



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 19, 2016 – 10:13 PM GMT

PDB ID : 4WZD
Title : Complex of 70S ribosome with cognate tRNA-Tyr in the P-site
Authors : Rozov, A.; Demeshkina, N.; Yusupov, M.; Yusupova, G.
Deposited on : 2014-11-19
Resolution : 3.10 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 : **FAILED**
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : rb-20026982

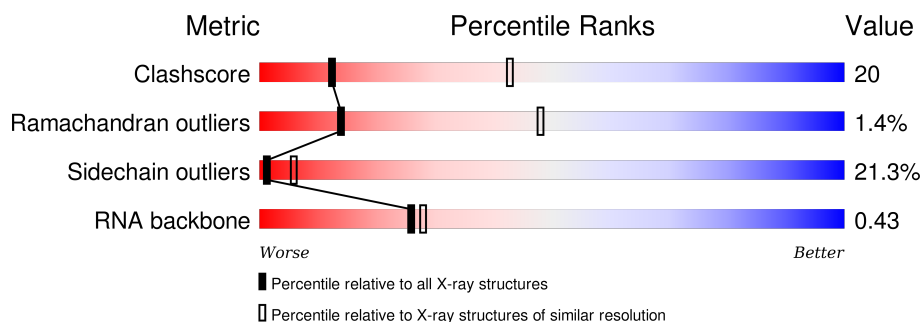
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.10 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))
Clashscore	102246	1222 (3.14-3.06)
Ramachandran outliers	100387	1174 (3.14-3.06)
Sidechain outliers	100360	1174 (3.14-3.06)
RNA backbone	2183	1010 (3.52-2.68)

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.

Note EDS failed to run properly.

Mol	Chain	Length	Quality of chain
1	13	1522	<div> <div>27%</div> <div>45%</div> <div>24%</div> <div>• •</div> </div>
1	1G	1522	<div> <div>29%</div> <div>46%</div> <div>20%</div> <div>• •</div> </div>
2	12	256	<div> <div>40%</div> <div>41%</div> <div>11%</div> <div>7%</div> </div>
2	1E	256	<div> <div>35%</div> <div>43%</div> <div>13%</div> <div>• 7%</div> </div>
3	22	239	<div> <div>39%</div> <div>39%</div> <div>8%</div> <div>14%</div> </div>
3	2E	239	<div> <div>42%</div> <div>39%</div> <div>•</div> <div>14%</div> </div>






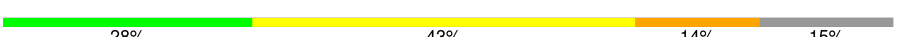
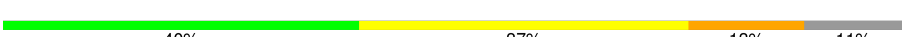
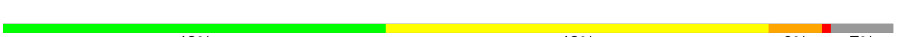
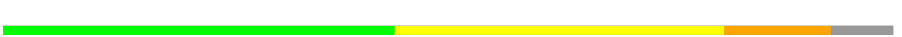

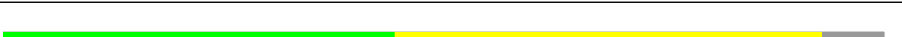
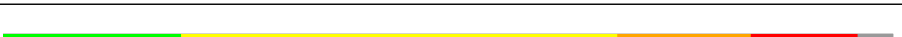

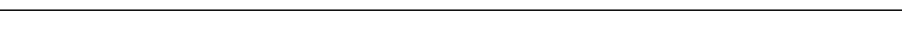
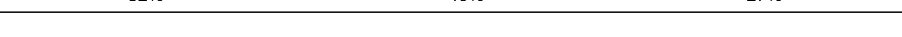
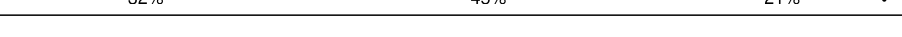


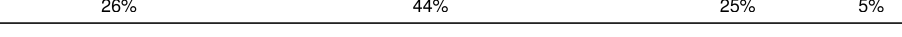
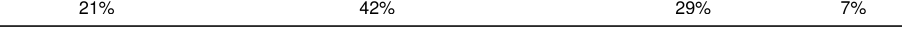


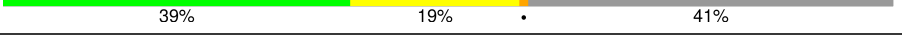


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Mol	Chain	Length	Quality of chain
4	32	209	
4	3E	209	
5	42	162	
5	4E	162	
6	52	101	
6	5E	101	
7	62	156	
7	6E	156	
8	72	138	
8	7E	138	
9	82	128	
9	8E	128	
10	1A	105	
10	1I	105	
11	2A	129	
11	2I	129	
12	3A	132	
12	3I	132	
13	4A	126	
13	4I	126	
14	5A	61	
14	5I	61	
15	6A	89	
15	6I	89	
16	7A	88	






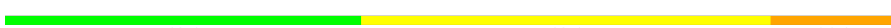







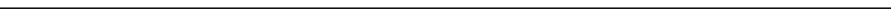











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Mol	Chain	Length	Quality of chain
16	7I	88	
17	8A	105	
17	8I	105	
18	9A	88	
18	9I	88	
19	AA	93	
19	AI	93	
20	BA	106	
20	BI	106	
21	1B	27	
21	1F	27	
22	2K	85	
22	2L	85	
22	3K	85	
22	3L	85	
23	4K	30	
23	4L	30	
24	14	2917	
24	1H	2917	
25	16	122	
25	1J	122	
26	7I	229	
26	79	229	
27	11	276	
27	19	276	







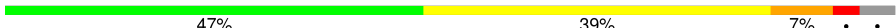

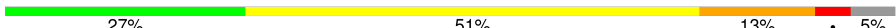

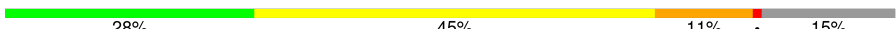
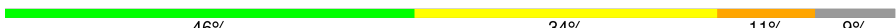




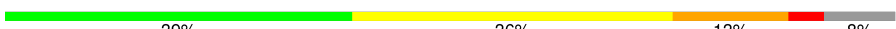


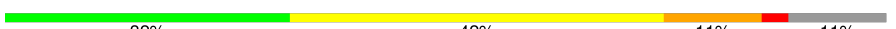
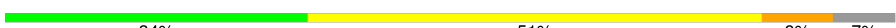

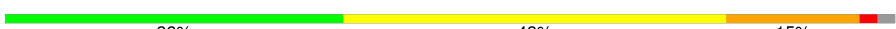


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Mol	Chain	Length	Quality of chain
28	21	206	
28	29	206	
29	31	210	
29	39	210	
30	41	182	
30	49	182	
31	51	180	
31	59	180	
32	61	148	
32	69	148	
33	15	140	
33	58	140	
34	25	122	
34	68	122	
35	35	150	
35	78	150	
36	45	141	
36	88	141	
37	55	118	
37	98	118	
38	65	112	
38	A8	112	
39	75	146	
39	B8	146	
40	85	118	

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Mol	Chain	Length	Quality of chain
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	K5	54	
52	O8	54	

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Mol	Chain	Length	Quality of chain
53	L5	49	<div><div></div><div>47%</div><div>45%</div><div>6%</div><div></div></div>
53	P8	49	<div><div></div><div>41%</div><div>41%</div><div>12%</div><div></div><div></div></div>
54	M5	65	<div><div></div><div>40%</div><div>35%</div><div>14%</div><div>6%</div><div>5%</div></div>
54	Q8	65	<div><div></div><div>37%</div><div>35%</div><div>15%</div><div>8%</div><div>5%</div></div>

2 Entry composition

There are 57 unique types of molecules in this entry. The entry contains 299705 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	1499	Total	C	N	O	P	0	5	0
			32337	14392	5999	10442	1504			
1	1G	1503	Total	C	N	O	P	0	0	0
			32309	14381	5990	10436	1502			

- 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			
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	127	Total	C	N	O	0	0	0
			1009	639	197	173			

- 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			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
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	116	Total	C	N	O	S	0	0	0
			864	537	164	160	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	79	Total	C	N	O	S	0	0	0
			633	404	117	110	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			
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
			1824	822	323	592	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	16	Total	C	N	O	P	0	0	0
			348	157	72	103	16			
23	4L	8	Total	C	N	O	P	0	0	0
			170	77	32	53	8			

- 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	0	0
			62707	27911	11722	20163	2911			
24	14	2909	Total	C	N	O	P	0	0	0
			62647	27884	11716	20139	2908			

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			
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			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
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	92	Total	C	N	O	0	0	0
			725	471	131	123			
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
			656	407	139	109	1			
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			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
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 L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	O8	45	Total	C	N	O	S	0	0	0
			389	241	79	65	4			
52	K5	45	Total	C	N	O	S	0	0	0
			389	241	79	65	4			

- Molecule 53 is a protein called 50S ribosomal protein L34.

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

- Molecule 54 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	Q8	62	Total	C	N	O	S	0	0	0
			483	308	98	75	2			
54	M5	62	Total	C	N	O	S	0	0	0
			495	317	100	76	2			

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	98	1	Total	Mg	0	0
			1	1		
55	45	1	Total	Mg	0	0
			1	1		
55	55	1	Total	Mg	0	0
			1	1		
55	32	1	Total	Mg	0	0
			1	1		
55	C5	1	Total	Mg	0	0
			1	1		
55	13	140	Total	Mg	0	0
			140	140		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	1J	10	Total 10	Mg 10	0	0
55	16	15	Total 15	Mg 15	0	0
55	42	1	Total 1	Mg 1	0	0
55	25	1	Total 1	Mg 1	0	0
55	3K	1	Total 1	Mg 1	0	0
55	21	2	Total 2	Mg 2	0	0
55	31	2	Total 2	Mg 2	0	0
55	Q8	2	Total 2	Mg 2	0	0
55	I8	3	Total 3	Mg 3	0	0
55	52	1	Total 1	Mg 1	0	0
55	2A	1	Total 1	Mg 1	0	0
55	5E	1	Total 1	Mg 1	0	0
55	29	4	Total 4	Mg 4	0	0
55	2K	4	Total 4	Mg 4	0	0
55	15	1	Total 1	Mg 1	0	0
55	4A	2	Total 2	Mg 2	0	0
55	7E	1	Total 1	Mg 1	0	0
55	39	1	Total 1	Mg 1	0	0
55	1G	144	Total 144	Mg 144	0	0
55	11	3	Total 3	Mg 3	0	0
55	1H	521	Total 521	Mg 521	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	F5	1	Total 1	Mg 1	0	0
55	E5	1	Total 1	Mg 1	0	0
55	88	1	Total 1	Mg 1	0	0
55	14	467	Total 467	Mg 467	0	0
55	19	1	Total 1	Mg 1	0	0
55	3L	2	Total 2	Mg 2	0	0
55	4K	1	Total 1	Mg 1	0	0
55	3A	1	Total 1	Mg 1	0	0
55	G8	1	Total 1	Mg 1	0	0
55	2L	3	Total 3	Mg 3	0	0

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

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

- Molecule 57 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	13	125	Total 125	O 125	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	5I	1	Total 1	O 1	0	0
57	AI	3	Total 3	O 3	0	0
57	2K	2	Total 2	O 2	0	0
57	4K	3	Total 3	O 3	0	0
57	1H	652	Total 652	O 652	0	0
57	16	12	Total 12	O 12	0	0
57	11	8	Total 8	O 8	0	0
57	21	2	Total 2	O 2	0	0
57	31	5	Total 5	O 5	0	0
57	78	4	Total 4	O 4	0	0
57	98	1	Total 1	O 1	0	0
57	C8	2	Total 2	O 2	0	0
57	E8	1	Total 1	O 1	0	0
57	F8	2	Total 2	O 2	0	0
57	G8	2	Total 2	O 2	0	0
57	1G	96	Total 96	O 96	0	0
57	32	1	Total 1	O 1	0	0
57	5A	1	Total 1	O 1	0	0
57	7A	2	Total 2	O 2	0	0
57	BA	1	Total 1	O 1	0	0
57	2L	6	Total 6	O 6	0	0

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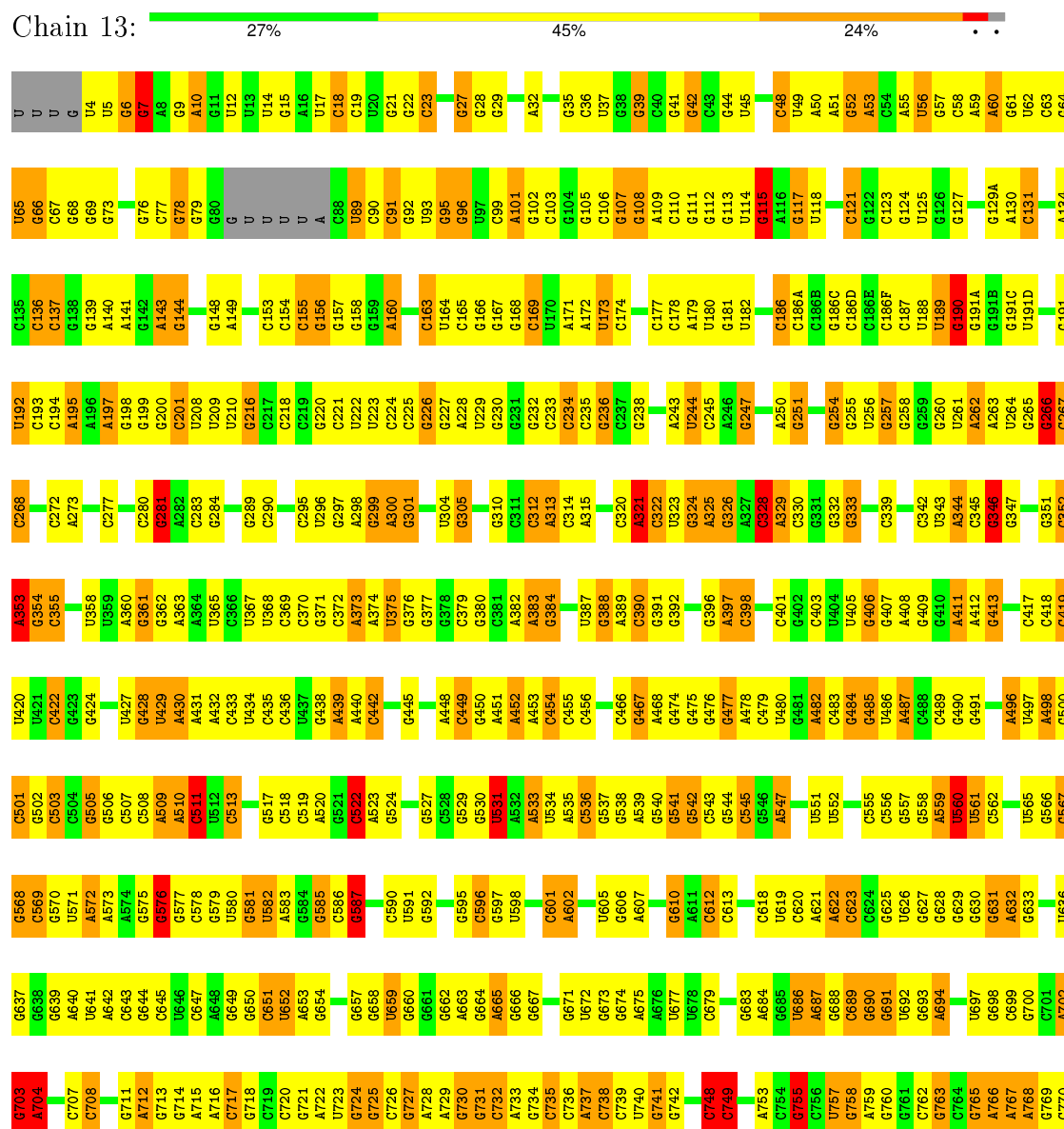
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	14	523	Total 523	O 523	0	0
57	1J	22	Total 22	O 22	0	0
57	19	11	Total 11	O 11	0	0
57	39	3	Total 3	O 3	0	0
57	25	6	Total 6	O 6	0	0
57	35	1	Total 1	O 1	0	0
57	75	1	Total 1	O 1	0	0
57	85	4	Total 4	O 4	0	0
57	F5	1	Total 1	O 1	0	0
57	H5	2	Total 2	O 2	0	0

3 Residue-property plots

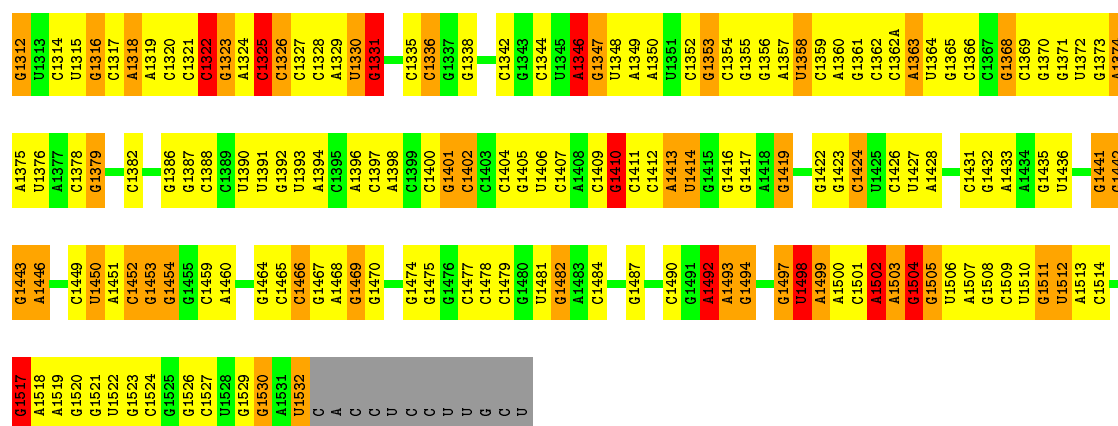
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according 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 ($\text{RSRZ} > 2$). 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.

Note EDS failed to run properly.

• Molecule 1: 16S ribosomal RNA

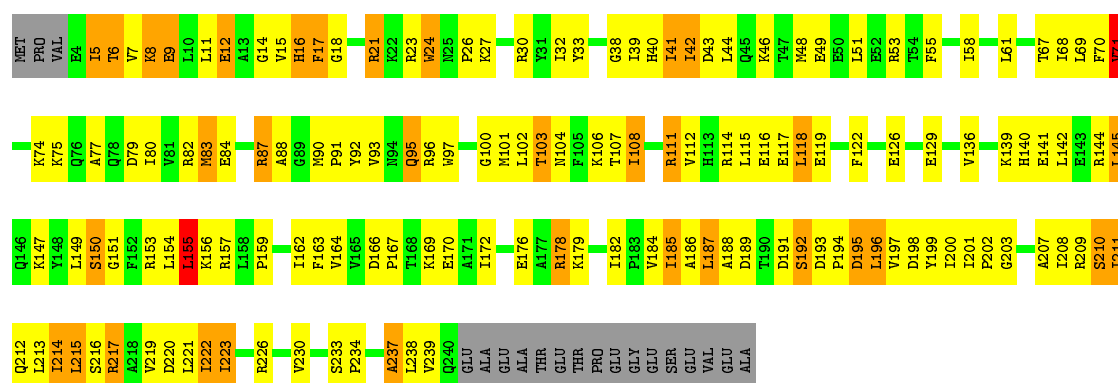


C1246	G1182	C1054	G927	A859	G785	A715	A642	G568	C504	G426	A363	A288	G200
U1247	A1183	A1055	G928	A860	G786	A716	C643	C569	G505	U427	A364	G289	C201
A1248	G1184	U1056	G929	G861	A787		C645	U570	A509	U429	C366	C290	U208
C1249	A1185	G1057		G862		C719	C646	G571	A510	A430	U367	U296	U209
A1250	G1186	G1058	C932	U863	G791	G720	C647	A572	C511	A431	U368	G297	U210
A1251	G1187	C995	G933	U864	A792	G721	C647	A573	C512	A432	C369	A298	G216
A1252	A1188	A996	C934	A865	U793	A722	C650	A574	U512	A433	C370	A299	G220
G1253	C1189	U1061	A935		A794	U723	C651	G575	C514	C433	C371	A300	C221
C1254	G1190	U1062		C868	G797	G724	C652	G576	C515	U434	C372	G301	U222
G1255	A1191	C1063		G869	G798	G725	A653	C577	U516	C435	A373		U223
A1256	C1192	U1064		A872	G799	G726		G578	U517				
U1257	G1193	U1065	C940		G800	A727	U659	G579	C518	G438	U374	U304	G227
G1258	A1194	C1066	G941		U801	A728	G660	U660	C519	A439	U375	G305	A226
C1259	C1195	A1067		C877	U802	A729	G661	G661	C520	A440	G376	G306	U229
C1260	U1196	G1068		G878	A802	A730	G662	U662	A521	C442	G377		
A1261	G1197		G944	G879	G803	G731	C663	G583	C522	C443	C379	G309	G232
C1262	G1198	C1069	A946	C880	G804	G732	A664	G584	C523	C444	G380	G310	G233
G1263	U1199	G1072	G947	G881	C805	A733	G665	G585	C524	C445	C381	A313	C234
C1264	G1200	U1073	C948	C882	C806	G734	A665	G586	C525	C446	A382	C314	G235
A1201	A1201	G1074	A949	C883	A807	G735		G587	C526	G447	A383	A315	
G1265	C1202	C1075	U950	U884	C808	C736	G668	C589	C527	C448	A384	G316	A243
C1267	C1203	U1076	G951	G885	G809	A737	U669	C590	C528	C449	C385	G317	U244
A1268	G1141	G1077	U952	G886	C810	C738	G670	U591	C529	G450	G386	G318	C245
U1205	G1142	U1078	G953		C811	G739	G671		C530	A451	U387	G319	A246
G1206	G1143	U1078	G954	A889	C812	U740	U672	G595	C531	A452	C388	C320	G247
G1207	G1144	G1079	U955		U813	G741	G673	C596	C532	C457	A389	A321	A250
C1208	C1145	A1080	U956	C893	A814		G674	C597	C533	C458	C390	C322	G251
G1209	A1146	G1081	U957	G894	A815	C747	A675	C601	C534	A459	G391	G323	U252
C1210	U1147	U1082	A958	G895	A816	C748	A676	A602	C535	A460	G392	G324	G253
G1211	U1148		A959	G896	C817	C749	U677	U603	C536	C466	A393	A327	G254
U1211	C1149	U1086	U960	C897	G818	G750	U678	G604	C537	C467	C394	C328	G255
U1212	U1150	U1086	U961	C898	A819		C679	U605	C538	A468	C395	A329	U256
		G1023	U962	A900	G821	G755	G683	A607	C539	G474	G396	G330	G257
G1215	A1151	U1088	C962	A901	C822	C756	G685		C540	G475	A397	G331	G258
C1216	C1153	G1089	A964	A902	G823	U757	G686	G612	C541	G476	C398	G332	
G1217	G1154	G1026	A965	G903	G824	G758	U686	C613	C542	G477		G333	U261
C1218	G1155	G1027	G966	G904	C825	A759	A687	A614	C543	G481	C402	C337	A262
U1219	A1156	U1092	C967	U905	C826	C760	G688	C615	C544	A482	C403	A338	A263
G1282	C1157	G1093	A968	G906	U827	G761	C689	G616	C545	C483	U404	C339	G265
C1220	A1157	U1095	A969	U907	A828		G691	G617	C546	G484	U405	U340	G266
G1221	C1158	C1096	C970	A908		G765	U692		C547	G485	G406	C341	C267
C1223	G1160	C1097	G971	A909	U831	A766	G693	C620	C548	U486	G407	C342	C268
G1224	C1161	U1098	C972	C910	C832	A767	A694	A621	C549	A487	A408	C343	G269
A1225	C1162	G1099	G973	U911	U833	A768		A622	C550	C488	G409	C344	
C1226	C1163	C1100	A974	C912	C834	G769	U697	C623	C551	C489	G410	C345	A270
A1227		G1033	A975	A913	U835	C770		C624	C552	G490	A411	G346	
G1290	G1166	C1034	C976	A914	G836	G771	G701	G625	C553	G491	A412	G347	A274
C1228	A1167	A1103	A977	A915	G837	U772	A702	U626	C554	G492	G413	G348	G275
A1229	A1169	G1104	A978	A916	G838	G773		G627	C555	G493	A414	G349	G276
G1293	C1171	C1106	C979	G917	U841	G774	A706	G628	C556	G494		G350	C277
	G1172	G1107	C980	G918	C842		C707	G629	C557	U495	C418	C351	C278
C1297	G1173	U1040	U981	A918	U843	A777	G708	G630	C558	A496	C419	C352	A279
A1298	C1174	C1109	U982	A919	C848	G778	G709	G631	C559	U497	U420	G353	C280
C1299	G1175	A1110	A983	U921	G849	C779	G710	A632	C560	A498	U421	G354	G281
A1300	A1176	A1111	C984	U922	U850	A780	G711	G633	C561	G500	C422	U359	G285
C1302	G1177	C1112	C985	A923	G851	A781	A712	G634	C562	C501	G423	A360	G286
U1303	C1178	C1113	A886	C924	G852	A782	G713	A640	C563	G502	G424	G361	G287
G1304	G1179		G987	C925	C857	A783	G714	U641	C564	C503		G362	
A1305	C1243		G988	G926	G858	C784			C565	C504			
G1306	A1244		G989						C566	C505			
A1245	A1245		C989						C567	C506			



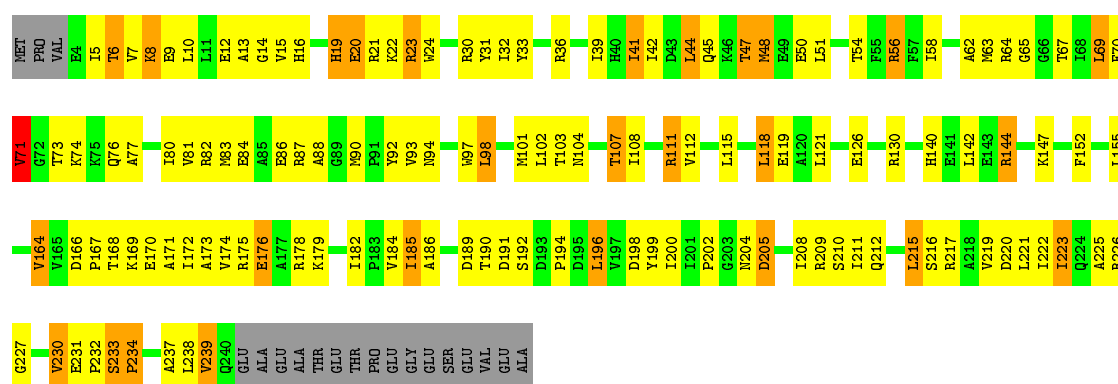
• Molecule 2: 30S ribosomal protein S2

Chain 1E: 35% 43% 13% 7%



• Molecule 2: 30S ribosomal protein S2

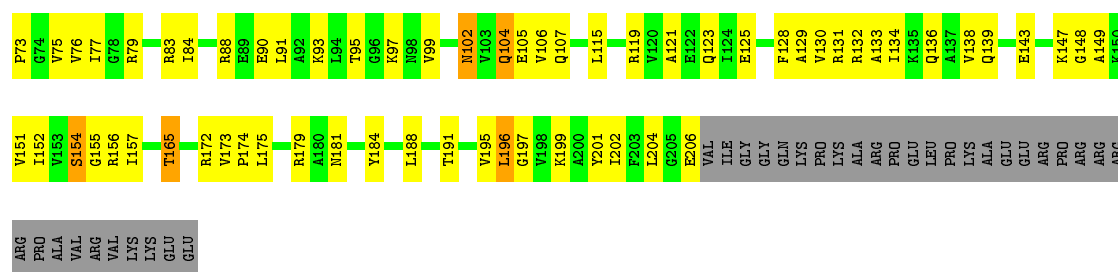
Chain 12: 40% 41% 11% 7%



• Molecule 3: 30S ribosomal protein S3

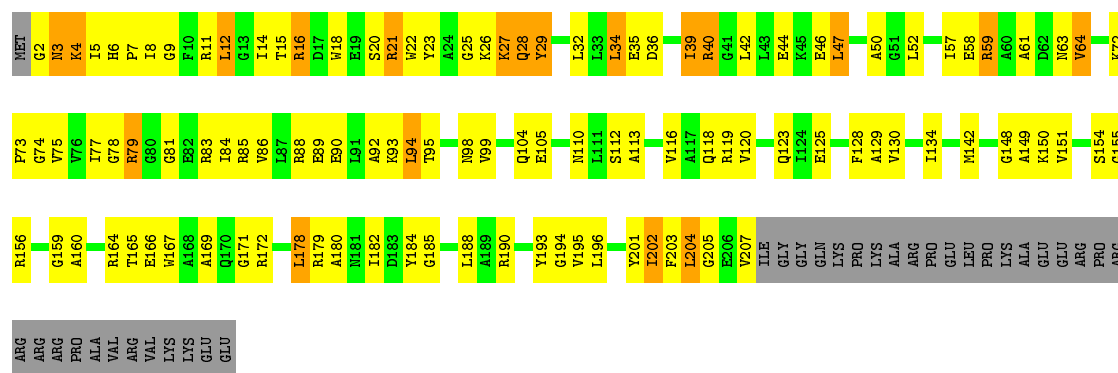
Chain 2E: 42% 39% 14%





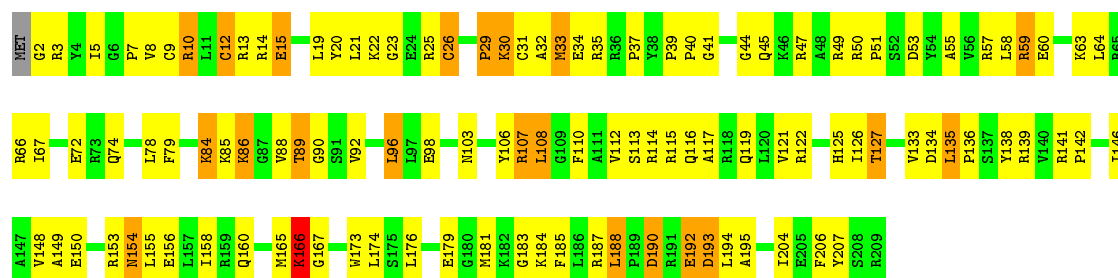
- Molecule 3: 30S ribosomal protein S3

Chain 22: 39% 39% 8% 14%



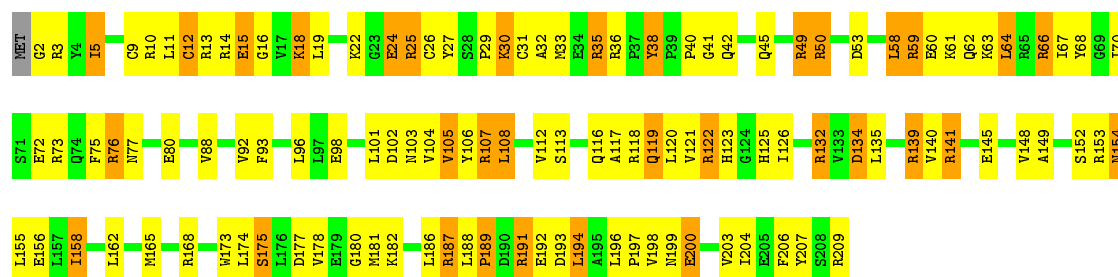
- Molecule 4: 30S ribosomal protein S4

Chain 3E: 45% 44% 10%

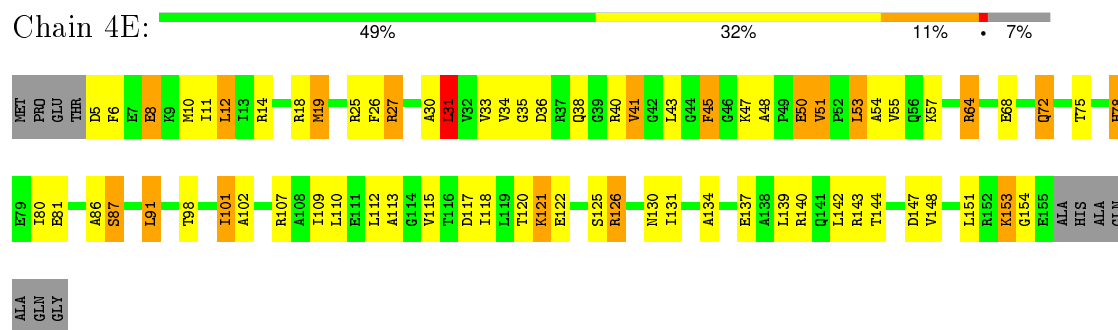


- Molecule 4: 30S ribosomal protein S4

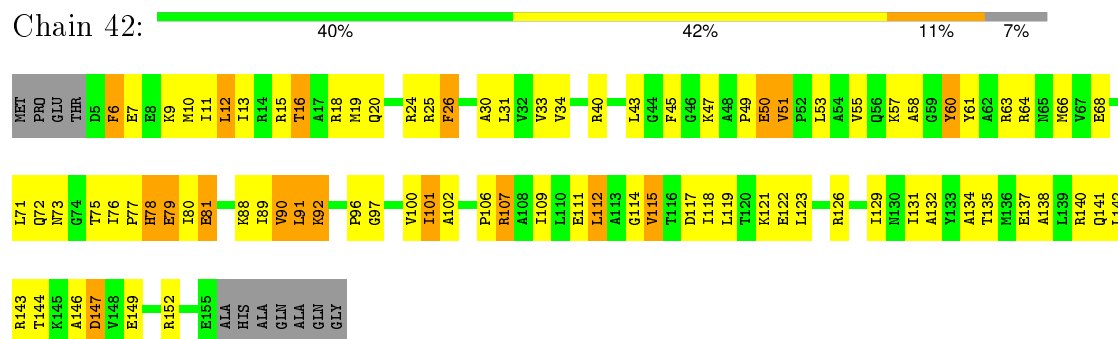
Chain 32: 43% 41% 16%



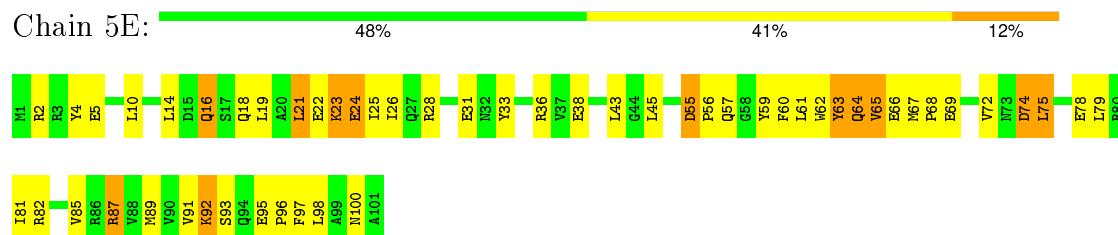
- Molecule 5: 30S ribosomal protein S5



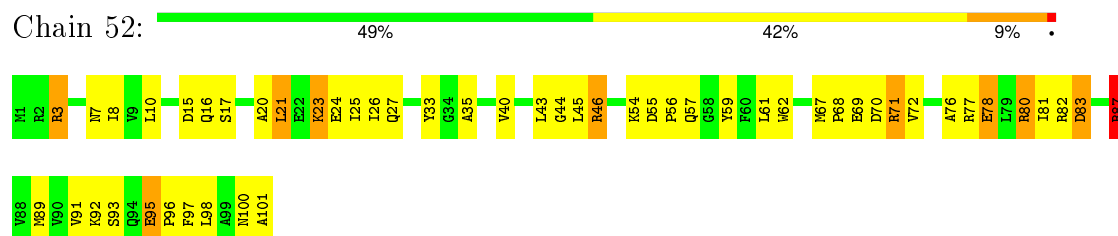
• Molecule 5: 30S ribosomal protein S5



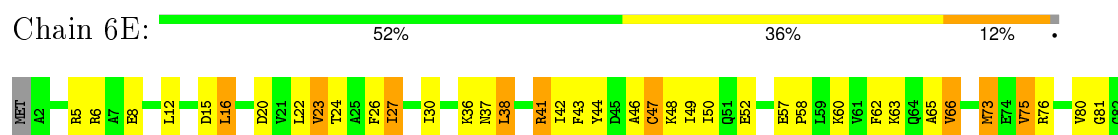
• Molecule 6: 30S ribosomal protein S6



• Molecule 6: 30S ribosomal protein S6



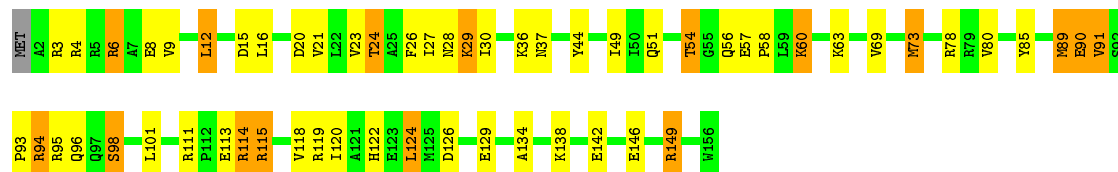
• Molecule 7: 30S ribosomal protein S7





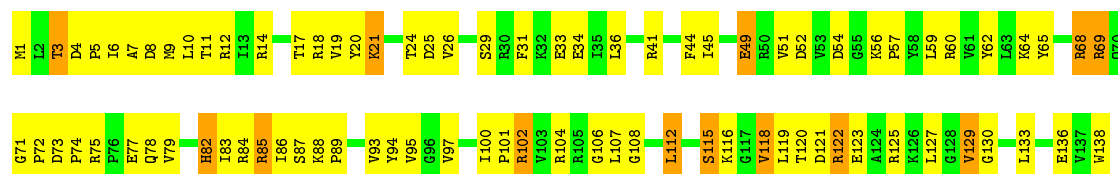
• Molecule 7: 30S ribosomal protein S7

Chain 62: 62% 27% 10% .



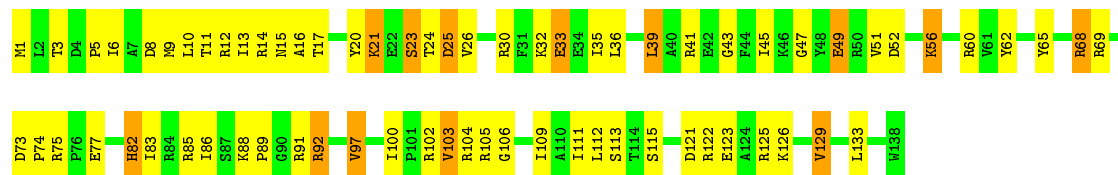
• Molecule 8: 30S ribosomal protein S8

Chain 7E: 39% 51% 9%



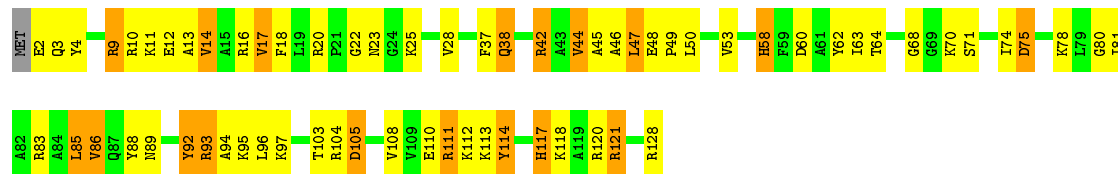
• Molecule 8: 30S ribosomal protein S8

Chain 72: 49% 41% 9%



• Molecule 9: 30S ribosomal protein S9

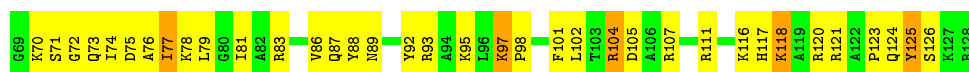
Chain 8E: 48% 38% 14% .



• Molecule 9: 30S ribosomal protein S9

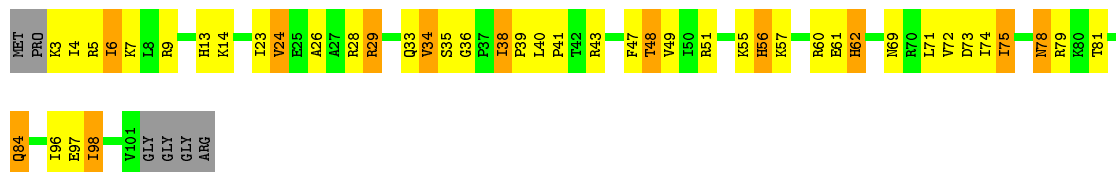
Chain 82: 39% 49% 10% ..





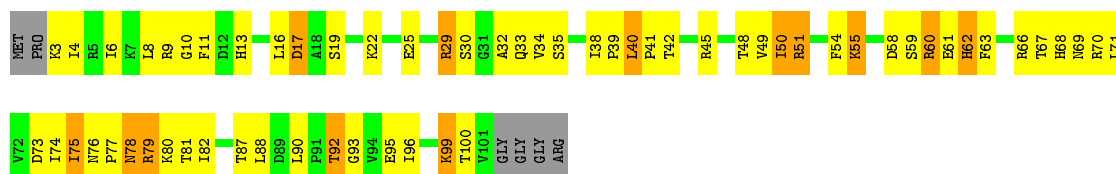
- Molecule 10: 30S ribosomal protein S10

Chain 1I:



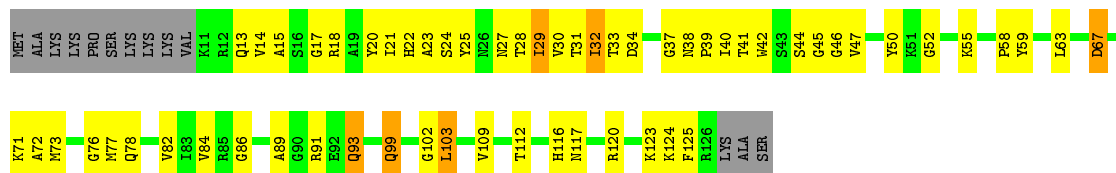
- Molecule 10: 30S ribosomal protein S10

Chain 1A:



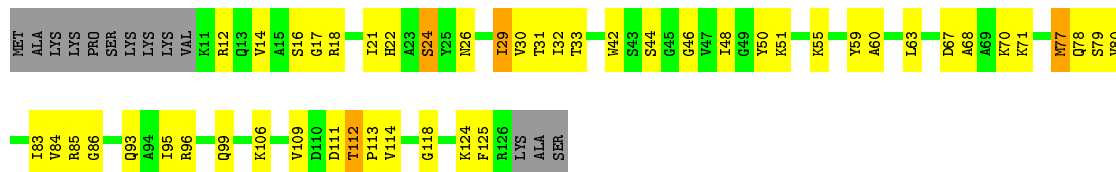
- Molecule 11: 30S ribosomal protein S11

Chain 2I:



- Molecule 11: 30S ribosomal protein S11

Chain 2A:



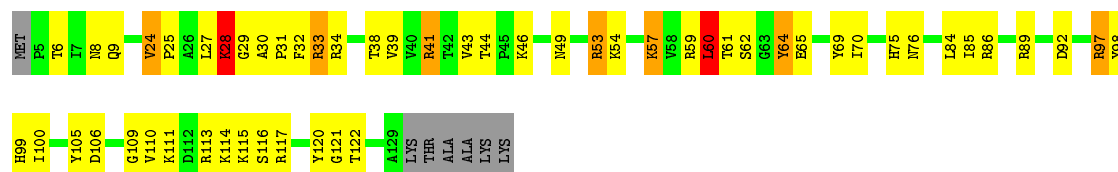
- Molecule 12: 30S ribosomal protein S12

Chain 3I:

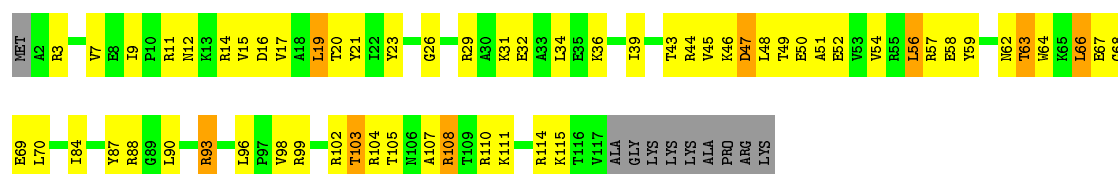




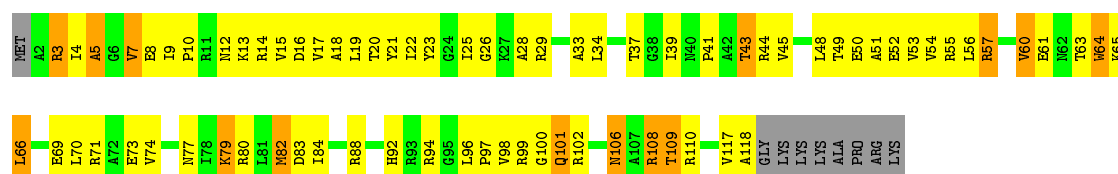
- Molecule 12: 30S ribosomal protein S12



- Molecule 13: 30S ribosomal protein S13



- Molecule 13: 30S ribosomal protein S13



- Molecule 14: 30S ribosomal protein S14 type Z

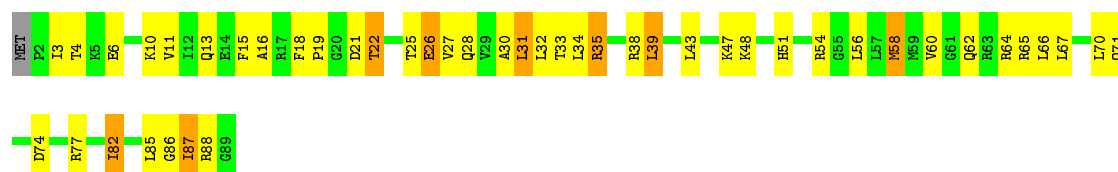


- Molecule 14: 30S ribosomal protein S14 type Z



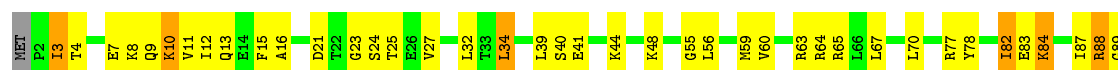
- Molecule 15: 30S ribosomal protein S15





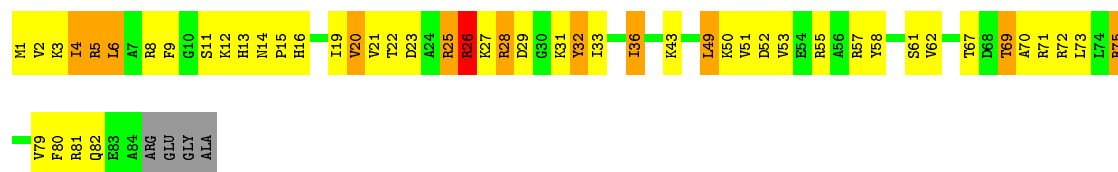
- Molecule 15: 30S ribosomal protein S15

Chain 6A: 54% 38% 7%



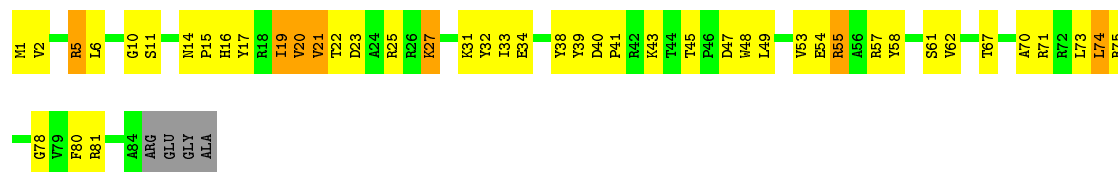
- Molecule 16: 30S ribosomal protein S16

Chain 7I: 39% 43% 13% 5%



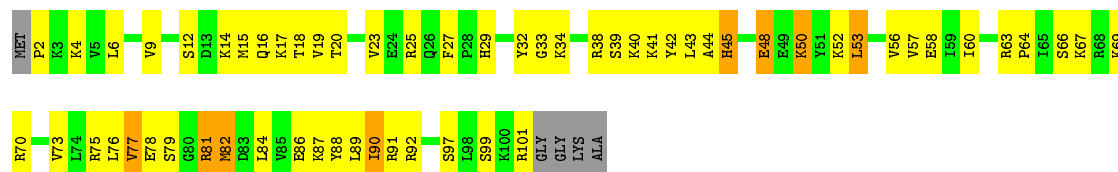
- Molecule 16: 30S ribosomal protein S16

Chain 7A: 43% 44% 8% 5%



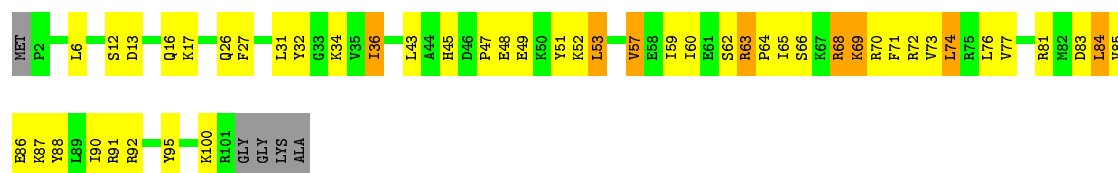
- Molecule 17: 30S ribosomal protein S17

Chain 8I: 38% 50% 8% 5%

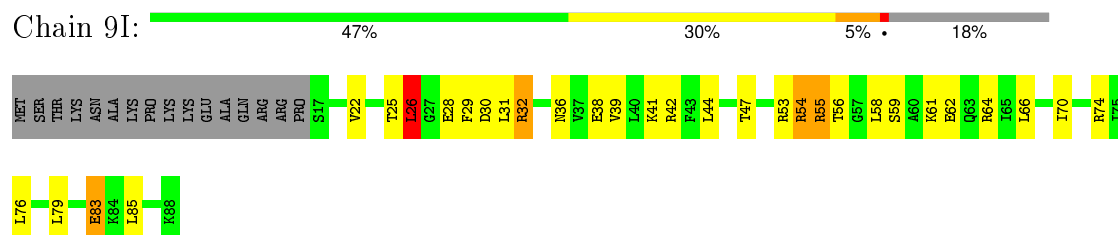


- Molecule 17: 30S ribosomal protein S17

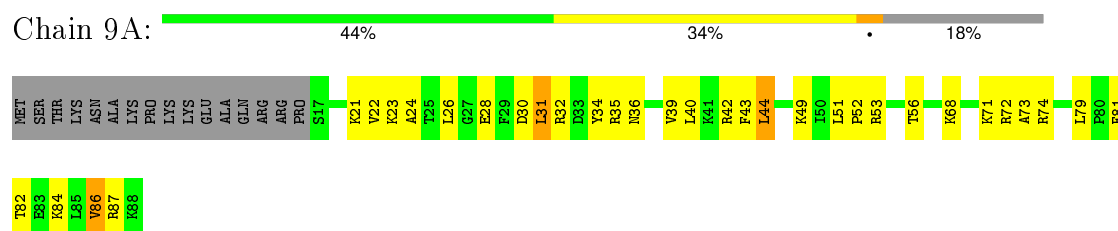
Chain 8A: 50% 38% 8% 5%



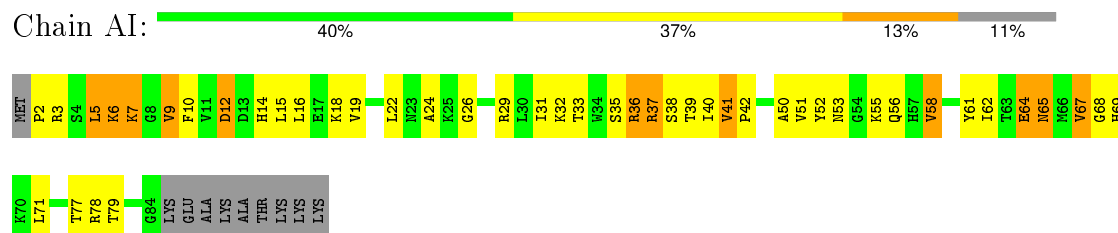
- Molecule 18: 30S ribosomal protein S18



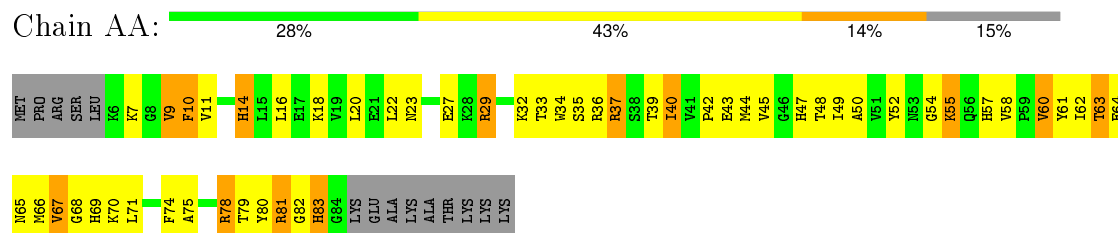
- Molecule 18: 30S ribosomal protein S18



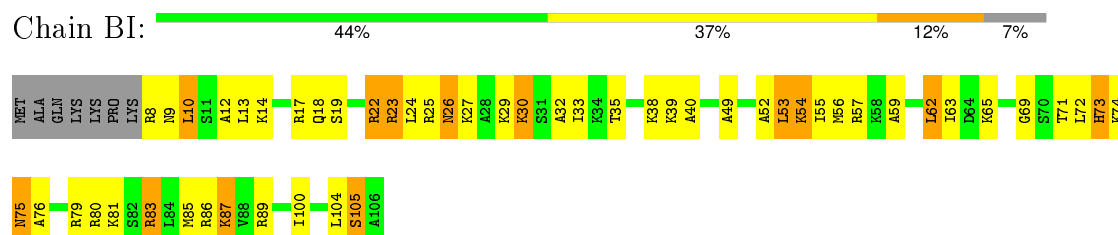
- Molecule 19: 30S ribosomal protein S19



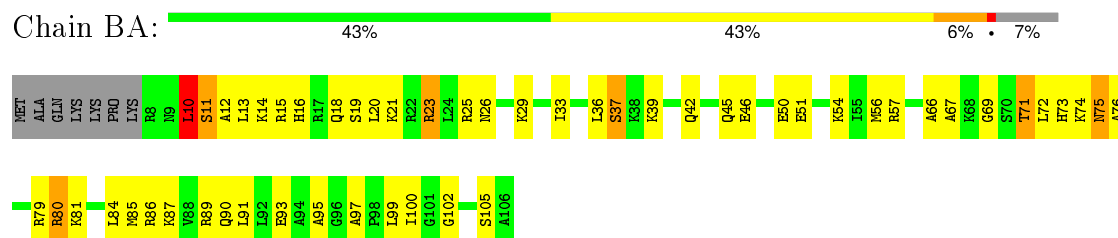
- Molecule 19: 30S ribosomal protein S19



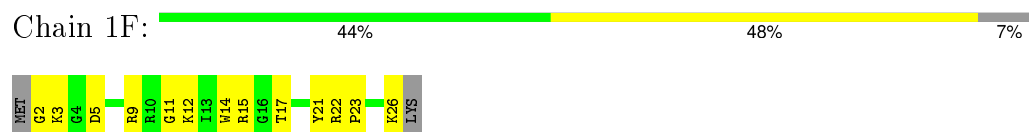
- Molecule 20: 30S ribosomal protein S20



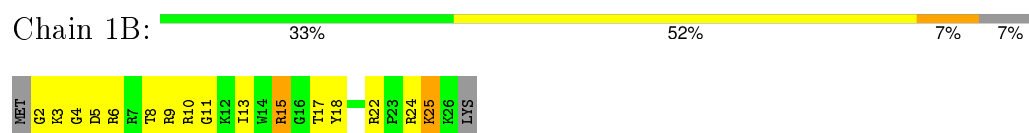
- Molecule 20: 30S ribosomal protein S20



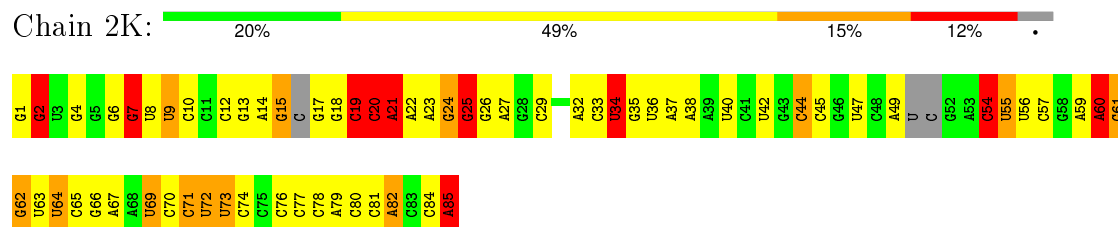
- Molecule 21: 30S ribosomal protein Thx



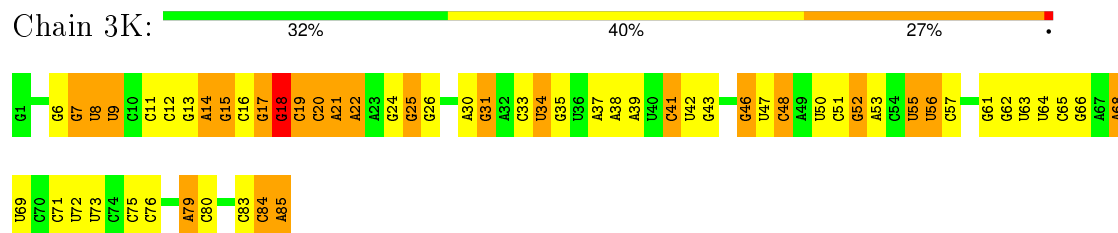
- Molecule 21: 30S ribosomal protein Thx



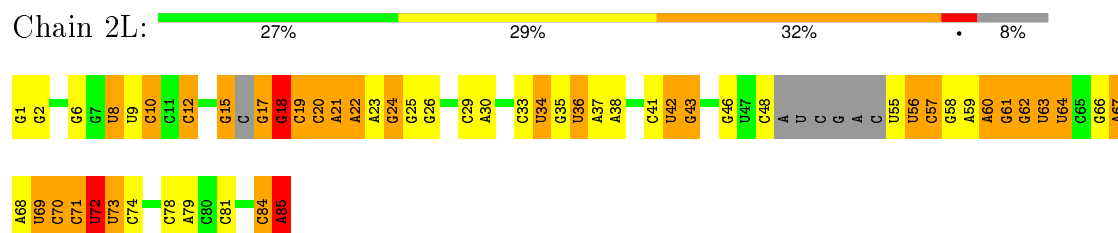
- Molecule 22: tRNA-Tyr



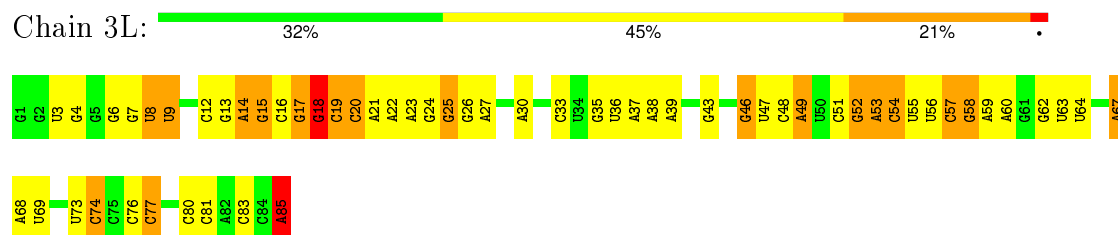
- Molecule 22: tRNA-Tyr



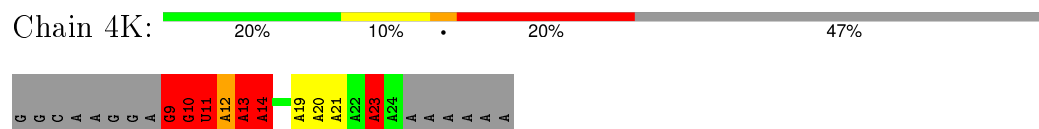
- Molecule 22: tRNA-Tyr



- Molecule 22: tRNA-Tyr



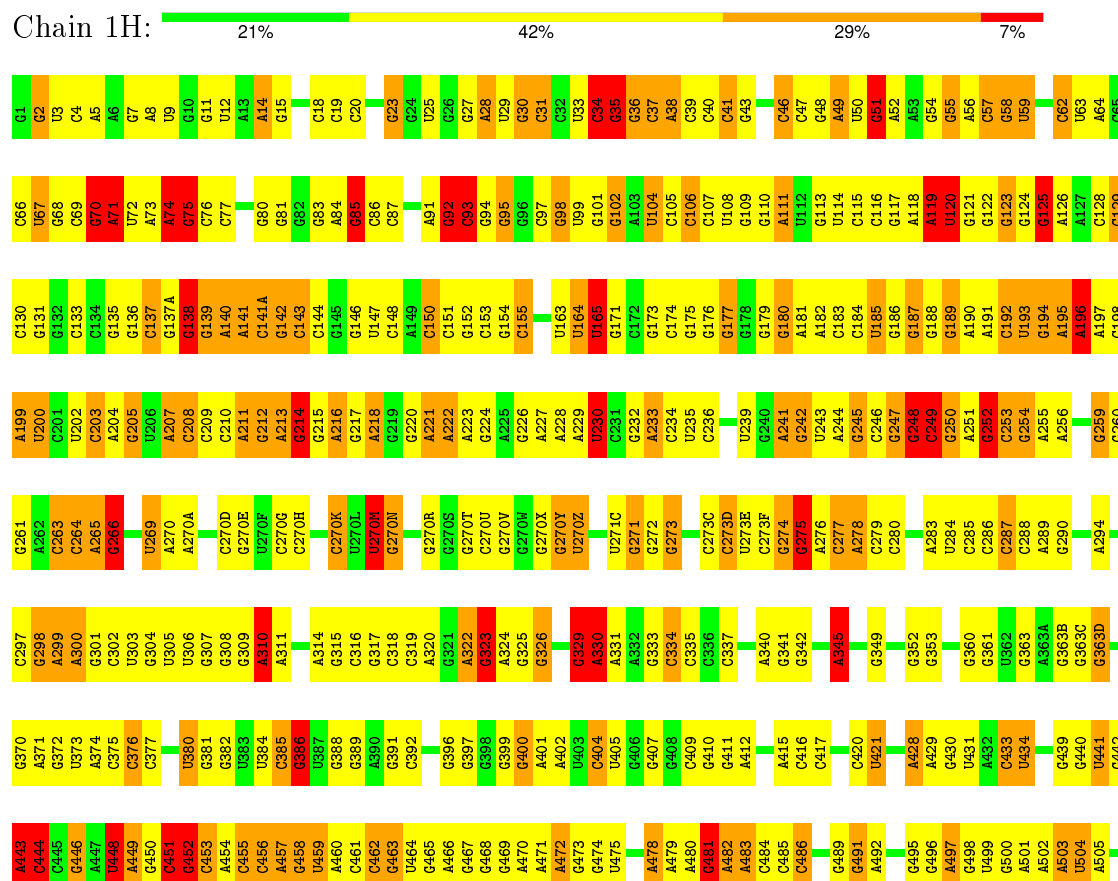
- Molecule 23: mRNA



- Molecule 23: mRNA



- Molecule 24: 23S ribosomal RNA



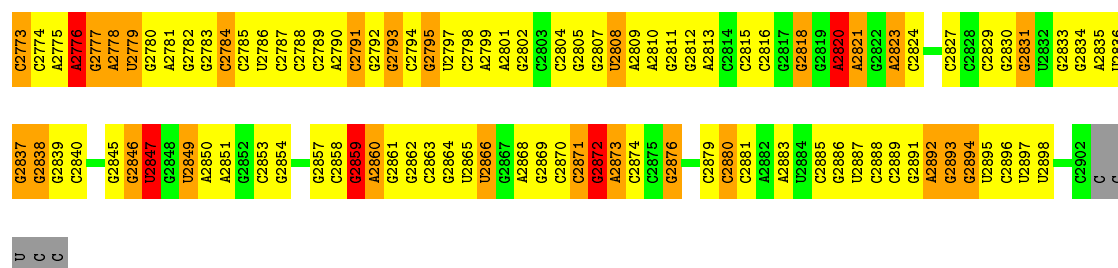
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G1435	G1374	G1375	G1309	G1245	G1186	G1053	A988	G928	A861	G738	C673	A633	C510
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G1441	U1372	U1373	U1312	G1250	G1189	G1056	C991	G931	G864	G741	A676	G637	A513
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G1443	G1380	G1381	C1314	A1252	G1190	A1057	C993	A933	A866	G743	C678	G638	A515
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C1446	C1384	C1385	G1319	G1256	G1194	U1061	A996	U937	A870	U747	G682	G643	U519
G1447	G1320	G1257	U1320	C1257	G1195	U1062	C997	G938	U871	U748	G683	A644	G520
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G1508	G1369	G1301	U1240	G1180	G1180	U1113	G1047	C982	U922	C795	C731	G667	U569
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G1511													A572

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G2516	C2452	G2390	A2266	G2193	G2128	G2061	A2001	U1940	G1856	A1791	G1699	U1693	G1573	C1509
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U2522	G2458	A2395	U2272	G2206	G2133	G2067	C2007	U1946	U1864	C1797	G1710	G1645	U1579	U1517
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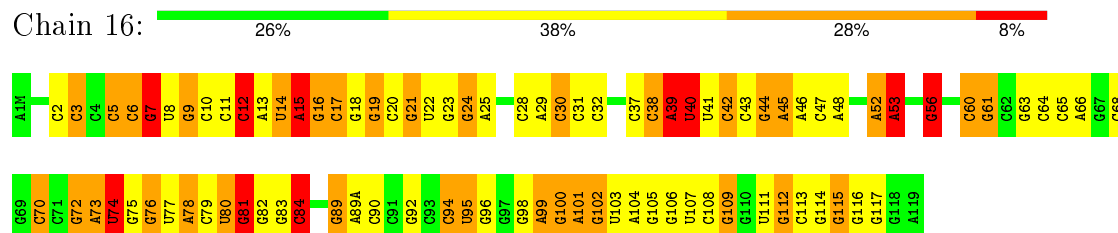


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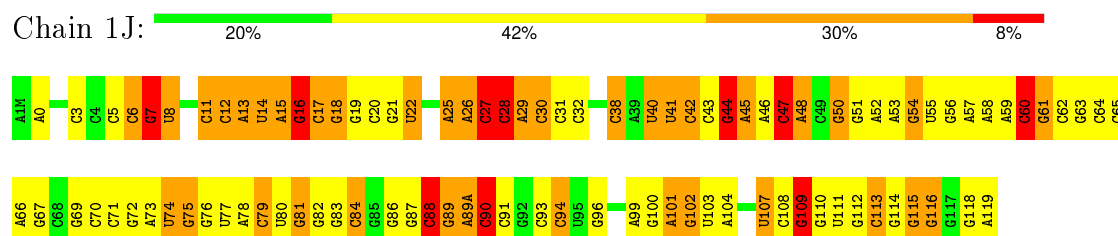
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G2766	C2698	U2561	A2434	A2434	G2365	A2305	A2241	U2167	G2100	C2037	U1969	U1899	G1823	G1764
G2767	C2700	G2562	U2435	A2435	G2366	G2306	G2242	G2168	G2101	G2038	A1970	A1900	G1824	C1765
C2768	G2701	U2563	G2436	G2436	G2367	G2307	U2243	A2169	U2102	C2039	A1971	A1901	A1825	C1766
G2769	U2702	G2564	U2437	U2437	G2368	G2308	U2244	A2170	G2103	U2040	A1972	A1902	G1826	U1766
C2770	C2703	U2565	U2438	U2438	G2369	A2309	U2245	U2171	G2104	U2041	A1973	G1903	C1827	U1767
C2772	G2704	G2566	A2439	A2439	G2370	G2310	A2246	U2172	G2105	A2042	C1974	G1904	G1828	U1768
		G2567	G2439	G2439	G2371	G2311	A2247	A2173					A1829	G1769
		G2568	G2440	G2440	G2372	G2312								
		G2569	G2441	G2441	G2373									
		G2570	G2442	G2442	G2374									
			G2443	G2443	G2375									
			G2444	G2444										
			G2445	G2445										
			G2446	G2446										
			G2447	G2447										
			G2448	G2448										
			G2449	G2449										
			G2450	G2450										
			G2451	G2451										
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			G2469	G2469										
			G2470	G2470										
			G2471	G2471										
			G2472	G2472										
			G2473	G2473										
			G2474	G2474										
			G2475	G2475										
			G2476	G2476										
			G2477	G2477										
			G2478	G2478										
			G2479	G2479										
			G2480	G2480										
			G2481	G2481										
			G2482	G2482										
			G2483	G2483										
			G2484	G2484										
			G2485	G2485										
			G2486	G2486										
			G2487	G2487										
			G2488	G2488										
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			G2490	G2490										
			G2491	G2491										
			G2492	G2492				</						



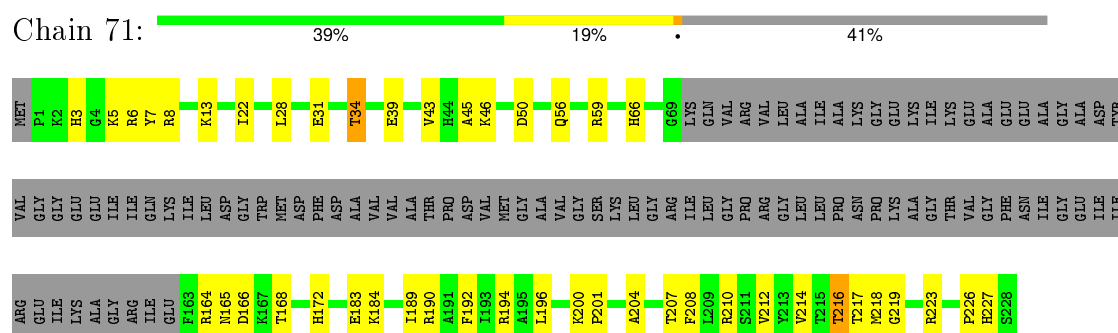
- Molecule 25: 5S ribosomal RNA



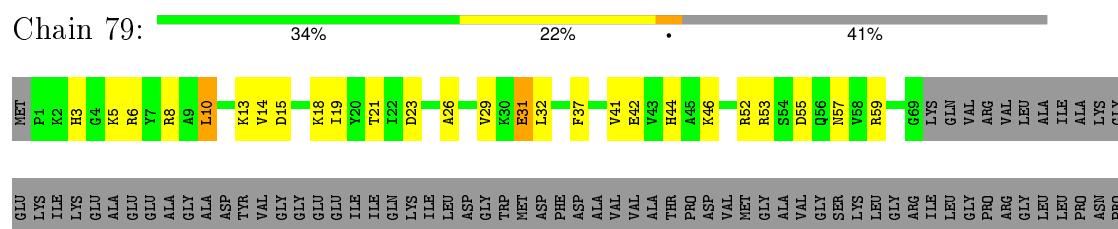
- Molecule 25: 5S ribosomal RNA

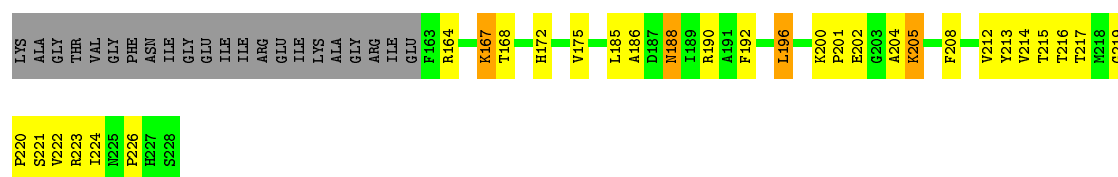


- Molecule 26: 50S ribosomal protein L1



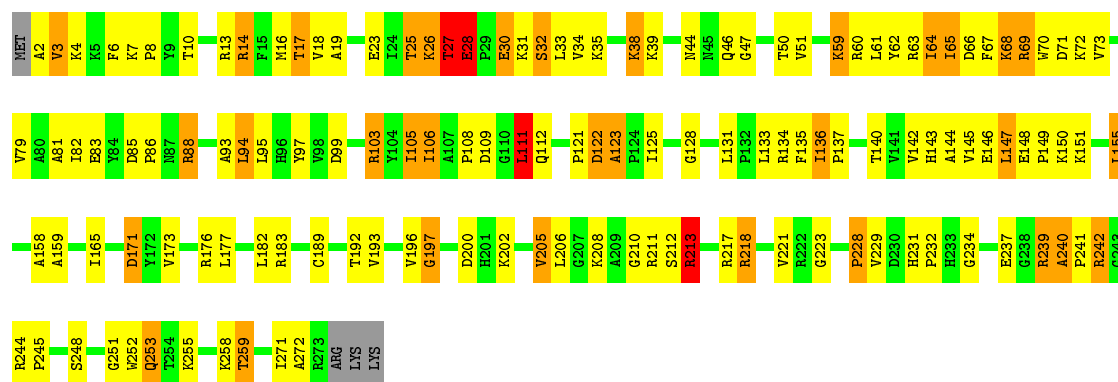
- Molecule 26: 50S ribosomal protein L1





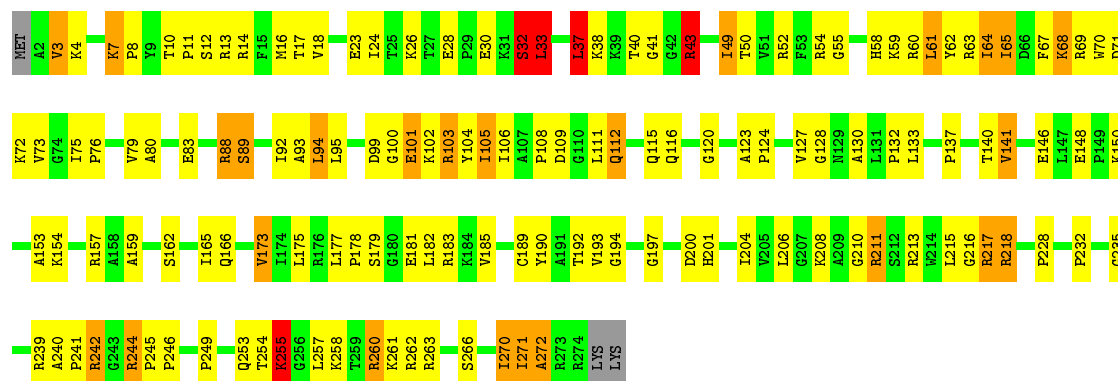
• Molecule 27: 50S ribosomal protein L2

Chain 11: 49% 36% 12% ..



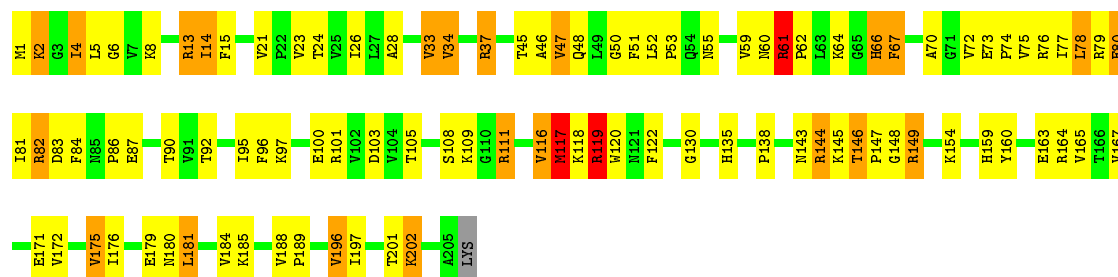
• Molecule 27: 50S ribosomal protein L2

Chain 19: 48% 40% 9% ..

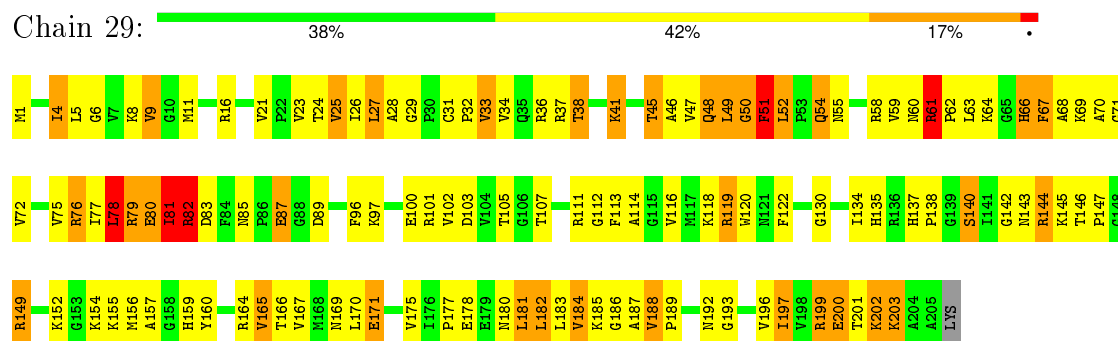


• Molecule 28: 50S ribosomal protein L3

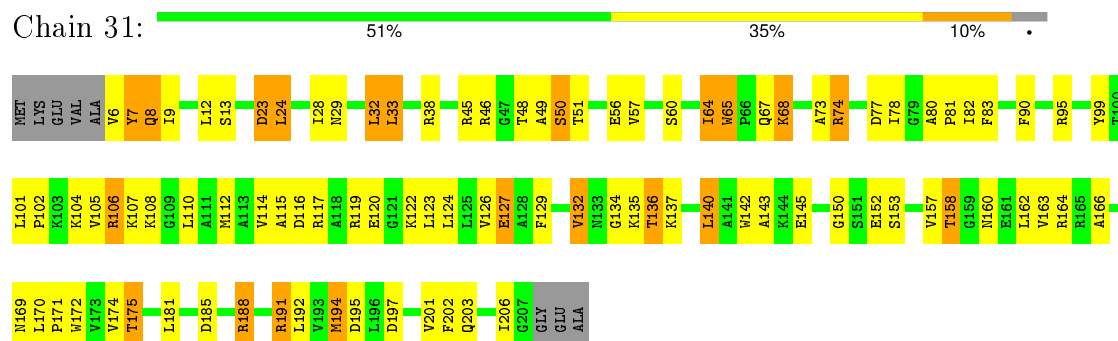
Chain 21: 51% 36% 11% .



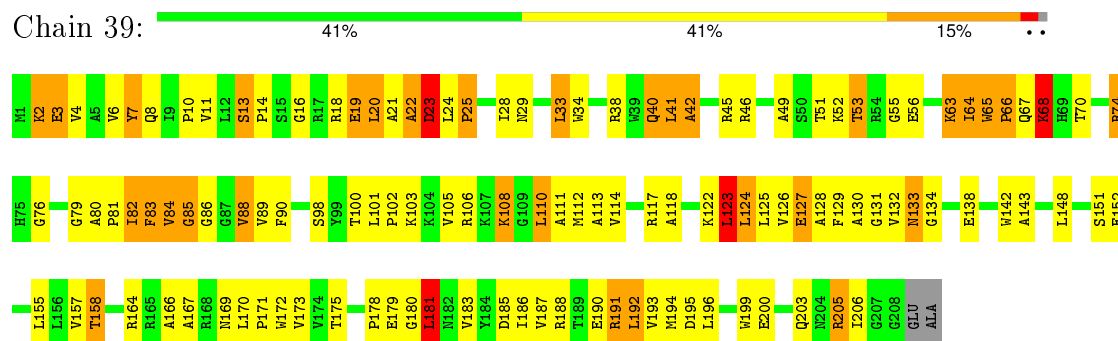
• Molecule 28: 50S ribosomal protein L3



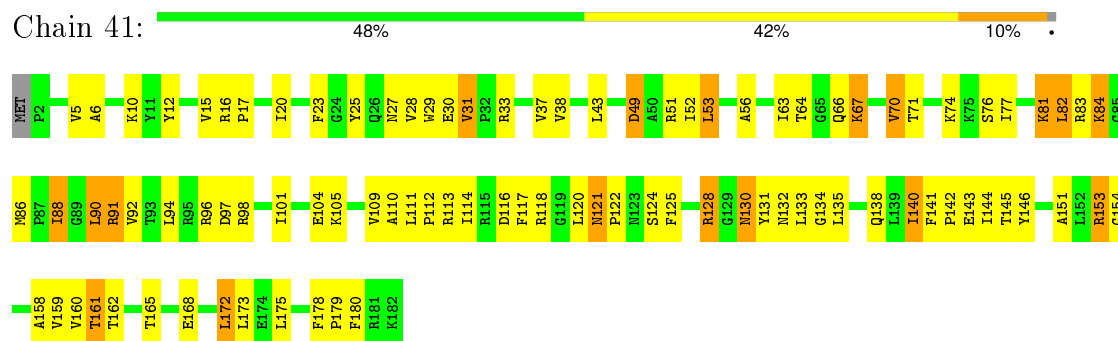
- Molecule 29: 50S ribosomal protein L4



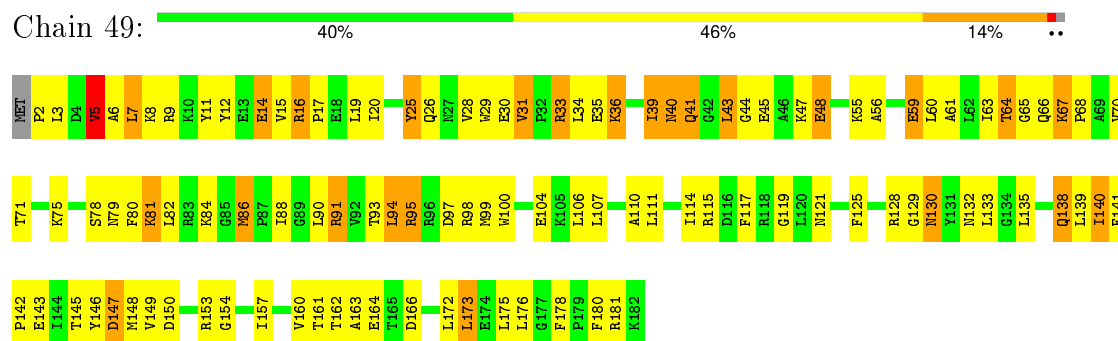
- Molecule 29: 50S ribosomal protein L4



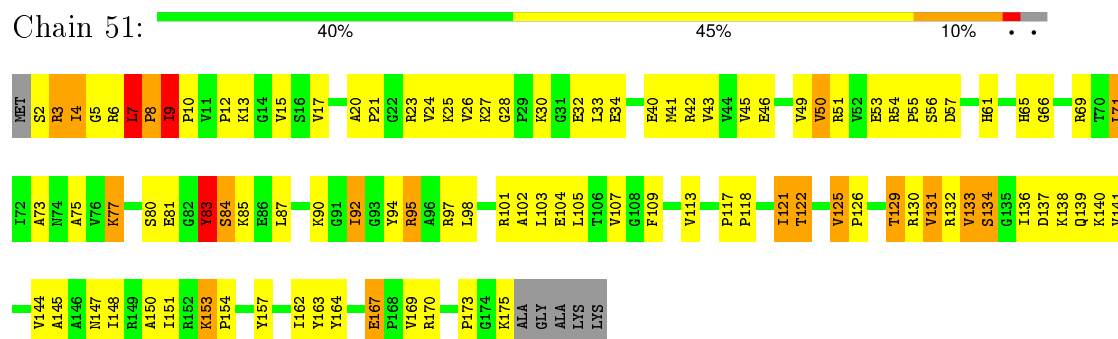
- Molecule 30: 50S ribosomal protein L5



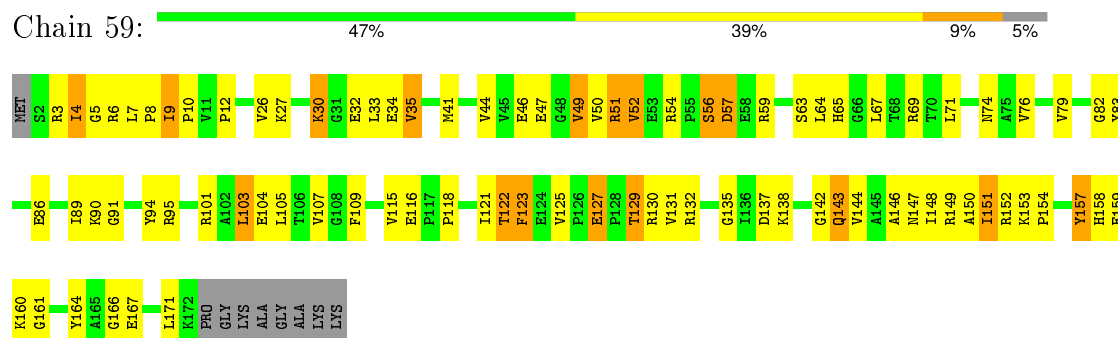
- Molecule 30: 50S ribosomal protein L5



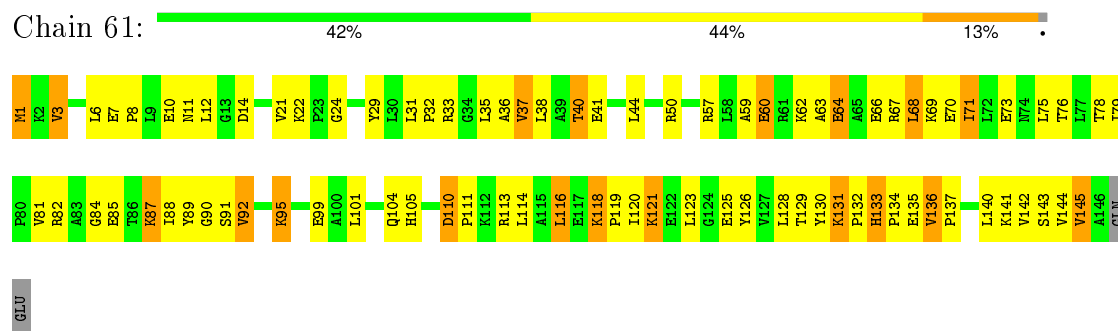
- Molecule 31: 50S ribosomal protein L6



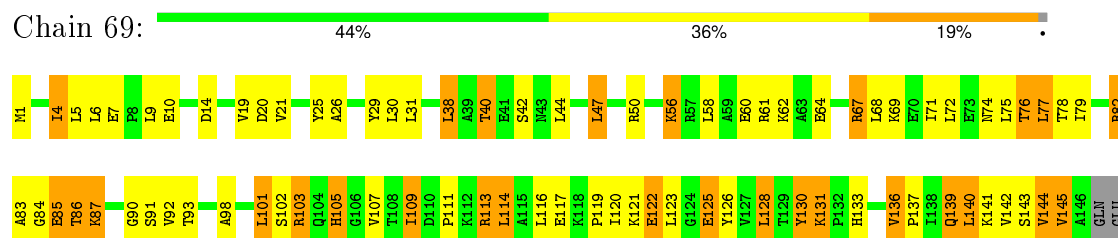
- Molecule 31: 50S ribosomal protein L6



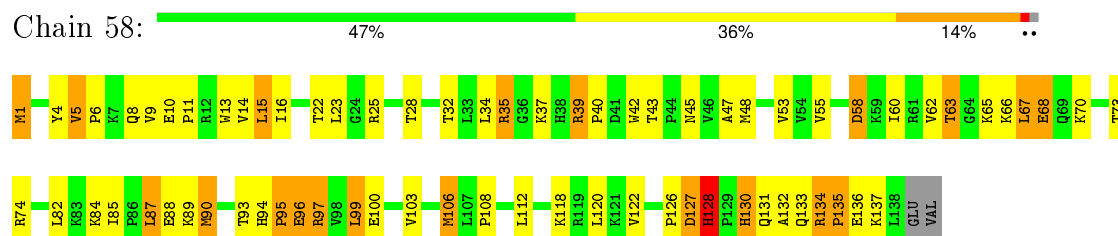
- Molecule 32: 50S ribosomal protein L9



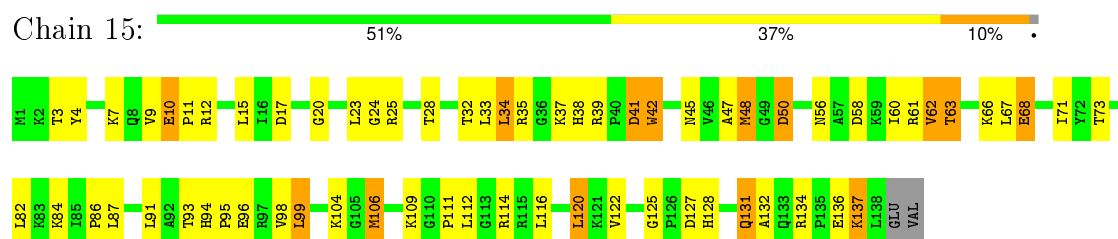
- Molecule 32: 50S ribosomal protein L9



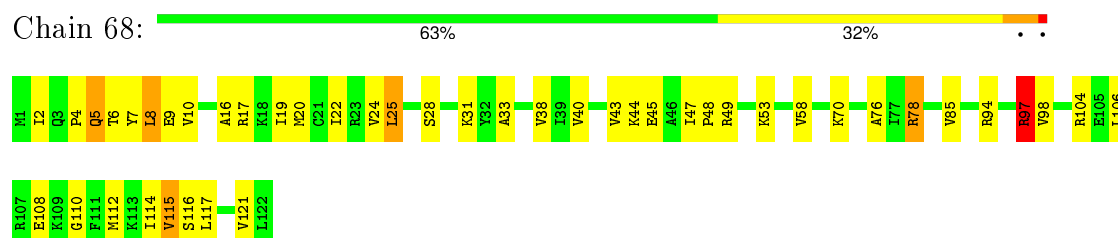
• Molecule 33: 50S ribosomal protein L13



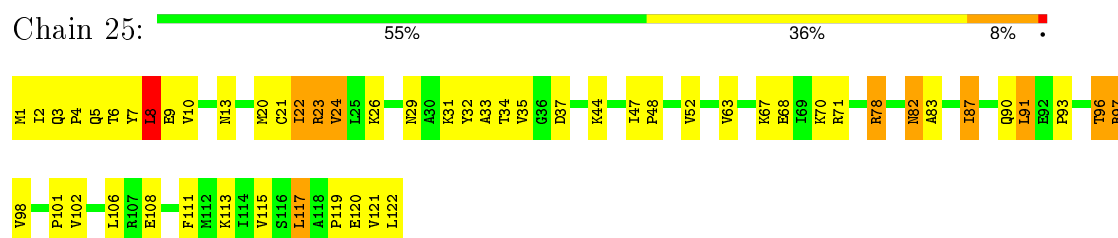
• Molecule 33: 50S ribosomal protein L13



• Molecule 34: 50S ribosomal protein L14

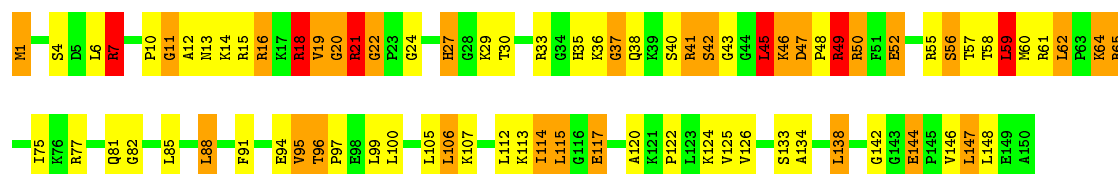


• Molecule 34: 50S ribosomal protein L14

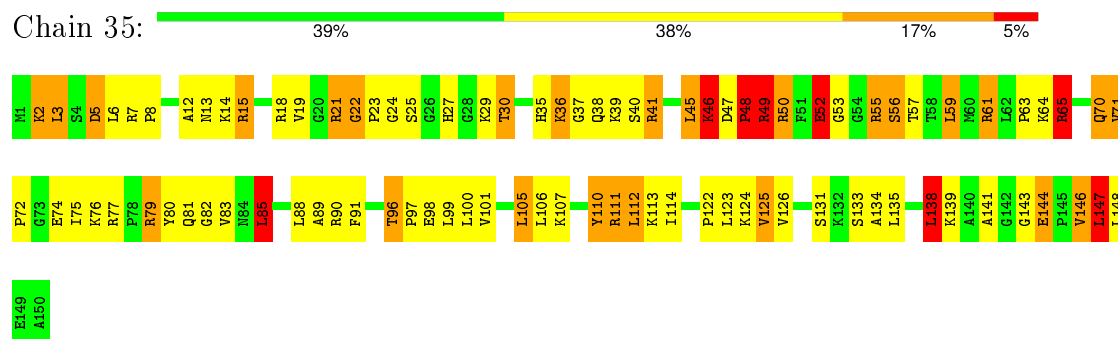


• Molecule 35: 50S ribosomal protein L15

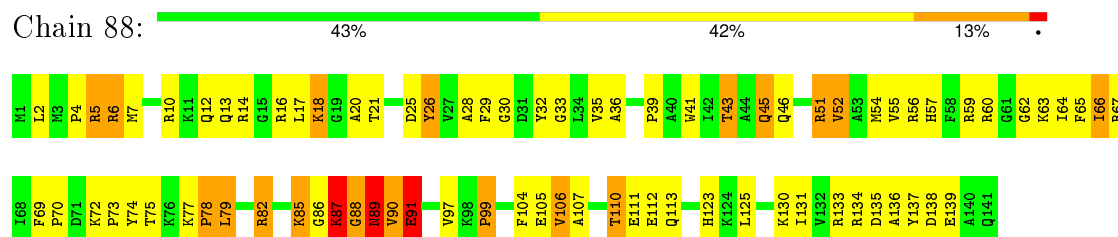




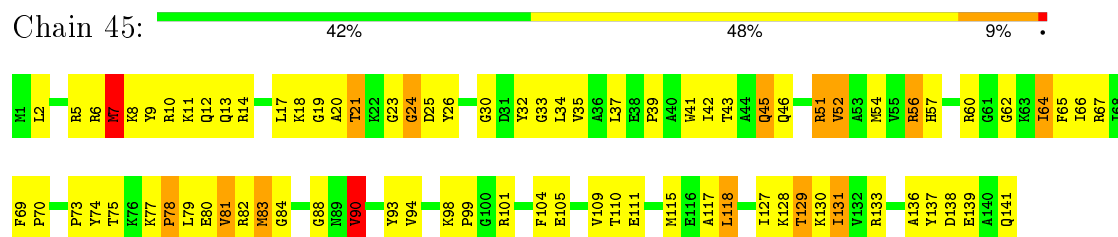
- Molecule 35: 50S ribosomal protein L15



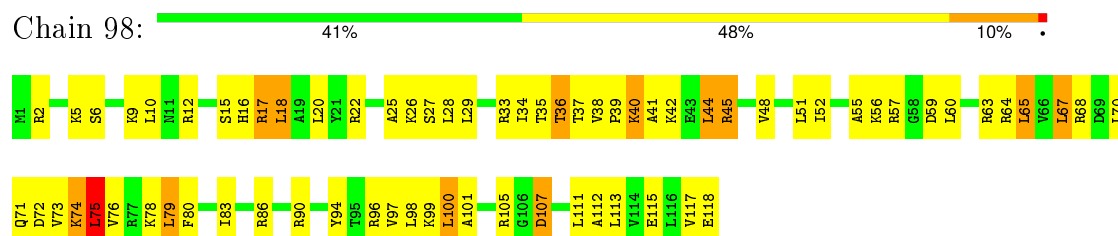
- Molecule 36: 50S ribosomal protein L16



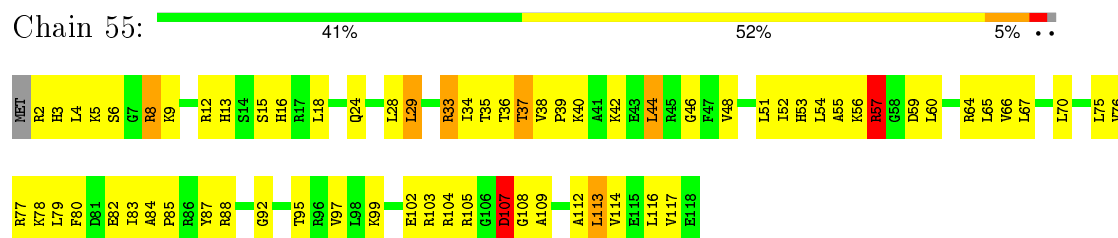
- Molecule 36: 50S ribosomal protein L16



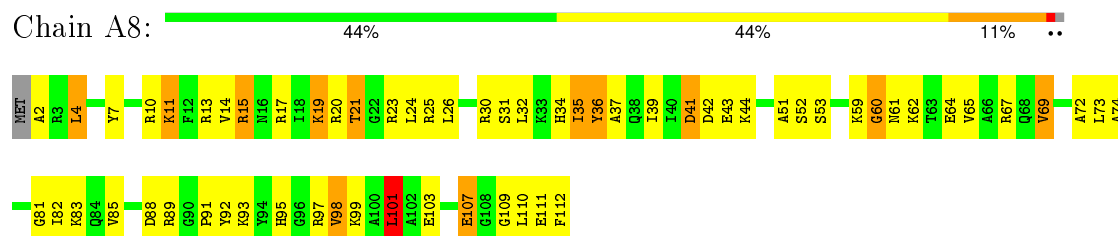
- Molecule 37: 50S ribosomal protein L17



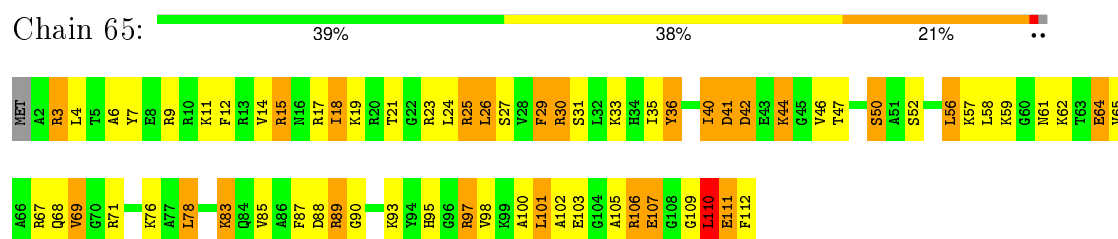
- Molecule 37: 50S ribosomal protein L17



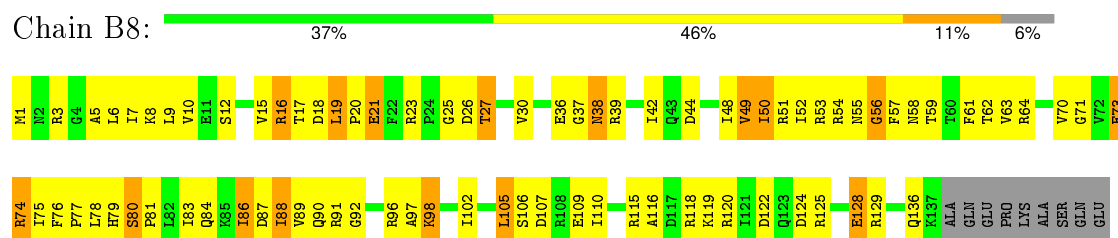
- Molecule 38: 50S ribosomal protein L18



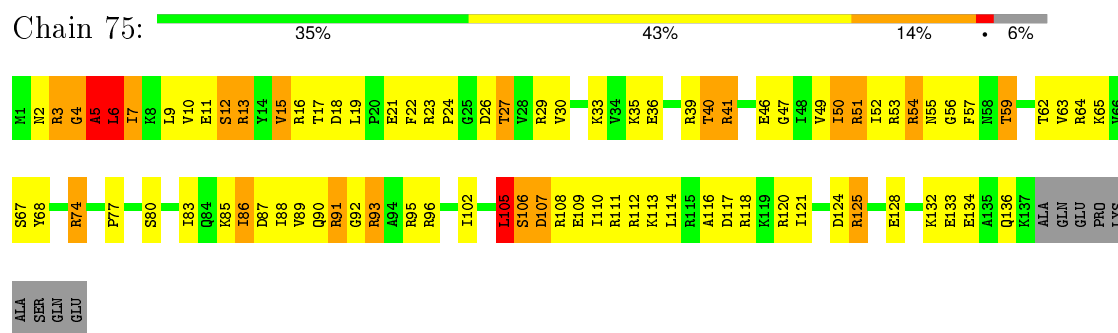
- Molecule 38: 50S ribosomal protein L18



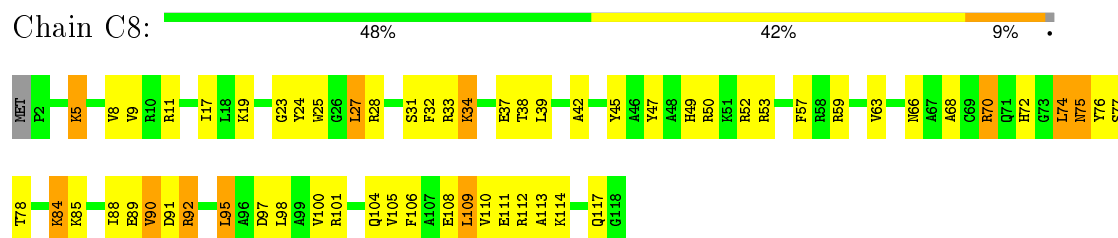
- Molecule 39: 50S ribosomal protein L19



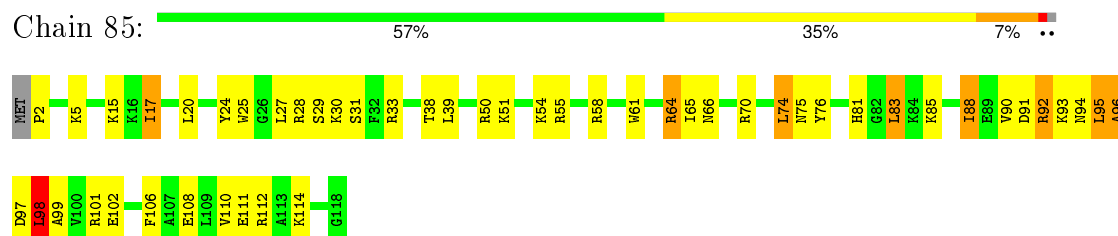
- Molecule 39: 50S ribosomal protein L19



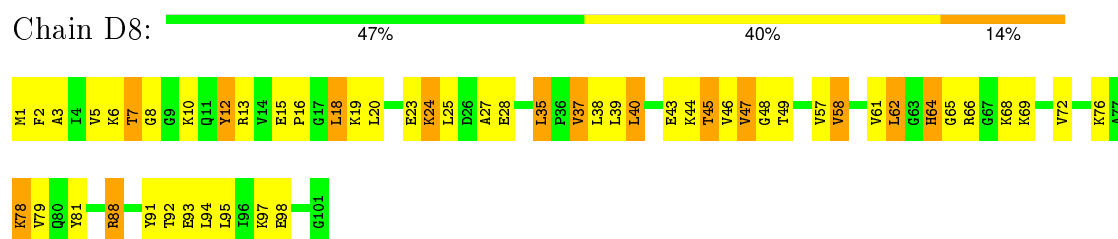
- Molecule 40: 50S ribosomal protein L20



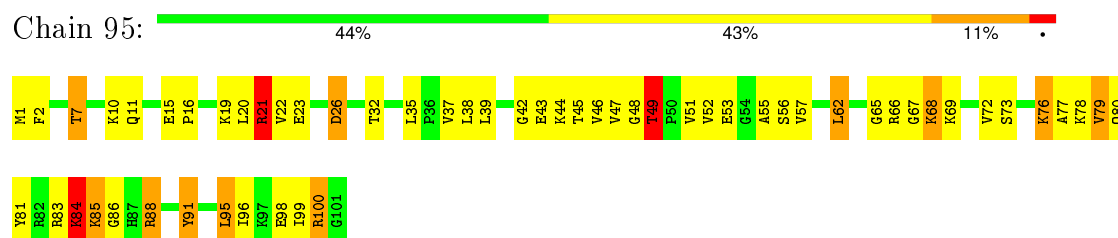
• Molecule 40: 50S ribosomal protein L20



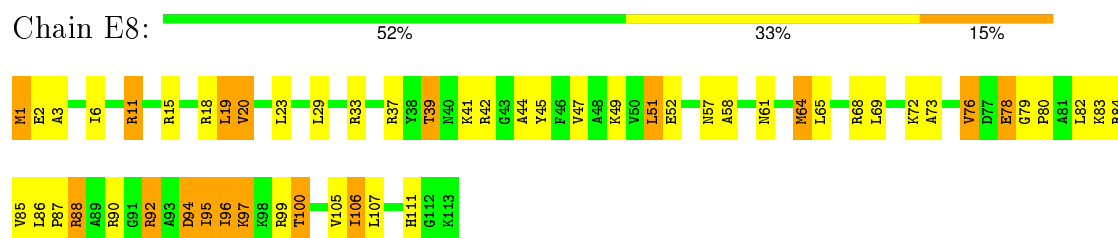
• Molecule 41: 50S ribosomal protein L21



• Molecule 41: 50S ribosomal protein L21

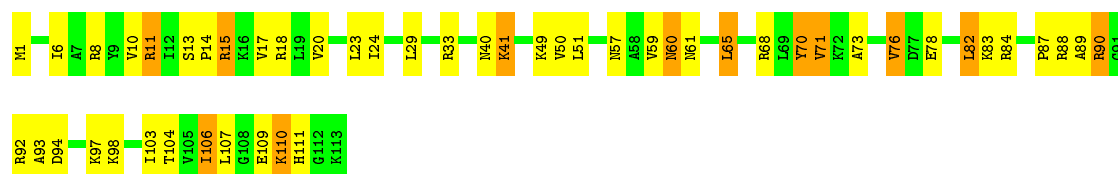


• Molecule 42: 50S ribosomal protein L22

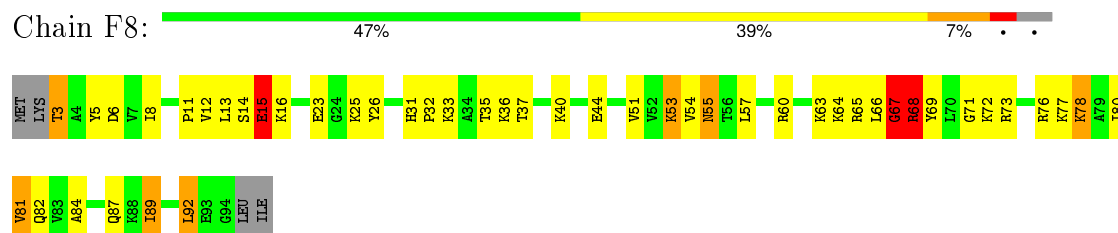


• Molecule 42: 50S ribosomal protein L22

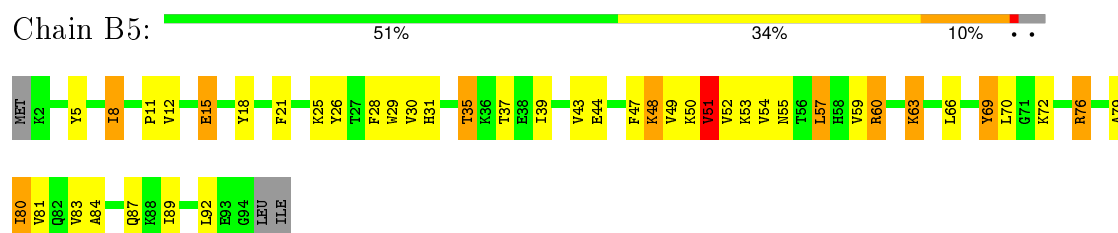




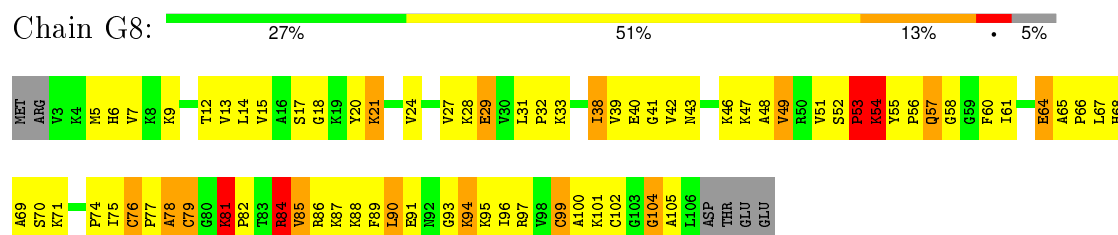
- Molecule 43: 50S ribosomal protein L23



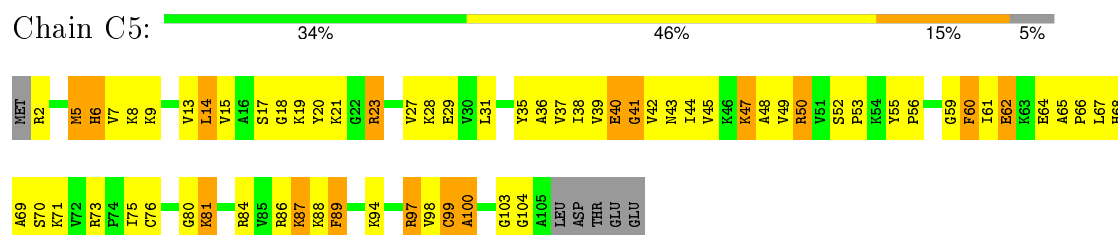
- Molecule 43: 50S ribosomal protein L23



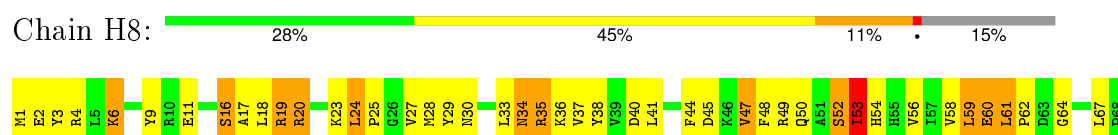
- Molecule 44: 50S ribosomal protein L24



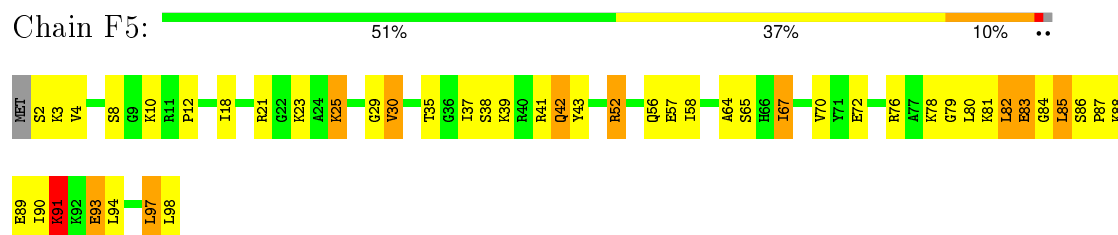
- Molecule 44: 50S ribosomal protein L24



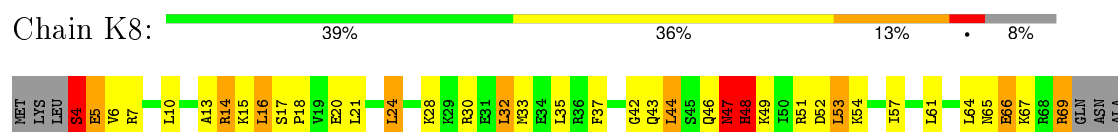
- Molecule 45: 50S ribosomal protein L25



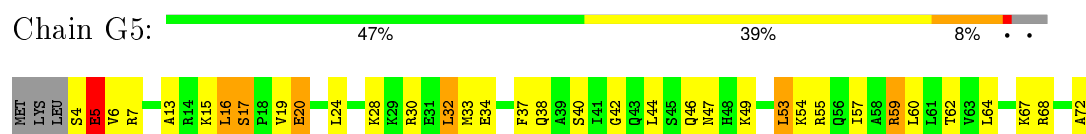
- Molecule 47: 50S ribosomal protein L28



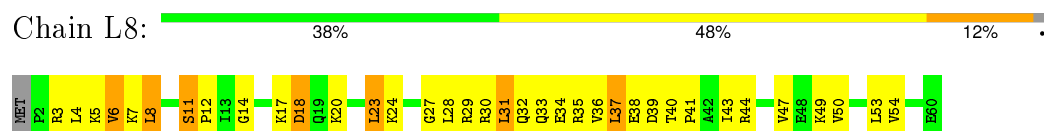
- Molecule 48: 50S ribosomal protein L29



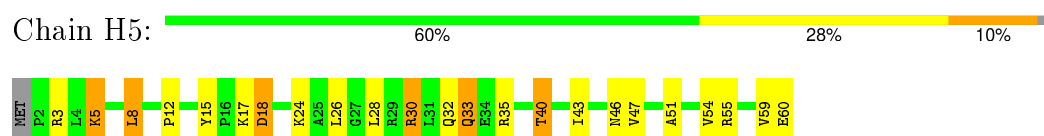
- Molecule 48: 50S ribosomal protein L29



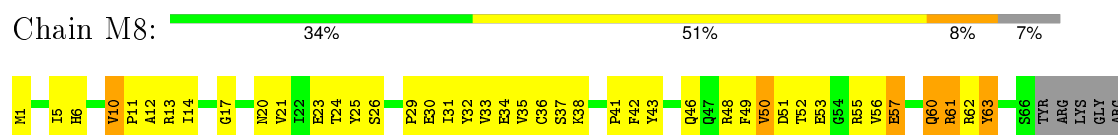
- Molecule 49: 50S ribosomal protein L30



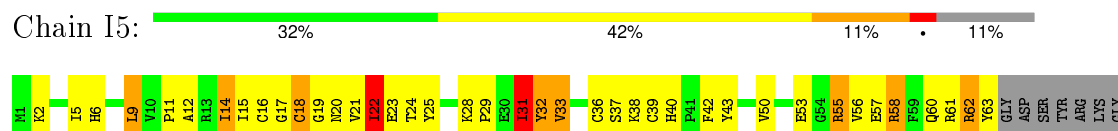
- Molecule 49: 50S ribosomal protein L30



- Molecule 50: 50S ribosomal protein L31



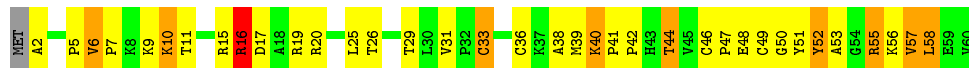
- Molecule 50: 50S ribosomal protein L31



ARG

- Molecule 51: 50S ribosomal protein L32

Chain N8: 



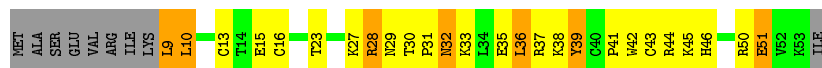
- Molecule 51: 50S ribosomal protein L32

Chain J5: 




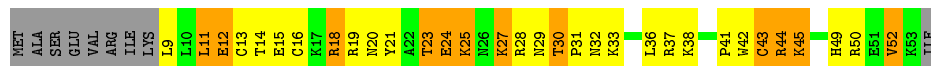
- Molecule 52: 50S ribosomal protein L33

Chain O8: 



- Molecule 52: 50S ribosomal protein L33

Chain K5: 



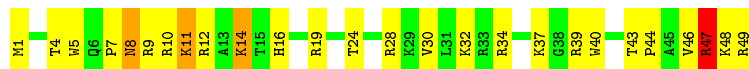
- Molecule 53: 50S ribosomal protein L34

Chain P8: 



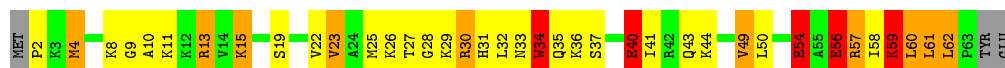
- Molecule 53: 50S ribosomal protein L34

Chain L5: 

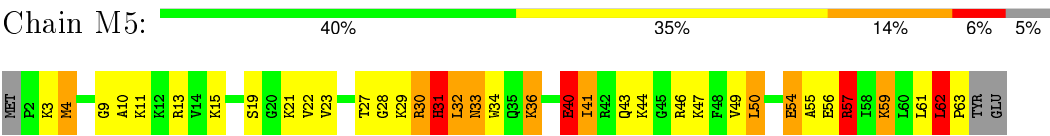


- Molecule 54: 50S ribosomal protein L35

Chain Q8: 



● Molecule 54: 50S ribosomal protein L35



4 Data and refinement statistics

EDS failed to run properly - this section will therefore be incomplete.

Property	Value	Source
Space group	?	Depositor
Cell constants a, b, c, α , β , γ	210.70Å 448.40Å 616.30Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	153.54 – 3.10	Depositor
% Data completeness (in resolution range)	99.8 (153.54-3.10)	Depositor
R_{merge}	0.22	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$	-	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.227 , 0.193	Depositor
Wilson B-factor (Å ²)	(Not available)	Xtriage
Anisotropy	(Not available)	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ¹	$\langle L \rangle =$ (Not available), $\langle L^2 \rangle =$ (Not available)	Xtriage
Outliers	(Not available)	Xtriage
Total number of atoms	299705	wwPDB-VP
Average B, all atoms (Å ²)	114.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *(Not available)*

¹Theoretical 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	0.81	9/36199 (0.0%)	1.50	567/56498 (1.0%)
1	1G	0.81	7/36167 (0.0%)	1.49	517/56448 (0.9%)
2	12	0.39	0/1959	0.65	0/2642
2	1E	0.43	0/1959	0.67	1/2642 (0.0%)
3	22	0.47	0/1636	0.68	0/2205
3	2E	0.47	0/1629	0.63	0/2195
4	32	0.57	0/1732	0.80	1/2318 (0.0%)
4	3E	0.65	2/1732 (0.1%)	0.78	4/2318 (0.2%)
5	42	0.60	0/1171	0.78	0/1576
5	4E	0.59	0/1171	0.77	1/1576 (0.1%)
6	52	0.61	0/855	0.76	2/1154 (0.2%)
6	5E	0.57	0/855	0.72	0/1154
7	62	0.48	0/1275	0.65	0/1709
7	6E	0.47	0/1275	0.62	0/1709
8	72	0.52	0/1135	0.70	0/1527
8	7E	0.52	0/1135	0.78	1/1527 (0.1%)
9	82	0.46	0/1028	0.67	0/1379
9	8E	0.45	0/1028	0.65	1/1379 (0.1%)
10	1A	0.43	0/814	0.66	0/1095
10	1I	0.44	0/814	0.62	0/1095
11	2A	0.57	0/879	0.75	0/1187
11	2I	0.57	0/879	0.74	0/1187
12	3A	0.65	0/991	0.82	0/1327
12	3I	0.68	0/991	0.87	1/1327 (0.1%)
13	4A	0.40	0/943	0.62	0/1265
13	4I	0.40	0/938	0.70	0/1258
14	5A	0.53	0/500	0.74	0/664
14	5I	0.56	0/500	0.77	1/664 (0.2%)
15	6A	0.61	0/744	0.72	0/992
15	6I	0.59	0/744	0.78	0/992
16	7A	0.59	0/721	0.76	0/970
16	7I	0.51	0/721	0.80	1/970 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	8A	0.62	0/847	0.76	0/1131
17	8I	0.55	0/847	0.74	0/1131
18	9A	0.58	0/595	0.79	2/790 (0.3%)
18	9I	0.52	0/595	0.73	1/790 (0.1%)
19	AA	0.43	0/647	0.71	0/871
19	AI	0.41	0/680	0.70	0/915
20	BA	0.57	0/764	0.80	1/1007 (0.1%)
20	BI	0.44	0/764	0.72	0/1007
21	1B	0.44	0/221	0.69	0/288
21	1F	0.43	0/221	0.65	0/288
22	2K	0.82	0/1784	1.60	34/2771 (1.2%)
22	2L	0.83	0/1686	1.53	26/2618 (1.0%)
22	3K	0.45	0/1850	1.08	5/2875 (0.2%)
22	3L	0.50	0/1851	1.15	10/2877 (0.3%)
23	4K	1.22	0/392	1.69	14/609 (2.3%)
23	4L	0.96	0/190	1.70	5/293 (1.7%)
24	14	1.10	158/70167 (0.2%)	1.83	2510/109541 (2.3%)
24	1H	1.18	231/70233 (0.3%)	1.95	3196/109643 (2.9%)
25	16	0.89	0/2928	1.59	63/4568 (1.4%)
25	1J	0.85	0/2928	1.68	64/4568 (1.4%)
26	71	0.29	0/1072	0.51	0/1447
26	79	0.29	0/1072	0.48	0/1447
27	11	0.97	2/2165 (0.1%)	1.12	8/2919 (0.3%)
27	19	0.88	1/2170 (0.0%)	1.05	8/2926 (0.3%)
28	21	0.73	0/1601	0.97	4/2160 (0.2%)
28	29	0.80	0/1601	1.01	5/2160 (0.2%)
29	31	0.86	0/1620	0.99	2/2194 (0.1%)
29	39	0.73	1/1662 (0.1%)	0.94	3/2249 (0.1%)
30	41	0.44	0/1498	0.65	0/2016
30	49	0.45	0/1498	0.67	0/2016
31	51	0.63	0/1362	0.89	1/1841 (0.1%)
31	59	0.37	0/1337	0.69	0/1809
32	61	0.56	0/1151	0.83	3/1558 (0.2%)
32	69	0.54	0/1151	0.76	1/1558 (0.1%)
33	15	0.61	0/1131	0.81	0/1525
33	58	0.67	0/1131	0.83	0/1525
34	25	0.82	0/942	0.89	1/1269 (0.1%)
34	68	0.76	0/942	0.84	0/1269
35	35	0.76	1/1161 (0.1%)	1.10	5/1544 (0.3%)
35	78	0.83	0/1161	1.19	8/1544 (0.5%)
36	45	0.71	0/1142	0.97	3/1527 (0.2%)
36	88	0.82	2/1142 (0.2%)	0.99	3/1527 (0.2%)
37	55	0.77	0/973	1.03	3/1302 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
37	98	0.70	0/981	0.96	1/1312 (0.1%)
38	65	0.61	0/891	0.88	1/1187 (0.1%)
38	A8	0.62	0/891	0.88	2/1187 (0.2%)
39	75	0.76	0/1145	0.95	2/1531 (0.1%)
39	B8	0.71	0/1155	0.88	1/1542 (0.1%)
40	85	0.69	0/981	0.84	2/1306 (0.2%)
40	C8	0.78	0/981	0.84	0/1306
41	95	4.12	8/789 (1.0%)	1.45	6/1057 (0.6%)
41	D8	0.73	0/789	0.89	2/1057 (0.2%)
42	A5	0.75	0/910	0.89	1/1220 (0.1%)
42	E8	0.79	0/910	0.93	3/1220 (0.2%)
43	B5	0.88	1/744 (0.1%)	0.85	0/1000
43	F8	0.95	1/739 (0.1%)	0.89	0/993
44	C5	0.69	0/807	0.93	1/1076 (0.1%)
44	G8	0.90	1/804 (0.1%)	1.06	3/1073 (0.3%)
45	D5	0.47	0/1460	0.71	0/1982
45	H8	0.45	0/1427	0.73	2/1935 (0.1%)
46	E5	0.72	0/620	0.93	0/827
46	I8	0.83	0/665	1.01	3/885 (0.3%)
47	F5	0.74	0/769	0.92	1/1022 (0.1%)
47	J8	0.78	0/769	1.09	6/1022 (0.6%)
48	G5	0.68	2/582 (0.3%)	0.89	1/771 (0.1%)
48	K8	1.01	2/560 (0.4%)	0.97	0/741
49	H5	0.61	0/473	0.81	0/635
49	L8	0.70	0/473	0.91	0/635
50	I5	0.44	0/527	0.68	0/709
50	M8	0.36	0/545	0.59	0/733
51	J5	0.65	0/472	0.84	0/639
51	N8	0.80	0/472	0.98	2/639 (0.3%)
52	K5	0.57	0/396	0.77	0/529
52	O8	0.51	0/396	0.72	0/529
53	L5	0.84	0/437	1.05	3/575 (0.5%)
53	P8	1.01	0/417	1.18	3/550 (0.5%)
54	M5	0.97	1/502 (0.2%)	1.27	5/661 (0.8%)
54	Q8	1.08	1/488 (0.2%)	1.19	2/641 (0.3%)
All	All	0.95	431/321962 (0.1%)	1.56	7140/481589 (1.5%)

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	2
2	1E	0	1
3	22	0	1
4	3E	0	3
9	82	0	2
12	3A	0	4
14	5I	0	1
19	AA	0	1
19	AI	0	3
20	BA	0	2
27	11	0	4
27	19	0	5
28	29	0	7
29	31	0	1
29	39	0	1
30	49	0	1
31	59	0	1
32	61	0	1
33	15	0	1
34	25	0	1
35	35	0	7
35	78	0	7
36	45	0	1
36	88	0	3
38	65	0	1
38	A8	0	2
39	75	0	3
39	B8	0	1
40	85	0	1
41	95	0	2
43	F8	0	1
44	C5	0	3
44	G8	0	5
45	D5	0	3
47	F5	0	2
47	J8	0	2
48	K8	0	2
49	L8	0	1
51	J5	0	1
52	K5	0	1
53	P8	0	2
54	M5	0	2
54	Q8	0	4

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Mol	Chain	#Chirality outliers	#Planarity outliers
All	All	0	100

All (431) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
41	95	91	TYR	CD1-CE1	59.58	2.28	1.39
41	95	91	TYR	CD2-CE2	57.56	2.25	1.39
41	95	91	TYR	CE2-CZ	41.48	1.92	1.38
41	95	91	TYR	CE1-CZ	39.94	1.90	1.38
41	95	91	TYR	CG-CD2	31.31	1.79	1.39
41	95	91	TYR	CG-CD1	31.07	1.79	1.39
41	95	21	ARG	CD-NE	23.38	1.86	1.46
41	95	21	ARG	NE-CZ	15.05	1.52	1.33
24	1H	1614	A	N9-C4	-13.02	1.30	1.37
24	1H	676	A	N9-C4	-12.88	1.30	1.37
24	14	2287	A	N9-C4	-12.84	1.30	1.37
24	14	528	A	N9-C4	-12.69	1.30	1.37
24	14	74	A	N9-C4	-12.38	1.30	1.37
24	1H	783	A	N9-C4	-12.34	1.30	1.37
24	1H	2430	A	N9-C4	-11.86	1.30	1.37
24	1H	1786	A	N9-C4	-11.77	1.30	1.37
24	1H	774	A	N9-C4	-11.65	1.30	1.37
24	14	1786	A	N9-C4	-11.53	1.30	1.37
24	14	676	A	N9-C4	-11.33	1.31	1.37
24	14	1786	A	N3-C4	-11.22	1.28	1.34
24	1H	1332	G	N9-C4	-11.18	1.29	1.38
24	1H	528	A	N9-C4	-11.02	1.31	1.37
24	14	783	A	C5-C6	-10.90	1.31	1.41
24	1H	2518	A	N9-C4	-10.79	1.31	1.37
27	11	30	GLU	CG-CD	10.18	1.67	1.51
24	14	2713	A	N9-C4	-9.87	1.31	1.37
24	14	2518	A	N9-C4	-9.83	1.31	1.37
24	1H	1950	G	N3-C4	-9.70	1.28	1.35
24	1H	783	A	N3-C4	-9.67	1.29	1.34
24	14	1332	G	N9-C4	-9.30	1.30	1.38
24	1H	1616	A	N9-C4	-9.29	1.32	1.37
24	1H	1786	A	N3-C4	-9.26	1.29	1.34
24	14	828	U	N3-C4	-9.12	1.30	1.38
24	14	2346	A	N3-C4	-9.03	1.29	1.34
24	1H	2287	A	N9-C4	-9.02	1.32	1.37
48	K8	5	GLU	CB-CG	8.97	1.69	1.52
24	1H	774	A	C5-C6	-8.87	1.33	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	1H	71	A	N9-C4	-8.85	1.32	1.37
24	1H	1204	A	N9-C4	-8.65	1.32	1.37
24	1H	1950	G	N9-C8	8.63	1.43	1.37
24	1H	74	A	N9-C4	-8.61	1.32	1.37
24	14	1698	A	N9-C4	-8.57	1.32	1.37
24	14	783	A	N9-C4	-8.53	1.32	1.37
24	1H	1614	A	N3-C4	-8.48	1.29	1.34
24	14	2452	C	N1-C6	-8.41	1.32	1.37
24	1H	141	A	N9-C4	-8.38	1.32	1.37
24	14	1950	G	N3-C4	-8.32	1.29	1.35
24	1H	2062	A	N3-C4	8.25	1.39	1.34
24	1H	2346	A	N9-C4	-8.23	1.32	1.37
24	1H	1210	A	N9-C4	-8.22	1.32	1.37
24	14	2430	A	N9-C4	-8.12	1.32	1.37
24	14	71	A	N9-C4	-8.10	1.32	1.37
48	K8	5	GLU	CG-CD	8.08	1.64	1.51
24	14	1332	G	N9-C8	8.08	1.43	1.37
24	1H	71	A	C5-C6	-8.00	1.33	1.41
24	1H	1899	G	N9-C4	-7.99	1.31	1.38
24	1H	1142(A)	A	N9-C4	-7.97	1.33	1.37
24	14	746	A	N3-C4	-7.96	1.30	1.34
24	1H	1332	G	N9-C8	7.94	1.43	1.37
24	14	1678	G	N9-C4	-7.92	1.31	1.38
24	1H	138	G	N9-C8	7.92	1.43	1.37
24	14	676	A	N9-C8	7.88	1.44	1.37
24	14	1950	G	N9-C8	7.78	1.43	1.37
24	1H	1899	G	C2-N3	-7.66	1.26	1.32
24	1H	676	A	N9-C8	7.66	1.43	1.37
24	1H	621	A	N7-C5	-7.63	1.34	1.39
24	1H	140	A	C5-C6	-7.63	1.34	1.41
24	1H	1241	A	N9-C4	-7.63	1.33	1.37
43	B5	15	GLU	CG-CD	7.57	1.63	1.51
44	G8	102	CYS	CB-SG	7.51	1.95	1.82
24	1H	140	A	N9-C4	-7.49	1.33	1.37
24	1H	1021	A	N9-C4	-7.48	1.33	1.37
24	14	781	A	C6-N1	-7.41	1.30	1.35
24	1H	772	C	N1-C6	-7.41	1.32	1.37
24	14	1353	A	N3-C4	-7.41	1.30	1.34
24	1H	793	A	C5-C6	-7.39	1.34	1.41
24	1H	1786	A	C5-C6	-7.37	1.34	1.41
24	1H	2713	A	N9-C4	-7.36	1.33	1.37
24	14	735	A	N9-C4	-7.34	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	14	676	A	C5-C6	-7.33	1.34	1.41
24	1H	1899	G	N9-C8	7.33	1.43	1.37
24	14	774	A	C5-C6	-7.27	1.34	1.41
24	1H	788	A	N7-C5	-7.26	1.34	1.39
24	14	783	A	N7-C5	-7.16	1.34	1.39
24	14	1616	A	N9-C4	-7.13	1.33	1.37
24	14	774	A	N1-C2	7.12	1.40	1.34
24	1H	783	A	N7-C5	-7.08	1.35	1.39
36	88	91	GLU	CG-CD	7.06	1.62	1.51
24	1H	197	A	N3-C4	-7.03	1.30	1.34
24	14	528	A	N3-C4	-7.03	1.30	1.34
24	1H	330	A	N9-C4	-7.00	1.33	1.37
24	14	752	A	N9-C4	-7.00	1.33	1.37
24	14	781	A	C6-N6	-6.99	1.28	1.33
24	14	774	A	N9-C4	-6.97	1.33	1.37
24	1H	2688	U	N3-C4	-6.96	1.32	1.38
24	1H	74	A	N3-C4	-6.95	1.30	1.34
24	1H	1251	C	N1-C6	-6.89	1.33	1.37
24	1H	1899	G	N3-C4	-6.85	1.30	1.35
24	1H	2392	A	N9-C4	-6.84	1.33	1.37
24	1H	1678	G	N9-C8	6.82	1.42	1.37
43	F8	15	GLU	CG-CD	6.81	1.62	1.51
1	1G	1507	A	N9-C4	-6.80	1.33	1.37
1	13	768	A	N3-C4	-6.79	1.30	1.34
24	1H	2451	A	C6-N1	-6.78	1.30	1.35
24	14	74	A	N3-C4	-6.78	1.30	1.34
24	14	1899	G	C5-C4	6.76	1.43	1.38
4	3E	12	CYS	CB-SG	6.76	1.93	1.82
24	1H	1254	A	N3-C4	-6.75	1.30	1.34
24	14	2560	C	N1-C6	-6.75	1.33	1.37
35	35	52	GLU	CG-CD	6.75	1.62	1.51
24	14	2490	G	N9-C8	6.73	1.42	1.37
27	11	122	ASP	CB-CG	6.70	1.65	1.51
24	1H	784	A	N3-C4	-6.70	1.30	1.34
24	1H	1564	C	N3-C4	-6.70	1.29	1.33
24	1H	676	A	N3-C4	-6.70	1.30	1.34
24	1H	746	A	N3-C4	-6.67	1.30	1.34
24	1H	1616	A	C5-C6	-6.67	1.35	1.41
24	1H	1332	G	C2-N3	-6.66	1.27	1.32
24	1H	1969	A	N7-C5	-6.65	1.35	1.39
24	14	204	A	N3-C4	-6.65	1.30	1.34
24	1H	2082	A	N9-C4	-6.64	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	14	2688	U	N3-C4	-6.63	1.32	1.38
24	1H	2490	G	N9-C4	-6.63	1.32	1.38
24	1H	2448	A	C5-C4	-6.62	1.34	1.38
24	1H	453	C	N1-C6	-6.62	1.33	1.37
24	14	1353	A	N9-C4	-6.61	1.33	1.37
24	1H	1899	G	C8-N7	6.60	1.34	1.30
24	1H	2452	C	N1-C6	-6.60	1.33	1.37
24	14	1785	A	N7-C5	-6.59	1.35	1.39
24	1H	2590	A	C6-N1	-6.58	1.30	1.35
24	1H	1950	G	N9-C4	-6.56	1.32	1.38
24	14	1784	A	N3-C4	-6.56	1.30	1.34
24	1H	2067	G	N3-C4	-6.55	1.30	1.35
24	1H	667	U	C2-N3	6.54	1.42	1.37
24	14	735	A	N3-C4	-6.54	1.30	1.34
1	13	690	G	C8-N7	6.51	1.34	1.30
24	1H	2227	A	N3-C4	-6.47	1.30	1.34
24	1H	2062	A	N7-C5	6.46	1.43	1.39
24	1H	739	G	C5-C4	-6.45	1.33	1.38
24	14	1021	A	N9-C4	-6.43	1.33	1.37
24	1H	783	A	C5-C6	-6.42	1.35	1.41
24	14	1308	A	N3-C4	-6.42	1.30	1.34
24	1H	2490	G	N9-C8	6.39	1.42	1.37
24	14	774	A	C5-C4	6.39	1.43	1.38
24	14	330	A	N9-C4	-6.39	1.34	1.37
1	13	1523	G	N3-C4	-6.37	1.30	1.35
24	1H	1646	C	N1-C6	-6.36	1.33	1.37
1	1G	1492	A	N9-C4	6.35	1.41	1.37
24	1H	472	A	N3-C4	-6.34	1.31	1.34
24	1H	1616	A	N7-C5	-6.34	1.35	1.39
24	1H	621	A	N9-C4	-6.32	1.34	1.37
24	1H	330	A	C5-C6	-6.32	1.35	1.41
24	14	774	A	N9-C8	6.31	1.42	1.37
24	14	1902	C	C4-N4	-6.30	1.28	1.33
24	14	1241	A	N9-C4	-6.29	1.34	1.37
24	1H	216	A	N9-C4	-6.29	1.34	1.37
24	1H	1984	G	C6-N1	-6.28	1.35	1.39
24	14	1681	G	N9-C4	-6.27	1.32	1.38
24	14	1988	C	N1-C6	-6.25	1.33	1.37
24	14	1364	G	C5-C4	-6.23	1.33	1.38
24	14	778	G	N3-C4	-6.22	1.31	1.35
24	1H	124	G	N9-C4	-6.20	1.32	1.38
24	1H	2064	C	N1-C6	-6.20	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	1H	663	G	N3-C4	-6.19	1.31	1.35
24	1H	1960	A	N7-C5	-6.18	1.35	1.39
24	1H	774	A	N7-C5	-6.16	1.35	1.39
24	1H	676	A	C5-C4	6.15	1.43	1.38
24	14	197	A	N9-C4	-6.14	1.34	1.37
24	1H	828	U	N3-C4	-6.14	1.32	1.38
24	14	1368	G	N9-C8	-6.12	1.33	1.37
24	14	1786	A	C5-C4	6.12	1.43	1.38
24	1H	1332	G	N3-C4	-6.11	1.31	1.35
24	1H	190	A	N3-C4	6.09	1.38	1.34
24	1H	1308	A	N3-C4	-6.06	1.31	1.34
24	14	621	A	N9-C4	-6.05	1.34	1.37
24	14	805	G	N7-C5	-6.03	1.35	1.39
24	14	676	A	N3-C4	-6.03	1.31	1.34
24	1H	1616	A	N3-C4	-6.01	1.31	1.34
24	1H	2601	C	C4-N4	-6.01	1.28	1.33
24	1H	946	G	N9-C4	-6.01	1.33	1.38
24	1H	593	G	N7-C5	-6.01	1.35	1.39
24	1H	124	G	N3-C4	-6.00	1.31	1.35
24	14	74	A	C5-C6	-6.00	1.35	1.41
24	1H	1828	G	N7-C5	6.00	1.42	1.39
24	1H	2062	A	N9-C4	5.98	1.41	1.37
24	1H	1241	A	N3-C4	-5.98	1.31	1.34
24	1H	1379	A	N7-C5	-5.96	1.35	1.39
24	1H	2430	A	N3-C4	-5.96	1.31	1.34
24	14	2440	C	N1-C6	-5.96	1.33	1.37
24	14	1616	A	C5-C6	-5.95	1.35	1.41
24	1H	1771	C	N3-C4	-5.95	1.29	1.33
24	14	621	A	C5-C6	-5.94	1.35	1.41
24	1H	783	A	N1-C2	5.93	1.39	1.34
24	1H	1670	C	N1-C6	-5.93	1.33	1.37
24	14	677	A	N9-C4	-5.93	1.34	1.37
24	1H	821	A	N3-C4	-5.92	1.31	1.34
24	1H	2430	A	C5-C6	-5.91	1.35	1.41
1	13	808	C	N1-C6	-5.91	1.33	1.37
24	1H	1204	A	N3-C4	-5.90	1.31	1.34
24	1H	2611	U	N3-C4	-5.90	1.33	1.38
24	1H	1332	G	C8-N7	5.88	1.34	1.30
1	13	690	G	N3-C4	-5.86	1.31	1.35
24	1H	2490	G	C5-C6	-5.84	1.36	1.42
27	19	255	LYS	CD-CE	5.84	1.65	1.51
24	1H	805	G	N7-C5	-5.83	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	88	91	GLU	CB-CG	5.83	1.63	1.52
24	14	1966	A	N9-C4	-5.83	1.34	1.37
24	1H	2590	A	C5-C6	-5.83	1.35	1.41
24	1H	749	C	N1-C6	-5.82	1.33	1.37
24	14	1786	A	C5-C6	-5.82	1.35	1.41
24	1H	2713	A	N7-C5	-5.81	1.35	1.39
24	14	2681	C	N3-C4	-5.81	1.29	1.33
24	14	1616	A	N9-C8	5.80	1.42	1.37
24	1H	1783	A	N9-C8	-5.80	1.33	1.37
24	1H	2051	A	N7-C5	-5.80	1.35	1.39
24	14	1257	C	N1-C6	-5.80	1.33	1.37
24	14	1177	A	N9-C4	5.79	1.41	1.37
24	1H	1971	A	C5-C4	-5.78	1.34	1.38
24	1H	2713	A	C5-C6	-5.78	1.35	1.41
24	1H	310	A	C5-C4	-5.77	1.34	1.38
24	1H	946	G	C5-C4	-5.77	1.34	1.38
24	1H	1612	C	N1-C6	-5.76	1.33	1.37
24	1H	783	A	N9-C8	5.76	1.42	1.37
24	1H	1889	A	N9-C4	-5.76	1.34	1.37
1	1G	690	G	N9-C8	5.75	1.41	1.37
24	14	1950	G	N9-C4	-5.74	1.33	1.38
54	M5	56	GLU	CG-CD	5.74	1.60	1.51
24	1H	1971	A	C6-N1	-5.72	1.31	1.35
24	14	1772	G	N9-C8	-5.71	1.33	1.37
24	14	1678	G	N9-C8	5.71	1.41	1.37
24	1H	71	A	N9-C8	5.71	1.42	1.37
1	1G	1414	U	C4-O4	5.71	1.28	1.23
24	14	1614	A	N7-C5	-5.71	1.35	1.39
24	14	257	A	N3-C4	-5.70	1.31	1.34
24	1H	1263	U	C4-O4	-5.69	1.19	1.23
24	14	1788	C	C4-N4	-5.69	1.28	1.33
24	1H	2507	C	N3-C4	-5.68	1.29	1.33
24	14	1616	A	C6-N1	5.68	1.39	1.35
24	1H	1355	G	C6-N1	-5.68	1.35	1.39
24	14	2441	C	N3-C4	-5.68	1.29	1.33
24	1H	774	A	N1-C2	5.67	1.39	1.34
24	1H	1810	A	C5-C4	-5.67	1.34	1.38
24	1H	621	A	C5-C6	-5.66	1.35	1.41
24	14	2430	A	N7-C5	-5.66	1.35	1.39
24	1H	862	G	C6-N1	-5.66	1.35	1.39
24	1H	1210	A	C5-C6	-5.65	1.35	1.41
24	14	1314	C	C4-C5	-5.64	1.38	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	14	2346	A	N9-C4	-5.64	1.34	1.37
24	14	469	G	N9-C8	-5.63	1.33	1.37
24	1H	829	A	N9-C4	-5.62	1.34	1.37
24	1H	1678	G	N3-C4	-5.61	1.31	1.35
24	14	1332	G	C5-C4	5.61	1.42	1.38
24	14	1142(A)	A	N3-C4	-5.59	1.31	1.34
24	1H	1698	A	N9-C4	-5.59	1.34	1.37
24	1H	1783	A	N7-C5	-5.59	1.35	1.39
24	1H	1676	A	N3-C4	-5.58	1.31	1.34
24	1H	202	U	C5-C6	-5.57	1.29	1.34
24	14	835	A	N3-C4	-5.57	1.31	1.34
24	14	1783	A	C5-C6	-5.56	1.36	1.41
24	1H	1786	A	N9-C8	5.56	1.42	1.37
24	1H	1392	A	N9-C4	5.56	1.41	1.37
24	14	2873	A	C5-C4	5.56	1.42	1.38
24	1H	509	C	N1-C6	-5.55	1.33	1.37
24	1H	2059	A	C5-C6	-5.55	1.36	1.41
24	1H	915	C	N1-C2	5.54	1.45	1.40
24	14	1821	A	C5-C4	-5.54	1.34	1.38
1	1G	690	G	N9-C4	-5.54	1.33	1.38
24	1H	120	U	N3-C4	-5.54	1.33	1.38
24	1H	49	A	C5-C6	-5.53	1.36	1.41
24	1H	1950	G	C8-N7	5.53	1.34	1.30
24	1H	1836	C	N3-C4	-5.53	1.30	1.33
24	14	772	C	N1-C6	-5.52	1.33	1.37
24	14	472	A	N3-C4	-5.51	1.31	1.34
24	1H	2392	A	N7-C5	-5.51	1.35	1.39
24	1H	2772	C	N1-C6	-5.50	1.33	1.37
24	14	2713	A	C5-C6	-5.50	1.36	1.41
24	1H	795	C	N1-C6	-5.49	1.33	1.37
24	14	1899	G	C2-N3	5.48	1.37	1.32
24	1H	449	A	N9-C4	-5.47	1.34	1.37
24	14	1698	A	N9-C8	5.47	1.42	1.37
24	14	57	C	N1-C6	-5.47	1.33	1.37
24	14	1307	A	N7-C5	-5.47	1.35	1.39
24	14	2713	A	N9-C8	5.47	1.42	1.37
24	1H	2589	A	C5-C4	-5.46	1.34	1.38
24	14	2064	C	N1-C6	-5.46	1.33	1.37
24	14	2502	G	N3-C4	5.46	1.39	1.35
24	1H	752	A	C6-N1	-5.45	1.31	1.35
24	1H	70	G	C6-N1	-5.45	1.35	1.39
24	1H	218	A	N9-C4	-5.45	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	14	1932	A	N9-C4	-5.45	1.34	1.37
24	14	140	A	N9-C4	-5.45	1.34	1.37
24	14	1612	C	N1-C6	-5.44	1.33	1.37
24	1H	138	G	N7-C5	5.44	1.42	1.39
1	1G	559	A	N9-C4	-5.44	1.34	1.37
24	14	1332	G	C8-N7	5.44	1.34	1.30
24	1H	678	C	N1-C6	-5.43	1.33	1.37
24	14	1379	A	N9-C4	-5.43	1.34	1.37
24	1H	1678	G	N9-C4	-5.43	1.33	1.38
24	1H	2063	C	N1-C6	-5.42	1.33	1.37
24	14	828	U	C2-N3	-5.42	1.33	1.37
24	1H	2346	A	N3-C4	-5.42	1.31	1.34
24	14	1353	A	C6-N1	-5.42	1.31	1.35
24	14	2392	A	C5-C4	5.41	1.42	1.38
24	14	2346	A	C6-N1	-5.41	1.31	1.35
24	1H	1379	A	N9-C4	-5.40	1.34	1.37
24	14	2644	G	N9-C4	-5.40	1.33	1.38
24	14	74	A	N7-C5	-5.40	1.36	1.39
24	14	827	U	N1-C2	-5.39	1.33	1.38
24	14	1599	C	N3-C4	-5.39	1.30	1.33
24	1H	1204	A	C5-C6	-5.39	1.36	1.41
24	1H	574	C	N1-C6	-5.39	1.33	1.37
24	1H	2033	A	C6-N6	-5.39	1.29	1.33
24	14	509	C	N1-C6	-5.39	1.33	1.37
24	1H	858	U	N1-C2	5.38	1.43	1.38
48	G5	5	GLU	CB-CG	5.38	1.62	1.52
24	14	71	A	N9-C8	5.38	1.42	1.37
24	1H	138	G	C5-C4	5.38	1.42	1.38
24	1H	667	U	C4-O4	5.37	1.27	1.23
24	14	2379	G	C2-N3	5.36	1.37	1.32
24	1H	71	A	C5-C4	5.36	1.42	1.38
24	14	805	G	N9-C8	-5.36	1.34	1.37
24	1H	1231	G	C6-N1	5.36	1.43	1.39
24	14	1802	A	N3-C4	-5.36	1.31	1.34
24	14	1613	G	N1-C2	-5.35	1.33	1.37
24	1H	676	A	C5-C6	-5.34	1.36	1.41
24	1H	787	U	C2-O2	-5.33	1.17	1.22
24	1H	1802	A	N9-C4	-5.32	1.34	1.37
24	1H	732	C	N1-C6	-5.31	1.33	1.37
24	1H	2772	C	N3-C4	-5.31	1.30	1.33
24	14	2430	A	C6-N6	5.31	1.38	1.33
24	1H	2503	A	C5-C6	-5.29	1.36	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	1H	946	G	N3-C4	-5.29	1.31	1.35
24	1H	1971	A	N3-C4	-5.29	1.31	1.34
24	1H	2490	G	C6-O6	-5.28	1.19	1.24
24	1H	2227	A	N9-C4	-5.28	1.34	1.37
24	14	444	C	N3-C4	-5.28	1.30	1.33
24	14	203	C	N1-C2	-5.27	1.34	1.40
24	1H	787	U	C2-N3	-5.27	1.34	1.37
24	1H	621	A	N3-C4	-5.27	1.31	1.34
24	1H	805	G	N9-C8	-5.27	1.34	1.37
24	14	1460	A	N9-C4	5.26	1.41	1.37
24	14	2006	C	C4-N4	-5.26	1.29	1.33
24	1H	446	G	N9-C8	-5.26	1.34	1.37
24	14	2623	G	N3-C4	-5.26	1.31	1.35
24	1H	1838	C	N1-C6	-5.26	1.33	1.37
24	1H	140	A	N7-C5	-5.25	1.36	1.39
24	1H	1827	C	N3-C4	-5.25	1.30	1.33
24	14	1332	G	N3-C4	-5.25	1.31	1.35
54	Q8	56	GLU	CG-CD	5.25	1.59	1.51
24	1H	1614	A	N7-C5	-5.24	1.36	1.39
24	1H	2509	G	C5-C4	-5.24	1.34	1.38
24	14	1460	A	N3-C4	5.24	1.38	1.34
24	14	1322	A	N3-C4	-5.23	1.31	1.34
24	14	1689	A	N9-C4	-5.23	1.34	1.37
24	1H	1780	A	N3-C4	-5.22	1.31	1.34
24	1H	607	U	C2-N3	-5.22	1.34	1.37
24	1H	746	A	N9-C4	-5.22	1.34	1.37
24	1H	1381	G	N3-C4	-5.21	1.31	1.35
24	1H	2688	U	C2-N3	-5.21	1.34	1.37
24	14	1600	C	N3-C4	-5.21	1.30	1.33
24	1H	57	C	N1-C6	-5.21	1.34	1.37
24	1H	866	A	N3-C4	5.20	1.38	1.34
24	1H	1346	G	N1-C2	-5.20	1.33	1.37
24	14	1558	A	C5-C6	-5.20	1.36	1.41
24	14	1332	G	N1-C2	5.19	1.42	1.37
24	14	1970	A	C5-C6	-5.18	1.36	1.41
24	1H	1600	C	N3-C4	-5.18	1.30	1.33
1	13	768	A	N9-C4	-5.18	1.34	1.37
24	1H	2453	A	C6-N6	-5.17	1.29	1.33
24	1H	1347	G	C5-C4	-5.17	1.34	1.38
24	14	2544	G	C6-N1	5.17	1.43	1.39
24	1H	727	A	N3-C4	-5.16	1.31	1.34
24	1H	945	A	N3-C4	-5.16	1.31	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	1H	1972	A	N9-C4	-5.16	1.34	1.37
24	1H	1349	A	N9-C8	5.15	1.41	1.37
24	1H	74	A	C5-C6	-5.15	1.36	1.41
24	1H	1698	A	C5-C6	-5.15	1.36	1.41
24	1H	1660	C	N3-C4	-5.15	1.30	1.33
24	14	2437	U	N1-C2	-5.14	1.33	1.38
1	13	690	G	C2-N3	-5.14	1.28	1.32
24	1H	1336	A	C6-N1	-5.14	1.31	1.35
24	1H	2253	G	N9-C4	-5.14	1.33	1.38
29	39	65	TRP	CB-CG	-5.13	1.41	1.50
1	13	576	G	C6-O6	5.13	1.28	1.24
24	1H	1945	G	N1-C2	-5.13	1.33	1.37
24	1H	1497	U	N1-C2	5.12	1.43	1.38
24	14	2060	A	C6-N1	-5.12	1.31	1.35
24	1H	784	A	C6-N1	-5.12	1.31	1.35
24	14	1143	A	N9-C4	-5.12	1.34	1.37
24	1H	1937	A	N9-C8	-5.12	1.33	1.37
24	1H	210	C	C4-N4	-5.12	1.29	1.33
24	1H	1278	A	N9-C4	-5.12	1.34	1.37
24	14	374	A	N9-C4	-5.11	1.34	1.37
24	14	1649	G	C6-N1	-5.11	1.35	1.39
24	1H	1270	C	N1-C6	-5.10	1.34	1.37
24	14	2393	A	N7-C5	-5.10	1.36	1.39
24	1H	821	A	N9-C4	-5.10	1.34	1.37
24	14	71	A	N3-C4	-5.09	1.31	1.34
24	14	469	G	C5-C4	-5.09	1.34	1.38
24	1H	1324	G	N1-C2	-5.09	1.33	1.37
24	14	186	G	N7-C5	5.08	1.42	1.39
24	1H	1210	A	N9-C8	5.08	1.41	1.37
24	1H	1945	G	C6-N1	-5.07	1.36	1.39
24	14	2070	G	C6-O6	-5.07	1.19	1.24
24	14	1789	A	C5-C4	-5.07	1.35	1.38
24	14	1966	A	C5-C4	-5.06	1.35	1.38
24	1H	759	G	C5-C4	-5.06	1.34	1.38
24	1H	981	A	C6-N1	-5.06	1.32	1.35
24	14	1368	G	C5-C4	-5.05	1.34	1.38
24	14	1698	A	N3-C4	-5.05	1.31	1.34
24	1H	123	G	C5-C4	-5.05	1.34	1.38
24	14	587	C	N1-C6	-5.05	1.34	1.37
48	G5	5	GLU	CG-CD	5.05	1.59	1.51
24	14	2773	C	N1-C6	-5.04	1.34	1.37
24	1H	2506	U	C2-N3	5.04	1.41	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	1G	1507	A	N3-C4	-5.03	1.31	1.34
24	14	933	A	N9-C4	-5.03	1.34	1.37
1	13	1512	U	C2-N3	-5.03	1.34	1.37
24	1H	2597	G	C5-C6	-5.03	1.37	1.42
24	14	1760	A	N3-C4	-5.03	1.31	1.34
24	14	2332	U	N1-C2	5.03	1.43	1.38
24	1H	330	A	N3-C4	-5.02	1.31	1.34
24	1H	1621	U	N1-C6	-5.02	1.33	1.38
24	14	1649	G	N1-C2	-5.02	1.33	1.37
24	1H	1934	C	N1-C6	-5.02	1.34	1.37
24	14	789	A	N7-C5	-5.02	1.36	1.39
24	1H	1129	A	C5-C6	-5.02	1.36	1.41
24	14	706	A	N3-C4	-5.02	1.31	1.34
4	3E	26	CYS	CB-SG	5.01	1.90	1.82
24	14	2542	A	C5-C6	-5.01	1.36	1.41
24	1H	2239	G	C5-C6	-5.01	1.37	1.42

All (7140) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1332	G	N3-C4-N9	-24.58	111.25	126.00
24	1H	1332	G	N3-C4-C5	23.29	140.25	128.60
41	95	21	ARG	CD-NE-CZ	23.04	155.86	123.60
24	1H	1899	G	N3-C4-N9	-22.45	112.53	126.00
41	95	21	ARG	NE-CZ-NH1	22.42	131.51	120.30
24	1H	774	A	C2-N3-C4	-22.12	99.54	110.60
24	1H	676	A	C2-N3-C4	-21.84	99.68	110.60
24	1H	1332	G	C2-N3-C4	-21.70	101.05	111.90
24	14	1786	A	C5-N7-C8	-21.33	93.23	103.90
24	14	1786	A	N7-C8-N9	21.25	124.43	113.80
24	1H	783	A	C5-N7-C8	-20.85	93.47	103.90
24	14	1332	G	N3-C4-N9	-20.01	113.99	126.00
24	1H	1204	A	C2-N3-C4	-19.51	100.84	110.60
24	1H	1786	A	C5-N7-C8	-19.49	94.16	103.90
24	14	1332	G	N3-C4-C5	19.36	138.28	128.60
24	14	774	A	N1-C6-N6	19.35	130.21	118.60
24	14	676	A	C5-N7-C8	-19.28	94.26	103.90
24	14	74	A	C2-N3-C4	-19.17	101.02	110.60
24	14	1332	G	C2-N3-C4	-18.73	102.53	111.90
24	1H	783	A	C2-N3-C4	-18.62	101.29	110.60
24	14	774	A	C2-N3-C4	-18.26	101.47	110.60
24	1H	783	A	N7-C8-N9	17.83	122.71	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2544	G	N1-C6-O6	17.61	130.46	119.90
24	14	783	A	N1-C6-N6	17.60	129.16	118.60
24	1H	1899	G	N3-C4-C5	17.55	137.38	128.60
24	1H	621	A	C2-N3-C4	-17.39	101.90	110.60
24	1H	74	A	C2-N3-C4	-17.20	102.00	110.60
24	14	1899	G	N1-C2-N2	-17.11	100.80	116.20
24	14	783	A	C4-C5-N7	17.05	119.23	110.70
24	14	2544	G	C5-C6-O6	-16.77	118.54	128.60
24	14	2430	A	C2-N3-C4	-16.69	102.25	110.60
24	14	783	A	C5-N7-C8	-16.58	95.61	103.90
24	14	2430	A	N1-C6-N6	16.46	128.47	118.60
24	1H	1265	A	O5'-P-OP1	-16.43	90.91	105.70
24	14	2430	A	O5'-P-OP2	-16.43	90.91	105.70
24	1H	676	A	C5-N7-C8	-16.37	95.72	103.90
24	14	917	A	O5'-P-OP1	-16.34	90.99	105.70
24	1H	1786	A	N7-C8-N9	16.28	121.94	113.80
24	1H	567	A	O5'-P-OP1	-16.22	91.10	105.70
24	14	2287	A	C2-N3-C4	-16.20	102.50	110.60
24	14	1786	A	C8-N9-C4	-16.14	99.35	105.80
24	1H	1786	A	C2-N3-C4	-16.00	102.60	110.60
24	14	1786	A	C2-N3-C4	-15.96	102.62	110.60
24	1H	1950	G	N3-C4-N9	-15.96	116.42	126.00
24	1H	1614	A	C2-N3-C4	-15.94	102.63	110.60
24	14	783	A	C2-N3-C4	-15.93	102.63	110.60
24	14	676	A	C4-C5-N7	15.93	118.67	110.70
24	1H	71	A	C5-N7-C8	-15.86	95.97	103.90
24	14	1899	G	C2-N3-C4	-15.85	103.98	111.90
24	1H	1616	A	C2-N3-C4	-15.80	102.70	110.60
24	1H	783	A	N1-C6-N6	15.75	128.05	118.60
24	1H	774	A	N1-C6-N6	15.59	127.95	118.60
24	14	2873	A	C2-N3-C4	-15.57	102.81	110.60
24	1H	1210	A	C5-N7-C8	-15.54	96.13	103.90
24	14	828	U	C5-C4-O4	15.35	135.11	125.90
24	14	1902	C	N3-C4-C5	15.34	128.03	121.90
24	14	676	A	N1-C6-N6	15.24	127.75	118.60
24	14	2713	A	C5-N7-C8	-15.23	96.29	103.90
24	1H	71	A	N1-C6-N6	15.13	127.67	118.60
24	1H	783	A	C6-C5-N7	-15.11	121.72	132.30
24	1H	1950	G	N3-C4-C5	15.04	136.12	128.60
24	14	2056	G	C5-C6-O6	-15.02	119.59	128.60
24	14	676	A	C2-N3-C4	-15.01	103.10	110.60
24	14	2688	U	C5-C4-O4	15.01	134.90	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	774	A	N3-C4-C5	14.88	137.22	126.80
24	1H	1762	A	O5'-P-OP2	-14.82	92.36	105.70
24	14	1616	A	C5-N7-C8	-14.82	96.49	103.90
24	1H	528	A	C2-N3-C4	-14.81	103.20	110.60
24	1H	2712	U	C5-C4-O4	14.81	134.78	125.90
24	14	801	G	N1-C6-O6	-14.80	111.02	119.90
24	1H	1616	A	N1-C6-N6	14.74	127.44	118.60
24	1H	2430	A	C2-N3-C4	-14.73	103.23	110.60
24	1H	1899	G	N3-C2-N2	-14.73	109.59	119.90
24	1H	140	A	C5-N7-C8	-14.71	96.55	103.90
24	14	528	A	C2-N3-C4	-14.65	103.28	110.60
24	1H	1678	G	C5-N7-C8	-14.64	96.98	104.30
24	1H	676	A	N3-C4-C5	14.61	137.03	126.80
24	1H	917	A	C2-N3-C4	-14.54	103.33	110.60
24	1H	783	A	C8-N9-C4	-14.53	99.99	105.80
24	1H	1204	A	C5-C6-N1	-14.48	110.46	117.70
24	14	2346	A	N1-C2-N3	14.48	136.54	129.30
24	14	2518	A	C2-N3-C4	-14.30	103.45	110.60
24	1H	1678	G	C2-N3-C4	-14.25	104.77	111.90
24	1H	2062	A	C8-N9-C4	14.22	111.49	105.80
24	14	1616	A	C4-C5-N7	14.18	117.79	110.70
24	14	2713	A	N1-C6-N6	14.16	127.09	118.60
24	1H	1332	G	C5-N7-C8	-14.09	97.26	104.30
24	14	528	A	C5-N7-C8	-14.07	96.86	103.90
24	1H	828	U	C5-C4-O4	14.03	134.32	125.90
24	1H	2490	G	C4-C5-N7	13.98	116.39	110.80
24	1H	1698	A	C2-N3-C4	-13.96	103.62	110.60
1	13	1517	G	O5'-P-OP2	-13.93	93.16	105.70
24	1H	783	A	C4-C5-N7	13.89	117.65	110.70
24	14	1332	G	C5-N7-C8	-13.82	97.39	104.30
24	14	1678	G	N3-C4-C5	13.79	135.49	128.60
24	1H	1899	G	C8-N9-C1'	13.78	144.91	127.00
24	14	2357	U	O5'-P-OP2	-13.75	93.33	105.70
24	1H	140	A	C4-C5-N7	13.73	117.57	110.70
24	1H	2490	G	C5-N7-C8	-13.73	97.44	104.30
24	14	2056	G	N1-C6-O6	13.59	128.05	119.90
24	1H	71	A	C4-C5-N7	13.58	117.49	110.70
24	14	2873	A	N1-C2-N3	13.55	136.08	129.30
24	1H	2238	G	O5'-P-OP2	-13.47	93.58	105.70
24	1H	120	U	C5-C6-N1	-13.46	115.97	122.70
1	13	974	A	O4'-C1'-N9	13.41	118.93	108.20
24	14	1342	A	C2-N3-C4	-13.38	103.91	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	621	A	N1-C2-N3	13.32	135.96	129.30
24	1H	1614	A	C5-N7-C8	-13.28	97.26	103.90
24	14	1899	G	C6-C5-N7	-13.16	122.50	130.40
24	14	2688	U	N3-C2-O2	-13.11	113.02	122.20
24	1H	51	G	O5'-P-OP1	-13.07	93.94	105.70
24	14	621	A	C5-N7-C8	-13.06	97.37	103.90
24	1H	2554	U	O5'-P-OP1	-13.05	93.95	105.70
24	1H	1950	G	C5-N7-C8	-13.05	97.78	104.30
24	14	1950	G	N3-C4-N9	-13.05	118.17	126.00
24	14	1950	G	C5-N7-C8	-13.04	97.78	104.30
24	14	1698	A	C5-N7-C8	-13.04	97.38	103.90
24	14	330	A	C2-N3-C4	-13.02	104.09	110.60
24	14	2490	G	C5-N7-C8	-12.99	97.81	104.30
24	1H	1678	G	C4-C5-N7	12.99	116.00	110.80
25	16	81	G	C4-C5-N7	12.96	115.98	110.80
24	1H	248	G	O5'-P-OP2	-12.94	94.06	105.70
24	14	774	A	C4-C5-N7	12.92	117.16	110.70
24	1H	2688	U	C5-C4-O4	12.91	133.65	125.90
24	1H	2392	A	C2-N3-C4	-12.89	104.16	110.60
24	1H	1786	A	C4-C5-N7	12.87	117.14	110.70
24	14	2023	G	O5'-P-OP2	-12.87	94.12	105.70
24	1H	1496	A	N7-C8-N9	12.78	120.19	113.80
24	1H	71	A	C2-N3-C4	-12.71	104.25	110.60
24	1H	991	C	O5'-P-OP1	-12.68	94.29	105.70
25	1J	81	G	C4-C5-N7	12.66	115.86	110.80
24	1H	120	U	C4-C5-C6	12.64	127.28	119.70
24	14	74	A	N1-C6-N6	12.64	126.19	118.60
24	1H	2509	G	C5-C6-O6	-12.64	121.02	128.60
24	1H	774	A	C5-C6-N1	-12.63	111.38	117.70
24	1H	2430	A	N3-C4-C5	12.63	135.64	126.80
24	1H	330	A	C2-N3-C4	-12.62	104.29	110.60
1	13	1524	C	C6-N1-C2	12.59	125.33	120.30
24	14	676	A	N7-C8-N9	12.59	120.09	113.80
24	1H	2503	A	N1-C6-N6	12.56	126.14	118.60
24	14	2708	G	O5'-P-OP2	-12.50	94.45	105.70
24	1H	1210	A	C4-C5-N7	12.45	116.92	110.70
24	14	74	A	C5-N7-C8	-12.43	97.69	103.90
24	1H	115	C	N1-C2-O2	-12.42	111.45	118.90
24	1H	2445	G	C8-N9-C4	-12.42	101.43	106.40
24	14	2689	U	N3-C4-O4	-12.42	110.70	119.40
24	1H	918	A	O5'-P-OP1	-12.42	94.52	105.70
24	14	2430	A	C5-C6-N1	-12.41	111.50	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1614	A	N1-C2-N3	12.39	135.50	129.30
24	1H	2402	C	C5-C6-N1	12.38	127.19	121.00
24	14	783	A	C6-C5-N7	-12.38	123.64	132.30
24	14	1698	A	C2-N3-C4	-12.37	104.42	110.60
24	1H	676	A	N3-C4-N9	-12.33	117.53	127.40
24	1H	140	A	N1-C6-N6	12.30	125.98	118.60
24	14	528	A	N1-C2-N3	12.29	135.44	129.30
24	14	1342	A	N1-C2-N3	12.27	135.43	129.30
24	1H	2713	A	N1-C6-N6	12.25	125.95	118.60
24	1H	2507	C	N3-C2-O2	-12.25	113.33	121.90
24	1H	2518	A	C5-N7-C8	-12.25	97.78	103.90
24	1H	2402	C	C6-N1-C2	-12.23	115.41	120.30
24	14	2346	A	C2-N3-C4	-12.21	104.49	110.60
24	1H	141	A	C5-N7-C8	-12.19	97.80	103.90
24	1H	241	A	O5'-P-OP2	-12.19	94.73	105.70
24	1H	434	U	O5'-P-OP2	-12.19	94.73	105.70
24	1H	2490	G	N3-C4-C5	12.19	134.69	128.60
24	1H	1021	A	C2-N3-C4	-12.18	104.51	110.60
24	1H	2688	U	N3-C2-O2	-12.18	113.67	122.20
24	1H	330	A	C5-N7-C8	-12.14	97.83	103.90
24	14	2430	A	C6-C5-N7	-12.14	123.80	132.30
24	14	621	A	C2-N3-C4	-12.13	104.53	110.60
24	1H	1496	A	C8-N9-C4	-12.11	100.96	105.80
24	14	245	G	O5'-P-OP1	-12.11	94.81	105.70
1	1G	1517	G	O5'-P-OP2	-12.09	94.82	105.70
24	1H	667	U	N3-C4-O4	12.08	127.86	119.40
24	14	1681	G	N1-C6-O6	12.08	127.15	119.90
24	1H	730	C	O5'-P-OP2	-12.07	94.83	105.70
24	1H	1950	G	C2-N3-C4	-12.07	105.86	111.90
24	1H	1899	G	C2-N3-C4	-12.06	105.87	111.90
24	14	1903	G	O5'-P-OP1	-12.05	94.86	105.70
24	14	2713	A	C4-C5-N7	12.03	116.72	110.70
24	1H	1272	A	O5'-P-OP2	-12.03	94.87	105.70
24	1H	2361	A	O5'-P-OP2	-12.02	94.88	105.70
24	14	2688	U	N3-C4-O4	-11.99	111.01	119.40
24	14	2689	U	C5-C4-O4	11.99	133.09	125.90
24	14	1816	G	O5'-P-OP1	-11.96	94.93	105.70
24	1H	774	A	C4-C5-N7	11.95	116.67	110.70
24	14	196	A	O5'-P-OP2	-11.94	94.96	105.70
24	14	1899	G	N1-C2-N3	11.94	131.06	123.90
24	14	1678	G	C2-N3-C4	-11.93	105.94	111.90
24	14	2829	C	C6-N1-C2	11.90	125.06	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2490	G	C4-C5-N7	11.86	115.54	110.80
24	1H	1021	A	C5-N7-C8	-11.83	97.98	103.90
24	1H	74	A	C5-N7-C8	-11.82	97.99	103.90
24	14	1950	G	C8-N9-C4	-11.77	101.69	106.40
24	14	1899	G	N3-C2-N2	11.76	128.13	119.90
24	1H	2331	G	C4-C5-N7	11.74	115.50	110.80
24	1H	2689	U	N3-C4-O4	-11.74	111.18	119.40
24	14	574	C	O5'-P-OP2	-11.72	95.16	105.70
24	1H	1210	A	N1-C6-N6	11.71	125.63	118.60
24	1H	1899	G	N9-C4-C5	11.71	110.09	105.40
24	14	689	A	O5'-P-OP2	-11.71	95.16	105.70
24	1H	2713	A	C2-N3-C4	-11.71	104.75	110.60
24	14	71	A	C2-N3-C4	-11.70	104.75	110.60
1	1G	197	A	C8-N9-C4	-11.68	101.13	105.80
24	1H	2430	A	N1-C6-N6	11.67	125.60	118.60
24	1H	1678	G	N7-C8-N9	11.66	118.93	113.10
24	1H	444	C	O5'-P-OP1	11.62	124.65	110.70
24	1H	2503	A	C5-C6-N6	-11.59	114.42	123.70
24	1H	840	C	C6-N1-C2	11.57	124.93	120.30
24	14	141	A	C5-N7-C8	-11.56	98.12	103.90
24	1H	1632	A	N1-C6-N6	11.55	125.53	118.60
24	14	621	A	N1-C6-N6	11.54	125.52	118.60
24	14	801	G	N9-C4-C5	11.54	110.01	105.40
24	1H	1616	A	C4-C5-N7	11.50	116.45	110.70
24	14	2287	A	N3-C4-C5	11.50	134.85	126.80
24	1H	2713	A	C5-N7-C8	-11.50	98.15	103.90
24	1H	751	A	O5'-P-OP1	-11.49	95.36	105.70
24	14	1379	A	C5-N7-C8	-11.49	98.16	103.90
24	1H	74	A	N1-C2-N3	11.46	135.03	129.30
24	1H	1332	G	C8-N9-C1'	11.46	141.89	127.00
24	1H	667	U	N1-C2-O2	-11.45	114.78	122.80
24	14	801	G	C5-C6-O6	11.44	135.47	128.60
24	14	2713	A	C2-N3-C4	-11.43	104.88	110.60
1	13	690	G	N3-C4-N9	-11.43	119.14	126.00
24	1H	1786	A	C8-N9-C4	-11.42	101.23	105.80
24	1H	1616	A	C5-N7-C8	-11.41	98.20	103.90
24	1H	917	A	N1-C6-N6	11.40	125.44	118.60
24	1H	2571	C	N1-C2-O2	11.34	125.70	118.90
24	1H	913	U	O5'-P-OP2	-11.33	95.50	105.70
24	14	1681	G	C2-N3-C4	-11.33	106.23	111.90
24	1H	613	U	C5-C4-O4	11.31	132.69	125.90
24	1H	676	A	C4-C5-N7	11.29	116.35	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1241	A	C6-N1-C2	11.29	125.38	118.60
24	14	1950	G	N7-C8-N9	11.28	118.74	113.10
24	1H	788	A	N1-C6-N6	11.28	125.37	118.60
24	14	1621	U	O5'-P-OP1	-11.28	95.55	105.70
24	14	676	A	N3-C4-C5	11.27	134.69	126.80
24	14	774	A	C5-N7-C8	-11.27	98.26	103.90
24	14	2688	U	C5-C6-N1	-11.27	117.06	122.70
24	1H	2032	G	C8-N9-C4	11.24	110.90	106.40
24	1H	1307	A	N1-C6-N6	11.24	125.34	118.60
1	1G	690	G	N3-C4-C5	11.24	134.22	128.60
24	1H	2331	G	C5-C6-O6	-11.23	121.86	128.60
24	1H	676	A	N7-C8-N9	11.21	119.41	113.80
24	14	71	A	C5-N7-C8	-11.21	98.30	103.90
24	1H	2503	A	N9-C4-C5	-11.21	101.32	105.80
24	1H	1332	G	N3-C2-N2	-11.19	112.07	119.90
24	1H	1678	G	N3-C4-C5	11.19	134.19	128.60
24	14	1678	G	N3-C4-N9	-11.17	119.30	126.00
24	14	2032	G	N1-C6-O6	11.17	126.60	119.90
24	1H	1616	A	C6-C5-N7	-11.16	124.49	132.30
24	1H	71	A	C6-C5-N7	-11.15	124.49	132.30
24	1H	2430	A	N3-C4-N9	-11.12	118.51	127.40
24	1H	774	A	C5-N7-C8	-11.11	98.35	103.90
24	14	2490	G	N7-C8-N9	11.11	118.65	113.10
24	14	1143	A	C2-N3-C4	-11.10	105.05	110.60
24	14	1786	A	C6-C5-N7	-11.09	124.54	132.30
24	14	1786	A	N1-C2-N3	11.07	134.84	129.30
1	1G	197	A	N7-C8-N9	11.06	119.33	113.80
24	1H	2346	A	C2-N3-C4	-10.97	105.11	110.60
24	1H	528	A	N3-C4-C5	10.97	134.48	126.80
24	14	1021	A	C2-N3-C4	-10.96	105.12	110.60
24	1H	1241	A	C5-C6-N1	-10.96	112.22	117.70
24	14	1899	G	C5-C6-N1	-10.96	106.02	111.50
24	14	530	G	C4-C5-N7	10.94	115.18	110.80
24	1H	1899	G	C4-N9-C1'	-10.93	112.29	126.50
24	1H	1614	A	N7-C8-N9	10.91	119.26	113.80
24	14	783	A	N3-C4-C5	10.90	134.43	126.80
24	14	1950	G	N3-C4-C5	10.89	134.04	128.60
24	1H	930	U	C5-C4-O4	10.88	132.43	125.90
24	1H	1790	C	C2-N3-C4	-10.87	114.47	119.90
24	14	2307	G	O4'-C1'-N9	10.87	116.89	108.20
24	14	74	A	N3-C4-C5	10.87	134.41	126.80
24	14	1786	A	C4-C5-N7	10.87	116.13	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1559	G	N1-C6-O6	10.85	126.41	119.90
24	1H	530	G	C4-C5-N7	10.83	115.13	110.80
24	1H	2726	U	O5'-P-OP1	-10.82	95.96	105.70
1	1G	1081	G	O5'-P-OP2	-10.81	95.97	105.70
24	14	741	G	O5'-P-OP1	-10.80	95.98	105.70
24	1H	2238	G	OP1-P-OP2	10.78	135.77	119.60
24	1H	1210	A	N7-C8-N9	10.77	119.18	113.80
24	14	2324	C	C6-N1-C2	10.73	124.59	120.30
25	1J	114	G	C8-N9-C4	10.73	110.69	106.40
24	14	1950	G	C2-N3-C4	-10.72	106.54	111.90
25	1J	61	G	O5'-P-OP1	-10.72	96.05	105.70
24	14	1970	A	O5'-P-OP2	-10.71	96.06	105.70
24	1H	1638	C	O5'-P-OP2	-10.71	96.06	105.70
24	14	621	A	N7-C8-N9	10.70	119.15	113.80
24	14	2346	A	O4'-C1'-N9	10.70	116.76	108.20
24	1H	139	G	O5'-P-OP1	-10.70	96.07	105.70
24	1H	667	U	N3-C2-O2	10.68	129.68	122.20
24	14	2441	C	C5-C6-N1	-10.66	115.67	121.00
24	14	774	A	C6-C5-N7	-10.64	124.85	132.30
24	14	2545	G	C5-C6-O6	-10.64	122.22	128.60
24	14	774	A	N3-C4-C5	10.63	134.24	126.80
24	14	1989	G	C5-C6-O6	-10.61	122.23	128.60
24	1H	528	A	N3-C4-N9	-10.61	118.91	127.40
24	1H	783	A	N1-C2-N3	10.60	134.60	129.30
24	1H	140	A	C2-N3-C4	-10.60	105.30	110.60
24	14	2430	A	N1-C2-N3	10.59	134.59	129.30
24	1H	252	G	O5'-P-OP2	-10.58	96.18	105.70
24	14	2518	A	C5-N7-C8	-10.57	98.62	103.90
24	14	2545	G	N1-C6-O6	10.56	126.24	119.90
24	1H	2287	A	C2-N3-C4	-10.54	105.33	110.60
24	1H	1786	A	C6-C5-N7	-10.52	124.94	132.30
1	13	690	G	N3-C2-N2	-10.51	112.54	119.90
24	14	1252	G	O4'-C1'-N9	-10.51	99.79	108.20
24	1H	1798	U	O5'-P-OP2	-10.51	96.25	105.70
24	1H	1698	A	C5-N7-C8	-10.49	98.65	103.90
24	1H	2430	A	C5-C6-N1	-10.49	112.45	117.70
24	1H	1837	C	O5'-P-OP1	-10.49	96.26	105.70
24	14	141	A	C4-C5-N7	10.45	115.92	110.70
24	1H	1373	A	C8-N9-C4	10.44	109.98	105.80
24	1H	189	G	C8-N9-C4	10.43	110.57	106.40
24	14	863	A	O5'-P-OP2	-10.43	96.31	105.70
24	1H	2062	A	N9-C4-C5	-10.43	101.63	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2237	G	C8-N9-C4	10.43	110.57	106.40
24	1H	758	C	O5'-P-OP2	-10.42	96.32	105.70
24	1H	1792	G	C8-N9-C4	10.41	110.57	106.40
24	1H	2445	G	N7-C8-N9	10.39	118.30	113.10
24	1H	190	A	C5-C6-N6	-10.39	115.39	123.70
24	1H	1349	A	C2-N3-C4	-10.39	105.41	110.60
24	1H	2713	A	C6-C5-N7	-10.33	125.07	132.30
24	1H	1288	U	O5'-P-OP1	-10.31	96.42	105.70
24	1H	930	U	N3-C4-O4	-10.31	112.18	119.40
24	1H	1799	G	C2-N3-C4	10.31	117.05	111.90
24	14	2060	A	N1-C6-N6	-10.31	112.42	118.60
24	1H	508	G	C4-C5-N7	10.31	114.92	110.80
1	13	281	G	O5'-P-OP1	-10.30	96.43	105.70
24	14	1332	G	N7-C8-N9	10.30	118.25	113.10
24	1H	750	A	OP1-P-O3'	-10.28	82.58	105.20
24	1H	847	U	C5-C6-N1	-10.29	117.56	122.70
24	1H	2509	G	C8-N9-C4	10.28	110.51	106.40
24	1H	71	A	C5-C6-N6	-10.27	115.48	123.70
24	1H	1251	C	C6-N1-C2	10.27	124.41	120.30
23	4L	18	C	C6-N1-C2	-10.27	116.19	120.30
24	14	621	A	C4-C5-N7	10.26	115.83	110.70
24	1H	140	A	N7-C8-N9	10.24	118.92	113.80
1	1G	690	G	C2-N3-C4	-10.24	106.78	111.90
24	14	593	G	O5'-P-OP2	-10.23	96.49	105.70
24	14	1496	A	C5-N7-C8	-10.22	98.79	103.90
24	1H	2330	G	C8-N9-C4	10.22	110.49	106.40
24	1H	2590	A	C2-N3-C4	-10.21	105.49	110.60
24	1H	918	A	O5'-P-OP2	10.18	122.92	110.70
24	1H	1021	A	N1-C6-N6	10.18	124.71	118.60
24	14	74	A	C5-C6-N1	-10.18	112.61	117.70
24	1H	74	A	N7-C8-N9	10.16	118.88	113.80
24	14	197	A	C5-N7-C8	-10.14	98.83	103.90
24	1H	1382	G	N1-C6-O6	10.14	125.98	119.90
24	14	130	C	C6-N1-C2	10.13	124.35	120.30
24	1H	974(A)	C	C5-C4-N4	10.13	127.29	120.20
24	1H	2577	A	O5'-P-OP2	-10.12	96.59	105.70
24	1H	2571	C	N3-C2-O2	-10.12	114.82	121.90
24	1H	1799	G	N3-C4-C5	-10.12	123.54	128.60
24	14	801	G	C4-C5-N7	-10.11	106.76	110.80
1	13	121	C	N1-C2-O2	10.11	124.97	118.90
24	1H	1647	G	O5'-P-OP1	-10.11	96.60	105.70
24	14	922	U	O5'-P-OP1	-10.11	96.60	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	128	C	N3-C4-C5	10.10	125.94	121.90
24	14	1678	G	C5-N7-C8	-10.10	99.25	104.30
24	14	1496	A	N7-C8-N9	10.08	118.84	113.80
24	1H	774	A	N3-C4-N9	-10.07	119.34	127.40
24	1H	2374	C	C5-C6-N1	-10.07	115.96	121.00
24	1H	2712	U	N3-C4-O4	-10.05	112.36	119.40
24	1H	71	A	N7-C8-N9	10.03	118.81	113.80
24	14	1783	A	N1-C6-N6	10.02	124.61	118.60
24	1H	2774	C	C6-N1-C2	10.01	124.30	120.30
1	13	1502	A	C5-N7-C8	-10.00	98.90	103.90
24	14	828	U	N3-C4-O4	-10.00	112.40	119.40
25	1J	81	G	C5-N7-C8	-10.00	99.30	104.30
24	1H	210	C	N3-C4-C5	9.99	125.90	121.90
24	14	1558	A	C2-N3-C4	-9.99	105.60	110.60
24	1H	790	C	N1-C2-O2	-9.98	112.91	118.90
24	1H	840	C	O5'-P-OP2	-9.98	96.72	105.70
25	16	81	G	C5-N7-C8	-9.98	99.31	104.30
24	1H	1379	A	C5-N7-C8	-9.97	98.91	103.90
24	1H	1931	U	N3-C2-O2	-9.97	115.22	122.20
1	1G	1200	C	N1-C2-O2	9.97	124.88	118.90
24	1H	2509	G	N1-C6-O6	9.95	125.87	119.90
24	1H	669	G	OP1-P-OP2	9.94	134.51	119.60
24	1H	575	A	C8-N9-C4	9.94	109.78	105.80
24	14	1681	G	N3-C4-C5	9.94	133.57	128.60
24	14	1965	C	C6-N1-C2	9.93	124.27	120.30
24	1H	793	A	N1-C6-N6	9.92	124.55	118.60
24	14	530	G	C5-N7-C8	-9.91	99.35	104.30
24	1H	2381	C	C6-N1-C2	9.90	124.26	120.30
24	14	2422	A	O5'-P-OP2	-9.90	96.79	105.70
24	14	2392	A	C5-C6-N1	-9.90	112.75	117.70
24	1H	120	U	C5-C4-O4	9.90	131.84	125.90
24	14	1424	G	O5'-P-OP2	-9.90	96.79	105.70
24	1H	2448	A	N1-C6-N6	9.89	124.54	118.60
24	14	330	A	N1-C2-N3	9.88	134.24	129.30
24	14	2571	C	C2-N3-C4	-9.88	114.96	119.90
24	1H	1241	A	C5-N7-C8	-9.86	98.97	103.90
24	14	1332	G	N3-C2-N2	-9.86	113.00	119.90
24	14	1616	A	N7-C8-N9	9.85	118.72	113.80
24	1H	74	A	N1-C6-N6	9.85	124.51	118.60
24	14	2700	C	C6-N1-C2	9.85	124.24	120.30
24	1H	25	U	C5-C6-N1	-9.83	117.79	122.70
24	1H	2392	A	C5-N7-C8	-9.82	98.99	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1284	A	O5'-P-OP1	-9.80	96.88	105.70
24	14	2393	A	O5'-P-OP1	-9.80	96.88	105.70
24	14	676	A	C6-C5-N7	-9.80	125.44	132.30
24	1H	1204	A	N1-C6-N6	9.80	124.48	118.60
24	1H	1318	C	O5'-P-OP1	-9.79	96.89	105.70
24	1H	1807	G	C5-C6-O6	-9.77	122.74	128.60
24	1H	199	A	C2-N3-C4	9.76	115.48	110.60
24	1H	2062	A	O5'-P-OP2	-9.76	96.91	105.70
24	1H	2375	G	C5-C6-O6	-9.76	122.74	128.60
24	1H	1786	A	C5-C6-N1	-9.75	112.82	117.70
24	14	2779	U	C5-C6-N1	-9.75	117.83	122.70
24	1H	1618	A	C8-N9-C4	-9.74	101.91	105.80
24	1H	942	G	N3-C2-N2	-9.73	113.09	119.90
24	14	1308	A	N1-C2-N3	9.73	134.16	129.30
24	1H	2542	A	C8-N9-C4	9.72	109.69	105.80
24	1H	74	A	C6-C5-N7	-9.72	125.49	132.30
24	14	2503	A	O5'-P-OP2	-9.71	96.97	105.70
24	1H	1496	A	C5-N7-C8	-9.70	99.05	103.90
24	1H	74	A	C5-C6-N1	-9.70	112.85	117.70
24	14	1965	C	N3-C4-C5	9.70	125.78	121.90
24	14	774	A	C5-C6-N6	-9.69	115.95	123.70
24	14	801	G	C6-C5-N7	9.69	136.22	130.40
24	14	140	A	C5-N7-C8	-9.68	99.06	103.90
24	14	783	A	N7-C8-N9	9.68	118.64	113.80
24	1H	337	C	O5'-P-OP2	-9.66	97.00	105.70
24	14	2490	G	C8-N9-C4	-9.64	102.54	106.40
24	1H	1931	U	C4-C5-C6	9.63	125.48	119.70
24	14	1698	A	N7-C8-N9	9.63	118.62	113.80
24	14	1899	G	C4-C5-C6	9.63	124.58	118.80
24	14	528	A	N7-C8-N9	9.63	118.61	113.80
24	1H	2380	C	C5-C6-N1	-9.62	116.19	121.00
24	1H	561	G	C8-N9-C4	9.62	110.25	106.40
24	1H	758	C	N3-C4-C5	9.61	125.75	121.90
24	1H	1332	G	C8-N9-C4	-9.61	102.56	106.40
24	1H	676	A	C5-C6-N1	-9.60	112.90	117.70
24	1H	1021	A	N7-C8-N9	9.60	118.60	113.80
24	1H	1210	A	C2-N3-C4	-9.59	105.80	110.60
24	14	746	A	O5'-P-OP2	9.59	122.21	110.70
24	14	1162	G	O5'-P-OP1	-9.58	97.08	105.70
24	14	676	A	O4'-C1'-N9	9.57	115.86	108.20
24	1H	2000	G	O5'-P-OP1	9.57	122.19	110.70
24	1H	746	A	C8-N9-C4	-9.57	101.97	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1379	A	N1-C6-N6	9.56	124.33	118.60
1	1G	366	C	C6-N1-C2	9.55	124.12	120.30
24	1H	210	C	C6-N1-C2	9.54	124.12	120.30
24	1H	2513	G	C5-C6-O6	-9.54	122.88	128.60
24	1H	141	A	N7-C8-N9	9.53	118.56	113.80
24	1H	676	A	O4'-C1'-N9	9.53	115.82	108.20
24	14	669	G	O5'-P-OP2	9.52	122.13	110.70
24	1H	1204	A	N3-C4-C5	9.52	133.46	126.80
1	1G	1410	G	O5'-P-OP2	-9.51	97.14	105.70
24	1H	330	A	C4-C5-N7	9.51	115.45	110.70
1	1G	1414	U	C5-C4-O4	9.50	131.60	125.90
24	1H	1931	U	C5-C6-N1	-9.50	117.95	122.70
1	13	834	C	O5'-P-OP2	-9.49	97.16	105.70
24	14	2713	A	N7-C8-N9	9.49	118.55	113.80
24	1H	858	U	N1-C2-O2	9.49	129.44	122.80
22	2L	72	U	O5'-P-OP2	-9.49	97.16	105.70
1	1G	1502	A	N1-C2-N3	9.49	134.04	129.30
24	1H	860	U	C4-C5-C6	9.49	125.39	119.70
24	14	1616	A	N1-C6-N6	9.49	124.29	118.60
24	1H	2705	A	C8-N9-C4	9.47	109.59	105.80
23	4K	13	A	C8-N9-C4	-9.47	102.01	105.80
24	1H	57	C	C6-N1-C2	9.46	124.08	120.30
24	14	2741	A	C8-N9-C4	9.45	109.58	105.80
24	14	470	A	O5'-P-OP1	-9.45	97.20	105.70
24	1H	130	C	C6-N1-C2	9.44	124.07	120.30
24	14	1204	A	C2-N3-C4	-9.44	105.88	110.60
1	13	1502	A	C2-N3-C4	-9.42	105.89	110.60
24	1H	783	A	C5-C6-N1	-9.42	112.99	117.70
24	1H	2265	U	O5'-P-OP1	-9.41	97.23	105.70
24	14	1613	G	O5'-P-OP2	-9.41	97.23	105.70
24	1H	530	G	C5-N7-C8	-9.41	99.60	104.30
24	1H	1142(A)	A	C2-N3-C4	-9.40	105.90	110.60
24	14	687	C	O5'-P-OP1	-9.40	97.24	105.70
24	1H	207	A	N1-C6-N6	9.40	124.24	118.60
24	1H	1786	A	N3-C4-C5	9.39	133.38	126.80
24	14	1790	C	N3-C4-N4	9.39	124.58	118.00
24	14	2406	U	O5'-P-OP1	-9.39	97.25	105.70
24	1H	2513	G	N1-C6-O6	9.39	125.53	119.90
24	1H	1804	C	N3-C4-C5	9.38	125.65	121.90
24	14	133	C	C6-N1-C2	9.38	124.05	120.30
24	14	2363	C	C6-N1-C2	9.37	124.05	120.30
24	14	2081	C	O5'-P-OP2	-9.37	97.27	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	923	A	O5'-P-OP1	-9.36	97.28	105.70
24	1H	1200	C	C5-C6-N1	-9.36	116.32	121.00
24	1H	2380	C	C2-N3-C4	-9.35	115.22	119.90
24	14	2502	G	N3-C2-N2	9.35	126.45	119.90
24	14	783	A	C5-C6-N6	-9.35	116.22	123.70
24	14	2726	U	C5-C4-O4	9.35	131.51	125.90
24	1H	1379	A	C8-N9-C4	-9.34	102.06	105.80
24	14	2873	A	C5-N7-C8	-9.33	99.24	103.90
24	14	2518	A	N3-C4-C5	9.32	133.33	126.80
24	1H	2591	C	N1-C2-O2	-9.31	113.31	118.90
24	1H	630	G	C8-N9-C4	9.31	110.12	106.40
24	1H	1899	G	C8-N9-C4	-9.31	102.68	106.40
24	1H	1021	A	C5-C6-N1	-9.30	113.05	117.70
1	1G	1519	A	C8-N9-C4	-9.30	102.08	105.80
24	14	2027	G	N1-C6-O6	9.29	125.48	119.90
24	1H	530	G	C2-N3-C4	-9.29	107.25	111.90
1	1G	690	G	N3-C4-N9	-9.29	120.43	126.00
24	14	1681	G	C4-C5-N7	9.29	114.52	110.80
24	14	1444(A)	A	C8-N9-C4	9.29	109.51	105.80
24	1H	2392	A	N7-C8-N9	9.28	118.44	113.80
24	1H	2430	A	C5-N7-C8	-9.28	99.26	103.90
24	14	2061	G	C8-N9-C4	9.28	110.11	106.40
24	1H	2448	A	C5-C6-N6	-9.27	116.29	123.70
24	14	1528	A	N7-C8-N9	9.27	118.43	113.80
24	14	1302	A	OP1-P-OP2	9.26	133.49	119.60
24	14	1528	A	C8-N9-C4	-9.26	102.10	105.80
24	1H	2713	A	C4-C5-N7	9.26	115.33	110.70
24	14	1764	G	N1-C6-O6	-9.26	114.35	119.90
24	14	2430	A	C4-C5-C6	9.26	121.63	117.00
24	14	2430	A	O5'-P-OP1	9.26	121.81	110.70
1	13	703	G	C4-N9-C1'	9.25	138.53	126.50
24	1H	863	A	O5'-P-OP2	-9.25	97.38	105.70
24	14	1698	A	N3-C4-C5	9.24	133.27	126.80
24	1H	2272	U	O5'-P-OP2	-9.23	97.39	105.70
24	14	1647	G	O5'-P-OP1	-9.23	97.39	105.70
24	14	2032	G	C5-C6-O6	-9.23	123.06	128.60
24	14	2544	G	C6-C5-N7	-9.23	124.86	130.40
24	1H	954	G	O5'-P-OP2	9.23	121.77	110.70
24	1H	676	A	N1-C6-N6	9.22	124.14	118.60
24	1H	2518	A	C2-N3-C4	-9.22	105.99	110.60
24	1H	966	G	O5'-P-OP2	-9.22	97.40	105.70
24	1H	1379	A	N7-C8-N9	9.22	118.41	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	510	C	O5'-P-OP2	-9.22	97.40	105.70
24	1H	1332	G	N7-C8-N9	9.22	117.71	113.10
24	14	1145	C	C6-N1-C2	-9.22	116.61	120.30
24	1H	1382	G	C5-C6-O6	-9.22	123.07	128.60
24	1H	951	C	C6-N1-C2	9.21	123.98	120.30
24	14	2713	A	N3-C4-C5	9.21	133.25	126.80
24	1H	2532	G	N1-C6-O6	9.21	125.42	119.90
24	1H	1559	G	C6-C5-N7	-9.20	124.88	130.40
24	14	1698	A	C4-C5-N7	9.20	115.30	110.70
1	1G	1200	C	C2-N1-C1'	9.20	128.92	118.80
24	14	74	A	C4-C5-N7	9.20	115.30	110.70
24	1H	1950	G	N7-C8-N9	9.19	117.69	113.10
24	14	2325	G	O5'-P-OP1	-9.19	97.43	105.70
24	1H	2773	C	C5-C6-N1	-9.19	116.41	121.00
1	13	1058	G	C8-N9-C4	9.18	110.07	106.40
24	1H	839	U	O5'-P-OP2	-9.18	97.44	105.70
24	1H	47	C	O5'-P-OP1	-9.17	97.45	105.70
24	1H	1950	G	C8-N9-C4	-9.17	102.73	106.40
24	1H	190	A	N1-C6-N6	9.16	124.10	118.60
24	1H	512	G	O4'-C1'-N9	9.16	115.53	108.20
1	1G	690	G	C5-N7-C8	-9.16	99.72	104.30
24	14	1342	A	C6-C5-N7	-9.16	125.89	132.30
24	1H	2503	A	N1-C2-N3	-9.16	124.72	129.30
24	1H	1678	G	C6-C5-N7	-9.15	124.91	130.40
24	1H	1698	A	C4-C5-N7	9.15	115.28	110.70
24	1H	1614	A	N1-C6-N6	9.15	124.09	118.60
24	1H	789	A	O5'-P-OP1	-9.14	97.47	105.70
24	1H	2688	U	N3-C4-O4	-9.13	113.01	119.40
24	14	456	C	C6-N1-C2	9.13	123.95	120.30
35	35	147	LEU	CA-CB-CG	9.13	136.30	115.30
24	14	1572	A	N1-C6-N6	9.13	124.08	118.60
24	1H	1983	C	C6-N1-C2	9.13	123.95	120.30
1	13	690	G	C2-N3-C4	-9.12	107.34	111.90
24	14	131	G	C8-N9-C4	9.12	110.05	106.40
25	1J	81	G	O5'-P-OP1	-9.12	97.49	105.70
24	1H	124	G	N1-C6-O6	9.11	125.37	119.90
1	1G	739	C	C6-N1-C2	9.11	123.94	120.30
24	14	945	A	O5'-P-OP1	-9.10	97.51	105.70
24	1H	858	U	N3-C2-O2	-9.10	115.83	122.20
24	14	74	A	N1-C2-N3	9.10	133.85	129.30
24	14	1681	G	C5-N7-C8	-9.10	99.75	104.30
24	14	1379	A	C4-C5-N7	9.10	115.25	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	917	A	C5-C6-N1	-9.08	113.16	117.70
24	14	2287	A	C5-C6-N1	-9.08	113.16	117.70
24	14	569	U	C5-C6-N1	-9.07	118.16	122.70
24	14	787	U	O5'-P-OP1	9.07	121.59	110.70
24	1H	247	G	N3-C2-N2	9.07	126.25	119.90
24	1H	1362	C	N1-C2-O2	-9.07	113.46	118.90
24	1H	141	A	C2-N3-C4	-9.07	106.06	110.60
1	13	1499	A	C8-N9-C4	9.06	109.43	105.80
24	14	968	G	C4-C5-N7	9.06	114.42	110.80
24	14	1309	G	O5'-P-OP2	-9.05	97.55	105.70
1	13	1336	C	N1-C2-O2	9.05	124.33	118.90
1	13	1502	A	N7-C8-N9	9.05	118.32	113.80
1	13	1336	C	C2-N1-C1'	9.04	128.75	118.80
24	14	203	C	N1-C2-O2	-9.04	113.47	118.90
24	1H	1204	A	C5-N7-C8	-9.04	99.38	103.90
24	1H	253	C	O5'-P-OP2	9.03	121.54	110.70
24	1H	774	A	C6-C5-N7	-9.03	125.98	132.30
24	1H	1698	A	N1-C6-N6	9.03	124.02	118.60
24	1H	330	A	N7-C8-N9	9.02	118.31	113.80
24	1H	974	G	O5'-P-OP2	-9.02	97.58	105.70
24	14	621	A	C5-C6-N1	-9.02	113.19	117.70
24	14	2375	G	C8-N9-C4	9.02	110.01	106.40
24	1H	190	A	N9-C4-C5	-9.01	102.19	105.80
24	14	2060	A	N9-C4-C5	9.01	109.40	105.80
24	1H	1408	C	N1-C2-O2	-9.01	113.50	118.90
1	1G	906	G	N1-C6-O6	9.00	125.30	119.90
24	1H	210	C	C5-C6-N1	-9.00	116.50	121.00
24	1H	746	A	O4'-C1'-N9	8.99	115.39	108.20
24	14	110	G	N1-C6-O6	8.99	125.29	119.90
24	14	1332	G	C8-N9-C4	-8.99	102.81	106.40
24	1H	256	A	N1-C6-N6	8.98	123.99	118.60
24	14	330	A	C5-N7-C8	-8.98	99.41	103.90
24	14	2712	U	C5-C6-N1	-8.96	118.22	122.70
24	1H	808	G	N1-C6-O6	-8.95	114.53	119.90
1	1G	906	G	C5-C6-O6	-8.94	123.24	128.60
24	14	141	A	N1-C6-N6	8.94	123.96	118.60
24	14	1520	U	C5-C4-O4	8.94	131.26	125.90
24	14	2287	A	N3-C4-N9	-8.94	120.25	127.40
24	14	2679	A	O5'-P-OP2	-8.94	97.66	105.70
24	1H	929	G	N1-C6-O6	8.93	125.26	119.90
24	14	1652	A	O5'-P-OP1	-8.93	97.66	105.70
24	1H	1614	A	C6-C5-N7	-8.93	126.05	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	729	G	N7-C8-N9	8.92	117.56	113.10
24	14	2873	A	N7-C8-N9	8.92	118.26	113.80
1	13	789	U	N1-C2-N3	8.92	120.25	114.90
24	14	528	A	N1-C6-N6	8.92	123.95	118.60
24	14	1353	A	C2-N3-C4	-8.92	106.14	110.60
24	14	2235	G	C5-C6-O6	-8.92	123.25	128.60
1	13	733	A	N1-C6-N6	8.91	123.94	118.60
24	14	530	G	C6-C5-N7	-8.90	125.06	130.40
24	1H	1427	A	N1-C2-N3	8.89	133.75	129.30
24	1H	2450	A	O5'-P-OP2	-8.89	97.69	105.70
1	13	703	G	C8-N9-C1'	-8.89	115.44	127.00
24	14	2436	G	N3-C2-N2	-8.89	113.67	119.90
24	1H	840	C	C5-C6-N1	-8.89	116.56	121.00
24	1H	2689	U	C5-C4-O4	8.88	131.23	125.90
24	14	2000	G	O5'-P-OP1	8.88	121.36	110.70
1	13	810	C	O5'-P-OP2	-8.88	97.71	105.70
24	14	141	A	N7-C8-N9	8.88	118.24	113.80
24	14	2056	G	C6-C5-N7	-8.87	125.08	130.40
24	14	310	A	O5'-P-OP1	-8.87	97.72	105.70
24	1H	673	C	N3-C4-N4	8.86	124.20	118.00
24	1H	2062	A	N7-C8-N9	-8.85	109.38	113.80
24	1H	1790	C	N3-C4-C5	8.85	125.44	121.90
24	14	1241	A	C5-C6-N1	-8.85	113.28	117.70
24	1H	318	C	O5'-P-OP1	-8.84	97.74	105.70
24	14	1777	U	C5-C6-N1	-8.84	118.28	122.70
24	14	2609	U	O5'-P-OP2	-8.84	97.74	105.70
24	1H	1950	G	C4-C5-N7	8.84	114.33	110.80
27	11	111	LEU	CA-CB-CG	8.83	135.60	115.30
24	14	2726	U	N3-C4-O4	-8.83	113.22	119.40
24	1H	1812	A	OP1-P-OP2	8.82	132.83	119.60
24	1H	1616	A	N3-C4-C5	8.82	132.98	126.80
1	13	893	C	N1-C2-O2	8.82	124.19	118.90
24	1H	804	A	O5'-P-OP1	-8.81	97.77	105.70
24	1H	2362	G	C8-N9-C4	8.81	109.92	106.40
24	1H	2518	A	N7-C8-N9	8.81	118.20	113.80
1	1G	345	C	C2-N1-C1'	8.80	128.48	118.80
24	14	1644	C	N1-C2-O2	8.80	124.18	118.90
24	14	1830	C	N3-C4-C5	8.79	125.41	121.90
24	1H	803	U	C6-N1-C2	8.78	126.27	121.00
24	1H	1698	A	C6-C5-N7	-8.78	126.15	132.30
24	1H	615	G	C4-C5-N7	-8.78	107.29	110.80
22	2L	85	A	C4-C5-N7	8.78	115.09	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	812	C	P-O3'-C3'	8.78	130.23	119.70
24	1H	1618	A	N7-C8-N9	8.77	118.19	113.80
24	1H	659	C	C5-C6-N1	-8.77	116.61	121.00
24	1H	1981	A	C5-C6-N6	-8.76	116.69	123.70
24	1H	2392	A	N1-C2-N3	8.76	133.68	129.30
24	14	97	C	O5'-P-OP2	-8.76	97.82	105.70
22	2L	85	A	C5-N7-C8	-8.76	99.52	103.90
24	14	752	A	N1-C2-N3	8.76	133.68	129.30
24	14	2552	U	C2-N3-C4	-8.76	121.75	127.00
24	14	783	A	N9-C4-C5	-8.75	102.30	105.80
24	1H	137(A)	G	N3-C2-N2	-8.74	113.78	119.90
24	1H	1021	A	C4-C5-N7	8.73	115.07	110.70
24	14	691	C	C6-N1-C2	8.73	123.79	120.30
24	14	966	G	N1-C6-O6	-8.73	114.66	119.90
1	13	567	G	O5'-P-OP1	-8.72	97.85	105.70
24	14	1379	A	N7-C8-N9	8.72	118.16	113.80
47	J8	41	ARG	NE-CZ-NH2	-8.72	115.94	120.30
24	14	933	A	C5-N7-C8	-8.72	99.54	103.90
24	14	1204	A	N1-C6-N6	8.72	123.83	118.60
24	1H	813	U	O5'-P-OP2	-8.71	97.86	105.70
24	14	1972	A	C8-N9-C4	8.72	109.29	105.80
24	1H	140	A	C6-C5-N7	-8.71	126.20	132.30
24	1H	571	A	C8-N9-C4	8.70	109.28	105.80
24	1H	917	A	N1-C2-N3	8.70	133.65	129.30
24	1H	49	A	N7-C8-N9	-8.69	109.45	113.80
24	1H	1376	C	O5'-P-OP1	-8.69	97.88	105.70
24	1H	807	U	OP1-P-OP2	8.68	132.62	119.60
24	14	453	C	N3-C2-O2	8.68	127.98	121.90
24	1H	464	U	C5-C6-N1	-8.68	118.36	122.70
24	1H	561	G	N7-C8-N9	-8.68	108.76	113.10
24	14	528	A	C4-C5-N7	8.67	115.04	110.70
24	14	1614	A	C5-C6-N1	-8.67	113.36	117.70
1	13	1528	U	O5'-P-OP2	-8.67	97.90	105.70
24	1H	2688	U	N1-C2-N3	8.67	120.10	114.90
24	1H	1314	C	O5'-P-OP2	-8.67	97.90	105.70
24	1H	192	C	C6-N1-C2	8.66	123.77	120.30
24	1H	783	A	N3-C4-C5	8.66	132.86	126.80
24	14	774	A	N9-C4-C5	-8.65	102.34	105.80
24	1H	2713	A	N7-C8-N9	8.65	118.13	113.80
24	1H	1333	C	C5-C4-N4	-8.65	114.15	120.20
24	1H	1604	C	N1-C2-O2	-8.64	113.72	118.90
24	1H	141	A	C4-C5-N7	8.63	115.02	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	74	A	N3-C4-N9	-8.63	120.49	127.40
1	13	689	C	O5'-P-OP1	-8.63	97.93	105.70
24	1H	1204	A	N1-C2-N3	8.62	133.61	129.30
24	14	1902	C	N1-C2-O2	8.63	124.08	118.90
24	1H	2376	A	C8-N9-C4	8.62	109.25	105.80
22	2K	60	A	O4'-C1'-N9	8.62	115.10	108.20
24	14	1821	A	C5-C6-N1	8.62	122.01	117.70
24	1H	1428	C	O5'-P-OP1	-8.61	97.95	105.70
41	95	21	ARG	NE-CZ-NH2	-8.61	116.00	120.30
24	1H	120	U	O5'-P-OP2	8.61	121.03	110.70
24	14	1210	A	C2-N3-C4	-8.61	106.30	110.60
25	1J	72	G	C8-N9-C4	8.60	109.84	106.40
24	1H	508	G	C5-N7-C8	-8.60	100.00	104.30
24	14	2699	C	C6-N1-C2	8.59	123.74	120.30
1	1G	747	C	C6-N1-C2	8.59	123.74	120.30
1	1G	1502	A	C2-N3-C4	-8.58	106.31	110.60
24	14	1142(A)	A	N1-C2-N3	8.58	133.59	129.30
24	14	1284	A	N1-C6-N6	8.58	123.75	118.60
24	1H	528	A	C5-N7-C8	-8.57	99.61	103.90
24	14	613	U	C5-C4-O4	8.57	131.04	125.90
24	1H	676	A	N1-C2-N3	8.57	133.59	129.30
24	1H	2239	G	C6-C5-N7	-8.57	125.26	130.40
24	1H	1202	C	N1-C2-O2	-8.57	113.76	118.90
24	1H	587	C	N1-C2-O2	-8.56	113.76	118.90
24	14	845	G	C2-N3-C4	-8.56	107.62	111.90
24	1H	1299	G	N1-C6-O6	8.55	125.03	119.90
24	1H	1645	G	N1-C6-O6	-8.55	114.77	119.90
1	1G	1267	C	C2-N1-C1'	8.55	128.20	118.80
24	1H	1839	G	N9-C4-C5	-8.54	101.98	105.40
24	14	1616	A	O4'-C1'-N9	8.55	115.04	108.20
1	13	789	U	C4-C5-C6	8.54	124.83	119.70
24	1H	222	A	P-O3'-C3'	8.54	129.95	119.70
24	1H	982	C	OP1-P-O3'	8.54	123.99	105.20
24	14	2393	A	N1-C6-N6	8.54	123.72	118.60
24	14	2713	A	C6-C5-N7	-8.54	126.32	132.30
1	1G	623	C	C6-N1-C2	-8.53	116.89	120.30
24	1H	1193	G	C8-N9-C4	8.53	109.81	106.40
24	14	2058	A	C5-C6-N6	-8.53	116.88	123.70
24	1H	2041	U	O5'-P-OP1	-8.53	98.02	105.70
24	14	197	A	C4-C5-N7	8.53	114.97	110.70
24	1H	796	C	C2-N3-C4	-8.53	115.64	119.90
24	1H	1404	C	O5'-P-OP1	-8.52	98.03	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	690	G	N3-C4-C5	8.51	132.86	128.60
24	1H	628	G	O5'-P-OP1	-8.51	98.04	105.70
1	13	703	G	C6-C5-N7	-8.51	125.30	130.40
24	1H	1307	A	C5-C6-N6	-8.51	116.89	123.70
1	13	735	C	C6-N1-C2	-8.51	116.90	120.30
24	1H	613	U	N3-C2-O2	-8.50	116.25	122.20
24	1H	70	G	N3-C4-N9	8.50	131.10	126.00
25	1J	81	G	C6-C5-N7	-8.50	125.30	130.40
24	1H	811	U	N1-C2-N3	8.50	120.00	114.90
24	14	778	G	C5-C6-N1	-8.50	107.25	111.50
24	1H	1950	G	C5-C6-N1	-8.49	107.25	111.50
24	1H	837	C	C5-C4-N4	-8.48	114.26	120.20
24	1H	1981	A	N1-C6-N6	8.48	123.69	118.60
24	1H	2039	C	N3-C4-C5	-8.48	118.51	121.90
24	14	1559	G	N1-C6-O6	8.48	124.99	119.90
24	1H	805	G	C2-N3-C4	-8.48	107.66	111.90
1	1G	726	C	O5'-P-OP1	-8.48	98.07	105.70
24	1H	614	U	N3-C2-O2	-8.47	116.27	122.20
24	1H	596	G	N3-C2-N2	-8.47	113.97	119.90
24	1H	622	G	O5'-P-OP2	-8.47	98.08	105.70
1	1G	47	C	N1-C2-O2	-8.47	113.82	118.90
24	1H	2584	U	N3-C2-O2	-8.47	116.27	122.20
24	1H	1332	G	C4-N9-C1'	-8.46	115.51	126.50
24	1H	1806	C	O5'-P-OP2	-8.46	98.09	105.70
24	14	2688	U	C4-C5-C6	8.46	124.77	119.70
24	14	448	U	N3-C2-O2	-8.45	116.28	122.20
24	14	1772	G	C8-N9-C4	8.45	109.78	106.40
1	1G	768	A	C2-N3-C4	-8.45	106.38	110.60
24	14	676	A	C5-C6-N6	-8.45	116.94	123.70
24	14	2601	C	O5'-P-OP2	-8.44	98.10	105.70
24	14	1204	A	O4'-C1'-N9	8.44	114.95	108.20
24	1H	1800	C	O5'-P-OP2	8.43	120.82	110.70
24	14	679	C	C5-C6-N1	-8.43	116.78	121.00
24	14	1303	G	O5'-P-OP2	-8.43	98.11	105.70
24	1H	1373	A	N7-C8-N9	-8.42	109.59	113.80
24	1H	140	A	N3-C4-C5	8.42	132.69	126.80
24	1H	1990	C	C2-N3-C4	-8.42	115.69	119.90
24	1H	1939	U	N3-C4-C5	8.42	119.65	114.60
24	14	1991	U	C5-C4-O4	8.42	130.95	125.90
24	1H	730	C	C2-N3-C4	-8.41	115.69	119.90
24	1H	200	U	O5'-P-OP1	-8.41	98.13	105.70
24	1H	1264	G	C8-N9-C4	-8.41	103.04	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1786	A	N1-C6-N6	8.41	123.64	118.60
24	1H	2387	U	OP2-P-O3'	8.40	123.68	105.20
24	1H	2000	G	OP1-P-OP2	-8.40	107.00	119.60
24	1H	1300	U	N1-C2-N3	8.39	119.94	114.90
1	13	18	C	O5'-P-OP2	8.39	120.77	110.70
1	13	251	G	N1-C6-O6	8.39	124.93	119.90
24	1H	197	A	N1-C2-N3	8.39	133.50	129.30
24	14	448	U	C5-C6-N1	-8.39	118.50	122.70
24	1H	2507	C	N1-C2-O2	8.39	123.93	118.90
24	14	2087	G	C8-N9-C4	8.38	109.75	106.40
24	1H	508	G	N1-C6-O6	8.38	124.93	119.90
24	1H	2542	A	O5'-P-OP1	-8.38	98.16	105.70
24	1H	946	G	N7-C8-N9	-8.37	108.91	113.10
24	14	2518	A	N1-C6-N6	8.37	123.62	118.60
24	14	856	C	C6-N1-C2	-8.37	116.95	120.30
1	13	900	A	C5-C6-N6	-8.36	117.01	123.70
24	1H	508	G	C6-C5-N7	-8.36	125.38	130.40
24	14	445	C	O5'-P-OP2	-8.36	98.17	105.70
24	14	1349	A	C2-N3-C4	-8.36	106.42	110.60
24	1H	323	G	O5'-P-OP1	-8.36	98.18	105.70
24	1H	946	G	C8-N9-C4	8.36	109.74	106.40
24	1H	2056	G	C5-N7-C8	8.35	108.48	104.30
24	14	2374	C	C2-N3-C4	-8.35	115.72	119.90
24	14	1437	C	C6-N1-C2	-8.35	116.96	120.30
1	13	758	G	N1-C6-O6	8.34	124.91	119.90
24	1H	692	C	N3-C4-C5	8.34	125.24	121.90
24	1H	1379	A	N1-C6-N6	8.34	123.61	118.60
24	1H	382	G	C5-C6-O6	-8.34	123.60	128.60
24	1H	786	C	N3-C4-N4	-8.34	112.17	118.00
24	14	691	C	C5-C6-N1	-8.33	116.83	121.00
1	13	251	G	C5-C6-O6	-8.33	123.60	128.60
24	1H	115	C	O5'-P-OP1	-8.32	98.21	105.70
24	1H	673	C	C5-C4-N4	-8.32	114.37	120.20
24	1H	1332	G	C5-C6-N1	-8.32	107.34	111.50
24	14	2505	G	C5-C6-O6	8.32	133.59	128.60
24	14	1614	A	C2-N3-C4	-8.32	106.44	110.60
1	13	833	U	O5'-P-OP2	-8.32	98.21	105.70
24	14	2700	C	C5-C6-N1	-8.32	116.84	121.00
24	14	623	G	C5-C6-O6	-8.32	123.61	128.60
24	1H	349	G	N1-C6-O6	8.31	124.88	119.90
24	1H	2325	G	N3-C4-C5	-8.31	124.45	128.60
24	1H	729	G	C6-C5-N7	-8.30	125.42	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	797	C	C4-C5-C6	8.30	121.55	117.40
24	1H	839	U	C5-C6-N1	-8.30	118.55	122.70
24	14	2569	G	O5'-P-OP2	-8.30	98.23	105.70
24	1H	2490	G	C2-N3-C4	-8.29	107.75	111.90
24	14	1678	G	C4-C5-N7	8.29	114.12	110.80
24	14	122	G	C8-N9-C4	8.29	109.72	106.40
24	1H	2239	G	C4-C5-N7	8.28	114.11	110.80
24	1H	604	G	O5'-P-OP1	-8.28	98.25	105.70
1	1G	911	U	C5-C4-O4	8.28	130.87	125.90
1	1G	1433	A	O5'-P-OP1	-8.28	98.25	105.70
24	14	541	C	C6-N1-C2	-8.28	116.99	120.30
24	1H	672	C	O5'-P-OP2	-8.28	98.25	105.70
1	13	789	U	C5-C4-O4	8.27	130.86	125.90
24	1H	62	C	C6-N1-C2	8.27	123.61	120.30
1	13	766	A	C8-N9-C4	8.27	109.11	105.80
24	1H	1204	A	C6-C5-N7	-8.27	126.51	132.30
24	1H	1982	C	O5'-P-OP2	-8.27	98.26	105.70
24	14	2064	C	O5'-P-OP2	-8.27	98.26	105.70
24	14	2726	U	N3-C2-O2	-8.27	116.41	122.20
24	14	2019	A	C8-N9-C4	8.26	109.11	105.80
24	14	1630(A)	C	C6-N1-C2	8.26	123.60	120.30
24	1H	1327	C	O5'-P-OP2	-8.26	98.27	105.70
24	14	140	A	C4-C5-N7	8.25	114.83	110.70
24	14	453	C	N1-C2-O2	-8.25	113.95	118.90
1	1G	328	C	C5-C6-N1	8.25	125.12	121.00
24	14	203	C	N3-C2-O2	8.25	127.67	121.90
24	1H	609	A	N1-C6-N6	8.24	123.55	118.60
24	1H	2035	G	C8-N9-C4	-8.24	103.10	106.40
24	14	1790	C	N1-C2-O2	-8.24	113.95	118.90
24	14	1342	A	N7-C8-N9	8.24	117.92	113.80
24	14	727	A	O5'-P-OP1	-8.24	98.29	105.70
24	14	1698	A	N3-C4-N9	-8.23	120.81	127.40
24	1H	1771	C	C5-C6-N1	-8.23	116.88	121.00
24	1H	1968	G	C5-C6-N1	8.23	115.62	111.50
24	1H	2518	A	C4-C5-N7	8.23	114.81	110.70
24	14	140	A	C2-N3-C4	-8.22	106.49	110.60
1	1G	345	C	C6-N1-C2	-8.22	117.01	120.30
24	1H	803	U	C5-C6-N1	-8.22	118.59	122.70
24	1H	1257	C	C4-C5-C6	8.22	121.51	117.40
24	14	1616	A	N3-C4-C5	8.22	132.55	126.80
24	14	2552	U	C5-C6-N1	-8.21	118.59	122.70
24	14	2503	A	N1-C2-N3	-8.21	125.19	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	973	A	C2-N3-C4	-8.21	106.50	110.60
24	1H	443	A	O5'-P-OP2	-8.20	98.32	105.70
24	1H	2057	A	C8-N9-C4	8.20	109.08	105.80
24	1H	1201	C	C5-C4-N4	-8.19	114.47	120.20
24	1H	2830	G	C8-N9-C4	-8.19	103.12	106.40
24	1H	481	G	O5'-P-OP2	-8.19	98.33	105.70
1	1G	668	G	N1-C6-O6	8.19	124.81	119.90
24	1H	1989	G	N1-C6-O6	8.19	124.81	119.90
24	14	192	C	C2-N3-C4	8.19	123.99	119.90
24	14	808	G	O5'-P-OP2	-8.18	98.34	105.70
24	1H	828	U	N3-C4-O4	-8.18	113.67	119.40
24	1H	2060	A	N9-C4-C5	8.18	109.07	105.80
1	1G	1414	U	N3-C4-C5	-8.18	109.69	114.60
24	1H	125	G	O4'-C1'-N9	-8.17	101.66	108.20
24	14	1899	G	C5-C6-O6	8.17	133.50	128.60
24	1H	682	G	C8-N9-C1'	-8.17	116.38	127.00
24	14	778	G	C5-C6-O6	8.17	133.50	128.60
24	1H	1312	U	O5'-P-OP1	-8.17	98.35	105.70
24	1H	1968	G	N1-C6-O6	-8.16	115.00	119.90
24	14	189	G	C8-N9-C4	8.16	109.67	106.40
24	14	2056	G	N9-C4-C5	-8.16	102.14	105.40
24	1H	750	A	OP2-P-O3'	8.16	123.15	105.20
24	1H	2502	G	O5'-P-OP2	-8.16	98.36	105.70
24	14	74	A	C6-C5-N7	-8.16	126.59	132.30
24	1H	698	C	C6-N1-C2	8.15	123.56	120.30
24	14	530	G	N7-C8-N9	8.15	117.18	113.10
24	14	2689	U	C2-N1-C1'	-8.15	107.92	117.70
24	14	621	A	C6-C5-N7	-8.15	126.60	132.30
24	14	696	G	C5-C6-N1	8.15	115.57	111.50
24	14	847	U	C2-N1-C1'	-8.15	107.92	117.70
24	1H	795	C	C5-C6-N1	-8.14	116.93	121.00
24	14	1899	G	C4-N9-C1'	8.13	137.07	126.50
24	14	2497	A	C8-N9-C4	8.13	109.05	105.80
24	1H	790	C	N3-C2-O2	8.13	127.59	121.90
24	1H	124	G	C5-C6-O6	-8.13	123.72	128.60
24	1H	863	A	C8-N9-C4	8.12	109.05	105.80
24	1H	930	U	N3-C2-O2	-8.12	116.51	122.20
1	1G	322	C	C6-N1-C2	8.12	123.55	120.30
24	14	1342	A	C5-N7-C8	-8.12	99.84	103.90
24	1H	772	C	N3-C4-C5	-8.12	118.65	121.90
24	14	847	U	C5-C6-N1	-8.12	118.64	122.70
24	1H	1261	C	C5-C6-N1	-8.12	116.94	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	837	C	N3-C4-N4	8.11	123.68	118.00
24	14	1327	C	N1-C2-O2	-8.11	114.03	118.90
24	1H	832	G	C5-C6-N1	-8.11	107.44	111.50
24	14	453	C	C6-N1-C2	8.11	123.54	120.30
24	1H	1899	G	N1-C2-N2	8.11	123.50	116.20
24	1H	213	A	C5-C6-N6	-8.10	117.22	123.70
24	1H	746	A	C5-N7-C8	-8.10	99.85	103.90
24	1H	1698	A	N1-C2-N3	8.10	133.35	129.30
1	13	694	A	O5'-P-OP2	8.10	120.42	110.70
24	1H	529	A	N1-C6-N6	8.09	123.45	118.60
24	14	1210	A	N1-C6-N6	8.09	123.45	118.60
24	1H	2515	C	N3-C4-C5	8.09	125.14	121.90
24	14	936	C	C6-N1-C2	8.09	123.53	120.30
24	1H	1379	A	C6-C5-N7	-8.08	126.64	132.30
24	1H	1427	A	N9-C4-C5	8.08	109.03	105.80
24	1H	210	C	C2-N3-C4	-8.08	115.86	119.90
24	1H	621	A	C6-C5-N7	-8.08	126.64	132.30
24	1H	788	A	N9-C4-C5	-8.07	102.57	105.80
25	1J	48	A	O5'-P-OP2	8.07	120.39	110.70
24	1H	540	G	C5-C6-O6	-8.07	123.76	128.60
24	1H	621	A	C5-N7-C8	-8.06	99.87	103.90
24	1H	1792	G	N7-C8-N9	-8.06	109.07	113.10
24	1H	2032	G	C2-N3-C4	-8.06	107.87	111.90
24	1H	115	C	N3-C2-O2	8.06	127.54	121.90
1	1G	481	G	C8-N9-C1'	-8.06	116.52	127.00
24	14	1241	A	C6-N1-C2	8.06	123.43	118.60
24	14	2829	C	N3-C4-C5	8.05	125.12	121.90
24	14	693	C	C5-C6-N1	-8.05	116.97	121.00
24	1H	909	A	C8-N9-C4	8.04	109.02	105.80
24	1H	1349	A	N1-C6-N6	8.04	123.43	118.60
24	14	329	G	C5-C6-N1	8.05	115.52	111.50
24	1H	1637	A	C8-N9-C4	-8.04	102.58	105.80
24	14	2591	C	O5'-P-OP2	-8.04	98.46	105.70
24	14	130	C	C5-C4-N4	-8.03	114.58	120.20
24	1H	630	G	N7-C8-N9	-8.03	109.09	113.10
24	1H	783	A	N3-C4-N9	-8.03	120.98	127.40
1	13	789	U	N3-C2-O2	-8.02	116.58	122.20
24	1H	2710	C	C6-N1-C2	8.02	123.51	120.30
24	14	1950	G	C5-C6-N1	-8.02	107.49	111.50
24	14	1782	C	C5-C4-N4	-8.02	114.59	120.20
24	14	786	C	N3-C4-C5	8.01	125.11	121.90
24	14	2000	G	O5'-P-OP2	-8.01	98.49	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1299	G	O5'-P-OP2	8.01	120.31	110.70
24	1H	330	A	N1-C6-N6	8.01	123.41	118.60
24	1H	955	C	N1-C2-O2	-8.01	114.09	118.90
24	14	1332	G	C8-N9-C1'	8.01	137.41	127.00
24	14	1786	A	N1-C6-N6	8.01	123.41	118.60
24	1H	974(A)	C	N3-C2-O2	-8.01	116.30	121.90
24	1H	330	A	C6-C5-N7	-8.01	126.70	132.30
1	1G	1200	C	C6-N1-C1'	-8.01	111.19	120.80
24	14	1821	A	C6-N1-C2	-8.01	113.80	118.60
24	14	1950	G	C4-C5-N7	8.01	114.00	110.80
1	1G	288	A	O5'-P-OP2	-8.00	98.50	105.70
1	1G	1524	C	O5'-P-OP1	-8.00	98.50	105.70
25	16	81	G	C6-C5-N7	-8.00	125.60	130.40
24	1H	382	G	N1-C6-O6	8.00	124.70	119.90
24	14	1760	A	N9-C4-C5	8.00	109.00	105.80
1	13	749	C	C2-N1-C1'	7.99	127.59	118.80
24	1H	705	A	N1-C6-N6	7.99	123.39	118.60
24	14	1783	A	C5-N7-C8	-7.99	99.91	103.90
24	1H	465	G	N3-C2-N2	7.99	125.49	119.90
1	1G	481	G	C4-N9-C1'	7.99	136.88	126.50
1	13	1513	A	N1-C6-N6	7.98	123.39	118.60
1	13	1513	A	C5-C6-N6	-7.98	117.31	123.70
24	14	827	U	O5'-P-OP2	-7.98	98.52	105.70
24	14	1142(A)	A	C2-N3-C4	-7.98	106.61	110.60
24	1H	1989	G	N3-C2-N2	-7.98	114.31	119.90
1	1G	760	G	O5'-P-OP2	-7.98	98.52	105.70
24	14	1675	C	O5'-P-OP2	7.98	120.28	110.70
24	1H	794	G	C5-N7-C8	7.98	108.29	104.30
24	1H	2008	C	O5'-P-OP1	7.98	120.27	110.70
24	1H	1528	A	N7-C8-N9	7.98	117.79	113.80
24	1H	1967	C	O5'-P-OP2	-7.98	98.52	105.70
1	1G	505	G	O5'-P-OP2	7.98	120.27	110.70
24	14	1200	C	N1-C2-O2	-7.97	114.12	118.90
25	16	60	C	C5-C6-N1	7.97	124.99	121.00
24	1H	444	C	C2-N3-C4	-7.97	115.92	119.90
1	13	725	G	O5'-P-OP1	-7.96	98.53	105.70
24	1H	2048	G	C4-C5-N7	-7.96	107.61	110.80
24	14	1620	G	OP1-P-O3'	7.96	122.72	105.20
24	14	1839	G	O5'-P-OP2	-7.96	98.53	105.70
24	14	1950	G	O4'-C1'-N9	7.96	114.57	108.20
1	13	121	C	C2-N1-C1'	7.96	127.56	118.80
24	1H	1678	G	N3-C4-N9	-7.96	121.22	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1816	G	N1-C6-O6	-7.96	115.12	119.90
24	1H	1210	A	C6-C5-N7	-7.96	126.73	132.30
24	14	582	G	N1-C6-O6	7.96	124.67	119.90
24	14	734	A	N1-C6-N6	-7.96	113.83	118.60
24	1H	862	G	N1-C6-O6	-7.95	115.13	119.90
24	14	2544	G	N3-C2-N2	-7.95	114.33	119.90
24	1H	1219	G	C5-C6-O6	-7.95	123.83	128.60
24	14	735	A	N1-C6-N6	7.95	123.37	118.60
24	1H	1637	A	N9-C4-C5	7.95	108.98	105.80
24	14	2859	G	C8-N9-C4	-7.95	103.22	106.40
24	14	2439	A	P-O3'-C3'	7.95	129.24	119.70
24	1H	1331	A	N1-C2-N3	7.95	133.27	129.30
24	1H	451	C	C6-N1-C2	7.95	123.48	120.30
24	14	265	A	C2-N3-C4	-7.95	106.63	110.60
24	14	2576	G	C8-N9-C4	7.95	109.58	106.40
1	13	1502	A	C4-C5-N7	7.94	114.67	110.70
1	13	900	A	O5'-P-OP2	7.94	120.23	110.70
1	13	1502	A	C6-C5-N7	-7.94	126.74	132.30
24	1H	1185	C	O5'-P-OP2	-7.94	98.55	105.70
24	1H	1132	A	O5'-P-OP2	-7.94	98.55	105.70
1	1G	309	G	C5-C6-O6	-7.93	123.84	128.60
1	1G	1354	C	C5-C6-N1	7.93	124.97	121.00
24	14	676	A	N3-C4-N9	-7.93	121.05	127.40
24	14	845	G	N3-C4-C5	7.93	132.57	128.60
24	14	2436	G	N1-C2-N2	7.93	123.34	116.20
24	1H	2282	G	O5'-P-OP1	-7.93	98.56	105.70
24	1H	1332	G	C4-C5-N7	7.93	113.97	110.80
24	14	830	G	C8-N9-C4	7.93	109.57	106.40
24	1H	2721	A	N1-C6-N6	7.92	123.35	118.60
1	13	1404	C	N3-C4-C5	7.92	125.07	121.90
24	1H	2438	U	C5-C6-N1	-7.92	118.74	122.70
24	1H	2888	C	O5'-P-OP1	-7.92	98.57	105.70
24	14	602	G	N9-C4-C5	-7.92	102.23	105.40
24	14	1782	C	OP1-P-O3'	7.92	122.62	105.20
24	14	186	G	N7-C8-N9	-7.92	109.14	113.10
1	13	703	G	N1-C6-O6	7.91	124.65	119.90
24	1H	2329	G	N7-C8-N9	-7.91	109.14	113.10
24	1H	1604	C	N3-C2-O2	7.91	127.44	121.90
24	14	987	G	C6-C5-N7	7.91	135.15	130.40
24	1H	1558	A	C2-N3-C4	-7.90	106.65	110.60
24	14	2342	C	N3-C2-O2	-7.90	116.37	121.90
24	1H	2033	A	C5-C6-N1	7.89	121.65	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	895	G	N3-C4-N9	-7.89	121.27	126.00
24	1H	491	G	O5'-P-OP1	-7.89	98.60	105.70
24	1H	1307	A	N9-C4-C5	-7.89	102.64	105.80
24	1H	2818	G	C2-N3-C4	-7.89	107.95	111.90
24	1H	2417	C	N1-C2-O2	-7.89	114.17	118.90
24	14	186	G	C8-N9-C4	7.89	109.56	106.40
1	1G	122	G	O5'-P-OP1	-7.89	98.60	105.70
24	14	1579	A	N1-C6-N6	7.89	123.33	118.60
24	1H	1616	A	C5-C6-N1	-7.88	113.76	117.70
1	1G	244	U	O5'-P-OP1	-7.88	98.61	105.70
24	14	2522	U	C6-N1-C2	7.88	125.73	121.00
1	13	571	U	O5'-P-OP2	7.88	120.16	110.70
24	1H	1614	A	C5-C6-N1	-7.88	113.76	117.70
24	14	133	C	N3-C4-C5	7.87	125.05	121.90
24	14	2502	G	N3-C4-N9	7.87	130.72	126.00
24	14	1621	U	O5'-P-OP2	7.86	120.13	110.70
24	1H	1600	C	O5'-P-OP2	-7.86	98.63	105.70
24	14	2512	C	N3-C4-C5	7.86	125.04	121.90
24	14	197	A	OP2-P-O3'	7.86	122.48	105.20
24	1H	1812	A	O5'-P-OP2	-7.85	98.63	105.70
24	14	1760	A	N1-C6-N6	-7.85	113.89	118.60
24	14	1846	G	N1-C6-O6	7.85	124.61	119.90
24	14	2518	A	C4-C5-N7	7.85	114.63	110.70
24	1H	1950	G	O4'-C1'-N9	7.85	114.48	108.20
1	13	14	U	O5'-P-OP1	-7.85	98.64	105.70
24	14	2338	G	O5'-P-OP1	-7.85	98.64	105.70
24	1H	1241	A	N3-C4-C5	7.85	132.29	126.80
24	14	2592	G	N1-C6-O6	7.84	124.61	119.90
24	14	933	A	C4-C5-N7	7.84	114.62	110.70
24	1H	2490	G	N3-C4-N9	-7.83	121.30	126.00
24	1H	2073	C	OP1-P-OP2	-7.83	107.85	119.60
24	1H	1786	A	N3-C4-N9	-7.83	121.13	127.40
1	1G	1279	A	N7-C8-N9	7.83	117.72	113.80
1	1G	1301	U	C2-N1-C1'	7.83	127.09	117.70
24	14	782	A	C8-N9-C4	7.83	108.93	105.80
24	1H	939	G	O5'-P-OP2	-7.82	98.66	105.70
1	13	328	C	O5'-P-OP1	-7.82	98.66	105.70
1	1G	25	C	O5'-P-OP2	-7.82	98.66	105.70
24	14	2360	A	N1-C6-N6	7.82	123.29	118.60
24	14	630	G	N7-C8-N9	-7.82	109.19	113.10
24	1H	259	G	N1-C6-O6	7.81	124.59	119.90
24	14	1953	A	O5'-P-OP2	7.81	120.08	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	288	C	N1-C2-O2	7.81	123.58	118.90
24	14	968	G	N9-C4-C5	-7.81	102.28	105.40
24	14	2542	A	N1-C6-N6	7.80	123.28	118.60
24	1H	2280	G	OP1-P-O3'	7.80	122.36	105.20
1	1G	972	C	C6-N1-C2	-7.80	117.18	120.30
24	14	847	U	C5-C4-O4	7.80	130.58	125.90
24	1H	621	A	C5-C6-N1	-7.80	113.80	117.70
1	1G	1401	G	O5'-P-OP2	-7.80	98.68	105.70
24	1H	1839	G	C4-C5-N7	7.80	113.92	110.80
24	14	694	U	N3-C2-O2	-7.80	116.74	122.20
24	1H	794	G	N1-C6-O6	-7.79	115.22	119.90
24	14	2542	A	N1-C2-N3	7.79	133.19	129.30
24	1H	2579	C	O5'-P-OP2	-7.79	98.69	105.70
24	1H	2888	C	C6-N1-C2	-7.79	117.19	120.30
1	13	1502	A	N1-C2-N3	7.79	133.19	129.30
24	1H	2331	G	C5-N7-C8	-7.79	100.41	104.30
24	14	2502	G	N1-C2-N2	-7.79	109.19	116.20
24	14	2587	A	N1-C6-N6	7.78	123.27	118.60
24	14	1427	A	P-O3'-C3'	7.78	129.04	119.70
24	1H	689	A	N1-C6-N6	7.78	123.27	118.60
24	14	834	C	C4-C5-C6	7.78	121.29	117.40
24	14	630	G	C8-N9-C4	7.78	109.51	106.40
1	13	733	A	N9-C4-C5	-7.78	102.69	105.80
24	1H	1210	A	N3-C4-C5	7.78	132.24	126.80
24	1H	1299	G	C5-C6-O6	-7.78	123.93	128.60
24	1H	1665	A	O5'-P-OP1	-7.78	98.70	105.70
1	13	897	C	C5-C6-N1	-7.77	117.11	121.00
24	14	530	G	C2-N3-C4	-7.77	108.01	111.90
24	14	766	C	N1-C2-O2	-7.77	114.24	118.90
24	1H	72	U	C2-N3-C4	-7.76	122.34	127.00
24	1H	529	A	C5-N7-C8	-7.76	100.02	103.90
24	1H	2856	C	C6-N1-C2	-7.76	117.19	120.30
24	1H	1332	G	N9-C4-C5	7.76	108.50	105.40
24	14	795	C	C6-N1-C2	7.76	123.40	120.30
36	88	87	LYS	N-CA-C	-7.76	90.06	111.00
24	1H	2526	G	O5'-P-OP2	7.75	120.00	110.70
24	1H	2617	C	C4-C5-C6	7.75	121.28	117.40
24	14	2503	A	C2-N3-C4	7.75	114.48	110.60
1	13	1403	C	C5-C6-N1	-7.75	117.12	121.00
24	1H	961	C	O5'-P-OP1	-7.75	98.73	105.70
1	13	503	C	C6-N1-C2	-7.75	117.20	120.30
24	1H	213	A	N1-C6-N6	7.75	123.25	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	668	G	OP2-P-O3'	-7.75	88.16	105.20
24	1H	1742	C	C5-C6-N1	7.74	124.87	121.00
24	1H	76	C	C6-N1-C2	-7.74	117.20	120.30
24	1H	130	C	C5-C6-N1	-7.74	117.13	121.00
24	1H	2008	C	O5'-P-OP2	-7.74	98.73	105.70
1	1G	1504	G	O5'-P-OP1	-7.74	98.74	105.70
24	14	2352	A	C8-N9-C4	7.74	108.90	105.80
24	14	1299	G	O5'-P-OP1	-7.74	98.74	105.70
24	14	1770	G	N1-C6-O6	7.74	124.54	119.90
24	1H	2477	C	O4'-C1'-N1	7.73	114.39	108.20
24	1H	566	U	C5-C4-O4	-7.73	121.26	125.90
24	1H	1122	G	C5-C6-O6	-7.73	123.96	128.60
24	14	57	C	C6-N1-C2	7.73	123.39	120.30
24	14	2058	A	N1-C6-N6	7.73	123.24	118.60
24	1H	187	G	O5'-P-OP1	-7.72	98.75	105.70
24	1H	784	A	N1-C6-N6	-7.72	113.97	118.60
24	14	621	A	O5'-P-OP1	-7.72	98.75	105.70
24	14	774	A	C5-C6-N1	-7.72	113.84	117.70
1	1G	1346	A	P-O3'-C3'	7.72	128.96	119.70
25	1J	74	U	N1-C2-O2	-7.72	117.40	122.80
24	1H	606	U	C5-C4-O4	7.71	130.53	125.90
24	14	1620	G	C8-N9-C4	-7.71	103.31	106.40
24	1H	755	C	N1-C2-O2	-7.71	114.27	118.90
1	13	1530	G	N3-C4-C5	7.71	132.45	128.60
24	1H	2239	G	N1-C6-O6	7.71	124.53	119.90
24	14	2595	G	C4-N9-C1'	-7.71	116.48	126.50
24	1H	1632	A	C5-C6-N6	-7.71	117.53	123.70
24	1H	2558	C	C5-C6-N1	-7.71	117.15	121.00
24	1H	1790	C	N1-C2-O2	-7.71	114.28	118.90
24	1H	786	C	C5-C4-N4	7.70	125.59	120.20
24	1H	979	G	N3-C4-N9	-7.70	121.38	126.00
24	1H	1241	A	C2-N3-C4	-7.70	106.75	110.60
1	1G	34	C	C6-N1-C2	7.70	123.38	120.30
24	1H	459	U	O5'-P-OP2	-7.70	98.77	105.70
24	14	2813	A	C8-N9-C4	-7.70	102.72	105.80
25	1J	16	G	N1-C6-O6	7.70	124.52	119.90
24	1H	1819	A	N1-C6-N6	7.70	123.22	118.60
24	1H	2685	G	C5-C6-N1	-7.70	107.65	111.50
24	14	587	C	O5'-P-OP1	-7.70	98.77	105.70
24	1H	1021	A	N3-C4-C5	7.70	132.19	126.80
24	14	801	G	O5'-P-OP2	-7.70	98.78	105.70
24	14	1616	A	N1-C2-N3	-7.70	125.45	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2261	C	O5'-P-OP1	7.69	119.93	110.70
24	14	1366	A	N1-C6-N6	7.69	123.22	118.60
24	1H	1771	C	C2-N3-C4	-7.69	116.05	119.90
24	14	1783	A	C5-C6-N6	-7.69	117.55	123.70
1	13	925	G	O5'-P-OP2	-7.69	98.78	105.70
24	1H	453	C	C5-C4-N4	-7.69	114.82	120.20
24	1H	1217	C	N1-C2-O2	-7.69	114.29	118.90
1	1G	668	G	C5-C6-O6	-7.69	123.99	128.60
1	13	1530	G	N3-C4-N9	-7.68	121.39	126.00
24	1H	1441	G	C8-N9-C4	7.68	109.47	106.40
24	1H	2726	U	N3-C4-O4	-7.68	114.02	119.40
24	14	2857	G	N9-C4-C5	-7.68	102.33	105.40
24	1H	697	C	N3-C2-O2	7.68	127.28	121.90
24	1H	1670	C	N3-C4-C5	-7.68	118.83	121.90
24	14	971	C	C6-N1-C2	-7.68	117.23	120.30
1	1G	1354	C	C6-N1-C2	-7.68	117.23	120.30
24	14	1022	G	N9-C4-C5	7.68	108.47	105.40
24	14	2498	C	C5-C6-N1	-7.68	117.16	121.00
1	1G	1404	C	N3-C4-C5	7.68	124.97	121.90
24	1H	2232	U	N3-C4-C5	-7.67	110.00	114.60
24	14	2688	U	N1-C2-N3	7.67	119.50	114.90
24	1H	621	A	C8-N9-C4	-7.67	102.73	105.80
1	13	900	A	N1-C6-N6	7.67	123.20	118.60
24	1H	1934	C	C6-N1-C2	7.67	123.37	120.30
24	1H	1976	U	N3-C2-O2	-7.67	116.83	122.20
24	1H	1930	G	O5'-P-OP1	-7.67	98.80	105.70
24	1H	2824	C	C6-N1-C2	7.66	123.37	120.30
24	14	583	G	N1-C6-O6	7.66	124.50	119.90
24	1H	2084	C	C5-C6-N1	-7.66	117.17	121.00
24	14	2430	A	C4-C5-N7	7.66	114.53	110.70
24	1H	2717	G	N3-C4-C5	-7.66	124.77	128.60
24	14	965	C	C6-N1-C2	-7.66	117.24	120.30
24	14	2401	U	N1-C2-O2	-7.66	117.44	122.80
24	1H	2506	U	P-O3'-C3'	7.66	128.89	119.70
24	14	2380	C	C2-N3-C4	-7.66	116.07	119.90
24	14	2639	A	N1-C6-N6	7.66	123.20	118.60
24	14	694	U	N1-C2-O2	7.66	128.16	122.80
1	1G	1344	C	C6-N1-C2	-7.66	117.24	120.30
24	1H	2429	G	O5'-P-OP1	7.65	119.89	110.70
24	1H	128	C	C6-N1-C2	7.65	123.36	120.30
24	14	130	C	N3-C4-C5	7.65	124.96	121.90
24	1H	1366	A	C2-N3-C4	-7.65	106.78	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2518	A	C5-C6-N1	-7.65	113.88	117.70
24	14	786	C	C6-N1-C2	7.64	123.36	120.30
24	1H	253	C	O5'-P-OP1	-7.64	98.82	105.70
24	1H	1390	U	OP1-P-O3'	7.64	122.01	105.20
36	45	62	GLY	N-CA-C	-7.64	94.00	113.10
24	1H	2381	C	C5-C6-N1	-7.64	117.18	121.00
24	14	1899	G	N7-C8-N9	7.64	116.92	113.10
24	1H	115	C	C5-C4-N4	-7.64	114.85	120.20
24	14	864	G	C8-N9-C4	-7.64	103.35	106.40
24	14	2430	A	C5-N7-C8	-7.63	100.08	103.90
24	1H	697	C	C5-C4-N4	-7.63	114.86	120.20
24	1H	1939	U	C4-C5-C6	-7.63	115.12	119.70
24	1H	1994	C	N3-C4-C5	-7.63	118.85	121.90
24	14	933	A	N1-C6-N6	7.63	123.18	118.60
24	1H	141	A	N3-C4-C5	7.62	132.14	126.80
1	1G	690	G	O4'-C1'-N9	7.62	114.30	108.20
24	14	1029	A	O5'-P-OP2	-7.62	98.84	105.70
24	14	1618	A	N1-C6-N6	-7.62	114.03	118.60
24	14	1558	A	N1-C6-N6	7.62	123.17	118.60
24	1H	792	G	O5'-P-OP2	-7.62	98.84	105.70
1	1G	950	U	O5'-P-OP2	7.62	119.84	110.70
24	1H	1802	A	O5'-P-OP1	-7.62	98.84	105.70
24	1H	2331	G	N9-C4-C5	-7.62	102.35	105.40
1	1G	530	G	N3-C4-C5	7.62	132.41	128.60
1	1G	1267	C	C6-N1-C2	-7.61	117.25	120.30
24	14	676	A	C8-N9-C4	-7.61	102.75	105.80
24	1H	1528	A	C5-N7-C8	-7.61	100.09	103.90
24	14	2441	C	C6-N1-C2	7.61	123.34	120.30
24	14	621	A	N3-C4-C5	7.61	132.12	126.80
1	13	266	G	C5-N7-C8	-7.61	100.50	104.30
24	1H	540	G	N1-C6-O6	7.61	124.46	119.90
24	1H	729	G	C8-N9-C4	-7.61	103.36	106.40
24	14	815	C	OP2-P-O3'	7.61	121.93	105.20
24	14	845	G	N3-C4-N9	-7.60	121.44	126.00
24	14	2518	A	N3-C4-N9	-7.60	121.32	127.40
24	1H	1251	C	C5-C4-N4	-7.60	114.88	120.20
24	1H	2032	G	C5-C6-N1	-7.60	107.70	111.50
24	1H	2067	G	N9-C4-C5	7.60	108.44	105.40
24	14	1681	G	C5-C6-O6	-7.60	124.04	128.60
24	1H	1611	C	C2-N3-C4	-7.59	116.10	119.90
24	1H	2565	A	C8-N9-C4	7.59	108.84	105.80
24	14	1314	C	C5-C6-N1	7.59	124.80	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	107	G	C8-N9-C4	7.59	109.44	106.40
1	13	1403	C	C2-N1-C1'	-7.59	110.45	118.80
1	1G	197	A	P-O3'-C3'	7.59	128.81	119.70
24	14	602	G	N3-C4-N9	7.59	130.55	126.00
24	1H	843	G	C5-C6-O6	-7.59	124.05	128.60
24	1H	1228	G	N3-C2-N2	-7.59	114.59	119.90
1	1G	150	C	C6-N1-C2	-7.59	117.27	120.30
1	13	503	C	O5'-P-OP1	-7.59	98.87	105.70
1	13	690	G	C5-C6-N1	-7.58	107.71	111.50
24	14	693	C	C6-N1-C2	7.58	123.33	120.30
24	14	2683	C	N3-C4-C5	-7.58	118.87	121.90
24	14	2682	U	N1-C2-O2	-7.58	117.49	122.80
24	1H	746	A	N9-C4-C5	7.58	108.83	105.80
24	1H	1693	U	N3-C2-O2	-7.58	116.89	122.20
1	1G	913	A	C8-N9-C4	-7.58	102.77	105.80
24	14	2429	G	O5'-P-OP1	7.58	119.79	110.70
24	14	1779	U	C2-N1-C1'	7.58	126.79	117.70
24	14	1939	U	C2-N3-C4	-7.58	122.45	127.00
24	14	140	A	N3-C4-C5	7.58	132.10	126.80
24	14	234	C	N1-C2-O2	7.58	123.45	118.90
2	1E	155	LEU	CA-CB-CG	7.57	132.72	115.30
24	1H	115	C	N3-C4-N4	7.57	123.30	118.00
24	1H	704	G	N3-C4-N9	-7.57	121.46	126.00
24	14	2377	A	C8-N9-C4	7.57	108.83	105.80
1	13	121	C	N3-C2-O2	-7.57	116.60	121.90
24	1H	2059	A	N1-C6-N6	7.57	123.14	118.60
24	14	675	A	C4-C5-N7	7.57	114.48	110.70
24	1H	2292	C	N1-C2-O2	7.57	123.44	118.90
24	14	214	G	O4'-C1'-N9	7.57	114.25	108.20
24	14	2644	G	N3-C4-N9	-7.57	121.46	126.00
24	1H	391	G	N1-C6-O6	7.56	124.44	119.90
24	1H	808	G	C5-C6-O6	7.56	133.14	128.60
24	1H	1964	G	C8-N9-C4	7.56	109.42	106.40
24	14	1838	C	O5'-P-OP1	-7.56	98.89	105.70
24	14	1332	G	C4-C5-N7	7.56	113.82	110.80
24	14	1894	C	N3-C4-C5	7.56	124.92	121.90
24	1H	2500	U	C5-C4-O4	-7.55	121.37	125.90
24	1H	739	G	O5'-P-OP1	-7.55	98.90	105.70
24	14	71	A	C4-C5-N7	7.55	114.48	110.70
24	14	450	G	C5-C6-O6	-7.55	124.07	128.60
24	1H	449	A	C8-N9-C4	7.55	108.82	105.80
24	14	74	A	N7-C8-N9	7.55	117.58	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	860	U	O5'-P-OP2	-7.55	98.91	105.70
24	14	1543	A	O5'-P-OP1	7.55	119.76	110.70
24	14	1698	A	C8-N9-C4	-7.55	102.78	105.80
24	14	2262	U	O5'-P-OP2	-7.55	98.91	105.70
24	14	1332	G	N1-C6-O6	7.55	124.43	119.90
24	1H	138	G	C8-N9-C4	-7.54	103.38	106.40
24	1H	1653	G	P-O3'-C3'	7.54	128.75	119.70
25	16	30	C	C6-N1-C2	-7.54	117.28	120.30
24	1H	2329	G	C8-N9-C4	7.54	109.42	106.40
1	1G	1499	A	C8-N9-C4	7.54	108.82	105.80
24	1H	1369	G	O5'-P-OP1	-7.54	98.92	105.70
24	1H	2293	C	C6-N1-C2	-7.53	117.29	120.30
1	1G	525	C	C5-C6-N1	7.53	124.77	121.00
24	14	329	G	O5'-P-OP2	-7.53	98.93	105.70
24	14	1313	U	C6-N1-C2	-7.53	116.48	121.00
24	14	1528	A	C5-N7-C8	-7.53	100.14	103.90
24	1H	2381	C	N3-C4-C5	7.53	124.91	121.90
24	1H	2562	U	C5-C6-N1	-7.53	118.94	122.70
24	14	2603	G	O5'-P-OP1	-7.52	98.93	105.70
24	1H	2346	A	N3-C4-N9	-7.52	121.38	127.40
1	1G	632	A	P-O3'-C3'	7.52	128.72	119.70
24	14	129	C	O5'-P-OP1	-7.52	98.93	105.70
24	1H	1251	C	N3-C4-N4	7.52	123.26	118.00
1	1G	309	G	N1-C6-O6	7.51	124.41	119.90
24	1H	2518	A	N1-C6-N6	7.51	123.11	118.60
24	14	1681	G	C6-C5-N7	-7.51	125.89	130.40
1	13	251	G	C4-C5-N7	7.51	113.80	110.80
24	14	2436	G	N1-C6-O6	7.51	124.41	119.90
1	13	1403	C	C6-N1-C2	7.51	123.30	120.30
24	1H	40	C	N1-C2-O2	-7.51	114.39	118.90
24	1H	683	C	C6-N1-C2	7.51	123.30	120.30
1	1G	1527	C	O5'-P-OP2	-7.51	98.94	105.70
1	13	18	C	O5'-P-OP1	-7.50	98.95	105.70
24	1H	1366	A	N1-C6-N6	7.50	123.10	118.60
24	1H	2554	U	N1-C2-O2	-7.50	117.55	122.80
24	1H	2437	U	C5-C4-O4	7.50	130.40	125.90
24	1H	330	A	N1-C2-N3	7.49	133.04	129.30
24	14	2755	C	C2-N1-C1'	7.49	127.04	118.80
24	14	2873	A	N1-C6-N6	7.49	123.09	118.60
24	14	1642	G	O5'-P-OP1	-7.49	98.96	105.70
24	1H	376	C	O5'-P-OP1	-7.48	98.97	105.70
24	1H	2503	A	C4-C5-N7	7.48	114.44	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	1475	G	C8-N9-C4	-7.48	103.41	106.40
24	1H	751	A	O5'-P-OP2	7.48	119.67	110.70
42	E8	23	LEU	CA-CB-CG	7.48	132.50	115.30
24	14	2838	G	N3-C2-N2	-7.48	114.67	119.90
24	1H	1265	A	O5'-P-OP2	7.47	119.67	110.70
24	1H	37	C	O5'-P-OP2	-7.47	98.97	105.70
24	1H	1008	C	C6-N1-C2	7.47	123.29	120.30
24	1H	2346	A	C5-C6-N1	-7.47	113.96	117.70
24	1H	2773	C	C4-C5-C6	7.47	121.14	117.40
1	13	576	G	C8-N9-C1'	-7.46	117.30	127.00
24	1H	329	G	O5'-P-OP2	-7.46	98.98	105.70
24	1H	458	G	N1-C6-O6	-7.46	115.42	119.90
24	1H	528	A	C5-C6-N1	-7.46	113.97	117.70
24	1H	2346	A	N3-C4-C5	7.46	132.03	126.80
24	14	2776	A	C8-N9-C4	-7.46	102.82	105.80
24	1H	2558	C	C6-N1-C2	7.46	123.28	120.30
1	1G	1203	C	C6-N1-C2	7.46	123.28	120.30
24	14	2857	G	N1-C6-O6	7.46	124.38	119.90
24	1H	621	A	N7-C8-N9	7.46	117.53	113.80
24	1H	781	A	C4-C5-C6	7.46	120.73	117.00
24	1H	729	G	C5-N7-C8	-7.46	100.57	104.30
24	1H	1368	G	N3-C4-C5	-7.45	124.87	128.60
24	1H	189	G	N1-C6-O6	7.45	124.37	119.90
24	1H	1964	G	N9-C4-C5	-7.45	102.42	105.40
24	14	2827	C	C6-N1-C2	7.45	123.28	120.30
24	1H	1161	C	O5'-P-OP2	7.45	119.64	110.70
1	13	866	C	C6-N1-C2	-7.45	117.32	120.30
24	1H	2626	C	C6-N1-C2	7.44	123.28	120.30
24	14	2430	A	N9-C4-C5	-7.44	102.83	105.80
1	13	911	U	C5-C6-N1	-7.44	118.98	122.70
24	1H	2569	G	O5'-P-OP2	-7.44	99.01	105.70
1	13	881	G	C8-N9-C4	7.43	109.37	106.40
24	14	2392	A	C2-N3-C4	-7.43	106.88	110.60
24	1H	1810	A	N1-C2-N3	-7.43	125.58	129.30
24	14	1241	A	C2-N3-C4	-7.43	106.88	110.60
24	14	2596	U	C2-N3-C4	-7.43	122.54	127.00
38	65	110	LEU	CA-CB-CG	7.43	132.39	115.30
1	13	897	C	C6-N1-C2	7.43	123.27	120.30
24	1H	1427	A	C8-N9-C4	-7.43	102.83	105.80
24	1H	2056	G	N7-C8-N9	-7.43	109.39	113.10
1	1G	1498	U	P-O3'-C3'	7.43	128.61	119.70
24	1H	2236	C	N1-C2-O2	-7.43	114.44	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2061	G	N3-C2-N2	7.42	125.10	119.90
24	1H	2258	C	C5-C4-N4	-7.42	115.00	120.20
24	1H	2732	G	C8-N9-C4	-7.42	103.43	106.40
24	14	383	U	C2-N1-C1'	-7.42	108.79	117.70
24	1H	2624	G	C5-C6-N1	7.42	115.21	111.50
24	14	1620	G	N9-C4-C5	7.42	108.37	105.40
24	1H	935	C	N3-C2-O2	7.42	127.09	121.90
24	1H	1395	A	O4'-C1'-N9	7.42	114.13	108.20
24	14	1663	C	C6-N1-C2	7.41	123.27	120.30
24	1H	74	A	C4-C5-N7	7.41	114.41	110.70
24	1H	1931	U	N1-C2-N3	7.41	119.35	114.90
24	14	2444	G	O5'-P-OP2	-7.41	99.03	105.70
24	1H	189	G	N7-C8-N9	-7.41	109.40	113.10
24	14	829	A	O5'-P-OP2	-7.41	99.03	105.70
24	1H	465	G	C8-N9-C4	7.41	109.36	106.40
1	13	1386	G	O5'-P-OP2	-7.41	99.03	105.70
24	1H	459	U	C5-C4-O4	7.40	130.34	125.90
24	14	1992	G	N1-C6-O6	-7.40	115.46	119.90
24	1H	194	G	C8-N9-C4	7.40	109.36	106.40
24	1H	2509	G	N7-C8-N9	-7.40	109.40	113.10
24	1H	2724	C	N1-C2-O2	-7.40	114.46	118.90
24	1H	2439	A	O5'-P-OP2	-7.40	99.04	105.70
24	14	2374	C	C5-C6-N1	-7.40	117.30	121.00
24	14	2873	A	C6-C5-N7	-7.40	127.12	132.30
24	1H	1790	C	C5-C4-N4	-7.39	115.02	120.20
24	1H	386	G	C8-N9-C4	-7.39	103.44	106.40
24	1H	697	C	N1-C2-O2	-7.39	114.47	118.90
24	1H	845	G	C4-C5-N7	7.39	113.76	110.80
24	14	694	U	O5'-P-OP2	-7.39	99.05	105.70
24	14	1982	C	N3-C4-N4	7.39	123.17	118.00
24	1H	728	G	N1-C6-O6	7.39	124.33	119.90
25	1J	6	C	C6-N1-C2	7.39	123.26	120.30
25	1J	114	G	N7-C8-N9	-7.39	109.41	113.10
24	1H	746	A	N7-C8-N9	7.39	117.49	113.80
25	16	81	G	C5-C6-O6	-7.39	124.17	128.60
1	1G	1519	A	N9-C4-C5	7.39	108.75	105.80
24	1H	2757	A	O5'-P-OP2	-7.38	99.05	105.70
24	1H	1626	G	O5'-P-OP1	-7.38	99.06	105.70
24	1H	2581	G	N1-C6-O6	-7.38	115.47	119.90
1	13	769	G	O5'-P-OP2	-7.38	99.06	105.70
24	14	71	A	N7-C8-N9	7.38	117.49	113.80
24	14	1789	A	C8-N9-C4	7.38	108.75	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	52	A	C2-N3-C4	7.38	114.29	110.60
24	1H	2628	C	C6-N1-C2	7.38	123.25	120.30
24	14	1783	A	C4-C5-N7	7.38	114.39	110.70
24	1H	2070	G	C8-N9-C4	7.37	109.35	106.40
1	1G	449	C	C6-N1-C2	-7.37	117.35	120.30
1	13	906	G	C5-C6-O6	-7.37	124.18	128.60
24	1H	1227	A	C8-N9-C4	7.37	108.75	105.80
24	1H	785	G	C4-C5-N7	-7.37	107.85	110.80
24	1H	1803	A	C2-N3-C4	7.37	114.28	110.60
24	1H	1994	C	C6-N1-C2	-7.37	117.35	120.30
1	1G	353	A	C5-N7-C8	-7.37	100.22	103.90
24	1H	1789	A	C5-C6-N1	7.37	121.38	117.70
24	1H	2374	C	C6-N1-C2	7.37	123.25	120.30
24	1H	2522	U	N3-C4-O4	7.36	124.56	119.40
24	14	943	U	O5'-P-OP1	-7.36	99.07	105.70
24	14	1390	U	N3-C2-O2	-7.36	117.05	122.20
24	14	810	U	C5-C4-O4	-7.36	121.48	125.90
24	14	113	G	C4-N9-C1'	-7.36	116.93	126.50
24	14	201	C	C5-C6-N1	-7.36	117.32	121.00
24	14	2056	G	N3-C4-N9	7.36	130.42	126.00
1	1G	1511	G	O5'-P-OP1	-7.36	99.08	105.70
24	1H	1804	C	C2-N3-C4	-7.36	116.22	119.90
24	1H	1197	G	N1-C6-O6	-7.36	115.49	119.90
24	14	71	A	N1-C6-N6	7.36	123.01	118.60
1	1G	1524	C	O5'-P-OP2	7.35	119.53	110.70
24	1H	663	G	N9-C4-C5	7.35	108.34	105.40
22	2L	85	A	N1-C6-N6	7.35	123.01	118.60
25	1J	88	C	C2-N3-C4	7.35	123.58	119.90
1	13	900	A	N9-C4-C5	-7.35	102.86	105.80
24	1H	1992	G	C5-C6-N1	7.35	115.17	111.50
1	1G	481	G	N3-C4-N9	7.35	130.41	126.00
24	14	2334	G	O5'-P-OP1	-7.35	99.09	105.70
24	1H	675	A	N9-C4-C5	-7.35	102.86	105.80
24	1H	917	A	O5'-P-OP1	-7.35	99.09	105.70
24	1H	1193	G	O5'-P-OP2	-7.35	99.09	105.70
24	14	1786	A	N9-C1'-C2'	7.35	123.55	114.00
24	1H	948	G	O5'-P-OP2	7.35	119.52	110.70
24	1H	2465	C	C5-C6-N1	-7.34	117.33	121.00
24	1H	2048	G	N9-C4-C5	7.34	108.34	105.40
24	1H	28	A	C2-N3-C4	7.34	114.27	110.60
24	1H	915	C	N3-C2-O2	-7.34	116.76	121.90
24	1H	940	G	O5'-P-OP2	-7.34	99.09	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	612	C	C6-N1-C2	7.34	123.24	120.30
1	1G	945	G	N1-C6-O6	7.34	124.31	119.90
24	14	782	A	N9-C4-C5	-7.34	102.86	105.80
24	1H	2067	G	C2-N3-C4	7.34	115.57	111.90
24	14	1313	U	C5-C6-N1	7.34	126.37	122.70
24	1H	530	G	N3-C4-C5	7.34	132.27	128.60
24	14	1143	A	N1-C2-N3	7.34	132.97	129.30
27	19	272	ALA	N-CA-C	7.34	130.81	111.00
1	1G	322	C	N3-C2-O2	7.33	127.03	121.90
1	1G	963	G	N3-C4-N9	7.33	130.40	126.00
24	1H	847	U	C4-C5-C6	7.33	124.10	119.70
24	1H	1332	G	N1-C2-N3	7.33	128.30	123.90
24	1H	2439	A	P-O3'-C3'	7.33	128.50	119.70
1	1G	581	G	N1-C6-O6	7.33	124.30	119.90
24	1H	1254	A	N1-C6-N6	7.32	122.99	118.60
24	1H	1614	A	C4-C5-N7	7.32	114.36	110.70
24	1H	150	C	N3-C4-N4	-7.32	112.88	118.00
24	14	613	U	N3-C2-O2	-7.31	117.08	122.20
24	1H	1204	A	C4-C5-N7	7.31	114.36	110.70
24	1H	793	A	C5-C6-N6	-7.31	117.85	123.70
24	14	778	G	C2-N3-C4	-7.31	108.25	111.90
1	13	760	G	N1-C6-O6	7.31	124.28	119.90
1	1G	605	U	O5'-P-OP1	-7.30	99.13	105.70
24	1H	34	C	O5'-P-OP1	-7.30	99.13	105.70
24	1H	1200	C	C2-N3-C4	-7.30	116.25	119.90
24	1H	1278	A	O5'-P-OP2	-7.30	99.13	105.70
24	1H	2073	C	C2-N3-C4	-7.30	116.25	119.90
24	14	512	G	O5'-P-OP1	-7.30	99.13	105.70
24	1H	682	G	C4-N9-C1'	7.29	135.98	126.50
24	14	688	U	OP2-P-O3'	7.29	121.24	105.20
24	14	1323	U	N3-C2-O2	7.29	127.30	122.20
24	1H	141	A	C8-N9-C4	-7.29	102.89	105.80
24	14	1496	A	C4-C5-N7	7.29	114.34	110.70
24	1H	1899	G	C5-N7-C8	-7.29	100.66	104.30
25	16	15	A	O4'-C1'-N9	7.29	114.03	108.20
24	1H	194	G	N7-C8-N9	-7.29	109.46	113.10
24	14	192	C	C6-N1-C2	7.29	123.21	120.30
24	1H	49	A	C5-N7-C8	7.28	107.54	103.90
24	1H	576	U	N1-C2-O2	-7.28	117.70	122.80
24	1H	1427	A	C6-N1-C2	-7.28	114.23	118.60
24	1H	1573	G	C8-N9-C4	7.28	109.31	106.40
24	14	1798	U	C2-N3-C4	-7.28	122.63	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2337	G	N7-C8-N9	7.28	116.74	113.10
1	1G	925	G	C8-N9-C4	7.28	109.31	106.40
24	1H	2392	A	C6-C5-N7	-7.28	127.20	132.30
24	14	1566	A	O5'-P-OP2	-7.28	99.15	105.70
24	14	682	G	N3-C4-N9	7.28	130.37	126.00
24	1H	991	C	OP1-P-OP2	7.28	130.51	119.60
24	14	2457	U	N3-C2-O2	-7.27	117.11	122.20
24	14	909	A	OP2-P-O3'	7.27	121.20	105.20
24	14	1353	A	N3-C4-N9	-7.27	121.58	127.40
24	1H	49	A	C8-N9-C4	7.27	108.71	105.80
24	1H	673	C	O5'-P-OP1	7.27	119.42	110.70
24	1H	1204	A	O4'-C1'-N9	7.27	114.02	108.20
24	1H	1640	C	N3-C4-C5	7.27	124.81	121.90
24	14	2872	G	C8-N9-C4	-7.27	103.49	106.40
1	1G	197	A	C6-C5-N7	-7.27	127.21	132.30
24	14	236	C	C5-C6-N1	-7.27	117.37	121.00
24	1H	1698	A	N7-C8-N9	7.27	117.43	113.80
24	1H	199	A	N1-C2-N3	-7.26	125.67	129.30
24	1H	259	G	C6-C5-N7	-7.26	126.04	130.40
24	1H	983	A	O5'-P-OP2	7.26	119.42	110.70
24	1H	2060	A	N1-C2-N3	7.26	132.93	129.30
24	14	1999	C	C6-N1-C2	7.26	123.20	120.30
24	14	2032	G	N3-C2-N2	-7.26	114.82	119.90
24	14	613	U	C6-N1-C2	-7.26	116.64	121.00
24	1H	783	A	C4-C5-C6	7.26	120.63	117.00
24	1H	1647	G	N1-C6-O6	-7.26	115.55	119.90
24	14	25	U	N3-C2-O2	7.26	127.28	122.20
24	14	120	U	O5'-P-OP2	7.26	119.41	110.70
24	1H	2377	A	C8-N9-C4	7.25	108.70	105.80
24	14	2026	C	O5'-P-OP2	-7.25	99.17	105.70
24	1H	914	C	C5-C4-N4	7.25	125.28	120.20
24	1H	380	U	O5'-P-OP2	-7.25	99.17	105.70
24	1H	463	G	N3-C2-N2	7.25	124.98	119.90
24	14	735	A	C2-N3-C4	-7.25	106.97	110.60
1	1G	20	U	O5'-P-OP2	-7.25	99.18	105.70
24	14	2323	G	C2-N3-C4	-7.25	108.28	111.90
24	1H	704	G	C2-N3-C4	-7.25	108.28	111.90
24	1H	1122	G	N1-C6-O6	7.25	124.25	119.90
24	1H	2635	C	C6-N1-C2	7.25	123.20	120.30
24	14	1776	G	C6-N1-C2	-7.24	120.75	125.10
24	1H	265	A	N1-C6-N6	7.24	122.94	118.60
24	1H	614	U	N1-C2-O2	7.24	127.87	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	904	C	N3-C4-N4	-7.24	112.93	118.00
24	1H	1616	A	O4'-C1'-N9	7.24	113.99	108.20
24	14	1342	A	C5-C6-N1	-7.24	114.08	117.70
24	1H	1786	A	N9-C1'-C2'	7.24	123.41	114.00
24	1H	2324	C	C6-N1-C1'	-7.24	112.11	120.80
1	13	819	A	O5'-P-OP1	-7.24	99.19	105.70
24	1H	2247	A	N1-C2-N3	7.24	132.92	129.30
24	1H	464	U	O5'-P-OP2	7.24	119.38	110.70
24	1H	2029	G	N3-C4-C5	7.24	132.22	128.60
24	1H	2331	G	N1-C6-O6	7.24	124.24	119.90
24	1H	1951	U	C5-C4-O4	7.23	130.24	125.90
24	1H	2251	G	N3-C2-N2	-7.23	114.84	119.90
1	1G	869	G	O5'-P-OP1	-7.23	99.19	105.70
24	14	2056	G	C4-C5-N7	7.23	113.69	110.80
24	14	739	G	N9-C4-C5	-7.23	102.51	105.40
24	14	1798	U	O5'-P-OP2	-7.23	99.19	105.70
24	14	1992	G	C6-C5-N7	7.23	134.74	130.40
24	1H	1660	C	N3-C4-N4	-7.23	112.94	118.00
24	1H	2362	G	N7-C8-N9	-7.23	109.49	113.10
24	14	1620	G	N1-C6-O6	-7.23	115.56	119.90
24	14	1627	G	C5-C6-O6	7.23	132.94	128.60
24	1H	2606	C	C2-N3-C4	-7.23	116.29	119.90
24	1H	120	U	N3-C2-O2	-7.22	117.14	122.20
24	1H	1931	U	C5-C4-O4	7.22	130.24	125.90
25	16	7	G	C6-C5-N7	-7.22	126.07	130.40
24	1H	1290	C	O5'-P-OP2	-7.22	99.20	105.70
24	14	1776	G	C5-C6-O6	-7.22	124.27	128.60
24	1H	246	C	C2-N3-C4	-7.22	116.29	119.90
24	1H	575	A	N7-C8-N9	-7.22	110.19	113.80
24	1H	1969	A	C5-N7-C8	7.22	107.51	103.90
1	1G	872	A	N3-C4-C5	7.22	131.85	126.80
24	14	664	C	C2-N3-C4	-7.22	116.29	119.90
24	14	2499	C	N1-C2-O2	-7.22	114.57	118.90
24	1H	730	C	C5-C4-N4	-7.22	115.15	120.20
24	1H	1218	C	C6-N1-C2	-7.22	117.41	120.30
24	14	2436	G	C5-C6-O6	-7.22	124.27	128.60
24	14	2571	C	C6-N1-C2	7.21	123.19	120.30
24	1H	2337	G	O5'-P-OP2	7.21	119.35	110.70
34	25	8	LEU	CA-CB-CG	7.21	131.89	115.30
1	1G	449	C	C5-C4-N4	7.21	125.25	120.20
24	14	330	A	N7-C8-N9	7.21	117.40	113.80
24	1H	126	A	O5'-P-OP2	-7.21	99.21	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	71	A	O4'-C1'-N9	-7.20	102.44	108.20
24	14	1496	A	C8-N9-C4	-7.20	102.92	105.80
24	14	2428	G	N3-C4-N9	-7.20	121.68	126.00
1	13	12	U	O5'-P-OP1	-7.20	99.22	105.70
24	14	2282	G	O4'-C1'-N9	7.20	113.96	108.20
24	1H	135	G	C5-C6-O6	-7.20	124.28	128.60
24	1H	582	G	C6-C5-N7	-7.20	126.08	130.40
1	13	36	C	O5'-P-OP2	-7.20	99.22	105.70
24	1H	1379	A	C2-N3-C4	-7.20	107.00	110.60
24	14	1283	G	O5'-P-OP2	-7.20	99.22	105.70
24	1H	1969	A	OP1-P-OP2	-7.20	108.81	119.60
24	1H	2762	G	C8-N9-C4	7.20	109.28	106.40
24	1H	2451	A	N1-C6-N6	-7.19	114.28	118.60
1	13	730	G	C4-C5-N7	-7.19	107.92	110.80
1	1G	869	G	N3-C4-N9	-7.19	121.69	126.00
24	1H	2623	G	N3-C4-C5	-7.19	125.01	128.60
24	1H	1201	C	N3-C4-C5	7.19	124.78	121.90
24	1H	1678	G	C8-N9-C4	-7.19	103.53	106.40
24	1H	2502	G	N3-C4-N9	7.18	130.31	126.00
24	14	819	A	O5'-P-OP1	-7.18	99.23	105.70
25	1J	102	G	C8-N9-C4	7.18	109.27	106.40
1	13	576	G	N1-C6-O6	7.18	124.21	119.90
24	1H	940	G	OP2-P-O3'	7.18	121.00	105.20
24	14	2639	A	C5-N7-C8	-7.18	100.31	103.90
24	1H	1312	U	O5'-P-OP2	7.18	119.31	110.70
24	1H	2689	U	P-O3'-C3'	7.18	128.31	119.70
24	14	1613	G	N1-C2-N2	-7.18	109.74	116.20
24	14	2620	C	C5-C4-N4	-7.18	115.17	120.20
24	1H	1333	C	N1-C2-O2	-7.18	114.59	118.90
24	1H	2296	U	N3-C4-O4	7.18	124.42	119.40
1	1G	481	G	C4-C5-C6	7.18	123.11	118.80
24	14	1342	A	N1-C6-N6	7.18	122.91	118.60
24	14	1356	G	O5'-P-OP1	-7.18	99.24	105.70
24	14	1241	A	C5-N7-C8	-7.17	100.31	103.90
24	1H	29	U	N3-C2-O2	-7.17	117.18	122.20
24	1H	2605	U	C5-C4-O4	7.17	130.20	125.90
24	1H	782	A	C6-N1-C2	-7.17	114.30	118.60
24	1H	1011	G	N9-C4-C5	7.17	108.27	105.40
24	1H	138	G	N7-C8-N9	7.17	116.68	113.10
24	1H	1762	A	O5'-P-OP1	7.17	119.30	110.70
24	14	604	G	C5-C6-O6	-7.17	124.30	128.60
22	2L	84	C	N1-C2-O2	-7.17	114.60	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	765	G	O5'-P-OP1	-7.17	99.25	105.70
1	13	529	G	C5-C6-O6	-7.16	124.30	128.60
24	1H	1123	C	C4-C5-C6	7.16	120.98	117.40
24	14	584	C	N1-C2-O2	-7.16	114.60	118.90
24	14	2361	A	N1-C2-N3	7.16	132.88	129.30
24	1H	1193	G	N7-C8-N9	-7.16	109.52	113.10
24	1H	188	G	C5-C6-N1	7.15	115.08	111.50
24	1H	655	A	C8-N9-C4	-7.15	102.94	105.80
24	14	2685	G	C8-N9-C4	7.15	109.26	106.40
24	14	1695	G	C6-C5-N7	-7.15	126.11	130.40
1	13	131	C	N1-C2-O2	7.15	123.19	118.90
24	1H	25	U	C6-N1-C2	7.15	125.29	121.00
24	1H	1564	C	N3-C2-O2	-7.15	116.89	121.90
24	1H	2726	U	C5-C6-N1	-7.15	119.12	122.70
1	1G	305	G	O5'-P-OP2	-7.15	99.26	105.70
24	1H	1901	A	O5'-P-OP2	-7.15	99.27	105.70
24	1H	2779	U	N3-C2-O2	-7.14	117.20	122.20
24	14	829	A	OP1-P-OP2	7.14	130.32	119.60
24	14	1258	C	OP2-P-O3'	7.14	120.92	105.20
1	13	545	C	N3-C2-O2	-7.14	116.90	121.90
24	1H	2569	G	N3-C4-C5	-7.14	125.03	128.60
24	1H	1142(A)	A	N3-C4-C5	7.14	131.80	126.80
24	1H	1392	A	C2-N3-C4	7.14	114.17	110.60
24	1H	2441	C	O5'-P-OP1	-7.14	99.27	105.70
1	1G	690	G	C4-C5-N7	7.14	113.66	110.80
24	14	2287	A	C5-N7-C8	-7.14	100.33	103.90
24	14	125	G	O4'-C1'-N9	-7.14	102.49	108.20
24	14	25	U	C6-N1-C2	7.14	125.28	121.00
24	14	790	C	O5'-P-OP2	-7.14	99.28	105.70
24	14	2490	G	O4'-C1'-N9	7.14	113.91	108.20
22	2L	10	C	N3-C2-O2	-7.13	116.91	121.90
24	14	2590	A	C2-N3-C4	-7.13	107.03	110.60
24	1H	1144	G	C5-C6-N1	7.13	115.07	111.50
35	78	49	ARG	NE-CZ-NH1	7.13	123.87	120.30
1	13	571	U	O5'-P-OP1	-7.13	99.28	105.70
1	13	812	C	P-O3'-C3'	7.13	128.26	119.70
24	1H	189	G	C5-C6-O6	-7.13	124.32	128.60
24	1H	247	G	N1-C6-O6	-7.13	115.62	119.90
24	1H	2445	G	N9-C4-C5	7.13	108.25	105.40
24	14	2006	C	N3-C4-C5	7.13	124.75	121.90
24	14	2439	A	O5'-P-OP2	-7.13	99.28	105.70
1	13	1524	C	N3-C2-O2	7.13	126.89	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2264	C	C6-N1-C2	-7.13	117.45	120.30
1	1G	579	G	O5'-P-OP2	-7.13	99.28	105.70
1	1G	945	G	C5-C6-O6	-7.13	124.32	128.60
24	14	2829	C	C5-C6-N1	-7.13	117.44	121.00
24	14	1661	G	C8-N9-C4	7.12	109.25	106.40
24	1H	2465	C	C2-N3-C4	-7.12	116.34	119.90
24	14	971	C	C5-C6-N1	7.12	124.56	121.00
24	14	1786	A	C5-C6-N1	-7.12	114.14	117.70
24	1H	209	C	C2-N3-C4	-7.12	116.34	119.90
24	1H	1543	A	N1-C6-N6	7.12	122.87	118.60
24	14	1606	G	C5-C6-N1	7.12	115.06	111.50
24	1H	391	G	N3-C2-N2	-7.12	114.92	119.90
1	1G	912	C	C5-C6-N1	-7.12	117.44	121.00
24	1H	1019	U	N3-C2-O2	-7.12	117.22	122.20
1	13	56	U	N3-C4-O4	7.11	124.38	119.40
24	1H	122	G	C6-N1-C2	-7.11	120.83	125.10
24	14	288	C	N3-C2-O2	-7.11	116.92	121.90
24	1H	973	A	N1-C2-N3	7.11	132.85	129.30
24	1H	2436	G	C5-C6-O6	-7.11	124.33	128.60
24	14	803	U	N1-C2-N3	7.11	119.17	114.90
24	1H	2056	G	C4-C5-N7	-7.11	107.96	110.80
24	14	842	G	C8-N9-C4	7.10	109.24	106.40
24	1H	1129	A	OP1-P-OP2	7.10	130.25	119.60
24	1H	2512	C	N3-C4-C5	7.10	124.74	121.90
24	1H	689	A	O5'-P-OP2	-7.10	99.31	105.70
39	75	6	LEU	CA-CB-CG	7.10	131.63	115.30
24	1H	917	A	N9-C4-C5	-7.10	102.96	105.80
24	14	2271	G	C5-C6-O6	-7.10	124.34	128.60
24	1H	663	G	C4-C5-N7	-7.10	107.96	110.80
24	1H	774	A	C6-N1-C2	7.10	122.86	118.60
24	1H	2700	C	C2-N3-C4	-7.10	116.35	119.90
24	14	1982	C	C5-C4-N4	-7.10	115.23	120.20
24	1H	463	G	N1-C2-N2	-7.09	109.82	116.20
24	1H	683	C	C5-C6-N1	-7.09	117.45	121.00
24	1H	114	U	O5'-P-OP1	-7.09	99.32	105.70
24	1H	695	G	N1-C6-O6	7.09	124.16	119.90
24	14	1769	G	C4-N9-C1'	7.09	135.72	126.50
24	14	2324	C	N3-C4-C5	7.09	124.74	121.90
24	14	2415	G	N3-C2-N2	-7.09	114.94	119.90
24	1H	46	C	O5'-P-OP1	-7.09	99.32	105.70
24	14	1328	G	C4-C5-N7	7.09	113.64	110.80
24	1H	1261	C	C6-N1-C2	7.09	123.14	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	757	U	OP2-P-O3'	7.08	120.79	105.20
24	14	1377	G	N1-C6-O6	7.08	124.15	119.90
24	1H	667	U	C5-C4-O4	-7.08	121.65	125.90
1	1G	1127	G	O5'-P-OP2	-7.08	99.33	105.70
24	14	1902	C	C4-C5-C6	-7.08	113.86	117.40
24	14	110	G	C5-C6-O6	-7.08	124.35	128.60
24	1H	2440	C	O5'-P-OP1	-7.08	99.33	105.70
1	1G	1374	A	C2-N3-C4	-7.08	107.06	110.60
24	14	1284	A	N9-C4-C5	-7.08	102.97	105.80
24	14	1964	G	O5'-P-OP1	-7.08	99.33	105.70
24	14	2709	G	O5'-P-OP2	-7.08	99.33	105.70
1	1G	1512	U	O5'-P-OP2	-7.07	99.34	105.70
24	14	2873	A	C5-C6-N1	-7.07	114.17	117.70
24	1H	827	U	C5-C6-N1	-7.07	119.17	122.70
24	14	1790	C	C5-C4-N4	-7.07	115.25	120.20
36	88	88	GLY	N-CA-C	-7.07	95.44	113.10
24	14	372	G	O4'-C1'-N9	7.07	113.85	108.20
24	14	2031	A	C5-C6-N6	-7.07	118.05	123.70
24	14	2779	U	C4-C5-C6	7.07	123.94	119.70
24	14	307	G	O5'-P-OP2	-7.06	99.34	105.70
24	14	1575	C	N3-C2-O2	-7.06	116.96	121.90
24	1H	377	C	C6-N1-C2	7.06	123.12	120.30
24	14	1558	A	C5-C6-N1	-7.06	114.17	117.70
24	1H	582	G	C5-C6-O6	-7.05	124.37	128.60
1	1G	925	G	N7-C8-N9	-7.05	109.57	113.10
24	14	122	G	C5-C6-O6	-7.05	124.37	128.60
24	1H	2558	C	C2-N3-C4	-7.05	116.37	119.90
24	14	450	G	N1-C6-O6	7.05	124.13	119.90
24	1H	1831	G	C8-N9-C4	-7.05	103.58	106.40
24	14	1022	G	P-O3'-C3'	7.05	128.16	119.70
24	14	2596	U	C5-C6-N1	-7.05	119.17	122.70
1	13	771	G	N3-C4-N9	-7.05	121.77	126.00
23	4K	10	G	C4-N9-C1'	-7.05	117.34	126.50
24	1H	813	U	N3-C4-O4	7.05	124.33	119.40
24	1H	859	G	N3-C4-C5	7.05	132.12	128.60
24	1H	2572	A	C8-N9-C4	7.05	108.62	105.80
24	14	2392	A	C6-N1-C2	7.05	122.83	118.60
24	1H	684	G	N1-C6-O6	-7.05	115.67	119.90
24	14	607	U	O5'-P-OP2	-7.05	99.36	105.70
1	13	785	G	O5'-P-OP1	-7.04	99.36	105.70
24	1H	859	G	N1-C6-O6	7.04	124.13	119.90
25	16	81	G	N7-C8-N9	7.04	116.62	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	1080	A	O5'-P-OP1	-7.04	99.36	105.70
24	1H	814	C	O5'-P-OP2	-7.04	99.36	105.70
24	14	201	C	C6-N1-C2	7.04	123.12	120.30
24	1H	1241	A	N3-C4-N9	-7.04	121.77	127.40
24	14	1903	G	C8-N9-C4	7.04	109.22	106.40
1	13	912	C	C6-N1-C2	7.04	123.11	120.30
1	13	1203	C	N3-C2-O2	-7.04	116.97	121.90
24	1H	1517	G	OP1-P-O3'	7.04	120.68	105.20
24	1H	2440	C	OP1-P-O3'	7.04	120.68	105.20
47	J8	41	ARG	NE-CZ-NH1	7.04	123.82	120.30
24	14	675	A	C5-C6-N6	-7.04	118.07	123.70
24	14	1900	A	N3-C4-C5	-7.04	121.88	126.80
24	1H	75	G	C2-N3-C4	7.03	115.42	111.90
24	1H	775	G	N3-C2-N2	7.03	124.82	119.90
24	1H	1990	C	N1-C2-N3	7.03	124.12	119.20
24	1H	1147	C	O5'-P-OP2	-7.03	99.37	105.70
24	1H	2490	G	N7-C8-N9	7.03	116.61	113.10
24	14	528	A	C6-C5-N7	-7.03	127.38	132.30
24	14	1556	C	C6-N1-C2	7.03	123.11	120.30
24	14	2542	A	C2-N3-C4	-7.03	107.08	110.60
24	1H	1409	C	C5-C6-N1	-7.03	117.48	121.00
24	1H	2430	A	C4-C5-N7	7.03	114.22	110.70
24	1H	308	G	N3-C4-N9	7.03	130.22	126.00
24	1H	633	A	N1-C6-N6	7.03	122.82	118.60
24	1H	778	G	C5-C6-N1	-7.03	107.99	111.50
24	1H	935	C	N1-C2-O2	-7.03	114.68	118.90
24	1H	337	C	OP1-P-OP2	7.03	130.14	119.60
24	1H	835	A	N9-C4-C5	7.02	108.61	105.80
24	1H	2205	C	O5'-P-OP2	-7.02	99.38	105.70
24	1H	2726	U	C5-C4-O4	7.02	130.11	125.90
24	14	2498	C	C6-N1-C2	7.02	123.11	120.30
1	13	1403	C	N3-C4-N4	-7.02	113.09	118.00
24	1H	2066	C	OP1-P-O3'	7.02	120.64	105.20
1	13	42	G	N1-C6-O6	7.02	124.11	119.90
24	1H	659	C	C2-N3-C4	-7.02	116.39	119.90
24	1H	1333	C	N3-C4-N4	7.02	122.91	118.00
24	14	1249	U	O5'-P-OP1	-7.02	99.38	105.70
24	1H	1157	G	C5-C6-O6	-7.01	124.39	128.60
24	1H	1742	C	C6-N1-C2	-7.01	117.49	120.30
24	1H	2011	U	O5'-P-OP1	-7.01	99.39	105.70
24	14	1930	G	C4-N9-C1'	-7.01	117.39	126.50
54	M5	31	HIS	CB-CA-C	7.01	124.42	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1606	G	C8-N9-C4	7.01	109.20	106.40
1	1G	11	G	O5'-P-OP2	7.01	119.11	110.70
1	1G	229	U	O5'-P-OP1	-7.01	99.39	105.70
24	14	1644	C	N3-C2-O2	-7.01	116.99	121.90
24	1H	1122	G	C4-C5-N7	7.01	113.60	110.80
24	1H	2327	A	N1-C6-N6	-7.01	114.40	118.60
24	14	445	C	N3-C4-C5	7.01	124.70	121.90
24	1H	232	G	O5'-P-OP2	-7.00	99.40	105.70
24	1H	1427	A	P-O3'-C3'	7.00	128.10	119.70
24	1H	1427	A	N1-C6-N6	-7.00	114.40	118.60
24	1H	1992	G	C8-N9-C4	7.00	109.20	106.40
24	1H	49	A	O5'-P-OP2	-7.00	99.40	105.70
24	14	1670	C	C6-N1-C2	-7.00	117.50	120.30
24	14	2073	C	C2-N3-C4	-7.00	116.40	119.90
24	1H	40	C	C2-N3-C4	-7.00	116.40	119.90
24	1H	974(A)	C	N3-C4-N4	-7.00	113.10	118.00
24	1H	1596	A	C8-N9-C4	7.00	108.60	105.80
24	1H	1298	C	OP1-P-O3'	7.00	120.59	105.20
1	13	702	A	N1-C6-N6	-6.99	114.40	118.60
24	1H	754	C	C5-C6-N1	-6.99	117.50	121.00
24	1H	2566	A	P-O3'-C3'	6.99	128.09	119.70
24	14	1283	G	OP1-P-OP2	6.99	130.09	119.60
24	14	1373	A	C8-N9-C4	6.99	108.60	105.80
24	14	1779	U	O4'-C1'-N1	6.99	113.79	108.20
1	1G	785	G	N1-C6-O6	6.99	124.09	119.90
24	14	2036	C	O5'-P-OP2	-6.99	99.41	105.70
24	14	2443	C	N3-C4-N4	6.99	122.89	118.00
24	14	2588	G	O5'-P-OP2	-6.99	99.41	105.70
24	1H	135	G	C5-C6-N1	6.99	114.99	111.50
24	14	987	G	C4-C5-N7	-6.99	108.00	110.80
24	1H	1577	C	O5'-P-OP1	-6.99	99.41	105.70
24	14	1973	G	N1-C2-N2	-6.99	109.91	116.20
24	14	768	G	N3-C4-N9	6.98	130.19	126.00
24	1H	1562	A	O5'-P-OP2	6.98	119.08	110.70
24	1H	2212	A	O4'-C1'-N9	6.98	113.79	108.20
24	14	140	A	O4'-C1'-N9	6.98	113.79	108.20
1	1G	1346	A	OP2-P-O3'	6.98	120.56	105.20
24	1H	1254	A	C2-N3-C4	-6.98	107.11	110.60
24	1H	1336	A	N1-C6-N6	-6.98	114.41	118.60
24	1H	2271	G	C8-N9-C4	6.98	109.19	106.40
24	14	2352	A	O5'-P-OP1	-6.98	99.42	105.70
24	14	1805	U	C5-C6-N1	-6.98	119.21	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	217	G	N3-C2-N2	-6.97	115.02	119.90
24	14	2328	A	C2-N3-C4	-6.97	107.11	110.60
24	1H	979	G	C8-N9-C4	-6.97	103.61	106.40
24	1H	1763	G	C8-N9-C4	6.97	109.19	106.40
24	14	448	U	C4-C5-C6	6.97	123.88	119.70
24	14	469	G	C8-N9-C4	6.97	109.19	106.40
24	14	1788	C	N3-C4-C5	6.97	124.69	121.90
1	13	52	G	N1-C6-O6	-6.97	115.72	119.90
24	14	197	A	N1-C6-N6	6.97	122.78	118.60
24	1H	28	A	N1-C2-N3	-6.97	125.81	129.30
24	14	1616	A	C5-C6-N6	-6.97	118.12	123.70
24	1H	1962	C	C5-C6-N1	6.97	124.48	121.00
24	1H	2251	G	O5'-P-OP1	-6.97	99.43	105.70
24	1H	2474	C	N1-C2-O2	6.97	123.08	118.90
24	14	1630(A)	C	N3-C4-C5	6.97	124.69	121.90
24	14	2565	A	O5'-P-OP2	6.97	119.06	110.70
1	13	888	G	C8-N9-C4	6.96	109.19	106.40
24	1H	1310	G	N1-C6-O6	6.96	124.08	119.90
24	1H	2281	C	O5'-P-OP2	6.96	119.06	110.70
24	14	707	G	N1-C6-O6	6.96	124.08	119.90
24	14	2689	U	C5-C6-N1	-6.96	119.22	122.70
1	1G	768	A	N1-C2-N3	6.96	132.78	129.30
1	13	814	A	O5'-P-OP2	6.96	119.05	110.70
24	14	2059	A	O4'-C1'-N9	6.96	113.77	108.20
24	1H	2446	G	O5'-P-OP2	-6.96	99.44	105.70
1	1G	913	A	P-O3'-C3'	6.96	128.05	119.70
24	1H	594	U	C5-C6-N1	-6.96	119.22	122.70
24	1H	684	G	C8-N9-C4	-6.96	103.62	106.40
24	1H	704	G	N3-C4-C5	6.96	132.08	128.60
24	1H	2713	A	C5-C6-N1	-6.96	114.22	117.70
1	1G	537	G	O5'-P-OP2	6.96	119.05	110.70
24	14	987	G	N1-C6-O6	-6.96	115.73	119.90
23	4K	14	A	O5'-P-OP2	-6.96	99.44	105.70
24	1H	481	G	N1-C6-O6	6.96	124.07	119.90
24	14	2545	G	C8-N9-C4	6.96	109.18	106.40
24	14	2726	U	N1-C2-O2	6.96	127.67	122.80
24	1H	775	G	N1-C2-N2	-6.95	109.94	116.20
24	1H	2598	A	O5'-P-OP1	-6.95	99.44	105.70
24	14	2717	G	N3-C4-C5	-6.95	125.12	128.60
24	14	739	G	N3-C4-N9	6.95	130.17	126.00
24	1H	59	U	OP2-P-O3'	6.95	120.49	105.20
24	1H	1379	A	C4-C5-N7	6.95	114.17	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2295	C	C6-N1-C2	-6.95	117.52	120.30
1	1G	904	C	N3-C4-C5	6.95	124.68	121.90
24	14	2033	A	C5-C6-N1	6.95	121.17	117.70
24	1H	1019	U	C5-C4-O4	6.95	130.07	125.90
24	14	404	C	C6-N1-C2	6.95	123.08	120.30
24	14	2376	A	C8-N9-C4	6.95	108.58	105.80
24	14	2829	C	C2-N1-C1'	-6.95	111.16	118.80
24	1H	1356	G	O5'-P-OP1	-6.95	99.45	105.70
24	1H	2592	G	O5'-P-OP2	-6.95	99.45	105.70
24	14	784	A	C8-N9-C4	6.95	108.58	105.80
1	1G	1233	G	O5'-P-OP2	-6.95	99.45	105.70
1	1G	332	G	O5'-P-OP1	-6.94	99.45	105.70
24	14	2440	C	C6-N1-C2	6.94	123.08	120.30
24	14	593	G	C5-C6-O6	-6.94	124.44	128.60
1	1G	345	C	C5-C6-N1	6.94	124.47	121.00
24	1H	606	U	N3-C2-O2	-6.94	117.34	122.20
24	1H	862	G	C5-C6-O6	6.94	132.76	128.60
24	1H	920	G	C8-N9-C4	6.94	109.17	106.40
24	14	1277	G	C8-N9-C4	6.94	109.17	106.40
24	1H	109	G	C5-C6-O6	6.93	132.76	128.60
24	1H	193	U	C5-C6-N1	-6.93	119.23	122.70
24	1H	87	C	N3-C4-C5	6.93	124.67	121.90
24	1H	570	G	C5-C6-N1	-6.93	108.03	111.50
24	1H	2054	A	C5-C6-N6	-6.93	118.15	123.70
24	1H	2424	C	C5-C4-N4	-6.93	115.35	120.20
1	1G	449	C	N3-C4-N4	-6.93	113.15	118.00
24	14	827	U	N3-C4-O4	6.93	124.25	119.40
24	1H	1600	C	OP1-P-O3'	6.93	120.45	105.20
24	1H	1622	G	N1-C6-O6	6.93	124.06	119.90
24	1H	1992	G	N7-C8-N9	-6.93	109.64	113.10
1	1G	722	A	N1-C6-N6	6.93	122.76	118.60
24	14	1787	A	C5-N7-C8	-6.93	100.44	103.90
24	1H	781	A	N1-C2-N3	6.92	132.76	129.30
24	1H	1939	U	C5-C4-O4	-6.92	121.75	125.90
24	1H	529	A	C6-C5-N7	-6.92	127.45	132.30
24	14	1883	G	N3-C4-N9	6.92	130.15	126.00
24	1H	137(A)	G	C5-C6-O6	-6.92	124.45	128.60
24	1H	518	G	N1-C6-O6	-6.92	115.75	119.90
24	1H	713	G	N9-C4-C5	-6.92	102.63	105.40
24	1H	917	A	C6-C5-N7	-6.92	127.45	132.30
24	14	564	C	N3-C4-C5	-6.92	119.13	121.90
24	1H	917	A	C4-C5-N7	6.92	114.16	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1672	C	N1-C2-O2	-6.92	114.75	118.90
24	1H	910	A	N1-C6-N6	6.92	122.75	118.60
1	1G	1484	C	O5'-P-OP2	-6.92	99.47	105.70
1	13	717	C	C6-N1-C2	-6.92	117.53	120.30
24	1H	1196	C	N3-C4-C5	6.92	124.67	121.90
24	14	573	G	N3-C4-C5	-6.92	125.14	128.60
24	1H	474	G	O5'-P-OP2	-6.91	99.48	105.70
24	1H	1368	G	C8-N9-C4	-6.91	103.64	106.40
1	13	365	U	N3-C4-O4	6.91	124.24	119.40
24	14	1210	A	C5-N7-C8	-6.91	100.44	103.90
24	14	192	C	N1-C2-N3	-6.91	114.36	119.20
24	14	2246	G	C5-C6-O6	-6.91	124.45	128.60
1	13	690	G	C8-N9-C4	-6.91	103.64	106.40
24	1H	587	C	O5'-P-OP1	-6.91	99.48	105.70
25	16	94	C	N3-C4-C5	-6.91	119.14	121.90
24	14	949	C	C5-C6-N1	-6.91	117.55	121.00
24	14	1982	C	C2-N1-C1'	6.91	126.40	118.80
24	1H	672	C	C4-C5-C6	6.91	120.85	117.40
24	14	1359	A	C8-N9-C4	6.91	108.56	105.80
24	1H	2595	G	C4-C5-N7	6.90	113.56	110.80
24	14	1278	A	O5'-P-OP2	-6.90	99.49	105.70
24	14	2441	C	N3-C4-N4	-6.90	113.17	118.00
24	1H	655	A	N7-C8-N9	6.90	117.25	113.80
24	1H	2271	G	O5'-P-OP2	-6.90	99.49	105.70
1	1G	542	G	O5'-P-OP1	-6.90	99.49	105.70
1	1G	963	G	C4-N9-C1'	6.90	135.47	126.50
24	14	983	A	OP2-P-O3'	6.90	120.37	105.20
24	14	2232	U	N3-C4-C5	-6.90	110.46	114.60
24	14	746	A	N1-C2-N3	6.90	132.75	129.30
24	1H	140	A	C5-C6-N6	-6.89	118.19	123.70
24	1H	2275	C	OP1-P-O3'	6.89	120.37	105.20
24	14	403	U	C5-C6-N1	-6.89	119.25	122.70
24	14	510	C	O5'-P-OP2	-6.89	99.50	105.70
24	14	1496	A	O4'-C1'-N9	6.89	113.72	108.20
24	14	2061	G	N7-C8-N9	-6.89	109.65	113.10
24	14	2596	U	O5'-P-OP2	-6.89	99.50	105.70
24	1H	961	C	N3-C4-N4	6.89	122.83	118.00
24	1H	1325	G	N3-C4-C5	-6.89	125.16	128.60
1	1G	565	U	N1-C2-N3	6.89	119.03	114.90
24	14	1660	C	O5'-P-OP2	-6.89	99.50	105.70
24	1H	795	C	C4-C5-C6	6.89	120.84	117.40
24	1H	1626	G	O5'-P-OP2	6.89	118.96	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1902	C	C6-N1-C2	6.89	123.06	120.30
24	14	2518	A	N7-C8-N9	6.89	117.24	113.80
24	1H	1785	A	N1-C6-N6	6.88	122.73	118.60
24	1H	2490	G	O5'-P-OP2	-6.88	99.50	105.70
1	13	1336	C	C5-C6-N1	6.88	124.44	121.00
24	1H	2827	C	C5-C6-N1	-6.88	117.56	121.00
24	1H	2451	A	N9-C4-C5	6.88	108.55	105.80
24	14	1620	G	C5-C6-O6	6.88	132.73	128.60
24	14	2324	C	C5-C6-N1	-6.88	117.56	121.00
24	14	2388	A	O5'-P-OP2	-6.88	99.51	105.70
24	1H	2502	G	C5-C6-N1	6.88	114.94	111.50
24	1H	2593	U	N1-C2-N3	6.88	119.03	114.90
24	14	186	G	N1-C6-O6	-6.88	115.77	119.90
24	14	2441	C	C2-N3-C4	-6.88	116.46	119.90
24	14	2574	G	C5-C6-O6	-6.88	124.47	128.60
24	1H	194	G	C5-N7-C8	6.88	107.74	104.30
24	14	2681	C	N3-C4-N4	-6.88	113.19	118.00
24	1H	2325	G	C4-N9-C1'	6.88	135.44	126.50
1	13	53	A	N1-C6-N6	6.87	122.72	118.60
24	1H	511	U	N3-C2-O2	-6.87	117.39	122.20
24	14	2585	U	C5-C6-N1	6.87	126.14	122.70
1	13	823	G	N3-C4-C5	6.87	132.04	128.60
24	1H	821	A	N9-C4-C5	6.87	108.55	105.80
24	1H	846	C	C5-C4-N4	-6.87	115.39	120.20
24	1H	1307	A	C8-N9-C4	6.87	108.55	105.80
24	14	320	A	O5'-P-OP2	-6.87	99.52	105.70
24	1H	148	C	C2-N3-C4	-6.87	116.47	119.90
24	1H	513	A	C8-N9-C4	-6.87	103.05	105.80
24	1H	535	C	OP2-P-O3'	6.87	120.31	105.20
24	14	2821	A	N1-C6-N6	6.87	122.72	118.60
24	1H	190	A	C8-N9-C4	6.87	108.55	105.80
24	1H	382	G	C4-C5-N7	6.87	113.55	110.80
24	14	1342	A	C8-N9-C4	-6.87	103.05	105.80
24	1H	509	C	N3-C4-C5	-6.86	119.16	121.90
24	14	71	A	N1-C2-N3	6.86	132.73	129.30
24	1H	716	A	O5'-P-OP2	6.86	118.93	110.70
1	1G	817	C	C5-C6-N1	-6.86	117.57	121.00
24	14	1496	A	N1-C6-N6	6.86	122.72	118.60
24	1H	571	A	N7-C8-N9	-6.86	110.37	113.80
24	1H	1266	G	C5-C6-O6	-6.86	124.49	128.60
1	1G	898	G	C8-N9-C4	6.86	109.14	106.40
24	14	736	C	C6-N1-C2	6.86	123.04	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2689	U	OP2-P-O3'	6.86	120.29	105.20
24	1H	915	C	N1-C2-O2	6.85	123.01	118.90
24	1H	667	U	N3-C4-C5	-6.85	110.49	114.60
24	1H	697	C	N3-C4-N4	6.85	122.80	118.00
24	1H	788	A	C5-C6-N6	-6.85	118.22	123.70
24	1H	2062	A	N3-C4-N9	6.85	132.88	127.40
24	1H	2436	G	N3-C2-N2	-6.85	115.10	119.90
1	1G	951	G	O5'-P-OP1	-6.85	99.53	105.70
24	14	2592	G	C5-C6-O6	-6.85	124.49	128.60
24	1H	2325	G	C8-N9-C4	-6.85	103.66	106.40
24	1H	202	U	N1-C2-N3	-6.85	110.79	114.90
1	1G	897	C	N1-C2-O2	-6.85	114.79	118.90
24	14	780	G	C2-N3-C4	-6.85	108.47	111.90
24	14	1790	C	C4-C5-C6	6.85	120.83	117.40
24	14	2251	G	N1-C2-N3	6.85	128.01	123.90
24	14	2699	C	C5-C6-N1	-6.85	117.58	121.00
24	14	205	G	C8-N9-C4	6.85	109.14	106.40
24	14	450	G	C6-C5-N7	-6.84	126.29	130.40
1	13	882	C	C6-N1-C2	-6.84	117.56	120.30
24	1H	1156	A	O5'-P-OP2	-6.84	99.54	105.70
24	14	728	G	N3-C4-N9	6.84	130.10	126.00
24	14	751	A	OP1-P-OP2	-6.84	109.34	119.60
24	14	2583	G	N1-C6-O6	6.84	124.00	119.90
24	1H	1021	A	C6-C5-N7	-6.84	127.51	132.30
24	14	739	G	C8-N9-C4	6.84	109.14	106.40
24	14	2236	C	C6-N1-C2	6.84	123.04	120.30
24	14	2606	C	N1-C2-O2	-6.84	114.80	118.90
1	13	254	G	O5'-P-OP1	-6.83	99.55	105.70
24	1H	62	C	C5-C6-N1	-6.83	117.58	121.00
24	1H	2329	G	N3-C2-N2	-6.83	115.12	119.90
24	14	784	A	C2-N3-C4	-6.83	107.18	110.60
24	1H	147	U	C5-C4-O4	-6.83	121.80	125.90
24	1H	841	A	C2-N3-C4	-6.83	107.19	110.60
24	14	827	U	O5'-P-OP1	6.83	118.89	110.70
24	14	2509	G	O5'-P-OP1	-6.83	99.56	105.70
24	1H	1296	G	OP2-P-O3'	6.82	120.20	105.20
24	1H	2409	G	C6-C5-N7	-6.82	126.31	130.40
24	14	426	C	C6-N1-C2	6.82	123.03	120.30
1	13	852	G	O5'-P-OP2	-6.82	99.56	105.70
24	1H	1165	U	N3-C2-O2	-6.82	117.43	122.20
24	14	1129	A	O5'-P-OP2	-6.82	99.56	105.70
24	14	528	A	N3-C4-C5	6.81	131.57	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1313	U	C2-N1-C1'	6.81	125.88	117.70
1	1G	872	A	C2-N3-C4	-6.81	107.19	110.60
24	1H	778	G	C5-C6-O6	6.81	132.69	128.60
24	14	575	A	O5'-P-OP2	6.81	118.87	110.70
24	14	2780	G	C8-N9-C1'	-6.81	118.15	127.00
1	1G	197	A	C4-C5-C6	6.81	120.40	117.00
1	1G	1519	A	C5-C6-N6	6.81	129.15	123.70
24	1H	2368	C	N1-C2-O2	6.81	122.98	118.90
24	1H	658	C	C5-C6-N1	-6.80	117.60	121.00
24	14	1696	G	C5-C6-N1	6.80	114.90	111.50
24	14	2068	U	N3-C4-O4	-6.80	114.64	119.40
24	1H	1428	C	O5'-P-OP2	6.80	118.86	110.70
24	1H	2070	G	N7-C8-N9	-6.80	109.70	113.10
24	1H	2503	A	N3-C4-N9	6.80	132.84	127.40
24	14	728	G	N9-C4-C5	-6.80	102.68	105.40
1	1G	671	G	O5'-P-OP2	-6.79	99.58	105.70
24	1H	613	U	N1-C2-N3	6.79	118.98	114.90
24	1H	2576	G	C8-N9-C4	6.79	109.12	106.40
1	13	52	G	C5-C6-O6	6.79	132.68	128.60
54	Q8	61	LEU	CA-CB-CG	-6.79	99.68	115.30
24	14	2252	G	C2-N3-C4	-6.79	108.50	111.90
1	13	582	U	C5-C6-N1	-6.79	119.31	122.70
1	13	777	A	C8-N9-C4	-6.79	103.08	105.80
24	1H	1210	A	C5-C6-N6	-6.79	118.27	123.70
24	14	562	U	N1-C2-N3	6.79	118.97	114.90
24	14	1342	A	C4-C5-C6	6.79	120.39	117.00
24	1H	510	C	N3-C2-O2	6.79	126.65	121.90
24	1H	754	C	C2-N3-C4	-6.79	116.51	119.90
24	14	71	A	O4'-C1'-N9	-6.79	102.77	108.20
24	14	1204	A	C4-C5-N7	6.79	114.09	110.70
24	14	1779	U	C6-N1-C1'	-6.79	111.70	121.20
24	14	1664	A	OP1-P-OP2	-6.78	109.42	119.60
25	1J	38	C	O5'-P-OP2	-6.78	99.59	105.70
24	1H	909	A	N7-C8-N9	-6.78	110.41	113.80
24	14	736	C	C2-N1-C1'	-6.78	111.34	118.80
24	1H	1952	A	N1-C6-N6	6.78	122.67	118.60
1	1G	509	A	C8-N9-C4	-6.78	103.09	105.80
24	14	1353	A	N1-C2-N3	6.78	132.69	129.30
24	1H	1286	A	O5'-P-OP2	-6.78	99.60	105.70
24	14	768	G	N3-C4-C5	-6.78	125.21	128.60
24	14	1769	G	C6-C5-N7	-6.78	126.33	130.40
24	14	1900	A	C4-C5-C6	6.78	120.39	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	1455	G	C8-N9-C4	6.78	109.11	106.40
24	14	1613	G	N3-C2-N2	6.78	124.64	119.90
24	1H	931	G	O5'-P-OP1	-6.77	99.61	105.70
24	1H	1616	A	N7-C8-N9	6.77	117.19	113.80
1	13	442	C	C5-C6-N1	6.77	124.39	121.00
24	1H	1618	A	C5-N7-C8	-6.77	100.52	103.90
24	1H	1968	G	C2-N3-C4	6.77	115.28	111.90
1	13	1446	A	O5'-P-OP1	6.77	118.82	110.70
24	1H	2032	G	N7-C8-N9	-6.77	109.72	113.10
24	14	689	A	C5-C6-N6	-6.77	118.28	123.70
24	1H	1319	G	N3-C4-C5	-6.77	125.22	128.60
24	1H	2061	G	N9-C4-C5	-6.77	102.69	105.40
24	1H	2393	A	N1-C6-N6	-6.77	114.54	118.60
24	14	871	U	O5'-P-OP1	-6.77	99.61	105.70
24	1H	265	A	C6-C5-N7	-6.76	127.56	132.30
24	1H	961	C	C6-N1-C2	-6.76	117.59	120.30
24	1H	2337	G	OP1-P-OP2	-6.76	109.45	119.60
23	4L	18	C	N3-C4-C5	-6.76	119.19	121.90
24	14	696	G	N7-C8-N9	-6.76	109.72	113.10
24	14	2881	C	N3-C4-C5	-6.76	119.19	121.90
24	1H	2509	G	N9-C4-C5	-6.76	102.69	105.40
24	14	431	U	O5'-P-OP1	-6.76	99.61	105.70
24	1H	124	G	N3-C4-C5	6.76	131.98	128.60
24	1H	852	G	O5'-P-OP2	-6.76	99.62	105.70
24	1H	2231	C	N1-C2-O2	-6.76	114.84	118.90
24	1H	2344	U	C6-N1-C2	-6.76	116.94	121.00
24	14	1332	G	N1-C2-N3	6.76	127.96	123.90
24	1H	757	U	C5-C6-N1	-6.76	119.32	122.70
24	1H	137	C	N3-C4-C5	6.76	124.60	121.90
24	1H	2250	G	C2-N3-C4	6.76	115.28	111.90
24	14	486	C	O5'-P-OP2	6.76	118.81	110.70
24	14	2594	C	N1-C2-O2	-6.76	114.85	118.90
24	14	1858	G	C8-N9-C4	-6.75	103.70	106.40
24	14	194	G	C2-N3-C4	-6.75	108.53	111.90
24	14	2713	A	C5-C6-N1	-6.75	114.32	117.70
25	1J	81	G	C2-N3-C4	-6.75	108.52	111.90
25	1J	89	G	C2-N3-C4	6.75	115.28	111.90
24	1H	1663	C	C6-N1-C2	6.75	123.00	120.30
35	78	18	ARG	NE-CZ-NH2	-6.75	116.92	120.30
24	14	1192	G	C8-N9-C4	6.75	109.10	106.40
1	13	1498	U	C6-N1-C2	-6.75	116.95	121.00
24	14	2779	U	N3-C2-O2	-6.75	117.47	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	2K	2	G	C5-C6-O6	-6.75	124.55	128.60
24	1H	1218	C	O5'-P-OP1	-6.75	99.63	105.70
24	14	681	G	N1-C2-N3	6.75	127.95	123.90
24	1H	190	A	C4-C5-N7	6.74	114.07	110.70
24	1H	1614	A	N3-C4-C5	6.74	131.52	126.80
24	14	2612	C	N1-C2-O2	6.74	122.94	118.90
24	1H	1603	A	OP1-P-O3'	6.74	120.03	105.20
24	14	1652	A	C2-N3-C4	-6.74	107.23	110.60
24	14	1266	G	C4-C5-N7	6.74	113.50	110.80
24	14	1989	G	N1-C6-O6	6.74	123.94	119.90
1	13	1489	G	C8-N9-C4	6.73	109.09	106.40
24	1H	676	A	C8-N9-C4	-6.73	103.11	105.80
24	14	2251	G	C6-N1-C2	-6.73	121.06	125.10
24	14	929	G	O5'-P-OP1	-6.73	99.64	105.70
24	1H	777	A	N1-C2-N3	6.73	132.66	129.30
24	1H	851	U	N1-C2-O2	-6.73	118.09	122.80
24	1H	1568	G	C5-C6-N1	6.73	114.86	111.50
1	1G	748	C	C6-N1-C2	-6.73	117.61	120.30
24	1H	1327	C	C4-C5-C6	6.72	120.76	117.40
24	1H	128	C	C2-N1-C1'	-6.72	111.40	118.80
24	1H	147	U	C6-N1-C2	6.72	125.03	121.00
35	78	45	LEU	CA-CB-CG	6.72	130.76	115.30
24	1H	2828	C	C2-N3-C4	-6.72	116.54	119.90
24	14	689	A	N1-C6-N6	6.72	122.63	118.60
24	14	2544	G	C4-C5-N7	6.72	113.49	110.80
1	1G	1469	G	C6-C5-N7	-6.72	126.37	130.40
1	1G	632	A	OP2-P-O3'	6.72	119.98	105.20
24	14	847	U	N3-C4-O4	-6.72	114.70	119.40
24	14	1700	A	O5'-P-OP2	6.72	118.76	110.70
24	14	116	C	C6-N1-C2	-6.71	117.61	120.30
1	13	295	C	O5'-P-OP2	-6.71	99.66	105.70
24	14	1616	A	N9-C4-C5	-6.71	103.11	105.80
24	14	1314	C	C5-C4-N4	-6.71	115.50	120.20
24	1H	951	C	C5-C6-N1	-6.71	117.65	121.00
24	14	430	G	C5-C6-O6	-6.71	124.57	128.60
24	14	970	C	O5'-P-OP1	-6.71	99.66	105.70
24	1H	56	A	C2-N3-C4	-6.71	107.25	110.60
24	1H	758	C	N3-C4-N4	-6.71	113.31	118.00
24	1H	775	G	N3-C4-N9	6.71	130.02	126.00
24	1H	2375	G	C5-C6-N1	6.71	114.85	111.50
24	14	1368	G	O5'-P-OP2	-6.71	99.67	105.70
24	14	1786	A	C4-N9-C1'	6.70	138.37	126.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2406	U	O4'-C1'-N1	-6.70	102.84	108.20
24	1H	305	U	C6-N1-C2	-6.70	116.98	121.00
24	14	2571	C	C5-C6-N1	-6.70	117.65	121.00
24	1H	451	C	C5-C6-N1	-6.70	117.65	121.00
24	1H	517	C	C5-C4-N4	-6.70	115.51	120.20
24	1H	963	U	C5-C6-N1	-6.70	119.35	122.70
24	14	2831	G	N1-C6-O6	6.70	123.92	119.90
24	1H	788	A	C6-C5-N7	-6.70	127.61	132.30
24	14	2503	A	C5-C6-N6	-6.70	118.34	123.70
1	1G	786	G	C8-N9-C4	6.70	109.08	106.40
24	1H	672	C	O5'-P-OP1	6.70	118.74	110.70
24	1H	777	A	C6-N1-C2	-6.70	114.58	118.60
24	14	952	G	O5'-P-OP1	-6.70	99.67	105.70
24	14	2427	C	C6-N1-C2	6.69	122.98	120.30
24	1H	2440	C	N3-C4-C5	-6.69	119.22	121.90
24	14	1943	U	N1-C2-N3	6.69	118.92	114.90
1	13	301	G	C5-C6-O6	-6.69	124.59	128.60
24	1H	740	U	C6-N1-C2	-6.69	116.99	121.00
24	1H	2440	C	C5-C4-N4	6.69	124.88	120.20
1	1G	115	G	P-O3'-C3'	6.69	127.73	119.70
24	1H	2060	A	O5'-P-OP1	6.69	118.73	110.70
24	1H	849	A	N1-C6-N6	6.69	122.61	118.60
24	1H	944	G	OP1-P-OP2	6.69	129.63	119.60
24	1H	1242	A	O5'-P-OP2	-6.69	99.68	105.70
24	1H	2337	G	C8-N9-C4	-6.69	103.73	106.40
24	14	820	A	N1-C6-N6	-6.69	114.59	118.60
24	1H	794	G	C4-C5-N7	-6.68	108.13	110.80
24	1H	797	C	N1-C2-O2	-6.68	114.89	118.90
24	1H	2076	U	C5-C4-O4	6.68	129.91	125.90
24	1H	2449	U	OP2-P-O3'	6.68	119.90	105.20
24	14	772	C	N3-C4-C5	-6.68	119.23	121.90
1	13	266	G	C4-C5-N7	6.68	113.47	110.80
24	1H	2393	A	N9-C4-C5	6.68	108.47	105.80
24	14	1647	G	O5'-P-OP2	6.68	118.72	110.70
22	2L	36	U	O5'-P-OP1	-6.68	99.69	105.70
24	1H	593	G	C6-C5-N7	-6.68	126.39	130.40
24	1H	871	U	N3-C4-C5	-6.68	110.59	114.60
24	1H	2387	U	N1-C2-O2	-6.68	118.12	122.80
24	14	603	A	N1-C6-N6	6.68	122.61	118.60
37	55	8	ARG	NE-CZ-NH1	-6.68	116.96	120.30
24	1H	537	C	N3-C2-O2	-6.68	117.23	121.90
24	1H	2620	C	N3-C4-N4	6.68	122.67	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1248	G	N1-C6-O6	-6.68	115.89	119.90
24	14	2000	G	C8-N9-C4	6.68	109.07	106.40
24	14	2688	U	N1-C2-O2	6.68	127.47	122.80
1	1G	487	A	N1-C6-N6	6.67	122.60	118.60
24	14	1261	C	N1-C2-O2	-6.67	114.90	118.90
24	1H	861	A	O5'-P-OP1	-6.67	99.69	105.70
24	1H	1660	C	C5-C4-N4	6.67	124.87	120.20
1	1G	886	G	C8-N9-C4	6.67	109.07	106.40
24	14	71	A	N3-C4-C5	6.67	131.47	126.80
24	14	1917	U	C5-C6-N1	6.67	126.04	122.70
24	14	2392	A	OP1-P-OP2	-6.67	109.59	119.60
24	1H	2056	G	C8-N9-C4	6.67	109.07	106.40
24	14	1021	A	C5-C6-N1	-6.67	114.36	117.70
1	1G	24	U	C5-C4-O4	-6.67	121.90	125.90
1	1G	306	G	N1-C6-O6	6.67	123.90	119.90
24	14	1243	G	C5-C6-O6	-6.67	124.60	128.60
24	1H	1614	A	C8-N9-C4	-6.67	103.13	105.80
24	14	472	A	N1-C2-N3	6.67	132.63	129.30
24	1H	676	A	C6-C5-N7	-6.67	127.63	132.30
24	1H	908	C	O5'-P-OP2	-6.67	99.70	105.70
24	14	121	G	C5-C6-O6	-6.67	124.60	128.60
24	14	805	G	N3-C4-N9	6.67	130.00	126.00
24	14	2387	U	C5-C6-N1	-6.67	119.37	122.70
1	1G	773	G	C8-N9-C4	-6.66	103.73	106.40
24	14	74	A	O4'-C1'-N9	-6.66	102.87	108.20
24	14	2071	A	OP1-P-OP2	-6.66	109.61	119.60
24	1H	2644	G	N3-C4-N9	-6.66	122.00	126.00
24	14	1573	G	N1-C6-O6	6.66	123.90	119.90
24	14	2373	G	C6-N1-C2	-6.66	121.10	125.10
24	1H	202	U	C6-N1-C2	6.66	125.00	121.00
24	1H	652	C	C6-N1-C2	-6.66	117.64	120.30
24	1H	2247	A	C8-N9-C4	-6.66	103.14	105.80
24	1H	2628	C	O5'-P-OP2	-6.66	99.71	105.70
24	14	603	A	C6-C5-N7	-6.66	127.64	132.30
24	14	1262	A	N1-C6-N6	6.66	122.59	118.60
1	13	1513	A	C8-N9-C4	6.66	108.46	105.80
1	1G	11	G	O5'-P-OP1	-6.66	99.71	105.70
1	1G	1502	A	C5-N7-C8	-6.66	100.57	103.90
24	1H	254	G	N1-C6-O6	6.65	123.89	119.90
24	1H	764	A	C8-N9-C4	-6.65	103.14	105.80
24	14	1782	C	C6-N1-C2	6.65	122.96	120.30
24	14	1917	U	C6-N1-C2	-6.65	117.01	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1284	A	C5-C6-N6	-6.65	118.38	123.70
24	14	2776	A	P-O3'-C3'	6.65	127.68	119.70
24	1H	529	A	C4-C5-N7	6.65	114.03	110.70
24	1H	1448	G	O5'-P-OP1	-6.65	99.72	105.70
24	1H	2413	G	C2-N3-C4	-6.65	108.58	111.90
47	J8	11	ARG	NE-CZ-NH1	-6.65	116.97	120.30
24	14	1775	U	C6-N1-C2	6.65	124.99	121.00
24	14	11	G	C8-N9-C4	-6.65	103.74	106.40
24	1H	265	A	N7-C8-N9	6.64	117.12	113.80
24	1H	529	A	N7-C8-N9	6.64	117.12	113.80
24	1H	2712	U	C5-C6-N1	-6.64	119.38	122.70
24	14	1823	G	C5-C6-O6	6.64	132.59	128.60
24	1H	1773	A	O5'-P-OP2	-6.64	99.72	105.70
25	16	76	G	C5-C6-O6	6.64	132.59	128.60
1	1G	1267	C	N1-C2-O2	6.64	122.89	118.90
24	1H	2239	G	C5-C6-O6	-6.64	124.61	128.60
24	14	655	A	N7-C8-N9	6.64	117.12	113.80
24	14	2247	A	C4-C5-C6	6.64	120.32	117.00
24	1H	754	C	C4-C5-C6	6.64	120.72	117.40
24	14	752	A	C6-N1-C2	-6.64	114.62	118.60
1	13	1518	A	C5-C6-N1	-6.64	114.38	117.70
24	1H	150	C	C5-C4-N4	6.64	124.84	120.20
24	1H	569	U	N3-C4-C5	6.64	118.58	114.60
24	1H	853	G	N9-C4-C5	-6.64	102.75	105.40
24	1H	1139	G	N3-C4-N9	6.64	129.98	126.00
24	1H	1831	G	N3-C2-N2	-6.64	115.25	119.90
24	14	1241	A	N3-C4-C5	6.64	131.45	126.80
1	13	326	G	C4-C5-N7	-6.63	108.15	110.80
24	14	1259	G	C8-N9-C4	6.63	109.05	106.40
24	14	2286	A	N7-C8-N9	6.63	117.12	113.80
24	1H	772	C	N3-C4-N4	6.63	122.64	118.00
24	14	2342	C	N1-C2-O2	6.63	122.88	118.90
25	1J	81	G	N9-C4-C5	-6.63	102.75	105.40
24	1H	947	G	N3-C2-N2	-6.63	115.26	119.90
24	1H	554	U	O5'-P-OP1	-6.63	99.73	105.70
24	1H	805	G	C6-C5-N7	-6.63	126.42	130.40
24	1H	1784	A	N1-C6-N6	-6.63	114.62	118.60
24	1H	1929	G	C8-N9-C4	6.63	109.05	106.40
24	14	1417	C	C5-C6-N1	6.63	124.31	121.00
24	1H	925	C	O5'-P-OP2	-6.62	99.74	105.70
24	14	1829	A	O5'-P-OP2	-6.62	99.74	105.70
24	1H	452	G	OP1-P-OP2	6.62	129.53	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	564	C	C6-N1-C2	-6.62	117.65	120.30
24	14	1602	U	N3-C4-C5	-6.62	110.63	114.60
1	13	581	G	C6-C5-N7	-6.62	126.43	130.40
24	1H	1637	A	N1-C6-N6	-6.62	114.63	118.60
24	14	2502	G	N3-C4-C5	-6.62	125.29	128.60
24	1H	2276	G	OP1-P-OP2	-6.62	109.67	119.60
24	1H	297	C	C5-C6-N1	-6.62	117.69	121.00
24	1H	917	A	N3-C4-C5	6.62	131.43	126.80
24	1H	960	A	C8-N9-C4	6.62	108.45	105.80
1	1G	527	G	C8-N9-C4	-6.62	103.75	106.40
24	14	2522	U	C5-C4-O4	-6.62	121.93	125.90
24	1H	260	G	C8-N9-C4	-6.62	103.75	106.40
24	1H	1024	G	OP1-P-OP2	6.62	129.52	119.60
22	2K	37	A	N1-C6-N6	-6.61	114.63	118.60
24	1H	92	G	N1-C6-O6	6.61	123.87	119.90
24	1H	1777	U	C5-C6-N1	-6.61	119.39	122.70
24	14	621	A	C8-N9-C4	-6.61	103.15	105.80
24	14	1301	A	C8-N9-C4	6.61	108.45	105.80
24	14	1614	A	N1-C6-N6	6.61	122.57	118.60
1	13	551	U	C5-C6-N1	-6.61	119.39	122.70
24	1H	141	A	N3-C4-N9	-6.61	122.11	127.40
24	1H	673	C	N1-C2-O2	-6.61	114.94	118.90
1	1G	46	G	N1-C6-O6	6.61	123.86	119.90
24	1H	1266	G	N3-C4-N9	6.61	129.96	126.00
24	1H	1673	U	C6-N1-C2	6.61	124.96	121.00
24	1H	1831	G	N7-C8-N9	6.61	116.40	113.10
24	14	271(A)	C	C2-N1-C1'	6.61	126.07	118.80
24	1H	2674	G	N1-C6-O6	-6.60	115.94	119.90
24	1H	1142(A)	A	N3-C4-N9	-6.60	122.12	127.40
1	1G	300	A	O5'-P-OP1	-6.60	99.76	105.70
24	14	215	G	C8-N9-C4	6.60	109.04	106.40
24	14	952	G	O5'-P-OP2	6.60	118.62	110.70
1	13	1336	C	C6-N1-C1'	-6.60	112.88	120.80
1	1G	1286	A	N7-C8-N9	6.60	117.10	113.80
24	14	2448	A	C8-N9-C4	-6.60	103.16	105.80
24	1H	2595	G	C5-C6-N1	6.60	114.80	111.50
24	14	834	C	C5-C6-N1	-6.60	117.70	121.00
24	14	1379	A	C6-C5-N7	-6.60	127.68	132.30
24	14	949	C	C6-N1-C2	6.59	122.94	120.30
24	1H	816	C	O5'-P-OP1	6.59	118.61	110.70
24	1H	2387	U	N3-C4-O4	6.59	124.01	119.40
24	1H	2477	C	OP1-P-O3'	6.59	119.70	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	353	A	N7-C8-N9	6.59	117.10	113.80
1	1G	730	G	OP1-P-O3'	6.59	119.70	105.20
24	14	1382	G	C8-N9-C1'	6.59	135.57	127.00
24	1H	663	G	C5-C6-O6	6.59	132.55	128.60
24	1H	1241	A	N7-C8-N9	6.59	117.09	113.80
24	14	930	U	N1-C2-O2	6.59	127.41	122.80
24	14	1912	A	C8-N9-C4	-6.59	103.17	105.80
24	1H	2502	G	C5-C6-O6	-6.59	124.65	128.60
24	14	571	A	C8-N9-C4	-6.59	103.17	105.80
24	14	1341	U	O5'-P-OP1	-6.59	99.77	105.70
24	14	2516	G	O5'-P-OP2	-6.59	99.77	105.70
24	14	2592	G	C6-C5-N7	-6.59	126.45	130.40
24	14	2681	C	C5-C4-N4	6.59	124.81	120.20
24	14	2731	G	N7-C8-N9	6.59	116.39	113.10
1	13	1099	G	N3-C4-N9	-6.58	122.05	126.00
24	14	987	G	C4-N9-C1'	-6.58	117.94	126.50
24	1H	1973	G	N1-C2-N2	-6.58	110.27	116.20
24	1H	2499	C	C6-N1-C2	-6.58	117.67	120.30
24	14	675	A	C5-N7-C8	-6.58	100.61	103.90
24	14	1673	U	C2-N1-C1'	-6.58	109.80	117.70
1	13	1267	C	C6-N1-C2	-6.58	117.67	120.30
24	1H	123	G	N7-C8-N9	-6.58	109.81	113.10
24	1H	2036	C	C6-N1-C2	-6.58	117.67	120.30
24	14	205	G	N3-C2-N2	6.58	124.51	119.90
24	14	1496	A	C6-C5-N7	-6.58	127.69	132.30
22	2K	19	C	C2-N1-C1'	6.58	126.04	118.80
24	14	1327	C	N3-C2-O2	6.58	126.51	121.90
24	1H	2702	U	C6-N1-C2	-6.58	117.05	121.00
24	14	1187	G	N3-C4-N9	-6.58	122.06	126.00
24	1H	1273	U	C2-N3-C4	-6.57	123.06	127.00
24	1H	2287	A	N3-C4-C5	6.57	131.40	126.80
24	1H	2474	C	N3-C2-O2	-6.57	117.30	121.90
24	1H	2584	U	C5-C4-O4	6.57	129.84	125.90
1	13	907	A	N1-C6-N6	6.57	122.54	118.60
1	13	1205	U	C6-N1-C2	-6.57	117.06	121.00
24	1H	572	A	O5'-P-OP1	6.57	118.58	110.70
24	1H	1955	U	C2-N3-C4	-6.57	123.06	127.00
24	1H	769	G	C5-N7-C8	6.57	107.58	104.30
24	1H	1347	G	N1-C6-O6	6.57	123.84	119.90
24	1H	1616	A	N1-C2-N3	6.57	132.58	129.30
24	1H	1790	C	OP1-P-O3'	6.57	119.64	105.20
24	14	2535	G	O5'-P-OP2	-6.57	99.79	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1489	U	C5-C4-O4	6.56	129.84	125.90
24	1H	1543	A	C4-C5-N7	6.56	113.98	110.70
24	14	1307	A	C6-N1-C2	-6.56	114.66	118.60
1	13	805	C	OP1-P-OP2	-6.56	109.76	119.60
24	14	125	G	C5-C6-O6	-6.56	124.66	128.60
24	14	675	A	N9-C4-C5	-6.56	103.17	105.80
24	14	1786	A	N3-C4-N9	-6.56	122.15	127.40
1	13	1497	G	O5'-P-OP2	-6.56	99.80	105.70
23	4K	10	G	C8-N9-C1'	6.56	135.53	127.00
24	1H	2743	C	N1-C2-O2	-6.56	114.96	118.90
1	1G	264	U	N3-C2-O2	6.56	126.79	122.20
24	1H	621	A	O4'-C1'-N9	6.56	113.45	108.20
24	1H	808	G	C4-C5-N7	-6.56	108.18	110.80
24	1H	1178	C	N1-C2-O2	6.56	122.83	118.90
24	1H	2509	G	N3-C4-N9	6.56	129.94	126.00
24	14	2439	A	C8-N9-C4	-6.56	103.18	105.80
24	14	2673	G	C8-N9-C1'	-6.56	118.47	127.00
24	1H	2699	C	C2-N3-C4	-6.56	116.62	119.90
1	1G	882	C	C6-N1-C2	-6.56	117.68	120.30
24	14	664	C	C5-C6-N1	-6.55	117.72	121.00
24	14	2347	C	N1-C2-O2	6.55	122.83	118.90
24	1H	2554	U	O5'-P-OP2	6.55	118.56	110.70
1	1G	1279	A	C8-N9-C4	-6.55	103.18	105.80
24	14	704	G	C5-C6-O6	-6.55	124.67	128.60
24	14	1021	A	N3-C4-N9	-6.55	122.16	127.40
24	1H	796	C	N3-C4-C5	6.55	124.52	121.90
1	13	1528	U	C5-C6-N1	-6.55	119.42	122.70
24	1H	1559	G	C4-C5-N7	6.55	113.42	110.80
1	13	1513	A	N9-C4-C5	-6.55	103.18	105.80
24	1H	1528	A	C8-N9-C4	-6.55	103.18	105.80
24	14	94	G	N1-C6-O6	6.55	123.83	119.90
24	14	2507	C	N1-C2-O2	6.55	122.83	118.90
24	1H	1513	C	C5-C6-N1	6.55	124.27	121.00
24	1H	1996	C	O5'-P-OP1	-6.55	99.81	105.70
24	1H	2452	C	C6-N1-C1'	-6.54	112.95	120.80
24	14	404	C	N3-C4-C5	6.54	124.52	121.90
24	14	1807	G	N1-C6-O6	6.54	123.83	119.90
1	13	1433	A	N1-C2-N3	6.54	132.57	129.30
24	1H	1211	U	C6-N1-C2	6.54	124.92	121.00
24	1H	1424	G	C2-N3-C4	-6.54	108.63	111.90
24	1H	2060	A	OP1-P-OP2	-6.54	109.79	119.60
24	14	817	C	C5-C6-N1	6.54	124.27	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	136	C	C6-N1-C2	6.54	122.92	120.30
24	1H	789	A	C2-N3-C4	-6.54	107.33	110.60
24	1H	1300	U	N1-C2-O2	-6.54	118.22	122.80
24	1H	832	G	N1-C6-O6	6.54	123.82	119.90
24	1H	2082	A	C8-N9-C4	6.54	108.41	105.80
4	32	194	LEU	CA-CB-CG	6.54	130.33	115.30
24	14	668	G	C8-N9-C4	6.54	109.01	106.40
24	14	1586	A	N7-C8-N9	6.54	117.07	113.80
24	14	1558	A	P-O3'-C3'	6.53	127.54	119.70
24	14	2545	G	N9-C4-C5	-6.53	102.79	105.40
24	1H	869	G	O5'-P-OP2	-6.53	99.82	105.70
24	1H	2457	U	C4-C5-C6	-6.53	115.78	119.70
24	14	1949	G	O5'-P-OP1	-6.53	99.82	105.70
24	14	2779	U	C5-C4-O4	6.53	129.82	125.90
1	13	1178	G	N3-C4-N9	-6.53	122.08	126.00
24	14	2857	G	C5-C6-O6	-6.53	124.68	128.60
24	1H	2466	C	N3-C4-C5	6.53	124.51	121.90
1	13	730	G	N9-C4-C5	6.53	108.01	105.40
1	13	1528	U	C6-N1-C2	6.53	124.92	121.00
24	1H	458	G	O5'-P-OP2	-6.53	99.83	105.70
24	1H	810	U	C2-N3-C4	-6.53	123.08	127.00
24	1H	2454	G	N1-C2-N2	-6.53	110.33	116.20
24	14	682	G	C6-C5-N7	-6.53	126.48	130.40
24	14	1883	G	N9-C4-C5	-6.53	102.79	105.40
24	1H	508	G	C5-C6-O6	-6.52	124.69	128.60
24	14	696	G	C8-N9-C4	6.52	109.01	106.40
24	14	2429	G	O5'-P-OP2	-6.52	99.83	105.70
1	13	827	U	C2-N1-C1'	6.52	125.52	117.70
24	1H	1216	G	N1-C6-O6	6.52	123.81	119.90
24	1H	1387	C	OP1-P-OP2	6.52	129.38	119.60
24	1H	2584	U	N3-C4-O4	-6.52	114.84	119.40
24	1H	1528	A	O4'-C1'-N9	6.52	113.41	108.20
24	14	141	A	C6-C5-N7	-6.52	127.74	132.30
24	14	1559	G	C2-N3-C4	-6.52	108.64	111.90
24	14	734	A	C5-C6-N6	6.52	128.91	123.70
24	1H	569	U	C6-N1-C2	6.51	124.91	121.00
24	1H	1990	C	C4-C5-C6	6.51	120.66	117.40
24	14	696	G	C6-C5-N7	6.51	134.31	130.40
24	14	967	C	OP1-P-O3'	6.51	119.53	105.20
24	14	2244	U	N1-C2-N3	6.51	118.81	114.90
27	19	43	ARG	NE-CZ-NH2	-6.51	117.04	120.30
24	1H	1561	G	N1-C6-O6	-6.51	115.99	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	449	A	OP1-P-O3'	6.51	119.53	105.20
24	14	1614	A	N7-C8-N9	6.51	117.06	113.80
1	13	749	C	N1-C2-O2	6.51	122.81	118.90
1	1G	481	G	N3-C4-C5	-6.51	125.34	128.60
20	BA	10	LEU	CA-CB-CG	6.51	130.27	115.30
24	14	1325	G	O5'-P-OP1	6.51	118.51	110.70
24	1H	845	G	P-O3'-C3'	6.51	127.51	119.70
25	16	99	A	OP1-P-OP2	6.51	129.36	119.60
25	1J	102	G	N7-C8-N9	-6.51	109.85	113.10
1	13	690	G	N9-C4-C5	6.50	108.00	105.40
24	14	2830	G	C5-C6-O6	-6.50	124.70	128.60
24	1H	743	G	C8-N9-C4	-6.50	103.80	106.40
1	1G	893	C	N1-C2-O2	6.50	122.80	118.90
1	13	1510	U	C6-N1-C2	6.50	124.90	121.00
24	1H	119	A	OP1-P-O3'	6.50	119.50	105.20
24	1H	265	A	C2-N3-C4	-6.50	107.35	110.60
24	1H	59	U	N1-C2-N3	6.50	118.80	114.90
24	1H	794	G	N7-C8-N9	-6.50	109.85	113.10
25	1J	88	C	N3-C4-C5	-6.50	119.30	121.90
24	1H	193	U	C2-N3-C4	-6.50	123.10	127.00
24	1H	2518	A	N3-C4-C5	6.50	131.35	126.80
24	14	2244	U	C4-C5-C6	6.50	123.60	119.70
24	14	2438	U	OP2-P-O3'	6.50	119.50	105.20
24	1H	2443	C	C2-N3-C4	-6.50	116.65	119.90
24	14	58	G	O5'-P-OP1	6.50	118.50	110.70
24	14	1698	A	C5-C6-N1	-6.50	114.45	117.70
24	1H	2392	A	C8-N9-C4	-6.50	103.20	105.80
44	G8	81	LYS	C-N-CD	-6.50	106.31	120.60
1	1G	1469	G	C4-N9-C1'	6.50	134.94	126.50
24	14	213	A	C4-C5-C6	-6.50	113.75	117.00
24	1H	1139	G	C8-N9-C4	6.49	109.00	106.40
24	1H	2375	G	C8-N9-C4	6.49	109.00	106.40
1	1G	197	A	C5-N7-C8	-6.49	100.65	103.90
1	13	690	G	C5-N7-C8	-6.49	101.05	104.30
24	1H	417	C	O5'-P-OP2	6.49	118.49	110.70
24	1H	2628	C	O5'-P-OP1	6.49	118.49	110.70
1	1G	481	G	C6-C5-N7	-6.49	126.50	130.40
24	14	672	C	O5'-P-OP2	-6.49	99.86	105.70
1	13	365	U	C5-C4-O4	-6.49	122.01	125.90
24	1H	576	U	C2-N3-C4	-6.49	123.11	127.00
24	14	450	G	C4-C5-N7	6.49	113.40	110.80
24	14	1313	U	O4'-C1'-N1	6.49	113.39	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2571	C	N3-C4-C5	6.49	124.50	121.90
24	1H	1129	A	O5'-P-OP2	-6.49	99.86	105.70
24	1H	1827	C	N3-C4-N4	-6.49	113.46	118.00
24	1H	860	U	OP2-P-O3'	6.49	119.47	105.20
24	1H	2594	C	N1-C2-O2	-6.49	115.01	118.90
29	31	74	ARG	CG-CD-NE	6.49	125.42	111.80
24	14	572	A	N1-C6-N6	6.49	122.49	118.60
24	1H	941	A	OP1-P-OP2	-6.48	109.88	119.60
24	1H	1204	A	C6-N1-C2	6.48	122.49	118.60
24	1H	2363	C	OP2-P-O3'	6.48	119.46	105.20
24	1H	2364	C	OP2-P-O3'	6.48	119.46	105.20
24	1H	70	G	C6-C5-N7	-6.48	126.51	130.40
24	1H	1204	A	N9-C1'-C2'	6.48	122.42	114.00
24	14	593	G	C6-N1-C2	-6.48	121.21	125.10
24	14	2838	G	C5-C6-O6	-6.48	124.71	128.60
24	1H	853	G	C8-N9-C4	6.48	108.99	106.40
24	14	781	A	N1-C6-N6	-6.48	114.71	118.60
24	1H	1300	U	C2-N3-C4	-6.48	123.11	127.00
24	1H	1349	A	N3-C4-C5	6.48	131.33	126.80
24	14	2518	A	C6-C5-N7	-6.48	127.77	132.30
24	1H	752	A	N1-C2-N3	6.48	132.54	129.30
24	1H	1838	C	C6-N1-C2	6.48	122.89	120.30
24	1H	2745	C	C6-N1-C2	-6.48	117.71	120.30
24	1H	209	C	N3-C2-O2	-6.47	117.37	121.90
24	1H	1558	A	P-O3'-C3'	6.47	127.47	119.70
24	1H	2054	A	N1-C6-N6	6.47	122.48	118.60
24	1H	2550	G	C5-C6-O6	-6.47	124.72	128.60
1	1G	1301	U	N1-C2-O2	6.47	127.33	122.80
24	1H	246	C	C5-C6-N1	-6.47	117.77	121.00
24	1H	2830	G	N7-C8-N9	6.47	116.33	113.10
22	2K	25	G	N1-C6-O6	-6.47	116.02	119.90
24	14	2439	A	N1-C6-N6	6.47	122.48	118.60
1	13	541	G	C5-C6-O6	-6.47	124.72	128.60
24	1H	226	G	N1-C6-O6	6.47	123.78	119.90
24	1H	461	C	N3-C2-O2	6.47	126.43	121.90
24	1H	1294	U	O5'-P-OP2	6.47	118.46	110.70
24	14	1297	C	O5'-P-OP2	-6.47	99.88	105.70
24	1H	1274	A	N1-C6-N6	6.46	122.48	118.60
24	1H	1850	G	N3-C2-N2	-6.46	115.38	119.90
24	1H	1992	G	O5'-P-OP2	-6.46	99.88	105.70
24	14	1284	A	C4-C5-N7	6.46	113.93	110.70
24	1H	793	A	C4-C5-N7	6.46	113.93	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2774	C	C5-C6-N1	-6.46	117.77	121.00
24	14	2287	A	C6-N1-C2	6.46	122.48	118.60
24	14	837	C	O5'-P-OP1	-6.46	99.89	105.70
24	14	1209	G	O5'-P-OP2	-6.46	99.89	105.70
24	14	2499	C	N3-C4-C5	-6.46	119.31	121.90
24	1H	932	G	N3-C4-C5	-6.46	125.37	128.60
24	1H	2325	G	O5'-P-OP1	-6.46	99.89	105.70
22	2L	18	G	N3-C4-C5	6.46	131.83	128.60
24	14	912	C	C6-N1-C2	-6.46	117.72	120.30
24	1H	446	G	N9-C4-C5	-6.46	102.82	105.40
24	1H	2773	C	C6-N1-C2	6.46	122.88	120.30
1	1G	886	G	N9-C4-C5	-6.46	102.82	105.40
24	1H	795	C	C6-N1-C2	6.46	122.88	120.30
24	14	1145	C	C5-C6-N1	6.46	124.23	121.00
24	1H	1825	A	N1-C6-N6	-6.46	114.73	118.60
24	1H	2198	A	C8-N9-C4	6.46	108.38	105.80
24	1H	2717	G	N3-C4-N9	6.46	129.87	126.00
1	1G	366	C	C5-C6-N1	-6.46	117.77	121.00
1	13	1515	C	C6-N1-C2	6.45	122.88	120.30
24	1H	1158	C	C5-C6-N1	-6.45	117.77	121.00
24	1H	1446	C	C6-N1-C2	-6.45	117.72	120.30
24	14	2235	G	C4-C5-N7	6.45	113.38	110.80
24	1H	464	U	C4-C5-C6	6.45	123.57	119.70
24	1H	1204	A	N3-C4-N9	-6.45	122.24	127.40
24	14	1793	C	N1-C2-O2	-6.45	115.03	118.90
24	1H	773	U	O5'-P-OP1	-6.45	99.90	105.70
24	1H	2437	U	N3-C4-C5	-6.45	110.73	114.60
24	1H	227	A	C4-C5-C6	6.45	120.22	117.00
24	1H	1241	A	C4-C5-N7	6.45	113.92	110.70
24	14	1354	A	C5-C6-N1	6.45	120.92	117.70
24	14	1366	A	C2-N3-C4	-6.45	107.38	110.60
24	14	1830	C	C5-C4-N4	-6.45	115.69	120.20
24	1H	189	G	N3-C2-N2	-6.44	115.39	119.90
24	1H	1943	U	O5'-P-OP2	-6.44	99.90	105.70
24	1H	1967	C	OP1-P-OP2	6.44	129.27	119.60
24	14	2713	A	N3-C4-N9	-6.44	122.25	127.40
1	13	484	G	P-O3'-C3'	6.44	127.43	119.70
1	13	703	G	C4-C5-C6	6.44	122.67	118.80
24	1H	1632	A	C6-C5-N7	-6.44	127.79	132.30
24	1H	2744	G	C2-N3-C4	-6.44	108.68	111.90
24	14	122	G	N1-C6-O6	6.44	123.77	119.90
1	1G	945	G	C4-C5-N7	6.44	113.38	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	533	G	C8-N9-C4	6.44	108.98	106.40
24	1H	736	C	C5-C4-N4	-6.44	115.69	120.20
24	1H	1622	G	C5-C6-O6	-6.44	124.74	128.60
24	1H	220	G	C8-N9-C4	6.44	108.97	106.40
1	13	1440	C	C6-N1-C2	6.44	122.87	120.30
1	1G	251	G	O4'-C1'-N9	-6.44	103.05	108.20
1	13	797	C	N1-C2-O2	-6.43	115.04	118.90
24	1H	598	G	O5'-P-OP2	-6.43	99.91	105.70
24	1H	1767	C	C2-N3-C4	-6.43	116.68	119.90
24	14	1890	A	C8-N9-C4	6.43	108.37	105.80
24	14	2857	G	C4-C5-N7	6.43	113.37	110.80
24	1H	74	A	O4'-C1'-N9	-6.43	103.05	108.20
24	1H	1800	C	OP1-P-OP2	-6.43	109.95	119.60
24	14	632	A	O5'-P-OP2	6.43	118.42	110.70
1	13	7	G	O4'-C1'-N9	6.43	113.34	108.20
1	13	1498	U	N3-C2-O2	-6.43	117.70	122.20
24	14	774	A	N1-C2-N3	6.43	132.51	129.30
24	14	2859	G	N7-C8-N9	6.43	116.32	113.10
1	13	803	G	C5-C6-N1	-6.43	108.29	111.50
24	1H	713	G	N1-C6-O6	6.43	123.76	119.90
24	1H	1559	G	C5-C6-N1	-6.43	108.29	111.50
24	14	2059	A	OP2-P-O3'	6.43	119.34	105.20
24	14	2509	G	C8-N9-C4	6.43	108.97	106.40
24	1H	52	A	N1-C2-N3	-6.42	126.09	129.30
24	1H	457	A	C6-N1-C2	6.42	122.45	118.60
24	1H	2198	A	OP1-P-O3'	6.42	119.33	105.20
24	14	1188	U	C5-C6-N1	-6.42	119.49	122.70
24	14	2674	G	O5'-P-OP2	-6.42	99.92	105.70
24	1H	220	G	N1-C6-O6	6.42	123.75	119.90
24	1H	71	A	N1-C2-N3	6.42	132.51	129.30
24	1H	179	G	N1-C6-O6	6.42	123.75	119.90
24	1H	2392	A	C5-C6-N1	-6.42	114.49	117.70
25	16	60	C	N3-C4-N4	6.42	122.49	118.00
1	1G	567	G	C5-C6-O6	-6.42	124.75	128.60
24	14	1620	G	C8-N9-C1'	6.42	135.34	127.00
24	14	1695	G	N1-C6-O6	6.42	123.75	119.90
1	13	708	C	N3-C2-O2	-6.42	117.41	121.90
24	1H	784	A	C5-C6-N6	6.42	128.83	123.70
24	1H	49	A	N1-C6-N6	6.41	122.45	118.60
24	1H	242	G	C8-N9-C4	6.41	108.97	106.40
24	1H	391	G	C5-C6-O6	-6.41	124.75	128.60
1	1G	643	C	N1-C2-O2	-6.41	115.05	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	585	G	C2-N3-C4	-6.41	108.69	111.90
24	14	736	C	O5'-P-OP1	-6.41	99.93	105.70
23	4K	13	A	P-O3'-C3'	6.41	127.39	119.70
24	1H	1253	A	C8-N9-C4	6.41	108.36	105.80
24	1H	2520	C	N1-C2-O2	-6.41	115.05	118.90
24	14	448	U	N1-C2-N3	6.41	118.75	114.90
1	13	1498	U	C2-N1-C1'	6.41	125.39	117.70
24	1H	1618	A	O5'-P-OP1	-6.41	99.93	105.70
1	1G	20	U	OP1-P-OP2	6.41	129.22	119.60
1	13	1058	G	N7-C8-N9	-6.41	109.89	113.10
24	1H	115	C	C2-N3-C4	-6.41	116.70	119.90
24	1H	569	U	N3-C2-O2	6.41	126.69	122.20
24	14	784	A	C5-C6-N1	-6.41	114.50	117.70
24	14	1323	U	N1-C2-O2	-6.41	118.31	122.80
24	14	1697	G	C5-C6-O6	-6.41	124.75	128.60
41	95	21	ARG	CG-CD-NE	6.41	125.26	111.80
24	1H	1210	A	C8-N9-C4	-6.41	103.24	105.80
24	1H	446	G	N1-C6-O6	6.41	123.74	119.90
24	1H	1022	G	P-O3'-C3'	6.41	127.39	119.70
24	14	261	G	C5-C6-O6	-6.41	124.76	128.60
24	14	1805	U	OP2-P-O3'	6.41	119.29	105.20
24	1H	924	C	N1-C2-O2	6.40	122.74	118.90
24	1H	1968	G	N3-C4-C5	-6.40	125.40	128.60
24	14	2033	A	C6-N1-C2	-6.40	114.76	118.60
1	13	524	G	OP2-P-O3'	6.40	119.29	105.20
22	2K	21	A	C2-N3-C4	-6.40	107.40	110.60
24	1H	2219	G	N1-C6-O6	6.40	123.74	119.90
24	1H	2606	C	N1-C2-O2	-6.40	115.06	118.90
24	14	2077	A	C8-N9-C4	-6.40	103.24	105.80
24	1H	75	G	N3-C4-C5	-6.40	125.40	128.60
24	1H	2619	C	O5'-P-OP2	-6.40	99.94	105.70
24	14	603	A	N7-C8-N9	6.40	117.00	113.80
24	14	804	A	N1-C2-N3	6.40	132.50	129.30
24	14	2327	A	N7-C8-N9	-6.40	110.60	113.80
24	14	2713	A	C5-C6-N6	-6.40	118.58	123.70
24	1H	1337	G	OP1-P-O3'	6.40	119.27	105.20
24	1H	2376	A	N7-C8-N9	-6.40	110.60	113.80
1	1G	690	G	O5'-P-OP2	-6.40	99.94	105.70
24	14	1371	G	C8-N9-C4	6.40	108.96	106.40
41	95	21	ARG	NH1-CZ-NH2	-6.40	112.36	119.40
24	14	1204	A	C5-C6-N1	-6.40	114.50	117.70
1	13	422	C	C6-N1-C2	-6.39	117.74	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	848	G	N3-C2-N2	6.39	124.38	119.90
24	1H	1915	U	C6-N1-C2	-6.39	117.16	121.00
22	2K	42	U	O5'-P-OP2	-6.39	99.95	105.70
25	16	7	G	N1-C6-O6	6.39	123.73	119.90
24	14	562	U	N3-C2-O2	-6.39	117.72	122.20
24	14	1259	G	OP2-P-O3'	6.39	119.26	105.20
25	1J	47	C	OP1-P-O3'	6.39	119.26	105.20
24	14	1704	G	C8-N9-C4	6.39	108.95	106.40
1	13	906	G	N1-C6-O6	6.39	123.73	119.90
24	1H	599	G	C6-C5-N7	-6.39	126.57	130.40
24	1H	1562	A	C2-N3-C4	-6.39	107.41	110.60
24	1H	2392	A	N1-C6-N6	6.39	122.43	118.60
24	14	308	G	C5-C6-O6	-6.39	124.77	128.60
24	14	541	C	C5-C6-N1	6.39	124.19	121.00
24	14	2358	G	N3-C2-N2	-6.39	115.43	119.90
1	13	760	G	C5-C6-O6	-6.38	124.77	128.60
24	1H	1004	C	O5'-P-OP2	6.38	118.36	110.70
24	14	829	A	O5'-P-OP1	-6.38	99.95	105.70
24	14	2361	A	C2-N3-C4	-6.38	107.41	110.60
24	14	1825	A	C5-C6-N1	6.38	120.89	117.70
24	14	1955	U	N1-C2-N3	6.38	118.73	114.90
24	1H	669	G	O5'-P-OP2	-6.38	99.96	105.70
1	1G	1519	A	N7-C8-N9	6.38	116.99	113.80
24	1H	1380	G	O5'-P-OP2	-6.38	99.96	105.70
24	1H	2448	A	N9-C4-C5	-6.38	103.25	105.80
24	14	446	G	C8-N9-C4	6.38	108.95	106.40
24	14	1949	G	OP1-P-OP2	6.38	129.17	119.60
24	1H	207	A	C5-C6-N6	-6.38	118.60	123.70
24	1H	2712	U	C2-N1-C1'	-6.38	110.05	117.70
1	1G	690	G	N3-C2-N2	-6.38	115.44	119.90
24	14	1765	C	N3-C4-C5	6.38	124.45	121.90
24	14	1834	U	C6-N1-C2	-6.38	117.17	121.00
24	14	2067	G	N9-C4-C5	6.38	107.95	105.40
1	13	131	C	N3-C2-O2	-6.37	117.44	121.90
24	1H	1764	G	C4-C5-N7	-6.37	108.25	110.80
24	1H	849	A	N9-C4-C5	-6.37	103.25	105.80
24	1H	945	A	C6-N1-C2	-6.37	114.78	118.60
24	1H	1008	C	N3-C2-O2	6.37	126.36	121.90
25	16	47	C	C6-N1-C2	6.37	122.85	120.30
22	2L	85	A	C6-C5-N7	-6.37	127.84	132.30
24	1H	1644	C	N1-C2-O2	6.37	122.72	118.90
24	14	1712	C	C6-N1-C2	-6.37	117.75	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	795	C	N1-C2-O2	-6.37	115.08	118.90
24	14	847	U	C6-N1-C1'	6.37	130.12	121.20
24	14	1157	G	O5'-P-OP2	-6.37	99.97	105.70
24	14	2640	G	N1-C6-O6	6.37	123.72	119.90
24	14	2644	G	N3-C4-C5	6.37	131.78	128.60
24	1H	148	C	C5-C6-N1	-6.37	117.82	121.00
24	1H	1235	G	C5-C6-N1	-6.37	108.32	111.50
24	1H	582	G	C4-C5-N7	6.37	113.35	110.80
24	1H	726	G	OP1-P-OP2	6.37	129.15	119.60
24	1H	835	A	C6-N1-C2	-6.37	114.78	118.60
1	1G	1482	G	O5'-P-OP1	-6.37	99.97	105.70
24	1H	783	A	O5'-P-OP2	-6.36	99.97	105.70
24	1H	1327	C	N1-C2-O2	-6.36	115.08	118.90
24	1H	2585	U	C5-C4-O4	-6.36	122.08	125.90
24	14	847	U	N1-C2-N3	6.36	118.72	114.90
24	14	1382	G	C6-C5-N7	6.36	134.22	130.40
24	14	2709	G	O5'-P-OP1	6.36	118.34	110.70
24	1H	197	A	OP2-P-O3'	6.36	119.20	105.20
1	1G	130	A	N1-C6-N6	6.36	122.42	118.60
1	1G	963	G	N3-C4-C5	-6.36	125.42	128.60
24	14	1839	G	N9-C4-C5	-6.36	102.86	105.40
24	1H	308	G	C4-N9-C1'	6.36	134.77	126.50
24	1H	932	G	O4'-C1'-N9	6.36	113.29	108.20
24	1H	1299	G	O5'-P-OP2	6.36	118.33	110.70
24	1H	2270	G	N3-C4-N9	6.36	129.82	126.00
24	14	801	G	N3-C4-N9	-6.36	122.18	126.00
24	14	968	G	C5-C6-O6	-6.36	124.78	128.60
1	13	542	G	O5'-P-OP1	-6.36	99.98	105.70
24	1H	1640	C	C2-N1-C1'	-6.36	111.81	118.80
1	1G	898	G	C5-C6-N1	6.36	114.68	111.50
24	1H	833	U	O5'-P-OP1	-6.36	99.98	105.70
24	1H	2827	C	C6-N1-C2	6.36	122.84	120.30
1	1G	61	G	N1-C6-O6	6.36	123.71	119.90
24	14	805	G	C6-C5-N7	-6.36	126.59	130.40
24	14	1121	C	C6-N1-C2	6.36	122.84	120.30
24	1H	828	U	N3-C2-O2	-6.35	117.75	122.20
24	14	1851	U	O5'-P-OP1	-6.35	99.98	105.70
24	14	2271	G	C8-N9-C4	6.35	108.94	106.40
24	1H	860	U	C5-C6-N1	-6.35	119.52	122.70
25	1J	55	U	O5'-P-OP1	-6.35	99.98	105.70
24	1H	99	U	N3-C2-O2	-6.35	117.75	122.20
24	1H	1781	C	N3-C4-N4	-6.35	113.56	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1695	G	C8-N9-C1'	-6.35	118.75	127.00
24	14	1906	G	C4-C5-N7	6.35	113.34	110.80
1	13	346	G	N3-C4-N9	6.35	129.81	126.00
24	1H	1313	U	C6-N1-C2	-6.35	117.19	121.00
24	1H	2553	G	N1-C2-N2	-6.35	110.49	116.20
1	1G	1416	G	O5'-P-OP2	-6.35	99.99	105.70
22	3K	18	G	C4-N9-C1'	-6.34	118.25	126.50
24	1H	143	C	C6-N1-C2	-6.34	117.76	120.30
24	1H	2585	U	N3-C4-O4	6.34	123.84	119.40
47	J8	85	LEU	CA-CB-CG	6.34	129.89	115.30
24	14	1806	C	C6-N1-C2	6.34	122.84	120.30
1	13	895	G	N3-C2-N2	-6.34	115.46	119.90
22	2K	19	C	C6-N1-C2	-6.34	117.76	120.30
24	1H	692	C	C6-N1-C2	6.34	122.84	120.30
24	1H	2527	C	N3-C4-N4	6.34	122.44	118.00
24	14	1935	G	C8-N9-C4	6.34	108.94	106.40
24	1H	1678	G	N1-C2-N2	-6.34	110.50	116.20
24	1H	1852	C	N1-C2-O2	-6.34	115.10	118.90
6	52	87	ARG	NE-CZ-NH1	6.34	123.47	120.30
24	14	2246	G	N3-C4-N9	6.34	129.80	126.00
24	1H	755	C	C2-N3-C4	-6.33	116.73	119.90
24	1H	960	A	O5'-P-OP1	-6.33	100.00	105.70
24	14	1029	A	C8-N9-C4	6.33	108.33	105.80
1	13	738	C	C5-C6-N1	6.33	124.17	121.00
1	1G	963	G	C8-N9-C1'	-6.33	118.77	127.00
24	1H	739	G	N1-C6-O6	6.33	123.70	119.90
24	14	1380	G	C8-N9-C4	6.33	108.93	106.40
24	14	2573	C	N3-C4-N4	6.33	122.43	118.00
24	1H	140	A	N9-C4-C5	-6.33	103.27	105.80
24	1H	609	A	C5-C6-N6	-6.33	118.64	123.70
38	A8	101	LEU	CA-CB-CG	6.33	129.86	115.30
24	14	593	G	O5'-P-OP1	6.33	118.30	110.70
24	1H	226	G	C5-C6-O6	-6.33	124.80	128.60
24	1H	1349	A	C4-C5-N7	6.33	113.86	110.70
1	1G	402	G	O5'-P-OP2	-6.33	100.00	105.70
1	13	652	U	O4'-C1'-N1	6.33	113.26	108.20
24	1H	1900	A	C5-N7-C8	6.33	107.06	103.90
1	13	1502	A	C8-N9-C4	-6.33	103.27	105.80
24	1H	1963	U	C6-N1-C2	-6.33	117.20	121.00
24	14	2447	G	C5-C6-O6	-6.33	124.80	128.60
24	1H	522	G	C5-C6-O6	-6.32	124.81	128.60
24	14	414	C	C5-C6-N1	-6.32	117.84	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1301	A	O5'-P-OP1	-6.32	100.01	105.70
24	1H	929	G	C6-C5-N7	-6.32	126.61	130.40
24	1H	1004	C	O5'-P-OP1	-6.32	100.01	105.70
24	1H	1649	G	N3-C4-C5	-6.32	125.44	128.60
24	1H	2010	G	OP1-P-O3'	6.32	119.11	105.20
24	1H	2539	C	O5'-P-OP2	-6.32	100.01	105.70
1	13	1281	U	O4'-C1'-N1	6.32	113.25	108.20
24	1H	1230	C	N3-C4-C5	6.32	124.43	121.90
24	1H	1564	C	C6-N1-C2	-6.32	117.77	120.30
24	1H	2254	C	N3-C4-C5	-6.32	119.37	121.90
24	1H	2552	U	N3-C4-O4	6.32	123.82	119.40
1	13	576	G	C4-N9-C1'	6.32	134.71	126.50
24	1H	266	G	C5-C6-O6	-6.32	124.81	128.60
24	1H	954	G	C4-C5-N7	-6.32	108.27	110.80
24	1H	1670	C	C4-C5-C6	6.32	120.56	117.40
24	14	2623	G	N1-C2-N3	6.32	127.69	123.90
24	14	1762	A	O5'-P-OP1	-6.31	100.02	105.70
1	13	496	A	N1-C6-N6	-6.31	114.81	118.60
1	13	802	A	C2-N3-C4	-6.31	107.44	110.60
1	13	1407	C	N3-C4-C5	6.31	124.42	121.90
24	1H	609	A	N9-C4-C5	-6.31	103.28	105.80
24	1H	1698	A	O4'-C1'-N9	6.31	113.25	108.20
24	14	129	C	C2-N3-C4	-6.31	116.74	119.90
24	1H	439	G	N1-C2-N3	6.31	127.69	123.90
24	1H	1141	U	N3-C2-O2	-6.31	117.78	122.20
24	1H	1602	U	C5-C6-N1	-6.31	119.55	122.70
24	14	2698	U	C6-N1-C1'	-6.31	112.36	121.20
24	1H	615	G	C5-N7-C8	6.31	107.45	104.30
24	1H	628	G	OP1-P-OP2	6.31	129.06	119.60
24	1H	837	C	N1-C2-O2	-6.31	115.11	118.90
24	1H	1257	C	N3-C4-C5	-6.31	119.38	121.90
24	14	1204	A	C5-N7-C8	-6.31	100.75	103.90
24	14	2639	A	C4-C5-N7	6.31	113.86	110.70
1	13	333	G	O5'-P-OP1	-6.31	100.02	105.70
24	1H	123	G	C8-N9-C4	6.31	108.92	106.40
24	1H	202	U	C5-C4-O4	-6.31	122.12	125.90
24	14	1695	G	C4-N9-C1'	6.31	134.70	126.50
24	1H	124	G	C8-N9-C4	6.30	108.92	106.40
24	1H	1799	G	P-O3'-C3'	6.30	127.27	119.70
1	1G	329	A	O5'-P-OP2	-6.30	100.03	105.70
22	2L	33	C	O5'-P-OP1	-6.30	100.03	105.70
24	14	1500	G	C6-C5-N7	-6.30	126.62	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	1158	C	C2-N1-C1'	6.30	125.73	118.80
24	1H	486	C	N3-C2-O2	6.30	126.31	121.90
1	1G	301	G	O5'-P-OP2	-6.30	100.03	105.70
1	1G	1071	C	C6-N1-C2	-6.30	117.78	120.30
24	14	462	C	C5-C6-N1	-6.30	117.85	121.00
24	14	828	U	N3-C2-O2	-6.30	117.79	122.20
24	1H	124	G	C4-C5-N7	6.30	113.32	110.80
24	1H	1349	A	N9-C4-C5	-6.30	103.28	105.80
24	1H	1521	G	C8-N9-C4	-6.30	103.88	106.40
24	1H	1830	C	N1-C2-O2	-6.30	115.12	118.90
24	14	639	U	O5'-P-OP2	-6.30	100.03	105.70
24	14	1764	G	C5-C6-O6	6.30	132.38	128.60
24	1H	1141	U	O4'-C1'-N1	6.30	113.24	108.20
24	14	1248	G	C4-C5-N7	-6.30	108.28	110.80
24	14	2838	G	N1-C6-O6	6.30	123.68	119.90
24	14	2031	A	N1-C6-N6	6.30	122.38	118.60
24	14	2373	G	N3-C2-N2	-6.30	115.49	119.90
24	1H	2050	C	C4-C5-C6	6.30	120.55	117.40
24	1H	2346	A	O4'-C1'-N9	6.30	113.24	108.20
1	1G	47	C	C2-N3-C4	-6.30	116.75	119.90
1	1G	581	G	C5-C6-O6	-6.30	124.82	128.60
24	1H	126	A	OP1-P-OP2	6.29	129.04	119.60
24	1H	141(A)	C	C2-N3-C4	-6.29	116.75	119.90
24	14	1392	A	OP2-P-O3'	6.29	119.05	105.20
24	1H	2249	U	N3-C4-C5	-6.29	110.82	114.60
24	1H	2328	A	C2-N3-C4	-6.29	107.45	110.60
1	13	587	G	N3-C4-N9	-6.29	122.22	126.00
22	2K	85	A	N9-C4-C5	-6.29	103.28	105.80
24	14	185	U	C5-C6-N1	-6.29	119.55	122.70
1	13	581	G	N1-C6-O6	6.29	123.67	119.90
24	1H	946	G	C4-C5-N7	-6.29	108.28	110.80
1	1G	38	G	N1-C6-O6	6.29	123.67	119.90
1	1G	50	A	C2-N3-C4	-6.29	107.45	110.60
1	1G	773	G	N7-C8-N9	6.29	116.25	113.10
24	1H	142	G	N3-C4-N9	-6.29	122.23	126.00
24	14	189	G	C5-C6-O6	-6.29	124.83	128.60
1	13	346	G	C4-N9-C1'	6.29	134.67	126.50
24	1H	946	G	O5'-P-OP1	-6.29	100.04	105.70
24	1H	847	U	C2-N3-C4	-6.29	123.23	127.00
24	14	734	A	N9-C4-C5	6.29	108.31	105.80
24	14	2573	C	C5-C4-N4	-6.29	115.80	120.20
24	1H	1992	G	N1-C2-N3	-6.28	120.13	123.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	141	A	C2-N3-C4	-6.28	107.46	110.60
24	14	1368	G	N7-C8-N9	-6.28	109.96	113.10
24	1H	1568	G	C2-N3-C4	6.28	115.04	111.90
24	1H	1653	G	N3-C4-C5	-6.28	125.46	128.60
24	1H	2443	C	C5-C4-N4	-6.28	115.80	120.20
32	61	131	LYS	C-N-CD	-6.28	106.78	120.60
24	14	864	G	OP1-P-OP2	-6.28	110.18	119.60
24	14	1705	G	N1-C6-O6	6.28	123.67	119.90
1	13	802	A	C5-N7-C8	-6.28	100.76	103.90
24	1H	791	C	OP2-P-O3'	6.28	119.01	105.20
1	1G	1502	A	N7-C8-N9	6.28	116.94	113.80
24	14	2456	C	N3-C4-N4	6.28	122.39	118.00
24	1H	70	G	C8-N9-C1'	-6.28	118.84	127.00
24	1H	265	A	C5-C6-N1	-6.28	114.56	117.70
24	1H	839	U	C4-C5-C6	6.28	123.47	119.70
24	1H	2268	A	O5'-P-OP1	-6.28	100.05	105.70
24	1H	2466	C	C5-C4-N4	-6.28	115.81	120.20
24	14	805	G	N3-C4-C5	-6.28	125.46	128.60
24	14	1021	A	N3-C4-C5	6.28	131.19	126.80
24	14	1266	G	N9-C4-C5	-6.28	102.89	105.40
25	1J	109	G	N1-C6-O6	6.28	123.67	119.90
1	13	1432	G	N1-C6-O6	6.28	123.67	119.90
24	1H	193	U	C5-C4-O4	-6.28	122.13	125.90
24	1H	564	C	C6-N1-C2	-6.28	117.79	120.30
24	14	2080	G	C8-N9-C4	6.28	108.91	106.40
24	14	1210	A	C4-C5-N7	6.27	113.84	110.70
24	14	1128	A	C8-N9-C4	6.27	108.31	105.80
24	14	1663	C	C5-C4-N4	-6.27	115.81	120.20
24	14	2375	G	N9-C4-C5	-6.27	102.89	105.40
24	1H	1513	C	C6-N1-C2	-6.27	117.79	120.30
24	1H	2581	G	O5'-P-OP2	-6.27	100.06	105.70
24	14	569	U	C2-N3-C4	-6.27	123.24	127.00
24	14	784	A	N7-C8-N9	-6.27	110.66	113.80
24	14	2390	U	O5'-P-OP1	-6.27	100.06	105.70
24	1H	2700	C	N3-C4-C5	6.27	124.41	121.90
24	1H	2702	U	C5-C6-N1	6.27	125.83	122.70
24	14	703	U	O5'-P-OP1	-6.27	100.06	105.70
24	14	1899	G	C8-N9-C1'	-6.27	118.85	127.00
24	14	1970	A	O4'-C1'-N9	-6.27	103.19	108.20
24	14	2717	G	C8-N9-C4	-6.27	103.89	106.40
24	14	777	A	N1-C6-N6	-6.27	114.84	118.60
24	14	1254	A	C5-C6-N6	-6.27	118.69	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2497	A	N7-C8-N9	-6.27	110.67	113.80
24	1H	582	G	N1-C6-O6	6.26	123.66	119.90
24	1H	934	G	C4-C5-N7	-6.26	108.30	110.80
4	3E	12	CYS	CA-CB-SG	6.26	125.27	114.00
24	1H	54	G	OP1-P-O3'	6.26	118.98	105.20
24	1H	1455	G	N1-C6-O6	-6.26	116.14	119.90
24	1H	2039	C	C2-N3-C4	6.26	123.03	119.90
24	1H	2392	A	C4-C5-N7	6.26	113.83	110.70
24	1H	2593	U	N1-C2-O2	-6.26	118.42	122.80
1	13	858	G	C8-N9-C4	-6.26	103.90	106.40
1	13	863	U	C2-N1-C1'	-6.26	110.19	117.70
24	1H	25	U	C2-N3-C4	-6.26	123.25	127.00
24	1H	702	G	C5-C6-O6	-6.26	124.84	128.60
24	1H	2279	G	OP1-P-O3'	6.26	118.97	105.20
24	1H	269	U	C6-N1-C2	6.26	124.75	121.00
24	1H	2732	G	N7-C8-N9	6.26	116.23	113.10
24	14	1606	G	N3-C2-N2	6.26	124.28	119.90
25	1J	81	G	N7-C8-N9	6.26	116.23	113.10
1	13	916	G	C5-C6-N1	6.25	114.63	111.50
24	1H	74	A	N3-C4-C5	6.25	131.18	126.80
24	1H	576	U	C5-C6-N1	-6.25	119.57	122.70
24	14	1630(A)	C	C5-C6-N1	-6.25	117.87	121.00
24	14	2229	C	C2-N3-C4	-6.25	116.77	119.90
24	1H	227	A	N1-C2-N3	6.25	132.43	129.30
24	1H	410	G	O5'-P-OP2	6.25	118.20	110.70
24	1H	1663	C	C5-C6-N1	-6.25	117.88	121.00
35	78	49	ARG	CG-CD-NE	6.25	124.93	111.80
24	14	664	C	N1-C2-O2	-6.25	115.15	118.90
24	14	2247	A	C2-N3-C4	-6.25	107.47	110.60
24	14	1333	C	C6-N1-C2	-6.25	117.80	120.30
1	13	708	C	N1-C2-O2	6.25	122.65	118.90
24	1H	2342	C	C5-C6-N1	6.25	124.12	121.00
1	1G	1433	A	O5'-P-OP2	6.25	118.20	110.70
24	14	982	C	C5-C6-N1	6.25	124.12	121.00
24	1H	1768	U	C2-N1-C1'	-6.25	110.20	117.70
25	16	81	G	N9-C4-C5	-6.25	102.90	105.40
24	14	472	A	N9-C4-C5	6.25	108.30	105.80
24	14	735	A	C8-N9-C4	6.25	108.30	105.80
1	13	872	A	O4'-C1'-N9	6.25	113.20	108.20
24	14	1296	G	C2-N3-C4	-6.25	108.78	111.90
24	1H	1321	A	OP1-P-OP2	6.24	128.96	119.60
1	1G	741	G	O5'-P-OP2	-6.24	100.08	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	675	A	N1-C6-N6	6.24	122.35	118.60
24	1H	139	G	O4'-C1'-N9	-6.24	103.21	108.20
24	1H	849	A	C5-C6-N6	-6.24	118.71	123.70
24	14	1846	G	C5-C6-O6	-6.24	124.86	128.60
24	1H	1836	C	OP1-P-O3'	6.24	118.93	105.20
24	1H	1942	C	C5-C6-N1	6.24	124.12	121.00
24	1H	2327	A	C2-N3-C4	6.24	113.72	110.60
25	16	76	G	N1-C6-O6	-6.24	116.16	119.90
24	14	641	C	C6-N1-C2	6.24	122.80	120.30
24	14	1192	G	C2-N3-C4	-6.24	108.78	111.90
24	14	2595	G	N1-C6-O6	-6.24	116.16	119.90
24	1H	683	C	C2-N3-C4	-6.24	116.78	119.90
24	1H	2246	G	N3-C4-C5	-6.24	125.48	128.60
24	1H	2585	U	C5-C6-N1	6.24	125.82	122.70
24	1H	2605	U	N3-C4-O4	-6.24	115.03	119.40
24	1H	2547	U	C5-C6-N1	-6.24	119.58	122.70
1	13	601	C	C6-N1-C2	-6.24	117.81	120.30
1	1G	1475	G	N7-C8-N9	6.24	116.22	113.10
24	14	655	A	C8-N9-C4	-6.24	103.31	105.80
24	14	2019	A	N7-C8-N9	-6.23	110.68	113.80
1	13	312	C	C6-N1-C2	-6.23	117.81	120.30
24	1H	1675	C	N3-C4-C5	-6.23	119.41	121.90
1	1G	889	A	O5'-P-OP1	-6.23	100.09	105.70
24	14	615	G	C4-C5-N7	-6.23	108.31	110.80
24	14	2252	G	N1-C6-O6	6.23	123.64	119.90
24	14	2503	A	N1-C6-N6	6.23	122.34	118.60
24	1H	381	G	C8-N9-C4	6.23	108.89	106.40
24	1H	575	A	C5-N7-C8	6.23	107.02	103.90
24	1H	1332	G	N1-C6-O6	6.23	123.64	119.90
24	14	602	G	C6-C5-N7	-6.23	126.66	130.40
24	1H	1543	A	C6-N1-C2	6.23	122.34	118.60
24	1H	2388	A	O4'-C1'-N9	6.23	113.18	108.20
1	1G	1427	U	N1-C2-O2	-6.23	118.44	122.80
24	14	1333	C	C5-C6-N1	6.23	124.11	121.00
24	14	2053	G	C5-C6-O6	-6.23	124.86	128.60
24	14	817	C	C6-N1-C2	-6.23	117.81	120.30
24	1H	59	U	C6-N1-C2	-6.22	117.27	121.00
24	14	1913	A	C4-C5-C6	-6.22	113.89	117.00
1	13	1498	U	P-O3'-C3'	6.22	127.17	119.70
24	1H	849	A	C8-N9-C4	6.22	108.29	105.80
24	1H	942	G	N1-C2-N2	6.22	121.80	116.20
24	1H	1950	G	C6-N1-C2	6.22	128.83	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1348	G	C8-N9-C4	6.22	108.89	106.40
24	1H	609(A)	G	C2-N3-C4	-6.22	108.79	111.90
24	1H	2258	C	N3-C4-N4	6.22	122.36	118.00
1	1G	316	G	O5'-P-OP2	-6.22	100.10	105.70
24	14	2428	G	C5-C6-O6	6.22	132.33	128.60
1	13	858	G	C4-N9-C1'	6.22	134.59	126.50
1	13	897	C	C4-C5-C6	6.22	120.51	117.40
24	1H	2237	G	N9-C4-C5	-6.22	102.91	105.40
24	14	1572	A	C5-C6-N6	-6.22	118.72	123.70
24	1H	458	G	C8-N9-C1'	6.22	135.08	127.00
24	1H	998	C	N3-C4-C5	6.22	124.39	121.90
24	1H	1836	C	N3-C4-N4	-6.22	113.65	118.00
24	1H	2247	A	N9-C4-C5	6.22	108.29	105.80
24	14	952	G	OP1-P-O3'	6.22	118.88	105.20
24	1H	1314	C	C6-N1-C2	6.21	122.78	120.30
24	1H	1915	U	N3-C2-O2	-6.21	117.85	122.20
24	1H	2270	G	N9-C4-C5	-6.21	102.92	105.40
1	1G	687	A	P-O3'-C3'	6.21	127.16	119.70
24	14	581	C	N3-C4-N4	-6.21	113.65	118.00
24	14	1992	G	C5-C6-N1	6.21	114.61	111.50
24	1H	141	A	O4'-C1'-N9	6.21	113.17	108.20
24	1H	2685	G	C4-C5-N7	-6.21	108.32	110.80
1	1G	1305	G	N9-C4-C5	6.21	107.88	105.40
22	2K	26	G	C5-C6-O6	-6.21	124.87	128.60
24	1H	386	G	N3-C4-C5	-6.21	125.50	128.60
24	1H	2503	A	C2-N3-C4	6.21	113.70	110.60
1	13	1527	C	OP2-P-O3'	6.21	118.86	105.20
24	1H	1225	C	N3-C4-C5	-6.21	119.42	121.90
24	1H	1944	U	N1-C2-O2	-6.21	118.45	122.80
24	1H	2282	G	O5'-P-OP2	6.21	118.15	110.70
24	1H	2433	A	N1-C2-N3	6.21	132.40	129.30
24	1H	2453	A	C5-N7-C8	6.21	107.00	103.90
24	14	583	G	C5-C6-O6	-6.21	124.88	128.60
24	14	948	G	N9-C4-C5	6.21	107.88	105.40
24	14	1384	A	O5'-P-OP2	-6.21	100.11	105.70
24	14	2633	G	C8-N9-C4	6.21	108.88	106.40
24	14	2463	C	O5'-P-OP1	6.21	118.15	110.70
1	13	814	A	O5'-P-OP1	-6.21	100.12	105.70
24	1H	1981	A	C8-N9-C4	6.21	108.28	105.80
24	1H	2059	A	O4'-C1'-N9	6.21	113.16	108.20
24	1H	2773	C	O5'-P-OP2	-6.21	100.12	105.70
24	14	654(S)	G	P-O3'-C3'	6.21	127.15	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1022	G	C4-C5-N7	-6.21	108.32	110.80
24	14	2084	C	C6-N1-C2	6.21	122.78	120.30
24	1H	805	G	N1-C2-N3	6.20	127.62	123.90
1	1G	1404	C	O5'-P-OP2	-6.20	100.12	105.70
1	13	767	A	O5'-P-OP1	-6.20	100.12	105.70
24	1H	682	G	N3-C4-N9	6.20	129.72	126.00
24	1H	254	G	C5-C6-O6	-6.20	124.88	128.60
24	1H	914	C	N3-C4-C5	-6.20	119.42	121.90
24	1H	1212	G	N1-C2-N2	6.20	121.78	116.20
1	1G	884	U	N3-C2-O2	-6.20	117.86	122.20
24	14	307	G	C8-N9-C4	6.20	108.88	106.40
24	1H	74	A	C4-C5-C6	6.20	120.10	117.00
24	1H	109	G	N1-C6-O6	-6.20	116.18	119.90
24	1H	400	G	N1-C6-O6	6.20	123.62	119.90
24	1H	2244	U	N3-C2-O2	-6.20	117.86	122.20
24	14	422	A	C2-N3-C4	-6.20	107.50	110.60
24	14	1674	G	O4'-C1'-N9	-6.20	103.24	108.20
24	14	2073	C	N1-C2-N3	6.20	123.54	119.20
24	1H	508	G	N7-C8-N9	6.20	116.20	113.10
24	1H	1764	G	N9-C4-C5	6.20	107.88	105.40
24	1H	2210	G	C6-C5-N7	-6.20	126.68	130.40
24	14	479	A	N1-C6-N6	-6.20	114.88	118.60
1	13	1344	C	N1-C2-O2	6.20	122.62	118.90
24	1H	49	A	N9-C4-C5	-6.20	103.32	105.80
24	1H	671	C	C5-C6-N1	-6.20	117.90	121.00
24	14	2610	C	C5-C6-N1	-6.20	117.90	121.00
1	13	346	G	C8-N9-C1'	-6.19	118.95	127.00
24	1H	1301	A	N1-C6-N6	6.19	122.31	118.60
24	1H	2258	C	C2-N1-C1'	6.19	125.61	118.80
24	14	573	G	N3-C4-N9	6.19	129.72	126.00
24	14	701	G	N1-C2-N3	6.19	127.61	123.90
24	14	1816	G	C6-C5-N7	6.19	134.12	130.40
24	14	2392	A	N3-C4-C5	6.19	131.13	126.80
24	1H	252	G	O5'-P-OP1	6.19	118.13	110.70
24	1H	2356	C	N3-C2-O2	-6.19	117.57	121.90
24	14	1702	G	N3-C4-N9	-6.19	122.29	126.00
24	14	2271	G	OP2-P-O3'	6.19	118.82	105.20
24	1H	249	C	OP1-P-OP2	6.19	128.88	119.60
24	14	454	A	C8-N9-C4	6.19	108.28	105.80
24	14	704	G	N1-C6-O6	6.19	123.61	119.90
24	1H	1122	G	N9-C4-C5	-6.19	102.92	105.40
24	1H	1662	C	C5-C6-N1	-6.19	117.91	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	602	G	N1-C6-O6	6.19	123.61	119.90
24	14	2501	C	C2-N1-C1'	-6.19	111.99	118.80
24	1H	808	G	N1-C2-N3	6.19	127.61	123.90
24	14	2084	C	C5-C6-N1	-6.19	117.91	121.00
24	1H	1149	G	O5'-P-OP2	-6.18	100.13	105.70
24	1H	2507	C	N3-C4-N4	-6.18	113.67	118.00
24	14	242	G	C8-N9-C4	6.18	108.87	106.40
24	14	371	A	C2-N3-C4	-6.18	107.51	110.60
24	14	669	G	N9-C4-C5	6.18	107.87	105.40
24	14	213	A	C8-N9-C4	6.18	108.27	105.80
24	14	738	G	O5'-P-OP2	-6.18	100.14	105.70
24	1H	114	U	OP1-P-O3'	6.18	118.80	105.20
24	1H	828	U	C6-N1-C2	-6.18	117.29	121.00
24	1H	62	C	C2-N1-C1'	-6.18	112.00	118.80
24	1H	1191	G	OP1-P-OP2	6.18	128.87	119.60
24	1H	1832	C	OP2-P-O3'	6.18	118.79	105.20
24	14	2216	G	C5-C6-N1	-6.18	108.41	111.50
1	13	738	C	C6-N1-C2	-6.18	117.83	120.30
24	1H	1964	G	N3-C2-N2	6.18	124.22	119.90
24	1H	2232	U	C5-C4-O4	6.18	129.61	125.90
1	1G	390	C	N1-C2-O2	-6.18	115.19	118.90
24	14	448	U	OP2-P-O3'	6.18	118.79	105.20
24	14	773	U	N1-C2-O2	-6.18	118.48	122.80
24	14	1978	A	N9-C4-C5	6.18	108.27	105.80
24	14	2489	G	OP2-P-O3'	6.18	118.79	105.20
24	14	1663	C	N1-C2-O2	-6.17	115.19	118.90
24	14	956	G	C2-N3-C4	-6.17	108.81	111.90
24	14	792	G	O4'-C1'-N9	-6.17	103.26	108.20
24	14	958	U	N3-C2-O2	-6.17	117.88	122.20
24	14	1988	C	N3-C4-N4	6.17	122.32	118.00
24	1H	1559	G	C5-N7-C8	-6.17	101.22	104.30
24	1H	2624	G	C6-N1-C2	-6.17	121.40	125.10
24	14	833	U	C4-C5-C6	6.17	123.40	119.70
1	13	1158	C	N1-C2-O2	6.17	122.60	118.90
24	1H	2211	G	N1-C6-O6	6.17	123.60	119.90
1	1G	365	U	C2-N1-C1'	6.17	125.10	117.70
24	1H	667	U	OP2-P-O3'	6.17	118.76	105.20
24	1H	1943	U	C5-C6-N1	-6.17	119.62	122.70
1	1G	50	A	C8-N9-C4	-6.17	103.33	105.80
24	1H	845	G	N3-C2-N2	6.16	124.21	119.90
1	1G	1286	A	C8-N9-C4	-6.16	103.33	105.80
1	13	880	C	C6-N1-C2	6.16	122.76	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2462	U	O5'-P-OP1	-6.16	100.16	105.70
24	14	783	A	C5-C6-N1	-6.16	114.62	117.70
24	1H	1644	C	N3-C2-O2	-6.16	117.59	121.90
24	1H	2239	G	C2-N3-C4	-6.16	108.82	111.90
24	1H	147	U	N3-C2-O2	6.16	126.51	122.20
24	1H	421	U	C5-C6-N1	6.16	125.78	122.70
24	1H	2044	C	C2-N3-C4	-6.16	116.82	119.90
24	1H	2532	G	C5-C6-O6	-6.16	124.91	128.60
24	14	1559	G	C4-C5-N7	6.16	113.26	110.80
24	14	1619	G	C4-C5-N7	6.16	113.26	110.80
24	14	1906	G	C5-C6-O6	-6.16	124.91	128.60
1	13	1412	C	C6-N1-C2	6.15	122.76	120.30
24	14	93	C	C5-C6-N1	6.15	124.08	121.00
24	14	748	G	C4-C5-N7	-6.15	108.34	110.80
24	14	1026	U	C5-C6-N1	6.15	125.78	122.70
24	14	2053	G	N1-C6-O6	6.15	123.59	119.90
24	14	2374	C	N3-C4-C5	6.15	124.36	121.90
1	13	321	A	N1-C2-N3	6.15	132.38	129.30
1	13	703	G	N3-C4-N9	6.15	129.69	126.00
22	2K	85	A	C4-C5-N7	6.15	113.78	110.70
24	1H	97	C	OP1-P-OP2	6.15	128.83	119.60
1	1G	581	G	N3-C4-C5	6.15	131.68	128.60
24	14	155	C	N1-C2-O2	6.15	122.59	118.90
24	14	202	U	C6-N1-C2	6.15	124.69	121.00
24	14	1337	G	OP1-P-O3'	6.15	118.74	105.20
24	1H	1325	G	N3-C4-N9	6.15	129.69	126.00
24	1H	1763	G	N7-C8-N9	-6.15	110.03	113.10
24	1H	2236	C	N3-C2-O2	6.15	126.21	121.90
1	1G	442	C	C6-N1-C2	-6.15	117.84	120.30
24	14	21	A	C2-N3-C4	-6.15	107.53	110.60
24	14	126	A	N1-C2-N3	-6.15	126.22	129.30
24	1H	729	G	OP2-P-O3'	6.15	118.73	105.20
24	1H	1615	C	N1-C2-O2	-6.15	115.21	118.90
24	1H	1956	U	C6-N1-C2	-6.15	117.31	121.00
24	14	69	C	C5-C6-N1	-6.15	117.93	121.00
22	2K	27	A	C5-N7-C8	-6.15	100.83	103.90
24	1H	632	A	C2-N3-C4	-6.15	107.53	110.60
24	14	682	G	C4-C5-N7	6.15	113.26	110.80
24	14	948	G	N3-C2-N2	-6.15	115.60	119.90
24	1H	1671	U	N3-C4-C5	-6.14	110.91	114.60
24	1H	1839	G	C8-N9-C4	6.14	108.86	106.40
24	1H	2763	G	N9-C4-C5	-6.14	102.94	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1614	A	N3-C4-N9	-6.14	122.48	127.40
24	1H	2270	G	C6-C5-N7	-6.14	126.71	130.40
24	14	1661	G	C5-C6-O6	-6.14	124.92	128.60
24	1H	2427	C	N1-C2-O2	-6.14	115.22	118.90
24	1H	2035	G	N9-C4-C5	6.14	107.86	105.40
37	55	107	ASP	CB-CG-OD1	-6.14	112.77	118.30
24	1H	2619	C	C6-N1-C2	6.14	122.75	120.30
24	1H	1614	A	O4'-C1'-N9	6.14	113.11	108.20
24	1H	2542	A	N7-C8-N9	-6.14	110.73	113.80
24	1H	2627	G	C5-C6-O6	-6.14	124.92	128.60
24	1H	2777	G	N1-C6-O6	6.14	123.58	119.90
24	14	582	G	C6-C5-N7	-6.14	126.72	130.40
24	14	1663	C	N3-C4-C5	6.14	124.35	121.90
24	1H	106	C	C6-N1-C2	-6.13	117.85	120.30
24	14	2080	G	O5'-P-OP2	-6.13	100.18	105.70
24	1H	947	G	N1-C6-O6	6.13	123.58	119.90
1	1G	47	C	C5-C6-N1	-6.13	117.93	121.00
24	14	2587	A	C5-C6-N6	-6.13	118.79	123.70
24	14	2755	C	C5-C6-N1	6.13	124.07	121.00
24	1H	1200	C	C6-N1-C2	6.13	122.75	120.30
24	1H	1573	G	N7-C8-N9	-6.13	110.03	113.10
24	1H	1752	C	O5'-P-OP1	-6.13	100.18	105.70
24	1H	2558	C	N3-C4-C5	6.13	124.35	121.90
24	1H	2702	U	C5'-C4'-O4'	6.13	116.46	109.10
54	M5	57	ARG	NE-CZ-NH1	6.13	123.36	120.30
24	1H	1616	A	C5-C6-N6	-6.13	118.80	123.70
24	1H	2352	A	C8-N9-C4	6.13	108.25	105.80
1	1G	324	G	O5'-P-OP2	-6.13	100.18	105.70
24	14	130	C	N3-C2-O2	6.13	126.19	121.90
24	14	2271	G	N1-C6-O6	6.13	123.58	119.90
24	1H	692	C	C5-C6-N1	-6.13	117.94	121.00
24	1H	1518	C	O5'-P-OP1	-6.13	100.19	105.70
24	1H	2490	G	C5-C6-O6	-6.13	124.92	128.60
24	14	623	G	C4-C5-N7	6.13	113.25	110.80
24	14	2457	U	C5-C4-O4	6.13	129.58	125.90
1	13	971	G	O4'-C1'-N9	6.12	113.10	108.20
24	1H	2430	A	C6-N1-C2	6.12	122.28	118.60
1	1G	46	G	C5-C6-O6	-6.12	124.92	128.60
24	1H	247	G	C8-N9-C4	6.12	108.85	106.40
24	1H	780	G	C4-N9-C1'	6.12	134.46	126.50
24	1H	1611	C	C5-C6-N1	-6.12	117.94	121.00
24	1H	2027	G	N3-C2-N2	-6.12	115.61	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2330	G	N7-C8-N9	-6.12	110.04	113.10
24	14	1776	G	N3-C4-N9	6.12	129.67	126.00
24	14	2389	G	C8-N9-C4	-6.12	103.95	106.40
1	13	27	G	N1-C6-O6	6.12	123.57	119.90
24	1H	2031	A	C2-N3-C4	6.12	113.66	110.60
24	1H	2292	C	N3-C2-O2	-6.12	117.61	121.90
24	1H	2318	G	O4'-C1'-N9	6.12	113.10	108.20
24	14	1479	G	N1-C6-O6	6.12	123.57	119.90
28	29	80	GLU	N-CA-C	6.12	127.53	111.00
24	1H	812	C	N1-C2-O2	-6.12	115.23	118.90
24	1H	803	U	O5'-P-OP1	6.12	118.04	110.70
24	1H	1313	U	C5-C6-N1	6.12	125.76	122.70
24	1H	2518	A	C6-C5-N7	-6.12	128.02	132.30
24	14	803	U	N1-C2-O2	-6.12	118.52	122.80
24	14	837	C	C6-N1-C2	-6.12	117.85	120.30
24	14	119	A	OP1-P-O3'	6.12	118.65	105.20
24	14	1620	G	N3-C4-N9	-6.12	122.33	126.00
24	14	1782	C	N3-C4-N4	6.12	122.28	118.00
24	14	1979	C	C5-C6-N1	-6.12	117.94	121.00
24	14	2032	G	C6-C5-N7	-6.12	126.73	130.40
1	13	511	C	O5'-P-OP2	-6.11	100.20	105.70
24	1H	2238	G	C8-N9-C4	6.11	108.84	106.40
24	14	781	A	N1-C2-N3	6.11	132.36	129.30
24	14	1244	G	C5-C6-O6	-6.11	124.93	128.60
24	14	1972	A	O5'-P-OP2	-6.11	100.20	105.70
24	1H	572	A	OP1-P-OP2	-6.11	110.43	119.60
24	1H	1393	A	O5'-P-OP2	-6.11	100.20	105.70
24	14	1328	G	C5-N7-C8	-6.11	101.25	104.30
24	14	1382	G	N3-C4-N9	-6.11	122.33	126.00
24	14	2258	C	N3-C4-N4	6.11	122.28	118.00
24	1H	2058	A	C8-N9-C4	-6.11	103.36	105.80
24	1H	2065	C	C5-C4-N4	-6.11	115.92	120.20
24	1H	2604	U	N1-C2-N3	-6.11	111.24	114.90
24	14	2386	C	C2-N3-C4	-6.11	116.85	119.90
24	14	2741	A	N7-C8-N9	-6.11	110.75	113.80
24	14	2873	A	C4-C5-N7	6.11	113.75	110.70
24	1H	1306	C	O5'-P-OP1	-6.10	100.21	105.70
24	1H	1374	G	C2-N3-C4	-6.10	108.85	111.90
24	1H	2260	C	OP2-P-O3'	6.10	118.62	105.20
24	1H	20	C	C5-C6-N1	-6.10	117.95	121.00
24	1H	48	G	N3-C2-N2	6.10	124.17	119.90
24	14	683	C	C2-N3-C4	-6.10	116.85	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	852	G	O5'-P-OP1	6.10	118.02	110.70
1	1G	1053	G	C4-N9-C1'	-6.10	118.57	126.50
24	14	1027	A	C8-N9-C4	6.10	108.24	105.80
24	1H	1236	G	OP1-P-OP2	-6.10	110.45	119.60
24	1H	1453	A	N1-C6-N6	6.10	122.26	118.60
24	14	1672	C	P-O3'-C3'	6.10	127.02	119.70
1	13	862	C	C6-N1-C2	6.09	122.74	120.30
24	1H	85	G	O5'-P-OP1	6.09	118.01	110.70
24	1H	270(A)	A	N1-C6-N6	6.09	122.26	118.60
24	1H	470	A	C2-N3-C4	-6.09	107.55	110.60
24	1H	860	U	O5'-P-OP1	6.09	118.01	110.70
24	14	557	U	N3-C4-O4	-6.09	115.13	119.40
24	14	1198	U	O5'-P-OP1	-6.09	100.21	105.70
24	14	2040	C	C5-C6-N1	-6.09	117.95	121.00
24	14	2609	U	C4-C5-C6	6.09	123.36	119.70
1	13	1058	G	N9-C4-C5	-6.09	102.96	105.40
24	1H	1804	C	C5-C6-N1	-6.09	117.95	121.00
24	1H	1820	U	O5'-P-OP1	-6.09	100.22	105.70
24	1H	2492	U	N1-C2-O2	6.09	127.06	122.80
24	1H	2532	G	C6-C5-N7	-6.09	126.75	130.40
24	14	585	G	C4-C5-N7	6.09	113.24	110.80
24	14	930	U	C6-N1-C1'	-6.09	112.67	121.20
24	14	2070	G	C2-N3-C4	-6.09	108.85	111.90
24	14	2328	A	N1-C2-N3	6.09	132.35	129.30
24	1H	121	G	C8-N9-C1'	-6.09	119.08	127.00
24	14	2252	G	C8-N9-C4	6.09	108.84	106.40
24	1H	144	C	C6-N1-C2	6.09	122.73	120.30
24	1H	2381	C	C2-N3-C4	-6.09	116.86	119.90
24	1H	691	C	C5-C4-N4	-6.09	115.94	120.20
24	1H	1899	G	C4-C5-C6	-6.09	115.15	118.80
24	1H	2510	C	C5-C6-N1	-6.09	117.96	121.00
24	1H	2615	U	C4-C5-C6	-6.09	116.05	119.70
24	14	93	C	C6-N1-C2	-6.09	117.86	120.30
24	14	118	A	O5'-P-OP1	-6.09	100.22	105.70
1	13	733	A	C4-C5-N7	6.08	113.74	110.70
24	1H	72	U	N3-C4-C5	6.08	118.25	114.60
24	14	455	C	N3-C4-N4	-6.08	113.74	118.00
24	14	536	A	OP1-P-OP2	-6.08	110.47	119.60
24	1H	1827	C	C5-C4-N4	6.08	124.46	120.20
24	1H	2032	G	OP1-P-OP2	6.08	128.72	119.60
24	14	767	U	C5-C4-O4	6.08	129.55	125.90
24	14	1772	G	N9-C1'-C2'	-6.08	105.31	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2389	G	O5'-P-OP2	6.08	118.00	110.70
24	1H	2059	A	C5-C6-N6	-6.08	118.84	123.70
25	16	70	C	C6-N1-C2	-6.08	117.87	120.30
1	1G	1112	C	C5-C6-N1	6.08	124.04	121.00
24	14	692	C	N3-C4-N4	-6.08	113.74	118.00
24	14	2586	C	C5-C4-N4	-6.08	115.94	120.20
24	1H	829	A	C8-N9-C4	6.08	108.23	105.80
24	1H	1999	C	C5-C6-N1	-6.08	117.96	121.00
24	14	1772	G	N7-C8-N9	-6.08	110.06	113.10
1	13	305	G	C5-C6-O6	6.08	132.25	128.60
1	13	771	G	N3-C4-C5	6.08	131.64	128.60
1	13	970	C	N1-C2-O2	6.08	122.55	118.90
24	1H	739	G	N7-C8-N9	-6.08	110.06	113.10
24	1H	2248	C	O5'-P-OP1	-6.08	100.23	105.70
1	1G	44	G	C6-C5-N7	-6.08	126.75	130.40
1	1G	50	A	C5-N7-C8	-6.08	100.86	103.90
1	13	1374	A	C2-N3-C4	-6.08	107.56	110.60
24	14	1286	A	O5'-P-OP2	-6.08	100.23	105.70
25	16	75	G	C8-N9-C4	6.08	108.83	106.40
24	14	140	A	N7-C8-N9	6.08	116.84	113.80
24	14	1786	A	N3-C4-C5	6.08	131.05	126.80
24	14	2371	G	C5-C6-O6	-6.08	124.95	128.60
24	14	728	G	C8-N9-C4	6.07	108.83	106.40
24	14	1128	A	N7-C8-N9	-6.07	110.76	113.80
24	14	2556	C	O5'-P-OP2	-6.07	100.23	105.70
24	14	1395	A	O4'-C1'-N9	6.07	113.06	108.20
24	1H	1311	G	C8-N9-C4	6.07	108.83	106.40
24	1H	2067	G	N3-C2-N2	-6.07	115.65	119.90
24	14	1839	G	C8-N9-C4	6.07	108.83	106.40
24	14	2430	A	N3-C4-C5	6.07	131.05	126.80
24	1H	801	G	N3-C2-N2	-6.07	115.65	119.90
24	14	1883	G	C8-N9-C1'	-6.07	119.11	127.00
24	14	1999	C	N3-C4-C5	6.07	124.33	121.90
24	14	2731	G	O5'-P-OP1	-6.07	100.24	105.70
24	1H	928	G	C8-N9-C1'	6.07	134.88	127.00
24	14	2873	A	O4'-C1'-N9	6.07	113.05	108.20
24	14	2609	U	N3-C2-O2	-6.06	117.95	122.20
24	14	2235	G	N1-C6-O6	6.06	123.54	119.90
24	14	2573	C	C2-N1-C1'	6.06	125.47	118.80
1	13	912	C	C5-C6-N1	-6.06	117.97	121.00
24	1H	825	C	C6-N1-C2	6.06	122.72	120.30
24	14	574	C	C6-N1-C2	6.06	122.72	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	613	U	N1-C2-N3	6.06	118.53	114.90
24	1H	687	C	C4-C5-C6	-6.06	114.37	117.40
24	1H	835	A	N1-C6-N6	-6.06	114.97	118.60
24	1H	1759	A	O5'-P-OP1	-6.06	100.25	105.70
24	1H	2618	G	C4-C5-N7	-6.06	108.38	110.80
31	51	7	LEU	C-N-CD	6.06	141.12	128.40
24	14	439	G	N3-C4-C5	-6.06	125.57	128.60
24	14	966	G	C6-C5-N7	6.06	134.03	130.40
24	14	2782	G	C8-N9-C4	-6.06	103.98	106.40
1	13	1501	C	OP2-P-O3'	6.05	118.52	105.20
24	14	1783	A	C6-C5-N7	-6.05	128.06	132.30
22	2K	76	C	C6-N1-C2	6.05	122.72	120.30
24	1H	193	U	N1-C2-O2	-6.05	118.56	122.80
24	1H	2218	G	O5'-P-OP1	-6.05	100.25	105.70
24	1H	1013	C	C6-N1-C2	6.05	122.72	120.30
24	1H	1236	G	C8-N9-C4	6.05	108.82	106.40
24	1H	2466	C	C6-N1-C2	6.05	122.72	120.30
24	14	997	G	OP1-P-O3'	6.05	118.51	105.20
24	1H	2635	C	C5-C6-N1	-6.05	117.97	121.00
25	16	78	A	C2-N3-C4	-6.05	107.58	110.60
1	1G	1094	G	OP2-P-O3'	6.05	118.51	105.20
24	14	2517	C	O4'-C1'-N1	6.05	113.04	108.20
24	1H	744	G	N1-C6-O6	6.05	123.53	119.90
24	1H	974(A)	C	N1-C2-O2	6.05	122.53	118.90
24	14	1909	C	N3-C2-O2	-6.05	117.67	121.90
24	1H	2781	A	O5'-P-OP1	-6.04	100.26	105.70
1	1G	106	C	N3-C2-O2	-6.04	117.67	121.90
1	1G	1082	G	N3-C4-C5	6.04	131.62	128.60
24	1H	837	C	C6-N1-C2	-6.04	117.88	120.30
1	1G	896	C	C6-N1-C2	6.04	122.72	120.30
1	1G	1053	G	C8-N9-C1'	6.04	134.85	127.00
35	35	85	LEU	CA-CB-CG	6.04	129.20	115.30
24	14	1696	G	N1-C6-O6	-6.04	116.28	119.90
1	13	694	A	O5'-P-OP1	-6.04	100.27	105.70
24	1H	668	G	OP1-P-O3'	6.04	118.48	105.20
24	1H	827	U	N3-C2-O2	6.04	126.43	122.20
24	14	1985	G	OP2-P-O3'	6.04	118.48	105.20
1	1G	45	U	C5-C6-N1	-6.04	119.68	122.70
1	1G	733	A	N1-C6-N6	6.04	122.22	118.60
24	14	1807	G	C5-C6-O6	-6.04	124.98	128.60
24	1H	248	G	C5-C6-O6	-6.04	124.98	128.60
24	1H	2243	U	C4-C5-C6	6.04	123.32	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2500	U	N3-C4-O4	6.04	123.62	119.40
24	1H	2697	G	OP1-P-OP2	6.04	128.65	119.60
25	16	81	G	O4'-C1'-N9	6.04	113.03	108.20
24	14	1616	A	C6-C5-N7	-6.04	128.07	132.30
1	13	121	C	C6-N1-C1'	-6.03	113.56	120.80
24	1H	976	C	N3-C4-N4	6.03	122.22	118.00
24	1H	1901	A	N1-C6-N6	-6.03	114.98	118.60
46	I8	7	LEU	CA-CB-CG	6.03	129.18	115.30
24	14	1216	G	N1-C6-O6	6.03	123.52	119.90
24	14	1342	A	C4-C5-N7	6.03	113.72	110.70
24	1H	2449	U	N1-C2-N3	6.03	118.52	114.90
24	14	2359	C	N3-C4-C5	-6.03	119.49	121.90
24	1H	2509	G	C6-N1-C2	-6.03	121.48	125.10
24	1H	2710	C	C5-C6-N1	-6.03	117.98	121.00
24	14	2444	G	N3-C2-N2	-6.03	115.68	119.90
24	14	2537	U	C5-C4-O4	6.03	129.52	125.90
24	1H	1214	A	C8-N9-C4	6.03	108.21	105.80
24	1H	2457	U	N3-C2-O2	6.03	126.42	122.20
24	1H	308	G	N3-C2-N2	6.03	124.12	119.90
24	1H	577	G	N9-C4-C5	-6.03	102.99	105.40
24	1H	1142(A)	A	C5-C6-N1	-6.03	114.69	117.70
24	14	1331	A	N1-C6-N6	6.03	122.22	118.60
24	14	2542	A	C6-C5-N7	-6.03	128.08	132.30
1	13	652	U	C5-C6-N1	6.03	125.71	122.70
24	1H	584	C	N3-C4-N4	6.03	122.22	118.00
24	14	2356	C	C5-C6-N1	-6.03	117.99	121.00
24	14	2592	G	O5'-P-OP2	-6.03	100.28	105.70
24	1H	930	U	C5-C6-N1	-6.02	119.69	122.70
24	14	678	C	N3-C4-C5	6.02	124.31	121.90
24	1H	428	A	N1-C2-N3	6.02	132.31	129.30
24	1H	782	A	C5-C6-N1	6.02	120.71	117.70
24	1H	2329	G	OP1-P-OP2	6.02	128.63	119.60
1	1G	1414	U	C6-N1-C1'	6.02	129.63	121.20
24	14	799	G	C5-C6-O6	-6.02	124.99	128.60
24	14	1930	G	C6-C5-N7	6.02	134.01	130.40
24	14	2496	C	OP1-P-O3'	6.02	118.45	105.20
24	1H	515	A	C2-N3-C4	6.02	113.61	110.60
24	1H	1299	G	C4-C5-N7	6.02	113.21	110.80
24	14	531	C	C5-C6-N1	-6.02	117.99	121.00
24	14	2318	G	O4'-C1'-N9	6.02	113.02	108.20
24	1H	2244	U	OP1-P-OP2	-6.02	110.57	119.60
24	1H	2827	C	C4-C5-C6	6.02	120.41	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1601	G	N3-C2-N2	6.02	124.11	119.90
24	14	2495	G	N1-C6-O6	6.02	123.51	119.90
1	13	568	G	O5'-P-OP1	-6.02	100.28	105.70
24	1H	930	U	O5'-P-OP2	-6.02	100.28	105.70
24	1H	956	G	C8-N9-C4	6.02	108.81	106.40
24	1H	1523	U	C5-C6-N1	6.02	125.71	122.70
24	1H	543	C	C5-C6-N1	-6.02	117.99	121.00
24	1H	1382	G	C8-N9-C4	6.02	108.81	106.40
24	14	1382	G	C4-N9-C1'	-6.02	118.68	126.50
24	1H	2071	A	C4-C5-C6	6.01	120.01	117.00
24	1H	2368	C	C2-N1-C1'	6.01	125.42	118.80
24	14	669	G	OP1-P-OP2	-6.01	110.58	119.60
24	14	698	C	C6-N1-C2	6.01	122.71	120.30
24	14	914	C	N1-C2-O2	6.01	122.51	118.90
24	14	1265	A	N1-C6-N6	6.01	122.21	118.60
24	14	1353	A	C5-C6-N6	6.01	128.51	123.70
24	14	2583	G	C5-C6-O6	-6.01	124.99	128.60
24	14	2607	G	O5'-P-OP2	-6.01	100.29	105.70
22	2K	21	A	O4'-C1'-N9	6.01	113.01	108.20
24	14	678	C	C6-N1-C2	6.01	122.70	120.30
24	14	2063	C	O5'-P-OP2	-6.01	100.29	105.70
24	14	2595	G	C5-C6-N1	6.01	114.51	111.50
1	13	858	G	N3-C4-C5	-6.01	125.59	128.60
1	13	1501	C	C5-C6-N1	-6.01	118.00	121.00
24	1H	769	G	N7-C8-N9	-6.01	110.10	113.10
24	1H	1441	G	N7-C8-N9	-6.01	110.09	113.10
24	14	679	C	C4-C5-C6	6.01	120.41	117.40
24	14	2092	U	N3-C2-O2	-6.01	117.99	122.20
24	14	2272	U	O5'-P-OP2	-6.01	100.29	105.70
24	14	2569	G	O5'-P-OP1	6.01	117.91	110.70
24	1H	58	G	N1-C6-O6	6.01	123.50	119.90
24	14	530	G	N1-C6-O6	6.01	123.50	119.90
1	13	320	C	C6-N1-C2	6.01	122.70	120.30
1	13	904	C	N3-C4-C5	6.01	124.30	121.90
24	1H	1429	G	O5'-P-OP2	-6.01	100.29	105.70
24	1H	2406	U	N3-C2-O2	-6.01	118.00	122.20
24	14	678	C	C5-C6-N1	-6.01	118.00	121.00
24	14	909	A	O5'-P-OP2	-6.01	100.30	105.70
24	14	1294	U	N1-C2-O2	-6.01	118.59	122.80
1	13	1337	G	C8-N9-C4	-6.00	104.00	106.40
24	1H	1230	C	C6-N1-C2	6.00	122.70	120.30
1	13	781	A	N1-C6-N6	6.00	122.20	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2452	C	N3-C4-N4	6.00	122.20	118.00
24	1H	1544	C	N1-C2-O2	6.00	122.50	118.90
24	1H	1800	C	C2-N3-C4	6.00	122.90	119.90
24	1H	1839	G	C5-C6-O6	-6.00	125.00	128.60
18	9A	31	LEU	CA-CB-CG	6.00	129.10	115.30
24	14	604	G	N1-C6-O6	6.00	123.50	119.90
24	14	2242	G	N9-C4-C5	6.00	107.80	105.40
24	1H	2725	A	N9-C4-C5	6.00	108.20	105.80
24	1H	2741	A	C8-N9-C4	6.00	108.20	105.80
1	1G	583	A	C2-N3-C4	-6.00	107.60	110.60
24	14	1937	A	N1-C6-N6	6.00	122.20	118.60
1	13	1165	C	C6-N1-C2	-6.00	117.90	120.30
24	14	178	G	N1-C6-O6	6.00	123.50	119.90
24	14	236	C	C6-N1-C2	6.00	122.70	120.30
24	14	1379	A	C8-N9-C4	-6.00	103.40	105.80
24	14	2595	G	C8-N9-C1'	6.00	134.80	127.00
1	1G	412	A	P-O3'-C3'	6.00	126.89	119.70
24	1H	756	C	N1-C2-O2	-6.00	115.30	118.90
24	1H	1807	G	N1-C6-O6	6.00	123.50	119.90
24	1H	2588	G	C5-C6-N1	6.00	114.50	111.50
24	1H	30	G	N3-C4-N9	5.99	129.60	126.00
24	14	836	G	C2-N3-C4	5.99	114.90	111.90
24	14	2329	G	N7-C8-N9	-5.99	110.10	113.10
1	1G	1523	G	O5'-P-OP2	-5.99	100.31	105.70
1	13	926	G	N1-C6-O6	-5.99	116.31	119.90
1	1G	1205	U	C5-C6-N1	5.99	125.69	122.70
22	3L	54	C	C6-N1-C2	-5.99	117.90	120.30
24	14	1694	C	C6-N1-C2	5.99	122.70	120.30
24	1H	2336	A	C8-N9-C4	-5.99	103.40	105.80
24	14	1543	A	N1-C2-N3	5.99	132.29	129.30
24	14	1572	A	C6-C5-N7	-5.99	128.11	132.30
24	14	1894	C	C2-N3-C4	-5.99	116.91	119.90
24	1H	863	A	N9-C4-C5	-5.99	103.41	105.80
1	13	301	G	C4-C5-N7	5.99	113.19	110.80
23	4K	13	A	N7-C8-N9	5.99	116.79	113.80
24	1H	821	A	C8-N9-C4	-5.99	103.41	105.80
24	1H	1257	C	N1-C2-N3	5.99	123.39	119.20
24	14	138	G	O4'-C1'-N9	5.99	112.99	108.20
24	14	1756	G	C8-N9-C4	-5.99	104.01	106.40
24	14	2439	A	N7-C8-N9	5.99	116.79	113.80
24	1H	300	A	O5'-P-OP2	-5.98	100.31	105.70
28	21	117	MET	CA-CB-CG	5.98	123.47	113.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1805	U	C2-N3-C4	-5.98	123.41	127.00
24	1H	441	U	N1-C2-O2	5.98	126.99	122.80
24	1H	2605	U	N3-C2-O2	-5.98	118.01	122.20
24	14	933	A	N7-C8-N9	5.98	116.79	113.80
24	14	1347	G	N3-C4-C5	5.98	131.59	128.60
24	1H	744	G	O5'-P-OP2	-5.98	100.32	105.70
24	1H	1968	G	OP2-P-O3'	5.98	118.36	105.20
24	14	620	G	C8-N9-C4	-5.98	104.01	106.40
24	14	1007	C	C2-N3-C4	-5.98	116.91	119.90
24	14	1601	G	N1-C2-N2	-5.98	110.82	116.20
24	14	1614	A	C6-C5-N7	-5.98	128.11	132.30
24	14	2078	C	N1-C2-O2	-5.98	115.31	118.90
24	1H	1518	C	O5'-P-OP2	5.98	117.87	110.70
24	14	615	G	O4'-C1'-N9	5.98	112.98	108.20
24	14	1368	G	C5-N7-C8	5.98	107.29	104.30
24	14	1663	C	N3-C2-O2	5.98	126.08	121.90
24	1H	1011	G	C4-C5-N7	-5.98	108.41	110.80
24	1H	1264	G	OP1-P-O3'	5.98	118.35	105.20
24	1H	2243	U	N1-C2-N3	5.98	118.49	114.90
1	1G	1405	G	N1-C6-O6	-5.98	116.31	119.90
1	13	811	C	N3-C4-C5	5.98	124.29	121.90
24	1H	852	G	N1-C6-O6	-5.98	116.31	119.90
24	1H	1668	A	C8-N9-C4	5.98	108.19	105.80
24	14	1124	C	C6-N1-C2	5.98	122.69	120.30
24	1H	70	G	N1-C2-N2	-5.97	110.82	116.20
24	14	2424	C	N3-C4-C5	-5.97	119.51	121.90
24	1H	1936	A	C5-C6-N6	-5.97	118.92	123.70
25	16	100	G	C8-N9-C4	5.97	108.79	106.40
24	1H	1023	U	O5'-P-OP1	-5.97	100.33	105.70
27	11	131	LEU	CB-CG-CD2	-5.97	100.85	111.00
48	G5	17	SER	N-CA-C	5.97	127.12	111.00
24	14	529	A	N1-C6-N6	5.97	122.18	118.60
27	19	43	ARG	CG-CD-NE	5.97	124.34	111.80
24	1H	946	G	N1-C2-N2	5.97	121.57	116.20
24	1H	524	U	N3-C2-O2	-5.97	118.02	122.20
24	1H	1242	A	OP1-P-OP2	5.97	128.55	119.60
24	1H	1262	A	C8-N9-C4	5.97	108.19	105.80
24	14	1725	G	C4-N9-C1'	5.97	134.26	126.50
25	1J	11	C	N1-C2-O2	5.97	122.48	118.90
24	1H	59	U	N3-C4-C5	-5.96	111.02	114.60
24	1H	951	C	N3-C4-N4	-5.96	113.83	118.00
24	1H	1616	A	N9-C4-C5	-5.96	103.41	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1799	G	C8-N9-C4	-5.96	104.01	106.40
24	14	519	U	N1-C2-N3	5.96	118.48	114.90
24	14	1769	G	N7-C8-N9	5.96	116.08	113.10
22	2K	27	A	O4'-C1'-N9	5.96	112.97	108.20
24	14	911	A	OP1-P-O3'	5.96	118.31	105.20
24	14	1244	G	C8-N9-C4	5.96	108.78	106.40
24	14	1647	G	O4'-C1'-N9	-5.96	103.43	108.20
24	14	2443	C	C5-C4-N4	-5.96	116.03	120.20
24	1H	1601	G	OP1-P-OP2	-5.96	110.66	119.60
24	1H	2601	C	N3-C4-C5	5.96	124.28	121.90
1	13	36	C	C6-N1-C2	-5.96	117.92	120.30
1	13	529	G	C4-C5-N7	5.96	113.18	110.80
1	13	814	A	C8-N9-C4	5.96	108.18	105.80
24	1H	1011	G	N3-C4-N9	-5.96	122.42	126.00
24	14	1626	G	N3-C2-N2	-5.96	115.73	119.90
1	13	984	C	C6-N1-C2	5.96	122.68	120.30
24	1H	2507	C	C6-N1-C2	-5.96	117.92	120.30
24	1H	2571	C	C2-N1-C1'	5.96	125.35	118.80
24	14	1673	U	O4'-C1'-N1	5.96	112.97	108.20
24	14	2590	A	C8-N9-C4	5.96	108.18	105.80
24	1H	1309	G	C8-N9-C4	5.96	108.78	106.40
1	1G	838	G	N1-C6-O6	5.96	123.47	119.90
24	14	1426	G	C2-N3-C4	-5.96	108.92	111.90
24	1H	845	G	N3-C4-C5	5.95	131.58	128.60
24	1H	2465	C	C6-N1-C2	5.95	122.68	120.30
24	1H	2506	U	OP2-P-O3'	5.95	118.30	105.20
24	14	1266	G	C8-N9-C4	5.95	108.78	106.40
24	1H	70	G	C4-N9-C1'	5.95	134.24	126.50
24	14	2241	A	C2-N3-C4	-5.95	107.62	110.60
5	4E	31	LEU	CA-CB-CG	5.95	128.99	115.30
24	1H	840	C	C2-N1-C1'	-5.95	112.25	118.80
24	14	682	G	N9-C4-C5	-5.95	103.02	105.40
24	14	2347	C	N3-C2-O2	-5.95	117.73	121.90
1	13	36	C	N3-C4-C5	-5.95	119.52	121.90
24	1H	180	G	C5-C6-O6	-5.95	125.03	128.60
24	1H	530	G	N7-C8-N9	5.95	116.07	113.10
24	1H	1203	G	C5-C6-O6	5.95	132.17	128.60
24	14	679	C	C2-N3-C4	-5.95	116.93	119.90
24	1H	1652	A	N1-C6-N6	5.95	122.17	118.60
24	14	682	G	C8-N9-C1'	-5.95	119.27	127.00
24	1H	675	A	C5-C6-N6	-5.95	118.94	123.70
24	1H	1209	G	N1-C2-N2	-5.95	110.85	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	974	G	O5'-P-OP2	-5.95	100.35	105.70
24	14	1930	G	N7-C8-N9	-5.95	110.13	113.10
24	14	2584	U	C2-N1-C1'	5.95	124.83	117.70
1	13	781	A	C2-N3-C4	-5.94	107.63	110.60
24	1H	2360	A	C2-N3-C4	-5.94	107.63	110.60
24	1H	461	C	N1-C2-O2	-5.94	115.33	118.90
24	1H	1307	A	C4-C5-N7	5.94	113.67	110.70
1	1G	758	G	N1-C6-O6	5.94	123.47	119.90
24	14	2602	A	P-O3'-C3'	5.94	126.83	119.70
24	1H	70	G	P-O3'-C3'	5.94	126.83	119.70
24	1H	804	A	O5'-P-OP2	5.94	117.83	110.70
24	1H	1780	A	N1-C2-N3	5.94	132.27	129.30
24	14	1763	G	N7-C8-N9	-5.94	110.13	113.10
24	1H	729	G	C4-C5-N7	5.94	113.18	110.80
24	1H	1929	G	N7-C8-N9	-5.94	110.13	113.10
24	14	2360	A	C5-C6-N6	-5.94	118.95	123.70
24	14	2872	G	N7-C8-N9	5.94	116.07	113.10
24	1H	1650	G	C5-C6-N1	-5.94	108.53	111.50
24	1H	1912	A	P-O3'-C3'	5.94	126.83	119.70
24	1H	2272	U	C5-C4-O4	5.94	129.46	125.90
24	1H	130	C	N3-C4-C5	5.94	124.27	121.90
24	1H	774	A	N9-C4-C5	-5.94	103.42	105.80
24	14	2634	G	N1-C6-O6	5.94	123.46	119.90
24	1H	1517	G	C8-N9-C4	5.93	108.77	106.40
24	1H	1784	A	C5-C6-N6	5.93	128.45	123.70
24	1H	2415	G	C6-C5-N7	-5.93	126.84	130.40
24	14	2250	G	OP1-P-O3'	5.93	118.25	105.20
25	1J	90	C	C5-C4-N4	-5.93	116.05	120.20
1	13	365	U	C2-N1-C1'	5.93	124.82	117.70
1	13	1205	U	N1-C2-N3	5.93	118.46	114.90
24	1H	845	G	N9-C4-C5	-5.93	103.03	105.40
24	1H	1161	C	C6-N1-C2	-5.93	117.93	120.30
24	1H	2270	G	C8-N9-C1'	-5.93	119.29	127.00
32	61	110	ASP	C-N-CD	-5.93	107.55	120.60
24	14	1619	G	C5-C6-O6	-5.93	125.04	128.60
24	14	2330	G	C8-N9-C4	5.93	108.77	106.40
24	14	1441	G	C5-C6-O6	-5.93	125.04	128.60
1	13	755	G	C8-N9-C1'	-5.93	119.29	127.00
24	1H	70	G	N3-C4-C5	-5.93	125.64	128.60
24	1H	335	C	C6-N1-C2	-5.93	117.93	120.30
24	1H	540	G	N1-C2-N2	5.93	121.54	116.20
24	1H	2292	C	C6-N1-C2	-5.93	117.93	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2780	G	N3-C4-N9	5.93	129.56	126.00
1	13	23	C	O5'-P-OP1	-5.93	100.36	105.70
25	16	80	U	N3-C2-O2	-5.93	118.05	122.20
24	14	1122	G	C5-C6-N1	5.93	114.46	111.50
24	14	1425	G	N1-C6-O6	5.93	123.46	119.90
24	14	1950	G	N9-C4-C5	5.93	107.77	105.40
24	1H	846	C	N3-C4-N4	5.92	122.15	118.00
24	1H	2445	G	N1-C2-N3	5.92	127.45	123.90
24	1H	2595	G	C4-N9-C1'	-5.92	118.80	126.50
24	1H	2875	C	N1-C2-O2	5.92	122.45	118.90
24	14	2607	G	N3-C2-N2	5.92	124.05	119.90
24	1H	783	A	C5-C6-N6	-5.92	118.96	123.70
24	1H	2542	A	N9-C4-C5	-5.92	103.43	105.80
1	13	1515	C	C5-C6-N1	-5.92	118.04	121.00
24	1H	2447	G	O5'-P-OP2	-5.92	100.37	105.70
24	14	122	G	N7-C8-N9	-5.92	110.14	113.10
24	14	1021	A	N1-C2-N3	5.92	132.26	129.30
24	14	2606	C	C2-N1-C1'	-5.92	112.29	118.80
1	13	766	A	N1-C6-N6	5.92	122.15	118.60
1	13	894	G	C8-N9-C4	5.92	108.77	106.40
1	13	904	C	N3-C2-O2	-5.92	117.76	121.90
24	1H	2402	C	C2-N3-C4	5.92	122.86	119.90
24	1H	2451	A	O5'-P-OP2	-5.92	100.37	105.70
24	1H	2016	U	C5-C6-N1	-5.92	119.74	122.70
24	1H	2198	A	N7-C8-N9	-5.92	110.84	113.80
24	1H	2332	U	O5'-P-OP1	5.92	117.80	110.70
24	14	2821	A	C2-N3-C4	-5.92	107.64	110.60
1	13	833	U	C5-C4-O4	5.92	129.45	125.90
24	1H	130	C	C2-N3-C4	-5.92	116.94	119.90
24	1H	1009	A	N1-C6-N6	5.92	122.15	118.60
24	1H	1554	A	O4'-C1'-N9	5.92	112.93	108.20
24	1H	2273	A	O5'-P-OP2	-5.92	100.38	105.70
24	14	1366	A	C4-C5-N7	5.92	113.66	110.70
24	14	2325	G	OP1-P-OP2	5.92	128.48	119.60
1	13	568	G	C2-N3-C4	5.92	114.86	111.90
1	1G	886	G	N1-C6-O6	5.92	123.45	119.90
24	14	383	U	C6-N1-C1'	5.92	129.48	121.20
24	14	1573	G	OP2-P-O3'	5.92	118.21	105.20
24	1H	202	U	C6-N1-C1'	-5.91	112.92	121.20
24	1H	1800	C	N1-C2-O2	5.91	122.45	118.90
24	1H	2287	A	N3-C4-N9	-5.91	122.67	127.40
1	1G	774	G	C8-N9-C4	5.91	108.77	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	1393	U	OP1-P-O3'	5.91	118.21	105.20
24	14	1953	A	O5'-P-OP1	-5.91	100.38	105.70
24	14	740	U	C5-C4-O4	5.91	129.45	125.90
1	13	1337	G	N7-C8-N9	5.91	116.06	113.10
24	1H	605	C	C4-C5-C6	5.91	120.36	117.40
25	16	102	G	N3-C4-N9	-5.91	122.45	126.00
24	14	1973	G	N3-C2-N2	5.91	124.04	119.90
1	13	865	A	C5-N7-C8	-5.91	100.95	103.90
24	1H	928	G	C5-N7-C8	-5.91	101.35	104.30
24	1H	946	G	N3-C2-N2	-5.91	115.76	119.90
24	1H	1403	C	O5'-P-OP2	-5.91	100.38	105.70
24	1H	2688	U	C4-C5-C6	5.91	123.25	119.70
27	11	16	MET	CB-CG-SD	-5.91	94.67	112.40
1	1G	1469	G	C8-N9-C1'	-5.91	119.32	127.00
24	14	1907	G	O5'-P-OP2	5.91	117.79	110.70
24	14	819	A	C8-N9-C4	-5.91	103.44	105.80
24	14	1939	U	N1-C2-O2	-5.91	118.67	122.80
24	1H	1773	A	O5'-P-OP1	5.91	117.78	110.70
24	1H	2618	G	N3-C4-C5	-5.91	125.65	128.60
25	16	80	U	OP2-P-O3'	5.91	118.19	105.20
24	14	669	G	N3-C2-N2	-5.91	115.77	119.90
24	14	1029	A	N1-C6-N6	5.91	122.14	118.60
24	14	1231	G	N1-C6-O6	5.91	123.44	119.90
24	14	1382	G	N1-C6-O6	-5.91	116.36	119.90
24	1H	38	A	N1-C2-N3	-5.90	126.35	129.30
24	1H	214	G	C2-N3-C4	5.90	114.85	111.90
24	1H	964	C	C6-N1-C2	-5.90	117.94	120.30
24	1H	1775	U	OP1-P-O3'	5.90	118.18	105.20
24	1H	2070	G	C5-N7-C8	5.90	107.25	104.30
24	14	773	U	C2-N3-C4	-5.90	123.46	127.00
24	14	1900	A	O5'-P-OP1	-5.90	100.39	105.70
1	1G	537	G	O5'-P-OP1	-5.90	100.39	105.70
24	14	1928	A	C8-N9-C4	5.90	108.16	105.80
24	1H	2392	A	OP1-P-OP2	-5.90	110.75	119.60
24	14	786	C	OP2-P-O3'	5.90	118.18	105.20
1	13	186	C	C6-N1-C2	-5.90	117.94	120.30
24	1H	2415	G	N1-C6-O6	5.90	123.44	119.90
24	14	1296	G	OP2-P-O3'	5.90	118.17	105.20
24	14	1613	G	C5-C6-O6	5.90	132.14	128.60
24	1H	1022	G	N3-C2-N2	-5.90	115.77	119.90
24	1H	1382	G	N9-C4-C5	-5.90	103.04	105.40
24	14	528	A	N3-C4-N9	-5.90	122.68	127.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	35	46	LYS	C-N-CA	-5.90	106.96	121.70
24	1H	464	U	N3-C2-O2	-5.89	118.07	122.20
24	1H	703	U	C5-C4-O4	5.89	129.44	125.90
24	1H	1451	C	C6-N1-C2	5.89	122.66	120.30
24	14	208	C	N1-C2-O2	-5.89	115.36	118.90
24	14	1306	C	O5'-P-OP1	-5.89	100.39	105.70
24	14	2040	C	C4-C5-C6	5.89	120.35	117.40
24	1H	2246	G	N3-C4-N9	5.89	129.54	126.00
24	1H	2270	G	N3-C2-N2	5.89	124.02	119.90
24	1H	2435	A	N1-C6-N6	-5.89	115.06	118.60
1	1G	972	C	N3-C4-C5	-5.89	119.54	121.90
24	14	1391	U	O5'-P-OP1	-5.89	100.40	105.70
24	14	2401	U	C2-N1-C1'	-5.89	110.63	117.70
24	1H	568	U	N3-C4-C5	-5.89	111.07	114.60
24	1H	1936	A	N1-C6-N6	5.89	122.14	118.60
24	1H	67	U	C5-C6-N1	5.89	125.64	122.70
24	1H	790	C	P-O3'-C3'	-5.89	112.64	119.70
24	14	623	G	N1-C6-O6	5.89	123.43	119.90
24	14	2339	G	N3-C4-N9	5.89	129.53	126.00
1	13	789	U	N3-C4-C5	-5.89	111.07	114.60
24	1H	593	G	N9-C4-C5	-5.89	103.05	105.40
24	1H	1673	U	C2-N1-C1'	-5.89	110.64	117.70
24	1H	2266	A	C5-C6-N6	-5.89	118.99	123.70
24	14	2579	C	N3-C4-C5	-5.89	119.55	121.90
1	13	708	C	C6-N1-C2	-5.88	117.95	120.30
24	1H	719	C	C6-N1-C2	-5.88	117.95	120.30
24	1H	843	G	C8-N9-C4	5.88	108.75	106.40
1	1G	817	C	N1-C2-O2	-5.88	115.37	118.90
24	14	472	A	C6-N1-C2	-5.88	115.07	118.60
24	14	2392	A	N3-C4-N9	-5.88	122.69	127.40
24	14	2327	A	C8-N9-C4	5.88	108.15	105.80
22	2K	29	C	C6-N1-C2	5.88	122.65	120.30
24	1H	469	G	N1-C6-O6	-5.88	116.37	119.90
24	1H	569	U	C2-N1-C1'	-5.88	110.64	117.70
24	1H	836	G	OP1-P-OP2	-5.88	110.78	119.60
24	1H	1607	C	OP1-P-OP2	5.88	128.42	119.60
24	14	197	A	C2-N3-C4	-5.88	107.66	110.60
24	14	2258	C	N1-C2-O2	-5.88	115.37	118.90
27	19	218	ARG	NE-CZ-NH2	-5.88	117.36	120.30
24	1H	717	G	N3-C4-N9	5.88	129.53	126.00
22	2L	72	U	N3-C2-O2	5.88	126.32	122.20
24	1H	1267	U	OP2-P-O3'	5.88	118.13	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	197	A	C4-N9-C1'	5.88	136.88	126.30
24	14	805	G	OP1-P-O3'	5.88	118.13	105.20
24	14	1255	U	C2-N1-C1'	5.88	124.75	117.70
24	14	1799	G	C8-N9-C4	5.88	108.75	106.40
24	14	2386	C	C5-C4-N4	-5.88	116.08	120.20
22	2K	85	A	C5-N7-C8	-5.88	100.96	103.90
24	1H	579	G	N1-C6-O6	5.88	123.42	119.90
24	1H	845	G	O4'-C1'-N9	5.88	112.90	108.20
24	1H	963	U	O5'-P-OP2	5.88	117.75	110.70
24	1H	2048	G	C4-C5-C6	5.88	122.33	118.80
24	1H	2489	G	OP2-P-O3'	5.88	118.13	105.20
46	I8	39	ARG	NE-CZ-NH2	-5.88	117.36	120.30
1	1G	912	C	C2-N3-C4	-5.88	116.96	119.90
24	14	908	C	C6-N1-C2	-5.88	117.95	120.30
24	1H	52	A	O5'-P-OP1	-5.88	100.41	105.70
24	1H	1771	C	C4-C5-C6	5.88	120.34	117.40
22	2L	24	G	N3-C4-C5	5.88	131.54	128.60
24	14	383	U	O4'-C1'-N1	5.88	112.90	108.20
24	1H	275	G	C8-N9-C4	5.87	108.75	106.40
24	1H	404	C	P-O3'-C3'	5.87	126.75	119.70
24	1H	584	C	N1-C2-O2	-5.87	115.38	118.90
24	1H	793	A	C6-C5-N7	-5.87	128.19	132.30
24	1H	1383	C	C6-N1-C2	5.87	122.65	120.30
24	1H	1606	G	N7-C8-N9	-5.87	110.16	113.10
24	1H	2042	A	C5-C6-N1	-5.87	114.76	117.70
1	1G	449	C	N3-C2-O2	-5.87	117.79	121.90
24	1H	380	U	N3-C4-O4	5.87	123.51	119.40
1	1G	227	G	C8-N9-C4	5.87	108.75	106.40
24	14	499	U	O5'-P-OP1	-5.87	100.42	105.70
24	1H	2060	A	C8-N9-C4	-5.87	103.45	105.80
24	1H	1271	G	C8-N9-C4	5.87	108.75	106.40
24	1H	1653	G	C5-C6-O6	-5.87	125.08	128.60
24	1H	1989	G	C2-N3-C4	-5.87	108.97	111.90
22	2K	10	C	O5'-P-OP1	-5.86	100.42	105.70
24	1H	1394	U	C6-N1-C2	-5.86	117.48	121.00
1	1G	1498	U	C6-N1-C2	-5.86	117.48	121.00
24	14	2880	C	N3-C4-C5	-5.86	119.56	121.90
24	1H	76	C	N3-C4-C5	-5.86	119.56	121.90
24	1H	211	A	C8-N9-C4	5.86	108.14	105.80
1	1G	1474	G	C5-C6-O6	-5.86	125.08	128.60
24	1H	40	C	C5-C6-N1	-5.86	118.07	121.00
24	1H	705	A	C6-C5-N7	-5.86	128.20	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	16	16	G	C8-N9-C4	5.86	108.74	106.40
24	14	576	U	N3-C4-C5	5.86	118.12	114.60
24	14	808	G	C8-N9-C4	5.86	108.74	106.40
24	14	1204	A	N3-C4-C5	5.86	130.90	126.80
24	14	1349	A	C5-N7-C8	-5.86	100.97	103.90
24	14	1390	U	N1-C2-O2	5.86	126.90	122.80
24	14	1521	G	C8-N9-C4	-5.86	104.06	106.40
24	1H	1789	A	N1-C6-N6	-5.86	115.08	118.60
24	14	140	A	N1-C6-N6	5.86	122.11	118.60
1	13	322	C	N3-C4-C5	5.86	124.24	121.90
1	13	866	C	N1-C2-O2	-5.86	115.39	118.90
24	1H	658	C	OP1-P-OP2	5.86	128.39	119.60
24	14	672	C	O5'-P-OP1	5.86	117.73	110.70
1	13	965	A	N1-C6-N6	5.86	122.11	118.60
24	1H	1981	A	N9-C4-C5	-5.86	103.46	105.80
1	1G	812	C	N3-C4-N4	5.86	122.10	118.00
24	14	1308	A	C4-C5-C6	5.86	119.93	117.00
24	14	2092	U	C6-N1-C2	-5.86	117.49	121.00
24	1H	1497	U	N1-C2-O2	5.85	126.90	122.80
25	16	61	G	C8-N9-C4	-5.85	104.06	106.40
24	14	469	G	N7-C8-N9	-5.85	110.17	113.10
1	13	324	G	O5'-P-OP2	-5.85	100.43	105.70
24	1H	729	G	C4-N9-C1'	5.85	134.11	126.50
1	1G	565	U	N3-C2-O2	-5.85	118.10	122.20
24	14	801	G	C8-N9-C1'	5.85	134.61	127.00
24	1H	213	A	C2-N3-C4	5.85	113.53	110.60
24	14	129	C	C5-C6-N1	-5.85	118.08	121.00
24	14	2701	C	C4-C5-C6	5.85	120.33	117.40
24	1H	2076	U	N1-C2-N3	5.85	118.41	114.90
1	1G	345	C	N1-C2-O2	5.85	122.41	118.90
1	1G	701	C	O5'-P-OP2	-5.85	100.44	105.70
24	14	593	G	C5-C6-N1	5.85	114.42	111.50
24	14	748	G	N9-C4-C5	5.85	107.74	105.40
23	4K	11	U	N3-C2-O2	5.85	126.29	122.20
24	1H	2553	G	N3-C2-N2	5.85	123.99	119.90
24	1H	2725	A	N1-C6-N6	-5.85	115.09	118.60
24	14	1202	C	C6-N1-C2	5.85	122.64	120.30
24	14	1525	G	OP1-P-OP2	5.85	128.37	119.60
1	13	234	C	C6-N1-C2	-5.85	117.96	120.30
1	1G	576	G	C6-C5-N7	-5.85	126.89	130.40
1	13	529	G	N1-C6-O6	5.84	123.41	119.90
24	1H	1275	A	N1-C6-N6	5.84	122.11	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1559	G	N3-C4-C5	5.84	131.52	128.60
24	1H	2673	G	N3-C4-C5	-5.84	125.68	128.60
24	1H	2821	A	C8-N9-C4	5.84	108.14	105.80
25	16	14	U	C5-C6-N1	-5.84	119.78	122.70
24	14	733	G	C8-N9-C4	-5.84	104.06	106.40
1	13	1205	U	N3-C4-C5	-5.84	111.10	114.60
24	1H	621	A	C4-C5-N7	5.84	113.62	110.70
24	1H	1798	U	N3-C4-C5	5.84	118.11	114.60
24	1H	1817	G	C8-N9-C4	5.84	108.74	106.40
24	1H	1820	U	C5-C6-N1	-5.84	119.78	122.70
24	1H	2751	G	C2-N3-C4	-5.84	108.98	111.90
24	14	620	G	OP1-P-O3'	5.84	118.05	105.20
24	14	982	C	O5'-P-OP2	-5.84	100.44	105.70
24	14	1308	A	C2-N3-C4	-5.84	107.68	110.60
24	14	1565	C	C5-C4-N4	-5.84	116.11	120.20
24	14	1769	G	N3-C4-N9	5.84	129.50	126.00
24	14	2387	U	O5'-P-OP2	-5.84	100.44	105.70
24	1H	998	C	C5-C4-N4	-5.84	116.11	120.20
24	1H	2401	U	C6-N1-C2	-5.84	117.50	121.00
1	1G	816	A	C8-N9-C4	-5.84	103.46	105.80
24	14	2085	C	O5'-P-OP2	-5.84	100.44	105.70
25	1J	114	G	N3-C4-C5	5.84	131.52	128.60
24	1H	859	G	C5-C6-O6	-5.84	125.10	128.60
24	1H	1632	A	N9-C4-C5	-5.84	103.47	105.80
24	14	1353	A	N9-C4-C5	5.84	108.13	105.80
24	14	2510	C	C6-N1-C2	5.84	122.64	120.30
1	13	506	G	O5'-P-OP1	-5.83	100.45	105.70
24	1H	1278	A	C2-N3-C4	-5.83	107.68	110.60
24	1H	1374	G	C5-C6-N1	-5.83	108.58	111.50
1	1G	898	G	N7-C8-N9	-5.83	110.18	113.10
1	13	712	A	N1-C6-N6	-5.83	115.10	118.60
24	1H	130	C	C5-C4-N4	-5.83	116.12	120.20
24	1H	537	C	N1-C2-O2	5.83	122.40	118.90
1	1G	812	C	C2-N1-C1'	5.83	125.22	118.80
1	1G	1413	A	O5'-P-OP1	-5.83	100.45	105.70
24	14	16	G	N1-C6-O6	5.83	123.40	119.90
24	1H	1291	C	C2-N1-C1'	-5.83	112.39	118.80
24	1H	1850	G	O5'-P-OP2	5.83	117.70	110.70
24	1H	2818	G	N1-C2-N3	5.83	127.40	123.90
24	14	797	C	C5-C6-N1	-5.83	118.08	121.00
1	13	45	U	O5'-P-OP2	-5.83	100.45	105.70
1	13	1528	U	O5'-P-OP1	5.83	117.69	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	726	G	O4'-C1'-N9	5.83	112.86	108.20
24	1H	1262	A	N9-C4-C5	-5.83	103.47	105.80
24	1H	2374	C	N3-C4-N4	-5.83	113.92	118.00
24	14	46	C	O5'-P-OP1	-5.83	100.45	105.70
24	14	1210	A	C6-C5-N7	-5.83	128.22	132.30
24	1H	1956	U	N3-C4-C5	-5.83	111.10	114.60
24	1H	2615	U	N3-C4-C5	5.83	118.10	114.60
24	14	732	C	C5-C4-N4	-5.83	116.12	120.20
1	13	244	U	C2-N1-C1'	5.83	124.69	117.70
1	13	361	G	O5'-P-OP1	-5.83	100.46	105.70
1	13	1407	C	C4-C5-C6	-5.83	114.49	117.40
24	1H	780	G	C8-N9-C1'	-5.83	119.43	127.00
24	14	999	U	OP1-P-O3'	5.83	118.02	105.20
24	14	1342	A	N9-C1'-C2'	5.83	121.57	114.00
24	1H	71	A	N9-C4-C5	-5.82	103.47	105.80
24	1H	1234	U	OP1-P-OP2	5.82	128.33	119.60
24	1H	1602	U	C4-C5-C6	5.82	123.19	119.70
24	1H	2446	G	C4-C5-N7	5.82	113.13	110.80
24	1H	2828	C	N3-C4-C5	5.82	124.23	121.90
24	14	793	A	O5'-P-OP2	-5.82	100.46	105.70
24	1H	797	C	N1-C2-N3	5.82	123.28	119.20
24	1H	802	A	OP2-P-O3'	5.82	118.01	105.20
24	1H	2599	G	C8-N9-C4	5.82	108.73	106.40
24	14	1776	G	C8-N9-C1'	-5.82	119.43	127.00
24	14	1903	G	OP1-P-OP2	5.82	128.33	119.60
1	13	56	U	C5-C6-N1	5.82	125.61	122.70
24	1H	139	G	OP1-P-O3'	5.82	118.00	105.20
24	1H	543	C	C6-N1-C2	5.82	122.63	120.30
24	1H	1284	A	OP1-P-OP2	5.82	128.33	119.60
24	1H	2033	A	C6-N1-C2	-5.82	115.11	118.60
24	1H	465	G	N9-C4-C5	-5.82	103.07	105.40
24	1H	1296	G	O5'-P-OP2	-5.82	100.47	105.70
24	1H	2819	G	C5-C6-O6	-5.82	125.11	128.60
24	14	1332	G	N9-C4-C5	5.82	107.73	105.40
24	14	1543	A	N1-C6-N6	-5.82	115.11	118.60
24	1H	133	C	C6-N1-C2	5.82	122.63	120.30
24	1H	2503	A	C8-N9-C4	5.82	108.13	105.80
24	1H	2509	G	N3-C2-N2	-5.82	115.83	119.90
24	14	961	C	O4'-C1'-N1	5.82	112.85	108.20
24	14	2780	G	C4-N9-C1'	5.82	134.06	126.50
24	14	178	G	C5-C6-O6	-5.81	125.11	128.60
1	13	811	C	O4'-C1'-N1	-5.81	103.55	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	621	A	N1-C6-N6	5.81	122.09	118.60
24	1H	2763	G	C6-C5-N7	-5.81	126.91	130.40
1	1G	144	G	N1-C6-O6	5.81	123.39	119.90
24	14	1325	G	C8-N9-C4	5.81	108.72	106.40
24	1H	1528	A	C4-C5-N7	5.81	113.61	110.70
24	1H	2409	G	C4-N9-C1'	5.81	134.06	126.50
1	13	155	C	C6-N1-C2	-5.81	117.98	120.30
24	1H	843	G	N1-C6-O6	5.81	123.39	119.90
24	1H	2205	C	O5'-P-OP1	5.81	117.67	110.70
24	1H	2389	G	N1-C6-O6	-5.81	116.41	119.90
24	14	870	A	C8-N9-C4	5.81	108.12	105.80
24	14	1559	G	C6-C5-N7	-5.81	126.92	130.40
24	1H	386	G	C5-C6-O6	-5.81	125.11	128.60
24	1H	2569	G	OP1-P-OP2	5.81	128.31	119.60
24	14	414	C	O5'-P-OP2	-5.81	100.47	105.70
24	14	2365	G	N3-C4-N9	5.81	129.49	126.00
24	14	1286	A	OP1-P-OP2	5.81	128.31	119.60
1	13	136	C	C5-C6-N1	-5.80	118.10	121.00
24	1H	656	G	C5-C6-O6	-5.80	125.12	128.60
24	1H	2695	C	N3-C4-C5	-5.80	119.58	121.90
1	1G	1301	U	C6-N1-C1'	-5.80	113.08	121.20
24	14	2703	C	N3-C2-O2	-5.80	117.84	121.90
1	13	904	C	N3-C4-N4	-5.80	113.94	118.00
24	1H	462	C	N3-C4-N4	-5.80	113.94	118.00
24	1H	74	A	C8-N9-C4	-5.80	103.48	105.80
24	1H	522	G	C4-C5-N7	5.80	113.12	110.80
24	1H	1314	C	OP1-P-OP2	5.80	128.30	119.60
24	1H	1945	G	C4-C5-N7	5.80	113.12	110.80
24	1H	1976	U	N1-C2-O2	5.80	126.86	122.80
38	A8	60	GLY	N-CA-C	5.80	127.60	113.10
24	14	1691	C	C5-C4-N4	-5.80	116.14	120.20
24	14	1829	A	N1-C6-N6	5.80	122.08	118.60
24	14	1899	G	C8-N9-C4	-5.80	104.08	106.40
24	1H	2045	C	C2-N3-C4	-5.80	117.00	119.90
24	1H	2474	C	C6-N1-C2	-5.80	117.98	120.30
1	1G	560	U	C5-C6-N1	5.80	125.60	122.70
24	14	194	G	C8-N9-C4	5.80	108.72	106.40
24	14	1307	A	N1-C2-N3	5.80	132.20	129.30
1	13	35	G	C8-N9-C4	-5.80	104.08	106.40
24	1H	322	A	C5-N7-C8	-5.80	101.00	103.90
24	1H	1275	A	C5-C6-N6	-5.80	119.06	123.70
24	14	55	G	C5-C6-O6	-5.80	125.12	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	682	G	C4-N9-C1'	5.80	134.04	126.50
24	14	1394	U	OP1-P-OP2	-5.80	110.90	119.60
24	14	1798	U	C5-C6-N1	-5.80	119.80	122.70
1	13	63	C	C6-N1-C2	-5.80	117.98	120.30
24	1H	847	U	N1-C2-N3	5.80	118.38	114.90
24	1H	970	C	N1-C2-O2	-5.80	115.42	118.90
1	1G	1076	C	N3-C4-N4	-5.80	113.94	118.00
24	14	2262	U	OP1-P-O3'	5.80	117.95	105.20
25	1J	88	C	C2-N1-C1'	5.80	125.17	118.80
24	1H	1333	C	N3-C2-O2	5.79	125.96	121.90
24	14	1488	G	C8-N9-C4	-5.79	104.08	106.40
24	14	2321	G	C8-N9-C4	-5.79	104.08	106.40
24	14	2544	G	N9-C4-C5	-5.79	103.08	105.40
1	13	1455	G	N9-C4-C5	-5.79	103.08	105.40
24	1H	726	G	O5'-P-OP2	-5.79	100.48	105.70
24	1H	2375	G	OP2-P-O3'	5.79	117.94	105.20
24	1H	2880	C	N3-C4-C5	-5.79	119.58	121.90
24	14	1326	U	N1-C2-N3	5.79	118.38	114.90
24	14	2681	C	N3-C2-O2	-5.79	117.84	121.90
24	1H	1121	C	C6-N1-C2	5.79	122.62	120.30
24	1H	1672	C	C6-N1-C2	5.79	122.62	120.30
24	14	742	G	C5-C6-O6	5.79	132.07	128.60
24	1H	1942	C	C6-N1-C2	-5.79	117.98	120.30
24	1H	2626	C	N3-C4-C5	5.79	124.22	121.90
24	1H	1261	C	C4-C5-C6	5.79	120.29	117.40
1	1G	1112	C	C6-N1-C2	-5.79	117.98	120.30
24	14	124	G	C8-N9-C4	5.79	108.72	106.40
24	14	787	U	OP1-P-OP2	-5.79	110.92	119.60
24	14	2731	G	C8-N9-C4	-5.79	104.08	106.40
25	1J	82	G	N3-C4-N9	-5.79	122.53	126.00
1	13	233	C	C6-N1-C2	-5.79	117.98	120.30
24	1H	2268	A	N1-C6-N6	5.79	122.07	118.60
24	1H	1009	A	C8-N9-C4	5.79	108.11	105.80
24	1H	2443	C	N3-C4-C5	5.79	124.21	121.90
1	1G	725	G	O5'-P-OP1	-5.79	100.49	105.70
1	13	749	C	C6-N1-C1'	-5.78	113.86	120.80
22	2K	77	C	N3-C4-C5	5.78	124.21	121.90
24	1H	31	C	O5'-P-OP1	-5.78	100.50	105.70
24	1H	1328	G	N9-C4-C5	-5.78	103.09	105.40
24	1H	1341	U	C5-C4-O4	-5.78	122.43	125.90
24	14	956	G	C5-C6-N1	-5.78	108.61	111.50
1	13	244	U	C6-N1-C1'	-5.78	113.11	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	572	A	C6-C5-N7	-5.78	128.25	132.30
24	14	1602	U	C5-C6-N1	-5.78	119.81	122.70
24	1H	2707	G	C5-C6-O6	-5.78	125.13	128.60
24	14	1022	G	N3-C2-N2	-5.78	115.85	119.90
1	1G	1407	C	C4-C5-C6	-5.78	114.51	117.40
24	1H	1693	U	C5-C4-O4	5.78	129.37	125.90
24	1H	2346	A	C6-N1-C2	5.78	122.07	118.60
1	1G	1426	C	N1-C2-O2	-5.78	115.43	118.90
24	14	686	G	N3-C2-N2	5.78	123.94	119.90
24	14	757	U	N1-C2-N3	5.78	118.37	114.90
24	14	1760	A	C5-C6-N6	5.78	128.32	123.70
1	13	1525	G	N3-C4-N9	-5.78	122.53	126.00
24	1H	1602	U	O5'-P-OP2	5.78	117.63	110.70
24	1H	2041	U	OP1-P-OP2	5.78	128.26	119.60
24	1H	2689	U	C5-C6-N1	-5.78	119.81	122.70
24	14	833	U	C5-C6-N1	-5.78	119.81	122.70
24	14	1966	A	C8-N9-C4	5.78	108.11	105.80
24	14	2556	C	C2-N3-C4	-5.78	117.01	119.90
1	13	1392	G	OP1-P-O3'	5.77	117.90	105.20
25	16	84	C	C5-C6-N1	5.77	123.89	121.00
24	14	1319	G	O5'-P-OP1	-5.77	100.50	105.70
24	14	2259	G	C2-N3-C4	-5.77	109.01	111.90
24	1H	609(A)	G	C8-N9-C4	5.77	108.71	106.40
24	1H	839	U	N1-C2-N3	5.77	118.36	114.90
24	1H	1548	C	OP1-P-O3'	5.77	117.90	105.20
24	1H	2328	A	OP1-P-OP2	5.77	128.26	119.60
1	1G	372	C	O5'-P-OP1	-5.77	100.50	105.70
1	1G	732	C	OP2-P-O3'	5.77	117.90	105.20
37	55	57	ARG	NE-CZ-NH1	5.77	123.19	120.30
22	3K	84	C	N1-C2-O2	5.77	122.36	118.90
24	1H	2424	C	OP1-P-OP2	5.77	128.26	119.60
24	1H	2771	C	C6-N1-C2	-5.77	117.99	120.30
24	1H	2330	G	C5-C6-O6	-5.77	125.14	128.60
1	1G	511	C	C2-N1-C1'	-5.77	112.45	118.80
24	14	797	C	C4-C5-C6	5.77	120.28	117.40
24	14	1466	G	O5'-P-OP1	-5.77	100.51	105.70
24	14	2246	G	C6-C5-N7	-5.77	126.94	130.40
24	1H	1223	C	N1-C2-O2	-5.77	115.44	118.90
24	1H	2238	G	C5-C6-N1	5.77	114.38	111.50
24	1H	2617	C	C5-C6-N1	-5.77	118.12	121.00
25	16	53	A	N7-C8-N9	5.77	116.68	113.80
25	16	102	G	N3-C4-C5	5.77	131.48	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	659	U	C5-C6-N1	-5.77	119.82	122.70
24	14	761	A	C8-N9-C4	5.77	108.11	105.80
24	14	1228	G	O5'-P-OP1	-5.77	100.51	105.70
24	14	1314	C	C2-N1-C1'	5.77	125.14	118.80
24	14	1613	G	N3-C4-C5	-5.77	125.72	128.60
24	14	2069	G	OP1-P-OP2	5.77	128.25	119.60
1	13	823	G	OP1-P-OP2	-5.76	110.95	119.60
24	1H	955	C	O5'-P-OP1	-5.76	100.51	105.70
24	1H	1662	C	C2-N3-C4	-5.76	117.02	119.90
1	1G	1474	G	N1-C6-O6	5.76	123.36	119.90
24	14	389	G	N3-C4-N9	5.76	129.46	126.00
25	1J	72	G	N9-C4-C5	-5.76	103.09	105.40
24	1H	811	U	N3-C2-O2	-5.76	118.17	122.20
1	13	1233	G	O5'-P-OP2	-5.76	100.52	105.70
24	14	2031	A	C2-N3-C4	5.76	113.48	110.60
1	13	769	G	O4'-C1'-N9	5.76	112.81	108.20
24	1H	265	A	C5-N7-C8	-5.76	101.02	103.90
24	1H	2327	A	C6-C5-N7	5.76	136.33	132.30
1	1G	136	C	O5'-P-OP2	-5.76	100.52	105.70
24	14	1769	G	C8-N9-C1'	-5.76	119.51	127.00
24	14	2447	G	N1-C6-O6	5.76	123.36	119.90
24	1H	391	G	N1-C2-N2	5.76	121.38	116.20
24	1H	575	A	N1-C2-N3	5.76	132.18	129.30
24	1H	846	C	O5'-P-OP2	-5.76	100.52	105.70
24	1H	2568	C	C6-N1-C2	5.76	122.60	120.30
1	1G	365	U	O4'-C1'-N1	5.76	112.81	108.20
1	1G	652	U	O4'-C1'-N1	5.76	112.81	108.20
24	14	1275	A	O5'-P-OP1	-5.76	100.52	105.70
24	14	2396	G	N1-C6-O6	5.76	123.36	119.90
24	14	2429	G	N3-C4-C5	-5.76	125.72	128.60
24	14	2685	G	N7-C8-N9	-5.76	110.22	113.10
24	1H	659	C	C4-C5-C6	5.76	120.28	117.40
1	1G	1203	C	C5-C6-N1	-5.76	118.12	121.00
24	14	1203	G	C5-C6-O6	5.76	132.05	128.60
24	1H	621	A	N3-C4-C5	5.75	130.83	126.80
24	1H	1989	G	N1-C2-N3	5.75	127.35	123.90
24	1H	2483	C	N3-C4-C5	-5.75	119.60	121.90
41	D8	18	LEU	CA-CB-CG	5.75	128.53	115.30
1	13	900	A	C4-C5-N7	5.75	113.58	110.70
24	1H	205	G	N3-C2-N2	5.75	123.93	119.90
24	1H	1562	A	N1-C6-N6	5.75	122.05	118.60
24	1H	2716	U	C5-C4-O4	-5.75	122.45	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	16	17	C	N3-C2-O2	-5.75	117.87	121.90
24	14	602	G	C8-N9-C1'	-5.75	119.52	127.00
24	14	1029	A	N9-C4-C5	-5.75	103.50	105.80
24	14	1241	A	C4-C5-N7	5.75	113.58	110.70
24	14	1262	A	O5'-P-OP2	5.75	117.60	110.70
24	1H	974(A)	C	N3-C4-C5	-5.75	119.60	121.90
24	1H	1670	C	N3-C4-N4	5.75	122.03	118.00
1	1G	924	C	OP1-P-OP2	5.75	128.23	119.60
24	14	1379	A	C5-C6-N6	-5.75	119.10	123.70
24	14	2562	U	C5-C6-N1	-5.75	119.82	122.70
1	13	1525	G	N3-C2-N2	-5.75	115.88	119.90
22	2K	34	U	C2'-C3'-O3'	5.75	122.90	113.70
24	14	578	A	C6-N1-C2	-5.75	115.15	118.60
24	1H	963	U	C6-N1-C2	5.75	124.45	121.00
35	78	18	ARG	NE-CZ-NH1	5.75	123.17	120.30
24	14	835	A	O5'-P-OP1	5.75	117.60	110.70
24	14	1789	A	O5'-P-OP2	-5.75	100.53	105.70
24	14	2331	G	C6-N1-C2	-5.75	121.65	125.10
1	13	1446	A	N1-C6-N6	5.75	122.05	118.60
24	1H	687	C	C5-C6-N1	5.75	123.87	121.00
24	1H	2244	U	O5'-P-OP2	5.75	117.60	110.70
1	1G	288	A	N1-C6-N6	5.75	122.05	118.60
24	14	933	A	C6-C5-N7	-5.75	128.28	132.30
24	14	1295	C	OP2-P-O3'	5.75	117.84	105.20
1	13	1472	U	C5-C6-N1	-5.75	119.83	122.70
24	1H	1367	A	C6-N1-C2	-5.75	115.15	118.60
24	1H	1416	G	C4-N9-C1'	-5.75	119.03	126.50
24	14	2042	A	C8-N9-C4	5.75	108.10	105.80
24	14	2712	U	C2-N3-C4	-5.75	123.55	127.00
25	1J	83	G	N1-C6-O6	5.75	123.35	119.90
24	1H	1657	C	C2-N3-C4	-5.74	117.03	119.90
24	14	1192	G	C5-C6-N1	-5.74	108.63	111.50
24	14	1555	G	C5-C6-O6	-5.74	125.15	128.60
1	13	1503	A	N1-C6-N6	5.74	122.05	118.60
24	1H	2595	G	C5-C6-O6	-5.74	125.16	128.60
24	14	442	G	N3-C4-C5	-5.74	125.73	128.60
1	13	1430	C	C5-C6-N1	-5.74	118.13	121.00
23	4K	23	A	N7-C8-N9	5.74	116.67	113.80
24	1H	662	G	C4-C5-N7	-5.74	108.50	110.80
24	1H	764	A	C2-N3-C4	5.74	113.47	110.60
24	1H	1328	G	C4-C5-N7	5.74	113.10	110.80
24	14	236	C	N1-C2-O2	-5.74	115.46	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2234	G	O5'-P-OP1	5.74	117.59	110.70
23	4K	13	A	N3-C4-C5	-5.74	122.78	126.80
24	1H	1299	G	C5-N7-C8	-5.74	101.43	104.30
24	1H	1424	G	C6-C5-N7	-5.74	126.96	130.40
24	1H	1799	G	N1-C6-O6	-5.74	116.46	119.90
24	1H	1985	G	N3-C4-C5	-5.74	125.73	128.60
24	1H	2712	U	P-O3'-C3'	5.74	126.59	119.70
1	1G	1199	U	C5-C4-O4	5.74	129.34	125.90
24	14	398	G	C5-C6-N1	-5.74	108.63	111.50
24	14	1187	G	N3-C4-C5	5.74	131.47	128.60
24	14	1820	U	C2-N3-C4	-5.74	123.56	127.00
24	14	2307	G	C4-C5-N7	5.74	113.09	110.80
24	14	2401	U	N3-C2-O2	5.74	126.22	122.20
24	1H	948	G	N1-C2-N2	5.74	121.36	116.20
24	1H	1362	C	N3-C2-O2	5.74	125.92	121.90
24	1H	1643	G	C5-N7-C8	5.74	107.17	104.30
1	13	652	U	N1-C2-O2	5.74	126.81	122.80
1	13	732	C	C6-N1-C2	-5.74	118.01	120.30
24	1H	2246	G	C5-N7-C8	5.74	107.17	104.30
1	13	922	G	N7-C8-N9	5.73	115.97	113.10
1	1G	758	G	C4-C5-N7	5.73	113.09	110.80
24	14	1385	G	C5-C6-N1	-5.73	108.63	111.50
24	14	2323	G	N3-C4-C5	5.73	131.47	128.60
24	1H	41	C	N1-C2-O2	5.73	122.34	118.90
24	14	1299	G	C4-C5-N7	5.73	113.09	110.80
24	14	2587	A	C5-N7-C8	-5.73	101.03	103.90
24	14	2598	A	C8-N9-C4	5.73	108.09	105.80
24	1H	1816	G	C8-N9-C1'	5.73	134.45	127.00
24	1H	2264	C	OP1-P-O3'	5.73	117.81	105.20
1	1G	1396	A	OP1-P-OP2	5.73	128.19	119.60
24	14	1489	U	C2-N1-C1'	-5.73	110.82	117.70
24	14	1979	C	O5'-P-OP2	-5.73	100.54	105.70
24	14	2512	C	C6-N1-C2	5.73	122.59	120.30
24	14	685	A	O4'-C1'-N9	5.73	112.78	108.20
24	1H	910	A	N9-C4-C5	-5.73	103.51	105.80
24	1H	1610	A	N7-C8-N9	5.73	116.66	113.80
24	1H	1620	G	OP1-P-O3'	5.73	117.80	105.20
24	1H	2581	G	N1-C2-N2	-5.73	111.05	116.20
27	11	28	GLU	C-N-CD	5.73	140.43	128.40
1	1G	1427	U	N3-C2-O2	5.73	126.21	122.20
24	14	572	A	C4-C5-C6	5.73	119.86	117.00
24	14	1332	G	C5-C6-N1	-5.73	108.64	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1616	A	C4-C5-C6	-5.73	114.14	117.00
24	14	2813	A	N7-C8-N9	5.73	116.66	113.80
24	1H	2380	C	C6-N1-C2	5.73	122.59	120.30
1	1G	1432	G	O5'-P-OP1	-5.73	100.55	105.70
24	1H	1377	G	N1-C6-O6	5.72	123.33	119.90
24	1H	1796	U	C5-C6-N1	-5.72	119.84	122.70
24	14	2086	U	N1-C2-O2	5.72	126.81	122.80
24	14	2595	G	N3-C4-C5	5.72	131.46	128.60
24	14	2690	C	N1-C2-O2	-5.72	115.47	118.90
1	13	797	C	N3-C4-N4	5.72	122.01	118.00
24	1H	381	G	OP1-P-O3'	5.72	117.79	105.20
24	1H	1945	G	C5-C6-N1	5.72	114.36	111.50
24	1H	2700	C	N1-C2-O2	-5.72	115.47	118.90
24	1H	2708	G	N1-C2-N3	5.72	127.33	123.90
1	1G	1424	C	N3-C4-N4	5.72	122.00	118.00
24	14	781	A	C2-N3-C4	-5.72	107.74	110.60
24	14	2058	A	C4-C5-N7	5.72	113.56	110.70
1	13	501	C	OP2-P-O3'	5.72	117.79	105.20
24	1H	597	U	C6-N1-C2	5.72	124.43	121.00
24	1H	2053	G	C8-N9-C4	-5.72	104.11	106.40
24	14	2056	G	N3-C2-N2	-5.72	115.89	119.90
1	13	1414	U	C5-C6-N1	-5.72	119.84	122.70
24	1H	2306	C	C6-N1-C2	5.72	122.59	120.30
24	1H	2713	A	O4'-C1'-N9	-5.72	103.62	108.20
1	1G	812	C	OP2-P-O3'	5.72	117.78	105.20
24	14	133	C	C5-C6-N1	-5.72	118.14	121.00
24	14	422	A	N1-C2-N3	5.72	132.16	129.30
24	14	1391	U	N1-C2-O2	5.72	126.80	122.80
24	14	2342	C	C6-N1-C2	-5.72	118.01	120.30
24	1H	188	G	N1-C6-O6	-5.72	116.47	119.90
24	1H	1413	G	N3-C2-N2	-5.72	115.90	119.90
24	14	865	C	C6-N1-C2	5.72	122.59	120.30
24	14	1805	U	C4-C5-C6	5.72	123.13	119.70
24	1H	1622	G	N3-C2-N2	-5.72	115.90	119.90
1	1G	345	C	C6-N1-C1'	-5.72	113.94	120.80
24	14	1692	U	C5-C6-N1	-5.72	119.84	122.70
24	1H	385	C	C2-N3-C4	5.71	122.76	119.90
24	1H	609	A	C4-C5-N7	5.71	113.56	110.70
24	1H	2705	A	N9-C4-C5	-5.71	103.51	105.80
24	14	104	U	N3-C2-O2	5.71	126.20	122.20
24	14	1606	G	C4-C5-N7	5.71	113.08	110.80
1	13	1511	G	C2-N3-C4	-5.71	109.05	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	964	C	N3-C4-N4	5.71	122.00	118.00
24	1H	2569	G	C4-N9-C1'	5.71	133.93	126.50
24	1H	2594	C	C2-N3-C4	-5.71	117.05	119.90
24	14	198	C	C2-N3-C4	-5.71	117.04	119.90
24	14	1321	A	C2-N3-C4	-5.71	107.75	110.60
24	14	1475	G	N7-C8-N9	5.71	115.96	113.10
24	14	2058	A	C5-N7-C8	-5.71	101.05	103.90
24	14	2689	U	P-O3'-C3'	5.71	126.55	119.70
24	1H	1645	G	C5-C6-N1	5.71	114.36	111.50
25	1J	84	C	C5-C6-N1	-5.71	118.14	121.00
1	13	1518	A	C5-C6-N6	5.71	128.27	123.70
24	1H	137(A)	G	N1-C6-O6	5.71	123.33	119.90
24	1H	304	G	OP1-P-O3'	5.71	117.76	105.20
24	1H	797	C	N3-C4-C5	-5.71	119.62	121.90
1	1G	316	G	O5'-P-OP1	5.71	117.55	110.70
1	1G	851	G	N1-C6-O6	5.71	123.33	119.90
22	2L	12	C	N3-C2-O2	-5.71	117.90	121.90
24	14	1131	G	O4'-C1'-N9	5.71	112.77	108.20
24	14	1568	G	C5-C6-O6	-5.71	125.17	128.60
24	1H	1497	U	N3-C2-O2	-5.71	118.20	122.20
24	1H	2374	C	C2-N3-C4	-5.71	117.05	119.90
24	1H	2699	C	N1-C2-O2	-5.71	115.48	118.90
24	14	71	A	C6-C5-N7	-5.71	128.31	132.30
24	14	683	C	N3-C4-C5	5.71	124.18	121.90
24	14	2060	A	C5-C6-N1	5.71	120.55	117.70
24	14	2507	C	C6-N1-C2	5.71	122.58	120.30
1	13	1099	G	C6-C5-N7	5.71	133.82	130.40
24	1H	197	A	C8-N9-C4	-5.71	103.52	105.80
24	1H	222	A	O4'-C1'-N9	-5.71	103.64	108.20
24	1H	1165	U	C5-C4-O4	5.71	129.32	125.90
24	14	1266	G	N3-C2-N2	5.71	123.89	119.90
24	14	2286	A	C5-N7-C8	-5.71	101.05	103.90
24	14	2328	A	N1-C6-N6	5.71	122.02	118.60
24	14	2586	C	OP1-P-OP2	-5.71	111.04	119.60
22	2K	2	G	C4-C5-N7	5.70	113.08	110.80
24	1H	797	C	C5-C6-N1	-5.70	118.15	121.00
24	1H	675	A	C4-C5-N7	5.70	113.55	110.70
24	1H	2726	U	N3-C2-O2	-5.70	118.21	122.20
24	14	554	U	C6-N1-C2	5.70	124.42	121.00
1	13	758	G	C5-C6-O6	-5.70	125.18	128.60
24	1H	180	G	C5-C6-N1	5.70	114.35	111.50
24	1H	1611	C	OP1-P-OP2	-5.70	111.05	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2638	G	N3-C4-N9	5.70	129.42	126.00
24	14	2681	C	C4-C5-C6	5.70	120.25	117.40
24	1H	345	A	C6-N1-C2	-5.70	115.18	118.60
24	1H	613	U	N3-C4-O4	-5.70	115.41	119.40
24	1H	1764	G	C5-C6-O6	5.70	132.02	128.60
24	1H	1940	U	O5'-P-OP2	-5.70	100.57	105.70
24	1H	2407	G	OP2-P-O3'	5.70	117.74	105.20
24	14	389	G	N9-C4-C5	-5.70	103.12	105.40
24	14	2075	U	OP2-P-O3'	5.70	117.74	105.20
24	14	2264	C	OP1-P-O3'	5.70	117.74	105.20
25	1J	81	G	C5-C6-O6	-5.70	125.18	128.60
24	14	1830	C	C2-N3-C4	-5.70	117.05	119.90
1	13	975	A	N7-C8-N9	5.70	116.65	113.80
24	1H	1397	U	C5-C4-O4	5.70	129.32	125.90
1	1G	387	U	OP1-P-O3'	5.70	117.73	105.20
24	14	389	G	C8-N9-C1'	-5.70	119.59	127.00
24	14	1293	C	N3-C2-O2	-5.70	117.91	121.90
24	14	1345	C	OP2-P-O3'	5.70	117.73	105.20
24	14	2073	C	N1-C2-O2	-5.70	115.48	118.90
24	1H	2567	G	O5'-P-OP1	-5.69	100.58	105.70
24	14	2640	G	C5-C6-O6	-5.69	125.18	128.60
25	1J	8	U	C6-N1-C2	5.69	124.42	121.00
24	1H	787	U	O5'-P-OP1	5.69	117.53	110.70
24	1H	2048	G	N3-C2-N2	-5.69	115.92	119.90
24	1H	2420	C	N3-C2-O2	5.69	125.88	121.90
24	1H	2550	G	N3-C2-N2	-5.69	115.92	119.90
24	14	732	C	N1-C2-O2	-5.69	115.48	118.90
24	14	1608	A	C5-C6-N6	5.69	128.25	123.70
24	14	2657	A	C8-N9-C4	-5.69	103.52	105.80
24	1H	248	G	C8-N9-C4	5.69	108.68	106.40
24	1H	1204	A	C3'-C2'-C1'	-5.69	96.95	101.50
24	14	1213	A	N1-C6-N6	5.69	122.01	118.60
24	14	2626	C	C6-N1-C2	5.69	122.58	120.30
24	1H	463	G	C2-N3-C4	-5.69	109.06	111.90
1	13	117	G	N3-C4-C5	5.69	131.44	128.60
24	1H	264	C	N1-C2-O2	5.69	122.31	118.90
24	1H	1444	G	N1-C6-O6	-5.69	116.49	119.90
24	1H	2539	C	C2-N3-C4	-5.69	117.06	119.90
1	1G	963	G	N1-C2-N2	-5.69	111.08	116.20
24	14	1488	G	N7-C8-N9	5.69	115.94	113.10
24	14	2330	G	C2-N3-C4	-5.69	109.06	111.90
24	14	2595	G	C8-N9-C4	5.69	108.67	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	49	A	N1-C2-N3	-5.69	126.46	129.30
24	1H	2497	A	C6-N1-C2	-5.69	115.19	118.60
53	P8	39	ARG	NE-CZ-NH2	-5.69	117.46	120.30
24	14	398	G	N1-C6-O6	5.69	123.31	119.90
24	14	2549	G	C8-N9-C4	5.69	108.67	106.40
1	13	397	A	C8-N9-C4	-5.68	103.53	105.80
1	13	765	G	C8-N9-C1'	-5.68	119.61	127.00
24	1H	213	A	N9-C4-C5	-5.68	103.53	105.80
24	1H	1139	G	N3-C2-N2	5.68	123.88	119.90
1	1G	1267	C	C5-C6-N1	5.68	123.84	121.00
24	14	762	U	C2-N1-C1'	5.68	124.52	117.70
1	13	766	A	N9-C4-C5	-5.68	103.53	105.80
24	1H	433	C	OP2-P-O3'	5.68	117.70	105.20
1	1G	298	A	C8-N9-C4	5.68	108.07	105.80
1	1G	932	C	N1-C2-O2	5.68	122.31	118.90
24	14	2234	G	C4-C5-C6	5.68	122.21	118.80
24	1H	1809	A	C5-C6-N1	5.68	120.54	117.70
24	1H	1957	C	C2-N3-C4	-5.68	117.06	119.90
24	1H	2688	U	C6-N1-C2	-5.68	117.59	121.00
24	14	1613	G	N3-C4-N9	5.68	129.41	126.00
24	14	2050	C	N1-C2-O2	-5.68	115.49	118.90
1	13	1259	C	C6-N1-C2	-5.68	118.03	120.30
24	1H	530	G	C6-C5-N7	-5.68	126.99	130.40
24	1H	801	G	O4'-C1'-N9	-5.68	103.66	108.20
24	1H	1597	A	C5-N7-C8	5.68	106.74	103.90
24	1H	2210	G	C4-C5-N7	5.68	113.07	110.80
24	14	1763	G	C8-N9-C4	5.68	108.67	106.40
24	1H	179	G	C5-C6-O6	-5.68	125.19	128.60
24	14	141	A	O4'-C1'-N9	5.68	112.74	108.20
1	13	169	C	C6-N1-C2	-5.68	118.03	120.30
24	1H	785	G	OP2-P-O3'	5.68	117.69	105.20
24	1H	918	A	C6-N1-C2	5.68	122.01	118.60
24	1H	1562	A	O5'-P-OP1	-5.68	100.59	105.70
24	1H	1598	C	OP1-P-O3'	5.68	117.69	105.20
24	1H	2261	C	OP2-P-O3'	5.68	117.69	105.20
24	1H	456	C	C5-C6-N1	-5.67	118.16	121.00
24	1H	1789	A	C4-C5-C6	-5.67	114.16	117.00
23	4L	18	C	C2-N1-C1'	5.67	125.04	118.80
24	14	1742	C	C5-C6-N1	5.67	123.84	121.00
24	14	2236	C	C5-C6-N1	-5.67	118.16	121.00
1	13	730	G	C5-C6-O6	5.67	132.00	128.60
24	1H	2562	U	C4-C5-C6	5.67	123.10	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	736	C	O5'-P-OP2	5.67	117.51	110.70
24	14	2429	G	N3-C4-N9	5.67	129.40	126.00
1	13	1379	G	C8-N9-C1'	-5.67	119.63	127.00
24	1H	1131	G	OP2-P-O3'	5.67	117.68	105.20
24	1H	2773	C	N1-C2-O2	-5.67	115.50	118.90
24	14	205	G	O5'-P-OP2	-5.67	100.60	105.70
24	14	632	A	C8-N9-C4	-5.67	103.53	105.80
24	14	1350	C	N1-C2-O2	-5.67	115.50	118.90
24	14	1476	C	N3-C4-N4	5.67	121.97	118.00
24	1H	874	G	O5'-P-OP2	-5.67	100.60	105.70
24	1H	2231	C	C6-N1-C2	-5.67	118.03	120.30
24	1H	2251	G	OP1-P-O3'	5.67	117.67	105.20
24	14	1374	G	N7-C8-N9	5.67	115.94	113.10
1	13	42	G	N9-C4-C5	-5.67	103.13	105.40
24	1H	1567	A	OP1-P-O3'	5.67	117.67	105.20
24	14	1981	A	N1-C6-N6	5.67	122.00	118.60
24	1H	236	C	C5-C6-N1	-5.67	118.17	121.00
24	1H	2247	A	N1-C6-N6	-5.67	115.20	118.60
24	1H	2597	G	C2-N3-C4	-5.67	109.07	111.90
24	14	856	C	P-O3'-C3'	5.67	126.50	119.70
24	14	1368	G	C8-N9-C4	5.67	108.67	106.40
24	14	1614	A	C5-N7-C8	-5.67	101.07	103.90
24	14	1698	A	N1-C6-N6	5.67	122.00	118.60
24	14	1813	G	O5'-P-OP1	-5.67	100.60	105.70
24	1H	20	C	C4-C5-C6	5.67	120.23	117.40
24	1H	2004	G	C4-C5-N7	5.67	113.07	110.80
1	13	1512	U	N3-C4-O4	-5.66	115.44	119.40
24	1H	1904	G	O5'-P-OP1	-5.66	100.60	105.70
24	14	2564	A	O5'-P-OP1	-5.66	100.60	105.70
24	1H	859	G	C4-N9-C1'	-5.66	119.14	126.50
24	1H	1381	G	N9-C4-C5	5.66	107.67	105.40
24	1H	1819	A	C2-N3-C4	-5.66	107.77	110.60
24	14	2278	A	N1-C2-N3	5.66	132.13	129.30
36	45	7	MET	CA-CB-CG	5.66	122.92	113.30
1	13	1484	C	N1-C2-O2	-5.66	115.50	118.90
24	1H	1790	C	P-O3'-C3'	5.66	126.49	119.70
24	1H	2320	A	C8-N9-C4	-5.66	103.54	105.80
23	4L	18	C	OP1-P-OP2	-5.66	111.11	119.60
1	13	1113	C	C6-N1-C2	-5.66	118.04	120.30
24	1H	342	G	O5'-P-OP2	-5.66	100.61	105.70
24	1H	1256	G	N3-C2-N2	-5.66	115.94	119.90
24	1H	2689	U	O5'-P-OP1	-5.66	100.61	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2845	G	C5-C6-O6	-5.66	125.20	128.60
1	1G	1086	U	C5-C6-N1	5.66	125.53	122.70
1	1G	1344	C	C5-C6-N1	5.66	123.83	121.00
24	14	1899	G	O5'-P-OP2	-5.66	100.61	105.70
24	14	2519	U	C2-N3-C4	-5.66	123.60	127.00
24	14	1950	G	C6-C5-N7	-5.66	127.01	130.40
1	13	1109	C	N1-C2-O2	-5.66	115.51	118.90
24	1H	691	C	N1-C2-O2	-5.66	115.51	118.90
24	1H	2625	G	N1-C6-O6	5.66	123.29	119.90
24	14	987	G	C8-N9-C1'	5.66	134.35	127.00
1	13	925	G	N3-C2-N2	5.65	123.86	119.90
24	1H	2601	C	OP1-P-OP2	-5.65	111.12	119.60
25	16	17	C	N1-C2-O2	5.65	122.29	118.90
23	4L	12	A	P-O3'-C3'	5.65	126.48	119.70
24	14	186	G	C6-C5-N7	5.65	133.79	130.40
24	14	445	C	C6-N1-C2	5.65	122.56	120.30
24	14	1781	C	O4'-C1'-N1	5.65	112.72	108.20
24	14	2755	C	C6-N1-C1'	-5.65	114.02	120.80
25	1J	115	G	N1-C6-O6	5.65	123.29	119.90
1	13	321	A	C6-N1-C2	-5.65	115.21	118.60
1	13	729	A	N1-C6-N6	5.65	121.99	118.60
24	14	410	G	N1-C6-O6	5.65	123.29	119.90
25	1J	50	G	N3-C4-C5	-5.65	125.77	128.60
24	1H	214	G	O4'-C1'-N9	5.65	112.72	108.20
24	1H	1229(A)	G	N3-C2-N2	-5.65	115.94	119.90
24	1H	2606	C	OP1-P-OP2	5.65	128.07	119.60
24	14	2830	G	N1-C6-O6	5.65	123.29	119.90
24	1H	138	G	N9-C1'-C2'	5.65	121.34	114.00
24	1H	1545(A)	A	O5'-P-OP1	-5.65	100.62	105.70
24	14	517	C	C6-N1-C2	5.65	122.56	120.30
1	13	1192	C	C5-C6-N1	5.65	123.82	121.00
1	13	1512	U	N3-C4-C5	5.65	117.99	114.60
24	1H	2324	C	N3-C4-C5	5.65	124.16	121.90
1	1G	115	G	N1-C6-O6	-5.65	116.51	119.90
1	1G	1279	A	C5-N7-C8	-5.65	101.08	103.90
24	14	1308	A	C6-N1-C2	-5.65	115.21	118.60
24	14	1385	G	O4'-C1'-N9	5.65	112.72	108.20
24	14	1961	C	C2-N1-C1'	-5.65	112.59	118.80
24	14	2741	A	C4-C5-C6	-5.65	114.18	117.00
22	2K	85	A	N1-C6-N6	5.65	121.99	118.60
24	1H	1955	U	C5-C6-N1	-5.65	119.88	122.70
25	1J	101	A	N9-C4-C5	-5.65	103.54	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	621	A	N3-C4-N9	-5.64	122.88	127.40
24	1H	2816	C	N1-C2-O2	-5.64	115.51	118.90
24	14	392	C	N3-C4-C5	5.64	124.16	121.90
24	14	1186	G	N1-C2-N2	-5.64	111.12	116.20
1	13	789	U	C6-N1-C2	-5.64	117.61	121.00
24	1H	961	C	OP1-P-OP2	5.64	128.06	119.60
24	1H	2443	C	O5'-P-OP2	5.64	117.47	110.70
1	1G	287	U	C5-C6-N1	-5.64	119.88	122.70
24	14	330	A	C4-C5-N7	5.64	113.52	110.70
24	14	1663	C	P-O3'-C3'	5.64	126.47	119.70
24	1H	265	A	C8-N9-C4	-5.64	103.54	105.80
24	1H	2457	U	OP2-P-O3'	5.64	117.61	105.20
1	13	690	G	N1-C2-N2	5.64	121.28	116.20
24	1H	520	G	N1-C2-N2	-5.64	111.12	116.20
24	1H	1232	G	O5'-P-OP2	5.64	117.47	110.70
24	1H	1902	C	N1-C2-O2	5.64	122.28	118.90
24	1H	2486	G	C5-C6-N1	5.64	114.32	111.50
24	1H	2639	A	OP1-P-O3'	5.64	117.61	105.20
24	14	799	G	N1-C6-O6	5.64	123.28	119.90
24	1H	674	G	C2-N3-C4	5.64	114.72	111.90
24	1H	1266	G	C4-C5-N7	5.64	113.06	110.80
24	1H	2492	U	C5-C6-N1	5.64	125.52	122.70
1	1G	1417	G	N1-C6-O6	5.64	123.28	119.90
24	14	625	G	N3-C4-N9	-5.64	122.62	126.00
24	14	1805	U	N1-C2-O2	-5.64	118.85	122.80
24	1H	230	U	O5'-P-OP2	-5.64	100.63	105.70
24	1H	1217	C	N3-C2-O2	5.64	125.84	121.90
24	1H	2777	G	C5-C6-O6	-5.64	125.22	128.60
24	1H	196	A	O5'-P-OP1	-5.63	100.63	105.70
24	1H	1368	G	O5'-P-OP1	-5.63	100.63	105.70
24	1H	1495	A	N1-C6-N6	-5.63	115.22	118.60
24	1H	1671	U	N3-C4-O4	5.63	123.34	119.40
24	1H	2287	A	C5-N7-C8	-5.63	101.08	103.90
24	1H	2698	U	C5-C6-N1	-5.63	119.88	122.70
24	14	781	A	C5-C6-N1	5.63	120.52	117.70
24	1H	698	C	C5-C6-N1	-5.63	118.18	121.00
24	1H	1202	C	N3-C2-O2	5.63	125.84	121.90
24	1H	2022	U	C5-C4-O4	-5.63	122.52	125.90
24	1H	2677	G	N3-C2-N2	-5.63	115.96	119.90
1	13	907	A	C5-N7-C8	-5.63	101.08	103.90
24	1H	261	G	N1-C6-O6	5.63	123.28	119.90
24	1H	2067	G	N1-C2-N2	5.63	121.27	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1254	A	C6-N1-C2	-5.63	115.22	118.60
24	1H	1251	C	C6-N1-C1'	-5.63	114.04	120.80
24	1H	1776	G	C6-N1-C2	-5.63	121.72	125.10
24	14	231	C	C5-C6-N1	-5.63	118.19	121.00
24	14	2443	C	C4-C5-C6	5.63	120.22	117.40
44	C5	103	GLY	N-CA-C	5.63	127.17	113.10
1	13	785	G	N3-C2-N2	-5.63	115.96	119.90
24	1H	2642	G	C5-C6-O6	-5.63	125.22	128.60
24	14	2561	A	OP1-P-OP2	5.63	128.04	119.60
1	13	449	C	C6-N1-C2	-5.63	118.05	120.30
24	1H	1321	A	N1-C2-N3	5.63	132.11	129.30
24	1H	1368	G	C4-N9-C1'	5.63	133.81	126.50
24	1H	1600	C	C6-N1-C2	-5.63	118.05	120.30
24	1H	1693	U	N1-C2-O2	5.63	126.74	122.80
24	1H	2538	C	C6-N1-C2	5.63	122.55	120.30
24	1H	2544	G	C5-C6-O6	-5.63	125.22	128.60
24	14	1441	G	N1-C6-O6	5.63	123.28	119.90
24	14	1473	G	C5-C6-N1	-5.63	108.69	111.50
24	1H	1773	A	N1-C6-N6	5.62	121.97	118.60
1	1G	951	G	O5'-P-OP2	5.62	117.45	110.70
24	14	1158	C	O5'-P-OP1	-5.62	100.64	105.70
24	1H	520	G	N1-C2-N3	5.62	127.28	123.90
25	16	115	G	C4-C5-N7	5.62	113.05	110.80
24	14	1555	G	N1-C6-O6	5.62	123.27	119.90
24	14	2509	G	N7-C8-N9	-5.62	110.29	113.10
24	1H	1753	G	C6-C5-N7	-5.62	127.03	130.40
24	1H	2379	G	OP2-P-O3'	5.62	117.57	105.20
22	2L	10	C	N1-C2-O2	5.62	122.27	118.90
1	13	375	U	O5'-P-OP1	-5.62	100.64	105.70
1	13	827	U	C6-N1-C1'	-5.62	113.33	121.20
24	1H	270(M)	U	C2-N1-C1'	5.62	124.44	117.70
24	1H	815	C	C5-C4-N4	-5.62	116.27	120.20
24	1H	1764	G	N3-C4-C5	-5.62	125.79	128.60
24	1H	1777	U	C4-C5-C6	5.62	123.07	119.70
24	1H	2329	G	C4-C5-N7	-5.62	108.55	110.80
24	1H	2674	G	C6-N1-C2	-5.62	121.73	125.10
24	14	1347	G	C4-C5-N7	5.62	113.05	110.80
24	14	2513	G	C6-N1-C2	-5.62	121.73	125.10
40	85	95	LEU	CA-CB-CG	-5.62	102.38	115.30
24	1H	2232	U	C6-N1-C2	-5.62	117.63	121.00
24	14	2433	A	N1-C6-N6	5.62	121.97	118.60
24	1H	611	C	C6-N1-C2	5.62	122.55	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	715	G	N3-C4-N9	5.62	129.37	126.00
24	1H	928	G	N3-C4-N9	-5.62	122.63	126.00
24	1H	1804	C	C6-N1-C2	5.62	122.55	120.30
24	1H	2327	A	C5-C6-N1	5.62	120.51	117.70
24	1H	2729	G	C5-C6-O6	-5.62	125.23	128.60
24	14	117	G	OP1-P-OP2	-5.62	111.18	119.60
24	14	871	U	N3-C4-O4	5.62	123.33	119.40
24	14	979	G	O5'-P-OP1	-5.62	100.65	105.70
1	13	1499	A	N7-C8-N9	-5.61	110.99	113.80
24	1H	62	C	N1-C2-O2	-5.61	115.53	118.90
24	1H	1797	C	N3-C4-C5	5.61	124.14	121.90
24	1H	2705	A	N7-C8-N9	-5.61	110.99	113.80
1	1G	353	A	C4-C5-N7	5.61	113.51	110.70
24	14	69	C	C6-N1-C2	5.61	122.55	120.30
24	14	448	U	C2-N3-C4	-5.61	123.63	127.00
24	14	943	U	O5'-P-OP2	5.61	117.44	110.70
24	14	1444(A)	A	N9-C4-C5	-5.61	103.56	105.80
24	14	798	G	N1-C2-N3	5.61	127.27	123.90
24	1H	2780	G	O4'-C1'-N9	-5.61	103.71	108.20
1	1G	50	A	N7-C8-N9	5.61	116.61	113.80
1	1G	1484	C	OP1-P-OP2	5.61	128.02	119.60
24	14	55	G	C4-C5-N7	5.61	113.04	110.80
24	14	977	G	C5-C6-O6	5.61	131.97	128.60
24	14	1471	A	C8-N9-C4	-5.61	103.56	105.80
24	14	2497	A	C2-N3-C4	-5.61	107.79	110.60
1	13	322	C	C6-N1-C2	5.61	122.54	120.30
1	13	802	A	N1-C6-N6	5.61	121.97	118.60
24	1H	483	A	O5'-P-OP1	-5.61	100.65	105.70
24	1H	1198	U	O5'-P-OP1	-5.61	100.65	105.70
24	14	566	U	C6-N1-C2	5.61	124.36	121.00
24	14	845	G	C5-N7-C8	-5.61	101.50	104.30
24	14	1029	A	N1-C2-N3	-5.61	126.50	129.30
1	13	15	G	C6-C5-N7	-5.61	127.04	130.40
24	1H	326	G	N1-C6-O6	-5.61	116.54	119.90
24	1H	834	C	OP2-P-O3'	5.61	117.53	105.20
24	1H	1471	A	N7-C8-N9	5.61	116.60	113.80
24	1H	2380	C	C4-C5-C6	5.61	120.20	117.40
24	1H	2609	U	O5'-P-OP2	-5.61	100.66	105.70
24	14	379	G	C8-N9-C4	5.61	108.64	106.40
24	14	736	C	N3-C2-O2	5.61	125.82	121.90
24	14	1279	G	N1-C6-O6	-5.61	116.54	119.90
24	14	1378	A	N1-C2-N3	-5.61	126.50	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	652	U	O5'-P-OP1	-5.60	100.66	105.70
1	1G	1410	G	O5'-P-OP1	5.60	117.42	110.70
24	1H	242	G	C5-C6-O6	-5.60	125.24	128.60
24	1H	692	C	N3-C4-N4	-5.60	114.08	118.00
24	1H	853	G	N1-C6-O6	5.60	123.26	119.90
24	1H	1233	C	C6-N1-C2	-5.60	118.06	120.30
24	1H	1261	C	C2-N1-C1'	-5.60	112.64	118.80
1	1G	191(D)	U	C5-C6-N1	5.60	125.50	122.70
1	1G	258	G	N1-C6-O6	5.60	123.26	119.90
1	1G	1428	A	N1-C2-N3	5.60	132.10	129.30
24	14	196	A	OP1-P-OP2	5.60	128.00	119.60
24	14	1262	A	N9-C4-C5	-5.60	103.56	105.80
24	1H	37	C	N3-C4-C5	-5.60	119.66	121.90
24	1H	308	G	C8-N9-C1'	-5.60	119.72	127.00
24	1H	1250	G	C5-N7-C8	5.60	107.10	104.30
1	13	266	G	N7-C8-N9	5.60	115.90	113.10
1	13	748	C	C5-C6-N1	5.60	123.80	121.00
1	13	1189	C	N1-C2-O2	5.60	122.26	118.90
24	1H	1283	G	N3-C4-C5	-5.60	125.80	128.60
24	1H	1681	G	N3-C4-C5	5.60	131.40	128.60
24	1H	2042	A	C2-N3-C4	-5.60	107.80	110.60
24	1H	2324	C	C5-C4-N4	-5.60	116.28	120.20
25	16	68	C	C6-N1-C2	5.60	122.54	120.30
24	14	1595	G	C8-N9-C4	5.60	108.64	106.40
24	14	2544	G	N1-C2-N2	5.60	121.24	116.20
1	13	793	U	N3-C2-O2	-5.60	118.28	122.20
24	1H	671	C	C6-N1-C2	5.60	122.54	120.30
24	1H	683	C	N3-C4-C5	5.60	124.14	121.90
24	1H	2331	G	N3-C4-C5	5.60	131.40	128.60
24	1H	2623	G	C8-N9-C4	-5.60	104.16	106.40
1	1G	483	C	C6-N1-C2	5.60	122.54	120.30
1	1G	895	G	N1-C2-N3	5.60	127.26	123.90
24	14	478	A	C2-N3-C4	-5.60	107.80	110.60
53	L5	47	ARG	NE-CZ-NH1	5.60	123.10	120.30
24	1H	2346	A	C5-N7-C8	-5.60	101.10	103.90
24	14	864	G	N3-C4-C5	-5.60	125.80	128.60
24	14	1820	U	C5-C6-N1	-5.60	119.90	122.70
24	1H	197	A	N9-C4-C5	5.59	108.04	105.80
24	1H	308	G	N3-C4-C5	-5.59	125.80	128.60
24	1H	1882	C	C5-C6-N1	5.59	123.80	121.00
24	1H	2283	C	N3-C2-O2	5.59	125.82	121.90
35	78	37	GLY	N-CA-C	-5.59	99.11	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2393	A	C5-C6-N6	-5.59	119.22	123.70
24	1H	2356	C	N1-C2-O2	5.59	122.26	118.90
1	13	266	G	P-O3'-C3'	5.59	126.41	119.70
24	1H	853	G	O5'-P-OP1	5.59	117.41	110.70
24	1H	1657	C	N1-C2-N3	5.59	123.11	119.20
24	1H	2447	G	C5-C6-N1	-5.59	108.70	111.50
24	14	1022	G	N1-C6-O6	-5.59	116.55	119.90
24	14	1232	G	N9-C4-C5	5.59	107.64	105.40
24	14	2475	C	C6-N1-C2	-5.59	118.06	120.30
24	14	2499	C	C6-N1-C2	-5.59	118.06	120.30
1	13	1366	C	C2-N1-C1'	5.59	124.95	118.80
24	1H	963	U	OP1-P-O3'	5.59	117.50	105.20
24	1H	1397	U	N1-C2-N3	5.59	118.25	114.90
1	1G	517	G	C8-N9-C4	-5.59	104.16	106.40
24	14	1696	G	O5'-P-OP2	-5.59	100.67	105.70
24	14	1831	G	C5-C6-N1	-5.59	108.71	111.50
24	14	1930	G	C8-N9-C4	5.59	108.64	106.40
24	14	1962	C	C6-N1-C2	5.59	122.54	120.30
24	1H	294	A	N1-C2-N3	5.59	132.09	129.30
24	1H	1317	A	O5'-P-OP2	-5.59	100.67	105.70
24	14	257	A	N1-C2-N3	5.59	132.09	129.30
24	14	1475	G	C8-N9-C4	-5.59	104.17	106.40
24	14	2784	C	C6-N1-C2	5.59	122.53	120.30
1	13	1403	C	C5-C4-N4	5.59	124.11	120.20
24	1H	2562	U	C2-N3-C4	-5.59	123.65	127.00
24	1H	2818	G	N3-C4-C5	5.59	131.39	128.60
25	16	53	A	C8-N9-C4	-5.59	103.56	105.80
24	14	2701	C	C5-C6-N1	-5.59	118.21	121.00
24	1H	502	A	N1-C2-N3	5.58	132.09	129.30
24	1H	985	C	N3-C4-N4	-5.58	114.09	118.00
24	1H	2597	G	C4-C5-N7	5.58	113.03	110.80
24	1H	2828	C	C5-C6-N1	-5.58	118.21	121.00
24	14	2555	U	O5'-P-OP1	-5.58	100.67	105.70
1	13	1084	G	N3-C4-C5	-5.58	125.81	128.60
24	1H	190	A	C5-C6-N1	5.58	120.49	117.70
24	1H	934	G	N1-C6-O6	-5.58	116.55	119.90
24	1H	943	U	O5'-P-OP1	-5.58	100.67	105.70
24	1H	2324	C	C6-N1-C2	5.58	122.53	120.30
1	1G	196	A	O5'-P-OP1	-5.58	100.67	105.70
1	1G	498	A	O5'-P-OP2	-5.58	100.67	105.70
24	14	1624	G	C8-N9-C4	5.58	108.63	106.40
24	14	1705	G	C4-C5-N7	5.58	113.03	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	298	G	OP1-P-O3'	5.58	117.48	105.20
24	1H	582	G	C5-N7-C8	-5.58	101.51	104.30
24	1H	941	A	N1-C6-N6	5.58	121.95	118.60
24	1H	1645	G	N3-C2-N2	5.58	123.81	119.90
24	1H	2079	U	OP1-P-O3'	5.58	117.48	105.20
1	1G	817	C	C4-C5-C6	5.58	120.19	117.40
1	1G	971	G	C5-C6-N1	-5.58	108.71	111.50
24	14	2457	U	N1-C2-O2	5.58	126.71	122.80
24	14	2711	A	C8-N9-C4	5.58	108.03	105.80
24	1H	1780	A	C6-N1-C2	-5.58	115.25	118.60
24	14	215	G	N7-C8-N9	-5.58	110.31	113.10
24	14	830	G	N9-C4-C5	-5.58	103.17	105.40
24	14	2270	G	OP2-P-O3'	5.58	117.48	105.20
1	13	922	G	C8-N9-C4	-5.58	104.17	106.40
24	1H	979	G	N7-C8-N9	5.58	115.89	113.10
24	1H	1765	C	N3-C2-O2	-5.58	118.00	121.90
24	1H	2029	G	C5-C6-N1	-5.58	108.71	111.50
24	1H	2337	G	C5-N7-C8	-5.58	101.51	104.30
24	14	930	U	N3-C2-O2	-5.58	118.29	122.20
24	14	954	G	C8-N9-C4	-5.58	104.17	106.40
24	1H	2505	G	O5'-P-OP1	-5.58	100.68	105.70
1	1G	1200	C	N3-C2-O2	-5.58	118.00	121.90
24	14	190	A	N1-C6-N6	-5.58	115.25	118.60
24	14	1022	G	C8-N9-C4	-5.58	104.17	106.40
24	14	2439	A	C5-N7-C8	-5.58	101.11	103.90
24	1H	137	C	C6-N1-C2	5.58	122.53	120.30
24	1H	1977	A	C8-N9-C4	5.58	108.03	105.80
24	1H	2440	C	N1-C2-O2	5.58	122.25	118.90
1	1G	328	C	C6-N1-C2	-5.58	118.07	120.30
24	14	696	G	N1-C6-O6	-5.58	116.56	119.90
1	13	268	C	O5'-P-OP2	5.57	117.39	110.70
1	13	496	A	C8-N9-C4	-5.57	103.57	105.80
1	13	1113	C	C5-C6-N1	5.57	123.79	121.00
24	1H	208	C	N3-C4-C5	5.57	124.13	121.90
24	1H	675	A	C8-N9-C4	5.57	108.03	105.80
24	1H	773	U	N1-C2-N3	5.57	118.24	114.90
24	1H	1665	A	C8-N9-C4	5.57	108.03	105.80
46	I8	39	ARG	NE-CZ-NH1	5.57	123.09	120.30
24	14	189	G	N9-C4-C5	-5.57	103.17	105.40
24	14	844	C	C6-N1-C2	5.57	122.53	120.30
24	14	1903	G	N9-C4-C5	-5.57	103.17	105.40
24	14	2092	U	N1-C2-N3	5.57	118.24	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	843	U	C2-N1-C1'	5.57	124.39	117.70
24	1H	431	U	C2-N3-C4	-5.57	123.66	127.00
24	1H	785	G	N1-C6-O6	-5.57	116.56	119.90
24	1H	2454	G	N1-C2-N3	5.57	127.24	123.90
24	1H	2580	U	OP2-P-O3'	5.57	117.46	105.20
22	2L	12	C	N1-C2-O2	5.57	122.24	118.90
24	14	1143	A	C5-N7-C8	-5.57	101.11	103.90
24	14	2455	G	C5-C6-O6	-5.57	125.26	128.60
24	14	1612	C	C4-C5-C6	5.57	120.18	117.40
1	13	703	G	C5-C6-N1	-5.57	108.72	111.50
24	14	330	A	N3-C4-C5	5.57	130.70	126.80
24	14	1999	C	OP2-P-O3'	5.57	117.45	105.20
1	13	717	C	C5-C6-N1	5.57	123.78	121.00
1	13	907	A	C4-C5-N7	5.57	113.48	110.70
1	13	1099	G	C8-N9-C1'	5.57	134.23	127.00
24	1H	71	A	N3-C4-C5	5.57	130.69	126.80
24	1H	1043	C	C6-N1-C2	-5.57	118.07	120.30
24	1H	1992	G	C4-C5-C6	-5.57	115.46	118.80
24	1H	2079	U	OP1-P-OP2	5.57	127.95	119.60
24	1H	2525	G	C8-N9-C4	5.57	108.63	106.40
24	1H	2612	C	C6-N1-C2	5.57	122.53	120.30
24	14	2380	C	N1-C2-N3	5.57	123.10	119.20
1	13	1365	G	OP1-P-OP2	-5.56	111.25	119.60
25	16	114	G	C4-N9-C1'	-5.56	119.27	126.50
1	13	1355	G	C8-N9-C4	-5.56	104.17	106.40
24	1H	826	U	C4-C5-C6	5.56	123.04	119.70
24	1H	2068	U	N1-C2-O2	5.56	126.69	122.80
24	1H	2622	C	C5-C6-N1	-5.56	118.22	121.00
27	11	147	LEU	CA-CB-CG	5.56	128.09	115.30
1	1G	488	C	N3-C2-O2	5.56	125.79	121.90
1	1G	1066	C	N3-C4-C5	-5.56	119.67	121.90
24	14	322	A	OP2-P-O3'	5.56	117.44	105.20
24	1H	1981	A	O4'-C1'-N9	-5.56	103.75	108.20
24	1H	2847	U	C5-C4-O4	-5.56	122.56	125.90
1	1G	818	G	OP2-P-O3'	5.56	117.43	105.20
24	14	2706	G	C5-C6-N1	5.56	114.28	111.50
24	14	2837	G	C5-C6-O6	5.56	131.94	128.60
1	13	325	A	C2-N3-C4	-5.56	107.82	110.60
24	1H	19	C	C4-C5-C6	5.56	120.18	117.40
24	1H	220	G	N3-C4-C5	5.56	131.38	128.60
24	1H	593	G	N1-C6-O6	5.56	123.24	119.90
24	1H	752	A	OP1-P-O3'	5.56	117.43	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	801	G	C5-C6-O6	-5.56	125.27	128.60
24	1H	979	G	N3-C4-C5	5.56	131.38	128.60
24	1H	1212	G	N3-C2-N2	-5.56	116.01	119.90
24	1H	2227	A	N9-C4-C5	5.56	108.02	105.80
1	1G	530	G	C2-N3-C4	-5.56	109.12	111.90
24	14	934	G	OP1-P-OP2	5.56	127.94	119.60
1	13	1429	C	C6-N1-C2	5.56	122.52	120.30
24	1H	220	G	N3-C2-N2	-5.56	116.01	119.90
24	1H	226	G	O4'-C1'-N9	5.56	112.65	108.20
24	1H	1209	G	O5'-P-OP1	-5.56	100.70	105.70
24	1H	1253	A	C4-C5-C6	-5.56	114.22	117.00
24	1H	1989	G	C5-C6-N1	-5.56	108.72	111.50
24	1H	2765	A	OP1-P-OP2	5.56	127.94	119.60
24	14	196	A	O4'-C1'-N9	5.56	112.65	108.20
24	14	672	C	C6-N1-C2	-5.56	118.08	120.30
24	14	779	U	OP1-P-O3'	5.56	117.43	105.20
24	14	2585	U	N1-C2-O2	5.56	126.69	122.80
22	2K	44	C	P-O3'-C3'	5.55	126.37	119.70
24	1H	461	C	O5'-P-OP1	-5.55	100.70	105.70
24	1H	668	G	O5'-P-OP1	-5.55	100.70	105.70
24	1H	2547	U	C4-C5-C6	5.55	123.03	119.70
24	14	1655	A	C6-N1-C2	-5.55	115.27	118.60
24	14	2522	U	C5-C6-N1	-5.55	119.92	122.70
24	14	2590	A	N1-C2-N3	5.55	132.08	129.30
24	14	2859	G	P-O3'-C3'	5.55	126.36	119.70
53	L5	28	ARG	NE-CZ-NH2	5.55	123.08	120.30
24	1H	740	U	C5-C6-N1	5.55	125.48	122.70
24	1H	2448	A	C4-C5-N7	5.55	113.48	110.70
1	1G	1498	U	C2'-C3'-O3'	5.55	122.58	113.70
1	13	236	G	N1-C6-O6	5.55	123.23	119.90
1	13	1069	C	O5'-P-OP1	-5.55	100.70	105.70
1	13	1229	A	OP1-P-O3'	5.55	117.41	105.20
24	1H	2390	U	OP1-P-OP2	5.55	127.93	119.60
24	14	1971	A	C6-N1-C2	-5.55	115.27	118.60
24	14	2700	C	C2-N3-C4	-5.55	117.12	119.90
54	M5	41	ILE	N-CA-C	-5.55	96.01	111.00
1	13	758	G	C8-N9-C4	5.55	108.62	106.40
24	1H	195	A	P-O3'-C3'	5.55	126.36	119.70
24	1H	1294	U	O5'-P-OP1	-5.55	100.70	105.70
24	1H	1528	A	C5-C6-N1	-5.55	114.92	117.70
1	1G	975	A	O4'-C1'-N9	-5.55	103.76	108.20
24	14	465	G	O5'-P-OP2	5.55	117.36	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	775	G	OP1-P-OP2	5.55	127.92	119.60
24	14	2449	U	C5-C4-O4	-5.55	122.57	125.90
24	1H	680	G	OP1-P-OP2	-5.55	111.28	119.60
24	1H	1250	G	C4-C5-N7	-5.55	108.58	110.80
24	1H	2058	A	N9-C4-C5	5.55	108.02	105.80
24	14	1121	C	C5-C6-N1	-5.55	118.23	121.00
24	14	2874	C	C6-N1-C2	5.55	122.52	120.30
25	1J	107	U	O4'-C1'-N1	5.55	112.64	108.20
24	1H	2409	G	N3-C4-N9	5.54	129.33	126.00
24	1H	1143	A	OP1-P-OP2	5.54	127.92	119.60
24	1H	1784	A	O4'-C1'-N9	-5.54	103.76	108.20
1	1G	741	G	C8-N9-C4	5.54	108.62	106.40
24	14	601	C	C2-N3-C4	-5.54	117.13	119.90
24	14	1604	C	N1-C2-O2	-5.54	115.57	118.90
1	1G	525	C	N3-C4-N4	5.54	121.88	118.00
24	14	1309	G	C6-C5-N7	-5.54	127.08	130.40
24	14	2335	A	O4'-C1'-N9	5.54	112.63	108.20
24	14	2563	U	N3-C4-C5	5.54	117.92	114.60
24	1H	508	G	C4-N9-C1'	5.54	133.70	126.50
24	1H	537	C	C6-N1-C2	-5.54	118.08	120.30
24	1H	932	G	N3-C4-N9	5.54	129.32	126.00
22	2L	79	A	C4-C5-C6	-5.54	114.23	117.00
24	14	1299	G	N1-C6-O6	5.54	123.22	119.90
24	14	1475	G	C4-N9-C1'	5.54	133.70	126.50
24	14	2069	G	C8-N9-C4	5.54	108.62	106.40
1	13	346	G	N3-C4-C5	-5.54	125.83	128.60
1	13	733	A	C8-N9-C4	5.54	108.02	105.80
1	13	1342	C	N1-C2-O2	-5.54	115.58	118.90
24	1H	137(A)	G	C6-N1-C2	-5.54	121.78	125.10
24	1H	1328	G	C6-C5-N7	-5.54	127.08	130.40
24	1H	2517	C	N3-C4-N4	5.54	121.88	118.00
1	1G	690	G	N7-C8-N9	5.54	115.87	113.10
1	1G	906	G	C4-C5-N7	5.54	113.02	110.80
1	1G	1519	A	OP2-P-O3'	5.54	117.38	105.20
24	14	1293	C	N1-C2-O2	5.54	122.22	118.90
24	14	1302	A	N1-C6-N6	-5.54	115.28	118.60
24	14	1838	C	N3-C4-N4	5.54	121.88	118.00
24	14	2439	A	C6-C5-N7	-5.54	128.42	132.30
24	14	2818	G	C5-C6-O6	-5.54	125.28	128.60
1	13	920	U	N3-C4-C5	-5.54	111.28	114.60
24	1H	2454	G	C2-N3-C4	-5.54	109.13	111.90
24	14	740	U	N3-C4-O4	-5.54	115.52	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	41	C	N3-C2-O2	-5.54	118.03	121.90
24	1H	796	C	N3-C4-N4	-5.54	114.12	118.00
24	1H	1359	A	C8-N9-C4	5.54	108.01	105.80
1	1G	1058	G	N1-C6-O6	5.54	123.22	119.90
24	14	671	C	N1-C2-O2	-5.54	115.58	118.90
24	14	1817	G	C5-C6-O6	5.54	131.92	128.60
24	14	2092	U	C5-C4-O4	5.54	129.22	125.90
24	1H	453	C	N1-C2-O2	-5.53	115.58	118.90
24	1H	638	G	O5'-P-OP1	-5.53	100.72	105.70
24	1H	2577	A	O5'-P-OP1	5.53	117.34	110.70
1	1G	396	G	N1-C6-O6	-5.53	116.58	119.90
1	1G	1397	C	O4'-C1'-N1	5.53	112.63	108.20
24	14	189	G	N7-C8-N9	-5.53	110.33	113.10
24	14	1833	U	C4-C5-C6	5.53	123.02	119.70
1	13	690	G	N7-C8-N9	5.53	115.87	113.10
24	1H	775	G	N9-C4-C5	-5.53	103.19	105.40
24	14	1128	A	C5-N7-C8	5.53	106.67	103.90
24	1H	260	G	N9-C4-C5	5.53	107.61	105.40
24	1H	835	A	C4-C5-N7	-5.53	107.94	110.70
24	14	736	C	N1-C2-O2	-5.53	115.58	118.90
24	14	933	A	O4'-C1'-N9	5.53	112.62	108.20
24	14	2337	G	C5-C6-O6	-5.53	125.28	128.60
24	1H	810	U	C5-C6-N1	-5.53	119.94	122.70
24	14	1328	G	N7-C8-N9	5.53	115.86	113.10
24	14	1353	A	N1-C6-N6	-5.53	115.28	118.60
24	1H	1424	G	N1-C2-N3	5.53	127.22	123.90
24	1H	2036	C	C5-C6-N1	5.53	123.76	121.00
24	1H	2394	C	O5'-P-OP2	-5.53	100.72	105.70
1	1G	44	G	N1-C2-N2	-5.53	111.23	116.20
24	14	113	G	N3-C4-C5	5.53	131.36	128.60
24	14	407	G	O5'-P-OP2	-5.53	100.72	105.70
24	1H	681	G	N1-C2-N3	5.53	127.22	123.90
24	1H	1139	G	N1-C2-N2	-5.53	111.23	116.20
24	1H	1528	A	N1-C6-N6	5.53	121.92	118.60
24	1H	2851	A	N7-C8-N9	5.53	116.56	113.80
25	16	60	C	C6-N1-C2	-5.53	118.09	120.30
24	14	585	G	C5-N7-C8	-5.53	101.54	104.30
24	14	701	G	N3-C2-N2	-5.53	116.03	119.90
1	13	770	C	OP2-P-O3'	5.52	117.35	105.20
24	1H	928	G	N3-C4-C5	5.52	131.36	128.60
1	1G	604	G	OP1-P-O3'	5.52	117.35	105.20
1	1G	919	A	N1-C6-N6	-5.52	115.29	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	1414	U	C6-N1-C2	-5.52	117.69	121.00
24	14	2818	G	C8-N9-C4	5.52	108.61	106.40
24	1H	1574	C	C6-N1-C2	5.52	122.51	120.30
1	1G	740	U	O5'-P-OP2	-5.52	100.73	105.70
24	14	255	A	C6-N1-C2	-5.52	115.29	118.60
24	14	811	U	N1-C2-O2	-5.52	118.93	122.80
24	14	1307	A	OP1-P-OP2	5.52	127.88	119.60
24	14	1386	C	C6-N1-C2	-5.52	118.09	120.30
24	14	1692	U	C6-N1-C2	5.52	124.31	121.00
24	14	1913	A	C4-N9-C1'	-5.52	116.36	126.30
24	14	2087	G	N9-C4-C5	-5.52	103.19	105.40
24	1H	465	G	C6-N1-C2	5.52	128.41	125.10
24	1H	1284	A	N1-C6-N6	5.52	121.91	118.60
24	14	1573	G	C5-C6-O6	-5.52	125.29	128.60
24	14	2420	C	C6-N1-C2	5.52	122.51	120.30
25	16	76	G	C4-C5-N7	-5.52	108.59	110.80
42	E8	19	LEU	CB-CG-CD2	-5.52	101.62	111.00
1	13	895	G	C8-N9-C1'	5.52	134.17	127.00
24	1H	101	G	OP1-P-OP2	5.52	127.88	119.60
24	1H	256	A	N9-C4-C5	-5.52	103.59	105.80
24	1H	1201	C	C6-N1-C2	5.52	122.51	120.30
1	1G	826	C	C5-C6-N1	-5.52	118.24	121.00
24	14	1028	A	C8-N9-C4	5.52	108.01	105.80
24	14	1581	G	C5-C6-O6	-5.52	125.29	128.60
24	1H	261	G	C6-C5-N7	-5.52	127.09	130.40
24	1H	793	A	N9-C4-C5	-5.52	103.59	105.80
24	1H	988	A	O5'-P-OP2	5.52	117.32	110.70
24	14	110	G	C6-C5-N7	-5.52	127.09	130.40
24	14	531	C	C6-N1-C2	5.52	122.51	120.30
24	14	1759	A	C2-N3-C4	-5.52	107.84	110.60
24	14	2081	C	O5'-P-OP1	5.52	117.32	110.70
24	1H	1234	U	N3-C4-O4	-5.51	115.54	119.40
24	1H	2205	C	C4-C5-C6	5.51	120.16	117.40
24	1H	2429	G	OP1-P-OP2	-5.51	111.33	119.60
1	1G	731	G	OP1-P-OP2	-5.51	111.33	119.60
1	1G	1502	A	C6-C5-N7	-5.51	128.44	132.30
24	14	584	C	N3-C2-O2	5.51	125.76	121.90
24	14	1499	C	C5-C6-N1	-5.51	118.24	121.00
24	14	1777	U	C4-C5-C6	5.51	123.01	119.70
24	14	2505	G	N1-C6-O6	-5.51	116.59	119.90
24	1H	165	U	C2-N1-C1'	5.51	124.31	117.70
24	1H	540	G	N1-C2-N3	-5.51	120.59	123.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2477	C	C2-N1-C1'	-5.51	112.74	118.80
24	14	828	U	N1-C2-N3	5.51	118.21	114.90
24	14	2488	A	C8-N9-C4	5.51	108.00	105.80
24	1H	1827	C	OP1-P-O3'	5.51	117.33	105.20
24	1H	1839	G	N1-C6-O6	5.51	123.21	119.90
24	1H	1958	C	N3-C4-C5	5.51	124.10	121.90
24	1H	2283	C	N1-C2-O2	-5.51	115.59	118.90
1	1G	912	C	C4-C5-C6	5.51	120.16	117.40
1	1G	1199	U	N3-C4-C5	-5.51	111.29	114.60
24	14	992	C	C5-C6-N1	5.51	123.76	121.00
24	14	1201	C	C5-C6-N1	-5.51	118.25	121.00
24	14	2027	G	N3-C2-N2	-5.51	116.04	119.90
24	14	2260	C	C5-C6-N1	-5.51	118.24	121.00
24	14	2422	A	OP1-P-OP2	5.51	127.87	119.60
24	1H	684	G	N3-C4-C5	-5.51	125.85	128.60
24	1H	1807	G	C4-C5-N7	5.51	113.00	110.80
1	1G	525	C	N3-C2-O2	5.51	125.76	121.90
1	1G	1267	C	N3-C2-O2	-5.51	118.04	121.90
24	14	188	G	N1-C2-N2	-5.51	111.24	116.20
24	14	912	C	O5'-P-OP2	5.51	117.31	110.70
24	14	936	C	C5-C6-N1	-5.51	118.25	121.00
24	14	2602	A	N1-C6-N6	5.51	121.91	118.60
24	1H	932	G	C5-C6-O6	-5.51	125.30	128.60
24	14	728	G	C5-C6-O6	-5.51	125.30	128.60
24	14	1197	G	C5-C6-N1	-5.51	108.75	111.50
24	14	2356	C	OP2-P-O3'	5.51	117.32	105.20
24	1H	1305	C	C6-N1-C2	5.51	122.50	120.30
24	1H	1528	A	C2-N3-C4	-5.51	107.85	110.60
1	1G	21	G	O5'-P-OP1	5.51	117.31	110.70
24	14	141	A	N9-C4-C5	-5.51	103.60	105.80
24	14	956	G	N1-C6-O6	5.51	123.20	119.90
24	14	1366	A	N9-C4-C5	-5.51	103.60	105.80
24	1H	2037	G	O5'-P-OP2	-5.50	100.75	105.70
24	1H	2179	C	C6-N1-C2	-5.50	118.10	120.30
24	1H	518	G	OP1-P-OP2	5.50	127.86	119.60
24	1H	2761	G	N1-C2-N3	5.50	127.20	123.90
24	14	805	G	C4-C5-C6	5.50	122.10	118.80
24	14	1882	C	C2-N1-C1'	5.50	124.85	118.80
24	14	486	C	O5'-P-OP1	-5.50	100.75	105.70
24	14	888	C	OP2-P-O3'	5.50	117.31	105.20
24	14	1301	A	OP1-P-OP2	5.50	127.85	119.60
24	14	2591	C	N1-C2-O2	-5.50	115.60	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	982	C	OP2-P-O3'	-5.50	93.10	105.20
22	2L	34	U	C5-C4-O4	5.50	129.20	125.90
24	14	1770	G	C5-C6-O6	-5.50	125.30	128.60
1	13	622	A	N9-C4-C5	5.50	108.00	105.80
1	13	727	G	C8-N9-C4	5.50	108.60	106.40
24	1H	740	U	OP2-P-O3'	5.50	117.30	105.20
24	1H	1283	G	C4-N9-C1'	5.50	133.65	126.50
24	1H	1688	U	OP2-P-O3'	5.50	117.30	105.20
24	14	583	G	C4-C5-N7	5.50	113.00	110.80
24	14	1902	C	C5-C4-N4	-5.50	116.35	120.20
24	14	2044	C	C4-C5-C6	5.50	120.15	117.40
1	13	690	G	O4'-C1'-N9	5.50	112.60	108.20
24	1H	185	U	OP2-P-O3'	5.50	117.29	105.20
24	1H	769	G	C8-N9-C4	5.50	108.60	106.40
24	1H	1024	G	O5'-P-OP1	-5.50	100.75	105.70
24	1H	1233	C	N1-C2-O2	-5.50	115.60	118.90
24	1H	1293	C	O5'-P-OP1	5.50	117.30	110.70
24	1H	1559	G	C5-C6-O6	-5.50	125.30	128.60
1	1G	690	G	N1-C6-O6	5.50	123.20	119.90
24	14	1282	U	C5-C6-N1	-5.50	119.95	122.70
24	1H	138	G	OP1-P-O3'	5.50	117.29	105.20
24	1H	2040	C	O5'-P-OP1	-5.50	100.75	105.70
25	16	60	C	C2-N3-C4	5.50	122.65	119.90
1	1G	1511	G	OP2-P-O3'	5.50	117.29	105.20
24	1H	569	U	C2-N3-C4	-5.49	123.70	127.00
24	1H	924	C	C6-N1-C2	5.49	122.50	120.30
24	1H	2251	G	N1-C2-N3	5.49	127.20	123.90
24	14	924	C	O5'-P-OP2	-5.49	100.76	105.70
24	14	1607	C	C6-N1-C2	5.49	122.50	120.30
24	14	2358	G	N1-C2-N2	5.49	121.14	116.20
24	14	2441	C	N3-C4-C5	5.49	124.10	121.90
24	1H	763	G	N1-C2-N3	5.49	127.19	123.90
24	1H	1602	U	N3-C4-C5	-5.49	111.31	114.60
24	1H	1664	A	O4'-C1'-N9	-5.49	103.81	108.20
1	1G	1153	C	C6-N1-C2	-5.49	118.10	120.30
24	14	2689	U	C6-N1-C1'	5.49	128.89	121.20
1	13	1530	G	C4-N9-C1'	-5.49	119.36	126.50
24	1H	517	C	N3-C4-N4	5.49	121.84	118.00
24	1H	739	G	C5-C6-O6	-5.49	125.31	128.60
24	1H	1347	G	N9-C1'-C2'	-5.49	105.96	112.00
24	1H	2385	C	C2-N3-C4	-5.49	117.16	119.90
24	1H	2438	U	C2-N3-C4	-5.49	123.71	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	1511	G	N3-C4-N9	5.49	129.29	126.00
24	14	192	C	N3-C2-O2	5.49	125.74	121.90
24	14	270(T)	G	N1-C6-O6	5.49	123.19	119.90
24	14	2025	C	N3-C2-O2	5.49	125.74	121.90
24	14	2644	G	C8-N9-C1'	5.49	134.14	127.00
24	1H	865	C	O5'-P-OP2	5.49	117.29	110.70
24	1H	1609	A	C6-N1-C2	-5.49	115.31	118.60
24	1H	2058	A	N1-C2-N3	-5.49	126.56	129.30
28	21	61	ARG	C-N-CD	5.49	139.93	128.40
24	14	739	G	C5-C6-O6	-5.49	125.31	128.60
24	14	2331	G	C5-C6-O6	-5.49	125.31	128.60
24	14	2680	C	O5'-P-OP1	5.49	117.28	110.70
22	3K	55	U	C2-N1-C1'	5.49	124.28	117.70
24	1H	1250	G	N3-C4-C5	-5.49	125.86	128.60
24	1H	1272	A	C8-N9-C4	-5.49	103.61	105.80
24	14	841	A	N1-C2-N3	5.49	132.04	129.30
24	14	955	C	O5'-P-OP2	-5.49	100.76	105.70
24	1H	731	C	OP1-P-O3'	5.49	117.27	105.20
24	1H	2731	G	N9-C4-C5	-5.49	103.21	105.40
24	14	145	G	C8-N9-C4	5.49	108.59	106.40
24	14	253	C	N3-C2-O2	5.49	125.74	121.90
24	14	1646	C	O4'-C1'-N1	5.49	112.59	108.20
24	1H	144	C	C2-N3-C4	-5.48	117.16	119.90
24	1H	1298	C	N1-C2-O2	5.48	122.19	118.90
1	13	513	C	C5-C6-N1	5.48	123.74	121.00
24	1H	478	A	O5'-P-OP1	-5.48	100.77	105.70
24	1H	658	C	C4-C5-C6	5.48	120.14	117.40
24	1H	661	C	N1-C2-O2	-5.48	115.61	118.90
24	1H	1761	C	OP2-P-O3'	5.48	117.26	105.20
24	1H	1769	G	N3-C4-N9	5.48	129.29	126.00
24	1H	2581	G	OP2-P-O3'	-5.48	93.14	105.20
1	1G	900	A	O5'-P-OP2	5.48	117.28	110.70
24	14	2394	C	C5-C4-N4	5.48	124.04	120.20
25	1J	11	C	N3-C2-O2	-5.48	118.06	121.90
24	1H	593	G	O5'-P-OP2	-5.48	100.77	105.70
24	1H	1278	A	N1-C2-N3	5.48	132.04	129.30
24	1H	2590	A	OP1-P-O3'	5.48	117.26	105.20
24	14	679	C	C6-N1-C2	5.48	122.49	120.30
24	14	984	A	O5'-P-OP2	-5.48	100.77	105.70
24	14	1766	U	N1-C2-N3	5.48	118.19	114.90
24	14	11	G	N3-C4-C5	-5.48	125.86	128.60
24	1H	764	A	OP2-P-O3'	5.48	117.25	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1787	A	O4'-C1'-N9	-5.48	103.82	108.20
24	1H	2217	G	C8-N9-C4	-5.48	104.21	106.40
1	1G	332	G	OP1-P-OP2	5.48	127.82	119.60
1	1G	366	C	O5'-P-OP2	-5.48	100.77	105.70
1	1G	530	G	N3-C4-N9	-5.48	122.71	126.00
24	14	1969	A	C5-C6-N6	-5.48	119.32	123.70
24	14	2070	G	C5-C6-O6	-5.48	125.31	128.60
24	1H	929	G	C5-C6-N1	-5.48	108.76	111.50
25	16	39	A	C8-N9-C4	-5.48	103.61	105.80
24	14	202	U	O5'-P-OP1	-5.48	100.77	105.70
24	14	1381	G	C6-N1-C2	-5.48	121.81	125.10
1	13	691	G	N9-C4-C5	-5.47	103.21	105.40
24	1H	1245	G	OP1-P-OP2	5.47	127.81	119.60
24	1H	1665	A	N7-C8-N9	-5.47	111.06	113.80
24	1H	1795	C	C6-N1-C2	5.47	122.49	120.30
1	1G	1108	G	C5-C6-O6	5.47	131.88	128.60
24	14	2500	U	N3-C4-C5	5.47	117.89	114.60
24	14	2880	C	C6-N1-C2	-5.47	118.11	120.30
1	13	860	A	N1-C6-N6	5.47	121.88	118.60
24	1H	431	U	N3-C4-C5	5.47	117.88	114.60
24	1H	1021	A	C6-N1-C2	5.47	121.88	118.60
24	1H	1305	C	N3-C4-C5	5.47	124.09	121.90
24	1H	2032	G	N9-C4-C5	-5.47	103.21	105.40
24	1H	2390	U	O5'-P-OP1	-5.47	100.77	105.70
24	1H	2512	C	N1-C2-O2	-5.47	115.62	118.90
24	1H	2573	C	C6-N1-C2	-5.47	118.11	120.30
24	14	833	U	N1-C2-O2	-5.47	118.97	122.80
24	1H	189	G	N3-C4-C5	5.47	131.34	128.60
24	1H	217	G	N3-C4-N9	-5.47	122.72	126.00
24	1H	528	A	C6-N1-C2	5.47	121.88	118.60
24	1H	1565	C	C5-C4-N4	-5.47	116.37	120.20
24	1H	1605	C	C2-N3-C4	-5.47	117.17	119.90
24	1H	2566	A	OP2-P-O3'	5.47	117.23	105.20
1	1G	274	A	O4'-C1'-N9	5.47	112.58	108.20
1	1G	612	C	C5-C6-N1	-5.47	118.27	121.00
1	1G	1417	G	C5-C6-N1	-5.47	108.77	111.50
24	14	1815	A	C6-N1-C2	-5.47	115.32	118.60
24	1H	614	U	C2-N1-C1'	5.47	124.26	117.70
24	1H	740	U	N3-C2-O2	-5.47	118.37	122.20
24	1H	1967	C	N3-C2-O2	-5.47	118.07	121.90
1	1G	251	G	N1-C6-O6	5.47	123.18	119.90
1	1G	1189	C	N1-C2-O2	5.47	122.18	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	202	U	N3-C4-C5	5.47	117.88	114.60
24	1H	2819	G	C8-N9-C4	5.47	108.59	106.40
24	1H	2822	G	C8-N9-C1'	-5.47	119.89	127.00
24	14	439	G	C8-N9-C4	-5.47	104.21	106.40
24	14	609	A	C5-N7-C8	-5.47	101.17	103.90
24	14	817	C	C2-N3-C4	5.47	122.63	119.90
28	29	50	GLY	N-CA-C	5.47	126.76	113.10
1	13	1523	G	C6-N1-C2	-5.46	121.82	125.10
24	1H	621	A	C4-C5-C6	5.46	119.73	117.00
24	14	251	A	OP1-P-O3'	5.46	117.22	105.20
24	14	2026	C	O5'-P-OP1	5.46	117.26	110.70
24	14	2396	G	C8-N9-C4	5.46	108.59	106.40
1	13	1075	C	C2-N1-C1'	-5.46	112.79	118.80
24	1H	1611	C	O5'-P-OP1	5.46	117.25	110.70
24	1H	1917	U	C6-N1-C2	-5.46	117.72	121.00
24	1H	1964	G	N1-C2-N2	-5.46	111.28	116.20
24	1H	2069	G	C8-N9-C4	5.46	108.58	106.40
24	14	520	G	O5'-P-OP1	5.46	117.25	110.70
24	1H	2540	C	C5-C6-N1	-5.46	118.27	121.00
25	16	7	G	C4-N9-C1'	5.46	133.60	126.50
1	1G	1406	U	C2-N3-C4	-5.46	123.72	127.00
24	14	557	U	N3-C4-C5	5.46	117.88	114.60
24	14	1285	G	C5-C6-O6	-5.46	125.32	128.60
24	14	2563	U	C2-N3-C4	-5.46	123.72	127.00
24	1H	242	G	N9-C4-C5	-5.46	103.22	105.40
24	1H	305	U	C5-C6-N1	5.46	125.43	122.70
1	13	865	A	N1-C6-N6	5.46	121.88	118.60
1	13	1189	C	C6-N1-C2	5.46	122.48	120.30
24	1H	815	C	N3-C4-C5	5.46	124.08	121.90
24	1H	1566	A	C4-C5-N7	5.46	113.43	110.70
24	1H	1674	G	N3-C4-N9	5.46	129.28	126.00
24	14	726	G	N3-C4-C5	-5.46	125.87	128.60
24	14	2046	G	C4-N9-C1'	5.46	133.60	126.50
24	14	2057	A	O5'-P-OP2	-5.46	100.79	105.70
1	13	1259	C	C5-C6-N1	5.46	123.73	121.00
24	1H	2454	G	C5-C6-O6	5.46	131.87	128.60
24	14	1489	U	C5-C4-O4	5.46	129.17	125.90
24	14	1780	A	N1-C2-N3	5.46	132.03	129.30
24	14	2609	U	N1-C2-N3	5.46	118.17	114.90
24	1H	448	U	O5'-P-OP2	-5.46	100.79	105.70
24	1H	713	G	C6-C5-N7	-5.46	127.13	130.40
24	1H	1416	G	O4'-C1'-N9	5.46	112.56	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1698	A	N3-C4-C5	5.46	130.62	126.80
1	13	1126	U	P-O3'-C3'	5.45	126.25	119.70
24	1H	701	G	N3-C2-N2	-5.45	116.08	119.90
24	1H	1218	C	OP1-P-OP2	5.45	127.78	119.60
24	1H	1312	U	P-O3'-C3'	5.45	126.24	119.70
24	14	1571	A	C8-N9-C4	5.45	107.98	105.80
24	14	1646	C	OP1-P-O3'	5.45	117.20	105.20
24	1H	994	C	C6-N1-C2	-5.45	118.12	120.30
24	14	2331	G	C5-C6-N1	5.45	114.23	111.50
24	14	2437	U	OP1-P-OP2	5.45	127.78	119.60
1	13	702	A	N9-C4-C5	5.45	107.98	105.80
24	1H	2595	G	N9-C4-C5	-5.45	103.22	105.40
24	14	678	C	N1-C2-O2	-5.45	115.63	118.90
24	14	2226	C	N3-C4-C5	5.45	124.08	121.90
24	14	2644	G	C4-N9-C1'	-5.45	119.42	126.50
24	1H	593	G	C2-N3-C4	-5.45	109.18	111.90
24	1H	851	U	N3-C2-O2	5.45	126.01	122.20
24	1H	2446	G	C5-N7-C8	-5.45	101.58	104.30
24	1H	2688	U	C5-C6-N1	-5.45	119.98	122.70
24	14	2491	U	C6-N1-C2	5.45	124.27	121.00
24	14	1924	C	N1-C2-O2	-5.45	115.63	118.90
24	1H	2256	G	OP2-P-O3'	5.45	117.18	105.20
24	14	75	G	N1-C6-O6	5.45	123.17	119.90
24	14	113	G	C8-N9-C4	5.45	108.58	106.40
24	14	794	G	C4-C5-N7	-5.45	108.62	110.80
24	14	1579	A	C6-C5-N7	-5.45	128.49	132.30
24	1H	1816	G	C4-N9-C1'	-5.44	119.42	126.50
24	14	930	U	C2-N1-C1'	5.44	124.23	117.70
24	14	1697	G	N1-C6-O6	5.44	123.17	119.90
24	1H	35	G	C5-C6-O6	5.44	131.87	128.60
24	1H	949	C	C4-C5-C6	5.44	120.12	117.40
24	1H	1214	A	C5-C6-N1	-5.44	114.98	117.70
1	1G	254	G	O5'-P-OP1	-5.44	100.80	105.70
1	1G	1498	U	C2-N1-C1'	5.44	124.23	117.70
24	14	503	A	N1-C2-N3	5.44	132.02	129.30
24	14	1965	C	N3-C2-O2	5.44	125.71	121.90
24	14	2413	G	C8-N9-C4	5.44	108.58	106.40
24	1H	1178	C	N3-C2-O2	-5.44	118.09	121.90
24	1H	1217	C	C5-C4-N4	-5.44	116.39	120.20
24	14	2612	C	C5-C6-N1	5.44	123.72	121.00
24	1H	2076	U	N3-C2-O2	-5.44	118.39	122.20
1	1G	345	C	N3-C2-O2	-5.44	118.09	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2380	C	N1-C2-O2	-5.44	115.64	118.90
24	1H	55	G	C5-C6-N1	5.44	114.22	111.50
24	1H	456	C	C6-N1-C2	5.44	122.47	120.30
24	1H	512	G	C4-C5-C6	-5.44	115.54	118.80
24	1H	524	U	N1-C2-N3	5.44	118.16	114.90
24	1H	2028	U	N3-C4-C5	-5.44	111.34	114.60
24	1H	2455	G	C8-N9-C4	5.44	108.58	106.40
24	14	51	G	C2-N3-C4	5.44	114.62	111.90
24	14	1797	C	C6-N1-C2	5.44	122.47	120.30
24	14	1840	G	N1-C6-O6	5.44	123.16	119.90
24	14	1912	A	P-O3'-C3'	5.44	126.22	119.70
24	14	2446	G	OP2-P-O3'	5.44	117.16	105.20
24	1H	198	C	N3-C4-C5	5.44	124.08	121.90
24	14	13	A	C8-N9-C4	-5.44	103.62	105.80
24	14	1405	U	O5'-P-OP2	-5.44	100.81	105.70
24	1H	1985	G	C6-N1-C2	-5.43	121.84	125.10
24	1H	2237	G	N7-C8-N9	-5.43	110.38	113.10
1	1G	251	G	C5-C6-O6	-5.43	125.34	128.60
1	1G	557	G	O5'-P-OP2	-5.43	100.81	105.70
24	14	2620	C	N3-C4-N4	5.43	121.80	118.00
1	13	975	A	C8-N9-C4	-5.43	103.63	105.80
1	13	1496	C	O5'-P-OP2	-5.43	100.81	105.70
24	1H	138	G	C2-N3-C4	5.43	114.62	111.90
24	1H	773	U	N1-C2-O2	-5.43	119.00	122.80
24	1H	1389	G	OP1-P-O3'	5.43	117.15	105.20
24	1H	2509	G	C8-N9-C1'	-5.43	119.94	127.00
24	1H	2583	G	N3-C2-N2	-5.43	116.10	119.90
24	14	1643	G	O5'-P-OP1	-5.43	100.81	105.70
24	14	1897	G	C8-N9-C4	5.43	108.57	106.40
24	14	2063	C	OP2-P-O3'	5.43	117.15	105.20
24	14	2703	C	C5-C4-N4	5.43	124.00	120.20
25	1J	79	C	O5'-P-OP2	-5.43	100.81	105.70
1	13	296	U	N3-C2-O2	-5.43	118.40	122.20
24	1H	1632	A	C4-C5-N7	5.43	113.42	110.70
29	31	77	ASP	CB-CG-OD1	-5.43	113.41	118.30
24	14	1853	A	O5'-P-OP1	-5.43	100.81	105.70
24	1H	205	G	N3-C4-N9	5.43	129.26	126.00
24	1H	259	G	C4-C5-N7	5.43	112.97	110.80
24	1H	263	C	N1-C2-O2	5.43	122.16	118.90
24	1H	814	C	C5-C6-N1	-5.43	118.28	121.00
24	1H	2357	U	N1-C2-O2	5.43	126.60	122.80
24	14	741	G	N1-C6-O6	-5.43	116.64	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1601	G	C5-C6-N1	5.43	114.21	111.50
24	1H	599	G	C4-C5-C6	5.43	122.06	118.80
1	13	777	A	N7-C8-N9	5.43	116.51	113.80
24	1H	1631	A	N1-C6-N6	5.43	121.86	118.60
24	1H	1826	G	OP2-P-O3'	5.43	117.14	105.20
24	1H	2046	G	N1-C6-O6	-5.43	116.64	119.90
24	14	1787	A	C4-C5-N7	5.43	113.41	110.70
24	14	2346	A	C4-C5-C6	5.43	119.71	117.00
24	14	2438	U	O5'-P-OP2	-5.43	100.82	105.70
24	14	2584	U	O5'-P-OP1	5.43	117.21	110.70
24	1H	835	A	C2-N3-C4	5.42	113.31	110.60
24	1H	1018	C	C2-N1-C1'	5.42	124.77	118.80
24	1H	1499	C	C5-C6-N1	-5.42	118.29	121.00
24	1H	1674	G	O4'-C1'-N9	-5.42	103.86	108.20
24	1H	1824	G	C4-C5-N7	-5.42	108.63	110.80
25	16	30	C	C5-C6-N1	5.42	123.71	121.00
35	78	21	ARG	N-CA-C	5.42	125.65	111.00
24	14	379	G	N9-C4-C5	-5.42	103.23	105.40
24	14	778	G	N1-C2-N3	5.42	127.15	123.90
24	14	974	G	C5-C6-O6	-5.42	125.34	128.60
24	14	1143	A	O4'-C1'-N9	5.42	112.54	108.20
24	14	1651	G	C4-C5-N7	5.42	112.97	110.80
24	14	2720	U	C2-N3-C4	5.42	130.25	127.00
1	13	42	G	C5-C6-O6	-5.42	125.35	128.60
22	2K	85	A	C8-N9-C4	5.42	107.97	105.80
1	1G	586	C	OP2-P-O3'	5.42	117.13	105.20
24	14	2000	G	OP2-P-O3'	5.42	117.13	105.20
1	13	1511	G	C5-C6-N1	-5.42	108.79	111.50
24	1H	1216	G	C6-C5-N7	-5.42	127.15	130.40
24	1H	2569	G	N3-C4-N9	5.42	129.25	126.00
25	1J	7	G	N3-C4-C5	5.42	131.31	128.60
24	1H	1660	C	N3-C2-O2	-5.42	118.11	121.90
24	14	615	G	N9-C4-C5	5.42	107.57	105.40
1	13	926	G	C5-C6-O6	5.42	131.85	128.60
24	1H	247	G	C5-C6-N1	5.42	114.21	111.50
24	1H	1982	C	OP1-P-OP2	5.42	127.73	119.60
24	1H	2219	G	C5-C6-O6	-5.42	125.35	128.60
24	1H	2745	C	O5'-P-OP2	5.42	117.20	110.70
1	1G	281	G	C4-N9-C1'	5.42	133.54	126.50
24	14	300	A	N1-C6-N6	5.42	121.85	118.60
24	14	1704	G	N7-C8-N9	-5.42	110.39	113.10
24	1H	1367	A	OP1-P-O3'	5.42	117.12	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	571	A	C5-N7-C8	-5.42	101.19	103.90
24	14	1672	C	C4-C5-C6	5.42	120.11	117.40
24	14	1825	A	N1-C6-N6	-5.42	115.35	118.60
24	1H	212	G	C2-N3-C4	-5.42	109.19	111.90
24	1H	910	A	C5-C6-N6	-5.41	119.37	123.70
24	1H	1621	U	N3-C4-C5	-5.41	111.35	114.60
24	1H	2571	C	C6-N1-C1'	-5.41	114.31	120.80
24	1H	2436	G	N1-C2-N2	5.41	121.07	116.20
24	1H	2782	G	N1-C6-O6	5.41	123.15	119.90
1	13	576	G	C5-C6-N1	-5.41	108.79	111.50
24	1H	1413	G	N1-C6-O6	5.41	123.15	119.90
24	1H	1978	A	N9-C4-C5	5.41	107.96	105.80
24	1H	2240	C	N3-C4-N4	5.41	121.79	118.00
24	1H	2504	U	N1-C2-O2	5.41	126.59	122.80
24	14	489	G	N3-C2-N2	-5.41	116.11	119.90
24	1H	988	A	P-O3'-C3'	5.41	126.19	119.70
24	1H	1646	C	OP1-P-O3'	5.41	117.10	105.20
24	1H	1941	C	N3-C2-O2	5.41	125.69	121.90
24	1H	2869	G	C8-N9-C4	-5.41	104.24	106.40
24	14	945	A	N1-C6-N6	5.41	121.84	118.60
24	14	1299	G	C6-C5-N7	-5.41	127.16	130.40
24	14	1939	U	C5-C6-N1	-5.41	120.00	122.70
22	2L	85	A	C5-C6-N6	-5.41	119.37	123.70
24	14	617	G	N3-C4-N9	5.41	129.24	126.00
24	14	1641	A	C6-N1-C2	-5.41	115.36	118.60
24	14	1651	G	OP1-P-O3'	5.41	117.09	105.20
24	14	1896	G	N1-C6-O6	-5.41	116.66	119.90
1	13	496	A	N9-C4-C5	5.41	107.96	105.80
24	1H	1287	A	N1-C2-N3	5.41	132.00	129.30
24	1H	1752	C	N3-C2-O2	5.41	125.68	121.90
24	14	138	G	N3-C4-C5	-5.41	125.90	128.60
24	14	1616	A	C6-N1-C2	5.41	121.84	118.60
24	14	1972	A	N7-C8-N9	-5.41	111.10	113.80
24	1H	481	G	C8-N9-C4	5.40	108.56	106.40
24	1H	1262	A	OP1-P-O3'	5.40	117.08	105.20
24	14	772	C	N3-C4-N4	5.40	121.78	118.00
24	14	1314	C	N3-C4-C5	5.40	124.06	121.90
22	2K	7	G	C8-N9-C4	-5.40	104.24	106.40
24	1H	143	C	N3-C2-O2	-5.40	118.12	121.90
24	1H	942	G	OP1-P-O3'	5.40	117.08	105.20
24	1H	1528	A	C6-C5-N7	-5.40	128.52	132.30
24	1H	1899	G	OP2-P-O3'	5.40	117.08	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	396	G	N3-C4-C5	-5.40	125.90	128.60
1	1G	1322	C	C5-C6-N1	5.40	123.70	121.00
24	14	796	C	C6-N1-C2	5.40	122.46	120.30
24	14	1185	C	N3-C4-C5	5.40	124.06	121.90
24	14	2346	A	C5-C6-N1	-5.40	115.00	117.70
25	1J	28	C	O4'-C1'-N1	5.40	112.52	108.20
35	35	138	LEU	CA-CB-CG	5.40	127.72	115.30
23	4K	11	U	C5-C6-N1	5.40	125.40	122.70
24	14	729	G	N1-C6-O6	5.40	123.14	119.90
24	1H	1268	A	N1-C2-N3	5.40	132.00	129.30
24	14	270(M)	U	C2-N1-C1'	5.40	124.18	117.70
24	14	1401	G	N3-C4-N9	-5.40	122.76	126.00
24	14	1681	G	C5-C6-N1	-5.40	108.80	111.50
24	14	2333	A	OP1-P-O3'	5.40	117.08	105.20
24	1H	669	G	C8-N9-C4	5.40	108.56	106.40
24	1H	680	G	N3-C2-N2	-5.40	116.12	119.90
1	1G	296	U	C5-C6-N1	-5.40	120.00	122.70
24	14	2392	A	N7-C8-N9	5.40	116.50	113.80
24	14	2553	G	O5'-P-OP2	5.40	117.17	110.70
1	13	244	U	P-O3'-C3'	5.39	126.17	119.70
1	13	612	C	O5'-P-OP2	5.39	117.17	110.70
1	13	1260	C	N1-C2-O2	-5.39	115.66	118.90
24	1H	137(A)	G	O5'-P-OP1	-5.39	100.84	105.70
24	1H	457	A	N1-C2-N3	-5.39	126.60	129.30
37	98	75	LEU	CA-CB-CG	5.39	127.70	115.30
1	1G	963	G	N3-C2-N2	5.39	123.68	119.90
24	14	1192	G	N3-C4-C5	5.39	131.30	128.60
24	14	2011	U	N3-C2-O2	5.39	125.98	122.20
24	1H	587	C	C6-N1-C1'	5.39	127.27	120.80
24	1H	785	G	N9-C4-C5	5.39	107.56	105.40
24	1H	828	U	C2-N3-C4	5.39	130.24	127.00
24	1H	976	C	O5'-P-OP2	-5.39	100.85	105.70
24	1H	1147	C	N3-C4-C5	-5.39	119.74	121.90
24	1H	1323	U	N1-C2-O2	-5.39	119.03	122.80
24	1H	1640	C	N3-C4-N4	-5.39	114.23	118.00
24	14	734	A	N3-C4-N9	-5.39	123.09	127.40
24	14	1666	G	C5-C6-O6	5.39	131.84	128.60
24	14	1930	G	N1-C6-O6	-5.39	116.67	119.90
24	14	2090	G	C5-C6-O6	-5.39	125.36	128.60
24	1H	1291	C	N3-C4-N4	-5.39	114.23	118.00
4	3E	167	GLY	N-CA-C	-5.39	99.63	113.10
24	1H	662	G	N7-C8-N9	-5.39	110.41	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1961	C	N1-C2-O2	-5.39	115.67	118.90
1	1G	1259	C	C5-C6-N1	5.39	123.69	121.00
1	13	895	G	N3-C4-C5	5.39	131.29	128.60
24	1H	1204	A	N7-C8-N9	5.39	116.49	113.80
24	1H	1383	C	N3-C2-O2	5.39	125.67	121.90
1	1G	748	C	C5-C6-N1	5.39	123.69	121.00
1	1G	1519	A	N1-C6-N6	-5.39	115.37	118.60
24	14	737	C	N1-C2-O2	-5.39	115.67	118.90
24	14	2375	G	N7-C8-N9	-5.39	110.41	113.10
24	1H	685	A	N9-C4-C5	5.39	107.95	105.80
24	1H	1233	C	N3-C4-C5	-5.39	119.75	121.90
24	1H	1915	U	C2-N1-C1'	5.39	124.16	117.70
24	1H	453	C	C2-N3-C4	-5.38	117.21	119.90
24	1H	788	A	N3-C4-N9	5.38	131.71	127.40
24	1H	1205	U	N3-C2-O2	-5.38	118.43	122.20
24	1H	2004	G	C5-N7-C8	-5.38	101.61	104.30
24	1H	2324	C	C2-N1-C1'	5.38	124.72	118.80
24	1H	2823	A	N1-C6-N6	-5.38	115.37	118.60
27	11	218	ARG	NE-CZ-NH2	-5.38	117.61	120.30
24	14	603	A	C4-C5-C6	5.38	119.69	117.00
24	14	1433	U	C6-N1-C2	5.38	124.23	121.00
24	14	2243	U	C2-N3-C4	-5.38	123.77	127.00
29	39	42	ALA	N-CA-C	-5.38	96.46	111.00
24	1H	678	C	C5-C6-N1	-5.38	118.31	121.00
27	11	213	ARG	NE-CZ-NH2	5.38	122.99	120.30
44	G8	79	CYS	N-CA-C	5.38	125.53	111.00
1	1G	576	G	N3-C4-N9	5.38	129.23	126.00
24	14	808	G	N7-C8-N9	-5.38	110.41	113.10
25	1J	107	U	C5-C4-O4	5.38	129.13	125.90
1	13	792	A	C8-N9-C4	5.38	107.95	105.80
24	1H	204	A	N1-C6-N6	5.38	121.83	118.60
24	1H	213	A	N3-C4-N9	5.38	131.71	127.40
24	1H	456	C	O5'-P-OP2	-5.38	100.86	105.70
24	1H	763	G	N9-C4-C5	5.38	107.55	105.40
24	1H	828	U	N1-C2-O2	5.38	126.57	122.80
24	1H	1234	U	O5'-P-OP1	-5.38	100.86	105.70
1	1G	916	G	C2-N3-C4	5.38	114.59	111.90
24	14	1433	U	C5-C6-N1	-5.38	120.01	122.70
24	14	1635	G	N1-C6-O6	5.38	123.13	119.90
24	1H	202	U	N1-C2-O2	5.38	126.57	122.80
24	14	805	G	C6-N1-C2	-5.38	121.87	125.10
24	14	2428	G	C2-N3-C4	-5.38	109.21	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2542	A	P-O3'-C3'	5.38	126.16	119.70
1	13	1489	G	N1-C6-O6	5.38	123.13	119.90
24	1H	835	A	OP2-P-O3'	5.38	117.03	105.20
24	1H	1669	A	N7-C8-N9	5.38	116.49	113.80
24	1H	2502	G	C5'-C4'-O4'	5.38	115.55	109.10
1	1G	758	G	C6-C5-N7	-5.38	127.17	130.40
1	1G	810	C	N3-C4-C5	5.38	124.05	121.90
24	14	155	C	N3-C2-O2	-5.38	118.14	121.90
24	14	669	G	N3-C4-C5	-5.38	125.91	128.60
24	14	1771	C	N3-C4-C5	5.38	124.05	121.90
28	29	149	ARG	NE-CZ-NH2	-5.38	117.61	120.30
29	39	68	LYS	C-N-CA	-5.38	108.25	121.70
54	M5	33	ASN	CB-CA-C	-5.38	99.64	110.40
23	4K	13	A	C4-N9-C1'	5.38	135.98	126.30
24	1H	1689	A	C2-N3-C4	-5.38	107.91	110.60
24	1H	1959	G	OP2-P-O3'	5.38	117.03	105.20
24	1H	2463	C	C5-C6-N1	-5.38	118.31	121.00
24	1H	2513	G	C6-C5-N7	-5.38	127.17	130.40
24	14	1637	A	N9-C4-C5	5.38	107.95	105.80
24	1H	1405	U	C5-C6-N1	-5.38	120.01	122.70
25	16	101	A	C8-N9-C4	5.38	107.95	105.80
24	14	1301	A	N7-C8-N9	-5.38	111.11	113.80
24	1H	1237	A	C2-N3-C4	-5.37	107.91	110.60
24	1H	2717	G	OP2-P-O3'	5.37	117.02	105.20
24	1H	2821	A	O4'-C1'-N9	-5.37	103.90	108.20
24	14	213	A	C5-C6-N1	5.37	120.39	117.70
24	14	2280	G	C2-N3-C4	5.37	114.59	111.90
24	1H	1297	C	OP1-P-O3'	5.37	117.02	105.20
25	16	7	G	C4-C5-N7	5.37	112.95	110.80
24	14	1992	G	N7-C8-N9	-5.37	110.42	113.10
24	14	2261	C	OP2-P-O3'	5.37	117.02	105.20
24	14	2448	A	N9-C4-C5	5.37	107.95	105.80
24	1H	930	U	N1-C2-O2	5.37	126.56	122.80
24	1H	1728	G	C4-C5-N7	5.37	112.95	110.80
24	14	2401	U	C6-N1-C1'	5.37	128.72	121.20
1	13	1153	C	C6-N1-C2	5.37	122.45	120.30
24	1H	2415	G	C4-N9-C1'	5.37	133.48	126.50
24	1H	2845	G	C6-C5-N7	-5.37	127.18	130.40
22	3L	74	C	C6-N1-C2	-5.37	118.15	120.30
24	14	1296	G	P-O3'-C3'	5.37	126.14	119.70
24	14	1975	G	C5-C6-O6	-5.37	125.38	128.60
24	14	2427	C	O5'-P-OP2	5.37	117.14	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1J	60	C	C6-N1-C2	-5.37	118.15	120.30
24	1H	543	C	OP1-P-OP2	5.37	127.65	119.60
1	13	1512	U	C5-C6-N1	-5.37	120.02	122.70
24	1H	1161	C	C5-C6-N1	5.37	123.68	121.00
24	1H	1205	U	C5-C6-N1	-5.37	120.02	122.70
53	P8	47	ARG	NE-CZ-NH2	-5.37	117.62	120.30
24	14	751	A	C8-N9-C4	5.37	107.95	105.80
24	14	756	C	C5-C4-N4	-5.37	116.44	120.20
24	14	1289	C	N1-C2-O2	-5.37	115.68	118.90
24	14	1816	G	C8-N9-C1'	5.37	133.97	127.00
24	14	2673	G	C4-N9-C1'	5.37	133.47	126.50
24	1H	146	G	C8-N9-C4	5.36	108.55	106.40
24	1H	1997	G	N1-C6-O6	5.36	123.12	119.90
24	1H	2060	A	N1-C6-N6	-5.36	115.38	118.60
24	1H	2514	U	C5-C6-N1	-5.36	120.02	122.70
22	2L	85	A	N7-C8-N9	5.36	116.48	113.80
24	14	1256	G	C2-N3-C4	5.36	114.58	111.90
24	14	1679	U	OP1-P-O3'	5.36	117.00	105.20
24	14	2025	C	N1-C2-O2	-5.36	115.68	118.90
25	1J	17	C	N1-C2-O2	5.36	122.12	118.90
25	1J	75	G	O5'-P-OP2	-5.36	100.87	105.70
24	1H	1543	A	C2-N3-C4	-5.36	107.92	110.60
1	1G	1067	A	C8-N9-C4	-5.36	103.66	105.80
22	3L	33	C	C6-N1-C2	-5.36	118.16	120.30
24	14	113	G	C8-N9-C1'	5.36	133.97	127.00
24	14	121	G	N3-C2-N2	-5.36	116.15	119.90
24	14	788	A	N1-C6-N6	5.36	121.82	118.60
24	14	1322	A	OP2-P-O3'	5.36	116.99	105.20
47	F5	79	GLY	N-CA-C	5.36	126.50	113.10
24	1H	529	A	C5-C6-N6	-5.36	119.41	123.70
24	1H	1523	U	C6-N1-C2	-5.36	117.78	121.00
24	1H	2578	G	OP2-P-O3'	5.36	116.99	105.20
24	14	1267	U	OP2-P-O3'	5.36	116.99	105.20
1	13	1505	G	C4-C5-N7	-5.36	108.66	110.80
22	2K	54	C	C5-C6-N1	5.36	123.68	121.00
24	1H	1381	G	N3-C2-N2	-5.36	116.15	119.90
24	1H	2763	G	C8-N9-C1'	-5.36	120.04	127.00
24	1H	2845	G	N1-C6-O6	5.36	123.11	119.90
1	1G	1053	G	N3-C4-N9	-5.36	122.79	126.00
24	14	48	G	O5'-P-OP1	-5.36	100.88	105.70
24	14	2579	C	N3-C4-N4	5.36	121.75	118.00
1	13	42	G	C4-C5-N7	5.36	112.94	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	679	C	C2-N3-C4	-5.36	117.22	119.90
24	1H	1207	C	OP1-P-O3'	5.36	116.98	105.20
24	1H	1564	C	N3-C4-N4	-5.36	114.25	118.00
24	1H	1843	C	N1-C2-O2	-5.36	115.69	118.90
24	1H	2027	G	C6-C5-N7	5.36	133.61	130.40
24	1H	2646	C	C4-C5-C6	5.36	120.08	117.40
24	14	450	G	O5'-P-OP1	-5.36	100.88	105.70
24	14	866	A	O4'-C1'-N9	-5.36	103.92	108.20
24	14	1201	C	C6-N1-C2	5.36	122.44	120.30
24	14	2543	G	C2-N3-C4	5.36	114.58	111.90
24	14	2766	G	C4-N9-C1'	5.36	133.46	126.50
24	1H	975	G	N3-C2-N2	-5.35	116.15	119.90
24	1H	1941	C	N1-C2-O2	-5.35	115.69	118.90
24	14	453	C	C5-C4-N4	-5.35	116.45	120.20
24	14	1177	A	C8-N9-C4	-5.35	103.66	105.80
24	14	2244	U	O5'-P-OP2	5.35	117.12	110.70
24	14	2346	A	C4-N9-C1'	5.35	135.94	126.30
24	1H	1990	C	C5-C6-N1	-5.35	118.32	121.00
24	1H	2057	A	N7-C8-N9	-5.35	111.12	113.80
24	1H	2274	A	OP1-P-OP2	-5.35	111.57	119.60
24	1H	2406	U	N1-C2-O2	5.35	126.55	122.80
1	1G	290	C	N1-C2-O2	-5.35	115.69	118.90
1	13	758	G	N9-C4-C5	-5.35	103.26	105.40
1	13	781	A	C5-C6-N6	-5.35	119.42	123.70
24	1H	1310	G	C5-C6-O6	-5.35	125.39	128.60
1	13	1099	G	C4-N9-C1'	-5.35	119.55	126.50
24	1H	691	C	N3-C2-O2	5.35	125.64	121.90
24	1H	988	A	N1-C2-N3	5.35	131.97	129.30
24	1H	1796	U	O5'-P-OP1	-5.35	100.89	105.70
24	1H	1950	G	C5-C6-O6	5.35	131.81	128.60
24	1H	2025	C	C2-N1-C1'	5.35	124.68	118.80
24	1H	2596	U	OP1-P-OP2	5.35	127.62	119.60
24	14	811	U	N1-C2-N3	5.35	118.11	114.90
24	14	1785	A	C4-C5-C6	5.35	119.67	117.00
25	1J	7	G	C8-N9-C4	5.35	108.54	106.40
24	1H	129	C	C2-N3-C4	-5.35	117.23	119.90
24	1H	1016	G	N1-C6-O6	5.35	123.11	119.90
24	1H	1060	U	P-O3'-C3'	5.35	126.12	119.70
24	1H	2401	U	C5-C6-N1	5.35	125.37	122.70
24	1H	2661	G	C8-N9-C1'	-5.35	120.05	127.00
24	14	848	G	N3-C4-N9	5.35	129.21	126.00
24	14	2607	G	C6-C5-N7	-5.35	127.19	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	1178	G	N3-C2-N2	-5.35	116.16	119.90
24	1H	109	G	C4-C5-N7	-5.35	108.66	110.80
24	1H	979	G	C5-C6-N1	-5.35	108.83	111.50
24	14	2267	A	OP1-P-OP2	5.35	127.62	119.60
24	14	2339	G	C8-N9-C1'	-5.35	120.05	127.00
25	1J	104	A	C8-N9-C4	5.35	107.94	105.80
1	13	115	G	C5-C6-O6	-5.34	125.39	128.60
1	13	305	G	C4-C5-N7	-5.34	108.66	110.80
1	13	534	U	N1-C2-O2	5.34	126.54	122.80
24	1H	125	G	C4-C5-N7	5.34	112.94	110.80
24	1H	508	G	N9-C4-C5	-5.34	103.26	105.40
24	1H	2493	U	O5'-P-OP2	-5.34	100.89	105.70
24	14	205	G	N3-C4-N9	5.34	129.21	126.00
24	14	398	G	C2-N3-C4	-5.34	109.23	111.90
24	14	2294	C	OP1-P-OP2	-5.34	111.58	119.60
1	13	1431	C	C5-C4-N4	-5.34	116.46	120.20
1	1G	758	G	C5-C6-O6	-5.34	125.39	128.60
24	14	2051	A	C2-N3-C4	-5.34	107.93	110.60
24	1H	341	G	N3-C4-N9	-5.34	122.80	126.00
24	1H	947	G	N1-C2-N2	5.34	121.01	116.20
24	1H	1574	C	C5-C6-N1	-5.34	118.33	121.00
24	1H	2329	G	C4-N9-C1'	-5.34	119.56	126.50
24	1H	2360	A	C5-C6-N1	-5.34	115.03	117.70
1	1G	309	G	C4-C5-N7	5.34	112.94	110.80
1	1G	431	A	O5'-P-OP2	5.34	117.11	110.70
24	14	185	U	C2-N3-C4	-5.34	123.80	127.00
24	14	255	A	C5-C6-N6	-5.34	119.43	123.70
24	14	1768	U	C2-N1-C1'	-5.34	111.29	117.70
24	14	2241	A	N1-C2-N3	5.34	131.97	129.30
24	1H	70	G	N9-C4-C5	-5.34	103.26	105.40
24	1H	453	C	N3-C4-N4	5.34	121.74	118.00
24	1H	909	A	O5'-P-OP2	-5.34	100.89	105.70
24	1H	1559	G	C2-N3-C4	-5.34	109.23	111.90
24	1H	1860	G	N3-C4-N9	-5.34	122.80	126.00
24	1H	1949	G	N3-C2-N2	-5.34	116.16	119.90
24	1H	2266	A	N1-C6-N6	5.34	121.80	118.60
24	14	452	G	C5-C6-N1	5.34	114.17	111.50
24	14	596	G	N1-C6-O6	-5.34	116.70	119.90
24	14	1136	G	C5-C6-O6	-5.34	125.40	128.60
24	1H	647	G	N3-C4-N9	5.34	129.20	126.00
24	14	556	G	C8-N9-C1'	-5.34	120.06	127.00
24	14	1350	C	N3-C4-C5	5.34	124.03	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	48	C	N1-C2-O2	5.34	122.10	118.90
24	1H	192	C	O5'-P-OP2	-5.34	100.90	105.70
24	1H	974(A)	C	C6-N1-C2	-5.34	118.17	120.30
1	1G	1441	G	N1-C6-O6	5.34	123.10	119.90
24	14	2324	C	N3-C2-O2	5.34	125.64	121.90
24	14	2388	A	O5'-P-OP1	5.34	117.11	110.70
24	14	2514	U	C6-N1-C2	5.34	124.20	121.00
25	1J	113	C	C6-N1-C2	5.34	122.44	120.30
1	13	428	G	O5'-P-OP2	-5.33	100.90	105.70
1	13	733	A	C5-C6-N6	-5.33	119.43	123.70
24	1H	557	U	N1-C2-N3	5.33	118.10	114.90
24	1H	2032	G	C8-N9-C1'	-5.33	120.06	127.00
1	13	576	G	N3-C4-N9	5.33	129.20	126.00
1	13	1522	U	C5-C4-O4	-5.33	122.70	125.90
24	1H	1008	C	N1-C2-O2	-5.33	115.70	118.90
24	1H	1667	G	C8-N9-C4	5.33	108.53	106.40
24	1H	2349	G	N3-C4-C5	-5.33	125.93	128.60
1	1G	748	C	P-O3'-C3'	5.33	126.10	119.70
1	1G	769	G	N3-C4-C5	-5.33	125.93	128.60
1	1G	1500	A	N7-C8-N9	5.33	116.47	113.80
24	14	451	C	O5'-P-OP1	-5.33	100.90	105.70
24	14	933	A	C2-N3-C4	-5.33	107.93	110.60
24	14	1802	A	O5'-P-OP2	-5.33	100.90	105.70
24	14	2042	A	N3-C4-C5	5.33	130.53	126.80
24	14	2409	G	N1-C6-O6	-5.33	116.70	119.90
24	14	2587	A	C4-C5-N7	5.33	113.37	110.70
24	1H	827	U	N1-C2-O2	-5.33	119.07	122.80
24	1H	2430	A	C8-N9-C1'	5.33	137.30	127.70
24	1H	2572	A	N7-C8-N9	-5.33	111.13	113.80
54	Q8	59	LYS	CD-CE-NZ	5.33	123.96	111.70
1	1G	328	C	N1-C2-O2	5.33	122.10	118.90
1	1G	785	G	C6-C5-N7	-5.33	127.20	130.40
1	1G	940	C	OP1-P-O3'	5.33	116.93	105.20
24	14	1157	G	O5'-P-OP1	5.33	117.10	110.70
24	1H	2346	A	C5-C6-N6	5.33	127.96	123.70
24	14	2234	G	C6-C5-N7	-5.33	127.20	130.40
24	14	2352	A	C2-N3-C4	-5.33	107.94	110.60
25	1J	27	C	C6-N1-C2	-5.33	118.17	120.30
1	13	689	C	C6-N1-C2	-5.33	118.17	120.30
24	1H	36	G	OP2-P-O3'	5.33	116.92	105.20
24	1H	701	G	OP2-P-O3'	5.33	116.92	105.20
24	1H	1184	G	N3-C2-N2	-5.33	116.17	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1266	G	N9-C4-C5	-5.33	103.27	105.40
25	16	106	G	C8-N9-C4	5.33	108.53	106.40
24	14	75	G	C5-C6-O6	-5.33	125.40	128.60
24	14	84	A	N7-C8-N9	-5.33	111.14	113.80
24	14	508	G	O5'-P-OP1	-5.33	100.90	105.70
24	14	671	C	N1-C2-N3	5.33	122.93	119.20
24	14	2755	C	O5'-P-OP2	-5.33	100.91	105.70
24	1H	1789	A	N7-C8-N9	-5.33	111.14	113.80
24	1H	2239	G	C5-N7-C8	-5.33	101.64	104.30
24	1H	2280	G	O5'-P-OP1	-5.33	100.91	105.70
1	1G	754	C	C2-N1-C1'	5.33	124.66	118.80
24	14	583	G	C6-C5-N7	-5.33	127.20	130.40
24	14	682	G	N3-C2-N2	5.33	123.63	119.90
24	14	1614	A	C8-N9-C4	-5.33	103.67	105.80
24	14	2257	U	N3-C4-C5	-5.33	111.41	114.60
23	4K	23	A	C8-N9-C4	-5.32	103.67	105.80
24	1H	30	G	N3-C4-C5	-5.32	125.94	128.60
24	1H	940	G	C5-C6-O6	-5.32	125.41	128.60
24	1H	977	G	N1-C6-O6	-5.32	116.71	119.90
1	1G	281	G	C6-C5-N7	-5.32	127.21	130.40
24	1H	2589	A	N1-C2-N3	-5.32	126.64	129.30
24	1H	622	G	N3-C4-N9	5.32	129.19	126.00
24	1H	803	U	OP2-P-O3'	5.32	116.90	105.20
24	1H	1607	C	C5-C6-N1	5.32	123.66	121.00
22	2L	18	G	N3-C4-N9	-5.32	122.81	126.00
24	14	1678	G	N7-C8-N9	5.32	115.76	113.10
24	14	1776	G	N3-C4-C5	-5.32	125.94	128.60
24	14	2001	A	C5-C6-N6	-5.32	119.44	123.70
32	69	131	LYS	C-N-CD	-5.32	108.89	120.60
24	1H	271	G	C6-C5-N7	-5.32	127.21	130.40
24	14	1969	A	N1-C6-N6	5.32	121.79	118.60
22	2K	20	C	N1-C2-O2	5.32	122.09	118.90
24	1H	203	C	C5-C4-N4	-5.32	116.48	120.20
24	1H	462	C	C2-N3-C4	-5.32	117.24	119.90
24	1H	756	C	N3-C4-N4	5.32	121.72	118.00
1	1G	869	G	N3-C4-C5	5.32	131.26	128.60
24	14	594	U	OP1-P-OP2	5.32	127.58	119.60
24	14	1391	U	N3-C2-O2	-5.32	118.48	122.20
24	14	2452	C	OP1-P-OP2	5.32	127.58	119.60
24	1H	115	C	C5-C6-N1	-5.32	118.34	121.00
24	1H	1283	G	N3-C2-N2	5.32	123.62	119.90
24	1H	2241	A	N1-C2-N3	5.32	131.96	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	925	G	C5-N7-C8	5.32	106.96	104.30
24	14	2823	A	C2-N3-C4	-5.32	107.94	110.60
25	1J	72	G	N3-C2-N2	5.32	123.62	119.90
1	13	920	U	C6-N1-C2	-5.31	117.81	121.00
24	1H	140	A	C8-N9-C4	-5.31	103.67	105.80
24	1H	690	G	C2-N3-C4	-5.31	109.24	111.90
24	1H	80	G	C8-N9-C4	-5.31	104.28	106.40
24	1H	633	A	C4-C5-N7	5.31	113.36	110.70
24	1H	713	G	C8-N9-C1'	-5.31	120.09	127.00
24	1H	1331	A	C6-N1-C2	-5.31	115.41	118.60
24	1H	1341	U	N3-C2-O2	5.31	125.92	122.20
24	1H	2417	C	O5'-P-OP2	-5.31	100.92	105.70
41	D8	40	LEU	CA-CB-CG	5.31	127.52	115.30
24	14	678	C	C2-N3-C4	-5.31	117.24	119.90
24	14	2062	A	C8-N9-C4	5.31	107.92	105.80
24	14	2702	U	C5-C6-N1	-5.31	120.04	122.70
24	1H	270(Z)	U	N3-C2-O2	-5.31	118.48	122.20
28	21	149	ARG	NE-CZ-NH1	5.31	122.96	120.30
1	13	1387	G	N3-C4-N9	5.31	129.19	126.00
24	1H	2766	G	C4-C5-N7	5.31	112.92	110.80
24	14	121	G	C6-N1-C2	-5.31	121.91	125.10
24	14	673	C	O5'-P-OP1	5.31	117.07	110.70
24	14	811	U	C5-C4-O4	5.31	129.09	125.90
24	14	1256	G	N1-C2-N2	5.31	120.98	116.20
24	1H	1817	G	N7-C8-N9	-5.31	110.45	113.10
24	14	2596	U	OP1-P-OP2	5.31	127.56	119.60
35	35	65	ARG	NE-CZ-NH2	-5.31	117.65	120.30
1	13	741	G	O5'-P-OP2	-5.31	100.92	105.70
24	1H	2229	C	C6-N1-C2	-5.31	118.18	120.30
24	1H	2448	A	C6-C5-N7	-5.31	128.59	132.30
24	14	2045	C	C5-C6-N1	-5.31	118.35	121.00
25	1J	94	C	N3-C4-N4	5.31	121.71	118.00
1	13	1338	G	C5-C6-O6	5.30	131.78	128.60
24	1H	207	A	C4-C5-N7	5.30	113.35	110.70
24	1H	1639	U	OP1-P-OP2	-5.30	111.64	119.60
24	1H	1829	A	C8-N9-C4	5.30	107.92	105.80
24	1H	2451	A	C5-C6-N6	5.30	127.94	123.70
24	1H	2823	A	C2-N3-C4	-5.30	107.95	110.60
1	1G	267	C	C2-N3-C4	-5.30	117.25	119.90
24	14	1695	G	N3-C4-N9	5.30	129.18	126.00
24	14	2481	G	N3-C4-C5	5.30	131.25	128.60
24	1H	1899	G	C6-C5-N7	5.30	133.58	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2449	U	C4-C5-C6	5.30	122.88	119.70
25	16	100	G	N1-C6-O6	5.30	123.08	119.90
36	88	106	VAL	CB-CA-C	-5.30	101.33	111.40
24	1H	577	G	O5'-P-OP1	5.30	117.06	110.70
24	1H	821	A	N1-C2-N3	5.30	131.95	129.30
24	14	1124	C	C2-N3-C4	-5.30	117.25	119.90
24	14	1388	G	O5'-P-OP2	-5.30	100.93	105.70
24	14	1605	C	N1-C2-O2	-5.30	115.72	118.90
24	14	1637	A	N1-C6-N6	-5.30	115.42	118.60
24	14	1705	G	N3-C4-C5	5.30	131.25	128.60
24	14	1809	A	O5'-P-OP2	5.30	117.06	110.70
24	14	2286	A	N1-C6-N6	5.30	121.78	118.60
1	13	954	G	N1-C6-O6	5.30	123.08	119.90
24	1H	468	G	C8-N9-C4	5.30	108.52	106.40
24	1H	624	C	O5'-P-OP2	5.30	117.06	110.70
24	1H	1273	U	C5-C6-N1	-5.30	120.05	122.70
24	1H	1956	U	C5-C4-O4	5.30	129.08	125.90
24	1H	2051	A	O5'-P-OP1	5.30	117.06	110.70
1	1G	1499	A	N7-C8-N9	-5.30	111.15	113.80
24	14	1804	C	C5-C4-N4	-5.30	116.49	120.20
24	14	2040	C	O5'-P-OP2	5.30	117.06	110.70
24	14	2639	A	N9-C4-C5	-5.30	103.68	105.80
28	29	78	LEU	CA-CB-CG	5.30	127.49	115.30
24	1H	75	G	C5-C6-N1	5.30	114.15	111.50
24	1H	464	U	OP1-P-OP2	-5.30	111.65	119.60
24	14	1930	G	C8-N9-C1'	5.30	133.89	127.00
1	13	1505	G	C5-C6-O6	5.30	131.78	128.60
24	1H	600	G	C8-N9-C4	5.30	108.52	106.40
24	1H	620	G	C5-N7-C8	-5.30	101.65	104.30
1	1G	488	C	N1-C2-O2	-5.30	115.72	118.90
24	14	271(A)	C	C6-N1-C2	-5.30	118.18	120.30
24	1H	1327	C	O5'-P-OP1	5.29	117.05	110.70
24	14	810	U	N3-C4-O4	5.29	123.11	119.40
24	14	1899	G	C4-C5-N7	5.29	112.92	110.80
24	14	2585	U	OP2-P-O3'	5.29	116.85	105.20
24	1H	117	G	O5'-P-OP1	5.29	117.05	110.70
24	1H	809	G	N1-C2-N3	-5.29	120.72	123.90
24	1H	1426	G	C2-N3-C4	5.29	114.55	111.90
24	1H	1562	A	N1-C2-N3	5.29	131.95	129.30
24	1H	2462	U	OP1-P-OP2	5.29	127.54	119.60
24	14	120	U	N3-C2-O2	-5.29	118.49	122.20
24	14	1309	G	N3-C4-C5	-5.29	125.95	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2324	C	C2-N3-C4	-5.29	117.25	119.90
24	14	2560	C	N3-C4-N4	5.29	121.71	118.00
24	1H	1157	G	N1-C6-O6	5.29	123.07	119.90
24	1H	1561	G	C5-C6-O6	5.29	131.78	128.60
24	1H	2105	C	C6-N1-C2	-5.29	118.18	120.30
24	1H	2441	C	O5'-P-OP2	5.29	117.05	110.70
24	1H	2512	C	C6-N1-C2	5.29	122.42	120.30
25	16	7	G	C5-C6-O6	-5.29	125.42	128.60
24	14	1764	G	C6-C5-N7	5.29	133.57	130.40
24	14	1789	A	C5-C6-N1	5.29	120.34	117.70
24	14	1897	G	N9-C4-C5	-5.29	103.28	105.40
24	14	2032	G	C2-N3-C4	-5.29	109.25	111.90
24	14	2673	G	C6-C5-N7	-5.29	127.22	130.40
22	3K	16	C	C2-N1-C1'	5.29	124.62	118.80
1	1G	186	C	C6-N1-C2	-5.29	118.18	120.30
24	14	1596	A	C4-C5-N7	-5.29	108.06	110.70
24	14	1913	A	C6-C5-N7	5.29	136.00	132.30
24	14	2306	C	N1-C2-O2	5.29	122.07	118.90
24	14	2387	U	C2-N3-C4	-5.29	123.83	127.00
24	14	2520	C	N1-C2-O2	-5.29	115.73	118.90
1	13	802	A	N7-C8-N9	5.29	116.44	113.80
24	1H	717	G	C6-C5-N7	-5.29	127.23	130.40
24	1H	1128	A	C5-C6-N6	-5.29	119.47	123.70
24	1H	1573	G	OP2-P-O3'	5.29	116.84	105.20
24	14	2552	U	C4-C5-C6	5.29	122.87	119.70
1	13	531	U	O5'-P-OP1	-5.29	100.94	105.70
1	1G	706	A	C8-N9-C4	-5.29	103.69	105.80
24	14	987	G	C5-C6-O6	5.29	131.77	128.60
24	14	2394	C	N3-C4-N4	-5.29	114.30	118.00
1	13	1064	G	C2-N3-C4	-5.29	109.26	111.90
24	1H	1597	A	N7-C8-N9	-5.29	111.16	113.80
1	1G	950	U	O5'-P-OP1	-5.29	100.94	105.70
24	14	389	G	N1-C2-N2	-5.29	111.44	116.20
24	14	921	G	C8-N9-C4	-5.29	104.29	106.40
24	14	1313	U	OP1-P-O3'	5.29	116.83	105.20
24	14	1332	G	C4-N9-C1'	-5.29	119.63	126.50
24	1H	72	U	N1-C2-N3	5.28	118.07	114.90
24	1H	848	G	N1-C2-N2	-5.28	111.44	116.20
24	1H	988	A	O5'-P-OP1	-5.28	100.95	105.70
24	1H	2779	U	N3-C4-O4	-5.28	115.70	119.40
24	14	512	G	N3-C4-N9	-5.28	122.83	126.00
24	14	2276	G	O5'-P-OP1	-5.28	100.94	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	842	G	N3-C4-C5	5.28	131.24	128.60
24	1H	1821	A	C5-C6-N1	5.28	120.34	117.70
1	1G	945	G	C6-C5-N7	-5.28	127.23	130.40
1	13	697	U	C6-N1-C2	5.28	124.17	121.00
1	13	1379	G	N3-C4-N9	5.28	129.17	126.00
24	1H	212	G	N1-C2-N2	-5.28	111.45	116.20
24	1H	560	C	C2-N3-C4	-5.28	117.26	119.90
24	1H	754	C	N1-C2-N3	5.28	122.90	119.20
24	1H	1278	A	N1-C6-N6	-5.28	115.43	118.60
1	1G	1426	C	N3-C2-O2	5.28	125.60	121.90
24	14	1654	A	O5'-P-OP1	-5.28	100.95	105.70
1	13	503	C	N3-C4-N4	5.28	121.69	118.00
24	1H	1936	A	C6-C5-N7	-5.28	128.60	132.30
24	1H	2452	C	C2-N1-C1'	5.28	124.61	118.80
24	14	1396	U	N3-C2-O2	-5.28	118.50	122.20
24	14	1564	C	N3-C2-O2	-5.28	118.20	121.90
1	13	863	U	C5-C6-N1	-5.28	120.06	122.70
1	13	895	G	C4-N9-C1'	-5.28	119.64	126.50
24	1H	1184	G	N1-C6-O6	5.28	123.07	119.90
24	1H	1228	G	N1-C2-N3	5.28	127.07	123.90
24	1H	1271	G	N9-C4-C5	-5.28	103.29	105.40
24	1H	1332	G	C4-C5-C6	-5.28	115.63	118.80
24	1H	1692	U	C6-N1-C2	5.28	124.17	121.00
24	1H	2028	U	OP1-P-O3'	5.28	116.81	105.20
24	1H	2527	C	C5-C4-N4	-5.28	116.51	120.20
24	1H	2757	A	C8-N9-C4	-5.28	103.69	105.80
24	14	248	G	O5'-P-OP2	-5.28	100.95	105.70
24	14	1313	U	N3-C4-O4	5.28	123.09	119.40
24	14	1441	G	C8-N9-C4	5.28	108.51	106.40
24	14	1785	A	O5'-P-OP2	-5.28	100.95	105.70
24	14	1899	G	C5-N7-C8	-5.28	101.66	104.30
24	14	2723	C	N1-C2-O2	-5.28	115.73	118.90
1	13	936	C	N1-C2-O2	5.28	122.06	118.90
22	3K	18	G	C8-N9-C1'	5.28	133.86	127.00
24	1H	15	G	N1-C6-O6	5.28	123.06	119.90
24	1H	247	G	N1-C2-N2	-5.28	111.45	116.20
24	1H	965	C	C6-N1-C2	-5.28	118.19	120.30
24	1H	1973	G	N1-C2-N3	5.28	127.07	123.90
24	14	698	C	N3-C2-O2	5.28	125.59	121.90
24	14	1899	G	P-O3'-C3'	5.28	126.03	119.70
24	14	2689	U	OP1-P-O3'	-5.28	93.59	105.20
1	13	610	G	N3-C4-N9	5.27	129.16	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	702	A	C4-C5-N7	-5.27	108.06	110.70
24	14	2247	A	C5-C6-N1	-5.27	115.06	117.70
1	13	522	C	C6-N1-C2	5.27	122.41	120.30
24	1H	471	A	C5-N7-C8	-5.27	101.26	103.90
24	1H	1249	U	C5-C6-N1	-5.27	120.06	122.70
24	1H	2656	U	N1-C2-O2	5.27	126.49	122.80
1	1G	1267	C	C6-N1-C1'	-5.27	114.47	120.80
24	14	512	G	C5'-C4'-C3'	-5.27	107.56	116.00
24	14	603	A	C8-N9-C4	-5.27	103.69	105.80
24	14	1888	G	O4'-C1'-N9	5.27	112.42	108.20
24	14	2058	A	C6-C5-N7	-5.27	128.61	132.30
1	13	1192	C	C2-N3-C4	5.27	122.53	119.90
24	1H	757	U	O5'-P-OP2	-5.27	100.96	105.70
24	1H	796	C	C5-C6-N1	-5.27	118.36	121.00
24	1H	1604	C	C5-C4-N4	-5.27	116.51	120.20
1	1G	565	U	C6-N1-C2	-5.27	117.84	121.00
24	14	435	C	C6-N1-C2	5.27	122.41	120.30
24	14	863	A	OP2-P-O3'	5.27	116.80	105.20
24	14	1229(A)	G	O5'-P-OP2	-5.27	100.96	105.70
1	13	915	A	C4-C5-N7	-5.27	108.06	110.70
24	1H	451	C	C5-C4-N4	-5.27	116.51	120.20
24	1H	1695	G	N3-C2-N2	5.27	123.59	119.90
24	1H	2299	G	N1-C6-O6	5.27	123.06	119.90
24	1H	2593	U	N3-C4-C5	-5.27	111.44	114.60
24	14	1234	U	C5-C4-O4	5.27	129.06	125.90
24	14	1316	U	C2-N1-C1'	5.27	124.02	117.70
24	14	1612	C	C6-N1-C2	5.27	122.41	120.30
29	39	181	LEU	CA-CB-CG	5.27	127.42	115.30
1	13	708	C	OP1-P-O3'	5.27	116.79	105.20
1	13	1430	C	C6-N1-C2	5.27	122.41	120.30
24	1H	192	C	N3-C2-O2	5.27	125.59	121.90
24	1H	769	G	OP1-P-O3'	5.27	116.79	105.20
24	1H	1283	G	N3-C4-N9	5.27	129.16	126.00
24	1H	1674	G	C4-N9-C1'	5.27	133.35	126.50
24	1H	1883	G	C8-N9-C4	5.27	108.51	106.40
24	1H	2056	G	O4'-C1'-N9	-5.27	103.99	108.20
24	1H	2637	U	N3-C4-O4	5.27	123.09	119.40
25	16	40	U	C2-N1-C1'	5.27	124.02	117.70
1	1G	801	U	N1-C2-O2	5.27	126.49	122.80
24	14	529	A	C5-N7-C8	-5.27	101.27	103.90
24	14	1763	G	O5'-P-OP2	-5.27	100.96	105.70
24	14	1839	G	C5-C6-O6	-5.27	125.44	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	301	G	N9-C4-C5	-5.27	103.29	105.40
24	1H	57	C	N1-C2-O2	5.27	122.06	118.90
24	1H	596	G	N1-C6-O6	5.27	123.06	119.90
24	1H	763	G	N3-C4-C5	-5.27	125.97	128.60
24	14	790	C	C6-N1-C2	5.27	122.41	120.30
24	14	1146	C	N1-C2-O2	-5.27	115.74	118.90
24	14	1243	G	C6-C5-N7	-5.27	127.24	130.40
24	14	1630(A)	C	C2-N3-C4	-5.27	117.27	119.90
24	14	1662	C	C2-N3-C4	-5.27	117.27	119.90
24	14	2230	G	C4-C5-N7	-5.27	108.69	110.80
24	14	2246	G	N1-C6-O6	5.27	123.06	119.90
24	14	2701	C	OP2-P-O3'	5.27	116.78	105.20
1	13	545	C	N1-C2-O2	5.26	122.06	118.90
1	13	749	C	N3-C2-O2	-5.26	118.22	121.90
24	1H	763	G	C5-C6-O6	5.26	131.76	128.60
24	1H	975	G	OP1-P-OP2	-5.26	111.70	119.60
24	1H	1930	G	OP1-P-OP2	5.26	127.50	119.60
24	1H	2701	C	C2-N3-C4	-5.26	117.27	119.90
1	1G	668	G	N1-C2-N2	5.26	120.94	116.20
1	1G	675	A	O5'-P-OP1	-5.26	100.96	105.70
1	1G	1424	C	N3-C4-C5	-5.26	119.79	121.90
24	14	194	G	N9-C4-C5	-5.26	103.30	105.40
24	14	602	G	C5-C6-O6	-5.26	125.44	128.60
24	14	955	C	OP1-P-O3'	5.26	116.78	105.20
24	14	2035	G	O5'-P-OP2	-5.26	100.96	105.70
24	14	2038	G	OP1-P-OP2	-5.26	111.70	119.60
24	1H	1558	A	N1-C2-N3	5.26	131.93	129.30
1	1G	396	G	N3-C2-N2	5.26	123.58	119.90
24	14	845	G	N7-C8-N9	5.26	115.73	113.10
24	14	2673	G	N9-C4-C5	-5.26	103.30	105.40
1	13	137	C	C6-N1-C2	5.26	122.41	120.30
24	1H	1161	C	OP1-P-O3'	5.26	116.78	105.20
24	1H	1264	G	N9-C4-C5	5.26	107.50	105.40
24	1H	1277	G	N1-C6-O6	-5.26	116.74	119.90
24	1H	1669	A	C8-N9-C4	-5.26	103.69	105.80
24	1H	2374	C	O5'-P-OP2	-5.26	100.97	105.70
24	14	452	G	C5-C6-O6	-5.26	125.44	128.60
24	14	468	G	C8-N9-C4	5.26	108.50	106.40
24	14	1385	G	N3-C4-N9	-5.26	122.84	126.00
27	19	68	LYS	C-N-CA	-5.26	108.54	121.70
24	1H	801	G	C8-N9-C1'	5.26	133.84	127.00
24	1H	2518	A	N3-C4-N9	-5.26	123.19	127.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	1498	U	O4'-C1'-N1	-5.26	103.99	108.20
24	14	1731	G	N3-C2-N2	-5.26	116.22	119.90
24	14	1991	U	N3-C2-O2	-5.26	118.52	122.20
24	14	2374	C	OP1-P-OP2	5.26	127.49	119.60
1	13	1399	C	O5'-P-OP1	-5.26	100.97	105.70
22	2K	26	G	C8-N9-C4	5.26	108.50	106.40
1	1G	500	G	N1-C2-N2	-5.26	111.47	116.20
24	1H	56	A	N9-C4-C5	-5.26	103.70	105.80
24	1H	988	A	OP2-P-O3'	5.26	116.76	105.20
1	1G	515	G	O5'-P-OP1	-5.26	100.97	105.70
24	14	686	G	O5'-P-OP1	5.26	117.01	110.70
24	14	2385	C	C2-N3-C4	-5.26	117.27	119.90
24	1H	670	A	N1-C2-N3	-5.25	126.67	129.30
24	1H	2361	A	C8-N9-C4	5.25	107.90	105.80
24	1H	2520	C	O5'-P-OP1	5.25	117.01	110.70
24	1H	2755	C	N1-C2-O2	-5.25	115.75	118.90
1	13	578	C	OP2-P-O3'	5.25	116.76	105.20
24	1H	458	G	N9-C4-C5	5.25	107.50	105.40
24	1H	978	G	C8-N9-C4	5.25	108.50	106.40
24	1H	2272	U	N3-C4-O4	-5.25	115.72	119.40
24	1H	2464	C	C2-N3-C4	-5.25	117.27	119.90
1	1G	310	G	C5-C6-N1	5.25	114.13	111.50
24	14	1649	G	O5'-P-OP2	-5.25	100.97	105.70
24	14	1782	C	C6-N1-C1'	-5.25	114.50	120.80
1	13	250	A	C6-N1-C2	5.25	121.75	118.60
1	13	623	C	C5-C6-N1	5.25	123.62	121.00
1	13	1403	C	N1-C2-O2	-5.25	115.75	118.90
24	1H	57	C	C5-C6-N1	-5.25	118.37	121.00
24	1H	115	C	C4-C5-C6	5.25	120.03	117.40
24	1H	239	U	C2-N1-C1'	-5.25	111.40	117.70
24	1H	624	C	N3-C2-O2	5.25	125.58	121.90
24	1H	654(S)	G	P-O3'-C3'	5.25	126.00	119.70
24	1H	2249	U	C5-C4-O4	5.25	129.05	125.90
24	1H	2453	A	N1-C6-N6	-5.25	115.45	118.60
1	1G	1062	U	O5'-P-OP2	-5.25	100.97	105.70
24	14	562	U	C6-N1-C2	-5.25	117.85	121.00
24	14	396	G	N1-C6-O6	5.25	123.05	119.90
24	14	1888	G	C4-N9-C1'	5.25	133.32	126.50
1	13	791	G	C4-C5-N7	-5.25	108.70	110.80
24	1H	574	C	C2-N1-C1'	-5.25	113.03	118.80
24	1H	780	G	C4-C5-C6	5.25	121.95	118.80
24	1H	1994	C	C5-C4-N4	5.25	123.87	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2485	G	C6-N1-C2	-5.25	121.95	125.10
24	1H	2501	C	C2-N1-C1'	-5.25	113.03	118.80
24	1H	2644	G	N9-C4-C5	5.25	107.50	105.40
24	1H	2776	A	C8-N9-C4	5.25	107.90	105.80
1	1G	560	U	C6-N1-C2	-5.25	117.85	121.00
24	14	574	C	OP2-P-O3'	-5.25	93.65	105.20
24	14	579	G	C6-N1-C2	-5.25	121.95	125.10
24	14	922	U	C6-N1-C2	-5.25	117.85	121.00
1	13	783	C	C6-N1-C2	5.25	122.40	120.30
1	13	1421	G	N3-C4-C5	5.25	131.22	128.60
24	1H	2440	C	C2-N3-C4	5.25	122.52	119.90
24	14	819	A	OP2-P-O3'	5.25	116.74	105.20
24	14	1187	G	C5-C6-N1	-5.25	108.88	111.50
24	14	1771	C	C2-N3-C4	-5.25	117.28	119.90
24	14	2046	G	C8-N9-C1'	-5.25	120.18	127.00
24	14	2435	A	N1-C2-N3	5.25	131.92	129.30
24	14	2587	A	C6-C5-N7	-5.25	128.63	132.30
1	13	1128	C	C5-C6-N1	5.25	123.62	121.00
24	14	1142(A)	A	C8-N9-C4	-5.25	103.70	105.80
24	14	1305	C	O5'-P-OP2	5.25	116.99	110.70
16	7I	26	ARG	NE-CZ-NH1	5.24	122.92	120.30
24	1H	906	G	N3-C4-N9	-5.24	122.85	126.00
25	16	56	G	C8-N9-C4	-5.24	104.30	106.40
1	1G	1189	C	C6-N1-C2	5.24	122.40	120.30
22	2L	78	C	C5-C4-N4	-5.24	116.53	120.20
24	14	784	A	C5-C6-N6	5.24	127.89	123.70
24	14	955	C	OP1-P-OP2	5.24	127.47	119.60
24	14	2463	C	C6-N1-C2	5.24	122.40	120.30
1	13	755	G	N1-C2-N2	-5.24	111.48	116.20
24	1H	138	G	C5-N7-C8	-5.24	101.68	104.30
24	1H	446	G	C8-N9-C4	5.24	108.50	106.40
24	1H	933	A	O5'-P-OP2	-5.24	100.98	105.70
42	E8	64	MET	N-CA-C	5.24	125.15	111.00
24	1H	655	A	C5-C6-N1	-5.24	115.08	117.70
24	1H	1310	G	N3-C2-N2	-5.24	116.23	119.90
24	1H	2519	U	N3-C2-O2	5.24	125.87	122.20
1	1G	285	G	C8-N9-C4	5.24	108.50	106.40
1	1G	517	G	N1-C6-O6	-5.24	116.76	119.90
24	14	236	C	C2-N3-C4	-5.24	117.28	119.90
24	14	1278	A	N1-C6-N6	-5.24	115.46	118.60
24	14	1348	G	N9-C4-C5	-5.24	103.30	105.40
24	14	2610	C	C4-C5-C6	5.24	120.02	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	720	C	C6-N1-C2	-5.24	118.20	120.30
1	13	898	G	C4-C5-N7	5.24	112.89	110.80
24	1H	1331	A	C2-N3-C4	-5.24	107.98	110.60
24	1H	1966	A	C5-C6-N6	-5.24	119.51	123.70
24	1H	1996	C	O4'-C1'-N1	-5.24	104.01	108.20
24	1H	2775	A	C8-N9-C4	5.24	107.89	105.80
1	1G	44	G	C4-N9-C1'	5.24	133.31	126.50
1	1G	1390	U	C5-C4-O4	5.24	129.04	125.90
1	1G	1466	C	C2-N3-C4	-5.24	117.28	119.90
24	14	152	G	N3-C4-C5	5.24	131.22	128.60
24	14	1705	G	C5-N7-C8	-5.24	101.68	104.30
24	14	2242	G	C4-C5-N7	-5.24	108.70	110.80
40	85	98	LEU	CA-CB-CG	5.24	127.35	115.30
24	1H	522	G	OP1-P-OP2	-5.24	111.74	119.60
24	1H	1216	G	C2-N3-C4	-5.24	109.28	111.90
24	1H	2382	G	N1-C6-O6	5.24	123.04	119.90
24	1H	2822	G	N3-C2-N2	5.24	123.57	119.90
25	16	112	G	N9-C4-C5	-5.24	103.31	105.40
53	L5	34	ARG	NE-CZ-NH2	5.24	122.92	120.30
18	9I	26	LEU	CA-CB-CG	5.24	127.34	115.30
24	1H	1544	C	C6-N1-C2	5.24	122.39	120.30
24	1H	1762	A	N1-C2-N3	-5.24	126.68	129.30
24	1H	2025	C	O5'-P-OP2	-5.24	100.99	105.70
24	1H	2422	A	C8-N9-C4	-5.24	103.70	105.80
1	1G	333	G	N1-C6-O6	5.24	123.04	119.90
1	1G	1322	C	C2-N1-C1'	5.24	124.56	118.80
24	14	744	G	O5'-P-OP2	-5.24	100.99	105.70
24	14	789	A	O5'-P-OP2	5.24	116.98	110.70
24	14	1559	G	C5-N7-C8	-5.24	101.68	104.30
24	1H	1288	U	N1-C2-O2	5.23	126.46	122.80
24	1H	1806	C	OP1-P-OP2	5.23	127.45	119.60
24	1H	2486	G	C5-C6-O6	-5.23	125.46	128.60
24	1H	2591	C	C2-N3-C4	-5.23	117.28	119.90
1	1G	401	C	N3-C4-N4	5.23	121.66	118.00
24	14	2091	U	N3-C4-O4	-5.23	115.74	119.40
24	14	2590	A	N7-C8-N9	-5.23	111.18	113.80
24	14	2820	A	P-O3'-C3'	5.23	125.98	119.70
24	1H	1666	G	OP2-P-O3'	5.23	116.71	105.20
24	1H	2618	G	C5-N7-C8	5.23	106.92	104.30
24	14	2087	G	N7-C8-N9	-5.23	110.48	113.10
24	14	2490	G	C6-C5-N7	-5.23	127.26	130.40
28	21	119	ARG	NE-CZ-NH1	5.23	122.92	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
44	G8	81	LYS	C-N-CA	5.23	143.96	122.00
24	14	1239	G	N1-C6-O6	5.23	123.04	119.90
24	14	1705	G	C5-C6-O6	-5.23	125.46	128.60
24	1H	140	A	O4'-C1'-N9	5.23	112.38	108.20
24	1H	726	G	O5'-P-OP1	-5.23	100.99	105.70
24	1H	1318	C	O5'-P-OP2	5.23	116.97	110.70
25	16	74	U	O4'-C1'-N1	5.23	112.38	108.20
1	1G	115	G	N3-C4-C5	-5.23	125.99	128.60
22	3L	18	G	OP2-P-O3'	5.23	116.70	105.20
1	13	1519	A	N9-C4-C5	5.23	107.89	105.80
14	5I	24	CYS	CA-CB-SG	5.23	123.41	114.00
24	1H	573	G	O5'-P-OP2	-5.23	101.00	105.70
24	1H	2447	G	C4-C5-C6	5.23	121.94	118.80
24	1H	2690	C	C6-N1-C2	-5.23	118.21	120.30
24	14	186	G	C5-N7-C8	5.23	106.91	104.30
24	14	1382	G	C4-C5-C6	-5.23	115.66	118.80
24	14	2238	G	C8-N9-C4	5.23	108.49	106.40
24	14	2681	C	N1-C2-N3	5.23	122.86	119.20
24	14	2871	C	O5'-P-OP2	-5.23	101.00	105.70
1	13	545	C	O5'-P-OP2	-5.23	101.00	105.70
1	13	1524	C	N1-C2-O2	-5.23	115.77	118.90
24	1H	785	G	C5-C6-O6	5.23	131.74	128.60
1	1G	972	C	N1-C2-O2	-5.23	115.76	118.90
24	14	2880	C	N1-C2-O2	-5.23	115.77	118.90
8	7E	71	GLY	N-CA-C	-5.22	100.04	113.10
24	1H	1205	U	O5'-P-OP2	-5.22	101.00	105.70
24	1H	1769	G	N3-C4-C5	-5.22	125.99	128.60
24	1H	1819	A	C6-C5-N7	-5.22	128.64	132.30
24	1H	2586	C	N1-C2-O2	5.22	122.03	118.90
24	1H	2661	G	N3-C4-N9	5.22	129.13	126.00
24	14	1256	G	C5-C6-O6	-5.22	125.47	128.60
24	14	1651	G	C5-C6-O6	-5.22	125.47	128.60
25	1J	44	G	C4-N9-C1'	-5.22	119.71	126.50
25	1J	88	C	N1-C2-O2	5.22	122.03	118.90
1	13	916	G	C2-N3-C4	5.22	114.51	111.90
24	1H	2427	C	C2-N1-C1'	-5.22	113.06	118.80
1	1G	1432	G	OP1-P-OP2	5.22	127.43	119.60
24	14	184	C	N1-C2-O2	-5.22	115.77	118.90
24	14	2205	C	O5'-P-OP2	-5.22	101.00	105.70
24	1H	999	U	O5'-P-OP2	5.22	116.97	110.70
24	1H	1811	G	OP1-P-O3'	-5.22	93.71	105.20
24	1H	2620	C	C5-C4-N4	-5.22	116.55	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2751	G	C6-C5-N7	-5.22	127.27	130.40
24	14	2232	U	C4-C5-C6	5.22	122.83	119.70
1	13	112	G	C4-C5-N7	5.22	112.89	110.80
1	13	765	G	N9-C4-C5	-5.22	103.31	105.40
24	1H	104	U	C6-N1-C2	5.22	124.13	121.00
24	1H	763	G	C8-N9-C4	-5.22	104.31	106.40
24	1H	936	C	C2-N3-C4	-5.22	117.29	119.90
24	1H	1165	U	N1-C2-O2	5.22	126.45	122.80
24	1H	1184	G	C5-C6-N1	-5.22	108.89	111.50
24	1H	1579	A	N1-C2-N3	5.22	131.91	129.30
24	1H	2490	G	C4-C5-C6	-5.22	115.67	118.80
24	1H	2500	U	OP2-P-O3'	5.22	116.69	105.20
1	1G	108	G	C5-N7-C8	-5.22	101.69	104.30
24	1H	1455	G	C6-C5-N7	5.22	133.53	130.40
1	1G	769	G	N3-C4-N9	5.22	129.13	126.00
24	14	2286	A	C6-C5-N7	-5.22	128.65	132.30
39	B8	56	GLY	N-CA-C	-5.22	100.06	113.10
1	1G	46	G	C8-N9-C4	5.22	108.49	106.40
1	1G	534	U	C5-C4-O4	5.22	129.03	125.90
24	14	833	U	N1-C2-N3	5.22	118.03	114.90
24	14	1663	C	OP2-P-O3'	5.22	116.68	105.20
24	14	2428	G	N3-C4-C5	5.22	131.21	128.60
24	1H	110	G	C5-C6-O6	-5.21	125.47	128.60
24	1H	165	U	C5-C6-N1	5.21	125.31	122.70
24	1H	199	A	C6-C5-N7	5.21	135.95	132.30
24	1H	597	U	C5-C4-O4	-5.21	122.77	125.90
24	1H	1210	A	N3-C4-N9	-5.21	123.23	127.40
24	1H	1259	G	N1-C6-O6	-5.21	116.77	119.90
24	1H	1377	G	C5-N7-C8	-5.21	101.69	104.30
24	1H	2589	A	C5-C6-N1	5.21	120.31	117.70
24	14	848	G	N1-C2-N2	-5.21	111.51	116.20
24	14	1277	G	N7-C8-N9	-5.21	110.49	113.10
24	14	1602	U	O5'-P-OP2	5.21	116.96	110.70
24	14	2016	U	C5-C6-N1	-5.21	120.09	122.70
24	14	2435	A	O5'-P-OP1	-5.21	101.01	105.70
27	19	194	GLY	N-CA-C	-5.21	100.07	113.10
24	1H	98	G	C4-C5-N7	5.21	112.89	110.80
24	1H	2236	C	O5'-P-OP1	-5.21	101.01	105.70
24	14	916	G	OP1-P-O3'	5.21	116.67	105.20
1	13	892	A	N1-C6-N6	5.21	121.73	118.60
1	13	1327	C	C6-N1-C2	5.21	122.39	120.30
24	1H	15	G	C6-C5-N7	-5.21	127.27	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	122	G	C5-C6-O6	-5.21	125.47	128.60
24	1H	621	A	OP1-P-OP2	5.21	127.42	119.60
24	1H	1187	G	N1-C6-O6	5.21	123.03	119.90
24	1H	1215	G	OP1-P-O3'	5.21	116.67	105.20
24	1H	2439	A	C8-N9-C4	-5.21	103.72	105.80
24	14	753	C	O5'-P-OP2	-5.21	101.01	105.70
24	14	1241	A	N3-C4-N9	-5.21	123.23	127.40
24	14	1566	A	C4-C5-C6	-5.21	114.39	117.00
24	14	2409	G	C5-C6-O6	5.21	131.73	128.60
1	13	1474	G	N1-C6-O6	-5.21	116.77	119.90
24	1H	566	U	N1-C2-O2	-5.21	119.15	122.80
24	1H	1799	G	N3-C4-N9	5.21	129.13	126.00
24	1H	1982	C	C2-N1-C1'	5.21	124.53	118.80
24	1H	2438	U	O4'-C1'-N1	-5.21	104.03	108.20
1	1G	1419	G	C6-C5-N7	-5.21	127.27	130.40
24	14	2565	A	C8-N9-C4	5.21	107.88	105.80
1	13	449	C	N3-C2-O2	-5.21	118.25	121.90
1	13	1415	G	C5-C6-N1	-5.21	108.90	111.50
1	1G	525	C	C2-N3-C4	5.21	122.50	119.90
24	14	1298	C	N1-C2-O2	5.21	122.03	118.90
24	14	2698	U	C2-N1-C1'	5.21	123.95	117.70
24	1H	138	G	C5-C6-N1	5.21	114.10	111.50
24	1H	530	G	N1-C2-N2	-5.21	111.51	116.20
24	1H	2429	G	OP2-P-O3'	5.21	116.66	105.20
24	1H	2546	U	O5'-P-OP1	5.21	116.95	110.70
1	1G	785	G	C4-C5-C6	5.21	121.92	118.80
24	14	647	G	N1-C6-O6	5.21	123.02	119.90
24	1H	1394	U	O5'-P-OP2	5.21	116.95	110.70
24	14	848	G	C6-C5-N7	-5.21	127.28	130.40
24	14	1805	U	N1-C2-N3	5.21	118.02	114.90
24	14	2438	U	C5-C6-N1	-5.21	120.10	122.70
24	14	2443	C	O5'-P-OP2	5.21	116.95	110.70
1	13	866	C	N3-C4-C5	-5.20	119.82	121.90
1	13	888	G	N7-C8-N9	-5.20	110.50	113.10
24	1H	1848	A	C8-N9-C4	5.20	107.88	105.80
24	1H	1900	A	N1-C6-N6	-5.20	115.48	118.60
24	1H	2713	A	C4-C5-C6	5.20	119.60	117.00
1	1G	169	C	C6-N1-C2	-5.20	118.22	120.30
24	14	676	A	OP1-P-OP2	5.20	127.41	119.60
24	14	1687	G	C8-N9-C4	5.20	108.48	106.40
1	1G	26	A	C8-N9-C4	5.20	107.88	105.80
1	1G	66	G	C6-C5-N7	-5.20	127.28	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	109	A	O5'-P-OP2	5.20	116.94	110.70
1	13	797	C	OP1-P-O3'	5.20	116.64	105.20
24	1H	803	U	O5'-P-OP2	-5.20	101.02	105.70
24	1H	1196	C	C6-N1-C2	5.20	122.38	120.30
24	1H	1327	C	C5-C6-N1	-5.20	118.40	121.00
24	1H	1370	C	C5-C6-N1	-5.20	118.40	121.00
24	1H	2234	G	C2-N3-C4	-5.20	109.30	111.90
24	1H	2374	C	C4-C5-C6	5.20	120.00	117.40
1	1G	304	U	N3-C2-O2	-5.20	118.56	122.20
24	14	1124	C	C5-C6-N1	-5.20	118.40	121.00
24	14	1918	A	C8-N9-C4	5.20	107.88	105.80
24	14	1934	C	N3-C4-N4	-5.20	114.36	118.00
24	1H	793	A	O5'-P-OP2	-5.20	101.02	105.70
24	1H	1225	C	O5'-P-OP2	-5.20	101.02	105.70
24	1H	1253	A	O5'-P-OP1	-5.20	101.02	105.70
24	1H	1678	G	C5-C6-N1	-5.20	108.90	111.50
24	1H	1690	A	N1-C2-N3	5.20	131.90	129.30
24	1H	2713	A	N3-C4-C5	5.20	130.44	126.80
1	1G	134	A	N1-C6-N6	5.20	121.72	118.60
24	14	426	C	C5-C6-N1	-5.20	118.40	121.00
24	14	789	A	O5'-P-OP1	-5.20	101.02	105.70
24	14	955	C	C5-C6-N1	-5.20	118.40	121.00
24	14	1247	A	N1-C6-N6	-5.20	115.48	118.60
24	14	2246	G	N9-C4-C5	-5.20	103.32	105.40
1	13	513	C	OP1-P-O3'	5.20	116.63	105.20
1	13	1158	C	N3-C2-O2	-5.20	118.26	121.90
24	14	51	G	C5-C6-N1	5.20	114.10	111.50
24	14	434	U	N1-C2-O2	-5.20	119.16	122.80
24	14	573	G	C5-N7-C8	5.20	106.90	104.30
24	14	1204	A	C6-C5-N7	-5.20	128.66	132.30
24	14	2598	A	OP1-P-OP2	-5.20	111.81	119.60
54	M5	33	ASN	N-CA-C	5.20	125.03	111.00
1	13	251	G	N9-C4-C5	-5.20	103.32	105.40
1	13	1503	A	N9-C4-C5	-5.20	103.72	105.80
24	1H	842	G	OP2-P-O3'	5.20	116.63	105.20
24	1H	1197	G	O5'-P-OP1	-5.20	101.02	105.70
24	1H	1543	A	C5-C6-N1	-5.20	115.10	117.70
24	1H	1912	A	N1-C6-N6	-5.20	115.48	118.60
24	14	1558	A	C6-C5-N7	-5.20	128.66	132.30
24	1H	752	A	C2-N3-C4	-5.19	108.00	110.60
24	1H	832	G	C8-N9-C1'	-5.19	120.25	127.00
24	1H	2527	C	C5-C6-N1	5.19	123.60	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1387	C	C6-N1-C2	-5.19	118.22	120.30
24	14	1965	C	C4-C5-C6	-5.19	114.80	117.40
24	14	2056	G	C6-N1-C2	-5.19	121.98	125.10
1	13	505	G	C8-N9-C4	-5.19	104.32	106.40
24	1H	121	G	C8-N9-C4	5.19	108.48	106.40
24	1H	504	U	C2-N1-C1'	5.19	123.93	117.70
24	1H	955	C	OP1-P-O3'	5.19	116.62	105.20
24	1H	1395	A	C4-N9-C1'	-5.19	116.95	126.30
24	14	1325	G	OP1-P-OP2	-5.19	111.81	119.60
24	14	1718	G	N1-C6-O6	5.19	123.02	119.90
24	14	2601	C	OP1-P-OP2	5.19	127.39	119.60
1	13	819	A	O4'-C1'-N9	-5.19	104.05	108.20
24	1H	141(A)	C	C5-C4-N4	-5.19	116.57	120.20
24	1H	330	A	N3-C4-C5	5.19	130.43	126.80
24	1H	1264	G	N1-C6-O6	-5.19	116.79	119.90
24	1H	2445	G	C5-N7-C8	-5.19	101.70	104.30
24	14	47	C	O5'-P-OP1	-5.19	101.03	105.70
24	14	945	A	O5'-P-OP2	5.19	116.93	110.70
24	1H	2457	U	C5-C4-O4	-5.19	122.79	125.90
24	1H	2606	C	C5-C6-N1	-5.19	118.41	121.00
24	14	84	A	C2-N3-C4	5.19	113.19	110.60
24	14	1965	C	O5'-P-OP1	-5.19	101.03	105.70
24	14	2081	C	C6-N1-C2	5.19	122.38	120.30
22	2K	9	U	C5-C4-O4	5.19	129.01	125.90
24	1H	827	U	C6-N1-C2	5.19	124.11	121.00
24	1H	1703	G	N1-C6-O6	-5.19	116.79	119.90
24	1H	1785	A	C5-C6-N6	-5.19	119.55	123.70
24	14	2060	A	C8-N9-C4	-5.19	103.72	105.80
24	1H	582	G	N7-C8-N9	5.19	115.69	113.10
24	1H	1251	C	C5-C6-N1	-5.19	118.41	121.00
24	1H	1560	G	C8-N9-C4	5.19	108.47	106.40
24	1H	2562	U	N1-C2-N3	5.19	118.01	114.90
1	1G	500	G	N3-C4-C5	-5.19	126.01	128.60
24	14	71	A	N3-C4-N9	-5.19	123.25	127.40
24	14	2566	A	C2-N3-C4	-5.19	108.01	110.60
1	13	920	U	C2-N3-C4	5.18	130.11	127.00
1	13	1218	C	N3-C2-O2	-5.18	118.27	121.90
24	1H	503	A	C5-C6-N6	5.18	127.85	123.70
24	1H	2777	G	N3-C2-N2	-5.18	116.27	119.90
1	1G	265	G	N3-C2-N2	5.18	123.53	119.90
24	14	13	A	N1-C6-N6	-5.18	115.49	118.60
24	14	1440	G	O5'-P-OP2	-5.18	101.03	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2027	G	C5-C6-N1	-5.18	108.91	111.50
24	14	2045	C	C6-N1-C2	5.18	122.37	120.30
24	14	2741	A	N9-C4-C5	-5.18	103.73	105.80
24	14	2866	U	C5-C4-O4	5.18	129.01	125.90
1	13	945	G	OP1-P-O3'	5.18	116.60	105.20
24	1H	1597	A	O4'-C1'-N9	5.18	112.34	108.20
24	1H	1617	C	C5'-C4'-O4'	-5.18	102.88	109.10
24	1H	1753	G	OP1-P-OP2	5.18	127.38	119.60
24	1H	2540	C	C4-C5-C6	5.18	119.99	117.40
1	1G	23	C	O5'-P-OP2	5.18	116.92	110.70
1	1G	47	C	C2-N1-C1'	-5.18	113.10	118.80
1	1G	1127	G	N3-C4-C5	5.18	131.19	128.60
24	14	528	A	C8-N9-C4	-5.18	103.73	105.80
24	14	1674	G	C8-N9-C1'	-5.18	120.26	127.00
24	14	2701	C	N1-C2-N3	5.18	122.83	119.20
24	1H	2424	C	N3-C4-C5	5.18	123.97	121.90
24	14	69	C	N3-C4-N4	-5.18	114.37	118.00
24	14	2443	C	O5'-P-OP1	-5.18	101.04	105.70
24	14	2456	C	C5-C4-N4	-5.18	116.57	120.20
24	1H	560	C	C5-C6-N1	-5.18	118.41	121.00
24	1H	1260	G	OP1-P-OP2	-5.18	111.83	119.60
1	1G	66	G	N1-C6-O6	5.18	123.01	119.90
1	1G	525	C	C5-C4-N4	-5.18	116.58	120.20
24	14	941	A	C8-N9-C4	-5.18	103.73	105.80
24	14	1165	U	N3-C4-C5	-5.18	111.49	114.60
24	14	1188	U	C4-C5-C6	5.18	122.81	119.70
24	1H	1203	G	C4-C5-N7	-5.18	108.73	110.80
24	1H	2581	G	OP1-P-O3'	5.18	116.59	105.20
24	14	1914	C	N1-C2-O2	5.18	122.01	118.90
24	14	2232	U	N1-C2-O2	-5.18	119.18	122.80
24	14	2259	G	N1-C6-O6	5.18	123.01	119.90
25	1J	54	G	C8-N9-C4	-5.18	104.33	106.40
1	13	930	C	N1-C2-O2	-5.18	115.79	118.90
12	3I	115	LYS	C-N-CA	-5.18	108.76	121.70
22	2K	21	A	N9-C1'-C2'	5.18	120.73	114.00
24	1H	1299	G	N7-C8-N9	5.18	115.69	113.10
24	1H	2587	A	OP2-P-O3'	-5.18	93.81	105.20
22	2L	81	C	OP2-P-O3'	5.18	116.59	105.20
24	14	529	A	C6-C5-N7	-5.18	128.68	132.30
24	14	1385	G	N3-C4-C5	5.18	131.19	128.60
24	14	1559	G	C5-C6-O6	-5.18	125.49	128.60
1	13	1343	G	N3-C4-C5	5.17	131.19	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	80	G	N9-C4-C5	5.17	107.47	105.40
24	1H	1773	A	C5-C6-N6	-5.17	119.56	123.70
24	1H	2747	G	N1-C6-O6	5.17	123.00	119.90
24	14	450	G	N9-C4-C5	-5.17	103.33	105.40
24	14	2276	G	N3-C2-N2	-5.17	116.28	119.90
25	1J	81	G	O4'-C1'-N9	5.17	112.34	108.20
24	1H	1800	C	C5-C6-N1	5.17	123.59	121.00
24	14	298	G	C8-N9-C4	-5.17	104.33	106.40
24	14	2452	C	O5'-P-OP2	-5.17	101.04	105.70
27	19	54	ARG	NE-CZ-NH1	-5.17	117.71	120.30
1	13	691	G	N3-C4-N9	5.17	129.10	126.00
24	1H	144	C	C5-C6-N1	-5.17	118.41	121.00
24	1H	205	G	N7-C8-N9	-5.17	110.52	113.10
24	1H	1011	G	N3-C2-N2	-5.17	116.28	119.90
24	1H	1161	C	O5'-P-OP1	-5.17	101.05	105.70
24	1H	1291	C	C5-C6-N1	-5.17	118.41	121.00
24	1H	2447	G	N1-C6-O6	5.17	123.00	119.90
1	1G	668	G	N3-C2-N2	-5.17	116.28	119.90
24	14	669	G	C8-N9-C4	-5.17	104.33	106.40
24	14	912	C	O5'-P-OP1	-5.17	101.05	105.70
24	14	1856	G	N1-C6-O6	-5.17	116.80	119.90
24	14	2280	G	C8-N9-C4	5.17	108.47	106.40
24	1H	1298	C	N3-C4-C5	5.17	123.97	121.90
24	1H	2375	G	N7-C8-N9	-5.17	110.52	113.10
35	78	59	LEU	CA-CB-CG	5.17	127.19	115.30
25	1J	114	G	C4-N9-C1'	-5.17	119.78	126.50
24	1H	536	A	C6-N1-C2	-5.17	115.50	118.60
24	1H	1614	A	C4-C5-C6	5.17	119.58	117.00
24	1H	2373	G	C6-N1-C2	-5.17	122.00	125.10
25	16	114	G	N3-C4-C5	5.17	131.18	128.60
1	1G	115	G	O5'-P-OP2	-5.17	101.05	105.70
1	1G	130	A	C6-C5-N7	-5.17	128.68	132.30
22	2L	12	C	C2-N1-C1'	5.17	124.48	118.80
22	2L	12	C	O4'-C1'-N1	5.17	112.33	108.20
24	14	613	U	N3-C4-O4	-5.17	115.78	119.40
24	14	632	A	N7-C8-N9	5.17	116.38	113.80
24	14	859	G	O5'-P-OP2	-5.17	101.05	105.70
24	14	1681	G	N3-C4-N9	-5.17	122.90	126.00
24	14	1969	A	OP1-P-OP2	-5.17	111.85	119.60
24	14	2078	C	O5'-P-OP2	5.17	116.90	110.70
24	14	2394	C	N1-C2-O2	5.17	122.00	118.90
24	14	2824	C	N1-C2-O2	-5.17	115.80	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	19	60	ARG	NE-CZ-NH2	-5.17	117.72	120.30
24	1H	1013	C	N3-C2-O2	5.17	125.52	121.90
24	1H	1266	G	C6-C5-N7	-5.17	127.30	130.40
24	1H	2271	G	C5-C6-O6	-5.17	125.50	128.60
24	1H	2701	C	OP1-P-O3'	-5.17	93.83	105.20
1	1G	967	C	N3-C4-C5	5.17	123.97	121.90
24	14	700	G	OP2-P-O3'	5.17	116.57	105.20
24	14	1884	A	C5-C6-N6	-5.17	119.57	123.70
24	1H	684	G	N9-C4-C5	5.17	107.47	105.40
24	1H	1219	G	C5-C6-N1	5.17	114.08	111.50
24	1H	1256	G	N1-C6-O6	5.17	123.00	119.90
24	1H	1543	A	C5-N7-C8	-5.17	101.32	103.90
24	1H	1839	G	C6-C5-N7	-5.17	127.30	130.40
24	1H	1934	C	C5-C6-N1	-5.17	118.42	121.00
24	1H	2581	G	C5-C6-O6	5.17	131.70	128.60
24	14	1599	C	N3-C2-O2	-5.17	118.28	121.90
24	14	1644	C	C2-N1-C1'	5.17	124.48	118.80
1	13	803	G	C5-C6-O6	5.16	131.70	128.60
24	1H	113	G	N1-C2-N3	5.16	127.00	123.90
24	1H	200	U	C4-C5-C6	5.16	122.80	119.70
24	1H	205	G	C2-N3-C4	5.16	114.48	111.90
24	1H	1155	A	N9-C4-C5	5.16	107.87	105.80
24	1H	2286	A	N7-C8-N9	5.16	116.38	113.80
24	1H	2433	A	C2-N3-C4	-5.16	108.02	110.60
24	1H	2591	C	OP2-P-O3'	5.16	116.56	105.20
1	1G	1499	A	O5'-P-OP1	-5.16	101.05	105.70
24	1H	273	G	C8-N9-C4	5.16	108.47	106.40
24	1H	2264	C	C5-C6-N1	5.16	123.58	121.00
1	1G	1199	U	C6-N1-C1'	5.16	128.43	121.20
24	14	741	G	N9-C4-C5	5.16	107.47	105.40
24	14	769	G	C8-N9-C4	5.16	108.47	106.40
1	13	244	U	N1-C2-O2	5.16	126.41	122.80
24	1H	601	C	C2-N3-C4	-5.16	117.32	119.90
24	1H	618	G	N1-C6-O6	-5.16	116.80	119.90
24	1H	856	C	C5-C6-N1	5.16	123.58	121.00
24	1H	944	G	O5'-P-OP2	-5.16	101.06	105.70
24	1H	1144	G	N1-C6-O6	-5.16	116.80	119.90
24	1H	1294	U	N3-C2-O2	5.16	125.81	122.20
24	1H	2538	C	OP1-P-OP2	5.16	127.34	119.60
24	1H	2751	G	C5-N7-C8	-5.16	101.72	104.30
1	1G	1205	U	N3-C4-O4	5.16	123.01	119.40
24	14	456	C	N3-C2-O2	5.16	125.51	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	775	G	N3-C2-N2	5.16	123.51	119.90
24	14	783	A	N3-C4-N9	-5.16	123.27	127.40
24	14	1255	U	N1-C2-O2	5.16	126.41	122.80
24	14	1664	A	C4-C5-C6	5.16	119.58	117.00
24	14	1846	G	C6-C5-N7	-5.16	127.30	130.40
24	14	1971	A	C4-C5-C6	5.16	119.58	117.00
1	13	1157	A	P-O3'-C3'	5.16	125.89	119.70
24	1H	283	A	N1-C6-N6	-5.16	115.50	118.60
24	1H	473	G	O5'-P-OP2	-5.16	101.06	105.70
24	1H	1798	U	OP1-P-OP2	5.16	127.34	119.60
24	1H	2329	G	C5-N7-C8	5.16	106.88	104.30
47	J8	40	ARG	NE-CZ-NH1	5.16	122.88	120.30
1	1G	281	G	N3-C4-N9	5.16	129.09	126.00
24	1H	1437	C	C2-N1-C1'	5.16	124.47	118.80
24	1H	2082	A	C2-N3-C4	-5.16	108.02	110.60
24	1H	2259	G	N1-C6-O6	5.16	122.99	119.90
24	14	410	G	O5'-P-OP2	5.16	116.89	110.70
24	14	463	G	OP1-P-O3'	5.16	116.55	105.20
24	14	2365	G	OP2-P-O3'	5.16	116.55	105.20
24	1H	965	C	N3-C2-O2	-5.16	118.29	121.90
24	1H	1473	G	O5'-P-OP2	-5.16	101.06	105.70
24	1H	1690	A	C4-C5-C6	5.16	119.58	117.00
24	1H	1828	G	C8-N9-C4	5.16	108.46	106.40
24	1H	2340	G	C8-N9-C4	5.16	108.46	106.40
1	1G	1082	G	N3-C4-N9	-5.16	122.91	126.00
1	1G	1500	A	C5-N7-C8	-5.16	101.32	103.90
24	14	191	A	C8-N9-C4	5.16	107.86	105.80
24	14	1578	U	C5-C4-O4	5.16	128.99	125.90
24	14	1964	G	O4'-C1'-N9	-5.16	104.08	108.20
24	1H	199	A	N1-C6-N6	-5.15	115.51	118.60
24	1H	1774	C	N3-C4-C5	-5.15	119.84	121.90
24	1H	2060	A	O4'-C1'-N9	5.15	112.32	108.20
24	14	115	C	C2-N3-C4	-5.15	117.32	119.90
24	14	126	A	C6-N1-C2	5.15	121.69	118.60
24	14	531	C	C2-N3-C4	-5.15	117.32	119.90
24	14	2271	G	N9-C4-C5	-5.15	103.34	105.40
1	1G	487	A	C8-N9-C4	5.15	107.86	105.80
24	14	594	U	OP2-P-O3'	5.15	116.53	105.20
24	14	1858	G	N3-C4-C5	-5.15	126.02	128.60
24	1H	254	G	C6-C5-N7	-5.15	127.31	130.40
24	1H	453	C	O5'-P-OP2	5.15	116.88	110.70
24	1H	630	G	N9-C4-C5	-5.15	103.34	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	698	C	OP1-P-OP2	5.15	127.33	119.60
1	1G	1517	G	O5'-P-OP1	5.15	116.88	110.70
24	14	329	G	N3-C4-N9	5.15	129.09	126.00
24	14	330	A	C6-C5-N7	-5.15	128.69	132.30
24	14	621	A	C6-N1-C2	5.15	121.69	118.60
24	14	746	A	O4'-C1'-N9	5.15	112.32	108.20
24	14	1022	G	C6-N1-C2	-5.15	122.01	125.10
1	13	1336	C	N3-C2-O2	-5.15	118.30	121.90
24	1H	2492	U	C2-N1-C1'	5.15	123.88	117.70
24	14	569	U	N1-C2-N3	5.15	117.99	114.90
24	14	2278	A	C6-N1-C2	-5.15	115.51	118.60
24	1H	634	C	O5'-P-OP2	-5.15	101.07	105.70
24	1H	1278	A	N7-C8-N9	-5.15	111.23	113.80
24	1H	2270	G	N1-C2-N2	-5.15	111.57	116.20
25	16	92	G	OP2-P-O3'	5.15	116.53	105.20
1	1G	24	U	N3-C4-O4	5.15	123.00	119.40
1	1G	552	U	OP2-P-O3'	5.15	116.53	105.20
24	14	541	C	C2-N1-C1'	5.15	124.46	118.80
24	14	827	U	N1-C2-O2	-5.15	119.20	122.80
24	14	1880	C	C5-C6-N1	-5.15	118.43	121.00
1	13	365	U	C6-N1-C1'	-5.15	114.00	121.20
24	1H	768	G	O5'-P-OP2	-5.15	101.07	105.70
25	16	72	G	O5'-P-OP1	-5.15	101.07	105.70
24	14	2346	A	C1'-O4'-C4'	-5.15	105.78	109.90
24	1H	673	C	N3-C2-O2	5.14	125.50	121.90
24	1H	1611	C	OP2-P-O3'	5.14	116.52	105.20
24	1H	2346	A	P-O3'-C3'	5.14	125.87	119.70
24	1H	2576	G	N9-C4-C5	-5.14	103.34	105.40
1	1G	500	G	N1-C6-O6	-5.14	116.81	119.90
24	14	61	G	C8-N9-C1'	-5.14	120.31	127.00
24	14	129	C	N3-C4-C5	5.14	123.96	121.90
24	14	1350	C	C6-N1-C2	5.14	122.36	120.30
24	14	1775	U	N3-C4-C5	5.14	117.69	114.60
1	13	560	U	C5-C6-N1	5.14	125.27	122.70
24	1H	444	C	N3-C4-C5	5.14	123.96	121.90
24	1H	801	G	C4-N9-C1'	-5.14	119.81	126.50
24	1H	1122	G	C6-C5-N7	-5.14	127.31	130.40
24	1H	2707	G	C6-N1-C2	-5.14	122.01	125.10
1	1G	91	C	C5-C6-N1	5.14	123.57	121.00
1	1G	1374	A	C5-C6-N1	-5.14	115.13	117.70
22	3L	55	U	O4'-C1'-N1	5.14	112.31	108.20
24	14	442	G	N1-C6-O6	-5.14	116.81	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	1230	C	C6-N1-C2	5.14	122.36	120.30
24	14	1559	G	N9-C4-C5	-5.14	103.34	105.40
24	14	1679	U	N1-C2-N3	5.14	117.99	114.90
24	14	2637	U	N3-C4-C5	-5.14	111.52	114.60
1	13	401	C	N3-C4-N4	5.14	121.60	118.00
23	4K	13	A	N9-C4-C5	5.14	107.86	105.80
24	1H	1819	A	N1-C2-N3	5.14	131.87	129.30
24	1H	1950	G	N9-C4-C5	5.14	107.46	105.40
24	1H	2250	G	C8-N9-C4	-5.14	104.34	106.40
1	1G	61	G	C5-C6-N1	-5.14	108.93	111.50
24	14	2330	G	N1-C6-O6	5.14	122.98	119.90
24	14	2619	C	N3-C4-C5	5.14	123.96	121.90
1	13	704	A	N1-C2-N3	-5.14	126.73	129.30
1	13	1527	C	C2-N3-C4	-5.14	117.33	119.90
24	1H	691	C	O5'-P-OP1	5.14	116.87	110.70
24	1H	1029	A	N1-C6-N6	5.14	121.68	118.60
24	1H	1915	U	C5-C6-N1	5.14	125.27	122.70
24	1H	2716	U	N3-C4-O4	5.14	123.00	119.40
24	14	1383	C	C6-N1-C2	5.14	122.36	120.30
24	14	1906	G	C5-N7-C8	-5.14	101.73	104.30
24	1H	317	G	OP1-P-O3'	5.14	116.50	105.20
24	1H	2259	G	C5-C6-O6	-5.14	125.52	128.60
24	1H	2453	A	C5-C6-N1	5.14	120.27	117.70
24	1H	2486	G	C6-N1-C2	-5.14	122.02	125.10
1	13	1303	C	C6-N1-C2	-5.14	118.25	120.30
24	1H	128	C	C4-C5-C6	-5.14	114.83	117.40
24	1H	913	U	O5'-P-OP1	5.14	116.86	110.70
25	16	100	G	N9-C4-C5	-5.14	103.35	105.40
24	14	636	G	O5'-P-OP1	-5.14	101.08	105.70
1	13	881	G	N7-C8-N9	-5.13	110.53	113.10
1	13	1240	U	P-O3'-C3'	5.13	125.86	119.70
24	1H	742	G	C5-C6-O6	-5.13	125.52	128.60
24	1H	1187	G	OP2-P-O3'	5.13	116.50	105.20
24	1H	1424	G	N1-C6-O6	5.13	122.98	119.90
24	1H	2062	A	C2-N3-C4	5.13	113.17	110.60
27	11	73	VAL	CB-CA-C	-5.13	101.64	111.40
1	1G	44	G	C8-N9-C4	-5.13	104.35	106.40
22	3L	9	U	N1-C2-O2	5.13	126.39	122.80
24	14	83	G	N1-C6-O6	5.13	122.98	119.90
24	14	1979	C	C4-C5-C6	5.13	119.97	117.40
24	14	2637	U	N3-C4-O4	5.13	122.99	119.40
24	1H	786	C	C2-N1-C1'	-5.13	113.15	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1975	G	OP1-P-O3'	5.13	116.49	105.20
24	1H	2690	C	N3-C4-C5	-5.13	119.85	121.90
1	1G	264	U	C5-C4-O4	-5.13	122.82	125.90
1	1G	584	G	OP2-P-O3'	5.13	116.49	105.20
1	13	823	G	C8-N9-C4	5.13	108.45	106.40
1	13	1205	U	C5-C4-O4	5.13	128.98	125.90
1	13	1482	G	C5-C6-N1	-5.13	108.93	111.50
24	1H	1967	C	C4-C5-C6	5.13	119.97	117.40
24	1H	2518	A	C8-N9-C4	-5.13	103.75	105.80
24	14	1364	G	C2-N3-C4	5.13	114.47	111.90
24	14	2459	A	O5'-P-OP2	-5.13	101.08	105.70
24	1H	270(Y)	G	C4-C5-N7	-5.13	108.75	110.80
24	1H	2449	U	N3-C4-O4	5.13	122.99	119.40
1	1G	590	C	C6-N1-C2	-5.13	118.25	120.30
1	1G	697	U	C5-C6-N1	-5.13	120.14	122.70
24	14	717	G	N1-C6-O6	5.13	122.98	119.90
24	14	870	A	O5'-P-OP2	-5.13	101.08	105.70
24	14	1248	G	N9-C4-C5	5.13	107.45	105.40
1	13	854	G	O5'-P-OP2	5.13	116.85	110.70
22	2K	19	C	N1-C2-O2	5.13	121.98	118.90
24	1H	388	G	C5-C6-O6	-5.13	125.52	128.60
24	1H	468	G	N3-C2-N2	-5.13	116.31	119.90
24	1H	636	G	O5'-P-OP2	5.13	116.85	110.70
24	1H	852	G	N3-C4-C5	-5.13	126.03	128.60
24	1H	920	G	N7-C8-N9	-5.13	110.54	113.10
24	1H	2440	C	O5'-P-OP2	5.13	116.86	110.70
25	16	6	C	C6-N1-C2	5.13	122.35	120.30
1	1G	1126	U	P-O3'-C3'	5.13	125.85	119.70
24	14	21	A	N1-C6-N6	5.13	121.68	118.60
24	14	617	G	C8-N9-C4	5.13	108.45	106.40
1	13	234	C	O5'-P-OP1	-5.13	101.09	105.70
24	1H	261	G	C5-C6-O6	-5.13	125.52	128.60
24	1H	456	C	OP2-P-O3'	5.13	116.48	105.20
45	H8	76	LEU	CA-CB-CG	5.13	127.09	115.30
1	1G	975	A	C2-N3-C4	-5.13	108.04	110.60
24	14	195	A	O5'-P-OP1	5.13	116.85	110.70
24	1H	1663	C	C2-N3-C4	-5.12	117.34	119.90
1	1G	1469	G	N1-C6-O6	5.12	122.97	119.90
24	14	839	U	N3-C4-O4	-5.12	115.81	119.40
24	14	2441	C	C4-C5-C6	5.12	119.96	117.40
25	1J	81	G	N1-C2-N2	-5.12	111.59	116.20
1	13	760	G	N3-C2-N2	-5.12	116.31	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	675	A	N1-C6-N6	5.12	121.67	118.60
24	1H	682	G	O4'-C1'-N9	-5.12	104.10	108.20
24	1H	1325	G	C6-N1-C2	-5.12	122.03	125.10
24	1H	1965	C	N3-C4-C5	5.12	123.95	121.90
24	1H	2647	U	C5-C6-N1	-5.12	120.14	122.70
22	3L	85	A	C8-N9-C4	5.12	107.85	105.80
24	14	1989	G	N3-C2-N2	-5.12	116.31	119.90
24	14	2526	G	N3-C2-N2	-5.12	116.31	119.90
1	13	1402	C	C2-N1-C1'	-5.12	113.17	118.80
24	1H	1307	A	C6-C5-N7	-5.12	128.72	132.30
24	1H	1407	C	O5'-P-OP2	-5.12	101.09	105.70
1	13	1338	G	N1-C6-O6	-5.12	116.83	119.90
24	1H	671	C	N3-C4-N4	-5.12	114.42	118.00
24	1H	2258	C	O5'-P-OP1	-5.12	101.09	105.70
24	1H	2447	G	O4'-C1'-N9	5.12	112.30	108.20
24	1H	2763	G	N3-C2-N2	5.12	123.48	119.90
24	14	212	G	N7-C8-N9	-5.12	110.54	113.10
24	14	2617	C	C6-N1-C2	5.12	122.35	120.30
1	13	900	A	C8-N9-C4	5.12	107.85	105.80
1	13	1371	G	O5'-P-OP2	5.12	116.84	110.70
24	1H	979	G	C5-N7-C8	-5.12	101.74	104.30
24	1H	2342	C	C2-N1-C1'	5.12	124.43	118.80
24	1H	2464	C	N3-C4-C5	5.12	123.95	121.90
25	16	7	G	N7-C8-N9	5.12	115.66	113.10
1	1G	724	G	N1-C6-O6	5.12	122.97	119.90
24	14	796	C	OP2-P-O3'	5.12	116.46	105.20
24	14	1191	G	N7-C8-N9	-5.12	110.54	113.10
24	14	2502	G	N1-C6-O6	-5.12	116.83	119.90
24	14	2575	C	OP2-P-O3'	5.12	116.46	105.20
25	1J	116	G	N3-C4-C5	5.12	131.16	128.60
24	1H	839	U	C5-C4-O4	5.12	128.97	125.90
24	1H	946	G	C5-N7-C8	5.12	106.86	104.30
24	1H	1294	U	N1-C2-O2	-5.12	119.22	122.80
24	1H	1630	G	N1-C6-O6	-5.12	116.83	119.90
24	1H	2444	G	N1-C6-O6	-5.12	116.83	119.90
24	14	2857	G	C8-N9-C4	5.12	108.45	106.40
1	13	244	U	C5-C4-O4	-5.12	122.83	125.90
1	13	579	G	OP2-P-O3'	5.12	116.46	105.20
1	13	700	G	N9-C4-C5	5.12	107.45	105.40
1	13	970	C	C2-N1-C1'	5.12	124.43	118.80
1	13	1484	C	OP1-P-OP2	5.12	127.27	119.60
1	1G	911	U	N3-C4-C5	-5.12	111.53	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	961	U	C5-C6-N1	-5.12	120.14	122.70
1	1G	972	C	C5-C6-N1	5.12	123.56	121.00
24	14	820	A	C2-N3-C4	5.12	113.16	110.60
24	14	2506	U	N1-C1'-C2'	5.12	120.65	114.00
24	14	2611	U	O5'-C5'-C4'	5.12	121.42	111.70
1	13	1502	A	N1-C6-N6	5.11	121.67	118.60
24	1H	652	C	C5-C6-N1	5.11	123.56	121.00
24	1H	749	C	N3-C4-C5	-5.11	119.86	121.90
24	1H	2232	U	C4-C5-C6	5.11	122.77	119.70
25	16	70	C	N3-C2-O2	-5.11	118.32	121.90
1	1G	920	U	C5-C6-N1	-5.11	120.14	122.70
6	52	80	ARG	NE-CZ-NH1	-5.11	117.74	120.30
24	14	819	A	C6-N1-C2	-5.11	115.53	118.60
24	14	1029	A	O5'-P-OP1	5.11	116.84	110.70
24	14	1255	U	N3-C2-O2	-5.11	118.62	122.20
24	14	1328	G	N1-C6-O6	5.11	122.97	119.90
24	14	1697	G	C4-C5-N7	5.11	112.84	110.80
24	14	2509	G	OP2-P-O3'	5.11	116.45	105.20
24	14	2576	G	N7-C8-N9	-5.11	110.54	113.10
25	1J	86	G	C8-N9-C4	5.11	108.44	106.40
36	45	51	ARG	NE-CZ-NH1	-5.11	117.74	120.30
22	2K	20	C	N3-C2-O2	-5.11	118.32	121.90
24	1H	1153	C	N1-C2-O2	-5.11	115.83	118.90
24	14	615	G	C6-C5-N7	5.11	133.47	130.40
24	14	1291	C	OP2-P-O3'	5.11	116.45	105.20
24	14	1298	C	N3-C2-O2	-5.11	118.32	121.90
1	13	1519	A	C5-C6-N6	5.11	127.79	123.70
24	1H	451	C	OP2-P-O3'	5.11	116.44	105.20
24	1H	587	C	C2-N1-C1'	-5.11	113.18	118.80
24	1H	1934	C	OP2-P-O3'	5.11	116.44	105.20
1	1G	337	C	C5-C4-N4	-5.11	116.62	120.20
1	1G	823	G	O5'-P-OP1	-5.11	101.10	105.70
24	14	2061	G	OP2-P-O3'	5.11	116.44	105.20
24	1H	918	A	N7-C8-N9	5.11	116.36	113.80
24	14	1244	G	N1-C6-O6	5.11	122.97	119.90
24	14	1566	A	N3-C4-C5	5.11	130.38	126.80
1	13	920	U	C5-C6-N1	5.11	125.25	122.70
1	13	1099	G	C4-C5-N7	-5.11	108.76	110.80
24	1H	458	G	C6-C5-N7	5.11	133.47	130.40
24	1H	606	U	O4'-C1'-N1	5.11	112.28	108.20
24	1H	782	A	N1-C2-N3	5.11	131.85	129.30
24	1H	1184	G	OP2-P-O3'	5.11	116.44	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1227	A	N7-C8-N9	-5.11	111.25	113.80
24	1H	2284	C	N3-C2-O2	5.11	125.47	121.90
24	1H	2463	C	C6-N1-C2	5.11	122.34	120.30
25	16	40	U	N1-C2-O2	5.11	126.38	122.80
1	1G	1227	A	C8-N9-C4	-5.11	103.76	105.80
24	14	66	C	C5-C6-N1	5.11	123.55	121.00
24	14	978	G	OP1-P-O3'	5.11	116.44	105.20
24	14	1696	G	C2-N3-C4	5.11	114.45	111.90
24	14	1802	A	OP1-P-OP2	5.11	127.26	119.60
24	14	2042	A	C4-C5-C6	-5.11	114.45	117.00
1	13	10	A	OP1-P-O3'	5.11	116.43	105.20
24	1H	946	G	N3-C4-N9	-5.11	122.94	126.00
24	1H	1158	C	N3-C2-O2	-5.11	118.33	121.90
24	1H	1226	G	C5-C6-O6	5.11	131.66	128.60
24	1H	1286	A	OP2-P-O3'	5.11	116.43	105.20
24	1H	1983	C	C5-C6-N1	-5.11	118.45	121.00
24	1H	2589	A	O5'-P-OP2	5.11	116.83	110.70
1	1G	20	U	C5-C6-N1	-5.11	120.15	122.70
1	1G	616	G	N1-C6-O6	5.11	122.96	119.90
24	14	985	C	OP2-P-O3'	5.11	116.43	105.20
24	14	1209	G	OP1-P-OP2	5.11	127.26	119.60
24	14	1265	A	C5-C6-N6	-5.11	119.62	123.70
24	14	2253	G	N1-C6-O6	5.11	122.96	119.90
24	1H	245	G	C4-N9-C1'	5.10	133.13	126.50
24	1H	794	G	C5-C6-O6	5.10	131.66	128.60
24	1H	1471	A	C8-N9-C4	-5.10	103.76	105.80
24	1H	2251	G	N1-C6-O6	5.10	122.96	119.90
25	1J	14	U	OP1-P-OP2	5.10	127.25	119.60
1	13	326	G	C5-C6-O6	5.10	131.66	128.60
1	13	1513	A	C4-C5-N7	5.10	113.25	110.70
1	13	1517	G	O5'-P-OP1	5.10	116.82	110.70
24	1H	622	G	N3-C2-N2	5.10	123.47	119.90
24	1H	1607	C	O5'-P-OP2	-5.10	101.11	105.70
24	1H	1678	G	N1-C6-O6	5.10	122.96	119.90
1	1G	1532	U	C5-C6-N1	5.10	125.25	122.70
24	14	138	G	C2-N3-C4	5.10	114.45	111.90
24	14	1812	A	C6-N1-C2	-5.10	115.54	118.60
24	14	2612	C	C2-N1-C1'	5.10	124.41	118.80
1	13	919	A	C6-N1-C2	-5.10	115.54	118.60
1	13	1500	A	N1-C2-N3	5.10	131.85	129.30
24	1H	859	G	C4-C5-N7	5.10	112.84	110.80
24	14	139	G	O5'-P-OP1	-5.10	101.11	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2589	A	C8-N9-C4	5.10	107.84	105.80
1	13	290	C	C2-N1-C1'	-5.10	113.19	118.80
1	13	766	A	N7-C8-N9	-5.10	111.25	113.80
1	13	805	C	C6-N1-C2	-5.10	118.26	120.30
24	1H	1240	U	O5'-P-OP2	-5.10	101.11	105.70
24	1H	1769	G	C2-N3-C4	5.10	114.45	111.90
24	1H	2512	C	C2-N1-C1'	-5.10	113.19	118.80
24	1H	2685	G	N9-C4-C5	5.10	107.44	105.40
24	1H	2778	A	O5'-P-OP2	-5.10	101.11	105.70
1	1G	523	A	O5'-P-OP1	-5.10	101.11	105.70
24	14	824	A	C5-C6-N1	5.10	120.25	117.70
24	14	1673	U	C5-C6-N1	-5.10	120.15	122.70
24	14	1966	A	N7-C8-N9	-5.10	111.25	113.80
24	14	2326	C	N3-C4-C5	-5.10	119.86	121.90
24	14	2783	G	OP2-P-O3'	5.10	116.42	105.20
28	29	51	PHE	N-CA-C	5.10	124.77	111.00
24	1H	14	A	O5'-P-OP1	-5.10	101.11	105.70
24	14	137	C	C6-N1-C2	-5.10	118.26	120.30
24	14	139	G	C5-C6-O6	5.10	131.66	128.60
24	14	392	C	C5-C4-N4	-5.10	116.63	120.20
24	14	750	A	N7-C8-N9	5.10	116.35	113.80
24	14	774	A	OP2-P-O3'	5.10	116.41	105.20
24	14	1755	A	N1-C6-N6	-5.10	115.54	118.60
24	14	2056	G	C8-N9-C1'	-5.10	120.37	127.00
24	14	2333	A	C4-C5-N7	-5.10	108.15	110.70
1	13	320	C	OP2-P-O3'	5.10	116.41	105.20
24	1H	510	C	C2-N1-C1'	-5.10	113.19	118.80
24	1H	609(A)	G	N9-C4-C5	-5.10	103.36	105.40
24	1H	1126	A	C2-N3-C4	-5.10	108.05	110.60
24	1H	1883	G	N9-C4-C5	-5.10	103.36	105.40
24	14	751	A	C5-C6-N6	-5.10	119.62	123.70
24	14	2680	C	O5'-P-OP2	-5.10	101.11	105.70
25	1J	18	G	C5-C6-N1	-5.10	108.95	111.50
24	1H	1816	G	C6-C5-N7	5.09	133.46	130.40
24	1H	2293	C	N3-C2-O2	-5.09	118.33	121.90
24	1H	2614	A	C2-N3-C4	5.09	113.15	110.60
24	1H	2648	C	N1-C2-O2	-5.09	115.84	118.90
24	1H	2763	G	N3-C4-N9	5.09	129.06	126.00
24	14	213	A	N1-C2-N3	-5.09	126.75	129.30
24	14	1284	A	C5-N7-C8	-5.09	101.35	103.90
24	14	1649	G	N1-C2-N3	5.09	126.96	123.90
24	14	2847	U	N3-C2-O2	5.09	125.77	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	771	G	N3-C2-N2	-5.09	116.33	119.90
1	13	895	G	N9-C4-C5	5.09	107.44	105.40
9	8E	47	LEU	CA-CB-CG	5.09	127.01	115.30
24	1H	607	U	C2-N1-C1'	-5.09	111.59	117.70
24	1H	2250	G	N9-C4-C5	5.09	107.44	105.40
53	P8	28	ARG	NE-CZ-NH1	5.09	122.85	120.30
1	1G	505	G	O5'-P-OP1	-5.09	101.12	105.70
1	1G	1424	C	C6-N1-C2	-5.09	118.26	120.30
24	14	1913	A	N1-C6-N6	-5.09	115.54	118.60
24	14	2583	G	N3-C2-N2	-5.09	116.33	119.90
24	1H	497	A	N1-C6-N6	5.09	121.66	118.60
24	1H	2073	C	N1-C2-O2	-5.09	115.84	118.90
25	16	12	C	C5-C6-N1	-5.09	118.45	121.00
24	14	331	A	N9-C4-C5	5.09	107.84	105.80
24	14	603	A	C4-N9-C1'	5.09	135.47	126.30
24	14	1246	A	C8-N9-C4	5.09	107.84	105.80
24	14	1327	C	C6-N1-C1'	5.09	126.91	120.80
1	13	552	U	O5'-P-OP1	5.09	116.81	110.70
1	13	575	G	N1-C2-N2	-5.09	111.62	116.20
1	13	924	C	OP1-P-OP2	5.09	127.23	119.60
24	1H	481	G	C5-C6-O6	-5.09	125.55	128.60
24	1H	2595	G	C4-C5-C6	-5.09	115.75	118.80
1	1G	362	G	N3-C2-N2	-5.09	116.34	119.90
1	1G	817	C	C2-N3-C4	-5.09	117.36	119.90
24	14	636	G	C2-N3-C4	5.09	114.44	111.90
24	14	659	C	C5-C6-N1	-5.09	118.46	121.00
24	14	1803	A	OP2-P-O3'	5.09	116.40	105.20
24	14	2562	U	C2-N3-C4	-5.09	123.95	127.00
24	1H	462	C	N3-C4-C5	5.09	123.94	121.90
24	1H	1647	G	C5-C6-O6	5.09	131.65	128.60
25	16	98	G	OP1-P-OP2	5.09	127.23	119.60
1	1G	341	C	C6-N1-C2	5.09	122.33	120.30
24	1H	922	U	N3-C2-O2	5.09	125.76	122.20
32	61	123	LEU	CA-CB-CG	5.09	127.00	115.30
1	1G	578	C	OP2-P-O3'	5.09	116.39	105.20
24	14	88	G	O5'-P-OP1	-5.09	101.12	105.70
24	14	240	G	N3-C2-N2	-5.09	116.34	119.90
24	14	1290	C	OP1-P-O3'	5.09	116.39	105.20
24	14	1769	G	N3-C4-C5	-5.09	126.06	128.60
24	14	1836	C	OP1-P-O3'	5.09	116.39	105.20
24	1H	142	G	N3-C2-N2	-5.08	116.34	119.90
24	1H	1328	G	N3-C2-N2	5.08	123.46	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	1850	G	C5-C6-N1	-5.08	108.96	111.50
24	1H	2018	G	C8-N9-C4	-5.08	104.37	106.40
24	1H	2454	G	N1-C6-O6	-5.08	116.85	119.90
1	1G	785	G	N3-C2-N2	-5.08	116.34	119.90
24	14	1461	G	N3-C4-C5	5.08	131.14	128.60
24	14	2424	C	C6-N1-C2	-5.08	118.27	120.30
1	13	888	G	C2-N3-C4	-5.08	109.36	111.90
24	1H	917	A	C5-N7-C8	-5.08	101.36	103.90
24	1H	1123	C	N3-C4-C5	-5.08	119.87	121.90
24	1H	1999	C	C2-N3-C4	-5.08	117.36	119.90
24	1H	2225	A	C8-N9-C4	5.08	107.83	105.80
24	1H	2446	G	C5-C6-O6	-5.08	125.55	128.60
24	14	966	G	C4-C5-C6	-5.08	115.75	118.80
24	14	2593	U	O5'-P-OP1	5.08	116.80	110.70
24	14	2703	C	C6-N1-C2	-5.08	118.27	120.30
1	13	1094	G	C4-C5-N7	-5.08	108.77	110.80
1	13	1487	G	C8-N9-C4	5.08	108.43	106.40
1	13	1502	A	N9-C1'-C2'	5.08	120.61	114.00
24	1H	569	U	N1-C2-O2	-5.08	119.24	122.80
24	1H	1824	G	OP2-P-O3'	5.08	116.38	105.20
24	14	1318	C	OP1-P-OP2	-5.08	111.98	119.60
24	1H	190	A	N1-C2-N3	-5.08	126.76	129.30
24	1H	241	A	C6-N1-C2	-5.08	115.55	118.60
24	1H	1251	C	C4-C5-C6	5.08	119.94	117.40
24	1H	2275	C	N3-C4-C5	-5.08	119.87	121.90
47	J8	82	LEU	CA-CB-CG	5.08	126.98	115.30
1	1G	114	U	O5'-P-OP2	-5.08	101.13	105.70
22	2L	24	G	N3-C4-N9	-5.08	122.95	126.00
24	1H	1002	G	N1-C6-O6	5.08	122.95	119.90
24	1H	1588	C	N3-C4-C5	5.08	123.93	121.90
24	1H	2441	C	OP1-P-OP2	-5.08	111.98	119.60
25	16	5	C	N1-C2-O2	5.08	121.95	118.90
24	14	556	G	C4-N9-C1'	5.08	133.10	126.50
24	14	585	G	N1-C6-O6	5.08	122.95	119.90
24	14	2765	A	N1-C6-N6	5.08	121.65	118.60
1	13	766	A	C5-C6-N6	-5.08	119.64	123.70
24	1H	595	C	OP2-P-O3'	5.08	116.37	105.20
24	1H	2068	U	O5'-P-OP1	-5.08	101.13	105.70
1	1G	1185	G	C8-N9-C4	5.08	108.43	106.40
1	1G	1505	G	C5-C6-N1	-5.08	108.96	111.50
24	14	1128	A	OP2-P-O3'	5.08	116.37	105.20
24	14	1694	C	C5-C6-N1	-5.08	118.46	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	300	A	O5'-P-OP1	-5.08	101.13	105.70
1	1G	1149	C	C6-N1-C2	-5.08	118.27	120.30
24	14	48	G	OP2-P-O3'	5.08	116.37	105.20
24	14	854	G	OP1-P-OP2	-5.08	111.99	119.60
24	14	1327	C	C2-N1-C1'	-5.08	113.22	118.80
24	14	2766	G	N3-C4-N9	5.08	129.04	126.00
1	13	320	C	C2-N1-C1'	-5.07	113.22	118.80
1	13	652	U	N3-C2-O2	-5.07	118.65	122.20
24	1H	116	C	N3-C4-N4	5.07	121.55	118.00
24	1H	522	G	N1-C6-O6	5.07	122.94	119.90
24	1H	658	C	O5'-P-OP2	-5.07	101.13	105.70
24	1H	1670	C	N1-C2-O2	-5.07	115.86	118.90
24	1H	1795	C	C5-C6-N1	-5.07	118.46	121.00
51	N8	16	ARG	NE-CZ-NH1	5.07	122.84	120.30
1	1G	770	C	N3-C4-C5	5.07	123.93	121.90
1	1G	883	C	O5'-P-OP1	-5.07	101.13	105.70
1	1G	1053	G	N3-C4-C5	5.07	131.14	128.60
24	14	51	G	N1-C6-O6	-5.07	116.86	119.90
24	14	479	A	P-O3'-C3'	5.07	125.79	119.70
24	14	1570	A	C8-N9-C4	5.07	107.83	105.80
1	13	933	G	C6-C5-N7	5.07	133.44	130.40
24	14	410	G	C6-C5-N7	-5.07	127.36	130.40
1	13	768	A	OP1-P-OP2	5.07	127.21	119.60
24	1H	640	C	O5'-P-OP2	-5.07	101.14	105.70
24	1H	1274	A	C6-C5-N7	-5.07	128.75	132.30
24	1H	1386	C	O5'-P-OP2	-5.07	101.14	105.70
24	14	1203	G	N1-C6-O6	-5.07	116.86	119.90
24	14	1265	A	C6-C5-N7	-5.07	128.75	132.30
24	14	1620	G	N7-C8-N9	5.07	115.64	113.10
24	14	1728	G	N7-C8-N9	5.07	115.64	113.10
24	14	1964	G	C6-C5-N7	-5.07	127.36	130.40
24	14	2498	C	C2-N3-C4	-5.07	117.36	119.90
24	1H	1962	C	C6-N1-C2	-5.07	118.27	120.30
24	1H	2656	U	N3-C2-O2	-5.07	118.65	122.20
1	13	1065	U	P-O3'-C3'	5.07	125.78	119.70
24	1H	748	G	OP1-P-OP2	-5.07	112.00	119.60
24	1H	859	G	N3-C4-N9	-5.07	122.96	126.00
24	1H	1674	G	C8-N9-C1'	-5.07	120.41	127.00
24	1H	2584	U	N1-C2-N3	5.07	117.94	114.90
24	1H	2621	A	C8-N9-C4	5.07	107.83	105.80
1	1G	285	G	N1-C6-O6	5.07	122.94	119.90
24	14	675	A	C4-C5-C6	-5.07	114.47	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	729	G	C4-C5-C6	5.07	121.84	118.80
24	14	1637	A	C4-C5-N7	-5.07	108.17	110.70
1	13	139	G	C8-N9-C4	-5.07	104.37	106.40
24	1H	93	C	C6-N1-C2	-5.07	118.27	120.30
24	1H	111	A	C2-N3-C4	-5.07	108.07	110.60
24	1H	739	G	C8-N9-C4	5.07	108.43	106.40
24	1H	974	G	O4'-C1'-N9	-5.07	104.15	108.20
24	1H	1999	C	N1-C1'-C2'	-5.07	106.43	112.00
24	1H	2083	G	C5-C6-N1	-5.07	108.97	111.50
24	1H	2321	G	O5'-P-OP2	-5.07	101.14	105.70
1	1G	394	G	C8-N9-C4	-5.07	104.37	106.40
1	1G	808	C	N3-C4-N4	-5.07	114.45	118.00
1	1G	889	A	OP1-P-OP2	5.07	127.20	119.60
24	14	429	A	N1-C6-N6	5.07	121.64	118.60
24	14	568	U	C4-C5-C6	5.07	122.74	119.70
24	1H	845	G	C4-N9-C1'	-5.06	119.92	126.50
22	2L	42	U	N3-C2-O2	-5.06	118.66	122.20
24	14	1799	G	O5'-P-OP2	-5.06	101.14	105.70
24	14	1971	A	N3-C4-N9	5.06	131.45	127.40
24	14	2001	A	C5-N7-C8	-5.06	101.37	103.90
1	13	1084	G	N3-C4-N9	5.06	129.04	126.00
1	13	1519	A	OP1-P-OP2	5.06	127.19	119.60
24	1H	755	C	C5-C6-N1	-5.06	118.47	121.00
24	1H	853	G	C5-C6-O6	-5.06	125.56	128.60
24	1H	1863	G	C8-N9-C4	5.06	108.42	106.40
1	1G	831	U	N3-C4-O4	5.06	122.94	119.40
24	14	199	A	C5-C6-N6	-5.06	119.65	123.70
24	14	449	A	C2-N3-C4	-5.06	108.07	110.60
24	14	1197	G	OP2-P-O3'	5.06	116.34	105.20
24	14	1248	G	O5'-P-OP1	5.06	116.78	110.70
24	14	1586	A	C4-N9-C1'	5.06	135.41	126.30
24	14	2268	A	O5'-P-OP1	-5.06	101.14	105.70
41	95	49	THR	N-CA-C	-5.06	97.33	111.00
1	13	893	C	C6-N1-C1'	-5.06	114.73	120.80
24	1H	736	C	C6-N1-C2	5.06	122.32	120.30
24	1H	2507	C	N1-C2-N3	5.06	122.74	119.20
24	1H	2589	A	N7-C8-N9	-5.06	111.27	113.80
1	13	802	A	C6-C5-N7	-5.06	128.76	132.30
4	3E	31	CYS	C-N-CA	5.06	134.35	121.70
24	1H	55	G	N3-C2-N2	-5.06	116.36	119.90
24	1H	81	G	O5'-P-OP1	-5.06	101.15	105.70
24	1H	729	G	N1-C6-O6	5.06	122.94	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	952	G	OP2-P-O3'	5.06	116.33	105.20
24	1H	1662	C	C6-N1-C2	5.06	122.32	120.30
24	1H	2627	G	N1-C6-O6	5.06	122.94	119.90
1	1G	805	C	C5-C6-N1	5.06	123.53	121.00
24	14	57	C	OP2-P-O3'	5.06	116.33	105.20
24	14	1349	A	O4'-C1'-N9	5.06	112.25	108.20
1	13	869	G	N1-C6-O6	5.06	122.94	119.90
24	1H	19	C	C5-C6-N1	-5.06	118.47	121.00
24	1H	1986	A	C6-N1-C2	-5.06	115.57	118.60
24	1H	2192	G	C6-C5-N7	-5.06	127.36	130.40
1	1G	912	C	N3-C2-O2	-5.06	118.36	121.90
24	14	197	A	N3-C4-C5	5.06	130.34	126.80
24	14	205	G	N1-C2-N2	-5.06	111.65	116.20
24	14	358	U	C2-N1-C1'	5.06	123.77	117.70
24	14	445	C	N3-C2-O2	5.06	125.44	121.90
24	14	735	A	N1-C2-N3	5.06	131.83	129.30
24	14	2087	G	N3-C2-N2	5.06	123.44	119.90
24	14	2620	C	C6-N1-C2	5.06	122.32	120.30
24	1H	345	A	O4'-C1'-N9	-5.06	104.16	108.20
24	1H	1934	C	N1-C2-O2	5.06	121.93	118.90
24	1H	1971	A	C4-C5-C6	5.06	119.53	117.00
24	1H	2554	U	C2-N1-C1'	-5.06	111.63	117.70
24	14	1347	G	C6-N1-C2	5.06	128.13	125.10
1	13	737	A	N7-C8-N9	5.05	116.33	113.80
22	2K	19	C	N3-C2-O2	-5.05	118.36	121.90
24	1H	939	G	OP1-P-OP2	5.05	127.18	119.60
24	1H	1320	C	C4-C5-C6	5.05	119.93	117.40
24	1H	1576	U	OP2-P-O3'	5.05	116.32	105.20
24	1H	2259	G	OP1-P-OP2	-5.05	112.02	119.60
24	1H	2393	A	C5-C6-N6	5.05	127.74	123.70
1	1G	33	A	O5'-P-OP1	-5.05	101.15	105.70
24	14	751	A	O5'-P-OP2	5.05	116.77	110.70
24	14	802	A	OP2-P-O3'	5.05	116.32	105.20
24	14	1650	G	C8-N9-C4	-5.05	104.38	106.40
24	14	2607	G	N9-C4-C5	-5.05	103.38	105.40
24	14	1767	C	C2-N3-C4	-5.05	117.37	119.90
24	1H	243	U	N1-C2-O2	5.05	126.34	122.80
24	1H	1200	C	C4-C5-C6	5.05	119.93	117.40
24	1H	2356	C	OP1-P-OP2	-5.05	112.02	119.60
24	1H	2435	A	C5-C6-N1	5.05	120.23	117.70
24	14	37	C	N3-C4-C5	-5.05	119.88	121.90
24	14	189	G	N1-C6-O6	5.05	122.93	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	793	A	C5-C6-N6	-5.05	119.66	123.70
24	14	1318	C	OP1-P-O3'	5.05	116.31	105.20
24	14	2356	C	C4-C5-C6	5.05	119.93	117.40
25	1J	22	U	C5-C6-N1	5.05	125.22	122.70
1	13	647	C	C6-N1-C2	-5.05	118.28	120.30
24	1H	1151	G	C5-C6-O6	-5.05	125.57	128.60
24	1H	1229	G	C8-N9-C4	5.05	108.42	106.40
24	1H	1305	C	C2-N3-C4	-5.05	117.38	119.90
24	1H	2247	A	C5-C6-N6	5.05	127.74	123.70
24	1H	2618	G	OP2-P-O3'	5.05	116.31	105.20
24	14	234	C	N3-C2-O2	-5.05	118.36	121.90
24	14	270(K)	C	C2-N1-C1'	5.05	124.35	118.80
24	14	405	U	N1-C2-O2	5.05	126.33	122.80
24	14	2503	A	N3-C4-N9	5.05	131.44	127.40
1	13	1369	C	O5'-P-OP1	5.05	116.76	110.70
24	1H	1989	G	C4-C5-C6	5.05	121.83	118.80
1	1G	227	G	N9-C4-C5	-5.05	103.38	105.40
1	1G	278	G	C5-C6-N1	5.05	114.02	111.50
24	14	707	G	C6-C5-N7	-5.05	127.37	130.40
24	14	1146	C	C6-N1-C2	-5.05	118.28	120.30
1	13	353	A	OP2-P-O3'	5.05	116.30	105.20
24	1H	577	G	OP1-P-OP2	-5.05	112.03	119.60
24	1H	972	G	N7-C8-N9	-5.05	110.58	113.10
24	1H	2261	C	O5'-P-OP2	-5.05	101.16	105.70
24	1H	2280	G	OP2-P-O3'	-5.05	94.10	105.20
24	1H	2292	C	C2-N1-C1'	5.05	124.35	118.80
24	1H	2297	C	N3-C4-C5	-5.05	119.88	121.90
24	1H	2330	G	O5'-P-OP2	-5.05	101.16	105.70
24	1H	2553	G	N3-C4-N9	5.05	129.03	126.00
1	1G	596	C	C6-N1-C2	5.05	122.32	120.30
22	3L	18	G	O5'-P-OP1	-5.05	101.16	105.70
24	14	199	A	C2-N3-C4	5.05	113.12	110.60
24	14	347	A	N1-C6-N6	-5.05	115.57	118.60
24	14	701	G	C5-C6-N1	-5.05	108.98	111.50
24	14	2073	C	C4-C5-C6	5.05	119.92	117.40
39	75	5	ALA	N-CA-C	-5.05	97.38	111.00
1	13	266	G	N3-C4-C5	5.04	131.12	128.60
1	13	299	G	N3-C4-C5	5.04	131.12	128.60
24	1H	1565	C	N3-C4-C5	5.04	123.92	121.90
24	14	666	G	O5'-P-OP1	5.04	116.75	110.70
24	14	1821	A	C5-C6-N6	-5.04	119.66	123.70
1	13	190	G	C4-C5-N7	5.04	112.82	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	209	C	C5-C6-N1	-5.04	118.48	121.00
24	1H	458	G	C8-N9-C4	-5.04	104.38	106.40
24	1H	928	G	C4-N9-C1'	-5.04	119.94	126.50
24	1H	932	G	C2-N3-C4	5.04	114.42	111.90
24	1H	1574	C	C2-N3-C4	-5.04	117.38	119.90
24	1H	2565	A	N7-C8-N9	-5.04	111.28	113.80
24	14	1588	C	C6-N1-C2	-5.04	118.28	120.30
24	14	1897	G	C5-C6-O6	-5.04	125.57	128.60
24	14	2091	U	C5-C4-O4	5.04	128.93	125.90
23	4K	9	G	N1-C6-O6	-5.04	116.88	119.90
24	1H	752	A	N1-C6-N6	-5.04	115.58	118.60
24	1H	2712	U	C6-N1-C1'	5.04	128.26	121.20
1	1G	1505	G	N1-C6-O6	5.04	122.92	119.90
24	14	1612	C	C5-C6-N1	-5.04	118.48	121.00
24	14	2262	U	O5'-P-OP1	5.04	116.75	110.70
24	14	2386	C	N3-C4-N4	5.04	121.53	118.00
24	14	2590	A	P-O3'-C3'	-5.04	113.65	119.70
1	13	818	G	OP1-P-OP2	5.04	127.16	119.60
24	1H	177	G	O4'-C1'-N9	5.04	112.23	108.20
24	1H	696	G	C8-N9-C4	5.04	108.42	106.40
24	1H	1601	G	OP1-P-O3'	5.04	116.29	105.20
1	1G	884	U	N1-C2-O2	5.04	126.33	122.80
24	14	1581	G	N3-C4-N9	5.04	129.02	126.00
24	1H	910	A	C8-N9-C4	5.04	107.81	105.80
24	1H	2583	G	O5'-P-OP2	-5.04	101.17	105.70
1	1G	563	A	C8-N9-C4	-5.04	103.78	105.80
24	14	713	G	C2-N3-C4	-5.04	109.38	111.90
24	14	2365	G	N9-C4-C5	-5.04	103.39	105.40
24	1H	1607	C	C6-N1-C2	-5.04	118.28	120.30
24	1H	1645	G	C2-N3-C4	5.04	114.42	111.90
24	1H	2275	C	C5'-C4'-O4'	-5.04	103.06	109.10
24	14	703	U	C5-C4-O4	5.04	128.92	125.90
24	14	782	A	N7-C8-N9	-5.04	111.28	113.80
24	14	1216	G	C6-C5-N7	-5.04	127.38	130.40
24	14	1614	A	O4'-C1'-N9	5.04	112.23	108.20
24	14	2624	G	C5-C6-O6	-5.04	125.58	128.60
1	13	1432	G	C6-C5-N7	-5.04	127.38	130.40
24	1H	601	C	N3-C4-C5	5.04	123.91	121.90
24	1H	625	G	N1-C2-N3	-5.04	120.88	123.90
24	1H	1209	G	N3-C2-N2	5.04	123.42	119.90
24	1H	1255	U	N3-C4-O4	5.04	122.92	119.40
1	1G	7	G	C8-N9-C1'	5.04	133.55	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	101	G	O4'-C1'-N9	5.04	112.23	108.20
24	14	965	C	C5-C6-N1	5.04	123.52	121.00
24	14	1807	G	OP1-P-O3'	5.04	116.28	105.20
24	14	1940	U	OP1-P-OP2	-5.04	112.05	119.60
24	1H	758	C	C2-N3-C4	-5.03	117.38	119.90
24	1H	1250	G	N3-C4-N9	5.03	129.02	126.00
24	1H	1325	G	N1-C2-N2	-5.03	111.67	116.20
24	1H	1349	A	C5-N7-C8	-5.03	101.38	103.90
24	1H	2466	C	OP2-P-O3'	5.03	116.27	105.20
1	1G	576	G	C8-N9-C1'	-5.03	120.46	127.00
18	9A	44	LEU	CA-CB-CG	5.03	126.88	115.30
24	14	451	C	OP2-P-O3'	5.03	116.27	105.20
24	14	966	G	C5-C6-O6	5.03	131.62	128.60
24	14	1681	G	N3-C2-N2	-5.03	116.38	119.90
24	14	1829	A	OP1-P-OP2	5.03	127.15	119.60
24	14	2304	G	O5'-P-OP1	-5.03	101.17	105.70
24	1H	911	A	OP1-P-O3'	5.03	116.27	105.20
24	1H	2618	G	N1-C6-O6	-5.03	116.88	119.90
1	1G	894	G	C2-N3-C4	-5.03	109.38	111.90
24	1H	562	U	OP1-P-OP2	5.03	127.14	119.60
24	1H	2325	G	N3-C4-N9	5.03	129.02	126.00
24	14	410	G	C5-C6-O6	-5.03	125.58	128.60
24	14	822	U	C6-N1-C2	-5.03	117.98	121.00
1	13	757	U	O5'-P-OP2	-5.03	101.17	105.70
24	1H	541	C	N3-C4-C5	-5.03	119.89	121.90
24	1H	934	G	OP1-P-OP2	5.03	127.14	119.60
24	1H	1241	A	O4'-C1'-N9	5.03	112.22	108.20
24	14	574	C	OP1-P-O3'	5.03	116.26	105.20
24	14	1255	U	N3-C4-O4	5.03	122.92	119.40
24	14	1838	C	O5'-P-OP2	5.03	116.73	110.70
1	13	251	G	C6-C5-N7	-5.03	127.38	130.40
24	1H	287	C	O5'-P-OP1	5.03	116.73	110.70
24	1H	294	A	C4-C5-C6	5.03	119.51	117.00
24	1H	805	G	N9-C4-C5	-5.03	103.39	105.40
24	1H	918	A	C5-C6-N1	-5.03	115.19	117.70
24	1H	1139	G	C8-N9-C1'	-5.03	120.46	127.00
24	1H	1338	G	OP1-P-O3'	5.03	116.26	105.20
1	1G	812	C	C6-N1-C2	-5.03	118.29	120.30
24	14	948	G	N3-C4-N9	-5.03	122.98	126.00
24	14	1789	A	N7-C8-N9	-5.03	111.29	113.80
1	13	585	G	O5'-P-OP2	-5.03	101.18	105.70
24	1H	239	U	C5-C6-N1	-5.03	120.19	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	514	A	N1-C6-N6	5.03	121.61	118.60
24	1H	564	C	OP1-P-O3'	5.03	116.26	105.20
24	1H	984	A	C4-C5-N7	5.03	113.21	110.70
24	1H	1244	G	C2-N3-C4	-5.03	109.39	111.90
24	1H	1311	G	C2-N3-C4	-5.03	109.39	111.90
24	1H	1394	U	C5-C6-N1	5.03	125.21	122.70
24	1H	1668	A	N1-C6-N6	5.03	121.62	118.60
1	1G	1511	G	C6-C5-N7	-5.03	127.38	130.40
24	14	1233	C	N3-C4-C5	5.03	123.91	121.90
24	14	2611	U	C2-N1-C1'	5.03	123.73	117.70
1	13	1399	C	OP2-P-O3'	5.02	116.25	105.20
22	2K	21	A	N1-C2-N3	5.02	131.81	129.30
24	1H	453	C	N3-C2-O2	5.02	125.42	121.90
24	1H	536	A	OP2-P-O3'	5.02	116.25	105.20
24	1H	2016	U	N3-C4-O4	-5.02	115.88	119.40
1	1G	603	U	N3-C4-C5	-5.02	111.59	114.60
24	14	691	C	C4-C5-C6	5.02	119.91	117.40
24	14	1347	G	N1-C6-O6	5.02	122.91	119.90
1	13	27	G	C5-C6-O6	-5.02	125.59	128.60
1	13	777	A	O5'-P-OP2	-5.02	101.18	105.70
24	1H	446	G	C5-C6-O6	-5.02	125.59	128.60
24	1H	1899	G	O4'-C1'-N9	5.02	112.22	108.20
24	1H	2690	C	N3-C2-O2	-5.02	118.39	121.90
24	1H	2739	U	O5'-P-OP1	-5.02	101.18	105.70
1	1G	345	C	P-O3'-C3'	5.02	125.73	119.70
24	14	1228	G	C5-C6-N1	-5.02	108.99	111.50
24	14	2582	G	N3-C4-N9	5.02	129.01	126.00
1	13	452	A	C8-N9-C4	5.02	107.81	105.80
24	1H	1394	U	C2-N3-C4	5.02	130.01	127.00
24	1H	1520	U	C5-C4-O4	5.02	128.91	125.90
1	1G	44	G	C4-C5-C6	5.02	121.81	118.80
24	14	2331	G	O5'-P-OP2	-5.02	101.18	105.70
24	1H	113	G	OP1-P-O3'	5.02	116.24	105.20
24	1H	470	A	C4-C5-N7	5.02	113.21	110.70
24	1H	1025	G	C5-C6-O6	5.02	131.61	128.60
24	1H	1899	G	N1-C2-N3	5.02	126.91	123.90
1	1G	886	G	C5-C6-O6	-5.02	125.59	128.60
24	14	213	A	OP2-P-O3'	5.02	116.24	105.20
24	14	529	A	N1-C2-N3	5.02	131.81	129.30
24	14	793	A	C5-C6-N1	5.02	120.21	117.70
24	14	1787	A	N7-C8-N9	5.02	116.31	113.80
24	14	1978	A	C4-C5-N7	-5.02	108.19	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2086	U	N3-C2-O2	-5.02	118.69	122.20
24	14	2679	A	OP2-P-O3'	5.02	116.24	105.20
1	13	1276	G	C8-N9-C4	-5.02	104.39	106.40
24	1H	382	G	N9-C4-C5	-5.02	103.39	105.40
24	1H	667	U	C4-C5-C6	5.02	122.71	119.70
24	1H	775	G	C6-C5-N7	-5.02	127.39	130.40
24	1H	2454	G	C8-N9-C4	5.02	108.41	106.40
24	1H	2507	C	C5-C4-N4	5.02	123.71	120.20
24	1H	2573	C	C5-C4-N4	-5.02	116.69	120.20
1	1G	1325	C	C6-N1-C2	-5.02	118.29	120.30
1	1G	1331	G	P-O3'-C3'	5.02	125.72	119.70
24	14	374	A	C8-N9-C4	5.02	107.81	105.80
24	14	987	G	N9-C4-C5	5.02	107.41	105.40
24	14	1520	U	C6-N1-C1'	5.02	128.22	121.20
24	14	1667	G	N9-C4-C5	5.02	107.41	105.40
24	14	2597	G	N3-C2-N2	5.02	123.41	119.90
24	14	2607	G	C4-C5-N7	5.02	112.81	110.80
25	1J	101	A	C8-N9-C4	5.02	107.81	105.80
1	13	730	G	N1-C6-O6	-5.02	116.89	119.90
1	13	893	C	C6-N1-C2	5.02	122.31	120.30
1	13	1314	C	C6-N1-C2	-5.02	118.29	120.30
24	1H	1643	G	N7-C8-N9	-5.02	110.59	113.10
51	N8	58	LEU	CA-CB-CG	5.02	126.84	115.30
1	1G	1382	C	N3-C4-C5	5.02	123.91	121.90
24	14	575	A	O5'-P-OP1	-5.02	101.19	105.70
1	13	1064	G	N1-C2-N3	5.01	126.91	123.90
1	13	1528	U	N3-C4-C5	5.01	117.61	114.60
4	3E	176	LEU	CA-CB-CG	5.01	126.83	115.30
24	1H	962	G	C5-C6-O6	-5.01	125.59	128.60
24	1H	1163	G	O5'-P-OP1	-5.01	101.19	105.70
24	1H	1827	C	N3-C2-O2	-5.01	118.39	121.90
24	1H	2243	U	OP1-P-O3'	5.01	116.23	105.20
24	1H	2849	U	C5-C6-N1	-5.01	120.19	122.70
45	H8	64	GLY	N-CA-C	-5.01	100.56	113.10
24	14	1197	G	C5-C6-O6	5.01	131.61	128.60
24	14	1243	G	C4-C5-N7	5.01	112.81	110.80
24	14	1602	U	C4-C5-C6	5.01	122.71	119.70
24	14	2034	U	OP2-P-O3'	5.01	116.23	105.20
1	13	251	G	C5-N7-C8	-5.01	101.79	104.30
24	1H	1781	C	C5-C6-N1	-5.01	118.49	121.00
1	13	48	C	N3-C2-O2	-5.01	118.39	121.90
24	1H	246	C	C6-N1-C2	5.01	122.31	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	1H	2434	A	C6-N1-C2	-5.01	115.59	118.60
24	1H	2494	G	C5-C6-O6	5.01	131.61	128.60
24	1H	2622	C	C6-N1-C2	5.01	122.31	120.30
24	1H	2772	C	C5-C6-N1	-5.01	118.49	121.00
1	1G	26	A	N7-C8-N9	-5.01	111.29	113.80
1	1G	605	U	C5-C4-O4	5.01	128.91	125.90
22	3L	55	U	C2-N1-C1'	5.01	123.71	117.70
24	14	308	G	C4-C5-N7	5.01	112.81	110.80
1	13	117	G	N1-C6-O6	5.01	122.91	119.90
24	1H	913	U	N1-C2-N3	5.01	117.91	114.90
24	1H	1677	A	C2-N3-C4	-5.01	108.09	110.60
24	1H	1966	A	N1-C6-N6	5.01	121.61	118.60
24	1H	2616	C	C6-N1-C2	-5.01	118.30	120.30
24	1H	2661	G	C4-N9-C1'	5.01	133.01	126.50
1	1G	320	C	N1-C2-O2	-5.01	115.89	118.90
1	1G	581	G	N1-C2-N2	5.01	120.71	116.20
1	1G	1322	C	N1-C2-O2	5.01	121.91	118.90
24	14	621	A	N3-C4-N9	-5.01	123.39	127.40
24	14	709	U	OP2-P-O3'	5.01	116.22	105.20
24	14	1634	A	N7-C8-N9	-5.01	111.30	113.80
1	13	737	A	N1-C6-N6	5.01	121.61	118.60
24	1H	1396	U	N3-C2-O2	-5.01	118.69	122.20
24	1H	2506	U	C5-C6-N1	5.01	125.20	122.70
24	14	442	G	N1-C2-N2	-5.01	111.69	116.20
24	14	1141	U	C5-C6-N1	-5.01	120.20	122.70
24	14	2373	G	C4-C5-N7	-5.01	108.80	110.80
24	14	2509	G	C6-N1-C2	-5.01	122.09	125.10
1	13	1455	G	N1-C6-O6	5.01	122.90	119.90
24	1H	797	C	C2-N3-C4	-5.01	117.40	119.90
24	14	569	U	C2-N1-C1'	-5.01	111.69	117.70
24	14	733	G	N7-C8-N9	5.01	115.60	113.10
24	14	1286	A	OP2-P-O3'	5.01	116.22	105.20
24	14	1489	U	C6-N1-C1'	5.01	128.21	121.20
24	14	2079	U	C4-C5-C6	5.01	122.70	119.70
24	14	2359	C	C5-C4-N4	5.01	123.70	120.20
24	14	2392	A	C5-N7-C8	-5.01	101.40	103.90
24	1H	859	G	C8-N9-C1'	5.00	133.51	127.00
24	1H	1151	G	C4-C5-N7	5.00	112.80	110.80
24	1H	2061	G	N3-C4-N9	5.00	129.00	126.00
1	1G	6	G	C5-C6-O6	-5.00	125.60	128.60
24	14	1283	G	C6-C5-N7	-5.00	127.40	130.40
24	14	2779	U	C2-N3-C4	-5.00	124.00	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	14	2787	C	C6-N1-C2	-5.00	118.30	120.30
42	A5	97	LYS	CD-CE-NZ	5.00	123.21	111.70
1	13	112	G	C5-C6-O6	-5.00	125.60	128.60
1	13	795	C	C2-N1-C1'	-5.00	113.30	118.80
24	1H	696	G	N7-C8-N9	-5.00	110.60	113.10
1	1G	1526	G	C2-N3-C4	5.00	114.40	111.90
24	14	1543	A	C5-C6-N6	5.00	127.70	123.70
24	14	2351	G	C8-N9-C1'	-5.00	120.50	127.00
24	14	2386	C	C6-N1-C1'	-5.00	114.80	120.80
1	13	1099	G	N9-C4-C5	5.00	107.40	105.40
1	13	1406	U	C2-N3-C4	-5.00	124.00	127.00
24	1H	386	G	C5-C6-N1	5.00	114.00	111.50
24	1H	741	G	N1-C2-N3	5.00	126.90	123.90
24	1H	951	C	N3-C4-C5	5.00	123.90	121.90
24	1H	1557	C	C2-N1-C1'	-5.00	113.30	118.80
24	1H	1671	U	C4-C5-C6	5.00	122.70	119.70
24	1H	2861	G	OP1-P-O3'	5.00	116.20	105.20
1	1G	322	C	N1-C2-O2	-5.00	115.90	118.90
22	3L	9	U	C2-N1-C1'	5.00	123.70	117.70
24	14	2681	C	C5-C6-N1	-5.00	118.50	121.00

There are no chirality outliers.

All (100) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
27	11	197	GLY	Peptide
27	11	239	ARG	Peptide
27	11	27	THR	Peptide
27	11	32	SER	Peptide
2	12	233	SER	Peptide
2	12	71	VAL	Peptide
33	15	41	ASP	Peptide
27	19	197	GLY	Peptide
27	19	270	ILE	Peptide
27	19	271	ILE	Peptide
27	19	32	SER	Peptide
27	19	37	LEU	Peptide
2	1E	71	VAL	Peptide
3	22	166	GLU	Peptide
34	25	97	ARG	Peptide
28	29	130	GLY	Peptide
28	29	186	GLY	Peptide

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Mol	Chain	Res	Type	Group
28	29	202	LYS	Peptide
28	29	54	GLN	Peptide
28	29	61	ARG	Peptide
28	29	76	ARG	Peptide
28	29	81	ILE	Peptide
29	31	132	VAL	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
35	35	89	ALA	Peptide
29	39	128	ALA	Peptide
12	3A	28	LYS	Peptide
12	3A	46	LYS	Peptide
12	3A	60	LEU	Peptide
12	3A	61	THR	Peptide
4	3E	166	LYS	Peptide
4	3E	193	ASP	Peptide
4	3E	29	PRO	Peptide
36	45	24	GLY	Peptide
30	49	117	PHE	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	4	GLY	Peptide
39	75	6	LEU	Peptide
35	78	11	GLY	Peptide
35	78	147	LEU	Peptide
35	78	20	GLY	Peptide
35	78	22	GLY	Peptide
35	78	24	GLY	Peptide
35	78	45	LEU	Peptide
35	78	65	ARG	Peptide
9	82	40	LEU	Peptide
9	82	87	GLN	Peptide
40	85	96	ALA	Peptide
36	88	21	THR	Peptide
36	88	78	PRO	Peptide

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Mol	Chain	Res	Type	Group
36	88	89	ASN	Peptide
41	95	48	GLY	Peptide
41	95	49	THR	Peptide
38	A8	2	ALA	Peptide
38	A8	81	GLY	Peptide
19	AA	10	PHE	Peptide
19	AI	5	LEU	Peptide
19	AI	6	LYS	Peptide
19	AI	64	GLU	Peptide
39	B8	58	ASN	Peptide
20	BA	102	GLY	Peptide
20	BA	11	SER	Peptide
44	C5	100	ALA	Peptide
44	C5	41	GLY	Peptide
44	C5	81	LYS	Peptide
45	D5	107	THR	Peptide
45	D5	174	VAL	Peptide
45	D5	61	LEU	Peptide
47	F5	85	LEU	Peptide
47	F5	91	LYS	Peptide
43	F8	67	GLY	Peptide
44	G8	104	GLY	Peptide
44	G8	53	PRO	Peptide
44	G8	54	LYS	Peptide
44	G8	77	PRO	Peptide
44	G8	78	ALA	Peptide
51	J5	51	TYR	Peptide
47	J8	86	SER	Peptide
47	J8	88	LYS	Peptide
52	K5	44	ARG	Peptide
48	K8	4	SER	Peptide
48	K8	46	GLN	Peptide
49	L8	39	ASP	Peptide
54	M5	40	GLU	Peptide
54	M5	54	GLU	Peptide
53	P8	42	LEU	Peptide
53	P8	44	PRO	Peptide
54	Q8	32	LEU	Peptide
54	Q8	34	TRP	Peptide
54	Q8	40	GLU	Peptide
54	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	32337	0	16321	893	0
1	1G	32309	0	16307	840	0
2	12	1924	0	1975	95	0
2	1E	1924	0	1975	120	0
3	22	1612	0	1677	92	0
3	2E	1605	0	1668	72	0
4	32	1702	0	1763	112	0
4	3E	1702	0	1763	83	0
5	42	1155	0	1213	70	0
5	4E	1155	0	1213	52	0
6	52	842	0	857	38	0
6	5E	842	0	857	43	0
7	62	1256	0	1296	41	0
7	6E	1256	0	1296	55	0
8	72	1115	0	1177	50	0
8	7E	1115	0	1177	71	0
9	82	1009	0	1037	72	0
9	8E	1009	0	1037	67	0
10	1A	801	0	849	55	0
10	1I	801	0	849	44	0
11	2A	864	0	881	27	0
11	2I	864	0	881	39	0
12	3A	975	0	1062	39	0
12	3I	975	0	1062	43	0
13	4A	933	0	992	57	0
13	4I	928	0	987	50	0
14	5A	491	0	529	36	0
14	5I	491	0	529	45	0
15	6A	733	0	771	28	0
15	6I	733	0	771	36	0
16	7A	705	0	725	34	0
16	7I	705	0	725	47	0
17	8A	834	0	904	44	0
17	8I	834	0	904	47	0
18	9A	590	0	662	26	0
18	9I	590	0	662	20	0
19	AA	633	0	649	46	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	AI	665	0	686	36	0
20	BA	762	0	861	37	0
20	BI	762	0	861	54	0
21	1B	217	0	234	17	0
21	1F	217	0	234	12	0
22	2K	1765	0	916	65	0
22	2L	1678	0	872	64	0
22	3K	1824	0	945	58	0
22	3L	1825	0	946	54	0
23	4K	348	0	175	9	0
23	4L	170	0	87	3	0
24	14	62647	0	31572	1459	0
24	1H	62707	0	31606	1605	0
25	16	2617	0	1328	87	0
25	1J	2617	0	1328	93	0
26	71	1049	0	1071	31	0
26	79	1049	0	1071	42	0
27	11	2115	0	2195	134	0
27	19	2120	0	2197	114	0
28	21	1568	0	1634	95	0
28	29	1568	0	1634	121	0
29	31	1585	0	1632	79	0
29	39	1627	0	1680	103	0
30	41	1473	0	1535	72	0
30	49	1473	0	1535	89	0
31	51	1336	0	1418	89	0
31	59	1312	0	1384	64	0
32	61	1136	0	1223	55	0
32	69	1136	0	1223	65	0
33	15	1104	0	1180	47	0
33	58	1104	0	1180	51	0
34	25	932	0	996	39	0
34	68	932	0	996	32	0
35	35	1144	0	1228	81	0
35	78	1144	0	1228	90	0
36	45	1121	0	1179	71	0
36	88	1121	0	1179	84	0
37	55	959	0	1021	54	0
37	98	967	0	1033	68	0
38	65	881	0	943	77	0
38	A8	881	0	943	49	0
39	75	1131	0	1180	86	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
39	B8	1141	0	1202	58	0
40	85	963	0	1022	54	0
40	C8	963	0	1022	60	0
41	95	778	0	852	86	0
41	D8	778	0	852	32	0
42	A5	899	0	964	34	0
42	E8	899	0	964	40	0
43	B5	730	0	780	39	0
43	F8	725	0	778	46	0
44	C5	794	0	884	58	0
44	G8	791	0	880	67	0
45	D5	1428	0	1454	89	0
45	H8	1397	0	1430	86	0
46	E5	612	0	633	39	0
46	I8	656	0	683	55	0
47	F5	762	0	848	35	0
47	J8	762	0	848	47	0
48	G5	580	0	629	29	0
48	K8	558	0	610	30	0
49	H5	468	0	518	14	0
49	L8	468	0	518	36	0
50	I5	515	0	514	43	0
50	M8	533	0	526	40	0
51	J5	458	0	480	20	0
51	N8	458	0	480	36	0
52	K5	389	0	404	24	0
52	O8	389	0	404	27	0
53	L5	429	0	480	33	0
53	P8	409	0	454	20	0
54	M5	495	0	567	37	0
54	Q8	483	0	555	42	0
55	11	3	0	0	0	0
55	13	140	0	0	0	0
55	14	467	0	0	0	0
55	15	1	0	0	0	0
55	16	15	0	0	0	0
55	19	1	0	0	0	0
55	1G	144	0	0	0	0
55	1H	521	0	0	0	0
55	1J	10	0	0	0	0
55	21	2	0	0	0	0
55	25	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
55	29	4	0	0	0	0
55	2A	1	0	0	0	0
55	2K	4	0	0	0	0
55	2L	3	0	0	0	0
55	31	2	0	0	0	0
55	32	1	0	0	0	0
55	39	1	0	0	0	0
55	3A	1	0	0	0	0
55	3K	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	4A	2	0	0	0	0
55	4K	1	0	0	0	0
55	52	1	0	0	0	0
55	55	1	0	0	0	0
55	5E	1	0	0	0	0
55	7E	1	0	0	0	0
55	88	1	0	0	0	0
55	98	1	0	0	0	0
55	C5	1	0	0	0	0
55	E5	1	0	0	0	0
55	F5	1	0	0	0	0
55	G8	1	0	0	0	0
55	I8	3	0	0	0	0
55	Q8	2	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	11	8	0	0	2	0
57	13	125	0	0	23	0
57	14	523	0	0	116	0
57	16	12	0	0	3	0
57	19	11	0	0	3	0
57	1G	96	0	0	18	0
57	1H	652	0	0	172	0
57	1J	22	0	0	2	0
57	21	2	0	0	2	0
57	25	6	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	2K	2	0	0	0	0
57	2L	6	0	0	0	0
57	31	5	0	0	0	0
57	32	1	0	0	0	0
57	35	1	0	0	0	0
57	39	3	0	0	0	0
57	4K	3	0	0	0	0
57	5A	1	0	0	0	0
57	5I	1	0	0	0	0
57	75	1	0	0	0	0
57	78	4	0	0	2	0
57	7A	2	0	0	0	0
57	85	4	0	0	0	0
57	98	1	0	0	2	0
57	AI	3	0	0	0	0
57	BA	1	0	0	0	0
57	C8	2	0	0	0	0
57	E8	1	0	0	0	0
57	F5	1	0	0	0	0
57	F8	2	0	0	0	0
57	G8	2	0	0	1	0
57	H5	2	0	0	0	0
All	All	299705	0	201607	9355	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 20.

All (9355) 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:CD1	41:95:91:TYR:CG	1.79	1.67
41:95:91:TYR:CD2	41:95:91:TYR:CG	1.79	1.65
41:95:91:TYR:CZ	41:95:91:TYR:CE1	1.90	1.56
41:95:91:TYR:CZ	41:95:91:TYR:CE2	1.92	1.55
22:2K:35:QUO:N3	22:2K:35:QUO:C4	1.68	1.55
22:3K:35:QUO:C4	22:3K:35:QUO:N3	1.71	1.53
22:3L:35:QUO:N3	22:3L:35:QUO:C4	1.71	1.50
22:2L:35:QUO:N3	22:2L:35:QUO:C4	1.71	1.49
41:95:21:ARG:NE	41:95:91:TYR:CD1	1.86	1.38
41:95:21:ARG:CD	41:95:21:ARG:NE	1.86	1.36
41:95:21:ARG:NE	41:95:91:TYR:CD2	1.97	1.30

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:95:21:ARG:NE	41:95:91:TYR:CE1	1.98	1.29
41:95:21:ARG:NE	41:95:91:TYR:CG	1.96	1.27
41:95:91:TYR:CD2	41:95:91:TYR:CE2	2.25	1.25
41:95:91:TYR:CD1	41:95:91:TYR:CE1	2.28	1.19
41:95:21:ARG:NE	41:95:91:TYR:CE2	2.11	1.19
41:95:21:ARG:NE	41:95:91:TYR:CZ	2.12	1.17
24:1H:2711:A:OP2	57:1H:3664:HOH:O	1.66	1.12
24:1H:1774:C:OP1	57:1H:3750:HOH:O	1.68	1.11
24:1H:2714:G:OP2	57:1H:3664:HOH:O	1.69	1.08
24:1H:730:C:OP2	57:1H:3669:HOH:O	1.70	1.06
14:5I:24:CYS:SG	14:5I:40:CYS:HB3	1.95	1.06
24:14:1899:G:H21	24:14:1902:C:N4	1.55	1.04
24:14:1632:A:N7	57:14:3550:HOH:O	1.91	1.04
41:95:21:ARG:CD	41:95:91:TYR:CE2	2.41	1.03
41:95:21:ARG:CD	41:95:91:TYR:CZ	2.42	1.03
24:14:192:C:N3	57:14:3727:HOH:O	1.92	1.02
24:1H:1268:A:OP1	57:1H:3637:HOH:O	1.76	1.02
47:J8:85:LEU:N	47:J8:86:SER:O	1.93	1.01
33:15:47:ALA:HB2	33:15:112:LEU:HD11	1.43	1.01
24:14:1664:A:OP2	57:14:3620:HOH:O	1.78	1.01
41:95:37:VAL:HG21	41:95:56:SER:HA	1.39	1.01
24:14:574:C:OP2	57:14:3689:HOH:O	1.80	1.00
40:85:90:VAL:HG22	41:95:39:LEU:HB3	1.43	1.00
24:14:2576:G:OP1	57:14:3542:HOH:O	1.79	0.99
24:14:2074:U:OP1	57:14:3506:HOH:O	1.81	0.99
24:14:323:G:HO2'	24:14:1205:U:H3	1.12	0.98
1:1G:1277:C:HO2'	1:1G:1279:A:H8	1.01	0.98
41:95:21:ARG:CZ	41:95:91:TYR:CE2	2.47	0.97
24:1H:945:A:OP1	57:1H:4024:HOH:O	1.82	0.97
20:BI:22:ARG:O	20:BI:26:ASN:ND2	1.98	0.97
24:1H:67:U:H3	24:1H:74:A:H2	1.07	0.97
24:14:676:A:H8	24:14:2069:G:H21	1.08	0.96
24:1H:49:A:N7	24:1H:120:U:H5	1.63	0.96
6:52:87:ARG:HH11	6:52:87:ARG:HG3	1.26	0.96
41:95:21:ARG:CZ	41:95:91:TYR:CZ	2.47	0.96
1:13:1502:A:H2	1:13:1505:G:H1	1.12	0.96
24:1H:2:G:H22	24:1H:2901:C:H42	1.10	0.96
41:95:21:ARG:HD2	41:95:91:TYR:CE2	2.01	0.96
24:1H:2006:C:OP1	57:1H:3636:HOH:O	1.81	0.96
24:14:2499:C:OP2	57:14:3533:HOH:O	1.82	0.96
35:35:23:PRO:HB3	41:95:80:GLN:HG2	1.46	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1J:5:C:H42	25:1J:115:G:H1	1.02	0.95
24:1H:450:G:OP2	57:1H:3849:HOH:O	1.83	0.95
24:1H:2419:U:O4	54:Q8:30:ARG:NE	1.99	0.95
1:13:1348:U:H3	1:13:1374:A:H2	1.14	0.94
24:1H:1658:C:OP1	57:1H:3689:HOH:O	1.83	0.94
24:14:2420:C:H41	54:M5:31:HIS:HB3	1.33	0.94
1:13:686:U:H1'	11:2I:42:TRP:HE1	1.32	0.94
24:1H:2588:G:OP2	57:1H:3655:HOH:O	1.85	0.94
24:14:1496:A:H8	24:14:1577:C:HO2'	1.01	0.94
24:1H:2392:A:H8	35:78:61:ARG:HG2	1.32	0.94
1:1G:1348:U:H3	1:1G:1374:A:H2	1.13	0.94
43:F8:67:GLY:O	43:F8:69:TYR:N	2.01	0.93
29:31:6:VAL:HG21	29:31:119:ARG:HB2	1.50	0.93
24:1H:741:G:OP1	57:1H:3900:HOH:O	1.84	0.93
24:14:2448:A:OP2	57:14:3533:HOH:O	1.87	0.93
24:14:2681:C:H5	24:14:2725:A:H62	1.15	0.93
25:1J:80:U:H2'	25:1J:81:G:H21	1.32	0.93
1:1G:1502:A:H2	1:1G:1505:G:H1	1.12	0.93
24:1H:1479:G:N7	24:1H:1510:A:N6	2.16	0.93
24:14:1022:G:H22	24:14:1142(A):A:H2	1.15	0.93
28:29:1:MET:N	28:29:200:GLU:OE2	2.01	0.92
24:14:1614:A:OP1	57:14:3515:HOH:O	1.87	0.92
33:58:96:GLU:HG2	33:58:97:ARG:H	1.33	0.92
47:J8:86:SER:HA	47:J8:88:LYS:HB2	1.50	0.92
1:1G:406:G:H21	4:32:119:GLN:HE22	1.15	0.92
24:14:259:G:H21	24:14:621:A:H8	1.13	0.92
25:1J:15:A:H5'	25:1J:16:G:C8	2.05	0.92
24:1H:2035:G:OP1	57:1H:3741:HOH:O	1.85	0.92
24:14:617:G:OP1	29:39:40:GLN:NE2	2.02	0.92
10:1I:48:THR:HG23	10:1I:62:HIS:HB3	1.52	0.92
24:1H:676:A:H8	24:1H:2069:G:H21	1.13	0.92
41:95:21:ARG:CZ	41:95:91:TYR:CE1	2.52	0.92
24:14:1771:C:HO2'	24:14:1786:A:H8	1.00	0.91
4:32:29:PRO:HG2	4:32:30:LYS:HG3	1.51	0.91
41:95:21:ARG:HD2	41:95:91:TYR:CZ	2.04	0.91
24:14:1891:G:O6	57:14:3920:HOH:O	1.89	0.91
22:3L:20:C:H5''	22:3L:68:A:H62	1.36	0.91
38:A8:11:LYS:HD3	38:A8:91:PRO:HD3	1.52	0.91
24:14:2016:U:OP1	57:14:3856:HOH:O	1.87	0.91
24:14:1855:G:N7	57:14:3892:HOH:O	2.02	0.91
25:16:100:G:OP2	57:16:303:HOH:O	1.87	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:49:161:THR:HG22	30:49:163:ALA:H	1.33	0.91
19:AA:50:ALA:HB1	19:AA:57:HIS:HB3	1.53	0.90
2:12:185:ILE:HG22	2:12:199:TYR:HB2	1.53	0.90
24:1H:409:C:OP1	57:1H:3716:HOH:O	1.88	0.90
52:O8:31:PRO:HB2	52:O8:35:GLU:HG2	1.53	0.90
22:2L:62:G:O6	22:2L:70:C:N4	2.03	0.90
1:13:1329:A:H5'	13:4I:29:ARG:HD2	1.53	0.90
1:1G:448:A:OP2	1:1G:485:G:N2	2.05	0.89
24:1H:567:A:OP1	57:1H:3603:HOH:O	1.89	0.89
24:1H:1187:G:OP2	57:1H:3830:HOH:O	1.90	0.89
24:14:249:C:OP1	57:14:3524:HOH:O	1.90	0.89
24:14:1012:U:H3	24:14:1143:A:H2	1.21	0.89
27:11:242:ARG:O	57:11:401:HOH:O	1.90	0.88
24:14:1332:G:N2	24:14:1609:A:O2'	2.06	0.88
24:1H:1265:A:OP2	57:1H:3606:HOH:O	1.91	0.88
24:1H:2062:A:N6	24:1H:2503:A:N7	2.20	0.88
24:14:2577:A:OP1	57:14:3544:HOH:O	1.92	0.88
24:14:192:C:OP1	57:14:3721:HOH:O	1.92	0.88
24:14:2269:A:OP1	57:14:3912:HOH:O	1.91	0.88
24:1H:252:G:OP2	35:78:50:ARG:NH1	2.07	0.88
24:1H:2305:A:H5''	30:41:134:GLY:HA3	1.56	0.88
24:1H:2447:G:OP2	57:1H:3800:HOH:O	1.91	0.88
1:13:339:C:OP2	34:68:97:ARG:NH1	2.07	0.88
24:14:800:A:OP1	57:14:3726:HOH:O	1.92	0.88
1:1G:1128:C:H1'	1:1G:1146:A:H61	1.40	0.87
39:75:92:GLY:HA2	39:75:116:ALA:HA	1.55	0.87
24:14:751:A:OP1	57:14:3517:HOH:O	1.89	0.87
38:65:107:GLU:H	38:65:110:LEU:HD21	1.37	0.87
24:1H:2056:G:N7	57:1H:4078:HOH:O	2.05	0.87
31:51:8:PRO:HG2	31:51:69:ARG:HH21	1.37	0.87
1:1G:971:G:N2	1:1G:1363:A:OP2	2.06	0.87
24:1H:1280:G:N7	57:1H:4222:HOH:O	2.05	0.87
4:3E:7:PRO:HB2	4:3E:10:ARG:HD2	1.55	0.87
24:1H:1525:G:H2'	24:1H:1526:G:H8	1.37	0.87
1:1G:353:A:H8	1:1G:353:A:H5'	1.37	0.87
1:1G:537:G:N7	57:1G:1822:HOH:O	2.06	0.87
1:13:631:G:H2'	1:13:632:A:H8	1.39	0.87
4:3E:12:CYS:HB3	4:3E:33:MET:HE1	1.56	0.87
22:3K:20:C:H5''	22:3K:68:A:H62	1.39	0.87
27:11:182:LEU:H	27:11:272:ALA:HB3	1.37	0.87
24:1H:2582:G:OP2	57:1H:3774:HOH:O	1.93	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AA:11:VAL:HG22	19:AA:39:THR:HB	1.57	0.87
24:14:2287:A:H62	24:14:2344:U:H3	1.22	0.87
30:49:47:LYS:HG3	30:49:81:LYS:HG2	1.56	0.87
25:16:40:U:O2	25:16:45:A:N6	2.08	0.86
24:1H:1678:G:N2	24:1H:1989:G:H22	1.72	0.86
25:16:19:G:H1	25:16:64:C:H42	1.23	0.86
24:1H:2032:G:N7	57:1H:3676:HOH:O	2.06	0.86
24:14:741:G:OP1	57:14:3565:HOH:O	1.92	0.86
2:12:118:LEU:HB3	2:12:142:LEU:HD12	1.57	0.86
24:1H:932:G:N7	57:1H:3840:HOH:O	2.07	0.86
24:1H:102:G:OP1	48:K8:7:ARG:NH2	2.07	0.86
24:14:2178:C:H4'	26:79:46:LYS:HD3	1.57	0.86
28:29:32:PRO:HD2	28:29:50:GLY:HA3	1.55	0.86
37:98:55:ALA:HA	37:98:80:PHE:HE1	1.38	0.86
1:1G:711:G:OP1	6:52:54:LYS:NZ	2.09	0.86
45:H8:19:ARG:NH1	45:H8:84:GLU:O	2.09	0.86
44:G8:15:VAL:HG21	44:G8:42:VAL:HG21	1.58	0.86
43:B5:63:LYS:H	43:B5:63:LYS:HE3	1.40	0.86
1:1G:963:G:N3	10:1A:55:LYS:NZ	2.23	0.86
31:51:15:VAL:HG12	31:51:28:GLY:HA3	1.58	0.86
24:1H:2707:G:H5'	37:98:68:ARG:HH21	1.40	0.85
24:1H:574:C:OP2	57:1H:3941:HOH:O	1.92	0.85
53:L5:47:ARG:HG3	53:L5:47:ARG:HH11	1.41	0.85
24:14:1729:A:O2'	24:14:1731:G:N2	2.09	0.85
1:13:1453:G:O2'	20:BI:39:LYS:NZ	2.10	0.85
24:14:1861:G:H5'	26:79:205:LYS:HZ3	1.42	0.85
22:3K:24:G:H2'	22:3K:25:G:H8	1.40	0.85
24:14:1464:C:HO2'	24:14:1528:A:H8	1.24	0.85
24:14:2268:A:OP1	57:14:3912:HOH:O	1.93	0.85
24:1H:764:A:N3	27:11:213:ARG:NH1	2.25	0.85
44:G8:28:LYS:NZ	44:G8:64:GLU:OE2	2.09	0.85
25:16:101:A:OP2	57:16:309:HOH:O	1.95	0.85
22:2K:15:G:H21	22:2K:20:C:H41	1.22	0.85
8:7E:33:GLU:HA	8:7E:36:LEU:HD12	1.57	0.85
22:3K:21:A:N6	22:3K:55:U:O4	2.09	0.85
24:14:2709:G:O6	57:14:3811:HOH:O	1.94	0.85
52:K5:19:ARG:HH21	52:K5:52:VAL:HG11	1.42	0.85
24:1H:1250:G:N7	35:78:18:ARG:NH2	2.24	0.85
1:13:1368:G:H5''	9:8E:112:LYS:HB3	1.59	0.85
24:1H:1496:A:H8	24:1H:1577:C:HO2'	0.89	0.85
2:1E:21:ARG:HD3	2:1E:39:ILE:HG12	1.57	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:6I:16:ALA:HB1	15:6I:21:ASP:HB3	1.57	0.85
24:1H:860:U:H5	24:1H:917:A:C2	1.95	0.84
54:M5:62:LEU:HB2	54:M5:63:PRO:HD2	1.57	0.84
24:14:2684:U:O4	57:14:3621:HOH:O	1.94	0.84
13:4A:97:PRO:HB2	13:4A:101:GLN:HE21	1.41	0.84
24:1H:946:G:OP2	57:1H:4015:HOH:O	1.95	0.84
24:1H:2313:C:H4'	30:41:91:ARG:HG3	1.59	0.84
1:13:509:A:OP2	57:13:1815:HOH:O	1.94	0.84
24:14:31:C:OP1	57:14:3800:HOH:O	1.93	0.84
24:1H:761:A:N7	57:1H:3989:HOH:O	2.09	0.84
24:14:2068:U:H3	24:14:2430:A:H2	1.25	0.84
24:14:2776:A:O2'	57:14:3850:HOH:O	1.95	0.84
24:1H:1771:C:HO2'	24:1H:1786:A:H8	1.22	0.84
41:95:21:ARG:CD	41:95:91:TYR:CE1	2.61	0.84
41:95:21:ARG:CZ	41:95:91:TYR:CD2	2.60	0.84
24:14:994:C:OP2	40:85:54:LYS:NZ	2.09	0.84
24:1H:1997:G:OP2	57:1H:3933:HOH:O	1.94	0.84
28:21:119:ARG:HG3	28:21:119:ARG:HH11	1.42	0.84
51:N8:40:LYS:NZ	51:N8:46:CYS:SG	2.50	0.84
9:82:89:ASN:HB3	9:82:92:TYR:HB2	1.60	0.84
1:1G:363:A:OP2	12:3A:34:ARG:NH2	2.11	0.84
2:1E:69:LEU:HB3	2:1E:162:ILE:HG22	1.60	0.84
29:39:53:THR:HG23	29:39:55:GLY:H	1.43	0.84
24:1H:453:C:OP1	57:1H:3850:HOH:O	1.95	0.84
5:42:101:ILE:HD11	5:42:119:LEU:HD23	1.60	0.84
1:1G:81:G:H1	1:1G:88:C:H42	1.23	0.84
24:14:67:U:H3	24:14:74:A:H2	1.22	0.84
2:12:8:LYS:HG2	2:12:217:ARG:HE	1.42	0.84
45:H8:17:ALA:HA	45:H8:20:ARG:HD2	1.60	0.83
24:1H:1324:G:O6	57:1H:3950:HOH:O	1.95	0.83
24:1H:654(C):G:N2	24:1H:654(R):C:O2	2.10	0.83
34:68:98:VAL:HG21	34:68:114:ILE:HG23	1.61	0.83
1:13:1320:C:OP2	19:AI:3:ARG:NH2	2.10	0.83
24:14:138:G:N2	43:B5:44:GLU:OE2	2.10	0.83
1:13:1500:A:OP1	57:13:1801:HOH:O	1.97	0.83
45:D5:157:LEU:HB3	45:D5:161:VAL:HA	1.57	0.83
22:3L:15:G:N1	22:3L:57:C:O2	2.12	0.83
24:1H:1313:U:OP1	57:1H:3890:HOH:O	1.94	0.83
4:3E:14:ARG:HB2	4:3E:40:PRO:HD2	1.59	0.83
24:14:2306:C:H3'	24:14:2307:G:H5''	1.61	0.83
24:1H:1264:G:OP1	51:N8:19:ARG:NH2	2.11	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:201:C:H42	1:13:216:G:H1	1.26	0.83
24:14:761:A:N7	57:14:3512:HOH:O	2.10	0.83
36:45:78:PRO:HB2	36:45:81:VAL:HG11	1.60	0.83
27:19:255:LYS:H	27:19:255:LYS:NZ	1.76	0.83
27:11:17:THR:HG22	27:11:205:VAL:H	1.42	0.83
24:1H:1386:C:H2'	24:1H:1387:C:H6	1.44	0.83
41:95:21:ARG:CD	41:95:91:TYR:CD2	2.62	0.83
30:41:112:PRO:HG3	50:M8:38:LYS:HB2	1.61	0.83
24:1H:2580:U:H4'	28:21:130:GLY:HA3	1.60	0.82
2:1E:84:GLU:HB3	2:1E:219:VAL:HG21	1.61	0.82
24:1H:839:U:N3	24:1H:939:G:O6	2.10	0.82
24:14:2786:U:O2'	28:29:63:LEU:N	2.10	0.82
36:88:14:ARG:HG2	36:88:41:TRP:HH2	1.41	0.82
24:1H:249:C:OP1	57:1H:3654:HOH:O	1.95	0.82
50:I5:16:CYS:SG	50:I5:17:GLY:N	2.52	0.82
24:14:833:U:O2	35:35:55:ARG:NH1	2.12	0.82
24:1H:1776:G:OP2	57:1H:3645:HOH:O	1.97	0.82
24:1H:805:G:OP1	57:1H:3775:HOH:O	1.95	0.82
24:14:2807:G:N1	24:14:2893:G:O6	2.11	0.82
29:39:148:LEU:HD21	29:39:191:ARG:HH11	1.42	0.82
46:I8:72:ARG:HB2	46:I8:75:LEU:HB2	1.61	0.82
45:H8:139:VAL:HG22	45:H8:155:LEU:HD21	1.61	0.82
24:14:2102:U:O2	24:14:2187:G:N2	2.13	0.82
1:13:738:C:H2'	1:13:739:C:H6	1.44	0.82
15:6A:87:ILE:HG22	15:6A:88:ARG:H	1.43	0.82
24:1H:2789:C:O2	24:1H:2894:G:N2	2.12	0.81
24:14:1141:U:OP2	33:15:63:THR:OG1	1.97	0.81
1:1G:664:G:H22	1:1G:741:G:H1	1.28	0.81
24:1H:1669:A:OP2	57:1H:3936:HOH:O	1.98	0.81
40:85:92:ARG:NH1	41:95:11:GLN:O	2.13	0.81
1:1G:827:U:H3	1:1G:872:A:H62	1.24	0.81
24:1H:2210:G:H3'	24:1H:2211:G:C8	2.15	0.81
24:14:2638:G:HO2'	24:14:2639:A:H8	1.26	0.81
24:14:1364:G:OP2	47:F5:2:SER:N	2.13	0.81
24:1H:804:A:OP1	57:1H:3776:HOH:O	1.97	0.81
1:1G:536:C:OP2	57:1G:1820:HOH:O	1.99	0.81
24:14:660:G:H21	35:35:12:ALA:HA	1.43	0.81
22:2K:1:G:H2'	22:2K:2:G:H8	1.45	0.81
24:1H:2057:A:OP2	57:1H:3616:HOH:O	1.97	0.81
24:14:2357:U:OP1	46:E5:20:ARG:NH1	2.14	0.81
4:32:98:GLU:OE2	4:32:103:ASN:ND2	2.14	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1970:A:OP2	57:14:3577:HOH:O	1.97	0.81
39:75:7:ILE:HA	39:75:11:GLU:HG3	1.59	0.81
24:14:452:G:OP2	57:14:3730:HOH:O	1.98	0.81
22:2K:15:G:H22	22:2K:57:C:H5	1.28	0.81
1:13:39:G:N2	1:13:403:C:O2	2.14	0.81
37:55:57:ARG:HG3	37:55:57:ARG:HH11	1.45	0.81
24:14:192:C:OP2	57:14:3717:HOH:O	1.97	0.81
45:H8:147:GLY:H	45:H8:174:VAL:HB	1.45	0.81
1:1G:962:C:H42	1:1G:973:G:H1	1.29	0.81
24:14:2294:C:P	38:65:89:ARG:HH22	2.04	0.81
25:16:17:C:N4	25:16:108:C:O2	2.13	0.81
45:H8:24:LEU:HD11	45:H8:86:VAL:HG23	1.61	0.81
1:13:263:A:OP2	20:BI:79:ARG:NH1	2.14	0.81
24:14:2157:G:H2'	24:14:2158:A:H8	1.45	0.80
8:7E:69:ARG:NH2	8:7E:73:ASP:O	2.12	0.80
1:1G:315:A:OP1	57:1G:1876:HOH:O	1.98	0.80
24:1H:1010:A:HO2'	24:1H:1152:C:HO2'	1.24	0.80
24:1H:2615:U:OP1	57:1H:3606:HOH:O	1.98	0.80
24:1H:993:G:OP1	40:C8:50:ARG:NH2	2.14	0.80
24:14:654(D):G:H1	24:14:654(Q):C:H42	1.28	0.80
45:D5:33:LEU:HD23	45:D5:90:VAL:HG21	1.63	0.80
9:82:28:VAL:HG22	9:82:63:ILE:HB	1.64	0.80
5:42:126:ARG:HG2	5:42:126:ARG:HH11	1.44	0.80
41:95:21:ARG:NH1	41:95:91:TYR:CZ	2.49	0.80
1:1G:974:A:OP2	14:5A:41:ARG:NH1	2.15	0.80
1:1G:324:G:N7	57:1G:1840:HOH:O	2.13	0.80
14:5A:40:CYS:H	14:5A:43:CYS:HB2	1.45	0.80
1:1G:957:U:OP1	19:AA:81:ARG:NH2	2.14	0.80
37:98:55:ALA:HA	37:98:80:PHE:CE1	2.14	0.80
37:55:78:LYS:HE2	37:55:83:ILE:HD11	1.61	0.80
17:8I:66:SER:HB3	17:8I:69:LYS:HB3	1.63	0.80
1:13:507:C:OP2	57:13:1812:HOH:O	2.00	0.80
22:2L:8:4SU:H6	22:2L:8:4SU:H5'	1.64	0.80
24:14:2597:G:O3'	57:14:3589:HOH:O	1.99	0.80
25:1J:18:G:H1	25:1J:65:C:H42	1.28	0.80
44:G8:39:VAL:HB	44:G8:42:VAL:HG13	1.62	0.80
24:1H:446:G:OP2	57:1H:3686:HOH:O	2.00	0.80
24:1H:2154:G:H2'	24:1H:2155:G:H8	1.47	0.80
1:1G:617:G:N7	57:1G:1824:HOH:O	2.14	0.80
1:1G:963:G:H21	10:1A:55:LYS:HE2	1.46	0.80
24:14:1828:G:OP1	57:14:3572:HOH:O	2.00	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:784:A:OP1	57:14:3593:HOH:O	2.00	0.80
24:1H:1856:G:OP2	57:1H:4177:HOH:O	2.00	0.80
44:G8:76:CYS:SG	44:G8:97:ARG:HG3	2.22	0.80
35:35:85:LEU:HA	35:35:88:LEU:HB2	1.63	0.80
24:14:450:G:N7	57:14:3733:HOH:O	2.14	0.80
13:4A:80:ARG:NH1	19:AA:66:MET:SD	2.55	0.79
16:7I:53:VAL:HG13	16:7I:79:VAL:HG22	1.64	0.79
42:E8:65:LEU:HD12	42:E8:68:ARG:HH11	1.47	0.79
1:1G:1243:C:OP2	21:1B:10:ARG:NH2	2.13	0.79
3:22:204:LEU:HD12	3:22:205:GLY:H	1.46	0.79
33:15:42:TRP:O	40:85:64:ARG:NH2	2.15	0.79
8:7E:51:VAL:HG11	8:7E:60:ARG:HD2	1.65	0.79
24:1H:1265:A:OP2	57:1H:3610:HOH:O	2.00	0.79
1:13:21:G:OP1	57:13:1830:HOH:O	2.00	0.79
35:35:47:ASP:HB3	35:35:48:PRO:O	1.81	0.79
4:32:31:CYS:C	4:32:33:MET:H	1.84	0.79
50:M8:37:SER:HA	50:M8:41:PRO:HG2	1.64	0.79
24:1H:1267:U:O3'	57:1H:3639:HOH:O	2.00	0.79
49:L8:12:PRO:O	49:L8:20:LYS:NZ	2.15	0.79
27:19:206:LEU:HD22	27:19:211:ARG:HG2	1.65	0.79
1:1G:1256:A:H62	1:1G:1277:C:H3'	1.47	0.79
24:14:2227:A:OP2	57:14:3897:HOH:O	1.99	0.79
24:1H:598:G:H5'	35:78:11:GLY:HA3	1.64	0.79
15:6I:87:ILE:HG22	15:6I:88:ARG:H	1.47	0.79
24:14:1007:C:OP1	33:15:35:ARG:NH1	2.15	0.79
6:5E:23:LYS:HZ3	6:5E:23:LYS:HB2	1.46	0.79
24:1H:1007:C:OP1	33:58:35:ARG:NH1	2.15	0.79
1:1G:1224:G:C6	1:1G:1322:C:H1'	2.18	0.79
10:1A:34:VAL:HG22	10:1A:74:ILE:HG12	1.65	0.79
24:1H:1970:A:OP2	57:1H:3913:HOH:O	2.00	0.79
39:75:24:PRO:HD3	39:75:52:ILE:HD12	1.64	0.79
4:3E:29:PRO:HA	4:3E:34:GLU:HG3	1.63	0.79
24:1H:2392:A:H2	24:1H:2424:C:H42	1.30	0.79
24:14:2343:C:O2'	24:14:2373:G:O2'	1.96	0.79
24:1H:1495:A:OP2	57:1H:4168:HOH:O	2.01	0.79
27:19:69:ARG:NH2	27:19:128:GLY:O	2.14	0.79
29:39:53:THR:HG22	29:39:56:GLU:HG3	1.64	0.79
24:1H:397:G:N7	57:1H:4244:HOH:O	2.15	0.79
50:I5:37:SER:OG	50:I5:38:LYS:N	2.13	0.78
1:13:1147:C:O2	9:8E:16:ARG:NH1	2.16	0.78
1:13:330:C:O2	57:13:1852:HOH:O	1.98	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1149:C:H2'	1:13:1150:U:H6	1.48	0.78
24:14:1327:C:OP2	57:14:3677:HOH:O	2.00	0.78
2:12:167:PRO:O	2:12:171:ALA:N	2.16	0.78
24:1H:270(K):C:O2	24:1H:270(N):G:N1	2.14	0.78
1:13:673:G:H2'	1:13:674:G:C8	2.18	0.78
24:1H:956:G:OP2	36:88:14:ARG:NH2	2.16	0.78
46:I8:38:VAL:HG12	46:I8:40:GLN:HG2	1.64	0.78
4:32:125:HIS:HD1	4:32:152:SER:HG	0.78	0.78
24:14:259:G:N2	24:14:621:A:H8	1.81	0.78
24:14:1249:U:OP1	57:14:3529:HOH:O	2.01	0.78
24:14:960:A:H61	36:45:83:MET:HE2	1.46	0.78
24:14:1171:G:OP2	24:14:1173:G:N2	2.17	0.78
24:1H:811:U:H2'	35:78:21:ARG:HA	1.65	0.78
24:14:593:G:H4'	54:M5:62:LEU:HD22	1.62	0.78
5:4E:148:VAL:HA	5:4E:151:LEU:HD12	1.65	0.78
5:42:31:LEU:HD12	5:42:45:PHE:HB2	1.65	0.78
24:1H:963:U:OP1	57:1H:3809:HOH:O	2.01	0.78
57:1H:3689:HOH:O	28:21:135:HIS:NE2	2.17	0.78
24:14:620:G:H5''	24:14:620:G:N3	1.99	0.78
24:1H:1664:A:OP2	57:1H:4003:HOH:O	1.99	0.78
2:1E:69:LEU:HD22	2:1E:155:LEU:HD21	1.65	0.78
1:1G:1435:G:H2'	1:1G:1436:U:C6	2.19	0.78
24:14:1041:C:O2	24:14:1114:G:N2	2.17	0.78
54:Q8:29:LYS:HB3	54:Q8:31:HIS:N	1.99	0.78
3:22:90:GLU:HG3	3:22:93:LYS:HD2	1.66	0.78
44:C5:19:LYS:HG3	44:C5:20:TYR:H	1.49	0.78
1:13:396:G:O2'	1:13:398:C:OP1	2.00	0.78
7:6E:42:ILE:HG23	7:6E:117:ALA:HB2	1.65	0.78
45:D5:161:VAL:HG23	45:D5:162:GLU:HG2	1.66	0.77
1:13:736:C:H2'	1:13:737:A:C8	2.18	0.77
24:1H:2017:U:OP2	57:1H:3752:HOH:O	2.01	0.77
24:1H:2867:G:OP2	39:B8:119:LYS:NZ	2.13	0.77
24:1H:583:G:N7	57:1H:3724:HOH:O	2.17	0.77
17:8A:45:HIS:CD2	17:8A:47:PRO:HG3	2.19	0.77
42:A5:59:VAL:HG12	42:A5:60:ASN:HD22	1.50	0.77
24:14:910:A:C5	36:45:13:GLN:HG3	2.20	0.77
24:1H:563:G:OP2	57:1H:3622:HOH:O	2.01	0.77
36:88:16:ARG:HH21	36:88:18:LYS:HD3	1.48	0.77
24:14:2477:C:H2'	24:14:2529:G:H22	1.49	0.77
25:1J:28:C:H42	25:1J:56:G:H1	1.31	0.77
1:1G:1286:A:C8	1:1G:1287:A:H4'	2.20	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:7I:26:ARG:HH11	16:7I:26:ARG:HG2	1.49	0.77
1:1G:1006:C:O2	1:1G:1023:G:N1	2.16	0.77
24:1H:1141:U:H2'	33:58:63:THR:HG21	1.66	0.77
28:29:167:VAL:HG12	28:29:170:LEU:HD11	1.66	0.77
7:6E:143:ARG:NH2	22:3K:43:G:OP1	2.17	0.77
13:4A:3:ARG:HE	13:4A:9:ILE:HD11	1.48	0.77
1:1G:998:G:N2	1:1G:1043:C:O2	2.17	0.77
33:58:96:GLU:HG2	33:58:97:ARG:N	2.00	0.77
45:D5:105:VAL:HG22	45:D5:107:THR:H	1.50	0.77
1:1G:1204:A:OP1	14:5A:3:ARG:NH1	2.18	0.77
2:12:178:ARG:NH1	2:12:196:LEU:O	2.17	0.77
24:14:248:G:OP1	57:14:3927:HOH:O	2.03	0.77
17:8I:15:MET:HB3	17:8I:18:THR:HB	1.67	0.77
24:14:2475:C:O2	24:14:2477:C:N4	2.18	0.77
1:1G:816:A:OP2	57:1G:1888:HOH:O	2.03	0.77
24:1H:192:C:N3	57:1H:3632:HOH:O	2.18	0.77
37:98:33:ARG:HH22	51:N8:55:ARG:HG2	1.49	0.77
24:14:2588:G:OP2	57:14:3596:HOH:O	2.03	0.77
24:1H:452:G:OP2	57:1H:3847:HOH:O	2.01	0.77
24:1H:1614:A:OP1	57:1H:3868:HOH:O	2.03	0.77
24:1H:1399:C:OP1	43:F8:25:LYS:NZ	2.17	0.77
24:1H:2256:G:N7	57:1H:4029:HOH:O	2.18	0.77
24:14:1105:U:H2'	24:14:1106:G:H8	1.49	0.77
1:1G:1205:U:H4'	3:22:195:VAL:HG11	1.66	0.77
1:13:1159:U:O4'	1:13:1182:G:N2	2.17	0.77
24:1H:592:G:O6	24:1H:665:C:N4	2.16	0.77
22:2K:60:A:O2'	22:2K:61:G:O5'	2.03	0.77
25:16:19:G:N2	25:16:64:C:N3	2.33	0.77
1:13:766:A:OP2	57:13:1806:HOH:O	2.02	0.77
24:1H:2048:G:N7	57:1H:3973:HOH:O	2.17	0.77
24:14:2808:U:O2	24:14:2892:A:N6	2.17	0.77
27:11:33:LEU:O	27:11:64:ILE:HG23	1.85	0.77
5:42:143:ARG:NH1	8:72:77:GLU:OE1	2.18	0.77
24:14:1073:A:OP2	24:14:1094:U:N3	2.18	0.77
24:14:493:G:N7	57:14:3788:HOH:O	2.16	0.77
44:C5:39:VAL:O	44:C5:41:GLY:N	2.17	0.77
24:1H:792:G:H5''	24:1H:793:A:H5'	1.67	0.77
28:29:37:ARG:HB2	28:29:46:ALA:H	1.50	0.76
27:19:17:THR:O	27:19:211:ARG:NH2	2.18	0.76
1:1G:1028:C:N3	1:1G:1033:G:N2	2.31	0.76
10:1A:48:THR:OG1	10:1A:62:HIS:ND1	2.18	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:68:76:ALA:HB3	39:B8:75:ILE:HB	1.65	0.76
24:1H:392:C:OP1	57:1H:3719:HOH:O	2.02	0.76
38:A8:25:ARG:NH1	38:A8:42:ASP:OD2	2.17	0.76
40:C8:34:LYS:NZ	40:C8:37:GLU:OE1	2.16	0.76
4:3E:98:GLU:O	4:3E:103:ASN:ND2	2.18	0.76
17:8I:18:THR:OG1	17:8I:69:LYS:NZ	2.17	0.76
8:72:45:ILE:HG22	8:72:47:GLY:H	1.50	0.76
3:2E:13:GLY:HA3	14:5I:57:ARG:HE	1.49	0.76
1:13:1346:A:OP1	9:8E:120:ARG:NH1	2.18	0.76
51:N8:41:PRO:O	51:N8:44:THR:OG1	2.01	0.76
2:1E:16:HIS:HD2	2:1E:210:SER:HA	1.50	0.76
24:1H:910:A:H62	36:88:12:GLN:HA	1.49	0.76
24:14:1416:G:O2'	24:14:1417:C:O5'	2.02	0.76
45:D5:10:ARG:NH2	45:D5:26:GLY:O	2.18	0.76
24:14:888:C:H4'	24:14:889:C:H5'	1.66	0.76
47:F5:64:ALA:HA	47:F5:67:ILE:HD12	1.67	0.76
35:35:122:PRO:HB3	35:35:141:ALA:HB1	1.68	0.76
24:1H:2788:C:O2'	24:1H:2809:A:N3	2.19	0.76
4:32:139:ARG:HG3	4:32:139:ARG:HH11	1.50	0.76
26:79:201:PRO:HG2	26:79:204:ALA:HB2	1.67	0.76
24:1H:2392:A:C8	35:78:61:ARG:HG2	2.18	0.76
24:1H:1030:G:O6	24:1H:1124:C:N4	2.15	0.76
2:1E:21:ARG:HB3	2:1E:39:ILE:HA	1.66	0.76
35:35:47:ASP:OD2	35:35:50:ARG:NH1	2.19	0.76
2:1E:7:VAL:HG21	2:1E:11:LEU:HD22	1.67	0.76
19:AA:9:VAL:HG11	50:I5:63:TYR:HB3	1.65	0.76
5:42:50:GLU:HB3	5:42:53:LEU:HD13	1.64	0.76
22:3L:17:OMG:N2	22:3L:67:A:OP2	2.19	0.76
47:J8:41:ARG:HH11	47:J8:41:ARG:HG3	1.48	0.76
24:14:1084:A:O2'	24:14:1105:U:O2'	2.03	0.76
36:88:86:GLY:HA3	36:88:87:LYS:HG3	1.67	0.76
25:1J:40:U:O2	25:1J:45:A:N6	2.18	0.76
1:1G:771:G:N7	57:1G:1802:HOH:O	2.17	0.76
1:13:1157:A:O2'	1:13:1181:G:N2	2.18	0.76
27:11:65:ILE:HD11	27:11:67:PHE:CZ	2.20	0.76
35:78:88:LEU:HD12	35:78:95:VAL:HG11	1.68	0.76
1:1G:957:U:H1'	1:1G:960:U:C5	2.20	0.76
1:13:454:C:OP1	16:7I:75:ARG:NH1	2.19	0.76
24:1H:751:A:OP1	57:1H:3867:HOH:O	2.04	0.76
24:1H:751:A:OP1	57:1H:3869:HOH:O	2.02	0.76
45:D5:59:LEU:O	45:D5:61:LEU:N	2.17	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:111:ARG:HG2	2:1E:111:ARG:HH11	1.51	0.76
38:65:106:ARG:O	38:65:106:ARG:NH1	2.19	0.75
38:65:14:VAL:HG21	38:65:89:ARG:HG2	1.67	0.75
24:14:399:G:OP2	57:14:3780:HOH:O	2.04	0.75
1:13:511:C:OP2	4:3E:49:ARG:NH2	2.20	0.75
45:D5:128:VAL:HG23	45:D5:160:GLY:HA3	1.67	0.75
24:1H:1334:G:N7	57:1H:3888:HOH:O	2.20	0.75
27:19:242:ARG:O	57:19:407:HOH:O	2.03	0.75
24:1H:450:G:O6	57:1H:3852:HOH:O	2.03	0.75
40:85:92:ARG:HD3	40:85:95:LEU:HD12	1.68	0.75
24:1H:1803:A:O2'	27:11:259:THR:HG21	1.86	0.75
24:1H:2327:A:H2'	24:1H:2328:A:C8	2.21	0.75
24:1H:2635:C:H5''	28:21:78:LEU:HA	1.67	0.75
26:79:19:ILE:HG12	26:79:223:ARG:HG2	1.67	0.75
48:K8:47:ASN:C	48:K8:49:LYS:H	1.90	0.75
8:7E:41:ARG:NH1	8:7E:123:GLU:OE2	2.17	0.75
10:1I:33:GLN:HB2	10:1I:75:ILE:HG12	1.69	0.75
4:3E:85:LYS:O	4:3E:89:THR:OG1	2.02	0.75
34:68:4:PRO:O	34:68:5:GLN:HB2	1.84	0.75
24:1H:1728:G:H8	24:1H:1732:A:H62	1.32	0.75
1:1G:929:G:N2	1:1G:1388:C:O2	2.19	0.75
39:B8:51:ARG:HG3	39:B8:98:LYS:HE3	1.68	0.75
48:G5:17:SER:HB2	48:G5:20:GLU:H	1.50	0.75
1:1G:1315:U:O2'	1:1G:1360:A:O2'	2.05	0.75
3:22:27:LYS:NZ	3:22:28:GLN:OE1	2.17	0.75
1:1G:448:A:H62	1:1G:486:U:H3	1.35	0.75
24:1H:1021:A:H3'	24:1H:1022:G:H5''	1.69	0.75
14:5A:23:ARG:NH1	14:5A:29:ARG:O	2.19	0.75
2:1E:17:PHE:HA	2:1E:44:LEU:HD11	1.68	0.75
24:1H:2032:G:H21	28:21:146:THR:HG23	1.49	0.75
24:14:1047:G:H21	24:14:1111:A:H62	1.35	0.75
37:55:37:THR:HG22	37:55:39:PRO:HD2	1.69	0.75
5:4E:126:ARG:HH11	5:4E:126:ARG:HG3	1.51	0.75
24:14:1012:U:OP2	40:85:70:ARG:NH2	2.19	0.75
24:1H:1403:C:H5''	24:1H:1471:A:H1'	1.67	0.75
1:13:321:A:N7	1:13:328:C:O2'	2.19	0.75
1:13:376:G:H5''	16:7I:5:ARG:HG3	1.69	0.75
1:13:407:G:OP1	4:3E:115:ARG:NH1	2.20	0.75
33:58:58:ASP:OD1	33:58:58:ASP:N	2.17	0.75
28:21:55:ASN:ND2	28:21:73:GLU:O	2.19	0.75
8:7E:64:LYS:HB3	8:7E:79:VAL:HG21	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:75:50:ILE:HD11	39:75:102:ILE:HD11	1.66	0.75
24:1H:2213:U:O2	47:J8:52:ARG:NH2	2.20	0.75
24:1H:881:G:O6	24:1H:882:G:N2	2.20	0.75
24:1H:2287:A:H62	24:1H:2344:U:H3	1.33	0.74
27:11:228:PRO:O	57:11:406:HOH:O	2.03	0.74
4:32:73:ARG:O	4:32:77:ASN:ND2	2.20	0.74
1:13:881:G:OP2	12:3I:12:ARG:NH2	2.19	0.74
39:B8:107:ASP:OD1	39:B8:107:ASP:N	2.20	0.74
24:14:1250:G:OP2	35:35:21:ARG:NH1	2.20	0.74
1:13:1378:C:O2	7:6E:76:ARG:NH1	2.20	0.74
24:14:1022:G:O2'	24:14:1023:U:OP2	2.05	0.74
24:1H:1614:A:OP1	57:1H:3871:HOH:O	2.05	0.74
31:59:30:LYS:NZ	31:59:79:VAL:O	2.19	0.74
1:1G:512:U:H2'	1:1G:513:C:H6	1.52	0.74
24:1H:2485:G:H5''	36:88:46:GLN:HE21	1.51	0.74
24:1H:1430:C:H2'	24:1H:1431:U:C6	2.21	0.74
1:1G:895:G:H1	1:1G:904:C:H42	1.35	0.74
22:2L:12:C:H5	22:2L:24:G:H1	1.35	0.74
1:13:1077:G:N2	1:13:1080:A:OP2	2.19	0.74
24:14:2656:U:H3	24:14:2665:A:H2	1.34	0.74
27:19:89:SER:HB2	27:19:159:ALA:H	1.51	0.74
1:1G:1187:G:N7	57:1G:1896:HOH:O	2.20	0.74
25:16:52:A:OP2	38:A8:59:LYS:NZ	2.17	0.74
24:1H:2074:U:OP1	57:1H:3668:HOH:O	2.06	0.74
7:6E:111:ARG:NH1	7:6E:113:GLU:OE2	2.19	0.74
38:65:25:ARG:HD2	38:65:88:ASP:HB2	1.68	0.74
34:68:2:ILE:HD12	34:68:6:THR:HG21	1.68	0.74
21:1F:9:ARG:NH2	21:1F:21:TYR:O	2.20	0.74
24:14:1975:G:OP2	57:14:3605:HOH:O	2.05	0.74
1:13:812:C:N3	57:13:1805:HOH:O	2.19	0.74
22:2L:62:G:C5	22:2L:63:5MU:H72	2.23	0.74
1:13:748:C:H4'	1:13:749:C:O5'	1.88	0.74
38:A8:35:ILE:HD11	38:A8:101:LEU:HD23	1.69	0.74
43:F8:60:ARG:HH22	53:P8:47:ARG:HH22	1.35	0.74
24:14:2592:G:N7	57:14:3602:HOH:O	2.19	0.74
24:14:1525:G:H2'	24:14:1526:G:H8	1.52	0.74
1:1G:750:G:N3	15:6A:23:GLY:HA3	2.03	0.74
24:14:330:A:H2	24:14:1210:A:HO2'	1.35	0.74
3:22:79:ARG:HH22	3:22:83:ARG:HB3	1.51	0.74
24:1H:307:G:N7	57:1H:4127:HOH:O	2.20	0.74
41:95:21:ARG:CZ	41:95:91:TYR:CD1	2.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:51:8:PRO:HD2	31:51:69:ARG:HE	1.52	0.74
24:14:2102:U:H3	24:14:2187:G:H1	1.36	0.74
1:13:4:U:O2'	8:7E:102:ARG:NH1	2.19	0.74
34:25:13:ASN:ND2	34:25:97:ARG:H	1.84	0.74
24:14:995:C:O2	33:15:3:THR:OG1	2.05	0.74
25:1J:7:G:H4'	38:65:29:PHE:CD2	2.22	0.74
24:14:2392:A:H8	35:35:61:ARG:HB3	1.53	0.74
28:21:135:HIS:NE2	57:21:401:HOH:O	2.19	0.74
19:AA:49:ILE:HD13	19:AA:62:ILE:HD13	1.70	0.74
24:14:9:U:N3	24:14:2629:A:N1	2.35	0.74
41:D8:19:LYS:HG3	41:D8:95:LEU:HD23	1.70	0.74
24:1H:249:C:O5'	57:1H:3654:HOH:O	2.04	0.74
4:3E:98:GLU:OE2	4:3E:103:ASN:ND2	2.20	0.74
30:49:98:ARG:HH21	50:I5:2:LYS:HE2	1.51	0.74
24:1H:2331:G:H4'	46:I8:43:THR:H	1.52	0.74
24:14:49:A:H5''	24:14:51:G:O4'	1.87	0.74
10:1A:61:GLU:OE2	14:5A:45:ARG:NH1	2.21	0.74
24:1H:2597:G:O3'	57:1H:3642:HOH:O	2.06	0.74
1:13:1058:G:OP1	3:2E:199:LYS:NZ	2.21	0.74
1:13:136:C:N4	1:13:227:G:O6	2.18	0.74
24:1H:298:G:N7	57:1H:4038:HOH:O	2.20	0.74
1:1G:1228:C:H2'	1:1G:1229:A:H8	1.51	0.74
24:14:2685:G:O6	57:14:3621:HOH:O	2.06	0.73
24:1H:1728:G:H3'	24:1H:1729:A:H5''	1.70	0.73
32:69:74:ASN:O	32:69:139:GLN:NE2	2.21	0.73
24:1H:2243:U:OP1	57:1H:3703:HOH:O	2.05	0.73
24:1H:2713:A:OP2	57:1H:3660:HOH:O	2.05	0.73
20:BI:73:HIS:HB3	20:BI:74:LYS:HG2	1.70	0.73
43:B5:44:GLU:HG3	43:B5:51:VAL:HG23	1.70	0.73
6:5E:36:ARG:NH2	6:5E:38:GLU:OE2	2.22	0.73
11:2I:21:ILE:HB	11:2I:84:VAL:HG12	1.69	0.73
37:55:107:ASP:HB3	37:55:109:ALA:H	1.52	0.73
24:14:1012:U:N3	24:14:1143:A:H2	1.86	0.73
24:1H:1175:U:O2	24:1H:1176:G:N2	2.21	0.73
1:13:1023:G:OP2	1:13:1024:G:N2	2.21	0.73
1:13:468:A:H5''	16:7I:80:PHE:HB3	1.70	0.73
1:13:677:U:H3	1:13:713:G:H22	1.34	0.73
1:1G:1256:A:OP2	3:22:26:LYS:NZ	2.16	0.73
24:14:2287:A:N1	24:14:2346:A:H2	1.86	0.73
24:1H:1190:G:N7	57:1H:3826:HOH:O	2.21	0.73
22:2L:17:OMG:N2	22:2L:64:PSU:O4	2.20	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:65:78:LEU:HD21	38:65:107:GLU:HB3	1.69	0.73
25:16:40:U:H3	25:16:43:C:H5''	1.53	0.73
44:G8:82:PRO:HG3	44:G8:97:ARG:HD2	1.71	0.73
44:C5:27:VAL:HA	44:C5:39:VAL:HG12	1.69	0.73
24:1H:2243:U:OP1	57:1H:3699:HOH:O	2.06	0.73
27:19:37:LEU:HA	27:19:38:LYS:HG2	1.68	0.73
28:29:24:THR:HG21	28:29:188:VAL:HB	1.69	0.73
3:22:50:ALA:HB2	3:22:75:VAL:HB	1.70	0.73
10:1I:26:ALA:HB1	10:1I:84:GLN:HG3	1.69	0.73
48:K8:17:SER:HB2	48:K8:20:GLU:H	1.54	0.73
22:3L:85:A:O2'	24:14:2394:C:N3	2.20	0.73
24:14:1828:G:OP2	57:14:3541:HOH:O	2.05	0.73
24:14:780:G:H21	24:14:783:A:H62	1.37	0.73
24:14:1084:A:N7	24:14:1085:A:N6	2.37	0.73
31:59:10:PRO:HG2	31:59:50:VAL:HG13	1.71	0.73
12:3I:47:LYS:HG2	12:3I:48:PRO:HD3	1.69	0.73
31:59:54:ARG:NH2	31:59:57:ASP:OD1	2.21	0.73
1:1G:411:A:C5	1:1G:413:G:H1'	2.23	0.73
8:72:12:ARG:NH1	8:72:25:ASP:O	2.22	0.73
8:72:49:GLU:OE2	8:72:62:TYR:OH	2.07	0.73
42:E8:18:ARG:HD3	42:E8:76:VAL:HG13	1.70	0.73
27:11:26:LYS:O	27:11:27:THR:OG1	2.07	0.73
24:1H:2836:U:H2'	24:1H:2837:G:C8	2.23	0.73
51:J5:16:ARG:NH1	51:J5:17:ASP:OD1	2.22	0.73
30:41:112:PRO:HB3	50:M8:37:SER:H	1.54	0.73
24:1H:2849:U:H4'	24:1H:2868:A:C2	2.24	0.73
45:H8:52:SER:O	45:H8:52:SER:OG	2.03	0.73
24:14:2785:C:O2'	28:29:64:LYS:HE3	1.88	0.73
24:1H:1105:U:H2'	24:1H:1106:G:H8	1.52	0.73
24:1H:620:G:H4'	24:1H:621:A:H5''	1.71	0.73
24:14:1633:G:O6	57:14:3549:HOH:O	2.04	0.73
24:1H:2006:C:OP1	57:1H:3637:HOH:O	2.06	0.73
22:2K:20:C:O2'	22:2K:21:A:OP2	2.06	0.73
13:4I:59:TYR:O	13:4I:63:THR:OG1	2.06	0.73
9:8E:13:ALA:HB2	9:8E:68:GLY:HA3	1.69	0.73
1:13:601:C:H2'	1:13:602:A:H8	1.54	0.73
24:14:674:G:O2'	29:39:74:ARG:HG3	1.87	0.73
24:1H:141:A:H8	24:1H:1595:G:H21	1.37	0.73
19:AA:22:LEU:HB3	19:AA:27:GLU:HG3	1.70	0.73
1:13:143:A:H2	1:13:220:G:H1	1.35	0.72
24:14:1019:U:H3	24:14:1142(A):A:H62	1.35	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4E:148:VAL:HG21	8:7E:107:LEU:HD22	1.72	0.72
1:13:559:A:OP1	5:4E:126:ARG:NH2	2.22	0.72
24:1H:1386:C:H2'	24:1H:1387:C:C6	2.23	0.72
24:14:654(E):C:H42	24:14:654(P):G:H1	1.38	0.72
39:75:33:LYS:HE3	39:75:40:THR:HG21	1.69	0.72
24:14:2410:G:OP2	57:14:3848:HOH:O	2.06	0.72
42:E8:45:TYR:OH	42:E8:49:LYS:NZ	2.21	0.72
25:1J:80:U:H2'	25:1J:81:G:N2	2.04	0.72
22:2L:18:G:H4'	22:2L:19:C:OP1	1.88	0.72
24:14:453:C:OP1	57:14:3738:HOH:O	2.07	0.72
24:1H:1281:G:N7	57:1H:4219:HOH:O	2.21	0.72
8:7E:112:LEU:HB3	8:7E:133:LEU:HA	1.71	0.72
5:4E:11:ILE:HD11	5:4E:31:LEU:HD22	1.71	0.72
24:1H:981:A:OP1	57:1H:3768:HOH:O	2.07	0.72
24:14:270(L):U:H3'	24:14:270(M):U:H5''	1.70	0.72
37:98:33:ARG:HH11	37:98:113:LEU:HD21	1.53	0.72
45:H8:95:PRO:HA	45:H8:130:PRO:HD3	1.71	0.72
2:12:166:ASP:HB3	2:12:169:LYS:HB2	1.70	0.72
24:1H:2334:G:O6	46:I8:74:ARG:NH1	2.21	0.72
1:13:542:G:OP1	4:3E:10:ARG:NH2	2.22	0.72
24:14:887:A:OP2	24:14:888:C:N4	2.22	0.72
2:12:74:LYS:NZ	2:12:205:ASP:OD1	2.22	0.72
24:1H:2298:A:H62	24:1H:2318:G:H8	1.36	0.72
28:21:92:THR:O	28:21:95:ILE:HG12	1.88	0.72
32:61:110:ASP:OD2	32:61:113:ARG:NH1	2.22	0.72
24:14:2124:G:H1	26:79:217:THR:HA	1.55	0.72
24:1H:761:A:OP1	57:1H:3669:HOH:O	2.07	0.72
24:1H:972:G:O2'	57:1H:3821:HOH:O	2.07	0.72
1:13:1182:G:H4'	1:13:1183:A:H5'	1.71	0.72
45:D5:152:ALA:HA	45:D5:171:ILE:HB	1.70	0.72
44:G8:84:ARG:NH2	57:G8:301:HOH:O	2.22	0.72
1:13:148:G:H2'	1:13:149:A:H8	1.55	0.72
24:14:1817:G:OP1	27:19:88:ARG:NH2	2.17	0.72
24:14:987:G:OP2	57:14:3943:HOH:O	2.08	0.72
41:95:37:VAL:HG11	41:95:57:VAL:H	1.55	0.72
37:98:33:ARG:HG3	37:98:115:GLU:HB3	1.71	0.72
24:1H:442:G:H4'	29:31:46:ARG:HG3	1.71	0.72
1:13:266:G:H5''	1:13:268:C:H41	1.54	0.72
1:1G:44:G:N2	1:1G:398:C:O2	2.19	0.72
13:4I:17:VAL:O	13:4I:20:THR:OG1	2.05	0.72
35:78:45:LEU:H	35:78:45:LEU:HD22	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2329:G:H2'	24:14:2330:G:C8	2.24	0.72
24:14:1058:U:O2	24:14:1080:A:N6	2.19	0.72
35:35:79:ARG:HG3	35:35:110:TYR:HB2	1.72	0.72
24:14:2392:A:H2	24:14:2424:C:H42	1.35	0.72
24:1H:298:G:N7	57:1H:4043:HOH:O	2.23	0.72
24:1H:1689:A:H62	24:1H:1698:A:H2	1.38	0.72
24:14:958:U:O2	25:1J:89(A):A:O2'	2.06	0.72
1:13:411:A:C4	1:13:413:G:H1'	2.24	0.72
24:14:751:A:OP1	57:14:3514:HOH:O	2.08	0.72
24:1H:2126:A:O2'	24:1H:2162:G:N2	2.22	0.72
3:22:47:LEU:O	3:22:50:ALA:N	2.23	0.72
24:14:1633:G:O6	57:14:3552:HOH:O	2.05	0.72
2:12:63:MET:HG3	2:12:225:ALA:HB1	1.71	0.72
19:AA:40:ILE:HD11	19:AA:69:HIS:HB2	1.72	0.72
24:14:1652:A:OP1	37:55:8:ARG:NH1	2.23	0.72
9:8E:42:ARG:NH1	9:8E:71:SER:OG	2.22	0.72
38:A8:24:LEU:HB2	38:A8:85:VAL:HG12	1.72	0.72
1:1G:1281:U:OP2	1:1G:1282:C:N4	2.17	0.71
24:1H:1510:A:O2'	24:1H:1512:G:N7	2.22	0.71
9:82:53:VAL:HG23	9:82:55:ALA:H	1.53	0.71
24:14:2873:A:H8	37:55:6:SER:H	1.36	0.71
20:BA:45:GLN:HA	20:BA:91:LEU:HD22	1.72	0.71
24:14:2053:G:OP2	57:14:3543:HOH:O	2.07	0.71
24:14:1019:U:HO2'	24:14:1021:A:H2	1.38	0.71
24:1H:1332:G:N2	24:1H:1610:A:C8	2.58	0.71
30:49:66:GLN:NE2	30:49:93:THR:O	2.23	0.71
24:14:956:G:OP2	36:45:14:ARG:NH2	2.23	0.71
1:1G:735:C:H2'	1:1G:736:C:H6	1.55	0.71
24:1H:399:G:OP2	57:1H:3965:HOH:O	2.08	0.71
1:13:837:G:H1	1:13:849:C:H42	1.38	0.71
24:14:1784:A:OP1	57:14:3568:HOH:O	2.07	0.71
43:B5:60:ARG:HH21	53:L5:47:ARG:HH22	1.38	0.71
46:E5:11:ARG:O	46:E5:14:ARG:NH2	2.23	0.71
24:1H:1942:C:OP2	24:1H:1943:U:O2'	2.08	0.71
24:14:2353:G:N7	57:14:3971:HOH:O	2.21	0.71
7:62:15:ASP:OD1	7:62:44:TYR:OH	2.09	0.71
24:1H:870:A:O5'	36:88:5:ARG:NH2	2.22	0.71
32:61:132:PRO:O	32:61:133:HIS:ND1	2.23	0.71
24:14:2577:A:OP1	57:14:3542:HOH:O	2.07	0.71
1:1G:1503:A:O2'	1:1G:1504:G:O5'	2.08	0.71
1:13:1135:U:H4'	1:13:1136:U:H5	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:2I:86:GLY:N	11:2I:112:THR:OG1	2.24	0.71
3:22:113:ALA:HB2	3:22:202:ILE:HG13	1.71	0.71
24:1H:1464:C:HO2'	24:1H:1528:A:H8	1.35	0.71
32:61:64:GLU:HG3	32:61:67:ARG:HH21	1.55	0.71
38:65:35:ILE:HD11	38:65:97:ARG:HE	1.55	0.71
47:J8:65:SER:OG	47:J8:66:HIS:ND1	2.21	0.71
30:49:29:TRP:O	30:49:33:ARG:NH1	2.24	0.71
24:1H:1434:A:H61	24:1H:1558:A:N6	1.88	0.71
24:1H:1798:U:H5'	27:11:259:THR:HG22	1.72	0.71
39:B8:26:ASP:HB3	39:B8:92:GLY:H	1.56	0.71
24:14:2720:U:H3	24:14:2873:A:H2	1.38	0.71
1:13:200:G:N2	1:13:218:C:O2	2.24	0.71
39:75:108:ARG:HA	39:75:111:ARG:HD2	1.73	0.71
47:F5:87:PRO:HA	47:F5:90:ILE:HG22	1.71	0.71
23:4L:13:A:O2'	23:4L:14:A:OP1	2.09	0.71
24:1H:1187:G:OP2	57:1H:3833:HOH:O	2.09	0.71
24:1H:1525:G:H2'	24:1H:1526:G:C8	2.25	0.71
24:1H:2017:U:P	57:1H:3752:HOH:O	2.49	0.71
51:N8:55:ARG:HG3	51:N8:57:VAL:H	1.56	0.71
36:88:135:ASP:HB3	36:88:137:TYR:H	1.56	0.71
24:1H:1641:A:OP2	57:1H:3883:HOH:O	2.09	0.71
24:14:1678:G:N2	24:14:1989:G:H22	1.89	0.71
1:13:313:A:H2'	1:13:314:C:C6	2.25	0.71
24:1H:1221:C:H2'	24:1H:1222:C:H6	1.54	0.71
14:5I:24:CYS:HB2	14:5I:28:GLY:H	1.55	0.71
24:14:328:U:H4'	44:C5:68:HIS:ND1	2.06	0.71
24:1H:2701:C:H3'	24:1H:2702:U:H5''	1.72	0.71
24:1H:2432:A:C4	47:J8:33:LYS:HG2	2.25	0.71
9:82:34:ASN:HA	9:82:37:PHE:HD2	1.55	0.71
38:65:93:LYS:HG2	38:65:95:HIS:HB2	1.72	0.71
19:AI:40:ILE:HG23	19:AI:41:VAL:HG13	1.71	0.71
15:6I:3:ILE:HD13	15:6I:34:LEU:HD23	1.70	0.71
46:I8:37:LEU:N	46:I8:59:LEU:O	2.21	0.70
33:15:17:ASP:OD1	33:15:56:ASN:ND2	2.24	0.70
44:G8:97:ARG:NH2	44:G8:104:GLY:O	2.24	0.70
24:14:252:G:OP2	35:35:50:ARG:NH2	2.24	0.70
54:M5:40:GLU:H	54:M5:43:GLN:HG3	1.56	0.70
44:C5:48:ALA:HB3	44:C5:59:GLY:HA2	1.72	0.70
1:1G:1151:A:H5''	10:1A:42:THR:HG23	1.72	0.70
53:P8:12:ARG:HH21	53:P8:44:PRO:HB3	1.55	0.70
24:1H:71:A:H2	43:F8:31:HIS:HE2	1.37	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:G5:68:ARG:HA	48:G5:72:ALA:HB2	1.73	0.70
24:1H:2392:A:H2	24:1H:2424:C:N4	1.88	0.70
48:K8:47:ASN:O	48:K8:49:LYS:N	2.24	0.70
1:13:920:U:H2'	1:13:921:U:C6	2.27	0.70
24:1H:739:G:OP1	57:1H:3907:HOH:O	2.08	0.70
24:1H:49:A:N7	24:1H:120:U:C5	2.55	0.70
46:I8:11:ARG:O	46:I8:14:ARG:NH2	2.24	0.70
33:58:47:ALA:HB2	33:58:112:LEU:HD11	1.74	0.70
24:1H:273(F):C:H3'	24:1H:274:G:H5''	1.72	0.70
2:12:70:PHE:O	2:12:93:VAL:N	2.24	0.70
4:3E:154:ASN:OD1	4:3E:154:ASN:N	2.22	0.70
1:1G:1502:A:H2	1:1G:1505:G:N1	1.89	0.70
24:1H:2314:C:H2'	24:1H:2315:G:H8	1.54	0.70
24:14:2776:A:OP1	24:14:2776:A:H3'	1.91	0.70
1:1G:975:A:H4'	1:1G:976:G:H5''	1.71	0.70
24:1H:607:U:N3	24:1H:621:A:H2	1.88	0.70
13:4I:58:GLU:O	13:4I:62:ASN:ND2	2.19	0.70
8:7E:20:TYR:HE2	8:7E:75:ARG:HD2	1.56	0.70
1:13:77:C:N4	1:13:89:U:O4	2.25	0.70
16:7A:40:ASP:HB3	16:7A:48:TRP:HB2	1.74	0.70
29:31:28:ILE:HG12	29:31:119:ARG:HH21	1.56	0.70
35:78:19:VAL:HB	35:78:27:HIS:HB2	1.73	0.70
36:88:51:ARG:HD2	36:88:66:ILE:HD11	1.73	0.70
24:14:2693:A:H2'	24:14:2694:G:H8	1.56	0.70
24:14:1756:G:OP2	57:14:3877:HOH:O	2.08	0.70
24:14:1200:C:OP1	57:14:3798:HOH:O	2.09	0.70
41:95:38:LEU:HD13	41:95:55:ALA:HB1	1.74	0.70
24:1H:2884:U:O2	51:N8:52:TYR:OH	2.10	0.70
1:13:1151:A:H2'	1:13:1152:A:H8	1.54	0.70
32:61:92:VAL:HG22	32:61:120:ILE:HB	1.72	0.70
22:2L:21:A:H8	22:2L:56:U:H3	1.37	0.70
45:H8:145:GLU:HB3	45:H8:148:ASP:HB2	1.73	0.70
1:13:674:G:H2'	1:13:675:A:H8	1.56	0.70
24:14:2853:C:H2'	24:14:2854:G:H8	1.54	0.70
24:1H:534:U:H5'	40:C8:42:ALA:HB1	1.74	0.70
9:8E:10:ARG:HG2	9:8E:11:LYS:HG3	1.73	0.70
28:21:47:VAL:HG11	28:21:86:PRO:HD2	1.72	0.70
24:1H:1843:C:H5'	27:11:253:GLN:OE1	1.91	0.70
26:71:13:LYS:NZ	26:71:31:GLU:O	2.24	0.70
1:13:1503:A:N1	57:13:1909:HOH:O	2.25	0.70
24:1H:682:G:N2	24:1H:795:C:O2	2.19	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2056:G:OP2	57:1H:3615:HOH:O	2.10	0.70
3:22:8:ILE:HG23	3:22:16:ARG:HD3	1.74	0.70
1:1G:631:G:H3'	1:1G:632:A:H8	1.57	0.70
24:1H:1664:A:OP2	57:1H:4007:HOH:O	2.09	0.70
6:5E:38:GLU:OE1	6:5E:64:GLN:NE2	2.25	0.70
24:1H:1026:U:H1'	24:1H:1027:A:O5'	1.92	0.70
24:14:2371:G:O6	57:14:3962:HOH:O	2.06	0.70
29:39:118:ALA:HB2	29:39:123:LEU:HD23	1.74	0.70
1:1G:56:U:H2'	1:1G:57:G:C8	2.27	0.70
17:8A:53:LEU:HD21	17:8A:85:VAL:HG11	1.73	0.70
24:1H:2134:A:OP2	24:1H:2157:G:N2	2.24	0.70
44:C5:40:GLU:N	44:C5:40:GLU:OE2	2.25	0.70
24:1H:2584:U:H2'	24:1H:2585:U:H2'	1.73	0.70
24:1H:1990:C:OP2	57:1H:3998:HOH:O	2.09	0.70
1:1G:920:U:H2'	1:1G:921:U:C6	2.27	0.70
1:1G:953:G:H5'	1:1G:965:A:H61	1.57	0.70
1:13:1455:G:OP1	20:BI:35:THR:OG1	2.08	0.70
24:14:273(F):C:H3'	24:14:274:G:H5''	1.74	0.70
22:2L:18:G:N2	22:2L:66:G:H1'	2.07	0.69
24:14:2357:U:O2	57:14:3945:HOH:O	2.06	0.69
24:1H:2341:G:H2'	24:1H:2342:C:C6	2.27	0.69
45:D5:140:ASP:OD1	45:D5:140:ASP:N	2.25	0.69
1:1G:1052:U:H5''	1:1G:1053:G:OP2	1.92	0.69
47:J8:76:ARG:HB2	47:J8:94:LEU:HD11	1.74	0.69
29:39:101:LEU:O	29:39:106:ARG:NH1	2.25	0.69
39:75:93:ARG:HG3	39:75:117:ASP:HB3	1.74	0.69
1:13:177:C:OP1	20:BI:65:LYS:NZ	2.23	0.69
24:1H:2052:G:H4'	28:21:143:ASN:O	1.91	0.69
24:14:1250:G:N7	35:35:18:ARG:NH2	2.40	0.69
43:B5:8:ILE:HD12	43:B5:43:VAL:HG12	1.74	0.69
24:1H:1533:C:H2'	24:1H:1534:G:C8	2.27	0.69
15:6I:32:LEU:O	15:6I:35:ARG:N	2.24	0.69
50:I5:56:VAL:HG22	50:I5:57:GLU:H	1.56	0.69
15:6A:70:LEU:HD11	15:6A:77:ARG:HG3	1.74	0.69
46:E5:27:GLU:HG3	46:E5:68:GLU:HA	1.75	0.69
24:1H:773:U:C4'	27:11:47:GLY:HA3	2.22	0.69
24:14:1538:G:H2'	24:14:1539:G:H8	1.56	0.69
41:95:21:ARG:CZ	41:95:91:TYR:CG	2.76	0.69
24:14:751:A:P	57:14:3514:HOH:O	2.49	0.69
1:13:738:C:H2'	1:13:739:C:C6	2.27	0.69
31:59:7:LEU:HB3	31:59:65:HIS:HE1	1.56	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1023:G:H3'	1:13:1024:G:H5''	1.73	0.69
24:1H:800:A:OP1	57:1H:3630:HOH:O	2.10	0.69
44:C5:47:LYS:H	44:C5:60:PHE:HB3	1.57	0.69
32:61:10:GLU:O	32:61:11:ASN:ND2	2.26	0.69
39:B8:50:ILE:HD11	39:B8:102:ILE:HD11	1.74	0.69
26:71:59:ARG:HD2	26:71:164:ARG:HD2	1.74	0.69
8:72:51:VAL:HG22	8:72:52:ASP:H	1.57	0.69
47:J8:85:LEU:HB3	47:J8:86:SER:CB	2.22	0.69
1:13:736:C:H2'	1:13:737:A:H8	1.56	0.69
1:1G:1182:G:H5'	1:1G:1183:A:H5'	1.73	0.69
33:58:89:LYS:O	33:58:93:THR:OG1	2.10	0.69
24:1H:958:U:OP2	36:88:14:ARG:NH1	2.25	0.69
24:1H:796:C:H2'	24:1H:797:C:C6	2.27	0.69
9:8E:3:GLN:OE1	9:8E:20:ARG:NH1	2.25	0.69
1:13:975:A:H4'	1:13:976:G:H5''	1.74	0.69
38:65:3:ARG:HH21	38:65:4:LEU:HB2	1.57	0.69
31:51:84:SER:OG	31:51:85:LYS:N	2.25	0.69
33:58:134:ARG:HH11	33:58:134:ARG:HB3	1.57	0.69
3:22:150:LYS:HG3	3:22:169:ALA:HB2	1.74	0.69
24:1H:138:G:N2	43:F8:44:GLU:OE2	2.19	0.69
1:13:1226:C:OP2	13:4I:103:THR:OG1	2.05	0.69
27:19:228:PRO:HD3	27:19:235:GLY:CA	2.22	0.69
31:59:137:ASP:OD1	31:59:138:LYS:N	2.26	0.69
13:4I:31:LYS:HA	13:4I:34:LEU:HD23	1.72	0.69
30:49:15:VAL:HG21	30:49:176:LEU:HD23	1.74	0.69
32:69:130:TYR:HB3	32:69:136:VAL:HG13	1.73	0.69
3:22:59:ARG:HE	3:22:64:VAL:HB	1.56	0.69
24:1H:1899:G:H22	24:1H:1902:C:H41	1.37	0.69
24:14:2576:G:OP1	57:14:3547:HOH:O	2.11	0.69
24:1H:2062:A:N3	24:1H:2062:A:H2'	2.07	0.69
1:1G:589:C:H42	1:1G:650:G:H1	1.38	0.69
24:1H:2058:A:N6	57:1H:3613:HOH:O	2.17	0.69
10:1A:99:LYS:HE2	10:1A:100:THR:H	1.56	0.69
2:1E:27:LYS:NZ	2:1E:193:ASP:OD2	2.22	0.69
47:J8:91:LYS:HA	47:J8:91:LYS:NZ	2.07	0.69
54:Q8:54:GLU:HA	54:Q8:57:ARG:HH21	1.57	0.69
4:32:29:PRO:HD2	4:32:30:LYS:NZ	2.08	0.69
22:2L:18:G:N2	30:49:78:SER:OG	2.26	0.69
22:3K:24:G:H2'	22:3K:25:G:C8	2.27	0.69
1:1G:1289:A:OP1	21:1B:9:ARG:NH2	2.25	0.69
47:F5:85:LEU:HD13	47:F5:87:PRO:HG2	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:456:C:H2'	43:F8:68:ARG:HH22	1.57	0.69
31:51:4:ILE:HG13	31:51:6:ARG:NE	2.07	0.69
32:69:101:LEU:HB3	32:69:105:HIS:HB2	1.73	0.69
24:1H:142:G:H1'	43:F8:37:THR:HG21	1.75	0.69
27:11:137:PRO:O	27:11:140:THR:HG23	1.93	0.69
29:39:20:LEU:HD22	29:39:203:GLN:HE22	1.56	0.69
1:13:1291:G:OP1	7:6E:37:ASN:ND2	2.23	0.69
24:1H:234:C:H2'	24:1H:235:U:H6	1.58	0.69
24:14:1531:C:H42	24:14:1540:G:H1	1.41	0.69
24:1H:731:C:OP2	57:1H:3669:HOH:O	2.09	0.69
1:1G:976:G:N2	1:1G:1362(A):C:OP2	2.27	0.69
1:1G:1086:U:H2'	1:1G:1087:G:O4'	1.91	0.69
4:32:60:GLU:OE2	4:32:199:ASN:N	2.26	0.69
24:1H:1509:C:H3'	24:1H:1510:A:H5''	1.76	0.68
1:13:1146:A:OP2	57:13:1888:HOH:O	2.10	0.68
22:2L:15:G:H1	22:2L:57:C:H5	1.41	0.68
32:69:98:ALA:HA	32:69:109:ILE:HD11	1.75	0.68
24:14:1434:A:H61	24:14:1558:A:N6	1.90	0.68
7:6E:16:LEU:HD13	9:8E:44:VAL:HG22	1.76	0.68
1:1G:1191:A:OP2	3:22:3:ASN:ND2	2.27	0.68
24:1H:273(D):C:H2'	24:1H:273(E):U:H6	1.57	0.68
24:1H:1643:G:N7	57:1H:3878:HOH:O	2.24	0.68
24:14:2836:U:H2'	24:14:2837:G:C8	2.27	0.68
17:8A:45:HIS:HB2	17:8A:65:ILE:HD13	1.75	0.68
33:58:132:ALA:O	33:58:134:ARG:NH2	2.26	0.68
1:13:538:G:H5''	12:3I:114:LYS:HB2	1.74	0.68
25:16:80:U:H2'	25:16:81:G:H21	1.58	0.68
27:11:59:LYS:HD2	27:11:60:ARG:N	2.08	0.68
24:1H:2016:U:OP1	57:1H:4100:HOH:O	2.09	0.68
25:1J:18:G:N2	25:1J:65:C:N3	2.37	0.68
44:G8:85:VAL:HG23	44:G8:96:ILE:HB	1.76	0.68
24:14:811:U:H2'	35:35:21:ARG:HA	1.75	0.68
24:1H:442:G:H1'	29:31:48:THR:HG21	1.75	0.68
12:3I:70:ILE:HD13	12:3I:77:LEU:HD12	1.75	0.68
32:69:84:GLY:O	32:69:87:LYS:NZ	2.24	0.68
4:32:9:CYS:HA	4:32:12:CYS:HB2	1.76	0.68
40:85:98:LEU:HB2	40:85:102:GLU:HB2	1.75	0.68
1:1G:1315:U:HO2'	1:1G:1360:A:HO2'	1.41	0.68
24:14:1778:U:H2'	24:14:1784:A:N6	2.08	0.68
3:2E:72:LYS:HZ3	3:2E:75:VAL:HG21	1.58	0.68
27:11:38:LYS:HE2	27:11:39:LYS:O	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:503:C:OP2	12:3A:116:SER:OG	2.10	0.68
24:14:2002:G:N7	57:14:3863:HOH:O	2.27	0.68
2:1E:32:ILE:HD11	2:1E:40:HIS:HB3	1.76	0.68
24:14:2638:G:O2'	24:14:2639:A:H8	1.76	0.68
1:13:1145:C:H4'	1:13:1146:A:H8	1.59	0.68
21:1F:9:ARG:HH22	21:1F:23:PRO:HD2	1.58	0.68
13:4I:57:ARG:NH2	50:M8:32:TYR:OH	2.26	0.68
9:82:7:THR:O	9:82:83:ARG:NH1	2.25	0.68
24:14:993:G:OP1	40:85:50:ARG:NH2	2.26	0.68
48:G5:53:LEU:O	48:G5:57:ILE:HG13	1.93	0.68
50:M8:12:ALA:HA	50:M8:29:PRO:HB3	1.74	0.68
24:14:2685:G:O6	57:14:3625:HOH:O	2.08	0.68
24:1H:1024:G:H3'	24:1H:1025:G:H5''	1.76	0.68
1:13:838:G:OP2	1:13:842:C:N4	2.26	0.68
36:45:20:ALA:HA	36:45:99:PRO:HD2	1.76	0.68
24:14:1324:G:N7	57:14:3676:HOH:O	2.26	0.68
24:1H:1328:G:N7	57:1H:3625:HOH:O	2.26	0.68
1:1G:957:U:H1'	1:1G:960:U:H5	1.56	0.68
1:1G:1492:A:H2'	24:14:1913:A:C6	2.28	0.68
47:J8:73:LEU:HD13	47:J8:90:ILE:HG22	1.75	0.68
6:5E:97:PHE:HB2	18:9I:32:ARG:HE	1.59	0.68
19:AA:63:THR:OG1	19:AA:65:ASN:OD1	2.12	0.68
4:32:64:LEU:HD22	4:32:198:VAL:HG21	1.74	0.68
1:13:1040:U:H2'	1:13:1041:A:H8	1.59	0.68
1:13:1321:C:H3'	1:13:1322:C:H5''	1.76	0.68
53:L5:12:ARG:NH2	53:L5:44:PRO:HB3	2.09	0.68
22:3L:8:4SU:HN3	22:3L:14:A:H62	1.42	0.68
36:88:66:ILE:O	36:88:104:PHE:N	2.26	0.68
1:1G:56:U:H2'	1:1G:57:G:H8	1.59	0.68
24:1H:193:U:O4	57:1H:3967:HOH:O	2.08	0.68
13:4A:79:LYS:HA	13:4A:82:MET:HG2	1.74	0.68
2:1E:115:LEU:HD13	2:1E:145:LEU:HB3	1.76	0.68
24:1H:2689:U:OP2	24:1H:2719:G:N2	2.26	0.68
24:1H:2791:C:N3	24:1H:2807:G:N2	2.40	0.68
31:59:7:LEU:HB3	31:59:65:HIS:CE1	2.28	0.68
32:69:79:ILE:HG13	32:69:140:LEU:HD11	1.75	0.68
31:51:4:ILE:HD13	31:51:4:ILE:H	1.59	0.68
27:11:146:GLU:HB2	27:11:189:CYS:HB3	1.76	0.68
24:1H:1853:A:H2'	24:1H:1854:A:C8	2.29	0.68
49:L8:18:ASP:N	49:L8:18:ASP:OD1	2.22	0.68
22:3L:25:G:H2'	22:3L:26:G:H8	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1021:A:H8	24:1H:1022:G:H5''	1.59	0.68
5:42:51:VAL:O	5:42:55:VAL:HG23	1.94	0.68
24:14:2352:A:OP2	57:14:3971:HOH:O	2.11	0.68
1:1G:1076:C:H42	1:1G:1081:G:H1	1.42	0.68
24:1H:749:C:OP2	57:1H:4182:HOH:O	2.11	0.68
30:41:122:PRO:HB3	30:41:180:PHE:HD2	1.59	0.68
7:6E:15:ASP:HB3	7:6E:20:ASP:H	1.59	0.68
25:1J:15:A:H5'	25:1J:16:G:H8	1.57	0.67
1:13:631:G:H2'	1:13:632:A:C8	2.26	0.67
45:D5:30:ASN:OD1	45:D5:31:ARG:N	2.27	0.67
28:21:2:LYS:NZ	28:21:95:ILE:O	2.26	0.67
4:32:59:ARG:HA	4:32:62:GLN:HB2	1.74	0.67
24:1H:1931:U:H5	24:1H:1969:A:N7	1.91	0.67
24:14:2212:A:H4'	24:14:2213:U:H5	1.57	0.67
24:1H:1312:U:O3'	57:1H:3891:HOH:O	2.12	0.67
44:G8:53:PRO:HA	44:G8:56:PRO:HG3	1.75	0.67
7:62:56:GLN:OE1	7:62:60:LYS:NZ	2.27	0.67
1:13:1133:G:N2	1:13:1141:C:O2	2.25	0.67
10:1A:33:GLN:HB2	10:1A:75:ILE:HG12	1.76	0.67
24:14:2718:G:N7	57:14:3825:HOH:O	2.27	0.67
24:1H:1406:U:H2'	24:1H:1407:C:C6	2.29	0.67
41:95:35:LEU:O	41:95:37:VAL:N	2.26	0.67
24:14:1342:A:H2	24:14:1602:U:H3	1.40	0.67
2:1E:87:ARG:NH1	2:1E:220:ASP:OD1	2.25	0.67
24:14:1689:A:H62	24:14:1698:A:H2	1.39	0.67
34:25:68:GLU:OE2	34:25:78:ARG:NH1	2.27	0.67
31:59:129:THR:OG1	31:59:130:ARG:N	2.26	0.67
29:39:157:VAL:HB	29:39:194:MET:HB3	1.76	0.67
24:14:2611:U:C4	51:J5:3:LYS:HG3	2.29	0.67
1:13:877:C:OP1	8:7E:88:LYS:NZ	2.27	0.67
36:88:104:PHE:HE2	36:88:125:LEU:HD11	1.58	0.67
46:I8:56:ASP:OD1	46:I8:58:THR:OG1	2.10	0.67
45:H8:143:GLY:HA3	45:H8:144:LEU:HD12	1.77	0.67
19:AA:40:ILE:HG13	19:AA:68:GLY:H	1.58	0.67
10:1A:17:ASP:OD2	10:1A:70:ARG:NH1	2.28	0.67
44:G8:55:TYR:HB2	44:G8:58:GLY:HA3	1.76	0.67
20:BA:16:HIS:O	20:BA:19:SER:OG	2.13	0.67
24:1H:11:G:H2'	24:1H:12:U:H5'	1.75	0.67
24:14:1198:U:H2'	24:14:1199:U:C6	2.29	0.67
9:82:97:LYS:HB3	9:82:102:LEU:HD12	1.75	0.67
1:1G:501:C:H2'	1:1G:502:G:H8	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:J8:93:GLU:N	47:J8:93:GLU:OE2	2.26	0.67
24:1H:2712(A):A:OP2	57:1H:3660:HOH:O	2.13	0.67
1:13:659:U:H2'	1:13:660:G:H8	1.57	0.67
37:55:34:ILE:HG22	37:55:114:VAL:HB	1.75	0.67
24:1H:763:G:OP1	57:1H:3674:HOH:O	2.12	0.67
2:12:164:VAL:HG23	2:12:186:ALA:HB2	1.77	0.67
24:14:2622:C:H5'	28:29:159:HIS:ND1	2.10	0.67
1:13:1062:U:H2'	1:13:1063:C:C6	2.30	0.67
24:1H:213:A:H2'	24:1H:214:G:O4'	1.95	0.67
15:6I:10:LYS:O	15:6I:10:LYS:NZ	2.21	0.67
24:1H:1971:A:C4	27:11:241:PRO:HD3	2.29	0.67
24:1H:1678:G:H21	24:1H:1989:G:H22	1.42	0.67
27:11:2:ALA:HB3	27:11:200:ASP:OD2	1.93	0.67
24:14:1054:A:H3'	24:14:1055:G:H8	1.60	0.67
28:21:34:VAL:HG22	28:21:48:GLN:HG2	1.75	0.67
24:14:739:G:OP1	57:14:3744:HOH:O	2.12	0.67
2:12:121:LEU:HG	2:12:126:GLU:HB2	1.76	0.67
3:22:81:GLY:HA2	3:22:85:ARG:HH21	1.60	0.67
1:1G:1305:G:H22	1:1G:1331:G:H2'	1.60	0.67
41:95:37:VAL:CG2	41:95:56:SER:HA	2.22	0.67
1:1G:1129:C:N4	1:1G:1141:C:H41	1.93	0.67
24:14:450:G:O6	57:14:3735:HOH:O	2.09	0.67
25:1J:45:A:O4'	30:49:95:ARG:NH1	2.28	0.67
1:13:407:G:O4'	4:3E:119:GLN:NE2	2.28	0.67
24:1H:1405:U:H2'	24:1H:1406:U:C6	2.30	0.67
24:14:646:A:H2'	24:14:647:G:O4'	1.94	0.67
24:1H:1189:A:OP2	57:1H:3828:HOH:O	2.13	0.67
44:G8:100:ALA:HB1	44:G8:101:LYS:HB2	1.77	0.67
33:58:67:LEU:HA	33:58:87:LEU:HD12	1.75	0.67
24:14:2427:C:H5''	24:14:2428:G:OP1	1.95	0.67
9:82:10:ARG:NH1	9:82:105:ASP:OD2	2.28	0.67
24:14:1636:C:OP2	57:14:3642:HOH:O	2.13	0.67
24:1H:2286:A:H8	52:O8:37:ARG:HH12	1.39	0.67
24:14:761:A:N7	57:14:3510:HOH:O	2.28	0.67
24:14:2873:A:H8	37:55:6:SER:N	1.93	0.67
24:14:1386:C:H2'	24:14:1387:C:H6	1.60	0.67
44:C5:81:LYS:HB2	44:C5:99:CYS:SG	2.35	0.67
8:7E:11:THR:HG23	8:7E:14:ARG:HH12	1.59	0.67
46:E5:72:ARG:HG3	46:E5:75:LEU:HB2	1.77	0.67
24:1H:1607:C:H4'	24:1H:1608:A:O5'	1.94	0.67
1:13:368:U:OP1	32:69:91:SER:OG	2.10	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:910:A:H62	36:45:12:GLN:HA	1.59	0.67
1:13:601:C:H2'	1:13:602:A:C8	2.29	0.67
25:16:8:U:O2	25:16:112:G:N1	2.18	0.67
24:1H:990:A:H1'	24:1H:1156:A:N3	2.10	0.67
24:1H:1427:A:H4'	24:1H:1428:C:O5'	1.93	0.67
1:1G:168:G:H2'	1:1G:169:C:H5''	1.75	0.67
22:3L:14:A:H3'	22:3L:15:G:H5''	1.76	0.67
24:14:529:A:H4'	24:14:530:G:H5'	1.77	0.67
22:2L:15:G:H22	22:2L:57:C:H41	1.43	0.67
39:75:107:ASP:OD2	39:75:109:GLU:HB2	1.95	0.67
1:13:17:U:H2'	1:13:18:C:C6	2.30	0.67
3:22:77:ILE:O	3:22:79:ARG:NH2	2.28	0.67
3:22:11:ARG:HE	3:22:180:ALA:HB3	1.60	0.67
29:39:132:VAL:O	29:39:134:GLY:N	2.28	0.67
54:M5:57:ARG:HH11	54:M5:57:ARG:CA	2.07	0.67
24:14:2748:A:H2'	24:14:2749:A:H8	1.60	0.67
10:1A:11:PHE:HE1	10:1A:67:THR:HG22	1.60	0.67
27:19:72:LYS:HB3	27:19:75:ILE:HD12	1.77	0.67
41:95:21:ARG:CD	41:95:91:TYR:CD1	2.78	0.66
1:1G:1442:G:O6	1:1G:1446:A:N6	2.28	0.66
43:B5:44:GLU:HG3	43:B5:51:VAL:CG2	2.25	0.66
1:1G:57:G:H2'	1:1G:58:C:C6	2.30	0.66
24:14:2298:A:H1'	24:14:2321:G:N2	2.10	0.66
24:1H:2656:U:H3	24:1H:2665:A:H2	1.43	0.66
1:13:980:C:O2	57:13:1825:HOH:O	2.10	0.66
32:69:69:LYS:O	32:69:72:LEU:N	2.28	0.66
46:E5:49:LYS:O	46:E5:50:ASN:ND2	2.29	0.66
2:12:190:THR:O	2:12:191:ASP:HB3	1.93	0.66
35:35:138:LEU:HD21	35:35:144:GLU:HG3	1.77	0.66
1:13:277:C:OP2	17:8I:41:LYS:NZ	2.26	0.66
41:95:21:ARG:NH1	41:95:91:TYR:CE2	2.61	0.66
25:1J:5:C:N4	25:1J:115:G:H1	1.85	0.66
24:1H:2315:G:N3	30:41:128:ARG:NH2	2.38	0.66
1:1G:1492:A:H2'	24:14:1913:A:N6	2.10	0.66
24:1H:2017:U:OP1	57:1H:3754:HOH:O	2.12	0.66
24:1H:1022:G:O6	33:58:66:LYS:NZ	2.29	0.66
31:59:46:GLU:HB2	31:59:49:VAL:HG23	1.77	0.66
31:51:30:LYS:HE3	31:51:81:GLU:H	1.59	0.66
1:1G:940:C:H2'	1:1G:941:G:C8	2.30	0.66
1:13:1508:G:OP1	57:13:1801:HOH:O	2.12	0.66
13:4A:80:ARG:HD2	19:AA:66:MET:HE1	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1151:A:H2'	1:13:1152:A:C8	2.30	0.66
24:1H:2010:G:N7	57:1H:4172:HOH:O	2.29	0.66
24:14:483:A:H4'	44:C5:49:VAL:HA	1.76	0.66
42:A5:10:VAL:HG21	42:A5:103:ILE:HD12	1.77	0.66
52:K5:18:ARG:HA	52:K5:18:ARG:HH11	1.59	0.66
24:1H:860:U:H5	24:1H:917:A:H2	1.41	0.66
24:1H:249:C:P	57:1H:3654:HOH:O	2.53	0.66
24:1H:1970:A:OP2	57:1H:3916:HOH:O	2.12	0.66
24:1H:879:G:N2	24:1H:898:C:O2	2.24	0.66
1:1G:412:A:O2'	1:1G:413:G:OP2	2.11	0.66
1:1G:735:C:H5''	18:9A:71:LYS:HB3	1.78	0.66
24:1H:529:A:H4'	24:1H:530:G:H5'	1.76	0.66
28:29:203:LYS:NZ	28:29:203:LYS:HB3	2.08	0.66
24:14:2498:C:OP2	57:14:3536:HOH:O	2.12	0.66
1:13:1348:U:H4'	9:8E:120:ARG:HD2	1.76	0.66
22:2K:19:C:H3'	22:2K:20:C:H2'	1.77	0.66
24:1H:822:U:OP2	57:1H:4019:HOH:O	2.13	0.66
6:5E:38:GLU:HB2	6:5E:64:GLN:HG2	1.78	0.66
1:13:67:C:H2'	1:13:68:G:C8	2.30	0.66
31:51:17:VAL:HG21	31:51:50:VAL:HG11	1.78	0.66
4:32:120:LEU:HB3	4:32:126:ILE:HD11	1.77	0.66
10:1I:61:GLU:OE2	14:5I:45:ARG:NH1	2.29	0.66
24:14:603:A:H8	24:14:604:G:H1'	1.61	0.66
41:95:21:ARG:HD3	41:95:91:TYR:CD2	2.30	0.66
29:39:102:PRO:HB2	29:39:105:VAL:HG23	1.76	0.66
24:14:527:C:OP2	24:14:2779:U:H5	1.77	0.66
3:22:35:GLU:HG3	3:22:95:THR:HG21	1.78	0.66
32:69:72:LEU:HD21	32:69:107:VAL:HG21	1.77	0.66
1:1G:552:U:H4'	12:3A:86:ARG:HG2	1.78	0.66
1:1G:1410:G:N2	1:1G:1490:C:O2	2.20	0.66
44:G8:20:TYR:CE2	44:G8:43:ASN:HA	2.31	0.66
42:E8:51:LEU:HD23	42:E8:105:VAL:HG11	1.75	0.66
24:14:273(D):C:N4	24:14:363(B):G:O6	2.19	0.66
22:2L:34:U:H5	22:2L:37:A:OP2	1.79	0.66
24:14:1063:G:O6	24:14:1075:C:N4	2.29	0.66
1:13:376:G:O3'	16:7I:5:ARG:NH1	2.25	0.66
8:7E:87:SER:HA	8:7E:93:VAL:HG23	1.78	0.66
27:19:228:PRO:O	57:19:402:HOH:O	2.12	0.66
4:3E:25:ARG:HH12	4:3E:30:LYS:HZ2	1.42	0.66
45:D5:30:ASN:HA	45:D5:89:PHE:HE1	1.60	0.66
1:13:1298:C:P	7:6E:114:ARG:HH22	2.18	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:7I:5:ARG:HH21	16:7I:22:THR:HG23	1.60	0.66
24:1H:1929:G:H4'	24:1H:1930:G:OP1	1.95	0.66
6:52:68:PRO:HG2	6:52:71:ARG:HG3	1.77	0.66
17:8I:56:VAL:HG23	17:8I:81:ARG:HG3	1.77	0.66
27:19:255:LYS:CE	27:19:255:LYS:H	2.09	0.66
1:1G:974:A:H5''	14:5A:31:ARG:HD3	1.76	0.66
24:14:1062:G:OP1	24:14:1070:A:O2'	2.13	0.66
24:1H:1021:A:H8	24:1H:1021:A:H3'	1.61	0.66
1:13:1292:U:P	7:6E:41:ARG:HH22	2.19	0.66
44:G8:54:LYS:HA	44:G8:56:PRO:HD3	1.78	0.66
24:1H:400:G:N7	57:1H:3963:HOH:O	2.29	0.66
1:13:137:C:N4	1:13:226:G:O6	2.20	0.66
28:29:8:LYS:HB3	28:29:192:ASN:HA	1.77	0.66
1:1G:620:C:OP1	57:1G:1825:HOH:O	2.14	0.66
20:BI:14:LYS:HB2	20:BI:17:ARG:HH21	1.61	0.66
24:1H:2303:G:O2'	30:41:132:ASN:HB2	1.96	0.66
39:75:6:LEU:HA	39:75:9:LEU:HB3	1.77	0.66
24:1H:2636:U:OP1	28:21:79:ARG:HA	1.95	0.66
1:13:376:G:O3'	16:7I:5:ARG:HD2	1.95	0.66
47:F5:93:GLU:HA	47:F5:97:LEU:HD22	1.77	0.66
36:45:24:GLY:HA3	36:45:25:ASP:HB2	1.78	0.66
1:1G:677:U:H3	1:1G:713:G:H22	1.43	0.66
24:1H:1359:A:H2'	24:1H:1360:A:H5'	1.76	0.65
24:14:2130:U:H2'	24:14:2158:A:N1	2.11	0.65
24:14:1055:G:H21	24:14:1085:A:H2	1.44	0.65
50:M8:24:THR:OG1	50:M8:25:TYR:N	2.29	0.65
27:19:70:TRP:CH2	27:19:150:LYS:HA	2.31	0.65
39:75:13:ARG:HH11	39:75:13:ARG:HB3	1.62	0.65
35:78:58:THR:HG21	54:Q8:54:GLU:HG3	1.79	0.65
22:2K:19:C:H5''	22:2K:20:C:H3'	1.78	0.65
22:2K:17:OMG:HN21	22:2K:64:PSU:HN3	1.42	0.65
24:1H:1323:U:O4	57:1H:3954:HOH:O	2.11	0.65
24:1H:2115:G:O3'	24:1H:2165:G:N2	2.29	0.65
1:13:659:U:H2'	1:13:660:G:C8	2.32	0.65
24:14:602:G:HO2'	24:14:604:G:HO2'	1.40	0.65
1:1G:565:U:OP2	1:1G:566:G:O2'	2.09	0.65
2:12:33:TYR:HB3	2:12:41:ILE:HG22	1.79	0.65
1:13:793:U:H5'	1:13:794:A:H5''	1.78	0.65
5:4E:91:LEU:HD12	5:4E:120:THR:HG22	1.76	0.65
30:41:130:ASN:HB3	30:41:160:VAL:HA	1.79	0.65
24:1H:2711:A:OP2	57:1H:3662:HOH:O	2.13	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2712(A):A:OP2	57:1H:3662:HOH:O	2.13	0.65
1:1G:1125:U:H2'	1:1G:1126:U:C5	2.31	0.65
37:98:52:ILE:O	37:98:55:ALA:N	2.29	0.65
27:11:147:LEU:HD22	27:11:155:LEU:HD11	1.79	0.65
1:13:157:G:H1	1:13:164:U:H3	1.42	0.65
9:8E:9:ARG:HD2	9:8E:14:VAL:HG13	1.78	0.65
24:14:2790:A:OP2	24:14:2790:A:H8	1.79	0.65
1:13:978:A:OP2	1:13:1362(A):C:N4	2.30	0.65
16:7A:21:VAL:HG22	16:7A:33:ILE:HD12	1.77	0.65
45:D5:144:LEU:HB2	45:D5:174:VAL:HG11	1.77	0.65
10:1A:3:LYS:HB2	10:1A:77:PRO:HG3	1.78	0.65
29:39:110:LEU:HD21	29:39:181:LEU:HD13	1.78	0.65
1:1G:1352:C:OP1	21:1B:3:LYS:NZ	2.24	0.65
24:1H:2339:G:H2'	24:1H:2340:G:C8	2.30	0.65
1:13:390:C:O2'	16:7I:28:ARG:NH2	2.29	0.65
24:1H:1926:U:H2'	24:1H:1928:A:OP2	1.96	0.65
16:7A:54:GLU:OE1	16:7A:54:GLU:N	2.29	0.65
1:1G:1330:U:H4'	13:4A:23:TYR:CE1	2.32	0.65
6:5E:75:LEU:HD22	6:5E:79:LEU:HG	1.77	0.65
24:14:451:C:H5'	57:14:3730:HOH:O	1.95	0.65
1:1G:512:U:H2'	1:1G:513:C:C6	2.31	0.65
41:D8:24:LYS:HB2	41:D8:92:THR:HG23	1.79	0.65
1:1G:1095:U:P	1:1G:1108:G:H1	2.20	0.65
4:3E:72:GLU:OE1	4:3E:207:TYR:OH	2.14	0.65
24:1H:1680:U:N3	24:1H:1764:G:OP2	2.26	0.65
10:1A:32:ALA:HA	10:1A:76:ASN:HB2	1.79	0.65
24:14:1331:A:HO2'	24:14:1332:G:H8	1.45	0.65
22:2K:1:G:H2'	22:2K:2:G:C8	2.30	0.65
24:1H:1803:A:H4'	27:11:259:THR:HG23	1.79	0.65
14:5A:21:TYR:HE1	14:5A:23:ARG:HE	1.45	0.65
47:F5:82:LEU:HD23	47:F5:82:LEU:H	1.61	0.65
15:6I:27:VAL:HG12	15:6I:31:LEU:HD22	1.78	0.65
40:C8:75:ASN:ND2	40:C8:78:THR:OG1	2.30	0.65
1:1G:142:G:H2'	1:1G:143:A:H8	1.60	0.65
11:2I:34:ASP:OD1	11:2I:37:GLY:N	2.29	0.65
2:12:12:GLU:HG3	2:12:14:GLY:H	1.60	0.65
22:3L:20:C:H5"	22:3L:68:A:N6	2.08	0.65
27:19:3:VAL:HG13	27:19:17:THR:HB	1.78	0.65
12:3A:117:ARG:HB3	12:3A:122:THR:HB	1.78	0.65
24:1H:1251:C:H5	57:1H:3793:HOH:O	1.79	0.65
37:98:67:LEU:HD13	37:98:76:VAL:HG21	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:7A:25:ARG:HH11	16:7A:25:ARG:HG3	1.62	0.65
1:1G:491:G:N7	57:1G:1872:HOH:O	2.29	0.65
24:1H:1676:A:OP2	57:1H:3692:HOH:O	2.15	0.65
5:4E:110:LEU:HD13	5:4E:118:ILE:HG21	1.78	0.65
10:1I:49:VAL:HG23	14:5I:41:ARG:HB2	1.77	0.65
25:16:65:C:H41	25:16:108:C:H2'	1.62	0.65
24:1H:1266:G:OP2	51:N8:19:ARG:NH1	2.30	0.65
28:21:61:ARG:HH11	28:21:61:ARG:HB3	1.61	0.65
38:65:88:ASP:OD1	38:65:90:GLY:N	2.29	0.65
44:C5:73:ARG:NH2	44:C5:81:LYS:O	2.29	0.65
1:13:42:G:O2'	1:13:622:A:N1	2.29	0.65
24:14:2602:A:H4'	24:14:2603:G:O5'	1.97	0.65
24:14:1388:G:O2'	24:14:1389:G:H5'	1.95	0.65
45:H8:103:ARG:HB2	45:H8:138:GLU:HA	1.76	0.65
48:G5:4:SER:HB2	48:G5:6:VAL:HG23	1.78	0.65
22:3K:38:MIA:H2'	22:3K:39:A:C8	2.32	0.65
24:1H:1980:G:O2'	24:1H:1982:C:OP2	2.12	0.65
24:14:1899:G:N2	24:14:1902:C:N4	2.37	0.65
2:1E:155:LEU:HD22	2:1E:159:PRO:HD3	1.77	0.65
24:1H:1332:G:N2	24:1H:1609:A:O2'	2.29	0.65
24:1H:2292:C:OP1	38:A8:17:ARG:NH2	2.30	0.65
8:72:12:ARG:HD3	8:72:26:VAL:HG12	1.78	0.65
24:14:1126:A:OP1	24:14:1126:A:H8	1.80	0.65
24:1H:273(D):C:H2'	24:1H:273(E):U:C6	2.32	0.65
22:3L:46:G:N2	22:3L:54:C:O2	2.29	0.65
1:13:452:A:O2'	1:13:453:A:O4'	2.12	0.65
29:31:65:TRP:HZ3	29:31:73:ALA:O	1.80	0.65
1:1G:731:G:OP2	57:1G:1887:HOH:O	2.14	0.65
30:41:70:VAL:HA	30:41:90:LEU:HD12	1.79	0.65
6:52:69:GLU:O	6:52:72:VAL:HG12	1.96	0.65
12:3A:41:ARG:HH11	12:3A:41:ARG:HB3	1.62	0.65
35:35:47:ASP:HB3	35:35:48:PRO:C	2.16	0.65
1:13:673:G:O3'	6:5E:87:ARG:NH2	2.30	0.65
1:13:1446:A:OP1	1:13:1446:A:H4'	1.96	0.65
36:88:136:ALA:HB1	45:H8:52:SER:HB2	1.78	0.65
9:82:97:LYS:HG3	9:82:98:PRO:HD3	1.79	0.65
24:14:1399:C:N4	57:14:3840:HOH:O	2.29	0.65
20:BA:13:LEU:HD12	20:BA:13:LEU:H	1.62	0.65
24:14:1379:A:H4'	24:14:1380:G:OP2	1.96	0.65
27:19:95:LEU:HD11	27:19:105:ILE:HD12	1.78	0.65
34:25:7:TYR:HE1	34:25:20:MET:HE3	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1514:U:H2'	24:14:1515:C:C6	2.32	0.65
24:14:322:A:H5'	24:14:340:A:H1'	1.79	0.65
1:13:186(D):C:H42	1:13:191(C):G:H1	1.43	0.65
24:14:2420:C:P	54:M5:34:TRP:H	2.20	0.64
1:1G:1179:A:OP2	9:82:93:ARG:NH2	2.30	0.64
27:19:228:PRO:HD3	27:19:235:GLY:HA3	1.79	0.64
4:32:24:GLU:OE1	4:32:24:GLU:N	2.30	0.64
28:21:51:PHE:CD2	28:21:52:LEU:HG	2.31	0.64
1:1G:885:G:O2'	1:1G:914:A:N1	2.29	0.64
50:M8:56:VAL:O	50:M8:60:GLN:NE2	2.29	0.64
52:K5:12:GLU:HB2	52:K5:21:TYR:HB3	1.78	0.64
32:69:1:MET:HB3	32:69:21:VAL:O	1.96	0.64
5:42:43:LEU:HD13	5:42:109:ILE:HD11	1.79	0.64
24:1H:2271:G:N7	57:1H:4105:HOH:O	2.29	0.64
47:J8:85:LEU:HD22	47:J8:86:SER:HB3	1.79	0.64
25:1J:13:A:N1	25:1J:69:G:O2'	2.25	0.64
1:1G:353:A:H5'	1:1G:353:A:C8	2.27	0.64
27:11:25:THR:HB	27:11:82:ILE:H	1.61	0.64
1:13:1104:G:OP1	2:1E:144:ARG:NH2	2.23	0.64
24:14:1857:G:O2'	24:14:1885:A:N6	2.31	0.64
22:3L:7:G:N2	22:3L:76:C:O2	2.30	0.64
1:1G:1291:G:OP1	7:62:37:ASN:ND2	2.30	0.64
24:1H:1065:U:O2	24:1H:1074:G:N2	2.30	0.64
24:1H:450:G:O6	57:1H:3854:HOH:O	2.14	0.64
24:1H:2615:U:OP1	57:1H:3609:HOH:O	2.14	0.64
50:I5:16:CYS:SG	50:I5:36:CYS:HB2	2.37	0.64
24:1H:192:C:P	57:1H:3700:HOH:O	2.54	0.64
24:14:2588:G:OP1	57:14:3592:HOH:O	2.14	0.64
39:75:105:LEU:O	39:75:107:ASP:N	2.31	0.64
24:14:2175:C:H1'	26:79:217:THR:O	1.97	0.64
24:1H:1778:U:H2'	24:1H:1784:A:N6	2.13	0.64
1:1G:41:G:H2'	1:1G:42:G:C8	2.33	0.64
25:16:95:U:H2'	25:16:96:G:C8	2.32	0.64
7:62:24:THR:HA	7:62:27:ILE:HD12	1.78	0.64
26:79:23:ASP:OD1	26:79:190:ARG:NH2	2.30	0.64
32:61:8:PRO:HA	32:61:14:ASP:HA	1.79	0.64
41:95:98:GLU:OE1	41:95:100:ARG:HD3	1.98	0.64
4:32:18:LYS:NZ	4:32:26:CYS:HB3	2.11	0.64
25:16:15:A:H1'	25:16:109:G:C5	2.33	0.64
1:13:262:A:H2'	1:13:263:A:C8	2.32	0.64
24:14:450:G:O6	57:14:3733:HOH:O	2.15	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:58:35:ARG:HB2	33:58:37:LYS:HG3	1.78	0.64
24:1H:2341:G:H2'	24:1H:2342:C:H6	1.62	0.64
1:1G:1122:U:N3	1:1G:1123:A:N7	2.45	0.64
1:1G:1178:G:H22	1:1G:1181:G:H5''	1.62	0.64
31:51:83:TYR:HD1	31:51:84:SER:H	1.45	0.64
25:16:95:U:H2'	25:16:96:G:H8	1.62	0.64
24:1H:545:G:H2'	24:1H:546:C:H5''	1.79	0.64
29:39:79:GLY:HA2	29:39:86:GLY:HA2	1.78	0.64
24:1H:2233:U:H2'	24:1H:2234:G:C8	2.32	0.64
18:9A:22:VAL:HG22	18:9A:23:LYS:H	1.63	0.64
27:19:253:GLN:HB3	27:19:255:LYS:HZ3	1.61	0.64
24:14:1771:C:H1'	24:14:1786:A:C8	2.32	0.64
1:1G:959:A:O2'	1:1G:984:C:O2'	2.16	0.64
24:1H:1021:A:C8	24:1H:1022:G:H5''	2.32	0.64
32:61:116:LEU:HD11	32:61:120:ILE:HG12	1.80	0.64
44:G8:5:MET:HE1	44:G8:32:PRO:HB3	1.79	0.64
22:3L:52:G:H2'	22:3L:53:A:C8	2.32	0.64
46:I8:17:GLN:O	46:I8:19:LYS:HE3	1.98	0.64
3:2E:53:ALA:HB2	3:2E:115:LEU:HD13	1.79	0.64
35:78:113:LYS:HG2	35:78:115:LEU:HD23	1.78	0.64
1:1G:963:G:H21	10:1A:55:LYS:CE	2.11	0.64
1:1G:1322:C:O2'	1:1G:1323:G:O5'	2.14	0.64
37:98:33:ARG:HH12	51:N8:55:ARG:HB3	1.63	0.64
24:14:987:G:OP2	57:14:3942:HOH:O	2.15	0.64
1:1G:1194:U:H2'	1:1G:1195:C:C6	2.32	0.64
24:14:1342:A:H2	24:14:1602:U:N3	1.96	0.64
30:41:16:ARG:HH12	30:41:31:VAL:CG1	2.11	0.64
12:3I:97:ARG:HB2	12:3I:98:TYR:CE1	2.33	0.64
52:K5:31:PRO:HB2	52:K5:33:LYS:HG3	1.80	0.64
46:I8:51:VAL:N	46:I8:62:LEU:HD12	2.13	0.64
27:19:182:LEU:H	27:19:272:ALA:HB2	1.62	0.64
24:1H:2175:C:OP1	26:71:3:HIS:ND1	2.29	0.64
1:1G:1162:C:H42	1:1G:1174:G:H1	1.45	0.64
49:L8:43:ILE:O	49:L8:47:VAL:HG23	1.98	0.64
1:1G:716:A:N3	11:2A:118:GLY:HA2	2.13	0.64
1:1G:1346:A:O5'	9:82:120:ARG:NH1	2.30	0.64
24:14:1006:C:H1'	33:15:106:MET:HG2	1.79	0.64
24:14:1786:A:H2	24:14:2606:C:H1'	1.62	0.64
4:3E:59:ARG:NH2	4:3E:66:ARG:HH12	1.96	0.64
53:P8:12:ARG:NH2	53:P8:44:PRO:HB3	2.11	0.64
37:98:70:LEU:O	37:98:72:ASP:N	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:O8:28:ARG:HD3	52:O8:29:ASN:H	1.63	0.64
24:14:1224:G:OP2	41:95:66:ARG:NH2	2.31	0.64
4:3E:108:LEU:HB3	4:3E:110:PHE:CD1	2.33	0.64
27:19:65:ILE:HD11	27:19:67:PHE:CE1	2.32	0.64
24:1H:1149:G:N7	57:1H:4209:HOH:O	2.30	0.64
1:13:1126:U:OP2	1:13:1281:U:H1'	1.97	0.64
45:H8:16:SER:O	45:H8:20:ARG:NH1	2.31	0.64
24:14:1210:A:H5''	24:14:1211:U:H3'	1.78	0.64
24:14:2370:G:H21	52:K5:45:LYS:NZ	1.95	0.64
24:1H:1406:U:H2'	24:1H:1407:C:H6	1.62	0.64
35:35:125:VAL:HG13	35:35:144:GLU:HB3	1.78	0.64
24:1H:2271:G:H5''	46:I8:20:ARG:HH11	1.63	0.64
9:82:46:ALA:HB1	9:82:77:ILE:HD11	1.79	0.64
24:1H:836:G:H5''	24:1H:837:C:OP2	1.98	0.64
1:1G:1497:G:H2'	1:1G:1498:U:H5'	1.79	0.64
12:3A:28:LYS:HD3	12:3A:30:ALA:HB2	1.79	0.64
48:K8:32:LEU:HD11	48:K8:54:LYS:HG2	1.80	0.64
1:1G:956:U:H1'	1:1G:1225:A:H2	1.62	0.64
24:1H:1022:G:N2	24:1H:1142(A):A:N1	2.43	0.64
52:O8:32:ASN:N	52:O8:32:ASN:OD1	2.31	0.64
14:5I:24:CYS:SG	14:5I:40:CYS:CB	2.72	0.64
24:14:2293:C:H5''	38:65:89:ARG:NH2	2.13	0.64
51:N8:33:CYS:SG	51:N8:40:LYS:HD3	2.38	0.64
24:1H:1021:A:C8	24:1H:1021:A:H3'	2.32	0.64
25:1J:89:G:O6	25:1J:89(A):A:N6	2.31	0.64
24:1H:273(C):C:H42	24:1H:363(C):G:H1	1.46	0.64
5:4E:78:HIS:CE1	5:4E:142:LEU:HD23	2.33	0.64
24:14:2143:C:H2'	24:14:2144:U:O4'	1.98	0.64
29:31:24:LEU:HB3	29:31:115:ALA:HB2	1.80	0.64
5:42:102:ALA:HB1	5:42:106:PRO:HG2	1.80	0.64
36:88:32:TYR:OH	36:88:111:GLU:OE1	2.13	0.64
41:95:21:ARG:NH2	41:95:65:GLY:O	2.31	0.63
24:1H:1729:A:O2'	24:1H:1730:U:H5''	1.99	0.63
38:65:27:SER:HA	38:65:88:ASP:HB3	1.80	0.63
1:13:1358:U:H5''	14:5I:33:VAL:O	1.97	0.63
26:79:42:GLU:HG3	26:79:215:THR:HG23	1.80	0.63
1:1G:1015:A:H2'	1:1G:1016:A:C8	2.33	0.63
21:1B:5:ASP:O	21:1B:11:GLY:HA3	1.98	0.63
24:14:81:G:N7	57:14:3755:HOH:O	2.30	0.63
24:1H:2532:G:O2'	24:1H:2657:A:N1	2.30	0.63
24:1H:1329:U:H5''	24:1H:1330:C:H5	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:J8:87:PRO:CA	47:J8:89:GLU:H	2.10	0.63
24:1H:74:A:H8	24:1H:74:A:H5''	1.63	0.63
54:Q8:29:LYS:HG3	54:Q8:30:ARG:HB3	1.80	0.63
1:13:737:A:H2'	1:13:738:C:C6	2.32	0.63
24:14:1171:G:O2'	24:14:1173:G:O4'	2.15	0.63
24:1H:259:G:H21	24:1H:621:A:H8	1.47	0.63
36:45:14:ARG:HG2	36:45:41:TRP:HH2	1.63	0.63
36:88:51:ARG:HH12	36:88:52:VAL:HG23	1.63	0.63
30:49:11:TYR:OH	30:49:16:ARG:NH2	2.32	0.63
1:1G:940:C:H2'	1:1G:941:G:H8	1.63	0.63
1:1G:673:G:H2'	1:1G:674:G:C8	2.34	0.63
30:49:125:PHE:HB3	30:49:166:ASP:HB2	1.80	0.63
20:BI:10:LEU:HG	20:BI:12:ALA:H	1.63	0.63
1:1G:719:C:OP2	1:1G:720:C:N4	2.24	0.63
2:1E:214:ILE:HG23	2:1E:215:LEU:HD22	1.80	0.63
7:62:12:LEU:HD11	7:62:28:ASN:ND2	2.12	0.63
41:95:1:MET:HG3	41:95:43:GLU:HB2	1.78	0.63
1:13:1305:G:N2	1:13:1331:G:H2'	2.13	0.63
29:31:191:ARG:HB3	29:31:191:ARG:HH11	1.63	0.63
24:1H:1794:U:H2'	24:1H:1795:C:C6	2.34	0.63
1:1G:235:C:H5'	17:8A:70:ARG:HG2	1.81	0.63
24:14:1170:G:O6	24:14:1179:C:N4	2.30	0.63
39:75:56:GLY:O	39:75:59:THR:HG22	1.99	0.63
39:75:50:ILE:HD11	39:75:102:ILE:CD1	2.29	0.63
24:14:1525:G:H2'	24:14:1526:G:C8	2.33	0.63
24:1H:2689:U:H4'	24:1H:2690:C:H5'	1.80	0.63
24:14:2754:U:H6	24:14:2754:U:H5''	1.63	0.63
46:E5:51:VAL:N	46:E5:62:LEU:HD12	2.14	0.63
4:3E:173:TRP:CD1	4:3E:174:LEU:HG	2.33	0.63
1:13:536:C:H2'	1:13:537:G:C8	2.33	0.63
25:16:73:A:OP2	57:16:304:HOH:O	2.16	0.63
1:1G:678:U:H2'	1:1G:679:C:C6	2.32	0.63
26:71:50:ASP:N	26:71:56:GLN:OE1	2.27	0.63
27:19:32:SER:OG	27:19:32:SER:O	2.08	0.63
24:1H:2114:A:N1	24:1H:2119:A:N6	2.46	0.63
24:14:191:A:H2'	24:14:192:C:C6	2.33	0.63
24:14:761:A:OP2	57:14:3508:HOH:O	2.15	0.63
51:N8:52:TYR:HD1	51:N8:53:ALA:H	1.47	0.63
24:1H:773:U:H4'	27:11:47:GLY:HA3	1.81	0.63
24:1H:1163:G:H2'	24:1H:1164:G:H8	1.64	0.63
24:14:1639:U:O2'	24:14:1640:C:H5'	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:542:G:P	4:32:10:ARG:HH22	2.22	0.63
13:4I:90:LEU:HA	13:4I:93:ARG:HG3	1.81	0.63
25:16:5:C:OP1	25:16:61:G:O2'	2.15	0.63
1:1G:1423:G:H2'	1:1G:1424:C:C6	2.33	0.63
22:3K:18:G:H4'	22:3K:19:C:O5'	1.98	0.63
47:J8:91:LYS:HZ2	47:J8:91:LYS:HA	1.63	0.63
1:1G:963:G:N2	1:1G:972:C:N3	2.43	0.63
24:1H:1054:A:H2'	24:1H:1055:G:C8	2.34	0.63
24:1H:2291:U:O2'	24:1H:2374:C:O2	2.14	0.63
30:49:64:THR:OG1	30:49:66:GLN:N	2.26	0.63
1:13:1455:G:H5'	20:BI:32:ALA:HB2	1.81	0.63
27:11:59:LYS:HD2	27:11:60:ARG:H	1.62	0.63
34:25:68:GLU:HB3	34:25:78:ARG:NH1	2.14	0.63
24:1H:1062:G:N1	24:1H:1076:C:O2	2.32	0.63
24:1H:288:C:H2'	24:1H:289:A:H8	1.62	0.63
48:K8:13:ALA:O	48:K8:16:LEU:HB2	1.98	0.63
30:41:114:ILE:HG22	30:41:117:PHE:HB2	1.80	0.63
54:Q8:34:TRP:HA	54:Q8:36:LYS:HB3	1.80	0.63
22:3K:30:A:H2'	22:3K:31:G:H5''	1.79	0.63
31:59:146:ALA:O	31:59:150:ALA:N	2.32	0.63
7:62:113:GLU:HB2	7:62:119:ARG:HG2	1.79	0.63
38:A8:15:ARG:HD2	38:A8:88:ASP:OD2	1.98	0.63
27:11:213:ARG:HG3	27:11:213:ARG:HH11	1.61	0.63
36:88:14:ARG:HG2	36:88:41:TRP:CH2	2.28	0.63
1:13:375:U:O3'	16:7I:6:LEU:HB2	1.97	0.63
24:1H:1534:G:O2'	24:1H:1535:U:O2	2.16	0.63
46:I8:39:ARG:HD3	46:I8:58:THR:HG23	1.81	0.63
30:41:43:LEU:HD22	30:41:53:LEU:HD12	1.80	0.63
26:79:13:LYS:NZ	26:79:31:GLU:O	2.32	0.63
1:1G:690:G:H2'	1:1G:691:G:O4'	1.97	0.63
27:11:32:SER:HA	27:11:34:VAL:HG22	1.81	0.63
29:39:158:THR:HG23	29:39:164:ARG:HG3	1.81	0.63
53:L5:5:TRP:CD1	53:L5:7:PRO:HG3	2.34	0.63
24:14:2572:A:H5''	24:14:2574:G:H4'	1.81	0.63
7:62:16:LEU:HD12	9:82:41:VAL:O	1.99	0.63
24:1H:1534:G:O2'	24:1H:1535:U:O4'	2.15	0.63
31:51:4:ILE:HG21	31:51:6:ARG:NH1	2.13	0.63
14:5I:26:ARG:HH11	14:5I:43:CYS:HB2	1.64	0.63
16:7I:49:LEU:HD12	16:7I:50:LYS:H	1.63	0.63
26:79:3:HIS:O	26:79:8:ARG:NH1	2.32	0.63
1:1G:434:U:H2'	1:1G:435:C:C6	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1266:G:O2'	24:14:2012:G:O6	2.15	0.63
24:14:1266:G:O5'	42:A5:15:ARG:NH2	2.32	0.63
24:1H:111:A:H4'	48:K8:69:ARG:NH2	2.13	0.63
25:1J:5:C:O2'	25:1J:27:C:O2	2.16	0.63
24:1H:248:G:H5''	24:1H:386:G:N2	2.14	0.63
1:1G:1442:G:N7	1:1G:1446:A:C6	2.67	0.63
39:75:5:ALA:O	39:75:6:LEU:HG	1.99	0.63
35:35:57:THR:O	35:35:61:ARG:HG2	1.99	0.63
24:14:2853:C:H2'	24:14:2854:G:C8	2.34	0.63
3:2E:49:SER:O	3:2E:72:LYS:NZ	2.32	0.63
27:11:68:LYS:HB3	27:11:70:TRP:CZ3	2.34	0.63
48:K8:42:GLY:O	48:K8:44:LEU:N	2.31	0.63
19:AI:68:GLY:H	50:M8:55:ARG:NH2	1.97	0.63
30:41:143:GLU:OE1	50:M8:26:SER:OG	2.17	0.63
1:1G:414:A:OP2	1:1G:428:G:N2	2.29	0.63
22:3K:11:C:H42	22:3K:25:G:H1	1.47	0.62
27:11:213:ARG:HG3	27:11:213:ARG:NH1	2.14	0.62
44:G8:81:LYS:HB3	44:G8:82:PRO:HA	1.80	0.62
3:22:90:GLU:HA	3:22:93:LYS:HB2	1.81	0.62
1:13:321:A:C2	1:13:333:G:C2	2.87	0.62
38:65:26:LEU:HD13	38:65:87:PHE:HD1	1.63	0.62
54:M5:57:ARG:N	54:M5:57:ARG:HH11	1.96	0.62
22:3L:49:A:N3	22:3L:52:G:N2	2.45	0.62
45:D5:45:ASP:OD1	45:D5:49:ARG:NE	2.31	0.62
27:11:8:PRO:HB3	27:11:14:ARG:HB2	1.79	0.62
24:14:2176:A:H2'	24:14:2177:C:C6	2.34	0.62
3:2E:88:ARG:HB3	3:2E:99:VAL:HG21	1.80	0.62
24:1H:330:A:O2'	24:1H:331:A:H8	1.82	0.62
24:14:540:G:H2'	24:14:541:C:H6	1.64	0.62
24:14:2273:A:O2'	24:14:2274:A:H5'	1.98	0.62
30:49:67:LYS:H	50:I5:6:HIS:CD2	2.16	0.62
28:21:53:PRO:O	28:21:55:ASN:ND2	2.31	0.62
27:19:183:ARG:HG3	27:19:270:ILE:HD13	1.81	0.62
30:49:33:ARG:H	30:49:162:THR:HG1	1.46	0.62
31:51:4:ILE:HD11	31:51:7:LEU:HD11	1.80	0.62
27:19:93:ALA:HB3	27:19:105:ILE:HG22	1.80	0.62
22:3K:18:G:H1	22:3K:65:C:H42	1.45	0.62
17:8A:81:ARG:HH21	17:8A:84:LEU:HD11	1.64	0.62
27:11:71:ASP:N	27:11:71:ASP:OD1	2.29	0.62
16:7A:6:LEU:HG	16:7A:17:TYR:HB3	1.81	0.62
24:1H:1916:A:H2'	24:1H:1917:U:O4'	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1623:G:O6	57:14:3654:HOH:O	2.15	0.62
31:51:118:PRO:HG3	31:51:144:VAL:HG21	1.81	0.62
35:78:95:VAL:HA	35:78:99:LEU:HD23	1.81	0.62
24:14:1800:C:OP2	27:19:183:ARG:NH2	2.31	0.62
35:78:82:GLY:HA2	35:78:113:LYS:O	1.99	0.62
24:1H:2130:U:O2'	24:1H:2158:A:N6	2.29	0.62
31:51:92:ILE:H	31:51:92:ILE:HD12	1.64	0.62
24:14:1093:G:H22	24:14:1097:U:H5''	1.63	0.62
24:14:1728:G:H8	24:14:1732:A:H62	1.47	0.62
52:K5:16:CYS:SG	52:K5:44:ARG:NH2	2.72	0.62
41:95:10:LYS:NZ	41:95:23:GLU:OE1	2.28	0.62
36:45:19:GLY:H	36:45:98:LYS:NZ	1.97	0.62
32:69:91:SER:HB3	32:69:121:LYS:HD2	1.82	0.62
24:1H:643:A:N1	24:1H:2369:A:O2'	2.31	0.62
1:13:193:C:H5'	20:BI:57:ARG:HH21	1.64	0.62
4:3E:107:ARG:HH22	4:3E:194:LEU:HD23	1.63	0.62
1:1G:880:C:OP1	12:3A:8:ASN:ND2	2.32	0.62
31:51:121:ILE:HD11	31:51:141:VAL:HA	1.82	0.62
28:29:47:VAL:HG22	28:29:48:GLN:H	1.64	0.62
22:2L:19:C:O2'	22:2L:21:A:OP1	2.18	0.62
51:N8:40:LYS:NZ	51:N8:48:GLU:OE1	2.29	0.62
1:13:1320:C:N3	19:AI:36:ARG:NH1	2.48	0.62
22:2L:8:4SU:C6	22:2L:8:4SU:H5'	2.29	0.62
28:21:50:GLY:HA2	28:21:77:ILE:HA	1.81	0.62
1:1G:25:C:H2'	1:1G:26:A:C8	2.34	0.62
4:32:61:LYS:HB2	4:32:203:VAL:HG13	1.81	0.62
50:I5:31:ILE:HG23	50:I5:32:TYR:HB2	1.80	0.62
1:1G:1256:A:N6	1:1G:1277:C:H3'	2.14	0.62
2:1E:212:GLN:NE2	2:1E:216:SER:OG	2.32	0.62
5:42:11:ILE:HG22	5:42:12:LEU:HB2	1.80	0.62
17:8A:17:LYS:HG2	17:8A:47:PRO:HA	1.81	0.62
24:1H:1025:G:C4	24:1H:1135:C:H1'	2.35	0.62
24:1H:2787:C:O3'	28:21:61:ARG:NH1	2.31	0.62
24:1H:1169:G:H1	24:1H:1180:C:H42	1.48	0.62
24:14:2720:U:N3	24:14:2873:A:H2	1.96	0.62
1:1G:1178:G:H5''	9:82:93:ARG:NH2	2.15	0.62
1:13:1133:G:H2'	1:13:1134:G:O4'	1.99	0.62
1:13:67:C:H2'	1:13:68:G:H8	1.63	0.62
1:13:1447:G:H1	1:13:1459:C:H42	1.46	0.62
24:1H:2564:A:OP1	24:1H:2648:C:H4'	2.00	0.62
24:1H:1266:G:O5'	42:E8:15:ARG:NH2	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:973:G:O3'	14:5A:41:ARG:NH2	2.27	0.62
22:2L:24:G:H2'	22:2L:25:G:H8	1.65	0.62
25:16:111:U:H2'	25:16:112:G:H8	1.63	0.62
1:13:1296:C:H5'	13:4I:14:ARG:HH11	1.64	0.62
29:31:107:LYS:HE2	29:31:206:ILE:HA	1.82	0.62
1:1G:1470:G:O6	57:1G:1835:HOH:O	2.14	0.62
30:49:59:GLU:OE1	30:49:138:GLN:NE2	2.32	0.62
24:14:972:G:OP2	24:14:974:G:H5''	2.00	0.62
45:H8:75:ASN:O	45:H8:84:GLU:N	2.32	0.62
24:14:2133:G:N2	24:14:2157:G:N7	2.48	0.62
1:1G:959:A:HO2'	1:1G:984:C:HO2'	1.47	0.62
1:13:1157:A:H62	1:13:1178:G:N2	1.98	0.62
1:13:881:G:P	12:3I:12:ARG:HH22	2.22	0.62
46:I8:50:ASN:HB2	46:I8:81:VAL:HG13	1.81	0.62
22:2L:59:A:N6	22:2L:60:A:H62	1.97	0.62
6:5E:100:ASN:HB2	18:9I:28:GLU:HA	1.81	0.62
1:13:686:U:H1'	11:2I:42:TRP:NE1	2.10	0.62
30:49:98:ARG:NH2	50:I5:2:LYS:HE2	2.15	0.62
29:39:123:LEU:O	29:39:124:LEU:HB3	1.99	0.62
27:11:30:GLU:HG3	27:11:63:ARG:NH2	2.15	0.62
1:1G:1004:A:H1'	1:1G:1025:U:C2	2.35	0.62
2:12:12:GLU:HA	2:12:15:VAL:HG12	1.82	0.62
24:14:2111:C:H41	24:14:2147:G:H21	1.47	0.62
24:14:491:G:H2'	24:14:492:A:C8	2.34	0.62
1:13:974:A:OP2	14:5I:41:ARG:NH1	2.32	0.62
5:42:140:ARG:O	5:42:143:ARG:NH2	2.32	0.62
1:13:558:G:H5''	1:13:559:A:OP2	2.00	0.62
46:I8:37:LEU:HG	46:I8:60:PHE:HA	1.82	0.62
16:7I:49:LEU:HD12	16:7I:50:LYS:N	2.15	0.62
7:62:111:ARG:NH1	7:62:126:ASP:OD2	2.32	0.62
53:L5:9:ARG:HH12	53:L5:49:ARG:HD2	1.64	0.62
24:1H:320:A:H2'	29:31:136:THR:HG21	1.80	0.62
22:3K:21:A:N6	22:3K:56:U:O2	2.33	0.61
24:14:2134:A:N6	24:14:2157:G:N3	2.48	0.61
24:14:1582:C:HO2'	24:14:1586:A:H8	1.48	0.61
16:7I:22:THR:HA	16:7I:33:ILE:HG13	1.82	0.61
1:1G:1305:G:O2'	1:1G:1306:A:H8	1.82	0.61
24:14:2754:U:H5'	24:14:2755:C:OP2	1.99	0.61
4:3E:9:CYS:HB3	4:3E:32:ALA:HB2	1.82	0.61
24:14:320:A:N3	29:39:169:ASN:ND2	2.47	0.61
24:1H:816:C:H4'	57:1H:3837:HOH:O	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:178:ARG:HH21	8:7E:74:PRO:HB3	1.63	0.61
39:75:16:ARG:HH12	39:75:83:ILE:HB	1.64	0.61
3:2E:148:GLY:HA3	3:2E:172:ARG:O	1.99	0.61
1:1G:81:G:N2	1:1G:88:C:N3	2.44	0.61
24:14:2134:A:C2	24:14:2159:G:H1'	2.34	0.61
24:1H:300:A:H2'	24:1H:334:C:H1'	1.81	0.61
24:1H:607:U:OP1	29:31:102:PRO:HA	1.99	0.61
1:1G:1002:G:H2'	1:1G:1003:G:C8	2.35	0.61
24:14:2027:G:H2'	24:14:2028:U:O4'	1.98	0.61
4:32:187:ARG:NH2	4:32:193:ASP:OD2	2.33	0.61
12:3I:93:LEU:O	12:3I:96:VAL:HG12	1.99	0.61
24:14:2469:A:OP2	24:14:2476:A:N6	2.33	0.61
42:E8:79:GLY:HA3	42:E8:100:THR:HG22	1.82	0.61
24:1H:2367:G:H2'	24:1H:2368:C:C6	2.36	0.61
12:3A:39:VAL:HB	12:3A:57:LYS:HD3	1.79	0.61
30:41:179:PRO:HB3	50:M8:38:LYS:HE2	1.82	0.61
1:13:1124:G:H2'	1:13:1145:C:C5	2.35	0.61
20:BA:10:LEU:HG	20:BA:11:SER:N	2.16	0.61
24:1H:330:A:HO2'	24:1H:331:A:H8	1.46	0.61
35:35:146:VAL:HG13	35:35:147:LEU:HG	1.82	0.61
13:4A:17:VAL:O	13:4A:20:THR:OG1	2.12	0.61
19:AI:32:LYS:HB3	19:AI:50:ALA:HB3	1.81	0.61
15:6A:16:ALA:HB1	15:6A:21:ASP:HB3	1.82	0.61
24:14:2557:G:H2'	24:14:2558:C:C6	2.36	0.61
9:82:125:TYR:HD1	9:82:126:SER:N	1.98	0.61
46:I8:64:ASP:OD1	46:I8:64:ASP:N	2.33	0.61
1:1G:1166:G:N2	1:1G:1170:A:OP2	2.32	0.61
22:2L:35:QUO:C2	22:2L:35:QUO:C4	2.71	0.61
30:49:47:LYS:HG2	30:49:48:GLU:H	1.65	0.61
45:H8:147:GLY:HA2	45:H8:175:VAL:HG23	1.81	0.61
24:14:1329:U:H5''	24:14:1330:C:H5	1.64	0.61
1:13:1132:C:H2'	1:13:1133:G:C8	2.35	0.61
33:58:67:LEU:O	33:58:88:GLU:HG3	1.99	0.61
39:B8:37:GLY:O	39:B8:38:ASN:ND2	2.33	0.61
24:14:2683:C:OP1	39:75:53:ARG:NH2	2.30	0.61
24:1H:2427:C:H5''	24:1H:2428:G:OP1	2.00	0.61
24:1H:581:C:H2'	24:1H:582:G:C8	2.35	0.61
1:13:510:A:OP2	57:13:1813:HOH:O	2.16	0.61
1:1G:321:A:C8	1:1G:328:C:H6	2.19	0.61
35:78:46:LYS:O	35:78:47:ASP:HB3	1.99	0.61
39:75:88:ILE:HD11	39:75:91:ARG:CZ	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1057:G:OP1	3:22:154:SER:OG	2.19	0.61
4:3E:15:GLU:OE1	4:3E:66:ARG:NH1	2.34	0.61
24:14:910:A:N7	36:45:13:GLN:HG3	2.15	0.61
1:1G:269:C:H2'	1:1G:270:A:C8	2.34	0.61
13:4A:10:PRO:HB2	13:4A:18:ALA:HB1	1.82	0.61
1:1G:382:A:H2'	1:1G:383:A:C8	2.36	0.61
24:1H:2882:A:OP1	37:98:96:ARG:HD3	2.00	0.61
24:1H:2682:U:O2'	28:21:13:ARG:HG2	2.00	0.61
35:35:30:THR:HG21	35:35:35:HIS:H	1.65	0.61
34:25:115:VAL:HG13	34:25:121:VAL:HG21	1.82	0.61
31:59:143:GLN:O	31:59:147:ASN:ND2	2.33	0.61
36:88:110:THR:HG23	36:88:113:GLN:OE1	2.00	0.61
24:14:2293:C:H42	24:14:2339:G:H1	1.47	0.61
2:1E:88:ALA:HB2	2:1E:219:VAL:HG13	1.83	0.61
1:1G:1243:C:P	21:1B:10:ARG:HH21	2.24	0.61
1:13:1145:C:H4'	1:13:1146:A:C8	2.34	0.61
45:D5:105:VAL:O	45:D5:108:PRO:HD2	2.00	0.61
3:22:79:ARG:NH2	3:22:83:ARG:HB3	2.15	0.61
24:1H:2598:A:OP1	57:1H:3641:HOH:O	2.16	0.61
32:69:76:THR:HG21	32:69:140:LEU:HD22	1.81	0.61
24:14:2688:U:H1'	24:14:2721:A:N6	2.15	0.61
24:1H:1899:G:H22	24:1H:1902:C:N4	1.98	0.61
1:1G:1003:G:N2	1:1G:1038:C:N3	2.49	0.61
24:1H:1794:U:H2'	24:1H:1795:C:H6	1.64	0.61
7:62:149:ARG:HD2	11:2A:59:TYR:CE1	2.36	0.61
3:2E:155:GLY:O	3:2E:157:ILE:HG13	2.00	0.61
45:H8:125:LEU:HG	45:H8:164:ALA:HB3	1.83	0.61
1:1G:802:A:H5'	1:1G:803:G:OP2	2.00	0.61
40:85:92:ARG:HD2	41:95:11:GLN:NE2	2.16	0.61
1:1G:983:A:H2	1:1G:984:C:C6	2.19	0.61
24:14:1054:A:H3'	24:14:1055:G:C8	2.36	0.61
24:14:1173:G:N3	24:14:1176:G:N2	2.48	0.61
24:1H:881:G:N1	24:1H:895:U:O4	2.33	0.61
9:82:37:PHE:CG	9:82:43:ALA:HB2	2.35	0.61
9:8E:9:ARG:HB3	9:8E:14:VAL:HG13	1.83	0.61
24:14:320:A:H4'	24:14:322:A:C8	2.36	0.61
6:52:100:ASN:ND2	18:9A:23:LYS:O	2.25	0.61
24:14:2161:C:H2'	24:14:2162:G:H8	1.65	0.61
28:29:79:ARG:HD2	28:29:79:ARG:N	2.14	0.61
24:1H:2367:G:H2'	24:1H:2368:C:H6	1.65	0.61
1:1G:1272:G:H2'	1:1G:1273:G:O4'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:5E:61:LEU:HB3	6:5E:63:TYR:HE1	1.65	0.61
1:1G:1347:G:C8	9:82:107:ARG:HB3	2.36	0.61
10:1A:61:GLU:HG2	14:5A:58:LYS:HE3	1.82	0.61
33:58:130:HIS:O	33:58:134:ARG:NH2	2.33	0.61
24:1H:1762:A:H4'	24:1H:1762:A:OP1	2.01	0.61
1:13:1106:G:H5''	3:2E:172:ARG:HG2	1.83	0.61
17:8A:87:LYS:HE2	17:8A:91:ARG:HH21	1.66	0.61
45:D5:146:ILE:HB	45:D5:176:PRO:HG3	1.81	0.61
20:BA:26:ASN:OD1	20:BA:71:THR:OG1	2.14	0.61
24:1H:2439:A:C8	24:1H:2439:A:H5'	2.35	0.61
1:13:69:G:H3'	1:13:73:G:H21	1.66	0.61
22:3K:75:C:H2'	22:3K:76:C:C6	2.36	0.61
13:4A:70:LEU:O	13:4A:74:VAL:HG23	2.01	0.61
24:14:943:U:OP2	35:35:36:LYS:NZ	2.32	0.61
14:5I:15:LYS:HB3	14:5I:16:PHE:CD2	2.36	0.61
1:13:1284:C:OP1	21:1F:26:LYS:NZ	2.33	0.61
2:12:21:ARG:O	2:12:23:ARG:N	2.33	0.61
44:G8:29:GLU:HB2	44:G8:38:ILE:HG23	1.83	0.61
25:1J:66:A:H61	25:1J:107:U:H2'	1.66	0.61
24:1H:1971:A:C5	27:11:241:PRO:HD3	2.35	0.61
22:2K:72:U:H2'	22:2K:73:U:C6	2.36	0.61
1:13:591:U:H2'	1:13:592:G:H8	1.64	0.61
1:13:1336:C:H1'	1:13:1337:G:N2	2.16	0.61
24:14:1332:G:H5'	24:14:1332:G:C8	2.35	0.61
38:65:14:VAL:O	38:65:18:ILE:HG23	2.01	0.61
1:13:1454:G:OP1	20:BI:39:LYS:NZ	2.28	0.61
1:1G:1004:A:O4'	1:1G:1024:G:O2'	2.19	0.61
10:1A:32:ALA:HB2	10:1A:81:THR:HG21	1.81	0.61
36:45:34:LEU:HB2	36:45:118:LEU:HD13	1.82	0.61
30:49:36:LYS:HE2	30:49:160:VAL:HG21	1.83	0.61
25:16:66:A:H61	25:16:107:U:H2'	1.66	0.61
24:14:2816:C:O3'	37:55:99:LYS:NZ	2.27	0.61
24:1H:1218:C:H5''	24:1H:1218:C:H6	1.66	0.61
1:13:639:G:H2'	1:13:640:A:H8	1.64	0.61
2:12:173:ALA:HA	2:12:176:GLU:HB2	1.83	0.61
22:2L:35:QUO:O14	22:2L:38:MIA:H132	2.01	0.60
24:1H:1678:G:O5'	24:1H:1678:G:H8	1.84	0.60
44:C5:39:VAL:C	44:C5:41:GLY:H	2.04	0.60
24:14:2693:A:H2'	24:14:2694:G:C8	2.35	0.60
24:1H:2791:C:H2'	24:1H:2792:G:H8	1.66	0.60
10:1A:11:PHE:CE1	10:1A:67:THR:HG22	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:757:U:H2'	1:1G:758:G:O4'	2.01	0.60
31:51:101:ARG:NH2	31:51:121:ILE:O	2.34	0.60
28:21:97:LYS:N	28:21:100:GLU:OE1	2.26	0.60
1:13:1095:U:H5'	1:13:1109:C:O2	2.00	0.60
1:13:757:U:H2'	1:13:758:G:O4'	2.01	0.60
24:1H:1287:A:N7	37:98:107:ASP:HB2	2.17	0.60
7:6E:50:ILE:HB	7:6E:58:PRO:HG3	1.82	0.60
24:1H:860:U:C5	24:1H:917:A:H2	2.18	0.60
24:14:593:G:O4'	54:M5:4:MET:HE1	2.00	0.60
1:13:1241:G:O6	7:6E:115:ARG:NH2	2.34	0.60
38:65:15:ARG:HD2	38:65:88:ASP:OD2	2.01	0.60
1:1G:1151:A:O2'	1:1G:1152:A:O5'	2.19	0.60
46:I8:36:ILE:HD11	46:I8:39:ARG:HG2	1.82	0.60
24:14:363(B):G:H2'	24:14:363(C):G:H8	1.66	0.60
46:I8:50:ASN:ND2	46:I8:81:VAL:O	2.31	0.60
7:62:120:ILE:HG22	7:62:124:LEU:HD12	1.83	0.60
24:1H:2661:G:O6	31:51:175:LYS:NZ	2.34	0.60
29:31:12:LEU:HD13	29:31:124:LEU:HD11	1.81	0.60
34:25:4:PRO:O	34:25:5:GLN:HB2	2.00	0.60
1:13:1251:A:H2'	1:13:1252:A:C8	2.36	0.60
29:31:6:VAL:HG11	29:31:119:ARG:HA	1.84	0.60
22:3L:19:C:H2'	22:3L:20:C:H4'	1.82	0.60
22:3L:57:C:H4'	22:3L:58:G:O5'	2.01	0.60
1:1G:1446:A:H4'	1:1G:1446:A:OP1	2.00	0.60
25:1J:28:C:OP1	38:65:36:TYR:OH	2.17	0.60
4:3E:30:LYS:C	4:3E:32:ALA:H	2.03	0.60
32:69:1:MET:N	32:69:20:ASP:OD1	2.29	0.60
27:19:182:LEU:H	27:19:272:ALA:CB	2.12	0.60
45:D5:23:LYS:NZ	45:D5:40:ASP:HB2	2.16	0.60
28:29:68:ALA:HB3	28:29:69:LYS:HB3	1.82	0.60
1:13:535:A:H5''	57:13:1841:HOH:O	2.01	0.60
8:7E:121:ASP:HB2	8:7E:125:ARG:NH2	2.15	0.60
47:J8:3:LYS:O	47:J8:12:PRO:HD3	2.00	0.60
24:14:984:A:H5''	24:14:985:C:H5	1.66	0.60
33:15:4:TYR:O	40:85:64:ARG:NH1	2.34	0.60
30:49:64:THR:HB	30:49:94:LEU:HD21	1.84	0.60
24:1H:71:A:H5'	24:1H:73:A:C8	2.36	0.60
27:11:68:LYS:HB3	27:11:70:TRP:CH2	2.36	0.60
1:13:910:C:OP1	12:3I:97:ARG:NH2	2.34	0.60
2:12:80:ILE:H	2:12:80:ILE:HD12	1.66	0.60
28:21:111:ARG:HD3	28:21:160:TYR:CE2	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AA:48:THR:HG22	19:AA:61:TYR:HB2	1.82	0.60
1:13:692:U:O2'	1:13:694:A:N7	2.26	0.60
50:M8:17:GLY:H	50:M8:36:CYS:HB3	1.67	0.60
46:E5:55:ARG:HH11	46:E5:55:ARG:HG3	1.66	0.60
24:14:2074:U:P	57:14:3506:HOH:O	2.54	0.60
1:13:1391:U:H2'	1:13:1392:G:C8	2.36	0.60
2:1E:14:GLY:H	2:1E:16:HIS:CE1	2.19	0.60
2:1E:5:ILE:O	2:1E:217:ARG:NH2	2.22	0.60
47:J8:90:ILE:O	47:J8:94:LEU:HB2	2.00	0.60
1:13:1134:G:H1	1:13:1140:C:H42	1.50	0.60
17:8A:66:SER:OG	17:8A:69:LYS:HB2	2.01	0.60
1:13:1354:C:H2'	1:13:1355:G:C8	2.37	0.60
28:29:33:VAL:HG13	28:29:89:ASP:HA	1.83	0.60
5:4E:143:ARG:NE	8:7E:77:GLU:OE1	2.31	0.60
6:52:20:ALA:HA	6:52:23:LYS:HD3	1.82	0.60
19:AI:6:LYS:HG3	19:AI:9:VAL:HG22	1.82	0.60
29:31:158:THR:HB	29:31:195:ASP:OD2	2.02	0.60
3:2E:76:VAL:HA	3:2E:83:ARG:HD3	1.83	0.60
41:95:44:LYS:C	41:95:46:VAL:H	2.05	0.60
41:D8:44:LYS:O	41:D8:46:VAL:N	2.33	0.60
32:69:103:ARG:H	32:69:103:ARG:HD3	1.67	0.60
2:1E:21:ARG:HE	2:1E:21:ARG:H	1.47	0.60
3:22:79:ARG:NE	3:22:79:ARG:H	1.99	0.60
24:14:956:G:H2'	24:14:957:A:H2'	1.83	0.60
1:1G:1003:G:O6	1:1G:1035:A:N6	2.32	0.60
24:1H:1156:A:OP2	57:1H:3762:HOH:O	2.17	0.60
1:1G:1352:C:H2'	1:1G:1353:G:C8	2.36	0.60
22:3L:38:MIA:H121	22:3L:39:A:N1	2.17	0.60
24:14:2772:C:H2'	24:14:2773:C:C6	2.36	0.60
1:1G:1378:C:H5	1:1G:1379:G:C4	2.18	0.60
22:2L:84:C:H2'	22:2L:85:A:C2	2.36	0.60
24:14:2285:C:H41	52:K5:25:LYS:HZ1	1.49	0.60
9:8E:70:LYS:O	9:8E:74:ILE:HG13	2.02	0.60
31:51:125:VAL:HG13	31:51:131:VAL:HB	1.83	0.60
4:32:31:CYS:C	4:32:33:MET:N	2.54	0.60
43:B5:63:LYS:H	43:B5:63:LYS:CE	2.13	0.60
53:L5:47:ARG:HG3	53:L5:47:ARG:NH1	2.15	0.60
25:1J:6:C:H2'	25:1J:7:G:H5''	1.84	0.60
46:I8:53:MET:HG3	46:I8:59:LEU:HD21	1.82	0.60
1:13:451:A:N6	1:13:480:U:H2'	2.17	0.60
24:1H:2295:C:OP1	38:A8:10:ARG:NH1	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:O8:9:LEU:N	52:O8:27:LYS:HG2	2.17	0.60
24:1H:2499:C:N3	57:1H:3675:HOH:O	2.32	0.60
29:31:114:VAL:HG21	29:31:202:PHE:CE1	2.37	0.60
5:42:57:LYS:HG2	5:42:61:TYR:HE1	1.66	0.60
11:2I:32:ILE:HD12	11:2I:72:ALA:HB2	1.84	0.60
38:A8:67:ARG:NH2	38:A8:103:GLU:OE2	2.35	0.60
27:19:12:SER:HB2	27:19:208:LYS:HB3	1.82	0.60
27:11:93:ALA:HB3	27:11:105:ILE:HG22	1.83	0.60
1:13:1376:U:H2'	1:13:1377:A:C8	2.37	0.60
10:1A:9:ARG:NH1	10:1A:69:ASN:OD1	2.34	0.60
24:14:1139:G:O2'	24:14:1143:A:N6	2.30	0.60
24:14:607:U:H3	24:14:621:A:H2	1.45	0.60
24:1H:934:G:H2'	24:1H:935:C:C6	2.37	0.60
45:H8:142:SER:HB2	45:H8:143:GLY:HA2	1.84	0.60
28:21:73:GLU:HG3	28:21:74:PRO:HD2	1.83	0.60
24:1H:2208:U:H4'	27:11:151:LYS:HG2	1.83	0.60
24:1H:330:A:O2'	24:1H:331:A:C8	2.55	0.60
24:1H:581:C:H2'	24:1H:582:G:H8	1.66	0.60
24:1H:1635:G:H2'	24:1H:1636:C:C6	2.37	0.60
34:25:119:PRO:HB2	39:75:68:TYR:CE2	2.36	0.60
24:14:2396:G:H1'	47:F5:30:VAL:HG23	1.84	0.60
24:1H:1040:C:H42	24:1H:1115:G:H1	1.49	0.60
5:42:80:ILE:HD12	5:42:91:LEU:HB2	1.83	0.60
43:F8:57:LEU:HD23	43:F8:57:LEU:N	2.17	0.60
10:1I:49:VAL:HG23	14:5I:41:ARG:HD2	1.82	0.60
1:13:1348:U:H2'	1:13:1349:A:H8	1.67	0.60
24:1H:2329:G:H2'	24:1H:2330:G:C8	2.36	0.60
24:14:1535:U:C4	24:14:1536:A:H1'	2.37	0.60
27:11:70:TRP:HZ3	27:11:146:GLU:OE2	1.85	0.60
24:14:2142:C:H2'	24:14:2143:C:C6	2.36	0.60
1:13:1376:U:H2'	1:13:1377:A:H8	1.67	0.60
24:14:580:C:H2'	24:14:581:C:C6	2.37	0.60
28:21:33:VAL:HG12	28:21:90:THR:H	1.67	0.60
44:G8:94:LYS:HA	44:G8:94:LYS:HZ3	1.67	0.60
46:I8:68:GLU:OE2	46:I8:82:ARG:NH1	2.34	0.60
18:9I:58:LEU:HD13	18:9I:62:GLU:HB3	1.83	0.60
1:13:450:G:OP1	16:7I:43:LYS:NZ	2.35	0.60
24:14:527:C:H4'	24:14:528:A:O5'	2.01	0.60
50:I5:37:SER:O	50:I5:40:HIS:N	2.33	0.60
1:13:227:G:N2	16:7I:62:VAL:O	2.35	0.60
32:61:120:ILE:HD12	32:61:126:TYR:CE2	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:11:70:TRP:CH2	27:11:150:LYS:HA	2.37	0.60
27:19:73:VAL:HG13	27:19:120:GLY:HA3	1.84	0.60
22:3K:37:A:H2'	22:3K:38:MIA:O4'	2.01	0.60
1:1G:731:G:OP1	1:1G:766:A:H1'	2.02	0.60
4:32:13:ARG:HD2	4:32:38:TYR:O	2.02	0.60
12:3A:110:VAL:HG23	12:3A:120:TYR:HB3	1.83	0.60
29:39:80:ALA:O	29:39:83:PHE:HB2	2.02	0.60
27:11:6:PHE:HE1	27:11:18:VAL:HG23	1.67	0.60
36:88:20:ALA:HB3	45:H8:79:ARG:HH12	1.67	0.60
1:1G:603:U:H2'	1:1G:604:G:C8	2.37	0.60
45:D5:77:ASP:OD2	45:D5:80:ARG:NH1	2.34	0.60
1:1G:607:A:C2	16:7A:31:LYS:HB2	2.36	0.60
24:1H:2255:G:OP2	57:1H:4031:HOH:O	2.16	0.60
22:3L:15:G:H4'	22:3L:15:G:OP1	2.01	0.59
1:1G:1286:A:H8	1:1G:1287:A:H4'	1.65	0.59
16:7I:22:THR:HB	16:7I:32:TYR:HA	1.83	0.59
19:AA:65:ASN:HD22	50:I5:55:ARG:HD2	1.67	0.59
24:14:1292:U:H2'	24:14:1293:C:C6	2.36	0.59
1:1G:142:G:H1	1:1G:221:C:H42	1.48	0.59
1:1G:1249:C:O2'	9:82:73:GLN:OE1	2.18	0.59
24:1H:1593:G:H2'	24:1H:1594:G:C8	2.37	0.59
1:1G:728:A:H2'	1:1G:729:A:C8	2.37	0.59
45:H8:35:ARG:HH11	45:H8:35:ARG:HB3	1.67	0.59
24:1H:1538:G:H2'	24:1H:1539:G:H8	1.65	0.59
14:5I:4:LYS:O	14:5I:7:ILE:HG12	2.02	0.59
24:1H:277:C:H3'	24:1H:278:A:O4'	2.02	0.59
24:14:1130:U:O2	28:29:149:ARG:NH2	2.34	0.59
24:1H:1919:A:H5''	24:1H:1920:C:OP2	2.02	0.59
45:H8:102:LEU:HD21	45:H8:124:ILE:HG22	1.84	0.59
29:39:188:ARG:HA	35:35:3:LEU:HD12	1.84	0.59
1:13:690:G:H2'	1:13:691:G:O4'	2.02	0.59
26:71:190:ARG:O	26:71:194:ARG:NH1	2.35	0.59
51:N8:38:ALA:HB3	51:N8:40:LYS:HZ2	1.66	0.59
24:14:2786:U:HO2'	28:29:63:LEU:H	1.49	0.59
1:1G:976:G:OP1	14:5A:32:SER:N	2.28	0.59
45:D5:105:VAL:HG13	45:D5:106:GLY:H	1.67	0.59
24:1H:895:U:O2'	24:1H:897:C:OP2	2.16	0.59
1:13:936:C:O2	1:13:1382:C:N4	2.30	0.59
24:1H:298:G:C5	57:1H:4038:HOH:O	2.55	0.59
44:C5:99:CYS:SG	44:C5:100:ALA:N	2.74	0.59
24:14:1001:A:H2'	24:14:1002:G:O4'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:72:69:ARG:HD3	8:72:75:ARG:O	2.01	0.59
24:14:1520:U:H2'	24:14:1521:G:O4'	2.02	0.59
1:13:110:C:H2'	1:13:111:G:O4'	2.01	0.59
3:2E:59:ARG:HH12	3:2E:97:LYS:HE2	1.67	0.59
39:B8:57:PHE:HA	39:B8:79:HIS:HD2	1.66	0.59
24:14:1992:G:N7	57:14:3616:HOH:O	2.32	0.59
24:1H:107:C:H2'	24:1H:108:U:H6	1.67	0.59
24:1H:2148:G:H2'	24:1H:2149:G:H8	1.67	0.59
5:4E:43:LEU:HD13	5:4E:109:ILE:HD11	1.84	0.59
24:1H:1683:C:H2'	24:1H:1684:C:H6	1.67	0.59
51:J5:35:GLU:OE1	51:J5:35:GLU:N	2.35	0.59
41:D8:1:MET:SD	41:D8:43:GLU:HG2	2.42	0.59
1:1G:17:U:H2'	1:1G:18:C:C6	2.38	0.59
1:13:323:U:H2'	1:13:324:G:O4'	2.03	0.59
1:1G:617:G:OP2	57:1G:1828:HOH:O	2.16	0.59
42:A5:60:ASN:HD22	42:A5:60:ASN:N	2.00	0.59
42:E8:88:ARG:HB3	42:E8:92:ARG:HB3	1.84	0.59
36:88:2:LEU:H	36:88:2:LEU:HD12	1.68	0.59
1:13:1039:C:N4	1:13:1040:U:O4	2.35	0.59
25:16:94:C:H2'	25:16:95:U:C6	2.37	0.59
29:39:84:VAL:O	29:39:86:GLY:N	2.35	0.59
24:1H:998:C:N4	57:1H:3761:HOH:O	2.35	0.59
1:1G:1266:G:N2	1:1G:1270:C:N3	2.50	0.59
44:C5:37:VAL:HG23	44:C5:67:LEU:HB3	1.85	0.59
24:1H:2722:G:H2'	24:1H:2723:C:C6	2.38	0.59
24:14:430:G:H5''	24:14:431:U:OP2	2.01	0.59
43:F8:51:VAL:HG13	43:F8:81:VAL:HG23	1.85	0.59
45:H8:163:LEU:H	45:H8:163:LEU:HD23	1.67	0.59
41:95:21:ARG:CD	41:95:91:TYR:CG	2.85	0.59
54:M5:33:ASN:O	54:M5:34:TRP:CE3	2.56	0.59
4:32:31:CYS:O	4:32:33:MET:N	2.35	0.59
51:N8:40:LYS:HE2	51:N8:47:PRO:HG2	1.83	0.59
34:25:13:ASN:HD21	34:25:97:ARG:H	1.48	0.59
47:J8:65:SER:HG	47:J8:66:HIS:HD1	1.49	0.59
24:1H:1899:G:N2	24:1H:1902:C:H5	2.00	0.59
36:45:19:GLY:H	36:45:98:LYS:HZ3	1.49	0.59
5:4E:101:ILE:O	5:4E:120:THR:OG1	2.17	0.59
45:H8:23:LYS:HE3	45:H8:40:ASP:HB2	1.84	0.59
24:14:1716:U:H1'	24:14:1746:G:N2	2.16	0.59
24:1H:2445:G:OP1	29:31:74:ARG:NH2	2.34	0.59
24:1H:861:A:N3	25:16:79:C:O2'	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:D5:134:PRO:O	45:D5:136:PHE:N	2.33	0.59
1:13:353:A:H5'	1:13:353:A:H8	1.67	0.59
4:32:154:ASN:OD1	4:32:154:ASN:N	2.34	0.59
45:D5:138:GLU:HG2	45:D5:156:LYS:HE2	1.84	0.59
27:19:253:GLN:HB3	27:19:255:LYS:NZ	2.16	0.59
9:82:17:VAL:HA	9:82:63:ILE:HG12	1.83	0.59
24:1H:2136:C:H2'	24:1H:2137:C:C6	2.38	0.59
24:1H:997:G:C2'	24:1H:998:C:H5'	2.33	0.59
34:25:3:GLN:HB2	34:25:4:PRO:HD2	1.85	0.59
24:1H:1994:C:OP1	57:1H:3934:HOH:O	2.17	0.59
4:32:108:LEU:HD13	4:32:174:LEU:HD13	1.83	0.59
24:1H:458:G:O2'	53:P8:39:ARG:HD3	2.03	0.59
1:1G:1226:C:H4'	19:AA:80:TYR:CZ	2.37	0.59
24:14:2439:A:C8	24:14:2439:A:H5'	2.37	0.59
54:Q8:40:GLU:HA	54:Q8:43:GLN:HB2	1.83	0.59
4:3E:150:GLU:HA	4:3E:153:ARG:HG3	1.84	0.59
27:11:142:VAL:HG23	27:11:193:VAL:HA	1.83	0.59
17:8A:57:VAL:HA	17:8A:77:VAL:HG23	1.84	0.59
5:4E:72:GLN:O	5:4E:75:THR:HG22	2.03	0.59
24:1H:450:G:N7	57:1H:3854:HOH:O	2.31	0.59
22:3K:20:C:O2'	22:3K:22:A:O5'	2.20	0.59
27:11:213:ARG:CG	27:11:213:ARG:HH11	2.15	0.59
24:1H:1171:G:N7	24:1H:1174:A:N6	2.50	0.59
1:1G:427:U:OP1	4:32:13:ARG:NH2	2.32	0.59
22:2K:72:U:O2'	22:2K:73:U:H5'	2.02	0.59
24:1H:1045:A:OP1	24:1H:1045:A:H4'	2.02	0.59
13:4A:54:VAL:HA	13:4A:57:ARG:HB3	1.84	0.59
13:4A:22:ILE:HB	13:4A:25:ILE:HG13	1.85	0.59
27:19:232:PRO:O	57:19:405:HOH:O	2.17	0.59
1:13:501:C:H2'	1:13:502:G:C8	2.37	0.59
40:85:108:GLU:O	40:85:111:GLU:N	2.36	0.59
45:H8:140:ASP:N	45:H8:140:ASP:OD1	2.35	0.59
39:75:134:GLU:OE2	39:75:134:GLU:N	2.36	0.59
42:E8:57:ASN:O	42:E8:61:ASN:HB2	2.03	0.59
44:G8:41:GLY:HA2	44:G8:64:GLU:OE1	2.03	0.59
24:1H:860:U:C5	24:1H:917:A:C2	2.85	0.59
1:13:375:U:OP1	16:7I:69:THR:HG21	2.03	0.59
24:1H:1430:C:H2'	24:1H:1431:U:H6	1.66	0.59
25:16:30:C:OP2	38:A8:32:LEU:HD11	2.03	0.59
24:1H:1221:C:H2'	24:1H:1222:C:C6	2.36	0.59
9:82:9:ARG:NH1	9:82:9:ARG:O	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:41:131:TYR:O	30:41:159:VAL:HG22	2.02	0.59
24:1H:2108:C:H42	24:1H:2181:G:H1	1.51	0.59
22:2K:84:C:H3'	22:2K:85:A:H5''	1.84	0.59
8:72:86:ILE:HG21	8:72:133:LEU:HD13	1.85	0.59
45:D5:5:LEU:HD11	45:D5:43:GLU:HB3	1.82	0.59
28:29:103:ASP:OD1	28:29:201:THR:HG23	2.03	0.59
31:51:113:VAL:HG11	31:51:151:ILE:HD13	1.84	0.59
33:15:96:GLU:HB2	33:15:122:VAL:HG12	1.85	0.59
24:14:1709:U:H2'	24:14:1710:C:C6	2.37	0.59
12:3I:62:SER:HB2	12:3I:64:TYR:HD1	1.67	0.59
24:1H:1140:C:OP1	33:58:23:LEU:HB3	2.03	0.59
22:2K:15:G:H21	22:2K:20:C:N4	1.98	0.59
43:B5:51:VAL:H	43:B5:83:VAL:HG23	1.67	0.59
24:14:1364:G:OP1	47:F5:3:LYS:HD3	2.03	0.59
1:13:1182:G:C4'	1:13:1183:A:H5'	2.32	0.59
31:51:4:ILE:HG21	31:51:6:ARG:CZ	2.33	0.59
24:14:1434:A:H61	24:14:1558:A:H62	1.51	0.59
4:3E:108:LEU:HD21	4:3E:183:GLY:HA3	1.85	0.59
36:45:26:TYR:OH	36:45:141:GLN:HB2	2.02	0.59
32:61:1:MET:HB3	32:61:21:VAL:O	2.02	0.59
24:14:1441:G:H2'	24:14:1442:G:H8	1.67	0.59
38:A8:20:ARG:NH1	46:I8:47:PRO:O	2.35	0.59
24:14:1140:C:H1'	24:14:1143:A:C8	2.37	0.59
2:12:118:LEU:HD12	2:12:142:LEU:HB2	1.84	0.59
28:29:60:ASN:HB2	28:29:62:PRO:HD2	1.83	0.59
39:75:7:ILE:H	39:75:10:VAL:HB	1.67	0.59
1:13:321:A:H62	1:13:328:C:H1'	1.66	0.59
24:1H:1105:U:H2'	24:1H:1106:G:C8	2.36	0.59
24:14:2262:U:OP1	24:14:2387:U:O2'	2.20	0.59
38:65:35:ILE:HG13	38:65:97:ARG:HH21	1.68	0.59
24:14:602:G:O2'	24:14:655:A:N6	2.35	0.59
1:1G:946:A:H2'	1:1G:947:G:C8	2.38	0.59
24:14:2296:U:OP2	38:65:9:ARG:NH1	2.30	0.59
30:41:66:GLN:HA	50:M8:6:HIS:CE1	2.37	0.59
13:4A:92:HIS:HE1	13:4A:98:VAL:HG21	1.68	0.59
1:1G:570:G:H2'	1:1G:571:U:C6	2.37	0.59
24:14:1486:A:H2'	24:14:1487:G:H8	1.67	0.59
24:1H:2737:G:H2'	24:1H:2738:A:H8	1.68	0.59
10:1I:34:VAL:HG12	10:1I:74:ILE:HG22	1.84	0.59
44:C5:97:ARG:NE	44:C5:104:GLY:O	2.36	0.59
43:F8:26:TYR:HD1	43:F8:92:LEU:HD12	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:187:C:H2'	1:1G:188:U:O4'	2.02	0.59
1:1G:993:G:H1	1:1G:1045:C:H42	1.51	0.59
1:1G:15:G:H2'	1:1G:16:A:C8	2.38	0.59
1:13:734:G:H2'	1:13:735:C:H6	1.68	0.59
1:13:908:A:H2'	1:13:909:A:C8	2.37	0.59
17:8A:69:LYS:C	17:8A:70:ARG:HD2	2.22	0.59
24:1H:1635:G:H2'	24:1H:1636:C:H6	1.68	0.59
1:1G:539:A:OP2	12:3A:115:LYS:HE2	2.02	0.59
4:3E:22:LYS:HB2	4:3E:26:CYS:SG	2.43	0.59
9:82:26:VAL:HG22	9:82:61:ALA:HB3	1.84	0.59
24:14:576:U:O4	57:14:3690:HOH:O	2.15	0.59
29:39:22:ALA:C	29:39:24:LEU:H	2.06	0.59
24:1H:443:A:N7	29:31:45:ARG:HG2	2.17	0.59
31:51:56:SER:OG	31:51:57:ASP:N	2.34	0.59
1:13:186:C:O2'	20:BI:85:MET:SD	2.54	0.59
4:3E:39:PRO:HD2	4:3E:44:GLY:HA2	1.85	0.58
1:13:468:A:H4'	16:7I:80:PHE:O	2.03	0.58
24:1H:1053:C:H42	24:1H:1106:G:H1	1.51	0.58
4:32:59:ARG:O	4:32:63:LYS:N	2.30	0.58
9:82:10:ARG:HG3	9:82:105:ASP:HB3	1.84	0.58
31:59:64:LEU:HA	31:59:67:LEU:HD12	1.85	0.58
17:8A:88:TYR:HA	17:8A:91:ARG:HD2	1.85	0.58
24:14:2772:C:H2'	24:14:2773:C:H6	1.68	0.58
1:1G:1324:A:H4'	1:1G:1362:C:H4'	1.83	0.58
39:75:46:GLU:H	39:75:65:LYS:NZ	2.00	0.58
24:1H:654(H):G:N7	24:1H:654(N):G:N2	2.50	0.58
12:3I:24:VAL:HB	12:3I:27:LEU:HD12	1.84	0.58
20:BA:75:ASN:N	20:BA:75:ASN:OD1	2.33	0.58
32:69:56:LYS:O	32:69:60:GLU:HB2	2.03	0.58
29:31:28:ILE:HG21	29:31:116:ASP:HB2	1.85	0.58
1:13:735:C:H2'	1:13:736:C:C6	2.38	0.58
24:14:2130:U:O2'	24:14:2134:A:O4'	2.21	0.58
36:88:51:ARG:NH1	36:88:52:VAL:HG23	2.18	0.58
28:21:21:VAL:HG13	28:21:185:LYS:HG3	1.84	0.58
27:19:10:THR:OG1	27:19:13:ARG:HB2	2.03	0.58
1:13:52:G:H2'	1:13:53:A:H8	1.67	0.58
29:31:157:VAL:HB	29:31:194:MET:HB3	1.85	0.58
1:13:171:A:H2'	1:13:172:A:C8	2.38	0.58
25:1J:41:U:C4	30:49:70:VAL:HG23	2.38	0.58
24:14:2533:A:OP2	57:14:4005:HOH:O	2.17	0.58
4:32:149:ALA:O	4:32:153:ARG:HB2	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:142:G:H2'	24:14:143:C:C6	2.37	0.58
1:1G:1392:G:H21	1:1G:1502:A:H8	1.50	0.58
24:1H:1435:G:O5'	24:1H:1435:G:H8	1.86	0.58
40:C8:75:ASN:H	40:C8:75:ASN:HD22	1.51	0.58
1:1G:451:A:OP1	1:1G:481:G:N2	2.32	0.58
6:52:25:ILE:HG21	6:52:82:ARG:HD2	1.84	0.58
24:1H:2776:A:H4'	24:1H:2777:G:H5''	1.84	0.58
24:14:2404:C:O3'	35:35:77:ARG:NH2	2.36	0.58
47:J8:80:LEU:H	47:J8:80:LEU:HD22	1.67	0.58
1:1G:1227:A:H8	1:1G:1227:A:H3'	1.69	0.58
24:1H:1183:G:O3'	49:L8:29:ARG:NH1	2.37	0.58
1:13:925:G:O6	1:13:1391:U:N3	2.19	0.58
35:78:47:ASP:OD2	35:78:50:ARG:NH2	2.36	0.58
24:1H:943:U:OP2	35:78:36:LYS:NZ	2.37	0.58
29:31:102:PRO:HB2	29:31:105:VAL:HG23	1.85	0.58
32:61:63:ALA:O	32:61:67:ARG:HB2	2.03	0.58
38:65:62:LYS:HB3	38:65:97:ARG:HD2	1.83	0.58
12:3A:41:ARG:HB3	12:3A:41:ARG:NH1	2.18	0.58
14:5I:43:CYS:HA	14:5I:46:GLU:HB2	1.84	0.58
24:14:373:U:H2'	24:14:374:A:H8	1.68	0.58
24:14:733:G:C8	57:14:3509:HOH:O	2.52	0.58
24:1H:2023:G:H5'	24:1H:2617:C:H4'	1.83	0.58
1:13:1346:A:H5''	9:8E:120:ARG:NH1	2.19	0.58
4:32:22:LYS:HG3	4:32:26:CYS:SG	2.43	0.58
39:75:118:ARG:HA	39:75:121:ILE:HB	1.86	0.58
5:42:100:VAL:HA	5:42:118:ILE:HG22	1.85	0.58
24:14:2637:U:H5''	28:29:82:ARG:HH21	1.68	0.58
1:13:674:G:H2'	1:13:675:A:C8	2.38	0.58
1:13:1239:A:O2'	1:13:1298:C:N4	2.36	0.58
28:21:70:ALA:HB1	28:21:73:GLU:HB2	1.86	0.58
5:4E:139:LEU:HA	5:4E:142:LEU:HD12	1.85	0.58
39:75:16:ARG:HB3	39:75:18:ASP:OD1	2.03	0.58
4:32:173:TRP:CD1	4:32:174:LEU:HG	2.38	0.58
24:14:861:A:C2	24:14:917:A:C4	2.92	0.58
13:4A:49:THR:HG22	13:4A:51:ALA:H	1.68	0.58
24:1H:2031:A:C6	24:1H:2498:C:H1'	2.38	0.58
24:14:588:U:H2'	24:14:589:C:C6	2.39	0.58
24:14:1418:G:H2'	24:14:1579:A:N6	2.19	0.58
24:1H:2518:A:C8	24:1H:2518:A:H5'	2.39	0.58
24:14:2270:G:OP2	57:14:3880:HOH:O	2.17	0.58
15:6A:3:ILE:H	15:6A:3:ILE:HD13	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:85:G:OP2	44:G8:9:LYS:HB2	2.03	0.58
1:13:280:C:H3'	1:13:281:G:H5'	1.85	0.58
1:1G:827:U:H5''	1:1G:828:A:OP2	2.03	0.58
24:14:960:A:N6	36:45:83:MET:HE2	2.18	0.58
1:1G:1228:C:H2'	1:1G:1229:A:C8	2.37	0.58
24:1H:376:C:OP1	57:1H:3721:HOH:O	2.17	0.58
24:14:2319:G:N1	24:14:2334:G:OP2	2.34	0.58
33:58:134:ARG:O	33:58:136:GLU:N	2.37	0.58
1:1G:1086:U:H6	1:1G:1086:U:O5'	1.86	0.58
1:13:1305:G:H21	1:13:1331:G:H2'	1.66	0.58
1:13:1287:A:H2'	1:13:1288:A:C8	2.39	0.58
1:13:689:C:H3'	1:13:690:G:H21	1.69	0.58
28:29:101:ARG:NH1	28:29:169:ASN:O	2.36	0.58
49:H5:8:LEU:O	49:H5:32:GLN:N	2.31	0.58
30:49:5:VAL:HB	30:49:8:LYS:HB3	1.85	0.58
24:1H:2199:A:H5'	47:J8:50:ARG:HH21	1.69	0.58
50:M8:57:GLU:O	50:M8:61:ARG:NH1	2.36	0.58
1:13:1219:U:H2'	1:13:1220:G:C8	2.39	0.58
29:31:160:ASN:OD1	29:31:163:VAL:HG23	2.02	0.58
24:14:2537:U:H2'	24:14:2538:C:C6	2.39	0.58
35:78:52:GLU:CG	35:78:57:THR:HG22	2.34	0.58
24:14:1149:G:H2'	24:14:1150:C:C6	2.39	0.58
24:14:634:C:H2'	24:14:635:C:C6	2.38	0.58
36:45:78:PRO:O	36:45:79:LEU:HB3	2.04	0.58
24:14:528:A:H2	24:14:2043:C:C5'	2.16	0.58
24:14:2134:A:H2	24:14:2159:G:H1'	1.69	0.58
24:14:886:C:O2'	24:14:887:A:O5'	2.22	0.58
25:1J:7:G:H4'	38:65:29:PHE:HD2	1.66	0.58
1:13:975:A:H8	1:13:975:A:H5''	1.69	0.58
25:1J:12:C:H2'	46:E5:73:GLY:HA3	1.86	0.58
24:14:739:G:P	57:14:3744:HOH:O	2.61	0.58
1:1G:197:A:C8	1:1G:198:G:H1'	2.38	0.58
1:13:1312:G:OP2	50:M8:62:ARG:NH1	2.37	0.58
24:1H:433:C:H2'	24:1H:434:U:C6	2.37	0.58
49:L8:50:VAL:O	49:L8:54:VAL:HG12	2.03	0.58
24:1H:2275:C:H5'	24:1H:2275:C:H6	1.67	0.58
1:1G:1450:U:OP1	1:1G:1451:A:N6	2.37	0.58
1:13:517:G:N1	1:13:533:A:OP2	2.31	0.58
15:6A:56:LEU:O	15:6A:60:VAL:HG23	2.04	0.58
32:69:92:VAL:HG13	32:69:120:ILE:HG13	1.85	0.58
48:G5:38:GLN:NE2	48:G5:44:LEU:O	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:273:A:H1'	17:8I:16:GLN:HE21	1.68	0.58
24:14:2531:A:H5'	31:59:157:TYR:CE2	2.38	0.58
22:2K:69:U:H5''	22:2K:70:C:H5	1.68	0.58
2:12:7:VAL:HG13	2:12:8:LYS:H	1.68	0.58
1:13:735:C:H2'	1:13:736:C:H6	1.66	0.58
20:BI:19:SER:O	20:BI:23:ARG:HB2	2.03	0.58
24:1H:1170:G:N2	24:1H:1180:C:O2	2.36	0.58
1:13:1132:C:H2'	1:13:1133:G:H8	1.67	0.58
30:41:124:SER:HB2	30:41:131:TYR:CE1	2.38	0.58
22:2L:41:C:H2'	22:2L:42:U:H6	1.68	0.58
24:14:2123:G:O6	24:14:2174:C:N4	2.36	0.58
24:1H:2131:G:H21	24:1H:2158:A:H5''	1.67	0.58
4:32:188:LEU:HD23	4:32:189:PRO:HD2	1.85	0.58
2:1E:101:MET:HA	2:1E:108:ILE:HD12	1.86	0.58
1:13:667:G:H4'	15:6I:51:HIS:CE1	2.39	0.58
24:14:2150:U:H2'	24:14:2151:G:H8	1.68	0.58
1:13:235:C:H5'	17:8I:70:ARG:HG2	1.86	0.58
9:8E:18:PHE:HD2	9:8E:62:TYR:HD2	1.51	0.58
24:1H:2816:C:O3'	37:98:99:LYS:NZ	2.30	0.58
24:1H:420:C:H2'	24:1H:421:U:C6	2.39	0.58
24:1H:2550:G:OP1	57:1H:3936:HOH:O	2.17	0.58
24:14:2845:G:O2'	24:14:2846:G:H5'	2.04	0.58
1:13:1213:A:O2'	1:13:1215:G:N7	2.32	0.58
1:1G:908:A:H2'	1:1G:909:A:C8	2.38	0.58
1:13:179:A:H2'	1:13:180:U:H6	1.68	0.58
24:14:141:A:H8	24:14:1595:G:H21	1.51	0.58
28:21:15:PHE:HB3	39:B8:81:PRO:HG2	1.86	0.58
1:13:1277:C:HO2'	1:13:1279:A:H8	1.46	0.58
18:9I:66:LEU:O	18:9I:70:ILE:HG13	2.03	0.58
23:4K:13:A:O2'	23:4K:14:A:H5''	2.04	0.58
41:95:35:LEU:O	41:95:37:VAL:HG22	2.04	0.58
54:Q8:56:GLU:HG2	54:Q8:57:ARG:NH2	2.19	0.58
22:3L:15:G:N2	22:3L:57:C:N3	2.47	0.58
38:A8:93:LYS:HG2	38:A8:95:HIS:HB2	1.86	0.58
24:1H:1331:A:O2'	24:1H:1332:G:H8	1.87	0.58
46:I8:49:LYS:HB2	46:I8:80:HIS:HB3	1.86	0.58
24:1H:910:A:C5	36:88:13:GLN:HG3	2.38	0.58
1:13:78:G:O6	1:13:90:C:N4	2.37	0.58
24:1H:1354:A:H2'	24:1H:1355:G:O4'	2.04	0.58
24:1H:1930:G:O2'	24:1H:1968:G:O6	2.18	0.58
13:4A:23:TYR:HE2	13:4A:71:ARG:HD3	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:39:84:VAL:HG12	29:39:85:GLY:N	2.18	0.58
50:I5:21:VAL:HG22	50:I5:22:ILE:H	1.68	0.58
45:H8:23:LYS:HA	45:H8:40:ASP:HA	1.85	0.58
24:14:1192:G:H2'	24:14:1193:G:H8	1.67	0.58
24:1H:2724:C:OP1	28:21:118:LYS:HE3	2.04	0.58
1:13:939:G:H2'	1:13:940:C:H6	1.68	0.58
31:59:103:LEU:HD22	31:59:121:ILE:HG21	1.86	0.58
24:1H:77:C:H5''	48:K8:10:LEU:HD11	1.86	0.58
24:14:458:G:O2'	53:L5:39:ARG:HD3	2.04	0.58
1:13:964:A:H4'	10:1I:55:LYS:HD2	1.86	0.58
24:14:2793:G:N2	24:14:2804:C:O2	2.36	0.58
25:1J:60:C:H2'	25:1J:61:G:H8	1.68	0.58
28:29:52:LEU:O	28:29:75:VAL:N	2.31	0.58
45:D5:132:ASN:N	45:D5:132:ASN:OD1	2.37	0.58
24:1H:2345:G:N3	24:1H:2381:C:H2'	2.19	0.57
38:65:106:ARG:NH1	38:65:107:GLU:OE2	2.37	0.57
30:49:61:ALA:HB2	30:49:68:PRO:HD3	1.86	0.57
24:1H:1798:U:H5'	27:11:259:THR:CG2	2.34	0.57
1:13:1135:U:H4'	1:13:1136:U:C5	2.36	0.57
1:1G:1152:A:OP1	10:1A:68:HIS:ND1	2.37	0.57
37:98:74:LYS:C	37:98:76:VAL:H	2.08	0.57
28:29:68:ALA:N	28:29:69:LYS:O	2.32	0.57
3:2E:73:PRO:O	3:2E:76:VAL:HG22	2.04	0.57
24:1H:2111:C:H41	24:1H:2147:G:N2	2.01	0.57
24:1H:2077:A:H2'	24:1H:2078:C:H6	1.69	0.57
24:14:1430:C:H2'	24:14:1431:U:C6	2.38	0.57
4:3E:190:ASP:HB3	4:3E:192:GLU:HG3	1.86	0.57
24:1H:2887:U:H2'	24:1H:2888:C:C6	2.39	0.57
24:1H:459:U:H5''	53:P8:40:TRP:CD2	2.39	0.57
35:35:2:LYS:HG3	35:35:5:ASP:OD2	2.03	0.57
24:1H:1210:A:H8	24:1H:1210:A:H5'	1.69	0.57
12:3A:69:TYR:HD2	12:3A:99:HIS:CD2	2.22	0.57
22:2K:69:U:H5''	22:2K:70:C:C5	2.38	0.57
24:1H:1009:A:OP2	33:58:37:LYS:NZ	2.23	0.57
24:1H:1021:A:H61	24:1H:1142(A):A:H61	1.51	0.57
1:13:1157:A:N6	1:13:1178:G:N2	2.51	0.57
8:72:9:MET:HG3	8:72:26:VAL:HG11	1.85	0.57
39:B8:26:ASP:OD2	39:B8:120:ARG:NH1	2.37	0.57
36:88:51:ARG:HG2	36:88:51:ARG:HH11	1.70	0.57
30:49:17:PRO:HA	30:49:20:ILE:HG22	1.86	0.57
24:14:1098:A:H3'	24:14:1099:G:H5'	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:29:201:THR:HG22	28:29:202:LYS:H	1.69	0.57
26:71:43:VAL:HG22	26:71:214:VAL:HG22	1.84	0.57
1:13:560:U:H5'	1:13:566:G:N2	2.18	0.57
17:8I:19:VAL:HG23	17:8I:44:ALA:HB3	1.86	0.57
1:1G:9:G:OP2	5:42:121:LYS:NZ	2.30	0.57
24:1H:603:A:H4'	24:1H:604:G:O5'	2.04	0.57
24:1H:3:U:OP1	24:1H:2790:A:N6	2.37	0.57
1:1G:514:C:H2'	1:1G:515:G:H8	1.67	0.57
28:29:38:THR:HG23	28:29:41:LYS:HB3	1.87	0.57
3:2E:147:LYS:HD3	3:2E:204:LEU:O	2.04	0.57
24:14:2365:G:H4'	46:E5:60:PHE:CZ	2.39	0.57
40:C8:110:VAL:O	40:C8:113:ALA:HB3	2.04	0.57
2:1E:185:ILE:HB	2:1E:199:TYR:HB2	1.86	0.57
1:1G:625:G:H2'	1:1G:626:U:H6	1.69	0.57
22:2K:35:QUO:C2	22:2K:35:QUO:C4	2.69	0.57
2:1E:69:LEU:HD12	2:1E:70:PHE:H	1.68	0.57
24:1H:988:A:P	49:L8:11:SER:HB2	2.44	0.57
1:13:1238:A:N7	1:13:1303:C:H1'	2.19	0.57
25:1J:88:C:N3	25:1J:89:G:N3	2.52	0.57
1:13:837:G:N2	1:13:850:U:O2	2.36	0.57
24:1H:274:G:H2'	24:1H:275:G:O4'	2.03	0.57
4:3E:108:LEU:HB3	4:3E:110:PHE:HD1	1.68	0.57
38:A8:10:ARG:O	38:A8:14:VAL:HG13	2.04	0.57
30:49:2:PRO:N	30:49:5:VAL:HG22	2.19	0.57
22:2L:1:G:C2	22:2L:2:G:C8	2.91	0.57
1:1G:900:A:H2'	1:1G:901:A:C8	2.39	0.57
36:45:32:TYR:HE1	36:45:133:ARG:HG3	1.69	0.57
9:8E:46:ALA:HA	9:8E:78:LYS:HB2	1.86	0.57
40:C8:25:TRP:O	40:C8:28:ARG:HB2	2.04	0.57
24:14:863:A:H2'	24:14:864:G:H8	1.67	0.57
24:1H:2404:C:OP2	57:1H:4091:HOH:O	2.17	0.57
24:14:2183:C:H2'	24:14:2184:G:H8	1.68	0.57
31:51:137:ASP:OD1	31:51:138:LYS:N	2.36	0.57
22:2L:55:U:O2'	22:2L:56:U:H5''	2.05	0.57
1:1G:1442:G:O2'	1:1G:1443:G:OP1	2.18	0.57
24:14:528:A:O2'	24:14:529:A:H5'	2.03	0.57
24:14:1039:G:N2	24:14:1116:C:O2	2.31	0.57
1:13:148:G:H2'	1:13:149:A:C8	2.38	0.57
28:21:51:PHE:HD2	28:21:52:LEU:HG	1.68	0.57
39:75:53:ARG:O	39:75:53:ARG:HG3	2.05	0.57
5:4E:33:VAL:HG11	5:4E:109:ILE:HA	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2377:A:H2'	24:1H:2378:A:C8	2.40	0.57
6:52:7:ASN:HD21	18:9A:34:TYR:HE2	1.50	0.57
1:1G:1190:G:OP2	3:22:5:ILE:HD13	2.03	0.57
1:13:1307:U:H2'	1:13:1308:U:H6	1.68	0.57
24:1H:2093:G:H5'	32:61:22:LYS:HD3	1.86	0.57
24:1H:2254:C:O2	46:18:7:LEU:HD11	2.05	0.57
45:D5:141:VAL:HG13	45:D5:150:LEU:HD12	1.85	0.57
1:13:1190:G:O2'	3:2E:3:ASN:HB3	2.05	0.57
41:95:21:ARG:HH22	41:95:65:GLY:C	2.08	0.57
24:1H:844:C:H2'	24:1H:845:G:O4'	2.04	0.57
30:49:39:ILE:HD11	30:49:94:LEU:HD22	1.86	0.57
24:14:2065:C:H2'	24:14:2066:C:H6	1.68	0.57
1:1G:475:G:O6	57:1G:1864:HOH:O	2.17	0.57
24:1H:142:G:H2'	24:1H:143:C:C6	2.40	0.57
24:14:483:A:H5''	44:C5:49:VAL:HG13	1.85	0.57
24:1H:1063:G:O2'	24:1H:1077:A:N7	2.36	0.57
26:79:5:LYS:HA	26:79:8:ARG:HB2	1.85	0.57
1:13:501:C:H2'	1:13:502:G:H8	1.68	0.57
24:14:1688:U:H1'	24:14:1701:A:C6	2.39	0.57
24:1H:1805:U:O2	27:11:50:THR:HB	2.03	0.57
24:14:1118:C:H2'	24:14:1119:C:C6	2.39	0.57
43:F8:84:ALA:HB3	43:F8:87:GLN:OE1	2.03	0.57
1:13:173:U:H5''	1:13:197:A:O4'	2.04	0.57
4:3E:53:ASP:HB3	4:3E:57:ARG:NH1	2.19	0.57
47:F5:25:LYS:HA	47:F5:29:GLY:HA2	1.85	0.57
26:71:166:ASP:N	26:71:166:ASP:OD1	2.36	0.57
5:42:6:PHE:HZ	5:42:40:ARG:HH21	1.51	0.57
2:1E:82:ARG:NH1	2:1E:92:TYR:OH	2.38	0.57
24:1H:91:A:H2'	24:1H:92:G:H8	1.69	0.57
24:14:389:G:H22	35:35:72:PRO:HD3	1.69	0.57
24:14:2611:U:H2'	51:J5:2:ALA:O	2.04	0.57
24:1H:2287:A:C2	24:1H:2289:G:C8	2.93	0.57
1:1G:1129:C:H42	1:1G:1141:C:H41	1.50	0.57
1:1G:1133:G:H2'	1:1G:1134:G:H8	1.69	0.57
1:1G:972:C:O2	10:1A:55:LYS:HD3	2.03	0.57
40:85:92:ARG:CZ	41:95:11:GLN:H	2.17	0.57
21:1B:8:THR:HG22	21:1B:10:ARG:H	1.69	0.57
5:4E:126:ARG:NH1	5:4E:126:ARG:HG3	2.16	0.57
25:1J:48:A:H4'	38:65:95:HIS:HD2	1.69	0.57
1:13:1057:G:H4'	3:2E:197:GLY:H	1.68	0.57
8:7E:86:ILE:HG21	8:7E:133:LEU:HD22	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:69:86:THR:HG23	32:69:87:LYS:H	1.68	0.57
1:13:1141:C:H2'	1:13:1142:G:C8	2.39	0.57
26:79:41:VAL:HG22	26:79:216:THR:HG22	1.85	0.57
20:BA:67:ALA:O	20:BA:73:HIS:ND1	2.37	0.57
20:BA:79:ARG:HH21	20:BA:80:ARG:NH1	2.02	0.57
24:1H:2855:C:H2'	24:1H:2856:C:H6	1.69	0.57
1:13:989:C:H42	1:13:1216:G:H1	1.51	0.57
1:1G:1105:A:H2'	1:1G:1106:G:H8	1.69	0.57
54:M5:29:LYS:HB2	54:M5:44:LYS:CB	2.35	0.57
33:58:4:TYR:CE2	40:C8:100:VAL:HG11	2.40	0.57
24:14:1754:C:OP1	39:75:96:ARG:NH1	2.37	0.57
28:29:49:LEU:O	28:29:78:LEU:HB3	2.05	0.57
1:1G:979:C:H3'	1:1G:980:C:H5''	1.85	0.57
50:I5:12:ALA:HB1	50:I5:29:PRO:HA	1.86	0.57
1:13:1504:G:OP1	1:13:1507:A:H4'	2.04	0.57
10:1A:50:ILE:HG13	14:5A:41:ARG:HD3	1.87	0.57
24:14:2129:C:H5'	26:79:6:ARG:HH11	1.69	0.57
5:42:126:ARG:NH1	5:42:126:ARG:HG2	2.18	0.57
6:5E:19:LEU:HD23	6:5E:23:LYS:HZ2	1.70	0.57
38:65:26:LEU:HD13	38:65:87:PHE:CD1	2.39	0.57
43:F8:60:ARG:HH22	53:P8:47:ARG:NH2	2.03	0.57
14:5A:45:ARG:O	14:5A:49:HIS:ND1	2.30	0.57
32:69:125:GLU:HA	32:69:141:LYS:HA	1.85	0.57
1:13:1491[B]:G:OP1	12:3I:47:LYS:NZ	2.38	0.57
51:J5:16:ARG:HG2	51:J5:16:ARG:HH11	1.70	0.57
24:1H:607:U:N3	24:1H:621:A:C2	2.73	0.57
46:E5:27:GLU:HB2	46:E5:69:PHE:HD1	1.68	0.57
24:14:558:G:P	33:15:111:PRO:HD2	2.45	0.57
47:J8:87:PRO:HA	47:J8:89:GLU:H	1.69	0.57
27:11:71:ASP:CG	27:11:103:ARG:HH22	2.06	0.57
24:1H:674:G:O2'	29:31:74:ARG:HD2	2.05	0.57
1:13:939:G:H2'	1:13:940:C:C6	2.39	0.57
39:B8:54:ARG:HA	39:B8:59:THR:OG1	2.05	0.57
24:14:2619:C:OP1	28:29:152:LYS:HE2	2.04	0.57
24:1H:1858:G:O2'	24:1H:1884:A:N6	2.37	0.57
24:1H:7:G:H1	24:1H:2896:C:H42	1.52	0.57
24:1H:2068:U:H3	24:1H:2430:A:H2	1.49	0.57
30:49:173:LEU:HG	30:49:178:PHE:CD2	2.39	0.57
27:19:242:ARG:HG2	27:19:246:PRO:HG3	1.87	0.57
47:J8:91:LYS:O	47:J8:95:LEU:HG	2.05	0.57
35:78:59:LEU:O	35:78:61:ARG:N	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:2L:62:G:C6	22:2L:63:5MU:H72	2.40	0.57
27:11:17:THR:HG22	27:11:205:VAL:N	2.17	0.57
2:1E:80:ILE:HD11	2:1E:208:ILE:HG22	1.86	0.57
24:1H:1007:C:H5''	33:58:35:ARG:NH1	2.19	0.57
24:14:1028:A:H61	24:14:1125:G:H2'	1.70	0.57
24:1H:795:C:H2'	24:1H:796:C:C6	2.40	0.57
1:1G:1305:G:H22	1:1G:1331:G:C2'	2.17	0.57
24:14:1093:G:H1	24:14:1097:U:P	2.28	0.57
28:21:21:VAL:HG12	28:21:23:VAL:HG13	1.86	0.57
36:45:34:LEU:HD11	36:45:129:THR:HB	1.85	0.57
28:29:68:ALA:H	28:29:69:LYS:C	2.07	0.57
40:C8:28:ARG:HD3	40:C8:38:THR:OG1	2.05	0.57
28:21:4:ILE:HG12	28:21:28:ALA:HB1	1.85	0.57
1:1G:279:A:OP2	17:8A:95:TYR:OH	2.14	0.57
2:12:189:ASP:O	2:12:192:SER:OG	2.12	0.57
30:41:97:ASP:O	30:41:101:ILE:HG12	2.05	0.57
7:62:26:PHE:O	7:62:30:ILE:HG13	2.05	0.57
24:14:1410:G:O2'	24:14:1411:C:H5'	2.05	0.57
15:6I:22:THR:OG1	15:6I:22:THR:O	2.21	0.57
32:61:75:LEU:HD21	32:61:105:HIS:ND1	2.20	0.57
1:13:49:U:C2	1:13:361:G:N2	2.73	0.57
1:13:730:G:C5	1:13:731:G:H1'	2.40	0.57
37:98:56:LYS:NZ	37:98:90:ARG:O	2.38	0.57
24:14:1450:C:H2'	24:14:1451:C:C6	2.40	0.57
24:1H:2829:C:H5'	28:21:76:ARG:NH2	2.20	0.57
47:J8:85:LEU:HB3	47:J8:86:SER:HB3	1.85	0.57
30:49:47:LYS:HE2	30:49:81:LYS:HE3	1.86	0.57
1:1G:827:U:H3	1:1G:872:A:N6	2.00	0.57
24:14:1175:U:O2'	24:14:1176:G:N3	2.34	0.57
24:14:2655:G:N2	24:14:2665:A:OP2	2.34	0.57
1:13:1441:G:H4'	1:13:1442:G:C5	2.40	0.57
24:1H:620:G:H4'	24:1H:621:A:C5'	2.33	0.57
24:1H:234:C:H2'	24:1H:235:U:C6	2.39	0.57
7:62:26:PHE:CE2	7:62:30:ILE:HD11	2.40	0.57
15:6A:8:LYS:O	15:6A:12:ILE:HG13	2.05	0.57
1:13:108:G:H5''	1:13:109:A:H5''	1.87	0.57
1:1G:1372:U:OP1	9:82:72:GLY:N	2.37	0.57
42:E8:85:VAL:HA	42:E8:95:ILE:HG22	1.85	0.57
1:13:417:C:H2'	1:13:418:C:H6	1.70	0.57
8:7E:10:LEU:HD22	8:7E:83:ILE:HD11	1.87	0.57
2:1E:71:VAL:HG12	2:1E:93:VAL:HB	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:2K:21:A:H2	22:2K:55:U:H3	1.50	0.57
25:16:29:A:P	38:A8:32:LEU:HD13	2.45	0.57
24:14:2387:U:O2'	46:E5:41:ARG:NH1	2.38	0.57
1:13:411:A:N9	1:13:413:G:H1'	2.18	0.57
24:1H:70:G:H21	24:1H:71:A:N6	2.02	0.57
3:22:63:ASN:HA	3:22:98:ASN:HB3	1.86	0.57
4:32:63:LYS:HB3	4:32:198:VAL:HG12	1.86	0.57
24:14:2816:C:O2	24:14:2883:A:O2'	2.23	0.57
2:12:208:ILE:HA	2:12:211:ILE:HD12	1.86	0.57
24:1H:1537:C:H2'	24:1H:1538:G:C8	2.39	0.57
1:1G:15:G:H2'	1:1G:16:A:H8	1.70	0.57
14:5A:26:ARG:HH12	14:5A:47:LEU:HD21	1.70	0.57
18:9A:74:ARG:HB3	18:9A:81:PHE:CE1	2.40	0.57
36:88:90:VAL:HG23	36:88:91:GLU:H	1.70	0.57
24:14:1568:G:P	27:19:63:ARG:HH12	2.28	0.57
24:1H:900:A:H3'	24:1H:901:A:H8	1.70	0.57
2:12:88:ALA:HB2	2:12:219:VAL:HG23	1.87	0.57
1:13:957:U:O2'	1:13:959:A:N7	2.35	0.57
1:13:95:G:H3'	1:13:96:G:C8	2.40	0.57
1:13:1413:A:H2	1:13:1487:G:H22	1.50	0.57
1:13:255:G:H4'	17:8I:17:LYS:HG2	1.87	0.57
24:1H:2352:A:H2'	24:1H:2353:G:O4'	2.05	0.57
2:1E:74:LYS:NZ	2:1E:166:ASP:OD2	2.29	0.57
10:1A:79:ARG:HA	10:1A:82:ILE:HG22	1.85	0.57
24:14:2637:U:H5''	28:29:82:ARG:NH2	2.20	0.56
47:J8:41:ARG:HG3	47:J8:41:ARG:NH1	2.19	0.56
1:13:1491[A]:G:OP1	12:3I:47:LYS:NZ	2.38	0.56
25:1J:87:G:N7	57:1J:321:HOH:O	2.32	0.56
24:14:1678:G:H22	24:14:1989:G:H22	1.53	0.56
25:1J:12:C:H6	25:1J:12:C:OP2	1.88	0.56
16:7A:34:GLU:OE1	16:7A:55:ARG:NH1	2.36	0.56
24:14:1337:G:H2'	24:14:1338:G:H8	1.68	0.56
1:13:693:G:H2'	1:13:694:A:C8	2.40	0.56
24:14:729:G:C6	27:19:208:LYS:HB2	2.40	0.56
45:D5:103:ARG:HG2	45:D5:136:PHE:HB2	1.87	0.56
1:1G:166:G:H2'	1:1G:167:G:H8	1.69	0.56
1:13:52:G:H2'	1:13:53:A:C8	2.40	0.56
24:1H:2002:G:O6	57:1H:4097:HOH:O	2.18	0.56
24:14:1151:G:H4'	40:85:81:HIS:CD2	2.40	0.56
1:1G:683:G:N2	1:1G:707:C:O2	2.26	0.56
1:13:1244:C:H42	1:13:1293:G:H1	1.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:608:A:H2'	24:14:609:A:C8	2.40	0.56
36:45:43:THR:OG1	36:45:45:GLN:HG2	2.04	0.56
29:39:18:ARG:HG2	29:39:19:GLU:H	1.69	0.56
29:39:4:VAL:HG12	29:39:19:GLU:OE1	2.05	0.56
6:52:10:LEU:HD11	6:52:61:LEU:HD22	1.87	0.56
24:1H:2132:U:H3	26:71:8:ARG:HH12	1.52	0.56
18:9I:26:LEU:HB3	18:9I:42:ARG:HH22	1.70	0.56
19:AI:33:THR:HG23	19:AI:35:SER:H	1.70	0.56
35:78:59:LEU:HD22	35:78:60:MET:H	1.71	0.56
1:1G:1132:C:H2'	1:1G:1133:G:C8	2.40	0.56
51:N8:46:CYS:HB3	51:N8:50:GLY:HA3	1.87	0.56
2:1E:80:ILE:HD12	2:1E:211:ILE:HB	1.86	0.56
2:1E:80:ILE:O	2:1E:84:GLU:HG2	2.05	0.56
7:6E:46:ALA:HB2	7:6E:117:ALA:HB1	1.87	0.56
1:1G:1151:A:H5'	10:1A:41:PRO:HA	1.87	0.56
24:14:481:G:OP2	44:C5:47:LYS:HB2	2.05	0.56
4:32:11:LEU:HD13	4:32:66:ARG:HG2	1.85	0.56
7:6E:20:ASP:O	7:6E:23:VAL:HG23	2.05	0.56
1:1G:1306:A:N6	1:1G:1331:G:H1'	2.20	0.56
1:1G:492:G:O6	57:1G:1870:HOH:O	2.14	0.56
26:71:3:HIS:HB3	26:71:7:TYR:HB3	1.87	0.56
8:7E:77:GLU:HG2	8:7E:78:GLN:H	1.69	0.56
1:1G:1378:C:H5	1:1G:1379:G:N9	2.02	0.56
27:11:6:PHE:CE1	27:11:18:VAL:HG23	2.41	0.56
24:14:1148:A:H2'	24:14:1149:G:H8	1.70	0.56
33:15:23:LEU:HD12	33:15:99:LEU:HD23	1.87	0.56
1:13:1075:C:OP1	2:1E:179:LYS:NZ	2.27	0.56
37:98:78:LYS:O	37:98:83:ILE:HG13	2.05	0.56
10:1I:35:SER:HB3	10:1I:73:ASP:HB2	1.86	0.56
43:B5:50:LYS:HG2	43:B5:84:ALA:HB2	1.87	0.56
24:1H:2781:A:H5''	24:1H:2782:G:H5'	1.87	0.56
15:6I:70:LEU:HD11	15:6I:77:ARG:HG3	1.87	0.56
24:14:1786:A:C2	24:14:2606:C:H1'	2.41	0.56
52:O8:33:LYS:O	52:O8:35:GLU:HG3	2.05	0.56
54:M5:62:LEU:HB2	54:M5:63:PRO:CD	2.31	0.56
5:42:111:GLU:O	5:42:114:GLY:N	2.31	0.56
44:C5:42:VAL:O	44:C5:65:ALA:N	2.27	0.56
22:3K:42:U:H2'	22:3K:43:G:C8	2.40	0.56
8:72:45:ILE:HG22	8:72:47:GLY:N	2.17	0.56
36:88:12:GLN:HG2	36:88:73:PRO:HD2	1.86	0.56
1:13:1037:C:H2'	1:13:1038:C:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:22:32:LEU:HD22	3:22:59:ARG:HH22	1.70	0.56
3:22:35:GLU:OE2	3:22:59:ARG:NH2	2.39	0.56
27:11:71:ASP:OD2	27:11:103:ARG:NH2	2.37	0.56
1:13:193:C:H5'	20:BI:57:ARG:NH2	2.20	0.56
28:29:34:VAL:HB	28:29:48:GLN:HG2	1.87	0.56
24:14:234:C:H2'	24:14:235:U:H6	1.69	0.56
44:G8:93:GLY:O	44:G8:94:LYS:HB2	2.05	0.56
35:78:52:GLU:HG3	35:78:57:THR:HA	1.86	0.56
1:13:1412:C:H2'	1:13:1413:A:C8	2.40	0.56
22:2K:4:G:H1	22:2K:78:C:H42	1.53	0.56
24:14:2889:C:H3'	24:14:2891:G:H8	1.70	0.56
20:BA:51:GLU:HA	20:BA:54:LYS:HB3	1.88	0.56
24:1H:2870:C:H5''	37:98:65:LEU:HD21	1.86	0.56
1:13:438:G:OP1	4:3E:125:HIS:HE1	1.88	0.56
1:1G:1239:A:H4'	1:1G:1240:U:H5''	1.87	0.56
1:1G:1062:U:H2'	1:1G:1063:C:C6	2.40	0.56
1:13:431:A:H2'	1:13:432:A:O4'	2.05	0.56
29:39:167:ALA:HB1	29:39:173:VAL:HG11	1.87	0.56
49:L8:28:LEU:HA	49:L8:33:GLN:OE1	2.05	0.56
45:H8:11:GLU:O	45:H8:36:LYS:NZ	2.28	0.56
54:Q8:23:VAL:HG23	54:Q8:49:VAL:HG12	1.88	0.56
35:78:96:THR:HG22	35:78:97:PRO:HD2	1.88	0.56
24:14:1331:A:O2'	24:14:1332:G:H8	1.87	0.56
24:14:1047:G:N2	24:14:1111:A:H62	2.03	0.56
2:1E:111:ARG:NH1	2:1E:111:ARG:HG2	2.16	0.56
3:22:78:GLY:HA3	3:22:79:ARG:CZ	2.36	0.56
2:1E:233:SER:HB2	2:1E:234:PRO:HD2	1.87	0.56
1:1G:41:G:H2'	1:1G:42:G:H8	1.70	0.56
24:1H:1864:U:H3	24:1H:1878:G:H1	1.54	0.56
24:14:973:A:H5'	24:14:1188:U:H1'	1.87	0.56
44:G8:94:LYS:HA	44:G8:94:LYS:NZ	2.21	0.56
30:41:64:THR:HG22	30:41:66:GLN:H	1.70	0.56
24:14:1408:C:C2	24:14:1595:G:N2	2.73	0.56
8:7E:34:GLU:HB3	8:7E:118:VAL:HG21	1.88	0.56
3:2E:102:ASN:N	3:2E:102:ASN:OD1	2.38	0.56
24:1H:2495:G:H5''	36:88:82:ARG:HB3	1.86	0.56
15:6A:4:THR:OG1	15:6A:7:GLU:OE2	2.13	0.56
4:32:76:ARG:NH2	4:32:80:GLU:OE1	2.38	0.56
24:14:1999:C:H4'	24:14:2723:C:O2	2.05	0.56
46:E5:53:MET:HG3	46:E5:59:LEU:HD23	1.86	0.56
16:7A:75:ARG:O	16:7A:78:GLY:N	2.29	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:62:115:ARG:HB2	7:62:118:VAL:HG13	1.88	0.56
24:1H:730:C:H3'	57:1H:3672:HOH:O	2.04	0.56
1:1G:1133:G:H2'	1:1G:1134:G:C8	2.40	0.56
38:65:109:GLY:O	38:65:111:GLU:N	2.27	0.56
1:13:201:C:N4	1:13:216:G:H1	1.98	0.56
1:1G:1357:A:N7	1:1G:1358:U:C5	2.74	0.56
2:12:63:MET:O	2:12:64:ARG:HB2	2.04	0.56
3:22:32:LEU:O	3:22:36:ASP:HB2	2.06	0.56
28:29:112:GLY:O	28:29:159:HIS:HA	2.06	0.56
1:1G:1015:A:H2'	1:1G:1016:A:H8	1.70	0.56
4:3E:194:LEU:HD12	4:3E:195:ALA:N	2.21	0.56
1:13:591:U:H2'	1:13:592:G:C8	2.40	0.56
1:13:688:G:H2'	1:13:689:C:H6	1.69	0.56
39:B8:16:ARG:NH2	39:B8:83:ILE:O	2.38	0.56
1:1G:1227:A:C8	1:1G:1227:A:H3'	2.41	0.56
1:1G:625:G:H2'	1:1G:626:U:C6	2.40	0.56
24:14:1688:U:O2	24:14:1700:A:H5'	2.05	0.56
24:1H:1449(A):G:H2'	24:1H:1450:C:H6	1.69	0.56
26:71:226:PRO:HG2	26:71:227:HIS:CE1	2.40	0.56
29:39:126:VAL:O	29:39:195:ASP:HA	2.06	0.56
1:1G:1237:C:H3'	1:1G:1336:C:H41	1.71	0.56
1:13:555:C:H2'	1:13:556:C:C6	2.40	0.56
22:3L:9:U:H3	22:3L:22:A:N6	2.03	0.56
24:14:1728:G:N2	24:14:1730:U:OP2	2.39	0.56
22:3K:25:G:H2'	22:3K:26:G:C8	2.41	0.56
24:14:2068:U:N3	24:14:2430:A:H2	1.99	0.56
1:13:403:C:OP2	4:3E:74:GLN:NE2	2.38	0.56
6:5E:19:LEU:O	6:5E:23:LYS:NZ	2.38	0.56
1:1G:1033:G:H2'	1:1G:1034:G:H8	1.70	0.56
1:13:383:A:OP1	1:13:454:C:O2'	2.19	0.56
1:1G:736:C:H2'	1:1G:737:A:C8	2.41	0.56
24:1H:1231:G:H2'	24:1H:1232:G:C8	2.41	0.56
24:14:1709:U:H2'	24:14:1710:C:H6	1.71	0.56
45:D5:19:ARG:NH2	45:D5:84:GLU:HB3	2.21	0.56
31:59:91:GLY:HA3	31:59:94:TYR:CD2	2.41	0.56
1:1G:1136:U:H5''	1:1G:1137:C:H5	1.70	0.56
1:1G:693:G:H2'	1:1G:694:A:C8	2.41	0.56
24:1H:593:G:C1'	54:Q8:4:MET:HE1	2.36	0.56
24:1H:2643:G:H2'	24:1H:2644:G:O4'	2.06	0.56
24:1H:934:G:H2'	24:1H:935:C:H6	1.69	0.56
44:G8:39:VAL:HB	44:G8:42:VAL:CG1	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:981:A:H8	24:1H:982:C:C5	2.23	0.56
1:1G:542:G:H5'	4:32:41:GLY:HA3	1.88	0.56
1:1G:189:U:O4	17:8A:62:SER:HB2	2.05	0.56
1:13:272:C:H2'	1:13:273:A:H8	1.70	0.56
13:4I:49:THR:HG22	13:4I:51:ALA:H	1.70	0.56
24:14:286:C:H2'	24:14:287:C:C6	2.41	0.56
35:35:39:LYS:HA	35:35:45:LEU:HD13	1.88	0.56
21:1F:3:LYS:HB3	21:1F:14:TRP:HD1	1.71	0.56
24:14:71:A:C8	24:14:71:A:H5'	2.41	0.56
27:19:260:ARG:NH2	27:19:266:SER:OG	2.38	0.56
34:25:2:ILE:HD12	34:25:6:THR:HG21	1.87	0.56
24:1H:1385:G:O2'	24:1H:1396:U:O2	2.24	0.56
33:58:103:VAL:HG11	33:58:120:LEU:HD12	1.88	0.56
32:69:5:LEU:O	32:69:6:LEU:HD12	2.06	0.56
24:14:324:A:H2'	24:14:325:G:O4'	2.06	0.56
3:22:12:LEU:HD11	14:5A:51:GLY:HA2	1.87	0.56
1:13:1329:A:H5''	13:4I:26:GLY:H	1.71	0.56
1:13:1124:G:N3	1:13:1125:U:N3	2.50	0.56
24:14:1651:G:H5'	37:55:39:PRO:HG3	1.88	0.56
10:1A:13:HIS:HB3	10:1A:68:HIS:CE1	2.41	0.56
9:82:9:ARG:HH22	9:82:104:ARG:HD3	1.70	0.56
24:14:2002:G:OP2	37:55:9:LYS:NZ	2.39	0.56
50:M8:10:VAL:HG22	50:M8:11:PRO:HD2	1.88	0.56
24:14:2212:A:H4'	24:14:2213:U:C5	2.40	0.56
24:14:363(B):G:H2'	24:14:363(C):G:C8	2.41	0.56
1:1G:838:G:O5'	1:1G:838:G:H8	1.88	0.56
24:1H:997:G:OP1	40:C8:92:ARG:HB2	2.05	0.56
1:13:93:U:H2'	1:13:95:G:O4'	2.05	0.56
43:F8:3:THR:HA	43:F8:6:ASP:OD2	2.04	0.56
44:G8:46:LYS:HE2	44:G8:60:PHE:CD2	2.40	0.56
24:14:2543:G:H2'	24:14:2544:G:C8	2.41	0.56
29:31:108:LYS:O	29:31:112:MET:HG3	2.06	0.56
9:8E:93:ARG:HA	9:8E:96:LEU:HB2	1.88	0.56
24:14:1204:A:C2	24:14:1241:A:N1	2.74	0.56
24:1H:247:G:H4'	24:1H:386:G:C5	2.41	0.56
33:15:24:GLY:O	33:15:28:THR:HG23	2.06	0.56
38:65:103:GLU:O	38:65:106:ARG:HG2	2.06	0.56
4:3E:12:CYS:HB3	4:3E:33:MET:CE	2.34	0.56
1:1G:1321:C:C4	1:1G:1322:C:C4	2.94	0.56
24:1H:2074:U:P	57:1H:3668:HOH:O	2.62	0.56
38:A8:35:ILE:HG22	38:A8:97:ARG:HH21	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:22:83:ARG:O	3:22:86:VAL:HG22	2.05	0.56
54:M5:40:GLU:HA	54:M5:43:GLN:HB2	1.87	0.56
24:14:2319:G:N7	38:65:3:ARG:HG3	2.20	0.56
4:32:62:GLN:O	4:32:66:ARG:HB2	2.05	0.56
22:3K:38:MIA:H2'	22:3K:39:A:H8	1.70	0.56
5:4E:80:ILE:HD12	8:7E:104:ARG:HH22	1.71	0.56
24:1H:998:C:OP1	40:C8:92:ARG:NH2	2.28	0.56
45:D5:146:ILE:HD13	45:D5:176:PRO:HD3	1.88	0.56
24:14:2635:C:H5''	28:29:77:ILE:O	2.06	0.56
24:1H:2068:U:N3	24:1H:2430:A:C2	2.70	0.56
43:B5:50:LYS:N	43:B5:87:GLN:OE1	2.31	0.56
2:12:104:ASN:OD1	2:12:107:THR:OG1	2.17	0.56
1:1G:988:G:N2	1:1G:1218:C:O2	2.39	0.56
24:1H:774:A:H2	24:1H:787:U:HO2'	1.52	0.56
9:82:24:GLY:HA2	9:82:59:PHE:O	2.06	0.56
3:22:29:TYR:OH	14:5A:54:PRO:HD2	2.05	0.56
24:1H:885:C:O2	24:1H:892:G:N2	2.39	0.56
36:88:62:GLY:O	36:88:63:LYS:HD2	2.06	0.56
24:14:205:G:O6	47:F5:39:LYS:NZ	2.39	0.56
22:3L:35:QUO:O6	22:3L:35:QUO:N11	2.39	0.56
24:1H:761:A:H5''	57:1H:3671:HOH:O	2.06	0.56
54:Q8:29:LYS:HB3	54:Q8:31:HIS:H	1.70	0.56
1:1G:1365:G:H2'	1:1G:1366:C:H6	1.71	0.56
1:13:542:G:H5'	4:3E:41:GLY:HA3	1.88	0.56
24:14:1328:G:H2'	24:14:1330:C:C5	2.41	0.56
1:13:1327:C:P	21:1F:12:LYS:HZ1	2.29	0.56
38:65:29:PHE:HD1	38:65:30:ARG:N	2.04	0.56
24:14:2327:A:H2'	24:14:2328:A:C8	2.41	0.56
10:1I:40:LEU:HB2	10:1I:69:ASN:HB2	1.88	0.56
1:1G:730:G:C5	1:1G:731:G:H1'	2.41	0.56
24:14:2889:C:H2'	24:14:2891:G:O4'	2.06	0.56
1:13:456:C:N3	1:13:476:G:N2	2.52	0.56
13:4I:67:GLU:CD	13:4I:68:GLY:H	2.07	0.56
24:1H:968:G:H5''	49:L8:17:LYS:NZ	2.21	0.56
1:13:1262:C:H2'	1:13:1263:C:C6	2.41	0.56
1:13:1310:G:N7	19:AI:2:PRO:HG3	2.21	0.56
32:61:29:TYR:O	32:61:32:PRO:HD2	2.06	0.56
24:1H:1588:C:H2'	24:1H:1589:C:C6	2.41	0.56
2:12:47:THR:HG23	2:12:202:PRO:HG2	1.87	0.56
8:72:6:ILE:O	8:72:10:LEU:HG	2.05	0.56
24:1H:74:A:C5'	24:1H:74:A:H8	2.19	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:51:5:GLY:O	31:51:69:ARG:HG2	2.05	0.55
37:98:63:ARG:HA	37:98:80:PHE:CZ	2.40	0.55
24:1H:1997:G:H5''	57:1H:3933:HOH:O	2.05	0.55
3:22:182:ILE:HG12	3:22:203:PHE:HB2	1.87	0.55
32:69:76:THR:HG23	32:69:140:LEU:HD13	1.86	0.55
24:14:517:C:OP1	51:J5:16:ARG:NH2	2.38	0.55
39:B8:91:ARG:O	39:B8:116:ALA:HA	2.06	0.55
24:1H:528:A:N1	24:1H:2042:A:H2'	2.21	0.55
24:1H:638:G:C5	24:1H:651:G:C2	2.94	0.55
24:14:218:A:H2	24:14:235:U:H4'	1.70	0.55
45:D5:132:ASN:ND2	45:D5:159:PRO:HB2	2.21	0.55
24:1H:2829:C:H5'	28:21:76:ARG:HH22	1.71	0.55
49:L8:3:ARG:HG2	49:L8:38:GLU:HG3	1.88	0.55
33:15:34:LEU:HD21	33:15:120:LEU:HB2	1.88	0.55
34:68:25:LEU:HD21	34:68:40:VAL:HG23	1.87	0.55
50:M8:49:PHE:HD1	50:M8:50:VAL:HG23	1.70	0.55
24:1H:721:C:H2'	24:1H:722:A:H8	1.71	0.55
31:51:23:ARG:HH22	31:51:25:LYS:HE3	1.71	0.55
45:D5:39:VAL:HG21	45:D5:44:PHE:HB2	1.88	0.55
24:1H:185:U:H2'	24:1H:186:G:H8	1.70	0.55
35:78:122:PRO:HA	35:78:142:GLY:HA3	1.88	0.55
24:1H:1213:A:H1'	24:1H:1238:G:N3	2.21	0.55
1:13:540:G:H2'	1:13:541:G:O4'	2.07	0.55
24:14:263:C:H2'	24:14:264:C:O4'	2.06	0.55
2:1E:189:ASP:HB3	2:1E:191:ASP:HB2	1.89	0.55
1:1G:448:A:P	1:1G:485:G:H22	2.26	0.55
1:13:606:G:O2'	1:13:632:A:N6	2.38	0.55
22:3K:9:U:H6	22:3K:46:G:H5''	1.72	0.55
24:14:2130:U:C2	24:14:2158:A:H2	2.25	0.55
45:D5:30:ASN:HA	45:D5:89:PHE:CE1	2.39	0.55
14:5A:40:CYS:HB2	14:5A:43:CYS:H	1.70	0.55
1:13:265:G:H5'	17:8I:64:PRO:O	2.07	0.55
44:C5:19:LYS:CG	44:C5:20:TYR:H	2.17	0.55
22:2K:61:G:H2'	22:2K:62:G:O4'	2.06	0.55
24:1H:2849:U:O4	39:B8:23:ARG:NH2	2.38	0.55
24:14:2261:C:O2'	24:14:2262:U:H5'	2.05	0.55
24:1H:1641:A:H2'	24:1H:1642:G:O4'	2.06	0.55
24:1H:456:C:H2'	43:F8:68:ARG:NH2	2.22	0.55
24:1H:528:A:C2	24:1H:2043:C:H4'	2.40	0.55
24:1H:2271:G:C5'	46:I8:20:ARG:HH11	2.18	0.55
24:1H:2169:A:H2'	24:1H:2170:A:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:88:90:VAL:O	36:88:91:GLU:HB3	2.06	0.55
28:21:66:HIS:CG	28:21:67:PHE:N	2.74	0.55
1:1G:1104:G:OP1	2:12:144:ARG:NH1	2.29	0.55
44:C5:88:LYS:O	44:C5:89:PHE:HB3	2.04	0.55
11:2A:29:ILE:HG22	11:2A:44:SER:HB2	1.86	0.55
35:78:81:GLN:OE1	35:78:106:LEU:HA	2.05	0.55
42:E8:58:ALA:O	42:E8:64:MET:HB2	2.06	0.55
1:13:918:A:H2'	1:13:919:A:C8	2.41	0.55
2:1E:195:ASP:O	8:7E:68:ARG:NH2	2.39	0.55
40:85:92:ARG:HD2	41:95:11:GLN:HB2	1.88	0.55
39:75:10:VAL:HG12	39:75:11:GLU:N	2.21	0.55
13:4A:77:ASN:OD1	13:4A:80:ARG:NH2	2.38	0.55
21:1B:9:ARG:O	21:1B:13:ILE:HG13	2.06	0.55
24:1H:270(M):U:H1'	24:1H:270(N):G:C2	2.41	0.55
25:16:90:C:H5'	36:88:18:LYS:HA	1.89	0.55
24:1H:1170:G:N2	24:1H:1180:C:C2	2.75	0.55
24:1H:795:C:H2'	24:1H:796:C:H6	1.72	0.55
24:1H:1899:G:H22	24:1H:1902:C:H5	1.52	0.55
1:13:164:U:H2'	1:13:165:C:C6	2.41	0.55
1:1G:173:U:O2	1:1G:197:A:N6	2.39	0.55
24:1H:643:A:H2'	24:1H:644:A:C8	2.41	0.55
1:1G:327:A:HO2'	1:1G:329:A:H8	1.53	0.55
1:1G:182:U:N3	1:1G:183:G:H1'	2.21	0.55
20:BA:29:LYS:O	20:BA:33:ILE:HG12	2.05	0.55
24:14:848:G:H2'	24:14:849:A:C8	2.42	0.55
1:1G:1000:A:H2'	1:1G:1001:G:H8	1.71	0.55
1:13:1316:G:N2	1:13:1318:A:H3'	2.20	0.55
5:4E:36:ASP:OD2	5:4E:38:GLN:HB2	2.05	0.55
24:14:873:G:N2	24:14:905:U:C2	2.74	0.55
13:4I:15:VAL:HA	13:4I:45:VAL:HG12	1.89	0.55
28:21:105:THR:HG21	28:21:164:ARG:NH1	2.21	0.55
41:95:21:ARG:HG2	41:95:91:TYR:CE1	2.41	0.55
24:1H:2712:U:H1'	24:1H:2712(A):A:C8	2.40	0.55
20:BI:26:ASN:HD22	20:BI:26:ASN:H	1.55	0.55
2:1E:77:ALA:HB2	2:1E:211:ILE:HD13	1.86	0.55
24:1H:2210:G:H5''	24:1H:2211:G:C6	2.40	0.55
27:19:16:MET:HG3	27:19:206:LEU:O	2.07	0.55
24:1H:2340:G:O2'	24:1H:2341:G:H5'	2.07	0.55
24:14:2250:G:C6	36:45:83:MET:HB3	2.42	0.55
25:1J:8:U:H3	25:1J:112:G:H1	1.54	0.55
38:65:15:ARG:O	38:65:19:LYS:HD2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:441:U:O2	29:31:46:ARG:NH2	2.40	0.55
1:1G:501:C:H2'	1:1G:502:G:C8	2.39	0.55
24:14:2173:A:C5	24:14:2174:C:H4'	2.41	0.55
1:13:1354:C:H2'	1:13:1355:G:H8	1.71	0.55
41:D8:44:LYS:C	41:D8:46:VAL:H	2.09	0.55
43:F8:11:PRO:HB3	43:F8:92:LEU:HD21	1.88	0.55
24:14:2530:A:C4	31:59:157:TYR:HE1	2.25	0.55
24:1H:2402:C:H3'	24:1H:2402:C:C6	2.41	0.55
29:39:18:ARG:HG2	29:39:19:GLU:N	2.22	0.55
1:13:865:A:H2	1:13:918:A:H4'	1.72	0.55
2:12:73:THR:HG22	2:12:170:GLU:OE1	2.06	0.55
1:1G:373:A:C2	1:1G:374:A:C8	2.95	0.55
27:19:8:PRO:HB3	27:19:14:ARG:HB2	1.88	0.55
1:1G:1250:A:H4'	9:82:68:GLY:N	2.21	0.55
24:1H:1317:A:H2'	24:1H:1318:C:H6	1.71	0.55
37:98:57:ARG:HB3	37:98:59:ASP:OD1	2.06	0.55
37:55:52:ILE:O	37:55:55:ALA:N	2.34	0.55
22:3L:24:G:H2'	22:3L:25:G:C8	2.41	0.55
24:1H:2345:G:H1'	24:1H:2382:G:H5'	1.89	0.55
28:21:143:ASN:HD22	28:21:147:PRO:HD3	1.70	0.55
24:1H:1054:A:H2'	24:1H:1055:G:H8	1.70	0.55
30:49:60:LEU:O	30:49:64:THR:HG23	2.06	0.55
30:49:64:THR:OG1	30:49:65:GLY:N	2.38	0.55
1:13:1078:U:O2'	5:4E:130:ASN:OD1	2.15	0.55
24:1H:1174:A:H1'	24:1H:1178:C:H41	1.72	0.55
50:I5:56:VAL:HG13	50:I5:57:GLU:HG3	1.89	0.55
24:1H:2175:C:O2'	26:71:219:GLY:O	2.25	0.55
22:3K:18:G:H1	22:3K:65:C:N4	2.05	0.55
44:G8:17:SER:OG	44:G8:71:LYS:HD2	2.06	0.55
2:1E:48:MET:HA	2:1E:51:LEU:HD12	1.87	0.55
35:35:14:LYS:HG2	35:35:15:ARG:H	1.72	0.55
24:1H:94:G:H2'	24:1H:95:G:O4'	2.06	0.55
24:1H:2728:U:H5'	34:68:70:LYS:NZ	2.21	0.55
6:5E:74:ASP:N	6:5E:74:ASP:OD1	2.37	0.55
27:11:28:GLU:N	27:11:28:GLU:OE1	2.39	0.55
37:98:41:ALA:O	37:98:44:LEU:N	2.40	0.55
24:14:2388:A:H2'	24:14:2389:G:H5'	1.87	0.55
1:13:974:A:H1'	14:5I:31:ARG:HE	1.71	0.55
25:1J:15:A:H1'	25:1J:109:G:C8	2.41	0.55
4:32:29:PRO:HD2	4:32:30:LYS:HZ2	1.71	0.55
22:2L:69:U:H5'	22:2L:70:C:H5	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:16:40:U:N3	25:16:43:C:H5''	2.18	0.55
25:16:63:G:H2'	25:16:64:C:C6	2.41	0.55
24:14:660:G:N2	35:35:12:ALA:HA	2.17	0.55
1:13:264:U:H4'	17:8I:63:ARG:HD2	1.87	0.55
17:8A:59:ILE:HG22	17:8A:71:PHE:HD2	1.72	0.55
24:1H:2837:G:H21	37:98:45:ARG:NH2	2.05	0.55
1:1G:1179:A:H2'	1:1G:1180:A:O4'	2.07	0.55
24:1H:1899:G:N2	24:1H:1902:C:H41	2.05	0.55
27:19:102:LYS:C	27:19:103:ARG:HG2	2.25	0.55
24:1H:2337:G:H2'	24:1H:2338:G:H8	1.72	0.55
1:1G:1226:C:H4'	19:AA:80:TYR:OH	2.07	0.55
45:D5:5:LEU:HD22	45:D5:47:VAL:HG21	1.88	0.55
16:7A:71:ARG:HG2	16:7A:80:PHE:CE2	2.41	0.55
2:12:204:ASN:HB2	2:12:210:SER:HB3	1.89	0.55
1:13:486:U:H2'	1:13:487:A:H8	1.71	0.55
1:13:486:U:H2'	1:13:487:A:C8	2.41	0.55
1:1G:45:U:H2'	1:1G:46:G:C8	2.41	0.55
24:1H:732:C:H3'	57:1H:3986:HOH:O	2.06	0.55
48:G5:47:ASN:N	48:G5:47:ASN:HD22	2.05	0.55
30:49:135:LEU:O	30:49:154:GLY:HA3	2.07	0.55
24:14:2777:G:OP2	24:14:2781:A:O2'	2.24	0.55
24:1H:1870:C:H2'	24:1H:1871:A:O4'	2.06	0.55
35:78:56:SER:HB2	35:78:61:ARG:HD2	1.89	0.55
1:1G:1503:A:O2'	23:4L:13:A:N6	2.39	0.55
24:14:1021:A:H62	24:14:1141:U:H3	1.54	0.55
24:1H:1771:C:O2'	24:1H:1786:A:H8	1.87	0.55
24:14:2250:G:N2	36:45:84:GLY:HA3	2.22	0.55
22:2K:59:A:O2'	22:2K:60:A:H5'	2.06	0.55
24:1H:2785:C:H2'	24:1H:2786:U:O4'	2.05	0.55
11:2I:34:ASP:OD1	11:2I:38:ASN:N	2.37	0.55
9:82:71:SER:HA	9:82:74:ILE:HD12	1.89	0.55
1:1G:426:G:OP1	4:32:38:TYR:OH	2.18	0.55
13:4A:66:LEU:HA	13:4A:70:LEU:HB2	1.88	0.55
24:1H:2655:G:O2'	24:1H:2664:G:O6	2.20	0.55
8:7E:121:ASP:OD1	8:7E:121:ASP:N	2.40	0.55
40:C8:104:GLN:HG2	41:D8:44:LYS:HD3	1.89	0.55
28:29:101:ARG:O	28:29:201:THR:OG1	2.23	0.55
24:1H:2737:G:H2'	24:1H:2738:A:C8	2.41	0.55
1:1G:1189:C:H5''	3:22:5:ILE:HG12	1.89	0.55
13:4I:49:THR:HB	13:4I:52:GLU:HG3	1.89	0.55
10:1A:92:THR:HG23	10:1A:93:GLY:H	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2859:G:H3'	24:14:2859:G:C8	2.42	0.55
24:14:2849:U:H4'	24:14:2868:A:C2	2.41	0.55
43:B5:18:TYR:HD1	43:B5:21:PHE:HE2	1.54	0.55
1:1G:926:G:H5''	1:1G:927:G:O5'	2.06	0.55
45:D5:148:ASP:OD1	45:D5:170:THR:OG1	2.12	0.55
1:1G:509:A:C8	1:1G:509:A:H3'	2.42	0.55
22:3K:33:C:H2'	22:3K:34:U:H5'	1.87	0.55
24:14:443:A:H1'	24:14:1201:C:O4'	2.06	0.55
24:14:2420:C:N4	54:M5:31:HIS:HB3	2.13	0.55
24:1H:250:G:H2'	24:1H:251:A:C8	2.42	0.55
24:1H:931:G:O2'	49:L8:24:LYS:HE3	2.06	0.55
39:75:11:GLU:HA	39:75:15:VAL:HG13	1.89	0.55
1:1G:1288:A:H2'	1:1G:1289:A:C8	2.42	0.55
17:8A:59:ILE:CG2	17:8A:71:PHE:HB3	2.36	0.55
45:D5:10:ARG:HD2	45:D5:36:LYS:HE2	1.89	0.55
1:13:376:G:H1	1:13:387:U:H3	1.53	0.55
24:1H:529:A:H8	24:1H:530:G:C6	2.25	0.55
24:14:540:G:H2'	24:14:541:C:C6	2.41	0.55
25:1J:66:A:N6	25:1J:107:U:H2'	2.22	0.55
39:B8:57:PHE:HA	39:B8:79:HIS:CD2	2.42	0.55
1:13:1074:G:H4'	2:1E:104:ASN:HB2	1.89	0.55
1:1G:1359:C:H5''	57:1G:1859:HOH:O	2.06	0.55
24:14:2170:A:H2'	24:14:2171:A:H5'	1.88	0.55
24:14:2402:C:H41	24:14:2416:C:H1'	1.71	0.55
24:1H:34:C:O2'	24:1H:35:G:OP2	2.23	0.55
28:29:97:LYS:O	28:29:100:GLU:HG3	2.07	0.55
20:BA:50:GLU:HG3	20:BA:100:ILE:HG21	1.87	0.55
44:C5:17:SER:O	44:C5:21:LYS:HB2	2.07	0.55
24:1H:1901:A:OP2	27:11:255:LYS:HE2	2.07	0.55
24:1H:2150:U:H2'	24:1H:2151:G:C8	2.42	0.55
24:14:2096:U:H3	24:14:2193:G:H1	1.55	0.55
3:22:20:SER:HB3	3:22:22:TRP:HE1	1.72	0.55
32:61:73:GLU:OE1	32:61:137:PRO:HD2	2.06	0.55
24:14:2612:C:OP2	51:J5:2:ALA:HA	2.07	0.55
24:14:2577:A:O4'	51:J5:3:LYS:HB2	2.06	0.55
24:1H:2305:A:H2'	24:1H:2306:C:C6	2.42	0.55
25:16:65:C:N4	25:16:108:C:H2'	2.22	0.55
39:75:11:GLU:HA	39:75:15:VAL:CG1	2.36	0.55
13:4A:73:GLU:O	13:4A:77:ASN:HB2	2.07	0.55
24:1H:2379:G:O2'	38:A8:17:ARG:NH1	2.40	0.55
45:D5:61:LEU:HB3	45:D5:62:PRO:O	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2636:U:H2'	24:1H:2637:U:C6	2.42	0.55
24:1H:1640:C:H2'	24:1H:1641:A:C8	2.42	0.55
13:4A:92:HIS:CE1	13:4A:98:VAL:HG21	2.42	0.55
24:1H:969:U:OP1	49:L8:17:LYS:HG3	2.07	0.55
42:A5:18:ARG:HG3	42:A5:76:VAL:HG13	1.88	0.55
24:14:2774:C:H2'	24:14:2775:A:O4'	2.06	0.55
29:39:66:PRO:O	29:39:67:GLN:HB3	2.07	0.55
1:13:355:C:H5''	1:13:389:A:OP2	2.07	0.55
2:12:230:VAL:HG12	2:12:231:GLU:H	1.70	0.55
1:13:618:C:H5''	1:13:619:U:H5''	1.89	0.55
24:1H:2348:U:H4'	52:O8:42:TRP:HE1	1.70	0.55
19:AI:65:ASN:N	19:AI:65:ASN:OD1	2.39	0.55
1:13:814:A:N7	1:13:816:A:C4	2.75	0.55
24:14:242:G:O5'	54:M5:3:LYS:HE3	2.07	0.55
1:1G:1075:C:H5''	2:12:179:LYS:NZ	2.22	0.55
19:AA:32:LYS:HB3	19:AA:57:HIS:CE1	2.42	0.55
24:1H:2346:A:HO2'	52:O8:39:TYR:HH	1.56	0.55
24:1H:2502:G:H5''	24:1H:2503:A:H5''	1.88	0.55
43:B5:49:VAL:HB	43:B5:83:VAL:HG21	1.89	0.55
39:75:102:ILE:HA	39:75:105:LEU:HB2	1.87	0.55
25:16:24:G:N7	25:16:56:G:H2'	2.21	0.55
37:98:42:LYS:O	37:98:45:ARG:HD3	2.06	0.55
27:11:69:ARG:NH2	27:11:128:GLY:O	2.37	0.55
24:14:581:C:H2'	24:14:582:G:H8	1.70	0.55
1:1G:947:G:H2'	1:1G:948:C:O4'	2.07	0.55
24:1H:1184:G:H5'	49:L8:29:ARG:NH1	2.22	0.55
1:13:1218:C:H2'	1:13:1219:U:C6	2.43	0.55
24:14:864:G:C6	24:14:865:C:N4	2.75	0.55
24:1H:185:U:H4'	24:1H:218:A:H4'	1.88	0.55
51:J5:46:CYS:SG	51:J5:48:GLU:HG2	2.47	0.55
24:14:1428:C:N4	24:14:1570:A:OP2	2.32	0.55
52:K5:29:ASN:OD1	52:K5:30:THR:N	2.40	0.55
3:2E:6:HIS:CD2	3:2E:7:PRO:HD2	2.42	0.55
1:1G:1208:C:H2'	1:1G:1209:C:C6	2.42	0.55
24:1H:1857:G:O2'	24:1H:1885:A:N6	2.35	0.55
35:35:59:LEU:O	35:35:59:LEU:HD22	2.06	0.55
24:14:657:U:H2'	24:14:658:C:C6	2.42	0.55
35:78:59:LEU:HD13	35:78:60:MET:HE2	1.89	0.54
1:1G:1127:G:N2	1:1G:1145:C:O2	2.40	0.54
1:1G:537:G:H5''	12:3A:113:ARG:NH1	2.23	0.54
24:1H:1668:A:OP1	34:68:5:GLN:HG3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A8:39:ILE:HD13	38:A8:85:VAL:HG11	1.88	0.54
36:88:104:PHE:CE2	36:88:125:LEU:HD11	2.41	0.54
24:14:481:G:C4	24:14:507:A:C2	2.95	0.54
31:51:4:ILE:HB	31:51:6:ARG:HG3	1.89	0.54
24:14:2135:A:H5''	24:14:2136:C:H5	1.71	0.54
2:12:12:GLU:OE1	2:12:16:HIS:N	2.28	0.54
24:1H:1980:G:H4'	57:1H:3646:HOH:O	2.06	0.54
18:9A:22:VAL:C	18:9A:24:ALA:H	2.11	0.54
1:13:1281:U:OP2	1:13:1282:C:N4	2.23	0.54
50:I5:14:ILE:HG23	50:I5:33:VAL:HG11	1.89	0.54
53:L5:9:ARG:NH1	53:L5:49:ARG:HD2	2.23	0.54
31:51:77:LYS:HE3	31:51:138:LYS:NZ	2.21	0.54
1:13:1075:C:H5'	2:1E:103:THR:HG21	1.88	0.54
24:1H:593:G:O4'	54:Q8:4:MET:HE1	2.07	0.54
24:1H:968:G:H5''	49:L8:17:LYS:HZ3	1.72	0.54
24:14:873:G:H1	24:14:904:C:H42	1.55	0.54
13:4I:107:ALA:O	13:4I:110:ARG:N	2.40	0.54
20:BI:49:ALA:HA	20:BI:52:ALA:HB3	1.88	0.54
10:1I:47:PHE:CZ	14:5I:37:PHE:HE1	2.25	0.54
1:1G:115:G:H1'	1:1G:116:A:N7	2.22	0.54
26:79:59:ARG:HG2	26:79:164:ARG:HG3	1.89	0.54
24:1H:1946:U:H2'	24:1H:1947:C:H6	1.72	0.54
15:6I:82:ILE:O	15:6I:86:GLY:N	2.39	0.54
8:72:102:ARG:NH1	8:72:105:ARG:HH11	2.05	0.54
24:1H:2035:G:P	57:1H:3741:HOH:O	2.60	0.54
24:14:2378:A:O2'	38:65:21:THR:HG21	2.08	0.54
1:1G:741:G:O6	57:1G:1854:HOH:O	2.16	0.54
13:4A:65:LYS:HB2	13:4A:69:GLU:CD	2.27	0.54
25:1J:42:C:O2'	30:49:67:LYS:O	2.13	0.54
36:45:11:LYS:NZ	36:45:88:GLY:O	2.31	0.54
1:1G:920:U:H2'	1:1G:921:U:H6	1.70	0.54
27:11:125:ILE:HD12	27:11:137:PRO:HD3	1.89	0.54
24:14:1556:C:H2'	24:14:1557:C:C6	2.43	0.54
24:14:1198:U:H2'	24:14:1199:U:H6	1.71	0.54
1:13:452:A:O2'	1:13:453:A:O5'	2.25	0.54
1:1G:328:C:H4'	1:1G:329:A:H5'	1.88	0.54
45:H8:97:GLU:HB2	45:H8:125:LEU:HD11	1.89	0.54
4:32:153:ARG:HG3	4:32:181:MET:SD	2.47	0.54
24:14:2150:U:H2'	24:14:2151:G:C8	2.42	0.54
20:BA:12:ALA:HA	20:BA:15:ARG:HB2	1.88	0.54
37:98:38:VAL:HG22	37:98:112:ALA:HB2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:2L:10:C:N4	22:2L:26:G:H1	2.04	0.54
16:7I:19:ILE:HB	16:7I:36:ILE:O	2.07	0.54
40:C8:17:ILE:HG13	40:C8:32:PHE:HE1	1.72	0.54
24:1H:848:G:H2'	24:1H:849:A:C8	2.42	0.54
40:C8:105:VAL:O	40:C8:109:LEU:HD12	2.07	0.54
47:J8:82:LEU:HD23	47:J8:83:GLU:H	1.71	0.54
24:1H:731:C:P	57:1H:3669:HOH:O	2.65	0.54
20:BI:69:GLY:O	20:BI:73:HIS:NE2	2.41	0.54
24:1H:1826:G:H4'	27:11:242:ARG:HH21	1.73	0.54
44:G8:28:LYS:HE3	44:G8:40:GLU:HB2	1.89	0.54
24:14:197:A:N6	24:14:2430:A:H2'	2.21	0.54
24:14:826:U:H4'	35:35:55:ARG:HA	1.89	0.54
6:5E:19:LEU:HD23	6:5E:23:LYS:NZ	2.21	0.54
24:1H:1614:A:H61	42:E8:88:ARG:H	1.56	0.54
48:G5:17:SER:HB2	48:G5:20:GLU:N	2.19	0.54
16:7I:3:LYS:O	16:7I:21:VAL:HA	2.08	0.54
1:13:376:G:OP1	16:7I:5:ARG:HB2	2.07	0.54
7:6E:113:GLU:HB2	7:6E:118:VAL:HG13	1.89	0.54
22:3K:8:4SU:O5'	22:3K:8:4SU:H6	2.07	0.54
39:75:54:ARG:HH11	39:75:54:ARG:HB3	1.70	0.54
1:13:536:C:H2'	1:13:537:G:H8	1.70	0.54
45:D5:132:ASN:HD22	45:D5:159:PRO:HB2	1.73	0.54
29:31:29:ASN:HB3	29:31:112:MET:HE1	1.90	0.54
1:13:657:G:H4'	15:6I:28:GLN:HG2	1.90	0.54
24:14:2554:U:H2'	24:14:2555:U:C6	2.41	0.54
1:13:114:U:H2'	1:13:115:G:C8	2.41	0.54
28:29:120:TRP:CD1	28:29:155:LYS:HB3	2.43	0.54
24:14:1794:U:H2'	24:14:1795:C:H6	1.72	0.54
24:1H:508:G:H4'	24:1H:509:C:OP2	2.05	0.54
1:1G:986:A:N3	19:AA:52:TYR:OH	2.38	0.54
24:1H:1239:G:H2'	24:1H:1240:U:O4'	2.07	0.54
1:1G:1072:G:H2'	1:1G:1073:U:C6	2.42	0.54
24:1H:2461:C:H2'	24:1H:2462:U:C6	2.42	0.54
40:85:88:ILE:HG22	40:85:90:VAL:HG23	1.89	0.54
1:1G:1131:G:H2'	1:1G:1132:C:H6	1.71	0.54
35:35:52:GLU:OE1	35:35:55:ARG:N	2.40	0.54
29:39:148:LEU:HD21	29:39:191:ARG:NH1	2.18	0.54
1:1G:859:A:H2'	1:1G:860:A:O4'	2.07	0.54
1:13:264:U:O2'	17:8I:64:PRO:O	2.19	0.54
24:14:1057:A:N6	24:14:1088:A:OP2	2.40	0.54
22:3K:41:C:H2'	22:3K:42:U:H6	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:2L:20:C:H6	22:2L:22:A:C8	2.25	0.54
24:1H:592:G:N1	24:1H:665:C:N3	2.47	0.54
27:11:65:ILE:HD11	27:11:67:PHE:CE1	2.43	0.54
24:14:2124:G:H5''	24:14:2125:G:N7	2.21	0.54
24:14:2873:A:C8	37:55:5:LYS:HA	2.41	0.54
8:7E:20:TYR:CE2	8:7E:75:ARG:HD2	2.40	0.54
24:14:1028:A:N6	24:14:1125:G:H2'	2.23	0.54
1:13:1448:C:H42	1:13:1455:G:H1	1.56	0.54
24:14:1537:C:H2'	24:14:1538:G:O4'	2.07	0.54
31:51:30:LYS:HG3	31:51:81:GLU:H	1.72	0.54
31:51:30:LYS:HE3	31:51:81:GLU:N	2.22	0.54
24:1H:1680:U:H2'	24:1H:1681:G:O4'	2.08	0.54
45:D5:18:LEU:HD12	45:D5:23:LYS:HB2	1.89	0.54
1:1G:995:C:O2	14:5A:4:LYS:NZ	2.41	0.54
48:G5:42:GLY:O	48:G5:44:LEU:N	2.41	0.54
24:14:863:A:H2'	24:14:864:G:C8	2.42	0.54
2:12:189:ASP:OD1	2:12:189:ASP:N	2.38	0.54
8:72:102:ARG:HD2	8:72:105:ARG:HA	1.88	0.54
45:H8:171:ILE:HG23	45:H8:172:ALA:H	1.71	0.54
24:14:476:G:H4'	24:14:502:A:N1	2.21	0.54
24:1H:2667:C:H1'	31:51:109:PHE:CD1	2.43	0.54
44:C5:52:SER:HA	44:C5:55:TYR:O	2.06	0.54
34:25:34:THR:OG1	34:25:35:VAL:N	2.38	0.54
17:8A:27:PHE:CE2	17:8A:36:ILE:HD11	2.42	0.54
24:14:395:U:H2'	24:14:396:G:N7	2.23	0.54
11:2I:58:PRO:HD3	11:2I:89:ALA:HB1	1.89	0.54
47:J8:85:LEU:H	47:J8:86:SER:C	2.03	0.54
1:1G:1224:G:O2'	13:4A:102:ARG:NH1	2.40	0.54
1:13:1124:G:H2'	1:13:1145:C:C4	2.42	0.54
24:1H:2339:G:H2'	24:1H:2340:G:H8	1.71	0.54
24:1H:1568:G:H4'	27:11:59:LYS:HB3	1.90	0.54
1:1G:1003:G:N2	1:1G:1037:C:N3	2.44	0.54
24:1H:484:C:H2'	24:1H:485:C:C6	2.43	0.54
46:E5:70:GLN:HB3	46:E5:80:HIS:HE2	1.72	0.54
1:1G:198:G:H2'	1:1G:199:G:H8	1.72	0.54
24:1H:1164:G:H2'	24:1H:1165:U:C6	2.42	0.54
24:1H:998:C:P	40:C8:92:ARG:HH22	2.30	0.54
24:1H:92:G:H2'	24:1H:93:C:C6	2.43	0.54
24:1H:601:C:O2'	29:31:104:LYS:NZ	2.39	0.54
24:1H:721:C:H2'	24:1H:722:A:C8	2.42	0.54
24:1H:2699:C:H2'	24:1H:2700:C:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:21:1:MET:N	28:21:83:ASP:O	2.39	0.54
19:AA:33:THR:HG22	19:AA:35:SER:H	1.72	0.54
1:13:626:U:C2	1:13:627:G:C8	2.96	0.54
16:7I:23:ASP:OD1	16:7I:25:ARG:HD3	2.08	0.54
45:H8:4:ARG:NH1	45:H8:60:GLU:OE2	2.40	0.54
24:14:2340:G:O2'	24:14:2341:G:H5'	2.07	0.54
1:1G:1300:G:O2'	1:1G:1301:U:O5'	2.21	0.54
40:85:66:ASN:HB2	40:85:76:TYR:HB2	1.90	0.54
24:1H:957:A:N1	24:1H:2458:G:H4'	2.22	0.54
24:1H:2104:G:C2	24:1H:2186:G:C2	2.95	0.54
1:1G:406:G:N2	4:32:119:GLN:HE22	1.95	0.54
30:49:47:LYS:HG2	30:49:48:GLU:N	2.23	0.54
47:J8:87:PRO:HA	47:J8:89:GLU:N	2.23	0.54
8:72:102:ARG:HH12	8:72:105:ARG:HH11	1.56	0.54
33:15:20:GLY:HA2	33:15:61:ARG:HG2	1.90	0.54
1:1G:1202:G:N2	14:5A:46:GLU:OE1	2.39	0.54
4:32:101:LEU:HD23	4:32:121:VAL:HG11	1.89	0.54
19:AA:36:ARG:HH12	19:AA:75:ALA:HB3	1.72	0.54
24:1H:1113:U:OP1	31:51:2:SER:N	2.41	0.54
45:D5:54:HIS:NE2	45:D5:123:ASP:HB3	2.23	0.54
24:14:2563:U:O2	24:14:2565:A:H8	1.91	0.54
27:19:255:LYS:N	27:19:255:LYS:NZ	2.54	0.54
24:14:2378:A:H4'	38:65:23:ARG:NH1	2.23	0.54
2:1E:15:VAL:HG11	2:1E:207:ALA:HB1	1.90	0.54
24:14:1053:C:N4	24:14:1105:U:O4	2.40	0.54
2:1E:6:THR:OG1	2:1E:7:VAL:N	2.41	0.54
1:13:1117:G:H5"	9:8E:104:ARG:NH1	2.23	0.54
1:13:1179:A:H2'	1:13:1180:A:O4'	2.08	0.54
24:14:2733:A:C2	28:29:203:LYS:HA	2.42	0.54
10:1I:51:ARG:HG3	14:5I:45:ARG:NH1	2.23	0.54
1:1G:1411:C:H2'	1:1G:1412:C:H6	1.73	0.54
5:4E:78:HIS:HE1	5:4E:142:LEU:HD23	1.73	0.54
1:1G:1014:A:H4'	19:AA:14:HIS:CD2	2.43	0.54
1:1G:1014:A:H2'	1:1G:1015:A:C8	2.43	0.54
5:42:81:GLU:HB3	5:42:90:VAL:HG13	1.89	0.54
1:1G:1189:C:OP1	10:1A:51:ARG:NH2	2.39	0.54
11:2A:22:HIS:HB3	11:2A:29:ILE:HG12	1.90	0.54
1:13:864:A:H2'	1:13:865:A:C8	2.42	0.54
44:C5:17:SER:HB3	44:C5:71:LYS:HB3	1.89	0.54
27:11:106:ILE:HD11	27:11:196:VAL:HG22	1.90	0.54
15:6A:11:VAL:HG21	15:6A:34:LEU:HD13	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:576:G:OP1	57:13:1857:HOH:O	2.18	0.54
53:P8:26:GLY:O	53:P8:30:VAL:HG23	2.08	0.54
1:1G:60:A:N1	1:1G:107:G:O2'	2.27	0.54
41:D8:35:LEU:O	41:D8:37:VAL:N	2.37	0.54
24:14:1503:U:H2'	24:14:1504:C:H6	1.71	0.54
34:68:78:ARG:NH1	39:B8:73:GLU:OE1	2.41	0.54
19:AI:12:ASP:H	19:AI:38:SER:HB3	1.73	0.54
24:14:819:A:C4	24:14:1189:A:C2	2.95	0.54
24:14:192:C:O2'	24:14:802:A:N3	2.35	0.54
1:1G:1057:G:H2'	1:1G:1058:G:C8	2.43	0.54
46:I8:23:VAL:HG13	46:I8:38:VAL:HG22	1.90	0.54
24:1H:1728:G:H3'	24:1H:1729:A:C5'	2.34	0.54
48:G5:13:ALA:HA	48:G5:16:LEU:HD21	1.89	0.54
25:1J:48:A:P	38:65:30:ARG:HH12	2.31	0.54
39:B8:88:ILE:HG13	39:B8:91:ARG:HD3	1.90	0.54
24:14:674:G:H1'	29:39:74:ARG:HD3	1.90	0.54
1:13:1141:C:H2'	1:13:1142:G:H8	1.72	0.54
1:1G:1305:G:HO2'	1:1G:1306:A:H8	1.54	0.54
2:12:12:GLU:OE1	2:12:15:VAL:N	2.41	0.54
1:1G:948:C:OP1	13:4A:109:THR:OG1	2.25	0.54
43:F8:11:PRO:HD3	48:K8:37:PHE:CD2	2.43	0.54
24:1H:92:G:H2'	24:1H:93:C:H6	1.72	0.54
36:88:89:ASN:HB2	36:88:90:VAL:HG22	1.90	0.54
28:21:105:THR:O	28:21:196:VAL:HG12	2.08	0.54
44:C5:17:SER:HB2	44:C5:71:LYS:HD2	1.89	0.54
22:3K:50:U:H2'	22:3K:51:C:C6	2.43	0.54
24:1H:2386:C:H2'	24:1H:2387:U:C6	2.43	0.54
21:1B:6:ARG:HE	21:1B:15:ARG:HH22	1.56	0.54
38:65:7:TYR:HE2	38:65:11:LYS:HZ3	1.56	0.54
24:14:862:G:OP1	36:45:18:LYS:HD2	2.07	0.54
24:1H:2695:C:H2'	24:1H:2696:U:H6	1.72	0.54
3:22:92:ALA:HB2	3:22:99:VAL:HG21	1.90	0.54
32:69:4:ILE:HG21	32:69:47:LEU:HD13	1.89	0.54
40:85:74:LEU:HD11	40:85:110:VAL:HG13	1.88	0.54
35:35:101:VAL:HG22	35:35:107:LYS:O	2.08	0.54
25:16:89:G:H8	25:16:89:G:OP2	1.90	0.54
7:6E:57:GLU:HB2	7:6E:60:LYS:HG2	1.90	0.54
29:39:152:GLU:HA	29:39:190:GLU:OE2	2.08	0.54
24:14:1165:U:H2'	24:14:1166:C:C6	2.42	0.54
24:14:2788:C:H5'	28:29:61:ARG:NH1	2.22	0.54
22:2K:18:G:N2	22:2K:66:G:H1'	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:821:A:H5''	24:1H:822:U:H6	1.73	0.54
17:8I:67:LYS:O	17:8I:69:LYS:N	2.41	0.54
2:12:178:ARG:NH2	8:72:74:PRO:HG3	2.23	0.54
24:1H:2788:C:OP1	28:21:61:ARG:NH2	2.41	0.54
24:14:330:A:H2	24:14:1210:A:O2'	1.88	0.54
24:1H:2298:A:OP1	30:41:74:LYS:NZ	2.19	0.54
1:13:91:C:H2'	1:13:92:G:O4'	2.07	0.54
24:1H:288:C:H2'	24:1H:289:A:C8	2.42	0.54
41:95:44:LYS:O	41:95:46:VAL:HG12	2.08	0.54
28:29:101:ARG:HG3	28:29:169:ASN:ND2	2.23	0.54
29:39:22:ALA:C	29:39:24:LEU:N	2.61	0.54
1:13:108:G:OP2	1:13:326:G:N1	2.34	0.54
29:39:64:ILE:HD12	29:39:65:TRP:CE2	2.42	0.54
30:41:173:LEU:HD22	30:41:178:PHE:CE1	2.43	0.54
24:1H:801:G:OP2	57:1H:4060:HOH:O	2.17	0.54
28:29:134:ILE:O	28:29:137:HIS:HB2	2.08	0.54
1:1G:1298:C:H2'	7:62:114:ARG:HH12	1.73	0.54
39:B8:3:ARG:HH21	39:B8:6:LEU:HG	1.72	0.54
31:59:116:GLU:O	31:59:118:PRO:HD3	2.08	0.54
1:13:986:A:H1'	19:AI:55:LYS:HA	1.90	0.54
47:J8:4:VAL:HG12	47:J8:11:ARG:HB3	1.89	0.54
24:14:2099:U:H3	24:14:2190:G:H1	1.56	0.54
24:1H:230:U:OP2	24:1H:230:U:H6	1.91	0.54
11:2I:17:GLY:HA3	11:2I:77:MET:SD	2.48	0.54
24:14:1025:G:C4	24:14:1135:C:H1'	2.43	0.54
24:14:30:G:H2'	24:14:31:C:C6	2.42	0.54
1:13:1432:G:OP1	39:B8:107:ASP:HB2	2.07	0.54
1:13:748:C:O5'	1:13:748:C:H6	1.91	0.54
11:2I:23:ALA:HB3	11:2I:86:GLY:O	2.08	0.54
19:AI:39:THR:HG22	19:AI:40:ILE:H	1.73	0.54
13:4I:34:LEU:O	13:4I:39:ILE:N	2.25	0.54
32:69:87:LYS:O	32:69:87:LYS:HD2	2.08	0.54
9:82:83:ARG:HA	9:82:86:VAL:HG12	1.88	0.54
24:1H:1570:A:H2'	24:1H:1571:A:C8	2.43	0.54
27:19:32:SER:O	27:19:33:LEU:HB2	2.06	0.54
12:3I:93:LEU:HB2	12:3I:96:VAL:HG12	1.90	0.54
25:16:78:A:H2'	25:16:79:C:O4'	2.08	0.54
24:14:2554:U:H2'	24:14:2555:U:H6	1.73	0.54
40:85:110:VAL:HG12	40:85:114:LYS:HE2	1.89	0.54
1:1G:1368:G:OP1	9:82:111:ARG:NH2	2.39	0.54
24:1H:630:G:OP2	54:Q8:15:LYS:NZ	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:65:64:GLU:OE2	38:65:67:ARG:NH1	2.41	0.54
24:14:125:G:C6	53:L5:10:ARG:HG3	2.43	0.54
24:1H:994:C:O2	41:D8:10:LYS:HE2	2.07	0.54
45:D5:7:ALA:O	45:D5:8:TYR:CG	2.61	0.54
24:14:93:C:H5'	24:14:94:G:OP2	2.08	0.54
33:58:73:THR:HG22	33:58:84:LYS:HG3	1.90	0.54
5:4E:51:VAL:O	5:4E:55:VAL:HG23	2.07	0.54
24:14:796:C:H2'	24:14:797:C:C6	2.43	0.54
46:I8:27:GLU:HG3	46:I8:69:PHE:H	1.71	0.54
24:1H:1503:U:H2'	24:1H:1504:C:C6	2.43	0.54
31:59:34:GLU:OE1	31:59:34:GLU:N	2.41	0.54
1:1G:994:A:N7	1:1G:1216:G:H4'	2.23	0.54
1:13:686:U:O4	1:13:703:G:H1'	2.08	0.53
24:1H:676:A:H8	24:1H:2069:G:N2	1.94	0.53
24:14:800:A:P	57:14:3726:HOH:O	2.65	0.53
24:1H:1678:G:N2	24:1H:1989:G:N2	2.50	0.53
35:78:18:ARG:O	35:78:18:ARG:HG3	2.08	0.53
45:D5:70:LEU:O	45:D5:89:PHE:N	2.29	0.53
24:14:1050:A:N6	24:14:2751:G:N7	2.56	0.53
17:8A:45:HIS:O	17:8A:73:VAL:HG12	2.08	0.53
8:72:49:GLU:HG2	8:72:62:TYR:HE1	1.71	0.53
39:B8:26:ASP:HB3	39:B8:92:GLY:N	2.22	0.53
24:14:2330:G:H4'	46:E5:44:ARG:HH12	1.73	0.53
1:1G:921:U:O2'	5:42:18:ARG:HG2	2.09	0.53
24:14:2136:C:H42	24:14:2156:G:H1	1.54	0.53
27:19:68:LYS:HB3	27:19:70:TRP:CH2	2.43	0.53
54:Q8:36:LYS:HG2	54:Q8:37:SER:H	1.72	0.53
24:1H:1184:G:H5'	49:L8:29:ARG:HH11	1.72	0.53
21:1F:3:LYS:HB3	21:1F:14:TRP:CD1	2.43	0.53
13:4A:48:LEU:HD11	13:4A:53:VAL:HG22	1.90	0.53
24:1H:531:C:H4'	24:1H:532:A:H5''	1.89	0.53
20:BA:21:LYS:O	20:BA:25:ARG:HG3	2.07	0.53
24:14:1225:C:O2'	41:95:85:LYS:N	2.41	0.53
31:59:26:VAL:HG21	31:59:76:VAL:HA	1.90	0.53
1:13:1435:G:H2'	1:13:1436:U:C6	2.43	0.53
29:39:29:ASN:HB3	29:39:112:MET:HE1	1.90	0.53
24:1H:2615:U:H2'	24:1H:2616:C:H6	1.73	0.53
1:1G:1142:G:H3'	1:1G:1143:G:C8	2.43	0.53
22:2K:21:A:C2	22:2K:56:U:C2	2.96	0.53
2:12:8:LYS:HE2	2:12:8:LYS:H	1.73	0.53
9:82:40:LEU:O	9:82:42:ARG:N	2.29	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:112:VAL:O	2:1E:115:LEU:HB3	2.09	0.53
1:13:41:G:H2'	1:13:42:G:C8	2.43	0.53
24:14:2123:G:N2	26:79:42:GLU:OE1	2.36	0.53
24:14:1257:C:H4'	29:39:83:PHE:CE1	2.43	0.53
2:1E:100:GLY:O	2:1E:104:ASN:N	2.34	0.53
40:C8:106:PHE:O	40:C8:109:LEU:HB2	2.08	0.53
24:14:2815:C:H5'	51:J5:29:THR:HG21	1.89	0.53
1:13:1166:G:N2	1:13:1170:A:OP2	2.38	0.53
34:68:17:ARG:HB2	34:68:45:GLU:HG2	1.91	0.53
52:K5:36:LEU:HA	52:K5:49:HIS:O	2.08	0.53
1:1G:1510:U:H2'	1:1G:1511:G:C8	2.43	0.53
1:1G:861:G:H2'	1:1G:862:C:H6	1.73	0.53
24:1H:2795:G:N2	24:1H:2801:A:OP2	2.41	0.53
11:2A:31:THR:HG22	11:2A:42:TRP:HB2	1.89	0.53
42:A5:70:TYR:HD1	42:A5:70:TYR:H	1.55	0.53
1:13:666:G:H5'	1:13:726:C:H1'	1.89	0.53
13:4A:33:ALA:O	13:4A:37:THR:OG1	2.15	0.53
32:69:93:THR:HG22	32:69:119:PRO:HG3	1.89	0.53
3:2E:20:SER:HB3	3:2E:40:ARG:HH12	1.72	0.53
24:1H:250:G:O6	24:1H:386:G:N1	2.31	0.53
29:31:116:ASP:OD2	35:78:1:MET:HB2	2.08	0.53
46:I8:70:GLN:NE2	46:I8:72:ARG:HD2	2.23	0.53
24:1H:1056:G:H5'	24:1H:1086:A:C8	2.42	0.53
24:1H:2137:C:H42	24:1H:2154:G:H1	1.55	0.53
1:13:1124:G:H8	1:13:1124:G:OP2	1.91	0.53
24:14:1171:G:N2	24:14:1178:C:H41	2.07	0.53
30:49:66:GLN:HA	50:I5:6:HIS:HD2	1.72	0.53
45:H8:48:PHE:HE1	45:H8:71:VAL:HG11	1.72	0.53
35:78:45:LEU:CD2	35:78:45:LEU:H	2.19	0.53
24:1H:376:C:P	57:1H:3721:HOH:O	2.66	0.53
1:13:89:U:O2'	1:13:90:C:H5''	2.07	0.53
1:1G:1181:G:O2'	1:1G:1182:G:O5'	2.25	0.53
1:1G:1002:G:H1	1:1G:1038:C:H42	1.55	0.53
3:22:81:GLY:HA2	3:22:85:ARG:NH2	2.21	0.53
24:1H:918:A:H8	24:1H:918:A:O5'	1.91	0.53
30:49:130:ASN:HB3	30:49:160:VAL:HA	1.90	0.53
28:21:167:VAL:HG12	28:21:189:PRO:HD3	1.89	0.53
24:14:729:G:C8	27:19:208:LYS:HD2	2.44	0.53
24:1H:1590:U:H2'	24:1H:1591:G:C8	2.42	0.53
24:1H:2887:U:H2'	24:1H:2888:C:H6	1.73	0.53
1:1G:1250:A:OP1	9:82:67:GLY:N	2.35	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:114:U:H2'	1:1G:115:G:C8	2.42	0.53
28:29:119:ARG:HG2	28:29:160:TYR:HB2	1.90	0.53
1:13:102:G:C6	1:13:103:C:C4	2.97	0.53
1:1G:277:C:H5	17:8A:92:ARG:HH22	1.56	0.53
24:14:756:C:C2'	24:14:757:U:H5'	2.38	0.53
1:1G:653:A:O5'	8:72:56:LYS:HE3	2.08	0.53
22:3K:71:C:H2'	22:3K:72:U:C6	2.43	0.53
24:1H:64:A:O3'	43:F8:71:GLY:HA3	2.09	0.53
24:1H:1047:G:H2'	24:1H:1110:G:N1	2.24	0.53
1:1G:591:U:OP2	8:72:30:ARG:HD3	2.09	0.53
1:13:1222:G:H2'	1:13:1223:C:O4'	2.07	0.53
24:1H:2531:A:H5'	31:51:157:TYR:CZ	2.44	0.53
16:7I:72:ARG:HG2	16:7I:73:LEU:HD23	1.91	0.53
3:2E:19:GLU:HG2	3:2E:54:ARG:NH1	2.24	0.53
24:14:747:U:O2	24:14:2014:A:H1'	2.09	0.53
41:95:21:ARG:NH2	41:95:91:TYR:CD1	2.76	0.53
25:1J:15:A:H1'	25:1J:109:G:N9	2.23	0.53
2:1E:21:ARG:C	2:1E:23:ARG:H	2.12	0.53
24:14:1041:C:H2'	24:14:1042:G:C8	2.44	0.53
1:1G:814:A:H2'	1:1G:816:A:H5''	1.89	0.53
24:1H:751:A:H5'	42:E8:90:ARG:HA	1.89	0.53
35:35:79:ARG:O	35:35:110:TYR:HB3	2.09	0.53
24:14:2320:A:H61	24:14:2333:A:H2'	1.71	0.53
24:14:738:G:O3'	57:14:3744:HOH:O	2.19	0.53
1:1G:1412:C:H2'	1:1G:1413:A:C8	2.44	0.53
1:13:1319:A:O2'	1:13:1323:G:N7	2.34	0.53
24:1H:636:G:N7	35:78:113:LYS:NZ	2.46	0.53
1:1G:321:A:N7	1:1G:328:C:H6	2.06	0.53
7:62:26:PHE:HB2	7:62:101:LEU:HD22	1.90	0.53
1:13:627:G:H2'	1:13:628:G:H8	1.72	0.53
49:H5:3:ARG:HD2	49:H5:60:GLU:O	2.07	0.53
37:55:38:VAL:HG22	37:55:112:ALA:HB2	1.89	0.53
1:1G:38:G:C2	1:1G:397:A:C2	2.97	0.53
24:14:1939:U:OP1	24:14:2604:U:O2'	2.20	0.53
53:L5:19:ARG:HG2	53:L5:19:ARG:HH11	1.74	0.53
34:25:47:ILE:HG13	34:25:48:PRO:HD2	1.90	0.53
42:E8:39:THR:HG22	42:E8:44:ALA:HB2	1.89	0.53
35:35:38:GLN:O	35:35:41:ARG:HB2	2.08	0.53
1:1G:1513:A:H2'	1:1G:1514:C:C6	2.43	0.53
43:F8:5:TYR:CE1	48:K8:30:ARG:HG3	2.43	0.53
31:59:158:HIS:ND1	31:59:158:HIS:O	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:8E:17:VAL:HA	9:8E:63:ILE:HG23	1.90	0.53
32:69:113:ARG:HG2	32:69:131:LYS:HB2	1.89	0.53
42:A5:73:ALA:HB3	42:A5:106:ILE:HG12	1.91	0.53
17:8I:86:GLU:O	17:8I:90:ILE:HG13	2.07	0.53
24:14:39:C:O2	29:39:46:ARG:NH2	2.41	0.53
25:1J:5:C:N3	25:1J:115:G:N2	2.36	0.53
43:B5:60:ARG:NH2	53:L5:47:ARG:HH22	2.05	0.53
38:A8:37:ALA:HB2	38:A8:101:LEU:HD21	1.90	0.53
24:14:1557:C:OP2	24:14:1558:A:O2'	2.26	0.53
47:F5:57:GLU:O	47:F5:58:ILE:HD13	2.09	0.53
1:1G:476:G:O2'	1:1G:477:G:H5'	2.09	0.53
40:C8:66:ASN:O	40:C8:70:ARG:HB2	2.08	0.53
22:2L:41:C:H2'	22:2L:42:U:C6	2.44	0.53
4:3E:110:PHE:HE2	4:3E:148:VAL:HG23	1.73	0.53
1:1G:327:A:O2'	1:1G:329:A:H8	1.91	0.53
24:1H:2337:G:H2'	24:1H:2338:G:C8	2.44	0.53
4:32:149:ALA:O	4:32:153:ARG:NE	2.42	0.53
24:14:606:U:H4'	24:14:658:C:H4'	1.90	0.53
34:68:19:ILE:HG22	34:68:43:VAL:HA	1.90	0.53
24:14:2648:C:H2'	24:14:2649:U:C6	2.43	0.53
1:13:1492[A]:A:H5'	1:13:1493[A]:A:OP2	2.08	0.53
24:1H:2572:A:N7	28:21:144:ARG:HD2	2.23	0.53
24:14:1405:U:H2'	24:14:1406:U:C6	2.43	0.53
1:1G:601:C:H2'	1:1G:602:A:C8	2.43	0.53
12:3A:24:VAL:HG12	12:3A:98:TYR:CE1	2.44	0.53
8:72:82:HIS:C	8:72:82:HIS:CD2	2.82	0.53
24:1H:1100:C:H2'	24:1H:1101:U:C6	2.43	0.53
1:13:1525:G:OP1	11:2I:120:ARG:NH2	2.41	0.53
5:4E:98:THR:HB	5:4E:117:ASP:HB3	1.90	0.53
1:13:1202:G:O2'	14:5I:27:CYS:HB3	2.08	0.53
17:8I:43:LEU:O	17:8I:69:LYS:HG3	2.09	0.53
24:14:1048:A:H5'	24:14:1049:C:OP2	2.08	0.53
24:1H:1019:U:HO2'	24:1H:1021:A:H2	1.55	0.53
24:1H:1021:A:H62	24:1H:1141:U:H3	1.55	0.53
24:1H:1142:U:H5'	24:1H:1142(A):A:H8	1.72	0.53
24:14:1416:G:O2'	24:14:1417:C:H6	1.91	0.53
24:1H:751:A:C8	57:1H:3869:HOH:O	2.54	0.53
24:14:1210:A:H5'	24:14:1212:G:O4'	2.09	0.53
1:1G:411:A:C6	1:1G:413:G:H1'	2.43	0.53
16:7A:43:LYS:HB3	16:7A:48:TRP:CD1	2.44	0.53
1:13:955:U:H1'	1:13:1227:A:N6	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1292:U:OP1	7:6E:41:ARG:NH2	2.25	0.53
1:1G:1002:G:H22	1:1G:1038:C:N4	2.07	0.53
24:14:2315:G:OP1	30:49:36:LYS:NZ	2.35	0.53
19:AI:6:LYS:HG2	50:M8:62:ARG:HD2	1.89	0.53
1:13:431:A:OP2	57:13:1845:HOH:O	2.19	0.53
39:B8:3:ARG:HB2	39:B8:7:ILE:HG13	1.91	0.53
1:13:1492[B]:A:C8	23:4K:20:A:O2'	2.62	0.53
9:8E:50:LEU:HD23	9:8E:85:LEU:HD22	1.91	0.53
42:E8:97:LYS:HE2	42:E8:99:ARG:NH2	2.23	0.53
39:75:3:ARG:HA	39:75:4:GLY:O	2.07	0.53
38:65:41:ASP:OD2	38:65:44:LYS:HG2	2.09	0.53
49:H5:12:PRO:O	49:H5:15:TYR:HB2	2.09	0.53
43:F8:36:LYS:HG2	43:F8:54:VAL:HB	1.91	0.53
24:14:907:U:O2'	36:45:101:ARG:NH2	2.32	0.53
6:52:96:PRO:HB3	18:9A:30:ASP:CG	2.29	0.53
24:14:361:G:OP1	57:14:3976:HOH:O	2.19	0.53
24:14:453:C:OP1	57:14:3735:HOH:O	2.19	0.53
16:7I:26:ARG:NH1	16:7I:31:LYS:O	2.42	0.53
1:13:10:A:OP2	5:4E:126:ARG:HD3	2.08	0.53
24:1H:2837:G:H21	37:98:45:ARG:HH21	1.56	0.53
24:14:957:A:N6	24:14:2459:A:C8	2.77	0.53
24:14:1540:G:H2'	24:14:1541:U:O4'	2.09	0.53
24:14:2135:A:H62	24:14:2156:G:H21	1.56	0.53
24:14:2749:A:N3	31:59:59:ARG:NH1	2.56	0.53
1:13:1060:C:H5''	10:1I:51:ARG:HG2	1.89	0.53
7:62:23:VAL:O	7:62:27:ILE:HG13	2.08	0.53
7:62:113:GLU:O	7:62:119:ARG:HD3	2.09	0.53
24:14:1754:C:H2'	24:14:1755:A:C8	2.43	0.53
24:14:1204:A:H2	24:14:1241:A:N1	2.07	0.53
33:58:73:THR:HB	33:58:82:LEU:HD11	1.91	0.53
29:39:46:ARG:HG2	29:39:46:ARG:HH11	1.74	0.53
41:D8:69:LYS:HB2	41:D8:88:ARG:HG2	1.90	0.53
28:29:36:ARG:NH1	28:29:85:ASN:OD1	2.41	0.53
34:68:104:ARG:HD3	39:B8:36:GLU:HG2	1.90	0.53
36:45:6:ARG:O	36:45:7:MET:HG2	2.09	0.53
24:1H:2065:C:H2'	24:1H:2066:C:C6	2.43	0.53
17:8I:4:LYS:HE2	17:8I:6:LEU:HD21	1.91	0.53
31:51:95:ARG:NH1	31:51:95:ARG:HB3	2.24	0.53
27:19:43:ARG:HD2	27:19:43:ARG:N	2.23	0.53
30:49:104:GLU:OE1	50:I5:23:GLU:HG2	2.09	0.53
2:1E:18:GLY:HA3	2:1E:41:ILE:HD12	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1520:U:H2'	24:1H:1521:G:O4'	2.08	0.53
1:1G:1400:C:N4	22:2L:35:QUO:H1'	2.24	0.53
24:14:676:A:H8	24:14:2069:G:N2	1.92	0.53
1:13:1346:A:H5''	9:8E:120:ARG:HH12	1.74	0.53
10:1I:48:THR:HG23	10:1I:62:HIS:CB	2.34	0.53
35:35:48:PRO:C	35:35:50:ARG:H	2.11	0.53
24:1H:451:C:H5'	57:1H:3847:HOH:O	2.09	0.53
27:11:25:THR:HG21	27:11:81:ALA:HA	1.90	0.53
32:61:131:LYS:HB3	32:61:132:PRO:HA	1.91	0.53
24:14:2320:A:H1'	24:14:2321:G:C6	2.43	0.53
25:1J:12:C:O2	46:E5:74:ARG:NH1	2.41	0.53
2:1E:112:VAL:HG23	2:1E:149:LEU:HD13	1.91	0.53
24:14:1386:C:H2'	24:14:1387:C:C6	2.42	0.53
24:1H:107:C:H2'	24:1H:108:U:C6	2.44	0.53
33:15:96:GLU:H	33:15:96:GLU:CD	2.12	0.53
24:14:589:C:H2'	24:14:590:A:C8	2.43	0.53
24:1H:2518:A:H8	24:1H:2518:A:H5'	1.73	0.53
24:14:863:A:H2	24:14:914:C:H41	1.56	0.53
24:14:2109:U:H3	24:14:2180:U:H3	1.57	0.53
6:5E:82:ARG:HB2	6:5E:85:VAL:HG23	1.91	0.53
1:1G:186(D):C:H2'	1:1G:186(E):C:C6	2.43	0.53
52:O8:15:GLU:HG3	52:O8:16:CYS:H	1.73	0.53
24:14:1470:G:H5''	24:14:1471:A:OP1	2.09	0.53
35:78:15:ARG:HA	35:78:16:ARG:HB2	1.91	0.53
4:32:5:ILE:HG22	4:32:5:ILE:O	2.09	0.53
24:1H:2774:C:H2'	24:1H:2775:A:O4'	2.09	0.53
24:14:868:U:N3	24:14:869:G:N7	2.57	0.53
24:1H:1484:G:H2'	24:1H:1485:G:H8	1.74	0.53
37:98:22:ARG:O	37:98:26:LYS:HG3	2.07	0.53
28:29:102:VAL:HB	28:29:199:ARG:O	2.08	0.53
1:1G:1142:G:H3'	1:1G:1143:G:H8	1.74	0.53
24:14:2698:U:H2'	24:14:2699:C:C6	2.44	0.53
2:1E:91:PRO:HB3	2:1E:154:LEU:HB2	1.91	0.53
5:42:100:VAL:O	5:42:107:ARG:NH2	2.38	0.53
24:14:2638:G:H1'	24:14:2778:A:H61	1.74	0.53
24:1H:2263:C:H2'	24:1H:2264:C:C6	2.44	0.53
24:1H:456:C:C2'	43:F8:68:ARG:HH22	2.22	0.53
2:12:126:GLU:O	2:12:130:ARG:HG3	2.09	0.53
42:A5:82:LEU:HB2	42:A5:98:LYS:HB2	1.91	0.53
24:1H:2131:G:N2	24:1H:2158:A:H5''	2.24	0.53
14:5I:4:LYS:HD2	14:5I:7:ILE:HD11	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:429:A:H2'	24:14:430:G:C8	2.44	0.53
24:1H:2108:C:N3	24:1H:2181:G:N2	2.41	0.53
34:68:25:LEU:HD12	34:68:38:VAL:HG13	1.90	0.53
35:35:105:LEU:O	35:35:106:LEU:HB3	2.08	0.53
1:1G:1096:C:H2'	1:1G:1097:C:H6	1.73	0.53
1:13:1510:U:H2'	1:13:1511:G:C8	2.44	0.53
36:88:30:GLY:CA	36:88:107:ALA:HB2	2.39	0.53
49:H5:28:LEU:HA	49:H5:33:GLN:OE1	2.09	0.53
24:1H:2629:A:OP1	24:1H:2629:A:H4'	2.08	0.53
24:14:1022:G:C6	24:14:1140:C:C4	2.97	0.53
33:58:97:ARG:HA	33:58:100:GLU:HB2	1.90	0.53
24:14:2335:A:C8	24:14:2337:G:C5	2.97	0.53
1:1G:1058:G:H1	1:1G:1199:U:H3	1.57	0.53
1:1G:828:A:H5''	1:1G:859:A:C2	2.44	0.53
24:1H:1541:U:H2'	24:1H:1542:G:O4'	2.09	0.53
1:13:79:G:N2	1:13:89:U:O2	2.41	0.53
50:15:14:ILE:HG22	50:15:20:ASN:HB3	1.91	0.53
6:5E:100:ASN:O	18:9I:28:GLU:HB2	2.08	0.53
24:14:581:C:H2'	24:14:582:G:C8	2.44	0.53
24:14:916:G:C2'	24:14:917:A:H5''	2.39	0.53
49:L8:50:VAL:HB	49:L8:53:LEU:HD12	1.91	0.53
39:B8:5:ALA:HA	39:B8:8:LYS:HG2	1.91	0.53
1:13:1315:U:H2'	1:13:1316:G:O4'	2.08	0.53
3:22:159:GLY:HA2	3:22:193:TYR:CE1	2.44	0.53
42:E8:20:VAL:HG22	42:E8:47:VAL:HG21	1.91	0.53
1:13:651:C:H2'	1:13:652:U:C6	2.44	0.53
24:14:925:C:H2'	24:14:926:A:H8	1.74	0.53
34:25:24:VAL:HB	34:25:33:ALA:HB2	1.90	0.53
24:14:1858:G:H8	24:14:1858:G:OP2	1.91	0.53
35:78:30:THR:HG21	35:78:35:HIS:H	1.73	0.53
24:1H:559:G:H22	40:C8:49:HIS:CE1	2.26	0.53
26:71:39:GLU:OE2	26:71:216:THR:OG1	2.24	0.53
24:14:150:C:H2'	24:14:151:C:C6	2.44	0.53
18:9I:53:ARG:HH21	18:9I:59:SER:HA	1.74	0.53
24:14:815:C:H2'	24:14:816:C:H6	1.74	0.53
12:3I:53:ARG:HG3	12:3I:53:ARG:HH11	1.74	0.53
36:88:77:LYS:HD2	36:88:78:PRO:HD2	1.91	0.53
42:A5:65:LEU:HB3	42:A5:68:ARG:HD2	1.91	0.53
41:95:21:ARG:CG	41:95:91:TYR:CE1	2.92	0.52
24:1H:250:G:OP2	54:Q8:13:ARG:NH2	2.42	0.52
24:1H:2286:A:H4'	24:1H:2287:A:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:O8:37:ARG:HG2	52:O8:38:LYS:H	1.73	0.52
1:1G:1147:C:OP1	1:1G:1147:C:H4'	2.09	0.52
4:3E:59:ARG:HH22	4:3E:66:ARG:HH12	1.57	0.52
24:1H:2153:G:H2'	24:1H:2154:G:O4'	2.09	0.52
22:3L:85:A:H61	24:14:2422:A:H5''	1.74	0.52
24:14:958:U:OP2	36:45:14:ARG:HD3	2.09	0.52
24:14:1785:A:H4'	24:14:1982:C:O2'	2.09	0.52
35:78:134:ALA:O	35:78:138:LEU:HB2	2.09	0.52
19:AA:48:THR:HA	19:AA:61:TYR:HA	1.91	0.52
1:13:108:G:P	1:13:326:G:H22	2.32	0.52
24:1H:2698:U:H2'	24:1H:2699:C:C6	2.43	0.52
24:1H:2348:U:H4'	52:O8:42:TRP:NE1	2.23	0.52
3:2E:43:LEU:O	3:2E:47:LEU:HB2	2.09	0.52
2:1E:118:LEU:HB3	2:1E:142:LEU:HD12	1.91	0.52
24:1H:18:C:O3'	40:C8:23:GLY:HA2	2.08	0.52
24:1H:1486:A:H2'	24:1H:1487:G:H8	1.74	0.52
45:H8:108:PRO:HD2	45:H8:113:ALA:H	1.74	0.52
24:1H:850:C:O3'	49:L8:49:LYS:HE2	2.08	0.52
24:1H:1379:A:H4'	24:1H:1380:G:OP2	2.08	0.52
9:8E:89:ASN:O	9:8E:92:TYR:HB2	2.08	0.52
39:75:27:THR:HG23	39:75:90:GLN:HB3	1.90	0.52
30:49:141:PHE:HD1	30:49:142:PRO:HD2	1.74	0.52
24:1H:2549:G:H5''	24:1H:2549:G:H8	1.74	0.52
27:11:171:ASP:N	27:11:171:ASP:OD1	2.37	0.52
49:H5:40:THR:HG23	49:H5:43:ILE:HG12	1.91	0.52
26:79:214:VAL:HG23	26:79:224:ILE:HG12	1.92	0.52
29:31:185:ASP:HA	29:31:188:ARG:NH1	2.23	0.52
41:95:21:ARG:NH2	41:95:91:TYR:CG	2.77	0.52
1:13:974:A:OP2	14:5I:29:ARG:NH2	2.42	0.52
42:A5:87:PRO:HA	42:A5:93:ALA:HA	1.90	0.52
22:2K:19:C:C3'	22:2K:20:C:H2'	2.39	0.52
30:41:112:PRO:HB3	50:M8:37:SER:N	2.23	0.52
29:39:143:ALA:O	29:39:148:LEU:N	2.30	0.52
37:55:57:ARG:NE	37:55:59:ASP:OD1	2.37	0.52
24:1H:2292:C:P	38:A8:17:ARG:HH22	2.32	0.52
24:1H:2243:U:H2'	24:1H:2244:U:C6	2.44	0.52
24:14:1678:G:N2	24:14:1989:G:N2	2.57	0.52
1:1G:57:G:H2'	1:1G:58:C:H6	1.74	0.52
24:1H:2270:G:H2'	24:1H:2271:G:O4'	2.09	0.52
27:11:97:TYR:CE1	27:11:103:ARG:HG3	2.45	0.52
24:1H:2564:A:C2	24:1H:2647:U:H4'	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:11:69:ARG:HD3	27:11:105:ILE:HD11	1.90	0.52
1:13:371:G:O2'	1:13:373:A:N7	2.42	0.52
29:39:66:PRO:O	29:39:68:LYS:N	2.42	0.52
24:1H:1503:U:H2'	24:1H:1504:C:H6	1.73	0.52
38:65:24:LEU:HD12	38:65:41:ASP:HB2	1.91	0.52
14:5A:8:GLU:OE2	14:5A:11:LYS:NZ	2.34	0.52
1:13:1422:G:O3'	34:68:49:ARG:NH1	2.42	0.52
44:G8:68:HIS:ND1	44:G8:70:SER:HB3	2.24	0.52
24:14:1889:A:N1	24:14:2234:G:H1'	2.25	0.52
24:1H:1952:A:C6	34:68:22:ILE:HD12	2.45	0.52
45:D5:163:LEU:HD23	45:D5:163:LEU:H	1.73	0.52
24:1H:125:G:C8	24:1H:125:G:H5'	2.44	0.52
43:B5:39:ILE:HD13	43:B5:79:ALA:HB2	1.92	0.52
24:1H:1983:C:O2'	24:1H:1984:G:H5'	2.09	0.52
24:1H:944:G:H5''	24:1H:945:A:H5'	1.92	0.52
1:13:703:G:H4'	1:13:704:A:O5'	2.10	0.52
4:32:30:LYS:HB2	4:32:35:ARG:HB2	1.91	0.52
24:1H:2306:C:H3'	24:1H:2307:G:H5'	1.92	0.52
28:29:37:ARG:O	28:29:45:THR:HA	2.09	0.52
24:14:2272:U:H5''	24:14:2273:A:OP1	2.08	0.52
1:1G:974:A:P	14:5A:41:ARG:HH22	2.32	0.52
39:75:106:SER:HA	39:75:110:ILE:CD1	2.39	0.52
25:16:112:G:H2'	25:16:113:C:C6	2.45	0.52
35:78:120:ALA:HB1	35:78:138:LEU:HD23	1.92	0.52
1:13:510:A:P	57:13:1813:HOH:O	2.67	0.52
30:41:67:LYS:H	50:M8:6:HIS:CE1	2.28	0.52
30:41:113:ARG:HD2	50:M8:33:VAL:HG13	1.91	0.52
24:1H:1316:U:H2'	24:1H:1317:A:C8	2.44	0.52
24:14:1915:U:H2'	24:14:1916:A:O4'	2.09	0.52
1:13:6:G:O2'	1:13:7:G:O5'	2.26	0.52
24:1H:2472:G:N2	24:1H:2477:C:O2'	2.42	0.52
24:1H:270:A:H1'	24:1H:370:G:C2	2.45	0.52
37:98:12:ARG:HG2	37:98:16:HIS:CG	2.45	0.52
24:1H:2053:G:OP1	57:1H:4079:HOH:O	2.19	0.52
24:14:2741:A:H2'	24:14:2742:C:O4'	2.09	0.52
45:H8:75:ASN:HB2	45:H8:85:HIS:HB3	1.90	0.52
28:21:119:ARG:HB3	28:21:120:TRP:CD1	2.45	0.52
45:D5:30:ASN:N	45:D5:33:LEU:O	2.40	0.52
42:A5:59:VAL:HG12	42:A5:60:ASN:ND2	2.23	0.52
24:1H:2331:G:O3'	46:I8:43:THR:HG22	2.09	0.52
16:7I:4:ILE:HA	16:7I:20:VAL:O	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:82:97:LYS:HG3	9:82:98:PRO:CD	2.39	0.52
24:14:2823:A:OP1	28:29:159:HIS:NE2	2.32	0.52
1:13:1352:C:H2'	1:13:1353:G:C8	2.44	0.52
5:4E:72:GLN:HE22	5:4E:144:THR:HG23	1.74	0.52
24:1H:654(G):C:H2'	24:1H:654(H):G:H8	1.73	0.52
24:14:795:C:H2'	24:14:796:C:H6	1.75	0.52
29:31:185:ASP:HA	29:31:188:ARG:HH12	1.73	0.52
24:14:1641:A:H5''	24:14:1642:G:OP2	2.09	0.52
24:14:639:U:H2'	24:14:640:C:C6	2.45	0.52
32:61:57:ARG:HA	32:61:60:GLU:HB2	1.90	0.52
30:41:49:ASP:OD2	30:41:51:ARG:NH2	2.40	0.52
24:1H:2850:A:H2'	24:1H:2851:A:C8	2.44	0.52
24:1H:551:G:OP1	41:D8:68:LYS:NZ	2.41	0.52
53:L5:8:ASN:OD1	53:L5:11:LYS:HB2	2.10	0.52
1:13:22:G:C6	1:13:23:C:C4	2.97	0.52
24:1H:1751:C:H2'	24:1H:1752:C:C6	2.44	0.52
1:13:963:G:H5'	57:13:1873:HOH:O	2.09	0.52
37:98:15:SER:HB3	57:98:301:HOH:O	2.09	0.52
24:1H:587:C:N3	35:78:33:ARG:NH1	2.58	0.52
3:2E:107:GLN:CD	3:2E:107:GLN:H	2.11	0.52
47:J8:2:SER:O	47:J8:2:SER:OG	2.23	0.52
1:1G:1326:C:H2'	1:1G:1327:C:C6	2.44	0.52
6:52:89:MET:HG2	6:52:91:VAL:HG23	1.92	0.52
4:32:177:ASP:HB3	4:32:182:LYS:HG3	1.92	0.52
27:19:246:PRO:HB2	27:19:255:LYS:HE3	1.92	0.52
24:1H:2393:A:H2'	24:1H:2394:C:H6	1.74	0.52
22:3L:24:G:H2'	22:3L:25:G:H8	1.73	0.52
38:65:18:ILE:O	38:65:21:THR:HG22	2.10	0.52
24:1H:845:G:H21	24:1H:933:A:N6	2.07	0.52
31:59:6:ARG:O	31:59:69:ARG:HG2	2.10	0.52
1:1G:1028:C:H42	1:1G:1033:G:H1	1.58	0.52
24:1H:1472:A:H2'	24:1H:1473:G:O4'	2.09	0.52
28:21:53:PRO:HA	28:21:74:PRO:HA	1.91	0.52
39:75:105:LEU:HB3	39:75:110:ILE:HG12	1.90	0.52
1:13:586:C:O2'	1:13:878:G:H4'	2.10	0.52
24:1H:2317:C:H2'	24:1H:2318:G:O4'	2.09	0.52
1:13:955:U:H1'	1:13:1227:A:H61	1.75	0.52
27:19:181:GLU:HG3	27:19:272:ALA:CB	2.40	0.52
9:82:73:GLN:O	9:82:76:ALA:HB3	2.09	0.52
53:L5:5:TRP:NE1	53:L5:7:PRO:HG3	2.24	0.52
1:13:1336:C:H1'	1:13:1337:G:C2	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:A5:17:VAL:HG23	42:A5:76:VAL:HG11	1.91	0.52
3:2E:7:PRO:O	3:2E:11:ARG:HG2	2.09	0.52
1:1G:1208:C:H2'	1:1G:1209:C:H6	1.74	0.52
4:32:101:LEU:HD23	4:32:121:VAL:CG1	2.40	0.52
24:1H:1619:G:N7	57:1H:3872:HOH:O	2.34	0.52
12:3A:70:ILE:HG12	12:3A:100:ILE:HD12	1.91	0.52
8:72:123:GLU:HA	8:72:126:LYS:HB2	1.90	0.52
1:13:1055:A:H2'	3:2E:156:ARG:HD2	1.91	0.52
1:13:1373:G:O3'	7:6E:36:LYS:NZ	2.42	0.52
24:1H:1935:G:H1'	24:1H:1964:G:N2	2.24	0.52
1:1G:1281:U:H3'	1:1G:1282:C:H5	1.74	0.52
24:14:621:A:H3'	24:14:622:G:H8	1.74	0.52
22:2L:21:A:C8	22:2L:56:U:N3	2.74	0.52
9:8E:110:GLU:OE2	9:8E:113:LYS:NZ	2.42	0.52
1:13:1508:G:H2'	1:13:1509:C:C6	2.45	0.52
1:13:321:A:N6	1:13:328:C:H1'	2.25	0.52
32:61:110:ASP:HB3	32:61:113:ARG:H	1.75	0.52
24:1H:375:C:H2'	24:1H:376:C:C6	2.45	0.52
24:14:1777:U:O2'	24:14:1778:U:H5'	2.08	0.52
31:51:83:TYR:CB	31:51:134:SER:HA	2.40	0.52
50:M8:14:ILE:HG13	50:M8:24:THR:HG22	1.91	0.52
1:1G:143:A:O3'	1:1G:144:G:H8	1.92	0.52
24:1H:1784:A:H4'	24:1H:1785:A:O5'	2.10	0.52
35:78:115:LEU:HA	35:78:134:ALA:HB2	1.90	0.52
4:3E:108:LEU:HD13	4:3E:174:LEU:HD13	1.91	0.52
24:1H:1329:U:H5''	24:1H:1330:C:C5	2.45	0.52
44:G8:17:SER:HA	44:G8:21:LYS:HB2	1.91	0.52
24:14:185:U:H4'	24:14:218:A:H4'	1.92	0.52
1:13:300:A:H1'	1:13:565:U:O2	2.09	0.52
24:1H:2403:C:H2'	24:1H:2404:C:H6	1.75	0.52
1:13:1317:C:H5''	1:13:1318:A:OP2	2.09	0.52
24:1H:991:C:H2'	24:1H:992:C:H6	1.74	0.52
13:4A:15:VAL:HG13	13:4A:43:THR:O	2.09	0.52
50:M8:52:THR:OG1	50:M8:53:GLU:N	2.41	0.52
43:F8:72:LYS:HE2	43:F8:73:ARG:O	2.10	0.52
1:13:1497:G:H2'	1:13:1498:U:H5'	1.92	0.52
1:13:1123:A:H4'	10:1I:36:GLY:HA3	1.92	0.52
5:4E:8:GLU:HB2	5:4E:34:VAL:HG22	1.92	0.52
24:14:304:G:H2'	24:14:305:U:C6	2.45	0.52
8:72:11:THR:HG22	8:72:15:ASN:ND2	2.24	0.52
1:13:1363:A:H1'	1:13:1365:G:N7	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:D8:79:VAL:HG13	41:D8:81:TYR:HB3	1.91	0.52
1:1G:418:C:H42	1:1G:425:G:H1	1.58	0.52
1:1G:1279:A:O2'	1:1G:1281:U:OP2	2.28	0.52
24:14:1732:A:H2'	24:14:1733:G:O4'	2.09	0.52
24:14:1448:G:O2'	24:14:1529:A:N1	2.39	0.52
24:1H:1263:U:O4'	51:N8:10:LYS:HD2	2.10	0.52
40:85:92:ARG:C	40:85:94:ASN:H	2.13	0.52
24:14:1050:A:C2	24:14:1051:G:H1'	2.45	0.52
24:14:1110:G:H2'	24:14:1111:A:H8	1.75	0.52
27:11:148:GLU:HB2	27:11:151:LYS:HD2	1.92	0.52
25:16:31:C:H4'	30:41:29:TRP:CH2	2.44	0.52
24:1H:2244:U:O2'	24:1H:2245:U:H5'	2.09	0.52
51:J5:16:ARG:CG	51:J5:16:ARG:HH11	2.22	0.52
39:B8:27:THR:HG23	39:B8:90:GLN:HB3	1.90	0.52
24:1H:919:G:H4'	25:16:81:G:H4'	1.91	0.52
26:71:6:ARG:NH2	26:71:34:THR:OG1	2.41	0.52
22:2L:73:U:H2'	22:2L:74:C:C6	2.44	0.52
24:14:1257:C:H4'	29:39:83:PHE:CD1	2.45	0.52
24:1H:2147:G:H2'	24:1H:2148:G:O4'	2.09	0.52
24:14:1486:A:H2'	24:14:1487:G:C8	2.44	0.52
29:39:63:LYS:HE2	29:39:67:GLN:HB2	1.92	0.52
1:1G:1300:G:HO2'	1:1G:1301:U:P	2.33	0.52
24:1H:2695:C:H2'	24:1H:2696:U:C6	2.44	0.52
24:14:2264:C:N4	46:E5:15:ASP:OD2	2.42	0.52
24:1H:906:G:OP1	36:88:26:TYR:OH	2.19	0.52
1:13:671:G:C2	1:13:672:U:C2	2.98	0.52
24:1H:557:U:H2'	24:1H:558:G:H8	1.75	0.52
1:13:1032(A):G:H2'	1:13:1032(B):G:H8	1.75	0.52
1:13:1401:G:C2	1:13:1402:C:H1'	2.45	0.52
3:22:134:ILE:HG23	3:22:151:VAL:HB	1.92	0.52
1:1G:857:C:H2'	1:1G:858:G:O4'	2.10	0.52
32:61:31:LEU:HD21	32:61:38:LEU:HG	1.91	0.52
1:1G:1316:G:H4'	14:5A:18:VAL:HG11	1.91	0.52
45:H8:76:LEU:H	45:H8:76:LEU:HD23	1.74	0.52
1:13:19:C:OP1	5:4E:125:SER:OG	2.18	0.52
1:1G:1279:A:O2'	1:1G:1282:C:N4	2.43	0.52
1:13:323:U:O3'	20:BI:22:ARG:HD3	2.09	0.52
24:1H:1657:C:H2'	24:1H:1658:C:C6	2.44	0.52
24:1H:1557:C:OP2	24:1H:1558:A:O2'	2.27	0.52
24:14:1861:G:H5'	26:79:205:LYS:NZ	2.19	0.52
5:42:101:ILE:HG12	5:42:118:ILE:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:6A:63:ARG:NH1	15:6A:87:ILE:HD13	2.25	0.52
24:14:996:A:N6	24:14:1160:G:C6	2.78	0.52
24:14:1110:G:O2'	24:14:1111:A:O4'	2.18	0.52
22:3K:41:C:H2'	22:3K:42:U:C6	2.45	0.52
30:49:39:ILE:HG23	30:49:157:ILE:HG12	1.92	0.52
2:12:71:VAL:HG13	2:12:93:VAL:HB	1.91	0.52
1:1G:992:U:O2'	1:1G:993:G:OP2	2.24	0.52
35:78:52:GLU:OE1	35:78:55:ARG:NH1	2.35	0.52
5:42:6:PHE:HB3	5:42:34:VAL:HG13	1.92	0.52
24:1H:33:U:O2'	24:1H:34:C:O2	2.20	0.52
1:1G:1060:C:C5	3:22:2:GLY:HA3	2.45	0.52
45:D5:9:TYR:CZ	45:D5:35:ARG:HD3	2.44	0.52
24:14:2704:C:H2'	24:14:2705:A:O4'	2.09	0.52
1:13:419:C:H5'	1:13:420:U:OP2	2.10	0.52
53:P8:45:ALA:O	53:P8:46:VAL:HB	2.10	0.52
41:95:49:THR:O	41:95:51:VAL:N	2.43	0.52
25:1J:103:U:O2'	45:D5:72:ARG:HG3	2.09	0.52
42:E8:29:LEU:O	42:E8:33:ARG:HG3	2.09	0.52
6:52:83:ASP:N	6:52:83:ASP:OD1	2.43	0.52
24:1H:978:G:OP2	57:1H:3767:HOH:O	2.18	0.52
24:14:616:A:C5	29:39:180:GLY:HA3	2.45	0.52
14:5I:29:ARG:HH11	14:5I:42:ILE:HG12	1.74	0.52
24:14:1012:U:P	40:85:70:ARG:HH22	2.33	0.52
39:75:91:ARG:O	39:75:116:ALA:HA	2.10	0.52
22:2K:64:PSU:P	22:2K:64:PSU:H2'	2.50	0.52
51:N8:48:GLU:OE1	51:N8:48:GLU:N	2.43	0.52
24:1H:1141:U:C2'	33:58:63:THR:HG21	2.40	0.52
24:1H:2598:A:P	57:1H:3642:HOH:O	2.67	0.52
37:55:104:ARG:HD2	37:55:109:ALA:HB3	1.91	0.52
24:1H:1171:G:C5	24:1H:1174:A:C6	2.98	0.52
24:14:2328:A:H2'	24:14:2329:G:O4'	2.09	0.52
24:14:328:U:H4'	44:C5:68:HIS:CE1	2.45	0.52
2:1E:83:MET:HG3	2:1E:234:PRO:HG2	1.91	0.52
1:1G:1291:G:P	7:62:37:ASN:HD22	2.33	0.52
1:1G:719:C:O2'	18:9A:49:LYS:HB3	2.10	0.52
1:13:502:G:OP1	12:3I:118:SER:HB3	2.09	0.52
29:39:63:LYS:HA	29:39:76:GLY:O	2.10	0.52
24:14:1794:U:H2'	24:14:1795:C:C6	2.45	0.52
1:1G:987:G:H5'	19:AA:55:LYS:NZ	2.25	0.52
24:1H:1502:C:O2'	24:1H:1503:U:H5'	2.10	0.52
1:13:1497:G:C2'	1:13:1498:U:H5'	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:67:ILE:HD13	4:32:196:LEU:HD22	1.92	0.52
24:14:2794:C:N4	24:14:2795:G:O6	2.43	0.52
1:1G:660:G:H2'	1:1G:661:G:O4'	2.09	0.52
36:88:39:PRO:HA	36:88:97:VAL:O	2.10	0.52
17:8A:31:LEU:HD23	17:8A:32:TYR:CZ	2.45	0.52
24:1H:588:U:H1'	29:31:90:PHE:HB3	1.92	0.52
1:13:1271:G:H2'	1:13:1272:G:H5''	1.91	0.52
24:1H:2184:G:C6	24:1H:2185:C:C4	2.98	0.52
20:BI:14:LYS:O	20:BI:18:GLN:HG3	2.10	0.52
35:78:49:ARG:HD2	54:Q8:59:LYS:HB3	1.90	0.52
2:1E:61:LEU:HD23	2:1E:68:ILE:HD11	1.90	0.52
24:1H:2579:C:H2'	24:1H:2580:U:O4'	2.09	0.52
24:14:1059:G:H3'	24:14:1060:U:H2'	1.92	0.52
17:8A:45:HIS:NE2	17:8A:47:PRO:HG3	2.24	0.52
43:F8:60:ARG:NH2	53:P8:47:ARG:HH12	2.07	0.52
24:14:2064:C:H2'	24:14:2065:C:C6	2.45	0.52
24:14:2458:G:H21	24:14:2459:A:H61	1.56	0.52
31:51:4:ILE:O	31:51:4:ILE:HG12	2.09	0.52
31:51:7:LEU:HD23	31:51:65:HIS:CE1	2.45	0.52
2:12:12:GLU:OE2	2:12:16:HIS:ND1	2.43	0.52
12:3I:93:LEU:HD12	12:3I:96:VAL:HG11	1.91	0.52
28:21:111:ARG:HD3	28:21:160:TYR:CD2	2.45	0.52
27:19:43:ARG:HG2	27:19:43:ARG:HH11	1.74	0.52
20:BI:89:ARG:HB2	20:BI:104:LEU:HD21	1.92	0.52
24:1H:1830:C:O2'	24:1H:1831:G:H5'	2.08	0.52
6:5E:21:LEU:O	6:5E:25:ILE:HG13	2.10	0.52
24:14:1533:C:H3'	24:14:1534:G:O4'	2.09	0.52
2:12:45:GLN:O	2:12:48:MET:HB3	2.09	0.52
1:13:1195:C:H5''	1:13:1196:U:H5''	1.90	0.52
24:14:1271:G:O3'	24:14:1272:A:H4'	2.09	0.52
24:14:2505:G:O6	24:14:2576:G:H2'	2.10	0.51
24:14:1019:U:O2'	24:14:1021:A:H2	1.92	0.51
42:A5:88:ARG:H	42:A5:93:ALA:H	1.58	0.51
38:65:78:LEU:HD11	38:65:107:GLU:HG2	1.91	0.51
22:3K:21:A:H1'	22:3K:22:A:H5''	1.91	0.51
1:13:1127:G:N2	1:13:1145:C:H1'	2.25	0.51
24:14:1043:C:H42	24:14:1112:G:H1	1.58	0.51
24:1H:2864:G:OP1	39:B8:119:LYS:HD2	2.09	0.51
1:13:310:G:H5''	16:7I:31:LYS:HB2	1.90	0.51
39:B8:26:ASP:O	39:B8:49:VAL:HG22	2.09	0.51
1:1G:396:G:O2'	1:1G:398:C:OP1	2.15	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:742:G:P	15:6I:35:ARG:HH22	2.33	0.51
24:1H:800:A:H8	24:1H:800:A:OP1	1.93	0.51
24:1H:456:C:H3'	43:F8:68:ARG:HH22	1.75	0.51
27:19:75:ILE:HG21	27:19:99:ASP:OD2	2.10	0.51
35:35:144:GLU:N	35:35:144:GLU:CD	2.63	0.51
1:1G:1342:C:H5''	9:82:125:TYR:HB3	1.92	0.51
24:1H:2294:C:OP1	38:A8:89:ARG:NH2	2.42	0.51
24:1H:654(K):C:H3'	24:1H:654(L):G:H5''	1.92	0.51
24:1H:62:C:H42	24:1H:92:G:H1	1.56	0.51
24:1H:1448:G:O2'	24:1H:1529:A:N1	2.38	0.51
53:L5:10:ARG:O	53:L5:14:LYS:HG2	2.10	0.51
24:14:1406:U:H2'	24:14:1407:C:C6	2.44	0.51
24:1H:444:C:H4'	29:31:49:ALA:HB2	1.91	0.51
20:BI:29:LYS:O	20:BI:33:ILE:HG12	2.10	0.51
1:13:581:G:N2	1:13:582:U:C4	2.78	0.51
30:49:107:LEU:HA	30:49:111:LEU:HD12	1.91	0.51
24:14:2050:C:H1'	28:29:156:MET:CE	2.39	0.51
1:1G:1092:A:H5''	7:62:4:ARG:NH2	2.25	0.51
45:H8:56:VAL:HA	45:H8:70:LEU:HD23	1.91	0.51
1:13:707:C:H2'	1:13:708:C:H6	1.74	0.51
1:13:1071:C:H2'	1:13:1072:G:H8	1.75	0.51
39:75:21:GLU:OE2	39:75:21:GLU:N	2.43	0.51
54:Q8:22:VAL:HG13	54:Q8:50:LEU:HB2	1.90	0.51
1:13:801:U:H2'	1:13:802:A:C8	2.45	0.51
2:1E:42:ILE:HD13	2:1E:202:PRO:HB2	1.92	0.51
24:14:676:A:H2	24:14:802:A:H61	1.58	0.51
24:14:249:C:OP1	57:14:3520:HOH:O	2.19	0.51
30:49:47:LYS:HG2	30:49:48:GLU:HG3	1.92	0.51
24:14:1465:G:H5'	24:14:1528:A:O2'	2.09	0.51
51:N8:33:CYS:HB2	51:N8:38:ALA:O	2.09	0.51
46:I8:23:VAL:HA	46:I8:38:VAL:HG22	1.92	0.51
1:13:1178:G:N2	1:13:1181:G:C8	2.73	0.51
21:1F:9:ARG:NH1	21:1F:22:ARG:HG3	2.25	0.51
1:1G:1118:C:H5'	9:82:104:ARG:HG2	1.93	0.51
31:51:6:ARG:HA	31:51:66:GLY:HA2	1.91	0.51
46:E5:49:LYS:HB3	46:E5:80:HIS:HB3	1.92	0.51
1:1G:1162:C:N4	1:1G:1174:G:H1	2.08	0.51
1:13:1276:G:N3	1:13:1282:C:O2'	2.37	0.51
36:88:20:ALA:HB1	36:88:99:PRO:HD2	1.92	0.51
24:1H:2766:G:H5''	24:1H:2767:C:OP2	2.09	0.51
1:13:272:C:H2'	1:13:273:A:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:950:G:H2'	24:1H:951:C:C6	2.45	0.51
24:1H:969:U:OP2	49:L8:17:LYS:NZ	2.44	0.51
1:13:865:A:C2	1:13:918:A:H4'	2.45	0.51
1:13:612:C:O2	1:13:629:G:N2	2.44	0.51
31:51:95:ARG:HB3	31:51:95:ARG:HH11	1.75	0.51
35:35:97:PRO:C	35:35:99:LEU:H	2.13	0.51
25:16:14:U:H5'	25:16:70:C:O2	2.10	0.51
4:32:14:ARG:HB2	4:32:40:PRO:HD2	1.93	0.51
24:14:857:C:H4'	46:E5:23:VAL:HG21	1.93	0.51
24:1H:1914:C:H2'	24:1H:1915:U:H6	1.74	0.51
24:1H:380:U:H5'	47:J8:18:ILE:HD12	1.92	0.51
45:D5:1:MET:HG3	45:D5:2:GLU:N	2.25	0.51
24:1H:2400:G:H3'	24:1H:2401:U:C6	2.45	0.51
33:58:55:VAL:HB	33:58:126:PRO:HA	1.93	0.51
24:14:2534:A:N7	57:14:4004:HOH:O	2.34	0.51
4:3E:79:PHE:HE2	4:3E:204:ILE:HD12	1.75	0.51
1:13:636:U:H2'	1:13:637:G:C8	2.45	0.51
24:14:180:G:OP2	53:L5:32:LYS:HE2	2.10	0.51
27:19:255:LYS:H	27:19:255:LYS:HZ1	1.56	0.51
24:1H:1435:G:H1	24:1H:1557:C:H42	1.58	0.51
40:85:99:ALA:HB2	40:85:106:PHE:CD1	2.46	0.51
24:14:528:A:C2	24:14:2042:A:H2'	2.45	0.51
44:G8:81:LYS:HB3	44:G8:82:PRO:CA	2.40	0.51
1:13:1240:U:H5''	1:13:1241:G:C8	2.45	0.51
24:1H:192:C:OP2	57:1H:3971:HOH:O	2.19	0.51
1:13:1023:G:H3'	1:13:1024:G:C5'	2.41	0.51
24:1H:1408:C:C2	24:1H:1595:G:N2	2.79	0.51
31:51:83:TYR:HB3	31:51:134:SER:HA	1.92	0.51
43:F8:63:LYS:O	43:F8:64:LYS:HG2	2.09	0.51
1:1G:168:G:C2'	1:1G:169:C:H5''	2.40	0.51
37:98:86:ARG:HG2	37:98:118:GLU:OE1	2.10	0.51
24:1H:2661:G:H2'	24:1H:2662:A:C8	2.45	0.51
1:13:940:C:H2'	1:13:941:G:H8	1.75	0.51
1:13:1317:C:O2	19:AI:37:ARG:NH2	2.41	0.51
30:49:41:GLN:NE2	30:49:154:GLY:O	2.43	0.51
1:1G:1060:C:N4	3:22:2:GLY:HA3	2.26	0.51
24:1H:2400:G:N2	24:1H:2417:C:C2	2.78	0.51
1:1G:1176:A:H2'	1:1G:1177:G:O4'	2.10	0.51
1:1G:186(B):C:O4'	20:BA:89:ARG:NH2	2.43	0.51
42:E8:84:ARG:HB2	42:E8:96:ILE:CD1	2.41	0.51
7:6E:80:VAL:HB	7:6E:85:TYR:HE2	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:79:10:LEU:HB3	26:79:220:PRO:HG3	1.92	0.51
30:49:121:ASN:HA	30:49:181:ARG:HH12	1.76	0.51
2:12:69:LEU:HD11	2:12:152:PHE:CE1	2.45	0.51
24:14:908:C:C2'	24:14:909:A:H5'	2.40	0.51
1:13:1502:A:H2	1:13:1505:G:N1	1.93	0.51
8:7E:49:GLU:O	8:7E:51:VAL:HG13	2.09	0.51
24:14:2212:A:O2'	24:14:2213:U:O5'	2.27	0.51
24:1H:2271:G:H5'	46:I8:20:ARG:HD3	1.91	0.51
24:1H:1065:U:H3	24:1H:1069:A:H3'	1.75	0.51
1:1G:758:G:H5'	1:1G:880:C:H1'	1.92	0.51
28:29:69:LYS:HG3	28:29:70:ALA:H	1.76	0.51
24:1H:1058:U:H2'	24:1H:1059:G:H8	1.75	0.51
1:13:1101:A:H61	2:1E:103:THR:HG21	1.74	0.51
22:2L:10:C:H41	22:2L:26:G:H1	1.58	0.51
28:29:137:HIS:HB3	28:29:138:PRO:HD2	1.93	0.51
24:14:924:C:H2'	24:14:925:C:C6	2.45	0.51
3:22:130:VAL:O	3:22:134:ILE:HG12	2.10	0.51
7:6E:107:ALA:O	7:6E:110:GLN:HB2	2.10	0.51
24:1H:2848:G:C8	39:B8:97:ALA:HB2	2.45	0.51
24:1H:723:G:H2'	24:1H:724:U:O4'	2.10	0.51
3:2E:79:ARG:NH1	18:9A:87:ARG:HH12	2.09	0.51
38:A8:111:GLU:HG3	38:A8:112:PHE:CD2	2.46	0.51
24:1H:1292:U:H2'	24:1H:1293:C:C6	2.45	0.51
24:1H:2505:G:HO2'	24:1H:2506:U:H6	1.56	0.51
16:7A:70:ALA:O	16:7A:74:LEU:HB2	2.09	0.51
36:45:30:GLY:H	36:45:105:GLU:HG3	1.76	0.51
1:1G:422:C:O2'	1:1G:423:G:N2	2.43	0.51
17:8I:48:GLU:O	17:8I:50:LYS:HG2	2.10	0.51
24:14:883:G:N2	24:14:893:C:N3	2.56	0.51
45:D5:118:GLN:NE2	45:D5:118:GLN:H	2.08	0.51
5:4E:64:ARG:N	5:4E:64:ARG:HH11	2.07	0.51
24:14:350:U:H2'	24:14:351:G:O4'	2.11	0.51
27:19:215:LEU:HB2	27:19:217:ARG:HG3	1.91	0.51
33:58:96:GLU:CG	33:58:97:ARG:H	2.15	0.51
24:14:2293:C:O3'	38:65:89:ARG:NH2	2.44	0.51
1:1G:975:A:H4'	1:1G:976:G:C5'	2.39	0.51
24:14:1416:G:HO2'	24:14:1417:C:P	2.30	0.51
1:13:881:G:H2'	1:13:882:C:O4'	2.09	0.51
32:61:110:ASP:N	32:61:130:TYR:OH	2.44	0.51
36:88:66:ILE:O	36:88:67:ARG:HB2	2.11	0.51
24:1H:692:C:O2'	27:11:38:LYS:HE3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1037:C:H2'	1:1G:1038:C:C6	2.46	0.51
1:1G:685:G:C2	1:1G:686:U:C4	2.99	0.51
24:1H:1778:U:P	57:1H:3911:HOH:O	2.68	0.51
1:13:1370:G:O6	9:8E:118:LYS:NZ	2.43	0.51
39:75:77:PRO:HB2	39:75:80:SER:HB2	1.93	0.51
30:41:64:THR:HG23	30:41:94:LEU:HD21	1.93	0.51
1:13:940:C:H2'	1:13:941:G:C8	2.45	0.51
24:1H:593:G:H4'	54:Q8:62:LEU:HD22	1.92	0.51
24:1H:2728:U:H5'	34:68:70:LYS:HZ1	1.74	0.51
43:B5:30:VAL:HG21	43:B5:39:ILE:HD11	1.91	0.51
24:1H:725:G:C6	24:1H:726:G:N1	2.79	0.51
1:1G:1478:C:H2'	1:1G:1479:C:H6	1.75	0.51
24:14:1676:A:P	57:14:3558:HOH:O	2.68	0.51
24:14:673:C:H4'	29:39:82:ILE:HG12	1.93	0.51
1:1G:67:C:H2'	1:1G:68:G:C8	2.45	0.51
24:14:78:A:H2'	24:14:79:G:C8	2.44	0.51
1:1G:1493:A:H3'	1:1G:1494:G:H5'	1.93	0.51
47:F5:18:ILE:HG12	47:F5:37:ILE:HD12	1.93	0.51
31:51:102:ALA:HA	31:51:117:PRO:HD3	1.93	0.51
27:19:40:THR:OG1	27:19:41:GLY:N	2.43	0.51
41:95:69:LYS:HD2	41:95:86:GLY:HA3	1.92	0.51
24:14:1314:C:H5'	24:14:1314:C:H6	1.74	0.51
24:1H:886:C:H3'	24:1H:887:A:H4'	1.92	0.51
36:45:66:ILE:O	36:45:67:ARG:HB2	2.10	0.51
24:1H:2164:C:OP2	24:1H:2166:G:N2	2.43	0.51
24:1H:2166:G:O6	24:1H:2168:G:N1	2.43	0.51
24:1H:150:C:H2'	24:1H:151:C:C6	2.45	0.51
24:14:1022:G:N2	24:14:1142(A):A:C2	2.73	0.51
13:4A:97:PRO:N	13:4A:110:ARG:HG2	2.26	0.51
24:1H:1786:A:C2	24:1H:2606:C:H1'	2.46	0.51
1:13:674:G:H21	11:2I:116:HIS:HB2	1.74	0.51
3:22:44:GLU:HA	3:22:52:LEU:HD11	1.93	0.51
5:4E:31:LEU:HG	5:4E:45:PHE:HB2	1.93	0.51
28:21:2:LYS:HA	28:21:84:PHE:CD1	2.46	0.51
1:1G:1181:G:HO2'	1:1G:1182:G:P	2.33	0.51
1:1G:142:G:H2'	1:1G:143:A:C8	2.44	0.51
22:2L:42:U:H2'	22:2L:43:G:H8	1.75	0.51
1:13:908:A:H2'	1:13:909:A:H8	1.75	0.51
20:BI:54:LYS:O	20:BI:57:ARG:HB2	2.10	0.51
24:14:579:G:H2'	24:14:580:C:C6	2.44	0.51
24:14:863:A:H2	24:14:914:C:N4	2.08	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1J:101:A:N7	57:1J:306:HOH:O	2.34	0.51
12:3I:53:ARG:HB3	12:3I:69:TYR:HE1	1.76	0.51
24:1H:2706:G:H5''	24:1H:2851:A:H5'	1.91	0.51
7:6E:122:HIS:O	7:6E:125:MET:N	2.43	0.51
27:11:133:LEU:HA	27:11:136:ILE:HG13	1.92	0.51
24:1H:462:C:H42	24:1H:467:G:H1	1.59	0.51
3:2E:123:GLN:O	3:2E:128:PHE:HB2	2.11	0.51
41:D8:58:VAL:O	41:D8:97:LYS:HB2	2.11	0.51
24:14:1799:G:O6	27:19:179:SER:HB3	2.11	0.51
24:1H:1032:A:H2	24:1H:1122:G:H22	1.59	0.51
45:D5:25:PRO:O	45:D5:85:HIS:HA	2.11	0.51
22:2K:7:G:OP2	22:2K:7:G:H8	1.92	0.51
32:69:144:VAL:HG22	32:69:145:VAL:H	1.76	0.51
1:1G:438:G:H4'	4:32:123:HIS:ND1	2.26	0.51
24:14:1771:C:C1'	24:14:1786:A:C8	2.93	0.51
38:A8:7:TYR:CE1	38:A8:91:PRO:HG3	2.45	0.51
1:13:1329:A:H5''	13:4I:26:GLY:N	2.26	0.51
1:13:631:G:N2	57:13:1899:HOH:O	2.43	0.51
24:1H:1102:C:H2'	24:1H:1103:A:C8	2.45	0.51
37:98:35:THR:HG22	37:98:113:LEU:HD12	1.93	0.51
44:C5:27:VAL:HA	44:C5:39:VAL:CG1	2.40	0.51
37:55:37:THR:CG2	37:55:39:PRO:HD2	2.39	0.51
3:22:6:HIS:CD2	3:22:7:PRO:HD2	2.46	0.51
39:B8:25:GLY:H	39:B8:49:VAL:HG23	1.75	0.51
20:BA:11:SER:HA	20:BA:13:LEU:HD12	1.93	0.51
4:3E:110:PHE:CE2	4:3E:148:VAL:HG23	2.46	0.51
12:3A:110:VAL:CG2	12:3A:120:TYR:HB3	2.40	0.51
29:39:3:GLU:HA	29:39:24:LEU:HG	1.93	0.51
24:1H:654(F):C:H42	24:1H:654(O):G:H1	1.59	0.51
1:13:1219:U:H2'	1:13:1220:G:H8	1.75	0.51
1:13:417:C:H2'	1:13:418:C:C6	2.46	0.51
18:9I:25:THR:HB	18:9I:42:ARG:HH12	1.75	0.51
43:B5:18:TYR:HA	43:B5:21:PHE:CD2	2.45	0.51
28:21:145:LYS:O	28:21:148:GLY:N	2.44	0.51
24:14:2850:A:C2	24:14:2851:A:C4	2.99	0.51
26:79:14:VAL:HG22	26:79:222:VAL:HG22	1.92	0.51
47:J8:6:GLU:HG3	47:J8:61:ARG:O	2.11	0.51
33:15:137:LYS:HA	33:15:137:LYS:NZ	2.26	0.51
8:7E:9:MET:O	8:7E:12:ARG:N	2.43	0.51
23:4K:11:U:O2'	23:4K:12:A:OP2	2.28	0.51
24:14:1356:G:H2'	24:14:1357:U:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1425:G:O2'	24:1H:1426:G:H5'	2.11	0.51
24:14:746:A:C6	24:14:2611:U:H5''	2.46	0.51
29:31:6:VAL:HG12	29:31:7:TYR:H	1.75	0.51
22:3L:57:C:H5''	22:3L:59:A:OP2	2.10	0.51
1:1G:1129:C:C2	1:1G:1139:G:C6	2.98	0.51
24:14:1448:G:H1'	24:14:1528:A:H62	1.76	0.51
35:78:19:VAL:CB	35:78:27:HIS:HB2	2.40	0.51
35:78:19:VAL:HG13	35:78:21:ARG:HB2	1.93	0.51
29:39:53:THR:HG23	29:39:55:GLY:N	2.20	0.51
30:49:34:LEU:HB3	30:49:99:MET:HE1	1.93	0.51
38:A8:59:LYS:HG2	38:A8:60:GLY:H	1.74	0.51
3:22:6:HIS:HD2	3:22:7:PRO:HD2	1.74	0.51
31:59:56:SER:OG	31:59:57:ASP:N	2.41	0.51
32:61:110:ASP:HB2	32:61:113:ARG:HB2	1.93	0.51
10:1A:13:HIS:O	10:1A:17:ASP:HB2	2.11	0.51
1:1G:1151:A:O2'	1:1G:1152:A:O4'	2.24	0.51
24:14:2334:G:O6	46:E5:74:ARG:NH2	2.43	0.51
1:1G:1192:C:OP2	3:22:4:LYS:NZ	2.44	0.51
24:14:2747:G:O6	24:14:2754:U:H3'	2.10	0.51
32:69:71:ILE:HG23	32:69:72:LEU:HD23	1.93	0.51
24:1H:924:C:H2'	24:1H:925:C:C6	2.46	0.51
24:14:2122:U:H2'	24:14:2123:G:O4'	2.11	0.51
24:14:2177:C:H5''	26:79:213:TYR:CD2	2.45	0.51
24:14:2469:A:H2'	24:14:2470:G:O4'	2.11	0.51
3:2E:155:GLY:HA3	3:2E:196:LEU:HB3	1.93	0.51
1:1G:1312:G:H1	1:1G:1325:C:H42	1.57	0.51
24:14:396:G:O2'	47:F5:43:TYR:O	2.27	0.51
24:14:1164:G:H2'	24:14:1165:U:C6	2.45	0.51
25:1J:84:C:OP1	49:H5:15:TYR:OH	2.26	0.51
24:1H:588:U:H2'	24:1H:589:C:C6	2.46	0.51
34:25:31:LYS:HB3	34:25:32:TYR:CE1	2.46	0.51
35:35:22:GLY:HA3	35:35:25:SER:HB3	1.92	0.51
24:14:2081:C:H2'	24:14:2082:A:C8	2.45	0.51
4:32:104:VAL:HG21	4:32:140:VAL:HG21	1.92	0.51
24:1H:631:A:OP1	35:78:65:ARG:NH1	2.43	0.51
24:1H:2096:U:H2'	24:1H:2097:C:C6	2.46	0.51
24:14:745:G:H5''	24:14:746:A:OP2	2.10	0.51
11:2I:31:THR:HA	11:2I:42:TRP:HA	1.93	0.51
39:75:91:ARG:NH1	39:75:124:ASP:OD2	2.36	0.51
24:14:528:A:OP2	33:15:114:ARG:NH1	2.44	0.51
1:1G:1288:A:H2'	1:1G:1289:A:H8	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1J:43:C:OP1	50:I5:2:LYS:HB3	2.11	0.51
45:D5:96:VAL:N	45:D5:128:VAL:O	2.26	0.51
1:1G:1387:G:H2'	1:1G:1388:C:C6	2.46	0.51
22:2L:12:C:H5	22:2L:24:G:N1	2.07	0.51
1:13:742:G:H5'	15:6I:58:MET:HE3	1.92	0.51
1:1G:589:C:N4	1:1G:650:G:H1	2.08	0.51
29:39:21:ALA:O	29:39:23:ASP:N	2.44	0.51
32:69:87:LYS:H	32:69:87:LYS:HE3	1.75	0.51
50:M8:11:PRO:HA	50:M8:25:TYR:HA	1.93	0.51
27:11:70:TRP:CD1	27:11:70:TRP:C	2.84	0.51
35:35:131:SER:HB3	35:35:134:ALA:HB2	1.91	0.51
1:1G:738:C:H5''	6:52:69:GLU:HB2	1.93	0.51
50:I5:31:ILE:HD13	50:I5:32:TYR:H	1.75	0.51
29:31:123:LEU:HD12	29:31:124:LEU:H	1.76	0.51
24:1H:2679:A:H4'	28:21:165:VAL:HG11	1.93	0.51
24:1H:2146:C:H4'	24:1H:2147:G:C4	2.46	0.51
4:32:105:VAL:O	4:32:108:LEU:N	2.42	0.51
13:4A:88:ARG:HG2	13:4A:98:VAL:HG13	1.93	0.51
5:42:81:GLU:HB2	5:42:88:LYS:HE3	1.93	0.51
15:6I:25:THR:HG21	15:6I:70:LEU:HB2	1.92	0.51
46:E5:47:PRO:HG3	46:E5:53:MET:HB2	1.93	0.51
24:1H:1449(A):G:H2'	24:1H:1450:C:C6	2.45	0.51
1:1G:986:A:H1'	19:AA:54:GLY:O	2.09	0.51
24:14:795:C:H2'	24:14:796:C:C6	2.46	0.51
42:E8:29:LEU:HD21	42:E8:33:ARG:NH2	2.25	0.51
17:8A:31:LEU:HD23	17:8A:32:TYR:CE1	2.46	0.51
1:1G:1171:G:H2'	1:1G:1172:C:C6	2.46	0.51
1:13:833:U:H2'	1:13:834:C:H6	1.76	0.51
34:25:90:GLN:O	34:25:91:LEU:HB2	2.09	0.51
11:2A:86:GLY:H	11:2A:112:THR:HG1	1.58	0.51
24:14:2210:G:H5'	24:14:2211:G:C6	2.46	0.51
1:13:490:G:H2'	1:13:491:G:C8	2.46	0.51
24:1H:1820:U:C2	27:11:202:LYS:HB3	2.45	0.51
24:1H:1257:C:H4'	29:31:83:PHE:CD1	2.46	0.51
24:14:2520:C:H41	24:14:2542:A:H62	1.59	0.51
34:68:112:MET:O	34:68:115:VAL:HG23	2.11	0.51
50:I5:9:LEU:H	50:I5:9:LEU:HD22	1.76	0.51
24:1H:2611:U:H5'	24:1H:2611:U:H6	1.75	0.51
35:35:82:GLY:HA2	35:35:113:LYS:O	2.11	0.51
54:M5:28:GLY:O	54:M5:34:TRP:HH2	1.94	0.51
22:2L:21:A:C8	22:2L:46:G:N7	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2173:A:H3'	24:1H:2174:C:C6	2.46	0.51
1:1G:975:A:H5'	1:1G:975:A:H8	1.75	0.51
1:1G:960:U:N3	1:1G:1225:A:C4	2.77	0.51
31:59:4:ILE:HB	31:59:6:ARG:HG2	1.92	0.51
37:98:97:VAL:HA	37:98:113:LEU:O	2.10	0.51
24:1H:2019:A:O4'	40:C8:34:LYS:HD2	2.11	0.51
3:22:113:ALA:HA	3:22:202:ILE:HD11	1.93	0.51
10:1A:40:LEU:HD13	10:1A:71:LEU:HB2	1.92	0.51
24:14:1478:G:HO2'	24:14:1558:A:H2	1.59	0.51
1:1G:501:C:OP1	12:3A:117:ARG:NH2	2.26	0.51
28:29:8:LYS:CB	28:29:192:ASN:HA	2.40	0.51
20:BA:66:ALA:HB1	20:BA:71:THR:HG21	1.93	0.51
1:13:639:G:H2'	1:13:640:A:C8	2.46	0.51
36:88:36:ALA:O	36:88:99:PRO:HA	2.11	0.51
1:1G:947:G:H5''	13:4A:109:THR:HG23	1.93	0.51
22:2K:84:C:H2'	22:2K:85:A:C8	2.46	0.51
13:4A:49:THR:N	13:4A:52:GLU:OE1	2.35	0.51
24:14:1148:A:H2'	24:14:1149:G:C8	2.45	0.51
24:14:468:G:N7	53:L5:39:ARG:NH2	2.59	0.51
2:12:84:GLU:OE1	2:12:216:SER:HA	2.11	0.51
24:14:874:G:N2	24:14:904:C:C2	2.79	0.51
24:14:2849:U:O4	39:75:23:ARG:NH2	2.43	0.51
1:13:576:G:OP1	57:13:1861:HOH:O	2.19	0.51
1:13:1525:G:P	11:2I:120:ARG:HH22	2.33	0.51
1:1G:1326:C:H2'	1:1G:1327:C:H6	1.76	0.51
2:12:237:ALA:C	2:12:239:VAL:H	2.13	0.51
45:H8:105:VAL:HG13	45:H8:106:GLY:H	1.76	0.51
49:L8:31:LEU:O	49:L8:32:GLN:HB2	2.11	0.51
24:14:439:G:H2'	24:14:440:G:H8	1.74	0.51
24:14:2393:A:OP1	54:M5:30:ARG:HB3	2.11	0.51
22:2L:61:G:N3	22:2L:62:G:H1'	2.25	0.50
24:1H:1826:G:H4'	27:11:242:ARG:NH2	2.25	0.50
1:13:605:U:H2'	1:13:606:G:O4'	2.11	0.50
24:1H:575:A:OP2	24:1H:2055:C:N4	2.40	0.50
35:78:19:VAL:HG13	35:78:21:ARG:CB	2.40	0.50
44:C5:20:TYR:CE2	44:C5:42:VAL:HA	2.46	0.50
22:2L:24:G:H2'	22:2L:25:G:C8	2.45	0.50
25:16:29:A:OP2	38:A8:31:SER:HB2	2.12	0.50
1:13:143:A:H5''	1:13:144:G:O5'	2.10	0.50
24:14:2124:G:H2'	24:14:2124:G:N3	2.25	0.50
24:1H:2488:A:H2'	24:1H:2489:G:O4'	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2749:A:O4'	31:59:63:SER:HA	2.12	0.50
24:14:1378:A:O2'	24:14:1380:G:N7	2.34	0.50
29:31:122:LYS:HD2	29:31:191:ARG:HG2	1.93	0.50
24:14:2845:G:H2'	24:14:2846:G:C8	2.45	0.50
4:32:72:GLU:OE1	4:32:207:TYR:OH	2.29	0.50
1:1G:321:A:C2	1:1G:333:G:C2	2.99	0.50
1:13:236:G:H5''	17:8I:42:TYR:OH	2.11	0.50
1:13:565:U:OP2	1:13:566:G:O2'	2.27	0.50
1:1G:626:U:H4'	16:7A:38:TYR:CZ	2.46	0.50
4:3E:53:ASP:HB3	4:3E:57:ARG:HH12	1.76	0.50
2:1E:167:PRO:HG2	2:1E:192:SER:HB3	1.93	0.50
24:1H:969:U:O3'	49:L8:14:GLY:HA2	2.12	0.50
30:49:180:PHE:O	50:I5:43:TYR:OH	2.29	0.50
24:14:830:G:H4'	24:14:831:G:OP2	2.11	0.50
7:62:91:VAL:HG12	7:62:95:ARG:HB3	1.93	0.50
5:4E:35:GLY:HA3	5:4E:112:LEU:HB3	1.93	0.50
14:5I:3:ARG:HA	14:5I:3:ARG:HH11	1.77	0.50
25:16:102:G:O2'	45:H8:73:GLN:NE2	2.43	0.50
24:1H:671:C:OP1	35:78:42:SER:O	2.29	0.50
5:4E:53:LEU:O	5:4E:57:LYS:HG3	2.11	0.50
24:14:1187:G:H8	24:14:1187:G:O5'	1.94	0.50
24:1H:1972:A:H2'	24:1H:1973:G:H8	1.75	0.50
17:8I:75:ARG:HH12	17:8I:77:VAL:HG13	1.75	0.50
33:58:13:TRP:O	33:58:135:PRO:HD2	2.11	0.50
1:1G:1167:A:H2'	1:1G:1169:A:O4'	2.11	0.50
24:14:1181:C:H2'	24:14:1182:A:C8	2.46	0.50
47:J8:91:LYS:HZ2	47:J8:91:LYS:CA	2.24	0.50
24:1H:945:A:OP2	24:1H:945:A:H4'	2.11	0.50
44:G8:39:VAL:O	44:G8:42:VAL:HG13	2.11	0.50
28:21:119:ARG:HG3	28:21:119:ARG:NH1	2.20	0.50
24:14:1826:G:H2'	24:14:1827:C:O4'	2.11	0.50
24:14:2157:G:H2'	24:14:2158:A:C8	2.35	0.50
1:13:1303:C:C4	1:13:1304:G:C5	3.00	0.50
24:14:2588:G:OP1	57:14:3595:HOH:O	2.19	0.50
1:13:322:C:H5	1:13:328:C:H5	1.58	0.50
24:1H:897:C:H2'	24:1H:898:C:H6	1.76	0.50
30:41:28:VAL:HG22	30:41:29:TRP:CD1	2.46	0.50
24:14:2370:G:H2'	24:14:2371:G:C8	2.46	0.50
25:1J:11:C:H3'	25:1J:12:C:H6	1.77	0.50
36:45:21:THR:HG23	36:45:21:THR:O	2.11	0.50
24:1H:1931:U:C5	24:1H:1969:A:N7	2.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:29:113:PHE:N	28:29:159:HIS:HD2	2.08	0.50
54:M5:57:ARG:HB2	54:M5:57:ARG:NH1	2.26	0.50
2:12:16:HIS:CD2	2:12:209:ARG:HB3	2.46	0.50
5:42:57:LYS:HG2	5:42:61:TYR:CE1	2.44	0.50
24:1H:443:A:H1'	24:1H:1201:C:O4'	2.09	0.50
24:14:699:A:H2'	24:14:700:G:O4'	2.11	0.50
1:13:1277:C:HO2'	1:13:1279:A:H1'	1.76	0.50
24:1H:602:G:O2'	24:1H:655:A:N6	2.44	0.50
2:12:84:GLU:HB3	2:12:219:VAL:HG11	1.93	0.50
9:82:24:GLY:HA3	9:82:57:GLY:HA2	1.93	0.50
1:13:1032(A):G:H2'	1:13:1032(B):G:C8	2.46	0.50
1:13:801:U:H2'	1:13:802:A:H8	1.77	0.50
1:13:1414:U:H2'	1:13:1415:G:H8	1.77	0.50
19:AI:5:LEU:HD11	19:AI:10:PHE:HD1	1.76	0.50
27:19:92:ILE:HD12	27:19:104:TYR:CD1	2.46	0.50
24:14:341:G:C6	24:14:342:G:C5	3.00	0.50
24:14:569:U:C4	24:14:570:G:C6	3.00	0.50
11:2A:18:ARG:HB3	11:2A:33:THR:OG1	2.10	0.50
1:1G:1441:G:H8	1:1G:1441:G:O5'	1.95	0.50
29:31:8:GLN:N	29:31:8:GLN:OE1	2.37	0.50
24:14:1581:G:H5''	24:14:1581:G:H8	1.75	0.50
35:78:125:VAL:O	35:78:144:GLU:HB2	2.10	0.50
24:14:2722:G:H5''	24:14:2820:A:N7	2.26	0.50
1:13:186(F):C:H2'	1:13:187:C:O4'	2.11	0.50
11:2A:79:SER:OG	11:2A:106:LYS:HG3	2.11	0.50
4:32:22:LYS:O	4:32:113:SER:HB3	2.11	0.50
24:1H:817:C:H4'	24:1H:932:G:C5	2.47	0.50
24:1H:1371:G:H2'	24:1H:1372:U:H5	1.75	0.50
1:1G:976:G:H5'	1:1G:1358:U:O2'	2.12	0.50
44:C5:19:LYS:HG3	44:C5:20:TYR:HD2	1.77	0.50
22:2K:59:A:C2'	22:2K:60:A:H5'	2.42	0.50
34:68:2:ILE:HG13	34:68:8:LEU:HD11	1.94	0.50
25:1J:38:C:O4'	38:65:95:HIS:NE2	2.44	0.50
1:13:227:G:H2'	1:13:228:A:O4'	2.12	0.50
24:1H:38:A:N3	29:31:48:THR:OG1	2.44	0.50
1:13:313:A:H2'	1:13:314:C:H6	1.75	0.50
3:22:61:ALA:N	3:22:63:ASN:OD1	2.44	0.50
3:22:3:ASN:N	3:22:3:ASN:OD1	2.45	0.50
31:59:12:PRO:HG3	31:59:49:VAL:HA	1.94	0.50
27:19:64:ILE:O	27:19:64:ILE:HG13	2.10	0.50
1:1G:603:U:H2'	1:1G:604:G:H8	1.74	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:257:G:C4	1:13:258:G:C8	2.99	0.50
16:7A:71:ARG:HG2	16:7A:80:PHE:HE2	1.76	0.50
1:1G:1000:A:H2'	1:1G:1001:G:C8	2.46	0.50
2:12:19:HIS:CE1	2:12:204:ASN:HB3	2.46	0.50
35:35:81:GLN:OE1	35:35:107:LYS:HG2	2.10	0.50
24:1H:1290:C:H2'	24:1H:1291:C:C6	2.46	0.50
1:1G:1274:G:H2'	1:1G:1275:A:C8	2.46	0.50
27:11:85:ASP:OD2	27:11:88:ARG:HD2	2.12	0.50
28:21:103:ASP:OD1	28:21:201:THR:HA	2.11	0.50
9:8E:22:GLY:N	9:8E:58:HIS:O	2.34	0.50
1:1G:1292:U:H2'	1:1G:1293:G:C8	2.46	0.50
24:1H:1005:C:O2'	33:58:28:THR:HG21	2.11	0.50
24:14:829:A:N7	24:14:2248:C:H5'	2.25	0.50
24:1H:896:A:H5''	45:H8:116:VAL:HG11	1.93	0.50
24:14:1973:G:H2'	24:14:1974:C:C6	2.46	0.50
33:15:91:LEU:HA	33:15:95:PRO:HB3	1.92	0.50
31:59:122:THR:O	31:59:131:VAL:HG13	2.12	0.50
40:C8:47:TYR:C	40:C8:47:TYR:CD1	2.85	0.50
17:8I:76:LEU:HD21	17:8I:79:SER:OG	2.11	0.50
27:19:201:HIS:O	27:19:204:ILE:HG13	2.10	0.50
24:14:445:C:OP1	40:85:2:PRO:HA	2.11	0.50
1:13:858:G:N1	1:13:870:U:OP2	2.39	0.50
37:55:54:LEU:HD23	37:55:66:VAL:HG23	1.92	0.50
1:1G:622:A:C8	1:1G:623:C:C6	2.99	0.50
20:BI:26:ASN:O	20:BI:30:LYS:HB2	2.10	0.50
1:13:1392:G:H21	1:13:1502:A:H8	1.60	0.50
24:14:1288:U:C2	24:14:1327:C:O2	2.65	0.50
25:1J:29:A:OP2	38:65:31:SER:HB2	2.11	0.50
16:7I:5:ARG:O	16:7I:20:VAL:HG12	2.10	0.50
1:1G:458:C:H2'	1:1G:464:G:H8	1.76	0.50
24:14:1278:A:O2'	37:55:34:ILE:HD11	2.12	0.50
25:16:7:G:H1	25:16:113:C:H42	1.59	0.50
29:39:84:VAL:C	29:39:86:GLY:H	2.14	0.50
24:1H:2682:U:HO2'	28:21:13:ARG:HG2	1.75	0.50
24:1H:2148:G:H2'	24:1H:2149:G:C8	2.45	0.50
24:1H:458:G:C8	53:P8:37:LYS:HG2	2.46	0.50
37:98:44:LEU:HD22	37:98:48:VAL:HG23	1.92	0.50
1:13:57:G:H2'	1:13:58:C:C6	2.47	0.50
45:H8:4:ARG:HA	45:H8:58:VAL:HB	1.94	0.50
22:3K:52:G:H2'	22:3K:53:A:C8	2.46	0.50
39:75:2:ASN:O	39:75:4:GLY:HA3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1914:C:H2'	24:1H:1915:U:O4'	2.12	0.50
35:78:114:ILE:HD13	35:78:125:VAL:HG11	1.94	0.50
36:45:37:LEU:HD21	36:45:130:LYS:HB2	1.94	0.50
12:3A:60:LEU:HB3	12:3A:62:SER:H	1.76	0.50
37:98:37:THR:HA	37:98:111:LEU:HD23	1.93	0.50
30:41:110:ALA:HA	30:41:140:ILE:O	2.11	0.50
37:55:76:VAL:O	37:55:80:PHE:N	2.39	0.50
24:14:2228:G:OP1	27:19:261:LYS:NZ	2.38	0.50
34:68:7:TYR:CZ	34:68:44:LYS:HG3	2.46	0.50
8:72:13:ILE:O	8:72:17:THR:HG23	2.11	0.50
24:14:13:A:N1	24:14:525:U:H2'	2.26	0.50
5:42:78:HIS:HE1	5:42:142:LEU:HD23	1.76	0.50
4:32:49:ARG:NE	4:32:49:ARG:HA	2.26	0.50
49:H5:18:ASP:OD1	49:H5:18:ASP:N	2.39	0.50
22:2L:69:U:H5'	22:2L:70:C:C5	2.47	0.50
24:1H:573:G:OP2	41:D8:78:LYS:NZ	2.42	0.50
1:1G:976:G:OP1	14:5A:31:ARG:HB2	2.12	0.50
24:14:1328:G:O5'	24:14:1328:G:H8	1.95	0.50
1:13:310:G:OP2	16:7I:27:LYS:NZ	2.19	0.50
45:D5:106:GLY:HA3	45:D5:140:ASP:HA	1.94	0.50
24:14:1209:G:H21	24:14:1210:A:H62	1.60	0.50
24:1H:307:G:N2	24:1H:310:A:O5'	2.43	0.50
38:65:97:ARG:O	38:65:101:LEU:N	2.38	0.50
31:51:4:ILE:HG13	31:51:6:ARG:HB2	1.94	0.50
24:1H:1339:G:N2	24:1H:1603:A:H1'	2.26	0.50
2:12:15:VAL:HG13	2:12:16:HIS:CD2	2.46	0.50
24:14:142:G:H2'	24:14:143:C:H6	1.76	0.50
1:13:989:C:N4	1:13:1216:G:H1	2.10	0.50
24:1H:1885:A:H2'	24:1H:1886:C:O4'	2.11	0.50
1:1G:1422:G:H5''	34:25:48:PRO:HB3	1.94	0.50
24:1H:1100:C:H2'	24:1H:1101:U:H6	1.76	0.50
37:98:10:LEU:O	37:98:12:ARG:NH1	2.44	0.50
1:1G:1326:C:OP1	21:1B:17:THR:OG1	2.19	0.50
20:BA:89:ARG:NH1	20:BA:105:SER:O	2.45	0.50
2:12:69:LEU:HD11	2:12:152:PHE:HE1	1.77	0.50
24:14:2820:A:C5	37:55:4:LEU:HD11	2.47	0.50
11:2A:16:SER:OG	11:2A:106:LYS:NZ	2.44	0.50
27:19:4:LYS:HB3	27:19:18:VAL:HG23	1.92	0.50
24:14:2317:C:H2'	24:14:2318:G:O4'	2.11	0.50
34:68:47:ILE:HG13	34:68:48:PRO:HD2	1.93	0.50
24:1H:301:G:C4	24:1H:302:C:C5	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:55:88:ARG:HB3	37:55:88:ARG:CZ	2.41	0.50
24:1H:325:G:O2'	24:1H:326:G:H5'	2.11	0.50
39:75:26:ASP:OD1	39:75:120:ARG:NH2	2.43	0.50
1:1G:405:U:H5''	1:1G:406:G:O4'	2.12	0.50
22:3L:12:C:H2'	22:3L:13:G:O4'	2.12	0.50
22:2K:19:C:H3'	22:2K:20:C:C2'	2.41	0.50
51:N8:40:LYS:HE2	51:N8:47:PRO:HD2	1.94	0.50
35:78:36:LYS:HB2	35:78:40:SER:HB3	1.93	0.50
24:14:996:A:OP2	40:85:92:ARG:NH2	2.45	0.50
46:I8:23:VAL:HB	46:I8:26:TYR:HE1	1.76	0.50
24:14:1105:U:H2'	24:14:1106:G:C8	2.38	0.50
44:C5:42:VAL:HG13	44:C5:65:ALA:HB3	1.92	0.50
25:1J:28:C:N4	25:1J:56:G:H1	2.07	0.50
24:14:2392:A:H2	24:14:2424:C:N4	2.07	0.50
38:65:35:ILE:CD1	38:65:97:ARG:HE	2.24	0.50
25:16:10:C:H2'	25:16:11:C:H6	1.76	0.50
46:E5:51:VAL:HG23	46:E5:81:VAL:HG23	1.94	0.50
10:1A:30:SER:HB3	10:1A:81:THR:HG22	1.93	0.50
30:41:16:ARG:HH12	30:41:31:VAL:HG13	1.76	0.50
1:13:944:G:O6	1:13:1337:G:H8	1.95	0.50
1:13:640:A:N3	8:7E:115:SER:OG	2.40	0.50
24:1H:2853:C:O2'	24:1H:2854:G:H5'	2.12	0.50
15:6I:74:ASP:HB3	15:6I:77:ARG:HG2	1.93	0.50
49:L8:23:LEU:HD12	49:L8:23:LEU:H	1.76	0.50
1:1G:509:A:C6	1:1G:510:A:N1	2.80	0.50
24:1H:1423:G:H2'	24:1H:1424:G:H8	1.76	0.50
24:1H:524:U:H4'	24:1H:554:U:H4'	1.94	0.50
32:61:144:VAL:HG23	32:61:145:VAL:HG23	1.93	0.50
2:12:112:VAL:O	2:12:115:LEU:HB3	2.12	0.50
24:14:1751:C:H2'	24:14:1752:C:C6	2.46	0.50
1:13:1210:C:O2	1:13:1214:C:O2'	2.28	0.50
15:6A:41:GLU:HA	15:6A:44:LYS:HG3	1.94	0.50
33:15:62:VAL:HG22	33:15:66:LYS:HD2	1.92	0.50
39:75:29:ARG:HB3	39:75:87:ASP:HB2	1.92	0.50
24:14:2350:C:H2'	24:14:2351:G:O4'	2.11	0.50
31:59:144:VAL:O	31:59:148:ILE:HG12	2.11	0.50
2:1E:9:GLU:H	2:1E:9:GLU:CD	2.14	0.50
35:35:123:LEU:H	35:35:123:LEU:HD23	1.75	0.50
1:1G:345:C:H1'	1:1G:346:G:N1	2.26	0.50
24:14:192:C:P	57:14:3717:HOH:O	2.66	0.50
41:95:35:LEU:HB2	41:95:37:VAL:HG13	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BI:26:ASN:HB2	20:BI:71:THR:OG1	2.12	0.50
11:2I:41:THR:HG22	11:2I:42:TRP:N	2.27	0.50
43:B5:63:LYS:HA	43:B5:72:LYS:HA	1.94	0.50
24:1H:1322:A:N7	57:1H:3954:HOH:O	2.35	0.50
24:14:2784:C:H1'	28:29:37:ARG:HH12	1.76	0.50
1:13:1128:C:O2'	1:13:1130:A:H5'	2.11	0.50
24:14:1047:G:H2'	24:14:1109:C:H42	1.77	0.50
17:8A:59:ILE:HG22	17:8A:71:PHE:CD2	2.47	0.50
5:42:55:VAL:O	5:42:58:ALA:HB3	2.11	0.50
21:1F:12:LYS:HB3	21:1F:17:THR:O	2.12	0.50
24:14:2392:A:C8	35:35:61:ARG:HB3	2.41	0.50
3:22:11:ARG:NE	3:22:180:ALA:HB3	2.27	0.50
1:1G:1117:G:H2'	9:82:104:ARG:NH1	2.27	0.50
24:14:1531:C:N4	24:14:1540:G:H1	2.09	0.50
1:1G:1191:A:H5''	3:22:4:LYS:NZ	2.26	0.50
54:Q8:34:TRP:HA	54:Q8:36:LYS:CB	2.41	0.50
37:98:117:VAL:HG22	37:98:118:GLU:H	1.77	0.50
19:AI:6:LYS:HE3	19:AI:9:VAL:HG22	1.93	0.50
1:1G:1266:G:N2	1:1G:1269:A:OP2	2.44	0.50
54:M5:29:LYS:HB2	54:M5:44:LYS:HB2	1.93	0.50
45:D5:19:ARG:HH21	45:D5:84:GLU:HB3	1.74	0.50
24:1H:593:G:H1'	54:Q8:4:MET:HE1	1.92	0.50
30:49:82:LEU:H	30:49:86:MET:HE3	1.77	0.50
9:8E:17:VAL:HG11	9:8E:81:ILE:HG12	1.94	0.50
24:14:912:C:OP1	36:45:8:LYS:NZ	2.41	0.50
12:3A:31:PRO:HB2	12:3A:32:PHE:CD2	2.45	0.50
24:14:53:A:OP2	57:14:3830:HOH:O	2.19	0.50
24:14:2239:G:OP2	27:19:244:ARG:NH2	2.23	0.50
24:1H:2688:U:H5	24:1H:2720:U:OP2	1.95	0.50
29:39:178:PRO:HG2	29:39:179:GLU:OE1	2.12	0.50
24:14:1506:C:H2'	24:14:1507:A:H8	1.77	0.50
6:52:8:ILE:HD12	6:52:26:ILE:HD13	1.94	0.50
37:98:2:ARG:HA	37:98:5:LYS:HG3	1.93	0.50
1:1G:792:A:H1'	1:1G:794:A:N7	2.27	0.50
24:14:2031:A:C6	24:14:2498:C:H1'	2.47	0.50
2:1E:208:ILE:HD12	2:1E:209:ARG:H	1.76	0.50
24:14:2130:U:H2'	24:14:2158:A:C2	2.47	0.50
1:1G:984:C:H42	1:1G:1221:G:H1	1.60	0.50
1:1G:1286:A:H2	21:1B:18:TYR:HH	1.58	0.50
1:13:1157:A:N6	1:13:1180:A:C5	2.79	0.50
24:1H:2784:C:O2	28:21:37:ARG:NH2	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:322:C:H5	1:13:328:C:C5	2.30	0.50
24:14:2688:U:H5	24:14:2720:U:OP2	1.95	0.50
24:1H:871:U:OP2	36:88:5:ARG:NE	2.45	0.50
1:13:953:G:H2'	1:13:954:G:O4'	2.11	0.50
7:6E:23:VAL:HG12	7:6E:43:PHE:CE2	2.47	0.50
1:13:163:C:H2'	1:13:164:U:C6	2.47	0.50
45:D5:144:LEU:HB2	45:D5:174:VAL:CG1	2.40	0.50
1:13:1296:C:H5'	13:4I:14:ARG:NH1	2.27	0.50
24:14:1310:G:OP2	53:L5:9:ARG:NE	2.44	0.50
12:3I:62:SER:C	12:3I:64:TYR:H	2.16	0.50
30:4I:37:VAL:O	30:4I:94:LEU:HB2	2.11	0.50
1:13:1044:A:C5	1:13:1045:C:H1'	2.47	0.50
24:1H:2022:U:O2'	24:1H:2617:C:H5'	2.12	0.50
2:1E:104:ASN:OD1	2:1E:107:THR:OG1	2.27	0.50
15:6A:4:THR:N	15:6A:7:GLU:OE2	2.45	0.50
24:14:2858:C:C2'	24:14:2859:G:H5'	2.42	0.50
1:13:576:G:N2	1:13:759:A:OP1	2.45	0.50
40:85:110:VAL:O	40:85:114:LYS:HG3	2.12	0.50
34:68:20:MET:HE3	34:68:44:LYS:HE3	1.94	0.50
31:51:154:PRO:HB3	31:51:163:TYR:CE2	2.46	0.50
4:32:175:SER:HB3	4:32:186:LEU:HD21	1.92	0.50
38:65:52:SER:O	38:65:56:LEU:HB2	2.11	0.50
12:3I:86:ARG:HG3	12:3I:101:VAL:HG22	1.94	0.50
24:1H:1198:U:H2'	24:1H:1199:U:C6	2.46	0.50
24:14:2608:G:H5''	24:14:2609:U:OP1	2.12	0.50
3:2E:77:ILE:HA	3:2E:84:ILE:HB	1.93	0.50
1:1G:1392:G:H8	1:1G:1392:G:O5'	1.93	0.50
24:14:1142:U:H5''	24:14:1142(A):A:C5'	2.41	0.50
1:13:1309:G:C6	1:13:1329:A:N1	2.80	0.50
24:14:527:C:C4	24:14:2779:U:H2'	2.47	0.50
24:14:1110:G:H2'	24:14:1111:A:C8	2.47	0.50
25:1J:51:G:N7	38:65:62:LYS:NZ	2.59	0.50
25:16:82:G:C4	25:16:83:G:C8	3.00	0.50
24:1H:1355:G:OP1	27:11:38:LYS:NZ	2.45	0.50
7:62:60:LYS:O	7:62:63:LYS:NZ	2.45	0.50
1:13:191(C):G:H2'	1:13:191(D):U:O4'	2.12	0.50
44:C5:37:VAL:O	44:C5:67:LEU:N	2.43	0.50
43:F8:11:PRO:HG2	43:F8:13:LEU:HD21	1.93	0.50
24:14:1427:A:H4'	24:14:1428:C:O5'	2.11	0.50
5:4E:87:SER:HB3	5:4E:125:SER:O	2.12	0.50
24:14:2662:A:C4	24:14:2663:G:H1'	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:833:U:H2'	1:13:834:C:C6	2.47	0.50
24:1H:780:G:H21	24:1H:783:A:H62	1.58	0.50
44:C5:87:LYS:H	44:C5:94:LYS:HB3	1.76	0.50
1:13:1256:A:H4'	1:13:1258:G:C4	2.47	0.50
28:29:165:VAL:HG12	28:29:189:PRO:HG3	1.94	0.50
1:1G:1376:U:OP1	7:62:98:SER:HB3	2.11	0.49
25:1J:13:A:H2'	25:1J:70:C:O2'	2.12	0.49
25:1J:14:U:H5'	25:1J:71:C:H1'	1.93	0.49
39:75:91:ARG:HD2	39:75:124:ASP:OD2	2.12	0.49
38:65:105:ALA:HB3	38:65:112:PHE:HE1	1.77	0.49
27:11:182:LEU:H	27:11:272:ALA:CB	2.19	0.49
24:14:740:U:O4'	24:14:1981:A:C4	2.65	0.49
24:14:2698:U:C4	57:14:3811:HOH:O	2.64	0.49
1:13:232:G:H1'	1:13:262:A:N1	2.27	0.49
24:14:248:G:OP1	57:14:3925:HOH:O	2.19	0.49
24:1H:897:C:H2'	24:1H:898:C:C6	2.47	0.49
27:19:37:LEU:HA	27:19:38:LYS:CG	2.38	0.49
47:F5:85:LEU:HD12	47:F5:88:LYS:HG3	1.94	0.49
10:1A:39:PRO:HA	10:1A:70:ARG:HE	1.76	0.49
24:14:1536:A:H5''	24:14:1537:C:C6	2.47	0.49
29:39:20:LEU:HD13	29:39:199:TRP:HH2	1.77	0.49
25:16:80:U:H2'	25:16:81:G:N2	2.26	0.49
24:14:1885:A:H2'	24:14:1886:C:O4'	2.12	0.49
5:42:7:GLU:O	5:42:34:VAL:HA	2.12	0.49
24:1H:969:U:P	49:L8:17:LYS:HZ3	2.34	0.49
24:14:2341:G:H2'	24:14:2342:C:C6	2.47	0.49
24:14:38:A:H2'	24:14:39:C:C6	2.47	0.49
1:13:872:A:C5	1:13:874:G:C8	3.00	0.49
1:1G:33:A:N3	12:3A:32:PHE:HE2	2.09	0.49
4:32:178:VAL:C	4:32:180:GLY:H	2.14	0.49
45:D5:17:ALA:HA	45:D5:20:ARG:HD2	1.93	0.49
1:1G:922:G:N3	1:1G:1398:A:H2	2.10	0.49
27:11:134:ARG:HG3	27:11:135:PHE:CE1	2.47	0.49
24:14:661:C:O2'	35:35:13:ASN:O	2.27	0.49
24:14:1967:C:H2'	24:14:1968:G:O4'	2.11	0.49
54:Q8:28:GLY:HA3	54:Q8:44:LYS:HD3	1.95	0.49
24:1H:189:G:H2'	24:1H:205:G:N2	2.26	0.49
27:19:49:ILE:HD11	27:19:52:ARG:HA	1.92	0.49
24:1H:1505:C:H2'	24:1H:1506:C:H6	1.77	0.49
36:45:75:THR:HA	36:45:90:VAL:H	1.76	0.49
41:95:35:LEU:C	41:95:37:VAL:N	2.65	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:16:40:U:O4	50:M8:1:MET:N	2.41	0.49
24:1H:2057:A:P	57:1H:3616:HOH:O	2.66	0.49
1:1G:1243:C:OP1	21:1B:8:THR:HG21	2.12	0.49
24:1H:448:U:O4	24:1H:583:G:H1'	2.12	0.49
24:14:2445:G:OP1	29:39:74:ARG:NH2	2.40	0.49
24:14:2262:U:H4'	24:14:2328:A:C2	2.46	0.49
38:A8:24:LEU:HD12	38:A8:41:ASP:HB2	1.94	0.49
24:14:2053:G:H5'	28:29:144:ARG:O	2.12	0.49
24:1H:699:A:H2'	24:1H:700:G:O4'	2.12	0.49
1:13:1134:G:N2	1:13:1140:C:N3	2.41	0.49
1:1G:1410:G:H2'	1:1G:1411:C:C6	2.47	0.49
27:19:181:GLU:HA	27:19:272:ALA:HB1	1.94	0.49
9:82:73:GLN:O	9:82:77:ILE:HG23	2.12	0.49
5:4E:78:HIS:CD2	8:7E:104:ARG:HD3	2.47	0.49
29:31:152:GLU:OE1	29:31:191:ARG:HD2	2.13	0.49
24:1H:1064:C:O2	24:1H:1076:C:O2'	2.29	0.49
1:13:649:G:H2'	1:13:650:G:H8	1.76	0.49
7:6E:50:ILE:HG21	7:6E:58:PRO:HA	1.94	0.49
29:31:12:LEU:O	29:31:127:GLU:N	2.45	0.49
20:BA:67:ALA:HA	20:BA:73:HIS:H	1.75	0.49
24:14:2562:U:H1'	34:25:23:ARG:NH1	2.27	0.49
24:1H:302:C:H2'	24:1H:303:U:H6	1.76	0.49
34:68:10:VAL:HG11	34:68:16:ALA:HB3	1.94	0.49
24:14:654(J):A:OP2	24:14:654(M):C:N4	2.45	0.49
24:14:522:G:H2'	24:14:523:C:C6	2.48	0.49
22:3K:83:C:H4'	47:J8:23:LYS:HE2	1.94	0.49
8:7E:129:VAL:HG23	8:7E:130:GLY:H	1.77	0.49
39:B8:52:ILE:HG23	39:B8:61:PHE:HB3	1.93	0.49
24:14:2079:U:OP1	47:F5:21:ARG:NH1	2.36	0.49
24:14:221:A:N6	24:14:265:A:C8	2.80	0.49
25:1J:44:G:H1'	25:1J:47:C:N4	2.26	0.49
4:32:134:ASP:N	4:32:134:ASP:OD1	2.44	0.49
28:29:96:PHE:HD2	28:29:182:LEU:HD21	1.77	0.49
24:14:1607:C:H4'	24:14:1608:A:O5'	2.11	0.49
24:1H:2260:C:C2'	24:1H:2261:C:H5'	2.43	0.49
30:41:165:THR:OG1	30:41:168:GLU:HG3	2.13	0.49
1:13:1255:G:O6	10:1I:43:ARG:NH2	2.34	0.49
24:1H:2005:A:H5''	24:1H:2006:C:OP2	2.12	0.49
22:3L:18:G:H4'	22:3L:19:C:O5'	2.12	0.49
4:3E:13:ARG:C	4:3E:15:GLU:H	2.15	0.49
24:14:2784:C:H1'	28:29:37:ARG:NH1	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2137:C:N4	24:1H:2154:G:H1	2.09	0.49
32:69:77:LEU:HD12	32:69:78:THR:H	1.77	0.49
24:14:2462:U:H2'	24:14:2463:C:C6	2.48	0.49
31:51:4:ILE:HD12	31:51:6:ARG:NH2	2.27	0.49
24:14:655:A:H5'	24:14:656:G:OP2	2.12	0.49
22:2L:71:C:O2'	22:2L:72:U:P	2.70	0.49
5:42:80:ILE:HD13	5:42:138:ALA:HB1	1.93	0.49
27:11:18:VAL:HG12	27:11:19:ALA:N	2.26	0.49
48:K8:33:MET:HG2	48:K8:37:PHE:CD1	2.47	0.49
24:1H:2352:A:C4	24:1H:2366:A:C2	3.00	0.49
24:14:71:A:H2	43:B5:31:HIS:HE2	1.57	0.49
22:3K:33:C:N4	22:3K:34:U:O4	2.44	0.49
24:14:2098:U:H2'	24:14:2099:U:C6	2.48	0.49
24:1H:302:C:H2'	24:1H:303:U:C6	2.48	0.49
1:1G:792:A:H4'	1:1G:793:U:O5'	2.12	0.49
24:1H:637:A:H2'	35:78:117:GLU:OE1	2.13	0.49
24:1H:1357:U:OP2	57:1H:3958:HOH:O	2.19	0.49
29:31:50:SER:OG	29:31:51:THR:N	2.43	0.49
24:14:1298:C:H5''	24:14:1299:G:OP2	2.12	0.49
45:H8:30:ASN:HA	45:H8:89:PHE:HE1	1.78	0.49
2:12:87:ARG:NH1	2:12:220:ASP:OD1	2.39	0.49
45:H8:44:PHE:O	45:H8:47:VAL:HG13	2.12	0.49
1:1G:380:G:C2	1:1G:384:G:C6	3.00	0.49
2:12:83:MET:HG3	2:12:234:PRO:O	2.12	0.49
30:49:75:LYS:HA	30:49:84:LYS:HE2	1.94	0.49
1:1G:868:C:H2'	1:1G:869:G:O4'	2.12	0.49
24:14:1146:C:H2'	24:14:1147:C:H6	1.75	0.49
1:1G:782:A:H2'	1:1G:783:C:O4'	2.12	0.49
4:32:75:PHE:CE1	4:32:93:PHE:HZ	2.30	0.49
24:1H:415:A:H2'	24:1H:416:C:C6	2.47	0.49
22:2L:62:G:H2'	22:2L:63:5MU:OP1	2.12	0.49
22:2K:64:PSU:OP2	22:2K:64:PSU:H2'	2.12	0.49
24:1H:2173:A:H3'	24:1H:2174:C:H6	1.77	0.49
1:13:129(A):G:C2	1:13:188:U:O2'	2.65	0.49
24:1H:1021:A:C3'	24:1H:1021:A:C8	2.95	0.49
24:1H:1141:U:OP2	33:58:63:THR:OG1	2.31	0.49
27:11:25:THR:O	27:11:26:LYS:O	2.30	0.49
39:B8:23:ARG:HG3	39:B8:120:ARG:NH1	2.27	0.49
24:14:2065:C:H2'	24:14:2066:C:C6	2.47	0.49
36:45:21:THR:C	36:45:23:GLY:N	2.66	0.49
1:1G:1036:G:H3'	1:1G:1037:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:19:70:TRP:C	27:19:70:TRP:CD1	2.86	0.49
24:1H:2133:G:O2'	24:1H:2158:A:N6	2.45	0.49
24:1H:997:G:H2'	24:1H:998:C:H5'	1.94	0.49
24:1H:2259:G:H1'	24:1H:2427:C:C2	2.47	0.49
1:1G:321:A:C8	1:1G:328:C:C6	2.99	0.49
24:14:218:A:C2	24:14:235:U:H4'	2.47	0.49
41:95:44:LYS:C	41:95:46:VAL:N	2.65	0.49
39:B8:16:ARG:HE	39:B8:19:LEU:HD21	1.77	0.49
45:H8:126:VAL:HG12	45:H8:163:LEU:HA	1.93	0.49
1:1G:1301:U:O2	1:1G:1301:U:H2'	2.11	0.49
24:1H:1291:C:H2'	24:1H:1292:U:C6	2.47	0.49
1:13:826:C:H4'	8:7E:12:ARG:HG3	1.94	0.49
3:2E:77:ILE:HG12	3:2E:84:ILE:HD12	1.94	0.49
1:13:1387:G:H2'	1:13:1388:C:H6	1.77	0.49
50:I5:58:ARG:NH2	50:I5:61:ARG:HB3	2.27	0.49
24:1H:270(T):G:C6	24:1H:270(U):C:C4	3.00	0.49
19:AI:53:ASN:O	19:AI:77:THR:HG22	2.12	0.49
43:B5:55:ASN:HB2	43:B5:80:ILE:HG23	1.93	0.49
30:49:97:ASP:HA	30:49:100:TRP:HD1	1.76	0.49
24:14:2745:C:H4'	31:59:142:GLY:O	2.11	0.49
24:1H:252:G:P	35:78:50:ARG:HH12	2.35	0.49
24:1H:2286:A:H2'	52:O8:31:PRO:HD3	1.95	0.49
38:65:106:ARG:HA	38:65:110:LEU:HD11	1.94	0.49
24:1H:2171:A:H2'	24:1H:2172:U:O4'	2.12	0.49
46:E5:12:ASN:HA	46:E5:14:ARG:NH2	2.27	0.49
46:E5:50:ASN:C	46:E5:62:LEU:HD12	2.33	0.49
46:I8:50:ASN:HB3	46:I8:63:VAL:HG22	1.94	0.49
24:14:240:G:H1'	24:14:257:A:N6	2.28	0.49
28:21:14:ILE:CG2	28:21:21:VAL:HB	2.42	0.49
24:1H:1417:C:H2'	24:1H:1418:G:O4'	2.13	0.49
17:8A:62:SER:OG	17:8A:72:ARG:HG3	2.12	0.49
1:1G:522:C:OP2	12:3A:69:TYR:OH	2.22	0.49
29:31:29:ASN:H	29:31:112:MET:CE	2.25	0.49
24:1H:2666:C:H3'	24:1H:2667:C:H6	1.77	0.49
35:35:101:VAL:HG23	35:35:106:LEU:HD23	1.93	0.49
24:14:815:C:H2'	24:14:816:C:C6	2.48	0.49
1:13:22:G:H2'	1:13:23:C:C6	2.48	0.49
1:13:828:A:H2'	1:13:829:G:O4'	2.12	0.49
32:61:125:GLU:OE2	32:61:141:LYS:HB3	2.12	0.49
24:14:195:A:H61	24:14:198:C:H3'	1.77	0.49
1:13:448:A:P	1:13:485:G:H22	2.36	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2507:C:H5'	24:1H:2573:C:N4	2.28	0.49
8:7E:116:LYS:HG3	8:7E:127:LEU:HD22	1.95	0.49
7:6E:130:GLY:O	7:6E:135:VAL:HG11	2.13	0.49
24:14:1489:U:O3'	24:14:1490:A:H8	1.95	0.49
1:1G:938:A:C6	1:1G:939:G:C5	3.01	0.49
24:14:2615:U:C2	51:J5:7:PRO:HA	2.47	0.49
3:2E:130:VAL:O	3:2E:134:ILE:HG12	2.13	0.49
7:6E:26:PHE:CE2	7:6E:30:ILE:HD11	2.46	0.49
13:4I:32:GLU:OE1	13:4I:36:LYS:HG3	2.13	0.49
24:1H:314:A:C2'	24:1H:315:G:H5'	2.43	0.49
24:14:1454:U:O2	37:55:60:LEU:HD11	2.13	0.49
1:13:1374:A:C5	1:13:1375:A:C8	3.00	0.49
24:1H:2306:C:H3'	24:1H:2307:G:C5'	2.43	0.49
31:59:52:VAL:HG12	31:59:69:ARG:HB2	1.94	0.49
24:14:2250:G:C5	36:45:83:MET:HB3	2.48	0.49
5:42:137:GLU:HG2	5:42:140:ARG:HH11	1.78	0.49
24:1H:2263:C:H2'	24:1H:2264:C:H6	1.76	0.49
8:7E:21:LYS:O	8:7E:65:TYR:OH	2.29	0.49
24:14:2757:A:C2	31:59:67:LEU:HD11	2.47	0.49
24:1H:2438:U:O3'	24:1H:2439:A:H3'	2.13	0.49
8:72:86:ILE:HG13	8:72:133:LEU:HD22	1.94	0.49
10:1I:4:ILE:O	10:1I:74:ILE:HG12	2.12	0.49
1:1G:539:A:H2'	1:1G:540:G:C8	2.47	0.49
24:14:2183:C:H2'	24:14:2184:G:C8	2.47	0.49
1:13:1307:U:H2'	1:13:1308:U:C6	2.47	0.49
20:BA:54:LYS:HA	20:BA:57:ARG:NH2	2.27	0.49
24:14:337:C:H2'	24:14:338:G:O4'	2.12	0.49
24:14:2646:C:H2'	24:14:2647:U:O4'	2.13	0.49
1:1G:116:A:H61	1:1G:313:A:H1'	1.77	0.49
39:B8:1:MET:O	39:B8:3:ARG:N	2.46	0.49
35:35:100:LEU:HD12	35:35:112:LEU:HD11	1.94	0.49
1:1G:791:G:C5	1:1G:792:A:N7	2.81	0.49
24:14:265:A:C8	24:14:266:G:H1'	2.48	0.49
40:85:17:ILE:HG23	40:85:39:LEU:HD12	1.94	0.49
21:1B:2:GLY:O	21:1B:4:GLY:N	2.46	0.49
24:1H:2102:U:H2'	24:1H:2103:C:C6	2.47	0.49
16:7A:5:ARG:NH1	16:7A:22:THR:HG21	2.26	0.49
3:22:120:VAL:O	3:22:123:GLN:N	2.45	0.49
1:1G:933:G:O6	7:62:3:ARG:NH2	2.46	0.49
1:13:1394:A:C5	1:13:1501:C:H4'	2.48	0.49
1:13:522:C:H2'	1:13:523:A:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:337:C:H2'	1:1G:338:A:C8	2.47	0.49
28:29:178:GLU:OE1	28:29:178:GLU:N	2.39	0.49
1:1G:896:C:H5'	17:8A:100:LYS:HG2	1.95	0.49
24:1H:1889:A:H2'	24:1H:1890:A:C8	2.47	0.49
24:14:2659:G:O2'	24:14:2661:G:N7	2.35	0.49
27:19:210:GLY:O	27:19:213:ARG:HB2	2.12	0.49
24:1H:705:A:C8	24:1H:727:A:C2	3.01	0.49
20:BI:26:ASN:HB2	20:BI:71:THR:HG23	1.95	0.49
1:13:427:U:H3'	1:13:428:G:H2'	1.94	0.49
24:14:67:U:N3	24:14:74:A:H2	2.02	0.49
9:8E:16:ARG:HB2	9:8E:64:THR:HG23	1.94	0.49
24:14:1112:G:H5'	31:59:3:ARG:HD3	1.95	0.49
2:1E:14:GLY:H	2:1E:16:HIS:HE1	1.58	0.49
24:1H:910:A:N6	36:88:12:GLN:HA	2.23	0.49
25:1J:40:U:H1'	25:1J:46:A:N1	2.28	0.49
24:1H:2277:G:C6	24:1H:2278:A:N7	2.80	0.49
36:88:43:THR:HB	36:88:45:GLN:HG2	1.95	0.49
7:6E:111:ARG:HB3	7:6E:113:GLU:OE2	2.13	0.49
25:16:24:G:O6	25:16:56:G:O2'	2.28	0.49
1:13:713:G:H2'	1:13:714:G:C8	2.48	0.49
25:1J:89:G:C6	25:1J:89(A):A:C6	3.01	0.49
24:14:1531:C:N3	24:14:1540:G:N2	2.48	0.49
13:4A:29:ARG:HD3	13:4A:64:TRP:CZ2	2.47	0.49
24:1H:1681:G:H21	24:1H:1762:A:H3'	1.76	0.49
6:52:69:GLU:CD	6:52:69:GLU:H	2.16	0.49
1:1G:1014:A:P	1:1G:1014:A:H8	2.36	0.49
26:79:13:LYS:HD2	26:79:32:LEU:HD23	1.95	0.49
1:1G:427:U:H3'	1:1G:428:G:H2'	1.93	0.49
4:3E:107:ARG:HH22	4:3E:194:LEU:CD2	2.26	0.49
1:1G:328:C:H4'	1:1G:329:A:C5'	2.43	0.49
24:14:2744:G:N2	31:59:143:GLN:OE1	2.46	0.49
19:AA:80:TYR:CZ	19:AA:82:GLY:HA2	2.47	0.49
24:14:1149:G:H2'	24:14:1150:C:H6	1.75	0.49
8:7E:6:ILE:O	8:7E:10:LEU:HG	2.12	0.49
24:14:71:A:H4'	24:14:72:U:H5''	1.93	0.49
24:14:126:A:O5'	53:L5:19:ARG:HG3	2.13	0.49
24:1H:2572:A:N7	28:21:145:LYS:HB2	2.28	0.49
43:F8:53:LYS:HG2	43:F8:82:GLN:HB2	1.94	0.49
42:E8:29:LEU:HG	42:E8:29:LEU:O	2.11	0.49
7:62:91:VAL:HB	7:62:96:GLN:HG2	1.94	0.49
24:1H:1972:A:H2'	24:1H:1973:G:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1181:C:H2'	24:14:1182:A:H8	1.77	0.49
24:1H:710:G:H2'	24:1H:711:G:H8	1.78	0.49
24:1H:272:G:H2'	24:1H:273:G:C8	2.48	0.49
24:14:1945:G:H2'	24:14:1946:U:C6	2.48	0.49
17:8I:29:HIS:O	17:8I:33:GLY:N	2.36	0.49
31:59:125:VAL:HG12	31:59:127:GLU:H	1.77	0.49
1:13:613:C:O3'	4:3E:86:LYS:NZ	2.45	0.49
28:29:81:ILE:HG22	28:29:81:ILE:O	2.12	0.49
10:1A:35:SER:OG	10:1A:73:ASP:HB2	2.13	0.49
24:1H:1204:A:C2	24:1H:1241:A:N1	2.81	0.49
34:25:8:LEU:HD13	34:25:82:ASN:HB2	1.95	0.49
24:1H:1434:A:H61	24:1H:1558:A:H62	1.58	0.49
22:2L:63:5MU:H2'	22:2L:64:PSU:H5''	1.93	0.49
24:14:1331:A:O2'	24:14:1332:G:C8	2.65	0.49
1:1G:1128:C:H4'	9:82:16:ARG:NH1	2.28	0.49
43:B5:60:ARG:HH21	53:L5:47:ARG:NH2	2.07	0.49
22:2K:17:OMG:H1'	22:2K:66:G:N2	2.28	0.49
35:35:52:GLU:HB2	35:35:55:ARG:HD2	1.95	0.49
28:29:46:ALA:HB1	28:29:82:ARG:H	1.78	0.49
22:2L:8:4SU:H6	22:2L:8:4SU:C5'	2.38	0.49
1:1G:814:A:N7	1:1G:816:A:C4	2.80	0.49
42:E8:88:ARG:HD3	42:E8:94:ASP:OD2	2.13	0.49
24:1H:2327:A:H2'	24:1H:2328:A:H8	1.71	0.49
24:1H:2485:G:H5''	36:88:46:GLN:NE2	2.24	0.49
1:13:1003:G:H2'	1:13:1004:A:O3'	2.13	0.49
24:14:2458:G:O2'	24:14:2460:U:O4	2.29	0.49
47:F5:83:GLU:OE1	47:F5:85:LEU:HB2	2.13	0.49
29:31:65:TRP:CZ3	29:31:73:ALA:O	2.63	0.49
30:41:109:VAL:O	30:41:113:ARG:HG3	2.13	0.49
36:88:74:TYR:O	36:88:90:VAL:O	2.31	0.49
1:13:1074:G:O2'	1:13:1101:A:N1	2.38	0.49
45:D5:99:TYR:HA	45:D5:124:ILE:O	2.13	0.49
24:14:868:U:C2	24:14:869:G:C8	3.01	0.49
25:1J:102:G:N2	45:D5:73:GLN:OE1	2.37	0.49
24:14:673:C:H5''	29:39:81:PRO:HD2	1.94	0.49
24:14:1505:C:H2'	24:14:1506:C:C6	2.47	0.49
24:1H:1545(A):A:H2'	24:1H:1546:C:O4'	2.12	0.49
44:C5:8:LYS:HG2	44:C5:9:LYS:H	1.77	0.49
24:14:75:G:H4'	48:G5:55:ARG:NH2	2.28	0.49
24:1H:2123:G:H3'	24:1H:2124:G:H8	1.77	0.49
1:1G:843:U:C5	1:1G:848:C:H1'	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:7A:20:VAL:HG21	16:7A:32:TYR:CD2	2.48	0.49
30:41:63:ILE:HB	30:41:141:PHE:CD2	2.47	0.49
4:3E:88:VAL:C	4:3E:90:GLY:H	2.16	0.49
1:13:1513:A:H2'	1:13:1514:C:C6	2.48	0.49
24:14:2831:G:OP1	28:29:58:ARG:NH1	2.42	0.49
4:3E:134:ASP:O	4:3E:136:PRO:HD3	2.12	0.49
15:6A:15:PHE:CZ	15:6A:84:LYS:HG2	2.48	0.49
27:11:10:THR:OG1	27:11:13:ARG:HB2	2.13	0.49
54:Q8:54:GLU:OE1	54:Q8:54:GLU:N	2.45	0.49
4:32:33:MET:C	4:32:35:ARG:N	2.65	0.49
24:1H:2032:G:C8	57:1H:3676:HOH:O	2.60	0.49
1:13:509:A:H3'	57:13:1811:HOH:O	2.12	0.49
24:1H:2126:A:N6	24:1H:2172:U:OP1	2.46	0.49
24:1H:1359:A:N1	24:1H:1372:U:C4	2.80	0.49
24:1H:1021:A:O2'	24:1H:1123:C:OP1	2.20	0.49
24:1H:1124:C:H2'	24:1H:1125:G:O4'	2.13	0.49
1:13:328:C:H4'	1:13:329:A:H5'	1.94	0.49
24:1H:619:G:H3'	24:1H:620:G:N2	2.27	0.49
1:13:587:G:C2	1:13:755:G:C5	3.01	0.49
46:I8:53:MET:HG3	46:I8:59:LEU:CD2	2.43	0.49
2:1E:220:ASP:HA	2:1E:223:ILE:HD12	1.94	0.49
1:1G:300:A:H2'	1:1G:301:G:O4'	2.13	0.49
24:14:558:G:OP2	33:15:111:PRO:HD2	2.13	0.49
1:1G:491:G:H2'	1:1G:492:G:O4'	2.13	0.49
25:16:94:C:H2'	25:16:95:U:H6	1.78	0.49
24:1H:2175:C:H1'	26:71:217:THR:O	2.13	0.49
9:82:77:ILE:O	9:82:81:ILE:HG23	2.12	0.49
24:14:2132:U:H3	26:79:8:ARG:HH21	1.60	0.49
30:49:138:GLN:OE1	30:49:153:ARG:N	2.39	0.49
24:1H:937:U:H2'	24:1H:938:G:O4'	2.13	0.49
2:12:77:ALA:O	2:12:81:VAL:HG23	2.13	0.49
1:1G:582:U:H5''	15:6A:64:ARG:NH2	2.28	0.49
24:1H:185:U:H2'	24:1H:186:G:C8	2.47	0.49
45:D5:17:ALA:O	45:D5:20:ARG:HB2	2.13	0.49
31:51:153:LYS:H	31:51:153:LYS:HD2	1.78	0.49
24:14:2113:U:C5	24:14:2114:A:H1'	2.48	0.49
1:13:960:U:C4	1:13:1225:A:H1'	2.46	0.49
1:13:1339:A:H2'	1:13:1340:A:O4'	2.12	0.49
24:1H:500:G:N1	24:1H:503:A:OP2	2.45	0.49
6:5E:5:GLU:HG3	6:5E:93:SER:OG	2.13	0.49
9:8E:25:LYS:N	9:8E:60:ASP:OD1	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1374:A:H2'	1:1G:1375:A:H5'	1.95	0.49
4:32:26:CYS:HA	4:32:31:CYS:HB3	1.95	0.49
22:3L:13:G:H2'	22:3L:14:A:H8	1.78	0.49
24:1H:845:G:H21	24:1H:933:A:H62	1.60	0.49
24:14:1542:G:O5'	24:14:1543:A:H5''	2.13	0.49
2:12:5:ILE:HD12	2:12:56:ARG:HH22	1.78	0.49
34:68:85:VAL:HG11	34:68:114:ILE:HD13	1.95	0.49
24:14:1050:A:O2'	24:14:2752:C:H1'	2.13	0.49
24:14:1106:G:H3'	24:14:1107:G:H8	1.78	0.49
24:1H:1899:G:O2'	24:1H:1900:A:P	2.71	0.49
25:16:73:A:H2'	25:16:74:U:O4'	2.13	0.49
1:1G:433:C:H2'	1:1G:434:U:H6	1.78	0.49
35:35:30:THR:CG2	35:35:35:HIS:H	2.26	0.49
1:13:475:G:H2'	1:13:476:G:O4'	2.13	0.49
24:14:849:A:H5''	24:14:850:C:OP2	2.12	0.49
13:4I:15:VAL:O	13:4I:19:LEU:HD13	2.13	0.49
1:1G:1075:C:O3'	2:12:175:ARG:NH1	2.39	0.49
50:15:58:ARG:HH12	50:15:62:ARG:HB2	1.78	0.49
7:6E:26:PHE:O	7:6E:30:ILE:HG13	2.12	0.49
45:D5:14:LYS:HA	45:D5:15:PRO:HD3	1.69	0.49
1:13:572:A:N3	1:13:917:G:H1'	2.28	0.49
27:11:94:LEU:HD22	27:11:95:LEU:N	2.27	0.49
40:85:28:ARG:HD3	40:85:38:THR:OG1	2.12	0.49
24:14:2503:A:H4'	24:14:2504:U:OP1	2.12	0.49
25:1J:20:C:H42	25:1J:63:G:H1	1.60	0.49
27:11:232:PRO:HB3	27:11:244:ARG:CZ	2.43	0.49
32:69:38:LEU:HB3	32:69:40:THR:HG22	1.95	0.49
12:3I:10:LEU:HD22	17:8I:32:TYR:CE1	2.48	0.49
1:13:562:C:H1'	12:3I:15:ARG:HB3	1.94	0.49
2:1E:237:ALA:O	2:1E:239:VAL:N	2.45	0.49
24:14:414:C:O2'	24:14:415:A:H5'	2.12	0.49
2:1E:24:TRP:CZ3	2:1E:26:PRO:HA	2.47	0.49
1:1G:1508:G:H2'	1:1G:1509:C:O4'	2.13	0.49
1:13:823:G:H21	8:7E:1:MET:HE1	1.77	0.49
1:13:1349:A:H2'	1:13:1350:A:C8	2.48	0.48
1:13:703:G:H8	1:13:703:G:O5'	1.96	0.48
35:78:49:ARG:HG3	35:78:49:ARG:HH11	1.77	0.48
1:1G:1505:G:H1'	23:4L:13:A:C2	2.48	0.48
24:14:1614:A:H62	42:A5:93:ALA:HB2	1.78	0.48
1:1G:438:G:OP1	4:32:125:HIS:HE1	1.96	0.48
1:1G:485:G:O2'	1:1G:486:U:O5'	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1728:G:O6	24:14:1730:U:H5'	2.13	0.48
2:1E:15:VAL:HG22	2:1E:209:ARG:HB2	1.95	0.48
24:14:1416:G:O2'	24:14:1417:C:C6	2.66	0.48
4:32:139:ARG:HH11	4:32:139:ARG:CG	2.24	0.48
24:1H:1429:G:H2'	24:1H:1430:C:C6	2.48	0.48
24:14:2720:U:N3	24:14:2873:A:C2	2.69	0.48
47:F5:84:GLY:O	47:F5:87:PRO:HD2	2.13	0.48
24:1H:2791:C:H2'	24:1H:2792:G:C8	2.45	0.48
27:11:69:ARG:HH11	27:11:69:ARG:HG3	1.77	0.48
1:13:373:A:C2	1:13:374:A:C8	3.00	0.48
24:1H:654(G):C:N4	24:1H:654(L):G:OP2	2.45	0.48
35:78:52:GLU:HG2	35:78:57:THR:HG22	1.94	0.48
24:1H:2850:A:C2	24:1H:2851:A:C4	3.01	0.48
1:13:448:A:H2'	1:13:449:C:O2	2.13	0.48
24:14:2112:G:H2'	24:14:2113:U:H5	1.77	0.48
49:H5:26:LEU:HD21	49:H5:46:ASN:HB2	1.94	0.48
22:3K:17:OMG:H2'	22:3K:66:G:N2	2.27	0.48
24:14:1848:A:H2'	24:14:1849:G:C8	2.48	0.48
3:2E:57:ILE:HG12	3:2E:66:VAL:HG13	1.94	0.48
22:3L:80:C:H2'	22:3L:81:C:H6	1.77	0.48
12:3I:28:LYS:HB2	12:3I:33:ARG:HH11	1.78	0.48
1:13:160:A:H1'	1:13:344:A:C5	2.48	0.48
24:1H:1224:G:OP2	41:D8:66:ARG:NH2	2.46	0.48
48:K8:48:HIS:O	48:K8:52:ASP:HB2	2.13	0.48
14:5I:24:CYS:SG	14:5I:27:CYS:HB2	2.52	0.48
24:1H:2370:G:N3	52:O8:45:LYS:NZ	2.61	0.48
4:3E:33:MET:HG3	4:3E:37:PRO:HA	1.95	0.48
45:H8:137:ILE:HG21	45:H8:155:LEU:HD13	1.94	0.48
37:98:101:ALA:HA	51:N8:44:THR:HG21	1.95	0.48
1:13:1118:C:H1'	1:13:1179:A:C4	2.48	0.48
3:22:9:GLY:HA3	14:5A:49:HIS:HA	1.95	0.48
1:13:1004:A:O2'	1:13:1036:G:O6	2.29	0.48
1:13:877:C:H5''	8:7E:88:LYS:HD3	1.95	0.48
45:D5:152:ALA:HB2	45:D5:169:GLU:O	2.13	0.48
24:14:1778:U:P	57:14:3741:HOH:O	2.70	0.48
46:E5:27:GLU:HB2	46:E5:69:PHE:CD1	2.47	0.48
44:G8:55:TYR:CE2	44:G8:61:ILE:HD11	2.49	0.48
32:69:90:GLY:O	32:69:121:LYS:HD2	2.13	0.48
4:3E:108:LEU:CD1	4:3E:174:LEU:HD13	2.43	0.48
24:14:972:G:H3'	24:14:973:A:H2'	1.95	0.48
1:13:1284:C:H3'	1:13:1285:A:C8	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:82:26:VAL:HG13	9:82:61:ALA:HB3	1.95	0.48
49:L8:6:VAL:HB	49:L8:54:VAL:HG21	1.94	0.48
24:14:1459:G:H5''	24:14:1460:A:OP2	2.13	0.48
1:13:256:U:H2'	1:13:257:G:C8	2.48	0.48
24:14:832:G:H5'	35:35:45:LEU:HD11	1.94	0.48
22:3K:51:C:C5	22:3K:52:G:H1'	2.48	0.48
30:49:143:GLU:HA	50:I5:28:LYS:HD2	1.94	0.48
24:1H:557:U:C2	24:1H:558:G:C8	3.00	0.48
34:68:7:TYR:CE1	34:68:20:MET:HB2	2.48	0.48
6:5E:89:MET:HG2	6:5E:91:VAL:HG23	1.96	0.48
24:1H:718:A:H3'	24:1H:719:C:H6	1.77	0.48
11:2A:84:VAL:HG21	11:2A:95:ILE:HD11	1.95	0.48
1:1G:392:G:H2'	1:1G:393:A:C8	2.48	0.48
12:3A:109:GLY:HA3	12:3A:121:GLY:O	2.14	0.48
1:1G:1349:A:H2'	1:1G:1350:A:O4'	2.13	0.48
44:G8:78:ALA:HB3	44:G8:79:CYS:SG	2.53	0.48
1:13:134:A:H1'	1:13:325:A:C5	2.48	0.48
24:14:2075:U:C4	24:14:2238:G:C6	3.01	0.48
44:G8:89:PHE:HD1	44:G8:90:LEU:N	2.12	0.48
24:14:1230:C:H2'	24:14:1231:G:C8	2.48	0.48
41:95:2:PHE:H	41:95:42:GLY:HA3	1.78	0.48
11:2I:46:GLY:HA2	11:2I:50:TYR:O	2.13	0.48
33:58:14:VAL:HG13	33:58:137:LYS:HG2	1.95	0.48
9:82:27:THR:OG1	9:82:32:ASP:HA	2.13	0.48
40:C8:5:LYS:NZ	40:C8:5:LYS:HB2	2.28	0.48
5:42:152:ARG:HB3	8:72:43:GLY:HA3	1.95	0.48
24:1H:1278:A:OP1	37:98:36:THR:HG22	2.12	0.48
41:95:56:SER:O	41:95:100:ARG:N	2.46	0.48
4:32:119:GLN:HG2	4:32:123:HIS:CD2	2.47	0.48
24:14:2377:A:O3'	38:65:111:GLU:HG2	2.14	0.48
44:G8:28:LYS:CE	44:G8:40:GLU:HB2	2.43	0.48
33:15:42:TRP:HA	33:15:48:MET:SD	2.54	0.48
24:1H:2864:G:H2'	24:1H:2865:U:C6	2.48	0.48
3:22:25:GLY:H	3:22:28:GLN:NE2	2.11	0.48
1:13:411:A:C6	1:13:429:U:C4	3.01	0.48
24:1H:399:G:OP2	57:1H:3961:HOH:O	2.19	0.48
24:1H:1222:C:H2'	24:1H:1223:C:H6	1.78	0.48
15:6I:11:VAL:HG21	15:6I:34:LEU:HD13	1.95	0.48
24:1H:275:G:N7	24:1H:363:G:C2	2.81	0.48
25:1J:91:C:OP1	45:D5:79:ARG:NH2	2.47	0.48
1:1G:197:A:C6	1:1G:221:C:H4'	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:191:G:H1'	20:BI:105:SER:HA	1.94	0.48
24:14:973:A:H5'	24:14:1188:U:C1'	2.43	0.48
1:13:1253:G:H1	1:13:1284:C:H42	1.60	0.48
24:14:1491:G:O2'	27:19:101:GLU:HB2	2.13	0.48
1:13:355:C:O4'	1:13:388:G:O2'	2.26	0.48
52:K5:14:THR:HG21	52:K5:20:ASN:N	2.28	0.48
24:1H:768:G:C6	24:1H:769:G:C5	3.01	0.48
24:1H:556:G:H2'	24:1H:557:U:C6	2.48	0.48
1:13:928:G:C2	1:13:1390:U:O2	2.67	0.48
45:H8:27:VAL:HG22	45:H8:29:TYR:HD1	1.77	0.48
24:1H:2473:U:O2'	24:1H:2474:C:O4'	2.19	0.48
36:45:136:ALA:HB1	45:D5:48:PHE:CE1	2.49	0.48
24:14:2861:G:H2'	24:14:2862:G:H8	1.77	0.48
1:1G:1007:C:O2	1:1G:1022:G:N2	2.26	0.48
20:BA:42:GLN:O	20:BA:46:GLU:HG3	2.12	0.48
1:1G:1223:C:P	19:AA:78:ARG:HH22	2.35	0.48
29:31:6:VAL:HG12	29:31:7:TYR:N	2.29	0.48
24:1H:2371:G:O2'	52:O8:46:HIS:ND1	2.30	0.48
24:1H:2115:G:C6	24:1H:2117:A:H3'	2.48	0.48
24:14:1160:G:C6	24:14:1161:C:C4	3.02	0.48
24:1H:1359:A:C2	24:1H:1372:U:O4	2.67	0.48
1:13:130:A:OP2	17:8I:63:ARG:NE	2.36	0.48
24:1H:2290:G:C2	24:1H:2291:U:C2	3.01	0.48
24:14:1056:G:H5''	24:14:1057:A:H5'	1.95	0.48
24:1H:234:C:C2	24:1H:235:U:C5	3.02	0.48
7:6E:15:ASP:OD1	7:6E:44:TYR:OH	2.30	0.48
24:14:1197:G:H2'	24:14:1198:U:H6	1.77	0.48
1:1G:36:C:O2'	12:3A:117:ARG:NH2	2.45	0.48
44:G8:99:CYS:SG	44:G8:100:ALA:N	2.85	0.48
24:14:603:A:C8	24:14:604:G:H1'	2.47	0.48
1:1G:1095:U:H5''	1:1G:1109:C:O2	2.13	0.48
28:29:201:THR:HG22	28:29:202:LYS:N	2.27	0.48
1:1G:165:C:H2'	1:1G:166:G:H8	1.78	0.48
1:13:300:A:C5	1:13:301:G:H1'	2.48	0.48
30:49:41:GLN:O	30:49:43:LEU:HD22	2.14	0.48
38:65:24:LEU:HB2	38:65:85:VAL:HG12	1.96	0.48
24:1H:270(X):G:C6	24:1H:270(Y):G:C2	3.01	0.48
1:13:962:C:O2'	57:13:1873:HOH:O	2.20	0.48
24:14:2704:C:H2'	24:14:2705:A:C8	2.49	0.48
38:A8:83:LYS:NZ	38:A8:110:LEU:HB2	2.28	0.48
24:1H:50:U:H3'	24:1H:51:G:H5'	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:70:ILE:HD11	4:32:75:PHE:HD1	1.78	0.48
29:39:111:ALA:HB2	29:39:206:ILE:HG21	1.94	0.48
24:14:2224:G:H4'	24:14:2226:C:C2	2.48	0.48
43:B5:59:VAL:N	43:B5:76:ARG:O	2.45	0.48
24:1H:286:C:H2'	24:1H:287:C:H6	1.79	0.48
1:13:1082:G:H2'	1:13:1083:U:O4'	2.13	0.48
22:3K:79:A:H2'	22:3K:80:C:C6	2.48	0.48
24:1H:478:A:C6	24:1H:480:A:C6	3.01	0.48
24:14:403:U:H4'	24:14:404:C:H5'	1.95	0.48
20:BI:83:ARG:HA	20:BI:86:ARG:HB3	1.94	0.48
32:61:3:VAL:HG12	32:61:37:VAL:O	2.13	0.48
29:31:150:GLY:HA2	29:31:172:TRP:CE3	2.49	0.48
20:BI:75:ASN:N	20:BI:75:ASN:OD1	2.45	0.48
47:J8:78:LYS:HD2	47:J8:79:GLY:N	2.28	0.48
1:1G:526:C:C5	1:1G:527:G:H1'	2.48	0.48
24:14:631:A:H2'	24:14:632:A:O4'	2.13	0.48
1:13:1192:C:OP2	3:2E:4:LYS:NZ	2.43	0.48
27:11:182:LEU:N	27:11:272:ALA:HB3	2.17	0.48
24:14:2893:G:H4'	24:14:2894:G:O5'	2.14	0.48
1:1G:1321:C:H3'	1:1G:1322:C:H5''	1.96	0.48
22:2L:15:G:N2	22:2L:57:C:H41	2.09	0.48
24:1H:1473:G:H2'	24:1H:1474:C:O4'	2.14	0.48
25:1J:8:U:O3'	38:65:25:ARG:NH2	2.46	0.48
24:1H:2298:A:H2'	24:1H:2299:G:O4'	2.14	0.48
54:M5:40:GLU:N	54:M5:43:GLN:HG3	2.27	0.48
1:13:742:G:OP2	15:6I:35:ARG:NH2	2.45	0.48
36:45:20:ALA:HB2	45:D5:79:ARG:CZ	2.43	0.48
1:1G:1025:U:H2'	1:1G:1026:G:C8	2.49	0.48
24:1H:1833:U:O2'	24:1H:1969:A:N1	2.39	0.48
22:2K:23:A:H2'	22:2K:24:G:O4'	2.12	0.48
22:2K:24:G:H2'	22:2K:25:G:H5''	1.95	0.48
24:1H:638:G:H2'	24:1H:639:U:O4'	2.13	0.48
30:41:12:TYR:HA	30:41:16:ARG:HG3	1.95	0.48
22:2L:71:C:H1'	22:2L:72:U:OP2	2.13	0.48
27:11:66:ASP:HB3	27:11:105:ILE:CD1	2.42	0.48
24:1H:1210:A:C8	24:1H:1210:A:H5'	2.47	0.48
2:1E:167:PRO:HG2	2:1E:192:SER:CB	2.43	0.48
24:14:948:G:C2	24:14:970:C:O2	2.67	0.48
40:C8:17:ILE:HG23	40:C8:39:LEU:HD12	1.96	0.48
1:13:625:G:C4	1:13:626:U:C5	3.02	0.48
25:16:2:C:H2'	25:16:3:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:983:A:H2	1:13:984:C:C6	2.31	0.48
24:14:869:G:N2	24:14:870:A:H1'	2.29	0.48
1:1G:661:G:C2	1:1G:662:G:C8	3.01	0.48
36:45:75:THR:HA	36:45:90:VAL:HA	1.95	0.48
32:61:88:ILE:HG22	32:61:90:GLY:H	1.78	0.48
24:14:1742:C:H5'	24:14:1743:G:OP2	2.14	0.48
24:1H:1547:C:H2'	24:1H:1548:C:C6	2.49	0.48
9:8E:83:ARG:O	9:8E:86:VAL:HG12	2.13	0.48
24:1H:2441:C:OP2	24:1H:2586:C:O2'	2.26	0.48
31:51:129:THR:OG1	31:51:129:THR:O	2.28	0.48
1:1G:1267:C:H2'	1:1G:1267:C:O2	2.13	0.48
39:75:74:ARG:HH11	39:75:74:ARG:HG2	1.78	0.48
24:1H:1517:G:H2'	24:1H:1518:C:C6	2.49	0.48
11:2A:85:ARG:HE	11:2A:111:ASP:HB3	1.78	0.48
41:95:35:LEU:HB2	41:95:37:VAL:CG1	2.44	0.48
20:BI:18:GLN:O	20:BI:22:ARG:HB2	2.14	0.48
29:39:122:LYS:HD2	29:39:191:ARG:HB3	1.96	0.48
22:2K:1:G:O2'	46:I8:6:GLY:HA2	2.12	0.48
6:5E:16:GLN:HA	6:5E:19:LEU:HB3	1.94	0.48
1:13:1128:C:HO2'	1:13:1130:A:H8	1.60	0.48
22:2L:57:C:C5	22:2L:68:A:H1'	2.49	0.48
25:1J:40:U:O4	50:I5:2:LYS:HA	2.13	0.48
1:13:1180:A:OP1	9:8E:103:THR:OG1	2.27	0.48
3:22:7:PRO:O	3:22:11:ARG:NH1	2.47	0.48
42:E8:18:ARG:NH1	42:E8:76:VAL:O	2.47	0.48
1:1G:1122:U:C2	1:1G:1123:A:C8	3.02	0.48
1:1G:1411:C:H2'	1:1G:1412:C:C6	2.48	0.48
1:1G:765:G:H5''	1:1G:766:A:OP1	2.13	0.48
27:19:11:PRO:C	27:19:13:ARG:H	2.16	0.48
24:1H:276:A:H2'	24:1H:277:C:H5''	1.96	0.48
24:14:1418:G:OP1	24:14:1588:C:O2'	2.31	0.48
35:78:52:GLU:HG3	35:78:57:THR:HG22	1.95	0.48
25:1J:60:C:H2'	25:1J:61:G:C8	2.48	0.48
24:14:1431:U:H2'	24:14:1432:C:C6	2.49	0.48
1:13:958:A:OP1	19:AI:79:THR:HG21	2.14	0.48
29:39:41:LEU:HG	29:39:41:LEU:H	1.47	0.48
24:14:1184:G:OP2	49:H5:30:ARG:NH2	2.46	0.48
1:13:1169:A:C6	1:13:1170:A:N1	2.82	0.48
46:E5:23:VAL:HA	46:E5:38:VAL:HG22	1.95	0.48
1:1G:791:G:C6	1:1G:792:A:N7	2.81	0.48
50:I5:58:ARG:HH21	50:I5:61:ARG:HB3	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1264:C:H2'	1:1G:1265:G:C8	2.48	0.48
24:14:284:U:H2'	24:14:285:C:C6	2.49	0.48
5:4E:153:LYS:HD2	5:4E:154:GLY:N	2.28	0.48
24:14:566:U:H5''	35:35:29:LYS:HE3	1.96	0.48
15:6I:56:LEU:O	15:6I:60:VAL:HG23	2.12	0.48
3:2E:149:ALA:HA	3:2E:201:TYR:O	2.13	0.48
24:1H:664:C:H4'	24:1H:941:A:OP1	2.13	0.48
24:14:2626:C:H2'	24:14:2627:G:O4'	2.14	0.48
24:14:2729:G:H2'	24:14:2730:C:C6	2.48	0.48
24:14:1153:C:H2'	24:14:1154:G:O4'	2.13	0.48
24:14:1952:A:H8	24:14:1952:A:O5'	1.97	0.48
31:51:97:ARG:HG2	31:51:98:LEU:H	1.77	0.48
24:14:270(H):C:O2'	47:F5:78:LYS:NZ	2.47	0.48
48:K8:15:LYS:H	48:K8:67:LYS:NZ	2.12	0.48
1:13:428:G:C8	1:13:430:A:C4	3.02	0.48
24:1H:1141:U:H4'	24:1H:1142(A):A:N9	2.28	0.48
1:13:1157:A:N3	1:13:1157:A:H2'	2.29	0.48
25:16:30:C:H2'	25:16:31:C:H5'	1.95	0.48
25:1J:87:G:H2'	25:1J:88:C:H5''	1.96	0.48
36:88:135:ASP:N	36:88:138:ASP:OD2	2.46	0.48
1:13:77:C:H2'	1:13:78:G:C8	2.49	0.48
24:1H:142:G:H2'	24:1H:143:C:H6	1.79	0.48
29:39:20:LEU:HD23	29:39:21:ALA:H	1.78	0.48
1:1G:1192:C:C5	1:1G:1193:G:C8	3.02	0.48
22:2L:42:U:H2'	22:2L:43:G:C8	2.48	0.48
19:AI:50:ALA:HA	19:AI:58:VAL:O	2.14	0.48
1:1G:804:U:H5''	1:1G:805:C:OP2	2.13	0.48
45:D5:23:LYS:HZ3	45:D5:40:ASP:HB2	1.78	0.48
24:1H:2679:A:H2'	24:1H:2680:C:H6	1.77	0.48
1:1G:993:G:H2'	1:1G:995:C:H41	1.78	0.48
24:1H:1184:G:N2	57:1H:3839:HOH:O	2.46	0.48
12:3A:49:ASN:ND2	12:3A:92:ASP:OD2	2.34	0.48
24:1H:2402:C:H2'	24:1H:2403:C:C6	2.48	0.48
1:13:619:U:C2	4:3E:135:LEU:HD21	2.48	0.48
24:1H:2799:A:O3'	24:1H:2895:U:H4'	2.14	0.48
24:14:2081:C:H2'	24:14:2082:A:H8	1.77	0.48
39:75:26:ASP:O	39:75:49:VAL:HG13	2.14	0.48
24:14:2493:U:H2'	24:14:2494:G:O4'	2.14	0.48
9:82:48:GLU:HB3	9:82:101:PHE:HE2	1.77	0.48
31:51:20:ALA:HB1	31:51:21:PRO:HD2	1.95	0.48
24:1H:2591:C:P	27:11:239:ARG:HG3	2.53	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2324:C:H5''	24:14:2325:G:C5'	2.44	0.48
1:13:859:A:H2'	1:13:860:A:O4'	2.13	0.48
29:39:131:GLY:HA2	29:39:138:GLU:HB3	1.96	0.48
24:1H:757:U:H2'	24:1H:758:C:O4'	2.13	0.48
24:1H:2751:G:C2	31:51:3:ARG:HB3	2.48	0.48
24:14:2364:C:H4'	46:E5:56:ASP:OD1	2.13	0.48
10:1A:49:VAL:O	10:1A:60:ARG:HB3	2.14	0.48
24:1H:1036:G:H2'	24:1H:1037:G:O4'	2.14	0.48
1:1G:1245:A:H2'	1:1G:1246:C:O4'	2.13	0.48
5:42:147:ASP:OD1	5:42:147:ASP:N	2.38	0.48
45:H8:132:ASN:OD1	45:H8:132:ASN:N	2.46	0.48
4:32:141:ARG:HB3	4:32:141:ARG:NH1	2.29	0.48
12:3I:44:THR:HG22	12:3I:52:LEU:HD23	1.96	0.48
32:61:84:GLY:N	32:61:89:TYR:HE1	2.12	0.48
24:1H:1479:G:H5'	24:1H:1558:A:H2	1.78	0.48
38:65:83:LYS:HB3	38:65:109:GLY:H	1.78	0.48
24:1H:1677:A:H2'	24:1H:1678:G:C8	2.49	0.48
24:14:2306:C:C3'	24:14:2307:G:H5''	2.39	0.48
1:13:265:G:O2'	17:8I:66:SER:O	2.30	0.48
1:13:1298:C:OP2	7:6E:114:ARG:NH2	2.41	0.48
30:49:95:ARG:O	30:49:99:MET:HG2	2.13	0.48
24:1H:2262:U:O2'	24:1H:2263:C:H5'	2.13	0.48
45:H8:54:HIS:HD2	45:H8:99:TYR:O	1.97	0.48
36:88:135:ASP:HB3	36:88:137:TYR:N	2.26	0.48
2:1E:145:LEU:HD12	2:1E:149:LEU:HD12	1.95	0.48
1:1G:1002:G:H22	1:1G:1038:C:H42	1.62	0.48
24:1H:1571:A:H8	24:1H:1571:A:O5'	1.96	0.48
13:4I:90:LEU:HA	13:4I:93:ARG:CG	2.44	0.48
37:98:96:ARG:CZ	37:98:117:VAL:HG23	2.44	0.48
30:49:36:LYS:CE	30:49:160:VAL:HG21	2.44	0.48
1:1G:995:C:H1'	14:5A:4:LYS:HZ2	1.78	0.48
24:1H:2275:C:O2	36:88:85:LYS:HG3	2.13	0.48
24:14:1226:G:C4'	41:95:84:LYS:HA	2.43	0.48
1:1G:1105:A:H2'	1:1G:1106:G:C8	2.48	0.48
1:13:1165:C:H2'	1:13:1166:G:O4'	2.13	0.48
42:E8:78:GLU:OE1	42:E8:99:ARG:HG2	2.14	0.48
17:8I:6:LEU:HD13	17:8I:23:VAL:HG11	1.95	0.48
24:1H:1983:C:C2'	24:1H:1984:G:H5'	2.43	0.48
1:13:434:U:H2'	1:13:435:C:C6	2.49	0.48
6:5E:18:GLN:O	6:5E:21:LEU:HB2	2.14	0.48
20:BI:25:ARG:HH11	20:BI:25:ARG:HG3	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:79:G:O2'	24:14:346:A:N3	2.34	0.48
29:39:51:THR:HB	29:39:88:VAL:HG11	1.96	0.48
52:K5:41:PRO:HG2	52:K5:43:CYS:O	2.14	0.48
24:1H:1012:U:O4	33:58:25:ARG:HA	2.14	0.48
5:42:16:THR:OG1	5:42:16:THR:O	2.25	0.48
1:1G:1297:C:OP2	1:1G:1297:C:H6	1.97	0.48
24:14:2017:U:O2	51:J5:10:LYS:HB2	2.13	0.48
24:1H:1512:G:H2'	24:1H:1513:C:C6	2.49	0.48
1:1G:1134:G:C2	1:1G:1135:U:H1'	2.49	0.48
25:16:15:A:H1'	25:16:109:G:C4	2.49	0.48
22:2K:17:OMG:C2	22:2K:67:A:C5	3.02	0.48
24:14:2684:U:H1'	34:25:70:LYS:HD3	1.96	0.48
40:85:98:LEU:O	40:85:99:ALA:HB3	2.14	0.48
45:H8:144:LEU:HD23	45:H8:148:ASP:HB3	1.96	0.48
37:98:33:ARG:NH2	51:N8:55:ARG:HG2	2.25	0.48
16:7I:20:VAL:HG21	16:7I:32:TYR:CD2	2.48	0.48
10:1A:63:PHE:HD1	14:5A:58:LYS:HA	1.78	0.48
46:E5:68:GLU:HG3	46:E5:82:ARG:HH11	1.79	0.48
19:AA:65:ASN:HB2	50:I5:55:ARG:HB2	1.95	0.48
49:L8:41:PRO:HA	49:L8:44:ARG:HG2	1.95	0.48
27:11:8:PRO:CB	27:11:14:ARG:HB2	2.42	0.48
22:3K:7:G:N2	22:3K:75:C:O2	2.40	0.48
1:13:1285:A:H3'	21:1F:26:LYS:HD3	1.96	0.48
24:14:2773:C:H5''	28:29:164:ARG:HG2	1.96	0.48
4:32:105:VAL:HG12	4:32:106:TYR:N	2.29	0.48
24:14:142:G:H1'	43:B5:37:THR:HG21	1.96	0.48
24:14:2536:G:C6	24:14:2537:U:C4	3.01	0.48
32:69:120:ILE:HG22	32:69:122:GLU:H	1.79	0.48
2:12:215:LEU:O	2:12:219:VAL:HG12	2.14	0.48
1:1G:986:A:O2'	19:AA:55:LYS:NZ	2.29	0.48
32:69:144:VAL:HG22	32:69:145:VAL:HG22	1.96	0.48
24:14:2820:A:C6	37:55:4:LEU:HD11	2.49	0.48
28:21:101:ARG:CZ	28:21:171:GLU:HB2	2.43	0.48
33:58:5:VAL:HG22	33:58:6:PRO:HD2	1.95	0.48
24:1H:813:U:H2'	24:1H:814:C:C6	2.48	0.48
44:C5:43:ASN:HB3	44:C5:64:GLU:HA	1.96	0.48
6:5E:22:GLU:O	6:5E:26:ILE:HG13	2.14	0.48
16:7A:39:TYR:HB2	16:7A:49:LEU:HD13	1.94	0.48
6:5E:55:ASP:HA	6:5E:56:PRO:HD2	1.73	0.48
24:1H:1132:A:H2'	24:1H:1133:U:C6	2.48	0.48
24:1H:1657:C:H2'	24:1H:1658:C:H6	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:78:59:LEU:HA	35:78:62:LEU:HD22	1.96	0.48
24:14:1771:C:C1'	24:14:1786:A:H8	2.25	0.48
22:2L:21:A:N3	22:2L:21:A:H2'	2.27	0.48
24:1H:2502:G:H5''	24:1H:2503:A:C5'	2.43	0.48
24:14:251:A:C5	24:14:252:G:H1'	2.49	0.48
1:1G:1387:G:H2'	1:1G:1388:C:H6	1.79	0.48
24:14:2175:C:O2'	26:79:219:GLY:O	2.30	0.48
15:6A:25:THR:HG21	15:6A:70:LEU:HB2	1.94	0.48
24:1H:485:C:H2'	24:1H:486:C:H6	1.79	0.48
24:14:1342:A:C2	24:14:1397:U:C2	3.02	0.48
1:13:1295:G:O3'	13:4I:14:ARG:NH1	2.47	0.48
30:49:114:ILE:HG12	30:49:140:ILE:HD13	1.96	0.48
42:E8:79:GLY:CA	42:E8:100:THR:HG22	2.43	0.48
29:31:114:VAL:HG21	29:31:202:PHE:CZ	2.49	0.48
45:D5:80:ARG:HD3	45:D5:82:ARG:NH1	2.29	0.48
1:1G:571:U:O2	1:1G:918:A:H5'	2.14	0.48
1:13:178:C:H2'	1:13:179:A:O4'	2.13	0.48
1:13:952:U:H4'	1:13:964:A:N1	2.29	0.48
5:42:90:VAL:HG23	5:42:121:LYS:O	2.14	0.48
24:1H:184:C:H2'	24:1H:185:U:C6	2.48	0.48
28:29:120:TRP:CG	28:29:155:LYS:HB3	2.48	0.48
24:1H:1424:G:H2'	24:1H:1425:G:O4'	2.14	0.48
11:2A:17:GLY:HA3	11:2A:77:MET:SD	2.53	0.48
1:1G:922:G:H2'	1:1G:923:A:C8	2.49	0.48
27:11:121:PRO:HB3	27:11:135:PHE:CE2	2.49	0.48
13:4A:39:ILE:HG12	13:4A:55:ARG:NH2	2.29	0.48
24:1H:30:G:H2'	24:1H:31:C:C6	2.49	0.48
24:14:2052:G:O4'	28:29:142:GLY:HA3	2.14	0.48
39:75:113:LYS:O	39:75:114:LEU:HD23	2.14	0.48
1:1G:583:A:H2'	1:1G:584:G:O4'	2.14	0.48
27:19:254:THR:N	27:19:255:LYS:HZ1	2.12	0.47
1:1G:1145:C:H5''	1:1G:1146:A:OP1	2.14	0.47
39:75:22:PHE:HA	39:75:91:ARG:HH21	1.79	0.47
31:51:8:PRO:O	31:51:9:ILE:HG13	2.13	0.47
22:3K:25:G:H2'	22:3K:26:G:H8	1.79	0.47
22:2K:20:C:C5	22:2K:22:A:H1'	2.49	0.47
22:3L:17:OMG:HN21	22:3L:64:PSU:HN3	1.62	0.47
30:49:61:ALA:HB2	30:49:67:LYS:HA	1.97	0.47
38:65:87:PHE:CZ	38:65:102:ALA:HB2	2.49	0.47
24:1H:298:G:H5''	24:1H:299:A:OP1	2.13	0.47
28:29:24:THR:HB	28:29:184:VAL:HG23	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:140:A:C8	24:1H:1408:C:O2'	2.67	0.47
24:14:654(E):C:N4	24:14:654(P):G:H1	2.09	0.47
24:1H:739:G:P	57:1H:3907:HOH:O	2.72	0.47
2:1E:87:ARG:NE	2:1E:233:SER:OG	2.44	0.47
24:14:2747:G:O2'	31:59:67:LEU:HD23	2.14	0.47
1:13:155:C:H2'	1:13:156:G:C8	2.48	0.47
1:1G:1095:U:OP1	1:1G:1108:G:N2	2.46	0.47
37:98:74:LYS:O	37:98:75:LEU:HB3	2.13	0.47
24:14:1337:G:H2'	24:14:1338:G:C8	2.47	0.47
24:14:2773:C:OP1	28:29:166:THR:OG1	2.32	0.47
24:1H:1592:C:H2'	24:1H:1593:G:C8	2.49	0.47
30:49:70:VAL:HA	30:49:90:LEU:HD12	1.94	0.47
15:6I:26:GLU:OE2	15:6I:77:ARG:HD2	2.14	0.47
1:13:56:U:H2'	1:13:57:G:C8	2.49	0.47
24:1H:1946:U:H2'	24:1H:1947:C:C6	2.49	0.47
24:14:396:G:H8	24:14:396:G:O5'	1.96	0.47
28:29:105:THR:HG1	28:29:199:ARG:HH22	1.60	0.47
12:3A:84:LEU:HD23	12:3A:105:TYR:HE2	1.79	0.47
24:14:2112:G:H8	24:14:2112:G:OP1	1.97	0.47
9:8E:23:ASN:HD21	9:8E:25:LYS:HE3	1.77	0.47
30:41:142:PRO:HB2	50:M8:31:ILE:HG21	1.96	0.47
1:13:1418:A:C2	1:13:1483:A:C2	3.02	0.47
5:42:131:ILE:O	5:42:134:ALA:HB3	2.14	0.47
8:7E:106:GLY:HA2	8:7E:122:ARG:HH12	1.78	0.47
24:14:2578:G:N7	28:29:140:SER:HB2	2.29	0.47
32:61:40:THR:O	32:61:44:LEU:N	2.46	0.47
24:1H:2626:C:H2'	24:1H:2627:G:O4'	2.14	0.47
36:45:57:HIS:HD2	36:45:117:ALA:HB2	1.78	0.47
24:1H:429:A:H2'	24:1H:430:G:C8	2.49	0.47
37:55:56:LYS:HE3	37:55:87:TYR:O	2.14	0.47
2:12:101:MET:HA	2:12:108:ILE:HG13	1.95	0.47
24:14:2029:G:H2'	24:14:2031:A:OP1	2.14	0.47
54:Q8:54:GLU:CA	54:Q8:57:ARG:HH21	2.26	0.47
38:65:105:ALA:C	38:65:106:ARG:HG3	2.34	0.47
24:14:2286:A:H4'	24:14:2287:A:O4'	2.14	0.47
45:H8:75:ASN:HB3	45:H8:84:GLU:HG3	1.96	0.47
1:1G:1057:G:H2'	1:1G:1058:G:O4'	2.15	0.47
24:14:1860:G:O3'	26:79:205:LYS:NZ	2.47	0.47
24:14:760:G:H2'	24:14:761:A:O4'	2.14	0.47
36:45:77:LYS:O	36:45:79:LEU:N	2.47	0.47
1:13:735:C:C2	1:13:736:C:C5	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:59:4:ILE:HG21	31:59:6:ARG:NE	2.28	0.47
24:14:1063:G:N3	24:14:1063:G:H2'	2.29	0.47
5:42:13:ILE:HG22	5:42:30:ALA:HB2	1.96	0.47
24:1H:563:G:OP2	57:1H:3620:HOH:O	2.18	0.47
24:1H:1141:U:H4'	24:1H:1142(A):A:O4'	2.14	0.47
37:98:100:LEU:HD11	37:98:113:LEU:HD13	1.95	0.47
1:13:1378:C:C5	1:13:1379:G:C8	3.02	0.47
24:14:330:A:C2	24:14:1210:A:O2'	2.63	0.47
8:7E:7:ALA:HB2	8:7E:85:ARG:HD2	1.96	0.47
44:G8:54:LYS:HE2	44:G8:54:LYS:O	2.13	0.47
24:1H:2533:A:OP1	24:1H:2665:A:H1'	2.14	0.47
1:13:1006:C:H2'	1:13:1007:C:C6	2.49	0.47
1:13:186(D):C:N4	1:13:191(C):G:H1	2.10	0.47
39:B8:74:ARG:HB3	39:B8:74:ARG:HH11	1.78	0.47
3:2E:3:ASN:OD1	3:2E:3:ASN:N	2.47	0.47
45:D5:72:ARG:N	45:D5:87:ASP:O	2.34	0.47
1:1G:1011:G:H22	1:1G:1018:C:H42	1.62	0.47
26:71:45:ALA:HB2	26:71:212:VAL:HG22	1.96	0.47
8:72:106:GLY:HA2	8:72:122:ARG:HH22	1.78	0.47
25:16:37:C:C2'	25:16:38:C:H5'	2.44	0.47
7:6E:22:LEU:HG	7:6E:62:PHE:HE1	1.79	0.47
29:39:7:TYR:HE1	29:39:16:GLY:HA3	1.79	0.47
31:59:89:ILE:HG13	31:59:90:LYS:N	2.29	0.47
35:35:63:PRO:HD3	54:M5:27:THR:HG22	1.95	0.47
24:1H:2086:U:H2'	24:1H:2087:G:C8	2.49	0.47
24:14:442:G:C4	24:14:444:C:C5	3.02	0.47
1:13:807:A:H2'	1:13:808:C:C6	2.49	0.47
28:29:1:MET:HA	28:29:83:ASP:O	2.15	0.47
25:16:44:G:OP2	50:M8:1:MET:N	2.47	0.47
2:1E:21:ARG:HH21	2:1E:23:ARG:HG3	1.79	0.47
5:4E:148:VAL:O	5:4E:151:LEU:HB2	2.14	0.47
1:1G:895:G:H1	1:1G:904:C:N4	2.08	0.47
24:14:1359:A:N7	24:14:1372:U:C4	2.82	0.47
8:7E:88:LYS:HB3	8:7E:89:PRO:HD2	1.96	0.47
36:88:33:GLY:HA2	36:88:105:GLU:HA	1.95	0.47
10:1I:7:LYS:HB2	10:1I:97:GLU:HB2	1.96	0.47
1:13:1292:U:H5'	9:8E:38:GLN:OE1	2.13	0.47
32:69:86:THR:HG23	32:69:87:LYS:HE3	1.96	0.47
2:1E:141:GLU:HG2	2:1E:145:LEU:HD23	1.96	0.47
25:16:7:G:N2	25:16:113:C:N3	2.56	0.47
36:45:24:GLY:HA3	36:45:25:ASP:CB	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:C8:70:ARG:HA	40:C8:74:LEU:O	2.14	0.47
1:1G:201:C:N4	1:1G:216:G:H1	2.11	0.47
11:2A:24:SER:OG	11:2A:26:ASN:N	2.47	0.47
2:12:103:THR:HG23	2:12:176:GLU:OE1	2.15	0.47
1:1G:373:A:N3	1:1G:374:A:C8	2.82	0.47
44:C5:14:LEU:HG	44:C5:15:VAL:N	2.26	0.47
4:32:102:ASP:HA	4:32:121:VAL:HG21	1.96	0.47
1:1G:1097:C:H2'	1:1G:1098:C:C6	2.49	0.47
24:1H:2361:A:H5'	54:Q8:27:THR:OG1	2.14	0.47
24:14:1676:A:H2'	24:14:1677:A:O4'	2.13	0.47
24:14:2114:A:H2'	24:14:2168:G:O2'	2.14	0.47
1:13:1192:C:C5	1:13:1193:G:C8	3.02	0.47
20:BA:14:LYS:HG2	20:BA:18:GLN:OE1	2.14	0.47
17:8A:86:GLU:O	17:8A:90:ILE:HG12	2.13	0.47
1:1G:1259:C:N4	1:1G:1260:C:O2	2.46	0.47
24:1H:533:G:H5'	40:C8:24:TYR:CE1	2.49	0.47
41:D8:15:GLU:HG2	41:D8:16:PRO:HD2	1.96	0.47
6:5E:28:ARG:O	6:5E:31:GLU:HB3	2.14	0.47
44:C5:75:ILE:O	44:C5:80:GLY:N	2.47	0.47
40:C8:8:VAL:HG23	40:C8:11:ARG:HH21	1.79	0.47
34:68:106:LEU:O	34:68:110:GLY:N	2.48	0.47
24:1H:675:A:N3	24:1H:2443:C:O2'	2.46	0.47
33:15:131:GLN:NE2	33:15:132:ALA:HB2	2.29	0.47
4:32:148:VAL:HG11	4:32:158:ILE:HD12	1.96	0.47
45:D5:76:LEU:H	45:D5:76:LEU:HD23	1.79	0.47
18:9I:47:THR:O	18:9I:83:GLU:N	2.47	0.47
24:14:2377:A:H2'	24:14:2378:A:C8	2.49	0.47
24:1H:821:A:H5''	24:1H:822:U:C6	2.49	0.47
24:1H:1786:A:P	57:1H:3748:HOH:O	2.72	0.47
24:14:2101:G:H2'	24:14:2102:U:O4'	2.14	0.47
7:6E:46:ALA:HA	7:6E:49:ILE:HG12	1.96	0.47
24:1H:2018:G:H21	40:C8:34:LYS:HZ1	1.61	0.47
1:13:1117:G:H5''	9:8E:104:ARG:CZ	2.44	0.47
24:1H:982:C:H6	24:1H:982:C:O5'	1.97	0.47
7:62:16:LEU:HD11	9:82:45:ALA:HB2	1.96	0.47
25:1J:11:C:H3'	25:1J:12:C:C6	2.49	0.47
54:M5:57:ARG:HD3	54:M5:57:ARG:HA	1.43	0.47
37:98:74:LYS:H	37:98:74:LYS:HD2	1.80	0.47
48:K8:51:ARG:O	48:K8:54:LYS:HB2	2.15	0.47
27:11:97:TYR:HE1	27:11:103:ARG:HG3	1.78	0.47
28:21:14:ILE:HG22	28:21:21:VAL:HB	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:B8:80:SER:HB3	39:B8:83:ILE:HG13	1.96	0.47
24:14:610:C:H2'	24:14:611:C:C6	2.50	0.47
24:14:2889:C:H3'	24:14:2891:G:C8	2.49	0.47
24:14:2388:A:C2'	24:14:2389:G:H5'	2.45	0.47
24:14:2849:U:H1'	24:14:2866:U:O2	2.15	0.47
1:13:725:G:O2'	1:13:726:C:H5'	2.14	0.47
37:55:38:VAL:HG12	37:55:42:LYS:HE3	1.97	0.47
37:98:18:LEU:HD11	37:98:22:ARG:HH21	1.79	0.47
24:14:616:A:C4	29:39:180:GLY:HA3	2.49	0.47
47:J8:20:ARG:HH11	47:J8:20:ARG:HG2	1.79	0.47
1:1G:1010:G:H2'	1:1G:1011:G:O4'	2.14	0.47
36:45:136:ALA:O	36:45:139:GLU:HG2	2.14	0.47
24:1H:284:U:H2'	24:1H:285:C:C6	2.49	0.47
24:14:554:U:O2'	24:14:556:G:N7	2.42	0.47
24:14:2869:G:H2'	24:14:2870:C:O4'	2.14	0.47
46:I8:24:LYS:O	46:I8:25:ARG:NH1	2.44	0.47
24:14:1818:U:O2'	27:19:154:LYS:O	2.28	0.47
1:1G:833:U:H2'	1:1G:834:C:H6	1.79	0.47
1:1G:562:C:H4'	1:1G:563:A:O5'	2.14	0.47
24:1H:1270:C:O2'	24:1H:1648:C:OP2	2.27	0.47
1:13:1030:C:H2'	1:13:1031:G:O4'	2.14	0.47
24:1H:2324:C:H5''	24:1H:2325:G:H5'	1.95	0.47
1:1G:119:A:H5''	1:1G:120:A:H5'	1.95	0.47
36:88:64:ILE:HG12	36:88:106:VAL:HG12	1.96	0.47
25:16:42:C:O2	30:41:92:VAL:HG23	2.13	0.47
1:13:467:G:H3'	1:13:467:G:OP2	2.14	0.47
47:J8:71:TYR:O	47:J8:75:GLU:HG2	2.15	0.47
24:14:901:A:H2'	24:14:901:A:N3	2.29	0.47
14:5I:6:LEU:HA	14:5I:6:LEU:HD23	1.74	0.47
45:H8:25:PRO:HB2	45:H8:85:HIS:HD2	1.79	0.47
40:85:91:ASP:O	40:85:92:ARG:HG2	2.15	0.47
1:13:129(A):G:H21	1:13:190:G:H5'	1.80	0.47
44:G8:104:GLY:H	44:G8:105:ALA:HB3	1.78	0.47
8:7E:44:PHE:HA	8:7E:79:VAL:CG1	2.45	0.47
1:1G:1431:C:O3'	39:75:107:ASP:HB3	2.15	0.47
24:14:1210:A:H5'	24:14:1212:G:C5'	2.45	0.47
24:1H:139:G:N3	24:1H:141:A:N1	2.62	0.47
24:14:2053:G:P	57:14:3543:HOH:O	2.70	0.47
3:22:39:ILE:HG21	3:22:57:ILE:HD11	1.96	0.47
29:39:132:VAL:C	29:39:134:GLY:H	2.17	0.47
45:D5:145:GLU:O	45:D5:174:VAL:HB	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:200:G:O2'	1:1G:201:C:H5'	2.15	0.47
1:1G:674:G:H2'	1:1G:675:A:C8	2.50	0.47
1:13:191:G:C4	20:BI:105:SER:HB2	2.50	0.47
1:13:939:G:C4	1:13:940:C:C5	3.01	0.47
24:14:458:G:C8	53:L5:37:LYS:HG2	2.50	0.47
1:1G:280:C:H3'	1:1G:281:G:H5'	1.95	0.47
24:14:1591:G:H2'	24:14:1592:C:C6	2.49	0.47
54:Q8:61:LEU:C	54:Q8:62:LEU:HG	2.33	0.47
54:Q8:61:LEU:O	54:Q8:62:LEU:HD12	2.14	0.47
1:1G:313:A:H2'	1:1G:314:C:C6	2.50	0.47
27:19:43:ARG:HH11	27:19:43:ARG:CG	2.28	0.47
24:14:304:G:H2'	24:14:305:U:H6	1.80	0.47
1:13:827:U:C5	1:13:870:U:C4	3.02	0.47
24:14:198:C:H5'	24:14:2244:U:OP1	2.15	0.47
24:1H:710:G:H2'	24:1H:711:G:C8	2.49	0.47
1:1G:352:C:O2'	1:1G:354:G:OP1	2.28	0.47
24:1H:253:C:H2'	24:1H:254:G:O4'	2.13	0.47
44:C5:36:ALA:HB1	44:C5:66:PRO:HB3	1.96	0.47
1:13:380:G:N2	1:13:384:G:C5	2.82	0.47
24:14:2880:C:H1'	37:55:92:GLY:HA3	1.95	0.47
24:14:781:A:H2	24:14:1776:G:N3	2.12	0.47
42:A5:29:LEU:HG	42:A5:33:ARG:HD2	1.97	0.47
41:95:20:LEU:HA	41:95:20:LEU:HD12	1.65	0.47
24:1H:753:C:H6	24:1H:753:C:OP2	1.97	0.47
22:3K:47:U:H2'	22:3K:48:C:C6	2.50	0.47
22:2L:17:OMG:C2	22:2L:67:A:C5	3.02	0.47
25:16:39:A:H5'	25:16:40:U:OP2	2.15	0.47
24:14:1728:G:H8	24:14:1732:A:N6	2.11	0.47
36:88:86:GLY:HA3	36:88:87:LYS:CG	2.39	0.47
8:7E:4:ASP:OD2	8:7E:85:ARG:NH1	2.47	0.47
8:7E:4:ASP:CG	8:7E:85:ARG:HH11	2.18	0.47
24:14:2572:A:H62	28:29:145:LYS:HD2	1.78	0.47
50:M8:14:ILE:O	50:M8:20:ASN:ND2	2.47	0.47
27:19:71:ASP:OD1	27:19:71:ASP:N	2.47	0.47
1:13:154:C:O2	1:13:167:G:N2	2.36	0.47
46:I8:50:ASN:C	46:I8:62:LEU:HD12	2.35	0.47
12:3I:93:LEU:HB2	12:3I:96:VAL:CG1	2.45	0.47
45:D5:43:GLU:O	45:D5:47:VAL:HG23	2.14	0.47
1:1G:901:A:C5	1:1G:902:G:H1'	2.50	0.47
22:2K:4:G:C2	22:2K:79:A:C2	3.03	0.47
1:1G:1237:C:H5''	1:1G:1238:A:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:B5:18:TYR:HA	43:B5:21:PHE:CE2	2.49	0.47
1:1G:1301:U:O3'	13:4A:21:TYR:OH	2.29	0.47
38:65:7:TYR:HE2	38:65:11:LYS:NZ	2.11	0.47
24:14:2788:C:O2'	24:14:2809:A:N3	2.42	0.47
24:1H:64:A:C5	43:F8:66:LEU:HD23	2.49	0.47
1:13:1223:C:P	1:13:1224:G:H2'	2.55	0.47
35:78:35:HIS:HA	57:78:201:HOH:O	2.14	0.47
1:13:1386:G:O2'	1:13:1387:G:H5'	2.14	0.47
1:1G:130:A:H1'	1:1G:263:A:O2'	2.13	0.47
1:1G:818:G:O2'	1:1G:819:A:H5'	2.13	0.47
13:4A:7:VAL:HG11	30:49:115:ARG:HE	1.80	0.47
41:95:7:THR:HG23	41:95:22:VAL:HG21	1.96	0.47
3:22:73:PRO:HG3	3:22:105:GLU:HG3	1.96	0.47
24:1H:2409:G:O5'	24:1H:2409:G:H8	1.98	0.47
24:14:84:A:N6	24:14:102:G:H1'	2.29	0.47
5:4E:102:ALA:HB3	5:4E:107:ARG:HB2	1.95	0.47
24:1H:1243:G:O2'	35:78:7:ARG:NH2	2.43	0.47
30:49:28:VAL:HG13	30:49:31:VAL:HG11	1.95	0.47
1:13:1202:G:H1'	14:5I:29:ARG:HD2	1.97	0.47
25:1J:5:C:OP1	25:1J:62:C:H5'	2.14	0.47
38:A8:15:ARG:O	38:A8:19:LYS:HD3	2.15	0.47
24:1H:1903:G:OP1	27:11:241:PRO:HB2	2.15	0.47
38:65:83:LYS:O	38:65:110:LEU:HB3	2.15	0.47
24:14:1464:C:O2'	24:14:1528:A:H8	1.94	0.47
2:12:5:ILE:HG12	2:12:6:THR:O	2.15	0.47
24:1H:1313:U:H4'	24:1H:1332:G:H4'	1.95	0.47
45:H8:155:LEU:HD22	45:H8:156:LYS:H	1.79	0.47
46:I8:70:GLN:HB2	46:I8:80:HIS:HE2	1.80	0.47
24:1H:2210:G:H3'	24:1H:2211:G:N7	2.28	0.47
24:14:782:A:H5'	24:14:783:A:C2	2.49	0.47
24:14:780:G:H21	24:14:783:A:N6	2.10	0.47
8:7E:49:GLU:HG2	8:7E:62:TYR:HE2	1.80	0.47
24:1H:988:A:O5'	49:L8:11:SER:HB2	2.14	0.47
24:1H:1970:A:P	57:1H:3916:HOH:O	2.71	0.47
2:1E:111:ARG:CG	2:1E:111:ARG:HH11	2.24	0.47
1:13:1078:U:C5	1:13:1079:G:C5	3.03	0.47
34:68:2:ILE:HB	34:68:33:ALA:HB3	1.96	0.47
24:1H:300:A:N3	24:1H:319:C:H1'	2.29	0.47
24:1H:1176:G:H5''	24:1H:1177:A:C5	2.49	0.47
45:H8:53:ILE:HG22	45:H8:71:VAL:HG13	1.97	0.47
1:13:585:G:H8	1:13:585:G:O5'	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:38:A:H2'	24:1H:39:C:C6	2.49	0.47
32:61:59:ALA:O	32:61:63:ALA:HB2	2.14	0.47
9:82:9:ARG:HB2	9:82:14:VAL:HG22	1.97	0.47
30:49:11:TYR:O	30:49:16:ARG:HB3	2.14	0.47
3:22:59:ARG:HG3	3:22:63:ASN:O	2.14	0.47
31:51:6:ARG:NE	31:51:54:ARG:HH12	2.12	0.47
44:G8:55:TYR:N	44:G8:56:PRO:HD3	2.29	0.47
24:14:1197:G:H2'	24:14:1198:U:C6	2.50	0.47
1:1G:500:G:N2	1:1G:546:G:H1'	2.30	0.47
24:1H:729:G:O2'	24:1H:763:G:H4'	2.15	0.47
1:1G:198:G:H2'	1:1G:199:G:C8	2.50	0.47
24:1H:546:C:OP1	24:1H:546:C:H6	1.97	0.47
11:2A:51:LYS:HA	11:2A:55:LYS:HD3	1.97	0.47
24:1H:643:A:H2'	24:1H:644:A:H8	1.79	0.47
24:1H:320:A:OP2	29:31:137:LYS:HE3	2.15	0.47
35:35:147:LEU:HD13	35:35:148:LEU:H	1.79	0.47
1:1G:580:U:H2'	1:1G:581:G:O4'	2.15	0.47
24:1H:155:C:H42	24:1H:171:G:H1	1.61	0.47
44:G8:94:LYS:HZ2	44:G8:95:LYS:H	1.61	0.47
1:1G:570:G:H2'	1:1G:571:U:H6	1.77	0.47
1:1G:992:U:H3	1:1G:1044:A:N6	2.13	0.47
20:BA:74:LYS:HB3	20:BA:75:ASN:H	1.37	0.47
4:32:153:ARG:HH12	4:32:181:MET:HB2	1.80	0.47
1:1G:523:A:H61	12:3A:53:ARG:NH1	2.12	0.47
1:1G:1065:U:C5	1:1G:1190:G:H1'	2.49	0.47
18:9I:26:LEU:HD13	18:9I:42:ARG:NH2	2.30	0.47
49:L8:8:LEU:HB2	49:L8:28:LEU:HD23	1.97	0.47
3:2E:67:THR:HG23	3:2E:102:ASN:HB2	1.97	0.47
24:1H:1449:A:H5'	24:1H:1449(A):G:OP2	2.15	0.47
1:13:474:G:H5''	16:7I:81:ARG:CZ	2.45	0.47
24:14:2402:C:O2'	24:14:2403:C:OP1	2.26	0.47
1:1G:1207:G:C6	1:1G:1208:C:C4	3.03	0.47
28:29:122:PHE:HZ	28:29:155:LYS:HB2	1.80	0.47
1:1G:861:G:H2'	1:1G:862:C:C6	2.49	0.47
3:2E:19:GLU:O	3:2E:56:ASP:HA	2.14	0.47
24:1H:2308:G:N3	24:1H:2308:G:H2'	2.30	0.47
24:14:686:G:H5''	53:L5:11:LYS:NZ	2.29	0.47
1:1G:1327:C:H2'	1:1G:1328:C:C6	2.50	0.47
24:1H:1188:U:H4'	41:D8:79:VAL:HG22	1.96	0.47
1:13:1196:U:C4	23:4K:23:A:C8	3.03	0.47
38:A8:83:LYS:HG2	38:A8:109:GLY:HA2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:345:C:H1'	1:1G:346:G:C2	2.50	0.47
1:13:1255:G:C2	1:13:1283:G:C2	3.03	0.47
24:14:999:U:C5	24:14:1154:G:C5	3.02	0.47
13:4A:39:ILE:HD12	13:4A:56:LEU:HG	1.95	0.47
14:5I:39:LEU:HD11	14:5I:47:LEU:HD12	1.96	0.47
27:11:109:ASP:HB2	27:11:197:GLY:HA3	1.96	0.47
7:62:93:PRO:HD2	7:62:94:ARG:HG3	1.95	0.47
52:K5:23:THR:OG1	52:K5:24:GLU:N	2.48	0.47
24:14:2257:U:H2'	24:14:2258:C:C6	2.50	0.47
3:22:148:GLY:HA3	3:22:172:ARG:O	2.14	0.47
24:1H:954:G:N3	24:1H:2274:A:C2	2.83	0.47
2:1E:8:LYS:HD3	2:1E:8:LYS:H	1.79	0.47
54:M5:9:GLY:O	54:M5:13:ARG:HD2	2.14	0.47
24:1H:2519:U:C6	24:1H:2542:A:N6	2.83	0.47
35:35:65:ARG:HH22	54:M5:15:LYS:HB2	1.80	0.47
24:14:724:U:H2'	24:14:725:G:O4'	2.15	0.47
37:55:97:VAL:HA	37:55:113:LEU:O	2.15	0.47
8:72:121:ASP:OD2	8:72:125:ARG:NH2	2.47	0.47
1:13:762:C:H2'	1:13:763:G:H8	1.80	0.47
1:13:1081:G:OP2	5:4E:27:ARG:HD2	2.15	0.47
24:1H:455:C:N3	24:1H:472:A:H2'	2.29	0.47
34:25:102:VAL:HB	34:25:106:LEU:HD12	1.96	0.47
24:14:1690:A:H5''	24:14:1691:C:OP2	2.14	0.47
24:14:881:G:N3	24:14:882:G:H1'	2.30	0.47
6:52:44:GLY:HA2	6:52:59:TYR:CE2	2.49	0.47
5:42:76:ILE:HG23	5:42:77:PRO:HD2	1.95	0.47
30:41:135:LEU:O	30:41:154:GLY:HA3	2.15	0.47
17:8I:45:HIS:O	17:8I:73:VAL:HG23	2.15	0.47
37:55:116:LEU:HA	37:55:116:LEU:HD23	1.75	0.47
11:2I:67:ASP:O	11:2I:71:LYS:HG2	2.14	0.47
1:1G:1141:C:H2'	1:1G:1142:G:H8	1.80	0.47
1:1G:1143:G:H2'	1:1G:1144:G:C8	2.50	0.47
24:1H:764:A:H5'	27:11:210:GLY:CA	2.43	0.47
2:12:5:ILE:HG13	2:12:221:LEU:HD22	1.97	0.47
46:I8:38:VAL:CG1	46:I8:40:GLN:HG2	2.38	0.47
24:14:1060:U:C2	24:14:1062:G:H4'	2.50	0.47
5:42:50:GLU:OE2	5:42:51:VAL:HG23	2.15	0.47
24:1H:1802:A:H2'	24:1H:1803:A:C8	2.49	0.47
1:13:322:C:O3'	20:BI:23:ARG:HG3	2.14	0.47
24:1H:2212:A:O2'	24:1H:2213:U:P	2.72	0.47
1:13:1431:C:H2'	1:13:1432:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7E:86:ILE:HG22	8:7E:93:VAL:HG21	1.96	0.47
24:1H:1464:C:O2'	24:1H:1528:A:H8	1.97	0.47
10:1A:68:HIS:N	10:1A:68:HIS:CD2	2.83	0.47
9:8E:10:ARG:HD2	9:8E:105:ASP:HB2	1.95	0.47
1:13:728:A:C5	15:6I:54:ARG:HD2	2.50	0.47
1:13:1226:C:H2'	13:4I:103:THR:HB	1.96	0.47
25:16:103:U:O2'	45:H8:72:ARG:HG2	2.15	0.47
39:75:80:SER:HB3	39:75:83:ILE:HG13	1.96	0.47
1:1G:1342:C:H1'	9:82:124:GLN:OE1	2.14	0.47
30:49:35:GLU:O	30:49:36:LYS:HG2	2.14	0.47
39:B8:76:PHE:HA	39:B8:77:PRO:HD3	1.59	0.47
39:75:65:LYS:HB3	39:75:65:LYS:HE2	1.74	0.47
24:1H:654(J):A:N1	24:1H:654(M):C:N4	2.62	0.47
24:14:2140:C:H1'	24:14:2152:G:N2	2.29	0.47
1:1G:261:U:OP2	20:BA:79:ARG:NH2	2.48	0.47
28:21:75:VAL:C	28:21:76:ARG:HD2	2.36	0.47
24:14:1011:G:C2	24:14:1151:G:C2	3.03	0.47
24:1H:2495:G:OP1	36:88:82:ARG:HD2	2.14	0.47
3:22:18:TRP:CD1	14:5A:54:PRO:HA	2.50	0.47
24:14:189:G:H2'	24:14:205:G:N2	2.29	0.47
28:29:9:VAL:HB	28:29:25:VAL:O	2.14	0.47
24:1H:2400:G:N2	24:1H:2417:C:O2	2.48	0.47
24:14:439:G:H2'	24:14:440:G:C8	2.49	0.47
1:1G:1274:G:H2'	1:1G:1275:A:H8	1.79	0.47
24:1H:1050:A:H1'	24:1H:2751:G:C8	2.50	0.47
32:61:82:ARG:O	32:61:89:TYR:HD1	1.97	0.47
28:21:101:ARG:HD2	28:21:171:GLU:HA	1.97	0.47
24:14:2116:G:H2'	24:14:2117:A:O4'	2.15	0.47
24:1H:1996:C:OP1	34:68:31:LYS:HE3	2.15	0.47
24:14:1832:C:N4	24:14:1833:U:C4	2.83	0.47
27:11:44:ASN:O	27:11:46:GLN:O	2.33	0.47
24:1H:270(D):C:H2'	24:1H:270(E):G:C8	2.50	0.47
33:58:53:VAL:HG11	33:58:128:HIS:HD2	1.80	0.47
1:1G:644:G:H4'	8:72:92:ARG:NH1	2.29	0.47
22:3L:83:C:H4'	47:F5:23:LYS:HB2	1.97	0.47
24:14:231:C:C5	24:14:232:G:C6	3.02	0.47
24:1H:590:A:OP1	29:31:95:ARG:NH1	2.48	0.47
6:52:76:ALA:O	6:52:80:ARG:HG3	2.15	0.47
11:2I:78:GLN:O	11:2I:103:LEU:HA	2.15	0.47
12:3I:82:VAL:HG23	12:3I:106:ASP:OD2	2.15	0.47
4:3E:156:GLU:O	4:3E:160:GLN:HG3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:A5:57:ASN:O	42:A5:61:ASN:HB2	2.15	0.47
24:14:2346:A:N6	52:K5:28:ARG:HH21	2.12	0.47
2:12:6:THR:OG1	2:12:7:VAL:N	2.48	0.47
27:11:3:VAL:HG13	27:11:17:THR:HG23	1.97	0.47
24:1H:1371:G:H2'	24:1H:1372:U:C5	2.50	0.47
24:1H:2138:C:C2	24:1H:2154:G:N2	2.83	0.47
33:15:41:ASP:O	40:85:64:ARG:NH2	2.48	0.47
1:13:1127:G:H22	1:13:1145:C:H1'	1.79	0.47
24:1H:1471:A:C2	24:1H:1472:A:C4	3.03	0.47
24:14:331:A:N6	24:14:1210:A:OP2	2.35	0.47
28:29:144:ARG:HB3	28:29:145:LYS:H	1.59	0.47
24:14:2279:G:N7	46:E5:14:ARG:NH1	2.63	0.47
8:72:51:VAL:HG21	8:72:60:ARG:NH1	2.30	0.47
1:1G:1158:C:O3'	1:1G:1159:U:H4'	2.14	0.47
24:1H:142:G:O3'	43:F8:35:THR:HG21	2.14	0.47
6:5E:67:MET:SD	6:5E:75:LEU:HD12	2.55	0.47
29:31:64:ILE:HG23	29:31:65:TRP:CD1	2.49	0.47
25:16:73:A:C4	25:16:104:A:C2	3.02	0.47
48:K8:16:LEU:HB3	48:K8:21:LEU:HG	1.97	0.47
48:K8:16:LEU:HD13	48:K8:16:LEU:HA	1.78	0.47
24:1H:997:G:H5''	40:C8:92:ARG:HH21	1.79	0.47
24:1H:1416:G:H2'	24:1H:1417:C:C6	2.50	0.47
24:14:1519:G:H2'	24:14:1520:U:O4'	2.15	0.47
24:14:1192:G:H2'	24:14:1193:G:C8	2.49	0.47
1:13:197:A:C6	1:13:221:C:H4'	2.50	0.47
13:4I:15:VAL:HG23	13:4I:43:THR:O	2.14	0.47
24:14:2231:C:OP1	47:F5:42:GLN:HA	2.14	0.47
30:49:142:PRO:HG2	30:49:143:GLU:OE2	2.15	0.47
24:14:2762:G:H5'	24:14:2763:G:OP2	2.15	0.47
1:13:1194:U:H2'	1:13:1195:C:C6	2.50	0.47
24:1H:1914:C:H2'	24:1H:1915:U:C6	2.49	0.47
17:8I:76:LEU:HD11	17:8I:78:GLU:O	2.15	0.47
1:1G:1260:C:H4'	1:1G:1283:G:O2'	2.15	0.47
24:14:882:G:OP2	24:14:882:G:H8	1.98	0.47
1:1G:28:G:H21	1:1G:296:U:H4'	1.80	0.47
38:A8:61:ASN:OD1	38:A8:64:GLU:HG3	2.15	0.47
24:1H:2860:A:C8	24:1H:2861:G:H1'	2.50	0.47
1:13:784:C:H2'	1:13:785:G:O4'	2.15	0.47
27:19:24:ILE:HG23	27:19:83:GLU:HA	1.97	0.47
18:9I:36:ASN:ND2	18:9I:39:VAL:HG21	2.30	0.47
26:79:202:GLU:H	26:79:202:GLU:CD	2.19	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:29:87:GLU:H	28:29:87:GLU:CD	2.17	0.47
5:4E:19:MET:HB3	5:4E:19:MET:HE2	1.74	0.47
4:3E:155:LEU:O	4:3E:158:ILE:N	2.46	0.47
40:85:90:VAL:HA	41:95:39:LEU:HD22	1.97	0.47
1:1G:1391:U:H2'	1:1G:1392:G:C8	2.50	0.47
22:2L:62:G:H2'	22:2L:62:G:N3	2.29	0.47
24:1H:574:C:P	57:1H:3941:HOH:O	2.67	0.47
24:1H:249:C:O2'	35:78:64:LYS:HE2	2.14	0.47
22:2K:2:G:H2'	22:2K:2:G:N3	2.28	0.47
24:14:783:A:H8	24:14:784:A:H4'	1.79	0.47
24:14:1079:C:N4	24:14:1088:A:OP1	2.48	0.47
24:14:1113:U:H2'	24:14:1114:G:O4'	2.15	0.47
24:1H:2018:G:H21	40:C8:34:LYS:NZ	2.11	0.47
24:14:1651:G:OP1	37:55:40:LYS:HE3	2.15	0.47
25:1J:113:C:O2'	38:65:46:VAL:HG13	2.15	0.47
33:58:133:GLN:O	33:58:134:ARG:NH1	2.48	0.47
24:14:2063:C:O2	24:14:2450:A:N1	2.48	0.47
8:7E:11:THR:HG23	8:7E:14:ARG:NH1	2.29	0.47
16:7A:21:VAL:CG1	16:7A:34:GLU:HB3	2.44	0.47
13:4A:23:TYR:CE2	13:4A:71:ARG:HD3	2.48	0.47
16:7A:23:ASP:OD1	16:7A:25:ARG:HG3	2.14	0.47
1:1G:690:G:H22	11:2A:55:LYS:NZ	2.12	0.47
30:49:56:ALA:HA	30:49:153:ARG:HH21	1.80	0.47
1:13:1284:C:H3'	1:13:1285:A:H8	1.80	0.47
24:1H:674:G:H1'	29:31:74:ARG:NH1	2.30	0.47
24:1H:1432:C:H2'	24:1H:1433:U:O4'	2.14	0.47
24:14:2151:G:H2'	24:14:2152:G:H8	1.80	0.47
24:1H:2378:A:H4'	38:A8:23:ARG:CZ	2.45	0.47
32:61:104:GLN:HG2	32:61:105:HIS:CD2	2.50	0.47
41:95:72:VAL:HB	41:95:85:LYS:HB3	1.97	0.47
24:1H:370:G:H4'	24:1H:371:A:OP2	2.15	0.47
45:D5:73:GLN:H	45:D5:87:ASP:HB2	1.80	0.47
24:1H:1419:A:C8	24:1H:1421:G:C6	3.03	0.47
20:BI:83:ARG:O	20:BI:87:LYS:HB2	2.15	0.47
47:J8:78:LYS:HD2	47:J8:79:GLY:H	1.79	0.47
24:14:1871:A:H2'	24:14:1872:A:C8	2.50	0.47
25:1J:93:C:H2'	25:1J:94:C:H6	1.79	0.47
44:C5:62:GLU:HG3	44:C5:62:GLU:H	1.54	0.47
11:2I:18:ARG:HB3	11:2I:33:THR:OG1	2.14	0.47
31:51:46:GLU:OE1	31:51:51:ARG:NH2	2.48	0.47
52:O8:36:LEU:HD13	52:O8:50:ARG:NH2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:22:21:ARG:HH11	3:22:21:ARG:HB3	1.79	0.47
32:61:79:ILE:HD13	32:61:79:ILE:HA	1.83	0.47
24:1H:2830:G:H8	24:1H:2830:G:H5''	1.80	0.47
24:14:2360:A:H8	24:14:2360:A:O5'	1.97	0.47
24:1H:985:C:C2'	24:1H:986:C:H5'	2.45	0.47
24:14:1138:G:N3	33:15:106:MET:HE3	2.30	0.46
4:32:9:CYS:SG	4:32:22:LYS:NZ	2.88	0.46
24:1H:2287:A:C2	24:1H:2346:A:N1	2.83	0.46
1:1G:1128:C:N3	1:1G:1139:G:C6	2.83	0.46
24:1H:817:C:O2'	24:1H:839:U:H5''	2.15	0.46
22:2K:20:C:H5	22:2K:57:C:H41	1.62	0.46
4:3E:15:GLU:HG3	4:3E:63:LYS:HG3	1.97	0.46
17:8I:18:THR:HG23	17:8I:69:LYS:HD2	1.96	0.46
24:1H:2154:G:H2'	24:1H:2155:G:C8	2.38	0.46
24:1H:2291:U:H5''	24:1H:2380:C:O2'	2.15	0.46
24:1H:1022:G:N2	24:1H:1023:U:O4	2.42	0.46
24:1H:1021:A:H61	24:1H:1142(A):A:N6	2.13	0.46
24:1H:1614:A:N6	42:E8:88:ARG:H	2.12	0.46
1:13:328:C:H4'	1:13:329:A:C5'	2.44	0.46
3:22:182:ILE:HA	3:22:202:ILE:O	2.15	0.46
32:69:139:GLN:HG2	32:69:139:GLN:H	1.57	0.46
24:1H:1178:C:HO2'	24:1H:1179:C:H6	1.63	0.46
24:1H:2334:G:O6	46:I8:74:ARG:NH2	2.48	0.46
24:1H:375:C:H2'	24:1H:376:C:H6	1.80	0.46
24:1H:1026:U:O2	24:1H:1027:A:H3'	2.15	0.46
24:1H:1027:A:C2	24:1H:2488:A:H5'	2.50	0.46
50:M8:12:ALA:HB3	50:M8:24:THR:HB	1.96	0.46
1:13:658:G:O2'	1:13:659:U:H5'	2.15	0.46
1:1G:1410:G:N1	1:1G:1490:C:N3	2.54	0.46
24:1H:363(B):G:H2'	24:1H:363(C):G:C8	2.51	0.46
1:1G:1423:G:H2'	1:1G:1424:C:H6	1.78	0.46
50:I5:21:VAL:HG22	50:I5:22:ILE:HG13	1.96	0.46
7:62:111:ARG:NH2	7:62:122:HIS:HB3	2.30	0.46
1:13:37:U:O2'	1:13:500:G:H4'	2.16	0.46
24:14:162:U:H4'	24:14:171:G:C8	2.50	0.46
1:1G:265:G:H5'	17:8A:64:PRO:O	2.15	0.46
13:4I:67:GLU:CG	13:4I:68:GLY:H	2.29	0.46
24:1H:1057:A:N6	24:1H:1087:G:OP2	2.48	0.46
42:A5:65:LEU:HD13	42:A5:68:ARG:HD2	1.97	0.46
37:98:12:ARG:HG2	37:98:16:HIS:ND1	2.30	0.46
33:15:91:LEU:HA	33:15:91:LEU:HD23	1.56	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:4A:14:ARG:HG3	13:4A:41:PRO:O	2.14	0.46
24:1H:606:U:H4'	24:1H:658:C:H4'	1.96	0.46
24:14:2643:G:H2'	24:14:2644:G:O4'	2.14	0.46
24:1H:2388:A:N7	24:1H:2389:G:C6	2.83	0.46
19:AI:52:TYR:HA	19:AI:56:GLN:O	2.14	0.46
2:12:31:TYR:O	2:12:42:ILE:HG13	2.15	0.46
26:79:15:ASP:HB3	26:79:18:LYS:HB3	1.97	0.46
24:1H:479:A:N3	24:1H:481:G:H5''	2.30	0.46
29:31:134:GLY:H	29:31:162:LEU:HB3	1.80	0.46
15:6A:67:LEU:HD23	15:6A:67:LEU:HA	1.68	0.46
32:61:68:LEU:HA	32:61:71:ILE:HG23	1.96	0.46
1:1G:505:G:C6	1:1G:535:A:C2	3.03	0.46
1:13:974:A:P	14:5I:41:ARG:HH12	2.38	0.46
1:13:1349:A:H2'	1:13:1350:A:H8	1.78	0.46
24:14:1140:C:O3'	33:15:25:ARG:NH1	2.48	0.46
1:1G:1442:G:N7	1:1G:1446:A:N1	2.64	0.46
38:65:100:ALA:HA	38:65:103:GLU:HB2	1.97	0.46
25:16:40:U:C2'	25:16:45:A:H61	2.28	0.46
25:16:19:G:H1	25:16:64:C:N4	2.03	0.46
40:85:91:ASP:OD1	40:85:96:ALA:N	2.48	0.46
1:1G:957:U:H2'	1:1G:959:A:OP2	2.15	0.46
24:1H:2784:C:H2'	24:1H:2785:C:H6	1.80	0.46
24:14:2394:C:H5''	35:35:64:LYS:CD	2.44	0.46
24:14:2688:U:C5	24:14:2720:U:OP2	2.69	0.46
24:1H:2432:A:C5	47:J8:33:LYS:HG2	2.50	0.46
33:15:56:ASN:H	33:15:125:GLY:HA3	1.80	0.46
38:65:3:ARG:HD2	38:65:3:ARG:HA	1.59	0.46
2:1E:115:LEU:HD23	2:1E:153:ARG:HD3	1.97	0.46
17:8I:81:ARG:O	17:8I:84:LEU:N	2.44	0.46
28:21:14:ILE:HA	28:21:14:ILE:HD12	1.54	0.46
5:42:57:LYS:O	5:42:60:TYR:HB3	2.15	0.46
44:G8:87:LYS:O	44:G8:94:LYS:HB2	2.15	0.46
24:14:1580:A:H8	24:14:1580:A:OP2	1.98	0.46
2:1E:164:VAL:HB	2:1E:186:ALA:CB	2.45	0.46
24:14:756:C:H2'	24:14:757:U:H5'	1.98	0.46
24:14:2649:U:H2'	24:14:2650:U:C6	2.50	0.46
1:13:409:G:H1	1:13:433:C:H42	1.63	0.46
13:4A:15:VAL:HG12	13:4A:45:VAL:HG22	1.98	0.46
1:13:1048:G:OP1	14:5I:3:ARG:HB3	2.15	0.46
24:1H:270(U):C:H2'	24:1H:270(V):G:H8	1.80	0.46
12:3I:52:LEU:O	12:3I:54:LYS:NZ	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:530:G:O2'	1:13:531:U:OP1	2.28	0.46
24:14:706:A:H2'	24:14:707:G:O4'	2.15	0.46
24:1H:2608:G:N7	57:1H:3771:HOH:O	2.35	0.46
24:14:654(R):C:N4	24:14:654(S):G:O6	2.48	0.46
24:14:459:U:H5''	53:L5:40:TRP:CD2	2.50	0.46
42:A5:83:LYS:O	42:A5:84:ARG:HD3	2.15	0.46
1:13:260:G:H2'	1:13:261:U:C6	2.50	0.46
24:14:108:U:H2'	24:14:109:G:C8	2.50	0.46
17:8I:12:SER:HB3	17:8I:20:THR:HB	1.97	0.46
45:D5:53:ILE:HG22	45:D5:71:VAL:HG13	1.96	0.46
1:1G:595:G:H1	1:1G:641:U:HO2'	1.63	0.46
29:39:117:ARG:HA	29:39:117:ARG:HD3	1.59	0.46
53:P8:8:ASN:OD1	53:P8:8:ASN:C	2.53	0.46
29:39:113:ALA:HB1	29:39:186:ILE:HG21	1.97	0.46
24:1H:2094:G:C2	24:1H:2196:C:C2	3.04	0.46
2:12:50:GLU:O	2:12:54:THR:OG1	2.19	0.46
40:85:88:ILE:HG22	40:85:90:VAL:CG2	2.45	0.46
1:1G:1126:U:C4	1:1G:1281:U:C6	3.04	0.46
29:31:116:ASP:CG	35:78:1:MET:HB2	2.35	0.46
24:1H:2344:U:OP1	52:O8:38:LYS:HD3	2.15	0.46
21:1B:9:ARG:HG3	21:1B:10:ARG:N	2.29	0.46
24:1H:2019:A:H2'	24:1H:2020:A:O5'	2.15	0.46
48:G5:17:SER:CB	48:G5:20:GLU:H	2.26	0.46
25:16:28:C:H2'	25:16:29:A:O4'	2.16	0.46
24:1H:1168:G:C2	24:1H:1182:A:C2	3.03	0.46
10:1A:38:ILE:HB	10:1A:71:LEU:O	2.15	0.46
32:69:109:ILE:HB	32:69:130:TYR:CZ	2.50	0.46
24:14:1556:C:H2'	24:14:1557:C:H6	1.79	0.46
1:1G:1247:U:H1'	1:1G:1291:G:N2	2.30	0.46
26:79:215:THR:OG1	26:79:216:THR:N	2.49	0.46
24:1H:329:G:N7	44:G8:71:LYS:NZ	2.63	0.46
44:G8:87:LYS:HG2	44:G8:88:LYS:H	1.81	0.46
2:1E:185:ILE:HA	2:1E:199:TYR:O	2.15	0.46
1:1G:279:A:H5''	1:1G:281:G:O4'	2.15	0.46
32:61:29:TYR:C	32:61:32:PRO:HD2	2.36	0.46
24:14:2563:U:O2	24:14:2565:A:C8	2.68	0.46
24:1H:662:G:O2'	24:1H:663:G:H5'	2.15	0.46
1:1G:1060:C:H41	3:22:2:GLY:HA3	1.81	0.46
24:14:314:A:H2'	24:14:315:G:C8	2.50	0.46
34:25:31:LYS:HB3	34:25:32:TYR:CD1	2.51	0.46
1:13:828:A:N6	1:13:858:G:O2'	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:32:A:C2	1:1G:33:A:C4	3.02	0.46
24:14:654(I):C:H2'	24:14:654(M):C:H42	1.81	0.46
32:61:78:THR:HG1	32:61:141:LYS:HZ2	1.56	0.46
24:1H:624:C:O2'	24:1H:657:U:H5''	2.16	0.46
24:14:1912:A:N6	24:14:1918:A:H1'	2.30	0.46
41:D8:65:GLY:HA3	41:D8:91:TYR:CE1	2.51	0.46
24:14:571:A:H5'	24:14:2030:A:N7	2.31	0.46
4:32:191:ARG:NH1	4:32:200:GLU:OE1	2.49	0.46
1:13:1489:G:H2'	1:13:1490[B]:C:O4'	2.15	0.46
35:35:19:VAL:HG12	35:35:27:HIS:HB3	1.97	0.46
1:13:683:G:C6	1:13:684:A:C6	3.04	0.46
41:D8:7:THR:HG23	41:D8:12:TYR:CE1	2.51	0.46
1:1G:1186:G:N2	14:5A:61:TRP:O	2.34	0.46
36:45:17:LEU:HB3	36:45:39:PRO:HB2	1.96	0.46
49:L8:37:LEU:H	49:L8:37:LEU:HD12	1.80	0.46
1:1G:1154:G:H2'	1:1G:1155:G:H8	1.80	0.46
50:I5:60:GLN:N	50:I5:60:GLN:OE1	2.49	0.46
3:2E:14:ILE:HG13	3:2E:15:THR:OG1	2.15	0.46
9:82:35:GLU:O	9:82:38:GLN:HG2	2.16	0.46
54:Q8:29:LYS:HB3	54:Q8:30:ARG:C	2.36	0.46
24:14:1018:C:H2'	24:14:1019:U:H6	1.81	0.46
33:58:96:GLU:O	33:58:99:LEU:N	2.44	0.46
22:3L:14:A:H1'	22:3L:23:A:C6	2.50	0.46
24:14:2335:A:C8	24:14:2337:G:N7	2.83	0.46
24:1H:1678:G:H21	24:1H:1989:G:N2	2.11	0.46
51:N8:46:CYS:HA	51:N8:47:PRO:HD2	1.81	0.46
50:I5:36:CYS:HB3	50:I5:39:CYS:CB	2.45	0.46
24:14:997:G:O2'	24:14:998:C:H5'	2.15	0.46
1:13:189:U:O2	17:8I:63:ARG:NH2	2.48	0.46
19:AA:66:MET:N	19:AA:67:VAL:HB	2.31	0.46
22:2K:61:G:C4	22:2K:62:G:C8	3.03	0.46
7:6E:118:VAL:O	7:6E:121:ALA:HB3	2.15	0.46
32:69:77:LEU:HD21	32:69:141:LYS:HD3	1.98	0.46
1:1G:735:C:H2'	1:1G:736:C:C6	2.45	0.46
1:13:79:G:H2'	1:13:79:G:N3	2.29	0.46
36:88:104:PHE:O	36:88:105:GLU:HB3	2.15	0.46
3:22:32:LEU:HD22	3:22:59:ARG:HH12	1.80	0.46
24:14:1479:G:O2'	24:14:1558:A:H5'	2.15	0.46
24:1H:1339:G:H5''	43:F8:16:LYS:HD3	1.96	0.46
24:1H:729:G:C6	27:11:208:LYS:HB2	2.50	0.46
7:62:28:ASN:OD1	7:62:36:LYS:NZ	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:3K:7:G:N2	22:3K:76:C:O2	2.48	0.46
1:1G:1269:A:N1	1:1G:1312:G:O2'	2.30	0.46
17:8A:63:ARG:HG2	17:8A:64:PRO:HD2	1.98	0.46
24:14:2531:A:H5'	31:59:157:TYR:CZ	2.50	0.46
24:1H:661:C:O2'	35:78:14:LYS:N	2.43	0.46
35:35:97:PRO:HG3	35:35:112:LEU:HD12	1.97	0.46
24:14:1180:C:O2'	24:14:1181:C:H5'	2.16	0.46
24:1H:1198:U:H2'	24:1H:1199:U:H6	1.80	0.46
24:14:1848:A:H2'	24:14:1849:G:H8	1.79	0.46
1:13:1191:A:H5''	1:13:1192:C:OP2	2.15	0.46
24:14:2724:C:OP1	28:29:118:LYS:HE3	2.14	0.46
42:A5:40:ASN:O	42:A5:41:LYS:HG2	2.15	0.46
24:14:2032:G:H21	28:29:146:THR:HG23	1.79	0.46
24:14:1280:G:OP1	37:55:33:ARG:NH2	2.48	0.46
24:14:1932:A:H2'	24:14:1933:G:O4'	2.15	0.46
12:3I:90:VAL:HG12	12:3I:92:ASP:H	1.81	0.46
24:1H:828:U:H2'	24:1H:829:A:C8	2.50	0.46
3:22:125:GLU:HG2	3:22:190:ARG:O	2.16	0.46
11:2I:59:TYR:CZ	11:2I:63:LEU:HD21	2.51	0.46
1:1G:127:G:C2	1:1G:128:G:C8	3.03	0.46
24:1H:1497:U:H5''	24:1H:1498:C:H5	1.80	0.46
1:13:1427:U:H2'	1:13:1428:A:C8	2.50	0.46
24:14:26:G:C6	24:14:27:G:N1	2.83	0.46
1:13:1163:C:H2'	1:13:1164:G:C8	2.50	0.46
49:H5:5:LYS:HB3	49:H5:5:LYS:HE3	1.72	0.46
1:1G:1077:G:N2	1:1G:1080:A:OP2	2.48	0.46
40:C8:97:ASP:OD1	40:C8:101:ARG:NH1	2.48	0.46
17:8A:60:ILE:HB	17:8A:74:LEU:HD12	1.97	0.46
24:1H:2822:G:H2'	24:1H:2823:A:H5''	1.97	0.46
24:14:1663:C:H2'	57:14:3620:HOH:O	2.15	0.46
24:1H:2582:G:C2	24:1H:2583:G:C8	3.04	0.46
24:1H:932:G:H4'	24:1H:933:A:O5'	2.16	0.46
20:BI:40:ALA:HB2	20:BI:55:ILE:HG22	1.98	0.46
22:2K:19:C:H4'	22:2K:19:C:OP1	2.13	0.46
29:39:122:LYS:HD2	29:39:191:ARG:HE	1.80	0.46
44:G8:12:THR:O	44:G8:75:ILE:HB	2.16	0.46
44:G8:97:ARG:NH2	44:G8:104:GLY:HA3	2.31	0.46
24:1H:1800:C:OP2	27:11:183:ARG:NH2	2.29	0.46
46:I8:40:GLN:NE2	46:I8:57:PHE:HB3	2.30	0.46
1:1G:1492:A:C4	24:14:1913:A:N6	2.83	0.46
1:13:1327:C:OP1	21:1F:21:TYR:HD1	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1J:118:G:H3'	25:1J:119:A:H8	1.79	0.46
27:19:71:ASP:CG	27:19:103:ARG:HH22	2.18	0.46
17:8I:41:LYS:HD3	17:8I:88:TYR:OH	2.15	0.46
1:13:1103:C:H2'	1:13:1104:G:O4'	2.15	0.46
24:1H:2176:A:OP1	26:71:7:TYR:OH	2.12	0.46
8:72:20:TYR:HA	8:72:65:TYR:CZ	2.50	0.46
24:14:1992:G:N2	24:14:1996:C:O2	2.46	0.46
24:1H:2067:G:H4'	24:1H:2068:U:OP2	2.15	0.46
9:8E:93:ARG:O	9:8E:97:LYS:N	2.45	0.46
9:82:13:ALA:HB2	9:82:68:GLY:HA3	1.96	0.46
24:1H:2348:U:H4'	52:O8:42:TRP:CD1	2.51	0.46
45:D5:100:VAL:N	45:D5:124:ILE:O	2.42	0.46
24:14:2840:C:H4'	37:55:53:HIS:CE1	2.51	0.46
27:11:85:ASP:OD1	27:11:86:PRO:HD2	2.16	0.46
40:85:39:LEU:HD23	40:85:39:LEU:HA	1.67	0.46
1:1G:247:G:OP2	17:8A:100:LYS:HB2	2.16	0.46
5:42:131:ILE:HD13	5:42:131:ILE:HA	1.81	0.46
24:1H:2608:G:O5'	24:1H:2608:G:H8	1.99	0.46
43:B5:5:TYR:CE1	48:G5:30:ARG:HG3	2.51	0.46
24:14:2251:G:OP1	36:45:82:ARG:NH1	2.49	0.46
24:1H:2745:C:C4	24:1H:2746:U:C4	3.03	0.46
1:1G:646:U:H2'	1:1G:647:C:H6	1.81	0.46
2:12:30:ARG:NH2	2:12:194:PRO:HB2	2.30	0.46
29:31:101:LEU:O	29:31:106:ARG:NH1	2.48	0.46
1:13:853:G:O6	57:13:1862:HOH:O	2.20	0.46
31:51:26:VAL:HG22	31:51:33:LEU:O	2.16	0.46
7:6E:91:VAL:HG12	7:6E:95:ARG:HB3	1.96	0.46
45:D5:4:ARG:CZ	45:D5:58:VAL:HG11	2.45	0.46
48:G5:15:LYS:HD2	48:G5:67:LYS:HZ2	1.80	0.46
24:14:14:A:H3'	24:14:15:G:H5''	1.98	0.46
41:95:26:ASP:N	41:95:26:ASP:OD2	2.39	0.46
48:K8:53:LEU:O	48:K8:57:ILE:HG13	2.14	0.46
29:39:183:VAL:O	29:39:187:VAL:HG23	2.15	0.46
24:14:547:A:H3'	24:14:548:A:C8	2.50	0.46
4:32:30:LYS:O	4:32:30:LYS:HD2	2.15	0.46
22:3L:14:A:H3'	22:3L:15:G:C5'	2.43	0.46
37:98:63:ARG:HA	37:98:80:PHE:HZ	1.79	0.46
2:1E:215:LEU:O	2:1E:219:VAL:HG23	2.16	0.46
24:1H:2210:G:H2'	24:1H:2211:G:N7	2.29	0.46
24:1H:598:G:H1'	35:78:12:ALA:HB2	1.96	0.46
24:1H:1007:C:OP2	24:1H:1008:C:O2'	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1148:U:O4'	9:8E:16:ARG:HD3	2.16	0.46
3:22:195:VAL:C	3:22:196:LEU:HD23	2.36	0.46
1:13:1157:A:N1	1:13:1180:A:H2'	2.30	0.46
45:H8:52:SER:C	45:H8:54:HIS:H	2.19	0.46
24:14:2688:U:H3'	24:14:2688:U:O2	2.15	0.46
43:F8:31:HIS:HA	43:F8:32:PRO:HD3	1.71	0.46
1:1G:457:C:H2'	1:1G:458:C:C6	2.50	0.46
36:45:21:THR:H	36:45:98:LYS:CB	2.29	0.46
24:1H:1906:G:C8	24:1H:1929:G:H2'	2.50	0.46
39:75:12:SER:HA	39:75:13:ARG:HA	1.49	0.46
30:41:16:ARG:HH12	30:41:31:VAL:HG11	1.78	0.46
9:82:70:LYS:O	9:82:74:ILE:HG13	2.14	0.46
1:1G:674:G:H2'	1:1G:675:A:H8	1.80	0.46
20:BI:10:LEU:HD11	20:BI:12:ALA:HB3	1.98	0.46
1:1G:542:G:OP1	4:32:10:ARG:NH2	2.48	0.46
9:8E:37:PHE:CZ	9:8E:74:ILE:HG12	2.50	0.46
24:14:1716:U:O2'	24:14:1717:G:H5'	2.16	0.46
4:32:106:TYR:HE1	4:32:112:VAL:O	1.99	0.46
9:8E:46:ALA:O	9:8E:49:PRO:HD2	2.16	0.46
24:1H:2402:C:HO2'	24:1H:2403:C:P	2.39	0.46
1:13:109:A:C6	1:13:326:G:C6	3.03	0.46
46:E5:53:MET:HA	46:E5:58:THR:O	2.15	0.46
24:1H:2311:A:N3	30:41:88:ILE:HD13	2.30	0.46
24:14:686:G:H5''	53:L5:11:LYS:HZ2	1.80	0.46
1:1G:369:C:O2'	1:1G:370:C:H5'	2.16	0.46
24:14:654(S):G:H1'	24:14:654(T):A:OP1	2.15	0.46
18:9A:68:LYS:O	18:9A:72:ARG:HG3	2.15	0.46
24:14:2515:C:H1'	24:14:2570:G:N2	2.30	0.46
24:14:2897:U:H5'	24:14:2898:U:OP2	2.16	0.46
1:13:405:U:O4	4:3E:2:GLY:N	2.49	0.46
24:14:1685:C:H2'	24:14:1686:C:C6	2.51	0.46
30:49:145:THR:O	30:49:146:TYR:HB3	2.16	0.46
33:58:39:ARG:HA	33:58:40:PRO:HD3	1.86	0.46
16:7I:67:THR:N	16:7I:70:ALA:HB3	2.30	0.46
14:5I:12:ARG:O	14:5I:12:ARG:HG3	2.14	0.46
37:55:51:LEU:HA	37:55:51:LEU:HD23	1.78	0.46
1:1G:1255:G:OP1	10:1A:45:ARG:NH2	2.42	0.46
24:1H:2092:U:H5''	32:61:24:GLY:HA2	1.98	0.46
26:71:200:LYS:HE3	26:71:204:ALA:HB3	1.97	0.46
20:BI:30:LYS:NZ	20:BI:80:ARG:HH12	2.14	0.46
1:13:686:U:HO2'	1:13:687:A:P	2.38	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2345:G:OP2	52:O8:39:TYR:HA	2.15	0.46
31:51:8:PRO:O	31:51:9:ILE:HG23	2.15	0.46
22:2K:18:G:H5''	22:2K:19:C:H1'	1.97	0.46
22:2K:19:C:H3'	22:2K:20:C:C3'	2.46	0.46
4:3E:59:ARG:NH2	4:3E:66:ARG:NH1	2.64	0.46
1:13:1177:G:C6	1:13:1178:G:C2	3.04	0.46
24:1H:2262:U:H4'	24:1H:2328:A:C2	2.51	0.46
24:14:2394:C:H5''	35:35:64:LYS:HD2	1.98	0.46
1:13:1152:A:H2'	1:13:1153:C:C6	2.50	0.46
13:4I:3:ARG:HE	13:4I:7:VAL:HG13	1.80	0.46
1:13:838:G:H2'	1:13:841:U:H5''	1.97	0.46
24:1H:485:C:H2'	24:1H:486:C:C6	2.51	0.46
4:3E:25:ARG:NH1	4:3E:30:LYS:HZ2	2.12	0.46
22:3K:13:G:H2'	22:3K:14:A:C8	2.51	0.46
4:32:174:LEU:HD23	4:32:174:LEU:HA	1.67	0.46
1:13:992:U:H4'	1:13:993:G:H5''	1.98	0.46
24:1H:2875:C:H4'	39:B8:5:ALA:HB2	1.98	0.46
24:1H:34:C:HO2'	24:1H:35:G:P	2.39	0.46
1:13:1409:C:H2'	1:13:1410:G:H8	1.80	0.46
35:78:13:ASN:CG	35:78:15:ARG:HD2	2.35	0.46
24:1H:2476:A:N1	24:1H:2477:C:N4	2.63	0.46
37:98:15:SER:CB	57:98:301:HOH:O	2.64	0.46
27:19:204:ILE:O	27:19:204:ILE:HD12	2.16	0.46
1:1G:961:U:OP2	1:1G:1223:C:O2'	2.14	0.46
1:13:740:U:H4'	15:6I:39:LEU:HD23	1.98	0.46
31:51:46:GLU:HB2	31:51:49:VAL:HG22	1.96	0.46
24:1H:244:A:C2	24:1H:255:A:C4	3.04	0.46
14:5A:37:PHE:HB3	14:5A:39:LEU:HG	1.98	0.46
1:13:664:G:OP1	18:9I:64:ARG:NE	2.33	0.46
24:14:653:A:H5''	24:14:654:A:C8	2.51	0.46
14:5I:53:LEU:HA	14:5I:53:LEU:HD23	1.47	0.46
22:3L:3:U:H2'	22:3L:4:G:C8	2.51	0.46
24:1H:2110:G:C6	24:1H:2120:G:C8	3.04	0.46
24:1H:1742:C:H5'	24:1H:1743:G:OP2	2.16	0.46
24:1H:579:G:H2'	24:1H:580:C:C6	2.50	0.46
16:7I:9:PHE:HB2	16:7I:16:HIS:O	2.16	0.46
1:1G:310:G:OP2	16:7A:27:LYS:NZ	2.38	0.46
1:1G:952:U:H4'	1:1G:964:A:N1	2.31	0.46
41:95:67:GLY:O	41:95:88:ARG:HD2	2.15	0.46
24:14:288:C:H2'	24:14:288:C:O2	2.16	0.46
24:1H:2081:C:H2'	24:1H:2082:A:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1253:G:H2'	1:1G:1254:C:C6	2.50	0.46
24:1H:1268:A:H5'	57:1H:3635:HOH:O	2.16	0.46
20:BI:30:LYS:HD2	20:BI:30:LYS:HA	1.48	0.46
22:2K:20:C:O2'	22:2K:21:A:P	2.74	0.46
24:1H:1771:C:H1'	24:1H:1786:A:C8	2.51	0.46
46:I8:75:LEU:HA	46:I8:75:LEU:HD23	1.64	0.46
44:C5:13:VAL:HG21	44:C5:39:VAL:HG11	1.97	0.46
28:21:60:ASN:OD1	28:21:62:PRO:HD2	2.16	0.46
1:13:585:G:H2'	1:13:586:C:O4'	2.16	0.46
45:H8:95:PRO:HB3	45:H8:129:SER:HA	1.98	0.46
10:1A:13:HIS:HB3	10:1A:68:HIS:ND1	2.31	0.46
24:14:1538:G:H2'	24:14:1539:G:C8	2.45	0.46
24:1H:1312:U:OP1	43:F8:63:LYS:HE2	2.15	0.46
25:16:7:G:H1	25:16:113:C:N4	2.13	0.46
24:14:602:G:O2'	24:14:604:G:O2'	2.17	0.46
1:1G:620:C:H2'	1:1G:621:A:O4'	2.16	0.46
9:8E:9:ARG:HB3	9:8E:14:VAL:HA	1.98	0.46
24:14:1399:C:O2'	24:14:1400:G:H5'	2.16	0.46
28:21:6:GLY:HA2	28:21:51:PHE:CZ	2.51	0.46
12:3I:89:ARG:CB	12:3I:97:ARG:HA	2.46	0.46
1:1G:678:U:H2'	1:1G:679:C:H6	1.77	0.46
34:25:111:PHE:O	34:25:115:VAL:HG23	2.16	0.46
35:35:71:VAL:HG12	35:35:72:PRO:HD3	1.97	0.46
24:14:2774:C:H2'	24:14:2775:A:C8	2.51	0.46
28:29:111:ARG:HD2	28:29:160:TYR:CD2	2.51	0.46
24:14:1384:A:N3	24:14:1405:U:H1'	2.31	0.46
24:1H:1087:G:C5	24:1H:1089:G:H1'	2.51	0.46
24:1H:314:A:O2'	24:1H:315:G:H5'	2.15	0.46
24:1H:826:U:H2'	24:1H:828:U:O4'	2.16	0.46
24:14:27:G:N2	24:14:512:G:O2'	2.34	0.46
1:13:567:G:H2'	1:13:568:G:O4'	2.15	0.46
30:41:145:THR:O	30:41:146:TYR:HB3	2.16	0.46
24:1H:1454:U:H5	37:98:73:VAL:HG13	1.80	0.46
24:1H:547:A:H2'	24:1H:548:A:C8	2.51	0.46
3:2E:104:GLN:OE1	3:2E:105:GLU:N	2.48	0.46
51:N8:49:CYS:C	51:N8:56:LYS:HB2	2.36	0.46
4:3E:23:GLY:HA2	4:3E:112:VAL:HG22	1.98	0.46
33:15:73:THR:HB	33:15:82:LEU:HD11	1.98	0.46
5:42:79:GLU:OE1	8:72:104:ARG:HA	2.15	0.46
24:1H:596:G:H2'	24:1H:597:U:O4'	2.16	0.46
1:13:297:G:H4'	1:13:557:G:H4'	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:283:C:C2	1:13:284:G:C8	3.04	0.46
27:19:127:VAL:HA	27:19:193:VAL:O	2.16	0.46
24:1H:760:G:H2'	24:1H:761:A:O4'	2.15	0.46
20:BI:26:ASN:HB2	20:BI:71:THR:CG2	2.46	0.46
35:78:47:ASP:OD1	35:78:49:ARG:HG3	2.16	0.46
24:14:1021:A:H2'	24:14:1023:U:H5'	1.97	0.46
51:N8:6:VAL:HA	51:N8:7:PRO:HD3	1.85	0.46
24:14:2685:G:O2'	24:14:2726:U:H5	1.98	0.46
5:42:107:ARG:O	5:42:111:GLU:HB2	2.16	0.46
40:85:61:TRP:O	40:85:65:ILE:HG13	2.16	0.46
24:14:1972:A:OP2	57:14:3574:HOH:O	2.20	0.46
44:C5:19:LYS:HG3	44:C5:20:TYR:CD2	2.51	0.46
48:G5:17:SER:HB3	48:G5:20:GLU:HB2	1.98	0.46
24:1H:2208:U:O2'	24:1H:2209:C:H5'	2.16	0.46
24:1H:871:U:P	36:88:5:ARG:HE	2.39	0.46
47:F5:87:PRO:O	47:F5:91:LYS:HB2	2.16	0.46
1:13:1291:G:H2'	1:13:1292:U:C6	2.51	0.46
13:4I:3:ARG:O	13:4I:57:ARG:NH1	2.49	0.46
25:16:6:C:H2'	25:16:7:G:H5''	1.97	0.46
37:98:74:LYS:O	37:98:76:VAL:N	2.47	0.46
22:3L:76:C:H2'	22:3L:77:C:H6	1.80	0.46
37:98:70:LEU:C	37:98:72:ASP:H	2.19	0.46
4:3E:148:VAL:HG12	4:3E:149:ALA:O	2.16	0.46
4:32:13:ARG:O	4:32:16:GLY:N	2.42	0.46
50:I5:20:ASN:CG	50:I5:21:VAL:H	2.18	0.46
24:14:1188:U:H4'	41:95:79:VAL:HG12	1.98	0.46
22:2K:71:C:H2'	22:2K:72:U:C6	2.51	0.46
24:14:1441:G:H2'	24:14:1442:G:C8	2.49	0.46
1:1G:918:A:H2'	1:1G:919:A:O4'	2.16	0.46
1:13:186:C:H2'	1:13:186(A):C:H6	1.81	0.46
24:14:864:G:O2'	24:14:865:C:H5'	2.15	0.46
24:1H:2572:A:C8	28:21:144:ARG:HD2	2.51	0.46
24:14:1217:C:P	40:85:15:LYS:HE2	2.56	0.46
1:1G:69:G:C2	1:1G:73:G:C8	3.04	0.46
24:1H:978:G:H2'	24:1H:979:G:O4'	2.15	0.46
1:13:707:C:C2	1:13:708:C:C5	3.04	0.46
14:5I:3:ARG:HD3	14:5I:3:ARG:C	2.36	0.46
1:13:892:A:H61	1:13:906:G:H1'	1.79	0.46
2:1E:237:ALA:C	2:1E:239:VAL:N	2.69	0.46
13:4A:7:VAL:HG21	30:49:115:ARG:HE	1.81	0.46
1:13:1429:C:H2'	1:13:1430:C:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2280:G:C2	24:1H:2281:C:C6	3.04	0.46
24:14:2768:C:H2'	24:14:2769:C:O4'	2.16	0.46
1:13:439:A:C5	1:13:440:A:H1'	2.50	0.46
1:13:1268:A:N3	1:13:1326:C:O2'	2.46	0.46
29:31:140:LEU:O	29:31:143:ALA:HB3	2.15	0.46
1:13:247:G:OP2	17:81:101:ARG:HG2	2.16	0.46
39:B8:21:GLU:H	39:B8:21:GLU:HG3	1.53	0.46
35:78:94:GLU:OE2	35:78:124:LYS:HD3	2.15	0.46
23:4K:9:G:O2'	23:4K:10:G:OP1	2.20	0.46
1:1G:714:G:H2'	1:1G:715:A:C8	2.51	0.46
41:95:76:LYS:HD2	41:95:80:GLN:O	2.16	0.46
4:32:152:SER:HA	4:32:155:LEU:HD12	1.98	0.46
27:11:205:VAL:O	27:11:205:VAL:HG12	2.16	0.46
2:1E:211:ILE:HG13	2:1E:211:ILE:H	1.53	0.46
35:78:36:LYS:HB3	35:78:37:GLY:H	1.33	0.46
46:I8:42:GLY:O	46:I8:57:PHE:HD2	1.98	0.46
1:13:1238:A:C8	1:13:1303:C:H1'	2.51	0.46
7:6E:38:LEU:O	7:6E:42:ILE:HB	2.16	0.46
1:13:1024:G:H4'	1:13:1024:G:OP1	2.15	0.46
24:1H:1530:G:C5	24:1H:1531:C:C4	3.04	0.46
9:82:34:ASN:HA	9:82:37:PHE:CD2	2.45	0.46
1:1G:1152:A:H5'	10:1A:13:HIS:CD2	2.50	0.46
1:1G:57:G:C2	1:1G:58:C:C2	3.04	0.46
24:1H:773:U:H4'	27:11:47:GLY:CA	2.46	0.46
27:11:70:TRP:CE2	27:11:150:LYS:HD3	2.51	0.46
24:1H:1189:A:P	57:1H:3828:HOH:O	2.73	0.46
1:1G:1413:A:H2'	1:1G:1414:U:O4'	2.16	0.46
27:19:70:TRP:HZ3	27:19:146:GLU:OE2	1.99	0.46
30:41:16:ARG:O	30:41:20:ILE:HG13	2.15	0.46
1:13:1330:U:H5''	1:13:1331:G:OP2	2.16	0.46
44:G8:21:LYS:HE2	44:G8:21:LYS:HB3	1.47	0.46
24:14:489:G:N7	42:A5:49:LYS:NZ	2.63	0.46
2:1E:178:ARG:HG3	8:7E:72:PRO:HA	1.98	0.46
1:13:943:U:H2'	1:13:944:G:H5'	1.98	0.46
34:25:4:PRO:HA	34:25:21:CYS:O	2.15	0.46
36:88:20:ALA:HB3	45:H8:79:ARG:NH1	2.30	0.46
24:1H:1045:A:OP1	24:1H:1046:A:H5'	2.16	0.46
1:1G:540:G:C4	1:1G:541:G:C8	3.05	0.46
48:G5:42:GLY:C	48:G5:44:LEU:H	2.19	0.46
24:1H:1448:G:H2'	24:1H:1449:A:C8	2.51	0.46
43:F8:3:THR:O	43:F8:6:ASP:HB2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1587:A:H2'	24:1H:1588:C:C6	2.51	0.46
42:E8:58:ALA:HB1	42:E8:64:MET:SD	2.56	0.46
24:14:2170:A:H2'	24:14:2170:A:N3	2.31	0.46
49:H5:59:VAL:HG22	49:H5:60:GLU:H	1.79	0.46
24:14:806:C:OP2	35:35:41:ARG:HD3	2.15	0.46
19:AI:5:LEU:HD11	19:AI:10:PHE:CD1	2.50	0.46
24:1H:272:G:H2'	24:1H:273:G:H8	1.80	0.46
1:1G:391:G:C6	1:1G:392:G:C5	3.04	0.46
24:1H:285:C:H2'	24:1H:286:C:C6	2.51	0.46
31:51:12:PRO:HD2	31:51:49:VAL:HA	1.97	0.46
24:1H:986:C:O2'	24:1H:987:G:H5'	2.16	0.46
31:51:26:VAL:HG23	31:51:27:LYS:H	1.81	0.46
24:1H:1340:U:H4'	24:1H:1341:U:OP2	2.15	0.46
8:7E:100:ILE:HA	8:7E:101:PRO:HD3	1.64	0.46
1:13:1014:A:H4'	19:AI:14:HIS:CD2	2.51	0.46
24:14:57:C:H2'	24:14:58:G:O4'	2.16	0.46
24:1H:2705:A:O2'	24:1H:2852:G:OP1	2.17	0.46
24:14:2716:U:O2'	24:14:2717:G:H5'	2.15	0.46
30:41:82:LEU:HA	30:41:86:MET:HE1	1.96	0.46
4:3E:179:GLU:CD	4:3E:179:GLU:H	2.19	0.46
6:52:46:ARG:HE	6:52:46:ARG:HB3	1.54	0.46
17:8A:43:LEU:HD12	17:8A:68:ARG:HG2	1.98	0.46
24:1H:2393:A:H4'	35:78:62:LEU:O	2.16	0.45
9:82:5:TYR:HE1	9:82:16:ARG:HG2	1.81	0.45
24:1H:811:U:C4	35:78:21:ARG:NH2	2.84	0.45
39:75:6:LEU:CA	39:75:9:LEU:HB3	2.46	0.45
36:88:72:LYS:HA	36:88:73:PRO:HD3	1.74	0.45
24:14:1582:C:O2'	24:14:1586:A:C8	2.66	0.45
1:13:377:G:OP1	16:7I:3:LYS:HD2	2.15	0.45
27:11:148:GLU:CB	27:11:151:LYS:HD2	2.45	0.45
3:22:180:ALA:HB1	3:22:182:ILE:HG13	1.98	0.45
24:1H:1181:C:H2'	24:1H:1182:A:C8	2.52	0.45
46:E5:44:ARG:HH11	46:E5:44:ARG:CG	2.29	0.45
1:13:78:G:C6	1:13:90:C:N4	2.85	0.45
46:E5:68:GLU:HG3	46:E5:82:ARG:NH1	2.31	0.45
1:1G:1118:C:H6	1:1G:1118:C:O5'	1.99	0.45
25:1J:118:G:H3'	25:1J:119:A:C8	2.51	0.45
30:41:131:TYR:HE2	30:41:133:LEU:HD23	1.80	0.45
12:3I:25:PRO:HD2	12:3I:98:TYR:OH	2.16	0.45
24:14:2127:G:H21	24:14:2173:A:H5''	1.80	0.45
1:1G:235:C:C5'	17:8A:70:ARG:HG2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:329:G:H4'	24:1H:330:A:OP2	2.15	0.45
24:14:971:C:H2'	24:14:972:G:C5'	2.46	0.45
1:13:1260:C:O5'	1:13:1284:C:H4'	2.16	0.45
24:1H:2333:A:N3	24:1H:2335:A:N6	2.64	0.45
24:1H:2376:A:H2'	24:1H:2377:A:O4'	2.16	0.45
45:H8:11:GLU:HA	45:H8:36:LYS:HD2	1.97	0.45
24:1H:302:C:O2'	24:1H:303:U:H5'	2.16	0.45
24:14:1946:U:H2'	24:14:1947:C:C6	2.51	0.45
24:14:2575:C:H2'	24:14:2578:G:O6	2.16	0.45
1:1G:254:G:OP1	17:8A:68:ARG:HB3	2.15	0.45
1:13:569:C:H5''	1:13:570:G:OP1	2.16	0.45
24:14:659:C:H4'	29:39:100:THR:O	2.16	0.45
24:1H:270(R):G:N7	57:1H:4140:HOH:O	2.36	0.45
11:2A:109:VAL:HG12	18:9A:86:VAL:HA	1.97	0.45
3:2E:70:VAL:N	3:2E:106:VAL:HG23	2.30	0.45
1:1G:1100:C:O2'	1:1G:1102:A:OP1	2.35	0.45
1:1G:1103:C:H5''	2:12:98:LEU:HD13	1.98	0.45
45:H8:3:TYR:OH	45:H8:50:GLN:HB3	2.15	0.45
22:3L:73:U:H2'	22:3L:74:C:O4'	2.17	0.45
11:2I:24:SER:HB3	11:2I:27:ASN:O	2.16	0.45
24:14:2023:G:OP2	24:14:2617:C:H4'	2.16	0.45
50:M8:13:ARG:HB2	50:M8:30:GLU:HA	1.97	0.45
11:2A:32:ILE:HD12	11:2A:68:ALA:HB1	1.98	0.45
26:71:22:ILE:HG23	26:71:189:ILE:HD12	1.97	0.45
1:1G:779:C:H2'	1:1G:780:A:O4'	2.17	0.45
8:72:21:LYS:HG2	8:72:23:SER:O	2.16	0.45
18:9A:40:LEU:HD23	18:9A:40:LEU:HA	1.74	0.45
4:3E:181:MET:HE2	4:3E:181:MET:HB3	1.85	0.45
28:29:6:GLY:HA2	28:29:28:ALA:HA	1.98	0.45
27:19:76:PRO:HB2	27:19:116:GLN:HE21	1.81	0.45
14:5I:23:ARG:NH1	14:5I:28:GLY:O	2.49	0.45
52:O8:45:LYS:HA	52:O8:45:LYS:HD3	1.80	0.45
52:O8:41:PRO:HD2	52:O8:46:HIS:HA	1.97	0.45
24:1H:806:C:OP2	35:78:41:ARG:HD3	2.17	0.45
24:14:1364:G:N7	47:F5:2:SER:HB2	2.31	0.45
31:59:6:ARG:HH12	31:59:7:LEU:HD23	1.81	0.45
1:1G:1286:A:OP1	21:1B:25:LYS:NZ	2.48	0.45
25:16:24:G:C2	25:16:56:G:C2	3.04	0.45
24:14:307:G:H21	24:14:330:A:H62	1.64	0.45
24:14:2392:A:N3	24:14:2392:A:O4'	2.48	0.45
27:19:37:LEU:HA	27:19:38:LYS:CB	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:534:U:H5'	40:C8:42:ALA:CB	2.45	0.45
1:1G:632:A:H1'	1:1G:633:G:OP2	2.16	0.45
24:14:1535:U:C5	24:14:1536:A:H1'	2.51	0.45
44:C5:47:LYS:N	44:C5:60:PHE:HB3	2.28	0.45
1:1G:458:C:H2'	1:1G:464:G:C8	2.50	0.45
24:1H:919:G:N2	24:1H:2269:A:OP2	2.49	0.45
4:32:58:LEU:HD22	4:32:62:GLN:HG2	1.97	0.45
30:41:17:PRO:HA	30:41:20:ILE:HD12	1.98	0.45
1:13:909:A:H2'	1:13:910:C:O4'	2.15	0.45
2:1E:178:ARG:NH1	2:1E:196:LEU:O	2.26	0.45
1:1G:382:A:H2'	1:1G:383:A:H8	1.80	0.45
1:1G:803:G:C5	1:1G:804:U:C4	3.04	0.45
28:21:167:VAL:CG1	28:21:189:PRO:HD3	2.46	0.45
24:14:580:C:H2'	24:14:581:C:H6	1.77	0.45
4:32:112:VAL:HG12	4:32:116:GLN:OE1	2.17	0.45
24:14:814:C:H5''	41:95:84:LYS:HB3	1.97	0.45
24:1H:2768:C:C4	24:1H:2769:C:C5	3.04	0.45
49:L8:23:LEU:HB3	49:L8:28:LEU:HB2	1.98	0.45
2:12:47:THR:O	2:12:51:LEU:HB2	2.16	0.45
49:L8:3:ARG:HG2	49:L8:38:GLU:CG	2.46	0.45
35:78:13:ASN:OD1	35:78:15:ARG:HD2	2.16	0.45
24:1H:2053:G:P	57:1H:4079:HOH:O	2.74	0.45
24:1H:460:A:P	53:P8:41:ARG:HH22	2.39	0.45
9:82:48:GLU:HB3	9:82:101:PHE:CE2	2.50	0.45
24:14:513:A:C2	24:14:514:A:C4	3.04	0.45
6:5E:4:TYR:HD1	6:5E:92:LYS:HA	1.81	0.45
24:1H:263:C:H2'	24:1H:264:C:O4'	2.17	0.45
16:7A:14:ASN:OD1	16:7A:16:HIS:NE2	2.48	0.45
1:1G:567:G:H2'	1:1G:568:G:O4'	2.16	0.45
24:1H:552:G:H2'	24:1H:553:U:O4'	2.16	0.45
24:1H:1288:U:H4'	24:1H:1289:C:OP2	2.16	0.45
29:39:129:PHE:HA	29:39:142:TRP:CD1	2.50	0.45
24:14:952:G:C6	24:14:953:A:N7	2.85	0.45
6:52:33:TYR:OH	6:52:78:GLU:HG3	2.15	0.45
24:1H:68:G:H2'	24:1H:69:C:C6	2.51	0.45
30:41:76:SER:OG	30:41:84:LYS:N	2.50	0.45
5:4E:121:LYS:HE3	5:4E:122:GLU:O	2.17	0.45
1:1G:689:C:P	11:2A:46:GLY:HA3	2.56	0.45
22:2K:38:MIA:HN6	22:2K:38:MIA:H152	1.81	0.45
6:52:70:ASP:OD1	6:52:70:ASP:N	2.37	0.45
24:14:455:C:N3	24:14:472:A:H2'	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:3A:6:THR:H	12:3A:9:GLN:HB2	1.81	0.45
24:14:1062:G:H2'	24:14:1063:G:N7	2.31	0.45
3:22:6:HIS:HB3	14:5A:49:HIS:HD2	1.80	0.45
32:69:76:THR:CG2	32:69:140:LEU:HD13	2.47	0.45
1:13:877:C:O2	8:7E:3:THR:OG1	2.34	0.45
1:13:195:A:OP1	20:BI:65:LYS:HE3	2.17	0.45
24:1H:1070:A:OP2	24:1H:1074:G:N1	2.35	0.45
1:1G:201:C:H42	1:1G:216:G:H1	1.62	0.45
1:13:691:G:O6	11:2I:52:GLY:HA2	2.15	0.45
1:13:186:C:H2'	1:13:186(A):C:C6	2.51	0.45
1:1G:626:U:C2	1:1G:627:G:C8	3.04	0.45
1:13:224:C:H2'	1:13:225:C:C6	2.50	0.45
2:1E:41:ILE:HD12	2:1E:41:ILE:HA	1.69	0.45
24:1H:1952:A:C5	34:68:22:ILE:HD12	2.52	0.45
24:14:1641:A:N6	24:14:1642:G:C2	2.84	0.45
1:13:973:G:OP1	10:1I:57:LYS:NZ	2.31	0.45
11:2A:17:GLY:N	11:2A:79:SER:O	2.40	0.45
36:45:37:LEU:HD12	36:45:128:LYS:HB3	1.98	0.45
1:13:160:A:H1'	1:13:344:A:N7	2.31	0.45
15:6A:67:LEU:HD22	15:6A:78:TYR:CE2	2.52	0.45
1:1G:1262:C:H2'	1:1G:1263:C:C6	2.51	0.45
22:3L:47:U:H2'	22:3L:48:C:C6	2.50	0.45
24:14:1657:C:H2'	24:14:1658:C:C6	2.52	0.45
1:13:445:G:H1	1:13:489:C:H42	1.63	0.45
1:13:1129:C:H5''	1:13:1139:G:N7	2.32	0.45
34:25:101:PRO:HG3	39:75:67:SER:OG	2.15	0.45
44:G8:13:VAL:HG12	44:G8:74:PRO:HA	1.99	0.45
45:H8:107:THR:O	45:H8:109:ALA:N	2.40	0.45
54:M5:19:SER:OG	54:M5:21:LYS:HD2	2.17	0.45
1:13:1237:C:H4'	1:13:1334:G:N2	2.30	0.45
45:D5:120:ILE:HD12	45:D5:173:ALA:HB2	1.99	0.45
28:29:16:ARG:NH2	28:29:171:GLU:OE1	2.48	0.45
1:1G:131:C:H2'	1:1G:132:C:C6	2.52	0.45
24:1H:1211:U:OP2	57:1H:4137:HOH:O	2.21	0.45
54:M5:50:LEU:HA	54:M5:50:LEU:HD12	1.83	0.45
24:1H:14:A:H8	24:1H:14:A:O5'	1.99	0.45
24:1H:221:A:O4'	24:1H:233:A:H1'	2.17	0.45
24:14:531:C:H4'	24:14:532:A:H5''	1.98	0.45
26:71:192:PHE:CZ	26:71:196:LEU:HD11	2.52	0.45
24:1H:74:A:H4'	24:1H:75:G:O5'	2.17	0.45
24:14:2448:A:P	57:14:3533:HOH:O	2.67	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1346:A:O4'	1:1G:1348:U:C6	2.70	0.45
24:14:1614:A:OP1	57:14:3518:HOH:O	2.21	0.45
31:51:69:ARG:NH1	31:51:73:ALA:HB2	2.31	0.45
22:3K:57:C:C2	22:3K:68:A:H1'	2.50	0.45
13:4A:97:PRO:HB2	13:4A:101:GLN:NE2	2.21	0.45
51:N8:39:MET:O	51:N8:40:LYS:HE3	2.17	0.45
4:3E:55:ALA:O	4:3E:59:ARG:HG2	2.16	0.45
24:1H:910:A:N7	36:88:13:GLN:HG3	2.31	0.45
24:14:1582:C:O2'	24:14:1586:A:H8	1.98	0.45
24:1H:1169:G:N2	24:1H:1181:C:C2	2.85	0.45
24:14:270(M):U:H1'	24:14:270(N):G:C6	2.50	0.45
24:1H:2689:U:P	24:1H:2719:G:H22	2.39	0.45
24:1H:2355:C:H1'	46:I8:39:ARG:HH21	1.82	0.45
46:I8:36:ILE:CD1	46:I8:39:ARG:HG2	2.44	0.45
1:1G:498:A:H4'	1:1G:500:G:H5'	1.98	0.45
48:G5:5:GLU:H	48:G5:5:GLU:CD	2.20	0.45
18:9A:22:VAL:HG22	18:9A:23:LYS:N	2.31	0.45
4:3E:173:TRP:HA	4:3E:187:ARG:CG	2.47	0.45
39:75:54:ARG:HA	39:75:59:THR:HB	1.97	0.45
9:82:125:TYR:CD1	9:82:126:SER:N	2.83	0.45
1:13:1336:C:O2'	1:13:1337:G:O5'	2.35	0.45
24:1H:2147:G:C5	24:1H:2148:G:H1'	2.51	0.45
1:1G:189:U:O2'	17:8A:63:ARG:NH2	2.49	0.45
24:1H:2028:U:H2'	24:1H:2029:G:O4'	2.15	0.45
37:98:38:VAL:HB	37:98:39:PRO:HD3	1.98	0.45
24:14:397:G:O2'	24:14:2231:C:H1'	2.17	0.45
21:1B:6:ARG:CZ	21:1B:15:ARG:HH12	2.29	0.45
1:1G:994:A:C5	1:1G:1216:G:H4'	2.51	0.45
37:98:18:LEU:HD22	37:98:22:ARG:HG3	1.98	0.45
24:14:1314:C:H5'	24:14:1314:C:C6	2.51	0.45
34:25:87:ILE:HG23	34:25:91:LEU:HA	1.98	0.45
1:13:344:A:H8	1:13:346:G:N7	2.15	0.45
24:14:2870:C:C2'	24:14:2871:C:H5'	2.47	0.45
34:25:63:VAL:HG12	34:25:106:LEU:HD11	1.99	0.45
24:1H:827:U:H5'	24:1H:828:U:O5'	2.16	0.45
41:95:67:GLY:O	41:95:88:ARG:NH1	2.42	0.45
32:61:95:LYS:O	32:61:99:GLU:HG3	2.16	0.45
2:12:62:ALA:O	2:12:65:GLY:N	2.46	0.45
2:1E:55:PHE:CD1	2:1E:58:ILE:HD12	2.51	0.45
24:14:1929:G:H4'	24:14:1930:G:OP1	2.15	0.45
44:G8:6:HIS:HE1	44:G8:69:ALA:O	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:837:G:C2	1:1G:850:U:O2	2.70	0.45
1:1G:547:A:OP2	4:32:2:GLY:HA2	2.16	0.45
24:1H:466:A:N3	24:1H:683:C:H1'	2.31	0.45
1:13:1053:G:N7	1:13:1200:C:H5'	2.31	0.45
3:22:149:ALA:HA	3:22:201:TYR:O	2.17	0.45
40:C8:59:ARG:O	40:C8:63:VAL:HG23	2.16	0.45
1:13:813:U:OP2	1:13:813:U:H6	2.00	0.45
24:1H:654:A:H3'	24:1H:654:A:N3	2.32	0.45
25:1J:78:A:C2	25:1J:99:A:C4	3.04	0.45
30:41:15:VAL:HG13	30:41:175:LEU:HB2	1.97	0.45
24:1H:2552:U:C2	24:1H:2554:U:H5'	2.52	0.45
22:3K:35:QUO:H162	23:4K:14:A:H8	1.82	0.45
24:1H:2712:U:O2	24:1H:2712:U:H2'	2.17	0.45
1:13:686:U:O2'	1:13:687:A:P	2.75	0.45
1:1G:1347:G:N2	1:1G:1373:G:H2'	2.32	0.45
24:14:1141:U:H2'	33:15:63:THR:HG21	1.99	0.45
24:1H:1387:C:H5'	24:1H:1469:A:H4'	1.99	0.45
6:5E:19:LEU:HD21	6:5E:59:TYR:CE1	2.52	0.45
24:14:910:A:N1	24:14:2277:G:H1'	2.31	0.45
24:1H:2209:C:O2	24:1H:2216:G:C2	2.69	0.45
24:1H:1690:A:H3'	24:1H:1691:C:H6	1.81	0.45
24:14:2262:U:H5	46:E5:16:SER:OG	1.99	0.45
19:AI:42:PRO:HD3	50:M8:63:TYR:CE1	2.52	0.45
30:41:125:PHE:HA	30:41:130:ASN:O	2.17	0.45
41:D8:64:HIS:CG	41:D8:92:THR:HG22	2.51	0.45
1:13:1288:A:N3	1:13:1352:C:O2'	2.45	0.45
24:1H:2410:G:C2	24:1H:2411:A:H1'	2.51	0.45
24:14:1092:C:N4	24:14:1099:G:H1	2.15	0.45
22:2L:1:G:N3	22:2L:2:G:C8	2.84	0.45
1:1G:1190:G:OP2	1:1G:1190:G:H8	2.00	0.45
24:14:286:C:H2'	24:14:287:C:H6	1.82	0.45
1:13:627:G:H2'	1:13:628:G:C8	2.50	0.45
41:D8:8:GLY:O	41:D8:10:LYS:HE3	2.17	0.45
24:1H:2799:A:H2'	24:1H:2801:A:H8	1.80	0.45
1:1G:553:A:H2'	1:1G:554:C:H6	1.81	0.45
24:1H:768:G:O2'	24:1H:1379:A:N6	2.47	0.45
1:13:1365:G:H2'	1:13:1366:C:H6	1.81	0.45
24:14:315:G:H2'	24:14:316:C:C6	2.51	0.45
45:H8:89:PHE:HE2	45:H8:96:VAL:HG21	1.80	0.45
27:11:232:PRO:HB3	27:11:244:ARG:NH1	2.31	0.45
7:6E:150:ALA:HB2	11:2I:50:TYR:OH	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:833:U:O2'	1:1G:834:C:H5'	2.16	0.45
24:14:99:U:O2	24:14:102:G:N1	2.50	0.45
24:1H:1783:A:H5'	24:1H:2608:G:H4'	1.98	0.45
22:3L:36:U:H2'	22:3L:37:A:O4'	2.17	0.45
36:88:133:ARG:O	36:88:134:ARG:HB2	2.17	0.45
39:B8:20:PRO:HD2	39:B8:86:ILE:HG12	1.97	0.45
19:AI:18:LYS:NZ	19:AI:22:LEU:HD21	2.31	0.45
30:49:6:ALA:O	30:49:9:ARG:HB3	2.16	0.45
1:13:1086:U:H2'	1:13:1087:G:O4'	2.17	0.45
24:1H:2397:G:N2	24:1H:2420:C:H1'	2.31	0.45
24:14:2636:U:OP1	28:29:80:GLU:N	2.45	0.45
6:52:101:ALA:C	18:9A:28:GLU:HB2	2.37	0.45
24:1H:1686:C:H2'	24:1H:1687:G:O4'	2.16	0.45
17:8A:83:ASP:N	17:8A:83:ASP:OD1	2.50	0.45
43:B5:57:LEU:HD23	43:B5:57:LEU:N	2.32	0.45
39:75:125:ARG:HD3	39:75:125:ARG:HA	1.78	0.45
48:K8:24:LEU:HA	48:K8:24:LEU:HD23	1.74	0.45
29:31:164:ARG:HG2	29:31:175:THR:OG1	2.16	0.45
31:59:149:ARG:HG2	31:59:154:PRO:HB3	1.99	0.45
24:14:1274:A:N3	24:14:1297:C:H1'	2.31	0.45
20:BI:13:LEU:HD12	20:BI:14:LYS:N	2.31	0.45
33:58:95:PRO:O	33:58:97:ARG:N	2.49	0.45
24:14:2016:U:H1'	51:J5:6:VAL:HG13	1.98	0.45
1:1G:1365:G:H2'	1:1G:1366:C:C6	2.50	0.45
24:14:2287:A:N1	24:14:2346:A:C2	2.76	0.45
24:1H:1359:A:H2'	24:1H:1360:A:C5'	2.46	0.45
24:14:1114:G:H2'	24:14:1115:G:C8	2.51	0.45
3:22:79:ARG:CZ	3:22:79:ARG:H	2.30	0.45
24:14:2009:G:H1'	37:55:107:ASP:O	2.17	0.45
24:1H:739:G:O5'	24:1H:739:G:H8	1.99	0.45
10:1I:40:LEU:HB3	10:1I:41:PRO:HD2	1.99	0.45
1:13:954:G:O6	13:4I:104:ARG:NH1	2.50	0.45
27:19:228:PRO:HD3	27:19:235:GLY:N	2.31	0.45
29:39:21:ALA:C	29:39:23:ASP:H	2.20	0.45
32:69:85:GLU:OE1	32:69:86:THR:HG22	2.16	0.45
25:16:9:G:C6	25:16:10:C:C4	3.05	0.45
24:14:2790:A:H5'	24:14:2791:C:H5'	1.97	0.45
3:2E:46:GLU:HB2	3:2E:83:ARG:HH21	1.80	0.45
24:1H:2146:C:H4'	24:1H:2147:G:C5	2.51	0.45
24:1H:2602:A:H4'	24:1H:2603:G:O5'	2.17	0.45
44:G8:9:LYS:HA	44:G8:27:VAL:HG22	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:2K:79:A:H2'	22:2K:80:C:O4'	2.16	0.45
44:C5:15:VAL:HG12	44:C5:21:LYS:HA	1.99	0.45
4:32:117:ALA:O	4:32:121:VAL:HG23	2.16	0.45
3:22:92:ALA:HB2	3:22:99:VAL:CG2	2.47	0.45
52:O8:15:GLU:HG3	52:O8:16:CYS:N	2.31	0.45
24:1H:1486:A:H2'	24:1H:1487:G:C8	2.51	0.45
1:13:707:C:H2'	1:13:708:C:C6	2.52	0.45
17:8I:58:GLU:OE2	17:8I:75:ARG:NH2	2.49	0.45
3:2E:15:THR:HG21	3:2E:181:ASN:HA	1.99	0.45
24:1H:1470:G:N2	24:1H:1522:G:OP2	2.47	0.45
18:9I:74:ARG:HG2	18:9I:79:LEU:HB2	1.99	0.45
1:1G:191(F):U:H2'	1:1G:191:G:H8	1.82	0.45
20:BI:63:ILE:HD12	20:BI:81:LYS:HG2	1.99	0.45
20:BA:97:ALA:O	20:BA:99:LEU:HG	2.17	0.45
28:29:27:LEU:HA	28:29:180:ASN:O	2.16	0.45
30:49:55:LYS:HA	30:49:55:LYS:HD2	1.80	0.45
9:8E:128:ARG:NH2	22:2K:34:U:H3'	2.31	0.45
45:H8:151:HIS:N	45:H8:154:ASP:OD2	2.50	0.45
24:14:1810:A:H2'	24:14:1811:G:O4'	2.16	0.45
2:1E:184:VAL:O	2:1E:198:ASP:HB2	2.17	0.45
1:1G:1256:A:C8	1:1G:1278:U:O4'	2.70	0.45
1:13:1502:A:H5'	1:13:1504:G:N7	2.32	0.45
54:M5:28:GLY:O	54:M5:34:TRP:CH2	2.70	0.45
24:1H:1510:A:OP1	24:1H:1511:A:H5'	2.17	0.45
24:14:249:C:P	57:14:3524:HOH:O	2.70	0.45
30:49:44:GLY:O	30:49:47:LYS:HD2	2.16	0.45
22:2L:15:G:H22	22:2L:57:C:N4	2.13	0.45
30:49:93:THR:HG21	30:49:95:ARG:HH21	1.81	0.45
31:59:10:PRO:HD2	31:59:50:VAL:O	2.17	0.45
19:AA:20:LEU:O	19:AA:23:ASN:HB2	2.17	0.45
47:F5:80:LEU:HD12	47:F5:82:LEU:HD21	1.98	0.45
47:F5:82:LEU:H	47:F5:82:LEU:CD2	2.29	0.45
47:F5:90:ILE:HA	47:F5:94:LEU:HD12	1.98	0.45
24:1H:1533:C:H2'	24:1H:1534:G:H8	1.79	0.45
24:14:2748:A:H2'	24:14:2749:A:C8	2.47	0.45
24:1H:528:A:N1	24:1H:2043:C:O5'	2.50	0.45
40:C8:70:ARG:NH2	40:C8:75:ASN:HB2	2.32	0.45
24:1H:639:U:H2'	24:1H:640:C:C6	2.52	0.45
24:14:2123:G:N2	26:79:44:HIS:HE1	2.14	0.45
1:1G:545:C:H5'	4:32:72:GLU:HB2	1.98	0.45
30:49:110:ALA:HA	30:49:140:ILE:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:75:16:ARG:NH2	39:75:19:LEU:HD21	2.32	0.45
24:1H:1590:U:H2'	24:1H:1591:G:H8	1.80	0.45
24:1H:2854:G:C6	24:1H:2855:C:C4	3.05	0.45
24:14:2418:A:P	54:M5:29:LYS:HZ1	2.39	0.45
36:88:75:THR:HG22	36:88:90:VAL:H	1.82	0.45
24:14:1568:G:OP2	27:19:63:ARG:NH2	2.47	0.45
26:71:5:LYS:HA	26:71:8:ARG:HB2	1.99	0.45
24:14:71:A:H5''	24:14:73:A:C8	2.52	0.45
29:31:33:LEU:HD13	29:31:112:MET:HE2	1.98	0.45
1:1G:988:G:C6	1:1G:989:C:C2	3.04	0.45
24:1H:33:U:H4'	24:1H:34:C:OP1	2.16	0.45
13:4I:107:ALA:HB3	13:4I:111:LYS:HE2	1.99	0.45
13:4I:107:ALA:HB3	13:4I:111:LYS:HG2	1.99	0.45
9:8E:17:VAL:HG21	9:8E:80:GLY:HA3	1.99	0.45
12:3A:97:ARG:HB2	12:3A:98:TYR:CE2	2.52	0.45
1:13:1264:C:H1'	1:13:1272:G:N2	2.32	0.45
20:BI:33:ILE:HD11	20:BI:62:LEU:HD22	1.98	0.45
24:14:78:A:H2'	24:14:79:G:H8	1.81	0.45
24:14:2517:C:HO2'	24:14:2542:A:H2	1.57	0.45
24:1H:2822:G:OP1	28:21:159:HIS:NE2	2.49	0.45
6:52:78:GLU:O	6:52:81:ILE:HG13	2.16	0.45
49:L8:7:LYS:HG3	49:L8:34:GLU:HG3	1.99	0.45
1:1G:359:U:H2'	1:1G:360:A:C8	2.52	0.45
27:19:58:HIS:CD2	27:19:59:LYS:N	2.85	0.45
22:2L:29:C:H2'	22:2L:30:A:C8	2.51	0.45
5:4E:12:LEU:O	5:4E:30:ALA:HA	2.17	0.45
1:13:775:G:O2'	1:13:776:G:H5'	2.16	0.45
24:14:1671:U:HO2'	24:14:1673:U:H5	1.65	0.45
4:3E:50:ARG:HA	4:3E:51:PRO:HD3	1.83	0.45
24:14:1680:U:H2'	24:14:1681:G:O4'	2.17	0.45
24:1H:483:A:O2'	44:G8:49:VAL:O	2.23	0.45
34:25:113:LYS:HE3	34:25:117:LEU:HD11	1.98	0.45
1:1G:518:C:H5	1:1G:530:G:OP2	2.00	0.45
34:25:120:GLU:CD	34:25:122:LEU:HD21	2.37	0.45
24:14:1045:A:N3	24:14:1045:A:H2'	2.32	0.45
24:1H:728:G:HO2'	24:1H:730:C:H6	1.64	0.45
35:78:49:ARG:O	54:Q8:56:GLU:HG3	2.16	0.45
16:7I:26:ARG:CZ	16:7I:31:LYS:HB3	2.47	0.45
1:13:1117:G:O3'	9:8E:104:ARG:HD3	2.15	0.45
19:AA:62:ILE:HD11	19:AA:71:LEU:HD21	1.98	0.45
3:2E:152:ILE:HB	3:2E:199:LYS:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AA:16:LEU:HG	19:AA:20:LEU:HD23	1.98	0.45
46:I8:60:PHE:CD1	46:I8:60:PHE:N	2.84	0.45
8:72:51:VAL:HG22	8:72:52:ASP:N	2.28	0.45
36:45:98:LYS:HB3	36:45:99:PRO:HD2	1.98	0.45
24:1H:1853:A:H2'	24:1H:1854:A:H8	1.80	0.45
18:9A:52:PRO:O	18:9A:56:THR:HG23	2.16	0.45
24:1H:636:G:H4'	24:1H:638:G:O3'	2.16	0.45
37:98:51:LEU:HD13	37:98:70:LEU:HD11	1.98	0.45
24:14:240:G:H1'	24:14:257:A:H61	1.82	0.45
35:35:36:LYS:HB3	35:35:37:GLY:H	1.44	0.45
1:13:591:U:C2	1:13:592:G:C8	3.05	0.45
39:B8:16:ARG:HD3	39:B8:79:HIS:HA	1.99	0.45
1:13:105:G:H2'	1:13:106:C:C6	2.52	0.45
24:1H:420:C:H2'	24:1H:421:U:H6	1.82	0.45
1:13:1277:C:O2'	1:13:1279:A:H1'	2.17	0.45
24:1H:603:A:C8	24:1H:655:A:C6	3.04	0.45
1:1G:1251:A:H2'	1:1G:1252:A:C8	2.51	0.45
48:G5:47:ASN:O	48:G5:49:LYS:N	2.50	0.45
3:2E:40:ARG:O	3:2E:44:GLU:HG2	2.16	0.45
22:3K:72:U:H2'	22:3K:73:U:O4'	2.17	0.45
6:52:97:PHE:N	18:9A:30:ASP:OD1	2.46	0.45
1:1G:1088:G:C5	1:1G:1089:G:N7	2.85	0.45
12:3A:70:ILE:HG21	12:3A:75:HIS:CD2	2.51	0.45
8:72:11:THR:HG23	8:72:14:ARG:HH12	1.81	0.45
28:29:182:LEU:O	28:29:183:LEU:HD12	2.17	0.45
22:3L:80:C:H2'	22:3L:81:C:C6	2.52	0.45
24:1H:1709:U:H2'	24:1H:1710:C:C6	2.51	0.45
27:19:26:LYS:HB3	27:19:83:GLU:HG2	1.98	0.45
28:29:27:LEU:HB2	28:29:181:LEU:HD12	1.98	0.45
24:1H:482:A:O2'	24:1H:497:A:N1	2.41	0.45
1:1G:20:U:H2'	1:1G:21:G:O4'	2.16	0.45
24:14:1926:U:H2'	24:14:1928:A:OP2	2.16	0.45
6:52:17:SER:O	6:52:21:LEU:HB2	2.17	0.45
24:1H:649:G:C5	24:1H:650:C:C4	3.05	0.45
24:1H:2470:G:H5'	36:88:56:ARG:HH21	1.82	0.45
24:1H:1006:C:H1'	33:58:106:MET:HG2	1.98	0.45
24:1H:569:U:C4	24:1H:570:G:C6	3.05	0.45
36:88:28:ALA:HB3	36:88:29:PHE:CD1	2.52	0.45
24:14:1971:A:C5	27:19:241:PRO:HD3	2.52	0.45
30:41:56:ALA:HB2	30:41:153:ARG:CZ	2.47	0.45
5:42:72:GLN:N	5:42:72:GLN:OE1	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:51:71:LEU:HD12	31:51:71:LEU:HA	1.83	0.45
24:1H:2543:G:H2'	24:1H:2544:G:O4'	2.17	0.45
1:1G:148:G:N2	1:1G:149:A:C2	2.85	0.45
1:13:643:C:H5'	8:7E:31:PHE:CD1	2.52	0.45
24:1H:2824:C:H2'	24:1H:2825:C:O4'	2.17	0.45
24:14:34:C:H2'	24:14:35:G:H5'	1.98	0.45
24:14:35:G:H2'	24:14:36:G:O4'	2.17	0.45
35:78:47:ASP:HA	35:78:48:PRO:HD3	1.68	0.45
1:1G:1141:C:H2'	1:1G:1142:G:C8	2.51	0.45
25:16:44:G:C2	25:16:48:A:C2	3.05	0.45
49:L8:24:LYS:O	49:L8:27:GLY:N	2.44	0.45
9:8E:111:ARG:HE	9:8E:111:ARG:HB2	1.62	0.45
22:2K:1:G:C2	22:2K:2:G:N7	2.85	0.45
45:H8:144:LEU:HB3	45:H8:148:ASP:HB3	1.99	0.45
24:14:2129:C:H2'	24:14:2130:U:O4'	2.17	0.45
1:1G:1386:G:H2'	1:1G:1387:G:H8	1.81	0.45
1:1G:749:C:H2'	1:1G:750:G:H8	1.81	0.45
39:B8:23:ARG:O	39:B8:49:VAL:HG21	2.17	0.45
39:B8:102:ILE:HA	39:B8:105:LEU:HD22	1.99	0.45
29:39:20:LEU:HD13	29:39:199:TRP:CH2	2.52	0.45
24:14:1478:G:H2'	24:14:1479:G:H8	1.82	0.45
2:1E:149:LEU:HD23	2:1E:149:LEU:HA	1.52	0.45
27:11:149:PRO:O	27:11:150:LYS:HB2	2.17	0.45
54:M5:54:GLU:N	54:M5:54:GLU:OE1	2.50	0.45
2:12:36:ARG:HB3	2:12:41:ILE:HD13	1.98	0.45
16:7I:28:ARG:HG3	16:7I:29:ASP:N	2.32	0.45
1:1G:197:A:H1'	1:1G:198:G:O4'	2.17	0.45
49:L8:44:ARG:HA	49:L8:47:VAL:HB	1.98	0.45
24:1H:2131:G:O2'	24:1H:2133:G:N3	2.48	0.45
1:1G:545:C:OP1	4:32:61:LYS:NZ	2.50	0.45
24:1H:2881:C:C2	24:1H:2882:A:C8	3.05	0.45
24:14:729:G:C5	27:19:208:LYS:HB2	2.52	0.45
1:13:690:G:O4'	1:13:690:G:N3	2.48	0.45
24:14:1485:G:O2'	24:14:1486:A:H5'	2.16	0.45
31:51:40:GLU:O	31:51:41:MET:HB3	2.17	0.45
24:1H:2888:C:H2'	24:1H:2889:C:H6	1.82	0.45
24:14:863:A:O2'	24:14:864:G:H5'	2.16	0.45
7:62:115:ARG:O	7:62:118:VAL:HG22	2.17	0.45
11:2I:58:PRO:HB2	11:2I:93:GLN:HG3	1.99	0.45
24:14:1503:U:H2'	24:14:1504:C:C6	2.50	0.45
24:1H:994:C:OP1	40:C8:53:ARG:NH2	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:39:29:ASN:O	29:39:33:LEU:HD22	2.17	0.45
1:1G:862:C:H2'	1:1G:863:U:C6	2.52	0.45
24:14:685:A:OP1	53:L5:11:LYS:NZ	2.49	0.45
42:E8:84:ARG:HB2	42:E8:96:ILE:HD11	1.99	0.45
37:98:111:LEU:HA	37:98:111:LEU:HD23	1.71	0.45
1:1G:32:A:H2'	1:1G:33:A:C8	2.52	0.45
22:3K:83:C:H2'	22:3K:84:C:C6	2.51	0.45
32:61:76:THR:HG21	32:61:141:LYS:HE3	1.99	0.45
24:1H:706:A:OP1	27:11:7:LYS:HE3	2.17	0.45
24:14:2114:A:N6	24:14:2119:A:N7	2.65	0.45
24:1H:483:A:N7	24:1H:497:A:H2	2.15	0.45
38:A8:34:HIS:HB2	38:A8:36:TYR:CE1	2.52	0.45
24:14:1466:G:H5'	24:14:1467:C:OP1	2.16	0.45
5:42:15:ARG:HG3	5:42:26:PHE:HB3	1.99	0.45
24:14:247:G:H4'	24:14:386:G:C5	2.52	0.45
7:6E:138:LYS:HD3	7:6E:142:GLU:HG3	1.99	0.45
15:6A:55:GLY:O	15:6A:59:MET:HG3	2.17	0.45
24:1H:2716:U:O2'	24:1H:2717:G:H5'	2.17	0.45
42:A5:90:ARG:HG3	42:A5:90:ARG:NH1	2.32	0.45
33:15:68:GLU:H	33:15:68:GLU:HG3	1.61	0.45
24:1H:1060:U:H1'	24:1H:1061:U:OP2	2.15	0.45
3:2E:23:TYR:CD2	3:2E:24:ALA:N	2.85	0.45
24:14:270(D):C:H2'	24:14:270(E):G:O4'	2.16	0.45
4:3E:96:LEU:HD11	4:3E:139:ARG:NH1	2.32	0.45
27:19:242:ARG:N	27:19:242:ARG:HD3	2.31	0.45
24:14:1012:U:OP1	40:85:75:ASN:ND2	2.38	0.45
24:1H:1827:C:H5'	24:1H:1971:A:H5'	1.98	0.45
54:M5:61:LEU:C	54:M5:62:LEU:HG	2.37	0.45
2:1E:67:THR:O	2:1E:68:ILE:HD12	2.17	0.45
50:M8:37:SER:HB3	50:M8:42:PHE:HB3	1.98	0.45
24:1H:956:G:N2	24:1H:959:A:H3'	2.32	0.45
40:85:95:LEU:O	40:85:98:LEU:HG	2.17	0.45
44:G8:75:ILE:HG23	44:G8:76:CYS:O	2.17	0.45
1:13:1128:C:H1'	1:13:1146:A:H61	1.82	0.45
24:1H:2336:A:H61	46:I8:43:THR:HB	1.81	0.45
24:1H:2215:G:O2'	24:1H:2216:G:H5'	2.17	0.45
27:11:25:THR:C	27:11:26:LYS:O	2.55	0.45
25:1J:89(A):A:C8	25:1J:90:C:H1'	2.52	0.45
24:1H:1543:A:C2	24:1H:1545:A:C4	3.05	0.45
25:1J:12:C:OP2	25:1J:12:C:C6	2.70	0.45
1:13:1291:G:O2'	9:8E:38:GLN:OE1	2.25	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1932:A:H2'	24:1H:1933:G:O4'	2.17	0.45
27:19:146:GLU:HB2	27:19:189:CYS:HB3	1.99	0.45
1:13:165:C:H2'	1:13:166:G:C8	2.52	0.45
1:13:792:A:H1'	1:13:794:A:N7	2.32	0.45
50:I5:32:TYR:HB3	50:I5:33:VAL:H	1.43	0.45
41:95:77:ALA:O	41:95:79:VAL:HG22	2.17	0.45
36:45:118:LEU:HD12	36:45:131:ILE:HG23	1.99	0.45
24:1H:1561:G:H2'	24:1H:1562:A:H8	1.82	0.45
24:14:142:G:OP1	24:14:1598:C:H1'	2.17	0.45
24:1H:2888:C:H2'	24:1H:2889:C:C6	2.52	0.45
13:4I:67:GLU:OE2	13:4I:68:GLY:N	2.42	0.45
1:13:582:U:H2'	1:13:583:A:C8	2.52	0.45
24:1H:2356:C:H2'	24:1H:2357:U:O4'	2.16	0.45
26:79:10:LEU:HB3	26:79:220:PRO:HD3	1.98	0.45
37:98:2:ARG:HA	37:98:5:LYS:HE2	1.99	0.45
13:4A:56:LEU:O	13:4A:60:VAL:HG23	2.17	0.45
24:14:881:G:C2	24:14:882:G:H1'	2.52	0.45
37:55:33:ARG:HD2	37:55:33:ARG:C	2.37	0.45
1:13:1014:A:H2'	1:13:1015:A:C8	2.52	0.45
24:14:1769:G:H2'	24:14:1770:G:H5'	1.99	0.45
30:41:161:THR:HG21	30:41:172:LEU:HD22	2.00	0.45
1:13:478:A:H2'	1:13:479:C:C6	2.52	0.45
52:O8:13:CYS:HA	52:O8:51:GLU:HA	1.98	0.45
30:41:27:ASN:HB3	30:41:30:GLU:HB2	1.98	0.45
27:19:137:PRO:O	27:19:140:THR:HG23	2.16	0.45
9:82:18:PHE:HB2	9:82:62:TYR:O	2.17	0.45
3:2E:10:PHE:HD1	14:5I:58:LYS:NZ	2.15	0.45
9:8E:53:VAL:HB	9:8E:95:LYS:NZ	2.32	0.45
44:C5:5:MET:HE1	44:C5:69:ALA:HB1	1.98	0.45
43:B5:25:LYS:HA	43:B5:81:VAL:O	2.17	0.45
24:1H:105:C:H2'	24:1H:106:C:H6	1.82	0.45
53:P8:31:LEU:HD22	53:P8:42:LEU:HD13	1.99	0.45
1:13:951:G:HO2'	1:13:972:C:H5	1.63	0.45
24:14:1796:U:H2'	24:14:1797:C:C6	2.52	0.45
1:13:997:U:H2'	1:13:998:G:O4'	2.17	0.45
50:I5:11:PRO:HA	50:I5:25:TYR:CD1	2.51	0.45
24:1H:74:A:C5'	24:1H:74:A:C8	2.98	0.44
22:3L:20:C:O2'	22:3L:22:A:O5'	2.32	0.44
24:1H:577:G:OP1	24:1H:2502:G:O2'	2.28	0.44
1:1G:1144:G:N2	1:1G:1146:A:H62	2.16	0.44
38:65:107:GLU:H	38:65:110:LEU:CD2	2.19	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2286:A:O5'	52:K5:28:ARG:HD2	2.17	0.44
10:1A:54:PHE:CE1	10:1A:55:LYS:HE3	2.52	0.44
2:1E:212:GLN:O	2:1E:216:SER:HB2	2.17	0.44
24:14:996:A:H4'	40:85:92:ARG:NE	2.33	0.44
24:14:2273:A:H2'	24:14:2274:A:C8	2.52	0.44
44:G8:104:GLY:N	44:G8:105:ALA:HB3	2.31	0.44
19:AA:66:MET:HA	19:AA:67:VAL:O	2.17	0.44
5:42:30:ALA:O	5:42:45:PHE:HD1	2.00	0.44
44:C5:20:TYR:CZ	44:C5:42:VAL:HA	2.52	0.44
25:1J:29:A:C2	25:1J:56:G:C2	3.05	0.44
24:1H:1403:C:H5''	24:1H:1471:A:C1'	2.42	0.44
1:1G:748:C:O5'	1:1G:748:C:H6	2.00	0.44
32:69:75:LEU:HD12	32:69:76:THR:H	1.81	0.44
1:1G:1151:A:C5	1:1G:1152:A:N7	2.85	0.44
1:1G:1118:C:H1'	1:1G:1179:A:C4	2.52	0.44
7:6E:16:LEU:HD11	9:8E:45:ALA:HB2	1.99	0.44
44:G8:54:LYS:O	44:G8:55:TYR:CG	2.70	0.44
1:13:1323:G:H4'	1:13:1362(A):C:N3	2.33	0.44
22:3K:37:A:N6	22:3K:38:MIA:H122	2.32	0.44
34:25:7:TYR:CE1	34:25:44:LYS:HG3	2.52	0.44
1:1G:445:G:H2'	1:1G:446:G:O4'	2.17	0.44
38:A8:99:LYS:HE2	38:A8:103:GLU:OE1	2.18	0.44
24:14:1000:A:C6	24:14:1001:A:N1	2.85	0.44
45:H8:23:LYS:HG2	45:H8:38:TYR:CE1	2.51	0.44
1:1G:166:G:H2'	1:1G:167:G:C8	2.51	0.44
18:9I:44:LEU:HD11	18:9I:70:ILE:HG21	1.99	0.44
24:14:2543:G:H21	24:14:2646:C:H5''	1.81	0.44
24:1H:2666:C:H3'	24:1H:2667:C:C6	2.52	0.44
24:1H:270(X):G:O6	24:1H:270(Y):G:N1	2.50	0.44
24:14:912:C:C2	24:14:913:U:C5	3.06	0.44
1:1G:391:G:C5	1:1G:392:G:C8	3.06	0.44
1:13:808:C:H2'	1:13:809:G:O4'	2.16	0.44
24:1H:1709:U:H1'	24:1H:2860:A:N3	2.31	0.44
16:7I:67:THR:H	16:7I:70:ALA:HB3	1.81	0.44
24:1H:482:A:H5''	24:1H:483:A:OP1	2.17	0.44
28:21:108:SER:OG	28:21:163:GLU:HG2	2.17	0.44
30:49:40:ASN:HB2	30:49:91:ARG:HG3	1.99	0.44
24:14:533:G:H5'	40:85:24:TYR:CE1	2.53	0.44
40:85:29:SER:C	40:85:30:LYS:HD3	2.38	0.44
47:J8:19:GLN:O	47:J8:35:THR:N	2.45	0.44
10:1I:38:ILE:HA	10:1I:39:PRO:HD3	1.72	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:406:G:H5'	4:3E:5:ILE:HD13	1.99	0.44
1:1G:1112:C:N3	3:22:178:LEU:HB2	2.32	0.44
34:25:9:GLU:O	34:25:83:ALA:HA	2.18	0.44
24:14:696:G:H2'	24:14:697:C:H6	1.82	0.44
24:14:1790:C:H2'	24:14:1791:A:C5	2.52	0.44
1:1G:403:C:O2'	1:1G:404:U:H5'	2.17	0.44
4:3E:117:ALA:O	4:3E:121:VAL:HG23	2.16	0.44
20:BA:20:LEU:HD23	20:BA:20:LEU:HA	1.69	0.44
4:3E:84:LYS:HD2	4:3E:84:LYS:HA	1.49	0.44
24:14:537:C:O2	33:15:45:ASN:ND2	2.50	0.44
24:14:1259:G:H2'	24:14:1260:G:C8	2.52	0.44
1:13:1371:G:C5	1:13:1372:U:C5	3.04	0.44
41:95:62:LEU:HD11	41:95:95:LEU:HB2	1.98	0.44
24:1H:2641:G:OP1	33:58:74:ARG:NE	2.40	0.44
20:BI:73:HIS:O	20:BI:76:ALA:HB3	2.17	0.44
22:3L:26:G:H2'	22:3L:27:A:O4'	2.17	0.44
31:51:8:PRO:HG2	31:51:69:ARG:NH2	2.18	0.44
22:3K:21:A:C5	22:3K:46:G:C8	3.05	0.44
24:14:1728:G:C6	24:14:1730:U:H5'	2.53	0.44
24:14:1729:A:O2'	24:14:1730:U:H5''	2.16	0.44
52:K5:18:ARG:HA	52:K5:18:ARG:NH1	2.27	0.44
15:6A:82:ILE:HB	15:6A:87:ILE:HB	1.99	0.44
1:1G:828:A:H5''	1:1G:859:A:N1	2.31	0.44
1:1G:1200:C:O2'	1:1G:1205:U:O4	2.26	0.44
24:1H:2212:A:H1'	24:1H:2215:G:C5	2.52	0.44
1:13:89:U:C2	1:13:90:C:C5	3.05	0.44
31:51:4:ILE:C	31:51:6:ARG:H	2.20	0.44
14:5I:26:ARG:HD3	14:5I:43:CYS:HB2	2.00	0.44
24:1H:1864:U:OP1	24:1H:2410:G:O2'	2.21	0.44
35:35:147:LEU:CD1	35:35:148:LEU:H	2.29	0.44
22:2K:84:C:H5'	57:1H:4055:HOH:O	2.16	0.44
45:D5:5:LEU:HD12	45:D5:5:LEU:HA	1.79	0.44
1:1G:908:A:H2'	1:1G:909:A:H8	1.79	0.44
1:1G:614:A:C2	1:1G:627:G:C2	3.05	0.44
1:13:1434:A:H2'	1:13:1435:G:O4'	2.17	0.44
1:13:666:G:H8	1:13:666:G:OP1	2.00	0.44
43:F8:66:LEU:O	43:F8:66:LEU:HG	2.17	0.44
28:29:9:VAL:HA	39:75:3:ARG:HD3	1.99	0.44
37:98:25:ALA:O	37:98:26:LYS:C	2.55	0.44
1:13:1122:U:O4	1:13:1123:A:N6	2.50	0.44
24:14:883:G:H2'	24:14:884:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:69:40:THR:O	32:69:44:LEU:N	2.46	0.44
24:14:2625:G:H2'	24:14:2626:C:O4'	2.17	0.44
1:1G:262:A:C6	1:1G:263:A:C6	3.04	0.44
29:31:134:GLY:CA	29:31:166:ALA:HB2	2.47	0.44
24:1H:2821:A:H2'	24:1H:2822:G:O4'	2.17	0.44
24:1H:2744:G:O2'	24:1H:2745:C:H5'	2.16	0.44
1:1G:191(F):U:H2'	1:1G:191:G:C8	2.53	0.44
4:3E:96:LEU:HD13	4:3E:96:LEU:HA	1.64	0.44
45:D5:113:ALA:HB1	45:D5:178:GLU:HA	1.99	0.44
52:O8:10:LEU:HD23	54:Q8:35:GLN:NE2	2.33	0.44
24:1H:2014:A:H2'	24:1H:2015:A:C8	2.52	0.44
1:1G:118:U:H3'	1:1G:288:A:H61	1.82	0.44
1:13:304:U:H2'	1:13:305:G:C8	2.53	0.44
24:14:494:G:OP1	42:A5:8:ARG:NH1	2.50	0.44
24:1H:1838:C:C2	24:1H:1898:U:C4	3.05	0.44
24:14:1032:A:H2	24:14:1122:G:H1	1.65	0.44
2:12:10:LEU:HD12	2:12:13:ALA:HB2	1.99	0.44
42:E8:73:ALA:HB3	42:E8:106:ILE:HG12	1.99	0.44
22:2L:17:OMG:HM23	22:2L:66:G:H1	1.83	0.44
25:16:108:C:H5'	25:16:109:G:O5'	2.17	0.44
2:1E:21:ARG:O	2:1E:23:ARG:N	2.50	0.44
35:35:52:GLU:OE1	35:35:56:SER:N	2.50	0.44
24:1H:1055:G:N3	24:1H:1055:G:H2'	2.32	0.44
33:15:42:TRP:C	33:15:42:TRP:CD1	2.91	0.44
35:35:47:ASP:OD1	35:35:49:ARG:HB2	2.17	0.44
5:42:31:LEU:CD1	5:42:45:PHE:HB2	2.39	0.44
24:1H:191:A:H2'	24:1H:192:C:C6	2.52	0.44
10:1A:48:THR:OG1	10:1A:62:HIS:HB3	2.17	0.44
39:B8:26:ASP:HB2	39:B8:90:GLN:O	2.16	0.44
24:1H:2450:A:C2	24:1H:2451:A:C4	3.05	0.44
25:1J:32:C:C2	25:1J:51:G:N2	2.85	0.44
33:15:17:ASP:O	33:15:56:ASN:HB2	2.17	0.44
27:11:245:PRO:HG2	27:11:253:GLN:HE21	1.82	0.44
20:BI:35:THR:O	20:BI:38:LYS:HB3	2.17	0.44
24:1H:1832:C:N4	24:1H:1833:U:C4	2.86	0.44
1:13:1133:G:C4	1:13:1134:G:C8	3.05	0.44
1:13:875:C:C4	1:13:876:G:N7	2.85	0.44
22:3K:14:A:H3'	22:3K:15:G:H5''	1.98	0.44
1:1G:42:G:H2'	1:1G:43:C:C6	2.52	0.44
18:9A:22:VAL:CG1	18:9A:56:THR:HA	2.47	0.44
18:9A:53:ARG:HA	18:9A:56:THR:OG1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:998:C:P	40:C8:92:ARG:NH2	2.89	0.44
40:C8:76:TYR:OH	40:C8:92:ARG:NH1	2.47	0.44
13:4A:16:ASP:OD1	13:4A:17:VAL:N	2.50	0.44
24:1H:2662:A:C4	24:1H:2663:G:H1'	2.52	0.44
19:AA:29:ARG:HD2	19:AA:48:THR:O	2.18	0.44
12:3I:62:SER:HB2	12:3I:64:TYR:CD1	2.51	0.44
24:14:586:A:P	57:14:3526:HOH:O	2.75	0.44
24:1H:2378:A:H4'	38:A8:23:ARG:NH1	2.32	0.44
28:29:77:ILE:C	28:29:78:LEU:HG	2.38	0.44
1:13:555:C:H2'	1:13:556:C:H6	1.80	0.44
13:4I:45:VAL:O	13:4I:48:LEU:HD22	2.17	0.44
1:1G:1298:C:H4'	1:1G:1299:A:N9	2.33	0.44
24:14:795:C:O2'	24:14:796:C:H5'	2.17	0.44
24:1H:270(X):G:C6	24:1H:270(Y):G:N1	2.86	0.44
1:13:1366:C:O2'	10:1I:60:ARG:NH2	2.49	0.44
41:95:51:VAL:HG12	41:95:52:VAL:O	2.17	0.44
24:14:1030:G:OP2	36:45:128:LYS:NZ	2.33	0.44
24:1H:265:A:C8	24:1H:266:G:H1'	2.53	0.44
28:29:26:ILE:HD13	28:29:196:VAL:HG21	1.99	0.44
1:13:718:G:H5'	11:2I:117:ASN:ND2	2.32	0.44
2:1E:102:LEU:HD23	2:1E:182:ILE:HD12	1.98	0.44
27:11:223:GLY:HA3	27:11:231:HIS:CE1	2.51	0.44
1:13:64:G:H4'	1:13:65:U:H5'	1.99	0.44
39:75:36:GLU:OE2	39:75:41:ARG:HD3	2.17	0.44
22:3K:63:5MU:C4	22:3K:64:PSU:C2	3.05	0.44
24:14:1845:G:OP1	27:19:258:LYS:NZ	2.45	0.44
24:14:2887:U:O2'	24:14:2888:C:H5'	2.17	0.44
9:82:116:LYS:HB3	9:82:121:ARG:O	2.17	0.44
32:69:26:ALA:HA	32:69:30:LEU:HB2	1.98	0.44
24:1H:562:U:O4	24:1H:2036:C:H1'	2.18	0.44
24:14:1301:A:O2'	24:14:1302:A:H3'	2.17	0.44
11:2I:44:SER:OG	11:2I:47:VAL:HG23	2.17	0.44
24:1H:1038:C:H2'	24:1H:1039:G:O4'	2.17	0.44
24:1H:778:G:OP2	57:1H:3995:HOH:O	2.21	0.44
49:L8:4:LEU:HA	49:L8:4:LEU:HD23	1.70	0.44
24:14:1026:U:H6	24:14:1026:U:H5''	1.81	0.44
1:1G:1056:U:O3'	3:22:155:GLY:HA2	2.17	0.44
24:14:1140:C:H5'	33:15:24:GLY:HA3	1.99	0.44
24:1H:821:A:O2'	24:1H:946:G:H5''	2.18	0.44
24:1H:1332:G:N2	24:1H:1610:A:H8	2.12	0.44
24:14:2786:U:HO2'	28:29:63:LEU:N	2.09	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2115:G:C2	24:1H:2117:A:C8	3.04	0.44
40:85:92:ARG:O	40:85:94:ASN:N	2.51	0.44
39:75:9:LEU:C	39:75:9:LEU:HD13	2.38	0.44
13:4A:69:GLU:O	13:4A:73:GLU:N	2.50	0.44
35:35:48:PRO:O	35:35:50:ARG:N	2.24	0.44
38:65:36:TYR:N	38:65:36:TYR:CD1	2.85	0.44
24:1H:1024:G:C3'	24:1H:1025:G:H5''	2.47	0.44
24:1H:2784:C:H2'	24:1H:2785:C:C6	2.52	0.44
24:1H:2636:U:H4'	28:21:80:GLU:OE2	2.17	0.44
24:1H:2836:U:H2'	24:1H:2837:G:H8	1.77	0.44
28:21:2:LYS:HB2	28:21:95:ILE:HG21	2.00	0.44
26:79:37:PHE:HZ	26:79:217:THR:HG21	1.81	0.44
9:82:37:PHE:O	9:82:40:LEU:HG	2.17	0.44
25:16:80:U:O2'	25:16:81:G:H5'	2.17	0.44
24:14:226:G:H21	24:14:228:A:H62	1.64	0.44
24:14:1341:U:OP1	24:14:1397:U:N3	2.42	0.44
1:1G:1235:U:O2'	1:1G:1305:G:O5'	2.35	0.44
2:1E:144:ARG:O	2:1E:147:LYS:HB3	2.18	0.44
24:14:2557:G:H2'	24:14:2558:C:H6	1.80	0.44
24:1H:2680:C:OP2	28:21:111:ARG:NH2	2.51	0.44
22:2K:85:A:O3'	24:1H:2602:A:C6	2.65	0.44
13:4A:88:ARG:O	13:4A:92:HIS:ND1	2.50	0.44
31:59:103:LEU:HD23	31:59:103:LEU:N	2.33	0.44
22:2K:4:G:H1	22:2K:78:C:N4	2.15	0.44
24:14:2402:C:H2'	24:14:2403:C:H5'	2.00	0.44
1:13:619:U:C4	4:3E:135:LEU:HD11	2.52	0.44
47:J8:82:LEU:CD2	47:J8:83:GLU:H	2.30	0.44
25:16:89:G:C6	25:16:89(A):A:C6	3.06	0.44
24:1H:2320:A:H1'	24:1H:2321:G:C6	2.52	0.44
1:13:582:U:OP1	15:6I:64:ARG:NH1	2.50	0.44
1:13:342:C:H2'	1:13:343:U:O4'	2.18	0.44
1:1G:1021:G:H2'	1:1G:1022:G:C8	2.52	0.44
24:14:27:G:O2'	24:14:28:A:OP2	2.32	0.44
24:14:547:A:C5	24:14:548:A:C6	3.05	0.44
16:7A:14:ASN:N	16:7A:15:PRO:HD3	2.33	0.44
49:L8:5:LYS:HB2	49:L8:36:VAL:HG12	1.98	0.44
24:1H:515:A:H2	24:1H:1260:G:N3	2.15	0.44
27:19:141:VAL:HG23	27:19:162:SER:HB2	2.00	0.44
36:45:73:PRO:HA	36:45:93:TYR:CD2	2.52	0.44
24:1H:1810:A:H2'	24:1H:1811:G:O4'	2.18	0.44
1:1G:642:A:N3	8:72:113:SER:OG	2.45	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:391:G:H1'	24:14:411:G:O4'	2.17	0.44
36:88:4:PRO:HD3	36:88:70:PRO:O	2.18	0.44
24:14:85:G:N3	24:14:103:A:C2	2.86	0.44
24:14:871:U:H5'	36:45:69:PHE:CE2	2.52	0.44
36:88:35:VAL:HG12	36:88:130:LYS:O	2.18	0.44
24:1H:491:G:H2'	24:1H:492:A:C8	2.53	0.44
24:14:1423:G:H2'	24:14:1424:G:H8	1.81	0.44
39:B8:42:ILE:HG12	39:B8:84:GLN:NE2	2.33	0.44
10:1A:78:ASN:ND2	10:1A:78:ASN:H	2.15	0.44
11:2I:125:PHE:CD1	11:2I:125:PHE:N	2.84	0.44
13:4A:106:ASN:N	13:4A:106:ASN:OD1	2.50	0.44
4:3E:133:VAL:HG11	4:3E:138:TYR:CD2	2.52	0.44
31:59:109:PHE:CZ	31:59:152:ARG:HB2	2.52	0.44
33:15:12:ARG:HG2	33:15:50:ASP:CB	2.47	0.44
24:14:2480:C:H2'	24:14:2481:G:H5'	2.00	0.44
29:39:42:ALA:O	29:39:45:ARG:HG2	2.18	0.44
37:55:103:ARG:NH1	37:55:108:GLY:O	2.51	0.44
47:J8:88:LYS:HD2	47:J8:91:LYS:HD3	1.99	0.44
24:14:945:A:C4	24:14:2448:A:C2	3.05	0.44
24:14:1019:U:OP1	24:14:1035:U:O2'	2.12	0.44
4:32:12:CYS:SG	4:32:19:LEU:O	2.76	0.44
24:1H:576:U:H2'	24:1H:577:G:C8	2.53	0.44
24:1H:1678:G:H22	24:1H:1989:G:H22	1.62	0.44
24:1H:933:A:C4	24:1H:934:G:C8	3.06	0.44
24:14:1464:C:C2	24:14:1465:G:C8	3.06	0.44
27:11:2:ALA:O	27:11:3:VAL:HB	2.18	0.44
40:85:92:ARG:O	40:85:92:ARG:HG3	2.18	0.44
22:2L:22:A:C6	22:2L:57:C:C4	3.05	0.44
24:14:1068:G:H1'	24:14:1095:A:H4'	1.99	0.44
43:F8:60:ARG:HH22	53:P8:47:ARG:HH12	1.64	0.44
41:D8:62:LEU:HD12	41:D8:62:LEU:HA	1.65	0.44
6:5E:64:GLN:HG3	6:5E:65:VAL:N	2.32	0.44
25:1J:89(A):A:H5'	25:1J:90:C:OP2	2.18	0.44
38:65:3:ARG:NH2	38:65:4:LEU:HB2	2.31	0.44
24:14:2212:A:H1'	24:14:2215:G:C4	2.52	0.44
1:1G:1329:A:H2'	1:1G:1330:U:O4'	2.18	0.44
4:3E:207:TYR:HD1	4:3E:207:TYR:HA	1.63	0.44
1:13:1330:U:H3'	1:13:1331:G:O4'	2.16	0.44
25:16:104:A:OP1	45:H8:72:ARG:NH1	2.50	0.44
26:79:29:VAL:HA	26:79:32:LEU:HD12	1.99	0.44
28:29:48:GLN:HB2	28:29:48:GLN:HE21	1.57	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:2L:72:U:H2'	22:2L:72:U:P	2.57	0.44
1:1G:1272:G:C6	1:1G:1273:G:C5	3.05	0.44
1:1G:1324:A:C4'	1:1G:1362:C:H4'	2.45	0.44
29:39:24:LEU:HB3	29:39:25:PRO:HD2	1.99	0.44
1:13:222:U:H2'	1:13:223:U:C6	2.52	0.44
1:13:360:A:H2'	1:13:361:G:C8	2.53	0.44
2:1E:71:VAL:HG23	2:1E:164:VAL:HG22	1.99	0.44
24:1H:2002:G:C6	57:1H:4097:HOH:O	2.71	0.44
24:1H:1588:C:H2'	24:1H:1589:C:H6	1.80	0.44
24:1H:35:G:H2'	24:1H:36:G:O4'	2.17	0.44
24:1H:662:G:OP1	35:78:15:ARG:CZ	2.65	0.44
1:13:581:G:N2	1:13:582:U:O4	2.50	0.44
24:1H:704:G:N2	24:1H:726:G:C4	2.86	0.44
24:1H:724:U:H2'	24:1H:725:G:O4'	2.17	0.44
24:1H:1277:G:H2'	24:1H:1278:A:O4'	2.17	0.44
1:13:664:G:H22	1:13:741:G:H1	1.63	0.44
24:1H:1138:G:H21	33:58:106:MET:CE	2.31	0.44
24:1H:1809:A:C6	24:1H:1810:A:C6	3.06	0.44
22:3L:30:A:C6	22:3L:43:G:C6	3.06	0.44
1:1G:797:C:O2'	1:1G:798:G:H5'	2.17	0.44
31:51:164:TYR:O	31:51:167:GLU:HB3	2.18	0.44
1:13:767:A:H2'	1:13:768:A:O4'	2.18	0.44
24:14:2354:G:O2'	46:E5:36:ILE:HG23	2.18	0.44
1:1G:587:G:N1	1:1G:754:C:OP2	2.50	0.44
24:1H:2593:U:O2'	24:1H:2594:C:H5'	2.17	0.44
45:D5:102:LEU:O	45:D5:104:PHE:HB2	2.17	0.44
47:J8:64:ALA:HA	47:J8:67:ILE:HG13	1.99	0.44
1:1G:125:U:H2'	1:1G:126:G:C8	2.52	0.44
24:1H:2238:G:H2'	24:1H:2238:G:N3	2.33	0.44
1:13:1443:G:O2'	39:B8:122:ASP:OD2	2.27	0.44
24:14:2540:C:H2'	24:14:2541:A:O4'	2.17	0.44
13:4I:56:LEU:HD12	13:4I:56:LEU:HA	1.78	0.44
44:G8:57:GLN:H	44:G8:57:GLN:HG3	1.59	0.44
19:AI:24:ALA:C	19:AI:26:GLY:H	2.21	0.44
31:51:133:VAL:HG21	31:51:145:ALA:HB2	2.00	0.44
14:5I:24:CYS:SG	14:5I:29:ARG:HG2	2.56	0.44
24:14:620:G:H4'	24:14:621:A:O5'	2.17	0.44
1:1G:1147:C:O2	9:82:16:ARG:NE	2.50	0.44
24:1H:2314:C:H2'	24:1H:2315:G:C8	2.43	0.44
4:3E:14:ARG:HA	4:3E:39:PRO:HB3	1.99	0.44
44:G8:97:ARG:HH21	44:G8:104:GLY:HA3	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:L8:11:SER:HA	49:L8:12:PRO:HD3	1.70	0.44
24:1H:270(M):U:O2'	24:1H:270(N):G:O5'	2.35	0.44
17:8A:59:ILE:HG22	17:8A:71:PHE:HB3	1.99	0.44
1:1G:1033:G:H2'	1:1G:1034:G:C8	2.51	0.44
24:1H:2328:A:H2'	24:1H:2329:G:C8	2.52	0.44
24:14:1210:A:H5'	24:14:1212:G:H5'	1.99	0.44
24:1H:1174:A:H62	24:1H:1175:U:H5	1.65	0.44
3:22:40:ARG:O	3:22:44:GLU:HB2	2.16	0.44
27:11:25:THR:CG2	27:11:26:LYS:N	2.80	0.44
24:14:2872:G:C4	24:14:2873:A:C2	3.06	0.44
1:13:90:C:H5'	1:13:91:C:OP1	2.18	0.44
32:61:11:ASN:OD1	32:61:12:LEU:N	2.45	0.44
1:1G:589:C:N3	1:1G:650:G:N2	2.47	0.44
44:G8:51:VAL:O	44:G8:56:PRO:HA	2.18	0.44
24:1H:975:G:H1'	24:1H:990:A:C2	2.53	0.44
4:32:24:GLU:HG2	4:32:25:ARG:H	1.82	0.44
24:14:2845:G:H2'	24:14:2846:G:H8	1.83	0.44
31:51:101:ARG:NH2	31:51:122:THR:HA	2.33	0.44
24:1H:2723:C:OP1	28:21:109:LYS:HD3	2.18	0.44
48:K8:33:MET:O	48:K8:37:PHE:HD1	2.01	0.44
29:39:2:LYS:O	29:39:24:LEU:HG	2.17	0.44
29:39:2:LYS:NZ	29:39:25:PRO:HG2	2.32	0.44
1:1G:1106:G:H2'	1:1G:1107:C:H6	1.82	0.44
24:14:1410:G:H2'	24:14:1411:C:C6	2.52	0.44
24:14:2849:U:OP1	39:75:95:ARG:NH1	2.51	0.44
3:2E:6:HIS:HD2	3:2E:8:ILE:H	1.64	0.44
1:13:666:G:H5''	1:13:732:C:O2	2.18	0.44
24:14:925:C:H2'	24:14:926:A:C8	2.52	0.44
1:13:872:A:C4	1:13:874:G:N7	2.85	0.44
2:1E:9:GLU:HA	2:1E:12:GLU:OE2	2.18	0.44
25:1J:110:G:H2'	25:1J:111:U:O4'	2.18	0.44
24:14:706:A:OP1	27:19:7:LYS:HE3	2.18	0.44
29:31:106:ARG:HG2	29:31:106:ARG:H	1.67	0.44
1:13:1200:C:H4'	1:13:1201:A:H5''	2.00	0.44
28:29:26:ILE:O	28:29:27:LEU:HB3	2.17	0.44
42:E8:73:ALA:HB3	42:E8:106:ILE:CG1	2.48	0.44
24:1H:2467:C:C2'	24:1H:2468:G:H5'	2.48	0.44
30:49:25:TYR:HB3	30:49:30:GLU:OE1	2.18	0.44
1:1G:1452:C:H4'	1:1G:1453:G:H5'	1.98	0.44
22:2K:81:C:C2'	22:2K:82:A:H5'	2.48	0.44
24:1H:696:G:O2'	24:1H:697:C:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2670:A:C2	24:1H:2671:A:C4	3.06	0.44
24:1H:2780:G:OP2	33:58:118:LYS:NZ	2.38	0.44
45:H8:61:LEU:HA	45:H8:62:PRO:HD3	1.84	0.44
24:1H:578:A:OP1	24:1H:1255:U:O2'	2.31	0.44
24:1H:1491:G:O2'	24:1H:1492:G:H5'	2.18	0.44
13:4I:12:ASN:HA	13:4I:46:LYS:HB2	1.98	0.44
5:4E:26:PHE:CD1	5:4E:26:PHE:N	2.85	0.44
18:9A:44:LEU:HD21	18:9A:79:LEU:HD22	1.99	0.44
6:52:3:ARG:O	6:52:93:SER:HB2	2.17	0.44
2:1E:33:TYR:HB2	2:1E:43:ASP:HB2	1.99	0.44
1:1G:538:G:H5''	12:3A:114:LYS:HB2	2.00	0.44
54:Q8:57:ARG:HB2	54:Q8:57:ARG:HE	1.54	0.44
29:31:116:ASP:OD1	29:31:119:ARG:NH2	2.42	0.44
24:14:260:G:O4'	24:14:621:A:H1'	2.18	0.44
22:3L:22:A:N3	22:3L:22:A:H2'	2.33	0.44
22:3L:16:C:N4	22:3L:68:A:C8	2.85	0.44
35:78:21:ARG:HB3	35:78:22:GLY:H	1.59	0.44
5:42:101:ILE:HD11	5:42:119:LEU:CD2	2.41	0.44
1:13:1508:G:H2'	1:13:1509:C:H6	1.82	0.44
30:41:111:LEU:HD22	30:41:179:PRO:HG2	1.98	0.44
2:1E:208:ILE:HD12	2:1E:209:ARG:N	2.32	0.44
1:13:734:G:H2'	1:13:735:C:C6	2.50	0.44
24:14:1285:G:C5	24:14:1329:U:C4	3.05	0.44
24:14:1115:G:H2'	24:14:1116:C:C6	2.53	0.44
24:1H:751:A:C6	24:1H:789:A:C5	3.06	0.44
16:7I:5:ARG:HH21	16:7I:22:THR:CG2	2.30	0.44
41:D8:62:LEU:HD22	41:D8:95:LEU:HB2	1.99	0.44
8:72:35:ILE:O	8:72:39:LEU:HB2	2.18	0.44
1:13:1005:A:H1'	1:13:1036:G:H22	1.82	0.44
13:4I:3:ARG:NH2	13:4I:7:VAL:HG22	2.32	0.44
9:82:6:GLY:HA3	9:82:83:ARG:HB2	2.00	0.44
10:1A:33:GLN:O	10:1A:75:ILE:HG23	2.18	0.44
8:7E:14:ARG:O	8:7E:18:ARG:HD3	2.17	0.44
24:1H:1329:U:H3'	24:1H:1330:C:H6	1.83	0.44
24:14:1612:C:H5''	53:L5:7:PRO:HG2	1.99	0.44
26:79:213:TYR:CD1	26:79:221:SER:HB2	2.53	0.44
17:8A:81:ARG:NH2	17:8A:84:LEU:HD21	2.33	0.44
24:1H:320:A:H4'	24:1H:322:A:N7	2.33	0.44
3:2E:172:ARG:NH2	3:2E:174:PRO:HG2	2.33	0.44
24:14:981:A:N1	24:14:2027:G:O2'	2.44	0.44
24:14:1336:A:H2'	24:14:1337:G:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1219:G:OP2	40:C8:19:LYS:HE3	2.17	0.44
24:14:162:U:H4'	24:14:171:G:C5	2.52	0.44
24:1H:1561:G:H2'	24:1H:1562:A:C8	2.53	0.44
1:13:95:G:H3'	1:13:96:G:H8	1.80	0.44
46:E5:53:MET:HG3	46:E5:59:LEU:CD2	2.47	0.44
9:8E:96:LEU:HD23	9:8E:96:LEU:HA	1.77	0.44
1:13:625:G:H2'	1:13:626:U:H6	1.83	0.44
24:14:2050:C:H2'	24:14:2051:A:C8	2.53	0.44
47:J8:18:ILE:HG22	47:J8:20:ARG:HG3	1.99	0.44
24:14:892:G:O6	24:14:893:C:N4	2.51	0.44
44:G8:89:PHE:CD1	44:G8:90:LEU:N	2.86	0.44
1:13:380:G:C2	1:13:384:G:C6	3.06	0.44
5:42:75:THR:HG23	5:42:76:ILE:N	2.32	0.44
4:3E:112:VAL:HG12	4:3E:116:GLN:OE1	2.17	0.44
1:1G:573:A:H2'	1:1G:574:A:C8	2.53	0.44
24:1H:1211:U:H4'	24:1H:1212:G:OP2	2.18	0.44
1:13:1053:G:N7	1:13:1199:U:H3'	2.32	0.44
43:B5:26:TYR:O	43:B5:81:VAL:HG22	2.18	0.44
24:1H:618:G:H2'	24:1H:618(A):C:O4'	2.17	0.44
24:1H:1344:G:H4'	24:1H:1384:A:C5	2.53	0.44
1:1G:1220:G:H5'	19:AA:34:TRP:O	2.18	0.44
24:1H:2512:C:H4'	28:21:122:PHE:CE2	2.53	0.44
43:F8:77:LYS:HG2	43:F8:78:LYS:N	2.32	0.44
38:A8:51:ALA:HB3	38:A8:73:LEU:HG	1.99	0.44
1:13:503:C:OP2	12:3I:116:SER:HB3	2.18	0.44
1:13:28:G:C6	1:13:29:G:C5	3.06	0.44
24:1H:211:A:H2'	24:1H:212:G:O4'	2.18	0.44
24:1H:952:G:C6	24:1H:953:A:N7	2.85	0.44
28:21:176:ILE:HD12	28:21:181:LEU:HD23	1.99	0.44
54:M5:55:ALA:O	54:M5:59:LYS:HE3	2.17	0.44
29:39:34:TRP:CZ3	35:35:8:PRO:HB3	2.53	0.44
8:72:5:PRO:O	8:72:8:ASP:HB3	2.18	0.44
24:14:1902:C:H5'	27:19:246:PRO:HD3	1.99	0.44
31:51:69:ARG:HH11	31:51:73:ALA:HB2	1.83	0.44
24:1H:1525:G:C4	24:1H:1526:G:C8	3.06	0.44
48:K8:4:SER:N	48:K8:7:ARG:H	2.16	0.44
24:1H:2314:C:H5''	30:41:38:VAL:HG21	1.99	0.44
46:I8:48:GLY:HA3	46:I8:80:HIS:ND1	2.31	0.44
1:13:1239:A:H4'	1:13:1240:U:H5''	2.00	0.44
1:13:375:U:O2'	16:7I:6:LEU:O	2.34	0.44
38:65:26:LEU:O	38:65:88:ASP:HB3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1372:U:H2'	24:14:1373:A:C8	2.53	0.44
24:14:273(F):C:H3'	24:14:274:G:C5'	2.45	0.44
26:71:59:ARG:HB2	26:71:164:ARG:HG3	1.99	0.44
24:14:1198:U:C2	24:14:1199:U:C5	3.05	0.44
24:1H:729:G:C5	27:11:208:LYS:HB2	2.52	0.44
37:98:74:LYS:C	37:98:76:VAL:N	2.71	0.44
1:13:41:G:H2'	1:13:42:G:H8	1.82	0.44
12:3A:28:LYS:HB3	12:3A:33:ARG:NE	2.32	0.44
1:1G:490:G:OP2	4:32:132:ARG:NH2	2.51	0.44
1:13:1251:A:H5''	9:8E:12:GLU:OE1	2.18	0.44
45:D5:23:LYS:HZ2	45:D5:40:ASP:HB2	1.82	0.44
5:42:60:TYR:HE1	5:42:64:ARG:NH2	2.15	0.44
11:2I:52:GLY:H	11:2I:55:LYS:NZ	2.15	0.44
24:1H:674:G:H1'	29:31:74:ARG:HH11	1.82	0.44
30:41:96:ARG:O	30:41:98:ARG:N	2.41	0.44
20:BA:73:HIS:HB3	20:BA:74:LYS:H	1.56	0.44
24:1H:1127:A:N3	24:1H:2518:A:H5''	2.33	0.44
24:14:2537:U:H2'	24:14:2538:C:H6	1.82	0.44
17:8I:40:LYS:HD3	17:8I:42:TYR:CE1	2.53	0.44
40:C8:72:HIS:HB2	40:C8:110:VAL:HG11	2.00	0.44
2:1E:51:LEU:HD23	2:1E:201:ILE:HD12	2.00	0.44
24:14:2115:G:N3	24:14:2171:A:H2	2.16	0.44
24:14:2788:C:H5'	28:29:61:ARG:HH12	1.82	0.44
43:F8:53:LYS:HB2	43:F8:53:LYS:HE3	1.70	0.44
4:32:196:LEU:HD23	4:32:197:PRO:HD2	2.00	0.44
32:69:144:VAL:HG13	32:69:145:VAL:N	2.33	0.44
48:K8:66:GLU:HG2	48:K8:67:LYS:N	2.33	0.44
24:1H:657:U:H2'	24:1H:658:C:C6	2.53	0.44
48:K8:28:LYS:HD3	48:K8:53:LEU:HD21	1.99	0.44
41:D8:3:ALA:HB1	41:D8:38:LEU:HD11	1.99	0.44
15:6I:33:THR:HG21	15:6I:85:LEU:HD22	2.00	0.44
11:2A:96:ARG:HA	11:2A:99:GLN:HB2	2.00	0.44
3:2E:129:ALA:HB3	3:2E:132:ARG:HE	1.83	0.44
24:14:1692:U:O2'	24:14:1693:U:H2'	2.17	0.44
24:14:2255:G:H21	46:E5:9:SER:HB2	1.83	0.44
33:15:71:ILE:HA	33:15:86:PRO:HA	2.00	0.44
6:52:55:ASP:HA	6:52:56:PRO:HD3	1.82	0.44
13:4A:34:LEU:HA	13:4A:34:LEU:HD23	1.80	0.44
24:1H:203:C:O5'	24:1H:203:C:H6	2.00	0.44
26:79:200:LYS:HE3	26:79:208:PHE:HB2	1.99	0.44
24:14:2473:U:H2'	24:14:2474:C:H5'	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:Q8:59:LYS:HE2	54:Q8:59:LYS:HB2	1.51	0.44
4:32:29:PRO:HD2	4:32:30:LYS:HZ1	1.81	0.44
22:3K:22:A:N3	22:3K:22:A:H2'	2.32	0.44
24:14:1729:A:C2'	24:14:1731:G:H22	2.30	0.44
9:8E:112:LYS:HD3	9:8E:113:LYS:N	2.32	0.44
29:39:53:THR:HG22	29:39:56:GLU:CG	2.42	0.44
2:1E:214:ILE:HG23	2:1E:215:LEU:N	2.32	0.44
45:H8:142:SER:CB	45:H8:143:GLY:HA2	2.48	0.44
45:H8:145:GLU:HG2	45:H8:146:ILE:H	1.83	0.44
27:11:147:LEU:HD11	27:11:183:ARG:NH2	2.33	0.44
24:1H:2787:C:H1'	28:21:62:PRO:HG3	2.00	0.44
24:1H:1728:G:C2	24:1H:1730:U:OP2	2.71	0.44
16:7I:21:VAL:HG23	16:7I:33:ILE:HB	2.00	0.44
24:14:2654:A:N3	24:14:2656:U:C4	2.86	0.44
32:61:130:TYR:HB3	32:61:136:VAL:HG13	2.00	0.44
24:14:2574:G:O2'	28:29:143:ASN:HB3	2.18	0.44
24:14:1784:A:H4'	24:14:1785:A:O5'	2.18	0.44
1:1G:1122:U:C2	1:1G:1123:A:N7	2.86	0.44
24:14:479:A:H4'	24:14:480:A:OP1	2.17	0.44
1:1G:1117:G:N2	1:1G:1180:A:H1'	2.32	0.44
25:16:11:C:H3'	25:16:12:C:H6	1.82	0.44
28:29:8:LYS:HB3	28:29:193:GLY:H	1.82	0.44
24:1H:1680:U:O2	24:1H:1763:G:H3'	2.16	0.44
24:14:535:C:C2'	24:14:536:A:H5'	2.47	0.44
1:13:1103:C:C4	1:13:1104:G:N7	2.85	0.44
24:1H:918:A:O2'	25:16:96:G:N2	2.43	0.44
24:1H:636:G:H5'	24:1H:639:U:OP1	2.18	0.44
9:82:77:ILE:HG13	9:82:78:LYS:N	2.32	0.44
2:1E:196:LEU:HA	8:7E:74:PRO:HG3	2.00	0.44
45:H8:28:MET:O	45:H8:34:ASN:HA	2.18	0.44
24:1H:278:A:H3'	24:1H:279:C:C6	2.52	0.44
1:1G:188:U:O2'	1:1G:189:U:H5'	2.18	0.44
24:1H:1433:U:O2	24:1H:1561:G:C2	2.71	0.44
24:1H:2375:G:N7	57:1H:4197:HOH:O	2.35	0.44
9:8E:93:ARG:HG3	9:8E:94:ALA:N	2.32	0.44
24:14:262:A:H2'	24:14:263:C:C6	2.53	0.44
38:65:67:ARG:HB2	38:65:67:ARG:NH1	2.33	0.44
1:13:1097:C:H1'	1:13:1170:A:H1'	2.00	0.44
1:13:977:A:C8	1:13:1223:C:N3	2.86	0.44
1:13:1492[A]:A:H2'	24:1H:1913:A:C2	2.52	0.44
50:I5:23:GLU:C	50:I5:24:THR:HG1	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1347:G:N2	1:13:1373:G:H2'	2.32	0.44
31:51:154:PRO:HB3	31:51:163:TYR:CZ	2.53	0.44
24:14:2745:C:H2'	24:14:2746:U:O4'	2.17	0.44
44:G8:90:LEU:HA	44:G8:91:GLU:HA	1.64	0.44
24:1H:1044:G:H4'	24:1H:1048:A:H1'	2.00	0.44
24:1H:2408:U:H2'	24:1H:2409:G:C8	2.53	0.44
24:1H:2820:A:O2'	24:1H:2821:A:OP1	2.35	0.44
6:5E:4:TYR:CD1	6:5E:92:LYS:HA	2.53	0.44
24:1H:221:A:N6	24:1H:265:A:C8	2.86	0.44
30:41:138:GLN:NE2	30:41:151:ALA:O	2.50	0.44
24:1H:1271:G:N2	24:1H:1617:C:O4'	2.51	0.44
49:H5:51:ALA:HA	49:H5:54:VAL:HG12	2.00	0.44
30:41:23:PHE:HB2	30:41:25:TYR:CE2	2.53	0.44
1:1G:878:G:H5'	8:72:89:PRO:HG2	2.00	0.44
22:3L:62:G:C5	22:3L:63:5MU:H72	2.53	0.44
24:1H:752:A:H3'	53:P8:1:MET:SD	2.58	0.44
24:1H:489:G:C5	24:1H:1284:A:C2	3.06	0.44
27:19:175:LEU:HD12	27:19:185:VAL:HG21	2.00	0.44
33:58:90:MET:HG3	33:58:94:HIS:O	2.18	0.44
40:C8:84:LYS:C	40:C8:84:LYS:HD2	2.38	0.44
22:3K:85:A:H5''	47:J8:30:VAL:HG11	1.99	0.43
24:14:259:G:N2	24:14:621:A:C8	2.73	0.43
2:12:56:ARG:HD3	2:12:56:ARG:HA	1.75	0.43
24:14:1050:A:H2'	24:14:1051:G:O4'	2.17	0.43
24:14:9:U:H2'	24:14:10:G:C8	2.53	0.43
1:13:1358:U:H5''	14:5I:34:TYR:HA	2.00	0.43
3:22:35:GLU:O	3:22:39:ILE:HD13	2.18	0.43
1:13:358:U:H4'	32:69:87:LYS:HD3	2.00	0.43
24:14:1636:C:O2'	24:14:1760:A:N3	2.41	0.43
24:14:2791:C:H2'	24:14:2792:G:C8	2.52	0.43
24:14:2845:G:H5''	39:75:54:ARG:O	2.18	0.43
25:16:22:U:H3	25:16:61:G:H1	1.66	0.43
40:C8:90:VAL:HG22	40:C8:95:LEU:HD22	1.99	0.43
36:88:20:ALA:HB1	36:88:99:PRO:CD	2.48	0.43
1:1G:604:G:C5	1:1G:605:U:C5	3.06	0.43
43:F8:89:ILE:HG22	43:F8:92:LEU:HB2	2.00	0.43
24:1H:2275:C:H5'	24:1H:2275:C:C6	2.51	0.43
39:B8:55:ASN:H	39:B8:59:THR:HA	1.81	0.43
44:C5:89:PHE:O	44:C5:89:PHE:CG	2.70	0.43
24:14:2865:U:C4	24:14:2866:U:C4	3.06	0.43
22:3K:33:C:C4	22:3K:34:U:C5	3.05	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:3K:33:C:C2'	22:3K:34:U:H5'	2.48	0.43
1:1G:1075:C:H5''	2:12:179:LYS:HZ3	1.83	0.43
28:29:120:TRP:CE3	28:29:155:LYS:HD3	2.53	0.43
45:D5:54:HIS:CE1	45:D5:123:ASP:HB3	2.53	0.43
41:D8:5:VAL:HG21	41:D8:35:LEU:HD23	1.99	0.43
34:68:17:ARG:HD2	34:68:17:ARG:HA	1.62	0.43
24:1H:1952:A:C2	34:68:22:ILE:HG23	2.53	0.43
24:1H:125:G:H5'	24:1H:125:G:H8	1.82	0.43
36:88:17:LEU:HD13	36:88:39:PRO:HB2	2.00	0.43
28:29:175:VAL:HG23	28:29:177:PRO:HD3	2.00	0.43
24:14:2092:U:H5	24:14:2226:C:OP2	2.01	0.43
17:8I:57:VAL:HG21	17:8I:73:VAL:HG13	2.00	0.43
32:61:91:SER:HB3	32:61:121:LYS:HD2	2.00	0.43
1:1G:232:G:H2'	1:1G:233:C:O4'	2.18	0.43
24:14:565:C:H4'	24:14:1253:A:N6	2.33	0.43
1:13:947:G:H2'	1:13:948:C:C6	2.53	0.43
24:1H:270(G):C:H2'	24:1H:270(H):C:C6	2.53	0.43
10:1I:24:VAL:O	10:1I:28:ARG:HB3	2.18	0.43
24:14:65:C:H2'	24:14:66:C:H6	1.83	0.43
1:13:124:G:H2'	1:13:125:U:O4'	2.18	0.43
32:69:123:LEU:HD22	32:69:143:SER:HA	2.00	0.43
45:H8:69:THR:HG22	45:H8:90:VAL:HG22	2.00	0.43
24:14:1788:C:H2'	24:14:1789:A:O4'	2.18	0.43
5:42:71:LEU:HD21	5:42:115:VAL:HG12	2.00	0.43
1:13:1521:G:H2'	1:13:1522:U:C6	2.53	0.43
1:13:153:C:N4	1:13:168:G:H1	2.16	0.43
36:45:64:ILE:HD13	36:45:64:ILE:H	1.83	0.43
12:3I:39:VAL:HG22	12:3I:57:LYS:HB2	1.99	0.43
24:1H:511:U:C5	24:1H:512:G:C5	3.05	0.43
1:13:913:A:OP1	12:3I:46:LYS:NZ	2.50	0.43
24:14:1022:G:N2	24:14:1142(A):A:H2	1.98	0.43
24:14:1142:U:H5''	24:14:1142(A):A:H5''	2.00	0.43
25:1J:15:A:H1'	25:1J:109:G:C4	2.53	0.43
22:3L:22:A:N7	22:3L:57:C:N4	2.65	0.43
24:14:2331:G:O2'	24:14:2336:A:N1	2.35	0.43
51:N8:38:ALA:HB3	51:N8:40:LYS:NZ	2.32	0.43
45:D5:161:VAL:HB	45:D5:162:GLU:H	1.55	0.43
24:1H:958:U:OP2	36:88:14:ARG:HD3	2.17	0.43
46:I8:70:GLN:CB	46:I8:80:HIS:HE2	2.31	0.43
40:85:98:LEU:HD12	40:85:99:ALA:N	2.33	0.43
24:14:1827:C:O2'	24:14:1970:A:N3	2.38	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:450:G:C6	57:14:3733:HOH:O	2.71	0.43
39:75:102:ILE:C	39:75:105:LEU:HB2	2.39	0.43
1:13:1327:C:H2'	1:13:1328:C:C6	2.53	0.43
9:8E:42:ARG:HE	9:8E:42:ARG:HB2	1.38	0.43
24:14:2136:C:OP1	24:14:2160:G:H4'	2.18	0.43
13:4I:3:ARG:HG3	13:4I:9:ILE:HD11	2.00	0.43
22:2K:12:C:H2'	22:2K:13:G:O4'	2.18	0.43
24:14:1093:G:H1'	24:14:1099:G:N1	2.33	0.43
22:2L:72:U:O2'	22:2L:73:U:P	2.77	0.43
24:14:185:U:H2'	24:14:186:G:H8	1.83	0.43
29:31:123:LEU:HD12	29:31:124:LEU:N	2.33	0.43
1:1G:980:C:H3'	1:1G:981:U:C6	2.53	0.43
2:1E:164:VAL:HG11	2:1E:167:PRO:HA	2.00	0.43
36:88:90:VAL:HG23	36:88:91:GLU:N	2.33	0.43
2:12:223:ILE:HG22	2:12:227:GLY:O	2.18	0.43
15:6A:4:THR:O	15:6A:7:GLU:N	2.52	0.43
1:1G:1104:G:H4'	2:12:111:ARG:NH1	2.33	0.43
52:K5:14:THR:HA	52:K5:49:HIS:ND1	2.33	0.43
24:1H:270:A:H1'	24:1H:370:G:N2	2.32	0.43
13:4A:13:LYS:O	13:4A:45:VAL:HG23	2.18	0.43
36:88:17:LEU:HB3	36:88:39:PRO:HB2	2.00	0.43
1:13:238:G:P	17:8I:25:ARG:HH22	2.41	0.43
3:2E:119:ARG:O	3:2E:123:GLN:HG3	2.19	0.43
11:2A:17:GLY:O	11:2A:80:VAL:HA	2.18	0.43
1:13:869:G:O5'	1:13:869:G:H8	2.01	0.43
4:32:141:ARG:HB3	4:32:141:ARG:HH11	1.82	0.43
7:6E:22:LEU:HD21	7:6E:66:VAL:HG11	2.00	0.43
24:1H:753:C:C6	24:1H:753:C:OP2	2.70	0.43
3:2E:23:TYR:CG	3:2E:24:ALA:N	2.86	0.43
10:1I:38:ILE:HG23	10:1I:71:LEU:HB3	2.00	0.43
31:59:151:ILE:HG22	31:59:152:ARG:H	1.83	0.43
24:1H:1255:U:O5'	24:1H:1256:G:H5''	2.18	0.43
42:E8:86:LEU:HD12	42:E8:87:PRO:HD2	2.00	0.43
22:3K:61:G:C4	22:3K:62:G:C8	3.06	0.43
24:1H:540:G:H2'	24:1H:541:C:C6	2.53	0.43
24:1H:280:C:C2	24:1H:361:G:N2	2.87	0.43
24:1H:2683:C:OP1	39:B8:53:ARG:NH2	2.48	0.43
24:1H:207:A:H2'	24:1H:208:C:O4'	2.18	0.43
2:12:174:VAL:HG13	2:12:184:VAL:HG21	2.00	0.43
54:Q8:41:ILE:HD13	54:Q8:41:ILE:HA	1.78	0.43
4:3E:188:LEU:HD22	4:3E:188:LEU:HA	1.79	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:31:67:GLN:O	29:31:67:GLN:HG3	2.18	0.43
28:21:81:ILE:HG22	28:21:81:ILE:O	2.18	0.43
1:1G:629:G:H2'	1:1G:630:G:O4'	2.17	0.43
1:13:644:G:H2'	1:13:645:C:O4'	2.18	0.43
24:14:1630(A):C:H2'	57:14:3553:HOH:O	2.19	0.43
41:95:37:VAL:HG21	41:95:56:SER:CA	2.29	0.43
54:Q8:54:GLU:CB	54:Q8:57:ARG:HH21	2.31	0.43
24:14:1138:G:C4	24:14:1139:G:H1'	2.53	0.43
24:14:621:A:H3'	24:14:622:G:C8	2.53	0.43
1:13:1309:G:C4	1:13:1329:A:C2	3.06	0.43
45:H8:24:LEU:HA	45:H8:25:PRO:HD3	1.65	0.43
24:1H:946:G:OP2	57:1H:4019:HOH:O	2.21	0.43
24:14:2271:G:C6	24:14:2272:U:C4	3.05	0.43
27:11:147:LEU:HD13	27:11:155:LEU:HD21	1.99	0.43
38:A8:30:ARG:HG3	38:A8:30:ARG:O	2.18	0.43
24:14:2124:G:N2	26:79:217:THR:OG1	2.51	0.43
45:D5:171:ILE:HD12	45:D5:171:ILE:HA	1.83	0.43
1:1G:1151:A:C4	1:1G:1152:A:C8	3.06	0.43
24:14:1127:A:N1	24:14:2463:C:O2'	2.49	0.43
30:49:14:GLU:O	30:49:17:PRO:HG2	2.17	0.43
24:1H:2010:G:H5''	42:E8:42:ARG:HB2	2.00	0.43
1:13:1189:C:P	10:1I:51:ARG:HH22	2.41	0.43
16:7A:54:GLU:HA	16:7A:57:ARG:HB2	1.99	0.43
17:8A:70:ARG:N	17:8A:70:ARG:HD2	2.33	0.43
14:5I:26:ARG:NH1	14:5I:43:CYS:HB2	2.30	0.43
17:8A:81:ARG:HD2	17:8A:81:ARG:HA	1.74	0.43
6:5E:60:PHE:C	6:5E:61:LEU:HD12	2.38	0.43
24:1H:1230:C:H2'	24:1H:1231:G:C8	2.53	0.43
28:21:165:VAL:O	28:21:189:PRO:HG2	2.18	0.43
8:7E:17:THR:HB	8:7E:78:GLN:OE1	2.19	0.43
24:1H:1683:C:H2'	24:1H:1684:C:C6	2.51	0.43
5:4E:144:THR:O	5:4E:147:ASP:N	2.51	0.43
30:41:66:GLN:OE1	30:41:98:ARG:NH1	2.51	0.43
24:14:864:G:H4'	25:1J:101:A:H4'	2.00	0.43
13:4I:98:VAL:HG23	13:4I:99:ARG:HG3	1.99	0.43
1:13:66:G:O4'	1:13:173:U:C4	2.71	0.43
24:14:1568:G:OP1	27:19:63:ARG:NH1	2.30	0.43
24:1H:2870:C:H2'	24:1H:2871:C:O4'	2.17	0.43
34:68:25:LEU:HD21	34:68:40:VAL:CG2	2.48	0.43
2:12:144:ARG:O	2:12:147:LYS:HB3	2.18	0.43
1:1G:1250:A:H2'	1:1G:1251:A:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:657:U:H2'	24:14:658:C:H6	1.82	0.43
24:14:1889:A:H2'	24:14:1890:A:C8	2.54	0.43
41:95:2:PHE:HB3	41:95:15:GLU:HG2	2.01	0.43
24:14:11:G:N2	24:14:2627:G:O3'	2.51	0.43
24:1H:533:G:H5'	40:C8:24:TYR:CD1	2.53	0.43
24:1H:2517:C:C5	24:1H:2542:A:C5	3.05	0.43
1:1G:1111:A:H2'	1:1G:1112:C:C6	2.52	0.43
24:1H:2467:C:N4	24:1H:2468:G:C6	2.86	0.43
24:1H:1271:G:O3'	24:1H:1272:A:H4'	2.19	0.43
13:4I:50:GLU:O	13:4I:54:VAL:HG23	2.18	0.43
12:3I:117:ARG:HB3	12:3I:122:THR:HB	1.99	0.43
16:7I:12:LYS:HG2	16:7I:13:HIS:CD2	2.53	0.43
24:14:748:G:C8	42:A5:89:ALA:HB1	2.53	0.43
19:AI:16:LEU:HD12	19:AI:19:VAL:HB	1.99	0.43
27:11:108:PRO:HB3	27:11:143:HIS:CE1	2.53	0.43
24:1H:1649:G:C6	24:1H:2009:G:C6	3.05	0.43
26:79:167:LYS:HG3	26:79:167:LYS:H	1.61	0.43
1:1G:109:A:H5'	1:1G:110:C:C5	2.52	0.43
24:1H:2599:G:N7	27:11:237:GLU:HG2	2.33	0.43
24:1H:86:C:H4'	24:1H:104:U:H1'	1.99	0.43
3:2E:138:VAL:HG23	3:2E:151:VAL:HG23	2.00	0.43
24:1H:498:G:C6	24:1H:499:U:C4	3.05	0.43
45:H8:127:LYS:O	45:H8:161:VAL:HB	2.17	0.43
28:29:197:ILE:HD13	28:29:197:ILE:HG21	1.65	0.43
24:1H:2845:G:O5'	24:1H:2845:G:H8	2.00	0.43
14:5A:9:LYS:HA	14:5A:12:ARG:HD3	2.00	0.43
36:45:111:GLU:O	36:45:115:MET:HG2	2.18	0.43
1:1G:1281:U:H3'	1:1G:1282:C:C5	2.53	0.43
24:1H:2393:A:H5'	35:78:61:ARG:O	2.19	0.43
1:1G:1375:A:H2'	1:1G:1376:U:H6	1.83	0.43
24:1H:1509:C:H2'	24:1H:1511:A:C8	2.53	0.43
24:14:1006:C:C2	24:14:1138:G:N2	2.86	0.43
22:3L:13:G:H2'	22:3L:14:A:C8	2.52	0.43
1:1G:1127:G:H1'	1:1G:1147:C:N4	2.33	0.43
52:K5:16:CYS:O	52:K5:18:ARG:HB2	2.18	0.43
24:1H:2313:C:H2'	24:1H:2314:C:C6	2.53	0.43
24:1H:1152:C:H4'	40:C8:77:SER:HA	2.00	0.43
46:I8:23:VAL:HG13	46:I8:38:VAL:CG2	2.48	0.43
24:14:1043:C:N4	24:14:1112:G:H1	2.17	0.43
24:14:1070:A:C8	24:14:1096:A:H1'	2.54	0.43
38:A8:30:ARG:HB3	38:A8:35:ILE:HD12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:69:74:ASN:O	32:69:75:LEU:HB2	2.19	0.43
25:1J:89:G:C5	25:1J:89(A):A:C6	3.06	0.43
24:1H:1542:G:OP2	24:1H:1543:A:O2'	2.33	0.43
19:AI:40:ILE:HD11	19:AI:62:ILE:HD12	2.00	0.43
9:82:9:ARG:HB3	9:82:14:VAL:HG13	2.00	0.43
24:1H:142:G:H1'	43:F8:37:THR:CG2	2.44	0.43
24:1H:2269:A:N3	24:1H:2269:A:H2'	2.34	0.43
1:1G:503:C:O2'	1:1G:504:C:H5'	2.18	0.43
24:1H:484:C:OP1	44:G8:51:VAL:HG22	2.18	0.43
29:39:134:GLY:HA2	29:39:166:ALA:HB2	2.01	0.43
35:35:125:VAL:O	35:35:144:GLU:HB3	2.18	0.43
1:13:1360:A:H2'	1:13:1361:G:O4'	2.18	0.43
24:14:877:U:HO2'	24:14:878:A:P	2.41	0.43
31:51:144:VAL:HA	31:51:147:ASN:ND2	2.34	0.43
1:1G:444:C:H2'	1:1G:445:G:H8	1.83	0.43
1:13:1285:A:H8	1:13:1285:A:O5'	2.00	0.43
25:1J:66:A:H61	25:1J:108:C:H5''	1.82	0.43
29:31:126:VAL:HG23	29:31:195:ASP:HA	2.01	0.43
29:39:155:LEU:HD22	29:39:185:ASP:O	2.18	0.43
25:16:78:A:C2	25:16:99:A:C4	3.05	0.43
35:78:52:GLU:HB2	35:78:55:ARG:HG2	2.00	0.43
1:1G:523:A:H61	12:3A:92:ASP:HB2	1.83	0.43
54:M5:29:LYS:HB2	54:M5:44:LYS:HB3	2.01	0.43
2:1E:164:VAL:HB	2:1E:186:ALA:HB2	1.99	0.43
24:1H:2496:C:OP1	36:88:82:ARG:HB2	2.18	0.43
43:B5:18:TYR:HD1	43:B5:21:PHE:CE2	2.34	0.43
45:H8:4:ARG:NH1	45:H8:58:VAL:HG11	2.33	0.43
12:3A:24:VAL:N	12:3A:25:PRO:HD3	2.32	0.43
42:A5:68:ARG:HB2	42:A5:109:GLU:HG2	2.01	0.43
1:13:408:A:OP1	4:3E:113:SER:OG	2.30	0.43
1:13:1364:U:O2'	1:13:1365:G:H5'	2.18	0.43
1:13:238:G:OP1	17:8I:25:ARG:NH2	2.38	0.43
38:A8:110:LEU:O	38:A8:111:GLU:HG2	2.18	0.43
1:13:889:A:H4'	1:13:890:G:OP1	2.19	0.43
1:13:343:U:O2	1:13:346:G:N2	2.48	0.43
31:59:90:LYS:HD2	31:59:90:LYS:HA	1.89	0.43
4:32:50:ARG:HH22	5:42:10:MET:CE	2.31	0.43
24:14:2591:C:OP1	27:19:239:ARG:HG3	2.18	0.43
24:14:1523:U:C2	24:14:1524:G:C8	3.06	0.43
24:1H:1936:A:H3'	24:1H:1937:A:H5'	2.00	0.43
32:61:6:LEU:HD13	32:61:36:ALA:HA	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:7I:58:TYR:O	16:7I:61:SER:N	2.48	0.43
24:1H:1205:U:H4'	24:1H:1206:G:OP2	2.18	0.43
28:29:21:VAL:HG13	28:29:185:LYS:HE2	2.00	0.43
24:1H:196:A:N3	24:1H:196:A:H2'	2.33	0.43
24:14:1268:A:H2'	24:14:1269:A:O4'	2.18	0.43
10:1A:87:THR:HB	10:1A:88:LEU:HD12	2.00	0.43
8:72:103:VAL:HG11	8:72:109:ILE:O	2.18	0.43
22:3L:16:C:C4	22:3L:69:U:C2	3.06	0.43
24:14:1465:G:H5'	24:14:1528:A:HO2'	1.83	0.43
45:D5:70:LEU:HA	45:D5:70:LEU:HD23	1.66	0.43
3:22:47:LEU:HB3	3:22:52:LEU:HD22	2.00	0.43
1:1G:1464:G:OP1	39:75:108:ARG:NH1	2.51	0.43
24:1H:2749:A:H5''	31:51:6:ARG:HH11	1.82	0.43
24:1H:1274:A:N3	24:1H:1297:C:H1'	2.33	0.43
2:1E:145:LEU:O	2:1E:149:LEU:HB2	2.18	0.43
24:14:483:A:H5'	44:C5:49:VAL:HG22	2.00	0.43
24:1H:529:A:C8	24:1H:530:G:C6	3.05	0.43
30:41:131:TYR:CE2	30:41:133:LEU:HD23	2.53	0.43
16:7I:28:ARG:HD2	16:7I:29:ASP:OD1	2.19	0.43
1:13:1330:U:H4'	13:4I:23:TYR:CE1	2.53	0.43
19:AI:67:VAL:HG13	50:M8:55:ARG:CZ	2.48	0.43
39:B8:78:LEU:HD12	39:B8:79:HIS:CE1	2.54	0.43
13:4A:19:LEU:HD12	13:4A:25:ILE:HD12	2.00	0.43
29:39:89:VAL:HG12	29:39:90:PHE:N	2.32	0.43
1:13:727:G:N2	1:13:730:G:OP2	2.43	0.43
15:6I:26:GLU:H	15:6I:26:GLU:HG2	1.50	0.43
42:E8:3:ALA:HB2	42:E8:64:MET:HE3	1.99	0.43
24:14:396:G:H1'	47:F5:42:GLN:HB2	2.00	0.43
24:1H:1726:G:H2'	24:1H:1727:U:O4'	2.18	0.43
30:49:121:ASN:HA	30:49:181:ARG:NH1	2.33	0.43
41:95:68:LYS:HD3	41:95:69:LYS:H	1.82	0.43
3:2E:131:ARG:HD3	5:4E:50:GLU:HG2	2.00	0.43
1:13:890:G:O2'	1:13:906:G:O6	2.29	0.43
24:14:1489:U:O3'	24:14:1490:A:C8	2.72	0.43
6:5E:24:GLU:HB3	6:5E:28:ARG:CZ	2.48	0.43
24:14:882:G:O6	24:14:894:C:N4	2.49	0.43
36:45:2:LEU:HD13	36:45:69:PHE:CE1	2.54	0.43
24:1H:2593:U:H2'	24:1H:2594:C:C6	2.52	0.43
1:1G:1453:G:HO2'	1:1G:1454:G:P	2.41	0.43
31:59:166:GLY:O	31:59:167:GLU:HB3	2.19	0.43
24:14:2689:U:H5''	24:14:2713:A:C2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:289:A:H3'	24:14:290:G:H8	1.83	0.43
1:1G:1459:C:H2'	1:1G:1460:A:O4'	2.19	0.43
1:13:352:C:H4'	1:13:354:G:OP1	2.19	0.43
27:11:72:LYS:NZ	27:11:99:ASP:OD2	2.52	0.43
20:BI:56:MET:HA	20:BI:59:ALA:HB3	1.99	0.43
24:1H:384:U:O2'	24:1H:385:C:H5'	2.18	0.43
38:A8:69:VAL:HA	38:A8:72:ALA:HB3	2.01	0.43
2:1E:95:GLN:O	2:1E:96:ARG:HD2	2.18	0.43
24:14:1508:A:O2'	24:14:1509:C:H5'	2.18	0.43
39:B8:124:ASP:O	39:B8:128:GLU:N	2.51	0.43
43:F8:15:GLU:CD	43:F8:15:GLU:H	2.20	0.43
41:D8:2:PHE:CD1	41:D8:2:PHE:C	2.92	0.43
54:M5:41:ILE:HA	54:M5:41:ILE:HD13	1.88	0.43
7:6E:139:GLU:H	7:6E:139:GLU:HG3	1.63	0.43
40:C8:114:LYS:H	40:C8:114:LYS:HG2	1.53	0.43
26:71:201:PRO:HD2	26:71:208:PHE:HE1	1.84	0.43
35:35:135:LEU:HD22	35:35:139:LYS:HD3	1.99	0.43
24:1H:728:G:H4'	27:11:13:ARG:HD3	2.00	0.43
47:J8:84:GLY:HA3	47:J8:85:LEU:HA	1.85	0.43
35:78:60:MET:H	54:Q8:13:ARG:HD2	1.84	0.43
4:32:18:LYS:NZ	4:32:19:LEU:O	2.46	0.43
1:1G:1132:C:H2'	1:1G:1133:G:H8	1.82	0.43
25:16:19:G:N2	25:16:65:C:C2	2.87	0.43
28:21:146:THR:HA	28:21:147:PRO:HA	1.66	0.43
24:14:1543:A:C4'	24:14:1543:A:OP1	2.66	0.43
24:14:1161:C:O2'	41:95:23:GLU:HG2	2.19	0.43
24:14:528:A:C2	24:14:2043:C:H4'	2.54	0.43
1:13:188:U:H2'	1:13:189:U:H5'	1.99	0.43
24:14:1048:A:H2	24:14:1112:G:H21	1.64	0.43
5:42:30:ALA:O	5:42:45:PHE:HA	2.18	0.43
8:7E:7:ALA:HA	8:7E:85:ARG:HG3	1.99	0.43
8:7E:86:ILE:O	8:7E:88:LYS:HG3	2.19	0.43
24:1H:1530:G:H2'	24:1H:1531:C:C6	2.53	0.43
8:7E:19:VAL:HG23	8:7E:21:LYS:HG2	1.99	0.43
1:13:1152:A:H2'	1:13:1153:C:H6	1.84	0.43
30:41:122:PRO:HB3	30:41:180:PHE:CD2	2.47	0.43
24:14:642:G:H21	24:14:646:A:H2	1.65	0.43
35:78:113:LYS:HE2	35:78:115:LEU:HD23	2.01	0.43
24:14:2846:G:H2'	24:14:2847:U:C6	2.54	0.43
25:16:73:A:C2'	25:16:74:U:H5'	2.48	0.43
4:32:203:VAL:O	4:32:206:PHE:HB3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:2L:59:A:H61	22:2L:60:A:H62	1.65	0.43
52:O8:9:LEU:N	52:O8:27:LYS:HA	2.33	0.43
17:8A:51:TYR:HE1	17:8A:76:LEU:HB2	1.83	0.43
1:1G:15:G:C4	1:1G:16:A:C8	3.07	0.43
1:1G:540:G:H2'	1:1G:541:G:O4'	2.19	0.43
20:BA:69:GLY:O	20:BA:73:HIS:NE2	2.52	0.43
1:1G:514:C:H2'	1:1G:515:G:C8	2.51	0.43
1:13:222:U:C2	1:13:223:U:C5	3.06	0.43
24:1H:91:A:C4	24:1H:92:G:C8	3.07	0.43
24:14:1451:C:H42	24:14:1459:G:H1	1.66	0.43
24:14:1459:G:H2'	24:14:1461:G:OP2	2.18	0.43
2:12:222:ILE:HG22	2:12:226:ARG:HD2	2.00	0.43
24:1H:2799:A:O2'	24:1H:2801:A:H5'	2.18	0.43
1:13:977:A:C8	1:13:1223:C:C4	3.06	0.43
30:49:7:LEU:HB2	30:49:104:GLU:OE1	2.18	0.43
24:1H:1519:G:C2'	24:1H:1520:U:H5'	2.49	0.43
6:5E:24:GLU:HB3	6:5E:28:ARG:NH1	2.34	0.43
44:C5:61:ILE:HG22	44:C5:62:GLU:HG3	2.01	0.43
1:1G:530:G:O2'	1:1G:531:U:OP1	2.35	0.43
50:M8:43:TYR:HA	50:M8:46:GLN:HG3	2.00	0.43
24:14:1668:A:C8	24:14:1674:G:C6	3.07	0.43
19:AA:60:VAL:HG21	19:AA:74:PHE:CD2	2.54	0.43
24:14:2355:C:H1'	46:E5:39:ARG:HH21	1.83	0.43
25:1J:30:C:N4	25:1J:31:C:O2	2.51	0.43
3:2E:133:ALA:O	3:2E:136:GLN:HG2	2.19	0.43
1:1G:1517:G:C6	1:1G:1518:A:C5	3.06	0.43
47:F5:10:LYS:NZ	47:F5:65:SER:OG	2.51	0.43
27:19:132:PRO:HD3	27:19:190:TYR:CZ	2.53	0.43
27:19:130:ALA:HB1	27:19:190:TYR:HD2	1.83	0.43
20:BA:81:LYS:O	20:BA:85:MET:HG2	2.17	0.43
32:69:111:PRO:O	32:69:114:LEU:HB2	2.18	0.43
44:C5:23:ARG:CZ	44:C5:23:ARG:HB2	2.48	0.43
24:1H:152:G:H2'	24:1H:153:C:C6	2.54	0.43
32:61:81:VAL:HG22	32:61:143:SER:O	2.18	0.43
1:1G:806:C:O2'	1:1G:807:A:H5'	2.19	0.43
24:14:2611:U:H6	24:14:2611:U:OP2	2.02	0.43
24:1H:944:G:H2'	57:1H:4024:HOH:O	2.18	0.43
1:1G:1128:C:C4	1:1G:1139:G:C5	3.06	0.43
24:14:2335:A:O2'	24:14:2336:A:OP2	2.27	0.43
24:14:2287:A:C2	24:14:2346:A:C2	3.07	0.43
30:49:47:LYS:HE2	30:49:81:LYS:HB2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:K5:15:GLU:HB3	52:K5:16:CYS:H	1.45	0.43
35:78:19:VAL:HB	35:78:27:HIS:CB	2.45	0.43
24:1H:1323:U:H2'	24:1H:1324:G:H5'	1.99	0.43
24:1H:1103:A:H3'	24:1H:1104:C:C6	2.54	0.43
24:14:1068:G:H21	24:14:1094:U:H2'	1.83	0.43
1:1G:512:U:C2	1:1G:513:C:C5	3.07	0.43
5:4E:45:PHE:CE2	5:4E:47:LYS:HD2	2.54	0.43
45:H8:130:PRO:HA	45:H8:133:ILE:HD11	2.00	0.43
24:1H:442:G:C4'	29:31:46:ARG:HG3	2.46	0.43
24:1H:870:A:OP1	36:88:6:ARG:NE	2.48	0.43
1:1G:1121:U:C4	1:1G:1122:U:C4	3.07	0.43
1:1G:1178:G:H5''	9:82:93:ARG:HH22	1.83	0.43
7:6E:44:TYR:HA	7:6E:47:CYS:HB2	1.99	0.43
31:59:59:ARG:O	31:59:63:SER:OG	2.29	0.43
4:3E:108:LEU:HD23	4:3E:110:PHE:CE1	2.53	0.43
22:3K:18:G:H1'	22:3K:19:C:OP2	2.19	0.43
24:1H:1062:G:C2	24:1H:1063:G:N1	2.87	0.43
39:75:19:LEU:HD22	39:75:86:ILE:HG23	2.00	0.43
2:12:77:ALA:HB2	2:12:211:ILE:HD13	2.01	0.43
24:1H:2679:A:H2'	24:1H:2680:C:C6	2.54	0.43
8:7E:118:VAL:O	8:7E:119:LEU:HD23	2.19	0.43
24:1H:720:C:H2'	24:1H:721:C:C6	2.53	0.43
1:1G:1251:A:H4'	9:82:12:GLU:OE2	2.19	0.43
10:1A:92:THR:HG23	10:1A:93:GLY:N	2.34	0.43
24:1H:2384:G:O2'	24:1H:2386:C:OP2	2.36	0.43
24:14:1184:G:C6	24:14:1185:C:C4	3.07	0.43
38:65:64:GLU:O	38:65:68:GLN:HG3	2.19	0.43
36:45:6:ARG:C	36:45:7:MET:HG2	2.38	0.43
30:49:119:GLY:O	30:49:181:ARG:HB2	2.19	0.43
1:13:1225:A:N3	1:13:1225:A:H2'	2.34	0.43
24:14:2324:C:H5''	24:14:2325:G:H5'	2.00	0.43
24:14:444:C:H4'	29:39:49:ALA:HB2	1.99	0.43
6:52:77:ARG:HH12	6:52:78:GLU:HG2	1.83	0.43
24:14:2110:G:C6	24:14:2120:G:C8	3.06	0.43
13:4A:5:ALA:HB2	13:4A:61:GLU:CD	2.39	0.43
32:69:25:TYR:CE1	32:69:29:TYR:CD2	3.07	0.43
24:1H:1655:A:H3'	24:1H:1656:C:H6	1.83	0.43
29:31:80:ALA:HA	29:31:81:PRO:HD3	1.88	0.43
15:6A:9:GLN:O	15:6A:13:GLN:HG2	2.19	0.43
24:1H:1392:A:N6	24:1H:1393:A:N6	2.67	0.43
32:69:128:LEU:HA	32:69:128:LEU:HD12	1.68	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:326:G:H2'	24:14:327:G:O4'	2.18	0.43
24:1H:1816:G:N7	27:11:35:LYS:NZ	2.66	0.43
29:31:23:ASP:OD1	29:31:23:ASP:N	2.47	0.43
4:32:162:LEU:HD23	4:32:162:LEU:HA	1.81	0.43
7:62:90:GLU:HG2	7:62:90:GLU:H	1.43	0.43
25:1J:76:G:H2'	25:1J:77:U:O4'	2.19	0.43
26:71:46:LYS:NZ	26:71:210:ARG:HH21	2.16	0.43
2:12:198:ASP:OD1	8:72:68:ARG:NH1	2.50	0.43
1:1G:256:U:H2'	1:1G:257:G:C8	2.53	0.43
24:1H:1315:C:C2	24:1H:1338:G:N2	2.86	0.43
1:1G:709:G:H2'	1:1G:710:G:H8	1.84	0.43
40:85:83:LEU:CD2	40:85:88:ILE:HB	2.49	0.43
1:1G:1375:A:H4'	7:62:29:LYS:NZ	2.34	0.43
24:14:918:A:C2	25:1J:80:U:H4'	2.53	0.43
24:1H:392:C:OP1	57:1H:3716:HOH:O	2.20	0.43
44:G8:64:GLU:HG2	44:G8:64:GLU:H	1.56	0.43
24:14:2685:G:P	39:75:51:ARG:HH22	2.40	0.43
50:I5:36:CYS:HB3	50:I5:39:CYS:HB2	1.99	0.43
1:13:267:C:OP1	17:8I:67:LYS:HD2	2.19	0.43
45:D5:62:PRO:O	45:D5:63:ASP:HB3	2.19	0.43
24:1H:2331:G:H4'	46:I8:43:THR:N	2.26	0.43
24:1H:1222:C:C2	24:1H:1223:C:C5	3.06	0.43
24:1H:71:A:H2	43:F8:31:HIS:NE2	2.08	0.43
36:88:105:GLU:HG2	36:88:105:GLU:O	2.19	0.43
1:1G:57:G:C6	1:1G:58:C:C4	3.07	0.43
1:1G:464:G:H1'	1:1G:468:A:H61	1.84	0.43
25:16:83:G:C6	25:16:84:C:C5	3.07	0.43
1:1G:1236:A:OP1	21:1B:3:LYS:HG3	2.18	0.43
24:14:558:G:OP1	33:15:111:PRO:HD2	2.19	0.43
34:25:44:LYS:HD3	34:25:44:LYS:HA	1.68	0.43
9:82:46:ALA:HB2	9:82:74:ILE:HG23	1.99	0.43
50:I5:14:ILE:O	50:I5:20:ASN:HB3	2.18	0.43
1:1G:949:A:C2	1:1G:1233:G:N3	2.87	0.43
24:1H:2027:G:C5	24:1H:2028:U:C5	3.07	0.43
24:14:2634:G:O3'	28:29:77:ILE:HG12	2.19	0.43
1:1G:1206:G:C4	1:1G:1207:G:C8	3.07	0.43
1:13:724:G:C2	1:13:725:G:C8	3.07	0.43
3:2E:40:ARG:NH2	3:2E:55:VAL:O	2.41	0.43
43:F8:53:LYS:HE2	43:F8:55:ASN:HD21	1.83	0.43
1:13:6:G:H4'	1:13:298:A:H4'	2.01	0.43
8:72:11:THR:HG23	8:72:14:ARG:NH1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2E:79:ARG:HH11	18:9A:87:ARG:NH1	2.17	0.43
24:1H:1425:G:N2	24:1H:1573:G:N7	2.66	0.43
1:1G:376:G:H5'	16:7A:5:ARG:HD3	1.99	0.43
24:1H:814:C:H2'	24:1H:815:C:C6	2.53	0.43
29:39:10:PRO:HA	29:39:127:GLU:HB3	2.00	0.43
24:14:875:G:N2	24:14:903:C:C2	2.87	0.43
20:BA:95:ALA:C	20:BA:97:ALA:H	2.21	0.43
24:1H:1060:U:H5'	24:1H:1061:U:H5	1.84	0.43
1:13:153:C:H42	1:13:168:G:H1	1.65	0.43
27:11:143:HIS:HD2	27:11:144:ALA:HB2	1.83	0.43
24:1H:1206:G:C6	24:1H:1207:C:C4	3.06	0.43
1:1G:152:A:N6	1:1G:170:U:C2	2.87	0.43
1:1G:176:C:H2'	1:1G:177:C:H6	1.84	0.43
51:J5:36:CYS:SG	51:J5:49:CYS:SG	3.16	0.43
24:14:931:G:O2'	49:H5:24:LYS:HE3	2.19	0.43
44:C5:50:ARG:HG2	44:C5:53:PRO:HB3	2.00	0.43
1:1G:298:A:H3'	1:1G:299:G:C8	2.54	0.43
8:72:97:VAL:HG13	8:72:129:VAL:O	2.19	0.43
45:H8:1:MET:HG2	45:H8:135:GLU:OE1	2.19	0.43
1:1G:408:A:H2'	1:1G:409:G:O4'	2.19	0.43
38:65:42:ASP:N	38:65:42:ASP:OD1	2.50	0.43
1:1G:79:G:H8	1:1G:79:G:OP2	2.02	0.43
15:6I:71:GLN:HG2	15:6I:71:GLN:O	2.18	0.43
4:3E:142:PRO:HA	4:3E:185:PHE:HD2	1.84	0.43
30:49:19:LEU:HG	30:49:175:LEU:HD12	2.01	0.43
1:13:1374:A:H2'	1:13:1375:A:H5'	2.01	0.43
24:14:607:U:OP1	29:39:102:PRO:HA	2.19	0.43
24:14:1543:A:H4'	24:14:1543:A:OP1	2.17	0.43
2:1E:154:LEU:O	2:1E:155:LEU:HD12	2.19	0.43
24:1H:1386:C:C2	24:1H:1387:C:C5	3.07	0.43
24:14:996:A:N3	24:14:997:G:C8	2.87	0.43
24:14:1327:C:C5	24:14:1328:G:C6	3.07	0.43
24:14:1106:G:H3'	24:14:1107:G:C8	2.53	0.43
1:13:1298:C:N4	7:6E:114:ARG:HB3	2.34	0.43
1:1G:1032(B):G:C6	1:1G:1033:G:C2	3.07	0.43
24:1H:2330:G:H2'	24:1H:2331:G:O4'	2.18	0.43
24:14:2408:U:H2'	24:14:2409:G:H8	1.84	0.43
9:8E:42:ARG:NH2	9:8E:75:ASP:OD2	2.40	0.43
1:13:200:G:N2	1:13:218:C:C2	2.86	0.43
1:1G:465:A:N6	1:1G:467:G:C2	2.87	0.43
29:39:21:ALA:C	29:39:23:ASP:N	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1004:A:O2'	1:1G:1036:G:N1	2.43	0.43
29:39:132:VAL:HG13	29:39:133:ASN:HB2	1.99	0.43
46:E5:50:ASN:O	46:E5:62:LEU:HB2	2.18	0.43
16:7A:23:ASP:OD2	16:7A:25:ARG:NH1	2.52	0.43
1:1G:685:G:N1	1:1G:686:U:O4	2.52	0.43
24:1H:2271:G:H5''	46:I8:20:ARG:NH1	2.33	0.43
24:1H:273(C):C:C2	24:1H:363(D):G:N2	2.86	0.43
24:14:2161:C:H2'	24:14:2162:G:C8	2.50	0.43
1:1G:691:G:H3'	11:2A:26:ASN:HD21	1.84	0.43
31:51:144:VAL:O	31:51:148:ILE:HG12	2.19	0.43
1:13:1459:C:H5'	20:BI:27:LYS:HE3	1.99	0.43
24:14:185:U:H2'	24:14:186:G:C8	2.54	0.43
24:1H:1287:A:N7	37:98:107:ASP:CB	2.82	0.43
24:1H:2663:G:C2	24:1H:2664:G:H1'	2.53	0.43
45:H8:28:MET:N	45:H8:35:ARG:O	2.40	0.43
29:39:185:ASP:CG	29:39:188:ARG:HH21	2.22	0.43
39:B8:74:ARG:HD3	39:B8:76:PHE:CZ	2.53	0.43
24:1H:654(G):C:H2'	24:1H:654(H):G:C8	2.52	0.43
24:14:142:G:O3'	43:B5:35:THR:HG21	2.18	0.43
24:1H:2027:G:H2'	24:1H:2028:U:H6	1.83	0.43
5:42:6:PHE:HB2	5:42:63:ARG:NH1	2.34	0.43
24:14:389:G:N2	35:35:72:PRO:HD3	2.33	0.43
39:B8:56:GLY:O	39:B8:59:THR:HG22	2.19	0.43
2:1E:103:THR:HB	2:1E:176:GLU:OE1	2.19	0.43
44:C5:17:SER:OG	44:C5:18:GLY:O	2.35	0.43
1:1G:1206:G:O4'	3:22:194:GLY:HA2	2.18	0.43
3:2E:20:SER:HB3	3:2E:40:ARG:HH22	1.84	0.43
24:1H:64:A:C4	43:F8:66:LEU:HD23	2.54	0.43
2:12:152:PHE:CE1	2:12:155:LEU:HD12	2.53	0.43
24:14:2228:G:O6	57:14:3898:HOH:O	2.21	0.43
24:14:661:C:H2'	24:14:662:G:C8	2.54	0.43
4:32:122:ARG:NH2	4:32:134:ASP:HB2	2.33	0.43
24:14:2615:U:H2'	24:14:2616:C:H6	1.84	0.43
32:69:31:LEU:HD21	32:69:38:LEU:HD12	1.99	0.43
11:2I:45:GLY:O	11:2I:50:TYR:HB2	2.18	0.43
45:H8:27:VAL:HG13	45:H8:87:ASP:HB2	1.99	0.43
19:AA:78:ARG:O	19:AA:79:THR:OG1	2.35	0.43
24:14:2870:C:H2'	24:14:2871:C:H5'	2.01	0.43
37:55:33:ARG:HD3	51:J5:55:ARG:HH22	1.84	0.43
47:J8:67:ILE:N	47:J8:68:PRO:HD2	2.33	0.43
24:14:565:C:H4'	24:14:1253:A:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2584:U:H5''	24:14:2585:U:OP2	2.19	0.43
1:13:99:C:N3	1:13:101:A:N6	2.66	0.43
24:14:2218:G:O2'	27:19:148:GLU:HG2	2.19	0.43
29:39:114:VAL:HG13	29:39:192:LEU:CD1	2.48	0.43
24:14:935:C:H2'	24:14:936:C:H6	1.84	0.43
24:14:1015:G:O2'	24:14:1016:G:H5'	2.19	0.43
2:1E:126:GLU:HA	2:1E:129:GLU:HB2	2.01	0.43
25:1J:26:A:H8	25:1J:26:A:OP2	2.02	0.43
27:19:106:ILE:O	27:19:108:PRO:HD3	2.18	0.43
24:14:693:C:H2'	24:14:694:U:C6	2.53	0.43
52:K5:9:LEU:HD21	52:K5:11:LEU:HD22	2.00	0.43
31:51:94:TYR:CE1	31:51:107:VAL:O	2.72	0.43
24:1H:2391:G:O6	24:1H:2425:A:H8	2.02	0.43
26:71:66:HIS:HD2	26:71:184:LYS:O	2.02	0.43
20:BA:37:SER:HB3	20:BA:84:LEU:HG	2.01	0.43
15:6A:10:LYS:O	15:6A:10:LYS:HE3	2.17	0.43
15:6A:32:LEU:HD23	15:6A:32:LEU:HA	1.82	0.43
24:14:2291:U:H5''	24:14:2380:C:O2'	2.18	0.43
5:42:146:ALA:O	5:42:149:GLU:N	2.52	0.43
54:M5:34:TRP:CZ3	54:M5:36:LYS:HG3	2.53	0.43
24:14:1021:A:O2'	24:14:1123:C:OP1	2.34	0.43
25:1J:69:G:H2'	25:1J:70:C:O4'	2.19	0.43
51:N8:40:LYS:HE2	51:N8:47:PRO:CG	2.46	0.43
35:78:37:GLY:HA2	35:78:41:ARG:NH2	2.34	0.43
27:19:206:LEU:HD23	27:19:206:LEU:HA	1.56	0.43
25:16:31:C:O2'	25:16:53:A:N1	2.44	0.43
24:1H:1176:G:O2'	24:1H:1178:C:N4	2.52	0.43
39:B8:26:ASP:CB	39:B8:91:ARG:HA	2.49	0.43
32:61:116:LEU:HD22	32:61:116:LEU:HA	1.75	0.43
1:1G:1004:A:H1'	1:1G:1025:U:N3	2.34	0.43
24:14:2215:G:H8	24:14:2215:G:O5'	2.01	0.43
24:14:1385:G:O2'	24:14:1396:U:H6	2.02	0.43
1:1G:1329:A:P	13:4A:28:ALA:HB3	2.59	0.43
30:41:12:TYR:O	30:41:16:ARG:HB2	2.19	0.43
24:1H:2285:C:P	52:O8:28:ARG:HG3	2.59	0.43
30:49:106:LEU:HA	30:49:110:ALA:HB3	2.01	0.43
24:1H:322:A:OP2	29:31:169:ASN:HB2	2.19	0.43
50:M8:17:GLY:N	50:M8:36:CYS:H	2.17	0.43
24:14:586:A:H5'	29:39:89:VAL:HG21	2.00	0.43
1:13:940:C:C2	1:13:941:G:C8	3.06	0.43
1:13:560:U:HO2'	1:13:561:U:P	2.35	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1371:G:O2'	1:1G:1372:U:H5'	2.19	0.43
24:1H:2098:U:H2'	24:1H:2099:U:O4'	2.19	0.43
1:1G:683:G:H2'	1:1G:684:A:C8	2.53	0.43
24:1H:2132:U:N3	26:71:5:LYS:HB3	2.34	0.43
1:13:1262:C:H2'	1:13:1263:C:H6	1.84	0.43
35:78:106:LEU:HD22	35:78:106:LEU:O	2.19	0.43
24:14:2400:G:H2'	24:14:2401:U:C6	2.53	0.43
24:1H:929:G:O5'	24:1H:929:G:H8	2.02	0.43
24:14:2648:C:H2'	24:14:2649:U:H6	1.83	0.43
24:1H:270:A:OP2	24:1H:270(Y):G:N2	2.44	0.43
1:13:1402:C:H2'	1:13:1403:C:O4'	2.19	0.43
45:D5:72:ARG:HA	45:D5:72:ARG:HD3	1.53	0.43
1:13:892:A:O2'	1:13:1415:G:H4'	2.19	0.43
29:39:179:GLU:O	29:39:205:ARG:NH2	2.52	0.43
1:1G:843:U:H3'	1:1G:848:C:O4'	2.19	0.43
24:1H:286:C:H2'	24:1H:287:C:C6	2.54	0.43
24:14:27:G:HO2'	24:14:28:A:P	2.40	0.43
24:14:1685:C:H2'	24:14:1686:C:H6	1.83	0.43
1:13:1300:G:C5	1:13:1334:G:C6	3.06	0.43
20:BA:95:ALA:O	20:BA:97:ALA:N	2.51	0.43
24:1H:570:G:H2'	24:1H:2030:A:C5	2.54	0.43
24:1H:2592:G:C5	24:1H:2593:U:C5	3.07	0.43
27:11:108:PRO:HG3	27:11:143:HIS:CE1	2.54	0.43
32:69:128:LEU:O	32:69:137:PRO:HA	2.19	0.43
12:3A:76:ASN:ND2	12:3A:106:ASP:O	2.51	0.43
24:1H:2740:A:H2'	24:1H:2741:A:C8	2.54	0.43
24:1H:176:G:O2'	24:1H:177:G:H5'	2.19	0.43
24:1H:1749:A:H2'	24:1H:1750:G:O4'	2.19	0.43
5:42:9:LYS:HB2	5:42:112:LEU:HD11	2.01	0.43
4:32:92:VAL:O	4:32:96:LEU:HG	2.19	0.43
24:1H:686:G:H4'	24:1H:687:C:OP2	2.18	0.43
24:1H:2431:U:O2	24:1H:2433:A:C8	2.72	0.43
17:8I:92:ARG:HD3	17:8I:92:ARG:HA	1.87	0.43
50:I5:18:CYS:N	50:I5:19:GLY:HA2	2.34	0.43
1:13:1167:A:OP1	1:13:1167:A:H8	2.02	0.43
1:1G:996:A:H2'	1:1G:997:U:O4'	2.19	0.43
24:1H:1268:A:C2	24:1H:2013:A:C4	3.07	0.42
1:13:1392:G:N2	1:13:1502:A:H8	2.16	0.42
24:14:1019:U:H3	24:14:1142(A):A:N6	2.11	0.42
24:14:1138:G:C5	24:14:1139:G:H1'	2.53	0.42
24:14:1771:C:O2'	24:14:1786:A:H8	1.80	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:3L:23:A:H2'	22:3L:24:G:O4'	2.19	0.42
35:78:18:ARG:O	35:78:19:VAL:HG22	2.19	0.42
45:H8:146:ILE:HA	45:H8:174:VAL:HG11	2.01	0.42
2:1E:7:VAL:HB	2:1E:217:ARG:NH1	2.34	0.42
7:6E:113:GLU:CG	7:6E:119:ARG:HG2	2.49	0.42
25:16:29:A:H2'	25:16:30:C:O4'	2.19	0.42
8:72:9:MET:SD	8:72:32:LYS:HB3	2.59	0.42
1:13:1002:G:H2'	1:13:1003:G:O4'	2.19	0.42
39:B8:26:ASP:HB2	39:B8:91:ARG:HA	2.01	0.42
1:13:1250:A:H4'	9:8E:68:GLY:N	2.34	0.42
24:1H:1639:U:O2'	24:1H:1640:C:H5'	2.19	0.42
1:13:314:C:O2'	1:13:315:A:H5'	2.19	0.42
19:A1:42:PRO:HD3	50:M8:63:TYR:CZ	2.54	0.42
10:1I:9:ARG:HG2	10:1I:69:ASN:OD1	2.19	0.42
1:13:1131:G:OP1	9:8E:20:ARG:NH2	2.52	0.42
24:14:2320:A:N6	24:14:2333:A:H2'	2.34	0.42
24:1H:1274:A:N1	24:1H:1644:C:O2'	2.45	0.42
48:G5:32:LEU:HD22	48:G5:53:LEU:HB3	2.01	0.42
24:1H:908:C:O2'	24:1H:909:A:H5'	2.19	0.42
1:13:875:C:O2'	8:7E:14:ARG:NH1	2.52	0.42
3:22:23:TYR:HA	10:1A:11:PHE:CE2	2.54	0.42
1:13:1021:G:H2'	1:13:1022:G:O4'	2.19	0.42
1:1G:1161:C:H42	1:1G:1175:G:H1	1.67	0.42
24:1H:1063:G:C5	24:1H:1064:C:C4	3.07	0.42
24:1H:581:C:OP1	40:C8:33:ARG:HG3	2.19	0.42
1:1G:332:G:H2'	1:1G:333:G:H8	1.83	0.42
28:29:67:PHE:HA	28:29:68:ALA:HA	1.71	0.42
8:72:20:TYR:HE2	8:72:75:ARG:HD2	1.84	0.42
4:32:153:ARG:NH1	4:32:181:MET:HB2	2.34	0.42
1:13:234:C:H2'	1:13:235:C:H6	1.83	0.42
24:1H:3:U:O5'	24:1H:3:U:H6	2.02	0.42
20:BA:76:ALA:O	20:BA:80:ARG:HB2	2.19	0.42
24:1H:186:G:H2'	24:1H:187:G:H8	1.83	0.42
2:1E:187:LEU:HD23	2:1E:201:ILE:O	2.19	0.42
24:14:2342:C:O2'	24:14:2374:C:H5''	2.19	0.42
38:65:24:LEU:CD1	38:65:41:ASP:HB2	2.49	0.42
24:1H:444:C:C4'	29:31:49:ALA:HB2	2.49	0.42
45:D5:1:MET:N	45:D5:135:GLU:OE2	2.51	0.42
3:2E:79:ARG:HH11	18:9A:87:ARG:HH12	1.64	0.42
36:45:33:GLY:HA2	36:45:105:GLU:HA	2.00	0.42
33:15:136:GLU:HG3	33:15:137:LYS:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:68:115:VAL:HG12	34:68:121:VAL:HG21	2.01	0.42
12:3A:32:PHE:HB3	12:3A:84:LEU:HD11	2.01	0.42
47:F5:21:ARG:HD3	47:F5:35:THR:HG21	2.01	0.42
24:1H:285:C:H2'	24:1H:286:C:H6	1.83	0.42
24:14:2578:G:OP2	24:14:2578:G:H4'	2.18	0.42
24:14:902:C:H2'	24:14:903:C:C6	2.53	0.42
6:52:80:ARG:HD3	6:52:80:ARG:HH11	1.70	0.42
11:2I:33:THR:HA	11:2I:39:PRO:HA	2.00	0.42
24:1H:2283:C:C4	24:1H:2389:G:C4	3.07	0.42
43:B5:5:TYR:HB3	48:G5:33:MET:HB2	2.01	0.42
24:14:1670:C:C5	24:14:1671:U:C4	3.07	0.42
24:1H:345:A:O2'	57:1H:4202:HOH:O	2.21	0.42
35:35:124:LYS:HA	35:35:143:GLY:O	2.18	0.42
1:13:1417:G:N2	1:13:1482:G:H2'	2.33	0.42
38:65:65:VAL:O	38:65:69:VAL:HG12	2.19	0.42
1:1G:877:C:H5''	8:72:88:LYS:HD2	2.00	0.42
2:12:82:ARG:HG3	2:12:92:TYR:CZ	2.54	0.42
24:14:1394:U:H2'	24:14:1395:A:O4'	2.19	0.42
24:1H:823:G:H2'	24:1H:824:A:C8	2.54	0.42
24:14:1851:U:H2'	24:14:1852:C:O4'	2.19	0.42
24:14:69:C:H2'	24:14:70:G:C8	2.54	0.42
24:1H:565:C:H4'	24:1H:1253:A:N6	2.34	0.42
1:13:965:A:C2	1:13:969:A:C2	3.07	0.42
24:14:911:A:H2'	36:45:9:TYR:OH	2.19	0.42
38:A8:92:TYR:CB	38:A8:98:VAL:HG21	2.48	0.42
4:3E:166:LYS:HE2	4:3E:166:LYS:H	1.83	0.42
19:AA:83:HIS:CD2	19:AA:83:HIS:H	2.37	0.42
24:1H:2523:G:O5'	24:1H:2523:G:H8	2.03	0.42
41:95:16:PRO:HA	41:95:96:ILE:HB	2.00	0.42
14:5I:41:ARG:HG3	14:5I:42:ILE:N	2.33	0.42
9:82:16:ARG:O	9:82:63:ILE:HG23	2.19	0.42
31:51:8:PRO:CD	31:51:69:ARG:HE	2.28	0.42
24:14:2286:A:H8	24:14:2287:A:N6	2.17	0.42
25:16:63:G:C2	25:16:64:C:C2	3.08	0.42
24:14:1728:G:C2	24:14:1730:U:OP2	2.72	0.42
22:3K:25:G:C2	22:3K:26:G:C4	3.07	0.42
24:14:2805:G:H2'	24:14:2807:G:C8	2.55	0.42
1:1G:976:G:P	14:5A:32:SER:H	2.40	0.42
24:1H:660:G:H21	35:78:12:ALA:HA	1.84	0.42
24:14:1111:A:O3'	24:14:1112:G:H4'	2.19	0.42
24:1H:1022:G:H4'	24:1H:1023:U:O5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:58:62:VAL:HG22	33:58:63:THR:N	2.34	0.42
39:75:102:ILE:CA	39:75:105:LEU:HB2	2.49	0.42
1:13:17:U:H2'	1:13:18:C:H6	1.81	0.42
36:88:2:LEU:HB3	36:88:69:PHE:CE1	2.54	0.42
32:61:126:TYR:HB2	32:61:140:LEU:O	2.19	0.42
1:1G:1118:C:OP1	9:82:9:ARG:NE	2.52	0.42
48:G5:32:LEU:HD21	48:G5:54:LYS:HG2	2.01	0.42
24:14:1291:C:H2'	24:14:1292:U:C6	2.54	0.42
1:1G:197:A:H8	1:1G:198:G:H1'	1.81	0.42
26:71:6:ARG:NH1	26:71:7:TYR:HB2	2.33	0.42
1:1G:720:C:O5'	1:1G:720:C:H6	2.02	0.42
1:13:1336:C:O2	1:13:1336:C:H2'	2.19	0.42
1:13:945:G:N1	1:13:1337:G:C2	2.87	0.42
24:14:1995:U:H3'	24:14:1996:C:H2'	2.00	0.42
13:4A:25:ILE:HG22	13:4A:26:GLY:O	2.19	0.42
24:1H:495:G:H1'	42:E8:57:ASN:OD1	2.19	0.42
32:69:120:ILE:CG2	32:69:126:TYR:HE2	2.32	0.42
32:61:104:GLN:HG2	32:61:105:HIS:NE2	2.34	0.42
1:13:255:G:C5	1:13:256:U:C5	3.07	0.42
1:13:474:G:H2'	1:13:475:G:C8	2.54	0.42
1:1G:553:A:C5	1:1G:554:C:C5	3.06	0.42
9:8E:114:TYR:HD2	10:1I:60:ARG:HB2	1.83	0.42
24:1H:1257:C:H4'	29:31:83:PHE:CE1	2.54	0.42
24:14:511:U:H5''	24:14:512:G:OP2	2.17	0.42
24:14:513:A:C2	24:14:514:A:C5	3.07	0.42
1:1G:568:G:N3	1:1G:574:A:H2	2.17	0.42
24:14:2886:G:C6	24:14:2887:U:C4	3.07	0.42
24:1H:2238:G:H4'	24:1H:2239:G:OP1	2.19	0.42
15:6I:30:ALA:HB2	15:6I:85:LEU:HD11	2.02	0.42
24:1H:2178:C:H5'	26:71:46:LYS:HD3	2.01	0.42
44:C5:50:ARG:HB3	44:C5:53:PRO:HD3	2.00	0.42
7:62:138:LYS:HE2	7:62:142:GLU:OE2	2.18	0.42
1:13:1100:C:O2'	1:13:1102:A:OP1	2.36	0.42
1:1G:820:U:H4'	1:1G:821:G:OP2	2.19	0.42
24:1H:182:A:H2'	24:1H:183:C:C6	2.55	0.42
24:1H:759:G:O4'	24:1H:1981:A:C2	2.72	0.42
35:78:43:GLY:HA3	57:78:202:HOH:O	2.19	0.42
1:13:894:G:C6	1:13:895:G:C5	3.07	0.42
1:1G:1401:G:C2	1:1G:1402:C:H1'	2.54	0.42
24:14:1155:A:O2'	24:14:1156:A:H2'	2.19	0.42
9:82:25:LYS:HD3	9:82:25:LYS:HA	1.80	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:15:58:ASP:N	33:15:58:ASP:OD1	2.52	0.42
4:3E:78:LEU:HD23	4:3E:78:LEU:HA	1.92	0.42
1:13:1091:U:H2'	1:13:1093:A:OP2	2.18	0.42
14:5I:6:LEU:HB3	14:5I:23:ARG:HH22	1.83	0.42
24:14:573:G:O2'	24:14:574:C:H3'	2.20	0.42
22:2K:17:OMG:C4	22:2K:67:A:C2	3.07	0.42
1:1G:324:G:OP2	57:1G:1842:HOH:O	2.21	0.42
15:6I:87:ILE:HG22	15:6I:88:ARG:N	2.25	0.42
24:14:1328:G:H2'	24:14:1330:C:C4	2.55	0.42
1:13:1238:A:N3	1:13:1241:G:O2'	2.37	0.42
24:1H:1019:U:H3	24:1H:1142(A):A:H62	1.66	0.42
24:1H:1019:U:N3	24:1H:1020:A:N7	2.67	0.42
28:21:37:ARG:HD2	28:21:80:GLU:OE2	2.19	0.42
43:F8:60:ARG:NH2	53:P8:47:ARG:HH22	2.10	0.42
10:1I:26:ALA:HA	10:1I:29:ARG:HH21	1.84	0.42
8:72:32:LYS:HA	8:72:35:ILE:HD12	2.00	0.42
1:1G:735:C:H5''	18:9A:71:LYS:CB	2.48	0.42
24:1H:1300:U:H4'	24:1H:1301:A:H5'	2.00	0.42
24:1H:456:C:C3'	43:F8:68:ARG:HH22	2.31	0.42
24:14:2837:G:H2'	24:14:2838:G:H8	1.83	0.42
4:32:15:GLU:HG3	4:32:63:LYS:HG3	2.00	0.42
25:16:10:C:H2'	25:16:11:C:C6	2.53	0.42
35:35:134:ALA:O	35:35:138:LEU:HD12	2.19	0.42
13:4A:29:ARG:HD3	13:4A:64:TRP:CH2	2.54	0.42
22:3L:76:C:H2'	22:3L:77:C:C6	2.53	0.42
1:1G:89:U:O2'	1:1G:90:C:O5'	2.27	0.42
24:14:1612:C:H5''	53:L5:7:PRO:CG	2.49	0.42
1:1G:428:G:H4'	1:1G:429:U:O5'	2.18	0.42
24:14:972:G:O2'	57:14:3703:HOH:O	2.22	0.42
24:1H:997:G:C2	24:1H:1159:U:C2	3.07	0.42
4:32:107:ARG:HD2	4:32:173:TRP:HZ2	1.84	0.42
13:4A:8:GLU:HG3	13:4A:22:ILE:HG23	2.00	0.42
24:14:588:U:C2	29:39:90:PHE:CE1	3.08	0.42
1:13:1198:G:O2'	10:1I:55:LYS:HD3	2.19	0.42
5:42:81:GLU:HA	5:42:89:ILE:O	2.18	0.42
26:71:165:ASN:ND2	26:71:166:ASP:O	2.53	0.42
24:1H:7:G:H2'	24:1H:8:A:C8	2.54	0.42
10:1I:35:SER:N	10:1I:73:ASP:O	2.43	0.42
24:1H:787:U:H5''	24:1H:788:A:H5'	2.00	0.42
40:C8:31:SER:O	40:C8:32:PHE:C	2.57	0.42
53:L5:14:LYS:HG2	53:L5:14:LYS:H	1.56	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:49:141:PHE:CD1	30:49:142:PRO:HD2	2.54	0.42
24:1H:270(Y):G:C2	24:1H:270(Z):U:O4	2.72	0.42
41:D8:76:LYS:O	41:D8:79:VAL:HG12	2.19	0.42
24:14:195:A:H2'	24:14:198:C:N4	2.34	0.42
24:1H:1516:U:C2	24:1H:1517:G:C8	3.08	0.42
3:2E:175:LEU:HD21	3:2E:201:TYR:CE2	2.54	0.42
48:K8:15:LYS:H	48:K8:67:LYS:HZ3	1.67	0.42
1:13:1429:C:H2'	1:13:1430:C:H6	1.84	0.42
29:31:101:LEU:HB3	29:31:106:ARG:HD3	2.00	0.42
5:42:79:GLU:HG2	5:42:92:LYS:HG2	2.00	0.42
24:1H:1341:U:OP1	24:1H:1397:U:N3	2.31	0.42
24:14:1769:G:C2'	24:14:1770:G:H5'	2.49	0.42
24:14:2188:C:H2'	24:14:2189:U:O4'	2.19	0.42
18:9A:73:ALA:HB3	18:9A:79:LEU:HD12	2.01	0.42
1:13:947:G:OP1	13:4I:108:ARG:HB3	2.20	0.42
24:1H:1816:G:H8	27:11:62:TYR:CZ	2.37	0.42
6:5E:78:GLU:O	6:5E:81:ILE:HG13	2.19	0.42
54:M5:23:VAL:HG22	54:M5:47:LYS:HB3	2.00	0.42
1:13:1110:A:N6	1:13:1111:A:N1	2.68	0.42
38:A8:74:ALA:HB3	38:A8:107:GLU:HG3	2.01	0.42
1:1G:4:U:H4'	1:1G:5:U:OP1	2.19	0.42
24:1H:194:G:H2'	24:1H:195:A:O4'	2.19	0.42
20:BA:90:GLN:HA	20:BA:93:GLU:HG2	2.01	0.42
3:22:128:PHE:CG	3:22:129:ALA:N	2.87	0.42
45:H8:6:LYS:O	45:H8:59:LEU:HD22	2.19	0.42
1:13:1406:U:O2	1:13:1517:G:N2	2.48	0.42
41:D8:27:ALA:CB	41:D8:61:VAL:HG21	2.49	0.42
1:13:598:U:H4'	8:7E:94:TYR:CG	2.54	0.42
1:1G:111:G:O6	1:1G:330:C:N4	2.51	0.42
43:B5:11:PRO:HD3	48:G5:37:PHE:CD2	2.54	0.42
37:98:34:ILE:HD13	37:98:34:ILE:HA	1.74	0.42
15:6I:43:LEU:HA	15:6I:43:LEU:HD23	1.77	0.42
33:58:1:MET:HE3	33:58:1:MET:HB3	1.63	0.42
32:61:101:LEU:HA	32:61:101:LEU:HD23	1.77	0.42
8:72:36:LEU:HD23	8:72:36:LEU:HA	1.84	0.42
35:78:59:LEU:CD2	54:Q8:13:ARG:HD2	2.50	0.42
24:1H:2344:U:C6	52:O8:37:ARG:HD3	2.55	0.42
24:1H:1826:G:C2'	24:1H:1827:C:O5'	2.67	0.42
40:85:92:ARG:CD	41:95:11:GLN:HB2	2.50	0.42
44:G8:75:ILE:O	44:G8:76:CYS:HB3	2.19	0.42
16:7I:57:ARG:HH21	16:7I:79:VAL:HA	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:11:177:LEU:HD11	27:11:183:ARG:HB2	2.01	0.42
24:1H:448:U:C4	24:1H:583:G:H1'	2.54	0.42
24:1H:1019:U:O2'	24:1H:1021:A:H2	2.02	0.42
1:1G:1205:U:H4'	3:22:195:VAL:CG1	2.45	0.42
24:1H:2020:A:OP1	40:C8:27:LEU:HB2	2.19	0.42
45:H8:48:PHE:CE1	45:H8:71:VAL:HG11	2.53	0.42
8:7E:85:ARG:O	8:7E:86:ILE:HD13	2.20	0.42
36:45:41:TRP:HB3	36:45:94:VAL:HG11	2.01	0.42
47:J8:8:SER:HB3	47:J8:66:HIS:CD2	2.54	0.42
47:F5:86:SER:N	47:F5:87:PRO:HD2	2.34	0.42
19:AI:40:ILE:O	19:AI:41:VAL:HG22	2.19	0.42
29:39:103:LYS:HA	29:39:106:ARG:HG3	2.01	0.42
1:13:1226:C:H5''	13:4I:96:LEU:HD11	2.02	0.42
27:11:30:GLU:HG3	27:11:63:ARG:CZ	2.48	0.42
24:14:2135:A:H3'	24:14:2136:C:C6	2.55	0.42
24:14:2002:G:C6	57:14:3863:HOH:O	2.72	0.42
27:11:145:VAL:HG12	27:11:146:GLU:O	2.19	0.42
29:39:110:LEU:HD23	29:39:110:LEU:HA	1.89	0.42
25:16:73:A:O2'	25:16:74:U:H5'	2.20	0.42
13:4I:87:TYR:HA	13:4I:90:LEU:HG	1.99	0.42
1:13:498:A:C6	1:13:547:A:C8	3.08	0.42
50:M8:17:GLY:HA3	50:M8:35:VAL:HG13	2.00	0.42
14:5A:4:LYS:HB3	14:5A:4:LYS:HE2	1.69	0.42
1:1G:15:G:H1'	5:42:19:MET:CE	2.50	0.42
20:BA:69:GLY:O	20:BA:73:HIS:CE1	2.73	0.42
24:14:588:U:H2'	24:14:589:C:H6	1.84	0.42
24:14:2151:G:H2'	24:14:2152:G:C8	2.55	0.42
2:12:223:ILE:HA	2:12:226:ARG:HB2	2.00	0.42
36:45:43:THR:O	36:45:46:GLN:HB2	2.20	0.42
1:13:864:A:H5'	5:4E:86:ALA:HB2	2.00	0.42
51:J5:33:CYS:SG	51:J5:46:CYS:SG	3.13	0.42
1:1G:1206:G:O2'	3:22:193:TYR:HA	2.19	0.42
21:1B:6:ARG:NE	21:1B:15:ARG:HH12	2.16	0.42
31:59:26:VAL:HG13	31:59:27:LYS:H	1.84	0.42
37:55:35:THR:HG23	37:55:112:ALA:O	2.19	0.42
24:1H:2850:A:H2'	24:1H:2851:A:H8	1.83	0.42
41:D8:79:VAL:CG1	41:D8:81:TYR:HB3	2.49	0.42
20:BI:25:ARG:O	20:BI:29:LYS:HG3	2.18	0.42
24:1H:1290:C:H2'	24:1H:1291:C:H6	1.84	0.42
4:32:175:SER:HB3	4:32:186:LEU:HD11	2.02	0.42
24:14:1848:A:C4	24:14:1849:G:C8	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:16:37:C:H2'	25:16:38:C:H5'	2.02	0.42
1:13:1031:G:H2'	1:13:1032:A:H8	1.85	0.42
24:14:901:A:H5'	24:14:902:C:OP2	2.20	0.42
24:14:1931:U:H2'	24:14:1932:A:C8	2.55	0.42
31:51:26:VAL:HG21	31:51:75:ALA:HB1	2.00	0.42
24:14:547:A:N7	24:14:548:A:N6	2.68	0.42
42:A5:90:ARG:HG3	42:A5:90:ARG:HH11	1.84	0.42
10:1A:8:LEU:HD23	10:1A:96:ILE:HD11	2.01	0.42
11:2A:124:LYS:HB3	11:2A:125:PHE:HD1	1.84	0.42
1:1G:1085:U:H5'	1:1G:1094:G:N2	2.34	0.42
24:1H:1638:C:H5''	24:1H:2710:C:O2'	2.19	0.42
7:6E:99:LEU:HD22	7:6E:103:TRP:CZ2	2.54	0.42
24:1H:2037:G:H2'	24:1H:2038:G:C8	2.54	0.42
11:2I:22:HIS:HB3	11:2I:29:ILE:HG23	2.01	0.42
12:3I:8:ASN:O	12:3I:11:VAL:HG23	2.19	0.42
24:1H:309:G:H4'	44:G8:18:GLY:HA2	2.00	0.42
24:14:1517:G:H2'	24:14:1518:C:C6	2.54	0.42
21:1F:5:ASP:O	21:1F:11:GLY:HA3	2.19	0.42
10:1I:79:ARG:HD3	10:1I:79:ARG:HA	1.66	0.42
15:6A:48:LYS:HB2	15:6A:48:LYS:HE3	1.90	0.42
31:51:42:ARG:HB3	31:51:42:ARG:HH11	1.84	0.42
1:13:254:G:H8	1:13:254:G:O5'	2.02	0.42
42:A5:6:ILE:HG12	42:A5:104:THR:OG1	2.20	0.42
27:19:123:ALA:HA	27:19:124:PRO:HD2	1.74	0.42
24:1H:2393:A:H2'	24:1H:2394:C:C6	2.53	0.42
24:14:918:A:O2'	25:1J:96:G:N2	2.45	0.42
1:1G:1141:C:C2	1:1G:1142:G:C8	3.08	0.42
24:14:2338:G:H2'	24:14:2339:G:C8	2.55	0.42
1:13:632:A:H2'	1:13:632:A:N3	2.33	0.42
24:14:2287:A:C2	24:14:2346:A:H2	2.35	0.42
24:1H:574:C:H4'	24:1H:575:A:O5'	2.19	0.42
22:2K:64:PSU:O4	22:2K:66:G:C8	2.73	0.42
4:3E:13:ARG:O	4:3E:14:ARG:HB3	2.19	0.42
24:14:2638:G:P	28:29:82:ARG:HH22	2.43	0.42
24:1H:1056:G:H5'	24:1H:1086:A:H8	1.84	0.42
24:14:784:A:C8	24:14:792:G:C5	3.08	0.42
24:1H:2292:C:P	38:A8:17:ARG:NH2	2.92	0.42
24:1H:1024:G:H8	24:1H:1024:G:O5'	2.02	0.42
1:13:765:G:H5''	1:13:766:A:OP1	2.20	0.42
24:1H:2636:U:H2'	24:1H:2637:U:H6	1.82	0.42
1:1G:1387:G:C4	1:1G:1388:C:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:51:G:N3	24:14:119:A:C2	2.88	0.42
24:1H:1178:C:H1'	24:1H:1179:C:O5'	2.20	0.42
47:F5:85:LEU:HD13	47:F5:85:LEU:HA	1.62	0.42
27:11:125:ILE:CD1	27:11:137:PRO:HD3	2.49	0.42
36:45:21:THR:H	36:45:98:LYS:HB2	1.84	0.42
2:1E:145:LEU:HA	2:1E:145:LEU:HD13	1.83	0.42
24:1H:363(B):G:H2'	24:1H:363(C):G:H8	1.85	0.42
17:8A:81:ARG:NE	17:8A:84:LEU:HD21	2.34	0.42
1:13:498:A:H4'	1:13:500:G:OP1	2.20	0.42
1:13:590:C:H42	1:13:649:G:H1	1.66	0.42
1:1G:582:U:C2	1:1G:760:G:C6	3.08	0.42
17:8A:57:VAL:HG13	17:8A:76:LEU:HA	2.01	0.42
24:1H:1045:A:H4'	24:1H:1046:A:H5'	2.01	0.42
13:4A:98:VAL:C	13:4A:100:GLY:H	2.22	0.42
31:51:137:ASP:HB3	31:51:140:LYS:HB3	2.01	0.42
32:61:75:LEU:HD21	32:61:105:HIS:HD1	1.84	0.42
24:1H:2251:G:N7	36:88:82:ARG:NH1	2.67	0.42
35:35:59:LEU:HD21	54:M5:10:ALA:HA	2.01	0.42
40:C8:39:LEU:HD23	40:C8:39:LEU:HA	1.82	0.42
24:1H:849:A:H61	24:1H:929:G:H1'	1.85	0.42
24:1H:855:G:O2'	46:I8:27:GLU:OE2	2.21	0.42
35:35:99:LEU:HD12	35:35:99:LEU:HA	1.90	0.42
1:1G:1478:C:H2'	1:1G:1479:C:C6	2.53	0.42
24:1H:467:G:OP2	53:P8:34:ARG:NH1	2.53	0.42
37:55:77:ARG:O	37:55:80:PHE:N	2.52	0.42
1:13:448:A:OP2	1:13:485:G:N2	2.48	0.42
3:2E:33:LEU:HD21	14:5I:53:LEU:HD21	2.00	0.42
24:1H:2281:C:O2'	24:1H:2282:G:H5'	2.19	0.42
24:1H:1288:U:C2	24:1H:1327:C:O2	2.72	0.42
24:1H:496:G:C6	24:1H:497:A:C4	3.08	0.42
28:21:117:MET:HA	28:21:122:PHE:N	2.34	0.42
27:19:80:ALA:HB3	27:19:94:LEU:HB3	2.01	0.42
24:1H:2653:U:H2'	24:1H:2654:A:C8	2.54	0.42
2:1E:114:ARG:HA	2:1E:117:GLU:HB3	2.01	0.42
3:22:112:SER:O	3:22:116:VAL:HG23	2.20	0.42
24:14:1825:A:OP1	27:19:249:PRO:HD3	2.19	0.42
44:G8:65:ALA:HA	44:G8:66:PRO:HD3	1.93	0.42
27:11:248:SER:HB3	27:11:252:TRP:CH2	2.54	0.42
28:21:8:LYS:HD2	28:21:188:VAL:HG22	2.01	0.42
24:14:500:G:N1	24:14:503:A:OP2	2.53	0.42
24:1H:775:G:O5'	24:1H:777:A:H1'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:8I:53:LEU:HD23	17:8I:82:MET:HE1	2.02	0.42
12:3A:27:LEU:C	12:3A:29:GLY:H	2.23	0.42
24:14:2104:G:C2	24:14:2186:G:C2	3.07	0.42
1:1G:145:G:H2'	1:1G:146:G:O4'	2.19	0.42
11:2A:67:ASP:OD1	11:2A:71:LYS:HE3	2.19	0.42
28:29:54:GLN:O	28:29:55:ASN:CG	2.58	0.42
15:6I:18:PHE:HD1	15:6I:19:PRO:O	2.02	0.42
25:1J:70:C:H2'	25:1J:71:C:H6	1.85	0.42
39:75:128:GLU:O	39:75:132:LYS:HD3	2.19	0.42
1:13:428:G:H5''	4:3E:7:PRO:HB3	2.02	0.42
13:4A:96:LEU:C	13:4A:110:ARG:HG2	2.39	0.42
51:N8:40:LYS:HG3	51:N8:47:PRO:HD2	2.01	0.42
28:29:62:PRO:O	28:29:63:LEU:HD12	2.20	0.42
24:1H:2789:C:H4'	24:1H:2789:C:OP1	2.19	0.42
46:I8:5:LYS:HG3	46:I8:6:GLY:N	2.35	0.42
24:14:2271:G:H5''	46:E5:20:ARG:NE	2.34	0.42
5:42:126:ARG:HH11	5:42:126:ARG:CG	2.23	0.42
24:14:250:G:H2'	24:14:251:A:C8	2.55	0.42
1:13:1157:A:C6	1:13:1180:A:C4	3.07	0.42
24:1H:2637:U:C4	24:1H:2638:G:C6	3.08	0.42
34:25:13:ASN:HD21	34:25:96:THR:HB	1.83	0.42
37:55:104:ARG:NH1	37:55:107:ASP:OD2	2.45	0.42
48:K8:17:SER:HB2	48:K8:20:GLU:HG3	2.00	0.42
24:14:270(L):U:O2'	24:14:270(M):U:OP1	2.28	0.42
19:AA:40:ILE:HG13	19:AA:68:GLY:N	2.30	0.42
38:A8:41:ASP:OD1	38:A8:44:LYS:HB2	2.19	0.42
24:14:2572:A:C8	28:29:144:ARG:HD2	2.54	0.42
24:1H:869:G:H2'	24:1H:870:A:O4'	2.19	0.42
24:14:2370:G:H21	52:K5:45:LYS:HZ2	1.66	0.42
24:14:2371:G:H1'	52:K5:45:LYS:HG2	2.02	0.42
1:13:976:G:C8	1:13:1358:U:O2	2.73	0.42
1:1G:1068:G:N3	1:1G:1191:A:C2	2.88	0.42
1:1G:1193:G:H2'	1:1G:1194:U:H5'	2.02	0.42
2:1E:223:ILE:HG13	2:1E:223:ILE:H	1.48	0.42
1:1G:500:G:H2'	1:1G:501:C:C6	2.55	0.42
27:19:72:LYS:HG3	27:19:103:ARG:NH2	2.35	0.42
27:19:146:GLU:HA	27:19:153:ALA:HA	2.02	0.42
9:82:46:ALA:HB1	9:82:77:ILE:CD1	2.47	0.42
24:14:2162:G:H2'	24:14:2163:C:C6	2.54	0.42
54:Q8:36:LYS:HG2	54:Q8:37:SER:N	2.33	0.42
1:1G:690:G:N3	1:1G:690:G:O4'	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:38:TYR:CE2	4:32:45:GLN:HB3	2.54	0.42
50:15:14:ILE:HG22	50:15:20:ASN:CB	2.50	0.42
24:1H:320:A:H4'	24:1H:322:A:C8	2.55	0.42
1:1G:803:G:C6	1:1G:804:U:N3	2.88	0.42
1:13:1269:A:H2	1:13:1312:G:N3	2.17	0.42
1:13:482:A:H2'	1:13:483:C:O4'	2.20	0.42
24:1H:1538:G:H2'	24:1H:1539:G:C8	2.51	0.42
38:65:6:ALA:HA	38:65:9:ARG:NH1	2.35	0.42
24:1H:2766:G:N3	24:1H:2766:G:H2'	2.35	0.42
30:49:8:LYS:O	30:49:12:TYR:HD1	2.03	0.42
1:13:234:C:H2'	1:13:235:C:C6	2.53	0.42
1:13:299:G:H2'	1:13:300:A:C8	2.55	0.42
24:1H:2404:C:H3'	24:1H:2405:G:H8	1.85	0.42
1:13:223:U:H2'	1:13:224:C:O4'	2.19	0.42
30:49:82:LEU:HD21	30:49:88:ILE:HG21	2.01	0.42
45:D5:100:VAL:O	45:D5:124:ILE:HG22	2.18	0.42
28:21:144:ARG:HB3	28:21:145:LYS:H	1.32	0.42
1:13:1196:U:N3	23:4K:23:A:H8	2.17	0.42
24:14:566:U:H2'	24:14:567:A:O4'	2.20	0.42
11:2I:15:ALA:O	11:2I:78:GLN:N	2.47	0.42
42:A5:41:LYS:HD2	51:J5:25:LEU:HD21	2.01	0.42
24:14:513:A:N1	24:14:514:A:C5	2.88	0.42
48:G5:15:LYS:HD2	48:G5:67:LYS:NZ	2.34	0.42
24:1H:2082:A:H2'	24:1H:2083:G:O4'	2.19	0.42
33:15:73:THR:HG22	33:15:84:LYS:HG2	2.01	0.42
45:D5:178:GLU:HG2	45:D5:178:GLU:H	1.52	0.42
24:1H:2467:C:H4'	36:88:123:HIS:CG	2.53	0.42
24:1H:174:C:H2'	24:1H:175:G:O4'	2.20	0.42
24:14:768:G:H5'	24:14:1622:G:H4'	2.02	0.42
24:14:128:C:H2'	24:14:129:C:O4'	2.19	0.42
24:14:774:A:H2	24:14:787:U:O2'	2.02	0.42
24:14:572:A:OP2	41:95:78:LYS:HE2	2.20	0.42
1:13:1155:G:H2'	1:13:1156:G:O4'	2.19	0.42
24:14:975:G:H1'	24:14:990:A:C2	2.55	0.42
32:61:118:LYS:HA	32:61:119:PRO:HD3	1.85	0.42
16:7A:19:ILE:H	16:7A:19:ILE:HG13	1.69	0.42
24:1H:1959:G:H2'	24:1H:1960:A:O4'	2.18	0.42
12:3I:58:VAL:O	12:3I:65:GLU:HA	2.19	0.42
24:1H:251:A:C5	24:1H:252:G:H1'	2.55	0.42
54:Q8:9:GLY:O	54:Q8:13:ARG:HB2	2.19	0.42
24:14:1786:A:H1'	24:14:1938:A:N6	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:M8:38:LYS:HA	50:M8:38:LYS:HD2	1.72	0.42
24:1H:654(A):A:C2	24:1H:654(T):A:N1	2.87	0.42
24:14:2130:U:C2	24:14:2158:A:C2	3.08	0.42
24:14:450:G:P	57:14:3732:HOH:O	2.77	0.42
1:13:1127:G:H21	1:13:1147:C:N4	2.18	0.42
24:1H:1299:G:H3'	24:1H:1639:U:O4	2.20	0.42
24:1H:1899:G:HO2'	24:1H:1900:A:P	2.40	0.42
24:1H:2749:A:H5'	31:51:6:ARG:HD3	2.00	0.42
16:7A:25:ARG:NH1	16:7A:25:ARG:HG3	2.32	0.42
24:1H:2119:A:C6	24:1H:2170:A:N6	2.87	0.42
24:1H:1062:G:P	24:1H:1062:G:H8	2.43	0.42
13:4I:16:ASP:N	13:4I:16:ASP:OD1	2.49	0.42
24:1H:654(N):G:C2	24:1H:654(O):G:C5	3.07	0.42
24:14:1349:A:N6	24:14:1598:C:H42	2.17	0.42
24:14:373:U:H2'	24:14:374:A:C8	2.51	0.42
1:13:1218:C:OP1	14:5I:9:LYS:HE2	2.19	0.42
5:42:63:ARG:HA	5:42:66:MET:CE	2.50	0.42
24:1H:1858:G:H1'	24:1H:1884:A:N6	2.35	0.42
8:72:10:LEU:HD22	8:72:83:ILE:HD11	2.01	0.42
30:49:43:LEU:O	30:49:88:ILE:HG13	2.19	0.42
1:13:628:G:O2'	1:13:629:G:H5'	2.20	0.42
19:AI:38:SER:OG	19:AI:71:LEU:HD13	2.19	0.42
36:88:30:GLY:HA2	36:88:107:ALA:HB2	2.00	0.42
24:1H:475:U:C4	24:1H:481:G:O6	2.73	0.42
1:13:439:A:H2'	1:13:440:A:O4'	2.20	0.42
5:4E:121:LYS:HD2	5:4E:121:LYS:HA	1.67	0.42
9:8E:53:VAL:HB	9:8E:95:LYS:HD3	2.01	0.42
22:2K:81:C:C4	22:2K:82:A:N7	2.88	0.42
24:1H:2577:A:HO2'	51:N8:2:ALA:N	2.18	0.42
45:H8:67:LEU:O	45:H8:69:THR:HG23	2.20	0.42
52:K5:9:LEU:N	52:K5:27:LYS:HG3	2.33	0.42
1:1G:1318:A:H1'	19:AA:37:ARG:HH21	1.85	0.42
42:A5:24:ILE:O	42:A5:71:VAL:HG21	2.20	0.42
24:1H:1692:U:H2'	24:1H:1694:C:C5	2.55	0.42
2:1E:188:ALA:O	2:1E:203:GLY:N	2.53	0.42
24:1H:373:U:H2'	24:1H:374:A:H8	1.84	0.42
24:14:765:G:H2'	24:14:766:C:C6	2.54	0.42
31:59:9:ILE:H	31:59:9:ILE:HG12	1.59	0.42
1:13:127:G:O2'	17:8I:2:PRO:O	2.38	0.42
1:1G:1257:U:OP1	1:1G:1257:U:H6	2.01	0.42
3:2E:91:LEU:HD12	3:2E:91:LEU:H	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:1A:4:ILE:HA	10:1A:4:ILE:HD13	1.85	0.42
35:78:107:LYS:HD2	35:78:107:LYS:HA	1.86	0.42
43:B5:15:GLU:H	43:B5:15:GLU:CD	2.23	0.42
18:9A:43:PHE:C	18:9A:51:LEU:HD12	2.40	0.42
24:14:270(R):G:OP1	32:69:42:SER:OG	2.36	0.42
1:1G:1126:U:O4	1:1G:1281:U:C6	2.73	0.42
24:14:1005:C:H2'	24:14:1006:C:C6	2.54	0.42
2:12:185:ILE:HA	2:12:199:TYR:O	2.20	0.42
24:1H:2286:A:O2'	52:O8:31:PRO:HG3	2.20	0.42
24:14:2337:G:H5''	24:14:2338:G:OP2	2.20	0.42
2:12:119:GLU:HG3	2:12:142:LEU:HD11	2.01	0.42
20:BI:39:LYS:HB2	20:BI:55:ILE:HG21	2.02	0.42
2:1E:21:ARG:HG3	2:1E:38:GLY:O	2.20	0.42
2:1E:68:ILE:HG22	2:1E:70:PHE:CE1	2.55	0.42
24:1H:1266:G:OP2	51:N8:20:ARG:NE	2.37	0.42
24:14:759:G:O2'	24:14:760:G:H5'	2.20	0.42
1:13:1149:C:O2'	1:13:1280:A:N1	2.50	0.42
1:13:1118:C:P	9:8E:104:ARG:HH11	2.43	0.42
35:78:91:PHE:HE2	35:78:99:LEU:HD11	1.85	0.42
8:7E:120:THR:OG1	8:7E:123:GLU:HG3	2.20	0.42
16:7I:21:VAL:O	16:7I:33:ILE:N	2.41	0.42
38:65:93:LYS:HB2	38:65:93:LYS:HE3	1.88	0.42
1:13:712:A:O2'	1:13:713:G:H5'	2.20	0.42
32:61:110:ASP:HB3	32:61:111:PRO:C	2.39	0.42
36:45:14:ARG:HG2	36:45:41:TRP:CH2	2.50	0.42
24:14:2213:U:H4'	47:F5:52:ARG:CZ	2.50	0.42
24:1H:1933:G:N2	24:1H:1968:G:H1'	2.35	0.42
50:I5:14:ILE:HD13	50:I5:14:ILE:HA	1.87	0.42
36:88:20:ALA:CB	36:88:99:PRO:HD2	2.49	0.42
24:1H:2601:C:H2'	24:1H:2603:G:C8	2.55	0.42
1:1G:590:C:C4	1:1G:591:U:C5	3.08	0.42
42:E8:20:VAL:HG21	42:E8:44:ALA:HA	2.02	0.42
42:A5:68:ARG:O	42:A5:110:LYS:N	2.52	0.42
53:L5:8:ASN:C	53:L5:8:ASN:OD1	2.58	0.42
37:55:60:LEU:O	37:55:64:ARG:HG3	2.20	0.42
24:14:2238:G:H2'	24:14:2238:G:N3	2.34	0.42
24:14:470:A:H2'	24:14:471:A:O4'	2.18	0.42
29:39:130:ALA:H	29:39:142:TRP:HD1	1.68	0.42
38:A8:34:HIS:HB2	38:A8:36:TYR:HE1	1.84	0.42
24:14:270(E):G:H2'	24:14:270(F):U:O4'	2.20	0.42
24:14:2885:C:N3	24:14:2886:G:H1'	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:21:117:MET:HB2	28:21:122:PHE:O	2.19	0.42
1:1G:612:C:O2	1:1G:629:G:N2	2.52	0.42
13:4I:50:GLU:N	13:4I:50:GLU:OE2	2.35	0.42
24:14:1508:A:H4'	24:14:1510:A:C2	2.55	0.42
24:1H:1796:U:H2'	24:1H:1797:C:C6	2.55	0.42
24:14:1156:A:N7	40:85:51:LYS:HG2	2.35	0.42
27:19:55:GLY:O	27:19:216:GLY:HA2	2.18	0.42
24:14:921:G:C6	24:14:922:U:C4	3.07	0.42
24:14:835:A:C2'	24:14:836:G:H5'	2.49	0.42
24:14:76:C:O3'	48:G5:59:ARG:HG3	2.19	0.42
42:E8:41:LYS:HE3	51:N8:25:LEU:HD21	2.02	0.42
27:19:177:LEU:HB3	27:19:178:PRO:HD2	2.01	0.42
24:14:1665:A:H4'	34:25:67:LYS:HB2	2.01	0.42
1:1G:969:A:H2'	1:1G:970:C:O4'	2.20	0.42
32:69:61:ARG:O	32:69:64:GLU:N	2.52	0.42
29:39:13:SER:HA	29:39:14:PRO:HD3	1.72	0.42
1:13:721:G:H4'	1:13:722:A:O5'	2.20	0.42
1:1G:613:C:C2	1:1G:628:G:N2	2.87	0.42
1:1G:524:G:H2'	1:1G:525:C:C6	2.54	0.42
27:11:206:LEU:O	27:11:211:ARG:HD3	2.20	0.42
40:85:83:LEU:HD23	40:85:88:ILE:HB	2.02	0.42
1:13:1393:U:H5'	1:13:1502:A:OP1	2.20	0.42
1:1G:449:C:O4'	1:1G:449:C:O2	2.38	0.42
24:1H:1792:G:H2'	24:1H:1793:C:C6	2.55	0.42
24:1H:1313:U:H2'	24:1H:1610:A:C2	2.54	0.42
43:B5:44:GLU:HG2	43:B5:49:VAL:O	2.20	0.42
24:14:996:A:C2	24:14:997:G:C8	3.08	0.42
25:1J:18:G:H2'	25:1J:19:G:C8	2.54	0.42
48:G5:16:LEU:HD12	48:G5:17:SER:HB3	2.00	0.42
24:1H:1697:G:O2'	24:1H:1978:A:OP1	2.27	0.42
19:AA:45:VAL:HA	19:AA:62:ILE:HG22	2.01	0.42
3:22:6:HIS:HD2	3:22:8:ILE:H	1.67	0.42
24:14:2124:G:H5''	24:14:2125:G:C8	2.55	0.42
35:35:110:TYR:HB3	35:35:111:ARG:H	1.66	0.42
15:6I:11:VAL:O	15:6I:15:PHE:HD2	2.03	0.42
24:1H:796:C:H2'	24:1H:797:C:H6	1.82	0.42
22:3K:37:A:H61	22:3K:38:MIA:H162	1.85	0.42
50:M8:55:ARG:HD2	50:M8:55:ARG:HA	1.59	0.42
24:14:971:C:H3'	24:14:971:C:C6	2.55	0.42
15:6A:21:ASP:OD2	15:6A:24:SER:OG	2.35	0.42
7:62:146:GLU:OE2	7:62:149:ARG:NH1	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:5E:62:TRP:C	6:5E:63:TYR:CD1	2.93	0.42
24:1H:2437:U:H2'	24:1H:2438:U:C6	2.55	0.42
1:13:590:C:H2'	1:13:591:U:H6	1.85	0.42
24:1H:1592:C:H2'	24:1H:1593:G:H8	1.82	0.42
44:C5:97:ARG:HD2	44:C5:104:GLY:H	1.85	0.42
1:1G:540:G:C6	1:1G:541:G:C5	3.08	0.42
24:1H:2068:U:N3	24:1H:2430:A:H2	2.11	0.42
1:1G:1137:C:H5''	1:1G:1138:G:OP1	2.20	0.42
28:21:66:HIS:C	28:21:66:HIS:ND1	2.71	0.42
24:14:2401:U:H2'	24:14:2402:C:O4'	2.19	0.42
24:1H:559:G:N2	40:C8:49:HIS:CE1	2.88	0.42
24:1H:401:A:H2'	24:1H:402:A:O4'	2.20	0.42
24:1H:2361:A:OP1	54:Q8:27:THR:OG1	2.31	0.42
45:D5:133:ILE:O	45:D5:135:GLU:N	2.53	0.42
42:E8:82:LEU:HD23	42:E8:84:ARG:NH2	2.35	0.42
1:13:891:U:H2'	1:13:892:A:H8	1.84	0.42
17:8I:75:ARG:NH1	17:8I:77:VAL:HG22	2.35	0.42
1:1G:1349:A:C4	1:1G:1350:A:C8	3.08	0.42
24:1H:1444:G:N2	24:1H:1548:C:C2	2.88	0.42
29:39:7:TYR:CE1	29:39:16:GLY:HA3	2.55	0.42
24:1H:2861:G:H2'	24:1H:2862:G:H8	1.85	0.42
28:29:29:GLY:HA2	28:29:180:ASN:ND2	2.34	0.42
30:41:138:GLN:O	30:41:144:ILE:HG13	2.20	0.42
24:14:270(E):G:C6	24:14:270(F):U:C4	3.07	0.42
53:P8:35:ARG:HG3	53:P8:42:LEU:HD11	2.02	0.42
13:4I:46:LYS:HE3	13:4I:47:ASP:OD2	2.20	0.42
24:14:1692:U:H2'	24:14:1694:C:C5	2.55	0.42
32:69:123:LEU:HA	32:69:123:LEU:HD23	1.89	0.42
1:1G:8:A:N6	4:32:209:ARG:HB2	2.35	0.42
5:4E:6:PHE:HZ	5:4E:40:ARG:HH12	1.68	0.42
24:14:2443:C:O2'	24:14:2444:G:H5'	2.20	0.42
39:75:133:GLU:O	39:75:136:GLN:HG2	2.20	0.42
22:2K:32:A:C5	22:2K:33:C:C5	3.08	0.42
40:C8:85:LYS:NZ	40:C8:117:GLN:HB2	2.34	0.42
1:1G:99:C:H2'	1:1G:101:A:C8	2.54	0.42
2:12:44:LEU:H	2:12:44:LEU:HG	1.64	0.42
1:1G:322:C:O3'	20:BA:23:ARG:HG3	2.20	0.42
24:14:2839:G:H5'	37:55:46:GLY:HA2	2.00	0.42
4:32:165:MET:SD	4:32:168:ARG:NH2	2.93	0.42
10:1I:49:VAL:CG2	14:5I:41:ARG:HB2	2.48	0.42
20:BI:76:ALA:O	20:BI:80:ARG:HG2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:11:240:ALA:HA	27:11:241:PRO:HD2	1.67	0.42
24:14:2332:U:H5'	24:14:2336:A:N6	2.35	0.42
31:51:8:PRO:HD2	31:51:69:ARG:NE	2.28	0.42
24:1H:1997:G:P	57:1H:3933:HOH:O	2.68	0.42
2:1E:69:LEU:HD12	2:1E:70:PHE:N	2.32	0.42
1:13:1147:C:O2'	9:8E:16:ARG:HD2	2.20	0.42
24:14:959:A:H62	36:45:83:MET:HE2	1.85	0.42
17:8A:59:ILE:HD13	17:8A:73:VAL:HA	2.02	0.42
24:1H:2788:C:H5'	28:21:61:ARG:HH22	1.85	0.42
1:13:375:U:C2	1:13:376:G:C8	3.07	0.42
38:65:29:PHE:CD1	38:65:30:ARG:N	2.87	0.42
24:1H:1174:A:N6	24:1H:1175:U:H5	2.18	0.42
24:14:2409:G:C6	24:14:2410:G:C5	3.08	0.42
1:13:878:G:H5'	8:7E:89:PRO:HG2	2.02	0.42
24:1H:1299:G:H5''	24:1H:1300:U:OP1	2.20	0.42
24:14:2319:G:C2	24:14:2320:A:N1	2.88	0.42
1:13:954:G:C2	1:13:955:U:C2	3.08	0.42
24:1H:1568:G:P	27:11:63:ARG:HH12	2.43	0.42
32:69:84:GLY:O	32:69:85:GLU:HB3	2.19	0.42
53:L5:12:ARG:HH21	53:L5:44:PRO:HB3	1.80	0.42
27:11:70:TRP:CZ3	27:11:146:GLU:OE2	2.68	0.42
31:59:67:LEU:O	31:59:71:LEU:N	2.53	0.42
24:14:2846:G:OP1	39:75:54:ARG:HG3	2.20	0.42
48:K8:18:PRO:O	48:K8:21:LEU:HB2	2.20	0.42
22:3K:7:G:H8	22:3K:7:G:OP2	2.03	0.42
24:1H:1418:G:H2'	24:1H:1579:A:N6	2.34	0.42
44:G8:88:LYS:HA	44:G8:88:LYS:HD3	1.84	0.42
1:1G:522:C:H2'	1:1G:523:A:O4'	2.20	0.42
24:1H:7:G:H2'	24:1H:8:A:O4'	2.20	0.42
24:14:1794:U:H1'	24:14:1900:A:N3	2.34	0.42
1:1G:1216:G:H5''	14:5A:5:ALA:CB	2.49	0.42
1:1G:553:A:H2'	1:1G:554:C:C6	2.55	0.42
24:1H:2064:C:H2'	24:1H:2065:C:C6	2.54	0.42
1:13:1122:U:C4	1:13:1123:A:N7	2.88	0.42
12:3I:84:LEU:HD23	12:3I:101:VAL:HG21	2.01	0.42
24:14:1003:G:N2	24:14:1153:C:C2	2.88	0.42
44:C5:28:LYS:HE3	44:C5:64:GLU:OE2	2.19	0.42
3:2E:12:LEU:O	3:2E:14:ILE:N	2.53	0.42
24:1H:1453:A:O2'	24:1H:1454:U:H2'	2.19	0.42
30:41:10:LYS:O	30:41:15:VAL:HG23	2.20	0.42
30:41:138:GLN:OE1	30:41:153:ARG:N	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:85:G:C5	24:14:98:G:C2	3.08	0.42
22:2K:81:C:N3	22:2K:82:A:N7	2.68	0.42
27:11:108:PRO:HD2	27:11:111:LEU:HG	2.01	0.42
24:14:2591:C:P	27:19:239:ARG:HG3	2.59	0.42
24:14:1444:G:C2	24:14:1548:C:C2	3.07	0.42
1:13:926:G:H5''	1:13:927:G:O5'	2.18	0.42
7:6E:81:GLY:C	7:6E:83:ALA:H	2.23	0.42
24:1H:818:G:H4'	24:1H:838:C:O3'	2.20	0.42
2:1E:116:GLU:OE2	2:1E:156:LYS:NZ	2.46	0.42
37:55:82:GLU:C	37:55:85:PRO:HD2	2.40	0.42
50:M8:21:VAL:HG12	50:M8:23:GLU:H	1.85	0.42
25:1J:21:G:H2'	25:1J:22:U:O4'	2.19	0.42
1:13:1230:C:H2'	1:13:1231:G:C8	2.54	0.42
24:14:601:C:O2'	24:14:605:C:H5''	2.20	0.42
31:51:126:PRO:HB2	31:51:130:ARG:HH12	1.84	0.42
43:B5:48:LYS:HB2	43:B5:48:LYS:HE2	1.88	0.42
24:1H:926:A:H2'	24:1H:926:A:N3	2.34	0.42
12:3I:20:LYS:HE2	12:3I:20:LYS:HB3	1.78	0.42
37:98:20:LEU:HD21	37:98:40:LYS:CD	2.50	0.42
11:2I:73:MET:SD	11:2I:102:GLY:HA3	2.60	0.42
24:14:720:C:H2'	24:14:721:C:C6	2.55	0.42
2:12:97:TRP:HZ2	2:12:102:LEU:HD13	1.83	0.42
24:14:859:G:H5'	24:14:2268:A:O2'	2.19	0.41
24:14:1728:G:H5'	24:14:1729:A:OP2	2.20	0.41
52:K5:18:ARG:HB3	52:K5:19:ARG:H	1.47	0.41
35:78:19:VAL:HA	35:78:20:GLY:HA3	1.83	0.41
24:1H:1263:U:O2'	24:1H:1264:G:H5'	2.19	0.41
36:45:77:LYS:HA	36:45:78:PRO:HD3	1.90	0.41
2:1E:208:ILE:HA	2:1E:211:ILE:HD12	2.02	0.41
24:1H:598:G:C1'	35:78:12:ALA:HB2	2.50	0.41
24:14:1175:U:H4'	24:14:1175:U:OP2	2.20	0.41
1:13:1240:U:OP2	7:6E:116:ALA:N	2.34	0.41
3:2E:13:GLY:HA2	14:5I:57:ARG:HH21	1.85	0.41
35:35:80:TYR:CD2	35:35:111:ARG:HB3	2.55	0.41
19:AA:40:ILE:H	19:AA:40:ILE:HG12	1.63	0.41
30:49:29:TRP:HE3	30:49:33:ARG:CZ	2.33	0.41
10:1A:38:ILE:HA	10:1A:39:PRO:HD3	1.87	0.41
33:58:47:ALA:HB2	33:58:112:LEU:CD1	2.48	0.41
24:14:1126:A:H4'	24:14:1127:A:O5'	2.20	0.41
1:13:1357:A:C5	1:13:1358:U:C5	3.08	0.41
24:14:1324:G:H4'	24:14:1616:A:C2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:5E:97:PHE:N	18:9I:30:ASP:OD1	2.47	0.41
1:1G:1004:A:N3	1:1G:1024:G:H1'	2.35	0.41
7:6E:44:TYR:O	7:6E:48:LYS:HG3	2.20	0.41
47:F5:52:ARG:HH11	47:F5:57:GLU:HG3	1.85	0.41
31:59:35:VAL:HB	31:59:71:LEU:HD21	2.02	0.41
27:19:70:TRP:O	27:19:73:VAL:HG23	2.20	0.41
1:13:186(C):G:C6	1:13:186(D):C:C4	3.08	0.41
24:1H:289:A:H2'	24:1H:290:G:O4'	2.20	0.41
42:E8:80:PRO:O	42:E8:100:THR:HB	2.19	0.41
24:1H:1591:G:H2'	24:1H:1592:C:C6	2.54	0.41
24:1H:1999:C:OP1	24:1H:2723:C:O2'	2.34	0.41
4:32:173:TRP:NE1	4:32:174:LEU:HG	2.34	0.41
30:41:37:VAL:HG13	30:41:158:ALA:O	2.20	0.41
31:51:56:SER:HB3	31:51:61:HIS:ND1	2.34	0.41
24:14:2150:U:H6	24:14:2150:U:O5'	2.03	0.41
1:1G:1106:G:H2'	1:1G:1107:C:C6	2.55	0.41
24:14:2811:G:N2	24:14:2891:G:H1'	2.35	0.41
1:1G:692:U:H2'	1:1G:693:G:H3'	2.02	0.41
24:14:2628:C:H1'	24:14:2781:A:H2'	2.01	0.41
29:39:63:LYS:HG3	29:39:65:TRP:O	2.19	0.41
3:2E:5:ILE:HG13	3:2E:6:HIS:N	2.35	0.41
1:1G:1368:G:N2	1:1G:1369:C:H1'	2.35	0.41
41:95:72:VAL:HB	41:95:85:LYS:CB	2.49	0.41
1:13:984:C:H42	1:13:1221:G:H1	1.67	0.41
17:8I:90:ILE:H	17:8I:90:ILE:HG13	1.64	0.41
24:1H:2356:C:C5	24:1H:2357:U:C4	3.08	0.41
24:14:2660:A:H2'	24:14:2661:G:O4'	2.20	0.41
24:1H:2123:G:H3'	24:1H:2124:G:C8	2.55	0.41
3:2E:173:VAL:O	3:2E:175:LEU:HD12	2.20	0.41
24:14:999:U:H5	24:14:1154:G:N7	2.18	0.41
28:21:101:ARG:NH1	28:21:171:GLU:HB2	2.35	0.41
25:1J:93:C:H2'	25:1J:94:C:C6	2.55	0.41
24:1H:483:A:O4'	44:G8:48:ALA:HB1	2.20	0.41
24:14:460:A:H2'	24:14:461:C:O4'	2.19	0.41
24:1H:27:G:O2'	24:1H:28:A:OP2	2.35	0.41
1:13:942:G:C2	1:13:1342:C:C2	3.09	0.41
9:82:117:HIS:NE2	9:82:123:PRO:HB3	2.35	0.41
51:N8:31:VAL:HG13	51:N8:42:PRO:HG3	2.01	0.41
24:1H:832:G:N7	57:1H:4022:HOH:O	2.37	0.41
24:1H:2693:A:H2'	24:1H:2694:G:H8	1.85	0.41
3:2E:121:ALA:O	3:2E:125:GLU:HG3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1420:U:O2'	24:14:1421:G:OP1	2.33	0.41
19:AI:64:GLU:HG3	19:AI:64:GLU:H	1.62	0.41
25:16:60:C:H6	25:16:60:C:O5'	2.03	0.41
3:22:94:LEU:H	3:22:94:LEU:HD12	1.85	0.41
1:1G:160:A:N6	1:1G:347:G:H1'	2.35	0.41
37:98:9:LYS:HA	37:98:17:ARG:CD	2.50	0.41
2:1E:30:ARG:HB2	2:1E:46:LYS:NZ	2.34	0.41
31:59:153:LYS:O	31:59:161:GLY:HA3	2.20	0.41
14:5I:21:TYR:HE2	14:5I:23:ARG:NE	2.18	0.41
41:95:35:LEU:O	41:95:37:VAL:HG13	2.21	0.41
1:13:703:G:O5'	1:13:703:G:C8	2.73	0.41
22:3K:85:A:O2'	24:1H:2394:C:O2	2.38	0.41
10:1I:48:THR:HG23	10:1I:62:HIS:CD2	2.55	0.41
22:3L:57:C:H5''	22:3L:59:A:P	2.60	0.41
1:1G:1128:C:H5'	9:82:16:ARG:HH22	1.85	0.41
38:65:107:GLU:O	38:65:110:LEU:HG	2.20	0.41
37:98:52:ILE:HB	37:98:94:TYR:HD2	1.85	0.41
4:32:68:TYR:OH	4:32:98:GLU:OE1	2.33	0.41
13:4A:65:LYS:NZ	13:4A:73:GLU:HG3	2.34	0.41
33:15:39:ARG:C	33:15:41:ASP:H	2.23	0.41
33:15:37:LYS:HG3	33:15:42:TRP:CZ3	2.55	0.41
8:7E:25:ASP:OD2	8:7E:60:ARG:HG3	2.20	0.41
1:1G:1052:U:N3	1:1G:1200:C:N3	2.68	0.41
24:1H:2019:A:C2'	24:1H:2020:A:O5'	2.68	0.41
28:21:78:LEU:HD21	28:21:79:ARG:HD2	2.02	0.41
8:7E:20:TYR:HD1	8:7E:65:TYR:CD2	2.38	0.41
1:13:1321:C:C3'	1:13:1322:C:H5''	2.47	0.41
24:1H:2807:G:H3'	24:1H:2808:U:H5''	2.02	0.41
24:14:1386:C:C2	24:14:1387:C:C5	3.08	0.41
1:1G:1329:A:H5'	13:4A:29:ARG:HE	1.85	0.41
1:13:622:A:N7	1:13:623:C:C2	2.88	0.41
29:39:84:VAL:C	29:39:86:GLY:N	2.72	0.41
24:1H:1062:G:OP1	24:1H:1062:G:H8	2.03	0.41
24:1H:825:C:H4'	24:1H:2428:G:C5	2.55	0.41
24:14:1336:A:C2	24:14:1337:G:C5	3.08	0.41
1:13:1251:A:H5'	9:8E:12:GLU:HB3	2.01	0.41
24:1H:2199:A:H3'	24:1H:2205:C:H6	1.84	0.41
24:1H:2402:C:C3'	24:1H:2402:C:C6	3.02	0.41
1:1G:1190:G:OP1	3:22:5:ILE:HB	2.21	0.41
1:13:221:C:H2'	1:13:222:U:C6	2.55	0.41
4:3E:57:ARG:HB3	4:3E:206:PHE:HB2	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:981:U:O5'	1:1G:981:U:H6	2.03	0.41
40:85:81:HIS:HE1	40:85:85:LYS:HE2	1.85	0.41
18:9I:25:THR:HB	18:9I:42:ARG:NH1	2.35	0.41
32:61:29:TYR:CE1	32:61:33:ARG:CZ	3.02	0.41
35:35:15:ARG:HA	35:35:15:ARG:HD3	1.52	0.41
32:61:129:THR:HA	32:61:137:PRO:HA	2.02	0.41
34:25:34:THR:O	34:25:37:ASP:HB2	2.20	0.41
9:8E:28:VAL:HG22	9:8E:63:ILE:HB	2.01	0.41
24:1H:661:C:H4'	35:78:13:ASN:OD1	2.20	0.41
7:6E:26:PHE:CD2	7:6E:30:ILE:HD11	2.55	0.41
48:G5:30:ARG:O	48:G5:34:GLU:HG3	2.19	0.41
29:31:101:LEU:HA	29:31:101:LEU:HD12	1.54	0.41
24:1H:2825:C:H6	24:1H:2825:C:O5'	2.03	0.41
39:75:39:ARG:NH1	39:75:41:ARG:HD2	2.35	0.41
24:14:2887:U:H2'	24:14:2888:C:C6	2.55	0.41
33:58:90:MET:O	33:58:94:HIS:N	2.53	0.41
24:1H:270(G):C:N4	57:1H:4145:HOH:O	2.52	0.41
4:32:88:VAL:O	4:32:92:VAL:HG23	2.20	0.41
1:1G:811:C:H2'	1:1G:812:C:H5'	2.02	0.41
24:14:2598:A:OP1	57:14:3590:HOH:O	2.21	0.41
1:1G:555:C:H2'	1:1G:556:C:C6	2.55	0.41
24:14:1572:A:H2'	24:14:1573:G:O4'	2.19	0.41
45:H8:45:ASP:O	45:H8:49:ARG:HG2	2.20	0.41
29:39:170:LEU:HD13	29:39:172:TRP:CZ2	2.55	0.41
1:13:596:C:H2'	1:13:597:G:H8	1.84	0.41
1:13:1405:G:O4'	1:13:1519:A:H4'	2.21	0.41
3:2E:90:GLU:HA	3:2E:93:LYS:HG3	2.02	0.41
1:1G:137:C:O2'	1:1G:138:G:H5'	2.20	0.41
32:61:87:LYS:HE3	32:61:87:LYS:HB2	1.81	0.41
12:3I:113:ARG:HD2	12:3I:113:ARG:HH11	1.74	0.41
11:2I:99:GLN:H	11:2I:99:GLN:HG2	1.52	0.41
6:52:43:LEU:HD12	6:52:43:LEU:N	2.35	0.41
18:9I:54:ARG:HG2	18:9I:55:ARG:N	2.35	0.41
10:1I:78:ASN:N	10:1I:78:ASN:OD1	2.51	0.41
24:1H:1814:G:H4'	27:11:51:VAL:HG21	2.01	0.41
1:13:1324:A:O4'	1:13:1362:C:H4'	2.20	0.41
7:62:69:VAL:HG11	7:62:134:ALA:HB1	2.02	0.41
24:1H:2371:G:C6	24:1H:2372:G:N7	2.89	0.41
24:1H:2615:U:C2	51:N8:7:PRO:HA	2.55	0.41
1:1G:536:C:H2'	1:1G:537:G:C8	2.55	0.41
24:1H:931:G:C4	24:1H:933:A:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1638:C:H1'	24:14:2698:U:O2'	2.21	0.41
24:14:1638:C:H4'	24:14:2710:C:O2	2.21	0.41
24:14:593:G:C1'	54:M5:4:MET:HE1	2.50	0.41
40:85:61:TRP:HB3	40:85:93:LYS:O	2.20	0.41
28:29:82:ARG:HA	28:29:82:ARG:HD3	1.85	0.41
24:14:1828:G:OP1	57:14:3574:HOH:O	2.20	0.41
24:1H:2019:A:C4'	40:C8:34:LYS:HD2	2.50	0.41
36:88:43:THR:O	36:88:46:GLN:N	2.51	0.41
1:13:1079:G:H2'	1:13:1080:A:C8	2.55	0.41
5:4E:130:ASN:O	5:4E:134:ALA:HB2	2.20	0.41
1:1G:411:A:N7	1:1G:413:G:N3	2.69	0.41
24:1H:1281:G:H2'	24:1H:1282:U:O4'	2.20	0.41
45:H8:92:SER:O	45:H8:130:PRO:HG2	2.19	0.41
24:1H:1530:G:C6	24:1H:1531:C:C4	3.08	0.41
9:8E:10:ARG:NH1	9:8E:105:ASP:OD2	2.53	0.41
1:13:177:C:P	20:BI:65:LYS:NZ	2.93	0.41
30:49:11:TYR:HA	30:49:15:VAL:HB	2.02	0.41
1:1G:1194:U:H2'	1:1G:1195:C:H6	1.82	0.41
2:12:20:GLU:HG3	2:12:190:THR:O	2.21	0.41
1:1G:197:A:H8	1:1G:198:G:C1'	2.33	0.41
1:13:621:A:H2'	1:13:622:A:O4'	2.19	0.41
7:62:20:ASP:HB3	7:62:23:VAL:HG23	2.00	0.41
9:82:46:ALA:HB1	9:82:77:ILE:CG1	2.50	0.41
29:31:120:GLU:HG3	29:31:122:LYS:HG2	2.02	0.41
13:4I:14:ARG:HG2	13:4I:16:ASP:OD1	2.20	0.41
1:1G:327:A:C5	1:1G:329:A:C5	3.07	0.41
41:D8:44:LYS:O	41:D8:46:VAL:HG12	2.20	0.41
1:1G:1378:C:C5	1:1G:1379:G:N9	2.86	0.41
24:1H:2335:A:C8	24:1H:2337:G:C5	3.08	0.41
24:1H:155:C:N4	24:1H:171:G:H1	2.19	0.41
1:13:691:G:C6	11:2I:52:GLY:HA2	2.55	0.41
8:72:73:ASP:OD1	8:72:75:ARG:HB2	2.20	0.41
30:41:64:THR:CG2	30:41:94:LEU:HD21	2.50	0.41
29:39:2:LYS:HD3	29:39:2:LYS:N	2.35	0.41
1:1G:1227:A:C3'	1:1G:1227:A:C8	3.00	0.41
45:H8:149:SER:HA	45:H8:172:ALA:O	2.20	0.41
24:1H:2629:A:O2'	24:1H:2630:G:H5''	2.20	0.41
49:H5:43:ILE:O	49:H5:47:VAL:HG23	2.19	0.41
24:1H:906:G:H5''	36:88:26:TYR:HE1	1.83	0.41
3:2E:12:LEU:HA	3:2E:12:LEU:HD23	1.78	0.41
24:14:26:G:H1'	24:14:515:A:H61	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:29:4:ILE:HD12	28:29:28:ALA:HB3	2.03	0.41
25:1J:78:A:H2'	25:1J:79:C:O4'	2.20	0.41
45:H8:154:ASP:OD1	45:H8:154:ASP:N	2.46	0.41
49:L8:7:LYS:CG	49:L8:34:GLU:HG3	2.49	0.41
1:13:28:G:C6	1:13:29:G:N7	2.88	0.41
52:K5:9:LEU:O	52:K5:27:LYS:HB2	2.21	0.41
2:12:82:ARG:HB2	2:12:94:ASN:ND2	2.35	0.41
32:69:64:GLU:HA	32:69:67:ARG:HD2	2.03	0.41
4:3E:19:LEU:HB3	4:3E:21:LEU:HD21	2.01	0.41
1:1G:1271:G:H5'	1:1G:1314:C:H5'	2.01	0.41
36:45:52:VAL:O	36:45:56:ARG:HB2	2.20	0.41
24:1H:1565:C:O2'	24:1H:1567:A:N7	2.35	0.41
1:1G:670:G:C6	1:1G:671:G:C5	3.08	0.41
24:1H:2877:G:O2'	24:1H:2878:U:H5'	2.20	0.41
24:14:2165:G:O2'	24:14:2166:G:H5'	2.21	0.41
4:3E:126:ILE:HG22	4:3E:127:THR:N	2.36	0.41
24:1H:333:G:O5'	24:1H:333:G:C8	2.74	0.41
44:G8:33:LYS:HB2	44:G8:33:LYS:HE2	1.95	0.41
3:2E:45:LYS:NZ	3:2E:45:LYS:HB2	2.35	0.41
24:1H:642:G:C8	24:1H:642:G:H3'	2.55	0.41
1:1G:968:A:O5'	1:1G:968:A:H8	2.03	0.41
37:55:29:LEU:HD12	37:55:29:LEU:HA	1.72	0.41
1:13:1451:A:H3'	1:13:1452:C:H5''	2.01	0.41
1:13:885:G:O2'	1:13:914:A:N1	2.44	0.41
24:1H:1894:C:O2'	24:1H:1895:C:H5'	2.20	0.41
24:1H:1153:C:C4	24:1H:1154:G:C5	3.08	0.41
1:13:1399:C:H4'	1:13:1400:C:H5''	2.03	0.41
24:14:2286:A:C8	24:14:2287:A:N6	2.89	0.41
24:14:740:U:H2'	24:14:741:G:C8	2.55	0.41
28:29:31:CYS:HB3	28:29:50:GLY:H	1.85	0.41
1:13:1368:G:OP1	9:8E:111:ARG:NH2	2.53	0.41
2:12:8:LYS:HB3	2:12:9:GLU:H	1.59	0.41
24:1H:805:G:H4'	24:1H:806:C:OP2	2.21	0.41
29:39:148:LEU:HD11	29:39:193:VAL:HG21	2.02	0.41
1:13:129(A):G:N3	1:13:190:G:H5''	2.36	0.41
1:13:1239:A:H62	1:13:1299:A:H62	1.69	0.41
25:16:90:C:OP1	36:88:16:ARG:HD2	2.20	0.41
28:21:50:GLY:HA3	28:21:74:PRO:HG3	2.02	0.41
19:AA:27:GLU:HG2	19:AA:47:HIS:NE2	2.36	0.41
47:F5:83:GLU:HG3	47:F5:83:GLU:H	1.51	0.41
1:13:1151:A:OP1	10:1I:41:PRO:HA	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:6I:54:ARG:O	15:6I:58:MET:HG2	2.21	0.41
1:13:538:G:H2'	1:13:539:A:C8	2.56	0.41
7:6E:23:VAL:HG12	7:6E:43:PHE:CZ	2.56	0.41
7:6E:27:ILE:HD11	7:6E:43:PHE:HD2	1.86	0.41
24:1H:528:A:O2'	24:1H:529:A:H5''	2.20	0.41
6:52:67:MET:HB2	6:52:68:PRO:HD2	2.02	0.41
17:8I:84:LEU:O	17:8I:87:LYS:HB2	2.20	0.41
1:13:1305:G:H8	1:13:1305:G:OP2	2.04	0.41
42:A5:11:ARG:CZ	42:A5:98:LYS:HB3	2.51	0.41
22:2L:71:C:HO2'	22:2L:72:U:P	2.44	0.41
24:14:2111:C:N4	24:14:2147:G:H21	2.15	0.41
24:1H:1252:G:N3	40:C8:33:ARG:HD2	2.34	0.41
27:11:105:ILE:HA	27:11:105:ILE:HD12	1.57	0.41
24:14:271:G:H2'	24:14:272:G:C8	2.55	0.41
24:14:2530:A:C5	31:59:157:TYR:HE1	2.38	0.41
1:1G:980:C:H5'	1:1G:981:U:C5	2.55	0.41
16:7A:75:ARG:HG3	16:7A:80:PHE:HD2	1.86	0.41
24:14:443:A:N6	29:39:41:LEU:O	2.53	0.41
24:14:2401:U:O2	24:14:2402:C:C6	2.73	0.41
44:C5:52:SER:CB	44:C5:56:PRO:HA	2.50	0.41
39:B8:3:ARG:HB3	39:B8:6:LEU:HB3	2.02	0.41
47:J8:11:ARG:HD2	47:J8:11:ARG:HH11	1.67	0.41
11:2A:31:THR:HG22	11:2A:42:TRP:CB	2.51	0.41
43:F8:54:VAL:C	43:F8:55:ASN:HD22	2.24	0.41
34:25:23:ARG:HG3	34:25:24:VAL:N	2.34	0.41
40:C8:45:TYR:O	40:C8:49:HIS:N	2.44	0.41
24:14:684:G:OP1	53:L5:16:HIS:ND1	2.51	0.41
24:14:569:U:H5''	57:14:3700:HOH:O	2.20	0.41
1:13:858:G:O6	1:13:869:G:H3'	2.20	0.41
24:1H:189:G:H8	24:1H:189:G:O5'	2.03	0.41
1:1G:938:A:N6	1:1G:939:G:C5	2.89	0.41
1:1G:1349:A:OP1	9:82:118:LYS:HE2	2.21	0.41
48:K8:28:LYS:HD3	48:K8:53:LEU:CD2	2.50	0.41
16:7A:27:LYS:HB3	16:7A:27:LYS:HE3	1.84	0.41
34:25:113:LYS:O	34:25:117:LEU:HD13	2.20	0.41
1:1G:518:C:C6	1:1G:530:G:H5'	2.55	0.41
13:4I:11:ARG:HG2	13:4I:12:ASN:H	1.86	0.41
24:1H:1400:G:C6	24:1H:1401:G:C6	3.09	0.41
28:29:114:ALA:O	28:29:157:ALA:HB1	2.20	0.41
6:5E:95:GLU:HA	6:5E:96:PRO:HD3	1.86	0.41
7:6E:75:VAL:HA	7:6E:87:VAL:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2467:C:H2'	24:14:2468:G:H1'	2.01	0.41
8:7E:108:GLY:HA3	8:7E:138:TRP:HB3	2.02	0.41
27:19:133:LEU:HD13	27:19:173:VAL:HG22	2.02	0.41
1:13:229:U:H2'	1:13:230:G:O4'	2.20	0.41
1:1G:222:U:H2'	1:1G:223:U:C6	2.55	0.41
24:1H:1951:U:O2	24:1H:1953:A:H8	2.03	0.41
6:5E:45:LEU:HD11	6:5E:57:GLN:HB2	2.02	0.41
25:1J:53:A:H2'	25:1J:54:G:O4'	2.20	0.41
53:P8:5:TRP:NE1	53:P8:7:PRO:HB3	2.35	0.41
3:22:156:ARG:HB3	3:22:160:ALA:O	2.20	0.41
48:K8:6:VAL:H	48:K8:6:VAL:HG23	1.57	0.41
45:D5:112:ARG:HA	45:D5:112:ARG:HD2	1.73	0.41
24:14:90:U:OP1	24:14:90:U:H6	2.03	0.41
32:69:58:LEU:HD12	32:69:58:LEU:HA	1.81	0.41
7:6E:100:ALA:O	7:6E:104:LEU:HB2	2.21	0.41
24:14:271(B):G:N7	24:14:421:U:H2'	2.35	0.41
22:2L:34:U:HO2'	22:2L:36:U:H5	1.66	0.41
24:1H:945:A:C4	24:1H:2448:A:C2	3.08	0.41
20:BI:72:LEU:HD12	20:BI:72:LEU:HA	1.84	0.41
1:13:1399:C:H4'	1:13:1400:C:C5'	2.51	0.41
25:1J:13:A:O2'	25:1J:15:A:O5'	2.38	0.41
1:1G:1124:G:HO2'	1:1G:1145:C:N4	2.18	0.41
1:1G:1124:G:O2'	1:1G:1145:C:N4	2.54	0.41
22:2K:19:C:C2'	22:2K:20:C:H2'	2.50	0.41
24:14:451:C:P	29:39:52:LYS:HD2	2.60	0.41
8:7E:25:ASP:HA	8:7E:59:LEU:O	2.21	0.41
24:14:1050:A:O2'	24:14:2752:C:O2	2.37	0.41
24:14:1040:C:H2'	24:14:1041:C:O4'	2.21	0.41
7:6E:38:LEU:HD13	7:6E:38:LEU:HA	1.74	0.41
1:13:1240:U:O2'	7:6E:38:LEU:HG	2.21	0.41
24:1H:1019:U:O2'	24:1H:1021:A:C2	2.73	0.41
24:1H:2074:U:O4	57:1H:3863:HOH:O	2.21	0.41
38:A8:31:SER:O	38:A8:97:ARG:NH2	2.43	0.41
1:1G:748:C:H4'	1:1G:749:C:O5'	2.20	0.41
35:35:61:ARG:HG2	35:35:61:ARG:H	1.61	0.41
10:1I:84:GLN:H	10:1I:84:GLN:HG2	1.49	0.41
37:98:42:LYS:HA	37:98:45:ARG:HD2	2.02	0.41
24:14:2572:A:N7	28:29:144:ARG:HD2	2.34	0.41
24:1H:871:U:H5'	36:88:69:PHE:CE2	2.54	0.41
47:F5:82:LEU:HB2	47:F5:83:GLU:H	1.74	0.41
7:62:16:LEU:HD12	9:82:42:ARG:HA	2.03	0.41

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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	0.41
44:C5:48:ALA:HB3	44:C5:59:GLY:CA	2.44	0.41
8:7E:20:TYR:HA	8:7E:65:TYR:CE2	2.55	0.41
24:1H:773:U:C5'	27:11:47:GLY:HA3	2.51	0.41
38:65:3:ARG:NE	38:65:4:LEU:N	2.68	0.41
33:58:15:LEU:HB2	33:58:134:ARG:HB2	2.02	0.41
54:M5:54:GLU:HG3	54:M5:57:ARG:HH12	1.85	0.41
1:13:980:C:C5	1:13:981:U:C2	3.08	0.41
22:3K:8:4SU:S4	22:3K:13:G:C8	3.14	0.41
1:13:155:C:H1'	1:13:167:G:N2	2.35	0.41
45:D5:144:LEU:C	45:D5:174:VAL:HG11	2.40	0.41
6:5E:33:TYR:CE2	6:5E:75:LEU:HA	2.56	0.41
1:13:991:U:OP2	1:13:991:U:H6	2.03	0.41
1:13:373:A:C2	1:13:482:A:C6	3.08	0.41
1:13:353:A:C8	1:13:353:A:H5'	2.50	0.41
1:1G:539:A:N6	1:1G:540:G:O6	2.53	0.41
24:1H:91:A:H2'	24:1H:92:G:C8	2.53	0.41
1:1G:246:A:C4	1:1G:279:A:N6	2.88	0.41
30:41:101:ILE:HG22	30:41:105:LYS:HE2	2.02	0.41
54:Q8:4:MET:HB2	54:Q8:4:MET:HE2	1.51	0.41
1:13:456:C:O2	1:13:477:G:N2	2.53	0.41
1:13:1315:U:C4	1:13:1316:G:C5	3.08	0.41
42:A5:14:PRO:HG2	42:A5:78:GLU:HB2	2.02	0.41
1:1G:1055:A:C8	1:1G:1206:G:C2	3.08	0.41
1:13:1166:G:H2'	1:13:1169:A:OP2	2.20	0.41
1:1G:862:C:H2'	1:1G:863:U:H6	1.85	0.41
1:13:102:G:C2	1:13:103:C:C2	3.09	0.41
1:13:1510:U:H1'	1:13:1526:G:N2	2.35	0.41
1:13:433:C:O2'	1:13:434:U:H5'	2.21	0.41
24:1H:1964:G:H4'	24:1H:1965:C:OP2	2.20	0.41
1:13:1071:C:H2'	1:13:1072:G:C8	2.54	0.41
1:1G:384:G:H2'	1:1G:385:C:C6	2.55	0.41
24:14:28:A:C2	24:14:513:A:C8	3.09	0.41
24:14:1657:C:H2'	24:14:1658:C:H6	1.85	0.41
19:AI:18:LYS:HE3	19:AI:22:LEU:HD11	2.01	0.41
24:14:82:G:N1	24:14:103:A:OP2	2.50	0.41
24:14:2540:C:O2'	24:14:2740:A:N3	2.50	0.41
13:4I:11:ARG:HG2	13:4I:12:ASN:N	2.35	0.41
12:3I:39:VAL:HG23	12:3I:41:ARG:HG2	2.03	0.41
26:79:52:ARG:HH21	26:79:167:LYS:HE2	1.84	0.41
2:12:102:LEU:HD23	2:12:182:ILE:HD12	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:59:82:GLY:HA3	31:59:135:GLY:O	2.21	0.41
4:3E:20:TYR:CZ	6:52:15:ASP:HB3	2.55	0.41
16:7I:14:ASN:N	16:7I:15:PRO:HD3	2.35	0.41
43:B5:69:TYR:HD1	43:B5:70:LEU:N	2.17	0.41
32:61:66:GLU:HA	32:61:69:LYS:HB3	2.02	0.41
1:13:117:G:H2'	1:13:118:U:H6	1.85	0.41
1:1G:836:G:C6	1:1G:851:G:C6	3.08	0.41
24:14:1131:G:C2	24:14:1132:A:C4	3.08	0.41
10:1I:6:ILE:HG22	10:1I:98:ILE:HG12	2.02	0.41
1:1G:781:A:OP2	1:1G:800:G:N1	2.40	0.41
1:1G:95:G:H2'	1:1G:96:G:O4'	2.20	0.41
38:65:17:ARG:HG3	38:65:17:ARG:HH11	1.84	0.41
36:45:138:ASP:N	36:45:138:ASP:OD1	2.52	0.41
1:13:902:G:H2'	1:13:903:G:H8	1.86	0.41
24:14:1488:G:C8	24:14:1488:G:H5''	2.55	0.41
24:1H:1002:G:O5'	24:1H:1002:G:H8	2.04	0.41
51:N8:16:ARG:HG3	51:N8:17:ASP:N	2.34	0.41
35:78:46:LYS:HB3	35:78:46:LYS:HE2	1.87	0.41
24:14:1142:U:H5''	24:14:1142(A):A:H5'	2.02	0.41
1:1G:448:A:O2'	1:1G:449:C:H5'	2.20	0.41
39:75:121:ILE:O	39:75:124:ASP:HB2	2.21	0.41
24:14:2287:A:C4	24:14:2289:G:C8	3.09	0.41
25:16:48:A:H4'	38:A8:95:HIS:ND1	2.35	0.41
24:1H:566:U:OP1	35:78:29:LYS:NZ	2.48	0.41
22:2K:22:A:C2	22:2K:57:C:C5	3.08	0.41
24:14:761:A:C8	57:14:3510:HOH:O	2.73	0.41
2:1E:84:GLU:OE1	2:1E:216:SER:HA	2.21	0.41
44:G8:96:ILE:HG22	44:G8:97:ARG:N	2.36	0.41
24:1H:1007:C:O2'	33:58:108:PRO:HA	2.20	0.41
2:1E:14:GLY:N	2:1E:16:HIS:CE1	2.86	0.41
24:1H:2636:U:H1'	24:1H:2783:G:N2	2.36	0.41
24:1H:306:U:H2'	24:1H:307:G:O4'	2.20	0.41
32:69:75:LEU:HD13	32:69:139:GLN:HG3	2.03	0.41
45:H8:48:PHE:CE1	45:H8:52:SER:HA	2.55	0.41
24:1H:1464:C:O2'	24:1H:1528:A:C8	2.72	0.41
25:1J:118:G:C2	25:1J:119:A:H1'	2.56	0.41
24:14:1636:C:H2'	24:14:1637:A:C8	2.56	0.41
1:13:451:A:H61	1:13:480:U:H2'	1.85	0.41
44:G8:5:MET:HE1	44:G8:32:PRO:CB	2.49	0.41
24:1H:2175:C:H4'	26:71:218:MET:O	2.20	0.41
1:1G:1497:G:C2'	1:1G:1498:U:H5'	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1015:A:C6	1:1G:1016:A:C6	3.09	0.41
1:1G:542:G:N2	1:1G:543:C:C2	2.89	0.41
17:8A:81:ARG:CZ	17:8A:84:LEU:HD21	2.51	0.41
28:29:48:GLN:O	28:29:79:ARG:O	2.38	0.41
40:C8:95:LEU:HD13	40:C8:95:LEU:HA	1.81	0.41
28:29:70:ALA:N	28:29:71:GLY:HA3	2.36	0.41
54:Q8:40:GLU:H	54:Q8:43:GLN:H	1.68	0.41
5:42:123:LEU:HA	5:42:123:LEU:HD23	1.80	0.41
31:51:140:LYS:HE3	31:51:140:LYS:HB2	1.85	0.41
1:13:222:U:H2'	1:13:223:U:H6	1.84	0.41
24:1H:2841:C:H2'	24:1H:2842:G:C8	2.56	0.41
14:5A:26:ARG:NH1	14:5A:47:LEU:HD21	2.34	0.41
45:D5:44:PHE:CE2	45:D5:86:VAL:HG21	2.56	0.41
24:14:1570:A:H2'	24:14:1571:A:C8	2.55	0.41
4:32:102:ASP:HB2	4:32:118:ARG:HA	2.02	0.41
23:4K:20:A:H2'	23:4K:21:A:C8	2.55	0.41
24:1H:973:A:O4'	24:1H:1188:U:C6	2.73	0.41
11:2A:112:THR:HA	11:2A:113:PRO:HD3	1.81	0.41
24:14:2722:G:H5'	37:55:4:LEU:HD12	2.02	0.41
24:1H:2260:C:H2'	24:1H:2261:C:H5'	2.02	0.41
24:14:2860:A:N7	24:14:2861:G:H1'	2.36	0.41
24:14:2861:G:C4	24:14:2862:G:C8	3.09	0.41
1:13:1428:A:H2'	1:13:1429:C:C6	2.55	0.41
30:49:145:THR:C	30:49:147:ASP:H	2.24	0.41
24:14:768:G:C6	24:14:769:G:C5	3.08	0.41
1:13:1266:G:N2	1:13:1270:C:C2	2.89	0.41
20:BI:53:LEU:HB2	20:BI:100:ILE:CG2	2.50	0.41
2:1E:119:GLU:O	2:1E:122:PHE:HB3	2.20	0.41
24:14:1438:U:O2'	24:14:1439:A:H5'	2.21	0.41
8:72:16:ALA:HB2	8:72:24:THR:HG21	2.03	0.41
5:4E:48:ALA:HB3	5:4E:54:ALA:HB2	2.03	0.41
5:42:96:PRO:HA	5:42:117:ASP:OD2	2.21	0.41
24:1H:862:G:H2'	24:1H:863:A:O4'	2.20	0.41
48:K8:61:LEU:HA	48:K8:61:LEU:HD23	1.91	0.41
1:1G:440:A:H8	1:1G:440:A:OP2	2.04	0.41
1:13:363:A:C5	12:3I:31:PRO:HD2	2.55	0.41
24:1H:2257:U:O2'	24:1H:2258:C:H5'	2.20	0.41
27:19:79:VAL:HG21	27:19:111:LEU:HD11	2.03	0.41
24:14:573:G:H1	24:14:2031:A:P	2.44	0.41
28:21:135:HIS:CE1	57:21:401:HOH:O	2.66	0.41
24:14:1123:C:H2'	24:14:1124:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:3L:59:A:H2'	22:3L:60:A:O4'	2.21	0.41
24:14:1319:G:C6	24:14:1320:C:N4	2.89	0.41
24:1H:2583:G:C6	24:1H:2584:U:C4	3.09	0.41
2:1E:21:ARG:CB	2:1E:39:ILE:HA	2.42	0.41
1:13:815:A:N6	1:13:1509:C:H1'	2.35	0.41
24:14:2786:U:H4'	28:29:63:LEU:O	2.20	0.41
24:14:996:A:H4'	40:85:92:ARG:HE	1.85	0.41
40:85:65:ILE:HG12	40:85:96:ALA:CB	2.51	0.41
47:F5:3:LYS:O	47:F5:12:PRO:HD3	2.21	0.41
39:75:10:VAL:O	39:75:11:GLU:HB2	2.21	0.41
1:1G:1323:G:N2	1:1G:1361:G:O2'	2.49	0.41
24:14:1055:G:H2'	24:14:1056:G:O4'	2.20	0.41
1:1G:1466:C:H2'	1:1G:1467:G:O4'	2.21	0.41
24:1H:1022:G:N2	24:1H:1024:G:C2	2.88	0.41
24:1H:784:A:C8	24:1H:792:G:C5	3.09	0.41
27:11:228:PRO:HG3	27:11:234:GLY:O	2.21	0.41
24:14:2065:C:H1'	24:14:2449:U:H3	1.84	0.41
11:2I:23:ALA:HA	11:2I:28:THR:HG23	2.02	0.41
24:1H:1222:C:H2'	24:1H:1223:C:C6	2.54	0.41
19:AI:40:ILE:HG22	19:AI:69:HIS:O	2.20	0.41
24:14:1027:A:C6	24:14:1126:A:C4	3.09	0.41
10:1I:9:ARG:NH2	10:1I:97:GLU:HG3	2.36	0.41
3:22:58:GLU:O	3:22:59:ARG:HD2	2.19	0.41
31:51:7:LEU:H	31:51:7:LEU:HG	1.56	0.41
1:1G:1193:G:C2'	1:1G:1194:U:H5'	2.50	0.41
1:13:1321:C:C5	1:13:1322:C:C2	3.08	0.41
1:13:658:G:C2	1:13:659:U:C2	3.07	0.41
24:14:273(C):C:H5'	24:14:273(D):C:OP2	2.21	0.41
1:1G:1162:C:N3	1:1G:1175:G:C2	2.88	0.41
27:19:62:TYR:CE2	27:19:64:ILE:HA	2.56	0.41
40:C8:91:ASP:O	40:C8:95:LEU:HB2	2.20	0.41
24:14:491:G:H2'	24:14:492:A:H8	1.84	0.41
24:14:635:C:H2'	24:14:636:G:O4'	2.20	0.41
24:14:389:G:O5'	24:14:389:G:H8	2.03	0.41
24:1H:7:G:C2	24:1H:8:A:C4	3.08	0.41
2:12:219:VAL:O	2:12:222:ILE:HB	2.20	0.41
49:L8:3:ARG:HG2	49:L8:38:GLU:CD	2.41	0.41
33:15:61:ARG:HA	33:15:61:ARG:HE	1.85	0.41
6:52:95:GLU:HA	6:52:96:PRO:HD3	1.81	0.41
24:14:1858:G:H1'	24:14:1884:A:H61	1.85	0.41
24:14:686:G:H1	53:L5:16:HIS:CD2	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1272:G:C6	1:13:1273:G:C4	3.08	0.41
1:13:1196:U:C4	23:4K:23:A:H8	2.39	0.41
24:14:2050:C:H1'	28:29:156:MET:HE1	2.03	0.41
33:58:55:VAL:HG12	33:58:127:ASP:O	2.21	0.41
42:E8:84:ARG:HB2	42:E8:96:ILE:HD13	2.03	0.41
5:4E:50:GLU:HB3	5:4E:53:LEU:HD13	2.03	0.41
24:14:321:G:C4	24:14:341:G:H4'	2.56	0.41
28:29:96:PHE:O	28:29:175:VAL:HG11	2.21	0.41
1:1G:938:A:N6	1:1G:939:G:C6	2.88	0.41
31:51:153:LYS:H	31:51:153:LYS:CD	2.31	0.41
1:13:960:U:H2'	1:13:960:U:O2	2.21	0.41
24:1H:2751:G:OP1	24:1H:2751:G:H8	2.03	0.41
3:2E:15:THR:HG22	3:2E:15:THR:O	2.20	0.41
24:1H:2239:G:H5'	27:11:251:GLY:HA3	2.03	0.41
25:1J:30:C:C5	25:1J:31:C:C2	3.09	0.41
15:6A:10:LYS:HD2	15:6A:10:LYS:HA	1.70	0.41
28:21:24:THR:HG21	28:21:188:VAL:HG13	2.03	0.41
31:51:130:ARG:HB3	31:51:130:ARG:NH1	2.35	0.41
8:7E:5:PRO:O	8:7E:8:ASP:HB3	2.21	0.41
1:13:698:G:C6	1:13:699:C:C4	3.09	0.41
30:41:77:ILE:O	30:41:81:LYS:O	2.38	0.41
18:9I:38:GLU:CD	18:9I:41:LYS:HD3	2.41	0.41
3:2E:139:GLN:NE2	3:2E:143:GLU:OE2	2.51	0.41
43:B5:12:VAL:HG12	43:B5:29:TRP:N	2.36	0.41
51:J5:19:ARG:HG2	51:J5:19:ARG:O	2.21	0.41
14:5A:53:LEU:HA	14:5A:53:LEU:HD23	1.86	0.41
24:1H:831:G:H8	24:1H:831:G:O5'	2.02	0.41
1:13:811:C:H4'	1:13:900:A:N6	2.35	0.41
1:1G:1521:G:H2'	1:1G:1522:U:O4'	2.21	0.41
12:3I:34:ARG:HD3	12:3I:105:TYR:CZ	2.55	0.41
33:15:10:GLU:HG3	33:15:11:PRO:HD2	2.01	0.41
24:14:1576:U:H2'	24:14:1577:C:H6	1.85	0.41
24:14:1141:U:H4'	24:14:1142(A):A:O4'	2.20	0.41
24:1H:819:A:OP2	24:1H:1187:G:N2	2.49	0.41
1:1G:1446:A:N3	1:1G:1446:A:H3'	2.36	0.41
22:2K:54:C:H2'	22:2K:55:U:C6	2.55	0.41
2:12:56:ARG:HH11	2:12:56:ARG:HA	1.85	0.41
24:1H:1324:G:C2	24:1H:1331:A:C2	3.08	0.41
24:1H:2172:U:H5'	24:1H:2173:A:OP2	2.21	0.41
39:75:10:VAL:HG12	39:75:11:GLU:H	1.85	0.41
39:75:5:ALA:N	39:75:7:ILE:O	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1103:A:H3'	24:1H:1104:C:C5	2.56	0.41
24:14:2133:G:H2'	24:14:2157:G:O6	2.21	0.41
5:42:12:LEU:HD22	5:42:13:ILE:N	2.36	0.41
25:1J:56:G:H4'	25:1J:57:A:C8	2.56	0.41
22:2L:20:C:C6	22:2L:22:A:C8	3.07	0.41
3:22:74:GLY:HA2	3:22:77:ILE:HB	2.03	0.41
24:1H:299:A:H5'	24:1H:300:A:OP2	2.21	0.41
32:69:140:LEU:HD12	32:69:141:LYS:N	2.36	0.41
3:22:50:ALA:HB2	3:22:75:VAL:CB	2.45	0.41
39:B8:90:GLN:HG3	39:B8:91:ARG:N	2.35	0.41
29:31:32:LEU:CD2	29:31:105:VAL:HG13	2.51	0.41
19:AA:23:ASN:HA	19:AA:27:GLU:OE2	2.21	0.41
24:14:270(M):U:O2	24:14:270(M):U:H2'	2.20	0.41
36:88:5:ARG:H	36:88:5:ARG:HG3	1.40	0.41
24:1H:1530:G:H1	24:1H:1541:U:H3	1.68	0.41
1:1G:1123:A:H1'	10:1A:39:PRO:HD3	2.01	0.41
24:1H:773:U:H5'	27:11:47:GLY:HA3	2.03	0.41
24:14:480:A:H3'	24:14:481:G:H5''	2.03	0.41
30:49:16:ARG:N	30:49:17:PRO:HD2	2.35	0.41
1:1G:474:G:H5''	16:7A:81:ARG:CZ	2.51	0.41
24:14:2002:G:C5	57:14:3863:HOH:O	2.73	0.41
24:1H:1312:U:C2	24:1H:1603:A:C2	3.09	0.41
24:14:2749:A:H1'	31:59:63:SER:HB3	2.02	0.41
30:41:125:PHE:CD1	30:41:131:TYR:HB2	2.55	0.41
37:98:75:LEU:O	37:98:79:LEU:HB2	2.21	0.41
24:14:2172:U:O2'	24:14:2174:C:OP2	2.30	0.41
1:1G:428:G:O4'	1:1G:430:A:C8	2.74	0.41
16:7A:17:TYR:HE2	16:7A:41:PRO:HG3	1.85	0.41
30:49:138:GLN:C	30:49:140:ILE:H	2.24	0.41
39:75:86:ILE:HG12	39:75:86:ILE:O	2.19	0.41
37:98:117:VAL:HG22	37:98:118:GLU:N	2.35	0.41
20:BA:66:ALA:HB1	20:BA:71:THR:CG2	2.50	0.41
1:13:1260:C:H4'	1:13:1284:C:H5'	2.03	0.41
2:12:80:ILE:HD11	2:12:208:ILE:HG23	2.02	0.41
24:1H:2333:A:O4'	24:1H:2335:A:C5	2.73	0.41
1:1G:604:G:H2'	1:1G:605:U:O4'	2.20	0.41
28:29:147:PRO:HB2	28:29:149:ARG:HG2	2.02	0.41
24:14:1710:C:H2'	24:14:1711:C:C6	2.55	0.41
1:13:171:A:C2	1:13:172:A:C5	3.08	0.41
1:13:1308:U:H5''	13:4I:98:VAL:HG22	2.03	0.41
24:14:1568:G:H5''	27:19:61:LEU:HD22	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:927:G:H4'	1:1G:927:G:OP2	2.20	0.41
1:1G:510:A:H5''	1:1G:511:C:P	2.60	0.41
31:59:26:VAL:CG1	31:59:33:LEU:H	2.33	0.41
1:1G:186(D):C:H2'	1:1G:186(E):C:H6	1.85	0.41
4:32:3:ARG:HG3	4:32:5:ILE:HD11	2.03	0.41
43:B5:28:PHE:O	43:B5:30:VAL:HG13	2.21	0.41
24:14:522:G:H2'	24:14:523:C:H6	1.86	0.41
48:K8:14:ARG:NH1	48:K8:66:GLU:OE2	2.54	0.41
40:C8:8:VAL:HG23	40:C8:11:ARG:NH2	2.35	0.41
1:13:1053:G:O6	1:13:1199:U:H2'	2.20	0.41
24:14:2584:U:C6	24:14:2585:U:C5	3.09	0.41
24:1H:2739:U:O2'	24:1H:2740:A:H5'	2.21	0.41
8:72:33:GLU:O	8:72:36:LEU:HB2	2.21	0.41
1:1G:145:G:C2	1:1G:178:C:N3	2.88	0.41
20:BI:53:LEU:HD12	20:BI:100:ILE:HG22	2.03	0.41
24:14:2579:C:H2'	24:14:2580:U:O4'	2.21	0.41
1:1G:252:U:H2'	1:1G:275:G:N2	2.36	0.41
24:14:2863:C:O2'	24:14:2864:G:H5'	2.21	0.41
3:2E:154:SER:HB3	3:2E:165:THR:HB	2.03	0.41
24:1H:41:C:H2'	24:1H:43:G:O4'	2.21	0.41
11:2I:20:TYR:O	11:2I:30:VAL:HG23	2.20	0.41
29:31:129:PHE:HA	29:31:142:TRP:NE1	2.36	0.41
15:6I:62:GLN:O	15:6I:66:LEU:HD13	2.21	0.41
24:1H:1844:C:O3'	27:11:258:LYS:NZ	2.44	0.41
28:29:11:MET:HG3	28:29:23:VAL:O	2.21	0.41
37:55:13:HIS:NE2	37:55:15:SER:OG	2.53	0.41
24:14:2086:U:H2'	24:14:2087:G:C8	2.56	0.41
41:D8:47:VAL:HG22	41:D8:48:GLY:N	2.36	0.41
5:4E:41:VAL:HG22	5:4E:113:ALA:HB2	2.02	0.41
38:A8:21:THR:O	38:A8:21:THR:OG1	2.37	0.41
1:1G:102:G:O2'	1:1G:151:A:N3	2.50	0.41
28:29:135:HIS:CD2	28:29:135:HIS:H	2.38	0.41
33:58:68:GLU:HG3	33:58:68:GLU:H	1.71	0.41
42:E8:11:ARG:HB3	42:E8:11:ARG:NH1	2.36	0.41
1:13:543:C:O2'	1:13:544:G:H5'	2.20	0.41
28:21:45:THR:O	28:21:46:ALA:HB2	2.21	0.41
24:1H:241:A:H4'	24:1H:242:G:OP1	2.20	0.41
1:13:1504:G:H3'	57:13:1803:HOH:O	2.20	0.41
35:78:49:ARG:HB2	54:Q8:60:LEU:HD11	2.03	0.41
1:1G:1346:A:H1'	1:1G:1347:G:OP2	2.21	0.41
38:A8:11:LYS:HD2	38:A8:15:ARG:NH2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:2L:69:U:H3'	22:2L:70:C:H5'	2.03	0.41
24:1H:2016:U:H1'	51:N8:6:VAL:HG13	2.03	0.41
1:1G:1131:G:H2'	1:1G:1132:C:C6	2.54	0.41
39:75:124:ASP:O	39:75:128:GLU:HB2	2.20	0.41
1:1G:971:G:C4	1:1G:1365:G:H4'	2.56	0.41
1:1G:963:G:N2	10:1A:55:LYS:HE2	2.23	0.41
24:14:1448:G:O2'	24:14:1528:A:N6	2.54	0.41
2:1E:211:ILE:HG22	2:1E:215:LEU:HD23	2.03	0.41
24:1H:806:C:P	35:78:41:ARG:HH21	2.44	0.41
46:I8:70:GLN:CD	46:I8:72:ARG:HD2	2.42	0.41
39:75:6:LEU:HD12	39:75:6:LEU:O	2.21	0.41
24:1H:1152:C:H5'	40:C8:77:SER:O	2.20	0.41
6:5E:14:LEU:HD13	6:5E:19:LEU:HA	2.03	0.41
24:14:960:A:H4'	24:14:961:C:OP1	2.20	0.41
5:42:12:LEU:O	5:42:30:ALA:HA	2.21	0.41
17:8A:16:GLN:O	17:8A:17:LYS:HB2	2.21	0.41
2:12:178:ARG:HH12	2:12:196:LEU:C	2.17	0.41
24:1H:192:C:O2'	24:1H:802:A:N3	2.48	0.41
37:98:98:LEU:O	37:98:113:LEU:N	2.53	0.41
24:14:1416:G:H21	24:14:1586:A:N6	2.19	0.41
36:88:87:LYS:HB3	36:88:88:GLY:H	1.73	0.41
1:13:407:G:N2	1:13:436:C:C2	2.89	0.41
28:21:48:GLN:NE2	28:21:77:ILE:HD12	2.34	0.41
39:75:106:SER:HA	39:75:110:ILE:HD11	2.03	0.41
24:14:2655:G:H1'	24:14:2656:U:H5	1.86	0.41
51:J5:16:ARG:HH11	51:J5:16:ARG:HB3	1.86	0.41
19:AA:18:LYS:O	19:AA:22:LEU:HD13	2.20	0.41
24:14:654(F):C:O2	24:14:654(P):G:N2	2.53	0.41
24:14:956:G:OP1	36:45:88:GLY:N	2.54	0.41
25:1J:50:G:H2'	25:1J:51:G:O4'	2.20	0.41
1:1G:1153:C:P	10:1A:13:HIS:HE2	2.42	0.41
3:22:36:ASP:OD2	3:22:57:ILE:HG21	2.21	0.41
1:13:1226:C:H4'	1:13:1227:A:OP1	2.21	0.41
24:1H:2791:C:OP2	24:1H:2893:G:N2	2.54	0.41
25:16:111:U:H2'	25:16:112:G:C8	2.49	0.41
1:1G:154:C:N4	1:1G:168:G:O6	2.53	0.41
24:14:2749:A:N1	24:14:2750:A:N6	2.69	0.41
24:14:2733:A:N1	28:29:203:LYS:HA	2.36	0.41
6:52:35:ALA:HA	6:52:67:MET:HB3	2.03	0.41
1:13:166:G:H2'	1:13:167:G:C8	2.55	0.41
24:14:535:C:O2'	24:14:536:A:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:62:20:ASP:HB3	7:62:23:VAL:CG2	2.51	0.41
26:79:186:ALA:O	26:79:190:ARG:NH1	2.54	0.41
5:4E:139:LEU:HA	5:4E:142:LEU:CD1	2.51	0.41
30:49:129:GLY:HA2	30:49:166:ASP:HA	2.03	0.41
25:16:72:G:N2	25:16:103:U:C5	2.89	0.41
1:13:191:G:C6	1:13:192:U:C4	3.09	0.41
39:75:16:ARG:NH1	39:75:80:SER:O	2.53	0.41
35:35:36:LYS:HB3	35:35:40:SER:OG	2.20	0.41
1:13:1213:A:C8	1:13:1215:G:C6	3.09	0.41
1:1G:760:G:H2'	1:1G:761:G:H5'	2.01	0.41
1:1G:947:G:OP1	13:4A:108:ARG:HG2	2.20	0.41
39:B8:77:PRO:O	39:B8:80:SER:HB2	2.20	0.41
1:1G:1324:A:H2'	1:1G:1325:C:C6	2.56	0.41
24:14:468:G:H2'	24:14:469:G:O4'	2.20	0.41
24:1H:2889:C:H2'	24:1H:2891:G:O4'	2.21	0.41
5:42:122:GLU:O	5:42:123:LEU:HD23	2.20	0.41
24:1H:1813:G:H1'	27:11:50:THR:OG1	2.21	0.41
1:1G:1105:A:C2	1:1G:1106:G:N7	2.89	0.41
1:13:958:A:C6	1:13:959:A:C6	3.09	0.41
6:52:61:LEU:HD12	6:52:61:LEU:HA	1.84	0.41
24:1H:2132:U:H3	26:71:5:LYS:HB3	1.86	0.41
37:98:65:LEU:HA	37:98:65:LEU:HD12	1.81	0.41
24:1H:601:C:OP1	29:31:108:LYS:HE3	2.21	0.41
24:1H:884:C:H2'	24:1H:885:C:O4'	2.20	0.41
2:12:204:ASN:N	2:12:204:ASN:OD1	2.54	0.41
1:1G:45:U:H2'	1:1G:46:G:H8	1.83	0.41
24:14:309:G:O3'	44:C5:18:GLY:HA2	2.20	0.41
42:A5:14:PRO:O	42:A5:18:ARG:HB2	2.20	0.41
24:14:1164:G:H1	24:14:1185:C:H42	1.68	0.41
1:13:665:A:N3	1:13:732:C:H2'	2.36	0.41
1:1G:1512:U:H2'	1:1G:1513:A:C8	2.56	0.41
1:13:22:G:C5	1:13:23:C:C4	3.09	0.41
1:13:1054:C:H5	1:13:1196:U:HO2'	1.67	0.41
1:13:827:U:C5	1:13:870:U:C5	3.08	0.41
5:42:78:HIS:CE1	5:42:142:LEU:HD23	2.54	0.41
24:14:2112:G:H2'	24:14:2113:U:C5	2.55	0.41
17:8I:32:TYR:O	17:8I:34:LYS:N	2.54	0.41
15:6I:39:LEU:HD13	15:6I:56:LEU:HB2	2.02	0.41
29:39:7:TYR:CE2	29:39:10:PRO:HG3	2.55	0.41
1:1G:1259:C:C4	1:1G:1260:C:H1'	2.56	0.41
24:1H:954:G:N3	24:1H:2274:A:H2	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:646:U:H2'	1:1G:647:C:C6	2.56	0.41
29:31:99:TYR:HE1	29:31:101:LEU:HD13	1.86	0.41
3:2E:50:ALA:HB1	3:2E:70:VAL:HG11	2.03	0.41
1:1G:191(E):G:H2'	1:1G:191(F):U:H6	1.86	0.41
13:4A:118:ALA:HB2	22:2L:29:C:O2'	2.20	0.41
24:1H:562:U:C4	24:1H:2036:C:O4'	2.73	0.41
27:11:79:VAL:HG21	27:11:111:LEU:HD21	2.02	0.41
27:11:108:PRO:HB3	27:11:143:HIS:HE1	1.86	0.41
24:14:289:A:H2'	24:14:289:A:N3	2.36	0.41
15:6I:18:PHE:CD1	15:6I:18:PHE:C	2.94	0.41
24:1H:173:G:H2'	24:1H:174:C:C6	2.56	0.41
24:14:601:C:OP1	29:39:108:LYS:NZ	2.54	0.41
10:1I:6:ILE:HD11	10:1I:72:VAL:HG12	2.02	0.41
37:55:12:ARG:HG2	37:55:16:HIS:CG	2.56	0.41
37:55:13:HIS:CD2	37:55:16:HIS:H	2.39	0.41
1:13:716:A:C6	1:13:717:C:N3	2.88	0.41
25:16:20:C:H2'	25:16:21:G:O4'	2.21	0.41
39:75:47:GLY:O	39:75:63:VAL:HG13	2.21	0.41
5:42:129:ILE:O	5:42:132:ALA:HB3	2.20	0.41
39:B8:48:ILE:O	39:B8:63:VAL:HA	2.21	0.41
28:21:96:PHE:O	28:21:175:VAL:HG11	2.19	0.41
39:B8:70:VAL:HG12	39:B8:71:GLY:O	2.21	0.41
26:79:192:PHE:O	26:79:196:LEU:HD22	2.21	0.41
25:1J:52:A:N6	38:65:33:LYS:HG2	2.36	0.41
31:59:86:GLU:HA	31:59:132:ARG:HB2	2.03	0.41
6:5E:69:GLU:CD	6:5E:69:GLU:H	2.24	0.41
12:3A:85:ILE:HA	12:3A:85:ILE:HD13	1.82	0.41
46:I8:41:ARG:HA	46:I8:41:ARG:NE	2.35	0.41
10:1I:3:LYS:N	10:1I:3:LYS:HD2	2.35	0.41
24:1H:2237:G:O5'	24:1H:2237:G:H8	2.04	0.41
6:5E:43:LEU:N	6:5E:43:LEU:HD12	2.36	0.41
1:13:780:A:C2	1:13:803:G:N1	2.89	0.41
36:45:65:PHE:O	36:45:104:PHE:HA	2.20	0.41
1:13:922:G:C6	1:13:923:A:C6	3.09	0.41
24:14:1773:A:C5	24:14:1829:A:H1'	2.56	0.41
8:7E:56:LYS:HA	8:7E:57:PRO:HD2	1.81	0.41
24:14:1375:C:H2'	24:14:1376:C:H6	1.85	0.41
24:14:8:A:H2	24:14:2895:U:H3	1.68	0.41
24:14:775:G:C4	24:14:794:G:C8	3.09	0.41
2:1E:150:SER:OG	2:1E:151:GLY:N	2.52	0.41
6:52:62:TRP:CE2	18:9A:35:ARG:NH2	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:818:G:O2'	1:13:819:A:H5'	2.21	0.41
1:1G:340:U:H2'	1:1G:341:C:C6	2.56	0.41
43:B5:47:PHE:CD2	43:B5:89:ILE:HD13	2.55	0.41
11:2I:31:THR:OG1	11:2I:42:TRP:HB3	2.21	0.41
4:32:26:CYS:HA	4:32:31:CYS:SG	2.60	0.41
1:1G:448:A:N7	1:1G:486:U:O4	2.54	0.41
1:1G:1127:G:H21	1:1G:1147:C:H5	1.67	0.41
1:1G:1446:A:N7	39:75:118:ARG:NH1	2.69	0.41
39:75:88:ILE:HD11	39:75:91:ARG:NH2	2.36	0.41
25:16:19:G:N2	25:16:65:C:N3	2.69	0.41
24:1H:573:G:O2'	24:1H:574:C:H3'	2.20	0.41
22:3K:11:C:H2'	22:3K:12:C:O4'	2.20	0.41
51:N8:40:LYS:HG2	51:N8:46:CYS:HA	2.03	0.41
24:14:1084:A:N3	24:14:1106:G:H1'	2.36	0.41
16:7I:26:ARG:HH11	16:7I:26:ARG:CG	2.26	0.41
39:75:105:LEU:O	39:75:107:ASP:CG	2.60	0.41
3:22:113:ALA:HB1	3:22:185:GLY:H	1.86	0.41
24:1H:1173:G:C2	24:1H:1175:U:C4	3.08	0.41
24:1H:440:G:H2'	24:1H:441:U:C6	2.55	0.41
30:49:29:TRP:HE3	30:49:33:ARG:NH1	2.19	0.41
32:61:11:ASN:CG	32:61:12:LEU:H	2.24	0.41
29:31:64:ILE:HA	29:31:64:ILE:HD13	1.72	0.41
34:25:7:TYR:CZ	34:25:44:LYS:HG3	2.56	0.41
30:41:20:ILE:H	30:41:20:ILE:HG13	1.72	0.41
5:4E:80:ILE:HD12	8:7E:104:ARG:NH2	2.35	0.41
1:13:193:C:H2'	1:13:194:C:C6	2.56	0.41
28:21:13:ARG:HA	28:21:21:VAL:O	2.21	0.41
1:1G:1379:G:OP1	7:62:6:ARG:NH1	2.54	0.41
24:1H:1636:C:H2'	24:1H:1637:A:C8	2.56	0.41
1:1G:605:U:H2'	1:1G:606:G:O4'	2.21	0.41
24:14:611:C:H2'	24:14:612:G:O4'	2.21	0.41
24:1H:654(N):G:H2'	24:1H:654(O):G:C8	2.56	0.41
24:14:2538:C:H2'	24:14:2539:C:H6	1.86	0.41
48:G5:38:GLN:HG2	48:G5:44:LEU:HD23	2.03	0.41
5:42:88:LYS:HG2	5:42:123:LEU:HB2	2.02	0.41
9:8E:48:GLU:N	9:8E:49:PRO:HD2	2.36	0.41
16:7A:75:ARG:HG3	16:7A:80:PHE:CD2	2.56	0.41
42:A5:13:SER:O	42:A5:14:PRO:C	2.60	0.41
24:1H:2799:A:H2'	24:1H:2801:A:C8	2.56	0.41
39:75:3:ARG:HA	39:75:4:GLY:C	2.42	0.41
36:45:66:ILE:HG22	36:45:67:ARG:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:25:87:ILE:HD12	34:25:93:PRO:HA	2.02	0.41
1:13:827:U:C5	1:13:872:A:N1	2.88	0.41
24:14:2228:G:C5	24:14:2229:C:C4	3.09	0.41
50:I5:58:ARG:HH22	50:I5:62:ARG:HD2	1.85	0.41
15:6A:84:LYS:HB2	15:6A:84:LYS:HE2	1.84	0.41
1:13:344:A:H2'	1:13:346:G:N7	2.36	0.41
24:1H:2590:A:H2'	24:1H:2591:C:C6	2.56	0.41
1:1G:833:U:H2'	1:1G:834:C:C6	2.56	0.41
24:14:2116:G:H3'	24:14:2117:A:H5''	2.02	0.41
24:14:411:G:OP2	24:14:2406:U:O2'	2.35	0.41
24:14:65:C:H2'	24:14:66:C:C6	2.56	0.41
24:1H:1392:A:C6	24:1H:1393:A:C6	3.08	0.41
24:14:76:C:O2'	48:G5:62:THR:OG1	2.28	0.41
45:H8:49:ARG:HD3	45:H8:49:ARG:HA	1.78	0.41
10:1I:78:ASN:O	10:1I:81:THR:OG1	2.34	0.41
1:13:715:A:O2'	1:13:716:A:H5'	2.20	0.41
1:13:803:G:C6	1:13:804:U:N3	2.89	0.41
24:14:2206:C:H2'	24:14:2207:C:C6	2.56	0.41
24:1H:136:G:H2'	24:1H:137:C:H6	1.85	0.41
7:6E:120:ILE:HG22	7:6E:124:LEU:HD12	2.03	0.41
38:A8:62:LYS:HA	38:A8:65:VAL:HB	2.02	0.41
10:1A:25:GLU:O	10:1A:29:ARG:HB3	2.21	0.41
4:32:204:ILE:HD13	5:42:97:GLY:O	2.21	0.41
26:79:175:VAL:O	26:79:188:ASN:ND2	2.31	0.41
24:14:2526:G:C6	24:14:2527:C:C4	3.09	0.41
16:7I:51:VAL:HG12	16:7I:52:ASP:C	2.41	0.41
24:14:1133:U:O2	24:14:1137:G:H5''	2.21	0.41
1:13:519:C:H2'	1:13:520:A:C8	2.56	0.41
24:14:879:G:C2	24:14:880:G:H1'	2.56	0.41
45:D5:98:MET:O	45:D5:125:LEU:HA	2.21	0.41
24:1H:84:A:N1	24:1H:98:G:O2'	2.45	0.41
1:1G:1530:G:H8	1:1G:1530:G:H5''	1.86	0.41
29:31:110:LEU:HD12	29:31:110:LEU:HA	1.54	0.41
33:15:109:LYS:HD3	33:15:109:LYS:HA	1.92	0.41
40:C8:9:VAL:HG23	40:C8:9:VAL:H	1.56	0.41
24:1H:323:G:C8	29:31:171:PRO:HG3	2.56	0.41
11:2A:50:TYR:HD2	11:2A:60:ALA:HB2	1.86	0.41
1:13:1399:C:C2	1:13:1502:A:N6	2.89	0.40
24:1H:1479:G:O2'	24:1H:1558:A:H5'	2.21	0.40
22:2L:18:G:O4'	22:2L:66:G:N2	2.54	0.40
44:G8:28:LYS:HB2	44:G8:28:LYS:HE3	1.79	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:85:58:ARG:HA	40:85:61:TRP:CE3	2.57	0.40
24:1H:2138:C:H2'	24:1H:2139:C:C6	2.56	0.40
24:14:1047:G:HO2'	24:14:1110:G:H22	1.65	0.40
1:13:17:U:O2'	1:13:1079:G:H1'	2.21	0.40
24:14:1200:C:P	57:14:3798:HOH:O	2.76	0.40
24:1H:141(A):C:H2'	24:1H:142:G:O4'	2.22	0.40
1:1G:544:G:OP1	4:32:62:GLN:NE2	2.29	0.40
46:I8:36:ILE:HD13	46:I8:58:THR:CG2	2.51	0.40
24:14:2757:A:N1	31:59:67:LEU:HD21	2.36	0.40
32:69:68:LEU:HA	32:69:71:ILE:HG22	2.01	0.40
1:13:820:U:H4'	1:13:821:G:OP2	2.21	0.40
1:1G:300:A:H1'	1:1G:565:U:O2	2.21	0.40
30:41:121:ASN:O	30:41:131:TYR:OH	2.26	0.40
48:G5:4:SER:HB3	48:G5:5:GLU:OE2	2.21	0.40
27:19:33:LEU:C	27:19:64:ILE:HG23	2.41	0.40
26:79:26:ALA:O	26:79:29:VAL:HG12	2.21	0.40
24:14:2012:G:OP1	42:A5:11:ARG:NH2	2.54	0.40
40:C8:88:ILE:HG22	40:C8:90:VAL:HG12	2.03	0.40
1:13:649:G:C4	1:13:650:G:C8	3.09	0.40
24:1H:2663:G:C6	24:1H:2664:G:C4	3.09	0.40
1:1G:581:G:N2	1:1G:760:G:N7	2.70	0.40
31:51:103:LEU:HD22	31:51:131:VAL:HG21	2.02	0.40
24:14:729:G:OP2	27:19:13:ARG:NH1	2.45	0.40
1:13:369:C:O2'	1:13:370:C:H5'	2.21	0.40
36:88:20:ALA:O	45:H8:79:ARG:NH2	2.54	0.40
24:14:2141:G:C6	24:14:2151:G:C6	3.09	0.40
24:14:814:C:H42	24:14:1193:G:H1	1.69	0.40
31:59:103:LEU:HG	31:59:115:VAL:HB	2.03	0.40
1:13:1412:C:H2'	1:13:1413:A:H8	1.85	0.40
42:E8:1:MET:HB3	42:E8:64:MET:HE2	2.03	0.40
24:14:478:A:H62	24:14:502:A:N6	2.19	0.40
45:D5:100:VAL:HG12	45:D5:101:PRO:HD2	2.03	0.40
45:D5:54:HIS:HB3	45:D5:101:PRO:HD3	2.02	0.40
41:D8:35:LEU:C	41:D8:37:VAL:H	2.18	0.40
1:13:983:A:N1	1:13:1222:G:N2	2.68	0.40
1:13:985:C:N3	1:13:1221:G:C2	2.89	0.40
28:29:105:THR:OG1	28:29:199:ARG:NH2	2.34	0.40
33:15:137:LYS:HZ3	33:15:137:LYS:HA	1.84	0.40
24:14:1581:G:H5''	24:14:1581:G:C8	2.55	0.40
24:1H:51:G:N3	24:1H:119:A:C2	2.89	0.40
32:69:44:LEU:HD23	32:69:44:LEU:HA	1.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2408:U:O2'	24:1H:2409:G:H5'	2.21	0.40
1:1G:518:C:C5	1:1G:530:G:H5'	2.56	0.40
1:13:27:G:C6	1:13:28:G:C5	3.09	0.40
24:1H:153:C:H2'	24:1H:154:G:O4'	2.21	0.40
24:14:2584:U:H6	24:14:2585:U:H5	1.68	0.40
24:1H:182:A:H2'	24:1H:183:C:O4'	2.21	0.40
28:29:54:GLN:O	28:29:55:ASN:ND2	2.54	0.40
31:59:9:ILE:HG23	31:59:51:ARG:HB3	2.03	0.40
24:1H:1154:G:O5'	24:1H:1154:G:H8	2.03	0.40
12:3A:59:ARG:HA	12:3A:65:GLU:HA	2.03	0.40
7:6E:73:MET:HA	7:6E:90:GLU:HA	2.02	0.40
13:4I:66:LEU:O	13:4I:69:GLU:HB3	2.21	0.40
24:1H:23:G:OP1	24:1H:504:U:N3	2.54	0.40
28:21:116:VAL:HG11	28:21:138:PRO:HB3	2.02	0.40
3:2E:29:TYR:OH	14:5I:54:PRO:HD2	2.21	0.40
24:1H:1443:G:C2	24:1H:1549:C:C2	3.09	0.40
7:62:51:GLN:HA	7:62:54:THR:O	2.21	0.40
10:1A:10:GLY:H	10:1A:16:LEU:HD11	1.86	0.40
1:13:1171:G:H2'	1:13:1172:C:C6	2.56	0.40
24:14:2055:C:OP1	24:14:2056:G:H4'	2.21	0.40
27:11:158:ALA:O	27:11:159:ALA:C	2.59	0.40
24:14:236:C:H2'	24:14:237:C:H6	1.86	0.40
16:7A:58:TYR:O	16:7A:61:SER:HB3	2.21	0.40
37:55:24:GLN:HB3	37:55:44:LEU:HD11	2.03	0.40
24:14:244:A:O3'	35:35:74:GLU:HB3	2.20	0.40
3:22:34:LEU:HD12	3:22:34:LEU:O	2.20	0.40
34:25:22:ILE:HD13	34:25:22:ILE:HA	1.43	0.40
24:1H:647:G:O5'	24:1H:647:G:H8	2.04	0.40
24:1H:1859:A:N6	24:1H:1883:G:O2'	2.54	0.40
26:79:212:VAL:HG21	26:79:226:PRO:HD3	2.02	0.40
24:14:1366:A:H2'	24:14:1367:A:O4'	2.21	0.40
22:3L:35:QUO:H101	22:3L:35:QUO:H162	1.82	0.40
4:32:12:CYS:HA	4:32:19:LEU:HD12	2.04	0.40
1:1G:711:G:P	6:52:54:LYS:HZ1	2.35	0.40
24:14:1528:A:C2	24:14:1543:A:C2	3.09	0.40
22:2K:19:C:H3'	22:2K:20:C:H3'	2.03	0.40
24:1H:2303:G:C6	24:1H:2314:C:N4	2.90	0.40
43:B5:49:VAL:HB	43:B5:83:VAL:CG2	2.49	0.40
35:35:52:GLU:OE2	35:35:53:GLY:N	2.54	0.40
24:1H:2115:G:O5'	24:1H:2115:G:H8	2.04	0.40
15:6A:88:ARG:HB3	15:6A:89:GLY:H	1.74	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2778:A:H4'	24:14:2779:U:OP2	2.20	0.40
50:I5:37:SER:HG	50:I5:38:LYS:H	1.58	0.40
31:59:3:ARG:CG	31:59:4:ILE:HG13	2.51	0.40
31:59:7:LEU:HD12	31:59:8:PRO:HD3	2.03	0.40
1:13:1304:G:OP1	21:1F:2:GLY:N	2.54	0.40
5:42:137:GLU:O	5:42:141:GLN:HB2	2.21	0.40
36:88:12:GLN:HE21	36:88:72:LYS:HG3	1.87	0.40
30:49:66:GLN:HG3	50:I5:6:HIS:HE2	1.85	0.40
24:1H:1728:G:N2	24:1H:1730:U:OP2	2.54	0.40
10:1A:63:PHE:CD1	14:5A:58:LYS:HA	2.57	0.40
1:1G:474:G:H2'	1:1G:475:G:H8	1.86	0.40
24:14:2191:G:C5	24:14:2192:G:C8	3.09	0.40
6:5E:97:PHE:O	18:9I:31:LEU:N	2.35	0.40
24:14:2212:A:H1'	24:14:2215:G:C5	2.56	0.40
26:71:6:ARG:HG2	26:71:34:THR:HB	2.02	0.40
4:32:38:TYR:CD2	4:32:45:GLN:HB3	2.57	0.40
28:21:100:GLU:O	28:21:172:VAL:HG23	2.20	0.40
24:1H:107:C:O2'	24:1H:108:U:H5'	2.22	0.40
4:32:108:LEU:HD12	4:32:108:LEU:HA	1.74	0.40
1:13:235:C:H2'	1:13:236:G:C8	2.57	0.40
24:1H:2077:A:H2'	24:1H:2078:C:C6	2.53	0.40
24:14:2485:G:H5''	36:45:46:GLN:HE21	1.86	0.40
20:BA:54:LYS:HE3	20:BA:54:LYS:HB2	1.82	0.40
28:29:111:ARG:HA	37:55:2:ARG:HH12	1.86	0.40
1:1G:38:G:H22	1:1G:397:A:H5''	1.85	0.40
1:13:1121:U:C4	1:13:1122:U:C4	3.09	0.40
45:H8:76:LEU:N	45:H8:76:LEU:HD23	2.36	0.40
1:13:1072:G:H2'	1:13:1073:U:C6	2.56	0.40
35:35:96:THR:HG23	35:35:99:LEU:HB2	2.03	0.40
24:1H:705:A:O3'	27:11:7:LYS:HD2	2.21	0.40
1:1G:390:C:H2'	1:1G:391:G:C8	2.56	0.40
24:14:2861:G:H2'	24:14:2862:G:C8	2.54	0.40
24:1H:1048:A:C6	24:1H:1049:C:C4	3.09	0.40
24:1H:2751:G:N2	31:51:3:ARG:HG2	2.35	0.40
43:F8:14:SER:O	43:F8:15:GLU:C	2.60	0.40
24:14:2584:U:H6	24:14:2585:U:C5	2.39	0.40
37:55:84:ALA:HB3	37:55:85:PRO:HD3	2.04	0.40
7:62:69:VAL:HG13	7:62:134:ALA:O	2.21	0.40
1:13:922:G:C2	1:13:923:A:C4	3.10	0.40
1:1G:1355:G:H2'	1:1G:1356:G:O4'	2.21	0.40
37:98:60:LEU:O	37:98:64:ARG:HG3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:65:50:SER:O	38:65:76:LYS:NZ	2.52	0.40
1:13:662:G:H2'	1:13:663:A:C8	2.56	0.40
24:14:839:U:H1'	24:14:1191:G:H1'	2.03	0.40
9:8E:4:TYR:CZ	9:8E:88:TYR:HB2	2.56	0.40
36:88:54:MET:O	36:88:57:HIS:N	2.51	0.40
1:1G:1481:U:H2'	1:1G:1482:G:C8	2.56	0.40
6:52:45:LEU:HD13	6:52:57:GLN:OE1	2.21	0.40
24:14:2303:G:O2'	30:49:132:ASN:HB2	2.21	0.40
24:1H:1688:U:O2	24:1H:1700:A:H8	2.05	0.40
1:1G:1394:A:C5	1:1G:1501:C:H4'	2.56	0.40
24:14:2652:C:C2	24:14:2669:G:C2	3.09	0.40
24:14:1808:U:H2'	24:14:1809:A:O4'	2.21	0.40
20:BI:71:THR:HB	20:BI:72:LEU:H	1.57	0.40
1:13:1399:C:H4'	1:13:1400:C:O5'	2.20	0.40
1:13:1348:U:N3	1:13:1374:A:H2	1.97	0.40
24:1H:248:G:H5'	24:1H:250:G:N7	2.37	0.40
35:78:59:LEU:HD21	54:Q8:10:ALA:HA	2.03	0.40
24:1H:2370:G:H2'	24:1H:2371:G:O4'	2.21	0.40
1:1G:1199:U:H5'	10:1A:54:PHE:CE2	2.56	0.40
28:29:63:LEU:O	28:29:66:HIS:ND1	2.54	0.40
19:AA:81:ARG:HE	19:AA:81:ARG:HB2	1.25	0.40
24:14:1329:U:H5''	24:14:1330:C:C5	2.49	0.40
31:59:4:ILE:HD12	31:59:5:GLY:H	1.85	0.40
24:14:1060:U:H1'	24:14:1062:G:H5'	2.02	0.40
24:1H:1729:A:H2'	24:1H:1731:G:N7	2.36	0.40
1:13:198:G:C6	1:13:220:G:C2	3.09	0.40
24:1H:1528:A:C2	24:1H:1542:G:C2	3.09	0.40
1:1G:953:G:C6	1:1G:954:G:C4	3.10	0.40
29:39:125:LEU:HD21	29:39:199:TRP:CD1	2.56	0.40
28:29:112:GLY:C	28:29:159:HIS:HD2	2.25	0.40
24:14:1385:G:C4	24:14:1386:C:C5	3.09	0.40
32:69:91:SER:HB3	32:69:121:LYS:CD	2.51	0.40
31:51:80:SER:C	31:51:81:GLU:HG3	2.42	0.40
27:19:68:LYS:HB3	27:19:70:TRP:CZ3	2.56	0.40
24:1H:638:G:H2'	24:1H:639:U:C6	2.56	0.40
24:1H:640:C:H42	24:1H:648:G:H1	1.69	0.40
1:13:1288:A:O5'	1:13:1288:A:H8	2.05	0.40
24:1H:2129:C:H2'	24:1H:2130:U:O4'	2.22	0.40
24:14:1072:C:H42	24:14:1092:C:H41	1.70	0.40
24:14:489:G:C6	24:14:491:G:C5	3.09	0.40
24:1H:1231:G:H2'	24:1H:1232:G:H8	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:51:40:GLU:OE1	31:51:61:HIS:NE2	2.37	0.40
24:14:699:A:H4'	24:14:1634:A:N7	2.36	0.40
10:1I:55:LYS:HB3	10:1I:56:HIS:CD2	2.56	0.40
1:1G:979:C:C5	1:1G:980:C:C6	3.10	0.40
30:41:105:LYS:O	30:41:109:VAL:HB	2.21	0.40
29:31:33:LEU:HA	29:31:33:LEU:HD12	1.96	0.40
24:14:2876:G:O5'	39:75:2:ASN:HA	2.21	0.40
24:1H:2095:C:C4	24:1H:2096:U:C5	3.09	0.40
1:1G:624:C:O3'	16:7A:10:GLY:HA2	2.21	0.40
31:51:154:PRO:HD3	31:51:162:ILE:O	2.22	0.40
1:1G:922:G:H4'	5:42:20:GLN:HA	2.03	0.40
24:14:2118:U:H5''	24:14:2119:A:OP1	2.21	0.40
24:14:2494:G:O2'	36:45:80:GLU:HA	2.22	0.40
11:2I:15:ALA:HA	11:2I:76:GLY:O	2.20	0.40
51:N8:49:CYS:HB3	51:N8:56:LYS:HD2	2.03	0.40
39:B8:86:ILE:HG21	39:B8:86:ILE:HD13	1.73	0.40
1:1G:518:C:C4	1:1G:530:G:C5	3.10	0.40
36:88:29:PHE:HB3	36:88:65:PHE:CE1	2.56	0.40
24:14:1301:A:H2	24:14:1626:G:H21	1.69	0.40
1:1G:409:G:C6	1:1G:410:G:C4	3.10	0.40
25:1J:25:A:H2'	25:1J:26:A:O4'	2.21	0.40
1:13:894:G:H2'	1:13:895:G:O4'	2.21	0.40
30:41:6:ALA:HB3	50:M8:23:GLU:HG3	2.03	0.40
24:14:839:U:H2'	24:14:840:C:C6	2.57	0.40
1:13:1000:A:H2'	1:13:1001:G:O4'	2.21	0.40
24:1H:164:U:H6	24:1H:165:U:C6	2.40	0.40
24:1H:2771:C:H4'	28:21:202:LYS:HG2	2.03	0.40
24:1H:2756:U:H4'	24:1H:2757:A:OP1	2.20	0.40
8:7E:82:HIS:NE2	8:7E:136:GLU:OE2	2.54	0.40
4:3E:64:LEU:O	4:3E:67:ILE:HB	2.21	0.40
28:29:5:LEU:HD23	28:29:5:LEU:N	2.36	0.40
24:14:370:G:H8	24:14:370:G:OP2	2.04	0.40
14:5I:44:LEU:O	14:5I:44:LEU:HD12	2.22	0.40
46:E5:24:LYS:HA	46:E5:24:LYS:HD3	1.84	0.40
53:P8:22:MET:HB3	53:P8:22:MET:HE2	1.83	0.40
26:79:185:LEU:HD23	26:79:185:LEU:HA	1.94	0.40
31:59:74:ASN:OD1	31:59:74:ASN:N	2.55	0.40
24:14:1444(A):A:H5''	24:14:1445:C:H5	1.86	0.40
1:13:595:G:H1	1:13:641:U:HO2'	1.65	0.40
1:13:62:U:O2'	1:13:379:C:O2	2.34	0.40
5:4E:137:GLU:HG2	5:4E:140:ARG:HH21	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:6E:65:ALA:HB1	7:6E:127:ALA:HB3	2.03	0.40
22:2L:35:QUO:C6	22:2L:36:U:C4	3.04	0.40
33:15:112:LEU:HD12	33:15:112:LEU:HA	1.76	0.40
6:52:87:ARG:NH1	6:52:87:ARG:HG3	2.05	0.40
24:1H:1658:C:H2'	24:1H:1659:U:C6	2.55	0.40
22:3L:16:C:N4	22:3L:68:A:C4	2.90	0.40
24:1H:1826:G:H2'	24:1H:1827:C:H6	1.87	0.40
2:1E:39:ILE:HG22	2:1E:40:HIS:O	2.21	0.40
24:1H:2314:C:C2	24:1H:2315:G:C8	3.09	0.40
24:1H:1668:A:H4'	24:1H:1669:A:O5'	2.22	0.40
37:55:57:ARG:CG	37:55:57:ARG:HH11	2.26	0.40
24:14:1111:A:H4'	31:59:3:ARG:H	1.86	0.40
24:1H:1142(A):A:C4	24:1H:1144:G:C8	3.09	0.40
24:14:1416:G:HO2'	24:14:1417:C:H6	1.68	0.40
45:H8:52:SER:O	45:H8:54:HIS:N	2.54	0.40
24:1H:619:G:H5''	24:1H:620:G:OP2	2.22	0.40
1:13:877:C:H5''	8:7E:88:LYS:CD	2.51	0.40
1:13:878:G:H1'	8:7E:3:THR:HG21	2.02	0.40
8:7E:87:SER:CB	8:7E:93:VAL:H	2.35	0.40
36:45:70:PRO:HA	36:45:94:VAL:O	2.22	0.40
24:1H:57:C:H2'	24:1H:58:G:O4'	2.20	0.40
31:51:54:ARG:HA	31:51:55:PRO:HD3	1.73	0.40
25:16:81:G:C6	25:16:82:G:C5	3.09	0.40
1:13:659:U:C2	1:13:660:G:C8	3.09	0.40
1:13:791:G:O2'	1:13:792:A:H5'	2.21	0.40
40:C8:92:ARG:HA	40:C8:95:LEU:HB2	2.04	0.40
24:1H:2881:C:H2'	24:1H:2882:A:C8	2.56	0.40
19:AI:6:LYS:HB3	19:AI:7:LYS:H	1.77	0.40
1:1G:309:G:O2'	1:1G:607:A:N1	2.53	0.40
45:H8:102:LEU:HG	45:H8:123:ASP:HA	2.02	0.40
1:13:688:G:H2'	1:13:689:C:C6	2.54	0.40
24:1H:2029:G:H2'	24:1H:2031:A:OP1	2.21	0.40
32:69:120:ILE:HD12	32:69:126:TYR:CD2	2.57	0.40
9:8E:18:PHE:HB2	9:8E:62:TYR:O	2.21	0.40
24:1H:2815:C:H2'	24:1H:2816:C:C6	2.56	0.40
24:14:2365:G:H2'	24:14:2366:A:C8	2.57	0.40
1:1G:1106:G:H4'	3:22:171:GLY:O	2.21	0.40
24:1H:2773:C:H5''	28:21:164:ARG:HG2	2.02	0.40
1:1G:1251:A:H4'	9:82:12:GLU:CD	2.42	0.40
24:14:2859:G:C8	24:14:2859:G:C3'	3.04	0.40
24:1H:36:G:C5	24:1H:37:C:C5	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:I8:45:PHE:CE2	46:I8:69:PHE:HE2	2.40	0.40
28:29:111:ARG:HB2	28:29:160:TYR:O	2.22	0.40
1:1G:623:C:C4	1:1G:624:C:C5	3.10	0.40
12:3A:62:SER:HB2	12:3A:64:TYR:HB2	2.03	0.40
24:1H:782:A:H5'	24:1H:783:A:C2	2.57	0.40
24:1H:1049:C:C2'	24:1H:1050:A:H5'	2.52	0.40
28:21:101:ARG:HA	28:21:101:ARG:HD2	1.84	0.40
44:C5:31:LEU:HD12	44:C5:36:ALA:HB3	2.04	0.40
24:1H:649:G:H2'	24:1H:650:C:C6	2.57	0.40
9:8E:95:LYS:HE3	9:8E:95:LYS:HB2	1.82	0.40
32:61:118:LYS:HG3	32:61:119:PRO:HD2	2.03	0.40
1:1G:8:A:C5	4:32:209:ARG:HA	2.57	0.40
24:14:2839:G:C5'	37:55:46:GLY:HA2	2.52	0.40
28:21:46:ALA:HB2	28:21:82:ARG:HA	2.03	0.40
16:7A:58:TYR:O	16:7A:62:VAL:HG22	2.22	0.40
1:13:55:A:H2	32:69:82:ARG:HG3	1.86	0.40
27:11:122:ASP:O	27:11:123:ALA:HB3	2.21	0.40
41:D8:93:GLU:O	41:D8:94:LEU:HD23	2.21	0.40
24:14:649:G:H2'	24:14:650:C:O4'	2.22	0.40
19:AA:42:PRO:C	19:AA:44:MET:H	2.24	0.40
24:14:638:G:C5	24:14:651:G:C2	3.09	0.40
10:1I:13:HIS:CE1	10:1I:14:LYS:HG2	2.57	0.40
1:13:60:A:N1	1:13:107:G:O2'	2.44	0.40
24:14:105:C:H2'	24:14:106:C:C6	2.56	0.40
24:1H:2492:U:H2'	24:1H:2493:U:C6	2.56	0.40
9:8E:117:HIS:HB2	9:8E:121:ARG:O	2.22	0.40
24:14:1500:G:O2'	27:19:100:GLY:O	2.27	0.40
1:13:140:A:C5	1:13:141:A:N7	2.90	0.40
24:1H:1488:G:C5	24:1H:1489:U:C5	3.10	0.40
24:14:224:G:N7	24:14:420:C:H4'	2.37	0.40
15:6I:13:GLN:HG3	15:6I:13:GLN:H	1.73	0.40
1:13:654:G:O5'	1:13:654:G:H8	2.03	0.40
37:55:70:LEU:HD23	37:55:70:LEU:HA	1.79	0.40
29:31:68:LYS:HB3	29:31:68:LYS:HE3	1.69	0.40
24:1H:930:U:O2	24:1H:930:U:O4'	2.39	0.40
53:L5:30:VAL:H	53:L5:30:VAL:HG23	1.67	0.40
48:G5:28:LYS:HD3	48:G5:28:LYS:HA	1.91	0.40
6:5E:2:ARG:O	6:5E:66:GLU:HA	2.21	0.40
3:22:164:ARG:HG2	3:22:165:THR:H	1.86	0.40
7:62:73:MET:HG3	7:62:89:MET:O	2.22	0.40
12:3I:110:VAL:HG23	12:3I:120:TYR:HB3	2.01	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:66:C:H2'	24:1H:67:U:C6	2.57	0.40
25:1J:13:A:O2'	25:1J:14:U:H3'	2.22	0.40
10:1I:48:THR:CG2	10:1I:62:HIS:HB3	2.38	0.40
22:3L:25:G:H2'	22:3L:26:G:C8	2.46	0.40
1:1G:486:U:H2'	1:1G:486:U:O2	2.22	0.40
31:51:10:PRO:HD3	31:51:69:ARG:CD	2.51	0.40
27:11:182:LEU:HA	27:11:182:LEU:HD23	1.83	0.40
24:14:2286:A:C8	24:14:2287:A:C6	3.09	0.40
25:16:63:G:H2'	25:16:64:C:H6	1.83	0.40
22:2K:17:OMG:H5"	22:2K:69:U:O2	2.21	0.40
22:2K:17:OMG:C5	22:2K:66:G:C6	3.10	0.40
2:1E:219:VAL:HA	2:1E:222:ILE:CD1	2.51	0.40
40:85:92:ARG:CG	40:85:94:ASN:HB3	2.51	0.40
40:85:98:LEU:O	40:85:99:ALA:CB	2.69	0.40
24:1H:2210:G:H5"	24:1H:2211:G:C5	2.55	0.40
39:75:9:LEU:C	39:75:10:VAL:O	2.59	0.40
17:8I:15:MET:HE3	17:8I:15:MET:HB2	2.02	0.40
24:14:1050:A:C6	24:14:2751:G:N7	2.89	0.40
24:1H:307:G:H22	24:1H:310:A:P	2.45	0.40
1:13:1057:G:H2'	1:13:1058:G:O4'	2.21	0.40
24:1H:868:U:H2'	24:1H:869:G:O4'	2.21	0.40
36:88:66:ILE:HG22	36:88:67:ARG:N	2.37	0.40
24:14:2694:G:H2'	24:14:2695:C:H6	1.86	0.40
32:61:11:ASN:CG	32:61:12:LEU:N	2.74	0.40
38:65:3:ARG:HE	38:65:4:LEU:N	2.18	0.40
24:14:1385:G:O2'	24:14:1396:U:C6	2.73	0.40
1:1G:1409:C:C2'	1:1G:1410:G:H5'	2.52	0.40
6:5E:67:MET:HB2	6:5E:68:PRO:HD2	2.04	0.40
2:12:16:HIS:HD2	2:12:209:ARG:CZ	2.35	0.40
1:13:452:A:H62	1:13:480:U:H3	1.68	0.40
1:13:1369:C:H2'	1:13:1370:G:C8	2.56	0.40
24:14:2469:A:H3'	24:14:2470:G:H8	1.86	0.40
1:13:1335:C:H5"	1:13:1336:C:OP1	2.21	0.40
38:A8:10:ARG:HG3	38:A8:13:ARG:NH1	2.36	0.40
1:13:391:G:C6	1:13:392:G:C5	3.09	0.40
24:14:1000:A:C6	24:14:1001:A:C6	3.09	0.40
32:69:56:LYS:HG2	32:69:56:LYS:O	2.21	0.40
24:14:1461:G:H2'	24:14:1462:C:C6	2.56	0.40
1:13:109:A:H2'	1:13:326:G:N2	2.37	0.40
1:1G:183:G:O6	1:1G:194:C:N4	2.51	0.40
37:98:44:LEU:HA	37:98:44:LEU:HD23	1.88	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:630:G:N2	24:1H:632:A:H3'	2.36	0.40
9:8E:28:VAL:HA	9:8E:63:ILE:O	2.22	0.40
24:14:150:C:H2'	24:14:151:C:H6	1.85	0.40
1:13:123:C:OP1	1:13:312:C:H5'	2.21	0.40
24:14:2850:A:H3'	24:14:2851:A:H8	1.87	0.40
27:19:244:ARG:HB2	27:19:245:PRO:HD2	2.04	0.40
36:45:74:TYR:O	36:45:90:VAL:HA	2.21	0.40
31:51:150:ALA:O	31:51:153:LYS:HG3	2.21	0.40
44:C5:75:ILE:HD12	44:C5:75:ILE:HA	1.87	0.40
24:1H:2861:G:H2'	24:1H:2862:G:C8	2.57	0.40
24:14:459:U:H4'	53:L5:40:TRP:CZ3	2.56	0.40
24:14:511:U:H3'	24:14:512:G:H5''	2.03	0.40
33:58:40:PRO:HB3	40:C8:68:ALA:HB2	2.04	0.40
24:14:951:C:O2'	24:14:952:G:H5'	2.21	0.40
2:12:10:LEU:HD12	2:12:10:LEU:HA	1.87	0.40
42:E8:72:LYS:HB3	42:E8:106:ILE:HD11	2.01	0.40
24:14:2479:G:H2'	24:14:2480:C:O4'	2.21	0.40
44:C5:50:ARG:HB2	44:C5:50:ARG:HE	1.75	0.40
31:51:90:LYS:O	31:51:94:TYR:HD2	2.05	0.40
24:1H:2433:A:H5''	24:1H:2434:A:OP1	2.22	0.40
24:1H:2556:C:H2'	24:1H:2557:G:O4'	2.21	0.40
38:65:40:ILE:HG23	38:65:47:THR:HA	2.03	0.40
44:C5:6:HIS:CE1	44:C5:7:VAL:HG13	2.56	0.40
24:1H:2676:C:N4	57:1H:4211:HOH:O	2.53	0.40
15:6I:4:THR:OG1	15:6I:6:GLU:HG2	2.21	0.40
36:45:51:ARG:O	36:45:54:MET:N	2.50	0.40
24:1H:1575:C:H2'	24:1H:1576:U:O4'	2.21	0.40
1:1G:865:A:H5'	1:1G:1078:U:C5	2.56	0.40
18:9A:36:ASN:OD1	18:9A:36:ASN:N	2.53	0.40
10:1A:80:LYS:HD2	10:1A:80:LYS:HA	1.90	0.40
24:14:837:C:O5'	24:14:837:C:H6	2.05	0.40
24:14:63:U:H2'	24:14:63:U:H6	1.72	0.40
35:35:46:LYS:HB3	35:35:46:LYS:HZ2	1.87	0.40
27:19:112:GLN:HB2	27:19:115:GLN:HE21	1.86	0.40
24:1H:2179:C:H2'	24:1H:2180:U:C6	2.56	0.40
24:14:1805:U:O2	27:19:50:THR:HB	2.21	0.40
1:13:836:G:OP1	18:9I:61:LYS:NZ	2.54	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	12	235/256 (92%)	196 (83%)	35 (15%)	4 (2%)	11	43
2	1E	235/256 (92%)	199 (85%)	32 (14%)	4 (2%)	11	43
3	22	204/239 (85%)	175 (86%)	29 (14%)	0	100	100
3	2E	203/239 (85%)	185 (91%)	18 (9%)	0	100	100
4	32	206/209 (99%)	176 (85%)	26 (13%)	4 (2%)	10	40
4	3E	206/209 (99%)	191 (93%)	15 (7%)	0	100	100
5	42	149/162 (92%)	142 (95%)	7 (5%)	0	100	100
5	4E	149/162 (92%)	141 (95%)	7 (5%)	1 (1%)	26	65
6	52	99/101 (98%)	95 (96%)	4 (4%)	0	100	100
6	5E	99/101 (98%)	93 (94%)	6 (6%)	0	100	100
7	62	153/156 (98%)	145 (95%)	8 (5%)	0	100	100
7	6E	153/156 (98%)	142 (93%)	11 (7%)	0	100	100
8	72	136/138 (99%)	127 (93%)	7 (5%)	2 (2%)	13	46
8	7E	136/138 (99%)	125 (92%)	11 (8%)	0	100	100
9	82	125/128 (98%)	112 (90%)	12 (10%)	1 (1%)	24	63
9	8E	125/128 (98%)	114 (91%)	11 (9%)	0	100	100
10	1A	97/105 (92%)	85 (88%)	12 (12%)	0	100	100
10	1I	97/105 (92%)	84 (87%)	13 (13%)	0	100	100
11	2A	114/129 (88%)	102 (90%)	12 (10%)	0	100	100
11	2I	114/129 (88%)	102 (90%)	11 (10%)	1 (1%)	21	61
12	3A	123/132 (93%)	111 (90%)	12 (10%)	0	100	100
12	3I	123/132 (93%)	112 (91%)	11 (9%)	0	100	100
13	4A	115/126 (91%)	98 (85%)	12 (10%)	5 (4%)	3	19
13	4I	114/126 (90%)	98 (86%)	16 (14%)	0	100	100
14	5A	58/61 (95%)	48 (83%)	10 (17%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	5I	58/61 (95%)	52 (90%)	5 (9%)	1 (2%)	11	43
15	6A	86/89 (97%)	80 (93%)	6 (7%)	0	100	100
15	6I	86/89 (97%)	77 (90%)	9 (10%)	0	100	100
16	7A	82/88 (93%)	76 (93%)	5 (6%)	1 (1%)	16	52
16	7I	82/88 (93%)	79 (96%)	3 (4%)	0	100	100
17	8A	98/105 (93%)	92 (94%)	6 (6%)	0	100	100
17	8I	98/105 (93%)	90 (92%)	7 (7%)	1 (1%)	19	58
18	9A	70/88 (80%)	65 (93%)	5 (7%)	0	100	100
18	9I	70/88 (80%)	63 (90%)	6 (9%)	1 (1%)	14	48
19	AA	77/93 (83%)	57 (74%)	17 (22%)	3 (4%)	4	22
19	AI	81/93 (87%)	66 (82%)	13 (16%)	2 (2%)	7	32
20	BA	97/106 (92%)	83 (86%)	14 (14%)	0	100	100
20	BI	97/106 (92%)	84 (87%)	13 (13%)	0	100	100
21	1B	23/27 (85%)	22 (96%)	1 (4%)	0	100	100
21	1F	23/27 (85%)	21 (91%)	2 (9%)	0	100	100
26	7I	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%)	254 (94%)	12 (4%)	4 (2%)	13	46
27	19	271/276 (98%)	253 (93%)	15 (6%)	3 (1%)	17	55
28	21	203/206 (98%)	174 (86%)	28 (14%)	1 (0%)	34	72
28	29	203/206 (98%)	160 (79%)	34 (17%)	9 (4%)	3	18
29	31	200/210 (95%)	189 (94%)	10 (5%)	1 (0%)	34	72
29	39	206/210 (98%)	176 (85%)	21 (10%)	9 (4%)	3	18
30	41	179/182 (98%)	154 (86%)	24 (13%)	1 (1%)	30	68
30	49	179/182 (98%)	151 (84%)	25 (14%)	3 (2%)	11	43
31	51	172/180 (96%)	146 (85%)	20 (12%)	6 (4%)	4	24
31	59	169/180 (94%)	133 (79%)	35 (21%)	1 (1%)	30	68
32	61	144/148 (97%)	120 (83%)	21 (15%)	3 (2%)	9	37
32	69	144/148 (97%)	122 (85%)	19 (13%)	3 (2%)	9	37
33	15	136/140 (97%)	128 (94%)	7 (5%)	1 (1%)	26	65
33	58	136/140 (97%)	116 (85%)	13 (10%)	7 (5%)	2	15

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
34	25	120/122 (98%)	111 (92%)	9 (8%)	0	100	100
34	68	120/122 (98%)	115 (96%)	4 (3%)	1 (1%)	24	63
35	35	148/150 (99%)	118 (80%)	24 (16%)	6 (4%)	3	20
35	78	148/150 (99%)	117 (79%)	28 (19%)	3 (2%)	9	38
36	45	139/141 (99%)	114 (82%)	20 (14%)	5 (4%)	4	24
36	88	139/141 (99%)	111 (80%)	23 (16%)	5 (4%)	4	24
37	55	115/118 (98%)	103 (90%)	11 (10%)	1 (1%)	21	61
37	98	116/118 (98%)	104 (90%)	10 (9%)	2 (2%)	11	43
38	65	109/112 (97%)	93 (85%)	14 (13%)	2 (2%)	11	42
38	A8	109/112 (97%)	94 (86%)	13 (12%)	2 (2%)	11	42
39	75	135/146 (92%)	113 (84%)	19 (14%)	3 (2%)	8	36
39	B8	135/146 (92%)	117 (87%)	18 (13%)	0	100	100
40	85	115/118 (98%)	106 (92%)	9 (8%)	0	100	100
40	C8	115/118 (98%)	109 (95%)	6 (5%)	0	100	100
41	95	99/101 (98%)	82 (83%)	12 (12%)	5 (5%)	2	15
41	D8	99/101 (98%)	89 (90%)	9 (9%)	1 (1%)	19	58
42	A5	111/113 (98%)	104 (94%)	7 (6%)	0	100	100
42	E8	111/113 (98%)	103 (93%)	8 (7%)	0	100	100
43	B5	91/96 (95%)	86 (94%)	4 (4%)	1 (1%)	17	55
43	F8	90/96 (94%)	84 (93%)	4 (4%)	2 (2%)	8	36
44	C5	102/110 (93%)	72 (71%)	27 (26%)	3 (3%)	6	29
44	G8	102/110 (93%)	84 (82%)	12 (12%)	6 (6%)	2	12
45	D5	177/206 (86%)	145 (82%)	25 (14%)	7 (4%)	4	21
45	H8	173/206 (84%)	134 (78%)	32 (18%)	7 (4%)	4	21
46	E5	75/85 (88%)	73 (97%)	2 (3%)	0	100	100
46	I8	81/85 (95%)	70 (86%)	11 (14%)	0	100	100
47	F5	95/98 (97%)	87 (92%)	7 (7%)	1 (1%)	17	55
47	J8	95/98 (97%)	83 (87%)	10 (10%)	2 (2%)	9	37
48	G5	67/72 (93%)	56 (84%)	11 (16%)	0	100	100
48	K8	64/72 (89%)	61 (95%)	0	3 (5%)	3	17
49	H5	57/60 (95%)	55 (96%)	2 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
49	L8	57/60 (95%)	54 (95%)	3 (5%)	0	100	100
50	I5	61/71 (86%)	33 (54%)	24 (39%)	4 (7%)	1	9
50	M8	64/71 (90%)	45 (70%)	17 (27%)	2 (3%)	5	27
51	J5	57/60 (95%)	48 (84%)	8 (14%)	1 (2%)	11	42
51	N8	57/60 (95%)	49 (86%)	6 (10%)	2 (4%)	4	24
52	K5	43/54 (80%)	28 (65%)	15 (35%)	0	100	100
52	O8	43/54 (80%)	32 (74%)	11 (26%)	0	100	100
53	L5	47/49 (96%)	47 (100%)	0	0	100	100
53	P8	45/49 (92%)	39 (87%)	4 (9%)	2 (4%)	3	18
54	M5	60/65 (92%)	51 (85%)	6 (10%)	3 (5%)	3	16
54	Q8	60/65 (92%)	51 (85%)	7 (12%)	2 (3%)	5	26
All	All	11616/12512 (93%)	10210 (88%)	1239 (11%)	167 (1%)	14	48

All (167) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
18	9I	22	VAL
27	11	240	ALA
36	88	87	LYS
43	F8	68	ARG
44	G8	53	PRO
44	G8	81	LYS
48	K8	43	GLN
48	K8	48	HIS
53	P8	45	ALA
53	P8	46	VAL
9	82	41	VAL
28	29	51	PHE
28	29	72	VAL
30	49	36	LYS
35	35	48	PRO
35	35	49	ARG
38	65	110	LEU
39	75	106	SER
44	C5	40	GLU
45	D5	53	ILE
50	I5	5	ILE
33	58	97	ARG

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Mol	Chain	Res	Type
36	88	66	ILE
38	A8	82	ILE
45	H8	53	ILE
47	J8	90	ILE
51	N8	57	VAL
2	12	22	LYS
4	32	32	ALA
28	29	81	ILE
28	29	82	ARG
29	39	22	ALA
29	39	25	PRO
29	39	84	VAL
32	69	144	VAL
35	35	55	ARG
35	35	56	SER
36	45	21	THR
41	95	79	VAL
41	95	84	LYS
44	C5	29	GLU
45	D5	60	GLU
2	1E	237	ALA
31	51	8	PRO
31	51	9	ILE
31	51	83	TYR
33	58	9	VAL
33	58	128	HIS
36	88	6	ARG
36	88	79	LEU
44	G8	94	LYS
45	H8	6	LYS
45	H8	151	HIS
45	H8	165	VAL
2	12	234	PRO
13	4A	99	ARG
27	19	33	LEU
28	29	9	VAL
29	39	23	ASP
29	39	133	ASN
35	35	46	LYS
36	45	7	MET
45	D5	135	GLU
45	D5	161	VAL

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Mol	Chain	Res	Type
54	M5	32	LEU
2	1E	194	PRO
14	5I	16	PHE
27	11	26	LYS
31	51	167	GLU
33	58	22	THR
36	88	90	VAL
38	A8	4	LEU
41	D8	45	THR
43	F8	67	GLY
44	G8	54	LYS
44	G8	84	ARG
45	H8	60	GLU
45	H8	141	VAL
45	H8	171	ILE
48	K8	47	ASN
50	M8	34	GLU
19	AA	9	VAL
32	69	83	ALA
37	55	3	HIS
38	65	111	GLU
39	75	5	ALA
41	95	45	THR
2	1E	95	GLN
2	1E	238	LEU
17	8I	82	MET
37	98	71	GLN
51	N8	6	VAL
54	Q8	33	ASN
54	Q8	34	TRP
4	32	189	PRO
13	4A	5	ALA
19	AA	29	ARG
27	19	240	ALA
28	29	187	ALA
29	39	85	GLY
29	39	123	LEU
30	49	139	LEU
32	69	117	GLU
35	35	7	ARG
39	75	7	ILE
41	95	85	LYS

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Mol	Chain	Res	Type
43	B5	51	VAL
45	D5	8	TYR
11	2I	82	VAL
32	61	133	HIS
33	58	95	PRO
34	68	97	ARG
35	78	95	VAL
37	98	45	ARG
44	G8	76	CYS
47	J8	86	SER
27	19	3	VAL
28	29	49	LEU
29	39	28	ILE
36	45	78	PRO
36	45	127	ILE
50	I5	31	ILE
54	M5	31	HIS
54	M5	62	LEU
19	AI	9	VAL
27	11	3	VAL
30	41	5	VAL
8	72	100	ILE
13	4A	117	VAL
36	45	90	VAL
45	D5	141	VAL
47	F5	30	VAL
50	I5	22	ILE
27	11	123	ALA
2	12	39	ILE
16	7A	53	VAL
19	AA	67	VAL
30	49	5	VAL
50	I5	33	VAL
51	J5	57	VAL
5	4E	115	VAL
28	21	72	VAL
29	31	132	VAL
32	61	118	LYS
35	78	47	ASP
2	12	232	PRO
8	72	103	VAL
13	4A	4	ILE

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Mol	Chain	Res	Type
13	4A	84	ILE
28	29	25	VAL
28	29	52	LEU
19	AI	41	VAL
31	51	92	ILE
32	61	145	VAL
33	58	135	PRO
35	78	7	ARG
50	M8	5	ILE
29	39	66	PRO
31	59	151	ILE
41	95	99	ILE
44	C5	76	CYS
33	58	11	PRO
4	32	5	ILE
4	32	105	VAL
33	15	128	HIS
45	D5	61	LEU
31	51	173	PRO

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	12	205/220 (93%)	165 (80%)	40 (20%)	2	7
2	1E	205/220 (93%)	150 (73%)	55 (27%)	0	1
3	22	160/188 (85%)	123 (77%)	37 (23%)	1	4
3	2E	159/188 (85%)	135 (85%)	24 (15%)	3	15
4	32	180/181 (99%)	142 (79%)	38 (21%)	1	6
4	3E	180/181 (99%)	146 (81%)	34 (19%)	2	8
5	42	116/123 (94%)	89 (77%)	27 (23%)	1	4
5	4E	116/123 (94%)	89 (77%)	27 (23%)	1	4
6	52	90/90 (100%)	75 (83%)	15 (17%)	3	11

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	5E	90/90 (100%)	75 (83%)	15 (17%)	3	11
7	62	126/127 (99%)	100 (79%)	26 (21%)	1	6
7	6E	126/127 (99%)	98 (78%)	28 (22%)	1	5
8	72	119/119 (100%)	99 (83%)	20 (17%)	2	11
8	7E	119/119 (100%)	97 (82%)	22 (18%)	2	9
9	82	98/99 (99%)	77 (79%)	21 (21%)	1	5
9	8E	98/99 (99%)	78 (80%)	20 (20%)	1	6
10	1A	89/92 (97%)	68 (76%)	21 (24%)	1	3
10	1I	89/92 (97%)	74 (83%)	15 (17%)	2	11
11	2A	88/99 (89%)	73 (83%)	15 (17%)	2	11
11	2I	88/99 (89%)	74 (84%)	14 (16%)	3	13
12	3A	104/109 (95%)	89 (86%)	15 (14%)	4	17
12	3I	104/109 (95%)	87 (84%)	17 (16%)	3	12
13	4A	94/101 (93%)	75 (80%)	19 (20%)	1	7
13	4I	94/101 (93%)	76 (81%)	18 (19%)	2	8
14	5A	49/50 (98%)	42 (86%)	7 (14%)	4	17
14	5I	49/50 (98%)	36 (74%)	13 (26%)	0	2
15	6A	79/80 (99%)	68 (86%)	11 (14%)	4	19
15	6I	79/80 (99%)	66 (84%)	13 (16%)	3	12
16	7A	72/74 (97%)	58 (81%)	14 (19%)	2	7
16	7I	72/74 (97%)	53 (74%)	19 (26%)	0	2
17	8A	95/97 (98%)	79 (83%)	16 (17%)	2	11
17	8I	95/97 (98%)	77 (81%)	18 (19%)	2	8
18	9A	63/77 (82%)	54 (86%)	9 (14%)	4	17
18	9I	63/77 (82%)	54 (86%)	9 (14%)	4	17
19	AA	68/80 (85%)	53 (78%)	15 (22%)	1	5
19	AI	72/80 (90%)	59 (82%)	13 (18%)	2	9
20	BA	76/82 (93%)	64 (84%)	12 (16%)	3	13
20	BI	76/82 (93%)	60 (79%)	16 (21%)	1	6
21	1B	20/22 (91%)	16 (80%)	4 (20%)	1	7
21	1F	20/22 (91%)	19 (95%)	1 (5%)	30	67

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
26	71	111/181 (61%)	103 (93%)	8 (7%)	18	53
26	79	111/181 (61%)	99 (89%)	12 (11%)	8	30
27	11	214/218 (98%)	172 (80%)	42 (20%)	1	7
27	19	214/218 (98%)	176 (82%)	38 (18%)	2	10
28	21	165/166 (99%)	130 (79%)	35 (21%)	1	6
28	29	165/166 (99%)	132 (80%)	33 (20%)	1	7
29	31	161/166 (97%)	123 (76%)	38 (24%)	1	3
29	39	165/166 (99%)	126 (76%)	39 (24%)	1	3
30	41	155/156 (99%)	128 (83%)	27 (17%)	2	11
30	49	155/156 (99%)	116 (75%)	39 (25%)	1	2
31	51	145/148 (98%)	112 (77%)	33 (23%)	1	4
31	59	142/148 (96%)	112 (79%)	30 (21%)	1	6
32	61	122/124 (98%)	97 (80%)	25 (20%)	1	6
32	69	122/124 (98%)	85 (70%)	37 (30%)	0	1
33	15	117/119 (98%)	88 (75%)	29 (25%)	1	3
33	58	117/119 (98%)	84 (72%)	33 (28%)	0	1
34	25	100/100 (100%)	82 (82%)	18 (18%)	2	10
34	68	100/100 (100%)	85 (85%)	15 (15%)	3	15
35	35	116/116 (100%)	78 (67%)	38 (33%)	0	0
35	78	116/116 (100%)	75 (65%)	41 (35%)	0	0
36	45	111/111 (100%)	92 (83%)	19 (17%)	2	11
36	88	111/111 (100%)	88 (79%)	23 (21%)	1	6
37	55	100/101 (99%)	81 (81%)	19 (19%)	2	8
37	98	101/101 (100%)	84 (83%)	17 (17%)	2	11
38	65	87/88 (99%)	57 (66%)	30 (34%)	0	0
38	A8	87/88 (99%)	71 (82%)	16 (18%)	2	9
39	75	117/127 (92%)	89 (76%)	28 (24%)	1	3
39	B8	120/127 (94%)	83 (69%)	37 (31%)	0	1
40	85	93/94 (99%)	76 (82%)	17 (18%)	2	9
40	C8	93/94 (99%)	75 (81%)	18 (19%)	2	7
41	95	82/82 (100%)	65 (79%)	17 (21%)	1	6

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
41	D8	82/82 (100%)	57 (70%)	25 (30%)	0	1
42	A5	92/92 (100%)	71 (77%)	21 (23%)	1	4
42	E8	92/92 (100%)	68 (74%)	24 (26%)	0	2
43	B5	74/78 (95%)	59 (80%)	15 (20%)	1	6
43	F8	74/78 (95%)	57 (77%)	17 (23%)	1	4
44	C5	85/91 (93%)	64 (75%)	21 (25%)	1	3
44	G8	85/91 (93%)	66 (78%)	19 (22%)	1	4
45	D5	158/179 (88%)	122 (77%)	36 (23%)	1	4
45	H8	154/179 (86%)	116 (75%)	38 (25%)	1	3
46	E5	62/67 (92%)	51 (82%)	11 (18%)	2	10
46	I8	66/67 (98%)	52 (79%)	14 (21%)	1	6
47	F5	82/83 (99%)	62 (76%)	20 (24%)	1	3
47	J8	82/83 (99%)	58 (71%)	24 (29%)	0	1
48	G5	64/67 (96%)	51 (80%)	13 (20%)	1	6
48	K8	62/67 (92%)	47 (76%)	15 (24%)	1	3
49	H5	51/52 (98%)	42 (82%)	9 (18%)	2	10
49	L8	51/52 (98%)	41 (80%)	10 (20%)	1	7
50	I5	57/63 (90%)	44 (77%)	13 (23%)	1	4
50	M8	59/63 (94%)	51 (86%)	8 (14%)	5	19
51	J5	51/52 (98%)	39 (76%)	12 (24%)	1	4
51	N8	51/52 (98%)	35 (69%)	16 (31%)	0	1
52	K5	44/52 (85%)	27 (61%)	17 (39%)	0	0
52	O8	44/52 (85%)	33 (75%)	11 (25%)	1	2
53	L5	42/42 (100%)	32 (76%)	10 (24%)	1	3
53	P8	40/42 (95%)	32 (80%)	8 (20%)	1	7
54	M5	52/55 (94%)	39 (75%)	13 (25%)	1	2
54	Q8	50/55 (91%)	30 (60%)	20 (40%)	0	0
All	All	9806/10360 (95%)	7722 (79%)	2084 (21%)	1	6

All (2084) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	1E	5	ILE

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Mol	Chain	Res	Type
2	1E	6	THR
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	24	TRP
2	1E	41	ILE
2	1E	42	ILE
2	1E	49	GLU
2	1E	53	ARG
2	1E	71	VAL
2	1E	75	LYS
2	1E	79	ASP
2	1E	83	MET
2	1E	87	ARG
2	1E	90	MET
2	1E	97	TRP
2	1E	103	THR
2	1E	106	LYS
2	1E	108	ILE
2	1E	111	ARG
2	1E	118	LEU
2	1E	136	VAL
2	1E	139	LYS
2	1E	140	HIS
2	1E	145	LEU
2	1E	150	SER
2	1E	155	LEU
2	1E	157	ARG
2	1E	163	PHE
2	1E	169	LYS
2	1E	170	GLU
2	1E	172	ILE
2	1E	178	ARG
2	1E	185	ILE
2	1E	187	LEU
2	1E	192	SER
2	1E	195	ASP
2	1E	196	LEU
2	1E	197	VAL

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Mol	Chain	Res	Type
2	1E	200	ILE
2	1E	210	SER
2	1E	211	ILE
2	1E	213	LEU
2	1E	214	ILE
2	1E	215	LEU
2	1E	217	ARG
2	1E	221	LEU
2	1E	222	ILE
2	1E	223	ILE
2	1E	226	ARG
2	1E	230	VAL
3	2E	3	ASN
3	2E	8	ILE
3	2E	17	ASP
3	2E	26	LYS
3	2E	30	ARG
3	2E	38	ARG
3	2E	45	LYS
3	2E	48	TYR
3	2E	49	SER
3	2E	62	ASP
3	2E	67	THR
3	2E	95	THR
3	2E	102	ASN
3	2E	104	GLN
3	2E	154	SER
3	2E	165	THR
3	2E	179	ARG
3	2E	184	TYR
3	2E	188	LEU
3	2E	191	THR
3	2E	195	VAL
3	2E	196	LEU
3	2E	202	ILE
3	2E	206	GLU
4	3E	3	ARG
4	3E	8	VAL
4	3E	10	ARG
4	3E	15	GLU
4	3E	30	LYS
4	3E	33	MET

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Mol	Chain	Res	Type
4	3E	35	ARG
4	3E	45	GLN
4	3E	47	ARG
4	3E	58	LEU
4	3E	59	ARG
4	3E	60	GLU
4	3E	84	LYS
4	3E	86	LYS
4	3E	89	THR
4	3E	92	VAL
4	3E	96	LEU
4	3E	106	TYR
4	3E	107	ARG
4	3E	108	LEU
4	3E	114	ARG
4	3E	122	ARG
4	3E	127	THR
4	3E	135	LEU
4	3E	141	ARG
4	3E	146	ILE
4	3E	154	ASN
4	3E	165	MET
4	3E	166	LYS
4	3E	184	LYS
4	3E	188	LEU
4	3E	190	ASP
4	3E	192	GLU
4	3E	193	ASP
5	4E	5	ASP
5	4E	8	GLU
5	4E	10	MET
5	4E	12	LEU
5	4E	14	ARG
5	4E	18	ARG
5	4E	19	MET
5	4E	25	ARG
5	4E	27	ARG
5	4E	31	LEU
5	4E	41	VAL
5	4E	45	PHE
5	4E	50	GLU
5	4E	51	VAL

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Mol	Chain	Res	Type
5	4E	53	LEU
5	4E	64	ARG
5	4E	68	GLU
5	4E	72	GLN
5	4E	78	HIS
5	4E	81	GLU
5	4E	87	SER
5	4E	91	LEU
5	4E	101	ILE
5	4E	121	LYS
5	4E	126	ARG
5	4E	131	ILE
5	4E	153	LYS
6	5E	10	LEU
6	5E	16	GLN
6	5E	21	LEU
6	5E	23	LYS
6	5E	24	GLU
6	5E	55	ASP
6	5E	63	TYR
6	5E	64	GLN
6	5E	65	VAL
6	5E	72	VAL
6	5E	74	ASP
6	5E	75	LEU
6	5E	87	ARG
6	5E	92	LYS
6	5E	98	LEU
7	6E	5	ARG
7	6E	6	ARG
7	6E	8	GLU
7	6E	12	LEU
7	6E	16	LEU
7	6E	23	VAL
7	6E	24	THR
7	6E	27	ILE
7	6E	38	LEU
7	6E	41	ARG
7	6E	47	CYS
7	6E	52	GLU
7	6E	63	LYS
7	6E	66	VAL

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Mol	Chain	Res	Type
7	6E	73	MET
7	6E	75	VAL
7	6E	90	GLU
7	6E	91	VAL
7	6E	95	ARG
7	6E	104	LEU
7	6E	109	ASN
7	6E	113	GLU
7	6E	115	ARG
7	6E	122	HIS
7	6E	139	GLU
7	6E	143	ARG
7	6E	155	ARG
7	6E	156	TRP
8	7E	3	THR
8	7E	21	LYS
8	7E	24	THR
8	7E	26	VAL
8	7E	29	SER
8	7E	45	ILE
8	7E	49	GLU
8	7E	52	ASP
8	7E	54	ASP
8	7E	68	ARG
8	7E	69	ARG
8	7E	82	HIS
8	7E	84	ARG
8	7E	85	ARG
8	7E	95	VAL
8	7E	97	VAL
8	7E	102	ARG
8	7E	112	LEU
8	7E	115	SER
8	7E	118	VAL
8	7E	122	ARG
8	7E	129	VAL
9	8E	2	GLU
9	8E	9	ARG
9	8E	14	VAL
9	8E	17	VAL
9	8E	38	GLN
9	8E	42	ARG

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Mol	Chain	Res	Type
9	8E	44	VAL
9	8E	47	LEU
9	8E	58	HIS
9	8E	75	ASP
9	8E	85	LEU
9	8E	86	VAL
9	8E	92	TYR
9	8E	93	ARG
9	8E	105	ASP
9	8E	108	VAL
9	8E	111	ARG
9	8E	114	TYR
9	8E	117	HIS
9	8E	121	ARG
10	1I	5	ARG
10	1I	6	ILE
10	1I	23	ILE
10	1I	24	VAL
10	1I	29	ARG
10	1I	34	VAL
10	1I	38	ILE
10	1I	48	THR
10	1I	56	HIS
10	1I	62	HIS
10	1I	75	ILE
10	1I	78	ASN
10	1I	84	GLN
10	1I	96	ILE
10	1I	98	ILE
11	2I	13	GLN
11	2I	14	VAL
11	2I	25	TYR
11	2I	29	ILE
11	2I	32	ILE
11	2I	40	ILE
11	2I	67	ASP
11	2I	91	ARG
11	2I	93	GLN
11	2I	99	GLN
11	2I	103	LEU
11	2I	109	VAL
11	2I	123	LYS

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Mol	Chain	Res	Type
11	2I	124	LYS
12	3I	11	VAL
12	3I	21	LYS
12	3I	23	LYS
12	3I	33	ARG
12	3I	39	VAL
12	3I	47	LYS
12	3I	55	VAL
12	3I	62	SER
12	3I	66	VAL
12	3I	70	ILE
12	3I	89	ARG
12	3I	92	ASP
12	3I	97	ARG
12	3I	114	LYS
12	3I	116	SER
12	3I	118	SER
12	3I	127	GLU
13	4I	19	LEU
13	4I	21	TYR
13	4I	44	ARG
13	4I	47	ASP
13	4I	56	LEU
13	4I	63	THR
13	4I	64	TRP
13	4I	66	LEU
13	4I	70	LEU
13	4I	84	ILE
13	4I	88	ARG
13	4I	93	ARG
13	4I	102	ARG
13	4I	103	THR
13	4I	105	THR
13	4I	108	ARG
13	4I	114	ARG
13	4I	115	LYS
14	5I	3	ARG
14	5I	9	LYS
14	5I	17	LYS
14	5I	18	VAL
14	5I	22	THR
14	5I	23	ARG

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Mol	Chain	Res	Type
14	5I	32	SER
14	5I	33	VAL
14	5I	40	CYS
14	5I	44	LEU
14	5I	56	VAL
14	5I	58	LYS
14	5I	60	SER
15	6I	22	THR
15	6I	26	GLU
15	6I	31	LEU
15	6I	35	ARG
15	6I	38	ARG
15	6I	39	LEU
15	6I	47	LYS
15	6I	48	LYS
15	6I	58	MET
15	6I	65	ARG
15	6I	67	LEU
15	6I	82	ILE
15	6I	87	ILE
16	7I	1	MET
16	7I	2	VAL
16	7I	4	ILE
16	7I	5	ARG
16	7I	6	LEU
16	7I	8	ARG
16	7I	11	SER
16	7I	20	VAL
16	7I	25	ARG
16	7I	26	ARG
16	7I	28	ARG
16	7I	32	TYR
16	7I	36	ILE
16	7I	49	LEU
16	7I	55	ARG
16	7I	69	THR
16	7I	71	ARG
16	7I	75	ARG
16	7I	82	GLN
17	8I	9	VAL
17	8I	14	LYS
17	8I	27	PHE

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Mol	Chain	Res	Type
17	8I	38	ARG
17	8I	39	SER
17	8I	45	HIS
17	8I	48	GLU
17	8I	50	LYS
17	8I	52	LYS
17	8I	53	LEU
17	8I	60	ILE
17	8I	77	VAL
17	8I	81	ARG
17	8I	89	LEU
17	8I	90	ILE
17	8I	91	ARG
17	8I	97	SER
17	8I	99	SER
18	9I	26	LEU
18	9I	29	PHE
18	9I	32	ARG
18	9I	54	ARG
18	9I	55	ARG
18	9I	56	THR
18	9I	76	LEU
18	9I	83	GLU
18	9I	85	LEU
19	AI	7	LYS
19	AI	12	ASP
19	AI	15	LEU
19	AI	29	ARG
19	AI	31	ILE
19	AI	36	ARG
19	AI	37	ARG
19	AI	51	VAL
19	AI	58	VAL
19	AI	61	TYR
19	AI	65	ASN
19	AI	67	VAL
19	AI	78	ARG
20	BI	8	ARG
20	BI	9	ASN
20	BI	10	LEU
20	BI	22	ARG
20	BI	23	ARG

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Mol	Chain	Res	Type
20	BI	24	LEU
20	BI	26	ASN
20	BI	30	LYS
20	BI	53	LEU
20	BI	54	LYS
20	BI	62	LEU
20	BI	73	HIS
20	BI	75	ASN
20	BI	83	ARG
20	BI	87	LYS
20	BI	105	SER
21	1F	15	ARG
26	71	28	LEU
26	71	34	THR
26	71	168	THR
26	71	172	HIS
26	71	183	GLU
26	71	207	THR
26	71	216	THR
26	71	223	ARG
27	11	4	LYS
27	11	14	ARG
27	11	17	THR
27	11	23	GLU
27	11	25	THR
27	11	27	THR
27	11	28	GLU
27	11	31	LYS
27	11	38	LYS
27	11	59	LYS
27	11	61	LEU
27	11	64	ILE
27	11	65	ILE
27	11	68	LYS
27	11	69	ARG
27	11	83	GLU
27	11	88	ARG
27	11	94	LEU
27	11	103	ARG
27	11	105	ILE
27	11	106	ILE
27	11	111	LEU

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Mol	Chain	Res	Type
27	11	112	GLN
27	11	136	ILE
27	11	155	LEU
27	11	165	ILE
27	11	171	ASP
27	11	173	VAL
27	11	176	ARG
27	11	192	THR
27	11	205	VAL
27	11	212	SER
27	11	213	ARG
27	11	217	ARG
27	11	218	ARG
27	11	221	VAL
27	11	228	PRO
27	11	229	VAL
27	11	242	ARG
27	11	253	GLN
27	11	259	THR
27	11	271	ILE
28	21	2	LYS
28	21	4	ILE
28	21	5	LEU
28	21	13	ARG
28	21	14	ILE
28	21	26	ILE
28	21	33	VAL
28	21	34	VAL
28	21	37	ARG
28	21	47	VAL
28	21	59	VAL
28	21	61	ARG
28	21	64	LYS
28	21	66	HIS
28	21	67	PHE
28	21	78	LEU
28	21	80	GLU
28	21	82	ARG
28	21	87	GLU
28	21	111	ARG
28	21	116	VAL
28	21	117	MET

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Mol	Chain	Res	Type
28	21	119	ARG
28	21	144	ARG
28	21	146	THR
28	21	149	ARG
28	21	154	LYS
28	21	175	VAL
28	21	179	GLU
28	21	180	ASN
28	21	181	LEU
28	21	184	VAL
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	23	ASP
29	31	24	LEU
29	31	32	LEU
29	31	33	LEU
29	31	38	ARG
29	31	50	SER
29	31	56	GLU
29	31	57	VAL
29	31	60	SER
29	31	64	ILE
29	31	65	TRP
29	31	68	LYS
29	31	78	ILE
29	31	82	ILE
29	31	106	ARG
29	31	117	ARG
29	31	127	GLU
29	31	135	LYS
29	31	136	THR
29	31	140	LEU
29	31	145	GLU
29	31	153	SER
29	31	158	THR
29	31	170	LEU
29	31	174	VAL

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Mol	Chain	Res	Type
29	31	175	THR
29	31	181	LEU
29	31	188	ARG
29	31	191	ARG
29	31	192	LEU
29	31	194	MET
29	31	197	ASP
29	31	201	VAL
29	31	203	GLN
30	41	31	VAL
30	41	33	ARG
30	41	49	ASP
30	41	52	ILE
30	41	53	LEU
30	41	67	LYS
30	41	70	VAL
30	41	71	THR
30	41	81	LYS
30	41	82	LEU
30	41	83	ARG
30	41	84	LYS
30	41	88	ILE
30	41	90	LEU
30	41	91	ARG
30	41	104	GLU
30	41	116	ASP
30	41	118	ARG
30	41	120	LEU
30	41	121	ASN
30	41	128	ARG
30	41	130	ASN
30	41	140	ILE
30	41	153	ARG
30	41	161	THR
30	41	162	THR
30	41	172	LEU
31	51	3	ARG
31	51	4	ILE
31	51	7	LEU
31	51	9	ILE
31	51	13	LYS
31	51	24	VAL

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Mol	Chain	Res	Type
31	51	32	GLU
31	51	34	GLU
31	51	43	VAL
31	51	45	VAL
31	51	50	VAL
31	51	53	GLU
31	51	71	LEU
31	51	77	LYS
31	51	83	TYR
31	51	84	SER
31	51	87	LEU
31	51	95	ARG
31	51	104	GLU
31	51	105	LEU
31	51	121	ILE
31	51	122	THR
31	51	125	VAL
31	51	129	THR
31	51	131	VAL
31	51	132	ARG
31	51	133	VAL
31	51	134	SER
31	51	136	ILE
31	51	139	GLN
31	51	153	LYS
31	51	169	VAL
31	51	170	ARG
32	61	1	MET
32	61	3	VAL
32	61	7	GLU
32	61	35	LEU
32	61	37	VAL
32	61	40	THR
32	61	41	GLU
32	61	50	ARG
32	61	60	GLU
32	61	62	LYS
32	61	64	GLU
32	61	68	LEU
32	61	70	GLU
32	61	71	ILE
32	61	85	GLU

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Mol	Chain	Res	Type
32	61	87	LYS
32	61	92	VAL
32	61	95	LYS
32	61	114	LEU
32	61	116	LEU
32	61	121	LYS
32	61	128	LEU
32	61	135	GLU
32	61	136	VAL
32	61	142	VAL
33	58	1	MET
33	58	5	VAL
33	58	8	GLN
33	58	10	GLU
33	58	15	LEU
33	58	16	ILE
33	58	32	THR
33	58	34	LEU
33	58	35	ARG
33	58	39	ARG
33	58	42	TRP
33	58	43	THR
33	58	45	ASN
33	58	48	MET
33	58	58	ASP
33	58	60	ILE
33	58	63	THR
33	58	65	LYS
33	58	67	LEU
33	58	68	GLU
33	58	70	LYS
33	58	85	ILE
33	58	87	LEU
33	58	90	MET
33	58	96	GLU
33	58	99	LEU
33	58	106	MET
33	58	122	VAL
33	58	127	ASP
33	58	128	HIS
33	58	130	HIS
33	58	131	GLN

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Mol	Chain	Res	Type
33	58	134	ARG
34	68	5	GLN
34	68	8	LEU
34	68	9	GLU
34	68	24	VAL
34	68	25	LEU
34	68	28	SER
34	68	53	LYS
34	68	58	VAL
34	68	78	ARG
34	68	94	ARG
34	68	97	ARG
34	68	108	GLU
34	68	115	VAL
34	68	116	SER
34	68	117	LEU
35	78	1	MET
35	78	4	SER
35	78	6	LEU
35	78	7	ARG
35	78	10	PRO
35	78	16	ARG
35	78	18	ARG
35	78	19	VAL
35	78	21	ARG
35	78	27	HIS
35	78	38	GLN
35	78	41	ARG
35	78	42	SER
35	78	45	LEU
35	78	46	LYS
35	78	49	ARG
35	78	50	ARG
35	78	52	GLU
35	78	56	SER
35	78	59	LEU
35	78	62	LEU
35	78	64	LYS
35	78	75	ILE
35	78	77	ARG
35	78	85	LEU
35	78	88	LEU

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Mol	Chain	Res	Type
35	78	96	THR
35	78	100	LEU
35	78	105	LEU
35	78	106	LEU
35	78	112	LEU
35	78	114	ILE
35	78	115	LEU
35	78	117	GLU
35	78	126	VAL
35	78	133	SER
35	78	138	LEU
35	78	144	GLU
35	78	146	VAL
35	78	147	LEU
35	78	148	LEU
36	88	5	ARG
36	88	7	MET
36	88	10	ARG
36	88	18	LYS
36	88	25	ASP
36	88	26	TYR
36	88	43	THR
36	88	45	GLN
36	88	51	ARG
36	88	52	VAL
36	88	55	VAL
36	88	59	ARG
36	88	60	ARG
36	88	79	LEU
36	88	82	ARG
36	88	85	LYS
36	88	89	ASN
36	88	91	GLU
36	88	99	PRO
36	88	110	THR
36	88	112	GLU
36	88	131	ILE
36	88	139	GLU
37	98	6	SER
37	98	17	ARG
37	98	18	LEU
37	98	27	SER

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Mol	Chain	Res	Type
37	98	28	LEU
37	98	29	LEU
37	98	36	THR
37	98	40	LYS
37	98	44	LEU
37	98	65	LEU
37	98	67	LEU
37	98	74	LYS
37	98	75	LEU
37	98	79	LEU
37	98	100	LEU
37	98	105	ARG
37	98	107	ASP
38	A8	4	LEU
38	A8	11	LYS
38	A8	15	ARG
38	A8	19	LYS
38	A8	21	THR
38	A8	26	LEU
38	A8	35	ILE
38	A8	36	TYR
38	A8	41	ASP
38	A8	43	GLU
38	A8	52	SER
38	A8	53	SER
38	A8	69	VAL
38	A8	98	VAL
38	A8	101	LEU
38	A8	107	GLU
39	B8	9	LEU
39	B8	10	VAL
39	B8	12	SER
39	B8	15	VAL
39	B8	16	ARG
39	B8	17	THR
39	B8	18	ASP
39	B8	19	LEU
39	B8	21	GLU
39	B8	27	THR
39	B8	30	VAL
39	B8	38	ASN
39	B8	39	ARG

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Mol	Chain	Res	Type
39	B8	44	ASP
39	B8	49	VAL
39	B8	50	ILE
39	B8	62	THR
39	B8	64	ARG
39	B8	73	GLU
39	B8	74	ARG
39	B8	80	SER
39	B8	86	ILE
39	B8	87	ASP
39	B8	88	ILE
39	B8	89	VAL
39	B8	96	ARG
39	B8	98	LYS
39	B8	105	LEU
39	B8	106	SER
39	B8	109	GLU
39	B8	110	ILE
39	B8	115	ARG
39	B8	118	ARG
39	B8	125	ARG
39	B8	128	GLU
39	B8	129	ARG
39	B8	136	GLN
40	C8	5	LYS
40	C8	27	LEU
40	C8	34	LYS
40	C8	52	ARG
40	C8	57	PHE
40	C8	70	ARG
40	C8	74	LEU
40	C8	75	ASN
40	C8	84	LYS
40	C8	89	GLU
40	C8	90	VAL
40	C8	92	ARG
40	C8	95	LEU
40	C8	98	LEU
40	C8	108	GLU
40	C8	109	LEU
40	C8	111	GLU
40	C8	112	ARG

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Mol	Chain	Res	Type
41	D8	6	LYS
41	D8	7	THR
41	D8	12	TYR
41	D8	13	ARG
41	D8	18	LEU
41	D8	20	LEU
41	D8	23	GLU
41	D8	24	LYS
41	D8	25	LEU
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	57	VAL
41	D8	58	VAL
41	D8	62	LEU
41	D8	64	HIS
41	D8	72	VAL
41	D8	78	LYS
41	D8	88	ARG
41	D8	98	GLU
42	E8	1	MET
42	E8	2	GLU
42	E8	6	ILE
42	E8	11	ARG
42	E8	19	LEU
42	E8	20	VAL
42	E8	37	ARG
42	E8	39	THR
42	E8	51	LEU
42	E8	52	GLU
42	E8	69	LEU
42	E8	76	VAL
42	E8	78	GLU
42	E8	83	LYS
42	E8	88	ARG
42	E8	92	ARG
42	E8	94	ASP

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Mol	Chain	Res	Type
42	E8	95	ILE
42	E8	96	ILE
42	E8	97	LYS
42	E8	100	THR
42	E8	106	ILE
42	E8	107	LEU
42	E8	111	HIS
43	F8	3	THR
43	F8	8	ILE
43	F8	12	VAL
43	F8	15	GLU
43	F8	23	GLU
43	F8	33	LYS
43	F8	40	LYS
43	F8	53	LYS
43	F8	55	ASN
43	F8	65	ARG
43	F8	68	ARG
43	F8	76	ARG
43	F8	78	LYS
43	F8	80	ILE
43	F8	81	VAL
43	F8	89	ILE
43	F8	92	LEU
44	G8	7	VAL
44	G8	14	LEU
44	G8	21	LYS
44	G8	24	VAL
44	G8	29	GLU
44	G8	31	LEU
44	G8	38	ILE
44	G8	47	LYS
44	G8	49	VAL
44	G8	52	SER
44	G8	54	LYS
44	G8	57	GLN
44	G8	64	GLU
44	G8	67	LEU
44	G8	84	ARG
44	G8	85	VAL
44	G8	86	ARG
44	G8	90	LEU

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Mol	Chain	Res	Type
44	G8	99	CYS
45	H8	2	GLU
45	H8	9	TYR
45	H8	16	SER
45	H8	18	LEU
45	H8	19	ARG
45	H8	20	ARG
45	H8	24	LEU
45	H8	33	LEU
45	H8	34	ASN
45	H8	35	ARG
45	H8	37	VAL
45	H8	41	LEU
45	H8	47	VAL
45	H8	52	SER
45	H8	53	ILE
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	81	ARG
45	H8	82	ARG
45	H8	91	LEU
45	H8	94	GLU
45	H8	97	GLU
45	H8	107	THR
45	H8	111	VAL
45	H8	120	ILE
45	H8	121	HIS
45	H8	132	ASN
45	H8	140	ASP
45	H8	155	LEU
45	H8	163	LEU
45	H8	165	VAL
45	H8	168	GLU
45	H8	169	GLU
46	I8	3	HIS
46	I8	4	LYS
46	I8	10	THR

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Mol	Chain	Res	Type
46	I8	20	ARG
46	I8	36	ILE
46	I8	40	GLN
46	I8	41	ARG
46	I8	43	THR
46	I8	53	MET
46	I8	64	ASP
46	I8	66	VAL
46	I8	68	GLU
46	I8	72	ARG
46	I8	80	HIS
47	J8	4	VAL
47	J8	6	GLU
47	J8	19	GLN
47	J8	26	ARG
47	J8	40	ARG
47	J8	41	ARG
47	J8	46	LEU
47	J8	53	VAL
47	J8	62	VAL
47	J8	65	SER
47	J8	69	LYS
47	J8	73	LEU
47	J8	74	VAL
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	86	SER
47	J8	89	GLU
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	24	LEU
48	K8	32	LEU
48	K8	35	LEU

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Mol	Chain	Res	Type
48	K8	44	LEU
48	K8	47	ASN
48	K8	48	HIS
48	K8	53	LEU
48	K8	64	LEU
48	K8	65	ASN
48	K8	66	GLU
48	K8	69	ARG
49	L8	6	VAL
49	L8	8	LEU
49	L8	11	SER
49	L8	18	ASP
49	L8	23	LEU
49	L8	30	ARG
49	L8	31	LEU
49	L8	35	ARG
49	L8	37	LEU
49	L8	40	THR
50	M8	10	VAL
50	M8	48	ARG
50	M8	50	VAL
50	M8	51	ASP
50	M8	57	GLU
50	M8	60	GLN
50	M8	61	ARG
50	M8	63	TYR
51	N8	5	PRO
51	N8	9	LYS
51	N8	10	LYS
51	N8	11	THR
51	N8	15	ARG
51	N8	16	ARG
51	N8	26	THR
51	N8	29	THR
51	N8	33	CYS
51	N8	36	CYS
51	N8	40	LYS
51	N8	44	THR
51	N8	51	TYR
51	N8	52	TYR
51	N8	55	ARG
51	N8	58	LEU

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Mol	Chain	Res	Type
52	O8	9	LEU
52	O8	10	LEU
52	O8	23	THR
52	O8	28	ARG
52	O8	30	THR
52	O8	32	ASN
52	O8	36	LEU
52	O8	39	TYR
52	O8	43	CYS
52	O8	44	ARG
52	O8	51	GLU
53	P8	4	THR
53	P8	8	ASN
53	P8	11	LYS
53	P8	14	LYS
53	P8	23	ARG
53	P8	24	THR
53	P8	43	THR
53	P8	46	VAL
54	Q8	2	PRO
54	Q8	4	MET
54	Q8	8	LYS
54	Q8	11	LYS
54	Q8	13	ARG
54	Q8	15	LYS
54	Q8	19	SER
54	Q8	23	VAL
54	Q8	25	MET
54	Q8	26	LYS
54	Q8	30	ARG
54	Q8	40	GLU
54	Q8	49	VAL
54	Q8	54	GLU
54	Q8	56	GLU
54	Q8	57	ARG
54	Q8	58	ILE
54	Q8	59	LYS
54	Q8	60	LEU
54	Q8	62	LEU
2	12	6	THR
2	12	8	LYS
2	12	19	HIS

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Mol	Chain	Res	Type
2	12	20	GLU
2	12	23	ARG
2	12	24	TRP
2	12	32	ILE
2	12	41	ILE
2	12	44	LEU
2	12	47	THR
2	12	48	MET
2	12	56	ARG
2	12	58	ILE
2	12	67	THR
2	12	69	LEU
2	12	71	VAL
2	12	76	GLN
2	12	86	GLU
2	12	90	MET
2	12	98	LEU
2	12	107	THR
2	12	111	ARG
2	12	118	LEU
2	12	140	HIS
2	12	144	ARG
2	12	164	VAL
2	12	168	THR
2	12	172	ILE
2	12	176	GLU
2	12	185	ILE
2	12	196	LEU
2	12	200	ILE
2	12	205	ASP
2	12	212	GLN
2	12	215	LEU
2	12	223	ILE
2	12	230	VAL
2	12	233	SER
2	12	238	LEU
2	12	239	VAL
3	22	3	ASN
3	22	4	LYS
3	22	12	LEU
3	22	14	ILE
3	22	15	THR

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Mol	Chain	Res	Type
3	22	16	ARG
3	22	21	ARG
3	22	27	LYS
3	22	28	GLN
3	22	29	TYR
3	22	34	LEU
3	22	39	ILE
3	22	40	ARG
3	22	42	LEU
3	22	46	GLU
3	22	47	LEU
3	22	59	ARG
3	22	64	VAL
3	22	72	LYS
3	22	79	ARG
3	22	84	ILE
3	22	88	ARG
3	22	89	GLU
3	22	94	LEU
3	22	104	GLN
3	22	110	ASN
3	22	118	GLN
3	22	119	ARG
3	22	142	MET
3	22	167	TRP
3	22	178	LEU
3	22	179	ARG
3	22	184	TYR
3	22	188	LEU
3	22	202	ILE
3	22	204	LEU
3	22	207	VAL
4	32	12	CYS
4	32	15	GLU
4	32	18	LYS
4	32	24	GLU
4	32	25	ARG
4	32	27	TYR
4	32	30	LYS
4	32	35	ARG
4	32	36	ARG
4	32	38	TYR

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Mol	Chain	Res	Type
4	32	42	GLN
4	32	49	ARG
4	32	50	ARG
4	32	53	ASP
4	32	58	LEU
4	32	59	ARG
4	32	64	LEU
4	32	66	ARG
4	32	76	ARG
4	32	107	ARG
4	32	108	LEU
4	32	119	GLN
4	32	122	ARG
4	32	132	ARG
4	32	134	ASP
4	32	135	LEU
4	32	139	ARG
4	32	141	ARG
4	32	145	GLU
4	32	154	ASN
4	32	156	GLU
4	32	158	ILE
4	32	175	SER
4	32	187	ARG
4	32	191	ARG
4	32	192	GLU
4	32	194	LEU
4	32	200	GLU
5	42	6	PHE
5	42	12	LEU
5	42	16	THR
5	42	24	ARG
5	42	25	ARG
5	42	26	PHE
5	42	33	VAL
5	42	47	LYS
5	42	49	PRO
5	42	50	GLU
5	42	51	VAL
5	42	60	TYR
5	42	68	GLU
5	42	73	ASN

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Mol	Chain	Res	Type
5	42	78	HIS
5	42	79	GLU
5	42	81	GLU
5	42	90	VAL
5	42	91	LEU
5	42	92	LYS
5	42	101	ILE
5	42	107	ARG
5	42	112	LEU
5	42	115	VAL
5	42	135	THR
5	42	144	THR
5	42	147	ASP
6	52	3	ARG
6	52	16	GLN
6	52	21	LEU
6	52	23	LYS
6	52	24	GLU
6	52	27	GLN
6	52	40	VAL
6	52	46	ARG
6	52	71	ARG
6	52	78	GLU
6	52	83	ASP
6	52	87	ARG
6	52	92	LYS
6	52	95	GLU
6	52	98	LEU
7	62	6	ARG
7	62	8	GLU
7	62	9	VAL
7	62	12	LEU
7	62	21	VAL
7	62	24	THR
7	62	29	LYS
7	62	49	ILE
7	62	54	THR
7	62	57	GLU
7	62	58	PRO
7	62	60	LYS
7	62	73	MET
7	62	78	ARG

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Mol	Chain	Res	Type
7	62	80	VAL
7	62	85	TYR
7	62	89	MET
7	62	90	GLU
7	62	91	VAL
7	62	94	ARG
7	62	98	SER
7	62	114	ARG
7	62	115	ARG
7	62	124	LEU
7	62	129	GLU
7	62	149	ARG
8	72	1	MET
8	72	3	THR
8	72	21	LYS
8	72	23	SER
8	72	25	ASP
8	72	33	GLU
8	72	39	LEU
8	72	41	ARG
8	72	49	GLU
8	72	56	LYS
8	72	68	ARG
8	72	82	HIS
8	72	85	ARG
8	72	91	ARG
8	72	92	ARG
8	72	97	VAL
8	72	111	ILE
8	72	112	LEU
8	72	115	SER
8	72	129	VAL
9	82	2	GLU
9	82	7	THR
9	82	9	ARG
9	82	10	ARG
9	82	20	ARG
9	82	27	THR
9	82	37	PHE
9	82	38	GLN
9	82	40	LEU
9	82	42	ARG

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Mol	Chain	Res	Type
9	82	64	THR
9	82	65	VAL
9	82	75	ASP
9	82	77	ILE
9	82	79	LEU
9	82	88	TYR
9	82	95	LYS
9	82	97	LYS
9	82	104	ARG
9	82	118	LYS
9	82	125	TYR
10	1A	6	ILE
10	1A	17	ASP
10	1A	19	SER
10	1A	22	LYS
10	1A	29	ARG
10	1A	40	LEU
10	1A	50	ILE
10	1A	51	ARG
10	1A	55	LYS
10	1A	58	ASP
10	1A	59	SER
10	1A	60	ARG
10	1A	62	HIS
10	1A	66	ARG
10	1A	75	ILE
10	1A	78	ASN
10	1A	79	ARG
10	1A	90	LEU
10	1A	92	THR
10	1A	95	GLU
10	1A	99	LYS
11	2A	12	ARG
11	2A	14	VAL
11	2A	21	ILE
11	2A	24	SER
11	2A	29	ILE
11	2A	30	VAL
11	2A	48	ILE
11	2A	63	LEU
11	2A	70	LYS
11	2A	77	MET

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Mol	Chain	Res	Type
11	2A	78	GLN
11	2A	83	ILE
11	2A	93	GLN
11	2A	112	THR
11	2A	114	VAL
12	3A	24	VAL
12	3A	28	LYS
12	3A	33	ARG
12	3A	38	THR
12	3A	41	ARG
12	3A	43	VAL
12	3A	44	THR
12	3A	53	ARG
12	3A	54	LYS
12	3A	57	LYS
12	3A	60	LEU
12	3A	64	TYR
12	3A	89	ARG
12	3A	97	ARG
12	3A	111	LYS
13	4A	3	ARG
13	4A	7	VAL
13	4A	12	ASN
13	4A	43	THR
13	4A	44	ARG
13	4A	50	GLU
13	4A	57	ARG
13	4A	60	VAL
13	4A	63	THR
13	4A	64	TRP
13	4A	66	LEU
13	4A	79	LYS
13	4A	82	MET
13	4A	83	ASP
13	4A	94	ARG
13	4A	101	GLN
13	4A	106	ASN
13	4A	108	ARG
13	4A	109	THR
14	5A	6	LEU
14	5A	8	GLU
14	5A	16	PHE

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Mol	Chain	Res	Type
14	5A	35	ARG
14	5A	41	ARG
14	5A	44	LEU
14	5A	58	LYS
15	6A	3	ILE
15	6A	10	LYS
15	6A	27	VAL
15	6A	34	LEU
15	6A	39	LEU
15	6A	40	SER
15	6A	65	ARG
15	6A	82	ILE
15	6A	83	GLU
15	6A	84	LYS
15	6A	88	ARG
16	7A	1	MET
16	7A	2	VAL
16	7A	5	ARG
16	7A	11	SER
16	7A	19	ILE
16	7A	20	VAL
16	7A	21	VAL
16	7A	27	LYS
16	7A	45	THR
16	7A	47	ASP
16	7A	55	ARG
16	7A	67	THR
16	7A	73	LEU
16	7A	74	LEU
17	8A	6	LEU
17	8A	12	SER
17	8A	13	ASP
17	8A	26	GLN
17	8A	34	LYS
17	8A	36	ILE
17	8A	48	GLU
17	8A	49	GLU
17	8A	52	LYS
17	8A	53	LEU
17	8A	57	VAL
17	8A	63	ARG
17	8A	68	ARG

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Mol	Chain	Res	Type
17	8A	69	LYS
17	8A	74	LEU
17	8A	84	LEU
18	9A	21	LYS
18	9A	26	LEU
18	9A	31	LEU
18	9A	32	ARG
18	9A	39	VAL
18	9A	42	ARG
18	9A	82	THR
18	9A	84	LYS
18	9A	86	VAL
19	AA	7	LYS
19	AA	10	PHE
19	AA	14	HIS
19	AA	37	ARG
19	AA	40	ILE
19	AA	43	GLU
19	AA	55	LYS
19	AA	58	VAL
19	AA	60	VAL
19	AA	63	THR
19	AA	64	GLU
19	AA	70	LYS
19	AA	78	ARG
19	AA	81	ARG
19	AA	83	HIS
20	BA	10	LEU
20	BA	23	ARG
20	BA	36	LEU
20	BA	37	SER
20	BA	39	LYS
20	BA	56	MET
20	BA	71	THR
20	BA	72	LEU
20	BA	75	ASN
20	BA	80	ARG
20	BA	86	ARG
20	BA	87	LYS
21	1B	15	ARG
21	1B	22	ARG
21	1B	24	ARG

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Mol	Chain	Res	Type
21	1B	25	LYS
26	79	10	LEU
26	79	21	THR
26	79	31	GLU
26	79	53	ARG
26	79	55	ASP
26	79	57	ASN
26	79	167	LYS
26	79	168	THR
26	79	172	HIS
26	79	188	ASN
26	79	196	LEU
26	79	205	LYS
27	19	7	LYS
27	19	23	GLU
27	19	28	GLU
27	19	30	GLU
27	19	32	SER
27	19	33	LEU
27	19	37	LEU
27	19	43	ARG
27	19	49	ILE
27	19	61	LEU
27	19	64	ILE
27	19	65	ILE
27	19	88	ARG
27	19	89	SER
27	19	94	LEU
27	19	101	GLU
27	19	103	ARG
27	19	105	ILE
27	19	109	ASP
27	19	112	GLN
27	19	141	VAL
27	19	157	ARG
27	19	165	ILE
27	19	166	GLN
27	19	173	VAL
27	19	192	THR
27	19	200	ASP
27	19	211	ARG
27	19	217	ARG

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Mol	Chain	Res	Type
27	19	218	ARG
27	19	242	ARG
27	19	244	ARG
27	19	255	LYS
27	19	257	LEU
27	19	260	ARG
27	19	262	ARG
27	19	263	ARG
27	19	271	ILE
28	29	4	ILE
28	29	27	LEU
28	29	33	VAL
28	29	38	THR
28	29	41	LYS
28	29	45	THR
28	29	48	GLN
28	29	51	PHE
28	29	59	VAL
28	29	61	ARG
28	29	66	HIS
28	29	67	PHE
28	29	76	ARG
28	29	78	LEU
28	29	79	ARG
28	29	82	ARG
28	29	87	GLU
28	29	107	THR
28	29	116	VAL
28	29	119	ARG
28	29	140	SER
28	29	144	ARG
28	29	154	LYS
28	29	165	VAL
28	29	171	GLU
28	29	181	LEU
28	29	182	LEU
28	29	184	VAL
28	29	188	VAL
28	29	197	ILE
28	29	199	ARG
28	29	200	GLU
28	29	203	LYS

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Mol	Chain	Res	Type
29	39	2	LYS
29	39	3	GLU
29	39	6	VAL
29	39	7	TYR
29	39	8	GLN
29	39	11	VAL
29	39	13	SER
29	39	19	GLU
29	39	20	LEU
29	39	23	ASP
29	39	33	LEU
29	39	38	ARG
29	39	40	GLN
29	39	41	LEU
29	39	53	THR
29	39	63	LYS
29	39	64	ILE
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	98	SER
29	39	108	LYS
29	39	110	LEU
29	39	123	LEU
29	39	124	LEU
29	39	127	GLU
29	39	151	SER
29	39	158	THR
29	39	171	PRO
29	39	175	THR
29	39	181	LEU
29	39	191	ARG
29	39	192	LEU
29	39	196	LEU
29	39	200	GLU
29	39	205	ARG
30	49	3	LEU
30	49	5	VAL
30	49	7	LEU

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Mol	Chain	Res	Type
30	49	14	GLU
30	49	16	ARG
30	49	25	TYR
30	49	26	GLN
30	49	31	VAL
30	49	33	ARG
30	49	39	ILE
30	49	40	ASN
30	49	41	GLN
30	49	43	LEU
30	49	45	GLU
30	49	48	GLU
30	49	59	GLU
30	49	63	ILE
30	49	64	THR
30	49	67	LYS
30	49	71	THR
30	49	79	ASN
30	49	80	PHE
30	49	81	LYS
30	49	86	MET
30	49	91	ARG
30	49	94	LEU
30	49	95	ARG
30	49	128	ARG
30	49	130	ASN
30	49	133	LEU
30	49	138	GLN
30	49	140	ILE
30	49	147	ASP
30	49	148	MET
30	49	149	VAL
30	49	150	ASP
30	49	164	GLU
30	49	172	LEU
30	49	173	LEU
31	59	4	ILE
31	59	9	ILE
31	59	30	LYS
31	59	32	GLU
31	59	35	VAL
31	59	41	MET

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Mol	Chain	Res	Type
31	59	44	VAL
31	59	47	GLU
31	59	49	VAL
31	59	51	ARG
31	59	52	VAL
31	59	56	SER
31	59	57	ASP
31	59	83	TYR
31	59	95	ARG
31	59	101	ARG
31	59	103	LEU
31	59	104	GLU
31	59	105	LEU
31	59	107	VAL
31	59	122	THR
31	59	123	PHE
31	59	127	GLU
31	59	129	THR
31	59	143	GLN
31	59	157	TYR
31	59	159	GLU
31	59	160	LYS
31	59	164	TYR
31	59	171	LEU
32	69	4	ILE
32	69	7	GLU
32	69	9	LEU
32	69	10	GLU
32	69	14	ASP
32	69	19	VAL
32	69	38	LEU
32	69	40	THR
32	69	47	LEU
32	69	50	ARG
32	69	56	LYS
32	69	62	LYS
32	69	67	ARG
32	69	76	THR
32	69	77	LEU
32	69	82	ARG
32	69	85	GLU
32	69	86	THR

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Mol	Chain	Res	Type
32	69	87	LYS
32	69	101	LEU
32	69	102	SER
32	69	103	ARG
32	69	105	HIS
32	69	109	ILE
32	69	113	ARG
32	69	114	LEU
32	69	116	LEU
32	69	122	GLU
32	69	125	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	142	VAL
32	69	145	VAL
33	15	7	LYS
33	15	9	VAL
33	15	10	GLU
33	15	15	LEU
33	15	32	THR
33	15	33	LEU
33	15	34	LEU
33	15	38	HIS
33	15	42	TRP
33	15	48	MET
33	15	50	ASP
33	15	60	ILE
33	15	62	VAL
33	15	63	THR
33	15	67	LEU
33	15	68	GLU
33	15	87	LEU
33	15	93	THR
33	15	94	HIS
33	15	98	VAL
33	15	99	LEU
33	15	104	LYS
33	15	106	MET

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Mol	Chain	Res	Type
33	15	116	LEU
33	15	120	LEU
33	15	127	ASP
33	15	131	GLN
33	15	134	ARG
33	15	137	LYS
34	25	1	MET
34	25	8	LEU
34	25	10	VAL
34	25	22	ILE
34	25	23	ARG
34	25	24	VAL
34	25	26	LYS
34	25	29	ASN
34	25	52	VAL
34	25	71	ARG
34	25	78	ARG
34	25	82	ASN
34	25	87	ILE
34	25	91	LEU
34	25	96	THR
34	25	98	VAL
34	25	108	GLU
34	25	117	LEU
35	35	2	LYS
35	35	3	LEU
35	35	5	ASP
35	35	6	LEU
35	35	15	ARG
35	35	21	ARG
35	35	30	THR
35	35	41	ARG
35	35	45	LEU
35	35	46	LYS
35	35	49	ARG
35	35	50	ARG
35	35	52	GLU
35	35	59	LEU
35	35	61	ARG
35	35	65	ARG
35	35	70	GLN
35	35	71	VAL

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Mol	Chain	Res	Type
35	35	75	ILE
35	35	76	LYS
35	35	79	ARG
35	35	83	VAL
35	35	85	LEU
35	35	90	ARG
35	35	91	PHE
35	35	96	THR
35	35	98	GLU
35	35	105	LEU
35	35	111	ARG
35	35	112	LEU
35	35	114	ILE
35	35	125	VAL
35	35	126	VAL
35	35	133	SER
35	35	138	LEU
35	35	144	GLU
35	35	146	VAL
35	35	147	LEU
36	45	5	ARG
36	45	7	MET
36	45	10	ARG
36	45	35	VAL
36	45	42	ILE
36	45	45	GLN
36	45	52	VAL
36	45	56	ARG
36	45	60	ARG
36	45	64	ILE
36	45	81	VAL
36	45	83	MET
36	45	90	VAL
36	45	109	VAL
36	45	110	THR
36	45	118	LEU
36	45	129	THR
36	45	131	ILE
36	45	137	TYR
37	55	18	LEU
37	55	28	LEU
37	55	29	LEU

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Mol	Chain	Res	Type
37	55	33	ARG
37	55	36	THR
37	55	37	THR
37	55	44	LEU
37	55	48	VAL
37	55	57	ARG
37	55	65	LEU
37	55	67	LEU
37	55	75	LEU
37	55	79	LEU
37	55	95	THR
37	55	102	GLU
37	55	105	ARG
37	55	107	ASP
37	55	113	LEU
37	55	117	VAL
38	65	3	ARG
38	65	12	PHE
38	65	15	ARG
38	65	18	ILE
38	65	25	ARG
38	65	26	LEU
38	65	29	PHE
38	65	30	ARG
38	65	36	TYR
38	65	40	ILE
38	65	41	ASP
38	65	42	ASP
38	65	44	LYS
38	65	50	SER
38	65	57	LYS
38	65	58	LEU
38	65	59	LYS
38	65	61	ASN
38	65	64	GLU
38	65	69	VAL
38	65	71	ARG
38	65	78	LEU
38	65	83	LYS
38	65	89	ARG
38	65	97	ARG
38	65	98	VAL

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Mol	Chain	Res	Type
38	65	101	LEU
38	65	106	ARG
38	65	107	GLU
38	65	110	LEU
39	75	3	ARG
39	75	12	SER
39	75	13	ARG
39	75	15	VAL
39	75	17	THR
39	75	27	THR
39	75	30	VAL
39	75	35	LYS
39	75	40	THR
39	75	41	ARG
39	75	50	ILE
39	75	51	ARG
39	75	54	ARG
39	75	55	ASN
39	75	57	PHE
39	75	59	THR
39	75	62	THR
39	75	64	ARG
39	75	74	ARG
39	75	85	LYS
39	75	86	ILE
39	75	89	VAL
39	75	91	ARG
39	75	93	ARG
39	75	105	LEU
39	75	107	ASP
39	75	112	ARG
39	75	125	ARG
40	85	5	LYS
40	85	17	ILE
40	85	20	LEU
40	85	25	TRP
40	85	27	LEU
40	85	31	SER
40	85	33	ARG
40	85	55	ARG
40	85	64	ARG
40	85	74	LEU

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Mol	Chain	Res	Type
40	85	83	LEU
40	85	88	ILE
40	85	92	ARG
40	85	97	ASP
40	85	98	LEU
40	85	101	ARG
40	85	112	ARG
41	95	7	THR
41	95	19	LYS
41	95	21	ARG
41	95	26	ASP
41	95	32	THR
41	95	47	VAL
41	95	53	GLU
41	95	62	LEU
41	95	68	LYS
41	95	73	SER
41	95	76	LYS
41	95	81	TYR
41	95	83	ARG
41	95	84	LYS
41	95	88	ARG
41	95	95	LEU
41	95	100	ARG
42	A5	1	MET
42	A5	11	ARG
42	A5	15	ARG
42	A5	20	VAL
42	A5	23	LEU
42	A5	41	LYS
42	A5	50	VAL
42	A5	51	LEU
42	A5	60	ASN
42	A5	65	LEU
42	A5	70	TYR
42	A5	71	VAL
42	A5	76	VAL
42	A5	82	LEU
42	A5	90	ARG
42	A5	92	ARG
42	A5	94	ASP
42	A5	106	ILE

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Mol	Chain	Res	Type
42	A5	107	LEU
42	A5	110	LYS
42	A5	111	HIS
43	B5	8	ILE
43	B5	35	THR
43	B5	48	LYS
43	B5	51	VAL
43	B5	52	VAL
43	B5	53	LYS
43	B5	54	VAL
43	B5	57	LEU
43	B5	60	ARG
43	B5	63	LYS
43	B5	66	LEU
43	B5	69	TYR
43	B5	76	ARG
43	B5	80	ILE
43	B5	92	LEU
44	C5	2	ARG
44	C5	5	MET
44	C5	6	HIS
44	C5	14	LEU
44	C5	23	ARG
44	C5	35	TYR
44	C5	38	ILE
44	C5	44	ILE
44	C5	45	VAL
44	C5	47	LYS
44	C5	50	ARG
44	C5	60	PHE
44	C5	62	GLU
44	C5	70	SER
44	C5	84	ARG
44	C5	86	ARG
44	C5	87	LYS
44	C5	89	PHE
44	C5	97	ARG
44	C5	98	VAL
44	C5	99	CYS
45	D5	2	GLU
45	D5	14	LYS
45	D5	16	SER

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Mol	Chain	Res	Type
45	D5	19	ARG
45	D5	24	LEU
45	D5	32	HIS
45	D5	41	LEU
45	D5	42	VAL
45	D5	53	ILE
45	D5	59	LEU
45	D5	71	VAL
45	D5	72	ARG
45	D5	74	VAL
45	D5	77	ASP
45	D5	81	ARG
45	D5	89	PHE
45	D5	93	ASP
45	D5	98	MET
45	D5	100	VAL
45	D5	104	PHE
45	D5	107	THR
45	D5	117	LEU
45	D5	118	GLN
45	D5	120	ILE
45	D5	123	ASP
45	D5	132	ASN
45	D5	133	ILE
45	D5	138	GLU
45	D5	140	ASP
45	D5	154	ASP
45	D5	161	VAL
45	D5	163	LEU
45	D5	165	VAL
45	D5	174	VAL
45	D5	175	VAL
45	D5	179	ASP
46	E5	9	SER
46	E5	11	ARG
46	E5	12	ASN
46	E5	25	ARG
46	E5	36	ILE
46	E5	44	ARG
46	E5	50	ASN
46	E5	55	ARG
46	E5	63	VAL

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Mol	Chain	Res	Type
46	E5	72	ARG
46	E5	74	ARG
47	F5	4	VAL
47	F5	8	SER
47	F5	25	LYS
47	F5	38	SER
47	F5	41	ARG
47	F5	42	GLN
47	F5	52	ARG
47	F5	56	GLN
47	F5	67	ILE
47	F5	70	VAL
47	F5	72	GLU
47	F5	76	ARG
47	F5	81	LYS
47	F5	82	LEU
47	F5	83	GLU
47	F5	89	GLU
47	F5	91	LYS
47	F5	93	GLU
47	F5	97	LEU
47	F5	98	LEU
48	G5	5	GLU
48	G5	7	ARG
48	G5	16	LEU
48	G5	19	VAL
48	G5	20	GLU
48	G5	24	LEU
48	G5	32	LEU
48	G5	40	SER
48	G5	46	GLN
48	G5	53	LEU
48	G5	59	ARG
48	G5	60	LEU
48	G5	64	LEU
49	H5	5	LYS
49	H5	8	LEU
49	H5	17	LYS
49	H5	18	ASP
49	H5	30	ARG
49	H5	33	GLN
49	H5	35	ARG

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Mol	Chain	Res	Type
49	H5	40	THR
49	H5	55	ARG
50	I5	9	LEU
50	I5	14	ILE
50	I5	15	ILE
50	I5	18	CYS
50	I5	22	ILE
50	I5	31	ILE
50	I5	32	TYR
50	I5	42	PHE
50	I5	50	VAL
50	I5	53	GLU
50	I5	55	ARG
50	I5	58	ARG
50	I5	62	ARG
51	J5	4	HIS
51	J5	8	LYS
51	J5	12	SER
51	J5	16	ARG
51	J5	26	THR
51	J5	29	THR
51	J5	35	GLU
51	J5	48	GLU
51	J5	49	CYS
51	J5	51	TYR
51	J5	55	ARG
51	J5	56	LYS
52	K5	11	LEU
52	K5	12	GLU
52	K5	13	CYS
52	K5	18	ARG
52	K5	23	THR
52	K5	24	GLU
52	K5	25	LYS
52	K5	27	LYS
52	K5	30	THR
52	K5	32	ASN
52	K5	37	ARG
52	K5	38	LYS
52	K5	42	TRP
52	K5	43	CYS
52	K5	45	LYS

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Mol	Chain	Res	Type
52	K5	50	ARG
52	K5	52	VAL
53	L5	1	MET
53	L5	4	THR
53	L5	8	ASN
53	L5	11	LYS
53	L5	14	LYS
53	L5	24	THR
53	L5	43	THR
53	L5	46	VAL
53	L5	47	ARG
53	L5	48	LYS
54	M5	4	MET
54	M5	11	LYS
54	M5	22	VAL
54	M5	30	ARG
54	M5	32	LEU
54	M5	36	LYS
54	M5	40	GLU
54	M5	46	ARG
54	M5	49	VAL
54	M5	50	LEU
54	M5	57	ARG
54	M5	59	LYS
54	M5	62	LEU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (21) such sidechains are listed below:

Mol	Chain	Res	Type
3	2E	6	HIS
27	11	143	HIS
32	61	104	GLN
34	68	29	ASN
35	78	9	ASN
39	B8	79	HIS
40	C8	75	ASN
43	F8	55	ASN
45	H8	54	HIS
50	M8	60	GLN
3	22	6	HIS
4	32	119	GLN
5	42	78	HIS

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Mol	Chain	Res	Type
13	4A	101	GLN
19	AA	57	HIS
26	79	66	HIS
27	19	58	HIS
29	39	203	GLN
40	85	81	HIS
41	95	11	GLN
45	D5	118	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	13	1492/1522 (98%)	352 (23%)	26 (1%)
1	1G	1502/1522 (98%)	370 (24%)	39 (2%)
22	2K	77/85 (90%)	33 (42%)	5 (6%)
22	2L	74/85 (87%)	25 (33%)	8 (10%)
22	3K	81/85 (95%)	23 (28%)	3 (3%)
22	3L	82/85 (96%)	21 (25%)	3 (3%)
23	4K	16/30 (53%)	7 (43%)	3 (18%)
23	4L	7/30 (23%)	4 (57%)	1 (14%)
24	14	2908/2917 (99%)	685 (23%)	48 (1%)
24	1H	2911/2917 (99%)	698 (23%)	56 (1%)
25	16	121/122 (99%)	38 (31%)	0
25	1J	121/122 (99%)	34 (28%)	0
All	All	9392/9522 (98%)	2290 (24%)	192 (2%)

All (2290) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	13	5	U
1	13	6	G
1	13	7	G
1	13	9	G
1	13	32	A
1	13	39	G
1	13	44	G
1	13	48	C
1	13	50	A
1	13	51	A
1	13	59	A
1	13	60	A

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Mol	Chain	Res	Type
1	13	61	G
1	13	65	U
1	13	66	G
1	13	76	G
1	13	78	G
1	13	89	U
1	13	91	C
1	13	95	G
1	13	96	G
1	13	101	A
1	13	108	G
1	13	113	G
1	13	115	G
1	13	121	C
1	13	131	C
1	13	143	A
1	13	144	G
1	13	156	G
1	13	158	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	189	U
1	13	190	G
1	13	191(A)	G
1	13	192	U
1	13	195	A
1	13	197	A
1	13	199	G
1	13	201	C
1	13	208	U
1	13	209	U
1	13	210	U
1	13	216	G
1	13	226	G
1	13	244	U
1	13	245	C
1	13	247	G
1	13	251	G

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Mol	Chain	Res	Type
1	13	257	G
1	13	262	A
1	13	266	G
1	13	267	C
1	13	281	G
1	13	289	G
1	13	313	A
1	13	321	A
1	13	328	C
1	13	329	A
1	13	332	G
1	13	344	A
1	13	345	C
1	13	346	G
1	13	347	G
1	13	351	G
1	13	352	C
1	13	353	A
1	13	354	G
1	13	355	C
1	13	362	G
1	13	367	U
1	13	372	C
1	13	373	A
1	13	382	A
1	13	383	A
1	13	384	G
1	13	388	G
1	13	390	C
1	13	397	A
1	13	398	C
1	13	406	G
1	13	411	A
1	13	412	A
1	13	413	G
1	13	419	C
1	13	422	C
1	13	424	G
1	13	429	U
1	13	430	A
1	13	439	A
1	13	442	C

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Mol	Chain	Res	Type
1	13	454	C
1	13	455	C
1	13	466	C
1	13	467	G
1	13	477	G
1	13	482	A
1	13	484	G
1	13	485	G
1	13	487	A
1	13	496	A
1	13	497	U
1	13	498	A
1	13	505	G
1	13	508	C
1	13	509	A
1	13	510	A
1	13	511	C
1	13	513	C
1	13	518	C
1	13	522	C
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	561	U
1	13	569	C
1	13	572	A
1	13	573	A
1	13	576	G
1	13	577	G
1	13	580	U
1	13	587	G
1	13	596	C
1	13	602	A
1	13	607	A
1	13	610	G
1	13	620	C
1	13	630	G
1	13	631	G

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Mol	Chain	Res	Type
1	13	632	A
1	13	633	G
1	13	642	A
1	13	651	C
1	13	653	A
1	13	659	U
1	13	665	A
1	13	679	C
1	13	686	U
1	13	687	A
1	13	702	A
1	13	703	G
1	13	704	A
1	13	711	G
1	13	723	U
1	13	724	G
1	13	731	G
1	13	748	C
1	13	749	C
1	13	753	A
1	13	755	G
1	13	763	G
1	13	777	A
1	13	785	G
1	13	788	U
1	13	792	A
1	13	793	U
1	13	794	A
1	13	796	C
1	13	798	G
1	13	805	C
1	13	812	C
1	13	813	U
1	13	815	A
1	13	817	C
1	13	818	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

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Mol	Chain	Res	Type
1	13	870	U
1	13	874	G
1	13	885	G
1	13	902	G
1	13	914	A
1	13	916	G
1	13	926	G
1	13	927	G
1	13	929	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	960	U
1	13	966	G
1	13	968	A
1	13	969	A
1	13	974	A
1	13	975	A
1	13	976	G
1	13	977	A
1	13	978	A
1	13	982	U
1	13	983	A
1	13	991	U
1	13	993	G
1	13	1001	G
1	13	1002	G
1	13	1004	A
1	13	1006	C
1	13	1009	G
1	13	1011	G
1	13	1012	U
1	13	1017	G
1	13	1020	U
1	13	1021	G
1	13	1024	G
1	13	1025	U
1	13	1026	G
1	13	1027	C

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Mol	Chain	Res	Type
1	13	1028	C
1	13	1029	G
1	13	1030	C
1	13	1032(A)	G
1	13	1036	G
1	13	1044	A
1	13	1046	A
1	13	1052	U
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	1099	G
1	13	1101	A
1	13	1108	G
1	13	1124	G
1	13	1125	U
1	13	1126	U
1	13	1127	G
1	13	1129	C
1	13	1130	A
1	13	1131	G
1	13	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	1152	A
1	13	1157	A
1	13	1158	C
1	13	1159	U
1	13	1160	G
1	13	1177	G
1	13	1181	G
1	13	1182	G
1	13	1183	A
1	13	1184	G

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Mol	Chain	Res	Type
1	13	1188	A
1	13	1189	C
1	13	1191	A
1	13	1193	G
1	13	1195	C
1	13	1196	U
1	13	1197	G
1	13	1211	U
1	13	1213	A
1	13	1218	C
1	13	1225	A
1	13	1227	A
1	13	1233	G
1	13	1238	A
1	13	1240	U
1	13	1252	A
1	13	1253	G
1	13	1256	A
1	13	1257	U
1	13	1258	G
1	13	1260	C
1	13	1270	C
1	13	1272	G
1	13	1273	G
1	13	1278	U
1	13	1279	A
1	13	1280	A
1	13	1281	U
1	13	1282	C
1	13	1286	A
1	13	1287	A
1	13	1290	G
1	13	1291	G
1	13	1299	A
1	13	1300	G
1	13	1302	U
1	13	1305	G
1	13	1310	G
1	13	1312	G
1	13	1317	C
1	13	1319	A
1	13	1320	C

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Mol	Chain	Res	Type
1	13	1322	C
1	13	1323	G
1	13	1331	G
1	13	1335	C
1	13	1336	C
1	13	1337	G
1	13	1338	G
1	13	1339	A
1	13	1346	A
1	13	1347	G
1	13	1350	A
1	13	1353	G
1	13	1356	G
1	13	1358	U
1	13	1359	C
1	13	1361	G
1	13	1362(A)	C
1	13	1364	U
1	13	1370	G
1	13	1379	G
1	13	1381	U
1	13	1398	A
1	13	1401	G
1	13	1416	G
1	13	1419	G
1	13	1422	G
1	13	1435	G
1	13	1442	G
1	13	1443	G
1	13	1446	A
1	13	1451	A
1	13	1452	C
1	13	1453	G
1	13	1454	G
1	13	1459	C
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

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Mol	Chain	Res	Type
1	13	1517	G
1	13	1529	G
1	13	1530	G
1	13	1531	A
22	2K	2	G
22	2K	6	G
22	2K	7	G
22	2K	8	4SU
22	2K	9	U
22	2K	14	A
22	2K	15	G
22	2K	19	C
22	2K	20	C
22	2K	21	A
22	2K	24	G
22	2K	25	G
22	2K	34	U
22	2K	36	U
22	2K	40	PSU
22	2K	45	C
22	2K	47	U
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	63	5MU
22	2K	64	PSU
22	2K	65	C
22	2K	69	U
22	2K	71	C
22	2K	72	U
22	2K	73	U
22	2K	74	C
22	2K	82	A
22	2K	85	A
22	3K	6	G
22	3K	7	G
22	3K	8	4SU
22	3K	9	U
22	3K	14	A

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Mol	Chain	Res	Type
22	3K	15	G
22	3K	18	G
22	3K	19	C
22	3K	20	C
22	3K	21	A
22	3K	22	A
22	3K	25	G
22	3K	31	G
22	3K	34	U
22	3K	41	C
22	3K	46	G
22	3K	48	C
22	3K	52	G
22	3K	56	U
22	3K	68	A
22	3K	69	U
22	3K	79	A
22	3K	85	A
23	4K	10	G
23	4K	11	U
23	4K	12	A
23	4K	13	A
23	4K	14	A
23	4K	19	A
23	4K	23	A
24	1H	2	G
24	1H	4	C
24	1H	5	A
24	1H	9	U
24	1H	23	G
24	1H	34	C
24	1H	35	G
24	1H	46	C
24	1H	51	G
24	1H	55	G
24	1H	59	U
24	1H	63	U
24	1H	70	G
24	1H	71	A
24	1H	74	A
24	1H	75	G
24	1H	83	G

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Mol	Chain	Res	Type
24	1H	85	G
24	1H	92	G
24	1H	93	C
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	129	C
24	1H	131	G
24	1H	138	G
24	1H	155	C
24	1H	163	U
24	1H	164	U
24	1H	165	U
24	1H	180	G
24	1H	181	A
24	1H	196	A
24	1H	199	A
24	1H	200	U
24	1H	214	G
24	1H	215	G
24	1H	216	A
24	1H	221	A
24	1H	222	A
24	1H	223	A
24	1H	224	G
24	1H	228	A
24	1H	229	A
24	1H	230	U
24	1H	233	A
24	1H	245	G
24	1H	248	G
24	1H	250	G
24	1H	252	G
24	1H	266	G
24	1H	269	U
24	1H	270(K)	C
24	1H	270(M)	U
24	1H	270(N)	G

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Mol	Chain	Res	Type
24	1H	271(C)	U
24	1H	271	G
24	1H	273(D)	C
24	1H	274	G
24	1H	275	G
24	1H	277	C
24	1H	278	A
24	1H	299	A
24	1H	310	A
24	1H	311	A
24	1H	316	C
24	1H	323	G
24	1H	324	A
24	1H	329	G
24	1H	330	A
24	1H	334	C
24	1H	340	A
24	1H	345	A
24	1H	352	G
24	1H	353	G
24	1H	360	G
24	1H	363(D)	G
24	1H	372	G
24	1H	386	G
24	1H	389	G
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	443	A
24	1H	444	C
24	1H	448	U
24	1H	449	A
24	1H	451	C
24	1H	452	G
24	1H	454	A
24	1H	455	C
24	1H	457	A
24	1H	463	G
24	1H	481	G

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Mol	Chain	Res	Type
24	1H	482	A
24	1H	501	A
24	1H	505	A
24	1H	508	G
24	1H	509	C
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	546	C
24	1H	547	A
24	1H	556	G
24	1H	563	G
24	1H	564	C
24	1H	567	A
24	1H	573	G
24	1H	574	C
24	1H	575	A
24	1H	577	G
24	1H	586	A
24	1H	592	G
24	1H	593	G
24	1H	595	C
24	1H	603	A
24	1H	607	U
24	1H	614	U
24	1H	615	G
24	1H	617	G
24	1H	618	G
24	1H	621	A
24	1H	622	G
24	1H	626	U
24	1H	627	A
24	1H	634	C
24	1H	637	A
24	1H	643	A
24	1H	644	A
24	1H	645	C
24	1H	646	A

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Mol	Chain	Res	Type
24	1H	654(A)	A
24	1H	654(B)	C
24	1H	654(G)	C
24	1H	654(H)	G
24	1H	654(I)	C
24	1H	654(L)	G
24	1H	654(N)	G
24	1H	654(T)	A
24	1H	654(V)	A
24	1H	666	G
24	1H	667	U
24	1H	668	G
24	1H	686	G
24	1H	717	G
24	1H	730	C
24	1H	731	C
24	1H	738	G
24	1H	740	U
24	1H	746	A
24	1H	752	A
24	1H	753	C
24	1H	764	A
24	1H	765	G
24	1H	776	G
24	1H	782	A
24	1H	784	A
24	1H	785	G
24	1H	790	C
24	1H	792	G
24	1H	805	G
24	1H	812	C
24	1H	819	A
24	1H	827	U
24	1H	828	U
24	1H	836	G
24	1H	845	G
24	1H	847	U
24	1H	859	G
24	1H	860	U
24	1H	861	A
24	1H	866	A
24	1H	870	A

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Mol	Chain	Res	Type
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	897	C
24	1H	898	C
24	1H	901	A
24	1H	904	C
24	1H	910	A
24	1H	917	A
24	1H	925	C
24	1H	926	A
24	1H	932	G
24	1H	938	G
24	1H	941	A
24	1H	946	G
24	1H	953	A
24	1H	957	A
24	1H	959	A
24	1H	961	C
24	1H	968	G
24	1H	974	G
24	1H	974(A)	C
24	1H	975	G
24	1H	982	C
24	1H	983	A
24	1H	986	C
24	1H	990	A
24	1H	991	C
24	1H	996	A
24	1H	998	C
24	1H	1002	G
24	1H	1003	G
24	1H	1005	C

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Mol	Chain	Res	Type
24	1H	1008	C
24	1H	1010	A
24	1H	1011	G
24	1H	1012	U
24	1H	1013	C
24	1H	1019	U
24	1H	1020	A
24	1H	1022	G
24	1H	1023	U
24	1H	1025	G
24	1H	1026	U
24	1H	1027	A
24	1H	1033	U
24	1H	1037	G
24	1H	1043	C
24	1H	1045	A
24	1H	1046	A
24	1H	1047	G
24	1H	1053	C
24	1H	1055	G
24	1H	1056	G
24	1H	1057	A
24	1H	1058	U
24	1H	1061	U
24	1H	1062	G
24	1H	1066	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	1076	C
24	1H	1077	A
24	1H	1078	U
24	1H	1080	A
24	1H	1083	U
24	1H	1087	G
24	1H	1088	A
24	1H	1090	U
24	1H	1092	C
24	1H	1095	A

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Mol	Chain	Res	Type
24	1H	1097	U
24	1H	1104	C
24	1H	1105	U
24	1H	1110	G
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	1170	G
24	1H	1173	G
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	1188	U
24	1H	1200	C
24	1H	1205	U
24	1H	1210	A
24	1H	1218	C
24	1H	1220	A
24	1H	1221	C
24	1H	1225	C
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

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Mol	Chain	Res	Type
24	1H	1272	A
24	1H	1273	U
24	1H	1282	U
24	1H	1287	A
24	1H	1288	U
24	1H	1293	C
24	1H	1300	U
24	1H	1301	A
24	1H	1312	U
24	1H	1313	U
24	1H	1314	C
24	1H	1319	G
24	1H	1329	U
24	1H	1332	G
24	1H	1338	G
24	1H	1344	G
24	1H	1345	C
24	1H	1348	G
24	1H	1349	A
24	1H	1359	A
24	1H	1360	A
24	1H	1365	A
24	1H	1379	A
24	1H	1380	G
24	1H	1385	G
24	1H	1388	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	1427	A
24	1H	1428	C
24	1H	1430	C
24	1H	1437	C
24	1H	1444(A)	A
24	1H	1449	A
24	1H	1453	A
24	1H	1455	G
24	1H	1459	G
24	1H	1460	A

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Mol	Chain	Res	Type
24	1H	1461	G
24	1H	1467	C
24	1H	1471	A
24	1H	1483	G
24	1H	1493	C
24	1H	1494	A
24	1H	1495	A
24	1H	1497	U
24	1H	1500	G
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	1548	C
24	1H	1554	A
24	1H	1558	A
24	1H	1559	G
24	1H	1566	A
24	1H	1569	A
24	1H	1578	U
24	1H	1580	A
24	1H	1581	G
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

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Mol	Chain	Res	Type
24	1H	1618	A
24	1H	1639	U
24	1H	1647	G
24	1H	1648	C
24	1H	1651	G
24	1H	1654	A
24	1H	1655	A
24	1H	1674	G
24	1H	1678	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	1762	A
24	1H	1763	G
24	1H	1764	G
24	1H	1773	A
24	1H	1782	C
24	1H	1791	A
24	1H	1798	U
24	1H	1799	G
24	1H	1800	C
24	1H	1801	G
24	1H	1816	G
24	1H	1827	C
24	1H	1829	A
24	1H	1839	G
24	1H	1847	A
24	1H	1848	A
24	1H	1856	G
24	1H	1858	G
24	1H	1870	C
24	1H	1871	A
24	1H	1878	G
24	1H	1882	C
24	1H	1886	C
24	1H	1900	A

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Mol	Chain	Res	Type
24	1H	1906	G
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	1931	U
24	1H	1936	A
24	1H	1938	A
24	1H	1941	C
24	1H	1955	U
24	1H	1960	A
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	1976	U
24	1H	1982	C
24	1H	1985	G
24	1H	1993	U
24	1H	2020	A
24	1H	2023	G
24	1H	2030	A
24	1H	2031	A
24	1H	2032	G
24	1H	2033	A
24	1H	2035	G
24	1H	2043	C
24	1H	2051	A
24	1H	2052	G
24	1H	2054	A
24	1H	2055	C
24	1H	2056	G
24	1H	2057	A
24	1H	2061	G
24	1H	2062	A
24	1H	2063	C

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Mol	Chain	Res	Type
24	1H	2068	U
24	1H	2069	G
24	1H	2071	A
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	2134	A
24	1H	2135	A
24	1H	2137	C
24	1H	2139	C
24	1H	2141	G
24	1H	2145	C
24	1H	2146	C
24	1H	2147	G
24	1H	2148	G
24	1H	2151	G
24	1H	2158	A
24	1H	2165	G
24	1H	2167	U
24	1H	2168	G
24	1H	2170	A
24	1H	2171	A
24	1H	2173	A
24	1H	2189	U
24	1H	2190	G
24	1H	2191	G
24	1H	2198	A
24	1H	2199	A
24	1H	2210	G
24	1H	2211	G

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Mol	Chain	Res	Type
24	1H	2212	A
24	1H	2213	U
24	1H	2215	G
24	1H	2219	G
24	1H	2225	A
24	1H	2226	C
24	1H	2238	G
24	1H	2239	G
24	1H	2240	C
24	1H	2252	G
24	1H	2261	C
24	1H	2264	C
24	1H	2267	A
24	1H	2268	A
24	1H	2269	A
24	1H	2275	C
24	1H	2280	G
24	1H	2283	C
24	1H	2284	C
24	1H	2287	A
24	1H	2288	A
24	1H	2298	A
24	1H	2305	A
24	1H	2307	G
24	1H	2308	G
24	1H	2310	A
24	1H	2311	A
24	1H	2314	C
24	1H	2315	G
24	1H	2320	A
24	1H	2321	G
24	1H	2324	C
24	1H	2325	G
24	1H	2326	C
24	1H	2327	A
24	1H	2334	G
24	1H	2336	A
24	1H	2343	C
24	1H	2346	A
24	1H	2347	C
24	1H	2350	C
24	1H	2352	A

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Mol	Chain	Res	Type
24	1H	2355	C
24	1H	2360	A
24	1H	2361	A
24	1H	2372	G
24	1H	2376	A
24	1H	2383	G
24	1H	2385	C
24	1H	2389	G
24	1H	2402	C
24	1H	2403	C
24	1H	2405	G
24	1H	2406	U
24	1H	2407	G
24	1H	2415	G
24	1H	2418	A
24	1H	2422	A
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	2431	U
24	1H	2434	A
24	1H	2435	A
24	1H	2439	A
24	1H	2440	C
24	1H	2441	C
24	1H	2442	C
24	1H	2445	G
24	1H	2447	G
24	1H	2448	A
24	1H	2468	G
24	1H	2474	C
24	1H	2477	C
24	1H	2478	A
24	1H	2484	G
24	1H	2497	A
24	1H	2502	G
24	1H	2505	G
24	1H	2506	U
24	1H	2507	C

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Mol	Chain	Res	Type
24	1H	2518	A
24	1H	2525	G
24	1H	2529	G
24	1H	2531	A
24	1H	2549	G
24	1H	2554	U
24	1H	2564	A
24	1H	2567	G
24	1H	2569	G
24	1H	2573	C
24	1H	2582	G
24	1H	2599	G
24	1H	2601	C
24	1H	2602	A
24	1H	2603	G
24	1H	2608	G
24	1H	2609	U
24	1H	2611	U
24	1H	2612	C
24	1H	2614	A
24	1H	2615	U
24	1H	2621	A
24	1H	2629	A
24	1H	2636	U
24	1H	2641	G
24	1H	2663	G
24	1H	2665	A
24	1H	2672	G
24	1H	2673	G
24	1H	2678	C
24	1H	2682	U
24	1H	2689	U
24	1H	2690	C
24	1H	2691	C
24	1H	2702	U
24	1H	2703	C
24	1H	2705	A
24	1H	2706	G
24	1H	2707	G
24	1H	2710	C
24	1H	2712(A)	A
24	1H	2713	A

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Mol	Chain	Res	Type
24	1H	2714	G
24	1H	2726	U
24	1H	2733	A
24	1H	2738	A
24	1H	2739	U
24	1H	2744	G
24	1H	2747	G
24	1H	2748	A
24	1H	2751	G
24	1H	2757	A
24	1H	2758	A
24	1H	2764	A
24	1H	2765	A
24	1H	2766	G
24	1H	2770	G
24	1H	2777	G
24	1H	2778	A
24	1H	2779	U
24	1H	2780	G
24	1H	2781	A
24	1H	2783	G
24	1H	2789	C
24	1H	2790	A
24	1H	2791	C
24	1H	2792	G
24	1H	2793	G
24	1H	2794	C
24	1H	2795	G
24	1H	2797	U
24	1H	2801	A
24	1H	2802	G
24	1H	2803	C
24	1H	2805	G
24	1H	2808	U
24	1H	2818	G
24	1H	2820	A
24	1H	2821	A
24	1H	2830	G
24	1H	2833	G
24	1H	2834	G
24	1H	2835	A
24	1H	2850	A

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Mol	Chain	Res	Type
24	1H	2851	A
24	1H	2860	A
24	1H	2871	C
24	1H	2872	G
24	1H	2883	A
24	1H	2885	C
24	1H	2891	G
24	1H	2892	A
24	1H	2893	G
25	16	3	C
25	16	7	G
25	16	9	G
25	16	12	C
25	16	13	A
25	16	15	A
25	16	16	G
25	16	18	G
25	16	19	G
25	16	21	G
25	16	23	G
25	16	24	G
25	16	25	A
25	16	32	C
25	16	38	C
25	16	39	A
25	16	40	U
25	16	41	U
25	16	42	C
25	16	44	G
25	16	45	A
25	16	46	A
25	16	52	A
25	16	53	A
25	16	56	G
25	16	73	A
25	16	74	U
25	16	76	G
25	16	77	U
25	16	81	G
25	16	84	C
25	16	89	G
25	16	95	U

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Mol	Chain	Res	Type
25	16	105	G
25	16	109	G
25	16	115	G
25	16	116	G
25	16	117	G
1	1G	5	U
1	1G	6	G
1	1G	7	G
1	1G	9	G
1	1G	10	A
1	1G	15	G
1	1G	22	G
1	1G	26	A
1	1G	31	G
1	1G	32	A
1	1G	33	A
1	1G	39	G
1	1G	41	G
1	1G	42	G
1	1G	44	G
1	1G	47	C
1	1G	48	C
1	1G	50	A
1	1G	51	A
1	1G	54	C
1	1G	66	G
1	1G	76	G
1	1G	77	C
1	1G	79	G
1	1G	81	G
1	1G	90	C
1	1G	91	C
1	1G	92	G
1	1G	95	G
1	1G	101	A
1	1G	105	G
1	1G	115	G
1	1G	116	A
1	1G	120	A
1	1G	121	C
1	1G	131	C
1	1G	144	G

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Mol	Chain	Res	Type
1	1G	145	G
1	1G	163	C
1	1G	169	C
1	1G	173	U
1	1G	174	C
1	1G	182	U
1	1G	186	C
1	1G	186(A)	C
1	1G	186(F)	C
1	1G	188	U
1	1G	189	U
1	1G	190	G
1	1G	191(D)	U
1	1G	195	A
1	1G	196	A
1	1G	197	A
1	1G	198	G
1	1G	208	U
1	1G	209	U
1	1G	210	U
1	1G	216	G
1	1G	220	G
1	1G	243	A
1	1G	245	C
1	1G	247	G
1	1G	250	A
1	1G	251	G
1	1G	262	A
1	1G	266	G
1	1G	267	C
1	1G	274	A
1	1G	281	G
1	1G	288	A
1	1G	289	G
1	1G	318	G
1	1G	321	A
1	1G	328	C
1	1G	329	A
1	1G	332	G
1	1G	340	U
1	1G	342	C
1	1G	345	C

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Mol	Chain	Res	Type
1	1G	346	G
1	1G	347	G
1	1G	350	G
1	1G	351	G
1	1G	352	C
1	1G	353	A
1	1G	354	G
1	1G	363	A
1	1G	367	U
1	1G	369	C
1	1G	372	C
1	1G	378	G
1	1G	384	G
1	1G	388	G
1	1G	397	A
1	1G	398	C
1	1G	406	G
1	1G	411	A
1	1G	412	A
1	1G	413	G
1	1G	414	A
1	1G	419	C
1	1G	421	U
1	1G	422	C
1	1G	423	G
1	1G	429	U
1	1G	431	A
1	1G	435	C
1	1G	439	A
1	1G	452	A
1	1G	466	C
1	1G	467	G
1	1G	484	G
1	1G	485	G
1	1G	486	U
1	1G	494	U
1	1G	495	A
1	1G	496	A
1	1G	497	U
1	1G	500	G
1	1G	505	G
1	1G	509	A

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Mol	Chain	Res	Type
1	1G	510	A
1	1G	511	C
1	1G	518	C
1	1G	519	C
1	1G	520	A
1	1G	521	G
1	1G	527	G
1	1G	530	G
1	1G	531	U
1	1G	532	A
1	1G	533	A
1	1G	536	C
1	1G	547	A
1	1G	549	C
1	1G	552	U
1	1G	559	A
1	1G	561	U
1	1G	562	C
1	1G	563	A
1	1G	564	C
1	1G	572	A
1	1G	573	A
1	1G	576	G
1	1G	577	G
1	1G	591	U
1	1G	596	C
1	1G	607	A
1	1G	615	C
1	1G	617	G
1	1G	630	G
1	1G	632	A
1	1G	633	G
1	1G	640	A
1	1G	653	A
1	1G	661	G
1	1G	665	A
1	1G	670	G
1	1G	687	A
1	1G	688	G
1	1G	702	A
1	1G	715	A
1	1G	722	A

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Mol	Chain	Res	Type
1	1G	723	U
1	1G	724	G
1	1G	731	G
1	1G	734	G
1	1G	735	C
1	1G	749	C
1	1G	754	C
1	1G	755	G
1	1G	760	G
1	1G	773	G
1	1G	777	A
1	1G	787	A
1	1G	792	A
1	1G	793	U
1	1G	794	A
1	1G	801	U
1	1G	802	A
1	1G	813	U
1	1G	816	A
1	1G	817	C
1	1G	819	A
1	1G	825	G
1	1G	826	C
1	1G	827	U
1	1G	828	A
1	1G	834	C
1	1G	842	C
1	1G	843	U
1	1G	848	C
1	1G	859	A
1	1G	860	A
1	1G	885	G
1	1G	889	A
1	1G	912	C
1	1G	914	A
1	1G	916	G
1	1G	921	U
1	1G	922	G
1	1G	926	G
1	1G	927	G
1	1G	934	C
1	1G	935	A

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Mol	Chain	Res	Type
1	1G	944	G
1	1G	954	G
1	1G	957	U
1	1G	958	A
1	1G	960	U
1	1G	961	U
1	1G	967	C
1	1G	968	A
1	1G	969	A
1	1G	971	G
1	1G	972	C
1	1G	974	A
1	1G	975	A
1	1G	976	G
1	1G	977	A
1	1G	980	C
1	1G	983	A
1	1G	988	G
1	1G	989	C
1	1G	991	U
1	1G	992	U
1	1G	993	G
1	1G	994	A
1	1G	1002	G
1	1G	1004	A
1	1G	1006	C
1	1G	1009	G
1	1G	1016	A
1	1G	1023	G
1	1G	1024	G
1	1G	1028	C
1	1G	1029	G
1	1G	1030	C
1	1G	1031	G
1	1G	1032(A)	G
1	1G	1032(B)	G
1	1G	1033	G
1	1G	1036	G
1	1G	1040	U
1	1G	1046	A
1	1G	1052	U
1	1G	1054	C

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Mol	Chain	Res	Type
1	1G	1055	A
1	1G	1066	C
1	1G	1067	A
1	1G	1081	G
1	1G	1082	G
1	1G	1094	G
1	1G	1095	U
1	1G	1101	A
1	1G	1109	C
1	1G	1110	A
1	1G	1113	C
1	1G	1117	G
1	1G	1124	G
1	1G	1126	U
1	1G	1127	G
1	1G	1129	C
1	1G	1137	C
1	1G	1138	G
1	1G	1139	G
1	1G	1140	C
1	1G	1146	A
1	1G	1147	C
1	1G	1148	U
1	1G	1154	G
1	1G	1157	A
1	1G	1159	U
1	1G	1160	G
1	1G	1163	C
1	1G	1171	G
1	1G	1178	G
1	1G	1179	A
1	1G	1181	G
1	1G	1182	G
1	1G	1184	G
1	1G	1188	A
1	1G	1190	G
1	1G	1193	G
1	1G	1194	U
1	1G	1196	U
1	1G	1197	G
1	1G	1200	C
1	1G	1201	A

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Mol	Chain	Res	Type
1	1G	1202	G
1	1G	1212	U
1	1G	1215	G
1	1G	1225	A
1	1G	1233	G
1	1G	1238	A
1	1G	1257	U
1	1G	1263	C
1	1G	1267	C
1	1G	1269	A
1	1G	1270	C
1	1G	1273	G
1	1G	1278	U
1	1G	1279	A
1	1G	1280	A
1	1G	1281	U
1	1G	1285	A
1	1G	1287	A
1	1G	1288	A
1	1G	1291	G
1	1G	1293	G
1	1G	1297	C
1	1G	1298	C
1	1G	1299	A
1	1G	1300	G
1	1G	1301	U
1	1G	1303	C
1	1G	1305	G
1	1G	1312	G
1	1G	1316	G
1	1G	1317	C
1	1G	1318	A
1	1G	1319	A
1	1G	1320	C
1	1G	1322	C
1	1G	1323	G
1	1G	1325	C
1	1G	1326	C
1	1G	1331	G
1	1G	1335	C
1	1G	1336	C
1	1G	1338	G

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Mol	Chain	Res	Type
1	1G	1346	A
1	1G	1347	G
1	1G	1353	G
1	1G	1358	U
1	1G	1363	A
1	1G	1364	U
1	1G	1368	G
1	1G	1370	G
1	1G	1379	G
1	1G	1402	C
1	1G	1410	G
1	1G	1419	G
1	1G	1442	G
1	1G	1443	G
1	1G	1446	A
1	1G	1449	C
1	1G	1450	U
1	1G	1452	C
1	1G	1453	G
1	1G	1454	G
1	1G	1465	C
1	1G	1468	A
1	1G	1469	G
1	1G	1477	C
1	1G	1487	G
1	1G	1492	A
1	1G	1493	A
1	1G	1494	G
1	1G	1497	G
1	1G	1499	A
1	1G	1502	A
1	1G	1503	A
1	1G	1504	G
1	1G	1506	U
1	1G	1517	G
1	1G	1520	G
1	1G	1529	G
1	1G	1530	G
1	1G	1532	U
22	2L	6	G
22	2L	8	4SU
22	2L	9	U

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Mol	Chain	Res	Type
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	43	G
22	2L	48	C
22	2L	56	U
22	2L	58	G
22	2L	61	G
22	2L	62	G
22	2L	63	5MU
22	2L	64	PSU
22	2L	67	A
22	2L	69	U
22	2L	70	C
22	2L	71	C
22	2L	72	U
22	2L	73	U
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	25	G
22	3L	46	G
22	3L	49	A
22	3L	51	C
22	3L	52	G
22	3L	53	A
22	3L	56	U
22	3L	57	C
22	3L	58	G
22	3L	67	A
22	3L	77	C

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Mol	Chain	Res	Type
22	3L	85	A
23	4L	12	A
23	4L	13	A
23	4L	14	A
23	4L	18	C
24	14	2	G
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	11	G
24	14	15	G
24	14	30	G
24	14	33	U
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	71	A
24	14	72	U
24	14	74	A
24	14	75	G
24	14	89	G
24	14	90	U
24	14	91	A
24	14	92	G
24	14	95	G
24	14	101	G
24	14	102	G
24	14	108	U
24	14	118	A
24	14	119	A
24	14	120	U
24	14	129	C
24	14	131	G
24	14	153	C
24	14	154	G
24	14	155	C

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Mol	Chain	Res	Type
24	14	161	U
24	14	174	C
24	14	175	G
24	14	181	A
24	14	188	G
24	14	196	A
24	14	199	A
24	14	200	U
24	14	214	G
24	14	215	G
24	14	216	A
24	14	222	A
24	14	229	A
24	14	233	A
24	14	248	G
24	14	250	G
24	14	252	G
24	14	265	A
24	14	270(K)	C
24	14	270(L)	U
24	14	270(M)	U
24	14	270(O)	U
24	14	271(B)	G
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	283	A
24	14	288	C
24	14	289	A
24	14	290	G
24	14	292	C
24	14	299	A
24	14	307	G
24	14	311	A
24	14	315	G
24	14	323	G
24	14	324	A

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Mol	Chain	Res	Type
24	14	329	G
24	14	330	A
24	14	333	G
24	14	342	G
24	14	352	G
24	14	355	G
24	14	363(E)	U
24	14	370	G
24	14	372	G
24	14	386	G
24	14	395	U
24	14	396	G
24	14	405	U
24	14	406	G
24	14	407	G
24	14	411	G
24	14	412	A
24	14	428	A
24	14	443	A
24	14	444	C
24	14	447	A
24	14	448	U
24	14	451	C
24	14	454	A
24	14	455	C
24	14	457	A
24	14	470	A
24	14	480	A
24	14	481	G
24	14	505	A
24	14	508	G
24	14	509	C
24	14	512	G
24	14	513	A
24	14	528	A
24	14	530	G
24	14	531	C
24	14	532	A
24	14	533	G
24	14	546	C
24	14	547	A
24	14	549	G

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Mol	Chain	Res	Type
24	14	556	G
24	14	563	G
24	14	573	G
24	14	575	A
24	14	579	G
24	14	580	C
24	14	586	A
24	14	599	G
24	14	603	A
24	14	607	U
24	14	614	U
24	14	617	G
24	14	618	G
24	14	618(A)	C
24	14	620	G
24	14	621	A
24	14	622	G
24	14	627	A
24	14	634	C
24	14	637	A
24	14	645	C
24	14	646	A
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(Q)	C
24	14	654(T)	A
24	14	656	G
24	14	665	C
24	14	666	G
24	14	669	G
24	14	686	G
24	14	699	A
24	14	717	G
24	14	730	C
24	14	738	G
24	14	741	G

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Mol	Chain	Res	Type
24	14	745	G
24	14	748	G
24	14	758	C
24	14	762	U
24	14	764	A
24	14	765	G
24	14	775	G
24	14	776	G
24	14	779	U
24	14	782	A
24	14	784	A
24	14	785	G
24	14	790	C
24	14	792	G
24	14	797	C
24	14	805	G
24	14	812	C
24	14	819	A
24	14	827	U
24	14	828	U
24	14	832	G
24	14	843	G
24	14	857	C
24	14	859	G
24	14	860	U
24	14	861	A
24	14	865	C
24	14	866	A
24	14	869	G
24	14	878	A
24	14	880	G
24	14	882	G
24	14	883	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

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Mol	Chain	Res	Type
24	14	897	C
24	14	898	C
24	14	899	A
24	14	901	A
24	14	902	C
24	14	904	C
24	14	907	U
24	14	909	A
24	14	910	A
24	14	914	C
24	14	917	A
24	14	918	A
24	14	925	C
24	14	926	A
24	14	928	G
24	14	932	G
24	14	938	G
24	14	941	A
24	14	945	A
24	14	946	G
24	14	961	C
24	14	972	G
24	14	974	G
24	14	980	A
24	14	983	A
24	14	996	A
24	14	1005	C
24	14	1009	A
24	14	1010	A
24	14	1011	G
24	14	1012	U
24	14	1013	C
24	14	1020	A
24	14	1022	G
24	14	1023	U
24	14	1025	G
24	14	1026	U
24	14	1033	U
24	14	1037	G
24	14	1040	C
24	14	1043	C
24	14	1045	A

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Mol	Chain	Res	Type
24	14	1047	G
24	14	1048	A
24	14	1049	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	1071	G
24	14	1075	C
24	14	1076	C
24	14	1079	C
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	1094	U
24	14	1096	A
24	14	1097	U
24	14	1099	G
24	14	1104	C
24	14	1105	U
24	14	1112	G
24	14	1128	A
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	1155	A

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Mol	Chain	Res	Type
24	14	1170	G
24	14	1173	G
24	14	1175	U
24	14	1177	A
24	14	1178	C
24	14	1180	C
24	14	1204	A
24	14	1205	U
24	14	1212	G
24	14	1220	A
24	14	1237	A
24	14	1244	G
24	14	1253	A
24	14	1256	G
24	14	1271	G
24	14	1272	A
24	14	1273	U
24	14	1284	A
24	14	1287	A
24	14	1289	C
24	14	1298	C
24	14	1300	U
24	14	1301	A
24	14	1303	G
24	14	1314	C
24	14	1319	G
24	14	1325	G
24	14	1328	G
24	14	1329	U
24	14	1332	G
24	14	1338	G
24	14	1345	C
24	14	1349	A
24	14	1359	A
24	14	1360	A
24	14	1365	A
24	14	1378	A
24	14	1380	G
24	14	1384	A
24	14	1385	G
24	14	1386	C
24	14	1403	C

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Mol	Chain	Res	Type
24	14	1404	C
24	14	1416	G
24	14	1417	C
24	14	1420	U
24	14	1421	G
24	14	1427	A
24	14	1428	C
24	14	1437	C
24	14	1444(A)	A
24	14	1445	C
24	14	1449	A
24	14	1449(A)	G
24	14	1458	C
24	14	1459	G
24	14	1460	A
24	14	1467	C
24	14	1471	A
24	14	1474	C
24	14	1475	G
24	14	1476	C
24	14	1480	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	1526	G
24	14	1534	G
24	14	1535	U
24	14	1536	A
24	14	1537	C
24	14	1540	G
24	14	1543	A
24	14	1547	C
24	14	1554	A
24	14	1558	A

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Mol	Chain	Res	Type
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	1586	A
24	14	1587	A
24	14	1588	C
24	14	1598	C
24	14	1608	A
24	14	1609	A
24	14	1610	A
24	14	1612	C
24	14	1616	A
24	14	1618	A
24	14	1641	A
24	14	1647	G
24	14	1648	C
24	14	1649	G
24	14	1672	C
24	14	1673	U
24	14	1674	G
24	14	1676	A
24	14	1678	G
24	14	1695	G
24	14	1697	G
24	14	1698	A
24	14	1700	A
24	14	1701	A
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	1762	A
24	14	1763	G
24	14	1764	G
24	14	1773	A

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Mol	Chain	Res	Type
24	14	1782	C
24	14	1791	A
24	14	1800	C
24	14	1801	G
24	14	1802	A
24	14	1806	C
24	14	1811	G
24	14	1816	G
24	14	1829	A
24	14	1834	U
24	14	1835	G
24	14	1839	G
24	14	1847	A
24	14	1848	A
24	14	1850	G
24	14	1858	G
24	14	1859	A
24	14	1861	G
24	14	1869	G
24	14	1871	A
24	14	1878	G
24	14	1887	C
24	14	1889	A
24	14	1900	A
24	14	1906	G
24	14	1911	U
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	1934	C
24	14	1936	A
24	14	1938	A
24	14	1952	A
24	14	1955	U
24	14	1963	U
24	14	1967	C
24	14	1970	A
24	14	1971	A

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Mol	Chain	Res	Type
24	14	1972	A
24	14	1984	G
24	14	1993	U
24	14	2000	G
24	14	2023	G
24	14	2024	G
24	14	2025	C
24	14	2027	G
24	14	2030	A
24	14	2031	A
24	14	2032	G
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
24	14	2061	G
24	14	2062	A
24	14	2063	C
24	14	2069	G
24	14	2071	A
24	14	2074	U
24	14	2093	G
24	14	2099	U
24	14	2100	G
24	14	2103	C
24	14	2111	C
24	14	2112	G
24	14	2114	A
24	14	2115	G
24	14	2117	A
24	14	2120	G
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

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Mol	Chain	Res	Type
24	14	2133	G
24	14	2136	C
24	14	2145	C
24	14	2146	C
24	14	2147	G
24	14	2159	G
24	14	2162	G
24	14	2165	G
24	14	2166	G
24	14	2167	U
24	14	2169	A
24	14	2170	A
24	14	2171	A
24	14	2173	A
24	14	2174	C
24	14	2175	C
24	14	2181	G
24	14	2189	U
24	14	2192	G
24	14	2198	A
24	14	2210	G
24	14	2211	G
24	14	2212	A
24	14	2213	U
24	14	2215	G
24	14	2225	A
24	14	2238	G
24	14	2268	A
24	14	2273	A
24	14	2275	C
24	14	2283	C
24	14	2286	A
24	14	2287	A
24	14	2288	A
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	2312	U
24	14	2316	C

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Mol	Chain	Res	Type
24	14	2320	A
24	14	2321	G
24	14	2322	A
24	14	2325	G
24	14	2327	A
24	14	2334	G
24	14	2336	A
24	14	2337	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	2361	A
24	14	2379	G
24	14	2383	G
24	14	2385	C
24	14	2388	A
24	14	2389	G
24	14	2392	A
24	14	2402	C
24	14	2403	C
24	14	2406	U
24	14	2410	G
24	14	2414	G
24	14	2422	A
24	14	2423	U
24	14	2424	C
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	2448	A
24	14	2449	U
24	14	2468	G

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Mol	Chain	Res	Type
24	14	2474	C
24	14	2476	A
24	14	2477	C
24	14	2487	G
24	14	2491	U
24	14	2492	U
24	14	2502	G
24	14	2504	U
24	14	2505	G
24	14	2506	U
24	14	2518	A
24	14	2529	G
24	14	2535	G
24	14	2542	A
24	14	2554	U
24	14	2555	U
24	14	2566	A
24	14	2567	G
24	14	2569	G
24	14	2572	A
24	14	2573	C
24	14	2574	G
24	14	2578	G
24	14	2579	C
24	14	2584	U
24	14	2585	U
24	14	2602	A
24	14	2603	G
24	14	2604	U
24	14	2608	G
24	14	2609	U
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	2644	G
24	14	2654	A
24	14	2660	A
24	14	2661	G

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Mol	Chain	Res	Type
24	14	2663	G
24	14	2665	A
24	14	2673	G
24	14	2679	A
24	14	2689	U
24	14	2690	C
24	14	2700	C
24	14	2702	U
24	14	2707	G
24	14	2708	G
24	14	2709	G
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	2743	C
24	14	2744	G
24	14	2748	A
24	14	2750	A
24	14	2751	G
24	14	2752	C
24	14	2761	G
24	14	2762	G
24	14	2764	A
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	2795	G
24	14	2797	U
24	14	2798	C
24	14	2799	A
24	14	2801	A
24	14	2802	G
24	14	2808	U
24	14	2810	A

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Mol	Chain	Res	Type
24	14	2812	G
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	2846	G
24	14	2847	U
24	14	2849	U
24	14	2859	G
24	14	2860	A
24	14	2872	G
24	14	2876	G
24	14	2879	C
24	14	2892	A
24	14	2894	G
24	14	2896	C
25	1J	0	A
25	1J	3	C
25	1J	7	G
25	1J	12	C
25	1J	13	A
25	1J	15	A
25	1J	16	G
25	1J	17	C
25	1J	25	A
25	1J	26	A
25	1J	27	C
25	1J	28	C
25	1J	29	A
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	59	A
25	1J	60	C
25	1J	64	C

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Mol	Chain	Res	Type
25	1J	67	G
25	1J	73	A
25	1J	74	U
25	1J	75	G
25	1J	88	C
25	1J	89(A)	A
25	1J	90	C
25	1J	100	G
25	1J	109	G
25	1J	116	G

All (192) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	13	5	U
1	13	181	G
1	13	210	U
1	13	243	A
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	560	U
1	13	686	U
1	13	703	G
1	13	748	C
1	13	793	U
1	13	811	C
1	13	812	C
1	13	913	A
1	13	1027	C
1	13	1054	C
1	13	1065	U
1	13	1126	U
1	13	1285	A
1	13	1302	U
1	13	1336	C
1	13	1498	U
22	2K	9	U
22	2K	20	C

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Mol	Chain	Res	Type
22	2K	44	C
22	2K	54	C
22	2K	61	G
22	3K	17	OMG
22	3K	18	G
22	3K	21	A
23	4K	9	G
23	4K	11	U
23	4K	13	A
24	1H	125	G
24	1H	196	A
24	1H	199	A
24	1H	222	A
24	1H	229	A
24	1H	249	C
24	1H	270(M)	U
24	1H	310	A
24	1H	404	C
24	1H	621	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	897	C
24	1H	961	C
24	1H	974	G
24	1H	974(A)	C
24	1H	990	A
24	1H	1022	G
24	1H	1026	U
24	1H	1060	U
24	1H	1178	C
24	1H	1286	A
24	1H	1312	U
24	1H	1378	A
24	1H	1379	A
24	1H	1396	U
24	1H	1427	A

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Mol	Chain	Res	Type
24	1H	1508	A
24	1H	1536	A
24	1H	1558	A
24	1H	1608	A
24	1H	1609	A
24	1H	1617	C
24	1H	1647	G
24	1H	1653	G
24	1H	1799	G
24	1H	1899	G
24	1H	1912	A
24	1H	2210	G
24	1H	2212	A
24	1H	2225	A
24	1H	2351	G
24	1H	2402	C
24	1H	2422	A
24	1H	2439	A
24	1H	2477	C
24	1H	2566	A
24	1H	2611	U
24	1H	2689	U
24	1H	2756	U
1	1G	4	U
1	1G	7	G
1	1G	80	G
1	1G	89	U
1	1G	115	G
1	1G	197	A
1	1G	201	C
1	1G	250	A
1	1G	327	A
1	1G	345	C
1	1G	412	A
1	1G	485	G
1	1G	509	A
1	1G	560	U
1	1G	632	A
1	1G	652	U
1	1G	687	A
1	1G	748	C
1	1G	793	U

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Mol	Chain	Res	Type
1	1G	812	C
1	1G	884	U
1	1G	913	A
1	1G	974	A
1	1G	991	U
1	1G	992	U
1	1G	1054	C
1	1G	1094	G
1	1G	1126	U
1	1G	1137	C
1	1G	1145	C
1	1G	1181	G
1	1G	1183	A
1	1G	1211	U
1	1G	1300	G
1	1G	1330	U
1	1G	1346	A
1	1G	1442	G
1	1G	1453	G
1	1G	1498	U
22	2L	9	U
22	2L	17	OMG
22	2L	18	G
22	2L	22	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
23	4L	12	A
24	14	128	C
24	14	196	A
24	14	197	A
24	14	199	A
24	14	249	C
24	14	278	A
24	14	310	A
24	14	385	C
24	14	503	A
24	14	654(S)	G

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Mol	Chain	Res	Type
24	14	685	A
24	14	764	A
24	14	774	A
24	14	856	C
24	14	886	C
24	14	888	C
24	14	945	A
24	14	960	A
24	14	971	C
24	14	1022	G
24	14	1085	A
24	14	1088	A
24	14	1378	A
24	14	1379	A
24	14	1396	U
24	14	1420	U
24	14	1427	A
24	14	1497	U
24	14	1558	A
24	14	1608	A
24	14	1609	A
24	14	1672	C
24	14	1912	A
24	14	2166	G
24	14	2212	A
24	14	2335	A
24	14	2402	C
24	14	2406	U
24	14	2430	A
24	14	2439	A
24	14	2448	A
24	14	2602	A
24	14	2689	U
24	14	2726	U
24	14	2776	A
24	14	2801	A
24	14	2859	G
24	14	2893	G

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	5.61	6 (33%)	21,38,41	5.92	7 (33%)
22	QUO	2K	35	22,23	27,35,36	5.66	10 (37%)	30,52,55	3.77	8 (26%)
22	MIA	2K	38	22	22,31,32	1.01	1 (4%)	26,44,47	3.34	4 (15%)
22	PSU	2K	40	22	15,21,22	0.84	1 (6%)	16,30,33	1.99	3 (18%)
22	5MU	2K	63	22	13,22,23	1.72	2 (15%)	16,32,35	1.30	1 (6%)
22	PSU	2K	64	55,22	15,21,22	1.01	1 (6%)	16,30,33	2.04	4 (25%)
22	4SU	2K	8	22	12,21,22	3.48	2 (16%)	15,30,33	0.74	0
22	OMG	2L	17	22	18,26,27	5.44	6 (33%)	21,38,41	5.97	6 (28%)
22	QUO	2L	35	22,23	27,35,36	5.81	9 (33%)	30,52,55	4.20	12 (40%)
22	MIA	2L	38	22	22,31,32	0.83	0	26,44,47	1.18	4 (15%)
22	PSU	2L	40	22	15,21,22	1.26	1 (6%)	16,30,33	2.21	3 (18%)
22	5MU	2L	63	22	13,22,23	1.76	2 (15%)	16,32,35	1.34	1 (6%)
22	PSU	2L	64	22	15,21,22	1.17	1 (6%)	16,30,33	2.11	6 (37%)
22	4SU	2L	8	22	12,21,22	2.98	2 (16%)	15,30,33	1.54	2 (13%)
22	OMG	3K	17	22	18,26,27	5.76	6 (33%)	21,38,41	6.85	7 (33%)
22	QUO	3K	35	22	27,35,36	5.90	9 (33%)	30,52,55	4.41	11 (36%)
22	MIA	3K	38	22	22,31,32	1.17	2 (9%)	26,44,47	2.42	5 (19%)
22	PSU	3K	40	22	15,21,22	1.00	1 (6%)	16,30,33	1.98	3 (18%)
22	5MU	3K	63	22	13,22,23	1.68	2 (15%)	16,32,35	1.51	1 (6%)
22	PSU	3K	64	22	15,21,22	1.00	1 (6%)	16,30,33	2.08	5 (31%)
22	4SU	3K	8	22	12,21,22	3.16	2 (16%)	15,30,33	0.66	0
22	OMG	3L	17	22	18,26,27	5.69	6 (33%)	21,38,41	6.23	6 (28%)
22	QUO	3L	35	22	27,35,36	5.76	9 (33%)	30,52,55	3.75	12 (40%)
22	MIA	3L	38	22	22,31,32	1.06	1 (4%)	26,44,47	2.27	6 (23%)
22	PSU	3L	40	22	15,21,22	1.14	1 (6%)	16,30,33	1.96	3 (18%)
22	5MU	3L	63	22	13,22,23	1.71	2 (15%)	16,32,35	1.36	1 (6%)
22	PSU	3L	64	22	15,21,22	1.07	1 (6%)	16,30,33	2.29	4 (25%)
22	4SU	3L	8	55,22	12,21,22	3.40	2 (16%)	15,30,33	1.17	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	55,22	-	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
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 (89) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	3K	17	OMG	C8-N7	-13.90	1.07	1.34
22	2L	17	OMG	C8-N7	-13.82	1.08	1.34
22	3L	17	OMG	C8-N7	-13.54	1.08	1.34
22	2K	17	OMG	C8-N7	-13.43	1.08	1.34
22	3K	35	QUO	C8-N9	-10.86	1.22	1.38
22	2L	35	QUO	C8-N9	-10.37	1.23	1.38
22	2K	35	QUO	C8-N9	-10.22	1.23	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	2K	35	QUO	C6-N1	-10.14	1.14	1.33
22	3K	35	QUO	C6-N1	-9.81	1.15	1.33
22	3L	35	QUO	C6-N1	-9.76	1.15	1.33
22	3L	35	QUO	C8-N9	-9.63	1.24	1.38
22	2L	35	QUO	C6-N1	-9.27	1.16	1.33
22	2K	35	QUO	C6-C5	-7.13	1.29	1.41
22	3K	35	QUO	C6-C5	-6.81	1.30	1.41
22	3L	35	QUO	C6-C5	-6.60	1.30	1.41
22	2L	35	QUO	C6-C5	-6.38	1.31	1.41
22	3L	17	OMG	C6-N1	-5.21	1.23	1.33
22	3K	17	OMG	C6-N1	-4.65	1.24	1.33
22	2L	17	OMG	C6-N1	-4.24	1.25	1.33
22	2K	17	OMG	C6-N1	-4.22	1.25	1.33
22	2K	35	QUO	C14-C13	-3.33	1.48	1.53
22	2L	63	5MU	C4-N3	-3.22	1.27	1.33
22	3K	63	5MU	C4-N3	-3.08	1.27	1.33
22	3L	35	QUO	C14-C13	-3.07	1.49	1.53
22	3L	63	5MU	C4-N3	-3.05	1.27	1.33
22	2K	63	5MU	C4-N3	-2.83	1.27	1.33
22	2L	17	OMG	O6-C6	-2.70	1.17	1.24
22	3L	17	OMG	O6-C6	-2.60	1.18	1.24
22	3K	17	OMG	O6-C6	-2.51	1.18	1.24
22	3K	35	QUO	C14-C13	-2.36	1.50	1.53
22	2K	17	OMG	O6-C6	-2.18	1.19	1.24
22	2L	35	QUO	C14-C13	-2.13	1.50	1.53
22	2K	35	QUO	C2-N1	-2.12	1.31	1.35
22	2K	35	QUO	C16-C15	2.19	1.60	1.54
22	3K	38	MIA	C6-N1	2.36	1.36	1.33
22	3L	35	QUO	C16-C15	2.45	1.60	1.54
22	2K	40	PSU	C4-N3	2.47	1.37	1.33
22	2L	35	QUO	C16-C15	2.56	1.61	1.54
22	3K	35	QUO	C16-C15	2.62	1.61	1.54
22	2K	64	PSU	C4-N3	2.88	1.38	1.33
22	2K	35	QUO	C2-N3	2.89	1.50	1.35
22	2L	17	OMG	C2-N2	2.96	1.40	1.34
22	3K	64	PSU	C4-N3	3.02	1.38	1.33
22	2K	38	MIA	C6-N1	3.02	1.37	1.33
22	3L	35	QUO	C2-N3	3.04	1.51	1.35
22	3K	40	PSU	C4-N3	3.05	1.38	1.33
22	2L	35	QUO	C2-N3	3.11	1.51	1.35
22	3L	17	OMG	C2-N2	3.13	1.40	1.34
22	3K	35	QUO	C2-N3	3.22	1.52	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	3L	64	PSU	C4-N3	3.27	1.38	1.33
22	3L	40	PSU	C4-N3	3.34	1.39	1.33
22	2L	40	PSU	C4-N3	3.37	1.39	1.33
22	3K	17	OMG	C2-N2	3.49	1.41	1.34
22	2K	17	OMG	C2-N2	3.51	1.41	1.34
22	2L	64	PSU	C4-N3	3.55	1.39	1.33
22	3L	38	MIA	C2-S10	3.96	1.79	1.75
22	3L	35	QUO	C2-N2	4.02	1.42	1.34
22	2L	35	QUO	C2-N2	4.14	1.42	1.34
22	2K	35	QUO	C2-N2	4.26	1.43	1.34
22	3K	38	MIA	C2-S10	4.35	1.79	1.75
22	3K	35	QUO	C2-N2	4.59	1.43	1.34
22	2L	63	5MU	C2-N3	4.73	1.48	1.38
22	2K	63	5MU	C2-N3	4.82	1.48	1.38
22	3K	63	5MU	C2-N3	4.90	1.48	1.38
22	3L	63	5MU	C2-N3	4.93	1.48	1.38
22	2L	8	4SU	C6-N1	6.54	1.44	1.35
22	3K	8	4SU	C6-N1	7.01	1.44	1.35
22	2K	8	4SU	C6-N1	7.04	1.44	1.35
22	3L	8	4SU	C6-N1	7.16	1.45	1.35
22	2L	8	4SU	C5-C4	7.69	1.48	1.38
22	3K	8	4SU	C5-C4	8.14	1.49	1.38
22	2L	17	OMG	C5-C4	8.94	1.60	1.40
22	3L	8	4SU	C5-C4	9.11	1.50	1.38
22	2K	17	OMG	C5-C4	9.45	1.61	1.40
22	3L	17	OMG	C5-C4	9.48	1.61	1.40
22	3K	17	OMG	C5-C4	9.51	1.61	1.40
22	3L	35	QUO	C7-C5	9.56	1.54	1.41
22	2K	8	4SU	C5-C4	9.66	1.51	1.38
22	3K	35	QUO	C7-C5	10.25	1.55	1.41
22	2L	35	QUO	C7-C5	10.25	1.55	1.41
22	2K	35	QUO	C7-C5	10.28	1.55	1.41
22	2L	17	OMG	C4-N3	14.90	1.59	1.35
22	2K	17	OMG	C4-N3	16.08	1.61	1.35
22	3L	17	OMG	C4-N3	16.08	1.61	1.35
22	3K	17	OMG	C4-N3	16.32	1.61	1.35
22	2K	35	QUO	C4-N3	21.02	1.68	1.35
22	3K	35	QUO	C4-N3	22.67	1.71	1.35
22	3L	35	QUO	C4-N3	22.72	1.71	1.35
22	2L	35	QUO	C4-N3	22.80	1.71	1.35

All (126) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	3K	35	QUO	C8-N9-C1'	-18.05	111.35	125.45
22	2L	35	QUO	C8-N9-C1'	-15.32	113.48	125.45
22	2L	17	OMG	C6-C5-C4	-13.42	105.53	120.86
22	2K	35	QUO	C8-N9-C1'	-12.65	115.57	125.45
22	2K	17	OMG	C6-C5-C4	-12.40	106.69	120.86
22	3K	17	OMG	C6-C5-C4	-11.50	107.72	120.86
22	3L	17	OMG	C6-C5-C4	-11.22	108.04	120.86
22	3L	35	QUO	C1'-N9-C4	-10.91	114.62	126.81
22	2K	35	QUO	C1'-N9-C4	-8.74	117.06	126.81
22	2L	35	QUO	C1'-N9-C4	-8.26	117.59	126.81
22	3K	35	QUO	N3-C2-N1	-8.02	116.65	127.56
22	3L	35	QUO	N3-C2-N1	-7.94	116.76	127.56
22	3L	35	QUO	C8-N9-C1'	-7.78	119.37	125.45
22	2L	35	QUO	N3-C2-N1	-7.62	117.19	127.56
22	2K	35	QUO	N3-C2-N1	-7.31	117.62	127.56
22	3K	17	OMG	N3-C2-N1	-6.70	118.45	127.56
22	2K	17	OMG	N3-C2-N1	-6.67	118.49	127.56
22	2L	17	OMG	N3-C2-N1	-6.16	119.18	127.56
22	3K	35	QUO	C1'-N9-C4	-6.09	120.01	126.81
22	3L	17	OMG	N3-C2-N1	-6.07	119.30	127.56
22	2L	8	4SU	C5-C4-N3	-4.49	118.80	123.56
22	3L	64	PSU	C5-C1'-C2'	-4.38	108.00	115.44
22	3K	38	MIA	C12-N6-C6	-4.21	118.59	123.46
22	3L	8	4SU	C5-C4-N3	-4.11	119.20	123.56
22	3L	35	QUO	C16-C15-C14	-3.81	102.10	105.83
22	3K	64	PSU	C5-C1'-C2'	-3.66	109.22	115.44
22	2K	64	PSU	C5-C1'-C2'	-3.65	109.24	115.44
22	2L	40	PSU	C5-C1'-C2'	-3.40	109.67	115.44
22	3L	38	MIA	C5-C6-N1	-3.36	117.17	120.58
22	3K	64	PSU	C5-C6-N1	-3.32	119.75	124.38
22	2L	64	PSU	C5-C6-N1	-3.32	119.75	124.38
22	3L	40	PSU	C5-C1'-C2'	-2.90	110.51	115.44
22	3L	35	QUO	C7-C5-C4	-2.87	104.09	110.00
22	2L	35	QUO	O14-C14-C15	-2.83	105.21	111.43
22	3K	35	QUO	C10-N11-C12	-2.78	108.73	115.05
22	2K	64	PSU	C5-C6-N1	-2.73	120.57	124.38
22	3K	38	MIA	N3-C2-N1	-2.69	121.89	126.84
22	2K	40	PSU	C5-C1'-C2'	-2.67	110.89	115.44
22	2L	35	QUO	C7-C8-N9	-2.67	100.81	109.19
22	2L	35	QUO	C7-C5-C4	-2.64	104.57	110.00
22	2K	64	PSU	C4-C5-C1'	-2.60	116.83	121.22
22	2L	35	QUO	C7-C10-N11	-2.56	105.11	112.59
22	3K	40	PSU	C5-C6-N1	-2.53	120.85	124.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	2K	35	QUO	C7-C5-C4	-2.53	104.79	110.00
22	3K	35	QUO	C7-C5-C4	-2.52	104.81	110.00
22	3L	64	PSU	C5-C6-N1	-2.50	120.89	124.38
22	2K	38	MIA	C12-N6-C6	-2.48	120.59	123.46
22	3K	35	QUO	C7-C8-N9	-2.43	101.56	109.19
22	2L	35	QUO	C10-N11-C12	-2.42	109.53	115.05
22	2L	8	4SU	C6-N1-C2	-2.41	117.40	121.33
22	3L	35	QUO	C7-C8-N9	-2.37	101.73	109.19
22	3K	64	PSU	C4-C5-C1'	-2.37	117.23	121.22
22	2L	64	PSU	O2'-C2'-C1'	-2.31	106.92	111.93
22	2K	35	QUO	C7-C8-N9	-2.29	101.99	109.19
22	3K	38	MIA	C1'-N9-C4	-2.29	124.25	126.81
22	2L	35	QUO	C16-C15-C14	-2.29	103.59	105.83
22	2L	64	PSU	C4-C5-C1'	-2.27	117.40	121.22
22	2K	17	OMG	C3'-C2'-C1'	-2.22	98.38	102.63
22	3L	40	PSU	C5-C6-N1	-2.16	121.37	124.38
22	3L	38	MIA	N3-C2-N1	-2.14	122.89	126.84
22	2L	38	MIA	C13-C12-N6	-2.11	108.30	112.25
22	3K	40	PSU	O2'-C2'-C1'	-2.09	107.38	111.93
22	3L	17	OMG	C3'-C2'-C1'	-2.09	98.63	102.63
22	2L	40	PSU	O2'-C2'-C1'	-2.08	107.41	111.93
22	3L	64	PSU	O2'-C2'-C1'	-2.06	107.44	111.93
22	3L	38	MIA	C13-C12-N6	2.01	116.02	112.25
22	3L	38	MIA	N6-C6-N1	2.09	121.04	118.55
22	3K	35	QUO	O13-C13-C14	2.11	116.42	111.66
22	3L	35	QUO	C15-C16-C12	2.11	106.39	103.45
22	3K	17	OMG	O2'-C2'-C3'	2.14	116.75	111.23
22	2L	38	MIA	C1'-N9-C4	2.16	129.21	126.81
22	2L	64	PSU	O4'-C1'-C2'	2.16	107.03	104.69
22	3K	35	QUO	N2-C2-N1	2.24	120.90	117.20
22	2L	38	MIA	C2-N1-C6	2.29	119.41	113.13
22	2K	38	MIA	C2-N1-C6	2.37	119.65	113.13
22	2K	40	PSU	O4'-C1'-C2'	2.38	107.27	104.69
22	3L	35	QUO	O3'-C3'-C2'	2.42	119.69	111.86
22	2L	64	PSU	C5-C1'-C2'	2.44	119.58	115.44
22	2L	35	QUO	N2-C2-N3	2.46	122.33	117.72
22	3K	64	PSU	O4'-C1'-C2'	2.50	107.39	104.69
22	2K	38	MIA	N6-C6-N1	2.52	121.55	118.55
22	3K	35	QUO	N2-C2-N3	2.52	122.45	117.72
22	3K	17	OMG	N2-C2-N1	2.68	121.62	117.20
22	2L	38	MIA	N6-C6-N1	2.70	121.77	118.55
22	2K	17	OMG	N2-C2-N1	2.74	121.71	117.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	3L	35	QUO	N2-C2-N1	2.85	121.91	117.20
22	2L	35	QUO	C5-C6-N1	2.99	126.44	124.15
22	3K	38	MIA	C2-N1-C6	2.99	121.35	113.13
22	2K	35	QUO	N2-C2-N1	3.04	122.22	117.20
22	3L	35	QUO	C10-C7-C8	3.11	132.04	127.67
22	3L	38	MIA	C2-N1-C6	3.21	121.94	113.13
22	3K	35	QUO	C5-C6-N1	4.09	127.29	124.15
22	2K	35	QUO	C5-C6-N1	4.31	127.46	124.15
22	2K	63	5MU	C4-N3-C2	4.32	118.76	115.16
22	2K	17	OMG	C5-C6-N1	4.34	129.20	123.52
22	2L	63	5MU	C4-N3-C2	4.41	118.84	115.16
22	3L	17	OMG	C5-C6-N1	4.72	129.69	123.52
22	2L	17	OMG	C5-C6-N1	4.74	129.72	123.52
22	3L	63	5MU	C4-N3-C2	4.77	119.13	115.16
22	3K	17	OMG	C5-C6-N1	4.78	129.77	123.52
22	2L	17	OMG	N2-C2-N1	4.92	125.32	117.20
22	3L	35	QUO	C5-C6-N1	5.00	127.99	124.15
22	3K	64	PSU	C4-N3-C2	5.05	119.37	115.16
22	3K	63	5MU	C4-N3-C2	5.42	119.67	115.16
22	2K	64	PSU	C4-N3-C2	5.54	119.78	115.16
22	2L	64	PSU	C4-N3-C2	5.63	119.85	115.16
22	3L	40	PSU	C4-N3-C2	5.76	119.97	115.16
22	3K	40	PSU	C4-N3-C2	6.19	120.32	115.16
22	2K	40	PSU	C4-N3-C2	6.38	120.48	115.16
22	3L	64	PSU	C4-N3-C2	6.42	120.52	115.16
22	2L	40	PSU	C4-N3-C2	7.37	121.31	115.16
22	2K	35	QUO	C6-N1-C2	8.62	125.98	115.88
22	3L	35	QUO	C6-N1-C2	8.82	126.22	115.88
22	3L	38	MIA	C11-S10-C2	9.34	108.89	102.31
22	3K	35	QUO	C6-N1-C2	9.46	126.96	115.88
22	2L	35	QUO	C6-N1-C2	9.87	127.45	115.88
22	3K	38	MIA	C11-S10-C2	10.05	109.39	102.31
22	3L	17	OMG	C6-N1-C2	12.06	130.01	115.88
22	2L	17	OMG	C6-N1-C2	12.26	130.25	115.88
22	3K	17	OMG	C6-N1-C2	12.42	130.44	115.88
22	2K	17	OMG	C6-N1-C2	12.90	130.99	115.88
22	2K	38	MIA	C11-S10-C2	16.02	113.61	102.31
22	2L	17	OMG	C1'-N9-C4	17.77	146.64	126.81
22	2K	17	OMG	C1'-N9-C4	18.01	146.90	126.81
22	3L	17	OMG	C1'-N9-C4	21.51	150.81	126.81
22	3K	17	OMG	C1'-N9-C4	24.77	154.44	126.81

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

22 monomers are involved in 46 short contacts:

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

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 1351 ligands modelled in this entry, 1351 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

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data [i](#)

6.1 Protein, DNA and RNA chains [i](#)

EDS failed to run properly - this section will therefore be empty.

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

EDS failed to run properly - this section will therefore be empty.

6.3 Carbohydrates [i](#)

EDS failed to run properly - this section will therefore be empty.

6.4 Ligands [i](#)

EDS failed to run properly - this section will therefore be empty.

6.5 Other polymers [i](#)

EDS failed to run properly - this section will therefore be empty.