.36	0.43
24:14:2094:G:C2'	24:14:2095:C:H5'	2.49	0.43
24:14:2772:C:O5'	24:14:2772:C:H6	2.01	0.43
24:14:2822:G:C5	57:14:3528:HOH:O	2.71	0.43
24:14:887:A:H3'	24:14:888:C:H5'	2.01	0.43
27:19:92:ILE:HD12	27:19:104:TYR:CE1	2.54	0.43
2:1E:63:MET:HA	2:1E:225:ALA:HB1	2.01	0.43
54:1G:173:U:O2	54:1G:197:A:N6	2.52	0.43
54:1G:246:A:OP1	17:8A:100:LYS:NZ	2.51	0.43
54:1G:131:C:O2'	54:1G:262:A:N3	2.47	0.43
24:1H:1048:A:P	24:1H:1110:G:H22	2.42	0.43
24:1H:1100:C:H2'	24:1H:1101:U:H6	1.84	0.43
24:1H:1441:G:H2'	24:1H:1442:G:H8	1.81	0.43
24:1H:2128:C:H2'	24:1H:2129:C:C6	2.54	0.43
24:1H:870:A:O5'	36:88:5:ARG:NH2	2.51	0.43
24:1H:875:G:C6	24:1H:876:C:C4	3.07	0.43
11:2I:96:ARG:O	11:2I:99:GLN:HG2	2.18	0.43
22:2K:5:G:O5'	22:2K:5:G:H8	2.01	0.43
12:3A:117:ARG:O	12:3A:121:GLY:N	2.51	0.43
12:3A:24:VAL:N	12:3A:25:PRO:HD3	2.33	0.43
54:1G:9:G:OP1	5:42:122:GLU:HB2	2.18	0.43
36:45:2:LEU:HB3	36:45:69:PHE:CE1	2.53	0.43
30:49:47:LYS:HE2	30:49:81:LYS:HG2	2.01	0.43
5:4E:33:VAL:HG11	5:4E:109:ILE:HA	2.01	0.43
31:51:116:GLU:OE1	31:51:117:PRO:HD2	2.18	0.43
6:52:26:ILE:O	6:52:29:ALA:HB3	2.19	0.43
14:5A:37:PHE:HB3	14:5A:39:LEU:HG	2.00	0.43
54:1G:1250:A:H4'	9:82:68:GLY:N	2.34	0.43
18:9I:59:SER:H	18:9I:62:GLU:HB2	1.84	0.43
42:A5:13:SER:O	42:A5:16:LYS:HB2	2.19	0.43
24:14:499:U:O3'	44:C5:44:ILE:HD11	2.19	0.43
48:G5:28:LYS:HA	48:G5:28:LYS:HD3	1.78	0.43
50:I5:9:LEU:HA	50:I5:26:SER:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:J5:16:ARG:HH12	51:J5:17:ASP:CG	2.21	0.43
51:N8:42:PRO:O	51:N8:44:THR:OG1	2.36	0.43
51:N8:45:VAL:HG22	51:N8:51:TYR:CD2	2.54	0.43
24:1H:2054:A:C2	51:N8:8:LYS:HD3	2.53	0.43
27:11:71:ASP:OD1	27:11:71:ASP:N	2.52	0.43
2:12:44:LEU:H	2:12:44:LEU:HG	1.62	0.43
1:13:1157:A:N7	1:13:1178:G:N2	2.66	0.43
24:14:55:G:O2'	24:14:127:A:N1	2.41	0.43
24:14:1716:U:O2'	24:14:1717:G:H5'	2.19	0.43
24:14:784:A:C8	24:14:792:G:C5	3.07	0.43
25:16:38:C:O4'	38:A8:95:HIS:CE1	2.71	0.43
54:1G:1298:C:C5	7:62:114:ARG:HD2	2.53	0.43
54:1G:1238:A:N7	54:1G:1303:C:H1'	2.34	0.43
54:1G:1410:G:N2	54:1G:1490:C:O2	2.42	0.43
54:1G:77:C:H2'	54:1G:78:G:O4'	2.18	0.43
24:1H:1210:A:H8	24:1H:1210:A:H5'	1.84	0.43
24:1H:2345:G:H4'	24:1H:2346:A:O5'	2.19	0.43
3:22:23:TYR:CD1	3:22:24:ALA:N	2.87	0.43
3:22:32:LEU:O	3:22:36:ASP:HB2	2.19	0.43
34:25:71:ARG:HH21	34:25:105:GLU:CD	2.22	0.43
11:2I:115:PRO:C	11:2I:117:ASN:H	2.22	0.43
4:32:120:LEU:HB3	4:32:126:ILE:HD11	1.99	0.43
24:14:1244:G:OP1	35:35:7:ARG:HD3	2.18	0.43
29:39:24:LEU:HD12	29:39:25:PRO:HD2	2.00	0.43
22:3L:77:C:H2'	22:3L:78:C:H6	1.84	0.43
24:1H:528:A:OP2	33:58:114:ARG:NH1	2.52	0.43
33:58:12:ARG:HG2	33:58:13:TRP:N	2.33	0.43
26:71:6:ARG:NH1	26:71:7:TYR:HB2	2.32	0.43
8:72:13:ILE:O	8:72:17:THR:HG23	2.19	0.43
35:78:85:LEU:HA	35:78:88:LEU:CD2	2.49	0.43
16:7A:55:ARG:HA	16:7A:55:ARG:HE	1.83	0.43
9:8E:128:ARG:HE	22:2K:36:U:P	2.41	0.43
9:8E:95:LYS:H	9:8E:95:LYS:HG2	1.71	0.43
37:98:9:LYS:HA	37:98:17:ARG:NE	2.34	0.43
6:52:50:TYR:OH	18:9A:74:ARG:O	2.23	0.43
45:D5:176:PRO:HA	45:D5:177:PRO:HD3	1.77	0.43
48:K8:42:GLY:C	48:K8:44:LEU:H	2.22	0.43
52:L5:5:TRP:NE1	52:L5:7:PRO:HG3	2.33	0.43
1:13:1148:U:H2'	1:13:1149:C:O4'	2.19	0.43
1:13:119:A:H2'	57:13:1819:HOH:O	2.19	0.43
1:13:1304:G:C5	1:13:1305:G:C6	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:517:G:N2	1:13:533:A:OP2	2.47	0.43
1:13:964:A:N3	1:13:969:A:O2'	2.44	0.43
24:14:1048:A:H5'	24:14:1049:C:OP2	2.19	0.43
24:14:1100:C:H2'	24:14:1101:U:C6	2.54	0.43
24:14:1285:G:C6	24:14:1329:U:C5	3.07	0.43
24:14:1507:A:H2'	24:14:1508:A:O4'	2.19	0.43
24:14:1576:U:N3	24:14:1577:C:C5	2.86	0.43
24:14:2239:G:P	57:14:3492:HOH:O	2.77	0.43
24:14:2267:A:H3'	57:14:4113:HOH:O	2.18	0.43
24:14:2569:G:C2	24:14:2570:G:C8	3.06	0.43
24:14:271(A):C:H1'	24:14:272:G:H1'	2.00	0.43
24:14:2860:A:N7	24:14:2861:G:H1'	2.34	0.43
24:14:988:A:O5'	24:14:988:A:H8	2.02	0.43
54:1G:1322:C:HO2'	54:1G:1323:G:P	2.40	0.43
54:1G:1366:C:H2'	54:1G:1367:C:H6	1.84	0.43
54:1G:160:A:H2'	54:1G:161:A:O4'	2.19	0.43
54:1G:570:G:H2'	54:1G:571:U:C6	2.53	0.43
54:1G:789:U:O2'	54:1G:791:G:O6	2.36	0.43
54:1G:792:A:N3	54:1G:794:A:C5	2.87	0.43
54:1G:896:C:C4	54:1G:897:C:C5	3.07	0.43
54:1G:938:A:C6	54:1G:939:G:C5	3.06	0.43
24:1H:2194:G:H2'	24:1H:2195:C:C6	2.53	0.43
24:1H:2261:C:H2'	24:1H:2262:U:H6	1.83	0.43
24:1H:2270:G:H2'	24:1H:2271:G:O4'	2.18	0.43
24:1H:248:G:H2'	57:1H:3608:HOH:O	2.19	0.43
24:1H:654(K):C:H3'	24:1H:654(L):G:H5''	2.01	0.43
24:1H:705:A:C8	24:1H:727:A:C2	3.07	0.43
24:1H:729:G:O2'	24:1H:763:G:H4'	2.18	0.43
24:1H:918:A:H1'	25:16:80:U:H1'	1.99	0.43
24:1H:988:A:O5'	49:L8:11:SER:HB2	2.18	0.43
24:1H:991:C:H2'	24:1H:992:C:H6	1.82	0.43
28:21:116:VAL:HG13	28:21:122:PHE:HB2	2.00	0.43
24:14:2773:C:H5''	28:29:164:ARG:HG2	2.00	0.43
28:29:81:ILE:O	28:29:81:ILE:HG22	2.19	0.43
12:3A:84:LEU:HD23	12:3A:105:TYR:HE2	1.84	0.43
22:3L:11:C:N4	22:3L:25:G:H1	2.16	0.43
22:3L:30:A:H2'	22:3L:31:G:O4'	2.19	0.43
5:42:57:LYS:O	5:42:60:TYR:HB3	2.18	0.43
3:2E:131:ARG:HD3	5:4E:50:GLU:HG2	2.01	0.43
6:5E:87:ARG:HH11	6:5E:87:ARG:CG	2.23	0.43
14:5I:15:LYS:HB3	14:5I:16:PHE:CD2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:62:16:LEU:HD12	9:82:41:VAL:O	2.19	0.43
39:75:99:LEU:HD22	39:75:101:PHE:HE1	1.83	0.43
19:AA:29:ARG:HD2	19:AA:48:THR:O	2.18	0.43
19:AA:51:VAL:HB	19:AA:75:ALA:HB2	2.01	0.43
20:BA:95:ALA:O	20:BA:97:ALA:N	2.51	0.43
44:C5:82:PRO:HG3	44:C5:97:ARG:HB3	2.00	0.43
24:14:988:A:H3'	49:H5:11:SER:OG	2.19	0.43
45:H8:46:LYS:HB2	45:H8:46:LYS:HE3	1.83	0.43
53:M5:57:ARG:CZ	53:M5:57:ARG:HB2	2.49	0.43
27:11:159:ALA:HB1	27:11:198:ASN:O	2.18	0.43
1:13:109:A:C6	1:13:326:G:C5	3.07	0.43
1:13:1157:A:H1'	1:13:1158:C:C4	2.53	0.43
1:13:19:C:OP1	5:4E:125:SER:OG	2.16	0.43
1:13:380:G:C2	1:13:384:G:C6	3.07	0.43
1:13:581:G:N2	1:13:582:U:C4	2.87	0.43
1:13:725:G:H2'	1:13:726:C:H6	1.83	0.43
24:14:1647:G:H2'	57:14:3710:HOH:O	2.18	0.43
24:14:1902:C:H2'	24:14:1903:G:O4'	2.18	0.43
24:14:2528:U:H2'	24:14:2530:A:O5'	2.19	0.43
24:14:2805:G:H2'	24:14:2807:G:C8	2.54	0.43
24:14:2840:C:H4'	37:55:53:HIS:CE1	2.54	0.43
24:14:34:C:H2'	24:14:35:G:H5'	2.01	0.43
2:1E:210:SER:O	2:1E:214:ILE:HG22	2.18	0.43
54:1G:1203:C:H2'	54:1G:1204:A:O4'	2.18	0.43
54:1G:631:G:H3'	54:1G:632:A:H8	1.83	0.43
54:1G:668:G:O4'	15:6A:49:ASP:HB2	2.18	0.43
54:1G:669:U:H2'	54:1G:670:G:C8	2.54	0.43
24:1H:1453:A:O2'	24:1H:1454:U:H2'	2.18	0.43
24:1H:1475:G:C2	24:1H:1519:G:N3	2.87	0.43
24:1H:2720:U:H2'	24:1H:2720:U:O2	2.19	0.43
24:1H:2862:G:C5	24:1H:2863:C:C5	3.07	0.43
24:1H:539:G:N3	24:1H:539:G:H2'	2.34	0.43
24:1H:569:U:C4	24:1H:570:G:C6	3.07	0.43
24:1H:603:A:H4'	24:1H:604:G:O5'	2.19	0.43
24:1H:882:G:H1'	24:1H:883:G:C8	2.54	0.43
24:1H:994:C:O2'	24:1H:996:A:OP1	2.26	0.43
25:1J:95:U:H2'	25:1J:96:G:H8	1.84	0.43
54:1G:707:C:OP1	11:2A:85:ARG:NH1	2.50	0.43
11:2I:34:ASP:OD1	11:2I:37:GLY:N	2.52	0.43
22:2L:12:C:H41	22:2L:24:G:H1	1.66	0.43
35:35:46:LYS:HE2	35:35:46:LYS:HB3	1.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3E:110:PHE:CE2	4:3E:148:VAL:HG23	2.53	0.43
22:3K:62:G:H3'	22:3K:63:5MU:H71	2.01	0.43
7:62:83:ALA:HB2	22:3L:35:QUO:O14	2.19	0.43
30:41:116:ASP:HB2	30:41:117:PHE:H	1.68	0.43
25:1J:90:C:H5'	36:45:18:LYS:HA	2.00	0.43
30:49:59:GLU:OE1	30:49:153:ARG:NE	2.52	0.43
13:4A:39:ILE:HD12	13:4A:56:LEU:HG	2.00	0.43
13:4I:16:ASP:N	13:4I:16:ASP:OD1	2.51	0.43
31:51:23:ARG:NH1	31:51:25:LYS:HG3	2.34	0.43
31:51:51:ARG:HG2	31:51:52:VAL:H	1.83	0.43
10:1I:53:PRO:HA	14:5I:42:ILE:HD12	2.00	0.43
7:62:18:TYR:HB3	7:62:59:LEU:HD12	2.00	0.43
32:69:44:LEU:HD23	32:69:44:LEU:HA	1.73	0.43
15:6I:26:GLU:H	15:6I:26:GLU:HG2	1.43	0.43
35:78:19:VAL:HG23	35:78:27:HIS:CB	2.45	0.43
36:88:109:VAL:HG13	36:88:113:GLN:OE1	2.18	0.43
17:8A:29:HIS:CG	17:8A:30:PRO:HD2	2.54	0.43
24:1H:1454:U:OP1	37:98:77:ARG:HD3	2.19	0.43
54:1G:1221:G:H5'	19:AA:36:ARG:HD3	1.99	0.43
39:B8:90:GLN:OE1	39:B8:121:ILE:HD11	2.19	0.43
40:C8:31:SER:O	40:C8:32:PHE:C	2.57	0.43
45:H8:52:SER:O	45:H8:54:HIS:N	2.52	0.43
27:11:73:VAL:O	27:11:75:ILE:HD12	2.19	0.43
1:13:1021:G:H2'	1:13:1022:G:O4'	2.18	0.43
1:13:1052:U:H5''	1:13:1053:G:OP2	2.19	0.43
1:13:1401:G:C2	1:13:1402:C:H1'	2.54	0.43
1:13:222:U:C2	1:13:223:U:C5	3.07	0.43
1:13:236:G:H5''	17:8I:42:TYR:OH	2.19	0.43
24:14:1665:A:N6	57:14:3649:HOH:O	2.44	0.43
24:14:2388:A:C2'	24:14:2389:G:H5'	2.49	0.43
24:14:240:G:H1'	24:14:257:A:N6	2.34	0.43
24:14:270(G):C:H2'	24:14:270(H):C:H6	1.84	0.43
24:14:447:A:C5	24:14:473:G:C5	3.07	0.43
24:14:537:C:O2	33:15:45:ASN:ND2	2.52	0.43
24:14:588:U:H1'	29:39:90:PHE:CD1	2.54	0.43
24:14:729:G:C5	27:19:208:LYS:HB2	2.54	0.43
54:1G:545:C:H5'	4:32:72:GLU:HB2	2.00	0.43
54:1G:557:G:C6	54:1G:558:G:C6	3.07	0.43
54:1G:612:C:H42	54:1G:628:G:H1	1.64	0.43
54:1G:862:C:O4'	54:1G:874:G:H4'	2.19	0.43
54:1G:940:C:H2'	54:1G:941:G:H8	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:942:G:O2'	24:1H:1189:A:N3	2.42	0.43
24:1H:1856:G:N2	24:1H:1887:C:C2	2.87	0.43
24:1H:253:C:H2'	24:1H:254:G:O4'	2.19	0.43
24:1H:299:A:N3	24:1H:319:C:O2'	2.51	0.43
25:1J:117:G:C6	25:1J:118:G:C8	3.07	0.43
4:32:15:GLU:OE1	4:32:59:ARG:NH2	2.28	0.43
29:39:53:THR:HG22	29:39:56:GLU:CD	2.39	0.43
30:41:139:LEU:HD11	30:41:146:TYR:HD1	1.83	0.43
5:4E:8:GLU:HA	5:4E:34:VAL:HG22	2.00	0.43
13:4I:11:ARG:HH12	13:4I:12:ASN:HD22	1.67	0.43
31:51:154:PRO:HD3	31:51:162:ILE:O	2.19	0.43
33:58:38:HIS:CE1	33:58:39:ARG:HG3	2.54	0.43
32:69:33:ARG:O	32:69:35:LEU:HD23	2.19	0.43
32:69:93:THR:O	32:69:97:ILE:HG13	2.18	0.43
15:6I:63:ARG:HH21	15:6I:87:ILE:HG21	1.82	0.43
40:85:66:ASN:HB2	40:85:76:TYR:HB2	2.00	0.43
54:1G:267:C:OP1	17:8A:67:LYS:HB2	2.19	0.43
39:B8:33:LYS:HG2	39:B8:42:ILE:HD11	2.00	0.43
39:B8:5:ALA:O	39:B8:6:LEU:C	2.57	0.43
45:D5:133:ILE:HA	45:D5:134:PRO:HD2	1.87	0.43
1:13:1157:A:N6	1:13:1178:G:N2	2.58	0.42
1:13:1258:G:H2'	1:13:1259:C:C6	2.54	0.42
1:13:1264:C:H1'	1:13:1272:G:H22	1.84	0.42
1:13:246:A:C4	1:13:282:A:N6	2.87	0.42
1:13:587:G:N2	1:13:755:G:C5	2.87	0.42
24:14:1189:A:P	57:14:3755:HOH:O	2.77	0.42
24:14:1925:C:C2'	24:14:1926:U:H5'	2.49	0.42
24:14:528:A:N1	24:14:2042:A:H2'	2.34	0.42
24:14:887:A:H3'	24:14:888:C:C5'	2.47	0.42
27:19:158:ALA:HB3	27:19:161:THR:HG21	2.01	0.42
10:1A:30:SER:HB3	10:1A:81:THR:HG22	2.02	0.42
54:1G:1057:G:H2'	54:1G:1058:G:C8	2.54	0.42
54:1G:1229:A:OP2	13:4A:114:ARG:HD3	2.19	0.42
54:1G:363:A:OP2	12:3A:34:ARG:NH1	2.52	0.42
54:1G:503:C:O2'	54:1G:504:C:H5'	2.18	0.42
54:1G:743:U:H2'	54:1G:744:C:C6	2.54	0.42
54:1G:828:A:H5''	54:1G:859:A:N1	2.34	0.42
24:1H:1120:G:H2'	24:1H:1121:C:C6	2.54	0.42
24:1H:1263:U:H2'	24:1H:1264:G:C8	2.54	0.42
24:1H:1535:U:H5	24:1H:1537:C:H1'	1.84	0.42
24:1H:2102:U:H3	24:1H:2187:G:H1	1.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1127:A:O2'	24:1H:2518:A:OP1	2.31	0.42
24:1H:2839:G:C6	24:1H:2840:C:N3	2.87	0.42
24:1H:53:A:C8	24:1H:54:G:C8	3.07	0.42
24:1H:601:C:O2'	24:1H:605:C:OP1	2.32	0.42
25:1J:56:G:H4'	25:1J:57:A:C8	2.54	0.42
3:22:188:LEU:HD13	3:22:189:ALA:N	2.34	0.42
24:14:2823:A:OP1	28:29:113:PHE:HB2	2.18	0.42
24:14:2823:A:P	28:29:159:HIS:HE2	2.41	0.42
28:29:31:CYS:HB3	28:29:49:LEU:HB3	2.00	0.42
22:2L:17:OMG:N2	22:2L:67:A:C8	2.86	0.42
29:31:155:LEU:HD11	29:31:176:LEU:HD22	2.00	0.42
22:3L:73:U:H2'	22:3L:74:C:O4'	2.18	0.42
36:45:48:GLU:O	36:45:52:VAL:HG13	2.19	0.42
31:51:80:SER:C	31:51:81:GLU:HG3	2.39	0.42
37:55:45:ARG:HA	37:55:95:THR:HG21	2.01	0.42
6:5E:67:MET:CE	6:5E:75:LEU:HD12	2.49	0.42
14:5I:6:LEU:HA	14:5I:6:LEU:HD23	1.87	0.42
32:69:144:VAL:HG22	32:69:145:VAL:H	1.84	0.42
9:82:77:ILE:HG13	9:82:78:LYS:N	2.34	0.42
9:8E:106:ALA:O	9:8E:108:VAL:HG22	2.19	0.42
19:AA:35:SER:HB2	19:AA:37:ARG:HD3	2.01	0.42
20:BA:87:LYS:HE3	20:BA:87:LYS:HB2	1.64	0.42
20:BI:40:ALA:HB2	20:BI:55:ILE:HG22	2.01	0.42
44:C5:87:LYS:HE2	44:C5:88:LYS:HG3	2.01	0.42
44:G8:33:LYS:HB2	44:G8:33:LYS:HE2	1.84	0.42
49:L8:28:LEU:HA	49:L8:33:GLN:NE2	2.33	0.42
27:11:23:GLU:H	27:11:23:GLU:HG2	1.49	0.42
2:12:120:ALA:O	2:12:124:SER:HB3	2.19	0.42
2:12:5:ILE:HG12	2:12:6:THR:O	2.20	0.42
1:13:1399:C:C2	1:13:1401:G:C5	3.08	0.42
1:13:191(C):G:H2'	1:13:191(D):U:O4'	2.19	0.42
1:13:864:A:H2'	1:13:865:A:C8	2.54	0.42
1:13:939:G:C4	1:13:940:C:C5	3.08	0.42
24:14:1204:A:N1	24:14:1241:A:N1	2.67	0.42
24:14:126:A:OP2	52:L5:19:ARG:HG3	2.18	0.42
24:14:1391:U:O2	24:14:1393:A:H8	2.01	0.42
24:14:2112:G:H2'	24:14:2113:U:H5	1.85	0.42
24:14:2206:C:H2'	24:14:2207:C:C6	2.53	0.42
24:14:2476:A:H2'	24:14:2476:A:N3	2.34	0.42
24:14:2526:G:H5'	24:14:2742:C:O2'	2.18	0.42
24:14:768:G:H2'	24:14:769:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:873:G:N2	24:14:905:U:C2	2.87	0.42
2:1E:41:ILE:HA	2:1E:41:ILE:HD12	1.66	0.42
54:1G:1109:C:H6	54:1G:1109:C:O5'	2.01	0.42
54:1G:1129:C:OP2	9:82:62:TYR:OH	2.25	0.42
54:1G:198:G:H2'	54:1G:199:G:C8	2.54	0.42
54:1G:232:G:H2'	54:1G:233:C:O4'	2.19	0.42
54:1G:373:A:C2	54:1G:374:A:C8	3.06	0.42
24:1H:82:G:N1	24:1H:103:A:OP2	2.43	0.42
24:1H:143:C:H2'	24:1H:144:C:H6	1.84	0.42
24:1H:1591:G:H2'	24:1H:1592:C:C6	2.53	0.42
24:1H:1654:A:OP1	37:98:1:MET:N	2.50	0.42
24:1H:1936:A:C8	24:1H:1940:U:O2	2.72	0.42
24:1H:2467:C:C2'	24:1H:2468:G:H5'	2.49	0.42
24:1H:2612:C:OP2	51:N8:2:ALA:HA	2.18	0.42
24:1H:2766:G:H5''	24:1H:2767:C:OP2	2.19	0.42
28:29:79:ARG:HD2	28:29:79:ARG:N	2.33	0.42
11:2A:93:GLN:HA	11:2A:96:ARG:HE	1.84	0.42
11:2I:122:LYS:HE3	11:2I:122:LYS:HB2	1.55	0.42
22:2K:9:U:O2'	22:2K:10:C:C5	2.72	0.42
22:2K:35:QUO:H8	22:2K:35:QUO:O5'	2.19	0.42
22:2K:81:C:C4	22:2K:82:A:N7	2.87	0.42
24:1H:442:G:C4'	29:31:46:ARG:HG3	2.46	0.42
4:32:101:LEU:HD23	4:32:121:VAL:CG1	2.48	0.42
4:3E:149:ALA:O	4:3E:153:ARG:HG2	2.18	0.42
22:3L:39:A:C6	22:3L:40:PSU:C2	3.07	0.42
5:4E:78:HIS:HB3	8:7E:107:LEU:HD12	2.01	0.42
13:4I:35:GLU:H	13:4I:35:GLU:HG2	1.74	0.42
31:59:152:ARG:HG3	31:59:153:LYS:HB2	2.01	0.42
32:61:67:ARG:HH21	32:61:68:LEU:HB2	1.84	0.42
15:6A:43:LEU:HD11	15:6A:53:HIS:HA	2.01	0.42
7:6E:149:ARG:HD3	11:2I:59:TYR:CE1	2.54	0.42
26:71:13:LYS:NZ	26:71:31:GLU:O	2.48	0.42
26:71:42:GLU:OE2	26:71:217:THR:HA	2.19	0.42
35:78:101:VAL:HA	35:78:105:LEU:O	2.19	0.42
57:1H:3774:HOH:O	35:78:44:GLY:O	2.22	0.42
41:95:62:LEU:HD21	41:95:95:LEU:HB2	2.01	0.42
18:9A:52:PRO:O	18:9A:56:THR:HG23	2.19	0.42
19:AA:15:LEU:HG	19:AA:33:THR:HG23	2.01	0.42
43:B5:48:LYS:HE2	43:B5:48:LYS:HB2	1.90	0.42
45:D5:171:ILE:HA	45:D5:171:ILE:HD12	1.86	0.42
24:14:1365:A:OP1	47:F5:41:ARG:NH2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:F8:44:GLU:HG2	43:F8:49:VAL:O	2.19	0.42
19:AA:65:ASN:HB3	50:I5:55:ARG:CZ	2.50	0.42
24:14:2611:U:O4	51:J5:3:LYS:HG3	2.19	0.42
27:11:25:THR:CG2	27:11:26:LYS:N	2.82	0.42
1:13:165:C:H2'	1:13:166:G:C8	2.54	0.42
1:13:779:C:H2'	1:13:780:A:O4'	2.19	0.42
24:14:1210:A:H5'	24:14:1212:G:H5'	2.01	0.42
24:14:2448:A:P	57:14:3519:HOH:O	2.66	0.42
24:14:2513:G:N2	28:29:143:ASN:HD21	2.17	0.42
54:1G:1128:C:C4	54:1G:1139:G:C5	3.07	0.42
54:1G:1436:U:OP1	20:BA:23:ARG:NH2	2.51	0.42
24:1H:1062:G:N2	24:1H:1076:C:O2	2.52	0.42
24:1H:1165:U:H2'	24:1H:1166:C:C6	2.55	0.42
24:1H:1863:G:H2'	24:1H:1864:U:O4'	2.19	0.42
24:1H:1:G:H1	24:1H:2902:C:N4	2.12	0.42
24:1H:2643:G:H2'	24:1H:2644:G:O4'	2.18	0.42
24:1H:428:A:P	57:1H:3709:HOH:O	2.77	0.42
24:1H:654(I):C:H2'	24:1H:654(J):A:C5	2.54	0.42
24:1H:655:A:H8	24:1H:656:G:O4'	2.03	0.42
24:1H:935:C:H2'	24:1H:936:C:C6	2.54	0.42
24:1H:1657:C:O3'	28:21:133:LYS:HG2	2.19	0.42
28:21:93:VAL:HG21	28:21:177:PRO:HA	2.02	0.42
12:3A:24:VAL:HG12	12:3A:98:TYR:HE1	1.82	0.42
5:42:6:PHE:HB2	5:42:63:ARG:CZ	2.50	0.42
30:49:178:PHE:HA	30:49:179:PRO:HD2	1.88	0.42
13:4I:30:ALA:O	13:4I:34:LEU:HD23	2.20	0.42
33:58:4:TYR:CE2	40:C8:100:VAL:HG11	2.54	0.42
54:1G:981:U:H5'	14:5A:21:TYR:CZ	2.54	0.42
6:5E:8:ILE:HG23	6:5E:85:VAL:HG13	2.00	0.42
32:61:62:LYS:HG2	32:61:66:GLU:OE1	2.19	0.42
15:6I:31:LEU:HD12	15:6I:31:LEU:HA	1.68	0.42
9:82:78:LYS:HZ3	9:82:101:PHE:HD1	1.67	0.42
36:88:54:MET:SD	36:88:118:LEU:HD23	2.59	0.42
6:52:99:ALA:HB2	18:9A:31:LEU:HD22	2.01	0.42
25:16:48:A:H4'	38:A8:95:HIS:ND1	2.35	0.42
40:C8:76:TYR:C	40:C8:76:TYR:CD1	2.92	0.42
45:D5:52:SER:O	45:D5:53:ILE:HG12	2.19	0.42
44:G8:49:VAL:HG21	44:G8:55:TYR:CE1	2.53	0.42
45:H8:30:ASN:HA	45:H8:89:PHE:CE1	2.55	0.42
48:K8:50:ILE:O	48:K8:54:LYS:HB2	2.19	0.42
1:13:1060:C:H5''	10:1I:51:ARG:HG2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1255:G:N2	1:13:1259:C:O2	2.37	0.42
1:13:1405:G:O2'	1:13:1519:A:H5'	2.20	0.42
1:13:486:U:H2'	1:13:487:A:H8	1.84	0.42
24:14:1034:G:H2'	24:14:1035:U:O4'	2.20	0.42
24:14:1047:G:N2	24:14:1111:A:H62	2.15	0.42
24:14:1279:G:H5''	37:55:33:ARG:HH21	1.85	0.42
24:14:1384:A:N3	24:14:1405:U:H1'	2.33	0.42
24:14:14:A:H5''	24:14:15:G:OP2	2.19	0.42
24:14:1832:C:N4	24:14:1833:U:C4	2.87	0.42
24:14:2130:U:C2	24:14:2158:A:H2	2.37	0.42
24:14:2723:C:H6	24:14:2723:C:O5'	2.02	0.42
24:14:2732:G:H3'	24:14:2733:A:O4'	2.19	0.42
24:14:2850:A:C2	24:14:2851:A:C4	3.08	0.42
24:14:2849:U:H4'	24:14:2868:A:C2	2.55	0.42
24:14:387:U:P	57:14:4141:HOH:O	2.76	0.42
24:14:68:G:H2'	24:14:69:C:C6	2.54	0.42
24:14:761:A:N6	57:14:4299:HOH:O	2.30	0.42
24:14:883:G:N2	24:14:893:C:N3	2.65	0.42
27:19:162:SER:HB3	27:19:195:ALA:CB	2.49	0.42
54:1G:1255:G:P	10:1A:45:ARG:HH22	2.42	0.42
2:1E:212:GLN:O	2:1E:216:SER:HB2	2.19	0.42
2:1E:30:ARG:HB2	2:1E:46:LYS:NZ	2.34	0.42
24:1H:1087:G:C5	24:1H:1089:G:H1'	2.54	0.42
24:1H:1103:A:H3'	24:1H:1104:C:C5	2.54	0.42
24:1H:1387:C:C2	24:1H:1388:G:C8	3.07	0.42
24:1H:2401:U:H2'	24:1H:2402:C:H1'	2.00	0.42
24:1H:2840:C:O3'	37:98:53:HIS:NE2	2.52	0.42
24:1H:2721:A:H1'	24:1H:2873:A:O2'	2.19	0.42
24:1H:2896:C:H2'	24:1H:2897:U:C6	2.54	0.42
24:1H:34:C:C6	24:1H:34:C:OP2	2.72	0.42
24:1H:654(F):C:H42	24:1H:654(O):G:H1	1.68	0.42
24:1H:818:G:H5'	24:1H:839:U:OP1	2.19	0.42
28:21:97:LYS:O	28:21:100:GLU:HG3	2.19	0.42
29:31:49:ALA:O	29:31:92:PRO:HB2	2.18	0.42
24:1H:1248:G:O5'	29:31:92:PRO:HD3	2.19	0.42
4:32:15:GLU:OE2	4:32:63:LYS:HE2	2.19	0.42
4:32:14:ARG:HB2	4:32:40:PRO:HD2	2.00	0.42
4:3E:154:ASN:CG	4:3E:155:LEU:H	2.18	0.42
12:3I:110:VAL:CG2	12:3I:120:TYR:HB3	2.50	0.42
36:45:11:LYS:HD3	36:45:87:LYS:HG2	2.02	0.42
30:49:15:VAL:HG13	30:49:175:LEU:CB	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1224:G:O2'	13:4A:102:ARG:NH1	2.52	0.42
13:4I:11:ARG:NH2	13:4I:46:LYS:HG3	2.34	0.42
13:4I:15:VAL:HG23	13:4I:43:THR:O	2.19	0.42
31:51:90:LYS:O	31:51:94:TYR:HD2	2.03	0.42
37:55:42:LYS:HB3	37:55:45:ARG:NH2	2.34	0.42
31:59:26:VAL:CG1	31:59:33:LEU:H	2.32	0.42
31:59:6:ARG:HB2	31:59:66:GLY:HA2	2.01	0.42
32:61:67:ARG:HE	32:61:67:ARG:HB3	1.51	0.42
7:62:65:ALA:HB1	7:62:127:ALA:HB3	2.01	0.42
38:65:61:ASN:OD1	38:65:64:GLU:HB2	2.20	0.42
32:69:144:VAL:HG13	32:69:145:VAL:H	1.83	0.42
7:6E:146:GLU:O	7:6E:149:ARG:HB2	2.19	0.42
39:75:50:ILE:HD13	39:75:64:ARG:HB3	2.01	0.42
41:95:24:LYS:HA	41:95:92:THR:OG1	2.19	0.42
24:1H:2870:C:H5''	37:98:65:LEU:HD21	2.01	0.42
19:AA:66:MET:N	19:AA:67:VAL:HB	2.34	0.42
48:G5:47:ASN:O	48:G5:49:LYS:N	2.52	0.42
46:I8:46:LYS:HB3	46:I8:46:LYS:HE2	1.90	0.42
47:J8:92:LYS:HA	47:J8:95:LEU:HD12	2.01	0.42
48:K8:17:SER:HB2	48:K8:20:GLU:HG3	2.01	0.42
24:14:624:C:OP1	53:M5:64:TYR:CZ	2.73	0.42
53:Q8:62:LEU:CB	53:Q8:63:PRO:HD2	2.50	0.42
27:11:245:PRO:HA	27:11:246:PRO:HD3	1.91	0.42
2:12:231:GLU:HA	2:12:232:PRO:HD3	1.78	0.42
1:13:1095:U:H5'	1:13:1109:C:O2	2.20	0.42
1:13:1219:U:H2'	1:13:1220:G:C8	2.52	0.42
1:13:1386:G:O2'	1:13:1387:G:H5'	2.19	0.42
1:13:54:C:N4	1:13:353:A:OP2	2.49	0.42
1:13:600:C:H2'	1:13:601:C:H6	1.85	0.42
1:13:746:A:H4'	1:13:837:G:O2'	2.19	0.42
24:14:1252:G:O2'	24:14:1253:A:C8	2.73	0.42
24:14:1500:G:H5''	24:14:1501:C:OP2	2.20	0.42
24:14:1664:A:OP2	57:14:3654:HOH:O	2.22	0.42
24:14:1707:G:C5	24:14:1756:G:C6	3.07	0.42
24:14:2036:C:H6	24:14:2036:C:H5'	1.85	0.42
24:14:214:G:O2'	24:14:216:A:O2'	2.32	0.42
24:14:2494:G:C5	24:14:2495:G:N7	2.88	0.42
24:14:429:A:H2'	24:14:430:G:C8	2.54	0.42
24:14:456:C:H2'	43:B5:69:TYR:HE2	1.84	0.42
24:14:1797:C:HO2'	27:19:259:THR:HG1	1.63	0.42
2:1E:149:LEU:HD23	2:1E:149:LEU:HA	1.64	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:1F:17:THR:O	21:1F:22:ARG:HD3	2.20	0.42
54:1G:1014:A:P	54:1G:1014:A:H8	2.43	0.42
54:1G:1095:U:H2'	54:1G:1096:C:C6	2.55	0.42
54:1G:1057:G:H1	54:1G:1203:C:H42	1.67	0.42
54:1G:1285:A:H4'	54:1G:1286:A:O5'	2.19	0.42
24:1H:1230:C:H2'	24:1H:1231:G:C8	2.54	0.42
24:1H:1332:G:N2	24:1H:1609:A:H2'	2.35	0.42
24:1H:1417:C:P	57:1H:4019:HOH:O	2.75	0.42
24:1H:1533:C:C5	24:1H:1534:G:H3'	2.54	0.42
24:1H:1590:U:H2'	24:1H:1591:G:H8	1.83	0.42
24:1H:1686:C:H2'	24:1H:1687:G:O4'	2.19	0.42
24:1H:1825:A:H1'	27:11:255:LYS:NZ	2.35	0.42
24:1H:2212:A:H8	24:1H:2212:A:H2'	1.75	0.42
24:1H:2329:G:H2'	24:1H:2330:G:C8	2.54	0.42
24:1H:274:G:H2'	24:1H:275:G:O4'	2.19	0.42
24:1H:685:A:H1'	24:1H:688:U:O4	2.20	0.42
24:1H:993:G:C6	24:1H:994:C:N4	2.87	0.42
28:29:82:ARG:HA	28:29:82:ARG:HD3	1.84	0.42
3:2E:134:ILE:HD11	3:2E:153:VAL:HG21	2.00	0.42
36:45:83:MET:N	36:45:83:MET:SD	2.91	0.42
30:49:15:VAL:HG13	30:49:175:LEU:HB3	2.00	0.42
30:49:19:LEU:HD23	30:49:19:LEU:HA	1.92	0.42
13:4A:101:GLN:HB3	13:4A:101:GLN:HE21	1.65	0.42
31:51:121:ILE:HD11	31:51:141:VAL:HA	2.02	0.42
26:71:42:GLU:HB2	26:71:215:THR:HG23	2.01	0.42
8:7E:14:ARG:O	8:7E:18:ARG:HD3	2.19	0.42
36:88:28:ALA:HB3	36:88:29:PHE:CD1	2.54	0.42
36:88:4:PRO:HD3	36:88:70:PRO:O	2.20	0.42
24:1H:1652:A:N6	37:98:11:ASN:OD1	2.45	0.42
40:C8:110:VAL:O	40:C8:113:ALA:HB3	2.19	0.42
42:E8:60:ASN:OD1	42:E8:60:ASN:N	2.53	0.42
43:F8:53:LYS:HG2	43:F8:82:GLN:HB2	2.00	0.42
49:L8:17:LYS:H	49:L8:17:LYS:HG2	1.69	0.42
1:13:1378:C:C5	1:13:1379:G:C8	3.08	0.42
1:13:1402:C:H2'	1:13:1403:C:O4'	2.20	0.42
1:13:232:G:H1'	1:13:262:A:N1	2.34	0.42
1:13:298:A:H8	1:13:298:A:OP1	2.03	0.42
1:13:985:C:N3	1:13:1221:G:C2	2.87	0.42
24:14:1003:G:N2	24:14:1153:C:C2	2.87	0.42
24:14:11:G:H8	24:14:11:G:O5'	2.03	0.42
24:14:1394:U:H2'	24:14:1395:A:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2115:G:H4'	24:14:2166:G:O2'	2.20	0.42
24:14:2286:A:H4'	24:14:2287:A:O4'	2.19	0.42
24:14:29:U:O4	57:14:4112:HOH:O	2.21	0.42
24:14:813:U:C2	24:14:1195:G:N2	2.88	0.42
24:14:976:C:H42	24:14:987:G:H1	1.67	0.42
24:14:1827:C:OP2	27:19:222:ARG:HD2	2.20	0.42
2:1E:61:LEU:HD23	2:1E:68:ILE:HD11	2.01	0.42
54:1G:1037:C:H2'	54:1G:1038:C:C6	2.54	0.42
24:1H:1260:G:C6	24:1H:1261:C:C4	3.08	0.42
24:1H:1553:A:N6	24:1H:1555:G:H1'	2.35	0.42
24:1H:1606:G:H8	24:1H:1606:G:O5'	2.02	0.42
24:1H:2106:G:C2	24:1H:2184:G:C2	3.08	0.42
24:1H:2360:A:H2'	24:1H:2361:A:O4'	2.20	0.42
24:1H:2400:G:H3'	24:1H:2401:U:C6	2.55	0.42
24:1H:35:G:H2'	24:1H:36:G:O4'	2.20	0.42
24:1H:878:A:C2	24:1H:879:G:C4	3.07	0.42
24:1H:94:G:H2'	24:1H:95:G:O4'	2.19	0.42
10:1I:35:SER:HB2	10:1I:73:ASP:HB2	2.02	0.42
3:2E:125:GLU:HA	3:2E:191:THR:HG22	2.02	0.42
3:2E:59:ARG:HA	3:2E:63:ASN:O	2.20	0.42
4:32:30:LYS:HG3	4:32:35:ARG:HE	1.84	0.42
4:32:3:ARG:HG3	4:32:5:ILE:CD1	2.47	0.42
4:32:59:ARG:HA	4:32:62:GLN:HB2	2.01	0.42
13:4A:14:ARG:H	13:4A:44:ARG:NH1	2.15	0.42
34:68:118:ALA:HA	34:68:119:PRO:HD2	1.80	0.42
32:69:69:LYS:HA	32:69:136:VAL:HG21	2.02	0.42
15:6A:24:SER:O	15:6A:28:GLN:HG3	2.18	0.42
39:75:98:LYS:HB3	39:75:100:TYR:CE2	2.54	0.42
39:75:125:ARG:HA	39:75:125:ARG:HD3	1.77	0.42
39:75:36:GLU:OE2	39:75:41:ARG:HD3	2.20	0.42
39:75:4:GLY:O	39:75:5:ALA:CB	2.68	0.42
35:78:113:LYS:HG2	35:78:115:LEU:HD23	2.01	0.42
16:7I:58:TYR:O	16:7I:62:VAL:HG22	2.20	0.42
40:85:100:VAL:O	40:85:101:ARG:HG2	2.20	0.42
40:85:92:ARG:O	40:85:94:ASN:N	2.51	0.42
36:88:118:LEU:HD23	36:88:118:LEU:HA	1.74	0.42
24:1H:910:A:N6	36:88:12:GLN:HA	2.31	0.42
1:13:1117:G:H5"	9:8E:104:ARG:CZ	2.49	0.42
17:8I:82:MET:HE3	17:8I:82:MET:HB3	2.00	0.42
41:95:71:LEU:HD12	41:95:71:LEU:HA	1.83	0.42
19:AA:49:ILE:HD13	19:AA:62:ILE:HD13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AI:41:VAL:HB	19:AI:42:PRO:HA	2.02	0.42
19:AI:68:GLY:H	50:M8:55:ARG:NH2	2.15	0.42
20:BI:49:ALA:O	20:BI:53:LEU:HG	2.20	0.42
24:14:336:C:H4'	44:C5:6:HIS:CD2	2.54	0.42
44:C5:17:SER:HB3	44:C5:71:LYS:HB3	2.01	0.42
44:C5:88:LYS:HB2	44:C5:89:PHE:H	1.67	0.42
41:D8:64:HIS:CG	41:D8:92:THR:HG22	2.54	0.42
46:E5:50:ASN:O	46:E5:62:LEU:HB2	2.19	0.42
48:G5:29:LYS:HG2	48:G5:57:ILE:HD13	2.02	0.42
47:J8:40:ARG:HB2	47:J8:40:ARG:HE	1.71	0.42
53:M5:33:ASN:OD1	53:M5:33:ASN:N	2.52	0.42
2:12:51:LEU:HD23	2:12:51:LEU:HA	1.87	0.42
2:12:56:ARG:HD3	2:12:56:ARG:HA	1.81	0.42
1:13:1264:C:O2	1:13:1272:G:C2	2.72	0.42
1:13:1286:A:N6	1:13:1354:C:H5''	2.34	0.42
24:14:1260:G:C6	24:14:1261:C:C4	3.07	0.42
24:14:138:G:O2'	24:14:139:G:H5'	2.20	0.42
24:14:185:U:H2'	24:14:186:G:C8	2.55	0.42
24:14:2516:G:C6	24:14:2517:C:N4	2.88	0.42
24:14:2825:C:H2'	24:14:2826:A:H5'	2.01	0.42
27:19:12:SER:HB2	27:19:207:GLY:O	2.20	0.42
27:19:73:VAL:HG13	27:19:120:GLY:CA	2.50	0.42
54:1G:160:A:H1'	54:1G:344:A:N7	2.34	0.42
54:1G:452:A:C4	54:1G:453:A:C8	3.07	0.42
54:1G:536:C:H2'	54:1G:537:G:C8	2.55	0.42
54:1G:574:A:H5''	54:1G:575:G:OP2	2.20	0.42
54:1G:900:A:H2'	54:1G:901:A:C8	2.55	0.42
24:1H:1038:C:H2'	24:1H:1039:G:O4'	2.20	0.42
24:1H:1113:U:OP1	31:51:2:SER:N	2.51	0.42
24:1H:1970:A:H4'	24:1H:1970:A:OP1	2.19	0.42
24:1H:2240:C:O2'	24:1H:2241:A:H5'	2.20	0.42
24:1H:2397:G:C2	24:1H:2420:C:O2	2.72	0.42
24:1H:2450:A:C2	24:1H:2451:A:C4	3.07	0.42
24:1H:760:G:OP1	57:1H:3782:HOH:O	2.21	0.42
10:1I:92:THR:HG22	10:1I:94:VAL:HG23	2.01	0.42
25:1J:76:G:H21	45:D5:75:ASN:HD22	1.66	0.42
3:22:4:LYS:HE3	3:22:4:LYS:HB2	1.91	0.42
28:29:144:ARG:HB3	28:29:145:LYS:H	1.54	0.42
3:2E:73:PRO:O	3:2E:76:VAL:HG22	2.19	0.42
29:31:111:ALA:HB2	29:31:206:ILE:HD12	2.01	0.42
29:39:63:LYS:HA	29:39:76:GLY:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3E:68:TYR:CE2	4:3E:97:LEU:HB3	2.55	0.42
30:41:95:ARG:O	30:41:99:MET:N	2.53	0.42
5:42:57:LYS:HG2	5:42:61:TYR:CE1	2.54	0.42
36:45:29:PHE:HB3	36:45:65:PHE:CD2	2.54	0.42
30:49:47:LYS:HG2	30:49:48:GLU:HG3	2.01	0.42
5:4E:121:LYS:HD2	5:4E:121:LYS:HA	1.75	0.42
31:51:4:ILE:HG13	31:51:6:ARG:HB2	2.00	0.42
37:55:61:HIS:CE1	37:55:65:LEU:HD11	2.55	0.42
6:5E:23:LYS:HD3	6:5E:61:LEU:HD21	2.00	0.42
3:2E:29:TYR:OH	14:5I:54:PRO:HD2	2.20	0.42
7:62:99:LEU:HD23	7:62:102:ARG:NH1	2.35	0.42
38:65:64:GLU:O	38:65:68:GLN:HG3	2.19	0.42
32:69:123:LEU:HA	32:69:123:LEU:HD23	1.84	0.42
7:6E:65:ALA:HB1	7:6E:127:ALA:HB3	2.02	0.42
15:6I:78:TYR:CZ	15:6I:82:ILE:HD11	2.54	0.42
26:71:45:ALA:HA	26:71:211:SER:O	2.19	0.42
9:8E:18:PHE:HD2	9:8E:62:TYR:CD2	2.31	0.42
41:95:21:ARG:HH22	41:95:65:GLY:CA	2.33	0.42
41:D8:67:GLY:O	41:D8:88:ARG:HB3	2.20	0.42
46:E5:62:LEU:O	46:E5:63:VAL:HG13	2.20	0.42
50:M8:12:ALA:HB3	50:M8:24:THR:HB	2.02	0.42
27:11:37:LEU:HD13	27:11:62:TYR:HB2	2.01	0.42
2:12:58:ILE:H	2:12:58:ILE:HG12	1.35	0.42
1:13:173:U:H5''	1:13:197:A:O4'	2.19	0.42
1:13:458:C:H2'	1:13:464:G:H8	1.84	0.42
1:13:536:C:OP2	57:13:1791:HOH:O	2.21	0.42
1:13:952:U:H4'	1:13:964:A:N1	2.35	0.42
24:14:1336:A:H2'	24:14:1337:G:H8	1.85	0.42
24:14:1370:C:HO2'	24:14:1811:G:HO2'	1.64	0.42
24:14:2111:C:H1'	24:14:2118:U:H4'	2.02	0.42
24:14:2231:C:H2'	24:14:2232:U:O4'	2.20	0.42
24:14:2543:G:H2'	24:14:2544:G:O4'	2.19	0.42
24:14:2712:U:H2'	24:14:2714:G:H5''	2.01	0.42
24:14:486:C:H4'	42:A5:60:ASN:HD22	1.84	0.42
24:14:590:A:H2'	24:14:591:C:C6	2.55	0.42
24:14:826:U:H2'	24:14:828:U:O4'	2.20	0.42
24:14:844:C:C5	24:14:845:G:C6	3.08	0.42
24:14:986:C:H3'	57:14:4154:HOH:O	2.18	0.42
25:16:2:C:H2'	25:16:3:C:C6	2.55	0.42
54:1G:1123:A:O2'	10:1A:38:ILE:HG12	2.20	0.42
2:1E:180:LEU:HA	2:1E:180:LEU:HD23	1.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:163:PHE:HA	2:1E:185:ILE:O	2.20	0.42
54:1G:1014:A:H4'	19:AA:14:HIS:HD2	1.85	0.42
54:1G:1059:C:OP2	3:22:199:LYS:NZ	2.44	0.42
54:1G:1208:C:H2'	54:1G:1209:C:C6	2.55	0.42
54:1G:1306:A:N6	54:1G:1331:G:H1'	2.35	0.42
54:1G:1446:A:C5	39:75:118:ARG:CZ	3.03	0.42
24:1H:1166:C:O2	24:1H:1184:G:N2	2.53	0.42
24:1H:1356:G:C5	24:1H:1357:U:C5	3.08	0.42
24:1H:1652:A:H2'	24:1H:1653:G:H5'	2.02	0.42
24:1H:1854:A:H2'	24:1H:1855:G:O4'	2.20	0.42
24:1H:1857:G:O6	57:1H:4346:HOH:O	2.21	0.42
24:1H:2564:A:OP1	24:1H:2648:C:H4'	2.20	0.42
24:1H:2875:C:H2'	24:1H:2876:G:O4'	2.19	0.42
24:1H:652:C:H2'	24:1H:653:A:H5'	2.01	0.42
24:1H:918:A:H8	24:1H:918:A:O5'	2.02	0.42
25:1J:12:C:OP2	25:1J:12:C:C6	2.73	0.42
28:21:119:ARG:NH1	28:21:156:MET:O	2.53	0.42
3:22:27:LYS:HG2	3:22:28:GLN:HG3	2.02	0.42
34:25:13:ASN:HD21	34:25:97:ARG:H	1.68	0.42
22:2K:17:OMG:HM21	22:2K:18:G:C8	2.54	0.42
22:2K:59:A:N6	22:2K:60:A:N6	2.68	0.42
29:31:136:THR:O	29:31:140:LEU:HB2	2.20	0.42
29:31:6:VAL:HG12	29:31:7:TYR:N	2.35	0.42
29:31:82:ILE:H	29:31:82:ILE:HG13	1.49	0.42
22:3K:42:U:H2'	22:3K:43:G:C8	2.55	0.42
30:41:67:LYS:HE2	50:M8:5:ILE:HG23	2.01	0.42
5:42:28:PHE:O	5:42:47:LYS:HA	2.20	0.42
30:49:43:LEU:O	30:49:88:ILE:HG13	2.19	0.42
6:52:70:ASP:OD1	6:52:71:ARG:N	2.52	0.42
6:5E:24:GLU:HG2	6:5E:28:ARG:NH2	2.35	0.42
32:61:118:LYS:HA	32:61:119:PRO:HD3	1.87	0.42
32:61:57:ARG:O	32:61:61:ARG:HG2	2.20	0.42
8:72:69:ARG:HD3	8:72:75:ARG:O	2.18	0.42
35:78:100:LEU:HA	35:78:100:LEU:HD12	1.82	0.42
36:88:74:TYR:O	36:88:90:VAL:O	2.37	0.42
20:BI:87:LYS:HA	20:BI:87:LYS:HD2	1.87	0.42
40:C8:27:LEU:HA	40:C8:27:LEU:HD22	1.83	0.42
46:E5:20:ARG:HH11	46:E5:20:ARG:HD2	1.67	0.42
50:M8:40:HIS:HB3	50:M8:41:PRO:HD3	2.02	0.42
50:M8:56:VAL:O	50:M8:60:GLN:NE2	2.53	0.42
2:12:77:ALA:O	2:12:81:VAL:HG23	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1347:G:H5''	9:8E:107:ARG:HG2	2.02	0.42
1:13:1357:A:N6	1:13:1358:U:O4	2.52	0.42
1:13:438:G:O2'	1:13:494:U:O4	2.22	0.42
1:13:708:C:H2'	1:13:709:G:H8	1.85	0.42
24:14:1197:G:H1'	24:14:1250:G:N2	2.35	0.42
24:14:1311:G:H2'	52:L5:47:ARG:HH21	1.85	0.42
24:14:1299:G:N2	24:14:1640:C:C6	2.87	0.42
24:14:1641:A:N6	24:14:1642:G:C2	2.87	0.42
24:14:1645:G:H5''	24:14:1646:C:H5'	2.02	0.42
24:14:184:C:H2'	24:14:185:U:C6	2.55	0.42
24:14:2195:C:O2'	24:14:2196:C:H5'	2.19	0.42
24:14:2250:G:C6	36:45:83:MET:HB3	2.54	0.42
24:14:2300:G:N2	24:14:2317:C:O2	2.53	0.42
24:14:221:A:C4	24:14:266:G:N7	2.88	0.42
24:14:392:C:H5''	24:14:409:C:H5''	2.01	0.42
24:14:572:A:H5''	24:14:573:G:OP2	2.19	0.42
24:14:932:G:P	49:H5:29:ARG:NH2	2.93	0.42
24:14:976:C:H2'	24:14:976:C:O2	2.18	0.42
54:1G:1137:C:H5''	54:1G:1138:G:OP1	2.20	0.42
54:1G:1300:G:O2'	54:1G:1301:U:P	2.76	0.42
54:1G:579:G:C4	54:1G:580:U:C5	3.08	0.42
54:1G:631:G:P	54:1G:632:A:N7	2.92	0.42
54:1G:660:G:H1	54:1G:745:C:N4	2.17	0.42
54:1G:825:G:H2'	54:1G:826:C:O4'	2.20	0.42
24:1H:1077:A:H2	24:1H:1088:A:H62	1.67	0.42
24:1H:17:G:H2'	24:1H:18:C:C6	2.55	0.42
24:1H:2000:G:N7	57:1H:4360:HOH:O	2.37	0.42
24:1H:2283:C:C4	24:1H:2389:G:C4	3.08	0.42
24:1H:784:A:C8	24:1H:792:G:C5	3.08	0.42
28:21:144:ARG:HB3	28:21:145:LYS:H	1.53	0.42
28:21:3:GLY:HA3	28:21:81:ILE:HG21	2.01	0.42
28:21:61:ARG:HB3	28:21:61:ARG:NH1	2.30	0.42
28:29:30:PRO:HD3	28:29:180:ASN:CG	2.41	0.42
11:2I:124:LYS:HE3	11:2I:125:PHE:CE1	2.55	0.42
35:35:39:LYS:HG3	35:35:45:LEU:CD2	2.48	0.42
5:42:9:LYS:HB2	5:42:112:LEU:HD11	2.02	0.42
24:14:2485:G:H5''	36:45:46:GLN:HE21	1.84	0.42
31:51:126:PRO:HB2	31:51:130:ARG:HH12	1.84	0.42
31:51:125:VAL:HG13	31:51:131:VAL:HB	2.02	0.42
9:82:111:ARG:HG3	14:5A:61:TRP:NE1	2.34	0.42
6:5E:39:LYS:HD2	6:5E:39:LYS:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:65:63:THR:O	38:65:66:ALA:HB3	2.20	0.42
35:78:121:LYS:HB3	35:78:122:PRO:HD2	2.01	0.42
26:79:10:LEU:O	26:79:220:PRO:HG3	2.19	0.42
8:7E:41:ARG:NH1	8:7E:123:GLU:OE2	2.53	0.42
37:98:14:SER:HA	37:98:17:ARG:NH1	2.34	0.42
39:B8:80:SER:HA	39:B8:81:PRO:HD3	1.94	0.42
20:BI:48:LYS:O	20:BI:50:GLU:N	2.53	0.42
40:C8:50:ARG:HG2	40:C8:53:ARG:NH2	2.35	0.42
45:D5:100:VAL:HG13	45:D5:101:PRO:HD2	2.00	0.42
47:F5:23:LYS:O	47:F5:31:GLY:HA2	2.19	0.42
50:I5:16:CYS:H	50:I5:20:ASN:H	1.68	0.42
51:J5:56:LYS:HZ3	51:J5:58:LEU:HB2	1.84	0.42
1:13:1031:G:H2'	1:13:1032:A:C8	2.55	0.42
1:13:1303:C:C4	1:13:1304:G:C5	3.07	0.42
1:13:302:G:C6	1:13:303:A:C5	3.08	0.42
1:13:321:A:O2'	1:13:322:C:H5'	2.19	0.42
1:13:322:C:OP2	1:13:328:C:N4	2.49	0.42
1:13:429:U:H1'	1:13:430:A:H5''	2.01	0.42
1:13:991:U:O4	1:13:1212:U:O2'	2.30	0.42
24:14:1473:G:H2'	24:14:1474:C:O4'	2.19	0.42
24:14:1857:G:C6	24:14:1858:G:N1	2.88	0.42
24:14:1955:U:O2'	24:14:1956:U:H5'	2.20	0.42
24:14:194:G:H2'	24:14:195:A:O4'	2.20	0.42
24:14:858:U:O2	24:14:2268:A:H2'	2.20	0.42
24:14:298:G:C5	57:14:3839:HOH:O	2.73	0.42
27:19:16:MET:HE1	27:19:208:LYS:HD3	2.02	0.42
54:1G:1287:A:N3	54:1G:1353:G:O2'	2.41	0.42
54:1G:325:A:N6	54:1G:326:G:C2	2.87	0.42
54:1G:918:A:H2'	54:1G:919:A:O4'	2.20	0.42
24:1H:1372:U:H2'	24:1H:1373:A:O4'	2.19	0.42
24:1H:2140:C:H2'	24:1H:2141:G:H8	1.85	0.42
24:1H:747:U:C4	24:1H:2613:U:C5	3.08	0.42
24:1H:262:A:H2'	24:1H:263:C:O4'	2.20	0.42
24:1H:602:G:O2'	24:1H:655:A:N6	2.53	0.42
24:1H:638:G:H2'	24:1H:639:U:O4'	2.20	0.42
24:1H:728:G:HO2'	24:1H:730:C:H6	1.64	0.42
24:1H:7:G:C2	24:1H:8:A:C4	3.08	0.42
24:1H:821:A:C2'	24:1H:946:G:H5''	2.50	0.42
25:1J:56:G:H4'	25:1J:57:A:O5'	2.20	0.42
28:21:85:ASN:HA	28:21:86:PRO:HD3	1.88	0.42
28:29:147:PRO:HB2	28:29:149:ARG:HG2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1523:G:OP1	11:2A:123:LYS:HD3	2.20	0.42
3:2E:16:ARG:HH12	3:2E:183:ASP:HA	1.85	0.42
22:2L:15:G:H2'	22:2L:68:A:C2	2.54	0.42
24:1H:588:U:C2	29:31:90:PHE:CE1	3.08	0.42
29:39:33:LEU:O	29:39:37:VAL:HG23	2.19	0.42
29:39:64:ILE:HD12	29:39:65:TRP:CE2	2.54	0.42
24:14:588:U:C2	29:39:90:PHE:CE1	3.08	0.42
12:3I:85:ILE:HD12	12:3I:85:ILE:HG23	1.72	0.42
30:41:73:ALA:HB3	30:41:82:LEU:HD21	2.01	0.42
30:49:145:THR:C	30:49:147:ASP:H	2.24	0.42
37:55:65:LEU:O	37:55:68:ARG:HB2	2.19	0.42
33:58:38:HIS:ND1	33:58:39:ARG:HG3	2.35	0.42
32:61:101:LEU:HA	32:61:101:LEU:HD23	1.79	0.42
38:65:14:VAL:HG21	38:65:90:GLY:O	2.19	0.42
38:65:7:TYR:CZ	38:65:91:PRO:HG2	2.55	0.42
32:69:5:LEU:HD12	32:69:17:GLN:O	2.19	0.42
32:69:41:GLU:HG3	32:69:41:GLU:H	1.72	0.42
26:71:190:ARG:HB3	26:71:194:ARG:NH1	2.35	0.42
26:71:208:PHE:HD2	26:71:209:LEU:HD23	1.85	0.42
39:75:3:ARG:HA	39:75:4:GLY:C	2.40	0.42
8:7E:6:ILE:HD11	8:7E:31:PHE:CD2	2.53	0.42
16:7I:23:ASP:CG	16:7I:25:ARG:HH11	2.22	0.42
17:8A:63:ARG:HG2	17:8A:64:PRO:CD	2.49	0.42
1:13:1117:G:H5''	9:8E:104:ARG:NH1	2.35	0.42
45:D5:30:ASN:HA	45:D5:89:PHE:HE1	1.85	0.42
46:E5:68:GLU:HG3	46:E5:82:ARG:NH1	2.35	0.42
50:I5:23:GLU:C	50:I5:24:THR:HG1	2.23	0.42
1:13:1079:G:H2'	1:13:1080:A:C8	2.55	0.41
1:13:1333:A:H3'	1:13:1334:G:H8	1.84	0.41
1:13:1350:A:C5	1:13:1351:U:C4	3.08	0.41
1:13:1413:A:H2'	1:13:1414:U:O4'	2.20	0.41
1:13:1442:G:C6	1:13:1446:A:N6	2.88	0.41
1:13:1497:G:C2'	1:13:1498:U:H5'	2.49	0.41
1:13:360:A:H2'	1:13:361:G:C8	2.55	0.41
1:13:58:C:O2'	1:13:388:G:N7	2.48	0.41
1:13:827:U:C5	1:13:872:A:N1	2.88	0.41
24:14:2029:G:N7	24:14:2031:A:H5'	2.34	0.41
24:14:2115:G:N2	24:14:2172:U:O4	2.53	0.41
24:14:2695:C:O2'	24:14:2696:U:H5'	2.20	0.41
24:14:2715:C:H2'	24:14:2716:U:H6	1.84	0.41
24:14:2745:C:O2	31:59:139:GLN:NE2	2.31	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2789:C:O2'	24:14:2893:G:N2	2.52	0.41
24:14:8:A:H2	24:14:2895:U:H3	1.67	0.41
24:14:289:A:N3	24:14:289:A:H2'	2.35	0.41
24:14:469:G:O6	52:L5:37:LYS:HE2	2.20	0.41
24:14:569:U:C4	24:14:570:G:C6	3.08	0.41
54:1G:1111:A:H2'	54:1G:1112:C:C6	2.55	0.41
54:1G:1068:G:N3	54:1G:1191:A:C2	2.88	0.41
54:1G:838:G:N2	54:1G:848:C:N3	2.68	0.41
24:1H:1141:U:H6	33:58:63:THR:OG1	2.01	0.41
24:1H:1219:G:OP2	40:C8:19:LYS:HE3	2.20	0.41
24:1H:1277:G:H2'	24:1H:1278:A:O4'	2.20	0.41
24:1H:1304:C:O2'	24:1H:1305:C:H5'	2.20	0.41
24:1H:1356:G:C6	24:1H:1357:U:C4	3.08	0.41
24:1H:2032:G:OP1	57:1H:4560:HOH:O	2.21	0.41
24:1H:218:A:C2	24:1H:235:U:H4'	2.54	0.41
24:1H:2306:C:H3'	24:1H:2307:G:C5'	2.49	0.41
24:1H:269:U:N3	24:1H:424:G:C6	2.88	0.41
24:1H:2853:C:O2'	24:1H:2854:G:H5'	2.20	0.41
24:1H:412:A:N6	24:1H:2412:A:O4'	2.52	0.41
24:1H:415:A:H2'	24:1H:416:C:H6	1.84	0.41
24:1H:940:G:H2'	24:1H:941:A:O4'	2.20	0.41
24:1H:945:A:OP2	24:1H:945:A:H4'	2.20	0.41
10:1I:81:THR:OG1	10:1I:82:ILE:N	2.53	0.41
11:2A:81:ASP:OD1	11:2A:107:SER:OG	2.32	0.41
29:39:132:VAL:C	29:39:134:GLY:H	2.23	0.41
4:3E:188:LEU:HA	4:3E:189:PRO:HD2	1.81	0.41
4:3E:39:PRO:HA	4:3E:40:PRO:HD3	1.90	0.41
4:3E:62:GLN:HA	4:3E:62:GLN:OE1	2.19	0.41
36:45:101:ARG:HG3	36:45:102:VAL:N	2.34	0.41
6:5E:26:ILE:O	6:5E:30:LEU:HD12	2.20	0.41
32:61:25:TYR:HE1	32:61:29:TYR:CD2	2.38	0.41
35:78:39:LYS:CG	35:78:45:LEU:HD21	2.50	0.41
35:78:82:GLY:HA2	35:78:113:LYS:O	2.20	0.41
36:88:29:PHE:HB3	36:88:65:PHE:CE1	2.55	0.41
17:8I:68:ARG:O	17:8I:68:ARG:HG3	2.20	0.41
40:85:95:LEU:HD13	41:95:4:ILE:HG23	2.01	0.41
37:98:78:LYS:O	37:98:78:LYS:HG2	2.20	0.41
18:9I:21:LYS:HB3	18:9I:57:GLY:HA3	2.01	0.41
18:9I:25:THR:HB	18:9I:42:ARG:HH12	1.84	0.41
54:1G:1320:C:C2	19:AA:72:GLY:HA3	2.55	0.41
39:B8:50:ILE:CD1	39:B8:102:ILE:HD11	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BI:57:ARG:HH11	20:BI:103:GLY:CA	2.33	0.41
44:C5:6:HIS:CE1	44:C5:7:VAL:HG13	2.55	0.41
44:C5:76:CYS:SG	44:C5:97:ARG:HG3	2.60	0.41
24:1H:536:A:OP1	40:C8:53:ARG:NH1	2.53	0.41
24:14:851:U:O2'	49:H5:42:ALA:O	2.34	0.41
49:H5:55:ARG:CZ	49:H5:55:ARG:HB3	2.50	0.41
24:1H:988:A:C5	49:L8:13:ILE:HD12	2.54	0.41
1:13:482:A:H2'	1:13:483:C:O4'	2.20	0.41
1:13:728:A:C5	15:6I:54:ARG:HD2	2.55	0.41
24:14:1135:C:N4	24:14:1138:G:OP2	2.50	0.41
24:14:1287:A:H5''	24:14:1288:U:OP2	2.20	0.41
24:14:1678:G:H22	24:14:1989:G:N2	2.18	0.41
24:14:1769:G:C2'	24:14:1770:G:H5'	2.51	0.41
24:14:1950:G:C2	24:14:1951:U:C5	3.08	0.41
24:14:2002:G:C5	57:14:4013:HOH:O	2.73	0.41
24:14:2030:A:H4'	24:14:2031:A:C8	2.55	0.41
24:14:2252:G:H2'	24:14:2253:G:O4'	2.20	0.41
24:14:2317:C:N4	24:14:2318:G:N7	2.69	0.41
24:14:252:G:OP2	35:35:50:ARG:NH1	2.48	0.41
24:14:2554:U:H2'	24:14:2555:U:C6	2.55	0.41
24:14:559:G:H2'	24:14:560:C:O4'	2.20	0.41
24:14:768:G:O2'	24:14:1379:A:N6	2.53	0.41
24:14:875:G:N2	24:14:903:C:C2	2.87	0.41
27:19:126:GLN:HB2	27:19:129:ASN:ND2	2.36	0.41
54:1G:1103:C:C4	54:1G:1104:G:N7	2.88	0.41
54:1G:115:G:H8	54:1G:115:G:O5'	2.03	0.41
54:1G:1118:C:H1'	54:1G:1179:A:C4	2.55	0.41
54:1G:596:C:H2'	54:1G:597:G:H8	1.84	0.41
54:1G:711:G:P	6:52:54:LYS:NZ	2.93	0.41
54:1G:977:A:O2'	54:1G:979:C:OP2	2.36	0.41
24:1H:106:C:H2'	24:1H:107:C:H6	1.85	0.41
24:1H:1416:G:H1	24:1H:1582:C:H42	1.67	0.41
24:1H:1836:C:O2'	24:1H:1837:C:H5'	2.20	0.41
24:1H:280:C:C2	24:1H:361:G:N2	2.88	0.41
24:1H:822:U:C2'	24:1H:823:G:H5'	2.50	0.41
28:21:14:ILE:HG13	28:21:173:VAL:HG11	2.03	0.41
34:25:63:VAL:HB	34:25:102:VAL:HG12	2.01	0.41
34:25:17:ARG:H	34:25:46:ALA:HA	1.85	0.41
28:29:4:ILE:HG21	28:29:4:ILE:HD13	1.78	0.41
3:2E:47:LEU:HA	3:2E:47:LEU:HD12	1.86	0.41
24:1H:588:U:H1'	29:31:90:PHE:CD1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:173:TRP:NE1	4:32:174:LEU:HG	2.35	0.41
29:39:200:GLU:O	29:39:203:GLN:HB2	2.20	0.41
29:39:1:MET:HB2	29:39:2:LYS:H	1.65	0.41
22:3K:35:QUO:H101	22:3K:35:QUO:H162	1.64	0.41
30:41:7:LEU:N	30:41:104:GLU:OE2	2.53	0.41
30:41:130:ASN:HB3	30:41:159:VAL:O	2.21	0.41
30:41:6:ALA:HB3	50:M8:23:GLU:HG3	2.02	0.41
30:49:96:ARG:HB3	30:49:96:ARG:HE	1.68	0.41
5:4E:118:ILE:HG12	5:4E:119:LEU:N	2.34	0.41
57:13:1760:HOH:O	14:5I:21:TYR:HB3	2.20	0.41
38:65:27:SER:HA	38:65:88:ASP:HB3	2.02	0.41
7:6E:23:VAL:O	7:6E:27:ILE:N	2.48	0.41
1:13:1350:A:H2	7:6E:34:GLY:HA3	1.85	0.41
26:71:214:VAL:HG23	26:71:224:ILE:HG12	2.02	0.41
35:78:121:LYS:HB2	35:78:123:LEU:HG	2.01	0.41
8:7E:61:VAL:HG12	8:7E:63:LEU:HD12	2.02	0.41
40:85:83:LEU:HD21	40:85:88:ILE:HB	2.02	0.41
17:8I:13:ASP:OD1	17:8I:14:LYS:NZ	2.41	0.41
20:BI:35:THR:O	20:BI:39:LYS:HE3	2.20	0.41
44:C5:43:ASN:N	44:C5:43:ASN:OD1	2.53	0.41
45:D5:146:ILE:HD13	45:D5:176:PRO:HD3	2.01	0.41
45:H8:11:GLU:O	45:H8:36:LYS:NZ	2.40	0.41
46:I8:18:ALA:HB3	46:I8:20:ARG:NH1	2.35	0.41
46:I8:66:VAL:O	46:I8:81:VAL:HG23	2.20	0.41
46:I8:51:VAL:HG23	46:I8:81:VAL:HG12	2.00	0.41
53:M5:54:GLU:CG	53:M5:57:ARG:HH22	2.28	0.41
50:M8:55:ARG:HB3	50:M8:56:VAL:H	1.62	0.41
27:11:238:GLY:O	27:11:240:ALA:N	2.54	0.41
2:12:188:ALA:O	2:12:203:GLY:N	2.51	0.41
1:13:1082:G:H2'	1:13:1083:U:O4'	2.20	0.41
1:13:1106:G:H2'	1:13:1107:C:H6	1.85	0.41
1:13:313:A:H2'	1:13:314:C:H6	1.83	0.41
1:13:884:U:H4'	1:13:885:G:H5''	2.02	0.41
24:14:1478:G:HO2'	24:14:1558:A:H2	1.66	0.41
24:14:1486:A:H2'	24:14:1487:G:C8	2.55	0.41
24:14:2065:C:H2'	24:14:2066:C:C6	2.54	0.41
24:14:2135:A:H3'	24:14:2136:C:C5	2.55	0.41
24:14:2652:C:N4	24:14:2668:G:H1	2.12	0.41
24:14:571:A:H5'	24:14:2030:A:N7	2.36	0.41
24:14:816:C:H2'	24:14:817:C:C6	2.55	0.41
24:14:825:C:H2'	24:14:826:U:O4'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:16:65:C:H41	25:16:108:C:H2'	1.83	0.41
2:1E:71:VAL:O	2:1E:164:VAL:HA	2.20	0.41
54:1G:1131:G:H2'	54:1G:1132:C:H6	1.86	0.41
54:1G:1141:C:C2	54:1G:1142:G:C8	3.08	0.41
54:1G:1225:A:H5''	54:1G:1226:C:OP2	2.21	0.41
54:1G:1333:A:H8	54:1G:1333:A:O5'	2.03	0.41
54:1G:1498:U:O5'	54:1G:1498:U:H6	2.03	0.41
54:1G:723:U:O2'	54:1G:724:G:OP1	2.34	0.41
54:1G:947:G:O3'	13:4A:109:THR:OG1	2.36	0.41
24:1H:1021:A:H8	24:1H:1022:G:H5''	1.85	0.41
24:1H:1035:U:H2'	24:1H:1036:G:C8	2.55	0.41
24:1H:1011:G:C2	24:1H:1151:G:C2	3.08	0.41
24:1H:1312:U:OP2	43:F8:63:LYS:HE2	2.19	0.41
24:1H:1945:G:H2'	24:1H:1946:U:C6	2.55	0.41
24:1H:248:G:O2'	24:1H:2432:A:OP1	2.32	0.41
24:1H:2716:U:O2'	24:1H:2717:G:H5'	2.20	0.41
24:1H:2768:C:C4	24:1H:2769:C:C5	3.09	0.41
24:1H:74:A:H8	24:1H:74:A:C5'	2.34	0.41
24:1H:91:A:C4	24:1H:92:G:C8	3.09	0.41
10:1I:84:GLN:HA	10:1I:87:THR:HG1	1.85	0.41
25:1J:2:C:H2'	25:1J:3:C:C6	2.55	0.41
28:21:97:LYS:N	28:21:100:GLU:OE1	2.45	0.41
34:25:19:ILE:HB	34:25:41:ALA:HB1	2.03	0.41
11:2A:51:LYS:HG3	11:2A:51:LYS:O	2.20	0.41
3:2E:19:GLU:HG3	3:2E:54:ARG:NH1	2.35	0.41
3:2E:70:VAL:HG12	3:2E:72:LYS:N	2.36	0.41
22:2L:63:5MU:H2'	22:2L:64:PSU:H5''	2.02	0.41
35:35:48:PRO:O	35:35:51:PHE:N	2.53	0.41
29:39:20:LEU:HD23	29:39:21:ALA:H	1.86	0.41
29:39:34:TRP:CZ2	35:35:8:PRO:HB3	2.55	0.41
12:3A:7:ILE:O	12:3A:11:VAL:HG23	2.20	0.41
4:3E:163:GLU:O	4:3E:166:LYS:HE3	2.20	0.41
30:41:37:VAL:HG13	30:41:158:ALA:O	2.20	0.41
36:45:16:ARG:O	36:45:17:LEU:HD23	2.20	0.41
30:49:129:GLY:O	30:49:161:THR:HB	2.19	0.41
30:49:138:GLN:HG3	30:49:139:LEU:H	1.84	0.41
1:13:8:A:N3	5:4E:103:GLY:HA2	2.35	0.41
24:14:2723:C:P	37:55:3:HIS:HD1	2.43	0.41
31:59:55:PRO:HD2	31:59:61:HIS:HB3	2.02	0.41
7:62:62:PHE:HA	7:62:124:LEU:CD2	2.50	0.41
32:69:74:ASN:O	32:69:75:LEU:HB2	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:6A:8:LYS:O	15:6A:12:ILE:HG13	2.20	0.41
26:71:20:TYR:H	26:71:224:ILE:HA	1.85	0.41
54:1G:1442:G:H2'	39:75:118:ARG:NH2	2.35	0.41
8:7E:83:ILE:HG13	8:7E:137:VAL:HG22	2.01	0.41
36:88:38:GLU:HA	36:88:99:PRO:HG3	2.02	0.41
42:A5:4:LYS:NZ	42:A5:6:ILE:HD11	2.35	0.41
20:BI:12:ALA:O	20:BI:15:ARG:HB2	2.21	0.41
44:C5:81:LYS:HD2	44:C5:99:CYS:SG	2.61	0.41
45:D5:3:TYR:O	45:D5:57:ILE:HA	2.20	0.41
42:E8:39:THR:HG22	42:E8:44:ALA:HB2	2.00	0.41
42:E8:79:GLY:HA3	42:E8:100:THR:HG22	2.03	0.41
44:G8:35:TYR:CD2	44:G8:69:ALA:HB3	2.55	0.41
48:K8:18:PRO:O	48:K8:21:LEU:HB2	2.20	0.41
53:M5:29:LYS:HB2	53:M5:44:LYS:CB	2.50	0.41
27:11:119:ALA:CB	27:11:130:ALA:HB3	2.50	0.41
1:13:1070:U:H2'	1:13:1071:C:C6	2.53	0.41
1:13:1126:U:O2'	1:13:1127:G:OP2	2.36	0.41
1:13:1144:G:C2'	1:13:1145:C:H5'	2.51	0.41
1:13:1166:G:C2	1:13:1171:G:O6	2.73	0.41
1:13:368:U:C6	32:69:90:GLY:HA3	2.55	0.41
1:13:297:G:H4'	1:13:557:G:H4'	2.02	0.41
1:13:811:C:O2'	1:13:901:A:N1	2.52	0.41
1:13:967:C:H3'	1:13:968:A:C8	2.55	0.41
24:14:1041:C:H2'	24:14:1042:G:C8	2.56	0.41
24:14:1184:G:C6	24:14:1185:C:C4	3.09	0.41
24:14:1332:G:N2	24:14:1609:A:HO2'	2.16	0.41
24:14:1586:A:H3'	24:14:1587:A:H8	1.84	0.41
24:14:173:G:C2	24:14:174:C:C2	3.09	0.41
24:14:1680:U:N3	24:14:1764:G:OP2	2.37	0.41
24:14:2065:C:H2'	24:14:2066:C:H6	1.85	0.41
24:14:2170:A:N3	24:14:2170:A:H2'	2.36	0.41
24:14:2468:G:C6	24:14:2481:G:C2	3.09	0.41
24:14:270(V):G:H2'	24:14:270(W):G:C8	2.55	0.41
24:14:363(C):G:H2'	24:14:363(D):G:H8	1.86	0.41
27:19:41:GLY:C	27:19:43:ARG:H	2.23	0.41
2:1E:31:TYR:N	2:1E:31:TYR:CD1	2.87	0.41
1:13:1286:A:H5''	21:1F:26:LYS:HB3	2.02	0.41
54:1G:1057:G:H2'	54:1G:1058:G:O4'	2.20	0.41
54:1G:1227:A:C8	54:1G:1227:A:H3'	2.55	0.41
54:1G:1464:G:OP1	39:75:108:ARG:NH1	2.53	0.41
54:1G:370:C:H2'	54:1G:371:G:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:448:A:O2'	54:1G:449:C:H5'	2.20	0.41
54:1G:791:G:C5	54:1G:792:A:N7	2.89	0.41
54:1G:946:A:H2'	54:1G:947:G:C8	2.55	0.41
24:1H:1171:G:C5	24:1H:1174:A:C6	3.07	0.41
24:1H:1259:G:H2'	24:1H:1260:G:C8	2.54	0.41
24:1H:1301:A:O2'	24:1H:1302:A:H3'	2.20	0.41
24:1H:140:A:C8	24:1H:1408:C:O2'	2.71	0.41
24:1H:1446:C:H2'	24:1H:1447:G:C8	2.52	0.41
24:1H:1663:C:HO2'	24:1H:1664:A:H8	1.68	0.41
24:1H:1976:U:H5'	24:1H:1977:A:OP1	2.21	0.41
24:1H:2179:C:H2'	24:1H:2180:U:C6	2.56	0.41
24:1H:2260:C:O2'	24:1H:2261:C:H5'	2.20	0.41
24:1H:270:A:OP2	24:1H:270(Y):G:N2	2.47	0.41
24:1H:394:A:C2'	24:1H:395:U:H5'	2.50	0.41
24:1H:479:A:HO2'	24:1H:481:G:H8	1.65	0.41
24:1H:574:C:N3	28:21:145:LYS:NZ	2.56	0.41
24:1H:751:A:C6	24:1H:789:A:C5	3.08	0.41
1:13:1153:C:P	10:1I:13:HIS:HE2	2.44	0.41
10:1I:65:LEU:HD13	14:5I:56:VAL:HG22	2.03	0.41
25:1J:97:G:C5	25:1J:98:G:C8	3.09	0.41
3:22:32:LEU:HD13	3:22:59:ARG:HH12	1.84	0.41
3:22:84:ILE:HD13	3:22:85:ARG:NH1	2.35	0.41
28:29:1:MET:HA	28:29:83:ASP:O	2.20	0.41
3:2E:6:HIS:CD2	3:2E:7:PRO:HD2	2.55	0.41
11:2I:45:GLY:O	11:2I:50:TYR:HB2	2.21	0.41
22:2L:57:C:H4'	22:2L:58:G:O5'	2.19	0.41
22:3L:22:A:H2'	22:3L:22:A:N3	2.34	0.41
5:42:59:GLY:O	5:42:62:ALA:HB3	2.21	0.41
30:49:53:LEU:HA	30:49:53:LEU:HD23	1.84	0.41
13:4A:33:ALA:O	13:4A:37:THR:N	2.52	0.41
5:4E:63:ARG:HA	5:4E:66:MET:HE2	2.02	0.41
6:52:6:VAL:HG22	6:52:90:VAL:HG22	2.02	0.41
24:1H:1141:U:C5	33:58:64:GLY:HA3	2.55	0.41
31:59:101:ARG:HG3	31:59:102:ALA:N	2.36	0.41
31:59:137:ASP:OD2	31:59:139:GLN:HB3	2.20	0.41
6:5E:95:GLU:HA	6:5E:96:PRO:HD3	1.76	0.41
7:6E:63:LYS:HE3	7:6E:63:LYS:HB3	1.82	0.41
7:6E:74:GLU:HG2	7:6E:91:VAL:HG13	2.01	0.41
26:79:10:LEU:HD23	26:79:219:GLY:HA2	2.02	0.41
16:7A:73:LEU:HA	16:7A:73:LEU:HD23	1.81	0.41
9:82:14:VAL:O	9:82:65:VAL:HG23	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:8A:90:ILE:O	17:8A:93:GLN:N	2.51	0.41
1:13:1118:C:P	9:8E:104:ARG:HH11	2.42	0.41
24:1H:1279:G:H4'	37:98:31:HIS:CE1	2.55	0.41
18:9I:74:ARG:HD3	18:9I:81:PHE:HA	2.02	0.41
39:B8:118:ARG:NH2	39:B8:121:ILE:HG21	2.34	0.41
39:B8:25:GLY:N	39:B8:49:VAL:HG23	2.28	0.41
20:BI:43:LEU:HB2	20:BI:52:ALA:HB2	2.02	0.41
44:C5:96:ILE:HA	44:C5:103:GLY:HA3	2.02	0.41
45:D5:44:PHE:CE1	45:D5:48:PHE:HB2	2.56	0.41
36:45:130:LYS:NZ	45:D5:81:ARG:HG2	2.36	0.41
41:D8:17:GLY:N	41:D8:96:ILE:O	2.33	0.41
42:E8:64:MET:O	42:E8:65:LEU:HB2	2.20	0.41
51:J5:16:ARG:HG2	51:J5:16:ARG:NH1	2.25	0.41
47:J8:13:ILE:HG21	47:J8:13:ILE:HD13	1.83	0.41
52:L5:34:ARG:HH12	52:L5:39:ARG:HD2	1.85	0.41
27:11:30:GLU:CD	27:11:31:LYS:N	2.74	0.41
2:12:20:GLU:O	2:12:39:ILE:HG23	2.21	0.41
1:13:1240:U:H5''	1:13:1241:G:H8	1.85	0.41
24:14:1183:G:OP2	24:14:1183:G:H8	2.03	0.41
24:14:1331:A:O2'	24:14:1332:G:C8	2.73	0.41
24:14:1543:A:H2	24:14:1545:A:C5	2.38	0.41
24:14:1762[A]:A:O5'	24:14:1762[A]:A:H8	2.04	0.41
24:14:1946:U:H2'	24:14:1947:C:C6	2.56	0.41
24:14:2080:G:O2'	24:14:2081:C:H5'	2.20	0.41
24:14:2109:U:H3	24:14:2180:U:H3	1.68	0.41
24:14:2419:U:OP1	53:M5:34:TRP:CE3	2.63	0.41
24:14:2462:U:H2'	24:14:2463:C:C6	2.55	0.41
24:14:2637:U:H2'	24:14:2638:G:O4'	2.20	0.41
24:14:2661:G:H2'	24:14:2662:A:O4'	2.20	0.41
24:14:547:A:C5	24:14:548:A:C6	3.08	0.41
24:14:638:G:C6	24:14:639:U:C4	3.08	0.41
24:14:957:A:H5'	36:45:76:LYS:HG3	2.03	0.41
27:19:96:HIS:CE1	27:19:102:LYS:HD3	2.55	0.41
27:19:13:ARG:HA	27:19:13:ARG:HD2	1.75	0.41
2:1E:54:THR:HG21	2:1E:201:ILE:HD11	2.01	0.41
1:13:828:A:C2	2:1E:26:PRO:HG3	2.55	0.41
54:1G:1161:C:H2'	54:1G:1162:C:C6	2.55	0.41
54:1G:1230:C:H6	54:1G:1230:C:O5'	2.03	0.41
54:1G:1311:G:N2	54:1G:1326:C:O2	2.51	0.41
54:1G:445:G:H2'	54:1G:446:G:O4'	2.20	0.41
24:1H:987:G:O2'	24:1H:1000:A:N3	2.42	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1011:G:O2'	24:1H:1012:U:H4'	2.20	0.41
24:1H:1026:U:H4'	24:1H:1027:A:OP1	2.21	0.41
24:1H:111:A:H4'	48:K8:69:ARG:HH22	1.85	0.41
24:1H:1138:G:H21	33:58:106:MET:CE	2.21	0.41
24:1H:1141:U:H4'	24:1H:1142(A):A:O4'	2.20	0.41
24:1H:1174:A:H3'	24:1H:1175:U:H5''	2.02	0.41
24:1H:1533:C:H3'	24:1H:1534:G:H5''	2.02	0.41
24:1H:1409:C:N4	24:1H:1593:G:H1	2.18	0.41
24:1H:2108:C:N3	24:1H:2181:G:N2	2.57	0.41
24:1H:2148:G:H2'	24:1H:2149:G:H8	1.85	0.41
24:1H:2232:U:P	47:J8:40:ARG:HH12	2.43	0.41
24:1H:2391:G:O6	24:1H:2425:A:H8	2.04	0.41
24:1H:265:A:H1'	24:1H:266:G:O4'	2.21	0.41
24:1H:856:C:O2'	46:I8:27:GLU:HB2	2.19	0.41
24:1H:928:G:H2'	24:1H:929:G:O4'	2.20	0.41
10:1I:50:ILE:HA	10:1I:60:ARG:HG2	2.02	0.41
25:1J:14:U:H5'	25:1J:71:C:C1'	2.51	0.41
22:2L:23:A:O2'	22:2L:24:G:OP1	2.36	0.41
35:35:125:VAL:HG13	35:35:144:GLU:HB3	2.02	0.41
29:39:187:VAL:HG13	35:35:1:MET:O	2.20	0.41
1:13:1503:A:O2'	23:4K:13:A:C6	2.72	0.41
32:69:144:VAL:HG13	32:69:145:VAL:N	2.35	0.41
15:6I:54:ARG:O	15:6I:58:MET:HG3	2.20	0.41
24:1H:2485:G:C5'	36:88:46:GLN:HE21	2.22	0.41
36:88:12:GLN:HG2	36:88:73:PRO:HD2	2.02	0.41
20:BI:23:ARG:O	20:BI:27:LYS:HB3	2.20	0.41
45:D5:95:PRO:HA	45:D5:129:SER:HA	2.02	0.41
48:G5:64:LEU:O	48:G5:68:ARG:HG2	2.21	0.41
49:H5:50:VAL:HB	49:H5:53:LEU:HD11	2.02	0.41
45:H8:135:GLU:HG3	45:H8:136:PHE:CD2	2.55	0.41
46:I8:51:VAL:N	46:I8:62:LEU:HD12	2.35	0.41
24:1H:850:C:H5''	49:L8:18:ASP:HB2	2.03	0.41
53:M5:57:ARG:HA	53:M5:57:ARG:HH11	1.85	0.41
53:Q8:28:GLY:O	53:Q8:44:LYS:HD3	2.20	0.41
57:1H:4581:HOH:O	27:11:244:ARG:HG2	2.19	0.41
2:12:12:GLU:HG3	2:12:14:GLY:H	1.85	0.41
2:12:164:VAL:HG23	2:12:186:ALA:CB	2.50	0.41
1:13:1192:C:OP2	3:2E:4:LYS:NZ	2.49	0.41
1:13:1236:A:H8	1:13:1236:A:H5''	1.84	0.41
1:13:1300:G:C5	1:13:1334:G:C6	3.08	0.41
1:13:443:C:H42	1:13:491:G:H1	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1423:G:C4	24:14:1424:G:C8	3.09	0.41
24:14:528:A:C2	24:14:2043:C:H4'	2.56	0.41
24:14:2165:G:H2'	24:14:2165:G:N3	2.36	0.41
24:14:2258:C:O2'	24:14:2427:C:OP2	2.36	0.41
24:14:453:C:OP1	57:14:3814:HOH:O	2.21	0.41
24:14:725:G:H8	24:14:725:G:O5'	2.03	0.41
24:14:909:A:O2'	24:14:910:A:H5''	2.20	0.41
24:14:925:C:H2'	24:14:926:A:C8	2.56	0.41
27:19:133:LEU:HD13	27:19:173:VAL:CG2	2.51	0.41
27:19:232:PRO:HB3	27:19:244:ARG:CZ	2.50	0.41
2:1E:48:MET:HA	2:1E:51:LEU:HB2	2.02	0.41
1:13:1327:C:OP1	21:1F:21:TYR:HD1	2.03	0.41
54:1G:1213:A:C5	54:1G:1215:G:C4	3.09	0.41
54:1G:198:G:H2'	54:1G:199:G:H8	1.85	0.41
54:1G:224:C:H2'	54:1G:225:C:C6	2.55	0.41
24:1H:1100:C:H2'	24:1H:1101:U:C6	2.56	0.41
24:1H:1728:G:N2	24:1H:1730:U:OP2	2.53	0.41
24:1H:2244:U:O2'	24:1H:2245:U:H5'	2.20	0.41
24:1H:2302:G:C4	24:1H:2303:G:C8	3.09	0.41
24:1H:511:U:O4	24:1H:512:G:C2	2.73	0.41
24:1H:831:G:N7	57:1H:4118:HOH:O	2.37	0.41
25:1J:55:U:H1'	30:49:29:TRP:HE1	1.85	0.41
25:1J:66:A:C6	25:1J:108:C:C6	3.08	0.41
3:2E:172:ARG:NH2	3:2E:174:PRO:HG3	2.34	0.41
35:35:15:ARG:HA	35:35:15:ARG:HD3	1.70	0.41
1:13:425:G:O3'	4:3E:45:GLN:NE2	2.53	0.41
12:3I:102:ARG:HD2	12:3I:102:ARG:HA	1.94	0.41
12:3I:85:ILE:CG2	12:3I:98:TYR:HB3	2.51	0.41
30:41:106:LEU:HD12	30:41:110:ALA:HB3	2.03	0.41
30:41:142:PRO:HB2	50:M8:31:ILE:HG21	2.02	0.41
5:42:80:ILE:CD1	5:42:91:LEU:HB2	2.51	0.41
30:49:139:LEU:HA	30:49:144:ILE:HB	2.01	0.41
13:4A:68:GLY:O	13:4A:72:ALA:N	2.42	0.41
13:4A:91:ARG:HH11	13:4A:94:ARG:NH2	2.19	0.41
5:4E:19:MET:HB3	5:4E:19:MET:HE2	1.70	0.41
6:52:25:ILE:O	6:52:28:ARG:N	2.53	0.41
6:5E:78:GLU:O	6:5E:81:ILE:HG13	2.20	0.41
54:1G:1379:G:OP2	7:62:6:ARG:HD2	2.21	0.41
34:68:88:ASN:ND2	34:68:92:GLU:HB2	2.36	0.41
8:72:38:ILE:HD12	8:72:118:VAL:HG12	2.01	0.41
9:8E:112:LYS:HG2	9:8E:117:HIS:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:98:34:ILE:HD13	37:98:34:ILE:HA	1.84	0.41
42:A5:8:ARG:O	42:A5:9:TYR:HB2	2.20	0.41
19:AA:53:ASN:HB2	19:AA:77:THR:HA	2.02	0.41
43:F8:25:LYS:HA	43:F8:81:VAL:O	2.21	0.41
46:I8:41:ARG:HA	46:I8:41:ARG:NE	2.31	0.41
46:I8:70:GLN:CD	46:I8:72:ARG:HD3	2.39	0.41
47:J8:60:PHE:HE2	47:J8:91:LYS:HE2	1.86	0.41
48:K8:38:GLN:O	48:K8:44:LEU:HB2	2.20	0.41
2:12:178:ARG:HA	2:12:178:ARG:HD2	1.73	0.41
2:12:5:ILE:HD11	2:12:55:PHE:CD2	2.55	0.41
1:13:1127:G:H8	1:13:1127:G:O5'	2.04	0.41
1:13:1057:G:C4	1:13:1204:A:C2	3.09	0.41
1:13:197:A:H4'	1:13:198:G:O5'	2.21	0.41
1:13:527:G:O6	12:3I:49:ASN:ND2	2.53	0.41
1:13:649:G:C4	1:13:650:G:C8	3.09	0.41
1:13:660:G:C2	1:13:746:A:C2	3.09	0.41
1:13:688:G:C5	1:13:689:C:C5	3.09	0.41
1:13:737:A:O2'	1:13:738:C:H5'	2.20	0.41
1:13:892:A:C2	1:13:893:C:C2	3.09	0.41
24:14:1027:A:C2	24:14:2488:A:H5'	2.56	0.41
24:14:1954:G:C2	24:14:2551:C:H5''	2.56	0.41
24:14:2861:G:C2	24:14:2862:G:C4	3.08	0.41
24:14:489:G:N7	42:A5:49:LYS:NZ	2.67	0.41
24:14:507:A:H5''	24:14:508:G:H3'	2.02	0.41
24:14:1007:C:H5''	33:15:35:ARG:NH1	2.36	0.41
33:15:82:LEU:HA	33:15:82:LEU:HD12	1.78	0.41
54:1G:1015:A:C6	54:1G:1016:A:C6	3.09	0.41
54:1G:1023:G:H3'	54:1G:1024:G:H5''	2.02	0.41
54:1G:1080:A:H4'	5:42:16:THR:OG1	2.20	0.41
54:1G:1132:C:H2'	54:1G:1133:G:C8	2.56	0.41
54:1G:1256:A:N7	54:1G:1277:C:H2'	2.36	0.41
54:1G:195:A:C6	54:1G:196:A:N1	2.89	0.41
54:1G:327:A:O2'	54:1G:329:A:H8	2.04	0.41
54:1G:373:A:N3	54:1G:374:A:C8	2.88	0.41
24:1H:1028:A:H2'	24:1H:1029:A:C8	2.56	0.41
24:1H:1205:U:H4'	24:1H:1206:G:OP2	2.20	0.41
24:1H:1263:U:O3'	51:N8:11:THR:OG1	2.36	0.41
24:1H:1690:A:H3'	24:1H:1691:C:H6	1.85	0.41
24:1H:1678:G:H22	24:1H:1989:G:H22	1.60	0.41
24:1H:2199:A:H5''	24:1H:2205:C:H5	1.86	0.41
24:1H:307:G:C8	57:1H:4290:HOH:O	2.70	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:311:A:C6	24:1H:328:U:C4	3.09	0.41
24:1H:325:G:N2	24:1H:337:C:O2	2.52	0.41
24:1H:578:A:P	57:1H:4547:HOH:O	2.78	0.41
25:1J:51:G:N7	38:65:62:LYS:NZ	2.58	0.41
28:21:11:MET:HG2	28:21:24:THR:HA	2.03	0.41
34:25:89:ASN:OD1	34:25:89:ASN:N	2.54	0.41
22:2L:34:U:O2'	22:2L:35:QUO:H3'	2.21	0.41
29:31:149:ASP:OD1	29:31:149:ASP:N	2.34	0.41
4:32:106:TYR:HE1	4:32:113:SER:HA	1.85	0.41
4:32:124:GLY:HA3	4:32:132:ARG:HD2	2.03	0.41
24:14:671:C:OP1	35:35:42:SER:O	2.39	0.41
29:39:205:ARG:HH11	29:39:205:ARG:HD2	1.76	0.41
22:3K:16:C:N4	22:3K:68:A:C5	2.89	0.41
22:3K:77:C:H2'	22:3K:78:C:H6	1.86	0.41
30:41:46:ALA:HB3	30:41:87:PRO:O	2.21	0.41
5:42:137:GLU:O	5:42:141:GLN:HB2	2.20	0.41
13:4A:66:LEU:O	13:4A:69:GLU:HG2	2.20	0.41
33:58:112:LEU:HD12	33:58:112:LEU:HA	1.62	0.41
33:58:135:PRO:O	33:58:137:LYS:HD2	2.20	0.41
32:61:81:VAL:HG21	32:61:88:ILE:HD13	2.02	0.41
38:65:26:LEU:O	38:65:88:ASP:HB3	2.21	0.41
15:6I:57:LEU:HD23	15:6I:57:LEU:HA	1.79	0.41
24:1H:2124:G:H5'	26:71:174:PRO:HD3	2.02	0.41
26:71:23:ASP:CG	26:71:190:ARG:HH22	2.24	0.41
39:75:80:SER:HA	39:75:81:PRO:HD3	1.75	0.41
8:7E:7:ALA:HA	8:7E:85:ARG:HG3	2.03	0.41
16:7I:38:TYR:O	16:7I:38:TYR:CD1	2.74	0.41
1:13:1349:A:OP1	9:8E:118:LYS:HB2	2.21	0.41
41:95:44:LYS:C	41:95:46:VAL:N	2.73	0.41
44:C5:68:HIS:O	44:C5:71:LYS:HG3	2.20	0.41
40:C8:28:ARG:HD3	40:C8:38:THR:OG1	2.21	0.41
46:E5:24:LYS:HA	46:E5:24:LYS:HD3	1.84	0.41
46:E5:72:ARG:HG3	46:E5:75:LEU:HB2	2.02	0.41
24:1H:493:G:O2'	42:E8:6:ILE:O	2.33	0.41
46:I8:11:ARG:NH1	46:I8:11:ARG:HB2	2.35	0.41
51:J5:46:CYS:SG	51:J5:48:GLU:HG2	2.60	0.41
47:J8:91:LYS:O	47:J8:94:LEU:N	2.49	0.41
24:1H:2054:A:N3	51:N8:8:LYS:HD3	2.36	0.41
2:12:84:GLU:HB3	2:12:219:VAL:HG11	2.03	0.41
1:13:153:C:N4	1:13:168:G:H1	2.18	0.41
1:13:255:G:H2'	1:13:256:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:390:C:O3'	16:7I:28:ARG:NH2	2.49	0.41
1:13:536:C:H2'	1:13:537:G:H8	1.86	0.41
1:13:639:G:H2'	1:13:640:A:C8	2.53	0.41
1:13:806:C:H2'	1:13:807:A:C8	2.52	0.41
24:14:1568:G:OP1	27:19:63:ARG:NH1	2.41	0.41
24:14:1890:A:OP2	57:14:4126:HOH:O	2.22	0.41
24:14:2328:A:H2'	24:14:2329:G:C8	2.55	0.41
24:14:2329:G:H2'	24:14:2330:G:C8	2.56	0.41
24:14:2642:G:OP1	33:15:76:SER:OG	2.33	0.41
24:14:353:G:H2'	24:14:354:G:C8	2.55	0.41
24:14:578:A:OP1	24:14:1255:U:O2'	2.25	0.41
24:14:696:G:H2'	24:14:697:C:H6	1.86	0.41
24:14:853:G:O2'	24:14:854:G:H5'	2.20	0.41
2:1E:145:LEU:HD13	2:1E:145:LEU:HA	1.91	0.41
2:1E:167:PRO:HG2	2:1E:192:SER:CB	2.51	0.41
54:1G:256:U:H2'	54:1G:257:G:H8	1.86	0.41
54:1G:345:C:O2'	54:1G:346:G:O5'	2.38	0.41
54:1G:707:C:H2'	54:1G:708:C:H6	1.81	0.41
54:1G:940:C:H2'	54:1G:941:G:C8	2.56	0.41
24:1H:1264:G:H5'	51:N8:11:THR:OG1	2.20	0.41
24:1H:141(A):C:H2'	24:1H:142:G:O4'	2.20	0.41
24:1H:1793:C:H2'	24:1H:1794:U:H6	1.84	0.41
24:1H:2135:A:N6	24:1H:2156:G:H1'	2.36	0.41
24:1H:2305:A:H2'	24:1H:2306:C:O4'	2.21	0.41
24:1H:1462:C:H4'	24:1H:2703:C:O4'	2.20	0.41
24:1H:301:G:C4	24:1H:302:C:C5	3.09	0.41
24:1H:31:C:O5'	24:1H:31:C:H6	2.03	0.41
24:1H:96:G:H4'	48:K8:48:HIS:NE2	2.35	0.41
25:1J:89(A):A:H5'	25:1J:90:C:OP2	2.20	0.41
28:21:116:VAL:H	28:21:157:ALA:HB2	1.85	0.41
28:21:4:ILE:HG22	28:21:96:PHE:HE2	1.85	0.41
28:29:8:LYS:CB	28:29:192:ASN:HA	2.48	0.41
22:2L:70:C:O2'	22:2L:71:C:H2'	2.20	0.41
4:32:3:ARG:HD2	4:32:3:ARG:HA	1.57	0.41
35:35:85:LEU:HB3	35:35:114:ILE:CD1	2.51	0.41
29:39:43:LYS:HE3	29:39:43:LYS:HB2	1.70	0.41
4:3E:142:PRO:HA	4:3E:185:PHE:HD2	1.86	0.41
22:3K:33:C:N4	22:3K:34:U:C4	2.89	0.41
22:3L:44:C:H2'	22:3L:45:C:O4'	2.20	0.41
22:3L:64:PSU:N3	22:3L:67:A:OP2	2.29	0.41
30:41:71:THR:OG1	30:41:89:GLY:O	2.37	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:49:81:LYS:HG3	30:49:82:LEU:H	1.84	0.41
13:4A:95:GLY:O	13:4A:110:ARG:HG3	2.20	0.41
13:4A:76:ALA:O	13:4A:80:ARG:HG3	2.21	0.41
5:4E:138:ALA:O	5:4E:142:LEU:HG	2.20	0.41
5:4E:74:GLY:HA3	5:4E:116:THR:HG23	2.02	0.41
13:4I:55:ARG:O	13:4I:59:TYR:HB2	2.20	0.41
6:52:36:ARG:NH2	6:52:66:GLU:OE1	2.53	0.41
7:62:94:ARG:HG3	7:62:94:ARG:H	1.40	0.41
7:6E:57:GLU:HB2	7:6E:60:LYS:HG2	2.02	0.41
15:6I:63:ARG:NH2	15:6I:87:ILE:HG21	2.36	0.41
41:95:20:LEU:HA	41:95:20:LEU:HD12	1.72	0.41
18:9A:37:VAL:HG11	18:9A:78:LEU:HB3	2.02	0.41
19:AA:70:LYS:HD2	19:AA:70:LYS:N	2.36	0.41
43:B5:49:VAL:HB	43:B5:83:VAL:HG21	2.03	0.41
44:C5:52:SER:HA	44:C5:55:TYR:O	2.21	0.41
40:C8:91:ASP:HB2	40:C8:94:ASN:OD1	2.20	0.41
40:C8:6:THR:O	40:C8:9:VAL:HG23	2.20	0.41
45:D5:8:TYR:HD2	45:D5:38:TYR:CE2	2.38	0.41
45:D5:65:GLN:OE1	45:D5:67:LEU:HD21	2.21	0.41
43:F8:14:SER:O	43:F8:15:GLU:C	2.59	0.41
47:J8:24:ALA:HB3	47:J8:27:GLU:HG3	2.03	0.41
27:11:108:PRO:HG3	27:11:143:HIS:HE1	1.86	0.41
27:11:53:PHE:HB3	27:11:218:ARG:O	2.21	0.41
27:11:232:PRO:HB3	27:11:244:ARG:NH1	2.36	0.41
1:13:711:G:H2'	1:13:712:A:H8	1.86	0.41
1:13:818:G:O2'	1:13:819:A:H5'	2.20	0.41
24:14:1275:A:C5	37:55:16:HIS:CD2	3.09	0.41
24:14:1849:G:H2'	24:14:1850:G:C8	2.56	0.41
24:14:1903:G:P	27:19:241:PRO:HB2	2.61	0.41
24:14:2290:G:C2	24:14:2343:C:O2	2.74	0.41
24:14:649:G:H2'	24:14:650:C:O4'	2.21	0.41
24:14:950:G:C6	24:14:951:C:C4	3.08	0.41
25:16:110:G:C5	25:16:111:U:C5	3.08	0.41
27:19:106:ILE:O	27:19:108:PRO:HD3	2.20	0.41
54:1G:1013:G:O2'	54:1G:1014:A:N7	2.46	0.41
54:1G:1202:G:H2'	54:1G:1203:C:O4'	2.20	0.41
54:1G:1246:C:C4	54:1G:1247:U:C4	3.08	0.41
54:1G:1315:U:H2'	54:1G:1316:G:O4'	2.21	0.41
54:1G:216:G:H2'	54:1G:217:C:C6	2.54	0.41
54:1G:45:U:H2'	54:1G:46:G:C8	2.56	0.41
24:1H:1009:A:OP2	57:1H:4153:HOH:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1011:G:H4'	40:C8:75:ASN:HD22	1.86	0.41
24:1H:1449(A):G:H1	24:1H:1462:C:H42	1.69	0.41
24:1H:1466:G:N2	24:1H:1547:C:N3	2.69	0.41
24:1H:1726:G:H2'	24:1H:1727:U:O4'	2.21	0.41
24:1H:2516:G:C6	24:1H:2517:C:N4	2.89	0.41
24:1H:2881:C:H2'	24:1H:2882:A:C8	2.56	0.41
24:1H:289:A:C4	24:1H:353:G:N2	2.89	0.41
24:1H:973:A:O4'	24:1H:1188:U:C6	2.74	0.41
24:1H:998:C:P	40:C8:92:ARG:NH2	2.94	0.41
25:1J:101:A:OP2	25:1J:101:A:H8	2.04	0.41
3:22:156:ARG:NE	3:22:160:ALA:O	2.54	0.41
11:2I:29:ILE:HG13	11:2I:44:SER:HB3	2.03	0.41
29:31:54:ARG:HB3	29:31:81:PRO:HD3	2.03	0.41
4:32:153:ARG:NH1	4:32:181:MET:HB2	2.34	0.41
12:3A:17:LYS:HA	12:3A:17:LYS:HD3	1.93	0.41
4:3E:31:CYS:HB3	4:3E:33:MET:HG3	2.02	0.41
4:3E:65:ARG:HH11	4:3E:65:ARG:HG2	1.85	0.41
5:42:63:ARG:HA	5:42:66:MET:HE1	2.03	0.41
36:45:29:PHE:HB3	36:45:65:PHE:CE2	2.55	0.41
13:4I:40:ASN:HA	13:4I:41:PRO:HD3	1.85	0.41
13:4I:90:LEU:HD13	19:AI:78:ARG:NH2	2.36	0.41
32:69:103:ARG:NE	32:69:104:GLN:H	2.18	0.41
32:69:62:LYS:HB3	32:69:62:LYS:NZ	2.36	0.41
15:6A:62:GLN:O	15:6A:65:ARG:N	2.54	0.41
8:72:106:GLY:HA2	8:72:122:ARG:HH22	1.86	0.41
16:7I:8:ARG:HG3	16:7I:9:PHE:N	2.36	0.41
36:88:104:PHE:O	36:88:105:GLU:HB3	2.20	0.41
36:88:52:VAL:O	36:88:56:ARG:HB2	2.20	0.41
36:88:86:GLY:HA3	36:88:87:LYS:CG	2.50	0.41
6:5E:96:PRO:HB3	18:9I:30:ASP:CG	2.41	0.41
42:A5:12:ILE:HG13	42:A5:42:ARG:NH1	2.36	0.41
19:AI:32:LYS:HG2	19:AI:50:ALA:HB3	2.03	0.41
39:B8:78:LEU:HD12	39:B8:79:HIS:CE1	2.56	0.41
45:D5:115:GLY:HA2	45:D5:179:ASP:CB	2.50	0.41
42:E8:42:ARG:HD3	42:E8:42:ARG:HH11	1.69	0.41
44:G8:50:ARG:HG2	44:G8:51:VAL:H	1.85	0.41
51:J5:25:LEU:HA	51:J5:25:LEU:HD23	1.86	0.41
48:K8:36:ARG:HG3	48:K8:36:ARG:HH11	1.86	0.41
50:M8:15:ILE:HB	50:M8:32:TYR:CD1	2.56	0.41
51:N8:33:CYS:SG	51:N8:46:CYS:HB2	2.61	0.41
27:11:59:LYS:HD2	27:11:60:ARG:N	2.32	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1235:U:H2'	1:13:1236:A:O4'	2.21	0.41
1:13:1262:C:H2'	1:13:1263:C:C6	2.56	0.41
1:13:875:C:C4	1:13:876:G:N7	2.89	0.41
1:13:928:G:C2	1:13:1390:U:O2	2.74	0.41
24:14:1006:C:C2	24:14:1138:G:N2	2.88	0.41
24:14:1187:G:OP2	57:14:3760:HOH:O	2.21	0.41
24:14:1439:A:N6	24:14:1552:G:O2'	2.53	0.41
24:14:1838:C:H4'	24:14:1839:G:C8	2.56	0.41
24:14:2103:C:H2'	24:14:2104:G:C8	2.55	0.41
24:14:2114:A:C8	24:14:2115:G:N7	2.89	0.41
24:14:2116:G:H2'	24:14:2117:A:O4'	2.21	0.41
24:14:2259:G:C2	24:14:2282:G:N1	2.89	0.41
24:14:2584:U:C6	24:14:2585:U:C5	3.08	0.41
24:14:2644:G:C6	24:14:2645:G:C6	3.09	0.41
24:14:596:G:H2'	24:14:597:U:O4'	2.21	0.41
24:14:654(R):C:N4	24:14:654(S):G:O6	2.54	0.41
24:14:602:G:N2	24:14:655:A:C8	2.85	0.41
24:14:874:G:C2	24:14:904:C:N3	2.89	0.41
33:15:102:ALA:O	33:15:106:MET:HG3	2.20	0.41
25:16:71:C:N3	25:16:72:G:C8	2.89	0.41
27:19:133:LEU:HD22	27:19:175:LEU:HD21	2.03	0.41
27:19:20:ASP:OD1	27:19:22:SER:OG	2.38	0.41
54:1G:1206:G:C6	54:1G:1207:G:C5	3.09	0.41
54:1G:1321:C:C3'	54:1G:1322:C:H5''	2.48	0.41
54:1G:32:A:N3	54:1G:33:A:C8	2.89	0.41
24:1H:1335:U:H2'	24:1H:1336:A:O4'	2.20	0.41
24:1H:1386:C:H2'	24:1H:1387:C:C6	2.46	0.41
24:1H:1748:G:H2'	24:1H:1749:A:H8	1.85	0.41
24:1H:2280:G:C2	24:1H:2281:C:C6	3.09	0.41
24:1H:2579:C:H2'	24:1H:2580:U:O4'	2.21	0.41
24:1H:2712(A):A:H5''	37:98:13:HIS:CD2	2.55	0.41
24:1H:458:G:O2'	52:P8:39:ARG:HD3	2.21	0.41
24:1H:932:G:H4'	24:1H:933:A:O5'	2.21	0.41
25:1J:11:C:O5'	25:1J:12:C:H5	2.04	0.41
28:21:54:GLN:HB3	28:21:55:ASN:H	1.47	0.41
22:2K:61:G:C4	22:2K:62:G:C8	3.09	0.41
29:31:33:LEU:HD13	29:31:112:MET:HE2	2.03	0.41
54:1G:4:U:H5''	4:32:87:GLY:H	1.86	0.41
4:3E:108:LEU:HD21	4:3E:183:GLY:HA3	2.02	0.41
22:3K:18:G:H1	22:3K:65:C:H42	1.69	0.41
22:3L:2:G:H2'	22:3L:3:U:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:62:26:PHE:HB2	7:62:101:LEU:HD22	2.02	0.41
25:1J:50:G:P	38:65:62:LYS:HB2	2.60	0.41
32:69:91:SER:HB3	32:69:121:LYS:HD2	2.03	0.41
7:6E:107:ALA:O	7:6E:110:GLN:HB2	2.21	0.41
15:6I:27:VAL:HG12	15:6I:31:LEU:HD22	2.03	0.41
8:7E:39:LEU:O	8:7E:44:PHE:N	2.52	0.41
16:7I:52:ASP:OD1	16:7I:54:GLU:HB3	2.20	0.41
9:8E:112:LYS:HA	9:8E:119:ALA:HB2	2.03	0.41
9:8E:70:LYS:O	9:8E:74:ILE:HG13	2.21	0.41
45:D5:99:TYR:HB3	45:D5:123:ASP:HB2	2.02	0.41
45:D5:67:LEU:HA	45:D5:68:PRO:HD3	1.90	0.41
42:E8:86:LEU:HD12	42:E8:86:LEU:C	2.42	0.41
43:F8:80:ILE:O	43:F8:80:ILE:HG12	2.19	0.41
47:J8:13:ILE:HD11	47:J8:42:GLN:OE1	2.21	0.41
48:K8:53:LEU:O	48:K8:57:ILE:HG13	2.21	0.41
27:11:232:PRO:HB3	27:11:244:ARG:CZ	2.49	0.41
1:13:942:G:C2	1:13:1342:C:C2	3.08	0.41
1:13:439:A:C5	1:13:440:A:H1'	2.55	0.41
1:13:592:G:C2	1:13:593:G:N7	2.89	0.41
1:13:662:G:H2'	1:13:663:A:C8	2.56	0.41
1:13:704:A:OP2	1:13:704:A:H8	2.04	0.41
24:14:1146:C:O2'	24:14:1147:C:H5'	2.21	0.41
24:14:2300:G:C2	24:14:2317:C:O2	2.74	0.41
24:14:2320:A:N1	24:14:2333:A:C8	2.89	0.41
24:14:2419:U:O4	53:M5:31:HIS:CG	2.74	0.41
24:14:2635:C:H5''	28:29:77:ILE:O	2.20	0.41
24:14:2638:G:OP2	28:29:82:ARG:NH2	2.54	0.41
24:14:740:U:H2'	24:14:741:G:C8	2.56	0.41
24:14:768:G:H5'	24:14:1622:G:H4'	2.03	0.41
24:14:83:G:H22	24:14:102:G:C2'	2.34	0.41
25:16:94:C:H2'	25:16:95:U:C6	2.56	0.41
10:1A:40:LEU:HG	10:1A:41:PRO:HD2	2.03	0.41
2:1E:61:LEU:HD12	2:1E:64:ARG:HD2	2.03	0.41
54:1G:1204:A:OP1	14:5A:3:ARG:NH1	2.51	0.41
54:1G:929:G:N2	54:1G:1388:C:O2	2.42	0.41
54:1G:160:A:O2'	54:1G:344:A:N6	2.54	0.41
54:1G:685:G:C2	54:1G:686:U:C4	3.09	0.41
24:1H:1388:G:N2	24:1H:1400:G:C4	2.89	0.41
24:1H:1463:C:N3	24:1H:1464:C:C5	2.89	0.41
24:1H:2177:C:H5''	26:7I:213:TYR:CD1	2.56	0.41
24:1H:2250:G:O2'	24:1H:2496:C:OP1	2.28	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:582:G:H2'	24:1H:583:G:C8	2.56	0.41
24:1H:620:G:H8	24:1H:622:G:O6	2.04	0.41
24:1H:90:U:H1'	24:1H:91:A:C8	2.56	0.41
25:1J:95:U:H2'	25:1J:96:G:C8	2.56	0.41
57:1H:3651:HOH:O	28:21:135:HIS:CE1	2.73	0.41
24:1H:2680:C:H5'	28:21:189:PRO:HA	2.02	0.41
24:1H:2637:U:H5'	28:21:44:TYR:CE1	2.55	0.41
28:29:27:LEU:HA	28:29:181:LEU:HA	2.03	0.41
11:2I:25:TYR:HD1	11:2I:25:TYR:HA	1.61	0.41
29:39:15:SER:HB3	29:39:16:GLY:H	1.68	0.41
12:3A:53:ARG:HG3	12:3A:53:ARG:HH11	1.86	0.41
22:3K:78:C:H2'	22:3K:79:A:O4'	2.21	0.41
30:41:165:THR:OG1	30:41:168:GLU:HG3	2.21	0.41
30:49:19:LEU:HG	30:49:175:LEU:HD12	2.02	0.41
31:51:23:ARG:HH12	31:51:25:LYS:HE3	1.85	0.41
6:5E:87:ARG:HG3	6:5E:87:ARG:NH1	2.25	0.41
32:69:27:ARG:HD2	47:F5:71:TYR:CZ	2.56	0.41
15:6I:20:GLY:O	15:6I:22:THR:HG22	2.20	0.41
39:75:50:ILE:HD11	39:75:102:ILE:HD11	2.01	0.41
54:1G:135:C:C2	16:7A:1:MET:HB3	2.56	0.41
8:7E:111:ILE:HD12	8:7E:135:CYS:SG	2.61	0.41
8:7E:11:THR:HG23	8:7E:14:ARG:NH1	2.36	0.41
24:1H:2278:A:OP1	36:88:11:LYS:HD2	2.21	0.41
9:8E:13:ALA:HB1	9:8E:73:GLN:HG2	2.03	0.41
37:98:62:ALA:O	37:98:66:VAL:HG23	2.21	0.41
39:B8:7:ILE:HG13	39:B8:10:VAL:CG2	2.50	0.41
20:BI:35:THR:HA	20:BI:38:LYS:HE3	2.02	0.41
44:C5:97:ARG:NH1	44:C5:104:GLY:H	2.19	0.41
44:C5:47:LYS:HA	44:C5:60:PHE:CD2	2.56	0.41
45:H8:78:LYS:H	45:H8:78:LYS:HG2	1.54	0.41
47:J8:19:GLN:O	47:J8:35:THR:N	2.44	0.41
48:K8:36:ARG:HG3	48:K8:36:ARG:NH1	2.36	0.41
24:1H:851:U:O2'	49:L8:42:ALA:O	2.32	0.41
53:M5:57:ARG:HA	53:M5:57:ARG:HD3	1.74	0.41
27:11:61:LEU:HA	27:11:61:LEU:HD13	1.91	0.40
2:12:12:GLU:HA	2:12:15:VAL:HG12	2.03	0.40
1:13:1124:G:H2'	1:13:1145:C:C5	2.57	0.40
1:13:1365:G:C6	1:13:1366:C:C4	3.10	0.40
1:13:414:A:H2'	1:13:415:A:O4'	2.21	0.40
1:13:555:C:H2'	1:13:556:C:C6	2.56	0.40
24:14:1190:G:O2'	24:14:1191:G:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1321:A:H2'	24:14:1322:A:O4'	2.22	0.40
24:14:1332:G:H8	24:14:1332:G:H5'	1.83	0.40
24:14:1757:U:O2	24:14:1762[B]:A:N6	2.45	0.40
24:14:199:A:HO2'	24:14:200:U:H6	1.64	0.40
24:14:2365:G:H4'	46:E5:60:PHE:CZ	2.55	0.40
24:14:2772:C:H2'	24:14:2773:C:C6	2.57	0.40
24:14:2862:G:C6	24:14:2863:C:C4	3.09	0.40
24:14:492:A:H2'	24:14:493:G:O4'	2.21	0.40
24:14:67:U:N3	24:14:74:A:H2	2.01	0.40
24:14:996:A:C2	24:14:997:G:C8	3.09	0.40
25:16:11:C:H3'	25:16:12:C:H6	1.84	0.40
27:19:204:ILE:HD12	27:19:204:ILE:O	2.21	0.40
10:1A:42:THR:HG22	10:1A:68:HIS:HA	2.03	0.40
10:1A:80:LYS:HD2	10:1A:80:LYS:HA	1.85	0.40
54:1G:101:A:C2'	54:1G:102:G:H5'	2.51	0.40
54:1G:1089:G:N2	54:1G:1096:C:O2	2.49	0.40
54:1G:1329:A:OP1	13:4A:28:ALA:HB3	2.20	0.40
54:1G:310:G:H4'	16:7A:31:LYS:HD2	2.04	0.40
54:1G:35:G:H2'	54:1G:36:C:C6	2.56	0.40
54:1G:578:C:H3'	57:1G:1884:HOH:O	2.21	0.40
24:1H:1204:A:C2	24:1H:1241:A:N1	2.89	0.40
24:1H:1331:A:O2'	24:1H:1332:G:H8	2.04	0.40
24:1H:2652:C:H2'	24:1H:2653:U:O4'	2.21	0.40
24:1H:2844:G:C5	24:1H:2845:G:C8	3.09	0.40
24:1H:302:C:H2'	24:1H:303:U:H6	1.85	0.40
24:1H:654(N):G:N1	24:1H:654(O):G:O6	2.55	0.40
24:1H:926:A:H2'	24:1H:926:A:N3	2.36	0.40
25:1J:33:G:C2	25:1J:34:U:C2	3.08	0.40
28:29:111:ARG:HD2	28:29:160:TYR:CD2	2.56	0.40
28:29:47:VAL:HG22	28:29:49:LEU:HD12	2.03	0.40
11:2A:83:ILE:HG12	11:2A:109:VAL:HG23	2.02	0.40
11:2I:44:SER:OG	11:2I:47:VAL:HG23	2.21	0.40
29:31:182:ASN:ND2	29:31:185:ASP:HB2	2.36	0.40
24:1H:443:A:N7	29:31:45:ARG:HG2	2.36	0.40
35:35:87:ASP:O	35:35:90:ARG:HD3	2.20	0.40
29:39:31:HIS:O	29:39:31:HIS:CD2	2.74	0.40
29:39:66:PRO:O	29:39:68:LYS:N	2.54	0.40
22:3K:20:C:O2'	22:3K:22:A:O5'	2.34	0.40
30:49:36:LYS:HE2	30:49:36:LYS:HB3	1.89	0.40
7:62:42:ILE:HG23	7:62:117:ALA:HA	2.03	0.40
38:65:109:GLY:C	38:65:111:GLU:H	2.12	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:65:37:ALA:HB2	38:65:101:LEU:HD21	2.03	0.40
34:68:71:ARG:HH11	39:B8:74:ARG:NH2	2.17	0.40
7:6E:16:LEU:HD13	7:6E:16:LEU:HA	1.76	0.40
1:13:1292:U:P	7:6E:41:ARG:HH22	2.42	0.40
1:13:1382:C:H1'	7:6E:79:ARG:NE	2.37	0.40
8:72:21:LYS:HB2	8:72:21:LYS:HE2	1.80	0.40
26:79:13:LYS:HD2	26:79:32:LEU:HD23	2.02	0.40
16:7A:40:ASP:O	16:7A:48:TRP:HB2	2.20	0.40
8:7E:68:ARG:HA	8:7E:76:PRO:HB3	2.03	0.40
40:85:94:ASN:OD1	40:85:95:LEU:HG	2.21	0.40
36:88:18:LYS:HB3	36:88:18:LYS:HE2	1.56	0.40
1:13:238:G:P	17:8I:25:ARG:HH22	2.41	0.40
17:8I:89:LEU:HA	17:8I:89:LEU:HD13	1.89	0.40
37:98:61:HIS:O	37:98:64:ARG:N	2.54	0.40
43:B5:5:TYR:CZ	48:G5:30:ARG:HB2	2.55	0.40
20:BI:63:ILE:HD12	20:BI:81:LYS:HG2	2.02	0.40
45:D5:111:VAL:HG11	45:D5:145:GLU:OE2	2.21	0.40
47:F5:83:GLU:HG3	47:F5:83:GLU:H	1.63	0.40
43:F8:78:LYS:HG2	43:F8:78:LYS:O	2.19	0.40
45:H8:15:PRO:O	45:H8:19:ARG:HB2	2.22	0.40
45:H8:48:PHE:HE1	45:H8:71:VAL:HG21	1.86	0.40
27:11:33:LEU:O	27:11:64:ILE:HG23	2.21	0.40
24:1H:1814:G:P	27:11:40:THR:HG21	2.60	0.40
1:13:1226:C:H4'	19:AI:80:TYR:CZ	2.56	0.40
1:13:1318:A:H5''	19:AI:10:PHE:CG	2.55	0.40
1:13:1328:C:H2'	1:13:1329:A:C8	2.57	0.40
1:13:1336:C:H2'	1:13:1336:C:O2	2.20	0.40
1:13:279:A:OP2	17:8I:95:TYR:OH	2.34	0.40
1:13:516:U:C4	1:13:517:G:C6	3.08	0.40
24:14:1087:G:N1	24:14:1103:A:H2	2.19	0.40
24:14:1140:C:H1'	24:14:1143:A:C8	2.56	0.40
24:14:1347:G:C5	24:14:1348:G:N7	2.89	0.40
24:14:1388:G:H2'	24:14:1389:G:C8	2.57	0.40
24:14:1342:A:H2	24:14:1602:U:H3	1.68	0.40
24:14:1686:C:H2'	24:14:1687:G:O4'	2.20	0.40
24:14:2111:C:C2	24:14:2118:U:H4'	2.56	0.40
24:14:2320:A:H1'	24:14:2321:G:C5	2.56	0.40
24:14:2594:C:N4	57:14:3627:HOH:O	2.55	0.40
24:14:2864:G:OP1	39:75:119:LYS:HD2	2.22	0.40
24:14:711:G:C6	24:14:712:G:C5	3.08	0.40
24:14:768:G:C5	24:14:769:G:N7	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:835:A:C2'	24:14:836:G:H5'	2.51	0.40
24:14:854:G:C2	24:14:855:G:C5	3.10	0.40
24:14:925:C:H2'	24:14:926:A:H8	1.87	0.40
24:14:820:A:H1'	24:14:943:U:H1'	2.02	0.40
25:16:21:G:N2	25:16:62:C:N3	2.60	0.40
2:1E:51:LEU:HD22	2:1E:55:PHE:CE1	2.51	0.40
54:1G:1104:G:C4	54:1G:1105:A:C8	3.09	0.40
54:1G:1179:A:H2'	54:1G:1180:A:O4'	2.21	0.40
54:1G:1503:A:O2'	54:1G:1504:G:O5'	2.37	0.40
54:1G:579:G:H8	54:1G:579:G:OP2	2.04	0.40
54:1G:579:G:C6	54:1G:580:U:C4	3.09	0.40
54:1G:605:U:H2'	54:1G:606:G:O4'	2.22	0.40
54:1G:706:A:C4'	11:2A:29:ILE:HD11	2.51	0.40
24:1H:1062:G:C2	24:1H:1063:G:N1	2.89	0.40
24:1H:1432:C:H2'	24:1H:1433:U:O4'	2.21	0.40
24:1H:1532:C:H2'	24:1H:1533:C:O4'	2.21	0.40
24:1H:1541:U:H2'	24:1H:1542:G:O4'	2.21	0.40
24:1H:1784:A:H5''	57:1H:3929:HOH:O	2.21	0.40
24:1H:1878:G:H2'	24:1H:1879:C:H6	1.85	0.40
24:1H:1902:C:N3	24:1H:1903:G:H1'	2.37	0.40
24:1H:2038:G:H2'	24:1H:2039:C:O4'	2.22	0.40
24:1H:2210:G:H5'	24:1H:2211:G:C5	2.56	0.40
24:1H:1027:A:C2	24:1H:2488:A:H5'	2.56	0.40
24:1H:341:G:C5	57:1H:3736:HOH:O	2.73	0.40
24:1H:49:A:H5''	24:1H:51:G:O4'	2.22	0.40
24:1H:552:G:C6	24:1H:553:U:C4	3.09	0.40
24:1H:613:U:O4'	24:1H:613:U:O2	2.37	0.40
25:1J:78:A:H2'	25:1J:79:C:O4'	2.21	0.40
24:1H:2513:G:N2	28:21:143:ASN:OD1	2.54	0.40
28:21:45:THR:O	28:21:83:ASP:N	2.49	0.40
3:22:88:ARG:NH1	3:22:101:LEU:HD12	2.37	0.40
34:25:47:ILE:HD12	34:25:47:ILE:HA	1.89	0.40
28:29:12:THR:HG21	39:75:9:LEU:HD12	2.04	0.40
11:2A:122:LYS:HE2	11:2A:122:LYS:HB3	1.88	0.40
11:2A:38:ASN:HA	11:2A:39:PRO:HD3	1.90	0.40
22:2L:34:U:O2'	22:2L:36:U:OP2	2.39	0.40
22:2L:74:C:H2'	22:2L:75:C:C6	2.53	0.40
4:32:119:GLN:HG2	4:32:123:HIS:CD2	2.56	0.40
4:32:150:GLU:O	4:32:152:SER:N	2.54	0.40
35:35:144:GLU:N	35:35:144:GLU:CD	2.75	0.40
4:3E:188:LEU:HD22	4:3E:188:LEU:HA	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:3I:53:ARG:HH12	12:3I:92:ASP:HB2	1.86	0.40
30:41:49:ASP:OD2	30:41:51:ARG:HB3	2.21	0.40
30:41:83:ARG:NH1	30:41:83:ARG:HB3	2.36	0.40
36:45:78:PRO:HB2	36:45:81:VAL:HG11	2.03	0.40
6:52:28:ARG:HD3	6:52:28:ARG:HA	1.96	0.40
6:5E:91:VAL:HG12	6:5E:92:LYS:O	2.21	0.40
32:61:120:ILE:HD12	32:61:126:TYR:CZ	2.56	0.40
1:13:1298:C:N4	7:6E:114:ARG:HB3	2.36	0.40
24:1H:942:G:OP2	35:78:39:LYS:HE2	2.21	0.40
35:78:50:ARG:NH2	35:78:50:ARG:HG3	2.34	0.40
16:7I:37:GLY:HA2	16:7I:50:LYS:HD3	2.03	0.40
9:82:4:TYR:HE1	9:82:88:TYR:HD2	1.68	0.40
36:88:19:GLY:O	36:88:21:THR:OG1	2.24	0.40
54:1G:235:C:C5'	17:8A:70:ARG:HG2	2.51	0.40
17:8I:53:LEU:HD23	17:8I:82:MET:SD	2.61	0.40
37:98:74:LYS:O	37:98:76:VAL:N	2.52	0.40
20:BA:91:LEU:HD23	20:BA:91:LEU:HA	1.95	0.40
43:F8:65:ARG:HG3	43:F8:67:GLY:H	1.85	0.40
37:55:98:LEU:HD22	51:J5:51:TYR:CD2	2.56	0.40
48:K8:22:GLU:OE2	48:K8:68:ARG:NH2	2.49	0.40
48:K8:30:ARG:O	48:K8:34:GLU:HG3	2.20	0.40
24:1H:764:A:N3	27:11:213:ARG:NH1	2.69	0.40
2:12:75:LYS:O	2:12:78:GLN:HG2	2.21	0.40
1:13:417:C:H2'	1:13:418:C:H6	1.85	0.40
1:13:522:C:H2'	1:13:523:A:O4'	2.21	0.40
1:13:524:G:H2'	1:13:525:C:C6	2.57	0.40
1:13:607:A:H2'	1:13:608:A:O4'	2.21	0.40
1:13:672:U:O2'	1:13:673:G:H5'	2.20	0.40
1:13:730:G:H2'	1:13:766:A:H5'	2.04	0.40
1:13:774:G:N3	1:13:774:G:H2'	2.35	0.40
1:13:961:U:H2'	1:13:962:C:O4'	2.22	0.40
24:14:1396:U:H2'	24:14:1396:U:O2	2.21	0.40
24:14:1999:C:H4'	24:14:2723:C:O2	2.21	0.40
24:14:2177:C:H1'	26:79:44:HIS:HB3	2.03	0.40
24:14:2361:A:OP1	53:M5:27:THR:HG23	2.21	0.40
24:14:2581:G:H3'	57:14:4242:HOH:O	2.22	0.40
24:14:2766:G:H5''	24:14:2767:C:OP2	2.21	0.40
24:14:71:A:H4'	24:14:72:U:H5''	2.03	0.40
24:14:774:A:HO2'	24:14:775:G:H8	1.67	0.40
24:14:7:G:H2'	24:14:8:A:O4'	2.21	0.40
24:14:864:G:OP2	36:45:22:LYS:HD3	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:923:C:O2'	24:14:924:C:H5'	2.21	0.40
25:16:73:A:H2'	25:16:74:U:H5'	2.02	0.40
24:14:764:A:N3	27:19:213:ARG:HD3	2.36	0.40
27:19:44:ASN:CG	27:19:46:GLN:H	2.24	0.40
24:14:1568:G:H21	27:19:58:HIS:CE1	2.38	0.40
27:19:34:VAL:CG1	27:19:61:LEU:HG	2.50	0.40
2:1E:211:ILE:HG13	2:1E:211:ILE:H	1.73	0.40
2:1E:5:ILE:HG22	2:1E:224:GLN:OE1	2.21	0.40
54:1G:1028:C:H2'	54:1G:1028(A):C:O4'	2.21	0.40
54:1G:1060:C:H2'	54:1G:1061:G:H8	1.86	0.40
54:1G:1152:A:H2'	54:1G:1153:C:O4'	2.21	0.40
54:1G:1306:A:C6	54:1G:1307:U:C2	3.09	0.40
54:1G:1493:A:H3'	54:1G:1494:G:H5'	2.04	0.40
54:1G:269:C:H2'	54:1G:270:A:C8	2.56	0.40
54:1G:29:G:O2'	54:1G:295:C:H4'	2.21	0.40
54:1G:380:G:C2	54:1G:384:G:C6	3.08	0.40
54:1G:456:C:N4	54:1G:476:G:H1	2.19	0.40
54:1G:57:G:C4	54:1G:58:C:C5	3.09	0.40
54:1G:788:U:C5	54:1G:789:U:C4	3.09	0.40
54:1G:803:G:C6	54:1G:804:U:C4	3.10	0.40
54:1G:80:G:O2'	54:1G:81:G:OP1	2.35	0.40
54:1G:980:C:H3'	54:1G:981:U:H6	1.85	0.40
54:1G:992:U:O2'	54:1G:993:G:OP2	2.35	0.40
24:1H:1465:G:C6	24:1H:1466:G:C5	3.09	0.40
24:1H:1571:A:H2'	24:1H:1572:A:C8	2.56	0.40
24:1H:1676:A:N6	24:1H:1677:A:C6	2.89	0.40
24:1H:1681:G:N2	24:1H:1762[B]:A:H5'	2.35	0.40
24:1H:197:A:N6	24:1H:2430:A:H2'	2.36	0.40
24:1H:2027:G:C5	24:1H:2028:U:C5	3.10	0.40
24:1H:2169:A:N7	24:1H:2170:A:C6	2.90	0.40
24:1H:249:C:H4'	24:1H:250:G:O5'	2.22	0.40
24:1H:2575:C:H6	24:1H:2575:C:O5'	2.04	0.40
24:1H:821:A:H2'	24:1H:946:G:H5''	2.04	0.40
10:1I:34:VAL:HG12	10:1I:74:ILE:HG22	2.02	0.40
3:2E:113:ALA:HB3	3:2E:114:PRO:HD3	2.02	0.40
1:13:690:G:H22	11:2I:55:LYS:NZ	2.20	0.40
4:32:117:ALA:O	4:32:121:VAL:HG23	2.21	0.40
4:32:13:ARG:HD2	4:32:38:TYR:O	2.22	0.40
35:35:112:LEU:HD22	35:35:114:ILE:HG22	2.04	0.40
35:35:98:GLU:HA	35:35:101:VAL:HB	2.03	0.40
29:39:181:LEU:CD1	29:39:186:ILE:HD11	2.43	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3E:110:PHE:HE2	4:3E:148:VAL:HG23	1.85	0.40
12:3I:57:LYS:HD3	12:3I:65:GLU:OE2	2.21	0.40
12:3I:85:ILE:HD13	12:3I:85:ILE:HA	1.77	0.40
5:42:101:ILE:HD11	5:42:119:LEU:CD2	2.32	0.40
36:45:33:GLY:HA2	36:45:105:GLU:HA	2.03	0.40
30:49:95:ARG:O	30:49:98:ARG:N	2.53	0.40
24:1H:2751:G:N2	31:51:3:ARG:HG2	2.36	0.40
33:58:110:GLY:O	33:58:114:ARG:HG3	2.21	0.40
54:1G:1202:G:N2	14:5A:46:GLU:OE1	2.53	0.40
6:5E:87:ARG:HG2	6:5E:88:VAL:N	2.35	0.40
32:61:1:MET:N	32:61:21:VAL:O	2.47	0.40
7:62:101:LEU:O	7:62:105:VAL:HG23	2.22	0.40
26:71:59:ARG:HD2	26:71:164:ARG:CZ	2.51	0.40
8:72:39:LEU:HD12	8:72:44:PHE:CD2	2.56	0.40
35:78:46:LYS:HB3	35:78:46:LYS:HE2	1.93	0.40
16:7I:4:ILE:CG2	16:7I:36:ILE:HD11	2.52	0.40
24:1H:1287:A:O4'	37:98:104:ARG:HD3	2.21	0.40
3:2E:79:ARG:HH11	18:9A:87:ARG:NH1	2.18	0.40
40:C8:91:ASP:HB3	40:C8:93:LYS:HB3	2.04	0.40
47:F5:73:LEU:HA	47:F5:73:LEU:HD23	1.90	0.40
24:1H:483:A:O2'	44:G8:49:VAL:O	2.27	0.40
44:G8:65:ALA:HA	44:G8:66:PRO:HD3	1.87	0.40
45:H8:24:LEU:HD12	45:H8:25:PRO:O	2.21	0.40
24:1H:2271:G:C5'	46:I8:20:ARG:HD2	2.50	0.40
47:J8:5:CYS:HB3	47:J8:9:GLY:N	2.35	0.40
53:Q8:61:LEU:O	53:Q8:62:LEU:HD12	2.21	0.40
2:12:46:LYS:O	2:12:50:GLU:HG2	2.22	0.40
1:13:373:A:C2	1:13:374:A:C8	3.10	0.40
1:13:42:G:H1	1:13:400:C:H42	1.69	0.40
1:13:774:G:H5''	1:13:775:G:OP2	2.20	0.40
1:13:91:C:H2'	1:13:92:G:O4'	2.21	0.40
1:13:933:G:H5''	1:13:934:C:OP2	2.22	0.40
24:14:1062:G:C6	24:14:1075:C:N4	2.89	0.40
24:14:1439:A:H2'	24:14:1440:G:O4'	2.21	0.40
24:14:1589:C:H2'	24:14:1590:U:H6	1.86	0.40
24:14:171:G:H2'	24:14:172:C:C6	2.56	0.40
24:14:1750:G:O2'	24:14:1751:C:H5'	2.21	0.40
24:14:2256:G:O6	57:14:3862:HOH:O	2.22	0.40
24:14:2306:C:O5'	24:14:2307:G:H5''	2.22	0.40
24:14:557:U:H5''	33:15:111:PRO:HB2	2.03	0.40
24:14:569:U:H5''	24:14:821:A:C2	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:68:G:C2	24:14:69:C:C2	3.09	0.40
24:14:748:G:O6	42:A5:90:ARG:NH1	2.54	0.40
24:14:768:G:C6	24:14:769:G:C5	3.10	0.40
24:14:838:C:H2'	24:14:839:U:H6	1.86	0.40
2:1E:104:ASN:HA	2:1E:104:ASN:HD22	1.59	0.40
2:1E:118:LEU:HD13	2:1E:142:LEU:HA	2.03	0.40
1:13:1075:C:OP1	2:1E:179:LYS:HE2	2.22	0.40
54:1G:1141:C:H2'	54:1G:1142:G:C8	2.56	0.40
54:1G:164:U:H2'	54:1G:165:C:C6	2.56	0.40
54:1G:409:G:H2'	54:1G:410:G:O4'	2.22	0.40
54:1G:4:U:H5''	4:32:87:GLY:N	2.36	0.40
54:1G:728:A:C2	54:1G:729:A:C5	3.09	0.40
54:1G:799:G:C6	54:1G:800:G:C4	3.09	0.40
24:1H:1044:G:O2'	24:1H:1111:A:N6	2.54	0.40
24:1H:1181:C:H2'	24:1H:1182:A:C8	2.57	0.40
24:1H:1206:G:C6	24:1H:1207:C:C4	3.09	0.40
24:1H:1221:C:C2	24:1H:1222:C:C5	3.10	0.40
24:1H:1340:U:H4'	24:1H:1341:U:OP2	2.22	0.40
24:1H:1530:G:C6	24:1H:1531:C:C4	3.09	0.40
24:1H:1792:G:H2'	24:1H:1793:C:C6	2.57	0.40
24:1H:1826:G:H4'	27:11:242:ARG:HE	1.86	0.40
24:1H:1858:G:C6	24:1H:1883:G:C6	3.09	0.40
24:1H:2262:U:O2'	24:1H:2263:C:H5'	2.21	0.40
24:1H:2299:G:H8	24:1H:2299:G:OP2	2.05	0.40
24:1H:580:C:H2'	24:1H:581:C:H6	1.86	0.40
24:1H:654(N):G:C2	24:1H:654(O):G:C6	3.10	0.40
24:1H:768:G:C6	24:1H:769:G:C5	3.09	0.40
24:1H:80:G:C5	57:1H:3724:HOH:O	2.75	0.40
28:21:125:GLY:HA3	28:21:134:ILE:HD13	2.03	0.40
34:25:4:PRO:O	34:25:5:GLN:CB	2.68	0.40
34:25:87:ILE:HG23	34:25:88:ASN:O	2.22	0.40
1:13:1190:G:OP1	3:2E:4:LYS:HA	2.21	0.40
11:2I:62:GLN:HB2	11:2I:93:GLN:OE1	2.21	0.40
22:2K:14:A:H61	22:2K:22:A:H2'	1.86	0.40
22:2L:81:C:C2'	22:2L:82:A:H5'	2.52	0.40
29:31:119:ARG:HB3	29:31:119:ARG:CZ	2.50	0.40
35:35:147:LEU:HB2	35:35:148:LEU:H	1.37	0.40
29:39:101:LEU:HG	29:39:102:PRO:HD2	2.03	0.40
22:3K:63:5MU:C2'	22:3K:64:PSU:H5''	2.50	0.40
30:41:101:ILE:HD13	30:41:101:ILE:HA	1.87	0.40
30:41:131:TYR:HB3	30:41:159:VAL:HG23	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:42:142:LEU:HA	5:42:142:LEU:HD23	1.88	0.40
5:42:30:ALA:O	5:42:45:PHE:HA	2.21	0.40
24:14:911:A:C5	36:45:9:TYR:CD2	3.09	0.40
13:4A:92:HIS:HE1	13:4A:98:VAL:HG21	1.84	0.40
37:55:8:ARG:NE	37:55:43:GLU:OE2	2.44	0.40
14:5A:29:ARG:HB2	14:5A:30:ALA:H	1.68	0.40
38:65:18:ILE:HD11	38:65:25:ARG:HG3	2.03	0.40
32:69:120:ILE:HG21	32:69:126:TYR:CE2	2.57	0.40
15:6I:71:GLN:O	15:6I:71:GLN:HG2	2.22	0.40
24:1H:2275:C:O2	36:88:85:LYS:HG3	2.21	0.40
9:8E:48:GLU:N	9:8E:49:PRO:HD2	2.36	0.40
41:95:100:ARG:HG2	41:95:100:ARG:H	1.77	0.40
37:98:73:VAL:O	37:98:77:ARG:HG3	2.21	0.40
42:A5:59:VAL:HG12	42:A5:60:ASN:N	2.35	0.40
20:BA:69:GLY:O	20:BA:73:HIS:CE1	2.73	0.40
44:C5:90:LEU:HA	44:C5:91:GLU:HA	1.82	0.40
24:14:857:C:H4'	46:E5:23:VAL:HG21	2.02	0.40
51:J5:20:ARG:HG2	51:J5:23:HIS:CD2	2.56	0.40
52:L5:14:LYS:HG2	52:L5:14:LYS:H	1.68	0.40
1:13:111:G:H8	1:13:111:G:O5'	2.05	0.40
1:13:1287:A:C6	1:13:1288:A:C6	3.09	0.40
1:13:1442:G:H1	1:13:1461:G:H21	1.70	0.40
1:13:370:C:C2	1:13:392:G:N2	2.90	0.40
1:13:427:U:H3'	1:13:428:G:H2'	2.02	0.40
1:13:484:G:O2'	1:13:485:G:OP2	2.29	0.40
1:13:792:A:H1'	1:13:794:A:N7	2.37	0.40
24:14:1099:G:C6	24:14:1100:C:C4	3.10	0.40
24:14:1110:G:H8	24:14:1110:G:O5'	2.05	0.40
24:14:1313:U:H2'	24:14:1610:A:N1	2.37	0.40
24:14:1448:G:O2'	24:14:1528:A:N6	2.54	0.40
24:14:162:U:H4'	24:14:171:G:C4	2.57	0.40
24:14:217:G:H2'	24:14:218:A:O4'	2.22	0.40
24:14:2212:A:H4'	24:14:2213:U:C5	2.41	0.40
24:14:2375:G:N7	57:14:3914:HOH:O	2.37	0.40
24:14:2391:G:O6	24:14:2425:A:H8	2.04	0.40
24:14:2553:G:H5''	24:14:2554:U:OP2	2.21	0.40
24:14:2688:U:H5	24:14:2720:U:OP2	2.05	0.40
24:14:350:U:H2'	24:14:351:G:O4'	2.22	0.40
24:14:580:C:H2'	24:14:581:C:C6	2.56	0.40
24:14:60:G:C8	24:14:63:U:C5	3.10	0.40
24:14:768:G:C4	24:14:769:G:C8	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:237:ALA:C	2:1E:239:VAL:N	2.74	0.40
54:1G:1230:C:H2'	54:1G:1231:G:C8	2.57	0.40
54:1G:1461:G:O5'	54:1G:1461:G:H8	2.04	0.40
54:1G:28:G:C6	54:1G:29:G:C5	3.10	0.40
54:1G:309:G:H1'	54:1G:608:A:C2	2.56	0.40
54:1G:376:G:H5''	16:7A:5:ARG:HD3	2.03	0.40
54:1G:408:A:H2'	54:1G:409:G:O4'	2.20	0.40
54:1G:87:A:C6	54:1G:88:C:C4	3.09	0.40
24:1H:1265:A:H3'	51:N8:19:ARG:NH1	2.36	0.40
24:1H:1386:C:C2	24:1H:1387:C:C5	3.09	0.40
24:1H:1973:G:H2'	24:1H:1974:C:H6	1.86	0.40
24:1H:2323:G:C6	24:1H:2324:C:C4	3.10	0.40
24:1H:234:C:H2'	24:1H:235:U:C6	2.56	0.40
24:1H:2537:U:H2'	24:1H:2538:C:C6	2.57	0.40
24:1H:2600:A:N6	57:1H:3629:HOH:O	2.16	0.40
24:1H:266:G:C6	24:1H:267:C:C5	3.09	0.40
24:1H:527:C:OP2	24:1H:2779:U:C5	2.75	0.40
24:1H:577:G:C6	24:1H:578:A:C6	3.10	0.40
24:1H:804:A:H5''	57:1H:3775:HOH:O	2.20	0.40
24:1H:862:G:H2'	24:1H:863:A:O4'	2.22	0.40
10:1I:79:ARG:HD3	10:1I:79:ARG:HA	1.90	0.40
25:1J:17:C:H2'	25:1J:18:G:O4'	2.21	0.40
28:21:14:ILE:HD13	28:21:14:ILE:HA	1.72	0.40
3:22:23:TYR:HA	10:1A:11:PHE:CE2	2.56	0.40
3:22:81:GLY:CA	3:22:85:ARG:HH21	2.27	0.40
22:2L:36:U:H2'	22:2L:37:A:H8	1.86	0.40
29:31:39:TRP:O	29:31:43:LYS:HG2	2.21	0.40
29:31:64:ILE:HA	29:31:64:ILE:HD13	1.79	0.40
12:3I:83:VAL:HG22	12:3I:84:LEU:H	1.87	0.40
54:1G:15:G:H1'	5:42:19:MET:CE	2.51	0.40
36:45:78:PRO:O	36:45:79:LEU:HB3	2.20	0.40
30:49:145:THR:O	30:49:146:TYR:HB3	2.22	0.40
6:52:25:ILE:HG12	6:52:25:ILE:H	1.64	0.40
37:55:18:LEU:HD23	37:55:18:LEU:HA	1.80	0.40
37:55:54:LEU:HD21	37:55:65:LEU:HD23	2.02	0.40
54:1G:1216:G:H5''	14:5A:5:ALA:HB2	2.02	0.40
32:69:97:ILE:HG23	32:69:140:LEU:HD23	2.03	0.40
7:6E:57:GLU:HB2	7:6E:60:LYS:HE2	2.03	0.40
19:AA:78:ARG:O	19:AA:79:THR:OG1	2.39	0.40
20:BA:20:LEU:HD23	20:BA:20:LEU:HA	1.70	0.40
44:C5:27:VAL:HA	44:C5:39:VAL:CG1	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:D5:111:VAL:O	45:D5:114:GLY:N	2.49	0.40
45:D5:144:LEU:HB2	45:D5:174:VAL:CG1	2.49	0.40
24:14:2262:U:H5	46:E5:16:SER:HG	1.69	0.40
24:1H:748:G:O6	42:E8:90:ARG:NH1	2.55	0.40
43:F8:11:PRO:HG2	43:F8:13:LEU:HD21	2.04	0.40
24:1H:142:G:C1'	43:F8:37:THR:HG21	2.45	0.40
24:14:61:G:H5'	48:G5:50:ILE:HD12	2.03	0.40
44:G8:35:TYR:CE2	44:G8:69:ALA:HB3	2.56	0.40
45:H8:120:ILE:HD13	45:H8:121:HIS:N	2.36	0.40
48:K8:47:ASN:C	48:K8:49:LYS:N	2.73	0.40
48:K8:9:GLN:O	48:K8:13:ALA:HB2	2.22	0.40
30:41:109:VAL:HG13	50:M8:33:VAL:HG22	2.04	0.40
51:N8:40:LYS:HG3	51:N8:47:PRO:HD2	2.04	0.40

All (2) 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)
6:5E:15:ASP:OD1	4:32:27:TYR:OH[4_555]	2.13	0.07
24:1H:277:C:O2'	48:G5:49:LYS:NZ[2_564]	2.14	0.06

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	12	235/256 (92%)	201 (86%)	32 (14%)	2 (1%)	17 56
2	1E	235/256 (92%)	198 (84%)	32 (14%)	5 (2%)	7 37
3	22	204/239 (85%)	180 (88%)	24 (12%)	0	100 100
3	2E	203/239 (85%)	183 (90%)	20 (10%)	0	100 100
4	32	206/209 (99%)	180 (87%)	25 (12%)	1 (0%)	29 67

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	3E	206/209 (99%)	191 (93%)	13 (6%)	2 (1%)	15	54
5	42	149/162 (92%)	144 (97%)	5 (3%)	0	100	100
5	4E	149/162 (92%)	139 (93%)	9 (6%)	1 (1%)	22	61
6	52	99/101 (98%)	93 (94%)	6 (6%)	0	100	100
6	5E	99/101 (98%)	94 (95%)	5 (5%)	0	100	100
7	62	153/156 (98%)	145 (95%)	8 (5%)	0	100	100
7	6E	153/156 (98%)	145 (95%)	8 (5%)	0	100	100
8	72	136/138 (99%)	129 (95%)	5 (4%)	2 (2%)	10	44
8	7E	136/138 (99%)	123 (90%)	13 (10%)	0	100	100
9	82	124/128 (97%)	113 (91%)	11 (9%)	0	100	100
9	8E	125/128 (98%)	113 (90%)	12 (10%)	0	100	100
10	1A	97/105 (92%)	87 (90%)	10 (10%)	0	100	100
10	1I	97/105 (92%)	83 (86%)	14 (14%)	0	100	100
11	2A	117/129 (91%)	107 (92%)	10 (8%)	0	100	100
11	2I	114/129 (88%)	104 (91%)	9 (8%)	1 (1%)	17	56
12	3A	123/132 (93%)	110 (89%)	11 (9%)	2 (2%)	9	43
12	3I	123/132 (93%)	114 (93%)	9 (7%)	0	100	100
13	4A	115/126 (91%)	100 (87%)	11 (10%)	4 (4%)	3	24
13	4I	114/126 (90%)	100 (88%)	14 (12%)	0	100	100
14	5A	58/61 (95%)	50 (86%)	8 (14%)	0	100	100
14	5I	58/61 (95%)	50 (86%)	8 (14%)	0	100	100
15	6A	86/89 (97%)	82 (95%)	4 (5%)	0	100	100
15	6I	86/89 (97%)	77 (90%)	9 (10%)	0	100	100
16	7A	82/88 (93%)	77 (94%)	5 (6%)	0	100	100
16	7I	82/88 (93%)	79 (96%)	3 (4%)	0	100	100
17	8A	98/105 (93%)	93 (95%)	5 (5%)	0	100	100
17	8I	98/105 (93%)	92 (94%)	6 (6%)	0	100	100
18	9A	70/88 (80%)	66 (94%)	4 (6%)	0	100	100
18	9I	70/88 (80%)	66 (94%)	3 (4%)	1 (1%)	11	46
19	AA	80/93 (86%)	59 (74%)	18 (22%)	3 (4%)	3	22
19	AI	81/93 (87%)	66 (82%)	14 (17%)	1 (1%)	13	49

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
20	BA	97/106 (92%)	83 (86%)	14 (14%)	0	100	100
20	BI	97/106 (92%)	87 (90%)	10 (10%)	0	100	100
21	1B	23/27 (85%)	20 (87%)	3 (13%)	0	100	100
21	1F	23/27 (85%)	21 (91%)	2 (9%)	0	100	100
26	71	131/229 (57%)	130 (99%)	1 (1%)	0	100	100
26	79	131/229 (57%)	129 (98%)	2 (2%)	0	100	100
27	11	270/276 (98%)	246 (91%)	19 (7%)	5 (2%)	8	39
27	19	271/276 (98%)	252 (93%)	16 (6%)	3 (1%)	14	51
28	21	203/206 (98%)	174 (86%)	28 (14%)	1 (0%)	29	67
28	29	203/206 (98%)	158 (78%)	38 (19%)	7 (3%)	3	24
29	31	200/210 (95%)	187 (94%)	13 (6%)	0	100	100
29	39	206/210 (98%)	176 (85%)	25 (12%)	5 (2%)	6	34
30	41	179/182 (98%)	154 (86%)	24 (13%)	1 (1%)	25	64
30	49	179/182 (98%)	148 (83%)	30 (17%)	1 (1%)	25	64
31	51	172/180 (96%)	145 (84%)	24 (14%)	3 (2%)	9	42
31	59	169/180 (94%)	133 (79%)	34 (20%)	2 (1%)	13	49
32	61	144/148 (97%)	123 (85%)	18 (12%)	3 (2%)	7	37
32	69	144/148 (97%)	120 (83%)	22 (15%)	2 (1%)	11	46
33	15	136/140 (97%)	126 (93%)	9 (7%)	1 (1%)	22	61
33	58	136/140 (97%)	115 (85%)	15 (11%)	6 (4%)	2	19
34	25	120/122 (98%)	111 (92%)	9 (8%)	0	100	100
34	68	120/122 (98%)	113 (94%)	7 (6%)	0	100	100
35	35	148/150 (99%)	119 (80%)	24 (16%)	5 (3%)	3	24
35	78	148/150 (99%)	114 (77%)	30 (20%)	4 (3%)	5	30
36	45	139/141 (99%)	113 (81%)	23 (16%)	3 (2%)	6	35
36	88	139/141 (99%)	113 (81%)	22 (16%)	4 (3%)	4	28
37	55	115/118 (98%)	102 (89%)	12 (10%)	1 (1%)	17	56
37	98	116/118 (98%)	106 (91%)	10 (9%)	0	100	100
38	65	109/112 (97%)	95 (87%)	12 (11%)	2 (2%)	8	41
38	A8	109/112 (97%)	91 (84%)	17 (16%)	1 (1%)	17	56
39	75	135/146 (92%)	113 (84%)	19 (14%)	3 (2%)	6	35

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
39	B8	135/146 (92%)	115 (85%)	20 (15%)	0	100	100
40	85	115/118 (98%)	105 (91%)	10 (9%)	0	100	100
40	C8	115/118 (98%)	111 (96%)	4 (4%)	0	100	100
41	95	99/101 (98%)	84 (85%)	12 (12%)	3 (3%)	4	28
41	D8	99/101 (98%)	87 (88%)	12 (12%)	0	100	100
42	A5	111/113 (98%)	102 (92%)	9 (8%)	0	100	100
42	E8	111/113 (98%)	105 (95%)	6 (5%)	0	100	100
43	B5	91/96 (95%)	86 (94%)	4 (4%)	1 (1%)	14	51
43	F8	92/96 (96%)	85 (92%)	6 (6%)	1 (1%)	14	51
44	C5	102/110 (93%)	70 (69%)	29 (28%)	3 (3%)	4	28
44	G8	102/110 (93%)	80 (78%)	19 (19%)	3 (3%)	4	28
45	D5	177/206 (86%)	141 (80%)	31 (18%)	5 (3%)	5	29
45	H8	173/206 (84%)	141 (82%)	25 (14%)	7 (4%)	3	21
46	E5	75/85 (88%)	69 (92%)	5 (7%)	1 (1%)	12	47
46	I8	81/85 (95%)	72 (89%)	8 (10%)	1 (1%)	13	49
47	F5	95/98 (97%)	85 (90%)	9 (10%)	1 (1%)	14	51
47	J8	95/98 (97%)	86 (90%)	7 (7%)	2 (2%)	7	37
48	G5	67/72 (93%)	57 (85%)	10 (15%)	0	100	100
48	K8	64/72 (89%)	61 (95%)	1 (2%)	2 (3%)	4	26
49	H5	57/60 (95%)	52 (91%)	4 (7%)	1 (2%)	8	41
49	L8	57/60 (95%)	54 (95%)	3 (5%)	0	100	100
50	I5	61/71 (86%)	35 (57%)	22 (36%)	4 (7%)	1	9
50	M8	64/71 (90%)	44 (69%)	19 (30%)	1 (2%)	9	43
51	J5	57/60 (95%)	48 (84%)	7 (12%)	2 (4%)	3	24
51	N8	57/60 (95%)	50 (88%)	6 (10%)	1 (2%)	8	41
52	L5	47/49 (96%)	45 (96%)	2 (4%)	0	100	100
52	P8	45/49 (92%)	41 (91%)	2 (4%)	2 (4%)	2	19
53	M5	61/65 (94%)	54 (88%)	4 (7%)	3 (5%)	2	17
53	Q8	60/65 (92%)	49 (82%)	7 (12%)	4 (7%)	1	9
All	All	11538/12404 (93%)	10164 (88%)	1238 (11%)	136 (1%)	13	49

All (136) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
18	9I	22	VAL
27	11	122	ASP
33	58	22	THR
33	58	95	PRO
33	58	96	GLU
36	88	87	LYS
44	G8	81	LYS
48	K8	43	GLN
52	P8	45	ALA
52	P8	46	VAL
53	Q8	35	GLN
28	29	51	PHE
28	29	81	ILE
35	35	49	ARG
38	65	110	LEU
44	C5	40	GLU
45	D5	53	ILE
50	I5	5	ILE
27	11	123	ALA
31	51	8	PRO
36	88	66	ILE
45	H8	53	ILE
53	Q8	31	HIS
12	3A	27	LEU
19	AA	9	VAL
29	39	84	VAL
32	69	144	VAL
41	95	84	LYS
44	C5	29	GLU
53	M5	31	HIS
53	M5	62	LEU
2	1E	237	ALA
27	11	26	LYS
33	58	128	HIS
35	78	117	GLU
44	G8	5	MET
45	H8	6	LYS
45	H8	151	HIS
45	H8	165	VAL
48	K8	47	ASN
28	29	9	VAL
36	45	7	MET
44	C5	78	ALA

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Mol	Chain	Res	Type
45	D5	161	VAL
49	H5	13	ILE
53	M5	63	PRO
2	1E	95	GLN
2	1E	238	LEU
4	3E	154	ASN
4	3E	155	LEU
31	51	83	TYR
33	58	9	VAL
35	78	19	VAL
36	88	90	VAL
38	A8	4	LEU
44	G8	84	ARG
45	H8	141	VAL
45	H8	171	ILE
46	I8	7	LEU
50	M8	34	GLU
53	Q8	30	ARG
53	Q8	32	LEU
2	12	20	GLU
19	AA	29	ARG
28	29	82	ARG
29	39	25	PRO
32	69	83	ALA
35	35	48	PRO
36	45	51	ARG
37	55	6	SER
41	95	45	THR
45	D5	60	GLU
2	1E	194	PRO
31	51	167	GLU
43	F8	68	ARG
45	H8	60	GLU
12	3A	26	ALA
27	19	240	ALA
27	19	272	ALA
29	39	28	ILE
29	39	85	GLY
33	15	128	HIS
35	35	46	LYS
35	35	56	SER
38	65	105	ALA

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Mol	Chain	Res	Type
39	75	7	ILE
39	75	8	LYS
45	D5	8	TYR
46	E5	63	VAL
50	I5	31	ILE
2	1E	155	LEU
36	88	6	ARG
4	32	189	PRO
13	4A	5	ALA
29	39	22	ALA
35	35	7	ARG
32	61	133	HIS
27	19	3	VAL
28	29	62	PRO
36	45	90	VAL
47	F5	30	VAL
50	I5	22	ILE
11	2I	82	VAL
27	11	240	ALA
30	41	5	VAL
35	78	95	VAL
39	75	10	VAL
50	I5	33	VAL
51	J5	5	PRO
19	AI	9	VAL
27	11	3	VAL
28	21	72	VAL
32	61	145	VAL
33	58	11	PRO
35	78	7	ARG
51	N8	6	VAL
2	12	39	ILE
13	4A	84	ILE
28	29	25	VAL
28	29	52	LEU
30	49	5	VAL
43	B5	51	VAL
45	D5	141	VAL
5	4E	115	VAL
47	J8	86	SER
8	72	100	ILE
8	72	103	VAL

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Mol	Chain	Res	Type
13	4A	117	VAL
19	AA	67	VAL
41	95	99	ILE
32	61	118	LYS
13	4A	4	ILE
31	59	17	VAL
31	59	136	ILE
51	J5	57	VAL
47	J8	87	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	
2	12	205/220 (93%)	170 (83%)	35 (17%)	2	10
2	1E	205/220 (93%)	168 (82%)	37 (18%)	1	9
3	22	160/188 (85%)	131 (82%)	29 (18%)	1	8
3	2E	159/188 (85%)	136 (86%)	23 (14%)	3	15
4	32	180/181 (99%)	152 (84%)	28 (16%)	2	12
4	3E	180/181 (99%)	155 (86%)	25 (14%)	3	16
5	42	116/123 (94%)	96 (83%)	20 (17%)	2	10
5	4E	116/123 (94%)	92 (79%)	24 (21%)	1	6
6	52	90/90 (100%)	81 (90%)	9 (10%)	7	30
6	5E	90/90 (100%)	79 (88%)	11 (12%)	5	22
7	62	126/127 (99%)	110 (87%)	16 (13%)	4	20
7	6E	126/127 (99%)	111 (88%)	15 (12%)	5	22
8	72	119/119 (100%)	103 (87%)	16 (13%)	4	18
8	7E	119/119 (100%)	108 (91%)	11 (9%)	9	33
9	82	97/99 (98%)	81 (84%)	16 (16%)	2	10
9	8E	98/99 (99%)	85 (87%)	13 (13%)	4	18
10	1A	89/92 (97%)	79 (89%)	10 (11%)	6	25

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
10	1I	89/92 (97%)	78 (88%)	11 (12%)	4	21
11	2A	90/99 (91%)	79 (88%)	11 (12%)	5	22
11	2I	88/99 (89%)	79 (90%)	9 (10%)	7	29
12	3A	104/109 (95%)	90 (86%)	14 (14%)	4	18
12	3I	104/109 (95%)	93 (89%)	11 (11%)	6	27
13	4A	94/101 (93%)	79 (84%)	15 (16%)	2	11
13	4I	94/101 (93%)	85 (90%)	9 (10%)	8	32
14	5A	49/50 (98%)	43 (88%)	6 (12%)	5	22
14	5I	49/50 (98%)	41 (84%)	8 (16%)	2	11
15	6A	79/80 (99%)	72 (91%)	7 (9%)	9	35
15	6I	79/80 (99%)	72 (91%)	7 (9%)	9	35
16	7A	72/74 (97%)	61 (85%)	11 (15%)	2	13
16	7I	72/74 (97%)	58 (81%)	14 (19%)	1	7
17	8A	95/97 (98%)	84 (88%)	11 (12%)	5	24
17	8I	95/97 (98%)	82 (86%)	13 (14%)	3	17
18	9A	63/77 (82%)	56 (89%)	7 (11%)	6	25
18	9I	63/77 (82%)	56 (89%)	7 (11%)	6	25
19	AA	67/80 (84%)	61 (91%)	6 (9%)	9	34
19	AI	72/80 (90%)	63 (88%)	9 (12%)	4	21
20	BA	76/82 (93%)	67 (88%)	9 (12%)	5	23
20	BI	76/82 (93%)	66 (87%)	10 (13%)	4	19
21	1B	20/22 (91%)	19 (95%)	1 (5%)	24	60
21	1F	20/22 (91%)	19 (95%)	1 (5%)	24	60
26	7I	111/181 (61%)	106 (96%)	5 (4%)	27	63
26	79	111/181 (61%)	109 (98%)	2 (2%)	59	82
27	11	214/218 (98%)	174 (81%)	40 (19%)	1	8
27	19	214/218 (98%)	176 (82%)	38 (18%)	2	9
28	21	165/166 (99%)	140 (85%)	25 (15%)	3	13
28	29	165/166 (99%)	141 (86%)	24 (14%)	3	15
29	31	161/166 (97%)	133 (83%)	28 (17%)	2	10
29	39	165/166 (99%)	132 (80%)	33 (20%)	1	6

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
30	41	155/156 (99%)	132 (85%)	23 (15%)	3	14
30	49	155/156 (99%)	135 (87%)	20 (13%)	4	19
31	51	145/148 (98%)	117 (81%)	28 (19%)	1	8
31	59	142/148 (96%)	118 (83%)	24 (17%)	2	10
32	61	122/124 (98%)	105 (86%)	17 (14%)	3	16
32	69	122/124 (98%)	91 (75%)	31 (25%)	0	2
33	15	117/119 (98%)	96 (82%)	21 (18%)	2	9
33	58	117/119 (98%)	94 (80%)	23 (20%)	1	7
34	25	100/100 (100%)	79 (79%)	21 (21%)	1	6
34	68	100/100 (100%)	87 (87%)	13 (13%)	4	19
35	35	116/116 (100%)	85 (73%)	31 (27%)	0	2
35	78	116/116 (100%)	80 (69%)	36 (31%)	0	0
36	45	111/111 (100%)	96 (86%)	15 (14%)	4	18
36	88	111/111 (100%)	93 (84%)	18 (16%)	2	11
37	55	100/101 (99%)	80 (80%)	20 (20%)	1	6
37	98	101/101 (100%)	85 (84%)	16 (16%)	2	12
38	65	87/88 (99%)	68 (78%)	19 (22%)	1	5
38	A8	87/88 (99%)	65 (75%)	22 (25%)	0	2
39	75	117/127 (92%)	93 (80%)	24 (20%)	1	6
39	B8	120/127 (94%)	92 (77%)	28 (23%)	1	3
40	85	93/94 (99%)	78 (84%)	15 (16%)	2	11
40	C8	93/94 (99%)	80 (86%)	13 (14%)	3	16
41	95	82/82 (100%)	63 (77%)	19 (23%)	1	3
41	D8	82/82 (100%)	58 (71%)	24 (29%)	0	1
42	A5	92/92 (100%)	78 (85%)	14 (15%)	3	13
42	E8	92/92 (100%)	71 (77%)	21 (23%)	1	4
43	B5	74/78 (95%)	63 (85%)	11 (15%)	3	14
43	F8	75/78 (96%)	61 (81%)	14 (19%)	1	8
44	C5	85/91 (93%)	62 (73%)	23 (27%)	0	1
44	G8	85/91 (93%)	65 (76%)	20 (24%)	1	3
45	D5	158/179 (88%)	133 (84%)	25 (16%)	2	12

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
45	H8	154/179 (86%)	118 (77%)	36 (23%)	1	3
46	E5	62/67 (92%)	50 (81%)	12 (19%)	1	7
46	I8	61/67 (91%)	50 (82%)	11 (18%)	1	9
47	F5	82/83 (99%)	66 (80%)	16 (20%)	1	7
47	J8	82/83 (99%)	65 (79%)	17 (21%)	1	6
48	G5	64/67 (96%)	53 (83%)	11 (17%)	2	10
48	K8	62/67 (92%)	46 (74%)	16 (26%)	0	2
49	H5	51/52 (98%)	39 (76%)	12 (24%)	1	3
49	L8	51/52 (98%)	35 (69%)	16 (31%)	0	0
50	I5	57/63 (90%)	42 (74%)	15 (26%)	0	2
50	M8	59/63 (94%)	49 (83%)	10 (17%)	2	10
51	J5	51/52 (98%)	41 (80%)	10 (20%)	1	7
51	N8	51/52 (98%)	38 (74%)	13 (26%)	0	2
52	L5	42/42 (100%)	34 (81%)	8 (19%)	1	8
52	P8	40/42 (95%)	34 (85%)	6 (15%)	3	14
53	M5	53/55 (96%)	41 (77%)	12 (23%)	1	4
53	Q8	52/55 (94%)	39 (75%)	13 (25%)	0	2
All	All	9717/10256 (95%)	8094 (83%)	1623 (17%)	2	10

All (1623) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	1E	4	GLU
2	1E	8	LYS
2	1E	9	GLU
2	1E	12	GLU
2	1E	16	HIS
2	1E	17	PHE
2	1E	21	ARG
2	1E	41	ILE
2	1E	42	ILE
2	1E	60	ASP
2	1E	63	MET
2	1E	75	LYS
2	1E	97	TRP
2	1E	104	ASN

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Mol	Chain	Res	Type
2	1E	108	ILE
2	1E	111	ARG
2	1E	128	GLU
2	1E	139	LYS
2	1E	145	LEU
2	1E	153	ARG
2	1E	155	LEU
2	1E	163	PHE
2	1E	168	THR
2	1E	170	GLU
2	1E	172	ILE
2	1E	185	ILE
2	1E	187	LEU
2	1E	191	ASP
2	1E	195	ASP
2	1E	208	ILE
2	1E	210	SER
2	1E	214	ILE
2	1E	215	LEU
2	1E	216	SER
2	1E	220	ASP
2	1E	226	ARG
2	1E	230	VAL
3	2E	3	ASN
3	2E	8	ILE
3	2E	30	ARG
3	2E	34	LEU
3	2E	42	LEU
3	2E	46	GLU
3	2E	52	LEU
3	2E	62	ASP
3	2E	76	VAL
3	2E	95	THR
3	2E	102	ASN
3	2E	131	ARG
3	2E	136	GLN
3	2E	143	GLU
3	2E	154	SER
3	2E	164	ARG
3	2E	165	THR
3	2E	175	LEU
3	2E	184	TYR

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Mol	Chain	Res	Type
3	2E	193	TYR
3	2E	196	LEU
3	2E	202	ILE
3	2E	206	GLU
4	3E	3	ARG
4	3E	9	CYS
4	3E	10	ARG
4	3E	30	LYS
4	3E	33	MET
4	3E	35	ARG
4	3E	58	LEU
4	3E	66	ARG
4	3E	78	LEU
4	3E	83	SER
4	3E	89	THR
4	3E	92	VAL
4	3E	96	LEU
4	3E	122	ARG
4	3E	127	THR
4	3E	135	LEU
4	3E	137	SER
4	3E	150	GLU
4	3E	156	GLU
4	3E	158	ILE
4	3E	159	ARG
4	3E	165	MET
4	3E	166	LYS
4	3E	188	LEU
4	3E	193	ASP
5	4E	5	ASP
5	4E	10	MET
5	4E	11	ILE
5	4E	12	LEU
5	4E	13	ILE
5	4E	14	ARG
5	4E	19	MET
5	4E	41	VAL
5	4E	50	GLU
5	4E	51	VAL
5	4E	53	LEU
5	4E	55	VAL
5	4E	64	ARG

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Mol	Chain	Res	Type
5	4E	66	MET
5	4E	68	GLU
5	4E	81	GLU
5	4E	87	SER
5	4E	91	LEU
5	4E	121	LYS
5	4E	131	ILE
5	4E	133	TYR
5	4E	144	THR
5	4E	147	ASP
5	4E	153	LYS
6	5E	23	LYS
6	5E	25	ILE
6	5E	39	LYS
6	5E	45	LEU
6	5E	65	VAL
6	5E	75	LEU
6	5E	80	ARG
6	5E	81	ILE
6	5E	86	ARG
6	5E	87	ARG
6	5E	92	LYS
7	6E	12	LEU
7	6E	27	ILE
7	6E	54	THR
7	6E	66	VAL
7	6E	75	VAL
7	6E	90	GLU
7	6E	91	VAL
7	6E	92	SER
7	6E	95	ARG
7	6E	104	LEU
7	6E	109	ASN
7	6E	113	GLU
7	6E	122	HIS
7	6E	155	ARG
7	6E	156	TRP
8	7E	3	THR
8	7E	18	ARG
8	7E	26	VAL
8	7E	60	ARG
8	7E	68	ARG

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Mol	Chain	Res	Type
8	7E	82	HIS
8	7E	85	ARG
8	7E	95	VAL
8	7E	98	LYS
8	7E	112	LEU
8	7E	127	LEU
9	8E	9	ARG
9	8E	47	LEU
9	8E	58	HIS
9	8E	64	THR
9	8E	75	ASP
9	8E	85	LEU
9	8E	92	TYR
9	8E	95	LYS
9	8E	108	VAL
9	8E	112	LYS
9	8E	114	TYR
9	8E	118	LYS
9	8E	126	SER
10	1I	5	ARG
10	1I	6	ILE
10	1I	17	ASP
10	1I	19	SER
10	1I	34	VAL
10	1I	38	ILE
10	1I	56	HIS
10	1I	59	SER
10	1I	62	HIS
10	1I	70	ARG
10	1I	96	ILE
11	2I	14	VAL
11	2I	25	TYR
11	2I	36	ASP
11	2I	91	ARG
11	2I	99	GLN
11	2I	103	LEU
11	2I	109	VAL
11	2I	114	VAL
11	2I	124	LYS
12	3I	24	VAL
12	3I	33	ARG
12	3I	47	LYS

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Mol	Chain	Res	Type
12	3I	52	LEU
12	3I	55	VAL
12	3I	60	LEU
12	3I	62	SER
12	3I	66	VAL
12	3I	78	GLN
12	3I	114	LYS
12	3I	118	SER
13	4I	19	LEU
13	4I	45	VAL
13	4I	50	GLU
13	4I	63	THR
13	4I	64	TRP
13	4I	70	LEU
13	4I	88	ARG
13	4I	102	ARG
13	4I	108	ARG
14	5I	3	ARG
14	5I	9	LYS
14	5I	12	ARG
14	5I	18	VAL
14	5I	22	THR
14	5I	33	VAL
14	5I	44	LEU
14	5I	58	LYS
15	6I	22	THR
15	6I	26	GLU
15	6I	31	LEU
15	6I	38	ARG
15	6I	41	GLU
15	6I	47	LYS
15	6I	87	ILE
16	7I	1	MET
16	7I	2	VAL
16	7I	6	LEU
16	7I	8	ARG
16	7I	11	SER
16	7I	20	VAL
16	7I	21	VAL
16	7I	25	ARG
16	7I	28	ARG
16	7I	40	ASP

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Mol	Chain	Res	Type
16	7I	45	THR
16	7I	55	ARG
16	7I	69	THR
16	7I	71	ARG
17	8I	7	THR
17	8I	14	LYS
17	8I	15	MET
17	8I	23	VAL
17	8I	38	ARG
17	8I	48	GLU
17	8I	52	LYS
17	8I	53	LEU
17	8I	60	ILE
17	8I	68	ARG
17	8I	77	VAL
17	8I	89	LEU
17	8I	97	SER
18	9I	32	ARG
18	9I	39	VAL
18	9I	54	ARG
18	9I	55	ARG
18	9I	82	THR
18	9I	83	GLU
18	9I	87	ARG
19	AI	15	LEU
19	AI	29	ARG
19	AI	31	ILE
19	AI	51	VAL
19	AI	52	TYR
19	AI	58	VAL
19	AI	60	VAL
19	AI	64	GLU
19	AI	67	VAL
20	BI	9	ASN
20	BI	16	HIS
20	BI	26	ASN
20	BI	34	LYS
20	BI	38	LYS
20	BI	54	LYS
20	BI	62	LEU
20	BI	70	SER
20	BI	73	HIS

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Mol	Chain	Res	Type
20	BI	75	ASN
21	1F	8	THR
26	71	10	LEU
26	71	34	THR
26	71	172	HIS
26	71	207	THR
26	71	209	LEU
27	11	3	VAL
27	11	4	LYS
27	11	17	THR
27	11	23	GLU
27	11	25	THR
27	11	28	GLU
27	11	30	GLU
27	11	31	LYS
27	11	38	LYS
27	11	46	GLN
27	11	61	LEU
27	11	64	ILE
27	11	65	ILE
27	11	68	LYS
27	11	73	VAL
27	11	88	ARG
27	11	94	LEU
27	11	95	LEU
27	11	98	VAL
27	11	99	ASP
27	11	105	ILE
27	11	106	ILE
27	11	118	VAL
27	11	126	GLN
27	11	140	THR
27	11	155	LEU
27	11	165	ILE
27	11	171	ASP
27	11	173	VAL
27	11	192	THR
27	11	205	VAL
27	11	212	SER
27	11	217	ARG
27	11	221	VAL
27	11	228	PRO

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Mol	Chain	Res	Type
27	11	229	VAL
27	11	242	ARG
27	11	257	LEU
27	11	262	ARG
27	11	271	ILE
28	21	13	ARG
28	21	23	VAL
28	21	26	ILE
28	21	27	LEU
28	21	34	VAL
28	21	37	ARG
28	21	61	ARG
28	21	64	LYS
28	21	66	HIS
28	21	67	PHE
28	21	75	VAL
28	21	80	GLU
28	21	82	ARG
28	21	93	VAL
28	21	111	ARG
28	21	117	MET
28	21	119	ARG
28	21	144	ARG
28	21	146	THR
28	21	154	LYS
28	21	175	VAL
28	21	178	GLU
28	21	196	VAL
28	21	197	ILE
28	21	202	LYS
29	31	7	TYR
29	31	8	GLN
29	31	9	ILE
29	31	13	SER
29	31	24	LEU
29	31	28	ILE
29	31	33	LEU
29	31	41	LEU
29	31	57	VAL
29	31	64	ILE
29	31	68	LYS
29	31	70	THR

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Mol	Chain	Res	Type
29	31	74	ARG
29	31	77	ASP
29	31	82	ILE
29	31	89	VAL
29	31	106	ARG
29	31	117	ARG
29	31	127	GLU
29	31	136	THR
29	31	158	THR
29	31	170	LEU
29	31	174	VAL
29	31	175	THR
29	31	181	LEU
29	31	183	VAL
29	31	189	THR
29	31	201	VAL
30	41	33	ARG
30	41	45	GLU
30	41	47	LYS
30	41	49	ASP
30	41	52	ILE
30	41	67	LYS
30	41	70	VAL
30	41	78	SER
30	41	81	LYS
30	41	82	LEU
30	41	88	ILE
30	41	90	LEU
30	41	94	LEU
30	41	96	ARG
30	41	116	ASP
30	41	118	ARG
30	41	121	ASN
30	41	128	ARG
30	41	130	ASN
30	41	140	ILE
30	41	153	ARG
30	41	155	MET
30	41	162	THR
31	51	2	SER
31	51	4	ILE
31	51	7	LEU

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Mol	Chain	Res	Type
31	51	11	VAL
31	51	13	LYS
31	51	24	VAL
31	51	26	VAL
31	51	40	GLU
31	51	43	VAL
31	51	45	VAL
31	51	47	GLU
31	51	49	VAL
31	51	50	VAL
31	51	53	GLU
31	51	68	THR
31	51	77	LYS
31	51	80	SER
31	51	81	GLU
31	51	87	LEU
31	51	95	ARG
31	51	104	GLU
31	51	129	THR
31	51	131	VAL
31	51	132	ARG
31	51	139	GLN
31	51	151	ILE
31	51	153	LYS
31	51	170	ARG
32	61	3	VAL
32	61	25	TYR
32	61	37	VAL
32	61	40	THR
32	61	41	GLU
32	61	64	GLU
32	61	67	ARG
32	61	70	GLU
32	61	81	VAL
32	61	86	THR
32	61	92	VAL
32	61	116	LEU
32	61	121	LYS
32	61	122	GLU
32	61	131	LYS
32	61	135	GLU
32	61	142	VAL

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Mol	Chain	Res	Type
33	58	1	MET
33	58	10	GLU
33	58	12	ARG
33	58	15	LEU
33	58	32	THR
33	58	34	LEU
33	58	35	ARG
33	58	37	LYS
33	58	38	HIS
33	58	43	THR
33	58	48	MET
33	58	58	ASP
33	58	60	ILE
33	58	87	LEU
33	58	90	MET
33	58	99	LEU
33	58	118	LYS
33	58	120	LEU
33	58	128	HIS
33	58	130	HIS
33	58	131	GLN
33	58	134	ARG
33	58	137	LYS
34	68	5	GLN
34	68	22	ILE
34	68	24	VAL
34	68	32	TYR
34	68	35	VAL
34	68	38	VAL
34	68	42	SER
34	68	53	LYS
34	68	66	LYS
34	68	108	GLU
34	68	115	VAL
34	68	116	SER
34	68	119	PRO
35	78	1	MET
35	78	4	SER
35	78	6	LEU
35	78	10	PRO
35	78	18	ARG
35	78	19	VAL

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Mol	Chain	Res	Type
35	78	21	ARG
35	78	27	HIS
35	78	30	THR
35	78	36	LYS
35	78	41	ARG
35	78	45	LEU
35	78	46	LYS
35	78	56	SER
35	78	57	THR
35	78	59	LEU
35	78	62	LEU
35	78	75	ILE
35	78	81	GLN
35	78	85	LEU
35	78	88	LEU
35	78	96	THR
35	78	99	LEU
35	78	100	LEU
35	78	101	VAL
35	78	105	LEU
35	78	106	LEU
35	78	107	LYS
35	78	112	LEU
35	78	114	ILE
35	78	115	LEU
35	78	126	VAL
35	78	132	LYS
35	78	138	LEU
35	78	144	GLU
35	78	147	LEU
36	88	5	ARG
36	88	6	ARG
36	88	7	MET
36	88	10	ARG
36	88	16	ARG
36	88	25	ASP
36	88	26	TYR
36	88	45	GLN
36	88	78	PRO
36	88	79	LEU
36	88	82	ARG
36	88	85	LYS

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Mol	Chain	Res	Type
36	88	89	ASN
36	88	103	MET
36	88	110	THR
36	88	112	GLU
36	88	130	LYS
36	88	139	GLU
37	98	18	LEU
37	98	28	LEU
37	98	29	LEU
37	98	36	THR
37	98	44	LEU
37	98	45	ARG
37	98	59	ASP
37	98	65	LEU
37	98	67	LEU
37	98	73	VAL
37	98	74	LYS
37	98	75	LEU
37	98	78	LYS
37	98	79	LEU
37	98	97	VAL
37	98	105	ARG
38	A8	8	GLU
38	A8	14	VAL
38	A8	15	ARG
38	A8	20	ARG
38	A8	24	LEU
38	A8	27	SER
38	A8	30	ARG
38	A8	35	ILE
38	A8	36	TYR
38	A8	43	GLU
38	A8	46	VAL
38	A8	49	VAL
38	A8	52	SER
38	A8	53	SER
38	A8	57	LYS
38	A8	58	LEU
38	A8	69	VAL
38	A8	83	LYS
38	A8	89	ARG
38	A8	98	VAL

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Mol	Chain	Res	Type
38	A8	107	GLU
38	A8	111	GLU
39	B8	1	MET
39	B8	6	LEU
39	B8	7	ILE
39	B8	12	SER
39	B8	15	VAL
39	B8	21	GLU
39	B8	26	ASP
39	B8	27	THR
39	B8	38	ASN
39	B8	49	VAL
39	B8	50	ILE
39	B8	58	ASN
39	B8	62	THR
39	B8	64	ARG
39	B8	65	LYS
39	B8	74	ARG
39	B8	85	LYS
39	B8	86	ILE
39	B8	87	ASP
39	B8	88	ILE
39	B8	96	ARG
39	B8	98	LYS
39	B8	100	TYR
39	B8	105	LEU
39	B8	106	SER
39	B8	118	ARG
39	B8	125	ARG
39	B8	136	GLN
40	C8	5	LYS
40	C8	27	LEU
40	C8	52	ARG
40	C8	56	ASP
40	C8	70	ARG
40	C8	74	LEU
40	C8	75	ASN
40	C8	90	VAL
40	C8	92	ARG
40	C8	95	LEU
40	C8	98	LEU
40	C8	111	GLU

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Mol	Chain	Res	Type
40	C8	112	ARG
41	D8	5	VAL
41	D8	7	THR
41	D8	18	LEU
41	D8	22	VAL
41	D8	28	GLU
41	D8	35	LEU
41	D8	37	VAL
41	D8	39	LEU
41	D8	40	LEU
41	D8	45	THR
41	D8	47	VAL
41	D8	49	THR
41	D8	50	PRO
41	D8	57	VAL
41	D8	58	VAL
41	D8	70	ILE
41	D8	72	VAL
41	D8	73	SER
41	D8	76	LYS
41	D8	82	ARG
41	D8	88	ARG
41	D8	91	TYR
41	D8	95	LEU
41	D8	98	GLU
42	E8	1	MET
42	E8	11	ARG
42	E8	17	VAL
42	E8	20	VAL
42	E8	39	THR
42	E8	51	LEU
42	E8	67	ASP
42	E8	69	LEU
42	E8	70	TYR
42	E8	76	VAL
42	E8	78	GLU
42	E8	86	LEU
42	E8	88	ARG
42	E8	92	ARG
42	E8	95	ILE
42	E8	96	ILE
42	E8	97	LYS

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Mol	Chain	Res	Type
42	E8	100	THR
42	E8	104	THR
42	E8	106	ILE
42	E8	107	LEU
43	F8	3	THR
43	F8	23	GLU
43	F8	27	THR
43	F8	30	VAL
43	F8	35	THR
43	F8	53	LYS
43	F8	54	VAL
43	F8	65	ARG
43	F8	68	ARG
43	F8	78	LYS
43	F8	80	ILE
43	F8	83	VAL
43	F8	92	LEU
43	F8	95	LEU
44	G8	4	LYS
44	G8	5	MET
44	G8	6	HIS
44	G8	24	VAL
44	G8	31	LEU
44	G8	33	LYS
44	G8	38	ILE
44	G8	42	VAL
44	G8	44	ILE
44	G8	51	VAL
44	G8	54	LYS
44	G8	57	GLN
44	G8	64	GLU
44	G8	67	LEU
44	G8	70	SER
44	G8	84	ARG
44	G8	85	VAL
44	G8	86	ARG
44	G8	99	CYS
44	G8	106	LEU
45	H8	4	ARG
45	H8	6	LYS
45	H8	16	SER
45	H8	19	ARG

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Mol	Chain	Res	Type
45	H8	24	LEU
45	H8	33	LEU
45	H8	35	ARG
45	H8	46	LYS
45	H8	47	VAL
45	H8	56	VAL
45	H8	59	LEU
45	H8	61	LEU
45	H8	71	VAL
45	H8	72	ARG
45	H8	74	VAL
45	H8	76	LEU
45	H8	77	ASP
45	H8	78	LYS
45	H8	81	ARG
45	H8	91	LEU
45	H8	97	GLU
45	H8	105	VAL
45	H8	107	THR
45	H8	111	VAL
45	H8	116	VAL
45	H8	120	ILE
45	H8	121	HIS
45	H8	132	ASN
45	H8	140	ASP
45	H8	142	SER
45	H8	154	ASP
45	H8	158	PRO
45	H8	163	LEU
45	H8	165	VAL
45	H8	168	GLU
45	H8	169	GLU
46	I8	10	THR
46	I8	11	ARG
46	I8	14	ARG
46	I8	20	ARG
46	I8	36	ILE
46	I8	41	ARG
46	I8	55	ARG
46	I8	57	PHE
46	I8	64	ASP
46	I8	66	VAL

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Mol	Chain	Res	Type
46	I8	80	HIS
47	J8	30	VAL
47	J8	40	ARG
47	J8	41	ARG
47	J8	53	VAL
47	J8	58	ILE
47	J8	76	ARG
47	J8	78	LYS
47	J8	80	LEU
47	J8	81	LYS
47	J8	82	LEU
47	J8	83	GLU
47	J8	85	LEU
47	J8	86	SER
47	J8	90	ILE
47	J8	91	LYS
47	J8	93	GLU
47	J8	94	LEU
48	K8	4	SER
48	K8	5	GLU
48	K8	14	ARG
48	K8	16	LEU
48	K8	17	SER
48	K8	24	LEU
48	K8	30	ARG
48	K8	32	LEU
48	K8	35	LEU
48	K8	44	LEU
48	K8	45	SER
48	K8	47	ASN
48	K8	48	HIS
48	K8	50	ILE
48	K8	53	LEU
48	K8	64	LEU
49	L8	8	LEU
49	L8	10	LYS
49	L8	11	SER
49	L8	17	LYS
49	L8	23	LEU
49	L8	26	LEU
49	L8	30	ARG
49	L8	33	GLN

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Mol	Chain	Res	Type
49	L8	36	VAL
49	L8	37	LEU
49	L8	38	GLU
49	L8	40	THR
49	L8	53	LEU
49	L8	56	VAL
49	L8	58	VAL
49	L8	59	VAL
50	M8	10	VAL
50	M8	32	TYR
50	M8	43	TYR
50	M8	48	ARG
50	M8	51	ASP
50	M8	53	GLU
50	M8	55	ARG
50	M8	57	GLU
50	M8	60	GLN
50	M8	61	ARG
51	N8	5	PRO
51	N8	6	VAL
51	N8	11	THR
51	N8	16	ARG
51	N8	26	THR
51	N8	29	THR
51	N8	33	CYS
51	N8	40	LYS
51	N8	44	THR
51	N8	51	TYR
51	N8	52	TYR
51	N8	55	ARG
51	N8	56	LYS
52	P8	4	THR
52	P8	8	ASN
52	P8	14	LYS
52	P8	24	THR
52	P8	29	LYS
52	P8	43	THR
53	Q8	4	MET
53	Q8	11	LYS
53	Q8	13	ARG
53	Q8	19	SER
53	Q8	22	VAL

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Mol	Chain	Res	Type
53	Q8	26	LYS
53	Q8	32	LEU
53	Q8	33	ASN
53	Q8	40	GLU
53	Q8	56	GLU
53	Q8	57	ARG
53	Q8	59	LYS
53	Q8	62	LEU
2	12	6	THR
2	12	8	LYS
2	12	19	HIS
2	12	24	TRP
2	12	44	LEU
2	12	47	THR
2	12	58	ILE
2	12	67	THR
2	12	69	LEU
2	12	75	LYS
2	12	87	ARG
2	12	90	MET
2	12	111	ARG
2	12	121	LEU
2	12	140	HIS
2	12	144	ARG
2	12	150	SER
2	12	164	VAL
2	12	176	GLU
2	12	178	ARG
2	12	185	ILE
2	12	187	LEU
2	12	191	ASP
2	12	192	SER
2	12	196	LEU
2	12	200	ILE
2	12	205	ASP
2	12	212	GLN
2	12	215	LEU
2	12	217	ARG
2	12	223	ILE
2	12	230	VAL
2	12	233	SER
2	12	235	SER

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Mol	Chain	Res	Type
2	12	238	LEU
3	22	3	ASN
3	22	4	LYS
3	22	12	LEU
3	22	14	ILE
3	22	15	THR
3	22	18	TRP
3	22	27	LYS
3	22	29	TYR
3	22	34	LEU
3	22	42	LEU
3	22	47	LEU
3	22	59	ARG
3	22	76	VAL
3	22	79	ARG
3	22	84	ILE
3	22	88	ARG
3	22	89	GLU
3	22	94	LEU
3	22	97	LYS
3	22	99	VAL
3	22	102	ASN
3	22	119	ARG
3	22	120	VAL
3	22	153	VAL
3	22	167	TRP
3	22	172	ARG
3	22	188	LEU
3	22	202	ILE
3	22	204	LEU
4	32	3	ARG
4	32	11	LEU
4	32	12	CYS
4	32	18	LYS
4	32	24	GLU
4	32	27	TYR
4	32	30	LYS
4	32	36	ARG
4	32	45	GLN
4	32	49	ARG
4	32	50	ARG
4	32	53	ASP

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Mol	Chain	Res	Type
4	32	58	LEU
4	32	59	ARG
4	32	96	LEU
4	32	98	GLU
4	32	119	GLN
4	32	122	ARG
4	32	127	THR
4	32	134	ASP
4	32	135	LEU
4	32	151	LYS
4	32	154	ASN
4	32	168	ARG
4	32	191	ARG
4	32	192	GLU
4	32	200	GLU
4	32	202	LEU
5	42	13	ILE
5	42	16	THR
5	42	25	ARG
5	42	26	PHE
5	42	33	VAL
5	42	38	GLN
5	42	47	LYS
5	42	71	LEU
5	42	73	ASN
5	42	78	HIS
5	42	79	GLU
5	42	80	ILE
5	42	81	GLU
5	42	90	VAL
5	42	91	LEU
5	42	107	ARG
5	42	112	LEU
5	42	120	THR
5	42	141	GLN
5	42	144	THR
6	52	3	ARG
6	52	7	ASN
6	52	19	LEU
6	52	25	ILE
6	52	40	VAL
6	52	46	ARG

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Mol	Chain	Res	Type
6	52	77	ARG
6	52	80	ARG
6	52	87	ARG
7	62	6	ARG
7	62	8	GLU
7	62	12	LEU
7	62	21	VAL
7	62	24	THR
7	62	45	ASP
7	62	54	THR
7	62	73	MET
7	62	75	VAL
7	62	89	MET
7	62	94	ARG
7	62	101	LEU
7	62	114	ARG
7	62	118	VAL
7	62	124	LEU
7	62	155	ARG
8	72	1	MET
8	72	23	SER
8	72	25	ASP
8	72	29	SER
8	72	33	GLU
8	72	39	LEU
8	72	49	GLU
8	72	56	LYS
8	72	82	HIS
8	72	91	ARG
8	72	92	ARG
8	72	97	VAL
8	72	102	ARG
8	72	111	ILE
8	72	112	LEU
8	72	115	SER
9	82	2	GLU
9	82	4	TYR
9	82	7	THR
9	82	9	ARG
9	82	10	ARG
9	82	37	PHE
9	82	65	VAL

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Mol	Chain	Res	Type
9	82	77	ILE
9	82	79	LEU
9	82	81	ILE
9	82	89	ASN
9	82	91	ASP
9	82	92	TYR
9	82	95	LYS
9	82	104	ARG
9	82	118	LYS
10	1A	22	LYS
10	1A	29	ARG
10	1A	33	GLN
10	1A	40	LEU
10	1A	59	SER
10	1A	62	HIS
10	1A	66	ARG
10	1A	79	ARG
10	1A	92	THR
10	1A	95	GLU
11	2A	14	VAL
11	2A	18	ARG
11	2A	24	SER
11	2A	48	ILE
11	2A	70	LYS
11	2A	93	GLN
11	2A	103	LEU
11	2A	104	GLN
11	2A	109	VAL
11	2A	114	VAL
11	2A	129	SER
12	3A	20	LYS
12	3A	24	VAL
12	3A	27	LEU
12	3A	33	ARG
12	3A	34	ARG
12	3A	41	ARG
12	3A	54	LYS
12	3A	57	LYS
12	3A	64	TYR
12	3A	83	VAL
12	3A	84	LEU
12	3A	92	ASP

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Mol	Chain	Res	Type
12	3A	111	LYS
12	3A	118	SER
13	4A	3	ARG
13	4A	7	VAL
13	4A	12	ASN
13	4A	23	TYR
13	4A	47	ASP
13	4A	48	LEU
13	4A	77	ASN
13	4A	79	LYS
13	4A	83	ASP
13	4A	88	ARG
13	4A	94	ARG
13	4A	101	GLN
13	4A	103	THR
13	4A	108	ARG
13	4A	109	THR
14	5A	8	GLU
14	5A	16	PHE
14	5A	29	ARG
14	5A	33	VAL
14	5A	44	LEU
14	5A	57	ARG
15	6A	3	ILE
15	6A	17	ARG
15	6A	39	LEU
15	6A	40	SER
15	6A	82	ILE
15	6A	84	LYS
15	6A	88	ARG
16	7A	1	MET
16	7A	2	VAL
16	7A	5	ARG
16	7A	6	LEU
16	7A	11	SER
16	7A	20	VAL
16	7A	21	VAL
16	7A	45	THR
16	7A	53	VAL
16	7A	55	ARG
16	7A	67	THR
17	8A	6	LEU

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Mol	Chain	Res	Type
17	8A	16	GLN
17	8A	48	GLU
17	8A	52	LYS
17	8A	57	VAL
17	8A	63	ARG
17	8A	68	ARG
17	8A	74	LEU
17	8A	76	LEU
17	8A	84	LEU
17	8A	85	VAL
18	9A	26	LEU
18	9A	31	LEU
18	9A	32	ARG
18	9A	42	ARG
18	9A	65	ILE
18	9A	82	THR
18	9A	84	LYS
19	AA	7	LYS
19	AA	9	VAL
19	AA	37	ARG
19	AA	40	ILE
19	AA	43	GLU
19	AA	83	HIS
20	BA	14	LYS
20	BA	37	SER
20	BA	56	MET
20	BA	72	LEU
20	BA	75	ASN
20	BA	80	ARG
20	BA	83	ARG
20	BA	84	LEU
20	BA	85	MET
21	1B	22	ARG
26	79	10	LEU
26	79	196	LEU
27	19	27	THR
27	19	30	GLU
27	19	33	LEU
27	19	43	ARG
27	19	49	ILE
27	19	61	LEU
27	19	64	ILE

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Mol	Chain	Res	Type
27	19	65	ILE
27	19	68	LYS
27	19	88	ARG
27	19	94	LEU
27	19	98	VAL
27	19	99	ASP
27	19	103	ARG
27	19	105	ILE
27	19	109	ASP
27	19	118	VAL
27	19	136	ILE
27	19	138	VAL
27	19	141	VAL
27	19	154	LYS
27	19	155	LEU
27	19	166	GLN
27	19	182	LEU
27	19	192	THR
27	19	193	VAL
27	19	200	ASP
27	19	211	ARG
27	19	212	SER
27	19	213	ARG
27	19	239	ARG
27	19	242	ARG
27	19	244	ARG
27	19	255	LYS
27	19	257	LEU
27	19	262	ARG
27	19	263	ARG
27	19	271	ILE
28	29	21	VAL
28	29	41	LYS
28	29	48	GLN
28	29	51	PHE
28	29	63	LEU
28	29	69	LYS
28	29	76	ARG
28	29	78	LEU
28	29	82	ARG
28	29	87	GLU
28	29	89	ASP

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Mol	Chain	Res	Type
28	29	91	VAL
28	29	93	VAL
28	29	116	VAL
28	29	119	ARG
28	29	141	ILE
28	29	144	ARG
28	29	154	LYS
28	29	171	GLU
28	29	175	VAL
28	29	197	ILE
28	29	200	GLU
28	29	201	THR
28	29	203	LYS
29	39	1	MET
29	39	2	LYS
29	39	4	VAL
29	39	6	VAL
29	39	8	GLN
29	39	11	VAL
29	39	19	GLU
29	39	20	LEU
29	39	23	ASP
29	39	41	LEU
29	39	44	ARG
29	39	50	SER
29	39	62	ARG
29	39	63	LYS
29	39	68	LYS
29	39	70	THR
29	39	74	ARG
29	39	82	ILE
29	39	83	PHE
29	39	88	VAL
29	39	108	LYS
29	39	110	LEU
29	39	151	SER
29	39	158	THR
29	39	164	ARG
29	39	175	THR
29	39	181	LEU
29	39	183	VAL
29	39	192	LEU

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Mol	Chain	Res	Type
29	39	196	LEU
29	39	197	ASP
29	39	200	GLU
29	39	205	ARG
30	49	3	LEU
30	49	26	GLN
30	49	39	ILE
30	49	40	ASN
30	49	43	LEU
30	49	45	GLU
30	49	47	LYS
30	49	48	GLU
30	49	60	LEU
30	49	67	LYS
30	49	71	THR
30	49	80	PHE
30	49	81	LYS
30	49	97	ASP
30	49	116	ASP
30	49	133	LEU
30	49	146	TYR
30	49	148	MET
30	49	159	VAL
30	49	173	LEU
31	59	4	ILE
31	59	6	ARG
31	59	9	ILE
31	59	11	VAL
31	59	30	LYS
31	59	32	GLU
31	59	41	MET
31	59	47	GLU
31	59	49	VAL
31	59	83	TYR
31	59	88	LEU
31	59	89	ILE
31	59	95	ARG
31	59	99	VAL
31	59	103	LEU
31	59	105	LEU
31	59	107	VAL
31	59	123	PHE

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Mol	Chain	Res	Type
31	59	127	GLU
31	59	129	THR
31	59	136	ILE
31	59	157	TYR
31	59	164	TYR
31	59	171	LEU
32	69	4	ILE
32	69	18	VAL
32	69	19	VAL
32	69	40	THR
32	69	44	LEU
32	69	50	ARG
32	69	52	ARG
32	69	64	GLU
32	69	67	ARG
32	69	76	THR
32	69	77	LEU
32	69	81	VAL
32	69	86	THR
32	69	87	LYS
32	69	92	VAL
32	69	101	LEU
32	69	103	ARG
32	69	104	GLN
32	69	105	HIS
32	69	109	ILE
32	69	114	LEU
32	69	116	LEU
32	69	117	GLU
32	69	128	LEU
32	69	130	TYR
32	69	133	HIS
32	69	136	VAL
32	69	139	GLN
32	69	140	LEU
32	69	143	SER
32	69	145	VAL
33	15	1	MET
33	15	7	LYS
33	15	9	VAL
33	15	12	ARG
33	15	22	THR

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Mol	Chain	Res	Type
33	15	28	THR
33	15	32	THR
33	15	33	LEU
33	15	34	LEU
33	15	43	THR
33	15	48	MET
33	15	63	THR
33	15	87	LEU
33	15	93	THR
33	15	94	HIS
33	15	99	LEU
33	15	104	LYS
33	15	112	LEU
33	15	116	LEU
33	15	123	TYR
33	15	130	HIS
34	25	1	MET
34	25	5	GLN
34	25	8	LEU
34	25	10	VAL
34	25	24	VAL
34	25	29	ASN
34	25	32	TYR
34	25	35	VAL
34	25	52	VAL
34	25	66	LYS
34	25	69	ILE
34	25	71	ARG
34	25	73	ASP
34	25	78	ARG
34	25	87	ILE
34	25	94	ARG
34	25	97	ARG
34	25	108	GLU
34	25	114	ILE
34	25	115	VAL
34	25	117	LEU
35	35	2	LYS
35	35	5	ASP
35	35	7	ARG
35	35	15	ARG
35	35	18	ARG

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Mol	Chain	Res	Type
35	35	30	THR
35	35	32	THR
35	35	41	ARG
35	35	45	LEU
35	35	46	LYS
35	35	55	ARG
35	35	61	ARG
35	35	65	ARG
35	35	70	GLN
35	35	79	ARG
35	35	83	VAL
35	35	85	LEU
35	35	90	ARG
35	35	91	PHE
35	35	95	VAL
35	35	98	GLU
35	35	100	LEU
35	35	105	LEU
35	35	111	ARG
35	35	114	ILE
35	35	123	LEU
35	35	125	VAL
35	35	133	SER
35	35	138	LEU
35	35	139	LYS
35	35	144	GLU
36	45	3	MET
36	45	10	ARG
36	45	35	VAL
36	45	45	GLN
36	45	60	ARG
36	45	64	ILE
36	45	66	ILE
36	45	83	MET
36	45	103	MET
36	45	109	VAL
36	45	110	THR
36	45	118	LEU
36	45	127	ILE
36	45	131	ILE
36	45	137	TYR
37	55	2	ARG

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Mol	Chain	Res	Type
37	55	6	SER
37	55	8	ARG
37	55	9	LYS
37	55	18	LEU
37	55	23	ASN
37	55	28	LEU
37	55	33	ARG
37	55	35	THR
37	55	37	THR
37	55	44	LEU
37	55	48	VAL
37	55	67	LEU
37	55	75	LEU
37	55	76	VAL
37	55	79	LEU
37	55	81	ASP
37	55	95	THR
37	55	113	LEU
37	55	117	VAL
38	65	3	ARG
38	65	12	PHE
38	65	13	ARG
38	65	14	VAL
38	65	15	ARG
38	65	17	ARG
38	65	18	ILE
38	65	24	LEU
38	65	29	PHE
38	65	36	TYR
38	65	40	ILE
38	65	56	LEU
38	65	57	LYS
38	65	58	LEU
38	65	69	VAL
38	65	71	ARG
38	65	101	LEU
38	65	107	GLU
38	65	110	LEU
39	75	9	LEU
39	75	13	ARG
39	75	15	VAL
39	75	17	THR

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Mol	Chain	Res	Type
39	75	21	GLU
39	75	27	THR
39	75	28	VAL
39	75	30	VAL
39	75	35	LYS
39	75	42	ILE
39	75	49	VAL
39	75	50	ILE
39	75	57	PHE
39	75	59	THR
39	75	62	THR
39	75	67	SER
39	75	74	ARG
39	75	85	LYS
39	75	86	ILE
39	75	91	ARG
39	75	112	ARG
39	75	117	ASP
39	75	125	ARG
39	75	132	LYS
40	85	8	VAL
40	85	20	LEU
40	85	27	LEU
40	85	30	LYS
40	85	31	SER
40	85	34	LYS
40	85	55	ARG
40	85	64	ARG
40	85	74	LEU
40	85	75	ASN
40	85	83	LEU
40	85	92	ARG
40	85	94	ASN
40	85	97	ASP
40	85	100	VAL
41	95	7	THR
41	95	21	ARG
41	95	22	VAL
41	95	26	ASP
41	95	32	THR
41	95	34	GLU
41	95	35	LEU

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Mol	Chain	Res	Type
41	95	37	VAL
41	95	45	THR
41	95	47	VAL
41	95	49	THR
41	95	61	VAL
41	95	62	LEU
41	95	68	LYS
41	95	73	SER
41	95	81	TYR
41	95	84	LYS
41	95	88	ARG
41	95	95	LEU
42	A5	1	MET
42	A5	11	ARG
42	A5	23	LEU
42	A5	51	LEU
42	A5	52	GLU
42	A5	60	ASN
42	A5	65	LEU
42	A5	76	VAL
42	A5	92	ARG
42	A5	94	ASP
42	A5	100	THR
42	A5	107	LEU
42	A5	110	LYS
42	A5	111	HIS
43	B5	9	LEU
43	B5	30	VAL
43	B5	49	VAL
43	B5	53	LYS
43	B5	54	VAL
43	B5	57	LEU
43	B5	60	ARG
43	B5	63	LYS
43	B5	69	TYR
43	B5	80	ILE
43	B5	92	LEU
44	C5	2	ARG
44	C5	6	HIS
44	C5	9	LYS
44	C5	14	LEU
44	C5	23	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
44	C5	29	GLU
44	C5	37	VAL
44	C5	38	ILE
44	C5	39	VAL
44	C5	43	ASN
44	C5	47	LYS
44	C5	50	ARG
44	C5	51	VAL
44	C5	60	PHE
44	C5	61	ILE
44	C5	62	GLU
44	C5	84	ARG
44	C5	86	ARG
44	C5	87	LYS
44	C5	88	LYS
44	C5	98	VAL
44	C5	99	CYS
44	C5	102	CYS
45	D5	2	GLU
45	D5	16	SER
45	D5	24	LEU
45	D5	41	LEU
45	D5	42	VAL
45	D5	45	ASP
45	D5	61	LEU
45	D5	70	LEU
45	D5	71	VAL
45	D5	72	ARG
45	D5	74	VAL
45	D5	76	LEU
45	D5	79	ARG
45	D5	81	ARG
45	D5	107	THR
45	D5	120	ILE
45	D5	123	ASP
45	D5	132	ASN
45	D5	137	ILE
45	D5	138	GLU
45	D5	148	ASP
45	D5	154	ASP
45	D5	161	VAL
45	D5	174	VAL

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Mol	Chain	Res	Type
45	D5	175	VAL
46	E5	9	SER
46	E5	11	ARG
46	E5	12	ASN
46	E5	20	ARG
46	E5	36	ILE
46	E5	43	THR
46	E5	50	ASN
46	E5	51	VAL
46	E5	58	THR
46	E5	63	VAL
46	E5	74	ARG
46	E5	75	LEU
47	F5	23	LYS
47	F5	30	VAL
47	F5	32	LYS
47	F5	38	SER
47	F5	46	LEU
47	F5	52	ARG
47	F5	59	THR
47	F5	67	ILE
47	F5	76	ARG
47	F5	80	LEU
47	F5	81	LYS
47	F5	82	LEU
47	F5	83	GLU
47	F5	91	LYS
47	F5	93	GLU
47	F5	97	LEU
48	G5	5	GLU
48	G5	16	LEU
48	G5	17	SER
48	G5	20	GLU
48	G5	21	LEU
48	G5	24	LEU
48	G5	30	ARG
48	G5	32	LEU
48	G5	50	ILE
48	G5	53	LEU
48	G5	62	THR
49	H5	5	LYS
49	H5	8	LEU

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Mol	Chain	Res	Type
49	H5	9	VAL
49	H5	11	SER
49	H5	17	LYS
49	H5	18	ASP
49	H5	20	LYS
49	H5	35	ARG
49	H5	36	VAL
49	H5	40	THR
49	H5	54	VAL
49	H5	55	ARG
50	I5	2	LYS
50	I5	5	ILE
50	I5	10	VAL
50	I5	14	ILE
50	I5	15	ILE
50	I5	22	ILE
50	I5	31	ILE
50	I5	32	TYR
50	I5	42	PHE
50	I5	43	TYR
50	I5	50	VAL
50	I5	51	ASP
50	I5	53	GLU
50	I5	58	ARG
50	I5	62	ARG
51	J5	12	SER
51	J5	16	ARG
51	J5	23	HIS
51	J5	26	THR
51	J5	29	THR
51	J5	40	LYS
51	J5	48	GLU
51	J5	51	TYR
51	J5	56	LYS
51	J5	59	GLU
52	L5	1	MET
52	L5	4	THR
52	L5	14	LYS
52	L5	24	THR
52	L5	41	ARG
52	L5	46	VAL
52	L5	47	ARG

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Mol	Chain	Res	Type
52	L5	48	LYS
53	M5	6	THR
53	M5	16	ILE
53	M5	22	VAL
53	M5	33	ASN
53	M5	40	GLU
53	M5	50	LEU
53	M5	52	LYS
53	M5	57	ARG
53	M5	59	LYS
53	M5	60	LEU
53	M5	61	LEU
53	M5	63	PRO

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (30) such sidechains are listed below:

Mol	Chain	Res	Type
2	1E	16	HIS
3	2E	6	HIS
13	4I	92	HIS
26	71	17	ASN
26	71	44	HIS
27	11	46	GLN
27	11	143	HIS
32	61	104	GLN
34	68	5	GLN
35	78	27	HIS
35	78	35	HIS
37	98	24	GLN
37	98	31	HIS
39	B8	79	HIS
43	F8	55	ASN
45	H8	32	HIS
45	H8	54	HIS
48	K8	47	ASN
53	Q8	33	ASN
2	12	135	GLN
4	32	201	GLN
7	62	97	GLN
13	4A	92	HIS
15	6A	9	GLN
27	19	58	HIS

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Mol	Chain	Res	Type
36	45	45	GLN
37	55	61	HIS
48	G5	38	GLN
50	I5	6	HIS
50	I5	60	GLN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	13	1496/1522 (98%)	326 (21%)	24 (1%)
22	2K	78/85 (91%)	28 (35%)	5 (6%)
22	2L	73/85 (85%)	25 (34%)	7 (9%)
22	3K	82/85 (96%)	22 (26%)	3 (3%)
22	3L	82/85 (96%)	22 (26%)	3 (3%)
23	4K	11/27 (40%)	3 (27%)	1 (9%)
23	4L	5/27 (18%)	2 (40%)	0
24	14	2907/2917 (99%)	652 (22%)	38 (1%)
24	1H	2910/2917 (99%)	677 (23%)	45 (1%)
25	16	121/122 (99%)	26 (21%)	0
25	1J	121/122 (99%)	29 (23%)	1 (0%)
54	1G	1503/1522 (98%)	322 (21%)	33 (2%)
All	All	9389/9516 (98%)	2134 (22%)	160 (1%)

All (2134) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	13	6	G
1	13	10	A
1	13	22	G
1	13	25	C
1	13	32	A
1	13	39	G
1	13	47	C
1	13	48	C
1	13	50	A
1	13	51	A
1	13	61	G
1	13	65	U
1	13	66	G
1	13	76	G
1	13	78	G

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Mol	Chain	Res	Type
1	13	79	G
1	13	80	G
1	13	89	U
1	13	91	C
1	13	95	G
1	13	101	A
1	13	108	G
1	13	116	A
1	13	121	C
1	13	131	C
1	13	144	G
1	13	156	G
1	13	160	A
1	13	163	C
1	13	169	C
1	13	173	U
1	13	174	C
1	13	182	U
1	13	183	G
1	13	186(A)	C
1	13	188	U
1	13	189	U
1	13	190	G
1	13	192	U
1	13	195	A
1	13	208	U
1	13	209	U
1	13	210	U
1	13	216	G
1	13	226	G
1	13	243	A
1	13	244	U
1	13	245	C
1	13	247	G
1	13	251	G
1	13	266	G
1	13	267	C
1	13	281	G
1	13	289	G
1	13	316	G
1	13	318	G
1	13	321	A

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Mol	Chain	Res	Type
1	13	324	G
1	13	328	C
1	13	329	A
1	13	330	C
1	13	332	G
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	367	U
1	13	372	C
1	13	373	A
1	13	382	A
1	13	383	A
1	13	388	G
1	13	390	C
1	13	397	A
1	13	398	C
1	13	406	G
1	13	412	A
1	13	413	G
1	13	419	C
1	13	421	U
1	13	422	C
1	13	423	G
1	13	429	U
1	13	430	A
1	13	439	A
1	13	442	C
1	13	466	C
1	13	467	G
1	13	477	G
1	13	479	C
1	13	484	G
1	13	485	G
1	13	487	A
1	13	495	A
1	13	496	A
1	13	497	U
1	13	498	A

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Mol	Chain	Res	Type
1	13	505	G
1	13	509	A
1	13	510	A
1	13	511	C
1	13	513	C
1	13	518	C
1	13	521	G
1	13	527	G
1	13	531	U
1	13	533	A
1	13	536	C
1	13	545	C
1	13	547	A
1	13	559	A
1	13	560	U
1	13	561	U
1	13	564	C
1	13	572	A
1	13	573	A
1	13	576	G
1	13	582	U
1	13	596	C
1	13	599	C
1	13	607	A
1	13	618	C
1	13	620	C
1	13	630	G
1	13	631	G
1	13	632	A
1	13	633	G
1	13	642	A
1	13	651	C
1	13	652	U
1	13	653	A
1	13	659	U
1	13	671	G
1	13	686	U
1	13	687	A
1	13	688	G
1	13	702	A
1	13	703	G
1	13	704	A

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Mol	Chain	Res	Type
1	13	711	G
1	13	723	U
1	13	724	G
1	13	731	G
1	13	740	U
1	13	748	C
1	13	749	C
1	13	753	A
1	13	755	G
1	13	759	A
1	13	774	G
1	13	776	G
1	13	777	A
1	13	790	A
1	13	791	G
1	13	792	A
1	13	793	U
1	13	794	A
1	13	796	C
1	13	800	G
1	13	802	A
1	13	813	U
1	13	817	C
1	13	818	G
1	13	821	G
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	857	C
1	13	864	A
1	13	866	C
1	13	869	G
1	13	870	U
1	13	874	G
1	13	876	G
1	13	902	G
1	13	914	A
1	13	916	G
1	13	926	G

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Mol	Chain	Res	Type
1	13	927	G
1	13	933	G
1	13	934	C
1	13	935	A
1	13	936	C
1	13	941	G
1	13	942	G
1	13	948	C
1	13	958	A
1	13	960	U
1	13	961	U
1	13	966	G
1	13	968	A
1	13	969	A
1	13	972	C
1	13	974	A
1	13	975	A
1	13	976	G
1	13	977	A
1	13	982	U
1	13	991	U
1	13	992	U
1	13	993	G
1	13	1002	G
1	13	1004	A
1	13	1006	C
1	13	1009	G
1	13	1011	G
1	13	1017	G
1	13	1020	U
1	13	1021	G
1	13	1024	G
1	13	1025	U
1	13	1026	G
1	13	1027	C
1	13	1028	C
1	13	1029	G
1	13	1030	C
1	13	1032(A)	G
1	13	1040	U
1	13	1042	G
1	13	1046	A

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Mol	Chain	Res	Type
1	13	1054	C
1	13	1065	U
1	13	1066	C
1	13	1081	G
1	13	1088	G
1	13	1094	G
1	13	1095	U
1	13	1101	A
1	13	1103	C
1	13	1108	G
1	13	1109	C
1	13	1124	G
1	13	1125	U
1	13	1126	U
1	13	1127	G
1	13	1131	G
1	13	1132	C
1	13	1136	U
1	13	1137	C
1	13	1138	G
1	13	1139	G
1	13	1146	A
1	13	1151	A
1	13	1157	A
1	13	1158	C
1	13	1159	U
1	13	1160	G
1	13	1177	G
1	13	1178	G
1	13	1181	G
1	13	1182	G
1	13	1183	A
1	13	1184	G
1	13	1188	A
1	13	1193	G
1	13	1195	C
1	13	1196	U
1	13	1197	G
1	13	1201	A
1	13	1211	U
1	13	1212	U
1	13	1213	A

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Mol	Chain	Res	Type
1	13	1214	C
1	13	1225	A
1	13	1227	A
1	13	1238	A
1	13	1240	U
1	13	1248	A
1	13	1256	A
1	13	1257	U
1	13	1258	G
1	13	1260	C
1	13	1262	C
1	13	1270	C
1	13	1272	G
1	13	1278	U
1	13	1279	A
1	13	1280	A
1	13	1282	C
1	13	1286	A
1	13	1287	A
1	13	1299	A
1	13	1300	G
1	13	1302	U
1	13	1305	G
1	13	1319	A
1	13	1320	C
1	13	1322	C
1	13	1331	G
1	13	1335	C
1	13	1336	C
1	13	1337	G
1	13	1346	A
1	13	1347	G
1	13	1350	A
1	13	1353	G
1	13	1361	G
1	13	1364	U
1	13	1370	G
1	13	1379	G
1	13	1419	G
1	13	1422	G
1	13	1435	G
1	13	1442	G

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Mol	Chain	Res	Type
1	13	1443	G
1	13	1446	A
1	13	1451	A
1	13	1452	C
1	13	1453	G
1	13	1454	G
1	13	1469	G
1	13	1487	G
1	13	1497	G
1	13	1499	A
1	13	1503	A
1	13	1504	G
1	13	1506	U
1	13	1517	G
1	13	1529	G
1	13	1530	G
1	13	1533	C
22	2K	6	G
22	2K	8	4SU
22	2K	9	U
22	2K	14	A
22	2K	15	G
22	2K	18	G
22	2K	19	C
22	2K	20	C
22	2K	21	A
22	2K	23	A
22	2K	24	G
22	2K	27	A
22	2K	28	G
22	2K	44	C
22	2K	45	C
22	2K	47	U
22	2K	48	C
22	2K	49	A
22	2K	54	C
22	2K	55	U
22	2K	60	A
22	2K	61	G
22	2K	62	G
22	2K	64	PSU
22	2K	72	U

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Mol	Chain	Res	Type
22	2K	73	U
22	2K	74	C
22	2K	85	A
22	3K	6	G
22	3K	9	U
22	3K	14	A
22	3K	15	G
22	3K	16	C
22	3K	17	OMG
22	3K	18	G
22	3K	19	C
22	3K	20	C
22	3K	21	A
22	3K	22	A
22	3K	32	A
22	3K	36	U
22	3K	46	G
22	3K	48	C
22	3K	51	C
22	3K	52	G
22	3K	56	U
22	3K	62	G
22	3K	64	PSU
22	3K	68	A
22	3K	85	A
23	4K	13	A
23	4K	14	A
23	4K	15	A
24	1H	4	C
24	1H	5	A
24	1H	9	U
24	1H	12	U
24	1H	14	A
24	1H	15	G
24	1H	26	G
24	1H	34	C
24	1H	35	G
24	1H	46	C
24	1H	51	G
24	1H	54	G
24	1H	55	G
24	1H	60	G

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Mol	Chain	Res	Type
24	1H	63	U
24	1H	64	A
24	1H	70	G
24	1H	71	A
24	1H	72	U
24	1H	74	A
24	1H	75	G
24	1H	85	G
24	1H	95	G
24	1H	102	G
24	1H	118	A
24	1H	119	A
24	1H	120	U
24	1H	123	G
24	1H	125	G
24	1H	131	G
24	1H	155	C
24	1H	163	U
24	1H	164	U
24	1H	165	U
24	1H	181	A
24	1H	196	A
24	1H	199	A
24	1H	214	G
24	1H	215	G
24	1H	216	A
24	1H	222	A
24	1H	223	A
24	1H	224	G
24	1H	227	A
24	1H	228	A
24	1H	229	A
24	1H	230	U
24	1H	233	A
24	1H	248	G
24	1H	250	G
24	1H	252	G
24	1H	265	A
24	1H	269	U
24	1H	270(L)	U
24	1H	270(M)	U
24	1H	270(O)	U

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Mol	Chain	Res	Type
24	1H	271(C)	U
24	1H	271	G
24	1H	273(A)	G
24	1H	274	G
24	1H	275	G
24	1H	277	C
24	1H	278	A
24	1H	299	A
24	1H	311	A
24	1H	315	G
24	1H	323	G
24	1H	324	A
24	1H	329	G
24	1H	330	A
24	1H	333	G
24	1H	352	G
24	1H	354	G
24	1H	357	A
24	1H	363	G
24	1H	372	G
24	1H	386	G
24	1H	392	C
24	1H	396	G
24	1H	405	U
24	1H	407	G
24	1H	411	G
24	1H	412	A
24	1H	428	A
24	1H	435	C
24	1H	443	A
24	1H	444	C
24	1H	447	A
24	1H	448	U
24	1H	451	C
24	1H	454	A
24	1H	455	C
24	1H	457	A
24	1H	460	A
24	1H	470	A
24	1H	471	A
24	1H	481	G
24	1H	482	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
24	1H	491	G
24	1H	494	G
24	1H	505	A
24	1H	509	C
24	1H	513	A
24	1H	528	A
24	1H	529	A
24	1H	530	G
24	1H	531	C
24	1H	532	A
24	1H	533	G
24	1H	537	C
24	1H	539	G
24	1H	540	G
24	1H	546	C
24	1H	547	A
24	1H	556	G
24	1H	563	G
24	1H	564	C
24	1H	567	A
24	1H	570	G
24	1H	573	G
24	1H	575	A
24	1H	586	A
24	1H	593	G
24	1H	595	C
24	1H	603	A
24	1H	607	U
24	1H	609(A)	G
24	1H	614	U
24	1H	615	G
24	1H	617	G
24	1H	618	G
24	1H	618(A)	C
24	1H	621	A
24	1H	622	G
24	1H	627	A
24	1H	637	A
24	1H	645	C
24	1H	646	A
24	1H	654(A)	A
24	1H	654(G)	C

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Mol	Chain	Res	Type
24	1H	654(I)	C
24	1H	654(J)	A
24	1H	654(L)	G
24	1H	654(N)	G
24	1H	654(T)	A
24	1H	654(V)	A
24	1H	664	C
24	1H	686	G
24	1H	699	A
24	1H	730	C
24	1H	731	C
24	1H	738	G
24	1H	746	A
24	1H	747	U
24	1H	748	G
24	1H	752	A
24	1H	753	C
24	1H	762	U
24	1H	765	G
24	1H	775	G
24	1H	776	G
24	1H	777	A
24	1H	780	G
24	1H	782	A
24	1H	784	A
24	1H	785	G
24	1H	790	C
24	1H	791	C
24	1H	792	G
24	1H	793	A
24	1H	805	G
24	1H	812	C
24	1H	819	A
24	1H	823	G
24	1H	824	A
24	1H	827	U
24	1H	828	U
24	1H	836	G
24	1H	845	G
24	1H	847	U
24	1H	855	G
24	1H	859	G

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Mol	Chain	Res	Type
24	1H	866	A
24	1H	870	A
24	1H	880	G
24	1H	881	G
24	1H	882	G
24	1H	883	G
24	1H	885	C
24	1H	886	C
24	1H	887	A
24	1H	888	C
24	1H	890	A
24	1H	893	C
24	1H	894	C
24	1H	895	U
24	1H	896	A
24	1H	897	C
24	1H	898	C
24	1H	899	A
24	1H	900	A
24	1H	901	A
24	1H	904	C
24	1H	907	U
24	1H	910	A
24	1H	917	A
24	1H	932	G
24	1H	941	A
24	1H	946	G
24	1H	957	A
24	1H	959	A
24	1H	961	C
24	1H	968	G
24	1H	972	G
24	1H	974	G
24	1H	974(A)	C
24	1H	983	A
24	1H	990	A
24	1H	996	A
24	1H	1002	G
24	1H	1005	C
24	1H	1008	C
24	1H	1011	G
24	1H	1012	U

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Mol	Chain	Res	Type
24	1H	1013	C
24	1H	1017	G
24	1H	1020	A
24	1H	1022	G
24	1H	1023	U
24	1H	1024	G
24	1H	1025	G
24	1H	1026	U
24	1H	1027	A
24	1H	1033	U
24	1H	1045	A
24	1H	1046	A
24	1H	1047	G
24	1H	1051	G
24	1H	1053	C
24	1H	1055	G
24	1H	1056	G
24	1H	1057	A
24	1H	1058	U
24	1H	1059	G
24	1H	1061	U
24	1H	1062	G
24	1H	1065	U
24	1H	1067	A
24	1H	1068	G
24	1H	1070	A
24	1H	1071	G
24	1H	1073	A
24	1H	1074	G
24	1H	1075	C
24	1H	1076	C
24	1H	1077	A
24	1H	1078	U
24	1H	1083	U
24	1H	1087	G
24	1H	1088	A
24	1H	1089	G
24	1H	1090	U
24	1H	1092	C
24	1H	1093	G
24	1H	1095	A
24	1H	1097	U

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Mol	Chain	Res	Type
24	1H	1104	C
24	1H	1106	G
24	1H	1111	A
24	1H	1112	G
24	1H	1121	C
24	1H	1126	A
24	1H	1129	A
24	1H	1130	U
24	1H	1135	C
24	1H	1136	G
24	1H	1139	G
24	1H	1142	U
24	1H	1142(A)	A
24	1H	1148	A
24	1H	1149	G
24	1H	1151	G
24	1H	1155	A
24	1H	1156	A
24	1H	1157	G
24	1H	1164	G
24	1H	1170	G
24	1H	1173	G
24	1H	1174	A
24	1H	1176	G
24	1H	1177	A
24	1H	1178	C
24	1H	1179	C
24	1H	1180	C
24	1H	1187	G
24	1H	1196	C
24	1H	1205	U
24	1H	1220	A
24	1H	1225	C
24	1H	1237	A
24	1H	1244	G
24	1H	1250	G
24	1H	1253	A
24	1H	1256	G
24	1H	1265	A
24	1H	1267	U
24	1H	1271	G
24	1H	1272	A

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Mol	Chain	Res	Type
24	1H	1273	U
24	1H	1287	A
24	1H	1298	C
24	1H	1300	U
24	1H	1301	A
24	1H	1312	U
24	1H	1313	U
24	1H	1314	C
24	1H	1320	C
24	1H	1329	U
24	1H	1338	G
24	1H	1344	G
24	1H	1345	C
24	1H	1348	G
24	1H	1349	A
24	1H	1352	U
24	1H	1359	A
24	1H	1360	A
24	1H	1365	A
24	1H	1368	G
24	1H	1380	G
24	1H	1385	G
24	1H	1388	G
24	1H	1389	G
24	1H	1395	A
24	1H	1411	C
24	1H	1416	G
24	1H	1417	C
24	1H	1420	U
24	1H	1421	G
24	1H	1428	C
24	1H	1430	C
24	1H	1444(A)	A
24	1H	1449	A
24	1H	1455	G
24	1H	1459	G
24	1H	1460	A
24	1H	1461	G
24	1H	1467	C
24	1H	1471	A
24	1H	1483	G
24	1H	1493	C

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Mol	Chain	Res	Type
24	1H	1497	U
24	1H	1507	A
24	1H	1509	C
24	1H	1510	A
24	1H	1511	A
24	1H	1520	U
24	1H	1522	G
24	1H	1523	U
24	1H	1526	G
24	1H	1533	C
24	1H	1534	G
24	1H	1535	U
24	1H	1536	A
24	1H	1537	C
24	1H	1540	G
24	1H	1543	A
24	1H	1544	C
24	1H	1545	A
24	1H	1554	A
24	1H	1558	A
24	1H	1559	G
24	1H	1562	A
24	1H	1564	C
24	1H	1566	A
24	1H	1569	A
24	1H	1578	U
24	1H	1580	A
24	1H	1581	G
24	1H	1582	C
24	1H	1585	C
24	1H	1586	A
24	1H	1608	A
24	1H	1609	A
24	1H	1610	A
24	1H	1616	A
24	1H	1617	C
24	1H	1620	G
24	1H	1634	A
24	1H	1639	U
24	1H	1640	C
24	1H	1644	C
24	1H	1647	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
24	1H	1648	C
24	1H	1651	G
24	1H	1654	A
24	1H	1674	G
24	1H	1677	A
24	1H	1678	G
24	1H	1682	G
24	1H	1684	C
24	1H	1691	C
24	1H	1694	C
24	1H	1695	G
24	1H	1728	G
24	1H	1729	A
24	1H	1730	U
24	1H	1731	G
24	1H	1733	G
24	1H	1742	C
24	1H	1743	G
24	1H	1750	G
24	1H	1756	G
24	1H	1763	G
24	1H	1764	G
24	1H	1773	A
24	1H	1782	C
24	1H	1786	A
24	1H	1791	A
24	1H	1799	G
24	1H	1800	C
24	1H	1801	G
24	1H	1802	A
24	1H	1816	G
24	1H	1819	A
24	1H	1828	G
24	1H	1829	A
24	1H	1839	G
24	1H	1847	A
24	1H	1869	G
24	1H	1870	C
24	1H	1878	G
24	1H	1882	C
24	1H	1889	A
24	1H	1897	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
24	1H	1900	A
24	1H	1906	G
24	1H	1911	U
24	1H	1912	A
24	1H	1913	A
24	1H	1914	C
24	1H	1919	A
24	1H	1920	C
24	1H	1929	G
24	1H	1930	G
24	1H	1936	A
24	1H	1937	A
24	1H	1938	A
24	1H	1951	U
24	1H	1952	A
24	1H	1955	U
24	1H	1963	U
24	1H	1967	C
24	1H	1968	G
24	1H	1969	A
24	1H	1970	A
24	1H	1971	A
24	1H	1972	A
24	1H	1982	C
24	1H	1992	G
24	1H	1993	U
24	1H	2005	A
24	1H	2020	A
24	1H	2023	G
24	1H	2031	A
24	1H	2032	G
24	1H	2033	A
24	1H	2034	U
24	1H	2043	C
24	1H	2051	A
24	1H	2052	G
24	1H	2055	C
24	1H	2056	G
24	1H	2060	A
24	1H	2061	G
24	1H	2063	C
24	1H	2068	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
24	1H	2069	G
24	1H	2099	U
24	1H	2110	G
24	1H	2111	C
24	1H	2112	G
24	1H	2113	U
24	1H	2114	A
24	1H	2115	G
24	1H	2117	A
24	1H	2119	A
24	1H	2126	A
24	1H	2128	C
24	1H	2129	C
24	1H	2131	G
24	1H	2132	U
24	1H	2133	G
24	1H	2135	A
24	1H	2137	C
24	1H	2145	C
24	1H	2147	G
24	1H	2148	G
24	1H	2151	G
24	1H	2157	G
24	1H	2158	A
24	1H	2159	G
24	1H	2160	G
24	1H	2165	G
24	1H	2168	G
24	1H	2170	A
24	1H	2171	A
24	1H	2173	A
24	1H	2190	G
24	1H	2192	G
24	1H	2198	A
24	1H	2209	C
24	1H	2210	G
24	1H	2211	G
24	1H	2212	A
24	1H	2213	U
24	1H	2215	G
24	1H	2225	A
24	1H	2226	C

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Mol	Chain	Res	Type
24	1H	2238	G
24	1H	2239	G
24	1H	2240	C
24	1H	2242	G
24	1H	2253	G
24	1H	2264	C
24	1H	2265	U
24	1H	2267	A
24	1H	2268	A
24	1H	2269	A
24	1H	2271	G
24	1H	2275	C
24	1H	2283	C
24	1H	2287	A
24	1H	2299	G
24	1H	2305	A
24	1H	2307	G
24	1H	2308	G
24	1H	2309	A
24	1H	2311	A
24	1H	2320	A
24	1H	2325	G
24	1H	2327	A
24	1H	2334	G
24	1H	2336	A
24	1H	2343	C
24	1H	2345	G
24	1H	2346	A
24	1H	2347	C
24	1H	2348	U
24	1H	2350	C
24	1H	2355	C
24	1H	2357	U
24	1H	2360	A
24	1H	2361	A
24	1H	2376	A
24	1H	2377	A
24	1H	2383	G
24	1H	2385	C
24	1H	2389	G
24	1H	2392	A
24	1H	2393	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
24	1H	2402	C
24	1H	2403	C
24	1H	2406	U
24	1H	2413	G
24	1H	2414	G
24	1H	2422	A
24	1H	2423	U
24	1H	2424	C
24	1H	2425	A
24	1H	2426	A
24	1H	2428	G
24	1H	2429	G
24	1H	2430	A
24	1H	2434	A
24	1H	2435	A
24	1H	2439	A
24	1H	2440	C
24	1H	2441	C
24	1H	2445	G
24	1H	2447	G
24	1H	2448	A
24	1H	2464	C
24	1H	2468	G
24	1H	2474	C
24	1H	2477	C
24	1H	2482	G
24	1H	2484	G
24	1H	2489	G
24	1H	2497	A
24	1H	2502	G
24	1H	2503	A
24	1H	2505	G
24	1H	2506	U
24	1H	2507	C
24	1H	2513	G
24	1H	2517	C
24	1H	2518	A
24	1H	2525	G
24	1H	2529	G
24	1H	2531	A
24	1H	2554	U
24	1H	2566	A

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Mol	Chain	Res	Type
24	1H	2567	G
24	1H	2572	A
24	1H	2573	C
24	1H	2582	G
24	1H	2599	G
24	1H	2601	C
24	1H	2602	A
24	1H	2609	U
24	1H	2611	U
24	1H	2612	C
24	1H	2613	U
24	1H	2614	A
24	1H	2615	U
24	1H	2629	A
24	1H	2636	U
24	1H	2646	C
24	1H	2654	A
24	1H	2663	G
24	1H	2665	A
24	1H	2666	C
24	1H	2667	C
24	1H	2673	G
24	1H	2682	U
24	1H	2689	U
24	1H	2690	C
24	1H	2702	U
24	1H	2703	C
24	1H	2705	A
24	1H	2707	G
24	1H	2712(A)	A
24	1H	2713	A
24	1H	2714	G
24	1H	2726	U
24	1H	2727	G
24	1H	2733	A
24	1H	2736	G
24	1H	2744	G
24	1H	2747	G
24	1H	2751	G
24	1H	2757	A
24	1H	2758	A
24	1H	2761	G

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Mol	Chain	Res	Type
24	1H	2764	A
24	1H	2765	A
24	1H	2766	G
24	1H	2777	G
24	1H	2778	A
24	1H	2779	U
24	1H	2781	A
24	1H	2789	C
24	1H	2790	A
24	1H	2791	C
24	1H	2793	G
24	1H	2794	C
24	1H	2795	G
24	1H	2801	A
24	1H	2802	G
24	1H	2803	C
24	1H	2805	G
24	1H	2808	U
24	1H	2820	A
24	1H	2821	A
24	1H	2826	A
24	1H	2833	G
24	1H	2834	G
24	1H	2835	A
24	1H	2850	A
24	1H	2851	A
24	1H	2860	A
24	1H	2866	U
24	1H	2871	C
24	1H	2872	G
24	1H	2880	C
24	1H	2892	A
24	1H	2893	G
25	16	7	G
25	16	9	G
25	16	12	C
25	16	13	A
25	16	15	A
25	16	19	G
25	16	22	U
25	16	24	G
25	16	25	A

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Mol	Chain	Res	Type
25	16	32	C
25	16	39	A
25	16	40	U
25	16	41	U
25	16	42	C
25	16	52	A
25	16	53	A
25	16	56	G
25	16	73	A
25	16	74	U
25	16	84	C
25	16	89	G
25	16	95	U
25	16	105	G
25	16	109	G
25	16	115	G
25	16	116	G
54	1G	5	U
54	1G	6	G
54	1G	7	G
54	1G	9	G
54	1G	22	G
54	1G	32	A
54	1G	39	G
54	1G	47	C
54	1G	48	C
54	1G	50	A
54	1G	51	A
54	1G	66	G
54	1G	76	G
54	1G	77	C
54	1G	79	G
54	1G	81	G
54	1G	90	C
54	1G	91	C
54	1G	92	G
54	1G	95	G
54	1G	101	A
54	1G	105	G
54	1G	108	G
54	1G	116	A
54	1G	120	A

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Mol	Chain	Res	Type
54	1G	121	C
54	1G	131	C
54	1G	144	G
54	1G	163	C
54	1G	173	U
54	1G	174	C
54	1G	182	U
54	1G	186	C
54	1G	186(F)	C
54	1G	187	C
54	1G	188	U
54	1G	189	U
54	1G	190	G
54	1G	191(A)	G
54	1G	191(D)	U
54	1G	195	A
54	1G	197	A
54	1G	198	G
54	1G	209	U
54	1G	210	U
54	1G	216	G
54	1G	220	G
54	1G	244	U
54	1G	245	C
54	1G	247	G
54	1G	251	G
54	1G	266	G
54	1G	267	C
54	1G	281	G
54	1G	289	G
54	1G	298	A
54	1G	318	G
54	1G	321	A
54	1G	328	C
54	1G	330	C
54	1G	332	G
54	1G	345	C
54	1G	346	G
54	1G	347	G
54	1G	350	G
54	1G	351	G
54	1G	352	C

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Mol	Chain	Res	Type
54	1G	353	A
54	1G	354	G
54	1G	363	A
54	1G	367	U
54	1G	372	C
54	1G	373	A
54	1G	381	C
54	1G	382	A
54	1G	384	G
54	1G	388	G
54	1G	397	A
54	1G	398	C
54	1G	406	G
54	1G	411	A
54	1G	412	A
54	1G	413	G
54	1G	417	C
54	1G	421	U
54	1G	422	C
54	1G	423	G
54	1G	429	U
54	1G	430	A
54	1G	439	A
54	1G	452	A
54	1G	466	C
54	1G	467	G
54	1G	484	G
54	1G	485	G
54	1G	486	U
54	1G	496	A
54	1G	497	U
54	1G	505	G
54	1G	509	A
54	1G	510	A
54	1G	511	C
54	1G	518	C
54	1G	527	G
54	1G	530	G
54	1G	531	U
54	1G	532	A
54	1G	533	A
54	1G	547	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
54	1G	549	C
54	1G	554	C
54	1G	559	A
54	1G	561	U
54	1G	562	C
54	1G	563	A
54	1G	572	A
54	1G	573	A
54	1G	575	G
54	1G	576	G
54	1G	577	G
54	1G	596	C
54	1G	607	A
54	1G	608	A
54	1G	614	A
54	1G	618	C
54	1G	631	G
54	1G	632	A
54	1G	633	G
54	1G	651	C
54	1G	652	U
54	1G	653	A
54	1G	661	G
54	1G	665	A
54	1G	674	G
54	1G	686	U
54	1G	688	G
54	1G	702	A
54	1G	722	A
54	1G	723	U
54	1G	724	G
54	1G	728	A
54	1G	731	G
54	1G	745	C
54	1G	749	C
54	1G	755	G
54	1G	760	G
54	1G	764	C
54	1G	777	A
54	1G	793	U
54	1G	794	A
54	1G	801	U

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Mol	Chain	Res	Type
54	1G	811	C
54	1G	816	A
54	1G	817	C
54	1G	821	G
54	1G	828	A
54	1G	836	G
54	1G	842	C
54	1G	843	U
54	1G	848	C
54	1G	859	A
54	1G	873	A
54	1G	885	G
54	1G	913	A
54	1G	914	A
54	1G	916	G
54	1G	921	U
54	1G	922	G
54	1G	926	G
54	1G	927	G
54	1G	934	C
54	1G	935	A
54	1G	936	C
54	1G	940	C
54	1G	958	A
54	1G	960	U
54	1G	961	U
54	1G	966	G
54	1G	967	C
54	1G	968	A
54	1G	969	A
54	1G	971	G
54	1G	972	C
54	1G	974	A
54	1G	975	A
54	1G	976	G
54	1G	977	A
54	1G	980	C
54	1G	989	C
54	1G	991	U
54	1G	992	U
54	1G	993	G
54	1G	994	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
54	1G	1002	G
54	1G	1004	A
54	1G	1009	G
54	1G	1017	G
54	1G	1023	G
54	1G	1024	G
54	1G	1028	C
54	1G	1029	G
54	1G	1030	C
54	1G	1031	G
54	1G	1032(A)	G
54	1G	1032(B)	G
54	1G	1033	G
54	1G	1036	G
54	1G	1038	C
54	1G	1052	U
54	1G	1054	C
54	1G	1055	A
54	1G	1056	U
54	1G	1066	C
54	1G	1067	A
54	1G	1081	G
54	1G	1093	A
54	1G	1094	G
54	1G	1095	U
54	1G	1101	A
54	1G	1110	A
54	1G	1117	G
54	1G	1124	G
54	1G	1126	U
54	1G	1127	G
54	1G	1129	C
54	1G	1138	G
54	1G	1139	G
54	1G	1140	C
54	1G	1146	A
54	1G	1147	C
54	1G	1148	U
54	1G	1154	G
54	1G	1157	A
54	1G	1159	U
54	1G	1171	G

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Mol	Chain	Res	Type
54	1G	1179	A
54	1G	1181	G
54	1G	1182	G
54	1G	1184	G
54	1G	1186	G
54	1G	1187	G
54	1G	1188	A
54	1G	1190	G
54	1G	1192	C
54	1G	1193	G
54	1G	1196	U
54	1G	1197	G
54	1G	1201	A
54	1G	1211	U
54	1G	1212	U
54	1G	1213	A
54	1G	1214	C
54	1G	1215	G
54	1G	1225	A
54	1G	1227	A
54	1G	1232	U
54	1G	1238	A
54	1G	1240	U
54	1G	1243	C
54	1G	1257	U
54	1G	1269	A
54	1G	1270	C
54	1G	1273	G
54	1G	1278	U
54	1G	1279	A
54	1G	1280	A
54	1G	1286	A
54	1G	1287	A
54	1G	1288	A
54	1G	1297	C
54	1G	1299	A
54	1G	1300	G
54	1G	1301	U
54	1G	1303	C
54	1G	1305	G
54	1G	1312	G
54	1G	1317	C

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Mol	Chain	Res	Type
54	1G	1319	A
54	1G	1320	C
54	1G	1322	C
54	1G	1323	G
54	1G	1324	A
54	1G	1325	C
54	1G	1331	G
54	1G	1335	C
54	1G	1336	C
54	1G	1346	A
54	1G	1347	G
54	1G	1353	G
54	1G	1362(A)	C
54	1G	1363	A
54	1G	1364	U
54	1G	1370	G
54	1G	1379	G
54	1G	1397	C
54	1G	1398	A
54	1G	1400	C
54	1G	1401	G
54	1G	1419	G
54	1G	1442	G
54	1G	1443	G
54	1G	1446	A
54	1G	1447	G
54	1G	1449	C
54	1G	1450	U
54	1G	1452	C
54	1G	1453	G
54	1G	1487	G
54	1G	1492	A
54	1G	1493	A
54	1G	1499	A
54	1G	1502	A
54	1G	1503	A
54	1G	1504	G
54	1G	1506	U
54	1G	1517	G
54	1G	1520	G
54	1G	1521	G
54	1G	1529	G

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Mol	Chain	Res	Type
54	1G	1530	G
54	1G	1531	A
54	1G	1532	U
22	2L	8	4SU
22	2L	9	U
22	2L	15	G
22	2L	18	G
22	2L	19	C
22	2L	20	C
22	2L	21	A
22	2L	22	A
22	2L	23	A
22	2L	24	G
22	2L	33	C
22	2L	36	U
22	2L	46	G
22	2L	47	U
22	2L	58	G
22	2L	59	A
22	2L	61	G
22	2L	67	A
22	2L	68	A
22	2L	70	C
22	2L	71	C
22	2L	72	U
22	2L	73	U
22	2L	75	C
22	2L	85	A
22	3L	6	G
22	3L	8	4SU
22	3L	14	A
22	3L	15	G
22	3L	17	OMG
22	3L	18	G
22	3L	19	C
22	3L	20	C
22	3L	21	A
22	3L	36	U
22	3L	41	C
22	3L	49	A
22	3L	51	C
22	3L	52	G

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Mol	Chain	Res	Type
22	3L	56	U
22	3L	57	C
22	3L	58	G
22	3L	64	PSU
22	3L	67	A
22	3L	68	A
22	3L	69	U
22	3L	85	A
23	4L	14	A
23	4L	18	C
24	14	3	U
24	14	4	C
24	14	5	A
24	14	6	A
24	14	9	U
24	14	10	G
24	14	14	A
24	14	15	G
24	14	34	C
24	14	35	G
24	14	36	G
24	14	46	C
24	14	51	G
24	14	58	G
24	14	60	G
24	14	61	G
24	14	71	A
24	14	72	U
24	14	74	A
24	14	75	G
24	14	90	U
24	14	91	A
24	14	93	C
24	14	95	G
24	14	102	G
24	14	118	A
24	14	119	A
24	14	120	U
24	14	129	C
24	14	131	G
24	14	150	C
24	14	153	C

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Mol	Chain	Res	Type
24	14	154	G
24	14	155	C
24	14	161	U
24	14	171	G
24	14	175	G
24	14	181	A
24	14	196	A
24	14	199	A
24	14	214	G
24	14	215	G
24	14	216	A
24	14	217	G
24	14	221	A
24	14	222	A
24	14	225	A
24	14	229	A
24	14	233	A
24	14	239	U
24	14	245	G
24	14	248	G
24	14	250	G
24	14	252	G
24	14	270(K)	C
24	14	270(L)	U
24	14	270(M)	U
24	14	270(O)	U
24	14	271(C)	U
24	14	271	G
24	14	273(C)	C
24	14	273(D)	C
24	14	274	G
24	14	277	C
24	14	278	A
24	14	279	C
24	14	286	C
24	14	289	A
24	14	292	C
24	14	293	U
24	14	294	A
24	14	309	G
24	14	311	A
24	14	329	G

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Mol	Chain	Res	Type
24	14	330	A
24	14	333	G
24	14	347	A
24	14	352	G
24	14	355	G
24	14	358	U
24	14	363	G
24	14	372	G
24	14	386	G
24	14	396	G
24	14	405	U
24	14	406	G
24	14	407	G
24	14	408	G
24	14	411	G
24	14	412	A
24	14	414	C
24	14	428	A
24	14	443	A
24	14	444	C
24	14	448	U
24	14	454	A
24	14	455	C
24	14	457	A
24	14	470	A
24	14	475	U
24	14	480	A
24	14	481	G
24	14	498	G
24	14	504	U
24	14	505	A
24	14	509	C
24	14	512	G
24	14	513	A
24	14	521	G
24	14	528	A
24	14	529	A
24	14	530	G
24	14	531	C
24	14	532	A
24	14	533	G
24	14	537	C

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Mol	Chain	Res	Type
24	14	546	C
24	14	549	G
24	14	556	G
24	14	563	G
24	14	567	A
24	14	573	G
24	14	575	A
24	14	584	C
24	14	586	A
24	14	592	G
24	14	603	A
24	14	607	U
24	14	615	G
24	14	617	G
24	14	621	A
24	14	622	G
24	14	627	A
24	14	637	A
24	14	645	C
24	14	646	A
24	14	647	G
24	14	654	A
24	14	654(G)	C
24	14	654(I)	C
24	14	654(J)	A
24	14	654(K)	C
24	14	654(L)	G
24	14	654(N)	G
24	14	654(O)	G
24	14	654(T)	A
24	14	669	G
24	14	686	G
24	14	690	G
24	14	717	G
24	14	730	C
24	14	739	G
24	14	740	U
24	14	759	G
24	14	762	U
24	14	765	G
24	14	776	G
24	14	779	U

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Mol	Chain	Res	Type
24	14	780	G
24	14	782	A
24	14	784	A
24	14	785	G
24	14	790	C
24	14	792	G
24	14	793	A
24	14	805	G
24	14	812	C
24	14	819	A
24	14	822	U
24	14	827	U
24	14	828	U
24	14	832	G
24	14	846	C
24	14	852	G
24	14	857	C
24	14	859	G
24	14	866	A
24	14	869	G
24	14	877	U
24	14	878	A
24	14	882	G
24	14	885	C
24	14	887	A
24	14	888	C
24	14	889	C
24	14	890	A
24	14	892	G
24	14	894	C
24	14	895	U
24	14	896	A
24	14	897	C
24	14	898	C
24	14	901	A
24	14	910	A
24	14	914	C
24	14	915	C
24	14	917	A
24	14	919	G
24	14	924	C
24	14	926	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
24	14	932	G
24	14	938	G
24	14	941	A
24	14	945	A
24	14	946	G
24	14	953	A
24	14	959	A
24	14	961	C
24	14	974	G
24	14	980	A
24	14	983	A
24	14	986	C
24	14	989	G
24	14	996	A
24	14	1009	A
24	14	1010	A
24	14	1012	U
24	14	1013	C
24	14	1022	G
24	14	1023	U
24	14	1024	G
24	14	1025	G
24	14	1026	U
24	14	1027	A
24	14	1033	U
24	14	1039	G
24	14	1045	A
24	14	1047	G
24	14	1048	A
24	14	1049	C
24	14	1053	C
24	14	1054	A
24	14	1060	U
24	14	1061	U
24	14	1062	G
24	14	1063	G
24	14	1064	C
24	14	1065	U
24	14	1067	A
24	14	1068	G
24	14	1070	A
24	14	1079	C

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Mol	Chain	Res	Type
24	14	1082	U
24	14	1083	U
24	14	1085	A
24	14	1086	A
24	14	1087	G
24	14	1088	A
24	14	1089	G
24	14	1090	U
24	14	1094	U
24	14	1096	A
24	14	1097	U
24	14	1099	G
24	14	1104	C
24	14	1112	G
24	14	1122	G
24	14	1129	A
24	14	1130	U
24	14	1135	C
24	14	1136	G
24	14	1139	G
24	14	1143	A
24	14	1147	C
24	14	1148	A
24	14	1151	G
24	14	1173	G
24	14	1175	U
24	14	1177	A
24	14	1178	C
24	14	1187	G
24	14	1188	U
24	14	1204	A
24	14	1205	U
24	14	1212	G
24	14	1220	A
24	14	1244	G
24	14	1252	G
24	14	1253	A
24	14	1255	U
24	14	1256	G
24	14	1269	A
24	14	1271	G
24	14	1272	A

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Mol	Chain	Res	Type
24	14	1273	U
24	14	1287	A
24	14	1300	U
24	14	1301	A
24	14	1303	G
24	14	1307	A
24	14	1310	G
24	14	1312	U
24	14	1314	C
24	14	1317	A
24	14	1325	G
24	14	1329	U
24	14	1338	G
24	14	1342	A
24	14	1345	C
24	14	1348	G
24	14	1349	A
24	14	1352	U
24	14	1359	A
24	14	1360	A
24	14	1365	A
24	14	1368	G
24	14	1380	G
24	14	1384	A
24	14	1385	G
24	14	1386	C
24	14	1388	G
24	14	1404	C
24	14	1405	U
24	14	1406	U
24	14	1407	C
24	14	1408	C
24	14	1416	G
24	14	1417	C
24	14	1421	G
24	14	1428	C
24	14	1436	G
24	14	1437	C
24	14	1444(A)	A
24	14	1445	C
24	14	1449	A
24	14	1449(A)	G

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Mol	Chain	Res	Type
24	14	1453	A
24	14	1455	G
24	14	1458	C
24	14	1459	G
24	14	1460	A
24	14	1462	C
24	14	1467	C
24	14	1471	A
24	14	1474	C
24	14	1475	G
24	14	1482	U
24	14	1483	G
24	14	1487	G
24	14	1488	G
24	14	1490	A
24	14	1493	C
24	14	1494	A
24	14	1497	U
24	14	1500	G
24	14	1509	C
24	14	1510	A
24	14	1522	G
24	14	1527	G
24	14	1528	A
24	14	1534	G
24	14	1535	U
24	14	1536	A
24	14	1537	C
24	14	1543	A
24	14	1544	C
24	14	1558	A
24	14	1559	G
24	14	1560	G
24	14	1566	A
24	14	1569	A
24	14	1578	U
24	14	1580	A
24	14	1581	G
24	14	1585	C
24	14	1586	A
24	14	1587	A
24	14	1588	C

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Mol	Chain	Res	Type
24	14	1595	G
24	14	1598	C
24	14	1608	A
24	14	1609	A
24	14	1610	A
24	14	1616	A
24	14	1618	A
24	14	1625	C
24	14	1636	C
24	14	1639	U
24	14	1648	C
24	14	1654	A
24	14	1672	C
24	14	1674	G
24	14	1675	C
24	14	1696	G
24	14	1698	A
24	14	1700	A
24	14	1701	A
24	14	1717	G
24	14	1725	G
24	14	1729	A
24	14	1730	U
24	14	1731	G
24	14	1732	A
24	14	1743	G
24	14	1756	G
24	14	1758	G
24	14	1764	G
24	14	1773	A
24	14	1774	C
24	14	1782	C
24	14	1791	A
24	14	1800	C
24	14	1801	G
24	14	1802	A
24	14	1811	G
24	14	1816	G
24	14	1829	A
24	14	1834	U
24	14	1839	G
24	14	1847	A

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Mol	Chain	Res	Type
24	14	1848	A
24	14	1858	G
24	14	1869	G
24	14	1871	A
24	14	1878	G
24	14	1889	A
24	14	1895	C
24	14	1900	A
24	14	1906	G
24	14	1912	A
24	14	1913	A
24	14	1914	C
24	14	1917	U
24	14	1929	G
24	14	1930	G
24	14	1931	U
24	14	1936	A
24	14	1937	A
24	14	1938	A
24	14	1945	G
24	14	1955	U
24	14	1963	U
24	14	1967	C
24	14	1970	A
24	14	1971	A
24	14	1972	A
24	14	1982	C
24	14	1984	G
24	14	1993	U
24	14	2020	A
24	14	2023	G
24	14	2027	G
24	14	2030	A
24	14	2031	A
24	14	2033	A
24	14	2036	C
24	14	2043	C
24	14	2049	G
24	14	2055	C
24	14	2056	G
24	14	2059	A
24	14	2060	A

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Mol	Chain	Res	Type
24	14	2061	G
24	14	2062	A
24	14	2069	G
24	14	2071	A
24	14	2074	U
24	14	2083	G
24	14	2093	G
24	14	2099	U
24	14	2100	G
24	14	2110	G
24	14	2111	C
24	14	2112	G
24	14	2114	A
24	14	2115	G
24	14	2117	A
24	14	2123	G
24	14	2125	G
24	14	2126	A
24	14	2127	G
24	14	2128	C
24	14	2131	G
24	14	2132	U
24	14	2133	G
24	14	2134	A
24	14	2136	C
24	14	2145	C
24	14	2146	C
24	14	2147	G
24	14	2148	G
24	14	2165	G
24	14	2166	G
24	14	2167	U
24	14	2169	A
24	14	2170	A
24	14	2173	A
24	14	2174	C
24	14	2175	C
24	14	2189	U
24	14	2191	G
24	14	2192	G
24	14	2198	A
24	14	2210	G

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Mol	Chain	Res	Type
24	14	2211	G
24	14	2212	A
24	14	2213	U
24	14	2215	G
24	14	2225	A
24	14	2226	C
24	14	2238	G
24	14	2239	G
24	14	2261	C
24	14	2271	G
24	14	2275	C
24	14	2278	A
24	14	2283	C
24	14	2287	A
24	14	2288	A
24	14	2289	G
24	14	2298	A
24	14	2305	A
24	14	2307	G
24	14	2308	G
24	14	2309	A
24	14	2310	A
24	14	2311	A
24	14	2312	U
24	14	2316	C
24	14	2320	A
24	14	2321	G
24	14	2324	C
24	14	2325	G
24	14	2327	A
24	14	2334	G
24	14	2336	A
24	14	2337	G
24	14	2341	G
24	14	2342	C
24	14	2346	A
24	14	2347	C
24	14	2350	C
24	14	2354	G
24	14	2355	C
24	14	2383	G
24	14	2385	C

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Mol	Chain	Res	Type
24	14	2388	A
24	14	2389	G
24	14	2392	A
24	14	2393	A
24	14	2402	C
24	14	2403	C
24	14	2406	U
24	14	2410	G
24	14	2414	G
24	14	2425	A
24	14	2428	G
24	14	2429	G
24	14	2430	A
24	14	2431	U
24	14	2434	A
24	14	2435	A
24	14	2439	A
24	14	2440	C
24	14	2441	C
24	14	2446	G
24	14	2448	A
24	14	2449	U
24	14	2459	A
24	14	2461	C
24	14	2468	G
24	14	2469	A
24	14	2472	G
24	14	2476	A
24	14	2477	C
24	14	2480	C
24	14	2502	G
24	14	2505	G
24	14	2506	U
24	14	2512	C
24	14	2513	G
24	14	2518	A
24	14	2529	G
24	14	2542	A
24	14	2543	G
24	14	2554	U
24	14	2566	A
24	14	2567	G

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Mol	Chain	Res	Type
24	14	2569	G
24	14	2572	A
24	14	2573	C
24	14	2574	G
24	14	2578	G
24	14	2582	G
24	14	2602	A
24	14	2603	G
24	14	2608	G
24	14	2609	U
24	14	2610	C
24	14	2611	U
24	14	2612	C
24	14	2615	U
24	14	2629	A
24	14	2630	G
24	14	2635	C
24	14	2636	U
24	14	2641	G
24	14	2660	A
24	14	2665	A
24	14	2666	C
24	14	2673	G
24	14	2679	A
24	14	2689	U
24	14	2690	C
24	14	2702	U
24	14	2703	C
24	14	2712(A)	A
24	14	2713	A
24	14	2714	G
24	14	2725	A
24	14	2726	U
24	14	2733	A
24	14	2750	A
24	14	2751	G
24	14	2752	C
24	14	2754	U
24	14	2757	A
24	14	2761	G
24	14	2762	G
24	14	2764	A

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Mol	Chain	Res	Type
24	14	2765	A
24	14	2766	G
24	14	2769	C
24	14	2777	G
24	14	2778	A
24	14	2789	C
24	14	2791	C
24	14	2793	G
24	14	2797	U
24	14	2798	C
24	14	2801	A
24	14	2802	G
24	14	2803	C
24	14	2810	A
24	14	2818	G
24	14	2820	A
24	14	2821	A
24	14	2833	G
24	14	2834	G
24	14	2835	A
24	14	2849	U
24	14	2850	A
24	14	2860	A
24	14	2872	G
24	14	2873	A
24	14	2874	C
24	14	2876	G
24	14	2879	C
24	14	2892	A
24	14	2893	G
24	14	2894	G
24	14	2896	C
25	1J	0	A
25	1J	7	G
25	1J	8	U
25	1J	12	C
25	1J	13	A
25	1J	15	A
25	1J	16	G
25	1J	25	A
25	1J	26	A
25	1J	28	C

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Mol	Chain	Res	Type
25	1J	30	C
25	1J	40	U
25	1J	41	U
25	1J	42	C
25	1J	44	G
25	1J	45	A
25	1J	47	C
25	1J	58	A
25	1J	65	C
25	1J	67	G
25	1J	73	A
25	1J	75	G
25	1J	81	G
25	1J	88	C
25	1J	89	G
25	1J	89(A)	A
25	1J	90	C
25	1J	95	U
25	1J	109	G

All (160) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	13	5	U
1	13	115	G
1	13	181	G
1	13	244	U
1	13	266	G
1	13	412	A
1	13	429	U
1	13	484	G
1	13	509	A
1	13	535	A
1	13	560	U
1	13	687	A
1	13	703	G
1	13	748	C
1	13	793	U
1	13	812	C
1	13	913	A
1	13	992	U
1	13	1027	C

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Mol	Chain	Res	Type
1	13	1054	C
1	13	1065	U
1	13	1285	A
1	13	1336	C
1	13	1498	U
22	2K	17	OMG
22	2K	20	C
22	2K	54	C
22	2K	61	G
22	2K	71	C
22	3K	8	4SU
22	3K	18	G
22	3K	21	A
23	4K	12	A
24	1H	70	G
24	1H	125	G
24	1H	195	A
24	1H	196	A
24	1H	222	A
24	1H	229	A
24	1H	404	C
24	1H	528	A
24	1H	654(S)	G
24	1H	685	A
24	1H	746	A
24	1H	752	A
24	1H	764	A
24	1H	776	G
24	1H	858	U
24	1H	859	G
24	1H	880	G
24	1H	897	C
24	1H	1022	G
24	1H	1026	U
24	1H	1060	U
24	1H	1178	C
24	1H	1312	U
24	1H	1379	A
24	1H	1396	U
24	1H	1427	A
24	1H	1508	A
24	1H	1558	A

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Mol	Chain	Res	Type
24	1H	1608	A
24	1H	1609	A
24	1H	1653	G
24	1H	1694	C
24	1H	1799	G
24	1H	1899	G
24	1H	1912	A
24	1H	1980	G
24	1H	2211	G
24	1H	2402	C
24	1H	2425	A
24	1H	2439	A
24	1H	2447	G
24	1H	2481	G
24	1H	2566	A
24	1H	2689	U
24	1H	2756	U
54	1G	4	U
54	1G	6	G
54	1G	80	G
54	1G	89	U
54	1G	115	G
54	1G	197	A
54	1G	243	A
54	1G	250	A
54	1G	327	A
54	1G	345	C
54	1G	412	A
54	1G	429	U
54	1G	485	G
54	1G	509	A
54	1G	560	U
54	1G	561	U
54	1G	632	A
54	1G	686	U
54	1G	687	A
54	1G	723	U
54	1G	748	C
54	1G	793	U
54	1G	884	U
54	1G	913	A
54	1G	992	U

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Mol	Chain	Res	Type
54	1G	1126	U
54	1G	1285	A
54	1G	1300	G
54	1G	1322	C
54	1G	1346	A
54	1G	1442	G
54	1G	1498	U
54	1G	1504	G
22	2L	18	G
22	2L	23	A
22	2L	32	A
22	2L	57	C
22	2L	60	A
22	2L	70	C
22	2L	71	C
22	3L	17	OMG
22	3L	18	G
22	3L	57	C
24	14	128	C
24	14	196	A
24	14	249	C
24	14	278	A
24	14	310	A
24	14	386	G
24	14	405	U
24	14	479	A
24	14	654(S)	G
24	14	669	G
24	14	685	A
24	14	746	A
24	14	856	C
24	14	886	C
24	14	888	C
24	14	974	G
24	14	1022	G
24	14	1085	A
24	14	1379	A
24	14	1396	U
24	14	1416	G
24	14	1420	U
24	14	1558	A
24	14	1608	A

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Mol	Chain	Res	Type
24	14	1609	A
24	14	1653	G
24	14	1912	A
24	14	2211	G
24	14	2320	A
24	14	2406	U
24	14	2439	A
24	14	2602	A
24	14	2610	C
24	14	2689	U
24	14	2776	A
24	14	2801	A
24	14	2859	G
24	14	2893	G
25	1J	15	A

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

28 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	$\# Z  > 2$
22	PSU	3K	64	22	17,21,22	3.93	6 (35%)	20,30,33	3.31	7 (35%)
22	PSU	2K	64	22	17,21,22	3.92	6 (35%)	20,30,33	3.34	7 (35%)
22	5MU	2L	63	22	15,22,23	2.11	3 (20%)	16,32,35	1.76	2 (12%)
22	OMG	2K	17	22	18,26,27	5.71	6 (33%)	20,38,41	5.38	9 (45%)
22	MIA	2L	38	22	24,31,32	2.52	3 (12%)	26,44,47	3.47	11 (42%)
22	MIA	3L	38	22	24,31,32	2.49	3 (12%)	26,44,47	3.43	10 (38%)
22	4SU	3L	8	55,22	14,21,22	3.45	2 (14%)	15,30,33	1.37	2 (13%)
22	OMG	3L	17	22	18,26,27	5.78	6 (33%)	20,38,41	5.27	8 (40%)
22	4SU	2L	8	22	14,21,22	3.27	2 (14%)	15,30,33	1.40	2 (13%)
22	QUO	2K	35	22,23	28,35,36	5.58	8 (28%)	32,52,55	5.09	10 (31%)



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
22	PSU	3L	40	22	17,21,22	3.89	6 (35%)	20,30,33	3.16	6 (30%)
22	PSU	3K	40	22	17,21,22	3.76	6 (35%)	20,30,33	3.48	6 (30%)
22	PSU	2L	40	22	17,21,22	3.66	5 (29%)	20,30,33	3.37	6 (30%)
22	4SU	3K	8	22	14,21,22	3.14	2 (14%)	15,30,33	0.91	1 (6%)
22	OMG	2L	17	22	18,26,27	5.67	6 (33%)	20,38,41	5.45	8 (40%)
22	5MU	3K	63	22	15,22,23	2.16	3 (20%)	16,32,35	1.84	2 (12%)
22	4SU	2K	8	22	14,21,22	3.30	2 (14%)	15,30,33	1.09	2 (13%)
22	PSU	3L	64	22	17,21,22	3.99	6 (35%)	20,30,33	3.60	7 (35%)
22	PSU	2K	40	22	17,21,22	3.62	6 (35%)	20,30,33	3.38	4 (20%)
22	QUO	3K	35	22	28,35,36	5.65	9 (32%)	32,52,55	4.96	12 (37%)
22	QUO	2L	35	22,23	28,35,36	5.73	9 (32%)	32,52,55	5.13	12 (37%)
22	PSU	2L	64	22	17,21,22	4.06	6 (35%)	20,30,33	3.45	5 (25%)
22	5MU	2K	63	22	15,22,23	2.20	3 (20%)	16,32,35	1.92	2 (12%)
22	MIA	2K	38	22	24,31,32	2.63	4 (16%)	26,44,47	4.41	9 (34%)
22	OMG	3K	17	22	18,26,27	5.63	6 (33%)	20,38,41	5.34	7 (35%)
22	MIA	3K	38	22	24,31,32	2.74	4 (16%)	26,44,47	2.97	9 (34%)
22	5MU	3L	63	22	15,22,23	2.15	3 (20%)	16,32,35	1.85	2 (12%)
22	QUO	3L	35	22	28,35,36	5.73	9 (32%)	32,52,55	4.83	12 (37%)

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
22	PSU	3K	64	22	-	2/7/25/26	0/2/2/2
22	PSU	2K	64	22	-	2/7/25/26	0/2/2/2
22	5MU	2L	63	22	-	0/5/25/26	0/2/2/2
22	OMG	2K	17	22	-	3/5/27/28	0/3/3/3
22	MIA	2L	38	22	-	7/11/33/34	0/3/3/3
22	MIA	3L	38	22	-	2/11/33/34	0/3/3/3
22	4SU	3L	8	55,22	-	0/5/25/26	0/2/2/2
22	OMG	3L	17	22	-	1/5/27/28	0/3/3/3
22	4SU	2L	8	22	-	2/5/25/26	0/2/2/2
22	QUO	2K	35	22,23	-	3/6/43/44	0/4/4/4
22	PSU	3L	40	22	-	0/7/25/26	0/2/2/2
22	PSU	3K	40	22	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	PSU	2L	40	22	-	0/7/25/26	0/2/2/2
22	4SU	3K	8	22	-	1/5/25/26	0/2/2/2
22	OMG	2L	17	22	-	4/5/27/28	0/3/3/3
22	5MU	3K	63	22	-	0/5/25/26	0/2/2/2
22	4SU	2K	8	22	-	0/5/25/26	0/2/2/2
22	PSU	3L	64	22	-	2/7/25/26	0/2/2/2
22	PSU	2K	40	22	-	0/7/25/26	0/2/2/2
22	QUO	3K	35	22	-	2/6/43/44	0/4/4/4
22	QUO	2L	35	22,23	-	1/6/43/44	0/4/4/4
22	PSU	2L	64	22	-	0/7/25/26	0/2/2/2
22	5MU	2K	63	22	-	0/5/25/26	0/2/2/2
22	MIA	2K	38	22	-	7/11/33/34	0/3/3/3
22	OMG	3K	17	22	-	4/5/27/28	0/3/3/3
22	MIA	3K	38	22	-	8/11/33/34	0/3/3/3
22	5MU	3L	63	22	-	0/5/25/26	0/2/2/2
22	QUO	3L	35	22	-	2/6/43/44	0/4/4/4

All (140) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	2L	35	QUO	C4-N3	23.45	1.72	1.35
22	3L	35	QUO	C4-N3	23.07	1.71	1.35
22	3K	35	QUO	C4-N3	22.96	1.71	1.35
22	2K	35	QUO	C4-N3	22.21	1.70	1.35
22	3L	17	OMG	C4-N3	16.57	1.61	1.35
22	2K	17	OMG	C4-N3	16.19	1.61	1.35
22	3K	17	OMG	C4-N3	16.11	1.60	1.35
22	2L	17	OMG	C4-N3	15.88	1.60	1.35
22	2L	17	OMG	C8-N7	-14.73	1.08	1.34
22	2K	17	OMG	C8-N7	-14.54	1.08	1.34
22	3L	17	OMG	C8-N7	-14.50	1.08	1.34
22	3K	17	OMG	C8-N7	-14.31	1.09	1.34
22	2L	64	PSU	C5-C1'	-13.35	1.40	1.52
22	3K	64	PSU	C5-C1'	-13.06	1.41	1.52
22	3L	64	PSU	C5-C1'	-13.05	1.41	1.52
22	3L	40	PSU	C5-C1'	-12.53	1.41	1.52
22	2K	64	PSU	C5-C1'	-12.12	1.41	1.52
22	3K	40	PSU	C5-C1'	-12.03	1.42	1.52
22	2K	40	PSU	C5-C1'	-11.47	1.42	1.52
22	2L	40	PSU	C5-C1'	-11.37	1.42	1.52
22	3L	8	4SU	C5-C4	10.35	1.50	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	2K	8	4SU	C5-C4	10.24	1.50	1.38
22	2L	35	QUO	C7-C5	10.13	1.57	1.41
22	3K	35	QUO	C8-N9	-10.08	1.23	1.38
22	3L	35	QUO	C6-N1	-9.93	1.15	1.33
22	2K	35	QUO	C6-N1	-9.92	1.15	1.33
22	2L	8	4SU	C5-C4	9.89	1.49	1.38
22	3L	35	QUO	C7-C5	9.75	1.56	1.41
22	2K	35	QUO	C8-N9	-9.69	1.23	1.38
22	3L	35	QUO	C8-N9	-9.61	1.23	1.38
22	2K	35	QUO	C7-C5	9.51	1.56	1.41
22	2L	35	QUO	C8-N9	-9.50	1.24	1.38
22	3K	35	QUO	C7-C5	9.36	1.56	1.41
22	3K	8	4SU	C5-C4	9.27	1.48	1.38
22	3K	35	QUO	C6-N1	-9.13	1.17	1.33
22	2L	38	MIA	C13-C14	8.92	1.58	1.32
22	3K	38	MIA	C13-C14	8.78	1.57	1.32
22	2K	38	MIA	C13-C14	8.59	1.57	1.32
22	2L	35	QUO	C6-N1	-8.59	1.18	1.33
22	3L	38	MIA	C13-C14	8.58	1.57	1.32
22	2K	17	OMG	C5-C4	7.92	1.61	1.40
22	3L	17	OMG	C5-C4	7.91	1.61	1.40
22	3K	17	OMG	C5-C4	7.78	1.61	1.40
22	2L	17	OMG	C5-C4	7.76	1.61	1.40
22	3L	8	4SU	C6-N1	7.35	1.44	1.35
22	2L	8	4SU	C6-N1	6.86	1.44	1.35
22	3K	8	4SU	C6-N1	6.79	1.44	1.35
22	2K	8	4SU	C6-N1	6.59	1.44	1.35
22	2K	38	MIA	C2-S10	6.46	1.81	1.75
22	3K	38	MIA	C6-N6	6.41	1.46	1.34
22	2L	64	PSU	C6-N1	6.27	1.47	1.34
22	3K	38	MIA	C2-S10	6.09	1.80	1.75
22	2K	63	5MU	C4-C5	6.03	1.54	1.41
22	2K	64	PSU	C4-C5	5.94	1.54	1.41
22	3L	64	PSU	C6-N1	5.93	1.46	1.34
22	3L	38	MIA	C6-N6	5.84	1.45	1.34
22	3K	64	PSU	C6-N1	5.83	1.46	1.34
22	3K	40	PSU	C6-N1	5.82	1.46	1.34
22	2L	38	MIA	C6-N6	5.78	1.45	1.34
22	2K	64	PSU	C6-N1	5.76	1.46	1.34
22	2L	35	QUO	C2-N2	5.73	1.45	1.33
22	3L	40	PSU	C6-N1	5.73	1.46	1.34
22	2L	40	PSU	C6-N1	5.67	1.46	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	3L	35	QUO	C13-C12	-5.63	1.47	1.53
22	3L	40	PSU	C4-C5	5.57	1.53	1.41
22	2K	38	MIA	C6-N6	5.56	1.44	1.34
22	2L	40	PSU	C4-C5	5.51	1.53	1.41
22	2K	40	PSU	C6-N1	5.46	1.45	1.34
22	3L	63	5MU	C4-C5	5.41	1.53	1.41
22	3K	63	5MU	C4-C5	5.37	1.53	1.41
22	3L	63	5MU	C2-N3	5.29	1.48	1.38
22	2K	35	QUO	C2-N2	5.24	1.44	1.33
22	3K	63	5MU	C2-N3	5.14	1.48	1.38
22	2K	35	QUO	C13-C12	-5.13	1.48	1.53
22	2L	63	5MU	C2-N3	5.12	1.48	1.38
22	3K	35	QUO	C2-N2	5.09	1.44	1.33
22	3L	17	OMG	C6-N1	-5.05	1.24	1.33
22	2K	40	PSU	C4-C5	5.03	1.52	1.41
22	3L	38	MIA	C2-S10	5.01	1.80	1.75
22	2L	35	QUO	C13-C12	-5.00	1.48	1.53
22	2K	17	OMG	C6-N1	-4.97	1.24	1.33
22	3K	40	PSU	C4-C5	4.97	1.52	1.41
22	3K	35	QUO	C13-C12	-4.91	1.48	1.53
22	2L	63	5MU	C4-C5	4.91	1.52	1.41
22	2L	17	OMG	C6-N1	-4.90	1.24	1.33
22	3L	64	PSU	C4-C5	4.84	1.51	1.41
22	2L	38	MIA	C2-S10	4.76	1.79	1.75
22	3L	35	QUO	C2-N2	4.71	1.43	1.33
22	3K	64	PSU	C4-C5	4.65	1.51	1.41
22	2K	63	5MU	C2-N3	4.65	1.47	1.38
22	2L	64	PSU	C4-C5	4.59	1.51	1.41
22	3K	17	OMG	C6-N1	-4.56	1.25	1.33
22	2L	64	PSU	C4-N3	4.38	1.40	1.33
22	3L	64	PSU	C4-N3	4.36	1.40	1.33
22	3K	40	PSU	C4-N3	4.22	1.40	1.33
22	2K	64	PSU	C4-N3	4.21	1.40	1.33
22	2L	40	PSU	C4-N3	4.12	1.40	1.33
22	2K	40	PSU	C4-N3	4.11	1.40	1.33
22	3L	40	PSU	C4-N3	4.04	1.40	1.33
22	2L	35	QUO	C2-N3	4.02	1.53	1.34
22	3K	64	PSU	C4-N3	3.88	1.39	1.33
22	2K	35	QUO	C2-N3	3.75	1.52	1.34
22	3L	17	OMG	C2-N2	3.72	1.41	1.33
22	3K	35	QUO	C2-N3	3.70	1.51	1.34
22	3K	17	OMG	C2-N2	3.67	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	3L	35	QUO	C2-N3	3.65	1.51	1.34
22	2L	17	OMG	C2-N2	3.53	1.41	1.33
22	2K	17	OMG	C2-N2	3.51	1.40	1.33
22	2K	64	PSU	C2-N1	3.48	1.45	1.38
22	2L	64	PSU	C2-N1	3.42	1.44	1.38
22	3K	38	MIA	C6-N1	3.40	1.37	1.32
22	3L	35	QUO	C14-C13	-3.31	1.48	1.53
22	3L	64	PSU	C2-N1	3.27	1.44	1.38
22	3K	64	PSU	C2-N1	3.27	1.44	1.38
22	2L	63	5MU	C4-N3	-3.14	1.27	1.33
22	2K	63	5MU	C4-N3	-3.13	1.27	1.33
22	3K	63	5MU	C4-N3	-3.13	1.27	1.33
22	2K	64	PSU	C2-N3	2.97	1.44	1.38
22	3K	40	PSU	C2-N1	2.92	1.44	1.38
22	3L	40	PSU	C2-N1	2.87	1.43	1.38
22	2L	40	PSU	C2-N1	2.85	1.43	1.38
22	3L	63	5MU	C4-N3	-2.81	1.28	1.33
22	2L	35	QUO	C14-C13	-2.81	1.49	1.53
22	3L	64	PSU	C2-N3	2.80	1.43	1.38
22	2K	38	MIA	C6-N1	2.65	1.36	1.32
22	2L	17	OMG	O6-C6	-2.61	1.18	1.24
22	3L	17	OMG	O6-C6	-2.60	1.18	1.24
22	3K	35	QUO	C16-C15	2.58	1.61	1.54
22	2K	35	QUO	C16-C15	2.50	1.60	1.54
22	2K	40	PSU	C2-N1	2.46	1.43	1.38
22	3K	35	QUO	C14-C13	-2.43	1.49	1.53
22	3K	17	OMG	O6-C6	-2.41	1.18	1.24
22	3L	35	QUO	C16-C15	2.38	1.60	1.54
22	2L	35	QUO	C16-C15	2.38	1.60	1.54
22	2K	17	OMG	O6-C6	-2.36	1.18	1.24
22	3L	40	PSU	C2-N3	2.36	1.42	1.38
22	2L	64	PSU	C2-N3	2.32	1.42	1.38
22	2K	40	PSU	C2-N3	2.24	1.42	1.38
22	3K	64	PSU	C2-N3	2.15	1.42	1.38
22	3K	40	PSU	C2-N3	2.10	1.42	1.38

All (180) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	3K	35	QUO	C6-C5-C4	21.73	127.28	115.01
22	2K	35	QUO	C6-C5-C4	21.36	127.07	115.01
22	2L	35	QUO	C6-C5-C4	20.39	126.52	115.01

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	3L	35	QUO	C6-C5-C4	19.69	126.13	115.01
22	2K	38	MIA	C11-S10-C2	17.63	115.43	102.27
22	3K	17	OMG	C6-C5-C4	-14.84	106.64	120.80
22	2L	17	OMG	C6-C5-C4	-14.39	107.06	120.80
22	2K	17	OMG	C6-C5-C4	-13.72	107.70	120.80
22	3L	17	OMG	C6-C5-C4	-13.26	108.14	120.80
22	2L	17	OMG	C1'-N9-C4	13.20	149.83	126.64
22	2L	38	MIA	C11-S10-C2	13.18	112.11	102.27
22	2L	35	QUO	C8-N9-C1'	-13.16	113.83	125.48
22	2K	17	OMG	C1'-N9-C4	13.02	149.53	126.64
22	3L	17	OMG	C1'-N9-C4	13.01	149.50	126.64
22	2K	35	QUO	C8-N9-C1'	-12.37	114.53	125.48
22	3K	40	PSU	N1-C2-N3	-12.36	118.61	128.43
22	2K	40	PSU	N1-C2-N3	-11.99	118.90	128.43
22	2L	64	PSU	N1-C2-N3	-11.86	119.00	128.43
22	2L	40	PSU	N1-C2-N3	-11.57	119.23	128.43
22	2K	64	PSU	N1-C2-N3	-11.45	119.33	128.43
22	3K	64	PSU	N1-C2-N3	-11.24	119.50	128.43
22	3L	64	PSU	N1-C2-N3	-11.18	119.54	128.43
22	3K	17	OMG	C1'-N9-C4	11.17	146.27	126.64
22	3L	38	MIA	C11-S10-C2	11.16	110.60	102.27
22	3L	40	PSU	N1-C2-N3	-10.37	120.19	128.43
22	3K	38	MIA	C11-S10-C2	9.78	109.57	102.27
22	2K	38	MIA	C12-C13-C14	-9.59	108.47	127.14
22	3L	35	QUO	C8-N9-C1'	-9.44	117.13	125.48
22	3K	17	OMG	C6-N1-C2	9.28	130.68	115.93
22	2L	35	QUO	N3-C2-N1	-9.27	114.86	127.22
22	2K	17	OMG	C6-N1-C2	8.98	130.20	115.93
22	3L	17	OMG	C6-N1-C2	8.79	129.90	115.93
22	2L	17	OMG	C6-N1-C2	8.76	129.85	115.93
22	3K	35	QUO	C1'-N9-C4	-8.66	111.42	126.64
22	3K	35	QUO	N3-C2-N1	-8.35	116.09	127.22
22	3L	35	QUO	N3-C2-N1	-8.31	116.14	127.22
22	3L	38	MIA	C12-C13-C14	-8.16	111.25	127.14
22	2K	35	QUO	N3-C2-N1	-7.68	116.97	127.22
22	2L	35	QUO	C6-N1-C2	7.59	127.99	115.93
22	2K	17	OMG	C4-C5-N7	-7.34	101.75	109.40
22	3K	17	OMG	C4-C5-N7	-7.12	101.98	109.40
22	3L	17	OMG	C4-C5-N7	-7.11	101.99	109.40
22	2L	17	OMG	C4-C5-N7	-7.09	102.02	109.40
22	2K	35	QUO	C6-N1-C2	6.97	127.00	115.93
22	3K	35	QUO	C6-N1-C2	6.88	126.86	115.93

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	2K	40	PSU	C4-N3-C2	6.84	120.92	115.14
22	3L	35	QUO	C6-N1-C2	6.82	126.77	115.93
22	3L	64	PSU	C4-N3-C2	6.75	120.84	115.14
22	2L	38	MIA	C12-C13-C14	-6.73	114.04	127.14
22	3K	40	PSU	C4-N3-C2	6.72	120.82	115.14
22	3L	35	QUO	C1'-N9-C4	-6.71	114.84	126.64
22	2L	40	PSU	C4-N3-C2	6.63	120.74	115.14
22	3K	17	OMG	N3-C2-N1	-6.60	118.42	127.22
22	3K	38	MIA	C12-C13-C14	-6.48	114.53	127.14
22	3L	40	PSU	C4-N3-C2	6.30	120.47	115.14
22	3L	17	OMG	N3-C2-N1	-6.24	118.90	127.22
22	2K	63	5MU	C5-C6-N1	-6.17	115.55	122.19
22	2L	17	OMG	N3-C2-N1	-6.11	119.07	127.22
22	2K	17	OMG	N3-C2-N1	-5.99	119.22	127.22
22	2L	64	PSU	C4-N3-C2	5.82	120.05	115.14
22	3L	63	5MU	C4-N3-C2	5.76	120.00	115.14
22	3K	35	QUO	C8-N9-C1'	-5.71	120.43	125.48
22	2K	64	PSU	C4-N3-C2	5.66	119.92	115.14
22	3L	35	QUO	C16-C12-C13	5.56	111.43	103.18
22	2L	35	QUO	C1'-N9-C4	-5.55	116.89	126.64
22	3K	63	5MU	C4-N3-C2	5.51	119.80	115.14
22	3L	35	QUO	C5-C6-N1	5.43	128.90	124.09
22	2K	35	QUO	C1'-N9-C4	-5.28	117.36	126.64
22	3K	64	PSU	C4-N3-C2	5.19	119.52	115.14
22	2L	63	5MU	C5-C6-N1	-5.18	116.61	122.19
22	3L	64	PSU	C5-C1'-C2'	-4.91	106.57	115.32
22	3L	38	MIA	C16-C14-C13	-4.81	108.73	122.65
22	2K	38	MIA	C16-C14-C13	-4.74	108.96	122.65
22	2L	17	OMG	C5-C6-N1	4.69	129.85	123.43
22	3L	17	OMG	C5-C6-N1	4.68	129.83	123.43
22	3L	38	MIA	C15-C14-C13	-4.55	109.50	122.65
22	2K	38	MIA	C15-C14-C13	-4.55	109.50	122.65
22	2L	38	MIA	C16-C14-C13	-4.53	109.56	122.65
22	3K	17	OMG	C5-C6-N1	4.46	129.53	123.43
22	3K	38	MIA	C2-N3-C4	4.43	121.43	115.32
22	3L	38	MIA	C2-N3-C4	4.41	121.40	115.32
22	3L	64	PSU	C5-C4-N3	-4.35	119.75	125.36
22	2K	38	MIA	C2-N3-C4	4.33	121.29	115.32
22	3K	63	5MU	C5-C6-N1	-4.30	117.56	122.19
22	2L	64	PSU	C5-C6-N1	-4.26	119.21	124.44
22	2K	17	OMG	C5-C6-N1	4.25	129.25	123.43
22	3L	63	5MU	C5-C6-N1	-4.22	117.64	122.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	2L	63	5MU	C4-N3-C2	4.17	118.67	115.14
22	3L	40	PSU	C5-C4-N3	-4.12	120.06	125.36
22	3L	64	PSU	O4'-C1'-C5	4.05	116.20	109.93
22	3K	38	MIA	C16-C14-C13	-4.03	111.00	122.65
22	3K	35	QUO	N2-C2-N1	4.00	123.47	117.25
22	3K	38	MIA	C15-C14-C13	-3.95	111.23	122.65
22	2L	35	QUO	C5-C6-N1	3.94	127.58	124.09
22	3K	35	QUO	C5-C6-N1	3.90	127.55	124.09
22	2K	35	QUO	C16-C12-C13	3.88	108.95	103.18
22	2L	35	QUO	C16-C12-C13	3.88	108.94	103.18
22	3K	64	PSU	C5-C6-N1	-3.86	119.70	124.44
22	2K	40	PSU	C5-C4-N3	-3.82	120.44	125.36
22	3L	8	4SU	C2-N3-C4	3.79	120.64	115.15
22	2L	38	MIA	C15-C14-C13	-3.77	111.76	122.65
22	3L	35	QUO	C15-C14-C13	3.76	109.89	103.91
22	2K	63	5MU	C4-N3-C2	3.74	118.30	115.14
22	2K	35	QUO	C5-C6-N1	3.71	127.38	124.09
22	3K	17	OMG	N2-C2-N1	3.71	123.02	117.25
22	3K	35	QUO	C16-C12-C13	3.69	108.66	103.18
22	2L	38	MIA	C5-C6-N1	-3.68	117.75	120.81
22	2L	64	PSU	C6-N1-C2	3.67	121.42	115.36
22	2K	64	PSU	C5-C4-N3	-3.64	120.67	125.36
22	2K	38	MIA	N3-C2-N1	-3.58	120.39	126.98
22	2K	35	QUO	N2-C2-N1	3.55	122.77	117.25
22	2L	8	4SU	C2-N3-C4	3.54	120.28	115.15
22	2L	40	PSU	C5-C4-N3	-3.52	120.83	125.36
22	3K	40	PSU	C5-C4-N3	-3.51	120.84	125.36
22	2L	17	OMG	N2-C2-N1	3.49	122.68	117.25
22	2L	35	QUO	N2-C2-N3	3.47	123.44	117.79
22	3K	64	PSU	C6-N1-C2	3.43	121.02	115.36
22	3K	40	PSU	C6-N1-C2	3.40	120.97	115.36
22	3K	35	QUO	C15-C14-C13	3.35	109.24	103.91
22	2L	38	MIA	C2-N3-C4	3.33	119.91	115.32
22	3L	38	MIA	C1'-N9-C4	3.31	132.45	126.64
22	2L	64	PSU	C5-C4-N3	-3.29	121.12	125.36
22	2L	8	4SU	C5-C4-N3	-3.27	119.45	123.83
22	2K	35	QUO	C15-C14-C13	3.26	109.10	103.91
22	3L	8	4SU	C5-C4-N3	-3.19	119.56	123.83
22	2L	40	PSU	C6-N1-C2	3.12	120.50	115.36
22	2K	64	PSU	C6-N1-C2	3.11	120.50	115.36
22	3K	38	MIA	N3-C2-N1	-3.09	121.31	126.98
22	2K	64	PSU	C4-C5-C1'	3.07	126.90	121.12

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	2K	64	PSU	O4'-C1'-C5	3.05	114.66	109.93
22	3K	64	PSU	C5-C4-N3	-2.99	121.51	125.36
22	2L	35	QUO	C15-C14-C13	2.98	108.66	103.91
22	3L	35	QUO	N2-C2-N1	2.97	121.87	117.25
22	3L	38	MIA	C4-C5-N7	-2.97	106.31	109.40
22	2K	40	PSU	C6-N1-C2	2.94	120.20	115.36
22	3K	64	PSU	O4'-C1'-C5	2.92	114.45	109.93
22	3K	38	MIA	C5-C6-N1	-2.91	118.39	120.81
22	3L	64	PSU	C5-C6-N1	-2.88	120.90	124.44
22	2L	35	QUO	N2-C2-N1	2.86	121.70	117.25
22	3K	38	MIA	C4-C5-N7	-2.85	106.43	109.40
22	3L	38	MIA	C12-N6-C6	-2.83	118.35	122.55
22	3K	35	QUO	C7-C8-N9	-2.81	101.01	108.55
22	2L	35	QUO	C7-C8-N9	-2.76	101.15	108.55
22	2K	17	OMG	O2'-C2'-C1'	2.75	114.55	109.09
22	3K	40	PSU	C5-C6-N1	-2.75	121.06	124.44
22	3K	35	QUO	C7-C10-N11	-2.74	104.77	112.75
22	2K	17	OMG	N2-C2-N1	2.72	121.49	117.25
22	3L	64	PSU	C6-N1-C2	2.72	119.85	115.36
22	3L	35	QUO	C7-C8-N9	-2.72	101.25	108.55
22	3L	40	PSU	C6-N1-C2	2.63	119.70	115.36
22	3K	64	PSU	C5-C1'-C2'	-2.62	110.64	115.32
22	2K	8	4SU	C2-N3-C4	2.62	118.95	115.15
22	2L	38	MIA	C16-C14-C15	-2.62	108.82	114.60
22	3K	8	4SU	C2-N3-C4	2.61	118.93	115.15
22	2K	38	MIA	C2-N1-C6	2.60	121.85	117.19
22	3K	35	QUO	C10-N11-C12	-2.59	109.46	114.90
22	3L	35	QUO	N2-C2-N3	2.58	121.99	117.79
22	2L	38	MIA	C4-C5-N7	-2.58	106.72	109.40
22	3L	38	MIA	C5-C6-N1	-2.52	118.71	120.81
22	2K	64	PSU	C5-C6-N1	-2.52	121.34	124.44
22	2L	40	PSU	C5-C1'-C2'	-2.46	110.93	115.32
22	2K	35	QUO	C7-C8-N9	-2.43	102.01	108.55
22	3L	40	PSU	C5-C6-N1	-2.43	121.45	124.44
22	2K	8	4SU	C5-C4-N3	-2.41	120.61	123.83
22	3L	38	MIA	N3-C2-N1	-2.41	122.56	126.98
22	2L	38	MIA	C1'-N9-C4	2.38	130.81	126.64
22	2K	17	OMG	C3'-C2'-C1'	-2.32	98.53	102.89
22	2K	38	MIA	C4-C5-N7	-2.31	106.99	109.40
22	3K	38	MIA	C2-N1-C6	2.30	121.30	117.19
22	2K	38	MIA	C5-C6-N1	-2.29	118.91	120.81
22	3L	17	OMG	C3'-C2'-C1'	-2.27	98.61	102.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	2L	40	PSU	C5-C6-N1	-2.24	121.69	124.44
22	2L	38	MIA	N3-C2-N1	-2.23	122.89	126.98
22	2L	38	MIA	C2-N1-C6	2.21	121.14	117.19
22	3L	17	OMG	N2-C2-N1	2.20	120.67	117.25
22	3L	40	PSU	C3'-C2'-C1'	-2.18	99.42	101.93
22	2L	17	OMG	C3'-C2'-C1'	-2.16	98.83	102.89
22	2L	35	QUO	C10-N11-C12	-2.10	110.48	114.90
22	3K	40	PSU	O2'-C2'-C1'	-2.01	107.15	111.94
22	3L	35	QUO	C7-C10-N11	-2.01	106.90	112.75

There are no chirality outliers.

All (53) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
22	3K	64	PSU	O4'-C4'-C5'-O5'
22	2K	64	PSU	O4'-C1'-C5-C4
22	2K	64	PSU	O4'-C1'-C5-C6
22	2L	38	MIA	C5-C6-N6-C12
22	2L	38	MIA	N1-C6-N6-C12
22	2L	38	MIA	N1-C2-S10-C11
22	2L	38	MIA	N3-C2-S10-C11
22	2L	38	MIA	N6-C12-C13-C14
22	2L	38	MIA	C12-C13-C14-C15
22	2L	38	MIA	C12-C13-C14-C16
22	3L	38	MIA	C12-C13-C14-C15
22	2K	35	QUO	O4'-C4'-C5'-O5'
22	3K	8	4SU	C2'-C1'-N1-C6
22	2K	38	MIA	N1-C2-S10-C11
22	2K	38	MIA	N3-C2-S10-C11
22	2K	38	MIA	N6-C12-C13-C14
22	2K	38	MIA	C12-C13-C14-C15
22	2K	38	MIA	C12-C13-C14-C16
22	3K	17	OMG	C1'-C2'-O2'-CM2
22	3K	38	MIA	O4'-C4'-C5'-O5'
22	3K	38	MIA	C5-C6-N6-C12
22	3K	38	MIA	N1-C6-N6-C12
22	3K	38	MIA	N1-C2-S10-C11
22	3K	38	MIA	N3-C2-S10-C11
22	3K	38	MIA	C12-C13-C14-C16
22	2K	17	OMG	C3'-C4'-C5'-O5'
22	2L	8	4SU	O4'-C4'-C5'-O5'
22	2K	35	QUO	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
22	2L	17	OMG	O4'-C4'-C5'-O5'
22	2L	17	OMG	C3'-C4'-C5'-O5'
22	3K	38	MIA	C3'-C4'-C5'-O5'
22	2K	38	MIA	N1-C6-N6-C12
22	2K	35	QUO	C7-C10-N11-C12
22	3K	64	PSU	C3'-C4'-C5'-O5'
22	2L	8	4SU	C3'-C4'-C5'-O5'
22	3L	64	PSU	C3'-C4'-C5'-O5'
22	3L	64	PSU	O4'-C4'-C5'-O5'
22	2K	38	MIA	C5-C6-N6-C12
22	3L	35	QUO	C7-C10-N11-C12
22	3K	38	MIA	C12-C13-C14-C15
22	2K	17	OMG	O4'-C4'-C5'-O5'
22	3K	17	OMG	O4'-C4'-C5'-O5'
22	2K	17	OMG	C4'-C5'-O5'-P
22	2L	17	OMG	C4'-C5'-O5'-P
22	3K	17	OMG	C4'-C5'-O5'-P
22	2L	17	OMG	C3'-C2'-O2'-CM2
22	3L	35	QUO	C16-C12-N11-C10
22	3K	35	QUO	C4'-C5'-O5'-P
22	3K	17	OMG	C3'-C4'-C5'-O5'
22	3L	17	OMG	O4'-C4'-C5'-O5'
22	3K	35	QUO	O4'-C4'-C5'-O5'
22	2L	35	QUO	C16-C12-N11-C10
22	3L	38	MIA	N3-C2-S10-C11

There are no ring outliers.

25 monomers are involved in 58 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	3K	64	PSU	3	0
22	2K	64	PSU	2	0
22	2L	63	5MU	3	0
22	2K	17	OMG	3	0
22	2L	38	MIA	1	0
22	3L	38	MIA	1	0
22	3L	8	4SU	2	0
22	3L	17	OMG	1	0
22	2L	8	4SU	2	0
22	2K	35	QUO	4	0
22	3L	40	PSU	1	0
22	2L	40	PSU	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	3K	8	4SU	2	0
22	2L	17	OMG	3	0
22	3K	63	5MU	4	0
22	3L	64	PSU	2	0
22	2K	40	PSU	1	0
22	3K	35	QUO	5	0
22	2L	35	QUO	6	0
22	2L	64	PSU	2	0
22	2K	38	MIA	3	0
22	3K	17	OMG	2	0
22	3K	38	MIA	3	0
22	3L	63	5MU	2	0
22	3L	35	QUO	4	0

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 1387 ligands modelled in this entry, 1387 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, 95<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	13	1501/1522 (98%)	0.17	32 (2%) 63 49	77, 129, 208, 407	0
2	12	237/256 (92%)	0.43	31 (13%) 3 2	137, 175, 213, 240	0
2	1E	237/256 (92%)	0.70	39 (16%) 1 1	131, 168, 201, 234	0
3	22	206/239 (86%)	0.51	28 (13%) 3 2	135, 156, 189, 209	0
3	2E	205/239 (85%)	0.50	23 (11%) 5 3	122, 142, 197, 207	0
4	32	208/209 (99%)	1.31	58 (27%) 0 0	108, 130, 156, 169	0
4	3E	208/209 (99%)	1.38	53 (25%) 0 0	104, 129, 155, 182	0
5	42	151/162 (93%)	0.43	17 (11%) 5 3	107, 128, 153, 194	0
5	4E	151/162 (93%)	0.57	16 (10%) 6 3	102, 125, 153, 204	0
6	52	101/101 (100%)	0.01	1 (0%) 82 72	101, 120, 138, 153	0
6	5E	101/101 (100%)	0.25	3 (2%) 50 34	105, 129, 146, 163	0
7	62	155/156 (99%)	1.14	33 (21%) 0 1	128, 144, 162, 171	0
7	6E	155/156 (99%)	0.74	27 (17%) 1 1	123, 149, 172, 184	0
8	72	138/138 (100%)	0.76	25 (18%) 1 1	111, 132, 143, 170	0
8	7E	138/138 (100%)	1.27	41 (29%) 0 0	115, 134, 145, 157	0
9	82	126/128 (98%)	2.64	69 (54%) 0 0	124, 170, 197, 213	0
9	8E	127/128 (99%)	1.37	46 (36%) 0 0	119, 163, 179, 191	0
10	1A	99/105 (94%)	1.46	30 (30%) 0 0	135, 170, 191, 206	0
10	1I	99/105 (94%)	0.97	24 (24%) 0 0	121, 166, 195, 209	0
11	2A	119/129 (92%)	0.96	11 (9%) 9 5	105, 125, 157, 256	0
11	2I	116/129 (89%)	0.42	8 (6%) 16 9	93, 126, 153, 203	0
12	3A	125/132 (94%)	1.35	39 (31%) 0 0	96, 114, 144, 188	0
12	3I	125/132 (94%)	1.08	29 (23%) 0 0	91, 104, 136, 239	0
13	4A	117/126 (92%)	1.18	29 (24%) 0 0	138, 174, 197, 229	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	4I	116/126 (92%)	0.92	26 (22%) 0 0	127, 173, 195, 208	0
14	5A	60/61 (98%)	3.06	38 (63%) 0 0	145, 163, 185, 186	0
14	5I	60/61 (98%)	2.60	38 (63%) 0 0	127, 137, 167, 186	0
15	6A	88/89 (98%)	1.00	23 (26%) 0 0	100, 128, 146, 152	0
15	6I	88/89 (98%)	0.45	7 (7%) 12 6	103, 127, 147, 154	0
16	7A	84/88 (95%)	0.75	15 (17%) 1 1	108, 121, 141, 189	0
16	7I	84/88 (95%)	1.37	29 (34%) 0 0	119, 136, 162, 196	0
17	8A	100/105 (95%)	1.23	24 (24%) 0 0	104, 121, 140, 197	0
17	8I	100/105 (95%)	0.83	14 (14%) 2 1	112, 132, 146, 150	0
18	9A	72/88 (81%)	0.33	1 (1%) 75 63	107, 127, 185, 223	0
18	9I	72/88 (81%)	0.22	4 (5%) 24 13	111, 130, 164, 208	0
19	AA	82/93 (88%)	2.44	45 (54%) 0 0	152, 196, 219, 232	0
19	AI	83/93 (89%)	1.64	30 (36%) 0 0	150, 176, 207, 222	0
20	BA	99/106 (93%)	1.54	38 (38%) 0 0	96, 125, 161, 175	0
20	BI	99/106 (93%)	1.92	43 (43%) 0 0	127, 147, 191, 205	0
21	1B	25/27 (92%)	3.47	19 (76%) 0 0	135, 158, 187, 196	0
21	1F	25/27 (92%)	3.04	15 (60%) 0 0	139, 156, 182, 190	0
22	2K	75/85 (88%)	0.28	8 (10%) 6 3	95, 145, 276, 308	0
22	2L	71/85 (83%)	-0.03	4 (5%) 24 13	95, 146, 228, 250	0
22	3K	78/85 (91%)	-0.40	0 100 100	95, 199, 288, 312	0
22	3L	78/85 (91%)	-0.39	2 (2%) 56 40	93, 213, 284, 309	0
23	4K	11/27 (40%)	0.97	2 (18%) 1 1	105, 139, 160, 164	0
23	4L	6/27 (22%)	1.90	3 (50%) 0 0	116, 126, 146, 163	0
24	14	2909/2917 (99%)	0.27	60 (2%) 63 49	65, 99, 266, 424	0
24	1H	2912/2917 (99%)	0.29	36 (1%) 79 67	57, 92, 251, 431	0
25	16	122/122 (100%)	-0.19	0 100 100	96, 125, 153, 258	0
25	1J	122/122 (100%)	-0.08	2 (1%) 72 59	102, 138, 160, 226	0
26	71	135/229 (58%)	1.45	35 (25%) 0 0	152, 213, 248, 256	0
26	79	135/229 (58%)	1.19	38 (28%) 0 0	159, 237, 261, 265	0
27	11	272/276 (98%)	0.64	16 (5%) 22 13	60, 82, 103, 122	0
27	19	273/276 (98%)	0.86	39 (14%) 2 1	64, 87, 104, 133	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å²)		Q<0.9	
28	21	205/206 (99%)	1.06	42 (20%)	1	1	68, 105, 159, 229	0
28	29	205/206 (99%)	1.21	53 (25%)	0	0	71, 102, 169, 251	0
29	31	202/210 (96%)	0.82	23 (11%)	5	3	61, 95, 137, 152	0
29	39	208/210 (99%)	0.80	24 (11%)	4	3	71, 113, 184, 198	0
30	41	181/182 (99%)	0.61	24 (13%)	3	2	127, 159, 197, 218	0
30	49	181/182 (99%)	1.01	39 (21%)	0	1	142, 165, 197, 213	0
31	51	174/180 (96%)	0.05	2 (1%)	80	69	98, 122, 145, 174	0
31	59	171/180 (95%)	1.35	55 (32%)	0	0	148, 205, 246, 335	0
32	61	146/148 (98%)	0.01	4 (2%)	54	39	99, 136, 162, 176	0
32	69	146/148 (98%)	0.01	4 (2%)	54	39	100, 143, 171, 191	0
33	15	138/140 (98%)	1.15	35 (25%)	0	0	86, 115, 153, 196	0
33	58	138/140 (98%)	0.88	18 (13%)	3	2	86, 108, 153, 174	0
34	25	122/122 (100%)	0.96	22 (18%)	1	1	77, 98, 113, 122	0
34	68	122/122 (100%)	0.47	4 (3%)	46	30	73, 96, 115, 134	0
35	35	150/150 (100%)	1.00	31 (20%)	1	1	74, 119, 159, 213	0
35	78	150/150 (100%)	0.72	16 (10%)	6	3	65, 101, 126, 244	0
36	45	141/141 (100%)	1.46	48 (34%)	0	0	88, 117, 144, 179	0
36	88	141/141 (100%)	0.92	22 (15%)	2	1	78, 107, 139, 170	0
37	55	117/118 (99%)	0.66	7 (5%)	21	12	74, 94, 109, 130	0
37	98	118/118 (100%)	0.58	9 (7%)	13	7	79, 100, 119, 136	0
38	65	111/112 (99%)	1.37	36 (32%)	0	0	109, 130, 159, 180	0
38	A8	111/112 (99%)	1.19	32 (28%)	0	0	102, 123, 157, 203	0
39	75	137/146 (93%)	0.46	9 (6%)	18	11	88, 105, 157, 218	0
39	B8	137/146 (93%)	0.58	11 (8%)	12	6	92, 113, 171, 204	0
40	85	117/118 (99%)	0.78	13 (11%)	5	3	77, 109, 146, 183	0
40	C8	117/118 (99%)	1.27	32 (27%)	0	0	66, 97, 138, 182	0
41	95	101/101 (100%)	0.40	10 (9%)	7	4	80, 136, 158, 200	0
41	D8	101/101 (100%)	1.04	23 (22%)	0	0	71, 118, 159, 234	0
42	A5	113/113 (100%)	1.28	20 (17%)	1	1	74, 89, 125, 209	0
42	E8	113/113 (100%)	0.74	12 (10%)	6	3	74, 89, 121, 227	0
43	B5	93/96 (96%)	0.48	5 (5%)	25	14	86, 97, 119, 137	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
43	F8	94/96 (97%)	0.45	5 (5%) 26 14	68, 87, 111, 124	0
44	C5	104/110 (94%)	1.06	21 (20%) 1 1	102, 136, 209, 232	0
44	G8	104/110 (94%)	0.65	12 (11%) 4 3	85, 108, 158, 205	0
45	D5	179/206 (86%)	0.92	34 (18%) 1 1	121, 163, 275, 332	0
45	H8	175/206 (84%)	0.23	12 (6%) 16 9	111, 157, 273, 304	0
46	E5	77/85 (90%)	1.66	31 (40%) 0 0	86, 102, 123, 174	0
46	I8	83/85 (97%)	1.31	25 (30%) 0 0	83, 99, 122, 165	0
47	F5	97/98 (98%)	1.54	31 (31%) 0 0	76, 96, 155, 197	0
47	J8	97/98 (98%)	2.25	44 (45%) 0 0	70, 93, 171, 227	0
48	G5	69/72 (95%)	0.53	3 (4%) 35 22	99, 124, 152, 184	0
48	K8	66/72 (91%)	0.19	0 100 100	74, 95, 120, 165	0
49	H5	59/60 (98%)	1.37	16 (27%) 0 0	91, 112, 169, 182	0
49	L8	59/60 (98%)	0.87	10 (16%) 1 1	87, 103, 149, 177	0
50	I5	63/71 (88%)	1.61	18 (28%) 0 0	165, 225, 254, 292	0
50	M8	66/71 (92%)	2.52	34 (51%) 0 0	156, 231, 273, 282	0
51	J5	59/60 (98%)	0.82	7 (11%) 4 2	71, 96, 206, 229	0
51	N8	59/60 (98%)	0.92	6 (10%) 6 4	64, 101, 224, 243	0
52	L5	49/49 (100%)	1.49	12 (24%) 0 0	69, 74, 108, 147	0
52	P8	47/49 (95%)	0.96	4 (8%) 10 6	60, 66, 88, 140	0
53	M5	63/65 (96%)	2.24	40 (63%) 0 0	82, 96, 122, 134	0
53	Q8	62/65 (95%)	1.28	13 (20%) 1 1	77, 92, 120, 133	0
54	1G	1504/1522 (98%)	0.20	47 (3%) 49 32	83, 130, 201, 419	0
All	All	21123/21920 (96%)	0.64	2476 (11%) 4 2	57, 120, 217, 431	0

All (2476) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
11	2A	129	SER	31.4
50	M8	66	SER	24.2
11	2A	128	ALA	21.5
26	71	1	PRO	20.6
19	AI	2	PRO	19.8
7	62	81	GLY	14.3
47	J8	97	LEU	14.2

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Mol	Chain	Res	Type	RSRZ
7	62	82	GLY	14.2
50	M8	63	TYR	13.5
13	4A	6	GLY	13.2
47	J8	98	LEU	13.1
47	J8	96	LYS	12.9
30	41	2	PRO	12.4
24	1H	4	C	12.4
50	I5	63	TYR	11.9
31	59	96	ALA	11.8
14	5A	2	ALA	11.3
10	1A	64	GLU	11.2
38	65	2	ALA	11.2
24	14	2902	C	11.2
12	3A	129	ALA	11.1
26	79	173	ALA	11.0
9	82	110	GLU	10.8
28	29	205	ALA	10.7
50	I5	42	PHE	10.4
45	D5	112	ARG	10.3
21	1F	16	GLY	10.2
45	D5	151	HIS	10.1
11	2I	11	LYS	10.1
9	82	115	GLY	9.8
14	5A	58	LYS	9.7
7	62	83	ALA	9.5
35	78	150	ALA	9.4
8	72	1	MET	9.3
9	82	111	ARG	9.1
4	32	70	ILE	9.0
24	14	2901	C	8.9
28	29	204	ALA	8.9
13	4I	98	VAL	8.9
14	5I	2	ALA	8.8
7	62	80	VAL	8.8
47	J8	92	LYS	8.7
26	71	175	VAL	8.7
13	4I	97	PRO	8.7
21	1B	13	ILE	8.6
50	M8	65	ASP	8.6
9	82	120	ARG	8.5
47	F5	98	LEU	8.5
50	I5	22	ILE	8.5

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Mol	Chain	Res	Type	RSRZ
26	71	2	LYS	8.4
20	BI	57	ARG	8.4
2	1E	96	ARG	8.3
7	62	84	ASN	8.3
45	D5	143	GLY	8.0
45	D5	150	LEU	8.0
12	3I	129	ALA	7.9
9	82	15	ALA	7.9
13	4I	96	LEU	7.9
26	79	51	PRO	7.8
47	F5	96	LYS	7.8
19	AI	3	ARG	7.8
11	2I	12	ARG	7.8
26	79	58	VAL	7.8
19	AA	79	THR	7.8
26	71	32	LEU	7.7
45	D5	149	SER	7.7
9	82	64	THR	7.7
14	5A	60	SER	7.6
12	3I	19	ARG	7.5
9	82	116	LYS	7.5
19	AA	71	LEU	7.5
14	5A	59	ALA	7.4
13	4I	100	GLY	7.4
11	2A	127	LYS	7.4
26	79	1	PRO	7.4
21	1B	14	TRP	7.4
20	BI	18	GLN	7.3
10	1A	59	SER	7.3
9	8E	117	HIS	7.3
2	1E	148	TYR	7.2
4	3E	3	ARG	7.2
14	5A	61	TRP	7.2
45	D5	147	GLY	7.2
45	D5	179	ASP	7.1
19	AA	10	PHE	7.1
14	5I	17	LYS	7.1
26	79	174	PRO	7.0
28	29	59	VAL	7.0
26	71	43	VAL	6.9
26	79	56	GLN	6.9
8	72	2	LEU	6.9

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Mol	Chain	Res	Type	RSRZ
20	BI	16	HIS	6.9
38	65	32	LEU	6.9
13	4I	110	ARG	6.8
24	14	3	U	6.7
24	14	4	C	6.7
38	65	33	LYS	6.7
24	14	2799	A	6.6
4	3E	209	ARG	6.6
4	32	2	GLY	6.6
13	4A	97	PRO	6.6
2	1E	95	GLN	6.6
4	32	69	GLY	6.6
51	N8	60	VAL	6.6
9	82	66	ARG	6.6
24	1H	654(K)	C	6.5
47	F5	97	LEU	6.5
28	29	151	TYR	6.5
14	5I	14	PRO	6.5
10	1A	67	THR	6.4
13	4I	111	LYS	6.4
3	22	177	THR	6.4
52	L5	48	LYS	6.4
26	71	33	ALA	6.4
46	E5	75	LEU	6.4
45	D5	141	VAL	6.4
4	32	3	ARG	6.4
26	79	52	ARG	6.3
46	E5	21	LEU	6.3
7	62	79	ARG	6.3
19	AI	6	LYS	6.3
9	82	126	SER	6.3
54	1G	1532	U	6.3
14	5A	57	ARG	6.3
9	82	114	TYR	6.3
50	M8	27	THR	6.3
9	82	109	VAL	6.3
21	1F	15	ARG	6.2
30	49	34	LEU	6.2
10	1I	47	PHE	6.2
4	3E	102	ASP	6.2
10	1A	46	ARG	6.1
17	8A	101	ARG	6.1

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Mol	Chain	Res	Type	RSRZ
21	1F	17	THR	6.1
18	9A	88	LYS	6.1
50	M8	22	ILE	6.1
10	1A	47	PHE	6.1
21	1F	2	GLY	6.1
9	82	10	ARG	6.1
14	5A	15	LYS	6.0
3	22	206	GLU	6.0
22	2K	49	A	6.0
19	AA	38	SER	6.0
50	M8	31	ILE	6.0
24	14	5	A	6.0
2	12	97	TRP	6.0
10	1A	66	ARG	6.0
31	59	164	TYR	6.0
35	78	149	GLU	6.0
47	J8	95	LEU	6.0
52	P8	47	ARG	6.0
7	62	85	TYR	6.0
10	1I	59	SER	5.9
13	4I	102	ARG	5.9
13	4A	94	ARG	5.9
30	49	39	ILE	5.9
42	A5	113	LYS	5.9
9	8E	126	SER	5.9
14	5I	30	ALA	5.9
45	H8	117	LEU	5.9
21	1B	2	GLY	5.8
10	1A	65	LEU	5.8
21	1F	14	TRP	5.8
10	1A	62	HIS	5.8
50	M8	62	ARG	5.8
9	8E	127	LYS	5.8
38	A8	13	ARG	5.8
9	82	36	TYR	5.8
31	59	124	GLU	5.7
19	AA	12	ASP	5.7
19	AA	35	SER	5.7
33	15	84	LYS	5.7
9	82	119	ALA	5.7
50	M8	59	PHE	5.7
7	62	32	ARG	5.7

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Mol	Chain	Res	Type	RSRZ
24	14	2802	G	5.7
4	3E	2	GLY	5.7
7	6E	32	ARG	5.7
26	71	173	ALA	5.6
17	8I	26	GLN	5.6
26	79	2	LYS	5.6
50	M8	60	GLN	5.6
9	82	14	VAL	5.6
31	59	169	VAL	5.6
4	3E	138	TYR	5.6
38	A8	92	TYR	5.6
45	D5	173	ALA	5.6
14	5I	12	ARG	5.6
50	I5	54	GLY	5.6
19	AA	33	THR	5.5
8	7E	131	GLY	5.5
8	7E	1	MET	5.5
31	59	33	LEU	5.5
31	59	95	ARG	5.5
21	1B	15	ARG	5.5
50	M8	64	GLY	5.5
31	59	111	HIS	5.5
38	A8	9	ARG	5.5
19	AI	71	LEU	5.5
21	1B	10	ARG	5.5
50	M8	28	LYS	5.5
8	7E	93	VAL	5.5
31	59	152	ARG	5.5
4	32	66	ARG	5.5
14	5A	50	LYS	5.4
9	82	63	ILE	5.4
38	A8	91	PRO	5.4
22	2K	54	C	5.4
7	6E	84	ASN	5.4
4	32	207	TYR	5.4
9	8E	106	ALA	5.4
8	7E	132	GLU	5.4
35	35	110	TYR	5.4
38	A8	8	GLU	5.3
10	1I	60	ARG	5.3
13	4A	87	TYR	5.3
39	75	106	SER	5.3

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Mol	Chain	Res	Type	RSRZ
4	32	73	ARG	5.3
9	82	11	LYS	5.3
19	AA	83	HIS	5.3
53	M5	40	GLU	5.3
4	32	74	GLN	5.3
19	AI	78	ARG	5.3
39	B8	106	SER	5.3
3	22	207	VAL	5.2
4	3E	21	LEU	5.2
9	8E	8	GLY	5.2
22	2L	48	C	5.2
13	4A	2	ALA	5.2
34	25	1	MET	5.2
19	AA	53	ASN	5.2
26	71	176	GLY	5.2
2	12	96	ARG	5.2
9	82	107	ARG	5.2
8	72	3	THR	5.2
9	8E	36	TYR	5.2
9	82	69	GLY	5.2
38	65	34	HIS	5.2
4	32	209	ARG	5.2
7	62	16	LEU	5.2
14	5I	13	THR	5.2
24	1H	654(J)	A	5.2
38	65	20	ARG	5.2
28	21	205	ALA	5.2
24	1H	1536	A	5.2
33	15	75	TYR	5.2
14	5A	39	LEU	5.2
30	49	75	LYS	5.2
8	7E	3	THR	5.2
26	71	28	LEU	5.1
46	I8	40	GLN	5.1
26	71	218	MET	5.1
26	71	174	PRO	5.1
13	4A	98	VAL	5.1
8	7E	2	LEU	5.1
50	M8	9	LEU	5.1
13	4A	88	ARG	5.1
2	12	163	PHE	5.1
7	6E	79	ARG	5.1

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Mol	Chain	Res	Type	RSRZ
7	6E	82	GLY	5.1
26	79	167	LYS	5.1
9	82	7	THR	5.0
14	5A	53	LEU	5.0
45	D5	177	PRO	5.0
26	79	210	ARG	5.0
10	1A	54	PHE	5.0
2	12	101	MET	5.0
45	D5	170	THR	5.0
26	71	34	THR	5.0
19	AA	49	ILE	5.0
46	E5	76	GLY	5.0
50	I5	41	PRO	5.0
12	3A	128	ALA	5.0
9	82	121	ARG	5.0
2	12	68	ILE	5.0
26	71	171	ILE	4.9
38	65	87	PHE	4.9
7	62	78	ARG	4.9
38	A8	112	PHE	4.9
21	1B	6	ARG	4.9
47	J8	42	GLN	4.9
46	E5	72	ARG	4.9
30	41	142	PRO	4.9
31	51	3	ARG	4.9
31	59	107	VAL	4.9
10	1I	58	ASP	4.9
8	72	131	GLY	4.9
33	15	74	ARG	4.9
19	AA	30	LEU	4.9
41	D8	71	LEU	4.9
52	P8	46	VAL	4.9
30	49	35	GLU	4.9
45	D5	146	ILE	4.8
45	D5	171	ILE	4.8
9	8E	123	PRO	4.8
12	3A	101	VAL	4.8
24	14	902	C	4.8
20	BI	70	SER	4.8
20	BI	17	ARG	4.8
9	82	65	VAL	4.8
26	79	60	GLY	4.8

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Mol	Chain	Res	Type	RSRZ
28	29	54	GLN	4.8
26	71	41	VAL	4.8
8	7E	92	ARG	4.8
19	AI	5	LEU	4.8
9	82	18	PHE	4.8
22	2K	52	G	4.8
26	79	49	ILE	4.8
14	5I	8	GLU	4.7
31	59	88	LEU	4.7
9	82	78	LYS	4.7
12	3A	19	ARG	4.7
9	8E	116	LYS	4.7
38	A8	11	LYS	4.7
26	79	164	ARG	4.7
20	BI	68	LYS	4.7
17	8I	27	PHE	4.7
35	35	35	HIS	4.7
13	4I	87	TYR	4.7
45	D5	168	GLU	4.7
26	79	34	THR	4.7
10	1I	46	ARG	4.7
21	1B	22	ARG	4.7
8	72	86	ILE	4.7
24	1H	2901	C	4.7
9	8E	121	ARG	4.7
45	D5	115	GLY	4.7
47	F5	22	GLY	4.7
4	32	68	TYR	4.7
10	1I	10	GLY	4.7
24	14	2898	U	4.6
35	35	68	GLN	4.6
19	AA	41	VAL	4.6
9	82	75	ASP	4.6
19	AA	13	ASP	4.6
46	E5	71	ASP	4.6
54	1G	1531	A	4.6
17	8I	35	VAL	4.6
15	6A	68	ARG	4.6
40	C8	56	ASP	4.6
12	3A	32	PHE	4.6
3	2E	179	ARG	4.6
3	22	199	LYS	4.6

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Mol	Chain	Res	Type	RSRZ
50	M8	30	GLU	4.6
9	82	42	ARG	4.6
36	45	10	ARG	4.6
9	82	124	GLN	4.6
45	D5	148	ASP	4.6
9	8E	119	ALA	4.6
38	A8	4	LEU	4.6
45	D5	155	LEU	4.6
4	3E	24	GLU	4.6
12	3I	47	LYS	4.6
12	3A	89	ARG	4.6
28	29	152	LYS	4.6
38	65	29	PHE	4.6
33	15	85	ILE	4.6
16	7I	9	PHE	4.6
7	62	36	LYS	4.6
26	71	11	LEU	4.6
9	8E	115	GLY	4.5
29	39	44	ARG	4.5
19	AA	31	ILE	4.5
8	7E	133	LEU	4.5
41	95	74	LYS	4.5
51	N8	59	GLU	4.5
17	8A	32	TYR	4.5
36	45	12	GLN	4.5
2	1E	102	LEU	4.5
21	1F	3	LYS	4.5
9	8E	120	ARG	4.5
38	A8	12	PHE	4.5
19	AA	11	VAL	4.5
19	AA	80	TYR	4.5
21	1F	10	ARG	4.5
9	8E	109	VAL	4.5
38	65	5	THR	4.5
24	1H	2167	U	4.5
51	J5	58	LEU	4.5
22	2K	48	C	4.5
13	4A	101	GLN	4.4
13	4I	104	ARG	4.4
16	7I	18	ARG	4.4
30	41	64	THR	4.4
35	35	62	LEU	4.4

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Mol	Chain	Res	Type	RSRZ
36	88	20	ALA	4.4
41	D8	84	LYS	4.4
9	8E	110	GLU	4.4
12	3A	87	GLY	4.4
3	2E	196	LEU	4.4
2	12	70	PHE	4.4
3	22	10	PHE	4.4
20	BI	22	ARG	4.4
7	6E	11	GLN	4.4
16	7I	1	MET	4.4
46	E5	74	ARG	4.4
30	49	28	VAL	4.4
24	1H	1058	U	4.4
14	5A	38	GLY	4.4
16	7I	30	GLY	4.4
36	45	68	ILE	4.4
46	E5	77	ARG	4.4
16	7I	22	THR	4.4
8	7E	135	CYS	4.4
26	79	170	ALA	4.4
38	A8	2	ALA	4.4
20	BA	65	LYS	4.4
26	79	171	ILE	4.4
40	C8	29	SER	4.4
52	L5	1	MET	4.4
10	1I	57	LYS	4.4
40	C8	27	LEU	4.3
31	59	106	THR	4.3
4	3E	5	ILE	4.3
28	29	116	VAL	4.3
35	35	65	ARG	4.3
19	AI	10	PHE	4.3
3	2E	200	ALA	4.3
16	7I	29	ASP	4.3
36	45	11	LYS	4.3
45	D5	172	ALA	4.3
10	1I	65	LEU	4.3
14	5A	41	ARG	4.3
41	D8	70	ILE	4.3
9	8E	37	PHE	4.3
19	AI	40	ILE	4.3
28	21	56	PRO	4.3

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Mol	Chain	Res	Type	RSRZ
31	59	89	ILE	4.3
9	82	19	LEU	4.3
49	L8	53	LEU	4.3
14	5A	34	TYR	4.3
51	N8	58	LEU	4.3
41	D8	81	TYR	4.3
43	B5	33	LYS	4.3
10	1A	60	ARG	4.3
47	F5	32	LYS	4.3
4	32	4	TYR	4.3
36	45	6	ARG	4.3
13	4I	99	ARG	4.3
3	22	178	LEU	4.3
20	BI	56	MET	4.3
14	5I	15	LYS	4.3
26	71	69	GLY	4.3
45	D5	142	SER	4.3
8	72	89	PRO	4.3
47	J8	48	LYS	4.3
10	1A	101	VAL	4.3
5	42	20	GLN	4.3
10	1A	61	GLU	4.3
19	AI	37	ARG	4.3
9	82	70	LYS	4.2
30	49	155	MET	4.2
47	J8	36	GLY	4.2
1	13	108	G	4.2
14	5I	59	ALA	4.2
14	5A	30	ALA	4.2
36	45	7	MET	4.2
2	1E	196	LEU	4.2
30	49	41	GLN	4.2
13	4A	7	VAL	4.2
20	BA	26	ASN	4.2
46	E5	55	ARG	4.2
9	82	108	VAL	4.2
24	14	1092	C	4.2
26	71	58	VAL	4.2
14	5I	31	ARG	4.2
44	G8	92	ASN	4.2
4	3E	118	ARG	4.2
14	5A	26	ARG	4.2

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Mol	Chain	Res	Type	RSRZ
20	BA	83	ARG	4.2
21	1F	6	ARG	4.2
4	32	208	SER	4.2
28	29	150	VAL	4.2
53	Q8	28	GLY	4.2
38	A8	7	TYR	4.2
38	A8	17	ARG	4.2
50	I5	46	GLN	4.2
41	D8	87	HIS	4.2
4	32	137	SER	4.2
33	58	109	LYS	4.2
21	1F	13	ILE	4.2
31	59	171	LEU	4.2
14	5A	25	VAL	4.2
46	E5	44	ARG	4.2
8	7E	136	GLU	4.2
47	F5	21	ARG	4.1
36	45	17	LEU	4.1
38	65	36	TYR	4.1
20	BI	71	THR	4.1
9	8E	15	ALA	4.1
5	4E	18	ARG	4.1
19	AA	37	ARG	4.1
30	49	36	LYS	4.1
47	F5	92	LYS	4.1
50	I5	40	HIS	4.1
16	7I	31	LYS	4.1
19	AA	8	GLY	4.1
14	5I	19	ARG	4.1
26	71	172	HIS	4.1
30	49	37	VAL	4.1
22	2K	53	A	4.1
24	14	2900	A	4.1
5	4E	24	ARG	4.1
13	4I	94	ARG	4.1
31	59	153	LYS	4.1
36	45	22	LYS	4.1
9	82	44	VAL	4.1
4	3E	115	ARG	4.1
14	5I	7	ILE	4.1
28	21	141	ILE	4.1
9	82	113	LYS	4.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
46	E5	41	ARG	4.1
17	8A	10	VAL	4.1
45	D5	178	GLU	4.1
10	1I	61	GLU	4.1
46	I8	74	ARG	4.1
53	M5	21	LYS	4.1
38	65	35	ILE	4.1
47	J8	94	LEU	4.1
9	82	8	GLY	4.1
45	H8	86	VAL	4.1
13	4A	99	ARG	4.0
20	BA	80	ARG	4.0
40	C8	28	ARG	4.0
36	45	18	LYS	4.0
13	4A	8	GLU	4.0
36	45	100	GLY	4.0
9	82	62	TYR	4.0
15	6A	71	GLN	4.0
35	35	70	GLN	4.0
12	3I	91	LYS	4.0
12	3I	20	LYS	4.0
14	5A	29	ARG	4.0
3	2E	201	TYR	4.0
14	5I	37	PHE	4.0
10	1I	62	HIS	4.0
13	4I	90	LEU	4.0
38	A8	30	ARG	4.0
47	F5	33	LYS	4.0
35	35	71	VAL	4.0
14	5I	58	LYS	4.0
9	82	74	ILE	4.0
36	45	9	TYR	4.0
31	59	159	GLU	4.0
7	62	31	MET	4.0
38	65	3	ARG	4.0
8	7E	95	VAL	4.0
12	3A	31	PRO	4.0
46	E5	22	GLY	4.0
28	21	79	ARG	4.0
41	D8	74	LYS	4.0
13	4A	111	LYS	4.0
20	BA	28	ALA	4.0

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Mol	Chain	Res	Type	RSRZ
28	21	76	ARG	4.0
7	6E	13	GLN	3.9
13	4A	27	LYS	3.9
9	82	117	HIS	3.9
3	2E	193	TYR	3.9
50	M8	25	TYR	3.9
7	6E	34	GLY	3.9
45	H8	173	ALA	3.9
1	13	111	G	3.9
14	5I	18	VAL	3.9
19	AA	67	VAL	3.9
38	65	28	VAL	3.9
12	3I	89	ARG	3.9
24	14	1535	U	3.9
36	88	4	PRO	3.9
30	49	137	GLU	3.9
3	22	179	ARG	3.9
20	BI	11	SER	3.9
24	14	2801	A	3.9
28	21	55	ASN	3.9
12	3A	47	LYS	3.9
16	7A	29	ASP	3.9
53	Q8	46	ARG	3.9
24	1H	2902	C	3.9
12	3I	31	PRO	3.9
26	71	220	PRO	3.9
28	29	163	GLU	3.9
10	1A	8	LEU	3.9
21	1B	17	THR	3.9
8	72	134	ILE	3.9
45	D5	113	ALA	3.9
43	B5	69	TYR	3.9
4	32	11	LEU	3.9
40	C8	39	LEU	3.9
14	5A	49	HIS	3.9
47	J8	47	GLN	3.9
17	8I	43	LEU	3.9
47	J8	49	VAL	3.9
53	M5	61	LEU	3.9
11	2A	11	LYS	3.9
51	J5	59	GLU	3.9
30	49	82	LEU	3.9

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Mol	Chain	Res	Type	RSRZ
38	65	54	LEU	3.9
21	1B	5	ASP	3.9
9	82	79	LEU	3.9
31	59	103	LEU	3.9
3	22	167	TRP	3.9
12	3I	64	TYR	3.9
46	I8	6	GLY	3.9
5	42	126	ARG	3.8
13	4I	108	ARG	3.8
20	BI	15	ARG	3.8
20	BI	23	ARG	3.8
33	58	46	VAL	3.8
45	D5	117	LEU	3.8
41	D8	75	PHE	3.8
36	45	96	VAL	3.8
14	5A	36	PHE	3.8
20	BA	63	ILE	3.8
20	BI	80	ARG	3.8
27	11	262	ARG	3.8
30	49	160	VAL	3.8
10	1I	63	PHE	3.8
14	5A	37	PHE	3.8
3	2E	149	ALA	3.8
4	3E	120	LEU	3.8
30	49	108	ASN	3.8
14	5I	29	ARG	3.8
24	14	1762[A]	A	3.8
30	41	93	THR	3.8
8	7E	94	TYR	3.8
38	65	108	GLY	3.8
2	12	152	PHE	3.8
4	3E	110	PHE	3.8
4	32	23	GLY	3.8
13	4I	91	ARG	3.8
19	AI	61	TYR	3.8
21	1B	18	TYR	3.8
36	45	99	PRO	3.8
20	BA	25	ARG	3.8
28	29	149	ARG	3.8
37	55	8	ARG	3.8
5	4E	88	LYS	3.8
7	6E	12	LEU	3.8

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Mol	Chain	Res	Type	RSRZ
8	7E	88	LYS	3.8
47	J8	90	ILE	3.8
8	7E	112	LEU	3.8
2	12	99	GLY	3.8
7	62	86	GLN	3.8
14	5A	55	GLY	3.8
41	D8	45	THR	3.8
20	BI	33	ILE	3.8
20	BI	53	LEU	3.8
30	49	90	LEU	3.8
33	15	99	LEU	3.8
9	82	73	GLN	3.8
27	11	236	GLY	3.8
47	F5	25	LYS	3.8
38	65	7	TYR	3.8
17	8A	25	ARG	3.8
38	65	4	LEU	3.8
10	1I	64	GLU	3.8
13	4I	101	GLN	3.8
24	1H	2	G	3.8
22	2L	85	A	3.8
24	1H	2119	A	3.8
28	29	76	ARG	3.8
4	32	78	LEU	3.8
28	29	124	GLY	3.7
12	3I	33	ARG	3.7
17	8A	7	THR	3.7
22	2K	85	A	3.7
50	I5	55	ARG	3.7
12	3A	5	PRO	3.7
4	32	5	ILE	3.7
8	72	92	ARG	3.7
8	72	133	LEU	3.7
28	21	195	LEU	3.7
13	4A	92	HIS	3.7
33	58	108	PRO	3.7
16	7A	8	ARG	3.7
44	C5	29	GLU	3.7
33	15	73	THR	3.7
42	A5	104	THR	3.7
53	M5	58	ILE	3.7
16	7A	26	ARG	3.7

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Mol	Chain	Res	Type	RSRZ
37	55	69	ASP	3.7
24	14	2506	U	3.7
36	45	2	LEU	3.7
8	7E	134	ILE	3.7
16	7I	17	TYR	3.7
40	C8	24	TYR	3.7
30	49	178	PHE	3.7
36	45	8	LYS	3.7
44	C5	92	ASN	3.7
24	1H	615	G	3.7
46	I8	42	GLY	3.7
4	3E	105	VAL	3.7
9	8E	118	LYS	3.7
39	B8	45	PHE	3.7
4	3E	40	PRO	3.7
36	45	33	GLY	3.7
4	3E	122	ARG	3.7
24	14	1091	G	3.7
9	82	122	ALA	3.7
4	32	67	ILE	3.7
30	41	63	ILE	3.7
4	3E	170	VAL	3.7
10	1A	49	VAL	3.7
19	AA	39	THR	3.7
9	82	45	ALA	3.7
20	BA	59	ALA	3.7
16	7I	28	ARG	3.7
19	AA	43	GLU	3.7
53	M5	57	ARG	3.7
7	62	77	SER	3.7
16	7I	68	ASP	3.7
7	62	4	ARG	3.7
8	7E	84	ARG	3.7
34	68	122	LEU	3.6
19	AI	38	SER	3.6
49	H5	15	TYR	3.6
12	3A	46	LYS	3.6
5	42	25	ARG	3.6
46	E5	45	PHE	3.6
9	82	17	VAL	3.6
2	1E	139	LYS	3.6
11	2A	125	PHE	3.6

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Mol	Chain	Res	Type	RSRZ
18	9I	75	ILE	3.6
8	72	87	SER	3.6
3	2E	192	THR	3.6
46	E5	73	GLY	3.6
19	AI	69	HIS	3.6
19	AI	74	PHE	3.6
13	4A	84	ILE	3.6
12	3A	127	GLU	3.6
31	59	43	VAL	3.6
24	1H	2476	A	3.6
19	AA	82	GLY	3.6
14	5A	6	LEU	3.6
8	7E	83	ILE	3.6
51	J5	2	ALA	3.6
50	M8	32	TYR	3.6
41	D8	89	GLN	3.6
9	82	46	ALA	3.6
44	G8	91	GLU	3.6
11	2A	126	ARG	3.6
8	7E	90	GLY	3.6
14	5I	21	TYR	3.6
33	58	107	LEU	3.6
38	A8	16	ASN	3.6
42	A5	38	TYR	3.6
30	49	161	THR	3.6
19	AI	44	MET	3.6
29	31	157	VAL	3.6
10	1I	54	PHE	3.6
14	5I	16	PHE	3.6
11	2A	12	ARG	3.6
38	A8	5	THR	3.6
28	29	159	HIS	3.6
9	82	9	ARG	3.6
42	A5	103	ILE	3.6
9	82	68	GLY	3.6
28	21	193	GLY	3.6
1	13	1492[A]	A	3.6
40	85	59	ARG	3.6
12	3A	90	VAL	3.6
14	5I	9	LYS	3.6
53	M5	14	VAL	3.6
8	7E	87	SER	3.6

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Mol	Chain	Res	Type	RSRZ
4	32	115	ARG	3.5
20	BI	9	ASN	3.5
2	1E	187	LEU	3.5
12	3A	69	TYR	3.5
15	6A	25	THR	3.5
31	59	87	LEU	3.5
49	H5	28	LEU	3.5
42	A5	92	ARG	3.5
2	1E	152	PHE	3.5
14	5I	4	LYS	3.5
9	8E	75	ASP	3.5
23	4L	13	A	3.5
45	D5	154	ASP	3.5
47	F5	93	GLU	3.5
27	11	250	TRP	3.5
31	59	105	LEU	3.5
37	98	8	ARG	3.5
10	1A	63	PHE	3.5
19	AA	69	HIS	3.5
2	1E	165	VAL	3.5
5	4E	123	LEU	3.5
30	49	138	GLN	3.5
47	J8	3	LYS	3.5
36	45	71	ASP	3.5
9	82	83	ARG	3.5
13	4I	105	THR	3.5
19	AA	40	ILE	3.5
41	95	83	ARG	3.5
10	1A	55	LYS	3.5
12	3I	94	PRO	3.5
38	A8	90	GLY	3.5
16	7I	25	ARG	3.5
24	14	2899	G	3.5
28	21	75	VAL	3.5
46	I8	41	ARG	3.5
19	AA	4	SER	3.5
36	88	17	LEU	3.5
5	42	24	ARG	3.5
26	79	57	ASN	3.5
47	F5	18	ILE	3.5
2	12	69	LEU	3.5
13	4A	64	TRP	3.5

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Mol	Chain	Res	Type	RSRZ
30	41	26	GLN	3.5
43	F8	60	ARG	3.5
17	8I	37	LYS	3.5
33	15	48	MET	3.5
17	8A	27	PHE	3.5
4	32	21	LEU	3.5
2	1E	72	GLY	3.5
28	21	192	ASN	3.5
31	59	170	ARG	3.5
46	I8	44	ARG	3.5
9	82	43	ALA	3.5
14	5I	34	TYR	3.5
45	D5	107	THR	3.5
30	49	92	VAL	3.5
30	41	34	LEU	3.5
30	49	33	ARG	3.5
1	13	1323	G	3.5
12	3A	28	LYS	3.5
12	3A	118	SER	3.5
10	1A	10	GLY	3.5
12	3A	20	LYS	3.5
16	7I	12	LYS	3.5
31	59	5	GLY	3.5
26	79	165	ASN	3.4
33	15	69	GLN	3.4
14	5I	60	SER	3.4
24	14	2318	G	3.4
41	D8	36	PRO	3.4
36	45	5	ARG	3.4
42	E8	82	LEU	3.4
47	F5	26	ARG	3.4
21	1F	4	GLY	3.4
36	45	65	PHE	3.4
4	32	80	GLU	3.4
46	E5	12	ASN	3.4
16	7I	19	ILE	3.4
20	BA	72	LEU	3.4
27	19	177	LEU	3.4
28	29	155	LYS	3.4
34	25	31	LYS	3.4
47	J8	17	SER	3.4
24	14	2147	G	3.4

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Mol	Chain	Res	Type	RSRZ
8	72	132	GLU	3.4
30	41	25	TYR	3.4
35	78	71	VAL	3.4
8	7E	89	PRO	3.4
8	72	90	GLY	3.4
14	5I	23	ARG	3.4
36	88	21	THR	3.4
35	78	70	GLN	3.4
24	14	2795	G	3.4
40	C8	11	ARG	3.4
20	BA	70	SER	3.4
33	15	100	GLU	3.4
35	35	106	LEU	3.4
50	I5	50	VAL	3.4
6	5E	89	MET	3.4
2	1E	149	LEU	3.4
13	4I	103	THR	3.4
32	69	146	ALA	3.4
1	13	208	U	3.4
8	72	112	LEU	3.4
52	L5	42	LEU	3.4
4	3E	74	GLN	3.4
20	BI	14	LYS	3.4
39	75	50	ILE	3.4
45	D5	120	ILE	3.4
2	1E	93	VAL	3.4
12	3I	21	LYS	3.4
42	E8	96	ILE	3.4
4	3E	97	LEU	3.4
19	AA	34	TRP	3.4
30	49	32	PRO	3.4
26	79	43	VAL	3.4
42	A5	105	VAL	3.4
47	F5	14	VAL	3.4
39	B8	50	ILE	3.4
4	3E	137	SER	3.4
47	F5	36	GLY	3.4
3	2E	156	ARG	3.4
37	55	9	LYS	3.4
54	1G	1286	A	3.4
14	5I	33	VAL	3.4
19	AI	76	PRO	3.4

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Mol	Chain	Res	Type	RSRZ
28	21	72	VAL	3.4
17	8A	59	ILE	3.4
26	71	189	ILE	3.4
31	59	109	PHE	3.4
4	3E	69	GLY	3.4
29	31	40	GLN	3.4
36	88	19	GLY	3.4
7	6E	78	ARG	3.4
26	79	59	ARG	3.4
38	A8	3	ARG	3.4
27	19	221	VAL	3.3
4	3E	70	ILE	3.3
3	22	172	ARG	3.3
4	3E	139	ARG	3.3
35	35	50	ARG	3.3
26	79	172	HIS	3.3
9	82	106	ALA	3.3
10	1I	50	ILE	3.3
4	3E	23	GLY	3.3
18	9I	68	LYS	3.3
38	65	92	TYR	3.3
40	C8	30	LYS	3.3
20	BI	24	LEU	3.3
33	15	76	SER	3.3
45	D5	121	HIS	3.3
45	D5	144	LEU	3.3
8	7E	116	LYS	3.3
9	8E	122	ALA	3.3
21	1B	20	LYS	3.3
28	29	58	ARG	3.3
50	M8	58	ARG	3.3
2	1E	101	MET	3.3
12	3A	99	HIS	3.3
12	3A	119	LYS	3.3
38	A8	93	LYS	3.3
41	D8	73	SER	3.3
20	BI	21	LYS	3.3
41	D8	69	LYS	3.3
19	AI	75	ALA	3.3
16	7I	32	TYR	3.3
20	BA	71	THR	3.3
26	71	197	GLU	3.3

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Mol	Chain	Res	Type	RSRZ
40	85	2	PRO	3.3
45	H8	25	PRO	3.3
8	7E	85	ARG	3.3
11	2I	122	LYS	3.3
30	49	159	VAL	3.3
31	59	132	ARG	3.3
46	I8	52	GLY	3.3
24	1H	654	A	3.3
53	M5	63	PRO	3.3
49	H5	26	LEU	3.3
26	79	41	VAL	3.3
31	59	113	VAL	3.3
7	62	37	ASN	3.3
9	82	12	GLU	3.3
31	59	85	LYS	3.3
46	I8	5	LYS	3.3
53	M5	11	LYS	3.3
53	Q8	6	THR	3.3
24	1H	2062	A	3.3
27	19	247	ALA	3.3
29	39	43	LYS	3.3
36	45	85	LYS	3.3
20	BI	25	ARG	3.3
24	14	2897	U	3.3
4	3E	15	GLU	3.3
14	5I	28	GLY	3.3
20	BI	8	ARG	3.3
14	5A	4	LYS	3.3
22	2K	55	U	3.3
40	C8	31	SER	3.3
40	C8	34	LYS	3.3
29	39	205	ARG	3.3
12	3A	88	GLY	3.3
42	A5	112	GLY	3.3
28	21	52	LEU	3.3
40	C8	18	LEU	3.3
53	M5	13	ARG	3.2
21	1B	16	GLY	3.2
7	62	33	ASP	3.2
4	3E	66	ARG	3.2
12	3A	86	ARG	3.2
8	7E	111	ILE	3.2

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Mol	Chain	Res	Type	RSRZ
1	13	1451	A	3.2
14	5A	28	GLY	3.2
9	82	112	LYS	3.2
13	4I	114	ARG	3.2
20	BI	64	ASP	3.2
54	1G	1533	C	3.2
33	58	1	MET	3.2
16	7I	27	LYS	3.2
2	12	137	ARG	3.2
31	59	122	THR	3.2
50	I5	59	PHE	3.2
4	3E	101	LEU	3.2
7	62	34	GLY	3.2
27	19	219	PRO	3.2
7	6E	154	TYR	3.2
9	82	125	TYR	3.2
47	F5	20	ARG	3.2
19	AA	60	VAL	3.2
47	J8	60	PHE	3.2
12	3A	91	LYS	3.2
3	2E	162	GLN	3.2
4	3E	158	ILE	3.2
38	A8	19	LYS	3.2
38	65	59	LYS	3.2
49	H5	12	PRO	3.2
8	72	93	VAL	3.2
31	59	94	TYR	3.2
51	J5	60	VAL	3.2
27	19	224	ALA	3.2
53	M5	8	LYS	3.2
54	1G	526	C	3.2
5	4E	89	ILE	3.2
9	82	6	GLY	3.2
29	31	176	LEU	3.2
38	65	60	GLY	3.2
35	78	68	GLN	3.2
36	88	18	LYS	3.2
40	85	50	ARG	3.2
41	D8	82	ARG	3.2
24	1H	654(I)	C	3.2
47	J8	13	ILE	3.2
30	41	66	GLN	3.2

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Mol	Chain	Res	Type	RSRZ
9	8E	108	VAL	3.2
19	AA	9	VAL	3.2
38	65	91	PRO	3.2
24	14	2146	C	3.2
53	M5	5	LYS	3.2
2	12	165	VAL	3.2
14	5A	31	ARG	3.2
44	C5	35	TYR	3.2
4	32	96	LEU	3.2
29	39	181	LEU	3.2
12	3I	17	LYS	3.2
4	3E	25	ARG	3.2
19	AA	48	THR	3.2
30	41	102	PHE	3.2
4	32	197	PRO	3.2
22	2K	47	U	3.2
33	15	116	LEU	3.2
43	F8	68	ARG	3.2
28	29	127	ASP	3.2
1	13	1362(A)	C	3.1
12	3I	23	LYS	3.1
42	E8	80	PRO	3.1
10	1A	50	ILE	3.1
54	1G	1066	C	3.1
4	3E	93	PHE	3.1
16	7A	1	MET	3.1
29	39	22	ALA	3.1
7	6E	85	TYR	3.1
33	15	8	GLN	3.1
42	A5	39	THR	3.1
36	88	2	LEU	3.1
19	AA	3	ARG	3.1
53	M5	15	LYS	3.1
53	M5	47	LYS	3.1
19	AA	78	ARG	3.1
38	A8	20	ARG	3.1
53	M5	46	ARG	3.1
3	22	13	GLY	3.1
17	8I	34	LYS	3.1
1	13	1325	C	3.1
21	1F	18	TYR	3.1
24	14	2138	C	3.1

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Mol	Chain	Res	Type	RSRZ
4	3E	135	LEU	3.1
10	1A	5	ARG	3.1
17	8I	36	ILE	3.1
43	B5	3	THR	3.1
9	8E	65	VAL	3.1
12	3A	23	LYS	3.1
9	8E	9	ARG	3.1
9	8E	124	GLN	3.1
22	3L	16	C	3.1
3	22	176	HIS	3.1
4	3E	134	ASP	3.1
24	14	1093	G	3.1
46	E5	42	GLY	3.1
47	F5	13	ILE	3.1
33	15	83	LYS	3.1
33	15	108	PRO	3.1
52	L5	18	PHE	3.1
13	4A	5	ALA	3.1
24	1H	3	U	3.1
37	98	9	LYS	3.1
46	I8	4	LYS	3.1
10	1I	66	ARG	3.1
15	6A	64	ARG	3.1
28	29	126	PRO	3.1
36	45	103	MET	3.1
35	78	38	GLN	3.1
46	I8	78	TYR	3.1
53	M5	60	LEU	3.1
13	4I	95	GLY	3.1
21	1B	4	GLY	3.1
50	M8	18	CYS	3.1
4	3E	111	ALA	3.1
16	7I	39	TYR	3.1
31	59	83	TYR	3.1
47	F5	95	LEU	3.1
2	1E	76	GLN	3.1
12	3A	7	ILE	3.1
8	7E	4	ASP	3.1
40	C8	21	ALA	3.1
4	32	71	SER	3.1
19	AI	15	LEU	3.1
39	75	99	LEU	3.1

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Mol	Chain	Res	Type	RSRZ
19	AI	39	THR	3.1
16	7A	30	GLY	3.1
53	M5	23	VAL	3.1
9	82	76	ALA	3.1
29	31	156	LEU	3.1
3	22	201	TYR	3.1
5	4E	11	ILE	3.1
11	2I	42	TRP	3.1
24	14	271(C)	U	3.1
46	I8	45	PHE	3.1
7	6E	35	LYS	3.1
36	88	6	ARG	3.1
9	82	123	PRO	3.0
33	15	78	TYR	3.0
49	L8	12	PRO	3.0
29	39	172	TRP	3.0
53	Q8	5	LYS	3.0
38	65	56	LEU	3.0
30	41	23	PHE	3.0
27	11	229	VAL	3.0
16	7I	13	HIS	3.0
35	35	107	LYS	3.0
36	88	104	PHE	3.0
19	AI	8	GLY	3.0
24	14	654(L)	G	3.0
30	49	97	ASP	3.0
47	J8	16	ASN	3.0
42	E8	81	ALA	3.0
9	8E	17	VAL	3.0
24	14	2803	C	3.0
26	71	13	LYS	3.0
33	15	109	LYS	3.0
40	C8	38	THR	3.0
16	7A	10	GLY	3.0
17	8A	36	ILE	3.0
2	1E	81	VAL	3.0
7	6E	80	VAL	3.0
45	H8	74	VAL	3.0
11	2I	124	LYS	3.0
26	79	209	LEU	3.0
33	58	51	PHE	3.0
8	72	91	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
38	A8	15	ARG	3.0
10	1A	6	ILE	3.0
54	1G	1398	A	3.0
17	8A	37	LYS	3.0
31	59	17	VAL	3.0
31	59	25	LYS	3.0
20	BI	72	LEU	3.0
53	M5	2	PRO	3.0
9	82	104	ARG	3.0
10	1A	58	ASP	3.0
29	39	72	ARG	3.0
46	E5	57	PHE	3.0
4	32	8	VAL	3.0
1	13	112	G	3.0
38	A8	89	ARG	3.0
3	2E	4	LYS	3.0
9	82	82	ALA	3.0
28	21	3	GLY	3.0
20	BI	63	ILE	3.0
41	95	72	VAL	3.0
14	5I	6	LEU	3.0
24	14	2118	U	3.0
40	C8	25	TRP	3.0
50	M8	8	LYS	3.0
3	22	184	TYR	3.0
14	5I	25	VAL	3.0
28	29	143	ASN	3.0
27	19	254	THR	3.0
36	45	1	MET	3.0
3	2E	189	ALA	3.0
12	3A	64	TYR	3.0
16	7I	4	ILE	3.0
21	1F	5	ASP	3.0
21	1B	21	TYR	3.0
28	21	111	ARG	3.0
46	I8	79	VAL	3.0
53	M5	22	VAL	3.0
12	3I	28	LYS	3.0
36	45	98	LYS	3.0
21	1B	23	PRO	3.0
31	59	167	GLU	3.0
14	5A	21	TYR	3.0

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Mol	Chain	Res	Type	RSRZ
28	21	198	VAL	3.0
38	65	37	ALA	3.0
47	J8	41	ARG	3.0
45	H8	170	THR	3.0
14	5A	42	ILE	2.9
19	AI	9	VAL	2.9
20	BA	13	LEU	2.9
4	32	206	PHE	2.9
28	29	141	ILE	2.9
35	35	63	PRO	2.9
44	G8	84	ARG	2.9
9	8E	40	LEU	2.9
44	C5	81	LYS	2.9
47	F5	10	LYS	2.9
4	3E	152	SER	2.9
47	F5	17	SER	2.9
12	3I	99	HIS	2.9
24	14	2798	C	2.9
47	F5	28	GLY	2.9
47	F5	42	GLN	2.9
36	88	10	ARG	2.9
4	32	156	GLU	2.9
10	1A	68	HIS	2.9
45	D5	165	VAL	2.9
12	3I	98	TYR	2.9
19	AA	52	TYR	2.9
27	19	53	PHE	2.9
30	41	100	TRP	2.9
10	1A	45	ARG	2.9
13	4A	102	ARG	2.9
21	1B	24	ARG	2.9
44	C5	19	LYS	2.9
22	2L	55	U	2.9
27	19	253	GLN	2.9
20	BI	20	LEU	2.9
20	BA	24	LEU	2.9
39	B8	99	LEU	2.9
29	39	97	TYR	2.9
3	22	186	PHE	2.9
24	1H	2334	G	2.9
1	13	110	C	2.9
53	M5	12	LYS	2.9

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Mol	Chain	Res	Type	RSRZ
4	3E	8	VAL	2.9
9	8E	111	ARG	2.9
13	4I	107	ALA	2.9
20	BI	19	SER	2.9
54	1G	1393	U	2.9
36	45	73	PRO	2.9
31	59	161	GLY	2.9
35	78	69	GLY	2.9
2	1E	138	LEU	2.9
4	3E	14	ARG	2.9
4	32	122	ARG	2.9
53	M5	41	ILE	2.9
16	7I	11	SER	2.9
49	L8	20	LYS	2.9
20	BI	55	ILE	2.9
36	45	14	ARG	2.9
15	6A	62	GLN	2.9
19	AA	70	LYS	2.9
20	BI	58	LYS	2.9
41	D8	80	GLN	2.9
1	13	1044	A	2.9
14	5A	23	ARG	2.9
28	21	10	GLY	2.9
12	3A	18	VAL	2.9
27	19	51	VAL	2.9
28	21	5	LEU	2.9
52	L5	46	VAL	2.9
20	BA	77	ALA	2.9
28	29	122	PHE	2.9
28	29	123	ALA	2.9
7	6E	4	ARG	2.9
14	5I	32	SER	2.9
29	31	164	ARG	2.9
26	7I	215	THR	2.9
49	L8	13	ILE	2.9
54	1G	1067	A	2.9
11	2I	13	GLN	2.9
2	12	134	GLU	2.9
52	L5	49	ARG	2.9
15	6A	70	LEU	2.9
33	58	43	THR	2.9
44	G8	83	THR	2.9

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Mol	Chain	Res	Type	RSRZ
24	1H	5	A	2.9
34	25	33	ALA	2.9
19	AA	18	LYS	2.9
35	78	64	LYS	2.9
36	45	87	LYS	2.9
2	1E	98	LEU	2.9
28	29	189	PRO	2.9
35	78	35	HIS	2.9
53	M5	31	HIS	2.9
5	4E	19	MET	2.8
9	82	77	ILE	2.8
12	3A	100	ILE	2.8
38	A8	49	VAL	2.8
9	82	33	PHE	2.8
10	1A	69	ASN	2.8
10	1I	55	LYS	2.8
44	C5	69	ALA	2.8
15	6A	31	LEU	2.8
9	8E	14	VAL	2.8
50	M8	5	ILE	2.8
2	1E	97	TRP	2.8
20	BA	66	ALA	2.8
31	59	4	ILE	2.8
38	65	13	ARG	2.8
11	2I	50	TYR	2.8
4	32	64	LEU	2.8
9	8E	79	LEU	2.8
16	7A	9	PHE	2.8
53	M5	34	TRP	2.8
4	32	77	ASN	2.8
17	8A	26	GLN	2.8
4	3E	11	LEU	2.8
13	4A	26	GLY	2.8
29	39	208	GLY	2.8
20	BA	87	LYS	2.8
46	I8	77	ARG	2.8
12	3A	71	PRO	2.8
9	8E	6	GLY	2.8
12	3A	53	ARG	2.8
46	E5	40	GLN	2.8
50	I5	62	ARG	2.8
53	M5	29	LYS	2.8

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Mol	Chain	Res	Type	RSRZ
33	15	51	PHE	2.8
16	7I	7	ALA	2.8
42	A5	74	ALA	2.8
3	22	12	LEU	2.8
46	E5	70	GLN	2.8
29	31	174	VAL	2.8
38	65	31	SER	2.8
7	62	42	ILE	2.8
3	2E	161	GLU	2.8
36	45	91	GLU	2.8
20	BA	64	ASP	2.8
19	AA	15	LEU	2.8
30	49	12	TYR	2.8
19	AA	68	GLY	2.8
20	BI	101	GLY	2.8
24	14	654(K)	C	2.8
41	D8	72	VAL	2.8
50	M8	26	SER	2.8
50	I5	49	PHE	2.8
16	7I	8	ARG	2.8
45	H8	79	ARG	2.8
46	I8	70	GLN	2.8
28	21	57	LYS	2.8
35	35	60	MET	2.8
36	45	63	LYS	2.8
8	7E	5	PRO	2.8
26	79	220	PRO	2.8
29	31	181	LEU	2.8
30	49	2	PRO	2.8
35	35	48	PRO	2.8
26	79	175	VAL	2.8
2	12	162	ILE	2.8
8	7E	91	ARG	2.8
33	58	118	LYS	2.8
47	J8	18	ILE	2.8
12	3I	127	GLU	2.8
50	M8	23	GLU	2.8
2	1E	77	ALA	2.8
3	22	200	ALA	2.8
4	32	120	LEU	2.8
17	8A	43	LEU	2.8
34	25	29	ASN	2.8

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Mol	Chain	Res	Type	RSRZ
53	M5	50	LEU	2.8
1	13	377	G	2.8
1	13	1233	G	2.8
40	C8	14	HIS	2.8
15	6I	72	ARG	2.8
15	6A	63	ARG	2.8
39	B8	51	ARG	2.8
42	E8	17	VAL	2.8
46	E5	20	ARG	2.8
49	H5	20	LYS	2.8
5	4E	122	GLU	2.8
9	8E	47	LEU	2.8
15	6A	56	LEU	2.8
26	79	54	SER	2.8
37	55	10	LEU	2.8
9	8E	114	TYR	2.8
19	AA	36	ARG	2.8
35	78	107	LYS	2.8
38	65	30	ARG	2.8
54	1G	1392	G	2.7
35	35	45	LEU	2.7
3	2E	164	ARG	2.7
5	42	29	GLY	2.7
30	49	11	TYR	2.7
32	61	27	ARG	2.7
40	C8	57	PHE	2.7
31	59	168	PRO	2.7
47	J8	70	VAL	2.7
17	8A	65	ILE	2.7
9	82	127	LYS	2.7
10	1A	71	LEU	2.7
30	49	136	ARG	2.7
53	Q8	60	LEU	2.7
24	14	615	G	2.7
24	14	1763	G	2.7
28	29	113	PHE	2.7
44	G8	89	PHE	2.7
47	J8	62	VAL	2.7
1	13	1350	A	2.7
31	59	112	PRO	2.7
15	6A	65	ARG	2.7
40	C8	118	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
22	2L	47	U	2.7
45	H8	166	SER	2.7
10	1I	56	HIS	2.7
36	45	13	GLN	2.7
19	AI	70	LYS	2.7
20	BA	62	LEU	2.7
21	1B	9	ARG	2.7
28	29	195	LEU	2.7
46	I8	53	MET	2.7
7	6E	83	ALA	2.7
36	45	19	GLY	2.7
36	45	74	TYR	2.7
38	A8	6	ALA	2.7
44	C5	93	GLY	2.7
14	5A	56	VAL	2.7
16	7A	12	LYS	2.7
19	AI	4	SER	2.7
34	25	2	ILE	2.7
47	J8	7	ILE	2.7
35	35	14	LYS	2.7
46	E5	39	ARG	2.7
28	29	192	ASN	2.7
50	I5	60	GLN	2.7
29	31	41	LEU	2.7
4	32	54	TYR	2.7
11	2A	50	TYR	2.7
45	D5	175	VAL	2.7
10	1I	98	ILE	2.7
12	3I	46	LYS	2.7
13	4A	25	ILE	2.7
47	J8	10	LYS	2.7
1	13	950	U	2.7
8	7E	59	LEU	2.7
24	14	1078	U	2.7
2	1E	94	ASN	2.7
13	4I	106	ASN	2.7
47	J8	51	VAL	2.7
16	7A	25	ARG	2.7
28	21	77	ILE	2.7
30	49	157	ILE	2.7
40	C8	37	GLU	2.7
53	M5	25	MET	2.7

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Mol	Chain	Res	Type	RSRZ
20	BI	69	GLY	2.7
34	25	26	LYS	2.7
42	E8	113	LYS	2.7
20	BA	76	ALA	2.7
26	71	35	ALA	2.7
46	E5	56	ASP	2.7
28	21	151	TYR	2.7
36	45	80	GLU	2.7
20	BA	20	LEU	2.7
2	1E	133	LYS	2.7
17	8I	28	PRO	2.7
4	32	76	ARG	2.7
19	AI	36	ARG	2.7
20	BI	34	LYS	2.7
20	BA	14	LYS	2.7
41	95	73	SER	2.7
29	31	133	ASN	2.7
29	39	183	VAL	2.7
50	M8	55	ARG	2.7
4	32	161	ASN	2.7
47	J8	6	GLU	2.7
2	12	115	LEU	2.7
12	3A	21	LYS	2.7
2	12	131	PRO	2.7
2	12	71	VAL	2.7
13	4A	100	GLY	2.7
14	5I	26	ARG	2.7
20	BI	85	MET	2.7
21	1B	26	LYS	2.7
35	35	51	PHE	2.7
40	85	54	LYS	2.7
46	E5	19	LYS	2.7
19	AI	14	HIS	2.7
33	58	53	VAL	2.7
7	62	28	ASN	2.7
28	29	134	ILE	2.7
34	25	32	TYR	2.7
35	35	150	ALA	2.7
20	BA	29	LYS	2.7
47	J8	32	LYS	2.7
4	3E	49	ARG	2.7
5	42	22	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
26	71	192	PHE	2.7
28	29	135	HIS	2.7
7	62	40	ALA	2.7
39	75	94	ALA	2.7
47	F5	37	ILE	2.7
14	5A	44	LEU	2.7
29	31	33	LEU	2.7
35	35	47	ASP	2.7
28	21	47	VAL	2.7
36	45	4	PRO	2.7
45	H8	116	VAL	2.7
3	2E	160	ALA	2.7
28	21	159	HIS	2.7
35	35	64	LYS	2.6
49	H5	17	LYS	2.6
13	4I	88	ARG	2.6
27	19	262	ARG	2.6
29	39	32	LEU	2.6
19	AI	12	ASP	2.6
8	72	31	PHE	2.6
28	29	105	THR	2.6
23	4K	15	A	2.6
26	71	31	GLU	2.6
36	45	90	VAL	2.6
4	3E	207	TYR	2.6
26	71	49	ILE	2.6
29	31	167	ALA	2.6
24	14	859	G	2.6
38	A8	87	PHE	2.6
14	5I	22	THR	2.6
2	1E	27	LYS	2.6
2	1E	75	LYS	2.6
39	75	73	GLU	2.6
2	12	201	ILE	2.6
52	L5	47	ARG	2.6
26	71	9	ALA	2.6
27	11	247	ALA	2.6
2	1E	70	PHE	2.6
5	42	45	PHE	2.6
26	71	163	PHE	2.6
38	65	112	PHE	2.6
2	12	130	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
4	32	65	ARG	2.6
15	6A	73	GLU	2.6
19	AI	66	MET	2.6
38	A8	22	GLY	2.6
27	19	183	ARG	2.6
7	6E	38	LEU	2.6
7	62	104	LEU	2.6
12	3A	26	ALA	2.6
16	7I	15	PRO	2.6
27	19	37	LEU	2.6
38	A8	24	LEU	2.6
7	6E	26	PHE	2.6
41	95	75	PHE	2.6
24	1H	976	C	2.6
28	21	109	LYS	2.6
41	D8	79	VAL	2.6
50	M8	56	VAL	2.6
7	6E	16	LEU	2.6
9	8E	63	ILE	2.6
20	BA	36	LEU	2.6
36	45	32	TYR	2.6
49	L8	8	LEU	2.6
14	5A	54	PRO	2.6
21	1F	23	PRO	2.6
24	14	1087	G	2.6
24	14	2321	G	2.6
23	4K	22	A	2.6
47	J8	65	SER	2.6
14	5A	52	GLN	2.6
2	1E	108	ILE	2.6
54	1G	1115	C	2.6
10	1A	48	THR	2.6
13	4A	103	THR	2.6
14	5I	41	ARG	2.6
27	11	53	PHE	2.6
4	32	72	GLU	2.6
10	1I	49	VAL	2.6
31	59	115	VAL	2.6
36	45	15	GLY	2.6
2	1E	142	LEU	2.6
12	3I	7	ILE	2.6
20	BI	76	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
20	BA	21	LYS	2.6
23	4L	14	A	2.6
28	29	133	LYS	2.6
28	29	145	LYS	2.6
47	J8	91	LYS	2.6
7	62	41	ARG	2.6
29	31	175	THR	2.6
2	12	164	VAL	2.6
53	M5	7	HIS	2.6
31	59	41	MET	2.6
7	6E	86	GLN	2.6
4	32	93	PHE	2.6
24	1H	654(L)	G	2.6
33	15	72	TYR	2.6
35	35	18	ARG	2.6
36	45	20	ALA	2.6
17	8A	35	VAL	2.6
14	5I	11	LYS	2.6
40	C8	16	LYS	2.6
52	L5	23	ARG	2.6
4	3E	206	PHE	2.6
27	11	230	ASP	2.6
52	P8	45	ALA	2.6
1	13	389	A	2.6
31	59	160	LYS	2.6
47	F5	23	LYS	2.6
3	22	6	HIS	2.6
7	62	30	ILE	2.6
12	3A	27	LEU	2.6
46	E5	69	PHE	2.6
26	79	50	ASP	2.6
19	AA	76	PRO	2.6
50	M8	7	PRO	2.6
31	51	171	LEU	2.6
53	M5	6	THR	2.6
26	71	3	HIS	2.6
29	39	40	GLN	2.6
49	L8	10	LYS	2.6
27	19	211	ARG	2.6
30	49	128	ARG	2.6
4	3E	154	ASN	2.6
12	3A	49	ASN	2.6

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Mol	Chain	Res	Type	RSRZ
16	7I	6	LEU	2.6
17	8A	22	LEU	2.6
28	29	147	PRO	2.6
49	H5	53	LEU	2.6
51	J5	30	LEU	2.6
53	M5	27	THR	2.6
36	45	104	PHE	2.5
20	BI	81	LYS	2.5
42	A5	4	LYS	2.5
9	82	28	VAL	2.5
17	8A	8	GLY	2.5
25	1J	59	A	2.5
47	J8	93	GLU	2.5
28	21	167	VAL	2.5
29	31	44	ARG	2.5
35	78	79	ARG	2.5
29	31	155	LEU	2.5
41	D8	78	LYS	2.5
48	G5	23	LYS	2.5
4	3E	114	ARG	2.5
9	8E	128	ARG	2.5
20	BA	60	GLU	2.5
27	19	181	GLU	2.5
28	29	7	VAL	2.5
24	1H	2135	A	2.5
30	49	94	LEU	2.5
38	A8	110	LEU	2.5
42	A5	51	LEU	2.5
4	3E	136	PRO	2.5
24	14	1102	C	2.5
26	79	208	PHE	2.5
42	A5	106	ILE	2.5
30	41	27	ASN	2.5
28	29	187	ALA	2.5
35	35	30	THR	2.5
47	F5	29	GLY	2.5
7	62	35	LYS	2.5
52	L5	32	LYS	2.5
8	72	101	PRO	2.5
20	BA	22	ARG	2.5
28	21	138	PRO	2.5
41	D8	88	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
1	13	1397	C	2.5
20	BA	30	LYS	2.5
28	29	118	LYS	2.5
14	5A	35	ARG	2.5
53	Q8	30	ARG	2.5
2	12	112	VAL	2.5
8	7E	118	VAL	2.5
30	41	65	GLY	2.5
33	58	45	ASN	2.5
34	25	74	GLY	2.5
53	M5	10	ALA	2.5
9	8E	7	THR	2.5
41	D8	76	LYS	2.5
35	35	59	LEU	2.5
10	1A	51	ARG	2.5
30	41	13	GLU	2.5
28	29	137	HIS	2.5
28	29	148	GLY	2.5
37	98	71	GLN	2.5
41	D8	77	ALA	2.5
37	55	4	LEU	2.5
31	59	149	ARG	2.5
24	14	901	A	2.5
28	21	51	PHE	2.5
28	29	156	MET	2.5
9	8E	105	ASP	2.5
29	39	36	VAL	2.5
47	J8	15	ALA	2.5
2	1E	175	ARG	2.5
47	J8	61	ARG	2.5
47	F5	40	ARG	2.5
14	5I	61	TRP	2.5
10	1I	48	THR	2.5
28	21	107	THR	2.5
9	8E	78	LYS	2.5
24	14	909	A	2.5
3	22	7	PRO	2.5
12	3A	120	TYR	2.5
27	11	34	VAL	2.5
31	59	114	VAL	2.5
38	65	10	ARG	2.5
40	C8	26	GLY	2.5

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Mol	Chain	Res	Type	RSRZ
19	AA	14	HIS	2.5
4	3E	61	LYS	2.5
5	4E	131	ILE	2.5
30	49	77	ILE	2.5
28	29	117	MET	2.5
34	25	65	THR	2.5
44	C5	75	ILE	2.5
2	1E	59	GLU	2.5
7	6E	5	ARG	2.5
36	45	82	ARG	2.5
26	79	178	ALA	2.5
30	49	25	TYR	2.5
49	H5	31	LEU	2.5
50	I5	45	GLY	2.5
20	BA	18	GLN	2.5
49	H5	32	GLN	2.5
27	19	220	HIS	2.5
36	45	76	LYS	2.5
37	98	5	LYS	2.5
10	1I	38	ILE	2.5
36	88	103	MET	2.5
44	G8	5	MET	2.5
21	1F	22	ARG	2.5
43	B5	68	ARG	2.5
33	15	80	GLY	2.5
33	15	82	LEU	2.5
46	E5	61	ALA	2.5
31	59	123	PHE	2.5
40	C8	32	PHE	2.5
41	95	76	LYS	2.5
42	E8	97	LYS	2.5
24	14	631	A	2.5
51	N8	23	HIS	2.5
12	3I	15	ARG	2.5
4	3E	108	LEU	2.5
34	25	25	LEU	2.5
44	G8	101	LYS	2.5
1	13	107	G	2.5
19	AA	62	ILE	2.5
54	1G	1112	C	2.4
15	6A	66	LEU	2.4
16	7I	10	GLY	2.4

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Mol	Chain	Res	Type	RSRZ
19	AA	45	VAL	2.4
24	14	2320	A	2.4
46	I8	51	VAL	2.4
48	G5	60	LEU	2.4
45	D5	104	PHE	2.4
33	58	8	GLN	2.4
34	25	37	ASP	2.4
2	12	155	LEU	2.4
8	72	98	LYS	2.4
44	G8	94	LYS	2.4
54	1G	1084	G	2.4
2	1E	163	PHE	2.4
20	BI	66	ALA	2.4
36	45	93	TYR	2.4
17	8A	91	ARG	2.4
30	41	143	GLU	2.4
34	25	19	ILE	2.4
44	C5	5	MET	2.4
17	8I	98	LEU	2.4
46	I8	38	VAL	2.4
44	G8	86	ARG	2.4
52	L5	41	ARG	2.4
8	7E	6	ILE	2.4
4	32	51	PRO	2.4
10	1I	37	PRO	2.4
16	7I	3	LYS	2.4
54	1G	1450	U	2.4
15	6A	54	ARG	2.4
27	11	234	GLY	2.4
28	29	79	ARG	2.4
28	29	161	GLY	2.4
15	6A	69	TYR	2.4
29	31	184	TYR	2.4
19	AA	32	LYS	2.4
42	E8	83	LYS	2.4
1	13	390	C	2.4
3	2E	11	ARG	2.4
8	72	9	MET	2.4
31	59	154	PRO	2.4
17	8A	11	VAL	2.4
28	29	9	VAL	2.4
31	59	131	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
32	69	12	LEU	2.4
3	2E	180	ALA	2.4
11	2A	89	ALA	2.4
37	98	21	TYR	2.4
47	J8	38	SER	2.4
2	12	80	ILE	2.4
30	41	164	GLU	2.4
31	59	121	ILE	2.4
15	6A	67	LEU	2.4
28	29	115	GLY	2.4
28	29	125	GLY	2.4
24	14	1090	U	2.4
1	13	1236	A	2.4
29	39	64	ILE	2.4
42	A5	6	ILE	2.4
3	22	204	LEU	2.4
10	1A	40	LEU	2.4
15	6A	32	LEU	2.4
27	11	147	LEU	2.4
33	15	23	LEU	2.4
36	45	97	VAL	2.4
49	H5	9	VAL	2.4
28	29	8	LYS	2.4
4	3E	68	TYR	2.4
26	79	166	ASP	2.4
54	1G	1065	U	2.4
8	7E	109	ILE	2.4
31	59	84	SER	2.4
4	32	157	LEU	2.4
28	21	7	VAL	2.4
33	15	122	VAL	2.4
1	13	331	G	2.4
1	13	1224	G	2.4
47	F5	16	ASN	2.4
54	1G	878	G	2.4
3	22	180	ALA	2.4
14	5I	35	ARG	2.4
16	7A	13	HIS	2.4
3	2E	182	ILE	2.4
34	25	69	ILE	2.4
50	M8	14	ILE	2.4
8	7E	137	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
9	82	102	LEU	2.4
28	29	109	LYS	2.4
40	85	60	LEU	2.4
51	N8	57	VAL	2.4
2	12	140	HIS	2.4
14	5I	5	ALA	2.4
14	5I	57	ARG	2.4
16	7A	28	ARG	2.4
28	29	157	ALA	2.4
31	59	104	GLU	2.4
36	45	38	GLU	2.4
37	55	102	GLU	2.4
39	75	48	ILE	2.4
54	1G	1224	G	2.4
12	3I	27	LEU	2.4
30	49	74	LYS	2.4
35	35	118	GLY	2.4
46	E5	54	GLY	2.4
1	13	1367	C	2.4
13	4A	110	ARG	2.4
54	1G	1395	C	2.4
20	BI	59	ALA	2.4
10	1A	38	ILE	2.4
36	45	75	THR	2.4
47	F5	34	THR	2.4
6	5E	55	ASP	2.4
7	6E	103	TRP	2.4
16	7A	6	LEU	2.4
49	H5	8	LEU	2.4
3	22	2	GLY	2.4
12	3I	18	VAL	2.4
20	BA	69	GLY	2.4
24	14	2319	G	2.4
27	19	15	PHE	2.4
38	A8	27	SER	2.4
52	P8	1	MET	2.4
9	82	13	ALA	2.4
21	1B	3	LYS	2.4
40	C8	46	ALA	2.4
13	4A	63	THR	2.4
33	58	15	LEU	2.4
3	22	198	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
35	35	77	ARG	2.3
42	A5	46	PHE	2.3
47	J8	21	ARG	2.3
9	82	31	GLN	2.3
46	E5	53	MET	2.3
20	BA	68	LYS	2.3
53	Q8	11	LYS	2.3
7	62	12	LEU	2.3
8	7E	13	ILE	2.3
9	8E	125	TYR	2.3
28	29	114	ALA	2.3
4	32	135	LEU	2.3
13	4A	96	LEU	2.3
30	49	88	ILE	2.3
4	3E	73	ARG	2.3
8	72	85	ARG	2.3
17	8I	91	ARG	2.3
28	21	196	VAL	2.3
34	68	35	VAL	2.3
50	I5	61	ARG	2.3
54	1G	879	C	2.3
2	12	141	GLU	2.3
15	6I	71	GLN	2.3
53	Q8	29	LYS	2.3
53	M5	26	LYS	2.3
30	41	35	GLU	2.3
18	9I	17	SER	2.3
24	14	2585	U	2.3
15	6I	31	LEU	2.3
15	6I	67	LEU	2.3
32	6I	12	LEU	2.3
40	85	17	ILE	2.3
47	J8	58	ILE	2.3
33	58	115	ARG	2.3
3	2E	195	VAL	2.3
4	32	110	PHE	2.3
9	82	67	GLY	2.3
13	4I	7	VAL	2.3
29	31	193	VAL	2.3
35	35	82	GLY	2.3
38	65	11	LYS	2.3
50	I5	47	GLN	2.3

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Mol	Chain	Res	Type	RSRZ
54	1G	1129	C	2.3
3	22	5	ILE	2.3
8	7E	110	ALA	2.3
11	2A	25	TYR	2.3
12	3I	97	ARG	2.3
12	3A	60	LEU	2.3
15	6I	68	ARG	2.3
16	7I	5	ARG	2.3
20	BA	12	ALA	2.3
27	19	155	LEU	2.3
47	J8	37	ILE	2.3
47	F5	11	ARG	2.3
54	1G	1394	A	2.3
40	C8	15	LYS	2.3
16	7I	67	THR	2.3
36	88	91	GLU	2.3
44	C5	12	THR	2.3
50	M8	20	ASN	2.3
53	Q8	40	GLU	2.3
20	BI	86	ARG	2.3
2	1E	80	ILE	2.3
19	AA	75	ALA	2.3
24	1H	654(H)	G	2.3
46	I8	75	LEU	2.3
7	6E	77	SER	2.3
27	11	246	PRO	2.3
39	B8	30	VAL	2.3
16	7I	37	GLY	2.3
50	M8	34	GLU	2.3
10	1I	70	ARG	2.3
35	35	49	ARG	2.3
46	E5	43	THR	2.3
4	32	134	ASP	2.3
6	5E	92	LYS	2.3
8	72	135	CYS	2.3
11	2I	123	LYS	2.3
27	19	4	LYS	2.3
28	29	154	LYS	2.3
39	75	100	TYR	2.3
39	75	114	LEU	2.3
42	A5	72	LYS	2.3
4	32	7	PRO	2.3

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Mol	Chain	Res	Type	RSRZ
15	6A	27	VAL	2.3
26	79	214	VAL	2.3
30	49	23	PHE	2.3
31	59	125	VAL	2.3
40	85	40	PHE	2.3
50	M8	21	VAL	2.3
51	J5	28	PRO	2.3
53	Q8	14	VAL	2.3
19	AA	44	MET	2.3
33	58	13	TRP	2.3
49	H5	19	GLN	2.3
2	12	148	TYR	2.3
5	4E	31	LEU	2.3
7	6E	33	ASP	2.3
29	39	42	ALA	2.3
29	39	49	ALA	2.3
40	C8	80	ILE	2.3
14	5I	36	PHE	2.3
29	31	129	PHE	2.3
2	1E	26	PRO	2.3
17	8A	24	GLU	2.3
42	E8	92	ARG	2.3
4	32	123	HIS	2.3
9	8E	102	LEU	2.3
28	21	78	LEU	2.3
33	15	107	LEU	2.3
54	1G	693	G	2.3
5	42	17	ALA	2.3
5	42	98	THR	2.3
24	1H	899	A	2.3
25	1J	52	A	2.3
45	D5	116	VAL	2.3
4	32	114	ARG	2.3
27	19	217	ARG	2.3
44	C5	84	ARG	2.3
17	8I	2	PRO	2.3
37	98	6	SER	2.3
1	13	877	C	2.3
2	12	187	LEU	2.3
8	7E	119	LEU	2.3
17	8A	6	LEU	2.3
2	1E	185	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
8	7E	80	ILE	2.3
13	4I	78	ILE	2.3
24	1H	2108	C	2.3
38	65	26	LEU	2.3
27	11	64	ILE	2.3
7	62	117	ALA	2.3
19	AI	41	VAL	2.3
20	BI	75	ASN	2.3
28	21	160	TYR	2.3
27	19	52	ARG	2.3
36	45	69	PHE	2.3
41	95	79	VAL	2.3
54	1G	1235	U	2.3
16	7A	27	LYS	2.3
19	AI	32	LYS	2.3
27	19	5	LYS	2.3
38	65	57	LYS	2.3
54	1G	46	G	2.3
54	1G	502	G	2.3
46	I8	47	PRO	2.3
2	12	138	LEU	2.3
13	4I	92	HIS	2.3
15	6A	72	ARG	2.3
26	71	194	ARG	2.3
33	15	119	ARG	2.3
24	14	868	U	2.3
47	J8	45	ASN	2.3
54	1G	400	C	2.3
27	11	226	MET	2.3
5	4E	101	ILE	2.3
5	42	27	ARG	2.3
14	5A	19	ARG	2.3
24	1H	989	G	2.3
24	14	271(B)	G	2.3
30	41	152	LEU	2.3
38	65	17	ARG	2.3
42	E8	95	ILE	2.3
44	C5	2	ARG	2.3
9	8E	113	LYS	2.3
35	78	51	PHE	2.3
40	C8	35	ALA	2.3
44	C5	47	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
45	H8	85	HIS	2.3
49	H5	10	LYS	2.3
8	72	4	ASP	2.3
24	1H	1537	C	2.3
21	1F	9	ARG	2.3
42	A5	36	LEU	2.3
11	2A	108	ILE	2.3
28	21	197	ILE	2.3
29	39	82	ILE	2.3
41	95	78	LYS	2.3
9	8E	5	TYR	2.3
40	C8	8	VAL	2.3
34	25	36	GLY	2.2
2	1E	73	THR	2.2
3	22	183	ASP	2.2
19	AA	81	ARG	2.2
20	BI	26	ASN	2.2
28	21	105	THR	2.2
37	98	1	MET	2.2
51	J5	26	THR	2.2
53	M5	62	LEU	2.2
41	D8	85	LYS	2.2
53	M5	36	LYS	2.2
4	3E	42	GLN	2.2
4	3E	124	GLY	2.2
6	52	53	ALA	2.2
12	3A	30	ALA	2.2
33	15	47	ALA	2.2
29	39	39	TRP	2.2
45	D5	169	GLU	2.2
47	F5	38	SER	2.2
7	6E	59	LEU	2.2
28	21	183	LEU	2.2
29	39	155	LEU	2.2
46	E5	24	LYS	2.2
36	88	68	ILE	2.2
34	25	58	VAL	2.2
12	3I	95	GLY	2.2
44	G8	35	TYR	2.2
9	8E	42	ARG	2.2
16	7A	18	ARG	2.2
38	65	9	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
3	22	4	LYS	2.2
4	3E	58	LEU	2.2
20	BA	84	LEU	2.2
27	19	38	LYS	2.2
33	15	87	LEU	2.2
9	8E	101	PHE	2.2
46	I8	57	PHE	2.2
45	H8	27	VAL	2.2
2	12	92	TYR	2.2
4	3E	10	ARG	2.2
4	32	117	ALA	2.2
14	5A	45	ARG	2.2
24	1H	2899	G	2.2
24	14	387	U	2.2
26	79	203	GLY	2.2
33	15	77	GLY	2.2
37	98	7	GLY	2.2
44	C5	91	GLU	2.2
7	62	156	TRP	2.2
22	3L	19	C	2.2
8	7E	9	MET	2.2
44	C5	7	VAL	2.2
2	1E	31	TYR	2.2
5	4E	22	GLY	2.2
9	82	72	GLY	2.2
12	3A	72	GLY	2.2
35	35	38	GLN	2.2
36	45	72	LYS	2.2
42	A5	73	ALA	2.2
52	L5	2	LYS	2.2
12	3A	10	LEU	2.2
28	29	78	LEU	2.2
54	1G	43	C	2.2
20	BA	15	ARG	2.2
29	31	173	VAL	2.2
35	78	41	ARG	2.2
40	C8	50	ARG	2.2
40	85	3	ARG	2.2
30	49	89	GLY	2.2
42	E8	94	ASP	2.2
47	J8	69	LYS	2.2
15	6I	62	GLN	2.2

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Mol	Chain	Res	Type	RSRZ
35	35	58	THR	2.2
7	6E	99	LEU	2.2
17	8A	31	LEU	2.2
26	79	47	LEU	2.2
34	25	8	LEU	2.2
2	12	172	ILE	2.2
8	7E	129	VAL	2.2
9	82	71	SER	2.2
15	6A	35	ARG	2.2
26	71	208	PHE	2.2
43	F8	28	PHE	2.2
53	Q8	57	ARG	2.2
1	13	306	G	2.2
28	21	6	GLY	2.2
36	88	12	GLN	2.2
53	M5	24	ALA	2.2
43	B5	92	LEU	2.2
12	3I	32	PHE	2.2
33	15	117	PHE	2.2
34	25	18	LYS	2.2
35	78	76	LYS	2.2
36	88	69	PHE	2.2
3	22	39	ILE	2.2
5	42	129	ILE	2.2
51	N8	13	LYS	2.2
27	19	173	VAL	2.2
42	A5	101	SER	2.2
54	1G	1111	A	2.2
20	BI	60	GLU	2.2
46	I8	73	GLY	2.2
49	L8	14	GLY	2.2
7	62	154	TYR	2.2
12	3I	68	ALA	2.2
4	32	97	LEU	2.2
7	6E	106	GLN	2.2
9	82	47	LEU	2.2
30	41	97	ASP	2.2
41	95	36	PRO	2.2
10	1A	7	LYS	2.2
24	14	1980	G	2.2
29	31	158	THR	2.2
29	39	45	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
33	58	121	LYS	2.2
49	L8	17	LYS	2.2
4	3E	123	HIS	2.2
29	39	75	HIS	2.2
38	A8	18	ILE	2.2
30	41	30	GLU	2.2
49	H5	59	VAL	2.2
28	29	140	SER	2.2
24	1H	887	A	2.2
2	1E	146	GLN	2.2
26	79	53	ARG	2.2
20	BA	55	ILE	2.2
24	14	2804	C	2.2
26	71	27	HIS	2.2
36	45	66	ILE	2.2
38	A8	28	VAL	2.2
45	H8	105	VAL	2.2
31	59	100	GLY	2.2
54	1G	1190	G	2.2
4	32	49	ARG	2.2
4	32	118	ARG	2.2
7	62	2	ALA	2.2
9	8E	112	LYS	2.2
9	82	118	LYS	2.2
12	3A	98	TYR	2.2
27	19	184	LYS	2.2
27	19	212	SER	2.2
30	41	107	LEU	2.2
33	15	115	ARG	2.2
44	G8	33	LYS	2.2
4	32	119	GLN	2.2
34	25	5	GLN	2.2
17	8A	71	PHE	2.2
36	88	65	PHE	2.2
5	4E	81	GLU	2.2
28	21	25	VAL	2.2
30	49	38	VAL	2.2
44	C5	72	VAL	2.2
50	I5	23	GLU	2.2
53	M5	4	MET	2.2
2	12	111	ARG	2.2
17	8I	38	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
26	71	164	ARG	2.2
14	5I	20	ALA	2.2
14	5A	47	LEU	2.2
28	21	131	ALA	2.2
31	59	71	LEU	2.2
34	25	41	ALA	2.2
24	14	2545	G	2.2
29	39	171	PRO	2.2
54	1G	31	G	2.2
5	42	131	ILE	2.2
36	88	97	VAL	2.2
46	E5	23	VAL	2.2
13	4A	95	GLY	2.2
42	A5	29	LEU	2.1
16	7I	64	ALA	2.1
54	1G	1109	C	2.1
24	1H	9	U	2.1
50	M8	29	PRO	2.1
7	62	29	LYS	2.1
19	AI	13	ASP	2.1
26	79	55	ASP	2.1
33	58	2	LYS	2.1
50	M8	13	ARG	2.1
35	35	44	GLY	2.1
54	1G	1064	G	2.1
13	4A	116	THR	2.1
18	9I	69	THR	2.1
27	11	254	THR	2.1
28	21	90	THR	2.1
28	29	132	HIS	2.1
36	88	32	TYR	2.1
4	32	160	GLN	2.1
1	13	43	C	2.1
4	32	133	VAL	2.1
5	42	105	VAL	2.1
53	M5	37	SER	2.1
45	D5	159	PRO	2.1
29	39	96	ASP	2.1
54	1G	789	U	2.1
8	7E	10	LEU	2.1
41	D8	40	LEU	2.1
7	62	39	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
12	3I	61	THR	2.1
33	58	73	THR	2.1
47	J8	71	TYR	2.1
53	Q8	10	ALA	2.1
1	13	1516	G	2.1
24	1H	529	A	2.1
24	14	2645	G	2.1
32	61	7	GLU	2.1
34	68	26	LYS	2.1
34	25	17	ARG	2.1
44	C5	49	VAL	2.1
5	4E	106	PRO	2.1
20	BI	102	GLY	2.1
46	E5	13	GLY	2.1
24	1H	614	U	2.1
27	19	147	LEU	2.1
30	41	94	LEU	2.1
30	49	7	LEU	2.1
54	1G	1240	U	2.1
4	32	20	TYR	2.1
3	2E	190	ARG	2.1
4	32	43	HIS	2.1
5	42	18	ARG	2.1
8	72	12	ARG	2.1
20	BI	89	ARG	2.1
27	19	35	LYS	2.1
27	19	67	PHE	2.1
30	49	80	PHE	2.1
31	59	138	LYS	2.1
38	65	93	LYS	2.1
46	I8	55	ARG	2.1
31	59	99	VAL	2.1
33	15	46	VAL	2.1
39	B8	89	VAL	2.1
2	1E	99	GLY	2.1
12	3I	25	PRO	2.1
14	5A	14	PRO	2.1
24	1H	2173	A	2.1
24	1H	2799	A	2.1
27	19	226	MET	2.1
54	1G	1183	A	2.1
27	19	68	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
39	B8	94	ALA	2.1
41	D8	83	ARG	2.1
52	L5	19	ARG	2.1
54	1G	82	U	2.1
27	19	233	HIS	2.1
49	H5	52	HIS	2.1
3	22	152	ILE	2.1
4	32	126	ILE	2.1
26	79	40	THR	2.1
39	B8	86	ILE	2.1
33	15	36	GLY	2.1
47	F5	31	GLY	2.1
30	41	8	LYS	2.1
33	15	79	PRO	2.1
5	42	14	ARG	2.1
8	72	94	TYR	2.1
24	14	2031	A	2.1
34	25	99	PHE	2.1
40	C8	47	TYR	2.1
42	A5	5	ALA	2.1
50	I5	51	ASP	2.1
17	8A	58	GLU	2.1
4	32	42	GLN	2.1
17	8I	59	ILE	2.1
17	8A	73	VAL	2.1
50	M8	3	GLU	2.1
20	BA	75	ASN	2.1
8	7E	127	LEU	2.1
15	6A	55	GLY	2.1
32	61	118	LYS	2.1
33	15	120	LEU	2.1
44	C5	63	LYS	2.1
50	M8	61	ARG	2.1
53	M5	44	LYS	2.1
9	82	5	TYR	2.1
24	1H	1762[A]	A	2.1
29	31	105	VAL	2.1
50	M8	33	VAL	2.1
24	14	2449	U	2.1
2	1E	111	ARG	2.1
29	31	101	LEU	2.1
29	39	175	THR	2.1

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Mol	Chain	Res	Type	RSRZ
44	C5	31	LEU	2.1
49	L8	31	LEU	2.1
54	1G	586	C	2.1
54	1G	1202	G	2.1
46	E5	47	PRO	2.1
4	3E	71	SER	2.1
28	21	104	VAL	2.1
15	6A	51	HIS	2.1
35	78	75	ILE	2.1
40	C8	51	LYS	2.1
20	BA	53	LEU	2.1
28	21	27	LEU	2.1
34	68	1	MET	2.1
37	55	51	LEU	2.1
19	AI	77	THR	2.1
5	4E	17	ALA	2.1
24	1H	654(O)	G	2.1
29	31	25	PRO	2.1
31	59	157	TYR	2.1
54	1G	1103	C	2.1
38	65	6	ALA	2.1
47	J8	89	GLU	2.1
9	8E	81	ILE	2.1
36	88	83	MET	2.1
29	31	182	ASN	2.1
24	14	899	A	2.1
27	11	35	LYS	2.1
40	85	47	TYR	2.1
44	C5	101	LYS	2.1
46	I8	46	LYS	2.1
53	M5	59	LYS	2.1
54	1G	994	A	2.1
14	5A	10	ALA	2.1
4	32	158	ILE	2.1
9	8E	77	ILE	2.1
16	7A	19	ILE	2.1
24	1H	888	C	2.1
32	69	4	ILE	2.1
54	1G	398	C	2.1
3	22	17	ASP	2.1
13	4A	90	LEU	2.1
24	14	2148	G	2.1

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Mol	Chain	Res	Type	RSRZ
27	11	95	LEU	2.1
39	75	105	LEU	2.1
27	19	250	TRP	2.1
13	4I	93	ARG	2.1
15	6A	26	GLU	2.1
26	71	165	ASN	2.1
28	21	154	LYS	2.1
48	G5	15	LYS	2.1
31	59	10	PRO	2.1
47	J8	43	TYR	2.1
3	2E	198	VAL	2.1
5	4E	90	VAL	2.1
36	88	90	VAL	2.1
38	65	14	VAL	2.1
1	13	1324	A	2.1
2	1E	69	LEU	2.1
20	BA	33	ILE	2.1
28	29	5	LEU	2.1
32	69	38	LEU	2.1
40	85	27	LEU	2.1
45	D5	163	LEU	2.1
46	I8	59	LEU	2.1
24	14	2827	C	2.1
38	65	8	GLU	2.0
46	I8	72	ARG	2.0
28	29	160	TYR	2.0
49	L8	15	TYR	2.0
54	1G	112	G	2.0
54	1G	306	G	2.0
54	1G	867	G	2.0
42	E8	85	VAL	2.0
47	J8	34	THR	2.0
13	4A	4	ILE	2.0
1	13	915	A	2.0
3	2E	10	PHE	2.0
26	79	163	PHE	2.0
40	C8	19	LYS	2.0
44	G8	4	LYS	2.0
53	Q8	15	LYS	2.0
30	49	116	ASP	2.0
31	59	6	ARG	2.0
33	58	130	HIS	2.0

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Mol	Chain	Res	Type	RSRZ
1	13	103	C	2.0
47	J8	72	GLU	2.0
7	62	9	VAL	2.0
9	8E	44	VAL	2.0
12	3I	30	ALA	2.0
38	A8	14	VAL	2.0
47	F5	15	ALA	2.0
27	19	55	GLY	2.0
27	19	249	PRO	2.0
40	C8	17	ILE	2.0
40	85	44	ASN	2.0
20	BA	27	LYS	2.0
40	C8	22	LYS	2.0
43	F8	63	LYS	2.0
49	H5	7	LYS	2.0
3	2E	128	PHE	2.0
5	42	28	PHE	2.0
54	1G	1086	U	2.0
53	M5	30	ARG	2.0
40	85	89	GLU	2.0
27	19	182	LEU	2.0
27	19	206	LEU	2.0
33	15	31	ALA	2.0
39	B8	100	TYR	2.0
8	72	88	LYS	2.0
15	6I	56	LEU	2.0
41	95	70	ILE	2.0
47	J8	73	LEU	2.0
50	M8	12	ALA	2.0
17	8A	75	ARG	2.0
40	85	55	ARG	2.0
15	6A	59	MET	2.0
24	14	614	U	2.0
24	14	958	U	2.0
36	88	7	MET	2.0
24	14	250	G	2.0
53	M5	35	GLN	2.0
35	35	27	HIS	2.0
17	8I	42	TYR	2.0
34	25	24	VAL	2.0
8	7E	107	LEU	2.0
20	BI	67	ALA	2.0

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Mol	Chain	Res	Type	RSRZ
27	19	175	LEU	2.0
28	21	134	ILE	2.0
35	78	6	LEU	2.0
1	13	975	A	2.0
3	2E	194	GLY	2.0
8	7E	128	GLY	2.0
53	M5	38	GLY	2.0
54	1G	1451	A	2.0
4	32	40	PRO	2.0
35	35	130	PHE	2.0
4	3E	140	VAL	2.0
36	45	41	TRP	2.0
2	12	145	LEU	2.0
1	13	1520	G	2.0
2	1E	14	GLY	2.0
7	6E	42	ILE	2.0
31	59	130	ARG	2.0
37	98	75	LEU	2.0
26	79	48	GLY	2.0
27	19	42	GLY	2.0
27	19	223	GLY	2.0
54	1G	823	G	2.0
10	1I	53	PRO	2.0
36	88	39	PRO	2.0
23	4L	15	A	2.0
24	14	423	A	2.0
5	42	121	LYS	2.0
33	15	118	LYS	2.0
43	F8	56	THR	2.0
9	82	41	VAL	2.0
39	B8	6	LEU	2.0
44	C5	86	ARG	2.0
47	J8	46	LEU	2.0

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

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
22	4SU	3L	8	20/21	0.77	0.19	193,208,220,222	0
22	PSU	3L	64	20/21	0.77	0.24	167,198,215,220	0
22	OMG	2L	17	24/25	0.81	0.17	161,167,175,176	0
22	PSU	3K	64	20/21	0.81	0.12	175,186,200,205	0
22	OMG	3L	17	24/25	0.82	0.29	201,218,239,245	0
22	4SU	3K	8	20/21	0.84	0.13	182,197,218,229	0
22	5MU	3L	63	21/22	0.84	0.20	164,182,191,194	0
22	PSU	2L	64	20/21	0.85	0.19	147,156,162,165	0
22	OMG	3K	17	24/25	0.86	0.17	201,213,227,235	0
22	OMG	2K	17	24/25	0.87	0.23	150,155,165,169	0
22	QUO	3K	35	32/33	0.90	0.32	131,138,151,152	0
22	5MU	2L	63	21/22	0.90	0.16	144,157,165,169	0
22	PSU	2K	64	20/21	0.90	0.11	139,143,148,152	0
22	4SU	2L	8	20/21	0.90	0.12	142,153,161,169	0
22	4SU	2K	8	20/21	0.91	0.15	139,144,148,151	0
22	5MU	3K	63	21/22	0.91	0.09	168,182,188,191	0
22	QUO	3L	35	32/33	0.91	0.35	131,137,152,158	0
22	PSU	3K	40	20/21	0.93	0.16	132,136,141,143	0
22	MIA	3K	38	29/30	0.93	0.21	128,138,144,146	0
22	PSU	3L	40	20/21	0.93	0.18	132,140,144,144	0
22	5MU	2K	63	21/22	0.93	0.13	136,142,148,150	0
22	MIA	3L	38	29/30	0.94	0.30	131,140,149,159	0
22	QUO	2L	35	32/33	0.94	0.47	111,120,135,136	8
22	PSU	2K	40	20/21	0.95	0.20	96,112,117,120	0
22	MIA	2K	38	29/30	0.95	0.27	101,114,121,126	0
22	PSU	2L	40	20/21	0.95	0.29	108,120,128,130	0
22	MIA	2L	38	29/30	0.96	0.30	112,124,132,146	0
22	QUO	2K	35	32/33	0.96	0.29	103,113,118,124	9

### 6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

### 6.4 Ligands [i](#)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	14	3319	1/1	-0.08	0.34	110,110,110,110	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	1H	3268	1/1	0.08	0.22	85,85,85,85	0
55	MG	14	3214	1/1	0.16	0.21	122,122,122,122	0
55	MG	1G	1696	1/1	0.17	0.33	112,112,112,112	0
55	MG	1G	1669	1/1	0.18	0.23	119,119,119,119	0
55	MG	1H	3249	1/1	0.27	0.38	102,102,102,102	0
55	MG	14	3342	1/1	0.36	0.30	93,93,93,93	0
55	MG	13	1684	1/1	0.36	0.18	99,99,99,99	0
55	MG	14	3271	1/1	0.42	0.45	99,99,99,99	0
55	MG	1H	3281	1/1	0.42	0.35	103,103,103,103	0
55	MG	14	3323	1/1	0.42	0.31	113,113,113,113	0
55	MG	1G	1693	1/1	0.42	0.43	106,106,106,106	0
55	MG	1G	1665	1/1	0.44	0.23	107,107,107,107	0
55	MG	14	3324	1/1	0.44	0.19	119,119,119,119	0
55	MG	14	3211	1/1	0.46	0.39	101,101,101,101	0
55	MG	1H	3216	1/1	0.47	0.31	93,93,93,93	0
55	MG	13	1685	1/1	0.47	0.26	119,119,119,119	0
55	MG	14	3306	1/1	0.49	0.55	92,92,92,92	0
55	MG	2K	103	1/1	0.49	0.36	140,140,140,140	0
55	MG	1H	3207	1/1	0.50	0.31	101,101,101,101	0
55	MG	1H	3522	1/1	0.51	0.09	112,112,112,112	0
55	MG	1H	3034	1/1	0.51	0.35	93,93,93,93	0
55	MG	1H	3242	1/1	0.51	0.34	107,107,107,107	0
55	MG	1H	3096	1/1	0.51	0.15	74,74,74,74	0
55	MG	13	1619	1/1	0.52	0.21	81,81,81,81	0
55	MG	1H	3136	1/1	0.52	0.36	96,96,96,96	0
55	MG	14	3247	1/1	0.53	0.33	89,89,89,89	0
55	MG	1H	3333	1/1	0.54	0.43	97,97,97,97	0
55	MG	1H	3131	1/1	0.54	0.50	96,96,96,96	0
55	MG	1H	3157	1/1	0.54	0.40	98,98,98,98	0
55	MG	29	304	1/1	0.56	0.34	115,115,115,115	0
55	MG	1G	1683	1/1	0.57	0.22	102,102,102,102	0
56	ZN	G8	201	1/1	0.57	0.12	201,201,201,201	0
55	MG	1G	1718	1/1	0.57	0.33	94,94,94,94	0
55	MG	1H	3398	1/1	0.58	0.09	110,110,110,110	0
55	MG	14	3317	1/1	0.58	0.28	92,92,92,92	0
55	MG	14	3201	1/1	0.59	0.34	84,84,84,84	0
55	MG	1H	3158	1/1	0.59	0.41	93,93,93,93	0
55	MG	I8	101	1/1	0.59	0.34	93,93,93,93	0
55	MG	14	3081	1/1	0.60	0.28	80,80,80,80	0
55	MG	1G	1664	1/1	0.60	0.21	112,112,112,112	0
55	MG	13	1694	1/1	0.60	0.54	108,108,108,108	0
55	MG	14	3246	1/1	0.61	0.26	101,101,101,101	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	1H	3192	1/1	0.61	0.52	97,97,97,97	0
55	MG	14	3031	1/1	0.61	0.23	95,95,95,95	0
55	MG	14	3171	1/1	0.61	0.34	82,82,82,82	0
55	MG	1H	3493	1/1	0.61	0.10	133,133,133,133	0
55	MG	1H	3178	1/1	0.61	0.57	92,92,92,92	0
55	MG	13	1690	1/1	0.62	0.36	136,136,136,136	0
55	MG	13	1675	1/1	0.62	0.33	127,127,127,127	0
55	MG	14	3179	1/1	0.62	0.29	107,107,107,107	0
55	MG	29	303	1/1	0.63	0.74	77,77,77,77	0
55	MG	13	1616	1/1	0.63	0.27	133,133,133,133	0
55	MG	1G	1744	1/1	0.63	0.20	126,126,126,126	0
55	MG	14	3279	1/1	0.63	0.31	103,103,103,103	0
55	MG	14	3097	1/1	0.64	0.27	94,94,94,94	0
55	MG	1H	3319	1/1	0.64	0.21	91,91,91,91	0
55	MG	16	210	1/1	0.64	0.36	117,117,117,117	0
55	MG	1G	1692	1/1	0.64	0.56	141,141,141,141	0
55	MG	45	201	1/1	0.64	0.28	78,78,78,78	0
55	MG	13	1660	1/1	0.65	0.28	108,108,108,108	0
55	MG	1G	1670	1/1	0.65	0.32	115,115,115,115	0
55	MG	1H	3307	1/1	0.65	0.27	105,105,105,105	0
55	MG	1H	3339	1/1	0.66	0.37	122,122,122,122	0
55	MG	1G	1704	1/1	0.66	0.20	98,98,98,98	0
55	MG	1G	1628	1/1	0.66	0.42	95,95,95,95	0
55	MG	14	3226	1/1	0.66	0.19	85,85,85,85	0
55	MG	14	3101	1/1	0.66	0.34	100,100,100,100	0
55	MG	1H	3175	1/1	0.66	0.43	96,96,96,96	0
55	MG	14	3326	1/1	0.66	0.51	103,103,103,103	0
55	MG	14	3257	1/1	0.66	0.29	109,109,109,109	0
55	MG	14	3296	1/1	0.66	0.26	87,87,87,87	0
55	MG	14	3444	1/1	0.66	0.09	113,113,113,113	0
55	MG	1H	3263	1/1	0.66	0.30	78,78,78,78	0
55	MG	78	202	1/1	0.66	0.48	91,91,91,91	0
55	MG	1H	3315	1/1	0.67	0.40	107,107,107,107	0
55	MG	1H	3273	1/1	0.67	0.42	98,98,98,98	0
55	MG	1H	3511	1/1	0.67	0.15	127,127,127,127	0
55	MG	13	1687	1/1	0.67	0.11	111,111,111,111	0
55	MG	14	3113	1/1	0.67	0.22	85,85,85,85	0
55	MG	1H	3297	1/1	0.68	0.26	104,104,104,104	0
55	MG	1G	1634	1/1	0.68	0.35	107,107,107,107	0
55	MG	1G	1717	1/1	0.68	0.15	111,111,111,111	0
55	MG	14	3328	1/1	0.68	0.25	103,103,103,103	0
55	MG	1G	1703	1/1	0.68	0.23	113,113,113,113	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	13	1667	1/1	0.68	0.30	99,99,99,99	0
55	MG	1H	3025	1/1	0.68	0.15	95,95,95,95	0
55	MG	1H	3336	1/1	0.68	0.27	103,103,103,103	0
55	MG	1H	3344	1/1	0.68	0.51	95,95,95,95	0
55	MG	14	3206	1/1	0.69	0.24	93,93,93,93	0
55	MG	14	3216	1/1	0.69	0.16	104,104,104,104	0
55	MG	1G	1653	1/1	0.69	0.23	90,90,90,90	0
55	MG	1G	1612	1/1	0.69	0.20	108,108,108,108	0
55	MG	14	3334	1/1	0.69	0.24	93,93,93,93	0
55	MG	14	3213	1/1	0.69	0.27	108,108,108,108	0
55	MG	14	3264	1/1	0.69	0.40	100,100,100,100	0
55	MG	1G	1678	1/1	0.69	0.57	107,107,107,107	0
55	MG	14	3234	1/1	0.69	0.32	96,96,96,96	0
55	MG	13	1659	1/1	0.69	0.14	108,108,108,108	0
55	MG	13	1635	1/1	0.70	0.50	106,106,106,106	0
55	MG	14	3203	1/1	0.70	0.40	98,98,98,98	0
55	MG	1H	3362	1/1	0.70	0.29	112,112,112,112	0
56	ZN	C5	202	1/1	0.70	0.11	206,206,206,206	0
55	MG	1H	3135	1/1	0.70	0.60	102,102,102,102	0
55	MG	13	1706	1/1	0.70	0.09	117,117,117,117	0
55	MG	1H	3342	1/1	0.70	0.68	87,87,87,87	0
55	MG	13	1646	1/1	0.70	0.29	100,100,100,100	0
55	MG	14	3249	1/1	0.70	0.28	106,106,106,106	0
55	MG	14	3140	1/1	0.70	0.28	97,97,97,97	0
55	MG	1H	3168	1/1	0.70	0.38	75,75,75,75	0
55	MG	1G	1740	1/1	0.70	0.52	135,135,135,135	0
55	MG	14	3320	1/1	0.70	0.32	114,114,114,114	0
55	MG	14	3289	1/1	0.71	0.21	100,100,100,100	0
55	MG	13	1674	1/1	0.71	0.18	142,142,142,142	0
55	MG	C5	201	1/1	0.71	0.32	95,95,95,95	0
55	MG	1G	1676	1/1	0.71	0.21	129,129,129,129	0
55	MG	1H	3155	1/1	0.71	0.36	92,92,92,92	0
55	MG	2L	103	1/1	0.71	0.21	109,109,109,109	0
55	MG	13	1689	1/1	0.71	0.38	102,102,102,102	0
55	MG	1H	3133	1/1	0.72	0.17	92,92,92,92	0
55	MG	1H	3355	1/1	0.72	0.28	92,92,92,92	0
55	MG	14	3297	1/1	0.72	0.20	81,81,81,81	0
55	MG	1G	1658	1/1	0.72	0.31	106,106,106,106	0
55	MG	14	3448	1/1	0.72	0.09	123,123,123,123	0
55	MG	1H	3290	1/1	0.72	0.21	88,88,88,88	0
55	MG	14	3325	1/1	0.72	0.33	107,107,107,107	0
55	MG	1G	1719	1/1	0.72	0.36	118,118,118,118	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	1H	3363	1/1	0.72	0.21	93,93,93,93	0
55	MG	14	3235	1/1	0.72	0.36	109,109,109,109	0
55	MG	16	209	1/1	0.72	0.12	101,101,101,101	0
55	MG	1H	3051	1/1	0.72	0.42	76,76,76,76	0
55	MG	1H	3348	1/1	0.72	0.28	126,126,126,126	0
55	MG	1H	3255	1/1	0.73	0.28	107,107,107,107	0
55	MG	1H	3243	1/1	0.73	0.18	119,119,119,119	0
55	MG	1H	3262	1/1	0.73	0.28	101,101,101,101	0
55	MG	14	3208	1/1	0.73	0.20	83,83,83,83	0
55	MG	1H	3353	1/1	0.73	0.42	100,100,100,100	0
55	MG	14	3299	1/1	0.73	0.40	138,138,138,138	0
55	MG	14	3029	1/1	0.73	0.43	85,85,85,85	0
55	MG	14	3339	1/1	0.73	0.55	107,107,107,107	0
55	MG	14	3136	1/1	0.73	0.18	109,109,109,109	0
55	MG	1H	3492	1/1	0.73	0.09	117,117,117,117	0
55	MG	1H	3213	1/1	0.73	0.36	80,80,80,80	0
55	MG	14	3233	1/1	0.73	0.32	84,84,84,84	0
55	MG	1G	1609	1/1	0.73	0.17	106,106,106,106	0
55	MG	14	3128	1/1	0.73	0.30	85,85,85,85	0
55	MG	14	3098	1/1	0.73	0.45	86,86,86,86	0
55	MG	14	3146	1/1	0.73	0.40	81,81,81,81	0
55	MG	14	3237	1/1	0.74	0.32	79,79,79,79	0
55	MG	1G	1635	1/1	0.74	0.31	98,98,98,98	0
55	MG	1H	3358	1/1	0.74	0.41	115,115,115,115	0
55	MG	14	3265	1/1	0.74	0.37	85,85,85,85	0
55	MG	1H	3314	1/1	0.74	0.41	80,80,80,80	0
55	MG	14	3220	1/1	0.74	0.18	89,89,89,89	0
55	MG	1G	1711	1/1	0.74	0.89	107,107,107,107	0
55	MG	14	3295	1/1	0.74	0.45	103,103,103,103	0
55	MG	1H	3504	1/1	0.75	0.12	131,131,131,131	0
55	MG	1H	3141	1/1	0.75	0.34	90,90,90,90	0
55	MG	13	1642	1/1	0.75	0.21	99,99,99,99	0
55	MG	1H	3071	1/1	0.75	0.67	80,80,80,80	0
55	MG	14	3267	1/1	0.75	0.14	99,99,99,99	0
55	MG	1H	3525	1/1	0.75	0.10	127,127,127,127	0
55	MG	1H	3276	1/1	0.75	0.21	89,89,89,89	0
55	MG	14	3446	1/1	0.75	0.43	120,120,120,120	0
55	MG	1H	3454	1/1	0.75	0.11	89,89,89,89	0
55	MG	14	3472	1/1	0.75	0.06	121,121,121,121	0
55	MG	1H	3294	1/1	0.76	0.44	91,91,91,91	0
55	MG	13	1668	1/1	0.76	0.28	94,94,94,94	0
55	MG	14	3212	1/1	0.76	0.21	94,94,94,94	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	14	3316	1/1	0.76	0.29	97,97,97,97	0
55	MG	13	1647	1/1	0.76	0.30	87,87,87,87	0
55	MG	1H	3351	1/1	0.76	0.44	114,114,114,114	0
55	MG	1H	3370	1/1	0.76	0.45	87,87,87,87	0
55	MG	14	3197	1/1	0.76	0.33	105,105,105,105	0
55	MG	1H	3346	1/1	0.76	0.24	80,80,80,80	0
55	MG	1H	3451	1/1	0.76	0.21	123,123,123,123	0
55	MG	13	1686	1/1	0.76	0.42	111,111,111,111	0
55	MG	1H	3230	1/1	0.76	0.39	91,91,91,91	0
55	MG	1H	3208	1/1	0.76	0.60	110,110,110,110	0
55	MG	13	1727	1/1	0.76	0.08	130,130,130,130	0
55	MG	14	3123	1/1	0.76	0.36	95,95,95,95	0
55	MG	14	3253	1/1	0.76	0.38	94,94,94,94	0
55	MG	1G	1629	1/1	0.76	0.23	91,91,91,91	0
55	MG	1H	3280	1/1	0.76	0.21	97,97,97,97	0
55	MG	1H	3254	1/1	0.76	0.17	104,104,104,104	0
55	MG	1G	1623	1/1	0.76	0.29	99,99,99,99	0
55	MG	1H	3210	1/1	0.76	0.22	97,97,97,97	0
55	MG	1G	1700	1/1	0.76	0.22	99,99,99,99	0
55	MG	1H	3256	1/1	0.77	0.64	82,82,82,82	0
55	MG	14	3149	1/1	0.77	0.33	81,81,81,81	0
55	MG	1G	1645	1/1	0.77	0.28	104,104,104,104	0
55	MG	14	3258	1/1	0.77	0.24	78,78,78,78	0
55	MG	14	3147	1/1	0.77	0.19	115,115,115,115	0
55	MG	1H	3332	1/1	0.77	0.70	101,101,101,101	0
55	MG	1H	3227	1/1	0.77	0.48	83,83,83,83	0
55	MG	5E	201	1/1	0.77	0.32	121,121,121,121	0
55	MG	1H	3139	1/1	0.77	0.43	101,101,101,101	0
55	MG	1H	3325	1/1	0.77	0.35	78,78,78,78	0
55	MG	13	1666	1/1	0.77	0.15	95,95,95,95	0
55	MG	16	203	1/1	0.78	0.14	105,105,105,105	0
55	MG	1H	3505	1/1	0.78	0.62	122,122,122,122	0
55	MG	14	3062	1/1	0.78	0.20	79,79,79,79	0
55	MG	1H	3179	1/1	0.78	0.24	69,69,69,69	0
55	MG	1H	3020	1/1	0.78	0.13	103,103,103,103	0
55	MG	1G	1651	1/1	0.78	0.28	92,92,92,92	0
55	MG	1H	3126	1/1	0.78	0.24	87,87,87,87	0
55	MG	1H	3099	1/1	0.78	0.11	90,90,90,90	0
55	MG	1J	205	1/1	0.78	0.22	112,112,112,112	0
55	MG	1H	3299	1/1	0.78	0.34	80,80,80,80	0
55	MG	1H	3397	1/1	0.78	0.09	90,90,90,90	0
55	MG	14	3330	1/1	0.78	0.25	85,85,85,85	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	14	3269	1/1	0.78	0.25	93,93,93,93	0
55	MG	1J	206	1/1	0.78	0.35	129,129,129,129	0
55	MG	14	3025	1/1	0.78	0.09	85,85,85,85	0
55	MG	1H	3341	1/1	0.78	0.31	94,94,94,94	0
55	MG	42	201	1/1	0.78	0.34	103,103,103,103	0
55	MG	1G	1737	1/1	0.78	0.23	147,147,147,147	0
55	MG	1H	3174	1/1	0.78	0.33	80,80,80,80	0
55	MG	1H	3166	1/1	0.79	0.30	86,86,86,86	0
55	MG	1H	3334	1/1	0.79	0.32	88,88,88,88	0
55	MG	1H	3253	1/1	0.79	0.41	92,92,92,92	0
55	MG	13	1663	1/1	0.79	0.35	108,108,108,108	0
55	MG	1G	1613	1/1	0.79	0.24	104,104,104,104	0
55	MG	1H	3182	1/1	0.79	0.22	68,68,68,68	0
55	MG	1H	3301	1/1	0.79	0.28	93,93,93,93	0
55	MG	14	3307	1/1	0.79	0.12	90,90,90,90	0
55	MG	14	3111	1/1	0.79	0.22	85,85,85,85	0
55	MG	1H	3345	1/1	0.79	0.27	104,104,104,104	0
55	MG	14	3410	1/1	0.79	0.11	109,109,109,109	0
55	MG	1H	3347	1/1	0.79	0.37	117,117,117,117	0
55	MG	1G	1705	1/1	0.79	0.17	110,110,110,110	0
55	MG	14	3131	1/1	0.79	0.18	81,81,81,81	0
55	MG	13	1693	1/1	0.79	0.28	103,103,103,103	0
55	MG	1H	3497	1/1	0.80	0.09	152,152,152,152	0
55	MG	14	3001	1/1	0.80	0.13	84,84,84,84	0
55	MG	1G	1731	1/1	0.80	0.07	117,117,117,117	0
55	MG	13	1644	1/1	0.80	0.26	91,91,91,91	0
55	MG	1H	3233	1/1	0.80	0.65	117,117,117,117	0
55	MG	14	3464	1/1	0.80	0.23	122,122,122,122	0
55	MG	14	3223	1/1	0.80	0.23	97,97,97,97	0
55	MG	13	1681	1/1	0.80	0.81	117,117,117,117	0
55	MG	1J	207	1/1	0.80	0.21	97,97,97,97	0
55	MG	1H	3260	1/1	0.80	0.29	114,114,114,114	0
55	MG	14	3104	1/1	0.80	0.39	96,96,96,96	0
55	MG	1H	3229	1/1	0.80	0.27	86,86,86,86	0
55	MG	1H	3404	1/1	0.81	0.11	71,71,71,71	0
55	MG	11	301	1/1	0.81	0.35	93,93,93,93	0
55	MG	13	1692	1/1	0.81	0.38	101,101,101,101	0
55	MG	1G	1715	1/1	0.81	0.29	116,116,116,116	0
55	MG	14	3321	1/1	0.81	0.39	93,93,93,93	0
55	MG	14	3335	1/1	0.81	0.24	93,93,93,93	0
55	MG	14	3417	1/1	0.81	0.07	119,119,119,119	0
55	MG	1H	3084	1/1	0.81	0.29	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	1H	3110	1/1	0.81	0.14	65,65,65,65	0
55	MG	1H	3328	1/1	0.81	0.19	94,94,94,94	0
55	MG	14	3318	1/1	0.81	0.31	102,102,102,102	0
55	MG	14	3332	1/1	0.81	0.21	89,89,89,89	0
55	MG	14	3219	1/1	0.81	0.12	105,105,105,105	0
56	ZN	5A	101	1/1	0.81	0.14	155,155,155,155	0
55	MG	1H	3172	1/1	0.81	0.58	94,94,94,94	0
55	MG	14	3162	1/1	0.81	0.19	92,92,92,92	0
55	MG	1G	1691	1/1	0.81	0.47	122,122,122,122	0
55	MG	1H	3264	1/1	0.81	0.51	85,85,85,85	0
55	MG	1H	3023	1/1	0.81	0.41	101,101,101,101	0
55	MG	1G	1666	1/1	0.81	0.28	99,99,99,99	0
55	MG	1G	1725	1/1	0.81	0.10	124,124,124,124	0
55	MG	16	205	1/1	0.81	0.18	109,109,109,109	0
55	MG	1H	3266	1/1	0.81	0.35	106,106,106,106	0
55	MG	14	3138	1/1	0.82	0.26	90,90,90,90	0
55	MG	14	3184	1/1	0.82	0.24	92,92,92,92	0
55	MG	1H	3361	1/1	0.82	0.35	103,103,103,103	0
55	MG	1H	3367	1/1	0.82	0.23	97,97,97,97	0
55	MG	1H	3324	1/1	0.82	0.27	96,96,96,96	0
55	MG	13	1636	1/1	0.82	0.23	100,100,100,100	0
55	MG	1H	3546	1/1	0.82	0.19	89,89,89,89	0
55	MG	14	3314	1/1	0.82	0.14	111,111,111,111	0
55	MG	1H	3142	1/1	0.82	0.19	81,81,81,81	0
55	MG	1H	3187	1/1	0.82	0.44	103,103,103,103	0
55	MG	1H	3185	1/1	0.82	0.19	73,73,73,73	0
55	MG	1H	3152	1/1	0.82	0.39	82,82,82,82	0
55	MG	1H	3279	1/1	0.82	0.42	101,101,101,101	0
55	MG	14	3274	1/1	0.82	0.19	88,88,88,88	0
55	MG	14	3144	1/1	0.82	0.16	78,78,78,78	0
55	MG	1H	3489	1/1	0.83	0.10	108,108,108,108	0
55	MG	1G	1723	1/1	0.83	0.19	131,131,131,131	0
55	MG	1H	3146	1/1	0.83	0.45	98,98,98,98	0
55	MG	1H	3310	1/1	0.83	0.36	84,84,84,84	0
55	MG	78	201	1/1	0.83	0.42	94,94,94,94	0
55	MG	39	301	1/1	0.83	0.13	108,108,108,108	0
55	MG	14	3455	1/1	0.83	0.19	131,131,131,131	0
55	MG	32	301	1/1	0.83	0.19	109,109,109,109	0
55	MG	14	3163	1/1	0.83	0.10	86,86,86,86	0
55	MG	13	1725	1/1	0.83	0.15	157,157,157,157	0
55	MG	1H	3338	1/1	0.83	0.60	88,88,88,88	0
55	MG	1H	3312	1/1	0.83	0.40	106,106,106,106	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	5E	202	1/1	0.83	0.21	109,109,109,109	0
55	MG	1H	3061	1/1	0.83	0.29	90,90,90,90	0
55	MG	14	3089	1/1	0.83	0.21	78,78,78,78	0
55	MG	1H	3037	1/1	0.83	0.20	78,78,78,78	0
55	MG	14	3224	1/1	0.83	0.26	87,87,87,87	0
55	MG	1H	3259	1/1	0.83	0.38	165,165,165,165	0
55	MG	14	3238	1/1	0.83	0.26	153,153,153,153	0
55	MG	14	3470	1/1	0.83	0.12	136,136,136,136	0
55	MG	14	3284	1/1	0.83	0.39	83,83,83,83	0
55	MG	29	305	1/1	0.83	1.00	86,86,86,86	0
55	MG	1G	1633	1/1	0.83	0.32	91,91,91,91	0
55	MG	14	3281	1/1	0.83	0.25	98,98,98,98	0
55	MG	13	1665	1/1	0.83	0.19	106,106,106,106	0
55	MG	1H	3309	1/1	0.83	0.26	96,96,96,96	0
55	MG	14	3209	1/1	0.83	0.34	89,89,89,89	0
55	MG	14	3160	1/1	0.83	0.21	82,82,82,82	0
55	MG	1H	3193	1/1	0.84	0.19	79,79,79,79	0
55	MG	1H	3226	1/1	0.84	0.15	89,89,89,89	0
55	MG	1H	3289	1/1	0.84	0.51	104,104,104,104	0
55	MG	1H	3282	1/1	0.84	0.28	87,87,87,87	0
55	MG	13	1650	1/1	0.84	0.17	116,116,116,116	0
55	MG	13	1678	1/1	0.84	0.22	124,124,124,124	0
55	MG	1H	3399	1/1	0.84	0.18	109,109,109,109	0
55	MG	13	1669	1/1	0.84	0.42	115,115,115,115	0
55	MG	14	3302	1/1	0.84	0.72	82,82,82,82	0
55	MG	13	1720	1/1	0.84	0.16	136,136,136,136	0
55	MG	1H	3318	1/1	0.84	0.34	86,86,86,86	0
55	MG	1H	3111	1/1	0.84	0.34	111,111,111,111	0
55	MG	14	3311	1/1	0.84	0.36	106,106,106,106	0
55	MG	13	1695	1/1	0.84	0.17	108,108,108,108	0
55	MG	1H	3073	1/1	0.84	0.42	71,71,71,71	0
55	MG	1H	3088	1/1	0.84	0.18	55,55,55,55	0
55	MG	1H	3114	1/1	0.84	0.30	94,94,94,94	0
55	MG	1H	3534	1/1	0.84	0.10	115,115,115,115	0
55	MG	14	3459	1/1	0.84	0.07	114,114,114,114	0
55	MG	13	1683	1/1	0.84	0.17	111,111,111,111	0
55	MG	14	3196	1/1	0.84	0.26	107,107,107,107	0
55	MG	1G	1710	1/1	0.84	0.63	107,107,107,107	0
55	MG	13	1712	1/1	0.84	0.06	119,119,119,119	0
55	MG	14	3437	1/1	0.84	0.12	98,98,98,98	0
55	MG	14	3479	1/1	0.84	0.32	108,108,108,108	0
55	MG	1G	1632	1/1	0.84	0.31	88,88,88,88	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	14	3460	1/1	0.84	0.09	94,94,94,94	0
55	MG	14	3304	1/1	0.84	0.35	85,85,85,85	0
55	MG	14	3227	1/1	0.84	0.28	112,112,112,112	0
55	MG	1G	1701	1/1	0.84	0.41	106,106,106,106	0
55	MG	3L	102	1/1	0.84	0.41	95,95,95,95	0
55	MG	1H	3091	1/1	0.85	0.17	81,81,81,81	0
55	MG	14	3202	1/1	0.85	0.19	90,90,90,90	0
55	MG	14	3193	1/1	0.85	0.20	90,90,90,90	0
55	MG	14	3310	1/1	0.85	0.11	107,107,107,107	0
55	MG	1H	3211	1/1	0.85	0.33	94,94,94,94	0
55	MG	1G	1644	1/1	0.85	0.12	104,104,104,104	0
55	MG	13	1638	1/1	0.85	0.44	103,103,103,103	0
55	MG	2K	104	1/1	0.85	0.08	153,153,153,153	0
55	MG	1H	3431	1/1	0.85	0.19	127,127,127,127	0
55	MG	1H	3300	1/1	0.85	0.16	54,54,54,54	0
55	MG	14	3217	1/1	0.85	0.14	88,88,88,88	0
55	MG	13	1617	1/1	0.85	0.21	99,99,99,99	0
55	MG	13	1639	1/1	0.85	0.27	89,89,89,89	0
55	MG	14	3270	1/1	0.85	0.15	88,88,88,88	0
55	MG	14	3482	1/1	0.85	0.12	118,118,118,118	0
55	MG	1H	3488	1/1	0.85	0.08	117,117,117,117	0
55	MG	1H	3502	1/1	0.85	0.12	125,125,125,125	0
55	MG	1H	3270	1/1	0.85	0.38	92,92,92,92	0
55	MG	14	3419	1/1	0.85	0.07	104,104,104,104	0
55	MG	1G	1679	1/1	0.85	0.14	106,106,106,106	0
55	MG	1H	3248	1/1	0.85	0.21	89,89,89,89	0
55	MG	14	3440	1/1	0.85	0.16	131,131,131,131	0
55	MG	1H	3240	1/1	0.85	0.38	91,91,91,91	0
55	MG	14	3462	1/1	0.85	0.21	100,100,100,100	0
55	MG	14	3157	1/1	0.85	0.25	95,95,95,95	0
55	MG	1H	3132	1/1	0.85	0.15	77,77,77,77	0
55	MG	14	3185	1/1	0.85	0.16	92,92,92,92	0
55	MG	1H	3537	1/1	0.85	0.10	148,148,148,148	0
55	MG	1J	204	1/1	0.85	0.25	128,128,128,128	0
55	MG	13	1609	1/1	0.85	0.21	130,130,130,130	0
55	MG	1H	3304	1/1	0.85	0.30	84,84,84,84	0
55	MG	1H	3531	1/1	0.85	0.10	116,116,116,116	0
55	MG	13	1656	1/1	0.86	0.41	89,89,89,89	0
55	MG	14	3336	1/1	0.86	0.63	102,102,102,102	0
55	MG	14	3457	1/1	0.86	0.14	101,101,101,101	0
55	MG	1H	3209	1/1	0.86	0.25	85,85,85,85	0
55	MG	14	3424	1/1	0.86	0.10	113,113,113,113	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	14	3109	1/1	0.86	0.28	77,77,77,77	0
55	MG	1H	3285	1/1	0.86	0.49	91,91,91,91	0
55	MG	1H	3228	1/1	0.86	0.23	90,90,90,90	0
55	MG	13	1699	1/1	0.86	0.05	137,137,137,137	0
55	MG	16	206	1/1	0.86	0.28	76,76,76,76	0
55	MG	1H	3364	1/1	0.86	0.17	101,101,101,101	0
55	MG	14	3312	1/1	0.86	0.19	98,98,98,98	0
55	MG	13	1626	1/1	0.86	0.21	69,69,69,69	0
55	MG	1G	1745	1/1	0.86	0.06	143,143,143,143	0
55	MG	1H	3044	1/1	0.86	0.35	74,74,74,74	0
55	MG	1H	3165	1/1	0.86	0.31	81,81,81,81	0
55	MG	14	3344	1/1	0.86	0.60	89,89,89,89	0
55	MG	14	3266	1/1	0.86	0.20	101,101,101,101	0
55	MG	1H	3200	1/1	0.86	0.24	109,109,109,109	0
55	MG	14	3420	1/1	0.86	0.05	125,125,125,125	0
55	MG	1G	1709	1/1	0.86	0.28	111,111,111,111	0
55	MG	1H	3115	1/1	0.86	0.39	89,89,89,89	0
55	MG	14	3449	1/1	0.86	0.09	135,135,135,135	0
55	MG	1H	3149	1/1	0.86	0.56	98,98,98,98	0
55	MG	14	3393	1/1	0.86	0.19	103,103,103,103	0
55	MG	14	3100	1/1	0.86	0.13	81,81,81,81	0
55	MG	1H	3373	1/1	0.86	0.19	87,87,87,87	0
55	MG	1H	3245	1/1	0.86	0.23	74,74,74,74	0
55	MG	14	3313	1/1	0.86	0.44	91,91,91,91	0
55	MG	1H	3121	1/1	0.86	0.20	82,82,82,82	0
55	MG	1H	3160	1/1	0.86	0.63	91,91,91,91	0
55	MG	14	3331	1/1	0.86	0.66	79,79,79,79	0
55	MG	1G	1681	1/1	0.86	0.18	105,105,105,105	0
55	MG	1H	3521	1/1	0.86	0.10	125,125,125,125	0
55	MG	1H	3313	1/1	0.86	0.51	100,100,100,100	0
55	MG	13	1655	1/1	0.86	0.24	107,107,107,107	0
55	MG	1H	3031	1/1	0.86	0.62	73,73,73,73	0
55	MG	1H	3060	1/1	0.86	0.29	79,79,79,79	0
55	MG	1H	3499	1/1	0.86	0.09	116,116,116,116	0
55	MG	1H	3444	1/1	0.86	0.14	111,111,111,111	0
55	MG	13	1648	1/1	0.86	0.27	94,94,94,94	0
55	MG	14	3300	1/1	0.86	0.29	85,85,85,85	0
55	MG	1H	3486	1/1	0.87	0.08	104,104,104,104	0
55	MG	1G	1638	1/1	0.87	0.19	86,86,86,86	0
55	MG	14	3124	1/1	0.87	0.15	92,92,92,92	0
55	MG	14	3103	1/1	0.87	0.13	74,74,74,74	0
55	MG	14	3014	1/1	0.87	0.42	88,88,88,88	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	14	3445	1/1	0.87	0.11	104,104,104,104	0
55	MG	1H	3359	1/1	0.87	0.27	70,70,70,70	0
55	MG	1H	3222	1/1	0.87	0.19	83,83,83,83	0
55	MG	1H	3198	1/1	0.87	0.23	58,58,58,58	0
55	MG	49	201	1/1	0.87	0.22	134,134,134,134	0
55	MG	14	3471	1/1	0.87	0.08	109,109,109,109	0
55	MG	1H	3295	1/1	0.87	0.41	87,87,87,87	0
55	MG	1G	1625	1/1	0.87	0.50	97,97,97,97	0
55	MG	13	1670	1/1	0.87	0.28	150,150,150,150	0
55	MG	1H	3411	1/1	0.87	0.09	110,110,110,110	0
55	MG	14	3074	1/1	0.87	0.24	97,97,97,97	0
55	MG	1H	3236	1/1	0.87	0.24	77,77,77,77	0
55	MG	1G	1680	1/1	0.87	0.15	101,101,101,101	0
55	MG	13	1623	1/1	0.87	0.22	104,104,104,104	0
55	MG	1H	3343	1/1	0.87	0.21	75,75,75,75	0
55	MG	1H	3250	1/1	0.87	0.23	80,80,80,80	0
55	MG	14	3483	1/1	0.87	0.15	113,113,113,113	0
55	MG	1H	3220	1/1	0.87	0.43	92,92,92,92	0
55	MG	11	302	1/1	0.87	0.54	63,63,63,63	0
55	MG	1H	3323	1/1	0.87	0.12	84,84,84,84	0
55	MG	1G	1637	1/1	0.87	0.31	127,127,127,127	0
55	MG	14	3473	1/1	0.87	0.24	108,108,108,108	0
55	MG	1H	3144	1/1	0.87	0.45	86,86,86,86	0
55	MG	14	3221	1/1	0.87	0.23	82,82,82,82	0
55	MG	1G	1720	1/1	0.87	0.12	97,97,97,97	0
55	MG	1J	211	1/1	0.87	0.12	133,133,133,133	0
55	MG	1H	3219	1/1	0.87	0.43	90,90,90,90	0
55	MG	1H	3265	1/1	0.87	0.13	85,85,85,85	0
55	MG	1H	3508	1/1	0.87	0.14	122,122,122,122	0
55	MG	14	3068	1/1	0.87	0.17	71,71,71,71	0
55	MG	13	1696	1/1	0.87	0.18	89,89,89,89	0
55	MG	14	3200	1/1	0.88	0.15	89,89,89,89	0
55	MG	21	301	1/1	0.88	0.21	69,69,69,69	0
55	MG	14	3137	1/1	0.88	0.38	107,107,107,107	0
55	MG	14	3236	1/1	0.88	0.21	113,113,113,113	0
55	MG	1H	3483	1/1	0.88	0.10	117,117,117,117	0
55	MG	14	3301	1/1	0.88	0.19	91,91,91,91	0
55	MG	14	3340	1/1	0.88	0.25	103,103,103,103	0
55	MG	1H	3122	1/1	0.88	0.27	77,77,77,77	0
55	MG	14	3450	1/1	0.88	0.15	113,113,113,113	0
55	MG	14	3275	1/1	0.88	0.10	84,84,84,84	0
55	MG	1H	3321	1/1	0.88	0.24	88,88,88,88	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	1H	3430	1/1	0.88	0.16	99,99,99,99	0
55	MG	1G	1671	1/1	0.88	0.14	102,102,102,102	0
55	MG	14	3466	1/1	0.88	0.06	104,104,104,104	0
55	MG	1H	3316	1/1	0.88	0.38	78,78,78,78	0
55	MG	14	3474	1/1	0.88	0.14	142,142,142,142	0
55	MG	1H	3402	1/1	0.88	0.10	110,110,110,110	0
55	MG	1H	3197	1/1	0.88	0.24	93,93,93,93	0
55	MG	1G	1663	1/1	0.88	0.20	110,110,110,110	0
55	MG	14	3046	1/1	0.88	0.23	88,88,88,88	0
55	MG	1J	209	1/1	0.88	0.06	110,110,110,110	0
55	MG	1H	3078	1/1	0.88	0.35	81,81,81,81	0
55	MG	14	3102	1/1	0.88	0.17	86,86,86,86	0
55	MG	1G	1728	1/1	0.88	0.09	133,133,133,133	0
55	MG	13	1691	1/1	0.88	0.13	98,98,98,98	0
55	MG	1G	1698	1/1	0.88	0.57	86,86,86,86	0
55	MG	1H	3205	1/1	0.88	0.45	101,101,101,101	0
55	MG	1H	3173	1/1	0.88	0.26	88,88,88,88	0
55	MG	1H	3217	1/1	0.88	0.24	85,85,85,85	0
55	MG	13	1672	1/1	0.88	0.16	105,105,105,105	0
55	MG	14	3468	1/1	0.88	0.11	134,134,134,134	0
55	MG	14	3256	1/1	0.88	0.41	96,96,96,96	0
55	MG	13	1641	1/1	0.88	0.31	117,117,117,117	0
55	MG	88	202	1/1	0.88	0.19	98,98,98,98	0
55	MG	1G	1608	1/1	0.88	0.23	110,110,110,110	0
55	MG	14	3452	1/1	0.88	0.09	96,96,96,96	0
55	MG	1H	3330	1/1	0.88	0.38	91,91,91,91	0
55	MG	14	3133	1/1	0.88	0.18	85,85,85,85	0
55	MG	14	3425	1/1	0.88	0.14	89,89,89,89	0
55	MG	13	1653	1/1	0.88	0.10	97,97,97,97	0
55	MG	14	3480	1/1	0.88	0.11	90,90,90,90	0
55	MG	14	3035	1/1	0.89	0.19	74,74,74,74	0
55	MG	1H	3371	1/1	0.89	0.11	72,72,72,72	0
55	MG	1H	3024	1/1	0.89	0.43	98,98,98,98	0
55	MG	13	1631	1/1	0.89	0.22	101,101,101,101	0
55	MG	14	3041	1/1	0.89	0.13	76,76,76,76	0
55	MG	14	3347	1/1	0.89	0.19	72,72,72,72	0
55	MG	1H	3518	1/1	0.89	0.18	99,99,99,99	0
55	MG	M5	101	1/1	0.89	0.14	97,97,97,97	0
55	MG	14	3286	1/1	0.89	0.31	78,78,78,78	0
55	MG	13	1658	1/1	0.89	0.37	84,84,84,84	0
55	MG	1H	3162	1/1	0.89	0.29	87,87,87,87	0
55	MG	14	3305	1/1	0.89	0.57	94,94,94,94	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	1H	3206	1/1	0.89	0.31	89,89,89,89	0
55	MG	13	1708	1/1	0.89	0.14	103,103,103,103	0
55	MG	14	3094	1/1	0.89	0.14	68,68,68,68	0
55	MG	13	1679	1/1	0.89	0.25	101,101,101,101	0
55	MG	1H	3543	1/1	0.89	0.26	121,121,121,121	0
55	MG	14	3076	1/1	0.89	0.20	68,68,68,68	0
55	MG	1H	3320	1/1	0.89	0.51	106,106,106,106	0
55	MG	1H	3326	1/1	0.89	0.21	85,85,85,85	0
55	MG	14	3329	1/1	0.89	0.23	85,85,85,85	0
55	MG	1H	3134	1/1	0.89	0.27	78,78,78,78	0
55	MG	1H	3235	1/1	0.89	0.26	107,107,107,107	0
55	MG	13	1628	1/1	0.89	0.30	89,89,89,89	0
55	MG	1H	3366	1/1	0.89	0.27	113,113,113,113	0
55	MG	13	1721	1/1	0.89	0.15	100,100,100,100	0
55	MG	1H	3215	1/1	0.89	0.57	84,84,84,84	0
55	MG	1H	3415	1/1	0.89	0.09	91,91,91,91	0
55	MG	1H	3305	1/1	0.89	0.54	107,107,107,107	0
55	MG	1G	1646	1/1	0.89	0.17	81,81,81,81	0
55	MG	1G	1734	1/1	0.89	0.12	114,114,114,114	0
55	MG	1H	3487	1/1	0.89	0.17	123,123,123,123	0
55	MG	1H	3164	1/1	0.89	0.21	95,95,95,95	0
55	MG	13	1718	1/1	0.89	0.17	125,125,125,125	0
55	MG	1H	3113	1/1	0.89	0.10	98,98,98,98	0
55	MG	14	3251	1/1	0.89	0.42	90,90,90,90	0
55	MG	14	3119	1/1	0.89	0.29	82,82,82,82	0
55	MG	1H	3476	1/1	0.89	0.19	106,106,106,106	0
55	MG	55	202	1/1	0.89	0.17	108,108,108,108	0
55	MG	1H	3143	1/1	0.89	0.23	90,90,90,90	0
55	MG	1H	3302	1/1	0.89	0.31	90,90,90,90	0
55	MG	1H	3524	1/1	0.89	0.33	123,123,123,123	0
55	MG	14	3215	1/1	0.89	0.16	182,182,182,182	0
55	MG	1H	3225	1/1	0.89	0.24	113,113,113,113	0
55	MG	1H	3298	1/1	0.89	0.35	114,114,114,114	0
55	MG	1G	1618	1/1	0.89	0.14	110,110,110,110	0
55	MG	13	1624	1/1	0.90	0.29	77,77,77,77	0
55	MG	14	3341	1/1	0.90	0.18	102,102,102,102	0
55	MG	14	3293	1/1	0.90	0.33	105,105,105,105	0
55	MG	14	3333	1/1	0.90	0.49	96,96,96,96	0
55	MG	14	3016	1/1	0.90	0.28	86,86,86,86	0
55	MG	14	3403	1/1	0.90	0.14	88,88,88,88	0
55	MG	1J	203	1/1	0.90	0.11	121,121,121,121	0
55	MG	1G	1712	1/1	0.90	0.28	122,122,122,122	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	1G	1736	1/1	0.90	0.10	151,151,151,151	0
55	MG	14	3225	1/1	0.90	0.35	94,94,94,94	0
55	MG	14	3108	1/1	0.90	0.14	87,87,87,87	0
55	MG	14	3423	1/1	0.90	0.14	101,101,101,101	0
55	MG	1H	3153	1/1	0.90	0.12	79,79,79,79	0
55	MG	1H	3433	1/1	0.90	0.12	92,92,92,92	0
55	MG	1H	3195	1/1	0.90	0.15	78,78,78,78	0
55	MG	1H	3214	1/1	0.90	0.62	94,94,94,94	0
55	MG	1G	1741	1/1	0.90	0.08	140,140,140,140	0
55	MG	1H	3194	1/1	0.90	0.30	75,75,75,75	0
55	MG	14	3387	1/1	0.90	0.07	77,77,77,77	0
55	MG	14	3484	1/1	0.90	0.09	146,146,146,146	0
55	MG	1G	1630	1/1	0.90	0.23	75,75,75,75	0
55	MG	1H	3449	1/1	0.90	0.08	90,90,90,90	0
55	MG	14	3181	1/1	0.90	0.23	97,97,97,97	0
55	MG	14	3079	1/1	0.90	0.20	75,75,75,75	0
55	MG	1H	3100	1/1	0.90	0.25	76,76,76,76	0
55	MG	14	3373	1/1	0.90	0.17	101,101,101,101	0
55	MG	13	1671	1/1	0.90	0.28	155,155,155,155	0
55	MG	55	203	1/1	0.90	0.45	88,88,88,88	0
55	MG	1G	1621	1/1	0.90	0.13	90,90,90,90	0
55	MG	14	3222	1/1	0.90	0.26	112,112,112,112	0
55	MG	14	3169	1/1	0.90	0.20	69,69,69,69	0
55	MG	1H	3403	1/1	0.90	0.13	78,78,78,78	0
55	MG	1H	3419	1/1	0.90	0.17	90,90,90,90	0
55	MG	1H	3223	1/1	0.90	0.25	77,77,77,77	0
55	MG	14	3255	1/1	0.90	0.22	107,107,107,107	0
55	MG	1H	3453	1/1	0.90	0.09	89,89,89,89	0
55	MG	1G	1650	1/1	0.90	0.18	99,99,99,99	0
55	MG	14	3343	1/1	0.90	0.40	83,83,83,83	0
55	MG	14	3087	1/1	0.90	0.26	101,101,101,101	0
55	MG	1H	3288	1/1	0.90	0.33	86,86,86,86	0
55	MG	1H	3468	1/1	0.90	0.41	120,120,120,120	0
55	MG	14	3291	1/1	0.90	0.14	88,88,88,88	0
55	MG	1H	3154	1/1	0.90	0.35	88,88,88,88	0
55	MG	14	3259	1/1	0.90	0.14	86,86,86,86	0
55	MG	16	202	1/1	0.90	0.31	88,88,88,88	0
55	MG	1H	3261	1/1	0.90	0.52	109,109,109,109	0
55	MG	14	3158	1/1	0.90	0.27	70,70,70,70	0
55	MG	1H	3303	1/1	0.90	0.19	88,88,88,88	0
55	MG	14	3132	1/1	0.90	0.23	90,90,90,90	0
55	MG	14	3080	1/1	0.90	0.18	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	14	3065	1/1	0.90	0.24	86,86,86,86	0
55	MG	1H	3538	1/1	0.90	0.11	67,67,67,67	0
55	MG	Q8	101	1/1	0.90	0.27	95,95,95,95	0
55	MG	14	3071	1/1	0.90	0.15	95,95,95,95	0
55	MG	1G	1605	1/1	0.90	0.13	81,81,81,81	0
55	MG	14	3263	1/1	0.90	0.41	101,101,101,101	0
55	MG	1H	3278	1/1	0.90	0.33	79,79,79,79	0
55	MG	14	3118	1/1	0.91	0.16	96,96,96,96	0
55	MG	13	1688	1/1	0.91	0.38	107,107,107,107	0
55	MG	1H	3123	1/1	0.91	0.30	93,93,93,93	0
55	MG	1G	1714	1/1	0.91	0.12	115,115,115,115	0
55	MG	13	1661	1/1	0.91	0.21	127,127,127,127	0
55	MG	1H	3237	1/1	0.91	0.33	99,99,99,99	0
55	MG	14	3408	1/1	0.91	0.13	103,103,103,103	0
55	MG	1H	3204	1/1	0.91	0.31	84,84,84,84	0
55	MG	1G	1713	1/1	0.91	0.15	106,106,106,106	0
55	MG	1G	1672	1/1	0.91	0.33	111,111,111,111	0
55	MG	14	3438	1/1	0.91	0.05	104,104,104,104	0
55	MG	14	3199	1/1	0.91	0.24	94,94,94,94	0
55	MG	14	3278	1/1	0.91	0.23	82,82,82,82	0
55	MG	1H	3467	1/1	0.91	0.10	101,101,101,101	0
55	MG	14	3277	1/1	0.91	0.15	68,68,68,68	0
55	MG	14	3287	1/1	0.91	0.14	111,111,111,111	0
55	MG	14	3412	1/1	0.91	0.07	91,91,91,91	0
55	MG	1G	1654	1/1	0.91	0.11	88,88,88,88	0
55	MG	14	3083	1/1	0.91	0.09	64,64,64,64	0
55	MG	1H	3189	1/1	0.91	0.11	83,83,83,83	0
55	MG	1H	3191	1/1	0.91	0.43	90,90,90,90	0
55	MG	14	3195	1/1	0.91	0.25	103,103,103,103	0
55	MG	1H	3356	1/1	0.91	0.32	98,98,98,98	0
55	MG	14	3240	1/1	0.91	0.18	100,100,100,100	0
55	MG	1H	3494	1/1	0.91	0.07	88,88,88,88	0
55	MG	13	1610	1/1	0.91	0.10	104,104,104,104	0
55	MG	14	3086	1/1	0.91	0.22	68,68,68,68	0
55	MG	14	3477	1/1	0.91	0.28	117,117,117,117	0
55	MG	1H	3529	1/1	0.91	0.08	106,106,106,106	0
55	MG	1H	3180	1/1	0.91	0.16	53,53,53,53	0
55	MG	1H	3509	1/1	0.91	0.05	126,126,126,126	0
55	MG	1H	3513	1/1	0.91	0.29	103,103,103,103	0
55	MG	14	3327	1/1	0.91	0.15	101,101,101,101	0
55	MG	1H	3046	1/1	0.91	0.31	86,86,86,86	0
55	MG	1G	1601	1/1	0.91	0.21	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	14	3107	1/1	0.91	0.15	78,78,78,78	0
55	MG	1H	3475	1/1	0.91	0.12	69,69,69,69	0
55	MG	1H	3106	1/1	0.91	0.44	81,81,81,81	0
55	MG	13	1654	1/1	0.91	0.13	104,104,104,104	0
55	MG	14	3063	1/1	0.91	0.21	85,85,85,85	0
55	MG	16	211	1/1	0.91	0.10	114,114,114,114	0
55	MG	1H	3052	1/1	0.91	0.30	72,72,72,72	0
55	MG	1H	3239	1/1	0.91	0.36	71,71,71,71	0
55	MG	1G	1721	1/1	0.91	0.09	121,121,121,121	0
55	MG	13	1640	1/1	0.91	0.20	99,99,99,99	0
55	MG	1G	1675	1/1	0.91	0.29	111,111,111,111	0
55	MG	1G	1624	1/1	0.91	0.17	101,101,101,101	0
55	MG	1H	3291	1/1	0.91	0.37	120,120,120,120	0
55	MG	1H	3138	1/1	0.91	0.18	82,82,82,82	0
55	MG	13	1676	1/1	0.91	0.30	120,120,120,120	0
55	MG	1G	1682	1/1	0.91	0.18	145,145,145,145	0
55	MG	1G	1708	1/1	0.91	0.19	96,96,96,96	0
55	MG	14	3177	1/1	0.91	0.17	91,91,91,91	0
55	MG	1H	3252	1/1	0.91	0.22	76,76,76,76	0
55	MG	1G	1686	1/1	0.91	0.24	121,121,121,121	0
55	MG	14	3232	1/1	0.91	0.10	86,86,86,86	0
55	MG	14	3229	1/1	0.91	0.31	71,71,71,71	0
55	MG	1G	1648	1/1	0.91	0.28	109,109,109,109	0
55	MG	1H	3218	1/1	0.91	0.31	87,87,87,87	0
55	MG	1H	3184	1/1	0.91	0.12	66,66,66,66	0
55	MG	13	1612	1/1	0.91	0.21	117,117,117,117	0
55	MG	14	3315	1/1	0.91	0.39	121,121,121,121	0
55	MG	14	3435	1/1	0.91	0.11	123,123,123,123	0
55	MG	14	3167	1/1	0.91	0.10	107,107,107,107	0
55	MG	1H	3409	1/1	0.91	0.17	84,84,84,84	0
55	MG	14	3358	1/1	0.91	0.09	102,102,102,102	0
55	MG	14	3105	1/1	0.91	0.19	82,82,82,82	0
55	MG	13	1702	1/1	0.91	0.12	140,140,140,140	0
55	MG	14	3381	1/1	0.91	0.09	69,69,69,69	0
55	MG	1H	3128	1/1	0.91	0.35	77,77,77,77	0
55	MG	14	3250	1/1	0.91	0.18	80,80,80,80	0
55	MG	1H	3118	1/1	0.91	0.15	56,56,56,56	0
55	MG	1H	3517	1/1	0.91	0.08	121,121,121,121	0
55	MG	14	3447	1/1	0.91	0.23	90,90,90,90	0
55	MG	1G	1743	1/1	0.91	0.09	128,128,128,128	0
55	MG	1H	3410	1/1	0.92	0.08	82,82,82,82	0
55	MG	14	3422	1/1	0.92	0.08	110,110,110,110	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	1H	3119	1/1	0.92	0.24	92,92,92,92	0
55	MG	1G	1726	1/1	0.92	0.07	137,137,137,137	0
55	MG	1G	1668	1/1	0.92	0.34	99,99,99,99	0
55	MG	14	3030	1/1	0.92	0.22	92,92,92,92	0
55	MG	14	3353	1/1	0.92	0.08	74,74,74,74	0
55	MG	1H	3103	1/1	0.92	0.13	74,74,74,74	0
55	MG	1G	1611	1/1	0.92	0.11	92,92,92,92	0
55	MG	14	3485	1/1	0.92	0.10	73,73,73,73	0
55	MG	14	3396	1/1	0.92	0.19	94,94,94,94	0
55	MG	14	3348	1/1	0.92	0.16	96,96,96,96	0
55	MG	2L	102	1/1	0.92	0.16	113,113,113,113	0
55	MG	1H	3076	1/1	0.92	0.29	74,74,74,74	0
55	MG	1H	3069	1/1	0.92	0.22	86,86,86,86	0
55	MG	1H	3384	1/1	0.92	0.12	72,72,72,72	0
55	MG	14	3433	1/1	0.92	0.09	105,105,105,105	0
55	MG	1J	210	1/1	0.92	0.13	105,105,105,105	0
55	MG	1H	3112	1/1	0.92	0.29	64,64,64,64	0
55	MG	1H	3407	1/1	0.92	0.08	83,83,83,83	0
55	MG	1H	3120	1/1	0.92	0.31	69,69,69,69	0
55	MG	55	201	1/1	0.92	0.42	92,92,92,92	0
55	MG	25	201	1/1	0.92	0.07	129,129,129,129	0
55	MG	J8	101	1/1	0.92	0.19	83,83,83,83	0
55	MG	1G	1702	1/1	0.92	0.34	173,173,173,173	0
55	MG	14	3151	1/1	0.92	0.20	79,79,79,79	0
55	MG	1H	3109	1/1	0.92	0.11	57,57,57,57	0
55	MG	14	3476	1/1	0.92	0.27	110,110,110,110	0
55	MG	1G	1604	1/1	0.92	0.09	106,106,106,106	0
55	MG	1H	3442	1/1	0.92	0.11	97,97,97,97	0
55	MG	13	1632	1/1	0.92	0.25	87,87,87,87	0
55	MG	1H	3042	1/1	0.92	0.32	69,69,69,69	0
55	MG	1H	3485	1/1	0.92	0.08	97,97,97,97	0
55	MG	1H	3480	1/1	0.92	0.08	100,100,100,100	0
55	MG	14	3117	1/1	0.92	0.11	87,87,87,87	0
55	MG	13	1664	1/1	0.92	0.18	142,142,142,142	0
55	MG	13	1680	1/1	0.92	0.40	160,160,160,160	0
55	MG	14	3018	1/1	0.92	0.22	81,81,81,81	0
55	MG	1H	3232	1/1	0.92	0.18	82,82,82,82	0
55	MG	1H	3523	1/1	0.92	0.08	135,135,135,135	0
55	MG	1H	3049	1/1	0.92	0.24	78,78,78,78	0
55	MG	1G	1656	1/1	0.92	0.31	104,104,104,104	0
55	MG	1G	1699	1/1	0.92	0.14	157,157,157,157	0
55	MG	14	3218	1/1	0.92	0.14	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	14	3230	1/1	0.92	0.24	81,81,81,81	0
55	MG	1H	3231	1/1	0.92	0.11	81,81,81,81	0
55	MG	14	3142	1/1	0.92	0.10	67,67,67,67	0
55	MG	1H	3167	1/1	0.92	0.23	119,119,119,119	0
55	MG	1H	3394	1/1	0.92	0.15	119,119,119,119	0
55	MG	1H	3514	1/1	0.92	0.13	129,129,129,129	0
55	MG	1H	3327	1/1	0.92	0.25	88,88,88,88	0
55	MG	13	1613	1/1	0.92	0.19	123,123,123,123	0
55	MG	16	207	1/1	0.92	0.29	95,95,95,95	0
55	MG	1G	1674	1/1	0.92	0.20	106,106,106,106	0
55	MG	14	3231	1/1	0.92	0.07	112,112,112,112	0
55	MG	1H	3378	1/1	0.92	0.12	59,59,59,59	0
55	MG	3L	101	1/1	0.92	0.24	189,189,189,189	0
55	MG	1H	3257	1/1	0.92	0.41	102,102,102,102	0
55	MG	16	208	1/1	0.92	0.25	76,76,76,76	0
55	MG	14	3465	1/1	0.92	0.14	92,92,92,92	0
55	MG	14	3115	1/1	0.92	0.09	94,94,94,94	0
55	MG	1H	3050	1/1	0.92	0.36	73,73,73,73	0
55	MG	1H	3377	1/1	0.92	0.19	66,66,66,66	0
55	MG	13	1697	1/1	0.92	0.14	100,100,100,100	0
55	MG	1H	3519	1/1	0.92	0.08	132,132,132,132	0
55	MG	1H	3057	1/1	0.92	0.27	76,76,76,76	0
55	MG	1H	3032	1/1	0.92	0.19	76,76,76,76	0
55	MG	1H	3097	1/1	0.92	0.09	75,75,75,75	0
55	MG	1H	3212	1/1	0.92	0.16	97,97,97,97	0
55	MG	14	3067	1/1	0.92	0.15	66,66,66,66	0
55	MG	14	3205	1/1	0.92	0.12	82,82,82,82	0
55	MG	1H	3147	1/1	0.92	0.44	76,76,76,76	0
55	MG	14	3174	1/1	0.92	0.60	85,85,85,85	0
55	MG	1G	1610	1/1	0.93	0.13	156,156,156,156	0
55	MG	29	302	1/1	0.93	0.58	81,81,81,81	0
55	MG	1H	3145	1/1	0.93	0.28	84,84,84,84	0
55	MG	1H	3181	1/1	0.93	0.18	69,69,69,69	0
55	MG	14	3165	1/1	0.93	0.15	90,90,90,90	0
55	MG	14	3017	1/1	0.93	0.20	79,79,79,79	0
55	MG	1H	3247	1/1	0.93	0.17	89,89,89,89	0
55	MG	14	3239	1/1	0.93	0.13	101,101,101,101	0
55	MG	14	3481	1/1	0.93	0.34	112,112,112,112	0
55	MG	14	3176	1/1	0.93	0.15	75,75,75,75	0
55	MG	14	3190	1/1	0.93	0.14	85,85,85,85	0
55	MG	13	1634	1/1	0.93	0.14	79,79,79,79	0
55	MG	1H	3520	1/1	0.93	0.07	104,104,104,104	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	1H	3479	1/1	0.93	0.05	97,97,97,97	0
55	MG	13	1704	1/1	0.93	0.11	89,89,89,89	0
55	MG	13	1719	1/1	0.93	0.06	140,140,140,140	0
55	MG	14	3156	1/1	0.93	0.10	84,84,84,84	0
55	MG	1G	1657	1/1	0.93	0.27	93,93,93,93	0
55	MG	1H	3477	1/1	0.93	0.09	80,80,80,80	0
55	MG	1H	3542	1/1	0.93	0.16	123,123,123,123	0
55	MG	13	1652	1/1	0.93	0.37	98,98,98,98	0
55	MG	1H	3390	1/1	0.93	0.10	67,67,67,67	0
55	MG	13	1604	1/1	0.93	0.13	96,96,96,96	0
55	MG	1H	3512	1/1	0.93	0.25	103,103,103,103	0
55	MG	14	3242	1/1	0.93	0.13	100,100,100,100	0
55	MG	14	3439	1/1	0.93	0.06	109,109,109,109	0
55	MG	14	3252	1/1	0.93	0.24	79,79,79,79	0
55	MG	1H	3473	1/1	0.93	0.05	95,95,95,95	0
55	MG	1H	3027	1/1	0.93	0.24	88,88,88,88	0
55	MG	14	3003	1/1	0.93	0.25	67,67,67,67	0
55	MG	1H	3536	1/1	0.93	0.04	130,130,130,130	0
55	MG	I8	103	1/1	0.93	0.31	94,94,94,94	0
55	MG	14	3443	1/1	0.93	0.07	106,106,106,106	0
55	MG	1H	3484	1/1	0.93	0.10	98,98,98,98	0
55	MG	14	3125	1/1	0.93	0.22	93,93,93,93	0
55	MG	16	212	1/1	0.93	0.16	126,126,126,126	0
55	MG	1H	3127	1/1	0.93	0.61	93,93,93,93	0
55	MG	14	3021	1/1	0.93	0.42	87,87,87,87	0
55	MG	E5	102	1/1	0.93	0.34	116,116,116,116	0
55	MG	13	1662	1/1	0.93	0.33	85,85,85,85	0
55	MG	14	3298	1/1	0.93	0.75	88,88,88,88	0
55	MG	14	3400	1/1	0.93	0.18	61,61,61,61	0
55	MG	1H	3335	1/1	0.93	0.26	90,90,90,90	0
55	MG	14	3210	1/1	0.93	0.17	89,89,89,89	0
55	MG	14	3282	1/1	0.93	0.26	77,77,77,77	0
55	MG	1H	3267	1/1	0.93	0.40	95,95,95,95	0
55	MG	14	3345	1/1	0.93	0.19	116,116,116,116	0
55	MG	14	3380	1/1	0.93	0.09	92,92,92,92	0
55	MG	14	3272	1/1	0.93	0.45	94,94,94,94	0
55	MG	1H	3163	1/1	0.93	0.40	111,111,111,111	0
55	MG	1G	1716	1/1	0.93	0.13	98,98,98,98	0
55	MG	14	3430	1/1	0.93	0.07	114,114,114,114	0
55	MG	1H	3530	1/1	0.93	0.19	97,97,97,97	0
55	MG	1H	3124	1/1	0.93	0.43	85,85,85,85	0
55	MG	1G	1617	1/1	0.93	0.15	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	1G	1649	1/1	0.93	0.19	125,125,125,125	0
55	MG	14	3170	1/1	0.93	0.13	77,77,77,77	0
55	MG	1H	3374	1/1	0.93	0.15	64,64,64,64	0
55	MG	14	3375	1/1	0.93	0.11	75,75,75,75	0
55	MG	14	3066	1/1	0.93	0.21	82,82,82,82	0
55	MG	1G	1673	1/1	0.93	0.18	101,101,101,101	0
55	MG	14	3126	1/1	0.93	0.27	110,110,110,110	0
55	MG	14	3088	1/1	0.93	0.13	99,99,99,99	0
55	MG	13	1722	1/1	0.93	0.10	103,103,103,103	0
55	MG	14	3456	1/1	0.93	0.06	125,125,125,125	0
55	MG	14	3357	1/1	0.93	0.13	83,83,83,83	0
55	MG	14	3164	1/1	0.93	0.16	89,89,89,89	0
55	MG	1H	3030	1/1	0.94	0.12	66,66,66,66	0
55	MG	1H	3501	1/1	0.94	0.13	93,93,93,93	0
55	MG	1H	3277	1/1	0.94	0.46	88,88,88,88	0
55	MG	1H	3283	1/1	0.94	0.54	104,104,104,104	0
55	MG	14	3254	1/1	0.94	0.19	95,95,95,95	0
55	MG	14	3022	1/1	0.94	0.11	60,60,60,60	0
55	MG	1H	3272	1/1	0.94	0.15	97,97,97,97	0
55	MG	14	3442	1/1	0.94	0.27	84,84,84,84	0
55	MG	14	3431	1/1	0.94	0.05	106,106,106,106	0
55	MG	1H	3447	1/1	0.94	0.12	78,78,78,78	0
55	MG	1G	1706	1/1	0.94	0.16	116,116,116,116	0
55	MG	1H	3095	1/1	0.94	0.33	72,72,72,72	0
55	MG	1G	1615	1/1	0.94	0.27	83,83,83,83	0
55	MG	14	3161	1/1	0.94	0.28	72,72,72,72	0
55	MG	1G	1647	1/1	0.94	0.14	102,102,102,102	0
55	MG	1H	3462	1/1	0.94	0.09	104,104,104,104	0
55	MG	1H	3188	1/1	0.94	0.30	88,88,88,88	0
55	MG	16	201	1/1	0.94	0.18	112,112,112,112	0
55	MG	1H	3496	1/1	0.94	0.12	91,91,91,91	0
55	MG	1G	1735	1/1	0.94	0.06	128,128,128,128	0
55	MG	1G	1614	1/1	0.94	0.17	89,89,89,89	0
55	MG	14	3114	1/1	0.94	0.30	83,83,83,83	0
55	MG	1H	3058	1/1	0.94	0.25	88,88,88,88	0
55	MG	1H	3306	1/1	0.94	0.27	109,109,109,109	0
55	MG	14	3283	1/1	0.94	0.40	81,81,81,81	0
55	MG	1G	1695	1/1	0.94	0.14	108,108,108,108	0
55	MG	1H	3408	1/1	0.94	0.08	102,102,102,102	0
55	MG	1H	3527	1/1	0.94	0.14	118,118,118,118	0
55	MG	14	3112	1/1	0.94	0.32	81,81,81,81	0
55	MG	14	3487	1/1	0.94	0.16	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	1H	3515	1/1	0.94	0.06	125,125,125,125	0
55	MG	14	3273	1/1	0.94	0.19	92,92,92,92	0
55	MG	1H	3244	1/1	0.94	0.34	75,75,75,75	0
55	MG	1H	3337	1/1	0.94	0.39	87,87,87,87	0
55	MG	1G	1667	1/1	0.94	0.13	92,92,92,92	0
55	MG	14	3178	1/1	0.94	0.51	87,87,87,87	0
55	MG	1H	3186	1/1	0.94	0.24	74,74,74,74	0
55	MG	1H	3478	1/1	0.94	0.07	99,99,99,99	0
55	MG	1H	3368	1/1	0.94	0.28	64,64,64,64	0
55	MG	1H	3446	1/1	0.94	0.16	112,112,112,112	0
55	MG	1H	3275	1/1	0.94	0.23	85,85,85,85	0
55	MG	1H	3349	1/1	0.94	0.15	95,95,95,95	0
55	MG	14	3366	1/1	0.94	0.09	71,71,71,71	0
55	MG	1H	3019	1/1	0.94	0.17	73,73,73,73	0
55	MG	1H	3201	1/1	0.94	0.12	98,98,98,98	0
55	MG	1H	3413	1/1	0.94	0.11	83,83,83,83	0
55	MG	14	3168	1/1	0.94	0.18	86,86,86,86	0
55	MG	1H	3482	1/1	0.94	0.18	99,99,99,99	0
55	MG	1G	1738	1/1	0.94	0.28	108,108,108,108	0
55	MG	1H	3151	1/1	0.94	0.19	80,80,80,80	0
55	MG	14	3121	1/1	0.94	0.21	88,88,88,88	0
55	MG	1H	3117	1/1	0.94	0.26	83,83,83,83	0
55	MG	13	1605	1/1	0.94	0.11	103,103,103,103	0
55	MG	16	204	1/1	0.94	0.14	121,121,121,121	0
55	MG	14	3376	1/1	0.94	0.11	84,84,84,84	0
55	MG	1G	1739	1/1	0.94	0.15	112,112,112,112	0
55	MG	1H	3539	1/1	0.94	0.09	123,123,123,123	0
55	MG	1H	3375	1/1	0.94	0.12	65,65,65,65	0
55	MG	14	3260	1/1	0.94	0.13	88,88,88,88	0
55	MG	1H	3352	1/1	0.94	0.12	84,84,84,84	0
55	MG	1H	3089	1/1	0.94	0.13	62,62,62,62	0
55	MG	14	3207	1/1	0.94	0.12	96,96,96,96	0
55	MG	14	3152	1/1	0.94	0.16	80,80,80,80	0
55	MG	1H	3528	1/1	0.94	0.06	115,115,115,115	0
55	MG	1H	3395	1/1	0.94	0.40	107,107,107,107	0
55	MG	14	3262	1/1	0.94	0.13	84,84,84,84	0
55	MG	1H	3372	1/1	0.94	0.10	68,68,68,68	0
55	MG	14	3354	1/1	0.94	0.15	92,92,92,92	0
55	MG	14	3276	1/1	0.94	0.27	75,75,75,75	0
55	MG	1H	3393	1/1	0.94	0.09	99,99,99,99	0
55	MG	1H	3533	1/1	0.94	0.18	88,88,88,88	0
55	MG	14	3378	1/1	0.94	0.12	99,99,99,99	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	1G	1606	1/1	0.94	0.14	108,108,108,108	0
55	MG	1H	3469	1/1	0.94	0.17	109,109,109,109	0
55	MG	1H	3075	1/1	0.94	0.42	80,80,80,80	0
55	MG	14	3145	1/1	0.94	0.27	75,75,75,75	0
55	MG	1H	3541	1/1	0.94	0.12	89,89,89,89	0
55	MG	1H	3196	1/1	0.94	0.29	106,106,106,106	0
55	MG	1H	3203	1/1	0.94	0.35	83,83,83,83	0
55	MG	14	3139	1/1	0.94	0.25	102,102,102,102	0
55	MG	1H	3365	1/1	0.94	0.24	96,96,96,96	0
55	MG	1H	3016	1/1	0.94	0.24	75,75,75,75	0
55	MG	14	3134	1/1	0.94	0.27	77,77,77,77	0
55	MG	1H	3340	1/1	0.94	0.25	81,81,81,81	0
55	MG	1H	3159	1/1	0.94	0.66	90,90,90,90	0
55	MG	1H	3293	1/1	0.95	0.45	89,89,89,89	0
55	MG	19	301	1/1	0.95	0.23	76,76,76,76	0
55	MG	1H	3035	1/1	0.95	0.48	98,98,98,98	0
55	MG	14	3388	1/1	0.95	0.11	80,80,80,80	0
55	MG	1H	3081	1/1	0.95	0.15	66,66,66,66	0
55	MG	1H	3441	1/1	0.95	0.33	97,97,97,97	0
55	MG	14	3130	1/1	0.95	0.25	85,85,85,85	0
55	MG	13	1622	1/1	0.95	0.18	96,96,96,96	0
55	MG	13	1711	1/1	0.95	0.18	86,86,86,86	0
55	MG	13	1716	1/1	0.95	0.07	97,97,97,97	0
55	MG	14	3032	1/1	0.95	0.21	79,79,79,79	0
55	MG	2K	101	1/1	0.95	0.18	84,84,84,84	0
55	MG	14	3189	1/1	0.95	0.29	98,98,98,98	0
55	MG	14	3355	1/1	0.95	0.16	97,97,97,97	0
55	MG	1H	3092	1/1	0.95	0.19	79,79,79,79	0
55	MG	14	3292	1/1	0.95	0.23	104,104,104,104	0
55	MG	13	1714	1/1	0.95	0.07	120,120,120,120	0
55	MG	1G	1652	1/1	0.95	0.35	100,100,100,100	0
55	MG	14	3365	1/1	0.95	0.09	72,72,72,72	0
55	MG	1G	1733	1/1	0.95	0.10	105,105,105,105	0
55	MG	1H	3045	1/1	0.95	0.23	104,104,104,104	0
55	MG	1G	1688	1/1	0.95	0.17	115,115,115,115	0
55	MG	14	3280	1/1	0.95	0.59	79,79,79,79	0
55	MG	13	1615	1/1	0.95	0.31	146,146,146,146	0
55	MG	1G	1622	1/1	0.95	0.27	124,124,124,124	0
55	MG	14	3288	1/1	0.95	0.21	88,88,88,88	0
55	MG	14	3015	1/1	0.95	0.23	78,78,78,78	0
55	MG	1G	1616	1/1	0.95	0.26	85,85,85,85	0
55	MG	13	1657	1/1	0.95	0.16	109,109,109,109	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	14	3095	1/1	0.95	0.43	87,87,87,87	0
55	MG	3I	201	1/1	0.95	0.14	89,89,89,89	0
55	MG	14	3143	1/1	0.95	0.12	58,58,58,58	0
55	MG	14	3036	1/1	0.95	0.20	84,84,84,84	0
55	MG	1H	3287	1/1	0.95	0.17	67,67,67,67	0
55	MG	1H	3500	1/1	0.95	0.14	87,87,87,87	0
55	MG	1G	1724	1/1	0.95	0.10	95,95,95,95	0
55	MG	1G	1684	1/1	0.95	0.21	108,108,108,108	0
55	MG	1H	3423	1/1	0.95	0.15	64,64,64,64	0
55	MG	1H	3116	1/1	0.95	0.41	92,92,92,92	0
55	MG	1H	3102	1/1	0.95	0.21	82,82,82,82	0
55	MG	1G	1620	1/1	0.95	0.19	97,97,97,97	0
55	MG	1H	3357	1/1	0.95	0.09	87,87,87,87	0
55	MG	14	3415	1/1	0.95	0.06	96,96,96,96	0
55	MG	1H	3284	1/1	0.95	0.22	83,83,83,83	0
55	MG	14	3052	1/1	0.95	0.27	74,74,74,74	0
55	MG	1H	3416	1/1	0.95	0.15	77,77,77,77	0
55	MG	1H	3108	1/1	0.95	0.36	79,79,79,79	0
55	MG	14	3426	1/1	0.95	0.10	96,96,96,96	0
55	MG	1G	1677	1/1	0.95	0.28	97,97,97,97	0
55	MG	1H	3130	1/1	0.95	0.36	91,91,91,91	0
55	MG	1G	1742	1/1	0.95	0.34	116,116,116,116	0
55	MG	1H	3526	1/1	0.95	0.08	106,106,106,106	0
55	MG	1H	3331	1/1	0.95	0.24	62,62,62,62	0
55	MG	1H	3471	1/1	0.95	0.10	89,89,89,89	0
55	MG	1H	3190	1/1	0.95	0.21	98,98,98,98	0
55	MG	14	3338	1/1	0.95	0.19	80,80,80,80	0
55	MG	1H	3292	1/1	0.95	0.22	100,100,100,100	0
55	MG	14	3478	1/1	0.95	0.23	102,102,102,102	0
55	MG	1H	3429	1/1	0.95	0.12	65,65,65,65	0
55	MG	1H	3317	1/1	0.95	0.35	87,87,87,87	0
55	MG	1H	3008	1/1	0.95	0.26	74,74,74,74	0
55	MG	14	3434	1/1	0.95	0.11	102,102,102,102	0
55	MG	1H	3033	1/1	0.95	0.18	113,113,113,113	0
55	MG	13	1728	1/1	0.95	0.09	119,119,119,119	0
55	MG	1G	1636	1/1	0.95	0.28	97,97,97,97	0
55	MG	1H	3421	1/1	0.95	0.18	63,63,63,63	0
55	MG	1G	1643	1/1	0.95	0.12	128,128,128,128	0
55	MG	14	3268	1/1	0.95	0.19	87,87,87,87	0
55	MG	14	3192	1/1	0.95	0.19	74,74,74,74	0
55	MG	14	3027	1/1	0.95	0.22	80,80,80,80	0
55	MG	1G	1631	1/1	0.95	0.26	81,81,81,81	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	13	1633	1/1	0.95	0.09	107,107,107,107	0
55	MG	14	3303	1/1	0.95	0.34	122,122,122,122	0
55	MG	1H	3510	1/1	0.95	0.06	125,125,125,125	0
55	MG	1H	3014	1/1	0.95	0.29	69,69,69,69	0
55	MG	14	3150	1/1	0.95	0.14	64,64,64,64	0
55	MG	14	3367	1/1	0.95	0.14	87,87,87,87	0
55	MG	1H	3274	1/1	0.95	0.12	97,97,97,97	0
55	MG	1H	3460	1/1	0.95	0.09	94,94,94,94	0
55	MG	1H	3296	1/1	0.95	0.22	92,92,92,92	0
55	MG	1H	3104	1/1	0.95	0.51	84,84,84,84	0
55	MG	1H	3176	1/1	0.95	0.47	93,93,93,93	0
55	MG	13	1726	1/1	0.95	0.05	134,134,134,134	0
55	MG	1H	3129	1/1	0.95	0.26	80,80,80,80	0
55	MG	14	3436	1/1	0.95	0.12	99,99,99,99	0
55	MG	1H	3079	1/1	0.95	0.21	50,50,50,50	0
55	MG	1H	3251	1/1	0.95	0.44	76,76,76,76	0
55	MG	14	3009	1/1	0.95	0.23	67,67,67,67	0
55	MG	14	3454	1/1	0.95	0.11	96,96,96,96	0
55	MG	13	1621	1/1	0.95	0.18	116,116,116,116	0
55	MG	14	3122	1/1	0.95	0.15	81,81,81,81	0
55	MG	13	1698	1/1	0.95	0.14	77,77,77,77	0
55	MG	E5	101	1/1	0.95	0.16	73,73,73,73	0
55	MG	14	3241	1/1	0.95	0.10	117,117,117,117	0
55	MG	14	3085	1/1	0.95	0.19	67,67,67,67	0
55	MG	1H	3148	1/1	0.95	0.29	74,74,74,74	0
55	MG	14	3059	1/1	0.95	0.14	64,64,64,64	0
55	MG	1H	3547	1/1	0.95	0.36	85,85,85,85	0
55	MG	1H	3028	1/1	0.95	0.38	93,93,93,93	0
55	MG	14	3337	1/1	0.95	0.30	111,111,111,111	0
55	MG	14	3359	1/1	0.95	0.11	87,87,87,87	0
55	MG	1H	3224	1/1	0.95	0.18	87,87,87,87	0
55	MG	1H	3452	1/1	0.95	0.10	86,86,86,86	0
55	MG	1H	3029	1/1	0.95	0.26	84,84,84,84	0
55	MG	13	1625	1/1	0.95	0.20	63,63,63,63	0
55	MG	14	3056	1/1	0.95	0.16	74,74,74,74	0
55	MG	1H	3041	1/1	0.95	0.24	68,68,68,68	0
55	MG	14	3173	1/1	0.96	0.30	103,103,103,103	0
55	MG	29	301	1/1	0.96	0.11	67,67,67,67	0
55	MG	14	3008	1/1	0.96	0.15	52,52,52,52	0
55	MG	14	3191	1/1	0.96	0.29	97,97,97,97	0
55	MG	13	1618	1/1	0.96	0.23	86,86,86,86	0
55	MG	14	3154	1/1	0.96	0.42	102,102,102,102	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	1H	3381	1/1	0.96	0.17	78,78,78,78	0
55	MG	14	3384	1/1	0.96	0.05	75,75,75,75	0
55	MG	1H	3516	1/1	0.96	0.04	126,126,126,126	0
55	MG	F5	101	1/1	0.96	0.18	90,90,90,90	0
55	MG	1H	3329	1/1	0.96	0.33	96,96,96,96	0
55	MG	14	3048	1/1	0.96	0.20	69,69,69,69	0
55	MG	14	3069	1/1	0.96	0.45	86,86,86,86	0
55	MG	14	3486	1/1	0.96	0.07	64,64,64,64	0
55	MG	14	3369	1/1	0.96	0.13	63,63,63,63	0
55	MG	14	3072	1/1	0.96	0.24	85,85,85,85	0
55	MG	14	3092	1/1	0.96	0.21	84,84,84,84	0
55	MG	1H	3405	1/1	0.96	0.11	94,94,94,94	0
55	MG	1G	1662	1/1	0.96	0.20	96,96,96,96	0
55	MG	13	1729	1/1	0.96	0.14	115,115,115,115	0
55	MG	14	3475	1/1	0.96	0.35	99,99,99,99	0
55	MG	1H	3067	1/1	0.96	0.22	79,79,79,79	0
55	MG	13	1603	1/1	0.96	0.15	107,107,107,107	0
55	MG	1H	3171	1/1	0.96	0.23	70,70,70,70	0
55	MG	14	3050	1/1	0.96	0.26	75,75,75,75	0
55	MG	14	3159	1/1	0.96	0.17	66,66,66,66	0
55	MG	1H	3495	1/1	0.96	0.08	122,122,122,122	0
55	MG	14	3309	1/1	0.96	0.14	85,85,85,85	0
55	MG	1H	3470	1/1	0.96	0.15	98,98,98,98	0
55	MG	1H	3311	1/1	0.96	0.18	85,85,85,85	0
55	MG	88	201	1/1	0.96	0.18	93,93,93,93	0
55	MG	14	3090	1/1	0.96	0.29	53,53,53,53	0
55	MG	1H	3064	1/1	0.96	0.37	82,82,82,82	0
55	MG	1H	3007	1/1	0.96	0.30	53,53,53,53	0
55	MG	1G	1746	1/1	0.96	0.10	162,162,162,162	0
55	MG	14	3391	1/1	0.96	0.25	80,80,80,80	0
55	MG	1H	3074	1/1	0.96	0.38	63,63,63,63	0
55	MG	14	3397	1/1	0.96	0.07	79,79,79,79	0
55	MG	I8	102	1/1	0.96	0.44	73,73,73,73	0
55	MG	1H	3308	1/1	0.96	0.19	90,90,90,90	0
55	MG	1J	208	1/1	0.96	0.07	104,104,104,104	0
55	MG	14	3352	1/1	0.96	0.09	65,65,65,65	0
55	MG	14	3026	1/1	0.96	0.25	76,76,76,76	0
55	MG	1H	3156	1/1	0.96	0.25	76,76,76,76	0
55	MG	1H	3458	1/1	0.96	0.15	67,67,67,67	0
55	MG	1H	3445	1/1	0.96	0.10	76,76,76,76	0
55	MG	14	3356	1/1	0.96	0.10	64,64,64,64	0
55	MG	14	3141	1/1	0.96	0.50	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	1G	1659	1/1	0.96	0.19	97,97,97,97	0
55	MG	1H	3269	1/1	0.96	0.25	107,107,107,107	0
55	MG	1H	3065	1/1	0.96	0.22	74,74,74,74	0
55	MG	1H	3005	1/1	0.96	0.17	64,64,64,64	0
55	MG	13	1715	1/1	0.96	0.24	108,108,108,108	0
55	MG	1H	3474	1/1	0.96	0.24	88,88,88,88	0
55	MG	1H	3094	1/1	0.96	0.29	72,72,72,72	0
55	MG	14	3371	1/1	0.96	0.09	66,66,66,66	0
55	MG	1G	1627	1/1	0.96	0.21	89,89,89,89	0
55	MG	14	3091	1/1	0.96	0.17	73,73,73,73	0
55	MG	1H	3379	1/1	0.96	0.14	71,71,71,71	0
55	MG	14	3416	1/1	0.96	0.06	87,87,87,87	0
55	MG	1G	1694	1/1	0.96	0.18	103,103,103,103	0
55	MG	1H	3066	1/1	0.96	0.26	81,81,81,81	0
55	MG	14	3414	1/1	0.96	0.13	99,99,99,99	0
55	MG	1H	3490	1/1	0.96	0.17	88,88,88,88	0
55	MG	1G	1619	1/1	0.96	0.20	92,92,92,92	0
55	MG	14	3290	1/1	0.96	0.18	102,102,102,102	0
55	MG	1H	3396	1/1	0.96	0.09	84,84,84,84	0
55	MG	13	1606	1/1	0.96	0.27	100,100,100,100	0
55	MG	14	3012	1/1	0.96	0.16	62,62,62,62	0
55	MG	1G	1607	1/1	0.96	0.21	94,94,94,94	0
55	MG	14	3204	1/1	0.96	0.07	104,104,104,104	0
55	MG	14	3120	1/1	0.96	0.21	69,69,69,69	0
55	MG	14	3127	1/1	0.96	0.17	87,87,87,87	0
55	MG	14	3099	1/1	0.96	0.24	75,75,75,75	0
55	MG	1H	3392	1/1	0.96	0.16	70,70,70,70	0
55	MG	1G	1727	1/1	0.96	0.08	126,126,126,126	0
55	MG	13	1620	1/1	0.96	0.28	67,67,67,67	0
56	ZN	5I	101	1/1	0.96	0.14	138,138,138,138	0
55	MG	1H	3199	1/1	0.96	0.56	106,106,106,106	0
55	MG	1H	3545	1/1	0.96	0.24	71,71,71,71	0
55	MG	1H	3424	1/1	0.96	0.14	57,57,57,57	0
55	MG	14	3093	1/1	0.96	0.13	66,66,66,66	0
55	MG	1H	3004	1/1	0.96	0.21	74,74,74,74	0
55	MG	14	3372	1/1	0.96	0.13	65,65,65,65	0
55	MG	14	3228	1/1	0.96	0.38	93,93,93,93	0
55	MG	1H	3506	1/1	0.96	0.17	102,102,102,102	0
55	MG	14	3432	1/1	0.96	0.10	107,107,107,107	0
55	MG	14	3182	1/1	0.96	0.16	79,79,79,79	0
55	MG	1H	3406	1/1	0.96	0.14	103,103,103,103	0
55	MG	14	3346	1/1	0.96	0.35	194,194,194,194	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	13	1724	1/1	0.96	0.23	113,113,113,113	0
55	MG	1H	3056	1/1	0.96	0.26	67,67,67,67	0
55	MG	1H	3426	1/1	0.96	0.10	68,68,68,68	0
55	MG	1G	1730	1/1	0.96	0.07	100,100,100,100	0
55	MG	13	1723	1/1	0.96	0.07	107,107,107,107	0
55	MG	1H	3420	1/1	0.96	0.14	71,71,71,71	0
55	MG	14	3374	1/1	0.96	0.10	80,80,80,80	0
55	MG	14	3370	1/1	0.96	0.13	76,76,76,76	0
55	MG	1H	3443	1/1	0.96	0.19	97,97,97,97	0
55	MG	13	1637	1/1	0.96	0.18	113,113,113,113	0
55	MG	14	3116	1/1	0.96	0.48	89,89,89,89	0
55	MG	14	3129	1/1	0.96	0.19	77,77,77,77	0
55	MG	1G	1707	1/1	0.96	0.21	91,91,91,91	0
55	MG	14	3106	1/1	0.96	0.34	75,75,75,75	0
55	MG	14	3377	1/1	0.96	0.09	91,91,91,91	0
55	MG	13	1701	1/1	0.96	0.05	89,89,89,89	0
55	MG	14	3368	1/1	0.96	0.13	75,75,75,75	0
55	MG	14	3166	1/1	0.96	0.16	86,86,86,86	0
55	MG	14	3172	1/1	0.96	0.15	74,74,74,74	0
55	MG	13	1601	1/1	0.96	0.13	110,110,110,110	0
55	MG	14	3096	1/1	0.96	0.20	78,78,78,78	0
55	MG	1H	3036	1/1	0.96	0.33	72,72,72,72	0
55	MG	1H	3150	1/1	0.96	0.31	81,81,81,81	0
55	MG	14	3285	1/1	0.96	0.08	107,107,107,107	0
55	MG	14	3261	1/1	0.97	0.48	68,68,68,68	0
55	MG	14	3187	1/1	0.97	0.21	103,103,103,103	0
55	MG	14	3385	1/1	0.97	0.13	96,96,96,96	0
55	MG	1H	3068	1/1	0.97	0.39	72,72,72,72	0
55	MG	1H	3241	1/1	0.97	0.23	99,99,99,99	0
55	MG	1H	3450	1/1	0.97	0.10	100,100,100,100	0
55	MG	14	3401	1/1	0.97	0.13	69,69,69,69	0
55	MG	1H	3183	1/1	0.97	0.26	55,55,55,55	0
55	MG	1H	3137	1/1	0.97	0.20	93,93,93,93	0
55	MG	14	3362	1/1	0.97	0.17	79,79,79,79	0
55	MG	14	3002	1/1	0.97	0.23	64,64,64,64	0
55	MG	1H	3459	1/1	0.97	0.16	86,86,86,86	0
55	MG	1H	3043	1/1	0.97	0.25	89,89,89,89	0
55	MG	13	1709	1/1	0.97	0.08	126,126,126,126	0
55	MG	1H	3026	1/1	0.97	0.16	68,68,68,68	0
55	MG	13	1717	1/1	0.97	0.11	91,91,91,91	0
55	MG	1H	3009	1/1	0.97	0.30	67,67,67,67	0
55	MG	1H	3544	1/1	0.97	0.08	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	1G	1660	1/1	0.97	0.11	112,112,112,112	0
55	MG	1H	3498	1/1	0.97	0.08	71,71,71,71	0
55	MG	13	1645	1/1	0.97	0.23	84,84,84,84	0
55	MG	13	1700	1/1	0.97	0.11	97,97,97,97	0
55	MG	14	3405	1/1	0.97	0.11	65,65,65,65	0
55	MG	14	3175	1/1	0.97	0.26	95,95,95,95	0
55	MG	15	201	1/1	0.97	0.47	110,110,110,110	0
55	MG	1H	3234	1/1	0.97	0.28	89,89,89,89	0
55	MG	1H	3059	1/1	0.97	0.48	90,90,90,90	0
55	MG	1H	3072	1/1	0.97	0.23	65,65,65,65	0
55	MG	1H	3401	1/1	0.97	0.17	82,82,82,82	0
55	MG	1H	3434	1/1	0.97	0.06	109,109,109,109	0
55	MG	1J	201	1/1	0.97	0.16	125,125,125,125	0
55	MG	14	3153	1/1	0.97	0.28	91,91,91,91	0
55	MG	13	1611	1/1	0.97	0.17	103,103,103,103	0
55	MG	1H	3481	1/1	0.97	0.11	77,77,77,77	0
55	MG	1H	3350	1/1	0.97	0.21	72,72,72,72	0
55	MG	1H	3021	1/1	0.97	0.19	61,61,61,61	0
55	MG	1G	1641	1/1	0.97	0.19	102,102,102,102	0
55	MG	1G	1639	1/1	0.97	0.14	102,102,102,102	0
55	MG	1H	3090	1/1	0.97	0.25	80,80,80,80	0
55	MG	1H	3456	1/1	0.97	0.07	86,86,86,86	0
55	MG	1H	3238	1/1	0.97	0.25	97,97,97,97	0
55	MG	1H	3080	1/1	0.97	0.33	67,67,67,67	0
55	MG	14	3461	1/1	0.97	0.22	88,88,88,88	0
55	MG	1H	3085	1/1	0.97	0.32	78,78,78,78	0
55	MG	1H	3202	1/1	0.97	0.21	75,75,75,75	0
55	MG	1H	3455	1/1	0.97	0.07	97,97,97,97	0
55	MG	1H	3006	1/1	0.97	0.30	58,58,58,58	0
55	MG	1H	3015	1/1	0.97	0.33	56,56,56,56	0
55	MG	14	3411	1/1	0.97	0.10	60,60,60,60	0
55	MG	1H	3062	1/1	0.97	0.24	70,70,70,70	0
55	MG	14	3294	1/1	0.97	0.27	82,82,82,82	0
55	MG	14	3389	1/1	0.97	0.09	102,102,102,102	0
55	MG	13	1705	1/1	0.97	0.15	85,85,85,85	0
55	MG	14	3308	1/1	0.97	0.19	74,74,74,74	0
55	MG	14	3024	1/1	0.97	0.23	81,81,81,81	0
55	MG	14	3382	1/1	0.97	0.11	93,93,93,93	0
55	MG	14	3042	1/1	0.97	0.07	71,71,71,71	0
55	MG	1G	1642	1/1	0.97	0.29	117,117,117,117	0
55	MG	1G	1729	1/1	0.97	0.17	112,112,112,112	0
55	MG	1G	1685	1/1	0.97	0.21	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	1H	3246	1/1	0.97	0.16	86,86,86,86	0
55	MG	14	3351	1/1	0.97	0.10	82,82,82,82	0
55	MG	14	3399	1/1	0.97	0.13	63,63,63,63	0
55	MG	13	1682	1/1	0.97	0.31	98,98,98,98	0
55	MG	14	3047	1/1	0.97	0.26	78,78,78,78	0
55	MG	1H	3412	1/1	0.97	0.11	103,103,103,103	0
55	MG	1H	3105	1/1	0.97	0.32	62,62,62,62	0
55	MG	14	3361	1/1	0.97	0.20	75,75,75,75	0
55	MG	1H	3535	1/1	0.97	0.08	115,115,115,115	0
55	MG	1H	3507	1/1	0.97	0.11	82,82,82,82	0
55	MG	14	3186	1/1	0.97	0.11	90,90,90,90	0
55	MG	14	3392	1/1	0.97	0.20	65,65,65,65	0
55	MG	14	3383	1/1	0.97	0.07	93,93,93,93	0
55	MG	1G	1697	1/1	0.97	0.23	83,83,83,83	0
55	MG	1H	3010	1/1	0.97	0.22	57,57,57,57	0
55	MG	14	3058	1/1	0.97	0.20	64,64,64,64	0
55	MG	14	3180	1/1	0.97	0.14	94,94,94,94	0
55	MG	1G	1640	1/1	0.97	0.17	95,95,95,95	0
55	MG	1H	3540	1/1	0.97	0.09	54,54,54,54	0
55	MG	2K	102	1/1	0.97	0.18	106,106,106,106	0
55	MG	1G	1747	1/1	0.97	0.15	123,123,123,123	0
55	MG	14	3441	1/1	0.97	0.04	113,113,113,113	0
55	MG	14	3469	1/1	0.97	0.06	115,115,115,115	0
55	MG	1G	1689	1/1	0.97	0.21	126,126,126,126	0
55	MG	1H	3387	1/1	0.97	0.09	83,83,83,83	0
55	MG	1H	3383	1/1	0.97	0.12	74,74,74,74	0
55	MG	1H	3417	1/1	0.97	0.13	70,70,70,70	0
55	MG	1G	1687	1/1	0.97	0.23	120,120,120,120	0
55	MG	14	3084	1/1	0.97	0.17	78,78,78,78	0
55	MG	1H	3258	1/1	0.97	0.31	94,94,94,94	0
55	MG	14	3075	1/1	0.97	0.19	65,65,65,65	0
55	MG	1H	3107	1/1	0.97	0.20	84,84,84,84	0
55	MG	1H	3360	1/1	0.97	0.08	96,96,96,96	0
55	MG	1H	3101	1/1	0.97	0.20	64,64,64,64	0
55	MG	14	3429	1/1	0.97	0.09	79,79,79,79	0
55	MG	1J	202	1/1	0.97	0.11	107,107,107,107	0
55	MG	14	3155	1/1	0.97	0.20	99,99,99,99	0
55	MG	13	1607	1/1	0.97	0.21	97,97,97,97	0
55	MG	14	3110	1/1	0.97	0.22	95,95,95,95	0
55	MG	1H	3039	1/1	0.97	0.27	55,55,55,55	0
55	MG	13	1649	1/1	0.97	0.25	121,121,121,121	0
55	MG	14	3394	1/1	0.97	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
55	MG	1G	1603	1/1	0.97	0.12	99,99,99,99	0
55	MG	1G	1732	1/1	0.97	0.18	113,113,113,113	0
55	MG	14	3070	1/1	0.97	0.30	72,72,72,72	0
55	MG	14	3188	1/1	0.97	0.19	71,71,71,71	0
55	MG	13	1643	1/1	0.97	0.24	111,111,111,111	0
55	MG	14	3082	1/1	0.97	0.34	100,100,100,100	0
55	MG	1H	3063	1/1	0.97	0.41	76,76,76,76	0
55	MG	13	1630	1/1	0.97	0.22	92,92,92,92	0
55	MG	1H	3389	1/1	0.97	0.09	72,72,72,72	0
55	MG	14	3057	1/1	0.97	0.20	63,63,63,63	0
55	MG	1H	3400	1/1	0.97	0.14	87,87,87,87	0
55	MG	14	3037	1/1	0.97	0.11	48,48,48,48	0
55	MG	14	3364	1/1	0.97	0.04	91,91,91,91	0
55	MG	1H	3391	1/1	0.97	0.06	84,84,84,84	0
55	MG	14	3386	1/1	0.97	0.13	67,67,67,67	0
55	MG	1G	1602	1/1	0.97	0.18	84,84,84,84	0
55	MG	1H	3322	1/1	0.97	0.12	103,103,103,103	0
55	MG	1H	3388	1/1	0.97	0.10	77,77,77,77	0
55	MG	14	3033	1/1	0.97	0.26	83,83,83,83	0
55	MG	13	1627	1/1	0.97	0.15	79,79,79,79	0
55	MG	14	3023	1/1	0.97	0.22	89,89,89,89	0
55	MG	1H	3177	1/1	0.97	0.27	69,69,69,69	0
55	MG	13	1713	1/1	0.97	0.11	94,94,94,94	0
55	MG	1H	3038	1/1	0.98	0.28	56,56,56,56	0
55	MG	1H	3011	1/1	0.98	0.26	65,65,65,65	0
55	MG	14	3019	1/1	0.98	0.15	73,73,73,73	0
55	MG	14	3064	1/1	0.98	0.11	84,84,84,84	0
55	MG	14	3243	1/1	0.98	0.33	89,89,89,89	0
55	MG	14	3390	1/1	0.98	0.14	70,70,70,70	0
55	MG	14	3044	1/1	0.98	0.19	78,78,78,78	0
55	MG	1H	3040	1/1	0.98	0.29	80,80,80,80	0
55	MG	1H	3086	1/1	0.98	0.17	60,60,60,60	0
55	MG	14	3379	1/1	0.98	0.09	99,99,99,99	0
55	MG	1G	1722	1/1	0.98	0.10	83,83,83,83	0
55	MG	1H	3436	1/1	0.98	0.13	55,55,55,55	0
55	MG	14	3028	1/1	0.98	0.17	76,76,76,76	0
55	MG	1H	3022	1/1	0.98	0.20	83,83,83,83	0
55	MG	13	1673	1/1	0.98	0.14	86,86,86,86	0
55	MG	14	3078	1/1	0.98	0.23	70,70,70,70	0
55	MG	1H	3461	1/1	0.98	0.12	77,77,77,77	0
55	MG	13	1677	1/1	0.98	0.27	96,96,96,96	0
55	MG	1H	3385	1/1	0.98	0.10	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	14	3053	1/1	0.98	0.21	49,49,49,49	0
55	MG	13	1707	1/1	0.98	0.13	101,101,101,101	0
55	MG	1H	3098	1/1	0.98	0.21	73,73,73,73	0
55	MG	14	3350	1/1	0.98	0.13	73,73,73,73	0
55	MG	14	3360	1/1	0.98	0.10	64,64,64,64	0
55	MG	1H	3438	1/1	0.98	0.15	69,69,69,69	0
55	MG	1H	3464	1/1	0.98	0.09	86,86,86,86	0
55	MG	1H	3386	1/1	0.98	0.14	72,72,72,72	0
55	MG	14	3148	1/1	0.98	0.10	79,79,79,79	0
55	MG	14	3467	1/1	0.98	0.21	95,95,95,95	0
55	MG	1H	3271	1/1	0.98	0.16	89,89,89,89	0
55	MG	1H	3448	1/1	0.98	0.21	79,79,79,79	0
55	MG	14	3427	1/1	0.98	0.09	72,72,72,72	0
55	MG	1H	3491	1/1	0.98	0.12	97,97,97,97	0
55	MG	1H	3140	1/1	0.98	0.20	87,87,87,87	0
55	MG	1H	3087	1/1	0.98	0.22	81,81,81,81	0
55	MG	1H	3055	1/1	0.98	0.23	55,55,55,55	0
55	MG	1G	1661	1/1	0.98	0.12	82,82,82,82	0
55	MG	14	3245	1/1	0.98	0.13	109,109,109,109	0
55	MG	14	3463	1/1	0.98	0.12	98,98,98,98	0
55	MG	14	3045	1/1	0.98	0.28	66,66,66,66	0
55	MG	1H	3221	1/1	0.98	0.21	67,67,67,67	0
55	MG	14	3039	1/1	0.98	0.23	90,90,90,90	0
55	MG	13	1710	1/1	0.98	0.15	119,119,119,119	0
55	MG	14	3248	1/1	0.98	0.16	110,110,110,110	0
55	MG	1H	3012	1/1	0.98	0.15	67,67,67,67	0
55	MG	14	3006	1/1	0.98	0.23	53,53,53,53	0
55	MG	14	3004	1/1	0.98	0.31	62,62,62,62	0
55	MG	14	3398	1/1	0.98	0.14	109,109,109,109	0
55	MG	14	3007	1/1	0.98	0.28	75,75,75,75	0
55	MG	14	3034	1/1	0.98	0.20	67,67,67,67	0
55	MG	1H	3427	1/1	0.98	0.12	71,71,71,71	0
55	MG	1H	3376	1/1	0.98	0.10	78,78,78,78	0
55	MG	1H	3053	1/1	0.98	0.27	74,74,74,74	0
55	MG	14	3005	1/1	0.98	0.24	72,72,72,72	0
55	MG	1H	3018	1/1	0.98	0.21	76,76,76,76	0
55	MG	1H	3047	1/1	0.98	0.38	84,84,84,84	0
55	MG	14	3055	1/1	0.98	0.17	72,72,72,72	0
55	MG	14	3077	1/1	0.98	0.24	80,80,80,80	0
55	MG	13	1651	1/1	0.98	0.16	91,91,91,91	0
55	MG	14	3418	1/1	0.98	0.11	70,70,70,70	0
55	MG	14	3402	1/1	0.98	0.09	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	1H	3548	1/1	0.98	0.21	76,76,76,76	0
55	MG	13	1602	1/1	0.98	0.15	88,88,88,88	0
55	MG	13	1614	1/1	0.98	0.23	96,96,96,96	0
55	MG	14	3404	1/1	0.98	0.11	54,54,54,54	0
55	MG	14	3011	1/1	0.98	0.20	54,54,54,54	0
55	MG	1G	1690	1/1	0.98	0.12	122,122,122,122	0
55	MG	14	3363	1/1	0.98	0.13	73,73,73,73	0
55	MG	14	3489	1/1	0.98	0.66	91,91,91,91	0
55	MG	14	3413	1/1	0.98	0.15	74,74,74,74	0
55	MG	14	3049	1/1	0.98	0.25	65,65,65,65	0
55	MG	13	1608	1/1	0.98	0.21	91,91,91,91	0
55	MG	2L	101	1/1	0.98	0.16	92,92,92,92	0
55	MG	14	3451	1/1	0.98	0.09	92,92,92,92	0
55	MG	1H	3354	1/1	0.98	0.16	82,82,82,82	0
55	MG	1H	3532	1/1	0.98	0.18	91,91,91,91	0
55	MG	1H	3457	1/1	0.98	0.11	79,79,79,79	0
55	MG	14	3488	1/1	0.98	0.20	81,81,81,81	0
55	MG	14	3194	1/1	0.98	0.33	92,92,92,92	0
55	MG	1H	3425	1/1	0.98	0.12	63,63,63,63	0
55	MG	14	3198	1/1	0.98	0.13	88,88,88,88	0
55	MG	14	3322	1/1	0.98	0.63	91,91,91,91	0
55	MG	1H	3428	1/1	0.98	0.15	60,60,60,60	0
55	MG	13	1703	1/1	0.98	0.09	108,108,108,108	0
55	MG	1H	3170	1/1	0.98	0.13	69,69,69,69	0
55	MG	14	3453	1/1	0.98	0.11	73,73,73,73	0
55	MG	1H	3465	1/1	0.98	0.24	73,73,73,73	0
55	MG	1G	1655	1/1	0.98	0.17	88,88,88,88	0
55	MG	1H	3054	1/1	0.98	0.18	66,66,66,66	0
55	MG	1H	3380	1/1	0.98	0.08	63,63,63,63	0
55	MG	14	3073	1/1	0.98	0.20	82,82,82,82	0
55	MG	14	3043	1/1	0.98	0.47	84,84,84,84	0
55	MG	14	3407	1/1	0.98	0.07	109,109,109,109	0
55	MG	14	3040	1/1	0.98	0.14	67,67,67,67	0
55	MG	14	3013	1/1	0.98	0.24	75,75,75,75	0
55	MG	1H	3077	1/1	0.98	0.26	59,59,59,59	0
55	MG	1H	3369	1/1	0.98	0.75	77,77,77,77	0
55	MG	1H	3432	1/1	0.99	0.12	85,85,85,85	0
55	MG	1H	3083	1/1	0.99	0.18	85,85,85,85	0
55	MG	1H	3161	1/1	0.99	0.15	73,73,73,73	0
55	MG	1H	3013	1/1	0.99	0.15	57,57,57,57	0
55	MG	14	3135	1/1	0.99	0.43	101,101,101,101	0
55	MG	1H	3418	1/1	0.99	0.13	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	14	3421	1/1	0.99	0.11	73,73,73,73	0
56	ZN	32	302	1/1	0.99	0.37	114,114,114,114	0
55	MG	14	3395	1/1	0.99	0.09	73,73,73,73	0
55	MG	1H	3093	1/1	0.99	0.27	67,67,67,67	0
55	MG	14	3051	1/1	0.99	0.34	78,78,78,78	0
55	MG	14	3458	1/1	0.99	0.21	94,94,94,94	0
55	MG	1H	3002	1/1	0.99	0.30	61,61,61,61	0
55	MG	1H	3070	1/1	0.99	0.21	72,72,72,72	0
55	MG	14	3428	1/1	0.99	0.11	92,92,92,92	0
55	MG	1H	3437	1/1	0.99	0.14	94,94,94,94	0
55	MG	1H	3286	1/1	0.99	0.17	69,69,69,69	0
55	MG	1H	3435	1/1	0.99	0.10	60,60,60,60	0
55	MG	1H	3463	1/1	0.99	0.10	64,64,64,64	0
55	MG	1H	3422	1/1	0.99	0.12	70,70,70,70	0
55	MG	1H	3440	1/1	0.99	0.12	59,59,59,59	0
55	MG	14	3409	1/1	0.99	0.10	99,99,99,99	0
55	MG	14	3054	1/1	0.99	0.17	65,65,65,65	0
55	MG	1H	3414	1/1	0.99	0.14	51,51,51,51	0
55	MG	14	3010	1/1	0.99	0.19	57,57,57,57	0
55	MG	1H	3082	1/1	0.99	0.12	66,66,66,66	0
55	MG	1H	3125	1/1	0.99	0.22	93,93,93,93	0
55	MG	1G	1626	1/1	0.99	0.24	108,108,108,108	0
55	MG	1H	3048	1/1	0.99	0.17	67,67,67,67	0
55	MG	14	3061	1/1	0.99	0.12	79,79,79,79	0
55	MG	1H	3169	1/1	0.99	0.19	68,68,68,68	0
55	MG	14	3349	1/1	0.99	0.16	66,66,66,66	0
55	MG	14	3038	1/1	0.99	0.17	58,58,58,58	0
55	MG	14	3020	1/1	0.99	0.18	71,71,71,71	0
55	MG	1H	3466	1/1	0.99	0.19	78,78,78,78	0
55	MG	1H	3472	1/1	0.99	0.21	94,94,94,94	0
55	MG	14	3183	1/1	0.99	0.36	98,98,98,98	0
55	MG	14	3244	1/1	0.99	0.17	90,90,90,90	0
56	ZN	3E	301	1/1	0.99	0.36	109,109,109,109	0
55	MG	14	3060	1/1	0.99	0.24	56,56,56,56	0
55	MG	1H	3003	1/1	0.99	0.28	51,51,51,51	0
55	MG	1H	3382	1/1	0.99	0.16	61,61,61,61	0
55	MG	13	1629	1/1	0.99	0.27	88,88,88,88	0
55	MG	1H	3001	1/1	0.99	0.30	47,47,47,47	0
55	MG	1H	3017	1/1	0.99	0.17	66,66,66,66	0
55	MG	1H	3503	1/1	0.99	0.16	75,75,75,75	0
55	MG	1H	3439	1/1	1.00	0.11	63,63,63,63	0
55	MG	14	3406	1/1	1.00	0.19	76,76,76,76	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.