



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 20, 2016 – 02:07 AM GMT

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
A user guide is available at
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.7.1 (RC1), CSD as537be (2016)
Xtriage (Phenix) : 1.9-1692
EDS : rb-20026982
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac : 5.8.0135
CCP4 : 6.5.0
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : rb-20026982

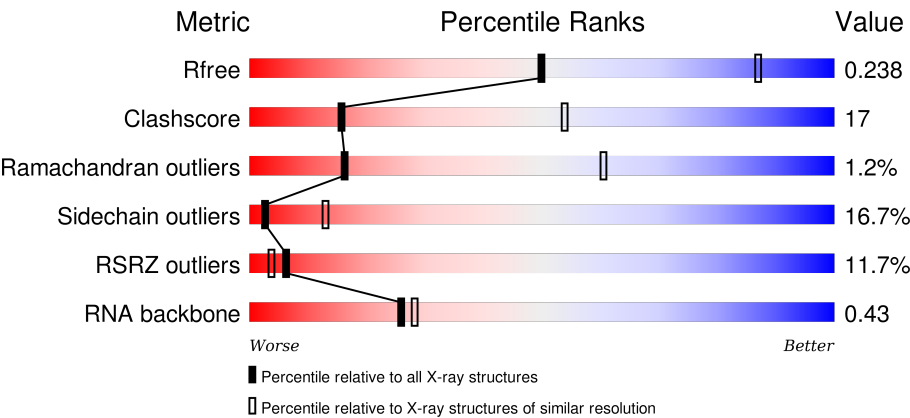
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.20 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}	91344	1124 (3.24-3.16)
Clashscore	102246	1024 (3.22-3.18)
Ramachandran outliers	100387	1004 (3.22-3.18)
Sidechain outliers	100360	1003 (3.22-3.18)
RSRZ outliers	91569	1129 (3.24-3.16)
RNA backbone	2183	1079 (3.70-2.70)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. 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><div></div><div>33%</div><div>46%</div><div>17%</div><div>..</div></div></div>
2	12	256	<div><div>12%</div><div><div></div><div>42%</div><div>42%</div><div>8%</div><div>7%</div></div></div>
2	1E	256	<div><div>15%</div><div><div></div><div>43%</div><div>38%</div><div>12%</div><div>7%</div></div></div>
3	22	239	<div><div>12%</div><div><div></div><div>49%</div><div>29%</div><div>8%</div><div>14%</div></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	11	302	-	-	-	X
55	MG	13	1616	-	-	-	X
55	MG	13	1619	-	-	-	X
55	MG	13	1629	-	-	-	X
55	MG	13	1662	-	-	-	X
55	MG	13	1681	-	-	-	X
55	MG	13	1692	-	-	-	X
55	MG	14	3021	-	-	-	X
55	MG	14	3024	-	-	-	X
55	MG	14	3047	-	-	-	X
55	MG	14	3110	-	-	-	X
55	MG	14	3141	-	-	-	X
55	MG	14	3146	-	-	-	X
55	MG	14	3154	-	-	-	X
55	MG	14	3174	-	-	-	X
55	MG	14	3201	-	-	-	X
55	MG	14	3223	-	-	-	X
55	MG	14	3236	-	-	-	X
55	MG	14	3243	-	-	-	X
55	MG	14	3256	-	-	-	X
55	MG	14	3265	-	-	-	X
55	MG	14	3266	-	-	-	X
55	MG	14	3280	-	-	-	X
55	MG	14	3283	-	-	-	X
55	MG	14	3284	-	-	-	X
55	MG	14	3312	-	-	-	X
55	MG	14	3479	-	-	-	X
55	MG	15	201	-	-	-	X
55	MG	1G	1616	-	-	-	X
55	MG	1G	1642	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
55	MG	1G	1653	-	-	-	X
55	MG	1G	1685	-	-	-	X
55	MG	1G	1687	-	-	-	X
55	MG	1G	1700	-	-	-	X
55	MG	1G	1701	-	-	-	X
55	MG	1G	1712	-	-	-	X
55	MG	1G	1719	-	-	-	X
55	MG	1H	3001	-	-	-	X
55	MG	1H	3027	-	-	-	X
55	MG	1H	3031	-	-	-	X
55	MG	1H	3041	-	-	-	X
55	MG	1H	3047	-	-	-	X
55	MG	1H	3051	-	-	-	X
55	MG	1H	3059	-	-	-	X
55	MG	1H	3063	-	-	-	X
55	MG	1H	3073	-	-	-	X
55	MG	1H	3106	-	-	-	X
55	MG	1H	3108	-	-	-	X
55	MG	1H	3116	-	-	-	X
55	MG	1H	3119	-	-	-	X
55	MG	1H	3130	-	-	-	X
55	MG	1H	3131	-	-	-	X
55	MG	1H	3154	-	-	-	X
55	MG	1H	3155	-	-	-	X
55	MG	1H	3228	-	-	-	X
55	MG	1H	3235	-	-	-	X
55	MG	1H	3332	-	-	-	X
55	MG	1H	3334	-	-	-	X
55	MG	1H	3337	-	-	-	X
55	MG	1H	3342	-	-	-	X
55	MG	1H	3358	-	-	-	X
55	MG	1H	3361	-	-	-	X
55	MG	1H	3368	-	-	-	X
55	MG	1H	3395	-	-	-	X
55	MG	1J	206	-	-	-	X
55	MG	29	302	-	-	-	X
55	MG	29	303	-	-	-	X
55	MG	29	305	-	-	-	X
55	MG	42	201	-	-	-	X
55	MG	55	203	-	-	-	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
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	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

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

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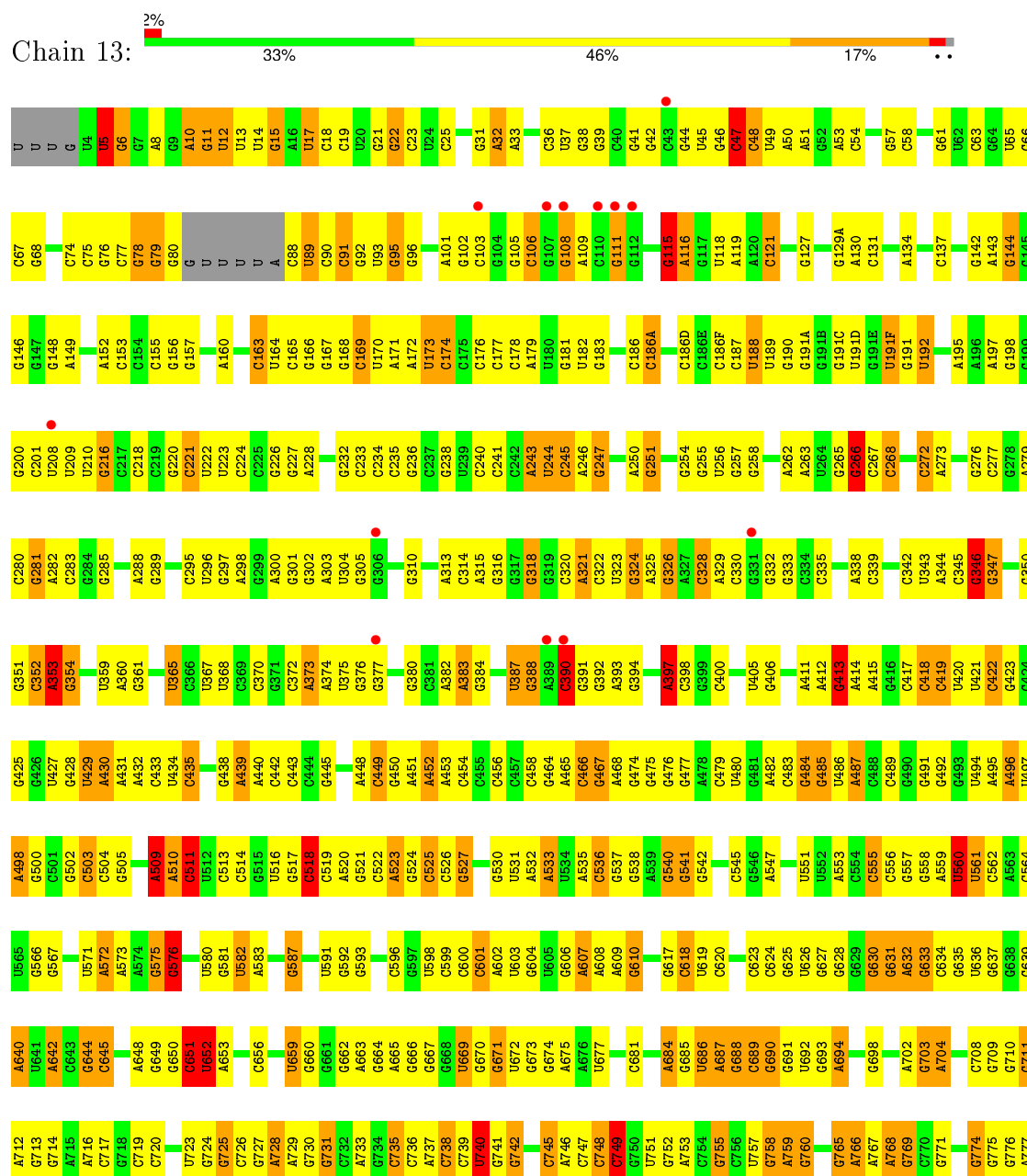
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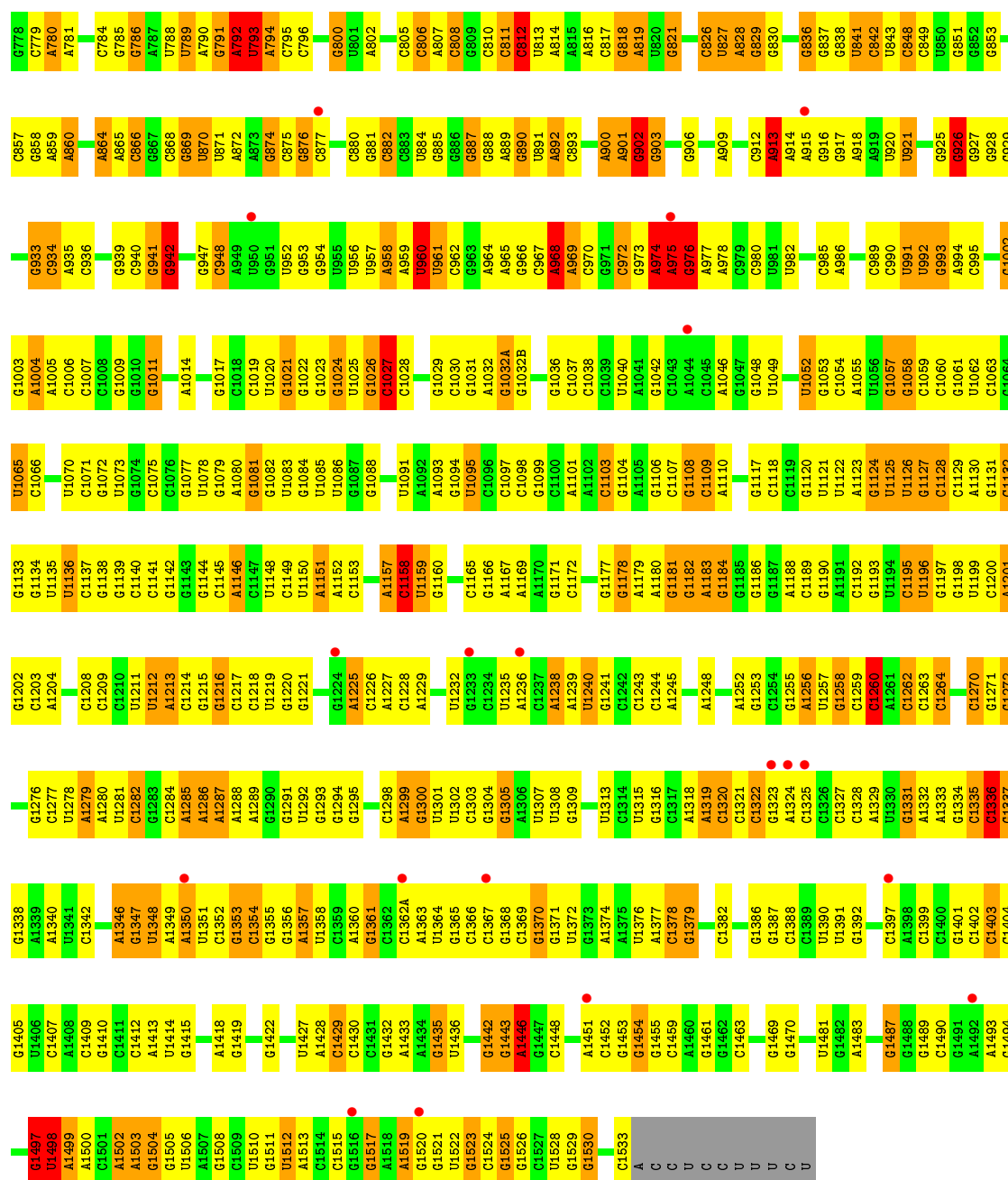
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57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	1J	6	Total O 6 6	0	0
57	1J	6	Total O 6 6	0	0
57	1J	6	Total O 6 6	0	0
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57	E5	6	Total O 6 6	0	0

3 Residue-property plots

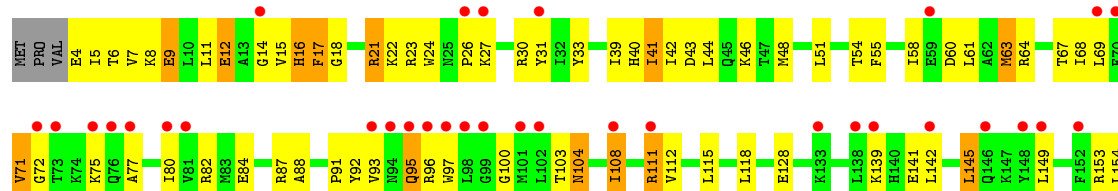
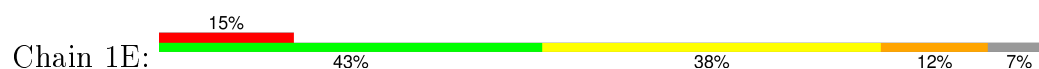
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according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

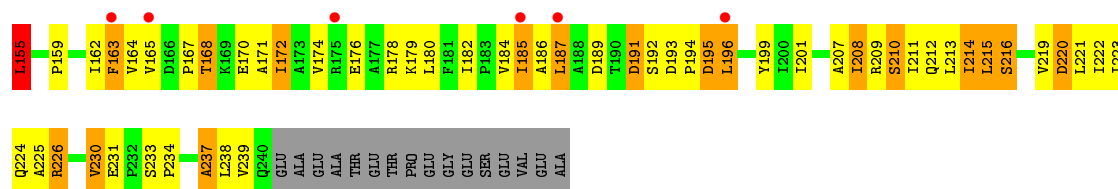
- Molecule 1: 16S ribosomal RNA



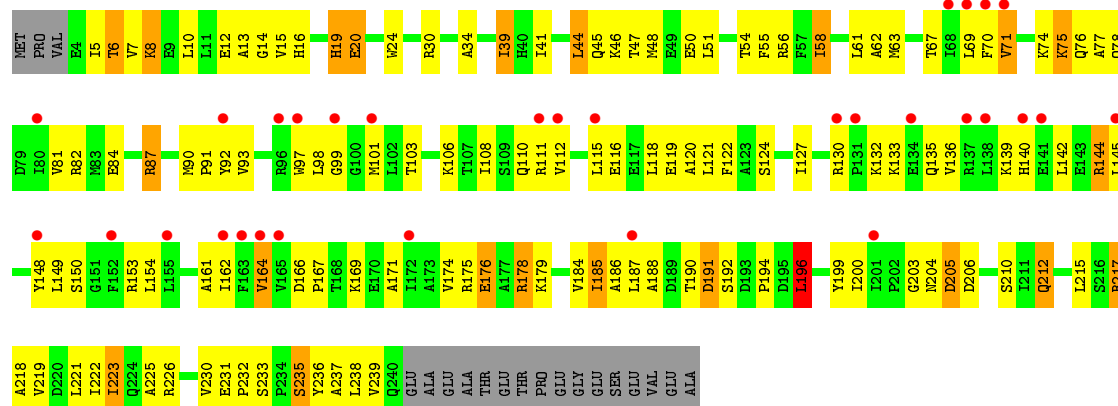


• Molecule 2: 30S ribosomal protein S2

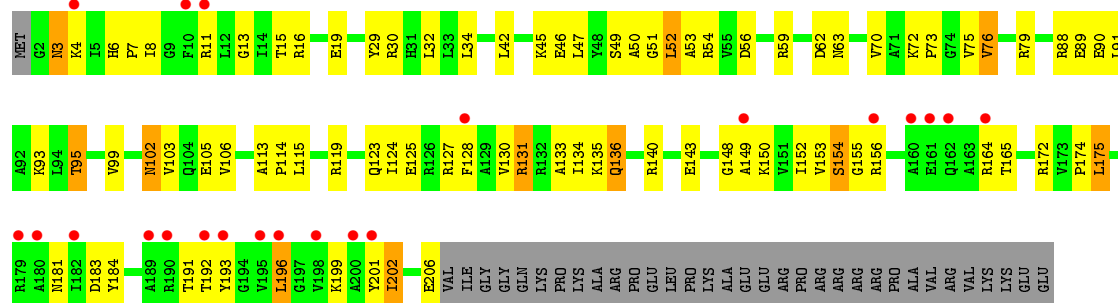




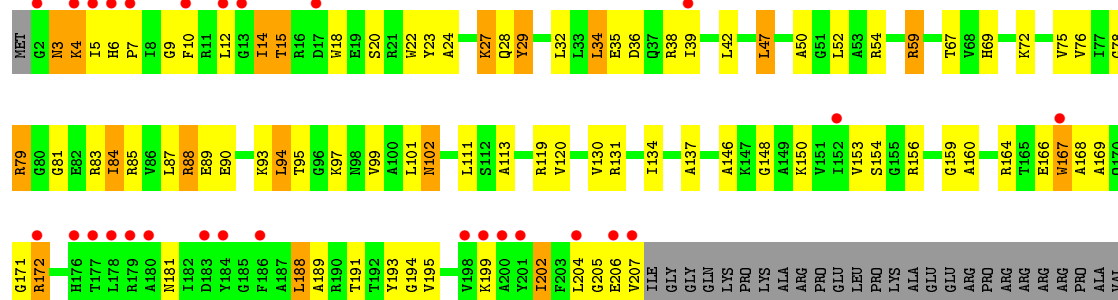
• Molecule 2: 30S ribosomal protein S2



• Molecule 3: 30S ribosomal protein S3

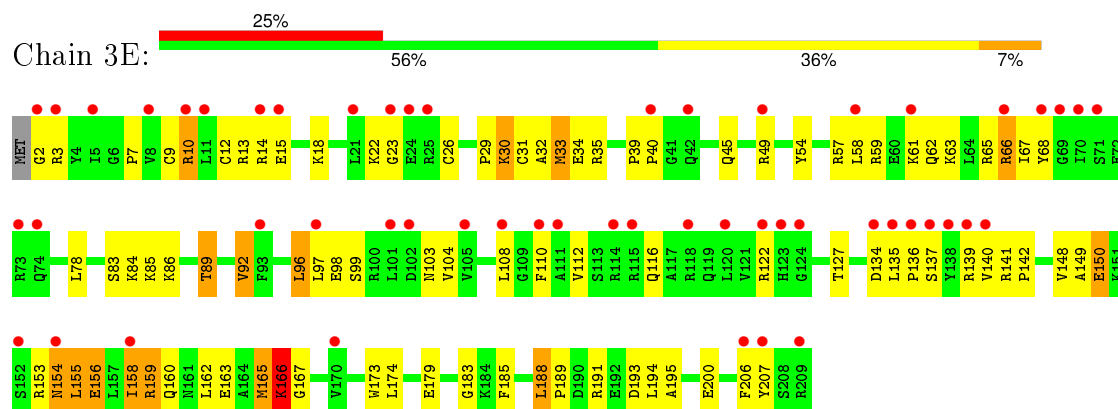


• Molecule 3: 30S ribosomal protein S3

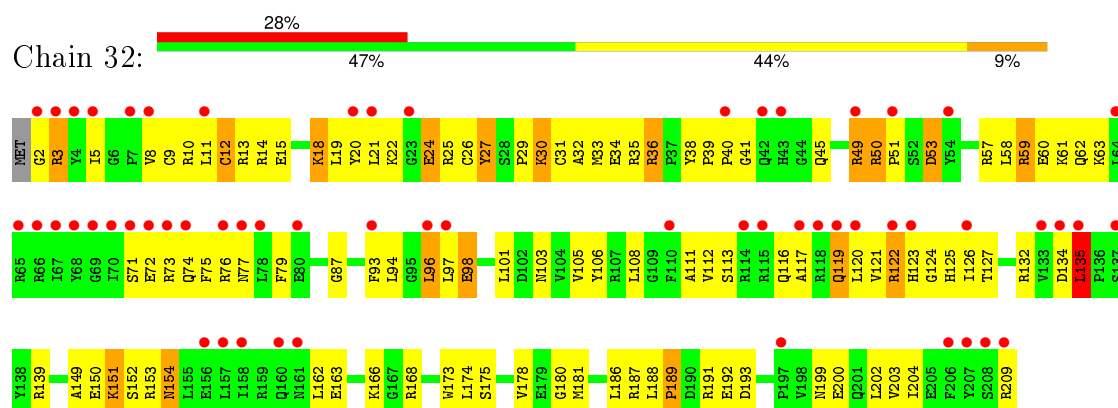


ARG
VAL
LYS
GLU
GLU

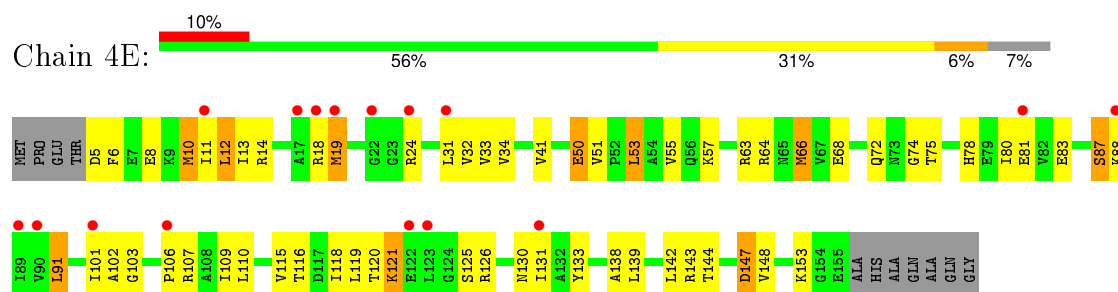
• Molecule 4: 30S ribosomal protein S4



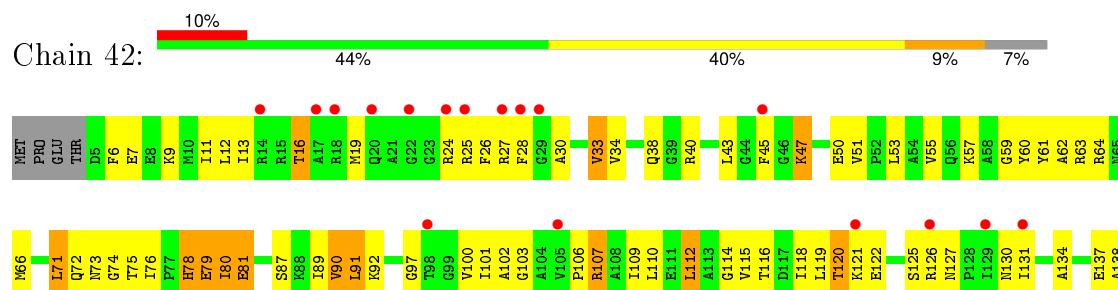
• Molecule 4: 30S ribosomal protein S4

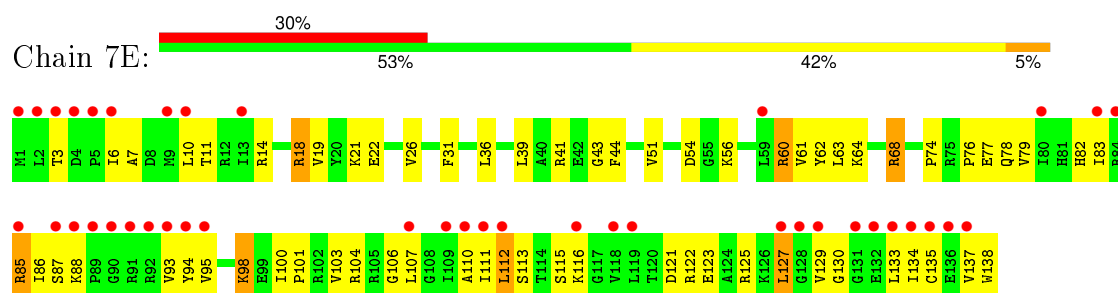


• Molecule 5: 30S ribosomal protein S5

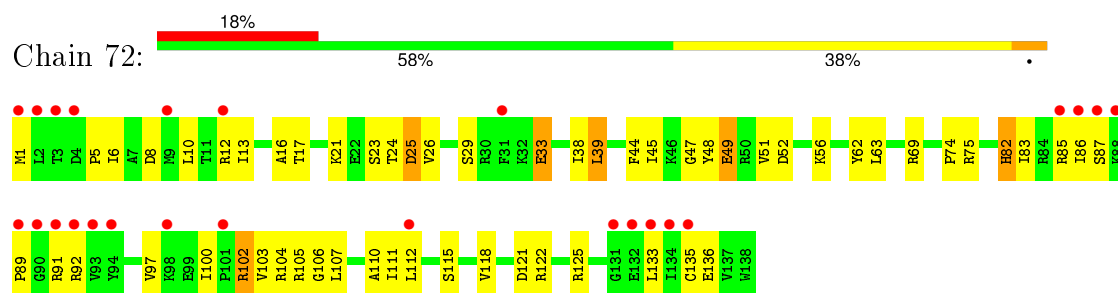


• Molecule 5: 30S ribosomal protein S5

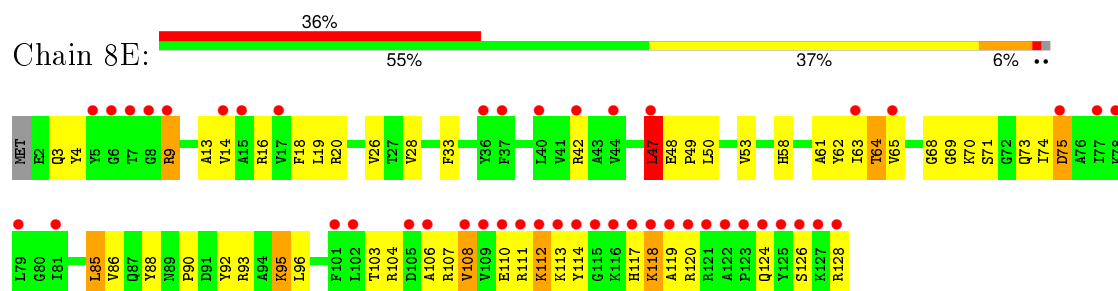




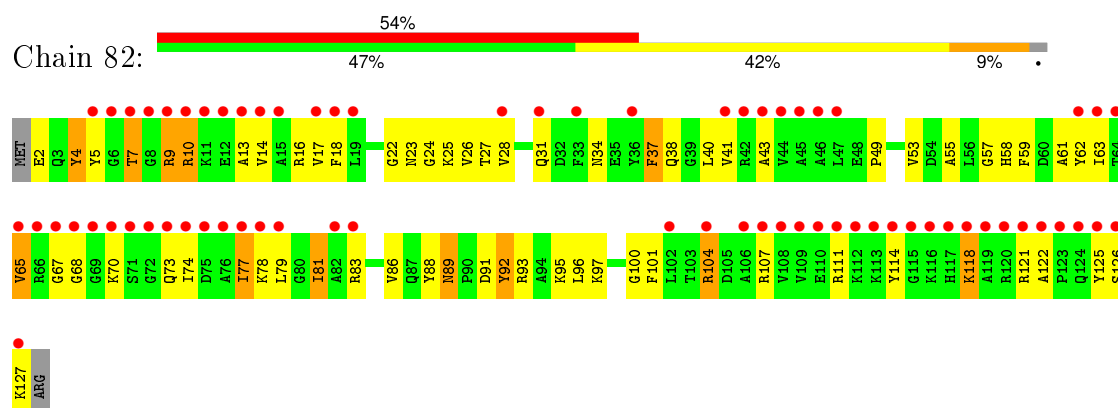
• Molecule 8: 30S ribosomal protein S8



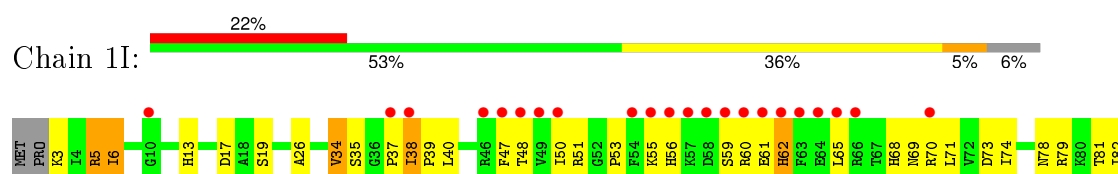
• Molecule 9: 30S ribosomal protein S9

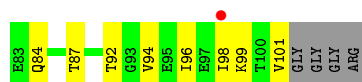


• Molecule 9: 30S ribosomal protein S9

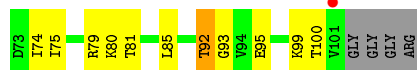
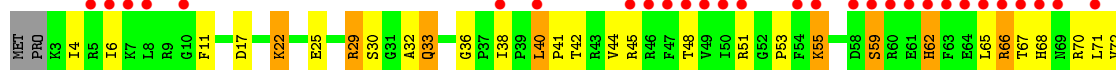


• Molecule 10: 30S ribosomal protein S10

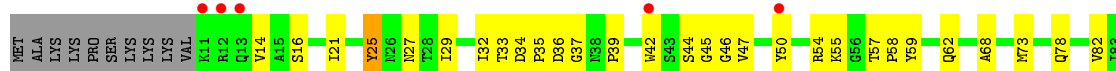




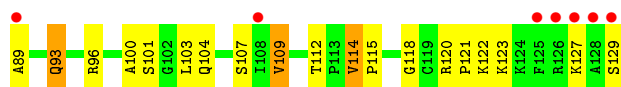
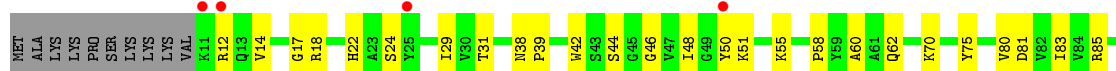
- Molecule 10: 30S ribosomal protein S10



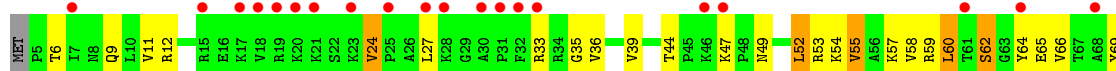
- Molecule 11: 30S ribosomal protein S11



- Molecule 11: 30S ribosomal protein S11

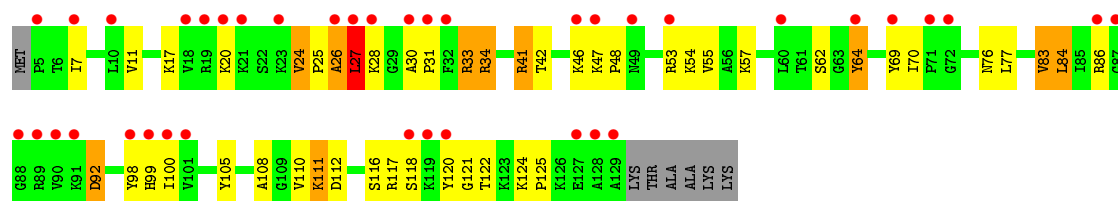


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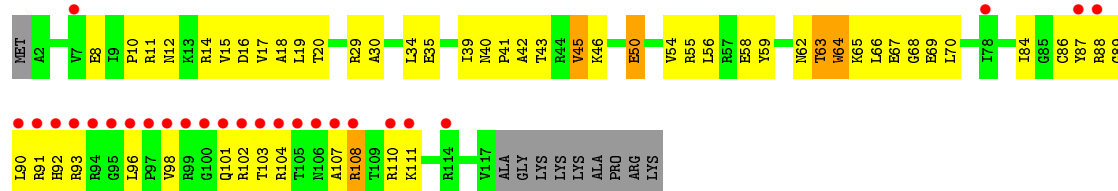


- Molecule 12: 30S ribosomal protein S12

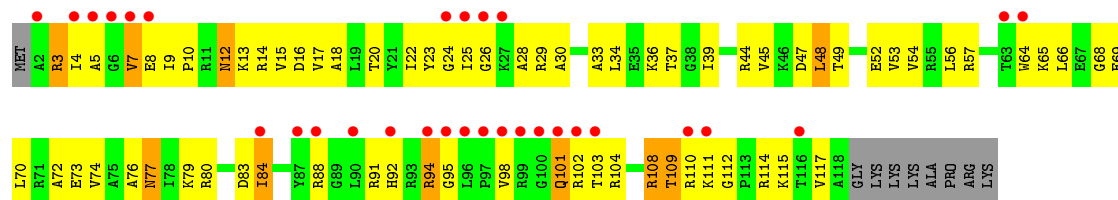




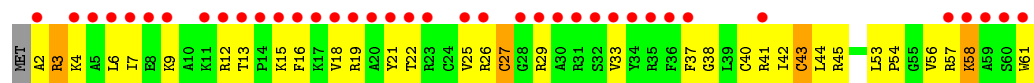
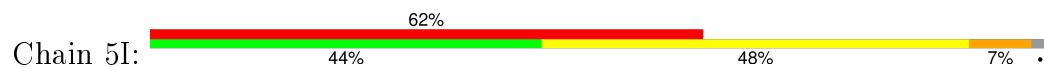
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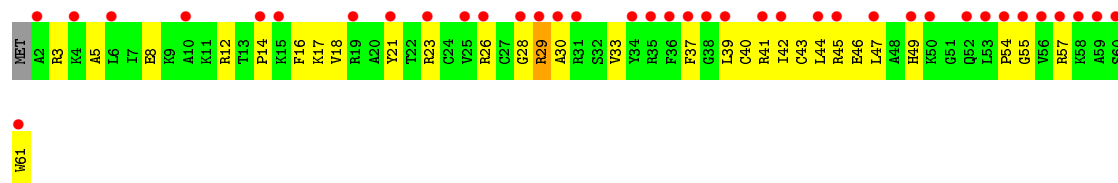
• Molecule 13: 30S ribosomal protein S13



• Molecule 14: 30S ribosomal protein S14 type Z

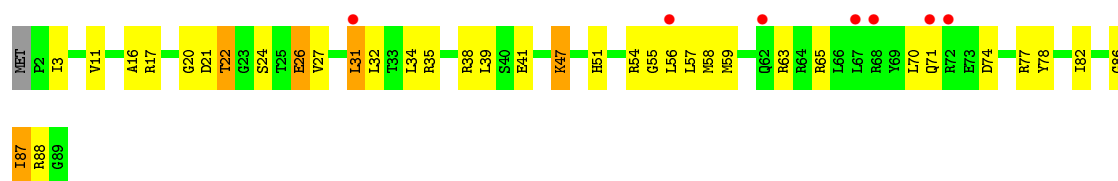


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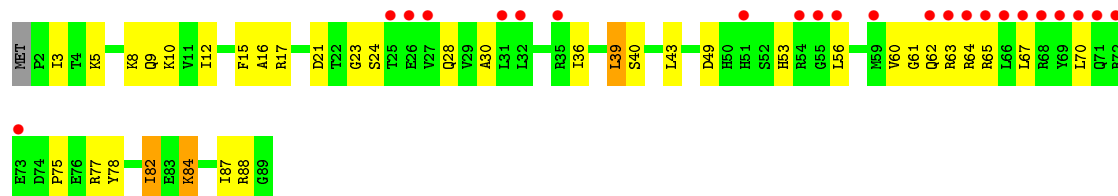


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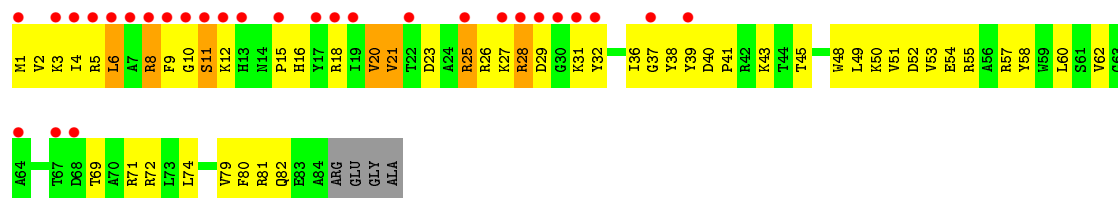




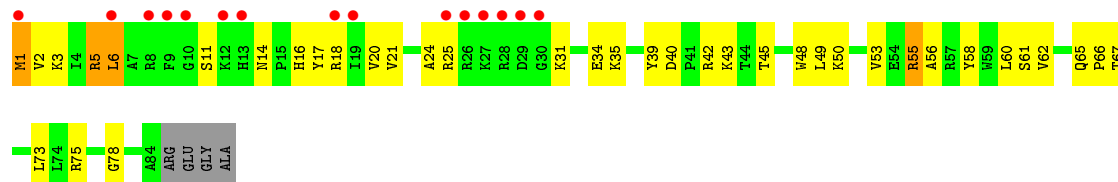
- Molecule 15: 30S ribosomal protein S15



- Molecule 16: 30S ribosomal protein S16



- Molecule 16: 30S ribosomal protein S16

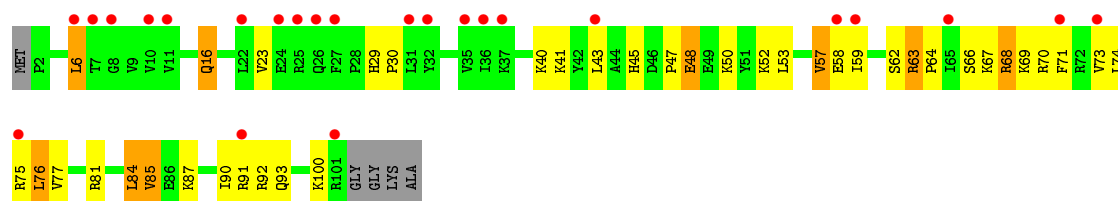


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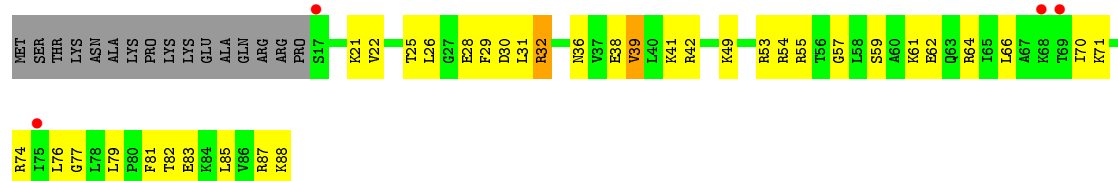
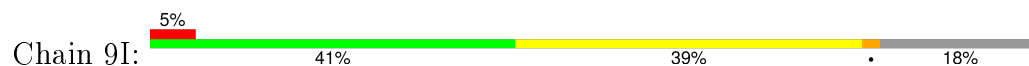


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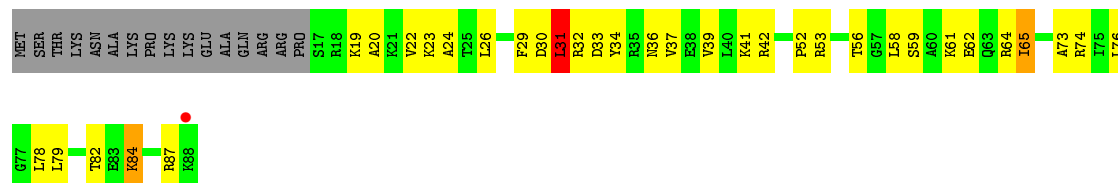
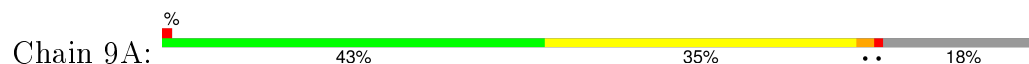




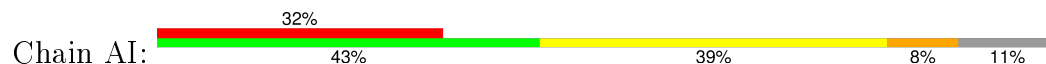
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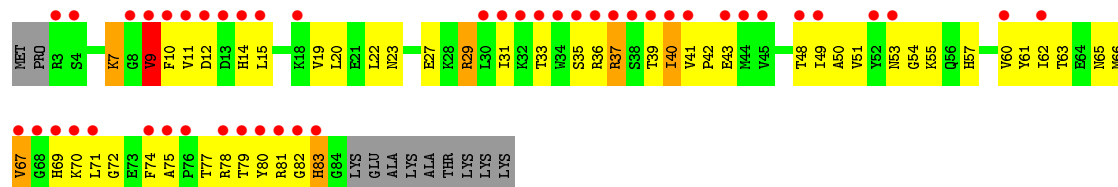
- Molecule 18: 30S ribosomal protein S18



- Molecule 19: 30S ribosomal protein S19

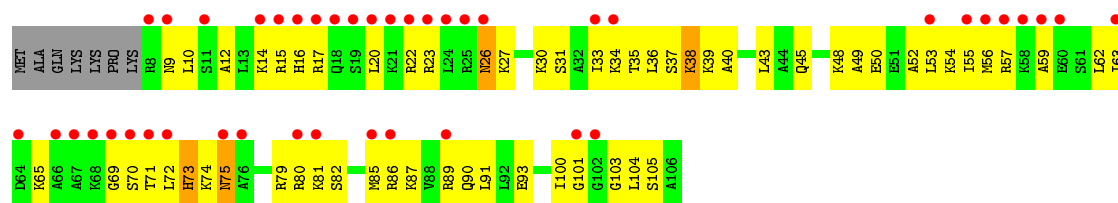


- Molecule 19: 30S ribosomal protein S19

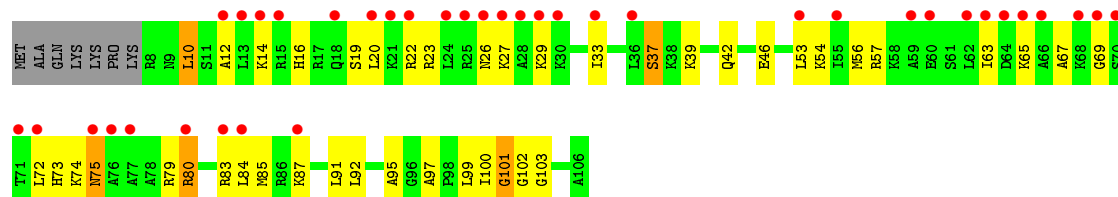


- Molecule 20: 30S ribosomal protein S20

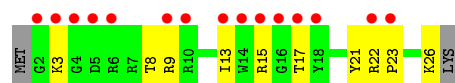




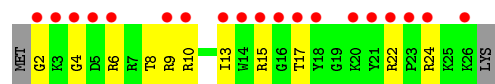
- Molecule 20: 30S ribosomal protein S20



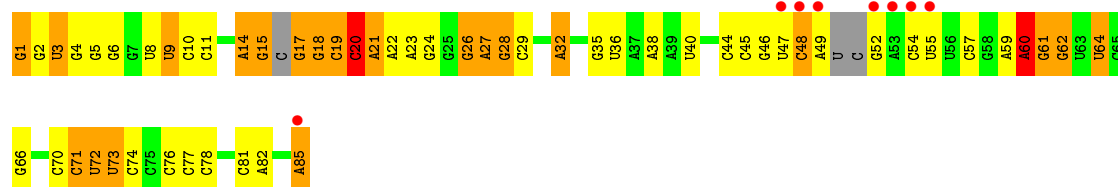
- Molecule 21: 30S ribosomal protein Thx



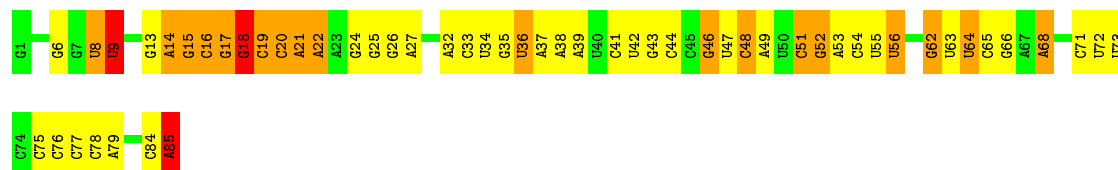
- Molecule 21: 30S ribosomal protein Thx



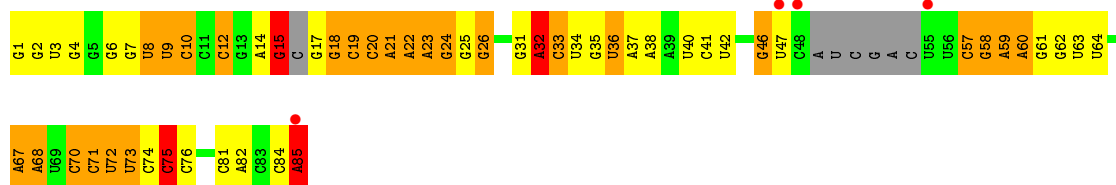
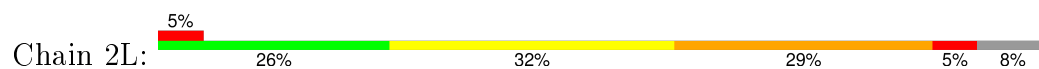
- Molecule 22: tRNA-Tyr



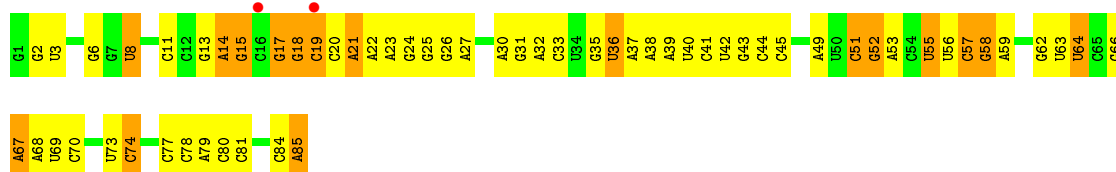
- Molecule 22: tRNA-Tyr



- Molecule 22: tRNA-Tyr



- Molecule 22: tRNA-Tyr



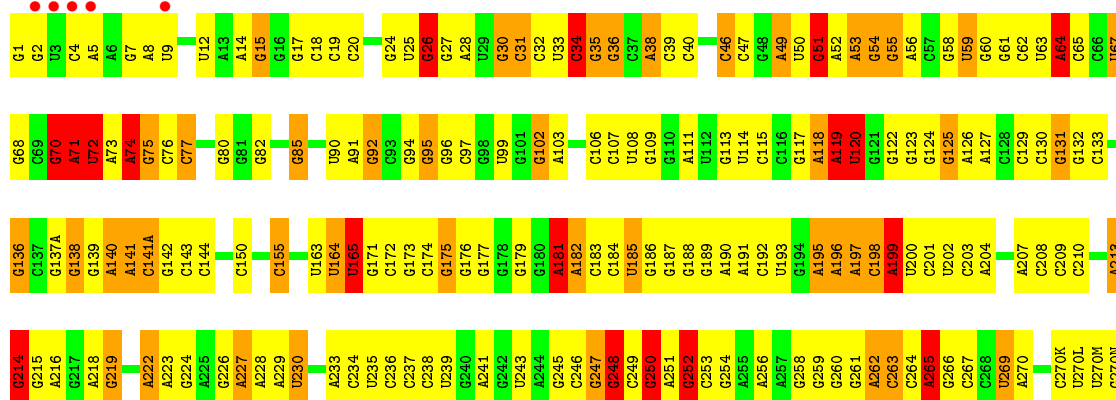
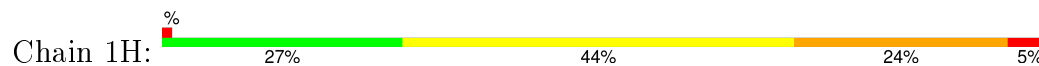
- Molecule 23: mRNA



- Molecule 23: mRNA

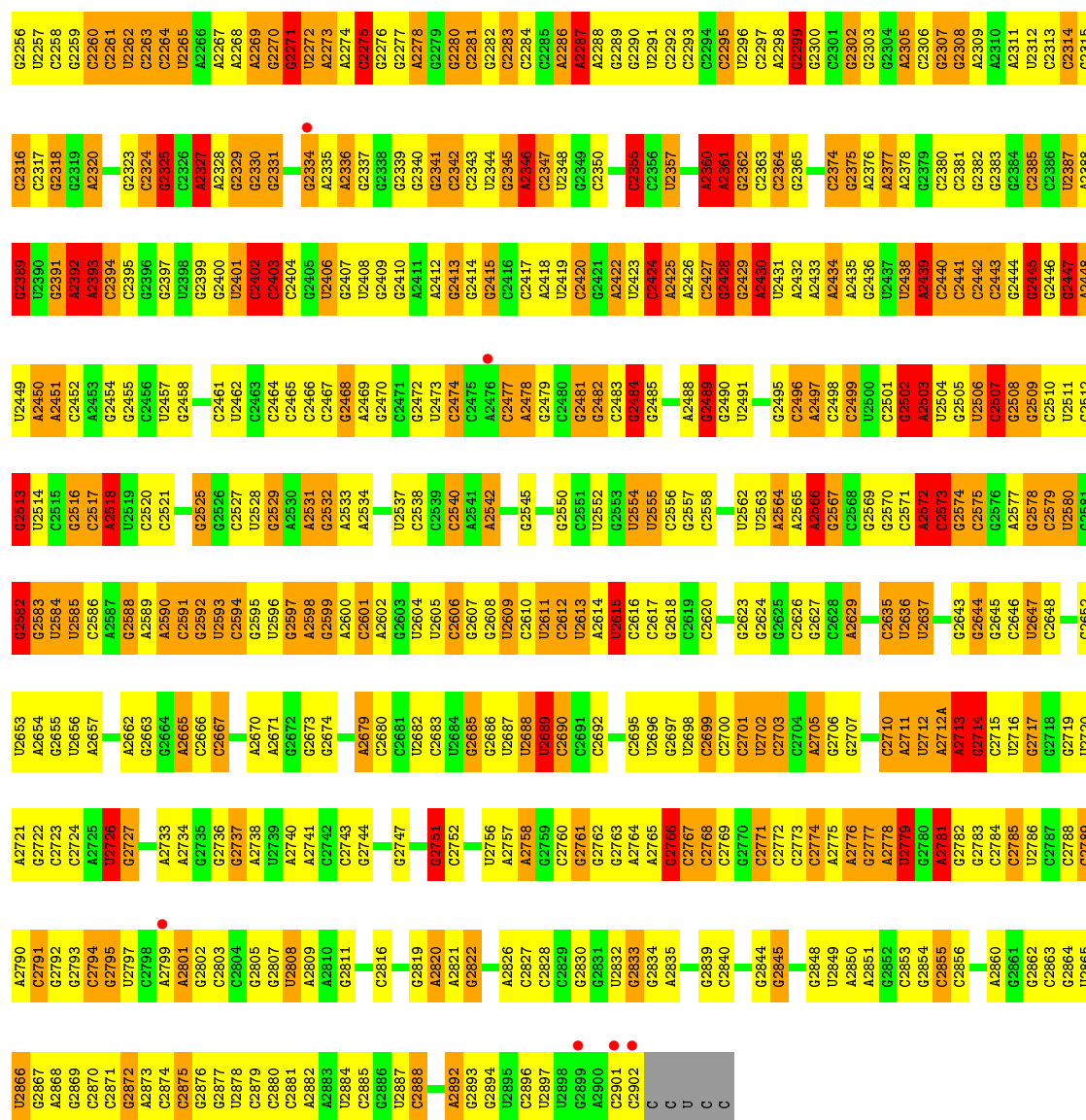


- Molecule 24: 23S ribosomal RNA

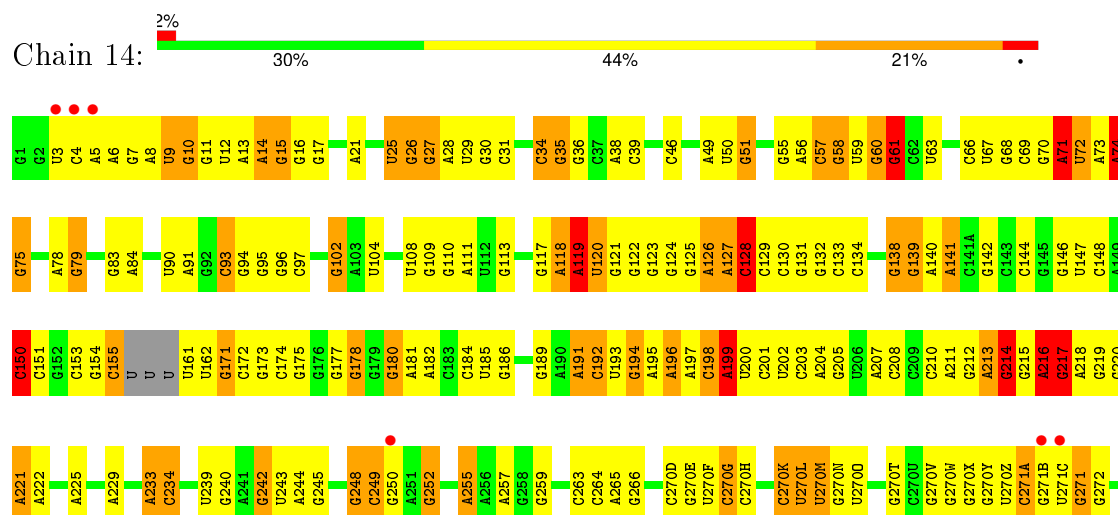


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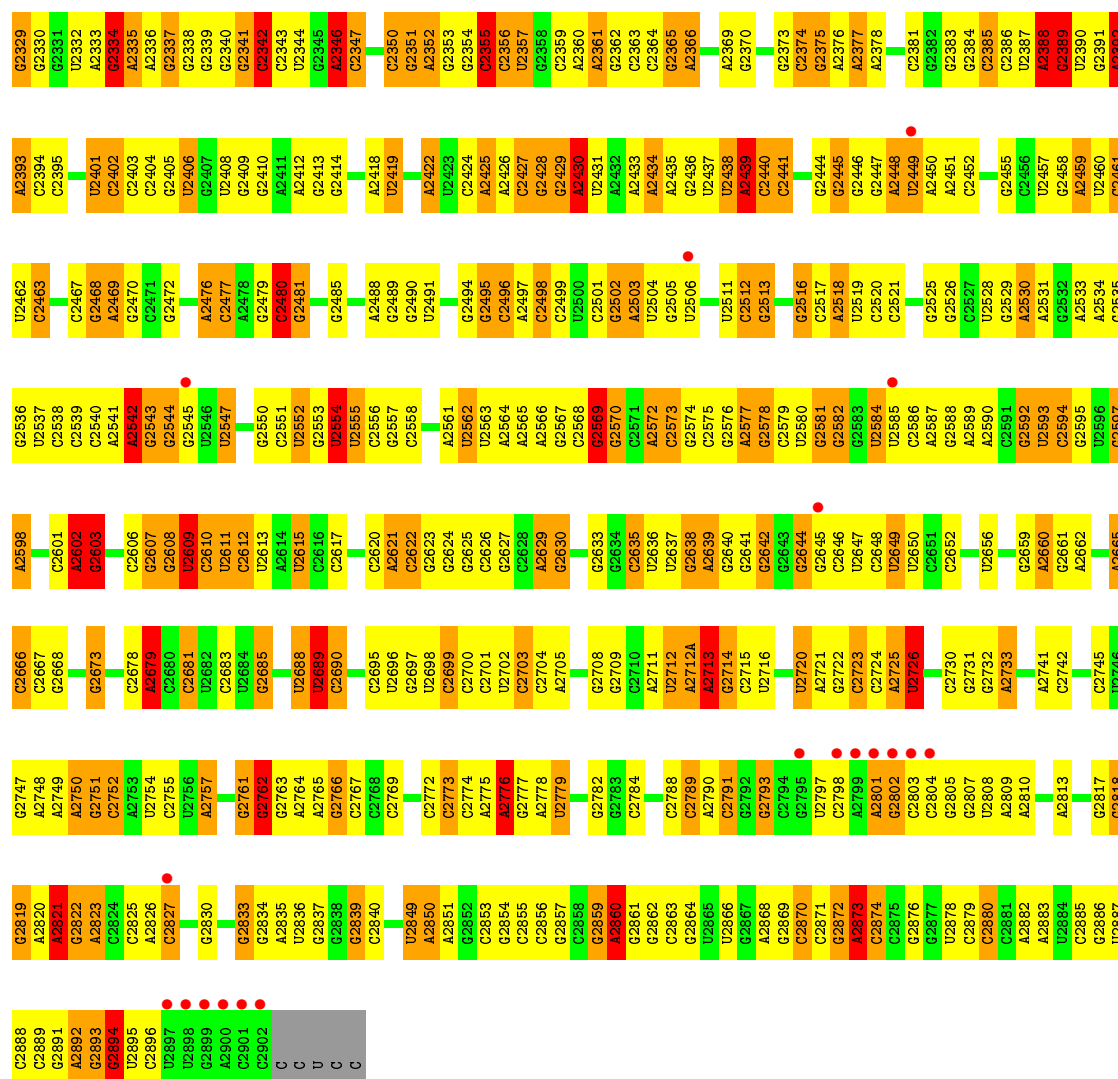


• Molecule 24: 23S ribosomal RNA

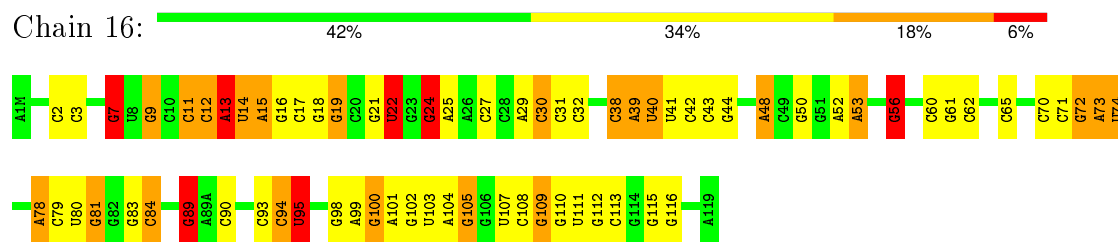


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A1220	G1150	U1078	A1010	G944	G879	G680	C635	U569	G493	A428	U350	U273E
	G1151	G1079	G1011	A945	G880	G681	G636	G570	G494	G430	G351	C273F
	C1152		U1012	G946	G881	G682	A637	A571	G495	G430	G352	G274
	C1153		U1013		G882	G683	G638	A572		G430	G353	
G1224	G1154	U1082	U1014	C949	G883	G684	U639	G573	G498	C433	G354	C277
C1225	A1155	U1083	G1015	G950	G884	G685	C640	G574	U499	C434	G355	A278
G1226	A1156	G1016	G1016	C951	C885	A764	C641	A575		C435	G356	C279
A1227	G1157	A1085	G1017	G952	C886	U688	G645	U576	U504	C436	A357	
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	U1159	G1087	U1019	G954	C888	G690	G647	G579	G507	G442	C287	C288
C1230	G1160	A1088	A1020	C955	C889	G691	G648	C580	G508	G443	C289	A289
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U1234	G1163	U1091	U1023	U958	C893	G694	G651	C583	C511	C446	C292	C292
	G1164	G1092	G1024	A959	C894	U694	G652	C584	U511	C447	U293	U293
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A1241	A1095	A1095	A1027	G962	C897	U773	G655	A587	C517	U450	C296	C296
A1242	A1096	A1096	A1028	U963	C898	A774	G656	C588	G517	C451	C297	C297
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G1244	A1098	G1173	U1033	C965	A900	G776	C658	C591	G522	C453	A299	A299
	G1174	A1174	U1034		A901	A777	C659	C592	G523	A454	A300	A300
A1245	U1175	U1175	U1035	C970	G902	G778	G65A	G593	U524	C455		
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	A1177	C1102	G1036	G972	C904	G780	A654	G595	U526	A457	G304	G304
U1248	C1178	A1103	U1037	G973	U905	A781	A655	G596	U527	G458	U305	U305
G1250	C1179	U1104	G1038	G974	C906	A782	G654	U597	C527	U459	U306	U306
C1251	U1105	C1039	U1039	G975	A907	A783	G655	G598	A528	A460	G307	G307
G1252	G1106	U1106	C1040	G976	A910	G784	G656	G599	A529	A461	C308	C308
			C1041	C977	A911	G785	G657	G600	C530	C462	G309	G309
A1253	G1183	G1110	G1042	G978	A912	G786	G658	C601	C531	C463	A310	A310
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	U1187	G1114	U1046	A981	C916	C791	C662		G539	G467	G315	G315
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A1261	G1191		U1050	C986	G920	C795	G666	G612	G545	G473	A322	A322
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	G1193	G1125	C1052	G988	U922	G797	C668	G615	A547	U475	A324	A324
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G1265	C1196	A1129	A1054	A990	C924	G799	C670	U405	G549	A477	U328	U328
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A1268	U1198	G1135	U1060	C993	G928	G802	C673	A480	U557	G480	A331	A331
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G1270	G1200	G1137	G1062	C995	G930	U804	C675	A482	G559	A482	G333	G333
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A1273	G1203	G1140	C1065	C998	G932	C896	C678	G485	U562	C485	C336	C336
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A1276	G1206	U1142	A1068	A1001	G934	G809	G67B	A627	C566	C488		
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A1278	A1424		A1070	G1003		U811	G67D	A632	C568			
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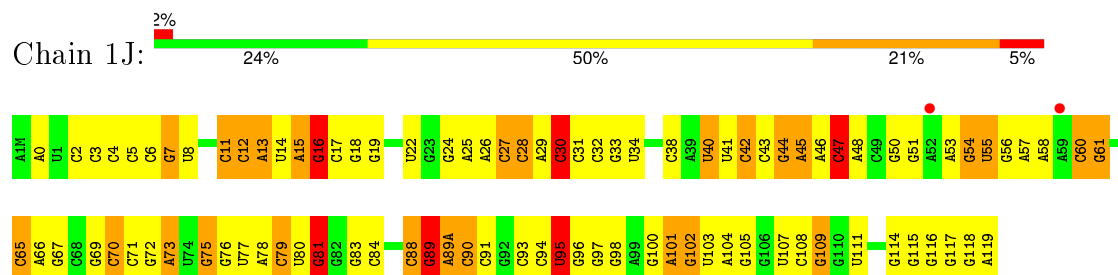




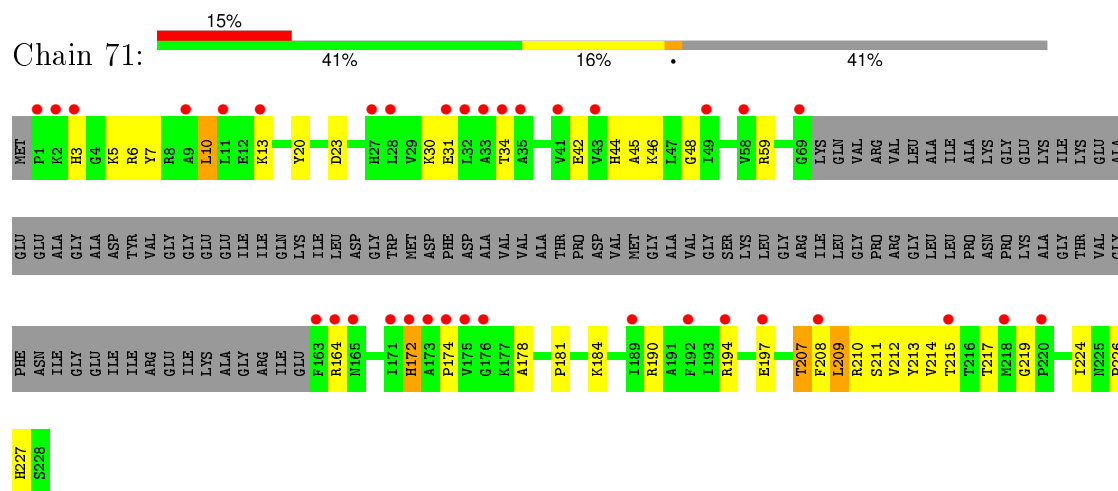
• Molecule 25: 5S ribosomal RNA



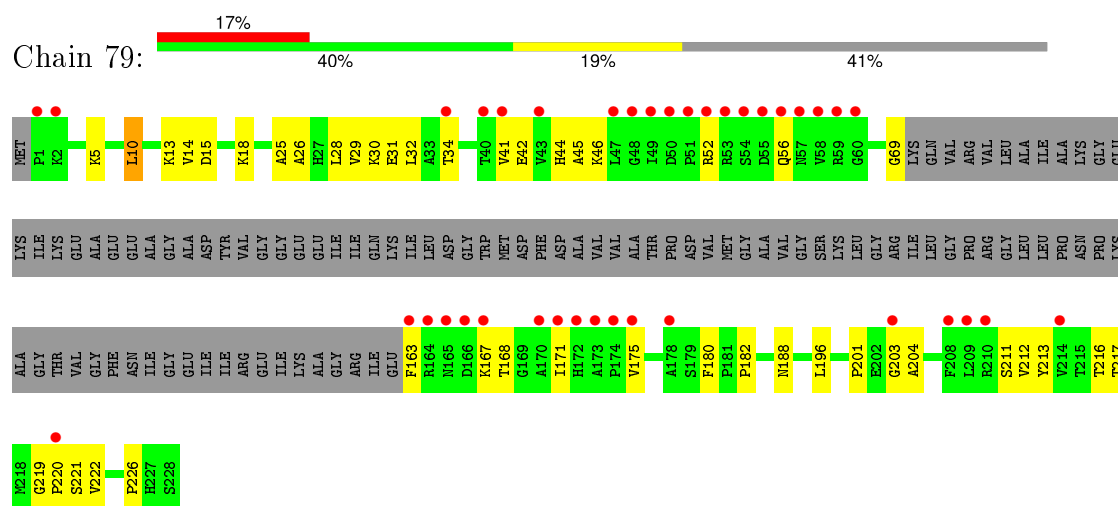
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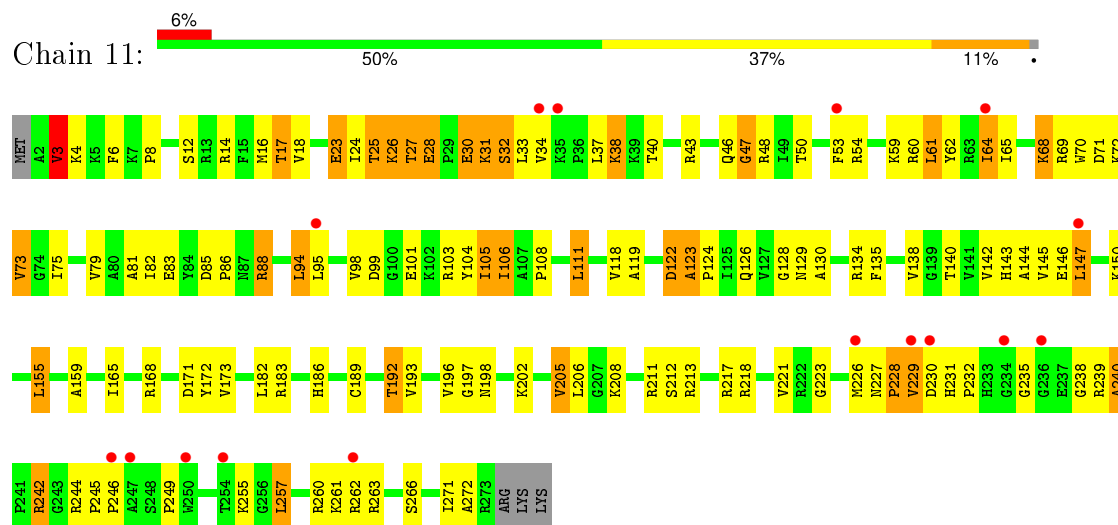
- Molecule 26: 50S ribosomal protein L1



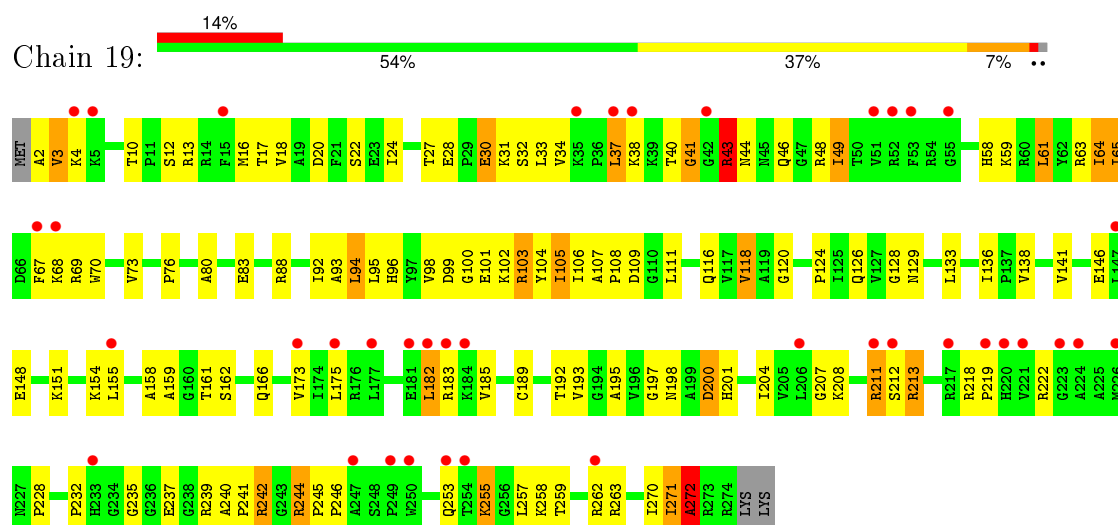
- Molecule 26: 50S ribosomal protein L1



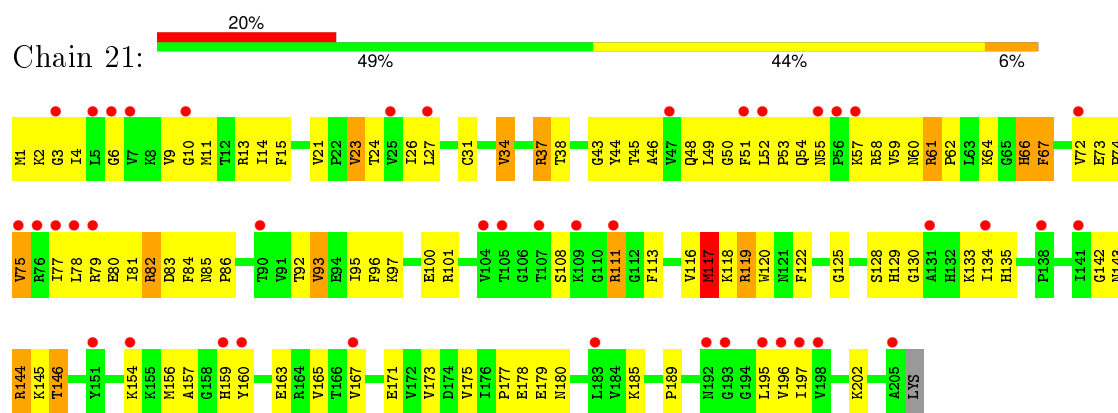
- Molecule 27: 50S ribosomal protein L2



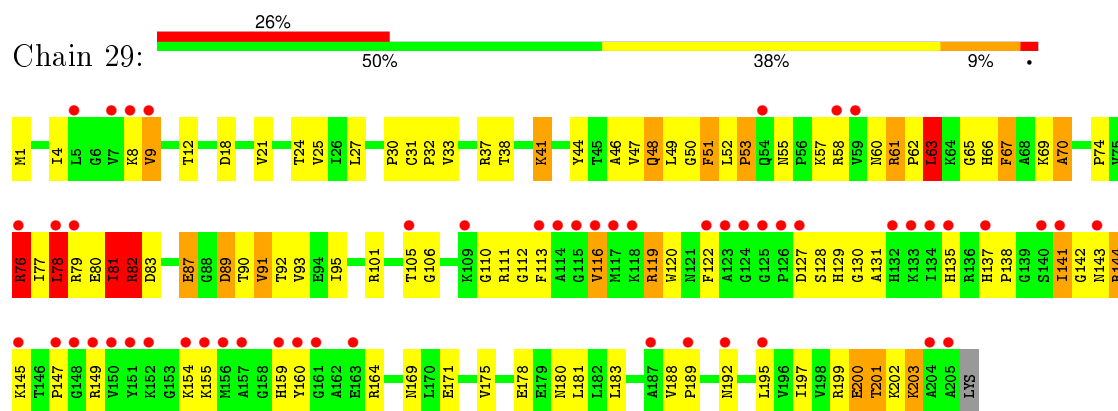
- Molecule 27: 50S ribosomal protein L2



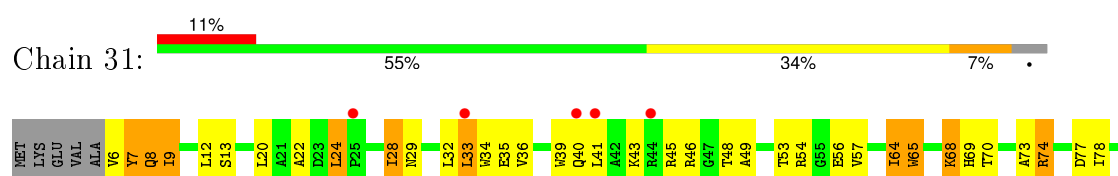
- Molecule 28: 50S ribosomal protein L3

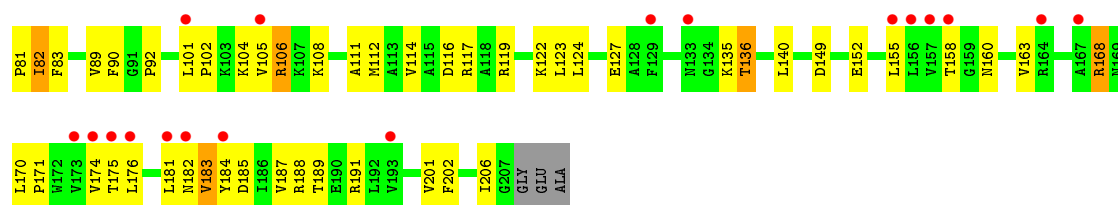


- Molecule 28: 50S ribosomal protein L3

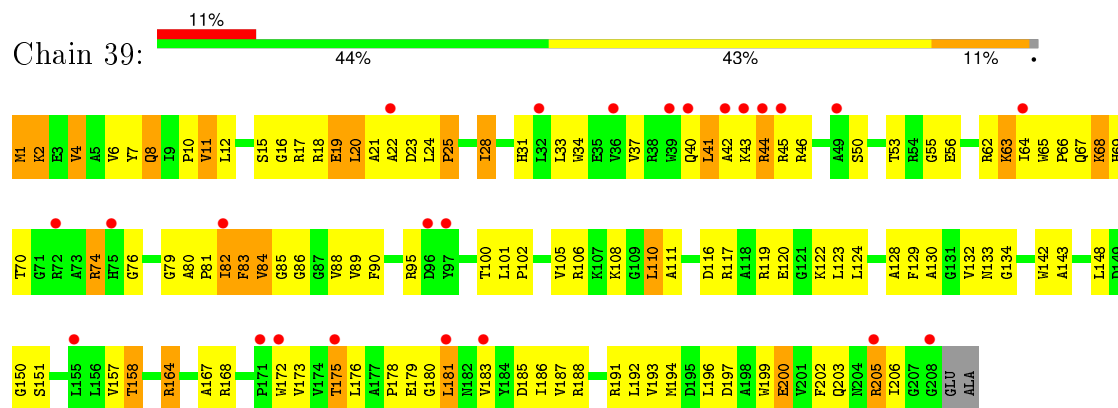


- Molecule 29: 50S ribosomal protein L4

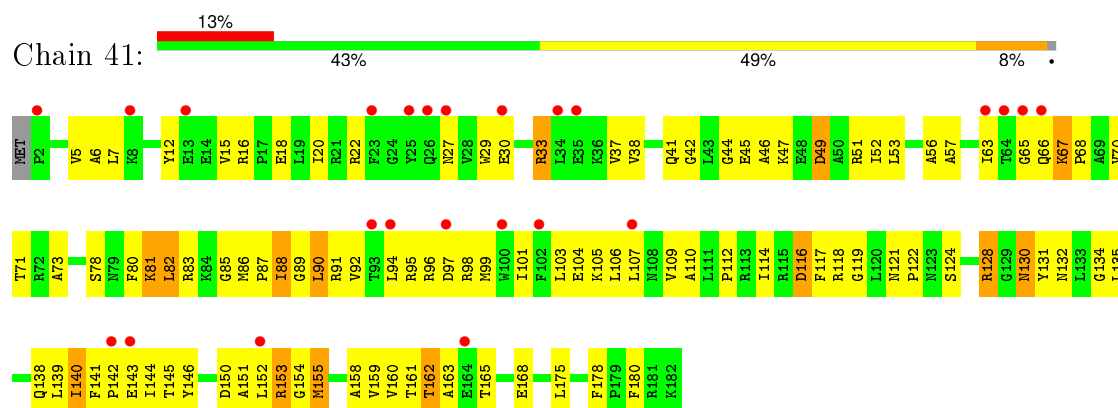




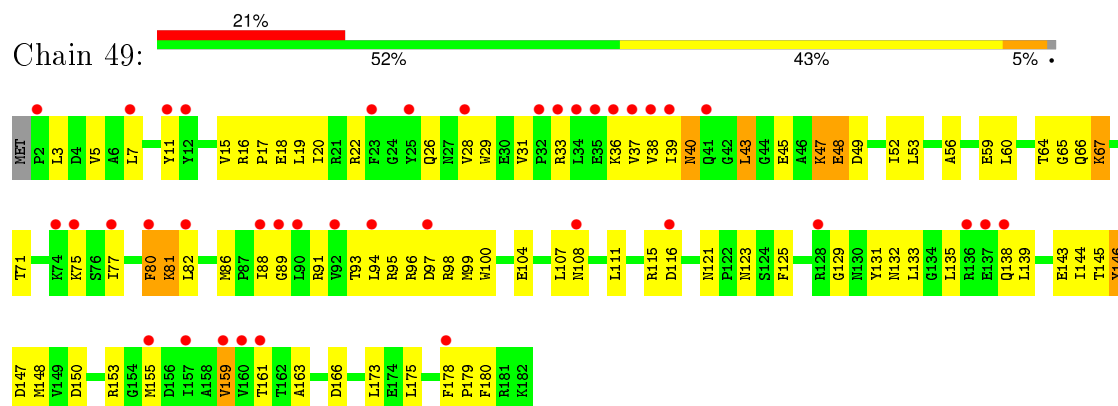
- Molecule 29: 50S ribosomal protein L4



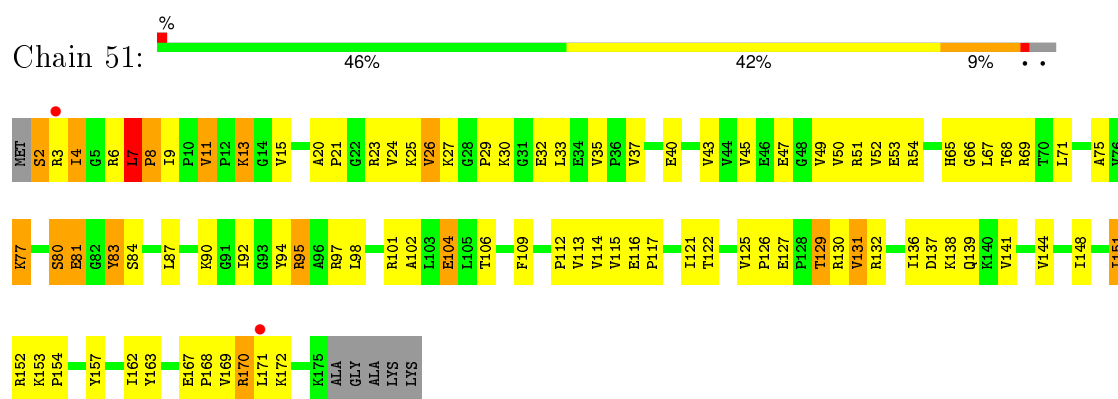
- Molecule 30: 50S ribosomal protein L5



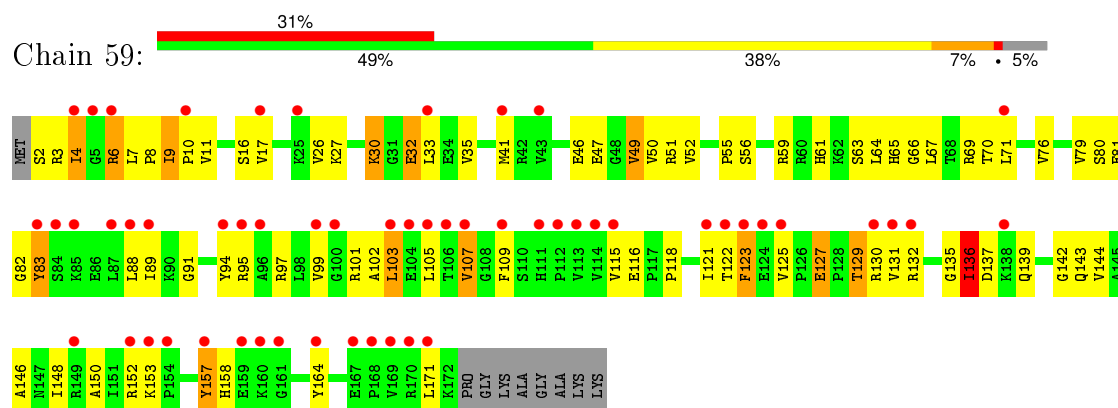
- Molecule 30: 50S ribosomal protein L5



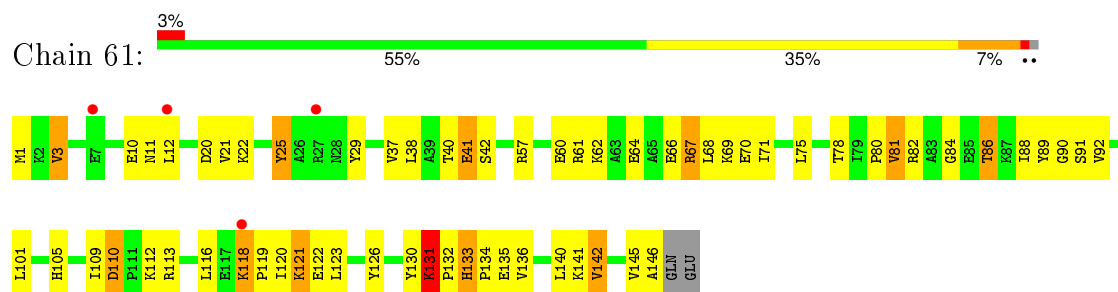
- Molecule 31: 50S ribosomal protein L6



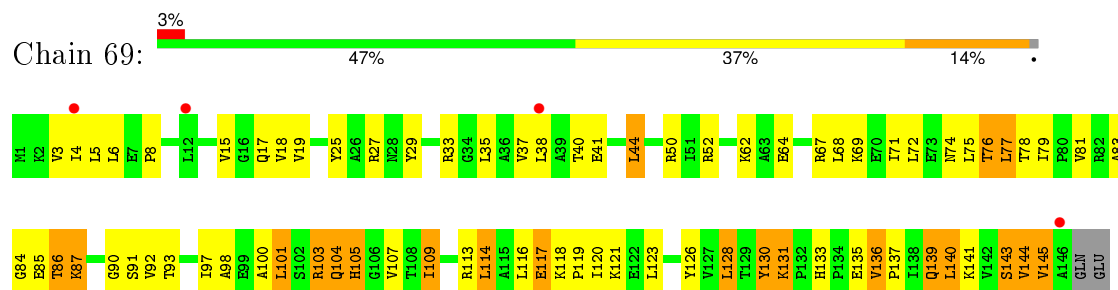
• Molecule 31: 50S ribosomal protein L6



• Molecule 32: 50S ribosomal protein L9

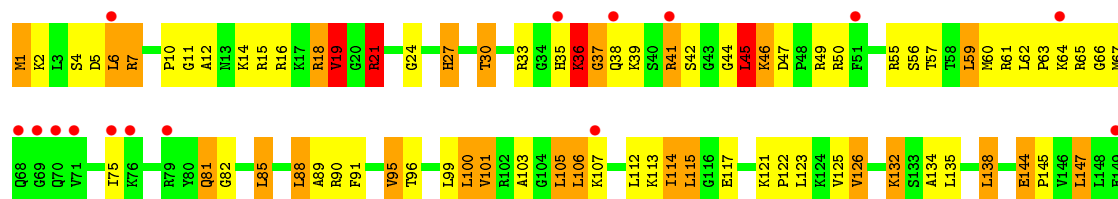


• Molecule 32: 50S ribosomal protein L9



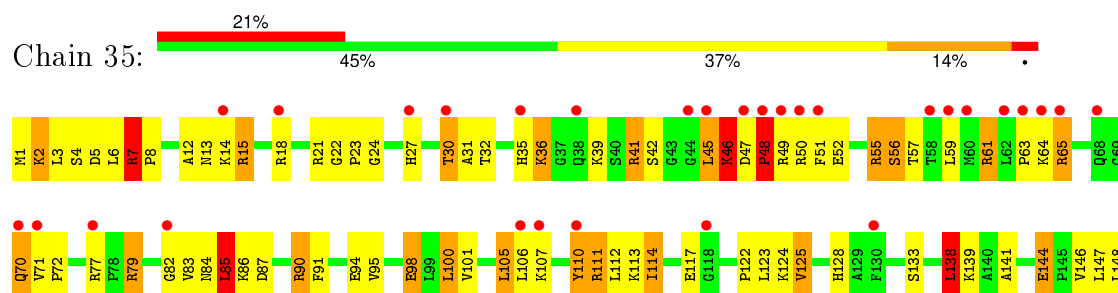
• Molecule 33: 50S ribosomal protein L13



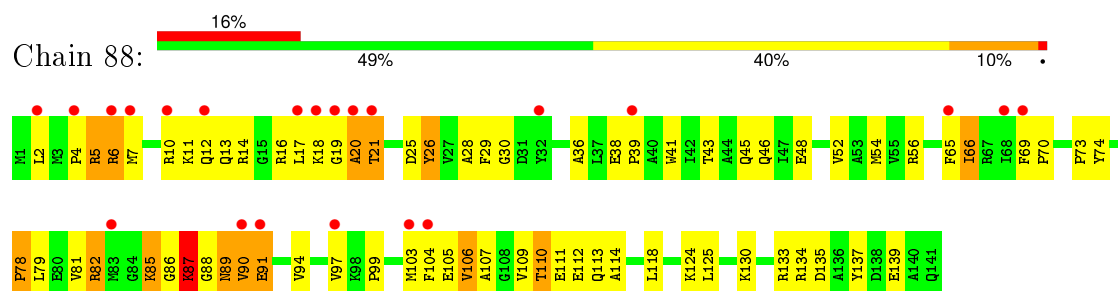




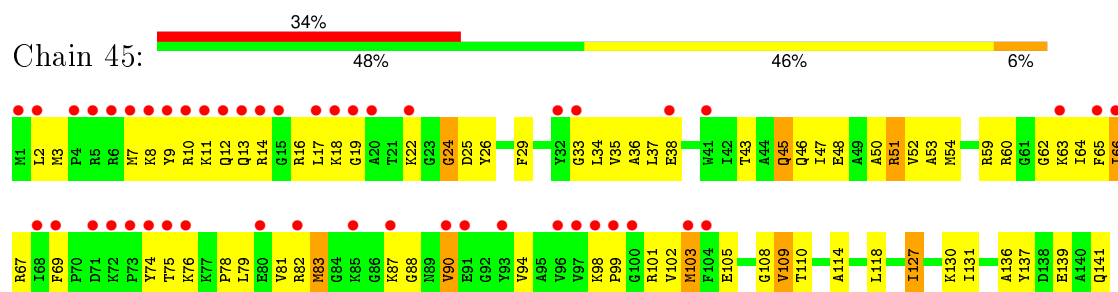
• Molecule 35: 50S ribosomal protein L15



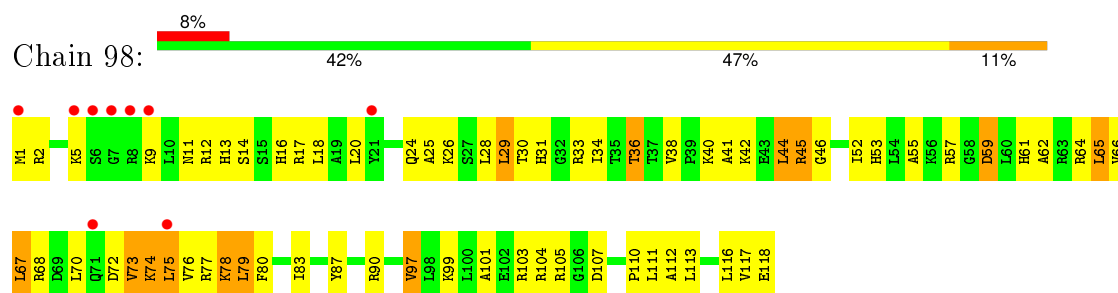
• Molecule 36: 50S ribosomal protein L16



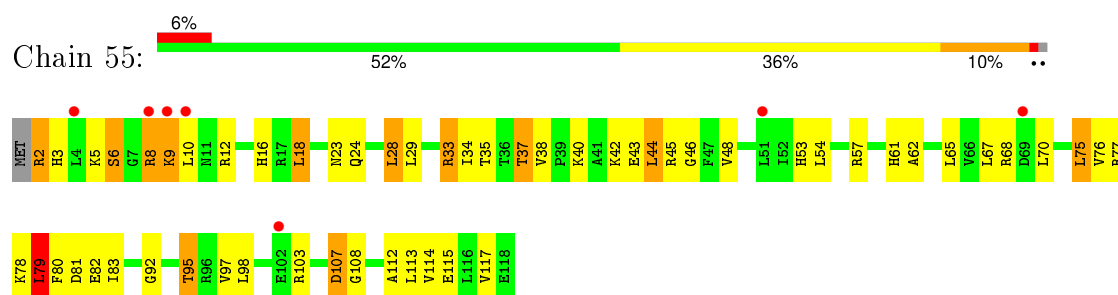
• Molecule 36: 50S ribosomal protein L16



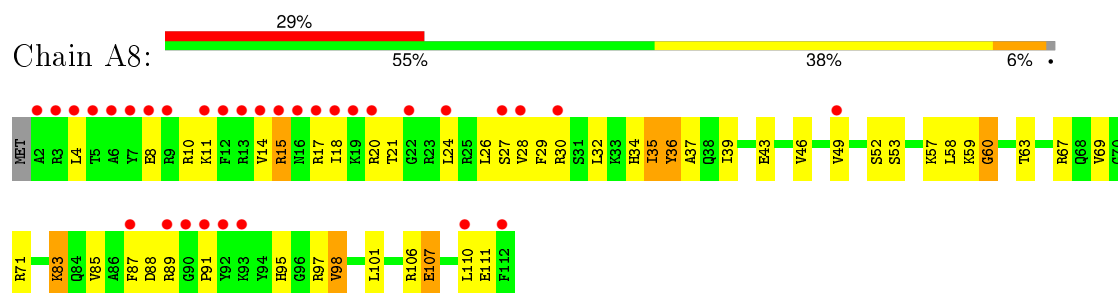
• Molecule 37: 50S ribosomal protein L17



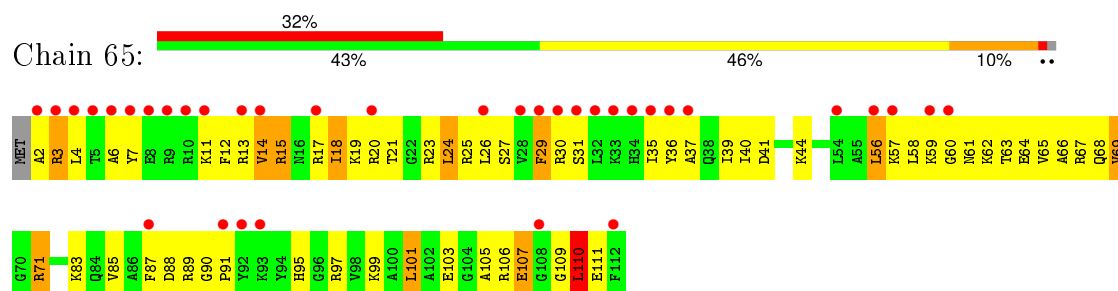
• Molecule 37: 50S ribosomal protein L17



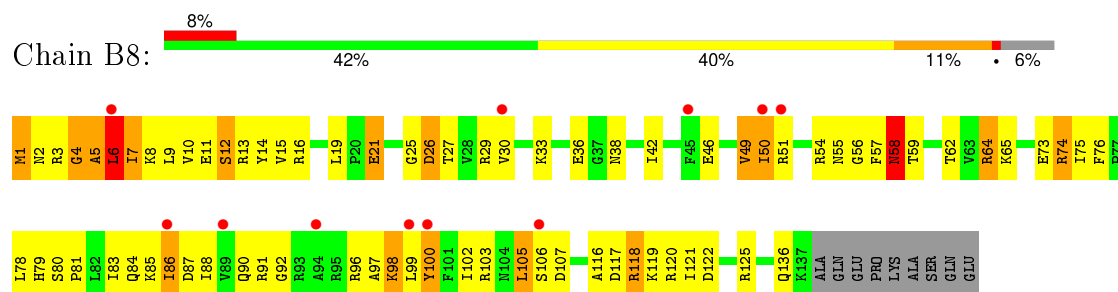
- Molecule 38: 50S ribosomal protein L18



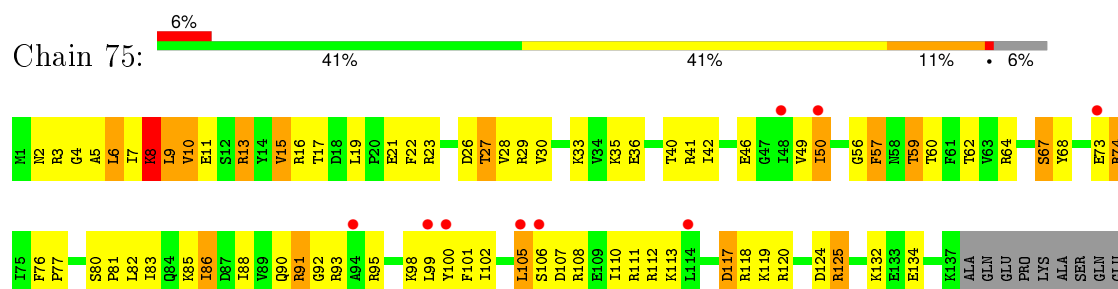
- Molecule 38: 50S ribosomal protein L18



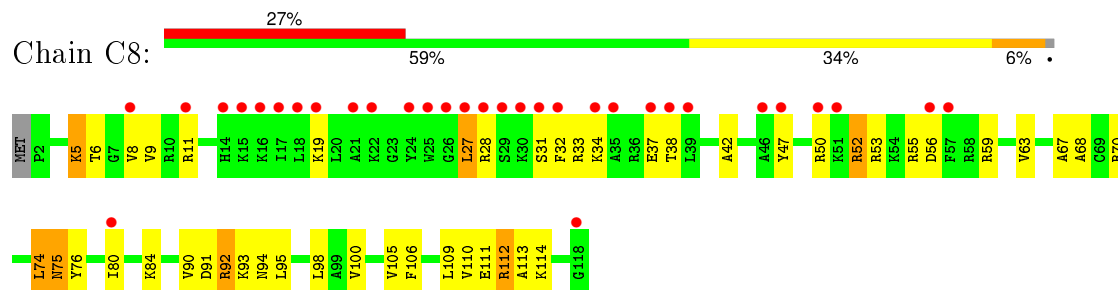
- Molecule 39: 50S ribosomal protein L19



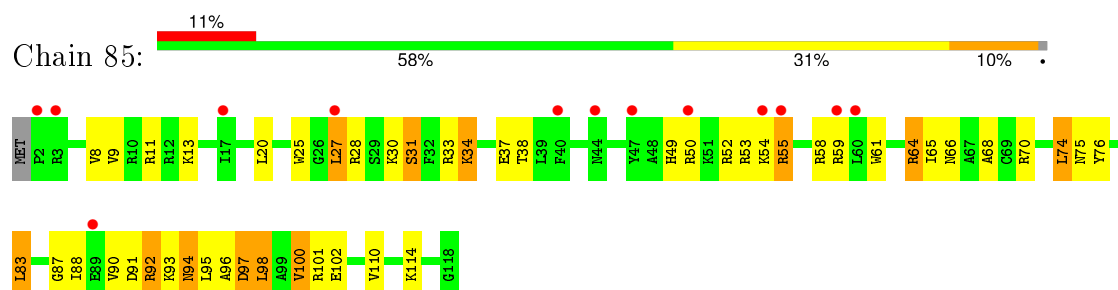
- Molecule 39: 50S ribosomal protein L19



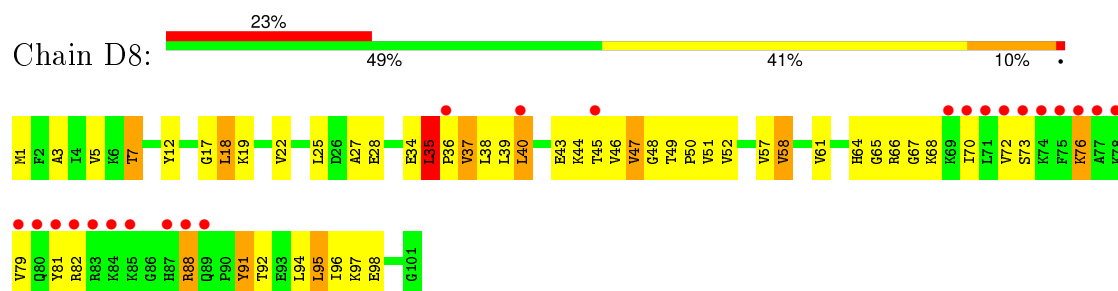
- Molecule 40: 50S ribosomal protein L20



- Molecule 40: 50S ribosomal protein L20



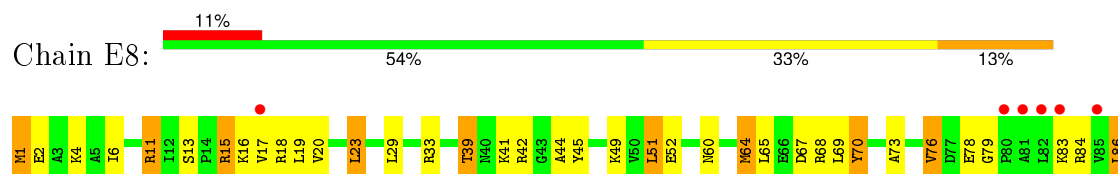
- Molecule 41: 50S ribosomal protein L21

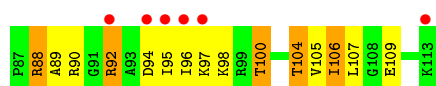


- Molecule 41: 50S ribosomal protein L21

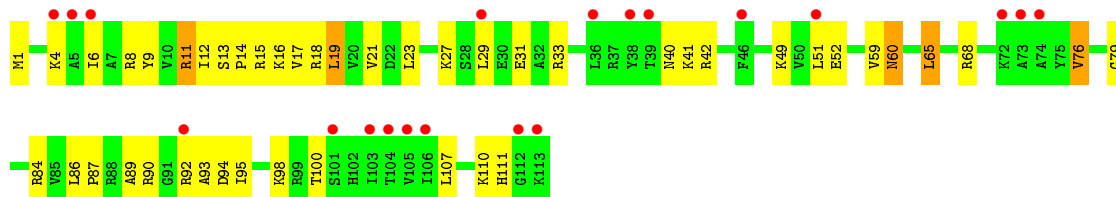


- Molecule 42: 50S ribosomal protein L22

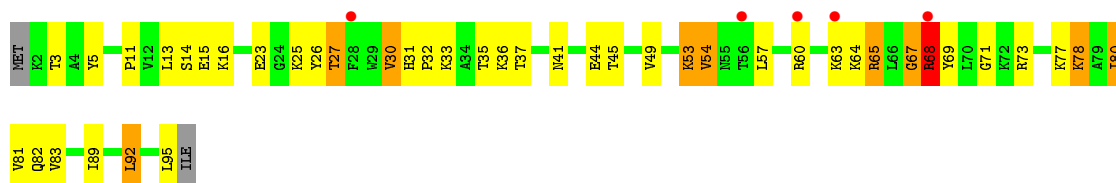




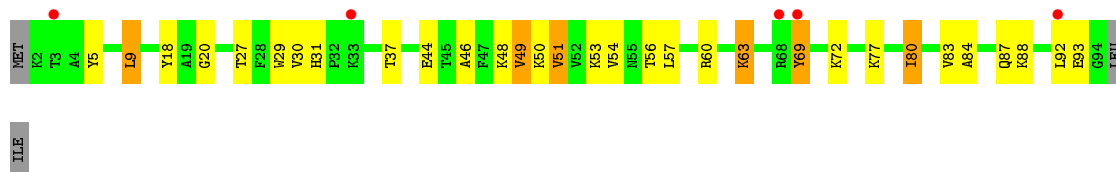
- Molecule 42: 50S ribosomal protein L22



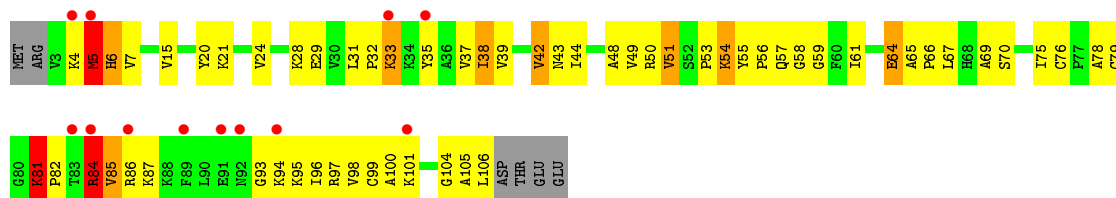
- Molecule 43: 50S ribosomal protein L23



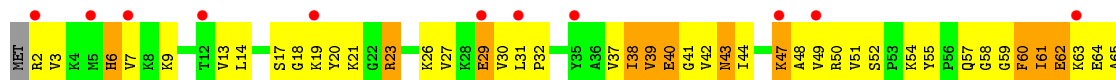
- Molecule 43: 50S ribosomal protein L23

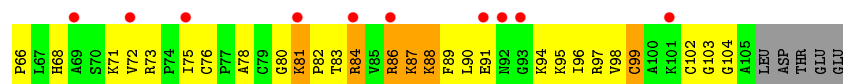


- Molecule 44: 50S ribosomal protein L24

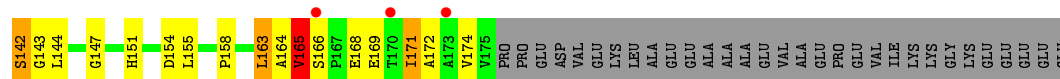
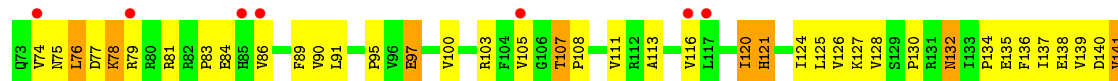
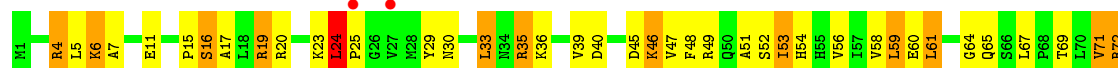
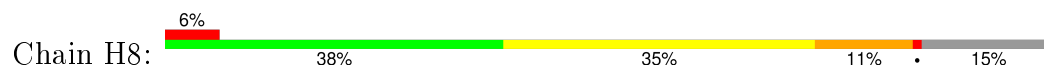


- Molecule 44: 50S ribosomal protein L24

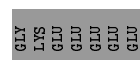
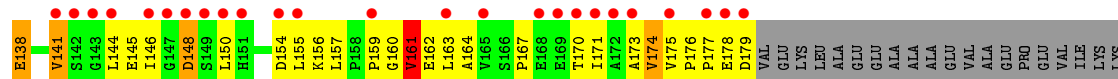
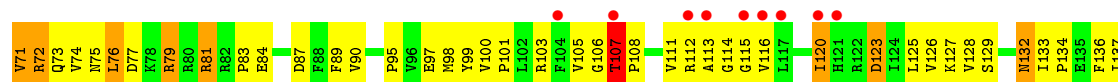




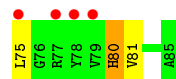
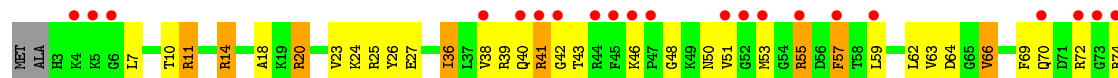
• Molecule 45: 50S ribosomal protein L25



• Molecule 45: 50S ribosomal protein L25

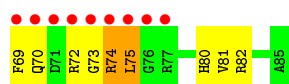


• Molecule 46: 50S ribosomal protein L27

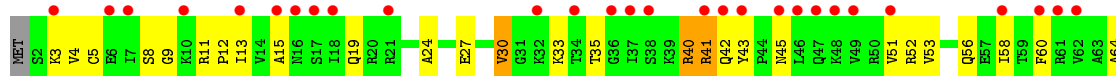


• Molecule 46: 50S ribosomal protein L27

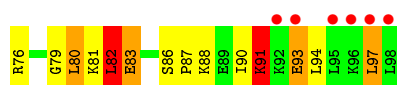
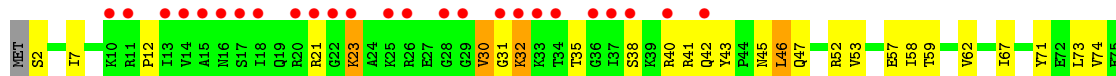




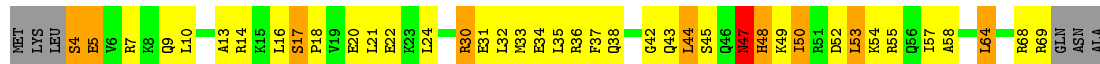
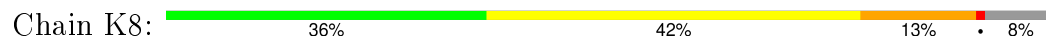
- Molecule 47: 50S ribosomal protein L28



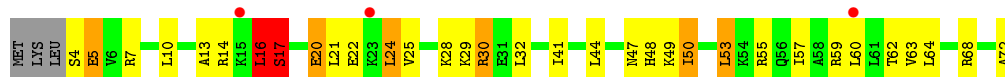
- Molecule 47: 50S ribosomal protein L28



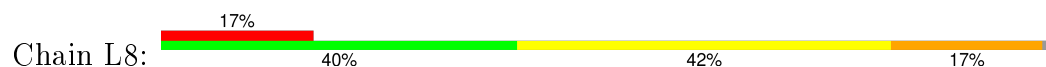
- Molecule 48: 50S ribosomal protein L29



- Molecule 48: 50S ribosomal protein L29

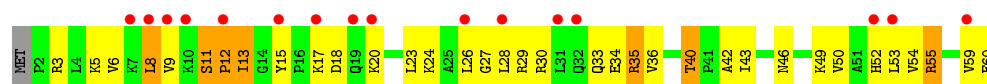


- Molecule 49: 50S ribosomal protein L30

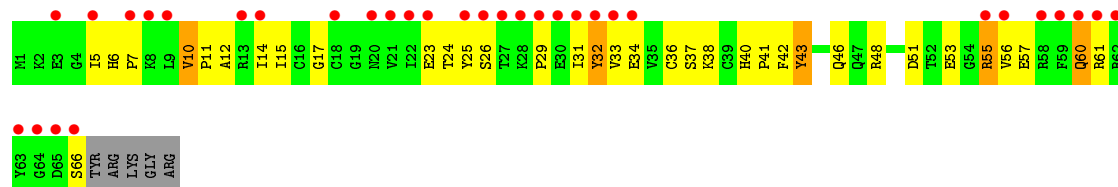


- Molecule 49: 50S ribosomal protein L30

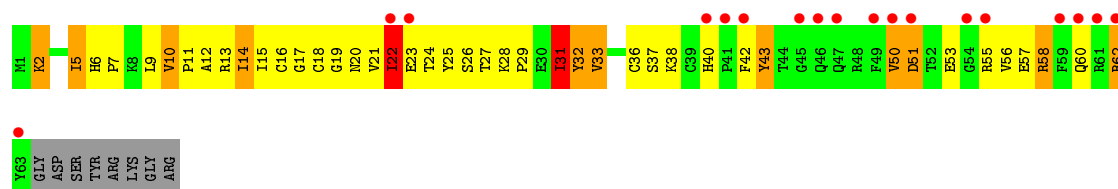




- Molecule 50: 50S ribosomal protein L31



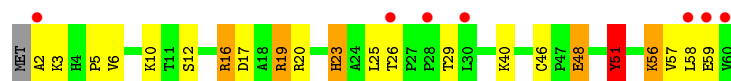
- Molecule 50: 50S ribosomal protein L31



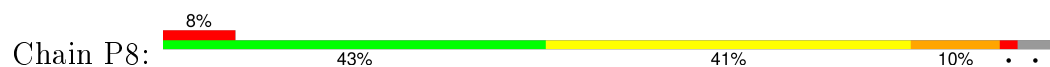
- Molecule 51: 50S ribosomal protein L32



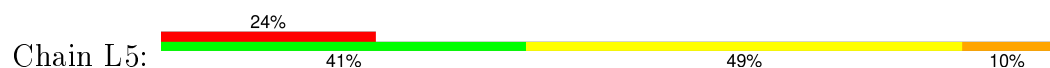
- Molecule 51: 50S ribosomal protein L32

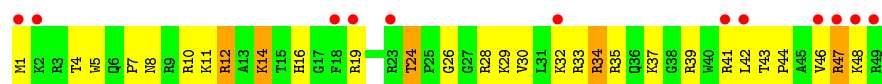


- Molecule 52: 50S ribosomal protein L34

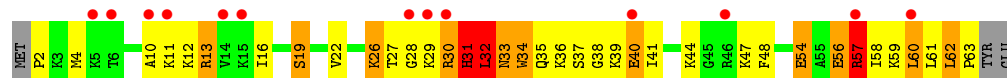


- Molecule 52: 50S ribosomal protein L34

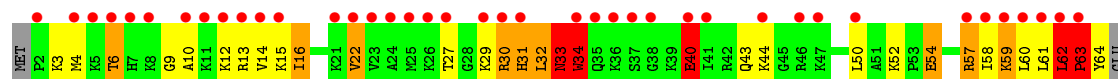




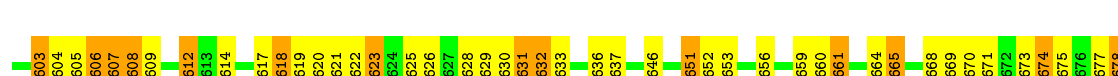
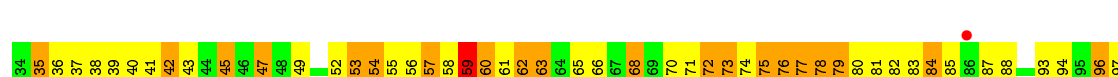
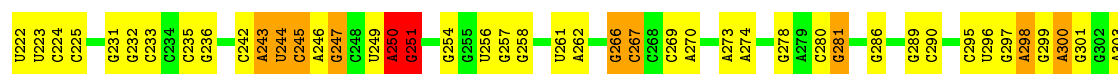
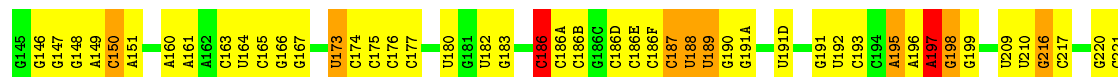
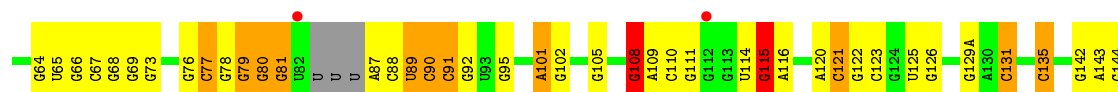
- Molecule 53: 50S ribosomal protein L35



- Molecule 53: 50S ribosomal protein L35



- Molecule 54: 16S ribosomal RNA



A1483	U1393	C1321	C1246	A1183	G1048	A986	G924	G837	G756	C679
A1394	A1396	C1322	U1247	G1184	U1052	C989	G925	G838	U757	G683
G1487	A1397	G1323	A1250	G1185	G1053	C990	G926	U841	G758	G684
	C1397	A1324	A1251	G1187	C1054	U991	G927	U842	A759	A684
A1490	A1398	C1325	A1255	A1188	A1055	U992	G928	U843	G760	U686
G1491	C1399	C1326	G1255	C1189	U1056	C993	G929	C848	G764	A687
A1492	C1400	C1327	A1256	C1190	G1057	A994	C932	C849	G765	G688
A1493	G1401	C1328	U1257	A1123	G1058	C995	G933	G853	G766	G689
G1494	C1402	A1329	A1258	A1124	C1059	A996	G934	G854	A767	G690
	C1403	U1330	G1259	U1125	C1060	U997	G935	G855	G768	G691
	C1404	G1331	C1260	U1126	C1061	C998	G936	G856	G769	U692
G1497	G1405	A1332	A1269	G1127	G1061	C998A	G937	C857	G772	G693
U1498	A1333	C1333	A1270	C1128	G1062	U999	G938	G858	U773	
A1499	G1334	G1335	C1270	C1129	U1063	U999	G939	A859	G774	C699
A1500	C1335	C1336	G1271	A1130	G1064	A1000	G940	A860	G775	A702
C1501	C1336		G1272	G1131	A1065	G1001	G941	G861	A777	G703
A1502	A1340	A1341	G1273	C1132	G1068	G1002	G942	C862		A706
A1503	U1341	C1342	A1274	C1133	C1069	A1004	G943	A865	G783	C707
G1504	G1343	G1344	A1275	U1136	U1070	C1008	G944	C866	G784	C708
G1505	C1345	U1346	C1276	C1137	C1071	G1009	G945	G867	G785	
A1507	U1347	C1348	U1277	G1138	U1072	G1010	G946	G868	U788	G711
G1508	A1348	A1349	A1278	U1139	U1073	G1011	G947	G869	U789	A716
C1509	G1349	A1350	U1280	C1141	G1074	U1012	U950	A872	A790	
U1510	U1346	C1351	U1281	G1142	C1076	G1013	G951	A873	G791	C719
G1511	U1348	C1352	C1282	G1143	U1077	A1014	U952	G874	A792	
U1512	A1349	C1353		G1144	U1078	G953	U953	U793	A793	A722
A1513	A1350	G1354	A1285	C1210	G1079	A1016	G954	G878	A794	U723
C1514	U1351	C1355	A1286	U1211	G1080	G1017	U955	C879	G798	G724
G1515	G1352	C1356	A1287	C1214	G1081	C1018	U956		G799	G725
U1516	C1353	C1354	A1288	C1215	G1082		U957	C883	G800	A728
G1517	C1354	A1357	A1289	U1149	U1083	G1022	U958	U884	U801	A729
A1518	U1441	C1357	G1290	U1150	G1084	G1023	A959	G885	A802	G730
A1519	G1442	U1358	G1291	A1151	U1085	G1024	U960	G886	G803	G731
G1520	G1443	C1359	C1217	A1152	U1086	U1025	U961	C886	U804	C732
U1521	A1446	U1360	U1292	A1153	G1087	G1026	C962	C887	C805	A733
G1522	G1447	A1361	G1293	C1153	G1088	G1027	G963	C897	C811	G735
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	C1449	C1362A	C1297	A1157	A1093	C1028A	A965	C899	A816	A737
	U1450	A1363	C1298	C1158	G1094	G1029	A966	A901	C817	C738
G1529	C1451	U1364	A1299	U1159	U1095	G1030	C967	G902	C739	
G1530	G1453	G1365	G1300	G1160	C1096	A1032	A968	C903	U905	G741
A1531	G1454	C1366	U1301	C1161	G1098	G1032A	C970	C904	G821	U743
U1532	G1455	C1367	C1227	C1162	G1099	G1032B	G971	G906	G822	C744
C1533	C1459	G1368	C1228		C1097	G1033	C972	G906	G823	C745
A	A1460	C1369	G1304	A1169	G1098	G1034	C973	A913	G824	A746
C	G1461	C1370	U1307	A1170	G1100	A1035	A974	A914	G825	C747
C	G1464	A1374	U1307	G1171	A1101	G1036	A975	A915	G826	U828
U	C1465	A1375	G1311	C1172	C1102	G1037	G976	G917	G827	G829
C	G1466		G1312	G1173	G1103	C1038	G977	C980	A918	C748
U	G1467	G1379	U1313	U1174	G1104	G1039	A978	A919	U920	G750
U	A1468		C1314	G1175	A1105	C1039	C979	U921	C834	C754
G	G1469	G1386	U1315	A1176	G1106	G1043	C980	U922	U835	
C	G1387	C1387	G1316	G1177	G1107	A1044	U981	C984	G836	
U	G1475	C1388	C1317	U1178	C1108	A1045	U982			
		U1391	A1318	A1179	C1109	A1046	G983			
		C1244	G1319	A1180	A1110	G1047	C985			
	C1479	G1392	C1245	G1181	C1112					

4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	210.00Å 451.50Å 616.70Å 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
$\langle I/\sigma(I) \rangle$ ¹	1.71 (at 3.19Å)	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.188 , 0.238 0.191 , 0.238	Depositor DCC
R_{free} test set	2000 reflections (0.23%)	DCC
Wilson B-factor (Å ²)	98.5	Xtriage
Anisotropy	0.192	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.26 , 83.8	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.43$, $\langle L^2 \rangle = 0.26$	Xtriage
Outliers	0 of 953301 reflections	Xtriage
F_o, F_c correlation	0.89	EDS
Total number of atoms	299678	wwPDB-VP
Average B, all atoms (Å ²)	126.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.45% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.375 respectively for untwinned datasets, and 0.333, 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
9:82:89:ASN:HB3	9:82:92:TYR:HB2	1.41	1.00
54:1G:448:A:OP2	54:1G:485:G:N2	1.93	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
24:14:2593:U:O4	57:14:3627:HOH:O	1.82	0.98
1:13:1182:G:H4'	1:13:1183:A:H5'	1.45	0.98
24:14:2705:A:OP2	57:14:3676:HOH:O	1.82	0.98
41:95:21:ARG:CZ	41:95:91:TYR:CE2	2.47	0.98
4:32:18:LYS:NZ	4:32:31:CYS:SG	2.37	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
41:95:21:ARG:CD	41:95:91:TYR:CD2	2.48	0.96
28:29:1:MET:N	28:29:200:GLU:OE2	1.97	0.96
24:14:676:A:H8	24:14:2069:G:H21	1.00	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
41:95:21:ARG:CZ	41:95:91:TYR:CD2	2.49	0.94
24:1H:676:A:H8	24:1H:2069:G:H21	1.09	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
25:1J:5:C:H42	25:1J:115:G:H1	1.04	0.93
24:1H:409:C:OP1	57:1H:3697:HOH:O	1.84	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
53:Q8:29:LYS:HB2	53:Q8:44:LYS:HB3	1.51	0.92
24:1H:2615:U:OP1	57:1H:3565:HOH:O	1.85	0.92
24:1H:1899:G:H22	24:1H:1902:C:H41	1.08	0.92
24:1H:2006:C:OP1	57:1H:3597:HOH:O	1.86	0.92
24:1H:1601:G:N7	57:1H:4010:HOH:O	2.03	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
24:1H:298:G:N7	57:1H:4142:HOH:O	2.03	0.91
27:11:182:LEU:H	27:11:272:ALA:HB3	1.34	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:286:G:N7	57:1G:1814:HOH:O	2.03	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
41:95:21:ARG:CZ	41:95:91:TYR:CZ	2.55	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2392:A:H2	24:1H:2424:C:H42	1.18	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:1479:G:N7	24:1H:1510:A:N6	2.20	0.90
24:1H:1385:G:O2'	24:1H:1396:U:O2	1.88	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
24:1H:1828:G:OP2	57:1H:3666:HOH:O	1.88	0.90
24:14:1970:A:OP1	57:14:3600:HOH:O	1.90	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
39:B8:5:ALA:O	39:B8:7:ILE:HA	1.72	0.89
24:1H:574:C:OP2	57:1H:4003:HOH:O	1.90	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: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
24:1H:1614:A:OP1	57:1H:3887:HOH:O	1.89	0.88
24:1H:1138:G:H21	33:58:106:MET:HE3	1.38	0.88
54:1G:330:C:O2	57:1G:1774:HOH:O	1.91	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:2392:A:C8	35:78:61:ARG:HG2	2.07	0.88
24:1H:1187:G:OP2	57:1H:3842:HOH:O	1.91	0.88
24:14:2499:C:OP2	57:14:3519:HOH:O	1.91	0.87
1:13:766:A:OP2	57:13:1735:HOH:O	1.90	0.87
22:2K:19:C:H3'	22:2K:20:C:H2'	1.55	0.87
10:1A:48:THR:HA	10:1A:62:HIS:HB3	1.57	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)
47:J8:87:PRO:HG2	47:J8:90:ILE:HD11	1.57	0.87
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
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
24:1H: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
24:14:780:G:H21	24:14:783:A:H62	1.21	0.86
57:14:4309:HOH:O	27:19:242:ARG:O	1.91	0.86
24:14:1263:U:OP2	57:14:4132:HOH:O	1.92	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
24:1H:2588:G:OP2	57:1H:3618:HOH:O	1.94	0.85
27:19:37:LEU:HA	27:19:38:LYS:HG2	1.59	0.85
24:14:2822:G:OP2	57:14:3525:HOH:O	1.93	0.85
1:13:1159:U:O4'	1:13:1182:G:N2	2.10	0.85
4:32:53:ASP:O	4:32:57:ARG:NH1	2.09	0.85
1:13:310:G:OP2	16:7I:27:LYS:NZ	2.09	0.85
24:1H:2580:U:H4'	28:21:130:GLY:HA3	1.59	0.85
24:14:2255:G:OP2	57:14:3864:HOH:O	1.94	0.85
24:14:2712(A):A:OP2	57:14:3569:HOH:O	1.93	0.85
35:35:146:VAL:HG13	35:35:147:LEU:HG	1.58	0.85
54:1G:664:G:H22	54:1G:741:G:H1	1.23	0.85
24:14:1359:A:H62	24:14:1372:U:H3	1.18	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
41:95:21:ARG:HD3	41:95:91:TYR:CD2	2.12	0.84
24:1H:1899:G:H22	24:1H:1902:C:N4	1.74	0.84
44:C5:39:VAL:O	44:C5:41:GLY:N	2.10	0.84
6:52:87:ARG:HH11	6:52:87:ARG:HG3	1.42	0.84
54:1G:976:G:N2	54:1G:1362(A):C:OP2	2.11	0.84
37:98:24:GLN:HE22	37:98:36:THR:HG21	1.43	0.84
22:2K:36:U:H3	23:4K:17:G:H1	1.26	0.84
24:1H:2314:C:H2'	24:1H:2315:G:H8	1.41	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
39:B8:2:ASN:CB	39:B8:5:ALA:H	1.91	0.84
24:14:2343:C:O2'	24:14:2373:G:O2'	1.94	0.84
24:1H:945:A:OP1	57:1H:4116:HOH:O	1.96	0.84
24:1H:67:U:H3	24:1H:74:A:H2	1.24	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
24:14:2269: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
1:13:686:U:H1'	11:2I:42:TRP:HE1	1.44	0.83
1:13:1348:U:H2'	1:13:1349:A:H8	1.42	0.83
24:1H:1346:G:OP2	57:1H:4501:HOH:O	1.97	0.83
24:14:450:G:O6	57:14:3809:HOH:O	1.95	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
28:29:33:VAL:HG12	28:29:89:ASP:HA	1.60	0.83
54:1G:957:U:OP1	19:AA:81:ARG:NH2	2.11	0.83
44:G8:100:ALA:HB1	44:G8:101:LYS:HB2	1.58	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
24:1H:598:G:H5'	35:78:11:GLY:HA3	1.60	0.83
5:42:100:VAL:O	5:42:107:ARG:NH2	2.12	0.83
24:1H:987:G:OP2	57:1H:3978:HOH:O	1.97	0.83
24:1H:2499:C:N3	57:1H:4557:HOH:O	2.10	0.82
1:13:1352:C:OP1	21:1F:3:LYS:NZ	2.12	0.82
27:11:26:LYS:O	27:11:27:THR:OG1	1.97	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
39:75:107:ASP:O	39:75:111:ARG:NH1	2.11	0.82
5:42:102:ALA:HB1	5:42:106:PRO:HG2	1.61	0.82
12:3I:39:VAL:HG22	12:3I:57:LYS:HB2	1.60	0.82
14:5I:26:ARG:HH11	14:5I:43:CYS:HB2	1.45	0.82
24:1H:1057:A:N6	24:1H:1087:G:N7	2.27	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
24:14:2582:G:OP1	57:14:4242:HOH:O	1.98	0.82
24:14:660:G:H21	35:35:12:ALA:HA	1.45	0.82
24:14:1614:A:OP1	57:14:3497:HOH:O	1.97	0.82
36:88:104:PHE:HE2	36:88:125:LEU:HD11	1.45	0.82
24:1H:330:A:HO2'	24:1H:331:A:H8	1.23	0.82
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
24:1H:1370:C:OP2	57:1H:4029:HOH:O	1.97	0.81
24:14:511:U:H3'	24:14:512:G:H5''	1.60	0.81
24:14:1633:G:O6	57:14:3549:HOH:O	1.95	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
24:14:1266:G:O5'	42:A5:15:ARG:NH2	2.13	0.81
39:B8:2:ASN:HB3	39:B8:4:GLY:H	1.45	0.81
24:14:654(E):C:H42	24:14:654(P):G:H1	1.27	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
24:14:1332:G:N2	24:14:1609:A:O2'	2.13	0.81
24:14:1019:U:H3	24:14:1142(A):A:H62	1.26	0.81
38:65:3:ARG:HE	38:65:4:LEU:N	1.79	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
24:14:1632:A:N7	57:14:3550:HOH:O	2.12	0.81
29:39:53:THR:HG23	29:39:55:GLY:H	1.44	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
1:13:504:C:OP1	57:13:1798:HOH:O	1.98	0.81
54:1G:1324:A:H4'	54:1G:1362:C:H4'	1.61	0.81
12:3A:62:SER:HB2	12:3A:64:TYR:HB2	1.63	0.81
24:1H:400:G:N7	57:1H:4037:HOH:O	2.14	0.81
24:1H:2789:C:O2	24:1H:2894:G:N2	2.14	0.81
47:J8:85:LEU:HB2	47:J8:86:SER:HB2	1.61	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
24:1H:1006:C:OP2	57:1H:4154:HOH:O	1.98	0.81
2:12:74:LYS:NZ	2:12:205:ASP:OD2	2.14	0.81
2:12:127:ILE:O	2:12:135:GLN:NE2	2.14	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1003:G:N1	1:13:1036:G:O6	2.14	0.81
42:E8:6:ILE:HG12	42:E8:104:THR:HG23	1.63	0.81
24:1H:2249:U:O4	57:1H:3675:HOH:O	1.98	0.81
5:4E:143:ARG:NE	8:7E:77:GLU:OE1	2.13	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
24:1H:1264:G:OP1	51:N8:19:ARG:NH2	2.11	0.81
1:13:1368:G:H5''	9:8E:112:LYS:HB3	1.63	0.80
24:1H:2781:A:H5''	24:1H:2782:G:H5'	1.63	0.80
45:H8:147:GLY:H	45:H8:174:VAL:HB	1.43	0.80
18:9A:33:ASP:OD2	18:9A:36:ASN:ND2	2.14	0.80
43:B5:63:LYS:H	43:B5:63:LYS:HE3	1.46	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
24:14:2782:G:OP2	57:14:3999:HOH:O	1.97	0.80
24:14:1488:G:O6	57:14:4083:HOH:O	1.98	0.80
24:14:397:G:N7	57:14:4145:HOH:O	2.13	0.80
24:14:2793:G:N2	24:14:2804:C:O2	2.14	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
51:J5:16:ARG:HG2	51:J5:16:ARG:HH11	1.46	0.80
54:1G:56:U:H2'	54:1G:57:G:H8	1.47	0.80
1:13:954:G:O6	1:13:1225:A:N6	2.14	0.80
39:75:93:ARG:HB2	39:75:117:ASP:HB3	1.63	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
42:E8:73:ALA:HB3	42:E8:106:ILE:HG23	1.64	0.80
25:1J:80:U:H2'	25:1J:81:G:H21	1.44	0.80
24:1H:1268:A:OP1	57:1H:3598:HOH:O	2.00	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
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
41:95:21:ARG:CZ	41:95:91:TYR:CE1	2.65	0.80
24:1H:259:G:O2'	24:1H:621:A:O2'	1.96	0.80
22:2L:34:U:O2'	22:2L:35:QUO:O5'	1.99	0.80
24:1H:259:G:HO2'	24:1H:621:A:HO2'	1.24	0.80
24:14:592:G:H21	53:M5:4:MET:HE1	1.45	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
41:95:35:LEU:O	41:95:37:VAL:HG22	1.82	0.79
31:59:64:LEU:HA	31:59:67:LEU:HD12	1.64	0.79
24:1H:2057:A:OP2	57:1H:3571:HOH:O	1.99	0.79
24:14:636:G:HO2'	24:14:638:G:HO2'	1.30	0.79
24:14:2268:A:OP1	57:14:4116:HOH:O	1.98	0.79
24:14:1022:G:H22	24:14:1142(A):A:H2	1.29	0.79
40:C8:34:LYS:NZ	40:C8:37:GLU:OE1	2.14	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
24:1H:1533:C:O2	24:1H:1539:G:N2	2.15	0.79
24:14:577:G:O6	57:14:3737:HOH:O	2.01	0.79
24:1H:330:A:O2'	24:1H:331:A:H8	1.64	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
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
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
2:1E:69:LEU:HB3	2:1E:162:ILE:HG22	1.63	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
38:65:3:ARG:HH21	38:65:4:LEU:HB2	1.48	0.79
24:14:1992:G:N7	57:14:3652:HOH:O	2.14	0.79
6:5E:87:ARG:HH11	6:5E:87:ARG:HG3	1.47	0.78
1:13:974:A:OP2	14:5I:41:ARG:NH1	2.16	0.78
25:1J:48:A:H4'	38:65:95:HIS:HD2	1.48	0.78
22:3L:35:QUO:O6	22:3L:35:QUO:N11	2.15	0.78
12:3A:28:LYS:HD3	12:3A:30:ALA:HB2	1.65	0.78
1:13:1157:A:H62	1:13:1178:G:N2	1.81	0.78
36:45:43:THR:HB	36:45:45:GLN:HE21	1.46	0.78
28:29:77:ILE:HG22	28:29:79:ARG:HE	1.48	0.78
1:13:812:C:N3	57:13:1734:HOH:O	2.14	0.78
24:14:574:C:OP2	57:14:3738:HOH:O	1.99	0.78
5:42:6:PHE:HZ	5:42:40:ARG:HH21	1.31	0.78
24:14:39:C:O2	29:39:46:ARG:NH2	2.16	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)
24:1H:2052:G:H4'	28:21:143:ASN:O	1.82	0.78
24:14:2592:G:N7	57:14:3629:HOH:O	2.16	0.78
24:14:1249:U:OP1	57:14:3515: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
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
39:B8:57:PHE:O	39:B8:58:ASN:ND2	2.14	0.78
2:1E:82:ARG:NH1	2:1E:92:TYR:OH	2.16	0.78
24:1H:1221:C:H2'	24:1H:1222:C:H6	1.47	0.78
54:1G:992:U:H3	54:1G:1044:A:H62	1.30	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
13:4I:15:VAL:HA	13:4I:45:VAL:HG12	1.66	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
24:1H:2210:G:H3'	24:1H:2211:G:C8	2.19	0.78
24:1H:1313:U:OP1	57:1H:3916:HOH:O	2.01	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
24:1H:802:A:OP1	57:1H:4298:HOH:O	2.02	0.77
54:1G:1105:A:H2'	54:1G:1106:G:H8	1.49	0.77
24:14:862:G:OP2	57:14:3927:HOH:O	2.00	0.77
31:51:15:VAL:HG12	31:51:29:PRO:HD2	1.67	0.77
1:13:538:G:H5''	12:3I:114:LYS:HB2	1.67	0.77
24:1H:801:G:OP2	57:1H:4170:HOH:O	2.03	0.77
37:98:67:LEU:HD13	37:98:76:VAL:HG21	1.67	0.77
24:14:2227:A:OP2	57:14:4101:HOH:O	2.03	0.77
33:58:70:LYS:HE3	33:58:72:TYR:CE1	2.19	0.77
24:14:2102:U:H3	24:14:2187:G:H1	1.30	0.77
24:1H:142:G:H1'	43:F8:37:THR:HG21	1.67	0.77
24:14:2748:A:H2'	24:14:2749:A:H8	1.50	0.77
39:75:8:LYS:N	39:75:11:GLU:OE1	2.15	0.77
57:14:3529:HOH:O	28:29:110:GLY:O	2.03	0.77
24:1H:2582:G:OP2	57:1H:3763:HOH:O	2.02	0.77
1:13:177:C:OP1	20:BI:65:LYS:NZ	2.12	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1151:A:H5''	10:1A:42:THR:HG23	1.66	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
41:95:21:ARG:CZ	41:95:91:TYR:CG	2.67	0.77
54:1G:1342:C:H4'	9:82:125:TYR:HB3	1.67	0.77
24:14:567:A:OP1	57:14:3749:HOH:O	2.02	0.77
24:14:2228:G:O6	57:14:4102:HOH:O	2.02	0.77
5:4E:101:ILE:O	5:4E:120:THR:OG1	2.02	0.77
22:2K:10:C:H42	22:2K:26:G:H1	1.30	0.77
54:1G:1291:G:OP1	7:62:37:ASN:ND2	2.17	0.77
54:1G:505:G:N7	57:1G:1759:HOH:O	2.17	0.77
53:Q8:34:TRP:CE3	53:Q8:34:TRP:HA	2.19	0.77
1:13:1124:G:H21	1:13:1125:U:H3	1.33	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
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
28:29:58:ARG:O	28:29:60:ASN:ND2	2.18	0.76
48:G5:68:ARG:HA	48:G5:72:ALA:HB2	1.66	0.76
4:32:30:LYS:HG3	4:32:35:ARG:HB2	1.66	0.76
4:32:98:GLU:OE2	4:32:103:ASN:ND2	2.16	0.76
28:21:128:SER:OG	28:21:129:HIS:N	2.15	0.76
24:14:2681:C:H5	24:14:2725:A:H62	1.32	0.76
24:14:1105:U:H2'	24:14:1106:G:H8	1.50	0.76
25:1J:18:G:H1	25:1J:65:C:H42	1.32	0.76
24:1H:654(G):C:N4	24:1H:654(L):G:OP2	2.18	0.76
24:1H:2608:G:N7	57:1H:3764:HOH:O	2.19	0.76
37:55:78:LYS:HE2	37:55:83:ILE:HD11	1.67	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
24:14:2533:A:OP2	57:14:4238:HOH:O	2.02	0.76
24:1H:2032:G:N7	57:1H:4560:HOH:O	2.19	0.76
45:D5:30:ASN:HD22	45:D5:90:VAL:HB	1.51	0.76
22:3L:52:G:H2'	22:3L:53:A:C8	2.20	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
8:72:102:ARG:HD3	8:72:105:ARG:HD3	1.67	0.76
24:1H:2298:A:H62	24:1H:2318:G:H8	1.33	0.76
29:39:79:GLY:HA2	29:39:86:GLY:HA2	1.68	0.76
24:14:2178:C:H4'	26:79:46:LYS:HD3	1.68	0.76
24:1H:2447:G:OP2	57:1H:3809:HOH:O	2.02	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
46:E5:12:ASN:HA	46:E5:14:ARG:HH21	1.48	0.76
1:13:201:C:H42	1:13:216:G:H1	1.32	0.76
9:8E:26:VAL:HG13	9:8E:61:ALA:HB3	1.67	0.76
15:6I:56:LEU:HA	15:6I:59:MET:HE2	1.66	0.76
24:1H:563:G:OP2	57:1H:3583:HOH:O	2.04	0.76
24:1H:2115:G:N3	24:1H:2171:A:N6	2.33	0.76
12:3A:41:ARG:HB3	12:3A:41:ARG:HH11	1.50	0.76
24:1H:2056:G:OP2	57:1H:3570:HOH:O	2.04	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
17:8I:18:THR:OG1	17:8I:69:LYS:NZ	2.19	0.75
3:22:81:GLY:HA2	3:22:85:ARG:HH21	1.51	0.75
24:1H:2404:C:OP2	57:1H:4220:HOH:O	2.03	0.75
24:14:910:A:H62	36:45:12:GLN:HA	1.50	0.75
24:14:2212:A:H4'	24:14:2213:U:H5	1.51	0.75
1:13:1508:G:OP1	57:13:1730:HOH:O	2.04	0.75
54:1G:1076:C:OP1	2:12:175:ARG:NH1	2.19	0.75
28:21:9:VAL:HG13	39:B8:3:ARG:HG2	1.68	0.75
24:14:1828:G:OP1	57:14:3594:HOH:O	2.05	0.75
4:32:22:LYS:NZ	4:32:26:CYS:SG	2.59	0.75
24:14:2582:G:OP1	57:14:4239:HOH:O	2.04	0.75
36:88:43:THR:HG22	36:88:94:VAL:HG12	1.67	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
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
4:32:31:CYS:C	4:32:33:MET:H	1.90	0.75
1:13:674:G:H2'	1:13:675:A:H8	1.51	0.75
9:82:9:ARG:HH22	9:82:104:ARG:HD3	1.52	0.75
24:1H:2701:C:C3'	24:1H:2702:U:H5''	2.15	0.74
9:82:53:VAL:HG23	9:82:55:ALA:H	1.51	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:59:9:ILE:HG23	31:59:51:ARG:HB3	1.69	0.74
54:1G:1527:C:OP1	57:1G:1872:HOH:O	2.04	0.74
1:13:736:C:H2'	1:13:737:A:C8	2.21	0.74
41:95:21:ARG:CD	41:95:91:TYR:CE1	2.70	0.74
22:2L:40:PSU:HO2'	22:3L:36:U:HO2'	1.25	0.74
40:85:28:ARG:NH1	40:85:38:THR:OG1	2.20	0.74
24:1H:102:G:OP1	48:K8:7:ARG:NH2	2.20	0.74
24:1H:2788:C:O2'	24:1H:2809:A:N3	2.20	0.74
36:45:24:GLY:HA3	36:45:25:ASP:HB2	1.67	0.74
24:1H:981:A:OP1	57:1H:3757:HOH:O	2.05	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
24:14:739: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
34:25:63:VAL:HG12	34:25:106:LEU:HD11	1.67	0.74
24:14:1416:G:O2'	24:14:1417:C:O5'	2.04	0.74
47:F5:7:ILE:HG12	47:F5:62:VAL:HG11	1.69	0.74
24:1H:963:U:OP1	57:1H:3816:HOH:O	2.05	0.74
24:14:2822:G:OP2	57:14:3526:HOH:O	2.05	0.74
24:1H:1534:G:O2'	24:1H:1535:U:O4'	2.06	0.74
24:14:1855:G:N7	57:14:4090:HOH:O	2.20	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
24:14:602:G:O2'	24:14:604:G:O2'	2.05	0.74
35:78:63:PRO:HB2	53:Q8:30:ARG:HH21	1.53	0.74
24:1H:2213:U:O2	47:J8:52:ARG:NH2	2.20	0.74
1:13:450:G:OP1	16:7I:43:LYS:NZ	2.20	0.74
1:13:1062:U:H2'	1:13:1063:C:C6	2.22	0.74
29:39:181:LEU:HD11	29:39:186:ILE:HD11	1.67	0.74
54:1G:536:C:OP2	57:1G:1791:HOH:O	2.06	0.74
33:58:134:ARG:HH11	33:58:134:ARG:HB3	1.51	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
28:21:73:GLU:HG3	28:21:74:PRO:HD2	1.69	0.74
24:1H:534:U:H5'	40:C8:42:ALA:HB1	1.69	0.74
39:B8:10:VAL:HA	39:B8:11:GLU:C	2.08	0.74
24:1H:1271:G:OP2	57:1H:4449:HOH:O	2.05	0.74
24:14:773:U:OP1	57:14:4098:HOH:O	2.05	0.74
24:1H:1975:G:OP2	57:1H:3964:HOH:O	2.06	0.74
53:Q8:32:LEU:O	53:Q8:33:ASN:ND2	2.20	0.74
54:1G:750:G:N3	15:6A:23:GLY:HA3	2.02	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:85:98:LEU:HB2	40:85:102:GLU:HB2	1.68	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
24:1H:815:C:O2	24:1H:1192:G:N2	2.18	0.74
24:14:1073:A:OP2	24:14:1094:U:N3	2.17	0.74
22:3K:48:C:H42	22:3K:52:G:H1	1.34	0.74
4:32:26:CYS:HA	4:32:31:CYS:HB2	1.69	0.74
24:14:1771:C:H1'	24:14:1786:A:C8	2.22	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
50:M8:37:SER:HB3	50:M8:42:PHE:HB3	1.70	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
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
24:14:2123:G:O6	24:14:2174:C:N4	2.20	0.73
24:14:1604:C:OP1	57:14:3915:HOH:O	2.06	0.73
24:14:2611:U:H2'	51:J5:2:ALA:O	1.87	0.73
24:14:732:C:OP2	57:14:4300:HOH:O	2.07	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
25:16:101:A:OP2	57:16:215:HOH:O	2.06	0.73
24:1H:1365:A:OP1	47:J8:41:ARG:NH2	2.22	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
24:14:483: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
24:14:1689:A:H62	24:14:1698:A:H2	1.36	0.73
16:7A:43:LYS:HA	16:7A:48:TRP:HB3	1.71	0.73
24:14:141:A:H8	24:14:1595:G:H21	1.36	0.73
31:51:4:ILE:HG21	31:51:6:ARG:NH1	2.04	0.73
35:35:48:PRO:O	35:35:50:ARG:N	2.14	0.73
5:4E:110:LEU:HD13	5:4E:118:ILE:HG21	1.70	0.73
24:1H:2125:G:O2'	24:1H:2173:A:N6	2.20	0.73
22:3L:24:G:H2'	22:3L:25:G:H8	1.52	0.73
2:1E:16:HIS:HD2	2:1E:210:SER:HA	1.54	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
28:21:119:ARG:HG2	28:21:160:TYR:HB2	1.70	0.73
8:72:10:LEU:HD22	8:72:83:ILE:HD11	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1376:U:H2'	1:13:1377:A:H8	1.53	0.73
41:95:21:ARG:CZ	41:95:91:TYR:CD1	2.71	0.73
24:1H:1771:C:H1'	24:1H:1786:A:C8	2.24	0.73
24:1H:1774:C:OP1	57:1H:3745:HOH:O	2.06	0.73
41:95:10:LYS:NZ	41:95:23:GLU:OE1	2.22	0.73
24:1H:2305:A:H5''	30:41:134:GLY:HA3	1.69	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
42:A5:18:ARG:NH2	42:A5:76:VAL:O	2.19	0.73
9:82:28:VAL:HG22	9:82:63:ILE:HB	1.69	0.73
1:13:736:C:H2'	1:13:737:A:H8	1.53	0.73
24:1H:249:C:OP1	57:1H:3613:HOH:O	2.06	0.73
24:1H:1495:A:OP2	57:1H:4333:HOH:O	2.05	0.73
12:3I:52:LEU:O	12:3I:54:LYS:NZ	2.22	0.73
24:14:585:G:OP2	57:14:4163:HOH:O	2.06	0.73
1:13:649:G:H2'	1:13:650:G:H8	1.54	0.73
17:8A:66:SER:O	17:8A:70:ARG:NH1	2.20	0.73
24:1H:1268:A:OP1	57:1H:3600:HOH:O	2.06	0.72
2:1E:7:VAL:HG21	2:1E:11:LEU:HD22	1.70	0.72
24:14:960:A:H61	36:45:83:MET:HE2	1.54	0.72
1:13:601:C:H2'	1:13:602:A:C8	2.24	0.72
8:72:49:GLU:OE2	8:72:62:TYR:OH	2.07	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:1333:C:OP2	57:1H:3909:HOH:O	2.06	0.72
24:1H:450:G:O6	57:1H:3857:HOH:O	2.06	0.72
39:B8:11:GLU:HB3	39:B8:13:ARG:HG2	1.71	0.72
24:1H:2270:G:OP2	57:1H:4235:HOH:O	2.07	0.72
24:1H:1290:C:H2'	24:1H:1291:C:C6	2.25	0.72
24:1H:1156:A:OP2	57:1H:3753:HOH:O	2.06	0.72
24:1H:1434:A:H61	24:1H:1558:A:N6	1.86	0.72
54:1G:57:G:H2'	54:1G:58:C:H6	1.53	0.72
24:1H:800:A:OP1	57:1H:3591:HOH:O	2.06	0.72
25:16:21:G:H1	25:16:62:C:H42	1.36	0.72
24:1H:1633:G:O6	57:1H:3696:HOH:O	2.06	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
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
24:1H:1704:G:O6	57:1H:4468:HOH:O	2.04	0.72
24:1H:732:C:OP2	57:1H:4070:HOH:O	2.06	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1828:G:OP2	57:14:3532:HOH:O	2.06	0.72
34:68:2:ILE:HD12	34:68:6:THR:HG21	1.72	0.72
24:14:1891:G:O6	57:14:4128:HOH:O	2.06	0.72
47:J8:78:LYS:HE2	47:J8:79:GLY:H	1.53	0.72
45:D5:163:LEU:HD11	45:D5:167:PRO:HG3	1.71	0.72
24:1H:1403:C:H5''	24:1H:1471:A:H1'	1.70	0.72
9:8E:13:ALA:HB2	9:8E:68:GLY:HA3	1.70	0.72
8:72:51:VAL:HG22	8:72:52:ASP:H	1.55	0.72
11:2I:86:GLY:N	11:2I:112:THR:OG1	2.20	0.72
54:1G:1133:G:H1	54:1G:1141:C:H42	1.36	0.72
35:78:39:LYS:HD2	35:78:45:LEU:HD21	1.70	0.72
24:1H:516:C:OP1	51:N8:13:LYS:NZ	2.23	0.72
24:1H:761:A:OP1	57:1H:3642:HOH:O	2.08	0.72
1:13:737:A:H2'	1:13:738:C:C6	2.25	0.72
19:AA:60:VAL:HG21	19:AA:74:PHE:HB3	1.72	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
50:I5:13:ARG:HE	50:I5:22:ILE:HG23	1.55	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
7:62:20:ASP:HB3	7:62:23:VAL:HG23	1.71	0.72
2:12:178:ARG:NH1	2:12:196:LEU:O	2.20	0.72
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
30:49:40:ASN:HB2	30:49:91:ARG:HG3	1.72	0.71
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
1:13:745:C:H2'	1:13:746:A:C8	2.25	0.71
24:1H:969:U:O4	57:1H:4347:HOH:O	2.08	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
24:14:810:U:O4	57:14:3746:HOH:O	2.06	0.71
22:3K:35:QUO:H8	22:3K:35:QUO:H5'	1.72	0.71
24:1H:731:C:H5''	57:1H:3781:HOH:O	1.89	0.71
27:11:31:LYS:HD2	27:11:94:LEU:HD11	1.71	0.71
24:1H:446:G:OP2	57:1H:3649:HOH:O	2.08	0.71
43:F8:60:ARG:NH2	52:P8:47:ARG:HH12	1.87	0.71
5:4E:126:ARG:HH11	5:4E:126:ARG:HG3	1.54	0.71
24:14:800:A:OP1	57:14:3800:HOH:O	2.07	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2652:C:H42	24:14:2668:G:H1	1.38	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
27:11:25:THR:HG21	27:11:81:ALA:HA	1.71	0.71
54:1G:1435:G:H2'	54:1G:1436:U:C6	2.24	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
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
41:95:21:ARG:HD2	41:95:91:TYR:CZ	2.25	0.71
24:1H:574:C:OP2	57:1H:4002:HOH:O	2.08	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
34:25:75:SER:OG	39:75:74:ARG:NH1	2.23	0.71
24:1H:918:A:N3	25:16:80:U:O2'	2.24	0.71
24:1H:1521:G:N7	57:1H:4415:HOH:O	2.23	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
39:B8:10:VAL:HA	39:B8:12:SER:N	2.06	0.71
54:1G:741:G:O6	57:1G:1841:HOH:O	2.07	0.71
24:14:2343:C:HO2'	24:14:2373:G:HO2'	1.34	0.71
22:2L:1:G:H2'	22:2L:2:G:H8	1.53	0.71
24:14:571:A:OP2	57:14:3772:HOH:O	2.08	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
2:1E:189:ASP:HB3	2:1E:191:ASP:HB2	1.72	0.71
24:1H:259:G:H21	24:1H:621:A:H8	1.35	0.71
45:D5:33:LEU:HD23	45:D5:90:VAL:HG21	1.72	0.71
24:1H:956:G:OP2	36:88:14:ARG:NH2	2.24	0.71
15:6I:26:GLU:OE2	15:6I:77:ARG:NH1	2.20	0.71
52:P8:10:ARG:O	52:P8:14:LYS:HB2	1.91	0.71
3:22:20:SER:HB3	3:22:22:TRP:HE1	1.54	0.71
26:71:45:ALA:HB2	26:71:212:VAL:HG22	1.72	0.71
24:14:493:G:N7	57:14:3923:HOH:O	2.22	0.71
24:14:2353:G:N7	57:14:4207:HOH:O	2.24	0.71
53:Q8:36:LYS:HG2	53:Q8:37:SER:H	1.54	0.71
1:13:677:U:H3	1:13:713:G:H22	1.37	0.71
19:AA:22:LEU:HB3	19:AA:27:GLU:HG3	1.71	0.71
4:32:18:LYS:NZ	4:32:26:CYS:HB3	2.06	0.71
4:32:30:LYS:HA	4:32:31:CYS:HB3	1.73	0.71
24:1H:2315:G:N3	30:41:128:ARG:NH2	2.37	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:41:112:PRO:HG3	50:M8:38:LYS:HB2	1.73	0.71
24:1H:136:G:N7	57:1H:4132:HOH:O	2.24	0.71
42:E8:45:TYR:OH	42:E8:49:LYS:NZ	2.16	0.71
24:14:1093:G:H22	24:14:1097:U:H5''	1.55	0.71
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
24:14:120:U:OP2	57:14:3547:HOH:O	2.08	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
47:J8:73:LEU:HB3	47:J8:90:ILE:HG22	1.73	0.70
24:1H:2017:U:OP2	57:1H:4546:HOH:O	2.08	0.70
44:G8:76:CYS:SG	44:G8:97:ARG:HG3	2.31	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
24:1H:2878:U:O4	57:1H:4242:HOH:O	2.07	0.70
10:1A:32:ALA:HB2	10:1A:81:THR:HG21	1.73	0.70
35:35:57:THR:HG22	35:35:59:LEU:H	1.55	0.70
25:16:40:U:H3	25:16:43:C:H5''	1.56	0.70
45:H8:16:SER:O	45:H8:20:ARG:NH1	2.22	0.70
24:14:1007:C:OP1	33:15:35:ARG:NH1	2.23	0.70
24:1H:1381:G:N7	57:1H:4011:HOH:O	2.24	0.70
24:14:270(L):U:H3'	24:14:270(M):U:H5''	1.71	0.70
24:1H:2572:A:N7	28:21:144:ARG:HD2	2.06	0.70
24:1H:787:U:OP1	57:1H:3880:HOH:O	2.09	0.70
31:51:54:ARG:HD3	31:51:65:HIS:ND1	2.06	0.70
43:B5:51:VAL:H	43:B5:83:VAL:HG23	1.57	0.70
24:14:2306:C:H3'	24:14:2307:G:H5''	1.73	0.70
24:14:2419:U:OP1	53:M5:34:TRP:HE3	1.74	0.70
57:1H:3653:HOH:O	28:21:135:HIS:NE2	2.24	0.70
2:1E:178:ARG:NH1	2:1E:196:LEU:O	2.22	0.70
38:65:35:ILE:HD11	38:65:97:ARG:HE	1.56	0.70
24:14:2255:G:H21	46:E5:9:SER:HB2	1.55	0.70
1:13:1281:U:OP2	1:13:1282:C:N4	2.19	0.70
43:F8:60:ARG:HH22	52:P8:47:ARG:HH12	1.36	0.70
44:C5:47:LYS:H	44:C5:60:PHE:HB3	1.57	0.70
13:4A:66:LEU:HA	13:4A:70:LEU:HB2	1.72	0.70
24:1H:1383:C:O2	57:1H:4502:HOH:O	2.09	0.70
47:J8:3:LYS:O	47:J8:12:PRO:HD3	1.90	0.70
41:D8:1:MET:HE3	41:D8:43:GLU:H	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)
28:29:55:ASN:O	28:29:57:LYS:NZ	2.25	0.70
24:14:31:C:OP1	57:14:3947:HOH:O	2.08	0.70
6:52:7:ASN:HD21	18:9A:34:TYR:HE1	1.39	0.70
24:1H:784:A:OP1	57:1H:3874:HOH:O	2.09	0.70
24:1H:2056:G:N7	57:1H:4207:HOH:O	2.22	0.70
24:14:1417:C:OP2	57:14:3893:HOH:O	2.08	0.70
35:35:122:PRO:HB3	35:35:141:ALA:HB1	1.72	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
24:14:1386:C:H2'	24:14:1387:C:H6	1.56	0.70
24:1H:1689:A:H62	24:1H:1698:A:H2	1.39	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
24:14:674:G:O2'	29:39:74:ARG:HG3	1.91	0.70
24:1H:583:G:N7	57:1H:3705:HOH:O	2.24	0.70
24:1H:1593:G:H2'	24:1H:1594:G:C8	2.26	0.70
24:14:1623:G:N7	57:14:3695:HOH:O	2.24	0.70
29:39:20:LEU:HD13	29:39:199:TRP:HH2	1.57	0.70
53:M5:40:GLU:HA	53:M5:43:GLN:HB2	1.73	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
24:14:2534:A:N7	57:14:4237:HOH:O	2.25	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
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
33:58:73:THR:HG22	33:58:84:LYS:HG2	1.74	0.70
24:1H:804:A:OP1	57:1H:3776:HOH:O	2.08	0.70
54:1G:766:A:OP2	57:1G:1750:HOH:O	2.09	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
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:971:G:N2	54:1G:1363:A:OP2	2.24	0.70
24:14:83:G:N2	24:14:102:G:O2'	2.24	0.70
1:13:737:A:H2'	1:13:738:C:H6	1.54	0.70
30:49:107:LEU:HA	30:49:111:LEU:HD12	1.74	0.70
10:1I:61:GLU:OE2	14:5I:45:ARG:NH1	2.25	0.70
54:1G:315:A:OP1	57:1G:1894:HOH:O	2.09	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:F8:36:LYS:HG2	43:F8:54:VAL:HB	1.73	0.70
54:1G:617:G:N7	57:1G:1796:HOH:O	2.25	0.70
1:13:768:A:OP2	57:13:1771:HOH:O	2.10	0.69
37:98:33:ARG:HH22	51:N8:55:ARG:HG2	1.57	0.69
57:1H:4144:HOH:O	44:G8:84:ARG:NH2	2.24	0.69
38:A8:26:LEU:HD23	38:A8:87:PHE:HD1	1.56	0.69
8:7E:19:VAL:HG23	8:7E:21:LYS:HG3	1.74	0.69
54:1G:353:A:H8	54:1G:353:A:H5'	1.57	0.69
25:16:7:G:H4'	38:A8:29:PHE:CD2	2.26	0.69
24:14:2577:A:OP1	57:14:3541:HOH:O	2.10	0.69
24:1H:563:G:OP2	57:1H:3580:HOH:O	2.08	0.69
24:1H:981:A:OP1	57:1H:3761:HOH:O	2.10	0.69
24:1H:1997:G:OP2	57:1H:3991:HOH:O	2.10	0.69
1:13:576:G:OP1	57:13:1827:HOH:O	2.09	0.69
1:13:452:A:H62	1:13:480:U:H3	1.37	0.69
36:45:19:GLY:H	36:45:98:LYS:NZ	1.90	0.69
24:1H:946:G:OP2	57:1H:4112:HOH:O	2.09	0.69
54:1G:552:U:H2'	54:1G:553:A:H8	1.55	0.69
39:75:56:GLY:O	39:75:59:THR:HG22	1.93	0.69
10:1A:33:GLN:HB3	10:1A:75:ILE:HG12	1.74	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
54:1G:920:U:H2'	54:1G:921:U:C6	2.27	0.69
54:1G:1305:G:N2	54:1G:1331:G:H2'	2.05	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
24:1H:1636:C:OP2	57:1H:3555:HOH:O	2.09	0.69
26:79:13:LYS:NZ	26:79:31:GLU:O	2.24	0.69
24:1H:1021:A:H62	24:1H:1141:U:H3	1.40	0.69
25:1J:102:G:N2	45:D5:73:GLN:OE1	2.22	0.69
41:95:81:TYR:HD1	41:95:83:ARG:HH12	1.40	0.69
54:1G:1322:C:O2'	54:1G:1323:G:O5'	2.10	0.69
44:G8:97:ARG:NH2	44:G8:104:GLY:O	2.25	0.69
24:14:603:A:H8	24:14:604:G:H1'	1.57	0.69
24:14:1394:U:OP1	57:14:3917:HOH:O	2.10	0.69
1:13:1305:G:N2	1:13:1331:G:H2'	2.07	0.69
24:14:300:A:N6	57:14:3846:HOH:O	2.16	0.69
25:1J:73:A:OP2	57:1J:227:HOH:O	2.11	0.69
54:1G:324:G:OP2	57:1G:1823:HOH:O	2.11	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:76:GLN:NE2	2:12:206:ASP:OD1	2.26	0.69
24:14:2878:U:O4	57:14:4080:HOH:O	2.10	0.69
24:1H:675:A:OP2	57:1H:4294:HOH:O	2.09	0.69
24:1H:593:G:H4'	53:Q8:62:LEU:HD22	1.73	0.69
24:14:361:G:OP1	57:14:4212:HOH:O	2.09	0.69
27:11:79:VAL:HG21	27:11:111:LEU:HD21	1.74	0.69
54:1G:261:U:OP2	20:BA:79:ARG:NH2	2.25	0.69
24:14:2611:U:C4	51:J5:3:LYS:HG3	2.28	0.69
24:14:1633:G:OP2	57:14:4245:HOH:O	2.10	0.69
19:AI:40:ILE:HG23	19:AI:41:VAL:HG13	1.74	0.69
29:39:2:LYS:H	29:39:2:LYS:HD3	1.57	0.69
57:14:3620:HOH:O	27:19:237:GLU:OE2	2.09	0.69
1:13:1213:A:O2'	1:13:1215:G:N7	2.21	0.69
24:1H:138:G:N2	43:F8:44:GLU:OE2	2.21	0.69
37:98:103:ARG:HH21	37:98:110:PRO:HD3	1.57	0.69
24:1H:2712(A):A:OP2	57:1H:3625:HOH:O	2.11	0.69
22:3L:36:U:H3'	22:3L:37:A:H8	1.56	0.69
22:2L:24:G:H2'	22:2L:25:G:H8	1.56	0.69
3:22:72:LYS:HD2	3:22:75:VAL:HG23	1.73	0.69
24:1H:768:G:O2'	24:1H:1379:A:N6	2.25	0.69
24:14:2002:G:N7	57:14:4013:HOH:O	2.26	0.69
24:14:1353:A:OP2	57:14:3578:HOH:O	2.11	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:910:A:H62	36:88:12:GLN:HA	1.57	0.69
54:1G:1302:U:OP1	13:4A:13:LYS:NZ	2.26	0.69
30:41:122:PRO:HB3	30:41:180:PHE:HD1	1.55	0.69
1:13:1182:G:C4'	1:13:1183:A:H5'	2.22	0.69
24:1H:676:A:H8	24:1H:2069:G:N2	1.88	0.69
24:1H:1771:C:OP1	57:1H:3967:HOH:O	2.10	0.69
54:1G:963:G:N3	10:1A:55:LYS:NZ	2.34	0.69
24:1H:821:A:N1	57:1H:3830:HOH:O	2.26	0.69
1:13:748:C:H4'	1:13:749:C:O5'	1.91	0.69
44:G8:85:VAL:HG23	44:G8:96:ILE:HB	1.74	0.69
24:1H:1053:C:H42	24:1H:1106:G:H1	1.40	0.69
32:61:132:PRO:O	32:61:133:HIS:ND1	2.25	0.69
54:1G:352:C:OP2	57:1G:1775:HOH:O	2.10	0.69
24:14:1828:G:OP2	57:14:3530:HOH:O	2.12	0.69
1:13:352:C:O2'	1:13:354:G:OP1	2.08	0.69
24:1H:978:G:OP2	57:1H:3760:HOH:O	2.10	0.69
35:78:49:ARG:HG3	53:Q8:60:LEU:HD12	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1349:A:OP1	57:1H:4125:HOH:O	2.11	0.68
17:8A:87:LYS:HE2	17:8A:91:ARG:HH21	1.58	0.68
54:1G:382:A:H2'	54:1G:383:A:C8	2.29	0.68
24:14:770:G:OP2	57:14:4043:HOH:O	2.11	0.68
24:1H:2849:U:H4'	24:1H:2868:A:C2	2.28	0.68
54:1G:953:G:H5'	54:1G:965:A:H61	1.57	0.68
20:BA:75:ASN:N	20:BA:75:ASN:OD1	2.25	0.68
35:78:88:LEU:HD12	35:78:95:VAL:HG11	1.74	0.68
20:BI:10:LEU:HG	20:BI:12:ALA:H	1.58	0.68
24:14:1633:G:O6	57:14:3552:HOH:O	2.07	0.68
24:14:102:G:OP1	48:G5:7:ARG:NH2	2.17	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
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
22:3K:18:G:H4'	22:3K:19:C:O5'	1.93	0.68
24:14:270(W):G:N7	57:14:4225:HOH:O	2.26	0.68
24:1H:1899:G:N2	24:1H:1902:C:H41	1.87	0.68
24:14:2576:G:OP1	57:14:3541:HOH:O	2.09	0.68
24:1H:2154:G:H2'	24:1H:2155:G:H8	1.59	0.68
1:13:148:G:H2'	1:13:149:A:H8	1.58	0.68
24:1H:2023:G:H5'	24:1H:2617:C:H4'	1.75	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
24:14:2821:A:H3'	57:14:3526:HOH:O	1.94	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
2:1E:100:GLY:O	2:1E:104:ASN:N	2.24	0.68
1:13:975:A:H5''	1:13:975:A:H8	1.59	0.68
1:13:1179:A:H4'	9:8E:103:THR:HA	1.75	0.68
54:1G:683:G:N2	54:1G:707:C:O2	2.22	0.68
24:14:2287:A:H62	24:14:2344:U:H3	1.38	0.68
24:1H:2314:C:H2'	24:1H:2315:G:C8	2.27	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
22:3K:17:OMG:N2	22:3K:64:PSU:O4	2.26	0.68
24:14:578:A:OP2	57:14:3739:HOH:O	2.11	0.68
24:14:1676:A:OP2	57:14:3561:HOH:O	2.12	0.68
24:1H:1013:C:H42	24:1H:1149:G:H1	1.42	0.68
1:13:1412:C:H2'	1:13:1413:A:C8	2.28	0.68
27:19:146:GLU:HB2	27:19:189:CYS:HB3	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:733:G:N7	57:1H:4067:HOH:O	2.26	0.68
45:D5:111:VAL:HG13	45:D5:113:ALA:H	1.59	0.68
24:1H:423:A:OP1	57:1H:3720:HOH:O	2.12	0.68
43:B5:50:LYS:N	43:B5:87:GLN:OE1	2.26	0.68
1:13:978:A:OP2	1:13:1362(A):C:N4	2.25	0.68
39:B8:107:ASP:OD1	39:B8:107:ASP:N	2.25	0.68
37:98:2:ARG:HA	37:98:5:LYS:HD2	1.76	0.68
35:35:63:PRO:HB3	53:M5:30:ARG:HH21	1.59	0.68
9:8E:42:ARG:NH2	9:8E:75:ASP:OD2	2.27	0.68
38:65:109:GLY:O	38:65:111:GLU:N	2.23	0.68
12:3A:70:ILE:HD13	12:3A:77:LEU:HD12	1.75	0.68
8:7E:116:LYS:HG3	8:7E:127:LEU:HD22	1.76	0.68
1:13:1023:G:H3'	1:13:1024:G:H5''	1.75	0.68
1:13:276:G:O2'	17:8I:68:ARG:NH1	2.27	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
20:BI:82:SER:O	20:BI:86:ARG:HB2	1.93	0.68
16:7I:53:VAL:HG13	16:7I:79:VAL:HG22	1.76	0.68
1:13:1320:C:N3	19:AI:36:ARG:NH1	2.42	0.68
40:85:92:ARG:HG3	40:85:94:ASN:HB3	1.76	0.68
24:14:399:G:OP2	57:14:3903:HOH:O	2.11	0.68
7:62:92:SER:HB2	7:62:94:ARG:HE	1.59	0.68
24:1H:1386:C:H2'	24:1H:1387:C:H6	1.59	0.68
20:BA:97:ALA:O	20:BA:99:LEU:HG	1.94	0.68
54:1G:581:G:OP1	15:6A:61:GLY:HA3	1.93	0.68
27:11:142:VAL:HG23	27:11:193:VAL:HA	1.75	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
24:1H:1676:A:OP2	57:1H:3658:HOH:O	2.11	0.68
16:7A:3:LYS:HG3	16:7A:24:ALA:HB2	1.76	0.68
14:5I:29:ARG:HD3	14:5I:40:CYS:SG	2.33	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
47:J8:93:GLU:OE2	47:J8:94:LEU:N	2.27	0.67
24:1H:428:A:OP1	57:1H:3709:HOH:O	2.11	0.67
24:1H:2406:U:OP1	57:1H:3683:HOH:O	2.13	0.67
1:13:601:C:H2'	1:13:602:A:H8	1.57	0.67
10:1A:92:THR:HG23	10:1A:93:GLY:H	1.59	0.67
16:7I:23:ASP:OD2	16:7I:25:ARG:NH1	2.27	0.67
24:14:586:A:OP2	57:14:3517:HOH:O	2.11	0.67
31:59:103:LEU:HD22	31:59:121:ILE:HG21	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:24:GLU:OE1	4:32:24:GLU:N	2.26	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
24:1H:273(F):C:H3'	24:1H:274:G:H5''	1.77	0.67
54:1G:1095:U:P	54:1G:1108:G:H1	2.16	0.67
40:C8:105:VAL:HG22	41:D8:44:LYS:HG2	1.76	0.67
3:22:27:LYS:NZ	3:22:28:GLN:OE1	2.27	0.67
1:13:468:A:H1'	16:7I:82:GLN:HE22	1.59	0.67
38:A8:34:HIS:HB2	38:A8:36:TYR:HE1	1.59	0.67
6:5E:97:PHE:HB2	18:9I:32:ARG:HE	1.59	0.67
3:2E:127:ARG:NH2	3:2E:192:THR:OG1	2.27	0.67
54:1G:866:C:O2'	54:1G:919:A:OP1	2.12	0.67
33:58:35:ARG:HG3	33:58:37:LYS:HG3	1.77	0.67
34:25:47:ILE:HG13	34:25:48:PRO:HD2	1.75	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
30:41:130:ASN:HB3	30:41:160:VAL:HA	1.77	0.67
4:32:163:GLU:OE2	4:32:166:LYS:NZ	2.28	0.67
1:13:1504:G:OP1	57:13:1732:HOH:O	2.13	0.67
24:1H:1690:A:N1	57:1H:4484:HOH:O	2.27	0.67
53:M5:54:GLU:HG2	53:M5:57:ARG:HH22	1.59	0.67
24:14:2251:G:OP1	36:45:82:ARG:NH1	2.28	0.67
24:1H:270(V):G:H2'	24:1H:270(W):G:H8	1.59	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:2445:G:OP1	29:31:74:ARG:NH2	2.28	0.67
50:I5:37:SER:O	50:I5:40:HIS:N	2.27	0.67
54:1G:1076:C:P	2:12:175:ARG:HH12	2.18	0.67
24:14:1828:G:OP1	57:14:3592:HOH:O	2.12	0.67
35:35:47:ASP:OD2	35:35:50:ARG:NH2	2.26	0.67
43:F8:67:GLY:O	43:F8:69:TYR:N	2.28	0.67
1:13:262:A:H2'	1:13:263:A:C8	2.30	0.67
54:1G:582:U:OP1	15:6A:64:ARG:NH1	2.26	0.67
24:1H:517:C:OP1	51:N8:16:ARG:NH2	2.27	0.67
24:1H:761:A:N7	57:1H:4069:HOH:O	2.28	0.67
39:B8:7:ILE:HG22	39:B8:9:LEU:HD23	1.76	0.67
24:1H:2791:C:N3	24:1H:2807:G:N2	2.41	0.67
22:2L:62:G:H3'	22:2L:63:5MU:H71	1.77	0.67
1:13:560:U:H5'	1:13:566:G:N2	2.10	0.67
20:BA:57:ARG:NE	20:BA:102:GLY:HA3	2.10	0.67
32:69:103:ARG:H	32:69:103:ARG:HE	1.41	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:22:32:LEU:HD22	3:22:59:ARG:HH12	1.59	0.67
24:14:751:A:OP1	57:14:3496:HOH:O	2.13	0.67
24:1H:2314:C:H5'	30:41:38:VAL:HG11	1.76	0.67
19:AI:19:VAL:HG11	19:AI:44:MET:HG2	1.77	0.67
24:1H:2345:G:H1'	24:1H:2382:G:H5'	1.76	0.67
54:1G:1281:U:OP2	54:1G:1282:C:N4	2.26	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
2:12:236:TYR:HB3	2:12:239:VAL:HG22	1.77	0.67
38:65:14:VAL:HG11	38:65:89:ARG:HH11	1.60	0.67
54:1G:1391:U:H2'	54:1G:1392:G:C8	2.29	0.67
28:29:181:LEU:HD21	39:75:5:ALA:HB1	1.75	0.67
1:13:887:G:N7	57:13:1834:HOH:O	2.27	0.67
12:3I:62:SER:HB2	12:3I:64:TYR:HD1	1.59	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
24:14:243:U:OP1	53:M5:6:THR:OG1	2.09	0.67
24:1H:2588:G:OP1	57:1H:3874:HOH:O	2.13	0.66
22:3L:51:C:OP2	22:3L:52:G:N2	2.29	0.66
24:14:399:G:OP2	57:14:3906:HOH:O	2.12	0.66
24:1H:1251:C:H5	57:1H:3801:HOH:O	1.77	0.66
4:3E:30:LYS:C	4:3E:32:ALA:H	1.95	0.66
54:1G:736:C:H2'	54:1G:737:A:C8	2.30	0.66
2:1E:21:ARG:HB3	2:1E:39:ILE:HA	1.75	0.66
24:14:2404:C:O3'	35:35:77:ARG:NH2	2.27	0.66
38:65:29:PHE:HD1	38:65:30:ARG:N	1.94	0.66
24:14:1250:G:OP1	57:14:4166:HOH:O	2.12	0.66
24:14:2748:A:H2'	24:14:2749:A:C8	2.30	0.66
35:35:47:ASP:HB3	35:35:48:PRO:O	1.95	0.66
54:1G:1178:G:H22	54:1G:1181:G:H5"	1.60	0.66
49:H5:8:LEU:HB2	49:H5:28:LEU:HD22	1.75	0.66
8:72:85:ARG:NH1	8:72:87:SER:O	2.27	0.66
1:13:771:G:N7	57:13:1776:HOH:O	2.27	0.66
1:13:693:G:H2'	1:13:694:A:C8	2.30	0.66
24:14:1800:C:OP2	27:19:183:ARG:NH2	2.28	0.66
24:14:2531:A:H5'	31:59:157:TYR:CZ	2.30	0.66
54:1G:1502:A:H2	54:1G:1505:G:N1	1.90	0.66
54:1G:1105:A:H2'	54:1G:1106:G:C8	2.29	0.66
3:2E:175:LEU:HD21	3:2E:201:TYR:HE2	1.60	0.66
12:3A:34:ARG:HH11	12:3A:34:ARG:HB3	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:32:149:ALA:O	4:32:153:ARG:NE	2.28	0.66
24:1H:392:C:OP1	57:1H:3697:HOH:O	2.12	0.66
24:14:1614:A:H62	42:A5:93:ALA:HB2	1.61	0.66
9:82:9:ARG:NH1	9:82:9:ARG:O	2.26	0.66
3:2E:113:ALA:HB2	3:2E:202:ILE:HG13	1.77	0.66
7:62:113:GLU:HB2	7:62:119:ARG:HG2	1.76	0.66
24:1H:1010:A:HO2'	24:1H:1152:C:HO2'	1.43	0.66
29:39:41:LEU:HB3	29:39:44:ARG:HD3	1.77	0.66
54:1G:827:U:H3	54:1G:872:A:N6	1.88	0.66
35:78:38:GLN:HG2	35:78:45:LEU:HD13	1.78	0.66
31:51:8:PRO:HD2	31:51:69:ARG:HE	1.60	0.66
57:1H:3651:HOH:O	28:21:135:HIS:NE2	2.28	0.66
13:4I:58:GLU:O	13:4I:62:ASN:ND2	2.26	0.66
24:1H:442:G:H4'	29:31:46:ARG:HG3	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
1:13:129(A):G:H4'	1:13:130:A:H5''	1.76	0.66
24:1H:1:G:H1	24:1H:2902:C:H42	1.43	0.66
1:13:1058:G:OP1	3:2E:199:LYS:NZ	2.28	0.66
42:E8:13:SER:HB3	42:E8:16:LYS:HG3	1.76	0.66
4:3E:98:GLU:OE2	4:3E:103:ASN:ND2	2.27	0.66
2:1E:24:TRP:CZ3	2:1E:26:PRO:HA	2.30	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
24:14:2577:A:O4'	51:J5:3:LYS:HB2	1.96	0.66
39:75:6:LEU:N	39:75:9:LEU:HB3	2.09	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
24:14:1352:U:OP1	57:14:3882:HOH:O	2.13	0.66
13:4A:8:GLU:HG3	13:4A:22:ILE:HG23	1.76	0.66
24:1H:2428:G:N7	57:1H:3770:HOH:O	2.29	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
2:1E:87:ARG:NH1	2:1E:220:ASP:OD1	2.29	0.66
4:3E:18:LYS:HE3	4:3E:31:CYS:HB2	1.76	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
45:H8:69:THR:HG22	45:H8:90:VAL:HG22	1.78	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
54:1G:1298:C:H41	7:62:114:ARG:HB3	1.60	0.66
27:19:93:ALA:HB3	27:19:105:ILE:HG22	1.77	0.66
50:I5:31:ILE:HG23	50:I5:32:TYR:HB2	1.78	0.66
2:1E:219:VAL:HA	2:1E:222:ILE:HD12	1.78	0.66
25:1J:83:G:H4'	49:H5:52:HIS:CG	2.31	0.66
29:31:29:ASN:H	29:31:112:MET:CE	2.09	0.66
24:14:854:G:H2'	24:14:855:G:C8	2.30	0.66
8:7E:10:LEU:HD22	8:7E:83:ILE:HD11	1.78	0.66
24:1H:397:G:N7	57:1H:4464:HOH:O	2.29	0.66
54:1G:1399:C:H4'	54:1G:1400:C:H5''	1.78	0.66
11:2I:124:LYS:HB3	11:2I:125:PHE:CD1	2.30	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
15:6I:17:ARG:HD3	15:6I:26:GLU:HG3	1.77	0.66
44:C5:47:LYS:N	44:C5:60:PHE:HB3	2.09	0.66
28:21:101:ARG:HD2	28:21:171:GLU:HA	1.78	0.66
8:7E:64:LYS:HB3	8:7E:79:VAL:HG21	1.77	0.66
24:1H:2867:G:OP2	39:B8:119:LYS:NZ	2.25	0.66
4:32:73:ARG:O	4:32:77:ASN:ND2	2.26	0.66
24:1H:760:G:OP2	57:1H:4068:HOH:O	2.12	0.66
24:1H:585:G:OP2	57:1H:3803:HOH:O	2.12	0.66
24:14:1977:A:OP2	57:14:4195:HOH:O	2.13	0.66
24:14:259:G:H21	24:14:621:A:H8	1.43	0.66
24:14:249:C:OP1	57:14:3506:HOH:O	2.12	0.66
24:1H:730:C:H3'	57:1H:3641:HOH:O	1.94	0.66
24:1H:219:G:O6	57:1H:3709:HOH:O	2.10	0.66
24:14:1332:G:H5'	24:14:1332:G:C8	2.31	0.66
22:3K:13:G:H2'	22:3K:14:A:H8	1.61	0.66
24:14:1050:A:N6	24:14:2751:G:N7	2.43	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
8:72:45:ILE:HG22	8:72:47:GLY:H	1.59	0.66
24:1H:1800:C:OP2	27:11:183:ARG:NH2	2.28	0.66
54:1G:1454:G:OP1	20:BA:39:LYS:NZ	2.26	0.66
24:1H:2402:C:H2'	24:1H:2403:C:C5	2.31	0.66
22:3K:84:C:H5'	47:J8:30:VAL:HG21	1.78	0.66
24:1H:2150:U:H2'	24:1H:2151:G:C8	2.31	0.66
54:1G:1028:C:H42	54:1G:1033:G:H1	1.43	0.66
2:12:166:ASP:HB3	2:12:169:LYS:HB2	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:8A:58:GLU:OE1	17:8A:75:ARG:NH2	2.29	0.66
39:B8:7:ILE:H	39:B8:10:VAL:HG22	1.61	0.65
24:14:1786:A:H2	24:14:2606:C:H1'	1.59	0.65
1:13:747:C:OP2	1:13:748:C:N4	2.25	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
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
24:14:2074:U:O5'	57:14:3494:HOH:O	2.15	0.65
54:1G:1274:G:H2'	54:1G:1275:A:C8	2.31	0.65
31:59:91:GLY:HA3	31:59:94:TYR:CE2	2.31	0.65
24:14:2324:C:H5''	24:14:2325:G:H5'	1.78	0.65
28:29:8:LYS:HB3	28:29:192:ASN:HA	1.76	0.65
45:H8:139:VAL:HG22	45:H8:155:LEU:HD21	1.78	0.65
39:B8:7:ILE:C	39:B8:9:LEU:H	2.00	0.65
24:14:1771:C:OP1	57:14:3634:HOH:O	2.13	0.65
1:13:1346:A:OP1	9:8E:120:ARG:NH1	2.28	0.65
54:1G:1226:C:O2'	13:4A:111:LYS:NZ	2.23	0.65
36:88:66:ILE:O	36:88:104:PHE:N	2.29	0.65
54:1G:324:G:N7	57:1G:1825:HOH:O	2.29	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
54:1G:659:U:OP1	15:6A:9:GLN:NE2	2.30	0.65
44:C5:40:GLU:OE2	44:C5:40:GLU:N	2.28	0.65
24:14:861:A:N6	24:14:916:G:O2'	2.29	0.65
24:1H:1425:G:O6	57:1H:4197:HOH:O	2.08	0.65
35:78:47:ASP:OD2	35:78:50:ARG:NH2	2.29	0.65
1:13:576:G:OP1	57:13:1823:HOH:O	2.15	0.65
24:1H:2375:G:N7	57:1H:4387:HOH:O	2.29	0.65
44:C5:19:LYS:HG3	44:C5:20:TYR:H	1.61	0.65
24:14:686:G:OP2	57:14:4044:HOH:O	2.13	0.65
45:D5:59:LEU:O	45:D5:61:LEU:N	2.26	0.65
24:1H:1517:G:H2'	24:1H:1518:C:C6	2.32	0.65
54:1G:1259:C:N4	54:1G:1260:C:O2	2.30	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
38:65:64:GLU:OE2	38:65:67:ARG:NH1	2.30	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
2:1E:71:VAL:HG12	2:1E:93:VAL:HB	1.77	0.65
24:1H:2593:U:O4	57:1H:3631:HOH:O	2.11	0.65
1:13:272:C:H2'	1:13:273:A:C8	2.31	0.65
24:14:2562:U:H1'	34:25:23:ARG:HH11	1.62	0.65
44:G8:53:PRO:HA	44:G8:56:PRO:HG3	1.79	0.65
1:13:1329:A:H5'	13:4I:29:ARG:HD2	1.79	0.65
34:25:68:GLU:HB3	34:25:78:ARG:NH1	2.10	0.65
1:13:339:C:OP2	34:68:97:ARG:NH1	2.30	0.65
22:2K:48:C:N3	22:2K:52:G:N1	2.44	0.65
24:14:2124:G:H1	26:79:217:THR:HA	1.61	0.65
24:14:1636:C:OP2	57:14:3683:HOH:O	2.13	0.65
24:1H:71:A:H5'	24:1H:73:A:C8	2.32	0.65
27:19:253:GLN:HB3	27:19:255:LYS:HZ3	1.62	0.65
25:1J:80:U:H2'	25:1J:81:G:N2	2.10	0.65
24:14:1105:U:H2'	24:14:1106:G:C8	2.31	0.65
40:85:97:ASP:OD1	40:85:98:LEU:N	2.29	0.65
24:14:1112:G:H5'	31:59:3:ARG:HD3	1.79	0.65
28:21:111:ARG:HD3	28:21:160:TYR:CD2	2.32	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
39:75:33:LYS:HE3	39:75:40:THR:HG21	1.77	0.65
51:N8:40:LYS:NZ	51:N8:48:GLU:OE1	2.28	0.65
1:13:1307:U:OP1	13:4I:101:GLN:NE2	2.29	0.65
24:1H:831:G:OP1	57:1H:3826:HOH:O	2.14	0.65
24:14:78:A:H2'	24:14:79:G:C8	2.32	0.65
24:1H:2295:C:OP1	38:A8:10:ARG:NH1	2.29	0.65
24:1H:1243:G:O2'	35:78:7:ARG:NH2	2.29	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
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
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
9:8E:18:PHE:HD2	9:8E:62:TYR:HD2	1.42	0.65
24:1H:2635:C:H5''	28:21:78:LEU:HA	1.78	0.65
24:14:2711:A:OP2	57:14:3569:HOH:O	2.14	0.65
24:1H:2061:G:P	57:1H:3576:HOH:O	2.53	0.65
35:35:52:GLU:OE2	35:35:55:ARG:NH2	2.30	0.65
24:1H:1537:C:H2'	24:1H:1538:G:C8	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:2L:62:G:C5	22:2L:63:5MU:H72	2.32	0.65
22:3L:42:U:H2'	22:3L:43:G:C8	2.31	0.65
1:13:266:G:H5''	1:13:268:C:H41	1.59	0.65
1:13:1325:C:OP1	21:1F:15:ARG:NH2	2.27	0.65
54:1G:422:C:O2'	54:1G:423:G:N2	2.30	0.65
24:1H:2331:G:O3'	46:18:43:THR:HG22	1.95	0.65
24:14:248:G:OP1	57:14:4142:HOH:O	2.15	0.65
12:3A:117:ARG:HB3	12:3A:122:THR:HB	1.79	0.65
24:14:2776:A:OP1	24:14:2776:A:H3'	1.97	0.65
24:14:987:G:OP2	57:14:4152:HOH:O	2.14	0.65
22:2L:21:A:N6	22:2L:46:G:O2'	2.30	0.65
51:N8:41:PRO:O	51:N8:44:THR:OG1	2.15	0.65
15:6A:36:ILE:HD12	15:6A:63:ARG:HD3	1.79	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
24:14:1021:A:H62	24:14:1141:U:H3	1.44	0.64
28:21:167:VAL:HG12	28:21:189:PRO:HD3	1.78	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
54:1G:588:G:H1	54:1G:651:C:H42	1.45	0.64
24:1H:2784:C:O2	28:21:37:ARG:NH2	2.30	0.64
49:L8:26:LEU:HD21	49:L8:46:ASN:HB3	1.80	0.64
24:14:2822:G:N7	57:14:3528:HOH:O	2.29	0.64
24:1H:2362:G:OP1	53:Q8:44:LYS:NZ	2.28	0.64
54:1G:501:C:H2'	54:1G:502:G:C8	2.32	0.64
2:1E:67:THR:HG21	2:1E:155:LEU:HB3	1.80	0.64
9:8E:3:GLN:OE1	9:8E:20:ARG:NH1	2.30	0.64
24:14:958:U:O2	25:1J:89(A):A:O2'	2.14	0.64
24:14:2656:U:H3	24:14:2665:A:H2	1.43	0.64
39:B8:2:ASN:HB2	39:B8:5:ALA:N	2.11	0.64
27:19:31:LYS:CD	27:19:32:SER:H	2.09	0.64
54:1G:1086:U:H6	54:1G:1086:U:O5'	1.81	0.64
12:3I:117:ARG:HB3	12:3I:122:THR:HB	1.78	0.64
13:4I:90:LEU:HA	13:4I:93:ARG:HG2	1.79	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
52:P8:12:ARG:HH21	52:P8:44:PRO:HB3	1.62	0.64
44:G8:94:LYS:HA	44:G8:94:LYS:HZ3	1.62	0.64
7:62:15:ASP:OD1	7:62:44:TYR:OH	2.16	0.64
30:41:105:LYS:HD3	50:M8:26:SER:HB2	1.78	0.64
54:1G:1171:G:H2'	54:1G:1172:C:C6	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:A5:65:LEU:HB3	42:A5:68:ARG:HD2	1.80	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
28:21:61:ARG:HH11	28:21:61:ARG:HB3	1.62	0.64
45:H8:125:LEU:HG	45:H8:164:ALA:HB3	1.80	0.64
54:1G:1122:U:O4	54:1G:1123:A:N6	2.27	0.64
47:J8:85:LEU:CB	47:J8:86:SER:HB2	2.27	0.64
54:1G:1286:A:C8	54:1G:1287:A:H4'	2.32	0.64
24:14:1196:C:HO2'	24:14:1228:G:HO2'	1.42	0.64
54:1G:1191:A:OP2	3:22:3:ASN:ND2	2.31	0.64
2:12:82:ARG:NH1	2:12:92:TYR:OH	2.31	0.64
46:E5:49:LYS:HB3	46:E5:80:HIS:HB3	1.79	0.64
24:1H:880:G:H1	24:1H:897:C:H42	1.46	0.64
24:1H:192:C:N3	57:1H:3593:HOH:O	2.29	0.64
1:13:1145:C:H4'	1:13:1146:A:H8	1.62	0.64
35:78:19:VAL:HG12	35:78:21:ARG:HB2	1.79	0.64
38:65:41:ASP:OD2	38:65:44:LYS:HG2	1.98	0.64
54:1G:974:A:OP2	14:5A:41:ARG:NH1	2.30	0.64
24:1H:270(K):C:O2	24:1H:270(N):G:N1	2.29	0.64
24:1H:1024:G:H3'	24:1H:1025:G:H5''	1.78	0.64
48:K8:33:MET:O	48:K8:37:PHE:HD1	1.80	0.64
1:13:1167:A:H8	1:13:1167:A:OP1	1.80	0.64
27:19:2:ALA:N	27:19:200:ASP:OD2	2.31	0.64
27:19:242:ARG:HG2	27:19:246:PRO:HG3	1.80	0.64
24:14:1427:A:H4'	24:14:1428:C:O5'	1.98	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
54:1G:1086:U:H3	54:1G:1099:G:H22	1.46	0.64
24:1H:1614:A:OP1	57:1H:3890:HOH:O	2.14	0.64
1:13:474:G:H2'	1:13:475:G:C8	2.32	0.64
41:95:35:LEU:HB2	41:95:37:VAL:HG13	1.78	0.64
24:1H:1533:C:N4	24:1H:1538:G:H1	1.96	0.64
24:14:2122:U:H2'	24:14:2123:G:O4'	1.98	0.64
25:1J:42:C:O2	30:49:93:THR:N	2.21	0.64
22:2K:27:A:H3'	22:2K:28:G:H8	1.60	0.64
54:1G:1015:A:H2'	54:1G:1016:A:C8	2.33	0.64
37:55:2:ARG:N	37:55:5:LYS:HE3	2.13	0.64
24:14:654(J):A:OP2	24:14:654(M):C:N4	2.30	0.64
54:1G:41:G:H2'	54:1G:42:G:C8	2.33	0.64
28:21:92:THR:O	28:21:95:ILE:HG12	1.98	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)
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
6:52:100:ASN:ND2	18:9A:23:LYS:O	2.31	0.64
15:6I:47:LYS:HD2	15:6I:47:LYS:H	1.62	0.64
24:14:617:G:OP1	29:39:40:GLN:NE2	2.31	0.64
1:13:1318:A:H1'	19:AI:37:ARG:HH21	1.61	0.64
24:1H:1786:A:H2	24:1H:2606:C:H1'	1.63	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
8:72:86:ILE:HG21	8:72:133:LEU:HD22	1.79	0.64
54:1G:1205:U:H4'	3:22:195:VAL:HG11	1.78	0.64
27:19:182:LEU:H	27:19:272:ALA:HB3	1.63	0.64
39:75:27:THR:HG23	39:75:90:GLN:HB3	1.80	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
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
24:1H:331:A:N3	57:1H:4486:HOH:O	2.30	0.64
1:13:411:A:H62	1:13:413:G:N2	1.96	0.64
24:1H:587:C:OP2	35:78:21:ARG:NH2	2.31	0.64
18:9A:22:VAL:HG22	18:9A:23:LYS:H	1.63	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
26:79:69:GLY:HA3	26:79:180:PHE:HZ	1.63	0.64
24:1H:323:G:HO2'	24:1H:1205:U:H3	1.46	0.64
54:1G:345:C:H1'	54:1G:346:G:C2	2.33	0.64
22:3K:46:G:N2	22:3K:54:C:O2	2.31	0.64
54:1G:962:C:H42	54:1G:973:G:H1	1.46	0.63
24:1H:1086:A:O2'	24:1H:1103:A:N1	2.27	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
24:1H:1010:A:O2'	24:1H:1152:C:O2'	2.14	0.63
35:35:84:ASN:HD22	35:35:117:GLU:HB3	1.63	0.63
2:12:10:LEU:HA	2:12:13:ALA:HB2	1.80	0.63
54:1G:1250:A:OP1	9:82:67:GLY:N	2.28	0.63
50:I5:12:ALA:HB1	50:I5:29:PRO:HA	1.80	0.63
43:F8:41:ASN:O	43:F8:45:THR:HG23	1.97	0.63
22:3L:14:A:H3'	22:3L:15:G:H5''	1.80	0.63
30:49:67:LYS:H	50:I5:6:HIS:CE1	2.15	0.63
24:1H:1430:C:H2'	24:1H:1431:U:H6	1.63	0.63
27:19:228:PRO:HD3	27:19:235:GLY:HA3	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:C5:17:SER:O	44:C5:21:LYS:HB2	1.99	0.63
1:13:5:U:O2'	1:13:6:G:O5'	2.14	0.63
37:55:29:LEU:HB3	37:55:75:LEU:HD11	1.81	0.63
24:1H:1588:C:H2'	24:1H:1589:C:H6	1.61	0.63
45:H8:30:ASN:OD1	45:H8:33:LEU:N	2.29	0.63
29:39:42:ALA:O	29:39:45:ARG:HB3	1.98	0.63
50:I5:16:CYS:HA	50:I5:33:VAL:HG13	1.80	0.63
33:58:70:LYS:HE3	33:58:72:TYR:HE1	1.62	0.63
24:14:2352:A:OP2	57:14:4207:HOH:O	2.15	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
8:7E:103:VAL:HG21	8:7E:110:ALA:HB2	1.80	0.63
32:69:41:GLU:HA	32:69:44:LEU:HB2	1.79	0.63
57:14:4153:HOH:O	49:H5:13:ILE:O	2.16	0.63
20:BI:75:ASN:N	20:BI:75:ASN:OD1	2.32	0.63
2:1E:33:TYR:HB2	2:1E:43:ASP:HB2	1.78	0.63
2:12:101:MET:HA	2:12:108:ILE:HG13	1.79	0.63
54:1G:1128:C:H1'	54:1G:1146:A:H61	1.64	0.63
24:1H:1534:G:N1	24:1H:1539:G:H1'	2.12	0.63
24:14:2392:A:C8	35:35:61:ARG:HB3	2.32	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
54:1G:324:G:N7	57:1G:1820:HOH:O	2.31	0.63
24:1H:674:G:H1'	29:31:74:ARG:HD2	1.81	0.63
24:14:620:G:H4'	24:14:621:A:H5''	1.79	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
46:I8:24:LYS:O	46:I8:25:ARG:NH1	2.31	0.63
24:1H:2131:G:O2'	24:1H:2133:G:N3	2.31	0.63
22:3L:17:OMG:N2	22:3L:67:A:OP2	2.32	0.63
22:2L:36:U:H3	23:4L:17:G:H1	1.46	0.63
54:1G:920:U:H2'	54:1G:921:U:H6	1.63	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
24:1H:1853:A:H2'	24:1H:1854:A:C8	2.34	0.63
24:1H:833:U:O2	35:78:55:ARG:NH2	2.32	0.63
24:1H:631:A:OP1	35:78:65:ARG:NH1	2.31	0.63
19:AA:7:LYS:HD3	19:AA:7:LYS:H	1.62	0.63
1:13:890:G:O2'	1:13:906:G:O6	2.11	0.63
4:32:12:CYS:SG	4:32:18:LYS:NZ	2.72	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:130:ARG:O	2:12:135:GLN:NE2	2.32	0.63
54:1G:1256:A:H62	54:1G:1277:C:H3'	1.64	0.63
25:1J:6:C:H2'	25:1J:7:G:H5''	1.81	0.63
6:5E:6:VAL:HG22	6:5E:90:VAL:HG22	1.81	0.63
24:1H:739:G:OP1	57:1H:3934:HOH:O	2.14	0.63
34:68:86:ILE:HG22	34:68:94:ARG:HG3	1.79	0.63
24:14:1224:G:OP2	41:95:66:ARG:NH2	2.30	0.63
54:1G:512:U:H2'	54:1G:513:C:H6	1.63	0.63
24:14:1771:C:C1'	24:14:1786:A:H8	2.12	0.63
39:75:108:ARG:HA	39:75:111:ARG:HD2	1.79	0.63
13:4A:54:VAL:HA	13:4A:57:ARG:HB3	1.80	0.63
54:1G:1116:C:H42	54:1G:1184:G:H1	1.45	0.63
1:13:929:G:H1	1:13:1388:C:H42	1.46	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
24:1H:2887:U:H2'	24:1H:2888:C:H6	1.63	0.63
39:75:2:ASN:O	39:75:4:GLY:HA3	1.99	0.63
24:14:634:C:H2'	24:14:635:C:C6	2.33	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
54:1G:1095:U:OP1	54:1G:1108:G:N2	2.31	0.63
2:1E:21:ARG:HH21	2:1E:23:ARG:HG3	1.62	0.63
39:75:91:ARG:NH1	39:75:124:ASP:OD2	2.26	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
24:1H: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
24:1H:2408:U:OP2	57:1H:3681:HOH:O	2.16	0.63
45:D5:97:GLU:HB3	45:D5:125:LEU:HD11	1.80	0.63
25:16:31:C:H4'	30:41:29:TRP:CH2	2.34	0.63
39:B8:7:ILE:HG13	39:B8:10:VAL:HG22	1.81	0.63
1:13:1157:A:O2'	1:13:1181:G:N2	2.32	0.63
1:13:1127:G:N2	1:13:1145:C:H1'	2.14	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
4:3E:14:ARG:HB2	4:3E:40:PRO:HD2	1.80	0.63
24:14:289:A:H5'	24:14:290:G:OP2	1.99	0.63
29:39:68:LYS:HB3	29:39:69:HIS:CD2	2.33	0.63
33:58:43:THR:HB	33:58:46:VAL:HG23	1.81	0.63
1:13:77:C:N4	1:13:89:U:O4	2.30	0.63
24:14:93:C:H5'	24:14:94:G:OP2	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:27:LYS:NZ	2:1E:193:ASP:OD2	2.23	0.63
22:3L:15:G:H4'	22:3L:15:G:OP1	1.99	0.62
52:P8:46:VAL:HG13	52:P8:47:ARG:HB3	1.80	0.62
24:14:1997:G:H5''	57:14:3644:HOH:O	1.99	0.62
19:AI:6:LYS:HG3	19:AI:9:VAL:HG22	1.81	0.62
15:6I:32:LEU:O	15:6I:35:ARG:N	2.32	0.62
31:51:20:ALA:HB1	31:51:21:PRO:HD2	1.80	0.62
19:AI:69:HIS:HB3	19:AI:73:GLU:HG3	1.81	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
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
9:82:9:ARG:HB3	9:82:14:VAL:HG13	1.81	0.62
24:1H:579:G:H2'	24:1H:580:C:C6	2.35	0.62
54:1G:15:G:O6	54:1G:920:U:N3	2.18	0.62
24:14:78:A:H2'	24:14:79:G:H8	1.64	0.62
46:I8:38:VAL:HG12	46:I8:40:GLN:HG2	1.81	0.62
54:1G:278:G:N7	17:8A:92:ARG:NH1	2.47	0.62
20:BA:22:ARG:O	20:BA:26:ASN:ND2	2.31	0.62
31:59:30:LYS:NZ	31:59:79:VAL:O	2.32	0.62
3:22:79:ARG:H	3:22:79:ARG:NE	1.97	0.62
1:13:1443:G:O2'	39:B8:122:ASP:OD2	2.16	0.62
24:1H:1211:U:OP2	57:1H:4526:HOH:O	2.15	0.62
24:14:1364:G:OP2	47:F5:2:SER:N	2.31	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
24:14:2062:A:OP2	57:14:3860:HOH:O	2.15	0.62
27:11:25:THR:HG23	27:11:26:LYS:N	2.13	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
24:14:1164:G:H1	24:14:1185:C:H42	1.46	0.62
1:13:243:A:H4'	1:13:244:U:H5''	1.81	0.62
28:29:24:THR:HG21	28:29:188:VAL:HB	1.80	0.62
54:1G:1326:C:H2'	54:1G:1327:C:C6	2.33	0.62
18:9I:66:LEU:O	18:9I:70:ILE:HG13	2.00	0.62
54:1G:539:A:H2'	54:1G:540:G:C8	2.34	0.62
24:14:2068:U:N3	24:14:2430:A:H2	1.90	0.62
45:D5:70:LEU:O	45:D5:89:PHE:N	2.31	0.62
27:11:70:TRP:CH2	27:11:150:LYS:HA	2.34	0.62
42:A5:17:VAL:HG23	42:A5:76:VAL:HG11	1.81	0.62
24:14:832:G:H5'	35:35:45:LEU:HD11	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:41:27:ASN:HB3	30:41:30:GLU:HG3	1.82	0.62
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
19:AA:48:THR:HA	19:AA:61:TYR:HA	1.82	0.62
31:51:98:LEU:HD22	31:51:125:VAL:HG23	1.81	0.62
24:1H:111:A:H4'	48:K8:69:ARG:NH2	2.15	0.62
24:14:517:C:OP1	51:J5:16:ARG:NH2	2.32	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
27:11:59:LYS:HD2	27:11:60:ARG:H	1.64	0.62
48:G5:24:LEU:HD13	48:G5:60:LEU:HD21	1.82	0.62
7:62:111:ARG:NH2	7:62:122:HIS:HB3	2.14	0.62
20:BA:29:LYS:O	20:BA:33:ILE:HG12	2.00	0.62
7:6E:26:PHE:CE2	7:6E:30:ILE:HD11	2.34	0.62
54:1G:992:U:H3	54:1G:1044:A:N6	1.97	0.62
45:D5:72:ARG:N	45:D5:87:ASP:O	2.25	0.62
1:13:1132:C:H2'	1:13:1133:G:H8	1.64	0.62
24:14:2720:U:H3	24:14:2873:A:H2	1.48	0.62
54:1G:1004:A:H1'	54:1G:1025:U:C2	2.35	0.62
54:1G:542:G:OP1	4:32:10:ARG:NH2	2.33	0.62
54:1G:542:G:P	4:32:10:ARG:HH22	2.22	0.62
40:85:34:LYS:NZ	40:85:37:GLU:OE1	2.27	0.62
4:32:3:ARG:HG3	4:32:5:ILE:HD11	1.82	0.62
24:14:1778:U:H2'	24:14:1784:A:N6	2.15	0.62
3:22:94:LEU:HD13	3:22:95:THR:HG23	1.82	0.62
54:1G:1052:U:H5''	54:1G:1053:G:OP2	1.99	0.62
18:9A:53:ARG:HD2	18:9A:59:SER:O	2.00	0.62
2:1E:18:GLY:HA3	2:1E:41:ILE:HD12	1.81	0.62
27:19:69:ARG:NH2	27:19:128:GLY:O	2.33	0.62
46:E5:11:ARG:O	46:E5:14:ARG:NH2	2.32	0.62
1:13:1212:U:H4'	1:13:1213:A:C8	2.35	0.62
25:1J:7:G:H4'	38:65:29:PHE:CD2	2.33	0.62
3:22:3:ASN:OD1	3:22:3:ASN:N	2.33	0.62
24:14:610:C:O2	24:14:618:G:N2	2.20	0.62
46:I8:70:GLN:NE2	46:I8:72:ARG:HD3	2.15	0.62
1:13:171:A:H2'	1:13:172:A:C8	2.35	0.62
24:14:581:C:H2'	24:14:582:G:H8	1.65	0.62
1:13:1319:A:O2'	1:13:1323:G:N7	2.29	0.62
24:14:1599:C:H2'	24:14:1600:C:H6	1.64	0.62
24:14:1054:A:H3'	24:14:1055:G:H8	1.64	0.62
26:79:201:PRO:HG2	26:79:204:ALA:HB2	1.82	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
45:H8:95:PRO:HA	45:H8:130:PRO:HD3	1.80	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
24:1H:1942:C:OP2	24:1H:1943:U:O2'	2.12	0.62
20:BA:69:GLY:O	20:BA:73:HIS:NE2	2.31	0.62
1:13:1502:A:H2	1:13:1505:G:H1	1.47	0.62
1:13:1347:G:H22	1:13:1374:A:P	2.23	0.62
27:11:24:ILE:HG22	27:11:25:THR:O	1.98	0.62
24:14:2757:A:H61	31:59:67:LEU:HD21	1.65	0.62
54:1G:1104:G:OP1	2:12:144:ARG:NH1	2.32	0.62
45:D5:30:ASN:OD1	45:D5:31:ARG:N	2.30	0.62
1:13:738:C:H2'	1:13:739:C:H6	1.65	0.62
3:2E:49:SER:O	3:2E:72:LYS:NZ	2.33	0.62
24:14:918:A:O2'	25:1J:96:G:N2	2.31	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
24:14:1511:A:H2'	24:14:1512:G:C8	2.35	0.62
2:1E:72:GLY:HA3	2:1E:165:VAL:HG22	1.81	0.62
24:14:2099:U:H3	24:14:2190:G:H1	1.47	0.62
24:14:1441:G:H2'	24:14:1442:G:H8	1.63	0.62
2:12:50:GLU:O	2:12:54:THR:OG1	2.12	0.62
24:1H:2212:A:H1'	24:1H:2215:G:C5	2.34	0.61
38:65:106:ARG:NH1	38:65:107:GLU:OE1	2.32	0.61
31:51:4:ILE:HG13	31:51:6:ARG:NE	2.14	0.61
54:1G:1279:A:O2'	54:1G:1281:U:OP2	2.14	0.61
24:1H:442:G:H1'	29:31:48:THR:HG21	1.82	0.61
46:E5:49:LYS:O	46:E5:50:ASN:ND2	2.33	0.61
24:1H:631:A:OP2	53:Q8:47:LYS:NZ	2.24	0.61
13:4I:92:HIS:CE1	13:4I:98:VAL:HG11	2.35	0.61
7:62:97:GLN:NE2	7:62:101:LEU:HD11	2.15	0.61
30:49:64:THR:HB	30:49:94:LEU:HD21	1.82	0.61
4:32:60:GLU:OE2	4:32:199:ASN:N	2.33	0.61
24:1H:107:C:H2'	24:1H:108:U:H6	1.64	0.61
54:1G:678:U:H2'	54:1G:679:C:C6	2.35	0.61
24:1H:2667:C:H1'	31:51:109:PHE:CD1	2.34	0.61
32:69:86:THR:HG23	32:69:87:LYS:HE3	1.82	0.61
29:39:185:ASP:CG	29:39:188:ARG:HH21	2.02	0.61
24:1H:424:G:N7	57:1H:3717:HOH:O	2.31	0.61
24:1H:71:A:H2	43:F8:31:HIS:NE2	1.94	0.61
54:1G:956:U:H1'	54:1G:1225:A:H2	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:51:4:ILE:HB	31:51:6:ARG:HG3	1.82	0.61
24:1H:1022:G:N2	24:1H:1142(A):A:N1	2.47	0.61
22:3K:18:G:O4'	22:3K:66:G:N2	2.33	0.61
25:16:15:A:H1'	25:16:109:G:C4	2.36	0.61
24:14:1839:G:OP2	57:14:3936:HOH:O	2.16	0.61
16:7A:6:LEU:HG	16:7A:17:TYR:HB3	1.82	0.61
24:1H:1645:G:H5''	24:1H:1646:C:H5'	1.82	0.61
54:1G:327:A:HO2'	54:1G:329:A:H8	1.47	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
37:98:24:GLN:NE2	37:98:36:THR:HG21	2.13	0.61
5:42:122:GLU:O	5:42:126:ARG:NH1	2.25	0.61
24:14:1165:U:H2'	24:14:1166:C:C6	2.35	0.61
24:14:1567:A:H5'	27:19:58:HIS:ND1	2.14	0.61
24:14:2335:A:C8	24:14:2337:G:C5	2.88	0.61
1:13:980:C:O2	57:13:1760:HOH:O	2.15	0.61
6:52:77:ARG:HH12	6:52:78:GLU:HG2	1.65	0.61
44:G8:29:GLU:HB3	44:G8:38:ILE:CG2	2.30	0.61
54:1G:957:U:H1'	54:1G:960:U:C5	2.35	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
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
24:1H:948:G:O6	57:1H:4351:HOH:O	2.14	0.61
24:1H:2178:C:H4'	26:71:46:LYS:HD3	1.80	0.61
29:31:185:ASP:OD1	29:31:188:ARG:NH1	2.27	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
24:1H:1520:U:H2'	24:1H:1521:G:O4'	2.01	0.61
54:1G:1052:U:O2'	54:1G:1055:A:OP2	2.11	0.61
48:G5:41:ILE:HD11	48:G5:44:LEU:HD22	1.82	0.61
24:14:2053:G:H5'	28:29:144:ARG:O	2.00	0.61
44:C5:87:LYS:H	44:C5:94:LYS:HB3	1.65	0.61
5:4E:102:ALA:HB1	5:4E:106:PRO:HG2	1.82	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
37:98:55:ALA:HA	37:98:80:PHE:CE2	2.34	0.61
42:E8:68:ARG:NH1	42:E8:109:GLU:OE1	2.32	0.61
24:14:2889:C:H2'	24:14:2891:G:O4'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2210:G:H2'	24:1H:2211:G:N7	2.16	0.61
2:12:164:VAL:HG23	2:12:186:ALA:HB2	1.83	0.61
25:1J:7:G:H4'	38:65:29:PHE:HD2	1.64	0.61
24:1H:878:A:N6	24:1H:899:A:O2'	2.34	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
24:1H:2132:U:N3	26:7I:5:LYS:HB3	2.15	0.61
30:41:138:GLN:NE2	30:41:151:ALA:O	2.33	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
24:14:162:U:H4'	24:14:171:G:C8	2.35	0.61
24:1H:1175:U:H1'	24:1H:1176:G:N3	2.16	0.61
19:AI:68:GLY:H	50:M8:55:ARG:HH21	1.48	0.61
13:4A:91:ARG:HB2	13:4A:98:VAL:HG22	1.81	0.61
24:14:784:A:OP1	57:14:3616:HOH:O	2.16	0.61
10:1I:48:THR:HG23	10:1I:62:HIS:HB3	1.81	0.61
34:68:76:ALA:HB3	39:B8:75:ILE:HB	1.82	0.61
24:1H:1329:U:H5''	24:1H:1330:C:H5	1.64	0.61
1:13:1295:G:O2'	13:4I:14:ARG:NH1	2.26	0.61
27:19:255:LYS:H	27:19:255:LYS:NZ	1.97	0.61
1:13:411:A:C5	1:13:413:G:H1'	2.35	0.61
24:14:138:G:N2	43:B5:44:GLU:OE2	2.30	0.61
24:1H:1021:A:H3'	24:1H:1022:G:H5''	1.82	0.61
1:13:1132:C:H2'	1:13:1133:G:C8	2.36	0.61
52:L5:8:ASN:OD1	52:L5:11:LYS:HB2	2.01	0.61
21:1B:6:ARG:HE	21:1B:15:ARG:HH12	1.46	0.61
24:14:61:G:H1	24:14:93:C:H42	1.49	0.61
1:13:1122:U:O4	1:13:1123:A:N6	2.34	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
1:13:1429:C:H2'	1:13:1430:C:H6	1.65	0.61
49:H5:27:GLY:HA3	49:H5:35:ARG:NH2	2.16	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
54:1G:1095:U:OP2	54:1G:1108:G:N1	2.30	0.61
1:13:1128:C:H5'	9:8E:16:ARG:HH22	1.64	0.61
46:E5:51:VAL:HG23	46:E5:81:VAL:HG23	1.82	0.61
9:82:83:ARG:HA	9:82:86:VAL:HG12	1.83	0.61
31:59:16:SER:HB2	31:59:27:LYS:HB3	1.83	0.61
54:1G:587:G:N2	54:1G:754:C:OP2	2.33	0.61
41:D8:35:LEU:HB3	41:D8:37:VAL:HG23	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:F5:82:LEU:HD23	47:F5:82:LEU:H	1.65	0.61
24:1H:2255:G:OP2	57:1H:4124:HOH:O	2.16	0.61
24:14:1174:A:N6	24:14:1177:A:O2'	2.34	0.61
54:1G:17:U:H2'	54:1G:18:C:C6	2.36	0.61
24:14:2575:C:H2'	24:14:2578:G:O6	2.01	0.61
1:13:192:U:O2	20:BI:57:ARG:NH1	2.32	0.61
4:32:18:LYS:NZ	4:32:19:LEU:O	2.34	0.61
39:B8:7:ILE:HB	39:B8:10:VAL:N	2.13	0.61
24:14:1771:C:H1'	24:14:1786:A:H8	1.63	0.61
50:M8:37:SER:HA	50:M8:41:PRO:HG2	1.82	0.61
27:11:70:TRP:CE2	27:11:150:LYS:HD2	2.36	0.61
1:13:1376:U:H2'	1:13:1377:A:C8	2.34	0.61
2:1E:145:LEU:HD12	2:1E:149:LEU:HD12	1.82	0.61
1:13:1304:G:N2	1:13:1332:A:OP2	2.33	0.61
6:5E:89:MET:HE3	18:9I:76:LEU:HD13	1.83	0.61
45:D5:39:VAL:HG21	45:D5:44:PHE:CD2	2.36	0.61
38:65:11:LYS:HD3	38:65:91:PRO:HG3	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
6:5E:50:TYR:OH	18:9I:74:ARG:O	2.12	0.61
24:1H:607:U:OP1	29:31:102:PRO:HA	2.01	0.60
22:2K:1:G:H2'	22:2K:2:G:C8	2.28	0.60
27:19:255:LYS:CE	27:19:255:LYS:H	2.14	0.60
35:78:50:ARG:HH21	35:78:50:ARG:HG3	1.66	0.60
54:1G:545:C:OP1	4:32:61:LYS:NZ	2.34	0.60
24:14:1676:A:OP2	57:14:3565:HOH:O	2.16	0.60
24:14:686:G:H5''	52:L5:11:LYS:HZ1	1.65	0.60
31:51:125:VAL:HG12	31:51:127:GLU:O	2.01	0.60
44:C5:88:LYS:O	44:C5:89:PHE:HB3	2.01	0.60
7:62:129:GLU:OE2	7:62:131:LYS:NZ	2.33	0.60
44:G8:15:VAL:HG21	44:G8:42:VAL:HG21	1.81	0.60
24:14:848:G:H2'	24:14:849:A:C8	2.36	0.60
24:1H:1681:G:N2	57:1H:3983:HOH:O	2.33	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
54:1G:147:G:H1	54:1G:175:C:H42	1.49	0.60
24:14:2733:A:N1	28:29:203:LYS:HA	2.16	0.60
30:41:161:THR:HG22	30:41:163:ALA:H	1.66	0.60
24:1H:1359:A:H2'	24:1H:1360:A:H5'	1.83	0.60
24:14:567:A:P	57:14:3749:HOH:O	2.58	0.60
1:13:277:C:OP2	17:8I:41:LYS:NZ	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:885:G:O2'	54:1G:914:A:N1	2.31	0.60
20:BI:53:LEU:HB2	20:BI:100:ILE:HG22	1.84	0.60
24:14:2602:A:H4'	24:14:2603:G:O5'	2.01	0.60
1:13:322:C:O2'	20:BI:23:ARG:HD2	2.01	0.60
24:14:2537:U:H2'	24:14:2538:C:C6	2.36	0.60
17:8I:48:GLU:OE1	17:8I:50:LYS:HE2	2.01	0.60
17:8A:45:HIS:CD2	17:8A:47:PRO:HG3	2.36	0.60
39:75:105:LEU:O	39:75:107:ASP:N	2.34	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
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
1:13:321:A:H62	1:13:328:C:H1'	1.66	0.60
25:1J:11:C:H3'	25:1J:12:C:H6	1.65	0.60
4:3E:104:VAL:HG21	4:3E:140:VAL:HG21	1.83	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
1:13:157:G:H1	1:13:164:U:H3	1.49	0.60
24:1H:1005:C:O2'	33:58:28:THR:HG21	2.01	0.60
1:13:1502:A:H5'	1:13:1504:G:N7	2.15	0.60
28:21:53:PRO:HA	28:21:74:PRO:HA	1.83	0.60
24:14:831:G:OP1	57:14:3871:HOH:O	2.15	0.60
28:29:120:TRP:CD1	28:29:155:LYS:HB3	2.36	0.60
24:1H:2324:C:H5''	24:1H:2325:G:H5'	1.84	0.60
1:13:992:U:H4'	1:13:993:G:O5'	2.00	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
32:69:144:VAL:HG22	32:69:145:VAL:HG22	1.83	0.60
35:78:39:LYS:HB2	35:78:45:LEU:HD11	1.83	0.60
24:1H:598:G:C5'	35:78:11:GLY:HA3	2.30	0.60
41:95:37:VAL:CG2	41:95:56:SER:HA	2.31	0.60
36:45:19:GLY:H	36:45:98:LYS:HZ1	1.50	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
8:72:39:LEU:HB3	8:72:45:ILE:HG12	1.83	0.60
24:1H:443:A:H1'	24:1H:1201:C:O4'	2.01	0.60
24:1H:271(B):G:H1	24:1H:404:C:H42	1.48	0.60
24:1H:2584:U:H2'	24:1H:2585:U:H2'	1.82	0.60
19:AA:11:VAL:HG12	19:AA:12:ASP:H	1.66	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:79:212:VAL:HG11	26:79:226:PRO:HD3	1.83	0.60
54:1G:316:G:OP2	54:1G:351:G:O2'	2.18	0.60
4:32:9:CYS:HA	4:32:12:CYS:HB2	1.83	0.60
54:1G:1316:G:OP1	14:5A:17:LYS:NZ	2.34	0.60
35:78:49:ARG:HG3	53:Q8:60:LEU:CD1	2.31	0.60
13:4A:70:LEU:O	13:4A:74:VAL:HG23	2.01	0.60
45:H8:97:GLU:HA	45:H8:127:LYS:HA	1.82	0.60
24:1H:1588:C:H2'	24:1H:1589:C:C6	2.37	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
28:21:10:GLY:HA3	39:B8:8:LYS:HD2	1.82	0.60
24:1H:1935:G:H1'	24:1H:1964:G:N2	2.17	0.60
1:13:881:G:OP2	12:3I:12:ARG:NH2	2.34	0.60
42:E8:29:LEU:HD21	42:E8:33:ARG:NH2	2.16	0.60
24:1H:2096:U:H2'	24:1H:2097:C:C6	2.36	0.60
24:14:1270:C:H5''	24:14:1271:G:H5'	1.83	0.60
24:1H:2392:A:H2	24:1H:2424:C:N4	1.96	0.60
24:1H:70:G:H21	24:1H:71:A:N6	1.99	0.60
24:14:1969:A:H3'	57:14:3607:HOH:O	2.02	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
1:13:1129:C:N4	1:13:1134:G:N7	2.49	0.60
28:29:169:ASN:HA	28:29:201:THR:HG21	1.82	0.60
32:69:76:THR:HG21	32:69:140:LEU:HD22	1.84	0.60
9:82:26:VAL:HG13	9:82:61:ALA:HB3	1.83	0.60
24:14:2887:U:H2'	24:14:2888:C:H6	1.65	0.60
35:35:30:THR:HG21	35:35:35:HIS:H	1.67	0.60
24:14:993:G:OP1	40:85:50:ARG:NH2	2.34	0.60
24:1H:529:A:H4'	24:1H:530:G:H5'	1.83	0.60
9:82:24:GLY:HA2	9:82:59:PHE:O	2.01	0.60
27:11:71:ASP:OD1	27:11:103:ARG:NH2	2.35	0.60
22:3K:33:C:H2'	22:3K:34:U:H5''	1.84	0.60
15:6I:3:ILE:HD13	15:6I:34:LEU:HD23	1.84	0.60
2:12:132:LYS:HA	2:12:135:GLN:HB2	1.84	0.60
31:51:6:ARG:HD2	31:51:65:HIS:HB3	1.84	0.60
31:59:103:LEU:HG	31:59:115:VAL:HB	1.82	0.60
28:21:2:LYS:HA	28:21:84:PHE:CD1	2.36	0.60
16:7I:49:LEU:HD12	16:7I:50:LYS:H	1.66	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
13:4A:80:ARG:NH1	19:AA:66:MET:SD	2.75	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:79:15:ASP:HB3	26:79:18:LYS:HB3	1.83	0.60
54:1G:603:U:H2'	54:1G:604:G:H8	1.65	0.60
33:58:89:LYS:O	33:58:93:THR:OG1	2.18	0.60
24:1H:2540:C:OP2	57:1H:4062:HOH:O	2.16	0.60
37:55:57:ARG:NH2	37:55:62:ALA:HB2	2.17	0.60
42:A5:60:ASN:OD1	42:A5:60:ASN:N	2.34	0.60
24:1H:1209:G:O6	57:1H:4486:HOH:O	2.17	0.60
2:1E:174:VAL:HG13	2:1E:184:VAL:HG11	1.84	0.60
24:1H:249:C:O5'	57:1H:3613:HOH:O	2.16	0.60
46:I8:40:GLN:NE2	46:I8:42:GLY:O	2.35	0.60
22:3K:33:C:N4	22:3K:34:U:O4	2.35	0.60
12:3A:110:VAL:HG23	12:3A:120:TYR:HB3	1.82	0.60
1:13:74:C:H42	1:13:96:G:H1	1.48	0.60
2:12:223:ILE:HA	2:12:226:ARG:HB2	1.84	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
24:1H:2795:G:N2	24:1H:2801:A:OP2	2.35	0.60
12:3A:24:VAL:HB	12:3A:27:LEU:HD12	1.82	0.60
53:Q8:34:TRP:HE3	53:Q8:34:TRP:HA	1.67	0.60
24:14:483:A:H5'	44:C5:49:VAL:HG22	1.82	0.60
44:C5:19:LYS:HG3	44:C5:20:TYR:HD1	1.65	0.60
24:14:328:U:H4'	44:C5:68:HIS:CD2	2.37	0.60
25:1J:89:G:O6	25:1J:89(A):A:N6	2.35	0.60
1:13:719:C:O2'	18:9I:49:LYS:HB3	2.02	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
9:8E:50:LEU:HD23	9:8E:85:LEU:HD22	1.83	0.60
50:I5:56:VAL:HG22	50:I5:57:GLU:H	1.67	0.60
31:59:56:SER:HG	31:59:61:HIS:HD1	1.49	0.60
25:16:111:U:H2'	25:16:112:G:H8	1.67	0.60
48:K8:47:ASN:C	48:K8:49:LYS:H	2.06	0.60
27:19:17:THR:O	27:19:211:ARG:NH2	2.35	0.60
24:14:1786:A:C2	24:14:2606:C:H1'	2.37	0.59
24:14:910:A:C5	36:45:13:GLN:HG3	2.36	0.59
1:13:636:U:H2'	1:13:637:G:C8	2.37	0.59
13:4A:108:ARG:HH11	13:4A:108:ARG:HG3	1.67	0.59
24:1H:581:C:H2'	24:1H:582:G:C8	2.36	0.59
13:4A:16:ASP:OD1	13:4A:17:VAL:N	2.33	0.59
22:2L:72:U:OP1	22:2L:72:U:H2'	2.02	0.59
5:4E:53:LEU:HD12	5:4E:53:LEU:H	1.67	0.59
29:39:67:GLN:HG3	29:39:67:GLN:O	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2E:90:GLU:HA	3:2E:93:LYS:HD2	1.84	0.59
22:2L:10:C:N4	22:2L:26:G:H1	2.00	0.59
38:A8:37:ALA:HB2	38:A8:101:LEU:HD21	1.83	0.59
1:13:517:G:N1	1:13:533:A:OP2	2.32	0.59
24:14:1840:G:OP2	57:14:3934:HOH:O	2.16	0.59
54:1G:1011:G:H22	54:1G:1018:C:N4	2.00	0.59
25:16:73:A:C2'	25:16:74:U:H5'	2.32	0.59
24:1H:2415:G:H4'	35:78:67:MET:N	2.17	0.59
24:14:142:G:H1'	43:B5:37:THR:HG21	1.83	0.59
3:2E:88:ARG:HB3	3:2E:99:VAL:HG21	1.83	0.59
47:J8:4:VAL:HG12	47:J8:11:ARG:HB2	1.84	0.59
1:13:368:U:OP1	32:69:91:SER:OG	2.20	0.59
24:14:2176:A:H2'	24:14:2177:C:C6	2.37	0.59
24:14:2319:G:N7	38:65:3:ARG:HG3	2.17	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
45:D5:19:ARG:HH21	45:D5:84:GLU:HB3	1.66	0.59
14:5A:39:LEU:HD13	14:5A:47:LEU:HD12	1.85	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
1:13:1070:U:OP1	5:4E:18:ARG:NH1	2.27	0.59
22:2K:36:U:O2	23:4K:17:G:N2	2.28	0.59
24:14:1372:U:OP2	57:14:4027:HOH:O	2.16	0.59
24:1H:598:G:H1'	35:78:12:ALA:HB2	1.84	0.59
24:14:273(C):C:N4	24:14:363(C):G:H1	2.00	0.59
24:1H:1065:U:O2	24:1H:1074:G:N2	2.35	0.59
43:F8:89:ILE:HG22	43:F8:92:LEU:H	1.67	0.59
31:59:122:THR:O	31:59:131:VAL:HG13	2.01	0.59
50:I5:18:CYS:H	50:I5:19:GLY:HA2	1.66	0.59
24:14:2836:U:H2'	24:14:2837:G:C8	2.36	0.59
46:E5:70:GLN:NE2	46:E5:72:ARG:HD2	2.17	0.59
24:1H:2068:U:N3	24:1H:2430:A:H2	1.94	0.59
1:13:659:U:H2'	1:13:660:G:C8	2.37	0.59
1:13:603:U:H2'	1:13:604:G:H8	1.68	0.59
2:1E:88:ALA:HB2	2:1E:219:VAL:HG13	1.83	0.59
22:2L:71:C:O2'	22:2L:72:U:OP1	2.20	0.59
24:1H:1778:U:H2'	24:1H:1784:A:N6	2.17	0.59
2:1E:51:LEU:HD22	2:1E:55:PHE:HE1	1.67	0.59
1:13:105:G:H2'	1:13:106:C:C6	2.37	0.59
24:14:527:C:OP2	24:14:2779:U:H5	1.86	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:41:66:GLN:HA	50:M8:6:HIS:CE1	2.37	0.59
24:1H:2853:C:H2'	24:1H:2854:G:H8	1.67	0.59
24:1H:1650:G:O6	57:1H:4192:HOH:O	2.15	0.59
20:BI:73:HIS:HB3	20:BI:74:LYS:HG2	1.85	0.59
35:35:2:LYS:NZ	35:35:4:SER:OG	2.35	0.59
24:14:2761:G:O2'	31:59:143:GLN:NE2	2.34	0.59
44:C5:6:HIS:ND1	44:C5:7:VAL:HG13	2.17	0.59
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
24:14:1810:A:H2'	24:14:1811:G:O4'	2.03	0.59
33:15:20:GLY:HA2	33:15:61:ARG:HG2	1.83	0.59
27:19:69:ARG:HD3	27:19:105:ILE:HD11	1.85	0.59
14:5I:26:ARG:NH1	14:5I:43:CYS:HB2	2.15	0.59
38:65:106:ARG:HA	38:65:110:LEU:HD11	1.83	0.59
6:5E:10:LEU:HD13	6:5E:61:LEU:HD13	1.85	0.59
32:61:131:LYS:HB3	32:61:132:PRO:HA	1.84	0.59
24:14:607:U:H3	24:14:621:A:H2	1.47	0.59
15:6A:21:ASP:OD2	15:6A:24:SER:OG	2.12	0.59
50:I5:58:ARG:HH12	50:I5:62:ARG:HB2	1.66	0.59
20:BI:45:GLN:HB2	20:BI:91:LEU:HD13	1.83	0.59
24:1H:2126:A:O2'	24:1H:2162:G:N2	2.35	0.59
24:14:1776:G:OP2	57:14:3558:HOH:O	2.16	0.59
4:32:2:GLY:N	4:32:71:SER:HB3	2.18	0.59
54:1G:1300:G:O2'	54:1G:1301:U:O5'	2.20	0.59
2:12:185:ILE:HG22	2:12:199:TYR:HB2	1.83	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
50:M8:24:THR:OG1	50:M8:25:TYR:N	2.36	0.59
2:12:8:LYS:HG2	2:12:217:ARG:HE	1.67	0.59
24:14:819:A:OP2	24:14:1187:G:N2	2.28	0.59
22:2L:32:A:H2'	22:2L:33:C:H6	1.67	0.59
2:1E:14:GLY:H	2:1E:16:HIS:CE1	2.20	0.59
51:N8:31:VAL:HG13	51:N8:42:PRO:HG3	1.85	0.59
21:1B:6:ARG:NE	21:1B:15:ARG:HH12	2.01	0.59
46:I8:72:ARG:HB3	46:I8:75:LEU:HB2	1.84	0.59
32:69:130:TYR:HB3	32:69:136:VAL:HG13	1.85	0.59
54:1G:177:C:OP1	20:BA:65:LYS:NZ	2.35	0.59
35:78:126:VAL:HG12	35:78:147:LEU:HD22	1.85	0.59
45:H8:142:SER:HB2	45:H8:143:GLY:HA2	1.85	0.59
54:1G:114:U:H2'	54:1G:115:G:C8	2.38	0.59
24:14:468:G:N7	52:L5:39:ARG:NH2	2.47	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:85:110:VAL:O	40:85:114:LYS:HG3	2.03	0.59
4:32:139:ARG:HG3	4:32:139:ARG:HH11	1.68	0.59
27:19:76:PRO:HA	27:19:118:VAL:HG23	1.85	0.59
22:2L:41:C:H2'	22:2L:42:U:H6	1.68	0.59
44:G8:104:GLY:H	44:G8:105:ALA:HB3	1.67	0.59
54:1G:235:C:H5'	17:8A:70:ARG:HG2	1.84	0.59
1:13:603:U:H2'	1:13:604:G:C8	2.38	0.59
9:8E:16:ARG:HB2	9:8E:64:THR:HG23	1.84	0.59
46:I8:23:VAL:HG13	46:I8:38:VAL:HG22	1.84	0.59
13:4A:14:ARG:H	13:4A:44:ARG:HH11	1.50	0.59
32:69:3:VAL:HG12	32:69:38:LEU:HA	1.84	0.59
40:C8:110:VAL:HG12	40:C8:114:LYS:HE3	1.85	0.59
5:4E:147:ASP:OD1	5:4E:147:ASP:N	2.36	0.59
24:14:548:A:C5	24:14:549:G:H1'	2.37	0.59
24:1H:50:U:H3'	24:1H:51:G:H5'	1.85	0.59
22:3K:17:OMG:O2'	22:3K:66:G:N2	2.36	0.59
41:D8:44:LYS:O	41:D8:46:VAL:N	2.34	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
30:49:56:ALA:HA	30:49:153:ARG:HH21	1.67	0.59
24:14:729:G:C6	27:19:208:LYS:HB2	2.37	0.59
24:1H:2688:U:OP1	24:1H:2713:A:N6	2.36	0.59
2:12:118:LEU:HB3	2:12:142:LEU:HD12	1.83	0.59
34:68:65:THR:OG1	34:68:69:ILE:HD11	2.03	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
24:1H:2292:C:P	38:A8:17:ARG:HH22	2.25	0.59
24:1H:761:A:OP2	57:1H:4065:HOH:O	2.17	0.59
24:1H:1434:A:H61	24:1H:1558:A:H61	1.48	0.59
35:35:63:PRO:HD3	53:M5:27:THR:HG22	1.83	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
24:1H:321:G:O3'	29:31:168:ARG:NH2	2.35	0.59
22:2L:19:C:O2'	22:2L:21:A:OP1	2.14	0.59
32:69:72:LEU:HD11	32:69:107:VAL:HG11	1.84	0.59
29:39:18:ARG:HG2	29:39:19:GLU:H	1.68	0.59
41:D8:91:TYR:HD1	41:D8:91:TYR:H	1.50	0.59
37:98:79:LEU:HA	37:98:83:ILE:HD12	1.85	0.59
54:1G:1347:G:O6	9:82:10:ARG:NH2	2.36	0.59
26:71:20:TYR:HB2	26:71:224:ILE:HG22	1.85	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
24:1H:1399:C:N4	57:1H:4494:HOH:O	2.34	0.59
24:1H:805:G:O4'	35:78:38:GLN:NE2	2.36	0.59
35:78:19:VAL:CG2	35:78:27:HIS:HB2	2.33	0.59
24:1H:1013:C:N4	24:1H:1149:G:H1	2.01	0.59
54:1G:1298:C:H4'	54:1G:1299:A:C8	2.38	0.59
20:BI:49:ALA:HA	20:BI:52:ALA:HB3	1.85	0.59
54:1G:547:A:OP2	4:32:2:GLY:HA2	2.02	0.59
41:D8:19:LYS:HG3	41:D8:95:LEU:HD23	1.85	0.59
1:13:667:G:H4'	15:6I:51:HIS:CE1	2.38	0.59
24:1H:1406:U:H2'	24:1H:1407:C:C6	2.38	0.59
24:14:1454:U:OP1	37:55:77:ARG:NH1	2.29	0.59
42:E8:1:MET:HB3	42:E8:64:MET:HE2	1.85	0.59
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:1076:C:H42	54:1G:1081:G:H1	1.50	0.58
35:35:39:LYS:HA	35:35:45:LEU:HD13	1.85	0.58
4:3E:13:ARG:HB3	4:3E:33:MET:HE3	1.85	0.58
54:1G:501:C:OP1	12:3A:117:ARG:NH2	2.33	0.58
3:2E:72:LYS:HZ3	3:2E:75:VAL:HG21	1.68	0.58
54:1G:603:U:H2'	54:1G:604:G:C8	2.37	0.58
15:6A:16:ALA:HB1	15:6A:21:ASP:HB3	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
1:13:1226:C:H5"	13:4I:96:LEU:HD11	1.85	0.58
26:71:7:TYR:HA	26:71:10:LEU:HD22	1.85	0.58
30:49:143:GLU:HA	50:15:28:LYS:HD2	1.85	0.58
19:AA:10:PHE:HB2	19:AA:39:THR:OG1	2.03	0.58
27:19:201:HIS:O	27:19:204:ILE:HG13	2.02	0.58
48:G5:4:SER:HB3	48:G5:5:GLU:OE2	2.03	0.58
28:21:31:CYS:HB3	28:21:49:LEU:HB3	1.84	0.58
38:A8:11:LYS:HD2	38:A8:15:ARG:NH2	2.17	0.58
24:1H:1141:U:H6	33:58:63:THR:HG1	1.50	0.58
34:25:4:PRO:HA	34:25:21:CYS:O	2.03	0.58
54:1G:1057:G:OP1	3:22:154:SER:OG	2.20	0.58
24:14:1110:G:H2'	24:14:1111:A:H8	1.68	0.58
45:H8:107:THR:OG1	45:H8:144:LEU:N	2.33	0.58
13:4I:59:TYR:O	13:4I:63:THR:OG1	2.17	0.58
24:14:654(D):G:H1	24:14:654(Q):C:H42	1.50	0.58
5:42:43:LEU:HD13	5:42:109:ILE:HD11	1.84	0.58
54:1G:108:G:H5"	54:1G:109:A:H5"	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:75:64:ARG:HD2	39:75:73:GLU:HG3	1.85	0.58
24:1H:459:U:H5''	52:P8:40:TRP:CD2	2.37	0.58
49:L8:43:ILE:O	49:L8:47:VAL:HG23	2.03	0.58
7:6E:46:ALA:HB2	7:6E:117:ALA:HB1	1.84	0.58
24:1H:2137:C:H42	24:1H:2154:G:H1	1.50	0.58
1:13:1075:C:H5'	2:1E:103:THR:HG21	1.85	0.58
25:16:15:A:H1'	25:16:109:G:C5	2.37	0.58
44:G8:49:VAL:HG21	44:G8:55:TYR:HE1	1.68	0.58
24:1H:2303:G:O2'	30:41:132:ASN:HB2	2.02	0.58
33:58:40:PRO:HB3	40:C8:68:ALA:HB2	1.85	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
2:1E:17:PHE:HA	2:1E:44:LEU:HD11	1.84	0.58
30:49:135:LEU:HB2	30:49:155:MET:HG2	1.86	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
1:13:673:G:H5''	6:5E:87:ARG:NH1	2.18	0.58
54:1G:1226:C:H4'	19:AA:80:TYR:OH	2.02	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
32:61:57:ARG:HA	32:61:60:GLU:HB2	1.84	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
52:L5:10:ARG:O	52:L5:14:LYS:HG2	2.03	0.58
45:H8:4:ARG:HA	45:H8:58:VAL:HB	1.85	0.58
1:13:127:G:O2'	17:8I:2:PRO:O	2.19	0.58
48:K8:42:GLY:O	48:K8:44:LEU:N	2.37	0.58
36:45:47:ILE:O	36:45:50:ALA:N	2.36	0.58
54:1G:1412:C:H2'	54:1G:1413:A:C8	2.39	0.58
49:L8:35:ARG:HG2	49:L8:37:LEU:HD23	1.85	0.58
16:7A:14:ASN:OD1	16:7A:42:ARG:NH2	2.36	0.58
54:1G:859:A:H2'	54:1G:860:A:O4'	2.03	0.58
22:2K:15:G:H21	22:2K:20:C:N4	2.01	0.58
24:14:1019:U:HO2'	24:14:1021:A:H2	1.52	0.58
35:78:50:ARG:HD3	53:Q8:60:LEU:HD21	1.86	0.58
30:49:108:ASN:OD1	50:I5:37:SER:OG	2.20	0.58
24:14:273(F):C:H3'	24:14:274:G:H5''	1.85	0.58
26:71:212:VAL:HG21	26:71:226:PRO:HB3	1.86	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
46:E5:27:GLU:OE1	46:E5:69:PHE:N	2.30	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BA:33:ILE:O	20:BA:37:SER:OG	2.20	0.58
25:1J:93:C:H2'	25:1J:94:C:H6	1.67	0.58
24:1H:1639:U:H4'	24:1H:2699:C:H4'	1.86	0.58
3:22:181:ASN:HB3	3:22:205:GLY:O	2.04	0.58
24:1H:827:U:H5'	24:1H:828:U:O5'	2.02	0.58
31:59:46:GLU:HB2	31:59:49:VAL:HG23	1.85	0.58
34:25:113:LYS:HE3	34:25:117:LEU:HD11	1.86	0.58
22:3L:57:C:H5''	22:3L:59:A:OP2	2.04	0.58
24:14:2212:A:H1'	24:14:2215:G:C4	2.39	0.58
24:14:2142:C:H2'	24:14:2143:C:C6	2.39	0.58
35:78:18:ARG:O	35:78:19:VAL:HG13	2.03	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
35:35:23:PRO:HB3	41:95:80:GLN:HG3	1.85	0.58
24:14:2114:A:H2'	24:14:2168:G:O2'	2.03	0.58
24:1H:2228:G:OP1	27:11:261:LYS:NZ	2.37	0.58
16:7A:75:ARG:O	16:7A:78:GLY:N	2.32	0.58
36:45:109:VAL:HG23	36:45:114:ALA:HB2	1.85	0.58
4:3E:156:GLU:O	4:3E:160:GLN:HG3	2.03	0.58
24:1H:2712:U:H1'	24:1H:2712(A):A:C8	2.38	0.58
25:1J:15:A:H5'	25:1J:16:G:N7	2.18	0.58
24:1H:751:A:OP1	57:1H:3886:HOH:O	2.16	0.58
2:1E:6:THR:OG1	2:1E:7:VAL:N	2.37	0.58
54:1G:1289:A:OP1	21:1B:9:ARG:NH2	2.37	0.58
26:71:44:HIS:CE1	26:71:172:HIS:HB3	2.38	0.58
54:1G:352:C:O2'	54:1G:354:G:OP1	2.21	0.58
22:2L:17:OMG:N2	22:2L:64:PSU:O4	2.36	0.58
24:14:576:U:H5	57:14:3733:HOH:O	1.86	0.58
24:1H:2291:U:H5''	24:1H:2380:C:O2'	2.03	0.58
49:H5:26:LEU:HD21	49:H5:46:ASN:HB2	1.86	0.58
2:12:70:PHE:O	2:12:93:VAL:N	2.33	0.58
9:8E:4:TYR:CZ	9:8E:88:TYR:HB2	2.39	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
8:7E:129:VAL:HG23	8:7E:130:GLY:H	1.69	0.58
26:79:25:ALA:HA	26:79:28:LEU:HB3	1.86	0.58
24:1H:1019:U:OP1	24:1H:1035:U:O2'	2.14	0.58
39:B8:74:ARG:HH11	39:B8:74:ARG:HB3	1.69	0.58
9:8E:93:ARG:HA	9:8E:96:LEU:HB2	1.86	0.58
24:14:242:G:O5'	53:M5:3:LYS:HE3	2.03	0.58
27:11:206:LEU:O	27:11:211:ARG:HD3	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:B8:7:ILE:CG2	39:B8:9:LEU:HB2	2.33	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
54:1G:1004:A:O4'	54:1G:1024:G:O2'	2.22	0.58
44:G8:29:GLU:HB3	44:G8:38:ILE:HG23	1.86	0.58
50:I5:56:VAL:HG13	50:I5:57:GLU:HG3	1.86	0.58
25:16:104:A:OP1	45:H8:72:ARG:NH1	2.37	0.58
27:19:148:GLU:HB2	27:19:151:LYS:HD2	1.85	0.58
24:1H:532:A:N7	24:1H:2021:C:O2'	2.25	0.58
9:8E:110:GLU:OE2	9:8E:113:LYS:NZ	2.36	0.58
24:14:1202:C:H42	24:14:1243:G:H1	1.51	0.58
22:3L:14:A:H3'	22:3L:15:G:C5'	2.34	0.58
24:14:31:C:OP1	57:14:3946:HOH:O	2.17	0.58
24:14:2445:G:OP1	29:39:74:ARG:NH2	2.36	0.58
10:1I:51:ARG:HG3	14:5I:45:ARG:NH1	2.19	0.58
24:1H:1021:A:C8	24:1H:1021:A:H3'	2.38	0.58
3:22:32:LEU:HD22	3:22:59:ARG:HH22	1.68	0.58
44:G8:94:LYS:HZ2	44:G8:95:LYS:H	1.52	0.58
54:1G:1003:G:O6	54:1G:1035:A:N6	2.37	0.58
39:B8:98:LYS:HB3	39:B8:100:TYR:CE2	2.38	0.58
54:1G:1469:G:N7	57:1G:1813:HOH:O	2.32	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
1:13:502:G:OP1	12:3I:118:SER:HB3	2.04	0.58
50:M8:10:VAL:HG22	50:M8:11:PRO:HD2	1.85	0.58
24:14:1871:A:H2'	24:14:1872:A:H8	1.68	0.58
24:14:1871:A:H2'	24:14:1872:A:C8	2.39	0.58
54:1G:868:C:H2'	54:1G:869:G:O4'	2.04	0.58
6:5E:41:GLU:HG2	6:5E:43:LEU:HD11	1.85	0.58
31:59:144:VAL:O	31:59:148:ILE:HG12	2.04	0.58
24:14:2183:C:H2'	24:14:2184:G:H8	1.69	0.58
24:1H:2175:C:OP1	26:7I:3:HIS:ND1	2.31	0.58
24:14:2839:G:H5'	37:55:46:GLY:HA2	1.84	0.58
24:14:817:C:OP2	57:14:3761:HOH:O	2.17	0.58
1:13:375:U:O2'	16:7I:6:LEU:O	2.22	0.58
24:1H:607:U:N3	24:1H:621:A:H2	1.99	0.58
22:3L:57:C:H4'	22:3L:58:G:O5'	2.03	0.58
43:B5:63:LYS:HE3	43:B5:63:LYS:N	2.16	0.58
24:14:363(B):G:H2'	24:14:363(C):G:H8	1.69	0.58
17:8I:15:MET:HB3	17:8I:18:THR:HB	1.86	0.58
24:1H:581:C:H2'	24:1H:582:G:H8	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1095:U:H5''	54:1G:1109:C:O2	2.04	0.58
24:14:309:G:H4'	44:C5:18:GLY:HA3	1.86	0.58
28:29:101:ARG:HD2	28:29:169:ASN:ND2	2.19	0.58
24:14:1688:U:O2	24:14:1700:A:H5'	2.04	0.58
49:H5:59:VAL:HG22	49:H5:60:GLU:H	1.69	0.58
24:1H:780:G:H21	24:1H:783:A:H62	1.50	0.58
24:1H:2840:C:H5''	37:98:53:HIS:CD2	2.38	0.58
12:3I:93:LEU:HB2	12:3I:96:VAL:CG1	2.34	0.58
24:1H:2199:A:H5'	24:1H:2205:C:OP2	2.04	0.58
54:1G:660:G:H2'	54:1G:661:G:O4'	2.04	0.58
8:7E:86:ILE:HG21	8:7E:133:LEU:HD22	1.85	0.58
33:15:62:VAL:HG22	33:15:66:LYS:HD2	1.85	0.58
24:1H:2312:U:H5'	30:41:88:ILE:HG21	1.86	0.58
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
26:79:41:VAL:HG22	26:79:216:THR:HG22	1.86	0.58
27:11:182:LEU:H	27:11:272:ALA:CB	2.12	0.57
24:14:2134:A:C2	24:14:2159:G:H1'	2.38	0.57
24:1H:1678:G:O5'	24:1H:1678:G:H8	1.86	0.57
5:42:6:PHE:HB3	5:42:34:VAL:HG13	1.86	0.57
7:62:23:VAL:O	7:62:27:ILE:HG13	2.04	0.57
24:14:2031:A:C6	24:14:2498:C:H1'	2.39	0.57
24:14:1175:U:O2'	24:14:1176:G:N3	2.33	0.57
54:1G:20:U:H2'	54:1G:21:G:O4'	2.04	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:636:U:H2'	54:1G:637:G:C8	2.39	0.57
32:61:10:GLU:O	32:61:11:ASN:ND2	2.37	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
36:88:39:PRO:HA	36:88:97:VAL:O	2.04	0.57
45:D5:52:SER:O	45:D5:52:SER:OG	2.15	0.57
24:14:2261:C:O2'	24:14:2262:U:H5'	2.04	0.57
18:9I:53:ARG:HH21	18:9I:59:SER:HA	1.68	0.57
3:22:14:ILE:HD13	3:22:15:THR:HB	1.86	0.57
24:14:191:A:H2'	24:14:192:C:C6	2.39	0.57
14:5A:26:ARG:HD3	14:5A:43:CYS:SG	2.44	0.57
24:1H:1170:G:O6	24:1H:1179:C:N4	2.28	0.57
24:1H:2685:G:OP1	34:68:78:ARG:NH2	2.37	0.57
18:9A:61:LYS:O	18:9A:65:ILE:HG13	2.04	0.57
7:6E:120:ILE:HG22	7:6E:124:LEU:HD12	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:939:G:H2'	1:13:940:C:C6	2.39	0.57
24:1H:181:A:H1'	24:1H:435:C:H5'	1.86	0.57
24:1H:654(D):G:H1	24:1H:654(Q):C:H42	1.52	0.57
53:M5:9:GLY:O	53:M5:13:ARG:HD2	2.04	0.57
54:1G:250:A:H1'	54:1G:251:G:OP2	2.04	0.57
24:14:271:G:H2'	24:14:272:G:H8	1.69	0.57
39:B8:4:GLY:O	39:B8:7:ILE:HG23	2.04	0.57
1:13:735:C:H2'	1:13:736:C:C6	2.39	0.57
2:1E:15:VAL:HG23	2:1E:210:SER:HB2	1.85	0.57
24:1H:1250:G:N7	35:78:18:ARG:NH2	2.50	0.57
25:16:15:A:O2'	25:16:109:G:N7	2.29	0.57
1:13:1007:C:H42	1:13:1022:G:H1	1.51	0.57
22:2L:73:U:H2'	22:2L:74:C:C6	2.40	0.57
1:13:1226:C:OP2	13:4I:103:THR:OG1	2.13	0.57
54:1G:660:G:H1	54:1G:745:C:H42	1.52	0.57
31:51:113:VAL:HG21	31:51:151:ILE:HG21	1.86	0.57
20:BA:10:LEU:HG	20:BA:12:ALA:H	1.68	0.57
13:4I:50:GLU:N	13:4I:50:GLU:OE2	2.37	0.57
24:1H:871:U:OP2	36:88:5:ARG:NE	2.36	0.57
8:7E:121:ASP:HB2	8:7E:125:ARG:NH2	2.20	0.57
4:3E:92:VAL:O	4:3E:96:LEU:HD22	2.04	0.57
46:I8:53:MET:HG3	46:I8:59:LEU:HD23	1.85	0.57
16:7A:14:ASN:OD1	16:7A:16:HIS:NE2	2.35	0.57
54:1G:1129:C:N4	54:1G:1141:C:H41	2.02	0.57
54:1G:963:G:H21	10:1A:55:LYS:CE	2.16	0.57
24:14:654(O):G:N2	24:14:654(P):G:O6	2.37	0.57
24:1H:249:C:P	57:1H:3613:HOH:O	2.62	0.57
45:D5:126:VAL:HG12	45:D5:163:LEU:HA	1.86	0.57
54:1G:28:G:H21	54:1G:296:U:H4'	1.69	0.57
1:13:1128:C:HO2'	1:13:1130:A:H8	1.51	0.57
44:G8:55:TYR:HB2	44:G8:58:GLY:HA3	1.85	0.57
36:45:75:THR:HA	36:45:90:VAL:H	1.69	0.57
24:1H:1587:A:H2'	24:1H:1588:C:C6	2.40	0.57
24:1H:950:G:H2'	24:1H:951:C:C6	2.40	0.57
24:14:125:G:H5''	52:L5:19:ARG:HD3	1.86	0.57
27:11:260:ARG:HG2	27:11:261:LYS:O	2.04	0.57
12:3I:93:LEU:HB2	12:3I:96:VAL:HG12	1.87	0.57
12:3A:83:VAL:HG21	12:3A:100:ILE:HD13	1.86	0.57
54:1G:110:C:O2'	16:7A:25:ARG:O	2.22	0.57
4:3E:61:LYS:HD2	4:3E:207:TYR:OH	2.04	0.57
45:D5:54:HIS:HB3	45:D5:101:PRO:HD3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:59:109:PHE:CZ	31:59:152:ARG:HB2	2.38	0.57
4:3E:155:LEU:HB3	4:3E:158:ILE:HB	1.86	0.57
1:13:280:C:H3'	1:13:281:G:H5'	1.86	0.57
27:19:253:GLN:HB3	27:19:255:LYS:NZ	2.19	0.57
1:13:1348:U:H4'	9:8E:120:ARG:HD2	1.85	0.57
24:1H:1533:C:H42	24:1H:1538:G:H1	1.53	0.57
48:G5:22:GLU:HG2	48:G5:64:LEU:HD11	1.87	0.57
16:7I:43:LYS:HG3	16:7I:48:TRP:CZ3	2.39	0.57
24:14:1291:C:H2'	24:14:1292:U:C6	2.39	0.57
24:1H:1174:A:H62	24:1H:1175:U:H5	1.51	0.57
24:14:1187:G:OP2	57:14:3762:HOH:O	2.17	0.57
24:14:2788:C:O2'	24:14:2809:A:N3	2.36	0.57
46:I8:36:ILE:CD1	46:I8:39:ARG:HG2	2.35	0.57
29:31:122:LYS:NZ	29:31:152:GLU:OE2	2.35	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
33:15:68:GLU:HG2	33:15:88:GLU:OE1	2.05	0.57
3:2E:172:ARG:HH21	3:2E:174:PRO:HG3	1.69	0.57
24:14:1337:G:H2'	24:14:1338:G:H8	1.70	0.57
35:35:82:GLY:HA2	35:35:113:LYS:O	2.05	0.57
36:88:106:VAL:HG21	36:88:114:ALA:HB1	1.86	0.57
54:1G:166:G:H2'	54:1G:167:G:H8	1.69	0.57
37:98:74:LYS:C	37:98:76:VAL:H	2.08	0.57
24:1H:1657:C:H2'	24:1H:1658:C:C6	2.40	0.57
13:4A:77:ASN:HD22	13:4A:80:ARG:HH21	1.52	0.57
24:14:2855:C:H2'	24:14:2856:C:H6	1.68	0.57
54:1G:674:G:H2'	54:1G:675:A:C8	2.39	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
33:58:58:ASP:N	33:58:58:ASP:OD1	2.24	0.57
1:13:926:G:N2	23:4K:15:A:OP2	2.37	0.57
33:15:15:LEU:HB2	33:15:134:ARG:HG2	1.87	0.57
9:82:4:TYR:OH	9:82:88:TYR:O	2.22	0.57
4:32:18:LYS:HZ1	4:32:26:CYS:HB3	1.68	0.57
39:75:5:ALA:O	39:75:6:LEU:HB3	2.05	0.57
24:1H:860:U:C5	24:1H:917:A:C2	2.91	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
24:1H:1021:A:H61	24:1H:1142(A):A:H61	1.51	0.57
51:N8:40:LYS:HG2	51:N8:46:CYS:HA	1.85	0.57
49:L8:50:VAL:O	49:L8:54:VAL:HG12	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:88:86:GLY:HA3	36:88:87:LYS:HG3	1.85	0.57
32:61:80:PRO:HB2	32:61:146:ALA:HB2	1.86	0.57
18:9I:85:LEU:HD23	18:9I:88:LYS:HB2	1.86	0.57
16:7I:39:TYR:OH	16:7I:41:PRO:HB3	2.05	0.57
24:14:71:A:H2	43:B5:31:HIS:HE2	1.47	0.57
13:4A:84:ILE:HG12	19:AA:63:THR:HB	1.85	0.57
47:F5:21:ARG:HD3	47:F5:35:THR:HG21	1.86	0.57
1:13:17:U:H2'	1:13:18:C:C6	2.38	0.57
42:E8:70:TYR:HD1	42:E8:70:TYR:H	1.51	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
54:1G:533:A:O2'	54:1G:535:A:OP2	2.14	0.57
29:31:32:LEU:HD21	29:31:105:VAL:HG13	1.85	0.57
33:58:15:LEU:HB2	33:58:134:ARG:HB2	1.87	0.57
2:1E:82:ARG:NH1	2:1E:92:TYR:HH	2.01	0.57
8:72:86:ILE:HD11	8:72:136:GLU:HG2	1.87	0.57
34:68:52:VAL:HG12	34:68:94:ARG:HH21	1.70	0.57
24:14:1777:U:O2'	24:14:1778:U:H5'	2.05	0.57
24:14:912:C:OP1	36:45:8:LYS:NZ	2.35	0.57
24:14:646:A:H2'	24:14:647:G:O4'	2.05	0.57
1:13:537:G:H5''	12:3I:113:ARG:HH12	1.70	0.57
24:14:1434:A:H61	24:14:1558:A:N6	2.03	0.57
42:A5:86:LEU:HD12	42:A5:87:PRO:HD2	1.85	0.57
41:95:16:PRO:HA	41:95:96:ILE:HG22	1.86	0.57
17:8A:48:GLU:HG3	17:8A:50:LYS:HB2	1.86	0.57
29:39:132:VAL:O	29:39:134:GLY:N	2.37	0.57
46:I8:50:ASN:HB2	46:I8:81:VAL:HG13	1.87	0.57
28:29:37:ARG:HB2	28:29:46:ALA:H	1.70	0.57
48:G5:53:LEU:O	48:G5:57:ILE:HG13	2.04	0.57
35:78:59:LEU:HD23	53:Q8:13:ARG:HD2	1.86	0.57
9:82:88:TYR:O	9:82:89:ASN:ND2	2.36	0.57
24:14:69:C:H2'	24:14:70:G:C8	2.40	0.57
44:C5:26:LYS:O	44:C5:39:VAL:HG12	2.04	0.57
54:1G:1246:C:O2	54:1G:1291:G:N2	2.31	0.57
31:51:4:ILE:HD11	31:51:7:LEU:HD11	1.87	0.57
24:14:1525:G:H2'	24:14:1526:G:C8	2.40	0.57
54:1G:1123:A:H4'	10:1A:36:GLY:HA3	1.85	0.57
24:14:494:G:OP1	42:A5:8:ARG:NH1	2.38	0.57
24:1H:2855:C:H2'	24:1H:2856:C:H6	1.68	0.57
24:1H:1036:G:N2	24:1H:1119:C:O2	2.36	0.57
2:12:162:ILE:HD11	2:12:184:VAL:HG22	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:864:G:C6	24:14:865:C:N4	2.73	0.57
24:1H:2147:G:H2'	24:1H:2148:G:O4'	2.05	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
1:13:1256:A:H4'	1:13:1258:G:C4	2.40	0.57
38:A8:28:VAL:HG11	38:A8:98:VAL:HG13	1.86	0.57
22:2K:64:PSU:O2'	22:2K:66:G:N7	2.34	0.57
24:14:1359:A:N7	24:14:1372:U:O4	2.38	0.57
8:7E:77:GLU:HG2	8:7E:78:GLN:H	1.69	0.57
24:14:363(B):G:H2'	24:14:363(C):G:C8	2.40	0.57
39:75:10:VAL:HG12	39:75:11:GLU:H	1.69	0.57
24:1H:1365:A:P	47:J8:41:ARG:HH22	2.28	0.57
24:14:1048:A:H61	24:14:1112:G:HO2'	1.53	0.57
17:8I:68:ARG:H	17:8I:70:ARG:NH1	2.03	0.57
14:5I:27:CYS:HB2	14:5I:29:ARG:HG2	1.87	0.57
29:31:29:ASN:H	29:31:112:MET:HE3	1.68	0.57
31:59:8:PRO:HG2	31:59:69:ARG:HH21	1.68	0.57
20:BA:67:ALA:HA	20:BA:73:HIS:H	1.70	0.57
32:69:87:LYS:O	32:69:87:LYS:HD2	2.04	0.57
1:13:1429:C:H2'	1:13:1430:C:C6	2.40	0.57
24:14:2131:G:H5'	24:14:2132:U:H5''	1.85	0.57
24:14:1742:C:H5'	24:14:1743:G:OP2	2.04	0.57
22:3L:62:G:N2	22:3L:70:C:O2	2.33	0.57
24:1H:300:A:H2'	24:1H:334:C:H1'	1.87	0.57
24:14:989:G:OP2	49:H5:11:SER:OG	2.23	0.57
54:1G:142:G:H1	54:1G:221:C:H42	1.52	0.57
14:5I:37:PHE:CE1	14:5I:53:LEU:HD13	2.40	0.57
31:59:10:PRO:HG2	31:59:50:VAL:HG13	1.87	0.57
41:95:37:VAL:HG21	41:95:56:SER:HA	1.86	0.56
29:39:122:LYS:HD2	29:39:191:ARG:HB3	1.87	0.56
24:14:1416:G:HO2'	24:14:1417:C:P	2.27	0.56
3:2E:47:LEU:HD11	3:2E:76:VAL:HG12	1.86	0.56
19:AA:9:VAL:HB	19:AA:11:VAL:HG23	1.87	0.56
16:7I:39:TYR:CZ	16:7I:41:PRO:HB3	2.40	0.56
24:1H:651:G:OP1	53:Q8:19:SER:HB3	2.04	0.56
24:1H:1435:G:H1	24:1H:1557:C:H42	1.50	0.56
45:D5:141:VAL:HG13	45:D5:150:LEU:HD12	1.87	0.56
24:1H:320:A:OP1	29:31:135:LYS:NZ	2.38	0.56
4:32:173:TRP:CD1	4:32:174:LEU:HG	2.40	0.56
53:Q8:29:LYS:HD3	53:Q8:44:LYS:O	2.05	0.56
24:14:780:G:N2	24:14:783:A:H62	1.98	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1102:C:H2'	24:1H:1103:A:C8	2.40	0.56
1:13:738:C:H2'	1:13:739:C:C6	2.40	0.56
24:14:1048:A:H2	24:14:1112:G:H21	1.51	0.56
1:13:788:U:H3	1:13:792:A:HO2'	1.54	0.56
35:78:19:VAL:HG12	35:78:21:ARG:N	2.20	0.56
35:35:39:LYS:CG	35:35:45:LEU:HD22	2.35	0.56
24:14:336:C:H5''	44:C5:6:HIS:HD2	1.70	0.56
24:1H:320:A:H2'	29:31:136:THR:HG21	1.86	0.56
54:1G:1365:G:H2'	54:1G:1366:C:H6	1.69	0.56
24:1H:773:U:C4'	27:11:47:GLY:HA3	2.34	0.56
54:1G:1190:G:OP2	3:22:5:ILE:HD13	2.04	0.56
39:B8:42:ILE:HG12	39:B8:84:GLN:NE2	2.21	0.56
24:14:2239:G:OP2	57:14:3492:HOH:O	2.17	0.56
24:14:1945:G:H2'	24:14:1946:U:C6	2.40	0.56
26:79:175:VAL:O	26:79:188:ASN:ND2	2.37	0.56
24:14:1593:G:H2'	24:14:1594:G:C8	2.40	0.56
11:2I:32:ILE:HD11	11:2I:68:ALA:HB1	1.87	0.56
11:2A:51:LYS:HA	11:2A:55:LYS:HD3	1.85	0.56
49:L8:21:ALA:O	49:L8:24:LYS:HB2	2.05	0.56
24:1H:314:A:C2'	24:1H:315:G:H5'	2.35	0.56
1:13:22:G:O2'	1:13:913:A:N1	2.36	0.56
43:F8:64:LYS:HD2	43:F8:73:ARG:NH2	2.20	0.56
4:32:29:PRO:HG2	4:32:30:LYS:HD3	1.86	0.56
24:14:751:A:H4'	42:A5:90:ARG:NH1	2.20	0.56
24:14:1771:C:C1'	24:14:1786:A:C8	2.87	0.56
24:14:1358:G:O2'	24:14:1359:A:H5''	2.05	0.56
27:11:8:PRO:HB3	27:11:14:ARG:CB	2.34	0.56
24:1H:2502:G:H5''	24:1H:2503:A:H5''	1.87	0.56
36:88:89:ASN:HB2	36:88:90:VAL:HG13	1.87	0.56
37:98:74:LYS:HD2	37:98:74:LYS:H	1.70	0.56
24:14:1115:G:H2'	24:14:1116:C:C6	2.41	0.56
25:16:21:G:H1	25:16:62:C:N4	2.03	0.56
2:1E:77:ALA:HB2	2:1E:211:ILE:HD13	1.86	0.56
24:14:479:A:N3	24:14:481:G:H5''	2.19	0.56
34:68:4:PRO:O	34:68:5:GLN:HB2	2.04	0.56
38:A8:34:HIS:HB2	38:A8:36:TYR:CE1	2.39	0.56
22:2L:71:C:H1'	22:2L:72:U:OP2	2.04	0.56
45:D5:125:LEU:HG	45:D5:164:ALA:HB3	1.87	0.56
24:14:579:G:H2'	24:14:580:C:C6	2.41	0.56
24:14:1568:G:P	27:19:63:ARG:HH12	2.27	0.56
10:1I:48:THR:HA	10:1I:62:HIS:HB3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:330:A:H2	24:14:1210:A:HO2'	1.51	0.56
26:79:213:TYR:CD2	26:79:221:SER:HB2	2.40	0.56
52:L5:34:ARG:NH1	52:L5:39:ARG:HD2	2.20	0.56
24:1H:871:U:P	36:88:5:ARG:HE	2.29	0.56
4:3E:154:ASN:O	4:3E:159:ARG:HG3	2.04	0.56
24:14:1537:C:H2'	24:14:1538:G:O4'	2.05	0.56
13:4A:15:VAL:HG12	13:4A:45:VAL:HG22	1.87	0.56
24:1H:2656:U:H3	24:1H:2665:A:H2	1.52	0.56
50:I5:9:LEU:HD12	50:I5:26:SER:HA	1.87	0.56
8:72:12:ARG:HD3	8:72:26:VAL:HG12	1.87	0.56
2:12:12:GLU:OE1	2:12:15:VAL:N	2.37	0.56
10:1A:4:ILE:HB	10:1A:74:ILE:HB	1.87	0.56
11:2I:58:PRO:HD3	11:2I:89:ALA:HB1	1.87	0.56
24:14:1268:A:H2'	24:14:1269:A:O4'	2.05	0.56
8:7E:6:ILE:HD11	8:7E:31:PHE:HD2	1.70	0.56
38:65:59:LYS:HG2	38:65:60:GLY:H	1.68	0.56
44:C5:38:ILE:HD13	44:C5:66:PRO:HA	1.86	0.56
1:13:902:G:H2'	1:13:903:G:H8	1.71	0.56
20:BI:14:LYS:HA	20:BI:17:ARG:HE	1.71	0.56
54:1G:1072:G:H2'	54:1G:1073:U:C6	2.40	0.56
24:1H:573:G:O2'	24:1H:574:C:H3'	2.05	0.56
54:1G:1118:C:O5'	54:1G:1118:C:H6	1.89	0.56
14:5A:40:CYS:HB2	14:5A:43:CYS:H	1.70	0.56
2:1E:141:GLU:O	2:1E:145:LEU:HB2	2.05	0.56
24:14:2688:U:H1'	24:14:2721:A:N6	2.21	0.56
4:32:5:ILE:HG22	4:32:5:ILE:O	2.05	0.56
19:AA:40:ILE:HD11	19:AA:69:HIS:HB2	1.88	0.56
1:13:939:G:H2'	1:13:940:C:H6	1.70	0.56
24:1H:2355:C:H1'	46:I8:39:ARG:HH21	1.70	0.56
10:1A:99:LYS:HD3	10:1A:100:THR:H	1.71	0.56
24:1H:1446:C:H2'	24:1H:1447:G:H8	1.69	0.56
37:55:37:THR:OG1	37:55:40:LYS:HE3	2.05	0.56
28:29:92:THR:O	28:29:95:ILE:HG13	2.04	0.56
24:1H:2:G:H22	24:1H:2901:C:H42	1.53	0.56
24:1H:589:C:H2'	24:1H:590:A:C8	2.40	0.56
31:59:129:THR:OG1	31:59:130:ARG:N	2.32	0.56
31:51:92:ILE:H	31:51:92:ILE:HD12	1.70	0.56
53:Q8:54:GLU:OE2	53:Q8:57:ARG:NH2	2.38	0.56
24:1H:2005:A:H5''	24:1H:2006:C:OP2	2.06	0.56
40:85:92:ARG:HD2	41:95:11:GLN:CD	2.26	0.56
24:14:2419:U:H5''	53:M5:34:TRP:HB3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:16:65:C:N4	25:16:108:C:H2'	2.21	0.56
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:2688:U:H5	24:1H:2720:U:OP2	1.88	0.56
32:61:88:ILE:HG22	32:61:90:GLY:H	1.69	0.56
24:1H:172:C:H2'	24:1H:173:G:H8	1.70	0.56
24:14:2563:U:O2	24:14:2565:A:H8	1.88	0.56
32:61:126:TYR:HB2	32:61:140:LEU:O	2.05	0.56
40:85:92:ARG:C	40:85:94:ASN:H	2.08	0.56
36:45:43:THR:HB	36:45:45:GLN:NE2	2.20	0.56
24:1H:248:G:H5'	24:1H:250:G:N7	2.20	0.56
24:14:581:C:H2'	24:14:582:G:C8	2.41	0.56
24:14:2572:A:H62	28:29:145:LYS:HD2	1.71	0.56
30:41:66:GLN:OE1	30:41:98:ARG:NH1	2.39	0.56
8:7E:54:ASP:O	8:7E:56:LYS:NZ	2.37	0.56
1:13:448:A:OP2	1:13:485:G:N2	2.28	0.56
40:85:52:ARG:HB3	40:85:52:ARG:HH11	1.71	0.56
52:L5:5:TRP:CD1	52:L5:7:PRO:HG3	2.41	0.56
1:13:639:G:H2'	1:13:640:A:H8	1.70	0.56
6:5E:82:ARG:HB2	6:5E:85:VAL:HG23	1.87	0.56
35:35:94:GLU:HG3	35:35:124:LYS:HD3	1.88	0.56
4:32:31:CYS:C	4:32:33:MET:N	2.59	0.56
44:C5:39:VAL:C	44:C5:41:GLY:H	2.06	0.56
24:14:1007:C:OP1	33:15:37:LYS:NZ	2.38	0.56
1:13:191(F):U:H2'	1:13:191:G:C8	2.41	0.56
49:H5:27:GLY:HA3	49:H5:35:ARG:HH21	1.70	0.56
2:12:7:VAL:HG13	2:12:8:LYS:H	1.69	0.56
30:49:56:ALA:HA	30:49:59:GLU:HG2	1.87	0.56
24:1H:459:U:H2'	24:1H:460:A:C8	2.40	0.56
24:14:2563:U:O2	24:14:2565:A:C8	2.58	0.56
1:13:626:U:H2'	1:13:627:G:H8	1.70	0.56
1:13:1103:C:H2'	1:13:1104:G:O4'	2.05	0.56
1:13:491:G:H2'	1:13:492:G:H8	1.70	0.56
24:14:755:C:H2'	24:14:756:C:C6	2.41	0.56
24:1H:575:A:OP2	24:1H:2055:C:N4	2.33	0.56
24:1H:2591:C:H2'	24:1H:2592:G:C8	2.41	0.56
36:45:108:GLY:HA3	45:D5:116:VAL:HG22	1.86	0.56
39:75:29:ARG:NH1	39:75:46:GLU:OE1	2.39	0.56
24:1H:731:C:OP2	57:1H:3638:HOH:O	2.18	0.56
45:D5:161:VAL:HG23	45:D5:162:GLU:HG2	1.87	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)
24:14:2130:U:O2'	24:14:2134:A:O4'	2.23	0.56
24:1H:956:G:N2	24:1H:959:A:H3'	2.21	0.56
24:14:488:G:N2	24:14:492:A:OP2	2.39	0.56
13:4A:77:ASN:ND2	13:4A:80:ARG:HH21	2.03	0.56
24:14:271:G:H2'	24:14:272:G:C8	2.39	0.56
24:14:755:C:H2'	24:14:756:C:H6	1.70	0.56
1:13:439:A:H2'	1:13:440:A:O4'	2.06	0.56
24:14:49:A:H5''	24:14:51:G:O4'	2.05	0.56
13:4A:49:THR:N	13:4A:52:GLU:OE1	2.30	0.56
1:13:666:G:H8	1:13:666:G:OP1	1.89	0.56
24:14:1751:C:H2'	24:14:1752:C:C6	2.41	0.56
45:D5:23:LYS:NZ	45:D5:40:ASP:HB2	2.21	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
24:1H:578:A:OP2	57:1H:4547:HOH:O	2.18	0.56
45:D5:76:LEU:HD23	45:D5:76:LEU:H	1.71	0.56
3:2E:15:THR:HG21	3:2E:181:ASN:HA	1.87	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
24:14:1899:G:H22	24:14:1902:C:N4	1.97	0.56
13:4I:107:ALA:CB	13:4I:111:LYS:HE2	2.33	0.56
1:13:1352:C:H2'	1:13:1353:G:C8	2.40	0.56
24:14:30:G:H2'	24:14:31:C:C6	2.41	0.56
37:98:97:VAL:HA	37:98:113:LEU:O	2.06	0.56
54:1G:1239:A:H4'	54:1G:1240:U:H5''	1.88	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
18:9A:58:LEU:HD22	18:9A:62:GLU:HB3	1.88	0.56
1:13:313:A:H2'	1:13:314:C:C6	2.40	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:947:G:N7	57:1H:4348:HOH:O	2.33	0.56
24:14:1287:A:N7	37:55:107:ASP:HB2	2.21	0.56
24:14:132:G:H1	24:14:147:U:H3	1.53	0.56
47:J8:80:LEU:H	47:J8:80:LEU:HD22	1.71	0.56
24:1H:2564:A:C2	24:1H:2647:U:H4'	2.40	0.56
27:11:223:GLY:HA3	27:11:231:HIS:CE1	2.41	0.56
1:13:1347:G:C8	9:8E:107:ARG:HB3	2.41	0.56
25:1J:18:G:H2'	25:1J:19:G:C8	2.41	0.56
24:1H:732:C:H3'	57:1H:4066:HOH:O	2.05	0.56
24:1H:2788:C:OP1	28:21:61:ARG:NH2	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1260:C:O5'	1:13:1284:C:H4'	2.06	0.56
17:8I:67:LYS:O	17:8I:68:ARG:HB3	2.05	0.56
24:14:2720:U:N3	24:14:2873:A:H2	2.04	0.56
25:1J:11:C:H3'	25:1J:12:C:C6	2.41	0.56
9:82:26:VAL:HG22	9:82:61:ALA:HB3	1.87	0.56
45:D5:53:ILE:HA	45:D5:71:VAL:HG13	1.88	0.56
29:39:132:VAL:HG13	29:39:133:ASN:HB2	1.87	0.56
1:13:390:C:O2'	16:7I:28:ARG:NH2	2.39	0.56
16:7I:26:ARG:NH1	16:7I:31:LYS:HB3	2.21	0.56
24:1H:1011:G:H4'	40:C8:75:ASN:ND2	2.21	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
45:D5:30:ASN:ND2	45:D5:90:VAL:O	2.39	0.55
54:1G:474:G:H2'	54:1G:475:G:H8	1.71	0.55
29:31:6:VAL:HG12	29:31:7:TYR:H	1.70	0.55
1:13:1202:G:O2'	14:5I:27:CYS:HB3	2.06	0.55
21:1B:6:ARG:HH21	21:1B:15:ARG:NH2	2.03	0.55
35:78:126:VAL:HG13	35:78:145:PRO:HG2	1.88	0.55
52:L5:19:ARG:HG2	52:L5:19:ARG:HH11	1.71	0.55
54:1G:165:C:H2'	54:1G:166:G:C8	2.41	0.55
1:13:491:G:H2'	1:13:492:G:C8	2.41	0.55
2:12:63:MET:HG3	2:12:225:ALA:HB1	1.87	0.55
24:1H:723:G:H2'	24:1H:724:U:O4'	2.06	0.55
35:78:15:ARG:HA	35:78:16:ARG:HB2	1.88	0.55
24:1H:699:A:H2'	24:1H:700:G:O4'	2.06	0.55
29:31:12:LEU:HD13	29:31:124:LEU:HD11	1.88	0.55
31:51:106:THR:HG22	31:51:112:PRO:HB3	1.87	0.55
1:13:1427:U:H2'	1:13:1428:A:C8	2.41	0.55
1:13:1149:C:H2'	1:13:1150:U:H6	1.70	0.55
24:14:2230:G:H1'	47:F5:45:ASN:HB2	1.87	0.55
7:62:71:PRO:HD3	7:62:103:TRP:HZ3	1.70	0.55
29:39:158:THR:HG23	29:39:164:ARG:HG3	1.88	0.55
54:1G:934:C:O2'	54:1G:1344:C:OP2	2.23	0.55
24:1H:2392:A:OP2	53:Q8:32:LEU:HD12	2.07	0.55
24:14:2157:G:H2'	24:14:2158:A:C8	2.33	0.55
1:13:576:G:N2	1:13:759:A:OP1	2.38	0.55
24:1H:1010:A:OP2	57:1H:4153:HOH:O	2.18	0.55
54:1G:923:A:O2'	54:1G:1399:C:OP2	2.21	0.55
24:1H:483:A:N7	24:1H:497:A:H2	2.04	0.55
50:I5:57:GLU:O	50:I5:60:GLN:NE2	2.40	0.55
22:3L:18:G:H4'	22:3L:19:C:O5'	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2144:U:H1'	24:1H:2148:G:N2	2.21	0.55
45:H8:171:ILE:HG23	45:H8:172:ALA:H	1.71	0.55
27:11:124:PRO:HG2	27:11:129:ASN:HD21	1.70	0.55
19:AI:5:LEU:HD22	19:AI:70:LYS:NZ	2.21	0.55
29:39:130:ALA:H	29:39:142:TRP:HD1	1.55	0.55
54:1G:438:G:H4'	4:32:123:HIS:ND1	2.21	0.55
28:29:76:ARG:HG2	28:29:195:LEU:HD22	1.88	0.55
24:14:1328:G:H2'	24:14:1330:C:C5	2.41	0.55
46:E5:26:TYR:O	46:E5:29:GLN:HB2	2.05	0.55
17:8A:63:ARG:HG2	17:8A:64:PRO:HD2	1.88	0.55
24:1H:2737:G:H2'	24:1H:2738:A:H8	1.69	0.55
1:13:411:A:N7	1:13:413:G:N3	2.53	0.55
54:1G:464:G:C6	54:1G:466:C:H5'	2.42	0.55
22:2L:12:C:H5	22:2L:24:G:H22	1.53	0.55
24:1H:1021:A:H8	24:1H:1021:A:H3'	1.72	0.55
30:49:64:THR:OG1	30:49:65:GLY:N	2.37	0.55
24:14:2695:C:H2'	24:14:2696:U:C6	2.41	0.55
25:16:112:G:H2'	25:16:113:C:C6	2.41	0.55
24:14:2276:G:C2	24:14:2277:G:C8	2.94	0.55
37:98:87:TYR:HE1	37:98:117:VAL:HG12	1.71	0.55
24:14:296:C:H2'	24:14:297:C:H6	1.72	0.55
54:1G:757:U:H2'	54:1G:758:G:O4'	2.07	0.55
1:13:1055:A:H2'	3:2E:156:ARG:HD2	1.88	0.55
31:59:116:GLU:O	31:59:118:PRO:HD3	2.06	0.55
24:1H:1857:G:N7	57:1H:4346:HOH:O	2.33	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
1:13:631:G:O2'	1:13:632:A:O4'	2.14	0.55
1:13:1369:C:H2'	1:13:1370:G:C8	2.41	0.55
1:13:807:A:H2'	1:13:808:C:C6	2.41	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:1472:A:H2'	24:1H:1473:G:O4'	2.06	0.55
24:1H:1113:U:H2'	24:1H:1114:G:C8	2.41	0.55
17:8A:87:LYS:HE2	17:8A:91:ARG:NH2	2.21	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
37:98:75:LEU:HA	37:98:78:LYS:HB3	1.88	0.55
24:14:2273:A:O2'	24:14:2274:A:H5'	2.07	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1878:G:H2'	24:1H:1879:C:C6	2.41	0.55
24:1H:1188:U:H4'	41:D8:79:VAL:HG22	1.88	0.55
16:7A:18:ARG:HD3	16:7A:35:LYS:HD2	1.87	0.55
25:1J:29:A:H2'	25:1J:30:C:O4'	2.07	0.55
4:3E:108:LEU:HB3	4:3E:110:PHE:CD1	2.41	0.55
24:14:1505:C:H2'	24:14:1506:C:C6	2.42	0.55
24:1H:1950:G:N2	57:1H:3995:HOH:O	2.39	0.55
24:14:2376:A:OP1	24:14:2376:A:H8	1.90	0.55
11:2I:73:MET:SD	11:2I:102:GLY:HA3	2.46	0.55
24:14:2130:U:H2'	24:14:2158:A:N1	2.21	0.55
24:14:1021:A:H61	24:14:1142(A):A:H61	1.55	0.55
24:1H:1332:G:H21	24:1H:1610:A:H8	1.54	0.55
4:32:153:ARG:HH12	4:32:181:MET:HB2	1.72	0.55
24:1H:2402:C:H2'	24:1H:2403:C:H5	1.70	0.55
54:1G:1273:G:H3'	54:1G:1274:G:C8	2.42	0.55
54:1G:1250:A:H2'	54:1G:1251:A:C8	2.42	0.55
1:13:93:U:H2'	1:13:95:G:O4'	2.06	0.55
24:14:2037:G:H2'	24:14:2038:G:C8	2.41	0.55
29:39:8:GLN:HG2	29:39:124:LEU:HD11	1.88	0.55
24:14:882:G:O6	24:14:894:C:N4	2.39	0.55
24:1H:2175:C:O2'	26:71:219:GLY:O	2.25	0.55
12:3I:93:LEU:O	12:3I:96:VAL:HG12	2.06	0.55
1:13:536:C:H2'	1:13:537:G:C8	2.41	0.55
28:21:108:SER:OG	28:21:163:GLU:HG2	2.06	0.55
45:D5:120:ILE:HG23	45:D5:173:ALA:HB2	1.89	0.55
24:14:924:C:H2'	24:14:925:C:C6	2.41	0.55
1:13:304:U:H2'	1:13:305:G:C8	2.42	0.55
24:1H:2230:G:H1'	47:J8:45:ASN:HB2	1.86	0.55
8:72:16:ALA:HB2	8:72:24:THR:HG21	1.87	0.55
25:1J:119:A:H8	25:1J:119:A:O5'	1.89	0.55
1:13:814:A:N7	1:13:816:A:C4	2.74	0.55
24:1H:1607:C:H4'	24:1H:1608:A:O5'	2.07	0.55
54:1G:996:A:H2'	54:1G:997:U:O4'	2.07	0.55
24:1H:1786:A:C2	24:1H:2606:C:H1'	2.40	0.55
24:14:2808:U:H5''	24:14:2891:G:O6	2.06	0.55
6:5E:30:LEU:HB3	6:5E:35:ALA:HB3	1.88	0.55
22:2L:74:C:H2'	22:2L:75:C:H6	1.72	0.55
54:1G:1033:G:H2'	54:1G:1034:G:H8	1.72	0.55
2:1E:71:VAL:HG23	2:1E:164:VAL:HG22	1.89	0.55
46:I8:23:VAL:HB	46:I8:26:TYR:HE1	1.72	0.55
24:1H:1762[B]:A:N1	57:1H:3693:HOH:O	2.33	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1070:U:H2'	1:13:1071:C:H6	1.71	0.55
24:14:75:G:H4'	48:G5:55:ARG:NH2	2.22	0.55
24:1H:1435:G:H8	24:1H:1435:G:O5'	1.90	0.55
24:14:1327:C:OP2	57:14:3721:HOH:O	2.18	0.55
37:98:117:VAL:HG22	37:98:118:GLU:H	1.71	0.55
54:1G:728:A:H2'	54:1G:729:A:C8	2.42	0.55
10:1A:17:ASP:OD2	10:1A:70:ARG:NH1	2.40	0.55
45:H8:48:PHE:HA	45:H8:51:ALA:HB3	1.88	0.55
24:1H:1929:G:H4'	24:1H:1930:G:OP1	2.06	0.55
54:1G:129(A):G:C6	54:1G:188:U:H4'	2.42	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
32:61:123:LEU:HD23	32:61:142:VAL:HB	1.89	0.55
35:78:59:LEU:HD11	53:Q8:10:ALA:HB2	1.88	0.55
39:B8:21:GLU:OE1	39:B8:91:ARG:NH2	2.40	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
36:88:17:LEU:HB3	36:88:39:PRO:HB2	1.88	0.55
24:14:988:A:P	49:H5:11:SER:HB2	2.47	0.55
53:Q8:54:GLU:HB3	53:Q8:57:ARG:HH21	1.71	0.55
37:98:70:LEU:O	37:98:72:ASP:N	2.39	0.55
24:1H:176:G:O2'	24:1H:177:G:H5'	2.07	0.55
1:13:353:A:H5'	1:13:353:A:H8	1.70	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
2:1E:237:ALA:O	2:1E:239:VAL:N	2.39	0.55
40:C8:106:PHE:HA	40:C8:109:LEU:HD12	1.89	0.55
44:C5:97:ARG:CZ	44:C5:104:GLY:H	2.19	0.55
42:A5:29:LEU:HD21	42:A5:33:ARG:NH2	2.20	0.55
54:1G:986:A:H1'	19:AA:54:GLY:O	2.06	0.55
37:98:12:ARG:HG2	37:98:16:HIS:ND1	2.22	0.55
25:1J:15:A:H1'	25:1J:109:G:C4	2.42	0.55
24:1H:2361:A:OP1	53:Q8:27:THR:OG1	2.16	0.55
31:51:4:ILE:HD13	31:51:4:ILE:H	1.71	0.55
21:1B:9:ARG:O	21:1B:13:ILE:HG13	2.06	0.55
35:78:27:HIS:N	35:78:27:HIS:CD2	2.73	0.55
24:14:1379:A:H4'	24:14:1380:G:OP2	2.06	0.55
24:1H:1025:G:C4	24:1H:1135:C:H1'	2.42	0.55
54:1G:1002:G:H1	54:1G:1037:C:H42	1.53	0.55
41:D8:35:LEU:C	41:D8:37:VAL:H	2.10	0.55
20:BI:20:LEU:O	20:BI:23:ARG:HB3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1678:G:H22	24:14:1989:G:H1	1.55	0.55
44:C5:3:VAL:HG11	44:C5:32:PRO:HB2	1.88	0.55
1:13:383:A:OP1	1:13:454:C:O2'	2.21	0.55
1:13:377:G:OP1	16:7I:3:LYS:HD2	2.06	0.55
54:1G:937:A:H1'	54:1G:1379:G:N2	2.22	0.55
15:6I:55:GLY:HA2	15:6I:58:MET:HE3	1.89	0.55
52:L5:29:LYS:O	52:L5:33:ARG:HG3	2.07	0.55
1:13:1292:U:OP1	7:6E:41:ARG:NH2	2.34	0.55
3:22:150:LYS:HG3	3:22:169:ALA:HB2	1.88	0.55
35:78:121:LYS:O	35:78:123:LEU:N	2.38	0.55
24:1H:1064:C:N4	24:1H:1075:C:N3	2.54	0.55
11:2A:12:ARG:HB2	11:2A:75:TYR:CD2	2.42	0.55
54:1G:538:G:O6	57:1G:1790:HOH:O	2.17	0.55
41:95:21:ARG:NH2	41:95:91:TYR:CD1	2.75	0.55
24:1H:1371:G:H2'	24:1H:1372:U:H5	1.70	0.55
1:13:674:G:H2'	1:13:675:A:C8	2.38	0.55
6:5E:87:ARG:HG2	6:5E:88:VAL:H	1.70	0.55
24:14:1012:U:OP1	40:85:70:ARG:NH1	2.32	0.55
30:49:121:ASN:O	30:49:131:TYR:OH	2.22	0.55
20:BA:79:ARG:HH21	20:BA:80:ARG:NH1	2.05	0.55
20:BA:54:LYS:HA	20:BA:57:ARG:NH2	2.22	0.55
29:39:4:VAL:HA	29:39:19:GLU:HB3	1.89	0.55
1:13:806:C:H2'	1:13:807:A:H8	1.72	0.55
24:14:2020:A:O2'	24:14:2021:C:H5'	2.06	0.55
27:11:146:GLU:HB2	27:11:189:CYS:HB3	1.89	0.55
24:14:2378:A:H4'	38:65:23:ARG:NH1	2.21	0.55
4:3E:134:ASP:O	4:3E:136:PRO:HD3	2.07	0.55
25:1J:55:U:HO2'	30:49:29:TRP:HD1	1.55	0.55
26:71:48:GLY:HA3	26:71:207:THR:O	2.06	0.55
22:2L:35:QUO:N11	22:2L:36:U:O4	2.40	0.55
54:1G:828:A:N6	54:1G:858:G:O2'	2.33	0.55
24:1H:620:G:H4'	24:1H:621:A:C5'	2.29	0.55
54:1G:963:G:N2	54:1G:972:C:N3	2.54	0.55
22:3K:49:A:H1'	22:3K:52:G:H22	1.72	0.55
24:14:1048:A:N6	24:14:1112:G:HO2'	2.05	0.55
35:35:48:PRO:C	35:35:50:ARG:H	2.08	0.55
24:1H:1290:C:H2'	24:1H:1291:C:H6	1.70	0.55
13:4A:17:VAL:O	13:4A:20:THR:OG1	2.14	0.55
35:35:86:LYS:HB2	35:35:117:GLU:O	2.06	0.55
24:1H:1177:A:H5'	24:1H:1178:C:C2	2.42	0.55
9:82:7:THR:O	9:82:83:ARG:NH1	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:39:124:LEU:O	29:39:124:LEU:HG	2.06	0.55
39:75:64:ARG:HD2	39:75:73:GLU:OE1	2.06	0.55
49:H5:6:VAL:O	49:H5:34:GLU:HA	2.07	0.55
35:35:138:LEU:HD21	35:35:144:GLU:HG3	1.89	0.55
30:41:49:ASP:OD2	30:41:51:ARG:NE	2.36	0.55
1:13:419:C:H5'	1:13:420:U:OP2	2.07	0.55
37:55:10:LEU:O	37:55:12:ARG:HG3	2.07	0.55
1:13:1240:U:H5''	1:13:1241:G:C8	2.42	0.55
24:14:2270:G:OP2	57:14:4060:HOH:O	2.18	0.55
22:2K:40:PSU:HO2'	22:3K:36:U:HO2'	1.44	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
20:BI:26:ASN:HD22	20:BI:26:ASN:H	1.55	0.54
1:13:686:U:O4	1:13:703:G:H1'	2.07	0.54
24:1H:1265:A:H8	24:1H:1265:A:OP1	1.90	0.54
24:14:1050:A:H2'	24:14:1051:G:O4'	2.07	0.54
38:65:62:LYS:HB3	38:65:97:ARG:CD	2.37	0.54
37:98:33:ARG:HD3	37:98:113:LEU:HD11	1.88	0.54
24:14:2124:G:N2	26:79:217:THR:OG1	2.40	0.54
54:1G:1238:A:H62	54:1G:1301:U:H3	1.54	0.54
24:14:1678:G:H22	24:14:1989:G:H22	1.55	0.54
39:B8:74:ARG:HD3	39:B8:76:PHE:CZ	2.43	0.54
1:13:994:A:N7	1:13:1216:G:H4'	2.22	0.54
4:3E:7:PRO:HB2	4:3E:10:ARG:HG2	1.88	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
24:14:2271:G:H5''	46:E5:20:ARG:NE	2.22	0.54
24:1H:2557:G:H2'	24:1H:2558:C:C6	2.41	0.54
24:1H:1771:C:P	57:1H:3967:HOH:O	2.65	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
24:14:1341:U:OP1	24:14:1397:U:N3	2.35	0.54
54:1G:1326:C:H2'	54:1G:1327:C:H6	1.73	0.54
31:59:26:VAL:HG21	31:59:76:VAL:HA	1.88	0.54
1:13:321:A:N6	1:13:328:C:H1'	2.22	0.54
25:16:71:C:C2	25:16:72:G:C8	2.96	0.54
1:13:1264:C:O2	1:13:1272:G:N1	2.40	0.54
24:14:931:G:O2'	49:H5:24:LYS:HE3	2.07	0.54
5:4E:78:HIS:CE1	5:4E:142:LEU:HD23	2.41	0.54
54:1G:748:C:H4'	54:1G:749:C:O5'	2.06	0.54
45:H8:45:ASP:O	45:H8:49:ARG:HG2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:82:70:LYS:O	9:82:74:ILE:HG13	2.07	0.54
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
44:C5:75:ILE:O	44:C5:80:GLY:N	2.40	0.54
54:1G:955:U:O2'	19:AA:83:HIS:ND1	2.33	0.54
9:82:23:ASN:ND2	9:82:25:LYS:HG2	2.23	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
24:14:1061:U:O2'	24:14:1064:C:N4	2.41	0.54
28:29:87:GLU:H	28:29:87:GLU:CD	2.10	0.54
54:1G:266:G:H3'	17:8A:67:LYS:HB2	1.89	0.54
24:1H:1026:U:H1'	24:1H:1027:A:O5'	2.07	0.54
6:52:7:ASN:HD22	18:9A:76:LEU:HD11	1.72	0.54
24:14:2293:C:H5''	38:65:89:ARG:NH2	2.23	0.54
1:13:344:A:H2'	1:13:346:G:N7	2.22	0.54
13:4A:92:HIS:CE1	13:4A:98:VAL:HG21	2.42	0.54
45:D5:39:VAL:HG21	45:D5:44:PHE:HD2	1.71	0.54
27:11:71:ASP:CG	27:11:103:ARG:HH22	2.10	0.54
19:AA:42:PRO:HD3	50:I5:60:GLN:HG3	1.89	0.54
24:1H:588:U:H2'	24:1H:589:C:C6	2.42	0.54
40:85:49:HIS:O	40:85:53:ARG:N	2.39	0.54
29:31:160:ASN:OD1	29:31:163:VAL:HG23	2.08	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
5:42:74:GLY:HA3	5:42:116:THR:OG1	2.07	0.54
24:14:1889:A:H2'	24:14:1890:A:C8	2.42	0.54
24:1H:2074:U:OP1	57:1H:3636:HOH:O	2.18	0.54
41:D8:1:MET:SD	41:D8:43:GLU:HG2	2.48	0.54
54:1G:15:G:H4'	5:42:24:ARG:NH1	2.22	0.54
24:1H:2287:A:H62	24:1H:2344:U:H3	1.54	0.54
1:13:881:G:P	12:3I:12:ARG:HH22	2.29	0.54
15:6A:39:LEU:CD1	15:6A:56:LEU:HB2	2.38	0.54
54:1G:1512:U:H2'	54:1G:1513:A:H8	1.72	0.54
24:1H:2393:A:H2'	24:1H:2394:C:H6	1.71	0.54
25:1J:13:A:H2'	25:1J:70:C:O2'	2.08	0.54
54:1G:1292:U:H2'	54:1G:1293:G:C8	2.41	0.54
39:75:77:PRO:HB2	39:75:80:SER:HB2	1.89	0.54
54:1G:254:G:N2	17:8A:16:GLN:OE1	2.35	0.54
24:1H:661:C:O2'	35:78:14:LYS:N	2.33	0.54
42:E8:51:LEU:HD23	42:E8:105:VAL:HG11	1.88	0.54
1:13:518:C:H2'	1:13:530[B]:G:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:612:G:O2'	24:1H:616:A:N1	2.29	0.54
24:14:2723:C:OP1	37:55:3:HIS:ND1	2.40	0.54
22:3K:43:G:H2'	22:3K:44:C:H6	1.71	0.54
54:1G:1162:C:N4	54:1G:1174:G:H1	2.04	0.54
24:1H:2271:G:H5''	46:I8:20:ARG:HD2	1.89	0.54
45:D5:138:GLU:O	45:D5:156:LYS:NZ	2.24	0.54
1:13:108:G:P	1:13:326:G:H22	2.29	0.54
24:14:31:C:N4	57:14:4108:HOH:O	2.40	0.54
46:E5:27:GLU:HB2	46:E5:69:PHE:HD1	1.71	0.54
24:14:2161:C:H2'	24:14:2162:G:H8	1.73	0.54
25:1J:91:C:OP1	45:D5:79:ARG:NH2	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
24:1H:1919:A:H5''	24:1H:1920:C:OP2	2.08	0.54
1:13:79:G:H22	1:13:88:C:H2'	1.71	0.54
15:6I:87:ILE:HG22	15:6I:88:ARG:H	1.72	0.54
54:1G:78:G:O6	54:1G:91:C:N4	2.39	0.54
18:9I:26:LEU:HB3	18:9I:42:ARG:NH2	2.22	0.54
24:1H:1680:U:O2	24:1H:1763:G:H3'	2.08	0.54
24:14:1230:C:H2'	24:14:1231:G:C8	2.43	0.54
4:32:59:ARG:O	4:32:63:LYS:N	2.34	0.54
24:1H:2484:G:H1'	36:88:124:LYS:HG3	1.90	0.54
4:32:32:ALA:O	4:32:36:ARG:N	2.37	0.54
51:J5:16:ARG:CG	51:J5:16:ARG:HH11	2.15	0.54
22:2K:21:A:H2'	22:2K:46:G:N7	2.23	0.54
1:13:1346:A:N1	1:13:1374:A:H5''	2.23	0.54
30:49:104:GLU:OE1	50:I5:23:GLU:HG2	2.08	0.54
1:13:975:A:H4'	1:13:976:G:H5''	1.88	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
46:E5:51:VAL:N	46:E5:62:LEU:HD12	2.22	0.54
18:9A:22:VAL:HG12	18:9A:56:THR:HA	1.90	0.54
22:3K:38:MIA:H2'	22:3K:39:A:H8	1.71	0.54
24:1H:2557:G:H2'	24:1H:2558:C:H6	1.73	0.54
24:14:2027:G:H2'	24:14:2028:U:O4'	2.06	0.54
7:6E:70:LYS:HD3	7:6E:96:GLN:OE1	2.08	0.54
24:14:1388:G:O2'	24:14:1389:G:H5'	2.08	0.54
1:13:115:G:H4'	1:13:116:A:O5'	2.07	0.54
24:14:973:A:H5'	24:14:1188:U:H1'	1.89	0.54
7:6E:24:THR:HA	7:6E:27:ILE:HB	1.89	0.54
25:1J:84:C:OP1	49:H5:15:TYR:OH	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1412:A:H2'	24:1H:1413:G:C8	2.42	0.54
24:14:1931:U:H6	24:14:1931:U:H5'	1.73	0.54
5:4E:83:GLU:HG2	5:4E:88:LYS:HG3	1.88	0.54
39:75:26:ASP:OD1	39:75:120:ARG:NH2	2.37	0.54
39:B8:102:ILE:HA	39:B8:105:LEU:HD22	1.89	0.54
38:65:3:ARG:NH2	38:65:4:LEU:HB2	2.19	0.54
1:13:1286:A:H5'	21:1F:26:LYS:HD3	1.89	0.54
22:3L:21:A:N6	22:3L:55:U:H3	2.06	0.54
44:G8:85:VAL:HG22	44:G8:98:VAL:HB	1.88	0.54
44:C5:87:LYS:N	44:C5:94:LYS:HB3	2.22	0.54
24:1H:1175:U:O2	24:1H:1176:G:N2	2.40	0.54
34:68:71:ARG:HH11	39:B8:74:ARG:HH21	1.55	0.54
39:B8:16:ARG:NH2	39:B8:83:ILE:O	2.41	0.54
49:L8:31:LEU:O	49:L8:32:GLN:HB2	2.08	0.54
24:14:1198:U:H2'	24:14:1199:U:C6	2.42	0.54
54:1G:1460:A:OP2	20:BA:27:LYS:NZ	2.40	0.54
42:A5:11:ARG:CZ	42:A5:98:LYS:HB3	2.37	0.54
45:D5:9:TYR:CE1	45:D5:35:ARG:HD3	2.43	0.54
44:C5:61:ILE:HD12	44:C5:63:LYS:HE2	1.90	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
54:1G:791:G:C6	54:1G:792:A:N7	2.75	0.54
24:1H:1510:A:OP1	24:1H:1511:A:H5'	2.08	0.54
1:13:475:G:H2'	1:13:476:G:O4'	2.07	0.54
45:D5:30:ASN:N	45:D5:33:LEU:O	2.38	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
9:8E:18:PHE:CD2	9:8E:62:TYR:HD2	2.24	0.54
24:14:1184:G:OP2	49:H5:30:ARG:NH2	2.40	0.54
38:65:7:TYR:HE2	38:65:11:LYS:NZ	2.06	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
32:61:11:ASN:OD1	32:61:12:LEU:N	2.40	0.54
29:39:129:PHE:HA	29:39:142:TRP:CD1	2.42	0.54
16:7I:3:LYS:O	16:7I:21:VAL:HA	2.07	0.54
54:1G:67:C:H2'	54:1G:68:G:C8	2.43	0.54
24:1H:2689:U:OP2	24:1H:2719:G:N2	2.36	0.54
24:1H:1859:A:N6	24:1H:1883:G:O2'	2.40	0.54
17:8I:75:ARG:HH12	17:8I:77:VAL:HG13	1.72	0.54
28:21:34:VAL:HG22	28:21:48:GLN:HG2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A8:15:ARG:HD2	38:A8:88:ASP:OD2	2.08	0.54
40:85:92:ARG:NH2	41:95:11:GLN:H	2.05	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
54:1G:999:U:H2'	54:1G:1000:A:C8	2.43	0.54
24:14:1858:G:H8	24:14:1858:G:OP2	1.90	0.54
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
24:14:320:A:H4'	24:14:322:A:C8	2.43	0.54
1:13:618:C:H5''	1:13:619:U:H5''	1.88	0.54
4:32:36:ARG:HG3	4:32:38:TYR:CE2	2.43	0.54
27:19:37:LEU:HA	27:19:38:LYS:CG	2.36	0.54
29:39:53:THR:HG23	29:39:55:GLY:N	2.19	0.54
24:14:2393:A:H5'	35:35:63:PRO:HG3	1.90	0.54
1:13:978:A:O2'	1:13:1322:C:N3	2.35	0.54
24:14:956:G:OP2	36:45:14:ARG:NH2	2.38	0.54
30:41:143:GLU:OE1	50:M8:26:SER:OG	2.25	0.54
24:1H:459:U:H2'	24:1H:460:A:H8	1.73	0.54
8:7E:112:LEU:HB3	8:7E:133:LEU:HA	1.89	0.54
24:14:1858:G:O2'	24:14:1884:A:N6	2.40	0.54
31:51:23:ARG:HH12	31:51:25:LYS:HG3	1.73	0.54
4:3E:191:ARG:HD3	4:3E:200:GLU:OE1	2.08	0.54
39:75:106:SER:HA	39:75:110:ILE:HD11	1.90	0.54
24:1H:671:C:OP1	35:78:42:SER:O	2.26	0.54
1:13:986:A:H1'	19:AI:55:LYS:HA	1.88	0.54
25:16:44:G:C2	25:16:48:A:C2	2.96	0.54
36:88:110:THR:HG23	36:88:113:GLN:OE1	2.07	0.54
54:1G:1129:C:H42	54:1G:1141:C:H41	1.54	0.53
24:1H:71:A:H5''	24:1H:72:U:H3'	1.88	0.53
24:14:2392:A:H2	24:14:2424:C:H42	1.55	0.53
1:13:1126:U:OP2	1:13:1281:U:H1'	2.07	0.53
24:1H:2488:A:H2'	24:1H:2489:G:O4'	2.08	0.53
29:39:20:LEU:HD13	29:39:199:TRP:CH2	2.39	0.53
24:14:1062:G:OP1	24:14:1070:A:O2'	2.15	0.53
45:D5:111:VAL:HG11	45:D5:177:PRO:HD2	1.89	0.53
20:BA:92:LEU:HA	20:BA:95:ALA:HB3	1.90	0.53
27:19:228:PRO:HD3	27:19:235:GLY:CA	2.37	0.53
1:13:37:U:O2'	1:13:500:G:H4'	2.07	0.53
36:45:74:TYR:O	36:45:90:VAL:HA	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
22:2K:38:MIA:HN6	22:2K:38:MIA:H162	1.73	0.53
28:29:112:GLY:O	28:29:159:HIS:HA	2.08	0.53
25:1J:14:U:H5'	25:1J:71:C:H1'	1.88	0.53
1:13:841:U:H5'	1:13:842:C:H5''	1.90	0.53
24:14:2408:U:H2'	24:14:2409:G:C8	2.43	0.53
24:14:213:A:H2'	24:14:214:G:O4'	2.08	0.53
24:14:1324:G:N7	57:14:3723:HOH:O	2.41	0.53
41:95:2:PHE:HB3	41:95:15:GLU:HG2	1.89	0.53
5:42:127:ASN:OD1	5:42:130:ASN:ND2	2.32	0.53
24:1H:2339:G:H2'	24:1H:2340:G:H8	1.73	0.53
54:1G:1443:G:N2	39:75:119:LYS:HB2	2.23	0.53
50:15:2:LYS:HG3	50:15:6:HIS:CG	2.43	0.53
32:61:109:ILE:HB	32:61:130:TYR:CZ	2.43	0.53
24:14:1062:G:N2	24:14:1089:G:OP2	2.42	0.53
25:16:7:G:H4'	38:A8:29:PHE:HD2	1.73	0.53
54:1G:552:U:H2'	54:1G:553:A:C8	2.41	0.53
2:1E:100:GLY:HA2	2:1E:103:THR:HB	1.90	0.53
1:13:1118:C:OP1	9:8E:104:ARG:NH1	2.40	0.53
24:14:1257:C:H4'	29:39:83:PHE:CD1	2.43	0.53
1:13:223:U:H2'	1:13:224:C:C6	2.41	0.53
1:13:1307:U:H5''	13:4I:101:GLN:HE22	1.74	0.53
30:41:29:TRP:O	30:41:33:ARG:NH1	2.38	0.53
24:14:336:C:H5''	44:C5:6:HIS:CD2	2.44	0.53
24:1H:724:U:H2'	24:1H:725:G:O4'	2.08	0.53
45:H8:5:LEU:HD21	45:H8:39:VAL:HB	1.90	0.53
24:14:1665:A:H1'	34:25:1:MET:HG3	1.90	0.53
9:82:49:PRO:HD2	9:82:81:ILE:HD11	1.89	0.53
1:13:519:C:H2'	1:13:520:A:C8	2.43	0.53
2:1E:111:ARG:HG2	2:1E:111:ARG:HH11	1.73	0.53
41:95:87:HIS:NE2	41:95:89:GLN:HB2	2.22	0.53
20:BI:26:ASN:HB2	20:BI:71:THR:OG1	2.08	0.53
6:52:7:ASN:ND2	18:9A:76:LEU:HD11	2.24	0.53
24:1H:1111:A:O2'	24:1H:1112:G:H4'	2.09	0.53
2:12:19:HIS:NE2	2:12:206:ASP:HB2	2.23	0.53
1:13:1179:A:H2'	1:13:1180:A:O4'	2.08	0.53
24:14:861:A:C2	24:14:917:A:C4	2.96	0.53
24:14:1164:G:H2'	24:14:1165:U:C6	2.44	0.53
1:13:359:U:OP1	32:69:87:LYS:HE2	2.08	0.53
2:1E:51:LEU:HD21	2:1E:201:ILE:HG23	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1409:C:O2	24:14:1594:G:N2	2.41	0.53
54:1G:555:C:H2'	54:1G:556:C:C6	2.44	0.53
57:14:4306:HOH:O	27:19:232:PRO:O	2.19	0.53
1:13:1077:G:N2	1:13:1080:A:OP2	2.41	0.53
1:13:859:A:H2'	1:13:860:A:H8	1.73	0.53
24:14:2512:C:H5''	24:14:2513:G:OP2	2.08	0.53
1:13:540:G:H2'	1:13:541:G:O4'	2.08	0.53
24:14:975:G:H1'	24:14:990:A:C2	2.43	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
17:8I:3:LYS:HD2	17:8I:60:ILE:HD11	1.89	0.53
17:8A:43:LEU:HD12	17:8A:68:ARG:HG2	1.90	0.53
36:45:36:ALA:HB2	36:45:103:MET:SD	2.48	0.53
44:C5:23:ARG:HH11	44:C5:23:ARG:HG3	1.74	0.53
3:2E:45:LYS:NZ	3:2E:45:LYS:HB2	2.23	0.53
27:19:34:VAL:HG13	27:19:61:LEU:HG	1.91	0.53
24:14:1970:A:H4'	24:14:1971:A:OP1	2.09	0.53
54:1G:664:G:P	18:9A:64:ARG:HH21	2.32	0.53
24:1H:1533:C:H2'	24:1H:1534:G:H8	1.73	0.53
12:3A:28:LYS:HD2	12:3A:33:ARG:NH2	2.23	0.53
28:29:47:VAL:HG22	28:29:48:GLN:H	1.74	0.53
30:49:98:ARG:NH2	50:I5:2:LYS:HE2	2.23	0.53
24:14:2697:G:H2'	24:14:2698:U:O4'	2.08	0.53
22:2L:1:G:H2'	22:2L:2:G:C8	2.41	0.53
6:5E:97:PHE:HD1	18:9I:31:LEU:HD12	1.73	0.53
24:14:1448:G:O2'	24:14:1529:A:N1	2.36	0.53
34:25:68:GLU:HB3	34:25:78:ARG:HH11	1.71	0.53
13:4I:87:TYR:O	13:4I:91:ARG:HG2	2.09	0.53
24:14:494:G:O6	57:14:3921:HOH:O	2.19	0.53
24:14:2542:A:H5''	24:14:2542:A:N3	2.23	0.53
50:M8:12:ALA:HA	50:M8:29:PRO:HB3	1.91	0.53
24:14:1187:G:P	57:14:3762:HOH:O	2.65	0.53
34:68:75:SER:HB2	39:B8:74:ARG:HH12	1.72	0.53
24:1H:2695:C:H2'	24:1H:2696:U:C6	2.43	0.53
4:32:187:ARG:NH2	4:32:193:ASP:OD2	2.40	0.53
32:61:67:ARG:NH2	32:61:68:LEU:HB2	2.24	0.53
52:P8:11:LYS:HE3	52:P8:15:THR:OG1	2.08	0.53
42:A5:27:LYS:NZ	42:A5:31:GLU:OE2	2.42	0.53
54:1G:298:A:H5''	54:1G:299:G:OP2	2.07	0.53
4:32:49:ARG:NE	4:32:49:ARG:HA	2.24	0.53
22:2L:37:A:N6	22:2L:38:MIA:H122	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:55:103:ARG:HD3	37:55:108:GLY:O	2.08	0.53
27:11:83:GLU:OE2	27:11:104:TYR:OH	2.23	0.53
42:E8:2:GLU:HB2	42:E8:106:ILE:HD11	1.90	0.53
1:13:451:A:N6	1:13:480:U:H2'	2.24	0.53
1:13:1022:G:H2'	1:13:1023:G:H8	1.74	0.53
32:69:103:ARG:HE	32:69:104:GLN:H	1.56	0.53
24:14:1250:G:OP2	35:35:21:ARG:NH1	2.42	0.53
24:14:2873:A:C8	37:55:5:LYS:O	2.62	0.53
18:9A:22:VAL:C	18:9A:24:ALA:H	2.12	0.53
1:13:1323:G:H2'	1:13:1324:A:C8	2.44	0.53
25:1J:12:C:H2'	46:E5:73:GLY:HA3	1.90	0.53
24:1H:795:C:H2'	24:1H:796:C:C6	2.44	0.53
24:14:863:A:H2'	24:14:864:G:C8	2.43	0.53
1:13:666:G:H5'	1:13:726:C:H1'	1.90	0.53
24:1H:2737:G:H2'	24:1H:2738:A:C8	2.44	0.53
24:1H:1693:U:OP2	24:1H:1694:C:N4	2.27	0.53
24:14:1519:G:H2'	24:14:1520:U:O4'	2.08	0.53
12:3A:76:ASN:HD21	12:3A:108:ALA:N	2.06	0.53
24:14:2370:G:N7	57:14:4202:HOH:O	2.33	0.53
24:1H:919:G:N2	24:1H:2269:A:OP2	2.41	0.53
53:M5:14:VAL:HG13	53:M5:22:VAL:HG23	1.90	0.53
24:14:307:G:H8	24:14:307:G:O5'	1.91	0.53
20:BA:100:ILE:HD12	20:BA:100:ILE:H	1.74	0.53
24:14:805:G:O5'	35:35:41:ARG:HG2	2.08	0.53
45:H8:126:VAL:HG12	45:H8:163:LEU:HA	1.90	0.53
54:1G:622:A:C8	54:1G:623:C:C6	2.96	0.53
54:1G:1142:G:H3'	54:1G:1143:G:C8	2.43	0.53
39:B8:50:ILE:HD11	39:B8:102:ILE:HD11	1.90	0.53
22:2K:15:G:N2	22:2K:57:C:H5	2.00	0.53
33:58:73:THR:HB	33:58:82:LEU:HD11	1.90	0.53
1:13:452:A:O2'	1:13:453:A:O5'	2.26	0.53
1:13:247:G:OP2	17:8I:101:ARG:HG2	2.09	0.53
52:P8:12:ARG:NH2	52:P8:44:PRO:HB3	2.22	0.53
19:AA:7:LYS:N	19:AA:7:LYS:HD3	2.23	0.53
54:1G:278:G:OP2	17:8A:41:LYS:NZ	2.29	0.53
1:13:49:U:C2	1:13:361:G:N2	2.77	0.53
54:1G:686:U:H1'	11:2A:42:TRP:HE1	1.74	0.53
24:1H:638:G:C5	24:1H:651:G:C2	2.97	0.53
24:1H:2054:A:H5''	24:1H:2055:C:O5'	2.08	0.53
9:82:73:GLN:O	9:82:77:ILE:HG23	2.09	0.53
54:1G:631:G:H2'	54:1G:632:A:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:145:LEU:O	2:12:149:LEU:HB2	2.08	0.53
27:11:226:MET:HB3	27:11:230:ASP:HB2	1.89	0.53
27:11:138:VAL:HG23	27:11:168:ARG:NH2	2.24	0.53
24:1H:1198:U:H2'	24:1H:1199:U:C6	2.43	0.53
9:82:121:ARG:NH1	9:82:122:ALA:O	2.41	0.53
24:1H:2110:G:C6	24:1H:2120:G:C8	2.97	0.53
25:16:24:G:N7	25:16:56:G:H2'	2.22	0.53
37:98:14:SER:HA	37:98:17:ARG:HH12	1.73	0.53
30:49:150:ASP:N	30:49:150:ASP:OD1	2.41	0.53
1:13:1397:C:H42	23:4K:22:A:H3'	1.72	0.53
37:98:104:ARG:HB2	37:98:111:LEU:HD11	1.90	0.53
27:19:246:PRO:HD2	27:19:255:LYS:HD3	1.90	0.53
39:75:4:GLY:O	39:75:5:ALA:HB3	2.08	0.53
24:1H:2807:G:H3'	24:1H:2808:U:H5''	1.89	0.53
21:1B:8:THR:HG22	21:1B:10:ARG:H	1.73	0.53
24:1H:1007:C:OP1	33:58:35:ARG:NH1	2.41	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
24:1H:748:G:C8	42:E8:89:ALA:HB1	2.44	0.53
24:1H:1328:G:H2'	24:1H:1330:C:C5	2.44	0.53
7:6E:84:ASN:ND2	22:3K:33:C:O3'	2.41	0.53
24:14:2556:C:H2'	24:14:2557:G:O4'	2.09	0.53
33:15:15:LEU:HG	33:15:134:ARG:HD3	1.91	0.53
2:12:12:GLU:OE1	2:12:16:HIS:N	2.36	0.53
28:29:32:PRO:HD2	28:29:50:GLY:HA3	1.89	0.53
54:1G:476:G:O2'	54:1G:477:G:H5'	2.08	0.53
24:1H:376:C:OP2	57:1H:3698:HOH:O	2.19	0.53
24:14:2608:G:OP1	57:14:4241:HOH:O	2.19	0.53
54:1G:340:U:H2'	54:1G:341:C:C6	2.44	0.53
22:2K:19:C:C3'	22:2K:20:C:H2'	2.34	0.53
54:1G:973:G:O4'	10:1A:55:LYS:HG2	2.08	0.53
1:13:1348:U:H2'	1:13:1349:A:C8	2.32	0.53
24:1H:1534:G:H2'	24:1H:1538:G:N2	2.24	0.53
1:13:1127:G:H22	1:13:1145:C:H1'	1.73	0.53
24:1H:2432:A:C5	47:J8:33:LYS:HG2	2.42	0.53
38:A8:36:TYR:N	38:A8:36:TYR:CD1	2.77	0.53
24:14:2298:A:H1'	24:14:2321:G:N2	2.24	0.53
1:13:78:G:O6	1:13:91:C:N4	2.40	0.53
24:1H:107:C:H2'	24:1H:108:U:C6	2.43	0.53
32:69:79:ILE:HD11	32:69:140:LEU:HD21	1.90	0.53
15:6I:11:VAL:HG21	15:6I:34:LEU:HD13	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BI:73:HIS:HB3	20:BI:74:LYS:HE2	1.90	0.53
24:1H:795:C:H2'	24:1H:796:C:H6	1.74	0.53
35:35:23:PRO:HB3	41:95:80:GLN:CG	2.39	0.53
31:59:109:PHE:HE1	31:59:152:ARG:HE	1.55	0.53
54:1G:1442:G:N7	54:1G:1446:A:N6	2.56	0.53
15:6A:15:PHE:HD2	15:6A:30:ALA:HB2	1.73	0.53
47:F5:93:GLU:HA	47:F5:97:LEU:HD22	1.90	0.53
24:1H:1441:G:H2'	24:1H:1442:G:C8	2.44	0.53
32:69:25:TYR:CE1	32:69:29:TYR:CD2	2.97	0.53
16:7A:34:GLU:OE1	16:7A:55:ARG:NH1	2.41	0.53
24:1H:2722:G:H2'	24:1H:2723:C:C6	2.43	0.53
26:71:30:LYS:NZ	26:71:178:ALA:O	2.40	0.53
31:51:67:LEU:O	31:51:71:LEU:HB2	2.09	0.53
24:14:1974:C:OP2	57:14:3635:HOH:O	2.18	0.53
31:51:95:ARG:HB3	31:51:95:ARG:HH11	1.74	0.53
24:1H:2256:G:N7	57:1H:4122:HOH:O	2.34	0.53
1:13:1086:U:H3	1:13:1099:G:H22	1.56	0.53
35:35:100:LEU:HD12	35:35:112:LEU:HD11	1.91	0.53
48:K8:21:LEU:HD13	48:K8:64:LEU:HA	1.90	0.53
39:B8:91:ARG:O	39:B8:116:ALA:HA	2.09	0.53
39:75:13:ARG:NH1	39:75:15:VAL:O	2.41	0.53
29:39:84:VAL:O	29:39:86:GLY:N	2.41	0.53
53:Q8:39:LYS:HG2	53:Q8:40:GLU:N	2.23	0.53
1:13:1304:G:H22	1:13:1332:A:P	2.31	0.53
54:1G:1058:G:H1	54:1G:1199:U:H3	1.57	0.53
1:13:243:A:H4'	1:13:244:U:H3'	1.91	0.53
32:69:98:ALA:HA	32:69:109:ILE:HD11	1.90	0.53
24:1H:2255:G:OP2	57:1H:4120:HOH:O	2.18	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
46:E5:72:ARG:HH21	46:E5:75:LEU:HD12	1.74	0.53
1:13:431:A:OP2	57:13:1799:HOH:O	2.19	0.53
24:1H:524:U:H4'	24:1H:554:U:H4'	1.91	0.53
37:98:65:LEU:O	37:98:68:ARG:HB2	2.09	0.53
13:4A:3:ARG:HB3	13:4A:9:ILE:HG12	1.91	0.53
24:14:588:U:H2'	24:14:589:C:C6	2.44	0.53
1:13:786:G:N7	57:13:1888:HOH:O	2.34	0.53
24:14:867:C:C5	24:14:868:U:C5	2.97	0.53
34:68:113:LYS:O	34:68:117:LEU:HD13	2.09	0.53
24:14:796:C:H2'	24:14:797:C:C6	2.44	0.53
24:1H:2098:U:H2'	24:1H:2099:U:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
24:1H:2017:U:P	57:1H:4546:HOH:O	2.65	0.53
47:F5:7:ILE:HG12	47:F5:62:VAL:CG1	2.35	0.53
25:1J:45:A:H1'	30:49:95:ARG:HH22	1.74	0.53
3:2E:131:ARG:NH1	5:4E:50:GLU:HG2	2.24	0.53
24:14:2646:C:H2'	24:14:2647:U:O4'	2.09	0.53
24:14:729:G:O5'	27:19:208:LYS:NZ	2.42	0.53
49:H5:3:ARG:HD2	49:H5:60:GLU:O	2.09	0.53
24:1H:2533:A:OP1	24:1H:2665:A:H1'	2.08	0.53
24:14:1505:C:H2'	24:14:1506:C:H6	1.74	0.53
7:6E:80:VAL:HB	7:6E:85:TYR:HE1	1.74	0.53
1:13:1218:C:H2'	1:13:1219:U:C5	2.44	0.53
24:14:304:G:H2'	24:14:305:U:C6	2.44	0.53
1:13:781:A:OP2	1:13:800:G:N1	2.27	0.53
27:11:6:PHE:HE1	27:11:18:VAL:HG23	1.74	0.53
29:31:9:ILE:HG12	29:31:20:LEU:O	2.09	0.53
1:13:1195:C:H5''	1:13:1196:U:O5'	2.09	0.53
28:29:61:ARG:HA	28:29:63:LEU:HD23	1.89	0.53
24:14:2689:U:H5''	24:14:2713:A:C2	2.45	0.52
22:2K:20:C:O2'	22:2K:21:A:OP2	2.22	0.52
24:14:2129:C:H2'	24:14:2130:U:O4'	2.09	0.52
41:95:35:LEU:CB	41:95:37:VAL:HG13	2.39	0.52
22:2L:40:PSU:O2'	22:3L:36:U:O2'	2.03	0.52
24:14:1466:G:H5'	24:14:1467:C:OP1	2.09	0.52
29:31:7:TYR:HA	29:31:22:ALA:O	2.09	0.52
22:2L:12:C:H1'	24:14:1923:U:O2'	2.10	0.52
1:13:453:A:H4'	16:7I:72:ARG:HB2	1.91	0.52
1:13:828:A:H2'	1:13:829:G:O4'	2.09	0.52
24:1H:1800:C:OP1	27:11:266:SER:OG	2.14	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
1:13:359:U:H2'	1:13:360:A:C8	2.44	0.52
28:29:105:THR:OG1	28:29:199:ARG:NH2	2.42	0.52
1:13:1218:C:H2'	1:13:1219:U:C6	2.44	0.52
24:1H:1257:C:H4'	29:31:83:PHE:CD1	2.44	0.52
24:14:1729:A:O2'	24:14:1731:G:N2	2.42	0.52
1:13:376:G:O3'	16:7I:5:ARG:NH1	2.41	0.52
22:2K:72:U:H2'	22:2K:73:U:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:11:85:ASP:OD2	27:11:88:ARG:HD2	2.09	0.52
12:3I:86:ARG:HG3	12:3I:101:VAL:HG22	1.91	0.52
24:14:2291:U:O2'	24:14:2374:C:O2	2.27	0.52
29:31:64:ILE:HG23	29:31:65:TRP:CD1	2.44	0.52
44:C5:43:ASN:HB3	44:C5:64:GLU:HA	1.91	0.52
24:14:1028:A:H2'	24:14:1029:A:C8	2.44	0.52
1:13:1371:G:O3'	9:8E:69:GLY:HA3	2.09	0.52
47:J8:64:ALA:HA	47:J8:67:ILE:HG13	1.89	0.52
54:1G:583:A:H2'	54:1G:584:G:O4'	2.09	0.52
10:1I:5:ARG:HH21	10:1I:99:LYS:HD2	1.75	0.52
40:C8:59:ARG:O	40:C8:63:VAL:HG23	2.10	0.52
16:7I:57:ARG:HA	16:7I:60:LEU:HD12	1.92	0.52
20:BI:90:GLN:HA	20:BI:93:GLU:HG2	1.91	0.52
24:14:568:U:H5''	24:14:568:U:H6	1.74	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
24:1H:2822:G:OP1	28:21:159:HIS:NE2	2.39	0.52
39:B8:7:ILE:C	39:B8:9:LEU:N	2.63	0.52
24:1H:2572:A:C8	28:21:144:ARG:HD2	2.45	0.52
54:1G:741:G:H2'	54:1G:742:G:O4'	2.09	0.52
1:13:767:A:H3'	57:13:1773:HOH:O	2.09	0.52
1:13:474:G:H5''	16:7I:81:ARG:CZ	2.40	0.52
24:14:886:C:O2'	24:14:887:A:O5'	2.26	0.52
54:1G:993:G:H1	54:1G:1045:C:H42	1.56	0.52
6:5E:35:ALA:HA	6:5E:67:MET:HB3	1.91	0.52
24:14:1050:A:C2	24:14:1051:G:H1'	2.43	0.52
1:13:712:A:O2'	1:13:713:G:H5'	2.09	0.52
44:C5:47:LYS:HA	44:C5:60:PHE:HD2	1.74	0.52
38:A8:26:LEU:HD23	38:A8:87:PHE:CD1	2.41	0.52
18:9I:59:SER:HB3	18:9I:62:GLU:HG3	1.90	0.52
1:13:626:U:C2	1:13:627:G:C8	2.97	0.52
24:14:304:G:H2'	24:14:305:U:H6	1.74	0.52
30:49:180:PHE:O	50:I5:43:TYR:OH	2.27	0.52
31:59:82:GLY:HA3	31:59:135:GLY:O	2.09	0.52
9:82:22:GLY:N	9:82:58:HIS:O	2.25	0.52
19:AI:8:GLY:HA2	50:M8:66:SER:HB3	1.91	0.52
22:2L:84:C:H2'	22:2L:85:A:C2	2.45	0.52
4:32:204:ILE:HD13	5:42:97:GLY:O	2.08	0.52
24:14:2745:C:H4'	31:59:142:GLY:O	2.08	0.52
31:59:125:VAL:HG12	31:59:127:GLU:H	1.73	0.52
1:13:609:A:H2'	1:13:610:G:H5'	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:59:80:SER:OG	31:59:81:GLU:N	2.43	0.52
5:42:80:ILE:HD12	5:42:91:LEU:HB2	1.90	0.52
25:16:89:G:H8	25:16:89:G:OP2	1.92	0.52
24:14:1351:C:H5''	57:14:3880:HOH:O	2.09	0.52
34:25:85:VAL:HG11	34:25:114:ILE:HD13	1.90	0.52
24:14:1899:G:O2'	24:14:1900:A:H5''	2.10	0.52
47:J8:86:SER:HB3	47:J8:87:PRO:HA	1.90	0.52
1:13:727:G:N2	1:13:730:G:OP2	2.39	0.52
24:1H:784:A:O4'	27:11:227:ASN:ND2	2.42	0.52
24:14:10:G:N2	24:14:2802:G:OP1	2.42	0.52
24:1H:821:A:H5''	24:1H:822:U:H6	1.74	0.52
17:8A:75:ARG:HH12	17:8A:77:VAL:HG22	1.74	0.52
54:1G:1170:A:N6	54:1G:1171:G:N3	2.56	0.52
41:95:44:LYS:C	41:95:46:VAL:H	2.13	0.52
24:14:2357:U:OP1	46:E5:20:ARG:HD2	2.09	0.52
33:15:98:VAL:HG23	33:15:99:LEU:N	2.24	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
1:13:1454:G:OP1	20:BI:39:LYS:NZ	2.43	0.52
19:AI:52:TYR:HA	19:AI:56:GLN:O	2.09	0.52
8:72:121:ASP:HB2	8:72:125:ARG:HH21	1.75	0.52
24:1H:1167:U:H2'	24:1H:1168:G:C8	2.44	0.52
3:2E:7:PRO:O	3:2E:11:ARG:HG2	2.09	0.52
40:85:65:ILE:HD11	40:85:93:LYS:HA	1.91	0.52
24:14:2064:C:H2'	24:14:2065:C:C6	2.44	0.52
28:29:38:THR:HG23	28:29:41:LYS:HB3	1.91	0.52
9:82:37:PHE:CD2	9:82:43:ALA:HB2	2.45	0.52
24:1H:1371:G:H2'	24:1H:1372:U:C5	2.45	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
46:E5:12:ASN:HA	46:E5:14:ARG:NH2	2.20	0.52
22:3L:24:G:H2'	22:3L:25:G:C8	2.41	0.52
1:13:10:A:OP2	5:4E:126:ARG:HD3	2.10	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
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
41:D8:65:GLY:O	41:D8:91:TYR:HD1	1.92	0.52
24:14:1751:C:H2'	24:14:1752:C:H6	1.73	0.52
24:1H:2689:U:P	24:1H:2719:G:H22	2.32	0.52
13:4I:64:TRP:HD1	13:4I:66:LEU:HD11	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2507:C:H5'	24:1H:2573:C:N4	2.24	0.52
24:1H:2439:A:C8	24:1H:2439:A:H5'	2.44	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
8:7E:106:GLY:HA2	8:7E:122:ARG:HH12	1.74	0.52
24:14:2830:G:O2'	24:14:2883:A:N1	2.30	0.52
2:12:212:GLN:OE1	2:12:235:SER:OG	2.25	0.52
16:7A:56:ALA:O	16:7A:60:LEU:HG	2.09	0.52
30:41:85:GLY:O	30:41:86:MET:HB2	2.10	0.52
24:14:1450:C:H2'	24:14:1451:C:C6	2.45	0.52
43:F8:31:HIS:CE1	43:F8:33:LYS:HB2	2.45	0.52
24:1H:2262:U:H4'	24:1H:2328:A:C2	2.45	0.52
24:1H:1993:U:H4'	28:21:128:SER:HB3	1.91	0.52
6:5E:19:LEU:HD23	6:5E:23:LYS:NZ	2.25	0.52
54:1G:1117:G:N2	54:1G:1180:A:H1'	2.24	0.52
24:1H:247:G:H4'	24:1H:386:G:C5	2.45	0.52
24:1H:1688:U:H2'	24:1H:1698:A:N6	2.25	0.52
1:13:975:A:H5''	1:13:975:A:C8	2.41	0.52
32:69:103:ARG:H	32:69:103:ARG:NE	2.08	0.52
54:1G:1002:G:H22	54:1G:1038:C:N4	2.08	0.52
3:2E:73:PRO:HG3	3:2E:105:GLU:HB2	1.91	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
32:61:67:ARG:O	32:61:71:ILE:HG23	2.09	0.52
43:B5:56:THR:HB	43:B5:77:LYS:HE2	1.91	0.52
24:1H:2832:U:H4'	24:1H:2833:G:H5''	1.92	0.52
24:14:659:C:H4'	29:39:100:THR:O	2.09	0.52
24:14:1098:A:H3'	24:14:1099:G:H5'	1.92	0.52
1:13:1349:A:H2'	1:13:1350:A:C8	2.43	0.52
24:1H:587:C:O2	35:78:33:ARG:NH1	2.43	0.52
54:1G:1015:A:H2'	54:1G:1016:A:H8	1.75	0.52
39:75:91:ARG:HD2	39:75:124:ASP:OD2	2.10	0.52
25:1J:88:C:N3	25:1J:89:G:N3	2.58	0.52
24:1H:2287:A:N3	24:1H:2289:G:C8	2.77	0.52
54:1G:540:G:H2'	54:1G:541:G:O4'	2.10	0.52
19:AA:63:THR:OG1	19:AA:65:ASN:OD1	2.19	0.52
24:14:1287:A:C8	37:55:107:ASP:HB2	2.45	0.52
44:C5:62:GLU:CD	44:C5:63:LYS:H	2.12	0.52
28:21:60:ASN:OD1	28:21:62:PRO:HD2	2.09	0.52
24:1H:1266:G:O2'	24:1H:2012:G:O6	2.21	0.52
11:2A:62:GLN:HB2	11:2A:93:GLN:OE1	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:559:A:H4'	54:1G:560:U:H5''	1.92	0.52
9:8E:28:VAL:HG22	9:8E:63:ILE:HB	1.91	0.52
39:75:16:ARG:HH12	39:75:83:ILE:HB	1.73	0.52
29:31:8:GLN:OE1	29:31:8:GLN:N	2.38	0.52
24:1H:761:A:H5''	57:1H:3640:HOH:O	2.10	0.52
24:14:1899:G:N2	24:14:1902:C:N4	2.44	0.52
24:14:1496:A:H8	24:14:1577:C:O2'	1.85	0.52
24:1H:1771:C:H1'	24:1H:1786:A:H8	1.73	0.52
54:1G:1357:A:N7	54:1G:1358:U:C5	2.78	0.52
24:14:2178:C:O2'	26:79:168:THR:O	2.26	0.52
35:35:47:ASP:HB3	35:35:48:PRO:C	2.30	0.52
24:14:481:G:OP2	44:C5:47:LYS:HB2	2.10	0.52
24:14:1292:U:H2'	24:14:1293:C:C6	2.43	0.52
1:13:170:U:H2'	1:13:171:A:H8	1.75	0.52
43:F8:26:TYR:CD1	43:F8:89:ILE:HD13	2.44	0.52
24:14:2113:U:C5	24:14:2114:A:H1'	2.45	0.52
26:79:26:ALA:O	26:79:29:VAL:HG12	2.10	0.52
24:14:988:A:N6	57:14:4150:HOH:O	2.33	0.52
11:2A:12:ARG:HB2	11:2A:75:TYR:HD2	1.75	0.52
24:14:1857:G:O2'	24:14:1885:A:N6	2.42	0.52
24:1H:2339:G:H2'	24:1H:2340:G:C8	2.44	0.52
25:16:29:A:P	38:A8:32:LEU:HD13	2.50	0.52
24:1H:32:C:O2'	24:1H:33:U:H5'	2.10	0.52
24:14:821:A:H2'	24:14:946:G:H5''	1.92	0.52
38:A8:67:ARG:O	38:A8:71:ARG:HG3	2.10	0.52
38:A8:39:ILE:HD13	38:A8:85:VAL:HG11	1.90	0.52
37:98:41:ALA:O	37:98:44:LEU:N	2.39	0.52
30:49:11:TYR:OH	30:49:16:ARG:NH2	2.43	0.52
22:2L:34:U:HO2'	22:2L:35:QUO:P	2.31	0.52
35:78:59:LEU:CD2	53:Q8:13:ARG:HD2	2.40	0.52
24:14:999:U:C5	24:14:1154:G:C5	2.97	0.52
24:1H:774:A:H2	24:1H:787:U:HO2'	1.56	0.52
24:14:826:U:H4'	35:35:55:ARG:HA	1.92	0.52
45:D5:10:ARG:HD2	45:D5:36:LYS:HE2	1.91	0.52
16:7A:43:LYS:HA	16:7A:48:TRP:CB	2.37	0.52
24:14:270(D):C:H2'	24:14:270(E):G:C8	2.45	0.52
24:1H:1515:C:H2'	24:1H:1516:U:H6	1.75	0.52
51:N8:40:LYS:CG	51:N8:47:PRO:HD2	2.40	0.52
27:19:58:HIS:HD2	27:19:59:LYS:H	1.57	0.52
24:14:1336:A:H2'	24:14:1337:G:C8	2.44	0.52
54:1G:79:G:H1	54:1G:90:C:H42	1.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:16:30:C:OP2	38:A8:32:LEU:HD11	2.10	0.52
7:6E:111:ARG:NH1	7:6E:113:GLU:OE2	2.42	0.52
36:88:135:ASP:HB3	36:88:137:TYR:H	1.74	0.52
22:2K:4:G:N2	22:2K:78:C:O2	2.43	0.52
54:1G:192:U:H2'	54:1G:193:C:H6	1.75	0.52
7:6E:9:VAL:HG13	7:6E:94:ARG:HE	1.74	0.52
24:14:1671:U:HO2'	24:14:1673:U:H5	1.57	0.52
29:39:25:PRO:CG	29:39:119:ARG:HB2	2.39	0.52
9:8E:86:VAL:O	9:8E:90:PRO:HA	2.09	0.52
1:13:553:A:H5''	12:3I:24:VAL:HG21	1.90	0.52
24:14:2660:A:H2'	24:14:2661:G:O4'	2.10	0.52
9:82:17:VAL:HA	9:82:63:ILE:HG12	1.92	0.52
54:1G:1321:C:C4	54:1G:1322:C:C4	2.98	0.52
24:14:2123:G:N2	26:79:42:GLU:OE1	2.42	0.52
25:1J:44:G:H1'	25:1J:47:C:N4	2.25	0.52
10:1A:11:PHE:CE1	10:1A:67:THR:HG22	2.45	0.52
24:14:2018:G:O2'	40:85:34:LYS:HE3	2.09	0.52
35:35:30:THR:CG2	35:35:35:HIS:H	2.23	0.52
24:14:1187:G:H8	24:14:1187:G:O5'	1.92	0.52
37:98:75:LEU:O	37:98:79:LEU:HB2	2.09	0.52
1:13:1216:G:H2'	1:13:1217:C:C6	2.45	0.52
24:14:2823:A:OP1	28:29:159:HIS:NE2	2.32	0.52
1:13:859:A:H2'	1:13:860:A:C8	2.44	0.52
31:51:168:PRO:HB2	31:51:170:ARG:HE	1.75	0.52
1:13:760:G:O2'	17:8I:98:LEU:HD22	2.10	0.52
24:14:932:G:OP1	49:H5:29:ARG:NH2	2.43	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
24:1H:1252:G:N3	40:C8:33:ARG:HD2	2.25	0.52
8:7E:87:SER:HA	8:7E:93:VAL:HG23	1.91	0.52
37:55:24:GLN:HB3	37:55:44:LEU:HD11	1.92	0.52
43:F8:15:GLU:CD	43:F8:15:GLU:H	2.14	0.52
36:88:2:LEU:H	36:88:2:LEU:HD12	1.75	0.52
4:32:30:LYS:CG	4:32:35:ARG:HB2	2.39	0.52
24:1H:2248:C:OP2	57:1H:3674:HOH:O	2.19	0.52
24:1H:1899:G:N2	24:1H:1902:C:C5	2.77	0.52
44:C5:27:VAL:HA	44:C5:39:VAL:HG13	1.92	0.52
35:35:57:THR:O	35:35:61:ARG:HG2	2.10	0.52
44:G8:104:GLY:N	44:G8:105:ALA:HB3	2.24	0.52
31:51:6:ARG:O	31:51:69:ARG:HB2	2.10	0.52
47:J8:78:LYS:HE2	47:J8:79:GLY:N	2.21	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1284:C:OP1	21:1F:26:LYS:NZ	2.43	0.52
24:1H:275:G:N2	24:1H:278:A:N1	2.57	0.52
24:1H:270(V):G:H2'	24:1H:270(W):G:C8	2.42	0.52
54:1G:1014:A:H4'	19:AA:14:HIS:CD2	2.45	0.52
22:2L:21:A:H1'	22:2L:22:A:H2'	1.92	0.52
1:13:692:U:O2'	1:13:694:A:N7	2.32	0.52
24:14:1568:G:OP2	27:19:63:ARG:NH2	2.43	0.52
24:1H:94:G:H21	48:K8:47:ASN:ND2	2.08	0.52
40:85:110:VAL:HG12	40:85:114:LYS:HE2	1.90	0.52
24:14:298:G:N7	57:14:3842:HOH:O	2.34	0.52
4:3E:57:ARG:HB3	4:3E:206:PHE:HB2	1.92	0.52
24:1H:1274:A:N1	24:1H:1644:C:O2'	2.37	0.52
1:13:146:G:N2	1:13:176:C:O2	2.42	0.52
4:32:112:VAL:HG12	4:32:116:GLN:OE1	2.10	0.52
31:51:104:GLU:HG3	31:51:114:VAL:HG22	1.92	0.52
24:14:2469:A:H2'	24:14:2470:G:O4'	2.09	0.52
24:1H:1339:G:H21	24:1H:1603:A:H1'	1.75	0.52
24:1H:1153:C:H2'	24:1H:1154:G:C8	2.45	0.52
22:3K:35:QUO:C4	22:3K:35:QUO:C2	2.73	0.51
35:78:59:LEU:HD21	53:Q8:10:ALA:HA	1.91	0.51
24:14:573:G:O2'	24:14:574:C:H3'	2.10	0.51
24:1H:2316:C:H1'	30:41:128:ARG:HH21	1.75	0.51
24:1H:2115:G:H1'	24:1H:2171:A:N6	2.25	0.51
54:1G:536:C:OP1	57:1G:1755:HOH:O	2.19	0.51
28:21:50:GLY:HA2	28:21:77:ILE:HA	1.92	0.51
24:1H:1668:A:OP1	34:68:5:GLN:HG3	2.10	0.51
3:2E:135:LYS:NZ	5:4E:53:LEU:HD11	2.26	0.51
24:14:2562:U:H1'	34:25:23:ARG:NH1	2.24	0.51
54:1G:328:C:H4'	54:1G:329:A:H5'	1.92	0.51
32:69:109:ILE:HB	32:69:130:TYR:CZ	2.44	0.51
54:1G:148:G:N2	54:1G:149:A:C2	2.78	0.51
54:1G:673:G:H2'	54:1G:674:G:C8	2.45	0.51
22:3L:62:G:C5	22:3L:63:5MU:H72	2.45	0.51
35:78:91:PHE:O	35:78:121:LYS:NZ	2.40	0.51
29:39:25:PRO:HG3	29:39:119:ARG:HB2	1.92	0.51
27:19:80:ALA:HB3	27:19:94:LEU:HB3	1.92	0.51
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
45:D5:99:TYR:HD2	45:D5:123:ASP:HB2	1.75	0.51
24:1H:1914:C:H2'	24:1H:1915:U:C6	2.46	0.51
24:14:1952:A:C2	34:25:22:ILE:HG23	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2048:G:N7	57:1H:4047:HOH:O	2.34	0.51
3:2E:130:VAL:O	3:2E:134:ILE:HG12	2.10	0.51
24:14:2355:C:H5''	24:14:2356:C:OP2	2.10	0.51
24:14:1607:C:H4'	24:14:1608:A:O5'	2.09	0.51
11:2A:127:LYS:H	11:2A:127:LYS:HD2	1.74	0.51
24:1H:1974:C:H3'	57:1H:3968:HOH:O	2.09	0.51
24:14:192:C:O2'	24:14:802:A:N3	2.38	0.51
24:1H:191:A:H2'	24:1H:192:C:C6	2.45	0.51
22:2K:15:G:H21	22:2K:20:C:H41	1.56	0.51
24:1H:2261:C:O2'	24:1H:2262:U:H5'	2.10	0.51
33:58:14:VAL:HG12	33:58:15:LEU:H	1.75	0.51
45:D5:73:GLN:H	45:D5:87:ASP:HB2	1.75	0.51
1:13:235:C:H5'	17:8I:70:ARG:HG2	1.92	0.51
45:H8:137:ILE:HG21	45:H8:155:LEU:HD13	1.91	0.51
25:16:73:A:C4	25:16:104:A:C2	2.99	0.51
54:1G:636:U:H2'	54:1G:637:G:H8	1.74	0.51
24:14:1337:G:H2'	24:14:1338:G:C8	2.45	0.51
24:1H:855:G:H5''	24:1H:856:C:OP2	2.11	0.51
33:15:95:PRO:O	33:15:98:VAL:HG22	2.09	0.51
24:1H:2473:U:O2'	24:1H:2474:C:O4'	2.22	0.51
3:22:90:GLU:HA	3:22:93:LYS:HB2	1.90	0.51
24:1H:1653:G:H8	24:1H:1653:G:O5'	1.94	0.51
40:C8:52:ARG:HA	40:C8:55:ARG:HG3	1.91	0.51
17:8I:54:GLY:HA3	17:8I:82:MET:HG2	1.92	0.51
27:19:4:LYS:HB3	27:19:18:VAL:HG23	1.91	0.51
24:1H:1525:G:H2'	24:1H:1526:G:H8	1.74	0.51
24:14:676:A:H8	24:14:2069:G:N2	1.85	0.51
39:B8:7:ILE:HG21	39:B8:9:LEU:HB2	1.92	0.51
1:13:1347:G:N2	1:13:1374:A:OP2	2.40	0.51
24:14:1022:G:C6	24:14:1140:C:C4	2.99	0.51
50:I5:14:ILE:HG22	50:I5:20:ASN:HB3	1.93	0.51
22:3K:20:C:H5''	22:3K:68:A:N6	2.24	0.51
24:1H:2679:A:H4'	28:21:165:VAL:HG11	1.93	0.51
24:14:769:G:H2'	24:14:770:G:H8	1.76	0.51
1:13:1133:G:H2'	1:13:1134:G:O4'	2.10	0.51
1:13:89:U:O2'	1:13:90:C:H5''	2.11	0.51
32:69:69:LYS:O	32:69:72:LEU:N	2.43	0.51
24:14:2733:A:C2	28:29:203:LYS:HA	2.45	0.51
24:1H:654(V):A:H2	24:1H:655:A:C2	2.28	0.51
54:1G:1319:A:OP1	19:AA:10:PHE:HB3	2.11	0.51
24:14:1538:G:H2'	24:14:1539:G:H8	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:61:88:ILE:HG22	32:61:90:GLY:N	2.26	0.51
45:H8:53:ILE:HG22	45:H8:71:VAL:HG22	1.92	0.51
54:1G:1244:C:H42	54:1G:1293:G:H1	1.58	0.51
24:1H:2758:A:C4	31:51:67:LEU:HD21	2.46	0.51
54:1G:575:G:O2'	54:1G:821:G:H5'	2.11	0.51
27:11:75:ILE:H	27:11:75:ILE:HD12	1.76	0.51
16:7I:15:PRO:C	16:7I:16:HIS:HD1	2.11	0.51
14:5I:4:LYS:O	14:5I:7:ILE:HG12	2.10	0.51
24:1H:455:C:N3	24:1H:473:G:H5'	2.25	0.51
24:1H:2218:G:N7	57:1H:4554:HOH:O	2.34	0.51
1:13:598:U:H4'	8:7E:94:TYR:CD2	2.46	0.51
34:68:101:PRO:HB3	34:68:122:LEU:CD1	2.39	0.51
24:14:405:U:O2'	24:14:406:G:OP1	2.23	0.51
27:19:40:THR:OG1	27:19:41:GLY:N	2.42	0.51
52:P8:8:ASN:C	52:P8:8:ASN:OD1	2.48	0.51
2:12:45:GLN:O	2:12:48:MET:HB3	2.10	0.51
40:85:83:LEU:HG	40:85:88:ILE:HD12	1.91	0.51
24:1H:1279:G:H4'	37:98:31:HIS:ND1	2.24	0.51
24:14:1771:C:O2'	24:14:1786:A:H8	1.88	0.51
27:11:231:HIS:CD2	27:11:249:PRO:HA	2.46	0.51
38:65:3:ARG:HE	38:65:4:LEU:H	1.57	0.51
24:1H:2327:A:H2'	24:1H:2328:A:H8	1.73	0.51
24:14:363:G:H2'	24:14:363(A):A:C8	2.40	0.51
30:49:95:ARG:O	30:49:99:MET:HG2	2.10	0.51
24:1H:2470:G:H5'	36:88:56:ARG:NH2	2.24	0.51
3:22:50:ALA:HB2	3:22:75:VAL:HB	1.92	0.51
27:19:65:ILE:HD13	27:19:106:ILE:HG13	1.91	0.51
16:7I:74:LEU:HD22	16:7I:79:VAL:HG21	1.93	0.51
49:H5:28:LEU:HA	49:H5:33:GLN:OE1	2.10	0.51
54:1G:512:U:H2'	54:1G:513:C:C6	2.45	0.51
34:25:2:ILE:HD12	34:25:6:THR:HG21	1.93	0.51
12:3A:110:VAL:CG2	12:3A:120:TYR:HB3	2.41	0.51
24:1H:1266:G:O5'	42:E8:15:ARG:NH2	2.43	0.51
29:31:39:TRP:CH2	29:31:106:ARG:HD2	2.45	0.51
1:13:1409:C:H2'	1:13:1410:G:H8	1.76	0.51
1:13:958:A:OP1	19:AI:79:THR:HG21	2.10	0.51
27:19:24:ILE:HG23	27:19:83:GLU:HA	1.92	0.51
24:14:874:G:N2	24:14:904:C:C2	2.79	0.51
7:6E:15:ASP:HB3	7:6E:19:GLY:N	2.25	0.51
7:62:60:LYS:HD2	7:62:63:LYS:HZ1	1.76	0.51
54:1G:1070:U:H2'	54:1G:1071:C:H6	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:8A:57:VAL:HG12	17:8A:76:LEU:HA	1.93	0.51
22:2L:32:A:H2'	22:2L:33:C:C6	2.45	0.51
57:14:3527:HOH:O	37:55:3:HIS:CD2	2.64	0.51
39:75:3:ARG:HA	39:75:4:GLY:O	2.10	0.51
24:1H:945:A:OP2	57:1H:4109:HOH:O	2.19	0.51
1:13:1346:A:H5''	9:8E:120:ARG:NH1	2.25	0.51
25:16:40:U:N3	25:16:43:C:H5''	2.25	0.51
31:51:4:ILE:O	31:51:4:ILE:HG12	2.09	0.51
28:21:119:ARG:HD2	28:21:120:TRP:CE2	2.45	0.51
24:1H:760:G:OP1	57:1H:3784:HOH:O	2.18	0.51
44:G8:55:TYR:CZ	44:G8:61:ILE:HD11	2.45	0.51
24:14:2774:C:H2'	24:14:2775:A:O4'	2.11	0.51
1:13:321:A:C2	1:13:333:G:C2	2.98	0.51
24:1H:484:C:OP1	44:G8:51:VAL:HG22	2.10	0.51
46:I8:53:MET:HG3	46:I8:59:LEU:CD2	2.41	0.51
45:H8:163:LEU:H	45:H8:163:LEU:HD23	1.76	0.51
1:13:1219:U:H2'	1:13:1220:G:H8	1.74	0.51
24:14:528:A:O2'	24:14:529:A:H5'	2.10	0.51
46:E5:21:LEU:HD21	46:E5:41:ARG:NH2	2.25	0.51
24:1H:2208:U:O2'	24:1H:2209:C:H5'	2.10	0.51
24:14:2880:C:H1'	37:55:92:GLY:HA3	1.91	0.51
10:1A:25:GLU:O	10:1A:29:ARG:HB3	2.10	0.51
3:2E:53:ALA:HB2	3:2E:115:LEU:HD13	1.93	0.51
54:1G:1402:C:H2'	54:1G:1403:C:O4'	2.11	0.51
35:78:1:MET:HE3	35:78:1:MET:O	2.09	0.51
34:25:11:ALA:HB1	34:25:99:PHE:HB2	1.93	0.51
24:14:353:G:H2'	24:14:354:G:H8	1.76	0.51
10:1I:6:ILE:HG22	10:1I:98:ILE:HG23	1.92	0.51
24:14:748:G:C8	42:A5:89:ALA:HB1	2.45	0.51
1:13:648:A:H2'	1:13:649:G:C8	2.46	0.51
15:6I:70:LEU:HD11	15:6I:77:ARG:HG3	1.93	0.51
24:1H:1113:U:H5'	31:51:2:SER:HB2	1.92	0.51
54:1G:1097:C:O2'	54:1G:1169:A:N3	2.36	0.51
54:1G:1028:C:N3	54:1G:1033:G:N2	2.47	0.51
24:14:565:C:H4'	24:14:1253:A:N6	2.26	0.51
22:2L:10:C:H41	22:2L:26:G:H1	1.57	0.51
2:1E:187:LEU:HD23	2:1E:201:ILE:O	2.10	0.51
54:1G:32:A:C2	54:1G:33:A:C4	2.98	0.51
45:D5:7:ALA:O	45:D5:8:TYR:CG	2.63	0.51
12:3I:11:VAL:HG13	17:8I:29:HIS:CD2	2.46	0.51
24:14:1956:U:H1'	24:14:2552:U:OP1	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:116:GLU:HG2	2:12:153:ARG:NH2	2.26	0.51
11:2I:33:THR:OG1	11:2I:34:ASP:O	2.26	0.51
10:1A:44:VAL:HG22	10:1A:66:ARG:HB3	1.93	0.51
24:14:1146:C:H2'	24:14:1147:C:H6	1.76	0.51
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
54:1G:1508:G:H2'	54:1G:1509:C:O4'	2.10	0.51
24:14:1630(A):C:H2'	57:14:3553:HOH:O	2.11	0.51
24:1H:2583:G:OP2	57:1H:3765:HOH:O	2.19	0.51
24:1H:1771:C:C1'	24:1H:1786:A:H8	2.24	0.51
1:13:745:C:H2'	1:13:746:A:H8	1.72	0.51
24:1H:1508:A:H4'	24:1H:1509:C:C1'	2.41	0.51
24:14:780:G:H21	24:14:783:A:N6	2.00	0.51
24:1H:2791:C:H2'	24:1H:2792:G:C8	2.46	0.51
34:25:73:ASP:OD1	34:25:75:SER:HB3	2.10	0.51
54:1G:1109:C:H2'	54:1G:1110:A:O4'	2.10	0.51
1:13:263:A:OP2	20:BI:79:ARG:NH1	2.44	0.51
24:14:620:G:H5'	24:14:620:G:N3	2.26	0.51
24:14:2537:U:H2'	24:14:2538:C:H6	1.75	0.51
32:69:76:THR:HG23	32:69:140:LEU:HD13	1.93	0.51
24:1H:2442:C:H2'	24:1H:2443:C:C6	2.46	0.51
24:14:2638:G:O2'	24:14:2639:A:H8	1.94	0.51
40:85:49:HIS:HA	40:85:52:ARG:HB2	1.93	0.51
24:14:1389:G:H2'	24:14:1390:U:C6	2.46	0.51
37:98:30:THR:HG22	37:98:31:HIS:CD2	2.46	0.51
31:51:154:PRO:HB3	31:51:163:TYR:CE2	2.45	0.51
24:1H:2388:A:H2'	24:1H:2389:G:H5'	1.92	0.51
3:22:111:LEU:HD22	3:22:146:ALA:HB2	1.93	0.51
29:39:168:ARG:HG2	29:39:175:THR:HG21	1.93	0.51
24:1H:2776:A:H4'	24:1H:2777:G:H5''	1.93	0.51
15:6A:70:LEU:HD11	15:6A:77:ARG:HG3	1.92	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
3:2E:13:GLY:CA	14:5I:57:ARG:HE	2.24	0.51
12:3I:6:THR:OG1	12:3I:9:GLN:HG3	2.11	0.51
24:14:26:G:C6	24:14:27:G:N1	2.78	0.51
27:19:70:TRP:C	27:19:70:TRP:CD1	2.84	0.51
24:14:2808:U:H3	24:14:2892:A:H62	1.59	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
24:1H:2271:G:H5''	46:I8:20:ARG:NH1	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:65:62:LYS:O	38:65:65:VAL:HG22	2.11	0.51
22:2K:48:C:O2	22:2K:52:G:N2	2.42	0.51
37:98:101:ALA:HA	51:N8:44:THR:HG21	1.93	0.51
54:1G:1086:U:H2'	54:1G:1087:G:O4'	2.11	0.51
1:13:95:G:H3'	1:13:96:G:C8	2.46	0.51
24:1H:2839:G:H5'	37:98:46:GLY:HA2	1.93	0.51
24:14:71:A:C8	24:14:71:A:H5'	2.46	0.51
24:14:1389:G:H2'	24:14:1390:U:H6	1.75	0.51
1:13:376:G:H1	1:13:387:U:H3	1.59	0.51
28:29:128:SER:O	28:29:129:HIS:HB2	2.09	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
11:2I:46:GLY:HA2	11:2I:50:TYR:O	2.11	0.51
10:1A:40:LEU:HD13	10:1A:71:LEU:HB2	1.92	0.51
33:58:96:GLU:OE1	33:58:96:GLU:N	2.44	0.51
24:1H:1316:U:H2'	24:1H:1317:A:C8	2.45	0.51
32:61:84:GLY:N	32:61:89:TYR:HE1	2.09	0.51
24:1H:1512:G:H2'	24:1H:1513:C:C6	2.46	0.51
45:D5:155:LEU:HD12	45:D5:163:LEU:HD13	1.93	0.51
24:1H:1111:A:OP1	31:51:3:ARG:NH1	2.43	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
24:1H:739:G:P	57:1H:3934:HOH:O	2.68	0.51
24:14:1510:A:H3'	24:14:1511:A:H8	1.76	0.51
32:69:77:LEU:HD21	32:69:141:LYS:HD3	1.93	0.51
24:1H:924:C:H2'	24:1H:925:C:C6	2.46	0.51
12:3A:24:VAL:HG12	12:3A:98:TYR:CE1	2.46	0.51
4:32:71:SER:OG	4:32:74:GLN:HG3	2.11	0.51
16:7A:25:ARG:HH11	16:7A:25:ARG:HG3	1.76	0.51
50:I5:25:TYR:O	50:I5:26:SER:OG	2.26	0.51
24:14:1827:C:OP2	27:19:222:ARG:NH1	2.43	0.51
54:1G:79:G:N2	54:1G:91:C:N3	2.59	0.51
24:14:554:U:O2'	24:14:556:G:N7	2.38	0.51
1:13:1313:U:O4	19:AI:4:SER:HB3	2.10	0.51
24:1H:273(D):C:H2'	24:1H:273(E):U:H6	1.76	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
10:1A:6:ILE:HG23	10:1A:72:VAL:HB	1.91	0.51
1:13:255:G:H2'	1:13:256:U:H6	1.76	0.51
24:1H:1324:G:O6	57:1H:4566:HOH:O	2.17	0.51
24:14:1627:G:OP1	57:14:4252:HOH:O	2.20	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:69:C:H2'	24:14:70:G:H8	1.75	0.51
33:58:103:VAL:HG21	33:58:120:LEU:HD11	1.93	0.51
1:13:1503:A:O2'	1:13:1504:G:O5'	2.29	0.51
24:14:1570:A:H2'	24:14:1571:A:C8	2.46	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
1:13:649:G:H2'	1:13:650:G:C8	2.41	0.51
24:14:270(M):U:H1'	24:14:270(N):G:C6	2.46	0.51
28:29:55:ASN:O	28:29:57:LYS:N	2.41	0.51
54:1G:422:C:HO2'	54:1G:423:G:N2	2.09	0.51
24:1H:2329:G:H21	46:I8:41:ARG:HG3	1.76	0.51
24:1H:654(D):G:N2	24:1H:654(Q):C:N3	2.44	0.51
22:3K:37:A:H2'	22:3K:38:MIA:O4'	2.11	0.51
19:AI:5:LEU:HD22	19:AI:70:LYS:HZ1	1.76	0.51
46:E5:29:GLN:O	46:E5:67:VAL:HG23	2.10	0.51
41:D8:76:LYS:HG3	41:D8:81:TYR:CD2	2.46	0.51
24:14:2469:A:OP2	24:14:2476:A:N6	2.27	0.51
24:1H:7:G:H2'	24:1H:8:A:O4'	2.10	0.51
24:1H:2388:A:C2'	24:1H:2389:G:H5'	2.41	0.51
25:16:14:U:OP2	25:16:70:C:O2'	2.24	0.51
54:1G:46:G:O2'	54:1G:365:U:H1'	2.11	0.51
54:1G:186(D):C:H2'	54:1G:186(E):C:C6	2.46	0.51
41:D8:7:THR:HG23	41:D8:12:TYR:HE1	1.74	0.51
45:H8:76:LEU:HA	45:H8:83:PRO:HA	1.91	0.51
24:14:443:A:H1'	24:14:1201:C:O4'	2.11	0.51
54:1G:612:C:O2	54:1G:629:G:N2	2.43	0.51
24:14:2017:U:OP1	57:14:3742:HOH:O	2.19	0.51
1:13:118:U:H3'	1:13:288:A:H61	1.75	0.51
54:1G:1145:C:H4'	54:1G:1146:A:H8	1.75	0.50
1:13:957:U:H1'	1:13:960:U:C5	2.46	0.50
47:F5:87:PRO:O	47:F5:91:LYS:HB2	2.11	0.50
24:14:38:A:H2'	24:14:39:C:C6	2.46	0.50
24:14:2102:U:O2	24:14:2187:G:N2	2.42	0.50
22:3K:51:C:H3'	22:3K:52:G:O4'	2.11	0.50
52:P8:45:ALA:O	52:P8:46:VAL:HB	2.10	0.50
13:4A:108:ARG:NH1	13:4A:112:GLY:O	2.44	0.50
33:15:21:LYS:O	33:15:60:ILE:HG13	2.11	0.50
54:1G:553:A:O4'	12:3A:31:PRO:HA	2.11	0.50
54:1G:1453:G:H2'	20:BA:39:LYS:NZ	2.26	0.50
57:14:3493:HOH:O	27:19:228:PRO:O	2.19	0.50
24:14:2124:G:H2'	24:14:2124:G:N3	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:67:C:H2'	1:13:68:G:H8	1.74	0.50
32:69:140:LEU:HD12	32:69:141:LYS:N	2.26	0.50
46:E5:70:GLN:HE22	46:E5:72:ARG:HD2	1.76	0.50
22:3L:62:G:H3'	22:3L:63:5MU:H71	1.92	0.50
32:69:25:TYR:HE1	32:69:29:TYR:CD2	2.28	0.50
24:1H:38:A:H2'	24:1H:39:C:C6	2.46	0.50
1:13:178:C:H2'	1:13:179:A:O4'	2.11	0.50
39:B8:55:ASN:H	39:B8:59:THR:HB	1.76	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
37:98:42:LYS:O	37:98:45:ARG:HD2	2.11	0.50
49:H5:40:THR:HG23	49:H5:43:ILE:HG12	1.92	0.50
5:42:92:LYS:HB3	5:42:119:LEU:HB2	1.94	0.50
24:14:760:G:H2'	24:14:761:A:O4'	2.12	0.50
36:88:133:ARG:O	36:88:134:ARG:HB2	2.11	0.50
24:14:2750:A:H8	24:14:2752:C:H42	1.57	0.50
24:14:1639:U:H4'	24:14:2699:C:H4'	1.93	0.50
30:49:82:LEU:HA	30:49:86:MET:SD	2.51	0.50
24:1H:1997:G:H5''	57:1H:3991:HOH:O	2.10	0.50
49:H5:8:LEU:HD11	49:H5:23:LEU:HD13	1.92	0.50
24:1H:1065:U:N3	24:1H:1070:A:OP1	2.40	0.50
1:13:626:U:H2'	1:13:627:G:C8	2.46	0.50
22:2K:71:C:C2	22:2K:72:U:C5	2.99	0.50
21:1B:2:GLY:O	21:1B:4:GLY:N	2.44	0.50
32:61:91:SER:HB3	32:61:121:LYS:HD2	1.93	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
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
24:1H:934:G:H2'	24:1H:935:C:H6	1.76	0.50
54:1G:861:G:O2'	54:1G:874:G:O2'	2.23	0.50
24:1H:1590:U:H2'	24:1H:1591:G:C8	2.46	0.50
49:L8:7:LYS:HB2	49:L8:34:GLU:HG2	1.93	0.50
54:1G:977:A:H2'	54:1G:978:A:H5''	1.94	0.50
24:14:635:C:H2'	24:14:636:G:O4'	2.12	0.50
50:I5:21:VAL:HG22	50:I5:22:ILE:H	1.75	0.50
33:58:90:MET:HG3	33:58:94:HIS:O	2.11	0.50
2:1E:12:GLU:HB2	2:1E:16:HIS:CG	2.46	0.50
45:D5:105:VAL:HG13	45:D5:106:GLY:H	1.76	0.50
25:16:7:G:O5'	38:A8:29:PHE:CE2	2.65	0.50
24:14:1341:U:C5	24:14:1395:A:H2	2.30	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:142:G:H2'	1:13:143:A:C8	2.45	0.50
45:D5:59:LEU:C	45:D5:61:LEU:H	2.13	0.50
24:1H:2128:C:H2'	24:1H:2129:C:H6	1.77	0.50
38:A8:101:LEU:O	38:A8:101:LEU:HD12	2.11	0.50
38:65:24:LEU:HB2	38:65:85:VAL:HG12	1.94	0.50
25:1J:70:C:H2'	25:1J:71:C:H6	1.76	0.50
24:1H:839:U:O2'	24:1H:1191:G:N3	2.41	0.50
24:1H:2721:A:H2'	24:1H:2722:G:O4'	2.11	0.50
24:14:337:C:H2'	24:14:338:G:O4'	2.11	0.50
1:13:642:A:N3	8:7E:113:SER:OG	2.35	0.50
24:1H:1525:G:H2'	24:1H:1526:G:C8	2.46	0.50
1:13:836:G:OP1	18:9I:61:LYS:NZ	2.45	0.50
13:4I:10:PRO:HB2	13:4I:18:ALA:HB1	1.92	0.50
14:5A:45:ARG:HG3	14:5A:49:HIS:HE1	1.76	0.50
29:39:110:LEU:HD12	29:39:202:PHE:CE1	2.46	0.50
31:51:27:LYS:HA	31:51:32:GLU:HA	1.94	0.50
34:68:47:ILE:HG13	34:68:48:PRO:HD2	1.93	0.50
45:H8:128:VAL:HG11	45:H8:134:PRO:HD2	1.93	0.50
25:16:100:G:H5''	57:16:220:HOH:O	2.11	0.50
52:L5:12:ARG:NH2	52:L5:44:PRO:HB3	2.26	0.50
24:14:1423:G:H2'	24:14:1424:G:H8	1.76	0.50
24:1H:1213:A:H1'	24:1H:1238:G:N3	2.26	0.50
24:14:1278:A:O3'	37:55:34:ILE:HG13	2.11	0.50
41:95:21:ARG:HD3	41:95:91:TYR:CG	2.45	0.50
47:J8:73:LEU:HD21	47:J8:95:LEU:HD23	1.94	0.50
24:1H:2572:A:H5''	24:1H:2574:G:H4'	1.93	0.50
1:13:1503:A:O2'	23:4K:13:A:N6	2.44	0.50
39:75:107:ASP:C	39:75:111:ARG:NH1	2.64	0.50
1:13:957:U:O2'	1:13:959:A:N7	2.36	0.50
39:75:92:GLY:HA2	39:75:117:ASP:H	1.75	0.50
24:14:2749:A:O4'	31:59:63:SER:HA	2.11	0.50
27:11:70:TRP:CD1	27:11:70:TRP:C	2.85	0.50
24:14:1113:U:OP1	31:59:3:ARG:HG3	2.10	0.50
20:BI:10:LEU:HG	20:BI:12:ALA:N	2.27	0.50
24:1H:2345:G:N3	24:1H:2381:C:H2'	2.27	0.50
1:13:338:A:OP2	34:68:97:ARG:NH2	2.45	0.50
54:1G:1122:U:N3	54:1G:1123:A:N7	2.59	0.50
1:13:152:A:N6	1:13:170:U:C2	2.80	0.50
1:13:1459:C:OP1	20:BI:31:SER:OG	2.16	0.50
1:13:322:C:H5	1:13:328:C:H5	1.58	0.50
24:1H:2853:C:H2'	24:1H:2854:G:C8	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1366:C:H2'	54:1G:1367:C:C6	2.46	0.50
24:1H:577:G:O2'	24:1H:1254:A:OP1	2.26	0.50
54:1G:1442:G:O2'	54:1G:1443:G:OP1	2.25	0.50
29:31:64:ILE:HG23	29:31:65:TRP:NE1	2.27	0.50
24:14:529:A:H4'	24:14:530:G:H5'	1.92	0.50
27:19:43:ARG:HD2	27:19:49:ILE:HB	1.93	0.50
7:6E:150:ALA:HB2	11:2I:50:TYR:OH	2.10	0.50
20:BA:16:HIS:O	20:BA:19:SER:OG	2.28	0.50
24:1H:1655:A:H1'	28:21:113:PHE:CD1	2.46	0.50
24:14:389:G:H22	35:35:72:PRO:HD3	1.76	0.50
35:35:14:LYS:HG2	35:35:15:ARG:H	1.75	0.50
24:14:2147:G:C2	24:14:2148:G:H1'	2.47	0.50
54:1G:125:U:H2'	54:1G:126:G:C8	2.47	0.50
31:51:129:THR:OG1	31:51:129:THR:O	2.29	0.50
24:14:801:G:OP2	57:14:3954:HOH:O	2.19	0.50
17:8A:59:ILE:CG2	17:8A:71:PHE:HB3	2.41	0.50
4:32:175:SER:HB3	4:32:186:LEU:HD11	1.92	0.50
39:B8:2:ASN:HB3	39:B8:5:ALA:H	1.76	0.50
24:1H:945:A:N7	57:1H:3822:HOH:O	2.35	0.50
24:14:1142:U:H5''	24:14:1142(A):A:H5'	1.93	0.50
1:13:413:G:H2'	1:13:428:G:N2	2.26	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
16:7I:43:LYS:HG3	16:7I:48:TRP:CE3	2.47	0.50
39:75:74:ARG:HD3	39:75:76:PHE:CZ	2.47	0.50
24:1H:1053:C:N4	24:1H:1106:G:H1	2.08	0.50
29:39:102:PRO:HB2	29:39:105:VAL:HG23	1.94	0.50
22:3K:62:G:C5	22:3K:63:5MU:H72	2.46	0.50
17:8A:45:HIS:O	17:8A:73:VAL:HG12	2.12	0.50
28:29:120:TRP:CG	28:29:155:LYS:HB3	2.47	0.50
24:1H:155:C:H42	24:1H:171:G:H1	1.60	0.50
31:59:107:VAL:HG11	31:59:152:ARG:HB3	1.94	0.50
24:1H:2111:C:H5	24:1H:2147:G:H22	1.60	0.50
54:1G:1442:G:N7	54:1G:1446:A:N1	2.59	0.50
24:14:1299:G:H5'	24:14:1301:A:O4'	2.11	0.50
1:13:1418:A:C2	1:13:1483:A:C2	3.00	0.50
57:1H:3633:HOH:O	27:11:228:PRO:O	2.20	0.50
24:1H:931:G:C4	24:1H:933:A:C8	2.99	0.50
47:J8:8:SER:HB3	47:J8:66:HIS:CD2	2.47	0.50
3:2E:123:GLN:O	3:2E:128:PHE:HB2	2.11	0.50
48:K8:31:GLU:HB2	48:K8:53:LEU:HD11	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9A:84:LYS:H	18:9A:84:LYS:HD3	1.76	0.50
4:3E:150:GLU:HA	4:3E:153:ARG:HG2	1.94	0.50
14:5A:23:ARG:HB2	14:5A:28:GLY:O	2.11	0.50
4:32:18:LYS:CE	4:32:26:CYS:HB3	2.41	0.50
24:1H:1771:C:C1'	24:1H:1786:A:C8	2.94	0.50
42:A5:14:PRO:O	42:A5:18:ARG:HG3	2.11	0.50
54:1G:352:C:P	57:1G:1777:HOH:O	2.68	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
22:2K:48:C:N4	22:2K:52:G:O6	2.40	0.50
28:21:84:PHE:CE2	28:21:86:PRO:HG3	2.47	0.50
24:1H:2313:C:H4'	30:41:91:ARG:HG3	1.93	0.50
25:16:31:C:H4'	30:41:29:TRP:HH2	1.76	0.50
3:22:78:GLY:HA3	3:22:79:ARG:NH2	2.27	0.50
9:8E:4:TYR:HB2	9:8E:19:LEU:HB2	1.93	0.50
54:1G:1513:A:H2'	54:1G:1514:C:C6	2.47	0.50
24:1H:2387:U:OP1	46:I8:55:ARG:NH1	2.28	0.50
9:8E:33:PHE:CE2	9:8E:47:LEU:HD12	2.47	0.50
34:68:107:ARG:NH1	39:B8:36:GLU:HG2	2.27	0.50
22:2K:22:A:N3	22:2K:22:A:H2'	2.25	0.50
49:L8:23:LEU:HD12	49:L8:23:LEU:H	1.76	0.50
45:H8:35:ARG:HB3	45:H8:35:ARG:HH11	1.76	0.50
31:51:144:VAL:O	31:51:148:ILE:HG12	2.11	0.50
24:14:1540:G:H2'	24:14:1541:U:O4'	2.12	0.50
1:13:186(F):C:H2'	1:13:187:C:O4'	2.11	0.50
1:13:960:U:N3	1:13:1225:A:H1'	2.27	0.50
24:1H:2212:A:H1'	24:1H:2215:G:C4	2.47	0.50
24:1H:2171:A:H2'	24:1H:2172:U:O4'	2.12	0.50
28:21:165:VAL:O	28:21:189:PRO:HG2	2.12	0.50
45:D5:163:LEU:HD23	45:D5:163:LEU:H	1.77	0.50
1:13:1260:C:H4'	1:13:1284:C:H5'	1.94	0.50
24:1H:1409:C:H42	24:1H:1593:G:H1	1.60	0.50
24:14:586:A:H5'	29:39:89:VAL:HG21	1.94	0.50
29:31:108:LYS:O	29:31:112:MET:HG3	2.11	0.50
1:13:77:C:H2'	1:13:78:G:C8	2.47	0.50
32:69:87:LYS:H	32:69:87:LYS:HE3	1.76	0.50
24:14:565:C:H4'	24:14:1253:A:C6	2.47	0.50
30:41:138:GLN:HE22	30:41:152:LEU:HA	1.77	0.50
24:1H:1176:G:H3'	24:1H:1177:A:C8	2.47	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:5:ILE:HA	2:12:221:LEU:HD13	1.91	0.50
24:1H:2533:A:H2'	24:1H:2534:A:O4'	2.10	0.50
54:1G:998:G:N2	54:1G:1043:C:O2	2.44	0.50
54:1G:986:A:O2'	19:AA:55:LYS:HA	2.11	0.50
1:13:1292:U:H2'	1:13:1293:G:C8	2.46	0.50
24:1H:2341:G:H2'	24:1H:2342:C:C6	2.47	0.50
24:14:2355:C:H1'	46:E5:39:ARG:HH21	1.76	0.50
41:D8:7:THR:HG23	41:D8:12:TYR:CE1	2.46	0.50
24:14:458:G:O2'	24:14:469:G:O6	2.23	0.50
24:1H:998:C:P	40:C8:92:ARG:HH22	2.35	0.50
30:41:12:TYR:HD1	30:41:16:ARG:HD2	1.77	0.50
54:1G:1369:C:H2'	54:1G:1370:G:O4'	2.12	0.50
10:1I:13:HIS:HB3	10:1I:68:HIS:CD2	2.47	0.50
16:7I:36:ILE:HG13	16:7I:36:ILE:O	2.11	0.50
24:1H:606:U:H4'	24:1H:658:C:H4'	1.93	0.50
24:14:774:A:H2	24:14:787:U:HO2'	1.58	0.50
24:1H:395:U:H1'	24:1H:396:G:N7	2.26	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
37:98:57:ARG:HB3	37:98:59:ASP:OD1	2.11	0.50
24:1H:234:C:H2'	24:1H:235:U:H6	1.77	0.50
35:35:59:LEU:HD23	53:M5:57:ARG:HE	1.76	0.50
1:13:600:C:H2'	1:13:601:C:C6	2.47	0.50
7:62:24:THR:HA	7:62:27:ILE:HD12	1.93	0.50
24:1H:1021:A:H61	24:1H:1142(A):A:N6	2.10	0.50
1:13:1432:G:OP1	39:B8:107:ASP:HB2	2.11	0.50
11:2I:125:PHE:CD1	11:2I:125:PHE:N	2.79	0.50
24:14:686:G:H1	52:L5:16:HIS:CD2	2.30	0.50
2:1E:164:VAL:HB	2:1E:186:ALA:HB1	1.94	0.50
24:1H:483:A:O4'	44:G8:48:ALA:HB1	2.12	0.50
24:1H:2287:A:N6	24:1H:2344:U:N3	2.59	0.50
13:4I:89:GLY:HA2	13:4I:92:HIS:HD2	1.77	0.50
24:1H:2275:C:H5'	24:1H:2275:C:H6	1.77	0.50
24:1H:1778:U:P	57:1H:3938:HOH:O	2.69	0.50
24:1H:1405:U:H2'	24:1H:1406:U:C6	2.45	0.50
24:1H:1298:C:H5''	24:1H:1299:G:OP2	2.11	0.50
3:22:5:ILE:HD11	10:1A:51:ARG:NH1	2.27	0.50
24:1H:314:A:H2'	24:1H:315:G:H5'	1.93	0.50
24:1H:2655:G:N2	24:1H:2665:A:OP2	2.44	0.50
22:2K:76:C:H2'	22:2K:77:C:C6	2.47	0.50
54:1G:280:C:H3'	54:1G:281:G:H5'	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:281:G:OP2	54:1G:281:G:H8	1.94	0.50
3:22:54:ARG:HB2	3:22:69:HIS:ND1	2.27	0.50
24:14:2790:A:H3'	24:14:2791:C:H5'	1.94	0.50
54:1G:938:A:N6	54:1G:939:G:C6	2.80	0.50
24:14:829:A:N7	24:14:2248:C:H5'	2.27	0.50
1:13:434:U:H2'	1:13:435:C:C6	2.47	0.50
54:1G:440:A:H8	54:1G:440:A:OP2	1.95	0.50
54:1G:716:A:N3	11:2A:118:GLY:HA2	2.27	0.50
24:1H:1899:G:N2	24:1H:1902:C:H5	2.10	0.50
33:58:103:VAL:O	33:58:106:MET:N	2.35	0.50
24:14:654(F):C:O2	24:14:654(P):G:N2	2.45	0.50
1:13:1005:A:H1'	1:13:1036:G:H22	1.77	0.50
39:75:11:GLU:HA	39:75:15:VAL:HG13	1.93	0.50
27:19:31:LYS:HD2	27:19:32:SER:N	2.23	0.50
31:51:6:ARG:HA	31:51:66:GLY:HA2	1.93	0.50
46:I8:18:ALA:HB3	46:I8:20:ARG:HH11	1.76	0.50
46:E5:27:GLU:HG3	46:E5:68:GLU:HA	1.94	0.50
24:1H:2287:A:C2	24:1H:2289:G:C8	3.00	0.50
36:45:136:ALA:HB1	45:D5:48:PHE:CE1	2.47	0.50
28:29:201:THR:HB	28:29:203:LYS:HZ1	1.76	0.50
1:13:940:C:H2'	1:13:941:G:C8	2.46	0.50
54:1G:674:G:H2'	54:1G:675:A:H8	1.77	0.50
24:14:297:C:H4'	44:C5:86:ARG:HD2	1.94	0.50
16:7I:9:PHE:CZ	16:7I:18:ARG:HD2	2.47	0.50
24:14:1016:G:H2'	24:14:1017:G:H8	1.77	0.50
24:14:765:G:H2'	24:14:766:C:C6	2.47	0.50
24:1H:2774:C:H2'	24:1H:2775:A:O4'	2.12	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
1:13:186:C:O2'	20:BI:85:MET:SD	2.56	0.50
16:7A:58:TYR:O	16:7A:62:VAL:HG22	2.11	0.50
24:1H:500:G:N2	24:1H:502:A:H3'	2.27	0.50
12:3I:77:LEU:HD21	12:3I:107:ALA:HB2	1.93	0.50
24:1H:1359:A:C2	24:1H:1372:U:O4	2.65	0.49
24:14:9:U:H2'	24:14:10:G:C8	2.47	0.49
44:G8:82:PRO:CG	44:G8:97:ARG:HD2	2.40	0.49
24:14:602:G:OP2	24:14:602:G:H8	1.95	0.49
24:14:2750:A:H8	24:14:2752:C:N4	2.10	0.49
45:H8:17:ALA:HA	45:H8:20:ARG:HD2	1.94	0.49
54:1G:552:U:H4'	12:3A:86:ARG:HG2	1.92	0.49
1:13:1134:G:H1	1:13:1140:C:H42	1.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:248:G:OP1	57:14:4140:HOH:O	2.19	0.49
36:45:75:THR:HG21	36:45:87:LYS:HE3	1.93	0.49
54:1G:1326:C:OP1	21:1B:17:THR:OG1	2.17	0.49
19:AA:48:THR:HG22	19:AA:61:TYR:HB2	1.93	0.49
24:14:1568:G:H21	27:19:58:HIS:HE1	1.60	0.49
30:41:114:ILE:HG22	30:41:117:PHE:HB2	1.94	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
19:AA:66:MET:HB3	19:AA:69:HIS:CD2	2.47	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:1073:U:H2'	54:1G:1074:G:C8	2.47	0.49
24:14:1885:A:H2'	24:14:1886:C:O4'	2.11	0.49
24:14:303:U:H2'	24:14:304:G:C8	2.47	0.49
12:3I:24:VAL:HB	12:3I:27:LEU:HD12	1.94	0.49
27:11:69:ARG:HD3	27:11:105:ILE:HD11	1.93	0.49
24:14:1926:U:H2'	24:14:1928:A:OP2	2.12	0.49
24:1H:1638:C:H5''	24:1H:2710:C:O2'	2.11	0.49
31:59:35:VAL:HB	31:59:71:LEU:HD21	1.94	0.49
24:14:673:C:H5''	29:39:81:PRO:HD2	1.94	0.49
24:1H:1570:A:H2'	24:1H:1571:A:C8	2.47	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
1:13:811:C:H4'	1:13:900:A:N6	2.27	0.49
17:8I:76:LEU:HD21	17:8I:79:SER:OG	2.12	0.49
14:5A:12:ARG:HH22	14:5A:14:PRO:HG3	1.77	0.49
54:1G:11:G:C5	54:1G:12:U:C5	3.00	0.49
19:AI:50:ALA:HA	19:AI:58:VAL:O	2.12	0.49
13:4I:107:ALA:O	13:4I:110:ARG:N	2.45	0.49
24:1H:2789:C:H1'	24:1H:2892:A:H2	1.77	0.49
14:5A:40:CYS:N	14:5A:43:CYS:HB2	2.26	0.49
24:1H:2271:G:H5''	46:18:20:ARG:HH11	1.76	0.49
54:1G:295:C:H2'	54:1G:296:U:O4'	2.11	0.49
24:1H:277:C:H3'	24:1H:278:A:O4'	2.12	0.49
24:1H:370:G:H4'	24:1H:371:A:OP2	2.12	0.49
29:39:80:ALA:O	29:39:83:PHE:HB2	2.12	0.49
24:14:2298:A:H2'	24:14:2299:G:O4'	2.12	0.49
3:2E:135:LYS:HZ2	5:4E:53:LEU:HD11	1.77	0.49
2:1E:155:LEU:HD22	2:1E:159:PRO:HD3	1.93	0.49
44:G8:87:LYS:H	44:G8:94:LYS:HB3	1.77	0.49
24:1H:1171:G:N7	24:1H:1174:A:N6	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1011:G:H22	54:1G:1018:C:H42	1.58	0.49
24:1H:1062:G:N1	24:1H:1076:C:O2	2.44	0.49
24:1H:2854:G:H2'	24:1H:2855:C:C6	2.47	0.49
24:1H:2690:C:H5''	24:1H:2872:G:N2	2.28	0.49
24:14:1146:C:C2'	24:14:1147:C:H5'	2.42	0.49
9:8E:33:PHE:HE2	9:8E:47:LEU:HD12	1.77	0.49
24:1H:433:C:H2'	24:1H:434:U:C6	2.47	0.49
1:13:624:C:H4'	16:7I:11:SER:N	2.27	0.49
36:45:26:TYR:OH	36:45:141:GLN:HB2	2.11	0.49
17:8A:6:LEU:HD13	17:8A:23:VAL:HG21	1.93	0.49
4:3E:15:GLU:OE1	4:3E:66:ARG:NH1	2.45	0.49
24:1H:844:C:H2'	24:1H:845:G:O4'	2.12	0.49
24:14:1404:C:C2'	24:14:1405:U:H5'	2.42	0.49
48:G5:10:LEU:O	48:G5:14:ARG:HB2	2.12	0.49
27:19:64:ILE:O	27:19:64:ILE:HG12	2.12	0.49
24:1H:414:C:H2'	24:1H:415:A:C8	2.47	0.49
2:12:103:THR:HG23	2:12:176:GLU:OE1	2.11	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
30:49:66:GLN:NE2	30:49:93:THR:O	2.46	0.49
24:14:994:C:H3'	40:85:54:LYS:HE3	1.94	0.49
24:1H:1403:C:H5''	24:1H:1471:A:C1'	2.41	0.49
54:1G:1288:A:H4'	21:1B:13:ILE:HD13	1.95	0.49
24:1H:988:A:H8	24:1H:988:A:O5'	1.95	0.49
30:41:138:GLN:O	30:41:144:ILE:HG13	2.11	0.49
32:61:86:THR:HA	32:61:123:LEU:HD12	1.93	0.49
29:31:101:LEU:O	29:31:106:ARG:NH1	2.43	0.49
13:4A:48:LEU:HD11	13:4A:53:VAL:HG22	1.93	0.49
18:9A:73:ALA:HB3	18:9A:79:LEU:HD12	1.93	0.49
54:1G:922:G:N3	54:1G:1398:A:H2	2.10	0.49
32:69:123:LEU:HD22	32:69:143:SER:HA	1.94	0.49
24:14:1167:U:C2	24:14:1183:G:N2	2.80	0.49
2:1E:230:VAL:HG12	2:1E:231:GLU:H	1.77	0.49
24:14:314:A:H2'	24:14:315:G:C8	2.46	0.49
3:2E:119:ARG:HD3	3:2E:140:ARG:NH2	2.28	0.49
31:59:158:HIS:ND1	31:59:158:HIS:O	2.42	0.49
1:13:1404:C:H6	1:13:1404:C:O5'	1.95	0.49
44:G8:20:TYR:CE2	44:G8:43:ASN:HA	2.47	0.49
28:21:1:MET:N	28:21:83:ASP:O	2.41	0.49
17:8I:86:GLU:O	17:8I:90:ILE:HG13	2.12	0.49
24:14:764:A:O4'	27:19:213:ARG:HG3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:625:G:C6	54:1G:626:U:C4	3.00	0.49
25:1J:24:G:H21	25:1J:27:C:H42	1.58	0.49
54:1G:1127:G:H21	54:1G:1147:C:H5	1.60	0.49
9:82:16:ARG:O	9:82:63:ILE:HG23	2.12	0.49
54:1G:960:U:N3	54:1G:1225:A:C4	2.80	0.49
1:13:960:U:H3	1:13:1225:A:H1'	1.76	0.49
24:1H:2211:G:H4'	24:1H:2212:A:OP2	2.11	0.49
11:2I:27:ASN:ND2	11:2I:55:LYS:HD2	2.27	0.49
44:C5:17:SER:HB2	44:C5:71:LYS:HD2	1.93	0.49
24:1H:1517:G:H2'	24:1H:1518:C:H6	1.76	0.49
54:1G:346:G:N2	54:1G:347:G:C8	2.81	0.49
24:1H:527:C:OP2	24:1H:2779:U:H5	1.96	0.49
24:14:2165:G:O2'	24:14:2166:G:H5'	2.12	0.49
46:I8:36:ILE:HD11	46:I8:39:ARG:HG2	1.94	0.49
10:1I:47:PHE:CE2	14:5I:37:PHE:HE2	2.29	0.49
54:1G:438:G:OP1	4:32:125:HIS:HE1	1.95	0.49
7:6E:15:ASP:OD1	7:6E:44:TYR:OH	2.29	0.49
4:3E:59:ARG:HH21	4:3E:66:ARG:HH12	1.60	0.49
1:13:393:A:OP2	16:7I:12:LYS:NZ	2.31	0.49
24:14:1486:A:H2'	24:14:1487:G:H8	1.78	0.49
1:13:1120:G:H2'	1:13:1121:U:C6	2.47	0.49
51:N8:56:LYS:HE3	51:N8:58:LEU:HG	1.93	0.49
27:19:92:ILE:HD12	27:19:104:TYR:CD1	2.47	0.49
24:1H:861:A:N3	25:16:79:C:O2'	2.43	0.49
24:1H:1408:C:C2	24:1H:1595:G:N2	2.80	0.49
29:39:167:ALA:HB1	29:39:173:VAL:HG11	1.95	0.49
53:Q8:33:ASN:O	53:Q8:33:ASN:ND2	2.45	0.49
38:A8:11:LYS:HD2	38:A8:15:ARG:CZ	2.42	0.49
24:14:2062:A:P	57:14:3857:HOH:O	2.64	0.49
22:2K:18:G:N2	22:2K:66:G:H1'	2.26	0.49
54:1G:503:C:OP2	12:3A:116:SER:OG	2.15	0.49
1:13:953:G:H2'	1:13:954:G:O4'	2.12	0.49
37:55:78:LYS:O	37:55:82:GLU:HB3	2.12	0.49
45:D5:30:ASN:HB3	45:D5:33:LEU:H	1.77	0.49
53:M5:34:TRP:CD1	53:M5:34:TRP:C	2.86	0.49
24:1H:1388:G:H2'	24:1H:1389:G:C8	2.47	0.49
24:14:811:U:H2'	35:35:21:ARG:HA	1.94	0.49
3:22:134:ILE:O	3:22:137:ALA:N	2.40	0.49
24:14:71:A:H2	43:B5:31:HIS:NE2	2.11	0.49
1:13:630:G:H2'	1:13:631:G:O4'	2.12	0.49
24:14:2608:G:H5''	24:14:2609:U:OP1	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1375:C:H2'	24:1H:1376:C:H6	1.78	0.49
34:25:7:TYR:HE1	34:25:20:MET:HE3	1.78	0.49
29:39:143:ALA:HB1	29:39:148:LEU:HB2	1.94	0.49
24:14:1588:C:H5'	24:14:1589:C:OP2	2.12	0.49
54:1G:247:G:OP2	17:8A:100:LYS:N	2.44	0.49
36:45:66:ILE:O	36:45:67:ARG:HB2	2.12	0.49
24:14:747:U:O2	24:14:2014:A:H1'	2.11	0.49
1:13:716:A:N3	11:2I:118:GLY:HA2	2.27	0.49
54:1G:1349:A:P	9:82:118:LYS:HZ3	2.35	0.49
2:1E:30:ARG:HG3	2:1E:31:TYR:CD1	2.47	0.49
24:1H:1705:G:C2'	24:1H:1706:U:H5'	2.42	0.49
24:1H:298:G:C5	57:1H:4137:HOH:O	2.66	0.49
54:1G:111:G:O5'	54:1G:111:G:H8	1.95	0.49
24:1H:787:U:OP2	57:1H:3884:HOH:O	2.20	0.49
28:29:9:VAL:HG13	39:75:3:ARG:HD3	1.95	0.49
28:21:119:ARG:HB3	28:21:120:TRP:CD1	2.47	0.49
24:1H:1047:G:HO2'	24:1H:1048:A:H8	1.57	0.49
54:1G:542:G:H5'	4:32:41:GLY:HA3	1.94	0.49
13:4A:73:GLU:O	13:4A:77:ASN:HB2	2.12	0.49
24:1H:725:G:C6	24:1H:726:G:N1	2.81	0.49
46:E5:26:TYR:HB2	46:E5:29:GLN:OE1	2.13	0.49
33:15:120:LEU:HG	33:15:122:VAL:HG23	1.94	0.49
24:14:972:G:OP2	24:14:973:A:O2'	2.16	0.49
1:13:838:G:OP2	1:13:842:C:N4	2.46	0.49
24:14:2607:G:H2'	24:14:2608:G:O4'	2.12	0.49
16:7I:20:VAL:HG21	16:7I:32:TYR:CD2	2.47	0.49
36:45:38:GLU:HB2	36:45:127:ILE:HG22	1.95	0.49
8:7E:51:VAL:HG21	8:7E:60:ARG:HD2	1.94	0.49
13:4I:65:LYS:HE3	13:4I:69:GLU:HG2	1.95	0.49
30:49:43:LEU:H	30:49:89:GLY:HA2	1.77	0.49
24:14:1433:U:O2	24:14:1561:G:C2	2.66	0.49
47:F5:12:PRO:HB3	47:F5:43:TYR:HD1	1.77	0.49
34:25:101:PRO:HG3	39:75:67:SER:OG	2.12	0.49
2:1E:223:ILE:HA	2:1E:226:ARG:HG2	1.93	0.49
54:1G:785:G:N2	54:1G:798:G:C4	2.81	0.49
6:5E:70:ASP:N	6:5E:70:ASP:OD1	2.44	0.49
30:49:18:GLU:O	30:49:22:ARG:HG2	2.12	0.49
25:1J:15:A:H1'	25:1J:109:G:N9	2.28	0.49
1:13:671:G:C2	1:13:672:U:C2	3.00	0.49
35:35:111:ARG:HG2	35:35:128:HIS:CD2	2.47	0.49
24:1H:1278:A:OP1	37:98:36:THR:HG22	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:11:25:THR:CG2	27:11:82:ILE:H	2.25	0.49
50:I5:16:CYS:SG	50:I5:36:CYS:HB2	2.53	0.49
22:3K:47:U:H2'	22:3K:48:C:C6	2.48	0.49
3:22:20:SER:HB3	3:22:22:TRP:NE1	2.25	0.49
45:D5:138:GLU:HG2	45:D5:156:LYS:HE2	1.94	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
1:13:1023:G:H3'	1:13:1024:G:C5'	2.42	0.49
38:A8:36:TYR:N	38:A8:36:TYR:HD1	2.09	0.49
24:14:1252:G:O4'	40:85:33:ARG:HD2	2.12	0.49
24:14:2335:A:C8	24:14:2337:G:N7	2.81	0.49
24:1H:2227:A:OP1	27:11:263:ARG:HD2	2.13	0.49
54:1G:89:U:O2'	54:1G:90:C:O5'	2.25	0.49
24:14:1915:U:H2'	24:14:1916:A:O4'	2.11	0.49
33:15:111:PRO:HA	33:15:114:ARG:NH1	2.28	0.49
4:32:188:LEU:HD23	4:32:189:PRO:HD2	1.94	0.49
24:14:616:A:C8	29:39:176:LEU:HD11	2.47	0.49
24:1H:1292:U:H2'	24:1H:1293:C:C6	2.48	0.49
36:45:37:LEU:HD21	36:45:130:LYS:HB2	1.94	0.49
4:32:94:LEU:O	4:32:97:LEU:N	2.44	0.49
24:1H:974(A):C:OP1	57:1H:4175:HOH:O	2.20	0.49
24:14:2521:C:O2'	24:14:2564:A:N3	2.39	0.49
24:14:2479:G:H2'	24:14:2480:C:O4'	2.12	0.49
29:31:40:GLN:NE2	29:31:184:TYR:HB3	2.27	0.49
24:14:67:U:H2'	24:14:68:G:H8	1.78	0.49
9:8E:118:LYS:O	9:8E:119:ALA:HB3	2.13	0.49
1:13:956:U:C2	1:13:1225:A:C2	3.01	0.49
50:I5:21:VAL:HG22	50:I5:22:ILE:HG13	1.94	0.49
22:3K:26:G:H2'	22:3K:27:A:C8	2.48	0.49
6:5E:19:LEU:HD23	6:5E:23:LYS:HZ2	1.78	0.49
24:1H:2791:C:H2'	24:1H:2792:G:H8	1.77	0.49
8:72:6:ILE:O	8:72:10:LEU:HG	2.13	0.49
41:D8:44:LYS:C	41:D8:46:VAL:H	2.15	0.49
4:3E:14:ARG:HB2	4:3E:40:PRO:CD	2.42	0.49
34:25:68:GLU:OE2	34:25:78:ARG:NH1	2.45	0.49
46:I8:42:GLY:C	46:I8:57:PHE:HD2	2.16	0.49
44:G8:93:GLY:O	44:G8:94:LYS:HB2	2.12	0.49
54:1G:983:A:H2	54:1G:984:C:C6	2.30	0.49
45:H8:141:VAL:HB	45:H8:144:LEU:HG	1.95	0.49
19:AA:63:THR:HG23	19:AA:65:ASN:O	2.12	0.49
54:1G:142:G:H2'	54:1G:143:A:H8	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:6E:113:GLU:CG	7:6E:119:ARG:HG2	2.43	0.49
30:41:16:ARG:O	30:41:20:ILE:HG13	2.13	0.49
31:59:35:VAL:HG11	31:59:71:LEU:HD11	1.95	0.49
29:39:148:LEU:HD11	29:39:193:VAL:HG21	1.94	0.49
30:41:119:GLY:HA2	50:M8:43:TYR:HE2	1.78	0.49
5:4E:72:GLN:O	5:4E:75:THR:HG22	2.11	0.49
24:1H:2636:U:OP1	28:21:79:ARG:HA	2.12	0.49
30:41:68:PRO:HA	30:41:92:VAL:HB	1.95	0.49
1:13:510:A:H8	57:13:1748:HOH:O	1.95	0.49
24:1H:2794:C:OP2	24:1H:2797:U:H4'	2.13	0.49
29:39:116:ASP:OD2	35:35:1:MET:HB2	2.12	0.49
41:D8:27:ALA:HB1	41:D8:61:VAL:HG21	1.95	0.49
25:1J:3:C:H2'	25:1J:4:C:C6	2.47	0.49
24:1H:2629:A:OP1	24:1H:2629:A:H4'	2.11	0.49
5:4E:87:SER:HB3	5:4E:125:SER:O	2.12	0.49
35:78:60:MET:HA	53:Q8:13:ARG:NH1	2.28	0.49
35:78:39:LYS:CD	35:78:45:LEU:HD21	2.41	0.49
45:D5:127:LYS:HB3	45:D5:162:GLU:HB3	1.94	0.49
33:58:134:ARG:O	33:58:136:GLU:N	2.45	0.49
25:1J:48:A:H4'	38:65:95:HIS:CD2	2.38	0.49
24:14:273(C):C:N3	24:14:363(C):G:N2	2.53	0.49
25:16:80:U:H2'	25:16:81:G:H21	1.77	0.49
24:1H:2518:A:C8	24:1H:2518:A:H5'	2.47	0.49
27:19:108:PRO:HG2	27:19:111:LEU:HB2	1.94	0.49
24:14:586:A:P	57:14:3512:HOH:O	2.70	0.49
54:1G:1096:C:H2'	54:1G:1097:C:H6	1.77	0.49
24:1H:1516:U:C2	24:1H:1517:G:C8	3.00	0.49
32:69:85:GLU:OE1	32:69:86:THR:HG22	2.13	0.49
45:H8:48:PHE:CE1	45:H8:71:VAL:HG21	2.48	0.49
24:14:1198:U:H2'	24:14:1199:U:H6	1.77	0.49
1:13:580:U:H2'	1:13:581:G:O4'	2.13	0.49
24:14:324:A:H2'	24:14:325:G:O4'	2.12	0.49
24:14:2659:G:O2'	24:14:2661:G:N7	2.25	0.49
24:1H:1317:A:H2'	24:1H:1318:C:H6	1.77	0.49
24:14:2017:U:O2	51:J5:10:LYS:HB2	2.13	0.49
28:21:66:HIS:CG	28:21:67:PHE:N	2.81	0.49
7:62:95:ARG:NH2	7:62:99:LEU:HD21	2.28	0.49
54:1G:197:A:H1'	54:1G:198:G:O4'	2.13	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
24:1H:2094:G:P	32:61:22:LYS:HD2	2.53	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:871:U:OP1	57:13:1831:HOH:O	2.20	0.49
26:71:181:PRO:HD2	26:71:184:LYS:HB2	1.94	0.49
1:13:1165:C:H2'	1:13:1166:G:O4'	2.12	0.49
48:K8:55:ARG:O	48:K8:58:ALA:HB3	2.12	0.49
24:1H:2517:C:C2	24:1H:2542:A:N6	2.81	0.49
24:14:180:G:OP2	52:L5:32:LYS:HE2	2.13	0.49
24:1H:382:G:H1	24:1H:392:C:H42	1.59	0.49
22:2K:17:OMG:O2'	22:2K:66:G:N2	2.45	0.49
39:B8:90:GLN:HG3	39:B8:91:ARG:N	2.28	0.49
24:14:2757:A:N1	31:59:67:LEU:HD11	2.28	0.49
38:65:31:SER:O	38:65:97:ARG:NH2	2.41	0.49
24:1H:2154:G:H2'	24:1H:2155:G:C8	2.43	0.49
22:2L:22:A:N6	22:2L:57:C:C2	2.81	0.49
44:C5:17:SER:CB	44:C5:71:LYS:HD2	2.43	0.49
27:19:12:SER:HB2	27:19:208:LYS:HB3	1.94	0.49
27:11:85:ASP:OD1	27:11:86:PRO:HD2	2.13	0.49
24:1H:2438:U:O3'	24:1H:2439:A:H3'	2.13	0.49
24:1H:451:C:N4	24:1H:454:A:OP2	2.31	0.49
1:13:853:G:O6	57:13:1830:HOH:O	2.20	0.49
24:1H:1094:U:O2'	24:1H:1096:A:OP1	2.27	0.49
24:1H:642:G:H21	24:1H:646:A:H2	1.60	0.49
1:13:1037:C:H2'	1:13:1038:C:C6	2.48	0.49
25:16:90:C:H5'	36:88:18:LYS:HA	1.94	0.49
32:69:128:LEU:O	32:69:137:PRO:HA	2.13	0.49
24:1H:2531:A:H5'	31:51:157:TYR:CZ	2.48	0.49
32:61:41:GLU:OE2	32:61:42:SER:N	2.45	0.49
18:9A:19:LYS:HG2	18:9A:20:ALA:H	1.78	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
3:22:159:GLY:HA2	3:22:193:TYR:CE1	2.48	0.49
35:78:90:ARG:HH21	35:78:103:ALA:HB1	1.78	0.49
24:1H:1039:G:H1	24:1H:1116:C:H42	1.61	0.49
28:29:30:PRO:HD3	28:29:180:ASN:ND2	2.28	0.49
22:3L:85:A:O2'	24:14:2394:C:O2	2.30	0.49
24:1H:2555:U:C5	24:1H:2556:C:C2	3.01	0.49
24:1H:2711:A:P	57:1H:3622:HOH:O	2.69	0.48
47:J8:88:LYS:HA	47:J8:90:ILE:HD12	1.95	0.48
42:A5:40:ASN:O	42:A5:41:LYS:HG2	2.13	0.48
24:1H:67:U:H2'	24:1H:68:G:H8	1.76	0.48
54:1G:730:G:C5	54:1G:731:G:H1'	2.48	0.48
36:45:43:THR:OG1	36:45:45:GLN:HG2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:78:63:PRO:HD3	53:Q8:27:THR:HG22	1.95	0.48
24:14:1639:U:P	57:14:3572:HOH:O	2.71	0.48
36:88:20:ALA:HB1	36:88:99:PRO:CD	2.42	0.48
22:3K:21:A:N6	22:3K:56:U:O2	2.45	0.48
6:52:7:ASN:N	6:52:7:ASN:OD1	2.45	0.48
30:49:80:PHE:HD1	30:49:81:LYS:H	1.61	0.48
24:1H:274:G:H2'	24:1H:275:G:C1'	2.43	0.48
24:1H:2427:C:H5''	24:1H:2428:G:OP1	2.12	0.48
22:3L:42:U:H2'	22:3L:43:G:H8	1.75	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
38:65:7:TYR:HE2	38:65:11:LYS:HZ3	1.60	0.48
24:1H:529:A:H8	24:1H:530:G:C6	2.30	0.48
2:1E:187:LEU:HA	2:1E:201:ILE:HB	1.94	0.48
29:39:4:VAL:HB	29:39:17:ARG:HH11	1.78	0.48
1:13:127:G:N2	17:8I:61:GLU:OE1	2.41	0.48
39:B8:30:VAL:HG11	39:B8:76:PHE:CE2	2.48	0.48
24:14:879:G:C2	24:14:880:G:H1'	2.48	0.48
5:4E:148:VAL:HG21	8:7E:107:LEU:HD22	1.93	0.48
24:1H:934:G:H2'	24:1H:935:C:C6	2.47	0.48
14:5A:45:ARG:O	14:5A:49:HIS:ND1	2.46	0.48
22:3L:85:A:O2'	24:14:2394:C:N3	2.40	0.48
14:5I:2:ALA:HB1	14:5I:6:LEU:HD12	1.95	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
34:68:37:ASP:O	34:68:61:VAL:HG23	2.13	0.48
52:L5:26:GLY:O	52:L5:30:VAL:HG23	2.13	0.48
24:1H:503:A:H4'	24:1H:504:U:H5''	1.95	0.48
54:1G:1189:C:H4'	3:22:10:PHE:HE1	1.78	0.48
24:1H:2186:G:H2'	24:1H:2187:G:H8	1.78	0.48
41:95:98:GLU:OE1	41:95:100:ARG:NH1	2.45	0.48
24:14:2789:C:C2	24:14:2894:G:N2	2.81	0.48
45:D5:11:GLU:O	45:D5:36:LYS:NZ	2.42	0.48
24:1H:248:G:H5''	24:1H:386:G:N2	2.28	0.48
1:13:108:G:OP2	1:13:326:G:N2	2.44	0.48
24:1H:1044:G:H4'	24:1H:1048:A:H1'	1.95	0.48
30:41:122:PRO:HB3	30:41:180:PHE:CD1	2.42	0.48
4:32:162:LEU:HD13	4:32:181:MET:HG2	1.96	0.48
24:14:249:C:OP1	57:14:3502:HOH:O	2.20	0.48
54:1G:1033:G:H2'	54:1G:1034:G:C8	2.48	0.48
24:14:2849:U:O4	39:75:23:ARG:NH2	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:997:U:H2'	54:1G:998:G:C8	2.48	0.48
1:13:758:G:O5'	1:13:758:G:H8	1.96	0.48
1:13:1014:A:H4'	19:AI:14:HIS:NE2	2.28	0.48
10:1A:53:PRO:HA	14:5A:42:ILE:HG13	1.95	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
8:72:25:ASP:N	8:72:25:ASP:OD1	2.46	0.48
11:2I:78:GLN:O	11:2I:103:LEU:HA	2.12	0.48
24:14:724:U:H2'	24:14:725:G:O4'	2.12	0.48
8:72:33:GLU:HG3	8:72:48:TYR:CE2	2.48	0.48
2:1E:167:PRO:HG2	2:1E:192:SER:HB3	1.95	0.48
24:1H:2615:U:H2'	24:1H:2616:C:H6	1.77	0.48
54:1G:1129:C:H41	54:1G:1140:C:N4	2.12	0.48
9:82:125:TYR:CD1	9:82:126:SER:N	2.80	0.48
2:1E:162:ILE:HD11	2:1E:184:VAL:HG22	1.94	0.48
24:1H:1657:C:H2'	24:1H:1658:C:H6	1.76	0.48
45:H8:75:ASN:O	45:H8:84:GLU:N	2.45	0.48
1:13:1023:G:OP2	1:13:1024:G:N2	2.30	0.48
54:1G:1002:G:H1	54:1G:1037:C:N4	2.10	0.48
24:14:582:G:H2'	24:14:583:G:C8	2.49	0.48
20:BA:67:ALA:O	20:BA:73:HIS:ND1	2.46	0.48
24:14:914:C:N3	24:14:915:C:H1'	2.28	0.48
40:85:52:ARG:HB3	40:85:52:ARG:NH1	2.28	0.48
1:13:1270:C:H2'	1:13:1271:G:O4'	2.13	0.48
38:65:23:ARG:NH1	38:65:85:VAL:O	2.46	0.48
1:13:1085:U:H3'	1:13:1086:U:H5	1.78	0.48
32:61:82:ARG:O	32:61:89:TYR:HD1	1.96	0.48
24:1H:273(D):C:H2'	24:1H:273(E):U:C6	2.48	0.48
24:1H:1464:C:HO2'	24:1H:1528:A:H8	1.60	0.48
54:1G:619:U:C4	4:32:135:LEU:HD11	2.48	0.48
9:82:114:TYR:HE2	10:1A:59:SER:HA	1.78	0.48
5:42:81:GLU:HA	5:42:89:ILE:O	2.13	0.48
24:1H:2082:A:H2'	24:1H:2083:G:O4'	2.13	0.48
54:1G:711:G:OP1	6:52:54:LYS:NZ	2.46	0.48
28:21:6:GLY:HA2	28:21:51:PHE:CZ	2.48	0.48
24:14:1983:C:H4'	24:14:2606:C:H4'	1.95	0.48
25:1J:66:A:H61	25:1J:107:U:H2'	1.78	0.48
42:A5:18:ARG:HG2	42:A5:76:VAL:HG13	1.94	0.48
2:1E:80:ILE:O	2:1E:84:GLU:HG2	2.13	0.48
13:4A:108:ARG:NH1	13:4A:108:ARG:HG3	2.28	0.48
35:78:19:VAL:HG12	35:78:21:ARG:H	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BI:10:LEU:HD21	20:BI:12:ALA:HB3	1.94	0.48
54:1G:1277:C:O2'	54:1G:1279:A:C8	2.67	0.48
24:1H:2864:G:OP1	39:B8:119:LYS:HD2	2.12	0.48
18:9I:70:ILE:HG23	18:9I:79:LEU:HD12	1.95	0.48
24:1H:1762[B]:A:N6	57:1H:3693:HOH:O	2.40	0.48
41:95:59:ALA:HB2	41:95:96:ILE:HD13	1.95	0.48
24:1H:2111:C:H5	24:1H:2147:G:N2	2.11	0.48
26:71:48:GLY:N	26:71:208:PHE:O	2.46	0.48
17:8A:67:LYS:O	17:8A:69:LYS:N	2.46	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
2:1E:167:PRO:O	2:1E:171:ALA:N	2.46	0.48
1:13:652:U:O4	1:13:752:G:O2'	2.16	0.48
24:1H:164:U:H5''	24:1H:165:U:C6	2.48	0.48
3:2E:32:LEU:HD13	3:2E:59:ARG:HD3	1.95	0.48
24:1H:1805:U:O2	27:11:50:THR:HB	2.13	0.48
1:13:669:U:O2	1:13:670:G:C8	2.66	0.48
1:13:227:G:H2'	1:13:228:A:O4'	2.14	0.48
24:14:2150:U:H2'	24:14:2151:G:C8	2.48	0.48
10:1I:40:LEU:HB2	10:1I:69:ASN:HB2	1.95	0.48
54:1G:764:C:H2'	54:1G:765:G:O4'	2.12	0.48
24:14:2340:G:O2'	24:14:2341:G:H5'	2.12	0.48
3:2E:133:ALA:O	3:2E:136:GLN:HG3	2.13	0.48
24:1H:2611:U:C4	51:N8:3:LYS:HG2	2.47	0.48
8:7E:98:LYS:HG2	8:7E:98:LYS:H	1.47	0.48
22:3K:35:QUO:C5'	22:3K:35:QUO:H8	2.42	0.48
40:85:58:ARG:HA	40:85:61:TRP:CE3	2.49	0.48
46:E5:23:VAL:HG22	46:E5:38:VAL:HG22	1.95	0.48
24:14:1138:G:H5''	24:14:1139:G:OP2	2.13	0.48
35:78:46:LYS:O	35:78:47:ASP:HB3	2.14	0.48
37:55:79:LEU:HA	37:55:83:ILE:HB	1.96	0.48
24:14:732:C:H3'	57:14:4303:HOH:O	2.13	0.48
31:51:4:ILE:C	31:51:6:ARG:H	2.16	0.48
2:1E:84:GLU:HB3	2:1E:219:VAL:CG2	2.41	0.48
15:6I:74:ASP:HB3	15:6I:77:ARG:HG2	1.95	0.48
22:2K:27:A:H3'	22:2K:28:G:C8	2.46	0.48
25:16:27:C:O3'	38:A8:36:TYR:OH	2.31	0.48
24:1H:880:G:H1	24:1H:897:C:N4	2.08	0.48
1:13:1167:A:H2'	1:13:1169:A:C8	2.48	0.48
24:14:486:C:O2'	42:A5:60:ASN:ND2	2.47	0.48
45:D5:19:ARG:NE	45:D5:84:GLU:OE2	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:I5:18:CYS:N	50:I5:19:GLY:HA2	2.27	0.48
48:K8:64:LEU:O	48:K8:68:ARG:HG3	2.13	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
41:D8:25:LEU:HD11	41:D8:94:LEU:HD11	1.95	0.48
42:E8:83:LYS:O	42:E8:84:ARG:HD3	2.12	0.48
1:13:1493[B]:A:H5''	1:13:1494:G:OP2	2.14	0.48
27:11:108:PRO:HG3	27:11:143:HIS:CE1	2.49	0.48
4:32:8:VAL:HG13	4:32:21:LEU:HD12	1.96	0.48
43:F8:27:THR:HG23	43:F8:80:ILE:HB	1.96	0.48
24:14:1798:U:H5'	27:19:259:THR:OG1	2.13	0.48
51:J5:56:LYS:HZ1	51:J5:58:LEU:HD12	1.78	0.48
54:1G:1510:U:H2'	54:1G:1511:G:C8	2.48	0.48
22:3L:13:G:H1'	22:3L:23:A:H61	1.78	0.48
39:B8:19:LEU:HD22	39:B8:86:ILE:HG23	1.95	0.48
47:F5:53:VAL:HG22	47:F5:74:VAL:HG13	1.96	0.48
2:1E:180:LEU:C	2:1E:182:ILE:H	2.16	0.48
54:1G:1176:A:H2'	54:1G:1177:G:O4'	2.14	0.48
28:21:46:ALA:HB2	28:21:82:ARG:HA	1.95	0.48
24:14:851:U:OP1	49:H5:49:LYS:HE2	2.14	0.48
24:1H:2281:C:O2'	24:1H:2282:G:H5'	2.14	0.48
40:85:92:ARG:CZ	41:95:11:GLN:H	2.26	0.48
24:14:761:A:C5	57:14:4299:HOH:O	2.63	0.48
24:14:55:G:H2'	24:14:56:A:H8	1.78	0.48
50:I5:14:ILE:HG23	50:I5:33:VAL:HG11	1.96	0.48
24:14:139:G:N3	24:14:141:A:N1	2.62	0.48
15:6I:17:ARG:HH11	15:6I:17:ARG:HG3	1.78	0.48
1:13:346:G:N2	1:13:347:G:C4	2.80	0.48
24:1H:2330:G:H2'	24:1H:2331:G:O4'	2.13	0.48
54:1G:1025:U:H2'	54:1G:1026:G:C8	2.48	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
6:5E:41:GLU:HG2	6:5E:43:LEU:CD1	2.43	0.48
41:95:16:PRO:HA	41:95:96:ILE:CG2	2.44	0.48
24:1H:2591:C:OP1	27:11:239:ARG:HG3	2.13	0.48
54:1G:187:C:H2'	54:1G:188:U:O4'	2.13	0.48
25:1J:3:C:H2'	25:1J:4:C:H6	1.79	0.48
24:14:2762:G:H5'	24:14:2763:G:OP2	2.14	0.48
7:62:74:GLU:HG2	7:62:91:VAL:HG22	1.94	0.48
24:1H:2575:C:H2'	24:1H:2578:G:O6	2.14	0.48
24:14:1011:G:C2	24:14:1151:G:C2	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:4I:84:ILE:HG21	19:AI:65:ASN:HB2	1.96	0.48
24:1H:654(C):G:N2	24:1H:654(R):C:O2	2.44	0.48
44:G8:78:ALA:HB3	44:G8:79:CYS:SG	2.54	0.48
54:1G:1497:G:H2'	54:1G:1498:U:H5'	1.96	0.48
1:13:1151:A:H2'	1:13:1152:A:C8	2.49	0.48
24:1H:307:G:N2	24:1H:310:A:O5'	2.44	0.48
54:1G:69:G:C2	54:1G:73:G:C8	3.02	0.48
18:9A:41:LYS:O	18:9A:41:LYS:HD3	2.13	0.48
24:1H:325:G:O2'	24:1H:326:G:H5'	2.14	0.48
24:14:2016:U:H1'	51:J5:6:VAL:HG13	1.95	0.48
35:35:65:ARG:HH22	53:M5:15:LYS:HB2	1.78	0.48
28:29:106:GLY:HA3	28:29:189:PRO:HB2	1.95	0.48
24:14:1542:G:O5'	24:14:1543:A:H5''	2.13	0.48
10:1A:48:THR:CA	10:1A:62:HIS:HB3	2.36	0.48
28:29:31:CYS:HB2	28:29:91:VAL:HG23	1.96	0.48
35:35:59:LEU:HD21	53:M5:10:ALA:HA	1.95	0.48
4:32:61:LYS:CB	4:32:203:VAL:HG13	2.42	0.48
24:14:2751:G:N2	31:59:2:SER:O	2.46	0.48
29:39:74:ARG:HG2	29:39:74:ARG:O	2.11	0.48
19:AI:40:ILE:HG12	19:AI:41:VAL:N	2.29	0.48
24:1H:1388:G:H2'	24:1H:1389:G:H8	1.79	0.48
30:41:37:VAL:HG22	30:41:159:VAL:HG12	1.96	0.48
54:1G:1279:A:O2'	54:1G:1282:C:N4	2.47	0.48
38:65:19:LYS:O	38:65:20:ARG:HB2	2.13	0.48
24:1H:1424:G:H2'	24:1H:1425:G:O4'	2.14	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
24:1H:2724:C:OP1	28:21:118:LYS:HE3	2.13	0.48
46:E5:72:ARG:HE	46:E5:75:LEU:HD12	1.79	0.48
24:14:336:C:OP1	44:C5:83:THR:HG23	2.13	0.48
24:14:2115:G:O2'	24:14:2165:G:N2	2.47	0.48
16:7I:28:ARG:HG3	16:7I:29:ASP:N	2.28	0.48
24:14:96:G:H4'	48:G5:48:HIS:CD2	2.48	0.48
42:A5:84:ARG:HG3	42:A5:98:LYS:HZ2	1.78	0.48
16:7A:34:GLU:OE2	16:7A:55:ARG:HD3	2.13	0.48
1:13:1298:C:H2'	7:6E:114:ARG:NH2	2.28	0.48
39:B8:56:GLY:O	39:B8:59:THR:HG22	2.14	0.48
30:41:12:TYR:HA	30:41:16:ARG:HG3	1.95	0.48
54:1G:619:U:C2	4:32:135:LEU:HD21	2.48	0.48
41:D8:3:ALA:HB1	41:D8:38:LEU:HD11	1.95	0.48
24:14:1470:G:N2	24:14:1522:G:OP2	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:65:66:ALA:HA	38:65:69:VAL:HG12	1.94	0.48
40:85:87:GLY:O	41:95:50:PRO:HD3	2.14	0.48
10:1A:65:LEU:HD12	14:5A:55:GLY:O	2.13	0.48
24:14:2427:C:H5''	24:14:2428:G:OP1	2.13	0.48
54:1G:1046:A:H3'	54:1G:1047:G:H8	1.78	0.48
54:1G:1124:G:H2'	54:1G:1145:C:C4	2.48	0.48
24:14:1154:G:P	40:85:58:ARG:HE	2.37	0.48
54:1G:978:A:H61	54:1G:1316:G:H1'	1.79	0.48
39:B8:26:ASP:OD2	39:B8:120:ARG:NH1	2.41	0.48
24:1H:969:U:O3'	49:L8:14:GLY:HA2	2.14	0.48
3:22:22:TRP:HA	10:1A:93:GLY:HA3	1.95	0.48
24:1H:1997:G:P	57:1H:3991:HOH:O	2.72	0.48
25:1J:103:U:O2'	45:D5:72:ARG:HG3	2.14	0.48
24:1H:2035:G:H5''	57:1H:3740:HOH:O	2.13	0.48
43:B5:50:LYS:HG2	43:B5:84:ALA:HB2	1.96	0.48
24:1H:1665:A:H4'	34:68:67:LYS:HB2	1.96	0.48
24:14:2074:U:P	57:14:3494:HOH:O	2.72	0.48
31:59:94:TYR:CD1	31:59:94:TYR:N	2.79	0.48
46:I8:57:PHE:HD1	46:I8:57:PHE:N	2.12	0.48
54:1G:974:A:P	14:5A:41:ARG:HH12	2.36	0.48
43:F8:11:PRO:HD3	48:K8:37:PHE:CD2	2.48	0.48
54:1G:913:A:H1'	54:1G:914:A:O4'	2.13	0.48
32:69:118:LYS:HD2	32:69:119:PRO:HD2	1.94	0.48
24:1H:1336:A:OP2	43:F8:64:LYS:NZ	2.42	0.48
1:13:640:A:N3	8:7E:115:SER:OG	2.36	0.48
24:1H:722:A:C2	24:1H:723:G:C4	3.01	0.48
4:32:119:GLN:O	4:32:123:HIS:HD2	1.96	0.48
24:1H:176:G:C2'	24:1H:177:G:H5'	2.43	0.48
54:1G:986:A:O2'	19:AA:55:LYS:HD2	2.13	0.48
28:29:63:LEU:HA	28:29:63:LEU:HD22	1.52	0.48
24:1H:1526:G:H2'	24:1H:1527:G:O4'	2.14	0.48
14:5A:12:ARG:NH2	14:5A:14:PRO:HG3	2.29	0.48
19:AI:51:VAL:HG13	19:AI:58:VAL:HG13	1.95	0.48
28:21:79:ARG:HH21	28:21:195:LEU:HD22	1.79	0.48
54:1G:1189:C:H4'	3:22:10:PHE:CE1	2.48	0.48
24:1H:1341:U:OP1	24:1H:1397:U:N3	2.39	0.48
44:G8:6:HIS:HE1	44:G8:69:ALA:O	1.97	0.48
24:1H:1355:G:OP1	27:11:38:LYS:NZ	2.42	0.48
1:13:350:G:H2'	1:13:351:G:C8	2.48	0.48
27:11:134:ARG:HG3	27:11:135:PHE:CE1	2.48	0.48
30:41:53:LEU:HD22	30:41:87:PRO:HG3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:16:50:G:OP1	38:A8:63:THR:HG23	2.14	0.48
11:2A:17:GLY:O	11:2A:80:VAL:HA	2.13	0.48
24:1H:77:C:H5'	48:K8:10:LEU:HD11	1.95	0.48
9:82:40:LEU:O	9:82:40:LEU:HD12	2.14	0.48
32:69:114:LEU:HD23	32:69:114:LEU:O	2.13	0.48
3:22:29:TYR:OH	14:5A:54:PRO:HD2	2.14	0.48
12:3I:55:VAL:HG12	12:3I:69:TYR:HA	1.95	0.48
24:1H:960:A:C8	24:1H:962:G:C8	3.02	0.48
1:13:659:U:H2'	1:13:660:G:H8	1.78	0.48
35:78:45:LEU:N	35:78:45:LEU:HD22	2.29	0.48
40:85:92:ARG:NH1	41:95:11:GLN:O	2.47	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
1:13:468:A:H4'	16:7I:80:PHE:O	2.13	0.48
24:1H:2119:A:N1	24:1H:2170:A:N6	2.62	0.48
1:13:108:G:OP2	1:13:326:G:N1	2.39	0.48
30:49:47:LYS:HG2	30:49:48:GLU:H	1.78	0.48
31:59:102:ALA:HB1	31:59:115:VAL:O	2.14	0.48
1:13:130:A:C8	17:8I:63:ARG:HB2	2.49	0.48
15:6A:5:LYS:O	15:6A:9:GLN:HG2	2.14	0.48
24:1H:2698:U:H2'	24:1H:2699:C:C6	2.49	0.48
24:14:881:G:C2	24:14:882:G:H1'	2.49	0.48
24:14:2273:A:H2'	24:14:2274:A:C8	2.48	0.48
46:E5:25:ARG:HG3	46:E5:29:GLN:NE2	2.29	0.48
24:1H:1188:U:C4'	41:D8:79:VAL:HG22	2.43	0.48
24:1H:33:U:H4'	24:1H:34:C:OP1	2.13	0.48
1:13:1333:A:C8	1:13:1334:G:C8	3.01	0.48
24:14:673:C:H4'	29:39:82:ILE:HG12	1.96	0.48
30:49:37:VAL:HG22	30:49:159:VAL:HG12	1.95	0.48
33:15:48:MET:HE2	33:15:48:MET:HB3	1.78	0.48
26:79:52:ARG:HE	26:79:167:LYS:HB2	1.78	0.48
24:1H:1810:A:H2'	24:1H:1811:G:O4'	2.14	0.48
24:1H:30:G:H2'	24:1H:31:C:C6	2.49	0.48
24:14:2885:C:N3	24:14:2886:G:H1'	2.29	0.48
24:14:118:A:N3	24:14:178:G:H1'	2.28	0.48
54:1G:1393:U:HO2'	54:1G:1501:C:HO2'	1.60	0.48
1:13:784:C:H2'	1:13:785:G:C8	2.49	0.48
9:8E:71:SER:HA	9:8E:74:ILE:HG13	1.96	0.48
24:14:1161:C:H1'	41:95:8:GLY:O	2.13	0.48
32:61:75:LEU:HD11	32:61:105:HIS:CD2	2.49	0.48
2:1E:195:ASP:N	2:1E:195:ASP:OD1	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:4I:39:ILE:HD12	13:4I:56:LEU:HD22	1.94	0.48
1:13:865:A:H2	1:13:918:A:H4'	1.79	0.48
22:3L:31:G:H2'	22:3L:32:A:C8	2.48	0.48
54:1G:449:C:H6	16:7A:42:ARG:HD2	1.79	0.48
40:85:66:ASN:HD21	40:85:70:ARG:HE	1.62	0.48
22:3K:14:A:N3	22:3K:14:A:H2'	2.29	0.48
37:98:33:ARG:NH1	51:N8:57:VAL:HG22	2.29	0.48
38:65:83:LYS:HB3	38:65:109:GLY:H	1.79	0.48
46:I8:57:PHE:N	46:I8:57:PHE:CD1	2.81	0.48
54:1G:308:C:H2'	54:1G:309:G:C8	2.49	0.48
24:14:1441:G:H2'	24:14:1442:G:C8	2.47	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
1:13:606:G:O2'	1:13:632:A:N6	2.45	0.48
5:4E:139:LEU:HA	5:4E:142:LEU:HD12	1.94	0.48
15:6A:15:PHE:CZ	15:6A:84:LYS:HG2	2.48	0.48
1:13:1489:G:H2'	1:13:1490:C:O4'	2.14	0.48
24:14:616:A:C5	29:39:180:GLY:HA3	2.49	0.48
35:78:90:ARG:HH22	35:78:105:LEU:HD21	1.78	0.48
24:1H:2186:G:H2'	24:1H:2187:G:C8	2.49	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
24:1H:906:G:OP1	36:88:26:TYR:OH	2.23	0.48
24:14:522:G:H2'	24:14:523:C:C6	2.49	0.48
54:1G:222:U:H2'	54:1G:223:U:C6	2.49	0.48
25:16:83:G:C6	25:16:84:C:C5	3.02	0.48
53:M5:59:LYS:HE3	53:M5:59:LYS:HB2	1.49	0.48
12:3A:55:VAL:HG23	12:3A:69:TYR:HA	1.94	0.48
24:1H:2419:U:O4	53:Q8:31:HIS:CD2	2.66	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
4:32:30:LYS:HA	4:32:31:CYS:CB	2.41	0.47
1:13:1505:G:OP1	57:13:1730:HOH:O	2.20	0.47
27:11:8:PRO:CB	27:11:14:ARG:HB3	2.40	0.47
11:2I:85:ARG:HA	11:2I:112:THR:OG1	2.13	0.47
24:14:2377:A:O3'	38:65:111:GLU:HG2	2.14	0.47
25:1J:89:G:C6	25:1J:89(A):A:C6	3.02	0.47
54:1G:1327:C:H2'	54:1G:1328:C:C6	2.49	0.47
34:68:76:ALA:HB3	39:B8:75:ILE:HD13	1.96	0.47
24:1H:527:C:H4'	24:1H:528:A:O5'	2.14	0.47
45:H8:53:ILE:HA	45:H8:71:VAL:HG13	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:303:U:H2'	24:14:304:G:H8	1.79	0.47
54:1G:980:C:H5'	54:1G:981:U:OP2	2.13	0.47
24:14:705:A:H2'	24:14:706:A:O4'	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
1:13:503:C:OP2	12:3I:116:SER:OG	2.22	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
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
27:19:124:PRO:HG2	27:19:129:ASN:ND2	2.28	0.47
39:B8:2:ASN:HB3	39:B8:4:GLY:N	2.24	0.47
24:1H:1510:A:N3	24:1H:1510:A:H2'	2.29	0.47
54:1G:1305:G:O2'	54:1G:1306:A:H8	1.97	0.47
24:1H:49:A:N7	24:1H:120:U:C5	2.63	0.47
1:13:1399:C:C2	1:13:1502:A:N6	2.83	0.47
27:19:245:PRO:HA	27:19:246:PRO:HD3	1.74	0.47
1:13:1124:G:N2	1:13:1125:U:H3	2.08	0.47
38:65:103:GLU:O	38:65:106:ARG:HG2	2.14	0.47
24:1H:2298:A:H2'	24:1H:2299:G:O4'	2.13	0.47
24:14:1114:G:H2'	24:14:1115:G:C8	2.48	0.47
24:14:1408:C:C2	24:14:1595:G:N2	2.82	0.47
22:2K:59:A:C2'	22:2K:60:A:H5'	2.44	0.47
27:11:3:VAL:HG12	27:11:17:THR:HG23	1.96	0.47
24:1H:2887:U:H2'	24:1H:2888:C:C6	2.45	0.47
24:14:2335:A:N7	24:14:2337:G:C5	2.82	0.47
2:1E:55:PHE:CD2	2:1E:58:ILE:HD12	2.49	0.47
29:31:122:LYS:HD2	29:31:191:ARG:HG2	1.96	0.47
46:I8:50:ASN:HB3	46:I8:63:VAL:HG22	1.97	0.47
17:8A:62:SER:OG	17:8A:63:ARG:N	2.47	0.47
44:C5:81:LYS:HB2	44:C5:99:CYS:SG	2.54	0.47
13:4A:3:ARG:HE	13:4A:9:ILE:HD11	1.79	0.47
31:51:154:PRO:HB3	31:51:163:TYR:CZ	2.49	0.47
1:13:1239:A:O2'	1:13:1298:C:N4	2.44	0.47
24:1H:1448:G:N2	24:1H:1449:A:N6	2.62	0.47
9:8E:47:LEU:H	9:8E:47:LEU:HD13	1.79	0.47
31:51:115:VAL:HG11	31:51:148:ILE:HD11	1.96	0.47
24:14:1311:G:O2'	52:L5:47:ARG:NH2	2.46	0.47
24:14:195:A:H2'	24:14:198:C:N4	2.28	0.47
1:13:1228:C:H2'	1:13:1229:A:H8	1.79	0.47
5:42:51:VAL:O	5:42:55:VAL:HG23	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:271(B):G:N7	24:14:421:U:H2'	2.29	0.47
24:14:1247:A:OP1	29:39:95:ARG:NH2	2.45	0.47
54:1G:443:C:H42	54:1G:491:G:H1	1.61	0.47
33:58:26:LEU:O	33:58:30:ILE:HG13	2.13	0.47
28:29:67:PHE:H	28:29:70:ALA:HB3	1.78	0.47
54:1G:1129:C:C2	54:1G:1139:G:C6	3.02	0.47
1:13:323:U:O3'	20:BI:22:ARG:HD3	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
24:1H:763:G:O2'	24:1H:764:A:H3'	2.14	0.47
36:45:43:THR:HA	36:45:94:VAL:HG12	1.96	0.47
22:3K:25:G:H2'	22:3K:26:G:C8	2.49	0.47
2:1E:14:GLY:N	2:1E:16:HIS:CE1	2.82	0.47
39:75:74:ARG:HH11	39:75:74:ARG:HG2	1.79	0.47
41:95:81:TYR:HD1	41:95:83:ARG:NH1	2.12	0.47
22:3K:63:5MU:H2'	22:3K:64:PSU:H5''	1.97	0.47
1:13:1202:G:H1'	14:5I:29:ARG:HD2	1.96	0.47
44:C5:42:VAL:O	44:C5:65:ALA:N	2.36	0.47
24:14:1110:G:H2'	24:14:1111:A:C8	2.47	0.47
54:1G:542:G:N2	54:1G:543:C:C2	2.82	0.47
30:41:135:LEU:HD23	30:41:140:ILE:HD11	1.94	0.47
31:59:27:LYS:HA	31:59:27:LYS:HD2	1.70	0.47
54:1G:149:A:H2'	54:1G:150:C:C6	2.48	0.47
37:55:57:ARG:HH21	37:55:62:ALA:HB2	1.79	0.47
38:A8:35:ILE:HG22	38:A8:97:ARG:HH21	1.79	0.47
27:19:76:PRO:HB2	27:19:116:GLN:NE2	2.28	0.47
24:1H:2199:A:H3'	24:1H:2205:C:H6	1.79	0.47
7:6E:113:GLU:HG3	7:6E:119:ARG:HG2	1.96	0.47
16:7A:58:TYR:O	16:7A:61:SER:HB3	2.14	0.47
25:16:78:A:H2'	25:16:79:C:O4'	2.15	0.47
24:1H:2636:U:H2'	24:1H:2637:U:C6	2.49	0.47
24:1H:2094:G:OP1	32:61:22:LYS:HD2	2.14	0.47
1:13:784:C:H2'	1:13:785:G:H8	1.79	0.47
1:13:1372:U:H5''	9:8E:71:SER:HB3	1.97	0.47
4:3E:22:LYS:HB2	4:3E:26:CYS:SG	2.55	0.47
1:13:265:G:H5''	17:8I:65:ILE:O	2.15	0.47
4:3E:23:GLY:HA2	4:3E:112:VAL:HG22	1.96	0.47
24:14:1794:U:H2'	24:14:1795:C:H6	1.79	0.47
30:41:150:ASP:OD1	30:41:153:ARG:NH2	2.48	0.47
38:A8:18:ILE:O	38:A8:21:THR:HG22	2.14	0.47
24:14:185:U:H4'	24:14:218:A:H4'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:11:106:ILE:HD11	27:11:196:VAL:HG22	1.95	0.47
39:B8:1:MET:N	39:B8:2:ASN:HA	2.27	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
28:21:50:GLY:HA3	28:21:74:PRO:HG3	1.97	0.47
30:49:95:ARG:O	30:49:99:MET:N	2.42	0.47
32:61:110:ASP:HB3	32:61:112:LYS:N	2.29	0.47
2:1E:15:VAL:HG22	2:1E:209:ARG:HB2	1.96	0.47
24:14:446:G:OP2	57:14:3901:HOH:O	2.20	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
11:2I:124:LYS:HB3	11:2I:125:PHE:CE1	2.48	0.47
24:1H:2863:C:H2'	24:1H:2864:G:C8	2.49	0.47
24:1H:2408:U:O2'	24:1H:2409:G:H5'	2.13	0.47
3:2E:50:ALA:HB1	3:2E:70:VAL:HG11	1.96	0.47
24:14:610:C:H2'	24:14:611:C:C6	2.50	0.47
6:5E:50:TYR:CZ	18:9I:77:GLY:HA2	2.50	0.47
1:13:881:G:H2'	1:13:882:C:O4'	2.15	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
39:75:106:SER:HA	39:75:110:ILE:CD1	2.45	0.47
24:14:1028:A:N6	24:14:1125:G:H2'	2.29	0.47
28:21:52:LEU:O	28:21:75:VAL:HG22	2.14	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
32:69:8:PRO:HD3	32:69:15:VAL:HG22	1.95	0.47
24:1H:1916:A:H2'	24:1H:1917:U:O4'	2.14	0.47
24:14:485:C:H42	24:14:495:G:H1	1.62	0.47
20:BA:53:LEU:HD12	20:BA:101:GLY:HA3	1.96	0.47
24:1H:1662:C:O2'	24:1H:2687:U:H5''	2.14	0.47
24:1H:2238:G:H2'	24:1H:2238:G:N3	2.28	0.47
54:1G:1136:U:H5''	54:1G:1137:C:C5	2.49	0.47
31:59:83:TYR:OH	31:59:132:ARG:NH2	2.47	0.47
4:32:154:ASN:N	4:32:154:ASN:OD1	2.48	0.47
24:1H:1731:G:H8	24:1H:1731:G:OP2	1.97	0.47
54:1G:804:U:H5''	54:1G:805:C:OP2	2.14	0.47
45:H8:165:VAL:HB	45:H8:166:SER:H	1.49	0.47
22:2L:35:QUO:H162	22:2L:35:QUO:H101	1.53	0.47
54:1G:448:A:H62	54:1G:486:U:H3	1.61	0.47
35:78:37:GLY:HA2	35:78:41:ARG:NH2	2.30	0.47
21:1B:9:ARG:HH11	21:1B:13:ILE:HD11	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
22:2L:72:U:O2'	22:2L:73:U:OP2	2.26	0.47
20:BA:54:LYS:HE3	20:BA:54:LYS:HB2	1.65	0.47
2:1E:21:ARG:C	2:1E:23:ARG:H	2.18	0.47
48:G5:17:SER:HB3	48:G5:20:GLU:HB2	1.96	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
24:14:1839:G:C8	24:14:1927:A:H1'	2.49	0.47
24:14:2646:C:OP2	24:14:2732:G:O2'	2.22	0.47
24:14:2536:G:C6	24:14:2537:U:C4	3.03	0.47
38:A8:35:ILE:HD11	38:A8:101:LEU:HD22	1.97	0.47
2:12:8:LYS:HG2	2:12:217:ARG:NE	2.30	0.47
24:14:1453:A:O2'	24:14:1454:U:H2'	2.14	0.47
4:32:108:LEU:HD13	4:32:174:LEU:HD13	1.97	0.47
41:D8:79:VAL:HG13	41:D8:81:TYR:HB3	1.95	0.47
4:3E:108:LEU:HB3	4:3E:110:PHE:HD1	1.80	0.47
1:13:838:G:H1	1:13:848:C:H42	1.62	0.47
54:1G:1440:C:O2'	54:1G:1442:G:N2	2.48	0.47
54:1G:7:G:H21	5:42:121:LYS:HG2	1.79	0.47
2:1E:30:ARG:HG3	2:1E:31:TYR:CE1	2.50	0.47
30:49:36:LYS:HG2	30:49:38:VAL:HG23	1.97	0.47
24:1H:2478:A:C8	24:1H:2529:G:H2'	2.50	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
24:1H:558:G:P	33:58:111:PRO:HD2	2.54	0.47
35:35:27:HIS:O	35:35:31:ALA:HA	2.15	0.47
13:4A:7:VAL:HG11	30:49:115:ARG:HH21	1.79	0.47
6:52:3:ARG:HB2	6:52:93:SER:HB2	1.97	0.47
24:1H:747:U:O2	24:1H:2014:A:H1'	2.14	0.47
54:1G:135:C:O2	16:7A:1:MET:HB3	2.15	0.47
24:14:2833:G:OP1	24:14:2833:G:H8	1.97	0.47
17:8I:74:LEU:HD23	17:8I:74:LEU:HA	1.68	0.47
4:32:31:CYS:O	4:32:33:MET:N	2.48	0.47
29:31:32:LEU:O	29:31:36:VAL:HG23	2.15	0.47
24:1H:2052:G:O4'	28:21:142:GLY:HA3	2.13	0.47
1:13:765:G:H5''	1:13:766:A:OP1	2.14	0.47
1:13:1503:A:H61	23:4K:12:A:C2'	2.18	0.47
24:14:2287:A:N1	24:14:2346:A:H2	2.12	0.47
6:52:87:ARG:NH1	6:52:87:ARG:HG3	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)
24:1H:1332:G:H5'	24:1H:1332:G:C8	2.50	0.47
24:1H:1609:A:H5'	24:1H:1617:C:OP1	2.14	0.47
2:12:178:ARG:NH2	8:72:74:PRO:HG3	2.30	0.47
2:1E:178:ARG:HH12	2:1E:196:LEU:C	2.16	0.47
24:1H:910:A:C5	36:88:13:GLN:HG3	2.49	0.47
11:2A:85:ARG:HA	11:2A:112:THR:OG1	2.14	0.47
20:BA:95:ALA:C	20:BA:97:ALA:H	2.16	0.47
51:N8:16:ARG:HG3	51:N8:17:ASP:N	2.29	0.47
24:14:1448:G:H1'	24:14:1528:A:H62	1.78	0.47
24:14:329:G:O6	44:C5:19:LYS:HG2	2.14	0.47
1:13:498:A:H4'	1:13:500:G:OP1	2.15	0.47
32:69:77:LEU:HD22	32:69:141:LYS:HB3	1.96	0.47
24:1H:528:A:O2'	24:1H:529:A:H5''	2.14	0.47
32:69:38:LEU:HD12	32:69:38:LEU:H	1.80	0.47
29:39:18:ARG:HG2	29:39:19:GLU:N	2.29	0.47
54:1G:523:A:H61	12:3A:53:ARG:NH1	2.13	0.47
24:14:1820:U:O2	27:19:201:HIS:HB3	2.14	0.47
54:1G:109:A:C6	54:1G:326:G:C6	3.03	0.47
24:14:1688:U:H1'	24:14:1701:A:C6	2.49	0.47
1:13:537:G:OP1	12:3I:113:ARG:NH2	2.34	0.47
54:1G:456:C:H42	54:1G:476:G:H1	1.63	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
24:1H:354:G:H2'	24:1H:355:G:H8	1.79	0.47
24:1H:2845:G:OP2	57:1H:4380:HOH:O	2.20	0.47
1:13:1186:G:H21	14:5I:61:TRP:C	2.17	0.47
1:13:15:G:H4'	5:4E:24:ARG:NH1	2.30	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
24:14:1785:A:H4'	24:14:1982:C:O2'	2.14	0.47
24:14:1149:G:H2'	24:14:1150:C:C6	2.50	0.47
1:13:1340:A:O2'	22:2K:32:A:O2'	2.14	0.47
24:1H:540:G:C8	24:1H:540:G:H5''	2.49	0.47
24:1H:1427:A:H4'	24:1H:1428:C:O5'	2.14	0.47
1:13:1525:G:OP1	11:2I:120:ARG:NH2	2.48	0.47
53:Q8:26:LYS:HD3	53:Q8:48:PHE:CD1	2.50	0.47
24:14:2666:C:H5''	24:14:2667:C:OP2	2.14	0.47
6:52:4:TYR:CE1	6:52:92:LYS:HG3	2.49	0.47
41:95:21:ARG:HG2	41:95:91:TYR:CE1	2.49	0.47
22:2L:36:U:H2'	22:2L:37:A:C8	2.49	0.47
24:1H:1497:U:H5''	24:1H:1498:C:H5	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:18:LYS:HE2	4:32:20:TYR:CD2	2.49	0.47
4:32:30:LYS:HB2	4:32:32:ALA:N	2.29	0.47
24:14:740:U:O4'	24:14:1981:A:C4	2.68	0.47
27:11:182:LEU:HA	27:11:182:LEU:HD23	1.64	0.47
41:95:22:VAL:HG22	41:95:23:GLU:H	1.80	0.47
39:75:6:LEU:H	39:75:9:LEU:CB	2.18	0.47
39:75:9:LEU:O	39:75:9:LEU:HD22	2.15	0.47
24:1H:792:G:H5''	24:1H:793:A:H5'	1.96	0.47
24:14:2629:A:O2'	24:14:2630:G:H4'	2.15	0.47
24:1H:372:G:H22	24:1H:400:G:H2'	1.80	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
22:3K:14:A:H3'	22:3K:15:G:H5''	1.96	0.47
6:5E:67:MET:HB2	6:5E:68:PRO:HD2	1.96	0.47
24:1H:963:U:H2'	24:1H:964:C:C6	2.49	0.47
24:1H:2680:C:OP2	28:21:111:ARG:NH2	2.48	0.47
43:F8:60:ARG:NH1	52:P8:47:ARG:HH22	2.11	0.47
2:1E:145:LEU:O	2:1E:149:LEU:HB2	2.15	0.47
1:13:1286:A:C8	1:13:1287:A:H4'	2.49	0.47
24:14:1342:A:C2	24:14:1397:U:C2	3.02	0.47
54:1G:952:U:H2'	54:1G:953:G:C8	2.50	0.47
24:1H:2023:G:H4'	24:1H:2617:C:O3'	2.15	0.47
54:1G:571:U:O2	54:1G:918:A:H5'	2.14	0.47
22:2L:59:A:H61	22:2L:60:A:N6	2.12	0.47
24:14:1464:C:O2'	24:14:1528:A:H8	1.97	0.47
4:3E:13:ARG:O	4:3E:14:ARG:HB3	2.15	0.47
24:1H:2151:G:H2'	24:1H:2152:G:H8	1.78	0.47
46:I8:23:VAL:HG13	46:I8:38:VAL:CG2	2.44	0.47
54:1G:412:A:O2'	54:1G:413:G:OP2	2.21	0.47
2:12:10:LEU:HD12	2:12:13:ALA:HB2	1.97	0.47
22:3L:64:PSU:O2'	22:3L:66:G:N7	2.39	0.47
19:AA:7:LYS:HE2	19:AA:7:LYS:O	2.15	0.47
54:1G:677:U:H2'	54:1G:678:U:C6	2.50	0.47
1:13:1123:A:H4'	10:1I:37:PRO:HD2	1.97	0.47
31:59:27:LYS:HA	31:59:32:GLU:HB3	1.95	0.47
32:69:75:LEU:HG	32:69:76:THR:N	2.30	0.47
24:1H:528:A:N1	24:1H:2042:A:H2'	2.29	0.47
24:1H:2854:G:H2'	24:1H:2855:C:H6	1.80	0.47
24:1H:639:U:H2'	24:1H:640:C:C6	2.49	0.47
39:75:60:THR:HG22	39:75:77:PRO:HA	1.95	0.47
1:13:79:G:H2'	1:13:79:G:N3	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1323:U:H2'	24:14:1324:G:H5'	1.96	0.47
24:1H:2340:G:O2'	24:1H:2341:G:H5'	2.14	0.47
28:29:32:PRO:HA	28:29:90:THR:H	1.78	0.47
35:78:125:VAL:O	35:78:144:GLU:HB2	2.15	0.47
1:13:376:G:H4'	16:7I:5:ARG:HH11	1.80	0.47
39:75:16:ARG:NH2	39:75:19:LEU:HD21	2.30	0.47
29:39:28:ILE:HD12	29:39:119:ARG:HE	1.79	0.47
1:13:391:G:O3'	16:7I:8:ARG:NH2	2.47	0.47
14:5A:45:ARG:HG3	14:5A:49:HIS:CE1	2.50	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
32:69:6:LEU:O	32:69:15:VAL:HG13	2.15	0.47
1:13:572:A:N3	1:13:917:G:H1'	2.30	0.47
24:1H:26:G:C6	24:1H:27:G:N1	2.82	0.47
24:1H:270(Y):G:C2	24:1H:270(Z):U:O4	2.67	0.47
45:D5:5:LEU:HD13	45:D5:47:VAL:HG21	1.97	0.47
27:19:102:LYS:C	27:19:103:ARG:HG2	2.34	0.47
24:1H:1575:C:H2'	24:1H:1576:U:O4'	2.15	0.47
41:95:84:LYS:HE3	41:95:85:LYS:H	1.79	0.47
34:68:20:MET:O	34:68:22:ILE:HD13	2.14	0.47
34:25:71:ARG:NH2	34:25:105:GLU:OE1	2.43	0.47
35:78:106:LEU:O	35:78:106:LEU:HD22	2.14	0.47
2:12:58:ILE:HA	2:12:61:LEU:HB3	1.96	0.47
24:14:1716:U:H1'	24:14:1746:G:N2	2.29	0.47
7:6E:88:PRO:HD2	7:6E:152:ALA:HA	1.96	0.47
1:13:947:G:H2'	1:13:948:C:C6	2.49	0.47
24:14:2050:C:H2'	24:14:2051:A:C8	2.49	0.47
30:41:97:ASP:O	30:41:101:ILE:HG12	2.15	0.47
1:13:1232:U:H5''	9:8E:124:GLN:HB3	1.97	0.47
34:68:63:VAL:HG12	34:68:106:LEU:HD11	1.95	0.47
10:1I:3:LYS:HB3	10:1I:101:VAL:O	2.15	0.47
9:8E:53:VAL:HB	9:8E:95:LYS:HE2	1.96	0.47
24:1H:2252:G:H2'	24:1H:2253:G:O4'	2.14	0.47
28:21:15:PHE:HB3	39:B8:81:PRO:HG2	1.95	0.47
6:5E:69:GLU:O	6:5E:72:VAL:HG12	2.15	0.47
1:13:774:G:OP1	27:11:202:LYS:NZ	2.46	0.47
24:14:2704:C:H2'	24:14:2705:A:O4'	2.14	0.47
39:B8:2:ASN:HB2	39:B8:5:ALA:CB	2.45	0.47
54:1G:979:C:OP1	54:1G:1223:C:N4	2.48	0.47
24:14:2635:C:OP1	28:29:77:ILE:HG21	2.15	0.47
54:1G:1106:G:H4'	3:22:171:GLY:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:956:G:H2'	24:1H:957:A:H2'	1.96	0.47
24:1H:1471:A:C2	24:1H:1472:A:C4	3.02	0.47
20:BA:63:ILE:HD13	20:BA:80:ARG:HB3	1.95	0.47
24:1H:2136:C:H2'	24:1H:2137:C:C6	2.50	0.47
7:62:114:ARG:H	7:62:114:ARG:HG2	1.47	0.47
24:1H:600:G:N2	24:1H:605:C:O3'	2.48	0.47
8:7E:43:GLY:O	8:7E:64:LYS:HD2	2.15	0.47
24:1H:2863:C:H2'	24:1H:2864:G:H8	1.80	0.47
24:1H:2864:G:H2'	24:1H:2865:U:C6	2.50	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
9:82:24:GLY:HA3	9:82:57:GLY:HA2	1.96	0.47
24:14:996:A:N6	24:14:1160:G:C6	2.82	0.47
15:6A:56:LEU:O	15:6A:60:VAL:HG23	2.15	0.47
24:1H:2442:C:H2'	24:1H:2443:C:H6	1.77	0.47
45:D5:100:VAL:HG11	45:D5:134:PRO:HG2	1.97	0.47
54:1G:166:G:H2'	54:1G:167:G:C8	2.49	0.47
37:98:87:TYR:HD1	37:98:90:ARG:HD2	1.80	0.47
24:14:903:C:H2'	24:14:904:C:C6	2.50	0.47
24:14:1404:C:O2'	24:14:1405:U:H5'	2.15	0.47
24:1H:141:A:H8	24:1H:1595:G:H21	1.59	0.47
4:32:94:LEU:HA	4:32:97:LEU:HD12	1.96	0.47
2:12:58:ILE:O	2:12:62:ALA:N	2.33	0.47
28:21:55:ASN:HA	28:21:58:ARG:HD2	1.95	0.47
54:1G:359:U:H2'	54:1G:360:A:C8	2.49	0.47
54:1G:878:G:H5'	8:72:89:PRO:HG2	1.96	0.47
27:11:147:LEU:HD22	27:11:155:LEU:HD11	1.97	0.47
5:42:30:ALA:O	5:42:45:PHE:HD1	1.98	0.47
1:13:1141:C:H2'	1:13:1142:G:H8	1.79	0.47
24:14:1313:U:H2'	24:14:1610:A:C2	2.50	0.47
33:58:56:ASN:N	33:58:125:GLY:O	2.39	0.47
54:1G:1216:G:H2'	54:1G:1217:C:C6	2.50	0.47
24:1H:2235:G:H2'	24:1H:2236:C:C6	2.50	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
19:AA:15:LEU:O	19:AA:19:VAL:HG23	2.15	0.47
22:3L:26:G:H2'	22:3L:27:A:O4'	2.14	0.47
40:85:61:TRP:CZ3	40:85:94:ASN:HB2	2.50	0.47
24:1H:1006:C:C2	24:1H:1138:G:N2	2.83	0.47
54:1G:57:G:C2	54:1G:58:C:C2	3.03	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)
22:3K:22:A:H2'	22:3K:22:A:N3	2.30	0.47
2:1E:87:ARG:HH11	2:1E:219:VAL:HB	1.79	0.47
26:71:45:ALA:CB	26:71:212:VAL:HG22	2.41	0.47
1:13:713:G:H2'	1:13:714:G:C8	2.50	0.47
1:13:342:C:H2'	1:13:343:U:O4'	2.15	0.47
54:1G:1399:C:H4'	54:1G:1400:C:O5'	2.14	0.47
24:1H:2331:G:H4'	46:I8:42:GLY:HA3	1.97	0.47
36:45:87:LYS:HG3	36:45:88:GLY:N	2.30	0.47
3:2E:52:LEU:HA	3:2E:70:VAL:HG22	1.97	0.47
2:1E:55:PHE:CD2	2:1E:221:LEU:HG	2.50	0.47
35:78:138:LEU:HD12	35:78:144:GLU:OE2	2.14	0.47
1:13:265:G:H5'	17:8I:64:PRO:O	2.15	0.47
4:3E:112:VAL:HG12	4:3E:116:GLN:OE1	2.14	0.47
22:2L:3:U:H2'	22:2L:4:G:C8	2.50	0.47
37:55:33:ARG:HB3	37:55:115:GLU:HG3	1.97	0.47
1:13:445:G:H1	1:13:489:C:H42	1.62	0.47
24:14:1753:G:N1	24:14:1756:G:C2	2.83	0.47
26:79:14:VAL:HG11	26:79:222:VAL:HA	1.95	0.47
54:1G:1084:G:H5'	54:1G:1102:A:OP2	2.15	0.47
24:1H:2123:G:H2'	24:1H:2124:G:O4'	2.15	0.47
15:6A:67:LEU:HD23	15:6A:67:LEU:HA	1.77	0.47
18:9I:38:GLU:HA	18:9I:41:LYS:HG2	1.96	0.47
37:98:13:HIS:CE1	37:98:16:HIS:HB2	2.50	0.47
33:58:47:ALA:CB	33:58:112:LEU:HD11	2.27	0.47
28:29:67:PHE:H	28:29:70:ALA:CB	2.28	0.47
4:32:33:MET:O	4:32:34:GLU:HB2	2.15	0.47
1:13:745:C:H5'	1:13:851:G:H21	1.80	0.47
24:1H:59:U:O2'	24:1H:73:A:H2'	2.15	0.47
54:1G:1178:G:OP2	9:82:93:ARG:NH2	2.47	0.47
24:14:270(V):G:H2'	24:14:270(W):G:H8	1.80	0.47
22:2L:70:C:HO2'	22:2L:71:C:H2'	1.80	0.47
28:21:101:ARG:NH1	28:21:171:GLU:HB2	2.29	0.47
24:1H:2130:U:O2'	24:1H:2158:A:N6	2.47	0.47
26:71:46:LYS:NZ	26:71:210:ARG:HH21	2.12	0.47
24:1H:1169:G:H1	24:1H:1180:C:H42	1.63	0.47
50:M8:55:ARG:HD2	50:M8:55:ARG:HA	1.52	0.47
24:14:2537:U:C2	24:14:2538:C:C5	3.03	0.47
45:H8:143:GLY:HA2	45:H8:144:LEU:HA	1.50	0.47
24:1H:935:C:H2'	24:1H:936:C:H6	1.80	0.47
24:14:2870:C:H2'	24:14:2871:C:O4'	2.15	0.47
1:13:651:C:H5''	1:13:652:U:OP2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:3I:110:VAL:HG23	12:3I:120:TYR:HB3	1.96	0.47
24:1H:270(T):G:C6	24:1H:270(U):C:C4	3.03	0.47
24:1H:198:C:H2'	24:1H:199:A:H5''	1.96	0.47
24:1H:2577:A:HO2'	51:N8:2:ALA:N	2.13	0.47
43:B5:9:LEU:HB2	43:B5:29:TRP:O	2.15	0.47
5:42:57:LYS:HG2	5:42:61:TYR:HE1	1.80	0.47
1:13:789:U:H2'	1:13:791:G:OP2	2.15	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
28:21:21:VAL:HG13	28:21:185:LYS:HG3	1.96	0.47
4:3E:141:ARG:HH11	4:3E:142:PRO:HD2	1.80	0.47
24:1H:667:U:O2	53:Q8:2:PRO:HD2	2.15	0.47
31:51:90:LYS:NZ	31:51:169:VAL:HG21	2.30	0.47
24:14:1634:A:N1	57:14:3687:HOH:O	2.36	0.47
41:95:91:TYR:CB	41:95:91:TYR:CD2	2.85	0.46
24:14:2698:U:H2'	24:14:2699:C:C6	2.51	0.46
24:1H:2432:A:C4	47:J8:33:LYS:HG2	2.50	0.46
29:31:6:VAL:HG11	29:31:119:ARG:HA	1.96	0.46
24:1H:274:G:H2'	24:1H:275:G:H1'	1.97	0.46
2:1E:164:VAL:HB	2:1E:186:ALA:CB	2.44	0.46
34:25:68:GLU:HB3	34:25:78:ARG:HB3	1.97	0.46
24:14:2175:C:H1'	26:79:217:THR:O	2.16	0.46
31:59:79:VAL:HA	31:59:136:ILE:HG22	1.97	0.46
24:14:2337:G:H5''	24:14:2338:G:OP2	2.15	0.46
1:13:164:U:H2'	1:13:165:C:C6	2.50	0.46
26:79:25:ALA:O	26:79:29:VAL:N	2.47	0.46
24:14:863:A:C2	24:14:864:G:C4	3.03	0.46
15:6A:15:PHE:HZ	15:6A:84:LYS:HG2	1.80	0.46
27:19:43:ARG:HH11	27:19:43:ARG:CG	2.28	0.46
13:4I:84:ILE:HG13	13:4I:86:CYS:H	1.80	0.46
1:13:865:A:C2	1:13:918:A:H4'	2.50	0.46
24:1H:2378:A:O2'	38:A8:21:THR:HG21	2.15	0.46
29:39:150:GLY:HA2	29:39:172:TRP:CD2	2.50	0.46
24:1H:911:A:H5''	24:1H:912:C:C5'	2.45	0.46
24:1H:2231:C:H2'	24:1H:2232:U:O4'	2.15	0.46
32:69:120:ILE:HG21	32:69:126:TYR:HE2	1.81	0.46
54:1G:391:G:C6	54:1G:392:G:C5	3.03	0.46
24:1H:654(A):A:H2	24:1H:654(T):A:N1	2.13	0.46
1:13:874:G:C5	1:13:875:C:C5	3.03	0.46
31:51:101:ARG:NH2	31:51:122:THR:HA	2.30	0.46
44:C5:84:ARG:HG3	44:C5:95:LYS:HG3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:1I:26:ALA:HB1	10:1I:84:GLN:HG3	1.96	0.46
42:A5:95:ILE:HG13	42:A5:95:ILE:O	2.14	0.46
34:25:90:GLN:O	34:25:91:LEU:HB2	2.14	0.46
24:14:540:G:H2'	24:14:541:C:C6	2.50	0.46
24:14:182:A:N3	24:14:433:C:O2'	2.44	0.46
29:31:102:PRO:HB2	29:31:105:VAL:HG23	1.97	0.46
24:1H:2593:U:H2'	24:1H:2594:C:C6	2.50	0.46
24:14:782:A:H5'	24:14:783:A:C2	2.50	0.46
35:35:128:HIS:HA	35:35:147:LEU:HA	1.97	0.46
24:14:2805:G:O2'	24:14:2807:G:O4'	2.33	0.46
24:14:55:G:H2'	24:14:56:A:C8	2.50	0.46
24:14:2635:C:OP1	28:29:77:ILE:HG12	2.15	0.46
48:G5:22:GLU:HA	48:G5:25:VAL:HG22	1.97	0.46
24:1H:2607:G:H2'	24:1H:2608:G:O4'	2.14	0.46
6:5E:14:LEU:HB3	6:5E:19:LEU:HD12	1.97	0.46
35:78:64:LYS:O	53:Q8:30:ARG:NH2	2.48	0.46
24:1H:1635:G:H2'	24:1H:1636:C:C6	2.51	0.46
22:2L:15:G:O5'	22:2L:15:G:H8	1.98	0.46
54:1G:737:A:H2'	54:1G:738:C:C6	2.50	0.46
7:62:116:ALA:HA	7:62:119:ARG:HG3	1.97	0.46
24:1H:1029:A:H62	24:1H:1125:G:H21	1.64	0.46
28:29:119:ARG:HG2	28:29:160:TYR:HB2	1.98	0.46
44:C5:42:VAL:HG13	44:C5:65:ALA:HB3	1.97	0.46
25:1J:89:G:C6	25:1J:89(A):A:N1	2.83	0.46
24:1H:1853:A:H2'	24:1H:1854:A:H8	1.77	0.46
45:D5:77:ASP:HB2	45:D5:84:GLU:HG2	1.98	0.46
25:1J:93:C:H2'	25:1J:94:C:C6	2.48	0.46
24:1H:2228:G:P	27:11:263:ARG:HH12	2.38	0.46
24:14:2638:G:HO2'	24:14:2639:A:H8	1.57	0.46
24:1H:174:C:H2'	24:1H:175:G:O4'	2.16	0.46
54:1G:630:G:H5'	54:1G:631:G:OP2	2.15	0.46
54:1G:364:A:O2'	54:1G:365:U:H5'	2.15	0.46
54:1G:980:C:H3'	54:1G:981:U:C6	2.50	0.46
5:42:72:GLN:O	5:42:75:THR:N	2.43	0.46
47:J8:15:ALA:O	47:J8:40:ARG:HG3	2.15	0.46
24:14:286:C:H2'	24:14:287:C:C6	2.49	0.46
13:4I:67:GLU:CD	13:4I:68:GLY:H	2.19	0.46
24:14:2516:G:C6	24:14:2517:C:C4	3.03	0.46
30:41:109:VAL:HG21	50:M8:14:ILE:HD13	1.96	0.46
7:62:13:GLN:HA	7:62:14:PRO:HD3	1.78	0.46
42:E8:11:ARG:CZ	42:E8:98:LYS:HB3	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2626:C:H2'	24:14:2627:G:O4'	2.15	0.46
24:1H:2626:C:H2'	24:1H:2627:G:O4'	2.16	0.46
52:P8:35:ARG:HG3	52:P8:42:LEU:HD11	1.97	0.46
24:14:1806:C:O2'	27:19:46:GLN:OE1	2.24	0.46
12:3I:35:GLY:HA2	12:3I:60:LEU:HA	1.96	0.46
4:3E:179:GLU:CD	4:3E:179:GLU:H	2.18	0.46
1:13:1363:A:H1'	1:13:1365:G:N7	2.29	0.46
5:42:140:ARG:O	5:42:143:ARG:NH2	2.49	0.46
1:13:1277:C:O2'	1:13:1279:A:H1'	2.14	0.46
6:5E:4:TYR:HD1	6:5E:92:LYS:HA	1.79	0.46
1:13:200:G:N2	1:13:218:C:O2	2.48	0.46
27:19:69:ARG:CD	27:19:105:ILE:HD11	2.45	0.46
24:14:1012:U:N3	24:14:1143:A:H2	2.06	0.46
1:13:1003:G:H2'	1:13:1004:A:H4'	1.96	0.46
2:1E:9:GLU:HA	2:1E:12:GLU:OE2	2.15	0.46
24:1H:322:A:P	29:31:168:ARG:HH21	2.39	0.46
24:1H:456:C:C2'	43:F8:68:ARG:HH22	2.25	0.46
45:D5:132:ASN:HD22	45:D5:159:PRO:HB2	1.79	0.46
38:65:62:LYS:HB3	38:65:97:ARG:HD3	1.97	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
1:13:828:A:N3	2:1E:26:PRO:HG3	2.30	0.46
44:C5:20:TYR:CZ	44:C5:42:VAL:HA	2.50	0.46
48:G5:17:SER:HB2	48:G5:20:GLU:N	2.29	0.46
54:1G:419:C:H5'	54:1G:513:C:H4'	1.97	0.46
1:13:359:U:H2'	1:13:360:A:H8	1.80	0.46
44:C5:87:LYS:O	44:C5:94:LYS:HG2	2.15	0.46
37:55:77:ARG:O	37:55:80:PHE:N	2.49	0.46
54:1G:523:A:H61	12:3A:92:ASP:HB2	1.79	0.46
54:1G:165:C:H2'	54:1G:166:G:H8	1.80	0.46
22:2K:38:MIA:H161	23:4K:15:A:C2	2.50	0.46
28:29:76:ARG:CG	28:29:195:LEU:HD22	2.46	0.46
33:15:99:LEU:HD22	33:15:103:VAL:HG23	1.97	0.46
24:1H:1339:G:H5''	43:F8:16:LYS:HD2	1.98	0.46
24:1H:1213:A:N3	24:1H:1238:G:O2'	2.42	0.46
24:14:1226:G:C4'	41:95:84:LYS:HA	2.45	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
1:13:1391:U:H2'	1:13:1392:G:C8	2.51	0.46
29:39:178:PRO:HG2	29:39:179:GLU:OE1	2.15	0.46
24:1H:1742:C:H5'	24:1H:1743:G:OP2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2439:A:C8	24:14:2439:A:H5'	2.50	0.46
4:3E:84:LYS:HD2	4:3E:84:LYS:HA	1.61	0.46
3:22:34:LEU:O	3:22:38:ARG:HG3	2.15	0.46
54:1G:355:C:C4	54:1G:356:A:N7	2.84	0.46
54:1G:1147:C:O2	9:82:16:ARG:NE	2.48	0.46
24:1H:2574:G:N3	28:21:143:ASN:ND2	2.62	0.46
24:14:999:U:H5	24:14:1154:G:N7	2.14	0.46
40:C8:47:TYR:C	40:C8:47:TYR:CD1	2.89	0.46
25:1J:66:A:N6	25:1J:107:U:H2'	2.31	0.46
24:14:2893:G:H4'	24:14:2894:G:O5'	2.15	0.46
43:B5:63:LYS:HA	43:B5:72:LYS:HA	1.96	0.46
50:I5:32:TYR:HB3	50:I5:33:VAL:H	1.35	0.46
22:2K:9:U:O2'	22:2K:10:C:H5	1.98	0.46
15:6I:39:LEU:HD13	15:6I:56:LEU:HB2	1.97	0.46
54:1G:1069:C:N4	54:1G:1094:G:O6	2.48	0.46
30:49:66:GLN:HG2	50:I5:6:HIS:CE1	2.51	0.46
25:1J:43:C:OP1	50:I5:2:LYS:HB3	2.15	0.46
3:2E:150:LYS:HB3	3:2E:201:TYR:HB2	1.97	0.46
1:13:793:U:H5'	1:13:794:A:H5''	1.98	0.46
2:1E:80:ILE:HD12	2:1E:211:ILE:HB	1.98	0.46
54:1G:457:C:H2'	54:1G:458:C:C6	2.51	0.46
54:1G:1158:C:O3'	2:12:133:LYS:NZ	2.49	0.46
24:14:2317:C:H2'	24:14:2318:G:O4'	2.14	0.46
1:13:1238:A:N7	1:13:1303:C:H1'	2.30	0.46
24:1H:2022:U:O2'	24:1H:2617:C:H5'	2.16	0.46
54:1G:683:G:C6	54:1G:684:A:C6	3.03	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
54:1G:1272:G:C6	54:1G:1273:G:C5	3.03	0.46
1:13:929:G:H1	1:13:1388:C:N4	2.13	0.46
46:I8:72:ARG:CB	46:I8:75:LEU:HB2	2.44	0.46
13:4A:14:ARG:N	13:4A:44:ARG:HH11	2.11	0.46
54:1G:1073:U:H2'	54:1G:1074:G:H8	1.79	0.46
24:14:1728:G:C2	24:14:1730:U:OP2	2.69	0.46
5:42:90:VAL:O	5:42:91:LEU:HD13	2.16	0.46
52:L5:12:ARG:HH21	52:L5:44:PRO:HB3	1.81	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
11:2I:92:GLU:O	11:2I:96:ARG:HG3	2.16	0.46
28:29:131:ALA:HB1	28:29:135:HIS:CE1	2.50	0.46
24:14:470:A:H2'	24:14:471:A:O4'	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:873:G:H1	24:1H:904:C:H42	1.62	0.46
3:22:206:GLU:HG3	3:22:207:VAL:H	1.78	0.46
24:14:1591:G:H2'	24:14:1592:C:C6	2.50	0.46
54:1G:300:A:H2'	54:1G:301:G:O4'	2.15	0.46
47:F5:40:ARG:NH2	47:F5:42:GLN:HG2	2.31	0.46
25:1J:53:A:H2'	25:1J:54:G:O4'	2.15	0.46
40:C8:80:ILE:O	40:C8:84:LYS:HB2	2.15	0.46
24:1H:885:C:H2'	24:1H:886:C:H5''	1.97	0.46
53:M5:62:LEU:HA	53:M5:62:LEU:HD23	1.39	0.46
54:1G:445:G:C4	54:1G:446:G:C8	3.03	0.46
24:1H:1697:G:O2'	24:1H:1978:A:OP1	2.27	0.46
53:M5:57:ARG:HH11	53:M5:57:ARG:CA	2.28	0.46
31:51:7:LEU:HD23	31:51:65:HIS:HE1	1.81	0.46
54:1G:553:A:H2'	54:1G:554:C:H6	1.80	0.46
1:13:148:G:H1	1:13:174:C:H42	1.62	0.46
24:1H:1516:U:N3	24:1H:1517:G:N7	2.63	0.46
25:1J:12:C:H6	25:1J:12:C:OP2	1.97	0.46
24:14:142:G:H1'	43:B5:37:THR:CG2	2.46	0.46
4:32:96:LEU:HD13	4:32:139:ARG:NH2	2.31	0.46
24:14:75:G:H1	24:14:111:A:H61	1.64	0.46
24:14:2230:G:H1'	47:F5:45:ASN:CB	2.46	0.46
24:1H:1763:G:OP1	24:1H:1763:G:H4'	2.15	0.46
54:1G:1446:A:H3'	54:1G:1446:A:N3	2.30	0.46
54:1G:32:A:C2	54:1G:33:A:C5	3.02	0.46
24:14:685:A:C8	24:14:774:A:C6	3.03	0.46
24:14:1545:A:H2'	24:14:1545(A):A:O4'	2.16	0.46
34:68:22:ILE:HA	34:68:22:ILE:HD12	1.75	0.46
44:G8:5:MET:HE1	44:G8:32:PRO:HB3	1.98	0.46
1:13:295:C:H2'	1:13:296:U:O4'	2.15	0.46
34:25:19:ILE:HG22	34:25:43:VAL:HA	1.97	0.46
54:1G:38:G:C2	54:1G:397:A:C2	3.04	0.46
24:1H:2491:U:O2'	24:1H:2570:G:OP1	2.29	0.46
20:BA:42:GLN:O	20:BA:46:GLU:HG3	2.15	0.46
36:45:48:GLU:O	36:45:48:GLU:HG3	2.16	0.46
24:14:1036:G:H2'	24:14:1037:G:O4'	2.14	0.46
43:B5:88:LYS:HD2	43:B5:93:GLU:HG3	1.98	0.46
4:3E:63:LYS:O	4:3E:67:ILE:HG13	2.16	0.46
24:14:1500:G:O2'	27:19:100:GLY:O	2.21	0.46
24:14:1516:U:H2'	24:14:1517:G:H8	1.81	0.46
53:M5:16:ILE:HD13	53:M5:58:ILE:HG12	1.97	0.46
1:13:465:A:H2'	1:13:467:G:N7	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:243:A:C4'	54:1G:244:U:H5'	2.30	0.46
54:1G:1306:A:H62	54:1G:1331:G:H1'	1.80	0.46
1:13:111:G:H5''	16:7I:27:LYS:HG3	1.97	0.46
24:1H:598:G:H2'	24:1H:599:G:O4'	2.15	0.46
5:42:103:GLY:O	5:42:106:PRO:HD2	2.15	0.46
22:3K:41:C:H2'	22:3K:42:U:H6	1.80	0.46
54:1G:1104:G:C2	54:1G:1105:A:C4	3.04	0.46
54:1G:1387:G:H2'	54:1G:1388:C:C6	2.51	0.46
31:51:4:ILE:HG21	31:51:6:ARG:CZ	2.46	0.46
12:3I:44:THR:HG22	12:3I:52:LEU:HD22	1.96	0.46
54:1G:1352:C:H2'	54:1G:1353:G:C8	2.51	0.46
24:14:1093:G:N1	24:14:1097:U:OP2	2.49	0.46
54:1G:1228:C:OP2	13:4A:108:ARG:NH2	2.48	0.46
1:13:976:G:H5'	1:13:1358:U:O2'	2.16	0.46
1:13:1118:C:H1'	1:13:1179:A:C4	2.51	0.46
54:1G:865:A:H5'	54:1G:1078:U:C5	2.51	0.46
22:2L:15:G:H1	22:2L:57:C:H5	1.63	0.46
24:1H:54:G:O6	57:1H:4186:HOH:O	2.18	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
42:E8:33:ARG:HE	42:E8:52:GLU:CD	2.19	0.46
27:11:239:ARG:O	27:11:240:ALA:HB3	2.15	0.46
1:13:314:C:O2'	1:13:315:A:H5'	2.15	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
35:78:134:ALA:O	35:78:138:LEU:HB2	2.16	0.46
54:1G:192:U:H2'	54:1G:193:C:C6	2.50	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
36:45:34:LEU:HD12	36:45:130:LYS:O	2.16	0.46
25:16:12:C:O2'	25:16:13:A:OP2	2.23	0.46
37:98:38:VAL:HG22	37:98:112:ALA:HB2	1.98	0.46
24:1H:900:A:H3'	24:1H:901:A:H8	1.81	0.46
24:1H:1629:U:O2'	24:1H:1630:G:H5'	2.15	0.46
24:14:57:C:H2'	24:14:58:G:O4'	2.16	0.46
24:14:1788:C:H2'	24:14:1789:A:O4'	2.16	0.46
6:5E:99:ALA:O	18:9I:28:GLU:HA	2.15	0.46
26:79:45:ALA:HA	26:79:211:SER:O	2.16	0.46
24:1H:1888:G:H5''	24:1H:1888:G:N3	2.30	0.46
47:F5:94:LEU:HD23	47:F5:94:LEU:HA	1.67	0.46
2:1E:108:ILE:O	2:1E:108:ILE:HG13	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:38:G:C2	1:13:397:A:C2	3.03	0.46
54:1G:256:U:H2'	54:1G:257:G:C8	2.51	0.46
3:22:35:GLU:O	3:22:39:ILE:HD13	2.15	0.46
24:1H:2615:U:H2'	24:1H:2616:C:C6	2.51	0.46
24:1H:805:G:O5'	35:78:41:ARG:HG2	2.16	0.46
22:2K:19:C:H4'	22:2K:19:C:OP1	2.09	0.46
27:11:25:THR:HG22	27:11:82:ILE:H	1.80	0.46
24:1H:2262:U:H4'	24:1H:2328:A:H2	1.81	0.46
9:82:125:TYR:HD1	9:82:126:SER:H	1.63	0.46
1:13:973:G:H3'	1:13:974:A:H5''	1.97	0.46
6:5E:23:LYS:HB2	6:5E:23:LYS:NZ	2.21	0.46
24:14:1416:G:O2'	24:14:1417:C:H6	1.99	0.46
1:13:10:A:H2'	1:13:11:G:H8	1.81	0.46
53:Q8:36:LYS:NZ	53:Q8:40:GLU:HG2	2.31	0.46
30:49:47:LYS:HG2	30:49:48:GLU:N	2.31	0.46
24:1H:2481:G:HO2'	24:1H:2482:G:P	2.39	0.46
1:13:1060:C:C5'	10:1I:51:ARG:HG2	2.46	0.46
1:13:1007:C:N3	1:13:1022:G:N2	2.60	0.46
1:13:129(A):G:C2	1:13:188:U:O2'	2.68	0.46
3:2E:70:VAL:N	3:2E:106:VAL:HG23	2.31	0.46
54:1G:1148:U:OP1	9:82:7:THR:HG21	2.15	0.46
1:13:575:G:C5	1:13:881:G:C2	3.04	0.46
24:1H:1019:U:N3	24:1H:1020:A:N7	2.64	0.46
22:2L:85:A:N3	22:2L:85:A:H5'	2.31	0.46
22:3L:85:A:N6	24:14:2422:A:H5''	2.30	0.46
24:1H:557:U:C2	24:1H:558:G:C8	3.04	0.46
31:51:9:ILE:O	31:51:11:VAL:HG22	2.16	0.46
5:42:27:ARG:HH11	5:42:47:LYS:HZ1	1.63	0.46
43:B5:18:TYR:C	43:B5:20:GLY:N	2.68	0.46
30:49:7:LEU:HD22	30:49:100:TRP:CE3	2.51	0.46
1:13:591:U:C2	1:13:592:G:C8	3.04	0.46
52:P8:24:THR:HG23	52:P8:27:GLY:H	1.81	0.46
1:13:405:U:O4	4:3E:2:GLY:N	2.49	0.46
24:1H:1486:A:H2'	24:1H:1487:G:H8	1.81	0.46
16:7I:51:VAL:HG12	16:7I:52:ASP:C	2.36	0.46
54:1G:304:U:H2'	54:1G:305:G:C8	2.51	0.46
24:1H:2233:U:H2'	24:1H:2234:G:C8	2.51	0.46
24:1H:118:A:C8	24:1H:119:A:C8	3.03	0.46
24:14:885:C:H1'	24:14:892:G:H1	1.80	0.46
35:78:135:LEU:HA	35:78:135:LEU:HD23	1.82	0.46
20:BI:36:LEU:HA	20:BI:36:LEU:HD13	1.72	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:21:117:MET:O	28:21:117:MET:HG3	2.16	0.46
20:BI:72:LEU:HD12	20:BI:72:LEU:HA	1.69	0.46
9:82:18:PHE:HB2	9:82:62:TYR:O	2.15	0.46
1:13:1502:A:H2	1:13:1505:G:N1	2.13	0.46
22:2K:1:G:N3	22:2K:2:G:C8	2.83	0.46
1:13:671:G:H2'	1:13:672:U:C6	2.50	0.46
28:29:27:LEU:O	28:29:27:LEU:HG	2.15	0.46
54:1G:976:G:H5'	54:1G:1358:U:O2'	2.15	0.46
24:14:857:C:H2'	24:14:858:U:C6	2.50	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
36:45:24:GLY:HA3	36:45:25:ASP:CB	2.36	0.46
24:14:1050:A:O2'	24:14:2752:C:H1'	2.15	0.46
24:1H:1641:A:H2'	24:1H:1642:G:O4'	2.16	0.46
2:1E:168:THR:OG1	2:1E:191:ASP:HB3	2.16	0.46
3:22:32:LEU:HD22	3:22:59:ARG:NH1	2.30	0.46
24:14:2320:A:C6	24:14:2333:A:C8	3.04	0.46
3:22:79:ARG:NH2	3:22:83:ARG:H	2.13	0.46
24:14:611:C:H2'	24:14:612:G:O4'	2.16	0.46
42:E8:23:LEU:HD13	51:N8:25:LEU:HB2	1.96	0.46
29:31:68:LYS:HB3	29:31:68:LYS:HE3	1.69	0.46
44:C5:73:ARG:NH2	44:C5:81:LYS:O	2.48	0.46
18:9I:26:LEU:HD11	18:9I:29:PHE:CG	2.50	0.46
24:14:1729:A:O2'	24:14:1730:U:H5''	2.16	0.46
24:14:459:U:H2'	24:14:460:A:C8	2.51	0.46
1:13:1171:G:H2'	1:13:1172:C:C6	2.51	0.46
24:1H:2104:G:C2	24:1H:2186:G:C2	3.04	0.46
24:14:1542:G:O6	24:14:1543:A:N6	2.49	0.46
24:1H:557:U:H2'	24:1H:558:G:H8	1.81	0.46
24:14:2625:G:H2'	24:14:2626:C:O4'	2.16	0.46
24:14:2438:U:O3'	24:14:2439:A:H3'	2.15	0.46
54:1G:356:A:N3	54:1G:368:U:O2'	2.40	0.46
25:16:22:U:H3	25:16:61:G:H1	1.64	0.46
54:1G:370:C:H2'	54:1G:371:G:C8	2.51	0.46
28:21:179:GLU:O	28:21:180:ASN:HB2	2.16	0.46
24:1H:2785:C:H2'	24:1H:2786:U:O4'	2.15	0.46
2:1E:91:PRO:HB3	2:1E:154:LEU:HB2	1.98	0.46
34:25:9:GLU:O	34:25:83:ALA:HA	2.16	0.46
24:14:1967:C:H2'	24:14:1968:G:O4'	2.16	0.46
1:13:240:C:H2'	1:13:241:C:C6	2.49	0.46
10:1A:22:LYS:HB3	10:1A:22:LYS:HE3	1.75	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:82:96:LEU:HA	9:82:96:LEU:HD12	1.71	0.46
43:F8:30:VAL:HG23	43:F8:31:HIS:O	2.16	0.46
24:1H:2032:G:C8	57:1H:4560:HOH:O	2.66	0.46
35:35:55:ARG:HG2	35:35:56:SER:N	2.30	0.46
24:14:2630:G:H21	24:14:2892:A:H1'	1.79	0.46
24:14:1331:A:O2'	24:14:1332:G:H8	1.98	0.46
43:B5:63:LYS:H	43:B5:63:LYS:CE	2.24	0.46
54:1G:1291:G:H4'	9:82:38:GLN:O	2.16	0.46
24:14:1084:A:O2'	24:14:1105:U:O2'	2.05	0.46
24:14:602:G:O2'	24:14:655:A:N6	2.49	0.46
2:1E:112:VAL:O	2:1E:115:LEU:N	2.49	0.46
24:1H:1636:C:P	57:1H:3558:HOH:O	2.74	0.46
1:13:1305:G:H21	1:13:1331:G:H2'	1.81	0.46
24:14:2002:G:OP2	37:55:9:LYS:NZ	2.49	0.46
1:13:57:G:H2'	1:13:58:C:C6	2.51	0.46
1:13:976:G:C8	1:13:1358:U:C2	3.04	0.46
22:3K:85:A:H5''	47:J8:30:VAL:HG11	1.98	0.46
29:39:63:LYS:HZ1	29:39:67:GLN:HB2	1.81	0.46
24:14:1173:G:H2'	24:14:1175:U:OP2	2.15	0.46
24:1H:106:C:H2'	24:1H:107:C:C6	2.51	0.46
37:98:52:ILE:O	37:98:55:ALA:N	2.46	0.46
24:14:792:G:H5''	24:14:793:A:H5'	1.97	0.46
24:1H:1299:G:H3'	24:1H:1639:U:O4	2.16	0.46
24:14:2113:U:H3'	24:14:2114:A:H4'	1.98	0.46
24:1H:2590:A:H2'	24:1H:2591:C:C6	2.51	0.46
36:45:63:LYS:HB2	45:D5:116:VAL:HG11	1.98	0.46
24:14:51:G:N3	24:14:119:A:C2	2.84	0.46
1:13:1149:C:H2'	1:13:1150:U:C6	2.50	0.46
1:13:816:A:OP1	1:13:1526:G:O2'	2.31	0.46
22:2K:70:C:H2'	22:2K:71:C:H6	1.81	0.46
24:14:1101:U:H2'	24:14:1102:C:C6	2.50	0.46
1:13:1239:A:H62	1:13:1299:A:H62	1.62	0.46
3:22:9:GLY:HA3	14:5A:49:HIS:HA	1.98	0.46
17:8A:59:ILE:HG22	17:8A:71:PHE:HD2	1.81	0.46
14:5A:28:GLY:C	14:5A:29:ARG:HG3	2.36	0.46
54:1G:688:G:H2'	54:1G:689:C:H6	1.81	0.46
54:1G:25:C:H2'	54:1G:26:A:C8	2.51	0.46
8:7E:100:ILE:HA	8:7E:101:PRO:HD3	1.64	0.46
24:1H:624:C:O2'	24:1H:657:U:H5''	2.15	0.46
1:13:1011:G:N2	1:13:1019:C:O2	2.49	0.46
24:14:1659:U:C4	24:14:1660:C:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:I5:7:PRO:HB2	50:I5:27:THR:HG22	1.98	0.46
3:22:113:ALA:HB2	3:22:202:ILE:HG13	1.98	0.46
24:14:2503:A:H4'	24:14:2504:U:OP1	2.16	0.46
5:4E:12:LEU:HB3	5:4E:31:LEU:HB2	1.97	0.46
33:58:67:LEU:HA	33:58:87:LEU:HD12	1.97	0.46
30:41:63:ILE:HB	30:41:141:PHE:CD2	2.51	0.46
24:14:1964:G:H4'	24:14:1965:C:OP2	2.16	0.46
31:51:13:LYS:HE3	31:51:13:LYS:HB3	1.61	0.46
54:1G:160:A:H1'	54:1G:344:A:C5	2.51	0.46
30:49:28:VAL:HG13	30:49:31:VAL:HG11	1.98	0.46
22:2L:31:G:H2'	22:2L:32:A:H8	1.80	0.46
22:2K:2:G:H2'	22:2K:3:U:C6	2.51	0.46
54:1G:1226:C:C5	13:4A:104:ARG:HA	2.51	0.46
54:1G:961:U:OP2	54:1G:1223:C:O2'	2.17	0.46
24:14:592:G:N2	53:M5:4:MET:HE1	2.23	0.46
30:49:104:GLU:CD	50:I5:23:GLU:HG2	2.37	0.46
27:11:68:LYS:HB3	27:11:70:TRP:CZ3	2.51	0.46
25:1J:43:C:H4'	30:49:66:GLN:OE1	2.16	0.46
28:21:119:ARG:HD2	28:21:120:TRP:NE1	2.31	0.46
20:BA:20:LEU:O	20:BA:23:ARG:HB3	2.16	0.46
45:D5:103:ARG:HB2	45:D5:138:GLU:HA	1.98	0.46
10:1A:81:THR:O	10:1A:85:LEU:HG	2.16	0.46
24:14:270(L):U:O2'	24:14:270(M):U:OP1	2.30	0.46
24:1H:580:C:H2'	24:1H:581:C:C6	2.51	0.46
33:58:73:THR:CG2	33:58:84:LYS:HG2	2.41	0.46
24:1H:768:G:C4	24:1H:769:G:C8	3.05	0.46
24:14:2496:C:OP1	36:45:82:ARG:HB3	2.16	0.46
34:25:23:ARG:HG3	34:25:24:VAL:N	2.31	0.46
24:1H:2286:A:H4'	24:1H:2287:A:O4'	2.16	0.46
54:1G:1002:G:H2'	54:1G:1003:G:C8	2.51	0.46
20:BA:73:HIS:HB3	20:BA:74:LYS:H	1.49	0.46
1:13:741:G:H2'	1:13:742:G:O4'	2.16	0.46
45:H8:142:SER:CB	45:H8:143:GLY:HA2	2.45	0.46
24:14:2638:G:O2'	24:14:2639:A:C8	2.65	0.46
29:39:128:ALA:O	29:39:142:TRP:NE1	2.49	0.46
44:C5:86:ARG:NH2	44:C5:91:GLU:OE2	2.46	0.46
24:14:1504:C:H2'	24:14:1505:C:C6	2.51	0.46
24:1H:2483:C:N3	36:88:124:LYS:HE3	2.30	0.46
17:8I:75:ARG:HH22	17:8I:77:VAL:HG13	1.80	0.46
25:16:38:C:H2'	25:16:39:A:O4'	2.16	0.46
24:14:389:G:H1	35:35:71:VAL:HG12	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:51:101:ARG:HE	31:51:101:ARG:HB3	1.58	0.46
24:14:2579:C:H2'	24:14:2580:U:O4'	2.16	0.46
24:1H:2566:A:H4'	24:1H:2567:G:O5'	2.15	0.46
24:14:839:U:H2'	24:14:840:C:C6	2.51	0.46
54:1G:834:C:C4	54:1G:835:U:C4	3.04	0.46
22:3K:71:C:H2'	22:3K:72:U:C6	2.51	0.46
24:1H:551:G:OP1	41:D8:68:LYS:NZ	2.48	0.46
52:P8:26:GLY:O	52:P8:30:VAL:HG23	2.16	0.46
24:14:2059:A:H5'	24:14:2060:A:OP2	2.15	0.46
6:5E:28:ARG:O	6:5E:31:GLU:HB3	2.15	0.46
24:14:2086:U:H2'	24:14:2087:G:C8	2.51	0.46
24:14:2540:C:H2'	24:14:2541:A:O4'	2.15	0.46
24:14:1514:U:H2'	24:14:1515:C:C6	2.51	0.46
1:13:257:G:C4	1:13:258:G:C8	3.04	0.46
47:F5:88:LYS:HB3	47:F5:88:LYS:HE2	1.69	0.46
36:88:48:GLU:HG3	36:88:48:GLU:O	2.15	0.46
24:14:2747:G:O3'	31:59:70:THR:HG21	2.15	0.46
54:1G:342:C:C2'	54:1G:343:U:H5'	2.46	0.46
27:11:144:ALA:HB3	27:11:192:THR:HG23	1.98	0.46
19:AI:31:ILE:HD13	19:AI:49:ILE:HG12	1.97	0.46
8:72:5:PRO:O	8:72:8:ASP:HB3	2.16	0.46
30:41:15:VAL:HG13	30:41:175:LEU:HB2	1.98	0.46
39:B8:50:ILE:HG12	39:B8:64:ARG:HB3	1.98	0.45
25:1J:15:A:H1'	25:1J:109:G:C8	2.51	0.45
22:2K:18:G:H5''	22:2K:19:C:H1'	1.98	0.45
24:14:1141:U:H2'	33:15:63:THR:HG21	1.97	0.45
11:2A:22:HIS:HB3	11:2A:29:ILE:HG12	1.97	0.45
24:1H:764:A:OP1	27:11:208:LYS:HE2	2.16	0.45
28:29:77:ILE:CG2	28:29:79:ARG:HE	2.21	0.45
50:I5:20:ASN:CG	50:I5:21:VAL:H	2.19	0.45
24:1H:2470:G:H5'	36:88:56:ARG:HH21	1.81	0.45
25:16:15:A:H5'	25:16:16:G:C8	2.51	0.45
3:22:24:ALA:HB1	3:22:28:GLN:HB2	1.97	0.45
1:13:1129:C:H4'	1:13:1130:A:H5'	1.98	0.45
4:3E:29:PRO:C	4:3E:30:LYS:HD3	2.36	0.45
24:1H:1296:G:O2'	24:1H:1297:C:H5'	2.16	0.45
1:13:143:A:H2	1:13:220:G:H1	1.64	0.45
35:78:6:LEU:O	35:78:7:ARG:HG2	2.16	0.45
45:H8:124:ILE:HD12	45:H8:125:LEU:H	1.81	0.45
24:1H:2129:C:H2'	24:1H:2130:U:O4'	2.17	0.45
13:4I:14:ARG:HB3	13:4I:17:VAL:HG12	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:I5:60:GLN:CD	50:I5:60:GLN:H	2.19	0.45
1:13:902:G:H2'	1:13:903:G:C8	2.51	0.45
25:1J:13:A:N1	25:1J:69:G:O2'	2.36	0.45
24:1H:2209:C:O2	24:1H:2216:G:C2	2.68	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
1:13:785:G:N7	57:13:1890:HOH:O	2.36	0.45
12:3A:69:TYR:HD2	12:3A:99:HIS:CD2	2.35	0.45
18:9A:29:PHE:CD2	18:9A:39:VAL:HG11	2.51	0.45
2:12:97:TRP:CZ3	2:12:99:GLY:HA2	2.51	0.45
2:1E:95:GLN:O	2:1E:96:ARG:HD2	2.15	0.45
16:7A:49:LEU:HD12	16:7A:50:LYS:H	1.81	0.45
1:13:155:C:H1'	1:13:167:G:N2	2.31	0.45
30:41:80:PHE:O	30:41:81:LYS:HB2	2.17	0.45
40:C8:112:ARG:NH2	41:D8:48:GLY:H	2.13	0.45
5:42:79:GLU:OE1	8:72:104:ARG:HA	2.16	0.45
52:P8:5:TRP:NE1	52:P8:7:PRO:HG3	2.31	0.45
45:H8:132:ASN:N	45:H8:132:ASN:OD1	2.50	0.45
30:49:125:PHE:HB3	30:49:166:ASP:OD2	2.16	0.45
24:14:1443:G:N2	24:14:1549:C:C2	2.85	0.45
22:3K:43:G:H2'	22:3K:44:C:C6	2.50	0.45
27:11:213:ARG:HA	27:11:213:ARG:HD2	1.51	0.45
24:14:2187:G:C5	24:14:2188:C:C4	3.04	0.45
1:13:1281:U:P	1:13:1282:C:H41	2.34	0.45
29:39:84:VAL:C	29:39:86:GLY:H	2.19	0.45
24:14:1113:U:H2'	24:14:1114:G:O4'	2.15	0.45
9:8E:65:VAL:HG21	9:8E:73:GLN:HB3	1.98	0.45
39:75:22:PHE:HA	39:75:91:ARG:HH21	1.81	0.45
28:21:2:LYS:HD2	28:21:95:ILE:HG22	1.98	0.45
54:1G:327:A:C5	54:1G:329:A:C5	3.04	0.45
30:41:103:LEU:HD23	30:41:106:LEU:HD23	1.98	0.45
24:1H:1178:C:O2	24:1H:1178:C:H2'	2.15	0.45
27:11:101:GLU:OE1	27:11:103:ARG:HD3	2.16	0.45
1:13:664:G:OP1	18:9I:64:ARG:NE	2.39	0.45
1:13:368:U:P	32:69:91:SER:HG	2.39	0.45
8:7E:104:ARG:HD2	8:7E:138:TRP:CG	2.51	0.45
45:D5:56:VAL:HG23	45:D5:133:ILE:HD13	1.98	0.45
24:14:1479:G:O2'	24:14:1558:A:H5'	2.15	0.45
2:12:174:VAL:HG13	2:12:184:VAL:HG11	1.98	0.45
1:13:627:G:H2'	1:13:628:G:H8	1.81	0.45
24:14:1288:U:C2	24:14:1327:C:O2	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:58:25:ARG:O	33:58:29:LYS:HG3	2.15	0.45
24:1H:1413:G:H8	24:1H:1413:G:O5'	2.00	0.45
1:13:418:C:O2'	1:13:540:G:H1'	2.15	0.45
1:13:376:G:H5''	16:7I:5:ARG:HB2	1.98	0.45
27:19:70:TRP:O	27:19:73:VAL:HG23	2.16	0.45
12:3I:53:ARG:HH12	12:3I:92:ASP:CB	2.29	0.45
33:58:17:ASP:O	33:58:56:ASN:HB2	2.16	0.45
30:41:81:LYS:N	30:41:81:LYS:HD3	2.31	0.45
12:3A:111:LYS:O	12:3A:112:ASP:HB2	2.16	0.45
13:4A:29:ARG:HD3	13:4A:64:TRP:CZ2	2.51	0.45
2:12:34:ALA:O	2:12:41:ILE:N	2.33	0.45
24:1H:698:C:O2'	24:1H:734:A:N6	2.49	0.45
2:12:136:VAL:HG13	2:12:139:LYS:NZ	2.31	0.45
24:1H:280:C:N4	24:1H:360:G:H1	2.15	0.45
24:14:1024:G:H5''	24:14:1025:G:H5''	1.97	0.45
1:13:1405:G:O4'	1:13:1519:A:H4'	2.16	0.45
7:6E:89:MET:SD	7:6E:156:TRP:HD1	2.39	0.45
3:22:131:ARG:NH1	3:22:164:ARG:HH22	2.14	0.45
54:1G:946:A:H61	54:1G:1234:C:H42	1.63	0.45
11:2A:50:TYR:HD2	11:2A:60:ALA:HB2	1.81	0.45
52:L5:35:ARG:HG3	52:L5:42:LEU:HD11	1.98	0.45
54:1G:991:U:H3	54:1G:1212:U:HO2'	1.61	0.45
41:95:1:MET:SD	41:95:43:GLU:HB2	2.56	0.45
24:1H:1776:G:OP2	57:1H:3604:HOH:O	2.20	0.45
31:51:26:VAL:HG11	31:51:75:ALA:O	2.17	0.45
3:2E:3:ASN:OD1	3:2E:3:ASN:N	2.49	0.45
1:13:48:C:H5''	1:13:365:U:O4	2.15	0.45
24:14:2577:A:H5'	51:J5:3:LYS:HD3	1.99	0.45
12:3I:58:VAL:O	12:3I:65:GLU:HA	2.17	0.45
30:49:121:ASN:ND2	30:49:123:ASN:HB2	2.24	0.45
2:1E:5:ILE:HG13	2:1E:6:THR:H	1.81	0.45
24:1H:990:A:H1'	24:1H:1156:A:N3	2.31	0.45
54:1G:683:G:H2'	54:1G:684:A:C8	2.52	0.45
38:65:14:VAL:O	38:65:18:ILE:HG23	2.16	0.45
2:1E:21:ARG:CB	2:1E:39:ILE:HA	2.44	0.45
9:82:13:ALA:HB2	9:82:68:GLY:HA3	1.98	0.45
45:H8:30:ASN:HA	45:H8:89:PHE:HE1	1.82	0.45
24:1H:2133:G:O2'	24:1H:2158:A:N1	2.43	0.45
24:14:1045:A:O2'	24:14:1047:G:O4'	2.31	0.45
24:1H:1170:G:N2	24:1H:1180:C:C2	2.83	0.45
36:45:136:ALA:O	36:45:139:GLU:HG2	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AA:66:MET:HB3	19:AA:69:HIS:CG	2.52	0.45
24:14:729:G:OP2	27:19:13:ARG:NH1	2.49	0.45
24:1H:2532:G:H4'	24:1H:2657:A:C2	2.51	0.45
54:1G:998(A):C:H2'	54:1G:999:U:O4'	2.16	0.45
40:85:65:ILE:O	40:85:68:ALA:N	2.50	0.45
24:1H:1339:G:N2	24:1H:1603:A:H1'	2.30	0.45
24:14:2151:G:H2'	24:14:2152:G:C8	2.51	0.45
24:1H:280:C:H42	24:1H:360:G:H1	1.63	0.45
11:2A:46:GLY:HA2	11:2A:50:TYR:O	2.17	0.45
17:8A:81:ARG:NH2	17:8A:84:LEU:HD21	2.32	0.45
11:2A:58:PRO:HG3	11:2A:89:ALA:O	2.16	0.45
1:13:1446:A:OP1	1:13:1446:A:H4'	2.15	0.45
28:29:116:VAL:HG13	28:29:122:PHE:HB2	1.99	0.45
24:1H:1799:G:H5''	24:1H:1819:A:N6	2.31	0.45
27:11:12:SER:O	27:11:16:MET:HB2	2.16	0.45
24:1H:64:A:O3'	43:F8:71:GLY:HA3	2.17	0.45
1:13:1244:C:H2'	1:13:1245:A:C8	2.52	0.45
32:61:69:LYS:HG2	32:61:69:LYS:O	2.16	0.45
14:5I:58:LYS:HB3	14:5I:58:LYS:HE2	1.68	0.45
54:1G:338:A:OP1	34:25:97:ARG:NH2	2.49	0.45
24:14:25:U:H5'	42:A5:79:GLY:HA2	1.99	0.45
4:32:25:ARG:HG3	4:32:31:CYS:H	1.82	0.45
39:B8:11:GLU:HB2	39:B8:14:TYR:CE2	2.50	0.45
24:1H:2572:A:OP1	24:1H:2574:G:H4'	2.16	0.45
24:1H:67:U:H2'	24:1H:68:G:C8	2.52	0.45
39:75:108:ARG:HA	39:75:111:ARG:NH1	2.31	0.45
24:1H:1250:G:OP2	35:78:21:ARG:HD3	2.17	0.45
24:1H:1021:A:C8	24:1H:1022:G:H5''	2.52	0.45
45:D5:72:ARG:HA	45:D5:72:ARG:HD3	1.61	0.45
38:65:88:ASP:OD1	38:65:90:GLY:N	2.47	0.45
24:1H:2862:G:C6	24:1H:2863:C:C4	3.04	0.45
54:1G:607:A:H2'	54:1G:608:A:O4'	2.17	0.45
45:H8:29:TYR:HA	45:H8:33:LEU:O	2.16	0.45
34:68:52:VAL:HG12	34:68:94:ARG:NH2	2.31	0.45
3:2E:50:ALA:HA	3:2E:72:LYS:NZ	2.31	0.45
24:14:125:G:C6	52:L5:10:ARG:HG3	2.52	0.45
41:95:76:LYS:HD2	41:95:80:GLN:O	2.17	0.45
24:1H:299:A:H5'	24:1H:300:A:OP2	2.16	0.45
9:82:34:ASN:HA	9:82:37:PHE:HD1	1.82	0.45
48:G5:10:LEU:HD13	48:G5:59:ARG:HD2	1.98	0.45
24:1H:415:A:H2'	24:1H:416:C:C6	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:62:102:ARG:O	7:62:106:GLN:HG3	2.16	0.45
31:51:157:TYR:CE1	31:51:172:LYS:HB2	2.51	0.45
1:13:1014:A:H4'	19:AI:14:HIS:CD2	2.51	0.45
51:J5:56:LYS:NZ	51:J5:58:LEU:HB2	2.30	0.45
35:78:81:GLN:HG2	35:78:106:LEU:HD23	1.98	0.45
24:1H:746:A:H2'	24:1H:2612:C:H5'	1.99	0.45
28:29:127:ASP:HA	28:29:135:HIS:ND1	2.32	0.45
16:7A:39:TYR:HB2	16:7A:49:LEU:HD13	1.98	0.45
41:95:1:MET:HG3	41:95:43:GLU:N	2.30	0.45
24:14:2853:C:H2'	24:14:2854:G:C8	2.52	0.45
5:42:131:ILE:O	5:42:134:ALA:HB3	2.16	0.45
4:32:50:ARG:HA	4:32:51:PRO:HD3	1.78	0.45
24:1H:1553:A:C6	24:1H:1555:G:H1'	2.52	0.45
24:1H:2816:C:O3'	37:98:99:LYS:HE2	2.17	0.45
24:14:1949:G:H2'	24:14:1950:G:O4'	2.17	0.45
24:14:2350:C:H2'	24:14:2351:G:O4'	2.17	0.45
31:59:146:ALA:O	31:59:150:ALA:N	2.47	0.45
8:7E:11:THR:HG23	8:7E:14:ARG:HH12	1.80	0.45
24:14:2238:G:N3	24:14:2238:G:H2'	2.30	0.45
1:13:633:G:H5'	1:13:634:C:OP2	2.16	0.45
54:1G:1329:A:O2'	13:4A:24:GLY:HA2	2.16	0.45
24:14:807:U:H2'	24:14:808:G:H8	1.80	0.45
49:L8:38:GLU:HB3	49:L8:40:THR:HG22	1.98	0.45
13:4A:34:LEU:HD23	13:4A:56:LEU:HD21	1.99	0.45
1:13:746:A:O5'	1:13:746:A:H8	2.00	0.45
24:14:2612:C:OP2	51:J5:2:ALA:HA	2.17	0.45
54:1G:731:G:OP1	54:1G:766:A:H1'	2.16	0.45
25:1J:38:C:O4'	38:65:95:HIS:NE2	2.49	0.45
24:1H:1635:G:H2'	24:1H:1636:C:H6	1.81	0.45
38:65:15:ARG:O	38:65:19:LYS:HD2	2.17	0.45
24:1H:2399:G:H2'	24:1H:2400:G:O4'	2.16	0.45
24:14:2621:A:P	28:29:119:ARG:HH22	2.40	0.45
44:C5:17:SER:OG	44:C5:18:GLY:N	2.48	0.45
44:G8:54:LYS:O	44:G8:55:TYR:CG	2.69	0.45
24:1H:96:G:H4'	48:K8:48:HIS:CE1	2.52	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
23:4K:14:A:N6	23:4K:15:A:N1	2.63	0.45
22:2K:38:MIA:H161	23:4K:15:A:H2	1.81	0.45
28:29:37:ARG:HG3	28:29:44:TYR:CZ	2.52	0.45
37:98:87:TYR:OH	37:98:116:LEU:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:2I:33:THR:HA	11:2I:39:PRO:HA	1.97	0.45
39:B8:54:ARG:HA	39:B8:59:THR:OG1	2.16	0.45
14:5A:21:TYR:HE2	14:5A:23:ARG:CZ	2.30	0.45
33:15:36:GLY:HA3	33:15:48:MET:HG2	1.98	0.45
24:1H:1344:G:H4'	24:1H:1384:A:C5	2.51	0.45
20:BI:33:ILE:O	20:BI:37:SER:OG	2.20	0.45
24:14:653:A:H5''	24:14:654:A:C8	2.51	0.45
37:55:38:VAL:HG22	37:55:112:ALA:HB2	1.98	0.45
24:14:2401:U:O2	24:14:2402:C:C5	2.70	0.45
24:1H:2670:A:C2	24:1H:2671:A:C4	3.05	0.45
26:71:194:ARG:HA	26:71:197:GLU:HG3	1.97	0.45
6:5E:18:GLN:O	6:5E:21:LEU:HB2	2.17	0.45
53:Q8:16:ILE:HD13	53:Q8:58:ILE:HG12	1.98	0.45
45:D5:115:GLY:HA2	45:D5:179:ASP:HB2	1.98	0.45
24:14:332:A:C2	24:14:335:C:C5	3.04	0.45
45:D5:98:MET:HE3	45:D5:98:MET:HB2	1.84	0.45
23:4L:13:A:H2'	23:4L:13:A:N3	2.31	0.45
45:D5:112:ARG:HD2	45:D5:112:ARG:HA	1.71	0.45
11:2A:100:ALA:O	11:2A:101:SER:OG	2.27	0.45
19:AI:18:LYS:O	19:AI:22:LEU:HG	2.17	0.45
24:14:2817:G:OP1	37:55:42:LYS:NZ	2.48	0.45
1:13:1091:U:H2'	1:13:1093:A:OP2	2.15	0.45
24:1H:2726:U:O2'	24:1H:2727:G:H5'	2.17	0.45
54:1G:433:C:O2'	54:1G:434:U:H5'	2.16	0.45
24:1H:511:U:C5	24:1H:512:G:C5	3.03	0.45
24:1H:1189:A:OP2	57:1H:3838:HOH:O	2.19	0.45
1:13:1504:G:H3'	57:13:1732:HOH:O	2.16	0.45
1:13:509:A:H5'	4:3E:54:TYR:HD2	1.81	0.45
24:14:2685:G:O2'	24:14:2726:U:H5	1.99	0.45
42:E8:4:LYS:HB3	42:E8:106:ILE:HB	1.97	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
6:5E:23:LYS:HA	6:5E:26:ILE:HD12	1.99	0.45
24:14:491:G:H2'	24:14:492:A:C8	2.51	0.45
24:1H:489:G:N7	42:E8:49:LYS:NZ	2.60	0.45
2:1E:178:ARG:NH2	8:7E:74:PRO:HB3	2.32	0.45
1:13:1305:G:H22	1:13:1331:G:H2'	1.82	0.45
33:58:32:THR:HG22	33:58:37:LYS:HB2	1.99	0.45
24:14:956:G:OP1	36:45:88:GLY:N	2.50	0.45
27:19:58:HIS:CD2	27:19:59:LYS:H	2.35	0.45
25:16:71:C:C4	25:16:72:G:N7	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BI:69:GLY:O	20:BI:73:HIS:NE2	2.49	0.45
50:I5:58:ARG:HH22	50:I5:62:ARG:HB2	1.81	0.45
54:1G:1300:G:HO2'	54:1G:1301:U:P	2.39	0.45
24:1H:459:U:H4'	52:P8:40:TRP:CZ3	2.51	0.45
34:25:113:LYS:O	34:25:117:LEU:HD13	2.17	0.45
4:3E:155:LEU:O	4:3E:158:ILE:N	2.49	0.45
3:2E:148:GLY:HA3	3:2E:172:ARG:O	2.15	0.45
24:1H:2:G:N2	24:1H:2901:C:H42	2.14	0.45
45:D5:40:ASP:OD2	45:D5:42:VAL:HG23	2.16	0.45
24:14:1203:G:H3'	24:14:1204:A:H5''	1.98	0.45
38:65:21:THR:HG23	38:65:23:ARG:H	1.82	0.45
24:1H:1167:U:O2	24:1H:1183:G:N2	2.49	0.45
24:1H:2388:A:N7	24:1H:2389:G:C6	2.84	0.45
1:13:144:G:N2	1:13:179:A:H1'	2.32	0.45
35:35:71:VAL:HG13	35:35:72:PRO:HD3	1.98	0.45
5:42:81:GLU:N	5:42:81:GLU:CD	2.70	0.45
1:13:865:A:H5'	1:13:1078:U:O4	2.17	0.45
45:D5:5:LEU:HD12	45:D5:5:LEU:HA	1.70	0.45
24:14:1226:G:H4'	41:95:84:LYS:HA	1.99	0.45
3:22:131:ARG:NH2	3:22:164:ARG:HH22	2.14	0.45
24:14:395:U:O2'	24:14:396:G:C8	2.66	0.45
4:32:76:ARG:O	4:32:79:PHE:HB3	2.16	0.45
1:13:1510:U:H2'	1:13:1511:G:C8	2.51	0.45
47:F5:46:LEU:O	47:F5:47:GLN:NE2	2.50	0.45
27:11:32:SER:HA	27:11:34:VAL:HG22	1.99	0.45
24:14:244:A:C2	24:14:255:A:C4	3.05	0.45
4:3E:85:LYS:O	4:3E:89:THR:OG1	2.22	0.45
19:AA:20:LEU:O	19:AA:23:ASN:HB2	2.17	0.45
41:95:21:ARG:HH22	41:95:65:GLY:C	2.20	0.45
24:1H:784:A:C5	27:11:229:VAL:HG21	2.51	0.45
54:1G:1321:C:N3	54:1G:1322:C:N4	2.65	0.45
2:12:74:LYS:O	2:12:78:GLN:HB3	2.16	0.45
1:13:953:G:N7	13:4I:104:ARG:NH2	2.64	0.45
13:4A:57:ARG:HH12	50:I5:17:GLY:HA3	1.82	0.45
24:1H:2115:G:O2'	24:1H:2165:G:N2	2.48	0.45
6:5E:67:MET:SD	6:5E:75:LEU:HD12	2.57	0.45
54:1G:1116:C:H2'	54:1G:1117:G:O4'	2.17	0.45
53:Q8:30:ARG:HG3	53:Q8:30:ARG:O	2.16	0.45
3:2E:149:ALA:HA	3:2E:201:TYR:O	2.17	0.45
1:13:602:A:H2'	1:13:603:U:O4'	2.15	0.45
2:12:19:HIS:CE1	2:12:204:ASN:HB3	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:273(F):C:O2	24:1H:273(F):C:H2'	2.17	0.45
2:12:169:LYS:HE3	2:12:169:LYS:HB3	1.59	0.45
27:19:271:ILE:O	27:19:272:ALA:HB2	2.17	0.45
1:13:5:U:HO2'	1:13:6:G:P	2.40	0.45
28:29:105:THR:HG21	28:29:164:ARG:NE	2.31	0.45
1:13:1459:C:H5''	20:BI:27:LYS:HE3	1.98	0.45
24:14:2208:U:H4'	27:19:151:LYS:HG2	1.99	0.45
24:1H:484:C:H2'	24:1H:485:C:C6	2.51	0.45
24:1H:2532:G:C6	24:1H:2533:A:C6	3.05	0.45
24:14:1283:G:N2	24:14:1285:G:H3'	2.32	0.45
24:14:1198:U:C2	24:14:1199:U:C5	3.05	0.45
24:1H:1844:C:H2'	24:1H:1845:G:C8	2.51	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
29:39:110:LEU:HD12	29:39:202:PHE:HE1	1.81	0.45
24:1H:606:U:OP2	29:31:104:LYS:HE3	2.17	0.45
24:14:1311:G:C2'	52:L5:47:ARG:HH21	2.30	0.45
54:1G:803:G:H2'	54:1G:804:U:C6	2.52	0.45
24:14:2315:G:OP1	30:49:36:LYS:NZ	2.50	0.45
16:7A:1:MET:HE1	16:7A:65:GLN:HB2	1.98	0.45
24:1H:618:G:H2'	24:1H:618(A):C:O4'	2.17	0.45
24:14:1910:G:H1	24:14:1920:C:H42	1.65	0.45
7:6E:72:ARG:HG3	7:6E:142:GLU:OE1	2.16	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
54:1G:1421:G:H1	54:1G:1479:C:H42	1.64	0.45
37:98:20:LEU:HD21	37:98:40:LYS:HD3	1.99	0.45
24:1H:1502:C:O2'	24:1H:1503:U:H5'	2.17	0.45
24:1H:1951:U:O2	24:1H:1953:A:H8	2.00	0.45
32:69:68:LEU:HA	32:69:71:ILE:HG22	1.98	0.45
2:12:190:THR:O	2:12:191:ASP:HB3	2.16	0.45
54:1G:1522:U:H2'	54:1G:1523:G:C8	2.52	0.45
24:1H:1568:G:H5''	27:11:61:LEU:HD23	1.98	0.45
1:13:45:U:H2'	1:13:46:G:C8	2.52	0.45
39:75:9:LEU:C	39:75:9:LEU:HD13	2.37	0.45
54:1G:972:C:O2	10:1A:55:LYS:HD3	2.17	0.45
42:A5:15:ARG:O	42:A5:19:LEU:HD13	2.16	0.45
24:1H:2808:U:H2'	24:1H:2809:A:H8	1.82	0.45
22:2L:1:G:N3	22:2L:2:G:C8	2.85	0.45
24:14:2311:A:H1'	30:49:82:LEU:HD11	1.98	0.45
53:M5:40:GLU:H	53:M5:43:GLN:HG3	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:6E:16:LEU:HG	9:8E:42:ARG:HA	1.98	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
22:2L:17:OMG:O2'	22:2L:18:G:H5'	2.17	0.45
22:2L:59:A:H61	22:2L:60:A:H62	1.64	0.45
1:13:688:G:H2'	1:13:689:C:C6	2.50	0.45
25:1J:12:C:O2	46:E5:74:ARG:NH1	2.50	0.45
24:1H:2290:G:C6	24:1H:2291:U:N3	2.85	0.45
24:14:2274:A:C6	24:14:2276:G:C8	3.04	0.45
24:1H:2590:A:O2'	24:1H:2591:C:H5'	2.16	0.45
24:14:1504:C:H2'	24:14:1505:C:H6	1.82	0.45
24:1H:2074:U:H2'	24:1H:2075:U:C6	2.51	0.45
30:49:11:TYR:HA	30:49:15:VAL:HB	1.99	0.45
36:88:2:LEU:HB3	36:88:69:PHE:CE1	2.52	0.45
7:6E:15:ASP:HB3	7:6E:19:GLY:H	1.82	0.45
49:H5:40:THR:HG23	49:H5:43:ILE:CG1	2.47	0.45
51:N8:58:LEU:H	51:N8:58:LEU:HD12	1.81	0.45
54:1G:803:G:C5	54:1G:804:U:C4	3.04	0.45
24:14:540:G:H2'	24:14:541:C:H6	1.81	0.45
28:29:135:HIS:CD2	28:29:135:HIS:H	2.33	0.45
24:14:892:G:N7	24:14:893:C:C4	2.85	0.45
51:J5:20:ARG:HA	51:J5:23:HIS:ND1	2.32	0.45
44:G8:7:VAL:CG2	44:G8:37:VAL:HG11	2.46	0.45
27:19:159:ALA:HB1	27:19:198:ASN:O	2.17	0.45
22:2L:81:C:C4	22:2L:82:A:N7	2.84	0.45
11:2I:16:SER:O	11:2I:35:PRO:HG3	2.15	0.45
2:1E:172:ILE:O	2:1E:176:GLU:HG3	2.17	0.45
8:72:17:THR:HG22	8:72:63:LEU:HG	1.98	0.45
1:13:1252:A:H2'	1:13:1253:G:O4'	2.17	0.45
47:F5:32:LYS:HB3	47:F5:32:LYS:HE2	1.75	0.45
4:3E:86:LYS:HG2	4:3E:86:LYS:H	1.65	0.45
24:14:455:C:N3	24:14:473:G:H5'	2.31	0.45
7:62:38:LEU:O	7:62:42:ILE:HG13	2.17	0.45
24:1H:2181:G:C2	24:1H:2182:G:C5	3.05	0.45
27:19:218:ARG:HB3	27:19:219:PRO:HD2	1.98	0.45
35:35:101:VAL:HG22	35:35:107:LYS:O	2.17	0.45
24:1H:1509:C:H3'	24:1H:1510:A:H5''	1.98	0.45
43:F8:32:PRO:HA	43:F8:77:LYS:HD2	1.97	0.45
27:19:93:ALA:HB2	27:19:107:ALA:HB2	1.99	0.45
24:14:127:A:H5''	24:14:128:C:C6	2.51	0.45
39:B8:26:ASP:O	39:B8:49:VAL:HG22	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
22:2K:59:A:O2'	22:2K:60:A:H5'	2.17	0.45
47:J8:12:PRO:HB3	47:J8:43:TYR:CD1	2.52	0.45
13:4A:20:THR:HG22	13:4A:26:GLY:O	2.16	0.45
1:13:690:G:H22	11:2I:55:LYS:HZ2	1.65	0.45
1:13:1355:G:H2'	1:13:1356:G:H8	1.82	0.45
29:31:29:ASN:HB3	29:31:112:MET:HE1	1.98	0.45
54:1G:41:G:H2'	54:1G:42:G:H8	1.82	0.45
54:1G:1036:G:H3'	54:1G:1037:C:C6	2.52	0.45
3:22:83:ARG:NH1	3:22:87:LEU:HD11	2.32	0.45
30:41:135:LEU:O	30:41:154:GLY:HA3	2.16	0.45
32:69:101:LEU:HA	32:69:105:HIS:HB2	1.99	0.45
24:1H:1639:U:H2'	24:1H:1640:C:H5''	1.99	0.45
24:14:1678:G:N2	24:14:1989:G:N2	2.64	0.45
24:1H:780:G:OP1	27:11:218:ARG:NH2	2.50	0.45
54:1G:188:U:O2'	54:1G:189:U:H5'	2.17	0.45
1:13:391:G:C6	1:13:392:G:C5	3.05	0.45
3:2E:13:GLY:HA2	14:5I:57:ARG:HE	1.80	0.45
49:L8:5:LYS:HD2	49:L8:34:GLU:OE1	2.16	0.45
24:1H:997:G:C2'	24:1H:998:C:H5'	2.47	0.45
54:1G:1046:A:H3'	54:1G:1047:G:C8	2.51	0.45
22:3L:31:G:H2'	22:3L:32:A:H8	1.81	0.45
1:13:947:G:OP1	13:4I:108:ARG:HB3	2.17	0.45
24:14:2516:G:C5	24:14:2517:C:C5	3.05	0.45
24:14:2209:C:O2	24:14:2216:G:C2	2.70	0.45
54:1G:434:U:H2'	54:1G:435:C:C6	2.52	0.45
24:14:2673:G:O3'	34:25:26:LYS:NZ	2.50	0.45
24:1H:2740:A:OP2	24:1H:2763:G:N1	2.38	0.45
54:1G:273:A:N6	54:1G:274:A:C6	2.84	0.45
54:1G:1466:C:H2'	54:1G:1467:G:O4'	2.17	0.45
44:C5:57:GLN:HB3	44:C5:58:GLY:H	1.63	0.45
54:1G:562:C:H4'	54:1G:563:A:O5'	2.16	0.45
1:13:1032(A):G:H2'	1:13:1032(B):G:H8	1.81	0.45
24:14:1849:G:H2'	24:14:1850:G:H8	1.81	0.45
52:P8:19:ARG:NH2	52:P8:23:ARG:HH22	2.15	0.45
41:D8:51:VAL:HG12	41:D8:52:VAL:H	1.82	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
24:1H:1769:G:O2'	24:1H:1958:C:OP1	2.18	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:545:G:H8	24:14:545:G:O5'	2.00	0.45
54:1G:873:A:H8	54:1G:873:A:OP1	2.00	0.45
24:14:900:A:H3'	24:14:901:A:H8	1.81	0.45
24:1H:1894:C:O2'	24:1H:1895:C:H5'	2.16	0.45
24:1H:2582:G:N2	24:1H:2583:G:H1'	2.31	0.45
24:1H:607:U:N3	24:1H:621:A:C2	2.80	0.45
54:1G:1143:G:H2'	54:1G:1144:G:C8	2.52	0.45
1:13:310:G:P	16:7I:27:LYS:HZ1	2.32	0.45
54:1G:1323:G:H2'	54:1G:1324:A:O4'	2.17	0.45
33:58:133:GLN:O	33:58:134:ARG:NH1	2.50	0.45
54:1G:1342:C:H2'	54:1G:1343:G:H8	1.82	0.45
24:1H:1268:A:H2'	24:1H:1269:A:O4'	2.16	0.45
54:1G:993:G:H2'	54:1G:995:C:H41	1.82	0.45
54:1G:1103:C:H5''	2:12:98:LEU:HD13	1.98	0.45
54:1G:1386:G:C2	54:1G:1387:G:N7	2.85	0.45
32:61:130:TYR:HB3	32:61:136:VAL:HG13	1.99	0.45
54:1G:464:G:N2	54:1G:467:G:C8	2.85	0.45
1:13:1288:A:H2'	1:13:1289:A:O4'	2.17	0.45
19:AI:40:ILE:O	19:AI:41:VAL:HG22	2.17	0.45
24:1H:273(F):C:H3'	24:1H:274:G:C5'	2.46	0.45
45:H8:19:ARG:NH1	45:H8:84:GLU:HB2	2.32	0.45
24:1H:601:C:OP1	29:31:108:LYS:HE3	2.17	0.45
24:14:820:A:N3	24:14:943:U:H4'	2.32	0.45
24:14:2773:C:H2'	24:14:2774:C:H6	1.83	0.45
1:13:163:C:H2'	1:13:164:U:C6	2.51	0.45
32:69:75:LEU:HD12	32:69:139:GLN:O	2.17	0.45
2:12:161:ALA:HB1	2:12:185:ILE:HD11	1.98	0.45
24:1H:172:C:H2'	24:1H:173:G:C8	2.51	0.45
40:85:83:LEU:CD2	40:85:88:ILE:HB	2.46	0.45
1:13:187:C:O2	1:13:191(A):G:N1	2.50	0.45
24:14:314:A:H2'	24:14:315:G:H8	1.82	0.45
24:1H:139:G:N3	24:1H:141:A:N1	2.64	0.45
29:39:187:VAL:HG12	35:35:3:LEU:HG	1.98	0.45
30:41:56:ALA:HB2	30:41:153:ARG:NE	2.32	0.45
16:7A:65:GLN:HA	16:7A:66:PRO:HD3	1.78	0.45
24:1H:270(X):G:C6	24:1H:270(Y):G:N1	2.85	0.45
24:14:2209:C:O2'	24:14:2211:G:N2	2.50	0.45
19:AI:18:LYS:NZ	19:AI:22:LEU:HD21	2.32	0.45
36:88:78:PRO:HG2	36:88:81:VAL:HG11	1.99	0.45
54:1G:1270:C:OP2	21:1B:24:ARG:NH2	2.49	0.45
28:21:116:VAL:HG13	28:21:122:PHE:CG	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:547:A:C5	24:1H:548:A:C6	3.05	0.45
24:14:1754:C:OP2	39:75:113:LYS:NZ	2.47	0.45
24:14:952:G:C6	24:14:953:A:N7	2.85	0.45
54:1G:854:G:C2	54:1G:855:G:C8	3.04	0.45
27:11:172:TYR:CD2	27:11:186:HIS:HA	2.52	0.45
54:1G:313:A:H2'	54:1G:314:C:C6	2.52	0.45
6:5E:44:GLY:HA2	6:5E:59:TYR:CE1	2.52	0.45
24:1H:2830:G:H5''	24:1H:2830:G:C8	2.51	0.45
33:15:137:LYS:HD3	33:15:137:LYS:HA	1.48	0.45
24:1H:1239:G:H2'	24:1H:1240:U:O4'	2.17	0.45
28:29:53:PRO:HA	28:29:74:PRO:HB3	1.99	0.45
24:1H:2272:U:H5''	24:1H:2273:A:OP1	2.17	0.45
24:1H:1479:G:H5'	24:1H:1558:A:H2	1.81	0.44
24:14:1971:A:H5''	57:14:3597:HOH:O	2.16	0.44
40:85:92:ARG:HD2	41:95:11:GLN:OE1	2.18	0.44
24:1H:1359:A:N6	24:1H:1372:U:H3	2.13	0.44
40:C8:47:TYR:HA	40:C8:50:ARG:CZ	2.47	0.44
19:AA:81:ARG:HE	19:AA:81:ARG:HB2	1.34	0.44
1:13:738:C:C2	1:13:739:C:C5	3.05	0.44
2:1E:208:ILE:H	2:1E:208:ILE:HG13	1.58	0.44
54:1G:15:G:H4'	5:42:24:ARG:HH12	1.80	0.44
1:13:1414:U:H2'	1:13:1415:G:H8	1.82	0.44
33:58:37:LYS:O	40:C8:67:ALA:HB2	2.17	0.44
1:13:232:G:C6	1:13:233:C:C4	3.05	0.44
54:1G:582:U:H5''	15:6A:64:ARG:NH2	2.32	0.44
32:69:103:ARG:HH21	32:69:104:GLN:HB3	1.81	0.44
38:65:25:ARG:O	38:65:39:ILE:HA	2.17	0.44
54:1G:735:C:H2'	54:1G:736:C:H6	1.83	0.44
24:1H:825:C:H4'	24:1H:2428:G:C5	2.52	0.44
30:41:33:ARG:O	30:41:162:THR:HG23	2.17	0.44
24:1H:1176:G:H5''	24:1H:1177:A:N7	2.33	0.44
31:59:26:VAL:HG13	31:59:27:LYS:H	1.82	0.44
24:14:2538:C:H2'	24:14:2539:C:H6	1.82	0.44
32:69:97:ILE:O	32:69:100:ALA:HB3	2.16	0.44
2:12:222:ILE:HG22	2:12:226:ARG:HD2	1.99	0.44
12:3A:53:ARG:HH12	12:3A:92:ASP:CB	2.30	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
24:14:1410:G:N2	24:14:1593:G:C4	2.85	0.44
24:1H:173:G:H2'	24:1H:174:C:C6	2.51	0.44
45:D5:76:LEU:HA	45:D5:83:PRO:HA	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:212:G:H2'	24:14:213:A:C8	2.52	0.44
39:75:19:LEU:HD22	39:75:86:ILE:HG23	1.98	0.44
1:13:1525:G:P	11:2I:120:ARG:HH22	2.40	0.44
24:1H:1952:A:C4	34:68:22:ILE:HG13	2.52	0.44
24:1H:1443:G:N7	57:1H:3688:HOH:O	2.36	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
54:1G:186:C:H42	54:1G:191:G:H1	1.65	0.44
24:1H:1275:A:N1	24:1H:1295:C:O2'	2.43	0.44
24:1H:2760:C:O2'	24:1H:2761:G:H5'	2.16	0.44
45:H8:7:ALA:HB2	45:H8:59:LEU:HD13	1.99	0.44
54:1G:577:G:H2'	54:1G:578:C:H6	1.82	0.44
24:1H:654(N):G:H2'	24:1H:654(O):G:C8	2.52	0.44
24:1H:749:C:OP2	57:1H:4354:HOH:O	2.21	0.44
2:12:91:PRO:HG3	2:12:154:LEU:HB2	1.99	0.44
26:79:30:LYS:HD2	26:79:182:PRO:HD3	1.98	0.44
24:1H:1491:G:O2'	24:1H:1492:G:H5'	2.17	0.44
44:G8:21:LYS:HE2	44:G8:21:LYS:HB3	1.36	0.44
8:72:82:HIS:C	8:72:82:HIS:CD2	2.91	0.44
24:1H:736:C:O5'	24:1H:736:C:H6	1.99	0.44
1:13:827:U:C5	1:13:870:U:C5	3.05	0.44
35:78:59:LEU:O	35:78:61:ARG:N	2.47	0.44
39:B8:50:ILE:O	39:B8:99:LEU:HB2	2.17	0.44
24:14:2136:C:N4	24:14:2156:G:H22	2.16	0.44
25:1J:40:U:H1'	25:1J:46:A:N1	2.32	0.44
22:3L:11:C:H42	22:3L:25:G:H1	1.64	0.44
24:1H:860:U:C5	24:1H:917:A:H2	2.33	0.44
25:1J:56:G:H4'	25:1J:57:A:H8	1.83	0.44
24:1H:811:U:H2'	35:78:21:ARG:HA	1.98	0.44
10:1A:11:PHE:HE1	10:1A:67:THR:HG22	1.82	0.44
6:5E:97:PHE:HB3	18:9I:31:LEU:HB2	1.99	0.44
24:1H:1815:A:C5	24:1H:1817:G:C6	3.06	0.44
1:13:21:G:OP1	57:13:1766:HOH:O	2.20	0.44
45:H8:97:GLU:HB2	45:H8:125:LEU:HD11	1.99	0.44
3:2E:47:LEU:HG	3:2E:50:ALA:HB3	2.00	0.44
1:13:1071:C:H2'	1:13:1072:G:H8	1.82	0.44
24:1H:1062:G:OP1	24:1H:1070:A:H4'	2.16	0.44
24:14:527:C:OP2	24:14:2779:U:C5	2.70	0.44
24:14:2168:G:H21	24:14:2169:A:H8	1.66	0.44
24:1H:1036:G:H2'	24:1H:1037:G:O4'	2.18	0.44
13:4I:50:GLU:O	13:4I:54:VAL:HG23	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:989:C:H42	1:13:1216:G:H1	1.64	0.44
20:BI:14:LYS:HB2	20:BI:17:ARG:NH2	2.32	0.44
24:14:1503:U:H2'	24:14:1504:C:C6	2.52	0.44
35:78:89:ALA:HA	35:78:121:LYS:HD3	1.98	0.44
44:C5:61:ILE:HB	44:C5:63:LYS:HD3	2.00	0.44
31:51:95:ARG:NH1	31:51:95:ARG:HB3	2.32	0.44
24:1H:182:A:H2'	24:1H:183:C:C6	2.52	0.44
52:L5:43:THR:HG23	52:L5:44:PRO:HD2	1.99	0.44
54:1G:1213:A:N6	54:1G:1215:G:N3	2.64	0.44
24:1H:141:A:C8	24:1H:1408:C:H1'	2.52	0.44
10:1I:40:LEU:HB2	10:1I:69:ASN:CB	2.47	0.44
1:13:1151:A:N6	1:13:1152:A:N6	2.65	0.44
32:61:75:LEU:HD11	32:61:105:HIS:CE1	2.51	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
54:1G:1522:U:H2'	54:1G:1523:G:H8	1.82	0.44
11:2A:120:ARG:HA	11:2A:121:PRO:HD3	1.70	0.44
24:1H:1545(A):A:H2'	24:1H:1546:C:O4'	2.17	0.44
24:14:526:A:N3	24:14:2044:C:H1'	2.33	0.44
24:14:844:C:H3'	24:14:845:G:C8	2.52	0.44
20:BI:56:MET:O	20:BI:59:ALA:HB3	2.16	0.44
31:59:7:LEU:HA	31:59:65:HIS:CE1	2.53	0.44
24:1H:458:G:O2'	24:1H:469:G:O6	2.26	0.44
3:22:148:GLY:HA3	3:22:172:ARG:O	2.16	0.44
24:14:2081:C:H2'	24:14:2082:A:C8	2.52	0.44
15:6I:82:ILE:O	15:6I:86:GLY:N	2.44	0.44
23:4L:15:A:O5'	23:4L:15:A:H8	2.00	0.44
29:39:157:VAL:HB	29:39:194:MET:HB3	1.98	0.44
24:1H:1965:C:H3'	24:1H:1966:A:H2'	1.99	0.44
24:1H:2420:C:OP1	53:Q8:33:ASN:HA	2.17	0.44
54:1G:243:A:C2	54:1G:245:C:C2	3.05	0.44
24:1H:1006:C:O2	33:58:106:MET:HG2	2.17	0.44
1:13:730:G:C5	1:13:731:G:H1'	2.52	0.44
24:14:566:U:H2'	24:14:567:A:O4'	2.17	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
24:1H:1728:G:H5'	24:1H:1729:A:OP2	2.17	0.44
36:88:20:ALA:HB3	45:H8:79:ARG:HH12	1.82	0.44
24:1H:1021:A:C3'	24:1H:1021:A:C8	3.00	0.44
24:1H:1021:A:C2	24:1H:1023:U:C2	3.05	0.44
1:13:1200:C:H4'	1:13:1201:A:H5''	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:62:22:LEU:HD12	7:62:97:GLN:HE21	1.82	0.44
1:13:1243:C:O2	1:13:1295:G:N2	2.51	0.44
24:14:2535:G:H2'	24:14:2536:G:O4'	2.18	0.44
19:AA:11:VAL:HG12	19:AA:12:ASP:N	2.31	0.44
1:13:575:G:C8	1:13:881:G:N2	2.85	0.44
24:1H:2799:A:H2'	24:1H:2801:A:H8	1.83	0.44
53:Q8:54:GLU:HA	53:Q8:54:GLU:OE2	2.16	0.44
1:13:448:A:H2'	1:13:449:C:O2	2.18	0.44
1:13:1293:G:H2'	1:13:1294:G:O4'	2.17	0.44
5:42:78:HIS:CE1	5:42:142:LEU:HD23	2.52	0.44
2:1E:111:ARG:NH1	2:1E:111:ARG:HG2	2.31	0.44
54:1G:687:A:H4'	54:1G:688:G:O5'	2.17	0.44
24:14:1225:C:O2'	41:95:85:LYS:N	2.50	0.44
24:14:455:C:N3	24:14:472:A:H2'	2.32	0.44
24:1H:2180:U:H2'	24:1H:2181:G:O4'	2.17	0.44
28:21:57:LYS:C	28:21:59:VAL:H	2.21	0.44
1:13:380:G:N2	1:13:384:G:C5	2.85	0.44
1:13:751:U:O4'	15:6I:24:SER:HA	2.18	0.44
24:14:1833:U:H2'	24:14:1834:U:H6	1.83	0.44
50:I5:50:VAL:HG23	50:I5:51:ASP:H	1.83	0.44
7:62:138:LYS:HE2	7:62:142:GLU:CD	2.37	0.44
6:52:11:ASN:HB3	6:52:14:LEU:HG	2.00	0.44
51:J5:48:GLU:OE1	51:J5:48:GLU:N	2.50	0.44
4:3E:194:LEU:HD12	4:3E:195:ALA:N	2.32	0.44
32:6I:1:MET:O	32:6I:20:ASP:HA	2.17	0.44
24:1H:1748:G:H2'	24:1H:1749:A:C8	2.52	0.44
25:16:94:C:H2'	25:16:95:U:H6	1.82	0.44
57:1G:1876:HOH:O	4:32:151:LYS:NZ	2.27	0.44
42:E8:18:ARG:HD3	42:E8:76:VAL:HG13	1.99	0.44
20:BI:30:LYS:NZ	20:BI:80:ARG:HH12	2.15	0.44
5:42:71:LEU:HD11	5:42:114:GLY:O	2.16	0.44
46:I8:48:GLY:HA3	46:I8:80:HIS:ND1	2.32	0.44
12:3I:36:VAL:O	12:3I:59:ARG:N	2.45	0.44
19:AA:71:LEU:HA	19:AA:71:LEU:HD23	1.78	0.44
11:2A:114:VAL:HA	11:2A:115:PRO:HD3	1.84	0.44
2:1E:22:LYS:HD3	2:1E:40:HIS:HE1	1.81	0.44
24:1H:1140:C:OP1	33:58:23:LEU:HB3	2.17	0.44
45:D5:14:LYS:HA	45:D5:15:PRO:HD3	1.72	0.44
54:1G:827:U:H2'	54:1G:859:A:H61	1.81	0.44
4:32:18:LYS:HE2	4:32:26:CYS:HB3	1.99	0.44
43:F8:31:HIS:HA	43:F8:32:PRO:HD3	1.75	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2032:G:O2'	28:21:145:LYS:HE3	2.17	0.44
33:58:28:THR:HA	33:58:106:MET:HE2	1.99	0.44
1:13:428:G:C8	1:13:430:A:C4	3.06	0.44
54:1G:1224:G:N1	54:1G:1322:C:H1'	2.31	0.44
54:1G:1117:G:O3'	9:82:9:ARG:NH2	2.35	0.44
24:1H:1417:C:H2'	24:1H:1418:G:O4'	2.17	0.44
45:D5:105:VAL:O	45:D5:108:PRO:HD2	2.17	0.44
36:45:98:LYS:HB3	36:45:99:PRO:HD2	2.00	0.44
19:AI:42:PRO:O	19:AI:45:VAL:HG13	2.18	0.44
43:F8:67:GLY:C	43:F8:69:TYR:H	2.19	0.44
38:65:15:ARG:HD2	38:65:88:ASP:OD2	2.18	0.44
24:14:2297:C:C2	24:14:2298:A:C8	3.05	0.44
20:BI:57:ARG:HH11	20:BI:103:GLY:HA2	1.83	0.44
26:79:213:TYR:HD2	26:79:221:SER:HB2	1.82	0.44
1:13:625:G:C4	1:13:626:U:C5	3.05	0.44
42:A5:29:LEU:HD21	42:A5:33:ARG:HH21	1.80	0.44
9:82:25:LYS:HD3	9:82:25:LYS:HA	1.66	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
49:H5:12:PRO:O	49:H5:15:TYR:HB2	2.17	0.44
29:31:65:TRP:HZ3	29:31:73:ALA:O	2.00	0.44
8:72:121:ASP:OD2	8:72:125:ARG:NH2	2.50	0.44
3:2E:51:GLY:O	3:2E:115:LEU:HD11	2.18	0.44
24:1H:2283:C:N3	24:1H:2389:G:C2	2.86	0.44
13:4I:8:GLU:O	13:4I:10:PRO:HD3	2.17	0.44
24:14:2151:G:H2'	24:14:2152:G:H8	1.81	0.44
54:1G:1232:U:H2'	54:1G:1233:G:O4'	2.16	0.44
28:21:21:VAL:HG12	28:21:23:VAL:HG13	2.00	0.44
1:13:1392:G:O5'	1:13:1392:G:H8	1.99	0.44
22:3K:72:U:H2'	22:3K:73:U:O4'	2.17	0.44
24:14:395:U:H2'	57:14:4144:HOH:O	2.18	0.44
24:14:1754:C:N3	24:14:2716:U:O2'	2.47	0.44
1:13:826:C:C2	1:13:827:U:O2	2.71	0.44
1:13:561:U:HO2'	1:13:562:C:P	2.41	0.44
24:14:2303:G:O2'	30:49:132:ASN:HB2	2.17	0.44
3:22:6:HIS:HA	3:22:7:PRO:HD3	1.83	0.44
1:13:1203:C:H2'	1:13:1204:A:O4'	2.18	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
38:A8:59:LYS:HG2	38:A8:60:GLY:H	1.81	0.44
5:42:50:GLU:CB	5:42:53:LEU:HD13	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:3L:80:C:H2'	22:3L:81:C:C6	2.52	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
1:13:1198:G:O2'	10:1I:55:LYS:HD3	2.16	0.44
13:4I:11:ARG:NH1	13:4I:12:ASN:HB2	2.33	0.44
54:1G:333:G:O2'	54:1G:334:C:H5'	2.18	0.44
24:14:1879:C:H6	24:14:1879:C:O5'	2.01	0.44
24:1H:2184:G:C6	24:1H:2185:C:C4	3.05	0.44
1:13:373:A:C2	1:13:482:A:C6	3.06	0.44
1:13:186(D):C:H42	1:13:191(C):G:H1	1.65	0.44
52:L5:24:THR:O	52:L5:28:ARG:HG3	2.18	0.44
41:95:21:ARG:NH2	41:95:65:GLY:O	2.50	0.44
24:1H:2420:C:P	53:Q8:33:ASN:HA	2.57	0.44
4:32:38:TYR:HA	4:32:39:PRO:HD3	1.84	0.44
45:H8:24:LEU:HA	45:H8:25:PRO:HD3	1.71	0.44
1:13:731:G:H5'	1:13:766:A:H4'	2.00	0.44
1:13:1048:G:OP1	14:5I:3:ARG:HB3	2.18	0.44
54:1G:353:A:H5'	54:1G:353:A:C8	2.44	0.44
25:16:19:G:N2	25:16:65:C:C2	2.86	0.44
16:7I:23:ASP:OD1	16:7I:25:ARG:HD3	2.18	0.44
24:14:853:G:H2'	24:14:854:G:H8	1.83	0.44
24:14:943:U:OP2	35:35:36:LYS:HE2	2.17	0.44
24:14:1511:A:H2'	24:14:1512:G:H8	1.79	0.44
20:BI:100:ILE:HG12	20:BI:101:GLY:H	1.83	0.44
1:13:74:C:H2'	1:13:75:C:O4'	2.16	0.44
8:7E:104:ARG:HD2	8:7E:138:TRP:CD2	2.53	0.44
4:32:119:GLN:O	4:32:123:HIS:CD2	2.70	0.44
24:14:1285:G:C5	24:14:1329:U:C4	3.06	0.44
24:1H:2074:U:P	57:1H:3636:HOH:O	2.75	0.44
24:1H:2393:A:H2'	24:1H:2394:C:C6	2.51	0.44
17:8I:75:ARG:NH1	17:8I:77:VAL:HG22	2.32	0.44
24:1H:2110:G:C2	24:1H:2120:G:H1'	2.53	0.44
24:14:821:A:C2'	24:14:946:G:H5''	2.48	0.44
24:1H:997:G:OP1	40:C8:92:ARG:HB2	2.18	0.44
1:13:624:C:O3'	16:7I:10:GLY:HA2	2.18	0.44
50:M8:43:TYR:HA	50:M8:46:GLN:HG3	2.00	0.44
20:BA:53:LEU:HD12	20:BA:101:GLY:CA	2.47	0.44
45:D5:43:GLU:O	45:D5:47:VAL:HG23	2.18	0.44
24:1H:198:C:C2'	24:1H:199:A:H5''	2.47	0.44
43:B5:18:TYR:C	43:B5:20:GLY:H	2.20	0.44
13:4A:30:ALA:O	13:4A:34:LEU:HG	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:22:191:THR:OG1	3:22:194:GLY:O	2.30	0.44
24:14:2584:U:H2'	24:14:2585:U:C6	2.53	0.44
30:41:107:LEU:HD22	30:41:178:PHE:HA	2.00	0.44
24:1H:2508:G:C4	24:1H:2509:G:C8	3.05	0.44
41:D8:34:GLU:O	41:D8:36:PRO:HD3	2.17	0.44
54:1G:1257:U:H5'	54:1G:1258:G:C8	2.53	0.44
24:14:270(F):U:H2'	24:14:270(G):C:C6	2.53	0.44
11:2I:21:ILE:HB	11:2I:84:VAL:HG12	1.99	0.44
41:95:21:ARG:CG	41:95:91:TYR:CE1	3.00	0.44
24:14:2712(A):A:O5'	57:14:3571:HOH:O	2.21	0.44
24:1H:2052:G:C2	24:1H:2053:G:C8	3.06	0.44
24:1H:2572:A:N7	28:21:145:LYS:HB2	2.32	0.44
37:55:103:ARG:HD2	42:A5:40:ASN:ND2	2.33	0.44
45:D5:161:VAL:HB	45:D5:162:GLU:H	1.54	0.44
5:42:102:ALA:HB2	5:42:120:THR:HG21	1.98	0.44
24:14:1021:A:H2'	24:14:1023:U:H5'	1.98	0.44
37:55:78:LYS:O	37:55:83:ILE:HG13	2.18	0.44
24:1H:2115:G:O3'	24:1H:2165:G:N2	2.51	0.44
54:1G:1117:G:H2'	9:82:104:ARG:NH1	2.32	0.44
24:14:1043:C:H42	24:14:1112:G:H1	1.64	0.44
2:1E:15:VAL:HG11	2:1E:207:ALA:HB1	1.99	0.44
26:71:226:PRO:HG2	26:71:227:HIS:ND1	2.33	0.44
24:1H:823:G:H2'	24:1H:824:A:C8	2.53	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
12:3I:62:SER:HB2	12:3I:64:TYR:CD1	2.46	0.44
1:13:142:G:H2'	1:13:143:A:H8	1.82	0.44
24:14:2547:U:O2	34:25:23:ARG:NH2	2.51	0.44
44:C5:89:PHE:O	44:C5:89:PHE:CG	2.69	0.44
54:1G:147:G:N2	54:1G:148:G:C4	2.86	0.44
24:14:150:C:H2'	24:14:151:C:C6	2.53	0.44
24:1H:2002:G:C6	57:1H:4226:HOH:O	2.69	0.44
24:1H:2291:U:O2'	24:1H:2374:C:O2	2.32	0.44
24:14:2784:C:H1'	28:29:37:ARG:NH1	2.32	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
1:13:1336:C:H1'	1:13:1337:G:N2	2.33	0.44
30:49:29:TRP:HE3	30:49:33:ARG:NH1	2.15	0.44
12:3A:76:ASN:N	12:3A:76:ASN:OD1	2.43	0.44
25:16:24:G:O6	25:16:56:G:O2'	2.25	0.44
29:31:101:LEU:HA	29:31:101:LEU:HD12	1.78	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:817:C:H4'	24:1H:932:G:C5	2.52	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
3:22:131:ARG:HH22	3:22:164:ARG:HH22	1.66	0.44
24:14:807:U:O2'	24:14:808:G:H5'	2.17	0.44
24:14:2081:C:O2'	24:14:2082:A:H5'	2.18	0.44
24:1H:1992:G:N2	24:1H:1996:C:O2'	2.51	0.44
5:42:11:ILE:HG22	5:42:12:LEU:HB2	1.99	0.44
40:85:27:LEU:HD13	40:85:31:SER:HB3	1.98	0.44
54:1G:837:G:H1	54:1G:849:C:N4	2.16	0.44
24:1H:1923:U:H2'	24:1H:1924:C:C6	2.53	0.44
24:1H:943:U:OP2	35:78:36:LYS:HG3	2.18	0.44
40:85:55:ARG:O	40:85:59:ARG:HB2	2.17	0.44
54:1G:940:C:C2	54:1G:941:G:C8	3.05	0.44
5:42:9:LYS:O	5:42:33:VAL:HG23	2.18	0.44
45:H8:108:PRO:HD2	45:H8:113:ALA:H	1.82	0.44
24:1H:1956:U:H2'	24:1H:1957:C:H5'	1.98	0.44
11:2I:54:ARG:O	11:2I:57:THR:OG1	2.30	0.44
33:58:1:MET:HE3	33:58:1:MET:HB3	1.91	0.44
24:14:1426:G:H8	24:14:1426:G:O5'	2.00	0.44
19:AI:24:ALA:C	19:AI:26:GLY:H	2.21	0.44
3:2E:19:GLU:HG3	3:2E:54:ARG:CZ	2.47	0.44
1:13:644:G:H2'	1:13:645:C:O4'	2.18	0.44
4:3E:99:SER:HB3	4:3E:139:ARG:HG3	1.98	0.44
24:1H:114:U:O2'	43:F8:33:LYS:NZ	2.49	0.44
24:1H:2315:G:N2	30:41:128:ARG:HH22	2.16	0.44
24:14:858:U:H1'	24:14:2268:A:H2'	2.00	0.44
24:1H:184:C:H2'	24:1H:185:U:C6	2.53	0.44
54:1G:1320:C:C4	54:1G:1321:C:C4	3.06	0.44
28:29:77:ILE:C	28:29:78:LEU:HG	2.38	0.44
24:1H:1222:C:C2	24:1H:1223:C:C5	3.05	0.44
24:14:1638:C:H1'	24:14:2698:U:O2'	2.18	0.44
22:3K:55:U:C4	22:3K:56:U:H1'	2.52	0.44
24:1H:371:A:H8	24:1H:423:A:C2	2.35	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
24:14:1635:G:N2	24:14:1636:C:C2	2.86	0.44
54:1G:1122:U:C4	54:1G:1123:A:N7	2.85	0.44
54:1G:542:G:H2'	54:1G:543:C:C6	2.53	0.44
1:13:1360:A:H2'	1:13:1361:G:O4'	2.18	0.44
13:4I:14:ARG:HH21	13:4I:42:ALA:HA	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:G8:39:VAL:O	44:G8:42:VAL:HG13	2.18	0.44
25:16:72:G:N2	25:16:103:U:C5	2.86	0.44
24:14:2177:C:H5''	26:79:213:TYR:CD1	2.53	0.44
24:14:923:C:H2'	24:14:924:C:C6	2.53	0.44
24:14:1858:G:H2'	24:14:1883:G:H22	1.83	0.44
34:25:1:MET:H1	34:25:67:LYS:HB3	1.82	0.44
2:12:115:LEU:HB2	2:12:145:LEU:HD23	1.99	0.44
24:14:2291:U:OP1	24:14:2381:C:H5'	2.18	0.44
35:78:2:LYS:NZ	35:78:5:ASP:OD1	2.50	0.44
24:14:2150:U:H2'	24:14:2151:G:H8	1.83	0.44
1:13:874:G:C4	1:13:875:C:C5	3.06	0.44
24:14:2232:U:P	47:F5:40:ARG:HH12	2.41	0.44
1:13:44:G:C2	1:13:45:U:H1'	2.52	0.44
24:14:1754:C:H2'	24:14:1755:A:C8	2.52	0.44
54:1G:853:G:H2'	54:1G:854:G:H8	1.82	0.44
24:1H:654(F):C:N3	24:1H:654(P):G:N2	2.66	0.44
24:1H:1436:G:C6	24:1H:1437:C:C4	3.06	0.44
24:1H:1069:A:H2'	24:1H:1073:A:H62	1.83	0.44
24:1H:2562:U:H1'	34:68:23:ARG:HE	1.82	0.44
54:1G:186(A):C:H2'	54:1G:186(B):C:C6	2.52	0.44
1:13:1208:C:H2'	1:13:1209:C:C6	2.53	0.44
31:51:35:VAL:HG12	31:51:37:VAL:HG23	1.99	0.44
54:1G:8:A:N6	4:32:209:ARG:HB2	2.33	0.44
24:14:233:A:H2'	24:14:234:C:H6	1.82	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
45:D5:178:GLU:HG2	45:D5:178:GLU:H	1.61	0.44
24:1H:2364:C:H2'	24:1H:2365:G:O4'	2.18	0.44
24:1H:1475:G:C2	24:1H:1519:G:C2	3.06	0.44
24:1H:2419:U:O4	53:Q8:31:HIS:CG	2.70	0.44
24:1H:1496:A:H5'	24:1H:1497:U:OP1	2.18	0.44
54:1G:828:A:H2'	54:1G:829:G:O4'	2.18	0.44
47:J8:89:GLU:C	47:J8:91:LYS:H	2.21	0.44
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
1:13:509:A:H5'	4:3E:54:TYR:CD2	2.53	0.44
22:3L:8:4SU:H1'	22:3L:57:C:O2	2.17	0.44
27:11:30:GLU:OE1	27:11:104:TYR:OH	2.36	0.44
24:14:2749:A:N3	31:59:59:ARG:NH1	2.66	0.44
24:1H:249:C:O2	53:Q8:12:LYS:NZ	2.39	0.44
25:1J:32:C:C2	25:1J:51:G:N2	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:79:10:LEU:HD11	26:79:34:THR:HG23	2.00	0.44
1:13:1024:G:H4'	1:13:1024:G:OP1	2.18	0.44
24:14:249:C:O2	53:M5:12:LYS:NZ	2.49	0.44
54:1G:1202:G:H22	14:5A:46:GLU:CD	2.22	0.44
48:G5:47:ASN:HD22	48:G5:47:ASN:N	2.15	0.44
24:1H:1762[B]:A:C6	57:1H:3693:HOH:O	2.69	0.44
22:3K:34:U:H6	22:3K:34:U:H5'	1.81	0.44
29:31:68:LYS:O	29:31:69:HIS:HB2	2.18	0.44
24:1H:722:A:H2'	24:1H:723:G:C8	2.53	0.44
27:11:145:VAL:HG12	27:11:146:GLU:O	2.18	0.44
24:1H:2689:U:H4'	24:1H:2690:C:H5'	2.00	0.44
24:1H:1287:A:N7	37:98:107:ASP:HB2	2.33	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
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
48:G5:14:ARG:HD3	48:G5:63:VAL:HG22	1.99	0.44
24:1H:646:A:H2'	24:1H:647:G:O4'	2.18	0.44
9:8E:111:ARG:HD2	14:5I:61:TRP:C	2.38	0.44
53:M5:62:LEU:HB3	53:M5:63:PRO:HD2	2.00	0.44
1:13:458:C:H2'	1:13:464:G:O4'	2.18	0.44
24:14:1853:A:N1	24:14:2087:G:H1'	2.32	0.44
40:85:9:VAL:O	40:85:13:LYS:HG3	2.18	0.44
45:H8:23:LYS:HA	45:H8:40:ASP:HA	2.00	0.44
2:12:119:GLU:O	2:12:122:PHE:HB3	2.17	0.44
8:7E:22:GLU:O	8:7E:62:TYR:HA	2.18	0.44
12:3A:124:LYS:HG3	12:3A:125:PRO:HD2	2.00	0.44
36:45:51:ARG:O	36:45:54:MET:N	2.49	0.44
54:1G:842:C:H5'	54:1G:843:U:OP1	2.18	0.44
1:13:1315:U:H2'	1:13:1316:G:O4'	2.17	0.44
41:D8:58:VAL:O	41:D8:97:LYS:HB2	2.18	0.44
24:1H:846:C:C4	24:1H:930:U:C4	3.05	0.44
45:H8:65:GLN:HE21	45:H8:67:LEU:HD21	1.83	0.44
9:82:97:LYS:O	9:82:100:GLY:N	2.43	0.44
10:1I:78:ASN:HB2	10:1I:81:THR:HG23	1.99	0.44
24:14:1437:C:H6	24:14:1437:C:H5''	1.83	0.44
29:31:24:LEU:HA	29:31:24:LEU:HD13	1.84	0.44
51:J5:19:ARG:HH11	51:J5:19:ARG:HD2	1.67	0.44
37:55:70:LEU:HA	37:55:70:LEU:HD23	1.81	0.44
54:1G:123:C:O5'	54:1G:123:C:H6	2.00	0.44
2:12:179:LYS:HE3	2:12:179:LYS:HB2	1.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:95:68:LYS:HA	41:95:68:LYS:HD3	1.86	0.44
24:14:263:C:H2'	24:14:264:C:O4'	2.18	0.44
24:1H:1870:C:H2'	24:1H:1871:A:O4'	2.18	0.44
1:13:41:G:H2'	1:13:42:G:C8	2.53	0.44
40:85:91:ASP:OD2	40:85:96:ALA:HB2	2.18	0.44
24:1H:1057:A:N1	24:1H:1086:A:H2'	2.33	0.44
54:1G:1342:C:H2'	54:1G:1343:G:C8	2.53	0.44
39:75:10:VAL:HG11	39:75:57:PHE:CG	2.52	0.44
54:1G:1151:A:C5	54:1G:1152:A:N7	2.86	0.44
27:19:30:GLU:HG3	27:19:31:LYS:O	2.18	0.44
54:1G:458:C:H2'	54:1G:464:G:C8	2.52	0.44
26:71:44:HIS:O	26:71:212:VAL:HA	2.17	0.44
29:39:1:MET:HB2	29:39:2:LYS:HD3	1.99	0.44
24:1H:674:G:O2'	29:31:74:ARG:HD3	2.18	0.44
1:13:693:G:H2'	1:13:694:A:H8	1.82	0.44
24:1H:1477:A:C6	24:1H:1517:G:C6	3.06	0.44
1:13:664:G:N2	1:13:741:G:H1	2.13	0.44
27:19:3:VAL:HG12	27:19:17:THR:HB	2.00	0.44
24:14:547:A:N7	24:14:548:A:N6	2.66	0.44
37:98:29:LEU:HB3	37:98:75:LEU:HD21	1.98	0.44
24:14:2132:U:C4	26:79:5:LYS:HE2	2.53	0.44
1:13:902:G:O2'	1:13:903:G:H5'	2.18	0.44
27:11:238:GLY:O	27:11:239:ARG:C	2.54	0.44
1:13:728:A:O5'	1:13:728:A:H8	2.01	0.44
4:32:105:VAL:HG12	4:32:117:ALA:HB1	2.00	0.44
33:15:96:GLU:HB2	33:15:122:VAL:HG12	1.99	0.44
54:1G:7:G:H5'	54:1G:298:A:O4'	2.18	0.44
2:12:112:VAL:O	2:12:115:LEU:HB3	2.18	0.44
35:78:1:MET:HG2	35:78:5:ASP:HB2	1.99	0.44
17:8A:59:ILE:HG22	17:8A:71:PHE:HB3	1.99	0.44
54:1G:1349:A:O2'	54:1G:1350:A:H5'	2.18	0.44
32:69:6:LEU:HD11	32:69:37:VAL:HG13	1.99	0.44
24:1H:354:G:H2'	24:1H:355:G:C8	2.52	0.44
54:1G:191:G:O2'	20:BA:103:GLY:HA3	2.17	0.44
41:D8:66:ARG:CZ	41:D8:88:ARG:HD3	2.48	0.44
27:11:122:ASP:CG	27:11:123:ALA:H	2.20	0.44
24:14:2296:U:OP2	38:65:6:ALA:HB2	2.18	0.44
24:1H:1312:U:H6	24:1H:1312:U:H5'	1.82	0.44
24:1H:2848:G:C8	39:B8:97:ALA:HB2	2.52	0.44
1:13:684:A:C6	1:13:685:G:C5	3.06	0.44
24:1H:1831:G:H2'	24:1H:1832:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:649:G:C5	24:1H:650:C:C4	3.06	0.44
32:61:3:VAL:HG12	32:61:38:LEU:HA	2.00	0.44
1:13:12:U:H4'	1:13:526:C:H4'	1.99	0.44
31:51:97:ARG:HB3	31:51:97:ARG:HE	1.50	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
30:49:17:PRO:HA	30:49:20:ILE:HG22	1.99	0.44
24:14:1019:U:OP1	24:14:1035:U:O2'	2.33	0.43
50:15:22:ILE:HG22	50:15:23:GLU:H	1.83	0.43
24:1H:2811:G:OP1	28:21:61:ARG:HB2	2.18	0.43
44:G8:75:ILE:HG23	44:G8:76:CYS:O	2.17	0.43
1:13:635:G:C5	1:13:636:U:C5	3.06	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
10:1I:38:ILE:HA	10:1I:39:PRO:HD3	1.66	0.43
24:14:30:G:H2'	24:14:31:C:H6	1.82	0.43
24:1H:1111:A:O2'	31:51:2:SER:OG	2.36	0.43
54:1G:1302:U:C6	13:4A:17:VAL:HG11	2.53	0.43
1:13:1356:G:H2'	1:13:1357:A:C8	2.53	0.43
24:14:259:G:N2	24:14:621:A:H8	2.15	0.43
24:14:1179:C:H2'	24:14:1180:C:H6	1.83	0.43
3:2E:131:ARG:NH1	3:2E:135:LYS:HZ3	2.16	0.43
24:1H:483:A:H1'	44:G8:59:GLY:O	2.18	0.43
24:1H:483:A:O2'	44:G8:59:GLY:HA2	2.17	0.43
44:G8:53:PRO:O	44:G8:54:LYS:HG2	2.17	0.43
24:1H:2635:C:C5'	28:21:78:LEU:HA	2.45	0.43
24:14:1512:G:C6	24:14:1513:C:C4	3.06	0.43
24:14:1837:C:H2'	24:14:1838:C:H5'	1.98	0.43
5:4E:102:ALA:HB3	5:4E:107:ARG:HB2	1.98	0.43
24:14:1210:A:H5'	24:14:1212:G:O4'	2.18	0.43
24:1H:950:G:H2'	24:1H:951:C:H6	1.81	0.43
24:14:830:G:H4'	24:14:831:G:OP2	2.18	0.43
54:1G:604:G:H2'	54:1G:605:U:O4'	2.18	0.43
54:1G:604:G:C5	54:1G:605:U:C5	3.06	0.43
33:15:61:ARG:HE	33:15:61:ARG:HA	1.83	0.43
28:29:113:PHE:N	28:29:159:HIS:HD2	2.16	0.43
1:13:448:A:P	1:13:485:G:H22	2.40	0.43
1:13:1336:C:H1'	1:13:1337:G:C2	2.53	0.43
54:1G:89:U:HO2'	54:1G:90:C:P	2.38	0.43
1:13:581:G:O2'	1:13:582:U:H5'	2.18	0.43
24:1H:921:G:H4'	24:1H:2269:A:C5	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:11:6:PHE:CE1	27:11:18:VAL:HG23	2.52	0.43
8:72:110:ALA:HB3	8:72:121:ASP:HB3	2.01	0.43
24:1H:1652:A:C2'	24:1H:1653:G:H5'	2.48	0.43
24:14:1418:G:H2'	24:14:1579:A:N6	2.32	0.43
24:14:195:A:H61	24:14:198:C:H3'	1.82	0.43
41:95:85:LYS:HD3	41:95:85:LYS:HA	1.86	0.43
28:21:14:ILE:HB	28:21:21:VAL:HB	2.00	0.43
1:13:874:G:H2'	1:13:875:C:H6	1.82	0.43
3:22:131:ARG:HH12	3:22:164:ARG:HH22	1.66	0.43
11:2A:123:LYS:HB3	11:2A:123:LYS:HE2	1.66	0.43
5:42:50:GLU:HB2	5:42:53:LEU:HD13	2.00	0.43
49:L8:3:ARG:HB2	49:L8:59:VAL:HG13	1.99	0.43
24:14:1462:C:H4'	24:14:2703:C:O4'	2.19	0.43
1:13:102:G:C6	1:13:103:C:C4	3.06	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
7:6E:127:ALA:HA	7:6E:135:VAL:HG21	1.99	0.43
3:2E:79:ARG:NH1	18:9A:87:ARG:HH12	2.15	0.43
34:25:34:THR:O	34:25:37:ASP:HB2	2.18	0.43
24:1H:2308:G:H2'	24:1H:2308:G:N3	2.33	0.43
38:A8:83:LYS:NZ	38:A8:110:LEU:HB2	2.33	0.43
34:25:69:ILE:HD12	34:25:77:ILE:O	2.18	0.43
3:2E:91:LEU:O	3:2E:95:THR:OG1	2.25	0.43
25:1J:104:A:H2'	25:1J:105:G:O4'	2.18	0.43
31:51:152:ARG:HA	31:51:152:ARG:HD3	1.77	0.43
46:I8:14:ARG:HH11	46:I8:14:ARG:HD3	1.67	0.43
29:31:34:TRP:CZ3	29:31:35:GLU:HG2	2.52	0.43
47:J8:73:LEU:HD13	47:J8:90:ILE:O	2.18	0.43
24:14:1022:G:C6	24:14:1140:C:N3	2.86	0.43
2:12:132:LYS:HD3	2:12:132:LYS:O	2.18	0.43
5:42:7:GLU:O	5:42:34:VAL:HA	2.17	0.43
37:98:74:LYS:C	37:98:76:VAL:N	2.71	0.43
45:D5:70:LEU:HA	45:D5:70:LEU:HD23	1.85	0.43
22:3K:52:G:H2'	22:3K:53:A:H8	1.78	0.43
24:1H:322:A:C5	24:1H:340:A:C2	3.06	0.43
24:1H:2137:C:N4	24:1H:2154:G:H1	2.15	0.43
25:16:108:C:H5'	25:16:109:G:O5'	2.18	0.43
6:5E:94:GLN:OE1	18:9I:32:ARG:NH1	2.51	0.43
1:13:221:C:H2'	1:13:222:U:C6	2.53	0.43
24:1H:1515:C:H2'	24:1H:1516:U:C6	2.53	0.43
25:1J:89:G:C5	25:1J:89(A):A:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:45:75:THR:HA	36:45:90:VAL:HA	1.98	0.43
46:E5:49:LYS:NZ	46:E5:82:ARG:HG2	2.33	0.43
7:6E:26:PHE:O	7:6E:30:ILE:HG13	2.18	0.43
27:19:58:HIS:CD2	27:19:59:LYS:N	2.86	0.43
32:69:77:LEU:HD12	32:69:78:THR:H	1.83	0.43
38:A8:35:ILE:HD11	38:A8:101:LEU:CD2	2.48	0.43
21:1F:9:ARG:O	21:1F:13:ILE:HG13	2.18	0.43
28:29:46:ALA:HB2	28:29:82:ARG:HA	2.00	0.43
24:14:863:A:H2	24:14:914:C:H41	1.65	0.43
24:14:117:G:C6	24:14:119:A:C6	3.06	0.43
4:32:119:GLN:HA	4:32:122:ARG:HB2	2.00	0.43
44:C5:82:PRO:HB3	44:C5:99:CYS:HB3	2.00	0.43
15:6A:15:PHE:HD2	15:6A:30:ALA:CB	2.30	0.43
31:51:67:LEU:HD12	31:51:71:LEU:HD13	2.00	0.43
1:13:781:A:H4'	1:13:1522:U:O2'	2.18	0.43
2:1E:30:ARG:HG2	2:1E:30:ARG:H	1.58	0.43
24:1H:2528:U:O2'	24:1H:2529:G:H3'	2.19	0.43
54:1G:1217:C:H2'	54:1G:1218:C:O4'	2.18	0.43
5:42:60:TYR:CZ	5:42:64:ARG:NH2	2.86	0.43
24:14:1658:C:H2'	24:14:1659:U:C6	2.53	0.43
54:1G:833:U:H2'	54:1G:834:C:H6	1.82	0.43
24:14:2853:C:O2'	24:14:2854:G:H5'	2.18	0.43
4:3E:162:LEU:O	4:3E:165:MET:HB2	2.18	0.43
27:11:43:ARG:HA	27:11:48:ARG:O	2.19	0.43
12:3I:78:GLN:N	12:3I:81:SER:OG	2.49	0.43
24:1H:1651:G:N2	24:1H:2007:C:C2	2.86	0.43
24:1H:2563:U:O2'	34:68:28:SER:HB3	2.18	0.43
3:2E:155:GLY:HA3	3:2E:196:LEU:HB3	2.00	0.43
28:21:81:ILE:HG22	28:21:81:ILE:O	2.18	0.43
25:1J:33:G:C6	25:1J:34:U:N3	2.87	0.43
24:1H:1932:A:H2'	24:1H:1933:G:O4'	2.19	0.43
17:8I:45:HIS:O	17:8I:73:VAL:HG23	2.18	0.43
47:F5:57:GLU:O	47:F5:58:ILE:HD13	2.18	0.43
40:C8:74:LEU:HA	40:C8:74:LEU:HD22	1.66	0.43
15:6A:10:LYS:HD2	15:6A:10:LYS:HA	1.76	0.43
44:C5:54:LYS:HD3	44:C5:54:LYS:HA	1.69	0.43
6:52:69:GLU:H	6:52:69:GLU:CD	2.21	0.43
44:C5:13:VAL:HB	44:C5:72:VAL:HB	2.00	0.43
7:62:69:VAL:HG13	7:62:134:ALA:O	2.18	0.43
24:14:2819:G:H1	24:14:2827:C:H42	1.66	0.43
29:31:183:VAL:O	29:31:187:VAL:HG23	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1647:G:OP2	24:14:1647:G:H3'	2.18	0.43
24:1H:71:A:OP1	24:1H:72:U:H2'	2.19	0.43
54:1G:963:G:H1	54:1G:972:C:H42	1.64	0.43
27:11:81:ALA:HB3	27:11:94:LEU:HB2	2.00	0.43
50:I5:14:ILE:O	50:I5:20:ASN:HB3	2.17	0.43
1:13:735:C:H5'	18:9I:71:LYS:HD3	2.00	0.43
25:1J:44:G:H5''	25:1J:45:A:OP1	2.18	0.43
54:1G:1287:A:H2'	54:1G:1288:A:C8	2.53	0.43
5:4E:126:ARG:NH1	5:4E:126:ARG:HG3	2.26	0.43
1:13:1060:C:H2'	1:13:1061:G:H8	1.83	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
24:14:943:U:OP2	35:35:36:LYS:HG3	2.18	0.43
24:14:329:G:OP2	44:C5:71:LYS:HD3	2.19	0.43
24:14:637:A:H2'	35:35:117:GLU:OE2	2.18	0.43
3:2E:76:VAL:HG21	3:2E:103:VAL:HG11	2.01	0.43
22:3K:33:C:C4	22:3K:34:U:C5	3.05	0.43
24:14:1677:A:H2'	24:14:1678:G:C8	2.53	0.43
29:39:132:VAL:HG22	29:39:133:ASN:N	2.33	0.43
24:1H:2230:G:H1'	47:J8:45:ASN:CB	2.48	0.43
54:1G:628:G:H2'	54:1G:629:G:C8	2.53	0.43
24:14:2790:A:H8	24:14:2790:A:OP2	2.00	0.43
13:4I:56:LEU:HD12	13:4I:56:LEU:HA	1.79	0.43
1:13:1078:U:O2'	5:4E:130:ASN:OD1	2.09	0.43
1:13:218:C:H4'	1:13:466:C:H42	1.83	0.43
54:1G:946:A:O2'	54:1G:1333:A:N3	2.46	0.43
2:1E:172:ILE:H	2:1E:172:ILE:HG13	1.44	0.43
36:45:51:ARG:O	36:45:53:ALA:N	2.50	0.43
27:19:175:LEU:HD12	27:19:185:VAL:HG21	1.99	0.43
44:C5:48:ALA:HB3	44:C5:59:GLY:HA2	1.99	0.43
24:14:108:U:C2	24:14:109:G:C8	3.06	0.43
39:75:99:LEU:HD23	39:75:99:LEU:HA	1.76	0.43
31:51:30:LYS:HD2	31:51:81:GLU:H	1.83	0.43
20:BI:89:ARG:HB2	20:BI:104:LEU:HD21	2.01	0.43
24:14:777:A:O2'	24:14:778:G:H5'	2.18	0.43
24:14:1406:U:N3	24:14:1597:A:C2	2.86	0.43
3:2E:124:ILE:HG22	3:2E:191:THR:HG21	2.00	0.43
24:14:1690:A:H5''	24:14:1691:C:OP2	2.18	0.43
1:13:1059:C:O2'	10:1I:53:PRO:HD3	2.17	0.43
24:1H:1300:U:H4'	24:1H:1301:A:H5'	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2244:U:H2'	24:1H:2245:U:O4'	2.18	0.43
30:41:57:ALA:HB2	30:41:90:LEU:HG	2.00	0.43
24:1H:1045:A:OP1	24:1H:1045:A:H4'	2.19	0.43
31:59:97:ARG:HB3	31:59:97:ARG:NH1	2.34	0.43
24:1H:2479:G:H8	24:1H:2479:G:O5'	2.01	0.43
24:14:2244:U:H6	24:14:2244:U:O5'	2.01	0.43
12:3A:47:LYS:HB3	12:3A:48:PRO:HD3	1.99	0.43
3:22:166:GLU:HG3	3:22:167:TRP:H	1.83	0.43
22:2K:19:C:H3'	22:2K:20:C:C2'	2.37	0.43
45:D5:127:LYS:HB2	45:D5:127:LYS:HE3	1.79	0.43
39:75:108:ARG:HA	39:75:111:ARG:HH11	1.84	0.43
24:14:2889:C:H3'	24:14:2891:G:H8	1.82	0.43
24:1H:1533:C:C2	24:1H:1534:G:C8	3.06	0.43
24:1H:1783:A:H5'	24:1H:2608:G:H4'	2.01	0.43
31:51:4:ILE:HG13	31:51:6:ARG:CZ	2.48	0.43
54:1G:1181:G:O2'	54:1G:1182:G:O5'	2.28	0.43
1:13:909:A:N3	1:13:1413:A:O2'	2.47	0.43
45:D5:145:GLU:O	45:D5:174:VAL:HB	2.18	0.43
54:1G:1298:C:H5	7:62:114:ARG:HD2	1.84	0.43
24:1H:1125:G:C6	24:1H:1126:A:N6	2.86	0.43
54:1G:746:A:H2'	54:1G:747:C:C6	2.54	0.43
5:42:126:ARG:HH11	5:42:126:ARG:CG	2.30	0.43
24:14:627:A:O4'	24:14:637:A:N6	2.51	0.43
24:14:2052:G:O4'	28:29:142:GLY:HA3	2.18	0.43
1:13:1308:U:H5''	13:4I:98:VAL:HG22	1.98	0.43
19:AA:29:ARG:HB3	19:AA:31:ILE:HG22	2.00	0.43
1:13:47:C:O2	1:13:49:U:C5	2.72	0.43
32:69:84:GLY:O	32:69:85:GLU:HB3	2.17	0.43
30:41:110:ALA:HA	30:41:140:ILE:O	2.18	0.43
24:14:2525:G:N2	24:14:2539:C:C2	2.87	0.43
1:13:740:U:O2'	1:13:741:G:H5'	2.18	0.43
2:12:218:ALA:O	2:12:221:LEU:N	2.51	0.43
40:85:74:LEU:HD11	40:85:110:VAL:HG13	1.99	0.43
24:14:2184:G:H2'	24:14:2185:C:C6	2.53	0.43
24:1H:870:A:C5'	36:88:5:ARG:HH21	2.31	0.43
4:3E:61:LYS:HD3	4:3E:206:PHE:CE2	2.53	0.43
54:1G:1072:G:H2'	54:1G:1073:U:H6	1.83	0.43
24:1H:2591:C:H6	24:1H:2591:C:O5'	2.01	0.43
54:1G:1442:G:N7	54:1G:1446:A:C6	2.86	0.43
24:14:1728:G:N1	24:14:1730:U:OP2	2.51	0.43
45:D5:99:TYR:CD2	45:D5:123:ASP:HB2	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:7I:9:PHE:HB2	16:7I:16:HIS:O	2.18	0.43
22:2K:14:A:N1	22:2K:22:A:O2'	2.33	0.43
16:7I:4:ILE:HA	16:7I:20:VAL:O	2.18	0.43
24:1H:1354:A:H2'	24:1H:1355:G:O4'	2.19	0.43
24:1H:911:A:H5''	24:1H:912:C:H5''	2.01	0.43
24:14:1516:U:H2'	24:14:1517:G:C8	2.53	0.43
41:D8:47:VAL:HG22	41:D8:48:GLY:N	2.32	0.43
24:14:2091:U:O2'	47:F5:47:GLN:HG3	2.18	0.43
24:1H:458:G:C8	52:P8:37:LYS:HG2	2.53	0.43
1:13:1057:G:H5''	3:2E:154:SER:O	2.18	0.43
24:14:1368:G:OP1	52:L5:28:ARG:NH2	2.51	0.43
44:C5:30:VAL:HG12	44:C5:31:LEU:N	2.32	0.43
24:14:699:A:H2'	24:14:700:G:O4'	2.17	0.43
2:12:106:LYS:O	2:12:110:GLN:HG3	2.19	0.43
4:3E:173:TRP:CD1	4:3E:174:LEU:HG	2.53	0.43
28:29:137:HIS:HB3	28:29:138:PRO:HD2	2.00	0.43
54:1G:565:U:H3'	54:1G:566:G:H2'	2.00	0.43
24:1H:1649:G:C6	24:1H:2009:G:C6	3.07	0.43
29:31:28:ILE:HD12	29:31:116:ASP:HB2	1.99	0.43
24:1H:2771:C:H2'	24:1H:2772:C:C6	2.54	0.43
34:25:119:PRO:HB2	39:75:68:TYR:CE2	2.53	0.43
30:49:138:GLN:HG3	30:49:139:LEU:N	2.33	0.43
1:13:1184:G:H8	1:13:1184:G:O5'	2.01	0.43
13:4A:36:LYS:HE2	13:4A:36:LYS:HB3	1.62	0.43
25:16:9:G:H8	25:16:9:G:H5''	1.83	0.43
22:3L:84:C:O5'	22:3L:84:C:H6	2.01	0.43
54:1G:1227:A:H8	54:1G:1227:A:H3'	1.83	0.43
24:1H:420:C:H2'	24:1H:421:U:C6	2.53	0.43
24:14:1366:A:H2'	24:14:1367:A:O4'	2.18	0.43
14:5I:25:VAL:HG13	14:5I:38:GLY:O	2.18	0.43
22:2L:33:C:H2'	22:2L:34:U:H5'	2.00	0.43
5:42:101:ILE:HG12	5:42:118:ILE:O	2.18	0.43
54:1G:1145:C:H4'	54:1G:1146:A:C8	2.52	0.43
40:85:92:ARG:NH2	41:95:10:LYS:HB3	2.33	0.43
50:M8:38:LYS:HA	50:M8:38:LYS:HD2	1.72	0.43
48:G5:64:LEU:O	48:G5:64:LEU:HD23	2.19	0.43
33:58:94:HIS:HA	33:58:95:PRO:HD2	1.65	0.43
8:72:51:VAL:HG22	8:72:52:ASP:N	2.29	0.43
41:95:53:GLU:C	41:95:55:ALA:H	2.22	0.43
24:1H:1658:C:H2'	24:1H:1659:U:C6	2.53	0.43
1:13:277:C:OP1	17:8I:68:ARG:NH2	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3E:29:PRO:HA	4:3E:34:GLU:HG3	2.00	0.43
24:14:621:A:H3'	24:14:622:G:H8	1.83	0.43
51:N8:40:LYS:HE2	51:N8:47:PRO:CG	2.48	0.43
24:1H:323:G:O2'	24:1H:1205:U:N3	2.42	0.43
31:59:6:ARG:O	31:59:69:ARG:HG2	2.19	0.43
24:14:1508:A:H4'	24:14:1510:A:C6	2.53	0.43
26:71:46:LYS:HE3	26:71:210:ARG:HE	1.84	0.43
20:BI:53:LEU:HB2	20:BI:100:ILE:CG2	2.47	0.43
1:13:322:C:H5	1:13:328:C:C5	2.36	0.43
17:8I:48:GLU:HG3	17:8I:48:GLU:H	1.50	0.43
24:14:2334:G:O6	46:E5:74:ARG:NH2	2.51	0.43
24:1H:529:A:C8	24:1H:530:G:C6	3.07	0.43
2:12:6:THR:OG1	2:12:7:VAL:N	2.50	0.43
21:1F:9:ARG:NH2	21:1F:23:PRO:HD2	2.32	0.43
34:25:113:LYS:O	34:25:117:LEU:HD22	2.18	0.43
24:1H:1012:U:O4	33:58:25:ARG:HA	2.18	0.43
29:31:123:LEU:HD12	29:31:124:LEU:H	1.84	0.43
49:L8:8:LEU:HD22	49:L8:31:LEU:HD22	2.00	0.43
9:82:77:ILE:O	9:82:81:ILE:HG23	2.18	0.43
24:1H:1198:U:H2'	24:1H:1199:U:H6	1.82	0.43
24:14:2291:U:H2'	24:14:2292:C:C6	2.54	0.43
24:14:2065:C:H1'	24:14:2449:U:O2	2.19	0.43
25:16:14:U:O3'	25:16:107:U:O2'	2.31	0.43
27:11:69:ARG:NH2	27:11:128:GLY:O	2.44	0.43
52:L5:47:ARG:HG3	52:L5:47:ARG:NH1	2.33	0.43
24:1H:2238:G:H4'	24:1H:2239:G:OP1	2.18	0.43
3:2E:19:GLU:O	3:2E:56:ASP:HA	2.18	0.43
24:14:2678:C:H2'	24:14:2679:A:O4'	2.18	0.43
24:14:2494:G:C4	24:14:2495:G:C8	3.07	0.43
24:14:1001:A:H2'	24:14:1002:G:O4'	2.19	0.43
1:13:769:G:H4'	1:13:1513:A:H4'	2.01	0.43
24:14:1015:G:C6	24:14:1148:A:C2	3.07	0.43
24:14:219:G:H2'	24:14:220:G:C8	2.54	0.43
24:1H:475:U:C4	24:1H:481:G:O6	2.72	0.43
24:14:2365:G:H2'	24:14:2366:A:C8	2.54	0.43
25:1J:100:G:OP2	57:1J:219:HOH:O	2.21	0.43
29:39:11:VAL:HG23	29:39:12:LEU:H	1.84	0.43
31:51:33:LEU:HD21	31:51:136:ILE:HG22	2.01	0.43
28:29:178:GLU:H	28:29:178:GLU:CD	2.21	0.43
37:55:28:LEU:O	37:55:28:LEU:HD22	2.19	0.43
25:1J:76:G:H2'	25:1J:77:U:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2822:G:C5	57:14:3528:HOH:O	2.71	0.43
51:J5:16:ARG:HH12	51:J5:17:ASP:CG	2.21	0.43
1:13:1002:G:H2'	1:13:1003:G:O4'	2.19	0.43
24:14:887:A:H3'	24:14:888:C:H5'	2.01	0.43
1:13:735:C:C2	1:13:736:C:C5	3.07	0.43
30:49:47:LYS:HE2	30:49:81:LYS:HG2	2.01	0.43
24:1H:1048:A:P	24:1H:1110:G:H22	2.42	0.43
54:1G:9:G:OP1	5:42:122:GLU:HB2	2.18	0.43
12:3A:117:ARG:O	12:3A:121:GLY:N	2.51	0.43
51:N8:42:PRO:O	51:N8:44:THR:OG1	2.36	0.43
54:1G:1250:A:H4'	9:82:68:GLY:N	2.34	0.43
24:1H:2128:C:H2'	24:1H:2129:C:C6	2.54	0.43
24:14:1164:G:H1	24:14:1185:C:N4	2.16	0.43
1:13:68:G:HO2'	1:13:152:A:H2	1.64	0.43
24:14:2772:C:O5'	24:14:2772:C:H6	2.01	0.43
24:14:331:A:N6	24:14:1210:A:OP2	2.43	0.43
27:11:72:LYS:NZ	27:11:101:GLU:OE2	2.32	0.43
12:3A:24:VAL:N	12:3A:25:PRO:HD3	2.33	0.43
14:5A:37:PHE:HB3	14:5A:39:LEU:HG	2.00	0.43
2:12:185:ILE:CG2	2:12:199:TYR:HB2	2.46	0.43
18:9I:59:SER:H	18:9I:62:GLU:HB2	1.84	0.43
24:1H:870:A:O5'	36:88:5:ARG:NH2	2.51	0.43
50:I5:9:LEU:HA	50:I5:26:SER:O	2.19	0.43
24:1H:2054:A:C2	51:N8:8:LYS:HD3	2.53	0.43
24:14:2094:G:C2'	24:14:2095:C:H5'	2.49	0.43
24:1H:1441:G:H2'	24:1H:1442:G:H8	1.81	0.43
27:19:92:ILE:HD12	27:19:104:TYR:CE1	2.54	0.43
24:14:1418:G:OP1	24:14:1588:C:O2'	2.36	0.43
54:1G:246:A:OP1	17:8A:100:LYS:NZ	2.51	0.43
54:1G:173:U:O2	54:1G:197:A:N6	2.52	0.43
31:51:116:GLU:OE1	31:51:117:PRO:HD2	2.18	0.43
11:2I:96:ARG:O	11:2I:99:GLN:HG2	2.18	0.43
24:1H:875:G:C6	24:1H:876:C:C4	3.07	0.43
24:14:499:U:O3'	44:C5:44:ILE:HD11	2.19	0.43
2:1E:63:MET:HA	2:1E:225:ALA:HB1	2.01	0.43
51:N8:45:VAL:HG22	51:N8:51:TYR:CD2	2.54	0.43
1:13:868:C:H2'	1:13:869:G:O4'	2.19	0.43
6:52:26:ILE:O	6:52:29:ALA:HB3	2.19	0.43
36:45:2:LEU:HB3	36:45:69:PHE:CE1	2.53	0.43
24:1H:1100:C:H2'	24:1H:1101:U:H6	1.84	0.43
42:A5:13:SER:O	42:A5:16:LYS:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4E:33:VAL:HG11	5:4E:109:ILE:HA	2.01	0.43
22:2K:5:G:O5'	22:2K:5:G:H8	2.01	0.43
48:G5:28:LYS:HA	48:G5:28:LYS:HD3	1.78	0.43
54:1G:131:C:O2'	54:1G:262:A:N3	2.47	0.43
9:8E:128:ARG:HE	22:2K:36:U:P	2.41	0.43
24:14:55:G:O2'	24:14:127:A:N1	2.41	0.43
1:13:1157:A:N7	1:13:1178:G:N2	2.66	0.43
35:78:85:LEU:HA	35:78:88:LEU:CD2	2.49	0.43
45:D5:176:PRO:HA	45:D5:177:PRO:HD3	1.77	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
24:1H:2345:G:H4'	24:1H:2346:A:O5'	2.19	0.43
54:1G:1298:C:C5	7:62:114:ARG:HD2	2.53	0.43
4:32:120:LEU:HB3	4:32:126:ILE:HD11	1.99	0.43
24:14:784:A:C8	24:14:792:G:C5	3.07	0.43
33:58:12:ARG:HG2	33:58:13:TRP:N	2.33	0.43
24:1H:528:A:OP2	33:58:114:ARG:NH1	2.52	0.43
27:11:71:ASP:N	27:11:71:ASP:OD1	2.52	0.43
54:1G:1238:A:N7	54:1G:1303:C:H1'	2.34	0.43
26:71:6:ARG:NH1	26:71:7:TYR:HB2	2.32	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
54:1G:77:C:H2'	54:1G:78:G:O4'	2.18	0.43
25:16:38:C:O4'	38:A8:95:HIS:CE1	2.71	0.43
37:98:9:LYS:HA	37:98:17:ARG:NE	2.34	0.43
16:7A:55:ARG:HA	16:7A:55:ARG:HE	1.83	0.43
29:39:24:LEU:HD12	29:39:25:PRO:HD2	2.00	0.43
34:25:71:ARG:HH21	34:25:105:GLU:CD	2.22	0.43
24:14:1716:U:O2'	24:14:1717:G:H5'	2.19	0.43
9:8E:95:LYS:H	9:8E:95:LYS:HG2	1.71	0.43
22:3L:77:C:H2'	22:3L:78:C:H6	1.84	0.43
8:72:13:ILE:O	8:72:17:THR:HG23	2.19	0.43
6:52:50:TYR:OH	18:9A:74:ARG:O	2.23	0.43
54:1G:1410:G:N2	54:1G:1490:C:O2	2.42	0.43
24:14:1244:G:OP1	35:35:7:ARG:HD3	2.18	0.43
2:12:44:LEU:H	2:12:44:LEU:HG	1.62	0.43
24:1H:1210:A:H8	24:1H:1210:A:H5'	1.84	0.43
11:2I:115:PRO:C	11:2I:117:ASN:H	2.22	0.43
24:14:1576:U:N3	24:14:1577:C:C5	2.86	0.43
6:5E:87:ARG:HH11	6:5E:87:ARG:CG	2.23	0.43
54:1G:1322:C:HO2'	54:1G:1323:G:P	2.40	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2261:C:H2'	24:1H:2262:U:H6	1.83	0.43
24:1H:729:G:O2'	24:1H:763:G:H4'	2.18	0.43
53:M5:57:ARG:HB2	53:M5:57:ARG:CZ	2.49	0.43
24:1H:654(K):C:H3'	24:1H:654(L):G:H5''	2.01	0.43
24:14:1048:A:H5'	24:14:1049:C:OP2	2.19	0.43
22:3L:11:C:N4	22:3L:25:G:H1	2.16	0.43
24:1H:248:G:H2'	57:1H:3608:HOH:O	2.19	0.43
24:1H:2270:G:H2'	24:1H:2271:G:O4'	2.18	0.43
24:1H:918:A:H1'	25:16:80:U:H1'	1.99	0.43
1:13:1304:G:C5	1:13:1305:G:C6	3.07	0.43
20:BA:95:ALA:O	20:BA:97:ALA:N	2.51	0.43
54:1G:570:G:H2'	54:1G:571:U:C6	2.53	0.43
3:2E:131:ARG:HD3	5:4E:50:GLU:HG2	2.01	0.43
24:1H:988:A:O5'	49:L8:11:SER:HB2	2.18	0.43
19:AA:29:ARG:HD2	19:AA:48:THR:O	2.18	0.43
24:14:1507:A:H2'	24:14:1508:A:O4'	2.19	0.43
24:14:2773:C:H5''	28:29:164:ARG:HG2	2.00	0.43
1:13:517:G:N2	1:13:533:A:OP2	2.47	0.43
24:14:271(A):C:H1'	24:14:272:G:H1'	2.00	0.43
24:14:988:A:O5'	24:14:988:A:H8	2.02	0.43
24:14:988:A:H3'	49:H5:11:SER:OG	2.19	0.43
54:1G:1366:C:H2'	54:1G:1367:C:H6	1.84	0.43
24:14:2239:G:P	57:14:3492:HOH:O	2.77	0.43
1:13:1148:U:H2'	1:13:1149:C:O4'	2.19	0.43
24:14:1285:G:C6	24:14:1329:U:C5	3.07	0.43
44:C5:82:PRO:HG3	44:C5:97:ARG:HB3	2.00	0.43
14:5I:15:LYS:HB3	14:5I:16:PHE:CD2	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
24:14:1100:C:H2'	24:14:1101:U:C6	2.54	0.43
54:1G:938:A:C6	54:1G:939:G:C5	3.06	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
54:1G:160:A:H2'	54:1G:161:A:O4'	2.19	0.43
24:14:2860:A:N7	24:14:2861:G:H1'	2.34	0.43
28:21:116:VAL:HG13	28:21:122:PHE:HB2	2.00	0.43
39:75:99:LEU:HD22	39:75:101:PHE:HE1	1.83	0.43
24:1H:2194:G:H2'	24:1H:2195:C:C6	2.53	0.43
24:1H:991:C:H2'	24:1H:992:C:H6	1.82	0.43
24:1H:705:A:C8	24:1H:727:A:C2	3.07	0.43
1:13:119:A:H2'	57:13:1819:HOH:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AA:51:VAL:HB	19:AA:75:ALA:HB2	2.01	0.43
1:13:964:A:N3	1:13:969:A:O2'	2.44	0.43
24:14:2267:A:H3'	57:14:4113:HOH:O	2.18	0.43
28:29:81:ILE:O	28:29:81:ILE:HG22	2.19	0.43
45:H8:46:LYS:HB2	45:H8:46:LYS:HE3	1.83	0.43
54:1G:896:C:C4	54:1G:897:C:C5	3.07	0.43
24:14:2569:G:C2	24:14:2570:G:C8	3.06	0.43
7:62:16:LEU:HD12	9:82:41:VAL:O	2.19	0.43
12:3A:84:LEU:HD23	12:3A:105:TYR:HE2	1.84	0.43
7:62:83:ALA:HB2	22:3L:35:QUO:O14	2.19	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
24:1H:994:C:O2'	24:1H:996:A:OP1	2.26	0.43
24:1H:882:G:H1'	24:1H:883:G:C8	2.54	0.43
24:14:2805:G:H2'	24:14:2807:G:C8	2.54	0.43
39:B8:90:GLN:OE1	39:B8:121:ILE:HD11	2.19	0.43
1:13:1157:A:H1'	1:13:1158:C:C4	2.53	0.43
2:1E:210:SER:O	2:1E:214:ILE:HG22	2.18	0.43
22:2L:12:C:H41	22:2L:24:G:H1	1.66	0.43
15:6I:26:GLU:H	15:6I:26:GLU:HG2	1.43	0.43
1:13:109:A:C6	1:13:326:G:C5	3.07	0.43
35:78:19:VAL:HG23	35:78:27:HIS:CB	2.45	0.43
22:3K:62:G:H3'	22:3K:63:5MU:H71	2.01	0.43
54:1G:707:C:OP1	11:2A:85:ARG:NH1	2.50	0.43
54:1G:669:U:H2'	54:1G:670:G:C8	2.54	0.43
24:1H:2862:G:C5	24:1H:2863:C:C5	3.07	0.43
54:1G:1203:C:H2'	54:1G:1204:A:O4'	2.18	0.43
25:1J:90:C:H5'	36:45:18:LYS:HA	2.00	0.43
32:69:44:LEU:HD23	32:69:44:LEU:HA	1.73	0.43
25:1J:95:U:H2'	25:1J:96:G:H8	1.84	0.43
30:41:116:ASP:HB2	30:41:117:PHE:H	1.68	0.43
24:1H:603:A:H4'	24:1H:604:G:O5'	2.19	0.43
30:49:59:GLU:OE1	30:49:153:ARG:NE	2.52	0.43
24:1H:2720:U:H2'	24:1H:2720:U:O2	2.19	0.43
1:13:725:G:H2'	1:13:726:C:H6	1.83	0.43
4:3E:110:PHE:CE2	4:3E:148:VAL:HG23	2.53	0.43
1:13:581:G:N2	1:13:582:U:C4	2.87	0.43
31:51:23:ARG:NH1	31:51:25:LYS:HG3	2.34	0.43
36:88:109:VAL:HG13	36:88:113:GLN:OE1	2.18	0.43
54:1G:631:G:H3'	54:1G:632:A:H8	1.83	0.43
11:2I:34:ASP:OD1	11:2I:37:GLY:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:19:C:OP1	5:4E:125:SER:OG	2.16	0.43
24:14:2840:C:H4'	37:55:53:HIS:CE1	2.54	0.43
13:4A:39:ILE:HD12	13:4A:56:LEU:HG	2.00	0.43
45:H8:52:SER:O	45:H8:54:HIS:N	2.52	0.43
1:13:380:G:C2	1:13:384:G:C6	3.07	0.43
24:1H:1475:G:C2	24:1H:1519:G:N3	2.87	0.43
10:1I:53:PRO:HA	14:5I:42:ILE:HD12	2.00	0.43
54:1G:1221:G:H5'	19:AA:36:ARG:HD3	1.99	0.43
24:1H:1453:A:O2'	24:1H:1454:U:H2'	2.18	0.43
24:1H:1454:U:OP1	37:98:77:ARG:HD3	2.19	0.43
7:62:18:TYR:HB3	7:62:59:LEU:HD12	2.00	0.43
40:C8:31:SER:O	40:C8:32:PHE:C	2.57	0.43
27:11:159:ALA:HB1	27:11:198:ASN:O	2.18	0.43
54:1G:668:G:O4'	15:6A:49:ASP:HB2	2.18	0.43
24:14:2528:U:H2'	24:14:2530:A:O5'	2.19	0.43
24:1H:569:U:C4	24:1H:570:G:C6	3.07	0.43
31:51:51:ARG:HG2	31:51:52:VAL:H	1.83	0.43
17:8A:29:HIS:CG	17:8A:30:PRO:HD2	2.54	0.43
24:1H:539:G:N3	24:1H:539:G:H2'	2.34	0.43
35:35:46:LYS:HE2	35:35:46:LYS:HB3	1.43	0.43
13:4I:16:ASP:N	13:4I:16:ASP:OD1	2.51	0.43
24:14:34:C:H2'	24:14:35:G:H5'	2.01	0.43
39:B8:5:ALA:O	39:B8:6:LEU:C	2.57	0.43
24:1H:942:G:O2'	24:1H:1189:A:N3	2.42	0.43
1:13:1401:G:C2	1:13:1402:C:H1'	2.54	0.43
40:85:66:ASN:HB2	40:85:76:TYR:HB2	2.00	0.43
29:39:53:THR:HG22	29:39:56:GLU:CD	2.39	0.43
54:1G:545:C:H5'	4:32:72:GLU:HB2	2.00	0.43
1:13:1021:G:H2'	1:13:1022:G:O4'	2.18	0.43
1:13:222:U:C2	1:13:223:U:C5	3.07	0.43
32:69:93:THR:O	32:69:97:ILE:HG13	2.18	0.43
24:14:729:G:C5	27:19:208:LYS:HB2	2.54	0.43
45:D5:133:ILE:HA	45:D5:134:PRO:HD2	1.87	0.43
24:1H:299:A:N3	24:1H:319:C:O2'	2.51	0.43
39:B8:33:LYS:HG2	39:B8:42:ILE:HD11	2.00	0.43
54:1G:267:C:OP1	17:8A:67:LYS:HB2	2.19	0.43
15:6I:63:ARG:HH21	15:6I:87:ILE:HG21	1.82	0.43
4:32:15:GLU:OE1	4:32:59:ARG:NH2	2.28	0.43
24:14:1665:A:N6	57:14:3649:HOH:O	2.44	0.43
24:14:588:U:H1'	29:39:90:PHE:CD1	2.54	0.43
27:11:73:VAL:O	27:11:75:ILE:HD12	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:51:154:PRO:HD3	31:51:162:ILE:O	2.19	0.43
54:1G:612:C:H42	54:1G:628:G:H1	1.64	0.43
5:4E:8:GLU:HA	5:4E:34:VAL:HG22	2.00	0.43
54:1G:862:C:O4'	54:1G:874:G:H4'	2.19	0.43
30:41:139:LEU:HD11	30:41:146:TYR:HD1	1.83	0.43
24:14:447:A:C5	24:14:473:G:C5	3.07	0.43
13:4I:11:ARG:HH12	13:4I:12:ASN:HD22	1.67	0.43
24:14:270(G):C:H2'	24:14:270(H):C:H6	1.84	0.43
54:1G:940:C:H2'	54:1G:941:G:H8	1.84	0.43
24:1H:253:C:H2'	24:1H:254:G:O4'	2.19	0.43
33:58:38:HIS:CE1	33:58:39:ARG:HG3	2.54	0.43
54:1G:557:G:C6	54:1G:558:G:C6	3.07	0.43
32:69:33:ARG:O	32:69:35:LEU:HD23	2.19	0.43
25:1J:117:G:C6	25:1J:118:G:C8	3.07	0.43
1:13:236:G:H5''	17:8I:42:TYR:OH	2.19	0.43
1:13:1052:U:H5''	1:13:1053:G:OP2	2.19	0.43
24:1H:1856:G:N2	24:1H:1887:C:C2	2.87	0.43
24:14:240:G:H1'	24:14:257:A:N6	2.34	0.43
24:14:537:C:O2	33:15:45:ASN:ND2	2.52	0.43
24:14:2388:A:C2'	24:14:2389:G:H5'	2.49	0.43
54:1G:828:A:H5''	54:1G:859:A:N1	2.34	0.42
54:1G:503:C:O2'	54:1G:504:C:H5'	2.18	0.42
24:1H:1263:U:H2'	24:1H:1264:G:C8	2.54	0.42
24:14:887:A:H3'	24:14:888:C:C5'	2.47	0.42
24:1H:1535:U:H5	24:1H:1537:C:H1'	1.84	0.42
1:13:1157:A:N6	1:13:1178:G:N2	2.58	0.42
28:29:31:CYS:HB3	28:29:49:LEU:HB3	2.00	0.42
6:5E:67:MET:CE	6:5E:75:LEU:HD12	2.49	0.42
24:1H:1127:A:O2'	24:1H:2518:A:OP1	2.31	0.42
10:1A:30:SER:HB3	10:1A:81:THR:HG22	2.02	0.42
54:1G:1229:A:OP2	13:4A:114:ARG:HD3	2.19	0.42
25:1J:56:G:H4'	25:1J:57:A:C8	2.54	0.42
22:2L:17:OMG:N2	22:2L:67:A:C8	2.86	0.42
24:1H:53:A:C8	24:1H:54:G:C8	3.07	0.42
54:1G:363:A:OP2	12:3A:34:ARG:NH1	2.52	0.42
24:1H:601:C:O2'	24:1H:605:C:OP1	2.32	0.42
54:1G:1057:G:H2'	54:1G:1058:G:C8	2.54	0.42
1:13:246:A:C4	1:13:282:A:N6	2.87	0.42
44:C5:87:LYS:HE2	44:C5:88:LYS:HG3	2.01	0.42
32:69:144:VAL:HG22	32:69:145:VAL:H	1.84	0.42
24:1H:2839:G:C6	24:1H:2840:C:N3	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
9:82:77:ILE:HG13	9:82:78:LYS:N	2.34	0.42
24:14:528:A:N1	24:14:2042:A:H2'	2.34	0.42
24:14:1925:C:C2'	24:14:1926:U:H5'	2.49	0.42
14:5I:6:LEU:HA	14:5I:6:LEU:HD23	1.87	0.42
24:1H:2102:U:H3	24:1H:2187:G:H1	1.67	0.42
36:45:48:GLU:O	36:45:52:VAL:HG13	2.19	0.42
1:13:587:G:N2	1:13:755:G:C5	2.87	0.42
37:55:45:ARG:HA	37:55:95:THR:HG21	2.01	0.42
31:51:80:SER:C	31:51:81:GLU:HG3	2.39	0.42
19:AA:35:SER:HB2	19:AA:37:ARG:HD3	2.01	0.42
54:1G:743:U:H2'	54:1G:744:C:C6	2.54	0.42
27:19:158:ALA:HB3	27:19:161:THR:HG21	2.01	0.42
9:8E:106:ALA:O	9:8E:108:VAL:HG22	2.19	0.42
20:BI:40:ALA:HB2	20:BI:55:ILE:HG22	2.01	0.42
22:3L:73:U:H2'	22:3L:74:C:O4'	2.18	0.42
24:1H:1120:G:H2'	24:1H:1121:C:C6	2.54	0.42
29:31:155:LEU:HD11	29:31:176:LEU:HD22	2.00	0.42
44:G8:33:LYS:HB2	44:G8:33:LYS:HE2	1.84	0.42
20:BA:87:LYS:HE3	20:BA:87:LYS:HB2	1.64	0.42
49:L8:28:LEU:HA	49:L8:33:GLN:NE2	2.33	0.42
3:22:188:LEU:HD13	3:22:189:ALA:N	2.34	0.42
24:14:1189:A:P	57:14:3755:HOH:O	2.77	0.42
22:2K:35:QUO:O5'	22:2K:35:QUO:H8	2.19	0.42
54:1G:1129:C:OP2	9:82:62:TYR:OH	2.25	0.42
1:13:1399:C:C2	1:13:1401:G:C5	3.08	0.42
24:14:2611:U:O4	51:J5:3:LYS:HG3	2.19	0.42
28:29:79:ARG:N	28:29:79:ARG:HD2	2.33	0.42
22:2K:9:U:O2'	22:2K:10:C:C5	2.72	0.42
43:F8:44:GLU:HG2	43:F8:49:VAL:O	2.19	0.42
24:14:768:G:H2'	24:14:769:G:H8	1.84	0.42
54:1G:1109:C:H6	54:1G:1109:C:O5'	2.01	0.42
24:1H:442:G:C4'	29:31:46:ARG:HG3	2.46	0.42
18:9A:52:PRO:O	18:9A:56:THR:HG23	2.19	0.42
2:1E:41:ILE:HA	2:1E:41:ILE:HD12	1.66	0.42
2:12:5:ILE:HG12	2:12:6:THR:O	2.20	0.42
24:14:126:A:OP2	52:L5:19:ARG:HG3	2.18	0.42
24:14:2112:G:H2'	24:14:2113:U:H5	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:939:G:C4	1:13:940:C:C5	3.08	0.42
31:59:152:ARG:HG3	31:59:153:LYS:HB2	2.01	0.42
19:AA:65:ASN:HB3	50:I5:55:ARG:CZ	2.50	0.42
24:14:1204:A:N1	24:14:1241:A:N1	2.67	0.42
5:4E:78:HIS:HB3	8:7E:107:LEU:HD12	2.01	0.42
4:32:101:LEU:HD23	4:32:121:VAL:CG1	2.48	0.42
32:61:67:ARG:HH21	32:61:68:LEU:HB2	1.84	0.42
11:2A:93:GLN:HA	11:2A:96:ARG:HE	1.84	0.42
24:14:2476:A:H2'	24:14:2476:A:N3	2.34	0.42
24:1H:1591:G:H2'	24:1H:1592:C:C6	2.53	0.42
4:3E:149:ALA:O	4:3E:153:ARG:HG2	2.18	0.42
54:1G:198:G:H2'	54:1G:199:G:C8	2.54	0.42
35:78:101:VAL:HA	35:78:105:LEU:O	2.19	0.42
1:13:864:A:H2'	1:13:865:A:C8	2.54	0.42
22:3L:39:A:C6	22:3L:40:PSU:C2	3.07	0.42
19:AA:15:LEU:HG	19:AA:33:THR:HG23	2.01	0.42
24:1H:2612:C:OP2	51:N8:2:ALA:HA	2.18	0.42
24:14:873:G:N2	24:14:905:U:C2	2.87	0.42
1:13:191(C):G:H2'	1:13:191(D):U:O4'	2.19	0.42
24:14:2206:C:H2'	24:14:2207:C:C6	2.53	0.42
26:71:42:GLU:OE2	26:71:217:THR:HA	2.19	0.42
54:1G:232:G:H2'	54:1G:233:C:O4'	2.19	0.42
2:12:120:ALA:O	2:12:124:SER:HB3	2.19	0.42
54:1G:373:A:C2	54:1G:374:A:C8	3.06	0.42
22:2K:81:C:C4	22:2K:82:A:N7	2.87	0.42
24:14:1391:U:O2	24:14:1393:A:H8	2.01	0.42
24:1H:2766:G:H5''	24:1H:2767:C:OP2	2.19	0.42
7:6E:149:ARG:HD3	11:2I:59:TYR:CE1	2.54	0.42
15:6A:43:LEU:HD11	15:6A:53:HIS:HA	2.01	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:82:G:N1	24:1H:103:A:OP2	2.43	0.42
24:14:2526:G:H5'	24:14:2742:C:O2'	2.18	0.42
57:1H:3774:HOH:O	35:78:44:GLY:O	2.22	0.42
24:14:1365:A:OP1	47:F5:41:ARG:NH2	2.53	0.42
26:71:13:LYS:NZ	26:71:31:GLU:O	2.48	0.42
13:4I:35:GLU:H	13:4I:35:GLU:HG2	1.74	0.42
11:2I:122:LYS:HE3	11:2I:122:LYS:HB2	1.55	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
27:11:23:GLU:H	27:11:23:GLU:HG2	1.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:143:C:H2'	24:1H:144:C:H6	1.84	0.42
41:95:62:LEU:HD21	41:95:95:LEU:HB2	2.01	0.42
24:1H:2467:C:C2'	24:1H:2468:G:H5'	2.49	0.42
24:14:2448:A:P	57:14:3519:HOH:O	2.66	0.42
54:1G:1128:C:C4	54:1G:1139:G:C5	3.07	0.42
27:11:25:THR:CG2	27:11:26:LYS:N	2.82	0.42
24:1H:428:A:P	57:1H:3709:HOH:O	2.77	0.42
5:42:6:PHE:HB2	5:42:63:ARG:CZ	2.50	0.42
24:1H:654(I):C:H2'	24:1H:654(J):A:C5	2.54	0.42
54:1G:1436:U:OP1	20:BA:23:ARG:NH2	2.51	0.42
24:1H:1657:C:O3'	28:21:133:LYS:HG2	2.19	0.42
24:1H:1:G:H1	24:1H:2902:C:N4	2.12	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
24:14:1210:A:H5'	24:14:1212:G:H5'	2.01	0.42
1:13:165:C:H2'	1:13:166:G:C8	2.54	0.42
12:3A:24:VAL:HG12	12:3A:98:TYR:HE1	1.82	0.42
24:1H:655:A:H8	24:1H:656:G:O4'	2.03	0.42
24:1H:1062:G:N2	24:1H:1076:C:O2	2.52	0.42
45:D5:52:SER:O	45:D5:53:ILE:HG12	2.19	0.42
6:5E:8:ILE:HG23	6:5E:85:VAL:HG13	2.00	0.42
25:16:48:A:H4'	38:A8:95:HIS:ND1	2.35	0.42
9:82:78:LYS:HZ3	9:82:101:PHE:HD1	1.67	0.42
24:14:2513:G:N2	28:29:143:ASN:HD21	2.17	0.42
1:13:779:C:H2'	1:13:780:A:O4'	2.19	0.42
24:1H:935:C:H2'	24:1H:936:C:C6	2.54	0.42
54:1G:981:U:H5'	14:5A:21:TYR:CZ	2.54	0.42
24:1H:1165:U:H2'	24:1H:1166:C:C6	2.55	0.42
32:61:62:LYS:HG2	32:61:66:GLU:OE1	2.19	0.42
28:21:93:VAL:HG21	28:21:177:PRO:HA	2.02	0.42
15:6I:31:LEU:HD12	15:6I:31:LEU:HA	1.68	0.42
33:58:4:TYR:CE2	40:C8:100:VAL:HG11	2.54	0.42
24:1H:1863:G:H2'	24:1H:1864:U:O4'	2.19	0.42
40:C8:76:TYR:C	40:C8:76:TYR:CD1	2.92	0.42
13:4I:30:ALA:O	13:4I:34:LEU:HD23	2.20	0.42
48:K8:50:ILE:O	48:K8:54:LYS:HB2	2.19	0.42
36:88:54:MET:SD	36:88:118:LEU:HD23	2.59	0.42
30:49:178:PHE:HA	30:49:179:PRO:HD2	1.88	0.42
6:52:99:ALA:HB2	18:9A:31:LEU:HD22	2.01	0.42
24:1H:2643:G:H2'	24:1H:2644:G:O4'	2.18	0.42
24:14:2723:C:H6	24:14:2723:C:O5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:J8:92:LYS:HA	47:J8:95:LEU:HD12	2.01	0.42
24:14:68:G:H2'	24:14:69:C:C6	2.54	0.42
24:14:2130:U:C2	24:14:2158:A:H2	2.37	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
24:14:1034:G:H2'	24:14:1035:U:O4'	2.20	0.42
24:14:761:A:N6	57:14:4299:HOH:O	2.30	0.42
54:1G:1224:G:O2'	13:4A:102:ARG:NH1	2.52	0.42
13:4I:15:VAL:HG23	13:4I:43:THR:O	2.19	0.42
1:13:1060:C:H5''	10:1I:51:ARG:HG2	2.01	0.42
53:Q8:62:LEU:CB	53:Q8:63:PRO:HD2	2.50	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
38:65:61:ASN:OD1	38:65:64:GLU:HB2	2.20	0.42
36:45:11:LYS:HD3	36:45:87:LYS:HG2	2.02	0.42
24:14:1047:G:N2	24:14:1111:A:H62	2.15	0.42
48:G5:47:ASN:O	48:G5:49:LYS:N	2.52	0.42
31:59:6:ARG:HB2	31:59:66:GLY:HA2	2.01	0.42
31:59:26:VAL:CG1	31:59:33:LEU:H	2.32	0.42
24:14:2732:G:H3'	24:14:2733:A:O4'	2.19	0.42
32:69:144:VAL:HG13	32:69:145:VAL:H	1.83	0.42
19:AA:66:MET:N	19:AA:67:VAL:HB	2.34	0.42
39:75:50:ILE:HD13	39:75:64:ARG:HB3	2.01	0.42
24:1H:2840:C:O3'	37:98:53:HIS:NE2	2.52	0.42
4:3E:154:ASN:CG	4:3E:155:LEU:H	2.18	0.42
24:14:2849:U:H4'	24:14:2868:A:C2	2.55	0.42
1:13:1255:G:N2	1:13:1259:C:O2	2.37	0.42
4:32:15:GLU:OE2	4:32:63:LYS:HE2	2.19	0.42
24:1H:818:G:H5'	24:1H:839:U:OP1	2.19	0.42
32:61:67:ARG:HE	32:61:67:ARG:HB3	1.51	0.42
24:1H:2721:A:H1'	24:1H:2873:A:O2'	2.19	0.42
24:1H:2870:C:H5''	37:98:65:LEU:HD21	2.01	0.42
24:1H:34:C:C6	24:1H:34:C:OP2	2.72	0.42
30:49:15:VAL:HG13	30:49:175:LEU:CB	2.49	0.42
24:1H:2896:C:H2'	24:1H:2897:U:C6	2.54	0.42
24:14:1384:A:N3	24:14:1405:U:H1'	2.33	0.42
2:1E:30:ARG:HB2	2:1E:46:LYS:NZ	2.34	0.42
24:14:1279:G:H5''	37:55:33:ARG:HH21	1.85	0.42
12:3I:110:VAL:CG2	12:3I:120:TYR:HB3	2.50	0.42
31:51:90:LYS:O	31:51:94:TYR:HD2	2.03	0.42
24:14:883:G:N2	24:14:893:C:N3	2.65	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1405:G:O2'	1:13:1519:A:H5'	2.20	0.42
37:55:42:LYS:HB3	37:55:45:ARG:NH2	2.34	0.42
24:1H:654(F):C:H42	24:1H:654(O):G:H1	1.68	0.42
24:14:1832:C:N4	24:14:1833:U:C4	2.87	0.42
13:4I:11:ARG:NH2	13:4I:46:LYS:HG3	2.34	0.42
7:6E:146:GLU:O	7:6E:149:ARG:HB2	2.19	0.42
24:14:2850:A:C2	24:14:2851:A:C4	3.08	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
1:13:486:U:H2'	1:13:487:A:H8	1.84	0.42
24:14:387:U:P	57:14:4141:HOH:O	2.76	0.42
4:32:14:ARG:HB2	4:32:40:PRO:HD2	2.00	0.42
2:1E:212:GLN:O	2:1E:216:SER:HB2	2.19	0.42
41:95:24:LYS:HA	41:95:92:THR:OG1	2.19	0.42
27:19:162:SER:HB3	27:19:195:ALA:CB	2.49	0.42
48:K8:17:SER:HB2	48:K8:20:GLU:HG3	2.01	0.42
54:1G:1255:G:P	10:1A:45:ARG:HH22	2.42	0.42
24:14:14:A:H5''	24:14:15:G:OP2	2.19	0.42
46:I8:46:LYS:HB3	46:I8:46:LYS:HE2	1.90	0.42
24:14:624:C:OP1	53:M5:64:TYR:CZ	2.73	0.42
7:62:65:ALA:HB1	7:62:127:ALA:HB3	2.01	0.42
1:13:746:A:H4'	1:13:837:G:O2'	2.19	0.42
24:1H:993:G:C6	24:1H:994:C:N4	2.87	0.42
24:1H:1533:C:C5	24:1H:1534:G:H3'	2.54	0.42
24:1H:2212:A:H8	24:1H:2212:A:H2'	1.75	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
36:45:83:MET:N	36:45:83:MET:SD	2.91	0.42
1:13:600:C:H2'	1:13:601:C:H6	1.85	0.42
54:1G:1285:A:H4'	54:1G:1286:A:O5'	2.19	0.42
2:1E:149:LEU:HD23	2:1E:149:LEU:HA	1.64	0.42
24:1H:274:G:H2'	24:1H:275:G:O4'	2.19	0.42
54:1G:1095:U:H2'	54:1G:1096:C:C6	2.55	0.42
54:1G:1014:A:P	54:1G:1014:A:H8	2.43	0.42
54:1G:1057:G:H1	54:1G:1203:C:H42	1.67	0.42
24:1H:2329:G:H2'	24:1H:2330:G:C8	2.54	0.42
24:14:1252:G:O2'	24:14:1253:A:C8	2.73	0.42
40:C8:110:VAL:O	40:C8:113:ALA:HB3	2.19	0.42
24:1H:1230:C:H2'	24:1H:1231:G:C8	2.54	0.42
28:29:82:ARG:HA	28:29:82:ARG:HD3	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:54:C:N4	1:13:353:A:OP2	2.49	0.42
24:1H:1825:A:H1'	27:11:255:LYS:NZ	2.35	0.42
24:14:214:G:O2'	24:14:216:A:O2'	2.32	0.42
1:13:1219:U:H2'	1:13:1220:G:C8	2.52	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
3:2E:134:ILE:HD11	3:2E:153:VAL:HG21	2.00	0.42
24:1H:1652:A:N6	37:98:11:ASN:OD1	2.45	0.42
24:1H:1590:U:H2'	24:1H:1591:G:H8	1.83	0.42
24:14:1797:C:HO2'	27:19:259:THR:HG1	1.63	0.42
24:14:1707:G:C5	24:14:1756:G:C6	3.07	0.42
24:14:1500:G:H5''	24:14:1501:C:OP2	2.20	0.42
8:7E:14:ARG:O	8:7E:18:ARG:HD3	2.19	0.42
2:12:231:GLU:HA	2:12:232:PRO:HD3	1.78	0.42
24:14:2494:G:C5	24:14:2495:G:N7	2.88	0.42
26:71:42:GLU:HB2	26:71:215:THR:HG23	2.01	0.42
43:F8:53:LYS:HG2	43:F8:82:GLN:HB2	2.00	0.42
1:13:1386:G:O2'	1:13:1387:G:H5'	2.19	0.42
1:13:1095:U:H5'	1:13:1109:C:O2	2.20	0.42
24:14:1664:A:OP2	57:14:3654:HOH:O	2.22	0.42
24:14:429:A:H2'	24:14:430:G:C8	2.54	0.42
36:88:4:PRO:HD3	36:88:70:PRO:O	2.20	0.42
31:51:121:ILE:HD11	31:51:141:VAL:HA	2.02	0.42
27:11:245:PRO:HA	27:11:246:PRO:HD3	1.91	0.42
36:88:28:ALA:HB3	36:88:29:PHE:CD1	2.54	0.42
24:1H:1686:C:H2'	24:1H:1687:G:O4'	2.19	0.42
24:1H:685:A:H1'	24:1H:688:U:O4	2.20	0.42
42:E8:60:ASN:OD1	42:E8:60:ASN:N	2.53	0.42
24:14:2036:C:H6	24:14:2036:C:H5'	1.85	0.42
13:4A:101:GLN:HB3	13:4A:101:GLN:HE21	1.65	0.42
49:L8:17:LYS:H	49:L8:17:LYS:HG2	1.69	0.42
21:1F:17:THR:O	21:1F:22:ARG:HD3	2.20	0.42
24:14:456:C:H2'	43:B5:69:TYR:HE2	1.84	0.42
4:32:30:LYS:HG3	4:32:35:ARG:HE	1.84	0.42
40:85:92:ARG:O	40:85:94:ASN:N	2.51	0.42
1:13:1402:C:H2'	1:13:1403:C:O4'	2.20	0.42
39:75:4:GLY:O	39:75:5:ALA:CB	2.68	0.42
24:14:2286:A:H4'	24:14:2287:A:O4'	2.19	0.42
24:14:976:C:H42	24:14:987:G:H1	1.67	0.42
24:1H:2360:A:H2'	24:1H:2361:A:O4'	2.20	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)
19:AI:41:VAL:HB	19:AI:42:PRO:HA	2.02	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
1:13:232:G:H1'	1:13:262:A:N1	2.34	0.42
24:1H:2400:G:H3'	24:1H:2401:U:C6	2.55	0.42
44:C5:17:SER:HB3	44:C5:71:LYS:HB3	2.01	0.42
46:E5:50:ASN:O	46:E5:62:LEU:HB2	2.19	0.42
54:1G:1037:C:H2'	54:1G:1038:C:C6	2.54	0.42
4:32:3:ARG:HG3	4:32:5:ILE:CD1	2.47	0.42
44:C5:88:LYS:HB2	44:C5:89:PHE:H	1.67	0.42
24:1H:878:A:C2	24:1H:879:G:C4	3.07	0.42
19:AI:68:GLY:H	50:M8:55:ARG:NH2	2.15	0.42
32:69:69:LYS:HA	32:69:136:VAL:HG21	2.02	0.42
1:13:1378:C:C5	1:13:1379:G:C8	3.08	0.42
20:BI:49:ALA:O	20:BI:53:LEU:HG	2.20	0.42
24:1H:94:G:H2'	24:1H:95:G:O4'	2.19	0.42
24:14:336:C:H4'	44:C5:6:HIS:CD2	2.54	0.42
15:6A:24:SER:O	15:6A:28:GLN:HG3	2.18	0.42
13:4A:14:ARG:H	13:4A:44:ARG:NH1	2.15	0.42
24:14:2115:G:H4'	24:14:2166:G:O2'	2.20	0.42
1:13:985:C:N3	1:13:1221:G:C2	2.87	0.42
48:G5:29:LYS:HG2	48:G5:57:ILE:HD13	2.02	0.42
24:14:1827:C:OP2	27:19:222:ARG:HD2	2.20	0.42
4:32:59:ARG:HA	4:32:62:GLN:HB2	2.01	0.42
17:8I:82:MET:HE3	17:8I:82:MET:HB3	2.00	0.42
3:2E:59:ARG:HA	3:2E:63:ASN:O	2.20	0.42
47:J8:40:ARG:HB2	47:J8:40:ARG:HE	1.71	0.42
24:14:11:G:H8	24:14:11:G:O5'	2.03	0.42
24:1H:1553:A:N6	24:1H:1555:G:H1'	2.35	0.42
24:1H:2106:G:C2	24:1H:2184:G:C2	3.08	0.42
3:2E:125:GLU:HA	3:2E:191:THR:HG22	2.02	0.42
36:88:118:LEU:HD23	36:88:118:LEU:HA	1.74	0.42
41:D8:64:HIS:CG	41:D8:92:THR:HG22	2.54	0.42
24:1H:1260:G:C6	24:1H:1261:C:C4	3.08	0.42
39:75:36:GLU:OE2	39:75:41:ARG:HD3	2.20	0.42
2:1E:61:LEU:HD23	2:1E:68:ILE:HD11	2.01	0.42
24:1H:35:G:H2'	24:1H:36:G:O4'	2.20	0.42
39:75:98:LYS:HB3	39:75:100:TYR:CE2	2.54	0.42
19:AA:49:ILE:HD13	19:AA:62:ILE:HD13	2.01	0.42
10:1I:35:SER:HB2	10:1I:73:ASP:HB2	2.02	0.42
40:85:100:VAL:O	40:85:101:ARG:HG2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:7I:58:TYR:O	16:7I:62:VAL:HG22	2.20	0.42
34:68:118:ALA:HA	34:68:119:PRO:HD2	1.80	0.42
24:14:1003:G:N2	24:14:1153:C:C2	2.87	0.42
41:95:71:LEU:HD12	41:95:71:LEU:HA	1.83	0.42
24:1H:1606:G:H8	24:1H:1606:G:O5'	2.02	0.42
1:13:298:A:H8	1:13:298:A:OP1	2.03	0.42
39:75:125:ARG:HA	39:75:125:ARG:HD3	1.77	0.42
53:M5:33:ASN:OD1	53:M5:33:ASN:N	2.52	0.42
24:14:29:U:O4	57:14:4112:HOH:O	2.21	0.42
35:78:113:LYS:HG2	35:78:115:LEU:HD23	2.01	0.42
24:14:813:U:C2	24:14:1195:G:N2	2.88	0.42
41:95:21:ARG:HH22	41:95:65:GLY:CA	2.33	0.42
24:1H:2397:G:C2	24:1H:2420:C:O2	2.72	0.42
24:1H:1970:A:H4'	24:1H:1970:A:OP1	2.19	0.42
3:22:4:LYS:HE3	3:22:4:LYS:HB2	1.91	0.42
6:5E:23:LYS:HD3	6:5E:61:LEU:HD21	2.00	0.42
54:1G:536:C:H2'	54:1G:537:G:C8	2.55	0.42
24:14:138:G:O2'	24:14:139:G:H5'	2.20	0.42
31:51:4:ILE:HG13	31:51:6:ARG:HB2	2.00	0.42
26:71:45:ALA:HA	26:71:211:SER:O	2.19	0.42
1:13:1286:A:N6	1:13:1354:C:H5''	2.34	0.42
30:49:47:LYS:HG2	30:49:48:GLU:HG3	2.01	0.42
24:1H:1113:U:OP1	31:51:2:SER:N	2.51	0.42
24:1H:760:G:OP1	57:1H:3782:HOH:O	2.21	0.42
38:65:64:GLU:O	38:65:68:GLN:HG3	2.19	0.42
9:8E:18:PHE:HD2	9:8E:62:TYR:CD2	2.31	0.42
46:E5:62:LEU:O	46:E5:63:VAL:HG13	2.20	0.42
29:39:63:LYS:HA	29:39:76:GLY:O	2.20	0.42
3:2E:73:PRO:O	3:2E:76:VAL:HG22	2.19	0.42
28:29:144:ARG:HB3	28:29:145:LYS:H	1.54	0.42
50:M8:12:ALA:HB3	50:M8:24:THR:HB	2.02	0.42
27:19:12:SER:HB2	27:19:207:GLY:O	2.20	0.42
1:13:1264:C:O2	1:13:1272:G:C2	2.72	0.42
54:1G:452:A:C4	54:1G:453:A:C8	3.07	0.42
54:1G:574:A:H5''	54:1G:575:G:OP2	2.20	0.42
27:19:73:VAL:HG13	27:19:120:GLY:CA	2.50	0.42
24:1H:2450:A:C2	24:1H:2451:A:C4	3.07	0.42
32:69:123:LEU:HA	32:69:123:LEU:HD23	1.84	0.42
7:62:99:LEU:HD23	7:62:102:ARG:NH1	2.35	0.42
24:1H:1038:C:H2'	24:1H:1039:G:O4'	2.20	0.42
24:14:185:U:H2'	24:14:186:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:42:57:LYS:HG2	5:42:61:TYR:CE1	2.54	0.42
24:14:2516:G:C6	24:14:2517:C:N4	2.88	0.42
54:1G:160:A:H1'	54:1G:344:A:N7	2.34	0.42
15:6I:78:TYR:CZ	15:6I:82:ILE:HD11	2.54	0.42
41:D8:67:GLY:O	41:D8:88:ARG:HB3	2.20	0.42
7:6E:65:ALA:HB1	7:6E:127:ALA:HB3	2.02	0.42
25:1J:76:G:H21	45:D5:75:ASN:HD22	1.66	0.42
37:55:61:HIS:CE1	37:55:65:LEU:HD11	2.55	0.42
54:1G:900:A:H2'	54:1G:901:A:C8	2.55	0.42
3:2E:29:TYR:OH	14:5I:54:PRO:HD2	2.20	0.42
29:31:111:ALA:HB2	29:31:206:ILE:HD12	2.01	0.42
30:41:95:ARG:O	30:41:99:MET:N	2.53	0.42
4:3E:68:TYR:CE2	4:3E:97:LEU:HB3	2.55	0.42
24:1H:2240:C:O2'	24:1H:2241:A:H5'	2.20	0.42
5:4E:121:LYS:HD2	5:4E:121:LYS:HA	1.75	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
24:14:1260:G:C6	24:14:1261:C:C4	3.07	0.42
36:45:29:PHE:HB3	36:45:65:PHE:CD2	2.54	0.42
10:1I:92:THR:HG22	10:1I:94:VAL:HG23	2.01	0.42
24:14:2825:C:H2'	24:14:2826:A:H5'	2.01	0.42
24:14:2712:U:H2'	24:14:2714:G:H5''	2.01	0.42
54:1G:1306:A:N6	54:1G:1331:G:H1'	2.35	0.42
22:2K:17:OMG:HM21	22:2K:18:G:C8	2.54	0.42
24:1H:1356:G:C5	24:1H:1357:U:C5	3.08	0.42
24:14:826:U:H2'	24:14:828:U:O4'	2.20	0.42
22:3K:42:U:H2'	22:3K:43:G:C8	2.55	0.42
36:88:74:TYR:O	36:88:90:VAL:O	2.37	0.42
50:M8:40:HIS:HB3	50:M8:41:PRO:HD3	2.02	0.42
2:1E:163:PHE:HA	2:1E:185:ILE:O	2.20	0.42
28:21:119:ARG:NH1	28:21:156:MET:O	2.53	0.42
22:2K:59:A:N6	22:2K:60:A:N6	2.68	0.42
24:1H:918:A:H8	24:1H:918:A:O5'	2.02	0.42
29:31:6:VAL:HG12	29:31:7:TYR:N	2.35	0.42
3:22:27:LYS:HG2	3:22:28:GLN:HG3	2.02	0.42
54:1G:1014:A:H4'	19:AA:14:HIS:HD2	1.85	0.42
54:1G:1123:A:O2'	10:1A:38:ILE:HG12	2.20	0.42
24:1H:1854:A:H2'	24:1H:1855:G:O4'	2.20	0.42
50:M8:56:VAL:O	50:M8:60:GLN:NE2	2.53	0.42
1:13:173:U:H5''	1:13:197:A:O4'	2.19	0.42
25:1J:12:C:OP2	25:1J:12:C:C6	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:486:C:H4'	42:A5:60:ASN:HD22	1.84	0.42
24:14:1370:C:HO2'	24:14:1811:G:HO2'	1.64	0.42
32:61:57:ARG:O	32:61:61:ARG:HG2	2.20	0.42
24:14:1336:A:H2'	24:14:1337:G:H8	1.85	0.42
1:13:536:C:OP2	57:13:1791:HOH:O	2.21	0.42
29:31:136:THR:O	29:31:140:LEU:HB2	2.20	0.42
24:1H:2564:A:OP1	24:1H:2648:C:H4'	2.20	0.42
24:1H:1857:G:O6	57:1H:4346:HOH:O	2.21	0.42
46:E5:20:ARG:HH11	46:E5:20:ARG:HD2	1.67	0.42
54:1G:1446:A:C5	39:75:118:ARG:CZ	3.03	0.42
24:1H:1652:A:H2'	24:1H:1653:G:H5'	2.02	0.42
30:49:43:LEU:O	30:49:88:ILE:HG13	2.19	0.42
24:1H:1166:C:O2	24:1H:1184:G:N2	2.53	0.42
2:1E:180:LEU:HA	2:1E:180:LEU:HD23	1.88	0.42
2:12:58:ILE:H	2:12:58:ILE:HG12	1.35	0.42
24:14:2231:C:H2'	24:14:2232:U:O4'	2.20	0.42
1:13:458:C:H2'	1:13:464:G:H8	1.84	0.42
5:42:28:PHE:O	5:42:47:LYS:HA	2.20	0.42
6:5E:24:GLU:HG2	6:5E:28:ARG:NH2	2.35	0.42
24:14:986:C:H3'	57:14:4154:HOH:O	2.18	0.42
34:25:13:ASN:HD21	34:25:97:ARG:H	1.68	0.42
24:14:844:C:C5	24:14:845:G:C6	3.08	0.42
1:13:952:U:H4'	1:13:964:A:N1	2.35	0.42
24:14:2111:C:H1'	24:14:2118:U:H4'	2.02	0.42
8:72:69:ARG:HD3	8:72:75:ARG:O	2.18	0.42
30:41:67:LYS:HE2	50:M8:5:ILE:HG23	2.01	0.42
24:1H:652:C:H2'	24:1H:653:A:H5'	2.01	0.42
25:16:2:C:H2'	25:16:3:C:C6	2.55	0.42
24:14:590:A:H2'	24:14:591:C:C6	2.55	0.42
54:1G:1208:C:H2'	54:1G:1209:C:C6	2.55	0.42
24:1H:2875:C:H2'	24:1H:2876:G:O4'	2.19	0.42
6:52:70:ASP:OD1	6:52:71:ARG:N	2.52	0.42
32:61:118:LYS:HA	32:61:119:PRO:HD3	1.87	0.42
24:14:2543:G:H2'	24:14:2544:G:O4'	2.19	0.42
27:11:37:LEU:HD13	27:11:62:TYR:HB2	2.01	0.42
40:C8:27:LEU:HA	40:C8:27:LEU:HD22	1.83	0.42
29:31:82:ILE:H	29:31:82:ILE:HG13	1.49	0.42
20:BI:87:LYS:HA	20:BI:87:LYS:HD2	1.87	0.42
35:78:100:LEU:HA	35:78:100:LEU:HD12	1.82	0.42
54:1G:1059:C:OP2	3:22:199:LYS:NZ	2.44	0.42
28:21:144:ARG:HB3	28:21:145:LYS:H	1.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:572:A:H5''	24:14:573:G:OP2	2.19	0.42
24:1H:784:A:C8	24:1H:792:G:C5	3.08	0.42
40:C8:50:ARG:HG2	40:C8:53:ARG:NH2	2.35	0.42
1:13:1347:G:H5''	9:8E:107:ARG:HG2	2.02	0.42
24:14:976:C:H2'	24:14:976:C:O2	2.18	0.42
50:I5:16:CYS:H	50:I5:20:ASN:H	1.68	0.42
28:21:61:ARG:HB3	28:21:61:ARG:NH1	2.30	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
26:79:10:LEU:O	26:79:220:PRO:HG3	2.19	0.42
35:35:39:LYS:HG3	35:35:45:LEU:CD2	2.48	0.42
1:13:1357:A:N6	1:13:1358:U:O4	2.52	0.42
24:14:1197:G:H1'	24:14:1250:G:N2	2.35	0.42
11:2I:124:LYS:HE3	11:2I:125:PHE:CE1	2.55	0.42
31:51:125:VAL:HG13	31:51:131:VAL:HB	2.02	0.42
54:1G:1300:G:O2'	54:1G:1301:U:P	2.76	0.42
54:1G:660:G:H1	54:1G:745:C:N4	2.17	0.42
45:D5:100:VAL:HG13	45:D5:101:PRO:HD2	2.00	0.42
35:78:121:LYS:HB3	35:78:122:PRO:HD2	2.01	0.42
24:14:2195:C:O2'	24:14:2196:C:H5'	2.19	0.42
54:1G:631:G:P	54:1G:632:A:N7	2.92	0.42
37:98:14:SER:HA	37:98:17:ARG:NH1	2.34	0.42
24:14:932:G:P	49:H5:29:ARG:NH2	2.93	0.42
24:1H:2283:C:C4	24:1H:2389:G:C4	3.08	0.42
24:14:1299:G:N2	24:14:1640:C:C6	2.87	0.42
28:29:30:PRO:HD3	28:29:180:ASN:CG	2.41	0.42
51:J5:56:LYS:HZ3	51:J5:58:LEU:HB2	1.84	0.42
38:65:63:THR:O	38:65:66:ALA:HB3	2.20	0.42
24:14:1311:G:H2'	52:L5:47:ARG:HH21	1.85	0.42
24:14:184:C:H2'	24:14:185:U:C6	2.55	0.42
54:1G:1137:C:H5''	54:1G:1138:G:OP1	2.20	0.42
39:B8:80:SER:HA	39:B8:81:PRO:HD3	1.94	0.42
24:1H:1077:A:H2	24:1H:1088:A:H62	1.67	0.42
5:42:9:LYS:HB2	5:42:112:LEU:HD11	2.02	0.42
28:21:3:GLY:HA3	28:21:81:ILE:HG21	2.01	0.42
24:14:1641:A:N6	24:14:1642:G:C2	2.87	0.42
24:1H:17:G:H2'	24:1H:18:C:C6	2.55	0.42
24:14:1645:G:H5''	24:14:1646:C:H5'	2.02	0.42
24:1H:2000:G:N7	57:1H:4360:HOH:O	2.37	0.42
2:12:77:ALA:O	2:12:81:VAL:HG23	2.20	0.42
54:1G:825:G:H2'	54:1G:826:C:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BI:48:LYS:O	20:BI:50:GLU:N	2.53	0.42
1:13:438:G:O2'	1:13:494:U:O4	2.22	0.42
24:14:392:C:H5''	24:14:409:C:H5''	2.01	0.42
8:7E:41:ARG:NH1	8:7E:123:GLU:OE2	2.53	0.42
9:82:111:ARG:HG3	14:5A:61:TRP:NE1	2.34	0.42
54:1G:579:G:C4	54:1G:580:U:C5	3.08	0.42
47:F5:23:LYS:O	47:F5:31:GLY:HA2	2.19	0.42
1:13:708:C:H2'	1:13:709:G:H8	1.85	0.42
31:51:126:PRO:HB2	31:51:130:ARG:HH12	1.84	0.42
6:5E:39:LYS:HD2	6:5E:39:LYS:N	2.35	0.42
24:14:221:A:C4	24:14:266:G:N7	2.88	0.42
24:14:2485:G:H5''	36:45:46:GLN:HE21	1.84	0.42
24:1H:728:G:HO2'	24:1H:730:C:H6	1.64	0.42
24:1H:1372:U:H2'	24:1H:1373:A:O4'	2.19	0.42
39:75:3:ARG:HA	39:75:4:GLY:C	2.40	0.42
24:14:858:U:O2	24:14:2268:A:H2'	2.20	0.42
1:13:429:U:H1'	1:13:430:A:H5''	2.01	0.42
50:I5:23:GLU:C	50:I5:24:THR:HG1	2.23	0.42
45:D5:30:ASN:HA	45:D5:89:PHE:HE1	1.85	0.42
29:39:33:LEU:O	29:39:37:VAL:HG23	2.19	0.42
54:1G:1287:A:N3	54:1G:1353:G:O2'	2.41	0.42
25:1J:56:G:H4'	25:1J:57:A:O5'	2.20	0.42
24:1H:821:A:C2'	24:1H:946:G:H5''	2.50	0.42
1:13:1303:C:C4	1:13:1304:G:C5	3.07	0.42
1:13:991:U:O4	1:13:1212:U:O2'	2.30	0.42
1:13:1117:G:H5''	9:8E:104:ARG:NH1	2.35	0.42
16:7I:23:ASP:CG	16:7I:25:ARG:HH11	2.22	0.42
54:1G:918:A:H2'	54:1G:919:A:O4'	2.20	0.42
22:2L:15:G:H2'	22:2L:68:A:C2	2.54	0.42
38:65:14:VAL:HG21	38:65:90:GLY:O	2.19	0.42
24:1H:2140:C:H2'	24:1H:2141:G:H8	1.85	0.42
46:E5:68:GLU:HG3	46:E5:82:ARG:NH1	2.35	0.42
28:21:85:ASN:HA	28:21:86:PRO:HD3	1.88	0.42
32:69:41:GLU:HG3	32:69:41:GLU:H	1.72	0.42
38:65:7:TYR:CZ	38:65:91:PRO:HG2	2.55	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
24:1H:602:G:O2'	24:1H:655:A:N6	2.53	0.42
27:19:16:MET:HE1	27:19:208:LYS:HD3	2.02	0.42
54:1G:325:A:N6	54:1G:326:G:C2	2.87	0.42
24:14:298:G:C5	57:14:3839:HOH:O	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:638:G:H2'	24:1H:639:U:O4'	2.20	0.42
8:7E:6:ILE:HD11	8:7E:31:PHE:CD2	2.53	0.42
24:1H:588:U:C2	29:31:90:PHE:CE1	3.08	0.42
17:8A:63:ARG:HG2	17:8A:64:PRO:CD	2.49	0.42
26:71:208:PHE:HD2	26:71:209:LEU:HD23	1.85	0.42
24:14:1857:G:C6	24:14:1858:G:N1	2.88	0.42
24:14:588:U:C2	29:39:90:PHE:CE1	3.08	0.42
24:14:1955:U:O2'	24:14:1956:U:H5'	2.20	0.42
24:1H:7:G:C2	24:1H:8:A:C4	3.08	0.42
24:14:194:G:H2'	24:14:195:A:O4'	2.20	0.42
24:1H:747:U:C4	24:1H:2613:U:C5	3.08	0.42
26:71:190:ARG:HB3	26:71:194:ARG:NH1	2.35	0.42
54:1G:1523:G:OP1	11:2A:123:LYS:HD3	2.20	0.42
33:58:38:HIS:ND1	33:58:39:ARG:HG3	2.35	0.42
37:55:65:LEU:O	37:55:68:ARG:HB2	2.19	0.42
24:1H:262:A:H2'	24:1H:263:C:O4'	2.20	0.42
12:3I:85:ILE:HG23	12:3I:85:ILE:HD12	1.72	0.42
24:14:1473:G:H2'	24:14:1474:C:O4'	2.19	0.42
29:39:64:ILE:HD12	29:39:65:TRP:CE2	2.54	0.42
1:13:302:G:C6	1:13:303:A:C5	3.08	0.42
1:13:1031:G:H2'	1:13:1032:A:C8	2.55	0.42
28:29:147:PRO:HB2	28:29:149:ARG:HG2	2.01	0.42
30:41:73:ALA:HB3	30:41:82:LEU:HD21	2.01	0.42
32:69:5:LEU:HD12	32:69:17:GLN:O	2.19	0.42
30:49:145:THR:C	30:49:147:ASP:H	2.24	0.42
32:61:101:LEU:HA	32:61:101:LEU:HD23	1.79	0.42
3:2E:16:ARG:HH12	3:2E:183:ASP:HA	1.85	0.42
39:B8:50:ILE:CD1	39:B8:102:ILE:HD11	2.48	0.41
24:1H:2032:G:OP1	57:1H:4560:HOH:O	2.21	0.41
35:78:39:LYS:CG	35:78:45:LEU:HD21	2.50	0.41
40:85:95:LEU:HD13	41:95:4:ILE:HG23	2.01	0.41
24:1H:1356:G:C6	24:1H:1357:U:C4	3.08	0.41
24:1H:2306:C:H3'	24:1H:2307:G:C5'	2.49	0.41
24:1H:1277:G:H2'	24:1H:1278:A:O4'	2.20	0.41
24:1H:536:A:OP1	40:C8:53:ARG:NH1	2.53	0.41
24:1H:945:A:OP2	24:1H:945:A:H4'	2.20	0.41
1:13:1350:A:C5	1:13:1351:U:C4	3.08	0.41
24:1H:218:A:C2	24:1H:235:U:H4'	2.54	0.41
24:14:2789:C:O2'	24:14:2893:G:N2	2.52	0.41
54:1G:1320:C:C2	19:AA:72:GLY:HA3	2.55	0.41
6:5E:26:ILE:O	6:5E:30:LEU:HD12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2029:G:N7	24:14:2031:A:H5'	2.34	0.41
24:1H:1141:U:H6	33:58:63:THR:OG1	2.01	0.41
1:13:58:C:O2'	1:13:388:G:N7	2.48	0.41
1:13:1413:A:H2'	1:13:1414:U:O4'	2.20	0.41
17:8I:68:ARG:O	17:8I:68:ARG:HG3	2.20	0.41
4:3E:39:PRO:HA	4:3E:40:PRO:HD3	1.90	0.41
24:1H:988:A:C5	49:L8:13:ILE:HD12	2.54	0.41
54:1G:1068:G:N3	54:1G:1191:A:C2	2.88	0.41
24:14:289:A:N3	24:14:289:A:H2'	2.35	0.41
1:13:360:A:H2'	1:13:361:G:C8	2.55	0.41
24:1H:269:U:N3	24:1H:424:G:C6	2.88	0.41
20:BI:57:ARG:HH11	20:BI:103:GLY:CA	2.33	0.41
24:14:2695:C:O2'	24:14:2696:U:H5'	2.20	0.41
24:1H:2853:C:O2'	24:1H:2854:G:H5'	2.20	0.41
44:C5:6:HIS:CE1	44:C5:7:VAL:HG13	2.55	0.41
37:98:78:LYS:O	37:98:78:LYS:HG2	2.20	0.41
24:14:2115:G:N2	24:14:2172:U:O4	2.53	0.41
24:1H:1219:G:OP2	40:C8:19:LYS:HE3	2.20	0.41
29:39:132:VAL:C	29:39:134:GLY:H	2.23	0.41
44:C5:76:CYS:SG	44:C5:97:ARG:HG3	2.60	0.41
18:9I:25:THR:HB	18:9I:42:ARG:HH12	1.84	0.41
1:13:1079:G:H2'	1:13:1080:A:C8	2.55	0.41
24:14:2745:C:O2	31:59:139:GLN:NE2	2.31	0.41
24:14:569:U:C4	24:14:570:G:C6	3.08	0.41
1:13:1333:A:H3'	1:13:1334:G:H8	1.84	0.41
24:14:469:G:O6	52:L5:37:LYS:HE2	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
24:14:8:A:H2	24:14:2895:U:H3	1.67	0.41
24:14:851:U:O2'	49:H5:42:ALA:O	2.34	0.41
1:13:1442:G:C6	1:13:1446:A:N6	2.88	0.41
24:14:2715:C:H2'	24:14:2716:U:H6	1.84	0.41
1:13:827:U:C5	1:13:872:A:N1	2.88	0.41
10:1I:81:THR:OG1	10:1I:82:ILE:N	2.53	0.41
36:88:29:PHE:HB3	36:88:65:PHE:CE1	2.55	0.41
35:78:82:GLY:HA2	35:78:113:LYS:O	2.20	0.41
11:2A:81:ASP:OD1	11:2A:107:SER:OG	2.32	0.41
4:3E:188:LEU:HA	4:3E:189:PRO:HD2	1.81	0.41
1:13:1497:G:C2'	1:13:1498:U:H5'	2.49	0.41
54:1G:838:G:N2	54:1G:848:C:N3	2.68	0.41
32:61:25:TYR:HE1	32:61:29:TYR:CD2	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1111:A:H2'	54:1G:1112:C:C6	2.55	0.41
18:9I:21:LYS:HB3	18:9I:57:GLY:HA3	2.01	0.41
24:1H:940:G:H2'	24:1H:941:A:O4'	2.20	0.41
24:1H:1304:C:O2'	24:1H:1305:C:H5'	2.20	0.41
36:45:101:ARG:HG3	36:45:102:VAL:N	2.34	0.41
49:H5:55:ARG:CZ	49:H5:55:ARG:HB3	2.50	0.41
4:3E:62:GLN:HA	4:3E:62:GLN:OE1	2.19	0.41
22:3K:35:QUO:H101	22:3K:35:QUO:H162	1.64	0.41
1:13:1350:A:H2	7:6E:34:GLY:HA3	1.85	0.41
24:14:1135:C:N4	24:14:1138:G:OP2	2.50	0.41
54:1G:977:A:O2'	54:1G:979:C:OP2	2.36	0.41
53:M5:54:GLU:CG	53:M5:57:ARG:HH22	2.28	0.41
54:1G:1103:C:C4	54:1G:1104:G:N7	2.88	0.41
54:1G:1118:C:H1'	54:1G:1179:A:C4	2.55	0.41
34:25:63:VAL:HB	34:25:102:VAL:HG12	2.01	0.41
24:14:252:G:OP2	35:35:50:ARG:NH1	2.48	0.41
5:4E:118:ILE:HG12	5:4E:119:LEU:N	2.34	0.41
46:I8:18:ALA:HB3	46:I8:20:ARG:NH1	2.35	0.41
24:14:2030:A:H4'	24:14:2031:A:C8	2.55	0.41
24:14:2317:C:N4	24:14:2318:G:N7	2.69	0.41
24:1H:822:U:C2'	24:1H:823:G:H5'	2.50	0.41
29:39:1:MET:HB2	29:39:2:LYS:H	1.65	0.41
24:14:2002:G:C5	57:14:4013:HOH:O	2.73	0.41
24:14:768:G:O2'	24:14:1379:A:N6	2.53	0.41
45:D5:146:ILE:HD13	45:D5:176:PRO:HD3	2.01	0.41
30:41:130:ASN:HB3	30:41:159:VAL:O	2.21	0.41
38:65:27:SER:HA	38:65:88:ASP:HB3	2.02	0.41
54:1G:596:C:H2'	54:1G:597:G:H8	1.84	0.41
3:2E:47:LEU:HA	3:2E:47:LEU:HD12	1.86	0.41
24:1H:106:C:H2'	24:1H:107:C:H6	1.85	0.41
57:13:1760:HOH:O	14:5I:21:TYR:HB3	2.20	0.41
50:M8:55:ARG:HB3	50:M8:56:VAL:H	1.62	0.41
54:1G:115:G:H8	54:1G:115:G:O5'	2.03	0.41
26:71:214:VAL:HG23	26:71:224:ILE:HG12	2.02	0.41
24:14:1678:G:H22	24:14:1989:G:N2	2.18	0.41
46:I8:51:VAL:HG23	46:I8:81:VAL:HG12	2.00	0.41
46:I8:66:VAL:O	46:I8:81:VAL:HG23	2.20	0.41
4:32:173:TRP:NE1	4:32:174:LEU:HG	2.35	0.41
24:1H:588:U:H1'	29:31:90:PHE:CD1	2.54	0.41
24:14:1287:A:H5''	24:14:1288:U:OP2	2.20	0.41
1:13:728:A:C5	15:6I:54:ARG:HD2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:78:121:LYS:HB2	35:78:123:LEU:HG	2.01	0.41
7:6E:23:VAL:O	7:6E:27:ILE:N	2.48	0.41
44:C5:43:ASN:OD1	44:C5:43:ASN:N	2.53	0.41
20:BI:35:THR:O	20:BI:39:LYS:HE3	2.20	0.41
40:85:83:LEU:HD21	40:85:88:ILE:HB	2.02	0.41
24:14:875:G:N2	24:14:903:C:C2	2.87	0.41
54:1G:711:G:P	6:52:54:LYS:NZ	2.93	0.41
27:19:126:GLN:HB2	27:19:129:ASN:ND2	2.36	0.41
28:21:14:ILE:HG13	28:21:173:VAL:HG11	2.03	0.41
24:1H:280:C:C2	24:1H:361:G:N2	2.88	0.41
24:14:1950:G:C2	24:14:1951:U:C5	3.08	0.41
24:14:2252:G:H2'	24:14:2253:G:O4'	2.20	0.41
1:13:482:A:H2'	1:13:483:C:O4'	2.20	0.41
24:14:559:G:H2'	24:14:560:C:O4'	2.20	0.41
34:25:17:ARG:H	34:25:46:ALA:HA	1.85	0.41
24:14:2554:U:H2'	24:14:2555:U:C6	2.55	0.41
8:7E:61:VAL:HG12	8:7E:63:LEU:HD12	2.02	0.41
29:39:200:GLU:O	29:39:203:GLN:HB2	2.20	0.41
17:8I:13:ASP:OD1	17:8I:14:LYS:NZ	2.41	0.41
30:41:6:ALA:HB3	50:M8:23:GLU:HG3	2.02	0.41
30:41:7:LEU:N	30:41:104:GLU:OE2	2.53	0.41
24:1H:1836:C:O2'	24:1H:1837:C:H5'	2.20	0.41
24:14:1769:G:C2'	24:14:1770:G:H5'	2.51	0.41
28:29:4:ILE:HG21	28:29:4:ILE:HD13	1.78	0.41
24:1H:1416:G:H1	24:1H:1582:C:H42	1.67	0.41
30:49:96:ARG:HB3	30:49:96:ARG:HE	1.68	0.41
45:H8:11:GLU:O	45:H8:36:LYS:NZ	2.40	0.41
24:14:2723:C:P	37:55:3:HIS:HD1	2.43	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
24:1H:74:A:C5'	24:1H:74:A:H8	2.34	0.41
54:1G:1225:A:H5''	54:1G:1226:C:OP2	2.21	0.41
24:14:825:C:H2'	24:14:826:U:O4'	2.19	0.41
24:14:2135:A:H3'	24:14:2136:C:C5	2.55	0.41
35:35:48:PRO:O	35:35:51:PHE:N	2.53	0.41
24:1H:248:G:O2'	24:1H:2432:A:OP1	2.32	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
36:88:38:GLU:HA	36:88:99:PRO:HG3	2.02	0.41
29:39:20:LEU:HD23	29:39:21:ALA:H	1.86	0.41
24:1H:1021:A:H8	24:1H:1022:G:H5''	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BI:12:ALA:O	20:BI:15:ARG:HB2	2.21	0.41
25:16:65:C:H41	25:16:108:C:H2'	1.83	0.41
30:41:37:VAL:HG13	30:41:158:ALA:O	2.20	0.41
22:2L:63:5MU:H2'	22:2L:64:PSU:H5''	2.02	0.41
8:7E:83:ILE:HG13	8:7E:137:VAL:HG22	2.01	0.41
2:1E:71:VAL:O	2:1E:164:VAL:HA	2.20	0.41
30:49:129:GLY:O	30:49:161:THR:HB	2.19	0.41
3:2E:70:VAL:HG12	3:2E:72:LYS:N	2.36	0.41
32:69:74:ASN:O	32:69:75:LEU:HB2	2.19	0.41
31:59:55:PRO:HD2	31:59:61:HIS:HB3	2.02	0.41
26:71:20:TYR:H	26:71:224:ILE:HA	1.85	0.41
24:1H:1035:U:H2'	24:1H:1036:G:C8	2.55	0.41
24:14:816:C:H2'	24:14:817:C:C6	2.55	0.41
24:14:1478:G:HO2'	24:14:1558:A:H2	1.66	0.41
11:2A:51:LYS:HG3	11:2A:51:LYS:O	2.20	0.41
27:11:238:GLY:O	27:11:240:ALA:N	2.54	0.41
1:13:313:A:H2'	1:13:314:C:H6	1.83	0.41
24:1H:1011:G:C2	24:1H:1151:G:C2	3.08	0.41
44:C5:81:LYS:HD2	44:C5:99:CYS:SG	2.61	0.41
24:1H:2768:C:C4	24:1H:2769:C:C5	3.09	0.41
54:1G:1442:G:H2'	39:75:118:ARG:NH2	2.35	0.41
48:K8:18:PRO:O	48:K8:21:LEU:HB2	2.20	0.41
24:14:2065:C:H2'	24:14:2066:C:C6	2.54	0.41
1:13:1106:G:H2'	1:13:1107:C:H6	1.85	0.41
24:14:1486:A:H2'	24:14:1487:G:C8	2.55	0.41
25:1J:2:C:H2'	25:1J:3:C:C6	2.55	0.41
54:1G:1498:U:O5'	54:1G:1498:U:H6	2.03	0.41
44:G8:35:TYR:CD2	44:G8:69:ALA:HB3	2.55	0.41
53:M5:29:LYS:HB2	53:M5:44:LYS:CB	2.50	0.41
10:1I:84:GLN:HA	10:1I:87:THR:HG1	1.85	0.41
34:25:19:ILE:HB	34:25:41:ALA:HB1	2.03	0.41
54:1G:1333:A:H8	54:1G:1333:A:O5'	2.03	0.41
54:1G:947:G:O3'	13:4A:109:THR:OG1	2.36	0.41
1:13:1082:G:H2'	1:13:1083:U:O4'	2.20	0.41
3:2E:19:GLU:HG3	3:2E:54:ARG:NH1	2.35	0.41
24:1H:1312:U:OP2	43:F8:63:LYS:HE2	2.19	0.41
30:49:138:GLN:HG3	30:49:139:LEU:H	1.84	0.41
28:21:97:LYS:N	28:21:100:GLU:OE1	2.45	0.41
24:1H:1945:G:H2'	24:1H:1946:U:C6	2.55	0.41
4:3E:163:GLU:O	4:3E:166:LYS:HE3	2.20	0.41
15:6A:8:LYS:O	15:6A:12:ILE:HG13	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:723:U:O2'	54:1G:724:G:OP1	2.34	0.41
42:E8:79:GLY:HA3	42:E8:100:THR:HG22	2.03	0.41
1:13:8:A:N3	5:4E:103:GLY:HA2	2.35	0.41
2:12:188:ALA:O	2:12:203:GLY:N	2.51	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
36:45:16:ARG:O	36:45:17:LEU:HD23	2.20	0.41
1:13:884:U:H4'	1:13:885:G:H5''	2.02	0.41
24:1H:2716:U:O2'	24:1H:2717:G:H5'	2.20	0.41
24:1H:91:A:C4	24:1H:92:G:C8	3.09	0.41
12:3A:7:ILE:O	12:3A:11:VAL:HG23	2.20	0.41
7:62:62:PHE:HA	7:62:124:LEU:CD2	2.50	0.41
29:39:34:TRP:CZ2	35:35:8:PRO:HB3	2.55	0.41
42:A5:4:LYS:NZ	42:A5:6:ILE:HD11	2.35	0.41
54:1G:448:A:O2'	54:1G:449:C:H5'	2.20	0.41
28:29:1:MET:HA	28:29:83:ASP:O	2.20	0.41
24:1H:574:C:N3	28:21:145:LYS:NZ	2.56	0.41
51:J5:16:ARG:HG2	51:J5:16:ARG:NH1	2.25	0.41
22:3L:22:A:N3	22:3L:22:A:H2'	2.34	0.41
54:1G:1464:G:OP1	39:75:108:ARG:NH1	2.53	0.41
24:1H:1663:C:HO2'	24:1H:1664:A:H8	1.68	0.41
24:14:1332:G:N2	24:14:1609:A:HO2'	2.16	0.41
24:1H:2260:C:O2'	24:1H:2261:C:H5'	2.20	0.41
24:1H:751:A:C6	24:1H:789:A:C5	3.08	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
24:14:363(C):G:H2'	24:14:363(D):G:H8	1.86	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
3:22:84:ILE:HD13	3:22:85:ARG:NH1	2.35	0.41
9:82:14:VAL:O	9:82:65:VAL:HG23	2.20	0.41
24:14:1041:C:H2'	24:14:1042:G:C8	2.56	0.41
1:13:1286:A:H5''	21:1F:26:LYS:HB3	2.02	0.41
26:79:10:LEU:HD23	26:79:219:GLY:HA2	2.02	0.41
24:1H:1141:U:C5	33:58:64:GLY:HA3	2.55	0.41
24:14:270(V):G:H2'	24:14:270(W):G:C8	2.55	0.41
1:13:1118:C:P	9:8E:104:ARG:HH11	2.42	0.41
31:59:101:ARG:HG3	31:59:102:ALA:N	2.36	0.41
22:2L:57:C:H4'	22:2L:58:G:O5'	2.19	0.41
3:22:32:LEU:HD13	3:22:59:ARG:HH12	1.84	0.41
54:1G:1057:G:H2'	54:1G:1058:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1184:G:C6	24:14:1185:C:C4	3.09	0.41
24:1H:1171:G:C5	24:1H:1174:A:C6	3.07	0.41
45:D5:44:PHE:CE1	45:D5:48:PHE:HB2	2.56	0.41
18:9I:74:ARG:HD3	18:9I:81:PHE:HA	2.02	0.41
20:BI:43:LEU:HB2	20:BI:52:ALA:HB2	2.02	0.41
1:13:368:U:C6	32:69:90:GLY:HA3	2.55	0.41
1:13:1070:U:H2'	1:13:1071:C:C6	2.53	0.41
52:L5:34:ARG:HH12	52:L5:39:ARG:HD2	1.85	0.41
42:E8:64:MET:O	42:E8:65:LEU:HB2	2.20	0.41
24:1H:1446:C:H2'	24:1H:1447:G:C8	2.52	0.41
54:1G:791:G:C5	54:1G:792:A:N7	2.89	0.41
31:59:137:ASP:OD2	31:59:139:GLN:HB3	2.20	0.41
3:2E:6:HIS:CD2	3:2E:7:PRO:HD2	2.55	0.41
24:14:2065:C:H2'	24:14:2066:C:H6	1.85	0.41
27:19:41:GLY:C	27:19:43:ARG:H	2.23	0.41
24:1H:1279:G:H4'	37:98:31:HIS:CE1	2.55	0.41
11:2I:45:GLY:O	11:2I:50:TYR:HB2	2.21	0.41
1:13:1153:C:P	10:1I:13:HIS:HE2	2.44	0.41
24:1H:394:A:C2'	24:1H:395:U:H5'	2.50	0.41
1:13:811:C:O2'	1:13:901:A:N1	2.52	0.41
24:1H:140:A:C8	24:1H:1408:C:O2'	2.71	0.41
2:1E:31:TYR:N	2:1E:31:TYR:CD1	2.87	0.41
36:45:130:LYS:NZ	45:D5:81:ARG:HG2	2.36	0.41
1:13:1166:G:C2	1:13:1171:G:O6	2.73	0.41
24:1H:270:A:OP2	24:1H:270(Y):G:N2	2.47	0.41
54:1G:370:C:H2'	54:1G:371:G:H8	1.85	0.41
54:1G:946:A:H2'	54:1G:947:G:C8	2.55	0.41
24:1H:2179:C:H2'	24:1H:2180:U:C6	2.56	0.41
24:1H:1301:A:O2'	24:1H:1302:A:H3'	2.20	0.41
54:1G:1227:A:C8	54:1G:1227:A:H3'	2.55	0.41
24:1H:479:A:HO2'	24:1H:481:G:H8	1.65	0.41
24:1H:1259:G:H2'	24:1H:1260:G:C8	2.54	0.41
25:1J:97:G:C5	25:1J:98:G:C8	3.09	0.41
7:6E:74:GLU:HG2	7:6E:91:VAL:HG13	2.01	0.41
41:D8:17:GLY:N	41:D8:96:ILE:O	2.33	0.41
6:5E:95:GLU:HA	6:5E:96:PRO:HD3	1.76	0.41
17:8A:90:ILE:O	17:8A:93:GLN:N	2.51	0.41
27:11:119:ALA:CB	27:11:130:ALA:HB3	2.50	0.41
24:14:2468:G:C6	24:14:2481:G:C2	3.09	0.41
47:J8:13:ILE:HG21	47:J8:13:ILE:HD13	1.83	0.41
24:14:1680:U:N3	24:14:1764:G:OP2	2.37	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1586:A:H3'	24:14:1587:A:H8	1.84	0.41
1:13:967:C:H3'	1:13:968:A:C8	2.55	0.41
5:42:59:GLY:O	5:42:62:ALA:HB3	2.21	0.41
44:C5:96:ILE:HA	44:C5:103:GLY:HA3	2.02	0.41
6:52:6:VAL:HG22	6:52:90:VAL:HG22	2.02	0.41
10:11:65:LEU:HD13	14:51:56:VAL:HG22	2.03	0.41
5:4E:63:ARG:HA	5:4E:66:MET:HE2	2.02	0.41
16:7A:73:LEU:HA	16:7A:73:LEU:HD23	1.81	0.41
7:6E:63:LYS:HE3	7:6E:63:LYS:HB3	1.82	0.41
30:49:53:LEU:HA	30:49:53:LEU:HD23	1.84	0.41
24:14:2170:A:H2'	24:14:2170:A:N3	2.36	0.41
24:1H:1976:U:H5''	24:1H:1977:A:OP1	2.21	0.41
24:14:173:G:C2	24:14:174:C:C2	3.09	0.41
13:4A:33:ALA:O	13:4A:37:THR:N	2.52	0.41
1:13:297:G:H4'	1:13:557:G:H4'	2.02	0.41
53:Q8:28:GLY:O	53:Q8:44:LYS:HD3	2.20	0.41
24:1H:1138:G:H21	33:58:106:MET:CE	2.21	0.41
1:13:1503:A:O2'	23:4K:13:A:C6	2.72	0.41
24:1H:2485:G:C5'	36:88:46:GLN:HE21	2.22	0.41
24:1H:987:G:O2'	24:1H:1000:A:N3	2.42	0.41
27:11:30:GLU:CD	27:11:31:LYS:N	2.74	0.41
24:14:1331:A:O2'	24:14:1332:G:C8	2.73	0.41
54:1G:1230:C:H6	54:1G:1230:C:O5'	2.03	0.41
54:1G:445:G:H2'	54:1G:446:G:O4'	2.20	0.41
24:14:638:G:C6	24:14:639:U:C4	3.08	0.41
24:1H:1533:C:H3'	24:1H:1534:G:H5''	2.02	0.41
53:M5:57:ARG:HA	53:M5:57:ARG:HH11	1.85	0.41
48:G5:64:LEU:O	48:G5:68:ARG:HG2	2.21	0.41
54:1G:1161:C:H2'	54:1G:1162:C:C6	2.55	0.41
22:2L:23:A:O2'	22:2L:24:G:OP1	2.36	0.41
24:1H:1026:U:H4'	24:1H:1027:A:OP1	2.21	0.41
24:14:2419:U:OP1	53:M5:34:TRP:CE3	2.63	0.41
24:1H:1409:C:N4	24:1H:1593:G:H1	2.18	0.41
24:1H:1141:U:H4'	24:1H:1142(A):A:O4'	2.20	0.41
36:88:12:GLN:HG2	36:88:73:PRO:HD2	2.02	0.41
1:13:828:A:C2	2:1E:26:PRO:HG3	2.55	0.41
54:1G:1311:G:N2	54:1G:1326:C:O2	2.51	0.41
24:1H:111:A:H4'	48:K8:69:ARG:HH22	1.85	0.41
24:1H:1174:A:H3'	24:1H:1175:U:H5''	2.02	0.41
20:BI:23:ARG:O	20:BI:27:LYS:HB3	2.20	0.41
32:69:144:VAL:HG13	32:69:145:VAL:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:54:THR:HG21	2:1E:201:ILE:HD11	2.01	0.41
24:14:547:A:C5	24:14:548:A:C6	3.08	0.41
27:19:13:ARG:HA	27:19:13:ARG:HD2	1.75	0.41
24:14:957:A:H5'	36:45:76:LYS:HG3	2.03	0.41
46:I8:51:VAL:N	46:I8:62:LEU:HD12	2.35	0.41
24:14:2637:U:H2'	24:14:2638:G:O4'	2.20	0.41
24:1H:2148:G:H2'	24:1H:2149:G:H8	1.85	0.41
24:14:1946:U:H2'	24:14:1947:C:C6	2.56	0.41
24:1H:1011:G:O2'	24:1H:1012:U:H4'	2.20	0.41
24:1H:856:C:O2'	46:I8:27:GLU:HB2	2.19	0.41
15:6I:54:ARG:O	15:6I:58:MET:HG3	2.20	0.41
35:35:125:VAL:HG13	35:35:144:GLU:HB3	2.02	0.41
1:13:1240:U:H5''	1:13:1241:G:H8	1.85	0.41
25:1J:14:U:H5'	25:1J:71:C:C1'	2.51	0.41
24:14:2661:G:H2'	24:14:2662:A:O4'	2.20	0.41
24:14:1183:G:OP2	24:14:1183:G:H8	2.03	0.41
29:39:187:VAL:HG13	35:35:1:MET:O	2.20	0.41
24:14:1543:A:H2	24:14:1545:A:C5	2.38	0.41
27:19:96:HIS:CE1	27:19:102:LYS:HD3	2.55	0.41
24:1H:2232:U:P	47:J8:40:ARG:HH12	2.43	0.41
24:1H:2108:C:N3	24:1H:2181:G:N2	2.57	0.41
24:14:2080:G:O2'	24:14:2081:C:H5'	2.20	0.41
10:1I:50:ILE:HA	10:1I:60:ARG:HG2	2.02	0.41
49:H5:50:VAL:HB	49:H5:53:LEU:HD11	2.02	0.41
24:1H:265:A:H1'	24:1H:266:G:O4'	2.21	0.41
24:14:2462:U:H2'	24:14:2463:C:C6	2.55	0.41
24:14:1762[A]:A:O5'	24:14:1762[A]:A:H8	2.04	0.41
2:12:20:GLU:O	2:12:39:ILE:HG23	2.21	0.41
24:1H:928:G:H2'	24:1H:929:G:O4'	2.20	0.41
45:D5:95:PRO:HA	45:D5:129:SER:HA	2.02	0.41
24:1H:2391:G:O6	24:1H:2425:A:H8	2.04	0.41
24:1H:850:C:H5''	49:L8:18:ASP:HB2	2.03	0.41
45:H8:135:GLU:HG3	45:H8:136:PHE:CD2	2.55	0.41
24:14:2109:U:H3	24:14:2180:U:H3	1.68	0.41
47:J8:60:PHE:HE2	47:J8:91:LYS:HE2	1.86	0.41
57:1H:4581:HOH:O	27:11:244:ARG:HG2	2.19	0.41
9:8E:112:LYS:HG2	9:8E:117:HIS:O	2.21	0.41
25:1J:66:A:C6	25:1J:108:C:C6	3.08	0.41
24:14:909:A:O2'	24:14:910:A:H5''	2.20	0.41
2:12:164:VAL:HG23	2:12:186:ALA:CB	2.50	0.41
24:1H:1728:G:N2	24:1H:1730:U:OP2	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:3I:102:ARG:HA	12:3I:102:ARG:HD2	1.94	0.41
24:1H:831:G:N7	57:1H:4118:HOH:O	2.37	0.41
46:I8:41:ARG:HA	46:I8:41:ARG:NE	2.31	0.41
24:1H:2302:G:C4	24:1H:2303:G:C8	3.09	0.41
46:I8:70:GLN:CD	46:I8:72:ARG:HD3	2.39	0.41
30:41:106:LEU:HD12	30:41:110:ALA:HB3	2.03	0.41
13:4A:91:ARG:HH11	13:4A:94:ARG:NH2	2.19	0.41
42:A5:8:ARG:O	42:A5:9:TYR:HB2	2.20	0.41
2:1E:48:MET:HA	2:1E:51:LEU:HB2	2.02	0.41
48:K8:38:GLN:O	48:K8:44:LEU:HB2	2.20	0.41
24:14:2165:G:H2'	24:14:2165:G:N3	2.36	0.41
3:2E:172:ARG:NH2	3:2E:174:PRO:HG3	2.34	0.41
2:12:12:GLU:HG3	2:12:14:GLY:H	1.85	0.41
1:13:443:C:H42	1:13:491:G:H1	1.68	0.41
24:14:925:C:H2'	24:14:926:A:C8	2.56	0.41
54:1G:1379:G:OP2	7:62:6:ARG:HD2	2.21	0.41
25:1J:55:U:H1'	30:49:29:TRP:HE1	1.85	0.41
27:19:232:PRO:HB3	27:19:244:ARG:CZ	2.50	0.41
5:42:80:ILE:CD1	5:42:91:LEU:HB2	2.51	0.41
24:14:528:A:C2	24:14:2043:C:H4'	2.56	0.41
1:13:1300:G:C5	1:13:1334:G:C6	3.08	0.41
24:14:1423:G:C4	24:14:1424:G:C8	3.09	0.41
35:35:15:ARG:HA	35:35:15:ARG:HD3	1.70	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
24:14:725:G:H8	24:14:725:G:O5'	2.03	0.41
24:14:2258:C:O2'	24:14:2427:C:OP2	2.36	0.41
24:1H:511:U:O4	24:1H:512:G:C2	2.73	0.41
27:19:133:LEU:HD13	27:19:173:VAL:CG2	2.51	0.41
24:1H:2244:U:O2'	24:1H:2245:U:H5'	2.20	0.41
30:49:139:LEU:HA	30:49:144:ILE:HB	2.01	0.41
24:1H:1100:C:H2'	24:1H:1101:U:C6	2.56	0.41
12:3I:85:ILE:CG2	12:3I:98:TYR:HB3	2.51	0.41
6:5E:78:GLU:O	6:5E:81:ILE:HG13	2.20	0.41
30:41:142:PRO:HB2	50:M8:31:ILE:HG21	2.02	0.41
8:72:38:ILE:HD12	8:72:118:VAL:HG12	2.01	0.41
13:4A:68:GLY:O	13:4A:72:ALA:N	2.42	0.41
1:13:1192:C:OP2	3:2E:4:LYS:NZ	2.49	0.41
43:F8:25:LYS:HA	43:F8:81:VAL:O	2.21	0.41
6:52:25:ILE:O	6:52:28:ARG:N	2.53	0.41
19:AA:53:ASN:HB2	19:AA:77:THR:HA	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1327:C:OP1	21:1F:21:TYR:HD1	2.03	0.41
1:13:1236:A:H8	1:13:1236:A:H5''	1.84	0.41
1:13:425:G:O3'	4:3E:45:GLN:NE2	2.53	0.41
54:1G:224:C:H2'	54:1G:225:C:C6	2.55	0.41
37:98:34:ILE:HD13	37:98:34:ILE:HA	1.84	0.41
5:4E:19:MET:HB3	5:4E:19:MET:HE2	1.70	0.41
34:68:88:ASN:ND2	34:68:92:GLU:HB2	2.36	0.41
24:14:453:C:OP1	57:14:3814:HOH:O	2.21	0.41
22:2L:34:U:O2'	22:2L:35:QUO:H3'	2.21	0.41
33:58:112:LEU:HD12	33:58:112:LEU:HA	1.62	0.41
54:1G:1132:C:H2'	54:1G:1133:G:C8	2.56	0.41
47:J8:91:LYS:O	47:J8:94:LEU:N	2.49	0.41
1:13:660:G:C2	1:13:746:A:C2	3.09	0.41
24:1H:1678:G:H22	24:1H:1989:G:H22	1.60	0.41
1:13:1349:A:OP1	9:8E:118:LYS:HB2	2.21	0.41
24:1H:493:G:O2'	42:E8:6:ILE:O	2.33	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
1:13:1127:G:H8	1:13:1127:G:O5'	2.04	0.41
22:3K:16:C:N4	22:3K:68:A:C5	2.89	0.41
1:13:737:A:O2'	1:13:738:C:H5'	2.20	0.41
1:13:649:G:C4	1:13:650:G:C8	3.09	0.41
2:12:178:ARG:HA	2:12:178:ARG:HD2	1.73	0.41
24:14:1007:C:H5''	33:15:35:ARG:NH1	2.36	0.41
25:1J:51:G:N7	38:65:62:LYS:NZ	2.58	0.41
13:4A:66:LEU:O	13:4A:69:GLU:HG2	2.20	0.41
54:1G:1015:A:C6	54:1G:1016:A:C6	3.09	0.41
54:1G:1256:A:N7	54:1G:1277:C:H2'	2.36	0.41
38:65:26:LEU:O	38:65:88:ASP:HB3	2.21	0.41
24:1H:1028:A:H2'	24:1H:1029:A:C8	2.56	0.41
44:C5:68:HIS:O	44:C5:71:LYS:HG3	2.20	0.41
24:1H:1205:U:H4'	24:1H:1206:G:OP2	2.20	0.41
54:1G:1023:G:H3'	54:1G:1024:G:H5''	2.02	0.41
54:1G:327:A:O2'	54:1G:329:A:H8	2.04	0.41
1:13:688:G:C5	1:13:689:C:C5	3.09	0.41
1:13:197:A:H4'	1:13:198:G:O5'	2.21	0.41
22:3K:77:C:H2'	22:3K:78:C:H6	1.86	0.41
33:58:135:PRO:O	33:58:137:LYS:HD2	2.20	0.41
46:E5:72:ARG:HG3	46:E5:75:LEU:HB2	2.02	0.41
2:12:5:ILE:HD11	2:12:55:PHE:CD2	2.55	0.41
24:1H:2199:A:H5''	24:1H:2205:C:H5	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:95:44:LYS:C	41:95:46:VAL:N	2.73	0.41
32:61:81:VAL:HG21	32:61:88:ILE:HD13	2.02	0.41
24:1H:2054:A:N3	51:N8:8:LYS:HD3	2.36	0.41
24:1H:578:A:P	57:1H:4547:HOH:O	2.78	0.41
39:75:80:SER:HA	39:75:81:PRO:HD3	1.75	0.41
24:1H:307:G:C8	57:1H:4290:HOH:O	2.70	0.41
24:1H:325:G:N2	24:1H:337:C:O2	2.52	0.41
30:41:46:ALA:HB3	30:41:87:PRO:O	2.21	0.41
24:1H:2124:G:H5'	26:71:174:PRO:HD3	2.02	0.41
24:14:2861:G:C2	24:14:2862:G:C4	3.08	0.41
26:71:23:ASP:CG	26:71:190:ARG:HH22	2.24	0.41
51:J5:46:CYS:SG	51:J5:48:GLU:HG2	2.60	0.41
1:13:1057:G:C4	1:13:1204:A:C2	3.09	0.41
54:1G:373:A:N3	54:1G:374:A:C8	2.88	0.41
54:1G:1080:A:H4'	5:42:16:THR:OG1	2.20	0.41
54:1G:195:A:C6	54:1G:196:A:N1	2.89	0.41
24:14:489:G:N7	42:A5:49:LYS:NZ	2.67	0.41
40:C8:28:ARG:HD3	40:C8:38:THR:OG1	2.21	0.41
4:32:106:TYR:HE1	4:32:113:SER:HA	1.85	0.41
8:7E:7:ALA:HA	8:7E:85:ARG:HG3	2.03	0.41
24:14:1954:G:C2	24:14:2551:C:H5''	2.56	0.41
28:21:11:MET:HG2	28:21:24:THR:HA	2.03	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
24:14:507:A:H5''	24:14:508:G:H3'	2.02	0.41
1:13:892:A:C2	1:13:893:C:C2	3.09	0.41
1:13:527:G:O6	12:3I:49:ASN:ND2	2.53	0.41
34:25:89:ASN:OD1	34:25:89:ASN:N	2.54	0.41
46:I8:11:ARG:NH1	46:I8:11:ARG:HB2	2.35	0.41
29:39:205:ARG:HH11	29:39:205:ARG:HD2	1.76	0.41
46:E5:24:LYS:HA	46:E5:24:LYS:HD3	1.84	0.41
16:7I:38:TYR:O	16:7I:38:TYR:CD1	2.74	0.41
15:6I:57:LEU:HD23	15:6I:57:LEU:HA	1.79	0.41
33:15:82:LEU:HA	33:15:82:LEU:HD12	1.78	0.41
29:31:149:ASP:OD1	29:31:149:ASP:N	2.34	0.41
24:1H:311:A:C6	24:1H:328:U:C4	3.09	0.41
5:42:137:GLU:O	5:42:141:GLN:HB2	2.20	0.41
24:14:1027:A:C2	24:14:2488:A:H5'	2.56	0.41
24:1H:2305:A:H2'	24:1H:2306:C:O4'	2.21	0.41
24:1H:1264:G:H5'	51:N8:11:THR:OG1	2.20	0.41
24:14:2328:A:H2'	24:14:2329:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2329:G:H2'	24:14:2330:G:C8	2.56	0.41
24:1H:141(A):C:H2'	24:1H:142:G:O4'	2.20	0.41
2:1E:145:LEU:HA	2:1E:145:LEU:HD13	1.91	0.41
43:B5:49:VAL:HB	43:B5:83:VAL:HG21	2.03	0.41
30:49:81:LYS:HG3	30:49:82:LEU:H	1.84	0.41
54:1G:707:C:H2'	54:1G:708:C:H6	1.81	0.41
24:14:578:A:OP1	24:14:1255:U:O2'	2.25	0.41
7:62:94:ARG:HG3	7:62:94:ARG:H	1.40	0.41
22:2L:70:C:O2'	22:2L:71:C:H2'	2.20	0.41
24:14:853:G:O2'	24:14:854:G:H5'	2.20	0.41
28:29:8:LYS:CB	28:29:192:ASN:HA	2.48	0.41
25:1J:89(A):A:H5'	25:1J:90:C:OP2	2.20	0.41
24:1H:96:G:H4'	48:K8:48:HIS:NE2	2.35	0.41
54:1G:345:C:O2'	54:1G:346:G:O5'	2.38	0.41
22:3L:64:PSU:N3	22:3L:67:A:OP2	2.29	0.41
4:32:3:ARG:HD2	4:32:3:ARG:HA	1.57	0.41
24:14:1568:G:OP1	27:19:63:ARG:NH1	2.41	0.41
22:3K:33:C:N4	22:3K:34:U:C4	2.89	0.41
13:4A:76:ALA:O	13:4A:80:ARG:HG3	2.21	0.41
13:4I:55:ARG:O	13:4I:59:TYR:HB2	2.20	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
1:13:390:C:O3'	16:7I:28:ARG:NH2	2.49	0.41
7:6E:57:GLU:HB2	7:6E:60:LYS:HG2	2.02	0.41
1:13:806:C:H2'	1:13:807:A:C8	2.52	0.41
5:4E:138:ALA:O	5:4E:142:LEU:HG	2.20	0.41
24:14:1890:A:OP2	57:14:4126:HOH:O	2.22	0.41
15:6I:63:ARG:NH2	15:6I:87:ILE:HG21	2.36	0.41
35:35:85:LEU:HB3	35:35:114:ILE:CD1	2.51	0.41
43:F8:14:SER:O	43:F8:15:GLU:C	2.59	0.41
24:1H:1793:C:H2'	24:1H:1794:U:H6	1.84	0.41
24:14:353:G:H2'	24:14:354:G:C8	2.55	0.41
45:D5:8:TYR:HD2	45:D5:38:TYR:CE2	2.38	0.41
1:13:255:G:H2'	1:13:256:U:C6	2.55	0.41
2:1E:167:PRO:HG2	2:1E:192:SER:CB	2.51	0.41
24:1H:31:C:O5'	24:1H:31:C:H6	2.03	0.41
4:3E:142:PRO:HA	4:3E:185:PHE:HD2	1.86	0.41
54:1G:256:U:H2'	54:1G:257:G:H8	1.86	0.41
1:13:153:C:N4	1:13:168:G:H1	2.18	0.41
28:21:116:VAL:H	28:21:157:ALA:HB2	1.85	0.41
54:1G:940:C:H2'	54:1G:941:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:21:4:ILE:HG22	28:21:96:PHE:HE2	1.85	0.41
24:14:2642:G:OP1	33:15:76:SER:OG	2.33	0.41
22:3L:44:C:H2'	22:3L:45:C:O4'	2.20	0.41
24:1H:1462:C:H4'	24:1H:2703:C:O4'	2.20	0.41
18:9A:37:VAL:HG11	18:9A:78:LEU:HB3	2.02	0.41
44:C5:52:SER:HA	44:C5:55:TYR:O	2.21	0.41
2:12:84:GLU:HB3	2:12:219:VAL:HG11	2.03	0.41
47:J8:24:ALA:HB3	47:J8:27:GLU:HG3	2.03	0.41
45:D5:65:GLN:OE1	45:D5:67:LEU:HD21	2.21	0.41
13:4A:95:GLY:O	13:4A:110:ARG:HG3	2.20	0.41
24:14:696:G:H2'	24:14:697:C:H6	1.86	0.41
40:C8:6:THR:O	40:C8:9:VAL:HG23	2.20	0.41
30:41:71:THR:OG1	30:41:89:GLY:O	2.37	0.41
24:1H:301:G:C4	24:1H:302:C:C5	3.09	0.41
24:1H:2135:A:N6	24:1H:2156:G:H1'	2.36	0.41
6:52:36:ARG:NH2	6:52:66:GLU:OE1	2.53	0.41
5:4E:74:GLY:HA3	5:4E:116:THR:HG23	2.02	0.41
29:39:43:LYS:HE3	29:39:43:LYS:HB2	1.70	0.41
41:95:20:LEU:HA	41:95:20:LEU:HD12	1.72	0.41
19:AA:70:LYS:HD2	19:AA:70:LYS:N	2.36	0.41
40:C8:91:ASP:HB2	40:C8:94:ASN:OD1	2.20	0.41
24:1H:2712(A):A:H5''	37:98:13:HIS:CD2	2.55	0.41
24:14:1903:G:P	27:19:241:PRO:HB2	2.61	0.41
51:J5:25:LEU:HA	51:J5:25:LEU:HD23	1.86	0.41
24:1H:2579:C:H2'	24:1H:2580:U:O4'	2.21	0.41
27:11:232:PRO:HB3	27:11:244:ARG:NH1	2.36	0.41
24:14:2290:G:C2	24:14:2343:C:O2	2.74	0.41
9:8E:112:LYS:HA	9:8E:119:ALA:HB2	2.03	0.41
24:14:1006:C:C2	24:14:1138:G:N2	2.88	0.41
36:88:104:PHE:O	36:88:105:GLU:HB3	2.20	0.41
24:14:596:G:H2'	24:14:597:U:O4'	2.21	0.41
54:1G:1321:C:C3'	54:1G:1322:C:H5''	2.48	0.41
54:1G:1315:U:H2'	54:1G:1316:G:O4'	2.21	0.41
5:42:63:ARG:HA	5:42:66:MET:HE1	2.03	0.41
54:1G:1246:C:C4	54:1G:1247:U:C4	3.08	0.41
24:14:602:G:N2	24:14:655:A:C8	2.85	0.41
22:2K:61:G:C4	22:2K:62:G:C8	3.09	0.41
1:13:711:G:H2'	1:13:712:A:H8	1.86	0.41
25:1J:50:G:P	38:65:62:LYS:HB2	2.60	0.41
36:88:52:VAL:O	36:88:56:ARG:HB2	2.20	0.41
22:3K:18:G:H1	22:3K:65:C:H42	1.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:19:106:ILE:O	27:19:108:PRO:HD3	2.20	0.41
24:1H:1386:C:H2'	24:1H:1387:C:C6	2.46	0.41
54:1G:1013:G:O2'	54:1G:1014:A:N7	2.46	0.41
32:69:103:ARG:NE	32:69:104:GLN:H	2.18	0.41
4:32:153:ARG:NH1	4:32:181:MET:HB2	2.34	0.41
24:1H:1009:A:OP2	57:1H:4153:HOH:O	2.21	0.41
4:3E:31:CYS:HB3	4:3E:33:MET:HG3	2.02	0.41
29:31:33:LEU:HD13	29:31:112:MET:HE2	2.03	0.41
51:N8:33:CYS:SG	51:N8:46:CYS:HB2	2.61	0.41
54:1G:1202:G:H2'	54:1G:1203:C:O4'	2.20	0.41
13:4I:90:LEU:HD13	19:AI:78:ARG:NH2	2.36	0.41
27:11:59:LYS:HD2	27:11:60:ARG:N	2.32	0.41
7:62:26:PHE:HB2	7:62:101:LEU:HD22	2.02	0.41
24:14:1838:C:H4'	24:14:1839:G:C8	2.56	0.41
25:1J:101:A:OP2	25:1J:101:A:H8	2.04	0.41
25:1J:11:C:O5'	25:1J:12:C:H5	2.04	0.41
25:16:110:G:C5	25:16:111:U:C5	3.08	0.41
25:16:71:C:N3	25:16:72:G:C8	2.89	0.41
32:69:91:SER:HB3	32:69:121:LYS:HD2	2.03	0.41
24:14:1187:G:OP2	57:14:3760:HOH:O	2.21	0.41
24:14:2114:A:C8	24:14:2115:G:N7	2.89	0.41
27:11:53:PHE:HB3	27:11:218:ARG:O	2.21	0.41
44:G8:50:ARG:HG2	44:G8:51:VAL:H	1.85	0.41
36:88:86:GLY:HA3	36:88:87:LYS:CG	2.50	0.41
24:1H:1335:U:H2'	24:1H:1336:A:O4'	2.20	0.41
24:1H:1011:G:H4'	40:C8:75:ASN:HD22	1.86	0.41
24:1H:973:A:O4'	24:1H:1188:U:C6	2.74	0.41
4:3E:108:LEU:HD21	4:3E:183:GLY:HA3	2.02	0.41
45:D5:99:TYR:HB3	45:D5:123:ASP:HB2	2.02	0.41
16:7I:8:ARG:HG3	16:7I:9:PHE:N	2.36	0.41
24:14:874:G:C2	24:14:904:C:N3	2.89	0.41
54:1G:32:A:N3	54:1G:33:A:C8	2.89	0.41
48:K8:36:ARG:HG3	48:K8:36:ARG:HH11	1.86	0.41
54:1G:45:U:H2'	54:1G:46:G:C8	2.56	0.41
24:1H:932:G:H4'	24:1H:933:A:O5'	2.21	0.41
48:K8:53:LEU:O	48:K8:57:ILE:HG13	2.21	0.41
24:1H:998:C:P	40:C8:92:ARG:NH2	2.94	0.41
19:AI:32:LYS:HG2	19:AI:50:ALA:HB3	2.03	0.41
24:1H:2516:G:C6	24:1H:2517:C:N4	2.89	0.41
27:11:108:PRO:HG3	27:11:143:HIS:HE1	1.86	0.41
43:F8:80:ILE:O	43:F8:80:ILE:HG12	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2280:G:C2	24:1H:2281:C:C6	3.09	0.41
9:8E:70:LYS:O	9:8E:74:ILE:HG13	2.21	0.41
24:1H:1726:G:H2'	24:1H:1727:U:O4'	2.21	0.41
28:21:54:GLN:HB3	28:21:55:ASN:H	1.47	0.41
1:13:875:C:C4	1:13:876:G:N7	2.89	0.41
16:7I:52:ASP:OD1	16:7I:54:GLU:HB3	2.20	0.41
45:D5:115:GLY:HA2	45:D5:179:ASP:CB	2.50	0.41
24:14:1849:G:H2'	24:14:1850:G:C8	2.56	0.41
24:1H:458:G:O2'	52:P8:39:ARG:HD3	2.21	0.41
24:1H:1748:G:H2'	24:1H:1749:A:H8	1.85	0.41
24:14:2584:U:C6	24:14:2585:U:C5	3.08	0.41
8:7E:39:LEU:O	8:7E:44:PHE:N	2.52	0.41
27:19:133:LEU:HD22	27:19:175:LEU:HD21	2.03	0.41
15:6I:27:VAL:HG12	15:6I:31:LEU:HD22	2.03	0.41
54:1G:216:G:H2'	54:1G:217:C:C6	2.54	0.41
36:45:29:PHE:HB3	36:45:65:PHE:CE2	2.55	0.41
6:5E:96:PRO:HB3	18:9I:30:ASP:CG	2.41	0.41
47:J8:13:ILE:HD11	47:J8:42:GLN:OE1	2.21	0.41
1:13:1235:U:H2'	1:13:1236:A:O4'	2.21	0.41
24:1H:1449(A):G:H1	24:1H:1462:C:H42	1.69	0.41
45:D5:67:LEU:HA	45:D5:68:PRO:HD3	1.90	0.41
24:14:649:G:H2'	24:14:650:C:O4'	2.21	0.41
8:72:106:GLY:HA2	8:72:122:ARG:HH22	1.86	0.41
24:1H:1466:G:N2	24:1H:1547:C:N3	2.69	0.41
24:1H:289:A:C4	24:1H:353:G:N2	2.89	0.41
24:14:950:G:C6	24:14:951:C:C4	3.08	0.41
29:31:54:ARG:HB3	29:31:81:PRO:HD3	2.03	0.41
42:A5:12:ILE:HG13	42:A5:42:ARG:NH1	2.36	0.41
24:1H:2881:C:H2'	24:1H:2882:A:C8	2.56	0.41
15:6A:62:GLN:O	15:6A:65:ARG:N	2.54	0.41
24:14:1275:A:C5	37:55:16:HIS:CD2	3.09	0.41
39:B8:78:LEU:HD12	39:B8:79:HIS:CE1	2.56	0.41
11:2I:29:ILE:HG13	11:2I:44:SER:HB3	2.03	0.41
3:22:156:ARG:NE	3:22:160:ALA:O	2.54	0.41
42:E8:42:ARG:HD3	42:E8:42:ARG:HH11	1.69	0.41
4:3E:65:ARG:HH11	4:3E:65:ARG:HG2	1.85	0.41
12:3A:17:LYS:HA	12:3A:17:LYS:HD3	1.93	0.41
32:69:62:LYS:HB3	32:69:62:LYS:NZ	2.36	0.41
1:13:818:G:O2'	1:13:819:A:H5'	2.20	0.41
13:4I:40:ASN:HA	13:4I:41:PRO:HD3	1.85	0.41
50:M8:15:ILE:HB	50:M8:32:TYR:CD1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:928:G:C2	1:13:1390:U:O2	2.74	0.41
24:14:2116:G:H2'	24:14:2117:A:O4'	2.21	0.41
7:6E:107:ALA:O	7:6E:110:GLN:HB2	2.21	0.41
24:14:1439:A:N6	24:14:1552:G:O2'	2.53	0.41
24:14:2644:G:C6	24:14:2645:G:C6	3.09	0.41
24:14:654(R):C:N4	24:14:654(S):G:O6	2.54	0.41
1:13:1262:C:H2'	1:13:1263:C:C6	2.56	0.41
22:3L:2:G:H2'	22:3L:3:U:C6	2.56	0.41
54:1G:4:U:H5''	4:32:87:GLY:H	1.86	0.41
33:15:102:ALA:O	33:15:106:MET:HG3	2.20	0.41
54:1G:1206:G:C6	54:1G:1207:G:C5	3.09	0.41
27:19:20:ASP:OD1	27:19:22:SER:OG	2.38	0.41
24:14:2259:G:C2	24:14:2282:G:N1	2.89	0.41
42:E8:86:LEU:HD12	42:E8:86:LEU:C	2.42	0.41
24:14:2103:C:H2'	24:14:2104:G:C8	2.55	0.41
39:B8:7:ILE:HG13	39:B8:10:VAL:CG2	2.50	0.41
24:14:740:U:H2'	24:14:741:G:C8	2.56	0.41
24:1H:620:G:H8	24:1H:622:G:O6	2.04	0.41
6:5E:87:ARG:HG3	6:5E:87:ARG:NH1	2.25	0.41
28:29:27:LEU:HA	28:29:181:LEU:HA	2.03	0.41
27:11:232:PRO:HB3	27:11:244:ARG:CZ	2.49	0.41
24:14:2635:C:H5''	28:29:77:ILE:O	2.20	0.41
53:M5:57:ARG:HA	53:M5:57:ARG:HD3	1.74	0.41
24:14:83:G:H22	24:14:102:G:C2'	2.34	0.41
54:1G:929:G:N2	54:1G:1388:C:O2	2.42	0.41
24:1H:2680:C:H5'	28:21:189:PRO:HA	2.02	0.41
9:8E:13:ALA:HB1	9:8E:73:GLN:HG2	2.03	0.41
24:14:2419:U:O4	53:M5:31:HIS:CG	2.74	0.41
57:1H:3651:HOH:O	28:21:135:HIS:CE1	2.73	0.41
44:C5:47:LYS:HA	44:C5:60:PHE:CD2	2.56	0.41
24:1H:582:G:H2'	24:1H:583:G:C8	2.56	0.41
24:14:2300:G:C2	24:14:2317:C:O2	2.74	0.41
24:14:768:G:H5'	24:14:1622:G:H4'	2.03	0.41
24:1H:1388:G:N2	24:1H:1400:G:C4	2.89	0.41
24:14:2320:A:N1	24:14:2333:A:C8	2.89	0.41
54:1G:1204:A:OP1	14:5A:3:ARG:NH1	2.51	0.41
25:1J:95:U:H2'	25:1J:96:G:C8	2.56	0.41
22:3K:78:C:H2'	22:3K:79:A:O4'	2.21	0.41
12:3A:53:ARG:HG3	12:3A:53:ARG:HH11	1.86	0.41
39:75:50:ILE:HD11	39:75:102:ILE:HD11	2.01	0.41
24:14:2638:G:OP2	28:29:82:ARG:NH2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:685:G:C2	54:1G:686:U:C4	3.09	0.41
1:13:439:A:C5	1:13:440:A:H1'	2.55	0.41
44:C5:97:ARG:NH1	44:C5:104:GLY:H	2.19	0.41
31:51:23:ARG:HH12	31:51:25:LYS:HE3	1.85	0.41
20:BI:35:THR:HA	20:BI:38:LYS:HE3	2.02	0.41
30:49:19:LEU:HG	30:49:175:LEU:HD12	2.02	0.41
24:14:1146:C:O2'	24:14:1147:C:H5'	2.21	0.41
48:K8:36:ARG:HG3	48:K8:36:ARG:NH1	2.36	0.41
10:1A:40:LEU:HG	10:1A:41:PRO:HD2	2.03	0.41
24:1H:1463:C:N3	24:1H:1464:C:C5	2.89	0.41
24:1H:2637:U:H5'	28:21:44:TYR:CE1	2.55	0.41
54:1G:135:C:C2	16:7A:1:MET:HB3	2.56	0.41
1:13:592:G:C2	1:13:593:G:N7	2.89	0.41
54:1G:160:A:O2'	54:1G:344:A:N6	2.54	0.41
8:7E:11:THR:HG23	8:7E:14:ARG:NH1	2.36	0.41
25:16:94:C:H2'	25:16:95:U:C6	2.56	0.41
2:1E:61:LEU:HD12	2:1E:64:ARG:HD2	2.03	0.41
24:1H:90:U:H1'	24:1H:91:A:C8	2.56	0.41
37:98:62:ALA:O	37:98:66:VAL:HG23	2.21	0.41
15:6I:20:GLY:O	15:6I:22:THR:HG22	2.20	0.41
1:13:662:G:H2'	1:13:663:A:C8	2.56	0.41
1:13:942:G:C2	1:13:1342:C:C2	3.08	0.41
32:69:27:ARG:HD2	47:F5:71:TYR:CZ	2.56	0.41
24:1H:2250:G:O2'	24:1H:2496:C:OP1	2.28	0.41
47:J8:19:GLN:O	47:J8:35:THR:N	2.44	0.41
24:1H:2278:A:OP1	36:88:11:LYS:HD2	2.21	0.41
8:7E:111:ILE:HD12	8:7E:135:CYS:SG	2.61	0.41
29:39:15:SER:HB3	29:39:16:GLY:H	1.68	0.41
11:2I:25:TYR:HD1	11:2I:25:TYR:HA	1.61	0.41
45:H8:78:LYS:H	45:H8:78:LYS:HG2	1.54	0.41
1:13:704:A:OP2	1:13:704:A:H8	2.04	0.41
24:1H:2177:C:H5''	26:71:213:TYR:CD1	2.56	0.41
24:1H:851:U:O2'	49:L8:42:ALA:O	2.32	0.41
30:41:165:THR:OG1	30:41:168:GLU:HG3	2.21	0.41
24:14:67:U:N3	24:14:74:A:H2	2.01	0.40
40:85:94:ASN:OD1	40:85:95:LEU:HG	2.21	0.40
1:13:414:A:H2'	1:13:415:A:O4'	2.21	0.40
24:14:1332:G:H8	24:14:1332:G:H5'	1.83	0.40
28:29:47:VAL:HG22	28:29:49:LEU:HD12	2.03	0.40
24:1H:1331:A:O2'	24:1H:1332:G:H8	2.04	0.40
10:1A:42:THR:HG22	10:1A:68:HIS:HA	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1124:G:H2'	1:13:1145:C:C5	2.57	0.40
22:3K:20:C:O2'	22:3K:22:A:O5'	2.34	0.40
43:B5:5:TYR:CZ	48:G5:30:ARG:HB2	2.55	0.40
16:7A:40:ASP:O	16:7A:48:TRP:HB2	2.20	0.40
24:14:492:A:H2'	24:14:493:G:O4'	2.21	0.40
26:79:13:LYS:HD2	26:79:32:LEU:HD23	2.02	0.40
45:H8:15:PRO:O	45:H8:19:ARG:HB2	2.22	0.40
45:D5:111:VAL:HG11	45:D5:145:GLU:OE2	2.21	0.40
7:6E:16:LEU:HD13	7:6E:16:LEU:HA	1.76	0.40
38:65:109:GLY:C	38:65:111:GLU:H	2.12	0.40
54:1G:1089:G:N2	54:1G:1096:C:O2	2.49	0.40
28:29:111:ARG:HD2	28:29:160:TYR:CD2	2.56	0.40
24:14:1190:G:O2'	24:14:1191:G:H5'	2.21	0.40
29:39:66:PRO:O	29:39:68:LYS:N	2.54	0.40
29:31:182:ASN:ND2	29:31:185:ASP:HB2	2.36	0.40
24:14:2772:C:H2'	24:14:2773:C:C6	2.57	0.40
54:1G:101:A:C2'	54:1G:102:G:H5'	2.51	0.40
24:1H:443:A:N7	29:31:45:ARG:HG2	2.36	0.40
24:14:996:A:C2	24:14:997:G:C8	3.09	0.40
27:19:204:ILE:HD12	27:19:204:ILE:O	2.21	0.40
1:13:1382:C:H1'	7:6E:79:ARG:NE	2.37	0.40
34:68:71:ARG:HH11	39:B8:74:ARG:NH2	2.17	0.40
2:12:12:GLU:HA	2:12:15:VAL:HG12	2.03	0.40
45:H8:48:PHE:HE1	45:H8:71:VAL:HG21	1.86	0.40
1:13:1292:U:P	7:6E:41:ARG:HH22	2.42	0.40
36:88:18:LYS:HB3	36:88:18:LYS:HE2	1.56	0.40
30:49:36:LYS:HE2	30:49:36:LYS:HB3	1.89	0.40
24:1H:2844:G:C5	24:1H:2845:G:C8	3.09	0.40
1:13:1365:G:C6	1:13:1366:C:C4	3.10	0.40
25:16:11:C:H3'	25:16:12:C:H6	1.84	0.40
24:14:2862:G:C6	24:14:2863:C:C4	3.09	0.40
54:1G:1329:A:OP1	13:4A:28:ALA:HB3	2.20	0.40
27:11:61:LEU:HA	27:11:61:LEU:HD13	1.91	0.40
7:62:42:ILE:HG23	7:62:117:ALA:HA	2.03	0.40
54:1G:578:C:H3'	57:1G:1884:HOH:O	2.21	0.40
24:1H:654(N):G:N1	24:1H:654(O):G:O6	2.55	0.40
25:1J:33:G:C2	25:1J:34:U:C2	3.08	0.40
24:14:2365:G:H4'	46:E5:60:PHE:CZ	2.55	0.40
24:14:1757:U:O2	24:14:1762[B]:A:N6	2.45	0.40
24:1H:302:C:H2'	24:1H:303:U:H6	1.85	0.40
11:2I:44:SER:OG	11:2I:47:VAL:HG23	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:98:61:HIS:O	37:98:64:ARG:N	2.54	0.40
24:1H:2652:C:H2'	24:1H:2653:U:O4'	2.21	0.40
11:2A:83:ILE:HG12	11:2A:109:VAL:HG23	2.02	0.40
24:14:199:A:HO2'	24:14:200:U:H6	1.64	0.40
54:1G:35:G:H2'	54:1G:36:C:C6	2.56	0.40
8:7E:68:ARG:HA	8:7E:76:PRO:HB3	2.03	0.40
1:13:238:G:P	17:8I:25:ARG:HH22	2.41	0.40
20:BI:63:ILE:HD12	20:BI:81:LYS:HG2	2.02	0.40
24:14:1321:A:H2'	24:14:1322:A:O4'	2.22	0.40
54:1G:310:G:H4'	16:7A:31:LYS:HD2	2.04	0.40
29:39:31:HIS:O	29:39:31:HIS:CD2	2.74	0.40
10:1A:80:LYS:HD2	10:1A:80:LYS:HA	1.85	0.40
17:8I:89:LEU:HD13	17:8I:89:LEU:HA	1.89	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
24:1H:926:A:H2'	24:1H:926:A:N3	2.36	0.40
8:72:21:LYS:HB2	8:72:21:LYS:HE2	1.80	0.40
38:65:37:ALA:HB2	38:65:101:LEU:HD21	2.03	0.40
24:1H:1204:A:C2	24:1H:1241:A:N1	2.89	0.40
1:13:555:C:H2'	1:13:556:C:C6	2.56	0.40
35:35:87:ASP:O	35:35:90:ARG:HD3	2.20	0.40
22:2L:34:U:O2'	22:2L:36:U:OP2	2.39	0.40
9:82:4:TYR:HE1	9:82:88:TYR:HD2	1.68	0.40
24:14:2594:C:N4	57:14:3627:HOH:O	2.55	0.40
24:1H:1902:C:N3	24:1H:1903:G:H1'	2.37	0.40
24:1H:2513:G:N2	28:21:143:ASN:OD1	2.54	0.40
24:1H:49:A:H5''	24:1H:51:G:O4'	2.22	0.40
24:1H:942:G:OP2	35:78:39:LYS:HE2	2.21	0.40
28:29:12:THR:HG21	39:75:9:LEU:HD12	2.04	0.40
24:14:1140:C:H1'	24:14:1143:A:C8	2.56	0.40
54:1G:706:A:C4'	11:2A:29:ILE:HD11	2.51	0.40
24:1H:1532:C:H2'	24:1H:1533:C:O4'	2.21	0.40
35:78:50:ARG:NH2	35:78:50:ARG:HG3	2.34	0.40
24:1H:2210:G:H5'	24:1H:2211:G:C5	2.56	0.40
54:1G:1104:G:C4	54:1G:1105:A:C8	3.09	0.40
37:98:74:LYS:O	37:98:76:VAL:N	2.52	0.40
54:1G:1179:A:H2'	54:1G:1180:A:O4'	2.21	0.40
54:1G:235:C:C5'	17:8A:70:ARG:HG2	2.51	0.40
25:16:21:G:N2	25:16:62:C:N3	2.60	0.40
24:1H:1027:A:C2	24:1H:2488:A:H5'	2.56	0.40
24:14:1342:A:H2	24:14:1602:U:H3	1.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:768:G:C5	24:14:769:G:N7	2.89	0.40
34:25:47:ILE:HA	34:25:47:ILE:HD12	1.89	0.40
43:F8:65:ARG:HG3	43:F8:67:GLY:H	1.85	0.40
22:2L:74:C:H2'	22:2L:75:C:C6	2.53	0.40
24:14:2320:A:H1'	24:14:2321:G:C5	2.56	0.40
24:14:854:G:C2	24:14:855:G:C5	3.10	0.40
24:14:820:A:H1'	24:14:943:U:H1'	2.02	0.40
24:1H:341:G:C5	57:1H:3736:HOH:O	2.73	0.40
25:1J:78:A:H2'	25:1J:79:C:O4'	2.21	0.40
1:13:1328:C:H2'	1:13:1329:A:C8	2.57	0.40
1:13:1318:A:H5''	19:AI:10:PHE:CG	2.55	0.40
16:7I:37:GLY:HA2	16:7I:50:LYS:HD3	2.03	0.40
54:1G:605:U:H2'	54:1G:606:G:O4'	2.22	0.40
1:13:516:U:C4	1:13:517:G:C6	3.08	0.40
24:1H:1062:G:C2	24:1H:1063:G:N1	2.89	0.40
24:1H:1784:A:H5''	57:1H:3929:HOH:O	2.21	0.40
2:1E:51:LEU:HD22	2:1E:55:PHE:CE1	2.51	0.40
1:13:1226:C:H4'	19:AI:80:TYR:CZ	2.56	0.40
32:61:120:ILE:HD12	32:61:126:TYR:CZ	2.56	0.40
4:32:119:GLN:HG2	4:32:123:HIS:CD2	2.56	0.40
24:1H:1878:G:H2'	24:1H:1879:C:H6	1.85	0.40
24:14:925:C:H2'	24:14:926:A:H8	1.87	0.40
1:13:1336:C:H2'	1:13:1336:C:O2	2.20	0.40
35:35:144:GLU:N	35:35:144:GLU:CD	2.75	0.40
30:41:49:ASP:OD2	30:41:51:ARG:HB3	2.21	0.40
24:14:1388:G:H2'	24:14:1389:G:C8	2.57	0.40
24:14:2864:G:OP1	39:75:119:LYS:HD2	2.22	0.40
48:K8:22:GLU:OE2	48:K8:68:ARG:NH2	2.49	0.40
17:8I:53:LEU:HD23	17:8I:82:MET:SD	2.61	0.40
1:13:1298:C:N4	7:6E:114:ARG:HB3	2.36	0.40
24:1H:1541:U:H2'	24:1H:1542:G:O4'	2.21	0.40
28:21:45:THR:O	28:21:83:ASP:N	2.49	0.40
12:3I:53:ARG:HH12	12:3I:92:ASP:HB2	1.86	0.40
6:5E:91:VAL:HG12	6:5E:92:LYS:O	2.21	0.40
24:14:2111:C:C2	24:14:2118:U:H4'	2.56	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
4:3E:188:LEU:HA	4:3E:188:LEU:HD22	1.85	0.40
6:52:28:ARG:HD3	6:52:28:ARG:HA	1.96	0.40
24:1H:1432:C:H2'	24:1H:1433:U:O4'	2.21	0.40
24:14:835:A:C2'	24:14:836:G:H5'	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1814:G:P	27:11:40:THR:HG21	2.60	0.40
24:1H:552:G:C6	24:1H:553:U:C4	3.09	0.40
37:55:98:LEU:HD22	51:J5:51:TYR:CD2	2.56	0.40
24:1H:2038:G:H2'	24:1H:2039:C:O4'	2.22	0.40
24:14:1347:G:C5	24:14:1348:G:N7	2.89	0.40
36:88:19:GLY:O	36:88:21:THR:OG1	2.24	0.40
3:22:88:ARG:NH1	3:22:101:LEU:HD12	2.37	0.40
24:14:1686:C:H2'	24:14:1687:G:O4'	2.20	0.40
4:32:150:GLU:O	4:32:152:SER:N	2.54	0.40
11:2A:38:ASN:HA	11:2A:39:PRO:HD3	1.90	0.40
27:11:33:LEU:O	27:11:64:ILE:HG23	2.21	0.40
48:K8:30:ARG:O	48:K8:34:GLU:HG3	2.20	0.40
54:1G:1503:A:O2'	54:1G:1504:G:O5'	2.37	0.40
20:BA:91:LEU:HD23	20:BA:91:LEU:HA	1.95	0.40
24:1H:613:U:O4'	24:1H:613:U:O2	2.37	0.40
11:2A:122:LYS:HE2	11:2A:122:LYS:HB3	1.88	0.40
30:41:83:ARG:NH1	30:41:83:ARG:HB3	2.36	0.40
24:14:711:G:C6	24:14:712:G:C5	3.08	0.40
1:13:279:A:OP2	17:8I:95:TYR:OH	2.34	0.40
24:14:1087:G:N1	24:14:1103:A:H2	2.19	0.40
36:45:78:PRO:HB2	36:45:81:VAL:HG11	2.03	0.40
24:14:1999:C:H4'	24:14:2723:C:O2	2.21	0.40
4:32:13:ARG:HD2	4:32:38:TYR:O	2.22	0.40
5:42:101:ILE:HD11	5:42:119:LEU:CD2	2.32	0.40
45:H8:24:LEU:HD12	45:H8:25:PRO:O	2.21	0.40
24:1H:197:A:N6	24:1H:2430:A:H2'	2.36	0.40
54:1G:1306:A:C6	54:1G:1307:U:C2	3.09	0.40
1:13:730:G:H2'	1:13:766:A:H5'	2.04	0.40
1:13:672:U:O2'	1:13:673:G:H5'	2.20	0.40
6:5E:87:ARG:HG2	6:5E:88:VAL:N	2.35	0.40
12:3I:57:LYS:HD3	12:3I:65:GLU:OE2	2.21	0.40
24:14:2581:G:H3'	57:14:4242:HOH:O	2.22	0.40
54:1G:57:G:C4	54:1G:58:C:C5	3.09	0.40
2:12:75:LYS:O	2:12:78:GLN:HG2	2.21	0.40
24:14:2361:A:OP1	53:M5:27:THR:HG23	2.21	0.40
35:78:46:LYS:HB3	35:78:46:LYS:HE2	1.93	0.40
24:1H:764:A:N3	27:11:213:ARG:NH1	2.69	0.40
54:1G:992:U:O2'	54:1G:993:G:OP2	2.35	0.40
54:1G:1152:A:H2'	54:1G:1153:C:O4'	2.21	0.40
29:39:181:LEU:CD1	29:39:186:ILE:HD11	2.43	0.40
24:1H:2169:A:N7	24:1H:2170:A:C6	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:49:95:ARG:O	30:49:98:ARG:N	2.53	0.40
24:1H:249:C:H4'	24:1H:250:G:O5'	2.22	0.40
2:1E:5:ILE:HG22	2:1E:224:GLN:OE1	2.21	0.40
24:1H:2271:G:C5'	46:I8:20:ARG:HD2	2.50	0.40
2:1E:211:ILE:HG13	2:1E:211:ILE:H	1.73	0.40
24:1H:821:A:H2'	24:1H:946:G:H5''	2.04	0.40
54:1G:29:G:O2'	54:1G:295:C:H4'	2.21	0.40
24:1H:2751:G:N2	31:51:3:ARG:HG2	2.36	0.40
53:Q8:61:LEU:O	53:Q8:62:LEU:HD12	2.21	0.40
1:13:690:G:H22	11:2I:55:LYS:NZ	2.20	0.40
24:1H:1676:A:N6	24:1H:1677:A:C6	2.89	0.40
3:2E:113:ALA:HB3	3:2E:114:PRO:HD3	2.02	0.40
8:72:39:LEU:HD12	8:72:44:PHE:CD2	2.56	0.40
54:1G:1028:C:H2'	54:1G:1028(A):C:O4'	2.21	0.40
24:1H:483:A:O2'	44:G8:49:VAL:O	2.27	0.40
54:1G:1202:G:N2	14:5A:46:GLU:OE1	2.53	0.40
1:13:961:U:H2'	1:13:962:C:O4'	2.22	0.40
7:62:101:LEU:O	7:62:105:VAL:HG23	2.22	0.40
24:14:1568:G:H21	27:19:58:HIS:CE1	2.38	0.40
24:1H:1681:G:N2	24:1H:1762[B]:A:H5'	2.35	0.40
33:58:110:GLY:O	33:58:114:ARG:HG3	2.21	0.40
25:16:73:A:H2'	25:16:74:U:H5'	2.02	0.40
24:14:2177:C:H1'	26:79:44:HIS:HB3	2.03	0.40
24:14:71:A:H4'	24:14:72:U:H5''	2.03	0.40
24:14:864:G:OP2	36:45:22:LYS:HD3	2.22	0.40
4:3E:110:PHE:HE2	4:3E:148:VAL:HG23	1.85	0.40
24:14:923:C:O2'	24:14:924:C:H5'	2.21	0.40
4:32:117:ALA:O	4:32:121:VAL:HG23	2.21	0.40
54:1G:788:U:C5	54:1G:789:U:C4	3.09	0.40
1:13:417:C:H2'	1:13:418:C:H6	1.85	0.40
27:19:34:VAL:CG1	27:19:61:LEU:HG	2.50	0.40
24:1H:1287:A:O4'	37:98:104:ARG:HD3	2.21	0.40
54:1G:456:C:N4	54:1G:476:G:H1	2.19	0.40
35:35:112:LEU:HD22	35:35:114:ILE:HG22	2.04	0.40
54:1G:980:C:H3'	54:1G:981:U:H6	1.85	0.40
16:7I:4:ILE:CG2	16:7I:36:ILE:HD11	2.52	0.40
24:14:774:A:HO2'	24:14:775:G:H8	1.67	0.40
24:1H:1571:A:H2'	24:1H:1572:A:C8	2.56	0.40
24:14:764:A:N3	27:19:213:ARG:HD3	2.36	0.40
36:45:33:GLY:HA2	36:45:105:GLU:HA	2.03	0.40
24:14:7:G:H2'	24:14:8:A:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2575:C:O5'	24:1H:2575:C:H6	2.04	0.40
1:13:522:C:H2'	1:13:523:A:O4'	2.21	0.40
54:1G:803:G:C6	54:1G:804:U:C4	3.10	0.40
1:13:774:G:H2'	1:13:774:G:N3	2.35	0.40
27:19:44:ASN:CG	27:19:46:GLN:H	2.24	0.40
54:1G:269:C:H2'	54:1G:270:A:C8	2.56	0.40
35:35:98:GLU:HA	35:35:101:VAL:HB	2.03	0.40
32:61:1:MET:N	32:61:21:VAL:O	2.47	0.40
3:2E:79:ARG:HH11	18:9A:87:ARG:NH1	2.18	0.40
54:1G:380:G:C2	54:1G:384:G:C6	3.08	0.40
12:3I:85:ILE:HD13	12:3I:85:ILE:HA	1.77	0.40
40:C8:91:ASP:HB3	40:C8:93:LYS:HB3	2.04	0.40
24:1H:1465:G:C6	24:1H:1466:G:C5	3.09	0.40
24:14:2766:G:H5''	24:14:2767:C:OP2	2.21	0.40
24:1H:2027:G:C5	24:1H:2028:U:C5	3.10	0.40
44:G8:65:ALA:HA	44:G8:66:PRO:HD3	1.87	0.40
10:1I:34:VAL:HG12	10:1I:74:ILE:HG22	2.02	0.40
54:1G:1493:A:H3'	54:1G:1494:G:H5'	2.04	0.40
1:13:607:A:H2'	1:13:608:A:O4'	2.21	0.40
54:1G:80:G:O2'	54:1G:81:G:OP1	2.35	0.40
1:13:524:G:H2'	1:13:525:C:C6	2.57	0.40
47:J8:5:CYS:HB3	47:J8:9:GLY:N	2.35	0.40
54:1G:1060:C:H2'	54:1G:1061:G:H8	1.86	0.40
47:F5:73:LEU:HA	47:F5:73:LEU:HD23	1.90	0.40
24:14:1396:U:H2'	24:14:1396:U:O2	2.21	0.40
26:71:59:ARG:HD2	26:71:164:ARG:CZ	2.51	0.40
24:14:748:G:O6	42:A5:90:ARG:NH1	2.54	0.40
54:1G:1141:C:H2'	54:1G:1142:G:C8	2.56	0.40
24:14:68:G:C2	24:14:69:C:C2	3.09	0.40
35:35:147:LEU:HB2	35:35:148:LEU:H	1.37	0.40
24:1H:1826:G:H4'	27:11:242:ARG:HE	1.86	0.40
24:14:857:C:H4'	46:E5:23:VAL:HG21	2.02	0.40
24:1H:2262:U:O2'	24:1H:2263:C:H5'	2.21	0.40
24:1H:1221:C:C2	24:1H:1222:C:C5	3.10	0.40
24:1H:2299:G:H8	24:1H:2299:G:OP2	2.05	0.40
29:31:119:ARG:HB3	29:31:119:ARG:CZ	2.50	0.40
24:14:2306:C:O5'	24:14:2307:G:H5''	2.22	0.40
24:1H:580:C:H2'	24:1H:581:C:H6	1.86	0.40
24:14:1062:G:C6	24:14:1075:C:N4	2.89	0.40
24:1H:1044:G:O2'	24:1H:1111:A:N6	2.54	0.40
24:1H:768:G:C6	24:1H:769:G:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:768:G:C6	24:14:769:G:C5	3.10	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
2:1E:104:ASN:HD22	2:1E:104:ASN:HA	1.59	0.40
1:13:1075:C:OP1	2:1E:179:LYS:HE2	2.22	0.40
30:41:131:TYR:HB3	30:41:159:VAL:HG23	2.03	0.40
38:65:18:ILE:HD11	38:65:25:ARG:HG3	2.03	0.40
34:25:4:PRO:O	34:25:5:GLN:CB	2.68	0.40
24:14:171:G:H2'	24:14:172:C:C6	2.56	0.40
24:1H:1206:G:C6	24:1H:1207:C:C4	3.09	0.40
1:13:91:C:H2'	1:13:92:G:O4'	2.21	0.40
20:BA:69:GLY:O	20:BA:73:HIS:CE1	2.73	0.40
2:12:46:LYS:O	2:12:50:GLU:HG2	2.22	0.40
13:4A:92:HIS:HE1	13:4A:98:VAL:HG21	1.84	0.40
24:1H:2275:C:O2	36:88:85:LYS:HG3	2.21	0.40
42:A5:59:VAL:HG12	42:A5:60:ASN:N	2.35	0.40
52:L5:14:LYS:HG2	52:L5:14:LYS:H	1.68	0.40
54:1G:164:U:H2'	54:1G:165:C:C6	2.56	0.40
24:14:1750:G:O2'	24:14:1751:C:H5'	2.21	0.40
44:C5:90:LEU:HA	44:C5:91:GLU:HA	1.82	0.40
54:1G:728:A:C2	54:1G:729:A:C5	3.09	0.40
5:42:142:LEU:HA	5:42:142:LEU:HD23	1.88	0.40
24:1H:1858:G:C6	24:1H:1883:G:C6	3.09	0.40
24:14:569:U:H5''	24:14:821:A:C2	2.57	0.40
24:1H:1792:G:H2'	24:1H:1793:C:C6	2.57	0.40
24:1H:80:G:C5	57:1H:3724:HOH:O	2.75	0.40
14:5A:29:ARG:HB2	14:5A:30:ALA:H	1.68	0.40
22:2K:14:A:H61	22:2K:22:A:H2'	1.86	0.40
24:14:1589:C:H2'	24:14:1590:U:H6	1.86	0.40
24:14:557:U:H5''	33:15:111:PRO:HB2	2.03	0.40
41:95:100:ARG:HG2	41:95:100:ARG:H	1.77	0.40
24:1H:1340:U:H4'	24:1H:1341:U:OP2	2.22	0.40
30:41:101:ILE:HD13	30:41:101:ILE:HA	1.87	0.40
1:13:774:G:H5''	1:13:775:G:OP2	2.20	0.40
5:42:30:ALA:O	5:42:45:PHE:HA	2.21	0.40
32:69:120:ILE:HG21	32:69:126:TYR:CE2	2.57	0.40
24:14:838:C:H2'	24:14:839:U:H6	1.86	0.40
51:J5:20:ARG:HG2	51:J5:23:HIS:CD2	2.56	0.40
22:2L:81:C:C2'	22:2L:82:A:H5'	2.52	0.40
24:1H:654(N):G:C2	24:1H:654(O):G:C6	3.10	0.40
1:13:373:A:C2	1:13:374:A:C8	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:42:G:H1	1:13:400:C:H42	1.69	0.40
37:98:73:VAL:O	37:98:77:ARG:HG3	2.21	0.40
1:13:1190:G:OP1	3:2E:4:LYS:HA	2.21	0.40
24:14:1439:A:H2'	24:14:1440:G:O4'	2.21	0.40
54:1G:4:U:H5''	4:32:87:GLY:N	2.36	0.40
24:1H:1530:G:C6	24:1H:1531:C:C4	3.09	0.40
1:13:933:G:H5''	1:13:934:C:OP2	2.22	0.40
9:8E:48:GLU:N	9:8E:49:PRO:HD2	2.36	0.40
24:1H:1181:C:H2'	24:1H:1182:A:C8	2.57	0.40
2:1E:118:LEU:HD13	2:1E:142:LEU:HA	2.03	0.40
28:21:125:GLY:HA3	28:21:134:ILE:HD13	2.03	0.40
11:2I:62:GLN:HB2	11:2I:93:GLN:OE1	2.21	0.40
24:14:911:A:C5	36:45:9:TYR:CD2	3.09	0.40
24:14:2256:G:O6	57:14:3862:HOH:O	2.22	0.40
54:1G:409:G:H2'	54:1G:410:G:O4'	2.22	0.40
15:6I:71:GLN:HG2	15:6I:71:GLN:O	2.22	0.40
37:55:8:ARG:NE	37:55:43:GLU:OE2	2.44	0.40
54:1G:799:G:C6	54:1G:800:G:C4	3.09	0.40
34:25:87:ILE:HG23	34:25:88:ASN:O	2.22	0.40
22:2L:36:U:H2'	22:2L:37:A:H8	1.86	0.40
24:1H:2600:A:N6	57:1H:3629:HOH:O	2.16	0.40
24:1H:804:A:H5''	57:1H:3775:HOH:O	2.20	0.40
1:13:111:G:O5'	1:13:111:G:H8	2.05	0.40
44:C5:27:VAL:HA	44:C5:39:VAL:CG1	2.52	0.40
24:1H:234:C:H2'	24:1H:235:U:C6	2.56	0.40
1:13:427:U:H3'	1:13:428:G:H2'	2.02	0.40
24:1H:1265:A:H3'	51:N8:19:ARG:NH1	2.36	0.40
54:1G:1230:C:H2'	54:1G:1231:G:C8	2.57	0.40
24:1H:142:G:C1'	43:F8:37:THR:HG21	2.45	0.40
25:1J:17:C:H2'	25:1J:18:G:O4'	2.21	0.40
3:22:81:GLY:CA	3:22:85:ARG:HH21	2.27	0.40
24:14:2212:A:H4'	24:14:2213:U:C5	2.41	0.40
24:1H:862:G:H2'	24:1H:863:A:O4'	2.22	0.40
1:13:792:A:H1'	1:13:794:A:N7	2.37	0.40
20:BA:20:LEU:HD23	20:BA:20:LEU:HA	1.70	0.40
1:13:1287:A:C6	1:13:1288:A:C6	3.09	0.40
54:1G:28:G:C6	54:1G:29:G:C5	3.10	0.40
54:1G:15:G:H1'	5:42:19:MET:CE	2.51	0.40
24:14:768:G:C4	24:14:769:G:C8	3.10	0.40
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1386:C:C2	24:1H:1387:C:C5	3.09	0.40
3:22:23:TYR:HA	10:1A:11:PHE:CE2	2.56	0.40
24:14:1448:G:O2'	24:14:1528:A:N6	2.54	0.40
24:14:2688:U:H5	24:14:2720:U:OP2	2.05	0.40
51:N8:40:LYS:HG3	51:N8:47:PRO:HD2	2.04	0.40
24:14:162:U:H4'	24:14:171:G:C4	2.57	0.40
54:1G:309:G:H1'	54:1G:608:A:C2	2.56	0.40
43:F8:11:PRO:HG2	43:F8:13:LEU:HD21	2.04	0.40
24:1H:748:G:O6	42:E8:90:ARG:NH1	2.55	0.40
24:14:1110:G:H8	24:14:1110:G:O5'	2.05	0.40
24:14:61:G:H5'	48:G5:50:ILE:HD12	2.03	0.40
24:14:580:C:H2'	24:14:581:C:C6	2.56	0.40
24:1H:2323:G:C6	24:1H:2324:C:C4	3.10	0.40
32:69:97:ILE:HG23	32:69:140:LEU:HD23	2.03	0.40
24:1H:527:C:OP2	24:1H:2779:U:C5	2.75	0.40
48:K8:47:ASN:C	48:K8:49:LYS:N	2.73	0.40
24:14:2262:U:H5	46:E5:16:SER:HG	1.69	0.40
1:13:484:G:O2'	1:13:485:G:OP2	2.29	0.40
24:1H:577:G:C6	24:1H:578:A:C6	3.10	0.40
7:6E:57:GLU:HB2	7:6E:60:LYS:HE2	2.03	0.40
2:1E:237:ALA:C	2:1E:239:VAL:N	2.74	0.40
29:31:64:ILE:HA	29:31:64:ILE:HD13	1.79	0.40
24:14:1099:G:C6	24:14:1100:C:C4	3.10	0.40
24:1H:1973:G:H2'	24:1H:1974:C:H6	1.86	0.40
1:13:370:C:C2	1:13:392:G:N2	2.90	0.40
29:31:39:TRP:O	29:31:43:LYS:HG2	2.21	0.40
44:G8:35:TYR:CE2	44:G8:69:ALA:HB3	2.56	0.40
24:14:217:G:H2'	24:14:218:A:O4'	2.22	0.40
24:14:1313:U:H2'	24:14:1610:A:N1	2.37	0.40
54:1G:1216:G:H5''	14:5A:5:ALA:HB2	2.02	0.40
28:21:14:ILE:HD13	28:21:14:ILE:HA	1.72	0.40
30:41:109:VAL:HG13	50:M8:33:VAL:HG22	2.04	0.40
1:13:1442:G:H1	1:13:1461:G:H21	1.70	0.40
54:1G:87:A:C6	54:1G:88:C:C4	3.09	0.40
37:55:54:LEU:HD21	37:55:65:LEU:HD23	2.02	0.40
30:49:145:THR:O	30:49:146:TYR:HB3	2.22	0.40
24:14:2553:G:H5''	24:14:2554:U:OP2	2.21	0.40
24:1H:266:G:C6	24:1H:267:C:C5	3.09	0.40
6:52:25:ILE:HG12	6:52:25:ILE:H	1.64	0.40
36:45:78:PRO:O	36:45:79:LEU:HB3	2.20	0.40
54:1G:408:A:H2'	54:1G:409:G:O4'	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:3I:83:VAL:HG22	12:3I:84:LEU:H	1.87	0.40
54:1G:376:G:H5''	16:7A:5:ARG:HD3	2.03	0.40
24:14:2375:G:N7	57:14:3914:HOH:O	2.37	0.40
24:14:60:G:C8	24:14:63:U:C5	3.10	0.40
19:AA:78:ARG:O	19:AA:79:THR:OG1	2.39	0.40
45:H8:120:ILE:HD13	45:H8:121:HIS:N	2.36	0.40
24:1H:2537:U:H2'	24:1H:2538:C:C6	2.57	0.40
10:1I:79:ARG:HD3	10:1I:79:ARG:HA	1.90	0.40
54:1G:1461:G:O5'	54:1G:1461:G:H8	2.04	0.40
37:55:18:LEU:HD23	37:55:18:LEU:HA	1.80	0.40
48:K8:9:GLN:O	48:K8:13:ALA:HB2	2.22	0.40
24:14:350:U:H2'	24:14:351:G:O4'	2.22	0.40
24:14:2391:G:O6	24:14:2425:A:H8	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%)	21 67
2	1E	235/256 (92%)	198 (84%)	32 (14%)	5 (2%)	9 46
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%)	34 78

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	3E	206/209 (99%)	191 (93%)	13 (6%)	2 (1%)	19	65
5	42	149/162 (92%)	144 (97%)	5 (3%)	0	100	100
5	4E	149/162 (92%)	139 (93%)	9 (6%)	1 (1%)	26	72
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%)	13	55
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%)	21	67
12	3A	123/132 (93%)	110 (89%)	11 (9%)	2 (2%)	12	54
12	3I	123/132 (93%)	114 (93%)	9 (7%)	0	100	100
13	4A	115/126 (91%)	100 (87%)	11 (10%)	4 (4%)	4	31
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%)	14	57
19	AA	80/93 (86%)	59 (74%)	18 (22%)	3 (4%)	4	28
19	AI	81/93 (87%)	66 (82%)	14 (17%)	1 (1%)	16	60

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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%)	10	50
27	19	271/276 (98%)	252 (93%)	16 (6%)	3 (1%)	17	62
28	21	203/206 (98%)	174 (86%)	28 (14%)	1 (0%)	34	78
28	29	203/206 (98%)	158 (78%)	38 (19%)	7 (3%)	5	31
29	31	200/210 (95%)	187 (94%)	13 (6%)	0	100	100
29	39	206/210 (98%)	176 (85%)	25 (12%)	5 (2%)	7	43
30	41	179/182 (98%)	154 (86%)	24 (13%)	1 (1%)	30	75
30	49	179/182 (98%)	148 (83%)	30 (17%)	1 (1%)	30	75
31	51	172/180 (96%)	145 (84%)	24 (14%)	3 (2%)	11	52
31	59	169/180 (94%)	133 (79%)	34 (20%)	2 (1%)	16	60
32	61	144/148 (97%)	123 (85%)	18 (12%)	3 (2%)	9	46
32	69	144/148 (97%)	120 (83%)	22 (15%)	2 (1%)	14	57
33	15	136/140 (97%)	126 (93%)	9 (7%)	1 (1%)	26	72
33	58	136/140 (97%)	115 (85%)	15 (11%)	6 (4%)	3	24
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%)	5	31
35	78	148/150 (99%)	114 (77%)	30 (20%)	4 (3%)	6	39
36	45	139/141 (99%)	113 (81%)	23 (16%)	3 (2%)	8	45
36	88	139/141 (99%)	113 (81%)	22 (16%)	4 (3%)	6	36
37	55	115/118 (98%)	102 (89%)	12 (10%)	1 (1%)	21	67
37	98	116/118 (98%)	106 (91%)	10 (9%)	0	100	100
38	65	109/112 (97%)	95 (87%)	12 (11%)	2 (2%)	11	51
38	A8	109/112 (97%)	91 (84%)	17 (16%)	1 (1%)	21	67
39	75	135/146 (92%)	113 (84%)	19 (14%)	3 (2%)	8	45

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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%)	5	35
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%)	17	62
43	F8	92/96 (96%)	85 (92%)	6 (6%)	1 (1%)	17	62
44	C5	102/110 (93%)	70 (69%)	29 (28%)	3 (3%)	6	36
44	G8	102/110 (93%)	80 (78%)	19 (19%)	3 (3%)	6	36
45	D5	177/206 (86%)	141 (80%)	31 (18%)	5 (3%)	6	37
45	H8	173/206 (84%)	141 (82%)	25 (14%)	7 (4%)	4	27
46	E5	75/85 (88%)	69 (92%)	5 (7%)	1 (1%)	15	59
46	I8	81/85 (95%)	72 (89%)	8 (10%)	1 (1%)	16	60
47	F5	95/98 (97%)	85 (90%)	9 (10%)	1 (1%)	17	62
47	J8	95/98 (97%)	86 (90%)	7 (7%)	2 (2%)	9	46
48	G5	67/72 (93%)	57 (85%)	10 (15%)	0	100	100
48	K8	64/72 (89%)	61 (95%)	1 (2%)	2 (3%)	5	34
49	H5	57/60 (95%)	52 (91%)	4 (7%)	1 (2%)	11	51
49	L8	57/60 (95%)	54 (95%)	3 (5%)	0	100	100
50	I5	61/71 (86%)	35 (57%)	22 (36%)	4 (7%)	1	12
50	M8	64/71 (90%)	44 (69%)	19 (30%)	1 (2%)	12	54
51	J5	57/60 (95%)	48 (84%)	7 (12%)	2 (4%)	4	31
51	N8	57/60 (95%)	50 (88%)	6 (10%)	1 (2%)	11	51
52	L5	47/49 (96%)	45 (96%)	2 (4%)	0	100	100
52	P8	45/49 (92%)	41 (91%)	2 (4%)	2 (4%)	3	24
53	M5	61/65 (94%)	54 (88%)	4 (7%)	3 (5%)	3	22
53	Q8	60/65 (92%)	49 (82%)	7 (12%)	4 (7%)	1	12
All	All	11538/12404 (93%)	10164 (88%)	1238 (11%)	136 (1%)	16	60

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	12
2	1E	205/220 (93%)	168 (82%)	37 (18%)	2	11
3	22	160/188 (85%)	131 (82%)	29 (18%)	2	11
3	2E	159/188 (85%)	136 (86%)	23 (14%)	4	19
4	32	180/181 (99%)	152 (84%)	28 (16%)	3	15
4	3E	180/181 (99%)	155 (86%)	25 (14%)	4	20
5	42	116/123 (94%)	96 (83%)	20 (17%)	2	12
5	4E	116/123 (94%)	92 (79%)	24 (21%)	1	7
6	52	90/90 (100%)	81 (90%)	9 (10%)	9	37
6	5E	90/90 (100%)	79 (88%)	11 (12%)	6	27
7	62	126/127 (99%)	110 (87%)	16 (13%)	5	25
7	6E	126/127 (99%)	111 (88%)	15 (12%)	6	28
8	72	119/119 (100%)	103 (87%)	16 (13%)	5	22
8	7E	119/119 (100%)	108 (91%)	11 (9%)	11	41
9	82	97/99 (98%)	81 (84%)	16 (16%)	3	13
9	8E	98/99 (99%)	85 (87%)	13 (13%)	5	23
10	1A	89/92 (97%)	79 (89%)	10 (11%)	7	32

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
10	1I	89/92 (97%)	78 (88%)	11 (12%)	6	27
11	2A	90/99 (91%)	79 (88%)	11 (12%)	6	27
11	2I	88/99 (89%)	79 (90%)	9 (10%)	9	36
12	3A	104/109 (95%)	90 (86%)	14 (14%)	5	22
12	3I	104/109 (95%)	93 (89%)	11 (11%)	8	34
13	4A	94/101 (93%)	79 (84%)	15 (16%)	3	14
13	4I	94/101 (93%)	85 (90%)	9 (10%)	10	39
14	5A	49/50 (98%)	43 (88%)	6 (12%)	6	27
14	5I	49/50 (98%)	41 (84%)	8 (16%)	3	14
15	6A	79/80 (99%)	72 (91%)	7 (9%)	12	44
15	6I	79/80 (99%)	72 (91%)	7 (9%)	12	44
16	7A	72/74 (97%)	61 (85%)	11 (15%)	3	17
16	7I	72/74 (97%)	58 (81%)	14 (19%)	2	9
17	8A	95/97 (98%)	84 (88%)	11 (12%)	7	30
17	8I	95/97 (98%)	82 (86%)	13 (14%)	4	21
18	9A	63/77 (82%)	56 (89%)	7 (11%)	8	32
18	9I	63/77 (82%)	56 (89%)	7 (11%)	8	32
19	AA	67/80 (84%)	61 (91%)	6 (9%)	12	43
19	AI	72/80 (90%)	63 (88%)	9 (12%)	6	26
20	BA	76/82 (93%)	67 (88%)	9 (12%)	6	29
20	BI	76/82 (93%)	66 (87%)	10 (13%)	5	23
21	1B	20/22 (91%)	19 (95%)	1 (5%)	30	71
21	1F	20/22 (91%)	19 (95%)	1 (5%)	30	71
26	7I	111/181 (61%)	106 (96%)	5 (4%)	34	74
26	79	111/181 (61%)	109 (98%)	2 (2%)	66	89
27	11	214/218 (98%)	174 (81%)	40 (19%)	2	10
27	19	214/218 (98%)	176 (82%)	38 (18%)	2	11
28	21	165/166 (99%)	140 (85%)	25 (15%)	3	17
28	29	165/166 (99%)	141 (86%)	24 (14%)	4	19
29	31	161/166 (97%)	133 (83%)	28 (17%)	2	12
29	39	165/166 (99%)	132 (80%)	33 (20%)	1	8

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

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
45	H8	154/179 (86%)	118 (77%)	36 (23%)	1	4
46	E5	62/67 (92%)	50 (81%)	12 (19%)	2	9
46	I8	61/67 (91%)	50 (82%)	11 (18%)	2	11
47	F5	82/83 (99%)	66 (80%)	16 (20%)	2	9
47	J8	82/83 (99%)	65 (79%)	17 (21%)	1	7
48	G5	64/67 (96%)	53 (83%)	11 (17%)	2	12
48	K8	62/67 (92%)	46 (74%)	16 (26%)	0	2
49	H5	51/52 (98%)	39 (76%)	12 (24%)	1	4
49	L8	51/52 (98%)	35 (69%)	16 (31%)	0	1
50	I5	57/63 (90%)	42 (74%)	15 (26%)	0	2
50	M8	59/63 (94%)	49 (83%)	10 (17%)	2	13
51	J5	51/52 (98%)	41 (80%)	10 (20%)	1	9
51	N8	51/52 (98%)	38 (74%)	13 (26%)	1	2
52	L5	42/42 (100%)	34 (81%)	8 (19%)	2	10
52	P8	40/42 (95%)	34 (85%)	6 (15%)	3	17
53	M5	53/55 (96%)	41 (77%)	12 (23%)	1	5
53	Q8	52/55 (94%)	39 (75%)	13 (25%)	1	2
All	All	9717/10256 (95%)	8094 (83%)	1623 (17%)	3	13

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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Mol	Chain	Res	Type
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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Mol	Chain	Res	Type
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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Mol	Chain	Res	Type
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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Mol	Chain	Res	Type
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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Mol	Chain	Res	Type
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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Mol	Chain	Res	Type
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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Mol	Chain	Res	Type
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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Mol	Chain	Res	Type
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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Mol	Chain	Res	Type
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	OMG	2K	17	22	18,26,27	5.64	6 (33%)	21,38,41	6.11	7 (33%)
22	QUO	2K	35	22,23	27,35,36	5.78	9 (33%)	30,52,55	4.03	9 (30%)
22	MIA	2K	38	22	22,31,32	1.55	2 (9%)	26,44,47	3.85	3 (11%)
22	PSU	2K	40	22	15,21,22	3.54	5 (33%)	16,30,33	2.00	2 (12%)
22	5MU	2K	63	22	13,22,23	1.58	2 (15%)	16,32,35	1.24	1 (6%)
22	PSU	2K	64	22	15,21,22	3.80	5 (33%)	16,30,33	2.00	4 (25%)
22	4SU	2K	8	22	12,21,22	3.18	2 (16%)	15,30,33	0.88	1 (6%)
22	OMG	2L	17	22	18,26,27	5.59	6 (33%)	21,38,41	6.18	6 (28%)
22	QUO	2L	35	22,23	27,35,36	5.88	9 (33%)	30,52,55	4.32	10 (33%)
22	MIA	2L	38	22	22,31,32	1.23	1 (4%)	26,44,47	3.02	5 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
22	PSU	2L	40	22	15,21,22	3.55	4 (26%)	16,30,33	2.09	3 (18%)
22	5MU	2L	63	22	13,22,23	1.71	2 (15%)	16,32,35	1.20	1 (6%)
22	PSU	2L	64	22	15,21,22	4.07	5 (33%)	16,30,33	2.12	4 (25%)
22	4SU	2L	8	22	12,21,22	3.17	2 (16%)	15,30,33	1.23	1 (6%)
22	OMG	3K	17	22	18,26,27	5.56	6 (33%)	21,38,41	5.84	7 (33%)
22	QUO	3K	35	22	27,35,36	5.82	9 (33%)	30,52,55	3.98	11 (36%)
22	MIA	3K	38	22	22,31,32	1.56	2 (9%)	26,44,47	2.36	5 (19%)
22	PSU	3K	40	22	15,21,22	3.71	4 (26%)	16,30,33	2.02	3 (18%)
22	5MU	3K	63	22	13,22,23	1.69	2 (15%)	16,32,35	1.57	1 (6%)
22	PSU	3K	64	22	15,21,22	3.92	5 (33%)	16,30,33	2.01	5 (31%)
22	4SU	3K	8	22	12,21,22	3.06	2 (16%)	15,30,33	0.63	0
22	OMG	3L	17	22	18,26,27	5.71	6 (33%)	21,38,41	6.07	9 (42%)
22	QUO	3L	35	22	27,35,36	5.89	9 (33%)	30,52,55	3.92	9 (30%)
22	MIA	3L	38	22	22,31,32	1.25	1 (4%)	26,44,47	2.82	5 (19%)
22	PSU	3L	40	22	15,21,22	3.80	5 (33%)	16,30,33	2.07	2 (12%)
22	5MU	3L	63	22	13,22,23	1.66	2 (15%)	16,32,35	1.59	1 (6%)
22	PSU	3L	64	22	15,21,22	3.97	5 (33%)	16,30,33	2.46	4 (25%)
22	4SU	3L	8	55,22	12,21,22	3.35	2 (16%)	15,30,33	1.12	1 (6%)

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

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	4SU	2L	8	22	-	0/3/25/26	0/2/2/2
22	OMG	3K	17	22	-	0/5/27/28	0/3/3/3
22	QUO	3K	35	22	-	0/6/43/44	0/4/4/4
22	MIA	3K	38	22	-	0/11/33/34	0/3/3/3
22	PSU	3K	40	22	-	0/7/25/26	0/2/2/2
22	5MU	3K	63	22	-	0/3/25/26	0/2/2/2
22	PSU	3K	64	22	-	0/7/25/26	0/2/2/2
22	4SU	3K	8	22	-	0/3/25/26	0/2/2/2
22	OMG	3L	17	22	-	0/5/27/28	0/3/3/3
22	QUO	3L	35	22	-	0/6/43/44	0/4/4/4
22	MIA	3L	38	22	-	0/11/33/34	0/3/3/3
22	PSU	3L	40	22	-	0/7/25/26	0/2/2/2
22	5MU	3L	63	22	-	0/3/25/26	0/2/2/2
22	PSU	3L	64	22	-	0/7/25/26	0/2/2/2
22	4SU	3L	8	55,22	-	0/3/25/26	0/2/2/2

All (120) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	2L	17	OMG	C8-N7	-13.62	1.08	1.34
22	2K	17	OMG	C8-N7	-13.44	1.08	1.34
22	3L	17	OMG	C8-N7	-13.40	1.08	1.34
22	3K	17	OMG	C8-N7	-13.23	1.09	1.34
22	2L	64	PSU	C5-C1'	-13.09	1.40	1.52
22	3K	64	PSU	C5-C1'	-12.80	1.41	1.52
22	3L	64	PSU	C5-C1'	-12.79	1.41	1.52
22	3L	40	PSU	C5-C1'	-12.29	1.41	1.52
22	2K	64	PSU	C5-C1'	-11.89	1.41	1.52
22	3K	40	PSU	C5-C1'	-11.79	1.42	1.52
22	2K	40	PSU	C5-C1'	-11.25	1.42	1.52
22	2L	40	PSU	C5-C1'	-11.15	1.42	1.52
22	3K	35	QUO	C8-N9	-10.48	1.23	1.38
22	2K	35	QUO	C8-N9	-10.08	1.23	1.38
22	3L	35	QUO	C8-N9	-9.99	1.23	1.38
22	2L	35	QUO	C8-N9	-9.89	1.24	1.38
22	3L	35	QUO	C6-N1	-9.58	1.15	1.33
22	2K	35	QUO	C6-N1	-9.58	1.15	1.33
22	3K	35	QUO	C6-N1	-8.81	1.17	1.33
22	2L	35	QUO	C6-N1	-8.29	1.18	1.33
22	2K	35	QUO	C6-C5	-7.26	1.29	1.41
22	3L	35	QUO	C6-C5	-6.62	1.30	1.41
22	3K	35	QUO	C6-C5	-6.32	1.31	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	2L	35	QUO	C6-C5	-5.91	1.31	1.41
22	3L	17	OMG	C6-N1	-4.87	1.24	1.33
22	2K	17	OMG	C6-N1	-4.80	1.24	1.33
22	2L	17	OMG	C6-N1	-4.73	1.24	1.33
22	3K	17	OMG	C6-N1	-4.40	1.25	1.33
22	3L	35	QUO	C14-C13	-3.56	1.48	1.53
22	2L	63	5MU	C4-N3	-3.03	1.27	1.33
22	2K	63	5MU	C4-N3	-3.02	1.27	1.33
22	3K	63	5MU	C4-N3	-3.02	1.27	1.33
22	2L	35	QUO	C14-C13	-3.01	1.49	1.53
22	3L	63	5MU	C4-N3	-2.71	1.28	1.33
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	C14-C13	-2.59	1.49	1.53
22	3K	17	OMG	O6-C6	-2.41	1.18	1.24
22	2K	17	OMG	O6-C6	-2.36	1.18	1.24
22	2K	35	QUO	C14-C13	-2.01	1.50	1.53
22	3K	64	PSU	C2-N3	2.05	1.42	1.38
22	2K	40	PSU	C2-N3	2.13	1.42	1.38
22	2L	64	PSU	C2-N3	2.21	1.42	1.38
22	3L	40	PSU	C2-N3	2.24	1.42	1.38
22	2L	35	QUO	C16-C15	2.31	1.60	1.54
22	3L	35	QUO	C16-C15	2.32	1.60	1.54
22	2K	40	PSU	C2-N1	2.34	1.43	1.38
22	2K	35	QUO	C16-C15	2.42	1.60	1.54
22	3K	35	QUO	C16-C15	2.50	1.61	1.54
22	2K	38	MIA	C6-N1	2.53	1.36	1.33
22	3L	64	PSU	C2-N3	2.66	1.43	1.38
22	2L	40	PSU	C2-N1	2.71	1.43	1.38
22	3L	40	PSU	C2-N1	2.73	1.43	1.38
22	3K	40	PSU	C2-N1	2.78	1.44	1.38
22	2K	64	PSU	C2-N3	2.83	1.44	1.38
22	3K	64	PSU	C2-N1	3.11	1.44	1.38
22	3L	64	PSU	C2-N1	3.11	1.44	1.38
22	3L	35	QUO	C2-N3	3.13	1.51	1.35
22	3K	35	QUO	C2-N3	3.17	1.51	1.35
22	2K	35	QUO	C2-N3	3.21	1.52	1.35
22	2K	17	OMG	C2-N2	3.24	1.40	1.34
22	2L	64	PSU	C2-N1	3.25	1.44	1.38
22	2L	17	OMG	C2-N2	3.26	1.41	1.34
22	3K	38	MIA	C6-N1	3.26	1.37	1.33
22	2K	64	PSU	C2-N1	3.31	1.45	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	3K	17	OMG	C2-N2	3.39	1.41	1.34
22	3L	17	OMG	C2-N2	3.44	1.41	1.34
22	2L	35	QUO	C2-N3	3.45	1.53	1.35
22	3K	64	PSU	C4-N3	3.75	1.39	1.33
22	3L	40	PSU	C4-N3	3.90	1.40	1.33
22	2K	40	PSU	C4-N3	3.97	1.40	1.33
22	2L	40	PSU	C4-N3	3.98	1.40	1.33
22	2K	64	PSU	C4-N3	4.07	1.40	1.33
22	3K	40	PSU	C4-N3	4.07	1.40	1.33
22	3L	64	PSU	C4-N3	4.21	1.40	1.33
22	2L	64	PSU	C4-N3	4.23	1.40	1.33
22	3L	35	QUO	C2-N2	4.36	1.43	1.34
22	2K	63	5MU	C2-N3	4.42	1.47	1.38
22	2L	38	MIA	C2-S10	4.71	1.79	1.75
22	3K	35	QUO	C2-N2	4.71	1.44	1.34
22	2K	35	QUO	C2-N2	4.85	1.44	1.34
22	2L	63	5MU	C2-N3	4.87	1.48	1.38
22	3K	63	5MU	C2-N3	4.90	1.48	1.38
22	3L	38	MIA	C2-S10	4.95	1.80	1.75
22	3L	63	5MU	C2-N3	5.03	1.48	1.38
22	2L	35	QUO	C2-N2	5.31	1.45	1.34
22	2K	40	PSU	C6-N1	5.48	1.45	1.34
22	2L	40	PSU	C6-N1	5.70	1.46	1.34
22	3L	40	PSU	C6-N1	5.76	1.46	1.34
22	2K	64	PSU	C6-N1	5.79	1.46	1.34
22	3K	40	PSU	C6-N1	5.85	1.46	1.34
22	3K	64	PSU	C6-N1	5.85	1.46	1.34
22	3L	64	PSU	C6-N1	5.96	1.46	1.34
22	3K	38	MIA	C2-S10	6.02	1.80	1.75
22	2L	64	PSU	C6-N1	6.30	1.47	1.34
22	2K	8	4SU	C6-N1	6.35	1.44	1.35
22	2K	38	MIA	C2-S10	6.39	1.81	1.75
22	3K	8	4SU	C6-N1	6.55	1.44	1.35
22	2L	8	4SU	C6-N1	6.61	1.44	1.35
22	3L	8	4SU	C6-N1	7.08	1.44	1.35
22	3K	8	4SU	C5-C4	8.01	1.48	1.38
22	2L	8	4SU	C5-C4	8.55	1.49	1.38
22	2K	8	4SU	C5-C4	8.86	1.50	1.38
22	3L	8	4SU	C5-C4	8.95	1.50	1.38
22	2L	17	OMG	C5-C4	9.29	1.61	1.40
22	3K	17	OMG	C5-C4	9.32	1.61	1.40
22	3L	17	OMG	C5-C4	9.47	1.61	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	2K	17	OMG	C5-C4	9.48	1.61	1.40
22	3K	35	QUO	C7-C5	10.43	1.56	1.41
22	2K	35	QUO	C7-C5	10.60	1.56	1.41
22	3L	35	QUO	C7-C5	10.86	1.56	1.41
22	2L	35	QUO	C7-C5	11.29	1.57	1.41
22	2L	17	OMG	C4-N3	15.71	1.60	1.35
22	3K	17	OMG	C4-N3	15.94	1.60	1.35
22	2K	17	OMG	C4-N3	16.02	1.61	1.35
22	3L	17	OMG	C4-N3	16.40	1.61	1.35
22	2K	35	QUO	C4-N3	22.00	1.70	1.35
22	3K	35	QUO	C4-N3	22.75	1.71	1.35
22	3L	35	QUO	C4-N3	22.86	1.71	1.35
22	2L	35	QUO	C4-N3	23.24	1.72	1.35

All (120) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	2L	35	QUO	C8-N9-C1'	-14.88	113.83	125.45
22	2K	35	QUO	C8-N9-C1'	-13.98	114.53	125.45
22	3K	35	QUO	C1'-N9-C4	-13.78	111.42	126.81
22	3K	17	OMG	C6-C5-C4	-12.45	106.64	120.86
22	2L	17	OMG	C6-C5-C4	-12.08	107.06	120.86
22	2K	17	OMG	C6-C5-C4	-11.51	107.70	120.86
22	3L	17	OMG	C6-C5-C4	-11.13	108.14	120.86
22	3L	35	QUO	C1'-N9-C4	-10.72	114.84	126.81
22	3L	35	QUO	C8-N9-C1'	-10.65	117.13	125.45
22	2L	35	QUO	N3-C2-N1	-9.34	114.86	127.56
22	2L	35	QUO	C1'-N9-C4	-8.88	116.89	126.81
22	2K	35	QUO	C1'-N9-C4	-8.46	117.36	126.81
22	3K	35	QUO	N3-C2-N1	-8.43	116.09	127.56
22	3L	35	QUO	N3-C2-N1	-8.40	116.14	127.56
22	2K	35	QUO	N3-C2-N1	-7.78	116.97	127.56
22	3K	17	OMG	N3-C2-N1	-6.72	118.42	127.56
22	3K	35	QUO	C8-N9-C1'	-6.42	120.43	125.45
22	3L	17	OMG	N3-C2-N1	-6.36	118.90	127.56
22	2L	17	OMG	N3-C2-N1	-6.24	119.07	127.56
22	2K	17	OMG	N3-C2-N1	-6.12	119.22	127.56
22	3L	64	PSU	C5-C1'-C2'	-5.22	106.57	115.44
22	3L	38	MIA	C12-N6-C6	-4.41	118.35	123.46
22	2L	8	4SU	C5-C4-N3	-3.88	119.45	123.56
22	3L	8	4SU	C5-C4-N3	-3.77	119.56	123.56
22	2L	64	PSU	C5-C6-N1	-3.71	119.21	124.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	2K	38	MIA	N3-C2-N1	-3.50	120.39	126.84
22	3K	64	PSU	C5-C6-N1	-3.36	119.70	124.38
22	3K	35	QUO	C7-C5-C4	-3.01	103.78	110.00
22	3K	38	MIA	N3-C2-N1	-3.00	121.31	126.84
22	3K	64	PSU	C5-C1'-C2'	-2.82	110.64	115.44
22	2L	38	MIA	C5-C6-N1	-2.79	117.75	120.58
22	2K	8	4SU	C5-C4-N3	-2.79	120.61	123.56
22	3L	35	QUO	C7-C5-C4	-2.76	104.32	110.00
22	3K	35	QUO	C7-C10-N11	-2.67	104.77	112.59
22	2L	40	PSU	C5-C1'-C2'	-2.65	110.93	115.44
22	3K	35	QUO	C7-C8-N9	-2.60	101.01	109.19
22	2L	35	QUO	C7-C8-N9	-2.56	101.15	109.19
22	3L	35	QUO	C7-C8-N9	-2.53	101.25	109.19
22	3L	64	PSU	C5-C6-N1	-2.50	120.90	124.38
22	3K	35	QUO	C10-N11-C12	-2.46	109.46	115.05
22	2K	35	QUO	C7-C5-C4	-2.40	105.05	110.00
22	3K	40	PSU	C5-C6-N1	-2.38	121.06	124.38
22	2L	35	QUO	C7-C5-C4	-2.37	105.12	110.00
22	3L	38	MIA	N3-C2-N1	-2.32	122.56	126.84
22	2K	35	QUO	C7-C8-N9	-2.28	102.01	109.19
22	3K	40	PSU	O2'-C2'-C1'	-2.20	107.15	111.93
22	2L	64	PSU	C4-C5-C1'	-2.19	117.53	121.22
22	2K	64	PSU	C5-C6-N1	-2.18	121.34	124.38
22	3K	35	QUO	C16-C12-N11	-2.17	109.21	112.85
22	3K	38	MIA	C5-C6-N1	-2.16	118.39	120.58
22	2L	38	MIA	N3-C2-N1	-2.14	122.89	126.84
22	2K	17	OMG	C3'-C2'-C1'	-2.14	98.53	102.63
22	3K	64	PSU	O2'-C2'-C1'	-2.12	107.33	111.93
22	2K	35	QUO	C16-C15-C14	-2.11	103.76	105.83
22	3L	40	PSU	C5-C6-N1	-2.10	121.45	124.38
22	3L	17	OMG	C3'-C2'-C1'	-2.10	98.61	102.63
22	2L	40	PSU	O2'-C2'-C1'	-2.09	107.38	111.93
22	3K	17	OMG	C4'-O4'-C1'	-2.02	107.50	109.64
22	3L	17	OMG	C4'-O4'-C1'	-2.01	107.52	109.64
22	2L	35	QUO	C10-N11-C12	-2.01	110.48	115.05
22	3L	17	OMG	N2-C2-N1	2.11	120.67	117.20
22	3K	38	MIA	N6-C6-N1	2.18	121.14	118.55
22	3K	64	PSU	O4'-C1'-C2'	2.23	107.10	104.69
22	3L	35	QUO	N2-C2-N3	2.28	121.99	117.72
22	3L	64	PSU	O4'-C1'-C2'	2.30	107.17	104.69
22	3L	17	OMG	O4'-C1'-N9	2.34	112.53	108.11
22	2L	64	PSU	O4'-C1'-C2'	2.38	107.27	104.69

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	2K	40	PSU	O4'-C1'-C2'	2.42	107.31	104.69
22	2K	17	OMG	N2-C2-N1	2.60	121.49	117.20
22	2K	64	PSU	O4'-C1'-C2'	2.63	107.53	104.69
22	2L	35	QUO	N2-C2-N1	2.73	121.70	117.20
22	3L	38	MIA	C2-N1-C6	2.78	120.76	113.13
22	3L	35	QUO	N2-C2-N1	2.83	121.87	117.20
22	2L	38	MIA	C2-N1-C6	2.91	121.14	113.13
22	3K	38	MIA	C2-N1-C6	2.97	121.30	113.13
22	2L	35	QUO	N2-C2-N3	3.05	123.44	117.72
22	2K	38	MIA	C2-N1-C6	3.17	121.85	113.13
22	2L	17	OMG	N2-C2-N1	3.32	122.68	117.20
22	2K	64	PSU	C4-C5-C1'	3.37	126.90	121.22
22	2K	35	QUO	N2-C2-N1	3.38	122.77	117.20
22	3K	17	OMG	N2-C2-N1	3.53	123.02	117.20
22	2L	38	MIA	C1'-N9-C4	3.59	130.81	126.81
22	2K	63	5MU	C4-N3-C2	3.77	118.30	115.16
22	3K	35	QUO	N2-C2-N1	3.80	123.47	117.20
22	2L	63	5MU	C4-N3-C2	4.20	118.67	115.16
22	2K	35	QUO	C5-C6-N1	4.21	127.38	124.15
22	2K	17	OMG	C5-C6-N1	4.38	129.25	123.52
22	3K	35	QUO	C5-C6-N1	4.42	127.55	124.15
22	2L	35	QUO	C5-C6-N1	4.47	127.58	124.15
22	3K	17	OMG	C5-C6-N1	4.59	129.53	123.52
22	3L	17	OMG	C5-C6-N1	4.82	129.83	123.52
22	2L	17	OMG	C5-C6-N1	4.84	129.85	123.52
22	3L	38	MIA	C1'-N9-C4	5.06	132.45	126.81
22	3K	64	PSU	C4-N3-C2	5.23	119.52	115.16
22	3K	63	5MU	C4-N3-C2	5.56	119.80	115.16
22	2K	64	PSU	C4-N3-C2	5.71	119.92	115.16
22	3L	63	5MU	C4-N3-C2	5.81	120.00	115.16
22	2L	64	PSU	C4-N3-C2	5.87	120.05	115.16
22	3L	35	QUO	C5-C6-N1	6.19	128.90	124.15
22	3L	40	PSU	C4-N3-C2	6.36	120.47	115.16
22	2L	40	PSU	C4-N3-C2	6.70	120.74	115.16
22	3K	40	PSU	C4-N3-C2	6.78	120.82	115.16
22	3L	64	PSU	C4-N3-C2	6.81	120.84	115.16
22	2K	40	PSU	C4-N3-C2	6.90	120.92	115.16
22	3L	35	QUO	C6-N1-C2	9.29	126.77	115.88
22	3K	35	QUO	C6-N1-C2	9.37	126.86	115.88
22	2K	35	QUO	C6-N1-C2	9.49	127.00	115.88
22	3K	38	MIA	C11-S10-C2	10.29	109.57	102.31
22	2L	35	QUO	C6-N1-C2	10.34	127.99	115.88

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	3L	38	MIA	C11-S10-C2	11.75	110.60	102.31
22	2L	17	OMG	C6-N1-C2	11.92	129.85	115.88
22	3L	17	OMG	C6-N1-C2	11.96	129.90	115.88
22	2K	17	OMG	C6-N1-C2	12.22	130.20	115.88
22	3K	17	OMG	C6-N1-C2	12.63	130.68	115.88
22	2L	38	MIA	C11-S10-C2	13.89	112.11	102.31
22	3K	17	OMG	C1'-N9-C4	17.45	146.27	126.81
22	2K	38	MIA	C11-S10-C2	18.60	115.43	102.31
22	3L	17	OMG	C1'-N9-C4	20.33	149.50	126.81
22	2K	17	OMG	C1'-N9-C4	20.36	149.53	126.81
22	2L	17	OMG	C1'-N9-C4	20.64	149.83	126.81

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

25 monomers are involved in 58 short contacts:

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

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	3L	64	PSU	2	0
22	3L	8	4SU	2	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, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	13	1501/1522 (98%)	0.17	32 (2%) 67 52	77, 129, 208, 407	0
2	12	237/256 (92%)	0.43	31 (13%) 5 3	137, 175, 213, 240	0
2	1E	237/256 (92%)	0.70	39 (16%) 2 1	131, 168, 201, 234	0
3	22	206/239 (86%)	0.52	28 (13%) 4 2	135, 156, 189, 209	0
3	2E	205/239 (85%)	0.50	22 (10%) 8 4	122, 142, 197, 207	0
4	32	208/209 (99%)	1.30	58 (27%) 1 0	108, 130, 156, 169	0
4	3E	208/209 (99%)	1.37	53 (25%) 1 0	104, 129, 155, 182	0
5	42	151/162 (93%)	0.43	17 (11%) 7 4	107, 128, 153, 194	0
5	4E	151/162 (93%)	0.57	16 (10%) 8 4	102, 125, 153, 204	0
6	52	101/101 (100%)	0.01	1 (0%) 84 75	101, 120, 138, 153	0
6	5E	101/101 (100%)	0.25	3 (2%) 54 39	105, 129, 146, 163	0
7	62	155/156 (99%)	1.14	33 (21%) 1 1	128, 144, 162, 171	0
7	6E	155/156 (99%)	0.74	27 (17%) 2 1	123, 149, 172, 184	0
8	72	138/138 (100%)	0.75	25 (18%) 2 1	111, 132, 143, 170	0
8	7E	138/138 (100%)	1.26	41 (29%) 1 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%)	1.47	30 (30%) 1 0	135, 170, 191, 206	0
10	1I	99/105 (94%)	0.97	23 (23%) 1 1	121, 166, 195, 209	0
11	2A	119/129 (92%)	0.96	11 (9%) 11 6	105, 125, 157, 256	0
11	2I	116/129 (89%)	0.42	8 (6%) 20 11	93, 126, 153, 203	0
12	3A	125/132 (94%)	1.35	39 (31%) 1 0	96, 114, 144, 188	0
12	3I	125/132 (94%)	1.08	29 (23%) 1 1	91, 104, 136, 239	0
13	4A	117/126 (92%)	1.18	30 (25%) 1 0	138, 174, 197, 229	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å²)		Q<0.9	
13	4I	116/126 (92%)	0.92	26 (22%)	1	1	127, 173, 195, 208	0
14	5A	60/61 (98%)	3.07	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%)	1	0	100, 128, 146, 152	0
15	6I	88/89 (98%)	0.45	7 (7%)	15	8	103, 127, 147, 154	0
16	7A	84/88 (95%)	0.75	15 (17%)	2	1	108, 121, 141, 189	0
16	7I	84/88 (95%)	1.38	29 (34%)	0	0	119, 136, 162, 196	0
17	8A	100/105 (95%)	1.22	24 (24%)	1	1	104, 121, 140, 197	0
17	8I	100/105 (95%)	0.83	14 (14%)	4	2	112, 132, 146, 150	0
18	9A	72/88 (81%)	0.33	1 (1%)	78	65	107, 127, 185, 223	0
18	9I	72/88 (81%)	0.22	4 (5%)	28	16	111, 130, 164, 208	0
19	AA	82/93 (88%)	2.45	46 (56%)	0	0	152, 196, 219, 232	0
19	AI	83/93 (89%)	1.63	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%)	3.48	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%)	8	4	95, 145, 276, 308	0
22	2L	71/85 (83%)	-0.03	4 (5%)	28	16	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%)	59	45	93, 213, 284, 309	0
23	4K	11/27 (40%)	0.97	2 (18%)	2	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	59 (2%)	68	54	65, 99, 266, 424	0
24	1H	2912/2917 (99%)	0.29	36 (1%)	81	69	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%)	-0.07	2 (1%)	74	62	102, 138, 160, 226	0
26	71	135/229 (58%)	1.45	35 (25%)	1	0	152, 213, 248, 256	0
26	79	135/229 (58%)	1.19	38 (28%)	1	0	159, 237, 261, 265	0
27	11	272/276 (98%)	0.64	16 (5%)	26	14	60, 82, 103, 122	0
27	19	273/276 (98%)	0.86	39 (14%)	4	2	64, 87, 104, 133	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	21	205/206 (99%)	1.06	42 (20%) 1 1	68, 105, 159, 229	0
28	29	205/206 (99%)	1.20	53 (25%) 1 0	71, 102, 169, 251	0
29	31	202/210 (96%)	0.82	23 (11%) 7 4	61, 95, 137, 152	0
29	39	208/210 (99%)	0.80	24 (11%) 6 4	71, 113, 184, 198	0
30	41	181/182 (99%)	0.60	24 (13%) 4 2	127, 159, 197, 218	0
30	49	181/182 (99%)	1.01	39 (21%) 1 1	142, 165, 197, 213	0
31	51	174/180 (96%)	0.05	2 (1%) 82 72	98, 122, 145, 174	0
31	59	171/180 (95%)	1.35	55 (32%) 1 0	148, 205, 246, 335	0
32	61	146/148 (98%)	0.01	4 (2%) 58 44	99, 136, 162, 176	0
32	69	146/148 (98%)	0.01	4 (2%) 58 44	100, 143, 171, 191	0
33	15	138/140 (98%)	1.15	35 (25%) 1 0	86, 115, 153, 196	0
33	58	138/140 (98%)	0.88	18 (13%) 5 3	86, 108, 153, 174	0
34	25	122/122 (100%)	0.96	22 (18%) 2 1	77, 98, 113, 122	0
34	68	122/122 (100%)	0.48	4 (3%) 50 35	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%) 8 4	65, 101, 126, 244	0
36	45	141/141 (100%)	1.47	48 (34%) 0 0	88, 117, 144, 179	0
36	88	141/141 (100%)	0.92	22 (15%) 3 2	78, 107, 139, 170	0
37	55	117/118 (99%)	0.66	7 (5%) 25 14	74, 94, 109, 130	0
37	98	118/118 (100%)	0.59	9 (7%) 17 9	79, 100, 119, 136	0
38	65	111/112 (99%)	1.37	36 (32%) 1 0	109, 130, 159, 180	0
38	A8	111/112 (99%)	1.19	32 (28%) 1 0	102, 123, 157, 203	0
39	75	137/146 (93%)	0.46	9 (6%) 22 12	88, 105, 157, 218	0
39	B8	137/146 (93%)	0.58	11 (8%) 15 8	92, 113, 171, 204	0
40	85	117/118 (99%)	0.78	13 (11%) 7 4	77, 109, 146, 183	0
40	C8	117/118 (99%)	1.27	32 (27%) 1 0	66, 97, 138, 182	0
41	95	101/101 (100%)	0.40	10 (9%) 9 5	80, 136, 158, 200	0
41	D8	101/101 (100%)	1.03	23 (22%) 1 1	71, 118, 159, 234	0
42	A5	113/113 (100%)	1.28	20 (17%) 2 1	74, 89, 125, 209	0
42	E8	113/113 (100%)	0.74	12 (10%) 8 4	74, 89, 121, 227	0
43	B5	93/96 (96%)	0.48	5 (5%) 29 17	86, 97, 119, 137	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
43	F8	94/96 (97%)	0.45	5 (5%) 30 17	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%) 6 4	85, 108, 158, 205	0
45	D5	179/206 (86%)	0.92	34 (18%) 2 1	121, 163, 275, 332	0
45	H8	175/206 (84%)	0.23	12 (6%) 20 11	111, 157, 273, 304	0
46	E5	77/85 (90%)	1.67	31 (40%) 0 0	86, 102, 123, 174	0
46	I8	83/85 (97%)	1.31	25 (30%) 1 0	83, 99, 122, 165	0
47	F5	97/98 (98%)	1.54	31 (31%) 1 0	76, 96, 155, 197	0
47	J8	97/98 (98%)	2.26	44 (45%) 0 0	70, 93, 171, 227	0
48	G5	69/72 (95%)	0.52	3 (4%) 39 25	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%)	1.38	16 (27%) 1 0	91, 112, 169, 182	0
49	L8	59/60 (98%)	0.87	10 (16%) 2 1	87, 103, 149, 177	0
50	I5	63/71 (88%)	1.61	18 (28%) 1 0	165, 225, 254, 292	0
50	M8	66/71 (92%)	2.51	33 (50%) 0 0	156, 231, 273, 282	0
51	J5	59/60 (98%)	0.82	7 (11%) 6 3	71, 96, 206, 229	0
51	N8	59/60 (98%)	0.92	6 (10%) 9 5	64, 101, 224, 243	0
52	L5	49/49 (100%)	1.50	12 (24%) 1 1	69, 74, 108, 147	0
52	P8	47/49 (95%)	0.97	4 (8%) 13 7	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%)	1.29	13 (20%) 1 1	77, 92, 120, 133	0
54	1G	1504/1522 (98%)	0.21	47 (3%) 52 38	83, 130, 201, 419	0
All	All	21123/21920 (96%)	0.64	2474 (11%) 6 4	57, 120, 217, 431	0

All (2474) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
11	2A	129	SER	31.4
50	M8	66	SER	24.1
11	2A	128	ALA	21.5
26	71	1	PRO	20.6
19	AI	2	PRO	19.7
7	62	81	GLY	14.2
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	12.3
50	I5	63	TYR	12.0
31	59	96	ALA	11.8
14	5A	2	ALA	11.4
38	65	2	ALA	11.2
10	1A	64	GLU	11.2
24	14	2902	C	11.2
12	3A	129	ALA	11.0
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	9.6
35	78	150	ALA	9.4
8	72	1	MET	9.3
9	82	111	ARG	9.2
4	32	70	ILE	9.0
24	14	2901	C	8.9
28	29	204	ALA	8.9
13	4I	98	VAL	8.8
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
9	82	120	ARG	8.5
50	M8	65	ASP	8.5
50	I5	22	ILE	8.5
26	71	2	LYS	8.4

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Mol	Chain	Res	Type	RSRZ
47	F5	98	LEU	8.4
20	BI	57	ARG	8.3
2	1E	96	ARG	8.3
7	62	84	ASN	8.3
45	D5	143	GLY	8.0
45	D5	150	LEU	8.0
9	82	15	ALA	7.9
12	3I	129	ALA	7.9
26	79	51	PRO	7.9
13	4I	96	LEU	7.9
19	AA	79	THR	7.8
19	AI	3	ARG	7.8
47	F5	96	LYS	7.8
11	2I	12	ARG	7.8
26	79	58	VAL	7.8
26	71	32	LEU	7.7
9	82	64	THR	7.7
45	D5	149	SER	7.6
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
11	2A	127	LYS	7.4
13	4I	100	GLY	7.4
21	1B	14	TRP	7.4
20	BI	18	GLN	7.4
26	79	1	PRO	7.3
10	1A	59	SER	7.3
9	8E	117	HIS	7.3
2	1E	148	TYR	7.2
14	5A	61	TRP	7.2
4	3E	3	ARG	7.2
45	D5	179	ASP	7.2
45	D5	147	GLY	7.1
19	AA	10	PHE	7.1
14	5I	17	LYS	7.1
26	79	174	PRO	7.0
26	79	56	GLN	6.9
28	29	59	VAL	6.9
20	BI	16	HIS	6.9
26	71	43	VAL	6.9

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Mol	Chain	Res	Type	RSRZ
8	72	2	LEU	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
4	32	2	GLY	6.6
4	3E	209	ARG	6.6
13	4A	97	PRO	6.6
24	14	2799	A	6.6
24	1H	654(K)	C	6.6
2	1E	95	GLN	6.6
9	82	66	ARG	6.5
51	N8	60	VAL	6.5
47	F5	97	LEU	6.5
4	32	69	GLY	6.5
14	5I	14	PRO	6.5
28	29	151	TYR	6.5
52	L5	48	LYS	6.4
10	1A	67	THR	6.4
46	E5	75	LEU	6.4
26	71	33	ALA	6.4
3	22	177	THR	6.4
13	4I	111	LYS	6.4
45	D5	141	VAL	6.4
4	32	3	ARG	6.4
26	79	52	ARG	6.4
46	E5	21	LEU	6.3
9	82	126	SER	6.3
54	1G	1532	U	6.3
7	62	79	ARG	6.3
9	82	114	TYR	6.3
9	82	109	VAL	6.3
14	5A	57	ARG	6.3
19	AI	6	LYS	6.3
21	1F	15	ARG	6.2
50	M8	27	THR	6.2
10	1I	47	PHE	6.2
30	49	34	LEU	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
10	1A	47	PHE	6.1
21	1F	2	GLY	6.1
9	82	10	ARG	6.1
14	5A	15	LYS	6.1
50	M8	22	ILE	6.0
3	22	206	GLU	6.0
22	2K	49	A	6.0
19	AA	38	SER	6.0
35	78	149	GLU	6.0
24	14	5	A	6.0
52	P8	47	ARG	6.0
2	12	97	TRP	6.0
50	M8	31	ILE	6.0
10	1A	66	ARG	6.0
7	62	85	TYR	6.0
47	J8	95	LEU	6.0
13	4A	94	ARG	6.0
31	59	164	TYR	6.0
10	1I	59	SER	5.9
13	4I	102	ARG	5.9
30	49	39	ILE	5.9
42	A5	113	LYS	5.9
14	5I	30	ALA	5.9
21	1B	2	GLY	5.9
9	8E	126	SER	5.8
10	1A	65	LEU	5.8
45	H8	117	LEU	5.8
10	1A	62	HIS	5.8
21	1F	14	TRP	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
19	AA	12	ASP	5.7
9	82	119	ALA	5.7
19	AA	35	SER	5.7
33	15	84	LYS	5.7
50	M8	59	PHE	5.7
7	62	32	ARG	5.7
31	59	124	GLU	5.7

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Mol	Chain	Res	Type	RSRZ
7	6E	32	ARG	5.7
26	71	173	ALA	5.6
4	3E	2	GLY	5.6
24	14	2802	G	5.6
17	8I	26	GLN	5.6
31	59	169	VAL	5.6
26	79	2	LYS	5.6
9	82	14	VAL	5.6
38	A8	92	TYR	5.6
50	M8	60	GLN	5.6
4	3E	138	TYR	5.6
45	D5	173	ALA	5.6
14	5I	12	ARG	5.5
19	AA	33	THR	5.5
50	I5	54	GLY	5.5
8	7E	1	MET	5.5
21	1B	15	ARG	5.5
8	7E	131	GLY	5.5
31	59	95	ARG	5.5
31	59	33	LEU	5.5
38	A8	9	ARG	5.5
19	AI	71	LEU	5.5
31	59	111	HIS	5.5
21	1B	10	ARG	5.5
50	M8	64	GLY	5.5
31	59	152	ARG	5.5
8	7E	93	VAL	5.5
4	32	66	ARG	5.5
50	M8	28	LYS	5.5
14	5A	50	LYS	5.4
7	6E	84	ASN	5.4
38	A8	91	PRO	5.4
9	82	63	ILE	5.4
22	2K	54	C	5.4
4	32	207	TYR	5.4
9	8E	106	ALA	5.4
8	7E	132	GLU	5.4
13	4A	87	TYR	5.3
35	35	110	TYR	5.3
10	1I	60	ARG	5.3
38	A8	8	GLU	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
39	B8	106	SER	5.3
53	M5	40	GLU	5.3
9	8E	8	GLY	5.3
4	32	74	GLN	5.3
19	AI	78	ARG	5.3
22	2L	48	C	5.2
13	4A	2	ALA	5.2
4	3E	21	LEU	5.2
2	12	96	ARG	5.2
3	22	207	VAL	5.2
19	AA	53	ASN	5.2
38	65	34	HIS	5.2
26	71	176	GLY	5.2
34	25	1	MET	5.2
9	8E	36	TYR	5.2
9	82	69	GLY	5.2
24	1H	654(J)	A	5.2
8	72	3	THR	5.2
4	32	209	ARG	5.2
9	82	107	ARG	5.2
38	65	20	ARG	5.2
14	5I	13	THR	5.2
24	1H	1536	A	5.2
7	62	16	LEU	5.2
30	49	75	LYS	5.2
14	5A	39	LEU	5.2
28	21	205	ALA	5.2
33	15	75	TYR	5.2
26	71	28	LEU	5.1
8	7E	3	THR	5.1
46	I8	40	GLN	5.1
13	4A	98	VAL	5.1
26	71	174	PRO	5.1
26	71	218	MET	5.1
13	4A	88	ARG	5.1
2	12	163	PHE	5.1
8	7E	2	LEU	5.1
7	6E	79	ARG	5.1
50	M8	9	LEU	5.1

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

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Mol	Chain	Res	Type	RSRZ
26	79	49	ILE	4.8
26	71	41	VAL	4.8
8	7E	92	ARG	4.8
28	29	54	GLN	4.8
22	2K	52	G	4.8
9	82	18	PHE	4.7
26	79	164	ARG	4.7
38	A8	11	LYS	4.7
14	5I	8	GLU	4.7
19	AI	5	LEU	4.7
35	35	35	HIS	4.7
12	3A	19	ARG	4.7
9	82	78	LYS	4.7
31	59	88	LEU	4.7
9	8E	116	LYS	4.7
17	8I	27	PHE	4.7
13	4I	87	TYR	4.7
20	BI	68	LYS	4.7
45	D5	168	GLU	4.7
21	1B	22	ARG	4.7
26	79	34	THR	4.7
10	1I	46	ARG	4.7
45	D5	115	GLY	4.7
47	F5	22	GLY	4.7
9	8E	121	ARG	4.7
8	72	86	ILE	4.7
19	AA	41	VAL	4.7
10	1I	10	GLY	4.7
24	1H	2901	C	4.7
19	AA	13	ASP	4.7
35	35	68	GLN	4.6
46	E5	71	ASP	4.6
54	1G	1531	A	4.6
4	32	68	TYR	4.6
9	82	75	ASP	4.6
24	14	2898	U	4.6
17	8I	35	VAL	4.6
15	6A	68	ARG	4.6
9	82	124	GLN	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
36	45	10	ARG	4.6
40	C8	56	ASP	4.6
9	82	42	ARG	4.6
9	8E	119	ALA	4.6
38	A8	4	LEU	4.6
38	65	29	PHE	4.6
12	3A	89	ARG	4.6
28	29	152	LYS	4.6
45	D5	155	LEU	4.6
12	3I	47	LYS	4.6
45	D5	148	ASP	4.6
19	AA	31	ILE	4.6
33	15	85	ILE	4.6
16	7I	9	PHE	4.6
4	3E	24	GLU	4.6
7	62	36	LYS	4.6
9	8E	115	GLY	4.5
41	95	74	LYS	4.5
50	M8	30	GLU	4.5
29	39	44	ARG	4.5
26	71	11	LEU	4.5
36	45	12	GLN	4.5
51	N8	59	GLU	4.5
8	7E	133	LEU	4.5
17	8A	32	TYR	4.5
19	AA	80	TYR	4.5
9	8E	120	ARG	4.5
19	AA	11	VAL	4.5
2	1E	102	LEU	4.5
21	1F	3	LYS	4.5
38	A8	12	PHE	4.5
9	8E	109	VAL	4.5
38	65	5	THR	4.5
24	1H	2167	U	4.5
21	1F	10	ARG	4.5
13	4A	101	GLN	4.5
16	7I	18	ARG	4.4
13	4I	104	ARG	4.4
12	3A	87	GLY	4.4
22	2K	48	C	4.4
16	7I	1	MET	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
30	41	64	THR	4.4
2	12	70	PHE	4.4
3	22	10	PHE	4.4
46	E5	74	ARG	4.4
3	2E	196	LEU	4.4
51	J5	58	LEU	4.4
20	BI	22	ARG	4.4
30	49	28	VAL	4.4
46	E5	77	ARG	4.4
7	6E	11	GLN	4.4
14	5A	38	GLY	4.4
36	45	68	ILE	4.4
16	7I	30	GLY	4.4
16	7I	22	THR	4.4
24	1H	1058	U	4.4
26	79	170	ALA	4.4
26	79	171	ILE	4.4
14	5A	41	ARG	4.4
38	A8	2	ALA	4.4
8	7E	135	CYS	4.4
40	C8	29	SER	4.4
10	1I	57	LYS	4.4
20	BA	65	LYS	4.4
40	C8	27	LEU	4.4
52	L5	1	MET	4.4
14	5A	34	TYR	4.3
35	35	65	ARG	4.3
9	8E	37	PHE	4.3
36	45	11	LYS	4.3
45	D5	172	ALA	4.3
4	3E	5	ILE	4.3
10	1I	65	LEU	4.3
28	29	116	VAL	4.3
31	59	106	THR	4.3
41	D8	70	ILE	4.3
19	AI	10	PHE	4.3
3	2E	200	ALA	4.3
16	7I	29	ASP	4.3
19	AI	40	ILE	4.3

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Mol	Chain	Res	Type	RSRZ
28	21	56	PRO	4.3
49	L8	53	LEU	4.3
41	D8	81	TYR	4.3
10	1A	60	ARG	4.3
31	59	89	ILE	4.3
47	F5	32	LYS	4.3
51	N8	58	LEU	4.3
43	B5	33	LYS	4.3
36	45	6	ARG	4.3
9	82	19	LEU	4.3
4	32	4	TYR	4.3
3	22	178	LEU	4.3
20	BI	56	MET	4.3
45	D5	142	SER	4.3
14	5I	15	LYS	4.3
26	71	69	GLY	4.3
10	1A	61	GLU	4.3
47	J8	48	LYS	4.3
13	4I	99	ARG	4.3
14	5A	30	ALA	4.3
47	J8	36	GLY	4.3
5	42	20	GLN	4.3
8	72	89	PRO	4.3
10	1A	101	VAL	4.3
14	5I	59	ALA	4.3
30	49	155	MET	4.3
24	14	1092	C	4.2
1	13	108	G	4.2
9	82	70	LYS	4.2
26	71	58	VAL	4.2
19	AI	37	ARG	4.2
30	49	41	GLN	4.2
46	E5	55	ARG	4.2
2	1E	196	LEU	4.2
36	45	7	MET	4.2
13	4A	7	VAL	4.2
9	82	108	VAL	4.2
14	5A	26	ARG	4.2
20	BA	26	ASN	4.2
53	Q8	28	GLY	4.2
14	5I	31	ARG	4.2
20	BA	83	ARG	4.2

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Mol	Chain	Res	Type	RSRZ
21	1F	6	ARG	4.2
14	5A	25	VAL	4.2
50	I5	46	GLN	4.2
4	32	208	SER	4.2
38	A8	7	TYR	4.2
38	A8	17	ARG	4.2
28	29	150	VAL	4.2
44	G8	92	ASN	4.2
4	3E	118	ARG	4.2
31	59	171	LEU	4.2
46	E5	44	ARG	4.2
4	32	137	SER	4.2
33	58	109	LYS	4.2
21	1F	13	ILE	4.2
36	45	17	LEU	4.2
41	D8	87	HIS	4.2
8	7E	136	GLU	4.2
47	F5	21	ARG	4.2
20	BI	71	THR	4.2
38	65	36	TYR	4.1
9	8E	15	ALA	4.1
5	4E	18	ARG	4.1
19	AA	8	GLY	4.1
19	AA	37	ARG	4.1
16	7I	31	LYS	4.1
30	49	36	LYS	4.1
26	71	172	HIS	4.1
46	E5	41	ARG	4.1
50	I5	40	HIS	4.1
47	F5	92	LYS	4.1
30	49	37	VAL	4.1
9	82	113	LYS	4.1
28	21	141	ILE	4.1
5	4E	24	ARG	4.1
14	5I	19	ARG	4.1
31	59	153	LYS	4.1
36	45	22	LYS	4.1
9	82	44	VAL	4.1
10	1I	61	GLU	4.1
14	5I	7	ILE	4.1
22	2K	53	A	4.1
24	14	2900	A	4.1

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Mol	Chain	Res	Type	RSRZ
45	D5	178	GLU	4.1
13	4I	94	ARG	4.1
9	82	8	GLY	4.1
17	8A	10	VAL	4.1
53	M5	21	LYS	4.1
38	65	35	ILE	4.1
47	J8	94	LEU	4.1
4	3E	115	ARG	4.1
36	45	18	LYS	4.1
36	45	100	GLY	4.1
45	H8	86	VAL	4.1
46	I8	74	ARG	4.1
13	4A	99	ARG	4.0
40	C8	28	ARG	4.0
13	4A	8	GLU	4.0
20	BA	80	ARG	4.0
35	35	70	GLN	4.0
10	1I	62	HIS	4.0
12	3I	20	LYS	4.0
12	3I	91	LYS	4.0
15	6A	71	GLN	4.0
14	5A	29	ARG	4.0
47	F5	33	LYS	4.0
14	5I	37	PHE	4.0
13	4I	90	LEU	4.0
38	A8	30	ARG	4.0
3	2E	201	TYR	4.0
9	82	62	TYR	4.0
36	45	9	TYR	4.0
14	5I	58	LYS	4.0
35	35	71	VAL	4.0
46	E5	22	GLY	4.0
31	59	159	GLU	4.0
38	65	3	ARG	4.0
7	62	31	MET	4.0
9	82	74	ILE	4.0
41	D8	74	LYS	4.0
12	3A	31	PRO	4.0
13	4A	111	LYS	4.0
9	82	117	HIS	4.0
28	21	76	ARG	4.0
28	21	79	ARG	4.0

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Mol	Chain	Res	Type	RSRZ
8	7E	95	VAL	3.9
1	13	111	G	3.9
13	4A	27	LYS	3.9
20	BA	28	ALA	3.9
30	49	137	GLU	3.9
7	6E	13	GLN	3.9
24	14	1535	U	3.9
7	6E	34	GLY	3.9
12	3A	47	LYS	3.9
19	AA	67	VAL	3.9
38	65	28	VAL	3.9
36	88	4	PRO	3.9
16	7A	29	ASP	3.9
3	22	179	ARG	3.9
10	1A	8	LEU	3.9
12	3I	89	ARG	3.9
21	1B	17	THR	3.9
26	71	220	PRO	3.9
43	B5	69	TYR	3.9
50	M8	25	TYR	3.9
14	5I	18	VAL	3.9
53	Q8	46	ARG	3.9
20	BI	11	SER	3.9
12	3I	31	PRO	3.9
3	2E	193	TYR	3.9
28	21	55	ASN	3.9
28	29	163	GLU	3.9
45	D5	113	ALA	3.9
4	32	11	LEU	3.9
17	8I	43	LEU	3.9
14	5A	49	HIS	3.9
47	J8	47	GLN	3.9
8	72	134	ILE	3.9
45	H8	173	ALA	3.9
24	1H	2902	C	3.9
40	C8	39	LEU	3.9
11	2A	11	LYS	3.9
21	1B	5	ASP	3.9
24	14	2801	A	3.9
47	J8	49	VAL	3.9
46	I8	6	GLY	3.9
30	49	82	LEU	3.9

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Mol	Chain	Res	Type	RSRZ
38	65	54	LEU	3.9
53	M5	61	LEU	3.9
9	82	79	LEU	3.9
3	22	167	TRP	3.9
20	BI	15	ARG	3.9
41	D8	75	PHE	3.9
5	42	126	ARG	3.8
45	D5	117	LEU	3.8
12	3I	64	TYR	3.8
51	J5	59	GLU	3.8
20	BI	23	ARG	3.8
27	11	262	ARG	3.8
30	49	160	VAL	3.8
31	59	103	LEU	3.8
36	45	96	VAL	3.8
14	5A	36	PHE	3.8
14	5A	37	PHE	3.8
13	4I	108	ARG	3.8
10	1I	63	PHE	3.8
20	BI	80	ARG	3.8
20	BA	63	ILE	3.8
33	58	46	VAL	3.8
30	49	108	ASN	3.8
14	5I	29	ARG	3.8
24	14	1762[A]	A	3.8
36	45	99	PRO	3.8
4	3E	120	LEU	3.8
3	2E	149	ALA	3.8
21	1B	18	TYR	3.8
30	41	93	THR	3.8
2	12	152	PHE	3.8
13	4I	91	ARG	3.8
38	65	108	GLY	3.8
7	62	86	GLN	3.8
4	32	23	GLY	3.8
20	BA	25	ARG	3.8
28	29	149	ARG	3.8
37	55	8	ARG	3.8
8	7E	94	TYR	3.8
19	AI	61	TYR	3.8
5	4E	88	LYS	3.8
8	7E	88	LYS	3.8

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Mol	Chain	Res	Type	RSRZ
14	5A	55	GLY	3.8
27	11	236	GLY	3.8
47	J8	90	ILE	3.8
7	6E	12	LEU	3.8
30	49	90	LEU	3.8
38	65	4	LEU	3.8
4	3E	110	PHE	3.8
8	7E	112	LEU	3.8
20	BI	33	ILE	3.8
33	15	99	LEU	3.8
2	12	99	GLY	3.8
9	82	73	GLN	3.8
22	2K	85	A	3.8
22	2L	85	A	3.8
24	1H	2119	A	3.8
47	F5	25	LYS	3.8
38	65	7	TYR	3.8
17	8A	25	ARG	3.8
20	BI	53	LEU	3.8
12	3I	33	ARG	3.8
4	32	78	LEU	3.8
41	D8	45	THR	3.8
10	1I	64	GLU	3.7
28	29	76	ARG	3.7
50	I5	55	ARG	3.7
13	4I	101	GLN	3.7
28	29	124	GLY	3.7
44	C5	29	GLU	3.7
4	32	5	ILE	3.7
12	3A	5	PRO	3.7
28	21	195	LEU	3.7
8	72	92	ARG	3.7
13	4A	92	HIS	3.7
17	8A	7	THR	3.7
8	72	133	LEU	3.7
33	58	108	PRO	3.7
37	55	69	ASP	3.7
53	M5	58	ILE	3.7
16	7A	26	ARG	3.7
33	15	73	THR	3.7
16	7I	17	TYR	3.7
36	45	2	LEU	3.7

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Mol	Chain	Res	Type	RSRZ
40	C8	24	TYR	3.7
16	7A	8	ARG	3.7
30	49	178	PHE	3.7
24	14	2506	U	3.7
24	1H	2	G	3.7
24	1H	615	G	3.7
42	A5	104	THR	3.7
36	45	8	LYS	3.7
46	I8	42	GLY	3.7
8	7E	134	ILE	3.7
10	1A	49	VAL	3.7
24	14	1091	G	3.7
9	8E	118	LYS	3.7
9	82	122	ALA	3.7
44	C5	92	ASN	3.7
39	B8	45	PHE	3.7
36	45	33	GLY	3.7
9	82	45	ALA	3.7
4	32	67	ILE	3.7
4	3E	122	ARG	3.7
7	62	77	SER	3.7
16	7I	28	ARG	3.7
19	AA	39	THR	3.7
16	7I	68	ASP	3.7
20	BA	59	ALA	3.7
4	3E	105	VAL	3.7
7	62	4	ARG	3.7
53	M5	57	ARG	3.7
4	3E	40	PRO	3.7
34	68	122	LEU	3.7
46	E5	45	PHE	3.7
4	3E	170	VAL	3.7
49	H5	15	TYR	3.7
19	AA	43	GLU	3.7
12	3A	46	LYS	3.6
8	7E	84	ARG	3.6
30	41	63	ILE	3.6
5	42	25	ARG	3.6
9	82	17	VAL	3.6
2	1E	139	LYS	3.6
11	2A	125	PHE	3.6
18	9I	75	ILE	3.6

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Mol	Chain	Res	Type	RSRZ
19	AI	38	SER	3.6
14	5A	6	LEU	3.6
24	1H	2476	A	3.6
8	72	87	SER	3.6
46	E5	73	GLY	3.6
12	3A	127	GLU	3.6
19	AA	82	GLY	3.6
19	AI	74	PHE	3.6
13	4A	84	ILE	3.6
8	7E	90	GLY	3.6
11	2A	126	ARG	3.6
3	2E	192	THR	3.6
30	49	161	THR	3.6
41	D8	89	GLN	3.6
19	AI	69	HIS	3.6
8	7E	83	ILE	3.6
9	82	46	ALA	3.6
31	59	43	VAL	3.6
51	J5	2	ALA	3.6
33	58	107	LEU	3.6
11	2A	12	ARG	3.6
42	A5	38	TYR	3.6
50	M8	32	TYR	3.6
38	A8	16	ASN	3.6
14	5I	16	PHE	3.6
9	82	9	ARG	3.6
19	AI	44	MET	3.6
29	31	157	VAL	3.6
38	A8	5	THR	3.6
40	85	59	ARG	3.6
44	G8	91	GLU	3.6
9	82	68	GLY	3.6
14	5I	21	TYR	3.6
28	21	193	GLY	3.6
42	A5	103	ILE	3.6
28	29	159	HIS	3.6
49	H5	28	LEU	3.6
1	13	1492[A]	A	3.6
10	1I	54	PHE	3.6
12	3A	90	VAL	3.6
53	M5	14	VAL	3.6
12	3A	69	TYR	3.6

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Mol	Chain	Res	Type	RSRZ
42	A5	92	ARG	3.5
14	5I	9	LYS	3.5
20	BI	9	ASN	3.5
8	7E	87	SER	3.5
9	8E	75	ASP	3.5
4	32	115	ARG	3.5
14	5I	4	LYS	3.5
27	11	250	TRP	3.5
2	1E	187	LEU	3.5
31	59	87	LEU	3.5
23	4L	13	A	3.5
37	98	8	ARG	3.5
41	95	83	ARG	3.5
2	1E	152	PHE	3.5
15	6A	25	THR	3.5
19	AA	69	HIS	3.5
45	D5	154	ASP	3.5
19	AA	40	ILE	3.5
31	59	105	LEU	3.5
26	79	57	ASN	3.5
10	1A	63	PHE	3.5
36	45	71	ASP	3.5
13	4I	105	THR	3.5
47	F5	93	GLU	3.5
16	7I	25	ARG	3.5
30	49	138	GLN	3.5
46	I8	41	ARG	3.5
5	4E	123	LEU	3.5
10	1A	55	LYS	3.5
38	A8	90	GLY	3.5
47	J8	3	LYS	3.5
2	1E	165	VAL	3.5
9	82	83	ARG	3.5
19	AA	4	SER	3.5
12	3I	94	PRO	3.5
36	88	17	LEU	3.5
5	42	24	ARG	3.5
28	21	75	VAL	3.5
47	F5	18	ILE	3.5
2	12	69	LEU	3.5
43	F8	60	ARG	3.5
17	8I	37	LYS	3.5

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Mol	Chain	Res	Type	RSRZ
28	21	192	ASN	3.5
33	15	48	MET	3.5
30	41	26	GLN	3.5
31	59	170	ARG	3.5
45	D5	107	THR	3.5
13	4A	64	TRP	3.5
24	14	2899	G	3.5
30	49	92	VAL	3.5
4	32	21	LEU	3.5
2	1E	72	GLY	3.5
26	79	165	ASN	3.5
17	8A	27	PHE	3.5
46	I8	44	ARG	3.5
14	5I	34	TYR	3.5
12	3A	20	LYS	3.5
12	3A	28	LYS	3.5
9	82	43	ALA	3.5
24	14	2318	G	3.5
36	45	65	PHE	3.5
12	3A	118	SER	3.5
41	D8	36	PRO	3.5
16	7I	12	LYS	3.5
47	F5	26	ARG	3.5
21	1F	4	GLY	3.5
31	59	5	GLY	3.5
46	E5	12	ASN	3.4
1	13	1323	G	3.4
14	5I	60	SER	3.4
24	14	2147	G	3.4
30	41	34	LEU	3.4
30	49	33	ARG	3.4
36	45	5	ARG	3.4
42	E8	82	LEU	3.4
47	J8	17	SER	3.4
16	7I	19	ILE	3.4
10	1A	10	GLY	3.4
33	15	69	GLN	3.4
27	19	177	LEU	3.4
4	32	80	GLU	3.4
28	29	155	LYS	3.4
30	41	25	TYR	3.4
34	25	31	LYS	3.4

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Mol	Chain	Res	Type	RSRZ
8	7E	89	PRO	3.4
20	BA	72	LEU	3.4
35	78	71	VAL	3.4
8	72	132	GLU	3.4
8	72	90	GLY	3.4
36	88	21	THR	3.4
35	78	70	GLN	3.4
50	I5	50	VAL	3.4
40	C8	11	ARG	3.4
45	D5	120	ILE	3.4
14	5I	23	ARG	3.4
6	5E	89	MET	3.4
33	15	100	GLU	3.4
20	BA	70	SER	3.4
52	L5	42	LEU	3.4
19	AA	34	TRP	3.4
26	79	43	VAL	3.4
35	35	106	LEU	3.4
13	4I	103	THR	3.4
4	3E	74	GLN	3.4
12	3I	21	LYS	3.4
20	BI	14	LYS	3.4
39	B8	50	ILE	3.4
39	75	50	ILE	3.4
1	13	208	U	3.4
24	14	2795	G	3.4
2	1E	93	VAL	3.4
2	1E	149	LEU	3.4
8	72	112	LEU	3.4
32	69	146	ALA	3.4
42	E8	96	ILE	3.4
47	F5	36	GLY	3.4
54	1G	1286	A	3.4
3	2E	156	ARG	3.4
4	3E	97	LEU	3.4
7	6E	78	ARG	3.4
26	79	59	ARG	3.4
37	55	9	LYS	3.4
19	AI	76	PRO	3.4
27	19	221	VAL	3.4
28	21	72	VAL	3.4
30	49	32	PRO	3.4

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Mol	Chain	Res	Type	RSRZ
42	A5	105	VAL	3.4
47	F5	14	VAL	3.4
26	71	189	ILE	3.4
38	65	92	TYR	3.4
29	31	40	GLN	3.4
4	3E	137	SER	3.4
26	79	172	HIS	3.4
35	35	50	ARG	3.4
14	5I	33	VAL	3.3
17	8A	59	ILE	3.3
31	59	109	PHE	3.3
3	22	172	ARG	3.3
18	9I	68	LYS	3.3
36	88	19	GLY	3.3
38	A8	3	ARG	3.3
45	D5	121	HIS	3.3
45	D5	144	LEU	3.3
9	8E	122	ALA	3.3
9	82	106	ALA	3.3
10	1I	50	ILE	3.3
4	3E	69	GLY	3.3
4	3E	139	ARG	3.3
40	C8	30	LYS	3.3
20	BI	24	LEU	3.3
4	3E	70	ILE	3.3
21	1B	20	LYS	3.3
50	M8	58	ARG	3.3
11	2I	122	LYS	3.3
12	3A	99	HIS	3.3
12	3A	119	LYS	3.3
33	15	76	SER	3.3
38	A8	93	LYS	3.3
41	D8	73	SER	3.3
28	29	58	ARG	3.3
4	3E	23	GLY	3.3
16	7I	32	TYR	3.3
40	85	2	PRO	3.3
45	H8	25	PRO	3.3
49	H5	26	LEU	3.3
20	BI	21	LYS	3.3
41	D8	69	LYS	3.3
20	BA	71	THR	3.3

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Mol	Chain	Res	Type	RSRZ
24	1H	654	A	3.3
46	I8	52	GLY	3.3
2	1E	101	MET	3.3
8	7E	85	ARG	3.3
26	79	41	VAL	3.3
30	49	159	VAL	3.3
31	59	132	ARG	3.3
46	I8	5	LYS	3.3
7	62	37	ASN	3.3
9	82	12	GLU	3.3
53	Q8	6	THR	3.3
53	M5	63	PRO	3.3
8	7E	116	LYS	3.3
36	45	85	LYS	3.3
31	59	113	VAL	3.3
19	AI	75	ALA	3.3
26	71	197	GLU	3.3
31	59	85	LYS	3.3
27	19	247	ALA	3.3
14	5A	4	LYS	3.3
24	1H	2062	A	3.3
53	M5	11	LYS	3.3
24	14	2897	U	3.3
40	C8	31	SER	3.3
40	C8	34	LYS	3.3
20	BI	25	ARG	3.3
29	39	43	LYS	3.3
4	3E	15	GLU	3.3
20	BI	8	ARG	3.3
53	M5	13	ARG	3.3
14	5I	28	GLY	3.3
28	21	52	LEU	3.3
40	C8	18	LEU	3.3
9	82	112	LYS	3.3
12	3A	86	ARG	3.2
22	2K	55	U	3.2
12	3A	88	GLY	3.2
14	5A	28	GLY	3.2
21	1B	16	GLY	3.2
54	1G	1533	C	3.2
29	39	205	ARG	3.2
42	A5	112	GLY	3.2

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Mol	Chain	Res	Type	RSRZ
16	7I	27	LYS	3.2
2	12	137	ARG	3.2
4	3E	66	ARG	3.2
7	62	33	ASP	3.2
20	BI	64	ASP	3.2
27	19	219	PRO	3.2
7	6E	154	TYR	3.2
9	82	125	TYR	3.2
13	4I	114	ARG	3.2
47	F5	20	ARG	3.2
19	AA	60	VAL	3.2
24	1H	654(I)	C	3.2
8	7E	111	ILE	3.2
4	3E	101	LEU	3.2
12	3A	91	LYS	3.2
49	H5	12	PRO	3.2
27	19	224	ALA	3.2
31	59	122	THR	3.2
47	J8	60	PHE	3.2
3	2E	162	GLN	3.2
7	62	34	GLY	3.2
33	58	1	MET	3.2
35	78	68	GLN	3.2
40	85	50	ARG	3.2
54	1G	526	C	3.2
8	72	93	VAL	3.2
31	59	94	TYR	3.2
38	A8	19	LYS	3.2
38	65	59	LYS	3.2
9	82	6	GLY	3.2
14	5A	31	ARG	3.2
41	D8	82	ARG	3.2
1	13	1451	A	3.2
50	I5	59	PHE	3.2
51	J5	60	VAL	3.2
4	3E	158	ILE	3.2
29	31	176	LEU	3.2
47	J8	13	ILE	3.2
9	8E	108	VAL	3.2
38	65	91	PRO	3.2
36	88	18	LYS	3.2
53	M5	8	LYS	3.2

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Mol	Chain	Res	Type	RSRZ
24	14	2146	C	3.2
5	4E	89	ILE	3.2
38	65	60	GLY	3.2
19	AA	9	VAL	3.2
44	C5	35	TYR	3.2
53	M5	5	LYS	3.2
19	AA	48	THR	3.2
2	12	165	VAL	3.2
43	F8	68	ARG	3.2
10	1A	50	ILE	3.2
29	39	181	LEU	3.2
12	3I	17	LYS	3.2
30	41	66	GLN	3.2
7	6E	85	TYR	3.2
54	1G	1066	C	3.2
42	E8	80	PRO	3.2
22	2K	47	U	3.2
4	32	96	LEU	3.2
33	15	116	LEU	3.2
16	7A	1	MET	3.2
30	41	102	PHE	3.2
28	29	127	ASP	3.2
1	13	1362(A)	C	3.1
4	3E	25	ARG	3.1
19	AA	3	ARG	3.1
19	AA	78	ARG	3.1
29	39	22	ALA	3.1
33	15	8	GLN	3.1
12	3I	23	LYS	3.1
4	32	197	PRO	3.1
36	88	2	LEU	3.1
24	14	1093	G	3.1
17	8I	34	LYS	3.1
21	1F	18	TYR	3.1
53	M5	15	LYS	3.1
53	M5	47	LYS	3.1
38	A8	20	ARG	3.1
42	A5	39	THR	3.1
53	M5	46	ARG	3.1
46	E5	42	GLY	3.1
4	3E	93	PHE	3.1
9	8E	124	GLN	3.1

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Mol	Chain	Res	Type	RSRZ
22	3L	16	C	3.1
9	8E	9	ARG	3.1
3	22	13	GLY	3.1
17	8I	36	ILE	3.1
12	3A	23	LYS	3.1
37	98	9	LYS	3.1
46	I8	4	LYS	3.1
10	1A	5	ARG	3.1
13	4A	5	ALA	3.1
35	78	38	GLN	3.1
1	13	1325	C	3.1
3	22	176	HIS	3.1
47	F5	13	ILE	3.1
33	15	108	PRO	3.1
43	B5	3	THR	3.1
52	L5	18	PHE	3.1
9	8E	65	VAL	3.1
10	1I	66	ARG	3.1
4	3E	135	LEU	3.1
21	1B	4	GLY	3.1
33	15	83	LYS	3.1
24	14	2138	C	3.1
15	6A	64	ARG	3.1
28	29	126	PRO	3.1
36	45	103	MET	3.1
46	I8	78	TYR	3.1
53	M5	60	LEU	3.1
4	3E	134	ASP	3.1
40	C8	21	ALA	3.1
16	7I	39	TYR	3.1
2	1E	76	GLN	3.1
12	3A	7	ILE	3.1
24	1H	3	U	3.1
47	F5	95	LEU	3.1
13	4I	95	GLY	3.1
16	7A	30	GLY	3.1
4	3E	111	ALA	3.1
8	7E	4	ASP	3.1
9	82	76	ALA	3.1
9	82	123	PRO	3.1
39	75	99	LEU	3.1
50	M8	18	CYS	3.1

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Mol	Chain	Res	Type	RSRZ
31	59	83	TYR	3.1
53	M5	23	VAL	3.1
19	AI	15	LEU	3.1
3	22	201	TYR	3.1
4	32	71	SER	3.1
11	2I	42	TRP	3.1
46	I8	45	PHE	3.1
7	6E	35	LYS	3.1
53	Q8	5	LYS	3.1
29	31	156	LEU	3.1
33	15	78	TYR	3.0
49	L8	12	PRO	3.0
5	4E	11	ILE	3.0
19	AI	39	THR	3.0
27	11	229	VAL	3.0
36	88	6	ARG	3.0
38	65	56	LEU	3.0
30	41	23	PHE	3.0
29	39	172	TRP	3.0
47	J8	16	ASN	3.0
24	14	271(C)	U	3.0
16	7I	13	HIS	3.0
30	49	97	ASP	3.0
40	C8	38	THR	3.0
36	88	104	PHE	3.0
42	E8	81	ALA	3.0
7	6E	80	VAL	3.0
24	14	654(L)	G	3.0
26	7I	13	LYS	3.0
33	15	109	LYS	3.0
35	35	107	LYS	3.0
8	72	91	ARG	3.0
16	7A	10	GLY	3.0
17	8A	36	ILE	3.0
19	AI	8	GLY	3.0
38	A8	15	ARG	3.0
9	8E	17	VAL	3.0
45	H8	74	VAL	3.0
11	2I	124	LYS	3.0
10	1A	58	ASP	3.0
20	BI	72	LEU	3.0
9	82	104	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
29	39	72	ARG	3.0
10	1A	6	ILE	3.0
54	1G	1398	A	3.0
2	1E	81	VAL	3.0
31	59	25	LYS	3.0
41	95	72	VAL	3.0
26	79	209	LEU	3.0
53	M5	2	PRO	3.0
46	E5	57	PHE	3.0
17	8A	37	LYS	3.0
24	14	2118	U	3.0
24	14	2803	C	3.0
1	13	112	G	3.0
33	58	51	PHE	3.0
36	45	1	MET	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
27	19	254	THR	3.0
31	59	17	VAL	3.0
38	A8	89	ARG	3.0
36	45	98	LYS	3.0
40	C8	25	TRP	3.0
3	22	184	TYR	3.0
4	32	8	VAL	3.0
12	3A	64	TYR	3.0
14	5A	21	TYR	3.0
16	7I	4	ILE	3.0
21	1B	21	TYR	3.0
14	5I	6	LEU	3.0
21	1B	23	PRO	3.0
14	5A	42	ILE	3.0
14	5I	25	VAL	3.0
21	1F	5	ASP	3.0
28	21	111	ARG	3.0
46	I8	79	VAL	3.0
47	J8	41	ARG	3.0
53	M5	22	VAL	3.0
28	29	143	ASN	3.0
12	3I	28	LYS	3.0
31	59	167	GLU	3.0

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Mol	Chain	Res	Type	RSRZ
3	2E	189	ALA	3.0
28	21	198	VAL	3.0
45	H8	170	THR	3.0
38	65	37	ALA	2.9
20	BA	13	LEU	2.9
22	2L	55	U	2.9
47	F5	17	SER	2.9
28	29	141	ILE	2.9
35	35	63	PRO	2.9
47	F5	28	GLY	2.9
9	8E	40	LEU	2.9
19	AA	52	TYR	2.9
4	32	206	PHE	2.9
10	1A	45	ARG	2.9
13	4A	102	ARG	2.9
44	G8	84	ARG	2.9
47	F5	42	GLN	2.9
44	C5	81	LYS	2.9
47	F5	10	LYS	2.9
50	M8	8	LYS	2.9
19	AI	9	VAL	2.9
20	BI	20	LEU	2.9
45	D5	165	VAL	2.9
36	88	10	ARG	2.9
4	32	156	GLU	2.9
4	3E	152	SER	2.9
27	19	253	GLN	2.9
10	1A	68	HIS	2.9
12	3I	99	HIS	2.9
36	45	73	PRO	2.9
39	B8	99	LEU	2.9
1	13	110	C	2.9
12	3I	98	TYR	2.9
21	1B	24	ARG	2.9
27	19	53	PHE	2.9
44	C5	19	LYS	2.9
54	1G	1393	U	2.9
2	1E	138	LEU	2.9
20	BI	19	SER	2.9
20	BA	24	LEU	2.9
3	22	186	PHE	2.9
9	8E	111	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
29	39	97	TYR	2.9
24	1H	2334	G	2.9
35	78	69	GLY	2.9
53	M5	12	LYS	2.9
30	41	100	TRP	2.9
24	14	2798	C	2.9
31	59	161	GLY	2.9
4	3E	8	VAL	2.9
14	5A	23	ARG	2.9
36	45	14	ARG	2.9
53	M5	41	ILE	2.9
13	4I	107	ALA	2.9
16	7I	11	SER	2.9
19	AA	70	LYS	2.9
28	21	10	GLY	2.9
4	3E	14	ARG	2.9
4	32	122	ARG	2.9
27	19	51	VAL	2.9
52	L5	46	VAL	2.9
52	L5	49	ARG	2.9
41	D8	80	GLN	2.9
49	L8	20	LYS	2.9
12	3A	18	VAL	2.9
20	BI	55	ILE	2.9
20	BI	58	LYS	2.9
28	21	5	LEU	2.9
11	2I	13	GLN	2.9
15	6A	62	GLN	2.9
7	6E	4	ARG	2.9
14	5I	32	SER	2.9
35	78	35	HIS	2.9
1	13	1044	A	2.9
26	7I	215	THR	2.9
49	L8	13	ILE	2.9
20	BA	77	ALA	2.9
28	29	122	PHE	2.9
28	29	123	ALA	2.9
2	12	134	GLU	2.9
29	31	164	ARG	2.9
19	AA	18	LYS	2.9
35	78	64	LYS	2.9
36	45	87	LYS	2.9

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Mol	Chain	Res	Type	RSRZ
5	4E	19	MET	2.9
12	3A	100	ILE	2.9
38	A8	49	VAL	2.9
34	25	33	ALA	2.9
54	1G	1067	A	2.9
15	6A	70	LEU	2.9
53	M5	31	HIS	2.9
9	8E	14	VAL	2.8
9	82	77	ILE	2.8
10	1A	69	ASN	2.8
33	58	43	THR	2.8
44	G8	83	THR	2.8
10	1I	55	LYS	2.8
44	C5	69	ALA	2.8
2	1E	98	LEU	2.8
15	6A	31	LEU	2.8
24	1H	5	A	2.8
28	29	189	PRO	2.8
2	1E	97	TRP	2.8
9	82	33	PHE	2.8
38	65	13	ARG	2.8
11	2I	50	TYR	2.8
16	7A	9	PHE	2.8
50	M8	5	ILE	2.8
20	BA	66	ALA	2.8
9	8E	6	GLY	2.8
9	8E	79	LEU	2.8
31	59	4	ILE	2.8
38	65	31	SER	2.8
53	M5	34	TRP	2.8
46	E5	40	GLN	2.8
46	E5	70	GLN	2.8
4	3E	11	LEU	2.8
4	32	64	LEU	2.8
12	3A	53	ARG	2.8
13	4A	26	GLY	2.8
20	BA	87	LYS	2.8
12	3A	71	PRO	2.8
17	8A	26	GLN	2.8
30	49	12	TYR	2.8
4	32	77	ASN	2.8
46	I8	77	ARG	2.8

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Mol	Chain	Res	Type	RSRZ
50	I5	62	ARG	2.8
53	M5	29	LYS	2.8
36	45	91	GLU	2.8
16	7I	7	ALA	2.8
24	14	654(K)	C	2.8
3	22	12	LEU	2.8
19	AA	15	LEU	2.8
19	AA	68	GLY	2.8
20	BI	101	GLY	2.8
29	39	208	GLY	2.8
33	15	51	PHE	2.8
3	2E	161	GLU	2.8
42	A5	74	ALA	2.8
7	62	42	ILE	2.8
29	31	174	VAL	2.8
41	D8	72	VAL	2.8
47	J8	18	ILE	2.8
16	7I	8	ARG	2.8
45	H8	79	ARG	2.8
20	BA	64	ASP	2.8
26	79	220	PRO	2.8
35	35	48	PRO	2.8
26	79	175	VAL	2.8
2	12	162	ILE	2.8
50	I5	49	PHE	2.8
28	21	57	LYS	2.8
35	35	60	MET	2.8
36	45	63	LYS	2.8
39	B8	51	ARG	2.8
46	E5	20	ARG	2.8
49	H5	20	LYS	2.8
8	7E	5	PRO	2.8
29	31	181	LEU	2.8
30	49	2	PRO	2.8
40	C8	14	HIS	2.8
46	I8	70	GLN	2.8
8	7E	91	ARG	2.8
30	49	136	ARG	2.8
33	58	118	LYS	2.8
38	65	30	ARG	2.8
26	79	54	SER	2.8
50	M8	26	SER	2.8

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Mol	Chain	Res	Type	RSRZ
2	1E	77	ALA	2.8
4	32	120	LEU	2.8
17	8A	43	LEU	2.8
53	M5	50	LEU	2.8
1	13	1233	G	2.8
42	E8	17	VAL	2.8
54	1G	1392	G	2.8
15	6I	72	ARG	2.8
19	AA	36	ARG	2.8
12	3I	127	GLU	2.8
9	8E	47	LEU	2.8
15	6A	56	LEU	2.8
34	25	29	ASN	2.8
35	35	45	LEU	2.8
37	55	10	LEU	2.8
53	Q8	60	LEU	2.8
3	22	200	ALA	2.8
5	42	29	GLY	2.8
9	8E	114	TYR	2.8
9	82	127	LYS	2.8
31	59	168	PRO	2.8
5	4E	122	GLU	2.7
1	13	377	G	2.7
1	13	1350	A	2.7
15	6A	63	ARG	2.7
35	78	107	LYS	2.7
50	M8	23	GLU	2.7
3	2E	164	ARG	2.7
10	1A	71	LEU	2.7
22	2L	47	U	2.7
32	61	27	ARG	2.7
24	14	615	G	2.7
24	14	1763	G	2.7
28	29	113	PHE	2.7
30	49	11	TYR	2.7
36	45	74	TYR	2.7
40	C8	57	PHE	2.7
47	J8	62	VAL	2.7
47	J8	70	VAL	2.7
10	1I	98	ILE	2.7
17	8A	65	ILE	2.7
35	35	14	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
36	45	19	GLY	2.7
40	C8	118	GLY	2.7
14	5A	56	VAL	2.7
10	1I	56	HIS	2.7
31	59	112	PRO	2.7
36	45	13	GLN	2.7
21	1B	9	ARG	2.7
29	31	41	LEU	2.7
7	6E	83	ALA	2.7
38	A8	6	ALA	2.7
44	G8	89	PHE	2.7
11	2A	50	TYR	2.7
45	D5	175	VAL	2.7
13	4A	25	ILE	2.7
15	6A	65	ARG	2.7
16	7A	12	LYS	2.7
24	14	1078	U	2.7
34	25	2	ILE	2.7
16	7A	25	ARG	2.7
41	95	73	SER	2.7
45	H8	166	SER	2.7
46	E5	39	ARG	2.7
47	J8	10	LYS	2.7
28	29	192	ASN	2.7
50	I5	60	GLN	2.7
20	BA	62	LEU	2.7
28	29	195	LEU	2.7
46	I8	53	MET	2.7
44	C5	93	GLY	2.7
4	32	54	TYR	2.7
19	AI	70	LYS	2.7
36	45	80	GLU	2.7
47	J8	7	ILE	2.7
8	7E	59	LEU	2.7
19	AI	4	SER	2.7
46	E5	56	ASP	2.7
12	3I	46	LYS	2.7
47	J8	51	VAL	2.7
28	21	77	ILE	2.7
40	C8	37	GLU	2.7
1	13	950	U	2.7
53	M5	25	MET	2.7

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Mol	Chain	Res	Type	RSRZ
2	1E	133	LYS	2.7
2	12	71	VAL	2.7
20	BI	34	LYS	2.7
20	BI	69	GLY	2.7
20	BA	14	LYS	2.7
40	85	54	LYS	2.7
42	E8	113	LYS	2.7
20	BA	76	ALA	2.7
28	21	151	TYR	2.7
30	49	157	ILE	2.7
2	12	115	LEU	2.7
20	BA	20	LEU	2.7
2	12	131	PRO	2.7
17	8I	28	PRO	2.7
20	BI	85	MET	2.7
4	32	76	ARG	2.7
5	42	22	GLY	2.7
19	AI	36	ARG	2.7
26	71	192	PHE	2.7
34	25	26	LYS	2.7
35	35	51	PHE	2.7
46	E5	19	LYS	2.7
2	1E	94	ASN	2.7
7	62	28	ASN	2.7
13	4I	106	ASN	2.7
26	71	35	ALA	2.7
47	J8	6	GLU	2.7
12	3A	21	LYS	2.7
13	4A	100	GLY	2.7
14	5I	26	ARG	2.7
47	J8	32	LYS	2.7
50	M8	55	ARG	2.7
29	39	183	VAL	2.7
4	32	161	ASN	2.7
28	29	134	ILE	2.7
35	35	47	ASP	2.7
47	F5	37	ILE	2.7
21	1B	26	LYS	2.7
26	71	31	GLU	2.7
28	29	135	HIS	2.7
33	58	53	VAL	2.7
34	25	32	TYR	2.7

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Mol	Chain	Res	Type	RSRZ
35	35	150	ALA	2.7
39	75	94	ALA	2.7
14	5A	44	LEU	2.7
20	BA	29	LYS	2.7
23	4K	15	A	2.7
29	31	33	LEU	2.7
29	31	133	ASN	2.7
49	H5	17	LYS	2.7
24	14	859	G	2.7
24	14	1087	G	2.7
36	45	4	PRO	2.7
36	45	90	VAL	2.7
3	2E	160	ALA	2.7
7	62	40	ALA	2.7
19	AI	14	HIS	2.7
26	71	49	ILE	2.7
28	21	159	HIS	2.7
35	35	64	LYS	2.6
4	3E	49	ARG	2.6
27	19	262	ARG	2.6
29	39	32	LEU	2.6
19	AI	12	ASP	2.6
2	1E	27	LYS	2.6
2	1E	75	LYS	2.6
13	4I	88	ARG	2.6
27	11	247	ALA	2.6
36	45	32	TYR	2.6
52	L5	47	ARG	2.6
8	72	31	PHE	2.6
26	71	163	PHE	2.6
38	65	112	PHE	2.6
41	95	75	PHE	2.6
28	21	47	VAL	2.6
38	A8	22	GLY	2.6
45	H8	116	VAL	2.6
2	12	201	ILE	2.6
27	19	183	ARG	2.6
4	3E	207	TYR	2.6
7	6E	38	LEU	2.6
12	3A	26	ALA	2.6
27	19	37	LEU	2.6
29	31	167	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
5	42	45	PHE	2.6
38	A8	87	PHE	2.6
2	12	130	ARG	2.6
14	5I	22	THR	2.6
19	AI	66	MET	2.6
39	75	73	GLU	2.6
41	D8	79	VAL	2.6
28	29	105	THR	2.6
7	62	104	LEU	2.6
14	5A	54	PRO	2.6
16	7I	15	PRO	2.6
26	7I	9	ALA	2.6
38	A8	24	LEU	2.6
2	1E	70	PHE	2.6
7	6E	26	PHE	2.6
27	11	53	PHE	2.6
24	1H	976	C	2.6
28	21	109	LYS	2.6
14	5A	52	GLN	2.6
7	6E	16	LEU	2.6
10	1A	48	THR	2.6
13	4A	103	THR	2.6
20	BA	36	LEU	2.6
49	L8	8	LEU	2.6
21	1F	23	PRO	2.6
24	1H	654(L)	G	2.6
24	14	2321	G	2.6
4	32	65	ARG	2.6
15	6A	73	GLU	2.6
47	J8	65	SER	2.6
2	1E	108	ILE	2.6
9	8E	63	ILE	2.6
54	1G	1115	C	2.6
35	35	18	ARG	2.6
2	12	164	VAL	2.6
4	32	72	GLU	2.6
10	1I	49	VAL	2.6
36	45	15	GLY	2.6
50	M8	56	VAL	2.6
2	1E	142	LEU	2.6
7	6E	86	GLN	2.6
12	3I	7	ILE	2.6

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Mol	Chain	Res	Type	RSRZ
23	4K	22	A	2.6
23	4L	14	A	2.6
28	29	133	LYS	2.6
28	29	145	LYS	2.6
36	45	20	ALA	2.6
14	5I	41	ARG	2.6
29	31	175	THR	2.6
31	59	41	MET	2.6
20	BA	21	LYS	2.6
40	C8	16	LYS	2.6
47	J8	91	LYS	2.6
4	32	93	PHE	2.6
7	62	41	ARG	2.6
20	BI	76	ALA	2.6
26	79	50	ASP	2.6
52	P8	45	ALA	2.6
52	L5	23	ARG	2.6
19	AA	76	PRO	2.6
31	59	115	VAL	2.6
53	M5	7	HIS	2.6
31	59	160	LYS	2.6
47	F5	23	LYS	2.6
12	3A	27	LEU	2.6
27	11	230	ASP	2.6
33	15	72	TYR	2.6
46	E5	69	PHE	2.6
1	13	389	A	2.6
14	5I	11	LYS	2.6
17	8A	35	VAL	2.6
3	22	6	HIS	2.6
26	71	3	HIS	2.6
4	3E	206	PHE	2.6
27	19	211	ARG	2.6
28	29	147	PRO	2.6
16	7I	6	LEU	2.6
31	51	171	LEU	2.6
35	78	79	ARG	2.6
7	62	30	ILE	2.6
25	1J	59	A	2.6
29	39	40	GLN	2.6
36	45	104	PHE	2.6
47	J8	93	GLU	2.6

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Mol	Chain	Res	Type	RSRZ
29	31	44	ARG	2.6
30	49	128	ARG	2.6
12	3A	49	ASN	2.6
17	8A	22	LEU	2.6
49	H5	53	LEU	2.6
53	M5	6	THR	2.6
53	M5	27	THR	2.6
20	BI	81	LYS	2.5
41	D8	78	LYS	2.5
49	L8	10	LYS	2.5
24	14	1102	C	2.5
29	31	155	LEU	2.5
51	J5	30	LEU	2.5
4	3E	154	ASN	2.5
35	35	30	THR	2.5
42	A5	4	LYS	2.5
9	8E	128	ARG	2.5
27	19	181	GLU	2.5
9	82	28	VAL	2.5
17	8A	8	GLY	2.5
28	21	167	VAL	2.5
24	1H	2135	A	2.5
30	49	94	LEU	2.5
38	A8	110	LEU	2.5
4	3E	136	PRO	2.5
48	G5	23	LYS	2.5
50	M8	7	PRO	2.5
4	3E	114	ARG	2.5
9	8E	7	THR	2.5
14	5A	35	ARG	2.5
20	BA	60	GLU	2.5
53	Q8	30	ARG	2.5
28	29	7	VAL	2.5
47	F5	29	GLY	2.5
7	62	35	LYS	2.5
42	A5	51	LEU	2.5
52	L5	32	LYS	2.5
26	79	208	PHE	2.5
42	A5	106	ILE	2.5
8	72	101	PRO	2.5
20	BA	22	ARG	2.5
28	21	138	PRO	2.5

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Mol	Chain	Res	Type	RSRZ
1	13	1397	C	2.5
28	29	187	ALA	2.5
30	41	27	ASN	2.5
34	25	74	GLY	2.5
20	BA	30	LYS	2.5
28	29	118	LYS	2.5
35	35	59	LEU	2.5
10	1A	51	ARG	2.5
41	D8	88	ARG	2.5
2	12	112	VAL	2.5
24	14	909	A	2.5
28	29	148	GLY	2.5
37	98	71	GLN	2.5
41	D8	76	LYS	2.5
19	AA	14	HIS	2.5
28	29	137	HIS	2.5
41	D8	77	ALA	2.5
47	J8	15	ALA	2.5
53	M5	10	ALA	2.5
14	5I	61	TRP	2.5
37	55	4	LEU	2.5
38	65	10	ARG	2.5
24	14	901	A	2.5
30	49	77	ILE	2.5
30	41	13	GLU	2.5
8	7E	118	VAL	2.5
9	8E	105	ASP	2.5
27	11	34	VAL	2.5
29	39	36	VAL	2.5
30	41	65	GLY	2.5
31	59	149	ARG	2.5
47	F5	40	ARG	2.5
28	21	51	PHE	2.5
33	58	45	ASN	2.5
10	1I	38	ILE	2.5
10	1I	48	THR	2.5
28	21	107	THR	2.5
28	29	156	MET	2.5
2	1E	175	ARG	2.5
3	22	7	PRO	2.5
12	3A	120	TYR	2.5
26	79	178	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
30	49	25	TYR	2.5
40	C8	26	GLY	2.5
43	B5	68	ARG	2.5
47	J8	61	ARG	2.5
20	BA	18	GLN	2.5
49	H5	31	LEU	2.5
27	19	220	HIS	2.5
49	H5	32	GLN	2.5
5	4E	131	ILE	2.5
9	8E	78	LYS	2.5
37	98	5	LYS	2.5
44	C5	75	ILE	2.5
31	59	114	VAL	2.5
36	45	82	ARG	2.5
46	E5	61	ALA	2.5
50	I5	45	GLY	2.5
4	3E	61	LYS	2.5
36	45	76	LYS	2.5
40	C8	32	PHE	2.5
41	95	76	LYS	2.5
28	29	117	MET	2.5
36	88	103	MET	2.5
44	G8	5	MET	2.5
7	6E	5	ARG	2.5
21	1F	22	ARG	2.5
34	25	65	THR	2.5
1	13	107	G	2.5
33	15	82	LEU	2.5
42	E8	97	LYS	2.5
51	N8	23	HIS	2.5
2	1E	59	GLU	2.5
12	3I	15	ARG	2.5
2	12	155	LEU	2.5
16	7I	10	GLY	2.5
19	AA	45	VAL	2.5
33	15	80	GLY	2.5
20	BI	66	ALA	2.5
34	25	25	LEU	2.5
36	45	93	TYR	2.5
31	59	123	PHE	2.5
45	D5	104	PHE	2.5
19	AA	62	ILE	2.5

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Mol	Chain	Res	Type	RSRZ
54	1G	1112	C	2.4
15	6A	66	LEU	2.4
24	14	631	A	2.4
24	14	2320	A	2.4
46	I8	51	VAL	2.4
34	25	37	ASP	2.4
4	3E	108	LEU	2.4
44	G8	101	LYS	2.4
46	I8	38	VAL	2.4
48	G5	60	LEU	2.4
54	1G	1084	G	2.4
2	1E	163	PHE	2.4
10	1I	37	PRO	2.4
33	58	8	GLN	2.4
34	25	19	ILE	2.4
19	AA	32	LYS	2.4
42	E8	83	LYS	2.4
44	G8	94	LYS	2.4
44	C5	5	MET	2.4
17	8I	98	LEU	2.4
27	11	234	GLY	2.4
17	8A	91	ARG	2.4
52	L5	41	ARG	2.4
8	7E	6	ILE	2.4
8	72	98	LYS	2.4
16	7I	3	LYS	2.4
3	2E	11	ARG	2.4
28	29	79	ARG	2.4
44	G8	86	ARG	2.4
37	98	21	TYR	2.4
47	J8	38	SER	2.4
2	12	80	ILE	2.4
1	13	390	C	2.4
4	32	51	PRO	2.4
15	6A	54	ARG	2.4
17	8A	11	VAL	2.4
24	14	1090	U	2.4
31	59	131	VAL	2.4
26	79	166	ASP	2.4
3	2E	180	ALA	2.4
11	2A	89	ALA	2.4
15	6A	69	TYR	2.4

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Mol	Chain	Res	Type	RSRZ
29	31	184	TYR	2.4
8	72	9	MET	2.4
15	6A	32	LEU	2.4
15	6A	67	LEU	2.4
28	29	9	VAL	2.4
31	59	154	PRO	2.4
32	69	12	LEU	2.4
28	29	115	GLY	2.4
28	29	161	GLY	2.4
49	H5	9	VAL	2.4
54	1G	1065	U	2.4
54	1G	1450	U	2.4
1	13	331	G	2.4
29	39	64	ILE	2.4
30	41	143	GLU	2.4
3	22	204	LEU	2.4
10	1A	40	LEU	2.4
27	11	147	LEU	2.4
33	15	23	LEU	2.4
28	29	8	LYS	2.4
28	29	125	GLY	2.4
36	45	97	VAL	2.4
14	5I	57	ARG	2.4
16	7A	28	ARG	2.4
31	59	121	ILE	2.4
42	A5	6	ILE	2.4
1	13	1236	A	2.4
4	32	157	LEU	2.4
9	82	102	LEU	2.4
33	15	122	VAL	2.4
47	F5	16	ASN	2.4
54	1G	878	G	2.4
54	1G	1224	G	2.4
3	22	180	ALA	2.4
13	4A	110	ARG	2.4
14	5I	35	ARG	2.4
16	7A	13	HIS	2.4
30	41	164	GLU	2.4
36	45	38	GLU	2.4
3	2E	182	ILE	2.4
8	7E	109	ILE	2.4
34	25	69	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
28	21	7	VAL	2.4
40	85	60	LEU	2.4
49	H5	8	LEU	2.4
51	N8	57	VAL	2.4
54	1G	1395	C	2.4
4	3E	68	TYR	2.4
1	13	1224	G	2.4
2	12	140	HIS	2.4
9	82	13	ALA	2.4
47	F5	34	THR	2.4
12	3I	27	LEU	2.4
21	1B	3	LYS	2.4
28	29	109	LYS	2.4
30	49	74	LYS	2.4
39	75	48	ILE	2.4
3	22	2	GLY	2.4
8	7E	137	VAL	2.4
27	19	15	PHE	2.4
31	59	84	SER	2.4
46	E5	54	GLY	2.4
52	P8	1	MET	2.4
47	J8	21	ARG	2.4
14	5I	5	ALA	2.4
28	29	157	ALA	2.4
31	59	104	GLU	2.4
37	55	102	GLU	2.4
10	1A	38	ILE	2.4
30	49	88	ILE	2.4
36	45	75	THR	2.4
50	M8	14	ILE	2.4
6	5E	55	ASP	2.4
7	6E	103	TRP	2.4
16	7A	6	LEU	2.4
24	14	2319	G	2.4
46	E5	53	MET	2.4
1	13	1367	C	2.4
20	BI	59	ALA	2.4
40	C8	46	ALA	2.4
53	Q8	11	LYS	2.4
4	32	135	LEU	2.4
13	4A	96	LEU	2.4
33	58	15	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
3	22	198	VAL	2.3
12	3I	18	VAL	2.3
20	BA	69	GLY	2.3
34	68	35	VAL	2.3
35	35	118	GLY	2.3
9	82	31	GLN	2.3
42	A5	46	PHE	2.3
24	14	2585	U	2.3
38	A8	27	SER	2.3
53	Q8	29	LYS	2.3
53	M5	26	LYS	2.3
9	8E	125	TYR	2.3
24	1H	654(H)	G	2.3
15	6I	67	LEU	2.3
40	85	17	ILE	2.3
15	6I	68	ARG	2.3
17	8I	91	ARG	2.3
28	21	196	VAL	2.3
35	35	77	ARG	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
20	BA	68	LYS	2.3
38	65	11	LYS	2.3
50	I5	47	GLN	2.3
54	1G	1394	A	2.3
7	6E	77	SER	2.3
7	62	12	LEU	2.3
8	7E	13	ILE	2.3
11	2A	25	TYR	2.3
8	72	85	ARG	2.3
15	6I	31	LEU	2.3
28	29	114	ALA	2.3
32	61	12	LEU	2.3
47	J8	37	ILE	2.3
47	J8	58	ILE	2.3
9	82	67	GLY	2.3
13	4A	63	THR	2.3
16	7I	67	THR	2.3
40	C8	15	LYS	2.3
44	C5	12	THR	2.3

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Mol	Chain	Res	Type	RSRZ
46	E5	43	THR	2.3
53	Q8	40	GLU	2.3
3	22	5	ILE	2.3
4	3E	73	ARG	2.3
8	7E	110	ALA	2.3
12	3A	60	LEU	2.3
16	7I	5	ARG	2.3
18	9I	17	SER	2.3
20	BA	12	ALA	2.3
27	11	246	PRO	2.3
27	19	155	LEU	2.3
33	58	115	ARG	2.3
47	F5	11	ARG	2.3
3	2E	195	VAL	2.3
4	32	110	PHE	2.3
16	7I	37	GLY	2.3
29	31	193	VAL	2.3
35	35	82	GLY	2.3
40	85	40	PHE	2.3
30	41	35	GLU	2.3
36	88	91	GLU	2.3
10	1I	70	ARG	2.3
12	3I	97	ARG	2.3
20	BI	86	ARG	2.3
35	35	49	ARG	2.3
2	12	148	TYR	2.3
6	5E	92	LYS	2.3
11	2I	123	LYS	2.3
19	AA	75	ALA	2.3
39	75	100	TYR	2.3
46	I8	75	LEU	2.3
54	1G	1129	C	2.3
13	4I	7	VAL	2.3
27	19	4	LYS	2.3
39	B8	30	VAL	2.3
19	AA	44	MET	2.3
49	H5	19	GLN	2.3
4	32	134	ASP	2.3
7	6E	33	ASP	2.3
2	1E	80	ILE	2.3
39	75	114	LEU	2.3
2	1E	26	PRO	2.3

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Mol	Chain	Res	Type	RSRZ
4	32	7	PRO	2.3
26	79	214	VAL	2.3
30	49	23	PHE	2.3
53	Q8	14	VAL	2.3
54	1G	693	G	2.3
42	E8	92	ARG	2.3
28	29	154	LYS	2.3
33	58	13	TRP	2.3
9	8E	102	LEU	2.3
33	15	107	LEU	2.3
5	42	17	ALA	2.3
29	39	42	ALA	2.3
29	39	49	ALA	2.3
40	C8	80	ILE	2.3
8	72	135	CYS	2.3
14	5I	36	PHE	2.3
15	6A	27	VAL	2.3
45	D5	116	VAL	2.3
17	8A	24	GLU	2.3
27	19	217	ARG	2.3
51	J5	28	PRO	2.3
4	32	123	HIS	2.3
42	A5	72	LYS	2.3
5	4E	31	LEU	2.3
28	21	78	LEU	2.3
38	65	26	LEU	2.3
54	1G	1235	U	2.3
25	1J	52	A	2.3
50	M8	20	ASN	2.3
29	31	129	PHE	2.3
31	59	125	VAL	2.3
41	95	79	VAL	2.3
4	32	114	ARG	2.3
44	C5	84	ARG	2.3
16	7A	27	LYS	2.3
17	8I	2	PRO	2.3
19	AI	32	LYS	2.3
27	19	5	LYS	2.3
50	M8	34	GLU	2.3
37	98	6	SER	2.3
1	13	877	C	2.3
2	12	138	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
2	12	187	LEU	2.3
2	1E	185	ILE	2.3
8	7E	80	ILE	2.3
5	42	98	THR	2.3
19	AI	41	VAL	2.3
20	BI	75	ASN	2.3
24	14	868	U	2.3
27	11	64	ILE	2.3
28	21	160	TYR	2.3
14	5A	19	ARG	2.3
26	71	194	ARG	2.3
27	19	52	ARG	2.3
36	45	69	PHE	2.3
38	65	17	ARG	2.3
50	M8	21	VAL	2.3
24	1H	899	A	2.3
38	65	57	LYS	2.3
49	H5	10	LYS	2.3
54	1G	502	G	2.3
27	11	226	MET	2.3
46	I8	47	PRO	2.3
8	7E	119	LEU	2.3
17	8A	6	LEU	2.3
5	42	27	ARG	2.3
13	4I	78	ILE	2.3
42	E8	95	ILE	2.3
7	62	117	ALA	2.3
35	78	51	PHE	2.3
9	8E	113	LYS	2.3
24	1H	1537	C	2.3
24	1H	2108	C	2.3
41	95	78	LYS	2.3
44	C5	47	LYS	2.3
47	J8	45	ASN	2.3
5	4E	101	ILE	2.3
15	6A	72	ARG	2.3
24	1H	989	G	2.3
29	39	82	ILE	2.3
33	15	119	ARG	2.3
54	1G	46	G	2.3
40	C8	35	ALA	2.3
8	72	4	ASP	2.3

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Mol	Chain	Res	Type	RSRZ
54	1G	400	C	2.3
19	AA	81	ARG	2.3
30	41	152	LEU	2.3
37	98	1	MET	2.3
44	C5	2	ARG	2.3
11	2A	108	ILE	2.3
28	21	197	ILE	2.3
53	M5	36	LYS	2.3
9	8E	5	TYR	2.3
13	4I	92	HIS	2.3
40	C8	8	VAL	2.3
45	H8	85	HIS	2.3
47	F5	38	SER	2.3
24	14	271(B)	G	2.2
34	25	36	GLY	2.2
2	1E	73	THR	2.2
3	22	183	ASP	2.2
20	BI	26	ASN	2.2
21	1F	9	ARG	2.2
28	21	105	THR	2.2
38	65	9	ARG	2.2
42	A5	36	LEU	2.2
53	M5	62	LEU	2.2
22	3L	19	C	2.2
41	D8	85	LYS	2.2
46	E5	24	LYS	2.2
34	25	58	VAL	2.2
6	52	53	ALA	2.2
12	3I	95	GLY	2.2
12	3A	30	ALA	2.2
26	79	203	GLY	2.2
45	D5	169	GLU	2.2
16	7A	18	ARG	2.2
27	19	38	LYS	2.2
36	88	68	ILE	2.2
51	J5	26	THR	2.2
4	3E	124	GLY	2.2
33	15	47	ALA	2.2
37	98	7	GLY	2.2
44	G8	35	TYR	2.2
9	8E	42	ARG	2.2
14	5A	45	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
3	22	4	LYS	2.2
29	39	39	TRP	2.2
4	3E	58	LEU	2.2
7	6E	59	LEU	2.2
28	21	183	LEU	2.2
29	39	155	LEU	2.2
8	7E	9	MET	2.2
9	8E	101	PHE	2.2
46	I8	57	PHE	2.2
2	12	92	TYR	2.2
4	3E	42	GLN	2.2
4	32	117	ALA	2.2
12	3A	72	GLY	2.2
24	14	387	U	2.2
35	35	38	GLN	2.2
44	C5	91	GLU	2.2
36	45	72	LYS	2.2
52	L5	2	LYS	2.2
7	62	156	TRP	2.2
33	15	87	LEU	2.2
54	1G	43	C	2.2
26	71	208	PHE	2.2
45	H8	27	VAL	2.2
2	1E	31	TYR	2.2
5	4E	22	GLY	2.2
9	82	72	GLY	2.2
20	BA	15	ARG	2.2
35	78	41	ARG	2.2
40	85	3	ARG	2.2
12	3A	10	LEU	2.2
20	BA	84	LEU	2.2
4	3E	10	ARG	2.2
29	31	173	VAL	2.2
40	C8	50	ARG	2.2
44	C5	7	VAL	2.2
53	Q8	57	ARG	2.2
30	49	89	GLY	2.2
33	15	77	GLY	2.2
42	E8	94	ASP	2.2
47	J8	69	LYS	2.2
15	6I	62	GLN	2.2
35	35	58	THR	2.2

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Mol	Chain	Res	Type	RSRZ
42	A5	73	ALA	2.2
17	8A	31	LEU	2.2
28	29	78	LEU	2.2
54	1G	1111	A	2.2
2	12	172	ILE	2.2
43	F8	28	PHE	2.2
35	78	76	LYS	2.2
1	13	306	G	2.2
7	62	154	TYR	2.2
24	1H	2899	G	2.2
24	14	1980	G	2.2
28	21	6	GLY	2.2
49	L8	14	GLY	2.2
26	79	47	LEU	2.2
34	25	8	LEU	2.2
36	88	12	GLN	2.2
53	M5	24	ALA	2.2
7	6E	99	LEU	2.2
43	B5	92	LEU	2.2
12	3I	32	PHE	2.2
15	6A	35	ARG	2.2
3	22	39	ILE	2.2
5	42	129	ILE	2.2
10	1A	7	LYS	2.2
33	15	117	PHE	2.2
34	25	18	LYS	2.2
36	88	69	PHE	2.2
27	19	173	VAL	2.2
36	45	66	ILE	2.2
38	A8	18	ILE	2.2
51	N8	13	LYS	2.2
8	7E	129	VAL	2.2
9	82	71	SER	2.2
42	A5	101	SER	2.2
49	H5	59	VAL	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
41	95	36	PRO	2.2
26	79	53	ARG	2.2
29	39	75	HIS	2.2

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Mol	Chain	Res	Type	RSRZ
20	BI	60	GLU	2.2
30	41	30	GLU	2.2
27	19	212	SER	2.2
28	29	140	SER	2.2
2	1E	146	GLN	2.2
9	82	118	LYS	2.2
17	8I	38	ARG	2.2
26	7I	164	ARG	2.2
27	19	184	LYS	2.2
29	39	45	ARG	2.2
30	41	97	ASP	2.2
33	58	121	LYS	2.2
49	L8	17	LYS	2.2
29	31	158	THR	2.2
4	3E	123	HIS	2.2
13	4A	95	GLY	2.2
31	59	100	GLY	2.2
46	I8	73	GLY	2.2
54	1G	1190	G	2.2
4	32	49	ARG	2.2
7	62	2	ALA	2.2
9	8E	112	LYS	2.2
12	3A	98	TYR	2.2
16	7I	64	ALA	2.2
28	21	131	ALA	2.2
33	15	115	ARG	2.2
44	G8	33	LYS	2.2
17	8A	71	PHE	2.2
24	1H	887	A	2.2
34	25	5	GLN	2.2
36	88	65	PHE	2.2
5	4E	81	GLU	2.2
20	BA	55	ILE	2.2
27	11	254	THR	2.2
30	49	38	VAL	2.2
36	88	97	VAL	2.2
38	A8	28	VAL	2.2
44	C5	72	VAL	2.2
45	H8	105	VAL	2.2
46	E5	23	VAL	2.2
50	I5	23	GLU	2.2
53	M5	4	MET	2.2

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Mol	Chain	Res	Type	RSRZ
26	71	27	HIS	2.2
2	12	111	ARG	2.2
4	32	118	ARG	2.2
54	1G	1109	C	2.2
14	5A	47	LEU	2.2
31	59	71	LEU	2.2
34	25	41	ALA	2.2
4	32	119	GLN	2.2
24	14	2545	G	2.2
26	79	55	ASP	2.2
29	39	171	PRO	2.2
54	1G	31	G	2.2
28	21	25	VAL	2.2
7	62	29	LYS	2.2
13	4A	116	THR	2.2
35	35	44	GLY	2.2
36	88	32	TYR	2.1
42	A5	29	LEU	2.1
14	5I	20	ALA	2.1
53	M5	37	SER	2.1
54	1G	789	U	2.1
5	42	131	ILE	2.1
1	13	1516	G	2.1
46	E5	13	GLY	2.1
54	1G	1064	G	2.1
18	9I	69	THR	2.1
30	41	107	LEU	2.1
41	D8	40	LEU	2.1
53	Q8	10	ALA	2.1
30	49	80	PHE	2.1
4	32	160	GLN	2.1
1	13	43	C	2.1
5	42	105	VAL	2.1
14	5A	14	PRO	2.1
24	14	2804	C	2.1
33	58	2	LYS	2.1
34	68	26	LYS	2.1
44	C5	49	VAL	2.1
45	D5	159	PRO	2.1
29	39	96	ASP	2.1
8	7E	10	LEU	2.1
7	62	39	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
12	3I	61	THR	2.1
28	29	132	HIS	2.1
27	19	67	PHE	2.1
28	21	90	THR	2.1
33	58	73	THR	2.1
24	1H	529	A	2.1
24	14	2645	G	2.1
27	19	35	LYS	2.1
34	25	17	ARG	2.1
38	65	93	LYS	2.1
46	I8	55	ARG	2.1
52	L5	19	ARG	2.1
54	1G	1183	A	2.1
4	32	133	VAL	2.1
39	B8	89	VAL	2.1
5	4E	106	PRO	2.1
27	19	226	MET	2.1
19	AI	13	ASP	2.1
24	1H	9	U	2.1
24	1H	614	U	2.1
27	19	147	LEU	2.1
30	49	7	LEU	2.1
54	1G	1240	U	2.1
26	79	40	THR	2.1
27	19	68	LYS	2.1
27	19	233	HIS	2.1
47	J8	71	TYR	2.1
5	42	18	ARG	2.1
49	H5	52	HIS	2.1
32	61	7	GLU	2.1
33	15	46	VAL	2.1
39	B8	86	ILE	2.1
20	BI	102	GLY	2.1
24	1H	2173	A	2.1
24	14	2031	A	2.1
30	41	94	LEU	2.1
33	15	36	GLY	2.1
47	F5	31	GLY	2.1
4	32	20	TYR	2.1
8	72	12	ARG	2.1
20	BI	89	ARG	2.1
31	59	138	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
34	25	99	PHE	2.1
39	B8	94	ALA	2.1
41	D8	83	ARG	2.1
44	C5	63	LYS	2.1
50	M8	13	ARG	2.1
54	1G	82	U	2.1
4	32	43	HIS	2.1
3	22	152	ILE	2.1
4	32	126	ILE	2.1
17	8I	59	ILE	2.1
31	59	99	VAL	2.1
2	1E	99	GLY	2.1
12	3I	25	PRO	2.1
30	41	8	LYS	2.1
50	M8	29	PRO	2.1
3	2E	190	ARG	2.1
5	42	14	ARG	2.1
14	5A	10	ALA	2.1
24	1H	1762[A]	A	2.1
40	C8	47	TYR	2.1
24	14	2449	U	2.1
54	1G	1202	G	2.1
17	8A	73	VAL	2.1
50	M8	3	GLU	2.1
20	BA	75	ASN	2.1
15	6A	55	GLY	2.1
2	1E	111	ARG	2.1
29	31	101	LEU	2.1
32	61	118	LYS	2.1
33	15	120	LEU	2.1
34	68	1	MET	2.1
53	M5	44	LYS	2.1
33	15	79	PRO	2.1
46	E5	47	PRO	2.1
8	72	94	TYR	2.1
17	8A	58	GLU	2.1
42	A5	5	ALA	2.1
50	I5	51	ASP	2.1
29	31	105	VAL	2.1
35	78	75	ILE	2.1
4	32	42	GLN	2.1
24	1H	654(O)	G	2.1

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Mol	Chain	Res	Type	RSRZ
44	C5	31	LEU	2.1
50	M8	61	ARG	2.1
9	82	5	TYR	2.1
31	59	157	TYR	2.1
38	65	6	ALA	2.1
15	6A	51	HIS	2.1
27	11	35	LYS	2.1
8	7E	127	LEU	2.1
36	88	83	MET	2.1
37	55	51	LEU	2.1
49	L8	31	LEU	2.1
24	1H	2799	A	2.1
26	71	165	ASN	2.1
29	39	175	THR	2.1
54	1G	994	A	2.1
29	31	25	PRO	2.1
40	85	47	TYR	2.1
54	1G	586	C	2.1
54	1G	1103	C	2.1
28	21	104	VAL	2.1
38	65	14	VAL	2.1
40	C8	51	LYS	2.1
9	8E	77	ILE	2.1
50	M8	33	VAL	2.1
13	4A	90	LEU	2.1
20	BA	53	LEU	2.1
27	11	95	LEU	2.1
28	21	27	LEU	2.1
39	75	105	LEU	2.1
40	85	27	LEU	2.1
19	AI	77	THR	2.1
29	31	182	ASN	2.1
24	14	899	A	2.1
5	4E	17	ALA	2.1
44	C5	101	LYS	2.1
46	I8	46	LYS	2.1
47	J8	89	GLU	2.1
53	M5	59	LYS	2.1
36	88	90	VAL	2.1
4	3E	71	SER	2.1
4	32	158	ILE	2.1
9	8E	81	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
16	7A	19	ILE	2.1
54	1G	398	C	2.1
3	22	17	ASP	2.1
24	14	2148	G	2.1
27	19	250	TRP	2.1
54	1G	112	G	2.1
15	6A	26	GLU	2.1
28	21	154	LYS	2.1
38	65	8	GLU	2.1
40	85	44	ASN	2.1
48	G5	15	LYS	2.1
47	J8	34	THR	2.1
31	59	10	PRO	2.1
47	J8	43	TYR	2.1
2	1E	69	LEU	2.1
20	BA	33	ILE	2.1
32	69	4	ILE	2.1
27	19	55	GLY	2.1
45	D5	163	LEU	2.1
46	I8	59	LEU	2.1
26	79	163	PHE	2.0
46	I8	72	ARG	2.0
53	Q8	15	LYS	2.0
28	29	160	TYR	2.0
39	B8	100	TYR	2.0
49	L8	15	TYR	2.0
54	1G	306	G	2.0
3	2E	198	VAL	2.0
5	4E	90	VAL	2.0
7	62	9	VAL	2.0
42	E8	85	VAL	2.0
13	4A	4	ILE	2.0
28	29	5	LEU	2.0
32	69	38	LEU	2.0
54	1G	1086	U	2.0
1	13	915	A	2.0
40	C8	19	LYS	2.0
49	H5	7	LYS	2.0
33	58	130	HIS	2.0
1	13	103	C	2.0
24	1H	888	C	2.0
24	14	2827	C	2.0

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Mol	Chain	Res	Type	RSRZ
47	J8	72	GLU	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
15	6I	56	LEU	2.0
27	19	206	LEU	2.0
27	19	249	PRO	2.0
40	C8	17	ILE	2.0
41	95	70	ILE	2.0
3	2E	10	PHE	2.0
5	42	28	PHE	2.0
24	14	958	U	2.0
40	C8	22	LYS	2.0
43	F8	63	LYS	2.0
44	G8	4	LYS	2.0
54	1G	867	G	2.0
13	4I	93	ARG	2.0
31	59	6	ARG	2.0
40	85	55	ARG	2.0
53	M5	30	ARG	2.0
30	49	116	ASP	2.0
35	35	27	HIS	2.0
40	85	89	GLU	2.0
53	M5	35	GLN	2.0
1	13	1324	A	2.0
17	8I	42	TYR	2.0
27	19	182	LEU	2.0
28	21	134	ILE	2.0
33	15	31	ALA	2.0
8	72	88	LYS	2.0
20	BA	27	LYS	2.0
17	8A	75	ARG	2.0
53	M5	38	GLY	2.0
15	6A	59	MET	2.0
24	14	614	U	2.0
36	88	7	MET	2.0
1	13	1520	G	2.0
24	14	250	G	2.0
34	25	24	VAL	2.0
7	6E	42	ILE	2.0
8	7E	107	LEU	2.0

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Mol	Chain	Res	Type	RSRZ
20	BI	67	ALA	2.0
27	19	175	LEU	2.0
35	78	6	LEU	2.0
47	J8	73	LEU	2.0
2	1E	14	GLY	2.0
27	19	42	GLY	2.0
27	19	223	GLY	2.0
35	35	130	PHE	2.0
36	88	39	PRO	2.0
36	45	41	TRP	2.0
2	12	145	LEU	2.0
37	98	75	LEU	2.0
8	7E	128	GLY	2.0
13	4A	24	GLY	2.0
26	79	48	GLY	2.0
3	2E	128	PHE	2.0
19	AA	74	PHE	2.0
54	1G	823	G	2.0
4	32	40	PRO	2.0
1	13	975	A	2.0
23	4L	15	A	2.0
43	F8	56	THR	2.0
54	1G	1451	A	2.0
5	42	121	LYS	2.0
33	15	118	LYS	2.0
4	3E	140	VAL	2.0
9	82	41	VAL	2.0
31	59	130	ARG	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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

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

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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	1H	3031	1/1	0.86	0.62	22.51	73,73,73,73	0
55	MG	1H	3059	1/1	0.97	0.48	19.89	90,90,90,90	0
55	MG	14	3174	1/1	0.92	0.60	14.75	85,85,85,85	0
55	MG	14	3141	1/1	0.96	0.50	14.13	64,64,64,64	0
55	MG	14	3280	1/1	0.95	0.59	13.65	79,79,79,79	0
55	MG	1H	3154	1/1	0.91	0.35	12.44	88,88,88,88	0
55	MG	1H	3108	1/1	0.95	0.36	12.34	79,79,79,79	0
55	MG	14	3256	1/1	0.88	0.41	12.21	96,96,96,96	0
55	MG	1H	3116	1/1	0.95	0.41	12.21	92,92,92,92	0
55	MG	1H	3063	1/1	0.97	0.41	11.64	76,76,76,76	0
55	MG	1H	3342	1/1	0.70	0.68	10.61	87,87,87,87	0
55	MG	14	3154	1/1	0.96	0.42	10.21	102,102,102,102	0
55	MG	13	1662	1/1	0.93	0.33	9.09	85,85,85,85	0
55	MG	1H	3047	1/1	0.98	0.38	8.89	84,84,84,84	0
55	MG	1H	3131	1/1	0.54	0.50	8.70	96,96,96,96	0
55	MG	14	3243	1/1	0.98	0.33	8.60	89,89,89,89	0
55	MG	13	1681	1/1	0.80	0.81	8.22	117,117,117,117	0
55	MG	1G	1719	1/1	0.72	0.36	8.00	118,118,118,118	0
55	MG	1H	3106	1/1	0.91	0.45	7.97	81,81,81,81	0
55	MG	1G	1700	1/1	0.76	0.22	7.39	99,99,99,99	0
55	MG	1H	3130	1/1	0.95	0.36	7.33	91,91,91,91	0
55	MG	1H	3235	1/1	0.89	0.26	7.20	107,107,107,107	0
55	MG	13	1692	1/1	0.81	0.39	7.11	101,101,101,101	0
55	MG	1G	1616	1/1	0.95	0.25	6.04	85,85,85,85	0
55	MG	14	3265	1/1	0.74	0.37	5.94	85,85,85,85	0
55	MG	1H	3073	1/1	0.84	0.42	5.45	71,71,71,71	0
55	MG	14	3201	1/1	0.59	0.34	5.42	84,84,84,84	0
55	MG	42	201	1/1	0.78	0.34	5.37	103,103,103,103	0
55	MG	29	305	1/1	0.83	0.99	5.11	86,86,86,86	0
55	MG	13	1616	1/1	0.63	0.27	5.08	133,133,133,133	0
55	MG	14	3283	1/1	0.94	0.40	4.94	81,81,81,81	0
55	MG	1G	1642	1/1	0.97	0.28	4.69	117,117,117,117	0
55	MG	1H	3332	1/1	0.77	0.70	4.64	101,101,101,101	0
55	MG	1H	3027	1/1	0.93	0.24	4.47	88,88,88,88	0
55	MG	1H	3155	1/1	0.70	0.36	4.36	92,92,92,92	0
55	MG	14	3024	1/1	0.97	0.23	4.24	81,81,81,81	0
55	MG	1G	1685	1/1	0.97	0.21	4.20	83,83,83,83	0
55	MG	14	3266	1/1	0.86	0.20	4.11	101,101,101,101	0
55	MG	14	3021	1/1	0.93	0.42	4.08	87,87,87,87	0
55	MG	13	1629	1/1	0.99	0.27	4.03	88,88,88,88	0
55	MG	1H	3334	1/1	0.79	0.32	4.00	88,88,88,88	0
55	MG	14	3146	1/1	0.73	0.40	3.86	81,81,81,81	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å ²)	Q<0.9
55	MG	1J	206	1/1	0.78	0.35	3.85	129,129,129,129	0
55	MG	1G	1701	1/1	0.84	0.41	3.80	106,106,106,106	0
55	MG	1H	3119	1/1	0.92	0.24	3.60	92,92,92,92	0
55	MG	1H	3337	1/1	0.94	0.40	3.52	87,87,87,87	0
55	MG	14	3223	1/1	0.80	0.23	3.31	97,97,97,97	0
55	MG	14	3047	1/1	0.97	0.26	3.04	78,78,78,78	0
55	MG	1H	3368	1/1	0.94	0.28	2.96	64,64,64,64	0
55	MG	1G	1687	1/1	0.97	0.23	2.92	120,120,120,120	0
55	MG	1H	3051	1/1	0.72	0.42	2.90	76,76,76,76	0
55	MG	14	3236	1/1	0.88	0.21	2.88	113,113,113,113	0
55	MG	14	3110	1/1	0.97	0.22	2.82	95,95,95,95	0
55	MG	15	201	1/1	0.97	0.47	2.78	110,110,110,110	0
55	MG	1H	3361	1/1	0.82	0.35	2.71	103,103,103,103	0
55	MG	14	3479	1/1	0.84	0.32	2.67	108,108,108,108	0
55	MG	13	1619	1/1	0.52	0.21	2.63	81,81,81,81	0
55	MG	1H	3395	1/1	0.94	0.40	2.59	107,107,107,107	0
55	MG	29	303	1/1	0.63	0.74	2.51	77,77,77,77	0
55	MG	14	3284	1/1	0.83	0.39	2.47	83,83,83,83	0
55	MG	1H	3041	1/1	0.95	0.24	2.30	68,68,68,68	0
55	MG	1G	1653	1/1	0.70	0.23	2.29	90,90,90,90	0
55	MG	1G	1712	1/1	0.90	0.28	2.28	122,122,122,122	0
55	MG	1H	3228	1/1	0.86	0.23	2.18	90,90,90,90	0
55	MG	1H	3358	1/1	0.74	0.42	2.08	115,115,115,115	0
55	MG	1H	3001	1/1	0.99	0.30	2.07	47,47,47,47	0
55	MG	14	3312	1/1	0.86	0.19	2.02	98,98,98,98	0
55	MG	1H	3210	1/1	0.76	0.22	1.96	97,97,97,97	0
55	MG	13	1620	1/1	0.96	0.28	1.92	67,67,67,67	0
55	MG	1H	3259	1/1	0.83	0.38	1.90	165,165,165,165	0
55	MG	29	302	1/1	0.93	0.58	1.85	81,81,81,81	0
55	MG	14	3220	1/1	0.74	0.18	1.79	89,89,89,89	0
55	MG	1J	207	1/1	0.80	0.21	1.79	97,97,97,97	0
55	MG	14	3086	1/1	0.91	0.22	1.77	68,68,68,68	0
55	MG	14	3334	1/1	0.69	0.24	1.76	93,93,93,93	0
55	MG	14	3252	1/1	0.93	0.24	1.74	79,79,79,79	0
55	MG	1H	3143	1/1	0.89	0.23	1.66	90,90,90,90	0
55	MG	14	3077	1/1	0.98	0.24	1.64	80,80,80,80	0
55	MG	1H	3084	1/1	0.81	0.29	1.63	83,83,83,83	0
55	MG	14	3031	1/1	0.61	0.23	1.63	95,95,95,95	0
55	MG	13	1630	1/1	0.97	0.22	1.62	92,92,92,92	0
55	MG	1G	1645	1/1	0.77	0.28	1.58	104,104,104,104	0
55	MG	16	201	1/1	0.94	0.18	1.56	112,112,112,112	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	14	3199	1/1	0.91	0.24	1.54	94,94,94,94	0
55	MG	13	1606	1/1	0.96	0.27	1.48	100,100,100,100	0
55	MG	1H	3513	1/1	0.91	0.29	1.40	103,103,103,103	0
55	MG	14	3013	1/1	0.98	0.24	1.35	75,75,75,75	0
55	MG	11	302	1/1	0.87	0.55	1.32	63,63,63,63	0
55	MG	55	203	1/1	0.90	0.45	1.22	88,88,88,88	0
55	MG	14	3158	1/1	0.90	0.27	1.21	70,70,70,70	0
55	MG	1H	3268	1/1	0.07	0.22	1.20	85,85,85,85	0
55	MG	1H	3040	1/1	0.98	0.28	1.20	80,80,80,80	0
55	MG	1H	3117	1/1	0.94	0.26	1.14	83,83,83,83	0
55	MG	1H	3085	1/1	0.97	0.32	1.06	78,78,78,78	0
56	ZN	32	302	1/1	0.99	0.37	1.05	114,114,114,114	0
55	MG	14	3049	1/1	0.98	0.25	0.96	65,65,65,65	0
55	MG	1G	1697	1/1	0.97	0.23	0.94	83,83,83,83	0
55	MG	1H	3043	1/1	0.97	0.25	0.93	89,89,89,89	0
55	MG	I8	101	1/1	0.59	0.34	0.91	93,93,93,93	0
55	MG	16	205	1/1	0.81	0.18	0.90	109,109,109,109	0
55	MG	14	3315	1/1	0.91	0.38	0.86	121,121,121,121	0
55	MG	14	3078	1/1	0.98	0.23	0.76	70,70,70,70	0
55	MG	14	3209	1/1	0.83	0.34	0.73	89,89,89,89	0
55	MG	1H	3077	1/1	0.98	0.26	0.73	59,59,59,59	0
55	MG	14	3194	1/1	0.98	0.33	0.72	92,92,92,92	0
55	MG	1H	3193	1/1	0.84	0.19	0.71	79,79,79,79	0
55	MG	1H	3016	1/1	0.94	0.24	0.63	75,75,75,75	0
55	MG	1H	3250	1/1	0.87	0.23	0.49	80,80,80,80	0
55	MG	1H	3359	1/1	0.87	0.27	0.49	70,70,70,70	0
55	MG	1G	1713	1/1	0.91	0.15	0.46	106,106,106,106	0
55	MG	13	1678	1/1	0.84	0.22	0.41	124,124,124,124	0
56	ZN	3E	301	1/1	0.99	0.36	0.39	109,109,109,109	0
55	MG	14	3005	1/1	0.98	0.24	0.37	72,72,72,72	0
55	MG	14	3473	1/1	0.87	0.24	0.31	108,108,108,108	0
55	MG	1H	3547	1/1	0.95	0.36	0.29	85,85,85,85	0
55	MG	1H	3134	1/1	0.89	0.27	0.28	78,78,78,78	0
55	MG	1G	1607	1/1	0.96	0.21	0.25	94,94,94,94	0
55	MG	14	3406	1/1	1.00	0.19	0.25	76,76,76,76	0
55	MG	1H	3236	1/1	0.87	0.24	0.24	77,77,77,77	0
55	MG	1H	3151	1/1	0.94	0.18	0.21	80,80,80,80	0
55	MG	1G	1650	1/1	0.90	0.18	0.21	99,99,99,99	0
55	MG	1G	1620	1/1	0.95	0.19	0.16	97,97,97,97	0
55	MG	1H	3465	1/1	0.98	0.24	0.15	73,73,73,73	0
55	MG	1H	3258	1/1	0.97	0.31	0.13	94,94,94,94	0
55	MG	1G	1738	1/1	0.94	0.28	0.07	108,108,108,108	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	1H	3070	1/1	0.99	0.21	0.04	72,72,72,72	0
55	MG	1H	3241	1/1	0.97	0.23	-0.01	99,99,99,99	0
55	MG	1H	3254	1/1	0.76	0.17	-0.02	104,104,104,104	0
55	MG	13	1615	1/1	0.95	0.31	-0.08	146,146,146,146	0
55	MG	1G	1658	1/1	0.72	0.31	-0.11	106,106,106,106	0
55	MG	14	3027	1/1	0.95	0.22	-0.16	80,80,80,80	0
55	MG	14	3301	1/1	0.88	0.19	-0.18	91,91,91,91	0
55	MG	1H	3472	1/1	0.99	0.21	-0.18	94,94,94,94	0
55	MG	1G	1648	1/1	0.91	0.28	-0.30	109,109,109,109	0
55	MG	13	1608	1/1	0.98	0.21	-0.30	91,91,91,91	0
55	MG	14	3017	1/1	0.93	0.20	-0.33	79,79,79,79	0
55	MG	14	3089	1/1	0.83	0.21	-0.34	78,78,78,78	0
55	MG	1H	3066	1/1	0.96	0.26	-0.38	81,81,81,81	0
55	MG	1G	1694	1/1	0.96	0.18	-0.40	103,103,103,103	0
55	MG	14	3048	1/1	0.96	0.20	-0.40	69,69,69,69	0
55	MG	13	1655	1/1	0.86	0.24	-0.42	107,107,107,107	0
55	MG	1H	3083	1/1	0.99	0.18	-0.43	85,85,85,85	0
55	MG	14	3294	1/1	0.97	0.27	-0.43	82,82,82,82	0
55	MG	1H	3140	1/1	0.98	0.20	-0.44	87,87,87,87	0
55	MG	1H	3056	1/1	0.96	0.26	-0.52	67,67,67,67	0
55	MG	13	1632	1/1	0.92	0.25	-0.55	87,87,87,87	0
55	MG	14	3296	1/1	0.66	0.27	-0.55	87,87,87,87	0
55	MG	1H	3173	1/1	0.88	0.26	-0.55	88,88,88,88	0
55	MG	14	3462	1/1	0.85	0.21	-0.57	100,100,100,100	0
55	MG	1H	3126	1/1	0.78	0.24	-0.62	87,87,87,87	0
55	MG	1H	3221	1/1	0.98	0.21	-0.63	67,67,67,67	0
55	MG	1H	3025	1/1	0.68	0.15	-0.63	95,95,95,95	0
55	MG	14	3085	1/1	0.95	0.19	-0.66	67,67,67,67	0
55	MG	1H	3331	1/1	0.95	0.24	-0.66	62,62,62,62	0
55	MG	14	3168	1/1	0.94	0.18	-0.67	86,86,86,86	0
55	MG	1G	1640	1/1	0.97	0.17	-0.70	95,95,95,95	0
55	MG	14	3175	1/1	0.97	0.27	-0.70	95,95,95,95	0
55	MG	1H	3200	1/1	0.86	0.24	-0.72	109,109,109,109	0
55	MG	88	202	1/1	0.88	0.19	-0.74	98,98,98,98	0
55	MG	1H	3487	1/1	0.89	0.17	-0.76	123,123,123,123	0
55	MG	1G	1695	1/1	0.94	0.14	-0.77	108,108,108,108	0
55	MG	1H	3079	1/1	0.95	0.21	-0.84	50,50,50,50	0
55	MG	13	1612	1/1	0.91	0.21	-0.88	117,117,117,117	0
55	MG	1G	1736	1/1	0.90	0.10	-0.88	151,151,151,151	0
55	MG	16	204	1/1	0.94	0.14	-0.89	121,121,121,121	0
55	MG	1H	3548	1/1	0.98	0.21	-0.90	76,76,76,76	0
55	MG	1H	3053	1/1	0.98	0.26	-0.90	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	1G	1610	1/1	0.93	0.13	-0.90	156,156,156,156	0
55	MG	1H	3088	1/1	0.84	0.18	-0.90	55,55,55,55	0
55	MG	1H	3072	1/1	0.97	0.23	-0.96	65,65,65,65	0
55	MG	13	1605	1/1	0.94	0.11	-0.96	103,103,103,103	0
55	MG	16	203	1/1	0.78	0.14	-0.97	105,105,105,105	0
56	ZN	G8	201	1/1	0.57	0.12	-0.99	201,201,201,201	0
55	MG	14	3044	1/1	0.98	0.19	-1.02	78,78,78,78	0
55	MG	1H	3101	1/1	0.97	0.20	-1.02	64,64,64,64	0
55	MG	49	201	1/1	0.87	0.22	-1.04	134,134,134,134	0
55	MG	14	3488	1/1	0.98	0.21	-1.06	81,81,81,81	0
55	MG	14	3020	1/1	0.99	0.18	-1.07	71,71,71,71	0
55	MG	1J	201	1/1	0.97	0.16	-1.08	125,125,125,125	0
56	ZN	5I	101	1/1	0.96	0.14	-1.08	138,138,138,138	0
56	ZN	5A	101	1/1	0.81	0.14	-1.09	155,155,155,155	0
55	MG	F5	101	1/1	0.96	0.18	-1.10	90,90,90,90	0
55	MG	1G	1606	1/1	0.94	0.14	-1.11	108,108,108,108	0
55	MG	21	301	1/1	0.88	0.21	-1.17	69,69,69,69	0
55	MG	1H	3232	1/1	0.92	0.18	-1.18	82,82,82,82	0
55	MG	1H	3121	1/1	0.86	0.20	-1.19	82,82,82,82	0
55	MG	14	3088	1/1	0.93	0.13	-1.19	99,99,99,99	0
55	MG	13	1659	1/1	0.69	0.14	-1.22	108,108,108,108	0
55	MG	13	1604	1/1	0.93	0.13	-1.25	96,96,96,96	0
55	MG	14	3487	1/1	0.94	0.16	-1.30	73,73,73,73	0
56	ZN	C5	202	1/1	0.70	0.11	-1.35	206,206,206,206	0
55	MG	1H	3384	1/1	0.92	0.12	-1.36	72,72,72,72	0
55	MG	1G	1627	1/1	0.96	0.21	-1.37	89,89,89,89	0
55	MG	14	3394	1/1	0.97	0.10	-1.38	100,100,100,100	0
55	MG	14	3062	1/1	0.79	0.20	-1.39	79,79,79,79	0
55	MG	14	3217	1/1	0.85	0.14	-1.39	88,88,88,88	0
55	MG	1G	1618	1/1	0.89	0.14	-1.40	110,110,110,110	0
55	MG	14	3124	1/1	0.87	0.15	-1.41	92,92,92,92	0
55	MG	1H	3010	1/1	0.97	0.22	-1.42	57,57,57,57	0
55	MG	13	1709	1/1	0.97	0.08	-1.42	126,126,126,126	0
55	MG	13	1603	1/1	0.96	0.15	-1.43	107,107,107,107	0
55	MG	14	3400	1/1	0.93	0.18	-1.43	61,61,61,61	0
55	MG	14	3349	1/1	0.99	0.15	-1.44	66,66,66,66	0
55	MG	13	1626	1/1	0.86	0.21	-1.45	69,69,69,69	0
55	MG	13	1702	1/1	0.91	0.12	-1.45	140,140,140,140	0
55	MG	1G	1716	1/1	0.93	0.13	-1.46	98,98,98,98	0
55	MG	1H	3471	1/1	0.95	0.10	-1.46	89,89,89,89	0
55	MG	14	3218	1/1	0.92	0.14	-1.48	77,77,77,77	0
55	MG	14	3011	1/1	0.98	0.20	-1.48	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	1H	3182	1/1	0.79	0.23	-1.51	68,68,68,68	0
55	MG	14	3359	1/1	0.95	0.11	-1.56	87,87,87,87	0
55	MG	1G	1601	1/1	0.91	0.21	-1.57	89,89,89,89	0
55	MG	14	3372	1/1	0.96	0.13	-1.58	65,65,65,65	0
55	MG	13	1651	1/1	0.98	0.16	-1.62	91,91,91,91	0
55	MG	J8	101	1/1	0.93	0.19	-1.64	83,83,83,83	0
55	MG	14	3160	1/1	0.83	0.21	-1.69	82,82,82,82	0
55	MG	14	3355	1/1	0.95	0.16	-1.69	97,97,97,97	0
55	MG	14	3259	1/1	0.90	0.14	-1.76	86,86,86,86	0
55	MG	1H	3413	1/1	0.94	0.11	-1.78	83,83,83,83	0
55	MG	2L	101	1/1	0.98	0.16	-1.79	92,92,92,92	0
55	MG	1G	1617	1/1	0.93	0.15	-1.80	74,74,74,74	0
55	MG	14	3037	1/1	0.97	0.11	-1.81	48,48,48,48	0
55	MG	2K	101	1/1	0.95	0.18	-1.81	84,84,84,84	0
55	MG	1H	3388	1/1	0.97	0.10	-1.82	77,77,77,77	0
55	MG	14	3287	1/1	0.91	0.14	-1.83	111,111,111,111	0
55	MG	14	3059	1/1	0.95	0.14	-1.85	64,64,64,64	0
55	MG	1G	1614	1/1	0.94	0.17	-1.87	89,89,89,89	0
55	MG	1H	3390	1/1	0.93	0.10	-1.89	67,67,67,67	0
55	MG	1G	1746	1/1	0.96	0.10	-1.89	162,162,162,162	0
55	MG	14	3091	1/1	0.96	0.17	-1.91	73,73,73,73	0
55	MG	14	3396	1/1	0.92	0.19	-1.93	94,94,94,94	0
55	MG	14	3028	1/1	0.98	0.17	-1.94	76,76,76,76	0
55	MG	1H	3030	1/1	0.94	0.12	-1.95	66,66,66,66	0
55	MG	14	3054	1/1	0.99	0.17	-1.98	65,65,65,65	0
55	MG	1H	3005	1/1	0.96	0.17	-2.00	64,64,64,64	0
55	MG	14	3169	1/1	0.90	0.20	-2.02	69,69,69,69	0
55	MG	1H	3087	1/1	0.98	0.22	-2.05	81,81,81,81	0
55	MG	1H	3032	1/1	0.92	0.19	-2.07	76,76,76,76	0
55	MG	14	3375	1/1	0.93	0.11	-2.09	75,75,75,75	0
55	MG	19	301	1/1	0.95	0.23	-2.11	76,76,76,76	0
55	MG	14	3285	1/1	0.96	0.08	-2.14	107,107,107,107	0
55	MG	14	3362	1/1	0.97	0.17	-2.16	79,79,79,79	0
55	MG	13	1673	1/1	0.98	0.14	-2.20	86,86,86,86	0
55	MG	14	3100	1/1	0.86	0.13	-2.21	81,81,81,81	0
55	MG	13	1657	1/1	0.95	0.16	-2.22	109,109,109,109	0
55	MG	1H	3376	1/1	0.98	0.10	-2.23	78,78,78,78	0
55	MG	14	3198	1/1	0.98	0.13	-2.26	88,88,88,88	0
55	MG	14	3172	1/1	0.96	0.15	-2.27	74,74,74,74	0
55	MG	14	3202	1/1	0.85	0.18	-2.28	90,90,90,90	0
55	MG	1H	3421	1/1	0.95	0.18	-2.29	63,63,63,63	0
55	MG	14	3402	1/1	0.98	0.09	-2.31	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	14	3427	1/1	0.98	0.09	-2.32	72,72,72,72	0
55	MG	1H	3371	1/1	0.89	0.11	-2.32	72,72,72,72	0
55	MG	13	1717	1/1	0.97	0.11	-2.34	91,91,91,91	0
55	MG	14	3060	1/1	0.99	0.24	-2.34	56,56,56,56	0
55	MG	14	3163	1/1	0.83	0.10	-2.37	86,86,86,86	0
55	MG	14	3242	1/1	0.93	0.13	-2.40	100,100,100,100	0
55	MG	14	3356	1/1	0.96	0.10	-2.40	64,64,64,64	0
55	MG	1H	3401	1/1	0.97	0.17	-2.41	82,82,82,82	0
55	MG	14	3019	1/1	0.98	0.15	-2.45	73,73,73,73	0
55	MG	14	3093	1/1	0.96	0.13	-2.46	66,66,66,66	0
55	MG	1G	1667	1/1	0.94	0.12	-2.48	92,92,92,92	0
55	MG	1H	3286	1/1	0.99	0.17	-2.49	69,69,69,69	0
55	MG	14	3411	1/1	0.97	0.10	-2.49	60,60,60,60	0
55	MG	14	3403	1/1	0.90	0.14	-2.51	88,88,88,88	0
55	MG	14	3038	1/1	0.98	0.17	-2.51	58,58,58,58	0
55	MG	14	3055	1/1	0.98	0.17	-2.52	72,72,72,72	0
55	MG	1H	3185	1/1	0.82	0.19	-2.53	73,73,73,73	0
55	MG	13	1710	1/1	0.98	0.15	-2.53	119,119,119,119	0
55	MG	13	1697	1/1	0.92	0.14	-2.54	100,100,100,100	0
55	MG	14	3358	1/1	0.91	0.10	-2.57	102,102,102,102	0
55	MG	14	3390	1/1	0.98	0.14	-2.59	70,70,70,70	0
55	MG	14	3472	1/1	0.75	0.06	-2.59	121,121,121,121	0
55	MG	13	1661	1/1	0.91	0.21	-2.64	127,127,127,127	0
55	MG	14	3465	1/1	0.92	0.14	-2.65	92,92,92,92	0
55	MG	1H	3544	1/1	0.97	0.08	-2.67	59,59,59,59	0
55	MG	1H	3195	1/1	0.90	0.15	-2.67	78,78,78,78	0
55	MG	14	3486	1/1	0.96	0.07	-2.68	64,64,64,64	0
55	MG	1G	1671	1/1	0.88	0.14	-2.72	102,102,102,102	0
55	MG	13	1698	1/1	0.95	0.14	-2.73	77,77,77,77	0
55	MG	14	3084	1/1	0.97	0.17	-2.74	78,78,78,78	0
55	MG	1J	202	1/1	0.97	0.11	-2.83	107,107,107,107	0
55	MG	1H	3161	1/1	0.99	0.15	-2.85	73,73,73,73	0
55	MG	14	3210	1/1	0.93	0.17	-2.86	89,89,89,89	0
55	MG	1H	3475	1/1	0.91	0.12	-2.89	69,69,69,69	0
55	MG	14	3036	1/1	0.95	0.20	-2.91	84,84,84,84	0
55	MG	13	1687	1/1	0.67	0.11	-2.95	111,111,111,111	0
55	MG	1H	3381	1/1	0.96	0.17	-2.98	78,78,78,78	0
55	MG	14	3041	1/1	0.89	0.13	-2.98	76,76,76,76	0
55	MG	14	3410	1/1	0.79	0.11	-3.03	109,109,109,109	0
55	MG	14	3200	1/1	0.88	0.15	-3.03	89,89,89,89	0
55	MG	1H	3539	1/1	0.94	0.09	-3.04	123,123,123,123	0
55	MG	1H	3048	1/1	0.99	0.17	-3.04	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	1H	3081	1/1	0.95	0.15	-3.04	66,66,66,66	0
55	MG	16	209	1/1	0.72	0.12	-3.05	101,101,101,101	0
55	MG	14	3107	1/1	0.91	0.15	-3.05	78,78,78,78	0
55	MG	14	3034	1/1	0.98	0.20	-3.06	67,67,67,67	0
55	MG	1G	1690	1/1	0.98	0.12	-3.06	122,122,122,122	0
55	MG	1H	3183	1/1	0.97	0.26	-3.08	55,55,55,55	0
55	MG	1G	1660	1/1	0.97	0.11	-3.13	112,112,112,112	0
55	MG	1H	3026	1/1	0.97	0.16	-3.14	68,68,68,68	0
55	MG	1G	1724	1/1	0.95	0.10	-3.14	95,95,95,95	0
55	MG	88	201	1/1	0.96	0.18	-3.17	93,93,93,93	0
55	MG	1H	3385	1/1	0.98	0.10	-3.18	58,58,58,58	0
55	MG	1H	3246	1/1	0.97	0.16	-3.20	86,86,86,86	0
55	MG	13	1705	1/1	0.97	0.15	-3.22	85,85,85,85	0
55	MG	1H	3423	1/1	0.95	0.15	-3.23	64,64,64,64	0
55	MG	14	3482	1/1	0.85	0.12	-3.24	118,118,118,118	0
55	MG	1G	1602	1/1	0.97	0.18	-3.24	84,84,84,84	0
55	MG	1H	3386	1/1	0.98	0.14	-3.24	72,72,72,72	0
55	MG	1G	1639	1/1	0.97	0.14	-3.24	102,102,102,102	0
55	MG	14	3426	1/1	0.95	0.10	-3.27	96,96,96,96	0
55	MG	1H	3506	1/1	0.96	0.17	-3.31	102,102,102,102	0
55	MG	39	301	1/1	0.83	0.13	-3.34	108,108,108,108	0
55	MG	14	3382	1/1	0.97	0.11	-3.39	93,93,93,93	0
55	MG	1H	3383	1/1	0.97	0.12	-3.43	74,74,74,74	0
55	MG	14	3025	1/1	0.78	0.09	-3.45	85,85,85,85	0
55	MG	1H	3354	1/1	0.98	0.16	-3.53	82,82,82,82	0
55	MG	14	3152	1/1	0.94	0.16	-3.55	80,80,80,80	0
55	MG	1H	3107	1/1	0.97	0.20	-3.55	84,84,84,84	0
55	MG	1H	3360	1/1	0.97	0.08	-3.59	96,96,96,96	0
55	MG	1G	1643	1/1	0.95	0.12	-3.62	128,128,128,128	0
55	MG	1H	3089	1/1	0.94	0.13	-3.62	62,62,62,62	0
55	MG	14	3035	1/1	0.89	0.19	-3.64	74,74,74,74	0
55	MG	13	1703	1/1	0.98	0.09	-3.64	108,108,108,108	0
55	MG	1H	3382	1/1	0.99	0.16	-3.65	61,61,61,61	0
55	MG	1H	3439	1/1	1.00	0.11	-3.66	63,63,63,63	0
55	MG	13	1672	1/1	0.88	0.16	-3.66	105,105,105,105	0
55	MG	14	3353	1/1	0.92	0.08	-3.68	74,74,74,74	0
55	MG	1H	3226	1/1	0.84	0.15	-3.76	89,89,89,89	0
55	MG	14	3056	1/1	0.95	0.16	-3.77	74,74,74,74	0
55	MG	14	3351	1/1	0.97	0.10	-3.78	82,82,82,82	0
55	MG	14	3467	1/1	0.98	0.21	-3.83	95,95,95,95	0
55	MG	1H	3397	1/1	0.78	0.09	-3.84	90,90,90,90	0
55	MG	13	1633	1/1	0.95	0.09	-3.84	107,107,107,107	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	1H	3374	1/1	0.93	0.15	-3.85	64,64,64,64	0
55	MG	14	3449	1/1	0.86	0.08	-3.88	135,135,135,135	0
55	MG	1H	3496	1/1	0.94	0.12	-3.92	91,91,91,91	0
55	MG	14	3231	1/1	0.92	0.07	-3.96	112,112,112,112	0
55	MG	14	3079	1/1	0.90	0.20	-3.97	75,75,75,75	0
55	MG	1G	1604	1/1	0.92	0.09	-4.00	106,106,106,106	0
55	MG	1H	3118	1/1	0.91	0.15	-4.00	56,56,56,56	0
55	MG	1H	3181	1/1	0.93	0.19	-4.03	69,69,69,69	0
55	MG	14	3129	1/1	0.96	0.19	-4.10	77,77,77,77	0
55	MG	14	3170	1/1	0.93	0.13	-4.10	77,77,77,77	0
55	MG	14	3413	1/1	0.98	0.15	-4.16	74,74,74,74	0
55	MG	1G	1725	1/1	0.81	0.10	-4.18	124,124,124,124	0
55	MG	1H	3103	1/1	0.92	0.13	-4.18	74,74,74,74	0
55	MG	1G	1720	1/1	0.87	0.12	-4.19	97,97,97,97	0
55	MG	14	3453	1/1	0.98	0.11	-4.22	73,73,73,73	0
55	MG	14	3354	1/1	0.94	0.15	-4.23	92,92,92,92	0
55	MG	14	3371	1/1	0.96	0.09	-4.26	66,66,66,66	0
55	MG	14	3205	1/1	0.92	0.12	-4.30	82,82,82,82	0
55	MG	14	3075	1/1	0.97	0.19	-4.32	65,65,65,65	0
55	MG	1H	3180	1/1	0.91	0.16	-4.41	53,53,53,53	0
55	MG	14	3436	1/1	0.95	0.12	-4.42	99,99,99,99	0
55	MG	1H	3454	1/1	0.75	0.11	-4.46	89,89,89,89	0
55	MG	14	3385	1/1	0.97	0.13	-4.48	96,96,96,96	0
55	MG	1H	3477	1/1	0.93	0.09	-4.50	80,80,80,80	0
55	MG	1H	3392	1/1	0.96	0.16	-4.52	70,70,70,70	0
55	MG	14	3103	1/1	0.87	0.13	-4.52	74,74,74,74	0
55	MG	1H	3445	1/1	0.96	0.10	-4.53	76,76,76,76	0
55	MG	14	3142	1/1	0.91	0.10	-4.57	67,67,67,67	0
55	MG	1H	3349	1/1	0.94	0.15	-4.60	95,95,95,95	0
55	MG	1H	3428	1/1	0.98	0.15	-4.65	60,60,60,60	0
55	MG	1H	3113	1/1	0.89	0.10	-4.77	98,98,98,98	0
55	MG	1H	3096	1/1	0.51	0.15	-4.90	74,74,74,74	0
55	MG	1H	3425	1/1	0.98	0.12	-4.93	63,63,63,63	0
55	MG	14	3429	1/1	0.97	0.09	-4.98	79,79,79,79	0
55	MG	1H	3323	1/1	0.87	0.12	-4.98	84,84,84,84	0
55	MG	14	3275	1/1	0.88	0.10	-4.99	84,84,84,84	0
55	MG	14	3395	1/1	0.99	0.09	-4.99	73,73,73,73	0
55	MG	14	3448	1/1	0.72	0.09	-5.03	123,123,123,123	0
55	MG	14	3308	1/1	0.97	0.19	-5.05	74,74,74,74	0
55	MG	1H	3417	1/1	0.97	0.13	-5.08	70,70,70,70	0
55	MG	1H	3110	1/1	0.81	0.14	-5.10	65,65,65,65	0
55	MG	1H	3538	1/1	0.90	0.11	-5.13	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	1H	3054	1/1	0.98	0.18	-5.22	66,66,66,66	0
55	MG	1H	3403	1/1	0.90	0.13	-5.22	78,78,78,78	0
55	MG	1G	1722	1/1	0.98	0.10	-5.24	83,83,83,83	0
55	MG	14	3439	1/1	0.93	0.06	-5.30	109,109,109,109	0
55	MG	1H	3435	1/1	0.99	0.10	-5.30	60,60,60,60	0
55	MG	14	3115	1/1	0.92	0.09	-5.32	94,94,94,94	0
55	MG	1H	3422	1/1	0.99	0.12	-5.32	70,70,70,70	0
55	MG	1H	3322	1/1	0.97	0.12	-5.33	103,103,103,103	0
55	MG	1H	3540	1/1	0.97	0.09	-5.36	54,54,54,54	0
55	MG	14	3456	1/1	0.93	0.06	-5.38	125,125,125,125	0
55	MG	1G	1727	1/1	0.96	0.08	-5.51	126,126,126,126	0
55	MG	1H	3378	1/1	0.92	0.12	-5.66	59,59,59,59	0
55	MG	1H	3372	1/1	0.94	0.10	-5.72	68,68,68,68	0
55	MG	1H	3463	1/1	0.99	0.10	-5.74	64,64,64,64	0
55	MG	1H	3012	1/1	0.98	0.15	-5.80	67,67,67,67	0
55	MG	14	3150	1/1	0.95	0.14	-5.90	64,64,64,64	0
55	MG	1H	3231	1/1	0.92	0.11	-6.16	81,81,81,81	0
55	MG	1H	3486	1/1	0.87	0.08	-6.33	104,104,104,104	0
55	MG	14	3365	1/1	0.95	0.09	-6.40	72,72,72,72	0
55	MG	1H	3529	1/1	0.91	0.08	-6.91	106,106,106,106	0
55	MG	1H	3461	1/1	0.98	0.12	-7.01	77,77,77,77	0
55	MG	1H	3415	1/1	0.89	0.09	-7.03	91,91,91,91	0
55	MG	14	3064	1/1	0.98	0.11	-7.04	84,84,84,84	0
55	MG	14	3401	1/1	0.97	0.13	-7.06	69,69,69,69	0
55	MG	14	3376	1/1	0.94	0.11	-7.17	84,84,84,84	0
55	MG	14	3083	1/1	0.91	0.09	-7.19	64,64,64,64	0
55	MG	1H	3427	1/1	0.98	0.12	-7.25	71,71,71,71	0
55	MG	1H	3404	1/1	0.81	0.11	-7.27	71,71,71,71	0
55	MG	14	3370	1/1	0.96	0.13	-7.29	76,76,76,76	0
55	MG	1H	3418	1/1	0.99	0.13	-7.31	60,60,60,60	0
55	MG	14	3381	1/1	0.91	0.09	-7.36	69,69,69,69	0
55	MG	1H	3429	1/1	0.95	0.12	-7.36	65,65,65,65	0
55	MG	1H	3485	1/1	0.92	0.09	-7.41	97,97,97,97	0
55	MG	1H	3447	1/1	0.94	0.12	-7.62	78,78,78,78	0
55	MG	1H	3379	1/1	0.96	0.14	-7.79	71,71,71,71	0
55	MG	1H	3097	1/1	0.92	0.09	-7.83	75,75,75,75	0
55	MG	1H	3375	1/1	0.94	0.12	-7.91	65,65,65,65	0
55	MG	1H	3426	1/1	0.96	0.10	-8.04	68,68,68,68	0
55	MG	14	3404	1/1	0.98	0.11	-8.11	54,54,54,54	0
55	MG	1H	3488	1/1	0.85	0.09	-8.24	117,117,117,117	0
55	MG	1H	3473	1/1	0.93	0.05	-8.24	95,95,95,95	0
55	MG	14	3368	1/1	0.96	0.13	-9.10	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	1H	3498	1/1	0.97	0.08	-9.31	71,71,71,71	0
55	MG	14	3384	1/1	0.96	0.05	-9.35	75,75,75,75	0
55	MG	14	3452	1/1	0.88	0.09	-9.44	96,96,96,96	0
55	MG	14	3399	1/1	0.97	0.13	-9.71	63,63,63,63	0
55	MG	14	3350	1/1	0.98	0.13	-10.06	73,73,73,73	0
55	MG	14	3397	1/1	0.96	0.07	-11.45	79,79,79,79	0
55	MG	1H	3534	1/1	0.84	0.10	-16.83	115,115,115,115	0
55	MG	1G	1692	1/1	0.64	0.56	-	141,141,141,141	0
55	MG	14	3481	1/1	0.93	0.34	-	112,112,112,112	0
55	MG	14	3030	1/1	0.92	0.22	-	92,92,92,92	0
55	MG	1H	3325	1/1	0.77	0.35	-	78,78,78,78	0
55	MG	14	3246	1/1	0.61	0.26	-	101,101,101,101	0
55	MG	13	1631	1/1	0.89	0.22	-	101,101,101,101	0
55	MG	1H	3090	1/1	0.97	0.25	-	80,80,80,80	0
55	MG	13	1706	1/1	0.70	0.09	-	117,117,117,117	0
55	MG	14	3357	1/1	0.93	0.13	-	83,83,83,83	0
55	MG	1H	3067	1/1	0.96	0.22	-	79,79,79,79	0
55	MG	1H	3419	1/1	0.90	0.17	-	90,90,90,90	0
55	MG	1H	3112	1/1	0.92	0.29	-	64,64,64,64	0
55	MG	14	3143	1/1	0.95	0.12	-	58,58,58,58	0
55	MG	1H	3011	1/1	0.98	0.26	-	65,65,65,65	0
55	MG	1G	1679	1/1	0.85	0.14	-	106,106,106,106	0
55	MG	1H	3156	1/1	0.96	0.25	-	76,76,76,76	0
55	MG	14	3230	1/1	0.92	0.24	-	81,81,81,81	0
55	MG	1G	1654	1/1	0.91	0.11	-	88,88,88,88	0
55	MG	14	3214	1/1	0.16	0.21	-	122,122,122,122	0
55	MG	1H	3186	1/1	0.94	0.24	-	74,74,74,74	0
55	MG	1H	3459	1/1	0.97	0.16	-	86,86,86,86	0
55	MG	14	3414	1/1	0.96	0.13	-	99,99,99,99	0
55	MG	1H	3299	1/1	0.78	0.34	-	80,80,80,80	0
55	MG	1H	3526	1/1	0.95	0.08	-	106,106,106,106	0
55	MG	1H	3430	1/1	0.88	0.16	-	99,99,99,99	0
55	MG	1H	3133	1/1	0.72	0.17	-	92,92,92,92	0
55	MG	14	3121	1/1	0.94	0.21	-	88,88,88,88	0
55	MG	1G	1718	1/1	0.58	0.33	-	94,94,94,94	0
55	MG	14	3070	1/1	0.97	0.30	-	72,72,72,72	0
55	MG	1H	3300	1/1	0.85	0.16	-	54,54,54,54	0
55	MG	1H	3391	1/1	0.97	0.06	-	84,84,84,84	0
55	MG	14	3081	1/1	0.60	0.28	-	80,80,80,80	0
55	MG	14	3307	1/1	0.79	0.12	-	90,90,90,90	0
55	MG	1H	3480	1/1	0.92	0.08	-	100,100,100,100	0
55	MG	1H	3004	1/1	0.96	0.21	-	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	2K	103	1/1	0.49	0.36	-	140,140,140,140	0
55	MG	1H	3449	1/1	0.90	0.08	-	90,90,90,90	0
55	MG	13	1660	1/1	0.65	0.28	-	108,108,108,108	0
55	MG	1H	3309	1/1	0.83	0.26	-	96,96,96,96	0
55	MG	13	1611	1/1	0.97	0.17	-	103,103,103,103	0
55	MG	13	1701	1/1	0.96	0.05	-	89,89,89,89	0
55	MG	1H	3080	1/1	0.97	0.33	-	67,67,67,67	0
55	MG	1H	3013	1/1	0.99	0.15	-	57,57,57,57	0
55	MG	1H	3436	1/1	0.98	0.13	-	55,55,55,55	0
55	MG	14	3373	1/1	0.90	0.17	-	101,101,101,101	0
55	MG	14	3319	1/1	-0.08	0.34	-	110,110,110,110	0
55	MG	14	3096	1/1	0.96	0.20	-	78,78,78,78	0
55	MG	1H	3248	1/1	0.85	0.22	-	89,89,89,89	0
55	MG	14	3440	1/1	0.85	0.16	-	131,131,131,131	0
55	MG	13	1656	1/1	0.86	0.41	-	89,89,89,89	0
55	MG	1H	3493	1/1	0.61	0.10	-	133,133,133,133	0
55	MG	14	3241	1/1	0.95	0.10	-	117,117,117,117	0
55	MG	1H	3531	1/1	0.85	0.10	-	116,116,116,116	0
55	MG	14	3171	1/1	0.61	0.35	-	82,82,82,82	0
55	MG	14	3068	1/1	0.87	0.17	-	71,71,71,71	0
55	MG	13	1674	1/1	0.71	0.18	-	142,142,142,142	0
55	MG	14	3348	1/1	0.92	0.16	-	96,96,96,96	0
55	MG	1H	3293	1/1	0.95	0.45	-	89,89,89,89	0
55	MG	14	3185	1/1	0.85	0.16	-	92,92,92,92	0
55	MG	14	3050	1/1	0.96	0.27	-	75,75,75,75	0
55	MG	13	1624	1/1	0.90	0.28	-	77,77,77,77	0
55	MG	14	3477	1/1	0.91	0.28	-	117,117,117,117	0
55	MG	14	3111	1/1	0.79	0.22	-	85,85,85,85	0
55	MG	1H	3166	1/1	0.79	0.30	-	86,86,86,86	0
55	MG	1G	1688	1/1	0.95	0.18	-	115,115,115,115	0
55	MG	1H	3387	1/1	0.97	0.09	-	83,83,83,83	0
55	MG	32	301	1/1	0.83	0.19	-	109,109,109,109	0
55	MG	1H	3017	1/1	0.99	0.17	-	66,66,66,66	0
55	MG	1G	1644	1/1	0.85	0.12	-	104,104,104,104	0
55	MG	13	1685	1/1	0.47	0.26	-	119,119,119,119	0
55	MG	13	1643	1/1	0.97	0.24	-	111,111,111,111	0
55	MG	1H	3483	1/1	0.88	0.10	-	117,117,117,117	0
55	MG	14	3155	1/1	0.97	0.20	-	99,99,99,99	0
55	MG	14	3416	1/1	0.96	0.06	-	87,87,87,87	0
55	MG	1G	1702	1/1	0.92	0.34	-	173,173,173,173	0
55	MG	1H	3396	1/1	0.96	0.09	-	84,84,84,84	0
55	MG	1G	1684	1/1	0.95	0.21	-	108,108,108,108	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	13	1718	1/1	0.89	0.17	-	125,125,125,125	0
55	MG	1H	3034	1/1	0.51	0.35	-	93,93,93,93	0
55	MG	1H	3518	1/1	0.89	0.18	-	99,99,99,99	0
55	MG	1G	1661	1/1	0.98	0.12	-	82,82,82,82	0
55	MG	1H	3208	1/1	0.76	0.60	-	110,110,110,110	0
55	MG	1H	3201	1/1	0.94	0.12	-	98,98,98,98	0
55	MG	1H	3279	1/1	0.82	0.42	-	101,101,101,101	0
55	MG	1H	3290	1/1	0.72	0.21	-	88,88,88,88	0
55	MG	1H	3115	1/1	0.86	0.39	-	89,89,89,89	0
55	MG	1G	1657	1/1	0.93	0.27	-	93,93,93,93	0
55	MG	1H	3479	1/1	0.93	0.05	-	97,97,97,97	0
55	MG	1G	1641	1/1	0.97	0.19	-	102,102,102,102	0
55	MG	14	3016	1/1	0.90	0.28	-	86,86,86,86	0
55	MG	14	3313	1/1	0.86	0.45	-	91,91,91,91	0
55	MG	14	3116	1/1	0.96	0.48	-	89,89,89,89	0
55	MG	1G	1632	1/1	0.84	0.31	-	88,88,88,88	0
55	MG	14	3235	1/1	0.72	0.36	-	109,109,109,109	0
55	MG	14	3445	1/1	0.87	0.11	-	104,104,104,104	0
55	MG	1H	3253	1/1	0.79	0.40	-	92,92,92,92	0
55	MG	1H	3369	1/1	0.98	0.75	-	77,77,77,77	0
55	MG	1H	3204	1/1	0.91	0.31	-	84,84,84,84	0
55	MG	1H	3160	1/1	0.86	0.63	-	91,91,91,91	0
55	MG	1G	1649	1/1	0.93	0.19	-	125,125,125,125	0
55	MG	14	3227	1/1	0.84	0.28	-	112,112,112,112	0
55	MG	1H	3521	1/1	0.86	0.10	-	125,125,125,125	0
55	MG	1H	3507	1/1	0.97	0.11	-	82,82,82,82	0
55	MG	14	3383	1/1	0.97	0.07	-	93,93,93,93	0
55	MG	14	3302	1/1	0.84	0.72	-	82,82,82,82	0
55	MG	13	1648	1/1	0.86	0.27	-	94,94,94,94	0
55	MG	14	3101	1/1	0.66	0.34	-	100,100,100,100	0
55	MG	14	3286	1/1	0.89	0.32	-	78,78,78,78	0
55	MG	1H	3405	1/1	0.96	0.11	-	94,94,94,94	0
55	MG	14	3118	1/1	0.91	0.16	-	96,96,96,96	0
55	MG	14	3475	1/1	0.96	0.35	-	99,99,99,99	0
55	MG	14	3216	1/1	0.69	0.16	-	104,104,104,104	0
55	MG	1G	1608	1/1	0.88	0.23	-	110,110,110,110	0
55	MG	13	1607	1/1	0.97	0.21	-	97,97,97,97	0
55	MG	14	3108	1/1	0.90	0.14	-	87,87,87,87	0
55	MG	1H	3123	1/1	0.91	0.30	-	93,93,93,93	0
55	MG	1H	3256	1/1	0.77	0.64	-	82,82,82,82	0
55	MG	1H	3433	1/1	0.90	0.12	-	92,92,92,92	0
55	MG	1G	1634	1/1	0.68	0.35	-	107,107,107,107	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	1H	3302	1/1	0.89	0.31	-	90,90,90,90	0
55	MG	1H	3450	1/1	0.97	0.10	-	100,100,100,100	0
55	MG	1H	3111	1/1	0.84	0.34	-	111,111,111,111	0
55	MG	1H	3137	1/1	0.97	0.20	-	93,93,93,93	0
55	MG	1H	3457	1/1	0.98	0.11	-	79,79,79,79	0
55	MG	14	3133	1/1	0.88	0.18	-	85,85,85,85	0
55	MG	14	3126	1/1	0.93	0.27	-	110,110,110,110	0
55	MG	13	1683	1/1	0.84	0.17	-	111,111,111,111	0
55	MG	1H	3474	1/1	0.96	0.24	-	88,88,88,88	0
55	MG	1G	1703	1/1	0.68	0.23	-	113,113,113,113	0
55	MG	1H	3363	1/1	0.72	0.21	-	93,93,93,93	0
55	MG	13	1726	1/1	0.95	0.05	-	134,134,134,134	0
55	MG	1G	1735	1/1	0.94	0.06	-	128,128,128,128	0
55	MG	13	1708	1/1	0.89	0.13	-	103,103,103,103	0
55	MG	1H	3157	1/1	0.54	0.40	-	98,98,98,98	0
55	MG	1G	1740	1/1	0.70	0.52	-	135,135,135,135	0
55	MG	1H	3393	1/1	0.94	0.09	-	99,99,99,99	0
55	MG	1J	209	1/1	0.88	0.06	-	110,110,110,110	0
55	MG	14	3153	1/1	0.97	0.28	-	91,91,91,91	0
55	MG	1G	1622	1/1	0.95	0.27	-	124,124,124,124	0
55	MG	14	3178	1/1	0.94	0.51	-	87,87,87,87	0
55	MG	1H	3492	1/1	0.72	0.09	-	117,117,117,117	0
55	MG	1H	3287	1/1	0.95	0.17	-	67,67,67,67	0
55	MG	14	3112	1/1	0.94	0.32	-	81,81,81,81	0
55	MG	1G	1662	1/1	0.96	0.20	-	96,96,96,96	0
55	MG	1H	3350	1/1	0.97	0.21	-	72,72,72,72	0
55	MG	14	3279	1/1	0.63	0.31	-	103,103,103,103	0
55	MG	14	3420	1/1	0.86	0.05	-	125,125,125,125	0
55	MG	1H	3357	1/1	0.95	0.09	-	87,87,87,87	0
55	MG	13	1668	1/1	0.76	0.28	-	94,94,94,94	0
55	MG	1H	3455	1/1	0.97	0.07	-	97,97,97,97	0
55	MG	1H	3327	1/1	0.92	0.25	-	88,88,88,88	0
55	MG	14	3408	1/1	0.91	0.13	-	103,103,103,103	0
55	MG	1H	3339	1/1	0.66	0.37	-	122,122,122,122	0
55	MG	1H	3520	1/1	0.93	0.07	-	104,104,104,104	0
55	MG	14	3392	1/1	0.97	0.20	-	65,65,65,65	0
55	MG	13	1650	1/1	0.84	0.17	-	116,116,116,116	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	3532	1/1	0.98	0.18	-	91,91,91,91	0
55	MG	1H	3412	1/1	0.97	0.11	-	103,103,103,103	0
55	MG	1H	3373	1/1	0.86	0.19	-	87,87,87,87	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	1G	1636	1/1	0.95	0.28	-	97,97,97,97	0
55	MG	14	3311	1/1	0.84	0.36	-	106,106,106,106	0
55	MG	1H	3301	1/1	0.79	0.28	-	93,93,93,93	0
55	MG	13	1652	1/1	0.93	0.37	-	98,98,98,98	0
55	MG	1H	3348	1/1	0.72	0.28	-	126,126,126,126	0
55	MG	1H	3321	1/1	0.88	0.24	-	88,88,88,88	0
55	MG	13	1618	1/1	0.96	0.23	-	86,86,86,86	0
55	MG	1G	1747	1/1	0.97	0.15	-	123,123,123,123	0
55	MG	1G	1631	1/1	0.95	0.26	-	81,81,81,81	0
55	MG	1H	3484	1/1	0.93	0.10	-	98,98,98,98	0
55	MG	16	212	1/1	0.93	0.15	-	126,126,126,126	0
55	MG	1G	1626	1/1	0.99	0.24	-	108,108,108,108	0
55	MG	14	3422	1/1	0.92	0.08	-	110,110,110,110	0
55	MG	1H	3237	1/1	0.91	0.33	-	99,99,99,99	0
55	MG	14	3195	1/1	0.91	0.25	-	103,103,103,103	0
55	MG	14	3282	1/1	0.93	0.26	-	77,77,77,77	0
55	MG	1H	3491	1/1	0.98	0.12	-	97,97,97,97	0
55	MG	14	3247	1/1	0.53	0.33	-	89,89,89,89	0
55	MG	14	3389	1/1	0.97	0.09	-	102,102,102,102	0
55	MG	1H	3466	1/1	0.99	0.19	-	78,78,78,78	0
55	MG	1H	3511	1/1	0.67	0.15	-	127,127,127,127	0
55	MG	14	3206	1/1	0.69	0.24	-	93,93,93,93	0
55	MG	14	3184	1/1	0.82	0.24	-	92,92,92,92	0
55	MG	1H	3069	1/1	0.92	0.22	-	86,86,86,86	0
55	MG	1H	3209	1/1	0.86	0.25	-	85,85,85,85	0
55	MG	14	3342	1/1	0.36	0.30	-	93,93,93,93	0
55	MG	14	3014	1/1	0.87	0.42	-	88,88,88,88	0
55	MG	14	3346	1/1	0.96	0.35	-	194,194,194,194	0
55	MG	1H	3093	1/1	0.99	0.27	-	67,67,67,67	0
55	MG	1H	3129	1/1	0.95	0.26	-	80,80,80,80	0
55	MG	1H	3452	1/1	0.95	0.10	-	86,86,86,86	0
55	MG	55	201	1/1	0.92	0.42	-	92,92,92,92	0
55	MG	1H	3229	1/1	0.80	0.27	-	86,86,86,86	0
55	MG	1G	1704	1/1	0.66	0.20	-	98,98,98,98	0
55	MG	1H	3179	1/1	0.78	0.24	-	69,69,69,69	0
55	MG	14	3109	1/1	0.86	0.28	-	77,77,77,77	0
55	MG	1H	3150	1/1	0.96	0.31	-	81,81,81,81	0
55	MG	1H	3316	1/1	0.88	0.38	-	78,78,78,78	0
55	MG	14	3002	1/1	0.97	0.23	-	64,64,64,64	0
55	MG	14	3253	1/1	0.76	0.38	-	94,94,94,94	0
55	MG	14	3012	1/1	0.96	0.16	-	62,62,62,62	0
55	MG	14	3128	1/1	0.73	0.31	-	85,85,85,85	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	13	1704	1/1	0.93	0.11	-	89,89,89,89	0
55	MG	1H	3152	1/1	0.82	0.39	-	82,82,82,82	0
55	MG	1H	3407	1/1	0.92	0.08	-	83,83,83,83	0
55	MG	1H	3364	1/1	0.86	0.17	-	101,101,101,101	0
55	MG	13	1680	1/1	0.92	0.40	-	160,160,160,160	0
55	MG	14	3080	1/1	0.90	0.18	-	66,66,66,66	0
55	MG	1H	3122	1/1	0.88	0.27	-	77,77,77,77	0
55	MG	1H	3244	1/1	0.94	0.35	-	75,75,75,75	0
55	MG	13	1665	1/1	0.83	0.19	-	106,106,106,106	0
55	MG	14	3228	1/1	0.96	0.39	-	93,93,93,93	0
55	MG	14	3105	1/1	0.91	0.19	-	82,82,82,82	0
55	MG	1H	3062	1/1	0.97	0.24	-	70,70,70,70	0
55	MG	1H	3512	1/1	0.93	0.26	-	103,103,103,103	0
55	MG	1H	3211	1/1	0.85	0.33	-	94,94,94,94	0
55	MG	1H	3399	1/1	0.84	0.18	-	109,109,109,109	0
55	MG	14	3464	1/1	0.79	0.23	-	122,122,122,122	0
55	MG	14	3366	1/1	0.94	0.09	-	71,71,71,71	0
55	MG	1G	1691	1/1	0.81	0.47	-	122,122,122,122	0
55	MG	13	1667	1/1	0.69	0.30	-	99,99,99,99	0
55	MG	1J	205	1/1	0.78	0.22	-	112,112,112,112	0
55	MG	14	3341	1/1	0.90	0.18	-	102,102,102,102	0
55	MG	3L	101	1/1	0.92	0.24	-	189,189,189,189	0
55	MG	1H	3344	1/1	0.68	0.52	-	95,95,95,95	0
55	MG	14	3136	1/1	0.73	0.18	-	109,109,109,109	0
55	MG	13	1695	1/1	0.84	0.17	-	108,108,108,108	0
55	MG	14	3010	1/1	0.99	0.19	-	57,57,57,57	0
55	MG	1H	3057	1/1	0.92	0.27	-	76,76,76,76	0
55	MG	14	3207	1/1	0.94	0.12	-	96,96,96,96	0
55	MG	1H	3049	1/1	0.92	0.24	-	78,78,78,78	0
55	MG	13	1653	1/1	0.88	0.10	-	97,97,97,97	0
55	MG	1G	1609	1/1	0.73	0.17	-	106,106,106,106	0
55	MG	1G	1656	1/1	0.92	0.31	-	104,104,104,104	0
55	MG	14	3192	1/1	0.95	0.19	-	74,74,74,74	0
55	MG	14	3226	1/1	0.66	0.19	-	85,85,85,85	0
55	MG	13	1636	1/1	0.82	0.23	-	100,100,100,100	0
55	MG	14	3076	1/1	0.89	0.20	-	68,68,68,68	0
55	MG	1H	3243	1/1	0.73	0.18	-	119,119,119,119	0
55	MG	1H	3196	1/1	0.94	0.29	-	106,106,106,106	0
55	MG	14	3471	1/1	0.87	0.08	-	109,109,109,109	0
55	MG	1H	3365	1/1	0.94	0.24	-	96,96,96,96	0
55	MG	1H	3274	1/1	0.95	0.12	-	97,97,97,97	0
55	MG	1H	3362	1/1	0.70	0.29	-	112,112,112,112	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	14	3190	1/1	0.93	0.14	-	85,85,85,85	0
55	MG	1H	3170	1/1	0.98	0.13	-	69,69,69,69	0
55	MG	13	1627	1/1	0.97	0.15	-	79,79,79,79	0
55	MG	1H	3311	1/1	0.96	0.18	-	85,85,85,85	0
55	MG	13	1682	1/1	0.97	0.31	-	98,98,98,98	0
55	MG	1H	3206	1/1	0.89	0.31	-	89,89,89,89	0
55	MG	14	3485	1/1	0.92	0.10	-	73,73,73,73	0
55	MG	1G	1681	1/1	0.86	0.18	-	105,105,105,105	0
55	MG	14	3026	1/1	0.96	0.25	-	76,76,76,76	0
55	MG	1H	3076	1/1	0.92	0.29	-	74,74,74,74	0
55	MG	1H	3086	1/1	0.98	0.17	-	60,60,60,60	0
55	MG	14	3483	1/1	0.87	0.15	-	113,113,113,113	0
55	MG	1H	3251	1/1	0.95	0.44	-	76,76,76,76	0
55	MG	1H	3223	1/1	0.90	0.25	-	77,77,77,77	0
55	MG	14	3063	1/1	0.91	0.21	-	85,85,85,85	0
55	MG	1G	1628	1/1	0.66	0.42	-	95,95,95,95	0
55	MG	14	3255	1/1	0.90	0.22	-	107,107,107,107	0
55	MG	1H	3203	1/1	0.94	0.35	-	83,83,83,83	0
55	MG	1H	3438	1/1	0.98	0.15	-	69,69,69,69	0
55	MG	14	3321	1/1	0.81	0.39	-	93,93,93,93	0
55	MG	14	3274	1/1	0.82	0.19	-	88,88,88,88	0
55	MG	13	1727	1/1	0.77	0.08	-	130,130,130,130	0
55	MG	14	3224	1/1	0.83	0.26	-	87,87,87,87	0
55	MG	1G	1682	1/1	0.91	0.18	-	145,145,145,145	0
55	MG	13	1625	1/1	0.95	0.20	-	63,63,63,63	0
55	MG	1H	3021	1/1	0.97	0.19	-	61,61,61,61	0
55	MG	78	201	1/1	0.83	0.42	-	94,94,94,94	0
55	MG	1H	3147	1/1	0.92	0.43	-	76,76,76,76	0
55	MG	1J	211	1/1	0.87	0.12	-	133,133,133,133	0
55	MG	14	3204	1/1	0.96	0.07	-	104,104,104,104	0
55	MG	14	3310	1/1	0.85	0.11	-	107,107,107,107	0
55	MG	1H	3207	1/1	0.50	0.31	-	101,101,101,101	0
55	MG	13	1693	1/1	0.79	0.28	-	103,103,103,103	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	1H	3330	1/1	0.88	0.38	-	91,91,91,91	0
55	MG	1H	3199	1/1	0.96	0.56	-	106,106,106,106	0
55	MG	14	3061	1/1	0.99	0.12	-	79,79,79,79	0
55	MG	1H	3092	1/1	0.95	0.19	-	79,79,79,79	0
55	MG	14	3317	1/1	0.58	0.28	-	92,92,92,92	0
55	MG	1H	3233	1/1	0.80	0.65	-	117,117,117,117	0
55	MG	1H	3453	1/1	0.90	0.09	-	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	14	3182	1/1	0.96	0.16	-	79,79,79,79	0
55	MG	1G	1729	1/1	0.97	0.17	-	112,112,112,112	0
55	MG	Q8	101	1/1	0.90	0.28	-	95,95,95,95	0
55	MG	1H	3260	1/1	0.80	0.29	-	114,114,114,114	0
55	MG	13	1724	1/1	0.96	0.23	-	113,113,113,113	0
55	MG	14	3053	1/1	0.98	0.21	-	49,49,49,49	0
55	MG	13	1613	1/1	0.92	0.19	-	123,123,123,123	0
55	MG	1G	1674	1/1	0.92	0.20	-	106,106,106,106	0
55	MG	1H	3341	1/1	0.78	0.31	-	94,94,94,94	0
55	MG	14	3181	1/1	0.90	0.23	-	97,97,97,97	0
55	MG	1H	3174	1/1	0.78	0.33	-	80,80,80,80	0
55	MG	1G	1651	1/1	0.78	0.28	-	92,92,92,92	0
55	MG	1H	3158	1/1	0.59	0.41	-	93,93,93,93	0
55	MG	1G	1710	1/1	0.84	0.63	-	107,107,107,107	0
55	MG	1H	3189	1/1	0.91	0.11	-	83,83,83,83	0
55	MG	1H	3416	1/1	0.94	0.15	-	77,77,77,77	0
55	MG	13	1712	1/1	0.84	0.06	-	119,119,119,119	0
55	MG	14	3330	1/1	0.78	0.25	-	85,85,85,85	0
55	MG	14	3240	1/1	0.91	0.18	-	100,100,100,100	0
55	MG	13	1677	1/1	0.98	0.27	-	96,96,96,96	0
55	MG	14	3065	1/1	0.90	0.24	-	86,86,86,86	0
55	MG	13	1686	1/1	0.76	0.42	-	111,111,111,111	0
55	MG	14	3323	1/1	0.42	0.31	-	113,113,113,113	0
55	MG	14	3360	1/1	0.98	0.10	-	64,64,64,64	0
55	MG	1H	3528	1/1	0.94	0.06	-	115,115,115,115	0
55	MG	1G	1677	1/1	0.95	0.28	-	97,97,97,97	0
55	MG	14	3474	1/1	0.88	0.14	-	142,142,142,142	0
55	MG	1H	3271	1/1	0.98	0.16	-	89,89,89,89	0
55	MG	1H	3402	1/1	0.88	0.10	-	110,110,110,110	0
55	MG	1G	1663	1/1	0.88	0.20	-	110,110,110,110	0
55	MG	1H	3400	1/1	0.97	0.14	-	87,87,87,87	0
55	MG	1H	3082	1/1	0.99	0.12	-	66,66,66,66	0
55	MG	78	202	1/1	0.67	0.49	-	91,91,91,91	0
55	MG	14	3261	1/1	0.97	0.48	-	68,68,68,68	0
55	MG	1G	1711	1/1	0.74	0.89	-	107,107,107,107	0
55	MG	14	3248	1/1	0.98	0.16	-	110,110,110,110	0
55	MG	14	3157	1/1	0.85	0.25	-	95,95,95,95	0
55	MG	14	3329	1/1	0.89	0.23	-	85,85,85,85	0
55	MG	1H	3171	1/1	0.96	0.23	-	70,70,70,70	0
55	MG	13	1654	1/1	0.91	0.13	-	104,104,104,104	0
55	MG	14	3292	1/1	0.95	0.23	-	104,104,104,104	0
55	MG	1H	3537	1/1	0.85	0.10	-	148,148,148,148	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	1H	3162	1/1	0.89	0.29	-	87,87,87,87	0
55	MG	14	3345	1/1	0.93	0.19	-	116,116,116,116	0
55	MG	1H	3245	1/1	0.86	0.23	-	74,74,74,74	0
55	MG	1H	3303	1/1	0.90	0.19	-	88,88,88,88	0
55	MG	14	3022	1/1	0.94	0.11	-	60,60,60,60	0
55	MG	1H	3297	1/1	0.68	0.26	-	104,104,104,104	0
55	MG	1G	1698	1/1	0.88	0.57	-	86,86,86,86	0
55	MG	1H	3522	1/1	0.51	0.09	-	112,112,112,112	0
55	MG	1H	3234	1/1	0.97	0.28	-	89,89,89,89	0
55	MG	1G	1708	1/1	0.91	0.19	-	96,96,96,96	0
55	MG	1J	204	1/1	0.85	0.24	-	128,128,128,128	0
55	MG	13	1700	1/1	0.97	0.11	-	97,97,97,97	0
55	MG	14	3470	1/1	0.83	0.11	-	136,136,136,136	0
55	MG	14	3468	1/1	0.88	0.11	-	134,134,134,134	0
55	MG	14	3303	1/1	0.95	0.34	-	122,122,122,122	0
55	MG	14	3117	1/1	0.92	0.11	-	87,87,87,87	0
55	MG	13	1638	1/1	0.85	0.44	-	103,103,103,103	0
55	MG	1H	3145	1/1	0.93	0.28	-	84,84,84,84	0
55	MG	1H	3029	1/1	0.95	0.26	-	84,84,84,84	0
55	MG	1H	3060	1/1	0.86	0.29	-	79,79,79,79	0
55	MG	14	3165	1/1	0.93	0.15	-	90,90,90,90	0
55	MG	1H	3128	1/1	0.91	0.35	-	77,77,77,77	0
55	MG	1H	3217	1/1	0.88	0.24	-	85,85,85,85	0
55	MG	1H	3295	1/1	0.87	0.41	-	87,87,87,87	0
55	MG	13	1634	1/1	0.93	0.14	-	79,79,79,79	0
55	MG	2K	104	1/1	0.85	0.08	-	153,153,153,153	0
55	MG	13	1688	1/1	0.91	0.38	-	107,107,107,107	0
55	MG	1J	203	1/1	0.90	0.11	-	121,121,121,121	0
55	MG	1H	3280	1/1	0.76	0.20	-	97,97,97,97	0
55	MG	1H	3099	1/1	0.78	0.11	-	90,90,90,90	0
55	MG	1H	3198	1/1	0.87	0.23	-	58,58,58,58	0
55	MG	13	1617	1/1	0.85	0.21	-	99,99,99,99	0
55	MG	13	1714	1/1	0.95	0.07	-	120,120,120,120	0
55	MG	1H	3172	1/1	0.81	0.58	-	94,94,94,94	0
55	MG	1H	3497	1/1	0.80	0.09	-	152,152,152,152	0
55	MG	1G	1637	1/1	0.87	0.31	-	127,127,127,127	0
55	MG	1G	1670	1/1	0.65	0.32	-	115,115,115,115	0
55	MG	14	3428	1/1	0.99	0.11	-	92,92,92,92	0
55	MG	14	3327	1/1	0.91	0.15	-	101,101,101,101	0
55	MG	1H	3194	1/1	0.90	0.30	-	75,75,75,75	0
55	MG	1H	3377	1/1	0.92	0.19	-	66,66,66,66	0
55	MG	14	3277	1/1	0.91	0.15	-	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	14	3340	1/1	0.88	0.25	-	103,103,103,103	0
55	MG	E5	102	1/1	0.93	0.34	-	116,116,116,116	0
55	MG	1H	3023	1/1	0.81	0.41	-	101,101,101,101	0
55	MG	14	3480	1/1	0.88	0.11	-	90,90,90,90	0
55	MG	1H	3347	1/1	0.79	0.37	-	117,117,117,117	0
55	MG	14	3052	1/1	0.95	0.27	-	74,74,74,74	0
55	MG	14	3314	1/1	0.82	0.14	-	111,111,111,111	0
55	MG	14	3326	1/1	0.66	0.51	-	103,103,103,103	0
55	MG	14	3196	1/1	0.84	0.26	-	107,107,107,107	0
55	MG	14	3418	1/1	0.98	0.11	-	70,70,70,70	0
55	MG	1G	1635	1/1	0.74	0.31	-	98,98,98,98	0
55	MG	1H	3202	1/1	0.97	0.21	-	75,75,75,75	0
55	MG	13	1679	1/1	0.89	0.25	-	101,101,101,101	0
55	MG	13	1699	1/1	0.86	0.05	-	137,137,137,137	0
55	MG	14	3191	1/1	0.96	0.30	-	97,97,97,97	0
55	MG	14	3466	1/1	0.88	0.06	-	104,104,104,104	0
55	MG	1H	3440	1/1	0.99	0.12	-	59,59,59,59	0
55	MG	1H	3184	1/1	0.91	0.12	-	66,66,66,66	0
55	MG	14	3257	1/1	0.66	0.29	-	109,109,109,109	0
55	MG	1H	3469	1/1	0.94	0.17	-	109,109,109,109	0
55	MG	1H	3008	1/1	0.95	0.26	-	74,74,74,74	0
55	MG	1G	1664	1/1	0.60	0.21	-	112,112,112,112	0
55	MG	14	3119	1/1	0.89	0.29	-	82,82,82,82	0
55	MG	13	1628	1/1	0.89	0.30	-	89,89,89,89	0
55	MG	13	1729	1/1	0.96	0.13	-	115,115,115,115	0
55	MG	13	1684	1/1	0.36	0.18	-	99,99,99,99	0
55	MG	14	3268	1/1	0.95	0.19	-	87,87,87,87	0
55	MG	1H	3351	1/1	0.76	0.44	-	114,114,114,114	0
55	MG	14	3328	1/1	0.68	0.25	-	103,103,103,103	0
55	MG	1H	3159	1/1	0.94	0.66	-	90,90,90,90	0
55	MG	13	1647	1/1	0.76	0.30	-	87,87,87,87	0
55	MG	14	3433	1/1	0.92	0.09	-	105,105,105,105	0
55	MG	14	3090	1/1	0.96	0.29	-	53,53,53,53	0
55	MG	14	3288	1/1	0.95	0.21	-	88,88,88,88	0
55	MG	1H	3510	1/1	0.95	0.06	-	125,125,125,125	0
55	MG	1G	1676	1/1	0.71	0.21	-	129,129,129,129	0
55	MG	13	1609	1/1	0.85	0.21	-	130,130,130,130	0
55	MG	I8	102	1/1	0.96	0.44	-	73,73,73,73	0
55	MG	1G	1721	1/1	0.91	0.09	-	121,121,121,121	0
55	MG	1H	3272	1/1	0.94	0.15	-	97,97,97,97	0
55	MG	1H	3120	1/1	0.92	0.31	-	69,69,69,69	0
55	MG	3L	102	1/1	0.84	0.40	-	95,95,95,95	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	13	1669	1/1	0.84	0.42	-	115,115,115,115	0
55	MG	1G	1655	1/1	0.98	0.17	-	88,88,88,88	0
55	MG	1H	3168	1/1	0.70	0.38	-	75,75,75,75	0
55	MG	1H	3451	1/1	0.76	0.21	-	123,123,123,123	0
55	MG	1H	3098	1/1	0.98	0.21	-	73,73,73,73	0
55	MG	1J	208	1/1	0.96	0.07	-	104,104,104,104	0
55	MG	14	3233	1/1	0.73	0.32	-	84,84,84,84	0
55	MG	1H	3135	1/1	0.70	0.60	-	102,102,102,102	0
55	MG	1H	3167	1/1	0.92	0.23	-	119,119,119,119	0
55	MG	1H	3324	1/1	0.82	0.27	-	96,96,96,96	0
55	MG	1H	3142	1/1	0.82	0.19	-	81,81,81,81	0
55	MG	1H	3448	1/1	0.98	0.21	-	79,79,79,79	0
55	MG	13	1664	1/1	0.92	0.18	-	142,142,142,142	0
55	MG	14	3423	1/1	0.90	0.14	-	101,101,101,101	0
55	MG	1H	3525	1/1	0.75	0.10	-	127,127,127,127	0
55	MG	1H	3055	1/1	0.98	0.22	-	55,55,55,55	0
55	MG	14	3331	1/1	0.86	0.66	-	79,79,79,79	0
55	MG	1H	3432	1/1	0.99	0.12	-	85,85,85,85	0
55	MG	14	3337	1/1	0.95	0.30	-	111,111,111,111	0
55	MG	1H	3442	1/1	0.92	0.11	-	97,97,97,97	0
55	MG	1G	1613	1/1	0.79	0.24	-	104,104,104,104	0
55	MG	14	3250	1/1	0.91	0.18	-	80,80,80,80	0
55	MG	14	3006	1/1	0.98	0.24	-	53,53,53,53	0
55	MG	14	3004	1/1	0.98	0.31	-	62,62,62,62	0
55	MG	1H	3536	1/1	0.93	0.04	-	130,130,130,130	0
55	MG	14	3443	1/1	0.93	0.07	-	106,106,106,106	0
55	MG	29	304	1/1	0.56	0.34	-	115,115,115,115	0
55	MG	1H	3018	1/1	0.98	0.21	-	76,76,76,76	0
55	MG	1G	1743	1/1	0.91	0.09	-	128,128,128,128	0
55	MG	1G	1707	1/1	0.96	0.21	-	91,91,91,91	0
55	MG	14	3270	1/1	0.85	0.15	-	88,88,88,88	0
55	MG	1G	1629	1/1	0.76	0.23	-	91,91,91,91	0
55	MG	14	3300	1/1	0.86	0.29	-	85,85,85,85	0
55	MG	16	207	1/1	0.92	0.29	-	95,95,95,95	0
55	MG	13	1658	1/1	0.89	0.37	-	84,84,84,84	0
55	MG	14	3189	1/1	0.95	0.29	-	98,98,98,98	0
55	MG	1H	3276	1/1	0.75	0.21	-	89,89,89,89	0
55	MG	14	3305	1/1	0.88	0.58	-	94,94,94,94	0
55	MG	13	1715	1/1	0.96	0.24	-	108,108,108,108	0
55	MG	13	1721	1/1	0.89	0.15	-	100,100,100,100	0
55	MG	1H	3045	1/1	0.95	0.23	-	104,104,104,104	0
55	MG	14	3067	1/1	0.92	0.15	-	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	1H	3443	1/1	0.96	0.19	-	97,97,97,97	0
55	MG	14	3058	1/1	0.97	0.20	-	64,64,64,64	0
55	MG	14	3183	1/1	0.99	0.36	-	98,98,98,98	0
55	MG	1G	1621	1/1	0.90	0.13	-	90,90,90,90	0
55	MG	1H	3050	1/1	0.92	0.36	-	73,73,73,73	0
55	MG	14	3450	1/1	0.88	0.15	-	113,113,113,113	0
55	MG	13	1666	1/1	0.77	0.15	-	95,95,95,95	0
55	MG	14	3106	1/1	0.96	0.34	-	75,75,75,75	0
55	MG	14	3469	1/1	0.97	0.06	-	115,115,115,115	0
55	MG	1H	3527	1/1	0.94	0.14	-	118,118,118,118	0
55	MG	1H	3176	1/1	0.95	0.47	-	93,93,93,93	0
55	MG	C5	201	1/1	0.71	0.32	-	95,95,95,95	0
55	MG	14	3008	1/1	0.96	0.15	-	52,52,52,52	0
55	MG	14	3095	1/1	0.95	0.43	-	87,87,87,87	0
55	MG	1H	3414	1/1	0.99	0.14	-	51,51,51,51	0
55	MG	14	3066	1/1	0.93	0.21	-	82,82,82,82	0
55	MG	14	3149	1/1	0.77	0.33	-	81,81,81,81	0
55	MG	1H	3262	1/1	0.73	0.28	-	101,101,101,101	0
55	MG	1H	3320	1/1	0.89	0.51	-	106,106,106,106	0
55	MG	14	3343	1/1	0.90	0.40	-	83,83,83,83	0
55	MG	1H	3410	1/1	0.92	0.08	-	82,82,82,82	0
55	MG	14	3291	1/1	0.90	0.14	-	88,88,88,88	0
55	MG	14	3415	1/1	0.95	0.06	-	96,96,96,96	0
55	MG	1H	3240	1/1	0.85	0.38	-	91,91,91,91	0
55	MG	1H	3329	1/1	0.96	0.33	-	96,96,96,96	0
55	MG	1H	3177	1/1	0.97	0.27	-	69,69,69,69	0
55	MG	1H	3310	1/1	0.83	0.36	-	84,84,84,84	0
55	MG	1H	3068	1/1	0.97	0.39	-	72,72,72,72	0
55	MG	1G	1647	1/1	0.94	0.14	-	102,102,102,102	0
55	MG	1H	3535	1/1	0.97	0.08	-	115,115,115,115	0
55	MG	1H	3261	1/1	0.90	0.53	-	109,109,109,109	0
55	MG	14	3369	1/1	0.96	0.13	-	63,63,63,63	0
55	MG	1H	3546	1/1	0.82	0.19	-	89,89,89,89	0
55	MG	14	3239	1/1	0.93	0.13	-	101,101,101,101	0
55	MG	1H	3541	1/1	0.94	0.12	-	89,89,89,89	0
55	MG	14	3299	1/1	0.73	0.40	-	138,138,138,138	0
55	MG	1H	3132	1/1	0.85	0.15	-	77,77,77,77	0
55	MG	14	3039	1/1	0.98	0.23	-	90,90,90,90	0
55	MG	1H	3009	1/1	0.97	0.30	-	67,67,67,67	0
55	MG	14	3437	1/1	0.84	0.12	-	98,98,98,98	0
55	MG	1H	3197	1/1	0.88	0.24	-	93,93,93,93	0
55	MG	1H	3270	1/1	0.85	0.38	-	92,92,92,92	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	13	1663	1/1	0.80	0.35	-	108,108,108,108	0
55	MG	14	3234	1/1	0.69	0.32	-	96,96,96,96	0
55	MG	14	3454	1/1	0.95	0.11	-	96,96,96,96	0
55	MG	1H	3165	1/1	0.86	0.32	-	81,81,81,81	0
55	MG	14	3007	1/1	0.98	0.28	-	75,75,75,75	0
55	MG	1H	3074	1/1	0.96	0.38	-	63,63,63,63	0
55	MG	14	3104	1/1	0.80	0.39	-	96,96,96,96	0
55	MG	1H	3281	1/1	0.42	0.35	-	103,103,103,103	0
55	MG	1H	3434	1/1	0.97	0.06	-	109,109,109,109	0
55	MG	1H	3503	1/1	0.99	0.16	-	75,75,75,75	0
55	MG	14	3316	1/1	0.76	0.29	-	97,97,97,97	0
55	MG	1H	3242	1/1	0.51	0.34	-	107,107,107,107	0
55	MG	1H	3315	1/1	0.67	0.40	-	107,107,107,107	0
55	MG	13	1614	1/1	0.98	0.23	-	96,96,96,96	0
55	MG	25	201	1/1	0.92	0.07	-	129,129,129,129	0
55	MG	14	3225	1/1	0.90	0.35	-	94,94,94,94	0
55	MG	14	3435	1/1	0.91	0.11	-	123,123,123,123	0
55	MG	14	3380	1/1	0.93	0.09	-	92,92,92,92	0
55	MG	1H	3269	1/1	0.96	0.25	-	107,107,107,107	0
55	MG	1H	3370	1/1	0.77	0.45	-	87,87,87,87	0
55	MG	1H	3238	1/1	0.97	0.25	-	97,97,97,97	0
55	MG	1H	3002	1/1	0.99	0.30	-	61,61,61,61	0
55	MG	13	1676	1/1	0.91	0.30	-	120,120,120,120	0
55	MG	14	3297	1/1	0.72	0.20	-	81,81,81,81	0
55	MG	1H	3192	1/1	0.61	0.52	-	97,97,97,97	0
55	MG	1G	1686	1/1	0.91	0.24	-	121,121,121,121	0
55	MG	1H	3003	1/1	0.99	0.28	-	51,51,51,51	0
55	MG	14	3229	1/1	0.91	0.31	-	71,71,71,71	0
55	MG	14	3322	1/1	0.98	0.63	-	91,91,91,91	0
55	MG	1H	3437	1/1	0.99	0.14	-	94,94,94,94	0
55	MG	1H	3249	1/1	0.27	0.38	-	102,102,102,102	0
55	MG	14	3120	1/1	0.96	0.21	-	69,69,69,69	0
55	MG	1G	1672	1/1	0.91	0.33	-	111,111,111,111	0
55	MG	14	3455	1/1	0.83	0.19	-	131,131,131,131	0
55	MG	14	3424	1/1	0.86	0.10	-	113,113,113,113	0
55	MG	1H	3255	1/1	0.73	0.28	-	107,107,107,107	0
55	MG	1H	3267	1/1	0.93	0.40	-	95,95,95,95	0
55	MG	45	201	1/1	0.64	0.28	-	78,78,78,78	0
55	MG	14	3221	1/1	0.87	0.23	-	82,82,82,82	0
55	MG	14	3332	1/1	0.81	0.21	-	89,89,89,89	0
55	MG	14	3325	1/1	0.72	0.33	-	107,107,107,107	0
55	MG	13	1621	1/1	0.95	0.18	-	116,116,116,116	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	14	3123	1/1	0.76	0.36	-	95,95,95,95	0
55	MG	1H	3408	1/1	0.94	0.08	-	102,102,102,102	0
55	MG	1H	3220	1/1	0.86	0.43	-	92,92,92,92	0
55	MG	1H	3257	1/1	0.92	0.41	-	102,102,102,102	0
55	MG	1H	3105	1/1	0.97	0.32	-	62,62,62,62	0
55	MG	1H	3307	1/1	0.65	0.27	-	105,105,105,105	0
55	MG	1H	3264	1/1	0.81	0.51	-	85,85,85,85	0
55	MG	13	1725	1/1	0.83	0.15	-	157,157,157,157	0
55	MG	13	1637	1/1	0.96	0.18	-	113,113,113,113	0
55	MG	14	3029	1/1	0.73	0.43	-	85,85,85,85	0
55	MG	14	3432	1/1	0.96	0.10	-	107,107,107,107	0
55	MG	1H	3169	1/1	0.99	0.19	-	68,68,68,68	0
55	MG	14	3461	1/1	0.97	0.22	-	88,88,88,88	0
55	MG	1H	3467	1/1	0.91	0.10	-	101,101,101,101	0
55	MG	14	3166	1/1	0.96	0.16	-	86,86,86,86	0
55	MG	1H	3482	1/1	0.94	0.18	-	99,99,99,99	0
55	MG	13	1689	1/1	0.71	0.38	-	102,102,102,102	0
55	MG	1H	3061	1/1	0.83	0.29	-	90,90,90,90	0
55	MG	1H	3275	1/1	0.94	0.23	-	85,85,85,85	0
55	MG	1G	1730	1/1	0.96	0.07	-	100,100,100,100	0
55	MG	14	3042	1/1	0.97	0.07	-	71,71,71,71	0
55	MG	1H	3508	1/1	0.87	0.14	-	122,122,122,122	0
55	MG	1H	3216	1/1	0.47	0.32	-	93,93,93,93	0
55	MG	14	3293	1/1	0.90	0.32	-	105,105,105,105	0
55	MG	14	3087	1/1	0.90	0.26	-	101,101,101,101	0
55	MG	1H	3247	1/1	0.93	0.17	-	89,89,89,89	0
55	MG	14	3097	1/1	0.64	0.27	-	94,94,94,94	0
55	MG	1G	1739	1/1	0.94	0.15	-	112,112,112,112	0
55	MG	14	3032	1/1	0.95	0.21	-	79,79,79,79	0
55	MG	1H	3014	1/1	0.95	0.29	-	69,69,69,69	0
55	MG	14	3249	1/1	0.70	0.28	-	106,106,106,106	0
55	MG	1G	1680	1/1	0.87	0.15	-	101,101,101,101	0
55	MG	13	1645	1/1	0.97	0.23	-	84,84,84,84	0
55	MG	13	1696	1/1	0.87	0.18	-	89,89,89,89	0
55	MG	1G	1630	1/1	0.90	0.23	-	75,75,75,75	0
55	MG	1G	1652	1/1	0.95	0.35	-	100,100,100,100	0
55	MG	14	3082	1/1	0.97	0.34	-	100,100,100,100	0
55	MG	1H	3319	1/1	0.63	0.21	-	91,91,91,91	0
55	MG	14	3271	1/1	0.42	0.45	-	99,99,99,99	0
55	MG	1G	1705	1/1	0.79	0.18	-	110,110,110,110	0
55	MG	14	3267	1/1	0.75	0.14	-	99,99,99,99	0
55	MG	29	301	1/1	0.96	0.11	-	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	14	3023	1/1	0.97	0.23	-	89,89,89,89	0
55	MG	1H	3213	1/1	0.73	0.36	-	80,80,80,80	0
55	MG	13	1602	1/1	0.98	0.15	-	88,88,88,88	0
55	MG	13	1713	1/1	0.97	0.11	-	94,94,94,94	0
55	MG	14	3336	1/1	0.86	0.63	-	102,102,102,102	0
55	MG	1H	3501	1/1	0.94	0.13	-	93,93,93,93	0
55	MG	1H	3283	1/1	0.94	0.54	-	104,104,104,104	0
55	MG	1H	3191	1/1	0.91	0.43	-	90,90,90,90	0
55	MG	1H	3294	1/1	0.75	0.44	-	91,91,91,91	0
55	MG	1H	3356	1/1	0.91	0.32	-	98,98,98,98	0
55	MG	1G	1646	1/1	0.89	0.17	-	81,81,81,81	0
55	MG	1H	3020	1/1	0.78	0.13	-	103,103,103,103	0
55	MG	1H	3205	1/1	0.88	0.45	-	101,101,101,101	0
55	MG	14	3442	1/1	0.94	0.27	-	84,84,84,84	0
55	MG	1G	1678	1/1	0.69	0.57	-	107,107,107,107	0
55	MG	1H	3367	1/1	0.82	0.23	-	97,97,97,97	0
55	MG	2L	102	1/1	0.92	0.16	-	113,113,113,113	0
55	MG	14	3333	1/1	0.90	0.49	-	96,96,96,96	0
55	MG	1G	1683	1/1	0.57	0.22	-	102,102,102,102	0
55	MG	1H	3366	1/1	0.89	0.27	-	113,113,113,113	0
55	MG	1H	3124	1/1	0.93	0.43	-	85,85,85,85	0
55	MG	1J	210	1/1	0.92	0.13	-	105,105,105,105	0
55	MG	1H	3495	1/1	0.97	0.08	-	122,122,122,122	0
55	MG	14	3405	1/1	0.97	0.11	-	65,65,65,65	0
55	MG	1H	3277	1/1	0.94	0.46	-	88,88,88,88	0
55	MG	14	3162	1/1	0.81	0.19	-	92,92,92,92	0
55	MG	1H	3524	1/1	0.89	0.33	-	123,123,123,123	0
55	MG	1H	3225	1/1	0.89	0.24	-	113,113,113,113	0
55	MG	1H	3038	1/1	0.98	0.28	-	56,56,56,56	0
55	MG	1H	3064	1/1	0.96	0.37	-	82,82,82,82	0
55	MG	1G	1696	1/1	0.17	0.33	-	112,112,112,112	0
55	MG	1H	3139	1/1	0.77	0.43	-	101,101,101,101	0
55	MG	1H	3190	1/1	0.95	0.21	-	98,98,98,98	0
55	MG	1H	3314	1/1	0.74	0.41	-	80,80,80,80	0
55	MG	1H	3292	1/1	0.95	0.22	-	100,100,100,100	0
55	MG	1H	3308	1/1	0.96	0.19	-	90,90,90,90	0
55	MG	1H	3431	1/1	0.85	0.19	-	127,127,127,127	0
55	MG	1G	1615	1/1	0.94	0.27	-	83,83,83,83	0
55	MG	1H	3230	1/1	0.76	0.39	-	91,91,91,91	0
55	MG	14	3430	1/1	0.93	0.07	-	114,114,114,114	0
55	MG	1H	3149	1/1	0.86	0.56	-	98,98,98,98	0
55	MG	14	3203	1/1	0.70	0.40	-	98,98,98,98	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	1G	1737	1/1	0.78	0.23	-	147,147,147,147	0
55	MG	1H	3042	1/1	0.92	0.32	-	69,69,69,69	0
55	MG	1G	1715	1/1	0.81	0.29	-	116,116,116,116	0
55	MG	14	3387	1/1	0.90	0.07	-	77,77,77,77	0
55	MG	13	1635	1/1	0.70	0.50	-	106,106,106,106	0
55	MG	14	3197	1/1	0.76	0.33	-	105,105,105,105	0
55	MG	14	3444	1/1	0.66	0.09	-	113,113,113,113	0
55	MG	14	3001	1/1	0.80	0.13	-	84,84,84,84	0
55	MG	14	3018	1/1	0.92	0.22	-	81,81,81,81	0
55	MG	1H	3406	1/1	0.96	0.14	-	103,103,103,103	0
55	MG	14	3347	1/1	0.89	0.19	-	72,72,72,72	0
55	MG	1H	3144	1/1	0.87	0.45	-	86,86,86,86	0
55	MG	13	1675	1/1	0.62	0.33	-	127,127,127,127	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	1G	1665	1/1	0.44	0.23	-	107,107,107,107	0
55	MG	1G	1699	1/1	0.92	0.14	-	157,157,157,157	0
55	MG	14	3051	1/1	0.99	0.35	-	78,78,78,78	0
55	MG	1H	3296	1/1	0.95	0.23	-	92,92,92,92	0
55	MG	14	3289	1/1	0.71	0.21	-	100,100,100,100	0
55	MG	1H	3037	1/1	0.83	0.20	-	78,78,78,78	0
55	MG	14	3099	1/1	0.96	0.24	-	75,75,75,75	0
55	MG	14	3361	1/1	0.97	0.20	-	75,75,75,75	0
55	MG	14	3417	1/1	0.81	0.07	-	119,119,119,119	0
55	MG	14	3130	1/1	0.95	0.25	-	85,85,85,85	0
55	MG	1H	3514	1/1	0.92	0.13	-	129,129,129,129	0
55	MG	14	3176	1/1	0.93	0.15	-	75,75,75,75	0
55	MG	1H	3313	1/1	0.86	0.51	-	100,100,100,100	0
55	MG	1G	1611	1/1	0.92	0.11	-	92,92,92,92	0
55	MG	1H	3353	1/1	0.73	0.42	-	100,100,100,100	0
55	MG	14	3138	1/1	0.82	0.26	-	90,90,90,90	0
55	MG	1H	3502	1/1	0.85	0.12	-	125,125,125,125	0
55	MG	5E	201	1/1	0.77	0.32	-	121,121,121,121	0
55	MG	M5	101	1/1	0.89	0.14	-	97,97,97,97	0
55	MG	1G	1633	1/1	0.83	0.32	-	91,91,91,91	0
55	MG	1H	3222	1/1	0.87	0.19	-	83,83,83,83	0
55	MG	1H	3542	1/1	0.93	0.16	-	123,123,123,123	0
55	MG	14	3489	1/1	0.98	0.66	-	91,91,91,91	0
55	MG	14	3460	1/1	0.84	0.09	-	94,94,94,94	0
55	MG	14	3237	1/1	0.74	0.32	-	79,79,79,79	0
55	MG	1H	3420	1/1	0.96	0.14	-	71,71,71,71	0
55	MG	14	3304	1/1	0.84	0.35	-	85,85,85,85	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	1H	3114	1/1	0.84	0.30	-	94,94,94,94	0
55	MG	1H	3411	1/1	0.87	0.09	-	110,110,110,110	0
55	MG	1H	3481	1/1	0.97	0.11	-	77,77,77,77	0
55	MG	1H	3333	1/1	0.54	0.43	-	97,97,97,97	0
55	MG	14	3324	1/1	0.44	0.19	-	119,119,119,119	0
55	MG	14	3258	1/1	0.77	0.24	-	78,78,78,78	0
55	MG	1H	3318	1/1	0.84	0.34	-	86,86,86,86	0
55	MG	1H	3035	1/1	0.95	0.48	-	98,98,98,98	0
55	MG	14	3003	1/1	0.93	0.25	-	67,67,67,67	0
55	MG	14	3135	1/1	0.99	0.43	-	101,101,101,101	0
55	MG	1H	3389	1/1	0.97	0.09	-	72,72,72,72	0
55	MG	14	3421	1/1	0.99	0.11	-	73,73,73,73	0
55	MG	1H	3022	1/1	0.98	0.20	-	83,83,83,83	0
55	MG	13	1649	1/1	0.97	0.25	-	121,121,121,121	0
55	MG	1H	3441	1/1	0.95	0.33	-	97,97,97,97	0
55	MG	1G	1731	1/1	0.80	0.07	-	117,117,117,117	0
55	MG	1H	3489	1/1	0.83	0.10	-	108,108,108,108	0
55	MG	14	3043	1/1	0.98	0.47	-	84,84,84,84	0
55	MG	14	3438	1/1	0.91	0.05	-	104,104,104,104	0
55	MG	13	1716	1/1	0.95	0.07	-	97,97,97,97	0
55	MG	1H	3071	1/1	0.75	0.67	-	80,80,80,80	0
55	MG	1H	3127	1/1	0.93	0.61	-	93,93,93,93	0
55	MG	14	3367	1/1	0.95	0.14	-	87,87,87,87	0
55	MG	1H	3460	1/1	0.95	0.09	-	94,94,94,94	0
55	MG	14	3033	1/1	0.97	0.26	-	83,83,83,83	0
55	MG	14	3318	1/1	0.81	0.31	-	102,102,102,102	0
55	MG	14	3306	1/1	0.49	0.55	-	92,92,92,92	0
55	MG	14	3278	1/1	0.91	0.23	-	82,82,82,82	0
55	MG	14	3193	1/1	0.85	0.20	-	90,90,90,90	0
55	MG	14	3379	1/1	0.98	0.09	-	99,99,99,99	0
55	MG	14	3145	1/1	0.94	0.27	-	75,75,75,75	0
55	MG	14	3187	1/1	0.97	0.21	-	103,103,103,103	0
55	MG	1H	3285	1/1	0.86	0.49	-	91,91,91,91	0
55	MG	14	3251	1/1	0.89	0.42	-	90,90,90,90	0
55	MG	1H	3340	1/1	0.94	0.25	-	81,81,81,81	0
55	MG	1G	1668	1/1	0.92	0.34	-	99,99,99,99	0
55	MG	1H	3146	1/1	0.83	0.45	-	98,98,98,98	0
55	MG	14	3046	1/1	0.88	0.23	-	88,88,88,88	0
55	MG	13	1707	1/1	0.98	0.13	-	101,101,101,101	0
55	MG	1H	3345	1/1	0.79	0.27	-	104,104,104,104	0
55	MG	14	3009	1/1	0.95	0.23	-	67,67,67,67	0
55	MG	11	301	1/1	0.81	0.35	-	93,93,93,93	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	14	3179	1/1	0.62	0.29	-	107,107,107,107	0
55	MG	1H	3464	1/1	0.98	0.09	-	86,86,86,86	0
55	MG	1H	3266	1/1	0.81	0.35	-	106,106,106,106	0
55	MG	14	3072	1/1	0.96	0.24	-	85,85,85,85	0
55	MG	1H	3298	1/1	0.89	0.35	-	114,114,114,114	0
55	MG	14	3363	1/1	0.98	0.13	-	73,73,73,73	0
55	MG	1H	3530	1/1	0.93	0.19	-	97,97,97,97	0
55	MG	13	1720	1/1	0.84	0.16	-	136,136,136,136	0
55	MG	14	3254	1/1	0.94	0.19	-	95,95,95,95	0
55	MG	1H	3305	1/1	0.89	0.54	-	107,107,107,107	0
55	MG	1H	3104	1/1	0.95	0.51	-	84,84,84,84	0
55	MG	1H	3500	1/1	0.95	0.14	-	87,87,87,87	0
55	MG	14	3245	1/1	0.98	0.13	-	109,109,109,109	0
55	MG	13	1610	1/1	0.91	0.10	-	104,104,104,104	0
55	MG	14	3309	1/1	0.96	0.14	-	85,85,85,85	0
55	MG	14	3211	1/1	0.46	0.38	-	101,101,101,101	0
55	MG	1H	3219	1/1	0.87	0.44	-	90,90,90,90	0
55	MG	1H	3398	1/1	0.58	0.09	-	110,110,110,110	0
55	MG	1H	3175	1/1	0.66	0.43	-	96,96,96,96	0
55	MG	1H	3095	1/1	0.94	0.33	-	72,72,72,72	0
55	MG	1H	3007	1/1	0.96	0.30	-	53,53,53,53	0
55	MG	13	1639	1/1	0.85	0.27	-	89,89,89,89	0
55	MG	13	1622	1/1	0.95	0.18	-	96,96,96,96	0
55	MG	1G	1741	1/1	0.90	0.08	-	140,140,140,140	0
55	MG	1G	1726	1/1	0.92	0.07	-	137,137,137,137	0
55	MG	13	1694	1/1	0.59	0.54	-	108,108,108,108	0
55	MG	1H	3188	1/1	0.94	0.30	-	88,88,88,88	0
55	MG	5E	202	1/1	0.83	0.21	-	109,109,109,109	0
55	MG	1H	3462	1/1	0.94	0.09	-	104,104,104,104	0
55	MG	14	3352	1/1	0.96	0.09	-	65,65,65,65	0
55	MG	14	3484	1/1	0.90	0.10	-	146,146,146,146	0
55	MG	14	3114	1/1	0.94	0.30	-	83,83,83,83	0
55	MG	1H	3125	1/1	0.99	0.22	-	93,93,93,93	0
55	MG	14	3377	1/1	0.96	0.09	-	91,91,91,91	0
55	MG	1H	3533	1/1	0.94	0.18	-	88,88,88,88	0
55	MG	1G	1669	1/1	0.18	0.23	-	119,119,119,119	0
55	MG	14	3102	1/1	0.88	0.17	-	86,86,86,86	0
55	MG	1H	3138	1/1	0.91	0.18	-	82,82,82,82	0
55	MG	14	3478	1/1	0.95	0.23	-	102,102,102,102	0
55	MG	1H	3504	1/1	0.75	0.12	-	131,131,131,131	0
55	MG	1H	3317	1/1	0.95	0.34	-	87,87,87,87	0
55	MG	14	3113	1/1	0.67	0.22	-	85,85,85,85	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	1H	3100	1/1	0.90	0.25	-	76,76,76,76	0
55	MG	14	3409	1/1	0.99	0.10	-	99,99,99,99	0
55	MG	14	3459	1/1	0.84	0.07	-	114,114,114,114	0
55	MG	13	1728	1/1	0.95	0.09	-	119,119,119,119	0
55	MG	1H	3515	1/1	0.94	0.06	-	125,125,125,125	0
55	MG	14	3273	1/1	0.94	0.20	-	92,92,92,92	0
55	MG	14	3094	1/1	0.89	0.14	-	68,68,68,68	0
55	MG	14	3419	1/1	0.85	0.07	-	104,104,104,104	0
55	MG	1H	3141	1/1	0.75	0.34	-	90,90,90,90	0
55	MG	14	3269	1/1	0.78	0.25	-	93,93,93,93	0
55	MG	1H	3109	1/1	0.92	0.11	-	57,57,57,57	0
55	MG	14	3290	1/1	0.96	0.18	-	102,102,102,102	0
55	MG	14	3213	1/1	0.69	0.27	-	108,108,108,108	0
55	MG	1H	3446	1/1	0.94	0.16	-	112,112,112,112	0
55	MG	14	3177	1/1	0.91	0.17	-	91,91,91,91	0
55	MG	1H	3523	1/1	0.92	0.08	-	135,135,135,135	0
55	MG	14	3434	1/1	0.95	0.11	-	102,102,102,102	0
55	MG	14	3127	1/1	0.96	0.17	-	87,87,87,87	0
55	MG	14	3212	1/1	0.76	0.21	-	94,94,94,94	0
55	MG	14	3232	1/1	0.91	0.10	-	86,86,86,86	0
55	MG	1G	1717	1/1	0.69	0.15	-	111,111,111,111	0
55	MG	1H	3355	1/1	0.72	0.28	-	92,92,92,92	0
55	MG	1H	3218	1/1	0.91	0.31	-	87,87,87,87	0
55	MG	1H	3499	1/1	0.86	0.09	-	116,116,116,116	0
55	MG	1G	1728	1/1	0.88	0.09	-	133,133,133,133	0
55	MG	1H	3394	1/1	0.92	0.15	-	119,119,119,119	0
55	MG	13	1691	1/1	0.88	0.13	-	98,98,98,98	0
55	MG	14	3069	1/1	0.96	0.45	-	86,86,86,86	0
55	MG	13	1623	1/1	0.87	0.22	-	104,104,104,104	0
55	MG	1H	3288	1/1	0.90	0.33	-	86,86,86,86	0
55	MG	14	3167	1/1	0.91	0.10	-	107,107,107,107	0
55	MG	1H	3409	1/1	0.91	0.18	-	84,84,84,84	0
55	MG	1H	3468	1/1	0.90	0.41	-	120,120,120,120	0
55	MG	1H	3024	1/1	0.89	0.43	-	98,98,98,98	0
55	MG	1H	3214	1/1	0.90	0.62	-	94,94,94,94	0
55	MG	E5	101	1/1	0.95	0.16	-	73,73,73,73	0
55	MG	14	3238	1/1	0.83	0.26	-	153,153,153,153	0
55	MG	1H	3343	1/1	0.87	0.21	-	75,75,75,75	0
55	MG	13	1723	1/1	0.96	0.07	-	107,107,107,107	0
55	MG	1H	3470	1/1	0.96	0.15	-	98,98,98,98	0
55	MG	16	210	1/1	0.64	0.36	-	117,117,117,117	0
55	MG	1G	1612	1/1	0.68	0.20	-	108,108,108,108	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	14	3388	1/1	0.95	0.11	-	80,80,80,80	0
55	MG	14	3298	1/1	0.93	0.75	-	88,88,88,88	0
55	MG	1H	3380	1/1	0.98	0.08	-	63,63,63,63	0
55	MG	14	3148	1/1	0.98	0.10	-	79,79,79,79	0
55	MG	1H	3039	1/1	0.97	0.27	-	55,55,55,55	0
55	MG	14	3262	1/1	0.94	0.13	-	84,84,84,84	0
55	MG	1G	1603	1/1	0.97	0.12	-	99,99,99,99	0
55	MG	13	1690	1/1	0.62	0.36	-	136,136,136,136	0
55	MG	14	3393	1/1	0.86	0.19	-	103,103,103,103	0
55	MG	14	3188	1/1	0.97	0.19	-	71,71,71,71	0
55	MG	1G	1723	1/1	0.83	0.20	-	131,131,131,131	0
55	MG	14	3132	1/1	0.90	0.23	-	90,90,90,90	0
55	MG	1H	3519	1/1	0.92	0.08	-	132,132,132,132	0
55	MG	1H	3164	1/1	0.89	0.21	-	95,95,95,95	0
55	MG	14	3045	1/1	0.98	0.28	-	66,66,66,66	0
55	MG	14	3378	1/1	0.94	0.12	-	99,99,99,99	0
55	MG	2L	103	1/1	0.71	0.21	-	109,109,109,109	0
55	MG	14	3364	1/1	0.97	0.04	-	91,91,91,91	0
55	MG	13	1601	1/1	0.96	0.14	-	110,110,110,110	0
55	MG	14	3386	1/1	0.97	0.13	-	67,67,67,67	0
55	MG	14	3147	1/1	0.77	0.19	-	115,115,115,115	0
55	MG	14	3398	1/1	0.98	0.14	-	109,109,109,109	0
55	MG	14	3272	1/1	0.93	0.45	-	94,94,94,94	0
55	MG	1H	3335	1/1	0.93	0.26	-	90,90,90,90	0
55	MG	1H	3444	1/1	0.86	0.14	-	111,111,111,111	0
55	MG	1H	3543	1/1	0.89	0.26	-	121,121,121,121	0
55	MG	14	3173	1/1	0.96	0.30	-	103,103,103,103	0
55	MG	1G	1714	1/1	0.91	0.12	-	115,115,115,115	0
55	MG	13	1641	1/1	0.88	0.31	-	117,117,117,117	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	1G	1623	1/1	0.76	0.29	-	99,99,99,99	0
55	MG	1G	1742	1/1	0.95	0.34	-	116,116,116,116	0
55	MG	1H	3476	1/1	0.89	0.19	-	106,106,106,106	0
55	MG	1G	1673	1/1	0.93	0.18	-	101,101,101,101	0
55	MG	1H	3304	1/1	0.85	0.31	-	84,84,84,84	0
55	MG	1H	3505	1/1	0.79	0.62	-	122,122,122,122	0
55	MG	1H	3091	1/1	0.85	0.17	-	81,81,81,81	0
55	MG	14	3431	1/1	0.94	0.05	-	106,106,106,106	0
55	MG	1G	1733	1/1	0.95	0.10	-	105,105,105,105	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	14	3425	1/1	0.88	0.14	-	89,89,89,89	0
55	MG	1H	3033	1/1	0.95	0.18	-	113,113,113,113	0
55	MG	14	3092	1/1	0.96	0.21	-	84,84,84,84	0
55	MG	13	1644	1/1	0.80	0.26	-	91,91,91,91	0
55	MG	14	3412	1/1	0.91	0.07	-	91,91,91,91	0
55	MG	1G	1706	1/1	0.94	0.16	-	116,116,116,116	0
55	MG	1H	3326	1/1	0.89	0.21	-	85,85,85,85	0
55	MG	1H	3289	1/1	0.84	0.51	-	104,104,104,104	0
55	MG	14	3186	1/1	0.97	0.11	-	90,90,90,90	0
55	MG	14	3015	1/1	0.95	0.23	-	78,78,78,78	0
55	MG	1H	3282	1/1	0.84	0.28	-	87,87,87,87	0
55	MG	14	3159	1/1	0.96	0.17	-	66,66,66,66	0
55	MG	1H	3273	1/1	0.67	0.42	-	98,98,98,98	0
55	MG	14	3164	1/1	0.93	0.16	-	89,89,89,89	0
55	MG	14	3040	1/1	0.98	0.14	-	67,67,67,67	0
55	MG	14	3180	1/1	0.97	0.14	-	94,94,94,94	0
55	MG	3I	201	1/1	0.95	0.14	-	89,89,89,89	0
55	MG	14	3137	1/1	0.88	0.38	-	107,107,107,107	0
55	MG	14	3131	1/1	0.79	0.18	-	81,81,81,81	0
55	MG	14	3446	1/1	0.75	0.43	-	120,120,120,120	0
55	MG	14	3451	1/1	0.98	0.09	-	92,92,92,92	0
55	MG	14	3407	1/1	0.98	0.07	-	109,109,109,109	0
55	MG	13	1711	1/1	0.95	0.18	-	86,86,86,86	0
55	MG	1G	1693	1/1	0.42	0.43	-	106,106,106,106	0
55	MG	1H	3036	1/1	0.96	0.34	-	72,72,72,72	0
55	MG	14	3264	1/1	0.69	0.40	-	100,100,100,100	0
55	MG	1H	3306	1/1	0.94	0.27	-	109,109,109,109	0
55	MG	1H	3153	1/1	0.90	0.12	-	79,79,79,79	0
55	MG	14	3457	1/1	0.86	0.14	-	101,101,101,101	0
55	MG	14	3244	1/1	0.99	0.17	-	90,90,90,90	0
55	MG	14	3339	1/1	0.73	0.55	-	107,107,107,107	0
55	MG	1H	3456	1/1	0.97	0.07	-	86,86,86,86	0
55	MG	13	1646	1/1	0.70	0.29	-	100,100,100,100	0
55	MG	1H	3284	1/1	0.95	0.22	-	83,83,83,83	0
55	MG	14	3344	1/1	0.86	0.60	-	89,89,89,89	0
55	MG	1H	3509	1/1	0.91	0.05	-	126,126,126,126	0
55	MG	1H	3458	1/1	0.97	0.15	-	67,67,67,67	0
55	MG	14	3144	1/1	0.82	0.16	-	78,78,78,78	0
55	MG	14	3161	1/1	0.94	0.28	-	72,72,72,72	0
55	MG	14	3476	1/1	0.92	0.27	-	110,110,110,110	0
55	MG	1G	1659	1/1	0.96	0.20	-	97,97,97,97	0
55	MG	1H	3046	1/1	0.91	0.31	-	86,86,86,86	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	1H	3263	1/1	0.66	0.31	-	78,78,78,78	0
55	MG	1H	3516	1/1	0.96	0.04	-	126,126,126,126	0
55	MG	13	1719	1/1	0.93	0.06	-	140,140,140,140	0
55	MG	1G	1709	1/1	0.86	0.27	-	111,111,111,111	0
55	MG	1H	3094	1/1	0.96	0.29	-	72,72,72,72	0
55	MG	1H	3328	1/1	0.81	0.19	-	94,94,94,94	0
55	MG	1H	3058	1/1	0.94	0.25	-	88,88,88,88	0
55	MG	14	3208	1/1	0.73	0.20	-	83,83,83,83	0
55	MG	1H	3478	1/1	0.94	0.07	-	99,99,99,99	0
55	MG	13	1671	1/1	0.90	0.28	-	155,155,155,155	0
55	MG	1G	1625	1/1	0.87	0.50	-	97,97,97,97	0
55	MG	1H	3102	1/1	0.95	0.21	-	82,82,82,82	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	3338	1/1	0.83	0.60	-	88,88,88,88	0
55	MG	1H	3239	1/1	0.91	0.36	-	71,71,71,71	0
55	MG	14	3391	1/1	0.96	0.25	-	80,80,80,80	0
55	MG	14	3151	1/1	0.92	0.20	-	79,79,79,79	0
55	MG	1H	3019	1/1	0.94	0.17	-	73,73,73,73	0
55	MG	13	1670	1/1	0.87	0.28	-	150,150,150,150	0
55	MG	1H	3312	1/1	0.83	0.40	-	106,106,106,106	0
55	MG	18	103	1/1	0.93	0.31	-	94,94,94,94	0
55	MG	1G	1734	1/1	0.88	0.12	-	114,114,114,114	0
55	MG	14	3074	1/1	0.87	0.24	-	97,97,97,97	0
55	MG	1H	3065	1/1	0.96	0.22	-	74,74,74,74	0
55	MG	14	3463	1/1	0.98	0.12	-	98,98,98,98	0
55	MG	14	3125	1/1	0.93	0.22	-	93,93,93,93	0
55	MG	1H	3291	1/1	0.91	0.37	-	120,120,120,120	0
55	MG	16	206	1/1	0.86	0.28	-	76,76,76,76	0
55	MG	14	3140	1/1	0.70	0.28	-	97,97,97,97	0
55	MG	1H	3336	1/1	0.68	0.27	-	103,103,103,103	0
55	MG	1H	3078	1/1	0.88	0.35	-	81,81,81,81	0
55	MG	1G	1744	1/1	0.64	0.20	-	126,126,126,126	0
55	MG	14	3219	1/1	0.81	0.12	-	105,105,105,105	0
55	MG	1H	3136	1/1	0.52	0.36	-	96,96,96,96	0
55	MG	1H	3215	1/1	0.89	0.57	-	84,84,84,84	0
55	MG	1H	3494	1/1	0.91	0.07	-	88,88,88,88	0
55	MG	1H	3346	1/1	0.76	0.24	-	80,80,80,80	0
55	MG	14	3441	1/1	0.97	0.04	-	113,113,113,113	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	1H	3252	1/1	0.91	0.22	-	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	1H	3163	1/1	0.93	0.40	-	111,111,111,111	0
55	MG	14	3276	1/1	0.94	0.27	-	75,75,75,75	0
55	MG	14	3320	1/1	0.70	0.33	-	114,114,114,114	0
55	MG	13	1642	1/1	0.75	0.21	-	99,99,99,99	0
55	MG	1G	1675	1/1	0.91	0.29	-	111,111,111,111	0
55	MG	14	3458	1/1	0.99	0.22	-	94,94,94,94	0
55	MG	13	1722	1/1	0.93	0.10	-	103,103,103,103	0
55	MG	1G	1745	1/1	0.86	0.06	-	143,143,143,143	0
55	MG	13	1640	1/1	0.91	0.20	-	99,99,99,99	0
55	MG	1H	3227	1/1	0.77	0.48	-	83,83,83,83	0
55	MG	14	3098	1/1	0.73	0.45	-	86,86,86,86	0
55	MG	16	202	1/1	0.90	0.31	-	88,88,88,88	0
55	MG	1H	3187	1/1	0.82	0.44	-	103,103,103,103	0
55	MG	1G	1638	1/1	0.87	0.20	-	86,86,86,86	0
55	MG	14	3374	1/1	0.96	0.10	-	80,80,80,80	0
55	MG	2K	102	1/1	0.97	0.18	-	106,106,106,106	0
55	MG	1G	1689	1/1	0.97	0.21	-	126,126,126,126	0
55	MG	14	3335	1/1	0.81	0.24	-	93,93,93,93	0
55	MG	1H	3044	1/1	0.86	0.35	-	74,74,74,74	0
55	MG	1G	1732	1/1	0.97	0.18	-	113,113,113,113	0
55	MG	14	3122	1/1	0.95	0.15	-	81,81,81,81	0
55	MG	55	202	1/1	0.89	0.17	-	108,108,108,108	0
55	MG	16	208	1/1	0.92	0.25	-	76,76,76,76	0
55	MG	14	3281	1/1	0.83	0.25	-	98,98,98,98	0
55	MG	1H	3075	1/1	0.94	0.42	-	80,80,80,80	0
55	MG	14	3156	1/1	0.93	0.10	-	84,84,84,84	0
55	MG	1G	1624	1/1	0.91	0.17	-	101,101,101,101	0
55	MG	14	3057	1/1	0.97	0.20	-	63,63,63,63	0
55	MG	1H	3148	1/1	0.95	0.29	-	74,74,74,74	0
55	MG	1G	1666	1/1	0.81	0.28	-	99,99,99,99	0
55	MG	1H	3265	1/1	0.87	0.13	-	85,85,85,85	0
55	MG	14	3215	1/1	0.89	0.16	-	182,182,182,182	0
55	MG	1H	3212	1/1	0.92	0.16	-	97,97,97,97	0
55	MG	14	3338	1/1	0.95	0.19	-	80,80,80,80	0
55	MG	14	3139	1/1	0.94	0.25	-	102,102,102,102	0
55	MG	1H	3224	1/1	0.95	0.18	-	87,87,87,87	0
55	MG	1H	3028	1/1	0.95	0.38	-	93,93,93,93	0
55	MG	14	3073	1/1	0.98	0.20	-	82,82,82,82	0
55	MG	1H	3517	1/1	0.91	0.08	-	121,121,121,121	0
55	MG	14	3222	1/1	0.90	0.26	-	112,112,112,112	0
55	MG	14	3134	1/1	0.94	0.27	-	77,77,77,77	0
55	MG	14	3447	1/1	0.91	0.23	-	90,90,90,90	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	1H	3178	1/1	0.61	0.57	-	92,92,92,92	0
55	MG	14	3295	1/1	0.74	0.45	-	103,103,103,103	0

6.5 Other polymers [i](#)

There are no such residues in this entry.