Full wwPDB X-ray Structure Validation Report ⓘ

Apr 28, 2024 – 03:46 am BST

PDB ID	:	5NDK
Title	:	Crystal structure of aminoglycoside TC007 co-crystallized with 70S ribosome from Thermus thermophilus, three tRNAs and mRNA
Authors	:	Prokhorova, I.; Djumagulov, M.; Urzhumtsev, A.; Yusupov, M.; Yusupova, G.
Deposited on	:	2017-03-08
Resolution	:	2.95 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

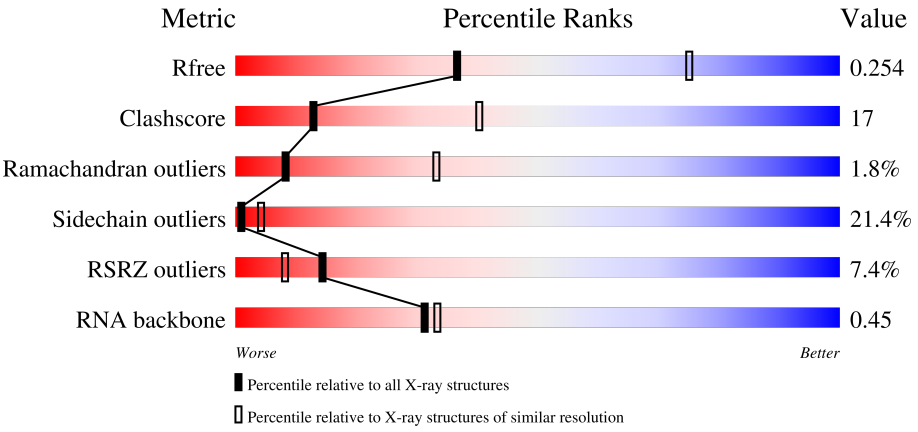
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36.2
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36.2

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.95 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	3104 (3.00-2.92)
Clashscore	141614	3462 (3.00-2.92)
Ramachandran outliers	138981	3340 (3.00-2.92)
Sidechain outliers	138945	3343 (3.00-2.92)
RSRZ outliers	127900	2986 (3.00-2.92)
RNA backbone	3102	1065 (3.22-2.70)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	13	1522	30% 44% 21% 5%
1	1G	1522	33% 45% 18%
2	65	112	9% 42% 38% 18%
2	A8	112	10% 44% 40% 14%

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Mol	Chain	Length	Quality of chain
3	B5	96	11% 54% 33% 8%
3	F8	96	4% 54% 33% 8%
4	11	276	2% 64% 25% 8%
4	19	276	% 60% 29% 7%
5	L5	49	4% 57% 27% 12%
5	P8	49	4% 61% 24% 8%
6	2A	129	45% 51% 35% 10%
6	2I	129	16% 53% 31% 6% 10%
7	8A	105	32% 56% 32% 6% 6%
7	8I	105	6% 43% 40% 12% 5%
8	22	239	8% 43% 32% 11% 14%
8	2E	239	16% 46% 33% 6% 14%
9	82	128	14% 46% 42% 7%
9	8E	128	17% 38% 48% 11%
10	15	140	19% 55% 33% 11%
10	58	140	10% 45% 41% 13%
11	C5	110	39% 31% 50% 12% 5%
11	G8	110	9% 40% 32% 17% 5% 6%
12	M5	65	15% 45% 31% 15% 5% 5%
12	Q8	65	6% 12% 32% 32% 15% 8%
13	3A	132	24% 48% 35% 12% 5%
13	3I	132	10% 55% 27% 11% 8%
14	32	209	6% 50% 39% 10%
14	3E	209	4% 53% 40% 6%
15	14	2917	2% 23% 45% 27% 5%

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Mol	Chain	Length	Quality of chain
15	1H	2917	2% 19% 44% 30% 7%
16	75	146	10% 40% 42% 12% 6%
16	B8	146	8% 39% 36% 12% 12%
17	H5	60	17% 47% 40% 12%
17	L8	60	5% 53% 32% 10% 5%
18	61	148	5% 43% 39% 16%
18	69	148	11% 44% 45% 9%
19	9A	88	6% 48% 22% 8% 22%
19	9I	88	43% 25% 7% 24%
20	1B	27	37% 48% 41% 7%
20	1F	27	11% 44% 41% 15%
21	25	122	11% 58% 31% 9%
21	68	122	2% 60% 30% 10%
22	D5	206	10% 20% 35% 10% 34%
22	H8	206	5% 38% 33% 9% 17%
23	21	206	16% 43% 40% 14%
23	29	206	8% 47% 36% 14%
24	4A	126	7% 41% 44% 7% 8%
24	4I	126	13% 48% 36% 9% 8%
25	42	162	4% 45% 41% 7% 7%
25	4E	162	2% 49% 34% 10% 7%
26	16	122	% 23% 48% 23% 7%
26	1J	122	% 32% 36% 24% 8%
27	85	118	8% 60% 30% 8%
27	C8	118	2% 51% 34% 14%

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Mol	Chain	Length	Quality of chain
28	I5	71	87% 24% 51% 13% 11%
28	M8	71	86% 31% 44% 17% 7%
29	AA	93	10% 41% 33% 10% 16%
29	AI	93	13% 30% 40% 12% 14%
30	35	150	7% 38% 41% 17%
30	78	150	3% 37% 41% 19%
31	E5	85	11% 49% 41% 8%
31	I8	85	5% 71% 24%
32	31	210	3% 45% 41% 9%
32	39	210	5% 42% 39% 17%
33	5A	61	28% 38% 46% 10% 5%
33	5I	61	20% 44% 39% 15%
34	52	101	52% 37% 11%
34	5E	101	61% 32% 7%
35	95	101	24% 35% 49% 15%
35	D8	101	6% 34% 49% 14%
36	J5	60	7% 47% 33% 13% 7%
36	N8	60	13% 45% 28% 13% 5% 8%
37	BA	106	10% 49% 37% 7% 7%
37	BI	106	17% 45% 38% 10% 7%
38	45	141	9% 41% 44% 13%
38	88	141	% 46% 37% 15%
39	F5	98	7% 42% 45% 8%
39	J8	98	8% 46% 36% 12%
40	41	182	10% 47% 38% 14%

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Mol	Chain	Length	Quality of chain
40	49	182	11% 43% 43% 13%
41	6A	89	6% 55% 38% 6%
41	6I	89	2% 57% 35% 7%
42	62	156	19% 58% 31% 5% 6%
42	6E	156	13% 53% 31% 9% 8%
43	A5	113	7% 53% 36% 10%
43	E8	113	6% 59% 32% 8%
44	12	256	13% 39% 39% 14% 7%
44	1E	256	6% 42% 39% 11% 7%
45	55	118	3% 50% 36% 12%
45	98	118	3% 37% 45% 16%
46	G5	72	6% 40% 38% 12% 7%
46	K8	72	3% 31% 46% 15% 6%
47	51	180	7% 43% 39% 13%
47	59	180	58% 39% 41% 13% 6%
48	1A	105	15% 41% 43% 10% 6%
48	1I	105	37% 42% 43% 10% 6%
49	7A	88	1% 55% 35% 6% 5%
49	7I	88	16% 39% 50% 7% 5%
50	72	138	12% 59% 32% 9%
50	7E	138	1% 51% 39% 10%
51	Y1	25	48% 28% 32% 24% 16%
51	Y4	25	56% 24% 24% 44% 8%
52	V1	76	25% 20% 34% 38% 8%
52	V4	76	14% 29% 33% 32% 7%

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Mol	Chain	Length	Quality of chain
52	W1	76	11% 46% 33% 17%
52	W4	76	7% 51% 39% 7%
52	X1	76	4% 26% 46% 18% 9%
52	X4	76	% 24% 45% 21% 11%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
54	MG	13	2287	-	-	-	X
54	MG	13	2307	-	-	-	X
54	MG	13	2335	-	-	-	X
54	MG	13	2372	-	-	-	X
54	MG	14	3169	-	-	-	X
54	MG	14	3222	-	-	-	X
54	MG	14	3231	-	-	-	X
54	MG	14	3251	-	-	-	X
54	MG	14	3263	-	-	-	X
54	MG	14	3276	-	-	-	X
54	MG	14	3308	-	-	-	X
54	MG	14	3364	-	-	-	X
54	MG	14	3367	-	-	-	X
54	MG	14	3460	-	-	-	X
54	MG	14	3485	-	-	-	X
54	MG	1G	2253	-	-	-	X
54	MG	1G	2269	-	-	-	X
54	MG	1G	2284	-	-	-	X
54	MG	1G	2288	-	-	-	X
54	MG	1H	3286	-	-	-	X
54	MG	1H	3346	-	-	-	X
54	MG	1H	3492	-	-	-	X
54	MG	1H	3561	-	-	-	X
54	MG	1H	3590	-	-	-	X
54	MG	58	201	-	-	-	X
54	MG	X1	105	-	-	-	X

2 Entry composition (i)

There are 56 unique types of molecules in this entry. The entry contains 299577 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	1508	Total	C	N	O	P	0	0	0
			32409	14425	6001	10475	1508			
1	1G	1513	Total	C	N	O	P	0	0	0
			32514	14473	6021	10508	1512			

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
13	2165	G	-	expression tag	GB 55771382
13	2166	C	-	expression tag	GB 55771382
13	2167	U	-	expression tag	GB 55771382
1G	2165	G	-	expression tag	GB 55771382
1G	2166	C	-	expression tag	GB 55771382
1G	2167	U	-	expression tag	GB 55771382

- Molecule 2 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
2	A8	111	Total	C	N	O	0	0	0
			881	556	176	149			
2	65	111	Total	C	N	O	0	0	0
			881	556	176	149			

- Molecule 3 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	B5	92	Total	C	N	O		0	0	0
			725	471	131	123				
3	F8	94	Total	C	N	O	S	0	0	0
			742	482	134	125	1			

- Molecule 4 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	11	273	Total	C	N	O	S	0	0	0
			2126	1341	424	358	3			
4	19	273	Total	C	N	O	S	0	0	0
			2120	1338	421	358	3			

- Molecule 5 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	L5	47	Total	C	N	O	S	0	0	0
			409	251	102	54	2			
5	P8	47	Total	C	N	O	S	0	0	0
			409	251	102	54	2			

- Molecule 6 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	2A	116	Total	C	N	O	S	0	0	0
			864	537	164	160	3			
6	2I	116	Total	C	N	O	S	0	0	0
			864	537	164	160	3			

- Molecule 7 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	8I	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			
7	8A	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			

- Molecule 8 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	22	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			
8	2E	205	Total	C	N	O	S	0	0	0
			1605	1011	313	280	1			

- 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			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	82	124	Total 983	C 624	N 190	O 169	0	0	0

- Molecule 10 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	58	138	Total 1104	C 712	N 206	O 182	S 4	0	0	0
10	15	138	Total 1104	C 712	N 206	O 182	S 4	0	0	0

- Molecule 11 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	G8	103	Total 783	C 504	N 148	O 126	S 5	0	0	0
11	C5	104	Total 794	C 510	N 152	O 127	S 5	0	0	0

- Molecule 12 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	Q8	60	Total 480	C 306	N 98	O 74	S 2	0	0	0
12	M5	62	Total 495	C 317	N 100	O 76	S 2	0	0	0

- Molecule 13 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	3I	122	Total 956	C 603	N 193	O 159	S 1	0	0	0
13	3A	125	Total 975	C 614	N 196	O 164	S 1	0	0	0

- Molecule 14 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	3E	208	Total 1702	C 1066	N 339	O 290	S 7	0	0	0
14	32	208	Total 1702	C 1066	N 339	O 290	S 7	0	0	0

- Molecule 15 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	1H	2912	Total	C	N	O	P	0	0	0
			62707	27911	11722	20163	2911			
15	14	2909	Total	C	N	O	P	0	0	0
			62647	27884	11716	20139	2908			

There are 14 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
1H	156	U	UNK	conflict	GB 55771382
1H	682	A	G	conflict	GB 55771382
1H	686	C	G	conflict	GB 55771382
1H	697	G	C	conflict	GB 55771382
1H	701	A	C	conflict	GB 55771382
1H	1106	U	G	conflict	GB 55771382
1H	1128	A	C	conflict	GB 55771382
14	155A	U	UNK	conflict	GB 55771382
14	682	A	G	conflict	GB 55771382
14	686	C	G	conflict	GB 55771382
14	697	G	C	conflict	GB 55771382
14	701	A	C	conflict	GB 55771382
14	1106	U	G	conflict	GB 55771382
14	1128	A	C	conflict	GB 55771382

- Molecule 16 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	B8	129	Total	C	N	O	S	0	0	0
			1081	674	223	183	1			
16	75	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			

- Molecule 17 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
17	L8	57	Total	C	N	O	0	0	0
			452	288	88	76			
17	H5	59	Total	C	N	O	0	0	0
			468	298	90	80			

- Molecule 18 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	61	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			
18	69	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			

- Molecule 19 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
19	9I	67	Total	C	N	O	0	0	0
			550	352	107	91			
19	9A	69	Total	C	N	O	0	0	0
			564	361	110	93			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
20	1F	23	Total	C	N	O	0	0	0
			199	122	48	29			
20	1B	25	Total	C	N	O	0	0	0
			217	134	52	31			

- Molecule 21 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	68	122	Total	C	N	O	S	0	0	0
			932	588	171	169	4			
21	25	122	Total	C	N	O	S	0	0	0
			932	588	171	169	4			

- Molecule 22 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	H8	171	Total	C	N	O	S	0	0	0
			1373	876	247	247	3			
22	D5	135	Total	C	N	O	S	0	0	0
			1120	720	202	195	3			

- Molecule 23 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	21	205	Total	C	N	O	S	0	0	0
			1568	991	300	271	6			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	29	205	Total	C	N	O	S	0	0	0
			1568	991	300	271	6			

- Molecule 24 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	4I	116	Total	C	N	O	S	0	0	0
			928	574	191	161	2			
24	4A	116	Total	C	N	O	S	0	0	0
			928	574	191	161	2			

- Molecule 25 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	4E	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			
25	42	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			

- Molecule 26 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	16	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			
26	1J	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			

- Molecule 27 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	C8	117	Total	C	N	O	S	0	0	0
			963	610	202	150	1			
27	85	117	Total	C	N	O	S	0	0	0
			963	610	202	150	1			

- Molecule 28 is a protein called 50S ribosomal protein L31.

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

- Molecule 29 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	AI	80	Total	C	N	O	S	0	0	0
			643	411	118	112	2			
29	AA	78	Total	C	N	O	S	0	0	0
			624	398	115	109	2			

- Molecule 30 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	78	147	Total	C	N	O	S	0	0	0
			1122	698	229	192	3			
30	35	150	Total	C	N	O	S	0	0	0
			1144	712	232	197	3			

- Molecule 31 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	I8	83	Total	C	N	O	S	0	0	0
			656	407	139	109	1			
31	E5	84	Total	C	N	O	S	0	0	0
			645	398	136	110	1			

- Molecule 32 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	31	202	Total	C	N	O	S	0	0	0
			1585	1011	297	275	2			
32	39	208	Total	C	N	O	S	0	0	0
			1627	1037	304	283	3			

- Molecule 33 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	5I	60	Total	C	N	O	S	0	0	0
			491	312	104	71	4			
33	5A	58	Total	C	N	O	S	0	0	0
			475	303	99	69	4			

- Molecule 34 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	5E	101	Total	C	N	O	S	0	0	0
			842	531	155	153	3			
34	52	101	Total	C	N	O	S	0	0	0
			842	531	155	153	3			

- Molecule 35 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	D8	101	Total	C	N	O	S	0	0	0
			778	501	142	134	1			
35	95	101	Total	C	N	O	S	0	0	0
			778	501	142	134	1			

- Molecule 36 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	N8	55	Total	C	N	O	S	0	0	0
			429	269	86	69	5			
36	J5	56	Total	C	N	O	S	0	0	0
			434	272	87	70	5			

- Molecule 37 is a protein called 30S ribosomal protein S20.

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

- Molecule 38 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	88	141	Total	C	N	O	S	0	0	0
			1121	715	212	187	7			
38	45	140	Total	C	N	O	S	0	0	0
			1113	710	211	186	6			

- Molecule 39 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	J8	95	Total	C	N	O	S	0	0	0
			746	469	148	128	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	F5	94	Total	C	N	O	S	0	0	0
			737	463	146	127	1			

- Molecule 40 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	41	181	Total	C	N	O	S	0	0	0
			1473	942	268	259	4			
40	49	181	Total	C	N	O	S	0	0	0
			1473	942	268	259	4			

- Molecule 41 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	6I	88	Total	C	N	O	S	0	0	0
			733	459	147	125	2			
41	6A	88	Total	C	N	O	S	0	0	0
			733	459	147	125	2			

- Molecule 42 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	6E	144	Total	C	N	O	S	0	0	0
			1157	718	230	203	6			
42	62	147	Total	C	N	O	S	0	0	0
			1200	750	237	207	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	E8	112	Total	C	N	O	S	0	0	0
			890	560	175	153	2			
43	A5	113	Total	C	N	O	S	0	0	0
			899	566	177	154	2			

- Molecule 44 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	1E	237	Total	C	N	O	S	0	0	0
			1924	1228	344	347	5			
44	12	237	Total	C	N	O	S	0	0	0
			1924	1228	344	347	5			

- Molecule 45 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	98	118	Total	C	N	O	S	0	0	0
			967	604	203	159	1			
45	55	117	Total	C	N	O		0	0	0
			959	599	202	158				

- Molecule 46 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	K8	68	Total	C	N	O	S	0	0	0
			575	358	116	100	1			
46	G5	67	Total	C	N	O	S	0	0	0
			567	351	115	100	1			

- Molecule 47 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	51	174	Total	C	N	O	S	0	0	0
			1336	848	251	236	1			
47	59	170	Total	C	N	O	S	0	0	0
			1307	829	245	232	1			

- Molecule 48 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	1A	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			
48	1I	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			

- Molecule 49 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	7I	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			
49	7A	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			

- Molecule 50 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	7E	138	Total	C	N	O	S	0	0	0
			1115	705	215	192	3			
50	72	138	Total	C	N	O	S	0	0	0
			1115	705	215	192	3			

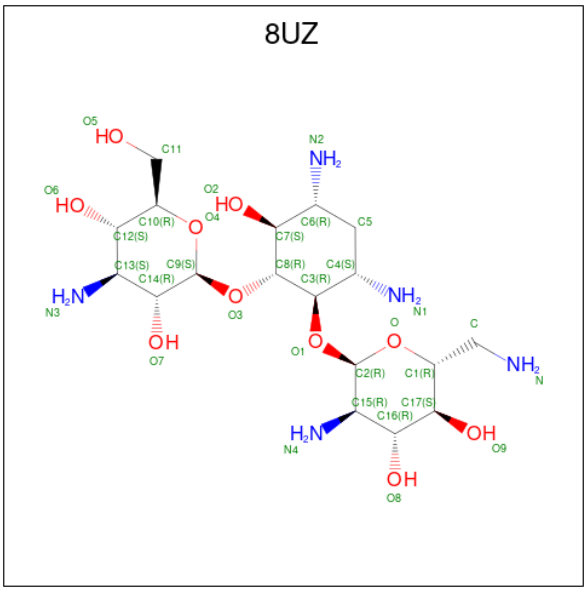
- Molecule 51 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	Y1	25	Total	C	N	O	P	0	0	0
			521	234	78	185	24			
51	Y4	25	Total	C	N	O	P	0	0	0
			521	234	78	185	24			

- Molecule 52 is a RNA chain called tRNA-Phe.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	W1	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
52	X1	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
52	V1	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
52	W4	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
52	X4	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
52	V4	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			

- Molecule 53 is TC007 (three-letter code: 8UZ) (formula: $C_{18}H_{37}N_5O_{10}$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
53	13	1	Total C N O 33 18 5 10	0	0
53	13	1	Total C N O 33 18 5 10	0	0
53	1G	1	Total C N O 33 18 5 10	0	0
53	1G	1	Total C N O 33 18 5 10	0	0

- Molecule 54 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	13	182	Total Mg 182 182	0	0
54	A8	1	Total Mg 1 1	0	0
54	B5	1	Total Mg 1 1	0	0
54	11	5	Total Mg 5 5	0	0
54	2A	1	Total Mg 1 1	0	0
54	1G	178	Total Mg 178 178	0	0
54	58	1	Total Mg 1 1	0	0
54	G8	1	Total Mg 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	19	3	Total Mg 3 3	0	0
54	3I	1	Total Mg 1 1	0	0
54	3E	2	Total Mg 2 2	0	0
54	1H	597	Total Mg 597 597	0	0
54	B8	1	Total Mg 1 1	0	0
54	C5	2	Total Mg 2 2	0	0
54	L8	1	Total Mg 1 1	0	0
54	14	568	Total Mg 568 568	0	0
54	68	2	Total Mg 2 2	0	0
54	21	3	Total Mg 3 3	0	0
54	4I	1	Total Mg 1 1	0	0
54	4E	1	Total Mg 1 1	0	0
54	16	14	Total Mg 14 14	0	0
54	25	2	Total Mg 2 2	0	0
54	29	5	Total Mg 5 5	0	0
54	42	1	Total Mg 1 1	0	0
54	1J	14	Total Mg 14 14	0	0
54	78	3	Total Mg 3 3	0	0
54	85	1	Total Mg 1 1	0	0
54	I8	2	Total Mg 2 2	0	0
54	31	3	Total Mg 3 3	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	5I	1	Total Mg 1 1	0	0
54	5E	1	Total Mg 1 1	0	0
54	35	1	Total Mg 1 1	0	0
54	E5	2	Total Mg 2 2	0	0
54	39	2	Total Mg 2 2	0	0
54	52	1	Total Mg 1 1	0	0
54	88	5	Total Mg 5 5	0	0
54	41	2	Total Mg 2 2	0	0
54	45	2	Total Mg 2 2	0	0
54	49	1	Total Mg 1 1	0	0
54	6A	1	Total Mg 1 1	0	0
54	98	1	Total Mg 1 1	0	0
54	A5	1	Total Mg 1 1	0	0
54	K8	1	Total Mg 1 1	0	0
54	55	2	Total Mg 2 2	0	0
54	P8	1	Total Mg 1 1	0	0
54	7A	1	Total Mg 1 1	0	0
54	W1	4	Total Mg 4 4	0	0
54	X1	9	Total Mg 9 9	0	0
54	W4	4	Total Mg 4 4	0	0
54	X4	6	Total Mg 6 6	0	0

- Molecule 55 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
55	G8	1	Total Zn 1 1	0	0
55	3E	1	Total Zn 1 1	0	0
55	C5	1	Total Zn 1 1	0	0
55	32	1	Total Zn 1 1	0	0
55	5I	1	Total Zn 1 1	0	0
55	5A	1	Total Zn 1 1	0	0

- Molecule 56 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	13	76	Total O 76 76	0	0
56	11	1	Total O 1 1	0	0
56	L5	3	Total O 3 3	0	0
56	1G	72	Total O 72 72	0	0
56	19	8	Total O 8 8	0	0
56	1H	533	Total O 533 533	0	0
56	B8	1	Total O 1 1	0	0
56	M5	2	Total O 2 2	0	0
56	14	512	Total O 512 512	0	0
56	21	1	Total O 1 1	0	0
56	C8	3	Total O 3 3	0	0
56	29	4	Total O 4 4	0	0
56	78	4	Total O 4 4	0	0

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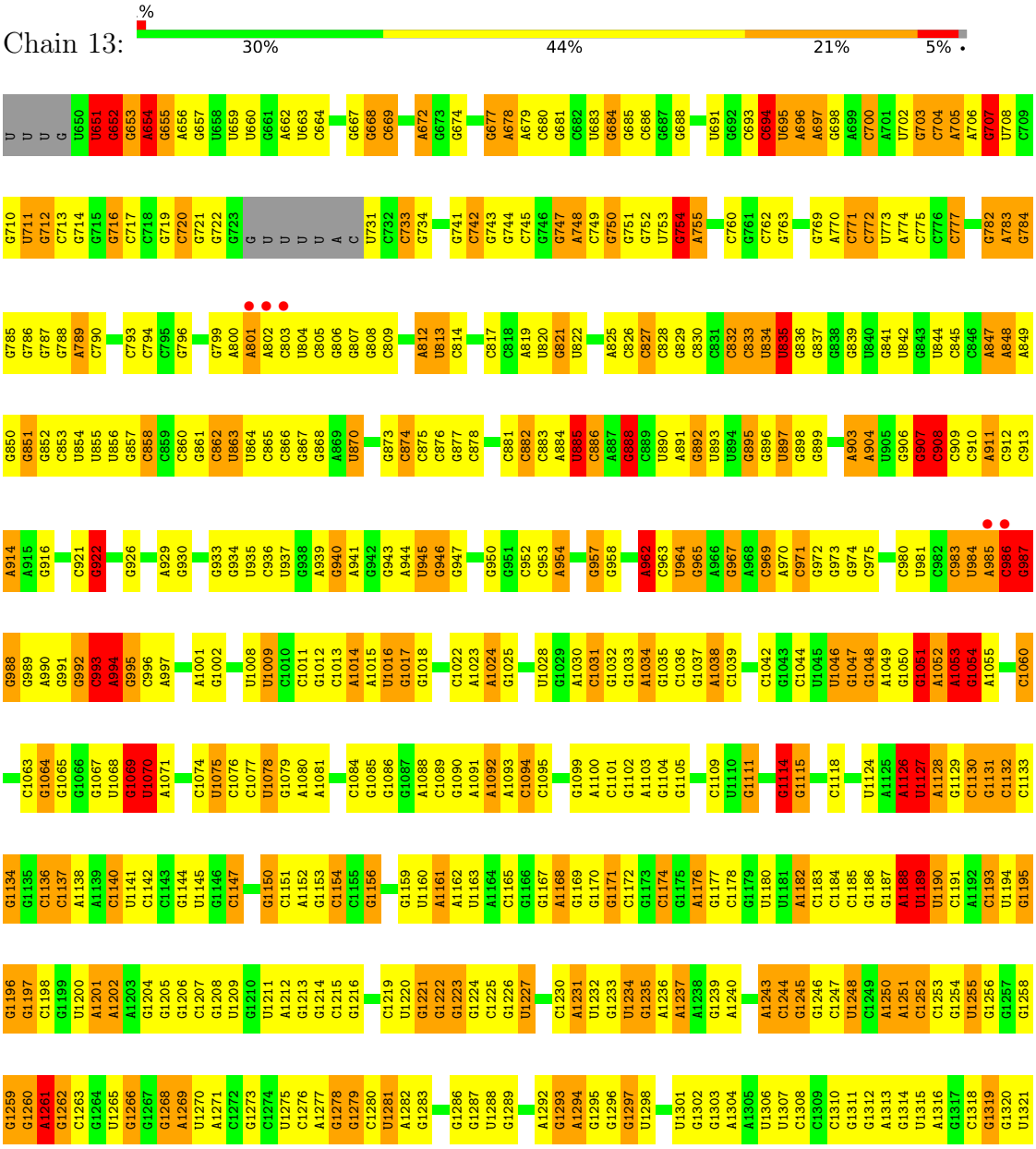
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	I8	5	Total O 5 5	0	0
56	31	5	Total O 5 5	0	0
56	35	1	Total O 1 1	0	0
56	D8	1	Total O 1 1	0	0
56	39	6	Total O 6 6	0	0
56	5A	1	Total O 1 1	0	0
56	J8	1	Total O 1 1	0	0
56	J5	1	Total O 1 1	0	0
56	6I	1	Total O 1 1	0	0
56	E8	1	Total O 1 1	0	0
56	6A	2	Total O 2 2	0	0
56	A5	1	Total O 1 1	0	0
56	55	1	Total O 1 1	0	0
56	F8	1	Total O 1 1	0	0
56	P8	1	Total O 1 1	0	0
56	7A	1	Total O 1 1	0	0
56	Y4	2	Total O 2 2	0	0

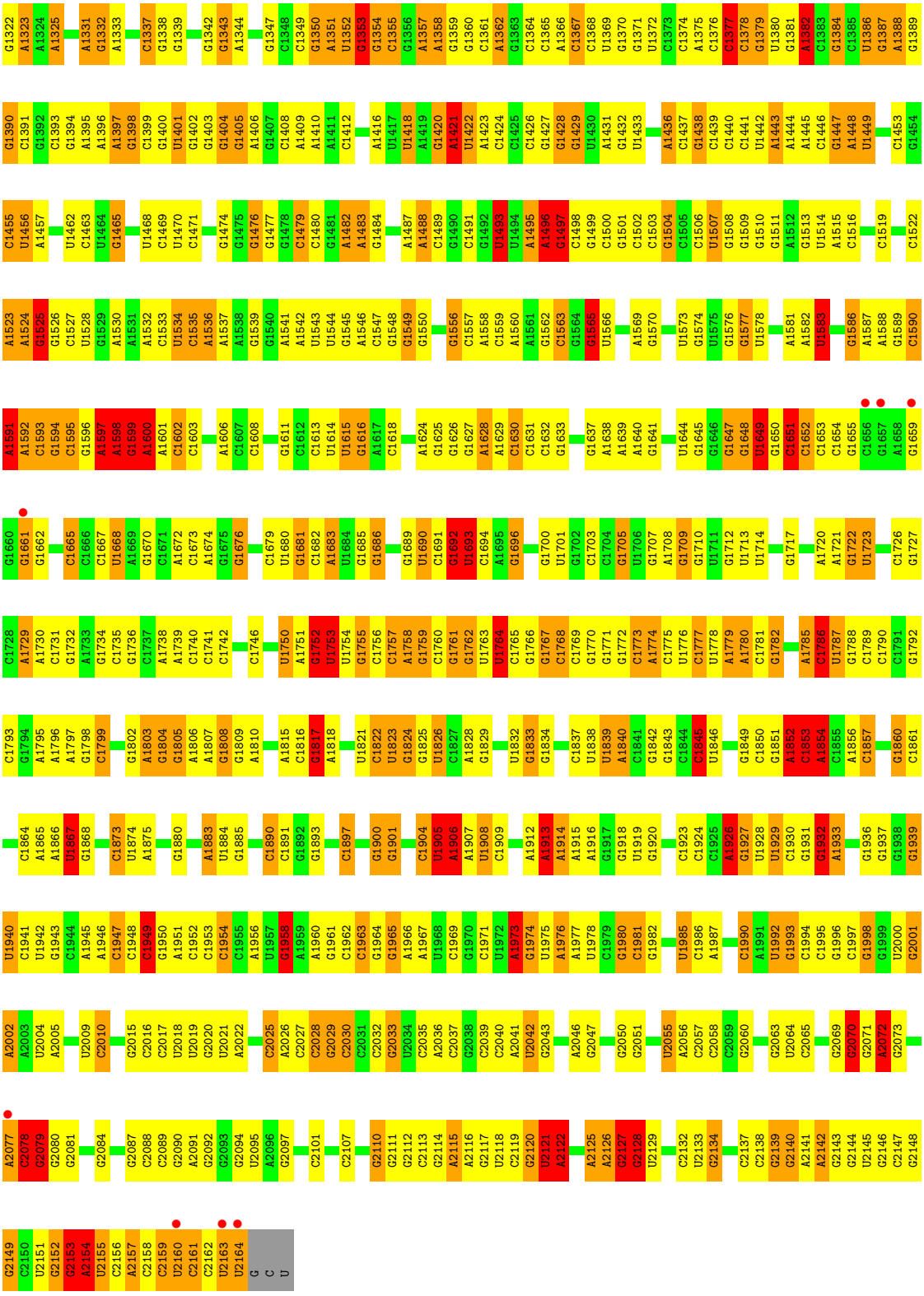
3 Residue-property plots (i)

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

- Molecule 1: 16S ribosomal RNA

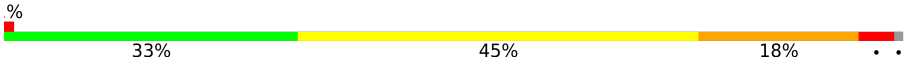
Chain 13:

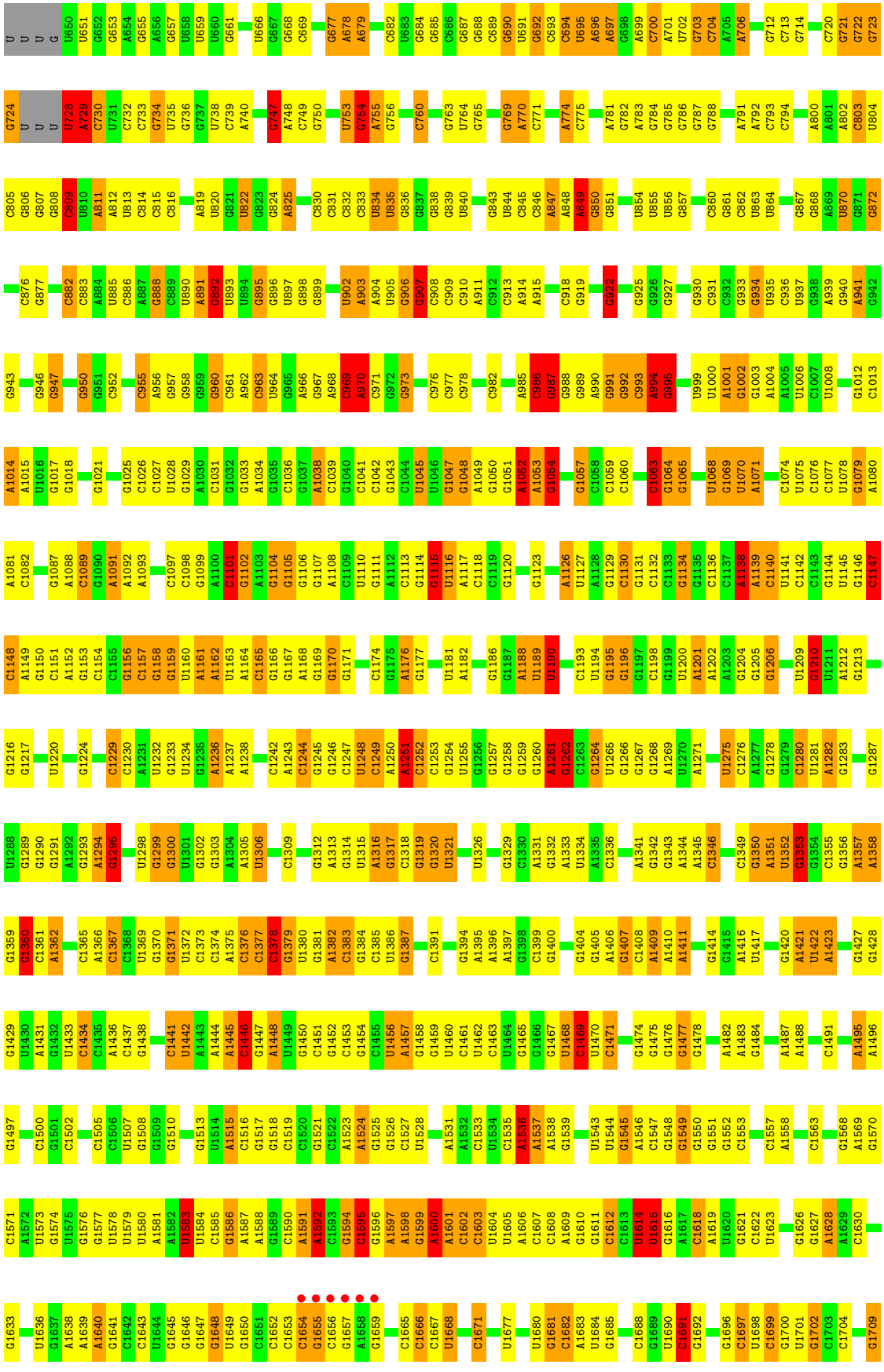


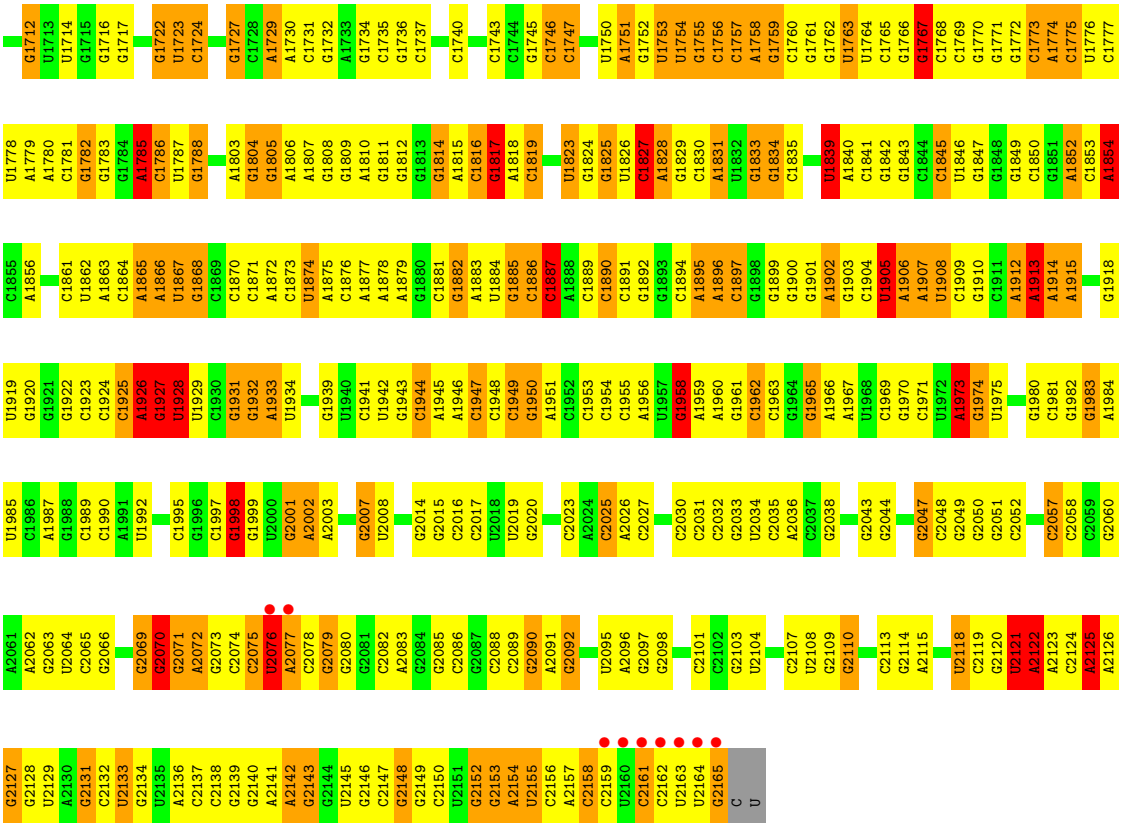


• Molecule 1: 16S ribosomal RNA

Chain 1G:

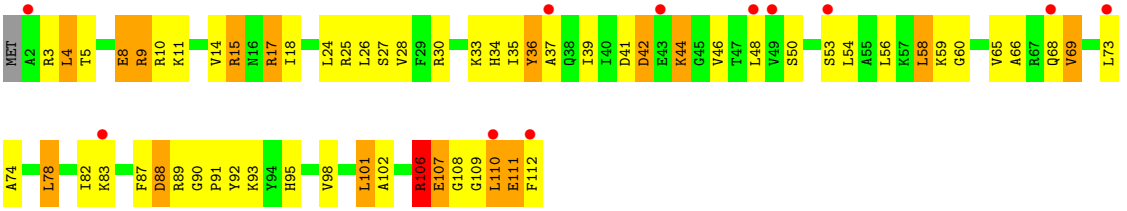






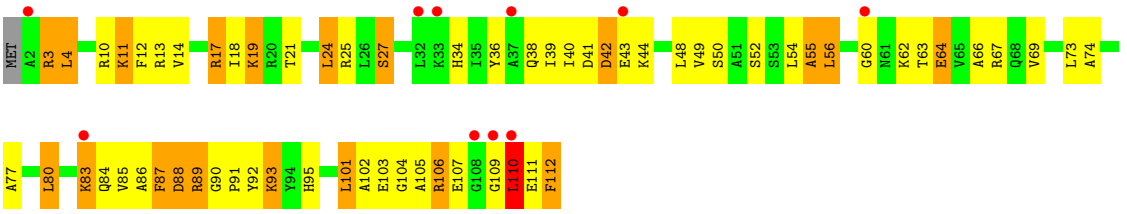
• Molecule 2: 50S ribosomal protein L18

Chain A8:



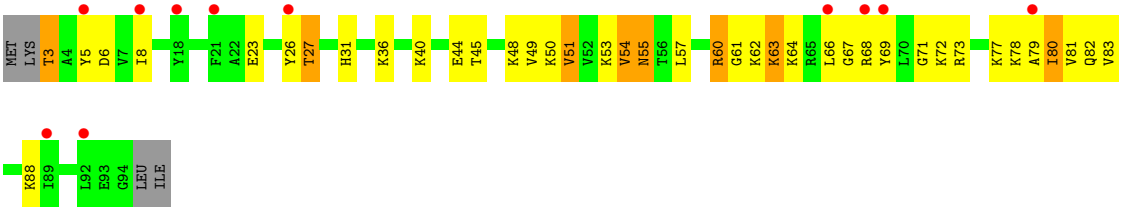
• Molecule 2: 50S ribosomal protein L18

Chain 65:



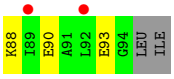
• Molecule 3: 50S ribosomal protein L23

Chain B5:



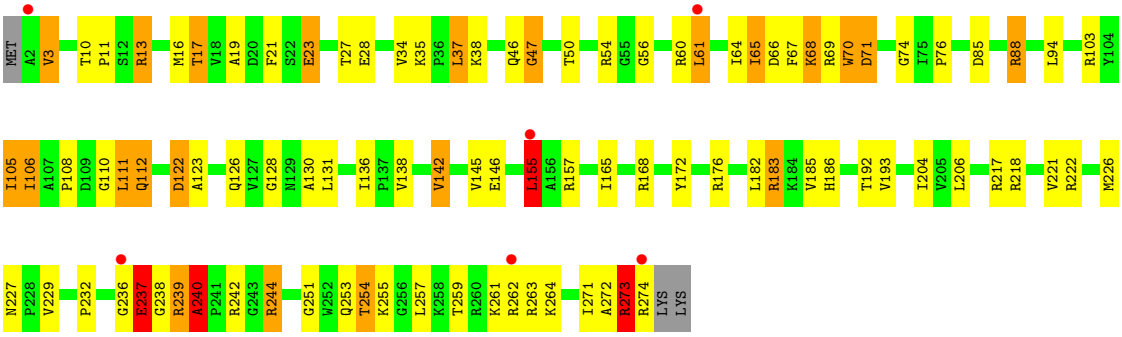
• Molecule 3: 50S ribosomal protein L23

Chain F8:



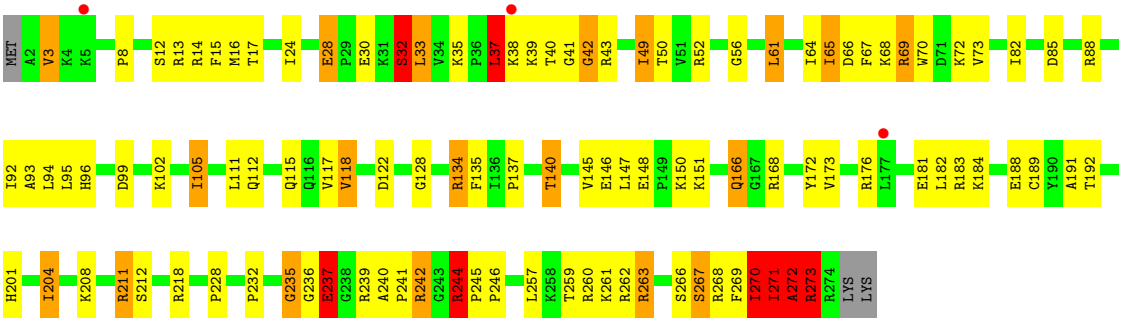
• Molecule 4: 50S ribosomal protein L2

Chain 11:



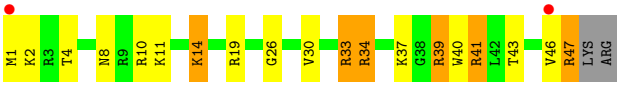
• Molecule 4: 50S ribosomal protein L2

Chain 19:



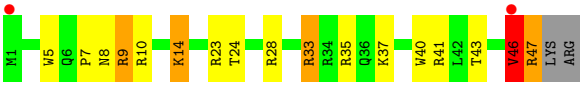
• Molecule 5: 50S ribosomal protein L34

Chain L5:



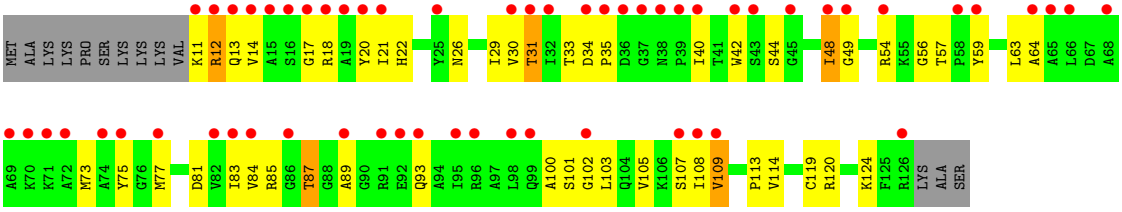
• Molecule 5: 50S ribosomal protein L34

Chain P8:



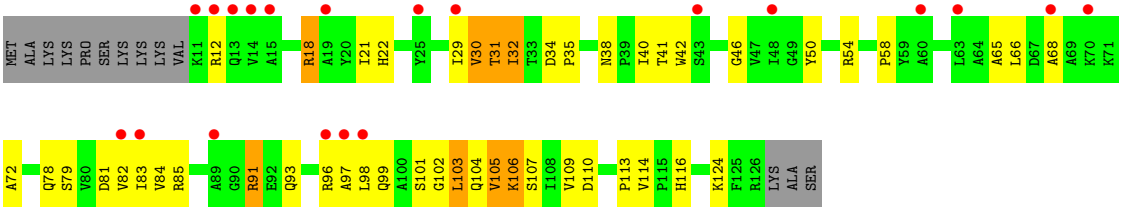
• Molecule 6: 30S ribosomal protein S11

Chain 2A:



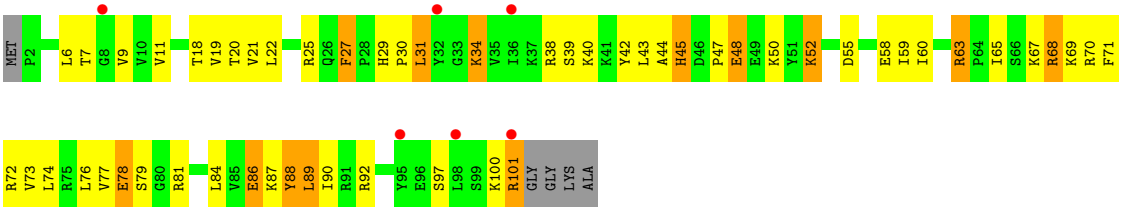
• Molecule 6: 30S ribosomal protein S11

Chain 2I:



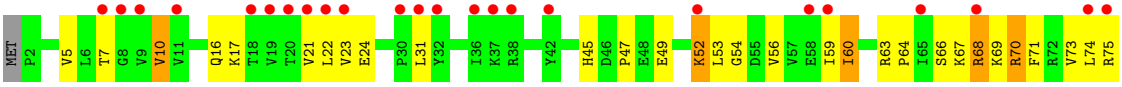
• Molecule 7: 30S ribosomal protein S17

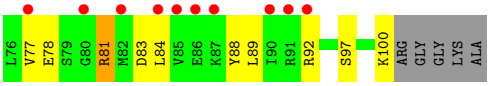
Chain 8I:



• Molecule 7: 30S ribosomal protein S17

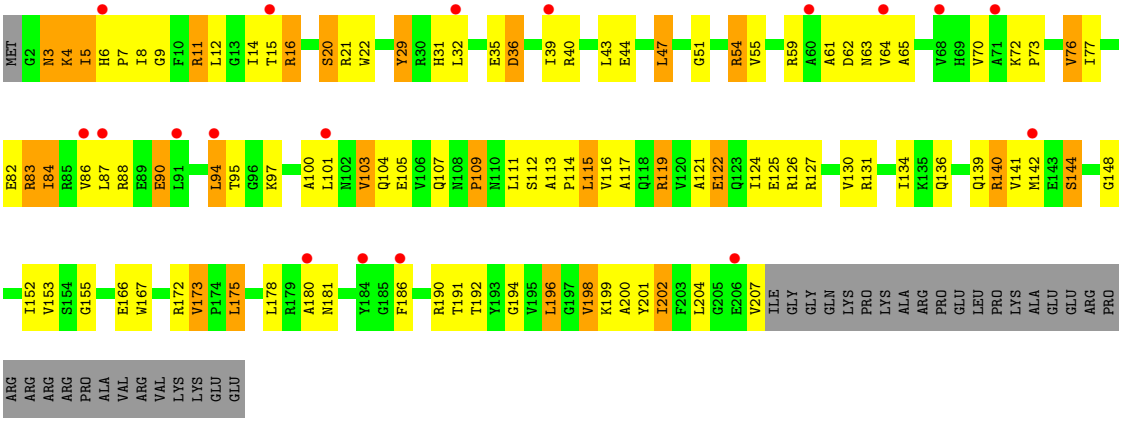
Chain 8A:





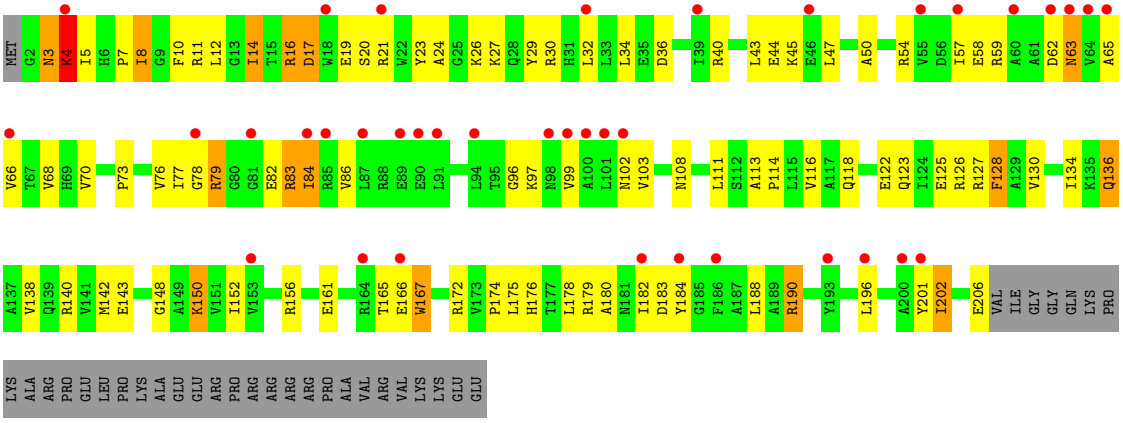
• Molecule 8: 30S ribosomal protein S3

Chain 22:



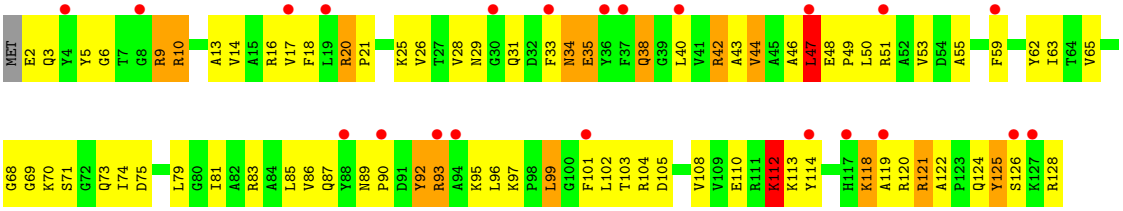
• Molecule 8: 30S ribosomal protein S3

Chain 2E:



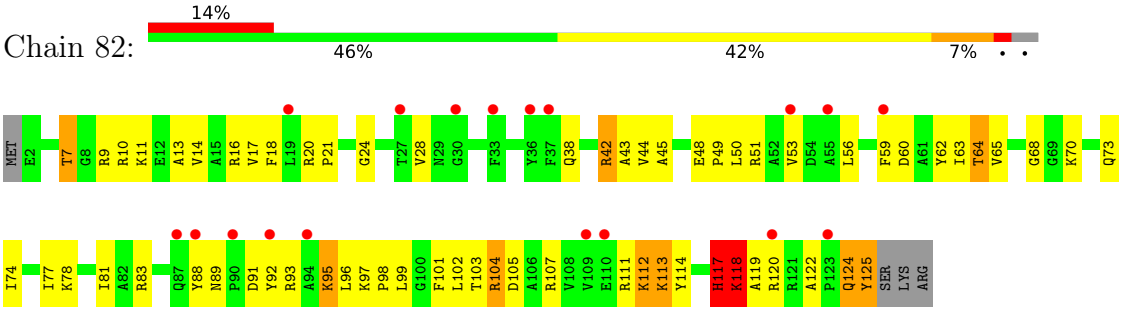
• Molecule 9: 30S ribosomal protein S9

Chain 8E:



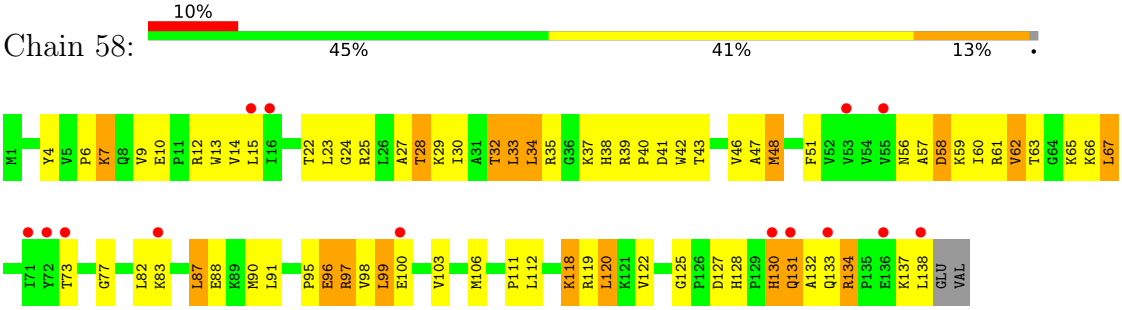
• Molecule 9: 30S ribosomal protein S9

Chain 82:



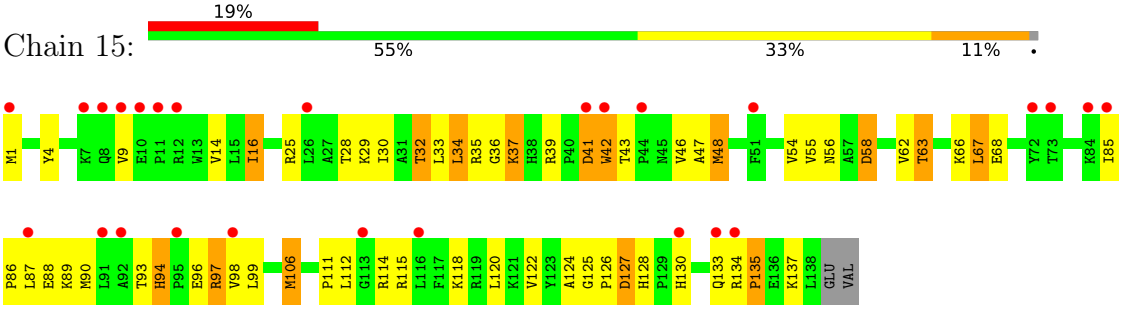
• Molecule 10: 50S ribosomal protein L13

Chain 58:



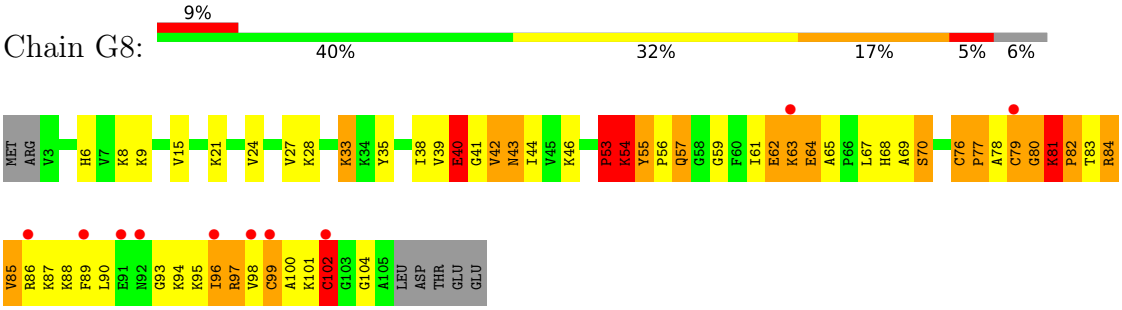
• Molecule 10: 50S ribosomal protein L13

Chain 15:



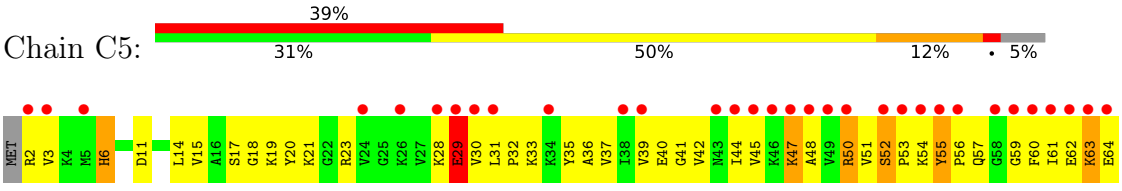
• Molecule 11: 50S ribosomal protein L24

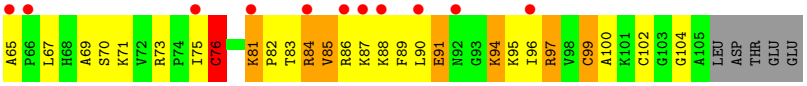
Chain G8:



• Molecule 11: 50S ribosomal protein L24

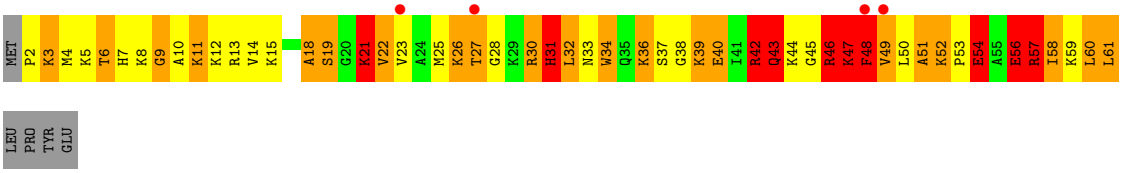
Chain C5:





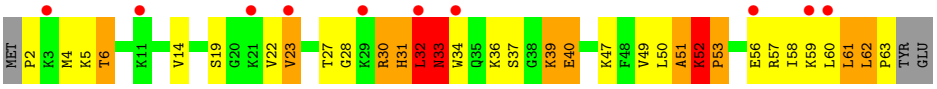
• Molecule 12: 50S ribosomal protein L35

Chain Q8:



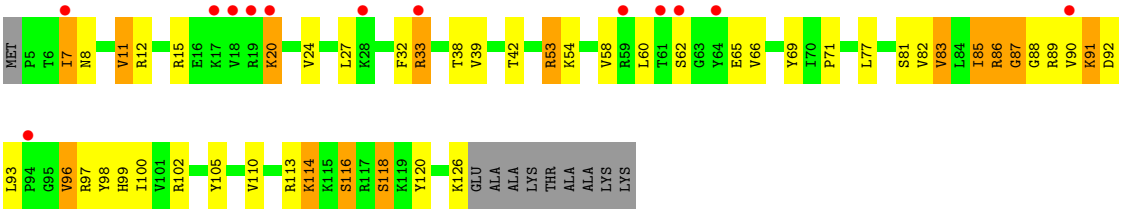
• Molecule 12: 50S ribosomal protein L35

Chain M5:



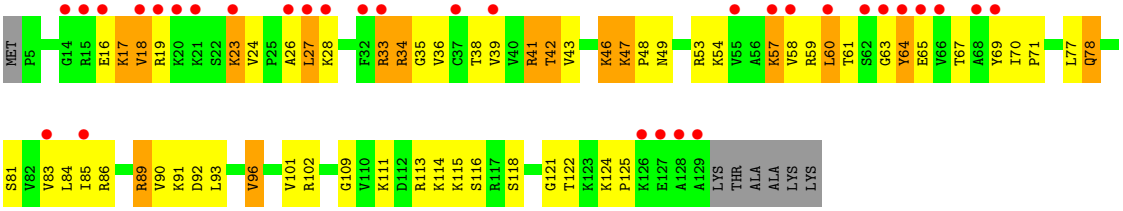
• Molecule 13: 30S ribosomal protein S12

Chain 3I:



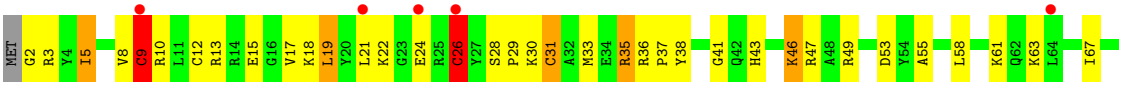
• Molecule 13: 30S ribosomal protein S12

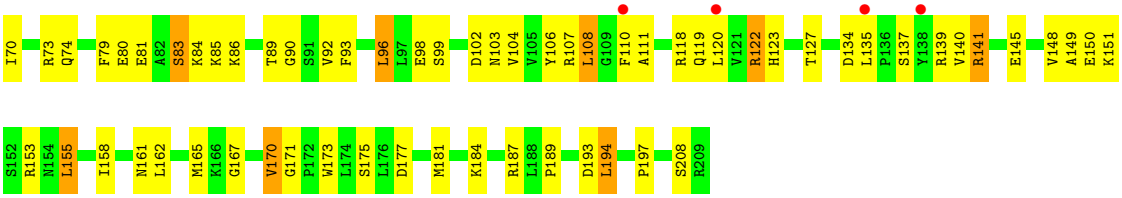
Chain 3A:



• Molecule 14: 30S ribosomal protein S4

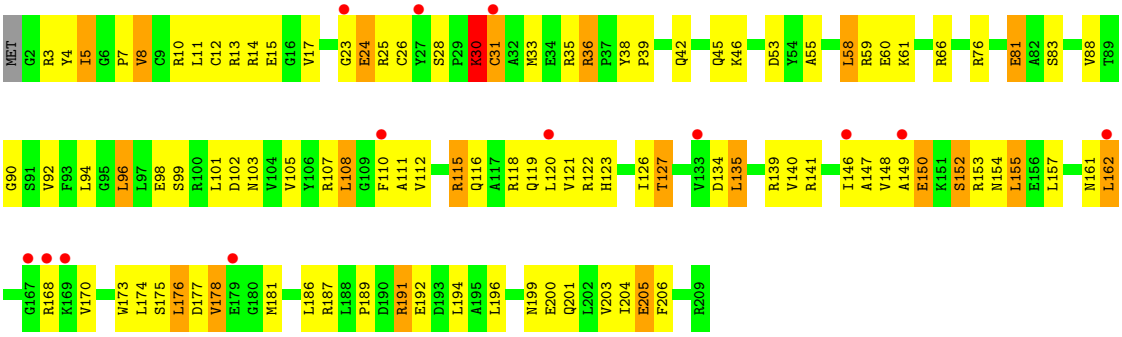
Chain 3E:





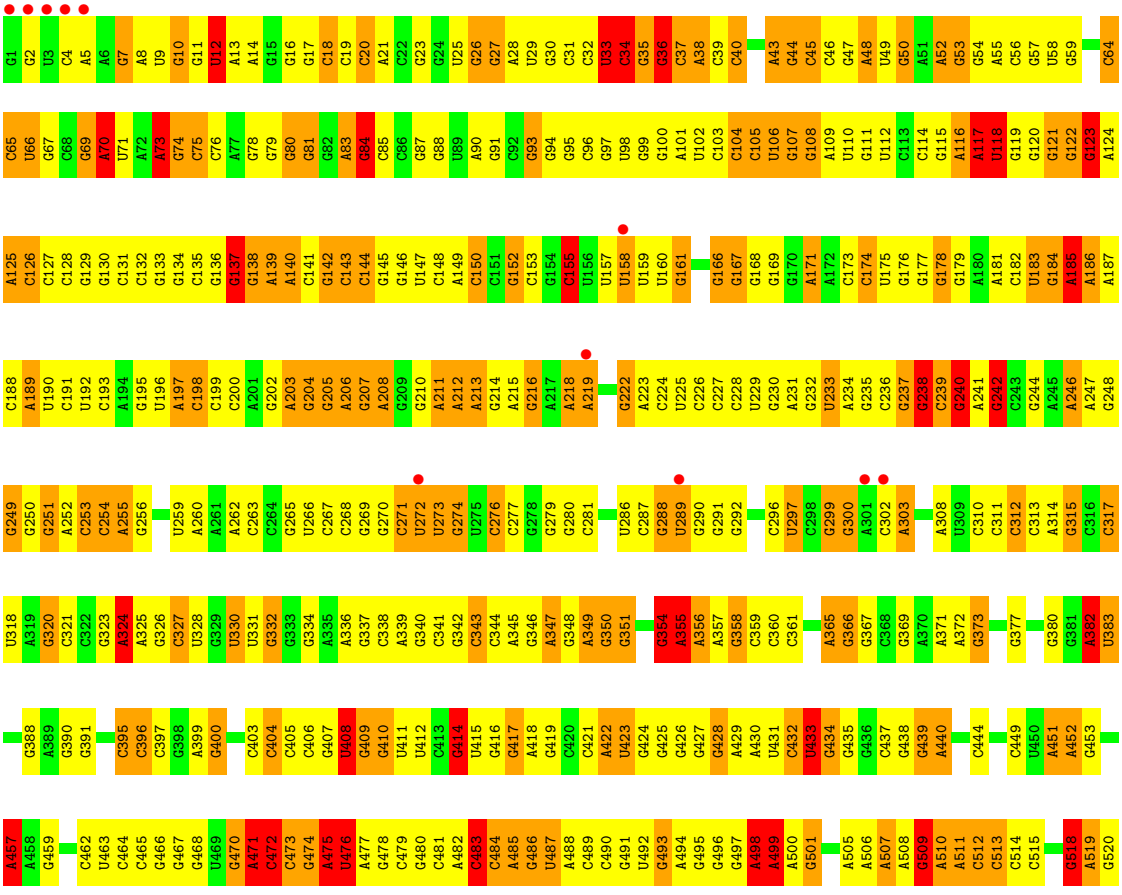
• Molecule 14: 30S ribosomal protein S4

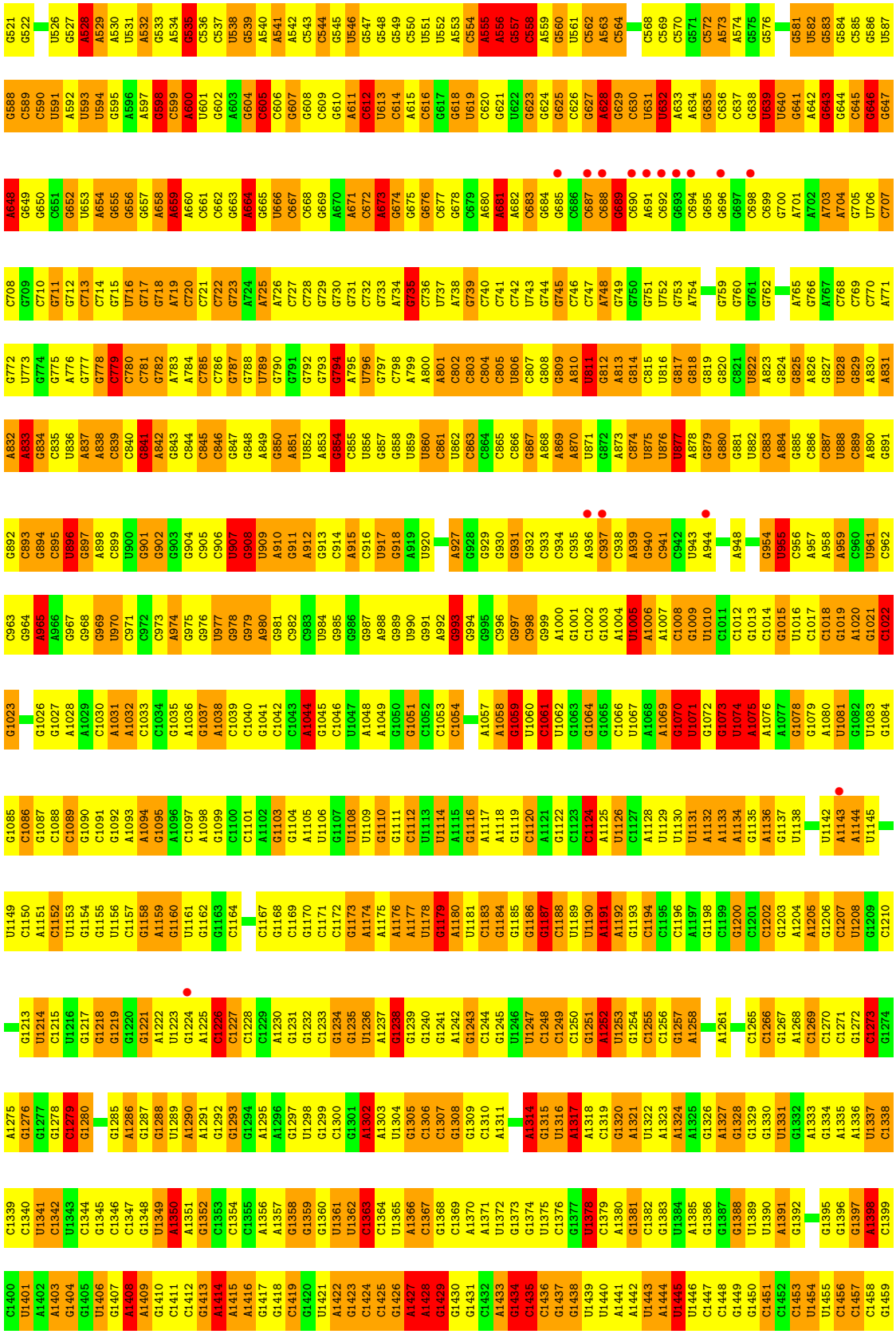
Chain 32:

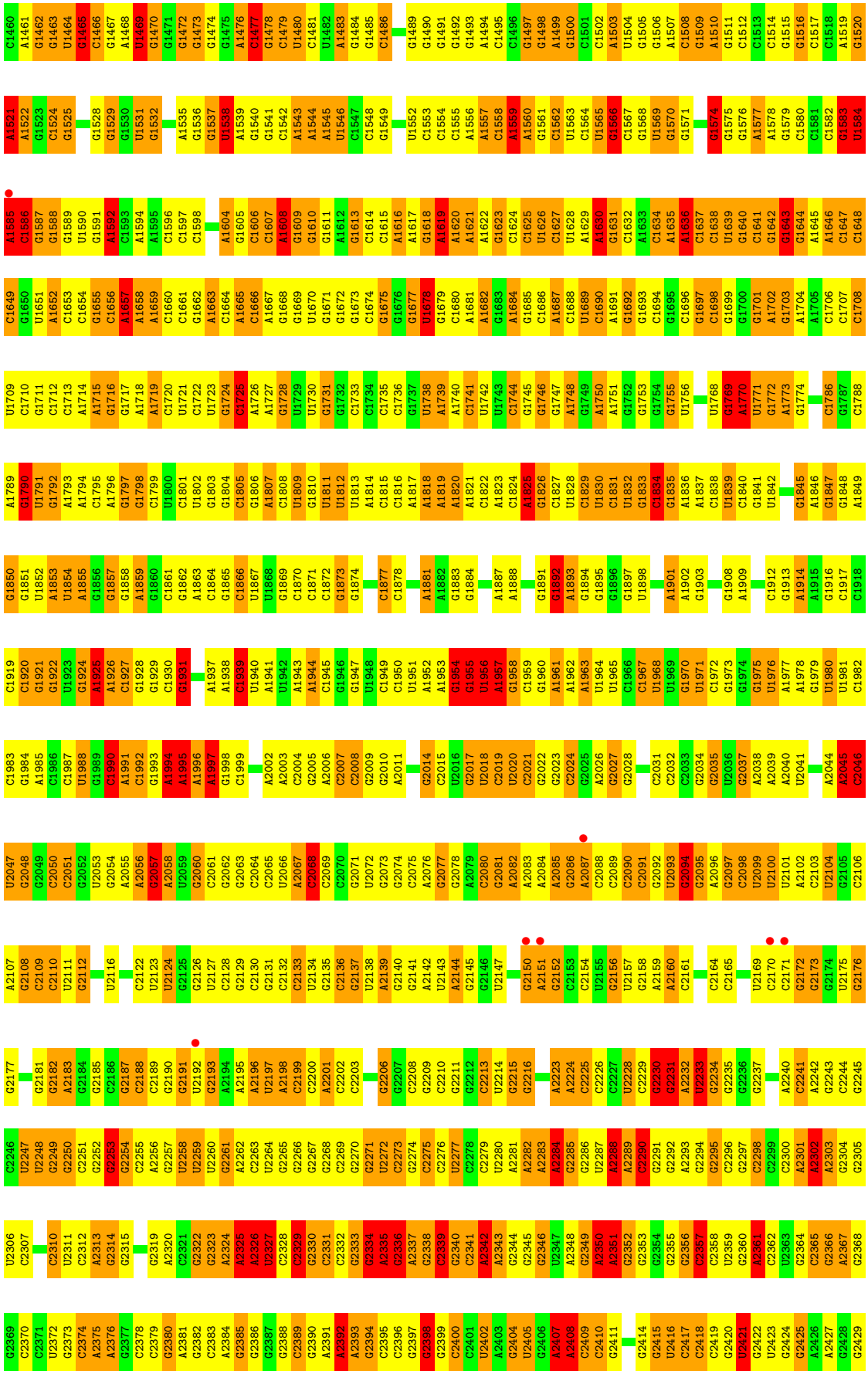


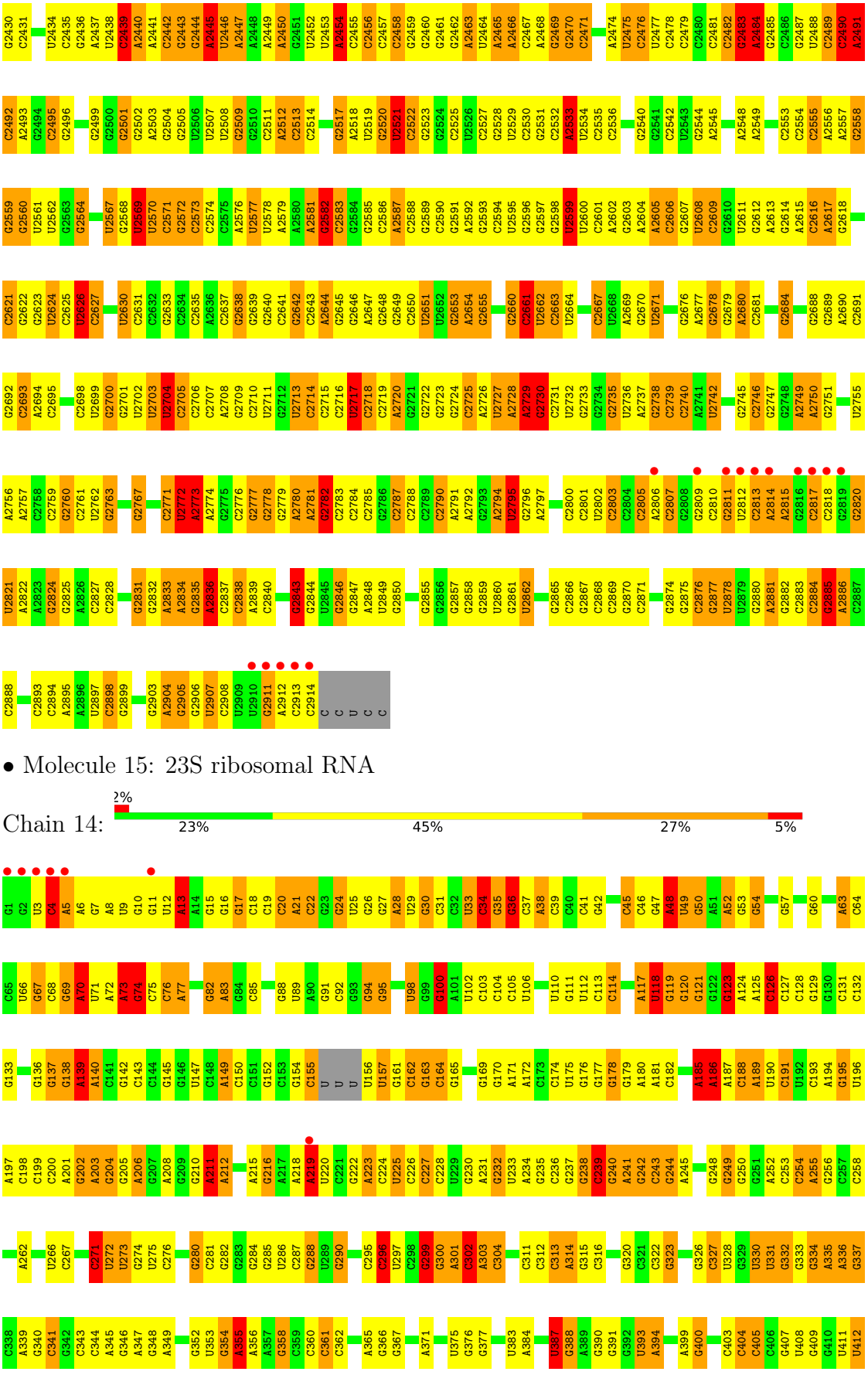
• Molecule 15: 23S ribosomal RNA

Chain 1H:



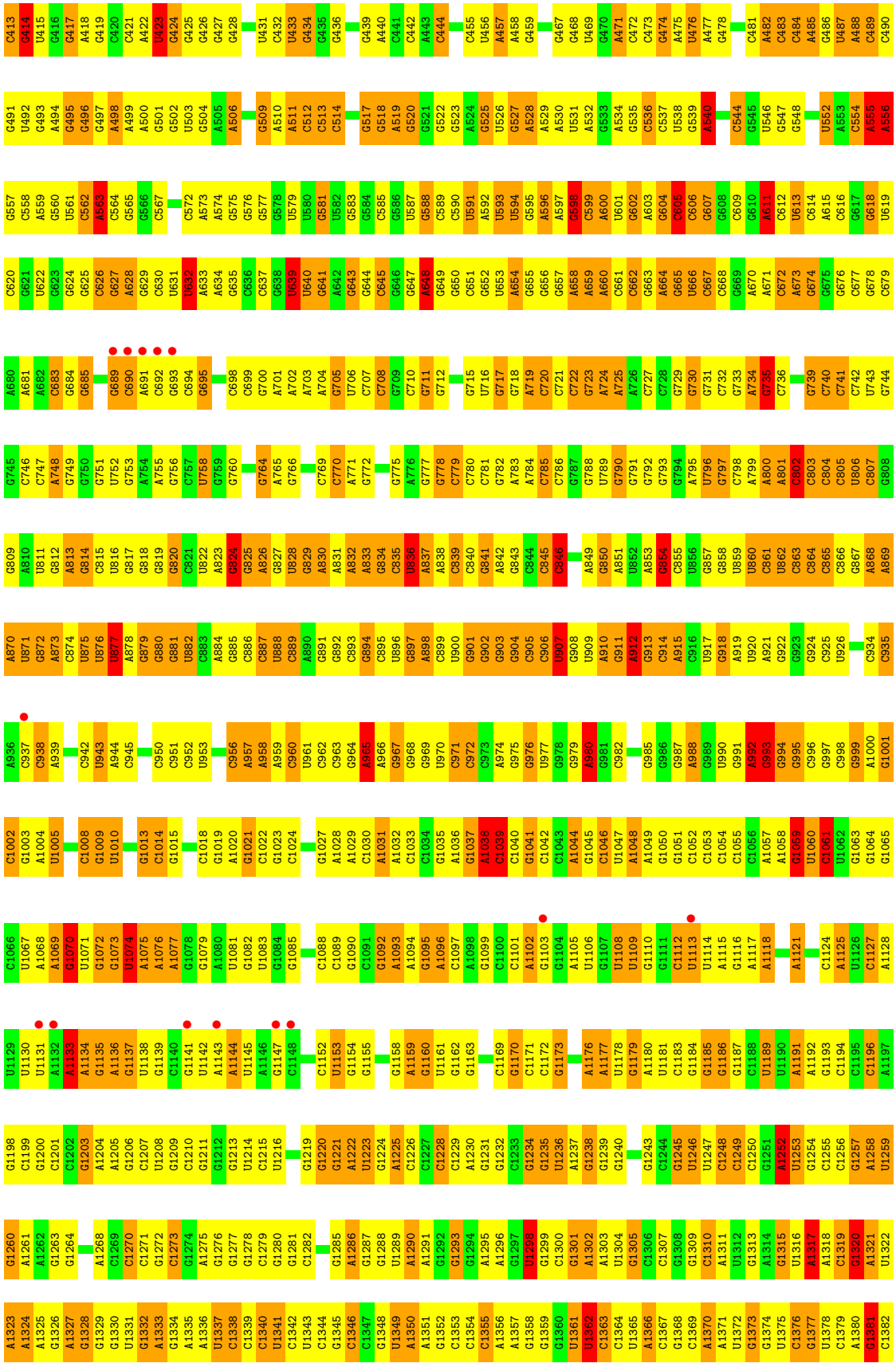


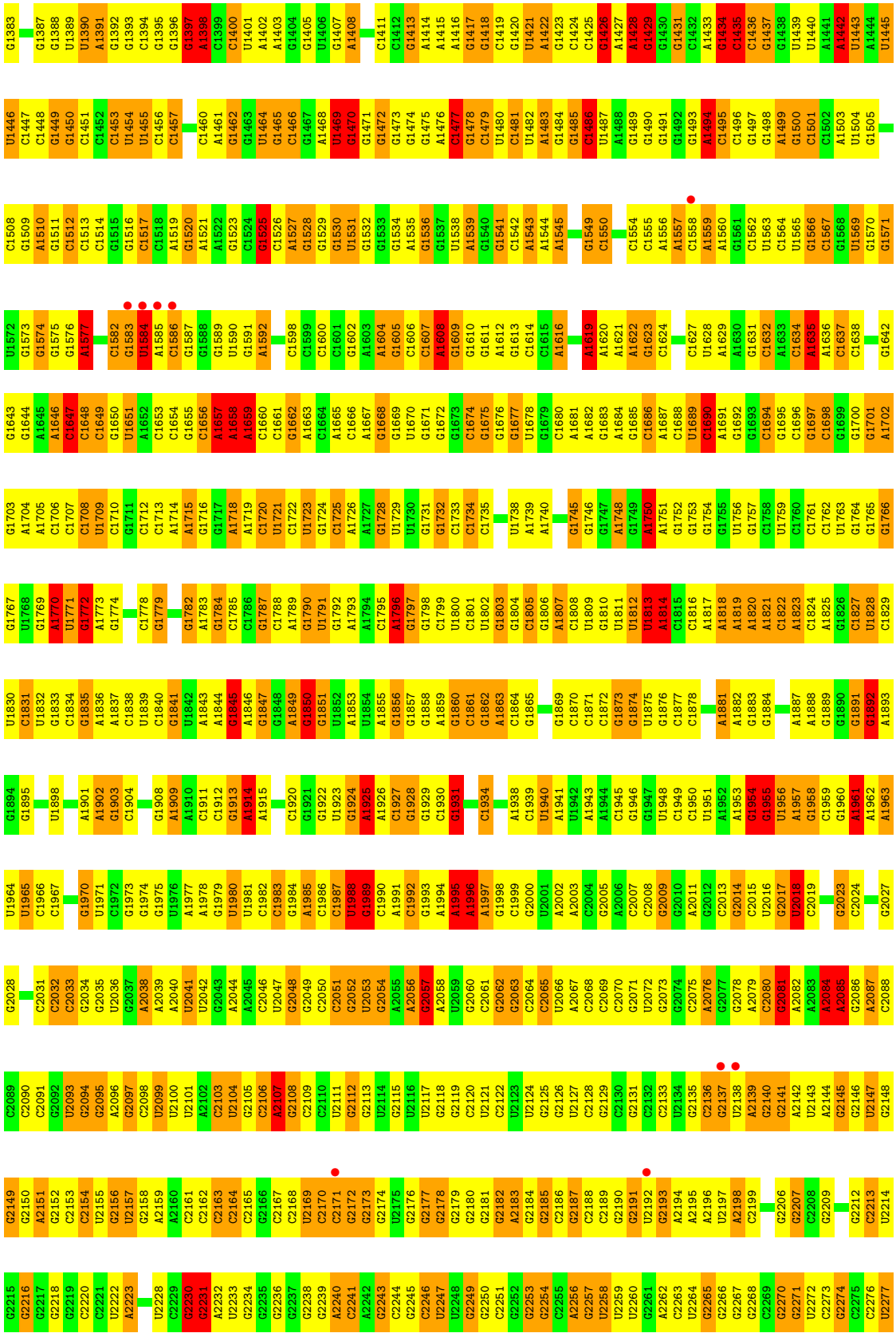


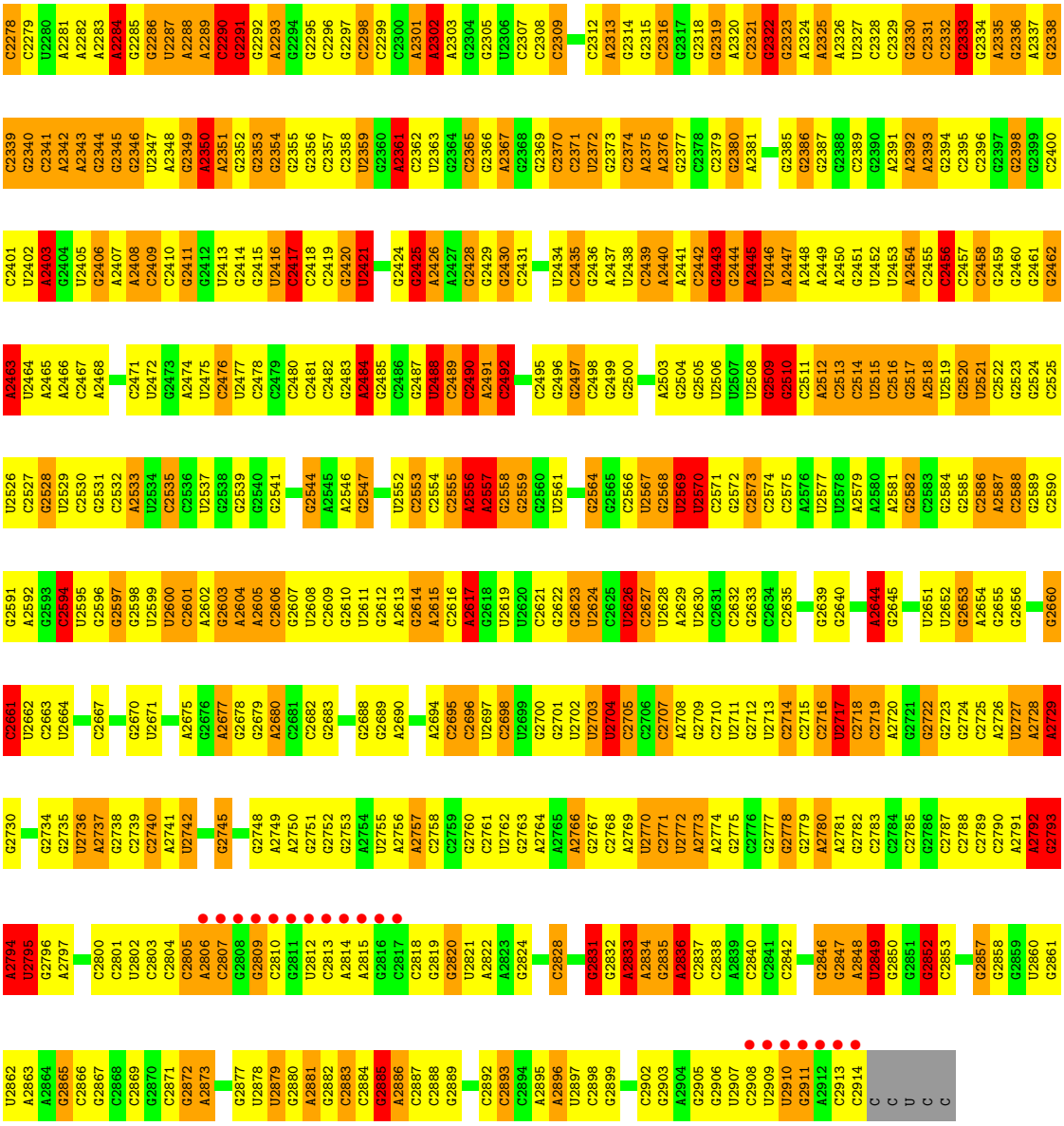


• Molecule 15: 23S ribosomal RNA

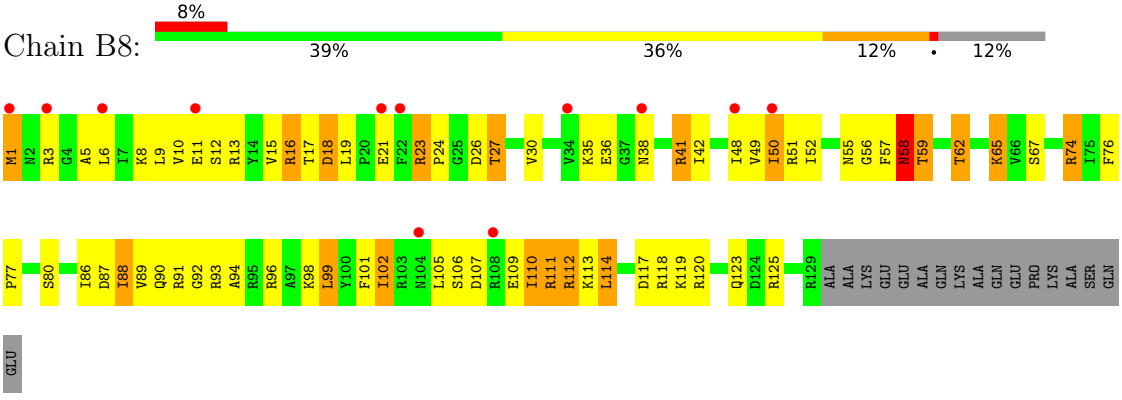
Chain 14:





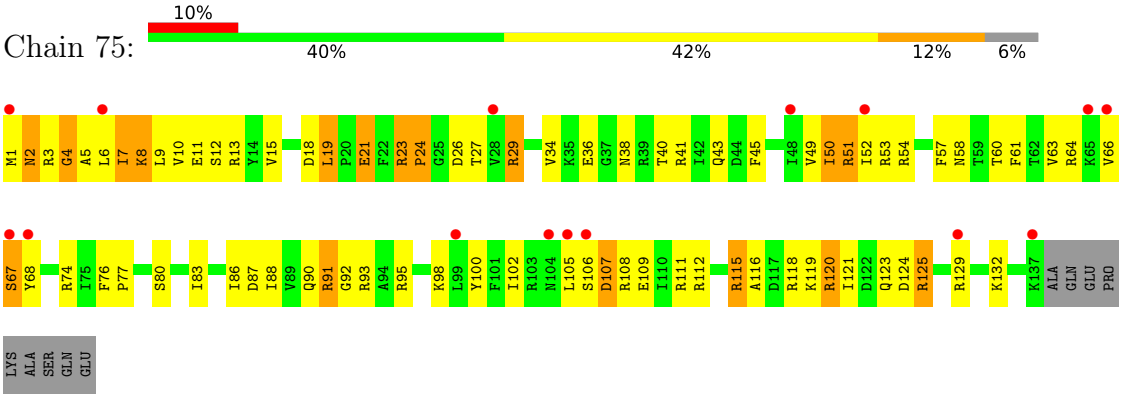


• Molecule 16: 50S ribosomal protein L19



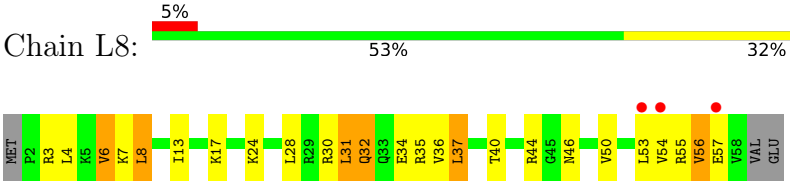
• Molecule 16: 50S ribosomal protein L19

Chain 75:



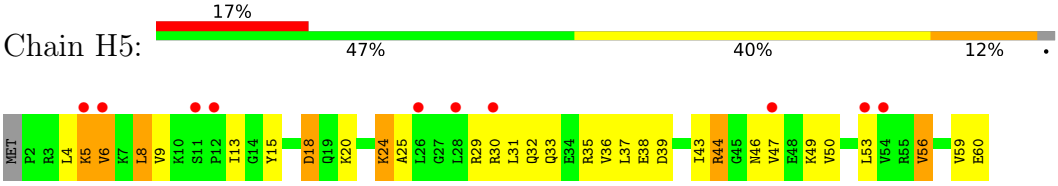
• Molecule 17: 50S ribosomal protein L30

Chain L8:



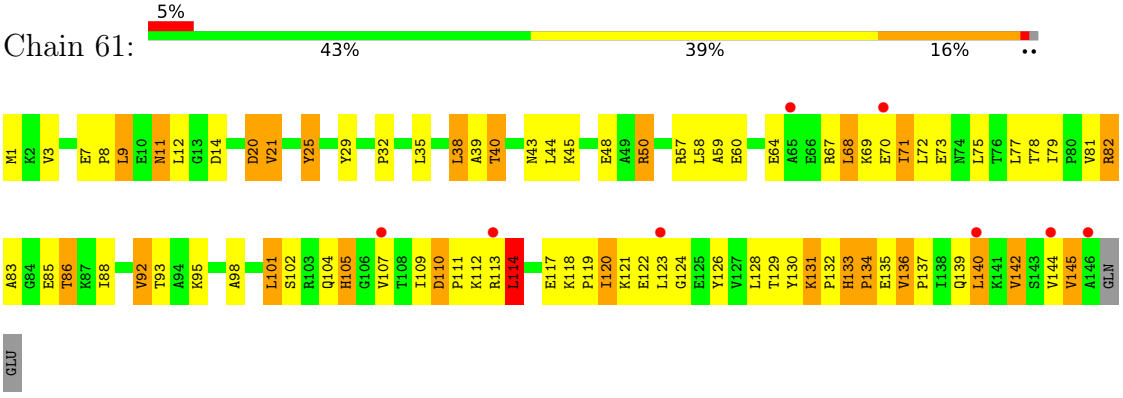
• Molecule 17: 50S ribosomal protein L30

Chain H5:



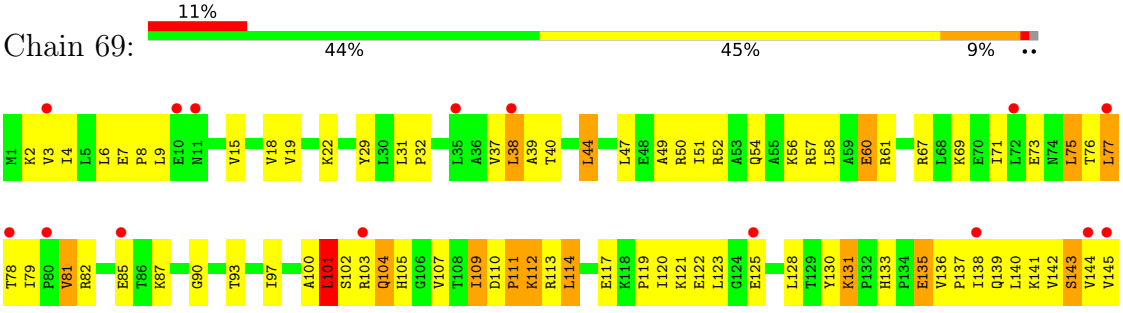
• Molecule 18: 50S ribosomal protein L9

Chain 61:



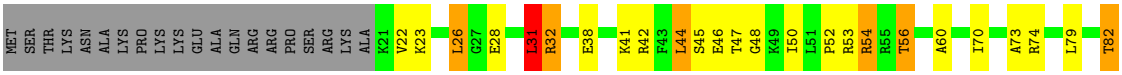
• Molecule 18: 50S ribosomal protein L9

Chain 69:



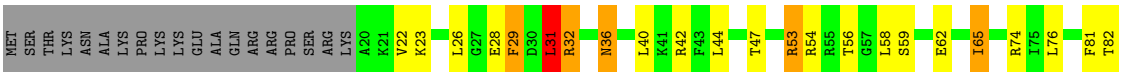
• Molecule 19: 30S ribosomal protein S18

Chain 9I:



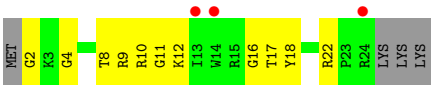
• Molecule 19: 30S ribosomal protein S18

Chain 9A:



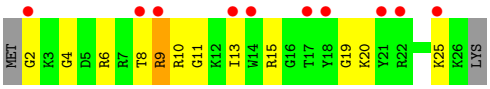
• Molecule 20: 30S ribosomal protein Thx

Chain 1F:



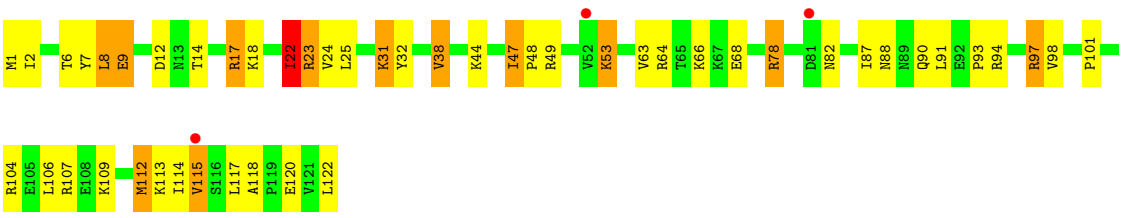
• Molecule 20: 30S ribosomal protein Thx

Chain 1B:



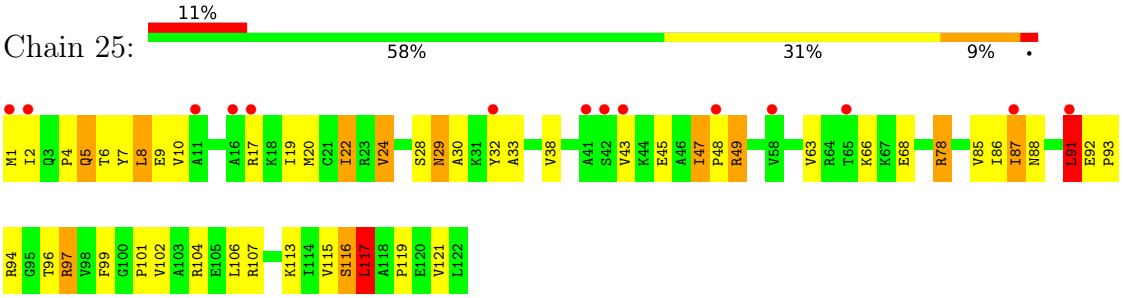
• Molecule 21: 50S ribosomal protein L14

Chain 68:



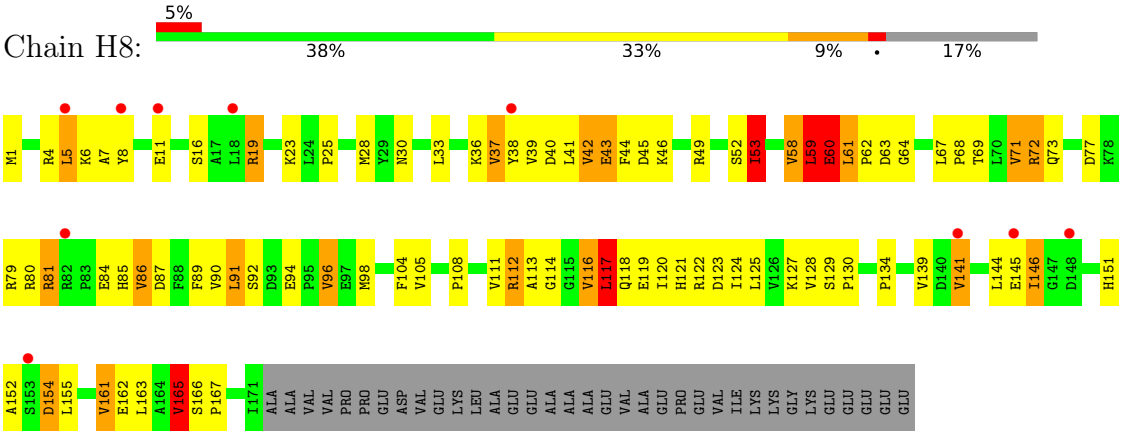
• Molecule 21: 50S ribosomal protein L14

Chain 25:



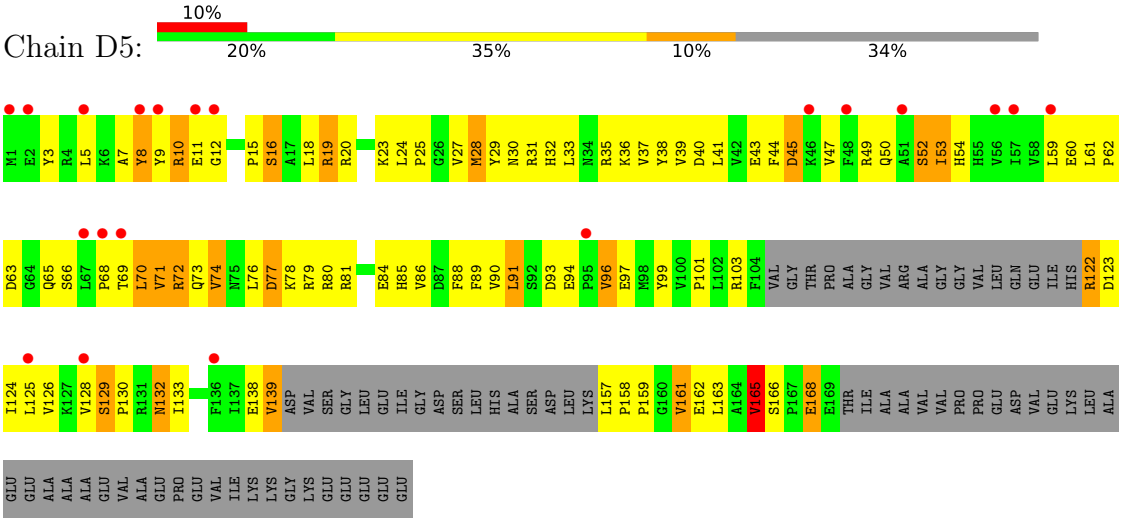
• Molecule 22: 50S ribosomal protein L25

Chain H8:



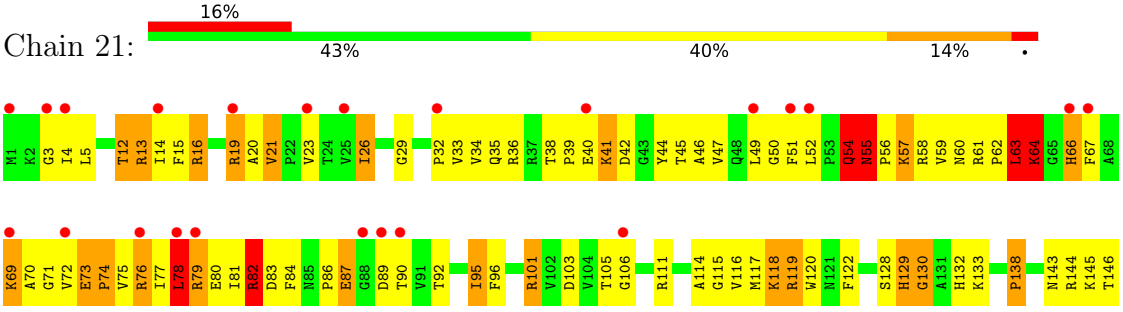
• Molecule 22: 50S ribosomal protein L25

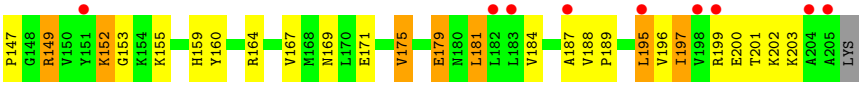
Chain D5:



• Molecule 23: 50S ribosomal protein L3

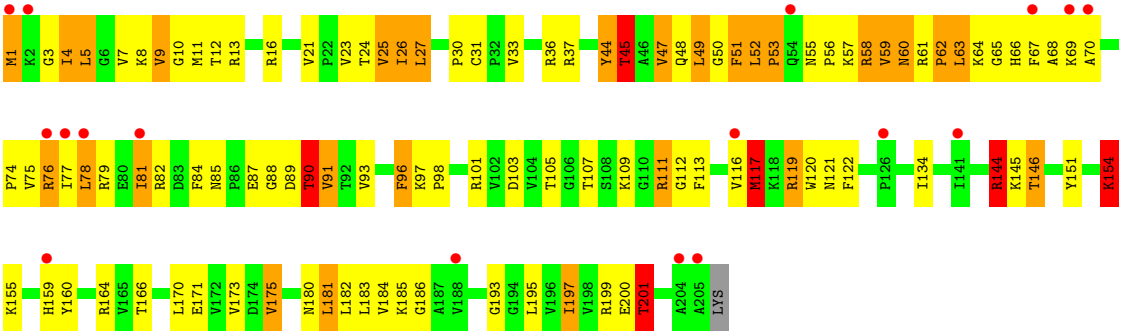
Chain 21:





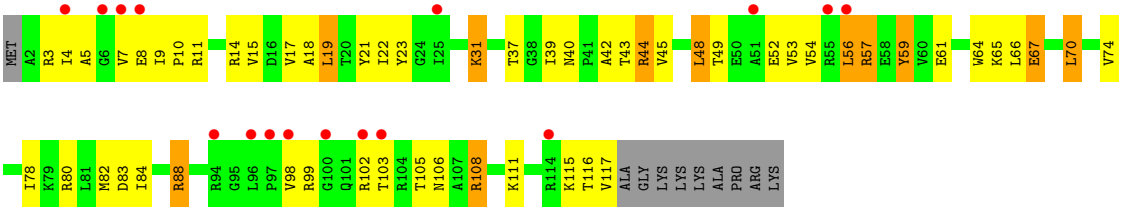
• Molecule 23: 50S ribosomal protein L3

Chain 29:



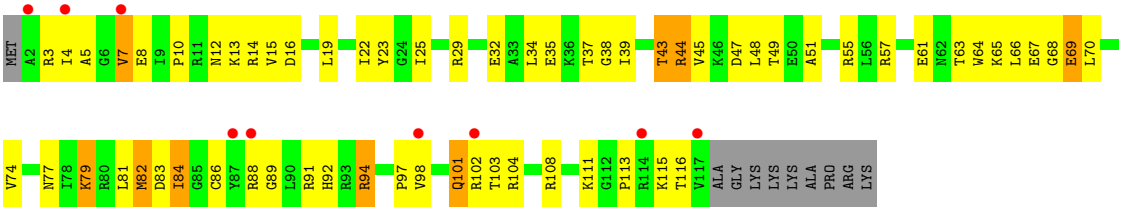
• Molecule 24: 30S ribosomal protein S13

Chain 4I:



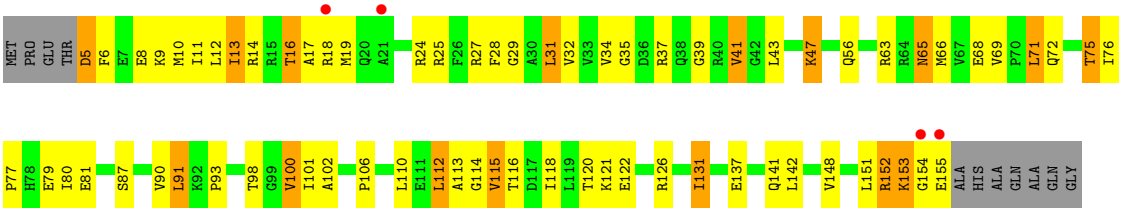
• Molecule 24: 30S ribosomal protein S13

Chain 4A:



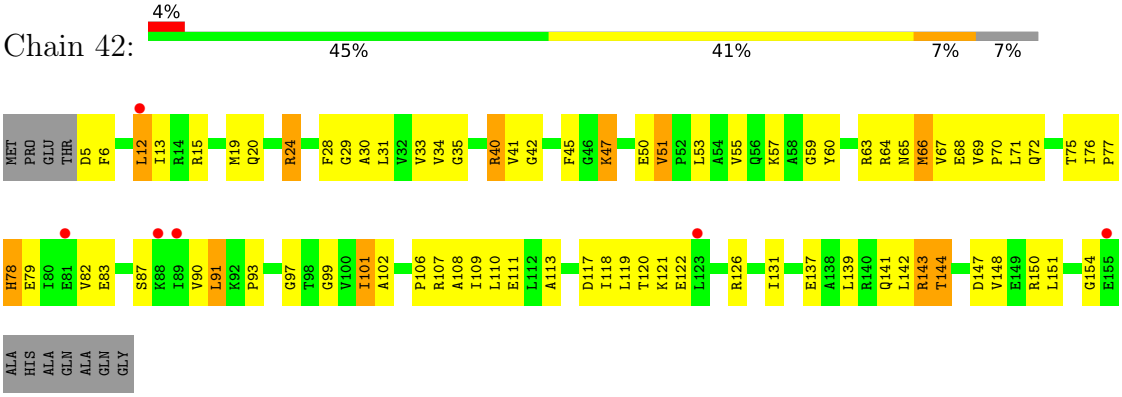
• Molecule 25: 30S ribosomal protein S5

Chain 4E:



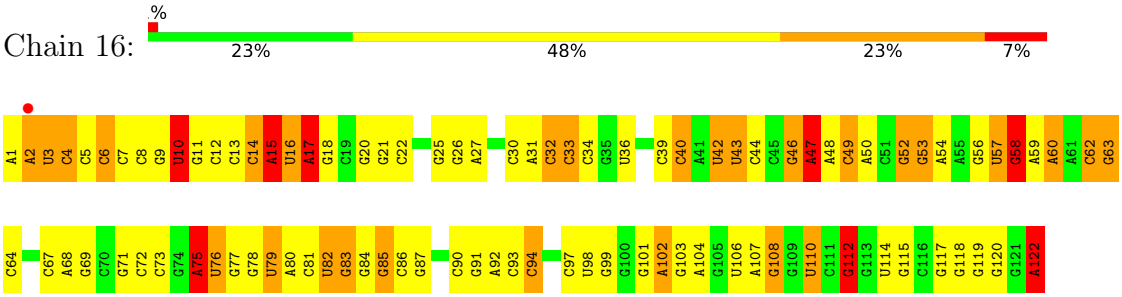
• Molecule 25: 30S ribosomal protein S5

Chain 42:



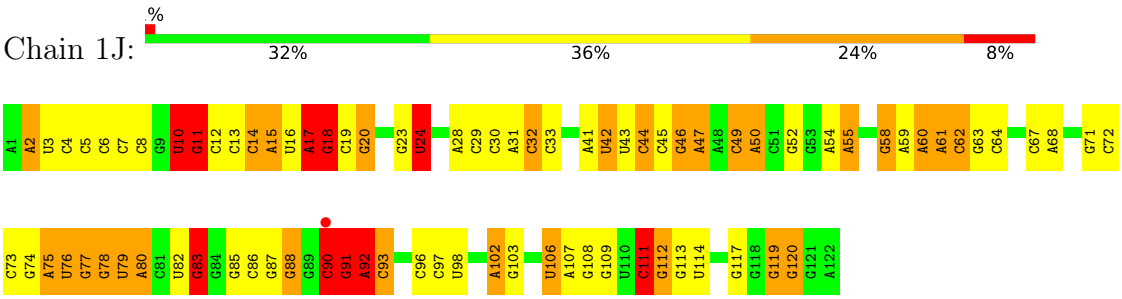
• Molecule 26: 5S ribosomal RNA

Chain 16:



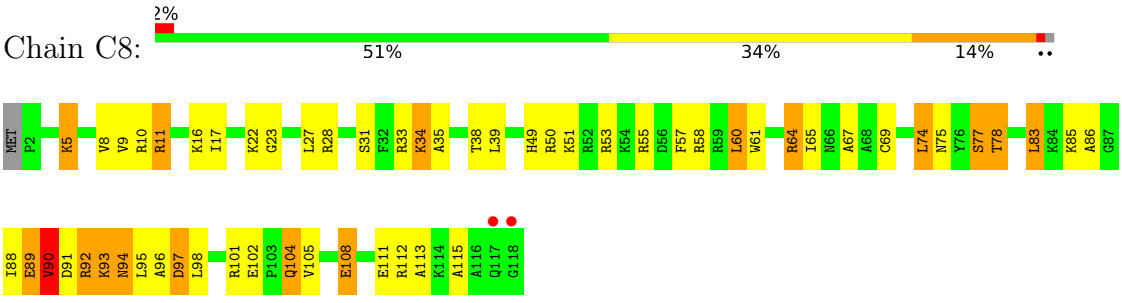
• Molecule 26: 5S ribosomal RNA

Chain 1J:



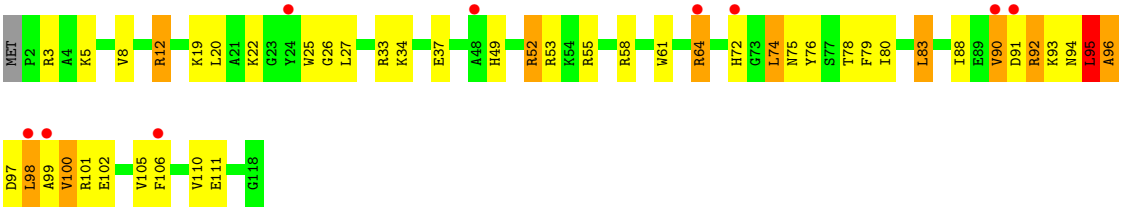
• Molecule 27: 50S ribosomal protein L20

Chain C8:



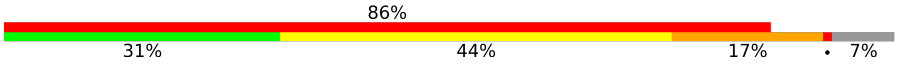
• Molecule 27: 50S ribosomal protein L20

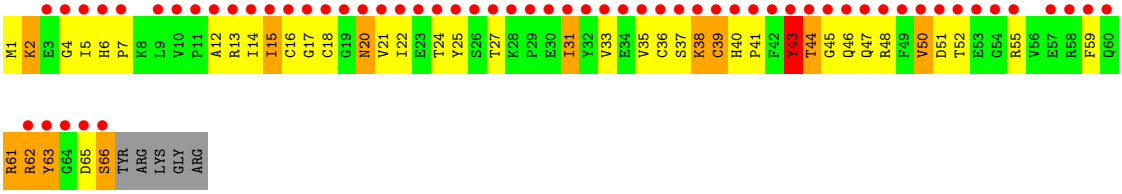
Chain 85:



• Molecule 28: 50S ribosomal protein L31

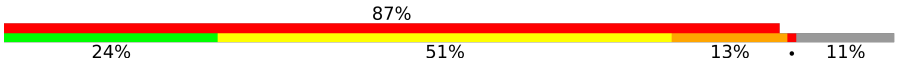
Chain M8:

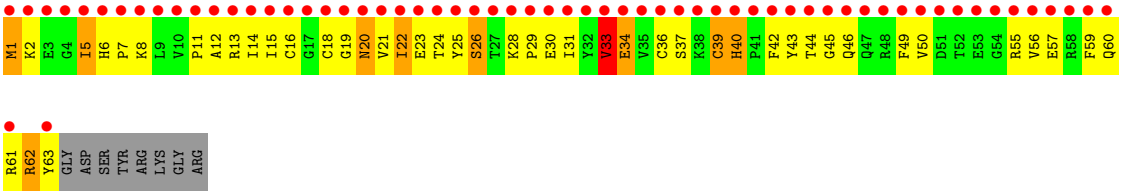




• Molecule 28: 50S ribosomal protein L31

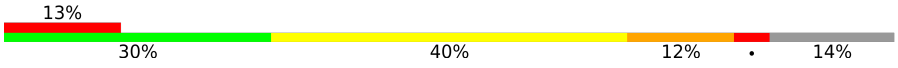
Chain I5:

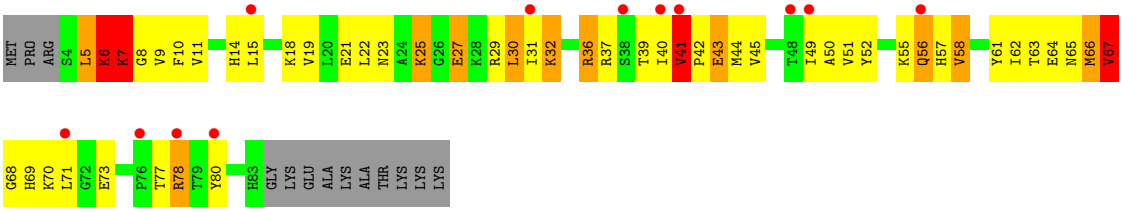




• Molecule 29: 30S ribosomal protein S19

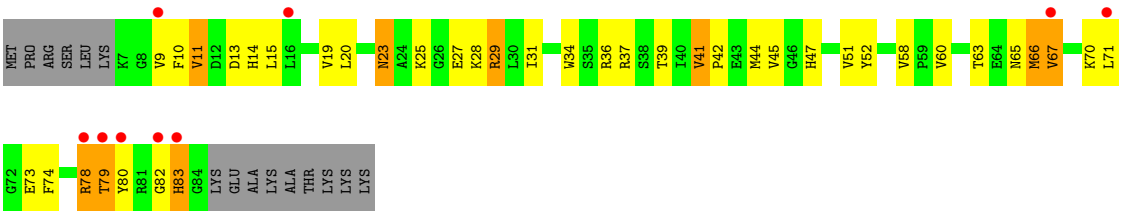
Chain AI:





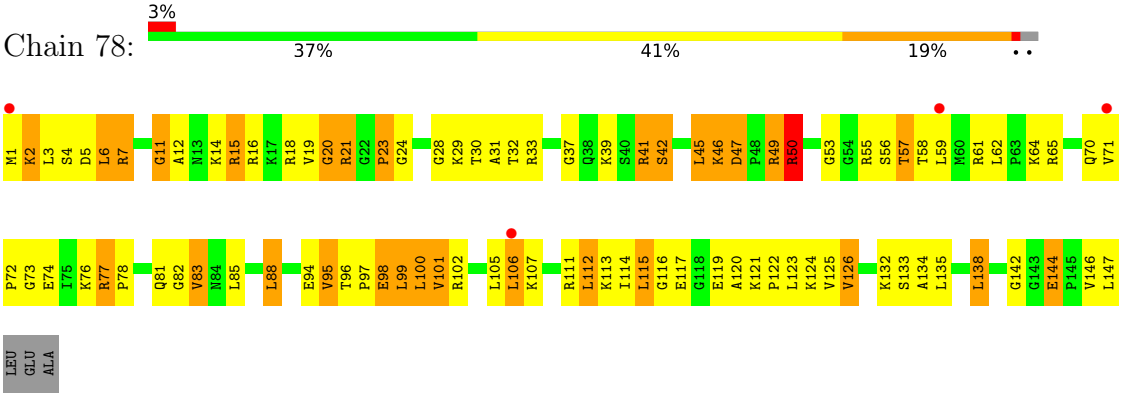
• Molecule 29: 30S ribosomal protein S19

Chain AA:



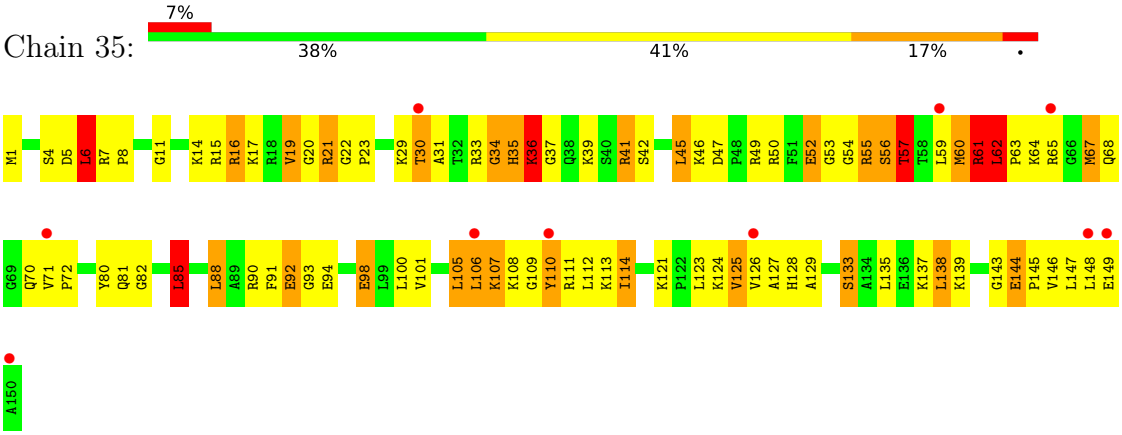
• Molecule 30: 50S ribosomal protein L15

Chain 78:



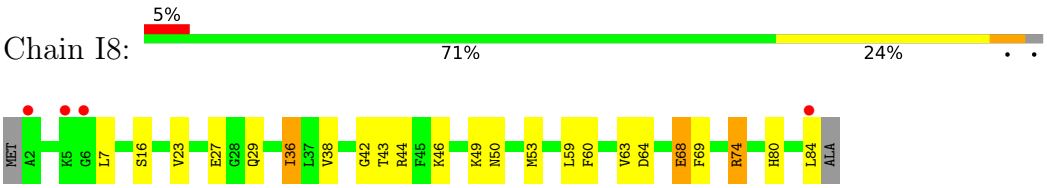
• Molecule 30: 50S ribosomal protein L15

Chain 35:



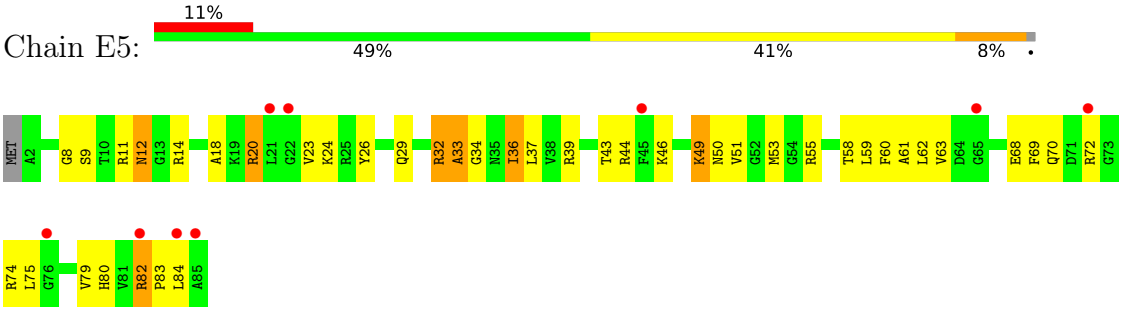
• Molecule 31: 50S ribosomal protein L27

Chain I8:



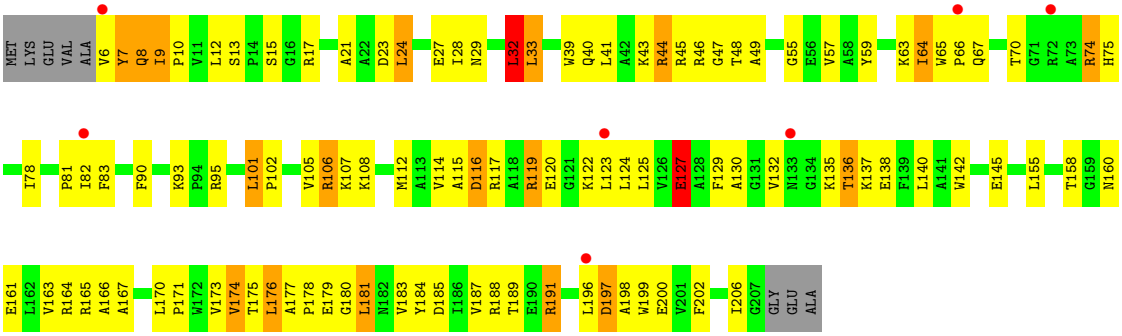
• Molecule 31: 50S ribosomal protein L27

Chain E5:



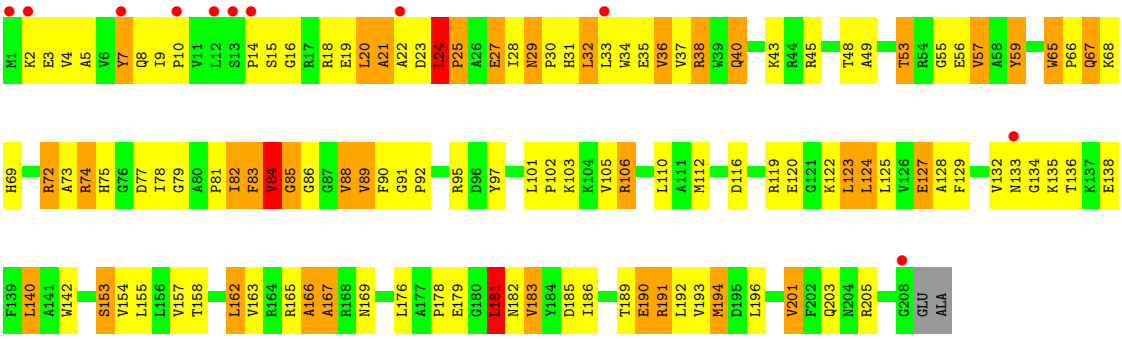
• Molecule 32: 50S ribosomal protein L4

Chain 31:



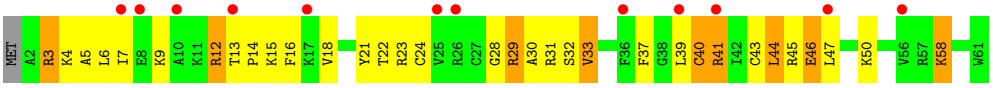
• Molecule 32: 50S ribosomal protein L4

Chain 39:



• Molecule 33: 30S ribosomal protein S14 type Z

Chain 5I:

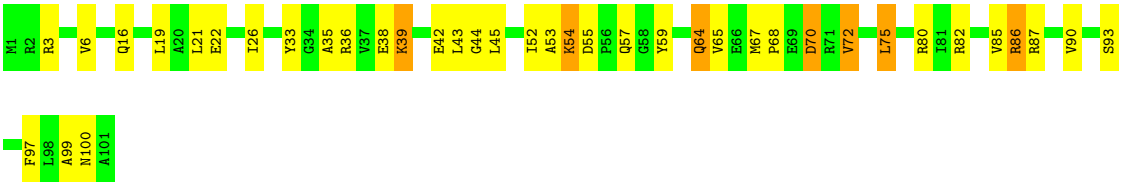


• Molecule 33: 30S ribosomal protein S14 type Z

Chain 5A:

• Molecule 34: 30S ribosomal protein S6

Chain 5E:

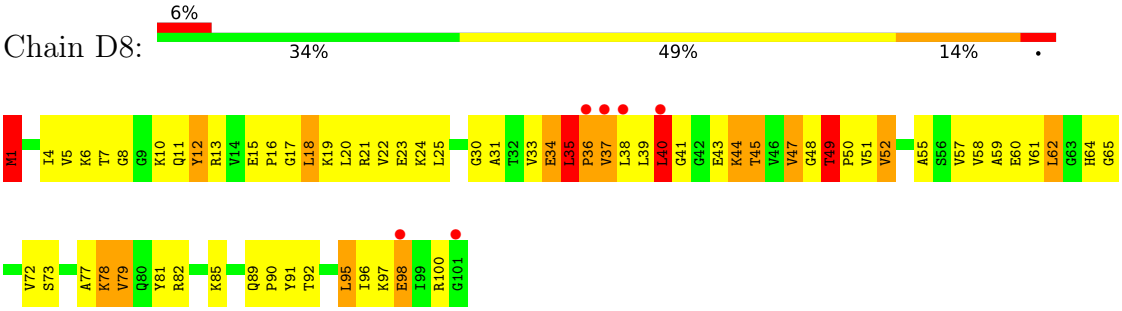


• Molecule 34: 30S ribosomal protein S6

Chain 52:

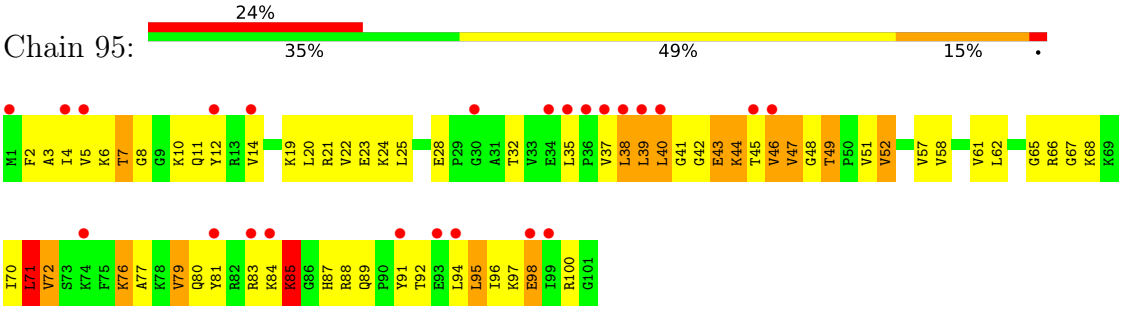
• Molecule 35: 50S ribosomal protein L21

Chain D8:



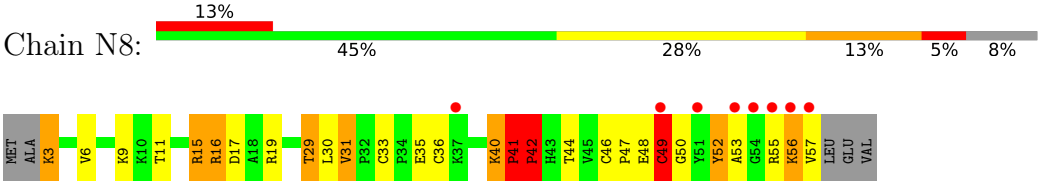
• Molecule 35: 50S ribosomal protein L21

Chain 95:



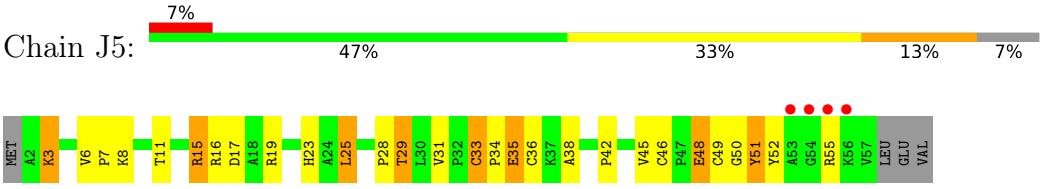
• Molecule 36: 50S ribosomal protein L32

Chain N8:



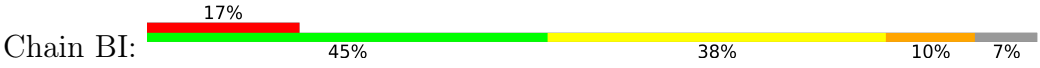
• Molecule 36: 50S ribosomal protein L32

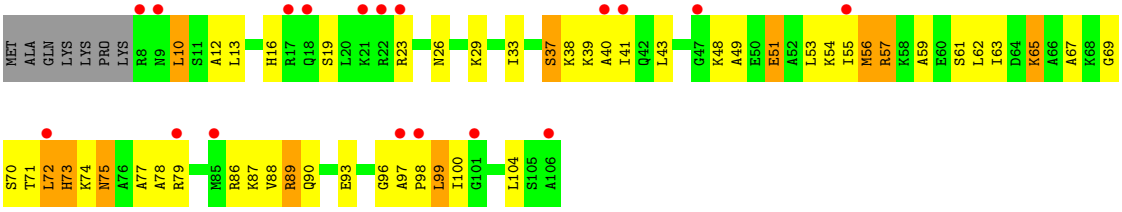
Chain J5:



• Molecule 37: 30S ribosomal protein S20

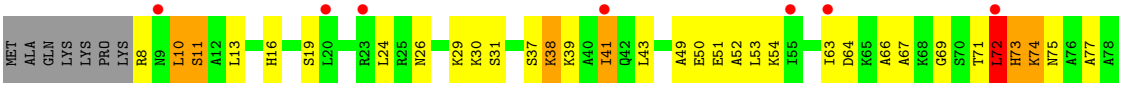
Chain BI:

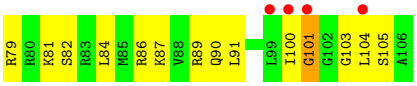




• Molecule 37: 30S ribosomal protein S20

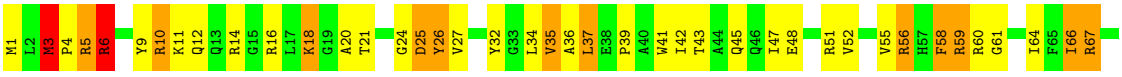
Chain BA:

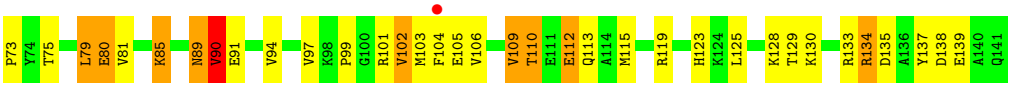




• Molecule 38: 50S ribosomal protein L16

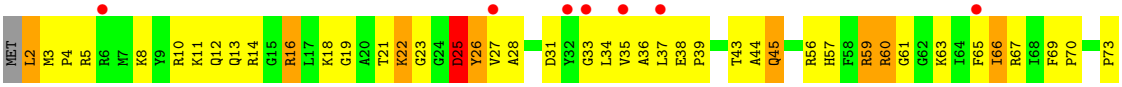
Chain 88:

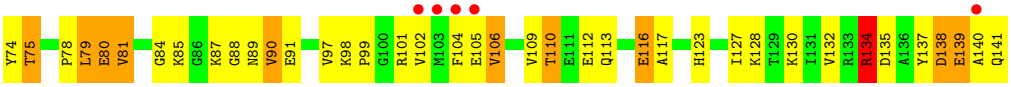




• Molecule 38: 50S ribosomal protein L16

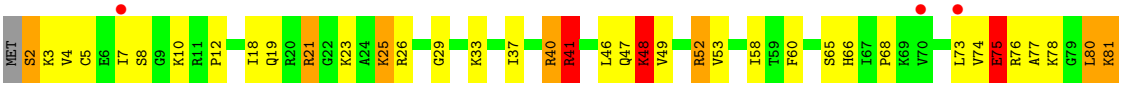
Chain 45:

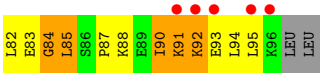




• Molecule 39: 50S ribosomal protein L28

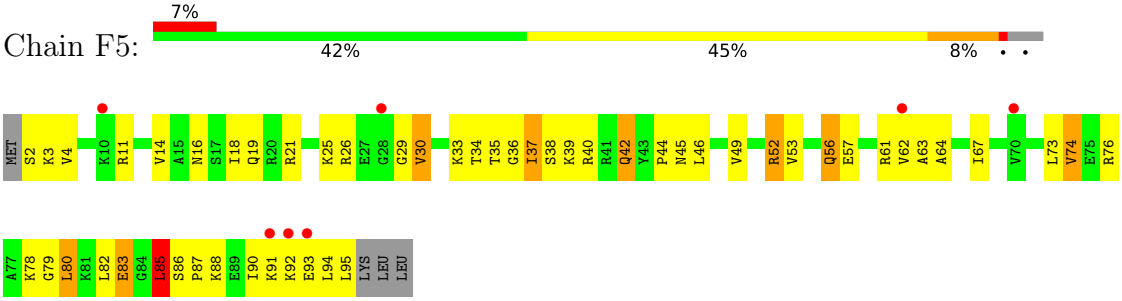
Chain J8:





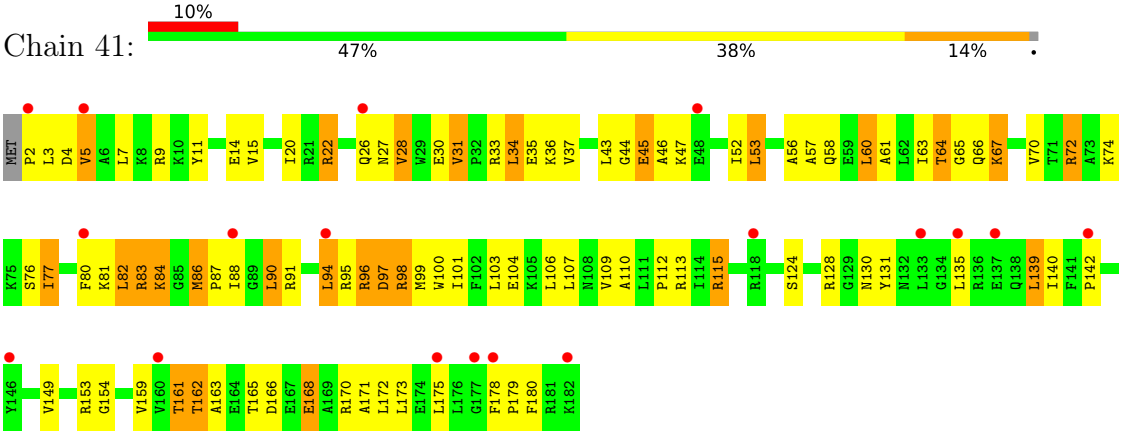
• Molecule 39: 50S ribosomal protein L28

Chain F5:



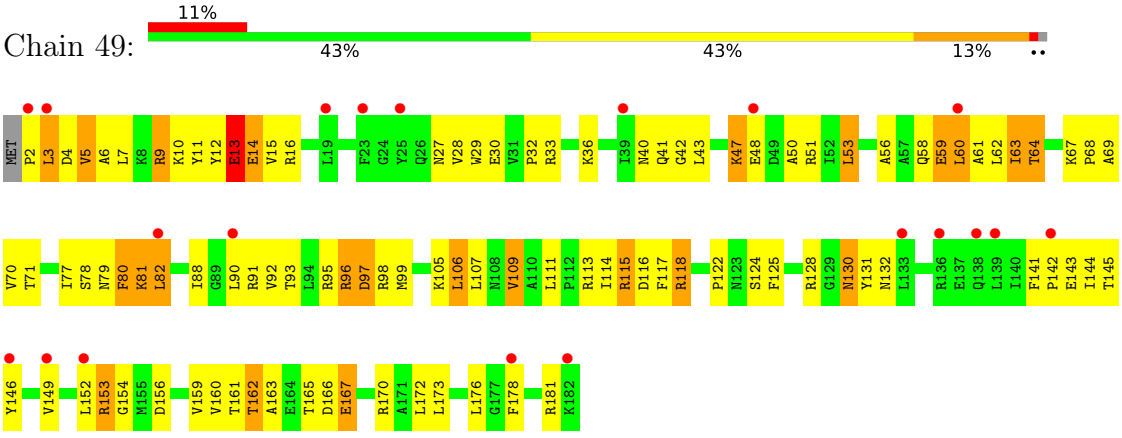
• Molecule 40: 50S ribosomal protein L5

Chain 41:



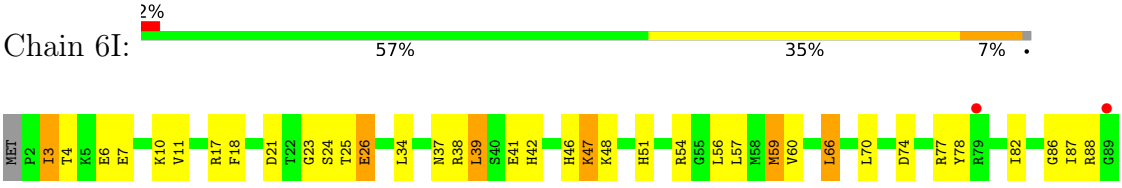
• Molecule 40: 50S ribosomal protein L5

Chain 49:



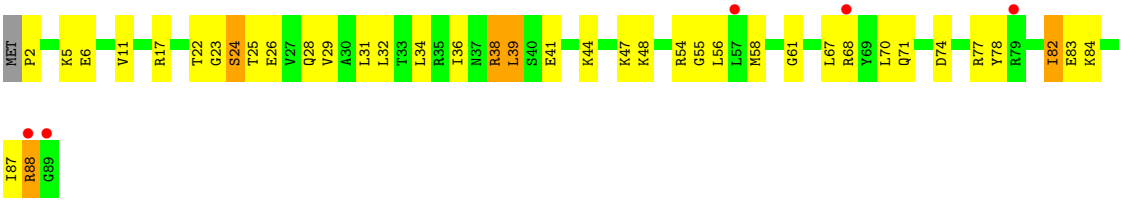
• Molecule 41: 30S ribosomal protein S15

Chain 6I:

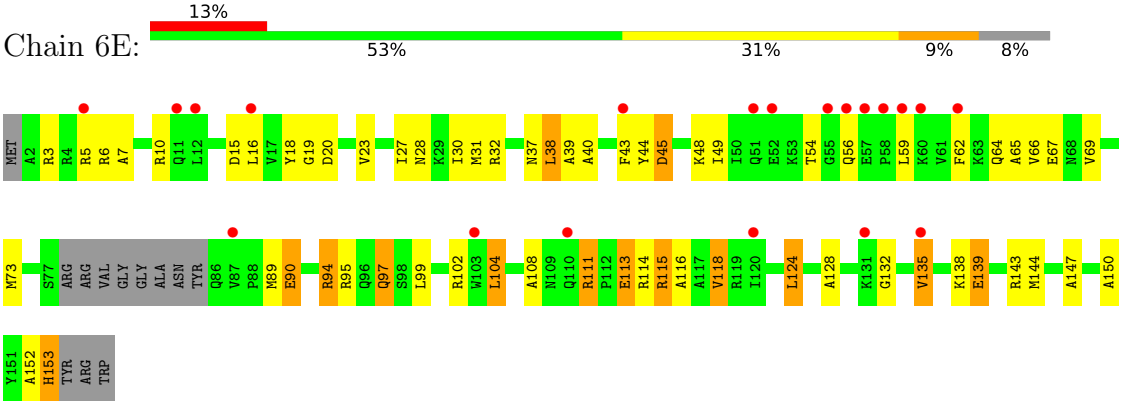


• Molecule 41: 30S ribosomal protein S15

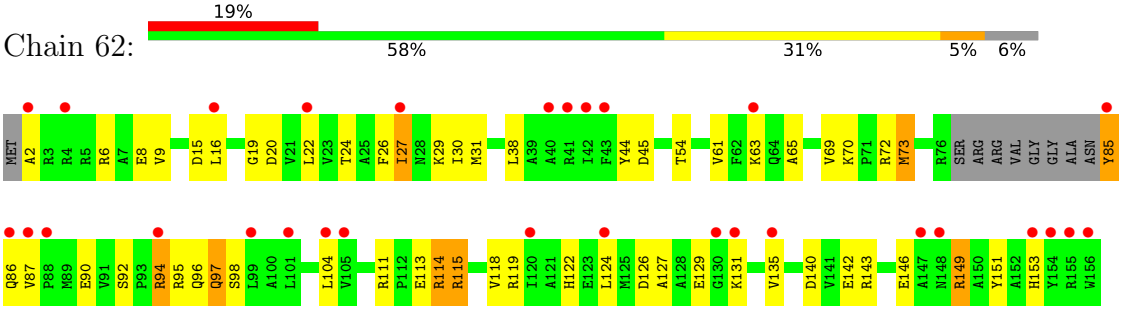
Chain 6A:



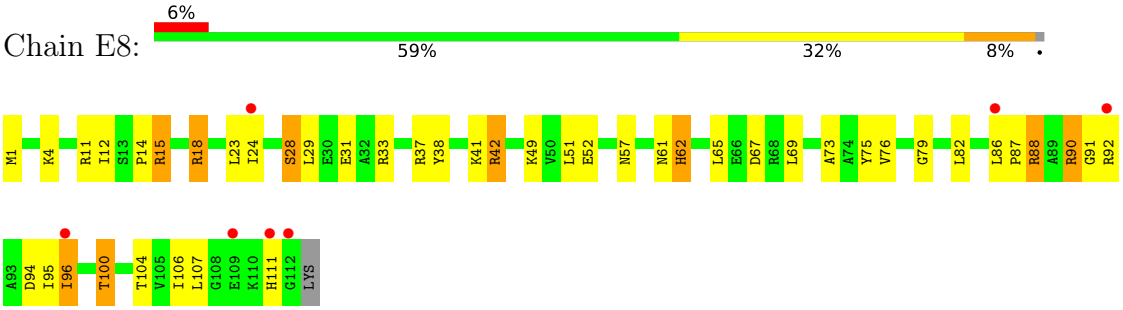
• Molecule 42: 30S ribosomal protein S7



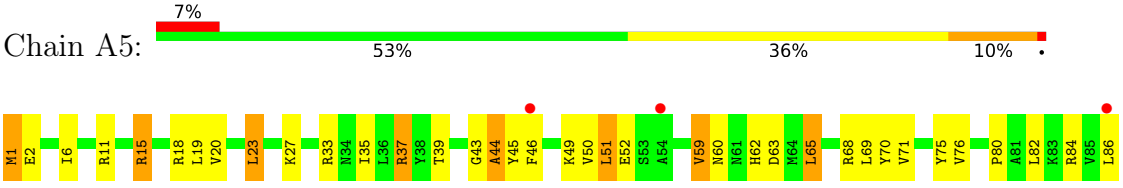
• Molecule 42: 30S ribosomal protein S7

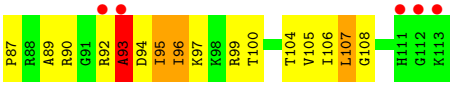


• Molecule 43: 50S ribosomal protein L22



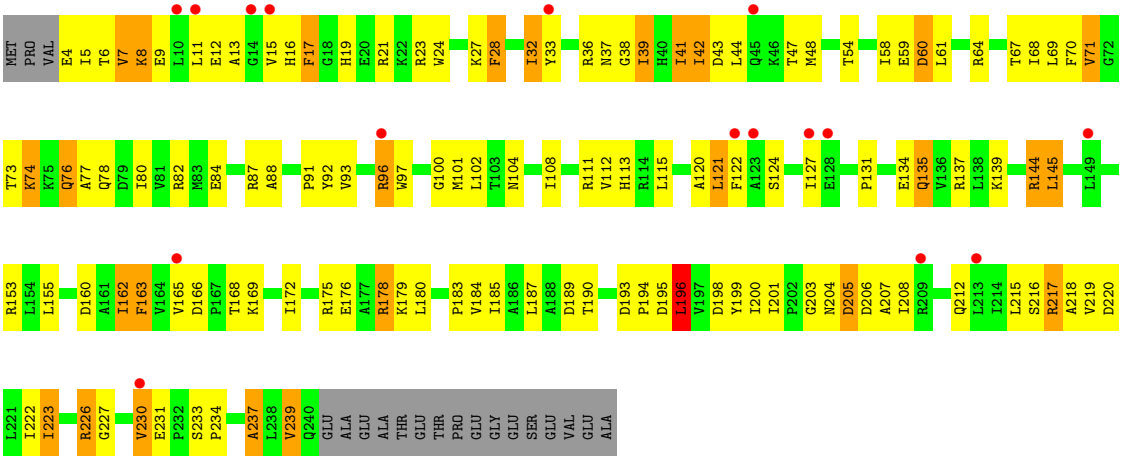
• Molecule 43: 50S ribosomal protein L22





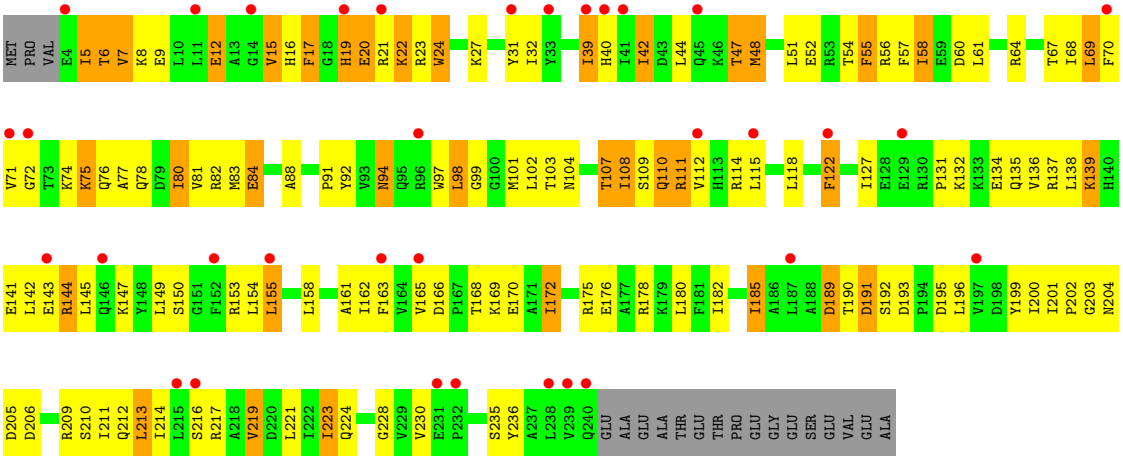
• Molecule 44: 30S ribosomal protein S2

Chain 1E:



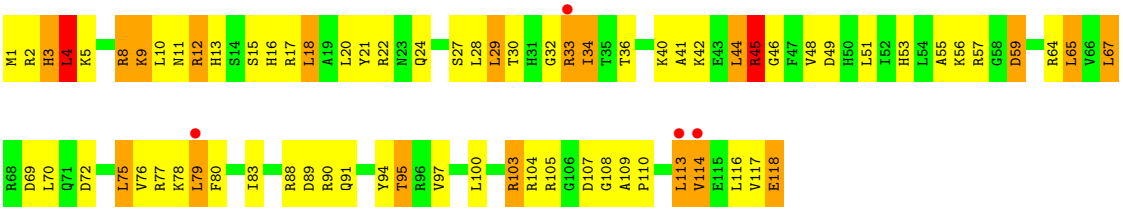
• Molecule 44: 30S ribosomal protein S2

Chain 12:



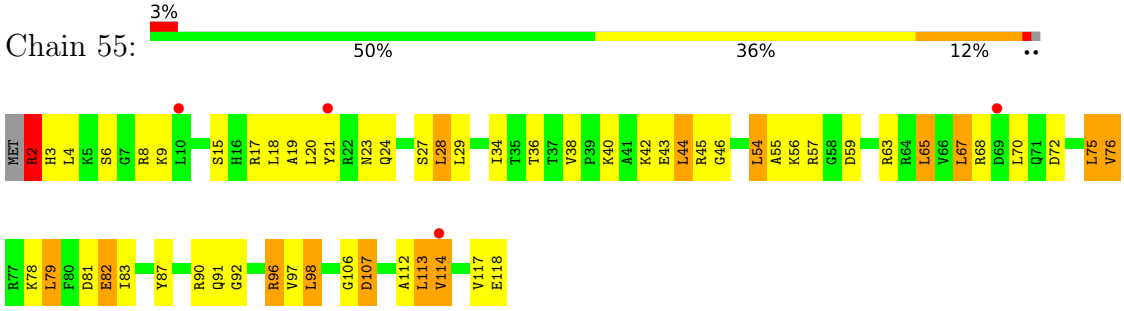
• Molecule 45: 50S ribosomal protein L17

Chain 98:



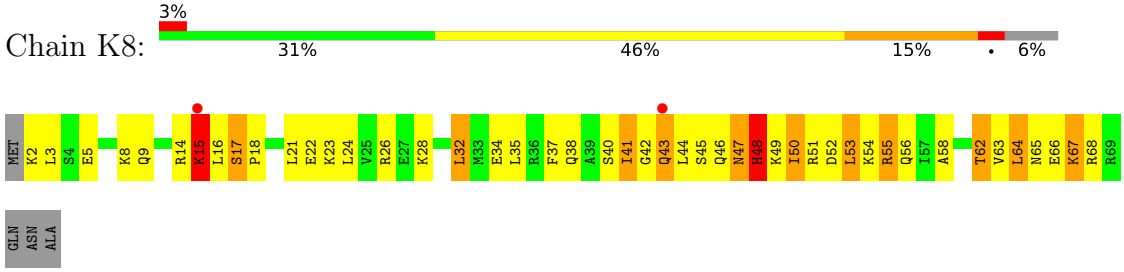
• Molecule 45: 50S ribosomal protein L17

Chain 55:



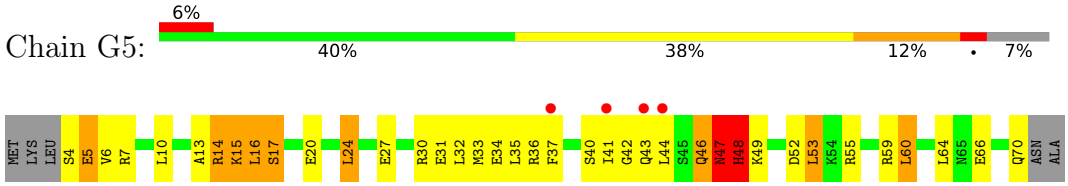
• Molecule 46: 50S ribosomal protein L29

Chain K8:



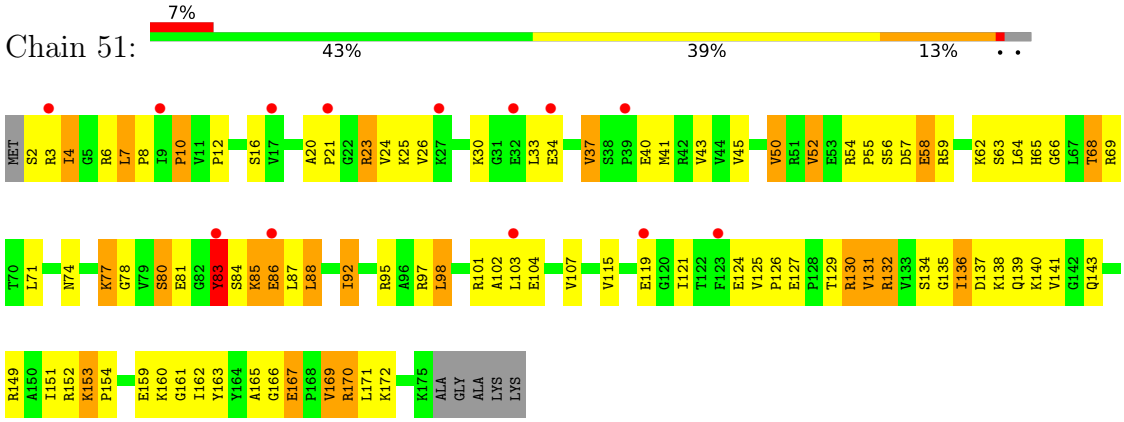
• Molecule 46: 50S ribosomal protein L29

Chain G5:



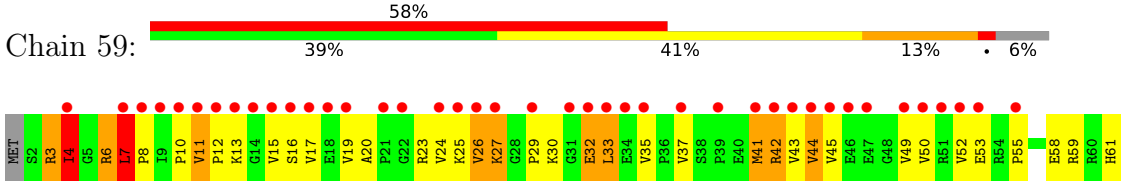
• Molecule 47: 50S ribosomal protein L6

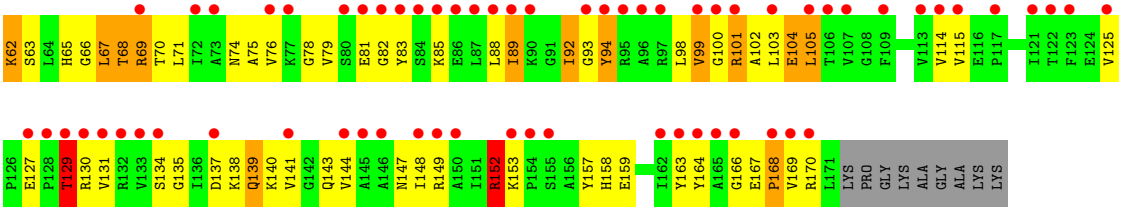
Chain 51:



• Molecule 47: 50S ribosomal protein L6

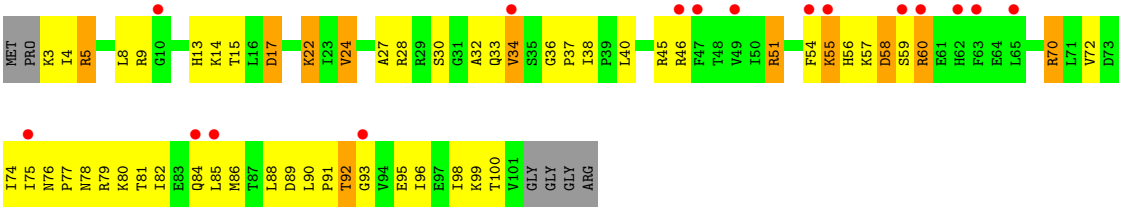
Chain 59:





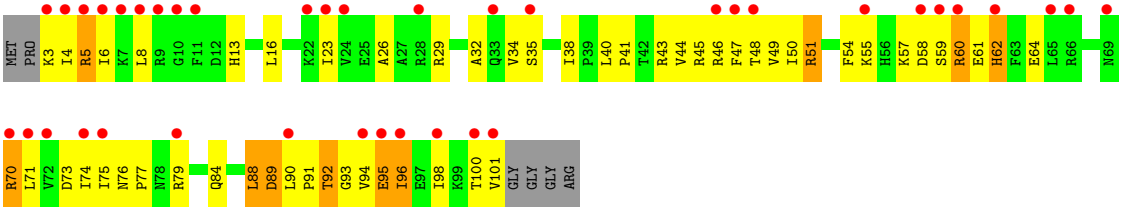
• Molecule 48: 30S ribosomal protein S10

Chain 1A:



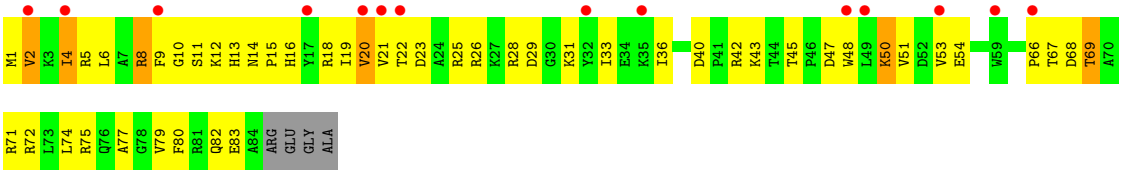
• Molecule 48: 30S ribosomal protein S10

Chain 1I:



• Molecule 49: 30S ribosomal protein S16

Chain 7I:

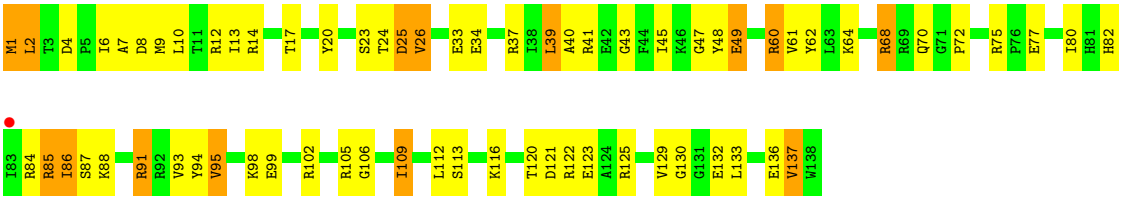


• Molecule 49: 30S ribosomal protein S16

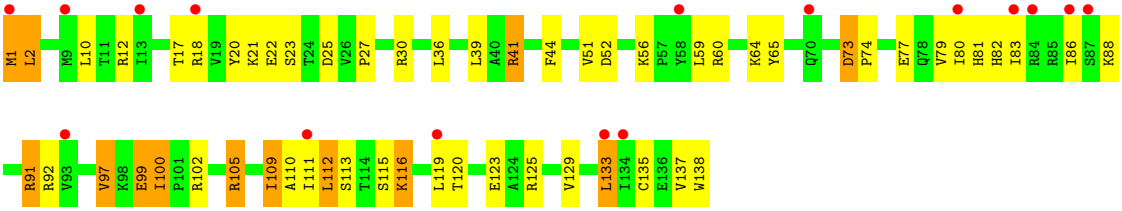
Chain 7A:

• Molecule 50: 30S ribosomal protein S8

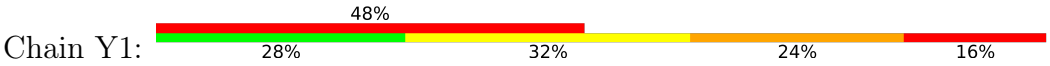
Chain 7E:

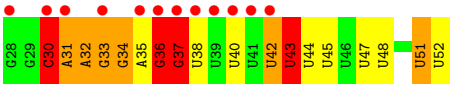


• Molecule 50: 30S ribosomal protein S8

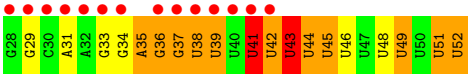


• Molecule 51: mRNA

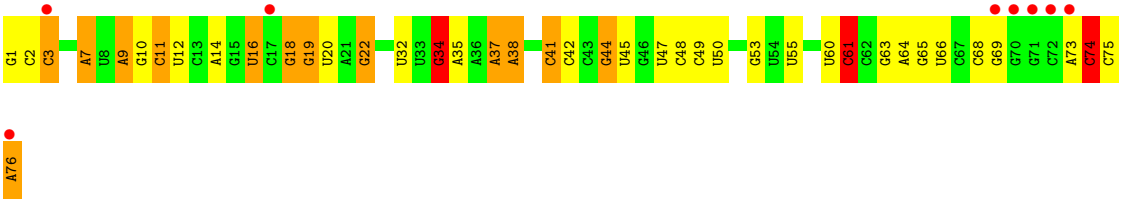




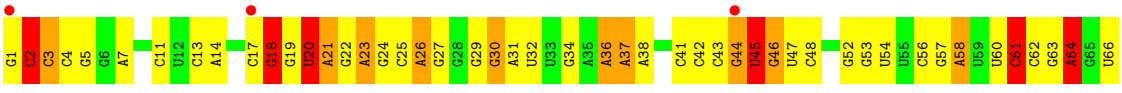
• Molecule 51: mRNA

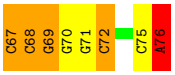


• Molecule 52: tRNA-Phe



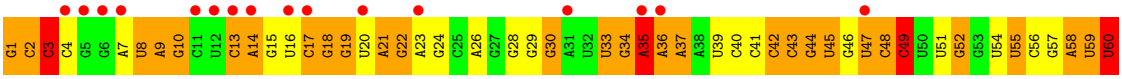
• Molecule 52: tRNA-Phe

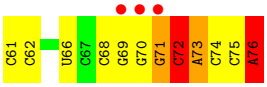




• Molecule 52: tRNA-Phe

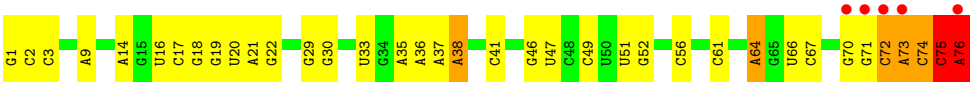
Chain V1:





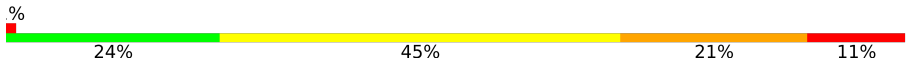
• Molecule 52: tRNA-Phe

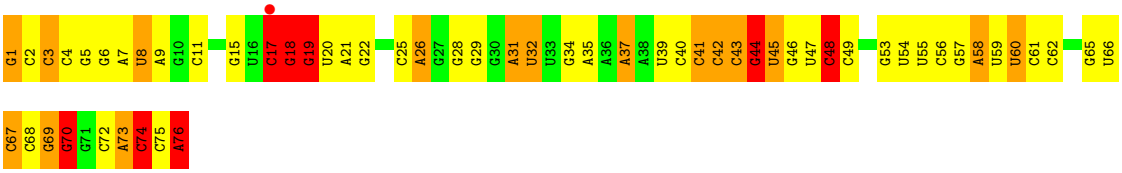
Chain W4:



• Molecule 52: tRNA-Phe

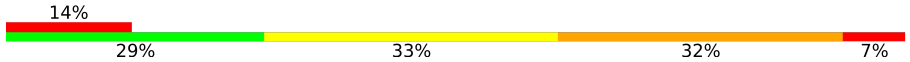
Chain X4:

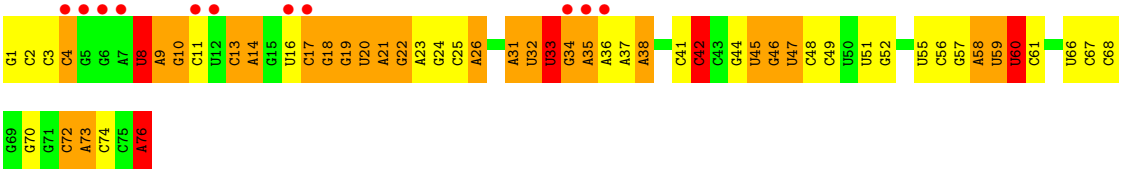




• Molecule 52: tRNA-Phe

Chain V4:





4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	209.07Å 447.36Å 619.49Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	152.74 – 2.95 187.49 – 2.95	Depositor EDS
% Data completeness (in resolution range)	100.0 (152.74-2.95) 94.2 (187.49-2.95)	Depositor EDS
R_{merge}	0.31	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	0.98 (at 2.96Å)	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.213 , 0.253 0.214 , 0.254	Depositor DCC
R_{free} test set	24081 reflections (2.00%)	wwPDB-VP
Wilson B-factor (Å^2)	66.3	Xtriage
Anisotropy	0.296	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.28 , 58.8	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	299577	wwPDB-VP
Average B, all atoms (Å^2)	78.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.51% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: 8UZ, MG, ZN

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	1.05	64/36276 (0.2%)	1.71	947/56615 (1.7%)
1	1G	0.94	22/36394 (0.1%)	1.56	681/56800 (1.2%)
2	65	0.75	0/891	1.00	3/1187 (0.3%)
2	A8	0.83	1/891 (0.1%)	0.99	2/1187 (0.2%)
3	B5	0.91	1/739 (0.1%)	0.91	1/993 (0.1%)
3	F8	1.01	2/756 (0.3%)	1.02	5/1014 (0.5%)
4	11	1.02	7/2176 (0.3%)	1.10	14/2933 (0.5%)
4	19	0.86	1/2170 (0.0%)	1.03	10/2926 (0.3%)
5	L5	1.03	0/417	1.04	1/550 (0.2%)
5	P8	1.09	0/417	1.19	4/550 (0.7%)
6	2A	0.56	0/879	0.68	0/1187
6	2I	0.60	0/879	0.77	0/1187
7	8A	0.70	1/836 (0.1%)	0.74	0/1117
7	8I	0.65	0/847	0.75	0/1131
8	22	0.60	1/1636 (0.1%)	0.65	0/2205
8	2E	0.65	0/1629	0.73	0/2195
9	82	0.46	0/1002	0.64	0/1346
9	8E	0.51	0/1028	0.69	0/1379
10	15	0.61	0/1131	0.76	1/1525 (0.1%)
10	58	0.73	0/1131	0.86	0/1525
11	C5	0.88	1/807 (0.1%)	0.95	1/1076 (0.1%)
11	G8	0.98	2/796 (0.3%)	1.10	4/1062 (0.4%)
12	M5	1.09	2/502 (0.4%)	1.21	3/661 (0.5%)
12	Q8	1.54	8/486 (1.6%)	1.71	14/638 (2.2%)
13	3A	0.84	3/991 (0.3%)	0.90	0/1327
13	3I	0.82	1/972 (0.1%)	0.98	2/1301 (0.2%)
14	32	0.61	1/1732 (0.1%)	0.76	2/2318 (0.1%)
14	3E	0.88	6/1732 (0.3%)	0.83	3/2318 (0.1%)
15	14	1.29	390/70167 (0.6%)	2.01	3453/109541 (3.2%)
15	1H	1.51	711/70233 (1.0%)	2.23	4800/109643 (4.4%)
16	75	0.76	0/1155	0.87	1/1542 (0.1%)
16	B8	0.84	0/1095	0.99	1/1463 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
17	H5	0.64	0/473	0.81	0/635
17	L8	1.01	2/457 (0.4%)	0.96	0/613
18	61	0.64	0/1151	0.82	2/1558 (0.1%)
18	69	0.57	0/1151	0.76	1/1558 (0.1%)
19	9A	0.62	0/569	0.81	1/757 (0.1%)
19	9I	0.71	0/555	0.80	1/739 (0.1%)
20	1B	0.54	0/221	0.67	0/288
20	1F	0.55	0/203	0.70	0/266
21	25	0.80	2/942 (0.2%)	0.86	1/1269 (0.1%)
21	68	0.80	0/942	0.89	2/1269 (0.2%)
22	D5	0.62	0/1145	0.73	1/1547 (0.1%)
22	H8	0.64	0/1403	0.82	1/1901 (0.1%)
23	21	0.89	3/1601 (0.2%)	1.00	7/2160 (0.3%)
23	29	0.79	2/1601 (0.1%)	1.04	6/2160 (0.3%)
24	4A	0.48	0/938	0.66	0/1258
24	4I	0.56	0/938	0.75	0/1258
25	42	0.62	0/1171	0.73	0/1576
25	4E	0.68	0/1171	0.79	1/1576 (0.1%)
26	16	1.20	10/2928 (0.3%)	2.01	140/4568 (3.1%)
26	1J	1.05	6/2928 (0.2%)	1.80	103/4568 (2.3%)
27	85	0.69	0/981	0.83	2/1306 (0.2%)
27	C8	0.88	1/981 (0.1%)	1.00	4/1306 (0.3%)
28	I5	0.66	0/527	0.78	0/709
28	M8	0.76	0/545	0.84	1/733 (0.1%)
29	AA	0.52	0/638	0.70	0/860
29	AI	0.63	1/657 (0.2%)	0.76	0/885
30	35	0.81	0/1161	1.08	3/1544 (0.2%)
30	78	0.82	0/1139	1.13	5/1514 (0.3%)
31	E5	0.80	0/653	0.95	0/872
31	I8	0.94	1/665 (0.2%)	1.02	0/885
32	31	1.00	5/1620 (0.3%)	0.99	4/2194 (0.2%)
32	39	0.79	2/1662 (0.1%)	0.97	4/2249 (0.2%)
33	5A	0.53	0/484	0.76	0/643
33	5I	0.54	0/500	0.78	2/664 (0.3%)
34	52	0.70	0/855	0.77	0/1154
34	5E	0.62	0/855	0.76	0/1154
35	95	0.83	0/789	0.97	2/1057 (0.2%)
35	D8	0.78	1/789 (0.1%)	0.95	4/1057 (0.4%)
36	J5	0.81	0/448	0.93	2/606 (0.3%)
36	N8	0.93	1/443 (0.2%)	1.02	2/599 (0.3%)
37	BA	0.54	0/764	0.76	0/1007
37	BI	0.48	0/764	0.70	0/1007
38	45	0.75	0/1134	0.91	1/1517 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	88	0.94	1/1142 (0.1%)	1.05	1/1527 (0.1%)
39	F5	0.83	0/744	0.94	2/989 (0.2%)
39	J8	0.96	1/753 (0.1%)	1.15	6/1000 (0.6%)
40	41	0.67	0/1498	0.77	0/2016
40	49	0.52	0/1498	0.69	0/2016
41	6A	0.65	0/744	0.69	0/992
41	6I	0.66	0/744	0.80	1/992 (0.1%)
42	62	0.52	0/1218	0.60	0/1632
42	6E	0.53	0/1171	0.60	0/1567
43	A5	0.78	0/910	0.94	2/1220 (0.2%)
43	E8	0.81	0/901	1.01	3/1209 (0.2%)
44	12	0.47	0/1959	0.64	0/2642
44	1E	0.49	0/1959	0.67	2/2642 (0.1%)
45	55	0.79	2/973 (0.2%)	1.02	2/1302 (0.2%)
45	98	0.71	0/981	0.94	2/1312 (0.2%)
46	G5	0.83	2/569 (0.4%)	0.91	0/753
46	K8	0.97	0/577	1.04	0/763
47	51	0.74	2/1362 (0.1%)	0.85	1/1841 (0.1%)
47	59	0.45	0/1332	0.71	5/1802 (0.3%)
48	1A	0.49	0/814	0.66	0/1095
48	1I	0.52	0/814	0.70	0/1095
49	7A	0.58	0/721	0.75	1/970 (0.1%)
49	7I	0.59	0/721	0.82	0/970
50	72	0.54	1/1135 (0.1%)	0.67	1/1527 (0.1%)
50	7E	0.59	0/1135	0.75	0/1527
51	Y1	1.24	2/579 (0.3%)	1.63	13/899 (1.4%)
51	Y4	1.00	0/579	1.44	6/899 (0.7%)
52	V1	0.96	7/1809 (0.4%)	1.47	24/2819 (0.9%)
52	V4	0.83	1/1809 (0.1%)	1.36	25/2819 (0.9%)
52	W1	0.92	4/1809 (0.2%)	1.34	17/2819 (0.6%)
52	W4	0.89	4/1809 (0.2%)	1.30	21/2819 (0.7%)
52	X1	1.25	7/1809 (0.4%)	2.02	91/2819 (3.2%)
52	X4	1.10	5/1809 (0.3%)	1.83	68/2819 (2.4%)
All	All	1.14	1301/322722 (0.4%)	1.74	10550/483601 (2.2%)

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	65	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
2	A8	0	1
3	B5	0	1
4	11	0	3
4	19	0	8
5	P8	0	1
6	2A	0	1
6	2I	0	1
8	22	0	2
9	82	0	1
9	8E	0	2
10	15	0	4
11	C5	0	5
11	G8	0	4
12	M5	0	2
12	Q8	0	9
13	3A	0	3
13	3I	0	2
14	32	0	5
14	3E	0	1
16	75	0	2
16	B8	0	2
18	61	0	4
18	69	0	4
22	H8	0	3
23	21	0	7
23	29	0	3
24	4A	0	1
27	85	0	5
27	C8	0	2
28	I5	0	1
28	M8	0	2
29	AI	0	2
30	35	0	11
30	78	0	7
31	E5	0	2
31	I8	0	1
32	31	0	2
32	39	0	6
33	5A	0	2
35	95	0	2
35	D8	0	1
36	J5	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
36	N8	0	2
37	BA	0	3
37	BI	0	3
38	45	0	3
38	88	0	4
39	F5	0	1
39	J8	0	3
40	41	0	1
40	49	0	1
43	A5	0	2
44	12	0	1
44	1E	0	3
45	98	0	2
46	G5	0	3
46	K8	0	3
47	59	0	1
48	1A	0	2
All	All	0	168

All (1301) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	2445	A	N9-C4	-21.99	1.24	1.37
15	1H	725	A	N9-C8	15.20	1.50	1.37
15	1H	823	A	N9-C4	-14.86	1.28	1.37
15	1H	832	A	N3-C4	-14.69	1.26	1.34
15	14	2445	A	N9-C4	-14.61	1.29	1.37
1	13	1421	A	N9-C4	-13.80	1.29	1.37
15	1H	1820	A	N9-C4	-13.79	1.29	1.37
15	1H	832	A	N9-C4	-13.73	1.29	1.37
15	1H	2302	A	N9-C4	-13.65	1.29	1.37
15	1H	73	A	N9-C4	-13.65	1.29	1.37
15	1H	1975	G	C2-N3	13.56	1.43	1.32
15	1H	1663	A	N9-C4	-13.46	1.29	1.37
15	14	555	A	N9-C4	-13.01	1.30	1.37
15	1H	1290	A	N9-C4	-12.92	1.30	1.37
15	14	832	A	N9-C4	-12.44	1.30	1.37
15	1H	1398	A	C5-C4	12.14	1.47	1.38
15	14	1381	G	N9-C4	-12.13	1.28	1.38
15	1H	725	A	N9-C4	-12.11	1.30	1.37
15	1H	2361	A	N3-C4	-12.08	1.27	1.34
52	X1	37	A	C6-N1	12.04	1.44	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	648	A	N9-C4	-11.92	1.30	1.37
15	14	725	A	N9-C4	-11.86	1.30	1.37
15	1H	823	A	N9-C8	11.82	1.47	1.37
15	1H	725	A	C5-C4	11.78	1.47	1.38
15	1H	2729	A	N9-C4	-11.67	1.30	1.37
15	14	823	A	N9-C4	-11.60	1.30	1.37
15	14	725	A	N9-C8	11.59	1.47	1.37
14	3E	9	CYS	CB-SG	11.54	2.01	1.82
15	14	832	A	C5-C6	-11.50	1.30	1.41
15	1H	832	A	C5-C6	-11.38	1.30	1.41
15	1H	355	A	N9-C4	-11.34	1.31	1.37
15	1H	992	A	N7-C5	-11.33	1.32	1.39
15	1H	555	A	N9-C4	-11.25	1.31	1.37
15	14	2361	A	N9-C4	-11.19	1.31	1.37
15	14	1814	A	N7-C5	-11.18	1.32	1.39
15	1H	1398	A	N9-C8	11.16	1.46	1.37
8	22	173	VAL	C-N	11.12	1.55	1.34
15	14	2302	A	N9-C4	-10.97	1.31	1.37
15	1H	1924	G	N9-C8	10.97	1.45	1.37
15	1H	2407	A	N9-C4	-10.96	1.31	1.37
1	13	1421	A	C5-C6	-10.92	1.31	1.41
15	14	1820	A	N9-C4	-10.92	1.31	1.37
15	14	823	A	N9-C8	10.73	1.46	1.37
15	14	1510	A	N3-C4	10.72	1.41	1.34
15	1H	992	A	N3-C4	-10.72	1.28	1.34
15	1H	1820	A	N3-C4	-10.69	1.28	1.34
14	3E	31	CYS	CB-SG	10.68	2.00	1.82
26	16	122	A	N9-C4	10.63	1.44	1.37
15	1H	1069	A	N9-C4	-10.62	1.31	1.37
1	13	1421	A	N3-C4	-10.61	1.28	1.34
15	1H	992	A	N9-C4	-10.60	1.31	1.37
15	1H	1975	G	N9-C8	10.55	1.45	1.37
15	1H	70	A	N9-C8	10.44	1.46	1.37
15	14	1820	A	N3-C4	-10.41	1.28	1.34
15	14	832	A	N3-C4	-10.38	1.28	1.34
15	14	2447	A	N9-C4	-10.38	1.31	1.37
15	1H	965	A	C5-C6	-10.33	1.31	1.41
15	1H	992	A	C5-C6	-10.28	1.31	1.41
15	1H	1748	A	N3-C4	-10.26	1.28	1.34
15	1H	2361	A	N9-C4	-10.24	1.31	1.37
15	1H	1820	A	C5-C4	10.18	1.45	1.38
15	14	2729	A	N9-C4	-10.18	1.31	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	2087	A	C6-N1	10.16	1.42	1.35
15	1H	1924	G	N9-C4	-10.13	1.29	1.38
15	1H	2533	A	N3-C4	-10.13	1.28	1.34
15	1H	2407	A	N9-C8	10.06	1.45	1.37
15	1H	535	G	N9-C8	10.03	1.44	1.37
15	1H	1252	A	N9-C4	-10.02	1.31	1.37
15	1H	1748	A	N9-C4	-9.99	1.31	1.37
15	1H	1074	U	N1-C2	9.99	1.47	1.38
15	1H	2445	A	N3-C4	-9.96	1.28	1.34
15	14	832	A	N7-C5	-9.95	1.33	1.39
15	14	1381	G	N3-C4	-9.81	1.28	1.35
52	W4	76	A	N9-C4	9.81	1.43	1.37
15	1H	1728	G	N9-C8	9.80	1.44	1.37
15	1H	1428	A	N9-C4	-9.78	1.31	1.37
15	1H	1728	G	N9-C4	-9.77	1.30	1.38
15	14	2886	A	N3-C4	-9.77	1.28	1.34
15	1H	70	A	C5-C4	9.74	1.45	1.38
15	14	992	A	N3-C4	-9.68	1.29	1.34
15	1H	965	A	C2-N3	-9.64	1.24	1.33
15	14	1510	A	N9-C4	9.62	1.43	1.37
15	1H	1252	A	N3-C4	-9.59	1.29	1.34
15	14	992	A	C5-C6	-9.57	1.32	1.41
15	1H	70	A	N9-C4	-9.53	1.32	1.37
15	14	725	A	N3-C4	-9.50	1.29	1.34
52	W1	37	A	C6-N1	9.50	1.42	1.35
52	X4	37	A	N3-C4	9.49	1.40	1.34
15	1H	725	A	N3-C4	-9.46	1.29	1.34
15	14	555	A	N3-C4	-9.39	1.29	1.34
15	1H	139	A	N9-C4	-9.38	1.32	1.37
15	1H	2445	A	C5-C6	-9.28	1.32	1.41
15	1H	747	C	N1-C6	-9.24	1.31	1.37
14	3E	26	CYS	CB-SG	9.24	1.98	1.82
15	1H	2617	A	N9-C4	9.21	1.43	1.37
15	1H	837	A	C8-N7	-9.20	1.25	1.31
15	14	1398	A	N9-C8	9.19	1.45	1.37
15	1H	1820	A	N9-C8	9.14	1.45	1.37
15	1H	73	A	N3-C4	-9.11	1.29	1.34
15	1H	2533	A	N9-C4	-9.01	1.32	1.37
15	1H	1748	A	N9-C8	9.00	1.45	1.37
15	14	70	A	N9-C4	-8.96	1.32	1.37
15	1H	137	G	N9-C8	8.95	1.44	1.37
15	1H	1191	A	N9-C4	-8.94	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	894	G	C2-N3	8.92	1.39	1.32
15	1H	70	A	C5-C6	-8.84	1.33	1.41
15	14	2627	C	N3-C4	8.82	1.40	1.33
15	14	592	A	N9-C4	-8.78	1.32	1.37
15	1H	1665	A	N9-C4	-8.78	1.32	1.37
15	1H	2407	A	C5-C6	-8.78	1.33	1.41
15	14	1924	G	N9-C8	8.76	1.44	1.37
15	14	992	A	N7-C5	-8.76	1.33	1.39
15	1H	1324	A	N7-C5	-8.76	1.33	1.39
15	1H	1665	A	N9-C8	8.75	1.44	1.37
17	L8	57	GLU	CG-CD	8.73	1.65	1.51
15	14	2886	A	N9-C4	-8.73	1.32	1.37
15	1H	1663	A	N3-C4	-8.72	1.29	1.34
15	14	725	A	C5-C4	8.67	1.44	1.38
52	X1	37	A	N3-C4	8.65	1.40	1.34
15	14	1665	A	N9-C4	-8.62	1.32	1.37
15	14	73	A	N9-C4	-8.58	1.32	1.37
15	14	1820	A	N9-C8	8.56	1.44	1.37
26	1J	92	A	N9-C4	8.56	1.43	1.37
15	14	2361	A	N3-C4	-8.55	1.29	1.34
15	1H	2445	A	N7-C5	-8.54	1.34	1.39
15	1H	2417	C	N1-C6	8.51	1.42	1.37
15	14	1924	G	N9-C4	-8.50	1.31	1.38
15	14	1728	G	N9-C8	8.49	1.43	1.37
1	13	1235	G	N3-C4	8.48	1.41	1.35
15	14	1975	G	N9-C8	8.46	1.43	1.37
15	14	1258	A	N9-C4	-8.41	1.32	1.37
15	1H	70	A	C6-N6	-8.40	1.27	1.33
15	1H	2057	G	C8-N7	-8.36	1.25	1.30
15	14	1252	A	N9-C4	-8.35	1.32	1.37
15	1H	2460	G	C6-N1	-8.33	1.33	1.39
15	14	1252	A	N3-C4	-8.29	1.29	1.34
15	14	789	U	C2-N3	-8.28	1.31	1.37
12	M5	33	ASN	CB-CG	8.27	1.70	1.51
26	16	83	G	N9-C8	8.26	1.43	1.37
15	14	823	A	C5-C6	-8.25	1.33	1.41
15	1H	832	A	N7-C5	-8.25	1.34	1.39
15	1H	179	G	C5-C4	-8.24	1.32	1.38
15	14	1031	A	N9-C4	-8.23	1.32	1.37
15	1H	1381	G	C5-C4	8.23	1.44	1.38
15	1H	2417	C	C2-N3	8.22	1.42	1.35
15	14	1814	A	N9-C8	-8.20	1.31	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	2459	G	N7-C5	-8.19	1.34	1.39
15	14	1381	G	N9-C8	8.18	1.43	1.37
15	1H	139	A	N7-C5	-8.18	1.34	1.39
15	1H	2434	U	C4-O4	8.18	1.30	1.23
15	1H	1748	A	C5-C6	-8.18	1.33	1.41
15	14	1728	G	N9-C4	-8.12	1.31	1.38
15	1H	2407	A	N7-C5	-8.10	1.34	1.39
15	1H	2463	A	N7-C5	-8.09	1.34	1.39
15	14	992	A	N9-C4	-8.09	1.32	1.37
15	1H	1428	A	C6-N1	8.07	1.41	1.35
15	1H	2533	A	N7-C5	-8.06	1.34	1.39
32	31	65	TRP	CB-CG	-8.06	1.35	1.50
15	14	2557	A	N3-C4	-8.05	1.30	1.34
26	1J	92	A	N3-C4	8.04	1.39	1.34
15	1H	557	G	N9-C8	8.03	1.43	1.37
15	1H	1975	G	C5-C4	8.02	1.44	1.38
52	X1	47	U	N1-C2	8.01	1.45	1.38
15	1H	2447	A	N9-C4	-7.97	1.33	1.37
15	14	850	G	C6-N1	-7.95	1.33	1.39
15	1H	235	G	N7-C5	-7.92	1.34	1.39
15	1H	2613	A	C8-N7	-7.91	1.26	1.31
15	1H	874	C	N1-C6	-7.90	1.32	1.37
15	1H	203	A	N9-C4	-7.89	1.33	1.37
15	14	1820	A	C5-C6	-7.89	1.33	1.41
15	1H	2416	U	N1-C2	7.88	1.45	1.38
15	1H	2076	A	N7-C5	-7.84	1.34	1.39
15	1H	823	A	C5-C6	-7.83	1.34	1.41
15	14	2087	A	N9-C4	7.83	1.42	1.37
35	D8	35	LEU	C-N	7.82	1.49	1.34
15	1H	2261	G	N9-C8	-7.82	1.32	1.37
15	1H	289	U	N1-C2	7.81	1.45	1.38
15	1H	784	A	N3-C4	-7.81	1.30	1.34
15	1H	2392	A	N9-C4	-7.81	1.33	1.37
1	13	1854	A	N9-C4	-7.78	1.33	1.37
15	14	1665	A	N9-C8	7.77	1.44	1.37
15	14	1748	A	C5-C6	-7.77	1.34	1.41
15	14	1819	A	N7-C5	-7.77	1.34	1.39
15	14	1928	G	N7-C5	-7.77	1.34	1.39
52	X4	37	A	C6-N1	7.76	1.41	1.35
15	1H	1621	A	N3-C4	-7.76	1.30	1.34
15	14	2644	A	N9-C4	7.76	1.42	1.37
15	1H	2097	G	C8-N7	-7.76	1.26	1.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	1012	C	N3-C4	-7.73	1.28	1.33
15	1H	1924	G	C2-N3	-7.73	1.26	1.32
15	1H	738	A	C5-C4	-7.73	1.33	1.38
15	1H	1483	A	N9-C4	-7.73	1.33	1.37
15	1H	2521	U	N1-C2	7.73	1.45	1.38
15	1H	1815	C	C4-C5	7.72	1.49	1.43
15	1H	1962	A	N9-C8	-7.71	1.31	1.37
52	V1	76	A	C5-C4	7.71	1.44	1.38
15	1H	788	G	C5-C6	-7.68	1.34	1.42
15	14	1820	A	C5-C4	7.67	1.44	1.38
15	1H	2729	A	C5-C4	7.66	1.44	1.38
15	1H	2557	A	N3-C4	-7.64	1.30	1.34
15	1H	1817	A	N9-C8	-7.62	1.31	1.37
15	14	2846	G	N1-C2	7.61	1.43	1.37
15	14	824	G	C6-N1	-7.61	1.34	1.39
15	1H	2505	G	N9-C8	7.60	1.43	1.37
15	1H	2417	C	N3-C4	7.59	1.39	1.33
15	1H	1820	A	N7-C5	-7.59	1.34	1.39
15	1H	1250	C	N1-C6	-7.58	1.32	1.37
14	3E	12	CYS	CB-SG	7.56	1.95	1.82
26	16	122	A	N3-C4	7.56	1.39	1.34
4	11	23	GLU	CD-OE1	7.55	1.33	1.25
15	14	2505	G	N9-C8	7.55	1.43	1.37
12	M5	56	GLU	CB-CG	-7.54	1.37	1.52
15	14	1337	U	C2-N3	-7.54	1.32	1.37
15	1H	2302	A	C5-C6	-7.52	1.34	1.41
15	1H	870	A	N7-C5	-7.49	1.34	1.39
1	13	2125	A	C5-C6	-7.47	1.34	1.41
15	1H	535	G	C8-N7	7.47	1.35	1.30
15	14	2611	U	C2-O2	-7.46	1.15	1.22
15	1H	140	A	N9-C8	7.46	1.43	1.37
15	1H	2597	G	C6-N1	-7.45	1.34	1.39
15	1H	601	U	N1-C2	-7.45	1.31	1.38
15	14	1357	A	N7-C5	-7.45	1.34	1.39
15	1H	1258	A	C5-C6	-7.44	1.34	1.41
15	14	1988	U	C2-N3	7.42	1.43	1.37
15	1H	832	A	N9-C8	7.42	1.43	1.37
15	1H	783	A	N7-C5	-7.42	1.34	1.39
23	21	40	GLU	CG-CD	7.41	1.63	1.51
15	1H	854	G	N9-C8	-7.41	1.32	1.37
15	14	1662	G	N3-C4	7.41	1.40	1.35
15	1H	830	A	C5-C4	-7.37	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	14	1728	G	N3-C4	-7.37	1.30	1.35
15	14	826	A	N3-C4	-7.36	1.30	1.34
15	1H	648	A	N7-C5	-7.35	1.34	1.39
15	14	1994	A	N3-C4	-7.35	1.30	1.34
15	1H	31	C	N1-C6	-7.34	1.32	1.37
15	1H	255	A	N3-C4	-7.34	1.30	1.34
15	14	2846	G	C6-N1	7.34	1.44	1.39
15	1H	783	A	N9-C4	-7.34	1.33	1.37
15	1H	1975	G	C2-N2	7.33	1.41	1.34
15	1H	2101	U	N1-C2	-7.33	1.31	1.38
15	1H	825	G	N7-C5	-7.32	1.34	1.39
15	14	529	A	N3-C4	-7.32	1.30	1.34
1	13	2046	A	N9-C4	-7.30	1.33	1.37
15	1H	2505	G	C2-N3	7.30	1.38	1.32
15	1H	844	C	N1-C6	-7.29	1.32	1.37
15	14	2087	A	N3-C4	7.29	1.39	1.34
15	14	605	C	N1-C6	-7.29	1.32	1.37
15	14	1748	A	N3-C4	-7.28	1.30	1.34
12	Q8	54	GLU	CG-CD	7.27	1.62	1.51
15	1H	219	A	N3-C4	7.27	1.39	1.34
15	14	2003	A	N7-C5	-7.27	1.34	1.39
15	1H	1820	A	C5-C6	-7.27	1.34	1.41
1	1G	1524	A	N7-C5	-7.25	1.34	1.39
15	1H	2085	A	N3-C4	7.24	1.39	1.34
15	1H	794	G	C5-C4	-7.24	1.33	1.38
15	1H	1585	A	N9-C4	7.23	1.42	1.37
15	14	597	A	N7-C5	-7.23	1.34	1.39
15	1H	2057	G	C6-N1	-7.21	1.34	1.39
15	14	2603	G	N7-C5	-7.20	1.34	1.39
15	1H	2286	G	N3-C4	-7.17	1.30	1.35
15	14	1408	A	C6-N1	7.17	1.40	1.35
15	1H	729	G	N7-C5	-7.16	1.34	1.39
15	1H	1846	A	C6-N1	-7.15	1.30	1.35
15	1H	722	C	N1-C6	-7.15	1.32	1.37
15	1H	55	A	N7-C5	-7.14	1.34	1.39
15	1H	861	C	N1-C6	-7.14	1.32	1.37
15	1H	183	U	N1-C2	-7.13	1.32	1.38
15	14	2703	U	N3-C4	-7.13	1.32	1.38
15	1H	2625	C	N3-C4	-7.13	1.28	1.33
15	1H	1398	A	C8-N7	7.12	1.36	1.31
15	1H	2445	A	C6-N1	7.12	1.40	1.35
1	13	2154	A	C5-C4	7.12	1.43	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	2779	G	N7-C5	-7.12	1.34	1.39
15	1H	957	A	C5-C4	-7.11	1.33	1.38
15	1H	640	U	N1-C2	7.11	1.45	1.38
15	1H	823	A	N7-C5	-7.10	1.34	1.39
15	1H	1820	A	C6-N6	-7.10	1.28	1.33
15	14	1391	A	N3-C4	-7.10	1.30	1.34
15	1H	1074	U	C2-N3	7.09	1.42	1.37
15	14	2886	A	N7-C5	-7.08	1.34	1.39
15	14	1069	A	N9-C4	-7.08	1.33	1.37
52	W1	37	A	N3-C4	7.08	1.39	1.34
15	1H	1914	A	N9-C4	-7.07	1.33	1.37
15	1H	1381	G	N9-C8	7.07	1.42	1.37
15	1H	1806	G	C6-N1	-7.07	1.34	1.39
15	1H	1993	G	C6-N1	-7.07	1.34	1.39
1	13	1387	G	N9-C4	-7.06	1.32	1.38
15	1H	2617	A	N3-C4	7.05	1.39	1.34
15	1H	219	A	N7-C5	7.05	1.43	1.39
15	14	1608	A	N3-C4	-7.04	1.30	1.34
15	14	1988	U	N1-C2	7.03	1.44	1.38
15	1H	501	G	C6-N1	-7.02	1.34	1.39
13	3A	16	GLU	CG-CD	7.02	1.62	1.51
15	1H	1398	A	N1-C2	7.01	1.40	1.34
15	1H	181	A	N3-C4	-7.01	1.30	1.34
15	1H	830	A	C6-N1	-7.01	1.30	1.35
15	1H	55	A	N3-C4	7.00	1.39	1.34
15	1H	2361	A	N7-C5	-7.00	1.35	1.39
15	1H	1429	G	N7-C5	-7.00	1.35	1.39
15	1H	726	A	N7-C5	-7.00	1.35	1.39
15	1H	1806	G	N9-C8	-6.99	1.32	1.37
26	1J	92	A	C5-C6	6.97	1.47	1.41
15	14	2633	G	C6-O6	6.97	1.30	1.24
15	14	825	G	N7-C5	-6.96	1.35	1.39
15	1H	1357	A	N3-C4	-6.94	1.30	1.34
15	1H	2407	A	N3-C4	-6.93	1.30	1.34
15	1H	140	A	C5-C4	6.93	1.43	1.38
15	14	2617	A	N3-C4	6.93	1.39	1.34
15	14	2886	A	C5-C6	-6.91	1.34	1.41
15	1H	837	A	N3-C4	6.89	1.39	1.34
15	14	1252	A	C5-C6	-6.89	1.34	1.41
52	W4	76	A	N7-C5	6.89	1.43	1.39
15	1H	1725	C	N1-C6	-6.88	1.33	1.37
1	13	2146	G	C6-N1	-6.88	1.34	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	2346	G	N9-C4	-6.87	1.32	1.38
15	14	2729	A	N3-C4	-6.87	1.30	1.34
15	14	2703	U	C2-N3	-6.86	1.32	1.37
15	1H	355	A	N3-C4	-6.86	1.30	1.34
15	1H	837	A	N9-C8	-6.85	1.32	1.37
15	1H	1704	A	N9-C4	-6.84	1.33	1.37
15	14	1665	A	C5-C6	-6.83	1.34	1.41
1	13	1439	C	N1-C6	-6.83	1.33	1.37
15	1H	1655	G	C5-C4	-6.82	1.33	1.38
15	1H	1290	A	N3-C4	-6.82	1.30	1.34
15	1H	992	A	N1-C2	6.81	1.40	1.34
15	1H	2567	U	N1-C2	-6.80	1.32	1.38
15	1H	2045	A	C5-C6	-6.79	1.34	1.41
15	1H	2092	G	C2-N3	-6.79	1.27	1.32
1	13	1509	G	N3-C4	-6.79	1.30	1.35
15	1H	738	A	N3-C4	-6.77	1.30	1.34
15	14	1665	A	C5-C4	6.77	1.43	1.38
1	13	1212	A	N9-C4	-6.76	1.33	1.37
12	Q8	56	GLU	CA-CB	6.76	1.68	1.53
15	1H	723	G	N9-C8	-6.76	1.33	1.37
52	W1	37	A	N9-C4	6.75	1.42	1.37
15	1H	1988	U	C2-N3	6.75	1.42	1.37
15	1H	1666	C	N1-C6	-6.74	1.33	1.37
15	1H	784	A	C5-C4	-6.73	1.34	1.38
15	14	1665	A	N3-C4	-6.73	1.30	1.34
15	14	2466	A	C6-N1	-6.73	1.30	1.35
15	14	2445	A	C5-C6	-6.73	1.34	1.41
12	Q8	48	PHE	CB-CG	-6.72	1.40	1.51
52	V1	76	A	N3-C4	-6.71	1.30	1.34
15	1H	121	G	N3-C4	-6.71	1.30	1.35
52	X1	45	U	N1-C2	6.71	1.44	1.38
15	1H	1822	C	N1-C6	-6.71	1.33	1.37
15	14	2614	G	C6-N1	-6.71	1.34	1.39
15	1H	1728	G	N3-C4	-6.70	1.30	1.35
15	1H	2343	A	N3-C4	-6.70	1.30	1.34
15	1H	2089	C	N3-C4	-6.70	1.29	1.33
15	14	1928	G	N9-C8	-6.70	1.33	1.37
52	X4	26	A	N9-C4	-6.70	1.33	1.37
15	1H	867	G	C2-N3	-6.68	1.27	1.32
15	14	1983	C	N1-C6	-6.68	1.33	1.37
15	1H	1020	A	N9-C4	-6.68	1.33	1.37
1	1G	947	G	C6-N1	6.67	1.44	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	1295	A	N9-C8	-6.67	1.32	1.37
15	1H	2727	U	C2-N3	-6.67	1.33	1.37
15	1H	788	G	C6-N1	-6.66	1.34	1.39
15	14	2376	A	N9-C4	-6.65	1.33	1.37
15	14	2627	C	C2-N3	6.65	1.41	1.35
15	14	788	G	C5-C4	-6.65	1.33	1.38
15	14	1988	U	C5-C6	6.65	1.40	1.34
15	1H	664	A	N9-C4	-6.65	1.33	1.37
15	1H	2087	A	C6-N6	6.64	1.39	1.33
1	13	1168	A	N3-C4	-6.63	1.30	1.34
15	1H	2437	A	N9-C4	-6.63	1.33	1.37
15	14	1659	A	C8-N7	-6.63	1.26	1.31
15	1H	781	C	N1-C6	-6.62	1.33	1.37
15	1H	1320	G	N9-C8	-6.62	1.33	1.37
15	1H	2587	A	C5-C4	-6.62	1.34	1.38
1	1G	1316	A	N9-C4	6.62	1.41	1.37
15	1H	2462	G	C5-C4	-6.62	1.33	1.38
15	1H	851	A	N9-C4	-6.62	1.33	1.37
15	1H	1614	C	N3-C4	-6.61	1.29	1.33
1	13	1444	A	N9-C4	-6.60	1.33	1.37
15	14	73	A	N3-C4	-6.60	1.30	1.34
15	14	980	A	C5-C6	-6.60	1.35	1.41
15	14	1692	G	N3-C4	6.59	1.40	1.35
15	14	672	C	N1-C6	6.59	1.41	1.37
15	1H	555	A	N3-C4	-6.59	1.30	1.34
15	14	139	A	C5-C4	6.58	1.43	1.38
11	G8	79	CYS	CB-SG	6.58	1.93	1.82
1	1G	2122	A	C5-C4	-6.58	1.34	1.38
15	1H	34	C	N3-C4	6.58	1.38	1.33
15	14	823	A	C5-C4	6.57	1.43	1.38
15	1H	794	G	N7-C5	-6.57	1.35	1.39
15	1H	1728	G	C5-C6	-6.57	1.35	1.42
15	14	592	A	C5-C6	-6.57	1.35	1.41
15	1H	2639	G	C8-N7	6.57	1.34	1.30
15	14	2617	A	N9-C4	6.57	1.41	1.37
15	1H	535	G	C5-C4	6.57	1.43	1.38
15	14	1720	C	N1-C6	-6.57	1.33	1.37
15	1H	2408	A	N7-C5	-6.56	1.35	1.39
15	14	2461	G	C6-N1	-6.56	1.34	1.39
15	1H	836	U	C2-N3	-6.56	1.33	1.37
15	1H	1295	A	N7-C5	-6.56	1.35	1.39
15	1H	1584	U	N1-C2	6.56	1.44	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	14	1335	A	N7-C5	-6.54	1.35	1.39
26	1J	90	C	N1-C6	6.54	1.41	1.37
15	14	648	A	N9-C4	-6.54	1.33	1.37
15	1H	1991	A	C5-C4	-6.53	1.34	1.38
15	1H	878	A	N9-C4	-6.52	1.33	1.37
26	1J	24	U	N1-C2	6.51	1.44	1.38
15	14	837	A	N3-C4	6.51	1.38	1.34
15	1H	2505	G	C2-N2	6.51	1.41	1.34
15	14	2302	A	C5-C6	-6.51	1.35	1.41
15	1H	2407	A	C5-C4	6.50	1.43	1.38
1	1G	1854	A	N9-C4	-6.50	1.33	1.37
15	1H	648	A	N3-C4	-6.50	1.30	1.34
15	14	1860	G	C5-C4	-6.50	1.33	1.38
15	14	779	C	C2-N3	6.49	1.41	1.35
15	14	2095	G	N7-C5	-6.49	1.35	1.39
4	11	28	GLU	CD-OE1	6.49	1.32	1.25
15	1H	909	U	N1-C6	-6.48	1.32	1.38
15	1H	977	U	N3-C4	-6.48	1.32	1.38
36	N8	49	CYS	CB-SG	6.48	1.93	1.82
15	14	2505	G	C5-C4	6.48	1.42	1.38
15	1H	2027	G	C5-C4	-6.47	1.33	1.38
15	14	219	A	C6-N1	6.47	1.40	1.35
32	31	59	TYR	CD1-CE1	-6.47	1.29	1.39
15	14	1069	A	N3-C4	-6.46	1.30	1.34
15	1H	2466	A	C6-N1	-6.46	1.31	1.35
15	1H	1252	A	C5-C6	-6.46	1.35	1.41
15	1H	965	A	N9-C8	6.45	1.43	1.37
15	1H	2087	A	C2-N3	6.44	1.39	1.33
15	1H	1381	G	N7-C5	-6.44	1.35	1.39
15	14	740	C	N1-C6	-6.44	1.33	1.37
26	16	122	A	C5-C4	6.43	1.43	1.38
15	1H	618	G	C5-C4	-6.42	1.33	1.38
4	11	122	ASP	CB-CG	6.42	1.65	1.51
15	14	2013	C	N1-C6	-6.41	1.33	1.37
15	1H	1258	A	N9-C4	-6.40	1.34	1.37
15	1H	1814	A	N3-C4	6.40	1.38	1.34
15	14	2615	A	N7-C5	-6.40	1.35	1.39
15	14	1391	A	N9-C4	-6.39	1.34	1.37
15	14	980	A	N3-C4	-6.39	1.31	1.34
15	14	2570	U	N1-C2	-6.38	1.32	1.38
15	1H	2342	A	N3-C4	-6.37	1.31	1.34
15	1H	2084	A	C5-C4	-6.37	1.34	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	825	G	C2-N2	-6.36	1.28	1.34
15	1H	1830	U	C4-O4	-6.36	1.18	1.23
15	1H	1003	G	C6-O6	6.36	1.29	1.24
15	1H	1559	A	N3-C4	6.36	1.38	1.34
15	14	2557	A	C5-C6	-6.36	1.35	1.41
15	14	1609	G	C6-N1	6.35	1.44	1.39
15	1H	965	A	N9-C4	-6.35	1.34	1.37
15	14	823	A	N7-C5	-6.35	1.35	1.39
15	14	838	A	C6-N1	-6.35	1.31	1.35
15	14	611	A	N3-C4	-6.34	1.31	1.34
15	1H	731	G	C8-N7	-6.34	1.27	1.30
1	13	1152	A	N9-C4	-6.34	1.34	1.37
15	1H	799	A	N9-C4	6.34	1.41	1.37
15	1H	1036	A	N3-C4	6.34	1.38	1.34
15	14	2465	A	C8-N7	-6.33	1.27	1.31
15	1H	1656	C	N3-C4	6.33	1.38	1.33
15	14	1661	C	N1-C6	-6.32	1.33	1.37
15	1H	1177	A	N9-C4	-6.32	1.34	1.37
15	1H	1403	A	N9-C4	-6.31	1.34	1.37
15	1H	73	A	N9-C8	6.31	1.42	1.37
15	14	70	A	N9-C8	6.31	1.42	1.37
15	14	1408	A	N3-C4	6.31	1.38	1.34
15	14	1510	A	C6-N1	6.31	1.40	1.35
15	1H	1381	G	C2-N3	6.30	1.37	1.32
15	14	832	A	N1-C2	6.29	1.40	1.34
15	1H	2087	A	N3-C4	6.29	1.38	1.34
15	14	1813	U	N1-C2	-6.29	1.32	1.38
31	I8	68	GLU	CD-OE2	6.29	1.32	1.25
15	1H	1670	U	N1-C6	-6.29	1.32	1.38
15	1H	597	A	N9-C8	-6.28	1.32	1.37
15	14	2233	U	N1-C2	6.28	1.44	1.38
1	13	1421	A	N9-C8	6.27	1.42	1.37
15	1H	829	G	C6-N1	-6.27	1.35	1.39
15	14	736	C	C2-N3	-6.26	1.30	1.35
15	1H	482	A	N9-C4	-6.26	1.34	1.37
15	1H	192	U	C5-C6	-6.25	1.28	1.34
15	1H	1577	A	N7-C5	-6.25	1.35	1.39
15	14	1811	U	C2-N3	-6.25	1.33	1.37
26	1J	83	G	N9-C8	6.24	1.42	1.37
15	14	2588	C	C2-N3	6.24	1.40	1.35
15	1H	2268	G	N1-C2	-6.23	1.32	1.37
15	1H	1585	A	N3-C4	6.23	1.38	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	965	A	N3-C4	-6.23	1.31	1.34
15	1H	2604	A	C5-C4	-6.23	1.34	1.38
15	14	2515	U	C2-N3	-6.22	1.33	1.37
1	13	907	G	N9-C8	6.21	1.42	1.37
15	1H	600	A	N3-C4	-6.21	1.31	1.34
15	1H	1675	G	N7-C5	-6.21	1.35	1.39
15	1H	140	A	N9-C4	-6.21	1.34	1.37
15	1H	2312	C	N1-C6	-6.21	1.33	1.37
15	14	2078	G	N9-C8	-6.21	1.33	1.37
15	14	1997	A	N9-C4	-6.21	1.34	1.37
15	1H	861	C	N1-C2	-6.21	1.33	1.40
15	1H	2457	C	C5-C6	-6.20	1.29	1.34
1	13	1213	G	N3-C4	-6.20	1.31	1.35
15	1H	957	A	N3-C4	-6.20	1.31	1.34
15	14	121	G	N9-C4	-6.19	1.32	1.38
15	1H	891	G	N9-C4	-6.18	1.33	1.38
15	14	1345	G	C5-C4	-6.18	1.34	1.38
1	1G	2136	A	N9-C4	-6.18	1.34	1.37
15	1H	992	A	C5-C4	6.18	1.43	1.38
15	1H	2072	U	C4-O4	-6.18	1.18	1.23
15	1H	2729	A	C5-C6	-6.18	1.35	1.41
15	14	139	A	N9-C8	6.18	1.42	1.37
15	14	832	A	N9-C8	6.17	1.42	1.37
15	1H	289	U	C2-N3	6.17	1.42	1.37
15	1H	830	A	C5-C6	-6.17	1.35	1.41
15	1H	1823	A	N7-C5	-6.17	1.35	1.39
15	14	2533	A	C5-C6	-6.17	1.35	1.41
15	14	2097	G	C8-N7	-6.16	1.27	1.30
15	1H	2045	A	C6-N6	-6.16	1.29	1.33
52	V1	72	C	N3-C4	6.16	1.38	1.33
52	W4	76	A	C5-C6	6.16	1.46	1.41
15	1H	2429	G	N3-C4	-6.15	1.31	1.35
15	14	554	C	N3-C4	-6.15	1.29	1.33
15	14	70	A	N3-C4	-6.15	1.31	1.34
15	1H	2729	A	N9-C8	6.14	1.42	1.37
13	3A	78	GLN	CG-CD	6.14	1.65	1.51
15	14	181	A	N3-C4	-6.14	1.31	1.34
15	1H	324	A	N9-C4	6.14	1.41	1.37
15	1H	1748	A	N7-C5	-6.13	1.35	1.39
15	1H	2604	A	N9-C4	-6.13	1.34	1.37
1	13	1418	U	N3-C4	-6.13	1.32	1.38
15	1H	1748	A	N1-C2	6.13	1.39	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	2576	A	N9-C8	-6.13	1.32	1.37
15	14	2262	A	N9-C4	-6.13	1.34	1.37
15	14	555	A	C5-C6	-6.13	1.35	1.41
15	1H	618	G	N1-C2	-6.13	1.32	1.37
15	1H	918	G	N3-C4	-6.13	1.31	1.35
15	14	2449	A	N9-C8	-6.13	1.32	1.37
15	1H	242	G	N3-C4	-6.12	1.31	1.35
15	1H	1258	A	N3-C4	-6.12	1.31	1.34
15	14	179	G	C5-C4	-6.12	1.34	1.38
15	1H	743	U	C2-N3	-6.12	1.33	1.37
15	14	140	A	C5-C4	6.11	1.43	1.38
15	1H	828	U	C5-C6	-6.11	1.28	1.34
15	1H	1726	A	C5-C6	-6.11	1.35	1.41
15	1H	2465	A	C8-N7	-6.11	1.27	1.31
15	1H	2660	G	C6-N1	6.11	1.43	1.39
15	1H	733	G	N7-C5	6.10	1.43	1.39
15	14	1748	A	N9-C8	6.10	1.42	1.37
15	1H	1746	G	C6-N1	-6.10	1.35	1.39
15	14	219	A	N3-C4	6.09	1.38	1.34
15	1H	1991	A	N9-C4	-6.09	1.34	1.37
4	11	237	GLU	CD-OE2	6.09	1.32	1.25
15	1H	1258	A	N7-C5	-6.09	1.35	1.39
15	1H	2410	C	C4-N4	-6.07	1.28	1.33
1	13	947	G	N7-C5	6.06	1.42	1.39
15	1H	1861	C	N3-C4	-6.06	1.29	1.33
15	1H	1608	A	N3-C4	-6.06	1.31	1.34
15	1H	2445	A	N9-C8	6.06	1.42	1.37
15	1H	1801	C	N1-C6	-6.05	1.33	1.37
1	13	1319	G	N9-C8	6.05	1.42	1.37
15	1H	810	A	N9-C8	-6.05	1.32	1.37
1	13	1511	G	N9-C4	-6.05	1.33	1.38
15	14	1398	A	C5-C4	6.05	1.43	1.38
15	1H	2233	U	C2-N3	6.04	1.42	1.37
15	1H	429	A	N3-C4	-6.04	1.31	1.34
15	14	2533	A	N9-C4	-6.04	1.34	1.37
15	1H	788	G	N1-C2	-6.04	1.32	1.37
15	1H	884	A	C8-N7	6.04	1.35	1.31
15	1H	2281	A	N3-C4	-6.03	1.31	1.34
15	1H	2729	A	N1-C2	6.03	1.39	1.34
15	1H	676	G	N7-C5	-6.03	1.35	1.39
15	1H	371	A	N3-C4	-6.03	1.31	1.34
15	1H	1665	A	N7-C5	-6.03	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	14	1418	G	C6-N1	-6.03	1.35	1.39
15	1H	842	A	C5-C4	-6.02	1.34	1.38
15	14	1317	A	N3-C4	-6.02	1.31	1.34
15	1H	2746	C	N1-C6	-6.02	1.33	1.37
15	1H	725	A	C5-C6	-6.02	1.35	1.41
15	1H	778	G	N3-C4	-6.01	1.31	1.35
15	1H	890	A	N9-C4	-6.01	1.34	1.37
15	14	781	C	N1-C6	-6.01	1.33	1.37
15	1H	1428	A	N1-C2	6.01	1.39	1.34
15	14	1714	A	N3-C4	-6.01	1.31	1.34
15	1H	433	U	C2-O2	6.01	1.27	1.22
15	14	1850	G	C6-N1	6.00	1.43	1.39
15	1H	738	A	N9-C4	-6.00	1.34	1.37
15	1H	918	G	C6-N1	-6.00	1.35	1.39
15	1H	621	G	C6-N1	5.99	1.43	1.39
15	14	1924	G	N1-C2	5.99	1.42	1.37
15	1H	1014	C	N3-C4	-5.99	1.29	1.33
1	13	2125	A	N9-C4	-5.99	1.34	1.37
15	1H	1671	G	C6-N1	-5.99	1.35	1.39
15	14	2729	A	N1-C2	5.99	1.39	1.34
11	C5	29	GLU	CG-CD	5.98	1.60	1.51
15	14	1002	C	N3-C4	-5.98	1.29	1.33
15	14	2016	U	C2-N3	-5.98	1.33	1.37
15	14	433	U	C2-N3	5.98	1.42	1.37
15	1H	2302	A	N3-C4	-5.97	1.31	1.34
15	1H	2654	A	N3-C4	-5.97	1.31	1.34
15	14	1926	A	N3-C4	-5.97	1.31	1.34
15	1H	1318	A	N9-C4	-5.97	1.34	1.37
15	14	2392	A	N9-C4	-5.97	1.34	1.37
15	1H	618	G	C6-N1	-5.97	1.35	1.39
15	14	717	G	N9-C4	-5.96	1.33	1.38
15	14	2600	U	C2-O2	5.96	1.27	1.22
15	14	1850	G	C6-O6	5.95	1.29	1.24
1	1G	747	G	N9-C8	5.94	1.42	1.37
15	1H	1748	A	C5-C4	5.94	1.43	1.38
15	1H	1805	C	C4-N4	-5.93	1.28	1.33
15	1H	2690	A	N7-C5	-5.93	1.35	1.39
15	1H	139	A	C5-C6	-5.93	1.35	1.41
15	1H	2703	U	N3-C4	-5.93	1.33	1.38
15	14	235	G	N7-C5	-5.93	1.35	1.39
47	51	115	VAL	C-N	5.93	1.47	1.34
15	14	2417	C	C2-N3	5.92	1.40	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	355	A	C5-C6	-5.92	1.35	1.41
15	14	1401	U	C2-N3	-5.92	1.33	1.37
15	1H	2611	U	C2-O2	-5.92	1.17	1.22
15	1H	2571	C	N1-C6	-5.91	1.33	1.37
15	14	219	A	N9-C4	5.91	1.41	1.37
15	1H	826	A	N9-C4	-5.90	1.34	1.37
15	14	729	G	N7-C5	-5.90	1.35	1.39
15	1H	1812	U	C2-N3	-5.90	1.33	1.37
1	13	1905	U	N1-C2	5.90	1.43	1.38
15	14	2408	A	N7-C5	-5.90	1.35	1.39
15	1H	2288	A	C5-C6	-5.90	1.35	1.41
15	1H	1012	C	N1-C2	-5.89	1.34	1.40
52	X1	20	U	C2-N3	5.89	1.41	1.37
15	14	2401	C	N1-C6	-5.89	1.33	1.37
15	14	1954	G	C6-N1	-5.88	1.35	1.39
15	14	2729	A	C5-C6	-5.88	1.35	1.41
1	13	1526	G	C5-C4	-5.88	1.34	1.38
15	1H	1653	C	N1-C6	-5.88	1.33	1.37
15	1H	710	C	N1-C6	-5.88	1.33	1.37
15	1H	2517	G	N9-C8	-5.87	1.33	1.37
15	14	1657	A	N9-C8	-5.87	1.33	1.37
15	1H	1994	A	C6-N1	-5.86	1.31	1.35
15	14	2632	C	N1-C6	-5.86	1.33	1.37
15	14	1796	A	C5-C4	5.86	1.42	1.38
15	14	201	A	N7-C5	-5.86	1.35	1.39
15	14	2445	A	N3-C4	-5.86	1.31	1.34
4	19	28	GLU	CD-OE1	5.85	1.32	1.25
15	1H	1522	A	N3-C4	-5.85	1.31	1.34
15	1H	1704	A	N3-C4	-5.85	1.31	1.34
14	3E	145	GLU	CG-CD	5.85	1.60	1.51
15	1H	1416	A	C5-C4	-5.85	1.34	1.38
15	14	1694	C	C4-N4	-5.85	1.28	1.33
23	29	96	PHE	C-N	5.85	1.47	1.34
15	1H	1621	A	N9-C4	-5.85	1.34	1.37
15	1H	2466	A	N9-C4	-5.85	1.34	1.37
15	1H	200	C	N3-C4	-5.84	1.29	1.33
15	14	2095	G	C6-N1	-5.84	1.35	1.39
15	1H	744	G	C6-N1	-5.84	1.35	1.39
15	1H	712	G	C6-N1	-5.84	1.35	1.39
15	1H	2009	G	C6-N1	-5.84	1.35	1.39
15	1H	2767	G	N9-C4	-5.84	1.33	1.38
15	1H	174	C	N1-C6	-5.84	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	2407	A	C2-N3	-5.84	1.28	1.33
15	14	1659	A	N9-C4	-5.83	1.34	1.37
15	1H	2512	A	C5-C4	-5.83	1.34	1.38
15	14	789	U	N3-C4	-5.83	1.33	1.38
15	14	2521	U	C2-N3	5.83	1.41	1.37
15	14	2622	G	C5-C4	5.82	1.42	1.38
15	1H	1069	A	N3-C4	-5.82	1.31	1.34
15	14	1689	U	C2-O2	-5.82	1.17	1.22
15	1H	289	U	C4-O4	5.82	1.28	1.23
15	14	1953	A	N9-C4	-5.82	1.34	1.37
15	14	2613	A	C8-N7	-5.82	1.27	1.31
15	1H	121	G	C6-N1	-5.82	1.35	1.39
15	1H	1847	G	N9-C8	-5.82	1.33	1.37
15	1H	828	U	C2-N3	-5.81	1.33	1.37
15	1H	499	A	N9-C4	-5.81	1.34	1.37
15	1H	1817	A	C5-C4	-5.81	1.34	1.38
15	1H	1304	U	N1-C6	-5.80	1.32	1.38
15	1H	2529	U	C2-N3	-5.80	1.33	1.37
15	1H	1994	A	C5-C4	-5.80	1.34	1.38
15	1H	1559	A	N9-C4	5.80	1.41	1.37
15	1H	1862	G	N9-C8	-5.80	1.33	1.37
15	14	1689	U	C4-O4	-5.79	1.19	1.23
15	1H	137	G	C6-N1	5.79	1.43	1.39
11	G8	102	CYS	CB-SG	5.79	1.92	1.82
15	14	823	A	C6-N1	5.79	1.39	1.35
15	1H	1795	C	N1-C6	-5.79	1.33	1.37
15	1H	2534	U	C2-N3	5.79	1.41	1.37
15	14	793	G	N7-C5	-5.79	1.35	1.39
15	1H	1988	U	C4-C5	5.79	1.48	1.43
15	1H	70	A	N1-C2	5.79	1.39	1.34
32	31	145	GLU	CG-CD	5.78	1.60	1.51
15	14	1665	A	N7-C5	-5.78	1.35	1.39
15	1H	965	A	C8-N7	5.78	1.35	1.31
15	1H	1810	G	C8-N7	-5.78	1.27	1.30
15	14	2096	A	C5-C4	-5.77	1.34	1.38
15	1H	2257	G	N9-C8	-5.77	1.33	1.37
15	1H	731	G	C5-C4	-5.77	1.34	1.38
15	1H	197	A	N9-C4	-5.77	1.34	1.37
15	1H	1702	A	N3-C4	-5.77	1.31	1.34
15	14	2466	A	N9-C4	-5.76	1.34	1.37
15	14	734	A	N9-C4	-5.76	1.34	1.37
15	14	2639	G	N7-C5	5.76	1.42	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	14	1665	A	N1-C2	5.75	1.39	1.34
15	14	1943	A	N9-C4	-5.75	1.34	1.37
15	1H	255	A	N7-C5	-5.75	1.35	1.39
52	V1	76	A	N1-C2	5.75	1.39	1.34
15	1H	54	G	N1-C2	-5.75	1.33	1.37
15	1H	2361	A	N9-C8	5.75	1.42	1.37
15	1H	2617	A	C8-N7	5.75	1.35	1.31
15	14	1258	A	C5-C6	-5.75	1.35	1.41
15	1H	2457	C	N3-C4	-5.75	1.29	1.33
15	14	2287	U	C2-N3	-5.75	1.33	1.37
15	1H	2605	A	C6-N1	-5.74	1.31	1.35
15	14	2719	C	N1-C6	-5.74	1.33	1.37
15	1H	2838	C	N3-C4	-5.74	1.29	1.33
15	14	842	A	N3-C4	-5.74	1.31	1.34
15	14	70	A	C5-C4	5.74	1.42	1.38
27	C8	69	CYS	CB-SG	-5.74	1.72	1.81
1	1G	2165	G	C1'-N9	-5.73	1.38	1.46
15	1H	833	A	C5-C4	-5.73	1.34	1.38
15	1H	2361	A	C5-C4	5.73	1.42	1.38
15	14	800	A	N3-C4	-5.73	1.31	1.34
15	14	1850	G	N3-C4	5.73	1.39	1.35
15	1H	130	G	C6-N1	-5.73	1.35	1.39
15	1H	219	A	C5-C4	5.73	1.42	1.38
15	1H	731	G	N1-C2	-5.73	1.33	1.37
17	L8	57	GLU	CB-CG	5.73	1.63	1.52
15	1H	1008	C	N1-C6	-5.72	1.33	1.37
15	1H	499	A	N3-C4	-5.72	1.31	1.34
15	1H	817	G	C6-N1	-5.72	1.35	1.39
15	1H	738	A	N7-C5	-5.72	1.35	1.39
15	1H	1820	A	N1-C2	5.72	1.39	1.34
15	1H	2520	G	N1-C2	-5.72	1.33	1.37
15	14	2342	A	C6-N1	-5.72	1.31	1.35
15	14	734	A	C5-C4	-5.71	1.34	1.38
15	1H	546	U	C2-N3	5.71	1.41	1.37
15	1H	1981	U	C2-N3	-5.71	1.33	1.37
15	1H	990	U	N1-C6	-5.71	1.32	1.38
15	1H	2268	G	C5-C4	-5.70	1.34	1.38
15	14	2605	A	C5-C4	-5.70	1.34	1.38
23	29	154	LYS	CE-NZ	5.70	1.63	1.49
1	1G	1341	A	N7-C5	-5.70	1.35	1.39
15	14	1338	C	N1-C6	-5.70	1.33	1.37
15	1H	183	U	C2-N3	-5.70	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	1816	C	N1-C6	-5.70	1.33	1.37
1	13	1145	U	N1-C2	5.70	1.43	1.38
3	F8	15	GLU	CB-CG	5.70	1.62	1.52
51	Y1	52	U	N1-C2	5.70	1.43	1.38
15	1H	179	G	N9-C4	-5.70	1.33	1.38
1	13	1397	A	C5-C4	-5.69	1.34	1.38
15	1H	1181	U	N1-C2	-5.69	1.33	1.38
15	14	885	G	C5-C4	-5.69	1.34	1.38
15	1H	1403	A	N3-C4	-5.69	1.31	1.34
15	14	1345	G	N1-C2	-5.69	1.33	1.37
15	1H	235	G	C5-C6	-5.69	1.36	1.42
15	14	2109	C	N1-C6	-5.69	1.33	1.37
15	14	2459	G	N7-C5	-5.69	1.35	1.39
15	1H	2312	C	N3-C4	-5.68	1.29	1.33
15	1H	2520	G	C6-N1	-5.68	1.35	1.39
15	14	128	C	N1-C6	-5.68	1.33	1.37
15	14	1748	A	N9-C4	-5.67	1.34	1.37
15	14	1915	A	N9-C4	-5.67	1.34	1.37
15	1H	255	A	N9-C4	-5.67	1.34	1.37
1	13	971	C	N1-C2	5.67	1.45	1.40
15	14	2696	C	N3-C4	-5.67	1.29	1.33
15	14	2846	G	N3-C4	5.67	1.39	1.35
15	1H	1608	A	N7-C5	-5.66	1.35	1.39
15	14	1731	G	N9-C4	-5.66	1.33	1.38
15	14	2557	A	N7-C5	-5.66	1.35	1.39
15	14	2533	A	N7-C5	-5.66	1.35	1.39
15	1H	122	G	C5-C4	-5.66	1.34	1.38
15	1H	808	G	N9-C4	-5.66	1.33	1.38
15	1H	834	G	N7-C5	-5.66	1.35	1.39
1	1G	1136	C	N3-C4	-5.65	1.29	1.33
15	1H	12	U	N1-C2	5.65	1.43	1.38
32	39	65	TRP	CB-CG	-5.65	1.40	1.50
15	14	1362	U	C2-O2	-5.65	1.17	1.22
15	1H	1947	G	N1-C2	-5.64	1.33	1.37
15	14	1403	A	N3-C4	-5.64	1.31	1.34
15	1H	2002	A	N9-C8	-5.64	1.33	1.37
15	1H	616	C	N1-C6	-5.64	1.33	1.37
21	25	91	LEU	C-N	-5.64	1.21	1.34
15	1H	179	G	N3-C4	-5.63	1.31	1.35
15	1H	602	G	N9-C8	-5.63	1.33	1.37
15	1H	839	C	C2-N3	5.63	1.40	1.35
15	1H	1648	C	C2-O2	-5.63	1.19	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	1874	G	N9-C8	-5.63	1.33	1.37
15	1H	1620	A	C5-C4	-5.63	1.34	1.38
1	13	747	G	C2-N3	5.63	1.37	1.32
15	14	1400	C	N1-C6	-5.63	1.33	1.37
15	14	12	U	N1-C2	5.63	1.43	1.38
15	1H	738	A	N9-C8	-5.63	1.33	1.37
15	1H	1414	A	N3-C4	-5.62	1.31	1.34
21	25	117	LEU	C-N	5.62	1.47	1.34
15	1H	824	G	N7-C5	-5.62	1.35	1.39
15	14	1191	A	N9-C4	-5.62	1.34	1.37
1	13	1235	G	C6-N1	5.62	1.43	1.39
15	1H	634	A	C5-C6	-5.61	1.36	1.41
15	1H	992	A	C2-N3	5.61	1.38	1.33
15	1H	2343	A	N9-C4	-5.61	1.34	1.37
15	1H	2409	C	N3-C4	-5.60	1.30	1.33
1	1G	2096	A	N9-C4	-5.60	1.34	1.37
15	14	1663	A	C6-N1	5.60	1.39	1.35
15	1H	681	A	N9-C4	5.59	1.41	1.37
15	1H	1913	G	C2-N3	5.59	1.37	1.32
15	1H	673	A	N9-C8	5.59	1.42	1.37
15	1H	754	A	C5-C6	-5.59	1.36	1.41
15	14	2533	A	N3-C4	-5.59	1.31	1.34
15	1H	1238	G	N9-C8	-5.59	1.33	1.37
15	1H	1849	A	N3-C4	-5.59	1.31	1.34
15	14	1822	C	N3-C4	-5.58	1.30	1.33
15	14	1728	G	C5-C4	5.58	1.42	1.38
15	14	529	A	N9-C4	-5.58	1.34	1.37
15	1H	1665	A	C6-N1	5.58	1.39	1.35
15	1H	2093	U	N3-C4	-5.58	1.33	1.38
15	1H	2325	A	N9-C4	5.58	1.41	1.37
15	1H	2463	A	C5-C6	-5.57	1.36	1.41
1	1G	2125	A	N7-C5	-5.57	1.35	1.39
15	1H	671	A	C6-N1	-5.57	1.31	1.35
15	14	632	U	C2-N3	-5.57	1.33	1.37
15	1H	1381	G	C5-C6	-5.56	1.36	1.42
52	X1	76	A	N9-C4	-5.56	1.34	1.37
15	14	556	A	N3-C4	-5.56	1.31	1.34
15	1H	1962	A	C5-C4	-5.56	1.34	1.38
15	1H	2093	U	C2-N3	-5.56	1.33	1.37
15	14	1333	A	N9-C4	-5.56	1.34	1.37
15	1H	1859	A	C6-N6	-5.56	1.29	1.33
15	1H	2729	A	C6-N1	5.55	1.39	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	1947	G	C5-C4	-5.55	1.34	1.38
15	14	1031	A	N3-C4	-5.55	1.31	1.34
15	14	171	A	N9-C4	-5.54	1.34	1.37
15	14	2342	A	N3-C4	-5.54	1.31	1.34
15	1H	197	A	N3-C4	-5.54	1.31	1.34
15	1H	1994	A	N3-C4	-5.54	1.31	1.34
15	1H	1619	A	N9-C4	-5.54	1.34	1.37
15	14	1362	U	N1-C2	-5.53	1.33	1.38
15	1H	632	U	N1-C2	-5.53	1.33	1.38
3	F8	3	THR	CB-CG2	5.53	1.70	1.52
15	1H	1664	C	N1-C6	-5.53	1.33	1.37
15	1H	289	U	C2-O2	5.53	1.27	1.22
15	1H	485	A	P-OP2	5.53	1.58	1.49
15	1H	73	A	C5-C6	-5.52	1.36	1.41
15	14	1818	A	C2-N3	-5.52	1.28	1.33
1	13	1516	C	N1-C6	-5.52	1.33	1.37
47	51	83	TYR	CB-CG	5.52	1.59	1.51
15	1H	1662	G	C5-C4	-5.52	1.34	1.38
15	14	1925	A	N7-C5	-5.52	1.35	1.39
15	14	2435	C	N1-C6	-5.52	1.33	1.37
1	13	2125	A	N7-C5	-5.51	1.35	1.39
15	1H	543	C	N3-C4	-5.51	1.30	1.33
15	14	1823	A	N3-C4	-5.51	1.31	1.34
15	1H	712	G	N3-C4	-5.51	1.31	1.35
13	3A	78	GLN	CB-CG	5.51	1.67	1.52
15	14	2417	C	N1-C6	5.51	1.40	1.37
15	1H	726	A	C5-C4	-5.51	1.34	1.38
4	11	54	ARG	CB-CG	-5.51	1.37	1.52
15	1H	1302	A	C5-C4	-5.51	1.34	1.38
15	14	2386	G	N3-C4	5.51	1.39	1.35
7	8A	49	GLU	CG-CD	5.50	1.60	1.51
15	1H	562	C	N3-C4	-5.50	1.30	1.33
29	AI	41	VAL	CA-CB	5.50	1.66	1.54
15	1H	1819	A	N7-C5	-5.50	1.35	1.39
1	1G	2025	C	N1-C2	5.50	1.45	1.40
15	1H	459	G	N7-C5	-5.50	1.35	1.39
1	13	1168	A	N9-C4	-5.50	1.34	1.37
15	1H	117	A	N9-C8	-5.50	1.33	1.37
15	1H	1314	A	P-O5'	-5.49	1.54	1.59
15	1H	2242	A	N3-C4	-5.49	1.31	1.34
15	1H	2693	C	N3-C4	-5.49	1.30	1.33
15	1H	1360	G	N9-C8	-5.49	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	2459	G	C6-N1	5.49	1.43	1.39
15	14	2107	A	C5-C4	-5.49	1.34	1.38
1	13	1213	G	C6-N1	-5.49	1.35	1.39
15	1H	1804	G	C6-N1	-5.49	1.35	1.39
15	1H	2449	A	N9-C4	-5.49	1.34	1.37
15	14	1428	A	C5-C4	5.49	1.42	1.38
15	14	2629	A	N9-C4	-5.48	1.34	1.37
15	1H	1428	A	C2-N3	5.48	1.38	1.33
15	14	409	G	N9-C8	-5.48	1.34	1.37
15	14	786	C	N1-C6	-5.48	1.33	1.37
15	14	1731	G	N3-C4	-5.47	1.31	1.35
3	B5	23	GLU	CG-CD	5.47	1.60	1.51
15	1H	743	U	N3-C4	-5.47	1.33	1.38
15	1H	2389	C	C2-N3	-5.47	1.31	1.35
15	14	712	G	N3-C4	-5.47	1.31	1.35
15	1H	1191	A	C5-C6	-5.46	1.36	1.41
15	1H	1665	A	N3-C4	-5.46	1.31	1.34
15	14	596	A	C5-C4	-5.46	1.34	1.38
15	1H	1001	G	C2-N2	-5.46	1.29	1.34
15	14	2454	A	N9-C4	-5.46	1.34	1.37
15	1H	1922	G	N9-C8	-5.45	1.34	1.37
15	1H	2704	U	N3-C4	-5.45	1.33	1.38
15	1H	501	G	N1-C2	-5.45	1.33	1.37
15	1H	823	A	N3-C4	-5.45	1.31	1.34
15	1H	802	C	N1-C6	5.45	1.40	1.37
15	1H	2068	C	C4-C5	-5.45	1.38	1.43
15	1H	879	G	C2-N3	5.45	1.37	1.32
15	1H	1074	U	C2-O2	5.45	1.27	1.22
15	14	1191	A	N3-C4	-5.44	1.31	1.34
15	14	1428	A	N9-C8	5.44	1.42	1.37
15	14	1806	G	N9-C8	-5.44	1.34	1.37
26	16	83	G	C2-N3	5.44	1.37	1.32
15	1H	1888	A	N7-C5	-5.44	1.35	1.39
15	1H	1375	U	C2-N3	-5.44	1.33	1.37
15	1H	890	A	N3-C4	-5.44	1.31	1.34
15	14	1663	A	N3-C4	-5.44	1.31	1.34
15	1H	1665	A	C5-C6	-5.43	1.36	1.41
15	1H	535	G	C2-N2	5.43	1.40	1.34
15	1H	539	G	C5-C4	-5.42	1.34	1.38
1	13	2121	U	N1-C2	5.42	1.43	1.38
15	1H	2280	U	N1-C6	-5.42	1.33	1.38
15	14	1510	A	C5-C4	5.42	1.42	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	13	1523	A	C5-C4	-5.41	1.34	1.38
15	1H	1245	G	N9-C8	-5.41	1.34	1.37
15	1H	98	U	N1-C2	5.41	1.43	1.38
15	1H	1036	A	N9-C4	5.41	1.41	1.37
15	14	2013	C	C4-C5	-5.41	1.38	1.43
15	14	672	C	N1-C2	5.41	1.45	1.40
15	1H	2050	C	C4-C5	-5.41	1.38	1.43
15	14	1847	G	N9-C8	-5.41	1.34	1.37
15	1H	2109	C	N3-C4	-5.40	1.30	1.33
15	14	894	G	C2-N3	5.40	1.37	1.32
15	1H	2509	G	C2-N3	-5.40	1.28	1.32
15	1H	2617	A	C6-N1	5.39	1.39	1.35
1	13	1389	G	N7-C5	-5.39	1.36	1.39
1	13	1399	C	N1-C6	-5.39	1.33	1.37
15	1H	1003	G	C4'-C3'	-5.39	1.47	1.52
15	1H	2447	A	C5-C4	-5.39	1.34	1.38
15	1H	372	A	N9-C4	5.38	1.41	1.37
15	1H	433	U	N1-C2	5.38	1.43	1.38
15	1H	506	A	N3-C4	-5.38	1.31	1.34
1	13	1444	A	N3-C4	-5.38	1.31	1.34
15	1H	2713	U	N1-C2	-5.38	1.33	1.38
15	14	725	A	C5-C6	-5.38	1.36	1.41
15	1H	842	A	N9-C8	-5.38	1.33	1.37
15	1H	1914	A	C6-N1	-5.38	1.31	1.35
1	1G	2121	U	N1-C2	5.38	1.43	1.38
15	1H	600	A	N9-C4	-5.38	1.34	1.37
15	14	2036	U	N1-C2	-5.38	1.33	1.38
26	16	1	A	N7-C5	5.38	1.42	1.39
15	1H	833	A	N1-C2	-5.37	1.29	1.34
15	1H	1857	G	N9-C8	-5.37	1.34	1.37
15	1H	1663	A	C5-C6	-5.37	1.36	1.41
15	14	2409	C	N3-C4	-5.37	1.30	1.33
15	1H	741	C	N1-C6	-5.37	1.33	1.37
15	1H	886	C	N1-C6	-5.37	1.33	1.37
15	1H	1408	A	C6-N1	5.37	1.39	1.35
15	1H	2290	C	P-O5'	-5.37	1.54	1.59
15	1H	2367	A	N3-C4	5.37	1.38	1.34
15	14	2441	A	C8-N7	-5.37	1.27	1.31
15	1H	990	U	C4-C5	-5.36	1.38	1.43
15	1H	2071	G	C5-C4	-5.36	1.34	1.38
15	14	2512	A	N3-C4	-5.36	1.31	1.34
15	1H	418	A	N7-C5	-5.36	1.36	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	1914	A	N3-C4	-5.36	1.31	1.34
15	14	140	A	N9-C8	5.36	1.42	1.37
1	13	1973	A	N3-C4	-5.36	1.31	1.34
1	13	1488	A	N7-C5	-5.36	1.36	1.39
15	1H	2491	A	N9-C4	5.36	1.41	1.37
15	1H	129	G	N3-C4	-5.36	1.31	1.35
15	14	1838	C	C4-N4	-5.36	1.29	1.33
32	31	27	GLU	CG-CD	5.36	1.59	1.51
15	14	1793	A	C5-C6	-5.35	1.36	1.41
15	1H	532	A	C5-C4	-5.35	1.35	1.38
15	1H	71	U	N1-C6	-5.35	1.33	1.38
15	1H	17	G	N1-C2	-5.35	1.33	1.37
15	14	407	G	N9-C8	-5.35	1.34	1.37
15	1H	59	G	C8-N7	-5.34	1.27	1.30
15	1H	965	A	N7-C5	-5.34	1.36	1.39
15	1H	2522	C	N3-C4	-5.34	1.30	1.33
15	1H	204	G	P-OP2	5.34	1.58	1.49
15	1H	2729	A	N7-C5	-5.34	1.36	1.39
15	1H	122	G	N3-C4	-5.34	1.31	1.35
15	1H	2449	A	C6-N1	-5.33	1.31	1.35
15	14	2454	A	C5-C6	-5.33	1.36	1.41
15	1H	70	A	N3-C4	-5.33	1.31	1.34
15	14	809	G	C8-N7	-5.33	1.27	1.30
15	1H	1357	A	N7-C5	-5.33	1.36	1.39
15	1H	728	C	N1-C6	-5.33	1.33	1.37
52	X4	70	G	N9-C8	5.33	1.41	1.37
15	1H	1993	G	C6-O6	-5.33	1.19	1.24
15	1H	2385	G	N1-C2	-5.33	1.33	1.37
15	14	179	G	C5-C6	-5.33	1.37	1.42
15	14	2525	C	N3-C4	-5.33	1.30	1.33
15	1H	120	G	N7-C5	-5.32	1.36	1.39
15	1H	2010	G	N7-C5	-5.32	1.36	1.39
15	1H	1665	A	C5-C4	5.32	1.42	1.38
14	32	12	CYS	CB-SG	5.32	1.91	1.82
15	1H	834	G	C2-N2	-5.32	1.29	1.34
15	1H	19	C	N1-C6	-5.32	1.33	1.37
15	14	1345	G	C6-N1	-5.32	1.35	1.39
15	14	1841	G	N9-C8	-5.31	1.34	1.37
52	V4	72	C	N3-C4	5.31	1.37	1.33
15	1H	1286	A	N7-C5	-5.31	1.36	1.39
15	1H	2617	A	N7-C5	5.30	1.42	1.39
15	14	2717	U	C2-O2	-5.30	1.17	1.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	1G	2125	A	N9-C4	-5.30	1.34	1.37
15	1H	2407	A	C6-N1	5.30	1.39	1.35
15	1H	440	A	N9-C4	-5.30	1.34	1.37
15	1H	640	U	C2-N3	5.30	1.41	1.37
15	1H	1661	C	N1-C6	-5.29	1.33	1.37
15	1H	240	G	C2-N3	-5.29	1.28	1.32
15	14	34	C	N1-C2	5.29	1.45	1.40
15	14	1993	G	N3-C4	-5.29	1.31	1.35
15	1H	1287	G	N7-C5	-5.29	1.36	1.39
26	16	48	A	N9-C4	-5.29	1.34	1.37
15	14	842	A	C6-N6	5.29	1.38	1.33
15	1H	1028	A	N7-C5	-5.29	1.36	1.39
1	13	1237	A	N9-C4	-5.29	1.34	1.37
15	14	1995	A	C6-N1	-5.29	1.31	1.35
15	1H	736	C	N1-C2	-5.29	1.34	1.40
1	13	1526	G	N7-C5	-5.28	1.36	1.39
4	11	70	TRP	CE3-CZ3	-5.28	1.29	1.38
15	14	2115	G	C6-N1	-5.28	1.35	1.39
15	1H	843	G	N9-C8	-5.28	1.34	1.37
15	14	600	A	N7-C5	-5.28	1.36	1.39
15	14	823	A	C2-N3	-5.28	1.28	1.33
15	14	1771	U	C2-N3	5.28	1.41	1.37
15	1H	735	G	N7-C5	-5.28	1.36	1.39
12	Q8	40	GLU	CG-CD	5.28	1.59	1.51
15	1H	877	U	N1-C2	-5.28	1.33	1.38
15	14	1666	C	N1-C6	-5.28	1.33	1.37
15	14	494	A	N7-C5	-5.27	1.36	1.39
1	1G	755	A	N7-C5	-5.27	1.36	1.39
23	21	40	GLU	CB-CG	5.27	1.62	1.52
15	14	2468	A	N7-C5	-5.27	1.36	1.39
15	1H	1006	A	C6-N1	-5.26	1.31	1.35
15	14	1324	A	N3-C4	5.26	1.38	1.34
15	1H	1414	A	N9-C4	-5.26	1.34	1.37
1	13	1926	A	N3-C4	-5.26	1.31	1.34
15	1H	968	G	N7-C5	-5.26	1.36	1.39
15	1H	2467	C	N1-C6	-5.26	1.33	1.37
15	1H	1179	G	C6-N1	-5.26	1.35	1.39
15	1H	1668	G	C5-C4	-5.26	1.34	1.38
15	1H	2410	C	C2-N3	5.26	1.40	1.35
15	14	527	G	N9-C8	-5.26	1.34	1.37
15	14	1686	C	N1-C2	-5.26	1.34	1.40
15	1H	187	A	N3-C4	-5.26	1.31	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	88	90	VAL	CB-CG1	5.26	1.63	1.52
1	13	1150	G	N7-C5	-5.26	1.36	1.39
15	1H	73	A	C6-N1	-5.26	1.31	1.35
15	1H	2832	G	C6-N1	-5.26	1.35	1.39
15	14	2009	G	N7-C5	-5.26	1.36	1.39
15	14	2065	C	N1-C6	-5.25	1.33	1.37
15	1H	491	G	C5-C4	-5.25	1.34	1.38
15	1H	1038	A	N7-C5	-5.25	1.36	1.39
15	1H	2463	A	N9-C8	-5.25	1.33	1.37
15	14	426	G	N9-C8	-5.25	1.34	1.37
15	14	1429	G	N9-C4	-5.25	1.33	1.38
15	14	2090	C	N3-C4	-5.25	1.30	1.33
1	13	1443	A	C5-C4	-5.25	1.35	1.38
15	14	2609	C	C4-N4	-5.25	1.29	1.33
4	11	54	ARG	CG-CD	-5.25	1.38	1.51
15	14	793	G	N9-C8	-5.25	1.34	1.37
15	14	2521	U	C4-C5	5.25	1.48	1.43
15	1H	1238	G	N7-C5	-5.25	1.36	1.39
15	14	858	G	C5-C4	-5.24	1.34	1.38
1	13	2032	C	N1-C6	5.24	1.40	1.37
15	1H	2082	A	N9-C8	-5.24	1.33	1.37
15	14	587	U	C2-O2	-5.24	1.17	1.22
15	14	1697	G	C6-O6	-5.24	1.19	1.24
45	55	114	VAL	CB-CG2	-5.24	1.41	1.52
15	1H	2505	G	C6-O6	-5.24	1.19	1.24
15	1H	876	U	N1-C2	-5.24	1.33	1.38
15	1H	2341	C	C3'-C2'	-5.24	1.47	1.52
15	14	1793	A	C6-N1	-5.24	1.31	1.35
1	13	2138	C	N1-C6	-5.23	1.34	1.37
15	1H	672	C	N1-C2	5.23	1.45	1.40
15	1H	996	C	N3-C4	-5.23	1.30	1.33
15	14	1428	A	C8-N7	5.23	1.35	1.31
15	1H	597	A	C6-N6	5.23	1.38	1.33
15	1H	1013	G	N9-C8	-5.23	1.34	1.37
15	1H	1324	A	N9-C8	-5.23	1.33	1.37
15	14	2447	A	C8-N7	-5.23	1.27	1.31
15	1H	1973	G	C6-N1	-5.23	1.35	1.39
15	14	1457	C	N1-C2	-5.23	1.34	1.40
52	V1	76	A	N9-C8	5.23	1.42	1.37
15	1H	775	G	C6-N1	-5.22	1.35	1.39
15	1H	1403	A	C5-C6	-5.22	1.36	1.41
15	1H	1924	G	N3-C4	-5.22	1.31	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	14	489	C	N3-C4	-5.22	1.30	1.33
15	1H	2564	G	N9-C8	-5.21	1.34	1.37
15	14	2108	G	C6-N1	-5.21	1.35	1.39
26	16	43	U	C4-C5	5.21	1.48	1.43
15	1H	18	C	N1-C6	-5.21	1.34	1.37
15	1H	1728	G	C6-N1	-5.21	1.35	1.39
15	1H	2090	C	C2-N3	-5.21	1.31	1.35
15	14	1381	G	C6-N1	-5.21	1.35	1.39
15	1H	838	A	N9-C4	-5.21	1.34	1.37
15	14	1683	G	N7-C5	-5.21	1.36	1.39
15	14	725	A	N1-C2	5.21	1.39	1.34
15	1H	838	A	C6-N1	-5.21	1.31	1.35
15	1H	2253	G	P-OP1	5.21	1.57	1.49
15	14	1494	A	C5-C4	5.21	1.42	1.38
15	14	1820	A	C2-N3	-5.21	1.28	1.33
39	J8	5	CYS	CB-SG	-5.21	1.73	1.81
46	G5	5	GLU	CB-CG	5.21	1.62	1.52
15	1H	1241	G	C2-N3	5.21	1.36	1.32
14	3E	145	GLU	CB-CG	5.20	1.62	1.52
15	1H	186	A	N3-C4	5.20	1.38	1.34
15	1H	1981	U	N3-C4	-5.20	1.33	1.38
15	1H	1559	A	C6-N1	5.20	1.39	1.35
15	14	1494	A	C5-C6	5.20	1.45	1.41
15	1H	885	G	C2-N3	-5.20	1.28	1.32
12	Q8	54	GLU	CB-CG	5.20	1.62	1.52
15	1H	2597	G	N1-C2	-5.20	1.33	1.37
1	1G	1260	G	C5-C4	5.19	1.42	1.38
52	V1	35	A	N9-C4	5.19	1.41	1.37
15	1H	726	A	C4'-C3'	-5.19	1.47	1.52
15	1H	56	C	N3-C4	-5.19	1.30	1.33
15	14	965	A	C8-N7	-5.19	1.27	1.31
15	1H	408	U	C2-O2	-5.19	1.17	1.22
15	1H	1657	A	N9-C8	-5.19	1.33	1.37
15	1H	1877	C	C4-N4	-5.19	1.29	1.33
15	1H	2609	C	C4-N4	-5.19	1.29	1.33
15	14	120	G	C5-C4	-5.19	1.34	1.38
15	14	2718	C	N1-C6	-5.19	1.34	1.37
1	1G	1495	A	N9-C4	-5.18	1.34	1.37
15	1H	1682	A	C5-C6	-5.18	1.36	1.41
15	1H	1746	G	N1-C2	-5.18	1.33	1.37
15	1H	2073	G	N7-C5	-5.18	1.36	1.39
15	14	815	C	N3-C4	-5.18	1.30	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	14	2112	G	C5-C4	-5.18	1.34	1.38
32	31	145	GLU	CB-CG	5.18	1.61	1.52
15	14	1258	A	N3-C4	-5.18	1.31	1.34
15	14	2302	A	N3-C4	-5.18	1.31	1.34
15	14	2512	A	C6-N1	-5.18	1.31	1.35
1	13	1396	A	N9-C4	-5.18	1.34	1.37
15	14	1695	G	C5-C4	-5.18	1.34	1.38
15	1H	1191	A	C5-C4	5.18	1.42	1.38
15	1H	2693	C	N1-C6	-5.18	1.34	1.37
15	1H	808	G	C5-C4	-5.17	1.34	1.38
15	1H	1014	C	N1-C6	-5.17	1.34	1.37
15	1H	2068	C	N1-C6	-5.17	1.34	1.37
46	G5	5	GLU	CG-CD	5.17	1.59	1.51
15	1H	894	G	C2-N2	5.17	1.39	1.34
15	1H	1922	G	N7-C5	-5.16	1.36	1.39
15	1H	2300	C	N3-C4	-5.16	1.30	1.33
1	13	1973	A	N9-C4	-5.16	1.34	1.37
1	13	655	G	N7-C5	-5.16	1.36	1.39
15	14	1609	G	N1-C2	5.16	1.41	1.37
15	1H	673	A	N9-C4	5.16	1.41	1.37
15	1H	830	A	C6-N6	-5.16	1.29	1.33
15	1H	1807	A	C6-N1	-5.16	1.31	1.35
15	1H	2784	C	N3-C4	-5.16	1.30	1.33
15	14	191	C	N1-C6	-5.16	1.34	1.37
15	1H	50	G	N1-C2	-5.15	1.33	1.37
15	1H	1252	A	N9-C8	5.15	1.41	1.37
15	1H	1398	A	C6-N1	5.15	1.39	1.35
15	1H	34	C	C2-N3	5.15	1.39	1.35
15	1H	543	C	C4-C5	-5.15	1.38	1.43
15	1H	1297	G	C8-N7	5.15	1.34	1.30
15	14	219	A	C5-C4	5.15	1.42	1.38
15	14	658	A	C5-C4	-5.15	1.35	1.38
26	16	79	U	N1-C2	-5.15	1.33	1.38
1	13	1510	G	N1-C2	-5.15	1.33	1.37
15	1H	849	A	P-O5'	-5.15	1.54	1.59
15	14	1337	U	N1-C6	-5.15	1.33	1.38
15	14	2344	G	N9-C4	-5.15	1.33	1.38
15	1H	192	U	C2-N3	-5.14	1.34	1.37
15	1H	2445	A	C2-N3	-5.14	1.28	1.33
15	14	824	G	N9-C8	-5.14	1.34	1.37
1	13	891	A	N9-C4	5.14	1.41	1.37
15	14	433	U	C2-O2	5.14	1.26	1.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	14	1847	G	N3-C4	5.14	1.39	1.35
15	1H	2097	G	N9-C4	5.14	1.42	1.38
15	1H	2439	C	N3-C4	-5.14	1.30	1.33
15	1H	2568	G	C8-N7	-5.14	1.27	1.30
1	13	1421	A	N7-C5	-5.14	1.36	1.39
15	1H	1009	G	N9-C8	-5.14	1.34	1.37
15	14	2046	C	N1-C6	-5.14	1.34	1.37
15	1H	851	A	C5-C4	-5.13	1.35	1.38
15	1H	2015	C	N3-C4	-5.13	1.30	1.33
15	1H	2457	C	N1-C2	-5.13	1.35	1.40
15	1H	2832	G	C5-C4	-5.13	1.34	1.38
15	14	2505	G	C2-N3	5.13	1.36	1.32
51	Y1	45	U	C4-O4	5.13	1.27	1.23
15	1H	760	G	N9-C4	-5.13	1.33	1.38
15	14	1748	A	C5-C4	5.13	1.42	1.38
15	1H	794	G	C8-N7	-5.13	1.27	1.30
52	W1	74	C	C2-O2	5.13	1.29	1.24
1	1G	753	U	C2-N3	-5.12	1.34	1.37
15	1H	114	C	N1-C6	-5.12	1.34	1.37
15	14	2590	C	N3-C4	-5.12	1.30	1.33
15	1H	1233	C	N3-C4	-5.12	1.30	1.33
15	1H	1914	A	C5-C4	-5.12	1.35	1.38
1	13	946	G	N9-C8	-5.12	1.34	1.37
15	1H	1662	G	C6-O6	-5.12	1.19	1.24
15	1H	1477	C	C4-C5	5.11	1.47	1.43
15	1H	2102	A	C6-N6	-5.11	1.29	1.33
15	14	860	U	N1-C2	-5.11	1.33	1.38
15	1H	784	A	C5-C6	-5.11	1.36	1.41
15	1H	2408	A	N9-C8	-5.11	1.33	1.37
52	X1	23	A	C6-N1	-5.11	1.31	1.35
15	14	1784	G	N7-C5	-5.11	1.36	1.39
15	1H	640	U	N3-C4	5.11	1.43	1.38
15	1H	959	A	C6-N1	-5.11	1.31	1.35
12	Q8	47	LYS	CE-NZ	5.10	1.61	1.49
15	1H	407	G	N9-C8	-5.10	1.34	1.37
15	1H	632	U	C2-N3	-5.10	1.34	1.37
15	14	1619	A	N7-C5	-5.10	1.36	1.39
15	14	1705	A	N7-C5	-5.10	1.36	1.39
15	1H	886	C	C4-N4	-5.10	1.29	1.33
15	1H	1236	U	C4-O4	-5.10	1.19	1.23
15	14	1318	A	C5-C6	-5.10	1.36	1.41
26	16	1	A	N3-C4	5.10	1.38	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	1007	A	N9-C8	-5.10	1.33	1.37
15	14	69	G	N1-C2	-5.10	1.33	1.37
15	14	2087	A	N7-C5	5.10	1.42	1.39
15	1H	727	C	C4'-C3'	-5.09	1.47	1.52
15	1H	2050	C	N1-C6	-5.09	1.34	1.37
15	1H	2600	U	C2-O2	5.09	1.26	1.22
15	14	748	A	C5-C4	-5.09	1.35	1.38
15	1H	2839	A	N3-C4	-5.09	1.31	1.34
15	14	1792	G	C5-C4	-5.09	1.34	1.38
15	14	633	A	N3-C4	-5.09	1.31	1.34
12	Q8	43	GLN	CG-CD	5.09	1.62	1.51
15	1H	485	A	P-OP1	5.09	1.57	1.49
15	1H	680	A	N3-C4	5.09	1.38	1.34
15	1H	2231	G	N7-C5	-5.09	1.36	1.39
15	14	2034	G	C5-C4	-5.09	1.34	1.38
1	13	1591	A	C5-C6	-5.08	1.36	1.41
50	72	135	CYS	CB-SG	-5.08	1.73	1.81
15	14	2701	G	C6-N1	-5.08	1.35	1.39
15	1H	1290	A	C5-C6	-5.08	1.36	1.41
15	14	2002	A	C6-N1	-5.08	1.31	1.35
15	14	2262	A	C6-N1	-5.08	1.31	1.35
15	1H	1928	G	N9-C8	-5.08	1.34	1.37
15	14	1291	A	N9-C4	-5.08	1.34	1.37
32	39	59	TYR	CB-CG	-5.08	1.44	1.51
1	13	2118	U	C4-O4	-5.07	1.19	1.23
15	1H	857	G	N7-C5	-5.07	1.36	1.39
15	1H	878	A	N7-C5	-5.07	1.36	1.39
15	1H	1429	G	N3-C4	-5.07	1.31	1.35
15	1H	2627	C	C4-C5	5.07	1.47	1.43
15	1H	2792	A	N9-C4	-5.07	1.34	1.37
15	14	2000	G	N7-C5	5.07	1.42	1.39
52	W4	37	A	N9-C4	5.07	1.40	1.37
15	1H	1414	A	N7-C5	-5.07	1.36	1.39
15	1H	2325	A	N3-C4	5.07	1.37	1.34
15	1H	717	G	N9-C8	-5.07	1.34	1.37
15	1H	171	A	N3-C4	-5.07	1.31	1.34
15	1H	554	C	N1-C6	-5.06	1.34	1.37
15	1H	1290	A	N9-C8	5.06	1.41	1.37
15	14	1796	A	N9-C8	5.06	1.41	1.37
45	55	2	ARG	CG-CD	5.06	1.64	1.51
1	1G	1400	G	N7-C5	-5.06	1.36	1.39
1	13	1447	G	N9-C8	-5.06	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	2602	A	N7-C5	-5.06	1.36	1.39
15	14	778	G	N9-C4	-5.06	1.33	1.38
1	13	1319	G	C2-N3	5.05	1.36	1.32
15	1H	2078	G	C5-C4	-5.05	1.34	1.38
15	1H	2600	U	N1-C2	5.05	1.43	1.38
15	1H	1322	U	N1-C2	-5.05	1.34	1.38
15	1H	2460	G	N9-C8	-5.05	1.34	1.37
23	21	73	GLU	CB-CG	5.05	1.61	1.52
15	14	977	U	N1-C2	5.05	1.43	1.38
15	14	1337	U	N3-C4	-5.05	1.33	1.38
2	A8	111	GLU	CG-CD	5.05	1.59	1.51
15	1H	794	G	C5-C6	-5.05	1.37	1.42
15	14	111	G	N9-C4	-5.05	1.33	1.38
15	14	1327	A	N7-C5	-5.05	1.36	1.39
15	14	1803	G	N9-C8	-5.05	1.34	1.37
1	13	2025	C	C2-N3	5.04	1.39	1.35
1	1G	1444	A	N9-C4	-5.04	1.34	1.37
15	14	1833	G	N9-C8	-5.04	1.34	1.37
52	X4	17	C	N1-C6	5.04	1.40	1.37
15	1H	2443	G	N7-C5	-5.04	1.36	1.39
15	14	994	G	C6-O6	5.04	1.28	1.24
1	1G	1295	G	N7-C5	-5.04	1.36	1.39
15	1H	2622	G	N3-C4	-5.04	1.31	1.35
15	1H	1094	A	N9-C4	5.04	1.40	1.37
15	1H	1608	A	N9-C4	-5.04	1.34	1.37
15	1H	355	A	N9-C8	5.04	1.41	1.37
15	1H	607	G	C8-N7	-5.04	1.27	1.30
15	1H	2259	U	C4-O4	5.03	1.27	1.23
15	1H	2463	A	C5-C4	-5.03	1.35	1.38
15	1H	496	G	C5-C4	-5.03	1.34	1.38
15	1H	719	A	N9-C4	-5.03	1.34	1.37
15	1H	2627	C	C2-N3	5.03	1.39	1.35
1	13	1323	A	N9-C4	-5.03	1.34	1.37
15	1H	2640	G	C6-N1	-5.03	1.36	1.39
15	14	1996	A	C5-C4	-5.03	1.35	1.38
15	14	232	G	C8-N7	5.02	1.33	1.30
15	14	2082	A	N9-C8	-5.02	1.33	1.37
12	Q8	34	TRP	CG-CD1	5.02	1.43	1.36
1	13	1331	A	N7-C5	-5.02	1.36	1.39
15	1H	867	G	N3-C4	-5.02	1.31	1.35
15	1H	1425	C	C2-O2	-5.02	1.20	1.24
15	14	1303	A	N7-C5	-5.02	1.36	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	13	1395	A	N3-C4	5.01	1.37	1.34
15	1H	1286	A	C5-C4	-5.01	1.35	1.38
15	1H	2244	C	N1-C6	-5.01	1.34	1.37
15	14	181	A	N9-C4	-5.01	1.34	1.37
15	14	2556	A	N3-C4	-5.01	1.31	1.34
15	1H	193	C	N1-C6	-5.01	1.34	1.37
15	1H	2703	U	C2-N3	-5.01	1.34	1.37
15	1H	835	C	N3-C4	-5.01	1.30	1.33
15	1H	1066	C	N1-C6	-5.01	1.34	1.37
15	14	879	G	C2-N3	5.01	1.36	1.32
52	V1	3	C	N1-C6	5.01	1.40	1.37
15	1H	189	A	N9-C8	-5.01	1.33	1.37
15	1H	2267	G	C5-C4	-5.01	1.34	1.38
15	1H	198	C	N1-C6	-5.01	1.34	1.37
13	3I	105	TYR	CD1-CE1	-5.01	1.31	1.39
15	1H	646	G	N9-C8	-5.01	1.34	1.37
15	1H	841	G	N3-C4	-5.01	1.31	1.35
15	1H	2095	G	C2-N2	-5.01	1.29	1.34
15	1H	2006	A	C5-C6	-5.00	1.36	1.41
15	14	2597	G	C8-N7	-5.00	1.27	1.30
15	1H	497	G	C6-N1	-5.00	1.36	1.39

All (10550) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1924	G	N3-C4-N9	-30.57	107.66	126.00
15	1H	1924	G	N3-C4-C5	25.42	141.31	128.60
15	1H	992	A	N1-C6-N6	24.66	133.40	118.60
15	1H	992	A	C6-C5-N7	-24.47	115.17	132.30
15	1H	832	A	C2-N3-C4	-24.00	98.60	110.60
15	1H	73	A	C2-N3-C4	-23.76	98.72	110.60
15	14	1381	G	N3-C4-N9	-23.57	111.86	126.00
15	1H	1381	G	N7-C8-N9	23.22	124.71	113.10
15	1H	725	A	C2-N3-C4	-22.75	99.22	110.60
15	1H	1381	G	C5-N7-C8	-22.34	93.13	104.30
15	1H	2302	A	C2-N3-C4	-22.10	99.55	110.60
15	1H	1381	G	C6-C5-N7	-21.96	117.23	130.40
15	14	1381	G	N3-C4-C5	21.89	139.54	128.60
15	14	1820	A	C5-N7-C8	-21.67	93.07	103.90
15	14	832	A	N1-C6-N6	21.57	131.54	118.60
15	1H	909	U	C4-C5-C6	21.54	132.63	119.70
15	1H	1820	A	C2-N3-C4	-21.53	99.83	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2505	G	C4-C5-N7	21.44	119.38	110.80
15	1H	2361	A	C2-N3-C4	-21.26	99.97	110.60
15	1H	648	A	C2-N3-C4	-21.19	100.00	110.60
15	1H	2505	G	C5-N7-C8	-20.77	93.91	104.30
15	1H	1748	A	C2-N3-C4	-20.69	100.26	110.60
15	1H	1728	G	C2-N3-C4	-20.60	101.60	111.90
15	1H	2445	A	N3-C4-C5	20.55	141.19	126.80
15	14	992	A	N1-C6-N6	20.37	130.82	118.60
15	1H	965	A	C5-N7-C8	-19.94	93.93	103.90
15	14	832	A	C2-N3-C4	-19.92	100.64	110.60
15	14	1924	G	C2-N3-C4	-19.88	101.96	111.90
15	1H	1665	A	C5-N7-C8	-19.51	94.14	103.90
1	13	1421	A	C2-N3-C4	-19.50	100.85	110.60
15	1H	1381	G	C4-C5-N7	19.39	118.56	110.80
15	1H	2445	A	C5-N7-C8	-19.38	94.21	103.90
15	1H	2361	A	N1-C2-N3	19.38	138.99	129.30
15	1H	909	U	C5-C6-N1	-19.34	113.03	122.70
15	14	1924	G	N3-C4-C5	19.31	138.25	128.60
15	1H	1728	G	C5-N7-C8	-19.28	94.66	104.30
15	1H	992	A	C4-C5-C6	19.22	126.61	117.00
15	1H	977	U	C5-C4-O4	19.22	137.43	125.90
15	14	1820	A	N7-C8-N9	19.12	123.36	113.80
15	1H	2445	A	C2-N3-C4	-18.90	101.15	110.60
15	1H	70	A	C2-N3-C4	-18.80	101.20	110.60
15	1H	832	A	C5-N7-C8	-18.63	94.59	103.90
15	14	1820	A	C2-N3-C4	-18.61	101.29	110.60
15	1H	965	A	C4-C5-N7	18.60	120.00	110.70
15	14	1381	G	C2-N3-C4	-18.59	102.60	111.90
15	1H	1477	C	O5'-P-OP1	-18.44	88.58	110.70
15	1H	1975	G	N3-C2-N2	18.34	132.74	119.90
15	14	832	A	C5-N7-C8	-18.32	94.74	103.90
15	1H	823	A	N3-C4-C5	18.32	139.62	126.80
15	1H	70	A	C5-N7-C8	-18.27	94.76	103.90
15	14	1924	G	N3-C2-N2	-18.21	107.15	119.90
15	1H	1728	G	C4-C5-N7	18.21	118.08	110.80
15	1H	1381	G	C8-N9-C4	-18.19	99.12	106.40
15	1H	1820	A	C5-N7-C8	-18.15	94.82	103.90
15	1H	992	A	C2-N3-C4	-18.06	101.57	110.60
15	14	2445	A	C2-N3-C4	-18.01	101.59	110.60
15	14	555	A	C2-N3-C4	-17.96	101.62	110.60
1	13	1421	A	N1-C6-N6	17.93	129.36	118.60
15	14	832	A	C6-C5-N7	-17.76	119.87	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	2302	A	C2-N3-C4	-17.72	101.74	110.60
15	1H	1428	A	N1-C6-N6	17.67	129.20	118.60
15	1H	1924	G	C2-N3-C4	-17.65	103.07	111.90
15	14	992	A	C6-C5-N7	-17.64	119.95	132.30
15	14	832	A	C4-C5-N7	17.60	119.50	110.70
15	1H	2407	A	C5-N7-C8	-17.58	95.11	103.90
15	14	2361	A	C2-N3-C4	-17.57	101.81	110.60
15	14	2886	A	C2-N3-C4	-17.52	101.84	110.60
15	1H	725	A	C5-N7-C8	-17.51	95.14	103.90
15	14	1924	G	N3-C4-N9	-17.38	115.58	126.00
15	14	1333	A	O5'-P-OP2	-17.37	89.86	110.70
15	1H	1748	A	C6-C5-N7	-17.26	120.22	132.30
15	1H	1665	A	N7-C8-N9	17.24	122.42	113.80
15	14	823	A	N3-C4-C5	17.11	138.78	126.80
15	1H	2407	A	C4-C5-N7	17.07	119.24	110.70
15	14	2886	A	C5-N7-C8	-17.06	95.37	103.90
15	14	725	A	C5-N7-C8	-17.04	95.38	103.90
15	1H	725	A	N3-C4-C5	17.04	138.73	126.80
15	1H	1728	G	N3-C4-C5	16.85	137.02	128.60
15	1H	1975	G	C4-C5-N7	16.82	117.53	110.80
15	1H	1975	G	N7-C8-N9	16.70	121.45	113.10
15	1H	1956	U	N3-C2-O2	-16.70	110.51	122.20
15	1H	2445	A	N3-C4-N9	-16.65	114.08	127.40
1	13	1319	G	C6-C5-N7	-16.63	120.42	130.40
15	1H	1975	G	C5-N7-C8	-16.63	95.99	104.30
15	1H	1252	A	C2-N3-C4	-16.56	102.32	110.60
15	1H	823	A	C2-N3-C4	-16.46	102.37	110.60
15	14	2505	G	C5-N7-C8	-16.44	96.08	104.30
15	14	2886	A	N7-C8-N9	16.41	122.01	113.80
15	1H	1748	A	C5-N7-C8	-16.34	95.73	103.90
15	14	2048	G	O5'-P-OP2	-16.32	91.01	105.70
15	1H	1665	A	C8-N9-C4	-16.32	99.27	105.80
15	1H	1314	A	O5'-P-OP2	-16.30	91.03	105.70
15	1H	1748	A	N1-C2-N3	16.30	137.45	129.30
15	14	1665	A	C5-N7-C8	-16.28	95.76	103.90
15	14	537	C	O5'-P-OP2	-16.26	91.06	105.70
15	1H	2445	A	C4-C5-N7	16.12	118.76	110.70
15	1H	1820	A	N7-C8-N9	16.12	121.86	113.80
15	1H	2445	A	N1-C6-N6	16.11	128.27	118.60
15	1H	1191	A	C2-N3-C4	-16.11	102.55	110.60
15	1H	195	G	O5'-P-OP2	-16.05	91.26	105.70
15	1H	992	A	C5-N7-C8	-16.04	95.88	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2505	G	N7-C8-N9	16.00	121.10	113.10
15	1H	555	A	C2-N3-C4	-15.97	102.61	110.60
15	1H	725	A	N3-C4-N9	-15.92	114.66	127.40
15	1H	70	A	N1-C2-N3	15.84	137.22	129.30
15	14	2886	A	N1-C2-N3	15.81	137.21	129.30
15	1H	1069	A	C2-N3-C4	-15.80	102.70	110.60
15	14	1748	A	N1-C6-N6	15.80	128.08	118.60
15	1H	2367	A	O5'-P-OP1	-15.74	91.53	105.70
15	1H	206	A	O5'-P-OP1	-15.68	91.59	105.70
15	1H	70	A	C4-C5-N7	15.67	118.54	110.70
15	1H	1748	A	N1-C6-N6	15.67	128.00	118.60
15	1H	1924	G	N3-C2-N2	-15.67	108.93	119.90
15	1H	965	A	N1-C6-N6	15.63	127.98	118.60
1	13	1421	A	C4-C5-N7	15.62	118.51	110.70
15	1H	1290	A	C2-N3-C4	-15.61	102.79	110.60
15	14	823	A	C5-N7-C8	-15.61	96.09	103.90
15	1H	537	C	O5'-P-OP2	-15.60	91.66	105.70
15	1H	832	A	C6-C5-N7	-15.57	121.40	132.30
15	14	1728	G	C5-N7-C8	-15.57	96.51	104.30
1	13	1421	A	C5-N7-C8	-15.56	96.12	103.90
15	14	725	A	C2-N3-C4	-15.52	102.84	110.60
52	W1	37	A	N1-C2-N3	-15.49	121.55	129.30
15	14	876	U	O5'-P-OP2	-15.45	91.79	105.70
15	1H	832	A	C4-C5-N7	15.39	118.40	110.70
15	1H	832	A	N1-C6-N6	15.34	127.80	118.60
15	1H	2729	A	C5-N7-C8	-15.31	96.24	103.90
15	14	1748	A	C6-C5-N7	-15.31	121.58	132.30
15	14	823	A	C2-N3-C4	-15.25	102.98	110.60
15	14	2445	A	C5-N7-C8	-15.24	96.28	103.90
15	14	1651	U	O5'-P-OP2	15.24	128.99	110.70
15	14	823	A	C4-C5-N7	15.21	118.31	110.70
15	14	1728	G	N7-C8-N9	15.20	120.70	113.10
15	1H	355	A	C2-N3-C4	-15.14	103.03	110.60
15	1H	992	A	N1-C2-N3	15.12	136.86	129.30
15	1H	992	A	C4-C5-N7	15.04	118.22	110.70
26	16	83	G	C4-C5-N7	14.99	116.80	110.80
15	14	1975	G	C4-C5-N7	14.97	116.79	110.80
15	14	1728	G	C8-N9-C4	-14.89	100.44	106.40
15	1H	1748	A	C4-C5-N7	14.89	118.14	110.70
15	1H	2729	A	N1-C6-N6	14.87	127.52	118.60
15	14	2505	G	C4-C5-N7	14.86	116.74	110.80
15	1H	118	U	C5-C6-N1	-14.85	115.28	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1820	A	C4-C5-N7	14.78	118.09	110.70
1	13	1418	U	C5-C4-O4	14.77	134.76	125.90
1	13	2115	A	O5'-P-OP2	-14.76	92.42	105.70
15	14	1748	A	C2-N3-C4	-14.75	103.22	110.60
15	14	1975	G	C5-N7-C8	-14.73	96.93	104.30
15	1H	823	A	N3-C4-N9	-14.72	115.62	127.40
15	1H	909	U	N3-C2-O2	-14.72	111.90	122.20
15	14	905	C	O5'-P-OP1	-14.70	92.47	105.70
15	14	1820	A	C8-N9-C4	-14.70	99.92	105.80
15	14	2445	A	N3-C4-C5	14.68	137.07	126.80
15	1H	204	G	O5'-P-OP2	-14.65	92.52	105.70
15	14	2505	G	N7-C8-N9	14.63	120.42	113.10
15	1H	725	A	C5-C6-N1	-14.56	110.42	117.70
15	14	73	A	C2-N3-C4	-14.56	103.32	110.60
15	14	70	A	C2-N3-C4	-14.55	103.33	110.60
15	14	1445	U	O5'-P-OP1	-14.53	92.62	105.70
15	1H	823	A	C4-C5-N7	14.49	117.94	110.70
15	14	2886	A	C6-C5-N7	-14.48	122.17	132.30
15	1H	977	U	N3-C4-O4	-14.34	109.36	119.40
15	14	2703	U	N3-C2-O2	-14.33	112.17	122.20
15	14	2533	A	N1-C6-N6	14.32	127.19	118.60
15	1H	2416	U	N3-C2-O2	-14.29	112.20	122.20
15	1H	1663	A	C5-N7-C8	-14.28	96.76	103.90
15	14	992	A	C5-N7-C8	-14.27	96.76	103.90
15	14	992	A	C2-N3-C4	-14.27	103.46	110.60
15	1H	73	A	N3-C4-C5	14.26	136.78	126.80
15	1H	1820	A	C8-N9-C4	-14.17	100.13	105.80
15	1H	2703	U	C5-C4-O4	14.16	134.40	125.90
15	1H	70	A	N7-C8-N9	14.14	120.87	113.80
15	1H	1445	U	O5'-P-OP1	-14.14	92.97	105.70
52	V1	76	A	C5-N7-C8	-14.13	96.83	103.90
15	1H	1805	C	C2-N3-C4	-14.12	112.84	119.90
15	1H	139	A	C5-N7-C8	-14.08	96.86	103.90
15	1H	1663	A	C2-N3-C4	-14.07	103.56	110.60
15	14	992	A	C4-C5-N7	14.06	117.73	110.70
15	1H	1965	U	O5'-P-OP2	-14.06	93.05	105.70
15	14	1748	A	C5-N7-C8	-14.02	96.89	103.90
15	1H	2434	U	N3-C4-C5	-14.02	106.19	114.60
15	1H	1975	G	C8-N9-C4	-13.98	100.81	106.40
15	1H	648	A	N1-C2-N3	13.98	136.29	129.30
15	14	965	A	O5'-P-OP1	-13.98	93.12	105.70
15	1H	823	A	C5-N7-C8	-13.96	96.92	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1431	G	C5-C6-O6	-13.96	120.23	128.60
1	13	668	G	O5'-P-OP2	-13.93	93.17	105.70
15	1H	1665	A	C4-C5-N7	13.93	117.66	110.70
15	14	1728	G	C2-N3-C4	-13.86	104.97	111.90
15	1H	1924	G	N9-C4-C5	13.82	110.93	105.40
15	1H	896	U	C5-C6-N1	-13.81	115.79	122.70
15	1H	2703	U	N3-C2-O2	-13.76	112.57	122.20
15	1H	1975	G	N1-C2-N2	-13.74	103.83	116.20
15	14	2729	A	N1-C6-N6	13.74	126.84	118.60
15	1H	555	A	C5-C6-N1	-13.72	110.84	117.70
15	14	1252	A	C2-N3-C4	-13.69	103.75	110.60
15	1H	2599	U	C5-C4-O4	13.68	134.11	125.90
15	1H	70	A	C6-C5-N7	-13.67	122.73	132.30
15	1H	2618	G	O5'-P-OP1	-13.67	93.40	105.70
15	1H	70	A	N1-C6-N6	13.66	126.79	118.60
15	14	1665	A	N7-C8-N9	13.66	120.63	113.80
15	1H	2704	U	N3-C4-O4	-13.62	109.86	119.40
15	14	2612	G	O5'-P-OP2	-13.62	93.44	105.70
1	13	1319	G	C4-C5-N7	13.62	116.25	110.80
15	14	2703	U	C5-C6-N1	-13.61	115.90	122.70
15	14	2703	U	C5-C4-O4	13.59	134.05	125.90
26	16	83	G	C5-N7-C8	-13.58	97.51	104.30
15	14	139	A	N7-C8-N9	13.57	120.59	113.80
15	1H	1987	C	C5-C6-N1	13.57	127.78	121.00
15	1H	1381	G	N1-C6-O6	13.49	127.99	119.90
15	1H	2471	C	C6-N1-C2	13.47	125.69	120.30
15	14	868	A	O5'-P-OP2	-13.46	93.58	105.70
15	14	355	A	C2-N3-C4	-13.46	103.87	110.60
52	X1	37	A	N1-C2-N3	-13.46	122.57	129.30
15	1H	253	C	O5'-P-OP2	-13.45	93.60	105.70
15	1H	2407	A	N1-C6-N6	13.43	126.66	118.60
15	1H	832	A	N3-C4-C5	13.41	136.19	126.80
15	14	725	A	N3-C4-C5	13.40	136.18	126.80
1	13	2122	A	O5'-P-OP1	-13.38	93.66	105.70
15	14	2886	A	C8-N9-C4	-13.34	100.47	105.80
15	1H	1069	A	C5-N7-C8	-13.32	97.24	103.90
15	14	1748	A	C4-C5-N7	13.30	117.35	110.70
15	1H	1381	G	C2-N3-C4	-13.28	105.26	111.90
15	1H	555	A	N3-C4-C5	13.27	136.09	126.80
15	14	725	A	C4-C5-N7	13.25	117.32	110.70
15	1H	1975	G	C6-C5-N7	-13.24	122.46	130.40
15	14	1748	A	N1-C2-N3	13.22	135.91	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	832	A	C5-C6-N1	-13.18	111.11	117.70
15	1H	1398	A	O5'-P-OP1	-13.16	93.86	105.70
15	1H	1258	A	C5-N7-C8	-13.15	97.33	103.90
15	1H	1663	A	C5-C6-N1	-13.12	111.14	117.70
15	14	2729	A	C5-N7-C8	-13.11	97.35	103.90
15	1H	354	G	O5'-P-OP2	-13.07	93.94	105.70
15	1H	2302	A	N3-C4-C5	13.04	135.93	126.80
15	14	1846	A	O5'-P-OP2	-13.00	94.00	105.70
15	1H	1728	G	N7-C8-N9	12.97	119.58	113.10
15	1H	2417	C	C5-C6-N1	12.97	127.48	121.00
15	14	988	A	O5'-P-OP2	-12.95	94.04	105.70
15	14	846	C	O5'-P-OP2	-12.94	94.06	105.70
1	1G	2125	A	C2-N3-C4	-12.93	104.13	110.60
15	1H	1014	C	O5'-P-OP2	-12.93	94.06	105.70
15	14	1653	C	N1-C2-O2	-12.90	111.16	118.90
15	1H	1797	G	O5'-P-OP2	-12.89	94.09	105.70
15	1H	2729	A	C2-N3-C4	-12.89	104.15	110.60
15	14	823	A	N3-C4-N9	-12.89	117.09	127.40
15	1H	891	G	C4-C5-N7	12.88	115.95	110.80
15	1H	725	A	N7-C8-N9	12.84	120.22	113.80
15	1H	73	A	C5-C6-N1	-12.82	111.29	117.70
15	14	736	C	O5'-P-OP1	-12.77	94.21	105.70
15	1H	2742	U	C5-C6-N1	-12.74	116.33	122.70
1	13	1525	G	O5'-P-OP2	-12.74	94.23	105.70
15	1H	2729	A	C4-C5-N7	12.70	117.05	110.70
1	13	1421	A	C6-C5-N7	-12.68	123.42	132.30
15	1H	555	A	N3-C4-N9	-12.68	117.25	127.40
15	1H	2703	U	C5-C6-N1	-12.67	116.36	122.70
15	14	2703	U	N3-C4-O4	-12.67	110.53	119.40
15	1H	2727	U	N3-C2-O2	-12.66	113.34	122.20
52	V1	76	A	N7-C8-N9	12.66	120.13	113.80
15	1H	253	C	N1-C2-O2	12.61	126.47	118.90
15	1H	832	A	N7-C8-N9	12.57	120.08	113.80
15	1H	192	U	N3-C4-C5	12.56	122.14	114.60
15	14	1358	G	O5'-P-OP2	-12.55	94.40	105.70
15	1H	965	A	C2-N3-C4	-12.54	104.33	110.60
15	1H	498	A	O5'-P-OP1	-12.54	94.41	105.70
15	1H	1324	A	N1-C6-N6	12.54	126.12	118.60
15	14	2574	C	O5'-P-OP1	-12.53	94.42	105.70
15	1H	909	U	N1-C2-N3	12.51	122.40	114.90
15	1H	837	A	N9-C4-C5	-12.49	100.81	105.80
15	1H	1191	A	C5-N7-C8	-12.48	97.66	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1191	A	N1-C6-N6	12.47	126.08	118.60
15	1H	2407	A	N3-C4-C5	12.45	135.51	126.80
15	1H	2533	A	C8-N9-C4	-12.45	100.82	105.80
52	W1	37	A	C2-N3-C4	12.45	116.83	110.60
15	1H	137	G	C4-C5-N7	12.42	115.77	110.80
15	1H	2609	C	N3-C2-O2	-12.41	113.21	121.90
15	1H	139	A	N7-C8-N9	12.37	119.98	113.80
15	1H	909	U	C2-N3-C4	-12.35	119.59	127.00
15	1H	2417	C	C6-N1-C2	-12.33	115.37	120.30
15	14	992	A	C5-C6-N6	-12.33	113.84	123.70
15	14	2727	U	C5-C6-N1	-12.32	116.54	122.70
52	X1	60	U	O5'-P-OP2	-12.32	94.61	105.70
15	1H	802	C	N3-C4-N4	-12.31	109.38	118.00
15	14	992	A	N1-C2-N3	12.30	135.45	129.30
15	1H	2601	C	N1-C2-O2	-12.30	111.52	118.90
15	1H	73	A	N3-C4-N9	-12.29	117.57	127.40
15	14	832	A	C5-C6-N6	-12.29	113.87	123.70
15	14	1871	C	O5'-P-OP1	-12.29	94.64	105.70
15	1H	1616	A	O5'-P-OP2	-12.27	94.65	105.70
15	1H	1258	A	C2-N3-C4	-12.27	104.47	110.60
15	14	2703	U	N1-C2-N3	12.25	122.25	114.90
1	13	2125	A	C5-N7-C8	-12.25	97.78	103.90
15	14	2533	A	C2-N3-C4	-12.25	104.47	110.60
15	14	139	A	C5-N7-C8	-12.25	97.78	103.90
15	14	1665	A	C4-C5-N7	12.24	116.82	110.70
15	14	2014	G	C5-C6-O6	-12.24	121.25	128.60
15	14	2231	G	O5'-P-OP2	-12.24	94.69	105.70
15	1H	126	C	C6-N1-C2	12.23	125.19	120.30
15	1H	1359	G	O5'-P-OP1	-12.22	94.70	105.70
15	1H	118	U	C4-C5-C6	12.20	127.02	119.70
15	14	2606	C	N1-C2-O2	-12.20	111.58	118.90
15	1H	725	A	C4-C5-N7	12.19	116.80	110.70
15	1H	2505	G	N3-C2-N2	12.19	128.43	119.90
15	14	2886	A	N1-C6-N6	12.19	125.91	118.60
15	1H	842	A	O5'-P-OP2	-12.18	94.74	105.70
15	14	2302	A	N1-C6-N6	12.18	125.91	118.60
15	1H	2703	U	N3-C4-O4	-12.17	110.88	119.40
15	1H	1545	A	C5-N7-C8	-12.14	97.83	103.90
15	1H	786	C	C6-N1-C2	12.14	125.16	120.30
15	1H	819	G	N9-C4-C5	-12.13	100.55	105.40
15	1H	2505	G	C6-C5-N7	-12.12	123.13	130.40
15	14	2103	C	N3-C4-C5	-12.11	117.06	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1924	G	N1-C6-O6	12.11	127.17	119.90
15	1H	474	G	N1-C6-O6	12.10	127.16	119.90
1	13	1854	A	C2-N3-C4	-12.10	104.55	110.60
52	X4	60	U	O5'-P-OP2	-12.09	94.82	105.70
1	13	1421	A	N3-C4-C5	12.05	135.23	126.80
15	1H	894	G	C4-C5-N7	12.04	115.62	110.80
15	1H	1798	G	C5-C6-O6	12.04	135.82	128.60
15	1H	539	G	O4'-C1'-N9	12.03	117.82	108.20
15	14	1850	G	O5'-P-OP1	-12.01	94.89	105.70
15	1H	1728	G	C6-C5-N7	-12.01	123.20	130.40
15	1H	518	G	O5'-P-OP1	-11.98	94.92	105.70
15	1H	2361	A	O4'-C1'-N9	11.96	117.77	108.20
15	1H	639	U	N3-C4-O4	-11.95	111.04	119.40
15	1H	1395	G	N1-C6-O6	-11.94	112.73	119.90
1	13	2125	A	C4-C5-N7	11.94	116.67	110.70
15	1H	1728	G	N3-C4-N9	-11.91	118.85	126.00
15	14	2263	C	N1-C2-O2	11.91	126.04	118.90
15	14	613	U	O5'-P-OP2	-11.89	95.00	105.70
15	1H	34	C	O5'-P-OP1	-11.88	95.01	105.70
15	1H	2007	C	O5'-P-OP2	-11.88	95.01	105.70
15	14	1663	A	C8-N9-C4	-11.88	101.05	105.80
15	14	1820	A	C5-C6-N1	-11.87	111.77	117.70
15	14	2322	G	O4'-C1'-N9	11.86	117.69	108.20
15	14	980	A	C5-N7-C8	-11.86	97.97	103.90
15	14	1608	A	C2-N3-C4	-11.84	104.68	110.60
15	1H	965	A	N7-C8-N9	11.83	119.71	113.80
15	1H	992	A	C5-C6-N6	-11.82	114.25	123.70
1	1G	995	G	O5'-P-OP2	-11.81	95.08	105.70
15	14	1924	G	C8-N9-C1'	11.80	142.34	127.00
1	13	907	G	C5-N7-C8	-11.80	98.40	104.30
15	14	1728	G	N3-C4-N9	-11.77	118.94	126.00
52	X1	37	A	N1-C6-N6	11.77	125.66	118.60
1	13	907	G	C4-C5-N7	11.72	115.49	110.80
15	1H	2104	U	N3-C2-O2	-11.70	114.01	122.20
15	1H	2454	A	O5'-P-OP2	-11.70	95.17	105.70
15	14	1348	G	O5'-P-OP1	-11.70	95.17	105.70
1	1G	1568	G	N1-C6-O6	11.69	126.92	119.90
15	14	823	A	N1-C6-N6	11.69	125.61	118.60
15	14	2087	A	C2-N3-C4	11.68	116.44	110.60
15	14	2717	U	O4'-C1'-N1	11.67	117.53	108.20
15	14	1390	U	O5'-P-OP1	-11.65	95.21	105.70
15	14	2886	A	C4-C5-N7	11.65	116.52	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1361	U	O5'-P-OP1	-11.64	95.22	105.70
15	14	1820	A	N3-C4-C5	11.63	134.94	126.80
15	1H	894	G	N3-C2-N2	11.62	128.04	119.90
15	1H	70	A	C5-C6-N6	-11.62	114.41	123.70
15	14	1665	A	C6-C5-N7	-11.62	124.17	132.30
15	14	2445	A	C4-C5-N7	11.61	116.50	110.70
15	1H	2533	A	N7-C8-N9	11.61	119.60	113.80
15	1H	832	A	N3-C4-N9	-11.60	118.12	127.40
15	14	1545	A	N7-C8-N9	11.60	119.60	113.80
52	X1	76	A	C8-N9-C4	11.60	110.44	105.80
15	14	807	C	O5'-P-OP2	-11.59	95.27	105.70
15	1H	1003	G	N1-C6-O6	11.59	126.85	119.90
15	1H	2361	A	C5-N7-C8	-11.58	98.11	103.90
15	1H	876	U	O5'-P-OP2	-11.57	95.28	105.70
15	1H	1870	C	N1-C2-O2	11.57	125.84	118.90
15	14	555	A	N1-C2-N3	11.57	135.09	129.30
15	1H	1987	C	C6-N1-C2	-11.57	115.67	120.30
52	X4	44	G	C5-C6-O6	-11.57	121.66	128.60
15	14	793	G	O5'-P-OP2	-11.56	95.30	105.70
15	14	1931	G	O5'-P-OP1	-11.56	95.30	105.70
15	14	2729	A	C2-N3-C4	-11.55	104.82	110.60
15	1H	1805	C	C5-C6-N1	-11.54	115.23	121.00
15	1H	346	G	C5-C6-O6	-11.54	121.68	128.60
15	14	1665	A	C2-N3-C4	-11.53	104.83	110.60
1	13	1908	U	N3-C2-O2	-11.53	114.13	122.20
15	1H	1670	U	O5'-P-OP1	-11.52	95.33	105.70
15	1H	639	U	C5-C4-O4	11.52	132.81	125.90
15	14	1665	A	C8-N9-C4	-11.52	101.19	105.80
15	1H	84	G	O5'-P-OP2	-11.51	95.34	105.70
15	14	195	G	C8-N9-C4	11.51	111.00	106.40
15	1H	118	U	C2-N3-C4	-11.51	120.09	127.00
15	1H	1545	A	N7-C8-N9	11.49	119.55	113.80
15	1H	1798	G	N1-C6-O6	-11.49	113.01	119.90
15	1H	2533	A	C5-N7-C8	-11.48	98.16	103.90
15	14	2088	C	O5'-P-OP2	-11.48	95.37	105.70
15	14	2837	C	N1-C2-O2	-11.47	112.02	118.90
15	1H	832	A	C8-N9-C4	-11.46	101.21	105.80
15	14	139	A	C8-N9-C4	-11.46	101.22	105.80
15	1H	235	G	C5-C6-O6	-11.46	121.72	128.60
15	1H	1806	G	N1-C6-O6	-11.44	113.03	119.90
15	14	1381	G	C5-N7-C8	-11.43	98.58	104.30
15	1H	1820	A	C4-C5-N7	11.42	116.41	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	965	A	C6-C5-N7	-11.42	124.30	132.30
15	14	725	A	N7-C8-N9	11.42	119.51	113.80
15	1H	355	A	C5-N7-C8	-11.42	98.19	103.90
15	1H	992	A	N7-C8-N9	11.42	119.51	113.80
15	1H	235	G	N1-C6-O6	11.40	126.74	119.90
15	1H	1748	A	N7-C8-N9	11.40	119.50	113.80
15	1H	594	U	C2-N3-C4	-11.40	120.16	127.00
15	1H	1033	C	N3-C4-C5	11.40	126.46	121.90
15	1H	1069	A	N7-C8-N9	11.40	119.50	113.80
15	1H	1924	G	C8-N9-C1'	11.40	141.82	127.00
15	1H	725	A	C8-N9-C4	-11.40	101.24	105.80
15	1H	2597	G	N1-C6-O6	-11.40	113.06	119.90
15	1H	1873	G	N9-C4-C5	-11.39	100.84	105.40
15	1H	2302	A	N1-C6-N6	11.38	125.43	118.60
15	1H	118	U	N1-C2-N3	11.38	121.72	114.90
15	1H	1877	C	N3-C4-C5	11.36	126.44	121.90
15	1H	139	A	C4-C5-N7	11.35	116.38	110.70
15	14	991	G	O5'-P-OP2	-11.35	95.49	105.70
15	1H	2053	U	O5'-P-OP1	-11.34	95.50	105.70
15	1H	1290	A	C5-N7-C8	-11.32	98.24	103.90
15	14	2445	A	N3-C4-N9	-11.32	118.34	127.40
15	1H	1648	C	N3-C2-O2	-11.31	113.98	121.90
15	14	2289	A	O5'-P-OP2	-11.31	95.52	105.70
15	1H	2361	A	C8-N9-C4	-11.30	101.28	105.80
15	1H	825	G	C6-N1-C2	-11.30	118.32	125.10
15	14	1059	G	O4'-C1'-N9	11.29	117.23	108.20
15	1H	1486	C	C6-N1-C2	-11.29	115.78	120.30
1	13	1319	G	C5-N7-C8	-11.29	98.65	104.30
15	1H	751	G	O5'-P-OP2	-11.29	95.54	105.70
1	13	996	C	O5'-P-OP2	-11.29	95.54	105.70
15	14	1665	A	N1-C6-N6	11.28	125.37	118.60
15	14	2445	A	N1-C6-N6	11.28	125.37	118.60
15	1H	2434	U	C6-N1-C2	-11.28	114.23	121.00
15	1H	675	G	O5'-P-OP2	-11.26	95.56	105.70
15	14	70	A	C5-N7-C8	-11.25	98.27	103.90
15	14	2098	C	N1-C2-O2	-11.25	112.15	118.90
15	1H	2599	U	N3-C4-O4	-11.24	111.53	119.40
15	1H	419	G	N1-C6-O6	11.24	126.64	119.90
15	1H	1820	A	N1-C2-N3	11.23	134.91	129.30
15	14	2729	A	C6-C5-N7	-11.23	124.44	132.30
1	13	1449	U	O5'-P-OP1	-11.22	95.60	105.70
15	1H	1428	A	C5-C6-N6	-11.22	114.72	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1258	A	N7-C8-N9	11.22	119.41	113.80
15	1H	1615	C	C6-N1-C2	11.20	124.78	120.30
15	1H	1448	C	C6-N1-C2	-11.19	115.83	120.30
52	X4	26	A	C8-N9-C4	11.19	110.27	105.80
15	14	832	A	N7-C8-N9	11.18	119.39	113.80
15	14	648	A	C2-N3-C4	-11.18	105.01	110.60
1	1G	849	A	C8-N9-C4	-11.17	101.33	105.80
15	1H	2483	G	O4'-C1'-N9	11.16	117.13	108.20
15	14	600	A	O5'-P-OP1	-11.15	95.66	105.70
15	1H	2614	G	N1-C6-O6	-11.15	113.21	119.90
15	1H	139	A	C2-N3-C4	-11.15	105.03	110.60
15	1H	2407	A	N7-C8-N9	11.15	119.37	113.80
15	1H	2559	G	C5-C6-O6	-11.15	121.91	128.60
15	1H	1975	G	C4-N9-C1'	11.13	140.98	126.50
15	14	2453	U	O5'-P-OP2	-11.13	95.68	105.70
15	1H	2089	C	C5-C4-N4	11.11	127.97	120.20
15	1H	1290	A	N3-C4-C5	11.10	134.57	126.80
1	13	1319	G	C4-N9-C1'	11.10	140.93	126.50
15	14	1694	C	N1-C2-O2	11.10	125.56	118.90
15	14	980	A	N1-C6-N6	11.09	125.26	118.60
15	1H	2361	A	N7-C8-N9	11.08	119.34	113.80
15	1H	1273	C	C6-N1-C2	11.08	124.73	120.30
15	1H	725	A	C6-N1-C2	11.08	125.25	118.60
15	14	1429	G	C5-C6-O6	-11.06	121.96	128.60
15	1H	1656	C	C5-C4-N4	-11.06	112.46	120.20
15	1H	1924	G	C8-N9-C4	-11.06	101.98	106.40
15	1H	839	C	N1-C2-O2	-11.06	112.27	118.90
1	13	2125	A	C2-N3-C4	-11.05	105.08	110.60
15	1H	557	G	C2-N3-C4	-11.05	106.38	111.90
15	1H	1577	A	N7-C8-N9	11.04	119.32	113.80
15	14	1525	G	C8-N9-C4	-11.04	101.98	106.40
15	14	1437	G	O5'-P-OP2	-11.04	95.77	105.70
15	14	2717	U	O5'-P-OP2	-11.04	95.77	105.70
15	1H	137	G	C5-C6-O6	-11.02	121.99	128.60
15	1H	803	C	C2-N3-C4	-11.00	114.40	119.90
15	14	1862	G	C5-C6-O6	11.00	135.20	128.60
15	1H	1806	G	C8-N9-C4	10.99	110.80	106.40
15	14	555	A	C5-N7-C8	-10.99	98.40	103.90
15	14	845	C	N3-C4-C5	10.99	126.30	121.90
15	14	659	A	O5'-P-OP2	10.98	123.87	110.70
15	1H	894	G	N9-C4-C5	-10.96	101.02	105.40
15	1H	2048	G	O5'-P-OP1	-10.96	95.84	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	907	G	N7-C8-N9	10.94	118.57	113.10
1	1G	2143	G	O5'-P-OP2	-10.94	95.86	105.70
15	1H	1252	A	O4'-C1'-N9	10.93	116.94	108.20
1	13	2147	C	N3-C4-C5	10.92	126.27	121.90
15	1H	993	G	OP1-P-OP2	-10.92	103.22	119.60
15	14	1924	G	N1-C2-N3	10.91	130.45	123.90
15	1H	1577	A	C8-N9-C4	-10.90	101.44	105.80
15	1H	1357	A	C8-N9-C4	-10.89	101.44	105.80
15	1H	1805	C	N3-C4-C5	10.88	126.25	121.90
15	14	2014	G	N3-C2-N2	-10.88	112.29	119.90
15	14	2533	A	C6-C5-N7	-10.88	124.69	132.30
15	14	725	A	N3-C4-N9	-10.87	118.71	127.40
15	1H	1806	G	C5-N7-C8	10.85	109.73	104.30
15	1H	2302	A	C5-C6-N1	-10.85	112.27	117.70
15	1H	2653	G	C5-C6-N1	10.84	116.92	111.50
15	14	557	G	C4-C5-N7	10.84	115.14	110.80
15	1H	1381	G	C4-N9-C1'	10.83	140.58	126.50
15	1H	1191	A	C5-C6-N1	-10.82	112.29	117.70
15	1H	126	C	N3-C4-C5	10.81	126.22	121.90
15	14	1663	A	N7-C8-N9	10.80	119.20	113.80
15	1H	823	A	C4-C5-C6	-10.78	111.61	117.00
15	14	1391	A	C2-N3-C4	-10.78	105.21	110.60
15	1H	2302	A	O5'-P-OP2	-10.77	96.01	105.70
15	1H	1956	U	N1-C2-N3	10.77	121.36	114.90
15	1H	1651	U	C2-N3-C4	-10.76	120.54	127.00
15	14	1391	A	N1-C2-N3	10.76	134.68	129.30
15	14	1651	U	O5'-P-OP1	-10.76	96.02	105.70
15	1H	2630	U	O5'-P-OP2	-10.75	96.02	105.70
15	1H	1663	A	N3-C4-C5	10.75	134.32	126.80
15	1H	2462	G	C5-C6-O6	-10.75	122.15	128.60
1	13	971	C	N1-C2-O2	10.74	125.34	118.90
15	14	355	A	N1-C2-N3	10.74	134.67	129.30
15	1H	2361	A	C5-C6-N1	-10.74	112.33	117.70
15	1H	45	C	O5'-P-OP2	-10.72	96.05	105.70
15	1H	965	A	N3-C4-C5	10.72	134.30	126.80
15	1H	740	C	C6-N1-C2	10.71	124.58	120.30
15	14	595	G	C5-C6-O6	10.71	135.03	128.60
15	1H	992	A	C5-C6-N1	-10.69	112.36	117.70
15	14	1358	G	O5'-P-OP1	10.69	123.52	110.70
15	14	1545	A	C5-N7-C8	-10.69	98.56	103.90
1	13	1598	A	N1-C6-N6	10.68	125.01	118.60
15	14	1659	A	N9-C4-C5	-10.68	101.53	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1924	G	C4-N9-C1'	-10.68	112.62	126.50
15	14	1975	G	N3-C4-C5	10.67	133.94	128.60
15	1H	1715	A	O5'-P-OP1	-10.66	96.10	105.70
15	1H	673	A	C8-N9-C4	-10.66	101.54	105.80
15	14	1928	G	N3-C2-N2	-10.65	112.44	119.90
15	14	648	A	C5-N7-C8	-10.65	98.58	103.90
15	14	1069	A	C2-N3-C4	-10.65	105.27	110.60
15	1H	2007	C	C6-N1-C2	-10.65	116.04	120.30
15	1H	140	A	C5-N7-C8	-10.64	98.58	103.90
15	1H	725	A	O4'-C1'-N9	10.64	116.72	108.20
15	14	2090	C	N3-C2-O2	-10.64	114.45	121.90
15	1H	891	G	C5-N7-C8	-10.64	98.98	104.30
15	1H	902	G	O5'-P-OP2	-10.64	96.12	105.70
15	1H	1545	A	C4-C5-N7	10.64	116.02	110.70
15	14	2440	A	N1-C6-N6	-10.64	112.22	118.60
15	14	992	A	C4-C5-C6	10.64	122.32	117.00
15	1H	1609	G	C6-C5-N7	-10.63	124.02	130.40
2	65	110	LEU	CA-CB-CG	10.63	139.74	115.30
15	1H	891	G	C5-C6-O6	-10.63	122.22	128.60
52	V1	72	C	C6-N1-C2	10.62	124.55	120.30
15	1H	179	G	C5-C6-O6	-10.62	122.23	128.60
1	1G	2125	A	N1-C2-N3	10.60	134.60	129.30
15	14	2612	G	O5'-P-OP1	10.60	123.42	110.70
15	1H	1924	G	C5-C6-O6	10.60	134.96	128.60
1	13	1319	G	N7-C8-N9	10.60	118.40	113.10
15	1H	819	G	C4-C5-N7	10.59	115.04	110.80
15	1H	729	G	C5-C6-O6	-10.59	122.25	128.60
15	1H	2533	A	C6-C5-N7	-10.59	124.89	132.30
15	1H	474	G	C5-C6-O6	-10.59	122.25	128.60
1	1G	849	A	N7-C8-N9	10.58	119.09	113.80
15	1H	35	G	O5'-P-OP2	-10.58	96.18	105.70
26	16	32	C	O5'-P-OP1	-10.57	96.18	105.70
15	14	481	C	C6-N1-C2	10.57	124.53	120.30
15	1H	132	C	N3-C4-C5	10.57	126.13	121.90
15	1H	1614	C	N3-C4-N4	-10.57	110.60	118.00
15	1H	2795	U	N3-C4-O4	-10.57	112.00	119.40
15	1H	992	A	O4'-C1'-N9	10.56	116.65	108.20
15	1H	594	U	N1-C2-O2	-10.55	115.41	122.80
15	14	2302	A	N3-C4-C5	10.55	134.19	126.80
15	1H	2407	A	C5-C6-N1	-10.54	112.43	117.70
15	1H	2445	A	C5-C6-N1	-10.54	112.43	117.70
15	1H	1818	A	O5'-P-OP2	10.53	123.34	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1361	U	C5-C6-N1	-10.53	117.44	122.70
15	14	2461	G	C5-C6-O6	10.52	134.91	128.60
15	14	1975	G	N7-C8-N9	10.52	118.36	113.10
15	1H	1069	A	C5-C6-N1	-10.52	112.44	117.70
15	14	1957	A	O5'-P-OP1	-10.52	96.23	105.70
15	1H	2460	G	C5-C6-O6	10.51	134.90	128.60
15	14	2696	C	C5-C4-N4	10.51	127.55	120.20
15	1H	1252	A	O5'-P-OP2	-10.50	96.25	105.70
15	1H	139	A	C8-N9-C4	-10.49	101.60	105.80
15	1H	639	U	N3-C2-O2	-10.49	114.86	122.20
26	1J	74	G	C8-N9-C4	10.49	110.59	106.40
15	1H	2591	G	N3-C2-N2	-10.48	112.56	119.90
1	13	2032	C	C4-C5-C6	-10.48	112.16	117.40
15	1H	648	A	C5-N7-C8	-10.48	98.66	103.90
15	1H	1258	A	C8-N9-C4	-10.47	101.61	105.80
15	14	823	A	C6-N1-C2	10.46	124.88	118.60
15	14	1258	A	C2-N3-C4	-10.46	105.37	110.60
26	16	83	G	N7-C8-N9	10.44	118.32	113.10
15	1H	886	C	O5'-P-OP1	-10.44	96.30	105.70
15	1H	1697	G	O5'-P-OP1	-10.44	96.31	105.70
15	14	2458	C	C4-C5-C6	10.44	122.62	117.40
26	16	118	G	C5-C6-O6	-10.44	122.34	128.60
15	1H	1820	A	N3-C4-C5	10.43	134.10	126.80
1	13	1825	G	O5'-P-OP1	-10.43	96.31	105.70
15	1H	2281	A	C6-N1-C2	-10.43	112.34	118.60
15	1H	1964	U	O5'-P-OP1	-10.43	96.32	105.70
15	1H	2729	A	N7-C8-N9	10.43	119.01	113.80
15	14	740	C	C5-C6-N1	-10.43	115.79	121.00
15	1H	825	G	N1-C2-N3	10.41	130.15	123.90
15	1H	1924	G	C5-C6-N1	-10.41	106.29	111.50
15	1H	2361	A	C6-C5-N7	-10.41	125.01	132.30
15	1H	2714	C	C6-N1-C2	10.41	124.47	120.30
15	1H	1592	A	C2-N3-C4	-10.41	105.39	110.60
15	1H	2087	A	N7-C8-N9	-10.40	108.60	113.80
15	1H	2247	U	C5-C6-N1	-10.40	117.50	122.70
15	14	980	A	C4-C5-N7	10.40	115.90	110.70
15	1H	1697	G	O5'-P-OP2	10.40	123.18	110.70
15	1H	2559	G	N1-C6-O6	10.40	126.14	119.90
15	14	1999	C	N3-C4-C5	10.40	126.06	121.90
1	13	1854	A	C5-N7-C8	-10.39	98.70	103.90
15	1H	2703	U	N1-C2-N3	10.39	121.14	114.90
15	1H	737	U	N1-C2-N3	10.38	121.13	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1577	A	C5-N7-C8	-10.38	98.71	103.90
15	14	790	G	O5'-P-OP1	10.38	123.16	110.70
15	14	2795	U	C5-C6-N1	-10.38	117.51	122.70
15	14	858	G	C5-C6-N1	10.36	116.68	111.50
15	14	1924	G	C5-C6-O6	-10.37	122.38	128.60
15	1H	1003	G	C5-C6-O6	-10.36	122.39	128.60
15	14	1608	A	N1-C2-N3	10.36	134.48	129.30
52	X4	44	G	C4-C5-N7	10.36	114.94	110.80
15	14	780	C	C2-N3-C4	-10.35	114.72	119.90
15	1H	36	G	O5'-P-OP2	-10.35	96.39	105.70
15	1H	555	A	C6-N1-C2	10.34	124.80	118.60
15	14	2444	G	O5'-P-OP1	10.34	123.11	110.70
15	1H	2407	A	C2-N3-C4	-10.34	105.43	110.60
15	1H	2505	G	C8-N9-C4	-10.33	102.27	106.40
15	1H	2302	A	C5-N7-C8	-10.32	98.74	103.90
15	1H	399	A	O5'-P-OP2	-10.32	96.41	105.70
15	1H	1473	G	O5'-P-OP2	-10.32	96.41	105.70
15	14	2035	G	N1-C6-O6	10.31	126.09	119.90
15	14	2438	U	C5-C6-N1	-10.31	117.54	122.70
15	1H	139	A	N1-C6-N6	10.31	124.79	118.60
1	13	1436	A	C8-N9-C4	-10.31	101.68	105.80
15	1H	2098	C	N1-C2-O2	-10.31	112.72	118.90
1	13	1429	G	N1-C6-O6	10.31	126.08	119.90
15	1H	1873	G	C8-N9-C4	10.29	110.52	106.40
15	1H	2518	A	C2-N3-C4	10.29	115.75	110.60
15	14	2090	C	N1-C2-O2	10.29	125.07	118.90
15	1H	1592	A	C5-C6-N1	-10.28	112.56	117.70
15	14	495	G	O5'-P-OP2	-10.28	96.45	105.70
15	1H	1623	G	C5-C6-O6	-10.28	122.43	128.60
15	14	2117	U	N1-C2-N3	10.28	121.07	114.90
52	X1	2	C	N3-C4-C5	10.27	126.01	121.90
15	1H	2290	C	O5'-P-OP2	-10.27	96.46	105.70
15	1H	1545	A	C8-N9-C4	-10.25	101.70	105.80
15	14	2727	U	C2-N3-C4	-10.25	120.85	127.00
15	1H	732	C	N3-C4-C5	10.25	126.00	121.90
26	16	43	U	C5-C6-N1	-10.24	117.58	122.70
15	1H	73	A	N1-C2-N3	10.24	134.42	129.30
15	1H	2275	C	C6-N1-C2	10.23	124.39	120.30
15	1H	2767	G	N3-C4-C5	10.22	133.71	128.60
15	1H	46	C	C2-N3-C4	-10.22	114.79	119.90
15	1H	1358	G	O5'-P-OP1	10.22	122.96	110.70
15	1H	850	G	C5-C6-O6	10.21	134.73	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1820	A	N3-C4-N9	-10.21	119.23	127.40
15	1H	2434	U	C4-C5-C6	10.20	125.82	119.70
15	1H	1798	G	C8-N9-C4	-10.19	102.32	106.40
15	1H	1820	A	C6-C5-N7	-10.19	125.17	132.30
15	1H	416	G	O5'-P-OP2	-10.18	96.53	105.70
15	14	2371	C	N1-C2-O2	-10.18	112.79	118.90
52	X1	32	U	O5'-P-OP1	-10.18	96.54	105.70
1	13	907	G	C8-N9-C4	-10.17	102.33	106.40
15	1H	722	C	C5-C4-N4	-10.17	113.08	120.20
15	1H	34	C	C5-C6-N1	10.17	126.08	121.00
15	14	832	A	N3-C4-C5	10.16	133.92	126.80
15	14	1577	A	N7-C8-N9	10.16	118.88	113.80
15	1H	1712	C	N1-C2-O2	-10.15	112.81	118.90
15	1H	2599	U	N3-C2-O2	-10.15	115.10	122.20
15	1H	1725	C	N3-C4-C5	-10.14	117.84	121.90
15	1H	1806	G	N7-C8-N9	-10.14	108.03	113.10
1	13	2125	A	N1-C6-N6	10.11	124.67	118.60
15	1H	405	C	N1-C2-O2	-10.11	112.83	118.90
1	13	2036	A	O5'-P-OP2	-10.11	96.60	105.70
15	1H	419	G	C4-C5-N7	10.10	114.84	110.80
15	1H	1258	A	C6-C5-N7	-10.10	125.23	132.30
15	1H	1663	A	N1-C6-N6	10.10	124.66	118.60
15	1H	2453	U	C5-C6-N1	-10.10	117.65	122.70
15	1H	2522	C	N3-C2-O2	-10.10	114.83	121.90
15	14	1211	G	O5'-P-OP1	-10.09	96.62	105.70
15	14	1381	G	C5-C6-O6	10.09	134.65	128.60
15	1H	1728	G	N1-C6-O6	10.09	125.95	119.90
15	14	2729	A	C4-C5-N7	10.08	115.74	110.70
1	13	1207	C	N3-C4-C5	-10.08	117.87	121.90
15	14	2795	U	N3-C2-O2	-10.08	115.15	122.20
15	1H	2339	C	C6-N1-C2	10.07	124.33	120.30
1	13	1433	U	O5'-P-OP2	-10.07	96.64	105.70
15	14	1328	G	O5'-P-OP2	-10.07	96.64	105.70
26	16	46	G	C4-N9-C1'	-10.07	113.41	126.50
15	1H	1869	G	C8-N9-C4	-10.06	102.38	106.40
15	14	868	A	O5'-P-OP1	10.06	122.77	110.70
15	14	2361	A	N3-C4-C5	10.05	133.84	126.80
15	1H	1924	G	N1-C2-N2	10.05	125.25	116.20
15	14	1820	A	C6-C5-N7	-10.05	125.26	132.30
15	14	2361	A	O4'-C1'-N9	10.05	116.24	108.20
1	1G	1441	C	P-O3'-C3'	10.04	131.75	119.70
15	14	832	A	N1-C2-N3	10.04	134.32	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	832	A	N1-C2-N3	10.03	134.32	129.30
15	1H	1824	C	C2-N3-C4	-10.03	114.89	119.90
15	1H	1801	C	O5'-P-OP1	-10.03	96.68	105.70
15	14	204	G	O5'-P-OP2	-10.02	96.68	105.70
15	1H	1257	G	N1-C6-O6	10.02	125.91	119.90
15	14	1663	A	C5-N7-C8	-10.02	98.89	103.90
15	14	2361	A	N1-C2-N3	10.02	134.31	129.30
15	1H	557	G	C4-C5-N7	10.00	114.80	110.80
15	1H	1381	G	N1-C2-N3	10.00	129.90	123.90
15	1H	2590	C	C6-N1-C2	10.00	124.30	120.30
15	1H	192	U	C6-N1-C2	9.99	127.00	121.00
15	1H	876	U	C5-C6-N1	-9.99	117.70	122.70
15	1H	1975	G	O4'-C1'-N9	9.99	116.19	108.20
15	14	2703	U	C2-N3-C4	-9.99	121.01	127.00
15	1H	2361	A	N1-C6-N6	9.98	124.59	118.60
26	1J	83	G	N7-C8-N9	9.98	118.09	113.10
15	1H	1181	U	N1-C2-O2	-9.98	115.81	122.80
15	1H	1205	A	O5'-P-OP2	-9.98	96.72	105.70
15	14	1413	G	C8-N9-C4	9.98	110.39	106.40
26	16	83	G	C6-C5-N7	-9.98	124.41	130.40
15	1H	1841	G	C5-C6-O6	-9.97	122.61	128.60
15	1H	2729	A	N3-C4-C5	9.97	133.78	126.80
14	3E	12	CYS	CA-CB-SG	9.97	131.94	114.00
15	1H	1258	A	C4-C5-N7	9.96	115.68	110.70
15	1H	419	G	C6-C5-N7	-9.96	124.42	130.40
15	1H	483	C	C6-N1-C2	9.96	124.28	120.30
15	14	1252	A	C5-N7-C8	-9.96	98.92	103.90
15	14	1860	G	C5-N7-C8	9.95	109.28	104.30
1	1G	1052	A	O5'-P-OP2	-9.95	96.74	105.70
15	14	2596	G	O5'-P-OP2	-9.95	96.75	105.70
15	14	1930	C	O5'-P-OP2	-9.94	96.76	105.70
15	14	2447	A	N1-C6-N6	9.92	124.55	118.60
15	1H	992	A	C4-N9-C1'	9.91	144.14	126.30
15	1H	204	G	O4'-C1'-N9	9.91	116.12	108.20
15	1H	594	U	N1-C2-N3	9.90	120.84	114.90
15	1H	355	A	C4-C5-N7	9.90	115.65	110.70
15	1H	838	A	O5'-P-OP1	-9.90	96.79	105.70
15	1H	1257	G	C5-C6-O6	-9.90	122.66	128.60
1	13	1440	C	N3-C4-C5	9.90	125.86	121.90
15	1H	1609	G	C4-C5-N7	9.90	114.76	110.80
15	1H	1399	C	O5'-P-OP1	-9.90	96.79	105.70
15	1H	1181	U	N3-C2-O2	9.90	129.13	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2567	U	N1-C2-O2	-9.90	115.87	122.80
15	14	730	G	C5-C6-O6	-9.89	122.67	128.60
15	14	1702	A	O5'-P-OP1	-9.89	96.80	105.70
15	1H	2512	A	O5'-P-OP2	-9.89	96.80	105.70
15	14	540	A	N1-C6-N6	9.89	124.53	118.60
1	13	1421	A	C5-C6-N1	-9.88	112.76	117.70
15	14	2557	A	C6-C5-N7	-9.88	125.38	132.30
1	13	1151	C	O5'-P-OP2	-9.88	96.81	105.70
15	1H	648	A	N3-C4-C5	9.88	133.72	126.80
15	1H	1925	A	O5'-P-OP2	-9.88	96.81	105.70
15	14	1820	A	N3-C4-N9	-9.87	119.50	127.40
15	1H	884	A	N9-C4-C5	9.87	109.75	105.80
15	1H	1376	C	C6-N1-C2	-9.87	116.35	120.30
15	1H	2045	A	C5-C6-N6	-9.86	115.81	123.70
15	1H	1373	G	N3-C2-N2	-9.86	113.00	119.90
15	1H	2107	A	C8-N9-C4	9.86	109.74	105.80
15	1H	555	A	C5-N7-C8	-9.85	98.97	103.90
15	1H	2704	U	C5-C4-O4	9.85	131.81	125.90
15	14	1723	U	O5'-P-OP1	-9.85	96.83	105.70
15	1H	2280	U	O5'-P-OP1	-9.85	96.83	105.70
15	14	2518	A	C2-N3-C4	9.85	115.52	110.60
15	14	2696	C	C4-C5-C6	9.85	122.32	117.40
26	16	8	C	C6-N1-C2	9.85	124.24	120.30
15	1H	2292	G	N1-C6-O6	-9.84	113.99	119.90
15	14	1647	C	OP1-P-OP2	-9.84	104.84	119.60
26	1J	83	G	C8-N9-C4	-9.84	102.46	106.40
15	1H	819	G	C5-C6-O6	-9.84	122.70	128.60
1	1G	2139	G	O5'-P-OP2	-9.83	96.85	105.70
15	1H	2443	G	C5-C6-O6	9.82	134.50	128.60
52	X4	37	A	N1-C2-N3	-9.82	124.39	129.30
26	16	75	A	O5'-P-OP2	-9.81	96.87	105.70
15	1H	2483	G	C6-C5-N7	-9.81	124.52	130.40
15	1H	1660	C	C6-N1-C2	9.80	124.22	120.30
15	14	595	G	C5-C6-N1	-9.80	106.60	111.50
15	1H	1428	A	C5-N7-C8	-9.79	99.01	103.90
15	1H	2057	G	C8-N9-C4	9.78	110.31	106.40
15	1H	1609	G	N1-C6-O6	9.78	125.77	119.90
1	13	1523	A	C5-C6-N1	9.78	122.59	117.70
1	1G	1158	G	C5-C6-O6	-9.77	122.74	128.60
15	1H	1545	A	N1-C6-N6	9.77	124.46	118.60
15	14	2588	C	N3-C4-N4	9.77	124.84	118.00
15	14	2852	G	O5'-P-OP2	-9.77	96.91	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	2154	A	C5-C6-N1	-9.77	112.82	117.70
1	1G	1158	G	N1-C6-O6	9.77	125.76	119.90
15	1H	854	G	C5-C6-O6	-9.77	122.74	128.60
15	1H	1806	G	C5-C6-O6	9.77	134.46	128.60
15	1H	2518	A	N1-C2-N3	-9.77	124.42	129.30
15	14	2517	G	O5'-P-OP1	-9.77	96.91	105.70
15	14	827	G	N1-C6-O6	-9.76	114.05	119.90
15	1H	1070	G	N9-C4-C5	9.76	109.30	105.40
26	1J	83	G	C5-N7-C8	-9.76	99.42	104.30
15	1H	1682	A	N1-C6-N6	9.75	124.45	118.60
15	1H	1869	G	N3-C4-C5	-9.75	123.72	128.60
15	1H	2518	A	C5-C6-N6	-9.74	115.91	123.70
15	14	813	A	O5'-P-OP2	-9.74	96.93	105.70
15	14	2014	G	N1-C6-O6	9.74	125.75	119.90
15	1H	2407	A	C6-N1-C2	9.73	124.44	118.60
1	1G	1568	G	C5-C6-O6	-9.73	122.76	128.60
15	1H	1803	G	C4-C5-N7	-9.73	106.91	110.80
15	1H	355	A	N1-C6-N6	9.73	124.44	118.60
15	1H	1191	A	N3-C4-C5	9.72	133.61	126.80
1	13	1528	U	O5'-P-OP2	9.72	122.36	110.70
15	14	1950	C	N1-C2-O2	-9.72	113.07	118.90
15	1H	736	C	N1-C2-O2	-9.72	113.07	118.90
15	1H	139	A	C6-C5-N7	-9.71	125.50	132.30
15	1H	2573	C	C6-N1-C2	9.71	124.19	120.30
15	1H	2633	G	O5'-P-OP2	-9.71	96.96	105.70
15	14	2301	A	C2-N3-C4	-9.71	105.74	110.60
15	1H	535	G	C8-N9-C4	-9.71	102.52	106.40
15	1H	1651	U	C5-C6-N1	-9.71	117.85	122.70
26	16	7	C	C6-N1-C2	9.70	124.18	120.30
1	13	2125	A	C6-C5-N7	-9.70	125.51	132.30
15	1H	1608	A	C2-N3-C4	-9.70	105.75	110.60
15	14	1355	C	O5'-P-OP1	-9.70	96.97	105.70
15	14	2516	C	N1-C2-O2	-9.70	113.08	118.90
15	14	2454	A	C5-N7-C8	-9.69	99.05	103.90
15	14	1748	A	N7-C8-N9	9.69	118.64	113.80
1	1G	1319	G	C5-N7-C8	-9.68	99.46	104.30
15	14	371	A	C8-N9-C4	9.68	109.67	105.80
15	1H	355	A	N3-C4-C5	9.68	133.57	126.80
15	1H	2080	C	N1-C2-O2	-9.68	113.09	118.90
15	1H	2242	A	C8-N9-C4	-9.67	101.93	105.80
52	W1	37	A	N1-C6-N6	9.67	124.40	118.60
15	1H	844	C	C5-C6-N1	-9.66	116.17	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	2611	U	C2-N3-C4	-9.66	121.20	127.00
15	1H	1428	A	C6-C5-N7	-9.65	125.54	132.30
1	13	1710	G	N1-C6-O6	9.65	125.69	119.90
15	1H	1329	G	OP1-P-OP2	-9.65	105.13	119.60
15	14	740	C	C2-N3-C4	-9.64	115.08	119.90
15	1H	407	G	C8-N9-C4	9.64	110.26	106.40
15	1H	1924	G	C6-C5-N7	9.64	136.18	130.40
15	14	242	G	N1-C6-O6	-9.64	114.12	119.90
15	14	2302	A	C5-C6-N1	-9.64	112.88	117.70
15	14	140	A	C5-N7-C8	-9.63	99.08	103.90
15	1H	137	G	C5-N7-C8	-9.63	99.48	104.30
1	13	1319	G	O4'-C1'-N9	9.62	115.90	108.20
26	1J	62	C	C6-N1-C2	-9.62	116.45	120.30
15	1H	1820	A	C5-C6-N1	-9.62	112.89	117.70
15	1H	678	G	C8-N9-C4	-9.61	102.56	106.40
15	1H	2453	U	C2-N3-C4	-9.61	121.23	127.00
15	1H	1441	A	O5'-P-OP1	-9.60	97.06	105.70
15	1H	1699	G	C8-N9-C4	-9.60	102.56	106.40
1	1G	1054	G	C4-C5-N7	-9.60	106.96	110.80
15	14	730	G	C4-C5-N7	9.60	114.64	110.80
15	1H	1739	A	O5'-P-OP1	-9.60	97.06	105.70
26	16	118	G	C6-C5-N7	-9.59	124.64	130.40
1	1G	775	C	C6-N1-C2	9.58	124.13	120.30
15	1H	2313	A	O5'-P-OP2	-9.57	97.08	105.70
15	1H	1039	C	N3-C4-C5	9.56	125.73	121.90
26	1J	83	G	C4-C5-N7	9.56	114.62	110.80
15	1H	1323	A	O5'-P-OP2	-9.56	97.10	105.70
15	14	2302	A	C5-N7-C8	-9.56	99.12	103.90
15	1H	415	U	C5-C4-O4	-9.55	120.17	125.90
15	1H	1611	G	C8-N9-C4	-9.55	102.58	106.40
15	14	2505	G	C8-N9-C4	-9.55	102.58	106.40
15	1H	2795	U	C5-C4-O4	9.55	131.63	125.90
15	14	1750	A	O5'-P-OP2	9.55	122.16	110.70
15	1H	255	A	C5-N7-C8	-9.54	99.13	103.90
15	14	2458	C	N3-C4-N4	9.54	124.68	118.00
15	1H	1994	A	O5'-P-OP1	-9.54	97.12	105.70
15	14	1796	A	C5-N7-C8	-9.53	99.13	103.90
15	1H	203	A	N1-C6-N6	9.53	124.32	118.60
15	14	727	C	N3-C4-C5	9.53	125.71	121.90
15	14	1959	C	C6-N1-C2	9.53	124.11	120.30
15	1H	535	G	N3-C2-N2	9.52	126.57	119.90
15	1H	1381	G	N1-C2-N2	-9.52	107.63	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	895	G	O5'-P-OP1	-9.51	97.14	105.70
15	14	73	A	N3-C4-C5	9.51	133.46	126.80
15	14	823	A	C4-C5-C6	-9.51	112.25	117.00
15	14	1874	G	N1-C6-O6	9.51	125.61	119.90
15	14	2445	A	C5-C6-N1	-9.51	112.95	117.70
15	1H	490	C	C5-C4-N4	9.50	126.85	120.20
15	1H	2593	G	N1-C6-O6	-9.50	114.20	119.90
15	14	204	G	C8-N9-C4	-9.50	102.60	106.40
15	14	2361	A	C5-C6-N1	-9.50	112.95	117.70
15	14	911	G	N1-C6-O6	-9.50	114.20	119.90
15	1H	2439	C	O5'-P-OP2	-9.49	97.16	105.70
15	14	1748	A	C5-C6-N6	-9.49	116.11	123.70
1	1G	2110	G	N1-C6-O6	9.49	125.59	119.90
15	1H	1851	G	N1-C6-O6	-9.49	114.20	119.90
15	1H	965	A	C5-C6-N1	-9.48	112.96	117.70
15	1H	2434	U	N1-C2-N3	9.48	120.59	114.90
15	14	740	C	C4-C5-C6	9.48	122.14	117.40
15	1H	1614	C	C5-C4-N4	9.47	126.83	120.20
15	14	708	C	C6-N1-C2	9.46	124.09	120.30
15	1H	2028	G	C8-N9-C4	9.46	110.18	106.40
15	1H	1663	A	C4-C5-N7	9.46	115.43	110.70
15	14	815	C	C5-C6-N1	-9.45	116.27	121.00
15	14	1577	A	C5-N7-C8	-9.45	99.18	103.90
15	1H	747	C	O5'-P-OP2	-9.45	97.20	105.70
15	1H	2392	A	C8-N9-C4	9.45	109.58	105.80
1	13	1589	G	C5-C6-O6	-9.44	122.94	128.60
15	1H	190	U	O5'-P-OP1	-9.44	97.20	105.70
15	14	70	A	N1-C2-N3	9.44	134.02	129.30
15	1H	1609	G	C2-N3-C4	-9.44	107.18	111.90
26	16	64	C	O5'-P-OP2	-9.44	97.21	105.70
15	14	2444	G	O5'-P-OP2	-9.43	97.21	105.70
15	1H	99	G	C8-N9-C4	9.43	110.17	106.40
15	1H	1004	A	N1-C6-N6	9.43	124.26	118.60
15	14	1030	C	N3-C2-O2	9.42	128.50	121.90
15	14	2035	G	N3-C2-N2	-9.42	113.31	119.90
1	13	1597	A	O4'-C1'-N9	9.41	115.73	108.20
15	14	1683	G	C8-N9-C4	-9.41	102.63	106.40
15	1H	546	U	N3-C2-O2	9.41	128.79	122.20
15	1H	1818	A	O5'-P-OP1	-9.41	97.23	105.70
15	1H	1956	U	C5-C4-O4	9.41	131.54	125.90
15	1H	527	G	O5'-P-OP1	-9.40	97.24	105.70
15	14	780	C	C5-C6-N1	-9.40	116.30	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1545	A	C8-N9-C4	-9.40	102.04	105.80
15	1H	1330	G	C5-C6-O6	-9.40	122.96	128.60
15	1H	2463	A	N1-C6-N6	9.40	124.24	118.60
15	1H	1821	A	O5'-P-OP1	-9.40	97.24	105.70
15	1H	144	C	C5-C6-N1	-9.39	116.30	121.00
1	13	1319	G	C8-N9-C4	-9.39	102.64	106.40
4	19	56	GLY	C-N-CA	-9.39	102.58	122.30
15	1H	2729	A	C6-C5-N7	-9.39	125.73	132.30
15	1H	2053	U	C4-C5-C6	9.39	125.33	119.70
15	14	786	C	C6-N1-C2	9.39	124.06	120.30
15	1H	1428	A	C2-N3-C4	-9.38	105.91	110.60
15	1H	206	A	O5'-P-OP2	9.38	121.96	110.70
15	1H	2509	G	N3-C2-N2	-9.38	113.33	119.90
15	14	2454	A	C4-C5-N7	9.38	115.39	110.70
15	1H	1431	G	N1-C6-O6	9.38	125.53	119.90
15	1H	419	G	C2-N3-C4	-9.37	107.21	111.90
15	1H	1931	G	O5'-P-OP1	-9.37	97.27	105.70
26	16	118	G	C4-C5-N7	9.37	114.55	110.80
15	1H	111	G	N3-C4-N9	-9.36	120.39	126.00
15	14	2557	A	C5-N7-C8	-9.35	99.23	103.90
15	1H	1803	G	C5-N7-C8	9.34	108.97	104.30
15	1H	248	G	N3-C2-N2	9.34	126.44	119.90
15	1H	474	G	N9-C4-C5	-9.34	101.66	105.40
15	14	502	G	C8-N9-C4	-9.34	102.66	106.40
15	14	1525	G	N7-C8-N9	9.34	117.77	113.10
15	1H	1422	A	OP1-P-OP2	-9.34	105.59	119.60
15	14	648	A	N7-C8-N9	9.34	118.47	113.80
52	V4	76	A	C2-N3-C4	-9.34	105.93	110.60
15	1H	1428	A	C4-C5-N7	9.33	115.37	110.70
15	14	1796	A	N7-C8-N9	9.33	118.47	113.80
15	1H	783	A	C2-N3-C4	-9.33	105.94	110.60
15	1H	2837	C	N3-C4-C5	9.33	125.63	121.90
1	1G	2125	A	C5-N7-C8	-9.32	99.24	103.90
15	14	555	A	N3-C4-C5	9.32	133.33	126.80
15	14	1039	C	O5'-P-OP1	-9.32	97.31	105.70
15	14	1796	A	C8-N9-C4	-9.31	102.07	105.80
15	1H	125	A	O5'-P-OP2	-9.31	97.32	105.70
15	1H	237	G	C5-C6-O6	-9.31	123.02	128.60
15	1H	2434	U	N3-C4-O4	9.31	125.91	119.40
15	1H	1361	U	O5'-P-OP2	9.30	121.86	110.70
15	1H	2224	A	O5'-P-OP1	-9.30	97.33	105.70
15	14	2792	A	C8-N9-C4	-9.30	102.08	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2407	A	C6-C5-N7	-9.30	125.79	132.30
15	1H	2261	G	C4-C5-N7	-9.30	107.08	110.80
15	14	1857	G	N3-C2-N2	-9.29	113.39	119.90
26	1J	30	C	N3-C2-O2	-9.29	115.40	121.90
1	1G	2125	A	N7-C8-N9	9.29	118.44	113.80
15	14	1814	A	N1-C2-N3	9.29	133.94	129.30
15	14	1649	C	O5'-P-OP2	-9.28	97.35	105.70
15	14	2271	G	N3-C2-N2	9.28	126.40	119.90
15	14	2727	U	N1-C2-N3	9.28	120.47	114.90
1	13	1690	U	O5'-P-OP2	-9.28	97.35	105.70
15	1H	721	C	OP2-P-O3'	9.28	125.61	105.20
15	14	2078	G	C8-N9-C4	9.28	110.11	106.40
15	1H	1748	A	C4-C5-C6	9.27	121.64	117.00
15	14	725	A	C5-C6-N1	-9.27	113.06	117.70
15	14	12	U	N3-C2-O2	-9.27	115.71	122.20
15	1H	794	G	C5-C6-O6	-9.27	123.04	128.60
15	14	1030	C	N1-C2-O2	-9.27	113.34	118.90
15	1H	648	A	C5-C6-N1	-9.27	113.07	117.70
15	1H	2395	C	C2-N3-C4	-9.26	115.27	119.90
1	13	1252	C	C6-N1-C2	-9.25	116.60	120.30
15	1H	1178	U	C2-N3-C4	-9.25	121.45	127.00
15	1H	2302	A	N1-C2-N3	9.25	133.93	129.30
15	14	1001	G	N1-C6-O6	-9.25	114.35	119.90
15	14	1398	A	N1-C6-N6	9.25	124.15	118.60
15	1H	1015	G	N1-C2-N2	-9.24	107.88	116.20
26	1J	117	G	C8-N9-C4	9.24	110.10	106.40
15	1H	2259	U	C4-C5-C6	9.24	125.24	119.70
15	1H	2533	A	N1-C6-N6	9.24	124.14	118.60
15	14	2461	G	N3-C2-N2	9.24	126.36	119.90
15	1H	593	U	C5-C6-N1	9.23	127.31	122.70
15	1H	722	C	N3-C4-N4	9.23	124.46	118.00
15	1H	557	G	C5-N7-C8	-9.23	99.69	104.30
15	1H	870	A	O5'-P-OP2	-9.23	97.39	105.70
15	1H	1015	G	N3-C2-N2	9.23	126.36	119.90
15	14	1363	C	N1-C2-O2	9.23	124.44	118.90
15	1H	837	A	N1-C6-N6	9.22	124.13	118.60
15	1H	1038	A	C8-N9-C4	-9.22	102.11	105.80
15	1H	1824	C	C5-C6-N1	-9.22	116.39	121.00
15	14	1924	G	C5-N7-C8	-9.22	99.69	104.30
15	1H	128	C	C6-N1-C2	9.22	123.99	120.30
15	1H	875	U	O5'-P-OP2	-9.22	97.40	105.70
15	14	1619	A	C5-N7-C8	-9.22	99.29	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	2072	A	N1-C6-N6	9.21	124.13	118.60
15	1H	1656	C	N3-C4-N4	9.21	124.45	118.00
15	1H	1699	G	N1-C6-O6	-9.22	114.37	119.90
15	1H	1357	A	N1-C2-N3	9.20	133.90	129.30
15	1H	1815	C	N3-C4-N4	-9.20	111.56	118.00
15	1H	2302	A	N3-C4-N9	-9.20	120.04	127.40
1	13	1817	G	N1-C6-O6	9.20	125.42	119.90
15	14	1382	C	N3-C4-C5	9.19	125.58	121.90
15	14	2301	A	C5-N7-C8	-9.19	99.30	103.90
15	14	730	G	N9-C4-C5	-9.19	101.72	105.40
15	1H	2703	U	C4-C5-C6	9.19	125.21	119.70
15	14	2605	A	N7-C8-N9	-9.19	109.20	113.80
15	1H	874	C	C5-C4-N4	-9.19	113.77	120.20
15	14	1728	G	C4-C5-N7	9.18	114.47	110.80
1	1G	2121	U	N3-C2-O2	-9.18	115.77	122.20
15	14	2461	G	N1-C6-O6	-9.18	114.39	119.90
15	1H	1815	C	C5-C4-N4	9.18	126.62	120.20
15	1H	2462	G	C6-N1-C2	-9.18	119.59	125.10
1	1G	2095	U	O5'-P-OP2	-9.18	97.44	105.70
15	1H	474	G	C6-C5-N7	-9.17	124.90	130.40
15	14	1349	U	O5'-P-OP2	-9.17	97.45	105.70
1	1G	1319	G	N7-C8-N9	9.17	117.68	113.10
15	1H	1287	G	C8-N9-C4	-9.17	102.73	106.40
15	1H	1453	C	O5'-P-OP2	-9.16	97.45	105.70
15	1H	2302	A	C4-C5-N7	9.16	115.28	110.70
15	14	556	A	C8-N9-C4	-9.16	102.14	105.80
15	14	1728	G	N3-C4-C5	9.16	133.18	128.60
1	13	1421	A	O4'-C1'-N9	9.15	115.52	108.20
15	14	827	G	C5-C6-O6	9.15	134.09	128.60
15	14	992	A	N7-C8-N9	9.15	118.38	113.80
15	14	2442	C	N3-C4-C5	9.15	125.56	121.90
1	13	1549	G	C8-N9-C4	-9.15	102.74	106.40
15	1H	499	A	O5'-P-OP2	-9.15	97.47	105.70
15	1H	1202	C	N1-C2-O2	-9.14	113.41	118.90
15	1H	487	U	O5'-P-OP2	-9.14	97.47	105.70
15	14	2301	A	N1-C6-N6	9.14	124.08	118.60
26	16	115	G	O5'-P-OP2	-9.14	97.48	105.70
15	14	70	A	C4-C5-N7	9.14	115.27	110.70
15	1H	1663	A	N7-C8-N9	9.13	118.37	113.80
15	14	2466	A	C8-N9-C4	-9.13	102.15	105.80
15	14	789	U	N3-C2-O2	-9.13	115.81	122.20
15	14	48	A	P-O3'-C3'	9.13	130.65	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	713	C	N3-C2-O2	-9.13	115.51	121.90
1	13	1904	C	C6-N1-C2	-9.12	116.65	120.30
15	14	1659	A	O5'-P-OP2	-9.12	97.49	105.70
15	1H	844	C	C2-N3-C4	-9.12	115.34	119.90
15	14	1662	G	N3-C4-N9	9.12	131.47	126.00
15	1H	255	A	C2-N3-C4	-9.12	106.04	110.60
15	1H	2067	A	O5'-P-OP2	-9.12	97.49	105.70
1	1G	1147	C	O5'-P-OP1	9.12	121.64	110.70
15	14	2458	C	C6-N1-C2	-9.12	116.65	120.30
15	14	1440	U	O5'-P-OP1	-9.11	97.50	105.70
15	14	2381	A	O5'-P-OP2	-9.11	97.50	105.70
15	1H	2625	C	N3-C2-O2	-9.10	115.53	121.90
15	1H	2301	A	N1-C6-N6	9.10	124.06	118.60
15	1H	2625	C	N1-C2-O2	9.10	124.36	118.90
15	1H	1191	A	C4-C5-N7	9.10	115.25	110.70
15	14	1966	C	O5'-P-OP1	-9.10	97.52	105.70
15	1H	2094	G	C8-N9-C4	9.09	110.04	106.40
15	1H	891	G	N1-C6-O6	9.09	125.35	119.90
15	1H	1252	A	C5-C6-N1	-9.09	113.16	117.70
15	1H	1993	G	C5-C6-N1	9.09	116.04	111.50
1	13	1132	C	C6-N1-C2	-9.08	116.67	120.30
15	1H	850	G	C8-N9-C4	-9.08	102.77	106.40
1	1G	697	A	C8-N9-C4	9.08	109.43	105.80
15	1H	2627	C	C6-N1-C2	9.08	123.93	120.30
15	14	2690	A	N1-C6-N6	9.08	124.05	118.60
15	1H	2416	U	N1-C2-O2	9.08	129.15	122.80
15	1H	1381	G	C5-C6-O6	-9.07	123.16	128.60
15	14	70	A	N1-C6-N6	9.07	124.04	118.60
15	14	2601	C	N3-C4-N4	9.07	124.35	118.00
15	14	1860	G	C2-N3-C4	9.07	116.44	111.90
15	1H	1234	G	O5'-P-OP2	-9.07	97.54	105.70
1	13	1533	C	C6-N1-C2	9.06	123.93	120.30
15	14	1519	A	N7-C8-N9	9.06	118.33	113.80
15	1H	2021	C	C6-N1-C2	9.06	123.92	120.30
15	1H	200	C	N3-C4-C5	9.06	125.52	121.90
15	1H	1424	C	N1-C2-O2	-9.06	113.47	118.90
15	1H	850	G	N9-C4-C5	9.06	109.02	105.40
15	14	1398	A	C4-C5-N7	9.05	115.23	110.70
15	14	1924	G	C4-C5-N7	9.06	114.42	110.80
15	1H	1290	A	N3-C4-N9	-9.05	120.16	127.40
15	14	1806	G	N1-C6-O6	-9.05	114.47	119.90
15	1H	1362	U	O5'-P-OP2	-9.05	97.55	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1249	C	C5-C4-N4	-9.05	113.87	120.20
15	1H	1869	G	O5'-P-OP1	-9.05	97.56	105.70
15	1H	1663	A	N3-C4-N9	-9.04	120.17	127.40
1	13	1594	G	O5'-P-OP2	-9.04	97.56	105.70
15	1H	1408	A	O5'-P-OP2	-9.04	97.56	105.70
15	1H	1620	A	C8-N9-C4	9.04	109.42	105.80
15	1H	2041	U	O5'-P-OP2	-9.04	97.56	105.70
15	1H	1665	A	O4'-C1'-N9	9.04	115.43	108.20
15	1H	2107	A	N7-C8-N9	-9.04	109.28	113.80
15	14	2727	U	N3-C4-O4	-9.04	113.08	119.40
15	1H	1924	G	C4-C5-C6	-9.03	113.38	118.80
15	1H	1381	G	C4-C5-C6	9.03	124.22	118.80
15	1H	2416	U	C6-N1-C2	-9.03	115.58	121.00
15	14	1036	A	N1-C6-N6	9.03	124.02	118.60
15	1H	2417	C	O5'-P-OP2	-9.03	97.57	105.70
15	14	2703	U	C4-C5-C6	9.03	125.12	119.70
26	16	1	A	C8-N9-C4	9.03	109.41	105.80
1	1G	1444	A	C8-N9-C4	9.02	109.41	105.80
15	1H	666	U	N1-C2-O2	9.02	129.11	122.80
15	14	1428	A	C8-N9-C4	-9.02	102.19	105.80
52	V1	76	A	C2-N3-C4	-9.02	106.09	110.60
15	1H	1972	C	C5-C4-N4	-9.02	113.89	120.20
1	1G	1827	C	N1-C2-O2	9.02	124.31	118.90
15	1H	835	C	C5-C4-N4	9.02	126.51	120.20
15	1H	1349	U	O5'-P-OP2	-9.01	97.59	105.70
15	1H	1319	C	C2-N3-C4	-9.01	115.39	119.90
43	E8	90	ARG	NE-CZ-NH1	-9.01	115.79	120.30
15	1H	2445	A	N7-C8-N9	9.01	118.31	113.80
15	1H	2598	G	C5-C6-O6	-9.01	123.19	128.60
15	14	627	G	N9-C4-C5	-9.01	101.80	105.40
1	1G	947	G	C5-C6-O6	-9.01	123.20	128.60
15	1H	288	G	C8-N9-C4	-9.01	102.80	106.40
15	1H	2437	A	C2-N3-C4	-9.01	106.10	110.60
15	1H	214	G	O5'-P-OP2	-9.00	97.60	105.70
52	W4	76	A	C2-N3-C4	9.00	115.10	110.60
15	14	1577	A	C8-N9-C4	-9.00	102.20	105.80
15	14	717	G	N3-C4-C5	9.00	133.10	128.60
15	1H	1831	C	C5-C6-N1	-8.99	116.50	121.00
15	14	2595	U	O5'-P-OP1	-8.99	97.61	105.70
15	1H	466	G	O5'-P-OP2	8.99	121.49	110.70
15	1H	1064	G	OP1-P-OP2	-8.99	106.11	119.60
15	1H	2334	G	N3-C4-N9	8.98	131.39	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	991	G	C5-C6-N1	-8.98	107.01	111.50
15	14	725	A	O4'-C1'-N9	8.98	115.38	108.20
15	14	2267	G	O5'-P-OP2	-8.98	97.62	105.70
26	16	49	C	O5'-P-OP2	-8.97	97.62	105.70
15	1H	728	C	C2-N3-C4	-8.97	115.42	119.90
15	14	70	A	O4'-C1'-N9	-8.97	101.02	108.20
52	X4	6	G	C8-N9-C4	8.97	109.99	106.40
15	1H	1290	A	C4-C5-N7	8.97	115.18	110.70
15	1H	2530	C	O5'-P-OP1	8.97	121.46	110.70
15	14	195	G	N9-C4-C5	-8.97	101.81	105.40
15	1H	1177	A	O5'-P-OP2	-8.96	97.63	105.70
15	1H	73	A	C5-N7-C8	-8.96	99.42	103.90
26	1J	30	C	N1-C2-O2	8.96	124.27	118.90
15	1H	1350	A	N1-C6-N6	8.95	123.97	118.60
15	1H	1620	A	N7-C8-N9	-8.95	109.32	113.80
15	14	63	A	O5'-P-OP1	-8.95	97.64	105.70
15	14	195	G	C5-C6-N1	8.95	115.98	111.50
15	14	2742	U	C5-C6-N1	-8.95	118.22	122.70
1	13	1319	G	N1-C6-O6	8.95	125.27	119.90
15	1H	408	U	N1-C2-N3	8.95	120.27	114.90
1	13	1397	A	C5-C6-N1	8.95	122.17	117.70
15	1H	1304	U	C5-C4-O4	-8.95	120.53	125.90
4	11	56	GLY	C-N-CA	-8.94	103.52	122.30
15	1H	140	A	N7-C8-N9	8.94	118.27	113.80
15	14	2513	C	O5'-P-OP2	-8.94	97.65	105.70
15	14	114	C	N1-C2-O2	-8.94	113.54	118.90
15	14	842	A	O5'-P-OP2	-8.94	97.66	105.70
15	14	2601	C	C4-C5-C6	8.94	121.87	117.40
1	1G	2113	C	C6-N1-C2	8.94	123.87	120.30
15	1H	594	U	C5-C6-N1	-8.94	118.23	122.70
26	1J	32	C	C6-N1-C2	-8.94	116.73	120.30
15	14	1318	A	N9-C4-C5	-8.93	102.23	105.80
52	X4	26	A	N9-C4-C5	-8.93	102.23	105.80
1	13	1523	A	C2-N3-C4	8.92	115.06	110.60
15	1H	2242	A	N9-C4-C5	8.92	109.37	105.80
15	1H	1320	G	O5'-P-OP2	-8.92	97.67	105.70
15	14	827	G	N3-C2-N2	8.92	126.15	119.90
15	14	1357	A	N1-C2-N3	8.92	133.76	129.30
15	1H	2345	G	C5-C6-O6	-8.92	123.25	128.60
15	14	2557	A	C4-C5-N7	8.92	115.16	110.70
15	1H	1395	G	C5-C6-O6	8.91	133.95	128.60
15	14	1680	C	N1-C2-O2	-8.91	113.55	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1956	U	C4-C5-C6	8.91	125.05	119.70
15	1H	883	C	N1-C2-O2	-8.91	113.56	118.90
15	14	2298	C	N1-C2-O2	-8.91	113.56	118.90
15	14	2525	C	N3-C4-N4	-8.91	111.76	118.00
15	1H	1851	G	C5-C6-O6	8.91	133.94	128.60
15	1H	838	A	N1-C2-N3	8.90	133.75	129.30
15	14	537	C	OP1-P-OP2	8.90	132.96	119.60
1	13	2022	A	C8-N9-C4	8.90	109.36	105.80
15	14	1398	A	C5-N7-C8	-8.90	99.45	103.90
15	1H	1210	C	O5'-P-OP2	8.89	121.37	110.70
26	1J	58	G	O5'-P-OP2	-8.89	97.69	105.70
15	1H	1315	G	C5-C6-N1	8.89	115.94	111.50
15	14	2514	C	N1-C2-O2	-8.89	113.57	118.90
1	13	669	C	C6-N1-C2	-8.88	116.75	120.30
15	14	1450	G	C8-N9-C4	-8.88	102.85	106.40
52	V1	76	A	N1-C6-N6	8.88	123.93	118.60
15	1H	111	G	N9-C4-C5	8.87	108.95	105.40
15	1H	2087	A	C5-N7-C8	8.87	108.34	103.90
15	1H	433	U	N1-C2-O2	8.87	129.01	122.80
15	14	816	U	N3-C4-O4	-8.87	113.19	119.40
15	1H	1708	C	N1-C2-O2	-8.86	113.58	118.90
15	14	2095	G	N1-C2-N2	-8.86	108.22	116.20
15	14	2533	A	O4'-C1'-N9	-8.86	101.11	108.20
15	14	592	A	C4-C5-N7	8.86	115.13	110.70
1	13	1421	A	N9-C4-C5	-8.86	102.26	105.80
15	1H	1964	U	C4-C5-C6	-8.86	114.39	119.70
15	1H	743	U	N3-C2-O2	-8.86	116.00	122.20
15	1H	2024	C	N1-C2-O2	-8.86	113.59	118.90
15	14	1331	U	C5-C6-N1	-8.86	118.27	122.70
15	1H	732	C	C2-N3-C4	-8.85	115.48	119.90
15	1H	2353	G	O5'-P-OP1	-8.85	97.74	105.70
15	14	712	G	O5'-P-OP1	-8.84	97.74	105.70
15	14	1979	G	N1-C6-O6	8.84	125.20	119.90
15	14	2516	C	C2-N3-C4	-8.84	115.48	119.90
1	13	683	U	N3-C2-O2	-8.84	116.02	122.20
15	1H	50	G	C5-C6-N1	8.83	115.92	111.50
15	14	73	A	C5-N7-C8	-8.83	99.48	103.90
15	14	639	U	C5-C4-O4	8.83	131.20	125.90
15	14	1429	G	N1-C6-O6	8.83	125.20	119.90
1	13	1438	G	C8-N9-C4	-8.82	102.87	106.40
15	1H	583	G	O5'-P-OP2	-8.82	97.76	105.70
15	1H	1618	G	OP1-P-OP2	-8.82	106.37	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1978	A	N1-C2-N3	-8.82	124.89	129.30
15	14	1001	G	N9-C4-C5	8.82	108.93	105.40
26	16	49	C	C6-N1-C2	8.82	123.83	120.30
15	1H	2373	G	C5-C6-N1	8.81	115.91	111.50
30	35	62	LEU	CA-CB-CG	8.81	135.56	115.30
15	1H	137	G	C5-C6-N1	8.80	115.90	111.50
15	1H	1399	C	N1-C2-O2	-8.80	113.62	118.90
15	14	304	C	O5'-P-OP2	-8.80	97.78	105.70
15	14	742	C	C2-N3-C4	-8.80	115.50	119.90
15	1H	1252	A	N3-C4-C5	8.80	132.96	126.80
15	14	1429	G	C4-C5-N7	8.80	114.32	110.80
15	1H	647	G	C5-C6-O6	-8.79	123.33	128.60
15	14	2729	A	C5-C6-N1	-8.79	113.30	117.70
15	14	1454	U	O5'-P-OP2	-8.79	97.79	105.70
15	1H	1013	G	C5-C6-O6	8.79	133.87	128.60
1	1G	2155	U	C5-C6-N1	8.79	127.09	122.70
15	1H	248	G	N1-C6-O6	-8.78	114.63	119.90
15	1H	1258	A	N1-C6-N6	8.78	123.87	118.60
15	1H	1545	A	C6-C5-N7	-8.79	126.15	132.30
15	1H	785	C	N3-C4-C5	8.78	125.41	121.90
15	1H	896	U	OP1-P-OP2	8.78	132.78	119.60
15	1H	2455	C	O5'-P-OP2	-8.78	97.80	105.70
15	1H	737	U	C4-C5-C6	8.78	124.97	119.70
15	1H	2483	G	N1-C6-O6	8.78	125.17	119.90
15	1H	1445	U	OP1-P-OP2	8.78	132.76	119.60
15	1H	1423	G	C5-C6-N1	-8.78	107.11	111.50
15	14	2031	C	C2-N3-C4	-8.78	115.51	119.90
15	1H	811	U	C4-C5-C6	-8.77	114.44	119.70
15	1H	2087	A	C8-N9-C4	8.77	109.31	105.80
15	14	2885	G	O5'-P-OP2	-8.77	97.81	105.70
15	1H	707	C	N3-C4-C5	8.77	125.41	121.90
15	1H	179	G	C6-N1-C2	-8.77	119.84	125.10
1	13	1397	A	C6-N1-C2	-8.77	113.34	118.60
15	1H	823	A	N1-C6-N6	8.77	123.86	118.60
15	1H	1177	A	OP1-P-OP2	8.76	132.75	119.60
52	W1	38	A	N1-C6-N6	8.76	123.86	118.60
15	1H	1708	C	N3-C4-N4	8.76	124.13	118.00
15	1H	618	G	N1-C2-N2	-8.76	108.32	116.20
15	1H	1423	G	N1-C6-O6	8.76	125.15	119.90
15	1H	1660	C	C5-C4-N4	-8.76	114.07	120.20
15	1H	2366	G	O5'-P-OP1	-8.76	97.82	105.70
15	1H	2517	G	O5'-P-OP1	-8.75	97.82	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1341	U	O5'-P-OP2	-8.74	97.83	105.70
15	1H	1359	G	O5'-P-OP2	8.74	121.19	110.70
15	1H	1786	C	C6-N1-C2	8.74	123.80	120.30
15	14	2704	U	N3-C4-O4	-8.74	113.28	119.40
15	1H	2435	C	O5'-P-OP1	-8.74	97.83	105.70
15	1H	2456	C	O5'-P-OP2	8.74	121.19	110.70
15	1H	2462	G	N3-C2-N2	-8.74	113.78	119.90
15	1H	2681	C	C6-N1-C2	-8.74	116.80	120.30
15	14	2435	C	O5'-P-OP1	-8.74	97.83	105.70
26	1J	8	C	C6-N1-C2	8.74	123.80	120.30
15	1H	2350	A	O5'-P-OP1	-8.74	97.84	105.70
15	1H	912	A	O5'-P-OP2	-8.73	97.84	105.70
15	14	140	A	C4-C5-N7	8.73	115.07	110.70
15	1H	1987	C	C4-C5-C6	-8.73	113.03	117.40
15	1H	2400	C	C2-N3-C4	-8.73	115.54	119.90
1	13	1141	U	C5-C4-O4	8.73	131.13	125.90
15	14	1656	C	C5-C4-N4	-8.73	114.09	120.20
1	1G	1054	G	C6-C5-N7	8.72	135.63	130.40
15	1H	1409	A	N1-C6-N6	8.72	123.83	118.60
15	1H	618	G	N3-C2-N2	8.72	126.00	119.90
15	1H	998	C	C5-C4-N4	8.71	126.30	120.20
15	14	1370	A	N1-C6-N6	8.71	123.83	118.60
15	1H	707	C	O5'-P-OP2	-8.71	97.86	105.70
15	14	1820	A	N9-C1'-C2'	8.71	125.32	114.00
15	1H	1252	A	N1-C2-N3	8.71	133.65	129.30
15	14	845	C	C2-N3-C4	-8.70	115.55	119.90
15	14	83	A	C8-N9-C4	8.70	109.28	105.80
15	14	2302	A	C4-C5-N7	8.70	115.05	110.70
15	1H	55	A	N9-C4-C5	-8.70	102.32	105.80
15	1H	2533	A	C4-C5-C6	8.70	121.35	117.00
15	1H	1660	C	N3-C4-C5	8.70	125.38	121.90
15	1H	2534	U	N3-C4-O4	8.70	125.49	119.40
1	13	2035	C	O5'-P-OP2	-8.69	97.88	105.70
15	1H	831	A	N1-C6-N6	8.69	123.81	118.60
15	14	988	A	O5'-P-OP1	8.69	121.13	110.70
15	14	1290	A	C2-N3-C4	-8.69	106.25	110.60
15	1H	35	G	OP1-P-OP2	8.69	132.63	119.60
15	14	799	A	N7-C8-N9	8.69	118.14	113.80
44	1E	230	VAL	C-N-CA	8.69	143.42	121.70
15	1H	1924	G	C5-N7-C8	-8.69	99.96	104.30
15	14	2443	G	C8-N9-C4	-8.69	102.92	106.40
15	14	2608	U	OP1-P-OP2	-8.69	106.57	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1806	G	C4-C5-N7	-8.68	107.33	110.80
15	14	620	C	N3-C4-C5	8.68	125.37	121.90
52	V1	76	A	C6-C5-N7	-8.68	126.22	132.30
15	14	894	G	C6-C5-N7	-8.67	125.20	130.40
15	14	2600	U	C6-N1-C2	8.67	126.20	121.00
15	1H	2452	U	C5-C4-O4	8.67	131.10	125.90
15	1H	661	C	N3-C4-N4	-8.67	111.93	118.00
15	14	721	C	O5'-P-OP1	8.66	121.10	110.70
1	13	1209	U	C5-C6-N1	-8.66	118.37	122.70
1	1G	747	G	C4-C5-N7	8.66	114.27	110.80
15	1H	1335	A	O5'-P-OP2	-8.66	97.91	105.70
15	14	733	G	C4-C5-N7	-8.66	107.33	110.80
15	1H	1433	A	OP1-P-OP2	8.66	132.59	119.60
15	14	836	U	O5'-P-OP2	-8.65	97.91	105.70
15	14	1027	G	N1-C6-O6	8.65	125.09	119.90
15	1H	874	C	C5-C6-N1	-8.65	116.68	121.00
15	1H	2795	U	N3-C2-O2	-8.65	116.15	122.20
15	14	242	G	O5'-P-OP2	-8.65	97.92	105.70
15	14	346	G	C5-C6-O6	-8.65	123.41	128.60
15	14	823	A	N7-C8-N9	8.65	118.12	113.80
52	X1	75	C	C4-C5-C6	8.65	121.72	117.40
15	14	980	A	N7-C8-N9	8.65	118.12	113.80
15	14	1460	C	N1-C2-O2	8.65	124.09	118.90
15	1H	2346	G	C4-C5-N7	8.64	114.26	110.80
15	14	2519	U	OP1-P-OP2	-8.64	106.64	119.60
1	13	975	C	N3-C4-C5	8.64	125.36	121.90
15	1H	2392	A	O5'-P-OP1	-8.64	97.92	105.70
15	1H	2469	G	C5-C6-N1	8.64	115.82	111.50
15	1H	2513	C	O5'-P-OP2	-8.64	97.92	105.70
26	16	118	G	N1-C6-O6	8.64	125.08	119.90
15	1H	1030	C	C6-N1-C2	-8.64	116.84	120.30
15	1H	2389	C	C2-N3-C4	-8.63	115.58	119.90
15	1H	111	G	N3-C2-N2	-8.63	113.86	119.90
15	1H	483	C	N3-C4-C5	8.62	125.35	121.90
15	14	977	U	N3-C2-O2	-8.62	116.16	122.20
15	14	1686	C	N1-C2-O2	-8.62	113.73	118.90
15	14	2886	A	C4-C5-C6	8.62	121.31	117.00
15	1H	823	A	C8-N9-C1'	8.62	143.21	127.70
15	1H	557	G	N3-C4-C5	8.61	132.91	128.60
15	1H	825	G	C5-C6-O6	-8.61	123.43	128.60
15	1H	2704	U	C2-N3-C4	-8.61	121.83	127.00
15	1H	2032	C	C5-C6-N1	-8.61	116.69	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	839	C	C5-C6-N1	-8.61	116.70	121.00
4	19	41	GLY	C-N-CA	-8.60	104.23	122.30
15	1H	240	G	O5'-P-OP1	-8.60	97.96	105.70
15	14	139	A	C4-C5-N7	8.60	115.00	110.70
15	1H	732	C	C5-C4-N4	-8.60	114.18	120.20
15	1H	876	U	C6-N1-C2	8.60	126.16	121.00
15	1H	1984	G	N1-C6-O6	-8.60	114.74	119.90
15	14	2467	C	N3-C2-O2	8.60	127.92	121.90
15	14	1332	G	N3-C4-C5	-8.60	124.30	128.60
1	1G	1319	G	C8-N9-C4	-8.60	102.96	106.40
15	1H	255	A	C8-N9-C4	-8.60	102.36	105.80
15	1H	2285	G	C8-N9-C4	8.60	109.84	106.40
15	1H	890	A	O5'-P-OP2	-8.59	97.97	105.70
15	1H	1252	A	N1-C6-N6	8.59	123.75	118.60
15	14	2076	A	C8-N9-C4	-8.59	102.36	105.80
15	14	2346	G	C8-N9-C4	8.59	109.83	106.40
15	1H	189	A	C2-N3-C4	8.59	114.89	110.60
26	16	16	U	O5'-P-OP2	-8.58	97.98	105.70
52	X1	38	A	O5'-P-OP2	-8.58	97.97	105.70
15	1H	1753	G	O5'-P-OP2	-8.58	97.98	105.70
15	1H	2525	C	N3-C4-N4	-8.58	112.00	118.00
15	14	1663	A	C5-C6-N1	-8.58	113.41	117.70
15	1H	192	U	C5-C4-O4	-8.57	120.75	125.90
15	1H	998	C	N3-C4-N4	-8.57	112.00	118.00
15	14	2492	C	N1-C2-O2	8.57	124.04	118.90
15	14	2569	U	O5'-P-OP1	-8.57	97.98	105.70
1	13	1539	G	C8-N9-C4	-8.57	102.97	106.40
15	1H	132	C	N3-C4-N4	-8.57	112.00	118.00
15	1H	621	G	C5-C6-O6	-8.57	123.46	128.60
15	14	187	A	C6-N1-C2	-8.57	113.46	118.60
1	1G	2121	U	C2-N1-C1'	8.57	127.98	117.70
15	1H	2469	G	N1-C6-O6	-8.57	114.76	119.90
1	1G	1369	U	O5'-P-OP2	-8.57	97.99	105.70
15	14	1860	G	C4-C5-N7	-8.57	107.37	110.80
51	Y1	43	U	N1-C2-O2	8.57	128.80	122.80
15	1H	671	A	N1-C6-N6	-8.56	113.46	118.60
15	1H	1913	G	N3-C4-N9	8.56	131.14	126.00
15	14	121	G	C4-C5-N7	8.56	114.22	110.80
15	14	2745	G	N1-C6-O6	8.56	125.04	119.90
52	V1	76	A	C4-C5-N7	8.56	114.98	110.70
15	1H	2089	C	N3-C4-N4	-8.56	112.01	118.00
15	14	1252	A	C5-C6-N1	-8.56	113.42	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	975	G	C5-C6-O6	-8.56	123.47	128.60
15	1H	2723	G	C2-N3-C4	-8.56	107.62	111.90
15	1H	1280	G	C5-C6-O6	-8.55	123.47	128.60
15	1H	1373	G	C5-C6-O6	-8.55	123.47	128.60
15	14	2557	A	N1-C2-N3	8.55	133.58	129.30
15	1H	2335	A	O5'-P-OP1	-8.55	98.00	105.70
15	14	1651	U	C4-C5-C6	8.55	124.83	119.70
15	1H	1252	A	C5-N7-C8	-8.54	99.63	103.90
15	14	555	A	N1-C6-N6	8.54	123.73	118.60
15	1H	664	A	C8-N9-C4	8.54	109.22	105.80
15	1H	2761	C	O5'-P-OP1	-8.54	98.02	105.70
15	1H	38	A	C2-N3-C4	8.54	114.87	110.60
1	1G	1594	G	N3-C2-N2	-8.54	113.92	119.90
15	14	2350	A	N1-C6-N6	-8.54	113.48	118.60
15	1H	2341	C	O5'-P-OP1	-8.53	98.02	105.70
15	1H	2704	U	C5-C6-N1	-8.53	118.44	122.70
15	14	2461	G	N1-C2-N2	-8.53	108.53	116.20
52	V4	72	C	C6-N1-C2	8.53	123.71	120.30
15	1H	1681	A	N1-C6-N6	8.53	123.72	118.60
15	1H	1830	U	N3-C4-C5	8.53	119.72	114.60
15	14	1457	C	N1-C2-O2	-8.53	113.78	118.90
15	14	1680	C	O5'-P-OP1	-8.53	98.03	105.70
15	1H	888	U	C5-C4-O4	8.52	131.01	125.90
15	1H	1038	A	N7-C8-N9	8.52	118.06	113.80
15	1H	321	C	C5-C6-N1	-8.52	116.74	121.00
15	14	111	G	N3-C4-C5	8.52	132.86	128.60
15	14	1806	G	C8-N9-C4	8.52	109.81	106.40
15	1H	288	G	P-O3'-C3'	8.52	129.92	119.70
1	13	2128	G	OP1-P-OP2	-8.52	106.82	119.60
15	1H	666	U	N3-C2-O2	-8.52	116.24	122.20
15	1H	1955	G	O5'-P-OP1	-8.52	98.03	105.70
1	1G	2075	C	C2-N1-C1'	8.52	128.17	118.80
15	1H	1939	C	C5-C4-N4	8.51	126.16	120.20
15	1H	2088	C	OP1-P-OP2	-8.51	106.83	119.60
15	14	195	G	N7-C8-N9	-8.51	108.84	113.10
15	14	2087	A	N1-C2-N3	-8.51	125.04	129.30
15	1H	980	A	O5'-P-OP2	-8.51	98.04	105.70
15	1H	2109	C	C2-N3-C4	-8.51	115.65	119.90
15	14	592	A	C5-N7-C8	-8.51	99.64	103.90
15	1H	1318	A	C2-N3-C4	-8.50	106.35	110.60
15	14	547	G	OP1-P-OP2	-8.50	106.85	119.60
15	14	801	A	P-O3'-C3'	8.50	129.90	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1426	G	C8-N9-C4	-8.50	103.00	106.40
15	1H	1069	A	N3-C4-C5	8.49	132.75	126.80
15	14	1703	G	O5'-P-OP2	-8.49	98.05	105.70
15	1H	1465	G	O5'-P-OP2	-8.49	98.06	105.70
15	14	1252	A	N1-C6-N6	8.49	123.69	118.60
15	14	519	A	O5'-P-OP2	-8.49	98.06	105.70
15	14	2409	C	N3-C2-O2	-8.49	115.96	121.90
15	14	1519	A	C8-N9-C4	-8.49	102.40	105.80
15	1H	1866	C	C6-N1-C2	-8.49	116.91	120.30
15	14	1460	C	N3-C2-O2	-8.49	115.96	121.90
1	1G	2092	G	C5-C6-O6	-8.48	123.51	128.60
15	1H	1659	A	O5'-P-OP1	-8.48	98.07	105.70
15	1H	2284	A	C2-N3-C4	-8.48	106.36	110.60
15	1H	2505	G	N1-C2-N2	-8.48	108.57	116.20
15	14	753	G	N1-C6-O6	8.48	124.99	119.90
15	14	1811	U	C5-C6-N1	-8.48	118.46	122.70
15	1H	179	G	C5-C6-N1	8.48	115.74	111.50
15	1H	1663	A	C6-C5-N7	-8.48	126.37	132.30
15	14	2371	C	N3-C2-O2	8.48	127.83	121.90
15	1H	2523	G	N1-C6-O6	-8.47	114.82	119.90
15	1H	2613	A	OP2-P-O3'	8.47	123.84	105.20
15	14	2466	A	N7-C8-N9	8.47	118.04	113.80
15	1H	2383	C	N3-C4-C5	-8.47	118.51	121.90
15	1H	619	U	C5-C6-N1	-8.47	118.47	122.70
15	1H	468	G	OP1-P-OP2	-8.47	106.90	119.60
15	1H	1679	G	O5'-P-OP2	8.46	120.86	110.70
15	14	355	A	C5-N7-C8	-8.47	99.67	103.90
26	16	87	G	N1-C6-O6	8.46	124.98	119.90
15	1H	2861	G	O4'-C1'-N9	8.46	114.97	108.20
52	X1	5	G	C8-N9-C4	8.46	109.78	106.40
1	13	1586	G	N3-C4-N9	8.46	131.07	126.00
15	1H	56	C	O5'-P-OP2	-8.46	98.09	105.70
15	1H	1618	G	C5-N7-C8	-8.46	100.07	104.30
15	14	1070	G	N9-C4-C5	8.46	108.78	105.40
1	13	1239	G	N7-C8-N9	-8.45	108.87	113.10
15	1H	1786	C	N3-C2-O2	8.45	127.82	121.90
15	14	1833	G	O5'-P-OP2	-8.45	98.09	105.70
15	1H	785	C	O5'-P-OP2	8.45	120.84	110.70
15	1H	1982	C	OP1-P-OP2	-8.45	106.93	119.60
15	14	690	C	C2-N1-C1'	8.45	128.09	118.80
15	1H	2095	G	N3-C2-N2	8.45	125.81	119.90
15	14	2884	C	O5'-P-OP2	-8.45	98.10	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	648	A	N7-C8-N9	8.45	118.02	113.80
15	14	179	G	C4-C5-N7	8.45	114.18	110.80
15	1H	839	C	N3-C2-O2	8.44	127.81	121.90
15	14	1975	G	C2-N3-C4	-8.44	107.68	111.90
15	1H	2444	G	OP2-P-O3'	8.43	123.75	105.20
15	14	654	A	O5'-P-OP2	-8.43	98.11	105.70
1	13	1950	G	N1-C6-O6	8.43	124.96	119.90
15	1H	1538	U	C5-C4-O4	8.43	130.96	125.90
15	14	875	U	C5-C6-N1	-8.43	118.48	122.70
15	14	1841	G	C8-N9-C4	8.43	109.77	106.40
26	16	58	G	O5'-P-OP2	-8.43	98.11	105.70
15	1H	1497	G	N1-C6-O6	-8.42	114.85	119.90
15	1H	1863	A	OP1-P-OP2	8.42	132.23	119.60
15	14	487	U	O5'-P-OP2	-8.42	98.12	105.70
1	13	967	G	C5-C6-O6	8.42	133.65	128.60
15	1H	16	G	O5'-P-OP2	-8.42	98.12	105.70
15	1H	140	A	C5-C6-N1	-8.42	113.49	117.70
15	14	1619	A	N7-C8-N9	8.42	118.01	113.80
15	14	2263	C	N3-C2-O2	-8.42	116.01	121.90
15	1H	1653	C	O5'-P-OP1	-8.41	98.13	105.70
15	1H	2389	C	C5-C6-N1	-8.41	116.80	121.00
15	14	824	G	N3-C2-N2	8.41	125.79	119.90
15	14	1353	C	N3-C4-N4	-8.41	112.11	118.00
15	1H	1549	G	O5'-P-OP2	-8.41	98.13	105.70
15	1H	400	G	O4'-C1'-N9	8.40	114.92	108.20
15	1H	648	A	N3-C4-N9	-8.40	120.68	127.40
15	14	1839	U	O5'-P-OP1	-8.40	98.14	105.70
15	14	648	A	C5-C6-N1	-8.40	113.50	117.70
15	1H	2600	U	N1-C2-O2	8.40	128.68	122.80
15	1H	244	G	O5'-P-OP1	-8.40	98.14	105.70
15	14	111	G	N1-C6-O6	8.40	124.94	119.90
15	14	2711	U	O5'-P-OP1	-8.40	98.14	105.70
15	14	823	A	C5-C6-N1	-8.39	113.50	117.70
15	14	585	C	C6-N1-C2	8.39	123.66	120.30
1	13	1931	G	N1-C6-O6	8.39	124.93	119.90
1	13	2029	G	N3-C2-N2	-8.39	114.03	119.90
15	14	812	G	O5'-P-OP2	-8.39	98.15	105.70
15	1H	1584	U	C2-N1-C1'	8.39	127.76	117.70
1	13	1530	A	N1-C2-N3	-8.38	125.11	129.30
1	13	1950	G	O5'-P-OP1	-8.38	98.16	105.70
1	13	2032	C	C5-C6-N1	8.38	125.19	121.00
15	1H	1614	C	N3-C2-O2	-8.38	116.04	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	125	A	O5'-P-OP2	-8.38	98.16	105.70
15	14	1797	G	O5'-P-OP2	-8.38	98.16	105.70
15	1H	1665	A	C6-C5-N7	-8.37	126.44	132.30
15	14	878	A	OP1-P-OP2	8.37	132.16	119.60
15	14	1001	G	C5-C6-O6	8.37	133.62	128.60
15	1H	829	G	N1-C2-N3	8.37	128.92	123.90
15	14	829	G	O5'-P-OP2	-8.37	98.17	105.70
26	16	83	G	O4'-C1'-N9	8.37	114.89	108.20
15	1H	1794	A	O5'-P-OP2	-8.36	98.17	105.70
1	13	1507	U	O5'-P-OP2	-8.36	98.17	105.70
1	13	2142	A	C8-N9-C4	-8.36	102.45	105.80
15	1H	590	C	C6-N1-C2	-8.36	116.95	120.30
15	14	729	G	C6-C5-N7	-8.36	125.38	130.40
15	1H	663	G	O5'-P-OP2	8.36	120.73	110.70
15	14	2361	A	N3-C4-N9	-8.36	120.71	127.40
15	14	2458	C	N3-C4-C5	-8.36	118.56	121.90
1	1G	2125	A	C6-C5-N7	-8.36	126.45	132.30
15	1H	537	C	OP1-P-OP2	8.36	132.13	119.60
15	1H	2533	A	N1-C2-N3	8.36	133.48	129.30
26	1J	91	G	C4-C5-N7	8.36	114.14	110.80
15	1H	1861	C	N3-C2-O2	-8.35	116.05	121.90
15	1H	2095	G	N1-C2-N2	-8.35	108.68	116.20
15	1H	1479	C	O5'-P-OP2	-8.35	98.19	105.70
15	1H	2263	C	N3-C4-N4	-8.35	112.16	118.00
15	14	1479	C	O5'-P-OP2	-8.35	98.19	105.70
15	1H	1872	C	O5'-P-OP1	-8.34	98.19	105.70
26	16	69	G	O5'-P-OP1	-8.34	98.19	105.70
15	14	186	A	O4'-C1'-N9	8.34	114.87	108.20
1	1G	1298	U	O5'-P-OP2	-8.34	98.19	105.70
15	1H	2626	U	OP2-P-O3'	8.34	123.55	105.20
1	1G	1886	C	C6-N1-C2	-8.34	116.97	120.30
15	1H	793	G	O5'-P-OP2	-8.34	98.20	105.70
15	1H	2407	A	N3-C4-N9	-8.33	120.73	127.40
15	14	2588	C	C5-C4-N4	-8.33	114.37	120.20
15	1H	725	A	OP1-P-OP2	8.33	132.09	119.60
15	14	459	G	O5'-P-OP1	-8.33	98.20	105.70
1	1G	1079	G	O5'-P-OP2	-8.33	98.21	105.70
15	1H	1391	A	O5'-P-OP2	-8.33	98.21	105.70
15	1H	1608	A	N1-C2-N3	8.33	133.46	129.30
15	1H	1069	A	C8-N9-C4	-8.32	102.47	105.80
15	14	2247	U	N3-C4-O4	-8.32	113.57	119.40
1	13	696	A	C8-N9-C4	-8.32	102.47	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1205	A	N1-C6-N6	8.32	123.59	118.60
1	13	2121	U	C2-N1-C1'	8.32	127.68	117.70
15	1H	1924	G	C6-N1-C2	8.32	130.09	125.10
15	14	2611	U	N1-C2-N3	8.32	119.89	114.90
15	1H	597	A	C5-N7-C8	8.32	108.06	103.90
15	14	2512	A	N1-C6-N6	-8.32	113.61	118.60
52	X1	76	A	N1-C6-N6	8.32	123.59	118.60
15	1H	977	U	N1-C2-N3	8.31	119.89	114.90
15	1H	1445	U	C5-C4-O4	8.31	130.89	125.90
15	1H	30	G	N1-C2-N3	8.31	128.89	123.90
1	13	1429	G	C5-C6-O6	-8.31	123.61	128.60
15	14	1545	A	C4-C5-N7	8.31	114.85	110.70
15	1H	2266	G	N3-C2-N2	-8.31	114.08	119.90
1	1G	679	A	O5'-P-OP2	-8.31	98.22	105.70
15	14	620	C	C5-C4-N4	-8.31	114.39	120.20
1	1G	961	C	C6-N1-C2	8.30	123.62	120.30
15	1H	2512	A	C6-N1-C2	-8.30	113.62	118.60
15	14	481	C	C5-C6-N1	-8.30	116.85	121.00
15	14	2557	A	P-O3'-C3'	8.30	129.66	119.70
15	1H	1873	G	C8-N9-C1'	-8.30	116.21	127.00
15	1H	740	C	C5-C6-N1	-8.30	116.85	121.00
15	14	1991	A	N1-C6-N6	-8.29	113.62	118.60
15	14	1345	G	N7-C8-N9	-8.29	108.95	113.10
15	14	2557	A	N1-C6-N6	8.29	123.58	118.60
15	1H	1674	C	O5'-P-OP2	-8.29	98.24	105.70
15	14	781	C	N3-C4-N4	8.29	123.80	118.00
15	14	799	A	C8-N9-C4	-8.29	102.48	105.80
26	16	118	G	C5-N7-C8	-8.29	100.16	104.30
15	1H	2086	G	OP2-P-O3'	8.28	123.42	105.20
52	V4	76	A	C5-N7-C8	-8.29	99.76	103.90
15	14	557	G	C2-N3-C4	-8.28	107.76	111.90
15	14	1668	G	O5'-P-OP2	-8.28	98.25	105.70
15	14	169	G	C8-N9-C4	8.28	109.71	106.40
15	1H	2453	U	N1-C2-O2	-8.28	117.01	122.80
1	13	1152	A	C2-N3-C4	-8.28	106.46	110.60
15	14	1061	C	C6-N1-C2	-8.28	116.99	120.30
15	14	2329	C	C6-N1-C2	-8.27	116.99	120.30
15	14	2698	C	N3-C4-C5	-8.27	118.59	121.90
15	1H	896	U	C4-C5-C6	8.27	124.66	119.70
15	1H	2300	C	N3-C4-N4	-8.27	112.21	118.00
15	1H	1340	C	O5'-P-OP2	-8.27	98.26	105.70
15	14	2729	A	N7-C8-N9	8.27	117.93	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	2795	U	C2-N3-C4	-8.27	122.04	127.00
1	13	2140	G	O5'-P-OP2	-8.26	98.27	105.70
15	1H	704	A	C8-N9-C4	-8.26	102.50	105.80
15	1H	1388	G	N3-C4-C5	-8.26	124.47	128.60
15	14	188	C	O5'-P-OP1	-8.26	98.27	105.70
15	14	2454	A	O5'-P-OP2	-8.26	98.27	105.70
1	13	1389	G	C5-C6-O6	-8.26	123.65	128.60
15	1H	2338	G	N1-C6-O6	8.25	124.85	119.90
15	1H	970	U	C5-C4-O4	-8.25	120.95	125.90
15	1H	1858	G	O5'-P-OP2	-8.25	98.28	105.70
15	14	1381	G	C8-N9-C1'	8.25	137.72	127.00
15	14	1450	G	N9-C4-C5	8.25	108.70	105.40
15	1H	1670	U	N1-C2-O2	-8.24	117.03	122.80
15	14	2328	C	C6-N1-C2	-8.24	117.00	120.30
15	1H	1373	G	N1-C6-O6	8.24	124.84	119.90
15	1H	2555	C	C6-N1-C2	8.24	123.59	120.30
15	1H	1954	G	O5'-P-OP2	-8.24	98.29	105.70
15	14	964	G	O5'-P-OP1	-8.24	98.29	105.70
1	13	1586	G	N1-C2-N2	-8.23	108.79	116.20
15	1H	2392	A	N9-C4-C5	-8.23	102.51	105.80
15	14	963	C	C6-N1-C2	-8.23	117.01	120.30
15	14	2557	A	C2-N3-C4	-8.23	106.48	110.60
15	1H	848	G	C8-N9-C4	8.23	109.69	106.40
15	1H	2727	U	N3-C4-O4	-8.23	113.64	119.40
15	1H	1070	G	C8-N9-C4	-8.23	103.11	106.40
15	14	1647	C	O5'-P-OP2	8.23	120.57	110.70
15	1H	965	A	C8-N9-C4	-8.22	102.51	105.80
1	1G	964	U	N1-C2-O2	-8.22	117.05	122.80
15	1H	2407	A	C8-N9-C4	-8.22	102.51	105.80
15	14	1694	C	N3-C2-O2	-8.22	116.15	121.90
15	14	2002	A	N1-C2-N3	8.22	133.41	129.30
26	1J	24	U	C6-N1-C2	-8.22	116.07	121.00
1	13	969	C	O5'-P-OP1	-8.22	98.31	105.70
15	14	1697	G	C5-C6-N1	8.21	115.61	111.50
15	1H	106	U	C5-C6-N1	-8.21	118.59	122.70
15	1H	2727	U	C2-N3-C4	-8.21	122.07	127.00
15	1H	2104	U	N1-C2-O2	8.21	128.55	122.80
15	1H	349	A	O5'-P-OP1	-8.21	98.32	105.70
4	11	157	ARG	NE-CZ-NH1	-8.20	116.20	120.30
15	1H	1477	C	C5-C6-N1	-8.20	116.90	121.00
15	14	1370	A	C5-C6-N6	-8.20	117.14	123.70
15	1H	2326	A	C5-N7-C8	-8.19	99.80	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2483	G	N7-C8-N9	8.20	117.20	113.10
15	14	1576	G	C5-C6-N1	-8.20	107.40	111.50
15	14	2266	G	C4-C5-N7	-8.19	107.52	110.80
15	14	2846	G	N1-C6-O6	8.19	124.81	119.90
15	1H	1998	G	C8-N9-C4	-8.19	103.12	106.40
15	1H	255	A	N7-C8-N9	8.19	117.89	113.80
15	1H	838	A	C2-N3-C4	-8.19	106.51	110.60
15	1H	992	A	C8-N9-C1'	-8.19	112.97	127.70
15	14	555	A	C4-C5-N7	8.19	114.79	110.70
15	14	1979	G	N3-C2-N2	-8.19	114.17	119.90
15	1H	249	G	N1-C2-N3	8.18	128.81	123.90
15	1H	1830	U	C2-N3-C4	-8.18	122.09	127.00
15	1H	2392	A	O5'-P-OP2	8.18	120.52	110.70
26	16	46	G	C8-N9-C1'	8.18	137.64	127.00
15	1H	1825	A	O5'-P-OP2	-8.18	98.34	105.70
15	14	892	G	O5'-P-OP1	8.18	120.52	110.70
15	14	1662	G	N9-C4-C5	-8.18	102.13	105.40
15	14	2341	C	O5'-P-OP1	-8.18	98.34	105.70
15	14	1696	C	C6-N1-C2	8.18	123.57	120.30
15	14	2447	A	N9-C4-C5	-8.18	102.53	105.80
15	14	2727	U	N3-C2-O2	-8.18	116.48	122.20
52	V1	72	C	N1-C2-N3	-8.18	113.48	119.20
15	1H	2333	G	C8-N9-C4	-8.17	103.13	106.40
1	1G	1495	A	C2-N3-C4	-8.17	106.51	110.60
15	1H	1074	U	N1-C2-O2	8.17	128.52	122.80
15	1H	199	C	C2-N3-C4	-8.17	115.82	119.90
1	13	2030	C	N3-C4-C5	-8.17	118.63	121.90
15	1H	857	G	N1-C2-N3	8.17	128.80	123.90
15	1H	889	C	C5-C6-N1	-8.17	116.92	121.00
15	1H	1478	G	C5-C6-O6	8.17	133.50	128.60
15	14	2002	A	N1-C6-N6	-8.17	113.70	118.60
15	1H	1713	C	C5-C4-N4	-8.17	114.48	120.20
15	14	980	A	C6-C5-N7	-8.17	126.58	132.30
1	13	1188	A	O5'-P-OP2	-8.16	98.35	105.70
15	1H	2015	C	N3-C4-C5	8.16	125.17	121.90
15	1H	2663	C	C6-N1-C2	8.16	123.57	120.30
15	1H	1479	C	OP1-P-O3'	8.16	123.16	105.20
15	14	618	G	O5'-P-OP2	-8.16	98.36	105.70
1	13	1190	U	C5-C4-O4	-8.16	121.01	125.90
15	1H	140	A	C2-N3-C4	-8.16	106.52	110.60
15	1H	802	C	C5-C4-N4	8.16	125.91	120.20
15	14	1624	C	N3-C4-C5	8.16	125.16	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	P8	33	ARG	NE-CZ-NH1	-8.16	116.22	120.30
15	1H	1559	A	C2-N3-C4	8.15	114.68	110.60
15	14	588	G	C8-N9-C4	-8.15	103.14	106.40
15	1H	907	U	O5'-P-OP2	-8.15	98.36	105.70
15	1H	1039	C	O5'-P-OP1	-8.15	98.36	105.70
15	1H	2045	A	C4-C5-N7	8.15	114.78	110.70
1	1G	2122	A	N7-C8-N9	-8.15	109.73	113.80
15	1H	2454	A	C2-N3-C4	-8.15	106.53	110.60
15	1H	1651	U	O5'-P-OP2	8.14	120.47	110.70
1	13	1319	G	C8-N9-C1'	-8.14	116.42	127.00
1	13	2072	A	N9-C4-C5	-8.14	102.54	105.80
15	1H	1924	G	C4-N9-C1'	-8.14	115.92	126.50
1	1G	2025	C	O5'-P-OP2	-8.14	98.38	105.70
15	1H	827	G	O5'-P-OP2	-8.14	98.38	105.70
15	1H	2438	U	C2-N3-C4	-8.14	122.12	127.00
15	1H	777	G	O5'-P-OP2	-8.13	98.38	105.70
15	1H	987	G	C2-N3-C4	8.13	115.97	111.90
15	1H	1249	C	N1-C2-O2	-8.13	114.02	118.90
1	1G	1196	G	O5'-P-OP1	-8.13	98.38	105.70
15	1H	909	U	O5'-P-OP1	8.13	120.46	110.70
15	1H	1682	A	C4-C5-N7	8.13	114.77	110.70
15	14	1864	C	C5-C4-N4	-8.13	114.51	120.20
26	16	8	C	N3-C2-O2	8.13	127.59	121.90
15	1H	2331	C	O5'-P-OP2	8.13	120.45	110.70
15	14	1748	A	C4-C5-C6	8.13	121.06	117.00
1	1G	986	C	C6-N1-C2	-8.13	117.05	120.30
1	1G	1320	G	N1-C6-O6	8.13	124.78	119.90
1	1G	1054	G	N1-C6-O6	-8.12	115.03	119.90
15	1H	2560	G	C5-C6-O6	-8.12	123.73	128.60
26	16	16	U	OP1-P-OP2	8.12	131.78	119.60
1	13	747	G	C4-C5-N7	8.12	114.05	110.80
15	1H	2006	A	C5-C6-N6	-8.12	117.21	123.70
15	1H	2445	A	C4-C5-C6	-8.12	112.94	117.00
15	14	2500	G	N1-C6-O6	8.12	124.77	119.90
15	1H	1372	U	OP1-P-OP2	-8.11	107.43	119.60
15	1H	1964	U	C5-C4-O4	-8.12	121.03	125.90
15	1H	871	U	N1-C2-N3	8.11	119.77	114.90
15	1H	2843	G	C8-N9-C4	-8.11	103.16	106.40
15	14	1252	A	C6-C5-N7	-8.11	126.62	132.30
15	1H	805	C	C6-N1-C2	-8.11	117.06	120.30
15	1H	886	C	O5'-P-OP2	8.10	120.42	110.70
15	1H	124	A	OP2-P-O3'	8.10	123.02	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1577	A	C2-N3-C4	-8.10	106.55	110.60
15	1H	803	C	C5-C6-N1	-8.10	116.95	121.00
15	1H	833	A	O4'-C1'-N9	8.10	114.68	108.20
15	14	785	C	O5'-P-OP2	8.10	120.42	110.70
15	1H	728	C	N3-C4-C5	8.10	125.14	121.90
15	14	878	A	O5'-P-OP2	-8.10	98.42	105.70
15	1H	2344	G	OP1-P-OP2	8.09	131.74	119.60
1	1G	730	C	O5'-P-OP1	-8.09	98.42	105.70
15	14	2488	U	N1-C2-O2	8.09	128.46	122.80
15	1H	1770	A	O4'-C1'-N9	8.09	114.67	108.20
15	14	962	C	C6-N1-C2	-8.09	117.07	120.30
15	14	1021	G	C5-C6-O6	-8.09	123.75	128.60
15	14	2031	C	N3-C4-C5	8.09	125.13	121.90
15	1H	1416	A	N1-C6-N6	8.08	123.45	118.60
15	1H	850	G	N1-C2-N3	8.08	128.75	123.90
15	14	2273	C	OP1-P-O3'	8.08	122.97	105.20
15	14	2570	U	N1-C2-O2	-8.08	117.14	122.80
15	14	1429	G	N9-C4-C5	-8.08	102.17	105.40
15	14	1793	A	C8-N9-C4	8.08	109.03	105.80
15	1H	2601	C	N3-C2-O2	8.07	127.55	121.90
15	1H	2400	C	N1-C2-O2	-8.07	114.06	118.90
15	14	1440	U	O5'-P-OP2	8.07	120.39	110.70
15	14	1746	G	O5'-P-OP2	-8.07	98.44	105.70
15	14	2087	A	O5'-P-OP2	-8.07	98.44	105.70
15	1H	837	A	C6-N1-C2	8.07	123.44	118.60
15	1H	1642	G	O5'-P-OP2	-8.07	98.44	105.70
15	1H	546	U	N1-C2-O2	-8.06	117.16	122.80
15	1H	288	G	N3-C4-C5	-8.06	124.57	128.60
15	1H	1462	G	C8-N9-C4	-8.06	103.17	106.40
15	14	2289	A	O5'-P-OP1	8.06	120.38	110.70
4	11	46	GLN	C-N-CA	-8.06	105.37	122.30
15	1H	535	G	N7-C8-N9	8.06	117.13	113.10
15	14	868	A	C8-N9-C4	-8.06	102.58	105.80
15	14	872	G	O5'-P-OP2	-8.06	98.44	105.70
15	14	1857	G	N9-C4-C5	8.06	108.62	105.40
15	1H	1684	A	N1-C6-N6	8.06	123.44	118.60
15	14	2696	C	C5-C6-N1	-8.06	116.97	121.00
15	14	717	G	C2-N3-C4	-8.05	107.87	111.90
1	1G	2090	G	O5'-P-OP2	-8.05	98.45	105.70
15	1H	1957	A	O5'-P-OP2	8.05	120.36	110.70
15	14	839	C	C6-N1-C2	8.05	123.52	120.30
15	14	879	G	N3-C2-N2	8.05	125.54	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1838	C	OP1-P-OP2	-8.05	107.52	119.60
15	1H	1448	C	C5-C6-N1	8.05	125.03	121.00
15	1H	1710	C	N1-C2-O2	8.05	123.73	118.90
15	1H	2443	G	N3-C2-N2	8.05	125.53	119.90
15	14	113	C	O5'-P-OP1	-8.05	98.46	105.70
15	14	864	C	O5'-P-OP2	-8.05	98.46	105.70
15	14	1728	G	C6-C5-N7	-8.05	125.57	130.40
15	14	1946	G	N3-C2-N2	8.05	125.53	119.90
15	1H	675	G	C5-C6-N1	-8.04	107.48	111.50
15	14	2533	A	N1-C2-N3	8.04	133.32	129.30
1	13	1420	G	C8-N9-C4	8.04	109.62	106.40
15	1H	830	A	C5-C6-N1	8.04	121.72	117.70
15	1H	1748	A	C8-N9-C4	-8.04	102.58	105.80
15	1H	1855	A	O5'-P-OP2	-8.04	98.47	105.70
15	1H	1988	U	C4-C5-C6	8.04	124.52	119.70
15	14	1954	G	N1-C6-O6	-8.04	115.08	119.90
1	1G	947	G	N1-C6-O6	8.04	124.72	119.90
15	1H	263	C	O5'-P-OP2	-8.04	98.47	105.70
15	1H	2421	U	O5'-P-OP2	8.03	120.34	110.70
26	1J	92	A	C2-N3-C4	8.04	114.62	110.60
1	13	1266	G	N1-C6-O6	-8.03	115.08	119.90
15	14	791	G	C8-N9-C4	8.03	109.61	106.40
15	1H	1862	G	C8-N9-C4	8.03	109.61	106.40
15	1H	2703	U	C2-N3-C4	-8.03	122.19	127.00
15	1H	920	U	N3-C4-O4	8.02	125.02	119.40
15	1H	1815	C	N3-C2-O2	-8.02	116.28	121.90
15	14	490	C	O5'-P-OP2	-8.02	98.48	105.70
15	14	1975	G	C6-N1-C2	8.02	129.91	125.10
52	V1	60	U	C5-C6-N1	8.02	126.71	122.70
15	14	554	C	N3-C2-O2	-8.02	116.29	121.90
15	14	2452	U	C5-C4-O4	8.02	130.71	125.90
15	1H	1489	G	O5'-P-OP2	-8.02	98.48	105.70
15	14	791	G	C5-C6-N1	-8.02	107.49	111.50
1	1G	860	C	C6-N1-C2	-8.02	117.09	120.30
15	1H	2053	U	N3-C4-O4	8.02	125.01	119.40
15	14	785	C	N1-C2-O2	-8.01	114.09	118.90
15	14	1177	A	O5'-P-OP2	-8.01	98.49	105.70
15	14	1975	G	O4'-C1'-N9	8.01	114.61	108.20
52	W1	37	A	C6-N1-C2	8.01	123.41	118.60
1	1G	815	C	C6-N1-C2	-8.01	117.10	120.30
15	1H	70	A	C6-N1-C2	-8.01	113.79	118.60
15	1H	850	G	C4-C5-N7	-8.01	107.60	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1290	A	C5-C6-N1	-8.01	113.69	117.70
15	1H	2691	C	C6-N1-C2	8.01	123.50	120.30
15	14	1348	G	O5'-P-OP2	8.01	120.31	110.70
15	14	1619	A	C6-C5-N7	-8.01	126.69	132.30
15	1H	835	C	N3-C4-N4	-8.01	112.39	118.00
15	14	2421	U	N3-C2-O2	-8.01	116.59	122.20
1	13	1124	U	O5'-P-OP1	-8.01	98.50	105.70
1	1G	1941	C	C6-N1-C2	-8.01	117.10	120.30
15	14	1887	A	O5'-P-OP1	-8.01	98.50	105.70
15	14	557	G	C5-N7-C8	-8.00	100.30	104.30
15	14	2607	G	O5'-P-OP2	-8.00	98.50	105.70
1	13	1440	C	C6-N1-C2	8.00	123.50	120.30
15	1H	1693	G	N3-C4-C5	-8.00	124.60	128.60
15	14	1337	U	N3-C2-O2	-8.00	116.60	122.20
15	1H	1748	A	O4'-C1'-N9	8.00	114.60	108.20
15	1H	2609	C	N1-C2-O2	8.00	123.70	118.90
15	1H	37	C	O5'-P-OP2	-7.99	98.51	105.70
15	1H	1584	U	N1-C2-O2	7.99	128.40	122.80
15	1H	1232	G	OP2-P-O3'	7.99	122.78	105.20
15	1H	1486	C	OP1-P-OP2	-7.99	107.61	119.60
15	14	592	A	N1-C6-N6	7.99	123.39	118.60
1	13	1692	G	N3-C2-N2	-7.99	114.31	119.90
15	1H	1241	G	O5'-P-OP2	-7.99	98.51	105.70
15	1H	2460	G	N3-C2-N2	7.99	125.49	119.90
15	1H	2653	G	C2-N3-C4	7.99	115.89	111.90
15	14	179	G	C5-C6-N1	7.99	115.49	111.50
15	14	775	G	O5'-P-OP1	-7.99	98.51	105.70
15	14	832	A	C8-N9-C4	-7.99	102.61	105.80
15	1H	1014	C	C5-C6-N1	-7.98	117.01	121.00
52	W4	37	A	N1-C2-N3	-7.98	125.31	129.30
15	14	1301	G	C5-C6-O6	-7.98	123.81	128.60
15	1H	2315	G	C8-N9-C4	-7.98	103.21	106.40
15	14	2401	C	C5-C4-N4	-7.98	114.61	120.20
52	X1	2	C	O5'-P-OP2	-7.98	98.52	105.70
15	14	1400	C	C2-N3-C4	-7.98	115.91	119.90
15	14	2704	U	C5-C4-O4	7.98	130.69	125.90
15	14	179	G	C5-C6-O6	-7.98	123.81	128.60
36	N8	41	PRO	C-N-CD	-7.98	103.05	120.60
15	1H	2003	A	C8-N9-C4	-7.97	102.61	105.80
15	1H	2057	G	C2-N3-C4	-7.97	107.91	111.90
15	1H	2248	U	N1-C2-N3	7.97	119.68	114.90
15	1H	535	G	C5-N7-C8	-7.97	100.32	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2393	A	C8-N9-C4	7.97	108.99	105.80
15	1H	2461	G	N3-C2-N2	7.97	125.48	119.90
15	14	2460	G	N1-C6-O6	-7.97	115.12	119.90
15	14	2467	C	N1-C2-O2	-7.96	114.12	118.90
15	1H	1069	A	N3-C4-N9	-7.96	121.03	127.40
15	14	1001	G	C4-C5-N7	-7.96	107.62	110.80
15	14	2466	A	C5-C6-N6	7.96	130.07	123.70
15	14	795	A	N1-C6-N6	-7.96	113.83	118.60
1	13	2139	G	C4-C5-N7	7.96	113.98	110.80
15	1H	803	C	N1-C2-N3	7.96	124.77	119.20
15	1H	1665	A	N1-C6-N6	7.96	123.37	118.60
15	14	729	G	C8-N9-C4	-7.96	103.22	106.40
15	1H	140	A	N3-C4-C5	7.95	132.37	126.80
15	14	823	A	C8-N9-C1'	7.95	142.01	127.70
15	14	2528	G	C5-C6-N1	7.95	115.48	111.50
15	1H	1720	C	C2-N3-C4	-7.95	115.92	119.90
15	1H	1795	C	N1-C2-O2	-7.95	114.13	118.90
15	1H	2449	A	C2-N3-C4	-7.95	106.62	110.60
15	1H	1430	G	C5-C6-O6	-7.95	123.83	128.60
15	1H	2384	A	N1-C6-N6	-7.95	113.83	118.60
15	1H	2438	U	N1-C2-N3	7.95	119.67	114.90
15	1H	1003	G	N3-C2-N2	-7.95	114.34	119.90
15	1H	740	C	N1-C2-O2	-7.94	114.13	118.90
1	1G	747	G	C5-N7-C8	-7.94	100.33	104.30
15	14	2366	G	C2-N3-C4	7.94	115.87	111.90
15	14	2516	C	C2-N1-C1'	-7.94	110.07	118.80
52	X1	69	G	N3-C4-N9	-7.94	121.24	126.00
1	1G	1819	C	C6-N1-C2	-7.93	117.13	120.30
15	1H	191	C	C2-N3-C4	-7.93	115.93	119.90
15	1H	250	G	C5-C6-N1	7.93	115.47	111.50
15	1H	1069	A	N1-C6-N6	7.93	123.36	118.60
15	1H	2597	G	C5-C6-O6	7.93	133.36	128.60
15	14	639	U	N3-C2-O2	-7.93	116.65	122.20
15	14	538	U	N3-C4-C5	-7.93	109.84	114.60
15	14	1861	C	C2-N3-C4	-7.93	115.93	119.90
15	14	2231	G	C4-N9-C1'	7.93	136.81	126.50
1	13	775	C	N1-C2-O2	-7.93	114.14	118.90
15	1H	712	G	OP1-P-OP2	7.93	131.50	119.60
15	1H	1035	G	C4-C5-N7	-7.93	107.63	110.80
1	13	1355	C	N1-C2-O2	7.93	123.66	118.90
15	1H	819	G	C8-N9-C4	7.93	109.57	106.40
15	14	1654	C	C2-N3-C4	-7.93	115.94	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1280	G	N1-C6-O6	7.93	124.66	119.90
1	1G	2101	C	N3-C2-O2	-7.93	116.35	121.90
15	1H	562	C	C5-C6-N1	-7.93	117.04	121.00
15	14	1706	C	O5'-P-OP2	-7.93	98.57	105.70
1	1G	1962	C	C6-N1-C2	7.92	123.47	120.30
15	1H	2295	G	OP1-P-O3'	7.92	122.63	105.20
15	1H	648	A	O4'-C1'-N9	7.92	114.54	108.20
15	1H	784	A	C6-N1-C2	-7.92	113.85	118.60
15	1H	2392	A	N1-C6-N6	7.92	123.35	118.60
15	14	1731	G	C5-N7-C8	-7.92	100.34	104.30
1	13	1141	U	N3-C4-O4	-7.92	113.86	119.40
1	13	1232	U	O5'-P-OP1	-7.92	98.58	105.70
1	13	1530	A	C4-C5-C6	-7.92	113.04	117.00
15	1H	12	U	N3-C2-O2	-7.92	116.66	122.20
15	1H	2456	C	OP1-P-OP2	-7.92	107.72	119.60
52	V1	60	U	C6-N1-C2	-7.92	116.25	121.00
1	13	707	G	O5'-P-OP2	-7.91	98.58	105.70
15	14	850	G	N1-C6-O6	-7.91	115.15	119.90
15	1H	657	G	C5-C6-O6	-7.91	123.85	128.60
15	1H	1026	G	O5'-P-OP2	-7.91	98.58	105.70
15	1H	2437	A	O4'-C1'-N9	7.91	114.53	108.20
15	14	537	C	C6-N1-C2	-7.91	117.14	120.30
15	1H	2293	A	C5-N7-C8	7.91	107.85	103.90
15	14	815	C	C2-N3-C4	-7.91	115.95	119.90
15	1H	2653	G	C5-C6-O6	-7.91	123.86	128.60
15	14	2402	U	C5-C6-N1	-7.91	118.75	122.70
1	13	1981	C	C6-N1-C2	-7.90	117.14	120.30
15	1H	1234	G	N7-C8-N9	-7.90	109.15	113.10
15	1H	1672	G	O5'-P-OP1	-7.90	98.59	105.70
15	1H	2622	G	N1-C6-O6	7.90	124.64	119.90
15	14	977	U	N1-C2-O2	7.90	128.33	122.80
15	1H	1570	G	C8-N9-C4	-7.90	103.24	106.40
15	14	789	U	C5-C4-O4	7.90	130.64	125.90
15	14	1637	C	C6-N1-C2	-7.90	117.14	120.30
15	1H	40	C	C6-N1-C2	-7.90	117.14	120.30
15	1H	2795	U	C5-C6-N1	-7.90	118.75	122.70
15	14	1426	G	O5'-P-OP2	-7.90	98.59	105.70
15	14	2505	G	C6-C5-N7	-7.89	125.66	130.40
15	1H	740	C	N3-C2-O2	7.89	127.42	121.90
15	1H	963	C	N1-C2-O2	7.89	123.64	118.90
52	V1	76	A	C8-N9-C4	-7.89	102.64	105.80
15	1H	1423	G	N3-C2-N2	-7.89	114.38	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	140	A	C2-N3-C4	-7.89	106.66	110.60
15	14	1273	C	C6-N1-C2	7.89	123.45	120.30
15	14	2795	U	N3-C4-O4	-7.89	113.88	119.40
1	13	790	C	C6-N1-C2	-7.88	117.15	120.30
15	1H	126	C	C2-N3-C4	-7.88	115.96	119.90
15	14	2301	A	C5-C6-N1	-7.88	113.76	117.70
52	V1	3	C	C6-N1-C2	-7.88	117.15	120.30
1	13	1854	A	N7-C8-N9	7.88	117.74	113.80
15	1H	1835	G	N3-C4-N9	7.88	130.73	126.00
15	14	1176	A	C5-C6-N1	7.88	121.64	117.70
15	14	2246	C	C6-N1-C2	7.88	123.45	120.30
15	14	2745	G	C6-C5-N7	-7.88	125.67	130.40
32	39	84	VAL	C-N-CA	-7.88	105.76	122.30
51	Y1	43	U	N3-C2-O2	-7.88	116.69	122.20
1	13	693	C	C6-N1-C2	7.88	123.45	120.30
15	1H	914	C	C6-N1-C2	7.88	123.45	120.30
15	1H	1035	G	N9-C4-C5	7.87	108.55	105.40
15	1H	1638	C	O5'-P-OP2	7.87	120.15	110.70
15	14	1682	A	N1-C6-N6	7.87	123.32	118.60
15	1H	1271	C	N1-C2-O2	-7.87	114.18	118.90
1	13	1209	U	C2-N3-C4	-7.87	122.28	127.00
15	1H	2483	G	C4-C5-N7	7.87	113.95	110.80
15	1H	46	C	C5-C6-N1	-7.87	117.07	121.00
15	1H	1069	A	N1-C2-N3	7.87	133.23	129.30
1	13	651	U	P-O3'-C3'	7.86	129.14	119.70
1	13	700	C	C6-N1-C2	7.86	123.45	120.30
15	1H	1873	G	C4-C5-N7	7.86	113.95	110.80
1	1G	1305	A	N1-C6-N6	-7.86	113.88	118.60
15	1H	871	U	C6-N1-C2	-7.86	116.28	121.00
15	1H	2273	C	N3-C4-N4	7.86	123.50	118.00
1	13	1598	A	C5-N7-C8	-7.86	99.97	103.90
15	1H	1841	G	N1-C6-O6	7.86	124.61	119.90
15	1H	2614	G	C5-C6-O6	7.86	133.31	128.60
15	1H	203	A	C5-C6-N6	-7.85	117.42	123.70
15	1H	713	C	N3-C4-N4	-7.85	112.50	118.00
15	14	1750	A	O5'-P-OP1	-7.85	98.63	105.70
15	14	2596	G	N1-C6-O6	-7.85	115.19	119.90
15	14	2375	A	C2-N3-C4	-7.85	106.67	110.60
15	14	1252	A	C4-C5-N7	7.85	114.62	110.70
15	14	1924	G	OP2-P-O3'	7.85	122.47	105.20
15	1H	260	A	O5'-P-OP2	-7.85	98.64	105.70
15	1H	490	C	N3-C4-N4	-7.85	112.51	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	725	A	C8-N9-C4	-7.85	102.66	105.80
15	1H	600	A	N1-C2-N3	7.84	133.22	129.30
15	1H	1807	A	C2-N3-C4	-7.84	106.68	110.60
15	1H	1830	U	C5-C6-N1	-7.84	118.78	122.70
15	14	1990	C	N3-C4-C5	7.84	125.04	121.90
15	14	2518	A	N1-C2-N3	-7.84	125.38	129.30
1	13	2121	U	C5-C4-O4	-7.84	121.20	125.90
15	14	2718	C	C4-C5-C6	7.84	121.32	117.40
1	13	1114	G	C8-N9-C4	-7.84	103.27	106.40
15	1H	255	A	C6-C5-N7	-7.84	126.81	132.30
1	1G	1319	G	C4-C5-N7	7.83	113.93	110.80
15	14	1234	G	O5'-P-OP2	-7.83	98.65	105.70
1	13	2042	U	C5-C4-O4	-7.83	121.20	125.90
15	1H	1015	G	O5'-P-OP1	7.83	120.10	110.70
15	1H	1614	C	C6-N1-C2	-7.83	117.17	120.30
15	1H	2518	A	OP1-P-OP2	-7.83	107.85	119.60
1	13	1608	C	N1-C2-O2	-7.83	114.20	118.90
15	1H	119	G	C5-C6-O6	-7.83	123.90	128.60
15	14	34	C	C6-N1-C2	-7.83	117.17	120.30
15	1H	785	C	N1-C2-O2	-7.83	114.20	118.90
15	1H	1706	C	N3-C4-C5	7.83	125.03	121.90
15	1H	2256	A	C4-C5-N7	-7.83	106.78	110.70
1	13	1854	A	C4-C5-N7	7.83	114.61	110.70
15	1H	2325	A	N7-C8-N9	7.83	117.71	113.80
15	1H	34	C	C4-C5-C6	-7.83	113.49	117.40
15	1H	492	U	C5-C6-N1	-7.83	118.79	122.70
15	1H	1046	C	C6-N1-C2	-7.83	117.17	120.30
15	14	1381	G	N9-C4-C5	7.83	108.53	105.40
15	14	2444	G	OP2-P-O3'	7.83	122.42	105.20
1	13	904	A	O5'-P-OP2	7.82	120.09	110.70
15	1H	1682	A	N9-C4-C5	-7.82	102.67	105.80
1	1G	1963	C	C6-N1-C2	-7.82	117.17	120.30
15	1H	241	A	O5'-P-OP1	-7.82	98.66	105.70
15	1H	1191	A	N7-C8-N9	7.82	117.71	113.80
15	1H	2855	G	OP1-P-OP2	-7.82	107.87	119.60
15	1H	1795	C	N3-C2-O2	7.82	127.38	121.90
15	14	835	C	N3-C4-C5	7.82	125.03	121.90
15	1H	1877	C	C2-N3-C4	-7.82	115.99	119.90
15	1H	2787	C	C6-N1-C2	-7.82	117.17	120.30
15	1H	1044	A	O5'-P-OP1	-7.82	98.67	105.70
52	X1	76	A	N9-C4-C5	-7.82	102.67	105.80
15	14	1647	C	C6-N1-C2	-7.81	117.17	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	954	G	C5-C6-O6	7.81	133.29	128.60
15	14	1964	U	N3-C4-C5	7.81	119.29	114.60
52	X1	37	A	C2-N3-C4	7.81	114.51	110.60
15	1H	192	U	C4-C5-C6	-7.81	115.01	119.70
15	1H	861	C	N1-C2-O2	-7.81	114.21	118.90
15	1H	2578	U	N1-C2-O2	7.81	128.27	122.80
1	13	1239	G	C8-N9-C4	7.81	109.52	106.40
15	1H	787	G	C8-N9-C4	7.80	109.52	106.40
15	14	1870	C	O5'-P-OP2	-7.80	98.68	105.70
1	1G	1437	C	N3-C4-N4	-7.80	112.54	118.00
15	14	795	A	O5'-P-OP2	7.80	120.06	110.70
15	14	1690	C	C6-N1-C2	7.80	123.42	120.30
1	13	1387	G	N1-C6-O6	7.80	124.58	119.90
52	V4	76	A	N1-C6-N6	7.80	123.28	118.60
1	13	2142	A	O5'-P-OP2	-7.80	98.68	105.70
15	1H	1727	A	OP1-P-OP2	-7.80	107.91	119.60
15	1H	371	A	N1-C2-N3	7.79	133.20	129.30
15	14	2095	G	N1-C2-N3	7.79	128.58	123.90
15	14	139	A	O4'-C1'-N9	7.79	114.44	108.20
1	13	1829	G	C5-C6-O6	7.79	133.28	128.60
15	1H	419	G	N9-C4-C5	-7.79	102.28	105.40
15	1H	253	C	N3-C2-O2	-7.79	116.45	121.90
15	1H	2392	A	C2-N3-C4	-7.79	106.70	110.60
15	1H	1191	A	C6-C5-N7	-7.79	126.85	132.30
15	1H	1324	A	C5-C6-N6	-7.79	117.47	123.70
15	14	1281	G	OP1-P-OP2	-7.79	107.92	119.60
1	13	1418	U	N3-C4-O4	-7.79	113.95	119.40
15	1H	1178	U	C5-C6-N1	-7.79	118.81	122.70
1	1G	1129	G	O5'-P-OP2	-7.78	98.70	105.70
15	14	2366	G	N3-C4-C5	-7.78	124.71	128.60
52	W4	76	A	N3-C4-C5	-7.78	121.35	126.80
15	1H	1987	C	C2-N3-C4	7.78	123.79	119.90
52	X1	45	U	N3-C2-O2	-7.78	116.75	122.20
15	1H	1964	U	C5-C6-N1	7.78	126.59	122.70
15	14	789	U	OP2-P-O3'	7.78	122.31	105.20
15	1H	718	G	OP1-P-OP2	-7.78	107.94	119.60
15	1H	1257	G	C4-C5-N7	7.78	113.91	110.80
15	14	1849	A	OP1-P-O3'	7.78	122.31	105.20
1	1G	1089	C	N3-C2-O2	-7.78	116.46	121.90
15	1H	216	G	O4'-C1'-N9	7.78	114.42	108.20
15	14	894	G	C5-N7-C8	-7.77	100.41	104.30
15	1H	2009	G	C5-N7-C8	7.77	108.19	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2729	A	C5-C6-N1	-7.77	113.81	117.70
15	14	2725	C	C6-N1-C2	7.77	123.41	120.30
15	1H	1383	G	C8-N9-C4	-7.77	103.29	106.40
1	13	693	C	C5-C6-N1	-7.77	117.12	121.00
15	1H	1250	C	C4-C5-C6	7.77	121.28	117.40
15	14	1723	U	N1-C2-O2	-7.77	117.36	122.80
15	1H	179	G	C4-C5-N7	7.77	113.91	110.80
15	1H	1303	A	C8-N9-C4	-7.77	102.69	105.80
1	13	1189	U	C5-C6-N1	7.76	126.58	122.70
15	1H	1577	A	O4'-C1'-N9	7.76	114.41	108.20
15	14	242	G	C5-C6-O6	7.76	133.26	128.60
15	14	2085	A	OP1-P-OP2	-7.76	107.95	119.60
1	13	1447	G	C8-N9-C4	7.76	109.50	106.40
15	1H	346	G	N1-C6-O6	7.76	124.56	119.90
15	1H	2281	A	C5-C6-N6	-7.76	117.49	123.70
15	14	2626	U	C5-C6-N1	7.76	126.58	122.70
15	1H	1998	G	N1-C6-O6	-7.76	115.25	119.90
15	1H	2009	G	N1-C6-O6	-7.75	115.25	119.90
1	1G	1319	G	O4'-C1'-N9	7.75	114.40	108.20
15	14	1569	U	O5'-P-OP2	-7.75	98.72	105.70
26	16	87	G	C5-C6-O6	-7.75	123.95	128.60
15	14	592	A	C5-C6-N6	-7.75	117.50	123.70
15	14	1975	G	C8-N9-C4	-7.75	103.30	106.40
15	14	495	G	C5-C6-N1	7.75	115.38	111.50
15	14	720	C	C2-N3-C4	-7.75	116.03	119.90
1	13	994	A	C8-N9-C4	-7.75	102.70	105.80
1	13	1589	G	N1-C6-O6	7.75	124.55	119.90
15	1H	1472	G	N1-C6-O6	-7.75	115.25	119.90
15	1H	1657	A	C2-N3-C4	-7.75	106.73	110.60
15	14	1925	A	C5-C6-N6	-7.75	117.50	123.70
1	1G	1568	G	C6-C5-N7	-7.74	125.75	130.40
15	1H	2272	U	OP1-P-OP2	-7.74	107.99	119.60
15	1H	2571	C	C2-N3-C4	-7.74	116.03	119.90
15	14	2533	A	C4-C5-N7	7.74	114.57	110.70
15	14	2596	G	OP1-P-OP2	7.74	131.21	119.60
15	14	2793	G	N1-C6-O6	7.74	124.54	119.90
15	14	1874	G	C5-C6-O6	-7.74	123.96	128.60
15	1H	1346	C	C6-N1-C2	-7.74	117.20	120.30
15	1H	1524	C	N3-C2-O2	7.74	127.31	121.90
15	1H	2361	A	C4-C5-C6	7.74	120.87	117.00
15	1H	2523	G	C6-C5-N7	7.74	135.04	130.40
15	14	1395	G	N1-C6-O6	-7.74	115.26	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1412	C	C6-N1-C2	7.73	123.39	120.30
15	1H	136	G	C5-C6-O6	-7.73	123.96	128.60
15	1H	1069	A	C4-C5-N7	7.73	114.56	110.70
15	1H	1315	G	N3-C2-N2	7.73	125.31	119.90
15	1H	2427	A	O5'-P-OP2	-7.73	98.74	105.70
15	1H	2522	C	N1-C2-O2	7.73	123.54	118.90
15	14	1343	U	N3-C2-O2	7.73	127.61	122.20
15	14	100	G	O5'-P-OP1	-7.73	98.75	105.70
15	1H	111	G	C8-N9-C4	-7.73	103.31	106.40
15	1H	894	G	C5-N7-C8	-7.72	100.44	104.30
15	1H	1624	C	OP2-P-O3'	7.72	122.19	105.20
15	1H	1647	C	OP1-P-O3'	7.72	122.19	105.20
15	1H	2082	A	N1-C2-N3	7.72	133.16	129.30
26	16	81	C	N3-C2-O2	-7.72	116.49	121.90
15	1H	2264	U	C5-C4-O4	-7.72	121.27	125.90
15	14	2517	G	OP1-P-O3'	7.72	122.18	105.20
15	1H	1958	G	N3-C2-N2	-7.72	114.50	119.90
15	14	45	C	C6-N1-C2	7.72	123.39	120.30
15	14	1656	C	N3-C4-N4	7.72	123.40	118.00
15	1H	255	A	N1-C2-N3	7.71	133.16	129.30
15	14	1545	A	N1-C6-N6	7.71	123.23	118.60
15	14	1694	C	N3-C4-N4	-7.71	112.60	118.00
15	1H	910	A	N1-C6-N6	7.71	123.23	118.60
15	1H	2483	G	C5-N7-C8	-7.71	100.44	104.30
15	1H	2729	A	OP1-P-O3'	-7.71	88.23	105.20
15	14	2605	A	C5-C6-N1	7.71	121.56	117.70
1	1G	1319	G	C2-N3-C4	-7.71	108.04	111.90
15	1H	108	G	O5'-P-OP2	-7.71	98.76	105.70
15	14	837	A	N9-C4-C5	-7.71	102.72	105.80
15	14	1258	A	N3-C4-C5	7.71	132.20	126.80
15	14	1397	G	OP1-P-OP2	-7.71	108.03	119.60
23	21	152	LYS	C-N-CA	-7.71	106.11	122.30
2	A8	9	ARG	NE-CZ-NH1	-7.71	116.45	120.30
1	1G	1186	G	N1-C6-O6	7.71	124.52	119.90
15	1H	1810	G	OP1-P-OP2	-7.71	108.04	119.60
1	1G	1533	C	C6-N1-C2	7.70	123.38	120.30
15	14	69	G	N1-C6-O6	-7.70	115.28	119.90
15	14	2398	G	N1-C2-N2	-7.70	109.27	116.20
15	1H	747	C	OP1-P-OP2	7.70	131.15	119.60
15	1H	777	G	C8-N9-C4	7.70	109.48	106.40
15	1H	1305	G	C8-N9-C4	7.70	109.48	106.40
15	1H	2258	U	N1-C2-O2	-7.70	117.41	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	139	A	C6-C5-N7	-7.69	126.91	132.30
15	1H	235	G	C6-C5-N7	-7.69	125.78	130.40
15	1H	1651	U	O5'-P-OP1	-7.69	98.78	105.70
15	14	70	A	N3-C4-C5	7.69	132.18	126.80
15	1H	114	C	C5-C6-N1	-7.69	117.16	121.00
15	14	1417	G	O5'-P-OP2	-7.69	98.78	105.70
15	14	2319	G	C8-N9-C4	-7.69	103.33	106.40
23	29	88	GLY	N-CA-C	7.69	132.32	113.10
12	Q8	58	ILE	CG1-CB-CG2	-7.69	94.49	111.40
15	1H	46	C	N3-C4-C5	7.69	124.97	121.90
15	1H	406	C	C6-N1-C2	7.69	123.37	120.30
15	1H	824	G	C5-C6-N1	7.69	115.34	111.50
15	1H	1634	C	C5-C6-N1	-7.68	117.16	121.00
26	1J	54	A	N1-C6-N6	7.68	123.21	118.60
15	1H	1704	A	N1-C2-N3	7.68	133.14	129.30
15	14	2008	C	C6-N1-C2	7.68	123.37	120.30
52	V1	76	A	C5-C6-N1	-7.68	113.86	117.70
15	1H	2715	C	N3-C4-C5	7.68	124.97	121.90
15	14	2445	A	N7-C8-N9	7.68	117.64	113.80
15	1H	2093	U	C6-N1-C2	7.68	125.61	121.00
15	1H	1344	C	C6-N1-C2	-7.67	117.23	120.30
15	14	1811	U	N1-C2-N3	7.67	119.50	114.90
15	1H	111	G	N1-C2-N2	7.67	123.11	116.20
15	1H	858	G	C5-C6-O6	-7.67	124.00	128.60
15	1H	889	C	C6-N1-C2	7.67	123.37	120.30
15	1H	563	A	C5-N7-C8	7.67	107.73	103.90
15	1H	1653	C	C2-N3-C4	-7.67	116.06	119.90
1	13	2139	G	N1-C6-O6	7.67	124.50	119.90
15	1H	754	A	N9-C4-C5	-7.67	102.73	105.80
15	1H	2087	A	P-O3'-C3'	-7.67	110.50	119.70
15	1H	2569	U	O5'-P-OP1	-7.66	98.80	105.70
15	14	2783	C	N1-C2-O2	-7.66	114.30	118.90
15	1H	484	C	O5'-P-OP2	-7.66	98.80	105.70
15	1H	822	U	C5-C6-N1	-7.66	118.87	122.70
15	14	837	A	N7-C8-N9	7.66	117.63	113.80
1	13	2141	A	O5'-P-OP2	-7.66	98.81	105.70
15	1H	906	C	OP1-P-OP2	7.66	131.09	119.60
15	14	2516	C	N3-C4-C5	7.66	124.96	121.90
52	X1	3	C	C6-N1-C2	-7.66	117.24	120.30
15	1H	2325	A	C2-N3-C4	7.66	114.43	110.60
15	14	1425	C	O5'-P-OP1	-7.65	98.81	105.70
15	1H	174	C	C6-N1-C2	7.65	123.36	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1745	G	C4-C5-N7	7.65	113.86	110.80
15	14	651	C	N1-C2-O2	-7.65	114.31	118.90
15	1H	1250	C	N3-C4-C5	-7.65	118.84	121.90
15	14	2408	A	C2-N3-C4	-7.65	106.77	110.60
26	1J	106	U	C6-N1-C2	7.65	125.59	121.00
15	14	2309	C	OP1-P-OP2	-7.65	108.13	119.60
15	1H	95	G	C5-C6-O6	-7.65	124.01	128.60
15	1H	2045	A	N1-C6-N6	7.65	123.19	118.60
15	1H	2274	G	OP1-P-OP2	-7.65	108.13	119.60
15	14	2442	C	C6-N1-C2	7.65	123.36	120.30
15	1H	737	U	C2-N3-C4	-7.64	122.41	127.00
15	14	980	A	C2-N3-C4	-7.64	106.78	110.60
15	1H	1833	G	P-O3'-C3'	7.64	128.87	119.70
15	1H	2325	A	C5-C6-N1	7.64	121.52	117.70
15	14	1851	G	C8-N9-C4	7.64	109.46	106.40
1	13	1549	G	N9-C4-C5	7.64	108.46	105.40
15	1H	1808	C	OP1-P-OP2	-7.64	108.14	119.60
15	1H	2490	C	C6-N1-C2	-7.64	117.24	120.30
15	14	1381	G	C4-C5-C6	-7.64	114.22	118.80
15	14	2117	U	C5-C4-O4	7.64	130.48	125.90
15	14	2745	G	C5-C6-O6	-7.64	124.02	128.60
52	X1	37	A	C5-C6-N6	-7.64	117.59	123.70
15	1H	961	U	C5-C6-N1	-7.63	118.88	122.70
15	14	2266	G	C5-N7-C8	7.63	108.12	104.30
15	14	2301	A	C4-C5-N7	7.63	114.52	110.70
1	13	1209	U	N3-C4-O4	-7.63	114.06	119.40
1	13	1515	A	C2-N3-C4	-7.63	106.79	110.60
15	1H	1005	U	C6-N1-C2	-7.63	116.42	121.00
15	14	919	A	N9-C4-C5	-7.63	102.75	105.80
15	1H	714	C	C6-N1-C2	7.63	123.35	120.30
15	1H	611	A	N1-C2-N3	-7.62	125.49	129.30
15	1H	2627	C	O5'-P-OP1	-7.62	98.84	105.70
15	14	538	U	C6-N1-C2	-7.62	116.43	121.00
15	14	1252	A	N1-C2-N3	7.62	133.11	129.30
1	13	1438	G	N7-C8-N9	7.62	116.91	113.10
1	13	2112	G	C8-N9-C4	7.62	109.45	106.40
15	14	760	G	C5-C6-O6	-7.62	124.03	128.60
15	1H	1857	G	O5'-P-OP2	-7.62	98.85	105.70
15	1H	728	C	C6-N1-C2	7.61	123.34	120.30
15	14	1811	U	C2-N3-C4	-7.61	122.43	127.00
15	1H	1846	A	OP1-P-OP2	7.61	131.02	119.60
15	1H	491	G	C5-C6-O6	-7.61	124.03	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	785	C	C2-N3-C4	-7.61	116.09	119.90
15	14	1333	A	OP1-P-OP2	7.61	131.02	119.60
52	X1	4	C	OP1-P-OP2	7.61	131.01	119.60
15	14	2566	C	O5'-P-OP2	-7.61	98.85	105.70
1	13	1834	G	O5'-P-OP2	-7.61	98.86	105.70
15	1H	1234	G	C8-N9-C4	7.61	109.44	106.40
15	14	780	C	C4-C5-C6	7.61	121.20	117.40
15	14	1258	A	C4-C5-N7	7.61	114.50	110.70
15	14	2601	C	N1-C2-O2	-7.61	114.34	118.90
26	16	32	C	C6-N1-C2	-7.61	117.26	120.30
15	1H	185	A	P-O3'-C3'	7.60	128.82	119.70
15	14	242	G	C4-C5-N7	-7.60	107.76	110.80
15	1H	1252	A	C4-C5-N7	7.60	114.50	110.70
15	1H	1648	C	C6-N1-C2	-7.60	117.26	120.30
1	1G	849	A	P-O3'-C3'	7.60	128.82	119.70
15	1H	204	G	OP1-P-OP2	7.60	131.00	119.60
15	14	1980	U	N1-C2-N3	7.60	119.46	114.90
52	X4	19	G	O5'-P-OP2	-7.60	98.86	105.70
15	1H	1956	U	N1-C2-O2	7.60	128.12	122.80
15	14	993	G	C5-C6-N1	-7.60	107.70	111.50
15	14	1349	U	O5'-P-OP1	7.60	119.81	110.70
15	1H	1958	G	N1-C6-O6	7.59	124.46	119.90
15	14	155	C	N1-C2-O2	7.59	123.46	118.90
15	14	2847	G	N1-C6-O6	7.59	124.46	119.90
15	1H	729	G	C6-N1-C2	-7.59	120.55	125.10
15	14	910	A	OP1-P-OP2	-7.59	108.22	119.60
1	1G	1602	C	C4-C5-C6	7.59	121.19	117.40
15	1H	837	A	C5-C6-N1	-7.59	113.91	117.70
15	14	1892	G	C5-C6-N1	-7.59	107.71	111.50
1	13	1367	C	C6-N1-C2	-7.58	117.27	120.30
15	1H	2589	G	C5-C6-N1	7.58	115.29	111.50
15	14	1013	G	O5'-P-OP2	-7.58	98.87	105.70
15	14	1975	G	N3-C4-N9	-7.58	121.45	126.00
15	14	871	U	N1-C2-N3	7.58	119.45	114.90
52	X4	17	C	C5-C6-N1	7.58	124.79	121.00
15	1H	675	G	C5-C6-O6	7.58	133.15	128.60
15	1H	2008	C	C5-C6-N1	-7.58	117.21	121.00
15	14	2014	G	N1-C2-N2	7.58	123.02	116.20
26	1J	10	U	O5'-P-OP2	-7.58	98.88	105.70
15	1H	1726	A	O5'-P-OP2	-7.58	98.88	105.70
15	1H	2053	U	N1-C2-O2	-7.58	117.49	122.80
15	14	1481	C	N1-C2-O2	-7.58	114.35	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	2785	C	O5'-P-OP2	-7.58	98.88	105.70
15	1H	1608	A	C6-C5-N7	-7.58	127.00	132.30
15	1H	2704	U	N1-C2-N3	7.58	119.45	114.90
15	1H	1334	G	C5-C6-N1	7.57	115.29	111.50
15	1H	1453	C	OP1-P-OP2	7.57	130.96	119.60
15	1H	2484	A	C4-C5-N7	7.57	114.49	110.70
15	14	1252	A	O4'-C1'-N9	7.57	114.26	108.20
1	13	1420	G	C5-C6-O6	-7.57	124.06	128.60
15	1H	1820	A	OP1-P-O3'	7.57	121.86	105.20
1	13	904	A	O5'-P-OP1	-7.57	98.89	105.70
15	1H	648	A	C6-C5-N7	-7.57	127.00	132.30
15	1H	1930	C	O5'-P-OP2	-7.57	98.89	105.70
15	1H	2021	C	OP1-P-O3'	7.57	121.85	105.20
15	14	2117	U	N3-C2-O2	-7.57	116.90	122.20
15	14	2292	G	C5-C6-O6	7.57	133.14	128.60
26	16	17	A	O4'-C1'-N9	7.57	114.25	108.20
1	13	1319	G	N1-C2-N2	-7.57	109.39	116.20
15	1H	2608	U	C6-N1-C2	-7.57	116.46	121.00
15	14	722	C	O5'-P-OP1	7.57	119.78	110.70
15	14	1671	G	N1-C6-O6	-7.57	115.36	119.90
15	1H	54	G	N7-C8-N9	7.57	116.88	113.10
15	1H	137	G	N7-C8-N9	7.56	116.88	113.10
15	1H	874	C	C6-N1-C2	7.56	123.33	120.30
15	1H	70	A	C8-N9-C4	-7.56	102.78	105.80
15	1H	88	G	OP1-P-OP2	-7.56	108.26	119.60
15	1H	414	G	C5-C6-O6	-7.56	124.06	128.60
1	13	986	C	N1-C2-O2	7.56	123.43	118.90
15	1H	1010	U	N3-C4-C5	7.56	119.14	114.60
15	1H	2298	C	N1-C2-O2	-7.56	114.36	118.90
15	1H	206	A	C8-N9-C4	7.56	108.82	105.80
15	1H	2345	G	C4-C5-N7	7.56	113.82	110.80
15	1H	1314	A	C5'-C4'-C3'	-7.55	103.91	116.00
15	1H	1835	G	C2-N3-C4	7.55	115.68	111.90
15	1H	1913	G	N9-C4-C5	-7.55	102.38	105.40
15	14	1975	G	C6-C5-N7	-7.55	125.87	130.40
1	13	1319	G	C4-C5-C6	7.55	123.33	118.80
1	13	1393	C	C6-N1-C2	7.55	123.32	120.30
15	1H	1349	U	N1-C2-N3	7.55	119.43	114.90
15	14	1258	A	C5-N7-C8	-7.55	100.12	103.90
15	1H	1744	C	N1-C2-O2	-7.55	114.37	118.90
15	14	992	A	C8-N9-C4	-7.55	102.78	105.80
15	14	1858	G	O5'-P-OP2	-7.55	98.91	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	2513	C	O5'-P-OP1	7.55	119.76	110.70
1	1G	1586	G	N1-C2-N2	-7.55	109.41	116.20
15	1H	1993	G	OP1-P-OP2	-7.55	108.28	119.60
15	14	502	G	N9-C4-C5	7.55	108.42	105.40
15	14	1431	G	C5-C6-O6	-7.55	124.07	128.60
26	16	30	C	N3-C4-C5	-7.55	118.88	121.90
1	1G	1136	C	O5'-P-OP1	-7.54	98.91	105.70
15	1H	597	A	N7-C8-N9	-7.54	110.03	113.80
15	1H	2773	A	C8-N9-C4	-7.54	102.78	105.80
15	1H	1803	G	N3-C4-C5	-7.54	124.83	128.60
15	1H	1357	A	N7-C8-N9	7.54	117.57	113.80
1	13	876	C	C6-N1-C2	7.54	123.32	120.30
1	1G	2150	C	O5'-P-OP2	-7.54	98.92	105.70
15	1H	2528	G	C8-N9-C4	-7.54	103.38	106.40
15	14	1362	U	N1-C2-N3	7.54	119.42	114.90
15	1H	107	G	N1-C6-O6	-7.54	115.38	119.90
15	1H	1648	C	C5-C4-N4	7.54	125.47	120.20
15	1H	1720	C	C4-C5-C6	7.54	121.17	117.40
15	14	1846	A	OP1-P-OP2	7.54	130.90	119.60
52	W4	76	A	C6-N1-C2	-7.54	114.08	118.60
15	1H	544	C	N1-C2-O2	-7.53	114.38	118.90
15	1H	1251	G	N1-C6-O6	-7.53	115.38	119.90
15	1H	1425	C	C6-N1-C2	-7.53	117.29	120.30
15	1H	1464	U	C5-C4-O4	7.53	130.42	125.90
15	1H	1520	G	N1-C6-O6	7.53	124.42	119.90
15	1H	1878	C	C4-C5-C6	7.53	121.17	117.40
15	1H	2597	G	C8-N9-C4	-7.53	103.39	106.40
15	14	1612	A	C8-N9-C4	7.53	108.81	105.80
1	13	2142	A	C5-C6-N6	7.53	129.72	123.70
15	1H	743	U	O5'-P-OP1	7.53	119.74	110.70
15	14	139	A	N1-C6-N6	7.53	123.12	118.60
15	1H	1361	U	O5'-P-OP1	-7.53	98.92	105.70
1	13	1270	U	O5'-P-OP1	-7.53	98.93	105.70
15	1H	505	A	N1-C6-N6	7.53	123.12	118.60
15	1H	1797	G	C8-N9-C4	7.53	109.41	106.40
15	14	2461	G	O5'-P-OP2	-7.53	98.93	105.70
15	1H	19	C	C5-C6-N1	-7.52	117.24	121.00
15	1H	1953	A	C5-C6-N1	7.52	121.46	117.70
15	1H	2742	U	C4-C5-C6	7.52	124.21	119.70
15	1H	203	A	C4-C5-N7	7.52	114.46	110.70
15	1H	1659	A	C4-C5-N7	7.52	114.46	110.70
15	1H	2423	U	O5'-P-OP2	-7.52	98.93	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1413	G	N7-C8-N9	-7.52	109.34	113.10
1	1G	1527	C	N3-C4-N4	7.52	123.26	118.00
15	1H	2443	G	N1-C6-O6	-7.52	115.39	119.90
15	14	242	G	N7-C8-N9	-7.52	109.34	113.10
15	1H	433	U	N1-C2-N3	-7.52	110.39	114.90
15	14	1838	C	N3-C4-C5	7.52	124.91	121.90
26	1J	11	G	N1-C6-O6	7.52	124.41	119.90
15	1H	1428	A	N9-C4-C5	-7.52	102.79	105.80
15	1H	731	G	C8-N9-C1'	-7.51	117.23	127.00
15	1H	863	C	O5'-P-OP2	-7.51	98.94	105.70
15	1H	1250	C	N1-C2-O2	-7.51	114.39	118.90
15	1H	1663	A	O4'-C1'-N9	7.51	114.21	108.20
15	1H	1940	U	O5'-P-OP2	-7.51	98.94	105.70
15	14	1038	A	N7-C8-N9	7.51	117.56	113.80
15	14	1619	A	N1-C6-N6	7.51	123.11	118.60
15	1H	1069	A	C6-C5-N7	-7.51	127.04	132.30
15	1H	1842	U	N3-C2-O2	7.51	127.46	122.20
15	1H	2031	C	N3-C4-C5	7.51	124.90	121.90
15	1H	2795	U	N1-C2-N3	7.51	119.41	114.90
15	14	1325	A	C8-N9-C4	7.51	108.80	105.80
15	14	2517	G	N3-C2-N2	7.51	125.16	119.90
15	1H	881	G	C8-N9-C4	-7.51	103.40	106.40
15	14	1619	A	C8-N9-C4	-7.51	102.80	105.80
1	13	1387	G	N3-C4-C5	7.51	132.35	128.60
1	1G	1531	A	C5-C6-N6	-7.51	117.69	123.70
15	1H	43	A	C5-C6-N1	-7.51	113.95	117.70
15	14	98	U	C5-C6-N1	-7.51	118.95	122.70
15	14	894	G	N7-C8-N9	7.51	116.85	113.10
1	13	1533	C	O5'-P-OP2	-7.50	98.94	105.70
15	1H	2389	C	N3-C4-C5	7.50	124.90	121.90
15	1H	407	G	N7-C8-N9	-7.50	109.35	113.10
15	1H	896	U	C2-N3-C4	-7.50	122.50	127.00
15	1H	1608	A	N1-C6-N6	7.50	123.10	118.60
15	14	1354	C	C5-C6-N1	-7.50	117.25	121.00
15	14	2440	A	C2-N3-C4	7.50	114.35	110.60
52	X4	76	A	C8-N9-C4	7.50	108.80	105.80
15	14	2492	C	N3-C2-O2	-7.50	116.65	121.90
1	13	1355	C	O5'-P-OP1	-7.50	98.95	105.70
15	1H	856	U	O5'-P-OP2	-7.50	98.95	105.70
15	1H	1659	A	C5-N7-C8	-7.50	100.15	103.90
15	14	2696	C	N3-C2-O2	-7.50	116.65	121.90
26	16	4	C	O5'-P-OP1	-7.50	98.95	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	2079	G	N1-C6-O6	7.50	124.40	119.90
15	1H	1087	G	C8-N9-C4	7.50	109.40	106.40
15	1H	2637	C	O5'-P-OP2	-7.50	98.95	105.70
15	14	1975	G	N3-C2-N2	7.50	125.15	119.90
15	1H	901	G	O5'-P-OP1	7.49	119.69	110.70
15	14	1809	U	N1-C2-O2	-7.49	117.56	122.80
15	14	2585	G	O5'-P-OP1	-7.49	98.95	105.70
15	14	1869	G	N1-C6-O6	-7.49	115.41	119.90
15	14	2610	G	C5-C6-N1	7.49	115.25	111.50
1	13	1908	U	C6-N1-C2	-7.49	116.51	121.00
15	1H	203	A	OP2-P-O3'	7.49	121.68	105.20
15	1H	1205	A	N9-C4-C5	-7.49	102.81	105.80
15	1H	2600	U	N3-C2-O2	-7.49	116.96	122.20
1	13	962	A	O5'-P-OP2	-7.48	98.97	105.70
15	1H	753	G	N9-C4-C5	7.48	108.39	105.40
15	14	840	C	N3-C4-C5	7.48	124.89	121.90
15	1H	1972	C	C6-N1-C2	7.48	123.29	120.30
15	14	2011	A	C2-N3-C4	-7.48	106.86	110.60
15	14	2506	U	C5-C4-O4	-7.48	121.41	125.90
15	14	2533	A	C4-C5-C6	7.48	120.74	117.00
15	14	1449	G	O5'-P-OP2	-7.48	98.97	105.70
1	13	2115	A	O5'-P-OP1	7.48	119.67	110.70
15	1H	425	G	C2-N3-C4	-7.48	108.16	111.90
15	1H	712	G	C8-N9-C4	-7.48	103.41	106.40
15	1H	1690	C	N3-C4-C5	7.48	124.89	121.90
15	14	1661	C	C6-N1-C2	7.48	123.29	120.30
1	13	1933	A	O5'-P-OP2	-7.47	98.97	105.70
1	1G	1905	U	C2-N1-C1'	7.47	126.67	117.70
15	14	1954	G	OP1-P-OP2	7.47	130.81	119.60
15	14	2511	C	C5-C4-N4	-7.47	114.97	120.20
26	1J	46	G	N7-C8-N9	-7.47	109.36	113.10
15	1H	199	C	C5-C6-N1	-7.47	117.27	121.00
1	13	1832	U	C4-C5-C6	7.47	124.18	119.70
15	14	2374	C	O5'-P-OP2	-7.47	98.98	105.70
52	W4	75	C	C5-C6-N1	7.47	124.73	121.00
15	14	2605	A	C5-N7-C8	7.47	107.63	103.90
15	1H	823	A	C4-N9-C1'	-7.47	112.86	126.30
52	X1	47	U	N1-C2-O2	7.47	128.03	122.80
15	1H	1342	C	N1-C2-O2	-7.46	114.42	118.90
15	14	1069	A	N1-C2-N3	7.46	133.03	129.30
15	14	2454	A	C2-N3-C4	-7.46	106.87	110.60
15	14	2268	G	C5-C6-O6	-7.46	124.12	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2463	A	C5-C6-N6	-7.46	117.73	123.70
15	1H	639	U	C5-C6-N1	-7.46	118.97	122.70
15	14	2374	C	C4-C5-C6	7.46	121.13	117.40
1	13	1209	U	N3-C4-C5	7.46	119.07	114.60
1	1G	1316	A	P-O3'-C3'	7.46	128.65	119.70
1	13	972	G	N1-C6-O6	7.45	124.37	119.90
15	1H	55	A	N1-C6-N6	7.45	123.07	118.60
15	1H	1873	G	O4'-C1'-N9	-7.45	102.24	108.20
15	1H	2326	A	C2-N3-C4	-7.45	106.87	110.60
15	1H	2443	G	N1-C2-N2	-7.45	109.49	116.20
15	14	835	C	C5-C6-N1	-7.45	117.27	121.00
15	14	1285	G	C8-N9-C4	7.45	109.38	106.40
15	14	1369	C	N1-C2-O2	-7.45	114.43	118.90
15	14	1607	C	O5'-P-OP2	-7.45	98.99	105.70
15	1H	235	G	C4-C5-N7	7.45	113.78	110.80
15	1H	859	U	C2-N3-C4	7.45	131.47	127.00
15	1H	2373	G	C6-N1-C2	-7.45	120.63	125.10
15	1H	1819	A	C8-N9-C4	-7.45	102.82	105.80
15	1H	675	G	C4-C5-N7	-7.45	107.82	110.80
15	14	12	U	N1-C2-O2	7.45	128.01	122.80
15	14	481	C	C2-N3-C4	-7.45	116.18	119.90
15	1H	415	U	N3-C4-O4	7.44	124.61	119.40
15	1H	1652	A	C5-N7-C8	-7.44	100.18	103.90
1	1G	1249	C	C6-N1-C2	7.44	123.28	120.30
15	1H	1345	G	OP2-P-O3'	7.44	121.57	105.20
15	14	2726	A	OP1-P-OP2	-7.44	108.44	119.60
1	13	1161	A	C2-N3-C4	-7.44	106.88	110.60
15	1H	2269	C	N1-C2-O2	-7.44	114.44	118.90
15	1H	1234	G	C5-N7-C8	7.44	108.02	104.30
52	V1	72	C	N3-C2-O2	7.44	127.11	121.90
1	13	1387	G	C5-N7-C8	-7.44	100.58	104.30
1	13	1421	A	N9-C1'-C2'	7.44	123.67	114.00
15	14	249	G	N1-C6-O6	7.44	124.36	119.90
15	1H	501	G	N1-C2-N2	-7.43	109.51	116.20
15	1H	1376	C	N1-C2-O2	-7.43	114.44	118.90
15	14	733	G	N3-C4-C5	-7.43	124.88	128.60
15	1H	139	A	O4'-C1'-N9	7.43	114.15	108.20
15	1H	178	G	C8-N9-C4	7.43	109.37	106.40
15	1H	1725	C	C4-C5-C6	7.43	121.12	117.40
15	14	1818	A	N1-C2-N3	7.43	133.02	129.30
15	14	73	A	C5-C6-N1	-7.43	113.98	117.70
1	1G	2070	G	N3-C4-C5	7.43	132.31	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1013	G	N1-C6-O6	-7.43	115.44	119.90
15	14	149	A	C2-N3-C4	-7.43	106.89	110.60
15	1H	2478	C	N3-C4-C5	7.42	124.87	121.90
15	1H	547	G	N1-C6-O6	-7.42	115.45	119.90
15	14	822	U	C5-C6-N1	-7.42	118.99	122.70
15	1H	1838	C	OP1-P-OP2	-7.42	108.47	119.60
15	14	859	U	N3-C4-O4	7.42	124.59	119.40
1	1G	1941	C	N3-C4-C5	-7.42	118.93	121.90
15	1H	473	C	OP1-P-OP2	-7.42	108.47	119.60
1	13	1036	C	N1-C2-O2	-7.42	114.45	118.90
15	1H	321	C	C4-C5-C6	7.42	121.11	117.40
15	1H	780	C	N3-C4-C5	-7.42	118.93	121.90
15	14	1352	G	C5-C6-O6	7.42	133.05	128.60
15	14	815	C	N1-C2-N3	7.42	124.39	119.20
15	14	2312	C	O5'-P-OP1	-7.42	99.03	105.70
15	14	2771	C	C5-C6-N1	7.41	124.71	121.00
15	14	1710	C	N3-C4-C5	7.41	124.86	121.90
15	1H	196	U	N1-C2-O2	-7.41	117.61	122.80
15	14	2260	U	C4-C5-C6	-7.41	115.25	119.70
1	13	1600	A	N1-C6-N6	-7.41	114.15	118.60
15	14	807	C	N3-C2-O2	-7.41	116.71	121.90
15	1H	641	G	C8-N9-C4	7.41	109.36	106.40
15	14	995	G	N1-C6-O6	7.41	124.34	119.90
15	14	1592	A	O5'-P-OP1	7.41	119.59	110.70
15	14	1823	A	N1-C6-N6	-7.40	114.16	118.60
15	1H	1643	G	OP1-P-O3'	7.40	121.48	105.20
15	1H	2439	C	N3-C4-N4	-7.40	112.82	118.00
15	14	1345	G	N1-C6-O6	-7.40	115.46	119.90
15	14	1967	C	C6-N1-C2	-7.40	117.34	120.30
52	X1	26	A	N9-C4-C5	-7.40	102.84	105.80
52	V1	60	U	C2-N1-C1'	7.40	126.58	117.70
15	1H	132	C	C2-N3-C4	-7.40	116.20	119.90
15	1H	1271	C	N3-C2-O2	7.40	127.08	121.90
15	14	1778	C	C6-N1-C2	-7.40	117.34	120.30
15	1H	802	C	N1-C2-O2	7.40	123.34	118.90
15	14	796	U	N3-C4-C5	7.40	119.04	114.60
15	1H	1324	A	N9-C4-C5	-7.39	102.84	105.80
15	14	1331	U	C2-N3-C4	-7.39	122.56	127.00
15	1H	324	A	C8-N9-C4	-7.39	102.84	105.80
15	1H	659	A	O5'-P-OP2	7.39	119.57	110.70
15	1H	1396	G	OP1-P-O3'	7.39	121.45	105.20
1	13	686	C	N1-C2-O2	-7.39	114.47	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1448	A	O5'-P-OP1	-7.39	99.05	105.70
15	1H	1477	C	N1-C2-O2	-7.39	114.47	118.90
15	1H	2439	C	OP1-P-OP2	7.39	130.68	119.60
15	14	730	G	C6-C5-N7	-7.39	125.97	130.40
1	1G	1519	C	C2-N3-C4	-7.38	116.21	119.90
15	14	888	U	C5-C4-O4	7.38	130.33	125.90
52	X1	37	A	N9-C4-C5	-7.38	102.85	105.80
15	1H	119	G	C5-C6-N1	7.38	115.19	111.50
15	1H	1748	A	C5-C6-N6	-7.38	117.79	123.70
15	14	2316	C	C6-N1-C2	-7.38	117.35	120.30
1	13	1456	U	C5-C6-N1	-7.38	119.01	122.70
3	B5	23	GLU	C-N-CA	-7.38	106.80	122.30
15	1H	2273	C	C5-C4-N4	-7.38	115.03	120.20
15	14	1352	G	N1-C6-O6	-7.38	115.47	119.90
1	13	1599	G	N1-C6-O6	7.38	124.33	119.90
15	1H	662	C	O5'-P-OP2	-7.38	99.06	105.70
15	1H	1484	G	C5-C6-O6	7.38	133.03	128.60
15	14	2417	C	N1-C2-O2	-7.38	114.47	118.90
15	1H	37	C	C2-N3-C4	7.38	123.59	119.90
15	1H	1381	G	O4'-C1'-N9	-7.38	102.30	108.20
15	14	121	G	C5-C6-O6	-7.38	124.17	128.60
15	1H	1870	C	N3-C2-O2	-7.38	116.74	121.90
15	1H	2583	C	C2-N3-C4	-7.38	116.21	119.90
15	1H	2727	U	N1-C2-N3	7.38	119.33	114.90
15	1H	2792	A	C8-N9-C4	7.38	108.75	105.80
15	14	627	G	C8-N9-C4	7.38	109.35	106.40
15	14	2466	A	C2-N3-C4	-7.38	106.91	110.60
15	1H	203	A	C5-N7-C8	-7.38	100.21	103.90
15	1H	1416	A	C5-C6-N6	-7.38	117.80	123.70
1	13	2142	A	OP1-P-OP2	7.37	130.66	119.60
15	1H	2559	G	N3-C2-N2	-7.37	114.74	119.90
15	14	517	G	C2-N3-C4	-7.37	108.21	111.90
15	14	2555	C	O5'-P-OP2	-7.37	99.06	105.70
1	13	842	U	C6-N1-C2	-7.37	116.58	121.00
15	14	648	A	C8-N9-C4	-7.37	102.85	105.80
1	13	1598	A	C4-C5-N7	7.37	114.39	110.70
15	14	1364	C	N3-C4-N4	-7.37	112.84	118.00
15	14	1855	A	C2-N3-C4	7.37	114.28	110.60
15	14	905	C	N1-C2-O2	-7.37	114.48	118.90
15	14	2093	U	O5'-P-OP1	-7.37	99.07	105.70
15	14	411	U	C5-C6-N1	-7.36	119.02	122.70
15	14	725	A	N1-C6-N6	7.36	123.02	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1717	G	N3-C2-N2	7.36	125.05	119.90
15	1H	1820	A	N9-C1'-C2'	7.36	123.57	114.00
15	1H	880	G	C8-N9-C4	7.36	109.34	106.40
15	1H	2459	G	C8-N9-C4	-7.36	103.46	106.40
52	X1	2	C	C6-N1-C2	7.36	123.24	120.30
1	1G	1341	A	C8-N9-C4	-7.36	102.86	105.80
15	1H	878	A	O5'-P-OP2	-7.36	99.08	105.70
15	14	588	G	N1-C6-O6	-7.36	115.48	119.90
15	14	911	G	C5-C6-O6	7.36	133.01	128.60
15	1H	166	G	C2-N3-C4	-7.36	108.22	111.90
26	1J	17	A	O4'-C1'-N9	7.36	114.08	108.20
1	1G	1767	G	N3-C4-C5	7.35	132.28	128.60
15	1H	495	G	C5-C6-O6	7.35	133.01	128.60
15	1H	1357	A	N9-C4-C5	7.35	108.74	105.80
15	14	2461	G	OP2-P-O3'	7.35	121.37	105.20
1	13	1441	C	N1-C2-O2	7.35	123.31	118.90
15	1H	618	G	N1-C6-O6	-7.35	115.49	119.90
15	1H	2254	G	N3-C2-N2	7.35	125.04	119.90
1	13	1908	U	N1-C2-O2	7.34	127.94	122.80
15	1H	2528	G	N7-C8-N9	7.34	116.77	113.10
15	1H	2795	U	C2-N3-C4	-7.34	122.59	127.00
15	14	2440	A	N9-C4-C5	7.34	108.74	105.80
1	1G	1201	A	N1-C6-N6	-7.34	114.19	118.60
15	1H	1348	G	O5'-P-OP1	-7.34	99.09	105.70
15	14	1424	C	N3-C4-C5	7.34	124.84	121.90
15	14	2366	G	N3-C4-N9	7.34	130.40	126.00
15	1H	1525	G	N9-C4-C5	7.34	108.33	105.40
15	1H	222	G	C6-C5-N7	-7.33	126.00	130.40
15	1H	2418	C	N1-C2-O2	-7.33	114.50	118.90
15	14	1667	A	O5'-P-OP2	7.33	119.50	110.70
15	1H	25	U	N3-C4-O4	7.33	124.53	119.40
15	1H	871	U	N3-C2-O2	-7.33	117.07	122.20
15	14	73	A	C4-C5-N7	7.33	114.37	110.70
15	14	1624	C	OP2-P-O3'	7.33	121.33	105.20
15	14	1489	G	O5'-P-OP2	-7.33	99.10	105.70
15	1H	114	C	C4-C5-C6	7.33	121.06	117.40
15	1H	187	A	OP1-P-O3'	-7.33	89.08	105.20
15	1H	846	C	C2-N1-C1'	-7.33	110.74	118.80
1	13	1137	C	O5'-P-OP1	-7.33	99.11	105.70
15	1H	140	A	C4-C5-N7	7.33	114.36	110.70
15	1H	1994	A	N1-C6-N6	-7.33	114.20	118.60
15	14	1849	A	N9-C4-C5	7.33	108.73	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	125	A	N1-C6-N6	7.32	122.99	118.60
15	1H	874	C	C2-N3-C4	-7.32	116.24	119.90
15	14	2302	A	N1-C2-N3	7.32	132.96	129.30
15	14	2842	C	O5'-P-OP1	7.32	119.49	110.70
15	14	2627	C	N3-C4-N4	7.32	123.12	118.00
15	1H	1786	C	C2-N1-C1'	-7.32	110.75	118.80
15	14	21	A	O5'-P-OP1	-7.32	99.11	105.70
15	14	1332	G	O5'-P-OP2	-7.32	99.11	105.70
15	1H	129	G	C8-N9-C4	7.32	109.33	106.40
52	W4	36	A	N1-C6-N6	-7.32	114.21	118.60
52	X4	3	C	C6-N1-C2	-7.32	117.37	120.30
15	1H	208	A	C2-N3-C4	-7.32	106.94	110.60
15	1H	635	G	C5-C6-O6	-7.32	124.21	128.60
15	1H	1584	U	N3-C2-O2	-7.32	117.08	122.20
15	1H	1745	G	N3-C2-N2	7.32	125.02	119.90
15	1H	2361	A	N3-C4-N9	-7.32	121.55	127.40
15	14	2375	A	O5'-P-OP2	-7.32	99.12	105.70
15	14	2611	U	C5-C6-N1	-7.32	119.04	122.70
1	13	1213	G	C5-C6-O6	7.31	132.99	128.60
15	1H	894	G	N1-C2-N2	-7.31	109.62	116.20
15	1H	1358	G	C8-N9-C4	7.31	109.33	106.40
15	14	1402	A	N1-C6-N6	-7.31	114.21	118.60
15	14	2079	A	OP2-P-O3'	7.31	121.28	105.20
15	1H	321	C	C2-N3-C4	-7.31	116.25	119.90
15	14	816	U	C5-C4-O4	7.31	130.29	125.90
15	14	1796	A	O4'-C1'-N9	7.31	114.05	108.20
15	14	2521	U	O4'-C1'-N1	7.31	114.05	108.20
1	1G	1446	C	C6-N1-C2	7.31	123.22	120.30
15	1H	992	A	C8-N9-C4	-7.31	102.88	105.80
15	1H	2051	C	O5'-P-OP2	-7.31	99.12	105.70
15	14	2438	U	C6-N1-C2	7.31	125.38	121.00
26	1J	46	G	C8-N9-C4	7.31	109.32	106.40
15	1H	2277	U	N1-C2-N3	7.31	119.28	114.90
15	1H	478	G	C4-C5-N7	-7.30	107.88	110.80
15	1H	1809	U	O5'-P-OP2	-7.30	99.13	105.70
15	14	959	A	N1-C6-N6	-7.30	114.22	118.60
15	14	1822	C	O5'-P-OP1	-7.30	99.13	105.70
15	14	2506	U	OP1-P-O3'	7.30	121.27	105.20
15	14	1986	C	C6-N1-C2	7.30	123.22	120.30
15	14	1362	U	C6-N1-C2	-7.30	116.62	121.00
15	14	2622	G	N1-C2-N2	-7.30	109.63	116.20
15	1H	2458	C	N3-C4-N4	7.30	123.11	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	1J	106	U	C5-C6-N1	-7.30	119.05	122.70
15	1H	963	C	N3-C4-N4	-7.30	112.89	118.00
15	14	1813	U	OP1-P-OP2	7.30	130.55	119.60
15	1H	1655	G	C5-C6-O6	-7.29	124.22	128.60
15	14	557	G	C6-C5-N7	-7.29	126.02	130.40
1	13	812	A	C8-N9-C4	-7.29	102.88	105.80
1	13	1981	C	N3-C2-O2	-7.29	116.80	121.90
1	13	2125	A	N7-C8-N9	7.29	117.45	113.80
1	1G	1817	G	C4-C5-N7	-7.29	107.88	110.80
15	1H	740	C	C5-C4-N4	-7.29	115.10	120.20
15	1H	1401	U	C2-N3-C4	-7.29	122.62	127.00
15	1H	2084	A	C2-N3-C4	-7.29	106.95	110.60
15	1H	2281	A	C5-C6-N1	7.29	121.35	117.70
15	14	1391	A	C5-N7-C8	-7.29	100.25	103.90
15	14	1689	U	O5'-P-OP2	-7.29	99.14	105.70
15	14	1847	G	C4-C5-N7	-7.29	107.88	110.80
15	14	2366	G	C5-C6-N1	7.29	115.15	111.50
15	14	742	C	C5-C6-N1	-7.29	117.36	121.00
15	14	100	G	O4'-C1'-N9	7.29	114.03	108.20
15	1H	2254	G	C4-C5-N7	7.29	113.72	110.80
15	14	412	U	C5-C6-N1	-7.29	119.06	122.70
15	14	1662	G	N3-C2-N2	7.29	125.00	119.90
26	16	52	G	OP2-P-O3'	7.29	121.23	105.20
1	1G	1165	C	C6-N1-C2	-7.28	117.39	120.30
15	1H	2445	A	C6-N1-C2	7.28	122.97	118.60
1	13	1577	G	N1-C6-O6	7.28	124.27	119.90
15	1H	2281	A	N1-C2-N3	7.28	132.94	129.30
15	14	2886	A	C5-C6-N1	-7.28	114.06	117.70
15	14	819	G	O5'-P-OP2	7.28	119.43	110.70
15	14	991	G	OP1-P-OP2	7.27	130.51	119.60
15	14	1805	C	C5-C4-N4	-7.27	115.11	120.20
15	14	2695	C	O5'-P-OP2	-7.27	99.16	105.70
1	13	1421	A	C5-C6-N6	-7.27	117.88	123.70
1	1G	1101	C	N1-C2-O2	7.27	123.26	118.90
15	1H	122	G	C8-N9-C4	7.27	109.31	106.40
15	1H	1689	U	N1-C2-O2	7.27	127.89	122.80
15	1H	1824	C	P-O3'-C3'	7.27	128.42	119.70
15	1H	2106	C	N3-C2-O2	-7.27	116.81	121.90
15	14	73	A	N1-C6-N6	7.27	122.96	118.60
15	14	140	A	N1-C6-N6	7.27	122.96	118.60
15	14	1377	G	C5-C6-O6	-7.27	124.24	128.60
15	14	2027	G	C2-N3-C4	-7.27	108.27	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1805	C	O5'-P-OP2	-7.27	99.16	105.70
15	1H	2035	G	OP1-P-OP2	-7.27	108.70	119.60
15	1H	2723	G	N9-C4-C5	-7.27	102.49	105.40
15	14	1422	A	N7-C8-N9	-7.27	110.17	113.80
15	14	1680	C	C5-C6-N1	-7.27	117.37	121.00
15	14	1847	G	C5-N7-C8	7.27	107.93	104.30
15	1H	687	C	C6-N1-C2	-7.26	117.39	120.30
15	1H	811	U	N3-C4-C5	7.26	118.96	114.60
15	14	1659	A	C5-N7-C8	-7.26	100.27	103.90
15	1H	1827	C	N3-C4-C5	7.26	124.81	121.90
15	14	1731	G	C4-C5-N7	7.26	113.70	110.80
1	1G	2096	A	C8-N9-C4	7.26	108.70	105.80
15	1H	1810	G	C4-C5-N7	7.26	113.70	110.80
15	14	2087	A	OP2-P-O3'	7.26	121.17	105.20
15	1H	597	A	C8-N9-C4	7.26	108.70	105.80
15	1H	1855	A	N1-C6-N6	-7.26	114.25	118.60
15	14	1408	A	C8-N9-C4	7.26	108.70	105.80
15	1H	831	A	C5-C6-N6	-7.26	117.89	123.70
15	1H	2006	A	N1-C6-N6	7.26	122.95	118.60
15	1H	2301	A	C6-C5-N7	-7.26	127.22	132.30
15	1H	132	C	N3-C2-O2	-7.25	116.82	121.90
1	13	1608	C	C6-N1-C2	-7.25	117.40	120.30
15	1H	753	G	C4-C5-N7	-7.25	107.90	110.80
15	14	2278	C	C6-N1-C2	-7.25	117.40	120.30
15	1H	1837	A	C2-N3-C4	7.25	114.23	110.60
15	14	1301	G	C5-C6-N1	7.25	115.13	111.50
15	14	2605	A	C8-N9-C4	7.25	108.70	105.80
52	V4	76	A	C4-C5-N7	7.25	114.33	110.70
15	1H	850	G	O5'-P-OP2	-7.25	99.17	105.70
15	1H	1345	G	N1-C6-O6	-7.25	115.55	119.90
15	1H	1897	G	N1-C6-O6	7.25	124.25	119.90
15	14	1357	A	C2-N3-C4	-7.25	106.97	110.60
15	14	1964	U	N3-C4-O4	-7.25	114.33	119.40
15	1H	1184	G	C8-N9-C4	7.25	109.30	106.40
15	14	832	A	C4-C5-C6	7.25	120.62	117.00
1	13	703	G	N1-C6-O6	-7.25	115.55	119.90
11	G8	81	LYS	N-CA-C	-7.25	91.43	111.00
15	14	1835	G	C4-C5-N7	7.25	113.70	110.80
15	14	1993	G	N3-C2-N2	-7.25	114.83	119.90
15	14	2417	C	C2-N1-C1'	-7.25	110.83	118.80
15	14	1654	C	O5'-P-OP1	-7.25	99.18	105.70
1	13	1239	G	C5-N7-C8	7.24	107.92	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	186	A	C2-N3-C4	-7.24	106.98	110.60
15	1H	1789	A	C8-N9-C4	-7.24	102.90	105.80
15	1H	1793	A	O5'-P-OP1	-7.24	99.18	105.70
15	1H	2723	G	C8-N9-C4	7.24	109.30	106.40
15	14	1429	G	N3-C4-C5	7.24	132.22	128.60
15	1H	648	A	C4-C5-N7	7.24	114.32	110.70
15	1H	659	A	C5-N7-C8	-7.24	100.28	103.90
15	1H	1917	C	N1-C2-O2	-7.24	114.56	118.90
15	14	834	G	O5'-P-OP1	-7.24	99.18	105.70
15	14	966	A	O5'-P-OP1	-7.24	99.18	105.70
15	1H	982	C	C6-N1-C2	7.24	123.20	120.30
15	1H	1410	G	C5-C6-N1	7.24	115.12	111.50
15	1H	1755	G	C5-C6-O6	7.24	132.94	128.60
15	1H	1822	C	C6-N1-C1'	-7.24	112.11	120.80
15	1H	2253	G	C2-N3-C4	7.24	115.52	111.90
15	1H	2483	G	C8-N9-C4	-7.24	103.50	106.40
15	14	1079	G	C5-C6-O6	-7.24	124.26	128.60
15	14	1697	G	C5-C6-O6	-7.24	124.26	128.60
15	14	1654	C	C5-C6-N1	-7.24	117.38	121.00
15	14	1820	A	OP1-P-O3'	7.24	121.12	105.20
15	1H	674	G	OP1-P-OP2	-7.24	108.75	119.60
15	14	1659	A	C4-C5-N7	7.24	114.32	110.70
1	1G	1147	C	O5'-P-OP2	-7.23	99.19	105.70
15	14	36	G	C8-N9-C4	-7.23	103.51	106.40
15	14	2401	C	N3-C4-N4	7.23	123.06	118.00
1	1G	907	G	P-O3'-C3'	7.23	128.37	119.70
15	1H	1956	U	C5-C6-N1	-7.23	119.09	122.70
15	14	404	C	N3-C2-O2	-7.23	116.84	121.90
15	14	1250	C	O5'-P-OP2	-7.23	99.19	105.70
15	14	995	G	C5-C6-O6	-7.23	124.27	128.60
15	14	1519	A	C5-N7-C8	-7.23	100.29	103.90
15	1H	501	G	N1-C6-O6	-7.22	115.57	119.90
15	14	1682	A	C5-C6-N6	-7.22	117.92	123.70
15	1H	1792	G	C5-C6-O6	-7.22	124.27	128.60
15	14	1731	G	N1-C6-O6	7.22	124.23	119.90
15	1H	1520	G	C5-C6-O6	-7.22	124.27	128.60
52	X1	30	G	OP1-P-OP2	-7.22	108.77	119.60
15	1H	894	G	P-O3'-C3'	7.22	128.36	119.70
15	1H	107	G	C4-C5-N7	-7.21	107.91	110.80
15	1H	1624	C	C6-N1-C2	7.21	123.19	120.30
15	14	817	G	O5'-P-OP2	-7.21	99.21	105.70
15	1H	1033	C	C2-N3-C4	-7.21	116.29	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	2231	G	C6-C5-N7	-7.21	126.07	130.40
1	13	1433	U	C5-C4-O4	7.21	130.22	125.90
15	1H	81	G	C4-C5-N7	-7.21	107.92	110.80
15	1H	101	A	C8-N9-C4	7.21	108.68	105.80
15	1H	1539	A	O5'-P-OP1	-7.21	99.21	105.70
1	13	1219	C	C6-N1-C2	-7.21	117.42	120.30
15	1H	197	A	C2-N3-C4	-7.21	107.00	110.60
15	1H	647	G	C6-C5-N7	-7.21	126.08	130.40
15	1H	659	A	N7-C8-N9	7.21	117.40	113.80
15	1H	1300	C	N1-C2-O2	7.21	123.22	118.90
15	14	22	C	N3-C4-N4	-7.21	112.95	118.00
15	14	131	C	C5-C6-N1	-7.21	117.40	121.00
15	14	648	A	C4-C5-N7	7.21	114.30	110.70
15	14	826	A	N9-C4-C5	7.21	108.68	105.80
15	14	1002	C	O5'-P-OP1	-7.21	99.21	105.70
26	1J	24	U	N3-C2-O2	-7.21	117.16	122.20
1	13	1319	G	C5-C6-O6	-7.20	124.28	128.60
15	1H	122	G	C5-C6-O6	-7.20	124.28	128.60
15	1H	438	G	C2-N3-C4	-7.20	108.30	111.90
15	1H	753	G	N3-C2-N2	-7.20	114.86	119.90
15	1H	1397	G	N3-C4-C5	-7.20	125.00	128.60
15	14	296	C	O5'-P-OP2	-7.20	99.22	105.70
1	13	1235	G	C2-N3-C4	7.20	115.50	111.90
15	1H	1290	A	O4'-C1'-N9	7.20	113.96	108.20
15	1H	843	G	O5'-P-OP1	-7.20	99.22	105.70
15	14	1446	U	N3-C2-O2	-7.20	117.16	122.20
15	14	1663	A	C6-C5-N7	-7.20	127.26	132.30
15	1H	249	G	N1-C2-N2	-7.20	109.72	116.20
15	14	481	C	N1-C2-O2	-7.20	114.58	118.90
15	14	2321	C	N1-C2-O2	7.20	123.22	118.90
1	1G	1908	U	C5-C6-N1	7.20	126.30	122.70
15	1H	2606	C	N1-C2-O2	-7.20	114.58	118.90
1	13	1387	G	C4-C5-N7	7.20	113.68	110.80
1	13	1536	A	OP1-P-O3'	7.20	121.03	105.20
15	1H	1415	A	C8-N9-C4	7.20	108.68	105.80
15	14	786	C	C5-C4-N4	-7.20	115.16	120.20
15	14	1345	G	N3-C2-N2	7.20	124.94	119.90
15	14	2078	G	N3-C4-N9	7.20	130.32	126.00
1	13	1147	C	N1-C2-O2	7.19	123.22	118.90
15	1H	612	C	N3-C4-C5	7.19	124.78	121.90
15	1H	1191	A	N3-C4-N9	-7.19	121.65	127.40
15	1H	1786	C	N1-C2-O2	-7.19	114.58	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2586	C	C2-N3-C4	-7.19	116.30	119.90
26	16	112	G	N3-C2-N2	-7.19	114.86	119.90
15	1H	1525	G	C8-N9-C4	-7.19	103.52	106.40
15	1H	1832	U	O5'-P-OP2	-7.19	99.23	105.70
15	1H	2420	G	O5'-P-OP2	-7.19	99.23	105.70
15	1H	2767	G	C5-N7-C8	-7.19	100.70	104.30
15	14	2024	C	OP2-P-O3'	7.19	121.02	105.20
1	13	1932	G	C8-N9-C4	-7.19	103.53	106.40
15	1H	1645	A	OP2-P-O3'	7.19	121.01	105.20
15	1H	1382	C	C5-C4-N4	-7.19	115.17	120.20
15	1H	2662	U	C5-C6-N1	-7.18	119.11	122.70
15	14	1958	G	OP1-P-OP2	7.18	130.37	119.60
15	14	2417	C	C6-N1-C1'	7.18	129.42	120.80
52	X1	47	U	N3-C2-O2	-7.18	117.17	122.20
1	13	1213	G	N1-C2-N3	7.18	128.21	123.90
12	Q8	8	LYS	C-N-CA	-7.18	107.22	122.30
15	1H	1081	U	O5'-P-OP1	-7.18	99.24	105.70
1	13	1211	U	N3-C4-C5	7.18	118.91	114.60
15	1H	2380	G	O5'-P-OP2	-7.18	99.24	105.70
15	14	2833	A	N1-C6-N6	7.18	122.91	118.60
1	13	1826	U	N3-C4-C5	-7.18	110.29	114.60
15	1H	624	G	N3-C4-C5	-7.18	125.01	128.60
15	1H	850	G	N7-C8-N9	7.18	116.69	113.10
15	1H	2064	C	N1-C2-O2	-7.18	114.59	118.90
15	1H	2075	C	N3-C4-N4	7.18	123.02	118.00
15	14	1800	U	O5'-P-OP2	-7.18	99.24	105.70
15	1H	1929	G	N1-C6-O6	-7.17	115.60	119.90
15	14	1715	A	N9-C4-C5	7.17	108.67	105.80
15	1H	2787	C	N1-C2-O2	-7.17	114.60	118.90
15	14	1648	C	C6-N1-C2	-7.17	117.43	120.30
15	14	1796	A	C5-C6-N1	-7.17	114.11	117.70
1	13	975	C	C6-N1-C2	7.17	123.17	120.30
15	1H	2502	G	C2-N3-C4	-7.17	108.31	111.90
15	14	258	C	C6-N1-C2	-7.17	117.43	120.30
15	14	840	C	C4-C5-C6	-7.17	113.82	117.40
15	1H	1477	C	OP1-P-OP2	7.17	130.35	119.60
1	13	1439	C	C4-C5-C6	7.17	120.98	117.40
15	1H	915	A	O4'-C1'-N9	-7.17	102.47	108.20
15	1H	1811	U	OP1-P-OP2	-7.17	108.85	119.60
15	1H	2417	C	N1-C2-O2	-7.17	114.60	118.90
15	1H	99	G	N9-C4-C5	-7.16	102.53	105.40
15	1H	634	A	N1-C6-N6	7.16	122.90	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	870	A	O5'-P-OP2	-7.16	99.25	105.70
15	1H	474	G	N3-C4-N9	7.16	130.30	126.00
1	13	1216	G	N3-C2-N2	-7.16	114.89	119.90
1	1G	2121	U	N1-C2-O2	7.16	127.81	122.80
15	1H	1252	A	C6-C5-N7	-7.16	127.29	132.30
15	1H	2535	C	OP1-P-OP2	-7.16	108.86	119.60
15	1H	914	C	OP1-P-OP2	-7.16	108.86	119.60
15	1H	1708	C	C5-C4-N4	-7.16	115.19	120.20
15	1H	2870	G	O5'-P-OP1	-7.16	99.26	105.70
15	1H	535	G	C4-C5-N7	7.16	113.66	110.80
15	1H	1540	G	C5-C6-N1	-7.16	107.92	111.50
15	1H	1621	A	C6-N1-C2	-7.16	114.31	118.60
15	1H	825	G	N3-C2-N2	-7.16	114.89	119.90
15	1H	1253	U	O5'-P-OP1	7.16	119.29	110.70
15	14	1805	C	C2-N3-C4	-7.16	116.32	119.90
1	1G	946	G	C5-C6-O6	7.15	132.89	128.60
15	1H	2724	G	C8-N9-C4	-7.15	103.54	106.40
15	14	711	G	C8-N9-C4	7.15	109.26	106.40
15	1H	2431	C	N3-C4-N4	-7.15	113.00	118.00
15	1H	2453	U	C6-N1-C2	7.15	125.29	121.00
1	13	993	C	C6-N1-C2	7.15	123.16	120.30
15	1H	619	U	C6-N1-C2	7.15	125.29	121.00
15	1H	2285	G	C5-C6-O6	-7.15	124.31	128.60
1	1G	2149	G	N1-C6-O6	7.15	124.19	119.90
15	1H	1555	C	C6-N1-C2	-7.15	117.44	120.30
15	1H	1190	U	C5-C4-O4	-7.14	121.61	125.90
15	1H	1704	A	C2-N3-C4	-7.14	107.03	110.60
15	14	784	A	OP1-P-O3'	7.14	120.91	105.20
15	14	2886	A	N9-C1'-C2'	7.14	123.28	114.00
15	1H	1051	G	C5-N7-C8	7.14	107.87	104.30
15	1H	1816	C	C4-C5-C6	7.14	120.97	117.40
15	1H	1976	U	N3-C4-C5	7.14	118.88	114.60
15	14	2557	A	C8-N9-C4	-7.14	102.94	105.80
15	1H	1794	A	N1-C6-N6	7.14	122.88	118.60
15	14	361	C	C6-N1-C2	7.14	123.16	120.30
15	14	1191	A	C2-N3-C4	-7.14	107.03	110.60
15	1H	1945	C	O5'-P-OP2	-7.14	99.28	105.70
15	1H	118	U	N3-C2-O2	-7.13	117.21	122.20
15	1H	817	G	OP1-P-OP2	7.13	130.30	119.60
15	1H	907	U	C5-C6-N1	7.13	126.27	122.70
1	1G	2142	A	C8-N9-C4	-7.13	102.95	105.80
15	1H	1869	G	C4-N9-C1'	7.13	135.77	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2325	A	C8-N9-C4	-7.13	102.95	105.80
15	1H	2460	G	C6-N1-C2	7.13	129.38	125.10
15	14	683	C	C5-C6-N1	7.13	124.57	121.00
15	14	2054	G	N3-C2-N2	-7.13	114.91	119.90
15	14	2301	A	C6-C5-N7	-7.13	127.31	132.30
15	14	2783	C	C6-N1-C2	-7.13	117.45	120.30
15	1H	1728	G	C8-N9-C4	-7.13	103.55	106.40
15	14	1608	A	P-O3'-C3'	7.13	128.25	119.70
1	13	1832	U	N3-C4-C5	-7.13	110.32	114.60
15	1H	1709	U	N1-C2-N3	7.13	119.18	114.90
15	1H	2244	C	C6-N1-C2	7.13	123.15	120.30
15	14	1860	G	N1-C6-O6	-7.13	115.62	119.90
52	X1	67	C	O5'-P-OP2	-7.12	99.29	105.70
1	13	1932	G	N9-C4-C5	7.12	108.25	105.40
15	1H	477	A	OP1-P-O3'	7.12	120.87	105.20
15	1H	1820	A	O5'-P-OP2	-7.12	99.29	105.70
1	13	2139	G	C6-C5-N7	-7.12	126.13	130.40
15	1H	711	G	OP1-P-OP2	7.12	130.28	119.60
15	14	1031	A	OP2-P-O3'	7.12	120.87	105.20
15	14	1525	G	C5-N7-C8	-7.12	100.74	104.30
15	1H	2533	A	C2-N3-C4	-7.12	107.04	110.60
15	14	896	U	C5-C6-N1	-7.12	119.14	122.70
15	1H	472	C	OP1-P-O3'	7.12	120.86	105.20
1	13	754	G	P-O3'-C3'	7.12	128.24	119.70
15	1H	2310	C	C6-N1-C2	-7.12	117.45	120.30
15	1H	965	A	O5'-P-OP2	7.11	119.24	110.70
15	1H	1352	G	N1-C2-N2	-7.11	109.80	116.20
15	1H	198	C	OP2-P-O3'	7.11	120.84	105.20
15	1H	1815	C	N1-C2-N3	7.11	124.18	119.20
15	1H	2536	C	N3-C4-N4	-7.11	113.02	118.00
15	1H	2767	G	N3-C4-N9	-7.11	121.73	126.00
15	14	1851	G	N3-C2-N2	7.11	124.88	119.90
15	1H	963	C	N3-C4-C5	7.11	124.74	121.90
15	14	2575	C	C2-N3-C4	-7.11	116.34	119.90
15	1H	636	C	C5-C6-N1	-7.11	117.45	121.00
15	1H	1373	G	N1-C2-N2	7.11	122.60	116.20
15	1H	2078	G	N3-C2-N2	-7.11	114.92	119.90
1	13	2032	C	N3-C4-N4	-7.11	113.03	118.00
15	1H	125	A	C5-C6-N6	-7.11	118.02	123.70
15	1H	1858	G	C8-N9-C4	7.11	109.24	106.40
15	1H	2509	G	N3-C4-N9	-7.11	121.74	126.00
15	14	70	A	C6-C5-N7	-7.11	127.33	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1382	C	O5'-P-OP1	7.11	119.23	110.70
15	14	1619	A	C4-C5-N7	7.11	114.25	110.70
15	14	2632	C	C6-N1-C2	7.11	123.14	120.30
15	1H	1010	U	O5'-P-OP2	7.10	119.22	110.70
15	1H	1608	A	P-O3'-C3'	7.10	128.22	119.70
15	1H	1799	C	C5-C4-N4	7.10	125.17	120.20
15	14	919	A	C8-N9-C4	7.10	108.64	105.80
15	14	1930	C	O5'-P-OP1	7.10	119.22	110.70
15	14	2492	C	C6-N1-C2	-7.10	117.46	120.30
15	1H	2502	G	N1-C6-O6	7.10	124.16	119.90
15	14	77	A	C2-N3-C4	-7.10	107.05	110.60
15	14	869	A	C5-C6-N1	7.10	121.25	117.70
15	14	2301	A	N7-C8-N9	7.10	117.35	113.80
15	14	1304	U	N3-C4-O4	7.10	124.37	119.40
26	1J	46	G	C4-N9-C1'	-7.10	117.27	126.50
15	1H	1720	C	C5-C4-N4	-7.10	115.23	120.20
15	1H	2276	C	C4-C5-C6	7.10	120.95	117.40
15	1H	462	C	C2-N3-C4	-7.10	116.35	119.90
15	1H	2621	C	C2-N3-C4	-7.10	116.35	119.90
15	14	2264	U	C6-N1-C2	-7.10	116.74	121.00
52	W4	76	A	N1-C6-N6	-7.10	114.34	118.60
15	1H	1345	G	C5-C6-N1	7.09	115.05	111.50
15	1H	1927	C	C4-C5-C6	7.09	120.95	117.40
15	1H	2021	C	OP2-P-O3'	-7.09	89.59	105.20
15	1H	2727	U	N3-C4-C5	7.09	118.86	114.60
15	14	236	C	O5'-P-OP1	-7.09	99.32	105.70
15	1H	226	C	C6-N1-C2	7.09	123.14	120.30
15	1H	630	C	N1-C2-O2	-7.09	114.64	118.90
15	14	2704	U	N1-C2-N3	7.09	119.16	114.90
1	1G	2124	C	N1-C2-O2	-7.09	114.65	118.90
15	1H	408	U	N3-C2-O2	-7.09	117.24	122.20
15	1H	1014	C	C2-N3-C4	-7.09	116.36	119.90
15	14	1047	U	O5'-P-OP2	7.09	119.21	110.70
15	14	1959	C	N1-C2-O2	7.09	123.15	118.90
15	1H	142	G	C2-N3-C4	-7.09	108.36	111.90
15	1H	2518	A	N1-C6-N6	7.09	122.85	118.60
15	14	30	G	C8-N9-C4	-7.09	103.56	106.40
15	14	1651	U	N3-C4-C5	-7.09	110.35	114.60
15	14	2027	G	N1-C6-O6	7.09	124.15	119.90
15	14	2794	A	C2-N3-C4	-7.09	107.06	110.60
15	14	1660	C	O5'-P-OP2	7.08	119.20	110.70
15	14	2511	C	N3-C4-C5	7.08	124.73	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	19	C	C4-C5-C6	7.08	120.94	117.40
15	1H	718	G	N3-C4-C5	-7.08	125.06	128.60
15	1H	2518	A	C5-C6-N1	7.08	121.24	117.70
15	14	548	G	OP1-P-OP2	-7.08	108.97	119.60
15	14	1318	A	C4-C5-N7	7.08	114.24	110.70
15	1H	483	C	N3-C2-O2	7.08	126.86	121.90
15	14	872	G	C5-N7-C8	7.08	107.84	104.30
15	1H	1014	C	N3-C4-C5	7.08	124.73	121.90
15	1H	233	U	C5-C6-N1	7.08	126.24	122.70
15	1H	563	A	N7-C8-N9	-7.08	110.26	113.80
15	1H	737	U	C5-C6-N1	-7.08	119.16	122.70
15	14	1391	A	C8-N9-C4	-7.08	102.97	105.80
15	14	1820	A	N1-C6-N6	7.08	122.84	118.60
15	14	2319	G	C5-C6-N1	-7.08	107.96	111.50
15	14	2505	G	N3-C2-N2	7.08	124.85	119.90
1	1G	1538	A	N7-C8-N9	-7.07	110.26	113.80
15	1H	2031	C	C5-C4-N4	-7.07	115.25	120.20
15	1H	2613	A	OP1-P-OP2	-7.07	109.00	119.60
15	14	1654	C	C4-C5-C6	7.07	120.94	117.40
15	14	589	C	O5'-P-OP1	-7.07	99.34	105.70
15	14	54	G	C8-N9-C4	-7.07	103.57	106.40
15	14	2443	G	N9-C4-C5	7.07	108.23	105.40
26	16	83	G	C4-N9-C1'	7.07	135.69	126.50
26	16	83	G	C8-N9-C4	-7.07	103.57	106.40
52	X4	18	G	C5-C6-O6	-7.07	124.36	128.60
1	13	1429	G	C6-C5-N7	-7.07	126.16	130.40
15	1H	818	G	N3-C4-C5	-7.07	125.07	128.60
15	1H	1018	C	C6-N1-C2	-7.07	117.47	120.30
15	1H	2835	G	N9-C4-C5	-7.07	102.57	105.40
15	14	195	G	N3-C4-N9	7.07	130.24	126.00
1	13	1215	C	C2-N3-C4	-7.06	116.37	119.90
15	14	817	G	OP1-P-OP2	7.06	130.19	119.60
15	14	1864	C	N3-C4-C5	7.06	124.72	121.90
1	1G	2131	G	C8-N9-C4	7.06	109.22	106.40
15	1H	918	G	N1-C2-N2	-7.06	109.85	116.20
15	1H	1084	G	C8-N9-C4	7.06	109.22	106.40
1	1G	2125	A	C5-C6-N1	-7.06	114.17	117.70
15	1H	1481	C	N3-C4-N4	7.06	122.94	118.00
15	14	1860	G	N3-C4-C5	-7.06	125.07	128.60
15	1H	2297	G	O5'-P-OP1	-7.06	99.35	105.70
15	14	730	G	N3-C4-N9	7.05	130.23	126.00
43	A5	23	LEU	CA-CB-CG	7.05	131.53	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1972	C	C2-N3-C4	-7.05	116.37	119.90
1	13	1586	G	N1-C2-N3	7.05	128.13	123.90
15	14	2476	C	N3-C4-N4	-7.05	113.06	118.00
15	1H	422	A	C8-N9-C4	-7.05	102.98	105.80
15	1H	2450	A	O5'-P-OP1	-7.05	99.36	105.70
15	1H	2495	C	N3-C4-C5	-7.05	119.08	121.90
15	14	2103	C	OP1-P-OP2	-7.05	109.03	119.60
15	1H	1170	G	C8-N9-C4	7.05	109.22	106.40
15	1H	2530	C	OP1-P-OP2	-7.05	109.03	119.60
15	14	715	G	C2-N3-C4	-7.05	108.38	111.90
1	13	1586	G	C8-N9-C1'	-7.04	117.84	127.00
1	1G	1519	C	N3-C4-C5	7.04	124.72	121.90
15	1H	2571	C	C4-C5-C6	7.04	120.92	117.40
52	X4	17	C	C6-N1-C2	-7.04	117.48	120.30
1	1G	1186	G	C6-C5-N7	-7.04	126.18	130.40
15	1H	1408	A	N1-C2-N3	7.04	132.82	129.30
15	1H	2375	A	C2-N3-C4	-7.04	107.08	110.60
15	14	837	A	N1-C6-N6	7.04	122.83	118.60
1	13	1949	C	O5'-P-OP2	-7.04	99.36	105.70
15	1H	1300	C	O5'-P-OP1	-7.04	99.36	105.70
15	14	1428	A	C2-N3-C4	-7.04	107.08	110.60
15	14	2525	C	C5-C4-N4	7.04	125.13	120.20
1	1G	700	C	N1-C2-O2	-7.04	114.68	118.90
15	1H	653	U	N1-C2-N3	7.04	119.12	114.90
15	14	198	C	N1-C2-O2	-7.04	114.68	118.90
15	14	2504	G	C8-N9-C4	7.04	109.21	106.40
1	13	1222	G	N1-C6-O6	7.03	124.12	119.90
15	1H	288	G	C4-N9-C1'	7.03	135.64	126.50
15	14	2036	U	N1-C2-O2	-7.03	117.88	122.80
15	1H	357	A	N1-C2-N3	7.03	132.82	129.30
15	1H	1943	A	O5'-P-OP2	-7.03	99.37	105.70
15	14	2243	G	C6-C5-N7	-7.03	126.18	130.40
1	13	1396	A	N1-C2-N3	7.03	132.81	129.30
1	1G	1126	A	N1-C6-N6	-7.03	114.38	118.60
15	14	1337	U	OP1-P-O3'	7.03	120.67	105.20
15	14	1965	U	OP1-P-OP2	-7.03	109.05	119.60
15	14	2259	U	N1-C2-O2	-7.03	117.88	122.80
15	1H	330	U	C6-N1-C2	-7.03	116.78	121.00
15	1H	2288	A	C5-C6-N6	-7.03	118.08	123.70
15	1H	1957	A	O5'-P-OP1	-7.03	99.38	105.70
15	1H	1618	G	N7-C8-N9	7.02	116.61	113.10
15	1H	1826	G	N1-C6-O6	-7.02	115.69	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	2792	A	N9-C4-C5	7.02	108.61	105.80
15	1H	802	C	N3-C4-C5	7.02	124.71	121.90
15	1H	1350	A	O5'-P-OP1	-7.02	99.38	105.70
15	1H	1840	C	C6-N1-C2	7.02	123.11	120.30
15	14	1725	C	OP2-P-O3'	7.02	120.65	105.20
1	13	2142	A	N9-C4-C5	7.02	108.61	105.80
15	1H	1616	A	O5'-P-OP1	7.02	119.12	110.70
15	1H	1703	G	O5'-P-OP2	-7.02	99.38	105.70
26	1J	91	G	N9-C4-C5	-7.02	102.59	105.40
1	1G	1158	G	C4-C5-N7	7.02	113.61	110.80
15	1H	832	A	N9-C1'-C2'	-7.02	104.28	112.00
15	14	611	A	N1-C6-N6	-7.02	114.39	118.60
15	14	1469	U	C5-C6-N1	-7.02	119.19	122.70
15	14	1839	U	C2-N3-C4	-7.02	122.79	127.00
15	1H	1835	G	C5-C6-N1	7.02	115.01	111.50
15	14	1400	C	C5-C6-N1	-7.02	117.49	121.00
15	14	1030	C	C5-C6-N1	7.01	124.51	121.00
15	14	1793	A	C2-N3-C4	-7.01	107.09	110.60
15	1H	2259	U	C5-C6-N1	-7.01	119.19	122.70
15	1H	1710	C	N3-C2-O2	-7.01	116.99	121.90
15	1H	2290	C	OP1-P-O3'	7.01	120.63	105.20
15	14	206	A	O5'-P-OP1	-7.01	99.39	105.70
15	14	1326	G	OP1-P-OP2	7.01	130.12	119.60
15	1H	1592	A	N1-C2-N3	7.01	132.80	129.30
15	1H	120	G	C6-N1-C2	-7.01	120.90	125.10
15	1H	2109	C	C5-C6-N1	-7.01	117.50	121.00
15	1H	2076	A	C5-N7-C8	7.00	107.40	103.90
15	14	2361	A	C5-N7-C8	-7.00	100.40	103.90
15	1H	1558	C	C6-N1-C2	7.00	123.10	120.30
15	1H	1850	G	N9-C4-C5	7.00	108.20	105.40
15	1H	2293	A	N7-C8-N9	-7.00	110.30	113.80
15	14	914	C	C6-N1-C2	7.00	123.10	120.30
1	1G	1886	C	C5-C6-N1	7.00	124.50	121.00
15	1H	2097	G	C5-N7-C8	7.00	107.80	104.30
15	14	592	A	N9-C4-C5	-7.00	103.00	105.80
15	14	666	U	O5'-P-OP2	-7.00	99.40	105.70
15	1H	811	U	N1-C2-N3	-7.00	110.70	114.90
15	14	1835	G	C5-C6-O6	-7.00	124.40	128.60
15	14	2476	C	O5'-P-OP1	-7.00	99.40	105.70
15	1H	555	A	N1-C6-N6	7.00	122.80	118.60
15	1H	1210	C	OP1-P-OP2	-7.00	109.10	119.60
15	1H	1748	A	C5-C6-N1	-7.00	114.20	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	535	G	O5'-P-OP1	-7.00	99.40	105.70
15	14	2521	U	C4-C5-C6	7.00	123.90	119.70
15	1H	188	C	N3-C4-C5	7.00	124.70	121.90
15	1H	563	A	C2-N3-C4	7.00	114.10	110.60
15	1H	1798	G	N9-C4-C5	7.00	108.20	105.40
15	14	611	A	N9-C4-C5	7.00	108.60	105.80
15	14	1282	C	C6-N1-C2	-6.99	117.50	120.30
15	1H	490	C	C6-N1-C2	-6.99	117.50	120.30
15	14	231	A	O5'-P-OP2	-6.99	99.41	105.70
15	14	977	U	N3-C4-O4	-6.99	114.51	119.40
15	14	2403	A	O5'-P-OP1	6.99	119.09	110.70
52	X4	44	G	N1-C6-O6	6.99	124.09	119.90
15	14	187	A	C5-C6-N1	6.99	121.19	117.70
15	14	341	C	O5'-P-OP1	6.99	119.09	110.70
15	14	2840	C	N3-C4-C5	6.99	124.69	121.90
15	1H	1577	A	C6-C5-N7	-6.99	127.41	132.30
15	14	828	U	C5-C4-O4	-6.99	121.71	125.90
15	14	1995	A	O5'-P-OP2	-6.99	99.41	105.70
15	14	2262	A	C2-N3-C4	-6.99	107.11	110.60
15	1H	1071	U	O5'-P-OP1	-6.98	99.42	105.70
15	14	355	A	C4-C5-N7	6.98	114.19	110.70
15	14	618	G	O5'-P-OP1	6.98	119.08	110.70
15	14	1731	G	N3-C4-C5	6.98	132.09	128.60
15	14	1795	C	C6-N1-C2	6.98	123.09	120.30
15	14	1993	G	N7-C8-N9	6.98	116.59	113.10
1	1G	2121	U	P-O3'-C3'	6.98	128.08	119.70
15	1H	54	G	C8-N9-C4	-6.98	103.61	106.40
15	1H	1945	C	N3-C4-C5	6.98	124.69	121.90
1	1G	1045	U	O5'-P-OP2	-6.98	99.42	105.70
1	1G	2125	A	C8-N9-C4	-6.98	103.01	105.80
15	1H	1562	C	C6-N1-C2	-6.98	117.51	120.30
15	1H	2057	G	N1-C2-N3	6.98	128.09	123.90
15	1H	2569	U	O5'-P-OP2	6.98	119.08	110.70
1	13	1456	U	N3-C2-O2	-6.98	117.31	122.20
15	1H	1315	G	N3-C4-N9	6.98	130.19	126.00
15	1H	2334	G	N3-C4-C5	-6.98	125.11	128.60
15	1H	2266	G	C4-C5-N7	-6.98	108.01	110.80
15	14	554	C	C5-C4-N4	6.98	125.08	120.20
15	14	690	C	N1-C2-O2	6.98	123.09	118.90
15	1H	23	G	C5-C6-N1	-6.98	108.01	111.50
15	1H	1010	U	C2-N3-C4	-6.97	122.81	127.00
15	1H	1416	A	C8-N9-C4	6.97	108.59	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1674	C	C5-C4-N4	6.97	125.08	120.20
15	14	1446	U	C5-C4-O4	6.97	130.08	125.90
15	14	1469	U	C6-N1-C2	6.97	125.19	121.00
15	14	2886	A	C4-N9-C1'	6.97	138.85	126.30
15	1H	34	C	N3-C2-O2	6.97	126.78	121.90
15	1H	2631	C	O5'-P-OP2	6.97	119.07	110.70
15	14	73	A	N3-C4-N9	-6.97	121.82	127.40
1	1G	1602	C	N3-C4-N4	6.97	122.88	118.00
15	1H	1648	C	N3-C4-N4	-6.97	113.12	118.00
15	1H	140	A	C8-N9-C4	-6.97	103.01	105.80
5	P8	9	ARG	NE-CZ-NH1	6.97	123.78	120.30
15	14	511	A	O5'-P-OP1	-6.97	99.43	105.70
15	14	719	A	N1-C6-N6	6.97	122.78	118.60
15	14	882	U	C4-C5-C6	6.97	123.88	119.70
15	14	1981	U	N3-C4-O4	-6.97	114.52	119.40
15	1H	93	G	C8-N9-C4	6.97	109.19	106.40
15	1H	977	U	C6-N1-C1'	6.97	130.95	121.20
15	1H	1252	A	N3-C4-N9	-6.97	121.83	127.40
15	14	1735	C	N3-C4-C5	6.97	124.69	121.90
15	14	2599	U	N3-C2-O2	-6.97	117.32	122.20
15	1H	50	G	N3-C4-N9	6.96	130.18	126.00
15	1H	1305	G	N7-C8-N9	-6.96	109.62	113.10
15	1H	2333	G	C5-C6-N1	-6.96	108.02	111.50
15	14	1934	C	N1-C2-O2	6.96	123.08	118.90
15	1H	30	G	C4-C5-C6	6.96	122.98	118.80
15	1H	2333	G	N3-C4-N9	-6.96	121.82	126.00
15	14	83	A	N7-C8-N9	-6.96	110.32	113.80
15	14	1353	C	N3-C2-O2	-6.96	117.03	121.90
1	13	1190	U	N3-C4-O4	6.96	124.27	119.40
1	1G	1887	C	C6-N1-C2	-6.96	117.52	120.30
15	1H	801	A	P-O3'-C3'	6.96	128.05	119.70
15	1H	2245	G	N1-C2-N2	6.96	122.47	116.20
15	1H	2609	C	C2-N3-C4	-6.96	116.42	119.90
15	14	1656	C	C5-C6-N1	6.96	124.48	121.00
1	13	772	C	O5'-P-OP1	-6.96	99.44	105.70
15	1H	2835	G	C8-N9-C4	6.96	109.18	106.40
15	14	200	C	N3-C4-C5	6.96	124.68	121.90
26	1J	88	G	C8-N9-C4	6.96	109.18	106.40
15	1H	854	G	N3-C2-N2	-6.96	115.03	119.90
15	1H	2621	C	C5-C4-N4	-6.96	115.33	120.20
15	1H	1648	C	N1-C2-O2	6.95	123.07	118.90
1	13	2122	A	N7-C8-N9	-6.95	110.32	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1386	U	O5'-P-OP2	-6.95	99.44	105.70
15	1H	140	A	N3-C4-N9	-6.95	121.84	127.40
15	1H	1295	A	C4-C5-C6	6.95	120.47	117.00
15	14	300	G	N3-C4-N9	6.95	130.17	126.00
15	14	2448	A	N1-C6-N6	6.95	122.77	118.60
15	1H	2677	A	C8-N9-C4	-6.95	103.02	105.80
15	14	2290	C	P-O3'-C3'	6.95	128.04	119.70
15	1H	1354	C	C6-N1-C2	6.95	123.08	120.30
15	1H	1362	U	OP1-P-O3'	6.95	120.48	105.20
15	14	228	C	N1-C2-O2	-6.95	114.73	118.90
15	1H	956	C	O5'-P-OP2	-6.94	99.45	105.70
15	1H	451	A	N1-C6-N6	6.94	122.77	118.60
15	1H	2109	C	N3-C4-C5	6.94	124.68	121.90
15	14	2236	G	C8-N9-C4	-6.94	103.62	106.40
1	13	2030	C	C5-C4-N4	6.94	125.06	120.20
15	1H	1001	G	N1-C2-N3	6.94	128.06	123.90
15	14	417	G	C8-N9-C4	6.94	109.18	106.40
15	14	2771	C	C6-N1-C2	-6.94	117.52	120.30
1	13	1853	C	N1-C2-O2	-6.94	114.74	118.90
15	1H	2380	G	C5-C6-O6	-6.94	124.44	128.60
15	1H	783	A	C5-N7-C8	-6.94	100.43	103.90
15	1H	1924	G	N7-C8-N9	6.94	116.57	113.10
15	14	1257	G	OP1-P-OP2	6.94	130.01	119.60
1	13	1854	A	C6-C5-N7	-6.94	127.44	132.30
15	1H	792	G	C2-N3-C4	6.94	115.37	111.90
1	13	1488	A	N7-C8-N9	6.93	117.27	113.80
1	13	2153	G	C4-C5-N7	6.93	113.57	110.80
1	13	1220	U	N3-C2-O2	-6.93	117.35	122.20
1	13	2140	G	C5-C6-O6	-6.93	124.44	128.60
1	1G	849	A	C5-N7-C8	-6.93	100.43	103.90
15	1H	2681	C	N3-C4-C5	-6.93	119.13	121.90
15	1H	1608	A	C5-N7-C8	-6.93	100.43	103.90
1	13	1591	A	N1-C6-N6	6.93	122.76	118.60
15	1H	1362	U	OP1-P-OP2	6.93	129.99	119.60
15	1H	1656	C	OP1-P-O3'	6.93	120.44	105.20
15	14	2716	C	P-O3'-C3'	6.93	128.02	119.70
52	X1	38	A	N1-C6-N6	6.93	122.76	118.60
1	1G	2142	A	N1-C2-N3	6.93	132.76	129.30
52	X1	68	C	O5'-P-OP2	-6.93	99.47	105.70
15	14	829	G	C6-C5-N7	-6.92	126.25	130.40
15	14	2503	A	N1-C6-N6	6.92	122.75	118.60
15	14	2601	C	C5-C4-N4	-6.92	115.35	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	909	U	O5'-P-OP2	-6.92	99.47	105.70
15	14	417	G	N9-C4-C5	-6.92	102.63	105.40
15	14	735	G	N1-C6-O6	-6.92	115.75	119.90
15	14	2075	C	OP2-P-O3'	6.92	120.43	105.20
15	1H	975	G	N1-C6-O6	6.92	124.05	119.90
15	1H	2512	A	C5-C6-N1	6.92	121.16	117.70
15	14	2342	A	N9-C4-C5	6.92	108.57	105.80
15	1H	471	A	N1-C2-N3	-6.92	125.84	129.30
15	14	999	G	N1-C6-O6	-6.92	115.75	119.90
15	14	1536	G	C8-N9-C4	-6.92	103.63	106.40
15	1H	776	A	O5'-P-OP1	-6.92	99.47	105.70
15	1H	2226	C	C5-C6-N1	-6.92	117.54	121.00
15	1H	747	C	C5-C4-N4	-6.92	115.36	120.20
15	1H	965	A	N3-C4-N9	-6.92	121.87	127.40
15	14	371	A	N9-C4-C5	-6.92	103.03	105.80
15	1H	189	A	N1-C2-N3	-6.91	125.84	129.30
15	1H	1484	G	N1-C6-O6	-6.91	115.75	119.90
15	1H	2045	A	C5-N7-C8	-6.91	100.44	103.90
15	1H	349	A	O5'-P-OP2	6.91	118.99	110.70
15	1H	905	C	O5'-P-OP1	-6.91	99.48	105.70
15	14	888	U	N3-C2-O2	-6.91	117.36	122.20
15	14	2533	A	C5-C6-N1	-6.91	114.24	117.70
15	1H	656	G	N3-C2-N2	6.91	124.74	119.90
15	1H	1837	A	C8-N9-C4	-6.91	103.04	105.80
15	1H	2329	C	O5'-P-OP2	-6.91	99.48	105.70
15	14	149	A	C5-C6-N1	-6.91	114.25	117.70
15	14	753	G	C5-C6-O6	-6.91	124.45	128.60
1	1G	653	G	N3-C4-C5	6.91	132.05	128.60
15	14	1686	C	O5'-P-OP2	6.91	118.99	110.70
15	1H	837	A	C8-N9-C4	6.91	108.56	105.80
15	1H	1021	G	N3-C2-N2	-6.91	115.06	119.90
15	1H	894	G	C6-C5-N7	-6.91	126.26	130.40
15	1H	2505	G	O4'-C1'-N9	6.91	113.72	108.20
15	1H	2614	G	C6-C5-N7	6.91	134.54	130.40
15	14	1445	U	C4-C5-C6	6.91	123.84	119.70
15	1H	147	U	C6-N1-C2	6.90	125.14	121.00
15	14	111	G	C5-C6-O6	-6.90	124.46	128.60
15	14	1592	A	N1-C2-N3	6.90	132.75	129.30
1	13	1421	A	C3'-C2'-C1'	-6.90	95.98	101.50
15	1H	355	A	C6-C5-N7	-6.90	127.47	132.30
15	1H	1693	G	O5'-P-OP2	-6.90	99.49	105.70
15	1H	1951	U	O5'-P-OP2	-6.90	99.49	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2569	U	N1-C2-O2	-6.90	117.97	122.80
15	14	1408	A	N9-C4-C5	-6.90	103.04	105.80
15	14	2329	C	N3-C2-O2	-6.90	117.07	121.90
27	85	12	ARG	NE-CZ-NH1	-6.90	116.85	120.30
15	1H	1451	C	OP1-P-O3'	6.90	120.38	105.20
15	1H	1608	A	C4-C5-N7	6.90	114.15	110.70
15	1H	1672	G	OP2-P-O3'	6.90	120.38	105.20
52	W4	76	A	C4-C5-N7	-6.90	107.25	110.70
15	1H	563	A	C6-N1-C2	-6.90	114.46	118.60
15	1H	2742	U	C2-N3-C4	-6.90	122.86	127.00
15	14	400	G	O4'-C1'-N9	6.90	113.72	108.20
15	1H	130	G	N1-C6-O6	-6.89	115.76	119.90
15	1H	1689	U	N3-C2-O2	-6.89	117.37	122.20
15	1H	1769	G	N7-C8-N9	6.89	116.55	113.10
15	1H	1964	U	N3-C2-O2	6.89	127.03	122.20
15	1H	2398	G	N1-C2-N2	-6.89	110.00	116.20
1	13	1037	G	O5'-P-OP2	-6.89	99.50	105.70
1	13	1488	A	N1-C6-N6	6.89	122.73	118.60
15	1H	141	C	C5-C4-N4	-6.89	115.38	120.20
15	1H	1920	C	OP1-P-OP2	-6.89	109.26	119.60
15	1H	2002	A	C8-N9-C4	6.89	108.56	105.80
15	1H	2416	U	C2-N1-C1'	6.89	125.97	117.70
15	1H	2576	A	C5-N7-C8	6.89	107.35	103.90
15	14	741	C	C6-N1-C2	6.89	123.06	120.30
15	1H	144	C	C6-N1-C2	6.89	123.06	120.30
15	1H	880	G	N7-C8-N9	-6.89	109.66	113.10
15	1H	1710	C	N3-C4-N4	-6.89	113.18	118.00
15	14	514	C	C5-C4-N4	-6.89	115.38	120.20
15	1H	739	G	O5'-P-OP1	-6.89	99.50	105.70
15	1H	970	U	N3-C4-O4	6.89	124.22	119.40
15	1H	1967	C	C5-C6-N1	6.89	124.44	121.00
15	14	1924	G	N1-C2-N2	6.89	122.40	116.20
15	14	2696	C	N3-C4-C5	-6.89	119.14	121.90
5	L5	34	ARG	NE-CZ-NH1	-6.89	116.86	120.30
26	1J	52	G	C5-C6-O6	6.89	132.73	128.60
1	13	696	A	N1-C6-N6	-6.88	114.47	118.60
15	1H	1822	C	N1-C2-O2	6.88	123.03	118.90
15	1H	2040	A	O5'-P-OP2	-6.88	99.50	105.70
15	1H	2655	G	C8-N9-C4	-6.88	103.65	106.40
15	14	137	G	C2-N3-C4	6.88	115.34	111.90
15	14	765	A	N1-C6-N6	6.88	122.73	118.60
15	14	885	G	C5-C6-N1	6.88	114.94	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2375	A	O5'-P-OP2	-6.88	99.50	105.70
15	14	137	G	N3-C4-C5	-6.88	125.16	128.60
15	14	772	G	O5'-P-OP1	6.88	118.96	110.70
15	14	1290	A	C5-C6-N1	-6.88	114.26	117.70
1	1G	695	U	OP2-P-O3'	6.88	120.34	105.20
15	1H	2010	G	OP1-P-OP2	-6.88	109.28	119.60
15	14	555	A	N3-C4-N9	-6.88	121.89	127.40
15	14	2600	U	O5'-P-OP1	-6.88	99.51	105.70
15	14	2605	A	N1-C6-N6	-6.88	114.47	118.60
15	14	362	C	O5'-P-OP2	-6.88	99.51	105.70
15	14	2439	C	OP1-P-OP2	6.88	129.92	119.60
15	1H	1811	U	N3-C2-O2	-6.88	117.39	122.20
15	1H	1857	G	C8-N9-C4	6.88	109.15	106.40
15	14	1010	U	N1-C2-O2	-6.88	117.98	122.80
15	14	2466	A	N1-C6-N6	-6.88	114.47	118.60
15	1H	177	G	N1-C2-N2	-6.88	110.01	116.20
15	1H	1795	C	C6-N1-C2	6.88	123.05	120.30
15	14	1814	A	C8-N9-C4	-6.88	103.05	105.80
15	14	2533	A	C5-N7-C8	-6.88	100.46	103.90
15	14	2054	G	N1-C2-N2	6.88	122.39	116.20
15	14	2466	A	N9-C4-C5	6.88	108.55	105.80
15	1H	1673	G	C8-N9-C4	6.87	109.15	106.40
15	1H	1842	U	N1-C2-N3	-6.87	110.78	114.90
15	1H	2843	G	N7-C8-N9	6.87	116.54	113.10
15	14	1665	A	O4'-C1'-N9	6.87	113.70	108.20
1	13	1556	G	C5-C6-O6	-6.87	124.48	128.60
1	13	1591	A	N9-C4-C5	-6.87	103.05	105.80
15	1H	45	C	O5'-P-OP1	6.87	118.95	110.70
15	1H	81	G	C5-C6-O6	6.87	132.72	128.60
15	1H	177	G	N1-C6-O6	-6.87	115.78	119.90
15	1H	601	U	N3-C2-O2	6.87	127.01	122.20
15	1H	48	A	O5'-P-OP2	-6.87	99.52	105.70
15	1H	711	G	O5'-P-OP2	-6.87	99.52	105.70
15	14	1811	U	N3-C2-O2	-6.87	117.39	122.20
15	14	999	G	C5-C6-O6	6.87	132.72	128.60
15	14	2500	G	C5-C6-O6	-6.87	124.48	128.60
15	14	2734	G	C8-N9-C4	-6.87	103.65	106.40
15	1H	1443	U	C5-C6-N1	6.87	126.13	122.70
15	1H	1712	C	C2-N3-C4	-6.87	116.47	119.90
15	1H	70	A	N9-C4-C5	-6.87	103.05	105.80
15	1H	248	G	N1-C2-N2	-6.87	110.02	116.20
15	14	1010	U	OP1-P-OP2	-6.87	109.30	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	382	A	C8-N9-C4	-6.86	103.06	105.80
15	1H	1333	A	OP1-P-OP2	6.86	129.90	119.60
15	1H	1424	C	N3-C2-O2	6.86	126.70	121.90
15	1H	2440	A	O5'-P-OP2	-6.86	99.52	105.70
15	14	1281	G	O5'-P-OP2	6.86	118.94	110.70
15	14	1357	A	C4-C5-C6	6.86	120.43	117.00
15	1H	891	G	N3-C4-C5	6.86	132.03	128.60
15	1H	2302	A	C6-C5-N7	-6.86	127.50	132.30
15	1H	187	A	OP2-P-O3'	6.86	120.29	105.20
15	1H	1008	C	OP1-P-O3'	6.86	120.29	105.20
1	13	1111	G	N1-C6-O6	6.86	124.01	119.90
15	1H	189	A	N1-C6-N6	-6.86	114.49	118.60
15	1H	1361	U	N1-C2-N3	6.86	119.01	114.90
15	1H	1750	A	O5'-P-OP2	-6.86	99.53	105.70
15	1H	1300	C	C6-N1-C2	6.85	123.04	120.30
15	14	2361	A	N1-C6-N6	6.85	122.71	118.60
15	1H	974	A	OP1-P-OP2	-6.85	109.32	119.60
15	1H	2245	G	N3-C2-N2	-6.85	115.10	119.90
15	14	2795	U	N1-C2-N3	6.85	119.01	114.90
15	1H	466	G	C5-C6-O6	-6.85	124.49	128.60
15	1H	1892	G	N1-C6-O6	6.85	124.01	119.90
15	14	892	G	C8-N9-C4	6.85	109.14	106.40
15	1H	475	A	N1-C6-N6	-6.85	114.49	118.60
15	1H	911	G	O5'-P-OP2	-6.85	99.54	105.70
15	1H	920	U	N3-C2-O2	6.85	126.99	122.20
15	14	690	C	C6-N1-C2	-6.85	117.56	120.30
15	14	1796	A	C2-N3-C4	-6.85	107.17	110.60
15	14	2801	C	C6-N1-C2	6.85	123.04	120.30
15	1H	1862	G	N7-C8-N9	-6.85	109.68	113.10
15	14	2559	G	N1-C6-O6	6.85	124.01	119.90
15	1H	876	U	C2-N1-C1'	-6.85	109.48	117.70
15	1H	1385	A	C2-N3-C4	6.85	114.02	110.60
15	1H	132	C	C5-C6-N1	-6.84	117.58	121.00
15	1H	138	G	C5-C6-O6	-6.84	124.49	128.60
15	14	1789	A	N1-C6-N6	-6.84	114.49	118.60
15	14	1796	A	C4-C5-N7	6.84	114.12	110.70
15	1H	2057	G	C8-N9-C1'	-6.84	118.11	127.00
15	14	204	G	N7-C8-N9	6.84	116.52	113.10
15	14	2375	A	N1-C2-N3	6.84	132.72	129.30
15	1H	490	C	N3-C2-O2	-6.84	117.11	121.90
15	1H	743	U	N3-C4-O4	-6.84	114.61	119.40
15	1H	846	C	C5-C4-N4	6.84	124.99	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	2062	G	N3-C4-C5	-6.84	125.18	128.60
52	X4	37	A	C6-N1-C2	6.84	122.70	118.60
15	1H	2361	A	C4-C5-N7	6.84	114.12	110.70
15	14	1349	U	C2-N3-C4	-6.84	122.90	127.00
15	1H	2483	G	C5-C6-O6	-6.84	124.50	128.60
15	14	1448	C	OP2-P-O3'	6.83	120.24	105.20
26	16	49	C	N3-C2-O2	6.83	126.68	121.90
1	13	1035	G	C8-N9-C4	-6.83	103.67	106.40
15	1H	426	G	N1-C2-N3	6.83	128.00	123.90
15	1H	591	U	O5'-P-OP2	-6.83	99.55	105.70
15	1H	1815	C	C2-N3-C4	-6.83	116.48	119.90
15	14	648	A	N3-C4-C5	6.83	131.58	126.80
15	14	1677	G	O5'-P-OP1	6.83	118.90	110.70
15	1H	1850	G	C4-C5-N7	-6.83	108.07	110.80
15	1H	1975	G	C8-N9-C1'	-6.83	118.12	127.00
15	14	119	G	C5-C6-O6	-6.83	124.50	128.60
1	13	1276	C	C5-C6-N1	6.83	124.42	121.00
15	14	1367	C	C6-N1-C2	-6.83	117.57	120.30
1	1G	1538	A	C8-N9-C4	6.83	108.53	105.80
15	1H	688	C	C6-N1-C2	-6.83	117.57	120.30
15	14	38	A	C2-N3-C4	6.83	114.02	110.60
15	14	1307	C	OP2-P-O3'	6.83	120.22	105.20
15	14	2319	G	N3-C2-N2	-6.83	115.12	119.90
1	1G	756	G	N9-C4-C5	-6.83	102.67	105.40
15	1H	792	G	N3-C4-C5	-6.83	125.19	128.60
15	1H	1673	G	N7-C8-N9	-6.83	109.69	113.10
15	1H	1835	G	C5-C6-O6	-6.83	124.50	128.60
15	14	1832	U	O5'-P-OP2	-6.83	99.56	105.70
1	13	2132	C	N3-C4-C5	6.83	124.63	121.90
1	1G	1441	C	N3-C4-C5	-6.83	119.17	121.90
1	1G	2075	C	N1-C2-O2	6.83	123.00	118.90
15	1H	780	C	C6-N1-C2	-6.83	117.57	120.30
15	1H	2015	C	N3-C4-N4	-6.83	113.22	118.00
15	14	886	C	O5'-P-OP1	-6.83	99.56	105.70
15	14	1732	G	C5-C6-O6	6.83	132.70	128.60
15	14	1991	A	C5-C6-N1	6.83	121.11	117.70
26	16	7	C	N3-C4-C5	6.83	124.63	121.90
1	13	1864	C	N1-C2-O2	-6.82	114.81	118.90
15	1H	2577	U	C5-C6-N1	-6.82	119.29	122.70
15	14	1341	U	O5'-P-OP2	-6.82	99.56	105.70
15	14	2302	A	C6-C5-N7	-6.82	127.52	132.30
15	1H	1441	A	OP2-P-O3'	6.82	120.21	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	299	G	C8-N9-C4	-6.82	103.67	106.40
15	14	2377	G	C8-N9-C4	6.82	109.13	106.40
1	13	1075	U	C5-C6-N1	6.82	126.11	122.70
1	13	2091	A	C5-C6-N1	6.82	121.11	117.70
15	1H	1739	A	O5'-P-OP2	-6.82	99.56	105.70
47	59	152	ARG	C-N-CA	6.82	138.75	121.70
1	13	1515	A	N1-C6-N6	6.82	122.69	118.60
15	1H	555	A	O4'-C1'-N9	-6.82	102.75	108.20
15	1H	786	C	C5-C6-N1	-6.82	117.59	121.00
1	13	1144	G	C5-C6-O6	6.82	132.69	128.60
1	13	1276	C	C6-N1-C2	-6.82	117.57	120.30
15	1H	16	G	N1-C2-N3	6.82	127.99	123.90
15	14	455	C	N1-C2-O2	6.82	122.99	118.90
15	14	1186	G	N1-C6-O6	6.82	123.99	119.90
15	14	1361	U	N1-C2-O2	-6.82	118.03	122.80
15	1H	108	G	OP1-P-OP2	6.82	129.82	119.60
15	1H	1339	C	N1-C2-O2	-6.82	114.81	118.90
15	1H	1545	A	C5-C6-N6	-6.82	118.25	123.70
15	14	717	G	C8-N9-C4	6.82	109.13	106.40
15	1H	2343	A	N1-C2-N3	6.81	132.71	129.30
15	14	735	G	C6-N1-C2	-6.81	121.01	125.10
15	1H	541	A	C6-N1-C2	-6.81	114.51	118.60
15	1H	1857	G	O5'-P-OP1	6.81	118.88	110.70
15	1H	2392	A	N3-C4-C5	6.81	131.57	126.80
15	1H	192	U	N1-C2-N3	-6.81	110.81	114.90
15	14	872	G	N7-C8-N9	-6.81	109.69	113.10
15	14	2019	C	O5'-P-OP2	-6.81	99.57	105.70
1	1G	1861	C	N1-C2-O2	6.81	122.99	118.90
15	1H	411	U	N1-C2-N3	6.81	118.99	114.90
15	1H	593	U	C2-N3-C4	6.81	131.09	127.00
15	1H	1036	A	C5-C6-N1	6.81	121.11	117.70
15	14	786	C	N1-C2-O2	-6.81	114.81	118.90
15	14	1377	G	C6-N1-C2	-6.81	121.02	125.10
15	1H	1878	C	N1-C2-O2	-6.81	114.82	118.90
15	1H	2005	G	C2-N3-C4	6.81	115.30	111.90
15	14	232	G	C4-N9-C1'	-6.81	117.65	126.50
26	16	15	A	O5'-P-OP2	-6.81	99.57	105.70
52	W4	38	A	N1-C6-N6	6.81	122.69	118.60
52	X4	70	G	O5'-P-OP1	6.81	118.87	110.70
1	13	1389	G	C4-C5-N7	6.81	113.52	110.80
15	1H	188	C	C2-N3-C4	-6.81	116.50	119.90
15	1H	1980	U	C6-N1-C2	6.81	125.08	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1700	G	C8-N9-C4	-6.81	103.68	106.40
15	1H	597	A	C5-C6-N1	-6.80	114.30	117.70
15	1H	2080	C	N3-C2-O2	6.80	126.66	121.90
15	14	194	A	C8-N9-C4	6.80	108.52	105.80
15	14	1008	C	O4'-C1'-N1	6.80	113.64	108.20
15	14	2302	A	N3-C4-N9	-6.80	121.96	127.40
19	9A	31	LEU	CA-CB-CG	6.80	130.95	115.30
15	1H	2241	C	N1-C2-O2	-6.80	114.82	118.90
15	1H	287	C	N3-C4-C5	6.80	124.62	121.90
15	14	327	C	C6-N1-C2	-6.80	117.58	120.30
15	14	595	G	C4-C5-C6	6.80	122.88	118.80
15	14	1372	U	OP1-P-O3'	6.80	120.16	105.20
15	14	1722	C	O5'-P-OP2	6.80	118.86	110.70
15	1H	830	A	C8-N9-C4	6.80	108.52	105.80
15	1H	2691	C	N3-C4-C5	6.80	124.62	121.90
15	1H	1375	U	OP2-P-O3'	6.80	120.16	105.20
12	Q8	42	ARG	C-N-CA	6.80	138.69	121.70
15	1H	199	C	C6-N1-C2	6.80	123.02	120.30
15	1H	976	G	N1-C6-O6	6.80	123.98	119.90
15	1H	1481	C	N1-C2-O2	-6.80	114.82	118.90
15	14	2042	U	O5'-P-OP1	-6.80	99.58	105.70
52	X1	4	C	N3-C4-C5	-6.80	119.18	121.90
15	1H	120	G	N1-C2-N3	6.79	127.98	123.90
52	X1	37	A	C6-N1-C2	6.79	122.68	118.60
1	13	1126	A	O5'-P-OP1	-6.79	99.59	105.70
15	1H	219	A	O4'-C1'-N9	-6.79	102.77	108.20
15	1H	1689	U	O5'-P-OP1	6.79	118.85	110.70
15	14	1787	G	N3-C2-N2	6.79	124.65	119.90
15	1H	53	G	O5'-P-OP1	-6.79	99.59	105.70
15	1H	884	A	C8-N9-C4	-6.79	103.08	105.80
15	1H	1478	G	O5'-P-OP2	-6.79	99.59	105.70
15	1H	1731	G	N3-C4-C5	6.79	131.99	128.60
15	1H	2082	A	OP1-P-O3'	6.79	120.13	105.20
15	1H	2496	G	O5'-P-OP2	-6.79	99.59	105.70
15	14	534	A	OP1-P-OP2	-6.79	109.42	119.60
15	14	2568	G	C4-C5-N7	6.79	113.52	110.80
15	14	854	G	C5-C6-O6	-6.79	124.53	128.60
1	1G	2143	G	C5-C6-O6	6.79	132.67	128.60
15	1H	355	A	N1-C2-N3	6.79	132.69	129.30
15	14	242	G	C5-N7-C8	6.79	107.69	104.30
15	14	1663	A	N1-C6-N6	6.79	122.67	118.60
15	14	1820	A	C6-N1-C2	6.79	122.67	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	131	C	C6-N1-C2	6.78	123.01	120.30
15	1H	196	U	C5-C6-N1	-6.78	119.31	122.70
15	1H	2388	G	C6-N1-C2	-6.78	121.03	125.10
15	14	2266	G	N1-C6-O6	-6.78	115.83	119.90
15	14	752	U	C5-C4-O4	6.78	129.97	125.90
26	1J	76	U	N1-C2-N3	6.78	118.97	114.90
15	1H	1524	C	C6-N1-C2	6.78	123.01	120.30
15	14	1808	C	OP1-P-OP2	-6.78	109.43	119.60
1	13	1598	A	N9-C4-C5	-6.78	103.09	105.80
1	1G	1576	G	N3-C4-C5	-6.78	125.21	128.60
15	1H	1950	C	OP2-P-O3'	6.78	120.11	105.20
15	14	1748	A	O4'-C1'-N9	6.78	113.62	108.20
15	14	2462	G	P-O3'-C3'	6.78	127.83	119.70
15	1H	1663	A	O5'-P-OP1	6.78	118.83	110.70
15	1H	2409	C	C5-C4-N4	6.78	124.94	120.20
15	14	121	G	C5-N7-C8	-6.78	100.91	104.30
15	14	125	A	C6-N1-C2	-6.78	114.53	118.60
15	14	742	C	N3-C4-C5	6.78	124.61	121.90
15	14	1350	A	C8-N9-C4	6.78	108.51	105.80
15	14	1827	C	N1-C2-O2	-6.78	114.83	118.90
15	14	2031	C	C5-C4-N4	-6.78	115.46	120.20
1	1G	689	C	N1-C2-O2	-6.78	114.83	118.90
15	1H	2366	G	OP1-P-OP2	6.78	129.76	119.60
15	1H	2463	A	C4-C5-C6	6.78	120.39	117.00
26	1J	117	G	OP1-P-OP2	6.77	129.76	119.60
15	1H	854	G	C6-N1-C2	-6.77	121.04	125.10
15	1H	2782	G	C4-C5-N7	6.77	113.51	110.80
52	X4	37	A	N1-C6-N6	6.77	122.66	118.60
15	1H	1994	A	C5-N7-C8	6.77	107.28	103.90
15	1H	2230	G	N9-C1'-C2'	6.77	122.80	114.00
1	13	1890	C	O5'-P-OP2	-6.77	99.61	105.70
15	1H	462	C	C5-C6-N1	-6.77	117.62	121.00
15	1H	1364	C	N3-C2-O2	-6.77	117.16	121.90
15	1H	1448	C	OP1-P-OP2	-6.77	109.44	119.60
15	14	2108	G	OP1-P-OP2	-6.77	109.45	119.60
15	1H	2345	G	C6-C5-N7	-6.77	126.34	130.40
15	1H	2452	U	N3-C4-C5	-6.77	110.54	114.60
15	1H	602	G	C8-N9-C4	6.76	109.11	106.40
15	14	2516	C	C5-C6-N1	-6.76	117.62	121.00
1	13	1462	U	C5-C4-O4	6.76	129.96	125.90
15	14	556	A	N7-C8-N9	6.76	117.18	113.80
15	14	2582	G	N1-C6-O6	-6.76	115.84	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	1391	C	C5-C6-N1	-6.76	117.62	121.00
15	1H	466	G	N1-C6-O6	6.76	123.96	119.90
15	1H	2237	G	N3-C2-N2	-6.76	115.17	119.90
15	14	1366	A	OP1-P-O3'	6.76	120.07	105.20
1	13	1215	C	N3-C4-C5	6.76	124.60	121.90
15	1H	585	C	C6-N1-C2	6.76	123.00	120.30
15	1H	829	G	N1-C6-O6	-6.76	115.84	119.90
15	1H	1636	A	C8-N9-C4	-6.76	103.10	105.80
15	1H	2597	G	N7-C8-N9	6.76	116.48	113.10
15	14	1070	G	C8-N9-C4	-6.76	103.70	106.40
15	14	725	A	O5'-P-OP1	-6.76	99.62	105.70
15	1H	1445	U	C5-C6-N1	-6.76	119.32	122.70
15	1H	1577	A	C5-C6-N1	-6.76	114.32	117.70
15	1H	2449	A	OP2-P-O3'	6.76	120.06	105.20
1	1G	922	G	O5'-P-OP2	-6.75	99.62	105.70
1	1G	849	A	C6-C5-N7	-6.75	127.57	132.30
15	1H	2368	G	OP1-P-OP2	6.75	129.73	119.60
15	1H	2776	C	N3-C2-O2	-6.75	117.17	121.90
15	14	198	C	C6-N1-C2	6.75	123.00	120.30
15	14	903	G	N3-C4-N9	-6.75	121.95	126.00
15	14	1397	G	O5'-P-OP2	6.75	118.81	110.70
15	14	1820	A	N1-C2-N3	6.75	132.68	129.30
26	1J	16	U	OP1-P-OP2	6.75	129.73	119.60
1	13	1913	A	N7-C8-N9	6.75	117.18	113.80
1	1G	2161	C	N1-C2-O2	6.75	122.95	118.90
15	1H	1834	C	N1-C2-N3	6.75	123.93	119.20
15	1H	1878	C	N3-C4-N4	6.75	122.72	118.00
15	1H	2571	C	C5-C6-N1	-6.75	117.62	121.00
15	14	879	G	C8-N9-C4	6.75	109.10	106.40
15	14	2223	A	O4'-C1'-N9	6.75	113.60	108.20
15	1H	1265	C	C5-C6-N1	-6.75	117.62	121.00
15	14	2081	G	C4-C5-N7	6.75	113.50	110.80
1	13	1591	A	C8-N9-C4	6.75	108.50	105.80
1	1G	729	A	P-O3'-C3'	6.75	127.80	119.70
15	1H	1051	G	N7-C8-N9	-6.75	109.73	113.10
15	1H	1445	U	N3-C4-O4	-6.75	114.68	119.40
15	1H	2586	C	N1-C2-O2	-6.75	114.85	118.90
15	1H	1298	U	O5'-P-OP2	6.75	118.80	110.70
15	1H	1953	A	C2-N3-C4	6.75	113.97	110.60
15	1H	2284	A	C5-C6-N1	-6.75	114.33	117.70
15	14	2087	A	C5-C6-N1	6.75	121.07	117.70
15	14	2466	A	C5-N7-C8	-6.75	100.53	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
52	X1	23	A	N1-C6-N6	-6.75	114.55	118.60
15	1H	1699	G	C2-N3-C4	6.75	115.27	111.90
15	1H	1818	A	O4'-C1'-N9	-6.75	102.80	108.20
26	1J	92	A	C8-N9-C4	-6.75	103.10	105.80
1	13	1510	G	N1-C2-N2	-6.74	110.13	116.20
15	1H	2452	U	C6-N1-C2	-6.74	116.95	121.00
15	14	300	G	C5-C6-O6	-6.74	124.55	128.60
1	1G	2075	C	C5-C6-N1	6.74	124.37	121.00
15	14	195	G	C5-C6-O6	-6.74	124.56	128.60
15	14	853	A	O4'-C1'-N9	6.74	113.59	108.20
15	1H	667	C	OP1-P-O3'	6.74	120.03	105.20
15	1H	2457	C	OP1-P-OP2	-6.74	109.49	119.60
15	14	884	A	C2-N3-C4	6.74	113.97	110.60
15	14	1277	G	N1-C2-N3	6.74	127.94	123.90
15	14	2603	G	C8-N9-C4	-6.74	103.70	106.40
52	V4	76	A	O4'-C1'-N9	6.74	113.59	108.20
15	1H	1944	A	O5'-P-OP1	-6.74	99.64	105.70
15	1H	2003	A	N9-C4-C5	6.74	108.50	105.80
15	14	557	G	N3-C4-C5	6.74	131.97	128.60
15	14	1350	A	N9-C4-C5	-6.74	103.10	105.80
15	14	2051	C	O5'-P-OP2	-6.74	99.64	105.70
1	13	2140	G	C5-C6-N1	6.74	114.87	111.50
15	1H	1554	C	N1-C2-O2	6.74	122.94	118.90
1	13	1501	G	N1-C6-O6	-6.74	115.86	119.90
15	14	2447	A	C8-N9-C4	6.74	108.49	105.80
15	1H	99	G	N1-C6-O6	6.73	123.94	119.90
15	1H	240	G	C8-N9-C4	-6.73	103.71	106.40
15	1H	1214	U	C5-C4-O4	6.73	129.94	125.90
15	14	743	U	O5'-P-OP2	-6.73	99.64	105.70
15	14	1381	G	C4-N9-C1'	-6.73	117.75	126.50
15	14	1429	G	C8-N9-C4	6.73	109.09	106.40
15	1H	621	G	N1-C6-O6	6.73	123.94	119.90
15	14	1801	C	C2-N3-C4	-6.73	116.53	119.90
12	Q8	54	GLU	OE1-CD-OE2	-6.73	115.22	123.30
15	14	2795	U	C5-C4-O4	6.73	129.94	125.90
15	1H	1685	G	OP1-P-OP2	-6.73	109.51	119.60
1	13	1144	G	C8-N9-C4	-6.73	103.71	106.40
1	13	2030	C	C4-C5-C6	6.73	120.76	117.40
15	1H	2424	G	N1-C6-O6	-6.73	115.86	119.90
15	14	178	G	N3-C2-N2	6.73	124.61	119.90
15	1H	850	G	N1-C6-O6	-6.72	115.87	119.90
15	1H	1832	U	N3-C4-C5	6.72	118.64	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	332	G	OP1-P-OP2	6.72	129.69	119.60
52	X1	34	G	C5-C6-O6	6.72	132.63	128.60
15	14	409	G	N7-C8-N9	-6.72	109.74	113.10
26	16	6	C	C5-C6-N1	-6.72	117.64	121.00
15	1H	957	A	N7-C8-N9	-6.72	110.44	113.80
15	14	2603	G	C5-C6-N1	-6.72	108.14	111.50
15	1H	673	A	N7-C8-N9	6.72	117.16	113.80
15	1H	1015	G	OP1-P-OP2	-6.72	109.52	119.60
15	1H	1845	G	N3-C4-C5	-6.72	125.24	128.60
15	14	187	A	OP1-P-OP2	-6.72	109.52	119.60
15	14	2095	G	C2-N3-C4	-6.72	108.54	111.90
15	14	2027	G	C5-C6-O6	-6.72	124.57	128.60
15	14	2401	C	N1-C2-O2	-6.72	114.87	118.90
1	13	1854	A	N1-C6-N6	6.72	122.63	118.60
12	Q8	54	GLU	CG-CD-OE2	6.72	131.73	118.30
15	1H	781	C	C6-N1-C2	6.72	122.99	120.30
15	1H	1442	A	N1-C6-N6	-6.72	114.57	118.60
15	1H	1975	G	C5-C6-N1	6.72	114.86	111.50
15	1H	2596	G	N9-C4-C5	-6.72	102.71	105.40
15	1H	2776	C	N1-C2-O2	6.72	122.93	118.90
1	13	1311	G	N1-C6-O6	6.71	123.93	119.90
1	1G	2114	G	O5'-P-OP1	6.71	118.76	110.70
15	1H	1351	A	OP1-P-OP2	6.71	129.67	119.60
15	14	1243	G	N1-C6-O6	-6.71	115.87	119.90
15	14	2374	C	N3-C4-C5	-6.71	119.21	121.90
1	13	1803	A	N7-C8-N9	6.71	117.16	113.80
15	14	860	U	C5-C4-O4	6.71	129.93	125.90
26	16	62	C	C6-N1-C2	-6.71	117.61	120.30
1	13	1397	A	N1-C6-N6	-6.71	114.57	118.60
15	1H	43	A	C4-C5-C6	6.71	120.36	117.00
15	1H	2421	U	O4'-C1'-N1	-6.71	102.83	108.20
15	14	1674	C	O5'-P-OP1	6.71	118.75	110.70
15	14	2696	C	N3-C4-N4	-6.71	113.30	118.00
1	13	1204	G	C4-C5-N7	-6.71	108.12	110.80
1	13	1092	A	O5'-P-OP1	-6.71	99.66	105.70
1	1G	1583	U	C5-C4-O4	6.71	129.93	125.90
15	1H	1392	G	C8-N9-C4	-6.71	103.72	106.40
15	14	1928	G	N1-C2-N2	6.71	122.24	116.20
15	14	2448	A	C5-C6-N1	-6.71	114.35	117.70
15	1H	1404	G	C5-C6-O6	6.71	132.62	128.60
15	1H	1964	U	N3-C4-C5	6.71	118.62	114.60
15	1H	2631	C	N1-C2-O2	-6.71	114.88	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1549	G	O5'-P-OP2	-6.71	99.66	105.70
15	1H	1406	U	O5'-P-OP1	-6.71	99.67	105.70
15	14	2846	G	N1-C2-N2	6.71	122.23	116.20
15	1H	2244	C	C5-C6-N1	-6.70	117.65	121.00
15	1H	1711	G	C2-N3-C4	-6.70	108.55	111.90
1	13	2126	A	O5'-P-OP2	-6.70	99.67	105.70
15	1H	954	G	N1-C6-O6	-6.70	115.88	119.90
15	1H	1308	G	OP2-P-O3'	6.70	119.94	105.20
15	1H	1618	G	C4-C5-N7	6.70	113.48	110.80
1	1G	1592	A	O5'-P-OP2	-6.70	99.67	105.70
15	1H	1577	A	C4-C5-N7	6.70	114.05	110.70
15	1H	2279	C	C5-C6-N1	-6.70	117.65	121.00
15	1H	2453	U	C5-C4-O4	-6.70	121.88	125.90
15	14	1927	C	O5'-P-OP1	-6.70	99.67	105.70
15	14	2704	U	C5-C6-N1	-6.70	119.35	122.70
15	14	2729	A	OP1-P-OP2	6.70	129.65	119.60
15	1H	910	A	N9-C4-C5	-6.70	103.12	105.80
15	1H	2509	G	O5'-P-OP1	-6.70	99.67	105.70
26	16	87	G	C6-C5-N7	-6.70	126.38	130.40
15	1H	484	C	N1-C2-O2	-6.70	114.88	118.90
15	1H	2289	A	C2-N3-C4	-6.70	107.25	110.60
15	14	540	A	N9-C4-C5	-6.70	103.12	105.80
15	14	1325	A	C6-N1-C2	6.70	122.62	118.60
15	14	2027	G	C4-C5-N7	6.70	113.48	110.80
15	1H	491	G	C5-C6-N1	6.69	114.85	111.50
15	1H	1584	U	C5-C6-N1	6.69	126.05	122.70
15	14	824	G	N1-C2-N2	-6.69	110.18	116.20
15	14	1428	A	N7-C8-N9	6.69	117.14	113.80
15	14	1728	G	C5-C6-N1	-6.69	108.16	111.50
1	1G	973	G	O5'-P-OP1	-6.69	99.68	105.70
15	1H	587	U	OP2-P-O3'	6.69	119.91	105.20
15	1H	647	G	N1-C6-O6	6.69	123.91	119.90
15	1H	1661	C	C6-N1-C2	6.69	122.97	120.30
15	1H	1863	A	O5'-P-OP2	-6.69	99.68	105.70
15	1H	2010	G	C8-N9-C4	-6.69	103.72	106.40
15	14	45	C	N3-C4-C5	6.69	124.58	121.90
15	14	250	G	N1-C6-O6	-6.69	115.89	119.90
15	14	1857	G	N1-C2-N2	6.69	122.22	116.20
15	14	2231	G	C8-N9-C1'	-6.69	118.31	127.00
15	1H	1973	G	O5'-P-OP1	-6.69	99.68	105.70
52	X4	18	G	C4-C5-N7	6.69	113.47	110.80
15	1H	1616	A	N1-C6-N6	-6.68	114.59	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	337	G	O5'-P-OP1	-6.68	99.68	105.70
15	14	2081	G	N1-C6-O6	6.68	123.91	119.90
15	14	529	A	N1-C2-N3	6.68	132.64	129.30
15	1H	1429	G	C6-C5-N7	-6.68	126.39	130.40
15	1H	1473	G	N1-C6-O6	6.68	123.91	119.90
15	1H	2338	G	C5-C6-O6	-6.68	124.59	128.60
15	1H	590	C	N3-C4-C5	-6.68	119.23	121.90
15	1H	1939	C	N3-C4-N4	-6.68	113.32	118.00
15	1H	1272	G	C5-C6-N1	6.68	114.84	111.50
15	14	2454	A	N3-C4-C5	6.68	131.47	126.80
15	1H	419	G	N3-C4-C5	6.68	131.94	128.60
15	14	1245	G	OP2-P-O3'	6.68	119.89	105.20
15	1H	802	C	N3-C2-O2	-6.67	117.23	121.90
15	1H	979	G	C8-N9-C4	-6.67	103.73	106.40
15	14	905	C	N3-C4-N4	6.67	122.67	118.00
15	14	1443	U	OP1-P-OP2	-6.67	109.59	119.60
1	13	1488	A	C2-N3-C4	-6.67	107.26	110.60
15	1H	878	A	OP1-P-OP2	6.67	129.61	119.60
15	1H	1363	C	C6-N1-C2	-6.67	117.63	120.30
15	14	1681	A	OP1-P-O3'	6.67	119.88	105.20
15	1H	1835	G	N3-C4-C5	-6.67	125.26	128.60
15	1H	2395	C	C5-C6-N1	-6.67	117.66	121.00
15	1H	2405	U	O5'-P-OP1	-6.67	99.69	105.70
15	1H	2572	G	N1-C6-O6	-6.67	115.90	119.90
15	14	859	U	C5-C4-O4	-6.67	121.90	125.90
15	14	1424	C	C6-N1-C2	6.67	122.97	120.30
52	X1	61	C	N3-C2-O2	-6.67	117.23	121.90
1	13	774	A	N1-C6-N6	6.67	122.60	118.60
15	1H	708	C	C5-C6-N1	-6.67	117.67	121.00
15	14	20	C	C4-C5-C6	6.67	120.73	117.40
1	13	984	U	C6-N1-C2	6.67	125.00	121.00
15	1H	729	G	N3-C4-N9	6.67	130.00	126.00
15	1H	1192	A	O5'-P-OP2	-6.67	99.70	105.70
15	1H	1687	A	N1-C6-N6	-6.67	114.60	118.60
15	1H	2082	A	C8-N9-C4	6.67	108.47	105.80
15	1H	2110	C	C6-N1-C2	6.67	122.97	120.30
15	14	2345	G	N1-C2-N3	6.67	127.90	123.90
15	14	1019	G	OP1-P-O3'	6.67	119.86	105.20
15	14	1345	G	C5-N7-C8	6.67	107.63	104.30
15	14	1460	C	O5'-P-OP1	6.67	118.70	110.70
15	14	2014	G	C6-N1-C2	-6.67	121.10	125.10
15	14	131	C	O5'-P-OP1	6.66	118.70	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1672	G	N9-C4-C5	6.66	108.07	105.40
15	14	2347	U	C5-C4-O4	6.66	129.90	125.90
1	13	1511	G	C8-N9-C4	6.66	109.06	106.40
1	13	1528	U	N3-C4-O4	6.66	124.06	119.40
15	14	1046	C	N1-C2-O2	6.66	122.90	118.90
1	1G	1041	C	C6-N1-C2	6.66	122.97	120.30
15	1H	360	C	C6-N1-C2	-6.66	117.64	120.30
15	1H	803	C	C4-C5-C6	6.66	120.73	117.40
15	1H	422	A	N1-C6-N6	-6.66	114.61	118.60
15	1H	1186	G	N3-C4-N9	6.66	130.00	126.00
15	1H	2409	C	OP2-P-O3'	6.66	119.85	105.20
15	1H	2509	G	O5'-P-OP2	-6.66	99.71	105.70
1	13	1679	C	C5-C4-N4	-6.66	115.54	120.20
15	1H	1670	U	C4-C5-C6	6.66	123.69	119.70
4	19	244	ARG	NE-CZ-NH1	-6.66	116.97	120.30
15	1H	1249	C	N3-C4-C5	6.66	124.56	121.90
15	1H	2383	C	C6-N1-C2	-6.66	117.64	120.30
15	14	1059	G	C4-N9-C1'	-6.66	117.85	126.50
26	1J	120	G	N1-C6-O6	6.66	123.89	119.90
15	1H	837	A	OP2-P-O3'	6.65	119.84	105.20
15	1H	877	U	N1-C2-O2	-6.65	118.14	122.80
15	1H	2824	G	C4-C5-N7	6.65	113.46	110.80
15	14	1860	G	N7-C8-N9	-6.65	109.77	113.10
26	16	106	U	OP2-P-O3'	6.65	119.83	105.20
1	13	684	G	OP1-P-OP2	-6.65	109.62	119.60
15	1H	2445	A	OP1-P-OP2	-6.65	109.63	119.60
15	1H	2525	C	C5-C4-N4	6.65	124.86	120.20
15	14	742	C	N3-C4-N4	-6.65	113.34	118.00
15	14	2660	G	N9-C4-C5	6.65	108.06	105.40
52	X4	5	G	C8-N9-C4	6.65	109.06	106.40
1	1G	895	G	O5'-P-OP1	-6.65	99.72	105.70
15	1H	37	C	N3-C4-C5	-6.65	119.24	121.90
15	1H	712	G	N9-C4-C5	6.65	108.06	105.40
15	1H	884	A	O4'-C1'-N9	6.65	113.52	108.20
15	1H	2599	U	N1-C2-O2	6.65	127.45	122.80
15	1H	729	G	C5-C6-N1	6.65	114.82	111.50
1	13	2127	G	N1-C2-N3	6.64	127.89	123.90
2	65	110	LEU	CB-CG-CD2	6.64	122.30	111.00
15	1H	1190	U	N3-C4-O4	6.64	124.05	119.40
15	1H	2291	G	N3-C2-N2	-6.64	115.25	119.90
15	1H	2881	A	C5-C6-N6	-6.64	118.39	123.70
15	14	894	G	C4-C5-N7	6.64	113.46	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	426	G	C2-N3-C4	-6.64	108.58	111.90
15	1H	829	G	C2-N3-C4	-6.64	108.58	111.90
15	1H	1414	A	C5-C6-N1	-6.64	114.38	117.70
15	1H	1769	G	C4-C5-N7	6.64	113.46	110.80
15	14	169	G	N1-C6-O6	6.64	123.89	119.90
15	14	1723	U	N3-C2-O2	6.64	126.85	122.20
15	1H	961	U	C6-N1-C2	6.64	124.98	121.00
52	X1	2	C	N1-C2-O2	6.64	122.88	118.90
15	1H	844	C	C4-C5-C6	6.64	120.72	117.40
15	1H	2495	C	C6-N1-C2	-6.64	117.64	120.30
15	1H	860	U	C5-C4-O4	6.64	129.88	125.90
1	13	995	G	O5'-P-OP2	-6.64	99.73	105.70
1	13	2121	U	C2'-C3'-O3'	6.64	124.32	113.70
15	1H	37	C	C5-C4-N4	6.64	124.85	120.20
15	1H	828	U	N1-C2-O2	6.64	127.44	122.80
15	1H	976	G	C6-C5-N7	-6.64	126.42	130.40
15	1H	2607	G	C5-C6-N1	-6.64	108.18	111.50
52	X1	5	G	N7-C8-N9	-6.64	109.78	113.10
15	1H	430	A	N1-C2-N3	6.63	132.62	129.30
15	1H	1727	A	C2-N3-C4	-6.63	107.28	110.60
15	1H	2623	G	C5-C6-O6	-6.63	124.62	128.60
15	1H	894	G	C8-N9-C4	6.63	109.05	106.40
15	1H	2230	G	C8-N9-C1'	-6.63	118.38	127.00
1	1G	2158	C	C6-N1-C2	-6.63	117.65	120.30
15	1H	2288	A	C8-N9-C4	6.63	108.45	105.80
15	1H	2540	G	OP2-P-O3'	6.63	119.79	105.20
15	1H	1883	G	O5'-P-OP2	6.63	118.65	110.70
15	1H	2100	U	C2-N3-C4	-6.63	123.02	127.00
15	14	2454	A	N1-C6-N6	6.63	122.58	118.60
15	14	2530	C	C5-C4-N4	-6.63	115.56	120.20
15	1H	562	C	O5'-P-OP2	-6.63	99.74	105.70
15	1H	2725	C	OP2-P-O3'	6.63	119.78	105.20
15	14	2231	G	O4'-C1'-N9	6.63	113.50	108.20
52	W1	32	U	C5-C6-N1	6.63	126.01	122.70
1	13	1583	U	C6-N1-C2	-6.62	117.03	121.00
15	1H	126	C	C5-C6-N1	-6.62	117.69	121.00
15	1H	2591	G	N1-C2-N3	6.62	127.88	123.90
15	1H	965	A	C6-N1-C2	6.62	122.57	118.60
15	1H	1358	G	N7-C8-N9	-6.62	109.79	113.10
15	1H	1925	A	C2-N3-C4	6.62	113.91	110.60
15	1H	2101	U	N1-C2-O2	-6.62	118.16	122.80
15	14	2611	U	N1-C2-O2	-6.62	118.16	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1210	C	C6-N1-C2	-6.62	117.65	120.30
15	1H	1439	U	OP1-P-OP2	-6.62	109.67	119.60
15	14	858	G	C2-N3-C4	6.62	115.21	111.90
15	14	1022	C	C5-C4-N4	6.62	124.83	120.20
15	14	2277	U	N3-C2-O2	6.62	126.83	122.20
15	14	2606	C	C2-N3-C4	-6.62	116.59	119.90
15	1H	237	G	C5-C6-N1	6.62	114.81	111.50
15	1H	600	A	C6-N1-C2	-6.62	114.63	118.60
15	1H	811	U	C5-C4-O4	-6.62	121.93	125.90
15	1H	897	G	N9-C4-C5	-6.62	102.75	105.40
15	1H	1186	G	C8-N9-C1'	-6.62	118.39	127.00
15	1H	1431	G	C4-C5-N7	6.62	113.45	110.80
15	1H	1638	C	O5'-P-OP1	-6.62	99.74	105.70
15	1H	2609	C	OP1-P-OP2	-6.62	109.67	119.60
15	14	503	U	C6-N1-C2	-6.62	117.03	121.00
15	14	720	C	C5-C6-N1	-6.62	117.69	121.00
15	14	2582	G	C5-C6-N1	6.62	114.81	111.50
15	14	2846	G	C5-C6-O6	-6.62	124.63	128.60
15	1H	2470	G	N1-C2-N2	-6.62	110.25	116.20
15	1H	2738	G	C5-C6-O6	-6.62	124.63	128.60
15	14	191	C	N3-C2-O2	-6.62	117.27	121.90
15	14	1647	C	N3-C2-O2	-6.62	117.27	121.90
15	14	2062	G	C4-C5-N7	-6.62	108.15	110.80
1	13	1985	U	O5'-P-OP2	-6.62	99.75	105.70
15	1H	616	C	C2-N3-C4	-6.62	116.59	119.90
15	1H	639	U	N1-C2-O2	6.62	127.43	122.80
15	14	2240	A	P-O3'-C3'	6.62	127.64	119.70
15	14	2297	G	O5'-P-OP2	6.62	118.64	110.70
15	1H	2028	G	C5-C6-O6	-6.61	124.63	128.60
1	1G	1021	G	N3-C4-N9	-6.61	122.03	126.00
15	1H	1235	G	N1-C6-O6	6.61	123.87	119.90
15	14	1961	A	O5'-P-OP2	6.61	118.64	110.70
52	X4	44	G	C5-N7-C8	-6.61	100.99	104.30
15	14	2492	C	C2-N1-C1'	6.61	126.07	118.80
39	J8	80	LEU	CA-CB-CG	6.61	130.51	115.30
15	1H	1866	C	N3-C4-C5	-6.61	119.26	121.90
15	14	851	A	C6-N1-C2	-6.61	114.64	118.60
15	14	1486	C	C6-N1-C2	-6.61	117.66	120.30
52	X1	34	G	N9-C4-C5	6.61	108.04	105.40
15	1H	788	G	C5-C6-O6	-6.61	124.64	128.60
15	1H	961	U	OP1-P-OP2	6.61	129.51	119.60
15	1H	2089	C	C2-N1-C1'	-6.61	111.53	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	198	C	N3-C2-O2	6.61	126.52	121.90
26	1J	50	A	O5'-P-OP2	6.61	118.63	110.70
1	13	1519	C	C6-N1-C2	6.60	122.94	120.30
15	1H	464	C	C2-N3-C4	-6.60	116.60	119.90
15	1H	2045	A	C5-C6-N1	6.60	121.00	117.70
15	1H	2402	U	OP2-P-O3'	6.60	119.73	105.20
15	14	1963	A	N1-C6-N6	6.60	122.56	118.60
1	1G	952	C	C6-N1-C2	-6.60	117.66	120.30
15	14	2351	A	N1-C6-N6	-6.60	114.64	118.60
1	13	747	G	N7-C8-N9	6.60	116.40	113.10
1	13	1488	A	C5-N7-C8	-6.60	100.60	103.90
15	1H	1811	U	C4-C5-C6	6.60	123.66	119.70
15	1H	2455	C	N3-C4-C5	-6.60	119.26	121.90
1	13	1362	A	C8-N9-C4	6.60	108.44	105.80
1	13	1854	A	N3-C4-C5	6.60	131.42	126.80
15	1H	1998	G	C5-C6-O6	6.60	132.56	128.60
15	14	712	G	OP1-P-OP2	6.60	129.50	119.60
15	14	1363	C	C2-N1-C1'	6.60	126.06	118.80
15	1H	2627	C	C5-C6-N1	-6.60	117.70	121.00
15	14	2271	G	N1-C2-N2	-6.60	110.26	116.20
15	14	1857	G	C8-N9-C4	-6.59	103.76	106.40
15	1H	572	C	N1-C2-O2	6.59	122.86	118.90
15	1H	2777	G	C8-N9-C4	6.59	109.04	106.40
15	14	1398	A	C2-N3-C4	-6.59	107.30	110.60
15	14	1321	A	C5-N7-C8	-6.59	100.61	103.90
1	1G	1054	G	C5-C6-O6	6.59	132.55	128.60
15	14	1428	A	C5-N7-C8	-6.59	100.61	103.90
15	14	1429	G	O5'-P-OP2	-6.59	99.77	105.70
15	14	2488	U	C2-N1-C1'	6.59	125.61	117.70
15	1H	815	C	C2-N3-C4	-6.59	116.61	119.90
15	1H	1922	G	C5-N7-C8	6.59	107.59	104.30
15	1H	2054	G	N1-C2-N2	6.59	122.13	116.20
15	1H	2836	A	N1-C2-N3	6.59	132.59	129.30
15	14	1408	A	N1-C2-N3	-6.59	126.01	129.30
15	14	1422	A	C6-N1-C2	-6.59	114.65	118.60
1	1G	1194	U	N1-C2-O2	-6.59	118.19	122.80
15	1H	253	C	O5'-P-OP1	6.59	118.60	110.70
15	1H	515	C	C5-C6-N1	6.59	124.29	121.00
15	1H	1926	A	N1-C6-N6	-6.59	114.65	118.60
15	1H	2031	C	C6-N1-C2	6.59	122.94	120.30
15	1H	2456	C	C4-C5-C6	6.59	120.69	117.40
15	14	303	A	P-O3'-C3'	6.59	127.60	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	2091	C	N3-C4-N4	6.59	122.61	118.00
15	1H	778	G	N3-C2-N2	-6.58	115.29	119.90
15	1H	920	U	N1-C2-O2	-6.58	118.19	122.80
15	1H	1672	G	C5-C6-O6	6.58	132.55	128.60
15	1H	1972	C	N3-C4-C5	6.58	124.53	121.90
15	14	1684	A	N1-C6-N6	6.58	122.55	118.60
15	1H	2063	G	OP2-P-O3'	6.58	119.68	105.20
15	1H	2460	G	N1-C6-O6	-6.58	115.95	119.90
1	1G	892	G	O4'-C1'-N9	-6.58	102.94	108.20
1	1G	973	G	C8-N9-C4	6.58	109.03	106.40
15	1H	831	A	N1-C2-N3	6.58	132.59	129.30
15	14	1818	A	C5-N7-C8	-6.58	100.61	103.90
15	1H	1476	A	O5'-P-OP1	-6.58	99.78	105.70
15	1H	2504	G	C6-N1-C2	-6.58	121.15	125.10
15	1H	2824	G	C5-C6-O6	-6.58	124.65	128.60
15	14	1957	A	O5'-P-OP2	6.58	118.59	110.70
15	1H	640	U	C5-C6-N1	6.58	125.99	122.70
15	1H	961	U	C2-N3-C4	-6.58	123.06	127.00
15	1H	1611	G	N9-C4-C5	6.58	108.03	105.40
15	14	1449	G	O5'-P-OP1	6.58	118.59	110.70
52	X1	61	C	N1-C2-O2	6.58	122.85	118.90
15	1H	121	G	OP1-P-OP2	6.57	129.46	119.60
15	1H	623	G	OP1-P-OP2	6.57	129.46	119.60
15	14	242	G	C8-N9-C4	6.57	109.03	106.40
15	14	1609	G	C5-C6-O6	-6.57	124.66	128.60
15	1H	1727	A	O5'-P-OP2	6.57	118.59	110.70
15	14	140	A	N7-C8-N9	6.57	117.09	113.80
15	1H	1070	G	N1-C6-O6	-6.57	115.96	119.90
15	1H	1480	U	C5-C6-N1	6.57	125.98	122.70
15	1H	1949	C	C6-N1-C2	-6.57	117.67	120.30
15	1H	2642	G	C5-C6-O6	-6.57	124.66	128.60
15	14	860	U	C2-N3-C4	6.57	130.94	127.00
15	14	1323	A	N1-C6-N6	6.57	122.54	118.60
1	1G	747	G	C8-N9-C4	-6.57	103.77	106.40
15	1H	1699	G	N9-C4-C5	6.57	108.03	105.40
1	13	2065	C	C6-N1-C2	6.57	122.93	120.30
1	13	2132	C	C5-C4-N4	-6.57	115.60	120.20
1	1G	1927	G	P-O3'-C3'	6.57	127.58	119.70
15	1H	1662	G	C5-C6-N1	6.57	114.78	111.50
15	14	455	C	N3-C2-O2	-6.57	117.30	121.90
15	14	1055	C	C2-N3-C4	-6.57	116.62	119.90
15	14	2510	G	N1-C6-O6	6.57	123.84	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	2122	A	O5'-P-OP2	6.57	118.58	110.70
1	1G	1495	A	C5-N7-C8	-6.57	100.62	103.90
15	1H	419	G	C5-C6-N1	-6.57	108.22	111.50
15	14	823	A	C4-N9-C1'	-6.57	114.48	126.30
15	14	2555	C	N3-C4-C5	6.56	124.53	121.90
1	13	1060	C	C5-C6-N1	6.56	124.28	121.00
15	1H	414	G	C4-C5-N7	6.56	113.42	110.80
15	1H	557	G	N7-C8-N9	6.56	116.38	113.10
15	1H	1970	G	N1-C6-O6	-6.56	115.96	119.90
15	14	299	G	N7-C8-N9	6.56	116.38	113.10
15	14	735	G	C5-C6-N1	6.56	114.78	111.50
26	1J	64	C	OP1-P-OP2	6.56	129.44	119.60
15	1H	658	A	C5-N7-C8	6.56	107.18	103.90
15	1H	916	C	C4-C5-C6	6.56	120.68	117.40
15	1H	2735	G	O5'-P-OP1	-6.56	99.80	105.70
15	14	243	C	N3-C4-C5	-6.56	119.28	121.90
15	14	1416	A	C8-N9-C4	6.56	108.42	105.80
15	14	1417	G	N1-C6-O6	-6.56	115.97	119.90
15	14	2727	U	C5-C4-O4	6.56	129.84	125.90
14	3E	31	CYS	CA-CB-SG	6.56	125.80	114.00
15	1H	1995	A	N1-C2-N3	6.56	132.58	129.30
15	1H	2314	G	N3-C4-N9	-6.56	122.07	126.00
15	1H	2440	A	N1-C2-N3	6.56	132.58	129.30
15	1H	2578	U	N3-C2-O2	-6.56	117.61	122.20
15	14	746	C	O5'-P-OP1	-6.56	99.80	105.70
15	14	2656	G	N1-C6-O6	-6.56	115.97	119.90
15	1H	866	C	O5'-P-OP2	6.55	118.57	110.70
15	1H	1361	U	C2-N3-C4	-6.55	123.07	127.00
15	1H	1522	A	C2-N3-C4	-6.55	107.32	110.60
15	1H	1805	C	N1-C2-O2	-6.55	114.97	118.90
15	14	555	A	C6-C5-N7	-6.55	127.71	132.30
15	14	721	C	C5-C4-N4	6.55	124.79	120.20
15	14	2223	A	C8-N9-C4	-6.55	103.18	105.80
1	1G	1422	U	O4'-C1'-N1	6.55	113.44	108.20
15	1H	2028	G	N7-C8-N9	-6.55	109.82	113.10
15	14	1391	A	N7-C8-N9	6.55	117.08	113.80
15	1H	58	U	N3-C4-C5	-6.55	110.67	114.60
15	1H	255	A	O4'-C1'-N9	6.55	113.44	108.20
15	1H	1690	C	OP1-P-OP2	-6.55	109.78	119.60
15	14	1428	A	N1-C6-N6	6.55	122.53	118.60
15	1H	557	G	N3-C4-N9	-6.55	122.07	126.00
15	1H	2315	G	N9-C4-C5	6.55	108.02	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	579	U	O5'-P-OP1	6.55	118.56	110.70
15	14	2218	G	C4-C5-N7	-6.55	108.18	110.80
1	13	1213	G	N1-C6-O6	-6.54	115.97	119.90
15	1H	661	C	C5-C4-N4	6.54	124.78	120.20
15	1H	2837	C	C5-C4-N4	-6.54	115.62	120.20
15	14	1651	U	C5-C6-N1	-6.54	119.43	122.70
15	14	2361	A	C1'-O4'-C4'	-6.54	104.66	109.90
1	1G	1518	G	N1-C6-O6	6.54	123.83	119.90
15	1H	2352	G	N3-C2-N2	-6.54	115.32	119.90
15	14	428	G	N1-C6-O6	6.54	123.83	119.90
15	14	835	C	C6-N1-C2	6.54	122.92	120.30
15	14	1310	C	C5-C6-N1	-6.54	117.73	121.00
15	14	1690	C	N3-C4-N4	-6.54	113.42	118.00
1	1G	1054	G	C4-N9-C1'	-6.54	118.00	126.50
15	1H	416	G	C4-C5-N7	6.54	113.42	110.80
15	1H	444	C	N3-C4-N4	-6.54	113.42	118.00
15	1H	730	G	C8-N9-C4	6.54	109.02	106.40
52	X4	11	C	O5'-P-OP2	-6.54	99.81	105.70
1	13	2132	C	C2-N3-C4	-6.54	116.63	119.90
1	1G	1089	C	N3-C4-N4	-6.54	113.42	118.00
15	1H	169	G	C8-N9-C4	6.54	109.02	106.40
15	1H	2100	U	C5-C6-N1	-6.54	119.43	122.70
15	1H	2292	G	C4-C5-N7	-6.54	108.19	110.80
15	1H	2450	A	C8-N9-C4	-6.54	103.19	105.80
15	14	1368	G	O5'-P-OP1	-6.54	99.81	105.70
15	14	1980	U	C2-N3-C4	-6.54	123.08	127.00
1	13	2072	A	C4-C5-N7	6.54	113.97	110.70
15	1H	1340	C	C5-C6-N1	-6.54	117.73	121.00
15	1H	2456	C	C5-C6-N1	-6.54	117.73	121.00
15	14	1449	G	C4-C5-N7	-6.54	108.19	110.80
15	14	2260	U	C5-C6-N1	6.54	125.97	122.70
1	13	1170	G	OP1-P-OP2	-6.54	109.80	119.60
15	14	202	G	O5'-P-OP2	-6.54	99.82	105.70
15	14	588	G	N9-C4-C5	6.54	108.01	105.40
51	Y1	48	U	C5-C6-N1	6.54	125.97	122.70
1	13	1032	G	N1-C6-O6	-6.53	115.98	119.90
1	13	1269	A	O5'-P-OP1	-6.53	99.82	105.70
1	13	1421	A	N7-C8-N9	6.53	117.07	113.80
15	1H	249	G	C6-C5-N7	-6.53	126.48	130.40
15	14	155	C	N3-C2-O2	-6.53	117.33	121.90
15	1H	97	G	C5-C6-O6	-6.53	124.68	128.60
15	1H	741	C	C2-N3-C4	-6.53	116.63	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	916	C	N1-C2-O2	-6.53	114.98	118.90
15	1H	1235	G	OP2-P-O3'	6.53	119.56	105.20
1	13	2127	G	N3-C2-N2	-6.53	115.33	119.90
15	1H	1088	C	C5-C6-N1	-6.53	117.74	121.00
15	1H	1352	G	N3-C2-N2	6.53	124.47	119.90
15	1H	2296	C	N3-C4-N4	6.53	122.57	118.00
15	14	2504	G	OP2-P-O3'	6.53	119.56	105.20
1	13	1752	G	C8-N9-C4	-6.53	103.79	106.40
1	1G	934	G	O5'-P-OP1	6.53	118.53	110.70
15	1H	1865	G	O5'-P-OP2	6.53	118.53	110.70
15	14	1722	C	O5'-P-OP1	-6.53	99.83	105.70
15	14	2467	C	O5'-P-OP2	-6.52	99.83	105.70
15	14	2597	G	N1-C6-O6	6.52	123.81	119.90
1	1G	747	G	N7-C8-N9	6.52	116.36	113.10
15	1H	1642	G	C8-N9-C4	-6.52	103.79	106.40
15	1H	2724	G	OP1-P-O3'	6.52	119.55	105.20
26	16	1	A	N7-C8-N9	-6.52	110.54	113.80
21	25	8	LEU	CA-CB-CG	6.52	130.30	115.30
35	D8	82	ARG	NE-CZ-NH1	-6.52	117.04	120.30
15	14	799	A	C5-N7-C8	-6.52	100.64	103.90
1	13	1350	G	O5'-P-OP2	-6.52	99.83	105.70
15	1H	562	C	N3-C4-N4	-6.52	113.44	118.00
15	1H	2065	C	N3-C4-N4	6.52	122.56	118.00
15	14	1237	A	OP1-P-OP2	-6.52	109.82	119.60
15	14	1746	G	O5'-P-OP1	6.52	118.52	110.70
1	1G	2075	C	C6-N1-C1'	-6.52	112.98	120.80
1	1G	2122	A	C5-N7-C8	6.52	107.16	103.90
15	1H	246	A	C5-C6-N1	-6.52	114.44	117.70
15	1H	2275	C	N3-C4-C5	6.52	124.51	121.90
15	1H	2582	G	O5'-P-OP1	-6.52	99.83	105.70
15	14	225	U	N3-C4-O4	-6.52	114.84	119.40
15	14	2717	U	C5-C6-N1	6.52	125.96	122.70
25	4E	14	ARG	NE-CZ-NH1	-6.52	117.04	120.30
15	14	255	A	C5-N7-C8	-6.52	100.64	103.90
15	14	2084	A	C5-N7-C8	6.52	107.16	103.90
1	13	1480	C	N3-C4-C5	-6.51	119.29	121.90
15	1H	54	G	OP1-P-O3'	6.51	119.53	105.20
15	1H	191	C	C5-C6-N1	-6.51	117.74	121.00
15	1H	1306	C	C4-C5-C6	6.51	120.66	117.40
15	1H	1699	G	N3-C4-C5	-6.51	125.34	128.60
15	1H	2018	U	C5-C4-O4	6.51	129.81	125.90
15	1H	2731	C	N3-C4-C5	6.51	124.51	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	2125	A	N9-C4-C5	-6.51	103.19	105.80
1	13	2107	C	N3-C4-N4	-6.51	113.44	118.00
15	1H	179	G	C8-N9-C4	6.51	109.00	106.40
15	1H	2489	C	C2-N1-C1'	6.51	125.96	118.80
15	14	1400	C	C6-N1-C2	6.51	122.90	120.30
4	11	244	ARG	NE-CZ-NH1	-6.51	117.05	120.30
15	1H	30	G	N3-C4-C5	-6.51	125.34	128.60
15	1H	474	G	C4-C5-N7	6.51	113.40	110.80
15	14	499	A	N1-C2-N3	6.51	132.56	129.30
15	14	2622	G	N1-C2-N3	6.51	127.81	123.90
1	13	1958	G	P-O3'-C3'	6.51	127.51	119.70
1	1G	2098	G	N1-C6-O6	6.51	123.81	119.90
15	1H	2536	C	C2-N3-C4	-6.51	116.65	119.90
1	13	992	G	O5'-P-OP1	-6.51	99.84	105.70
15	1H	1078	G	C6-C5-N7	-6.51	126.50	130.40
15	14	1478	G	N3-C2-N2	6.51	124.45	119.90
15	14	1871	C	O5'-P-OP2	6.51	118.51	110.70
15	1H	1609	G	O5'-P-OP1	-6.50	99.84	105.70
15	1H	1810	G	C5-N7-C8	-6.50	101.05	104.30
52	X4	44	G	C6-C5-N7	-6.50	126.50	130.40
1	13	1594	G	C4-C5-N7	-6.50	108.20	110.80
15	1H	141	C	OP2-P-O3'	6.50	119.51	105.20
15	1H	481	C	C6-N1-C2	6.50	122.90	120.30
15	1H	2326	A	N7-C8-N9	6.50	117.05	113.80
15	1H	2884	C	O5'-P-OP2	-6.50	99.85	105.70
15	14	73	A	N1-C2-N3	6.50	132.55	129.30
15	14	665	G	OP1-P-OP2	6.50	129.36	119.60
15	14	861	C	OP1-P-O3'	6.50	119.51	105.20
15	14	1823	A	N9-C4-C5	6.50	108.40	105.80
15	14	2718	C	OP1-P-OP2	6.50	129.36	119.60
1	1G	1573	U	O5'-P-OP2	6.50	118.50	110.70
15	1H	50	G	N1-C6-O6	-6.50	116.00	119.90
15	1H	992	A	OP1-P-O3'	6.50	119.50	105.20
15	1H	1258	A	C5-C6-N1	-6.50	114.45	117.70
15	1H	1984	G	OP2-P-O3'	6.50	119.50	105.20
15	1H	1995	A	O4'-C1'-N9	-6.50	103.00	108.20
15	14	2328	C	N3-C4-C5	-6.50	119.30	121.90
1	1G	1527	C	N1-C2-O2	-6.50	115.00	118.90
15	1H	975	G	C4-C5-N7	6.50	113.40	110.80
15	1H	1623	G	C5-C6-N1	6.50	114.75	111.50
15	1H	2884	C	C2-N3-C4	-6.50	116.65	119.90
15	14	2266	G	N7-C8-N9	-6.50	109.85	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
52	X4	9	A	O5'-P-OP2	-6.50	99.85	105.70
1	1G	692	G	O5'-P-OP1	6.50	118.50	110.70
15	1H	1627	C	N1-C2-O2	6.50	122.80	118.90
15	14	1698	C	N3-C4-N4	-6.50	113.45	118.00
15	14	1980	U	C5-C6-N1	-6.50	119.45	122.70
52	X4	76	A	N1-C6-N6	6.50	122.50	118.60
1	1G	1362	A	C8-N9-C4	6.50	108.40	105.80
15	1H	2306	U	N1-C2-N3	6.50	118.80	114.90
1	1G	1973	A	P-O3'-C3'	6.49	127.49	119.70
15	1H	2513	C	O5'-P-OP1	6.49	118.49	110.70
15	14	2292	G	N1-C6-O6	-6.49	116.00	119.90
15	14	2857	G	C5-C6-O6	-6.49	124.70	128.60
15	1H	840	C	OP2-P-O3'	6.49	119.48	105.20
15	14	2539	G	C8-N9-C4	-6.49	103.80	106.40
1	1G	1341	A	N7-C8-N9	6.49	117.05	113.80
15	1H	139	A	C5-C6-N6	-6.49	118.51	123.70
15	1H	825	G	C5-C6-N1	6.49	114.75	111.50
15	14	1354	C	C6-N1-C2	6.49	122.90	120.30
1	1G	2149	G	C5-C6-O6	-6.49	124.71	128.60
15	1H	1736	C	N1-C2-O2	-6.49	115.01	118.90
15	1H	2259	U	N1-C2-N3	6.49	118.79	114.90
15	14	626	C	C2-N3-C4	-6.49	116.66	119.90
15	14	826	A	N1-C6-N6	-6.49	114.71	118.60
15	14	1442	A	C2-N3-C4	6.49	113.84	110.60
1	1G	899	G	C5-C6-N1	-6.49	108.26	111.50
15	1H	230	G	N1-C2-N2	6.49	122.04	116.20
52	V4	33	U	C2-N1-C1'	6.49	125.48	117.70
1	13	1319	G	C2-N3-C4	-6.49	108.66	111.90
1	1G	1422	U	C2-N1-C1'	-6.49	109.92	117.70
1	1G	2092	G	N1-C6-O6	6.49	123.79	119.90
15	1H	762	G	N1-C6-O6	6.49	123.79	119.90
15	1H	1609	G	C5-N7-C8	-6.49	101.06	104.30
15	1H	2434	U	OP1-P-O3'	6.49	119.47	105.20
15	1H	2704	U	C2-N1-C1'	-6.49	109.92	117.70
15	14	918	G	OP1-P-O3'	6.49	119.47	105.20
15	14	2595	U	C2-N3-C4	-6.49	123.11	127.00
26	16	11	G	OP2-P-O3'	6.49	119.47	105.20
1	13	751	G	OP1-P-OP2	-6.48	109.87	119.60
15	1H	2463	A	C6-C5-N7	-6.48	127.76	132.30
15	14	126	C	C6-N1-C2	-6.48	117.71	120.30
15	14	1354	C	C2-N3-C4	-6.48	116.66	119.90
15	14	2860	U	C5-C4-O4	-6.48	122.01	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	934	G	OP1-P-OP2	-6.48	109.88	119.60
15	1H	831	A	C6-N1-C2	-6.48	114.71	118.60
15	1H	1830	U	C6-N1-C2	6.48	124.89	121.00
15	1H	1833	G	N1-C6-O6	-6.48	116.01	119.90
15	1H	2630	U	N3-C2-O2	-6.48	117.66	122.20
15	14	358	G	C8-N9-C4	-6.48	103.81	106.40
15	14	477	A	C5-N7-C8	-6.48	100.66	103.90
15	14	1703	G	OP1-P-O3'	6.48	119.45	105.20
1	13	907	G	C6-C5-N7	-6.48	126.51	130.40
1	13	1441	C	N3-C2-O2	-6.48	117.37	121.90
1	13	2002	A	C2-N3-C4	-6.48	107.36	110.60
15	1H	718	G	C2-N3-C4	6.48	115.14	111.90
15	1H	1240	G	N1-C2-N3	6.48	127.79	123.90
15	1H	1799	C	N3-C4-N4	-6.48	113.47	118.00
15	1H	1834	C	C2-N3-C4	-6.48	116.66	119.90
15	1H	2361	A	C1'-O4'-C4'	-6.48	104.72	109.90
15	14	1321	A	N7-C8-N9	6.48	117.04	113.80
4	11	240	ALA	CB-CA-C	-6.48	100.39	110.10
15	1H	674	G	N3-C4-C5	-6.48	125.36	128.60
52	X4	76	A	N7-C8-N9	-6.48	110.56	113.80
15	1H	1346	C	N1-C2-N3	6.47	123.73	119.20
15	1H	2068	C	C5-C4-N4	-6.47	115.67	120.20
15	1H	2576	A	C4-C5-N7	-6.47	107.46	110.70
15	1H	2585	G	C4-C5-N7	-6.47	108.21	110.80
15	14	290	G	N1-C6-O6	6.47	123.78	119.90
15	14	645	C	C6-N1-C2	6.47	122.89	120.30
15	1H	142	G	N3-C4-C5	6.47	131.84	128.60
15	1H	189	A	N7-C8-N9	-6.47	110.56	113.80
15	14	725	A	C6-C5-N7	-6.47	127.77	132.30
15	14	1077	A	O5'-P-OP2	-6.47	99.88	105.70
15	14	1418	G	N1-C6-O6	-6.47	116.02	119.90
15	14	2447	A	C2-N3-C4	-6.47	107.36	110.60
15	1H	2346	G	N3-C4-C5	6.47	131.84	128.60
15	14	633	A	N1-C2-N3	6.47	132.53	129.30
15	14	1203	G	C4-C5-N7	6.47	113.39	110.80
15	1H	494	A	C2-N3-C4	6.47	113.83	110.60
15	1H	610	G	N1-C2-N3	6.47	127.78	123.90
15	1H	2417	C	C6-N1-C1'	6.47	128.56	120.80
15	14	111	G	OP1-P-O3'	6.47	119.43	105.20
15	14	792	G	N3-C4-N9	6.47	129.88	126.00
15	14	2035	G	OP1-P-OP2	-6.47	109.90	119.60
15	1H	140	A	O4'-C1'-N9	6.47	113.38	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	219	A	C8-N9-C4	6.47	108.39	105.80
15	14	2445	A	C6-N1-C2	6.47	122.48	118.60
15	1H	712	G	O5'-P-OP2	-6.47	99.88	105.70
14	32	12	CYS	CA-CB-SG	6.47	125.64	114.00
15	14	1660	C	N1-C2-O2	-6.47	115.02	118.90
26	16	46	G	C6-C5-N7	6.47	134.28	130.40
52	X1	26	A	C8-N9-C4	6.47	108.39	105.80
52	X1	76	A	N3-C4-C5	6.47	131.33	126.80
15	1H	1674	C	N3-C4-N4	-6.46	113.47	118.00
15	1H	1728	G	C5-C6-N1	-6.46	108.27	111.50
1	1G	1320	G	C5-C6-O6	-6.46	124.72	128.60
15	1H	400	G	O5'-P-OP2	-6.46	99.88	105.70
15	14	892	G	O5'-P-OP2	-6.46	99.88	105.70
15	14	1022	C	N3-C2-O2	-6.46	117.38	121.90
15	14	1876	G	O5'-P-OP2	-6.46	99.89	105.70
1	1G	1905	U	N1-C2-O2	6.46	127.32	122.80
15	14	1861	C	OP1-P-O3'	6.46	119.41	105.20
15	14	1999	C	O5'-P-OP2	-6.46	99.89	105.70
1	13	1235	G	N3-C4-N9	6.46	129.88	126.00
1	13	2113	C	OP2-P-O3'	6.46	119.41	105.20
12	Q8	40	GLU	CA-CB-CG	6.46	127.61	113.40
15	14	242	G	C6-C5-N7	6.46	134.28	130.40
15	14	1902	A	N1-C6-N6	6.46	122.48	118.60
15	14	2661	C	N1-C2-O2	-6.46	115.03	118.90
15	1H	1170	G	N9-C4-C5	-6.46	102.82	105.40
15	1H	2572	G	C5-C6-N1	6.46	114.73	111.50
15	14	826	A	O5'-P-OP1	-6.46	99.89	105.70
15	14	2288	A	O5'-P-OP2	-6.46	99.89	105.70
15	14	2605	A	C6-N1-C2	-6.46	114.73	118.60
1	13	1193	C	N3-C4-C5	-6.45	119.32	121.90
15	1H	2727	U	P-O3'-C3'	6.45	127.44	119.70
15	14	627	G	C5-C6-O6	-6.45	124.73	128.60
15	1H	557	G	N1-C2-N2	-6.45	110.39	116.20
15	1H	2505	G	C5-C6-N1	6.45	114.73	111.50
15	1H	2250	G	O5'-P-OP1	6.45	118.44	110.70
15	14	255	A	C2-N3-C4	-6.45	107.37	110.60
15	14	2035	G	C5-C6-N1	-6.45	108.28	111.50
1	13	922	G	O5'-P-OP1	-6.45	99.90	105.70
1	13	1424	C	N1-C2-O2	-6.45	115.03	118.90
15	1H	405	C	C2-N3-C4	-6.45	116.68	119.90
15	1H	411	U	O5'-P-OP2	6.45	118.44	110.70
15	1H	544	C	N3-C4-N4	6.45	122.51	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	660	A	C5-N7-C8	-6.45	100.68	103.90
15	1H	1660	C	N3-C2-O2	6.45	126.41	121.90
15	14	150	C	O5'-P-OP1	-6.45	99.90	105.70
15	14	526	U	C5-C6-N1	-6.45	119.48	122.70
15	14	729	G	N7-C8-N9	6.45	116.32	113.10
15	14	743	U	C5-C6-N1	-6.45	119.48	122.70
15	14	980	A	C5-C6-N1	-6.45	114.48	117.70
15	14	2533	A	N9-C4-C5	-6.45	103.22	105.80
52	W1	38	A	C5-C6-N6	-6.45	118.54	123.70
15	14	1176	A	C8-N9-C4	6.45	108.38	105.80
15	14	1629	A	C8-N9-C4	6.45	108.38	105.80
1	1G	1690	U	O5'-P-OP2	-6.45	99.90	105.70
15	1H	355	A	N3-C4-N9	-6.45	122.24	127.40
15	1H	1443	U	C4-C5-C6	-6.45	115.83	119.70
15	1H	1665	A	OP1-P-OP2	6.45	129.27	119.60
15	1H	2256	A	C5-C6-N6	6.45	128.86	123.70
15	1H	2336	G	O5'-P-OP1	6.45	118.43	110.70
15	1H	2343	A	O5'-P-OP1	-6.45	99.90	105.70
15	1H	2727	U	N1-C2-O2	6.45	127.31	122.80
1	13	747	G	C5-N7-C8	-6.44	101.08	104.30
15	14	455	C	C6-N1-C2	-6.44	117.72	120.30
15	1H	811	U	N1-C2-O2	6.44	127.31	122.80
15	1H	2285	G	C5-C6-N1	6.44	114.72	111.50
15	14	2253	G	O4'-C1'-N9	-6.44	103.05	108.20
30	78	42	SER	C-N-CA	-6.44	108.77	122.30
15	1H	728	C	C5-C6-N1	-6.44	117.78	121.00
15	1H	874	C	N3-C4-N4	6.44	122.51	118.00
15	14	870	A	P-O3'-C3'	6.44	127.43	119.70
15	14	2367	A	O5'-P-OP1	-6.44	99.90	105.70
15	1H	2283	A	N1-C2-N3	-6.44	126.08	129.30
26	16	30	C	OP1-P-OP2	-6.44	109.94	119.60
52	X1	76	A	C4-C5-N7	6.44	113.92	110.70
1	13	2117	G	N1-C6-O6	-6.44	116.04	119.90
15	1H	355	A	C5-C6-N1	-6.44	114.48	117.70
15	1H	1114	U	C2-N1-C1'	6.44	125.42	117.70
15	1H	1287	G	N7-C8-N9	6.44	116.32	113.10
15	14	1349	U	N1-C2-N3	6.44	118.76	114.90
15	14	2471	C	N3-C4-C5	-6.44	119.33	121.90
15	1H	104	C	C5-C6-N1	6.44	124.22	121.00
15	1H	132	C	N1-C2-O2	6.44	122.76	118.90
15	1H	1002	C	C2-N3-C4	-6.44	116.68	119.90
15	1H	2279	C	C6-N1-C2	6.44	122.87	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	2036	U	N3-C2-O2	6.44	126.70	122.20
15	1H	140	A	C6-N1-C2	6.43	122.46	118.60
15	14	2111	U	O5'-P-OP2	-6.43	99.91	105.70
15	1H	132	C	OP2-P-O3'	6.43	119.35	105.20
15	1H	796	U	O5'-P-OP1	-6.43	99.91	105.70
15	1H	1546	U	N3-C4-O4	6.43	123.90	119.40
15	1H	2522	C	C6-N1-C2	-6.43	117.73	120.30
15	14	98	U	C2-N3-C4	-6.43	123.14	127.00
15	14	674	G	C8-N9-C4	-6.43	103.83	106.40
15	14	786	C	N3-C4-N4	6.43	122.50	118.00
1	13	1522	C	N3-C4-C5	-6.43	119.33	121.90
15	14	2409	C	N1-C2-O2	6.43	122.76	118.90
1	13	1509	G	N9-C4-C5	6.43	107.97	105.40
15	1H	148	C	C2-N3-C4	-6.43	116.69	119.90
15	1H	1196	C	N1-C2-O2	-6.43	115.04	118.90
15	14	2289	A	C8-N9-C4	6.43	108.37	105.80
15	1H	907	U	C4-C5-C6	-6.43	115.84	119.70
15	1H	587	U	OP1-P-OP2	6.43	129.24	119.60
15	1H	1247	U	C5-C6-N1	-6.43	119.49	122.70
15	1H	2456	C	C2-N1-C1'	-6.43	111.73	118.80
15	14	409	G	C5-N7-C8	6.43	107.51	104.30
15	14	1950	C	OP2-P-O3'	6.43	119.34	105.20
12	Q8	46	ARG	NE-CZ-NH1	6.42	123.51	120.30
15	1H	542	A	N9-C4-C5	6.42	108.37	105.80
15	1H	918	G	C5-C6-O6	6.42	132.45	128.60
15	1H	1659	A	C5-C6-N6	-6.42	118.56	123.70
15	1H	1961	A	O4'-C1'-N9	6.42	113.34	108.20
15	1H	2048	G	C8-N9-C4	-6.42	103.83	106.40
15	1H	2374	C	O5'-P-OP2	-6.42	99.92	105.70
15	14	1415	A	OP1-P-O3'	-6.42	91.07	105.20
15	1H	1164	C	N3-C2-O2	-6.42	117.40	121.90
15	1H	2689	G	C6-N1-C2	-6.42	121.25	125.10
1	13	1255	U	O5'-P-OP2	-6.42	99.92	105.70
15	1H	762	G	C5-C6-O6	-6.42	124.75	128.60
15	1H	1042	C	N1-C2-O2	-6.42	115.05	118.90
15	14	1851	G	C6-N1-C2	6.42	128.95	125.10
15	14	2458	C	OP1-P-OP2	-6.42	109.97	119.60
15	14	2533	A	C5-C6-N6	-6.42	118.56	123.70
1	13	1389	G	N1-C6-O6	6.42	123.75	119.90
1	13	2114	G	OP2-P-O3'	6.42	119.33	105.20
15	1H	563	A	N3-C4-C5	-6.42	122.31	126.80
15	1H	1554	C	N3-C2-O2	-6.42	117.41	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1592	A	C4-C5-C6	6.42	120.21	117.00
15	14	2438	U	C2-N3-C4	-6.42	123.15	127.00
15	1H	73	A	O4'-C1'-N9	-6.42	103.06	108.20
15	1H	493	G	N3-C2-N2	-6.42	115.41	119.90
15	1H	1015	G	N1-C6-O6	-6.42	116.05	119.90
15	1H	1562	C	C5-C6-N1	6.42	124.21	121.00
15	1H	1699	G	C5-C6-O6	6.42	132.45	128.60
15	1H	2523	G	N9-C4-C5	6.42	107.97	105.40
1	1G	946	G	C4-C5-N7	-6.42	108.23	110.80
15	1H	1634	C	C4-C5-C6	6.42	120.61	117.40
1	13	1526	G	C6-N1-C2	-6.41	121.25	125.10
15	1H	676	G	N1-C2-N3	6.41	127.75	123.90
15	1H	1484	G	C8-N9-C4	-6.41	103.83	106.40
15	1H	1745	G	OP1-P-OP2	6.41	129.22	119.60
1	1G	1054	G	N7-C8-N9	-6.41	109.89	113.10
15	1H	69	G	OP1-P-OP2	-6.41	109.98	119.60
15	1H	910	A	C5-N7-C8	-6.41	100.69	103.90
15	1H	1606	C	N1-C2-O2	6.41	122.75	118.90
15	1H	1961	A	C5-C6-N1	6.41	120.91	117.70
15	14	1434	G	N9-C4-C5	6.41	107.97	105.40
15	1H	64	C	OP1-P-O3'	6.41	119.30	105.20
15	14	129	G	N3-C2-N2	6.41	124.39	119.90
15	14	1670	U	N1-C2-O2	-6.41	118.31	122.80
15	14	1806	G	N7-C8-N9	-6.41	109.90	113.10
15	14	2794	A	C8-N9-C4	6.41	108.36	105.80
1	1G	2122	A	C8-N9-C4	6.41	108.36	105.80
15	1H	2374	C	C5-C4-N4	6.41	124.69	120.20
15	14	1431	G	C4-C5-N7	6.41	113.36	110.80
1	13	1595	C	N3-C2-O2	-6.41	117.42	121.90
15	1H	1791	U	N3-C4-O4	-6.41	114.92	119.40
15	1H	1862	G	C5-N7-C8	6.41	107.50	104.30
15	14	525	G	C5-C6-O6	-6.41	124.76	128.60
15	14	1694	C	C5-C4-N4	6.41	124.68	120.20
15	14	1951	U	O5'-P-OP2	-6.41	99.94	105.70
15	1H	602	G	OP2-P-O3'	6.40	119.29	105.20
15	1H	789	U	N1-C2-N3	6.40	118.74	114.90
15	14	2484	A	N1-C2-N3	6.40	132.50	129.30
15	1H	1524	C	N1-C2-O2	-6.40	115.06	118.90
15	1H	1720	C	N3-C4-N4	6.40	122.48	118.00
15	1H	2047	U	N1-C2-O2	-6.40	118.32	122.80
15	1H	1431	G	N1-C2-N2	6.40	121.96	116.20
15	1H	1712	C	N3-C2-O2	6.40	126.38	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	1J	91	G	C4-N9-C1'	6.40	134.82	126.50
15	1H	832	A	C4-C5-C6	6.40	120.20	117.00
15	1H	2533	A	C6-N1-C2	-6.40	114.76	118.60
15	14	598	G	C5-C6-O6	-6.40	124.76	128.60
15	14	2106	C	N1-C2-O2	6.40	122.74	118.90
15	14	2332	C	N3-C4-N4	6.40	122.48	118.00
15	14	2793	G	C5-C6-O6	-6.40	124.76	128.60
26	1J	58	G	N3-C4-N9	6.40	129.84	126.00
1	13	1331	A	N1-C2-N3	6.40	132.50	129.30
15	1H	557	G	N1-C2-N3	6.40	127.74	123.90
15	1H	858	G	C5-C6-N1	6.40	114.70	111.50
15	1H	1324	A	C6-C5-N7	-6.40	127.82	132.30
15	1H	1825	A	N1-C6-N6	-6.40	114.76	118.60
15	14	2591	G	O4'-C1'-N9	6.40	113.32	108.20
15	1H	166	G	N1-C2-N3	6.40	127.74	123.90
15	1H	1403	A	C4-C5-N7	6.40	113.90	110.70
15	1H	2417	C	N3-C2-O2	6.40	126.38	121.90
15	1H	2502	G	C6-C5-N7	-6.40	126.56	130.40
15	1H	2361	A	N3-C4-C5	6.39	131.28	126.80
15	1H	2409	C	N3-C4-N4	-6.39	113.52	118.00
15	1H	2613	A	N9-C4-C5	-6.39	103.24	105.80
15	14	2569	U	O5'-P-OP2	6.39	118.37	110.70
26	16	103	G	N3-C4-N9	6.39	129.84	126.00
15	1H	1672	G	N1-C6-O6	-6.39	116.06	119.90
15	1H	43	A	C2-N3-C4	-6.39	107.41	110.60
15	1H	1945	C	C4-C5-C6	-6.39	114.20	117.40
15	1H	829	G	N1-C2-N2	-6.39	110.45	116.20
15	14	15	G	O5'-P-OP1	-6.39	99.95	105.70
1	13	972	G	C5-C6-O6	-6.39	124.77	128.60
1	1G	849	A	C4-C5-C6	6.39	120.19	117.00
1	1G	1319	G	O5'-P-OP2	-6.39	99.95	105.70
15	1H	678	G	N7-C8-N9	6.39	116.29	113.10
15	1H	1522	A	C5-C6-N6	6.39	128.81	123.70
15	1H	1364	C	C6-N1-C2	-6.38	117.75	120.30
15	14	198	C	N3-C4-C5	6.38	124.45	121.90
15	14	423	U	C2-N1-C1'	6.38	125.36	117.70
15	14	724	A	C4-C5-C6	-6.38	113.81	117.00
15	14	875	U	C2-N3-C4	-6.38	123.17	127.00
15	1H	131	C	C5-C4-N4	-6.38	115.73	120.20
15	1H	511	A	C8-N9-C4	-6.38	103.25	105.80
15	1H	848	G	N7-C8-N9	-6.38	109.91	113.10
15	1H	1997	A	O5'-P-OP2	-6.38	99.96	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	476	U	O5'-P-OP2	-6.38	99.96	105.70
52	X1	64	A	O5'-P-OP1	6.38	118.36	110.70
15	1H	2247	U	C6-N1-C2	6.38	124.83	121.00
15	14	1986	C	C2-N1-C1'	-6.38	111.78	118.80
15	1H	416	G	N9-C4-C5	-6.38	102.85	105.40
15	1H	1972	C	C5-C6-N1	-6.38	117.81	121.00
15	14	1881	A	O4'-C1'-N9	6.38	113.30	108.20
15	14	2522	C	N3-C2-O2	-6.38	117.44	121.90
52	X1	27	G	C8-N9-C4	6.38	108.95	106.40
1	13	1384	G	C8-N9-C4	6.38	108.95	106.40
15	1H	2689	G	C5-C6-N1	6.38	114.69	111.50
15	14	896	U	C2-N3-C4	-6.38	123.17	127.00
15	14	1434	G	C4-C5-N7	-6.38	108.25	110.80
1	13	1161	A	C4-C5-N7	6.37	113.89	110.70
15	1H	431	U	N3-C2-O2	-6.37	117.74	122.20
15	1H	977	U	C2-N1-C1'	-6.37	110.05	117.70
15	1H	1167	C	C6-N1-C2	6.37	122.85	120.30
15	1H	1304	U	N3-C4-O4	6.37	123.86	119.40
15	14	243	C	C4-C5-C6	6.37	120.59	117.40
15	14	1252	A	N7-C8-N9	6.37	116.99	113.80
15	14	2247	U	C5-C4-O4	6.37	129.72	125.90
1	13	696	A	C2-N3-C4	6.37	113.79	110.60
15	1H	1583	G	C8-N9-C4	-6.37	103.85	106.40
15	1H	1712	C	C5-C4-N4	-6.37	115.74	120.20
15	1H	2096	A	C5-C6-N1	6.37	120.89	117.70
15	1H	2624	U	O5'-P-OP2	-6.37	99.97	105.70
15	14	877	U	C6-N1-C2	-6.37	117.18	121.00
15	14	1958	G	C2-N3-C4	-6.37	108.71	111.90
26	16	114	U	OP2-P-O3'	6.37	119.22	105.20
1	1G	1316	A	C8-N9-C4	-6.37	103.25	105.80
15	1H	2232	A	C8-N9-C4	-6.37	103.25	105.80
15	1H	883	C	C2-N3-C4	-6.37	116.72	119.90
15	14	2080	C	C5-C4-N4	6.37	124.66	120.20
51	Y1	38	U	C5-C6-N1	6.37	125.88	122.70
1	13	1522	C	C4-C5-C6	6.37	120.58	117.40
15	1H	222	G	C5-C6-O6	-6.37	124.78	128.60
15	14	517	G	C4-C5-N7	6.37	113.35	110.80
15	14	1649	C	N3-C4-C5	6.37	124.45	121.90
15	14	2451	G	O5'-P-OP1	-6.37	99.97	105.70
15	14	2513	C	OP1-P-OP2	-6.37	110.05	119.60
26	16	72	C	N1-C2-O2	6.37	122.72	118.90
51	Y1	44	U	C6-N1-C2	6.37	124.82	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	2119	C	O5'-P-OP2	-6.36	99.97	105.70
15	1H	101	A	N7-C8-N9	-6.36	110.62	113.80
15	1H	343	C	O5'-P-OP1	-6.36	99.97	105.70
15	1H	675	G	N9-C4-C5	6.36	107.94	105.40
15	1H	135	C	OP1-P-OP2	-6.36	110.06	119.60
15	1H	560	G	O5'-P-OP2	6.36	118.33	110.70
15	1H	1358	G	N9-C4-C5	-6.36	102.86	105.40
15	14	1550	C	N3-C2-O2	6.36	126.35	121.90
1	13	1686	G	O5'-P-OP2	-6.36	99.98	105.70
15	1H	242	G	O5'-P-OP2	-6.36	99.98	105.70
15	14	829	G	C4-C5-N7	6.36	113.34	110.80
15	14	2435	C	O5'-P-OP2	6.36	118.33	110.70
15	14	2071	G	N1-C6-O6	-6.36	116.08	119.90
1	13	1130	C	O5'-P-OP2	-6.36	99.98	105.70
1	13	1323	A	C2-N3-C4	-6.36	107.42	110.60
1	13	1418	U	N1-C2-N3	6.36	118.71	114.90
1	1G	1913	A	C8-N9-C4	-6.36	103.26	105.80
15	1H	200	C	C2-N3-C4	-6.36	116.72	119.90
15	1H	592	A	O5'-P-OP1	-6.36	99.98	105.70
15	1H	1417	G	C8-N9-C4	-6.36	103.86	106.40
15	1H	1424	C	C5-C4-N4	-6.36	115.75	120.20
15	1H	2593	G	N3-C2-N2	6.36	124.35	119.90
26	16	118	G	N7-C8-N9	6.36	116.28	113.10
1	13	2153	G	N9-C4-C5	-6.36	102.86	105.40
15	14	514	C	N3-C4-N4	6.36	122.45	118.00
15	14	796	U	N3-C4-O4	-6.36	114.95	119.40
15	14	1754	G	C8-N9-C4	6.36	108.94	106.40
15	14	2084	A	N7-C8-N9	-6.36	110.62	113.80
1	13	1803	A	C8-N9-C4	-6.35	103.26	105.80
15	1H	35	G	C5-C6-O6	6.35	132.41	128.60
15	14	2887	C	C6-N1-C2	6.35	122.84	120.30
4	11	273	ARG	N-CA-C	6.35	128.15	111.00
15	1H	120	G	O5'-P-OP2	-6.35	99.98	105.70
15	1H	202	G	OP2-P-O3'	6.35	119.17	105.20
15	1H	475	A	C4-C5-C6	-6.35	113.82	117.00
15	1H	820	G	N9-C4-C5	6.35	107.94	105.40
15	1H	1614	C	N1-C2-O2	6.35	122.71	118.90
15	1H	1708	C	C4-C5-C6	6.35	120.58	117.40
15	14	235	G	C8-N9-C4	-6.35	103.86	106.40
15	14	1445	U	N3-C2-O2	-6.35	117.75	122.20
15	14	2016	U	C5-C4-O4	6.35	129.71	125.90
15	1H	783	A	N7-C8-N9	6.35	116.97	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	806	U	C5-C4-O4	6.35	129.71	125.90
15	1H	1861	C	C5-C6-N1	-6.35	117.82	121.00
15	14	48	A	O5'-P-OP2	-6.35	99.98	105.70
15	14	674	G	N3-C4-C5	-6.35	125.42	128.60
1	1G	1054	G	C5-N7-C8	6.35	107.47	104.30
15	1H	891	G	C6-C5-N7	-6.35	126.59	130.40
15	1H	1314	A	N7-C8-N9	6.35	116.97	113.80
15	1H	1363	C	O5'-P-OP2	-6.35	99.98	105.70
15	1H	2553	C	N3-C2-O2	-6.35	117.45	121.90
15	1H	2732	U	OP2-P-O3'	6.35	119.17	105.20
15	14	444	C	N3-C4-N4	-6.35	113.56	118.00
15	14	843	G	C4-C5-N7	-6.35	108.26	110.80
15	14	906	C	O5'-P-OP1	-6.35	99.99	105.70
15	14	1859	A	C8-N9-C4	-6.35	103.26	105.80
15	14	2002	A	C6-N1-C2	-6.35	114.79	118.60
15	14	2291	G	O5'-P-OP1	-6.35	99.98	105.70
1	1G	941	A	C2-N3-C4	-6.35	107.43	110.60
15	1H	528	A	OP1-P-OP2	6.35	129.12	119.60
15	1H	2060	G	C2-N3-C4	-6.35	108.73	111.90
15	1H	2691	C	N1-C2-O2	6.35	122.71	118.90
45	98	103	ARG	NE-CZ-NH2	-6.35	117.13	120.30
15	1H	2293	A	C8-N9-C4	6.35	108.34	105.80
15	1H	648	A	N1-C6-N6	6.34	122.41	118.60
15	1H	901	G	O5'-P-OP2	-6.34	99.99	105.70
15	1H	1038	A	OP2-P-O3'	6.34	119.16	105.20
15	1H	1413	G	N9-C4-C5	-6.34	102.86	105.40
15	1H	1477	C	C2-N3-C4	-6.34	116.73	119.90
15	14	913	G	C2-N3-C4	6.34	115.07	111.90
15	14	1375	U	OP2-P-O3'	6.34	119.16	105.20
15	14	2600	U	N1-C2-O2	6.34	127.24	122.80
1	13	1424	C	O5'-P-OP1	-6.34	99.99	105.70
15	1H	125	A	C5-N7-C8	-6.34	100.73	103.90
15	1H	2445	A	C8-N9-C1'	6.34	139.12	127.70
15	1H	2502	G	N9-C4-C5	-6.34	102.86	105.40
15	14	2895	A	OP1-P-OP2	6.34	129.12	119.60
32	31	44	ARG	NE-CZ-NH1	-6.34	117.13	120.30
52	W1	37	A	C5-C6-N6	-6.34	118.63	123.70
1	13	707	G	C5-C6-N1	-6.34	108.33	111.50
1	1G	677	G	N1-C6-O6	6.34	123.70	119.90
15	1H	1812	U	C5-C6-N1	-6.34	119.53	122.70
15	1H	2082	A	C6-N1-C2	-6.34	114.80	118.60
15	1H	2315	G	O5'-P-OP1	-6.34	99.99	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1660	C	C5-C4-N4	-6.34	115.76	120.20
26	1J	92	A	N3-C4-C5	-6.34	122.36	126.80
15	1H	411	U	N3-C2-O2	-6.34	117.76	122.20
15	1H	1307	C	OP2-P-O3'	6.34	119.15	105.20
15	1H	1417	G	N3-C4-C5	-6.34	125.43	128.60
15	1H	2462	G	C2-N3-C4	6.34	115.07	111.90
15	14	2466	A	N3-C4-N9	-6.34	122.33	127.40
1	13	1488	A	C5-C6-N1	-6.34	114.53	117.70
15	1H	815	C	C5-C6-N1	-6.34	117.83	121.00
15	1H	1959	C	C6-N1-C2	6.34	122.83	120.30
1	13	933	G	O5'-P-OP2	-6.34	100.00	105.70
1	1G	1513	G	C8-N9-C4	6.34	108.94	106.40
15	14	355	A	N7-C8-N9	6.34	116.97	113.80
15	14	1318	A	C5-N7-C8	-6.33	100.73	103.90
15	1H	910	A	C4-C5-N7	6.33	113.87	110.70
15	1H	1922	G	N1-C2-N3	6.33	127.70	123.90
15	1H	2098	C	O5'-P-OP1	-6.33	100.00	105.70
15	1H	216	G	C5-C6-O6	-6.33	124.80	128.60
15	1H	513	C	OP1-P-OP2	-6.33	110.10	119.60
15	1H	582	U	N3-C4-O4	-6.33	114.97	119.40
15	14	1928	G	N1-C6-O6	6.33	123.70	119.90
15	14	2807	C	C6-N1-C2	-6.33	117.77	120.30
1	13	893	U	N1-C2-O2	6.33	127.23	122.80
15	14	789	U	N3-C4-O4	-6.33	114.97	119.40
15	14	1036	A	N9-C4-C5	-6.33	103.27	105.80
15	1H	97	G	OP1-P-OP2	6.33	129.09	119.60
15	14	606	C	C5-C4-N4	6.33	124.63	120.20
1	1G	1186	G	C4-C5-N7	6.33	113.33	110.80
1	1G	1350	G	N1-C6-O6	6.33	123.70	119.90
15	1H	2484	A	C5-N7-C8	-6.33	100.74	103.90
15	14	788	G	O5'-P-OP2	-6.33	100.01	105.70
15	14	1619	A	C2-N3-C4	-6.33	107.44	110.60
15	1H	1462	G	N7-C8-N9	6.33	116.26	113.10
15	1H	2593	G	C5-C6-O6	6.33	132.40	128.60
15	14	1993	G	C8-N9-C4	-6.33	103.87	106.40
15	14	2846	G	C8-N9-C4	6.33	108.93	106.40
1	13	1165	C	O5'-P-OP2	-6.32	100.01	105.70
15	1H	73	A	C4-C5-N7	6.32	113.86	110.70
15	1H	590	C	OP2-P-O3'	6.32	119.11	105.20
15	1H	815	C	C6-N1-C2	6.32	122.83	120.30
15	1H	2032	C	N1-C2-O2	-6.32	115.11	118.90
15	1H	2394	G	C6-N1-C2	-6.32	121.31	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	530	A	N1-C6-N6	-6.32	114.81	118.60
15	14	1756	U	C5-C6-N1	-6.32	119.54	122.70
15	14	1862	G	C5-C6-N1	-6.32	108.34	111.50
15	14	2103	C	C6-N1-C2	-6.32	117.77	120.30
15	1H	2005	G	N9-C4-C5	6.32	107.93	105.40
15	14	2488	U	N3-C2-O2	-6.32	117.78	122.20
1	1G	653	G	N3-C4-N9	-6.32	122.21	126.00
15	1H	828	U	OP1-P-OP2	-6.32	110.12	119.60
15	1H	1985	A	C2-N3-C4	-6.32	107.44	110.60
15	1H	2086	G	OP1-P-OP2	-6.32	110.12	119.60
15	1H	2441	A	N9-C4-C5	-6.32	103.27	105.80
15	14	627	G	N1-C6-O6	6.32	123.69	119.90
15	14	1978	A	C5-C6-N1	6.32	120.86	117.70
15	14	2005	G	N3-C2-N2	-6.32	115.48	119.90
15	14	2434	U	N1-C2-O2	-6.32	118.38	122.80
1	1G	830	C	C6-N1-C2	6.32	122.83	120.30
15	1H	347	A	C6-N1-C2	-6.32	114.81	118.60
15	1H	999	G	C6-N1-C2	6.32	128.89	125.10
15	1H	2767	G	C2-N3-C4	-6.32	108.74	111.90
15	14	1812	U	N1-C2-N3	6.32	118.69	114.90
15	14	2267	G	OP1-P-OP2	6.32	129.08	119.60
15	1H	189	A	C6-C5-N7	6.32	136.72	132.30
15	1H	823	A	C6-N1-C2	6.32	122.39	118.60
15	1H	2824	G	N1-C6-O6	6.32	123.69	119.90
1	13	1161	A	C5-N7-C8	-6.32	100.74	103.90
1	1G	1356	G	N3-C2-N2	6.32	124.32	119.90
15	1H	718	G	C8-N9-C4	-6.32	103.87	106.40
15	1H	846	C	C6-N1-C2	6.32	122.83	120.30
15	1H	2585	G	C5-C6-N1	-6.32	108.34	111.50
15	14	1659	A	C8-N9-C4	6.32	108.33	105.80
15	14	2286	G	OP2-P-O3'	6.32	119.09	105.20
52	V1	76	A	O4'-C1'-N9	6.32	113.25	108.20
15	1H	1330	G	OP1-P-OP2	-6.31	110.13	119.60
15	1H	1744	C	N3-C2-O2	6.31	126.32	121.90
15	14	67	G	C5-C6-O6	-6.31	124.81	128.60
15	14	1428	A	N1-C2-N3	6.31	132.46	129.30
15	1H	1665	A	N3-C4-N9	-6.31	122.35	127.40
15	14	561	U	N1-C2-O2	-6.31	118.38	122.80
15	14	868	A	N7-C8-N9	6.31	116.96	113.80
1	13	1992	U	O5'-P-OP2	-6.31	100.02	105.70
1	13	2032	C	C2-N3-C4	6.31	123.06	119.90
15	1H	75	C	N3-C2-O2	-6.31	117.48	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	569	C	OP1-P-OP2	6.31	129.07	119.60
15	1H	2020	U	C5-C6-N1	-6.31	119.55	122.70
15	1H	2267	G	OP1-P-OP2	6.31	129.07	119.60
15	1H	2727	U	O4'-C1'-N1	6.31	113.25	108.20
15	14	2447	A	C5-N7-C8	-6.31	100.74	103.90
26	16	8	C	N1-C2-O2	-6.31	115.11	118.90
15	14	1069	A	C5-C6-N1	-6.31	114.55	117.70
15	14	1576	G	N3-C2-N2	-6.31	115.48	119.90
15	14	1838	C	C6-N1-C2	-6.31	117.78	120.30
15	14	2729	A	N3-C4-C5	6.31	131.22	126.80
1	1G	811	A	N1-C6-N6	-6.31	114.82	118.60
15	1H	669	G	C8-N9-C4	-6.31	103.88	106.40
15	1H	1629	A	C5-N7-C8	-6.31	100.75	103.90
15	1H	2576	A	N7-C8-N9	-6.31	110.65	113.80
15	14	2509	G	N1-C6-O6	-6.31	116.12	119.90
52	X4	56	C	C5-C6-N1	-6.31	117.85	121.00
15	1H	1652	A	C4-C5-N7	6.30	113.85	110.70
15	1H	2573	C	OP2-P-O3'	6.30	119.07	105.20
15	1H	2606	C	C2-N3-C4	-6.30	116.75	119.90
26	1J	92	A	N1-C6-N6	-6.30	114.82	118.60
15	1H	554	C	N3-C4-C5	-6.30	119.38	121.90
15	1H	2761	C	O5'-P-OP2	6.30	118.26	110.70
15	14	595	G	N9-C4-C5	6.30	107.92	105.40
15	14	1332	G	N1-C6-O6	-6.30	116.12	119.90
15	14	1965	U	N1-C2-O2	-6.30	118.39	122.80
15	14	2322	G	N7-C8-N9	6.30	116.25	113.10
1	13	1416	A	C2-N3-C4	-6.30	107.45	110.60
15	1H	1416	A	N9-C4-C5	-6.30	103.28	105.80
15	1H	1696	C	C5-C6-N1	-6.30	117.85	121.00
15	1H	2385	G	N3-C2-N2	6.30	124.31	119.90
15	1H	2690	A	C8-N9-C4	-6.30	103.28	105.80
15	1H	2729	A	C5-C6-N6	-6.30	118.66	123.70
15	14	730	G	N1-C6-O6	6.30	123.68	119.90
15	14	1663	A	C2-N3-C4	-6.30	107.45	110.60
15	1H	1087	G	N7-C8-N9	-6.29	109.95	113.10
15	14	839	C	O5'-P-OP2	-6.29	100.03	105.70
15	1H	1022	C	C5-C4-N4	6.29	124.61	120.20
15	1H	2108	G	O5'-P-OP1	6.29	118.25	110.70
15	14	626	C	C5-C6-N1	-6.29	117.85	121.00
15	14	814	G	N9-C4-C5	6.29	107.92	105.40
15	14	995	G	O5'-P-OP2	6.29	118.25	110.70
15	14	2780	A	C2-N3-C4	-6.29	107.45	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	1321	U	C5-C4-O4	-6.29	122.13	125.90
15	14	70	A	N7-C8-N9	6.29	116.95	113.80
51	Y1	30	C	C6-N1-C2	-6.29	117.78	120.30
15	14	2340	G	N3-C2-N2	-6.29	115.50	119.90
15	14	2833	A	C6-C5-N7	-6.29	127.90	132.30
15	1H	2301	A	N7-C8-N9	6.29	116.94	113.80
15	14	2421	U	N1-C2-O2	6.29	127.20	122.80
1	13	1147	C	N3-C2-O2	-6.29	117.50	121.90
1	13	1369	U	O5'-P-OP2	-6.29	100.04	105.70
1	13	1710	G	C5-C6-O6	-6.29	124.83	128.60
15	1H	609	C	OP1-P-O3'	6.29	119.03	105.20
15	14	832	A	N3-C4-N9	-6.29	122.37	127.40
15	14	879	G	N9-C4-C5	-6.29	102.89	105.40
15	14	2471	C	N3-C4-N4	6.29	122.40	118.00
1	13	1235	G	N1-C2-N3	-6.28	120.13	123.90
15	1H	438	G	C5-C6-N1	-6.28	108.36	111.50
15	1H	512	C	N3-C4-C5	-6.28	119.39	121.90
15	1H	1858	G	N7-C8-N9	-6.28	109.96	113.10
15	1H	2622	G	N3-C2-N2	-6.28	115.50	119.90
15	14	814	G	C8-N9-C4	-6.28	103.89	106.40
15	14	864	C	O5'-P-OP1	6.28	118.24	110.70
1	13	1180	U	N3-C2-O2	6.28	126.60	122.20
15	14	1235	G	OP2-P-O3'	6.28	119.02	105.20
23	29	78	LEU	CA-CB-CG	6.28	129.75	115.30
15	1H	866	C	C6-N1-C2	-6.28	117.79	120.30
15	1H	1344	C	OP2-P-O3'	6.28	119.02	105.20
15	1H	2263	C	C5-C4-N4	6.28	124.60	120.20
15	14	1428	A	C6-C5-N7	-6.28	127.90	132.30
1	13	1281	U	O4'-C1'-N1	6.28	113.22	108.20
15	14	2392	A	C2-N3-C4	-6.28	107.46	110.60
15	14	1422	A	C8-N9-C4	6.28	108.31	105.80
15	14	1814	A	C6-N1-C2	-6.28	114.83	118.60
43	E8	18	ARG	NE-CZ-NH1	6.28	123.44	120.30
1	1G	1691	C	C6-N1-C2	-6.28	117.79	120.30
15	1H	506	A	N1-C6-N6	-6.28	114.83	118.60
15	1H	1723	U	C2-N1-C1'	-6.28	110.17	117.70
15	1H	2089	C	C6-N1-C1'	6.28	128.33	120.80
15	1H	2370	C	C5-C4-N4	-6.28	115.81	120.20
15	14	469	U	O5'-P-OP1	-6.28	100.05	105.70
15	14	791	G	C6-N1-C2	6.28	128.87	125.10
15	14	962	C	C5-C6-N1	6.28	124.14	121.00
15	14	1802	U	C2-N1-C1'	-6.28	110.17	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
52	X4	6	G	N9-C4-C5	-6.28	102.89	105.40
15	1H	29	U	O5'-P-OP1	6.27	118.23	110.70
15	1H	562	C	C6-N1-C2	6.27	122.81	120.30
15	14	1189	U	O4'-C1'-N1	6.27	113.22	108.20
1	13	1586	G	N9-C4-C5	-6.27	102.89	105.40
15	1H	1693	G	N3-C4-N9	6.27	129.76	126.00
15	14	546	U	OP2-P-O3'	6.27	119.00	105.20
15	14	1862	G	C4-C5-N7	-6.27	108.29	110.80
1	13	1503	C	N1-C2-O2	-6.27	115.14	118.90
18	61	131	LYS	C-N-CD	-6.27	106.80	120.60
1	13	1418	U	C4-C5-C6	6.27	123.46	119.70
15	1H	30	G	C6-C5-N7	-6.27	126.64	130.40
15	1H	847	G	C8-N9-C4	6.27	108.91	106.40
15	1H	2576	A	C8-N9-C4	6.27	108.31	105.80
15	14	491	G	N3-C2-N2	6.27	124.29	119.90
15	14	992	A	O4'-C1'-N9	6.27	113.22	108.20
15	14	1439	U	OP1-P-O3'	6.27	118.99	105.20
15	14	2557	A	N7-C8-N9	6.27	116.93	113.80
52	X1	30	G	C8-N9-C4	-6.27	103.89	106.40
1	13	1693	U	P-O3'-C3'	6.27	127.22	119.70
15	1H	1479	C	OP2-P-O3'	-6.27	91.41	105.20
15	1H	2230	G	C4-N9-C1'	6.27	134.65	126.50
15	14	119	G	C6-C5-N7	-6.27	126.64	130.40
15	14	1236	U	OP1-P-OP2	-6.27	110.20	119.60
15	14	1940	U	N3-C4-O4	-6.27	115.01	119.40
52	X1	38	A	C5-C6-N6	-6.27	118.69	123.70
1	13	763	G	O5'-P-OP1	6.27	118.22	110.70
15	1H	1624	C	OP1-P-O3'	-6.27	91.42	105.20
15	1H	255	A	N1-C6-N6	6.26	122.36	118.60
15	1H	731	G	C4-N9-C1'	6.26	134.64	126.50
15	1H	2483	G	C4-N9-C1'	6.26	134.64	126.50
15	1H	2767	G	C4-C5-N7	6.26	113.31	110.80
15	14	187	A	OP2-P-O3'	6.26	118.98	105.20
15	14	1813	U	N3-C2-O2	6.26	126.58	122.20
15	1H	1555	C	C2-N1-C1'	6.26	125.69	118.80
15	1H	1531	U	C5-C4-O4	6.26	129.66	125.90
15	1H	2462	G	C5-C6-N1	6.26	114.63	111.50
15	14	2613	A	OP2-P-O3'	6.26	118.98	105.20
1	1G	1242	C	C5-C6-N1	6.26	124.13	121.00
15	1H	484	C	P-O3'-C3'	6.26	127.21	119.70
15	1H	2290	C	C5'-C4'-O4'	-6.26	101.59	109.10
15	14	1984	G	N3-C4-N9	-6.26	122.24	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1060	C	C2-N1-C1'	6.26	125.68	118.80
1	1G	1140	C	C6-N1-C2	-6.26	117.80	120.30
15	1H	819	G	N1-C6-O6	6.26	123.65	119.90
15	1H	1023	G	N3-C2-N2	-6.26	115.52	119.90
15	1H	1840	C	C2-N3-C4	-6.26	116.77	119.90
15	1H	2553	C	C5-C6-N1	-6.26	117.87	121.00
15	14	1453	C	OP1-P-OP2	6.26	128.99	119.60
15	14	1667	A	N7-C8-N9	6.26	116.93	113.80
15	14	2525	C	N3-C2-O2	-6.26	117.52	121.90
15	1H	466	G	C6-C5-N7	-6.25	126.65	130.40
15	1H	780	C	C4-C5-C6	6.25	120.53	117.40
15	1H	111	G	C8-N9-C1'	6.25	135.13	127.00
15	14	1819	A	C4-C5-C6	6.25	120.13	117.00
15	14	2575	C	O5'-P-OP1	-6.25	100.07	105.70
15	1H	884	A	C2-N3-C4	6.25	113.72	110.60
15	1H	920	U	N3-C4-C5	-6.25	110.85	114.60
15	14	597	A	N1-C2-N3	6.25	132.43	129.30
15	14	1632	C	N1-C2-O2	6.25	122.65	118.90
15	14	1993	G	C5-N7-C8	-6.25	101.17	104.30
15	1H	920	U	O5'-P-OP2	6.25	118.20	110.70
52	V4	72	C	N1-C2-N3	-6.25	114.83	119.20
15	1H	255	A	C4-C5-N7	6.25	113.83	110.70
15	1H	894	G	N3-C4-C5	6.25	131.72	128.60
15	1H	1315	G	C5-C6-O6	-6.25	124.85	128.60
15	1H	1559	A	N1-C2-N3	-6.25	126.18	129.30
15	1H	2231	G	N1-C6-O6	6.25	123.65	119.90
15	1H	2269	C	C6-N1-C2	6.25	122.80	120.30
15	14	433	U	N3-C2-O2	6.25	126.57	122.20
15	14	785	C	O5'-P-OP1	-6.25	100.08	105.70
1	13	1136	C	C6-N1-C2	-6.25	117.80	120.30
1	13	1573	U	C6-N1-C2	6.25	124.75	121.00
15	1H	2276	C	OP2-P-O3'	6.25	118.94	105.20
15	1H	2416	U	N1-C2-N3	6.25	118.65	114.90
15	1H	2457	C	OP1-P-O3'	6.25	118.94	105.20
15	1H	2583	C	OP2-P-O3'	6.25	118.94	105.20
15	14	1252	A	N3-C4-C5	6.25	131.17	126.80
15	14	1545	A	C5-C6-N6	-6.25	118.70	123.70
15	1H	2523	G	C5-C6-N1	6.25	114.62	111.50
15	14	1055	C	N3-C4-C5	6.25	124.40	121.90
26	16	11	G	OP1-P-O3'	-6.25	91.46	105.20
52	W4	37	A	C2-N3-C4	6.25	113.72	110.60
1	13	1144	G	N9-C4-C5	6.24	107.90	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1170	G	N1-C6-O6	6.24	123.65	119.90
15	1H	775	G	N1-C6-O6	-6.24	116.15	119.90
15	1H	841	G	C6-C5-N7	-6.24	126.65	130.40
15	1H	1086	C	N3-C4-C5	6.24	124.40	121.90
15	1H	1611	G	N7-C8-N9	6.24	116.22	113.10
15	1H	1657	A	C5-C6-N6	6.24	128.70	123.70
15	14	1812	U	C5-C6-N1	-6.24	119.58	122.70
15	14	2216	G	C8-N9-C4	-6.24	103.90	106.40
15	14	1330	G	OP2-P-O3'	6.24	118.93	105.20
15	1H	45	C	OP2-P-O3'	6.24	118.93	105.20
15	1H	1327	A	C2-N3-C4	-6.24	107.48	110.60
15	1H	2303	A	N1-C6-N6	6.24	122.34	118.60
15	14	1962	A	O4'-C1'-N9	6.24	113.19	108.20
15	1H	76	C	C5-C4-N4	-6.24	115.83	120.20
15	1H	558	C	N3-C2-O2	-6.24	117.53	121.90
15	1H	1413	G	C5-C6-O6	-6.24	124.86	128.60
15	1H	2455	C	C6-N1-C2	-6.24	117.81	120.30
15	1H	2840	C	N3-C4-C5	6.24	124.39	121.90
15	14	1008	C	OP1-P-O3'	6.24	118.92	105.20
15	14	2717	U	N1-C1'-C2'	6.24	122.11	114.00
26	16	15	A	N1-C6-N6	-6.24	114.86	118.60
15	14	2880	G	O5'-P-OP1	-6.24	100.09	105.70
15	1H	73	A	C6-N1-C2	6.24	122.34	118.60
15	1H	1437	G	O5'-P-OP2	-6.24	100.09	105.70
15	14	595	G	C8-N9-C4	-6.24	103.91	106.40
1	13	1591	A	C5-C6-N6	-6.23	118.71	123.70
15	14	786	C	N3-C2-O2	6.23	126.26	121.90
15	14	1382	C	C2-N3-C4	-6.23	116.78	119.90
1	13	2149	G	C5-C6-O6	-6.23	124.86	128.60
15	1H	794	G	N1-C6-O6	6.23	123.64	119.90
15	1H	1663	A	C6-N1-C2	6.23	122.34	118.60
15	14	850	G	C5-C6-O6	6.23	132.34	128.60
15	14	1001	G	C8-N9-C4	-6.23	103.91	106.40
15	14	444	C	N3-C4-C5	6.23	124.39	121.90
15	14	1079	G	C4-C5-N7	6.23	113.29	110.80
15	14	1345	G	C8-N9-C4	6.23	108.89	106.40
15	14	1954	G	C5-C6-O6	6.23	132.34	128.60
15	1H	1807	A	O5'-P-OP1	6.23	118.17	110.70
15	1H	1845	G	C8-N9-C4	-6.23	103.91	106.40
15	14	777	G	C5-N7-C8	6.23	107.41	104.30
15	14	832	A	C5-C6-N1	-6.23	114.59	117.70
15	14	1323	A	O5'-P-OP1	-6.23	100.09	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1790	G	O5'-P-OP1	-6.23	100.09	105.70
26	16	83	G	C5-C6-O6	-6.23	124.86	128.60
52	X1	76	A	C5-C6-N6	-6.23	118.72	123.70
15	1H	1454	U	OP1-P-O3'	6.23	118.90	105.20
15	14	540	A	C4-C5-N7	6.23	113.81	110.70
15	14	730	G	N1-C2-N2	-6.23	110.60	116.20
1	1G	2110	G	C5-C6-O6	-6.22	124.86	128.60
1	1G	2125	A	C4-C5-N7	6.22	113.81	110.70
15	1H	1321	A	C5-N7-C8	-6.22	100.79	103.90
15	1H	1626	U	OP2-P-O3'	6.22	118.90	105.20
15	1H	2418	C	C5-C4-N4	-6.22	115.84	120.20
1	13	1456	U	C4-C5-C6	6.22	123.43	119.70
15	1H	323	G	N1-C2-N2	6.22	121.80	116.20
15	1H	1203	G	O5'-P-OP1	6.22	118.17	110.70
15	1H	1412	C	C6-N1-C2	6.22	122.79	120.30
15	14	815	C	C4-C5-C6	6.22	120.51	117.40
15	14	2353	G	O5'-P-OP1	-6.22	100.10	105.70
15	1H	2478	C	C6-N1-C2	6.22	122.79	120.30
1	13	891	A	C4-C5-C6	6.22	120.11	117.00
15	14	2230	G	OP2-P-O3'	6.22	118.88	105.20
15	14	2441	A	N9-C4-C5	-6.22	103.31	105.80
52	W1	38	A	C6-C5-N7	-6.22	127.95	132.30
15	1H	87	G	N1-C6-O6	-6.22	116.17	119.90
15	1H	590	C	C5-C6-N1	6.22	124.11	121.00
15	1H	35	G	OP2-P-O3'	6.22	118.87	105.20
15	14	22	C	N3-C4-C5	6.22	124.39	121.90
15	1H	598	G	N9-C4-C5	-6.21	102.91	105.40
15	1H	967	G	N3-C2-N2	-6.21	115.55	119.90
15	14	2439	C	C6-N1-C2	6.21	122.79	120.30
15	14	2517	G	N1-C2-N2	-6.21	110.61	116.20
15	1H	349	A	C8-N9-C4	-6.21	103.31	105.80
15	1H	1265	C	C6-N1-C2	6.21	122.78	120.30
15	14	1433	A	N9-C4-C5	6.21	108.28	105.80
1	1G	1111	G	O4'-C1'-N9	-6.21	103.23	108.20
15	1H	1622	A	O5'-P-OP1	6.21	118.15	110.70
15	1H	1682	A	C2-N3-C4	-6.21	107.50	110.60
15	1H	2066	U	C4-C5-C6	-6.21	115.97	119.70
15	14	959	A	C5-C6-N1	6.21	120.81	117.70
15	14	1353	C	C5-C4-N4	6.21	124.55	120.20
15	14	1999	C	C2-N3-C4	-6.21	116.79	119.90
15	14	2707	C	OP1-P-OP2	-6.21	110.28	119.60
15	1H	735	G	OP1-P-OP2	6.21	128.92	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1396	A	C2-N3-C4	-6.21	107.50	110.60
1	1G	2147	C	OP1-P-OP2	6.21	128.91	119.60
15	1H	886	C	C5-C4-N4	-6.21	115.85	120.20
15	1H	2704	U	N3-C4-C5	6.21	118.33	114.60
15	14	721	C	O5'-P-OP2	-6.21	100.11	105.70
15	14	823	A	C8-N9-C4	-6.21	103.32	105.80
15	14	1999	C	C5-C4-N4	-6.21	115.85	120.20
15	1H	288	G	OP2-P-O3'	6.21	118.85	105.20
15	1H	439	G	N1-C6-O6	-6.21	116.18	119.90
15	1H	976	G	C8-N9-C1'	-6.21	118.93	127.00
15	1H	1583	G	C2-N3-C4	6.21	115.00	111.90
15	1H	1665	A	N3-C4-C5	6.21	131.15	126.80
15	1H	2560	G	O5'-P-OP2	-6.21	100.11	105.70
15	14	1669	G	N1-C6-O6	6.21	123.62	119.90
1	1G	1817	G	N1-C6-O6	-6.21	116.18	119.90
15	1H	1546	U	C5-C6-N1	6.21	125.80	122.70
15	14	511	A	OP1-P-OP2	6.21	128.91	119.60
15	1H	555	A	C4-C5-N7	6.20	113.80	110.70
15	1H	1233	C	N3-C4-N4	-6.20	113.66	118.00
15	1H	2484	A	N1-C6-N6	6.20	122.32	118.60
15	14	2230	G	O4'-C1'-N9	-6.20	103.24	108.20
1	13	1213	G	N1-C2-N2	-6.20	110.62	116.20
1	1G	1210	G	N3-C4-C5	6.20	131.70	128.60
15	1H	824	G	N3-C4-C5	-6.20	125.50	128.60
15	1H	2037	G	C6-N1-C2	-6.20	121.38	125.10
15	1H	2242	A	N1-C6-N6	-6.20	114.88	118.60
15	1H	2256	A	C5-N7-C8	6.20	107.00	103.90
15	14	481	C	C2-N1-C1'	-6.20	111.98	118.80
1	13	789	A	C8-N9-C4	-6.20	103.32	105.80
1	13	1436	A	N9-C4-C5	6.20	108.28	105.80
15	1H	1010	U	C5-C4-O4	-6.20	122.18	125.90
15	1H	2053	U	N3-C4-C5	-6.20	110.88	114.60
15	1H	2345	G	C6-N1-C2	-6.20	121.38	125.10
15	1H	2781	A	OP1-P-OP2	6.20	128.90	119.60
15	14	149	A	C4-C5-C6	6.20	120.10	117.00
15	14	823	A	O5'-P-OP2	-6.20	100.12	105.70
26	16	81	C	N1-C2-O2	6.20	122.62	118.90
15	1H	1314	A	C8-N9-C4	-6.20	103.32	105.80
15	1H	2572	G	C8-N9-C4	-6.20	103.92	106.40
15	14	595	G	C4-C5-N7	-6.20	108.32	110.80
15	14	1757	G	N1-C6-O6	-6.20	116.18	119.90
15	1H	76	C	OP1-P-OP2	-6.20	110.31	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1002	C	C5-C6-N1	-6.20	117.90	121.00
15	1H	2048	G	O5'-P-OP2	6.20	118.14	110.70
15	1H	2592	A	C5-N7-C8	6.20	107.00	103.90
15	14	1985	A	OP2-P-O3'	6.19	118.83	105.20
1	13	1042	C	C5-C6-N1	-6.19	117.90	121.00
15	1H	139	A	OP2-P-O3'	6.19	118.82	105.20
15	1H	704	A	N7-C8-N9	6.19	116.90	113.80
15	1H	1366	A	OP1-P-O3'	6.19	118.83	105.20
15	1H	2536	C	C6-N1-C2	6.19	122.78	120.30
15	14	862	U	N3-C4-C5	-6.19	110.89	114.60
1	13	1196	G	O5'-P-OP1	-6.19	100.13	105.70
1	13	2022	A	N9-C4-C5	-6.19	103.32	105.80
15	1H	139	A	N3-C4-C5	6.19	131.13	126.80
15	1H	200	C	C5-C6-N1	-6.19	117.90	121.00
15	1H	1007	A	C5-C6-N1	-6.19	114.61	117.70
15	1H	1061	C	C6-N1-C2	6.19	122.78	120.30
15	1H	1315	G	C2-N3-C4	6.19	115.00	111.90
15	1H	2732	U	N1-C2-N3	6.19	118.61	114.90
15	14	809	G	N1-C6-O6	6.19	123.61	119.90
15	14	1828	U	N1-C2-N3	6.19	118.61	114.90
15	14	2639	G	C5-C6-O6	-6.19	124.89	128.60
1	13	1510	G	N1-C2-N3	6.19	127.61	123.90
15	1H	883	C	C5-C4-N4	-6.19	115.87	120.20
15	1H	1367	C	O5'-P-OP1	-6.19	100.13	105.70
15	1H	1733	C	N1-C2-N3	6.19	123.53	119.20
15	1H	2292	G	C6-C5-N7	6.19	134.11	130.40
15	1H	2536	C	C5-C6-N1	-6.19	117.91	121.00
15	14	138	G	O5'-P-OP1	-6.19	100.13	105.70
15	14	476	U	O5'-P-OP1	6.19	118.13	110.70
15	14	587	U	C2-N3-C4	-6.19	123.29	127.00
15	14	1851	G	N9-C4-C5	-6.19	102.92	105.40
15	14	1964	U	OP2-P-O3'	6.19	118.81	105.20
1	1G	2146	G	N1-C6-O6	-6.19	116.19	119.90
1	13	1195	G	O5'-P-OP2	-6.18	100.13	105.70
1	13	1753	U	P-O3'-C3'	6.18	127.12	119.70
15	1H	158	U	C5-C6-N1	6.18	125.79	122.70
15	1H	2678	G	C8-N9-C4	-6.18	103.93	106.40
15	14	518	G	C2-N3-C4	-6.18	108.81	111.90
15	14	2725	C	OP2-P-O3'	6.18	118.81	105.20
1	13	1337	C	OP1-P-O3'	6.18	118.80	105.20
15	1H	891	G	N9-C4-C5	-6.18	102.93	105.40
15	1H	2019	C	C5-C6-N1	-6.18	117.91	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1686	C	N3-C2-O2	6.18	126.23	121.90
15	14	818	G	N7-C8-N9	-6.18	110.01	113.10
15	14	2076	A	N7-C8-N9	6.18	116.89	113.80
1	13	2121	U	C2-N3-C4	-6.18	123.29	127.00
15	1H	463	U	C5-C6-N1	-6.18	119.61	122.70
15	1H	598	G	N3-C4-N9	6.18	129.71	126.00
26	16	99	G	C4-N9-C1'	-6.18	118.47	126.50
15	1H	719	A	C5-N7-C8	-6.18	100.81	103.90
15	14	2078	G	N9-C1'-C2'	-6.18	105.20	112.00
1	1G	2033	G	O5'-P-OP2	-6.18	100.14	105.70
15	1H	372	A	N7-C8-N9	6.18	116.89	113.80
15	14	180	A	C5-N7-C8	-6.18	100.81	103.90
15	14	196	U	C5-C4-O4	-6.18	122.19	125.90
15	14	782	G	N1-C2-N2	-6.18	110.64	116.20
15	14	1273	C	O5'-P-OP2	-6.18	100.14	105.70
15	14	1391	A	N9-C1'-C2'	6.18	122.03	114.00
1	13	696	A	P-O3'-C3'	6.17	127.11	119.70
1	1G	987	G	O5'-P-OP1	-6.17	100.14	105.70
15	1H	1186	G	C4-N9-C1'	6.17	134.53	126.50
15	1H	1425	C	N1-C2-O2	-6.17	115.20	118.90
15	14	825	G	N3-C2-N2	-6.17	115.58	119.90
15	14	2513	C	C6-N1-C2	6.17	122.77	120.30
52	V4	76	A	N3-C4-C5	6.17	131.12	126.80
15	1H	1431	G	N3-C4-C5	6.17	131.69	128.60
15	1H	1656	C	C6-N1-C2	6.17	122.77	120.30
15	14	1301	G	C8-N9-C4	6.17	108.87	106.40
15	14	1745	G	C6-C5-N7	-6.17	126.70	130.40
15	1H	611	A	O5'-P-OP1	-6.17	100.15	105.70
15	1H	865	C	OP1-P-OP2	-6.17	110.34	119.60
15	1H	1458	C	N3-C4-C5	6.17	124.37	121.90
15	14	415	U	C4-C5-C6	-6.17	116.00	119.70
1	13	1094	C	N1-C2-O2	6.17	122.60	118.90
15	1H	1682	A	C5-N7-C8	-6.17	100.81	103.90
15	1H	2385	G	N1-C6-O6	-6.17	116.20	119.90
15	14	1728	G	N9-C4-C5	6.17	107.87	105.40
15	14	2745	G	C4-C5-N7	6.17	113.27	110.80
26	16	86	C	C6-N1-C2	-6.17	117.83	120.30
1	13	954	A	O5'-P-OP2	-6.17	100.15	105.70
15	1H	605	C	C6-N1-C2	-6.17	117.83	120.30
15	1H	731	G	O4'-C1'-N9	-6.17	103.27	108.20
15	1H	909	U	C2-N1-C1'	6.17	125.10	117.70
15	1H	1681	A	C5-C6-N6	-6.17	118.77	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1924	G	O4'-C1'-N9	6.17	113.14	108.20
15	1H	2231	G	C4-C5-C6	6.17	122.50	118.80
15	14	793	G	OP1-P-OP2	6.17	128.85	119.60
15	14	1059	G	C8-N9-C1'	6.17	135.02	127.00
1	13	1501	G	N3-C2-N2	6.17	124.22	119.90
4	11	244	ARG	NE-CZ-NH2	6.17	123.38	120.30
15	1H	999	G	C4-C5-N7	6.17	113.27	110.80
15	1H	1431	G	C8-N9-C4	6.17	108.87	106.40
15	14	1423	G	C5-C6-N1	-6.17	108.42	111.50
15	14	1805	C	N1-C2-O2	-6.17	115.20	118.90
1	13	1817	G	N3-C2-N2	-6.17	115.58	119.90
1	13	1824	G	OP1-P-O3'	6.17	118.76	105.20
15	1H	819	G	C6-C5-N7	-6.17	126.70	130.40
15	1H	1340	C	C2-N3-C4	-6.17	116.82	119.90
15	1H	1806	G	N1-C2-N2	-6.17	110.65	116.20
15	14	2441	A	N1-C6-N6	6.17	122.30	118.60
1	13	1395	A	C8-N9-C4	6.16	108.27	105.80
15	1H	512	C	OP1-P-O3'	6.16	118.76	105.20
15	14	2244	C	C6-N1-C2	6.16	122.77	120.30
15	14	2445	A	C8-N9-C1'	6.16	138.79	127.70
15	1H	982	C	O5'-P-OP1	-6.16	100.15	105.70
15	1H	618	G	OP1-P-OP2	6.16	128.84	119.60
15	1H	965	A	O5'-P-OP1	-6.16	100.16	105.70
15	1H	1677	G	N3-C2-N2	6.16	124.21	119.90
15	1H	2704	U	N1-C2-O2	-6.16	118.49	122.80
1	13	1243	A	N1-C6-N6	-6.16	114.91	118.60
1	13	1401	U	C5-C4-O4	6.16	129.59	125.90
15	1H	1847	G	N3-C2-N2	-6.16	115.59	119.90
15	14	1052	C	N3-C2-O2	6.16	126.21	121.90
52	X1	69	G	N3-C4-C5	6.16	131.68	128.60
15	1H	34	C	N1-C2-N3	-6.16	114.89	119.20
15	1H	1649	C	O5'-P-OP2	-6.16	100.16	105.70
1	13	893	U	N3-C2-O2	-6.16	117.89	122.20
15	1H	1406	U	N3-C2-O2	-6.16	117.89	122.20
15	1H	1654	C	C4-C5-C6	6.16	120.48	117.40
15	1H	1731	G	N1-C6-O6	6.16	123.59	119.90
15	14	540	A	C5-N7-C8	-6.16	100.82	103.90
15	14	901	G	N1-C6-O6	-6.16	116.21	119.90
15	14	2393	A	N1-C6-N6	6.16	122.29	118.60
15	1H	2518	A	N9-C4-C5	-6.15	103.34	105.80
15	14	2472	U	C5-C4-O4	6.15	129.59	125.90
18	69	131	LYS	C-N-CD	-6.15	107.06	120.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	C8	74	LEU	CA-CB-CG	6.15	129.45	115.30
1	1G	964	U	N3-C4-O4	6.15	123.71	119.40
15	1H	102	U	N1-C2-O2	-6.15	118.49	122.80
15	1H	1956	U	C2-N3-C4	-6.15	123.31	127.00
15	1H	1990	C	O5'-P-OP2	6.15	118.08	110.70
15	1H	2258	U	C2-N3-C4	-6.15	123.31	127.00
15	1H	2292	G	C2-N3-C4	6.15	114.98	111.90
1	1G	677	G	C5-C6-O6	-6.15	124.91	128.60
15	1H	204	G	C8-N9-C4	-6.15	103.94	106.40
15	1H	1824	C	N3-C4-C5	6.15	124.36	121.90
15	1H	2057	G	N7-C8-N9	-6.15	110.03	113.10
15	1H	2254	G	N9-C4-C5	-6.15	102.94	105.40
15	14	995	G	N1-C2-N2	6.15	121.74	116.20
15	14	1545	A	C6-C5-N7	-6.15	128.00	132.30
1	1G	1186	G	C5-C6-O6	-6.15	124.91	128.60
15	1H	529	A	N9-C4-C5	6.15	108.26	105.80
15	1H	1962	A	C8-N9-C4	6.15	108.26	105.80
15	1H	2345	G	N1-C6-O6	6.15	123.59	119.90
1	1G	1441	C	N1-C2-O2	-6.15	115.21	118.90
15	1H	115	G	OP1-P-OP2	-6.15	110.38	119.60
15	1H	146	G	C8-N9-C4	6.15	108.86	106.40
15	1H	439	G	N3-C4-C5	-6.15	125.53	128.60
15	1H	589	C	N3-C4-C5	-6.15	119.44	121.90
15	1H	754	A	N1-C6-N6	6.15	122.29	118.60
15	1H	1770	A	C5-N7-C8	-6.15	100.83	103.90
15	1H	1822	C	N3-C4-C5	-6.15	119.44	121.90
15	1H	2512	A	C5-C6-N6	-6.15	118.78	123.70
15	1H	2213	C	C6-N1-C2	-6.15	117.84	120.30
15	1H	2404	G	N9-C4-C5	6.15	107.86	105.40
15	14	996	C	N1-C2-O2	-6.15	115.21	118.90
15	14	1375	U	O5'-P-OP1	-6.15	100.17	105.70
15	14	1355	C	C5-C6-N1	6.14	124.07	121.00
15	14	2512	A	C6-N1-C2	-6.14	114.91	118.60
26	1J	76	U	C5-C4-O4	6.14	129.59	125.90
1	1G	1041	C	C5-C6-N1	-6.14	117.93	121.00
15	1H	680	A	N1-C6-N6	6.14	122.29	118.60
15	1H	2513	C	N1-C2-N3	6.14	123.50	119.20
15	1H	2567	U	N1-C2-N3	6.14	118.59	114.90
15	1H	2569	U	C5-C4-O4	-6.14	122.22	125.90
15	14	227	C	N1-C2-O2	-6.14	115.22	118.90
15	14	1655	G	C5-C6-N1	6.14	114.57	111.50
52	X4	29	G	N1-C6-O6	-6.14	116.21	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1403	A	C5-N7-C8	-6.14	100.83	103.90
15	1H	1538	U	N3-C2-O2	-6.14	117.90	122.20
15	1H	2021	C	C5-C6-N1	-6.14	117.93	121.00
15	1H	2087	A	C2-N3-C4	6.14	113.67	110.60
15	14	255	A	N7-C8-N9	6.14	116.87	113.80
15	14	781	C	C4-C5-C6	6.14	120.47	117.40
1	13	1319	G	N1-C2-N3	6.14	127.58	123.90
1	1G	1216	G	N1-C6-O6	-6.14	116.22	119.90
15	1H	121	G	C6-N1-C2	-6.14	121.42	125.10
15	1H	185	A	OP1-P-O3'	-6.14	91.69	105.20
15	1H	484	C	OP1-P-OP2	6.14	128.81	119.60
15	1H	1413	G	N3-C4-N9	6.14	129.68	126.00
15	14	495	G	C2-N3-C4	6.14	114.97	111.90
15	14	504	G	O5'-P-OP2	-6.14	100.17	105.70
15	14	626	C	C4-C5-C6	6.14	120.47	117.40
15	14	1676	G	N3-C2-N2	6.14	124.20	119.90
1	13	1322	G	N3-C2-N2	6.14	124.20	119.90
1	13	2128	G	C5-C6-O6	6.14	132.28	128.60
15	1H	191	C	N3-C4-C5	6.14	124.36	121.90
15	1H	1955	G	OP1-P-OP2	6.14	128.81	119.60
15	14	1576	G	N3-C4-N9	-6.14	122.32	126.00
15	14	2338	G	N1-C6-O6	6.14	123.58	119.90
15	14	2847	G	C5-C6-O6	-6.14	124.92	128.60
1	13	1586	G	C8-N9-C4	6.14	108.86	106.40
1	1G	2092	G	C4-C5-N7	6.14	113.25	110.80
15	1H	1425	C	N1-C2-N3	6.14	123.50	119.20
15	1H	1686	C	O5'-P-OP1	-6.14	100.18	105.70
15	14	2459	G	C2-N3-C4	-6.14	108.83	111.90
26	16	85	G	O5'-P-OP2	-6.14	100.18	105.70
15	1H	141	C	OP1-P-O3'	-6.13	91.71	105.20
15	1H	323	G	N3-C2-N2	-6.13	115.61	119.90
15	1H	529	A	N1-C6-N6	-6.13	114.92	118.60
15	1H	1074	U	N3-C2-O2	-6.13	117.91	122.20
15	1H	1363	C	OP2-P-O3'	6.13	118.69	105.20
15	14	1523	G	N1-C6-O6	-6.13	116.22	119.90
15	1H	464	C	C5-C4-N4	-6.13	115.91	120.20
15	1H	1634	C	C6-N1-C2	6.13	122.75	120.30
15	14	554	C	N3-C4-N4	-6.13	113.71	118.00
15	14	1038	A	C8-N9-C4	-6.13	103.35	105.80
15	14	1981	U	C5-C6-N1	-6.13	119.63	122.70
15	14	2610	G	C5-N7-C8	-6.13	101.23	104.30
15	14	2887	C	N3-C2-O2	6.13	126.19	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	409	G	OP1-P-O3'	6.13	118.69	105.20
1	13	1170	G	C5-C6-O6	-6.13	124.92	128.60
4	11	271	ILE	CG1-CB-CG2	-6.13	97.92	111.40
1	1G	2110	G	C4-C5-N7	6.13	113.25	110.80
15	1H	184	G	C5-C6-N1	6.13	114.56	111.50
15	1H	239	C	C5-C6-N1	-6.13	117.94	121.00
15	1H	2633	G	O5'-P-OP1	6.13	118.05	110.70
15	14	404	C	C6-N1-C2	-6.13	117.85	120.30
15	14	2447	A	C4-C5-N7	6.13	113.76	110.70
1	13	1421	A	N3-C4-N9	-6.13	122.50	127.40
1	13	1499	G	N1-C6-O6	-6.13	116.22	119.90
1	1G	770	A	N1-C6-N6	6.13	122.28	118.60
15	1H	1769	G	C5-C6-O6	-6.13	124.92	128.60
15	1H	1919	C	C6-N1-C2	-6.13	117.85	120.30
15	1H	2533	A	C4-C5-N7	6.13	113.76	110.70
15	1H	2621	C	N3-C4-C5	6.13	124.35	121.90
15	1H	2865	G	C5-C6-O6	6.13	132.28	128.60
15	14	1838	C	C5-C4-N4	-6.13	115.91	120.20
15	14	2287	U	N3-C4-O4	-6.13	115.11	119.40
15	14	2532	C	C2-N3-C4	-6.13	116.84	119.90
1	1G	775	C	C5-C4-N4	-6.12	115.91	120.20
15	1H	969	G	C6-N1-C2	6.12	128.78	125.10
52	V1	4	C	C6-N1-C2	-6.12	117.85	120.30
1	13	860	C	C6-N1-C2	-6.12	117.85	120.30
1	13	1261	A	N1-C6-N6	-6.12	114.93	118.60
15	1H	2352	G	C8-N9-C4	-6.12	103.95	106.40
15	1H	2740	C	N3-C4-C5	-6.12	119.45	121.90
52	V4	20	U	N1-C2-O2	6.12	127.09	122.80
1	1G	2108	U	N3-C4-C5	6.12	118.27	114.60
15	1H	66	U	OP1-P-OP2	-6.12	110.42	119.60
15	14	992	A	C4-N9-C1'	6.12	137.32	126.30
15	14	1650	G	OP1-P-O3'	6.12	118.67	105.20
52	X1	34	G	C8-N9-C4	-6.12	103.95	106.40
15	1H	569	C	C5-C6-N1	-6.12	117.94	121.00
15	1H	1239	G	N7-C8-N9	-6.12	110.04	113.10
15	1H	1469	U	O5'-P-OP1	-6.12	100.19	105.70
15	14	1372	U	OP1-P-OP2	-6.12	110.42	119.60
15	14	1728	G	N1-C2-N3	6.12	127.57	123.90
15	14	1769	G	C2-N3-C4	6.12	114.96	111.90
1	13	1404	G	C4-C5-N7	-6.12	108.35	110.80
15	1H	1744	C	N3-C4-N4	6.12	122.28	118.00
15	1H	1806	G	C6-C5-N7	6.12	134.07	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	216	G	O4'-C1'-N9	6.12	113.09	108.20
15	14	299	G	C6-C5-N7	-6.12	126.73	130.40
15	14	1293	G	N9-C4-C5	-6.12	102.95	105.40
15	14	1381	G	C5-C6-N1	-6.12	108.44	111.50
1	1G	2113	C	C5-C6-N1	-6.12	117.94	121.00
15	1H	231	A	N1-C2-N3	6.12	132.36	129.30
15	14	170	G	C8-N9-C4	6.12	108.85	106.40
15	14	2614	G	N1-C6-O6	-6.12	116.23	119.90
1	13	1686	G	O5'-P-OP1	6.12	118.04	110.70
1	1G	1931	G	N1-C6-O6	6.12	123.57	119.90
1	1G	2110	G	N3-C4-C5	6.12	131.66	128.60
15	1H	34	C	C2-N1-C1'	-6.12	112.07	118.80
15	1H	852	U	O5'-P-OP2	-6.12	100.20	105.70
15	1H	1675	G	O5'-P-OP2	6.12	118.04	110.70
15	1H	1981	U	N3-C2-O2	-6.12	117.92	122.20
15	1H	2028	G	N1-C6-O6	6.12	123.57	119.90
15	14	1357	A	C8-N9-C4	-6.12	103.35	105.80
15	14	1591	G	C5-C6-O6	6.12	132.27	128.60
15	14	2544	G	C5-C6-O6	6.12	132.27	128.60
26	16	6	C	C6-N1-C2	6.12	122.75	120.30
1	13	1092	A	C8-N9-C4	6.11	108.25	105.80
15	1H	562	C	C5-C4-N4	6.11	124.48	120.20
15	1H	563	A	C4-C5-N7	-6.11	107.64	110.70
15	14	119	G	N9-C4-C5	-6.11	102.95	105.40
15	14	1927	C	C5-C6-N1	-6.11	117.94	121.00
26	16	43	U	C4-C5-C6	6.11	123.37	119.70
1	13	2127	G	O5'-P-OP1	-6.11	100.20	105.70
15	1H	837	A	OP1-P-O3'	-6.11	91.75	105.20
15	1H	2023	G	N7-C8-N9	-6.11	110.04	113.10
15	1H	2068	C	N3-C4-N4	6.11	122.28	118.00
15	14	1814	A	C4-C5-C6	6.11	120.06	117.00
15	1H	739	G	O5'-P-OP2	6.11	118.03	110.70
15	1H	1426	G	N3-C4-C5	-6.11	125.55	128.60
15	1H	2004	C	C4-C5-C6	6.11	120.45	117.40
15	14	501	G	N9-C4-C5	6.11	107.84	105.40
1	1G	1453	C	C5-C6-N1	-6.11	117.95	121.00
1	1G	1928	U	OP1-P-O3'	6.11	118.64	105.20
15	1H	888	U	OP1-P-OP2	6.11	128.76	119.60
15	14	2521	U	N1-C2-N3	6.11	118.56	114.90
52	V1	72	C	C4-C5-C6	-6.11	114.34	117.40
15	14	484	C	OP2-P-O3'	6.11	118.64	105.20
15	14	781	C	N3-C4-C5	-6.11	119.46	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1982	C	N3-C4-N4	-6.11	113.72	118.00
15	14	2113	G	O5'-P-OP2	6.11	118.03	110.70
15	14	2880	G	C5-C6-O6	6.11	132.26	128.60
52	V4	74	C	N1-C2-O2	6.11	122.56	118.90
1	13	1163	U	N3-C4-O4	-6.11	115.13	119.40
1	13	1395	A	N1-C2-N3	-6.11	126.25	129.30
15	1H	1051	G	C8-N9-C4	6.11	108.84	106.40
15	1H	1054	C	O5'-P-OP1	-6.11	100.20	105.70
15	14	2896	A	O5'-P-OP2	-6.11	100.21	105.70
15	1H	1971	U	OP1-P-OP2	-6.10	110.44	119.60
15	1H	2041	U	N3-C4-C5	6.10	118.26	114.60
1	13	1513	G	O4'-C1'-N9	6.10	113.08	108.20
15	1H	597	A	C4-C5-C6	6.10	120.05	117.00
15	1H	987	G	N3-C4-C5	-6.10	125.55	128.60
15	1H	1840	C	O5'-P-OP1	-6.10	100.21	105.70
15	1H	2277	U	OP1-P-OP2	-6.10	110.45	119.60
15	14	469	U	N3-C2-O2	-6.10	117.93	122.20
15	14	1923	U	C5-C4-O4	6.10	129.56	125.90
15	14	1925	A	C2-N3-C4	6.10	113.65	110.60
45	55	8	ARG	NE-CZ-NH1	6.10	123.35	120.30
15	1H	1678	U	OP1-P-OP2	-6.10	110.45	119.60
15	14	819	G	OP1-P-OP2	-6.10	110.45	119.60
1	13	2154	A	C4-C5-C6	6.10	120.05	117.00
15	1H	1242	A	C8-N9-C4	6.10	108.24	105.80
15	1H	1649	C	OP1-P-O3'	6.10	118.62	105.20
15	14	520	G	C5-C6-N1	-6.10	108.45	111.50
15	14	2250	G	N3-C4-C5	-6.10	125.55	128.60
15	14	2525	C	N1-C2-O2	6.10	122.56	118.90
15	14	2723	G	N3-C4-N9	6.10	129.66	126.00
26	16	3	U	O5'-P-OP1	-6.10	100.21	105.70
1	13	929	A	N1-C6-N6	6.10	122.26	118.60
15	1H	747	C	N1-C2-O2	-6.10	115.24	118.90
15	1H	1485	G	C8-N9-C4	-6.10	103.96	106.40
15	1H	2653	G	N3-C4-N9	6.10	129.66	126.00
15	14	485	A	O5'-P-OP1	6.10	118.02	110.70
15	14	2056	A	C5-C6-N6	-6.10	118.82	123.70
15	1H	2054	G	N3-C4-C5	6.10	131.65	128.60
15	1H	2292	G	C5-N7-C8	6.10	107.35	104.30
1	1G	1001	A	C8-N9-C4	6.09	108.24	105.80
1	1G	1536	A	P-O3'-C3'	6.09	127.01	119.70
15	1H	809	G	OP1-P-O3'	6.09	118.61	105.20
1	1G	1190	U	C5-C4-O4	-6.09	122.24	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	1350	G	C5-C6-N1	-6.09	108.45	111.50
1	1G	1441	C	C6-N1-C2	-6.09	117.86	120.30
15	14	149	A	N1-C2-N3	6.09	132.35	129.30
1	13	1273	G	C8-N9-C4	6.09	108.84	106.40
1	1G	1147	C	N1-C2-O2	6.09	122.56	118.90
15	1H	104	C	C6-N1-C2	-6.09	117.86	120.30
15	1H	1624	C	N1-C2-O2	-6.09	115.25	118.90
15	1H	2392	A	C4-C5-N7	6.09	113.75	110.70
15	14	1660	C	C2-N3-C4	-6.09	116.85	119.90
1	1G	1036	C	C6-N1-C2	-6.09	117.86	120.30
1	1G	1139	A	OP2-P-O3'	6.09	118.59	105.20
15	1H	2032	C	C2-N3-C4	-6.09	116.86	119.90
15	14	907	U	C5-C6-N1	6.09	125.74	122.70
1	13	2039	C	N3-C4-N4	-6.09	113.74	118.00
15	1H	894	G	C2-N3-C4	-6.09	108.86	111.90
15	1H	915	A	C4-N9-C1'	6.09	137.25	126.30
15	1H	2779	G	C6-C5-N7	-6.09	126.75	130.40
15	14	2446	U	N1-C2-O2	-6.09	118.54	122.80
15	1H	1385	A	O5'-P-OP2	-6.08	100.22	105.70
15	1H	2462	G	N3-C4-C5	-6.08	125.56	128.60
15	14	131	C	C6-N1-C2	6.08	122.73	120.30
15	1H	1008	C	N3-C4-N4	6.08	122.26	118.00
15	1H	1074	U	C5-C4-O4	-6.08	122.25	125.90
15	1H	2267	G	C8-N9-C4	6.08	108.83	106.40
15	1H	2310	C	O5'-P-OP1	-6.08	100.23	105.70
15	14	411	U	C4-C5-C6	6.08	123.35	119.70
15	14	1756	U	C2-N3-C4	-6.08	123.35	127.00
26	16	81	C	OP2-P-O3'	6.08	118.58	105.20
51	Y1	43	U	C6-N1-C1'	-6.08	112.68	121.20
1	13	882	C	OP1-P-O3'	6.08	118.58	105.20
1	13	907	G	N3-C4-C5	6.08	131.64	128.60
15	1H	199	C	N3-C4-C5	6.08	124.33	121.90
15	1H	887	C	C2-N3-C4	-6.08	116.86	119.90
15	1H	980	A	O5'-P-OP1	6.08	118.00	110.70
15	1H	1028	A	O5'-P-OP2	-6.08	100.23	105.70
15	1H	1371	A	OP2-P-O3'	6.08	118.58	105.20
15	14	191	C	C5-C6-N1	-6.08	117.96	121.00
15	14	1372	U	O5'-P-OP2	6.08	118.00	110.70
15	14	2623	G	N1-C6-O6	6.08	123.55	119.90
15	1H	911	G	N3-C4-C5	-6.08	125.56	128.60
15	14	538	U	C5-C6-N1	6.08	125.74	122.70
15	14	1010	U	O5'-P-OP2	6.08	118.00	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	2017	C	C6-N1-C2	6.08	122.73	120.30
15	1H	2069	C	C6-N1-C2	-6.08	117.87	120.30
15	14	1339	C	N3-C2-O2	-6.08	117.64	121.90
15	14	2231	G	C4-C5-N7	6.08	113.23	110.80
15	14	2792	A	P-O3'-C3'	6.08	126.99	119.70
1	13	1913	A	C5-N7-C8	-6.08	100.86	103.90
1	1G	1093	A	O5'-P-OP1	-6.08	100.23	105.70
15	1H	189	A	C4-C5-N7	-6.08	107.66	110.70
15	1H	415	U	N1-C2-O2	-6.08	118.55	122.80
15	1H	2398	G	N3-C2-N2	6.08	124.15	119.90
15	14	1964	U	C6-N1-C2	6.08	124.65	121.00
15	14	2561	U	OP1-P-OP2	6.08	128.72	119.60
15	14	2587	A	C8-N9-C4	6.08	108.23	105.80
15	14	2871	C	N1-C2-O2	-6.08	115.25	118.90
1	1G	1360	G	C5-C6-O6	-6.08	124.95	128.60
1	1G	1785	A	P-O3'-C3'	6.08	126.99	119.70
15	1H	841	G	C5-C6-N1	-6.08	108.46	111.50
15	1H	2084	A	N7-C8-N9	-6.08	110.76	113.80
15	1H	2364	G	N1-C6-O6	-6.08	116.25	119.90
35	D8	40	LEU	CA-CB-CG	6.08	129.27	115.30
1	13	967	G	O5'-P-OP2	-6.07	100.23	105.70
15	1H	216	G	N1-C6-O6	6.07	123.54	119.90
15	1H	834	G	N3-C2-N2	-6.07	115.65	119.90
15	1H	1265	C	N1-C2-O2	-6.07	115.26	118.90
52	W1	38	A	C4-C5-N7	6.07	113.74	110.70
52	X1	2	C	OP1-P-OP2	6.07	128.71	119.60
52	X1	20	U	N3-C2-O2	6.07	126.45	122.20
15	1H	1798	G	N7-C8-N9	6.07	116.14	113.10
1	13	2139	G	C5-N7-C8	-6.07	101.26	104.30
1	1G	1453	C	C6-N1-C2	6.07	122.73	120.30
15	14	1327	A	N3-C4-N9	-6.07	122.54	127.40
15	14	1434	G	N3-C2-N2	-6.07	115.65	119.90
15	1H	616	C	C5-C6-N1	-6.07	117.97	121.00
15	1H	1314	A	N1-C2-N3	6.07	132.34	129.30
15	1H	2460	G	N1-C2-N2	-6.07	110.74	116.20
15	1H	2662	U	C2-N3-C4	-6.07	123.36	127.00
15	14	171	A	C5-C6-N1	-6.07	114.67	117.70
1	13	1509	G	C5-C6-O6	6.07	132.24	128.60
1	1G	2158	C	C5-C6-N1	6.07	124.03	121.00
15	1H	1848	G	C5-C6-O6	-6.07	124.96	128.60
15	14	809	G	OP1-P-O3'	6.07	118.55	105.20
15	14	1079	G	N1-C6-O6	6.07	123.54	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1478	G	N3-C4-N9	6.07	129.64	126.00
52	X1	34	G	C4-C5-N7	-6.07	108.37	110.80
1	13	2097	G	N1-C6-O6	-6.07	116.26	119.90
15	1H	1022	C	C4-C5-C6	6.07	120.43	117.40
15	1H	1497	G	C2-N3-C4	6.07	114.93	111.90
15	14	299	G	N1-C6-O6	6.07	123.54	119.90
15	14	800	A	N1-C2-N3	6.07	132.33	129.30
15	14	827	G	N1-C2-N2	-6.07	110.74	116.20
15	14	2413	U	C5-C4-O4	6.07	129.54	125.90
15	14	2723	G	N1-C2-N2	-6.07	110.74	116.20
26	1J	117	G	N3-C4-C5	6.06	131.63	128.60
15	1H	83	A	C5-C6-N1	6.06	120.73	117.70
15	1H	253	C	C5-C6-N1	6.06	124.03	121.00
15	1H	1696	C	C4-C5-C6	6.06	120.43	117.40
15	14	1325	A	N9-C4-C5	-6.06	103.38	105.80
15	14	1433	A	N1-C6-N6	-6.06	114.96	118.60
15	1H	1791	U	OP1-P-O3'	6.06	118.53	105.20
15	14	2344	G	C8-N9-C4	6.06	108.83	106.40
26	16	10	U	O5'-P-OP1	6.06	117.97	110.70
1	13	747	G	C5-C6-O6	-6.06	124.96	128.60
15	14	825	G	N1-C2-N3	6.06	127.53	123.90
52	X4	3	C	N3-C4-C5	-6.06	119.48	121.90
1	1G	1068	U	O5'-P-OP2	-6.06	100.25	105.70
15	1H	238	G	N3-C2-N2	-6.06	115.66	119.90
15	1H	1486	C	N3-C2-O2	-6.06	117.66	121.90
15	1H	1963	A	N1-C6-N6	6.06	122.23	118.60
51	Y1	51	U	C2-N3-C4	-6.06	123.36	127.00
1	1G	1134	G	C8-N9-C4	-6.06	103.98	106.40
15	1H	431	U	N1-C2-O2	6.06	127.04	122.80
15	1H	745	G	O5'-P-OP2	6.06	117.97	110.70
15	1H	1644	G	O5'-P-OP2	6.06	117.97	110.70
15	14	236	C	N3-C4-C5	6.06	124.32	121.90
15	14	962	C	C2-N3-C4	6.06	122.93	119.90
1	1G	1158	G	C6-C5-N7	-6.05	126.77	130.40
15	1H	874	C	C4-C5-C6	6.05	120.43	117.40
15	1H	1030	C	C5-C6-N1	6.05	124.03	121.00
15	1H	1809	U	OP1-P-O3'	6.05	118.52	105.20
15	1H	1984	G	N9-C4-C5	6.05	107.82	105.40
15	1H	2279	C	OP1-P-O3'	6.05	118.52	105.20
15	14	840	C	N3-C2-O2	6.05	126.14	121.90
15	14	2257	G	C5-C6-N1	-6.05	108.47	111.50
1	13	1857	C	N3-C4-N4	6.05	122.24	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	152	G	C5-C6-O6	6.05	132.23	128.60
15	1H	457	A	OP1-P-O3'	6.05	118.52	105.20
15	14	546	U	C6-N1-C2	-6.05	117.37	121.00
15	1H	315	G	N3-C4-N9	6.05	129.63	126.00
15	1H	896	U	O5'-P-OP2	-6.05	100.25	105.70
15	1H	1724	G	O4'-C1'-N9	-6.05	103.36	108.20
52	X4	1	G	C8-N9-C4	-6.05	103.98	106.40
1	13	1707	G	C5-C6-N1	-6.05	108.47	111.50
15	1H	428	G	N1-C6-O6	6.05	123.53	119.90
15	1H	1171	C	C5-C6-N1	-6.05	117.98	121.00
15	1H	1824	C	C6-N1-C2	6.05	122.72	120.30
15	1H	2373	G	N1-C6-O6	-6.05	116.27	119.90
15	1H	2792	A	C2-N3-C4	-6.05	107.58	110.60
15	14	198	C	OP2-P-O3'	6.05	118.51	105.20
15	14	303	A	OP1-P-O3'	6.05	118.51	105.20
15	14	1293	G	N1-C6-O6	6.05	123.53	119.90
26	16	57	U	O5'-P-OP1	-6.05	100.25	105.70
15	1H	1994	A	OP1-P-OP2	-6.05	110.53	119.60
15	14	1330	G	C4-C5-N7	6.05	113.22	110.80
1	1G	1181	U	N3-C4-O4	-6.05	115.17	119.40
1	1G	1833	G	N1-C6-O6	6.05	123.53	119.90
15	1H	1350	A	C6-C5-N7	-6.05	128.07	132.30
15	1H	1924	G	OP2-P-O3'	6.05	118.50	105.20
15	1H	2005	G	C4-C5-N7	-6.05	108.38	110.80
15	1H	2382	G	N7-C8-N9	6.05	116.12	113.10
15	14	853	A	C6-N1-C2	-6.05	114.97	118.60
15	14	1623	G	OP2-P-O3'	6.05	118.50	105.20
15	14	2003	A	C8-N9-C4	-6.05	103.38	105.80
15	14	2241	C	OP1-P-OP2	-6.05	110.53	119.60
52	V1	72	C	C5-C4-N4	-6.05	115.97	120.20
15	1H	648	A	C8-N9-C4	-6.04	103.38	105.80
15	1H	2314	G	N3-C4-C5	6.04	131.62	128.60
4	19	176	ARG	NE-CZ-NH1	-6.04	117.28	120.30
15	1H	494	A	C5-C6-N1	6.04	120.72	117.70
15	1H	2839	A	N7-C8-N9	-6.04	110.78	113.80
15	14	67	G	N1-C6-O6	6.04	123.53	119.90
15	14	858	G	N3-C4-C5	-6.04	125.58	128.60
15	14	994	G	N3-C2-N2	-6.04	115.67	119.90
15	14	1686	C	N3-C4-N4	6.04	122.23	118.00
1	13	695	U	O5'-P-OP2	-6.04	100.26	105.70
1	1G	1391	C	C2-N3-C4	-6.04	116.88	119.90
15	1H	707	C	OP1-P-OP2	6.04	128.66	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	816	U	C5-C6-N1	-6.04	119.68	122.70
15	1H	820	G	C8-N9-C4	-6.04	103.98	106.40
15	1H	1027	G	OP1-P-OP2	-6.04	110.54	119.60
15	1H	1190	U	C5-C6-N1	6.04	125.72	122.70
15	1H	2452	U	N3-C2-O2	-6.04	117.97	122.20
15	14	795	A	O4'-C1'-N9	6.04	113.03	108.20
15	1H	158	U	C2-N1-C1'	6.04	124.95	117.70
15	1H	2250	G	C5-C6-O6	-6.04	124.98	128.60
15	1H	2339	C	N3-C4-C5	6.04	124.32	121.90
15	14	898	A	OP1-P-O3'	6.04	118.49	105.20
15	14	1014	C	OP1-P-O3'	6.04	118.49	105.20
15	14	1290	A	C5-N7-C8	-6.04	100.88	103.90
15	14	1817	A	C5-C6-N1	-6.04	114.68	117.70
15	14	1965	U	O5'-P-OP1	6.04	117.95	110.70
15	14	2009	G	N1-C6-O6	-6.04	116.28	119.90
23	21	76	ARG	NE-CZ-NH2	-6.04	117.28	120.30
15	1H	1609	G	N3-C4-C5	6.04	131.62	128.60
15	1H	2523	G	C4-C5-N7	-6.04	108.38	110.80
1	1G	1515	A	OP1-P-OP2	6.04	128.66	119.60
15	14	2078	G	N9-C4-C5	-6.04	102.98	105.40
26	1J	58	G	C2-N3-C4	6.04	114.92	111.90
15	1H	48	A	C5-N7-C8	6.04	106.92	103.90
15	1H	1124	C	C6-N1-C2	-6.04	117.89	120.30
15	1H	1569	U	C5-C4-O4	6.04	129.52	125.90
15	14	839	C	C2-N3-C4	-6.04	116.88	119.90
15	14	1700	G	N9-C4-C5	6.04	107.81	105.40
15	14	2389	C	N3-C4-C5	6.04	124.31	121.90
1	1G	2023	C	O5'-P-OP1	-6.03	100.27	105.70
15	1H	2519	U	O5'-P-OP2	-6.03	100.27	105.70
15	1H	2593	G	OP2-P-O3'	6.03	118.47	105.20
15	14	1653	C	C6-N1-C2	-6.03	117.89	120.30
15	1H	1520	G	OP2-P-O3'	6.03	118.47	105.20
15	14	980	A	N3-C4-C5	6.03	131.02	126.80
26	16	78	G	C8-N9-C4	6.03	108.81	106.40
1	13	1310	C	C6-N1-C2	-6.03	117.89	120.30
1	13	2146	G	N1-C6-O6	-6.03	116.28	119.90
15	1H	167	G	OP1-P-OP2	-6.03	110.55	119.60
15	1H	397	C	N1-C2-O2	-6.03	115.28	118.90
15	1H	677	C	OP1-P-O3'	6.03	118.47	105.20
15	14	777	G	N3-C2-N2	6.03	124.12	119.90
15	14	2046	C	C2-N3-C4	-6.03	116.89	119.90
52	X4	48	C	C6-N1-C2	-6.03	117.89	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	903	A	C5-C6-N6	-6.03	118.88	123.70
1	1G	1436	A	C6-N1-C2	-6.03	114.98	118.60
15	1H	2434	U	N1-C2-O2	-6.03	118.58	122.80
1	13	2141	A	C4-C5-N7	-6.03	107.69	110.70
15	1H	19	C	C2-N3-C4	-6.03	116.89	119.90
15	1H	414	G	C5-N7-C8	-6.03	101.29	104.30
15	1H	1878	C	C5-C6-N1	-6.03	117.99	121.00
15	1H	2076	A	C8-N9-C4	-6.03	103.39	105.80
15	1H	2091	C	O5'-P-OP1	-6.03	100.28	105.70
15	1H	2699	U	C5-C6-N1	-6.03	119.69	122.70
15	14	829	G	N1-C2-N2	-6.03	110.78	116.20
15	14	903	G	C5-C6-N1	-6.03	108.49	111.50
26	1J	86	C	C6-N1-C2	6.03	122.71	120.30
1	13	1162	A	OP1-P-OP2	6.03	128.64	119.60
15	1H	1361	U	C4-C5-C6	6.03	123.31	119.70
15	1H	1659	A	N9-C4-C5	-6.03	103.39	105.80
15	1H	1769	G	C8-N9-C4	-6.03	103.99	106.40
15	1H	2339	C	C5-C4-N4	-6.03	115.98	120.20
15	1H	2439	C	N1-C2-O2	6.03	122.52	118.90
15	1H	2475	U	N3-C4-C5	6.03	118.22	114.60
15	1H	991	G	C4-N9-C1'	6.02	134.33	126.50
15	1H	1862	G	N1-C6-O6	6.02	123.52	119.90
15	1H	2385	G	N1-C2-N2	-6.02	110.78	116.20
15	14	1690	C	N3-C4-C5	6.02	124.31	121.90
1	1G	2122	A	C5-C6-N1	6.02	120.71	117.70
15	1H	474	G	C8-N9-C1'	-6.02	119.17	127.00
15	1H	893	C	C5-C6-N1	-6.02	117.99	121.00
15	1H	2242	A	C5-C6-N6	6.02	128.52	123.70
15	14	1577	A	C4-C5-N7	6.02	113.71	110.70
15	14	1803	G	C4-C5-C6	6.02	122.41	118.80
15	14	2079	A	C8-N9-C4	-6.02	103.39	105.80
1	13	1649	U	C5-C6-N1	6.02	125.71	122.70
15	1H	796	U	OP1-P-O3'	6.02	118.45	105.20
15	1H	827	G	N3-C2-N2	6.02	124.11	119.90
15	1H	1949	C	OP1-P-OP2	-6.02	110.57	119.60
15	1H	2346	G	C5-N7-C8	-6.02	101.29	104.30
15	14	572	C	N1-C2-O2	6.02	122.51	118.90
15	14	1332	G	C2-N3-C4	6.02	114.91	111.90
15	1H	1416	A	C2-N3-C4	-6.02	107.59	110.60
15	1H	1443	U	O5'-P-OP2	6.02	117.92	110.70
15	1H	1538	U	N3-C4-C5	-6.02	110.99	114.60
15	14	894	G	N1-C6-O6	6.02	123.51	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1038	A	C5-N7-C8	-6.02	100.89	103.90
15	14	1928	G	C8-N9-C4	-6.02	103.99	106.40
15	14	2048	G	O5'-P-OP1	6.02	117.92	110.70
15	14	2222	U	OP2-P-O3'	6.02	118.44	105.20
1	1G	1817	G	C5-C6-O6	6.02	132.21	128.60
15	1H	482	A	OP2-P-O3'	6.02	118.44	105.20
15	1H	1035	G	C5-C6-O6	6.02	132.21	128.60
15	1H	1664	C	N3-C4-N4	6.02	122.21	118.00
15	1H	1710	C	O5'-P-OP2	-6.02	100.28	105.70
15	1H	2028	G	N9-C4-C5	-6.02	102.99	105.40
15	1H	2322	G	C4-C5-N7	6.02	113.21	110.80
15	1H	2625	C	C2-N1-C1'	6.02	125.42	118.80
15	14	255	A	C8-N9-C4	-6.02	103.39	105.80
15	14	1605	G	C5-C6-O6	-6.02	124.99	128.60
52	X4	73	A	OP1-P-O3'	6.02	118.44	105.20
1	13	1849	G	N3-C2-N2	-6.02	115.69	119.90
1	1G	690	G	C2-N3-C4	-6.02	108.89	111.90
15	1H	479	C	C5-C4-N4	-6.02	115.99	120.20
15	14	1246	U	C5-C6-N1	-6.02	119.69	122.70
15	14	1320	G	N1-C2-N3	6.02	127.51	123.90
1	1G	995	G	C6-C5-N7	-6.01	126.79	130.40
1	1G	1527	C	C5-C4-N4	-6.01	115.99	120.20
1	1G	1600	A	O5'-P-OP1	6.01	117.92	110.70
15	1H	46	C	C5-C4-N4	-6.01	115.99	120.20
15	1H	122	G	N1-C6-O6	6.01	123.51	119.90
15	1H	1257	G	C6-C5-N7	-6.01	126.79	130.40
15	1H	1677	G	N3-C4-C5	-6.01	125.59	128.60
15	1H	1984	G	C2-N3-C4	6.01	114.91	111.90
15	1H	2881	A	N1-C6-N6	6.01	122.21	118.60
15	14	119	G	N3-C4-N9	6.01	129.61	126.00
15	14	2409	C	O5'-P-OP2	-6.01	100.29	105.70
26	1J	120	G	C5-C6-O6	-6.01	124.99	128.60
52	W4	37	A	C6-N1-C2	6.01	122.21	118.60
1	13	2010	C	C5-C6-N1	6.01	124.01	121.00
15	1H	731	G	N9-C4-C5	-6.01	103.00	105.40
15	1H	1363	C	C2-N1-C1'	6.01	125.42	118.80
15	1H	1655	G	C8-N9-C4	6.01	108.81	106.40
1	13	1958	G	OP1-P-OP2	-6.01	110.58	119.60
1	1G	915	A	O5'-P-OP2	-6.01	100.29	105.70
15	1H	610	G	C6-N1-C2	-6.01	121.49	125.10
15	1H	824	G	C6-N1-C2	-6.01	121.49	125.10
15	1H	1048	A	C2-N3-C4	-6.01	107.59	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1744	C	C5-C4-N4	-6.01	115.99	120.20
15	1H	1838	C	N3-C4-C5	6.01	124.31	121.90
15	1H	1960	G	C5-C6-O6	6.01	132.21	128.60
15	1H	1967	C	C4-C5-C6	-6.01	114.39	117.40
15	14	2292	G	C4-C5-N7	-6.01	108.39	110.80
15	14	2296	C	N3-C4-C5	-6.01	119.50	121.90
1	13	691	U	OP2-P-O3'	6.01	118.42	105.20
4	11	222	ARG	NE-CZ-NH1	-6.01	117.30	120.30
1	1G	868	G	O5'-P-OP2	-6.01	100.29	105.70
1	1G	905	U	C5-C4-O4	-6.01	122.29	125.90
15	1H	624	G	N3-C4-N9	6.01	129.61	126.00
15	1H	656	G	C5-C6-O6	6.01	132.21	128.60
15	1H	2090	C	N3-C4-C5	-6.01	119.50	121.90
15	14	1841	G	N3-C2-N2	6.01	124.11	119.90
15	14	2392	A	C8-N9-C4	6.01	108.20	105.80
15	14	2865	G	C5-C6-O6	6.01	132.21	128.60
15	14	171	A	C2-N3-C4	-6.01	107.60	110.60
1	1G	682	C	N1-C2-O2	-6.01	115.30	118.90
15	1H	507	A	N1-C6-N6	-6.01	115.00	118.60
15	1H	841	G	C8-N9-C1'	-6.01	119.19	127.00
15	1H	1261	A	C2-N3-C4	-6.01	107.60	110.60
15	1H	1295	A	N1-C2-N3	6.01	132.30	129.30
15	1H	1621	A	C5-C6-N6	-6.01	118.89	123.70
15	1H	2755	U	C5-C4-O4	-6.01	122.30	125.90
15	1H	2762	U	OP2-P-O3'	6.01	118.41	105.20
15	14	1745	G	N1-C6-O6	6.01	123.50	119.90
15	14	1818	A	C2-N3-C4	-6.01	107.60	110.60
1	13	1387	G	C2-N3-C4	-6.00	108.90	111.90
1	13	2122	A	C8-N9-C4	6.00	108.20	105.80
1	1G	1965	G	N1-C6-O6	-6.00	116.30	119.90
1	1G	1374	C	O5'-P-OP1	6.00	117.90	110.70
15	1H	2093	U	OP1-P-O3'	6.00	118.41	105.20
15	1H	2314	G	C5-N7-C8	-6.00	101.30	104.30
15	14	581	G	O5'-P-OP2	-6.00	100.30	105.70
15	14	718	G	N1-C6-O6	6.00	123.50	119.90
15	14	891	G	OP2-P-O3'	6.00	118.41	105.20
15	14	1331	U	N1-C2-N3	6.00	118.50	114.90
15	14	1955	G	C4-C5-N7	-6.00	108.40	110.80
15	1H	407	G	N1-C6-O6	6.00	123.50	119.90
15	1H	729	G	O5'-P-OP1	-6.00	100.30	105.70
15	1H	2420	G	N1-C6-O6	6.00	123.50	119.90
15	14	195	G	N3-C2-N2	6.00	124.10	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	901	G	N1-C2-N2	-6.00	110.80	116.20
15	1H	1656	C	N3-C2-O2	6.00	126.10	121.90
15	1H	2453	U	N3-C4-C5	6.00	118.20	114.60
15	14	140	A	C6-C5-N7	-6.00	128.10	132.30
15	14	2088	C	OP2-P-O3'	6.00	118.40	105.20
15	1H	747	C	C2-N3-C4	-6.00	116.90	119.90
15	1H	813	A	OP1-P-OP2	-6.00	110.60	119.60
15	1H	867	G	N3-C4-N9	-6.00	122.40	126.00
15	1H	1639	U	O5'-P-OP1	-6.00	100.30	105.70
15	14	708	C	C5-C6-N1	-6.00	118.00	121.00
15	14	805	C	C6-N1-C2	-6.00	117.90	120.30
15	14	2002	A	N9-C4-C5	6.00	108.20	105.80
1	13	707	G	C4-C5-N7	-6.00	108.40	110.80
15	1H	463	U	C2-N3-C4	-6.00	123.40	127.00
15	1H	585	C	C5-C6-N1	-6.00	118.00	121.00
15	1H	609	C	OP2-P-O3'	-6.00	92.01	105.20
15	1H	1792	G	N1-C6-O6	6.00	123.50	119.90
15	1H	1999	C	C6-N1-C2	-6.00	117.90	120.30
15	14	753	G	N3-C2-N2	-6.00	115.70	119.90
1	13	1134	G	N3-C4-C5	-6.00	125.60	128.60
1	1G	1767	G	N3-C4-N9	-6.00	122.40	126.00
15	1H	1248	C	N1-C2-O2	-6.00	115.30	118.90
15	1H	2380	G	O5'-P-OP1	6.00	117.89	110.70
15	14	2522	C	N1-C2-O2	6.00	122.50	118.90
1	1G	1261	A	OP2-P-O3'	5.99	118.39	105.20
15	1H	70	A	O4'-C1'-N9	-5.99	103.41	108.20
15	1H	1524	C	C2-N1-C1'	-5.99	112.21	118.80
15	1H	1873	G	N3-C2-N2	5.99	124.10	119.90
15	1H	2715	C	C6-N1-C2	5.99	122.70	120.30
15	14	248	G	C8-N9-C4	5.99	108.80	106.40
15	14	1379	C	N1-C2-O2	5.99	122.50	118.90
15	14	1993	G	N1-C6-O6	5.99	123.50	119.90
52	X1	45	U	O4'-C1'-N1	5.99	112.99	108.20
15	1H	119	G	C6-N1-C2	-5.99	121.50	125.10
15	1H	1358	G	O5'-P-OP2	-5.99	100.31	105.70
15	1H	440	A	C8-N9-C4	5.99	108.20	105.80
15	1H	2577	U	C2-N3-C4	-5.99	123.41	127.00
15	14	232	G	C8-N9-C1'	5.99	134.79	127.00
15	14	1305	G	N3-C2-N2	-5.99	115.71	119.90
15	14	1381	G	N1-C2-N3	5.99	127.50	123.90
15	1H	657	G	C8-N9-C4	5.99	108.80	106.40
15	1H	798	C	OP1-P-OP2	-5.99	110.62	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1770	A	N7-C8-N9	5.99	116.79	113.80
15	1H	2290	C	N3-C4-C5	-5.99	119.50	121.90
15	14	648	A	N3-C4-N9	-5.99	122.61	127.40
51	Y4	36	G	C8-N9-C4	-5.99	104.00	106.40
15	1H	728	C	N1-C2-O2	-5.99	115.31	118.90
15	14	50	G	O5'-P-OP2	-5.99	100.31	105.70
15	14	987	G	O5'-P-OP2	-5.99	100.31	105.70
15	1H	75	C	C6-N1-C2	-5.99	117.91	120.30
15	1H	546	U	C2-N1-C1'	-5.99	110.52	117.70
15	1H	907	U	OP2-P-O3'	5.99	118.37	105.20
15	1H	1022	C	N3-C4-C5	-5.99	119.51	121.90
15	1H	1429	G	N1-C6-O6	5.99	123.49	119.90
15	1H	1822	C	C2-N1-C1'	5.99	125.38	118.80
15	1H	1925	A	C5'-C4'-O4'	-5.99	101.92	109.10
15	1H	2094	G	N9-C4-C5	-5.99	103.01	105.40
15	14	82	G	N1-C6-O6	5.99	123.49	119.90
26	16	112	G	N1-C2-N2	5.99	121.59	116.20
3	F8	60	ARG	NE-CZ-NH1	-5.99	117.31	120.30
52	X4	39	U	O5'-P-OP1	-5.99	100.31	105.70
15	1H	2461	G	C4-C5-N7	5.98	113.19	110.80
15	14	2027	G	C5-N7-C8	-5.98	101.31	104.30
1	1G	1531	A	N1-C6-N6	5.98	122.19	118.60
1	1G	1682	C	O5'-P-OP2	5.98	117.88	110.70
12	Q8	26	LYS	C-N-CA	5.98	136.65	121.70
15	1H	512	C	C5-C6-N1	5.98	123.99	121.00
15	1H	754	A	C8-N9-C4	5.98	108.19	105.80
15	1H	795	A	O4'-C1'-N9	5.98	112.99	108.20
15	1H	1250	C	N3-C4-N4	5.98	122.19	118.00
15	1H	1497	G	C5-C6-N1	5.98	114.49	111.50
15	14	2435	C	N3-C4-N4	5.98	122.19	118.00
1	13	1389	G	N1-C2-N3	-5.98	120.31	123.90
1	1G	1422	U	N3-C2-O2	5.98	126.39	122.20
1	1G	1926	A	C4-C5-C6	5.98	119.99	117.00
15	1H	143	C	C5-C6-N1	-5.98	118.01	121.00
15	1H	2301	A	C5-C6-N6	-5.98	118.92	123.70
15	14	2078	G	N7-C8-N9	-5.98	110.11	113.10
1	1G	1089	C	C5-C4-N4	5.98	124.39	120.20
1	1G	1854	A	C5-C6-N1	-5.98	114.71	117.70
15	1H	1207	C	C5-C6-N1	-5.98	118.01	121.00
15	1H	2614	G	N3-C2-N2	5.98	124.08	119.90
15	14	76	C	C5-C6-N1	5.98	123.99	121.00
15	14	2742	U	N1-C2-O2	5.98	126.98	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	230	G	N3-C4-C5	5.98	131.59	128.60
15	14	557	G	N9-C4-C5	-5.98	103.01	105.40
15	14	637	C	C6-N1-C2	5.98	122.69	120.30
15	14	735	G	O5'-P-OP1	5.98	117.87	110.70
15	14	1892	G	N1-C6-O6	5.98	123.49	119.90
15	14	1929	G	N9-C4-C5	-5.98	103.01	105.40
15	1H	1303	A	N7-C8-N9	5.98	116.79	113.80
15	1H	1968	U	N1-C2-N3	5.98	118.49	114.90
15	14	2504	G	N1-C6-O6	5.98	123.48	119.90
15	1H	366	G	C5-C6-O6	5.97	132.19	128.60
15	1H	515	C	C6-N1-C2	-5.97	117.91	120.30
15	1H	555	A	N7-C8-N9	5.97	116.79	113.80
15	1H	635	G	N3-C2-N2	-5.97	115.72	119.90
15	1H	784	A	N1-C2-N3	5.97	132.29	129.30
15	14	1323	A	C5-C6-N6	-5.97	118.92	123.70
1	1G	1928	U	C2-N1-C1'	5.97	124.87	117.70
15	14	2082	A	O5'-P-OP1	-5.97	100.33	105.70
52	X1	61	C	O5'-P-OP2	-5.97	100.32	105.70
15	1H	1892	G	C6-C5-N7	-5.97	126.82	130.40
15	1H	1913	G	C5-C6-O6	-5.97	125.02	128.60
26	1J	76	U	OP1-P-OP2	5.97	128.56	119.60
1	13	1033	G	C5-C6-O6	-5.97	125.02	128.60
1	13	1322	G	N1-C2-N2	-5.97	110.83	116.20
1	13	1509	G	N3-C4-N9	-5.97	122.42	126.00
1	1G	1926	A	C5-C6-N1	-5.97	114.72	117.70
1	1G	2142	A	N7-C8-N9	5.97	116.78	113.80
15	1H	754	A	C5-C6-N6	-5.97	118.92	123.70
15	1H	822	U	N1-C2-N3	5.97	118.48	114.90
15	1H	825	G	N3-C4-C5	-5.97	125.61	128.60
15	1H	2702	U	OP2-P-O3'	5.97	118.33	105.20
15	14	2596	G	C5-C6-O6	5.97	132.18	128.60
1	1G	2110	G	C2-N3-C4	-5.97	108.92	111.90
15	1H	139	A	N1-C2-N3	5.97	132.28	129.30
1	1G	1331	A	O5'-P-OP2	-5.97	100.33	105.70
1	1G	1825	G	O5'-P-OP1	-5.97	100.33	105.70
15	1H	1305	G	C8-N9-C1'	-5.97	119.24	127.00
15	1H	1333	A	O5'-P-OP2	-5.97	100.33	105.70
15	1H	1706	C	C4-C5-C6	-5.97	114.42	117.40
15	1H	1901	A	N1-C6-N6	5.97	122.18	118.60
15	1H	2104	U	C2-N1-C1'	5.97	124.86	117.70
15	1H	2346	G	C8-N9-C4	5.97	108.79	106.40
15	14	725	A	C6-N1-C2	5.97	122.18	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	884	A	O5'-P-OP2	-5.97	100.33	105.70
15	14	1327	A	N1-C6-N6	-5.97	115.02	118.60
15	14	1655	G	N7-C8-N9	-5.97	110.12	113.10
15	14	2610	G	C4-C5-C6	-5.97	115.22	118.80
1	13	1905	U	N3-C2-O2	-5.96	118.03	122.20
1	1G	1101	C	C2-N3-C4	5.96	122.88	119.90
1	1G	1295	G	C8-N9-C4	-5.96	104.02	106.40
15	1H	422	A	N9-C4-C5	5.96	108.19	105.80
15	1H	2553	C	OP1-P-OP2	5.96	128.54	119.60
15	1H	2611	U	N1-C2-O2	-5.96	118.62	122.80
15	14	611	A	C5-C6-N6	5.96	128.47	123.70
15	14	1398	A	C6-C5-N7	-5.96	128.12	132.30
15	14	2330	G	OP1-P-O3'	5.96	118.32	105.20
1	13	940	G	C5-C6-O6	5.96	132.18	128.60
1	1G	1206	G	O5'-P-OP2	5.96	117.86	110.70
36	N8	15	ARG	NE-CZ-NH1	-5.96	117.32	120.30
52	X4	69	G	N3-C4-C5	5.96	131.58	128.60
1	1G	2121	U	C6-N1-C2	-5.96	117.42	121.00
15	1H	1317	A	O5'-P-OP2	-5.96	100.33	105.70
15	14	1196	C	C6-N1-C2	-5.96	117.92	120.30
15	14	1674	C	O5'-P-OP2	-5.96	100.33	105.70
15	14	2595	U	C5-C4-O4	-5.96	122.32	125.90
26	16	16	U	N3-C2-O2	-5.96	118.03	122.20
51	Y1	43	U	C2-N1-C1'	5.96	124.85	117.70
52	X1	37	A	C4-C5-N7	5.96	113.68	110.70
15	1H	499	A	C8-N9-C4	-5.96	103.42	105.80
15	1H	1824	C	OP2-P-O3'	5.96	118.31	105.20
1	1G	1998	G	N1-C6-O6	5.96	123.47	119.90
15	1H	95	G	N1-C6-O6	5.96	123.47	119.90
15	1H	1748	A	N3-C4-C5	5.96	130.97	126.80
15	14	556	A	N9-C4-C5	5.96	108.18	105.80
15	14	1814	A	N7-C8-N9	5.96	116.78	113.80
15	14	1839	U	C5-C6-N1	-5.96	119.72	122.70
15	14	2073	G	N1-C2-N3	5.96	127.47	123.90
15	1H	570	C	C2-N3-C4	-5.96	116.92	119.90
15	1H	713	C	C5-C4-N4	5.96	124.37	120.20
15	1H	725	A	N1-C6-N6	5.96	122.17	118.60
15	1H	2301	A	C8-N9-C4	-5.96	103.42	105.80
1	13	1443	A	C8-N9-C4	5.96	108.18	105.80
1	13	1244	C	C6-N1-C2	-5.95	117.92	120.30
1	1G	1141	U	O5'-P-OP2	-5.95	100.34	105.70
15	1H	1677	G	N3-C4-N9	5.95	129.57	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1850	G	C8-N9-C4	-5.95	104.02	106.40
15	1H	2061	C	O5'-P-OP1	5.95	117.84	110.70
15	14	492	U	C4-C5-C6	5.95	123.27	119.70
15	14	1566	G	OP1-P-O3'	5.95	118.30	105.20
15	14	1702	A	OP1-P-OP2	5.95	128.53	119.60
15	14	1823	A	C6-N1-C2	-5.95	115.03	118.60
15	1H	2513	C	C6-N1-C2	-5.95	117.92	120.30
15	14	415	U	N3-C4-C5	5.95	118.17	114.60
15	14	496	G	O5'-P-OP2	5.95	117.84	110.70
15	14	998	C	OP1-P-O3'	5.95	118.29	105.20
1	1G	950	G	C8-N9-C4	5.95	108.78	106.40
15	1H	1236	U	OP2-P-O3'	5.95	118.29	105.20
15	1H	2655	G	N1-C6-O6	5.95	123.47	119.90
15	14	907	U	C6-N1-C2	-5.95	117.43	121.00
26	1J	52	G	N1-C6-O6	-5.95	116.33	119.90
52	X1	66	U	C2-N1-C1'	5.95	124.84	117.70
15	1H	147	U	N3-C2-O2	5.95	126.36	122.20
15	1H	1723	U	C6-N1-C2	5.95	124.57	121.00
15	1H	2893	C	N1-C2-O2	-5.95	115.33	118.90
15	14	118	U	N3-C2-O2	-5.95	118.04	122.20
15	14	619	U	C5-C6-N1	-5.95	119.73	122.70
15	14	2635	C	C6-N1-C2	5.95	122.68	120.30
15	14	2842	C	N1-C2-O2	-5.95	115.33	118.90
15	1H	428	G	C5-C6-O6	-5.95	125.03	128.60
15	14	2440	A	O5'-P-OP2	-5.95	100.35	105.70
26	1J	24	U	C2-N1-C1'	5.95	124.84	117.70
1	13	1436	A	N7-C8-N9	5.95	116.77	113.80
15	1H	119	G	N3-C4-C5	-5.95	125.63	128.60
15	1H	1951	U	N3-C4-O4	-5.95	115.24	119.40
15	1H	2518	A	N3-C4-N9	5.95	132.16	127.40
26	1J	91	G	C8-N9-C1'	-5.95	119.27	127.00
15	1H	614	C	C2-N3-C4	-5.94	116.93	119.90
15	1H	657	G	N1-C6-O6	5.94	123.47	119.90
15	1H	663	G	OP1-P-OP2	-5.94	110.68	119.60
15	1H	905	C	C5-C6-N1	-5.94	118.03	121.00
15	1H	2390	G	OP2-P-O3'	5.94	118.28	105.20
15	14	2512	A	OP1-P-O3'	5.94	118.28	105.20
15	1H	185	A	C5-N7-C8	-5.94	100.93	103.90
15	1H	1293	G	C5-C6-O6	-5.94	125.03	128.60
15	1H	2453	U	N3-C2-O2	5.94	126.36	122.20
15	14	842	A	N1-C2-N3	5.94	132.27	129.30
1	13	691	U	OP1-P-OP2	5.94	128.51	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	669	C	O5'-P-OP1	-5.94	100.35	105.70
15	1H	1869	G	N7-C8-N9	5.94	116.07	113.10
15	1H	1643	G	C5-C6-N1	-5.94	108.53	111.50
15	14	885	G	OP1-P-OP2	-5.94	110.69	119.60
15	14	977	U	C5-C4-O4	5.94	129.46	125.90
15	14	2057	G	C4-C5-N7	5.94	113.18	110.80
15	14	2871	C	N3-C2-O2	5.94	126.06	121.90
1	13	1962	C	C2-N1-C1'	-5.94	112.27	118.80
15	1H	1374	G	OP1-P-OP2	-5.94	110.69	119.60
15	1H	1657	A	C8-N9-C4	5.94	108.17	105.80
15	1H	2057	G	C5-N7-C8	5.94	107.27	104.30
15	14	458	A	C8-N9-C4	-5.94	103.43	105.80
15	14	1984	G	N9-C4-C5	5.94	107.77	105.40
26	1J	91	G	N1-C2-N3	-5.94	120.34	123.90
15	1H	134	G	C8-N9-C4	5.93	108.77	106.40
15	1H	141	C	N3-C4-N4	5.93	122.15	118.00
15	1H	1862	G	C5-C6-N1	-5.93	108.53	111.50
15	1H	2341	C	C5-C6-N1	5.93	123.97	121.00
52	X4	44	G	O5'-P-OP1	5.93	117.82	110.70
15	1H	67	G	C8-N9-C4	-5.93	104.03	106.40
15	1H	585	C	C5-C4-N4	-5.93	116.05	120.20
15	1H	1877	C	C6-N1-C2	5.93	122.67	120.30
15	1H	2009	G	OP2-P-O3'	5.93	118.25	105.20
15	1H	2564	G	C5-N7-C8	5.93	107.27	104.30
15	14	20	C	N3-C4-C5	-5.93	119.53	121.90
15	14	719	A	O4'-C1'-N9	-5.93	103.45	108.20
15	14	2434	U	N3-C4-O4	5.93	123.55	119.40
15	14	2886	A	OP1-P-O3'	5.93	118.25	105.20
1	1G	704	C	N1-C2-O2	5.93	122.46	118.90
15	1H	1958	G	C2-N3-C4	-5.93	108.94	111.90
15	1H	1998	G	N9-C4-C5	5.93	107.77	105.40
15	14	965	A	OP1-P-OP2	5.93	128.50	119.60
15	14	1653	C	N3-C2-O2	5.93	126.05	121.90
15	14	2863	A	OP1-P-O3'	5.93	118.24	105.20
15	1H	478	G	C5-C6-O6	5.93	132.16	128.60
15	1H	2368	G	C6-C5-N7	-5.93	126.84	130.40
15	14	2609	C	C5-C4-N4	-5.93	116.05	120.20
15	1H	1351	A	C5-C6-N1	5.93	120.66	117.70
15	1H	1362	U	C5-C6-N1	5.93	125.66	122.70
15	1H	1447	C	C6-N1-C2	5.93	122.67	120.30
15	14	513	C	C2-N3-C4	-5.93	116.94	119.90
15	14	711	G	N7-C8-N9	-5.93	110.14	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	913	G	N3-C4-C5	-5.93	125.64	128.60
15	14	1413	G	OP2-P-O3'	5.93	118.24	105.20
15	14	1857	G	C4-C5-N7	-5.93	108.43	110.80
15	14	1973	G	O5'-P-OP1	-5.93	100.37	105.70
52	X1	71	G	OP2-P-O3'	5.93	118.24	105.20
1	1G	1727	G	C5-C6-O6	5.92	132.15	128.60
15	1H	97	G	O5'-P-OP2	-5.92	100.37	105.70
15	1H	631	U	O5'-P-OP2	-5.92	100.37	105.70
15	1H	1978	A	C2-N3-C4	5.92	113.56	110.60
15	1H	2329	C	OP2-P-O3'	5.92	118.23	105.20
15	1H	2420	G	OP1-P-O3'	5.92	118.23	105.20
15	14	1408	A	C4-C5-C6	-5.92	114.04	117.00
15	14	1442	A	P-O3'-C3'	5.92	126.81	119.70
1	13	2141	A	C5-N7-C8	5.92	106.86	103.90
1	1G	986	C	C5-C6-N1	5.92	123.96	121.00
1	1G	1138	A	C8-N9-C4	-5.92	103.43	105.80
15	1H	814	G	C5-C6-O6	-5.92	125.05	128.60
1	1G	1905	U	C5-C6-N1	5.92	125.66	122.70
15	1H	1724	G	OP1-P-O3'	5.92	118.23	105.20
15	1H	2389	C	C6-N1-C2	5.92	122.67	120.30
15	14	1920	C	N1-C2-O2	-5.92	115.35	118.90
26	1J	76	U	C5-C6-N1	-5.92	119.74	122.70
1	1G	1275	U	C5-C4-O4	5.92	129.45	125.90
1	1G	2101	C	O5'-P-OP2	-5.92	100.37	105.70
15	1H	759	G	C5-C6-N1	-5.92	108.54	111.50
15	1H	2006	A	O5'-P-OP2	-5.92	100.37	105.70
15	1H	2249	G	C8-N9-C4	5.92	108.77	106.40
15	14	1974	G	C8-N9-C4	5.92	108.77	106.40
15	14	2090	C	C2-N1-C1'	5.92	125.31	118.80
30	78	21	ARG	NE-CZ-NH2	-5.92	117.34	120.30
15	1H	2256	A	N1-C6-N6	-5.92	115.05	118.60
15	14	1861	C	C4-C5-C6	5.92	120.36	117.40
15	14	2267	G	C2-N3-C4	-5.92	108.94	111.90
15	14	2447	A	C5-C6-N6	-5.92	118.97	123.70
15	14	2586	C	N1-C2-O2	-5.92	115.35	118.90
26	1J	77	G	N3-C4-C5	-5.92	125.64	128.60
52	X1	18	G	O4'-C1'-N9	5.92	112.93	108.20
15	14	1402	A	N9-C4-C5	5.92	108.17	105.80
15	14	1996	A	O5'-P-OP2	-5.92	100.38	105.70
1	13	1651	C	OP1-P-O3'	5.91	118.21	105.20
1	13	2121	U	P-O3'-C3'	5.91	126.80	119.70
15	1H	1004	A	N9-C4-C5	-5.91	103.44	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2274	G	C6-N1-C2	-5.91	121.55	125.10
15	1H	2607	G	N1-C6-O6	5.91	123.45	119.90
15	14	74	G	N3-C4-C5	-5.91	125.64	128.60
15	14	633	A	C8-N9-C4	-5.91	103.44	105.80
15	14	1205	A	C8-N9-C4	5.91	108.17	105.80
15	1H	778	G	N9-C4-C5	5.91	107.77	105.40
15	14	797	G	O4'-C1'-N9	5.91	112.93	108.20
15	14	1286	A	C5-C6-N6	5.91	128.43	123.70
15	14	1928	G	C4-C5-N7	-5.91	108.44	110.80
1	13	747	G	C6-C5-N7	-5.91	126.85	130.40
1	13	1200	U	OP2-P-O3'	5.91	118.20	105.20
1	13	1273	G	N3-C4-C5	5.91	131.56	128.60
1	13	1602	C	O5'-P-OP1	-5.91	100.38	105.70
1	13	1932	G	C5-C6-N1	-5.91	108.54	111.50
15	1H	662	C	C6-N1-C2	-5.91	117.94	120.30
15	1H	877	U	N1-C2-N3	5.91	118.45	114.90
15	1H	915	A	N7-C8-N9	5.91	116.75	113.80
15	1H	992	A	C6-N1-C2	-5.91	115.05	118.60
15	1H	2289	A	C5-C6-N1	-5.91	114.75	117.70
15	14	1481	C	N3-C2-O2	5.91	126.04	121.90
15	14	1752	G	C4-C5-N7	5.91	113.16	110.80
15	14	2611	U	OP2-P-O3'	5.91	118.20	105.20
1	13	1799	C	C6-N1-C2	-5.91	117.94	120.30
15	1H	845	C	C2-N3-C4	-5.91	116.95	119.90
15	1H	1386	G	C4-C5-N7	-5.91	108.44	110.80
15	1H	2430	G	N3-C2-N2	-5.91	115.76	119.90
15	14	194	A	N7-C8-N9	-5.91	110.85	113.80
15	14	1186	G	C5-C6-O6	-5.91	125.06	128.60
15	14	1802	U	N3-C4-O4	-5.91	115.27	119.40
1	13	2072	A	C2-N3-C4	-5.91	107.65	110.60
15	14	1258	A	N1-C6-N6	5.91	122.14	118.60
1	13	1421	A	N1-C2-N3	5.91	132.25	129.30
1	1G	1091	A	OP1-P-OP2	5.91	128.46	119.60
15	1H	71	U	N3-C4-O4	5.91	123.53	119.40
15	1H	1012	C	C5-C4-N4	5.91	124.33	120.20
15	14	625	G	N7-C8-N9	-5.91	110.15	113.10
15	14	818	G	OP1-P-O3'	5.91	118.19	105.20
15	1H	631	U	O5'-P-OP1	5.90	117.78	110.70
1	1G	809	C	C5-C6-N1	5.90	123.95	121.00
1	1G	1681	G	C8-N9-C4	-5.90	104.04	106.40
15	1H	20	C	C2-N3-C4	-5.90	116.95	119.90
15	1H	332	G	OP1-P-O3'	5.90	118.19	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	564	C	C5-C6-N1	5.90	123.95	121.00
15	1H	636	C	C6-N1-C2	5.90	122.66	120.30
15	1H	990	U	O5'-P-OP1	-5.90	100.39	105.70
15	1H	1285	G	N7-C8-N9	-5.90	110.15	113.10
15	1H	1413	G	C4-C5-N7	5.90	113.16	110.80
15	1H	1430	G	N1-C6-O6	5.90	123.44	119.90
15	1H	1797	G	O5'-P-OP1	5.90	117.78	110.70
15	1H	2054	G	N1-C6-O6	5.90	123.44	119.90
15	1H	2304	G	N1-C2-N2	5.90	121.51	116.20
15	14	729	G	C4-C5-N7	5.90	113.16	110.80
15	14	1270	C	OP1-P-OP2	-5.90	110.75	119.60
1	13	1598	A	O4'-C1'-N9	-5.90	103.48	108.20
15	1H	612	C	N3-C4-N4	-5.90	113.87	118.00
15	1H	792	G	C5-C6-O6	-5.90	125.06	128.60
15	1H	1013	G	N3-C2-N2	5.90	124.03	119.90
15	1H	1015	G	C5-C6-O6	5.90	132.14	128.60
15	1H	1975	G	N3-C4-N9	5.90	129.54	126.00
15	1H	2630	U	C6-N1-C2	-5.90	117.46	121.00
15	14	1655	G	N1-C6-O6	-5.90	116.36	119.90
15	14	2258	U	OP2-P-O3'	5.90	118.18	105.20
15	14	2322	G	C4-C5-N7	5.90	113.16	110.80
1	13	1939	G	C8-N9-C4	-5.90	104.04	106.40
15	1H	2573	C	C5-C4-N4	-5.90	116.07	120.20
1	13	1526	G	N3-C4-C5	-5.90	125.65	128.60
1	1G	1887	C	C5-C6-N1	5.90	123.95	121.00
15	1H	476	U	OP1-P-O3'	5.90	118.17	105.20
15	1H	955	U	O5'-P-OP1	-5.90	100.39	105.70
15	1H	1176	A	C5-C6-N6	-5.90	118.98	123.70
15	1H	1840	C	C5-C6-N1	-5.90	118.05	121.00
15	14	854	G	N3-C4-C5	-5.90	125.65	128.60
15	14	992	A	C6-N1-C2	-5.90	115.06	118.60
23	21	129	HIS	C-N-CA	-5.90	109.91	122.30
52	X1	29	G	O5'-P-OP2	-5.90	100.39	105.70
15	1H	908	G	N1-C2-N2	5.90	121.51	116.20
15	1H	2457	C	C2-N3-C4	-5.90	116.95	119.90
15	14	241	A	C4-C5-N7	-5.90	107.75	110.70
15	14	2599	U	C2-N1-C1'	5.90	124.78	117.70
1	13	1343	G	O5'-P-OP1	-5.89	100.39	105.70
1	13	1926	A	C6-C5-N7	-5.89	128.17	132.30
1	1G	1101	C	C2-N1-C1'	5.89	125.28	118.80
1	1G	2032	C	N3-C4-C5	5.89	124.26	121.90
15	1H	623	G	O5'-P-OP2	-5.89	100.40	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1789	A	N7-C8-N9	5.89	116.75	113.80
15	1H	2089	C	C2-N3-C4	5.89	122.85	119.90
16	75	29	ARG	NE-CZ-NH1	-5.89	117.35	120.30
1	13	1833	G	O5'-P-OP1	-5.89	100.40	105.70
1	13	1998	G	N1-C6-O6	5.89	123.44	119.90
1	1G	1854	A	C2-N3-C4	-5.89	107.65	110.60
15	1H	1164	C	N1-C2-O2	5.89	122.44	118.90
15	14	490	C	C5-C4-N4	5.89	124.33	120.20
15	1H	897	G	C4-C5-N7	5.89	113.16	110.80
15	1H	1819	A	OP2-P-O3'	5.89	118.16	105.20
15	14	1721	U	N3-C4-O4	5.89	123.52	119.40
26	1J	117	G	N7-C8-N9	-5.89	110.16	113.10
1	13	962	A	O5'-P-OP1	5.89	117.77	110.70
15	1H	1799	C	OP1-P-OP2	-5.89	110.77	119.60
15	14	223	A	N1-C6-N6	5.89	122.13	118.60
15	14	854	G	N3-C4-N9	5.89	129.53	126.00
15	14	1478	G	N1-C2-N2	-5.89	110.90	116.20
15	14	1565	U	N1-C2-O2	5.89	126.92	122.80
15	14	1609	G	N1-C6-O6	5.89	123.43	119.90
15	14	2698	C	N3-C4-N4	5.89	122.12	118.00
15	1H	131	C	C2-N3-C4	-5.89	116.96	119.90
1	13	2107	C	C5-C4-N4	5.89	124.32	120.20
15	1H	730	G	N7-C8-N9	-5.89	110.16	113.10
15	1H	1849	A	OP1-P-O3'	5.89	118.15	105.20
15	1H	2877	G	N3-C2-N2	5.89	124.02	119.90
15	14	801	A	C2'-C3'-O3'	5.89	123.12	113.70
26	16	22	C	C5-C4-N4	-5.89	116.08	120.20
26	1J	24	U	C5-C6-N1	5.89	125.64	122.70
1	13	1534	U	C5-C6-N1	-5.88	119.76	122.70
15	1H	518	G	C5-C6-O6	5.88	132.13	128.60
15	1H	668	C	O5'-P-OP2	5.88	117.76	110.70
15	1H	1692	G	OP2-P-O3'	5.88	118.15	105.20
15	1H	1988	U	N3-C4-C5	-5.88	111.07	114.60
15	14	980	A	C8-N9-C4	-5.88	103.45	105.80
15	14	2322	G	C5-N7-C8	-5.88	101.36	104.30
15	14	2532	C	O4'-C1'-N1	5.88	112.91	108.20
1	1G	1120	G	C8-N9-C4	5.88	108.75	106.40
15	1H	547	G	OP1-P-OP2	-5.88	110.78	119.60
15	1H	1472	G	O5'-P-OP2	-5.88	100.41	105.70
15	14	538	U	C2-N3-C4	5.88	130.53	127.00
15	14	1550	C	N1-C2-O2	-5.88	115.37	118.90
15	14	1814	A	O5'-P-OP1	5.88	117.76	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	2697	U	C5-C6-N1	5.88	125.64	122.70
1	1G	1104	G	N1-C6-O6	5.88	123.43	119.90
15	1H	1187	G	C5-C6-O6	5.88	132.13	128.60
15	1H	2404	G	C4-C5-N7	-5.88	108.45	110.80
15	14	255	A	O4'-C1'-N9	5.88	112.91	108.20
15	14	2005	G	N1-C2-N2	5.88	121.49	116.20
32	39	78	ILE	C-N-CA	-5.88	109.95	122.30
1	13	1369	U	OP1-P-OP2	5.88	128.42	119.60
1	13	1976	A	C8-N9-C4	5.88	108.15	105.80
1	13	2134	G	N1-C2-N3	5.88	127.43	123.90
15	1H	1728	G	N1-C2-N3	5.88	127.43	123.90
15	1H	2264	U	O5'-P-OP1	-5.88	100.41	105.70
15	14	625	G	C5-N7-C8	5.88	107.24	104.30
15	14	2575	C	OP1-P-OP2	5.88	128.42	119.60
1	13	1845	C	N1-C2-O2	5.88	122.43	118.90
15	1H	535	G	C5-C6-O6	5.88	132.13	128.60
15	1H	1008	C	OP1-P-OP2	5.88	128.42	119.60
15	1H	1017	C	C6-N1-C2	5.88	122.65	120.30
15	1H	1980	U	C2-N3-C4	-5.88	123.47	127.00
15	1H	2797	A	O5'-P-OP2	-5.88	100.41	105.70
15	1H	1406	U	C4-C5-C6	5.88	123.23	119.70
15	1H	1670	U	N3-C4-O4	5.88	123.51	119.40
15	1H	2467	C	N1-C2-O2	-5.88	115.37	118.90
15	14	442	C	C2-N3-C4	-5.88	116.96	119.90
15	14	857	G	N1-C2-N2	-5.88	110.91	116.20
15	14	1001	G	C6-C5-N7	5.88	133.93	130.40
15	14	1478	G	O5'-P-OP2	-5.88	100.41	105.70
15	1H	1698	C	C6-N1-C2	5.88	122.65	120.30
15	1H	2661	C	N3-C2-O2	5.88	126.01	121.90
15	14	2223	A	N9-C4-C5	5.88	108.15	105.80
15	1H	1857	G	C5-N7-C8	5.87	107.24	104.30
15	14	1814	A	O5'-P-OP2	-5.87	100.41	105.70
15	14	2081	G	C6-C5-N7	-5.87	126.88	130.40
15	14	2600	U	N1-C2-N3	-5.87	111.38	114.90
1	1G	2121	U	O5'-P-OP1	-5.87	100.42	105.70
15	14	668	C	O5'-P-OP2	5.87	117.75	110.70
15	14	2389	C	C2-N3-C4	-5.87	116.96	119.90
26	16	47	A	C8-N9-C4	-5.87	103.45	105.80
1	13	1447	G	N7-C8-N9	-5.87	110.17	113.10
15	1H	1677	G	OP1-P-OP2	-5.87	110.80	119.60
15	14	915	A	C4-N9-C1'	5.87	136.87	126.30
15	14	1382	C	C5-C4-N4	-5.87	116.09	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	1300	G	O5'-P-OP2	-5.87	100.42	105.70
1	1G	1362	A	N1-C6-N6	5.87	122.12	118.60
15	1H	263	C	N3-C4-C5	5.87	124.25	121.90
15	1H	916	C	C2-N3-C4	-5.87	116.97	119.90
15	1H	1637	C	OP1-P-O3'	5.87	118.11	105.20
15	1H	1795	C	N3-C4-N4	5.87	122.11	118.00
15	1H	2471	C	N1-C2-N3	-5.87	115.09	119.20
15	14	2002	A	C4-C5-N7	-5.87	107.77	110.70
52	V4	20	U	N3-C2-O2	-5.87	118.09	122.20
1	13	1594	G	O5'-P-OP1	5.87	117.74	110.70
1	13	2142	A	C5-C6-N1	-5.87	114.77	117.70
15	1H	1806	G	N9-C1'-C2'	-5.87	105.55	112.00
15	14	803	C	N1-C2-O2	-5.87	115.38	118.90
15	14	1789	A	OP1-P-O3'	5.87	118.10	105.20
15	14	2600	U	C5-C6-N1	-5.87	119.77	122.70
26	1J	11	G	OP2-P-O3'	5.87	118.10	105.20
15	1H	52	A	OP1-P-O3'	5.86	118.10	105.20
15	1H	270	G	N1-C6-O6	-5.86	116.38	119.90
15	1H	346	G	C4-C5-N7	5.86	113.14	110.80
15	1H	678	G	N9-C4-C5	5.86	107.75	105.40
15	1H	1411	C	O5'-P-OP2	-5.86	100.42	105.70
15	1H	1943	A	C8-N9-C4	5.86	108.14	105.80
15	1H	1994	A	C5-C6-N6	5.86	128.39	123.70
15	1H	2346	G	N9-C4-C5	-5.86	103.05	105.40
15	14	863	C	N3-C4-C5	5.86	124.25	121.90
15	1H	728	C	C5-C4-N4	-5.86	116.10	120.20
15	1H	2489	C	C6-N1-C1'	-5.86	113.77	120.80
15	14	1655	G	C2-N3-C4	5.86	114.83	111.90
15	14	1822	C	N1-C2-O2	5.86	122.42	118.90
1	13	1189	U	P-O3'-C3'	5.86	126.73	119.70
15	1H	655	G	N1-C2-N3	5.86	127.42	123.90
15	1H	1807	A	N9-C1'-C2'	-5.86	105.55	112.00
15	1H	2372	U	O5'-P-OP2	-5.86	100.42	105.70
15	1H	2513	C	N3-C4-N4	-5.86	113.90	118.00
15	14	530	A	C8-N9-C4	-5.86	103.46	105.80
1	13	1504	G	OP1-P-OP2	-5.86	110.81	119.60
15	1H	2479	C	C6-N1-C2	5.86	122.64	120.30
15	14	490	C	OP2-P-O3'	5.86	118.09	105.20
15	14	1424	C	OP1-P-OP2	-5.86	110.81	119.60
15	1H	140	A	N1-C6-N6	5.86	122.11	118.60
15	1H	984	U	O5'-P-OP1	5.86	117.73	110.70
15	1H	1049	A	OP1-P-OP2	5.86	128.39	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1748	A	C4-N9-C1'	5.86	136.84	126.30
15	14	1391	A	O4'-C1'-N9	5.86	112.89	108.20
15	14	1478	G	C8-N9-C1'	-5.86	119.39	127.00
15	14	1605	G	N1-C6-O6	5.86	123.41	119.90
15	14	1635	A	N7-C8-N9	5.86	116.73	113.80
1	13	1350	G	C6-C5-N7	-5.86	126.89	130.40
15	1H	890	A	C2-N3-C4	-5.86	107.67	110.60
15	1H	1181	U	C5-C4-O4	-5.86	122.39	125.90
15	1H	1529	G	N3-C2-N2	-5.86	115.80	119.90
15	1H	1804	G	C5-C6-O6	5.86	132.11	128.60
15	14	752	U	O5'-P-OP1	-5.86	100.43	105.70
15	14	1030	C	OP1-P-O3'	5.86	118.08	105.20
15	14	1343	U	N3-C4-O4	5.86	123.50	119.40
15	14	1350	A	O5'-P-OP2	-5.86	100.43	105.70
15	14	1669	G	C5-N7-C8	-5.86	101.37	104.30
15	14	178	G	N1-C2-N2	-5.85	110.93	116.20
1	13	1493	U	C5-C4-O4	-5.85	122.39	125.90
1	13	2137	C	N1-C2-N3	5.85	123.30	119.20
15	1H	248	G	C5-C6-O6	5.85	132.11	128.60
15	1H	912	A	O5'-P-OP1	5.85	117.72	110.70
15	1H	1297	G	C8-N9-C4	-5.85	104.06	106.40
15	14	858	G	N1-C6-O6	-5.85	116.39	119.90
15	14	1421	U	N1-C2-N3	5.85	118.41	114.90
15	14	1662	G	C6-C5-N7	-5.85	126.89	130.40
15	14	1998	G	O5'-P-OP2	-5.85	100.43	105.70
26	1J	91	G	O4'-C1'-N9	-5.85	103.52	108.20
52	X4	15	G	N1-C6-O6	-5.85	116.39	119.90
52	X4	25	C	C6-N1-C2	5.85	122.64	120.30
1	13	694	C	C6-N1-C2	5.85	122.64	120.30
1	13	2142	A	N1-C2-N3	5.85	132.23	129.30
15	1H	492	U	O5'-P-OP2	5.85	117.72	110.70
15	1H	602	G	OP1-P-O3'	-5.85	92.33	105.20
15	14	1391	A	N3-C4-N9	-5.85	122.72	127.40
15	14	1613	G	OP2-P-O3'	5.85	118.07	105.20
15	14	1811	U	N3-C4-O4	-5.85	115.30	119.40
1	1G	1908	U	C6-N1-C2	-5.85	117.49	121.00
1	1G	2108	U	C6-N1-C2	5.85	124.51	121.00
15	1H	753	G	C6-C5-N7	5.85	133.91	130.40
15	1H	2503	A	N1-C6-N6	5.85	122.11	118.60
15	1H	2627	C	C4-C5-C6	5.85	120.33	117.40
15	14	791	G	N7-C8-N9	-5.85	110.18	113.10
15	14	1729	U	C6-N1-C2	-5.85	117.49	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	1833	G	C6-C5-N7	-5.85	126.89	130.40
15	1H	1001	G	N3-C2-N2	-5.85	115.81	119.90
15	1H	1459	G	C4-C5-N7	5.85	113.14	110.80
15	1H	2596	G	N3-C2-N2	5.85	123.99	119.90
15	14	2117	U	C6-N1-C2	-5.85	117.49	121.00
15	14	2573	C	OP1-P-O3'	5.85	118.06	105.20
1	13	953	C	OP2-P-O3'	5.85	118.06	105.20
15	1H	323	G	C5-C6-O6	-5.85	125.09	128.60
15	14	627	G	N3-C4-N9	5.85	129.51	126.00
15	1H	411	U	O4'-C1'-N1	5.84	112.88	108.20
15	1H	1036	A	OP1-P-OP2	-5.84	110.83	119.60
15	1H	1037	G	C5-C6-N1	5.84	114.42	111.50
15	1H	1427	A	N7-C8-N9	5.84	116.72	113.80
15	1H	2037	G	C5-C6-N1	5.84	114.42	111.50
1	13	2121	U	C6-N1-C1'	-5.84	113.02	121.20
15	1H	2257	G	C8-N9-C4	5.84	108.74	106.40
15	1H	2655	G	C6-C5-N7	-5.84	126.89	130.40
15	14	1861	C	N1-C2-N3	5.84	123.29	119.20
15	14	2704	U	C2-N3-C4	-5.84	123.49	127.00
1	13	762	C	O5'-P-OP2	-5.84	100.44	105.70
1	1G	2048	C	C6-N1-C2	5.84	122.64	120.30
15	1H	753	G	C2-N3-C4	5.84	114.82	111.90
15	1H	1298	U	C2-N3-C4	-5.84	123.50	127.00
15	14	46	C	C6-N1-C2	5.84	122.64	120.30
15	14	857	G	C5-N7-C8	5.84	107.22	104.30
15	14	904	G	OP1-P-O3'	5.84	118.05	105.20
15	14	1806	G	N9-C1'-C2'	-5.84	105.57	112.00
1	13	1250	A	C8-N9-C4	-5.84	103.46	105.80
1	1G	1261	A	C5-N7-C8	5.84	106.82	103.90
15	1H	205	G	OP1-P-O3'	5.84	118.05	105.20
15	1H	1837	A	O5'-P-OP2	-5.84	100.44	105.70
15	1H	1913	G	C8-N9-C1'	-5.84	119.41	127.00
15	14	1310	C	C6-N1-C2	5.84	122.64	120.30
15	14	1464	U	C5-C6-N1	-5.84	119.78	122.70
52	V1	71	G	N3-C2-N2	5.84	123.99	119.90
1	13	1224	G	C5-C6-O6	5.84	132.10	128.60
15	1H	1307	C	C6-N1-C2	-5.84	117.97	120.30
15	1H	1476	A	C6-N1-C2	-5.84	115.10	118.60
15	1H	2108	G	N1-C6-O6	5.84	123.40	119.90
15	14	2410	C	N1-C2-O2	-5.84	115.40	118.90
1	13	1599	G	C5-C6-N1	-5.84	108.58	111.50
15	1H	1295	A	C4-C5-N7	-5.84	107.78	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1300	C	C4-C5-C6	-5.84	114.48	117.40
15	1H	1396	G	C5-C6-O6	5.84	132.10	128.60
15	1H	2513	C	N3-C4-C5	5.84	124.23	121.90
15	14	816	U	C5-C6-N1	-5.84	119.78	122.70
15	14	2734	G	N1-C6-O6	5.84	123.40	119.90
15	14	2831	G	N9-C4-C5	-5.84	103.07	105.40
26	16	15	A	OP1-P-OP2	5.84	128.35	119.60
27	85	95	LEU	CA-CB-CG	-5.84	101.88	115.30
15	1H	350	G	C4-C5-N7	-5.83	108.47	110.80
15	1H	628	A	OP1-P-O3'	5.83	118.04	105.20
15	1H	1849	A	C6-N1-C2	-5.83	115.10	118.60
15	14	491	G	C5-C6-O6	5.83	132.10	128.60
1	13	1488	A	C6-C5-N7	-5.83	128.22	132.30
1	13	1822	C	C6-N1-C2	-5.83	117.97	120.30
1	1G	756	G	C4-C5-N7	5.83	113.13	110.80
1	1G	1528	U	C5-C6-N1	-5.83	119.78	122.70
15	1H	2341	C	OP1-P-OP2	5.83	128.35	119.60
15	1H	2729	A	N3-C4-N9	-5.83	122.73	127.40
15	14	854	G	C6-N1-C2	-5.83	121.60	125.10
15	14	1487	U	O5'-P-OP1	-5.83	100.45	105.70
15	14	1666	C	C4-C5-C6	5.83	120.32	117.40
15	14	2085	A	OP1-P-O3'	5.83	118.04	105.20
26	1J	106	U	N3-C4-C5	5.83	118.10	114.60
52	V4	76	A	C6-C5-N7	-5.83	128.22	132.30
1	13	842	U	C5-C6-N1	5.83	125.62	122.70
1	13	1526	G	N3-C4-N9	5.83	129.50	126.00
1	13	1707	G	C5-C6-O6	5.83	132.10	128.60
1	13	1950	G	C5-C6-O6	-5.83	125.10	128.60
15	1H	93	G	N7-C8-N9	-5.83	110.18	113.10
15	1H	1689	U	O5'-P-OP2	-5.83	100.45	105.70
15	1H	2351	A	N1-C2-N3	-5.83	126.39	129.30
15	1H	2395	C	C6-N1-C2	5.83	122.63	120.30
15	14	671	A	N1-C6-N6	-5.83	115.10	118.60
15	14	2372	U	O5'-P-OP2	-5.83	100.45	105.70
27	C8	11	ARG	NE-CZ-NH1	-5.83	117.38	120.30
15	1H	1838	C	O5'-P-OP1	5.83	117.70	110.70
15	14	760	G	N1-C6-O6	5.83	123.40	119.90
1	1G	2131	G	N7-C8-N9	-5.83	110.19	113.10
15	1H	183	U	C5-C6-N1	-5.83	119.79	122.70
15	1H	1354	C	C5-C6-N1	-5.83	118.09	121.00
15	14	818	G	C8-N9-C4	5.83	108.73	106.40
15	14	2606	C	N1-C2-N3	5.83	123.28	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	601	U	C4-C5-C6	-5.83	116.20	119.70
15	1H	2249	G	OP1-P-OP2	-5.83	110.86	119.60
15	14	498	A	C5-N7-C8	-5.83	100.99	103.90
26	16	15	A	C5-C6-N6	5.83	128.36	123.70
15	1H	572	C	N3-C2-O2	-5.83	117.82	121.90
15	1H	1074	U	C2-N1-C1'	5.83	124.69	117.70
15	14	407	G	O5'-P-OP1	-5.83	100.46	105.70
15	14	730	G	C8-N9-C4	5.83	108.73	106.40
15	14	1712	C	N3-C4-C5	5.83	124.23	121.90
15	14	2272	U	N3-C4-O4	5.83	123.48	119.40
26	16	14	C	C4-C5-C6	5.83	120.31	117.40
52	X4	76	A	C5-C6-N6	-5.83	119.04	123.70
1	13	1499	G	C8-N9-C4	-5.82	104.07	106.40
1	13	2132	C	N1-C2-O2	-5.82	115.41	118.90
15	1H	822	U	N1-C2-O2	-5.82	118.72	122.80
15	1H	2014	G	C5-C6-O6	-5.82	125.11	128.60
15	14	824	G	N3-C4-N9	5.82	129.49	126.00
15	14	2054	G	N3-C4-N9	-5.82	122.51	126.00
51	Y1	36	G	C4-N9-C1'	5.82	134.07	126.50
1	13	907	G	N1-C6-O6	5.82	123.39	119.90
15	1H	1912	C	C5-C4-N4	-5.82	116.12	120.20
15	14	1330	G	OP1-P-OP2	-5.82	110.87	119.60
15	14	2065	C	O5'-P-OP1	-5.82	100.46	105.70
15	1H	315	G	N3-C2-N2	5.82	123.97	119.90
15	1H	439	G	C4-C5-N7	-5.82	108.47	110.80
15	1H	549	G	OP1-P-OP2	-5.82	110.87	119.60
15	1H	1383	G	N7-C8-N9	5.82	116.01	113.10
15	1H	1903	G	N3-C2-N2	-5.82	115.83	119.90
15	1H	1994	A	N7-C8-N9	-5.82	110.89	113.80
15	14	855	C	O5'-P-OP1	-5.82	100.46	105.70
15	14	1993	G	OP1-P-OP2	-5.82	110.87	119.60
26	1J	58	G	OP1-P-OP2	5.82	128.33	119.60
52	X1	18	G	N1-C6-O6	5.82	123.39	119.90
1	13	1539	G	N7-C8-N9	5.82	116.01	113.10
1	1G	1469	C	C2-N1-C1'	5.82	125.20	118.80
15	1H	1679	G	OP1-P-OP2	-5.82	110.87	119.60
15	14	835	C	N3-C4-N4	-5.82	113.93	118.00
15	14	1256	C	O5'-P-OP1	-5.82	100.46	105.70
1	13	1132	C	C2-N1-C1'	5.82	125.20	118.80
15	1H	339	A	N1-C6-N6	-5.82	115.11	118.60
15	1H	867	G	N3-C2-N2	-5.82	115.83	119.90
15	1H	1288	G	OP2-P-O3'	5.82	118.00	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1434	G	N3-C4-C5	5.82	131.51	128.60
15	14	225	U	N3-C4-C5	5.82	118.09	114.60
15	14	663	G	N1-C2-N2	5.82	121.44	116.20
15	14	717	G	N3-C4-N9	-5.82	122.51	126.00
15	14	1027	G	N3-C2-N2	-5.82	115.83	119.90
15	14	2266	G	C5-C6-O6	5.82	132.09	128.60
15	14	2627	C	N3-C2-O2	5.82	125.97	121.90
1	13	2127	G	P-O3'-C3'	5.82	126.68	119.70
1	1G	937	U	C5-C4-O4	5.82	129.39	125.90
15	1H	667	C	C6-N1-C2	-5.82	117.97	120.30
15	1H	747	C	N3-C4-N4	5.82	122.07	118.00
15	14	2458	C	N1-C2-N3	5.82	123.27	119.20
15	14	2464	U	N3-C4-O4	5.82	123.47	119.40
15	1H	215	A	C2-N3-C4	-5.81	107.69	110.60
15	1H	1257	G	OP1-P-OP2	5.81	128.32	119.60
15	1H	1320	G	N1-C2-N2	-5.81	110.97	116.20
15	1H	897	G	O5'-P-OP2	-5.81	100.47	105.70
15	1H	1802	U	C5-C4-O4	-5.81	122.41	125.90
15	1H	1840	C	N1-C2-O2	-5.81	115.41	118.90
15	1H	2559	G	N1-C2-N2	5.81	121.43	116.20
15	14	625	G	C4-C5-N7	-5.81	108.47	110.80
15	1H	789	U	OP2-P-O3'	5.81	117.98	105.20
15	14	1277	G	C2-N3-C4	-5.81	108.99	111.90
1	1G	1516	C	C6-N1-C2	5.81	122.62	120.30
15	1H	736	C	N3-C4-C5	-5.81	119.58	121.90
15	1H	2553	C	N1-C2-O2	5.81	122.39	118.90
1	1G	1827	C	C2-N1-C1'	5.81	125.19	118.80
15	1H	1614	C	O5'-P-OP2	-5.81	100.47	105.70
15	1H	1967	C	C5-C4-N4	-5.81	116.13	120.20
15	1H	1991	A	N1-C2-N3	-5.81	126.40	129.30
15	1H	2074	G	N3-C2-N2	5.81	123.97	119.90
15	14	330	U	N3-C4-O4	5.81	123.47	119.40
15	14	387	U	N3-C2-O2	-5.81	118.14	122.20
15	14	885	G	C6-N1-C2	-5.81	121.62	125.10
15	14	1869	G	N3-C2-N2	5.81	123.97	119.90
15	14	2351	A	C4-C5-N7	-5.81	107.80	110.70
15	1H	338	C	C6-N1-C2	5.81	122.62	120.30
15	1H	2729	A	N9-C4-C5	-5.81	103.48	105.80
1	13	1251	A	O5'-P-OP2	-5.80	100.48	105.70
15	1H	495	G	O5'-P-OP2	-5.80	100.48	105.70
15	1H	529	A	N1-C2-N3	5.80	132.20	129.30
15	1H	807	C	O5'-P-OP2	-5.80	100.47	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	886	C	N1-C2-O2	-5.80	115.42	118.90
15	1H	1495	C	C6-N1-C2	-5.80	117.98	120.30
15	1H	1654	C	OP1-P-OP2	5.80	128.31	119.60
15	1H	1795	C	C5-C4-N4	-5.80	116.14	120.20
15	14	1035	G	C8-N9-C4	-5.80	104.08	106.40
15	14	1435	C	N3-C2-O2	5.80	125.96	121.90
15	1H	480	G	O5'-P-OP2	-5.80	100.48	105.70
15	1H	1853	A	O5'-P-OP1	-5.80	100.48	105.70
1	13	1012	G	C8-N9-C4	5.80	108.72	106.40
15	1H	324	A	OP2-P-O3'	5.80	117.96	105.20
15	1H	965	A	C5-C6-N6	-5.80	119.06	123.70
15	1H	1655	G	N1-C6-O6	5.80	123.38	119.90
15	1H	1941	A	C5-N7-C8	5.80	106.80	103.90
15	14	474	G	N1-C6-O6	5.80	123.38	119.90
15	14	1450	G	N1-C6-O6	-5.80	116.42	119.90
26	16	52	G	C8-N9-C4	-5.80	104.08	106.40
15	1H	601	U	N1-C2-O2	-5.80	118.74	122.80
15	1H	991	G	C8-N9-C1'	-5.80	119.46	127.00
15	1H	1226	C	P-O3'-C3'	5.80	126.66	119.70
15	1H	1361	U	N3-C2-O2	-5.80	118.14	122.20
15	1H	1555	C	C5-C6-N1	5.80	123.90	121.00
15	14	1351	A	OP1-P-OP2	5.80	128.30	119.60
15	1H	2536	C	N3-C4-C5	5.80	124.22	121.90
15	1H	2617	A	C5-C6-N1	5.80	120.60	117.70
1	13	1162	A	O5'-P-OP2	-5.80	100.48	105.70
15	1H	222	G	N3-C4-N9	5.80	129.48	126.00
15	1H	1925	A	O5'-P-OP1	5.80	117.66	110.70
15	14	1698	C	C5-C4-N4	5.80	124.26	120.20
26	16	59	A	OP1-P-OP2	-5.79	110.91	119.60
1	1G	933	G	C5-N7-C8	5.79	107.20	104.30
15	1H	36	G	OP2-P-O3'	5.79	117.95	105.20
15	1H	882	U	C4-C5-C6	5.79	123.18	119.70
15	1H	1417	G	C4-N9-C1'	5.79	134.03	126.50
15	14	112	U	O5'-P-OP2	5.79	117.65	110.70
15	14	1703	G	N3-C2-N2	5.79	123.95	119.90
15	14	2065	C	O5'-P-OP2	5.79	117.65	110.70
52	X1	7	A	OP2-P-O3'	5.79	117.95	105.20
1	13	1444	A	N1-C2-N3	5.79	132.19	129.30
15	1H	137	G	C8-N9-C4	-5.79	104.08	106.40
15	1H	848	G	C8-N9-C1'	-5.79	119.47	127.00
15	1H	2241	C	N3-C2-O2	5.79	125.95	121.90
15	1H	2333	G	N7-C8-N9	5.79	116.00	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2590	C	C5-C6-N1	-5.79	118.10	121.00
15	1H	2596	G	N1-C2-N2	-5.79	110.99	116.20
15	14	302	C	C6-N1-C2	-5.79	117.98	120.30
15	14	413	C	OP1-P-OP2	5.79	128.29	119.60
15	14	1301	G	N7-C8-N9	-5.79	110.20	113.10
1	13	2002	A	N1-C2-N3	5.79	132.19	129.30
1	13	1420	G	N7-C8-N9	-5.79	110.21	113.10
1	1G	899	G	N1-C6-O6	5.79	123.37	119.90
1	1G	1002	G	N1-C6-O6	5.79	123.37	119.90
15	1H	844	C	N1-C2-N3	5.79	123.25	119.20
15	14	537	C	N3-C4-C5	-5.79	119.58	121.90
15	14	727	C	C6-N1-C2	5.79	122.61	120.30
15	14	896	U	C2-N1-C1'	-5.79	110.75	117.70
15	14	1271	C	OP2-P-O3'	5.79	117.94	105.20
15	14	1363	C	O5'-P-OP1	5.79	117.65	110.70
15	1H	186	A	N1-C6-N6	5.79	122.07	118.60
15	14	37	C	OP2-P-O3'	5.79	117.93	105.20
15	14	1395	G	N3-C2-N2	5.79	123.95	119.90
15	14	1624	C	C4-C5-C6	-5.79	114.51	117.40
1	13	1032	G	C5-C6-O6	5.79	132.07	128.60
1	13	1161	A	N1-C6-N6	5.79	122.07	118.60
1	1G	2133	U	C5-C6-N1	-5.79	119.81	122.70
15	1H	125	A	C4-C5-N7	5.79	113.59	110.70
15	1H	1869	G	N3-C2-N2	5.79	123.95	119.90
15	1H	2417	C	N3-C4-C5	-5.79	119.59	121.90
15	14	488	A	OP1-P-OP2	-5.79	110.92	119.60
15	14	1455	U	N1-C2-O2	5.79	126.85	122.80
15	1H	799	A	C2-N3-C4	5.78	113.49	110.60
15	1H	2586	C	C5-C6-N1	-5.78	118.11	121.00
52	X4	18	G	N3-C4-N9	5.78	129.47	126.00
1	13	1826	U	N3-C2-O2	-5.78	118.15	122.20
1	13	1926	A	C4-C5-C6	5.78	119.89	117.00
1	1G	697	A	N9-C4-C5	-5.78	103.49	105.80
1	1G	775	C	N3-C2-O2	5.78	125.95	121.90
15	1H	103	C	C6-N1-C2	-5.78	117.99	120.30
15	1H	879	G	N1-C2-N3	5.78	127.37	123.90
15	14	1662	G	C4-C5-N7	5.78	113.11	110.80
15	14	2521	U	N3-C2-O2	-5.78	118.15	122.20
1	1G	1444	A	OP2-P-O3'	5.78	117.92	105.20
1	1G	1495	A	C5-C6-N1	-5.78	114.81	117.70
15	1H	544	C	C5-C4-N4	-5.78	116.15	120.20
15	1H	2009	G	C5-C6-O6	5.78	132.07	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2374	C	N3-C4-N4	-5.78	113.95	118.00
15	1H	2790	C	O5'-P-OP2	-5.78	100.50	105.70
15	14	1304	U	C2-N1-C1'	5.78	124.64	117.70
15	1H	1857	G	N7-C8-N9	-5.78	110.21	113.10
1	1G	1995	C	O5'-P-OP1	-5.78	100.50	105.70
15	1H	474	G	C8-N9-C4	5.78	108.71	106.40
15	1H	851	A	O5'-P-OP1	5.78	117.63	110.70
15	1H	2701	G	N1-C6-O6	-5.78	116.43	119.90
15	14	495	G	N7-C8-N9	-5.78	110.21	113.10
15	14	512	C	C6-N1-C2	-5.78	117.99	120.30
15	14	1335	A	OP2-P-O3'	5.78	117.91	105.20
15	14	1748	A	C8-N9-C4	-5.78	103.49	105.80
15	14	2346	G	N7-C8-N9	-5.78	110.21	113.10
15	14	2347	U	N3-C4-O4	-5.78	115.36	119.40
1	1G	1814	G	N1-C6-O6	5.78	123.36	119.90
15	1H	38	A	N1-C2-N3	-5.78	126.41	129.30
15	1H	182	C	O5'-P-OP1	5.78	117.63	110.70
15	1H	498	A	N1-C2-N3	5.78	132.19	129.30
15	1H	547	G	C5-C6-O6	5.78	132.06	128.60
15	1H	1178	U	N1-C2-N3	5.78	118.37	114.90
15	1H	1293	G	C8-N9-C4	5.78	108.71	106.40
15	1H	2093	U	N3-C4-O4	-5.78	115.36	119.40
15	1H	2312	C	O5'-P-OP2	-5.78	100.50	105.70
15	14	241	A	C4-C5-C6	5.78	119.89	117.00
15	14	478	G	C8-N9-C4	-5.78	104.09	106.40
15	14	503	U	C2-N1-C1'	5.78	124.63	117.70
15	14	1864	C	C6-N1-C2	5.78	122.61	120.30
15	14	2009	G	C5-C6-O6	5.78	132.06	128.60
23	21	54	GLN	C-N-CA	5.78	136.14	121.70
1	1G	1158	G	OP2-P-O3'	5.77	117.90	105.20
15	14	2516	C	P-O3'-C3'	5.77	126.63	119.70
1	1G	2076	U	O5'-P-OP1	-5.77	100.51	105.70
15	1H	131	C	C5-C6-N1	-5.77	118.11	121.00
15	14	180	A	C4-C5-N7	5.77	113.59	110.70
15	14	1328	G	N7-C8-N9	-5.77	110.21	113.10
15	14	1632	C	N3-C4-C5	5.77	124.21	121.90
15	14	2607	G	OP2-P-O3'	5.77	117.90	105.20
26	16	102	A	OP1-P-OP2	5.77	128.26	119.60
26	1J	74	G	N3-C4-C5	5.77	131.49	128.60
52	X1	45	U	OP1-P-O3'	5.77	117.90	105.20
1	13	1565	G	OP1-P-O3'	5.77	117.90	105.20
1	13	1599	G	N3-C2-N2	-5.77	115.86	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1891	G	O5'-P-OP2	5.77	117.62	110.70
15	14	343	C	O5'-P-OP1	-5.77	100.51	105.70
15	14	1812	U	C4-C5-C6	5.77	123.16	119.70
1	13	1826	U	C6-N1-C2	-5.77	117.54	121.00
15	1H	137	G	N9-C1'-C2'	5.77	121.50	114.00
15	1H	419	G	C5-C6-O6	-5.77	125.14	128.60
15	1H	501	G	C5-C6-N1	5.77	114.39	111.50
15	1H	880	G	C5-N7-C8	5.77	107.18	104.30
15	1H	1064	G	O5'-P-OP1	5.77	117.62	110.70
15	1H	1921	G	N1-C6-O6	-5.77	116.44	119.90
15	1H	2304	G	C5-C6-O6	-5.77	125.14	128.60
15	14	1954	G	O5'-P-OP2	-5.77	100.51	105.70
26	16	120	G	OP2-P-O3'	5.77	117.89	105.20
52	X1	75	C	C2-N3-C4	-5.77	117.02	119.90
1	13	1048	G	C8-N9-C4	5.77	108.71	106.40
15	1H	528	A	OP1-P-O3'	5.77	117.89	105.20
15	1H	846	C	O5'-P-OP2	-5.77	100.51	105.70
15	1H	1376	C	N3-C4-C5	-5.77	119.59	121.90
15	1H	1426	G	C5-N7-C8	5.77	107.18	104.30
15	1H	2570	U	N1-C2-O2	-5.77	118.76	122.80
15	14	4	C	C2-N1-C1'	5.77	125.14	118.80
15	14	474	G	C5-C6-O6	-5.77	125.14	128.60
15	14	2635	C	C5-C4-N4	-5.77	116.16	120.20
52	X4	56	C	C6-N1-C2	5.77	122.61	120.30
15	1H	1720	C	N1-C2-O2	-5.77	115.44	118.90
15	14	1974	G	N9-C4-C5	-5.77	103.09	105.40
52	W1	74	C	C5-C4-N4	-5.77	116.16	120.20
1	1G	1232	U	N3-C4-C5	-5.76	111.14	114.60
15	1H	1051	G	C4-C5-N7	-5.76	108.49	110.80
15	1H	2024	C	OP2-P-O3'	5.76	117.88	105.20
15	14	987	G	C5-C6-O6	-5.76	125.14	128.60
15	14	1363	C	C6-N1-C1'	-5.76	113.88	120.80
1	1G	1261	A	P-O3'-C3'	5.76	126.62	119.70
15	1H	2385	G	C5-C6-N1	5.76	114.38	111.50
15	1H	2626	U	P-O3'-C3'	5.76	126.61	119.70
15	14	1293	G	C4-C5-N7	5.76	113.11	110.80
15	14	1788	C	N1-C2-O2	5.76	122.36	118.90
1	13	1234	U	C5-C4-O4	5.76	129.36	125.90
1	1G	1318	C	O5'-P-OP1	-5.76	100.51	105.70
1	1G	1434	C	N1-C2-O2	-5.76	115.44	118.90
15	14	1665	A	N1-C2-N3	5.76	132.18	129.30
15	14	1748	A	C6-N1-C2	-5.76	115.14	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	16	10	U	O5'-P-OP2	-5.76	100.52	105.70
1	13	1017	G	OP1-P-OP2	5.76	128.24	119.60
15	1H	499	A	N7-C8-N9	5.76	116.68	113.80
15	1H	1652	A	N7-C8-N9	5.76	116.68	113.80
15	1H	1865	G	OP2-P-O3'	5.76	117.87	105.20
15	1H	2883	C	C2-N3-C4	-5.76	117.02	119.90
15	14	779	C	C2-N3-C4	-5.76	117.02	119.90
15	14	1191	A	C5-C6-N1	-5.76	114.82	117.70
15	14	1793	A	N7-C8-N9	-5.76	110.92	113.80
26	16	94	C	O5'-P-OP1	5.76	117.61	110.70
15	14	483	C	C2-N3-C4	-5.76	117.02	119.90
15	14	1378	U	N1-C2-N3	5.76	118.36	114.90
47	59	7	LEU	CA-CB-CG	5.76	128.54	115.30
1	13	1476	G	O5'-P-OP2	-5.76	100.52	105.70
1	13	2037	C	C2-N3-C4	-5.76	117.02	119.90
15	1H	1014	C	N3-C2-O2	-5.76	117.87	121.90
15	1H	1219	G	N1-C6-O6	5.76	123.35	119.90
15	1H	1316	U	OP1-P-OP2	5.76	128.24	119.60
15	14	2014	G	N9-C4-C5	5.76	107.70	105.40
15	14	2084	A	C4-C5-N7	-5.76	107.82	110.70
1	13	1389	G	N1-C2-N2	5.75	121.38	116.20
1	13	1613	C	N1-C2-O2	-5.75	115.45	118.90
1	1G	1120	G	N9-C4-C5	-5.75	103.10	105.40
15	1H	1770	A	C2-N3-C4	-5.75	107.72	110.60
15	14	1238	G	N3-C4-C5	-5.75	125.72	128.60
1	13	1033	G	C4-C5-N7	5.75	113.10	110.80
1	1G	1358	A	OP1-P-O3'	5.75	117.86	105.20
15	14	841	G	OP2-P-O3'	5.75	117.86	105.20
15	14	912	A	OP2-P-O3'	5.75	117.86	105.20
15	14	2895	A	O5'-P-OP2	-5.75	100.52	105.70
1	13	1495	A	O4'-C1'-N9	5.75	112.80	108.20
15	1H	889	C	C2-N3-C4	-5.75	117.02	119.90
15	1H	1537	G	C8-N9-C4	-5.75	104.10	106.40
15	1H	1711	G	C8-N9-C4	5.75	108.70	106.40
15	14	1925	A	N1-C6-N6	5.75	122.05	118.60
15	14	2605	A	C4-C5-N7	-5.75	107.82	110.70
15	1H	987	G	C5-C6-N1	5.75	114.38	111.50
15	1H	2343	A	C2-N3-C4	-5.75	107.72	110.60
15	14	2717	U	C2-N1-C1'	5.75	124.60	117.70
52	X4	34	G	C8-N9-C4	-5.75	104.10	106.40
52	V4	60	U	C6-N1-C2	-5.75	117.55	121.00
1	13	1439	C	C6-N1-C1'	-5.75	113.90	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	664	A	N1-C6-N6	5.75	122.05	118.60
15	1H	978	G	N1-C2-N3	5.75	127.35	123.90
15	1H	1177	A	C5-C6-N1	5.75	120.58	117.70
15	1H	2265	G	N3-C2-N2	5.75	123.92	119.90
15	1H	2435	C	C6-N1-C2	5.75	122.60	120.30
15	14	1683	G	N9-C4-C5	5.75	107.70	105.40
15	14	1752	G	C8-N9-C4	5.75	108.70	106.40
1	13	748	A	N1-C6-N6	-5.75	115.15	118.60
1	13	1189	U	C6-N1-C2	-5.75	117.55	121.00
1	1G	1139	A	O5'-P-OP1	-5.75	100.53	105.70
1	1G	1953	C	O5'-P-OP2	-5.75	100.53	105.70
15	1H	230	G	N3-C2-N2	-5.75	115.88	119.90
15	14	547	G	OP1-P-O3'	5.75	117.84	105.20
15	14	854	G	C6-C5-N7	-5.75	126.95	130.40
15	14	915	A	C8-N9-C1'	-5.75	117.36	127.70
15	14	1008	C	OP1-P-OP2	5.75	128.22	119.60
15	14	1400	C	N3-C4-N4	-5.75	113.98	118.00
15	14	1450	G	OP1-P-OP2	-5.75	110.98	119.60
52	X1	46	G	C5-C6-O6	-5.75	125.15	128.60
15	14	2249	G	N9-C4-C5	5.75	107.70	105.40
52	W4	76	A	C5-N7-C8	5.75	106.77	103.90
1	13	1940	U	C5-C6-N1	5.74	125.57	122.70
1	1G	935	U	O5'-P-OP1	-5.74	100.53	105.70
15	1H	2855	G	O5'-P-OP2	5.74	117.59	110.70
15	14	1324	A	OP1-P-OP2	5.74	128.22	119.60
15	14	1327	A	C5-C6-N6	5.74	128.29	123.70
15	14	2091	C	C5-C4-N4	-5.74	116.18	120.20
1	13	1390	G	C5-C6-N1	-5.74	108.63	111.50
15	14	1676	G	C4-C5-N7	5.74	113.10	110.80
15	14	2518	A	N3-C4-N9	5.74	131.99	127.40
26	16	39	C	OP2-P-O3'	5.74	117.83	105.20
1	1G	2146	G	C5-C6-O6	5.74	132.04	128.60
15	1H	222	G	O5'-P-OP1	-5.74	100.53	105.70
15	1H	641	G	N7-C8-N9	-5.74	110.23	113.10
15	1H	678	G	OP1-P-OP2	-5.74	110.99	119.60
15	1H	1078	G	N1-C6-O6	5.74	123.34	119.90
15	1H	1647	C	C4-C5-C6	5.74	120.27	117.40
15	1H	1846	A	P-O3'-C3'	-5.74	112.81	119.70
15	1H	2253	G	N1-C6-O6	-5.74	116.46	119.90
15	1H	2306	U	N3-C4-C5	-5.74	111.16	114.60
15	14	399	A	C2-N3-C4	-5.74	107.73	110.60
15	14	600	A	O4'-C1'-N9	5.74	112.79	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	809	G	N1-C6-O6	5.74	123.34	119.90
15	1H	1865	G	C5-C6-N1	-5.74	108.63	111.50
15	14	824	G	C8-N9-C4	5.74	108.69	106.40
1	1G	1438	G	C6-C5-N7	-5.74	126.96	130.40
15	1H	478	G	N9-C4-C5	5.74	107.69	105.40
15	1H	557	G	C8-N9-C4	-5.74	104.11	106.40
15	1H	1498	G	O5'-P-OP1	-5.74	100.54	105.70
15	14	956	C	O5'-P-OP2	-5.74	100.54	105.70
15	14	1041	G	N3-C4-N9	-5.74	122.56	126.00
15	14	1862	G	N1-C6-O6	-5.74	116.46	119.90
15	1H	505	A	C5-N7-C8	-5.74	101.03	103.90
15	1H	1290	A	N7-C8-N9	5.74	116.67	113.80
15	1H	2053	U	N1-C2-N3	5.74	118.34	114.90
15	1H	2661	C	OP2-P-O3'	5.74	117.82	105.20
15	14	633	A	N9-C4-C5	5.74	108.09	105.80
15	14	1304	U	C5-C4-O4	-5.74	122.46	125.90
15	14	1682	A	N9-C4-C5	-5.74	103.51	105.80
15	14	1878	C	OP1-P-OP2	-5.74	111.00	119.60
15	14	2078	G	C5-C6-O6	-5.74	125.16	128.60
1	1G	1833	G	N7-C8-N9	5.73	115.97	113.10
15	1H	1607	C	N1-C2-O2	5.73	122.34	118.90
15	14	1203	G	C5-C6-O6	-5.73	125.16	128.60
15	14	2243	G	C4-N9-C1'	5.73	133.95	126.50
15	14	2614	G	OP2-P-O3'	5.73	117.81	105.20
1	13	2117	G	N3-C2-N2	5.73	123.91	119.90
1	1G	1316	A	N1-C6-N6	-5.73	115.16	118.60
15	1H	591	U	C6-N1-C2	5.73	124.44	121.00
15	1H	646	G	C8-N9-C4	5.73	108.69	106.40
15	1H	1031	A	O5'-P-OP1	5.73	117.58	110.70
15	1H	1174	A	O4'-C1'-N9	-5.73	103.61	108.20
15	1H	1298	U	C5-C6-N1	-5.73	119.83	122.70
15	1H	1427	A	C5-N7-C8	-5.73	101.03	103.90
15	14	409	G	C8-N9-C4	5.73	108.69	106.40
15	14	1569	U	C5-C4-O4	5.73	129.34	125.90
15	14	2085	A	C5-N7-C8	-5.73	101.03	103.90
1	1G	1206	G	C8-N9-C4	5.73	108.69	106.40
15	1H	150	C	N3-C2-O2	-5.73	117.89	121.90
15	1H	640	U	N1-C2-O2	5.73	126.81	122.80
15	1H	664	A	N9-C4-C5	-5.73	103.51	105.80
15	1H	792	G	C5-C6-N1	5.73	114.36	111.50
15	1H	1338	C	C5-C6-N1	-5.73	118.14	121.00
15	1H	1424	C	N3-C4-N4	5.73	122.01	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1272	G	C4-C5-C6	-5.73	115.36	118.80
15	1H	1525	G	N3-C2-N2	-5.73	115.89	119.90
15	14	331	U	N1-C2-O2	-5.73	118.79	122.80
15	14	723	G	OP1-P-OP2	-5.73	111.01	119.60
15	14	1028	A	O5'-P-OP2	-5.73	100.54	105.70
15	14	1069	A	N3-C4-N9	-5.73	122.82	127.40
1	13	1140	C	C5-C6-N1	-5.73	118.14	121.00
1	13	1499	G	C5-C6-O6	5.73	132.04	128.60
1	13	1852	A	N7-C8-N9	5.73	116.66	113.80
1	1G	1583	U	C6-N1-C2	-5.73	117.56	121.00
15	1H	44	G	OP1-P-O3'	5.73	117.80	105.20
15	1H	661	C	O5'-P-OP2	-5.73	100.55	105.70
15	1H	1249	C	N3-C2-O2	5.73	125.91	121.90
15	1H	1459	G	C5-C6-O6	-5.73	125.16	128.60
15	1H	1869	G	N3-C4-N9	5.73	129.44	126.00
15	1H	2445	A	C6-C5-N7	-5.73	128.29	132.30
15	14	1592	A	C2-N3-C4	-5.73	107.74	110.60
15	14	2239	G	N1-C6-O6	5.73	123.34	119.90
15	14	2703	U	OP1-P-O3'	5.73	117.80	105.20
1	13	1534	U	C2-N3-C4	-5.73	123.56	127.00
1	1G	1309	C	O5'-P-OP2	5.73	117.57	110.70
1	1G	1407	G	C2-N3-C4	-5.73	109.04	111.90
4	19	235	GLY	C-N-CA	5.73	134.32	122.30
15	1H	84	G	N3-C2-N2	-5.73	115.89	119.90
15	1H	1521	A	N1-C6-N6	5.73	122.03	118.60
15	1H	2531	G	OP2-P-O3'	5.73	117.80	105.20
1	1G	1469	C	N1-C2-O2	5.72	122.33	118.90
15	1H	738	A	N9-C4-C5	5.72	108.09	105.80
15	1H	1545	A	O4'-C1'-N9	5.72	112.78	108.20
15	14	104	C	C6-N1-C2	-5.72	118.01	120.30
15	14	411	U	O4'-C1'-N1	5.72	112.78	108.20
15	14	863	C	C6-N1-C2	5.72	122.59	120.30
15	14	1669	G	N7-C8-N9	5.72	115.96	113.10
15	14	1862	G	N9-C4-C5	5.72	107.69	105.40
15	14	2375	A	O5'-P-OP1	5.72	117.57	110.70
1	13	2033	G	C5-C6-N1	5.72	114.36	111.50
1	1G	1229	C	N1-C2-O2	-5.72	115.47	118.90
15	1H	181	A	C6-N1-C2	-5.72	115.17	118.60
15	1H	410	G	OP1-P-O3'	5.72	117.79	105.20
15	1H	501	G	N1-C2-N3	5.72	127.33	123.90
15	14	1774	G	N1-C6-O6	5.72	123.33	119.90
26	16	114	U	C5-C6-N1	-5.72	119.84	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	902	U	N1-C2-N3	5.72	118.33	114.90
15	1H	1305	G	C5-N7-C8	5.72	107.16	104.30
15	1H	1497	G	N3-C4-C5	-5.72	125.74	128.60
26	16	81	C	O5'-P-OP2	5.72	117.56	110.70
15	1H	112	U	O5'-P-OP1	5.72	117.56	110.70
15	1H	779	C	C2-N3-C4	-5.72	117.04	119.90
15	1H	1083	U	OP1-P-OP2	5.72	128.18	119.60
15	1H	1567	C	OP1-P-O3'	5.72	117.78	105.20
15	1H	2288	A	OP2-P-O3'	5.72	117.78	105.20
15	14	577	G	O5'-P-OP2	-5.72	100.55	105.70
15	14	1346	C	N3-C4-N4	-5.72	114.00	118.00
15	14	1479	C	N3-C2-O2	5.72	125.90	121.90
1	13	922	G	N3-C4-C5	-5.72	125.74	128.60
1	13	1753	U	N3-C2-O2	5.72	126.20	122.20
15	1H	2068	C	N1-C2-O2	-5.72	115.47	118.90
51	Y4	48	U	N3-C4-O4	5.72	123.40	119.40
1	13	1131	G	C5-C6-O6	-5.72	125.17	128.60
1	13	1215	C	O5'-P-OP1	5.72	117.56	110.70
1	13	1405	G	C8-N9-C4	5.72	108.69	106.40
15	1H	247	A	O5'-P-OP2	-5.72	100.56	105.70
15	1H	969	G	N1-C2-N3	-5.72	120.47	123.90
15	1H	1993	G	N3-C4-N9	5.72	129.43	126.00
15	14	536	C	N3-C2-O2	-5.72	117.90	121.90
15	14	2617	A	C5-C6-N1	5.72	120.56	117.70
1	1G	1727	G	C4-C5-N7	-5.71	108.51	110.80
15	1H	1477	C	C2-N1-C1'	-5.71	112.51	118.80
15	1H	2341	C	N3-C4-C5	-5.71	119.61	121.90
15	14	1435	C	N1-C2-O2	-5.71	115.47	118.90
15	14	2350	A	C5-C6-N6	5.71	128.27	123.70
52	V4	8	U	OP1-P-O3'	5.71	117.77	105.20
15	1H	288	G	N1-C2-N2	-5.71	111.06	116.20
15	1H	2396	C	OP2-P-O3'	5.71	117.77	105.20
15	14	1300	C	C5-C4-N4	-5.71	116.20	120.20
52	X4	3	C	C5-C6-N1	5.71	123.86	121.00
1	13	1084	C	C6-N1-C2	5.71	122.58	120.30
1	1G	1317	G	N1-C6-O6	-5.71	116.47	119.90
15	1H	634	A	N9-C4-C5	-5.71	103.52	105.80
15	1H	1031	A	C8-N9-C4	5.71	108.08	105.80
15	1H	1171	C	C2-N3-C4	-5.71	117.04	119.90
15	1H	1231	G	C5-C6-N1	-5.71	108.64	111.50
15	14	667	C	OP1-P-O3'	5.71	117.77	105.20
15	14	2044	A	C8-N9-C4	5.71	108.08	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	16	58	G	OP1-P-OP2	5.71	128.17	119.60
1	13	1651	C	P-O3'-C3'	5.71	126.55	119.70
1	1G	872	G	N1-C2-N3	5.71	127.33	123.90
1	1G	1722	G	OP2-P-O3'	5.71	117.76	105.20
1	1G	2141	A	C4-C5-C6	5.71	119.85	117.00
15	1H	744	G	N1-C6-O6	-5.71	116.47	119.90
15	1H	992	A	N9-C4-C5	-5.71	103.52	105.80
15	1H	1293	G	N3-C2-N2	-5.71	115.90	119.90
15	1H	1427	A	C8-N9-C4	-5.71	103.52	105.80
15	1H	2286	G	C5-N7-C8	-5.71	101.45	104.30
15	1H	2509	G	OP1-P-O3'	5.71	117.76	105.20
15	14	1824	C	OP1-P-O3'	5.71	117.76	105.20
15	1H	158	U	C6-N1-C2	-5.71	117.58	121.00
15	1H	1881	A	O4'-C1'-N9	5.71	112.77	108.20
15	14	837	A	C4-C5-N7	5.71	113.55	110.70
15	14	837	A	C6-C5-N7	-5.71	128.31	132.30
15	14	2049	G	N1-C6-O6	5.71	123.32	119.90
26	16	102	A	O5'-P-OP2	-5.71	100.56	105.70
1	1G	666	U	OP1-P-OP2	5.71	128.16	119.60
15	14	572	C	C2-N1-C1'	5.71	125.08	118.80
15	14	1959	C	O5'-P-OP1	5.71	117.55	110.70
15	14	2061	C	N3-C4-N4	-5.71	114.01	118.00
15	14	2722	G	C5-C6-N1	5.71	114.35	111.50
1	13	747	G	C4-N9-C1'	5.70	133.91	126.50
1	1G	1261	A	C2-N3-C4	5.70	113.45	110.60
1	1G	1594	G	N1-C2-N2	5.70	121.33	116.20
15	1H	1680	C	N1-C2-O2	-5.70	115.48	118.90
15	1H	2481	C	N3-C4-C5	5.70	124.18	121.90
15	14	224	C	N1-C2-O2	5.70	122.32	118.90
15	14	493	G	O5'-P-OP2	5.70	117.55	110.70
1	13	1325	A	OP2-P-O3'	5.70	117.75	105.20
1	1G	986	C	C2-N1-C1'	5.70	125.07	118.80
15	14	1315	G	C5-C6-N1	5.70	114.35	111.50
52	X1	76	A	N7-C8-N9	-5.70	110.95	113.80
15	1H	47	G	OP2-P-O3'	5.70	117.74	105.20
15	1H	597	A	N1-C2-N3	5.70	132.15	129.30
15	1H	1180	A	OP2-P-O3'	5.70	117.74	105.20
15	1H	1419	C	N1-C2-O2	-5.70	115.48	118.90
15	14	2831	G	C8-N9-C4	5.70	108.68	106.40
36	J5	25	LEU	CB-CG-CD2	-5.70	101.31	111.00
1	13	967	G	N1-C6-O6	-5.70	116.48	119.90
15	1H	405	C	C2-N1-C1'	-5.70	112.53	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	963	C	O4'-C1'-N1	5.70	112.76	108.20
15	1H	1398	A	C8-N9-C4	-5.70	103.52	105.80
15	1H	1981	U	OP1-P-O3'	5.70	117.74	105.20
15	1H	2778	G	C8-N9-C4	5.70	108.68	106.40
15	14	147	U	C6-N1-C2	5.70	124.42	121.00
15	14	903	G	C5-C6-O6	5.70	132.02	128.60
15	1H	73	A	C5-C6-N6	5.70	128.26	123.70
15	1H	509	G	P-O3'-C3'	5.70	126.54	119.70
15	1H	627	G	N9-C4-C5	-5.70	103.12	105.40
15	1H	979	G	O4'-C1'-N9	5.70	112.76	108.20
15	1H	2596	G	C8-N9-C4	5.70	108.68	106.40
15	14	1839	U	C4-C5-C6	5.70	123.12	119.70
1	1G	1441	C	N3-C4-N4	5.70	121.99	118.00
15	1H	1477	C	C4-C5-C6	5.70	120.25	117.40
15	14	857	G	N3-C2-N2	5.70	123.89	119.90
15	14	1020	A	C5-C6-N1	-5.70	114.85	117.70
15	14	2220	C	N3-C2-O2	-5.70	117.91	121.90
15	14	2444	G	OP1-P-OP2	-5.70	111.06	119.60
52	X1	3	C	C5-C6-N1	5.70	123.85	121.00
1	1G	955	C	N3-C2-O2	-5.69	117.91	121.90
13	3I	86	ARG	C-N-CA	-5.69	110.34	122.30
15	1H	833	A	C4-C5-N7	-5.69	107.85	110.70
15	1H	859	U	N3-C4-C5	-5.69	111.18	114.60
15	14	360	C	N3-C4-N4	5.69	121.99	118.00
15	14	2268	G	O5'-P-OP1	5.69	117.53	110.70
1	13	1109	C	C6-N1-C2	-5.69	118.02	120.30
1	13	1174	C	N1-C2-O2	5.69	122.32	118.90
15	1H	330	U	N3-C2-O2	-5.69	118.22	122.20
15	1H	1406	U	OP1-P-OP2	5.69	128.14	119.60
15	1H	1449	G	C8-N9-C4	-5.69	104.12	106.40
15	1H	1884	G	N1-C6-O6	5.69	123.31	119.90
15	1H	2004	C	N3-C2-O2	-5.69	117.92	121.90
15	1H	2404	G	OP1-P-O3'	5.69	117.72	105.20
15	14	1048	A	O5'-P-OP1	-5.69	100.58	105.70
15	14	1503	A	C6-N1-C2	-5.69	115.18	118.60
15	14	1567	C	O5'-P-OP1	-5.69	100.58	105.70
1	13	742	C	C6-N1-C2	-5.69	118.02	120.30
1	13	940	G	C4-C5-N7	-5.69	108.52	110.80
1	13	2125	A	N1-C2-N3	5.69	132.15	129.30
1	1G	1709	G	N1-C6-O6	-5.69	116.49	119.90
15	1H	1030	C	O5'-P-OP1	5.69	117.53	110.70
15	1H	1357	A	C6-N1-C2	-5.69	115.19	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1819	A	N7-C8-N9	5.69	116.64	113.80
15	1H	1862	G	C2-N3-C4	-5.69	109.06	111.90
15	14	1702	A	C2-N3-C4	-5.69	107.75	110.60
15	14	2342	A	N1-C6-N6	-5.69	115.19	118.60
52	X1	37	A	OP2-P-O3'	5.69	117.72	105.20
1	13	1395	A	N9-C4-C5	-5.69	103.52	105.80
15	1H	1755	G	C4-C5-N7	-5.69	108.52	110.80
15	1H	2060	G	N7-C8-N9	5.69	115.94	113.10
15	1H	2297	G	C8-N9-C4	5.69	108.68	106.40
15	14	2883	C	O5'-P-OP1	-5.69	100.58	105.70
28	M8	39	CYS	CA-CB-SG	5.69	124.24	114.00
1	13	1128	A	C5-N7-C8	-5.69	101.06	103.90
15	1H	33	U	OP1-P-O3'	5.69	117.71	105.20
15	1H	111	G	O5'-P-OP2	5.69	117.53	110.70
15	1H	146	G	N1-C2-N2	-5.69	111.08	116.20
15	1H	146	G	N3-C2-N2	5.69	123.88	119.90
15	1H	189	A	C5-N7-C8	5.69	106.74	103.90
15	1H	632	U	C6-N1-C2	5.69	124.41	121.00
15	1H	1412	C	C5-C6-N1	-5.69	118.16	121.00
15	14	782	G	N3-C2-N2	5.69	123.88	119.90
1	1G	868	G	C8-N9-C4	5.69	108.67	106.40
2	65	101	LEU	CA-CB-CG	5.69	128.38	115.30
15	1H	632	U	C2-N1-C1'	-5.69	110.88	117.70
15	1H	1604	A	O4'-C1'-N9	5.69	112.75	108.20
15	14	1031	A	C2-N3-C4	-5.69	107.76	110.60
15	14	2847	G	C8-N9-C4	5.69	108.67	106.40
51	Y4	43	U	C6-N1-C2	5.69	124.41	121.00
1	13	1941	C	C6-N1-C2	-5.68	118.03	120.30
1	1G	1576	G	N3-C4-N9	5.68	129.41	126.00
15	1H	600	A	O5'-P-OP2	5.68	117.52	110.70
15	1H	1258	A	N3-C4-C5	5.68	130.78	126.80
15	1H	1678	U	C4-C5-C6	5.68	123.11	119.70
15	1H	1698	C	C2-N1-C1'	-5.68	112.55	118.80
15	1H	1861	C	N1-C2-O2	5.68	122.31	118.90
15	1H	2393	A	N9-C4-C5	-5.68	103.53	105.80
15	14	199	C	C2-N3-C4	-5.68	117.06	119.90
15	14	2742	U	N3-C4-O4	-5.68	115.42	119.40
1	13	1779	A	O4'-C1'-N9	5.68	112.75	108.20
1	1G	1042	C	O5'-P-OP2	-5.68	100.59	105.70
15	1H	346	G	N3-C4-N9	5.68	129.41	126.00
15	1H	351	G	OP2-P-O3'	5.68	117.70	105.20
15	1H	1447	C	OP2-P-O3'	5.68	117.70	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1623	G	OP2-P-O3'	5.68	117.70	105.20
15	1H	2763	G	N9-C4-C5	-5.68	103.13	105.40
15	14	897	G	C5-C6-N1	5.68	114.34	111.50
15	14	1324	A	N9-C4-C5	-5.68	103.53	105.80
15	14	1819	A	C8-N9-C4	-5.68	103.53	105.80
15	14	2853	C	N3-C4-C5	-5.68	119.63	121.90
39	F5	35	THR	C-N-CA	-5.68	110.37	122.30
1	1G	877	G	N1-C2-N3	5.68	127.31	123.90
1	1G	1747	C	C6-N1-C2	-5.68	118.03	120.30
15	1H	123	G	C6-C5-N7	-5.68	126.99	130.40
15	1H	678	G	C5-C6-O6	5.68	132.01	128.60
15	1H	2408	A	C8-N9-C4	-5.68	103.53	105.80
15	14	2003	A	O5'-P-OP1	5.68	117.52	110.70
52	X1	3	C	O5'-P-OP2	5.68	117.52	110.70
15	1H	138	G	C6-N1-C2	-5.68	121.69	125.10
15	1H	192	U	C2-N3-C4	-5.68	123.59	127.00
15	1H	954	G	N3-C4-N9	-5.68	122.59	126.00
15	1H	2692	G	N1-C6-O6	-5.68	116.49	119.90
15	14	2003	A	OP2-P-O3'	5.68	117.70	105.20
15	14	2435	C	C5-C4-N4	-5.68	116.22	120.20
15	14	2505	G	N1-C2-N2	-5.68	111.09	116.20
26	16	78	G	C5-C6-O6	-5.68	125.19	128.60
1	1G	1594	G	N9-C4-C5	5.68	107.67	105.40
15	1H	970	U	C2-N3-C4	-5.68	123.59	127.00
15	1H	1292	G	C5-C6-O6	-5.68	125.19	128.60
15	14	2343	A	C4-C5-C6	5.68	119.84	117.00
1	13	1851	G	O5'-P-OP1	5.68	117.51	110.70
1	1G	1827	C	N3-C2-O2	-5.68	117.93	121.90
15	1H	120	G	C2-N3-C4	-5.68	109.06	111.90
15	1H	1870	C	O5'-P-OP2	-5.68	100.59	105.70
15	1H	2882	G	C5-C6-N1	-5.68	108.66	111.50
15	14	500	A	OP1-P-OP2	5.68	128.12	119.60
15	14	594	U	C2-N3-C4	-5.68	123.59	127.00
15	14	855	C	O5'-P-OP2	5.68	117.51	110.70
15	14	1173	G	O5'-P-OP2	-5.68	100.59	105.70
15	14	2836	A	N1-C6-N6	5.68	122.01	118.60
1	13	2091	A	C8-N9-C4	5.67	108.07	105.80
15	1H	598	G	C8-N9-C4	5.67	108.67	106.40
15	1H	870	A	C8-N9-C4	-5.67	103.53	105.80
15	1H	876	U	N3-C2-O2	5.67	126.17	122.20
15	1H	1660	C	C2-N3-C4	-5.67	117.06	119.90
15	1H	1666	C	OP1-P-OP2	-5.67	111.09	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2730	G	C5-C6-O6	-5.67	125.19	128.60
15	14	119	G	C8-N9-C1'	-5.67	119.62	127.00
15	14	727	C	C2-N3-C4	-5.67	117.06	119.90
15	14	740	C	OP1-P-OP2	-5.67	111.09	119.60
15	14	1790	G	C8-N9-C4	-5.67	104.13	106.40
15	14	2837	C	C2-N3-C4	-5.67	117.06	119.90
52	X4	26	A	C4-C5-N7	5.67	113.54	110.70
15	1H	1659	A	N1-C6-N6	5.67	122.00	118.60
15	14	1356	A	C2-N3-C4	-5.67	107.76	110.60
15	14	1912	C	N1-C2-O2	-5.67	115.50	118.90
52	X1	42	C	O5'-P-OP2	-5.67	100.59	105.70
1	1G	1130	C	OP2-P-O3'	5.67	117.68	105.20
15	1H	71	U	C5-C4-O4	-5.67	122.50	125.90
15	1H	849	A	N1-C2-N3	5.67	132.14	129.30
15	1H	1328	G	O5'-P-OP1	5.67	117.51	110.70
15	1H	1349	U	O5'-P-OP1	5.67	117.51	110.70
15	1H	1961	A	C6-N1-C2	-5.67	115.20	118.60
15	14	987	G	O5'-P-OP1	5.67	117.51	110.70
15	14	1315	G	C4-C5-N7	5.67	113.07	110.80
15	14	1695	G	N3-C2-N2	5.67	123.87	119.90
15	14	2884	C	C2-N3-C4	-5.67	117.06	119.90
1	13	1094	C	N3-C2-O2	-5.67	117.93	121.90
15	1H	168	G	N1-C6-O6	-5.67	116.50	119.90
15	1H	1592	A	N1-C6-N6	5.67	122.00	118.60
15	14	1616	A	O4'-C1'-N9	-5.67	103.66	108.20
1	13	1503	C	N3-C2-O2	5.67	125.87	121.90
1	1G	994	A	N1-C6-N6	5.67	122.00	118.60
1	1G	1021	G	N9-C4-C5	5.67	107.67	105.40
1	1G	1926	A	C2-N3-C4	-5.67	107.77	110.60
1	1G	2070	G	C4-C5-N7	5.67	113.07	110.80
15	1H	186	A	C6-C5-N7	-5.67	128.33	132.30
15	1H	689	G	C2-N3-C4	5.67	114.73	111.90
15	14	674	G	C4-N9-C1'	5.67	133.87	126.50
15	14	2440	A	C4-C5-N7	-5.67	107.86	110.70
26	1J	80	A	OP2-P-O3'	5.67	117.67	105.20
1	1G	872	G	C4-C5-N7	-5.67	108.53	110.80
15	1H	100	G	OP1-P-O3'	5.67	117.67	105.20
15	1H	191	C	N3-C2-O2	-5.67	117.93	121.90
15	1H	540	A	O4'-C1'-N9	-5.67	103.67	108.20
15	1H	656	G	N1-C6-O6	-5.67	116.50	119.90
15	1H	1694	C	O5'-P-OP1	-5.67	100.60	105.70
15	14	715	G	O5'-P-OP1	5.67	117.50	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	16	43	U	C5-C4-O4	5.67	129.30	125.90
1	13	945	U	N3-C4-C5	-5.67	111.20	114.60
1	13	2140	G	C8-N9-C4	5.67	108.67	106.40
1	1G	978	C	C6-N1-C2	-5.67	118.03	120.30
1	1G	2096	A	C5-C6-N6	-5.67	119.17	123.70
15	1H	634	A	C8-N9-C4	5.67	108.07	105.80
15	1H	1331	U	C5-C6-N1	-5.67	119.87	122.70
15	14	2464	U	C5-C4-O4	-5.67	122.50	125.90
15	14	2742	U	C6-N1-C2	5.67	124.40	121.00
1	13	965	G	O5'-P-OP2	-5.66	100.60	105.70
1	13	1429	G	N9-C4-C5	-5.66	103.14	105.40
15	1H	177	G	N3-C2-N2	5.66	123.86	119.90
15	1H	1414	A	C2-N3-C4	-5.66	107.77	110.60
15	14	853	A	C5-C6-N1	5.66	120.53	117.70
15	14	2078	G	OP1-P-OP2	-5.66	111.11	119.60
52	V4	8	U	P-O3'-C3'	5.66	126.50	119.70
15	1H	2534	U	C5-C4-O4	-5.66	122.50	125.90
30	78	21	ARG	NE-CZ-NH1	5.66	123.13	120.30
15	1H	655	G	C2-N3-C4	-5.66	109.07	111.90
15	1H	2398	G	OP1-P-O3'	5.66	117.66	105.20
15	1H	2725	C	C6-N1-C2	5.66	122.56	120.30
15	14	1369	C	C5-C4-N4	-5.66	116.24	120.20
1	13	1495	A	C6-N1-C2	5.66	122.00	118.60
15	1H	1360	G	O5'-P-OP2	-5.66	100.61	105.70
15	1H	1448	C	N3-C4-C5	-5.66	119.64	121.90
15	1H	1478	G	C5-C6-N1	-5.66	108.67	111.50
15	14	1336	A	OP1-P-OP2	-5.66	111.11	119.60
15	14	1605	G	C4-N9-C1'	5.66	133.85	126.50
15	14	2056	A	N1-C6-N6	5.66	122.00	118.60
15	14	2062	G	C5-N7-C8	5.66	107.13	104.30
15	14	2587	A	O5'-P-OP1	-5.66	100.61	105.70
26	16	101	G	N9-C4-C5	-5.66	103.14	105.40
15	1H	419	G	C5-N7-C8	-5.66	101.47	104.30
15	1H	1436	C	C6-N1-C2	-5.66	118.04	120.30
15	14	1263	G	C8-N9-C4	-5.66	104.14	106.40
15	14	1315	G	N9-C4-C5	-5.66	103.14	105.40
15	14	2524	G	C2-N3-C4	-5.66	109.07	111.90
43	E8	18	ARG	NE-CZ-NH2	-5.66	117.47	120.30
1	1G	991	G	OP2-P-O3'	5.66	117.64	105.20
1	1G	1448	A	C2-N3-C4	-5.66	107.77	110.60
1	1G	1595	C	O5'-P-OP2	-5.66	100.61	105.70
15	1H	430	A	C4-C5-C6	5.66	119.83	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	561	U	OP2-P-O3'	5.66	117.64	105.20
15	1H	673	A	O5'-P-OP2	5.66	117.49	110.70
15	1H	707	C	C2-N3-C4	-5.66	117.07	119.90
15	1H	2007	C	N3-C4-C5	-5.66	119.64	121.90
15	14	1462	G	OP1-P-OP2	-5.66	111.11	119.60
15	14	1663	A	O4'-C1'-N9	5.66	112.72	108.20
15	14	1818	A	C4-C5-N7	5.66	113.53	110.70
15	14	2339	C	C5-C4-N4	-5.66	116.24	120.20
15	1H	1660	C	OP1-P-OP2	-5.65	111.12	119.60
15	1H	2099	U	N1-C2-N3	5.65	118.29	114.90
15	1H	2612	G	C8-N9-C4	-5.65	104.14	106.40
15	14	2690	A	C6-C5-N7	-5.65	128.34	132.30
1	13	1598	A	C6-C5-N7	-5.65	128.34	132.30
1	13	2077	A	O4'-C1'-N9	5.65	112.72	108.20
15	1H	157	U	C2-N1-C1'	5.65	124.48	117.70
15	1H	1012	C	O5'-P-OP1	-5.65	100.61	105.70
15	1H	2009	G	N7-C8-N9	-5.65	110.27	113.10
15	14	137	G	O4'-C1'-N9	5.65	112.72	108.20
15	14	290	G	C5-C6-O6	-5.65	125.21	128.60
15	14	1079	G	C6-C5-N7	-5.65	127.01	130.40
15	14	2883	C	N1-C2-O2	-5.65	115.51	118.90
2	A8	110	LEU	CA-CB-CG	5.65	128.30	115.30
15	1H	17	G	O5'-P-OP2	-5.65	100.61	105.70
15	1H	476	U	C4-C5-C6	5.65	123.09	119.70
15	14	645	C	OP1-P-OP2	-5.65	111.12	119.60
15	14	1176	A	N7-C8-N9	-5.65	110.97	113.80
15	14	1796	A	C6-C5-N7	-5.65	128.34	132.30
15	14	1895	G	N3-C4-N9	-5.65	122.61	126.00
15	14	2084	A	C8-N9-C4	5.65	108.06	105.80
15	14	2459	G	N1-C2-N3	5.65	127.29	123.90
15	14	2833	A	C4-C5-N7	5.65	113.53	110.70
39	J8	2	SER	N-CA-C	5.65	126.26	111.00
51	Y4	41	U	OP1-P-O3'	5.65	117.63	105.20
1	13	2116	A	OP1-P-OP2	5.65	128.07	119.60
15	1H	2090	C	O5'-P-OP2	-5.65	100.62	105.70
1	13	947	G	C6-C5-N7	5.65	133.79	130.40
1	13	1404	G	C6-C5-N7	5.65	133.79	130.40
1	13	1449	U	OP2-P-O3'	5.65	117.62	105.20
15	1H	177	G	O5'-P-OP2	-5.65	100.62	105.70
15	1H	1279	C	C5-C6-N1	-5.65	118.18	121.00
15	1H	1841	G	C5-N7-C8	-5.65	101.48	104.30
15	1H	2090	C	N1-C2-O2	5.65	122.29	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	513	C	OP1-P-OP2	-5.65	111.13	119.60
15	14	1331	U	OP2-P-O3'	5.65	117.62	105.20
15	14	1405	G	O5'-P-OP1	-5.65	100.62	105.70
15	14	2660	G	C8-N9-C4	-5.65	104.14	106.40
15	14	2696	C	N1-C2-N3	5.65	123.15	119.20
1	13	2060	G	OP1-P-OP2	5.65	128.07	119.60
15	1H	2478	C	C2-N3-C4	-5.65	117.08	119.90
15	14	884	A	OP1-P-O3'	5.65	117.62	105.20
15	14	2096	A	N7-C8-N9	-5.65	110.98	113.80
1	13	825	A	C8-N9-C4	-5.64	103.54	105.80
1	13	2128	G	N1-C6-O6	-5.64	116.51	119.90
1	1G	1027	C	C2-N1-C1'	-5.64	112.59	118.80
1	1G	2069	G	C5-C6-N1	-5.64	108.68	111.50
15	1H	145	G	C6-C5-N7	-5.64	127.01	130.40
15	1H	1392	G	N3-C4-C5	-5.64	125.78	128.60
15	1H	1805	C	C4-C5-C6	5.64	120.22	117.40
15	1H	1847	G	N1-C2-N3	5.64	127.29	123.90
15	1H	2459	G	C5-C6-N1	-5.64	108.68	111.50
15	1H	2487	G	N1-C6-O6	-5.64	116.51	119.90
15	1H	2706	C	OP1-P-OP2	5.64	128.07	119.60
15	14	845	C	N3-C4-N4	-5.64	114.05	118.00
15	14	1375	U	N1-C2-N3	5.64	118.29	114.90
15	14	1634	C	N1-C2-O2	5.64	122.29	118.90
26	16	101	G	C8-N9-C4	5.64	108.66	106.40
1	13	1418	U	N3-C2-O2	-5.64	118.25	122.20
15	1H	320	G	C4-C5-N7	5.64	113.06	110.80
15	1H	1346	C	N3-C2-O2	-5.64	117.95	121.90
15	1H	2569	U	N3-C4-O4	5.64	123.35	119.40
15	14	734	A	O4'-C1'-N9	5.64	112.71	108.20
15	14	1955	G	C6-C5-N7	5.64	133.79	130.40
15	1H	1987	C	C5-C4-N4	5.64	124.15	120.20
15	1H	2051	C	C4-C5-C6	5.64	120.22	117.40
15	14	782	G	O5'-P-OP2	-5.64	100.62	105.70
15	14	1337	U	N1-C2-O2	5.64	126.75	122.80
1	13	1322	G	C5-C6-O6	5.64	131.98	128.60
15	1H	1416	A	N1-C2-N3	5.64	132.12	129.30
15	1H	1686	C	OP1-P-O3'	5.64	117.61	105.20
15	1H	1719	A	C2-N3-C4	5.64	113.42	110.60
15	1H	2306	U	N1-C2-O2	-5.64	118.85	122.80
15	1H	2662	U	C6-N1-C2	5.64	124.38	121.00
15	14	807	C	C5-C4-N4	5.64	124.15	120.20
15	14	858	G	N3-C4-N9	5.64	129.38	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1520	G	OP2-P-O3'	5.64	117.61	105.20
15	14	1662	G	C5-C6-O6	-5.64	125.22	128.60
15	1H	1870	C	C2-N3-C4	5.64	122.72	119.90
15	1H	2037	G	N3-C2-N2	-5.64	115.95	119.90
15	14	1290	A	O4'-C1'-N9	5.64	112.71	108.20
15	14	1663	A	N3-C4-N9	-5.64	122.89	127.40
15	14	2408	A	O5'-P-OP2	-5.64	100.63	105.70
15	14	2602	A	C6-N1-C2	5.64	121.98	118.60
1	1G	2052	C	O5'-P-OP2	-5.64	100.63	105.70
15	1H	968	G	O5'-P-OP2	5.64	117.47	110.70
15	1H	1456	C	OP1-P-O3'	5.64	117.60	105.20
15	1H	2470	G	N3-C2-N2	5.64	123.85	119.90
15	14	2398	G	C6-C5-N7	-5.64	127.02	130.40
15	14	2729	A	C4-C5-C6	5.64	119.82	117.00
1	13	669	C	C5-C6-N1	5.63	123.82	121.00
1	1G	1963	C	C5-C6-N1	5.63	123.82	121.00
15	1H	1576	G	OP2-P-O3'	5.63	117.60	105.20
15	1H	1992	C	C6-N1-C2	-5.63	118.05	120.30
15	14	1806	G	C5-C6-O6	5.63	131.98	128.60
3	F8	3	THR	C-N-CA	5.63	135.78	121.70
1	13	2140	G	N3-C2-N2	-5.63	115.96	119.90
15	1H	2305	G	N1-C6-O6	-5.63	116.52	119.90
15	1H	2529	U	C5-C6-N1	-5.63	119.88	122.70
15	14	1318	A	C8-N9-C4	5.63	108.05	105.80
15	14	2363	U	N3-C4-O4	-5.63	115.46	119.40
15	14	2532	C	N1-C2-N3	5.63	123.14	119.20
52	X1	75	C	N3-C4-N4	5.63	121.94	118.00
1	1G	1120	G	N3-C4-N9	5.63	129.38	126.00
1	1G	1210	G	N3-C4-N9	-5.63	122.62	126.00
1	1G	1378	C	C6-N1-C2	-5.63	118.05	120.30
1	1G	1519	C	C5-C6-N1	-5.63	118.19	121.00
15	1H	1338	C	C4-C5-C6	5.63	120.22	117.40
15	14	1655	G	N1-C2-N3	-5.63	120.52	123.90
1	13	1033	G	N1-C6-O6	5.63	123.28	119.90
1	13	1523	A	OP1-P-OP2	-5.63	111.16	119.60
1	13	2125	A	OP2-P-O3'	5.63	117.58	105.20
15	1H	288	G	N1-C2-N3	5.63	127.28	123.90
15	1H	846	C	O5'-P-OP1	5.63	117.45	110.70
15	1H	1430	G	C8-N9-C4	5.63	108.65	106.40
15	1H	1750	A	OP1-P-OP2	5.63	128.04	119.60
15	14	611	A	OP1-P-O3'	5.63	117.58	105.20
15	14	1256	C	N3-C4-C5	5.63	124.15	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1315	G	N3-C2-N2	5.63	123.84	119.90
15	14	2420	G	C5-C6-O6	-5.63	125.22	128.60
26	16	117	G	C2-N3-C4	-5.63	109.09	111.90
1	1G	1261	A	O4'-C1'-N9	5.63	112.70	108.20
15	1H	1464	U	N3-C4-O4	-5.63	115.46	119.40
15	1H	2005	G	N3-C4-C5	-5.63	125.79	128.60
15	1H	2464	U	OP2-P-O3'	5.63	117.58	105.20
15	1H	2662	U	N3-C4-C5	5.63	117.98	114.60
15	1H	2714	C	N3-C4-C5	5.63	124.15	121.90
15	1H	2871	C	C6-N1-C2	5.63	122.55	120.30
15	14	414	G	N3-C4-C5	-5.63	125.79	128.60
15	14	619	U	OP1-P-OP2	5.63	128.04	119.60
15	14	648	A	N1-C6-N6	5.63	121.98	118.60
15	14	992	A	N9-C1'-C2'	5.63	121.31	114.00
15	14	2084	A	C6-N1-C2	-5.63	115.22	118.60
15	14	2282	A	OP1-P-OP2	5.63	128.04	119.60
15	1H	2621	C	N1-C2-O2	-5.62	115.53	118.90
15	1H	2882	G	N3-C4-N9	-5.62	122.62	126.00
15	14	286	U	O5'-P-OP1	-5.62	100.64	105.70
15	14	792	G	N3-C2-N2	5.62	123.84	119.90
1	13	1549	G	C5-C6-O6	5.62	131.97	128.60
1	13	1803	A	N1-C2-N3	5.62	132.11	129.30
1	1G	1319	G	C6-C5-N7	-5.62	127.03	130.40
15	1H	1731	G	N3-C4-N9	-5.62	122.62	126.00
15	14	77	A	C5-N7-C8	-5.62	101.09	103.90
15	14	789	U	N1-C2-O2	5.62	126.74	122.80
15	14	875	U	C4-C5-C6	5.62	123.08	119.70
15	14	1819	A	N7-C8-N9	5.62	116.61	113.80
1	13	1252	C	C5-C6-N1	5.62	123.81	121.00
1	13	2094	G	C5-C6-O6	5.62	131.97	128.60
1	1G	2088	C	N3-C4-N4	5.62	121.94	118.00
15	1H	54	G	C5-N7-C8	-5.62	101.49	104.30
15	1H	206	A	N7-C8-N9	-5.62	110.99	113.80
15	1H	222	G	N1-C6-O6	5.62	123.27	119.90
15	1H	542	A	C4-C5-N7	-5.62	107.89	110.70
15	14	196	U	C2-N3-C4	-5.62	123.63	127.00
15	14	748	A	C6-N1-C2	-5.62	115.23	118.60
15	14	1442	A	O5'-P-OP2	-5.62	100.64	105.70
15	14	2532	C	N3-C2-O2	-5.62	117.97	121.90
15	1H	2612	G	OP2-P-O3'	5.62	117.56	105.20
15	14	1591	G	N3-C4-N9	-5.62	122.63	126.00
15	14	1847	G	C8-N9-C4	5.62	108.65	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	H8	117	LEU	CA-CB-CG	5.62	128.22	115.30
26	1J	58	G	C5-C6-N1	5.62	114.31	111.50
1	13	1252	C	N3-C4-C5	-5.62	119.65	121.90
1	13	1527	C	C6-N1-C2	5.62	122.55	120.30
15	1H	121	G	N1-C2-N3	5.62	127.27	123.90
15	1H	719	A	O4'-C1'-N9	-5.62	103.70	108.20
15	1H	1004	A	C5-C6-N6	-5.62	119.20	123.70
15	1H	1261	A	O5'-P-OP2	5.62	117.44	110.70
15	1H	1716	G	O4'-C1'-N9	5.62	112.69	108.20
15	1H	1980	U	N3-C4-C5	5.62	117.97	114.60
15	1H	2747	G	N1-C6-O6	-5.62	116.53	119.90
15	14	832	A	N9-C1'-C2'	-5.62	105.82	112.00
15	14	2590	C	C5-C4-N4	5.62	124.13	120.20
15	14	2610	G	O5'-P-OP1	-5.62	100.64	105.70
15	14	1923	U	N3-C2-O2	-5.62	118.27	122.20
1	1G	1491	C	N3-C4-C5	-5.62	119.65	121.90
15	1H	874	C	N1-C2-O2	-5.62	115.53	118.90
15	1H	2261	G	C5-N7-C8	5.62	107.11	104.30
15	1H	2590	C	N3-C4-C5	5.62	124.15	121.90
15	14	876	U	C5-C6-N1	-5.62	119.89	122.70
15	14	2377	G	N1-C6-O6	5.62	123.27	119.90
15	14	2445	A	C4-N9-C1'	-5.62	116.19	126.30
15	14	2623	G	N3-C2-N2	-5.62	115.97	119.90
15	14	2700	G	C4-C5-N7	-5.62	108.55	110.80
1	13	2078	C	O5'-P-OP1	-5.61	100.65	105.70
1	1G	1264	G	N1-C6-O6	5.61	123.27	119.90
15	1H	680	A	C5-C6-N6	-5.61	119.21	123.70
15	1H	1913	G	N3-C2-N2	5.61	123.83	119.90
15	1H	2429	G	N9-C4-C5	5.61	107.64	105.40
15	1H	2869	C	C6-N1-C2	-5.61	118.06	120.30
15	14	790	G	OP1-P-OP2	-5.61	111.18	119.60
15	14	1445	U	C5-C6-N1	-5.61	119.89	122.70
15	14	1766	G	C4-N9-C1'	5.61	133.80	126.50
1	1G	1356	G	N1-C2-N2	-5.61	111.15	116.20
15	1H	208	A	N1-C2-N3	5.61	132.11	129.30
15	1H	600	A	C6-C5-N7	-5.61	128.37	132.30
15	1H	2479	C	C5-C6-N1	-5.61	118.19	121.00
15	1H	2604	A	C6-N1-C2	-5.61	115.23	118.60
15	14	1449	G	OP2-P-O3'	5.61	117.55	105.20
15	14	1789	A	N9-C4-C5	5.61	108.05	105.80
15	14	2243	G	C8-N9-C1'	-5.61	119.70	127.00
15	14	2416	U	N1-C2-O2	5.61	126.73	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	1J	78	G	C5-C6-O6	-5.61	125.23	128.60
15	1H	1352	G	C5-C6-O6	5.61	131.97	128.60
15	1H	2283	A	C6-N1-C2	5.61	121.97	118.60
15	1H	2727	U	C2-N1-C1'	5.61	124.43	117.70
15	14	473	C	N3-C4-C5	-5.61	119.66	121.90
15	14	1670	U	N1-C2-N3	5.61	118.27	114.90
1	13	1078	U	C6-N1-C2	-5.61	117.64	121.00
1	1G	1568	G	N3-C2-N2	-5.61	115.97	119.90
15	14	1690	C	O5'-P-OP1	5.61	117.43	110.70
15	14	2263	C	N3-C4-N4	-5.61	114.07	118.00
15	14	2333	G	O5'-P-OP1	-5.61	100.65	105.70
1	13	884	A	OP2-P-O3'	5.61	117.54	105.20
1	13	2015	G	OP1-P-O3'	5.61	117.54	105.20
1	1G	955	C	N1-C2-O2	5.61	122.27	118.90
1	1G	1147	C	N3-C2-O2	-5.61	117.97	121.90
15	1H	412	U	N3-C4-C5	5.61	117.96	114.60
15	1H	658	A	N7-C8-N9	-5.61	111.00	113.80
15	1H	906	C	O5'-P-OP1	-5.61	100.65	105.70
15	1H	1869	G	C2-N3-C4	5.61	114.70	111.90
15	1H	2513	C	N1-C2-O2	-5.61	115.54	118.90
15	1H	2572	G	N3-C4-C5	-5.61	125.80	128.60
15	14	1478	G	C8-N9-C4	5.61	108.64	106.40
15	14	2425	G	C5'-C4'-O4'	5.61	115.83	109.10
30	78	50	ARG	NE-CZ-NH2	5.61	123.10	120.30
15	1H	2003	A	N1-C6-N6	-5.61	115.24	118.60
15	1H	2315	G	O5'-P-OP2	5.61	117.43	110.70
26	16	16	U	N1-C2-N3	5.61	118.26	114.90
1	13	1427	G	OP2-P-O3'	5.60	117.53	105.20
1	13	1591	A	C4-C5-N7	5.60	113.50	110.70
15	1H	116	A	C4-C5-C6	5.60	119.80	117.00
15	1H	1178	U	C5-C4-O4	-5.60	122.54	125.90
15	1H	1232	G	N3-C2-N2	-5.60	115.98	119.90
15	1H	1435	C	N1-C2-O2	-5.60	115.54	118.90
15	1H	2509	G	C4-C5-N7	-5.60	108.56	110.80
15	14	1874	G	N3-C2-N2	-5.60	115.98	119.90
1	13	884	A	C5-N7-C8	-5.60	101.10	103.90
1	13	1222	G	N3-C2-N2	-5.60	115.98	119.90
1	1G	892	G	O5'-P-OP1	-5.60	100.66	105.70
15	14	42	G	C4-C5-N7	5.60	113.04	110.80
15	14	1792	G	C8-N9-C4	5.60	108.64	106.40
26	16	12	C	O5'-P-OP1	5.60	117.42	110.70
1	13	1497	G	N1-C6-O6	-5.60	116.54	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1532	A	O5'-P-OP1	-5.60	100.66	105.70
12	Q8	56	GLU	CA-CB-CG	5.60	125.72	113.40
15	1H	826	A	N1-C6-N6	-5.60	115.24	118.60
15	14	606	C	N3-C4-N4	-5.60	114.08	118.00
26	16	75	A	O5'-P-OP1	5.60	117.42	110.70
1	13	1198	C	O5'-P-OP1	-5.60	100.66	105.70
1	1G	697	A	O5'-P-OP1	-5.60	100.66	105.70
1	1G	1326	U	O5'-P-OP2	-5.60	100.66	105.70
15	1H	198	C	C4-C5-C6	5.60	120.20	117.40
15	14	149	A	N1-C6-N6	5.60	121.96	118.60
15	14	322	C	C6-N1-C2	-5.60	118.06	120.30
15	14	879	G	N1-C2-N2	-5.60	111.16	116.20
26	16	43	U	C2-N3-C4	-5.60	123.64	127.00
1	13	1046	U	C5-C6-N1	5.60	125.50	122.70
1	1G	2033	G	N7-C8-N9	-5.60	110.30	113.10
15	1H	173	C	N3-C2-O2	-5.60	117.98	121.90
15	1H	1388	G	N3-C4-N9	5.60	129.36	126.00
15	1H	1449	G	N9-C4-C5	5.60	107.64	105.40
15	1H	1619	A	C2-N3-C4	-5.60	107.80	110.60
15	14	358	G	N7-C8-N9	5.60	115.90	113.10
15	14	1839	U	N1-C2-N3	5.60	118.26	114.90
15	14	2690	A	C2-N3-C4	-5.60	107.80	110.60
26	1J	91	G	N3-C4-N9	5.60	129.36	126.00
15	1H	851	A	N1-C2-N3	-5.60	126.50	129.30
15	1H	2607	G	OP2-P-O3'	5.60	117.51	105.20
15	14	690	C	N3-C2-O2	-5.60	117.98	121.90
1	1G	1513	G	N7-C8-N9	-5.59	110.30	113.10
15	1H	25	U	OP1-P-O3'	5.59	117.51	105.20
15	1H	332	G	N1-C6-O6	5.59	123.26	119.90
15	1H	2284	A	C8-N9-C4	5.59	108.04	105.80
15	14	1734	C	C6-N1-C2	5.59	122.54	120.30
15	14	2466	A	OP2-P-O3'	5.59	117.51	105.20
26	1J	16	U	O5'-P-OP2	-5.59	100.66	105.70
32	39	24	LEU	CA-CB-CG	5.59	128.17	115.30
1	13	835	U	N3-C2-O2	-5.59	118.28	122.20
1	13	1353	G	OP1-P-O3'	5.59	117.50	105.20
1	13	2095	U	C5-C6-N1	-5.59	119.90	122.70
15	1H	1358	G	C5-N7-C8	5.59	107.10	104.30
15	1H	2295	G	C4-C5-N7	-5.59	108.56	110.80
15	1H	2397	G	N1-C2-N2	-5.59	111.17	116.20
15	14	427	G	C8-N9-C4	5.59	108.64	106.40
15	1H	792	G	C6-N1-C2	-5.59	121.75	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1655	G	N7-C8-N9	-5.59	110.30	113.10
15	1H	2245	G	C2-N3-C4	5.59	114.70	111.90
15	1H	2349	G	OP2-P-O3'	5.59	117.50	105.20
15	14	1996	A	C5-C6-N1	5.59	120.50	117.70
15	14	2249	G	N1-C6-O6	-5.59	116.55	119.90
1	13	1089	C	N3-C2-O2	-5.59	117.99	121.90
1	1G	958	G	C8-N9-C4	-5.59	104.16	106.40
15	1H	355	A	N7-C8-N9	5.59	116.59	113.80
15	1H	737	U	N1-C2-O2	-5.59	118.89	122.80
15	14	760	G	C4-C5-N7	5.59	113.04	110.80
15	14	1457	C	N3-C4-C5	-5.59	119.66	121.90
15	14	2734	G	C6-C5-N7	-5.59	127.05	130.40
15	14	2742	U	N3-C2-O2	-5.59	118.29	122.20
1	13	1259	G	C8-N9-C4	-5.59	104.17	106.40
1	13	1998	G	C5-C6-N1	-5.59	108.71	111.50
1	1G	770	A	C5-C6-N6	-5.59	119.23	123.70
15	1H	2306	U	C4-C5-C6	5.59	123.05	119.70
15	14	1280	G	C5-C6-N1	-5.59	108.71	111.50
15	14	1478	G	C5-N7-C8	5.59	107.09	104.30
15	14	2430	G	C5-C6-O6	-5.59	125.25	128.60
1	13	1281	U	C5-C6-N1	5.59	125.49	122.70
1	13	1993	G	C4-C5-N7	5.59	113.03	110.80
1	1G	907	G	O4'-C1'-N9	-5.59	103.73	108.20
1	1G	1518	G	C5-C6-O6	-5.59	125.25	128.60
15	14	662	C	N3-C4-C5	-5.59	119.67	121.90
15	14	804	C	C5-C6-N1	-5.59	118.21	121.00
15	14	1180	A	N1-C2-N3	5.59	132.09	129.30
15	14	2243	G	C4-C5-C6	5.59	122.15	118.80
15	14	2335	A	P-O3'-C3'	5.59	126.40	119.70
15	14	2374	C	C5-C6-N1	-5.59	118.21	121.00
1	13	1864	C	C6-N1-C2	-5.58	118.07	120.30
15	1H	483	C	N1-C2-O2	-5.58	115.55	118.90
15	1H	2109	C	N3-C4-N4	-5.58	114.09	118.00
15	1H	2458	C	C5-C4-N4	-5.58	116.29	120.20
15	14	860	U	N3-C4-C5	-5.58	111.25	114.60
15	14	882	U	N3-C4-O4	5.58	123.31	119.40
15	14	1369	C	N3-C4-N4	5.58	121.91	118.00
1	13	1215	C	C6-N1-C2	5.58	122.53	120.30
15	1H	742	C	C6-N1-C2	-5.58	118.07	120.30
15	1H	1179	G	N1-C6-O6	-5.58	116.55	119.90
15	1H	2630	U	C5-C6-N1	5.58	125.49	122.70
15	14	976	G	C5-C6-O6	-5.58	125.25	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1732	G	N1-C6-O6	-5.58	116.55	119.90
15	14	2103	C	C5-C4-N4	5.58	124.11	120.20
15	14	2724	G	C5-C6-N1	5.58	114.29	111.50
1	1G	728	U	P-O3'-C3'	5.58	126.40	119.70
15	1H	210	G	C4-C5-N7	-5.58	108.57	110.80
15	1H	1548	C	C6-N1-C1'	5.58	127.50	120.80
15	14	888	U	N3-C4-O4	-5.58	115.49	119.40
15	14	2290	C	C5'-C4'-O4'	-5.58	102.40	109.10
26	1J	20	G	C2-N3-C4	-5.58	109.11	111.90
1	1G	1242	C	C4-C5-C6	-5.58	114.61	117.40
1	13	1227	U	N3-C4-O4	5.58	123.31	119.40
15	1H	1430	G	OP2-P-O3'	5.58	117.47	105.20
15	1H	2333	G	O4'-C1'-N9	5.58	112.66	108.20
15	14	24	G	C2-N3-C4	-5.58	109.11	111.90
15	14	529	A	C2-N3-C4	-5.58	107.81	110.60
15	14	732	C	N1-C2-N3	5.58	123.10	119.20
15	14	1276	G	C4-C5-N7	-5.58	108.57	110.80
15	14	2047	U	C2-N1-C1'	5.58	124.39	117.70
15	14	2264	U	C5-C6-N1	5.58	125.49	122.70
15	14	2434	U	N3-C4-C5	-5.58	111.25	114.60
15	14	2592	A	C4-C5-C6	5.58	119.79	117.00
26	16	33	C	O5'-P-OP2	-5.58	100.68	105.70
52	W4	61	C	C6-N1-C2	-5.58	118.07	120.30
15	1H	1840	C	C2-N1-C1'	-5.58	112.67	118.80
15	1H	1937	A	C8-N9-C4	5.58	108.03	105.80
15	14	517	G	C5-N7-C8	-5.58	101.51	104.30
15	14	1290	A	N3-C4-C5	5.58	130.70	126.80
15	14	2448	A	C6-C5-N7	-5.58	128.40	132.30
26	1J	90	C	C5-C6-N1	5.58	123.79	121.00
1	13	2042	U	C2-N3-C4	-5.58	123.65	127.00
1	1G	891	A	P-O3'-C3'	5.58	126.39	119.70
15	1H	2751	G	N1-C6-O6	-5.58	116.55	119.90
15	14	539	G	C5-C6-O6	5.58	131.94	128.60
15	14	599	C	C2-N1-C1'	-5.58	112.67	118.80
15	14	1543	A	C5-C6-N6	5.58	128.16	123.70
15	14	2097	G	OP1-P-OP2	-5.58	111.24	119.60
15	14	2456	C	C5-C4-N4	5.58	124.10	120.20
52	X4	67	C	C6-N1-C2	5.58	122.53	120.30
1	13	1261	A	C2-N3-C4	5.57	113.39	110.60
1	13	1397	A	C2-N3-C4	5.57	113.39	110.60
1	13	1611	G	C8-N9-C4	-5.57	104.17	106.40
15	1H	1059	G	C8-N9-C1'	-5.57	119.75	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1278	G	C2-N3-C4	-5.57	109.11	111.90
15	1H	1829	C	OP1-P-OP2	5.57	127.96	119.60
15	1H	2065	C	O5'-P-OP1	-5.57	100.69	105.70
15	14	535	G	OP1-P-OP2	5.57	127.96	119.60
15	14	1847	G	C6-C5-N7	5.57	133.75	130.40
1	13	1172	C	OP2-P-O3'	5.57	117.46	105.20
15	1H	146	G	N9-C4-C5	-5.57	103.17	105.40
15	1H	185	A	OP2-P-O3'	5.57	117.46	105.20
15	1H	1298	U	N3-C4-C5	5.57	117.94	114.60
15	1H	1772	G	C5-C6-O6	-5.57	125.26	128.60
15	14	595	G	C4-N9-C1'	5.57	133.74	126.50
1	1G	699	A	N9-C4-C5	-5.57	103.57	105.80
1	1G	774	A	C4-C5-N7	5.57	113.49	110.70
15	1H	621	G	N3-C2-N2	-5.57	116.00	119.90
15	1H	2048	G	C5-C6-N1	-5.57	108.71	111.50
15	1H	2301	A	N9-C1'-C2'	5.57	121.24	114.00
15	14	486	G	O5'-P-OP2	-5.57	100.69	105.70
15	14	565	G	C8-N9-C4	-5.57	104.17	106.40
15	14	857	G	N3-C4-N9	5.57	129.34	126.00
15	14	1992	C	N1-C2-O2	5.57	122.24	118.90
15	1H	1928	G	O5'-P-OP2	-5.57	100.69	105.70
15	14	690	C	C5-C6-N1	5.57	123.78	121.00
15	14	1577	A	C6-C5-N7	-5.57	128.40	132.30
15	14	2023	G	C2-N3-C4	-5.57	109.11	111.90
15	14	2057	G	C8-N9-C4	5.57	108.63	106.40
15	14	2296	C	N3-C4-N4	5.57	121.90	118.00
1	13	1171	G	N3-C2-N2	-5.57	116.00	119.90
1	13	2114	G	O5'-P-OP1	5.57	117.38	110.70
1	1G	747	G	C5-C6-O6	-5.57	125.26	128.60
1	1G	1054	G	C8-N9-C4	5.57	108.63	106.40
15	1H	58	U	C6-N1-C2	-5.57	117.66	121.00
15	1H	253	C	C2-N3-C4	5.57	122.68	119.90
15	1H	722	C	C2-N3-C4	-5.57	117.12	119.90
15	1H	2277	U	N3-C2-O2	-5.57	118.30	122.20
15	1H	2509	G	C5-C6-N1	-5.57	108.72	111.50
15	14	111	G	N3-C4-N9	-5.57	122.66	126.00
15	14	592	A	C8-N9-C4	5.57	108.03	105.80
15	14	1376	C	C6-N1-C2	-5.57	118.07	120.30
15	14	1692	G	O5'-P-OP1	-5.57	100.69	105.70
15	14	1754	G	C5-C6-O6	-5.57	125.26	128.60
15	14	1959	C	C5-C6-N1	-5.57	118.22	121.00
15	14	2595	U	N3-C4-C5	5.57	117.94	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	16	40	C	OP2-P-O3'	5.57	117.45	105.20
1	13	1042	C	C2-N3-C4	-5.57	117.12	119.90
1	1G	2047	G	C8-N9-C4	-5.57	104.17	106.40
15	1H	412	U	C2-N3-C4	-5.57	123.66	127.00
15	1H	811	U	C6-N1-C1'	-5.57	113.41	121.20
15	1H	1059	G	OP2-P-O3'	5.57	117.44	105.20
15	1H	1340	C	N3-C4-C5	5.57	124.13	121.90
15	1H	2006	A	C6-C5-N7	-5.57	128.40	132.30
15	1H	2654	A	C8-N9-C4	-5.57	103.57	105.80
15	14	219	A	O4'-C1'-N9	5.57	112.65	108.20
15	14	2117	U	N3-C4-O4	-5.57	115.50	119.40
15	14	2514	C	C6-N1-C2	-5.57	118.07	120.30
15	14	2677	A	C8-N9-C4	5.57	108.03	105.80
15	1H	192	U	N3-C2-O2	5.56	126.09	122.20
15	1H	765	A	C8-N9-C4	-5.56	103.57	105.80
15	1H	829	G	C5-C6-O6	5.56	131.94	128.60
15	14	1849	A	C2-N3-C4	5.56	113.38	110.60
15	14	2024	C	N3-C4-N4	5.56	121.89	118.00
15	14	2660	G	N3-C4-N9	-5.56	122.66	126.00
1	1G	936	C	C6-N1-C2	5.56	122.53	120.30
15	1H	811	U	OP1-P-OP2	-5.56	111.26	119.60
15	1H	1816	C	C2-N3-C4	-5.56	117.12	119.90
15	1H	1983	C	N3-C2-O2	5.56	125.79	121.90
15	1H	2075	C	C2-N1-C1'	5.56	124.92	118.80
15	1H	2264	U	N1-C2-O2	-5.56	118.91	122.80
15	1H	2554	C	C2-N3-C4	-5.56	117.12	119.90
15	14	423	U	O5'-P-OP2	-5.56	100.69	105.70
15	14	736	C	OP2-P-O3'	5.56	117.44	105.20
15	14	1939	C	O4'-C1'-N1	5.56	112.65	108.20
15	14	2568	G	C5-C6-N1	5.56	114.28	111.50
15	1H	779	C	C5-C6-N1	-5.56	118.22	121.00
15	1H	1738	U	N3-C4-C5	5.56	117.94	114.60
15	1H	1805	C	N1-C2-N3	5.56	123.09	119.20
15	14	280	G	N1-C6-O6	5.56	123.24	119.90
15	14	2256	A	C5-N7-C8	5.56	106.68	103.90
15	14	2385	G	N7-C8-N9	-5.56	110.32	113.10
1	13	1428	G	C8-N9-C4	5.56	108.62	106.40
15	1H	207	G	C4-C5-N7	-5.56	108.58	110.80
15	1H	2333	G	N9-C4-C5	5.56	107.62	105.40
11	C5	76	CYS	CA-CB-SG	5.56	124.00	114.00
15	14	197	A	C8-N9-C4	5.56	108.02	105.80
15	14	2349	G	N9-C4-C5	-5.56	103.18	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	2462	G	C8-N9-C1'	5.56	134.23	127.00
1	13	1069	G	N3-C4-C5	5.56	131.38	128.60
1	13	2121	U	N3-C2-O2	-5.56	118.31	122.20
1	1G	971	C	C4-C5-C6	-5.56	114.62	117.40
15	1H	133	G	OP2-P-O3'	5.56	117.43	105.20
15	1H	627	G	C8-N9-C4	5.56	108.62	106.40
15	14	493	G	O5'-P-OP1	-5.56	100.70	105.70
26	1J	74	G	N9-C4-C5	-5.56	103.18	105.40
26	1J	119	G	C8-N9-C4	5.56	108.62	106.40
44	1E	196	LEU	CA-CB-CG	5.56	128.08	115.30
47	59	93	GLY	N-CA-C	5.56	126.99	113.10
1	13	1401	U	N3-C2-O2	-5.55	118.31	122.20
1	13	1455	C	C6-N1-C2	-5.55	118.08	120.30
1	1G	1383	C	C2-N1-C1'	5.55	124.91	118.80
15	1H	1473	G	C5-C6-O6	-5.55	125.27	128.60
15	1H	1609	G	C5-C6-N1	-5.55	108.72	111.50
15	1H	1922	G	C4-C5-C6	5.55	122.13	118.80
15	1H	2273	C	OP1-P-O3'	5.55	117.42	105.20
15	14	41	C	O5'-P-OP2	-5.55	100.70	105.70
15	14	1958	G	C8-N9-C1'	-5.55	119.78	127.00
1	1G	1437	C	N3-C4-C5	5.55	124.12	121.90
15	1H	1039	C	C2-N3-C4	-5.55	117.12	119.90
15	1H	1493	G	N1-C6-O6	-5.55	116.57	119.90
15	14	2285	G	C4-C5-N7	5.55	113.02	110.80
15	14	2341	C	C6-N1-C2	-5.55	118.08	120.30
1	1G	775	C	N3-C4-N4	5.55	121.89	118.00
1	1G	1380	U	C5-C6-N1	-5.55	119.92	122.70
4	19	272	ALA	C-N-CA	5.55	135.58	121.70
15	1H	666	U	C5-C4-O4	5.55	129.23	125.90
15	1H	707	C	N1-C2-O2	5.55	122.23	118.90
15	1H	1244	C	C2-N3-C4	-5.55	117.12	119.90
15	1H	1863	A	N3-C4-N9	-5.55	122.96	127.40
15	1H	2015	C	C2-N3-C4	-5.55	117.12	119.90
15	1H	2600	U	C5-C6-N1	-5.55	119.92	122.70
15	14	858	G	O5'-P-OP2	-5.55	100.70	105.70
15	14	2245	G	N1-C6-O6	-5.55	116.57	119.90
26	1J	67	C	O5'-P-OP2	5.55	117.36	110.70
1	13	1860	G	O5'-P-OP2	-5.55	100.70	105.70
1	1G	1319	G	N3-C4-N9	-5.55	122.67	126.00
15	1H	183	U	C5-C4-O4	5.55	129.23	125.90
15	1H	492	U	C6-N1-C2	5.55	124.33	121.00
15	1H	548	G	N3-C4-C5	-5.55	125.83	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	819	G	N3-C4-N9	5.55	129.33	126.00
15	14	733	G	C5-N7-C8	5.55	107.08	104.30
15	14	1021	G	O5'-P-OP2	-5.55	100.70	105.70
15	14	1841	G	N7-C8-N9	-5.55	110.33	113.10
1	13	2141	A	OP1-P-OP2	5.55	127.92	119.60
1	1G	712	G	OP1-P-OP2	5.55	127.92	119.60
15	1H	624	G	C2-N3-C4	5.55	114.67	111.90
15	1H	1684	A	N1-C2-N3	5.55	132.07	129.30
15	14	139	A	C2-N3-C4	-5.55	107.83	110.60
15	14	730	G	C6-N1-C2	-5.55	121.77	125.10
15	14	2052	G	N1-C2-N3	5.55	127.23	123.90
1	13	2101	C	C6-N1-C2	5.55	122.52	120.30
1	1G	892	G	N3-C4-C5	5.55	131.37	128.60
15	1H	833	A	C5-N7-C8	5.55	106.67	103.90
15	1H	1185	G	C5-C6-N1	-5.55	108.73	111.50
15	1H	1381	G	C8-N9-C1'	-5.55	119.79	127.00
15	1H	2008	C	C4-C5-C6	5.55	120.17	117.40
15	1H	2314	G	N1-C6-O6	5.55	123.23	119.90
15	1H	2418	C	N3-C4-N4	5.55	121.88	118.00
15	14	249	G	C6-C5-N7	-5.55	127.07	130.40
15	14	777	G	N1-C6-O6	-5.55	116.57	119.90
15	14	1939	C	C2-N1-C1'	5.55	124.90	118.80
15	14	2081	G	N9-C4-C5	-5.55	103.18	105.40
15	14	2271	G	N9-C4-C5	-5.55	103.18	105.40
15	14	2748	G	C5-C6-N1	5.55	114.27	111.50
1	1G	1165	C	C5-C6-N1	5.54	123.77	121.00
15	1H	434	G	O5'-P-OP2	5.54	117.36	110.70
15	1H	2609	C	C2-N1-C1'	5.54	124.90	118.80
15	14	1036	A	C6-C5-N7	-5.54	128.42	132.30
15	14	1381	G	N7-C8-N9	5.54	115.87	113.10
1	13	1506	C	C6-N1-C2	-5.54	118.08	120.30
1	1G	1367	C	N1-C2-O2	-5.54	115.57	118.90
15	1H	249	G	C2-N3-C4	-5.54	109.13	111.90
15	1H	373	G	N1-C6-O6	5.54	123.23	119.90
15	14	789	U	OP1-P-O3'	-5.54	93.01	105.20
15	14	1346	C	C5-C4-N4	5.54	124.08	120.20
15	14	2380	G	O5'-P-OP2	-5.54	100.71	105.70
1	1G	2147	C	O5'-P-OP1	-5.54	100.71	105.70
15	1H	1949	C	N1-C2-O2	-5.54	115.58	118.90
15	1H	2326	A	C4-C5-N7	5.54	113.47	110.70
15	1H	2378	C	OP2-P-O3'	5.54	117.39	105.20
15	1H	2603	G	C5-C6-O6	5.54	131.92	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1191	A	N1-C2-N3	5.54	132.07	129.30
15	14	1440	U	N3-C4-O4	5.54	123.28	119.40
15	14	1914	A	C6-N1-C2	-5.54	115.28	118.60
15	14	1956	U	OP1-P-OP2	-5.54	111.29	119.60
52	V1	76	A	N1-C2-N3	5.54	132.07	129.30
1	13	1832	U	N1-C2-N3	5.54	118.22	114.90
1	1G	1400	G	C2-N3-C4	-5.54	109.13	111.90
15	1H	1810	G	O5'-P-OP1	5.54	117.35	110.70
15	14	2421	U	C5-C4-O4	5.54	129.22	125.90
1	1G	1576	G	O5'-P-OP2	-5.54	100.72	105.70
15	1H	1316	U	C2-N3-C4	-5.54	123.68	127.00
15	1H	1836	A	C2-N3-C4	-5.54	107.83	110.60
15	14	69	G	C8-N9-C4	-5.54	104.19	106.40
15	14	2351	A	C5-C6-N6	5.54	128.13	123.70
15	14	2615	A	C8-N9-C4	-5.54	103.58	105.80
15	14	2727	U	O4'-C1'-N1	5.54	112.63	108.20
1	13	1152	A	N1-C2-N3	5.54	132.07	129.30
1	13	1939	G	C5-C6-O6	-5.54	125.28	128.60
1	1G	753	U	N3-C4-O4	-5.54	115.53	119.40
15	1H	81	G	N9-C4-C5	5.54	107.61	105.40
15	1H	618	G	OP2-P-O3'	5.54	117.38	105.20
15	1H	1985	A	N1-C2-N3	5.54	132.07	129.30
15	14	346	G	C5-C6-N1	5.54	114.27	111.50
15	14	490	C	C6-N1-C2	-5.54	118.09	120.30
15	14	1929	G	O5'-P-OP2	-5.54	100.72	105.70
15	14	2061	C	N3-C2-O2	-5.54	118.03	121.90
15	14	2081	G	C5-N7-C8	-5.54	101.53	104.30
1	1G	1319	G	N3-C4-C5	5.53	131.37	128.60
15	1H	222	G	C4-N9-C1'	5.53	133.69	126.50
15	1H	716	U	OP2-P-O3'	5.53	117.38	105.20
15	1H	2345	G	OP1-P-OP2	5.53	127.90	119.60
15	1H	2509	G	N1-C2-N2	5.53	121.18	116.20
15	14	212	A	N1-C6-N6	-5.53	115.28	118.60
15	14	539	G	O4'-C1'-N9	5.53	112.63	108.20
15	14	721	C	OP1-P-OP2	-5.53	111.30	119.60
15	14	1327	A	N9-C4-C5	5.53	108.01	105.80
15	14	1913	G	N1-C6-O6	-5.53	116.58	119.90
15	14	2869	C	C5-C6-N1	5.53	123.77	121.00
14	3E	194	LEU	CA-CB-CG	-5.53	102.58	115.30
15	1H	973	C	OP2-P-O3'	5.53	117.37	105.20
15	14	1832	U	C5-C6-N1	-5.53	119.93	122.70
1	13	1418	U	N3-C4-C5	-5.53	111.28	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	23	G	N3-C4-N9	-5.53	122.68	126.00
15	1H	408	U	C2-N3-C4	-5.53	123.68	127.00
15	1H	1318	A	C5-N7-C8	-5.53	101.14	103.90
15	1H	1832	U	C2-N3-C4	-5.53	123.68	127.00
15	1H	2041	U	C6-N1-C2	5.53	124.32	121.00
15	1H	2409	C	C6-N1-C2	-5.53	118.09	120.30
15	14	481	C	N3-C4-C5	5.53	124.11	121.90
15	14	1656	C	C4-C5-C6	-5.53	114.64	117.40
15	14	1986	C	N1-C2-O2	-5.53	115.58	118.90
15	14	2577	U	C4-C5-C6	5.53	123.02	119.70
15	14	2717	U	N3-C2-O2	-5.53	118.33	122.20
26	16	118	G	C4-N9-C1'	5.53	133.69	126.50
52	V1	1	G	C2-N3-C4	5.53	114.67	111.90
1	1G	2149	G	C5-N7-C8	-5.53	101.54	104.30
15	1H	1723	U	C5-C6-N1	-5.53	119.94	122.70
15	1H	2462	G	N1-C6-O6	5.53	123.22	119.90
15	14	2088	C	OP1-P-O3'	-5.53	93.04	105.20
1	13	1707	G	C4-C5-N7	-5.53	108.59	110.80
1	13	2091	A	C6-N1-C2	-5.53	115.28	118.60
1	1G	1358	A	C8-N9-C4	-5.53	103.59	105.80
1	1G	2110	G	C6-C5-N7	-5.53	127.08	130.40
15	1H	227	C	C5-C4-N4	-5.53	116.33	120.20
15	1H	914	C	O5'-P-OP2	5.53	117.33	110.70
15	1H	967	G	O5'-P-OP1	-5.53	100.72	105.70
15	1H	1925	A	N3-C4-C5	-5.53	122.93	126.80
15	14	1576	G	N3-C4-C5	5.53	131.36	128.60
1	13	1382	A	OP1-P-O3'	5.53	117.36	105.20
1	1G	1163	U	N1-C2-O2	5.53	126.67	122.80
1	1G	1299	G	C4-C5-N7	-5.53	108.59	110.80
15	1H	179	G	N9-C4-C5	-5.53	103.19	105.40
15	1H	1021	G	OP1-P-OP2	5.53	127.89	119.60
15	1H	1244	C	O5'-P-OP2	5.53	117.33	110.70
1	13	971	C	N3-C2-O2	-5.52	118.03	121.90
15	1H	855	C	N3-C4-C5	5.52	124.11	121.90
15	14	790	G	O5'-P-OP2	-5.52	100.73	105.70
15	14	2602	A	N7-C8-N9	5.52	116.56	113.80
15	1H	2739	C	N3-C4-N4	-5.52	114.14	118.00
15	14	807	C	N1-C2-O2	5.52	122.21	118.90
15	14	1059	G	N3-C4-N9	-5.52	122.69	126.00
15	14	1279	C	O5'-P-OP1	5.52	117.33	110.70
15	14	1649	C	N3-C4-N4	-5.52	114.13	118.00
15	14	1696	C	C2-N3-C4	-5.52	117.14	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1999	C	O5'-P-OP1	5.52	117.33	110.70
15	14	2070	C	OP1-P-OP2	5.52	127.88	119.60
1	13	1488	A	C4-C5-N7	5.52	113.46	110.70
15	1H	1066	C	C6-N1-C2	5.52	122.51	120.30
15	1H	2781	A	N1-C6-N6	-5.52	115.29	118.60
15	14	720	C	N1-C2-N3	5.52	123.06	119.20
15	14	1450	G	C5-C6-O6	5.52	131.91	128.60
15	1H	957	A	C2-N3-C4	5.52	113.36	110.60
15	1H	1097	C	N3-C2-O2	-5.52	118.04	121.90
15	1H	1440	U	OP1-P-O3'	5.52	117.34	105.20
15	1H	1988	U	N1-C2-O2	-5.52	118.94	122.80
15	1H	2609	C	N1-C2-N3	5.52	123.06	119.20
15	14	658	A	C5-N7-C8	5.52	106.66	103.90
15	14	918	G	O5'-P-OP2	-5.52	100.73	105.70
15	14	1282	C	C2-N3-C4	5.52	122.66	119.90
15	14	1327	A	C2-N3-C4	-5.52	107.84	110.60
15	14	1359	G	O4'-C1'-N9	5.52	112.62	108.20
15	14	1963	A	N9-C4-C5	-5.52	103.59	105.80
15	14	2415	G	OP2-P-O3'	5.52	117.34	105.20
15	14	2520	G	OP1-P-OP2	-5.52	111.32	119.60
1	13	1054	G	O4'-C1'-N9	5.52	112.61	108.20
1	13	1232	U	O5'-P-OP2	5.52	117.32	110.70
1	1G	1057	G	C6-C5-N7	-5.52	127.09	130.40
1	1G	1847	G	N1-C6-O6	5.52	123.21	119.90
15	1H	1803	G	N9-C4-C5	5.52	107.61	105.40
15	1H	2719	C	O5'-P-OP2	-5.52	100.73	105.70
15	14	1683	G	N7-C8-N9	5.52	115.86	113.10
15	14	2231	G	C5-N7-C8	-5.52	101.54	104.30
52	X1	45	U	N1-C2-N3	5.52	118.21	114.90
15	1H	476	U	C5-C6-N1	-5.52	119.94	122.70
15	1H	484	C	N3-C2-O2	5.52	125.76	121.90
15	1H	842	A	C2-N3-C4	5.52	113.36	110.60
15	1H	2019	C	O5'-P-OP2	-5.52	100.74	105.70
15	14	52	A	N1-C2-N3	5.52	132.06	129.30
1	13	1462	U	N3-C4-O4	-5.51	115.54	119.40
15	1H	916	C	C5-C6-N1	-5.51	118.24	121.00
15	1H	1186	G	C6-C5-N7	-5.51	127.09	130.40
15	1H	1994	A	C4-C5-N7	-5.51	107.94	110.70
15	1H	2084	A	OP2-P-O3'	5.51	117.33	105.20
15	1H	2087	A	N1-C6-N6	5.51	121.91	118.60
15	14	959	A	C2-N3-C4	5.51	113.36	110.60
15	14	1373	G	N7-C8-N9	5.51	115.86	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1501	C	C2-N3-C4	5.51	122.66	119.90
15	14	2722	G	N1-C2-N2	-5.51	111.24	116.20
39	J8	40	ARG	NE-CZ-NH1	5.51	123.06	120.30
1	13	1429	G	C4-C5-N7	5.51	113.00	110.80
1	13	2113	C	OP1-P-O3'	-5.51	93.07	105.20
15	1H	2048	G	C6-C5-N7	-5.51	127.09	130.40
15	14	1179	G	O4'-C1'-N9	5.51	112.61	108.20
15	14	1970	G	N9-C4-C5	-5.51	103.19	105.40
1	13	1680	U	N3-C2-O2	-5.51	118.34	122.20
1	1G	1042	C	O5'-P-OP1	5.51	117.31	110.70
1	1G	1505	C	C2-N3-C4	-5.51	117.14	119.90
15	1H	735	G	C6-N1-C2	-5.51	121.79	125.10
15	1H	853	A	O4'-C1'-N9	5.51	112.61	108.20
15	1H	976	G	N3-C4-N9	5.51	129.31	126.00
15	1H	2661	C	N1-C2-O2	-5.51	115.59	118.90
15	14	2516	C	C6-N1-C1'	5.51	127.42	120.80
15	14	2588	C	C6-N1-C1'	-5.51	114.19	120.80
15	14	2722	G	C6-N1-C2	-5.51	121.79	125.10
1	1G	682	C	C4-C5-C6	5.51	120.16	117.40
1	1G	1353	G	N1-C6-O6	5.51	123.21	119.90
15	1H	254	C	C6-N1-C2	5.51	122.50	120.30
15	1H	400	G	N1-C6-O6	-5.51	116.59	119.90
15	1H	737	U	OP2-P-O3'	5.51	117.32	105.20
15	1H	1621	A	N1-C6-N6	5.51	121.91	118.60
15	1H	2395	C	O5'-P-OP1	5.51	117.31	110.70
15	14	1697	G	O4'-C1'-N9	-5.51	103.79	108.20
15	14	2354	G	O5'-P-OP2	-5.51	100.74	105.70
15	1H	2439	C	C4-C5-C6	-5.51	114.65	117.40
15	14	1426	G	N9-C4-C5	5.51	107.60	105.40
26	1J	45	C	C6-N1-C2	-5.51	118.10	120.30
52	X1	70	G	C5-C6-N1	-5.51	108.75	111.50
1	13	1586	G	C6-N1-C2	-5.51	121.80	125.10
1	13	1931	G	C8-N9-C4	5.51	108.60	106.40
1	1G	1517	G	C4-C5-N7	5.51	113.00	110.80
15	1H	212	A	C5-C6-N6	-5.51	119.29	123.70
15	1H	228	C	C4-C5-C6	5.51	120.15	117.40
15	1H	291	G	N1-C6-O6	5.51	123.20	119.90
15	1H	729	G	C6-C5-N7	-5.51	127.10	130.40
15	1H	765	A	N7-C8-N9	5.51	116.55	113.80
15	1H	868	A	C8-N9-C4	5.51	108.00	105.80
15	1H	2445	A	C5-C6-N6	-5.51	119.30	123.70
15	14	674	G	N7-C8-N9	5.51	115.85	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	791	G	C2-N3-C4	-5.51	109.15	111.90
15	14	1282	C	C5-C6-N1	5.51	123.75	121.00
15	14	1802	U	C5-C4-O4	5.51	129.20	125.90
15	14	2601	C	C2-N3-C4	-5.51	117.15	119.90
26	16	8	C	C2-N1-C1'	-5.51	112.74	118.80
26	1J	29	C	C5-C4-N4	5.51	124.06	120.20
38	88	37	LEU	CB-CG-CD2	-5.51	101.64	111.00
52	X1	29	G	C5-N7-C8	-5.51	101.55	104.30
1	13	1825	G	O5'-P-OP2	5.50	117.31	110.70
1	1G	1983	G	C8-N9-C4	-5.50	104.20	106.40
15	1H	975	G	C5-N7-C8	-5.50	101.55	104.30
15	1H	1428	A	N1-C2-N3	5.50	132.05	129.30
15	1H	2777	G	C2-N3-C4	-5.50	109.15	111.90
15	14	185	A	P-O3'-C3'	5.50	126.31	119.70
15	14	1728	G	OP2-P-O3'	5.50	117.31	105.20
1	13	1201	A	N1-C2-N3	-5.50	126.55	129.30
1	13	1956	A	N1-C6-N6	5.50	121.90	118.60
15	1H	657	G	N3-C2-N2	-5.50	116.05	119.90
15	1H	1075	A	OP1-P-OP2	5.50	127.86	119.60
15	1H	1411	C	C5-C4-N4	-5.50	116.35	120.20
15	1H	2263	C	N1-C2-O2	5.50	122.20	118.90
15	1H	2352	G	N1-C2-N2	5.50	121.15	116.20
15	14	231	A	C8-N9-C4	5.50	108.00	105.80
15	14	405	C	C4-C5-C6	5.50	120.15	117.40
15	14	481	C	N3-C2-O2	5.50	125.75	121.90
15	14	598	G	OP1-P-OP2	-5.50	111.34	119.60
15	14	780	C	C6-N1-C2	5.50	122.50	120.30
15	14	873	A	C5-N7-C8	5.50	106.65	103.90
15	14	1440	U	OP1-P-OP2	-5.50	111.34	119.60
15	14	1787	G	N1-C2-N2	-5.50	111.25	116.20
1	13	716	G	O4'-C1'-N9	5.50	112.60	108.20
1	13	1011	C	O5'-P-OP2	-5.50	100.75	105.70
1	13	1410	A	C6-N1-C2	-5.50	115.30	118.60
1	13	1549	G	N7-C8-N9	5.50	115.85	113.10
15	1H	897	G	C6-C5-N7	-5.50	127.10	130.40
15	1H	981	G	N3-C2-N2	-5.50	116.05	119.90
15	1H	1049	A	O5'-P-OP2	-5.50	100.75	105.70
15	14	858	G	C6-N1-C2	-5.50	121.80	125.10
15	14	2031	C	C6-N1-C2	5.50	122.50	120.30
15	14	2605	A	C2-N3-C4	5.50	113.35	110.60
26	16	63	G	C8-N9-C4	-5.50	104.20	106.40
15	1H	2704	U	P-O3'-C3'	5.50	126.30	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	69	G	N3-C2-N2	5.50	123.75	119.90
15	14	1390	U	OP1-P-O3'	5.50	117.30	105.20
15	14	1986	C	O5'-P-OP2	-5.50	100.75	105.70
1	13	1012	G	C5-C6-O6	5.50	131.90	128.60
1	1G	2122	A	C6-N1-C2	-5.50	115.30	118.60
15	1H	1680	C	N3-C4-C5	5.50	124.10	121.90
15	1H	2607	G	N3-C2-N2	-5.50	116.05	119.90
15	14	457	A	C8-N9-C4	-5.50	103.60	105.80
15	14	544	C	C2-N3-C4	-5.50	117.15	119.90
15	14	604	G	N3-C2-N2	-5.50	116.05	119.90
15	14	1331	U	C4-C5-C6	5.50	123.00	119.70
15	14	1478	G	N1-C6-O6	-5.50	116.60	119.90
15	14	2072	U	C6-N1-C2	5.50	124.30	121.00
26	16	46	G	N7-C8-N9	-5.50	110.35	113.10
26	1J	79	U	OP2-P-O3'	5.50	117.30	105.20
1	13	1566	U	O5'-P-OP2	5.50	117.30	110.70
1	1G	1346	C	N3-C4-N4	5.50	121.85	118.00
1	1G	1350	G	C4-C5-C6	5.50	122.10	118.80
1	1G	1962	C	O5'-P-OP1	-5.50	100.75	105.70
15	1H	2517	G	C6-C5-N7	-5.50	127.10	130.40
15	1H	2660	G	N3-C4-C5	5.50	131.35	128.60
15	14	1324	A	O5'-P-OP2	-5.50	100.75	105.70
35	95	71	LEU	CA-CB-CG	-5.50	102.66	115.30
15	1H	598	G	N3-C2-N2	5.50	123.75	119.90
15	1H	976	G	C4-N9-C1'	5.50	133.64	126.50
15	1H	2334	G	C6-C5-N7	-5.50	127.10	130.40
15	14	404	C	C4-C5-C6	5.50	120.15	117.40
1	13	1927	G	N1-C6-O6	-5.49	116.60	119.90
1	13	2119	C	C2-N3-C4	-5.49	117.15	119.90
1	1G	1727	G	N9-C4-C5	5.49	107.60	105.40
15	1H	1265	C	C4-C5-C6	5.49	120.15	117.40
15	1H	1584	U	C6-N1-C2	-5.49	117.70	121.00
15	1H	2253	G	N3-C2-N2	5.49	123.75	119.90
15	1H	2513	C	C2-N3-C4	-5.49	117.15	119.90
15	14	1041	G	C5-N7-C8	-5.49	101.55	104.30
15	14	1315	G	N3-C4-N9	5.49	129.30	126.00
15	14	2273	C	N3-C4-N4	5.49	121.84	118.00
1	13	1397	A	N7-C8-N9	-5.49	111.05	113.80
15	1H	833	A	N1-C6-N6	-5.49	115.31	118.60
15	1H	1723	U	N3-C4-C5	5.49	117.89	114.60
15	1H	1970	G	OP1-P-O3'	5.49	117.28	105.20
15	1H	2028	G	N3-C4-C5	5.49	131.35	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	339	A	N9-C4-C5	5.49	108.00	105.80
15	14	2407	A	OP2-P-O3'	5.49	117.28	105.20
1	1G	769	G	C8-N9-C4	-5.49	104.20	106.40
15	1H	449	C	C6-N1-C2	5.49	122.50	120.30
15	1H	777	G	OP2-P-O3'	5.49	117.28	105.20
15	1H	1339	C	C4-C5-C6	5.49	120.14	117.40
15	1H	1871	C	O5'-P-OP1	-5.49	100.76	105.70
15	1H	2478	C	N3-C4-N4	-5.49	114.16	118.00
15	14	123	G	N3-C2-N2	5.49	123.74	119.90
15	14	652	G	N1-C6-O6	5.49	123.19	119.90
15	14	1925	A	C5-C6-N1	5.49	120.45	117.70
1	13	952	C	C4-C5-C6	5.49	120.14	117.40
15	1H	429	A	C2-N3-C4	-5.49	107.86	110.60
15	1H	775	G	C5-C6-N1	5.49	114.24	111.50
15	1H	1239	G	C4-C5-N7	-5.49	108.60	110.80
15	1H	1257	G	C5-N7-C8	-5.49	101.56	104.30
15	1H	1719	A	C5-C6-N1	5.49	120.44	117.70
15	1H	1865	G	C8-N9-C4	-5.49	104.20	106.40
15	14	343	C	OP1-P-OP2	5.49	127.83	119.60
15	14	656	G	O5'-P-OP2	-5.49	100.76	105.70
15	14	1945	C	O5'-P-OP2	-5.49	100.76	105.70
15	14	2271	G	C4-C5-N7	5.49	113.00	110.80
15	14	2599	U	C2-N3-C4	-5.49	123.71	127.00
1	13	750	G	C5-C6-O6	-5.49	125.31	128.60
1	1G	2096	A	N1-C6-N6	5.49	121.89	118.60
15	1H	2093	U	C5-C6-N1	-5.49	119.96	122.70
15	1H	2283	A	N9-C4-C5	-5.49	103.61	105.80
1	1G	877	G	C4-C5-C6	5.49	122.09	118.80
1	1G	950	G	C5-C6-O6	-5.49	125.31	128.60
15	14	1398	A	N7-C8-N9	5.49	116.54	113.80
15	14	2085	A	O4'-C1'-N9	5.49	112.59	108.20
15	14	2372	U	N3-C4-O4	-5.49	115.56	119.40
1	13	1174	C	OP1-P-OP2	5.48	127.83	119.60
1	1G	1157	C	O4'-C1'-N1	5.48	112.59	108.20
15	1H	429	A	N1-C6-N6	-5.48	115.31	118.60
15	14	482	A	C8-N9-C4	5.48	107.99	105.80
15	14	2553	C	C6-N1-C2	5.48	122.49	120.30
3	F8	63	LYS	CD-CE-NZ	5.48	124.31	111.70
1	13	1501	G	N1-C2-N2	-5.48	111.27	116.20
1	13	1954	C	C6-N1-C2	5.48	122.49	120.30
1	13	2152	G	C8-N9-C4	-5.48	104.21	106.40
15	1H	182	C	N1-C2-O2	-5.48	115.61	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	372	A	C8-N9-C4	-5.48	103.61	105.80
15	1H	569	C	O5'-P-OP2	-5.48	100.77	105.70
15	1H	2511	C	OP1-P-O3'	5.48	117.26	105.20
15	14	417	G	C5-C6-N1	5.48	114.24	111.50
15	14	744	G	C5-C6-O6	5.48	131.89	128.60
15	14	2290	C	N1-C2-O2	-5.48	115.61	118.90
1	1G	706	A	C8-N9-C4	5.48	107.99	105.80
15	1H	107	G	C6-C5-N7	5.48	133.69	130.40
15	1H	1311	A	N1-C6-N6	-5.48	115.31	118.60
15	1H	1713	C	N3-C4-C5	5.48	124.09	121.90
15	1H	2624	U	C5-C6-N1	-5.48	119.96	122.70
15	14	1320	G	O5'-P-OP2	-5.48	100.77	105.70
52	X4	44	G	C5-C6-N1	5.48	114.24	111.50
1	13	1034	A	C8-N9-C4	5.48	107.99	105.80
15	1H	12	U	C2-N1-C1'	5.48	124.28	117.70
15	1H	1607	C	O5'-P-OP2	-5.48	100.77	105.70
15	1H	1681	A	C6-C5-N7	-5.48	128.46	132.30
1	13	683	U	C6-N1-C2	-5.48	117.71	121.00
1	13	1170	G	C4-C5-N7	5.48	112.99	110.80
1	1G	1409	A	N1-C2-N3	-5.48	126.56	129.30
1	1G	2125	A	C4-C5-C6	5.48	119.74	117.00
15	1H	25	U	C5-C4-O4	-5.48	122.61	125.90
15	1H	1525	G	N3-C4-N9	-5.48	122.71	126.00
15	1H	2454	A	OP1-P-O3'	5.48	117.25	105.20
15	1H	2778	G	C2-N3-C4	-5.48	109.16	111.90
15	14	1035	G	N9-C4-C5	5.48	107.59	105.40
1	1G	2146	G	C4-C5-N7	-5.48	108.61	110.80
15	1H	1242	A	OP2-P-O3'	5.48	117.25	105.20
15	1H	1684	A	C5-C6-N6	-5.48	119.32	123.70
15	1H	2356	G	O5'-P-OP2	-5.48	100.77	105.70
15	14	982	C	N3-C4-N4	-5.48	114.17	118.00
15	1H	822	U	C4-C5-C6	5.47	122.98	119.70
15	1H	1717	G	N1-C2-N3	-5.47	120.61	123.90
15	1H	1903	G	N9-C4-C5	5.47	107.59	105.40
15	1H	2417	C	O5'-P-OP1	5.47	117.27	110.70
15	1H	2514	C	N1-C2-O2	-5.47	115.62	118.90
15	14	961	U	N3-C2-O2	5.47	126.03	122.20
15	14	1305	G	C5-C6-O6	-5.47	125.32	128.60
15	14	1703	G	N1-C2-N2	-5.47	111.27	116.20
1	13	668	G	OP1-P-OP2	5.47	127.81	119.60
1	13	812	A	N7-C8-N9	5.47	116.54	113.80
1	13	1127	U	OP2-P-O3'	5.47	117.24	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1154	C	C5-C4-N4	-5.47	116.37	120.20
1	13	1483	A	C2-N3-C4	-5.47	107.86	110.60
15	1H	241	A	N3-C4-C5	-5.47	122.97	126.80
15	1H	1431	G	C5-C6-N1	5.47	114.24	111.50
15	1H	1566	G	OP1-P-O3'	5.47	117.24	105.20
15	14	494	A	OP2-P-O3'	5.47	117.24	105.20
15	14	758	U	OP2-P-O3'	5.47	117.24	105.20
15	14	833	A	OP1-P-O3'	5.47	117.24	105.20
52	V1	49	C	C6-N1-C2	-5.47	118.11	120.30
1	1G	1089	C	N1-C2-O2	5.47	122.18	118.90
15	1H	1939	C	N3-C2-O2	-5.47	118.07	121.90
1	13	2122	A	C5-N7-C8	5.47	106.63	103.90
15	1H	865	C	C2-N3-C4	5.47	122.64	119.90
15	1H	1373	G	C8-N9-C4	-5.47	104.21	106.40
15	1H	1399	C	N3-C2-O2	5.47	125.73	121.90
15	1H	2417	C	C2-N3-C4	5.47	122.64	119.90
15	14	510	A	C8-N9-C4	-5.47	103.61	105.80
15	14	830	A	C8-N9-C4	5.47	107.99	105.80
15	14	1420	G	C5-C6-O6	-5.47	125.32	128.60
15	1H	1376	C	N1-C2-N3	5.47	123.03	119.20
1	1G	1262	G	OP1-P-OP2	-5.47	111.40	119.60
1	1G	1320	G	N9-C4-C5	-5.47	103.21	105.40
15	1H	187	A	N1-C2-N3	5.47	132.03	129.30
15	1H	190	U	C2-N3-C4	-5.47	123.72	127.00
15	1H	535	G	N1-C6-O6	-5.47	116.62	119.90
15	1H	605	C	N1-C2-O2	-5.47	115.62	118.90
15	1H	1191	A	C6-N1-C2	5.47	121.88	118.60
15	1H	2014	G	N3-C2-N2	-5.47	116.07	119.90
15	1H	2325	A	N3-C4-C5	-5.47	122.97	126.80
15	14	1856	G	OP1-P-O3'	5.47	117.22	105.20
15	14	1925	A	O5'-P-OP1	-5.47	100.78	105.70
15	14	2714	C	C6-N1-C2	5.47	122.49	120.30
1	13	1161	A	N3-C4-C5	5.46	130.63	126.80
1	1G	666	U	O5'-P-OP2	-5.46	100.78	105.70
15	1H	542	A	N1-C6-N6	-5.46	115.32	118.60
15	1H	977	U	N3-C2-O2	-5.46	118.38	122.20
15	1H	1437	G	C5-N7-C8	-5.46	101.57	104.30
15	1H	2076	A	N1-C6-N6	-5.46	115.32	118.60
15	1H	2378	C	N3-C4-N4	-5.46	114.17	118.00
15	14	1069	A	C5-N7-C8	-5.46	101.17	103.90
15	14	1335	A	C4-C5-C6	5.46	119.73	117.00
15	14	1927	C	C4-C5-C6	5.46	120.13	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	2476	C	C5-C4-N4	5.46	124.03	120.20
1	1G	1618	C	C5-C6-N1	5.46	123.73	121.00
15	1H	849	A	OP1-P-O3'	5.46	117.22	105.20
15	1H	1850	G	C2-N3-C4	5.46	114.63	111.90
15	14	778	G	OP2-P-O3'	5.46	117.22	105.20
15	14	874	C	N1-C2-O2	-5.46	115.62	118.90
1	13	693	C	C2-N3-C4	-5.46	117.17	119.90
1	13	1156	G	C5-C6-O6	5.46	131.88	128.60
15	1H	46	C	OP2-P-O3'	5.46	117.22	105.20
15	1H	148	C	C5-C6-N1	-5.46	118.27	121.00
15	1H	452	A	OP1-P-OP2	5.46	127.79	119.60
15	1H	1242	A	N7-C8-N9	-5.46	111.07	113.80
15	1H	2462	G	N1-C2-N2	5.46	121.12	116.20
15	14	70	A	C5-C6-N1	-5.46	114.97	117.70
15	14	733	G	N1-C6-O6	-5.46	116.62	119.90
15	14	1632	C	N3-C2-O2	-5.46	118.08	121.90
15	14	1667	A	C5-N7-C8	-5.46	101.17	103.90
15	14	2464	U	OP2-P-O3'	5.46	117.21	105.20
15	14	2723	G	N3-C2-N2	5.46	123.72	119.90
15	14	2869	C	C6-N1-C2	-5.46	118.11	120.30
1	13	1386	U	O5'-P-OP1	5.46	117.25	110.70
1	1G	1545	G	C5-C6-N1	-5.46	108.77	111.50
15	1H	824	G	N3-C4-N9	5.46	129.28	126.00
15	1H	1791	U	C5-C4-O4	5.46	129.18	125.90
15	1H	1903	G	C8-N9-C4	-5.46	104.22	106.40
15	14	1203	G	N1-C6-O6	5.46	123.18	119.90
15	1H	713	C	N1-C2-O2	5.46	122.17	118.90
15	1H	2003	A	OP2-P-O3'	5.46	117.21	105.20
15	1H	2271	G	N1-C2-N2	-5.46	111.29	116.20
15	1H	2417	C	P-O3'-C3'	-5.46	113.15	119.70
15	14	111	G	C8-N9-C4	5.46	108.58	106.40
15	14	1363	C	C2-N3-C4	5.46	122.63	119.90
15	14	1795	C	N3-C4-C5	5.46	124.08	121.90
26	16	47	A	N7-C8-N9	5.46	116.53	113.80
45	55	68	ARG	NE-CZ-NH2	-5.46	117.57	120.30
1	13	1932	G	N1-C2-N3	5.46	127.17	123.90
15	1H	117	A	C5-N7-C8	5.46	106.63	103.90
15	1H	249	G	C4-C5-C6	5.46	122.07	118.80
15	1H	382	A	N7-C8-N9	5.46	116.53	113.80
15	1H	601	U	OP2-P-O3'	5.46	117.21	105.20
15	1H	777	G	N7-C8-N9	-5.46	110.37	113.10
15	1H	1382	C	N3-C4-N4	5.46	121.82	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2292	G	C5-C6-O6	5.46	131.87	128.60
15	1H	2604	A	C8-N9-C4	5.46	107.98	105.80
15	14	722	C	C6-N1-C2	-5.46	118.12	120.30
50	72	133	LEU	CA-CB-CG	5.46	127.85	115.30
1	13	1202	A	OP1-P-OP2	-5.46	111.42	119.60
15	1H	1285	G	C8-N9-C4	5.46	108.58	106.40
15	1H	1621	A	N1-C2-N3	5.46	132.03	129.30
15	1H	1682	A	C6-C5-N7	-5.46	128.48	132.30
15	14	1257	G	O5'-P-OP2	-5.46	100.79	105.70
15	14	2415	G	N3-C4-C5	-5.46	125.87	128.60
1	13	1209	U	C6-N1-C2	5.45	124.27	121.00
1	13	1496	A	C6-N1-C2	-5.45	115.33	118.60
1	13	2153	G	C5-C6-O6	-5.45	125.33	128.60
15	1H	184	G	C4-C5-C6	-5.45	115.53	118.80
15	1H	582	U	C5-C6-N1	-5.45	119.97	122.70
15	1H	1388	G	C2-N3-C4	5.45	114.63	111.90
15	14	2299	C	C4-C5-C6	5.45	120.13	117.40
15	14	2835	G	N1-C2-N2	-5.45	111.29	116.20
1	13	1017	G	C8-N9-C4	5.45	108.58	106.40
1	1G	2070	G	C5-N7-C8	-5.45	101.57	104.30
15	1H	717	G	N1-C2-N2	-5.45	111.29	116.20
15	1H	1362	U	N1-C2-O2	-5.45	118.98	122.80
15	1H	1804	G	OP1-P-O3'	5.45	117.19	105.20
15	1H	2094	G	N7-C8-N9	-5.45	110.37	113.10
1	13	1854	A	C5-C6-N1	-5.45	114.97	117.70
1	13	1951	A	O5'-P-OP2	5.45	117.24	110.70
1	1G	1576	G	N1-C6-O6	-5.45	116.63	119.90
1	1G	2113	C	O5'-P-OP2	-5.45	100.80	105.70
15	1H	1009	G	OP1-P-OP2	-5.45	111.42	119.60
15	1H	1235	G	C6-C5-N7	-5.45	127.13	130.40
15	14	563	A	O5'-P-OP1	5.45	117.24	110.70
15	14	1525	G	C6-C5-N7	-5.45	127.13	130.40
15	14	1970	G	C4-C5-N7	5.45	112.98	110.80
15	14	1997	A	C2-N3-C4	-5.45	107.87	110.60
15	14	2596	G	N9-C4-C5	5.45	107.58	105.40
35	95	85	LYS	CA-CB-CG	5.45	125.39	113.40
52	W1	34	G	OP1-P-O3'	5.45	117.19	105.20
15	1H	627	G	N3-C4-N9	5.45	129.27	126.00
15	1H	1012	C	OP1-P-OP2	5.45	127.77	119.60
15	1H	1070	G	C4-C5-N7	-5.45	108.62	110.80
15	14	149	A	C6-C5-N7	-5.45	128.49	132.30
26	16	30	C	C6-N1-C2	-5.45	118.12	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1182	A	C8-N9-C4	-5.45	103.62	105.80
1	13	1890	C	C6-N1-C2	5.45	122.48	120.30
1	1G	2095	U	O5'-P-OP1	5.45	117.24	110.70
15	1H	1495	C	O5'-P-OP2	5.45	117.24	110.70
15	1H	1975	G	N1-C6-O6	-5.45	116.63	119.90
15	14	1324	A	C8-N9-C4	5.45	107.98	105.80
15	1H	229	U	O5'-P-OP1	5.45	117.24	110.70
15	1H	339	A	C4-C5-C6	-5.45	114.28	117.00
15	1H	629	G	O5'-P-OP1	-5.45	100.80	105.70
15	1H	1206	G	N3-C4-C5	-5.45	125.88	128.60
15	1H	1666	C	OP1-P-O3'	5.45	117.18	105.20
15	14	484	C	C5-C4-N4	-5.45	116.39	120.20
15	14	598	G	C6-N1-C2	-5.45	121.83	125.10
15	14	993	G	N1-C6-O6	5.45	123.17	119.90
15	1H	1592	A	C6-C5-N7	-5.44	128.49	132.30
15	1H	1956	U	N3-C4-O4	-5.44	115.59	119.40
15	1H	2346	G	C5-C6-O6	-5.44	125.33	128.60
15	14	355	A	C6-C5-N7	-5.44	128.49	132.30
15	14	842	A	C6-N1-C2	-5.44	115.33	118.60
15	14	1665	A	C5-C6-N6	-5.44	119.34	123.70
26	16	99	G	C4-C5-C6	-5.44	115.53	118.80
1	13	672	A	C6-N1-C2	-5.44	115.33	118.60
1	13	1016	U	O5'-P-OP2	5.44	117.23	110.70
1	1G	1082	C	C6-N1-C2	-5.44	118.12	120.30
15	1H	317	C	O5'-P-OP1	-5.44	100.80	105.70
15	1H	407	G	C5-C6-O6	-5.44	125.33	128.60
15	1H	892	G	OP2-P-O3'	5.44	117.17	105.20
15	1H	1318	A	N3-C4-C5	5.44	130.61	126.80
15	1H	1840	C	OP1-P-OP2	5.44	127.76	119.60
15	14	235	G	OP1-P-O3'	5.44	117.17	105.20
15	14	861	C	N1-C2-O2	-5.44	115.63	118.90
15	14	920	U	O5'-P-OP2	5.44	117.23	110.70
15	14	2530	C	N3-C4-N4	5.44	121.81	118.00
1	13	696	A	N9-C4-C5	5.44	107.98	105.80
1	13	1710	G	C6-C5-N7	-5.44	127.14	130.40
1	13	2090	G	O5'-P-OP2	-5.44	100.80	105.70
1	1G	1198	C	N3-C4-C5	5.44	124.08	121.90
15	1H	17	G	OP1-P-O3'	5.44	117.17	105.20
15	1H	106	U	N3-C4-O4	-5.44	115.59	119.40
15	1H	152	G	C4-C5-N7	-5.44	108.62	110.80
15	1H	635	G	OP2-P-O3'	5.44	117.17	105.20
15	1H	818	G	N1-C2-N2	-5.44	111.30	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1261	A	N1-C6-N6	5.44	121.86	118.60
15	1H	1859	A	N1-C6-N6	-5.44	115.34	118.60
15	14	1584	U	C5-C6-N1	5.44	125.42	122.70
15	14	1674	C	N1-C2-O2	5.44	122.16	118.90
26	16	104	A	C8-N9-C4	5.44	107.98	105.80
1	13	1372	U	O5'-P-OP1	5.44	117.23	110.70
15	1H	38	A	C5-C6-N1	5.44	120.42	117.70
15	1H	106	U	N3-C2-O2	-5.44	118.39	122.20
15	1H	1951	U	C2-N1-C1'	-5.44	111.17	117.70
15	14	498	A	C4-C5-N7	5.44	113.42	110.70
15	14	1433	A	C4-C5-N7	-5.44	107.98	110.70
15	14	1818	A	O4'-C1'-N9	-5.44	103.85	108.20
15	14	2032	C	C2-N3-C4	-5.44	117.18	119.90
15	14	2285	G	C5-C6-O6	-5.44	125.34	128.60
15	14	2484	A	C2-N3-C4	-5.44	107.88	110.60
52	W4	76	A	C5-C6-N1	5.44	120.42	117.70
1	13	1400	G	OP2-P-O3'	5.44	117.16	105.20
15	1H	487	U	OP2-P-O3'	5.44	117.16	105.20
15	1H	1307	C	C4-C5-C6	5.44	120.12	117.40
15	1H	1336	A	C5-C6-N6	5.44	128.05	123.70
15	1H	1720	C	C5-C6-N1	-5.44	118.28	121.00
15	1H	1726	A	N1-C2-N3	-5.44	126.58	129.30
15	1H	2653	G	C4-C5-N7	5.44	112.97	110.80
15	14	1550	C	OP1-P-O3'	5.44	117.16	105.20
15	14	1748	A	N9-C4-C5	-5.44	103.62	105.80
51	Y4	43	U	C5-C6-N1	-5.44	119.98	122.70
15	1H	618	G	C8-N9-C4	5.44	108.57	106.40
15	1H	1808	C	OP1-P-O3'	5.44	117.16	105.20
15	14	1839	U	OP2-P-O3'	5.44	117.16	105.20
1	13	1034	A	N9-C4-C5	-5.43	103.63	105.80
1	13	1036	C	C2-N1-C1'	-5.43	112.82	118.80
1	13	1142	C	N3-C4-N4	5.43	121.81	118.00
15	1H	662	C	N1-C2-O2	-5.43	115.64	118.90
15	1H	759	G	OP1-P-OP2	-5.43	111.45	119.60
15	1H	1973	G	N1-C6-O6	-5.43	116.64	119.90
15	14	1614	C	N3-C4-N4	-5.43	114.20	118.00
15	14	1817	A	C2-N3-C4	-5.43	107.88	110.60
1	1G	1926	A	C6-C5-N7	-5.43	128.50	132.30
15	1H	360	C	N3-C4-C5	-5.43	119.73	121.90
15	1H	656	G	N1-C2-N2	-5.43	111.31	116.20
15	1H	1745	G	N1-C2-N2	-5.43	111.31	116.20
15	1H	2019	C	C6-N1-C2	5.43	122.47	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2558	G	N9-C4-C5	-5.43	103.23	105.40
15	14	650	G	C5-C6-O6	-5.43	125.34	128.60
15	14	790	G	N9-C4-C5	5.43	107.57	105.40
15	14	1958	G	C5-C6-N1	-5.43	108.78	111.50
52	V4	4	C	C6-N1-C2	-5.43	118.13	120.30
52	V4	76	A	N7-C8-N9	5.43	116.52	113.80
1	13	1526	G	N1-C2-N2	-5.43	111.31	116.20
11	G8	80	GLY	N-CA-C	5.43	126.68	113.10
15	1H	1188	C	OP1-P-OP2	-5.43	111.45	119.60
15	1H	2275	C	N1-C2-O2	5.43	122.16	118.90
15	1H	2384	A	N9-C4-C5	5.43	107.97	105.80
15	1H	2562	U	C5-C6-N1	-5.43	119.98	122.70
15	14	891	G	C8-N9-C4	5.43	108.57	106.40
15	14	1838	C	O5'-P-OP2	5.43	117.22	110.70
26	16	117	G	C8-N9-C4	5.43	108.57	106.40
26	1J	83	G	C6-C5-N7	-5.43	127.14	130.40
15	1H	288	G	C6-N1-C2	-5.43	121.84	125.10
15	1H	2045	A	C6-C5-N7	-5.43	128.50	132.30
15	14	1477	C	C5-C6-N1	-5.43	118.29	121.00
26	1J	17	A	P-O3'-C3'	5.43	126.22	119.70
15	14	2846	G	N9-C4-C5	-5.43	103.23	105.40
15	14	2853	C	C5-C4-N4	5.43	124.00	120.20
52	X4	31	A	OP1-P-OP2	-5.43	111.46	119.60
15	1H	395	C	C6-N1-C2	-5.43	118.13	120.30
15	1H	844	C	N1-C2-O2	-5.43	115.64	118.90
15	1H	987	G	OP2-P-O3'	5.43	117.14	105.20
15	1H	1316	U	OP2-P-O3'	5.43	117.14	105.20
15	1H	1562	C	OP1-P-OP2	-5.43	111.46	119.60
15	1H	1847	G	C4-C5-N7	-5.43	108.63	110.80
15	1H	1861	C	C4-C5-C6	5.43	120.11	117.40
15	1H	2286	G	C8-N9-C1'	-5.43	119.95	127.00
15	1H	2348	A	P-O3'-C3'	5.43	126.21	119.70
15	1H	2461	G	N3-C4-N9	5.43	129.26	126.00
15	1H	2838	C	C5-C6-N1	-5.43	118.29	121.00
15	14	1658	A	C5-C6-N6	-5.43	119.36	123.70
15	14	1745	G	N9-C4-C5	-5.43	103.23	105.40
1	13	1597	A	C6-C5-N7	-5.42	128.50	132.30
1	1G	1057	G	C4-C5-C6	5.42	122.06	118.80
15	1H	127	C	O5'-P-OP1	5.42	117.21	110.70
15	1H	399	A	N1-C6-N6	5.42	121.86	118.60
15	1H	805	C	C5-C6-N1	5.42	123.71	121.00
15	1H	817	G	O5'-P-OP2	-5.42	100.82	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1038	A	O5'-P-OP1	-5.42	100.82	105.70
15	14	178	G	N3-C4-N9	5.42	129.25	126.00
15	14	341	C	OP1-P-OP2	-5.42	111.46	119.60
26	16	112	G	C8-N9-C4	-5.42	104.23	106.40
52	W4	38	A	C5-C6-N6	-5.42	119.36	123.70
15	1H	1302	A	C2-N3-C4	5.42	113.31	110.60
26	1J	91	G	N3-C2-N2	5.42	123.70	119.90
1	13	1429	G	OP2-P-O3'	5.42	117.13	105.20
1	1G	1350	G	C6-C5-N7	-5.42	127.15	130.40
1	1G	2141	A	C5-C6-N1	-5.42	114.99	117.70
15	1H	1692	G	N1-C2-N3	-5.42	120.65	123.90
15	1H	1831	C	C2-N3-C4	-5.42	117.19	119.90
15	1H	2715	C	C4-C5-C6	-5.42	114.69	117.40
15	14	906	C	C2-N3-C4	-5.42	117.19	119.90
15	14	1439	U	OP1-P-OP2	-5.42	111.47	119.60
15	14	2627	C	N1-C2-O2	-5.42	115.65	118.90
52	X4	26	A	N3-C4-C5	5.42	130.59	126.80
15	1H	183	U	OP2-P-O3'	5.42	117.12	105.20
15	1H	1036	A	C2-N3-C4	5.42	113.31	110.60
15	14	1455	U	C5-C6-N1	5.42	125.41	122.70
1	13	1301	U	O5'-P-OP1	-5.42	100.82	105.70
15	1H	203	A	N9-C4-C5	-5.42	103.63	105.80
15	1H	1410	G	C6-C5-N7	5.42	133.65	130.40
15	1H	1652	A	C8-N9-C4	-5.42	103.63	105.80
15	1H	2655	G	N7-C8-N9	5.42	115.81	113.10
15	14	604	G	N1-C6-O6	5.42	123.15	119.90
15	14	727	C	N3-C4-N4	-5.42	114.21	118.00
15	14	820	G	C8-N9-C4	5.42	108.57	106.40
15	14	964	G	C4-C5-N7	-5.42	108.63	110.80
15	14	2018	U	N1-C2-O2	-5.42	119.01	122.80
1	13	1161	A	O4'-C1'-N9	5.42	112.53	108.20
1	13	1574	G	C8-N9-C4	-5.42	104.23	106.40
1	13	1852	A	C5-N7-C8	-5.42	101.19	103.90
1	1G	1583	U	N1-C2-N3	5.42	118.15	114.90
15	1H	2394	G	N1-C2-N3	5.42	127.15	123.90
15	14	1447	C	C5-C4-N4	-5.42	116.41	120.20
15	14	2619	U	C2-N3-C4	-5.42	123.75	127.00
43	A5	94	ASP	CB-CG-OD1	5.42	123.18	118.30
1	1G	2097	G	OP1-P-OP2	-5.42	111.48	119.60
15	1H	515	C	N3-C4-N4	5.42	121.79	118.00
15	14	1988	U	N1-C2-O2	5.42	126.59	122.80
26	16	36	U	C4-C5-C6	5.42	122.95	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	1J	79	U	O5'-P-OP2	5.42	117.20	110.70
52	X1	41	C	C6-N1-C2	5.42	122.47	120.30
4	11	60	ARG	NE-CZ-NH1	-5.41	117.59	120.30
15	1H	625	G	N3-C2-N2	5.41	123.69	119.90
15	1H	1048	A	C8-N9-C4	5.41	107.97	105.80
15	1H	1979	G	OP2-P-O3'	5.41	117.11	105.20
15	14	527	G	C4-C5-N7	-5.41	108.63	110.80
15	14	976	G	N1-C6-O6	5.41	123.15	119.90
15	1H	216	G	C6-C5-N7	-5.41	127.15	130.40
15	1H	894	G	OP1-P-O3'	5.41	117.11	105.20
15	1H	1097	C	N1-C2-O2	5.41	122.15	118.90
19	9I	31	LEU	CA-CB-CG	5.41	127.75	115.30
15	14	1707	C	OP1-P-O3'	5.41	117.11	105.20
52	X1	56	C	OP1-P-O3'	5.41	117.11	105.20
1	13	1908	U	C5-C4-O4	5.41	129.15	125.90
1	13	2089	C	N3-C4-C5	-5.41	119.74	121.90
1	1G	1387	G	N1-C6-O6	-5.41	116.65	119.90
15	1H	117	A	N1-C2-N3	5.41	132.01	129.30
15	1H	541	A	O5'-P-OP2	-5.41	100.83	105.70
15	1H	809	G	N3-C2-N2	-5.41	116.11	119.90
15	1H	1789	A	C5-N7-C8	-5.41	101.19	103.90
15	1H	2076	A	C4-C5-N7	-5.41	108.00	110.70
15	1H	2326	A	N1-C6-N6	5.41	121.85	118.60
15	1H	2361	A	C4-N9-C1'	5.41	136.04	126.30
15	14	670	A	O5'-P-OP2	-5.41	100.83	105.70
15	14	712	G	N3-C2-N2	-5.41	116.11	119.90
15	14	724	A	N9-C4-C5	-5.41	103.64	105.80
15	14	2694	A	O5'-P-OP2	-5.41	100.83	105.70
15	14	2884	C	C6-N1-C2	5.41	122.46	120.30
11	G8	81	LYS	C-N-CD	-5.41	108.70	120.60
15	1H	1411	C	N3-C4-N4	5.41	121.79	118.00
15	1H	1483	A	C2-N3-C4	-5.41	107.89	110.60
15	1H	1693	G	O5'-P-OP1	-5.41	100.83	105.70
15	14	740	C	N1-C2-N3	5.41	122.99	119.20
15	14	1715	A	OP2-P-O3'	5.41	117.10	105.20
52	X1	4	C	N1-C2-O2	-5.41	115.66	118.90
1	1G	1874	U	C6-N1-C2	-5.41	117.76	121.00
15	1H	178	G	N1-C2-N2	-5.41	111.33	116.20
15	1H	2587	A	O5'-P-OP1	5.41	117.19	110.70
15	14	170	G	C2-N3-C4	-5.41	109.20	111.90
15	14	1992	C	O5'-P-OP2	-5.41	100.83	105.70
15	14	2490	C	N1-C2-O2	5.41	122.14	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1463	C	C2-N1-C1'	-5.41	112.85	118.80
1	1G	882	C	C5-C6-N1	-5.41	118.30	121.00
1	1G	890	U	O5'-P-OP2	-5.41	100.83	105.70
1	1G	1232	U	C4-C5-C6	5.41	122.94	119.70
15	1H	425	G	N3-C4-C5	5.41	131.30	128.60
15	1H	1381	G	C5-C6-N1	-5.41	108.80	111.50
15	1H	1684	A	C6-C5-N7	-5.41	128.52	132.30
15	1H	1810	G	OP1-P-O3'	5.41	117.09	105.20
15	1H	2288	A	N1-C6-N6	5.41	121.84	118.60
15	1H	2397	G	N1-C2-N3	5.41	127.14	123.90
15	14	788	G	N7-C8-N9	-5.41	110.40	113.10
15	14	1450	G	C4-C5-N7	-5.41	108.64	110.80
15	14	1608	A	C5-C6-N1	-5.41	115.00	117.70
15	14	1709	U	C5-C6-N1	-5.41	120.00	122.70
15	14	2518	A	C5-C6-N6	-5.41	119.38	123.70
33	5I	12	ARG	C-N-CA	5.41	135.22	121.70
1	13	2072	A	O5'-P-OP1	5.40	117.19	110.70
15	1H	859	U	C5-C4-O4	5.40	129.14	125.90
15	1H	1336	A	N1-C6-N6	-5.40	115.36	118.60
15	1H	2699	U	N1-C2-N3	5.40	118.14	114.90
1	1G	679	A	C8-N9-C4	-5.40	103.64	105.80
1	1G	1162	A	C5-N7-C8	-5.40	101.20	103.90
1	1G	1594	G	O5'-P-OP2	-5.40	100.84	105.70
15	1H	237	G	C8-N9-C4	5.40	108.56	106.40
15	1H	423	U	N3-C2-O2	-5.40	118.42	122.20
15	1H	1982	C	N3-C4-N4	-5.40	114.22	118.00
15	14	1803	G	N1-C6-O6	5.40	123.14	119.90
15	14	2103	C	C4-C5-C6	5.40	120.10	117.40
1	13	683	U	N1-C2-N3	5.40	118.14	114.90
1	13	827	C	C6-N1-C2	-5.40	118.14	120.30
1	13	1591	A	C2-N3-C4	-5.40	107.90	110.60
15	1H	186	A	C4-C5-C6	5.40	119.70	117.00
15	1H	528	A	C5-N7-C8	-5.40	101.20	103.90
15	1H	886	C	C2-N3-C4	-5.40	117.20	119.90
15	1H	1356	A	C2-N3-C4	-5.40	107.90	110.60
15	14	189	A	N1-C6-N6	-5.40	115.36	118.60
15	14	2216	G	N7-C8-N9	5.40	115.80	113.10
15	14	2529	U	N3-C2-O2	5.40	125.98	122.20
15	14	2719	C	OP1-P-OP2	5.40	127.70	119.60
15	1H	1835	G	C4-C5-N7	5.40	112.96	110.80
15	1H	2300	C	C5-C4-N4	5.40	123.98	120.20
15	1H	2718	C	OP2-P-O3'	5.40	117.08	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	2051	C	N3-C2-O2	5.40	125.68	121.90
15	1H	186	A	N9-C4-C5	-5.40	103.64	105.80
15	1H	1888	A	C4-C5-C6	5.40	119.70	117.00
15	14	1877	C	N1-C2-O2	-5.40	115.66	118.90
15	14	2053	U	O5'-P-OP2	5.40	117.18	110.70
15	14	2346	G	N9-C4-C5	-5.40	103.24	105.40
15	14	2567	U	C2-N3-C4	-5.40	123.76	127.00
52	W1	32	U	C6-N1-C2	-5.40	117.76	121.00
52	X1	69	G	C8-N9-C1'	5.40	134.02	127.00
15	1H	1837	A	OP2-P-O3'	5.40	117.07	105.20
15	14	112	U	N3-C4-O4	5.40	123.18	119.40
15	14	1696	C	N3-C4-C5	5.40	124.06	121.90
15	14	2884	C	N3-C4-C5	5.40	124.06	121.90
1	1G	1371	G	C2-N3-C4	5.39	114.60	111.90
15	1H	487	U	N3-C2-O2	-5.39	118.42	122.20
15	1H	1509	G	C5-C6-O6	-5.39	125.36	128.60
15	1H	2294	G	C2-N3-C4	5.39	114.60	111.90
15	14	1290	A	N3-C4-N9	-5.39	123.08	127.40
15	14	1609	G	C4-C5-N7	5.39	112.96	110.80
1	1G	1134	G	N7-C8-N9	5.39	115.80	113.10
1	1G	1317	G	C5-C6-O6	5.39	131.84	128.60
1	1G	1507	U	N3-C2-O2	-5.39	118.42	122.20
15	1H	421	C	N1-C2-O2	-5.39	115.67	118.90
15	1H	801	A	N7-C8-N9	5.39	116.50	113.80
15	1H	1351	A	C2-N3-C4	5.39	113.30	110.60
15	1H	2623	G	C4-C5-N7	5.39	112.96	110.80
15	14	648	A	C6-C5-N7	-5.39	128.53	132.30
15	14	2296	C	C6-N1-C2	-5.39	118.14	120.30
15	1H	203	A	C8-N9-C4	5.39	107.96	105.80
15	14	1805	C	N3-C4-C5	5.39	124.06	121.90
15	14	2290	C	N3-C4-C5	5.39	124.06	121.90
1	1G	1594	G	O5'-P-OP1	5.39	117.17	110.70
15	1H	65	C	C6-N1-C2	-5.39	118.14	120.30
15	1H	553	A	C8-N9-C4	5.39	107.96	105.80
15	1H	663	G	O5'-P-OP1	-5.39	100.85	105.70
15	1H	961	U	N3-C4-C5	5.39	117.83	114.60
15	14	1074	U	O5'-P-OP1	-5.39	100.85	105.70
15	14	1248	C	C6-N1-C2	5.39	122.46	120.30
15	14	1708	C	N3-C2-O2	5.39	125.67	121.90
15	14	2035	G	C2-N3-C4	-5.39	109.20	111.90
1	13	1516	C	O5'-P-OP2	5.39	117.17	110.70
1	1G	2072	A	O4'-C1'-N9	5.39	112.51	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1240	G	OP2-P-O3'	5.39	117.05	105.20
15	14	1431	G	C5-C6-N1	5.39	114.19	111.50
1	13	1851	G	N1-C6-O6	-5.39	116.67	119.90
15	1H	200	C	N3-C4-N4	-5.39	114.23	118.00
15	1H	433	U	C2-N3-C4	5.39	130.23	127.00
15	1H	1481	C	N3-C4-C5	-5.39	119.75	121.90
15	1H	1797	G	N7-C8-N9	-5.39	110.41	113.10
15	1H	1873	G	C6-C5-N7	-5.39	127.17	130.40
15	1H	2773	A	N7-C8-N9	5.39	116.49	113.80
15	14	1978	A	C6-N1-C2	-5.39	115.37	118.60
15	14	2335	A	O4'-C1'-N9	5.39	112.51	108.20
52	X4	67	C	N3-C4-C5	5.39	124.06	121.90
1	13	1293	G	N1-C6-O6	-5.38	116.67	119.90
1	13	1331	A	C4-C5-C6	5.38	119.69	117.00
1	1G	1731	C	C6-N1-C2	-5.38	118.15	120.30
15	14	960	C	OP2-P-O3'	5.38	117.04	105.20
15	14	997	G	OP1-P-OP2	-5.38	111.52	119.60
15	14	1752	G	N9-C4-C5	-5.38	103.25	105.40
15	14	1766	G	C8-N9-C1'	-5.38	120.00	127.00
15	14	1865	G	C5-C6-N1	-5.38	108.81	111.50
23	21	63	LEU	CA-CB-CG	5.38	127.68	115.30
52	X1	26	A	C4-C5-N7	5.38	113.39	110.70
1	13	1401	U	N3-C4-O4	-5.38	115.63	119.40
1	13	2089	C	C4-C5-C6	5.38	120.09	117.40
15	1H	1180	A	N1-C6-N6	-5.38	115.37	118.60
15	14	436	G	O5'-P-OP2	-5.38	100.86	105.70
15	14	2417	C	N3-C2-O2	5.38	125.67	121.90
1	13	1418	U	O4'-C1'-N1	5.38	112.50	108.20
1	1G	696	A	C8-N9-C4	-5.38	103.65	105.80
1	1G	970	A	N1-C2-N3	5.38	131.99	129.30
15	1H	648	A	O5'-P-OP1	-5.38	100.86	105.70
15	1H	1293	G	N7-C8-N9	-5.38	110.41	113.10
15	1H	1790	G	N9-C4-C5	5.38	107.55	105.40
15	14	667	C	O5'-P-OP2	-5.38	100.86	105.70
15	14	690	C	C6-N1-C1'	-5.38	114.34	120.80
15	14	777	G	N1-C2-N2	-5.38	111.36	116.20
15	14	876	U	O5'-P-OP1	5.38	117.16	110.70
15	14	1234	G	OP2-P-O3'	5.38	117.04	105.20
15	14	1978	A	C5-C6-N6	-5.38	119.39	123.70
52	V4	60	U	C2-N1-C1'	5.38	124.16	117.70
1	13	1389	G	C5-N7-C8	-5.38	101.61	104.30
15	1H	1993	G	OP2-P-O3'	5.38	117.04	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2282	A	P-O3'-C3'	5.38	126.16	119.70
15	1H	2876	C	N3-C4-C5	5.38	124.05	121.90
15	14	1005	U	C5-C4-O4	-5.38	122.67	125.90
15	14	1713	C	N3-C2-O2	5.38	125.67	121.90
26	1J	58	G	N3-C4-C5	-5.38	125.91	128.60
1	13	1491	C	C5-C6-N1	5.38	123.69	121.00
15	1H	429	A	N1-C2-N3	5.38	131.99	129.30
15	1H	639	U	C2-N3-C4	-5.38	123.77	127.00
15	1H	1457	C	C2-N3-C4	-5.38	117.21	119.90
15	1H	1965	U	C5-C4-O4	-5.38	122.67	125.90
15	1H	2007	C	C5-C6-N1	5.38	123.69	121.00
15	1H	2087	A	O4'-C1'-N9	-5.38	103.90	108.20
15	1H	2751	G	C6-C5-N7	5.38	133.63	130.40
1	13	1528	U	N1-C2-O2	-5.38	119.04	122.80
15	1H	184	G	C8-N9-C4	5.38	108.55	106.40
15	1H	621	G	N1-C2-N2	5.38	121.04	116.20
15	1H	635	G	N1-C6-O6	5.38	123.13	119.90
15	1H	1854	U	C5-C6-N1	-5.38	120.01	122.70
15	1H	2094	G	C5-C6-O6	-5.38	125.37	128.60
16	B8	114	LEU	CA-CB-CG	-5.38	102.93	115.30
15	14	993	G	N9-C4-C5	-5.38	103.25	105.40
15	14	996	C	N3-C2-O2	5.38	125.66	121.90
15	14	1298	U	N3-C2-O2	5.38	125.96	122.20
15	14	1634	C	N3-C4-C5	-5.38	119.75	121.90
1	1G	2057	C	O5'-P-OP2	-5.38	100.86	105.70
15	14	299	G	C4-C5-N7	5.38	112.95	110.80
15	14	902	G	C5-C6-O6	5.38	131.82	128.60
15	14	1264	G	C8-N9-C4	-5.38	104.25	106.40
15	14	2424	G	C8-N9-C4	-5.38	104.25	106.40
26	16	1	A	C5-N7-C8	5.38	106.59	103.90
26	16	58	G	N3-C4-C5	-5.38	125.91	128.60
26	16	119	G	OP2-P-O3'	5.38	117.02	105.20
1	13	1251	A	N1-C6-N6	-5.37	115.38	118.60
1	1G	956	A	N1-C6-N6	5.37	121.82	118.60
1	1G	1586	G	N1-C2-N3	5.37	127.12	123.90
1	1G	2114	G	N3-C4-C5	5.37	131.29	128.60
15	1H	84	G	O5'-P-OP1	5.37	117.15	110.70
15	1H	459	G	C6-C5-N7	-5.37	127.18	130.40
15	14	1715	A	N1-C6-N6	-5.37	115.38	118.60
1	1G	1031	C	N1-C2-N3	5.37	122.96	119.20
15	1H	423	U	N1-C2-O2	5.37	126.56	122.80
15	1H	754	A	C4-C5-N7	5.37	113.39	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1251	G	N3-C4-C5	-5.37	125.91	128.60
15	1H	1733	C	C4-C5-C6	5.37	120.09	117.40
15	14	235	G	N3-C2-N2	-5.37	116.14	119.90
15	14	506	A	N1-C2-N3	5.37	131.99	129.30
15	14	744	G	N1-C6-O6	-5.37	116.68	119.90
15	14	1022	C	C4-C5-C6	5.37	120.09	117.40
15	14	1328	G	C8-N9-C4	5.37	108.55	106.40
15	14	1378	U	O5'-P-OP2	-5.37	100.87	105.70
15	14	2254	G	C5-C6-O6	5.37	131.82	128.60
52	X1	46	G	C8-N9-C4	-5.37	104.25	106.40
15	1H	130	G	N7-C8-N9	-5.37	110.42	113.10
15	1H	618	G	C5-C6-O6	5.37	131.82	128.60
15	1H	647	G	C6-N1-C2	-5.37	121.88	125.10
15	1H	2330	G	C8-N9-C4	5.37	108.55	106.40
15	14	114	C	N3-C2-O2	5.37	125.66	121.90
15	14	2622	G	O5'-P-OP1	5.37	117.14	110.70
15	1H	56	C	N1-C2-O2	5.37	122.12	118.90
15	1H	196	U	N3-C2-O2	5.37	125.96	122.20
15	1H	1813	U	O5'-P-OP1	-5.37	100.87	105.70
15	1H	2460	G	C2-N3-C4	-5.37	109.22	111.90
15	1H	2528	G	C5-N7-C8	-5.37	101.62	104.30
15	1H	2639	G	C6-N1-C2	-5.37	121.88	125.10
15	1H	2717	U	C5-C6-N1	-5.37	120.02	122.70
15	1H	2725	C	OP1-P-OP2	-5.37	111.55	119.60
15	14	526	U	C4-C5-C6	5.37	122.92	119.70
15	14	966	A	OP1-P-OP2	-5.37	111.55	119.60
15	14	2038	A	C2-N3-C4	-5.37	107.92	110.60
23	21	130	GLY	N-CA-C	5.37	126.52	113.10
1	13	1522	C	C5-C6-N1	-5.37	118.32	121.00
1	1G	1069	G	N9-C4-C5	5.37	107.55	105.40
1	1G	1513	G	O5'-P-OP2	-5.37	100.87	105.70
15	1H	1038	A	C5-N7-C8	-5.37	101.22	103.90
15	1H	1654	C	N3-C2-O2	-5.37	118.14	121.90
15	1H	2242	A	N7-C8-N9	5.37	116.48	113.80
15	1H	2301	A	C5-N7-C8	-5.37	101.22	103.90
15	14	1436	C	C6-N1-C2	-5.37	118.15	120.30
15	14	1861	C	C5-C6-N1	-5.37	118.32	121.00
15	14	1958	G	N1-C2-N2	-5.37	111.37	116.20
15	14	1960	G	C8-N9-C4	-5.37	104.25	106.40
15	14	2559	G	N3-C2-N2	-5.37	116.14	119.90
15	14	2655	G	C5-C6-O6	-5.37	125.38	128.60
52	X4	70	G	C8-N9-C1'	5.37	133.97	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	235	G	N3-C2-N2	-5.36	116.14	119.90
15	1H	984	U	C6-N1-C2	5.36	124.22	121.00
15	1H	2035	G	N3-C2-N2	-5.36	116.15	119.90
15	14	896	U	N1-C2-O2	-5.36	119.05	122.80
15	14	1402	A	C4-C5-N7	-5.36	108.02	110.70
26	16	36	U	C5-C4-O4	5.36	129.12	125.90
15	1H	784	A	N7-C8-N9	-5.36	111.12	113.80
15	1H	1990	C	N3-C4-N4	5.36	121.75	118.00
15	14	1236	U	OP2-P-O3'	5.36	117.00	105.20
1	13	1507	U	C6-N1-C2	5.36	124.22	121.00
15	1H	795	A	O5'-P-OP2	5.36	117.13	110.70
15	1H	801	A	N1-C2-N3	5.36	131.98	129.30
15	1H	1386	G	C5-N7-C8	5.36	106.98	104.30
15	1H	2346	G	C2-N3-C4	-5.36	109.22	111.90
15	14	827	G	C8-N9-C4	5.36	108.54	106.40
36	J5	51	TYR	CA-CB-CG	5.36	123.58	113.40
1	1G	2044	G	C2-N3-C4	-5.36	109.22	111.90
15	1H	893	C	O5'-P-OP1	5.36	117.13	110.70
15	1H	2230	G	C4-C5-N7	5.36	112.94	110.80
15	14	871	U	C6-N1-C2	-5.36	117.78	121.00
15	14	1650	G	C5-N7-C8	-5.36	101.62	104.30
1	13	2081	G	O5'-P-OP2	-5.36	100.88	105.70
1	1G	1138	A	C2'-C3'-O3'	5.36	122.27	113.70
1	1G	1360	G	N1-C6-O6	5.36	123.11	119.90
1	1G	1928	U	N1-C2-O2	5.36	126.55	122.80
15	1H	74	G	N3-C2-N2	5.36	123.65	119.90
15	1H	80	G	C5-C6-O6	5.36	131.81	128.60
15	1H	1040	C	OP1-P-O3'	5.36	116.99	105.20
15	1H	1208	U	C5-C4-O4	5.36	129.12	125.90
15	1H	2060	G	C5-C6-N1	-5.36	108.82	111.50
15	1H	2304	G	N3-C4-C5	5.36	131.28	128.60
15	1H	2471	C	C5-C4-N4	-5.36	116.45	120.20
15	14	1358	G	N1-C6-O6	5.36	123.11	119.90
15	14	1955	G	C4-N9-C1'	-5.36	119.53	126.50
15	14	2795	U	C4-C5-C6	5.36	122.91	119.70
1	1G	1060	C	C6-N1-C2	5.36	122.44	120.30
15	1H	85	C	N1-C2-O2	-5.36	115.69	118.90
15	1H	415	U	N3-C2-O2	5.36	125.95	122.20
15	1H	873	A	C5-C6-N1	5.36	120.38	117.70
15	1H	1458	C	C2-N3-C4	-5.36	117.22	119.90
15	1H	1708	C	C2-N3-C4	-5.36	117.22	119.90
15	1H	2779	G	N1-C2-N2	-5.36	111.38	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	322	C	C4-C5-C6	5.36	120.08	117.40
15	14	554	C	N1-C2-N3	5.36	122.95	119.20
15	14	2374	C	OP1-P-OP2	5.36	127.64	119.60
15	14	2787	C	O5'-P-OP2	5.36	117.13	110.70
26	16	30	C	O5'-P-OP1	5.36	117.13	110.70
1	13	2154	A	N7-C8-N9	5.35	116.48	113.80
4	11	71	ASP	CB-CG-OD1	-5.35	113.48	118.30
15	1H	481	C	N3-C2-O2	5.35	125.65	121.90
15	1H	957	A	C5-N7-C8	5.35	106.58	103.90
15	1H	997	G	N1-C6-O6	-5.35	116.69	119.90
15	1H	1314	A	C4-C5-C6	5.35	119.68	117.00
15	1H	1391	A	N1-C6-N6	5.35	121.81	118.60
15	1H	1991	A	N1-C6-N6	-5.35	115.39	118.60
15	1H	484	C	N3-C4-N4	5.35	121.75	118.00
15	1H	498	A	C5-N7-C8	-5.35	101.22	103.90
15	14	1979	G	N1-C2-N2	5.35	121.02	116.20
15	14	2106	C	N3-C2-O2	-5.35	118.15	121.90
52	X1	41	C	O5'-P-OP2	-5.35	100.88	105.70
1	13	1526	G	C6-C5-N7	-5.35	127.19	130.40
13	3I	97	ARG	NE-CZ-NH2	-5.35	117.62	120.30
15	1H	1013	G	C4-C5-N7	-5.35	108.66	110.80
15	1H	1238	G	C5'-C4'-C3'	-5.35	107.44	116.00
15	1H	1877	C	C5-C4-N4	-5.35	116.45	120.20
15	1H	2032	C	N1-C2-N3	5.35	122.94	119.20
15	1H	2482	C	N3-C4-N4	-5.35	114.25	118.00
15	14	4	C	P-O3'-C3'	5.35	126.12	119.70
15	14	131	C	C4-C5-C6	5.35	120.07	117.40
15	14	178	G	OP1-P-OP2	5.35	127.62	119.60
15	14	653	U	C2-N3-C4	-5.35	123.79	127.00
15	14	822	U	C2-N3-C4	-5.35	123.79	127.00
15	14	1320	G	N1-C2-N2	-5.35	111.39	116.20
15	14	2064	C	N3-C4-C5	5.35	124.04	121.90
15	14	2395	C	N3-C4-C5	5.35	124.04	121.90
22	D5	91	LEU	CA-CB-CG	5.35	127.60	115.30
52	X4	18	G	C6-C5-N7	-5.35	127.19	130.40
1	13	1443	A	N7-C8-N9	-5.35	111.13	113.80
1	13	1786	C	C6-N1-C2	-5.35	118.16	120.30
1	13	2116	A	O5'-P-OP1	-5.35	100.89	105.70
15	1H	330	U	N1-C2-N3	5.35	118.11	114.90
15	1H	1059	G	C4-N9-C1'	5.35	133.45	126.50
15	1H	1320	G	C8-N9-C4	5.35	108.54	106.40
15	1H	1442	A	C5-C6-N6	5.35	127.98	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1648	C	N1-C2-N3	5.35	122.94	119.20
15	1H	2348	A	OP1-P-O3'	5.35	116.96	105.20
15	14	42	G	O5'-P-OP1	-5.35	100.89	105.70
15	1H	993	G	O5'-P-OP1	5.35	117.11	110.70
15	14	320	G	N1-C6-O6	-5.35	116.69	119.90
15	14	851	A	C5-C6-N1	5.35	120.37	117.70
26	16	21	G	N1-C6-O6	5.35	123.11	119.90
1	13	1439	C	C2-N1-C1'	5.34	124.68	118.80
1	1G	969	C	C6-N1-C1'	-5.34	114.39	120.80
1	1G	1356	G	N9-C4-C5	-5.34	103.26	105.40
15	1H	854	G	C5-C6-N1	5.34	114.17	111.50
15	1H	1036	A	OP2-P-O3'	5.34	116.96	105.20
15	1H	2252	G	N1-C2-N2	-5.34	111.39	116.20
15	14	182	C	N3-C2-O2	5.34	125.64	121.90
15	14	723	G	N1-C6-O6	-5.34	116.69	119.90
15	14	2430	G	N3-C2-N2	-5.34	116.16	119.90
39	J8	2	SER	CB-CA-C	-5.34	99.95	110.10
49	7A	40	ASP	CB-CG-OD1	5.34	123.11	118.30
15	1H	1983	C	C5-C6-N1	5.34	123.67	121.00
15	14	1050	G	C5-C6-O6	5.34	131.81	128.60
15	1H	140	A	O5'-P-OP1	5.34	117.11	110.70
15	1H	251	G	N1-C2-N2	5.34	121.01	116.20
15	1H	753	G	C6-N1-C2	-5.34	121.89	125.10
15	1H	799	A	O5'-P-OP2	5.34	117.11	110.70
15	1H	2564	G	N3-C4-C5	-5.34	125.93	128.60
15	1H	2843	G	N3-C2-N2	-5.34	116.16	119.90
15	14	1688	C	N3-C4-N4	-5.34	114.26	118.00
15	14	1849	A	C6-N1-C2	-5.34	115.39	118.60
15	14	1945	C	C6-N1-C2	5.34	122.44	120.30
1	13	888	G	N3-C4-C5	-5.34	125.93	128.60
1	13	1418	U	OP2-P-O3'	5.34	116.95	105.20
1	13	2021	U	N3-C4-C5	-5.34	111.40	114.60
1	1G	1602	C	N3-C4-C5	-5.34	119.76	121.90
15	1H	1419	C	O5'-P-OP1	5.34	117.11	110.70
15	1H	1976	U	C5-C4-O4	-5.34	122.70	125.90
15	1H	2840	C	C5-C4-N4	-5.34	116.46	120.20
15	14	818	G	C5-C6-O6	-5.34	125.40	128.60
15	14	868	A	N3-C4-C5	-5.34	123.06	126.80
15	14	982	C	C5-C4-N4	5.34	123.94	120.20
15	14	1709	U	O5'-P-OP1	-5.34	100.89	105.70
15	14	2394	G	O5'-P-OP1	5.34	117.11	110.70
1	13	1986	C	C6-N1-C2	5.34	122.44	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2295	G	C5-N7-C8	5.34	106.97	104.30
15	14	478	G	N3-C2-N2	-5.34	116.16	119.90
15	14	484	C	N3-C4-N4	5.34	121.74	118.00
1	13	754	G	N1-C6-O6	-5.34	116.70	119.90
1	13	1051	G	OP2-P-O3'	5.34	116.94	105.20
12	Q8	28	GLY	N-CA-C	-5.34	99.76	113.10
15	1H	98	U	N3-C2-O2	-5.34	118.46	122.20
15	1H	540	A	C5-N7-C8	-5.34	101.23	103.90
15	1H	1001	G	C6-N1-C2	-5.34	121.90	125.10
15	1H	1472	G	C5-C6-O6	5.34	131.80	128.60
15	14	525	G	N1-C6-O6	5.34	123.10	119.90
15	14	1257	G	C5-C6-O6	5.34	131.80	128.60
15	14	1374	G	OP1-P-OP2	-5.34	111.60	119.60
15	14	1611	G	C5-N7-C8	-5.34	101.63	104.30
15	14	2044	A	N7-C8-N9	-5.34	111.13	113.80
47	59	129	THR	C-N-CA	5.34	135.04	121.70
1	13	2029	G	C4-C5-N7	-5.33	108.67	110.80
15	1H	404	C	N3-C2-O2	-5.33	118.17	121.90
15	14	2370	C	C2-N1-C1'	5.33	124.67	118.80
15	14	2417	C	O4'-C1'-N1	5.33	112.47	108.20
15	14	2599	U	C6-N1-C1'	-5.33	113.73	121.20
1	13	1060	C	N3-C4-N4	5.33	121.73	118.00
1	13	1440	C	N3-C4-N4	-5.33	114.27	118.00
1	13	1926	A	C4-N9-C1'	5.33	135.90	126.30
4	11	37	LEU	CA-CB-CG	5.33	127.57	115.30
15	1H	196	U	C6-N1-C2	5.33	124.20	121.00
15	1H	1333	A	N7-C8-N9	5.33	116.47	113.80
15	1H	1339	C	N1-C2-N3	5.33	122.93	119.20
15	1H	2414	G	O5'-P-OP2	5.33	117.10	110.70
15	14	387	U	C2-N1-C1'	5.33	124.10	117.70
1	13	1134	G	C4-N9-C1'	5.33	133.43	126.50
1	13	2155	U	C5-C6-N1	5.33	125.36	122.70
1	1G	964	U	N3-C2-O2	5.33	125.93	122.20
1	1G	1190	U	O5'-P-OP1	-5.33	100.90	105.70
15	1H	97	G	N1-C6-O6	5.33	123.10	119.90
15	1H	1834	C	C6-N1-C2	-5.33	118.17	120.30
15	1H	1859	A	C5-C6-N1	5.33	120.37	117.70
15	14	995	G	N3-C2-N2	-5.33	116.17	119.90
15	14	1330	G	C5-N7-C8	-5.33	101.64	104.30
15	14	1383	G	O5'-P-OP1	-5.33	100.90	105.70
15	14	2357	C	C2-N3-C4	-5.33	117.23	119.90
15	14	2510	G	N9-C4-C5	-5.33	103.27	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	2740	C	OP2-P-O3'	5.33	116.93	105.20
1	1G	1712	G	N3-C4-C5	-5.33	125.94	128.60
15	1H	2272	U	C2-N3-C4	-5.33	123.80	127.00
15	14	1320	G	N3-C4-N9	5.33	129.20	126.00
15	14	1445	U	N1-C2-N3	5.33	118.10	114.90
15	14	1680	C	C2-N3-C4	-5.33	117.23	119.90
1	13	984	U	N1-C2-N3	-5.33	111.70	114.90
1	1G	1115	G	P-O3'-C3'	5.33	126.09	119.70
1	1G	1376	C	C6-N1-C2	5.33	122.43	120.30
15	1H	155	C	N3-C4-C5	5.33	124.03	121.90
15	1H	976	G	C5-C6-O6	-5.33	125.40	128.60
15	1H	979	G	N7-C8-N9	5.33	115.77	113.10
15	1H	2072	U	C5-C4-O4	-5.33	122.70	125.90
15	1H	2112	G	OP1-P-OP2	-5.33	111.61	119.60
15	1H	2865	G	C4-C5-N7	-5.33	108.67	110.80
15	14	252	A	C8-N9-C4	5.33	107.93	105.80
15	14	1772	G	C8-N9-C4	-5.33	104.27	106.40
15	14	1853	A	C8-N9-C4	5.33	107.93	105.80
15	14	1946	G	N1-C2-N2	-5.33	111.41	116.20
15	14	2503	A	C8-N9-C4	5.33	107.93	105.80
15	14	2544	G	N1-C6-O6	-5.33	116.70	119.90
1	13	1768	C	C6-N1-C2	-5.33	118.17	120.30
15	1H	1331	U	C2-N3-C4	-5.33	123.80	127.00
15	1H	2076	A	C5-C6-N6	5.33	127.96	123.70
15	1H	2456	C	C5-C4-N4	5.33	123.93	120.20
1	1G	754	G	P-O3'-C3'	5.33	126.09	119.70
1	1G	1696	G	N3-C4-C5	-5.33	125.94	128.60
15	1H	531	U	O5'-P-OP1	-5.33	100.91	105.70
15	1H	1538	U	C4-C5-C6	5.33	122.90	119.70
15	14	2737	A	N1-C2-N3	5.33	131.96	129.30
1	13	1462	U	O5'-P-OP2	-5.32	100.91	105.70
1	13	2128	G	C4-N9-C1'	-5.32	119.58	126.50
1	1G	1448	A	N1-C2-N3	5.32	131.96	129.30
15	1H	627	G	C6-C5-N7	-5.32	127.21	130.40
15	1H	1083	U	C5-C4-O4	5.32	129.09	125.90
15	1H	1506	G	C8-N9-C4	-5.32	104.27	106.40
15	1H	2794	A	OP1-P-O3'	5.32	116.91	105.20
15	14	241	A	N9-C4-C5	5.32	107.93	105.80
15	14	604	G	N1-C2-N2	5.32	120.99	116.20
15	14	1653	C	N3-C4-N4	5.32	121.73	118.00
21	68	8	LEU	CA-CB-CG	5.32	127.55	115.30
1	1G	1014	A	C8-N9-C4	5.32	107.93	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	605	C	N3-C4-C5	-5.32	119.77	121.90
15	1H	2076	A	N9-C4-C5	5.32	107.93	105.80
15	14	2398	G	N1-C2-N3	5.32	127.09	123.90
1	13	1197	G	OP1-P-O3'	5.32	116.90	105.20
15	1H	288	G	N1-C6-O6	-5.32	116.71	119.90
15	1H	1002	C	OP1-P-O3'	5.32	116.90	105.20
15	1H	1240	G	C4-C5-C6	5.32	121.99	118.80
15	1H	1625	C	OP2-P-O3'	5.32	116.91	105.20
15	1H	1712	C	N3-C4-N4	5.32	121.72	118.00
15	1H	1731	G	C5-C6-N1	-5.32	108.84	111.50
15	1H	1818	A	C2-N3-C4	-5.32	107.94	110.60
15	1H	2421	U	O5'-P-OP1	-5.32	100.91	105.70
15	1H	2681	C	N3-C4-N4	5.32	121.72	118.00
15	14	111	G	N3-C2-N2	-5.32	116.17	119.90
15	14	1363	C	C5-C6-N1	5.32	123.66	121.00
15	14	1856	G	N9-C4-C5	5.32	107.53	105.40
26	16	43	U	N3-C2-O2	-5.32	118.47	122.20
52	X4	44	G	N3-C4-N9	5.32	129.19	126.00
15	1H	1745	G	C5-N7-C8	-5.32	101.64	104.30
15	1H	2445	A	C4-N9-C1'	-5.32	116.73	126.30
15	14	536	C	N1-C2-O2	5.32	122.09	118.90
15	14	1425	C	OP2-P-O3'	5.32	116.90	105.20
15	14	2613	A	OP1-P-OP2	-5.32	111.62	119.60
1	13	655	G	N3-C4-C5	-5.32	125.94	128.60
15	1H	78	G	N3-C2-N2	-5.32	116.18	119.90
15	1H	542	A	O5'-P-OP2	-5.32	100.91	105.70
15	1H	1346	C	O5'-P-OP2	-5.32	100.91	105.70
15	1H	2226	C	C4-C5-C6	5.32	120.06	117.40
15	1H	2643	C	N1-C2-O2	5.32	122.09	118.90
15	14	2734	G	N7-C8-N9	5.32	115.76	113.10
26	16	25	G	C4-C5-N7	-5.32	108.67	110.80
26	1J	46	G	N3-C4-C5	5.32	131.26	128.60
15	1H	527	G	OP1-P-OP2	5.32	127.57	119.60
15	1H	1059	G	C6-C5-N7	-5.32	127.21	130.40
15	1H	1261	A	C5-N7-C8	-5.32	101.24	103.90
15	1H	1502	C	C6-N1-C2	5.32	122.43	120.30
15	1H	2720	A	N1-C6-N6	5.32	121.79	118.60
15	14	2398	G	N3-C2-N2	5.32	123.62	119.90
15	14	2441	A	N7-C8-N9	5.32	116.46	113.80
15	14	2445	A	C6-C5-N7	-5.32	128.58	132.30
15	1H	823	A	N7-C8-N9	5.31	116.46	113.80
15	1H	1596	C	C6-N1-C2	-5.31	118.17	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2606	C	N3-C4-C5	5.31	124.03	121.90
15	14	17	G	N3-C4-C5	-5.31	125.94	128.60
15	14	1604	A	N9-C4-C5	5.31	107.93	105.80
15	14	1970	G	C2-N3-C4	-5.31	109.24	111.90
15	14	2084	A	OP1-P-O3'	5.31	116.89	105.20
15	14	2396	C	N3-C2-O2	5.31	125.62	121.90
1	13	986	C	C2-N1-C1'	5.31	124.64	118.80
1	13	1380	U	N3-C4-O4	5.31	123.12	119.40
1	1G	2002	A	C2-N3-C4	-5.31	107.94	110.60
12	Q8	3	LYS	CD-CE-NZ	5.31	123.92	111.70
15	1H	604	G	C4-C5-N7	-5.31	108.67	110.80
15	1H	1305	G	O5'-P-OP2	5.31	117.08	110.70
15	1H	1462	G	N3-C2-N2	-5.31	116.18	119.90
15	1H	2023	G	C8-N9-C4	5.31	108.53	106.40
15	1H	2367	A	N9-C4-C5	-5.31	103.67	105.80
15	14	28	A	C2-N3-C4	5.31	113.26	110.60
15	14	47	G	OP2-P-O3'	5.31	116.89	105.20
52	X4	37	A	N9-C4-C5	-5.31	103.67	105.80
1	13	695	U	N3-C4-O4	-5.31	115.68	119.40
1	13	987	G	N1-C6-O6	-5.31	116.71	119.90
15	14	717	G	OP1-P-O3'	5.31	116.89	105.20
15	14	911	G	OP1-P-O3'	5.31	116.88	105.20
1	13	825	A	C2-N3-C4	5.31	113.25	110.60
1	13	1509	G	C5-C6-N1	-5.31	108.84	111.50
15	1H	360	C	C5-C6-N1	5.31	123.66	121.00
15	1H	472	C	C5-C6-N1	-5.31	118.34	121.00
15	1H	474	G	O5'-P-OP1	-5.31	100.92	105.70
15	1H	1233	C	N3-C2-O2	-5.31	118.18	121.90
15	1H	1682	A	C5-C6-N6	-5.31	119.45	123.70
15	1H	1826	G	C5-C6-O6	5.31	131.79	128.60
15	1H	2241	C	C6-N1-C2	5.31	122.42	120.30
15	1H	2400	C	N1-C2-N3	5.31	122.92	119.20
15	1H	2763	G	C4-C5-N7	5.31	112.92	110.80
15	1H	2767	G	C6-N1-C2	5.31	128.28	125.10
15	14	1009	G	OP1-P-O3'	5.31	116.88	105.20
15	14	2381	A	O5'-P-OP1	5.31	117.07	110.70
1	13	1420	G	N1-C6-O6	5.31	123.08	119.90
1	1G	1407	G	C5-C6-N1	-5.31	108.85	111.50
15	1H	498	A	C4-C5-N7	5.31	113.35	110.70
15	1H	854	G	N1-C6-O6	5.31	123.08	119.90
15	1H	1548	C	C2-N1-C1'	-5.31	112.96	118.80
15	1H	1651	U	N1-C2-N3	5.31	118.08	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2492	C	C6-N1-C2	-5.31	118.18	120.30
15	14	526	U	N3-C2-O2	-5.31	118.48	122.20
15	14	1243	G	C5-C6-O6	5.31	131.78	128.60
15	14	2104	U	O5'-P-OP1	-5.31	100.92	105.70
15	14	2454	A	N9-C4-C5	-5.31	103.68	105.80
15	14	2627	C	N3-C4-C5	-5.31	119.78	121.90
1	13	1318	C	OP1-P-OP2	5.31	127.56	119.60
1	13	1789	C	C6-N1-C2	5.31	122.42	120.30
1	13	1867	U	C5-C6-N1	5.31	125.35	122.70
1	1G	1438	G	N1-C6-O6	5.31	123.08	119.90
15	1H	666	U	O5'-P-OP2	-5.31	100.92	105.70
15	1H	1431	G	N3-C2-N2	-5.31	116.19	119.90
15	14	228	C	C2-N3-C4	-5.31	117.25	119.90
15	14	740	C	N1-C2-O2	-5.31	115.72	118.90
15	14	1891	G	N3-C4-C5	-5.31	125.95	128.60
52	X1	30	G	N1-C6-O6	-5.31	116.72	119.90
1	1G	1054	G	O4'-C1'-N9	5.30	112.44	108.20
1	1G	1387	G	C5-C6-O6	5.30	131.78	128.60
15	1H	119	G	C8-N9-C4	-5.30	104.28	106.40
15	1H	2623	G	C5-N7-C8	-5.30	101.65	104.30
15	14	53	G	N9-C4-C5	-5.30	103.28	105.40
15	14	971	C	N3-C4-C5	-5.30	119.78	121.90
15	14	1273	C	C5-C6-N1	-5.30	118.35	121.00
15	14	1701	G	N1-C6-O6	5.30	123.08	119.90
26	16	54	A	C8-N9-C4	5.30	107.92	105.80
1	13	1078	U	N1-C2-N3	5.30	118.08	114.90
15	1H	2573	C	C5-C6-N1	-5.30	118.35	121.00
15	14	1996	A	C2-N3-C4	5.30	113.25	110.60
52	X4	35	A	O5'-P-OP1	-5.30	100.93	105.70
1	13	1297	G	C6-N1-C2	-5.30	121.92	125.10
1	13	1875	A	N7-C8-N9	5.30	116.45	113.80
1	1G	1152	A	O5'-P-OP2	5.30	117.06	110.70
15	1H	240	G	N7-C8-N9	5.30	115.75	113.10
15	1H	2560	G	N3-C4-N9	5.30	129.18	126.00
15	1H	2843	G	C5-N7-C8	-5.30	101.65	104.30
15	14	884	A	N9-C4-C5	5.30	107.92	105.80
15	14	2861	G	O4'-C1'-N9	5.30	112.44	108.20
52	X4	44	G	N9-C4-C5	-5.30	103.28	105.40
1	13	1222	G	C5-C6-O6	-5.30	125.42	128.60
1	13	1416	A	N1-C2-N3	5.30	131.95	129.30
1	13	1483	A	C5-C6-N1	-5.30	115.05	117.70
15	1H	839	C	N3-C4-C5	-5.30	119.78	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	985	G	N9-C4-C5	5.30	107.52	105.40
15	1H	1074	U	C6-N1-C1'	-5.30	113.78	121.20
15	1H	1200	G	N1-C6-O6	5.30	123.08	119.90
15	1H	1320	G	N3-C2-N2	5.30	123.61	119.90
15	1H	1349	U	C5-C4-O4	5.30	129.08	125.90
15	1H	1685	G	OP2-P-O3'	5.30	116.86	105.20
15	1H	2006	A	C4-C5-N7	5.30	113.35	110.70
15	1H	2361	A	N9-C1'-C2'	5.30	120.89	114.00
15	1H	2429	G	N3-C2-N2	-5.30	116.19	119.90
15	1H	2731	C	C2-N3-C4	-5.30	117.25	119.90
15	14	887	C	C4-C5-C6	5.30	120.05	117.40
15	14	1843	A	N1-C2-N3	5.30	131.95	129.30
15	1H	505	A	C4-C5-N7	5.30	113.35	110.70
15	1H	1769	G	C5-N7-C8	-5.30	101.65	104.30
15	1H	1839	U	OP2-P-O3'	5.30	116.86	105.20
15	14	483	C	N3-C4-C5	5.30	124.02	121.90
15	14	1958	G	C8-N9-C4	5.30	108.52	106.40
15	1H	50	G	OP2-P-O3'	5.30	116.85	105.20
15	1H	105	C	N1-C2-O2	-5.30	115.72	118.90
15	1H	643	G	N3-C2-N2	5.30	123.61	119.90
15	1H	652	G	C8-N9-C4	-5.30	104.28	106.40
15	14	1614	C	OP1-P-OP2	-5.30	111.66	119.60
15	14	1703	G	OP1-P-OP2	5.30	127.55	119.60
15	14	1714	A	N1-C6-N6	-5.30	115.42	118.60
26	16	122	A	N3-C4-N9	5.30	131.64	127.40
1	1G	1576	G	N1-C2-N2	-5.29	111.43	116.20
15	1H	568	C	C2-N3-C4	-5.29	117.25	119.90
15	1H	1198	G	O5'-P-OP1	5.29	117.05	110.70
15	14	211	A	C5'-C4'-C3'	-5.29	107.53	116.00
15	14	2516	C	C6-N1-C2	5.29	122.42	120.30
1	13	707	G	N3-C2-N2	-5.29	116.19	119.90
1	13	2125	A	N3-C4-C5	5.29	130.50	126.80
1	1G	1021	G	C8-N9-C4	-5.29	104.28	106.40
1	1G	1438	G	C5-C6-N1	-5.29	108.85	111.50
15	1H	600	A	C4-C5-C6	5.29	119.65	117.00
15	1H	838	A	O4'-C1'-N9	-5.29	103.97	108.20
15	1H	905	C	OP1-P-OP2	5.29	127.54	119.60
15	1H	1190	U	OP1-P-O3'	5.29	116.84	105.20
15	14	119	G	C4-C5-N7	5.29	112.92	110.80
15	14	802	C	N3-C4-N4	-5.29	114.29	118.00
15	14	835	C	C2-N3-C4	-5.29	117.25	119.90
15	14	843	G	C5-N7-C8	5.29	106.95	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1171	C	C6-N1-C2	5.29	122.42	120.30
15	14	2285	G	C5-N7-C8	-5.29	101.65	104.30
26	16	20	G	C8-N9-C4	-5.29	104.28	106.40
5	P8	28	ARG	NE-CZ-NH1	5.29	122.95	120.30
1	13	1589	G	N9-C4-C5	-5.29	103.28	105.40
1	13	1676	G	OP1-P-O3'	5.29	116.84	105.20
1	13	1683	A	C8-N9-C4	-5.29	103.68	105.80
1	1G	1043	G	N3-C4-C5	5.29	131.25	128.60
1	1G	1926	A	N1-C2-N3	5.29	131.95	129.30
15	1H	2062	G	N1-C6-O6	-5.29	116.72	119.90
15	1H	2434	U	OP1-P-OP2	-5.29	111.66	119.60
15	1H	2442	C	N1-C2-O2	-5.29	115.72	118.90
15	14	1632	C	N3-C4-N4	-5.29	114.30	118.00
15	14	2095	G	O5'-P-OP2	-5.29	100.94	105.70
15	14	2428	G	C8-N9-C4	5.29	108.52	106.40
15	14	2541	G	O5'-P-OP1	-5.29	100.94	105.70
26	16	83	G	N3-C2-N2	5.29	123.60	119.90
52	W4	38	A	C4-C5-N7	5.29	113.35	110.70
1	13	1705	G	O5'-P-OP2	-5.29	100.94	105.70
1	1G	1320	G	C8-N9-C4	5.29	108.52	106.40
1	1G	1563	C	C6-N1-C2	-5.29	118.18	120.30
1	1G	2107	C	C6-N1-C2	5.29	122.42	120.30
15	14	501	G	C5-C6-O6	5.29	131.77	128.60
15	14	747	C	OP1-P-OP2	5.29	127.53	119.60
15	14	1684	A	C5-C6-N6	-5.29	119.47	123.70
15	14	2594	C	O5'-P-OP2	-5.29	100.94	105.70
1	13	1479	C	C6-N1-C2	-5.29	118.18	120.30
15	1H	645	C	OP1-P-O3'	5.29	116.84	105.20
15	1H	996	C	C6-N1-C2	-5.29	118.18	120.30
15	1H	1194	C	N3-C4-N4	5.29	121.70	118.00
15	1H	2048	G	N7-C8-N9	5.29	115.74	113.10
15	1H	2266	G	N9-C4-C5	5.29	107.52	105.40
15	14	998	C	OP1-P-OP2	-5.29	111.67	119.60
15	14	1332	G	OP2-P-O3'	5.29	116.83	105.20
15	14	1483	A	OP2-P-O3'	5.29	116.83	105.20
15	14	1983	C	N3-C4-C5	-5.29	119.78	121.90
15	14	1988	U	N3-C2-O2	-5.29	118.50	122.20
15	14	2599	U	C4-C5-C6	5.29	122.87	119.70
32	39	181	LEU	CA-CB-CG	5.29	127.46	115.30
1	13	1679	C	N3-C4-N4	5.29	121.70	118.00
15	14	993	G	C2-N3-C4	-5.29	109.26	111.90
1	13	1211	U	N3-C4-O4	-5.29	115.70	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1599	G	C2-N3-C4	-5.29	109.26	111.90
15	1H	1660	C	N1-C2-O2	-5.29	115.73	118.90
15	1H	1770	A	P-O3'-C3'	5.29	126.04	119.70
15	1H	1869	G	N1-C6-O6	-5.29	116.73	119.90
15	1H	2380	G	C5-C6-N1	5.29	114.14	111.50
15	1H	2606	C	C6-N1-C2	-5.29	118.19	120.30
15	14	870	A	OP1-P-O3'	5.29	116.83	105.20
15	14	1478	G	N7-C8-N9	-5.29	110.46	113.10
15	14	1512	C	C6-N1-C2	-5.29	118.19	120.30
15	14	1715	A	C8-N9-C4	-5.29	103.69	105.80
23	21	76	ARG	NE-CZ-NH1	5.29	122.94	120.30
52	W4	76	A	N9-C4-C5	5.29	107.91	105.80
1	1G	1477	G	C8-N9-C4	-5.28	104.29	106.40
1	1G	1833	G	C8-N9-C4	-5.28	104.29	106.40
15	1H	1434	G	C8-N9-C4	5.28	108.51	106.40
15	1H	2476	C	C6-N1-C2	-5.28	118.19	120.30
15	14	33	U	OP1-P-O3'	5.28	116.83	105.20
15	14	193	C	C2-N1-C1'	-5.28	112.99	118.80
15	14	594	U	C6-N1-C2	5.28	124.17	121.00
15	14	1573	G	N1-C6-O6	-5.28	116.73	119.90
15	14	1697	G	C6-N1-C2	-5.28	121.93	125.10
15	14	1725	C	N1-C2-O2	5.28	122.07	118.90
39	J8	48	LYS	CD-CE-NZ	-5.28	99.55	111.70
47	51	98	LEU	CA-CB-CG	5.28	127.45	115.30
15	1H	486	G	O5'-P-OP2	-5.28	100.95	105.70
26	16	60	A	OP2-P-O3'	5.28	116.82	105.20
1	1G	1224	G	C5-C6-O6	5.28	131.77	128.60
11	G8	81	LYS	C-N-CA	5.28	144.18	122.00
15	1H	14	A	C2-N3-C4	-5.28	107.96	110.60
15	1H	740	C	C2-N3-C4	-5.28	117.26	119.90
15	1H	1058	A	C5-C6-N1	-5.28	115.06	117.70
15	1H	1370	A	C8-N9-C4	5.28	107.91	105.80
15	1H	1940	U	N3-C2-O2	-5.28	118.50	122.20
15	14	622	U	N1-C2-O2	-5.28	119.10	122.80
15	14	959	A	OP1-P-O3'	5.28	116.82	105.20
1	1G	1079	G	O5'-P-OP1	5.28	117.03	110.70
1	1G	1461	C	N3-C4-C5	-5.28	119.79	121.90
15	1H	2334	G	C5-C6-O6	-5.28	125.43	128.60
15	14	74	G	C2-N3-C4	5.28	114.54	111.90
15	14	483	C	C5-C4-N4	-5.28	116.50	120.20
15	14	1655	G	C8-N9-C4	5.28	108.51	106.40
15	14	1672	G	C4-C5-N7	-5.28	108.69	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	862	C	C6-N1-C2	-5.28	118.19	120.30
1	13	947	G	N1-C2-N2	5.28	120.95	116.20
4	19	37	LEU	CA-CB-CG	5.28	127.44	115.30
15	1H	439	G	C5-C6-O6	5.28	131.77	128.60
15	1H	1613	G	OP2-P-O3'	5.28	116.81	105.20
15	1H	2296	C	C5-C4-N4	-5.28	116.50	120.20
15	1H	2301	A	C4-C5-N7	5.28	113.34	110.70
15	1H	2637	C	OP2-P-O3'	5.28	116.81	105.20
15	14	1359	G	C5-C6-N1	5.28	114.14	111.50
15	14	1696	C	C5-C6-N1	-5.28	118.36	121.00
27	C8	27	LEU	CA-CB-CG	5.28	127.44	115.30
52	W4	35	A	N1-C6-N6	-5.28	115.43	118.60
1	13	1170	G	N3-C4-C5	5.28	131.24	128.60
1	13	2070	G	C5-C6-N1	-5.28	108.86	111.50
15	1H	79	G	C8-N9-C4	-5.28	104.29	106.40
15	1H	124	A	OP1-P-O3'	-5.28	93.59	105.20
15	14	126	C	C5-C6-N1	5.28	123.64	121.00
15	14	176	G	C8-N9-C4	5.28	108.51	106.40
15	14	552	U	OP1-P-O3'	5.28	116.81	105.20
15	14	624	G	N1-C2-N2	-5.28	111.45	116.20
15	14	1531	U	C5-C6-N1	5.28	125.34	122.70
15	14	1864	C	N3-C2-O2	5.28	125.59	121.90
52	X4	75	C	P-O3'-C3'	5.28	126.03	119.70
15	14	832	A	N9-C4-C5	-5.27	103.69	105.80
15	14	1172	C	C2-N3-C4	-5.27	117.26	119.90
15	14	1837	A	C4-C5-C6	-5.27	114.36	117.00
1	13	996	C	N3-C2-O2	-5.27	118.21	121.90
1	13	1208	G	O5'-P-OP2	-5.27	100.95	105.70
1	13	1421	A	C1'-O4'-C4'	-5.27	105.68	109.90
15	1H	486	G	O4'-C1'-N9	5.27	112.42	108.20
15	1H	541	A	N1-C2-N3	5.27	131.94	129.30
15	1H	1586	C	C6-N1-C2	-5.27	118.19	120.30
15	1H	2574	C	OP1-P-OP2	-5.27	111.69	119.60
15	14	1004	A	C8-N9-C4	5.27	107.91	105.80
15	14	1249	C	N3-C4-N4	5.27	121.69	118.00
15	14	2085	A	O5'-P-OP1	5.27	117.03	110.70
15	14	2505	G	O4'-C1'-N9	5.27	112.42	108.20
26	1J	8	C	C5-C6-N1	-5.27	118.36	121.00
52	V1	1	G	C5-C6-N1	5.27	114.14	111.50
1	13	2153	G	N1-C6-O6	5.27	123.06	119.90
15	1H	712	G	N3-C4-C5	-5.27	125.96	128.60
15	1H	2087	A	C5-C6-N6	-5.27	119.48	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	748	A	C5-C6-N1	5.27	120.33	117.70
15	14	2112	G	O5'-P-OP2	-5.27	100.96	105.70
15	1H	122	G	N7-C8-N9	-5.27	110.47	113.10
15	1H	890	A	N1-C2-N3	5.27	131.94	129.30
15	1H	1666	C	O5'-P-OP2	5.27	117.02	110.70
15	14	556	A	C6-N1-C2	-5.27	115.44	118.60
15	14	896	U	N1-C2-N3	5.27	118.06	114.90
15	14	1302	A	O4'-C1'-N9	-5.27	103.98	108.20
15	14	1609	G	C5-N7-C8	-5.27	101.67	104.30
15	14	2463	A	OP2-P-O3'	5.27	116.80	105.20
1	13	1533	C	O5'-P-OP1	5.27	117.02	110.70
1	13	1875	A	C8-N9-C4	-5.27	103.69	105.80
1	13	2072	A	O4'-C1'-N9	5.27	112.41	108.20
1	1G	995	G	C4-N9-C1'	5.27	133.35	126.50
1	1G	1495	A	N3-C4-C5	5.27	130.49	126.80
15	1H	308	A	O5'-P-OP2	-5.27	100.96	105.70
15	1H	1791	U	OP1-P-OP2	5.27	127.50	119.60
15	14	28	A	OP1-P-OP2	-5.27	111.70	119.60
1	13	1857	C	N1-C2-O2	-5.27	115.74	118.90
15	1H	1810	G	N9-C4-C5	-5.27	103.29	105.40
15	1H	2878	U	N1-C2-N3	5.27	118.06	114.90
1	1G	1063	C	P-O3'-C3'	5.26	126.02	119.70
15	1H	130	G	C8-N9-C4	5.26	108.51	106.40
15	1H	657	G	N9-C1'-C2'	-5.26	106.21	112.00
15	1H	1818	A	OP1-P-O3'	5.26	116.78	105.20
15	1H	1874	G	C8-N9-C4	5.26	108.51	106.40
15	1H	1976	U	C6-N1-C2	5.26	124.16	121.00
15	1H	2757	A	C5-C6-N1	-5.26	115.07	117.70
15	14	1377	G	N1-C2-N3	5.26	127.06	123.90
15	14	1713	C	C5-C4-N4	-5.26	116.52	120.20
1	1G	1823	U	N1-C2-O2	5.26	126.48	122.80
1	1G	2101	C	C6-N1-C2	-5.26	118.19	120.30
15	1H	200	C	C6-N1-C2	5.26	122.41	120.30
15	1H	1929	G	N3-C2-N2	5.26	123.58	119.90
15	1H	2267	G	N7-C8-N9	-5.26	110.47	113.10
15	1H	2311	U	OP1-P-OP2	5.26	127.49	119.60
15	1H	2312	C	N3-C2-O2	-5.26	118.22	121.90
15	14	69	G	C5-C6-N1	5.26	114.13	111.50
15	14	820	G	C4-C5-N7	-5.26	108.69	110.80
15	14	1975	G	C5-C6-N1	-5.26	108.87	111.50
26	16	12	C	C2-N3-C4	-5.26	117.27	119.90
39	J8	41	ARG	NE-CZ-NH1	5.26	122.93	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	550	C	C5-C6-N1	5.26	123.63	121.00
15	1H	604	G	N3-C4-C5	-5.26	125.97	128.60
15	1H	618	G	O5'-P-OP2	-5.26	100.96	105.70
15	1H	777	G	N1-C6-O6	5.26	123.06	119.90
15	1H	1373	G	O4'-C1'-N9	5.26	112.41	108.20
15	1H	1870	C	N3-C4-C5	-5.26	119.80	121.90
15	1H	1941	A	O5'-P-OP1	-5.26	100.97	105.70
15	1H	2301	A	OP1-P-O3'	5.26	116.78	105.20
15	1H	2437	A	C6-C5-N7	-5.26	128.62	132.30
15	1H	2509	G	C2-N3-C4	-5.26	109.27	111.90
15	14	255	A	C5-C6-N1	-5.26	115.07	117.70
15	14	1659	A	N1-C6-N6	5.26	121.76	118.60
15	14	2047	U	N3-C4-O4	5.26	123.08	119.40
26	16	32	C	N1-C2-O2	-5.26	115.74	118.90
1	13	2001	G	C8-N9-C4	-5.26	104.30	106.40
1	1G	1251	A	C8-N9-C4	-5.26	103.70	105.80
1	1G	2062	A	C5-C6-N1	-5.26	115.07	117.70
15	1H	186	A	C5-C6-N1	-5.26	115.07	117.70
15	1H	824	G	O4'-C1'-N9	5.26	112.41	108.20
15	1H	1653	C	C4-C5-C6	5.26	120.03	117.40
15	1H	2292	G	C5-C6-N1	5.26	114.13	111.50
15	1H	2501	G	O5'-P-OP1	5.26	117.01	110.70
12	M5	33	ASN	CB-CA-C	5.26	120.92	110.40
15	14	112	U	C2-N1-C1'	5.26	124.01	117.70
15	14	548	G	OP1-P-O3'	5.26	116.77	105.20
15	1H	954	G	N9-C4-C5	5.26	107.50	105.40
15	1H	1411	C	C6-N1-C2	5.26	122.40	120.30
15	1H	2233	U	O4'-C1'-N1	5.26	112.41	108.20
15	14	1606	C	C5-C6-N1	-5.26	118.37	121.00
15	14	1638	C	OP1-P-OP2	-5.26	111.71	119.60
15	14	2426	A	C5-C6-N1	-5.26	115.07	117.70
30	35	61	ARG	NE-CZ-NH2	5.26	122.93	120.30
1	13	1997	C	O5'-P-OP2	-5.26	100.97	105.70
1	13	2128	G	C8-N9-C1'	5.26	133.83	127.00
1	1G	963	C	C5-C4-N4	-5.26	116.52	120.20
15	1H	563	A	C5-C6-N1	5.26	120.33	117.70
15	1H	1822	C	O5'-P-OP2	-5.26	100.97	105.70
15	1H	1929	G	N1-C2-N3	-5.26	120.75	123.90
15	1H	2228	U	N1-C2-O2	-5.26	119.12	122.80
15	1H	2667	C	OP2-P-O3'	5.26	116.76	105.20
15	14	1449	G	N9-C4-C5	5.26	107.50	105.40
15	14	1663	A	C4-C5-N7	5.26	113.33	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	2338	G	OP1-P-OP2	5.26	127.48	119.60
26	16	36	U	N3-C2-O2	-5.26	118.52	122.20
52	X4	15	G	C5-C6-O6	5.26	131.75	128.60
15	1H	1413	G	N3-C2-N2	5.25	123.58	119.90
15	1H	1548	C	OP2-P-O3'	5.25	116.76	105.20
15	14	739	G	N1-C2-N2	-5.25	111.47	116.20
15	14	2472	U	N3-C2-O2	-5.25	118.52	122.20
1	13	1170	G	N9-C1'-C2'	-5.25	106.22	112.00
4	11	111	LEU	CA-CB-CG	5.25	127.38	115.30
15	1H	470	G	C5-C6-O6	5.25	131.75	128.60
15	1H	780	C	N1-C2-N3	5.25	122.88	119.20
15	1H	870	A	OP1-P-OP2	5.25	127.48	119.60
15	1H	1397	G	C5-C6-N1	5.25	114.13	111.50
15	1H	1755	G	C5-N7-C8	5.25	106.93	104.30
15	1H	2058	A	N9-C4-C5	5.25	107.90	105.80
15	1H	2301	A	C4-N9-C1'	5.25	135.76	126.30
15	1H	2601	C	O4'-C1'-N1	-5.25	104.00	108.20
15	1H	2861	G	N1-C2-N2	-5.25	111.47	116.20
15	14	230	G	N3-C4-N9	-5.25	122.85	126.00
15	14	591	U	C6-N1-C2	5.25	124.15	121.00
15	14	785	C	N3-C4-N4	5.25	121.68	118.00
15	14	1285	G	N7-C8-N9	-5.25	110.47	113.10
52	X4	67	C	C5-C6-N1	-5.25	118.37	121.00
1	13	774	A	N9-C4-C5	-5.25	103.70	105.80
1	13	1213	G	OP1-P-OP2	5.25	127.48	119.60
15	1H	1497	G	C6-C5-N7	5.25	133.55	130.40
15	1H	2010	G	N1-C6-O6	-5.25	116.75	119.90
15	1H	2404	G	C8-N9-C4	-5.25	104.30	106.40
15	14	485	A	O5'-P-OP2	-5.25	100.97	105.70
15	14	555	A	C5-C6-N1	-5.25	115.08	117.70
15	14	739	G	OP1-P-O3'	5.25	116.75	105.20
15	14	2279	C	O5'-P-OP2	5.25	117.00	110.70
52	V4	70	G	N3-C4-C5	-5.25	125.97	128.60
1	13	1556	G	C5-C6-N1	5.25	114.12	111.50
15	1H	116	A	C8-N9-C4	-5.25	103.70	105.80
15	1H	518	G	N1-C6-O6	-5.25	116.75	119.90
15	1H	620	C	N3-C4-C5	5.25	124.00	121.90
15	1H	2258	U	N1-C2-N3	5.25	118.05	114.90
15	14	103	C	C6-N1-C2	-5.25	118.20	120.30
15	14	609	C	C6-N1-C2	5.25	122.40	120.30
26	16	82	U	N1-C2-O2	5.25	126.47	122.80
1	13	1156	G	N3-C4-N9	-5.25	122.85	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1273	G	C4-N9-C1'	-5.25	119.68	126.50
1	13	1867	U	N1-C2-O2	5.25	126.47	122.80
1	1G	1306	U	C6-N1-C2	-5.25	117.85	121.00
1	1G	1531	A	C6-N1-C2	-5.25	115.45	118.60
15	1H	1364	C	N1-C2-O2	5.25	122.05	118.90
15	1H	1497	G	C4-C5-N7	-5.25	108.70	110.80
15	14	13	A	C8-N9-C4	-5.25	103.70	105.80
15	14	894	G	N9-C1'-C2'	-5.25	106.23	112.00
15	14	1398	A	N3-C4-C5	5.25	130.47	126.80
15	14	2413	U	N3-C4-O4	-5.25	115.72	119.40
1	13	704	C	N1-C2-O2	5.25	122.05	118.90
1	1G	1165	C	N3-C4-C5	-5.25	119.80	121.90
15	1H	356	A	OP1-P-O3'	5.25	116.74	105.20
15	1H	814	G	N1-C6-O6	5.25	123.05	119.90
15	14	335	A	C8-N9-C4	5.25	107.90	105.80
15	14	1310	C	C2-N3-C4	-5.25	117.28	119.90
15	14	1319	C	OP2-P-O3'	5.25	116.74	105.20
15	14	2246	C	N3-C4-C5	5.25	124.00	121.90
15	14	2516	C	N3-C2-O2	5.25	125.57	121.90
15	14	2523	G	C5-C6-N1	5.25	114.12	111.50
23	29	44	TYR	CA-CB-CG	5.25	123.37	113.40
1	13	1906	A	N7-C8-N9	5.25	116.42	113.80
15	1H	1015	G	C8-N9-C4	5.25	108.50	106.40
15	1H	2601	C	N3-C4-N4	5.25	121.67	118.00
15	1H	2625	C	C4-C5-C6	5.25	120.02	117.40
15	14	400	G	C5-C6-N1	5.25	114.12	111.50
15	14	971	C	C6-N1-C2	-5.25	118.20	120.30
15	14	1940	U	N1-C2-N3	5.25	118.05	114.90
1	13	1231	A	OP1-P-O3'	5.24	116.73	105.20
1	13	1690	U	C5-C4-O4	5.24	129.05	125.90
15	1H	1347	C	OP1-P-OP2	-5.24	111.73	119.60
15	1H	1803	G	C4-C5-C6	5.24	121.95	118.80
15	14	48	A	C8-N9-C4	-5.24	103.70	105.80
15	14	2054	G	N1-C6-O6	5.24	123.05	119.90
15	14	2395	C	C5-C4-N4	-5.24	116.53	120.20
15	14	2564	G	C4-C5-N7	-5.24	108.70	110.80
26	1J	92	A	OP2-P-O3'	5.24	116.74	105.20
1	1G	1615	U	P-O3'-C3'	5.24	125.99	119.70
15	1H	2724	G	N7-C8-N9	5.24	115.72	113.10
15	14	243	C	N1-C2-O2	-5.24	115.75	118.90
27	C8	64	ARG	NE-CZ-NH1	-5.24	117.68	120.30
1	13	784	G	C8-N9-C4	-5.24	104.30	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	1410	A	OP1-P-O3'	5.24	116.73	105.20
15	1H	453	G	C8-N9-C4	-5.24	104.30	106.40
15	1H	1367	C	O5'-P-OP2	5.24	116.99	110.70
15	1H	2274	G	N1-C2-N3	5.24	127.05	123.90
15	1H	2288	A	N7-C8-N9	-5.24	111.18	113.80
15	1H	2304	G	N3-C2-N2	-5.24	116.23	119.90
15	14	1436	C	O5'-P-OP1	-5.24	100.98	105.70
15	14	1740	A	N1-C2-N3	-5.24	126.68	129.30
15	14	1990	C	O5'-P-OP1	-5.24	100.98	105.70
26	16	108	G	OP2-P-O3'	5.24	116.73	105.20
1	13	884	A	O5'-P-OP2	5.24	116.99	110.70
1	1G	1148	C	C6-N1-C2	5.24	122.40	120.30
1	1G	1754	U	P-O3'-C3'	5.24	125.99	119.70
15	1H	833	A	N7-C8-N9	-5.24	111.18	113.80
15	1H	1525	G	N7-C8-N9	5.24	115.72	113.10
15	1H	2256	A	N9-C4-C5	5.24	107.89	105.80
15	1H	2370	C	N3-C4-C5	5.24	124.00	121.90
15	1H	2866	C	N3-C2-O2	-5.24	118.23	121.90
15	14	1413	G	N9-C4-C5	-5.24	103.30	105.40
23	29	117	MET	CA-CB-CG	5.24	122.20	113.30
1	13	1070	U	OP1-P-OP2	-5.24	111.75	119.60
1	1G	747	G	C6-C5-N7	-5.24	127.26	130.40
1	1G	1411	A	C8-N9-C4	5.24	107.89	105.80
15	14	113	C	O5'-P-OP2	5.24	116.98	110.70
52	W4	38	A	C5-N7-C8	-5.24	101.28	103.90
15	1H	26	G	C2-N3-C4	5.24	114.52	111.90
15	1H	1347	C	OP1-P-O3'	5.24	116.72	105.20
15	1H	1646	A	OP2-P-O3'	5.24	116.72	105.20
15	1H	1865	G	OP1-P-OP2	-5.24	111.75	119.60
15	1H	2058	A	C2-N3-C4	5.24	113.22	110.60
15	1H	2082	A	C2-N3-C4	-5.24	107.98	110.60
15	1H	2598	G	C5-C6-N1	5.24	114.12	111.50
15	14	1833	G	C4-C5-N7	-5.24	108.70	110.80
15	14	1840	C	OP2-P-O3'	5.24	116.72	105.20
15	14	2511	C	C4-C5-C6	-5.24	114.78	117.40
26	16	110	U	OP1-P-OP2	5.24	127.45	119.60
52	X1	11	C	N1-C2-O2	-5.24	115.76	118.90
1	13	1680	U	O5'-P-OP2	-5.23	100.99	105.70
1	1G	978	C	N3-C4-N4	5.23	121.66	118.00
15	1H	365	A	C5-N7-C8	-5.23	101.28	103.90
15	1H	899	C	O5'-P-OP1	-5.23	100.99	105.70
15	1H	1088	C	C6-N1-C2	5.23	122.39	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1895	G	C8-N9-C4	5.23	108.49	106.40
1	13	1586	G	C4-N9-C1'	5.23	133.30	126.50
1	13	2091	A	N7-C8-N9	-5.23	111.18	113.80
15	1H	129	G	N7-C8-N9	-5.23	110.48	113.10
15	1H	396	C	N3-C4-N4	5.23	121.66	118.00
15	1H	831	A	C6-C5-N7	-5.23	128.64	132.30
15	1H	886	C	N3-C4-N4	5.23	121.66	118.00
15	1H	1449	G	OP2-P-O3'	5.23	116.71	105.20
15	14	1819	A	OP2-P-O3'	5.23	116.71	105.20
15	14	2028	G	OP2-P-O3'	5.23	116.71	105.20
1	13	762	C	C5-C4-N4	5.23	123.86	120.20
15	14	1329	G	N1-C6-O6	5.23	123.04	119.90
15	14	1340	C	N3-C4-C5	5.23	123.99	121.90
15	14	2057	G	N9-C4-C5	-5.23	103.31	105.40
15	14	2251	C	OP1-P-OP2	5.23	127.44	119.60
15	14	2293	A	N1-C6-N6	5.23	121.74	118.60
15	14	2440	A	N3-C4-C5	-5.23	123.14	126.80
15	14	2489	C	C6-N1-C2	-5.23	118.21	120.30
15	1H	501	G	C6-N1-C2	-5.23	121.96	125.10
15	14	2331	C	OP1-P-O3'	5.23	116.70	105.20
1	13	1012	G	N1-C6-O6	-5.23	116.76	119.90
1	13	1854	A	C8-N9-C4	-5.23	103.71	105.80
15	1H	745	G	C5-C6-O6	-5.23	125.46	128.60
15	1H	752	U	C5-C4-O4	5.23	129.04	125.90
15	1H	2087	A	OP1-P-O3'	5.23	116.70	105.20
15	1H	2345	G	C5-N7-C8	-5.23	101.69	104.30
15	1H	2749	A	OP1-P-O3'	5.23	116.70	105.20
15	14	592	A	C2-N3-C4	-5.23	107.99	110.60
15	14	1377	G	N3-C2-N2	-5.23	116.24	119.90
15	14	2582	G	C8-N9-C4	5.23	108.49	106.40
51	Y4	36	G	N7-C8-N9	5.23	115.71	113.10
1	1G	1295	G	C6-C5-N7	-5.23	127.26	130.40
15	1H	729	G	N3-C4-C5	-5.23	125.99	128.60
15	1H	1002	C	C2-N1-C1'	-5.23	113.05	118.80
15	14	1577	A	C2-N3-C4	-5.23	107.99	110.60
1	13	1449	U	O5'-P-OP2	5.22	116.97	110.70
1	1G	1451	C	N3-C4-N4	-5.22	114.34	118.00
1	1G	2001	G	O5'-P-OP1	-5.22	101.00	105.70
12	Q8	46	ARG	N-CA-C	-5.22	96.89	111.00
15	1H	776	A	C2-N3-C4	-5.22	107.99	110.60
15	1H	870	A	N7-C8-N9	5.22	116.41	113.80
15	1H	892	G	OP1-P-OP2	-5.22	111.76	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2407	A	OP1-P-O3'	5.22	116.70	105.20
15	14	1176	A	C6-N1-C2	-5.22	115.47	118.60
15	14	1979	G	C5-C6-O6	-5.22	125.47	128.60
1	13	1012	G	C6-C5-N7	5.22	133.53	130.40
1	1G	1444	A	N7-C8-N9	-5.22	111.19	113.80
1	1G	1518	G	C6-C5-N7	-5.22	127.27	130.40
15	1H	485	A	N1-C6-N6	-5.22	115.47	118.60
15	1H	669	G	C5-C6-O6	5.22	131.73	128.60
15	1H	825	G	N3-C4-N9	5.22	129.13	126.00
15	1H	963	C	N3-C2-O2	-5.22	118.24	121.90
15	1H	1508	C	N3-C4-C5	5.22	123.99	121.90
15	1H	2893	C	N3-C4-C5	-5.22	119.81	121.90
15	14	475	A	OP1-P-OP2	-5.22	111.77	119.60
15	14	804	C	C6-N1-C2	5.22	122.39	120.30
15	14	1657	A	O5'-P-OP1	-5.22	101.00	105.70
32	31	106	ARG	NE-CZ-NH1	-5.22	117.69	120.30
52	X4	34	G	OP1-P-O3'	5.22	116.69	105.20
1	13	986	C	P-O3'-C3'	5.22	125.97	119.70
1	1G	1045	U	O5'-P-OP1	5.22	116.97	110.70
15	1H	572	C	C2-N1-C1'	5.22	124.54	118.80
15	1H	1941	A	C4-C5-N7	-5.22	108.09	110.70
15	14	795	A	N9-C4-C5	5.22	107.89	105.80
1	13	2118	U	OP2-P-O3'	5.22	116.68	105.20
15	1H	28	A	O5'-P-OP2	-5.22	101.00	105.70
15	1H	2019	C	C2-N3-C4	-5.22	117.29	119.90
15	14	124	A	OP2-P-O3'	5.22	116.69	105.20
15	14	1401	U	C5-C6-N1	-5.22	120.09	122.70
15	14	1675	G	O5'-P-OP2	5.22	116.96	110.70
15	14	2555	C	C2-N3-C4	-5.22	117.29	119.90
33	5I	44	LEU	CA-CB-CG	5.22	127.30	115.30
1	13	677	G	C5-C6-O6	-5.22	125.47	128.60
1	13	747	G	N1-C2-N3	-5.22	120.77	123.90
1	13	1297	G	C8-N9-C4	-5.22	104.31	106.40
1	13	1325	A	N3-C4-C5	-5.22	123.15	126.80
1	1G	902	U	C4-C5-C6	5.22	122.83	119.70
15	1H	2455	C	C5-C4-N4	5.22	123.85	120.20
15	14	1047	U	N1-C2-O2	5.22	126.45	122.80
15	14	1754	G	N9-C4-C5	-5.22	103.31	105.40
1	13	1519	C	C2-N3-C4	-5.22	117.29	119.90
1	13	1786	C	N3-C2-O2	-5.22	118.25	121.90
1	1G	2038	G	C6-C5-N7	-5.22	127.27	130.40
15	1H	725	A	C6-C5-N7	-5.22	128.65	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1315	G	C4-C5-N7	5.22	112.89	110.80
15	1H	1319	C	C5-C6-N1	-5.22	118.39	121.00
15	1H	1401	U	N1-C2-O2	-5.22	119.15	122.80
15	1H	1852	U	N3-C4-C5	5.22	117.73	114.60
15	1H	1981	U	C5-C4-O4	5.22	129.03	125.90
15	1H	2418	C	N3-C2-O2	5.22	125.55	121.90
15	1H	2831	G	N3-C4-C5	5.22	131.21	128.60
15	14	496	G	N3-C2-N2	-5.22	116.25	119.90
15	14	906	C	C5-C6-N1	-5.22	118.39	121.00
15	14	1364	C	C5-C4-N4	5.22	123.85	120.20
15	14	2504	G	C5-C6-O6	-5.22	125.47	128.60
26	1J	106	U	C2-N3-C4	-5.22	123.87	127.00
52	X4	39	U	C5-C6-N1	5.22	125.31	122.70
1	13	747	G	N3-C2-N2	5.21	123.55	119.90
1	13	1089	C	N3-C4-N4	-5.21	114.35	118.00
1	13	1091	A	O5'-P-OP1	-5.21	101.01	105.70
1	13	1412	C	N3-C4-N4	-5.21	114.35	118.00
1	1G	703	G	OP1-P-O3'	5.21	116.67	105.20
15	1H	405	C	N3-C2-O2	5.21	125.55	121.90
15	1H	888	U	N1-C2-N3	5.21	118.03	114.90
15	1H	1249	C	C2-N3-C4	-5.21	117.29	119.90
15	1H	1538	U	C6-N1-C2	-5.21	117.87	121.00
15	1H	1852	U	C2-N3-C4	-5.21	123.87	127.00
15	1H	1963	A	C8-N9-C4	5.21	107.89	105.80
15	14	256	G	OP2-P-O3'	5.21	116.67	105.20
15	14	991	G	C5-C6-O6	-5.21	125.47	128.60
15	14	2015	C	N1-C2-O2	5.21	122.03	118.90
15	14	2057	G	C2-N3-C4	-5.21	109.29	111.90
15	14	2335	A	N9-C4-C5	-5.21	103.71	105.80
15	14	2506	U	N3-C4-O4	5.21	123.05	119.40
1	1G	1448	A	N1-C6-N6	5.21	121.73	118.60
15	1H	704	A	O4'-C1'-N9	5.21	112.37	108.20
15	1H	1955	G	C8-N9-C4	5.21	108.48	106.40
1	13	1429	G	O5'-P-OP2	-5.21	101.01	105.70
15	1H	26	G	OP1-P-O3'	5.21	116.67	105.20
15	1H	998	C	O5'-P-OP2	5.21	116.95	110.70
15	1H	1080	A	O5'-P-OP2	-5.21	101.01	105.70
15	1H	2723	G	C6-C5-N7	-5.21	127.27	130.40
15	1H	2857	G	N3-C2-N2	5.21	123.55	119.90
15	14	1820	A	C4-N9-C1'	5.21	135.68	126.30
15	14	1981	U	C2-N3-C4	-5.21	123.87	127.00
15	14	2101	U	C5-C6-N1	5.21	125.31	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	2472	U	N1-C2-O2	5.21	126.45	122.80
26	1J	24	U	N1-C2-O2	5.21	126.45	122.80
1	13	1261	A	C4-C5-C6	-5.21	114.39	117.00
15	1H	1431	G	N9-C4-C5	-5.21	103.32	105.40
15	1H	2382	G	C8-N9-C4	-5.21	104.32	106.40
15	1H	2846	G	C8-N9-C4	5.21	108.48	106.40
15	14	827	G	N7-C8-N9	-5.21	110.50	113.10
15	14	2518	A	OP2-P-O3'	5.21	116.66	105.20
1	1G	882	C	C4-C5-C6	5.21	120.00	117.40
1	1G	1349	C	N3-C2-O2	-5.21	118.25	121.90
1	1G	2143	G	C4-C5-N7	-5.21	108.72	110.80
15	1H	535	G	N1-C2-N2	-5.21	111.51	116.20
15	1H	1609	G	N9-C4-C5	-5.21	103.32	105.40
15	1H	1619	A	OP1-P-OP2	5.21	127.41	119.60
15	1H	1713	C	C6-N1-C2	5.21	122.38	120.30
15	14	169	G	N7-C8-N9	-5.21	110.50	113.10
15	14	591	U	C5-C6-N1	-5.21	120.10	122.70
15	14	1250	C	C2-N3-C4	-5.21	117.30	119.90
15	14	1827	C	C2-N3-C4	-5.21	117.30	119.90
15	14	1930	C	C6-N1-C2	5.21	122.38	120.30
15	14	2265	G	OP1-P-OP2	5.21	127.41	119.60
15	14	2614	G	C5-C6-O6	5.21	131.72	128.60
1	1G	2126	A	O5'-P-OP1	-5.21	101.01	105.70
15	1H	829	G	C6-N1-C2	-5.21	121.98	125.10
15	1H	1334	G	N9-C4-C5	-5.21	103.32	105.40
15	1H	2422	G	C6-C5-N7	-5.21	127.28	130.40
15	1H	2585	G	N3-C4-N9	-5.21	122.88	126.00
15	14	592	A	N3-C4-C5	5.21	130.44	126.80
15	14	683	C	C2-N3-C4	5.21	122.50	119.90
15	14	1477	C	C6-N1-C2	5.21	122.38	120.30
15	14	2442	C	O5'-P-OP2	5.21	116.95	110.70
15	14	2607	G	N1-C6-O6	-5.21	116.78	119.90
30	35	85	LEU	CA-CB-CG	5.21	127.28	115.30
1	1G	1422	U	N1-C2-O2	-5.21	119.16	122.80
15	1H	466	G	C4-C5-N7	5.21	112.88	110.80
15	1H	1428	A	C3'-C2'-C1'	-5.21	97.34	101.50
15	1H	1684	A	C4-C5-C6	5.21	119.60	117.00
15	1H	2272	U	N1-C2-N3	5.21	118.02	114.90
15	1H	2423	U	N3-C4-C5	5.21	117.72	114.60
15	1H	2509	G	OP1-P-OP2	5.21	127.41	119.60
15	1H	2670	G	C8-N9-C1'	5.21	133.77	127.00
15	14	705	G	C5-C6-O6	-5.21	125.48	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1402	G	C8-N9-C4	-5.20	104.32	106.40
15	1H	619	U	C5-C4-O4	5.20	129.02	125.90
15	1H	2294	G	N1-C6-O6	-5.20	116.78	119.90
15	1H	2327	U	N3-C4-O4	5.20	123.04	119.40
15	1H	2661	C	C6-N1-C2	5.20	122.38	120.30
15	14	34	C	N3-C2-O2	-5.20	118.26	121.90
15	14	854	G	C5-C6-N1	5.20	114.10	111.50
15	14	1377	G	N1-C6-O6	5.20	123.02	119.90
1	13	1496	A	N3-C4-C5	-5.20	123.16	126.80
1	13	1932	G	N3-C4-N9	-5.20	122.88	126.00
1	1G	1031	C	C2-N3-C4	-5.20	117.30	119.90
1	1G	1438	G	C2-N3-C4	-5.20	109.30	111.90
4	19	134	ARG	NE-CZ-NH2	5.20	122.90	120.30
15	1H	1717	G	C4-C5-N7	5.20	112.88	110.80
15	1H	1770	A	C5-C6-N1	-5.20	115.10	117.70
15	1H	2592	A	C4-C5-N7	-5.20	108.10	110.70
15	14	868	A	C2-N3-C4	5.20	113.20	110.60
15	14	2561	U	N3-C4-C5	-5.20	111.48	114.60
1	13	908	C	O5'-P-OP1	-5.20	101.02	105.70
1	13	1394	G	C8-N9-C1'	-5.20	120.24	127.00
1	13	1399	C	N3-C4-N4	5.20	121.64	118.00
1	1G	1190	U	N3-C4-O4	5.20	123.04	119.40
15	1H	721	C	OP1-P-O3'	-5.20	93.76	105.20
15	1H	748	A	N7-C8-N9	-5.20	111.20	113.80
15	1H	1013	G	OP1-P-OP2	5.20	127.40	119.60
15	1H	1994	A	OP2-P-O3'	5.20	116.64	105.20
15	14	145	G	N3-C4-C5	5.20	131.20	128.60
15	14	800	A	OP2-P-O3'	5.20	116.64	105.20
15	14	1172	C	C5-C6-N1	-5.20	118.40	121.00
1	1G	1469	C	C6-N1-C1'	-5.20	114.56	120.80
15	1H	118	U	O4'-C1'-N1	5.20	112.36	108.20
15	1H	558	C	O5'-P-OP1	-5.20	101.02	105.70
15	1H	1021	G	C5-C6-O6	-5.20	125.48	128.60
15	1H	1035	G	N3-C4-N9	-5.20	122.88	126.00
15	1H	1173	G	N3-C2-N2	-5.20	116.26	119.90
15	1H	1297	G	N3-C2-N2	-5.20	116.26	119.90
15	1H	1326	G	OP1-P-OP2	5.20	127.40	119.60
15	1H	1748	A	C6-N1-C2	-5.20	115.48	118.60
15	1H	2050	C	C6-N1-C2	-5.20	118.22	120.30
15	1H	2603	G	OP1-P-OP2	-5.20	111.80	119.60
15	14	74	G	C5-C6-N1	5.20	114.10	111.50
15	14	540	A	C5-C6-N1	-5.20	115.10	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1966	C	C5-C4-N4	-5.20	116.56	120.20
15	14	2081	G	C5-C6-O6	-5.20	125.48	128.60
15	14	2319	G	C2-N3-C4	-5.20	109.30	111.90
26	16	118	G	C8-N9-C4	-5.20	104.32	106.40
1	13	1679	C	C6-N1-C2	-5.20	118.22	120.30
15	1H	346	G	C6-C5-N7	-5.20	127.28	130.40
15	1H	2054	G	N1-C2-N3	-5.20	120.78	123.90
15	1H	2690	A	N7-C8-N9	5.20	116.40	113.80
15	14	1040	C	OP1-P-O3'	5.20	116.63	105.20
1	13	1009	U	N3-C4-O4	5.20	123.04	119.40
1	13	1527	C	OP1-P-OP2	-5.20	111.81	119.60
15	1H	795	A	C5-C6-N6	-5.20	119.54	123.70
15	1H	1439	U	OP1-P-O3'	5.20	116.63	105.20
15	1H	2689	G	N3-C4-C5	-5.20	126.00	128.60
12	M5	62	LEU	CB-CG-CD2	5.20	119.83	111.00
15	14	897	G	C6-N1-C2	-5.20	121.98	125.10
15	14	1037	G	O5'-P-OP1	-5.20	101.02	105.70
15	14	1670	U	N3-C4-O4	5.20	123.04	119.40
15	14	1998	G	C8-N9-C4	-5.20	104.32	106.40
15	14	2453	U	N1-C2-O2	5.20	126.44	122.80
1	13	1440	C	C2-N3-C4	-5.19	117.30	119.90
15	1H	660	A	N7-C8-N9	5.19	116.40	113.80
15	1H	998	C	C2-N1-C1'	-5.19	113.09	118.80
15	14	423	U	C6-N1-C2	-5.19	117.88	121.00
15	14	517	G	N1-C2-N2	-5.19	111.53	116.20
15	14	648	A	O4'-C1'-N9	5.19	112.36	108.20
15	14	1400	C	N3-C4-C5	5.19	123.98	121.90
15	14	1420	G	N1-C6-O6	5.19	123.02	119.90
15	14	1993	G	N3-C4-N9	-5.19	122.88	126.00
15	14	2042	U	N3-C4-O4	5.19	123.04	119.40
52	X1	72	C	N1-C2-O2	5.19	122.02	118.90
52	V4	60	U	C5-C6-N1	5.19	125.30	122.70
1	13	1387	G	N3-C4-N9	-5.19	122.89	126.00
1	1G	1607	C	O5'-P-OP2	-5.19	101.03	105.70
15	1H	984	U	C5-C6-N1	-5.19	120.10	122.70
15	1H	1395	G	C6-C5-N7	5.19	133.52	130.40
15	1H	2188	C	C6-N1-C2	-5.19	118.22	120.30
15	1H	2492	C	C5-C6-N1	5.19	123.60	121.00
15	14	120	G	C6-N1-C2	-5.19	121.98	125.10
15	14	300	G	O4'-C1'-N9	5.19	112.35	108.20
15	14	1205	A	N1-C6-N6	5.19	121.72	118.60
15	14	2588	C	C2-N1-C1'	5.19	124.51	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	1834	G	O5'-P-OP2	-5.19	101.03	105.70
1	1G	2145	U	N1-C2-O2	-5.19	119.17	122.80
1	1G	2147	C	N1-C2-O2	-5.19	115.78	118.90
15	1H	26	G	C5-C6-O6	-5.19	125.49	128.60
15	1H	850	G	N3-C2-N2	-5.19	116.27	119.90
15	1H	1987	C	N3-C4-N4	-5.19	114.37	118.00
15	14	1665	A	N3-C4-C5	5.19	130.43	126.80
15	14	1849	A	N3-C4-C5	-5.19	123.17	126.80
52	X4	32	U	O5'-P-OP1	-5.19	101.03	105.70
1	13	1692	G	N3-C4-N9	-5.19	122.89	126.00
15	1H	45	C	OP1-P-O3'	-5.19	93.78	105.20
15	1H	599	C	C2-N1-C1'	-5.19	113.09	118.80
26	1J	91	G	C6-C5-N7	-5.19	127.29	130.40
1	13	705	A	O5'-P-OP1	-5.19	101.03	105.70
1	13	2089	C	OP2-P-O3'	5.19	116.61	105.20
15	1H	204	G	N7-C8-N9	5.19	115.69	113.10
15	1H	616	C	OP2-P-O3'	5.19	116.61	105.20
15	1H	1293	G	N1-C6-O6	5.19	123.01	119.90
15	1H	2441	A	C5-C6-N6	-5.19	119.55	123.70
15	14	77	A	N1-C6-N6	5.19	121.71	118.60
15	14	203	A	OP2-P-O3'	5.19	116.61	105.20
15	14	254	C	N3-C4-N4	5.19	121.63	118.00
15	14	1637	C	C5-C6-N1	5.19	123.59	121.00
15	14	2370	C	C6-N1-C1'	-5.19	114.58	120.80
26	1J	88	G	N7-C8-N9	-5.19	110.51	113.10
15	1H	465	C	C6-N1-C2	5.19	122.37	120.30
15	1H	1247	U	N3-C2-O2	-5.19	118.57	122.20
15	1H	1585	A	C2-N3-C4	5.19	113.19	110.60
15	1H	1610	G	OP1-P-O3'	5.19	116.61	105.20
15	1H	1988	U	C5-C6-N1	-5.19	120.11	122.70
15	1H	2342	A	O5'-P-OP1	5.19	116.92	110.70
15	1H	2484	A	N9-C4-C5	-5.19	103.73	105.80
1	1G	946	G	O5'-P-OP2	-5.18	101.03	105.70
15	1H	26	G	C5-C6-N1	5.18	114.09	111.50
15	1H	80	G	C4-C5-N7	-5.18	108.73	110.80
15	1H	605	C	O5'-P-OP2	-5.18	101.03	105.70
15	1H	896	U	N1-C2-N3	5.18	118.01	114.90
15	1H	2096	A	C2-N3-C4	5.18	113.19	110.60
15	1H	2103	C	N1-C2-O2	-5.18	115.79	118.90
15	1H	2106	C	C6-N1-C2	-5.18	118.23	120.30
15	14	64	C	N3-C4-N4	5.18	121.63	118.00
15	14	902	G	C5-N7-C8	5.18	106.89	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1076	A	OP2-P-O3'	5.18	116.61	105.20
15	14	1708	C	OP1-P-OP2	-5.18	111.82	119.60
15	14	2711	U	N3-C4-O4	-5.18	115.77	119.40
1	13	773	U	C5-C6-N1	-5.18	120.11	122.70
1	13	1689	G	O5'-P-OP1	-5.18	101.04	105.70
1	13	1764	U	C6-N1-C2	-5.18	117.89	121.00
15	1H	720	C	N3-C4-C5	5.18	123.97	121.90
15	1H	869	A	OP2-P-O3'	5.18	116.60	105.20
15	1H	1827	C	N3-C4-N4	-5.18	114.37	118.00
15	1H	2405	U	C2-N3-C4	-5.18	123.89	127.00
15	1H	2520	G	C2-N3-C4	-5.18	109.31	111.90
15	1H	2542	C	OP2-P-O3'	5.18	116.60	105.20
15	14	419	G	C8-N9-C1'	-5.18	120.26	127.00
15	14	1457	C	N3-C2-O2	5.18	125.53	121.90
15	14	1807	A	O5'-P-OP1	5.18	116.92	110.70
15	14	2872	G	P-O3'-C3'	5.18	125.92	119.70
26	1J	62	C	C2-N1-C1'	5.18	124.50	118.80
15	1H	291	G	C2-N3-C4	-5.18	109.31	111.90
15	1H	1857	G	C4-C5-N7	-5.18	108.73	110.80
15	1H	1873	G	C4-N9-C1'	5.18	133.24	126.50
15	1H	1991	A	N7-C8-N9	-5.18	111.21	113.80
15	1H	2232	A	N7-C8-N9	5.18	116.39	113.80
15	14	1782	G	N1-C6-O6	-5.18	116.79	119.90
52	X4	26	A	C5-C6-N6	-5.18	119.56	123.70
1	13	870	U	N3-C4-O4	5.18	123.03	119.40
1	13	1600	A	O5'-P-OP1	5.18	116.91	110.70
1	1G	659	U	O5'-P-OP1	-5.18	101.04	105.70
1	1G	1063	C	O5'-P-OP2	-5.18	101.04	105.70
1	1G	1895	A	N1-C6-N6	-5.18	115.49	118.60
15	1H	191	C	O5'-P-OP2	-5.18	101.04	105.70
15	1H	383	U	OP1-P-OP2	-5.18	111.83	119.60
15	1H	2041	U	N1-C2-N3	-5.18	111.79	114.90
15	1H	2865	G	N1-C6-O6	-5.18	116.79	119.90
15	14	323	G	N1-C6-O6	5.18	123.01	119.90
15	14	659	A	N1-C6-N6	5.18	121.71	118.60
15	14	1745	G	C8-N9-C1'	-5.18	120.27	127.00
15	14	2281	A	C6-N1-C2	-5.18	115.49	118.60
15	14	2704	U	P-O3'-C3'	5.18	125.92	119.70
15	14	2840	C	C4-C5-C6	-5.18	114.81	117.40
15	14	2879	U	OP1-P-O3'	5.18	116.60	105.20
26	16	43	U	N3-C4-O4	-5.18	115.77	119.40
26	16	72	C	N3-C2-O2	-5.18	118.28	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1272	G	C4-N9-C1'	-5.18	119.77	126.50
15	1H	1426	G	C4-C5-C6	5.18	121.91	118.80
15	14	2896	A	C5-C6-N1	5.18	120.29	117.70
1	13	1134	G	N3-C4-N9	5.18	129.11	126.00
1	13	1432	G	C5-C6-O6	5.18	131.71	128.60
1	13	1501	G	C5-N7-C8	5.18	106.89	104.30
1	13	1873	C	C6-N1-C2	-5.18	118.23	120.30
1	13	2137	C	C6-N1-C2	-5.18	118.23	120.30
1	1G	2008	U	C6-N1-C2	5.18	124.11	121.00
1	1G	2146	G	N9-C4-C5	5.18	107.47	105.40
15	1H	777	G	OP1-P-OP2	5.18	127.36	119.60
15	1H	797	G	C5-C6-N1	5.18	114.09	111.50
15	1H	955	U	N3-C2-O2	5.18	125.82	122.20
15	1H	1318	A	N9-C4-C5	-5.18	103.73	105.80
15	1H	1615	C	N1-C2-N3	-5.18	115.58	119.20
15	1H	2319	G	N3-C4-N9	-5.18	122.89	126.00
15	1H	2601	C	C5-C4-N4	-5.18	116.58	120.20
15	14	230	G	C4-C5-C6	-5.18	115.69	118.80
15	14	1472	G	C8-N9-C4	5.18	108.47	106.40
1	13	885	U	C2-N1-C1'	5.17	123.91	117.70
1	13	2028	C	C4-C5-C6	-5.17	114.81	117.40
1	1G	1981	C	C6-N1-C2	-5.17	118.23	120.30
15	14	1046	C	N3-C2-O2	-5.17	118.28	121.90
15	14	1064	G	OP1-P-O3'	5.17	116.58	105.20
15	14	1470	G	C5-C6-N1	-5.17	108.91	111.50
15	14	1562	C	N1-C2-O2	-5.17	115.80	118.90
15	14	1720	C	N3-C4-C5	-5.17	119.83	121.90
1	1G	963	C	N3-C4-N4	5.17	121.62	118.00
1	1G	1697	C	C5-C6-N1	5.17	123.59	121.00
1	1G	1697	C	C6-N1-C2	-5.17	118.23	120.30
15	1H	16	G	N3-C2-N2	-5.17	116.28	119.90
15	1H	812	G	C5-C6-O6	-5.17	125.50	128.60
15	1H	1808	C	O5'-P-OP2	5.17	116.91	110.70
15	1H	2648	G	C8-N9-C4	5.17	108.47	106.40
15	14	746	C	C4-C5-C6	5.17	119.99	117.40
15	14	2722	G	N3-C4-C5	-5.17	126.01	128.60
1	13	1355	C	N3-C2-O2	-5.17	118.28	121.90
15	1H	407	G	N9-C4-C5	-5.17	103.33	105.40
15	1H	667	C	O5'-P-OP2	-5.17	101.05	105.70
15	1H	1307	C	N3-C4-C5	-5.17	119.83	121.90
15	1H	1472	G	N7-C8-N9	-5.17	110.51	113.10
15	1H	1701	G	O4'-C1'-N9	5.17	112.34	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1806	G	N3-C2-N2	5.17	123.52	119.90
15	1H	2771	C	N3-C4-C5	-5.17	119.83	121.90
15	14	501	G	C8-N9-C4	-5.17	104.33	106.40
15	14	1392	G	OP1-P-OP2	5.17	127.36	119.60
15	14	2406	G	C2-N3-C4	-5.17	109.31	111.90
15	14	2627	C	C4-C5-C6	5.17	119.98	117.40
1	1G	882	C	C2-N3-C4	-5.17	117.31	119.90
15	1H	272	U	C6-N1-C2	-5.17	117.90	121.00
15	1H	357	A	C6-N1-C2	-5.17	115.50	118.60
15	1H	788	G	C5-C6-N1	5.17	114.08	111.50
15	14	2367	A	N1-C2-N3	5.17	131.88	129.30
26	16	36	U	N3-C4-C5	-5.17	111.50	114.60
1	13	1901	G	C8-N9-C4	-5.17	104.33	106.40
1	1G	1001	A	N7-C8-N9	-5.17	111.22	113.80
15	1H	1468	A	C8-N9-C4	-5.17	103.73	105.80
15	1H	2310	C	O5'-P-OP2	5.17	116.90	110.70
15	14	1133	A	P-O3'-C3'	5.17	125.90	119.70
15	14	2241	C	OP2-P-O3'	5.17	116.57	105.20
15	14	2312	C	O5'-P-OP2	-5.17	101.05	105.70
15	14	2443	G	N7-C8-N9	5.17	115.68	113.10
15	14	2604	A	C5-C6-N1	5.17	120.28	117.70
1	1G	699	A	N1-C6-N6	5.17	121.70	118.60
15	1H	857	G	OP1-P-OP2	5.17	127.35	119.60
15	1H	1418	G	C5-C6-O6	-5.17	125.50	128.60
15	1H	1422	A	O5'-P-OP1	5.17	116.90	110.70
15	1H	1725	C	C5-C4-N4	5.17	123.82	120.20
15	1H	1811	U	N1-C2-N3	5.17	118.00	114.90
15	1H	2530	C	C5-C4-N4	-5.17	116.58	120.20
15	14	1845	G	OP1-P-OP2	-5.17	111.85	119.60
15	14	1911	C	C6-N1-C2	5.17	122.37	120.30
15	14	2656	G	C5-C6-O6	5.17	131.70	128.60
1	13	2055	U	OP2-P-O3'	5.17	116.56	105.20
15	1H	588	G	O5'-P-OP2	5.17	116.90	110.70
15	1H	830	A	O5'-P-OP1	-5.17	101.05	105.70
15	1H	2290	C	O5'-P-OP1	5.17	116.90	110.70
15	14	562	C	N3-C4-N4	-5.17	114.38	118.00
15	1H	40	C	N3-C4-N4	5.16	121.61	118.00
15	1H	315	G	N3-C4-C5	-5.16	126.02	128.60
15	1H	845	C	N3-C2-O2	-5.16	118.29	121.90
15	1H	1330	G	N1-C6-O6	5.16	123.00	119.90
15	1H	1816	C	N3-C4-N4	5.16	121.61	118.00
15	14	1003	G	N1-C6-O6	5.16	123.00	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	2005	G	C2-N3-C4	5.16	114.48	111.90
52	X1	69	G	N1-C2-N2	5.16	120.85	116.20
15	1H	467	G	OP1-P-OP2	-5.16	111.86	119.60
15	1H	1258	A	N3-C4-N9	-5.16	123.27	127.40
15	14	1668	G	C5-C6-N1	5.16	114.08	111.50
1	1G	1809	G	N3-C4-C5	5.16	131.18	128.60
15	1H	618	G	N7-C8-N9	-5.16	110.52	113.10
15	1H	1640	G	N1-C6-O6	-5.16	116.80	119.90
15	14	602	G	N1-C2-N3	5.16	127.00	123.90
15	14	724	A	C4-C5-N7	5.16	113.28	110.70
15	14	1330	G	OP1-P-O3'	-5.16	93.85	105.20
15	14	1344	C	C6-N1-C1'	5.16	126.99	120.80
15	14	1439	U	N3-C2-O2	-5.16	118.59	122.20
15	14	1490	G	N3-C2-N2	-5.16	116.29	119.90
3	F8	1	MET	CA-CB-CG	5.16	122.07	113.30
1	13	651	U	OP2-P-O3'	5.16	116.55	105.20
1	13	1235	G	C5-C6-O6	-5.16	125.50	128.60
1	1G	947	G	C4-C5-N7	5.16	112.86	110.80
1	1G	1267	G	N3-C2-N2	-5.16	116.29	119.90
15	1H	532	A	N1-C6-N6	-5.16	115.50	118.60
15	1H	830	A	N7-C8-N9	-5.16	111.22	113.80
15	1H	1054	C	N3-C4-C5	-5.16	119.84	121.90
15	1H	1298	U	N1-C2-O2	-5.16	119.19	122.80
15	1H	1525	G	N1-C2-N2	5.16	120.84	116.20
15	1H	1955	G	N1-C2-N3	-5.16	120.81	123.90
15	14	33	U	N1-C2-O2	5.16	126.41	122.80
15	14	147	U	N3-C2-O2	5.16	125.81	122.20
15	14	639	U	N3-C4-O4	-5.16	115.79	119.40
15	14	729	G	C4-N9-C1'	5.16	133.21	126.50
15	14	991	G	N3-C2-N2	-5.16	116.29	119.90
15	14	2447	A	N3-C4-C5	5.16	130.41	126.80
23	29	50	GLY	N-CA-C	5.16	126.00	113.10
51	Y1	40	U	C5-C6-N1	-5.16	120.12	122.70
15	1H	2457	C	N1-C2-O2	-5.16	115.81	118.90
1	13	870	U	C5-C6-N1	5.16	125.28	122.70
1	1G	1417	U	N1-C2-O2	-5.16	119.19	122.80
15	1H	106	U	O5'-P-OP1	-5.16	101.06	105.70
15	1H	256	G	C6-N1-C2	-5.16	122.01	125.10
15	1H	1849	A	C2-N3-C4	5.16	113.18	110.60
15	14	197	A	C2-N3-C4	-5.16	108.02	110.60
15	14	741	C	N3-C4-C5	5.16	123.96	121.90
15	14	837	A	C5-N7-C8	-5.16	101.32	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1036	A	N7-C8-N9	5.16	116.38	113.80
15	14	2287	U	OP1-P-OP2	-5.16	111.87	119.60
15	14	2338	G	C2-N3-C4	-5.16	109.32	111.90
1	13	1971	C	OP1-P-O3'	5.15	116.54	105.20
1	1G	1248	U	N1-C2-O2	-5.15	119.19	122.80
1	1G	1702	G	N1-C6-O6	5.15	122.99	119.90
15	1H	2003	A	N7-C8-N9	5.15	116.38	113.80
15	1H	2233	U	N3-C2-O2	5.15	125.81	122.20
15	14	627	G	C4-C5-N7	5.15	112.86	110.80
1	13	1817	G	C5-C6-N1	-5.15	108.92	111.50
1	13	2142	A	N1-C6-N6	-5.15	115.51	118.60
1	13	2154	A	N1-C6-N6	5.15	121.69	118.60
15	1H	32	C	N1-C2-O2	-5.15	115.81	118.90
15	1H	1205	A	C4-C5-N7	5.15	113.28	110.70
15	1H	1308	G	O5'-P-OP2	-5.15	101.06	105.70
15	1H	1715	A	OP1-P-O3'	5.15	116.53	105.20
15	1H	2505	G	N9-C4-C5	-5.15	103.34	105.40
15	14	1206	G	C5-C6-O6	-5.15	125.51	128.60
15	14	2832	G	O5'-P-OP2	5.15	116.88	110.70
15	1H	327	C	C6-N1-C2	-5.15	118.24	120.30
15	1H	707	C	N3-C2-O2	-5.15	118.29	121.90
15	1H	1609	G	C5-C6-O6	-5.15	125.51	128.60
15	1H	2609	C	C6-N1-C2	-5.15	118.24	120.30
15	14	123	G	N1-C2-N2	-5.15	111.56	116.20
15	14	1382	C	N3-C2-O2	-5.15	118.30	121.90
15	14	1925	A	C6-N1-C2	-5.15	115.51	118.60
15	14	1987	C	N3-C4-C5	5.15	123.96	121.90
52	X1	26	A	C2-N3-C4	-5.15	108.03	110.60
52	X1	27	G	N7-C8-N9	-5.15	110.53	113.10
1	13	1593	C	N3-C4-N4	5.15	121.60	118.00
1	1G	1417	U	N1-C2-N3	5.15	117.99	114.90
15	1H	100	G	C4-C5-N7	-5.15	108.74	110.80
15	1H	1686	C	N3-C4-C5	-5.15	119.84	121.90
15	14	679	C	O5'-P-OP2	5.15	116.88	110.70
1	1G	1123	G	N3-C2-N2	5.15	123.50	119.90
1	1G	1422	U	C6-N1-C1'	5.15	128.41	121.20
1	1G	1549	G	OP1-P-OP2	5.15	127.32	119.60
15	1H	1316	U	O5'-P-OP2	-5.15	101.07	105.70
15	1H	1699	G	N7-C8-N9	5.15	115.67	113.10
15	1H	1774	G	C8-N9-C4	5.15	108.46	106.40
15	1H	1824	C	C4-C5-C6	5.15	119.97	117.40
15	1H	2252	G	N3-C2-N2	5.15	123.50	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	M5	32	LEU	CA-CB-CG	-5.15	103.46	115.30
15	14	255	A	C4-C5-N7	5.15	113.27	110.70
15	14	660	A	N1-C6-N6	5.15	121.69	118.60
15	14	2257	G	C5-C6-O6	5.15	131.69	128.60
15	14	2456	C	N3-C4-N4	-5.15	114.40	118.00
15	14	2555	C	N1-C2-O2	-5.15	115.81	118.90
1	13	1204	G	C5-C6-O6	5.15	131.69	128.60
1	1G	1816	C	C6-N1-C2	5.15	122.36	120.30
15	1H	1596	C	C5-C6-N1	5.15	123.57	121.00
15	1H	2028	G	O5'-P-OP1	-5.15	101.07	105.70
15	14	581	G	C8-N9-C1'	-5.15	120.31	127.00
15	14	2107	A	C8-N9-C4	-5.15	103.74	105.80
52	X1	36	A	N1-C6-N6	5.15	121.69	118.60
1	1G	1371	G	C5-C6-N1	5.14	114.07	111.50
15	1H	987	G	C6-N1-C2	-5.14	122.01	125.10
15	1H	1362	U	C6-N1-C2	-5.14	117.91	121.00
15	1H	1693	G	C6-N1-C2	-5.14	122.01	125.10
15	1H	2306	U	C6-N1-C2	-5.14	117.91	121.00
15	14	530	A	N9-C4-C5	5.14	107.86	105.80
15	14	729	G	C5-N7-C8	-5.14	101.73	104.30
15	14	854	G	C8-N9-C4	-5.14	104.34	106.40
15	14	2028	G	N3-C4-N9	5.14	129.09	126.00
1	13	1532	A	OP2-P-O3'	5.14	116.51	105.20
1	13	1586	G	N3-C4-C5	-5.14	126.03	128.60
1	13	2042	U	N3-C4-C5	5.14	117.69	114.60
15	1H	178	G	N3-C2-N2	5.14	123.50	119.90
15	1H	978	G	N3-C4-C5	-5.14	126.03	128.60
15	1H	1019	G	O5'-P-OP1	5.14	116.87	110.70
15	1H	1319	C	N3-C4-C5	5.14	123.96	121.90
15	1H	1373	G	C2-N3-C4	5.14	114.47	111.90
15	1H	1473	G	C6-C5-N7	-5.14	127.31	130.40
15	1H	1537	G	O5'-P-OP1	-5.14	101.07	105.70
15	1H	2527	C	N1-C2-O2	-5.14	115.81	118.90
15	1H	2625	C	OP1-P-O3'	5.14	116.52	105.20
15	1H	2778	G	N3-C4-C5	5.14	131.17	128.60
15	14	806	U	C2-N3-C4	-5.14	123.92	127.00
15	14	957	A	O5'-P-OP2	-5.14	101.07	105.70
15	14	1712	C	C2-N3-C4	-5.14	117.33	119.90
15	14	1821	A	O5'-P-OP1	-5.14	101.07	105.70
15	14	1931	G	O5'-P-OP2	5.14	116.87	110.70
15	14	2472	U	C2-N3-C4	5.14	130.09	127.00
15	14	2794	A	O5'-P-OP2	-5.14	101.07	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	1201	A	N9-C4-C5	5.14	107.86	105.80
15	1H	102	U	N3-C2-O2	5.14	125.80	122.20
15	1H	1181	U	C2-N1-C1'	-5.14	111.53	117.70
15	1H	2585	G	C5-C6-O6	5.14	131.68	128.60
15	14	588	G	N7-C8-N9	5.14	115.67	113.10
15	14	1966	C	N3-C4-N4	5.14	121.60	118.00
15	14	2694	A	OP2-P-O3'	5.14	116.51	105.20
52	W1	32	U	C2-N3-C4	5.14	130.09	127.00
1	13	1586	G	C6-C5-N7	-5.14	127.32	130.40
1	13	1908	U	C2-N1-C1'	5.14	123.87	117.70
15	1H	519	A	C5-N7-C8	5.14	106.47	103.90
15	1H	2061	C	N3-C2-O2	-5.14	118.30	121.90
15	1H	2339	C	O5'-P-OP2	-5.14	101.07	105.70
15	1H	2423	U	O5'-P-OP1	5.14	116.87	110.70
15	1H	2456	C	C6-N1-C1'	5.14	126.97	120.80
15	14	36	G	O5'-P-OP2	-5.14	101.07	105.70
15	14	46	C	C5-C6-N1	-5.14	118.43	121.00
15	14	607	G	C8-N9-C4	5.14	108.45	106.40
15	14	1792	G	C5-C6-O6	-5.14	125.52	128.60
1	13	1278	G	C8-N9-C4	5.14	108.45	106.40
1	13	1396	A	C6-N1-C2	-5.14	115.52	118.60
1	1G	774	A	C5-N7-C8	-5.14	101.33	103.90
1	1G	2085	G	C2-N3-C4	-5.14	109.33	111.90
15	1H	2581	A	P-O3'-C3'	5.14	125.87	119.70
15	14	2069	C	N1-C2-O2	-5.14	115.82	118.90
15	14	2458	C	O5'-P-OP2	5.14	116.86	110.70
1	13	1001	A	N7-C8-N9	-5.14	111.23	113.80
1	13	1696	G	O5'-P-OP2	-5.14	101.08	105.70
1	1G	690	G	C5-C6-N1	-5.14	108.93	111.50
15	1H	346	G	N9-C4-C5	-5.14	103.34	105.40
15	1H	1315	G	N9-C4-C5	-5.14	103.34	105.40
15	1H	1426	G	C4-C5-N7	-5.14	108.75	110.80
15	1H	1465	G	O4'-C1'-N9	5.14	112.31	108.20
15	1H	1631	G	OP2-P-O3'	5.14	116.50	105.20
15	1H	1741	C	C6-N1-C2	-5.14	118.25	120.30
15	1H	2716	C	OP2-P-O3'	5.14	116.50	105.20
15	14	801	A	N7-C8-N9	5.14	116.37	113.80
15	14	1027	G	C5-C6-N1	-5.14	108.93	111.50
15	14	1922	G	C5-C6-O6	-5.14	125.52	128.60
1	1G	1089	C	C6-N1-C2	-5.13	118.25	120.30
1	1G	1391	C	C6-N1-C2	5.13	122.35	120.30
15	1H	736	C	N3-C2-O2	5.13	125.49	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1008	C	C5-C4-N4	-5.13	116.61	120.20
15	1H	1176	A	C5-C6-N1	5.13	120.27	117.70
15	1H	1618	G	C8-N9-C4	-5.13	104.35	106.40
15	1H	2407	A	N9-C4-C5	-5.13	103.75	105.80
15	14	111	G	N1-C2-N2	5.13	120.82	116.20
15	14	1416	A	N1-C2-N3	5.13	131.87	129.30
15	14	1953	A	N1-C6-N6	-5.13	115.52	118.60
15	14	2599	U	C5-C6-N1	-5.13	120.13	122.70
15	14	2087	A	C6-C5-N7	5.13	135.89	132.30
1	13	1030	A	N7-C8-N9	5.13	116.37	113.80
15	1H	597	A	C2-N3-C4	-5.13	108.03	110.60
15	1H	616	C	C6-N1-C2	5.13	122.35	120.30
15	1H	715	G	O5'-P-OP2	5.13	116.86	110.70
15	1H	1267	G	C6-C5-N7	-5.13	127.32	130.40
15	1H	1565	U	N3-C4-O4	-5.13	115.81	119.40
15	1H	1617	A	C2-N3-C4	5.13	113.17	110.60
15	1H	1671	G	O5'-P-OP1	-5.13	101.08	105.70
15	1H	1955	G	OP2-P-O3'	5.13	116.49	105.20
15	14	486	G	O4'-C1'-N9	5.13	112.31	108.20
15	14	722	C	OP1-P-OP2	-5.13	111.90	119.60
15	14	887	C	C2-N3-C4	-5.13	117.33	119.90
15	14	2359	U	N1-C2-O2	-5.13	119.21	122.80
26	1J	86	C	OP1-P-OP2	-5.13	111.90	119.60
52	X4	31	A	O5'-P-OP2	5.13	116.86	110.70
15	1H	12	U	N1-C2-O2	5.13	126.39	122.80
15	1H	1408	A	N1-C6-N6	5.13	121.68	118.60
15	14	1958	G	C4-C5-C6	5.13	121.88	118.80
15	14	2270	G	O5'-P-OP2	-5.13	101.08	105.70
15	14	2537	U	OP1-P-OP2	5.13	127.30	119.60
1	13	1281	U	N3-C2-O2	-5.13	118.61	122.20
15	1H	600	A	N1-C6-N6	5.13	121.68	118.60
15	1H	1540	G	C4-C5-C6	5.13	121.88	118.80
15	1H	2415	G	OP2-P-O3'	5.13	116.48	105.20
15	1H	2738	G	N9-C4-C5	-5.13	103.35	105.40
15	14	2452	U	N3-C4-O4	-5.13	115.81	119.40
15	14	2526	U	N1-C2-N3	5.13	117.98	114.90
1	13	1462	U	C2-N1-C1'	-5.13	111.55	117.70
1	13	1528	U	C5-C4-O4	-5.13	122.82	125.90
1	1G	2033	G	OP2-P-O3'	5.13	116.48	105.20
15	1H	318	U	N3-C4-O4	5.13	122.99	119.40
15	1H	476	U	N1-C2-N3	5.13	117.98	114.90
15	1H	597	A	N1-C6-N6	5.13	121.68	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	965	A	N9-C4-C5	-5.13	103.75	105.80
15	1H	2491	A	N1-C6-N6	5.13	121.67	118.60
15	14	1310	C	N3-C4-C5	5.13	123.95	121.90
15	14	1653	C	N1-C2-N3	5.13	122.79	119.20
15	14	1721	U	C6-N1-C2	5.13	124.08	121.00
52	X1	34	G	C5-C6-N1	-5.13	108.94	111.50
52	X1	76	A	C4-C5-C6	-5.13	114.44	117.00
15	14	786	C	C5-C6-N1	-5.12	118.44	121.00
15	14	1434	G	C8-N9-C4	-5.12	104.35	106.40
15	14	1986	C	O5'-P-OP1	5.12	116.85	110.70
23	29	144	ARG	CG-CD-NE	5.12	122.56	111.80
1	13	1854	A	O5'-P-OP2	-5.12	101.09	105.70
15	1H	1032	A	C4-C5-N7	5.12	113.26	110.70
15	1H	1531	U	N1-C2-N3	5.12	117.97	114.90
15	1H	1845	G	N9-C4-C5	5.12	107.45	105.40
15	1H	2007	C	C2-N1-C1'	5.12	124.44	118.80
15	1H	2116	U	N3-C4-O4	-5.12	115.81	119.40
15	14	1795	C	O5'-P-OP1	5.12	116.85	110.70
15	14	1841	G	N1-C2-N3	-5.12	120.83	123.90
15	14	2881	A	OP1-P-OP2	-5.12	111.92	119.60
52	V4	11	C	C6-N1-C2	-5.12	118.25	120.30
1	13	1095	C	C6-N1-C2	5.12	122.35	120.30
12	Q8	21	LYS	CB-CG-CD	-5.12	98.28	111.60
15	1H	529	A	C5-C6-N6	5.12	127.80	123.70
15	1H	1007	A	C2-N3-C4	-5.12	108.04	110.60
15	1H	1271	C	C6-N1-C2	5.12	122.35	120.30
15	1H	1465	G	C8-N9-C4	5.12	108.45	106.40
15	1H	1623	G	C4-C5-N7	5.12	112.85	110.80
15	1H	2288	A	N9-C4-C5	-5.12	103.75	105.80
15	1H	2334	G	N3-C2-N2	5.12	123.49	119.90
15	1H	2700	G	O5'-P-OP2	-5.12	101.09	105.70
15	14	1311	A	C8-N9-C4	5.12	107.85	105.80
15	14	2256	A	N7-C8-N9	-5.12	111.24	113.80
15	14	2319	G	N1-C6-O6	5.12	122.97	119.90
1	13	1803	A	C2-N3-C4	-5.12	108.04	110.60
1	13	2035	C	O5'-P-OP1	5.12	116.84	110.70
1	1G	1682	C	O5'-P-OP1	-5.12	101.09	105.70
15	1H	1797	G	P-O3'-C3'	5.12	125.84	119.70
15	1H	2638	G	N1-C6-O6	-5.12	116.83	119.90
15	1H	2885	G	O5'-P-OP2	-5.12	101.09	105.70
15	14	50	G	OP2-P-O3'	5.12	116.46	105.20
15	14	993	G	C6-C5-N7	-5.12	127.33	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1799	C	O5'-P-OP2	-5.12	101.09	105.70
1	13	1501	G	C8-N9-C4	5.12	108.45	106.40
15	1H	498	A	C2-N3-C4	-5.12	108.04	110.60
15	1H	522	G	C5-C6-O6	-5.12	125.53	128.60
15	1H	555	A	C8-N9-C4	-5.12	103.75	105.80
15	1H	1203	G	N3-C4-C5	-5.12	126.04	128.60
15	1H	1805	C	C6-N1-C2	5.12	122.35	120.30
15	1H	2023	G	O5'-P-OP1	-5.12	101.09	105.70
15	1H	2203	C	C6-N1-C2	-5.12	118.25	120.30
15	14	655	G	O5'-P-OP1	-5.12	101.09	105.70
15	14	2063	G	N3-C2-N2	5.12	123.48	119.90
15	14	2071	G	C5-C6-N1	5.12	114.06	111.50
15	14	2218	G	C5-C6-O6	5.12	131.67	128.60
15	14	2797	A	C8-N9-C4	5.12	107.85	105.80
26	16	103	G	C8-N9-C1'	-5.12	120.34	127.00
26	1J	18	G	C8-N9-C4	-5.12	104.35	106.40
35	D8	1	MET	CG-SD-CE	5.12	108.39	100.20
39	F5	36	GLY	N-CA-C	5.12	125.90	113.10
52	X4	28	G	N3-C4-C5	5.12	131.16	128.60
15	1H	1945	C	C6-N1-C2	5.12	122.35	120.30
15	1H	2073	G	C4-C5-C6	5.12	121.87	118.80
15	1H	2269	C	N3-C2-O2	5.12	125.48	121.90
15	14	421	C	N3-C4-C5	-5.12	119.85	121.90
15	14	1541	G	N3-C2-N2	-5.12	116.32	119.90
15	14	2272	U	N3-C4-C5	-5.12	111.53	114.60
15	14	2430	G	N1-C6-O6	5.12	122.97	119.90
15	14	2887	C	C5-C4-N4	-5.12	116.62	120.20
1	13	885	U	C5-C6-N1	5.12	125.26	122.70
1	13	1709	G	OP1-P-O3'	5.12	116.45	105.20
1	1G	906	G	N9-C4-C5	-5.12	103.35	105.40
1	1G	931	C	N1-C2-O2	-5.12	115.83	118.90
15	1H	438	G	O5'-P-OP1	-5.12	101.09	105.70
15	1H	526	U	O5'-P-OP1	-5.12	101.09	105.70
15	1H	907	U	N1-C2-O2	5.12	126.38	122.80
15	1H	918	G	N3-C2-N2	5.12	123.48	119.90
15	14	1421	U	C6-N1-C2	-5.12	117.93	121.00
15	14	1425	C	C4-C5-C6	5.12	119.96	117.40
15	14	1656	C	C2-N1-C1'	5.12	124.43	118.80
1	1G	721	G	C4-C5-N7	5.11	112.84	110.80
1	1G	1595	C	OP2-P-O3'	5.11	116.45	105.20
15	1H	181	A	O5'-P-OP1	5.11	116.83	110.70
15	1H	186	A	O4'-C1'-N9	5.11	112.29	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	459	G	C8-N9-C4	5.11	108.44	106.40
15	1H	2084	A	C8-N9-C4	5.11	107.84	105.80
15	1H	2102	A	OP1-P-O3'	5.11	116.45	105.20
15	1H	2342	A	N9-C4-C5	5.11	107.84	105.80
15	14	718	G	C5-C6-O6	-5.11	125.53	128.60
15	14	1181	U	O4'-C1'-N1	5.11	112.29	108.20
15	14	2338	G	C5-C6-N1	-5.11	108.94	111.50
26	1J	92	A	C4-C5-N7	-5.11	108.14	110.70
1	1G	936	C	OP2-P-O3'	5.11	116.45	105.20
15	1H	136	G	C5-N7-C8	-5.11	101.74	104.30
15	1H	231	A	C2-N3-C4	-5.11	108.04	110.60
15	1H	1324	A	C4-C5-C6	5.11	119.56	117.00
52	W1	61	C	C6-N1-C2	-5.11	118.25	120.30
52	W4	33	U	O5'-P-OP2	-5.11	101.10	105.70
1	13	922	G	C5-C6-N1	5.11	114.06	111.50
1	13	1092	A	C4-C5-C6	-5.11	114.44	117.00
1	1G	946	G	N1-C6-O6	-5.11	116.83	119.90
1	1G	1754	U	N1-C2-N3	-5.11	111.83	114.90
15	1H	681	A	C2-N3-C4	5.11	113.16	110.60
15	1H	1510	A	N1-C6-N6	5.11	121.67	118.60
15	1H	2346	G	O5'-P-OP2	5.11	116.83	110.70
15	14	200	C	C6-N1-C2	5.11	122.34	120.30
15	14	567	C	N3-C4-N4	-5.11	114.42	118.00
15	14	1077	A	N1-C6-N6	5.11	121.67	118.60
15	14	1851	G	N7-C8-N9	-5.11	110.55	113.10
15	14	1960	G	N7-C8-N9	5.11	115.66	113.10
26	1J	111	C	C6-N1-C2	-5.11	118.26	120.30
1	13	1535	C	C5-C4-N4	-5.11	116.62	120.20
15	14	587	U	N3-C4-C5	5.11	117.67	114.60
1	13	1186	G	N1-C6-O6	-5.11	116.84	119.90
1	1G	2036	A	C5-N7-C8	5.11	106.45	103.90
15	1H	30	G	C6-N1-C2	-5.11	122.04	125.10
15	1H	601	U	C5-C6-N1	5.11	125.25	122.70
15	1H	1667	A	OP1-P-O3'	5.11	116.43	105.20
15	14	1228	C	C6-N1-C2	5.11	122.34	120.30
15	14	2087	A	N1-C6-N6	-5.11	115.54	118.60
15	14	2099	U	C2-N3-C4	-5.11	123.94	127.00
15	14	2115	G	C8-N9-C4	5.11	108.44	106.40
1	1G	760	C	N1-C2-O2	5.11	121.96	118.90
15	1H	114	C	C2-N3-C4	-5.11	117.35	119.90
15	1H	132	C	C6-N1-C2	5.11	122.34	120.30
15	1H	138	G	N3-C4-C5	-5.11	126.05	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	158	U	N1-C2-O2	5.11	126.37	122.80
15	1H	2050	C	N1-C2-O2	-5.11	115.84	118.90
15	1H	2532	C	N1-C2-O2	-5.11	115.84	118.90
15	1H	2653	G	N3-C4-C5	-5.11	126.05	128.60
15	14	1018	C	OP2-P-O3'	5.11	116.43	105.20
15	14	1718	A	N7-C8-N9	-5.11	111.25	113.80
1	13	1982	G	C5-C6-O6	-5.10	125.54	128.60
1	1G	1087	G	C5-C6-O6	5.10	131.66	128.60
1	1G	1839	U	N1-C2-O2	5.10	126.37	122.80
15	1H	240	G	OP1-P-OP2	5.10	127.26	119.60
15	1H	797	G	C8-N9-C1'	5.10	133.63	127.00
15	1H	989	G	OP1-P-O3'	5.10	116.43	105.20
15	1H	2284	A	N1-C6-N6	5.10	121.66	118.60
15	1H	2761	C	OP2-P-O3'	5.10	116.43	105.20
1	13	652	G	C5-C6-O6	-5.10	125.54	128.60
1	13	1223	G	O5'-P-OP1	-5.10	101.11	105.70
1	1G	960	G	C5-C6-O6	5.10	131.66	128.60
1	1G	1069	G	N3-C4-N9	-5.10	122.94	126.00
1	1G	1195	G	N7-C8-N9	-5.10	110.55	113.10
1	1G	1928	U	C5-C6-N1	5.10	125.25	122.70
15	1H	104	C	C4-C5-C6	-5.10	114.85	117.40
15	1H	1249	C	N3-C4-N4	5.10	121.57	118.00
15	1H	1630	A	C8-N9-C4	-5.10	103.76	105.80
15	1H	1798	G	N3-C2-N2	5.10	123.47	119.90
15	1H	2285	G	N9-C4-C5	-5.10	103.36	105.40
15	1H	2834	A	C5-C6-N6	-5.10	119.62	123.70
15	14	1574	G	OP1-P-OP2	5.10	127.25	119.60
26	1J	120	G	N3-C4-C5	5.10	131.15	128.60
1	13	654	A	C2-N3-C4	-5.10	108.05	110.60
1	13	1174	C	N3-C2-O2	-5.10	118.33	121.90
1	13	1939	G	O5'-P-OP1	5.10	116.82	110.70
15	1H	27	G	C8-N9-C1'	-5.10	120.37	127.00
15	1H	146	G	OP1-P-OP2	-5.10	111.95	119.60
15	1H	1662	G	N3-C4-N9	5.10	129.06	126.00
15	1H	1720	C	C6-N1-C2	5.10	122.34	120.30
15	1H	1991	A	OP1-P-O3'	5.10	116.42	105.20
15	1H	2034	G	N3-C4-C5	-5.10	126.05	128.60
15	1H	2060	G	C8-N9-C4	-5.10	104.36	106.40
15	1H	2655	G	C5-C6-N1	-5.10	108.95	111.50
15	1H	2692	G	C5-C6-N1	5.10	114.05	111.50
15	14	11	G	C5-C6-N1	-5.10	108.95	111.50
15	14	487	U	N1-C2-N3	5.10	117.96	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1323	A	C5-N7-C8	-5.10	101.35	103.90
26	16	54	A	O5'-P-OP2	-5.10	101.11	105.70
15	1H	607	G	N1-C2-N2	-5.10	111.61	116.20
15	1H	1508	C	C6-N1-C2	5.10	122.34	120.30
15	1H	2215	G	C5-C6-O6	-5.10	125.54	128.60
15	1H	2341	C	C2-N3-C4	5.10	122.45	119.90
15	1H	2866	C	C5-C6-N1	-5.10	118.45	121.00
15	14	854	G	N7-C8-N9	5.10	115.65	113.10
15	14	1173	G	C4-C5-N7	-5.10	108.76	110.80
15	14	1602	G	OP1-P-OP2	-5.10	111.95	119.60
15	14	1891	G	C4-N9-C1'	5.10	133.13	126.50
38	45	10	ARG	NE-CZ-NH2	-5.10	117.75	120.30
52	X1	29	G	N7-C8-N9	5.10	115.65	113.10
1	1G	1382	A	N1-C6-N6	5.10	121.66	118.60
1	1G	2125	A	N9-C1'-C2'	5.10	120.63	114.00
15	1H	327	C	O5'-P-OP2	-5.10	101.11	105.70
15	1H	650	G	C5-C6-O6	-5.10	125.54	128.60
15	1H	1073	G	C5-C6-O6	5.10	131.66	128.60
15	1H	1192	A	OP1-P-O3'	5.10	116.42	105.20
15	1H	1690	C	C6-N1-C2	5.10	122.34	120.30
15	14	256	G	C4-C5-N7	5.10	112.84	110.80
15	14	1672	G	OP2-P-O3'	5.10	116.42	105.20
15	14	2582	G	N7-C8-N9	-5.10	110.55	113.10
26	16	22	C	N3-C4-N4	5.10	121.57	118.00
1	13	1140	C	C2-N1-C1'	-5.10	113.19	118.80
15	1H	93	G	N9-C4-C5	-5.10	103.36	105.40
15	1H	1287	G	C6-C5-N7	-5.10	127.34	130.40
15	14	1824	C	C2-N3-C4	-5.10	117.35	119.90
1	1G	661	G	C6-C5-N7	-5.09	127.34	130.40
1	1G	2032	C	C5-C4-N4	-5.09	116.63	120.20
15	1H	315	G	N1-C6-O6	-5.09	116.84	119.90
15	1H	430	A	C8-N9-C4	5.09	107.84	105.80
15	1H	588	G	C8-N9-C4	5.09	108.44	106.40
15	1H	735	G	O5'-P-OP2	-5.09	101.11	105.70
15	1H	782	G	N1-C2-N2	-5.09	111.61	116.20
15	1H	878	A	C2-N3-C4	-5.09	108.05	110.60
15	1H	1546	U	C5-C4-O4	-5.09	122.84	125.90
15	1H	1972	C	N3-C4-N4	5.09	121.57	118.00
15	14	1356	A	OP1-P-OP2	5.09	127.24	119.60
15	14	1411	C	C6-N1-C2	5.09	122.34	120.30
52	X1	69	G	N3-C2-N2	-5.09	116.33	119.90
52	V4	42	C	C2-N1-C1'	5.09	124.40	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	1586	G	N3-C2-N2	5.09	123.47	119.90
15	1H	138	G	C5-N7-C8	5.09	106.85	104.30
15	1H	661	C	N3-C2-O2	-5.09	118.33	121.90
15	1H	2357	C	OP1-P-OP2	-5.09	111.96	119.60
15	14	190	U	C5-C4-O4	5.09	128.96	125.90
15	14	313	C	C5-C4-N4	-5.09	116.64	120.20
15	14	544	C	C4-C5-C6	5.09	119.95	117.40
1	13	994	A	N7-C8-N9	5.09	116.35	113.80
1	1G	1583	U	N3-C2-O2	-5.09	118.64	122.20
1	1G	1926	A	C4-N9-C1'	5.09	135.46	126.30
1	1G	2092	G	C5-N7-C8	-5.09	101.75	104.30
15	1H	286	U	N3-C4-C5	5.09	117.65	114.60
15	1H	505	A	N9-C4-C5	-5.09	103.76	105.80
15	1H	570	C	N3-C4-C5	5.09	123.94	121.90
15	1H	1641	C	C6-N1-C2	5.09	122.34	120.30
15	1H	2450	A	N7-C8-N9	5.09	116.34	113.80
15	1H	2518	A	C8-N9-C4	5.09	107.84	105.80
15	14	1501	C	N3-C4-C5	-5.09	119.86	121.90
15	14	2332	C	C2-N1-C1'	5.09	124.40	118.80
15	14	2883	C	C4-C5-C6	5.09	119.95	117.40
52	V4	76	A	C5-C6-N1	-5.09	115.15	117.70
15	1H	451	A	C4-C5-C6	5.09	119.55	117.00
15	1H	849	A	N1-C6-N6	-5.09	115.55	118.60
15	1H	1984	G	C5-C6-O6	5.09	131.65	128.60
15	1H	2282	A	O4'-C1'-N9	-5.09	104.13	108.20
15	1H	2330	G	N3-C2-N2	5.09	123.46	119.90
15	1H	2471	C	N3-C2-O2	5.09	125.46	121.90
15	1H	2898	C	C6-N1-C2	-5.09	118.26	120.30
14	32	31	CYS	CA-CB-SG	5.09	123.16	114.00
15	14	400	G	N1-C6-O6	-5.09	116.85	119.90
15	14	556	A	C5-N7-C8	-5.09	101.36	103.90
15	14	1351	A	N9-C4-C5	5.09	107.84	105.80
15	14	1647	C	OP1-P-O3'	5.09	116.39	105.20
15	14	1817	A	C5-C6-N6	5.09	127.77	123.70
26	1J	74	G	C2-N3-C4	-5.09	109.36	111.90
1	13	1388	A	OP2-P-O3'	5.09	116.39	105.20
1	1G	978	C	C5-C4-N4	-5.09	116.64	120.20
15	1H	1979	G	N1-C6-O6	5.09	122.95	119.90
15	1H	2382	G	C5-N7-C8	-5.09	101.76	104.30
15	14	2554	C	OP1-P-OP2	5.09	127.23	119.60
5	P8	33	ARG	NE-CZ-NH2	5.09	122.84	120.30
1	13	1053	A	P-O3'-C3'	5.09	125.80	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	2070	G	N3-C4-N9	-5.09	122.95	126.00
15	1H	1174	A	OP1-P-O3'	5.09	116.39	105.20
15	1H	1397	G	C2-N3-C4	5.09	114.44	111.90
15	1H	2263	C	OP1-P-O3'	5.09	116.39	105.20
15	14	271	C	N1-C2-O2	5.09	121.95	118.90
15	14	371	A	N7-C8-N9	-5.09	111.26	113.80
15	14	425	G	C8-N9-C4	-5.09	104.36	106.40
15	14	662	C	C5-C4-N4	5.09	123.76	120.20
15	14	987	G	C4-C5-N7	5.09	112.83	110.80
15	14	1691	A	N9-C4-C5	5.09	107.83	105.80
52	W1	3	C	C5-C6-N1	5.09	123.54	121.00
52	X4	19	G	N3-C4-N9	5.09	129.05	126.00
52	X4	74	C	OP1-P-O3'	5.09	116.39	105.20
1	1G	910	C	C6-N1-C2	5.08	122.33	120.30
1	1G	994	A	OP2-P-O3'	5.08	116.39	105.20
1	1G	2035	C	C4-C5-C6	-5.08	114.86	117.40
15	1H	43	A	N1-C2-N3	5.08	131.84	129.30
15	1H	2086	G	N3-C2-N2	5.08	123.46	119.90
15	14	334	G	O5'-P-OP2	5.08	116.80	110.70
15	14	2014	G	C8-N9-C4	-5.08	104.37	106.40
45	98	113	LEU	CA-CB-CG	5.08	127.00	115.30
52	X4	47	U	N1-C2-O2	5.08	126.36	122.80
1	13	2039	C	C2-N3-C4	-5.08	117.36	119.90
1	1G	867	G	O5'-P-OP2	-5.08	101.12	105.70
15	1H	860	U	N3-C2-O2	-5.08	118.64	122.20
15	1H	1298	U	C5-C4-O4	-5.08	122.85	125.90
15	1H	1618	G	O5'-P-OP1	5.08	116.80	110.70
15	1H	2046	C	C4-C5-C6	5.08	119.94	117.40
15	1H	2778	G	O5'-P-OP1	5.08	116.80	110.70
15	14	554	C	OP1-P-O3'	5.08	116.38	105.20
15	14	659	A	OP1-P-OP2	-5.08	111.97	119.60
15	14	1369	C	C2-N3-C4	-5.08	117.36	119.90
15	14	2531	G	OP2-P-O3'	5.08	116.38	105.20
26	1J	14	C	N3-C2-O2	-5.08	118.34	121.90
26	1J	55	A	C5-C6-N6	-5.08	119.63	123.70
15	1H	630	C	C6-N1-C2	5.08	122.33	120.30
15	1H	977	U	OP1-P-O3'	5.08	116.38	105.20
15	1H	1413	G	C5-C6-N1	5.08	114.04	111.50
15	1H	1574	G	C6-N1-C2	-5.08	122.05	125.10
15	1H	2099	U	C2-N3-C4	-5.08	123.95	127.00
15	1H	2660	G	N1-C2-N3	-5.08	120.85	123.90
15	1H	2825	G	OP2-P-O3'	5.08	116.38	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1349	U	C5-C6-N1	-5.08	120.16	122.70
15	14	1653	C	C5-C4-N4	-5.08	116.64	120.20
15	14	1702	A	C8-N9-C4	5.08	107.83	105.80
1	13	1913	A	C8-N9-C4	-5.08	103.77	105.80
15	1H	507	A	P-O3'-C3'	5.08	125.80	119.70
15	1H	742	C	OP2-P-O3'	5.08	116.38	105.20
15	1H	815	C	N3-C4-C5	5.08	123.93	121.90
1	13	659	U	C5-C6-N1	-5.08	120.16	122.70
1	13	2126	A	C5'-C4'-O4'	-5.08	103.01	109.10
1	1G	1002	G	C5-C6-O6	-5.08	125.55	128.60
1	1G	1048	G	C8-N9-C4	5.08	108.43	106.40
12	Q8	54	GLU	CA-CB-CG	5.08	124.57	113.40
15	1H	816	U	N3-C4-O4	-5.08	115.85	119.40
15	1H	1330	G	C5-C6-N1	5.08	114.04	111.50
15	1H	2388	G	N1-C2-N3	5.08	126.95	123.90
15	1H	2715	C	O5'-P-OP1	5.08	116.80	110.70
15	1H	2839	A	C8-N9-C4	5.08	107.83	105.80
15	14	230	G	C6-C5-N7	5.08	133.45	130.40
15	14	579	U	O5'-P-OP2	-5.08	101.13	105.70
15	14	609	C	N1-C2-O2	-5.08	115.85	118.90
15	14	820	G	N7-C8-N9	-5.08	110.56	113.10
15	14	1002	C	N3-C2-O2	-5.08	118.34	121.90
15	14	1929	G	C5-C6-O6	-5.08	125.55	128.60
15	14	2757	A	C8-N9-C4	5.08	107.83	105.80
15	1H	173	C	N1-C2-O2	5.08	121.95	118.90
15	1H	842	A	N3-C4-C5	-5.08	123.25	126.80
15	1H	1442	A	O5'-P-OP2	-5.08	101.13	105.70
15	1H	2453	U	O5'-P-OP2	-5.08	101.13	105.70
15	14	1362	U	C2-N1-C1'	5.08	123.79	117.70
15	14	1989	G	N3-C2-N2	5.08	123.45	119.90
1	13	688	G	C8-N9-C4	5.08	108.43	106.40
1	13	916	G	C4-C5-N7	5.08	112.83	110.80
1	13	1377	C	P-O3'-C3'	5.08	125.79	119.70
1	13	1906	A	C8-N9-C4	-5.08	103.77	105.80
15	1H	144	C	C4-C5-C6	5.08	119.94	117.40
15	1H	2023	G	C5-N7-C8	5.08	106.84	104.30
15	1H	2093	U	P-O3'-C3'	5.08	125.79	119.70
15	1H	2504	G	N9-C4-C5	5.08	107.43	105.40
15	14	82	G	C5-C6-N1	-5.08	108.96	111.50
15	14	744	G	N3-C2-N2	5.08	123.45	119.90
15	14	2448	A	C2-N3-C4	-5.08	108.06	110.60
26	1J	55	A	C5-C6-N1	5.08	120.24	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	748	A	C8-N9-C4	5.07	107.83	105.80
15	1H	991	G	C5-C6-O6	5.07	131.64	128.60
15	1H	1662	G	C8-N9-C4	5.07	108.43	106.40
15	1H	2613	A	OP1-P-O3'	-5.07	94.04	105.20
15	1H	2635	C	O5'-P-OP1	-5.07	101.13	105.70
15	14	850	G	C8-N9-C1'	5.07	133.59	127.00
15	14	1666	C	C6-N1-C2	-5.07	118.27	120.30
15	1H	178	G	O5'-P-OP2	-5.07	101.14	105.70
15	1H	1023	G	C4-C5-N7	-5.07	108.77	110.80
15	1H	1300	C	N1-C2-N3	-5.07	115.65	119.20
15	1H	1993	G	O5'-P-OP1	5.07	116.79	110.70
15	14	864	C	N1-C2-O2	-5.07	115.86	118.90
15	14	1343	U	N1-C2-O2	-5.07	119.25	122.80
15	14	2607	G	N1-C2-N2	-5.07	111.64	116.20
26	16	99	G	N1-C2-N2	5.07	120.76	116.20
1	13	1857	C	C5-C4-N4	-5.07	116.65	120.20
1	1G	1445	A	N1-C6-N6	-5.07	115.56	118.60
1	1G	1618	C	C6-N1-C2	-5.07	118.27	120.30
1	1G	1709	G	C5-C6-O6	5.07	131.64	128.60
15	1H	55	A	C6-C5-N7	-5.07	128.75	132.30
15	1H	556	A	C5-N7-C8	-5.07	101.36	103.90
15	1H	776	A	C5-C6-N1	-5.07	115.16	117.70
15	1H	1066	C	OP2-P-O3'	5.07	116.35	105.20
15	1H	1615	C	N1-C2-O2	5.07	121.94	118.90
15	1H	1727	A	N1-C2-N3	5.07	131.84	129.30
15	1H	1813	U	OP1-P-O3'	5.07	116.36	105.20
15	1H	2441	A	N1-C6-N6	5.07	121.64	118.60
15	14	227	C	N3-C2-O2	5.07	125.45	121.90
15	14	235	G	N9-C4-C5	5.07	107.43	105.40
15	14	2117	U	C2-N3-C4	-5.07	123.96	127.00
15	14	2213	C	C6-N1-C2	-5.07	118.27	120.30
15	14	2322	G	C5-C6-O6	-5.07	125.56	128.60
15	14	2745	G	N9-C4-C5	-5.07	103.37	105.40
26	1J	91	G	C5-C6-O6	-5.07	125.56	128.60
1	1G	1260	G	N7-C8-N9	5.07	115.63	113.10
1	1G	1416	A	N1-C6-N6	5.07	121.64	118.60
15	1H	1033	C	N3-C4-N4	-5.07	114.45	118.00
15	1H	1840	C	OP2-P-O3'	5.07	116.35	105.20
3	F8	70	LEU	CA-CB-CG	5.07	126.96	115.30
1	13	1832	U	N1-C2-O2	-5.07	119.25	122.80
4	11	155	LEU	CA-CB-CG	5.07	126.96	115.30
15	1H	430	A	C6-N1-C2	-5.07	115.56	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	823	A	C5-C6-N1	-5.07	115.17	117.70
15	1H	1033	C	C5-C6-N1	-5.07	118.47	121.00
15	1H	1337	U	N3-C4-O4	5.07	122.95	119.40
15	1H	1789	A	OP1-P-O3'	5.07	116.35	105.20
15	14	829	G	N3-C2-N2	5.07	123.45	119.90
15	14	1234	G	N3-C2-N2	5.07	123.45	119.90
15	14	1291	A	N1-C2-N3	5.07	131.83	129.30
15	14	1344	C	C4-C5-C6	5.07	119.93	117.40
15	14	1497	G	C5-C6-N1	5.07	114.03	111.50
26	16	46	G	C8-N9-C4	5.07	108.43	106.40
1	1G	986	C	P-O3'-C3'	5.07	125.78	119.70
1	1G	1594	G	C8-N9-C4	-5.07	104.37	106.40
4	19	40	THR	C-N-CA	-5.07	111.66	122.30
15	1H	657	G	N7-C8-N9	-5.07	110.57	113.10
15	1H	840	C	C6-N1-C2	5.07	122.33	120.30
15	1H	1850	G	C6-N1-C2	-5.07	122.06	125.10
15	1H	1993	G	N9-C1'-C2'	-5.07	106.43	112.00
15	1H	2341	C	C6-N1-C2	-5.07	118.27	120.30
15	1H	2360	G	N9-C4-C5	5.07	107.43	105.40
15	14	735	G	N3-C4-C5	-5.07	126.07	128.60
15	14	1270	C	O5'-P-OP2	5.07	116.78	110.70
15	14	2846	G	N3-C4-C5	5.07	131.13	128.60
26	16	99	G	C8-N9-C1'	5.07	133.58	127.00
30	78	23	PRO	C-N-CA	-5.07	111.66	122.30
1	13	1854	A	N3-C4-N9	-5.06	123.35	127.40
15	1H	833	A	OP1-P-O3'	5.06	116.34	105.20
15	1H	2341	C	N3-C4-N4	5.06	121.55	118.00
1	13	1379	G	O5'-P-OP1	-5.06	101.14	105.70
1	1G	1252	C	OP1-P-OP2	-5.06	112.00	119.60
1	1G	2036	A	N7-C8-N9	-5.06	111.27	113.80
15	1H	1873	G	N3-C4-N9	5.06	129.04	126.00
15	1H	2858	G	C5-C6-O6	5.06	131.64	128.60
15	14	1036	A	C4-C5-N7	5.06	113.23	110.70
15	14	1315	G	C5-C6-O6	-5.06	125.56	128.60
15	14	1723	U	O5'-P-OP2	5.06	116.78	110.70
15	14	2060	G	O4'-C1'-N9	5.06	112.25	108.20
15	14	2736	U	OP1-P-O3'	5.06	116.34	105.20
1	13	993	C	N3-C4-C5	5.06	123.92	121.90
1	13	1036	C	N3-C2-O2	5.06	125.44	121.90
15	1H	1892	G	C4-C5-C6	5.06	121.84	118.80
15	1H	1963	A	N1-C2-N3	5.06	131.83	129.30
15	14	1191	A	OP2-P-O3'	5.06	116.33	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	2385	G	C8-N9-C4	5.06	108.42	106.40
1	1G	906	G	N3-C2-N2	5.06	123.44	119.90
1	1G	1329	G	C6-C5-N7	5.06	133.44	130.40
15	1H	680	A	N9-C4-C5	-5.06	103.78	105.80
15	1H	739	G	OP1-P-O3'	5.06	116.33	105.20
15	1H	1395	G	N3-C2-N2	5.06	123.44	119.90
15	1H	1453	C	C6-N1-C2	5.06	122.32	120.30
15	1H	1570	G	N3-C4-C5	-5.06	126.07	128.60
15	1H	2077	G	OP2-P-O3'	5.06	116.33	105.20
15	1H	2267	G	N3-C2-N2	5.06	123.44	119.90
15	14	1339	C	OP1-P-OP2	5.06	127.19	119.60
15	14	1835	G	C5-N7-C8	-5.06	101.77	104.30
15	14	2524	G	N1-C6-O6	5.06	122.94	119.90
15	14	2712	G	N1-C6-O6	5.06	122.94	119.90
15	14	2737	A	OP1-P-O3'	5.06	116.33	105.20
26	1J	31	A	C5-N7-C8	-5.06	101.37	103.90
1	13	1950	G	N3-C4-C5	5.06	131.13	128.60
15	1H	197	A	N1-C2-N3	5.06	131.83	129.30
15	1H	287	C	N1-C2-O2	5.06	121.94	118.90
15	1H	680	A	C4-C5-N7	5.06	113.23	110.70
15	1H	915	A	C8-N9-C1'	-5.06	118.60	127.70
15	1H	2454	A	N3-C4-C5	5.06	130.34	126.80
15	14	187	A	N1-C2-N3	5.06	131.83	129.30
15	14	1485	G	OP2-P-O3'	5.06	116.32	105.20
15	14	2446	U	C5-C6-N1	-5.06	120.17	122.70
15	14	2503	A	N9-C4-C5	-5.06	103.78	105.80
15	14	2617	A	C2-N3-C4	5.06	113.13	110.60
15	14	2622	G	OP2-P-O3'	5.06	116.33	105.20
47	59	166	GLY	C-N-CA	5.06	134.34	121.70
52	W4	36	A	C5-C6-N6	5.06	127.75	123.70
1	1G	1079	G	N3-C4-N9	5.06	129.03	126.00
15	1H	508	A	OP2-P-O3'	5.06	116.32	105.20
15	1H	918	G	N1-C6-O6	-5.06	116.87	119.90
15	1H	1389	U	C5-C6-N1	-5.06	120.17	122.70
15	1H	1669	G	N9-C4-C5	5.06	107.42	105.40
15	14	1791	U	C2-N1-C1'	-5.06	111.63	117.70
15	14	2698	C	C2-N3-C4	5.06	122.43	119.90
1	13	1298	U	O5'-P-OP2	-5.05	101.15	105.70
15	1H	624	G	C5-C6-N1	5.05	114.03	111.50
15	1H	729	G	N1-C6-O6	5.05	122.93	119.90
15	1H	830	A	C6-N1-C2	-5.05	115.57	118.60
15	1H	1682	A	OP2-P-O3'	5.05	116.32	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1992	C	N3-C4-C5	-5.05	119.88	121.90
15	1H	2776	C	N3-C4-N4	-5.05	114.46	118.00
15	14	540	A	C6-C5-N7	-5.05	128.76	132.30
15	14	782	G	C4-C5-N7	5.05	112.82	110.80
15	14	1238	G	N3-C4-N9	5.05	129.03	126.00
15	14	2098	C	C2-N3-C4	-5.05	117.37	119.90
52	X1	31	A	C5-N7-C8	-5.05	101.37	103.90
52	X1	45	U	C6-N1-C2	-5.05	117.97	121.00
1	13	1332	G	C4-C5-N7	5.05	112.82	110.80
1	1G	2077	A	C6-C5-N7	5.05	135.84	132.30
15	1H	841	G	C4-N9-C1'	5.05	133.07	126.50
15	1H	1059	G	C4-C5-C6	5.05	121.83	118.80
15	1H	1423	G	C2-N3-C4	-5.05	109.37	111.90
15	1H	1755	G	OP1-P-OP2	-5.05	112.02	119.60
15	1H	1801	C	C2-N3-C4	-5.05	117.37	119.90
15	1H	2772	U	OP1-P-O3'	5.05	116.32	105.20
15	14	660	A	N7-C8-N9	5.05	116.33	113.80
15	14	1909	A	N1-C6-N6	-5.05	115.57	118.60
15	14	2401	C	N3-C2-O2	5.05	125.44	121.90
1	13	1398	G	OP1-P-O3'	5.05	116.31	105.20
1	1G	1521	G	C5-C6-O6	-5.05	125.57	128.60
15	1H	2223	A	OP1-P-O3'	5.05	116.31	105.20
15	14	1833	G	OP2-P-O3'	5.05	116.31	105.20
15	14	2031	C	C5-C6-N1	-5.05	118.47	121.00
26	1J	20	G	C5-C6-N1	-5.05	108.97	111.50
1	13	888	G	N3-C4-N9	5.05	129.03	126.00
1	13	1692	G	C4-C5-N7	-5.05	108.78	110.80
1	1G	657	G	O5'-P-OP2	5.05	116.76	110.70
1	1G	870	U	N1-C2-O2	-5.05	119.27	122.80
1	1G	1488	A	C8-N9-C4	-5.05	103.78	105.80
15	1H	203	A	C6-C5-N7	-5.05	128.76	132.30
15	1H	784	A	C4-C5-C6	5.05	119.53	117.00
15	1H	869	A	N1-C2-N3	5.05	131.82	129.30
15	1H	1033	C	OP1-P-OP2	-5.05	112.03	119.60
15	1H	1964	U	O5'-P-OP2	5.05	116.76	110.70
15	1H	2084	A	N3-C4-C5	5.05	130.34	126.80
15	1H	2090	C	C4-C5-C6	5.05	119.92	117.40
15	1H	2678	G	N7-C8-N9	5.05	115.62	113.10
15	14	824	G	O4'-C1'-N9	5.05	112.24	108.20
15	14	1723	U	C2-N1-C1'	-5.05	111.64	117.70
15	14	2027	G	C6-C5-N7	-5.05	127.37	130.40
15	14	2260	U	P-O3'-C3'	5.05	125.76	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	2488	U	C6-N1-C1'	-5.05	114.13	121.20
1	13	1156	G	N9-C4-C5	5.05	107.42	105.40
1	1G	1123	G	N1-C2-N2	-5.05	111.66	116.20
15	1H	160	U	C2-N1-C1'	5.05	123.76	117.70
15	1H	654	A	N7-C8-N9	-5.05	111.28	113.80
15	1H	879	G	N1-C2-N2	-5.05	111.66	116.20
15	1H	1338	C	N1-C2-O2	-5.05	115.87	118.90
15	14	772	G	C5-C6-N1	-5.05	108.98	111.50
15	14	872	G	C8-N9-C4	5.05	108.42	106.40
15	14	1363	C	OP1-P-OP2	-5.05	112.03	119.60
1	13	986	C	N3-C2-O2	-5.05	118.37	121.90
1	13	1358	A	OP1-P-O3'	5.05	116.30	105.20
1	1G	1321	U	N3-C4-O4	5.05	122.93	119.40
15	1H	93	G	C5-C6-O6	-5.05	125.57	128.60
15	1H	312	C	C6-N1-C2	5.05	122.32	120.30
15	1H	1438	G	N1-C2-N2	-5.05	111.66	116.20
15	1H	2269	C	C2-N1-C1'	-5.05	113.25	118.80
15	1H	2707	C	C2-N3-C4	-5.05	117.38	119.90
15	14	177	G	N1-C2-N3	5.05	126.93	123.90
15	14	458	A	N7-C8-N9	5.05	116.32	113.80
52	X4	44	G	N7-C8-N9	5.05	115.62	113.10
1	1G	982	C	O5'-P-OP2	5.04	116.75	110.70
15	1H	837	A	C8-N9-C1'	-5.04	118.62	127.70
15	14	1286	A	N1-C6-N6	-5.04	115.57	118.60
32	31	32	LEU	CA-CB-CG	5.04	126.90	115.30
1	13	784	G	N1-C6-O6	5.04	122.93	119.90
1	1G	883	C	N3-C2-O2	5.04	125.43	121.90
1	1G	1399	C	N1-C2-O2	-5.04	115.87	118.90
15	1H	127	C	C2-N3-C4	-5.04	117.38	119.90
15	1H	855	C	C4-C5-C6	-5.04	114.88	117.40
15	1H	1463	G	O5'-P-OP1	-5.04	101.16	105.70
15	1H	1627	C	N3-C4-C5	-5.04	119.88	121.90
15	1H	2008	C	C6-N1-C2	5.04	122.32	120.30
15	1H	2605	A	N1-C2-N3	5.04	131.82	129.30
10	15	115	ARG	NE-CZ-NH1	5.04	122.82	120.30
15	14	242	G	C2-N3-C4	5.04	114.42	111.90
15	14	1369	C	C4-C5-C6	5.04	119.92	117.40
26	16	49	C	O5'-P-OP1	5.04	116.75	110.70
32	31	176	LEU	CB-CG-CD2	-5.04	102.43	111.00
1	1G	1123	G	N3-C4-C5	-5.04	126.08	128.60
1	1G	2101	C	N1-C2-O2	5.04	121.92	118.90
15	1H	837	A	N3-C4-N9	5.04	131.43	127.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	957	A	C6-N1-C2	-5.04	115.58	118.60
15	1H	1002	C	O5'-P-OP2	-5.04	101.16	105.70
15	1H	1792	G	P-O3'-C3'	5.04	125.75	119.70
15	1H	2591	G	C6-N1-C2	-5.04	122.08	125.10
15	14	611	A	C4-C5-N7	-5.04	108.18	110.70
15	14	2011	A	N1-C2-N3	5.04	131.82	129.30
21	68	22	ILE	CG1-CB-CG2	-5.04	100.31	111.40
1	13	1590	C	N3-C4-C5	5.04	123.92	121.90
1	1G	2148	G	N3-C4-N9	-5.04	122.98	126.00
15	1H	252	A	N1-C6-N6	5.04	121.62	118.60
15	1H	804	C	C4-C5-C6	5.04	119.92	117.40
15	1H	1391	A	C6-N1-C2	-5.04	115.58	118.60
15	1H	2103	C	C5-C4-N4	-5.04	116.67	120.20
15	1H	2273	C	C2-N3-C4	-5.04	117.38	119.90
15	1H	2499	G	C8-N9-C1'	-5.04	120.45	127.00
15	14	1803	G	C5-N7-C8	5.04	106.82	104.30
52	W1	16	U	C5-C6-N1	5.04	125.22	122.70
1	13	947	G	N3-C2-N2	-5.04	116.37	119.90
1	13	1528	U	N3-C2-O2	5.04	125.73	122.20
15	1H	1846	A	O5'-P-OP2	-5.04	101.17	105.70
15	1H	2277	U	C6-N1-C2	-5.04	117.98	121.00
15	1H	2611	U	N1-C2-N3	5.04	117.92	114.90
15	1H	2642	G	C8-N9-C4	5.04	108.42	106.40
15	14	198	C	O5'-P-OP1	5.04	116.75	110.70
15	14	589	C	OP1-P-OP2	5.04	127.16	119.60
15	14	809	G	C8-N9-C4	5.04	108.42	106.40
15	14	834	G	C5-C6-O6	5.04	131.62	128.60
15	14	1392	G	OP2-P-O3'	5.04	116.29	105.20
15	14	2093	U	OP1-P-O3'	5.04	116.29	105.20
15	14	2448	A	O5'-P-OP2	5.04	116.75	110.70
52	X4	4	C	OP1-P-OP2	5.04	127.16	119.60
1	13	1442	U	OP1-P-OP2	-5.04	112.05	119.60
1	1G	1614	U	N3-C2-O2	-5.04	118.67	122.20
15	1H	136	G	C5-C6-N1	5.04	114.02	111.50
15	1H	537	C	N1-C2-O2	-5.04	115.88	118.90
15	14	1527	A	O5'-P-OP2	-5.04	101.17	105.70
1	13	1387	G	C6-C5-N7	-5.04	127.38	130.40
1	13	1908	U	N1-C2-N3	5.04	117.92	114.90
1	1G	1320	G	C6-C5-N7	-5.04	127.38	130.40
1	1G	1699	C	C6-N1-C2	-5.04	118.29	120.30
1	1G	2085	G	N3-C4-N9	-5.04	122.98	126.00
15	1H	137	G	OP1-P-O3'	5.04	116.28	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1458	C	N3-C4-N4	-5.04	114.47	118.00
15	1H	1664	C	C5-C4-N4	-5.04	116.68	120.20
15	1H	2096	A	C6-N1-C2	-5.04	115.58	118.60
15	1H	2785	C	C6-N1-C2	-5.04	118.29	120.30
15	14	360	C	O5'-P-OP2	-5.04	101.17	105.70
15	14	1332	G	C5-C6-N1	5.04	114.02	111.50
15	14	1400	C	C2-N1-C1'	-5.04	113.26	118.80
15	14	1831	C	C6-N1-C2	5.04	122.31	120.30
15	14	2007	C	C5-C6-N1	5.04	123.52	121.00
15	14	2715	C	C6-N1-C2	5.04	122.31	120.30
26	1J	103	G	N3-C4-N9	5.04	129.02	126.00
52	V4	20	U	C2-N1-C1'	5.04	123.74	117.70
1	13	680	C	O5'-P-OP2	-5.03	101.17	105.70
1	13	1001	A	N1-C6-N6	-5.03	115.58	118.60
1	13	1252	C	N3-C4-N4	5.03	121.52	118.00
1	1G	1727	G	C5-C6-N1	-5.03	108.98	111.50
15	1H	811	U	C5-C6-N1	5.03	125.22	122.70
15	1H	1714	A	OP2-P-O3'	5.03	116.27	105.20
15	1H	1881	A	C5-C6-N1	-5.03	115.18	117.70
15	14	1473	G	OP1-P-OP2	5.03	127.15	119.60
15	14	1983	C	C4-C5-C6	5.03	119.92	117.40
15	14	2047	U	C5-C4-O4	-5.03	122.88	125.90
15	14	2267	G	N1-C2-N2	-5.03	111.67	116.20
26	16	53	G	N3-C4-C5	5.03	131.12	128.60
26	16	62	C	C5-C6-N1	5.03	123.52	121.00
1	13	1524	A	N1-C6-N6	5.03	121.62	118.60
1	1G	1958	G	P-O3'-C3'	5.03	125.74	119.70
4	19	271	ILE	C-N-CA	-5.03	109.12	121.70
15	1H	959	A	OP1-P-OP2	5.03	127.15	119.60
15	1H	2671	U	C6-N1-C2	-5.03	117.98	121.00
26	1J	31	A	OP1-P-OP2	-5.03	112.05	119.60
1	13	833	C	N3-C2-O2	-5.03	118.38	121.90
1	1G	1151	C	N3-C2-O2	-5.03	118.38	121.90
1	1G	1409	A	C4-C5-C6	-5.03	114.48	117.00
15	1H	288	G	N7-C8-N9	5.03	115.62	113.10
15	1H	310	C	OP2-P-O3'	5.03	116.27	105.20
15	1H	437	C	C6-N1-C2	5.03	122.31	120.30
15	1H	538	U	N1-C2-O2	5.03	126.32	122.80
15	1H	891	G	OP1-P-OP2	-5.03	112.06	119.60
15	1H	1406	U	N1-C2-N3	5.03	117.92	114.90
15	1H	1569	U	N3-C4-C5	-5.03	111.58	114.60
15	1H	1976	U	C2-N3-C4	-5.03	123.98	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	2006	A	C6-N1-C2	-5.03	115.58	118.60
15	1H	2404	G	C5-C6-N1	-5.03	108.98	111.50
15	1H	2533	A	O4'-C1'-N9	-5.03	104.18	108.20
15	14	938	C	C5-C6-N1	5.03	123.52	121.00
15	14	2899	G	N3-C4-C5	-5.03	126.08	128.60
51	Y1	37	G	O5'-P-OP2	-5.03	101.17	105.70
51	Y1	48	U	C6-N1-C2	-5.03	117.98	121.00
1	13	1226	G	C8-N9-C4	5.03	108.41	106.40
1	1G	1170	G	N1-C6-O6	5.03	122.92	119.90
15	1H	1722	C	O5'-P-OP1	-5.03	101.17	105.70
15	14	496	G	OP1-P-OP2	-5.03	112.06	119.60
15	14	1857	G	OP1-P-OP2	-5.03	112.06	119.60
15	14	2690	A	C4-C5-N7	5.03	113.21	110.70
26	1J	32	C	N3-C4-C5	-5.03	119.89	121.90
1	13	892	G	O4'-C1'-N9	-5.03	104.18	108.20
1	13	964	U	OP2-P-O3'	5.03	116.26	105.20
1	13	1484	G	N3-C4-C5	-5.03	126.09	128.60
1	13	1497	G	C5-C6-N1	5.03	114.01	111.50
1	1G	1927	G	N3-C4-C5	5.03	131.11	128.60
15	1H	789	U	OP1-P-O3'	-5.03	94.14	105.20
15	1H	846	C	N3-C4-N4	-5.03	114.48	118.00
15	1H	1509	G	N1-C6-O6	5.03	122.92	119.90
15	14	1672	G	N3-C2-N2	-5.03	116.38	119.90
15	14	1929	G	N3-C4-N9	5.03	129.02	126.00
15	14	2289	A	N7-C8-N9	-5.03	111.29	113.80
15	14	2319	G	N7-C8-N9	5.03	115.61	113.10
15	14	2322	G	C8-N9-C4	-5.03	104.39	106.40
15	14	2438	U	C2-N1-C1'	-5.03	111.67	117.70
15	14	2600	U	OP2-P-O3'	5.03	116.26	105.20
26	1J	109	G	C8-N9-C4	-5.03	104.39	106.40
1	13	1060	C	C2-N3-C4	5.03	122.41	119.90
1	13	1354	G	OP1-P-O3'	5.03	116.26	105.20
1	1G	1995	C	N1-C2-O2	-5.03	115.88	118.90
15	1H	21	A	O5'-P-OP2	5.03	116.73	110.70
15	1H	482	A	C5-N7-C8	-5.03	101.39	103.90
15	1H	1333	A	O5'-P-OP1	-5.03	101.18	105.70
15	1H	1872	C	C6-N1-C2	5.03	122.31	120.30
15	1H	2396	C	N3-C4-C5	5.03	123.91	121.90
15	1H	2723	G	N1-C2-N2	-5.03	111.68	116.20
15	14	633	A	C6-N1-C2	-5.03	115.58	118.60
15	14	900	U	N1-C2-O2	-5.03	119.28	122.80
15	14	1259	U	OP1-P-OP2	5.03	127.14	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1804	G	C4-C5-N7	-5.03	108.79	110.80
15	14	1878	C	N1-C2-O2	-5.03	115.88	118.90
15	14	2828	C	O5'-P-OP2	-5.03	101.18	105.70
15	14	2849	U	C5-C4-O4	5.03	128.91	125.90
35	D8	35	LEU	CA-CB-CG	5.03	126.86	115.30
1	13	2111	G	N7-C8-N9	-5.02	110.59	113.10
1	1G	1568	G	C4-N9-C1'	5.02	133.03	126.50
15	1H	227	C	C2-N3-C4	-5.02	117.39	119.90
15	1H	583	G	OP1-P-OP2	5.02	127.14	119.60
15	1H	2009	G	C4-C5-N7	-5.02	108.79	110.80
15	14	2054	G	C5-C6-N1	-5.02	108.99	111.50
15	14	2710	C	N3-C2-O2	-5.02	118.38	121.90
1	1G	1431	A	C6-N1-C2	-5.02	115.59	118.60
15	1H	539	G	C5-C6-N1	5.02	114.01	111.50
15	1H	1403	A	N1-C6-N6	5.02	121.61	118.60
15	1H	1822	C	C4-C5-C6	5.02	119.91	117.40
15	1H	1960	G	C6-C5-N7	5.02	133.41	130.40
15	1H	2315	G	N3-C2-N2	-5.02	116.39	119.90
15	14	1635	A	N1-C6-N6	5.02	121.61	118.60
41	6I	34	LEU	CA-CB-CG	-5.02	103.75	115.30
1	13	2092	G	OP1-P-OP2	-5.02	112.07	119.60
1	13	2110	G	N7-C8-N9	-5.02	110.59	113.10
15	1H	823	A	O5'-P-OP2	-5.02	101.18	105.70
15	1H	1235	G	N9-C4-C5	-5.02	103.39	105.40
15	1H	1914	A	C8-N9-C4	5.02	107.81	105.80
15	1H	2090	C	N3-C2-O2	-5.02	118.39	121.90
15	1H	2733	G	C6-N1-C2	-5.02	122.09	125.10
15	14	244	G	OP2-P-O3'	5.02	116.25	105.20
1	1G	756	G	C8-N9-C4	5.02	108.41	106.40
1	1G	943	G	N3-C4-N9	5.02	129.01	126.00
15	1H	2071	G	N7-C8-N9	-5.02	110.59	113.10
15	1H	2466	A	N1-C6-N6	-5.02	115.59	118.60
15	1H	2573	C	N3-C4-C5	5.02	123.91	121.90
15	14	1396	G	OP1-P-O3'	5.02	116.25	105.20
15	14	1622	A	C6-N1-C2	-5.02	115.59	118.60
15	14	2063	G	OP1-P-OP2	-5.02	112.07	119.60
1	13	1239	G	O5'-P-OP2	-5.02	101.19	105.70
1	13	1593	C	OP2-P-O3'	5.02	116.24	105.20
15	1H	440	A	N1-C2-N3	5.02	131.81	129.30
15	1H	602	G	C5-C6-O6	-5.02	125.59	128.60
15	1H	614	C	N3-C4-C5	5.02	123.91	121.90
15	1H	1232	G	OP1-P-O3'	-5.02	94.16	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	1406	U	O5'-P-OP2	-5.02	101.19	105.70
15	1H	1507	A	O5'-P-OP1	-5.02	101.19	105.70
15	14	1318	A	N3-C4-C5	5.02	130.31	126.80
15	14	1634	C	OP1-P-O3'	5.02	116.24	105.20
15	14	2284	A	OP1-P-O3'	5.02	116.24	105.20
15	14	2604	A	C6-N1-C2	-5.02	115.59	118.60
15	14	2607	G	N3-C4-C5	-5.02	126.09	128.60
52	X1	41	C	C5-C6-N1	-5.02	118.49	121.00
1	13	1035	G	C5-C6-N1	-5.02	108.99	111.50
1	1G	1814	G	C4-C5-N7	5.02	112.81	110.80
15	1H	535	G	C6-C5-N7	-5.02	127.39	130.40
15	1H	1013	G	N1-C2-N2	-5.02	111.69	116.20
15	14	2454	A	O4'-C1'-N9	-5.02	104.19	108.20
15	14	2518	A	C5-C6-N1	5.02	120.21	117.70
15	14	2833	A	C5-N7-C8	-5.02	101.39	103.90
1	13	1209	U	N3-C2-O2	-5.01	118.69	122.20
1	13	1387	G	C5-C6-O6	-5.01	125.59	128.60
1	13	1533	C	N1-C2-O2	-5.01	115.89	118.90
1	1G	964	U	C5-C4-O4	-5.01	122.89	125.90
15	1H	238	G	C5-N7-C8	5.01	106.81	104.30
15	1H	508	A	C5-N7-C8	-5.01	101.39	103.90
15	1H	1250	C	OP2-P-O3'	5.01	116.23	105.20
15	14	960	C	C6-N1-C2	-5.01	118.30	120.30
15	14	1464	U	OP1-P-OP2	5.01	127.12	119.60
15	14	2279	C	OP1-P-OP2	-5.01	112.08	119.60
15	14	2301	A	N3-C4-C5	5.01	130.31	126.80
15	14	2316	C	C5-C6-N1	5.01	123.51	121.00
15	14	2464	U	OP1-P-OP2	5.01	127.12	119.60
26	1J	14	C	N1-C2-O2	5.01	121.91	118.90
15	1H	1378	U	N1-C2-O2	-5.01	119.29	122.80
15	1H	2285	G	C6-N1-C2	-5.01	122.09	125.10
15	1H	2569	U	N3-C2-O2	5.01	125.71	122.20
15	14	1686	C	C5-C4-N4	-5.01	116.69	120.20
15	14	2062	G	C2-N3-C4	5.01	114.41	111.90
26	1J	74	G	N7-C8-N9	-5.01	110.59	113.10
1	13	890	U	OP1-P-OP2	5.01	127.12	119.60
1	1G	2118	U	C5-C4-O4	5.01	128.91	125.90
15	1H	1086	C	O5'-P-OP1	5.01	116.71	110.70
15	1H	1919	C	OP2-P-O3'	5.01	116.22	105.20
15	1H	2390	G	N9-C1'-C2'	-5.01	106.49	112.00
18	61	114	LEU	CA-CB-CG	5.01	126.83	115.30
15	14	48	A	C2-N3-C4	5.01	113.11	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	1323	A	C6-C5-N7	-5.01	128.79	132.30
15	14	1770	A	O4'-C1'-N9	5.01	112.21	108.20
15	14	2259	U	N1-C2-N3	5.01	117.91	114.90
15	14	2408	A	C5-C6-N1	-5.01	115.19	117.70
26	1J	30	C	O5'-P-OP1	5.01	116.71	110.70
1	13	1001	A	C8-N9-C4	5.01	107.80	105.80
1	1G	1120	G	C5-C6-O6	-5.01	125.59	128.60
1	1G	1341	A	C5-N7-C8	-5.01	101.39	103.90
15	1H	29	U	OP1-P-OP2	-5.01	112.08	119.60
15	1H	725	A	N1-C2-N3	5.01	131.81	129.30
15	1H	788	G	O5'-P-OP1	5.01	116.71	110.70
15	1H	2055	A	O4'-C1'-N9	-5.01	104.19	108.20
15	1H	2243	G	N3-C4-C5	-5.01	126.09	128.60
15	1H	2442	C	O5'-P-OP2	5.01	116.71	110.70
15	14	1176	A	C5-C6-N6	-5.01	119.69	123.70
15	14	1875	U	OP1-P-OP2	5.01	127.11	119.60
15	14	1946	G	C4-C5-N7	5.01	112.80	110.80
15	14	2727	U	P-O3'-C3'	5.01	125.71	119.70
1	1G	1182	A	N9-C4-C5	5.01	107.80	105.80
15	1H	81	G	OP1-P-O3'	5.01	116.22	105.20
15	1H	787	G	N1-C2-N2	-5.01	111.69	116.20
15	1H	1255	C	N1-C2-O2	-5.01	115.89	118.90
15	1H	1516	G	OP2-P-O3'	5.01	116.22	105.20
15	1H	1960	G	C4-C5-N7	-5.01	108.80	110.80
15	14	182	C	OP1-P-OP2	5.01	127.11	119.60
15	14	201	A	C5-C6-N6	-5.01	119.69	123.70
15	14	556	A	N1-C2-N3	5.01	131.80	129.30
15	14	2033	C	N3-C4-C5	-5.01	119.90	121.90
1	13	750	G	N1-C6-O6	5.01	122.90	119.90
15	1H	23	G	N3-C2-N2	-5.01	116.39	119.90
15	1H	432	C	P-O3'-C3'	5.01	125.71	119.70
15	1H	1588	G	N1-C6-O6	5.01	122.90	119.90
15	1H	2008	C	C2-N3-C4	-5.01	117.40	119.90
15	1H	2436	G	C5-C6-O6	-5.01	125.60	128.60
15	1H	2440	A	C2-N3-C4	-5.01	108.10	110.60
15	1H	2557	A	N9-C4-C5	5.01	107.80	105.80
15	14	594	U	N1-C2-O2	-5.01	119.30	122.80
15	14	751	G	C4-C5-N7	-5.01	108.80	110.80
15	14	894	G	C4-N9-C1'	5.01	133.01	126.50
15	14	1981	U	N3-C4-C5	5.01	117.60	114.60
15	14	2277	U	N1-C2-O2	-5.01	119.30	122.80
1	1G	1892	G	C8-N9-C4	-5.00	104.40	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	236	C	C6-N1-C2	5.00	122.30	120.30
15	1H	506	A	N9-C4-C5	5.00	107.80	105.80
15	1H	1391	A	N1-C2-N3	5.00	131.80	129.30
15	14	2035	G	N1-C2-N2	5.00	120.70	116.20
1	13	883	C	O5'-P-OP2	-5.00	101.20	105.70
1	1G	755	A	N1-C6-N6	5.00	121.60	118.60
1	1G	1831	A	OP1-P-OP2	-5.00	112.10	119.60
1	1G	1866	A	OP1-P-OP2	5.00	127.11	119.60
1	1G	2113	C	N3-C4-N4	-5.00	114.50	118.00
1	1G	2149	G	C4-C5-N7	5.00	112.80	110.80
15	1H	423	U	O4'-C1'-N1	5.00	112.20	108.20
15	1H	917	U	N3-C2-O2	-5.00	118.70	122.20
15	1H	2260	U	OP1-P-O3'	5.00	116.21	105.20
15	1H	2271	G	N9-C4-C5	-5.00	103.40	105.40
15	14	957	A	C2-N3-C4	5.00	113.10	110.60
15	14	2342	A	N1-C2-N3	5.00	131.80	129.30
1	13	1583	U	N3-C4-C5	-5.00	111.60	114.60
1	1G	666	U	C6-N1-C2	5.00	124.00	121.00
15	1H	645	C	N3-C4-N4	5.00	121.50	118.00
15	1H	1380	A	O5'-P-OP2	-5.00	101.20	105.70
15	1H	1392	G	C4-N9-C1'	5.00	133.00	126.50
15	1H	1472	G	C5-N7-C8	5.00	106.80	104.30
15	1H	1477	C	C6-N1-C2	5.00	122.30	120.30
15	1H	1577	A	N1-C6-N6	5.00	121.60	118.60
15	1H	1864	C	N1-C2-O2	-5.00	115.90	118.90
15	1H	2277	U	O5'-P-OP1	5.00	116.70	110.70
15	1H	2325	A	C6-N1-C2	-5.00	115.60	118.60
15	1H	2782	G	C5-C6-O6	-5.00	125.60	128.60
15	14	95	G	N3-C2-N2	-5.00	116.40	119.90
15	14	239	C	N3-C2-O2	-5.00	118.40	121.90
15	14	1391	A	P-O3'-C3'	5.00	125.70	119.70
15	14	1804	G	N3-C4-C5	-5.00	126.10	128.60
15	14	2267	G	C5-C6-N1	-5.00	109.00	111.50

There are no chirality outliers.

All (168) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
4	11	239	ARG	Mainchain
4	11	273	ARG	Peptide
4	11	47	GLY	Peptide
44	12	19	HIS	Peptide

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Mol	Chain	Res	Type	Group
10	15	124	ALA	Peptide
10	15	127	ASP	Peptide
10	15	36	GLY	Peptide
10	15	41	ASP	Peptide
4	19	122	ASP	Peptide
4	19	237	GLU	Peptide
4	19	270	ILE	Peptide
4	19	271	ILE	Peptide
4	19	272	ALA	Peptide
4	19	32	SER	Peptide
4	19	37	LEU	Peptide
4	19	42	GLY	Peptide
48	1A	55	LYS	Peptide
48	1A	92	THR	Peptide
44	1E	15	VAL	Peptide
44	1E	169	LYS	Peptide
44	1E	237	ALA	Peptide
23	21	115	GLY	Peptide
23	21	132	HIS	Peptide
23	21	153	GLY	Peptide
23	21	57	LYS	Peptide
23	21	64	LYS	Peptide
23	21	78	LEU	Peptide
23	21	82	ARG	Peptide
8	22	109	PRO	Peptide
8	22	77	ILE	Peptide
23	29	186	GLY	Peptide
23	29	201	THR	Peptide
23	29	53	PRO	Peptide
6	2A	49	GLY	Peptide
6	2I	102	GLY	Peptide
32	31	127	GLU	Peptide
32	31	47	GLY	Peptide
14	32	152	SER	Peptide
14	32	154	ASN	Peptide
14	32	155	LEU	Peptide
14	32	178	VAL	Peptide
14	32	30	LYS	Peptide
30	35	106	LEU	Peptide
30	35	107	LYS	Peptide
30	35	11	GLY	Peptide
30	35	110	TYR	Peptide

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Mol	Chain	Res	Type	Group
30	35	22	GLY	Peptide
30	35	36	LYS	Peptide
30	35	5	ASP	Peptide
30	35	52	GLU	Peptide
30	35	56	SER	Peptide
30	35	60	MET	Peptide
30	35	70	GLN	Peptide
32	39	127	GLU	Peptide
32	39	166	ALA	Peptide
32	39	24	LEU	Peptide
32	39	27	GLU	Peptide
32	39	69	HIS	Mainchain
32	39	85	GLY	Peptide
13	3A	17	LYS	Peptide
13	3A	18	VAL	Peptide
13	3A	63	GLY	Peptide
14	3E	151	LYS	Peptide
13	3I	118	SER	Peptide
13	3I	87	GLY	Peptide
40	41	95	ARG	Peptide
38	45	134	ARG	Peptide
38	45	137	TYR	Peptide
38	45	25	ASP	Peptide
40	49	13	GLU	Peptide
24	4A	94	ARG	Peptide
47	59	92	ILE	Peptide
33	5A	29	ARG	Peptide
33	5A	30	ALA	Peptide
18	61	11	ASN	Peptide
18	61	113	ARG	Peptide
18	61	134	PRO	Peptide
18	61	82	ARG	Peptide
2	65	55	ALA	Peptide
18	69	101	LEU	Peptide
18	69	112	LYS	Peptide
18	69	143	SER	Peptide
18	69	85	GLU	Peptide
16	75	12	SER	Peptide
16	75	4	GLY	Peptide
30	78	11	GLY	Peptide
30	78	115	LEU	Peptide
30	78	14	LYS	Peptide

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Mol	Chain	Res	Type	Group
30	78	19	VAL	Peptide
30	78	24	GLY	Peptide
30	78	5	ASP	Peptide
30	78	70	GLN	Peptide
9	82	117	HIS	Peptide
27	85	72	HIS	Peptide
27	85	90	VAL	Peptide
27	85	95	LEU	Peptide
27	85	96	ALA	Peptide
27	85	98	LEU	Peptide
38	88	21	THR	Peptide
38	88	58	PHE	Peptide
38	88	79	LEU	Peptide
38	88	89	ASN	Peptide
9	8E	110	GLU	Peptide
9	8E	47	LEU	Peptide
35	95	85	LYS	Peptide
35	95	98	GLU	Peptide
45	98	3	HIS	Peptide
45	98	8	ARG	Peptide
43	A5	43	GLY	Peptide
43	A5	93	ALA	Peptide
2	A8	106	ARG	Peptide
29	AI	6	LYS	Peptide
29	AI	7	LYS	Peptide
3	B5	61	GLY	Peptide
16	B8	12	SER	Peptide
16	B8	58	ASN	Peptide
37	BA	101	GLY	Peptide
37	BA	11	SER	Peptide
37	BA	72	LEU	Peptide
37	BI	73	HIS	Peptide
37	BI	96	GLY	Peptide
37	BI	98	PRO	Peptide
11	C5	100	ALA	Peptide
11	C5	57	GLN	Peptide
11	C5	81	LYS	Peptide
11	C5	91	GLU	Peptide
11	C5	99	CYS	Peptide
27	C8	115	ALA	Peptide
27	C8	90	VAL	Peptide
35	D8	45	THR	Peptide

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Mol	Chain	Res	Type	Group
31	E5	8	GLY	Peptide
31	E5	83	PRO	Peptide
39	F5	85	LEU	Peptide
46	G5	15	LYS	Peptide
46	G5	17	SER	Peptide
46	G5	43	GLN	Peptide
11	G8	53	PRO	Peptide
11	G8	54	LYS	Peptide
11	G8	77	PRO	Peptide
11	G8	80	GLY	Peptide
22	H8	165	VAL	Peptide
22	H8	59	LEU	Peptide
22	H8	63	ASP	Peptide
28	I5	26	SER	Peptide
31	I8	44	ARG	Peptide
36	J5	3	LYS	Peptide
39	J8	47	GLN	Peptide
39	J8	75	GLU	Peptide
39	J8	85	LEU	Peptide
46	K8	15	LYS	Peptide
46	K8	17	SER	Peptide
46	K8	46	GLN	Peptide
12	M5	39	LYS	Peptide
12	M5	49	VAL	Peptide
28	M8	4	GLY	Peptide
28	M8	43	TYR	Peptide
36	N8	41	PRO	Peptide
36	N8	42	PRO	Peptide
5	P8	46	VAL	Peptide
12	Q8	18	ALA	Peptide
12	Q8	19	SER	Peptide
12	Q8	21	LYS	Peptide
12	Q8	36	LYS	Peptide
12	Q8	48	PHE	Peptide
12	Q8	52	LYS	Peptide
12	Q8	56	GLU	Peptide
12	Q8	57	ARG	Peptide
12	Q8	9	GLY	Peptide

5.2 Too-close contacts (i)

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	32409	0	16360	705	0
1	1G	32514	0	16415	698	0
2	65	881	0	943	59	0
2	A8	881	0	943	51	0
3	B5	725	0	778	28	0
3	F8	742	0	803	39	0
4	11	2126	0	2208	61	0
4	19	2120	0	2197	80	0
5	L5	409	0	454	12	0
5	P8	409	0	454	13	0
6	2A	864	0	881	33	0
6	2I	864	0	881	31	0
7	8A	823	0	891	29	0
7	8I	834	0	904	48	0
8	22	1612	0	1677	74	0
8	2E	1605	0	1668	70	0
9	82	983	0	1006	68	0
9	8E	1009	0	1037	68	0
10	15	1104	0	1180	40	0
10	58	1104	0	1180	68	0
11	C5	794	0	886	60	0
11	G8	783	0	873	60	0
12	M5	495	0	567	54	0
12	Q8	480	0	549	91	0
13	3A	975	0	1062	41	0
13	3I	956	0	1046	36	0
14	32	1702	0	1764	83	0
14	3E	1702	0	1762	84	0
15	14	62647	0	31575	1194	0
15	1H	62707	0	31583	1236	0
16	75	1141	0	1202	55	0
16	B8	1081	0	1141	61	0
17	H5	468	0	518	21	0
17	L8	452	0	503	12	0
18	61	1136	0	1223	51	0
18	69	1136	0	1223	61	0
19	9A	564	0	631	20	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	9I	550	0	613	18	0
20	1B	217	0	234	13	0
20	1F	199	0	208	11	0
21	25	932	0	996	41	0
21	68	932	0	996	38	0
22	D5	1120	0	1146	68	0
22	H8	1373	0	1402	71	0
23	21	1568	0	1634	98	0
23	29	1568	0	1633	100	0
24	4A	928	0	987	49	0
24	4I	928	0	987	52	0
25	42	1155	0	1213	49	0
25	4E	1155	0	1213	51	0
26	16	2617	0	1328	47	0
26	1J	2617	0	1328	70	0
27	85	963	0	1022	54	0
27	C8	963	0	1022	53	0
28	I5	515	0	514	45	0
28	M8	533	0	526	47	0
29	AA	624	0	636	38	0
29	AI	643	0	662	54	0
30	35	1144	0	1228	91	0
30	78	1122	0	1206	92	0
31	E5	645	0	652	28	0
31	I8	656	0	683	23	0
32	31	1585	0	1632	91	0
32	39	1627	0	1680	92	0
33	5A	475	0	511	26	0
33	5I	491	0	529	27	0
34	52	842	0	857	36	0
34	5E	842	0	857	25	0
35	95	778	0	852	70	0
35	D8	778	0	852	45	0
36	J5	434	0	454	23	0
36	N8	429	0	449	31	0
37	BA	762	0	861	37	0
37	BI	762	0	861	37	0
38	45	1113	0	1167	81	0
38	88	1121	0	1179	77	0
39	F5	737	0	813	41	0
39	J8	746	0	826	54	0
40	41	1473	0	1535	81	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
40	49	1473	0	1535	77	0
41	6A	733	0	771	21	0
41	6I	733	0	771	31	0
42	62	1200	0	1238	36	0
42	6E	1157	0	1202	47	0
43	A5	899	0	964	42	0
43	E8	890	0	951	29	0
44	12	1924	0	1975	108	0
44	1E	1924	0	1975	94	0
45	55	959	0	1021	37	0
45	98	967	0	1033	71	0
46	G5	567	0	618	25	0
46	K8	575	0	634	38	0
47	51	1336	0	1418	80	0
47	59	1307	0	1382	74	0
48	1A	801	0	849	55	0
48	1I	801	0	849	54	0
49	7A	705	0	725	24	0
49	7I	705	0	725	44	0
50	72	1115	0	1177	39	0
50	7E	1115	0	1177	49	0
51	Y1	521	0	262	13	0
51	Y4	521	0	262	26	0
52	V1	1619	0	822	65	0
52	V4	1619	0	822	50	0
52	W1	1619	0	822	23	0
52	W4	1619	0	822	30	0
52	X1	1619	0	822	25	0
52	X4	1619	0	822	37	0
53	13	66	0	0	0	0
53	1G	66	0	0	4	0
54	11	5	0	0	0	0
54	13	182	0	0	0	0
54	14	568	0	0	0	0
54	16	14	0	0	0	0
54	19	3	0	0	0	0
54	1G	178	0	0	0	0
54	1H	597	0	0	0	0
54	1J	14	0	0	0	0
54	21	3	0	0	0	0
54	25	2	0	0	0	0
54	29	5	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
54	2A	1	0	0	0	0
54	31	3	0	0	0	0
54	35	1	0	0	0	0
54	39	2	0	0	0	0
54	3E	2	0	0	0	0
54	3I	1	0	0	0	0
54	41	2	0	0	0	0
54	42	1	0	0	0	0
54	45	2	0	0	0	0
54	49	1	0	0	0	0
54	4E	1	0	0	0	0
54	4I	1	0	0	0	0
54	52	1	0	0	0	0
54	55	2	0	0	0	0
54	58	1	0	0	0	0
54	5E	1	0	0	0	0
54	5I	1	0	0	0	0
54	68	2	0	0	0	0
54	6A	1	0	0	0	0
54	78	3	0	0	0	0
54	7A	1	0	0	0	0
54	85	1	0	0	0	0
54	88	5	0	0	0	0
54	98	1	0	0	0	0
54	A5	1	0	0	0	0
54	A8	1	0	0	0	0
54	B5	1	0	0	0	0
54	B8	1	0	0	0	0
54	C5	2	0	0	0	0
54	E5	2	0	0	0	0
54	G8	1	0	0	0	0
54	I8	2	0	0	0	0
54	K8	1	0	0	0	0
54	L8	1	0	0	0	0
54	P8	1	0	0	0	0
54	W1	4	0	0	0	0
54	W4	4	0	0	0	0
54	X1	9	0	0	0	0
54	X4	6	0	0	0	0
55	32	1	0	0	0	0
55	3E	1	0	0	0	0
55	5A	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
55	5I	1	0	0	0	0
55	C5	1	0	0	0	0
55	G8	1	0	0	0	0
56	11	1	0	0	0	0
56	13	76	0	0	7	0
56	14	512	0	0	62	0
56	19	8	0	0	0	0
56	1G	72	0	0	10	0
56	1H	533	0	0	61	0
56	21	1	0	0	0	0
56	29	4	0	0	0	0
56	31	5	0	0	0	0
56	35	1	0	0	0	0
56	39	6	0	0	0	0
56	55	1	0	0	0	0
56	5A	1	0	0	0	0
56	6A	2	0	0	0	0
56	6I	1	0	0	0	0
56	78	4	0	0	0	0
56	7A	1	0	0	0	0
56	A5	1	0	0	0	0
56	B8	1	0	0	0	0
56	C8	3	0	0	0	0
56	D8	1	0	0	0	0
56	E8	1	0	0	0	0
56	F8	1	0	0	0	0
56	I8	5	0	0	1	0
56	J5	1	0	0	0	0
56	J8	1	0	0	0	0
56	L5	3	0	0	0	0
56	M5	2	0	0	0	0
56	P8	1	0	0	0	0
56	Y4	2	0	0	0	0
All	All	299577	0	199398	7944	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 17.

All (7944) 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)
4:11:105:ILE:CD1	4:11:105:ILE:CG1	1.76	1.54
14:3E:9:CYS:CB	14:3E:9:CYS:SG	2.01	1.48
12:Q8:46:ARG:HH11	12:Q8:46:ARG:HB2	1.09	1.16
12:Q8:46:ARG:HB2	12:Q8:46:ARG:NH1	1.67	1.10
30:78:15:ARG:HB2	30:78:16:ARG:HB2	1.29	1.06
22:H8:30:ASN:HD22	22:H8:90:VAL:HB	1.20	1.06
40:41:64:THR:HG22	40:41:66:GLN:H	1.23	1.04
15:1H:2880:G:OP2	16:B8:119:LYS:NZ	1.91	1.03
44:12:185:ILE:HG22	44:12:199:TYR:HB2	1.41	1.03
15:1H:2057:G:H21	23:21:146:THR:HG23	1.25	1.00
15:14:1273:C:O3'	35:95:85:LYS:HA	1.60	1.00
9:82:112:LYS:HA	9:82:119:ALA:HB2	1.44	0.99
1:13:1932:G:H22	1:13:1958:G:H2'	1.25	0.98
1:1G:1975:U:H3	1:1G:2002:A:H2	1.11	0.98
15:1H:66:U:H3	15:1H:73:A:H2	1.07	0.98
14:32:157:LEU:O	14:32:161:ASN:ND2	1.95	0.97
15:14:1805:C:HO2'	15:14:1820:A:H8	1.03	0.97
15:14:544:C:OP1	36:J5:16:ARG:NH2	1.97	0.97
15:14:1381:G:N2	15:14:1658:A:O2'	1.96	0.97
15:14:1005:U:OP2	38:45:14:ARG:NH1	1.97	0.97
15:14:4:C:H42	15:14:2911:G:H22	1.10	0.96
15:14:2716:C:H3'	15:14:2717:U:H5"	1.45	0.96
15:1H:867:G:OP2	56:1H:3627:HOH:O	1.83	0.95
15:1H:70:A:H2	3:F8:31:HIS:HE1	1.13	0.95
15:14:1924:G:H22	15:14:1927:C:H41	1.05	0.95
12:Q8:50:LEU:HD23	12:Q8:51:ALA:H	1.28	0.94
36:N8:40:LYS:NZ	36:N8:46:CYS:HB3	1.83	0.94
14:32:26:CYS:HA	14:32:31:CYS:HB3	1.49	0.94
15:1H:269:G:H1	15:1H:277:C:H42	1.15	0.94
1:1G:2165:G:O6	51:Y4:29:G:N2	2.00	0.94
16:B8:3:ARG:HB2	16:B8:6:LEU:HB2	1.49	0.93
3:B5:31:HIS:HE2	15:14:70:A:H2	1.16	0.93
39:J8:21:ARG:HH11	39:J8:21:ARG:HG3	1.34	0.93
1:1G:2125:A:H2	1:1G:2128:G:H1	1.15	0.93
15:14:2598:G:H21	52:W4:76:A:H62	1.10	0.93
15:1H:909:U:H5	15:1H:965:A:C2	1.87	0.93
51:Y4:35:A:H2'	51:Y4:36:G:H8	1.34	0.92
15:1H:1005:U:OP2	38:88:14:ARG:NH1	2.02	0.92
15:14:2514:C:OP1	56:14:3620:HOH:O	1.87	0.92
13:3A:41:ARG:HB3	13:3A:41:ARG:HH11	1.34	0.92
30:35:47:ASP:OD2	30:35:50:ARG:NH1	2.03	0.92
1:13:2125:A:H2	1:13:2128:G:H1	1.14	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:34:C:OP2	15:1H:34:C:H6	1.52	0.92
32:31:116:ASP:OD1	32:31:119:ARG:NH2	2.02	0.92
15:1H:632:U:H3	15:1H:648:A:H2	1.09	0.91
1:13:1099:G:N2	1:13:1103:A:N7	2.19	0.91
12:Q8:59:LYS:HE3	12:Q8:60:LEU:HD11	1.52	0.91
15:14:1545:A:H8	15:14:1627:C:HO2'	1.13	0.91
15:1H:137:G:N2	3:F8:44:GLU:OE2	2.04	0.91
32:39:9:ILE:HG12	32:39:14:PRO:HA	1.53	0.91
15:14:299:G:N7	15:14:388:G:N2	2.17	0.91
1:13:1586:G:N3	48:1I:55:LYS:NZ	2.18	0.91
15:1H:48:A:N7	15:1H:118:U:H5	1.69	0.90
14:3E:107:ARG:HH22	14:3E:194:LEU:HD22	1.34	0.90
15:1H:2349:G:O6	31:I8:74:ARG:NH2	2.02	0.90
40:49:161:THR:HG22	40:49:163:ALA:H	1.36	0.90
33:5I:58:LYS:NZ	48:1I:61:GLU:OE1	2.05	0.90
15:14:1791:U:H3	15:14:1796:A:H2	1.20	0.90
15:14:1739:A:H62	15:14:1748:A:H2	1.14	0.89
15:1H:1805:C:HO2'	15:1H:1820:A:H8	0.93	0.89
15:1H:1769:G:H8	15:1H:1773:A:H62	1.20	0.89
15:1H:1924:G:H22	15:1H:1927:C:H5	1.21	0.89
13:3A:49:ASN:ND2	13:3A:92:ASP:OD2	2.05	0.89
15:14:2696:C:H5	15:14:2741:A:H62	1.20	0.89
15:1H:2302:A:H62	15:1H:2359:U:H3	1.19	0.88
1:1G:1003:G:O2'	13:3A:33:ARG:NH2	2.05	0.88
40:41:66:GLN:OE1	40:41:98:ARG:NH1	2.06	0.88
15:1H:591:U:OP1	30:78:29:LYS:NZ	2.07	0.87
15:1H:2595:U:H4'	23:21:130:GLY:HA3	1.55	0.87
44:1E:185:ILE:HG22	44:1E:199:TYR:HB2	1.56	0.87
1:13:1230:C:H2'	1:13:1231:A:H8	1.39	0.87
15:1H:2443:G:H21	30:78:61:ARG:HH21	1.21	0.87
1:1G:1088:A:P	1:1G:1115:G:H22	1.97	0.87
15:1H:1070:G:N2	15:1H:1071:U:O4	2.06	0.87
15:14:1096:A:N6	15:14:1160:G:O2'	2.07	0.87
23:21:57:LYS:HG3	23:21:59:VAL:HG12	1.55	0.86
12:Q8:30:ARG:HH11	12:Q8:30:ARG:HG3	1.38	0.86
15:14:1924:G:H22	15:14:1927:C:N4	1.72	0.86
11:C5:29:GLU:OE1	11:C5:29:GLU:N	2.08	0.86
15:14:2886:A:H8	45:55:6:SER:H	1.24	0.86
39:J8:92:LYS:HA	39:J8:95:LEU:HB2	1.57	0.86
1:13:1975:U:H3	1:13:2002:A:H2	1.19	0.86
11:G8:76:CYS:HB2	11:G8:82:PRO:HD3	1.56	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:21:77:ILE:O	23:21:79:ARG:N	2.09	0.86
15:14:1109:U:H5'	15:14:1118:A:H1'	1.56	0.86
33:5I:45:ARG:NH1	48:1I:61:GLU:OE2	2.09	0.85
1:13:1586:G:N2	1:13:1595:C:N3	2.24	0.85
29:AA:78:ARG:H	29:AA:78:ARG:HD3	1.41	0.85
27:85:92:ARG:HD3	27:85:94:ASN:HB3	1.58	0.85
15:14:723:G:O2'	32:39:74:ARG:HG3	1.76	0.85
11:G8:76:CYS:SG	11:G8:97:ARG:HG2	2.17	0.85
15:14:296:C:N4	15:14:390:G:O6	2.09	0.85
44:12:111:ARG:HA	44:12:111:ARG:HH11	1.40	0.85
52:V1:9:A:H62	52:V1:23:A:H62	1.25	0.85
13:3A:46:LYS:HG3	13:3A:47:LYS:HB2	1.59	0.85
14:32:162:LEU:HD21	14:32:178:VAL:HB	1.59	0.85
1:1G:1934:U:OP1	24:4A:101:GLN:NE2	2.10	0.84
15:1H:1089:C:H42	15:1H:1162:G:H1	1.25	0.84
2:65:3:ARG:HH21	2:65:4:LEU:HB2	1.42	0.84
12:M5:62:LEU:HG	15:14:232:G:H5'	1.58	0.84
6:2A:29:ILE:HG22	6:2A:44:SER:HB2	1.59	0.84
12:Q8:49:VAL:HG21	15:1H:2374:C:H5"	1.59	0.84
16:75:77:PRO:HG2	16:75:80:SER:HB2	1.59	0.84
15:1H:1812:U:H2'	15:1H:1818:A:N6	1.92	0.84
15:1H:2443:G:N2	30:78:61:ARG:HH21	1.76	0.84
27:C8:92:ARG:HD3	27:C8:94:ASN:HB3	1.56	0.84
28:I5:22:ILE:HG12	28:I5:23:GLU:H	1.43	0.84
22:D5:72:ARG:NH1	26:1J:107:A:OP1	2.10	0.84
15:1H:544:C:OP1	36:N8:16:ARG:NH2	2.10	0.84
1:13:1598:A:H4'	1:13:1599:G:H5"	1.60	0.84
15:1H:2407:A:H2	15:1H:2439:C:H42	1.25	0.84
15:14:1728:G:N2	15:14:2014:G:H22	1.75	0.84
22:D5:60:GLU:HA	22:D5:66:SER:HA	1.59	0.83
15:14:66:U:H3	15:14:73:A:H2	1.24	0.83
9:8E:9:ARG:HD2	9:8E:14:VAL:HG13	1.59	0.83
36:N8:40:LYS:HZ3	36:N8:46:CYS:HB3	1.38	0.83
34:52:24:GLU:OE1	34:52:28:ARG:NH1	2.12	0.83
50:7E:87:SER:HB2	50:7E:93:VAL:HB	1.61	0.83
1:13:1500:C:OP1	50:7E:88:LYS:NZ	2.11	0.83
15:14:725:A:H8	15:14:2094:G:H21	1.24	0.83
49:7I:28:ARG:HG2	49:7I:29:ASP:OD1	1.79	0.83
1:1G:1598:A:H4'	1:1G:1599:G:H5"	1.60	0.83
1:1G:1171:G:OP1	14:32:10:ARG:NH2	2.12	0.83
1:13:1188:A:OP1	25:4E:126:ARG:NH2	2.12	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2513:C:OP2	56:14:3615:HOH:O	1.97	0.82
15:1H:829:G:H21	15:1H:832:A:H62	1.27	0.82
44:12:75:LYS:HA	44:12:78:GLN:HB2	1.61	0.82
15:1H:2587:A:C8	23:21:144:ARG:HD3	2.14	0.82
15:1H:327:C:H2'	15:1H:328:U:H6	1.42	0.82
16:75:108:ARG:HA	16:75:111:ARG:HG3	1.62	0.82
22:H8:116:VAL:HG23	22:H8:146:ILE:HG12	1.61	0.82
1:1G:1456:U:H3	1:1G:1495:A:H62	1.27	0.82
15:1H:1110:G:N2	15:1H:1124:C:O2	2.13	0.82
19:9I:26:LEU:HB3	19:9I:42:ARG:HH22	1.43	0.82
38:88:89:ASN:HB3	38:88:90:VAL:HG22	1.60	0.82
47:59:6:ARG:HH11	47:59:6:ARG:H	1.28	0.82
15:1H:1069:A:H8	15:1H:1070:G:H5"	1.43	0.82
26:16:2:A:H62	26:16:122:A:H61	1.27	0.82
6:2I:91:ARG:NH2	6:2I:110:ASP:OD2	2.13	0.82
15:1H:851:A:OP1	56:1H:3642:HOH:O	1.96	0.82
1:1G:2156:C:H42	51:Y4:39:U:H3	1.26	0.82
4:19:32:SER:O	4:19:32:SER:OG	1.91	0.82
52:V1:72:C:H2'	52:V1:73:A:H5"	1.58	0.82
1:1G:1596:G:H1'	48:1A:55:LYS:HZ2	1.45	0.82
21:25:4:PRO:O	21:25:5:GLN:HB2	1.78	0.82
1:13:2120:G:H2'	1:13:2121:U:H5'	1.60	0.81
40:49:125:PHE:HB3	40:49:166:ASP:HB2	1.59	0.81
9:8E:125:TYR:HD1	9:8E:126:SER:H	1.27	0.81
15:1H:2409:C:H42	52:V1:76:A:H8	1.25	0.81
15:14:249:G:H21	15:14:648:A:H8	1.27	0.81
15:14:2736:U:H3	15:14:2886:A:H2	1.26	0.81
52:X4:26:A:N6	52:X4:44:G:O6	2.12	0.81
1:1G:2080:G:OP1	37:BA:39:LYS:NZ	2.12	0.81
15:1H:1583:G:H2'	15:1H:1584:U:H4'	1.62	0.81
12:M5:61:LEU:HD13	12:M5:62:LEU:H	1.43	0.81
19:9I:87:ARG:HG3	6:2I:107:SER:HA	1.62	0.81
15:14:2793:G:H5"	15:14:2794:A:H5'	1.63	0.81
32:31:66:PRO:O	32:31:67:GLN:HB3	1.76	0.81
1:13:1932:G:N2	1:13:1958:G:H2'	1.96	0.81
15:14:2057:G:H21	23:29:146:THR:HG23	1.43	0.81
26:1J:82:U:H2'	26:1J:83:G:H21	1.45	0.81
32:31:185:ASP:OD1	32:31:188:ARG:NH1	2.12	0.81
37:BI:86:ARG:NH1	37:BI:86:ARG:O	2.13	0.81
15:14:1092:G:H4'	15:14:1096:A:H1'	1.63	0.81
6:2I:99:GLN:HA	6:2I:105:VAL:HG11	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:8I:76:LEU:HD11	7:8I:79:SER:HB3	1.61	0.81
7:8I:100:LYS:HB2	7:8I:101:ARG:HH11	1.43	0.81
16:B8:74:ARG:HG2	16:B8:74:ARG:HH11	1.44	0.81
15:1H:1739:A:H62	15:1H:1748:A:H2	1.25	0.81
30:35:1:MET:N	32:39:116:ASP:OD2	2.13	0.81
1:13:1293:G:H22	1:13:1370:G:H1	1.25	0.81
15:14:1038:A:H8	15:14:1038:A:H5'	1.46	0.81
11:G8:83:THR:HG22	11:G8:84:ARG:HG3	1.63	0.81
41:6I:26:GLU:OE2	41:6I:77:ARG:NH1	2.14	0.81
4:19:134:ARG:NH1	4:19:188:GLU:OE2	2.14	0.80
15:1H:1545:A:H8	15:1H:1627:C:HO2'	1.25	0.80
15:1H:1559:A:O2'	15:1H:1561:G:N7	2.13	0.80
15:1H:2750:A:H5"	15:1H:2750:A:H8	1.45	0.80
15:1H:2850:G:H21	45:98:45:ARG:HH21	1.29	0.80
15:14:118:U:OP2	56:14:3633:HOH:O	1.98	0.80
35:95:35:LEU:O	35:95:37:VAL:HG22	1.80	0.80
44:1E:87:ARG:NH2	44:1E:220:ASP:OD1	2.13	0.80
43:A5:20:VAL:HG11	43:A5:44:ALA:H	1.46	0.80
47:59:26:VAL:HG21	47:59:75:ALA:HB1	1.60	0.80
26:16:44:C:O3'	40:41:67:LYS:NZ	2.15	0.80
15:14:2482:C:H4'	38:45:123:HIS:CD2	2.17	0.80
28:I5:63:TYR:OH	29:AA:10:PHE:O	1.99	0.80
15:14:1089:C:H42	15:14:1162:G:H22	1.29	0.80
32:39:122:LYS:HD2	32:39:191:ARG:HB3	1.61	0.80
35:95:21:ARG:HH21	35:95:91:TYR:HB2	1.45	0.80
1:13:1302:G:H2'	1:13:1303:G:C8	2.17	0.80
12:Q8:21:LYS:HE2	12:Q8:52:LYS:O	1.81	0.80
11:C5:17:SER:HB3	11:C5:71:LYS:HB3	1.61	0.80
15:1H:612:C:OP2	30:78:21:ARG:NH2	2.15	0.80
15:14:1413:G:OP2	39:F5:2:SER:N	2.15	0.80
30:35:23:PRO:HB3	35:95:80:GLN:HG3	1.64	0.80
35:D8:60:GLU:HB2	35:D8:97:LYS:HE2	1.64	0.80
9:82:112:LYS:HE3	9:82:118:LYS:H	1.48	0.79
15:1H:623:G:H5'	30:78:11:GLY:HA3	1.64	0.79
16:B8:77:PRO:HG2	16:B8:80:SER:HB2	1.64	0.79
19:9I:38:GLU:HA	19:9I:41:LYS:HE3	1.62	0.79
15:14:1096:A:H2	15:14:1160:G:H21	1.30	0.79
22:H8:4:ARG:HB3	22:H8:58:VAL:HG22	1.64	0.79
19:9A:23:LYS:O	34:52:100:ASN:ND2	2.14	0.79
32:31:6:VAL:N	32:31:24:LEU:O	2.16	0.79
15:1H:70:A:C2	3:F8:31:HIS:HE1	2.00	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:470:G:H1'	32:31:48:THR:HG21	1.63	0.79
6:2I:54:ARG:NH2	52:V1:39:U:O2'	2.16	0.79
1:13:817:C:OP1	37:BI:65:LYS:NZ	2.14	0.79
1:1G:1890:C:N4	1:1G:1899:G:O6	2.14	0.79
15:1H:216:G:H21	15:1H:218:A:H2	1.30	0.79
15:1H:2577:U:H1'	21:68:23:ARG:HH11	1.45	0.79
41:6A:54:ARG:HG2	41:6A:58:MET:HE2	1.65	0.79
47:51:64:LEU:O	47:51:68:THR:OG1	1.99	0.79
1:13:1167:G:H5"	13:3I:114:LYS:HB2	1.63	0.79
1:13:1586:G:H1	1:13:1595:C:H42	1.28	0.79
18:69:76:THR:HG21	18:69:140:LEU:HD12	1.64	0.79
32:39:53:THR:HG23	32:39:55:GLY:H	1.48	0.79
9:8E:3:GLN:OE1	9:8E:20:ARG:NH1	2.16	0.79
22:H8:108:PRO:HB2	22:H8:112:ARG:HA	1.64	0.79
25:42:50:GLU:HB2	25:42:53:LEU:HD13	1.63	0.79
30:78:50:ARG:HH21	30:78:50:ARG:HG3	1.47	0.79
18:69:130:TYR:HB3	18:69:136:VAL:HG13	1.63	0.79
15:1H:1020:A:OP2	56:1H:3643:HOH:O	2.01	0.78
13:3A:57:LYS:HG3	13:3A:67:THR:HG22	1.65	0.78
24:4I:3:ARG:HE	24:4I:9:ILE:HD11	1.47	0.78
37:BI:69:GLY:O	37:BI:73:HIS:NE2	2.15	0.78
49:7I:45:THR:HG22	49:7I:47:ASP:H	1.46	0.78
15:1H:1327:A:OP1	45:98:36:THR:HG22	1.82	0.78
15:14:1812:U:H2'	15:14:1818:A:N6	1.99	0.78
15:14:958:A:H62	38:45:12:GLN:HA	1.48	0.78
4:11:69:ARG:NH2	4:11:128:GLY:O	2.16	0.78
13:3A:71:PRO:O	13:3A:102:ARG:NH1	2.16	0.78
15:14:1431:G:N7	56:14:3661:HOH:O	2.17	0.78
15:14:2487:G:H2'	15:14:2490:C:H41	1.49	0.78
32:39:101:LEU:O	32:39:106:ARG:NH1	2.16	0.78
8:2E:122:GLU:OE1	8:2E:126:ARG:NH1	2.17	0.78
2:A8:48:LEU:HD23	2:A8:82:ILE:HD11	1.65	0.78
9:82:28:VAL:HG22	9:82:63:ILE:HB	1.65	0.78
33:5A:21:TYR:OH	33:5A:23:ARG:NH2	2.17	0.78
52:V4:33:U:H3'	52:V4:34:G:H5"	1.66	0.78
1:1G:2066:G:O6	1:1G:2086:C:N4	2.15	0.78
39:F5:85:LEU:HA	39:F5:87:PRO:HD2	1.65	0.78
39:F5:91:LYS:HZ3	39:F5:91:LYS:HA	1.49	0.78
15:1H:1234:G:N7	56:1H:3664:HOH:O	2.17	0.78
26:1J:19:C:H2'	26:1J:20:G:O4'	1.83	0.78
12:Q8:9:GLY:HA2	12:Q8:12:LYS:HB2	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:7E:41:ARG:NH1	50:7E:123:GLU:OE1	2.17	0.77
39:J8:48:LYS:HB3	39:J8:49:VAL:HA	1.65	0.77
30:78:138:LEU:HD12	30:78:144:GLU:HG3	1.63	0.77
4:11:182:LEU:H	4:11:272:ALA:HB3	1.48	0.77
11:G8:95:LYS:HE3	11:G8:97:ARG:HH22	1.49	0.77
37:BI:89:ARG:NH1	37:BI:93:GLU:OE1	2.18	0.77
40:41:97:ASP:O	40:41:100:TRP:N	2.17	0.77
47:59:81:GLU:O	47:59:138:LYS:NZ	2.17	0.77
15:1H:457:A:OP1	56:1H:3644:HOH:O	2.03	0.77
14:32:157:LEU:HD12	14:32:161:ASN:HD21	1.49	0.77
47:59:152:ARG:HG3	47:59:153:LYS:HB2	1.66	0.77
7:8I:67:LYS:HA	7:8I:70:ARG:HH12	1.48	0.77
10:58:96:GLU:HG2	10:58:97:ARG:N	1.98	0.77
7:8I:45:HIS:HB2	7:8I:65:ILE:HD13	1.64	0.77
15:1H:1922:G:N7	56:1H:3662:HOH:O	2.17	0.77
15:14:632:U:H3	15:14:648:A:H2	1.33	0.77
25:4E:91:LEU:HD12	25:4E:120:THR:HG22	1.66	0.77
32:39:123:LEU:O	32:39:125:LEU:N	2.17	0.77
44:12:114:ARG:NH1	44:12:141:GLU:OE2	2.17	0.77
15:14:2598:G:N2	52:W4:76:A:H62	1.82	0.77
15:14:2640:G:O6	56:14:3636:HOH:O	2.02	0.77
37:BA:50:GLU:HA	37:BA:100:ILE:HG21	1.67	0.77
16:B8:36:GLU:HG2	21:68:107:ARG:HH12	1.50	0.76
15:14:1901:A:H2'	15:14:1902:A:C8	2.20	0.76
30:35:39:LYS:HG3	30:35:45:LEU:HD22	1.67	0.76
32:39:66:PRO:O	32:39:67:GLN:HB3	1.85	0.76
15:14:2286:G:N7	56:14:3665:HOH:O	2.18	0.76
32:31:101:LEU:HD23	32:31:102:PRO:HD2	1.65	0.76
1:1G:1714:U:H3	1:1G:1727:G:H22	1.31	0.76
15:14:239:C:OP1	56:14:3637:HOH:O	2.03	0.76
26:1J:47:A:OP2	40:49:96:ARG:NH1	2.19	0.76
9:8E:28:VAL:HG22	9:8E:63:ILE:HB	1.67	0.76
15:1H:2027:G:N7	56:1H:3666:HOH:O	2.18	0.76
40:41:77:ILE:HG22	40:41:82:LEU:HD12	1.67	0.76
1:13:986:C:O2'	1:13:987:G:N2	2.18	0.76
15:14:2365:C:OP2	56:14:3638:HOH:O	2.04	0.76
38:45:110:THR:HG23	38:45:113:GLN:HB2	1.66	0.76
47:51:83:TYR:HD1	47:51:84:SER:H	1.32	0.76
46:G5:14:ARG:NH1	46:G5:66:GLU:OE1	2.18	0.76
2:A8:17:ARG:NH1	15:1H:2394:G:O2'	2.19	0.76
15:1H:1359:G:OP2	5:P8:9:ARG:NH1	2.18	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2509:G:O2'	38:88:80:GLU:HB3	1.85	0.76
15:14:611:A:OP2	56:14:3634:HOH:O	2.02	0.76
51:Y4:35:A:H2'	51:Y4:36:G:C8	2.21	0.76
1:13:903:A:H2'	1:13:904:A:C8	2.20	0.76
1:13:1994:C:O2'	48:1I:60:ARG:NH2	2.18	0.76
15:1H:810:A:H5"	56:1H:3896:HOH:O	1.84	0.76
15:1H:2877:G:OP1	16:B8:119:LYS:HD2	1.84	0.76
1:1G:1350:G:H4'	1:1G:1351:A:H5'	1.67	0.76
12:Q8:31:HIS:ND1	12:Q8:31:HIS:O	2.17	0.76
15:14:1381:G:N2	15:14:1658:A:HO2'	1.84	0.76
15:1H:593:U:O4	56:1H:3646:HOH:O	2.04	0.76
15:14:2335:A:H61	15:14:2348:A:H2'	1.49	0.76
26:1J:17:A:H1'	26:1J:112:G:C5	2.21	0.76
8:2E:78:GLY:HA3	8:2E:83:ARG:HB3	1.67	0.76
1:13:1576:G:H5'	1:13:1588:A:H61	1.49	0.75
12:M5:51:ALA:C	12:M5:53:PRO:HD2	2.06	0.75
23:29:76:ARG:HG2	23:29:195:LEU:HD13	1.68	0.75
15:14:1070:G:H22	15:14:1191:A:H2	1.33	0.75
15:14:1483:A:H61	15:14:1608:A:H62	1.35	0.75
24:4A:82:MET:SD	24:4A:83:ASP:N	2.60	0.75
15:1H:1728:G:N2	15:1H:2014:G:H22	1.83	0.75
15:1H:2805:C:O2	15:1H:2906:G:N2	2.17	0.75
44:1E:74:LYS:NZ	44:1E:205:ASP:OD2	2.14	0.75
1:1G:1586:G:H21	48:1A:55:LYS:HE3	1.52	0.75
15:1H:155:C:H42	15:1H:161:G:H1	1.32	0.75
15:1H:2151:A:N6	15:1H:2188:C:O2	2.20	0.75
15:14:613:U:H2'	15:14:614:C:C6	2.21	0.75
15:14:2409:C:H42	52:V4:76:A:H8	1.33	0.75
30:78:31:ALA:O	30:78:32:THR:HB	1.85	0.75
38:88:25:ASP:H	38:88:102:VAL:HG22	1.52	0.75
15:1H:2060:G:OP1	56:1H:3645:HOH:O	2.03	0.75
15:1H:2807:C:N4	15:1H:2905:G:O6	2.20	0.75
15:14:839:C:OP2	56:14:3639:HOH:O	2.04	0.75
15:14:2372:U:OP1	31:E5:20:ARG:NH1	2.18	0.75
1:13:1948:C:H3'	1:13:1949:C:H5"	1.69	0.75
4:19:242:ARG:HG2	4:19:242:ARG:HH11	1.50	0.75
15:1H:829:G:H21	15:1H:832:A:N6	1.84	0.75
15:1H:1924:G:N2	15:1H:1927:C:H5	1.84	0.75
15:14:2671:U:H3	15:14:2680:A:H2	1.34	0.75
23:21:120:TRP:CE3	23:21:155:LYS:HD3	2.21	0.75
46:G5:16:LEU:HD12	46:G5:20:GLU:HB3	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:B8:57:PHE:O	16:B8:58:ASN:ND2	2.19	0.75
22:H8:19:ARG:NH1	22:H8:84:GLU:O	2.19	0.75
47:59:159:GLU:O	47:59:163:TYR:OH	2.05	0.75
15:14:2762:U:OP1	47:59:85:LYS:NZ	2.15	0.75
21:68:88:ASN:HD21	21:68:90:GLN:HB2	1.51	0.75
22:H8:134:PRO:HG3	22:H8:161:VAL:HG11	1.68	0.75
3:B5:36:LYS:HG2	3:B5:54:VAL:HB	1.67	0.75
15:1H:2545:A:N7	47:51:172:LYS:NZ	2.35	0.75
15:14:1924:G:N2	15:14:1927:C:H41	1.83	0.75
44:1E:21:ARG:HB2	44:1E:39:ILE:HA	1.67	0.75
22:D5:69:THR:HG22	22:D5:90:VAL:HG22	1.69	0.74
45:55:20:LEU:HD21	45:55:40:LYS:HD3	1.69	0.74
2:65:106:ARG:NH1	2:65:107:GLU:OE2	2.20	0.74
15:1H:1137:G:N2	15:1H:1149:U:O4	2.19	0.74
14:32:108:LEU:HD23	14:32:110:PHE:HE1	1.52	0.74
24:4I:23:TYR:HD1	24:4I:67:GLU:HA	1.50	0.74
31:I8:53:MET:HG3	31:I8:59:LEU:HD23	1.67	0.74
32:31:9:ILE:HD11	32:31:125:LEU:HG	1.68	0.74
44:12:54:THR:HG21	44:12:201:ILE:HD11	1.69	0.74
1:1G:1923:C:O3'	24:4A:13:LYS:NZ	2.20	0.74
15:14:711:G:H5'	30:35:14:LYS:HB2	1.67	0.74
47:51:87:LEU:HB2	47:51:131:VAL:HG12	1.69	0.74
52:X1:2:C:H2'	52:X1:3:C:H6	1.50	0.74
4:11:273:ARG:O	4:11:273:ARG:NE	2.15	0.74
1:1G:2154:A:H2'	1:1G:2155:U:C4	2.22	0.74
15:1H:911:G:OP2	56:1H:3647:HOH:O	2.06	0.74
15:14:2704:U:OP2	15:14:2735:G:N2	2.21	0.74
32:31:39:TRP:CH2	32:31:106:ARG:HD3	2.23	0.74
44:1E:84:GLU:HB3	44:1E:219:VAL:HG21	1.70	0.74
1:1G:1614:U:O4	1:1G:1839:U:O2'	2.04	0.74
22:H8:163:LEU:HB3	22:H8:165:VAL:H	1.52	0.74
24:4A:12:ASN:O	24:4A:44:ARG:NH1	2.20	0.74
43:E8:95:ILE:O	43:E8:95:ILE:HG13	1.87	0.74
15:1H:779:C:H3'	56:1H:3623:HOH:O	1.87	0.74
32:39:133:ASN:HA	32:39:162:LEU:HD22	1.68	0.74
2:A8:11:LYS:HD2	2:A8:15:ARG:HH21	1.53	0.74
16:75:105:LEU:HD13	16:75:109:GLU:HG3	1.70	0.74
24:4I:3:ARG:HH22	40:41:139:LEU:HD13	1.53	0.74
26:16:17:A:H5'	26:16:18:G:C8	2.23	0.74
34:5E:36:ARG:NH2	34:5E:38:GLU:OE2	2.21	0.74
38:45:38:GLU:HG3	38:45:127:ILE:HG22	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2323:G:H1	15:1H:2326:A:H2	1.36	0.74
15:14:881:G:H5'	30:35:45:LEU:HD11	1.70	0.74
49:7A:34:GLU:OE1	49:7A:55:ARG:NH1	2.19	0.74
52:V4:9:A:H62	52:V4:23:A:H62	1.33	0.74
2:A8:26:LEU:HD12	2:A8:39:ILE:HD11	1.70	0.74
1:1G:1866:A:H4'	1:1G:1867:U:H5"	1.69	0.74
15:1H:1276:G:OP2	27:C8:16:LYS:NZ	2.21	0.74
15:14:2104:U:O4	56:14:3635:HOH:O	2.02	0.74
40:41:56:ALA:HB2	40:41:153:ARG:HE	1.52	0.74
44:12:23:ARG:NH2	44:12:191:ASP:HB2	2.02	0.74
8:2E:96:GLY:H	8:2E:97:LYS:HZ3	1.35	0.74
1:13:1757:C:H4'	1:13:1758:A:H5'	1.67	0.73
9:82:42:ARG:HA	42:62:16:LEU:HD12	1.70	0.73
15:1H:909:U:C5	15:1H:965:A:C2	2.74	0.73
15:1H:1924:G:H1	15:1H:1927:C:H41	1.36	0.73
15:1H:2330:G:OP1	40:41:36:LYS:NZ	2.21	0.73
12:M5:62:LEU:HB3	12:M5:63:PRO:HD2	1.70	0.73
22:H8:7:ALA:HB3	22:H8:61:LEU:HB3	1.69	0.73
23:21:105:THR:OG1	23:21:199:ARG:NH2	2.21	0.73
21:25:2:ILE:HD12	21:25:6:THR:HG21	1.69	0.73
38:88:37:LEU:HD21	38:88:130:LYS:HE2	1.68	0.73
1:13:1227:U:H4'	50:7E:94:TYR:CD2	2.23	0.73
30:78:47:ASP:OD2	30:78:50:ARG:NH2	2.21	0.73
1:13:1788:G:H1	1:13:1804:G:H1	1.37	0.73
2:A8:9:ARG:HG2	15:1H:2349:G:H5'	1.68	0.73
12:Q8:59:LYS:NZ	12:Q8:60:LEU:HD21	2.03	0.73
15:1H:810:A:OP2	56:1H:3649:HOH:O	2.06	0.73
10:15:56:ASN:H	10:15:125:GLY:HA3	1.51	0.73
15:14:1273:C:H4'	35:95:85:LYS:HB2	1.68	0.73
29:AI:5:LEU:HD13	29:AI:10:PHE:HD1	1.52	0.73
40:49:56:ALA:HA	40:49:59:GLU:HB3	1.70	0.73
1:13:1883:A:N6	1:13:1905:U:OP2	2.15	0.73
1:1G:1209:U:OP2	56:1G:2402:HOH:O	2.07	0.73
1:1G:1948:C:H3'	1:1G:1949:C:H5"	1.70	0.73
38:45:22:LYS:N	38:45:23:GLY:HA3	2.03	0.73
45:98:104:ARG:NH1	45:98:107:ASP:OD2	2.20	0.73
15:1H:1769:G:H2'	15:1H:1772:G:O6	1.88	0.73
16:75:1:MET:HB3	16:75:6:LEU:HB2	1.69	0.73
41:6A:26:GLU:OE2	41:6A:77:ARG:NH1	2.20	0.73
14:32:148:VAL:O	14:32:152:SER:OG	2.04	0.73
23:29:31:CYS:HB3	23:29:49:LEU:HB2	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AI:40:ILE:HD11	29:AI:62:ILE:HG23	1.70	0.73
1:1G:782:G:H2'	1:1G:783:A:H8	1.53	0.73
4:19:273:ARG:O	4:19:273:ARG:HG2	1.88	0.73
15:14:2270:G:OP2	56:14:3640:HOH:O	2.06	0.73
37:BA:69:GLY:O	37:BA:73:HIS:NE2	2.21	0.73
1:1G:1048:G:OP1	14:32:115:ARG:NH2	2.21	0.73
1:1G:1132:C:OP2	13:3A:116:SER:HB3	1.89	0.73
15:14:1514:C:HO2'	15:14:1577:A:H8	1.37	0.73
23:21:105:THR:HG22	23:21:106:GLY:H	1.53	0.73
37:BI:71:THR:HG22	37:BI:72:LEU:H	1.54	0.73
44:12:9:GLU:HB2	44:12:217:ARG:HH12	1.50	0.73
11:G8:87:LYS:H	11:G8:94:LYS:HG2	1.54	0.73
14:3E:111:ALA:HB2	14:3E:120:LEU:HD12	1.69	0.73
15:14:2181:G:N7	15:14:2182:G:N2	2.37	0.73
32:39:7:TYR:CE2	32:39:10:PRO:HG3	2.23	0.73
40:41:67:LYS:H	40:41:67:LYS:HE2	1.54	0.73
1:13:1995:C:H5'	48:1I:60:ARG:HH21	1.54	0.73
14:32:98:GLU:OE2	14:32:103:ASN:ND2	2.22	0.73
22:H8:117:LEU:HD22	22:H8:118:GLN:H	1.51	0.73
30:35:71:VAL:HG23	30:35:72:PRO:HD3	1.71	0.73
37:BA:82:SER:OG	37:BA:86:ARG:NH2	2.22	0.73
15:1H:10:G:O2'	15:1H:2815:A:N3	2.22	0.72
15:1H:2651:U:OP1	23:21:79:ARG:HA	1.89	0.72
15:14:1072:G:H3'	15:14:1073:G:H5"	1.69	0.72
47:51:98:LEU:HD22	47:51:125:VAL:HG23	1.71	0.72
1:13:1288:U:H2'	1:13:1289:G:H8	1.51	0.72
4:19:148:GLU:HB2	4:19:151:LYS:HD2	1.70	0.72
15:1H:909:U:C5	15:1H:965:A:H2	2.07	0.72
15:1H:1069:A:H3'	15:1H:1070:G:H5"	1.71	0.72
29:AI:6:LYS:HA	29:AI:6:LYS:HZ3	1.52	0.72
50:72:100:ILE:HD11	50:72:112:LEU:HD11	1.71	0.72
1:1G:1596:G:H1'	48:1A:55:LYS:NZ	2.04	0.72
15:14:897:G:H2'	15:14:898:A:C8	2.25	0.72
26:1J:12:C:O2	26:1J:113:G:N2	2.18	0.72
30:35:138:LEU:HD12	30:35:144:GLU:HG3	1.71	0.72
14:3E:153:ARG:HB3	14:3E:181:MET:SD	2.29	0.72
15:14:514:C:O2'	43:A5:60:ASN:ND2	2.22	0.72
15:14:2626:U:H5'	15:14:2626:U:H6	1.55	0.72
48:1A:3:LYS:N	48:1A:74:ILE:O	2.23	0.72
1:13:1230:C:H2'	1:13:1231:A:C8	2.23	0.72
1:13:1929:U:OP2	24:4I:21:TYR:OH	2.03	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2671:U:H3	15:1H:2680:A:H2	1.37	0.72
23:29:61:ARG:O	23:29:63:LEU:N	2.21	0.72
24:4A:92:HIS:CD2	24:4A:98:VAL:HG11	2.25	0.72
48:1I:57:LYS:HD2	48:1I:60:ARG:HH12	1.54	0.72
50:7E:121:ASP:HB2	50:7E:125:ARG:NH2	2.05	0.72
15:1H:142:G:H1'	3:F8:37:THR:HG21	1.70	0.72
15:1H:632:U:N3	15:1H:648:A:H2	1.86	0.72
21:25:92:GLU:HG2	21:25:113:LYS:NZ	2.03	0.72
50:72:64:LYS:HG2	50:72:79:VAL:HG21	1.71	0.72
11:C5:47:LYS:NZ	15:14:525:G:H21	1.88	0.72
15:14:2017:G:N7	56:14:3671:HOH:O	2.21	0.72
26:1J:42:U:O4	28:I5:1:MET:N	2.21	0.72
35:D8:65:GLY:HA3	35:D8:91:TYR:CZ	2.25	0.72
40:41:27:ASN:HB3	40:41:30:GLU:HG3	1.72	0.72
47:59:30:LYS:NZ	47:59:78:GLY:O	2.20	0.72
27:85:49:HIS:HA	27:85:52:ARG:HB2	1.71	0.72
49:7I:43:LYS:HG2	49:7I:48:TRP:CE3	2.24	0.72
1:13:1853:C:O2'	24:4I:111:LYS:NZ	2.21	0.72
12:Q8:53:PRO:HA	12:Q8:56:GLU:HG2	1.70	0.72
28:I5:31:ILE:HG21	40:49:145:THR:HG22	1.71	0.72
15:14:2572:G:H2'	15:14:2573:C:C6	2.25	0.72
15:14:2850:G:N7	56:14:3673:HOH:O	2.22	0.72
30:35:98:GLU:HA	30:35:101:VAL:HG12	1.72	0.72
52:X1:52:G:N2	52:X1:62:C:O2	2.17	0.72
1:13:2153:G:O2'	1:13:2154:A:N7	2.21	0.71
1:1G:994:A:H5'	1:1G:994:A:H8	1.55	0.71
1:1G:1052:A:H62	1:1G:1054:G:H21	1.38	0.71
15:1H:909:U:H5	15:1H:965:A:H2	1.35	0.71
12:M5:32:LEU:HD13	12:M5:33:ASN:H	1.52	0.71
23:21:116:VAL:HG11	23:21:138:PRO:HB3	1.72	0.71
25:4E:110:LEU:HD13	25:4E:118:ILE:HG21	1.70	0.71
26:1J:44:C:O2	40:49:93:THR:N	2.21	0.71
23:21:82:ARG:O	23:21:84:PHE:N	2.23	0.71
37:BA:51:GLU:HA	37:BA:54:LYS:HE3	1.72	0.71
6:2I:22:HIS:HB3	6:2I:29:ILE:HG23	1.71	0.71
1:1G:1932:G:H22	1:1G:1958:G:H2'	1.55	0.71
2:65:3:ARG:NH2	2:65:4:LEU:HB2	2.04	0.71
15:1H:993:G:OP1	56:1H:3651:HOH:O	2.08	0.71
15:14:849:A:O3'	56:14:3642:HOH:O	2.08	0.71
15:14:2462:G:H3'	56:14:3788:HOH:O	1.88	0.71
46:G5:47:ASN:HD22	46:G5:47:ASN:N	1.89	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:22:59:ARG:HG2	8:22:64:VAL:HG23	1.72	0.71
35:95:35:LEU:HB3	35:95:37:VAL:CG1	2.19	0.71
47:51:4:ILE:HG13	47:51:6:ARG:NE	2.04	0.71
15:1H:779:C:OP2	56:1H:3621:HOH:O	2.07	0.71
15:1H:2083:A:H5"	56:1H:3634:HOH:O	1.90	0.71
15:1H:2409:C:N4	52:V1:76:A:H8	1.88	0.71
18:61:117:GLU:N	18:61:117:GLU:OE2	2.23	0.71
23:29:111:ARG:HA	45:55:2:ARG:HH12	1.56	0.71
52:W4:75:C:C2'	52:W4:76:A:H5"	2.20	0.71
1:13:799:G:N2	1:13:802:A:OP2	2.23	0.71
1:13:1352:U:O4	1:13:2160:U:O2'	2.06	0.71
1:13:1913:A:C8	1:13:1914:A:H4'	2.25	0.71
9:8E:13:ALA:HB2	9:8E:68:GLY:HA3	1.73	0.71
10:58:33:LEU:HD12	10:58:38:HIS:CD2	2.26	0.71
4:19:93:ALA:HB3	4:19:105:ILE:HG22	1.72	0.71
15:1H:1397:G:H2'	15:1H:1398:A:H5"	1.71	0.71
15:1H:1892:G:HO2'	15:1H:1893:A:H8	1.39	0.71
15:14:599:C:N3	23:29:145:LYS:NZ	2.38	0.71
15:14:1393:G:O6	56:14:3643:HOH:O	2.08	0.71
28:I5:20:ASN:ND2	28:I5:39:CYS:SG	2.64	0.71
15:1H:2407:A:H1'	30:78:61:ARG:HH11	1.53	0.71
23:29:60:ASN:HB3	23:29:61:ARG:C	2.11	0.71
1:1G:1446:C:N3	1:1G:2152:G:O6	2.23	0.71
12:Q8:30:ARG:HH11	12:Q8:30:ARG:CG	2.03	0.71
14:3E:107:ARG:NH2	14:3E:194:LEU:HD22	2.06	0.71
15:1H:118:U:OP2	56:1H:3648:HOH:O	2.06	0.71
14:32:119:GLN:HG2	14:32:123:HIS:CD2	2.26	0.71
15:14:474:G:OP2	56:14:3644:HOH:O	2.09	0.71
19:9A:59:SER:HB2	19:9A:62:GLU:H	1.55	0.71
41:6A:87:ILE:HG22	41:6A:88:ARG:H	1.55	0.71
10:58:96:GLU:O	10:58:98:VAL:HG12	1.91	0.71
12:Q8:12:LYS:HD2	30:78:64:LYS:HE3	1.73	0.71
37:BI:33:ILE:O	37:BI:37:SER:OG	2.08	0.71
7:8I:18:THR:OG1	7:8I:69:LYS:NZ	2.20	0.71
9:82:50:LEU:HB3	9:82:56:LEU:HA	1.72	0.71
15:1H:344:C:OP1	32:31:137:LYS:NZ	2.19	0.71
22:D5:99:TYR:HD2	22:D5:123:ASP:HB3	1.55	0.71
23:29:89:ASP:OD1	23:29:90:THR:N	2.24	0.71
48:1I:35:SER:HB2	48:1I:73:ASP:HB2	1.73	0.71
47:59:137:ASP:HB3	47:59:140:LYS:HB2	1.72	0.71
6:2A:48:ILE:HD11	6:2A:64:ALA:HA	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:2156:C:N4	51:Y4:39:U:H3	1.87	0.70
15:1H:1435:C:H2'	15:1H:1436:C:H6	1.55	0.70
15:14:1063:G:N2	15:14:1196:C:O2	2.20	0.70
40:49:59:GLU:OE2	40:49:153:ARG:NH2	2.23	0.70
9:8E:42:ARG:HH11	9:8E:71:SER:HB3	1.56	0.70
1:1G:919:G:N7	7:8A:92:ARG:NH2	2.38	0.70
2:A8:17:ARG:NH2	15:1H:2307:C:OP1	2.23	0.70
15:1H:1520:G:H5"	15:1H:1521:A:OP1	1.91	0.70
15:1H:2485:G:H5'	38:88:56:ARG:HH21	1.56	0.70
15:14:1770:A:H2'	15:14:1772:G:N2	2.06	0.70
23:29:134:ILE:HD12	23:29:134:ILE:O	1.90	0.70
6:2I:50:TYR:HD2	6:2I:54:ARG:HB3	1.55	0.70
10:58:130:HIS:HA	10:58:134:ARG:HH12	1.56	0.70
15:1H:800:A:P	56:1H:3669:HOH:O	2.49	0.70
15:14:120:G:O6	56:14:3641:HOH:O	2.07	0.70
31:E5:53:MET:HG3	31:E5:59:LEU:HD23	1.72	0.70
38:88:104:PHE:HE2	38:88:125:LEU:HD11	1.56	0.70
40:41:161:THR:HG23	40:41:163:ALA:H	1.55	0.70
1:13:1994:C:H2'	1:13:1995:C:H6	1.57	0.70
1:1G:888:G:OP2	7:8A:100:LYS:N	2.24	0.70
1:1G:1168:A:OP2	13:3A:115:LYS:NZ	2.24	0.70
13:3I:90:VAL:O	13:3I:91:LYS:HB3	1.90	0.70
15:14:854:G:OP2	30:35:41:ARG:HG2	1.91	0.70
25:42:143:ARG:NH1	50:72:77:GLU:OE1	2.25	0.70
46:K8:26:ARG:HE	3:F8:2:LYS:HG2	1.55	0.70
9:8E:42:ARG:HA	42:6E:16:LEU:HD11	1.72	0.70
15:14:1273:C:O2'	35:95:85:LYS:N	2.21	0.70
15:14:1469:U:O2'	15:14:1470:G:OP1	2.09	0.70
16:75:50:ILE:HD11	16:75:102:ILE:HD11	1.72	0.70
25:4E:71:LEU:HD22	25:4E:114:GLY:HA3	1.74	0.70
47:59:71:LEU:O	47:59:75:ALA:N	2.24	0.70
1:13:907:G:H5"	1:13:908:C:C5	2.26	0.70
8:22:70:VAL:HG12	8:22:72:LYS:H	1.57	0.70
1:1G:1387:G:N7	56:1G:2406:HOH:O	2.23	0.70
12:M5:37:SER:N	12:M5:40:GLU:OE1	2.25	0.70
26:1J:90:C:H3'	26:1J:91:G:N7	2.05	0.70
44:1E:101:MET:HA	44:1E:108:ILE:HG21	1.72	0.70
1:13:888:G:OP2	7:8I:100:LYS:N	2.14	0.70
15:14:52:A:OP2	56:14:3648:HOH:O	2.10	0.70
15:14:2789:C:OP1	23:29:166:THR:OG1	2.09	0.70
32:39:178:PRO:HB2	32:39:201:VAL:HG11	1.71	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:F5:56:GLN:HE21	39:F5:83:GLU:HA	1.54	0.70
45:98:45:ARG:HA	45:98:95:THR:HG21	1.73	0.70
1:1G:1586:G:N2	48:1A:55:LYS:HE3	2.06	0.70
2:65:87:PHE:CE1	2:65:102:ALA:HB2	2.27	0.70
22:D5:70:LEU:O	22:D5:89:PHE:N	2.22	0.70
1:13:793:C:H42	1:13:808:G:H1	1.40	0.70
15:1H:249:G:H21	15:1H:648:A:H8	1.38	0.70
15:1H:327:C:H2'	15:1H:328:U:C6	2.26	0.70
38:88:135:ASP:HB3	38:88:137:TYR:H	1.56	0.70
52:W4:75:C:H2'	52:W4:76:A:H5"	1.74	0.70
4:19:244:ARG:NH2	15:14:2254:G:OP2	2.24	0.69
15:1H:725:A:H8	15:1H:2094:G:H21	1.37	0.69
29:AI:40:ILE:HG22	29:AI:69:HIS:O	1.92	0.69
27:85:92:ARG:HD2	27:85:95:LEU:HD12	1.72	0.69
38:88:90:VAL:HG23	38:88:91:GLU:H	1.57	0.69
8:2E:76:VAL:HG21	8:2E:103:VAL:HG21	1.73	0.69
52:V1:45:U:O2	52:V1:47:U:O2'	2.10	0.69
1:1G:728:U:O2'	1:1G:729:A:OP1	2.10	0.69
1:1G:1467:G:H1	1:1G:1471:C:H42	1.38	0.69
10:58:47:ALA:HB2	10:58:112:LEU:HD11	1.72	0.69
9:82:51:ARG:HG2	9:82:56:LEU:HD22	1.74	0.69
15:1H:122:G:N7	56:1H:3679:HOH:O	2.25	0.69
15:1H:1772:G:H2'	15:1H:1773:A:H8	1.57	0.69
15:1H:2150:G:H21	15:1H:2198:A:H62	1.38	0.69
8:2E:16:ARG:NH2	8:2E:183:ASP:OD1	2.25	0.69
1:13:1031:C:O3'	49:7I:28:ARG:NH2	2.25	0.69
1:1G:1088:A:OP2	1:1G:1115:G:N1	2.25	0.69
1:1G:1193:C:O2'	50:72:91:ARG:NH2	2.24	0.69
15:1H:1041:G:OP1	27:C8:50:ARG:NH2	2.25	0.69
18:61:124:GLY:H	18:61:142:VAL:HG23	1.57	0.69
15:14:1728:G:H22	15:14:2014:G:H22	1.38	0.69
28:I5:63:TYR:HD1	29:AA:9:VAL:HG13	1.57	0.69
2:65:3:ARG:HE	2:65:4:LEU:H	1.37	0.69
12:Q8:11:LYS:NZ	12:Q8:61:LEU:HD11	2.08	0.69
15:1H:1214:U:H2'	15:1H:1215:C:C6	2.27	0.69
15:14:1790:G:OP2	56:14:3645:HOH:O	2.09	0.69
39:F5:87:PRO:O	39:F5:91:LYS:N	2.25	0.69
1:13:1288:U:H2'	1:13:1289:G:C8	2.28	0.69
1:13:1738:A:OP2	56:13:2402:HOH:O	2.10	0.69
1:1G:1883:A:H62	1:1G:1904:C:H3'	1.56	0.69
11:G8:87:LYS:HB3	11:G8:96:ILE:HD12	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Q8:2:PRO:HD2	15:1H:716:U:O2	1.92	0.69
10:15:47:ALA:HB2	10:15:112:LEU:HD21	1.74	0.69
40:41:7:LEU:N	40:41:104:GLU:OE1	2.25	0.69
43:A5:33:ARG:NH1	43:A5:52:GLU:OE2	2.21	0.69
1:1G:1281:U:H1'	1:1G:1282:A:H2	1.58	0.69
12:Q8:30:ARG:NH2	15:1H:2407:A:OP2	2.25	0.69
15:1H:75:C:O2'	46:K8:62:THR:HG21	1.91	0.69
15:1H:140:A:H8	15:1H:1644:G:H21	1.39	0.69
15:1H:1158:G:H4'	47:51:3:ARG:HD3	1.75	0.69
38:45:57:HIS:CD2	38:45:117:ALA:HB2	2.28	0.69
44:1E:7:VAL:HG11	44:1E:217:ARG:HH11	1.56	0.69
47:51:101:ARG:NH2	47:51:121:ILE:O	2.26	0.69
9:82:63:ILE:HD11	9:82:81:ILE:HD11	1.74	0.69
24:4A:22:ILE:HB	24:4A:25:ILE:HG13	1.75	0.69
40:41:37:VAL:HG22	40:41:159:VAL:HG12	1.73	0.69
42:62:92:SER:HB2	42:62:95:ARG:HB2	1.74	0.69
44:12:115:LEU:HD13	44:12:145:LEU:HB3	1.74	0.69
9:8E:125:TYR:HD1	9:8E:126:SER:N	1.89	0.69
15:1H:1178:U:O2	23:21:149:ARG:NH1	2.24	0.69
15:14:839:C:OP2	56:14:3647:HOH:O	2.09	0.69
15:14:2230:G:H4'	15:14:2231:G:OP2	1.92	0.69
21:68:88:ASN:ND2	21:68:90:GLN:H	1.91	0.69
22:H8:165:VAL:HB	22:H8:166:SER:HA	1.75	0.69
24:4I:23:TYR:HB3	24:4I:67:GLU:HB2	1.75	0.69
28:M8:13:ARG:HH12	28:M8:22:ILE:HG23	1.57	0.69
26:1J:85:G:N2	26:1J:96:C:O2	2.19	0.69
35:95:35:LEU:HB3	35:95:37:VAL:HG11	1.72	0.69
1:13:1103:A:H5"	49:7I:80:PHE:HB3	1.73	0.69
1:13:1815:A:N6	56:13:2404:HOH:O	2.26	0.69
17:L8:35:ARG:HB3	17:L8:37:LEU:HD21	1.75	0.69
15:14:1391:A:H2	15:14:1651:U:H3	1.41	0.69
36:N8:33:CYS:HB2	36:N8:40:LYS:HE3	1.75	0.69
2:65:3:ARG:HE	2:65:4:LEU:N	1.91	0.69
12:Q8:51:ALA:O	12:Q8:52:LYS:HD3	1.93	0.69
15:1H:242:G:OP2	30:78:50:ARG:NH1	2.26	0.69
15:1H:723:G:H1'	32:31:74:ARG:HD3	1.73	0.69
15:14:1088:C:H2'	15:14:1089:C:C6	2.27	0.69
15:14:1298:U:O5'	56:14:3649:HOH:O	2.10	0.69
48:1I:3:LYS:N	48:1I:75:ILE:O	2.26	0.69
1:13:1816:C:OP1	48:1I:51:ARG:NH2	2.22	0.68
1:13:1919:U:H2'	1:13:1920:G:C8	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1483:A:H61	15:1H:1608:A:N6	1.90	0.68
15:14:1273:C:H4'	35:95:85:LYS:CB	2.22	0.68
15:14:2893:C:H1'	45:55:92:GLY:HA3	1.74	0.68
30:78:15:ARG:CB	30:78:16:ARG:HB2	2.18	0.68
35:95:67:GLY:O	35:95:88:ARG:HD2	1.93	0.68
8:2E:8:ILE:HG23	8:2E:16:ARG:HG2	1.74	0.68
52:V4:21:A:H2'	52:V4:22:G:H5"	1.74	0.68
11:G8:62:GLU:O	11:G8:63:LYS:HD2	1.92	0.68
13:3I:53:ARG:HG3	13:3I:93:LEU:HD21	1.75	0.68
52:V4:16:U:H1'	52:V4:60:U:O2	1.93	0.68
1:13:1477:G:N7	56:13:2405:HOH:O	2.26	0.68
12:M5:59:LYS:HE3	30:35:50:ARG:HB3	1.74	0.68
52:V1:3:C:H42	52:V1:70:G:H1	1.41	0.68
8:22:7:PRO:O	8:22:11:ARG:NH1	2.26	0.68
15:1H:573:A:H2'	15:1H:574:A:C8	2.29	0.68
27:C8:28:ARG:NH1	27:C8:38:THR:OG1	2.26	0.68
11:C5:50:ARG:HB3	11:C5:53:PRO:HG3	1.75	0.68
28:M8:40:HIS:CG	28:M8:45:GLY:HA3	2.28	0.68
44:1E:61:LEU:HD23	44:1E:68:ILE:HD11	1.76	0.68
8:2E:180:ALA:HB1	8:2E:182:ILE:HG13	1.74	0.68
15:1H:118:U:OP1	56:1H:3653:HOH:O	2.11	0.68
15:1H:688:C:O2	15:1H:695:G:N2	2.27	0.68
15:14:1315:G:O5'	43:A5:15:ARG:NH2	2.27	0.68
15:14:1400:C:OP2	56:14:3650:HOH:O	2.12	0.68
15:14:1830:U:H2'	15:14:1831:C:C6	2.29	0.68
32:39:40:GLN:HE22	32:39:182:ASN:HB2	1.58	0.68
32:39:88:VAL:HG23	32:39:89:VAL:O	1.94	0.68
47:51:20:ALA:HB3	47:51:23:ARG:HG3	1.76	0.68
8:2E:40:ARG:O	8:2E:44:GLU:HG2	1.94	0.68
1:1G:1875:A:N3	9:82:70:LYS:NZ	2.31	0.68
2:65:17:ARG:NH2	15:14:2307:C:OP1	2.27	0.68
11:G8:97:ARG:HD2	11:G8:97:ARG:N	2.09	0.68
4:19:242:ARG:HE	15:14:1860:G:H4'	1.59	0.68
15:1H:471:A:H1'	15:1H:1249:C:O4'	1.94	0.68
15:1H:1408:A:H2	15:1H:1421:U:O4	1.76	0.68
15:14:593:U:O4	56:14:3614:HOH:O	2.12	0.68
23:21:64:LYS:O	23:21:70:ALA:HB2	1.93	0.68
32:31:197:ASP:O	32:31:199:TRP:N	2.27	0.68
3:F8:1:MET:HG2	3:F8:2:LYS:H	1.59	0.68
9:8E:89:ASN:O	9:8E:89:ASN:ND2	2.26	0.68
1:1G:2125:A:H2	1:1G:2128:G:N1	1.90	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:3A:27:LEU:HG	13:3A:33:ARG:HG2	1.75	0.68
19:9A:36:ASN:O	19:9A:36:ASN:ND2	2.24	0.68
44:1E:187:LEU:HA	44:1E:201:ILE:HB	1.74	0.68
1:13:1386:U:H2'	1:13:1387:G:O4'	1.94	0.68
1:1G:2063:G:H2'	1:1G:2064:U:C6	2.29	0.68
15:1H:681:A:H3'	15:1H:681:A:N3	2.08	0.68
15:1H:1586:C:H2'	15:1H:1587:G:O4'	1.94	0.68
15:1H:2416:U:H2'	15:1H:2417:C:C2	2.29	0.68
15:14:1074:U:H2'	26:1J:90:C:N4	2.09	0.68
15:14:2552:U:H2'	15:14:2553:C:C6	2.29	0.68
17:H5:59:VAL:HG12	17:H5:60:GLU:H	1.59	0.68
28:I5:26:SER:OG	28:I5:28:LYS:O	2.11	0.68
44:1E:17:PHE:HD1	44:1E:17:PHE:H	1.42	0.68
45:98:56:LYS:NZ	45:98:90:ARG:O	2.26	0.68
1:13:796:G:H1	1:13:805:C:H42	1.41	0.68
1:1G:1925:C:OP2	42:62:114:ARG:NH2	2.27	0.68
15:14:348:G:O2'	15:14:1253:U:N3	2.27	0.68
15:14:2491:A:H4'	15:14:2492:C:H5	1.59	0.68
38:45:57:HIS:HD2	38:45:117:ALA:HB2	1.59	0.68
46:K8:42:GLY:O	46:K8:44:LEU:N	2.27	0.68
45:55:106:GLY:O	45:55:107:ASP:HB3	1.92	0.68
15:1H:1059:G:OP1	27:C8:77:SER:OG	2.11	0.67
23:29:3:GLY:HA3	23:29:81:ILE:HD12	1.75	0.67
42:6E:65:ALA:HB2	42:6E:128:ALA:HB2	1.76	0.67
44:12:12:GLU:HB3	44:12:213:LEU:HD22	1.76	0.67
15:1H:183:U:OP1	56:1H:3655:HOH:O	2.12	0.67
15:1H:1528:G:H2'	15:1H:1529:G:H8	1.59	0.67
11:C5:17:SER:HB2	11:C5:71:LYS:HD2	1.75	0.67
12:M5:61:LEU:CD2	12:M5:62:LEU:HD22	2.24	0.67
15:14:1117:A:H2	15:14:1142:U:H3	1.42	0.67
31:I8:16:SER:O	56:I8:201:HOH:O	2.12	0.67
1:13:1615:U:H4'	1:13:1616:G:O5'	1.93	0.67
1:1G:1601:A:O2'	1:1G:1949:C:N3	2.27	0.67
12:M5:39:LYS:NZ	15:14:2380:G:N7	2.42	0.67
15:14:348:G:HO2'	15:14:1253:U:H3	1.38	0.67
39:J8:92:LYS:O	39:J8:94:LEU:N	2.28	0.67
47:51:54:ARG:HD3	47:51:65:HIS:ND1	2.09	0.67
47:51:154:PRO:HB3	47:51:163:TYR:CZ	2.30	0.67
52:X1:36:A:H5"	52:X1:36:A:H8	1.59	0.67
4:11:68:LYS:HB3	4:11:70:TRP:CZ3	2.30	0.67
1:1G:1414:G:N7	56:1G:2408:HOH:O	2.26	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1760:C:H2'	1:1G:1761:G:H8	1.59	0.67
9:82:45:ALA:HB2	42:62:16:LEU:HD11	1.77	0.67
15:14:2335:A:H1'	15:14:2336:G:C6	2.29	0.67
28:M8:6:HIS:CE1	40:41:67:LYS:HZ3	2.12	0.67
23:29:81:ILE:HG22	23:29:82:ARG:H	1.59	0.67
1:13:653:G:H5'	1:13:939:A:O4'	1.95	0.67
1:1G:713:C:H2'	1:1G:714:G:C8	2.30	0.67
1:1G:1551:G:O2'	1:1G:2156:C:OP1	2.11	0.67
15:1H:1069:A:C8	15:1H:1070:G:H5"	2.27	0.67
12:M5:32:LEU:HD12	12:M5:36:LYS:CG	2.23	0.67
15:14:1535:A:H2'	15:14:1536:G:H8	1.59	0.67
16:75:4:GLY:O	16:75:7:ILE:N	2.27	0.67
52:V4:16:U:H2'	52:V4:17:C:H5'	1.77	0.67
1:13:1975:U:H4'	9:8E:120:ARG:HD2	1.77	0.67
6:2A:100:ALA:O	6:2A:102:GLY:N	2.28	0.67
15:1H:673:A:H2'	15:1H:674:G:O4'	1.95	0.67
15:14:829:G:H21	15:14:832:A:H62	1.42	0.67
32:39:18:ARG:HE	32:39:20:LEU:HD23	1.58	0.67
33:5A:26:ARG:O	33:5A:26:ARG:HG2	1.94	0.67
50:7E:82:HIS:NE2	50:7E:136:GLU:OE2	2.26	0.67
1:13:1597:A:OP2	33:5I:41:ARG:NH1	2.28	0.67
1:1G:1306:U:H3	1:1G:1342:G:H22	1.41	0.67
15:1H:2045:A:O2'	15:1H:2046:C:H5'	1.95	0.67
23:29:119:ARG:HG2	23:29:160:TYR:HB2	1.77	0.67
29:AI:63:THR:H	29:AI:66:MET:HG3	1.59	0.67
33:5A:29:ARG:HB3	33:5A:31:ARG:H	1.59	0.67
48:1I:8:LEU:HD22	48:1I:96:ILE:HG22	1.75	0.67
49:7I:50:LYS:HD3	49:7I:51:VAL:H	1.59	0.67
52:V1:1:G:H1'	52:V1:73:A:C2	2.28	0.67
8:22:122:GLU:OE1	8:22:126:ARG:NE	2.27	0.67
1:1G:1149:A:N1	1:1G:1165:C:H1'	2.10	0.67
2:65:83:LYS:HB3	2:65:84:GLN:HG2	1.77	0.67
11:G8:97:ARG:CZ	11:G8:104:GLY:HA3	2.25	0.67
15:1H:1465:G:HO2'	15:1H:1466:C:H6	1.43	0.67
15:1H:2703:U:H5	15:1H:2736:U:OP2	1.77	0.67
23:21:197:ILE:HD11	23:21:199:ARG:HE	1.60	0.67
25:4E:39:GLY:HA3	25:4E:71:LEU:HD11	1.75	0.67
23:29:25:VAL:HG12	23:29:26:ILE:H	1.60	0.67
15:1H:48:A:N7	15:1H:118:U:C5	2.59	0.67
15:1H:1067:U:HO2'	15:1H:1069:A:H2	1.39	0.67
13:3A:58:VAL:HG21	13:3A:85:ILE:HD11	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:M8:40:HIS:CD2	28:M8:45:GLY:HA3	2.30	0.67
1:13:1586:G:H21	48:1I:55:LYS:CE	2.08	0.67
1:1G:1905:U:H5'	1:1G:1906:A:O4'	1.94	0.67
1:1G:2091:A:OP2	56:1G:2403:HOH:O	2.12	0.67
4:19:201:HIS:O	4:19:204:ILE:HG23	1.95	0.67
15:1H:1252:A:H2	15:1H:1290:A:N1	1.93	0.67
15:1H:2035:G:N7	56:1H:3682:HOH:O	2.28	0.67
15:1H:2233:U:O4'	39:J8:52:ARG:NH2	2.28	0.67
19:9I:52:PRO:HB2	19:9I:54:ARG:HD3	1.77	0.67
16:75:21:GLU:O	16:75:91:ARG:NH2	2.28	0.67
16:75:60:THR:HG22	16:75:77:PRO:HA	1.77	0.67
23:21:54:GLN:O	23:21:55:ASN:ND2	2.28	0.67
24:4A:81:LEU:HD23	24:4A:86:CYS:SG	2.33	0.67
44:1E:60:ASP:HB3	44:1E:64:ARG:HH12	1.60	0.67
47:51:4:ILE:HB	47:51:6:ARG:HG3	1.77	0.67
51:Y4:43:U:H2'	51:Y4:44:U:C6	2.30	0.67
1:1G:805:C:H2'	1:1G:806:G:C8	2.30	0.66
11:C5:42:VAL:HG13	11:C5:65:ALA:HB3	1.77	0.66
1:13:863:U:H2'	1:13:864:U:C6	2.31	0.66
1:13:1947:C:O2	29:AI:36:ARG:NH2	2.28	0.66
1:1G:1698:U:H2'	1:1G:1699:C:H6	1.60	0.66
12:Q8:49:VAL:HG11	15:1H:2374:C:H4'	1.76	0.66
15:1H:1474:G:O6	56:1H:3657:HOH:O	2.13	0.66
15:1H:1498:G:O2'	15:1H:1578:A:N1	2.25	0.66
10:15:42:TRP:O	27:85:64:ARG:NH2	2.26	0.66
12:M5:2:PRO:HD2	15:14:716:U:O2	1.94	0.66
15:14:2128:C:H2'	15:14:2129:G:C8	2.29	0.66
22:H8:30:ASN:ND2	22:H8:90:VAL:HB	2.04	0.66
23:29:68:ALA:C	23:29:70:ALA:H	1.98	0.66
29:AI:18:LYS:HE2	29:AI:22:LEU:HD11	1.76	0.66
45:98:3:HIS:O	45:98:5:LYS:N	2.24	0.66
1:13:862:C:H2'	1:13:863:U:H6	1.60	0.66
1:13:1603:C:O2	56:13:2403:HOH:O	2.11	0.66
1:13:2079:G:H1	37:BI:54:LYS:HZ3	1.43	0.66
2:65:84:GLN:HA	2:65:110:LEU:HD12	1.77	0.66
4:19:208:LYS:NZ	15:14:778:G:O5'	2.28	0.66
15:1H:423:U:O2'	56:1H:3656:HOH:O	2.13	0.66
16:B8:50:ILE:HD11	16:B8:102:ILE:HD11	1.76	0.66
15:14:1483:A:H61	15:14:1608:A:N6	1.94	0.66
34:5E:42:GLU:OE1	34:5E:59:TYR:OH	2.12	0.66
52:V1:8:U:H2'	52:V1:13:C:H41	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:58:96:GLU:C	10:58:98:VAL:H	1.98	0.66
14:3E:30:LYS:HA	14:3E:35:ARG:HE	1.59	0.66
15:1H:428:G:O6	56:1H:3652:HOH:O	2.10	0.66
15:14:239:C:OP1	56:14:3653:HOH:O	2.12	0.66
15:14:711:G:H5'	30:35:14:LYS:CB	2.24	0.66
15:14:921:A:H4'	38:45:66:ILE:HD11	1.76	0.66
24:4I:3:ARG:HG2	24:4I:9:ILE:HG12	1.78	0.66
27:C8:105:VAL:HG22	35:D8:45:THR:HG21	1.77	0.66
22:D5:79:ARG:HB3	22:D5:80:ARG:HD2	1.77	0.66
32:31:29:ASN:H	32:31:112:MET:CE	2.07	0.66
38:45:25:ASP:HB3	38:45:102:VAL:HG23	1.77	0.66
1:13:828:C:H42	1:13:841:G:H1	1.43	0.66
1:13:907:G:H5"	1:13:908:C:H5	1.58	0.66
1:13:1017:G:H5"	49:7I:5:ARG:HD2	1.77	0.66
12:Q8:4:MET:O	12:Q8:59:LYS:HE2	1.94	0.66
11:C5:73:ARG:NH2	11:C5:81:LYS:O	2.29	0.66
8:2E:174:PRO:HD2	8:2E:182:ILE:HD11	1.77	0.66
52:X1:61:C:H2'	52:X1:62:C:H6	1.61	0.66
1:1G:1746:C:OP1	9:82:104:ARG:NH1	2.29	0.66
1:1G:1974:G:N2	1:1G:2001:G:H2'	2.10	0.66
12:Q8:59:LYS:HD2	12:Q8:60:LEU:HG	1.77	0.66
15:1H:121:G:O6	56:1H:3654:HOH:O	2.12	0.66
15:14:120:G:N7	56:14:3641:HOH:O	2.29	0.66
32:39:103:LYS:HA	32:39:106:ARG:HG3	1.78	0.66
44:1E:204:ASN:HD21	44:1E:207:ALA:HB3	1.60	0.66
50:7E:20:TYR:HE2	50:7E:75:ARG:HD2	1.61	0.66
52:X1:2:C:H2'	52:X1:3:C:C6	2.31	0.66
1:13:1840:A:O2'	1:13:1842:G:N7	2.24	0.66
2:A8:11:LYS:HD3	2:A8:91:PRO:HD3	1.78	0.66
2:A8:106:ARG:HA	2:A8:109:GLY:H	1.60	0.66
1:1G:1882:G:O2'	1:1G:1885:G:O2'	2.08	0.66
15:1H:1413:G:N7	39:J8:2:SER:HB3	2.11	0.66
15:14:1465:G:O2'	15:14:1466:C:O5'	2.08	0.66
23:21:63:LEU:HD23	23:21:63:LEU:O	1.95	0.66
45:98:32:GLY:HA2	45:98:116:LEU:HD12	1.77	0.66
2:A8:37:ALA:HB2	2:A8:101:LEU:HD21	1.78	0.66
12:Q8:48:PHE:CD2	12:Q8:52:LYS:HG3	2.31	0.66
15:1H:2314:G:N1	15:1H:2333:G:H8	1.94	0.66
14:32:105:VAL:HG13	14:32:110:PHE:HB2	1.77	0.66
15:14:118:U:OP1	56:14:3654:HOH:O	2.14	0.66
25:4E:35:GLY:HA3	25:4E:112:LEU:O	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:N8:47:PRO:HG3	43:E8:38:TYR:OH	1.95	0.66
38:45:25:ASP:HB3	38:45:102:VAL:H	1.60	0.66
50:7E:106:GLY:HA2	50:7E:122:ARG:HH12	1.61	0.66
15:14:332:G:H21	15:14:355:A:H62	1.43	0.66
15:14:2330:G:H2'	15:14:2331:C:C6	2.31	0.66
23:29:33:VAL:HG12	23:29:89:ASP:HB3	1.77	0.66
42:6E:62:PHE:HA	42:6E:124:LEU:HD21	1.78	0.66
40:49:109:VAL:HG11	40:49:142:PRO:HG3	1.78	0.66
45:98:67:LEU:HD13	45:98:76:VAL:HG21	1.78	0.66
1:13:921:C:N3	7:8I:39:SER:N	2.44	0.66
9:8E:46:ALA:HB2	9:8E:74:ILE:HG23	1.78	0.66
1:1G:1586:G:H21	48:1A:55:LYS:CE	2.08	0.66
14:3E:148:VAL:HG21	14:3E:158:ILE:HG21	1.77	0.66
12:M5:5:LYS:NZ	15:14:243:C:OP2	2.22	0.66
14:32:111:ALA:HB2	14:32:120:LEU:HD12	1.77	0.66
15:14:593:U:H5'	15:14:992:A:N1	2.11	0.66
15:14:604:G:H2'	15:14:605:C:C6	2.31	0.66
18:69:38:LEU:HD12	18:69:38:LEU:H	1.61	0.66
42:62:69:VAL:HG22	42:62:135:VAL:HG23	1.78	0.66
47:59:7:LEU:HD12	47:59:8:PRO:HD3	1.78	0.66
15:1H:334:G:N3	15:1H:354:G:O2'	2.28	0.65
15:1H:1133:A:H1'	15:1H:1134:A:H2	1.61	0.65
15:14:1108:U:H4'	15:14:1109:U:H5"	1.76	0.65
17:H5:18:ASP:OD1	17:H5:18:ASP:N	2.27	0.65
24:4I:15:VAL:HG23	24:4I:43:THR:O	1.96	0.65
26:16:17:A:H5'	26:16:18:G:H8	1.61	0.65
36:N8:42:PRO:O	36:N8:44:THR:HG22	1.96	0.65
38:45:56:ARG:NH2	52:W4:52:G:O2'	2.29	0.65
47:51:4:ILE:HG21	47:51:6:ARG:NH1	2.11	0.65
52:X4:2:C:H2'	52:X4:3:C:C6	2.31	0.65
9:8E:50:LEU:HD23	9:8E:85:LEU:HD11	1.78	0.65
15:1H:555:A:O2'	15:1H:556:A:H5'	1.95	0.65
26:1J:44:C:N3	40:49:91:ARG:NH1	2.43	0.65
31:E5:12:ASN:HA	31:E5:14:ARG:HH21	1.61	0.65
51:Y4:41:U:H5"	51:Y4:42:U:OP1	1.95	0.65
1:13:1980:G:OP1	20:1F:10:ARG:NH2	2.30	0.65
29:AI:5:LEU:HD13	29:AI:10:PHE:CD1	2.30	0.65
46:K8:47:ASN:HB2	46:K8:50:ILE:HD11	1.79	0.65
1:13:957:G:OP2	1:13:992:G:O2'	2.14	0.65
1:13:1637:G:N2	1:13:1640:A:OP2	2.27	0.65
7:8I:67:LYS:HA	7:8I:70:ARG:NH1	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1070:U:OP2	14:32:36:ARG:NH1	2.30	0.65
12:Q8:3:LYS:HE2	15:1H:232:G:O5'	1.96	0.65
15:1H:34:C:OP2	15:1H:34:C:C6	2.43	0.65
15:1H:562:C:O3'	27:C8:53:ARG:NH1	2.29	0.65
15:1H:1916:G:N7	56:1H:3684:HOH:O	2.29	0.65
15:14:249:G:O2'	15:14:648:A:O2'	2.15	0.65
15:14:2247:U:P	39:F5:40:ARG:HH12	2.20	0.65
15:14:2703:U:H5	15:14:2736:U:OP2	1.79	0.65
32:31:6:VAL:HG11	32:31:119:ARG:HA	1.78	0.65
3:F8:3:THR:OG1	3:F8:4:ALA:HA	1.97	0.65
46:G5:13:ALA:HA	46:G5:16:LEU:HD23	1.78	0.65
9:8E:121:ARG:NH1	9:8E:122:ALA:O	2.29	0.65
1:1G:1873:C:O2	1:1G:1918:G:N2	2.20	0.65
11:G8:83:THR:HG23	15:1H:361:C:OP1	1.95	0.65
15:1H:272:U:C2	18:61:50:ARG:HG2	2.32	0.65
15:1H:782:G:OP2	56:1H:3659:HOH:O	2.14	0.65
15:1H:909:U:H5	15:1H:965:A:N1	1.95	0.65
15:1H:2165:C:H42	15:1H:2176:G:H1	1.44	0.65
15:1H:2335:A:N3	15:1H:2335:A:H2'	2.11	0.65
15:1H:2705:C:OP1	45:98:17:ARG:NH1	2.29	0.65
27:C8:108:GLU:OE1	27:C8:112:ARG:NH1	2.29	0.65
32:31:6:VAL:HG21	32:31:119:ARG:HB2	1.78	0.65
38:45:25:ASP:CB	38:45:102:VAL:H	2.09	0.65
1:13:2120:G:C2'	1:13:2121:U:H5'	2.27	0.65
7:8I:100:LYS:HB2	7:8I:101:ARG:NH1	2.10	0.65
11:G8:85:VAL:HG22	11:G8:98:VAL:HB	1.77	0.65
15:1H:632:U:OP1	32:31:102:PRO:HA	1.96	0.65
16:B8:94:ALA:HB1	16:B8:99:LEU:HD21	1.79	0.65
16:B8:102:ILE:HB	16:B8:110:ILE:HG13	1.78	0.65
12:M5:30:ARG:NH1	30:35:63:PRO:HB3	2.12	0.65
18:61:98:ALA:HB2	18:61:111:PRO:HB3	1.79	0.65
15:14:121:G:O6	56:14:3652:HOH:O	2.12	0.65
15:14:2463:A:OP2	56:14:3615:HOH:O	2.14	0.65
15:14:2598:G:H21	52:W4:76:A:N6	1.91	0.65
25:42:101:ILE:HD11	25:42:119:LEU:HD23	1.79	0.65
32:31:9:ILE:HD13	32:31:123:LEU:HG	1.79	0.65
32:39:49:ALA:O	32:39:92:PRO:HB2	1.96	0.65
42:6E:111:ARG:NH1	42:6E:113:GLU:OE2	2.30	0.65
38:45:26:TYR:O	38:45:26:TYR:HD1	1.78	0.65
44:12:98:LEU:O	44:12:101:MET:HG2	1.97	0.65
51:Y4:43:U:H2'	51:Y4:44:U:H6	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L5:26:GLY:O	5:L5:30:VAL:HG23	1.97	0.65
1:1G:1281:U:O2'	1:1G:1282:A:N3	2.27	0.65
10:58:33:LEU:HD12	10:58:38:HIS:HD2	1.62	0.65
15:1H:1857:G:N7	56:1H:3683:HOH:O	2.28	0.65
13:3A:47:LYS:CG	13:3A:48:PRO:HD3	2.27	0.65
15:14:216:G:H21	15:14:218:A:H62	1.44	0.65
15:14:355:A:H2	15:14:1258:A:HO2'	1.42	0.65
46:K8:18:PRO:HA	46:K8:21:LEU:HB2	1.78	0.65
12:Q8:34:TRP:CD1	12:Q8:38:GLY:HA3	2.32	0.65
15:1H:1587:G:H2'	15:1H:1588:G:H8	1.62	0.65
15:1H:1715:A:H1'	21:68:1:MET:HG3	1.79	0.65
21:25:63:VAL:HG12	21:25:106:LEU:HD11	1.78	0.65
45:98:103:ARG:HD2	45:98:108:GLY:O	1.97	0.65
8:22:73:PRO:HA	8:22:76:VAL:HG13	1.78	0.65
2:65:27:SER:HA	2:65:88:ASP:HB2	1.79	0.65
18:61:9:LEU:HD21	18:61:35:LEU:HD13	1.79	0.65
15:14:647:G:N3	15:14:647:G:H5'	2.12	0.65
22:H8:151:HIS:N	22:H8:154:ASP:OD2	2.27	0.65
28:I5:14:ILE:HG22	28:I5:22:ILE:HA	1.78	0.65
34:5E:6:VAL:HG22	34:5E:90:VAL:HG22	1.78	0.65
38:88:135:ASP:HB2	38:88:138:ASP:OD1	1.96	0.65
52:V4:8:U:H2'	52:V4:13:C:H41	1.62	0.65
1:1G:1130:C:H2'	1:1G:1131:G:H8	1.62	0.65
1:1G:1302:G:H2'	1:1G:1303:G:C8	2.32	0.65
10:15:63:THR:OG1	15:14:1189:U:OP2	2.15	0.65
27:85:91:ASP:O	27:85:92:ARG:HG3	1.97	0.65
32:31:191:ARG:HB3	32:31:191:ARG:HH11	1.61	0.65
40:49:114:ILE:HG22	40:49:117:PHE:HB2	1.77	0.65
44:12:7:VAL:HG22	44:12:8:LYS:H	1.60	0.65
47:59:26:VAL:HG12	47:59:33:LEU:H	1.62	0.65
52:W1:9:A:O2'	52:W1:45:U:N3	2.29	0.65
52:V1:34:G:O2'	52:V1:35:A:O5'	2.14	0.65
56:1H:4029:HOH:O	35:D8:77:ALA:HB3	1.97	0.64
15:14:2137:G:O2'	15:14:2139:A:N6	2.30	0.64
27:C8:75:ASN:HB2	27:C8:78:THR:OG1	1.96	0.64
27:C8:92:ARG:O	27:C8:94:ASN:N	2.30	0.64
28:M8:25:TYR:HE2	40:41:5:VAL:H	1.43	0.64
27:85:34:LYS:NZ	27:85:37:GLU:OE1	2.27	0.64
1:13:1243:A:H2'	1:13:1244:C:H6	1.62	0.64
1:13:1271:A:N3	50:7E:113:SER:OG	2.30	0.64
1:1G:1580:U:H1'	1:1G:1583:U:C5	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1901:A:H2'	15:1H:1902:A:C8	2.33	0.64
15:14:83:A:N6	15:14:100:G:O2'	2.26	0.64
15:14:555:A:C2	15:14:2067:A:H2'	2.32	0.64
22:D5:45:ASP:OD2	22:D5:49:ARG:NE	2.31	0.64
38:88:66:ILE:HG22	38:88:67:ARG:N	2.11	0.64
38:45:26:TYR:O	38:45:28:ALA:N	2.30	0.64
39:F5:3:LYS:H	39:F5:61:ARG:HH22	1.45	0.64
1:13:1054:G:O2'	1:13:1069:G:N2	2.30	0.64
1:13:1919:U:H2'	1:13:1920:G:H8	1.61	0.64
11:G8:100:ALA:HB1	11:G8:101:LYS:HB2	1.78	0.64
15:1H:2271:G:N7	56:1H:3688:HOH:O	2.30	0.64
15:14:711:G:OP1	30:35:16:ARG:HD2	1.98	0.64
15:14:2695:C:OP2	23:29:111:ARG:NH2	2.30	0.64
27:85:92:ARG:HG2	35:95:11:GLN:OE1	1.98	0.64
52:X4:2:C:H2'	52:X4:3:C:H6	1.61	0.64
1:13:926:G:N7	56:13:2406:HOH:O	2.29	0.64
8:22:95:THR:HB	8:22:97:LYS:HG2	1.78	0.64
1:1G:1048:G:P	14:32:115:ARG:HH21	2.21	0.64
23:29:89:ASP:CG	23:29:90:THR:H	2.00	0.64
32:39:21:ALA:HB2	32:39:203:GLN:HE22	1.63	0.64
32:39:79:GLY:HA2	32:39:86:GLY:HA2	1.79	0.64
44:1E:212:GLN:O	44:1E:216:SER:OG	2.16	0.64
45:55:67:LEU:HD12	45:55:76:VAL:HG21	1.78	0.64
1:13:654:A:H62	14:3E:208:SER:HB2	1.63	0.64
1:1G:1723:U:H5"	1:1G:1737:C:O2	1.97	0.64
25:4E:10:MET:HB2	25:4E:32:VAL:HG22	1.80	0.64
22:D5:124:ILE:HD11	22:D5:165:VAL:HG21	1.77	0.64
35:D8:24:LYS:HA	35:D8:92:THR:HG23	1.80	0.64
32:39:102:PRO:HB2	32:39:105:VAL:HG23	1.79	0.64
37:BA:16:HIS:O	37:BA:19:SER:OG	2.12	0.64
47:51:33:LEU:HD21	47:51:136:ILE:HB	1.78	0.64
51:Y1:36:G:H3'	51:Y1:37:G:C8	2.33	0.64
1:13:912:C:H2'	1:13:913:C:H6	1.63	0.64
1:13:1016:U:OP1	49:7I:69:THR:HG21	1.98	0.64
1:13:2050:G:H5"	21:68:48:PRO:HB3	1.80	0.64
1:1G:1106:G:H2'	1:1G:1107:G:H8	1.62	0.64
11:G8:94:LYS:HA	11:G8:94:LYS:HZ3	1.61	0.64
15:1H:904:G:O2'	31:I8:27:GLU:OE2	2.09	0.64
15:1H:1772:G:H2'	15:1H:1773:A:C8	2.32	0.64
15:1H:2488:U:H2'	15:1H:2489:C:H6	1.62	0.64
28:M8:12:ALA:HB3	28:M8:24:THR:HB	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:35:59:LEU:O	30:35:59:LEU:HD22	1.98	0.64
34:52:83:ASP:OD1	34:52:83:ASP:N	2.29	0.64
48:1I:57:LYS:CD	48:1I:60:ARG:HH12	2.10	0.64
48:1I:57:LYS:O	48:1I:60:ARG:NH1	2.30	0.64
44:12:189:ASP:OD1	44:12:189:ASP:N	2.31	0.64
5:P8:10:ARG:O	5:P8:14:LYS:HB2	1.97	0.64
12:Q8:44:LYS:NZ	15:1H:658:A:OP2	2.31	0.64
15:1H:1381:G:C8	15:1H:1381:G:H5'	2.32	0.64
15:1H:1454:U:H2'	15:1H:1455:U:C6	2.32	0.64
15:1H:2767:G:H1	47:51:3:ARG:CZ	2.11	0.64
16:B8:26:ASP:HB2	16:B8:91:ARG:HA	1.78	0.64
15:14:596:A:OP2	56:14:3656:HOH:O	2.15	0.64
15:14:2761:C:O2	47:59:139:GLN:NE2	2.31	0.64
26:16:42:U:H1'	26:16:47:A:H61	1.62	0.64
38:88:34:LEU:HD11	38:88:129:THR:HB	1.80	0.64
41:6A:11:VAL:HG21	41:6A:34:LEU:HD22	1.78	0.64
45:98:12:ARG:HB2	45:98:16:HIS:HB3	1.80	0.64
15:1H:2302:A:N6	15:1H:2359:U:H3	1.93	0.64
15:14:1159:A:H5'	47:59:3:ARG:HD3	1.79	0.64
23:21:179:GLU:HB3	23:21:181:LEU:HD22	1.78	0.64
23:29:89:ASP:O	23:29:91:VAL:N	2.28	0.64
43:A5:82:LEU:HD22	43:A5:84:ARG:HH22	1.62	0.64
44:12:27:LYS:HZ2	44:12:195:ASP:HB2	1.62	0.64
8:2E:114:PRO:O	8:2E:118:GLN:HG3	1.97	0.64
8:22:73:PRO:HD3	8:22:105:GLU:HG3	1.80	0.64
1:1G:1638:A:H4'	29:AA:14:HIS:CE1	2.33	0.64
15:1H:2767:G:H1	47:51:3:ARG:NE	1.96	0.64
15:14:2331:C:O2'	40:49:128:ARG:NH1	2.31	0.64
15:14:2355:G:H2'	15:14:2356:G:H8	1.62	0.64
15:14:2653:G:OP1	23:29:82:ARG:NH2	2.31	0.64
22:H8:154:ASP:OD1	22:H8:154:ASP:N	2.21	0.64
31:I8:7:LEU:HD13	38:88:85:LYS:HG3	1.80	0.64
31:I8:23:VAL:HG22	31:I8:38:VAL:HG22	1.78	0.64
34:52:25:ILE:HD12	34:52:82:ARG:HD2	1.80	0.64
43:E8:92:ARG:NH1	43:E8:94:ASP:OD1	2.31	0.64
47:51:10:PRO:HD2	47:51:50:VAL:O	1.98	0.64
4:19:137:PRO:O	4:19:140:THR:OG1	2.16	0.63
15:1H:355:A:HO2'	15:1H:356:A:H8	1.46	0.63
15:1H:897:G:H2'	15:1H:898:A:C8	2.33	0.63
15:1H:1635:A:N3	15:1H:1635:A:H5"	2.12	0.63
11:C5:47:LYS:HZ3	15:14:525:G:H21	1.45	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:4E:79:GLU:HG3	25:4E:93:PRO:HD2	1.80	0.63
25:42:60:TYR:HB3	25:42:64:ARG:HH21	1.62	0.63
40:49:41:GLN:NE2	40:49:154:GLY:O	2.28	0.63
40:49:118:ARG:HB3	40:49:181:ARG:HG3	1.79	0.63
44:1E:8:LYS:HG2	44:1E:9:GLU:HG2	1.78	0.63
4:11:68:LYS:HB3	4:11:70:TRP:CH2	2.33	0.63
1:1G:1017:G:H5"	49:7A:5:ARG:HD2	1.79	0.63
1:1G:1915:A:H4'	20:1B:13:ILE:HD13	1.79	0.63
13:3A:24:VAL:O	13:3A:26:ALA:N	2.30	0.63
15:14:2173:G:H2'	15:14:2174:G:H8	1.63	0.63
21:68:98:VAL:HG13	21:68:117:LEU:HB3	1.79	0.63
6:2I:50:TYR:CD2	6:2I:54:ARG:HB3	2.33	0.63
2:A8:59:LYS:HD3	2:A8:60:GLY:N	2.13	0.63
1:1G:782:G:H2'	1:1G:783:A:C8	2.31	0.63
14:3E:28:SER:OG	14:3E:29:PRO:O	2.16	0.63
15:1H:2270:G:OP2	56:1H:3660:HOH:O	2.15	0.63
11:C5:48:ALA:HA	11:C5:50:ARG:NH2	2.13	0.63
15:14:1060:U:OP1	27:85:75:ASN:ND2	2.29	0.63
23:21:116:VAL:O	23:21:117:MET:HB3	1.97	0.63
48:1I:5:ARG:HB2	48:1I:73:ASP:HA	1.80	0.63
44:12:80:ILE:HD13	44:12:212:GLN:HG2	1.81	0.63
1:13:1752:G:O2'	1:13:1773:C:N4	2.31	0.63
16:B8:18:ASP:OD1	16:B8:18:ASP:N	2.32	0.63
22:H8:122:ARG:HH22	38:88:139:GLU:HG2	1.63	0.63
22:D5:52:SER:O	22:D5:52:SER:OG	2.16	0.63
23:29:120:TRP:CE3	23:29:155:LYS:HD3	2.34	0.63
37:BI:97:ALA:O	37:BI:99:LEU:N	2.31	0.63
1:13:706:A:H4'	1:13:707:G:H5'	1.79	0.63
1:1G:1587:A:N3	1:1G:1592:A:O2'	2.25	0.63
11:G8:76:CYS:O	11:G8:78:ALA:N	2.29	0.63
4:19:32:SER:O	4:19:33:LEU:HB2	1.99	0.63
15:1H:2230:G:H5"	15:1H:2231:G:N7	2.13	0.63
15:1H:2421:U:N3	30:78:73:GLY:O	2.22	0.63
15:1H:2750:A:H5"	15:1H:2750:A:C8	2.30	0.63
15:14:1721:U:HO2'	15:14:1723:U:H5	1.46	0.63
24:4I:10:PRO:HB2	24:4I:18:ALA:HB1	1.78	0.63
24:4I:37:THR:HG23	24:4I:59:TYR:HD2	1.63	0.63
29:AA:79:THR:O	29:AA:79:THR:OG1	2.16	0.63
33:5A:15:LYS:HG2	33:5A:16:PHE:CE2	2.33	0.63
39:J8:48:LYS:HB3	39:J8:49:VAL:CA	2.28	0.63
46:K8:15:LYS:HE3	46:K8:15:LYS:H	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:K8:41:ILE:HD13	46:K8:44:LEU:HG	1.79	0.63
48:1A:82:ILE:O	48:1A:86:MET:N	2.32	0.63
1:13:994:A:H5'	1:13:994:A:H8	1.63	0.63
1:13:1590:C:HO2'	9:8E:125:TYR:HH	1.46	0.63
1:13:1661:G:H2'	1:13:1662:G:H8	1.64	0.63
2:65:21:THR:HG21	15:14:2393:A:O2'	1.97	0.63
15:14:517:G:N7	43:A5:49:LYS:NZ	2.46	0.63
15:14:1461:A:H2'	15:14:1462:G:C8	2.33	0.63
15:14:2521:U:O2	15:14:2521:U:H2'	1.98	0.63
32:39:21:ALA:C	32:39:23:ASP:H	2.02	0.63
41:6I:4:THR:OG1	41:6I:7:GLU:HB2	1.99	0.63
1:1G:687:G:H2'	1:1G:688:G:C8	2.33	0.63
4:19:259:THR:HG1	15:14:1831:C:HO2'	1.45	0.63
15:1H:2152:G:N1	15:1H:2187:G:N3	2.45	0.63
15:14:723:G:H1'	32:39:74:ARG:HD3	1.81	0.63
17:H5:6:VAL:HG12	17:H5:56:VAL:HB	1.80	0.63
21:25:87:ILE:HG23	21:25:91:LEU:HA	1.79	0.63
24:4A:86:CYS:HB2	29:AA:73:GLU:HB3	1.81	0.63
37:BI:75:ASN:N	37:BI:75:ASN:OD1	2.32	0.63
35:95:43:GLU:HG3	35:95:44:LYS:NZ	2.13	0.63
46:G5:47:ASN:HD22	46:G5:47:ASN:H	1.46	0.63
1:13:1364:C:H2'	1:13:1365:C:H6	1.63	0.63
2:A8:106:ARG:NH2	2:A8:107:GLU:HB2	2.13	0.63
1:1G:1732:G:OP1	44:12:144:ARG:NH1	2.32	0.63
2:65:25:ARG:HH22	26:1J:11:G:P	2.21	0.63
15:1H:70:A:H2	3:F8:31:HIS:CE1	2.05	0.63
15:1H:1257:G:H21	15:1H:1258:A:H62	1.45	0.63
15:1H:2443:G:N2	30:78:61:ARG:NH2	2.47	0.63
16:B8:50:ILE:HD11	16:B8:102:ILE:CD1	2.29	0.63
12:M5:19:SER:HB3	15:14:678:G:OP1	1.98	0.63
15:14:643:G:OP1	32:39:40:GLN:NE2	2.21	0.63
15:14:2380:G:OP1	31:E5:55:ARG:HG2	1.99	0.63
44:12:82:ARG:NH1	44:12:92:TYR:OH	2.32	0.63
49:7A:53:VAL:HG13	49:7A:79:VAL:HG22	1.81	0.63
1:13:2004:U:H2'	1:13:2005:A:C8	2.34	0.63
3:B5:31:HIS:NE2	15:14:70:A:H2	1.92	0.63
5:L5:34:ARG:NH1	5:L5:41:ARG:O	2.32	0.63
1:1G:1253:C:H2'	1:1G:1254:G:H8	1.64	0.63
16:B8:51:ARG:HB2	16:B8:98:LYS:HD3	1.80	0.63
15:14:1535:A:H2'	15:14:1536:G:C8	2.33	0.63
15:14:2484:A:H2	15:14:2496:G:H21	1.47	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:9A:53:ARG:HA	19:9A:56:THR:OG1	1.99	0.63
9:8E:26:VAL:HB	9:8E:33:PHE:HB2	1.81	0.62
9:82:77:ILE:O	9:82:81:ILE:HG12	1.99	0.62
15:1H:1461:A:H2'	15:1H:1462:G:C8	2.34	0.62
15:1H:1728:G:H22	15:1H:2014:G:H22	1.45	0.62
11:C5:17:SER:O	11:C5:21:LYS:HB2	1.99	0.62
15:14:689:G:N7	15:14:695:G:N1	2.47	0.62
24:4A:7:VAL:HG21	40:49:115:ARG:HD3	1.80	0.62
38:45:19:GLY:O	38:45:98:LYS:HB3	1.99	0.62
43:A5:95:ILE:HG12	43:A5:95:ILE:O	1.99	0.62
47:51:137:ASP:O	47:51:141:VAL:HG12	1.99	0.62
1:13:1153:G:H2'	1:13:1154:C:C6	2.33	0.62
1:1G:1636:U:H3	1:1G:1641:G:H1	1.47	0.62
15:1H:673:A:H5'	15:1H:673:A:N3	2.14	0.62
14:32:24:GLU:HG2	14:32:25:ARG:H	1.65	0.62
15:14:603:A:OP2	56:14:3657:HOH:O	2.16	0.62
15:14:1365:U:H2'	15:14:1366:A:C8	2.34	0.62
15:14:1988:U:H5"	15:14:1988:U:O2	1.99	0.62
15:14:2512:A:O3'	56:14:3655:HOH:O	2.15	0.62
15:14:2792:A:OP1	15:14:2792:A:H3'	1.99	0.62
22:D5:68:PRO:O	22:D5:91:LEU:HD23	1.99	0.62
23:29:65:GLY:HA2	23:29:66:HIS:HB3	1.81	0.62
32:31:67:GLN:HG3	32:31:67:GLN:O	1.97	0.62
40:41:11:TYR:HA	40:41:15:VAL:HB	1.79	0.62
52:X1:67:C:H2'	52:X1:68:C:C6	2.34	0.62
13:3A:27:LEU:HD21	13:3A:61:THR:OG1	1.99	0.62
15:14:1586:C:H2'	15:14:1587:G:C8	2.34	0.62
22:H8:8:TYR:HB2	22:H8:38:TYR:CE2	2.34	0.62
24:4I:15:VAL:O	24:4I:19:LEU:HD22	2.00	0.62
28:M8:6:HIS:CE1	40:41:67:LYS:NZ	2.67	0.62
29:AI:45:VAL:HA	29:AI:62:ILE:HB	1.81	0.62
30:78:99:LEU:HA	30:78:102:ARG:HD3	1.81	0.62
37:BI:61:SER:O	37:BI:65:LYS:HB2	1.99	0.62
39:J8:90:ILE:HA	39:J8:94:LEU:HD12	1.80	0.62
42:6E:73:MET:HG2	42:6E:90:GLU:HA	1.82	0.62
45:98:72:ASP:O	45:98:76:VAL:HG23	1.99	0.62
45:55:38:VAL:HG22	45:55:112:ALA:HB2	1.81	0.62
46:G5:47:ASN:O	46:G5:49:LYS:N	2.26	0.62
47:59:11:VAL:HB	47:59:13:LYS:HE2	1.80	0.62
1:13:1047:G:H5"	14:3E:5:ILE:HG12	1.82	0.62
1:13:1690:U:H2'	1:13:1691:C:C6	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A8:10:ARG:O	2:A8:14:VAL:HG12	2.00	0.62
1:1G:1970:G:H2'	1:1G:1971:C:C6	2.33	0.62
15:1H:613:U:H2'	15:1H:614:C:C6	2.34	0.62
15:1H:1072:G:H3'	15:1H:1073:G:H5"	1.81	0.62
15:1H:1450:G:H2'	15:1H:1451:C:C6	2.35	0.62
11:C5:76:CYS:HB2	11:C5:97:ARG:CD	2.29	0.62
12:M5:28:GLY:O	12:M5:32:LEU:HB2	1.99	0.62
15:14:913:G:C6	15:14:914:C:N4	2.67	0.62
15:14:2626:U:H3'	15:14:2626:U:OP2	1.99	0.62
28:M8:17:GLY:HA3	28:M8:35:VAL:HG23	1.81	0.62
51:Y1:36:G:H5'	51:Y1:37:G:OP2	1.98	0.62
1:1G:1281:U:H1'	1:1G:1282:A:C2	2.34	0.62
15:1H:1892:G:H1'	15:1H:1909:A:N6	2.13	0.62
15:1H:1925:A:H5'	15:1H:1925:A:H8	1.64	0.62
15:1H:2099:U:H2'	15:1H:2100:U:C6	2.35	0.62
15:1H:2447:A:C4	39:J8:33:LYS:HG2	2.34	0.62
19:9I:44:LEU:HD11	19:9I:70:ILE:HG21	1.80	0.62
15:14:632:U:OP1	32:39:102:PRO:HA	1.99	0.62
23:21:101:ARG:HG2	23:21:169:ASN:OD1	1.98	0.62
21:25:102:VAL:HB	21:25:106:LEU:HD12	1.81	0.62
33:5A:45:ARG:O	33:5A:49:HIS:ND1	2.31	0.62
38:88:133:ARG:O	38:88:134:ARG:HB2	2.00	0.62
1:13:1562:G:H5"	42:6E:102:ARG:NH2	2.15	0.62
4:11:206:LEU:HD12	15:1H:1825:A:H5'	1.80	0.62
15:1H:563:A:H2'	15:1H:564:C:C6	2.34	0.62
12:M5:37:SER:O	12:M5:40:GLU:HB2	2.00	0.62
15:14:2836:A:OP1	23:29:159:HIS:NE2	2.31	0.62
34:52:7:ASN:HD22	34:52:7:ASN:N	1.97	0.62
44:12:47:THR:HG23	44:12:202:PRO:HG2	1.81	0.62
1:13:1596:G:H3'	1:13:1597:A:H5"	1.82	0.62
1:13:1996:G:H5"	9:8E:112:LYS:HB3	1.81	0.62
1:1G:2079:G:H1	37:BA:54:LYS:HZ2	1.47	0.62
15:1H:682:A:H2	15:1H:701:A:N1	1.98	0.62
15:1H:1093:A:H1'	15:1H:1095:G:N3	2.14	0.62
15:1H:2850:G:H21	45:98:45:ARG:NH2	1.97	0.62
15:14:274:G:OP1	18:69:57:ARG:NH1	2.33	0.62
15:14:628:A:H8	15:14:629:G:H1'	1.64	0.62
28:M8:6:HIS:CE1	40:41:67:LYS:HE2	2.34	0.62
28:I5:12:ALA:HB1	28:I5:29:PRO:HA	1.80	0.62
45:98:88:ARG:NH2	45:98:89:ASP:OD2	2.33	0.62
47:59:89:ILE:HD12	47:59:130:ARG:HA	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:Y4:41:U:O2'	51:Y4:42:U:O4'	2.17	0.62
1:13:1168:A:H2'	1:13:1169:G:C8	2.35	0.62
4:11:274:ARG:O	4:11:274:ARG:HG2	2.00	0.62
1:1G:1052:A:H62	1:1G:1054:G:N2	1.97	0.62
11:G8:82:PRO:HG3	11:G8:97:ARG:HG3	1.81	0.62
15:1H:700:G:O2'	15:1H:701:A:H5"	2.00	0.62
15:1H:2647:A:HO2'	15:1H:2824:G:HO2'	1.33	0.62
13:3A:41:ARG:NH1	13:3A:42:THR:O	2.33	0.62
15:14:1000:A:OP2	38:45:16:ARG:HD3	1.98	0.62
15:14:1893:A:N6	15:14:1908:G:O2'	2.32	0.62
15:14:2487:G:H3'	15:14:2488:U:H5'	1.82	0.62
21:68:112:MET:HA	21:68:115:VAL:HG13	1.81	0.62
24:4A:57:ARG:HG3	24:4A:61:GLU:OE1	2.00	0.62
30:35:52:GLU:O	30:35:54:GLY:N	2.29	0.62
37:BA:26:ASN:HA	37:BA:29:LYS:HG2	1.82	0.62
42:6E:150:ALA:HB2	6:2I:50:TYR:HE2	1.64	0.62
44:1E:54:THR:HG21	44:1E:201:ILE:HD11	1.80	0.62
8:2E:16:ARG:HD2	8:2E:54:ARG:HH21	1.64	0.62
1:13:1254:G:H4'	49:7I:16:HIS:CD2	2.34	0.62
1:13:1366:A:H2'	1:13:1367:C:C6	2.35	0.62
1:13:1954:C:OP2	20:1F:12:LYS:NZ	2.32	0.62
8:22:65:ALA:HA	8:22:100:ALA:HB3	1.82	0.62
12:M5:32:LEU:HD12	12:M5:36:LYS:HG3	1.82	0.62
12:M5:61:LEU:HD12	12:M5:61:LEU:H	1.63	0.62
15:14:70:A:H5'	15:14:70:A:C8	2.34	0.62
15:14:845:C:H2'	15:14:846:C:C6	2.35	0.62
15:14:1208:U:H2'	15:14:1209:G:H8	1.65	0.62
15:14:1365:U:H2'	15:14:1366:A:H8	1.64	0.62
21:25:115:VAL:HG13	21:25:121:VAL:HG21	1.81	0.62
52:V1:9:A:H5"	52:V1:10:G:OP2	2.00	0.62
52:W4:75:C:H3'	52:W4:75:C:H6	1.65	0.62
1:13:1498:C:O2'	50:7E:14:ARG:NH1	2.32	0.62
1:13:1853:C:OP2	24:4I:103:THR:OG1	2.14	0.62
5:L5:47:ARG:HH11	5:L5:47:ARG:HB2	1.65	0.62
4:19:69:ARG:NH2	4:19:128:GLY:O	2.31	0.62
4:19:242:ARG:NH1	15:14:1927:C:OP1	2.33	0.62
15:1H:1103:G:O2'	15:1H:1134:A:N6	2.32	0.62
15:1H:2334:G:N2	15:1H:2349:G:OP1	2.22	0.62
15:14:2805:C:H2'	15:14:2806:A:C8	2.35	0.62
24:4I:14:ARG:HB3	24:4I:17:VAL:HG22	1.82	0.62
28:I5:13:ARG:HA	28:I5:22:ILE:HB	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:35:105:LEU:O	30:35:106:LEU:HB3	2.00	0.62
39:F5:91:LYS:HA	39:F5:91:LYS:NZ	2.15	0.62
47:51:159:GLU:HG2	47:51:169:VAL:HG21	1.82	0.62
48:1A:33:GLN:HB3	48:1A:75:ILE:HG12	1.81	0.62
3:F8:3:THR:HA	3:F8:6:ASP:OD2	2.00	0.62
47:59:12:PRO:HB3	47:59:15:VAL:HG22	1.82	0.62
51:Y4:45:U:H5'	51:Y4:46:U:OP1	2.00	0.62
1:13:1994:C:H2'	1:13:1995:C:C6	2.35	0.61
11:G8:99:CYS:SG	11:G8:100:ALA:N	2.73	0.61
9:82:65:VAL:HG21	9:82:73:GLN:HB3	1.81	0.61
15:14:2145:G:H2'	15:14:2146:G:H8	1.65	0.61
15:14:2708:A:H2'	15:14:2709:G:H8	1.64	0.61
30:78:144:GLU:OE2	30:78:144:GLU:N	2.32	0.61
31:E5:26:TYR:O	31:E5:29:GLN:HB2	2.00	0.61
1:13:1079:G:H4'	14:3E:123:HIS:CD2	2.34	0.61
1:1G:1615:U:H6	1:1G:1615:U:H5"	1.64	0.61
22:D5:78:LYS:NZ	38:45:25:ASP:O	2.33	0.61
23:29:116:VAL:O	23:29:117:MET:HB3	2.00	0.61
27:85:92:ARG:CD	27:85:94:ASN:HB3	2.28	0.61
36:N8:40:LYS:HZ2	36:N8:46:CYS:HB3	1.62	0.61
43:A5:82:LEU:HD22	43:A5:84:ARG:NH2	2.14	0.61
3:F8:41:ASN:O	3:F8:45:THR:HG23	2.01	0.61
47:59:15:VAL:HG12	47:59:29:PRO:HD2	1.81	0.61
4:11:70:TRP:CD1	4:11:70:TRP:C	2.73	0.61
9:8E:44:VAL:HG22	42:6E:16:LEU:HD13	1.81	0.61
1:1G:1723:U:P	1:1G:1736:G:H1	2.23	0.61
12:Q8:5:LYS:O	12:Q8:6:THR:O	2.19	0.61
16:B8:26:ASP:HB3	16:B8:92:GLY:H	1.65	0.61
16:B8:27:THR:HG23	16:B8:90:GLN:HB3	1.82	0.61
12:M5:33:ASN:HA	15:14:2435:C:OP2	2.00	0.61
15:14:347:A:OP2	32:39:169:ASN:HB2	2.00	0.61
25:4E:11:ILE:HD11	25:4E:31:LEU:HD13	1.81	0.61
30:78:49:ARG:HG3	30:78:49:ARG:HH11	1.66	0.61
27:85:92:ARG:NH1	35:95:11:GLN:O	2.33	0.61
29:AA:63:THR:OG1	29:AA:65:ASN:O	2.18	0.61
47:51:6:ARG:HB3	47:51:65:HIS:CG	2.35	0.61
52:V4:72:C:C3'	52:V4:73:A:H5"	2.30	0.61
9:8E:31:GLN:HB3	9:8E:35:GLU:HG2	1.81	0.61
9:8E:53:VAL:HG12	9:8E:55:ALA:H	1.66	0.61
15:1H:625:G:N2	15:1H:630:C:O3'	2.33	0.61
13:3A:36:VAL:O	13:3A:59:ARG:N	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:393:U:H5'	15:14:394:A:OP2	1.99	0.61
15:14:829:G:H21	15:14:832:A:N6	1.98	0.61
15:14:2321:C:H3'	15:14:2322:G:H5"	1.81	0.61
1:13:1946:A:OP1	29:AI:70:LYS:NZ	2.34	0.61
15:1H:652:G:N7	30:78:107:LYS:NZ	2.48	0.61
15:1H:2660:G:H3'	15:1H:2661:C:H5'	1.81	0.61
14:32:175:SER:HB3	14:32:186:LEU:HD11	1.81	0.61
14:32:191:ARG:NH2	14:32:194:LEU:O	2.33	0.61
15:14:467:G:H2'	15:14:468:G:C8	2.35	0.61
21:68:98:VAL:HG11	21:68:114:ILE:HG23	1.82	0.61
22:D5:97:GLU:HB3	22:D5:125:LEU:HD11	1.83	0.61
32:31:28:ILE:HD13	32:31:116:ASP:HB2	1.81	0.61
33:5I:23:ARG:NH1	33:5I:30:ALA:HB2	2.15	0.61
30:35:124:LYS:HA	30:35:143:GLY:O	2.00	0.61
46:K8:47:ASN:O	46:K8:49:LYS:N	2.32	0.61
8:2E:19:GLU:HA	8:2E:54:ARG:HH12	1.65	0.61
3:B5:5:TYR:CE1	46:G5:30:ARG:HG3	2.35	0.61
8:22:109:PRO:HB2	8:22:115:LEU:HD12	1.82	0.61
9:82:13:ALA:HB2	9:82:68:GLY:HA3	1.82	0.61
15:1H:348:G:C8	32:31:171:PRO:HG3	2.35	0.61
15:1H:1558:C:H3'	15:1H:1559:A:H5"	1.83	0.61
15:1H:2193:G:OP1	15:1H:2193:G:H4'	1.99	0.61
15:1H:2272:U:O2'	15:1H:2273:C:H5'	2.01	0.61
15:1H:2888:C:H4'	16:B8:5:ALA:HB2	1.82	0.61
15:14:242:G:OP2	30:35:50:ARG:NH2	2.32	0.61
29:AI:6:LYS:O	29:AI:7:LYS:HB3	2.01	0.61
43:A5:65:LEU:HD13	43:A5:68:ARG:HD3	1.81	0.61
44:12:77:ALA:HB2	44:12:211:ILE:HD13	1.83	0.61
10:58:96:GLU:O	10:58:98:VAL:N	2.31	0.61
15:1H:810:A:N7	56:1H:3693:HOH:O	2.31	0.61
15:1H:1103:G:HO2'	15:1H:1134:A:N6	1.98	0.61
15:14:1076:A:N6	15:14:1173:G:H2'	2.15	0.61
15:14:1686:C:OP2	56:14:3659:HOH:O	2.16	0.61
18:69:75:LEU:HD22	18:69:76:THR:H	1.64	0.61
41:6I:39:LEU:HD13	41:6I:56:LEU:HB2	1.81	0.61
3:F8:68:ARG:NH1	3:F8:69:TYR:OH	2.34	0.61
52:V1:68:C:H2'	52:V1:69:G:C8	2.36	0.61
1:13:770:A:O2'	1:13:771:C:O5'	2.19	0.61
1:13:1303:G:H2'	1:13:1304:A:H8	1.64	0.61
1:1G:1747:C:OP1	9:82:83:ARG:NH1	2.34	0.61
2:65:89:ARG:HG3	2:65:92:TYR:O	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1957:A:H2'	15:1H:1958:G:O4'	2.01	0.61
15:14:2739:C:OP2	23:29:109:LYS:NZ	2.34	0.61
1:1G:1770:G:H3'	1:1G:1771:G:C8	2.35	0.61
15:1H:598:G:O2'	15:1H:599:C:H3'	2.01	0.61
15:1H:971:C:O4'	31:I8:29:GLN:NE2	2.34	0.61
10:15:106:MET:HE3	15:14:1186:G:H21	1.66	0.61
12:M5:61:LEU:HD21	12:M5:62:LEU:HD22	1.82	0.61
25:42:40:ARG:HH21	25:42:66:MET:HG2	1.66	0.61
31:E5:36:ILE:HD11	31:E5:39:ARG:HG2	1.81	0.61
37:BI:43:LEU:HD13	37:BI:51:GLU:HB3	1.82	0.61
38:88:59:ARG:HA	38:88:59:ARG:HE	1.66	0.61
44:12:9:GLU:HB2	44:12:217:ARG:NH1	2.16	0.61
1:1G:986:C:O2'	1:1G:987:G:O5'	2.15	0.61
16:B8:26:ASP:O	16:B8:49:VAL:HG12	1.99	0.61
15:14:2041:U:O2	36:J5:7:PRO:HG2	2.01	0.61
25:4E:110:LEU:HD13	25:4E:118:ILE:HD13	1.81	0.61
37:BA:87:LYS:O	37:BA:91:LEU:HG	2.01	0.61
47:51:124:GLU:HB3	47:51:132:ARG:HB3	1.82	0.61
52:V4:1:G:H1'	52:V4:73:A:C2	2.36	0.61
1:13:874:C:H2'	1:13:875:C:H6	1.66	0.60
5:L5:37:LYS:HD3	5:L5:39:ARG:HD3	1.83	0.60
1:1G:691:U:H2'	1:1G:692:G:C8	2.36	0.60
1:1G:1249:C:H2'	1:1G:1250:A:O4'	2.01	0.60
14:3E:102:ASP:OD1	14:3E:103:ASN:N	2.33	0.60
15:1H:1236:U:H4'	35:D8:79:VAL:HG22	1.83	0.60
21:68:25:LEU:HD12	21:68:38:VAL:HG22	1.82	0.60
23:29:36:ARG:NH1	23:29:85:ASN:OD1	2.34	0.60
27:85:74:LEU:HD13	27:85:79:PHE:HB2	1.83	0.60
28:I5:63:TYR:CD1	29:AA:9:VAL:HG13	2.35	0.60
44:1E:12:GLU:C	44:1E:16:HIS:HD2	2.04	0.60
3:B5:63:LYS:O	3:B5:63:LYS:HD2	2.02	0.60
8:22:62:ASP:O	8:22:97:LYS:HB2	2.01	0.60
12:Q8:10:ALA:HA	30:78:59:LEU:HD11	1.83	0.60
15:1H:1150:C:H2'	15:1H:1151:A:C8	2.35	0.60
18:61:93:THR:HG22	18:61:119:PRO:HB3	1.82	0.60
15:14:2335:A:N6	15:14:2348:A:H2'	2.14	0.60
15:14:2483:G:N2	15:14:2496:G:O2'	2.23	0.60
27:C8:17:ILE:HG23	27:C8:39:LEU:HD12	1.83	0.60
29:AA:20:LEU:HA	29:AA:23:ASN:HB3	1.83	0.60
37:BI:97:ALA:HB3	37:BI:99:LEU:HD13	1.83	0.60
39:F5:53:VAL:HG22	39:F5:74:VAL:HG22	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:K8:41:ILE:O	46:K8:41:ILE:HG12	2.01	0.60
44:12:16:HIS:HD2	44:12:210:SER:HA	1.65	0.60
50:7E:121:ASP:OD1	50:7E:121:ASP:N	2.26	0.60
8:2E:175:LEU:H	8:2E:175:LEU:HD12	1.65	0.60
50:72:20:TYR:HA	50:72:65:TYR:CZ	2.36	0.60
1:1G:1771:G:H2'	1:1G:1772:G:C8	2.37	0.60
1:1G:1886:C:O2'	1:1G:1910:G:N2	2.32	0.60
4:19:145:VAL:HG13	4:19:191:ALA:HB2	1.83	0.60
12:Q8:49:VAL:HG13	12:Q8:49:VAL:O	1.99	0.60
14:3E:197:PRO:HD3	34:52:16:GLN:HG3	1.82	0.60
15:1H:1134:A:H1'	15:1H:1151:A:H61	1.67	0.60
15:1H:1252:A:C2	15:1H:1290:A:N1	2.69	0.60
15:1H:1543:A:H2'	15:1H:1544:A:C8	2.36	0.60
15:1H:1656:C:H4'	15:1H:1657:A:O5'	2.01	0.60
18:61:8:PRO:HA	18:61:14:ASP:HA	1.82	0.60
15:14:1820:A:C2	15:14:2621:C:H1'	2.36	0.60
24:4A:3:ARG:HA	24:4A:8:GLU:O	2.01	0.60
24:4A:49:THR:HG22	24:4A:51:ALA:H	1.66	0.60
43:A5:96:ILE:H	43:A5:96:ILE:HD13	1.66	0.60
1:13:1052:A:C4	1:13:1054:G:H1'	2.36	0.60
1:13:1313:A:O2'	6:2I:38:ASN:HB3	2.00	0.60
1:13:1586:G:H21	48:1I:55:LYS:HE2	1.65	0.60
10:15:14:VAL:HA	10:15:135:PRO:HD2	1.83	0.60
12:M5:36:LYS:HD3	12:M5:40:GLU:CD	2.21	0.60
15:14:1728:G:N2	15:14:2014:G:N2	2.48	0.60
15:14:2430:G:H4'	30:35:67:MET:N	2.15	0.60
15:14:2848:A:O2'	56:14:3658:HOH:O	2.16	0.60
41:6I:17:ARG:HH11	41:6I:17:ARG:HG3	1.65	0.60
1:13:713:C:H2'	1:13:714:G:C8	2.37	0.60
1:13:1130:C:H2'	1:13:1131:G:C8	2.36	0.60
15:14:1390:U:OP2	15:14:1443:U:O2'	2.14	0.60
15:14:1500:G:H2'	15:14:1501:C:H6	1.67	0.60
23:21:92:THR:O	23:21:95:ILE:HB	2.00	0.60
25:42:6:PHE:HB2	25:42:34:VAL:HG22	1.82	0.60
34:52:2:ARG:HD3	34:52:92:LYS:NZ	2.16	0.60
39:J8:87:PRO:HA	39:J8:90:ILE:HG13	1.82	0.60
45:98:13:HIS:HE1	45:98:15:SER:HB2	1.67	0.60
1:13:1545:G:C6	1:13:1546:A:C6	2.89	0.60
3:B5:71:GLY:HA3	15:14:63:A:O3'	2.02	0.60
4:11:145:VAL:HB	4:11:155:LEU:HD23	1.82	0.60
1:1G:986:C:H1'	1:1G:987:G:C2	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1261:A:H1'	1:1G:1262:G:OP2	2.00	0.60
14:3E:92:VAL:O	14:3E:96:LEU:HD22	2.01	0.60
14:32:127:THR:HG21	14:32:149:ALA:HB2	1.83	0.60
15:14:29:U:H2'	15:14:30:G:C8	2.36	0.60
15:14:467:G:H2'	15:14:468:G:H8	1.67	0.60
15:14:2831:G:OP2	45:55:42:LYS:NZ	2.35	0.60
15:14:2888:C:OP1	16:75:3:ARG:NH1	2.34	0.60
23:21:12:THR:OG1	23:21:13:ARG:N	2.33	0.60
35:95:21:ARG:NH2	35:95:91:TYR:HB2	2.15	0.60
40:49:61:ALA:HB2	40:49:68:PRO:HD3	1.84	0.60
47:51:98:LEU:HD12	47:51:102:ALA:O	2.02	0.60
52:V1:19:G:O2'	52:V1:57:G:N3	2.33	0.60
1:13:1943:G:H2'	1:13:1945:A:OP2	2.01	0.60
1:1G:774:A:H61	49:7A:25:ARG:NH1	2.00	0.60
4:19:35:LYS:NZ	15:14:1850:G:O6	2.32	0.60
12:Q8:11:LYS:HZ2	12:Q8:61:LEU:HD11	1.67	0.60
14:3E:98:GLU:HG2	14:3E:189:PRO:HG2	1.84	0.60
9:82:114:TYR:HE2	48:1A:60:ARG:H	1.50	0.60
15:1H:265:G:H1	15:1H:281:C:H42	1.50	0.60
15:1H:2175:U:H2'	15:1H:2176:G:C8	2.37	0.60
15:1H:2417:C:O5'	15:1H:2417:C:H6	1.84	0.60
15:14:1820:A:H2	15:14:2621:C:H1'	1.66	0.60
15:14:2099:U:H2'	15:14:2100:U:C6	2.36	0.60
15:14:2258:U:OP1	56:14:3660:HOH:O	2.17	0.60
26:1J:93:C:P	38:45:16:ARG:HH21	2.25	0.60
38:88:12:GLN:HG2	38:88:73:PRO:HD2	1.82	0.60
44:12:42:ILE:HD11	44:12:202:PRO:HB2	1.83	0.60
52:V1:35:A:H2'	52:V1:36:A:C1'	2.31	0.60
1:13:1624:A:H2'	1:13:1625:G:C8	2.37	0.60
1:13:1975:U:H2'	1:13:1976:A:H8	1.67	0.60
1:13:2125:A:H2	1:13:2128:G:N1	1.94	0.60
3:B5:53:LYS:HB3	3:B5:82:GLN:HB3	1.81	0.60
1:1G:1580:U:H1'	1:1G:1583:U:H5	1.66	0.60
15:1H:1655:G:OP1	56:1H:3661:HOH:O	2.17	0.60
15:1H:2324:A:C6	15:1H:2325:A:C8	2.89	0.60
22:H8:52:SER:O	22:H8:53:ILE:HG12	2.01	0.60
24:4I:49:THR:HB	24:4I:52:GLU:HG3	1.83	0.60
30:35:85:LEU:HB3	30:35:114:ILE:HD11	1.82	0.60
37:BI:53:LEU:HA	37:BI:56:MET:HB3	1.83	0.60
1:13:1247:C:H5"	1:13:1248:U:H5"	1.83	0.60
1:13:1248:U:H3	14:3E:134:ASP:HB2	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:8I:48:GLU:O	7:8I:50:LYS:HG2	2.02	0.60
1:1G:844:U:O4'	37:BA:103:GLY:HA2	2.01	0.60
18:61:86:THR:HA	18:61:123:LEU:HD13	1.84	0.60
15:14:1272:G:N2	15:14:1275:A:OP2	2.29	0.60
15:14:2265:G:OP1	38:45:85:LYS:NZ	2.28	0.60
27:C8:92:ARG:CZ	35:D8:11:GLN:H	2.14	0.60
28:M8:36:CYS:HA	40:41:112:PRO:HB2	1.84	0.60
25:42:102:ALA:HB1	25:42:106:PRO:HG2	1.82	0.60
30:35:55:ARG:HG2	30:35:56:SER:N	2.17	0.60
38:88:66:ILE:HG22	38:88:67:ARG:H	1.67	0.60
38:45:37:LEU:HD21	38:45:130:LYS:HE2	1.83	0.60
50:7E:87:SER:HB2	50:7E:93:VAL:CB	2.32	0.60
51:Y1:42:U:H4'	51:Y1:43:U:OP2	2.02	0.60
1:13:1017:G:O3'	49:7I:5:ARG:NH1	2.28	0.60
2:A8:106:ARG:CZ	2:A8:107:GLU:HB2	2.32	0.60
2:65:106:ARG:HB3	2:65:112:PHE:O	2.01	0.60
12:Q8:5:LYS:O	12:Q8:6:THR:C	2.39	0.60
12:Q8:48:PHE:HD2	12:Q8:49:VAL:H	1.50	0.60
15:1H:33:U:H4'	15:1H:34:C:OP1	2.02	0.60
15:1H:782:G:N7	56:1H:3676:HOH:O	2.32	0.60
15:1H:1606:C:H2'	15:1H:1607:C:H6	1.67	0.60
15:1H:2862:U:O4	16:B8:23:ARG:NH2	2.31	0.60
25:4E:87:SER:HB3	25:4E:131:ILE:HG12	1.84	0.60
27:C8:92:ARG:NH1	27:C8:94:ASN:OD1	2.35	0.60
27:85:74:LEU:HD11	27:85:110:VAL:HG13	1.84	0.60
44:1E:115:LEU:HD13	44:1E:145:LEU:HB3	1.84	0.60
1:13:1130:C:H2'	1:13:1131:G:H8	1.66	0.59
9:82:99:LEU:HB3	9:82:101:PHE:CE1	2.37	0.59
11:C5:52:SER:HA	11:C5:55:TYR:O	2.02	0.59
18:61:73:GLU:HG3	18:61:136:VAL:HG23	1.84	0.59
15:14:1203:G:OP2	27:85:58:ARG:NH1	2.35	0.59
15:14:2815:A:H5"	15:14:2907:U:H4'	1.83	0.59
32:31:160:ASN:OD1	32:31:163:VAL:HG23	2.02	0.59
31:E5:32:ARG:O	31:E5:34:GLY:N	2.31	0.59
44:1E:5:ILE:HG13	44:1E:6:THR:H	1.67	0.59
49:7I:28:ARG:NH1	49:7I:29:ASP:OD1	2.34	0.59
52:X1:43:C:H2'	52:X1:44:G:C8	2.37	0.59
1:13:1054:G:N7	14:3E:35:ARG:NH1	2.49	0.59
1:13:1314:G:O2'	1:13:1315:U:H5'	2.02	0.59
1:13:1756:C:H42	1:13:1771:G:H1	1.50	0.59
1:13:1854:A:OP1	29:AI:80:TYR:OH	2.19	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1854:A:OP2	24:4I:111:LYS:HE3	2.02	0.59
14:3E:104:VAL:HG21	14:3E:140:VAL:HG21	1.83	0.59
15:1H:279:G:O6	56:1H:3658:HOH:O	2.13	0.59
15:1H:1967:C:OP2	15:1H:1968:U:O2'	2.16	0.59
15:1H:2350:A:C8	15:1H:2352:G:C5	2.90	0.59
14:32:150:GLU:C	14:32:152:SER:H	2.05	0.59
15:14:140:A:H8	15:14:1644:G:H21	1.50	0.59
21:25:19:ILE:HG22	21:25:43:VAL:HA	1.84	0.59
47:59:10:PRO:HD3	47:59:50:VAL:O	2.01	0.59
52:X4:44:G:H3'	52:X4:45:U:C6	2.37	0.59
1:13:1044:C:OP1	14:3E:137:SER:OG	2.19	0.59
15:1H:417:G:N1	30:78:71:VAL:HG12	2.18	0.59
15:1H:1158:G:O2'	15:1H:1159:A:O5'	2.18	0.59
15:1H:2488:U:H2'	15:1H:2489:C:C6	2.37	0.59
15:14:1954:G:H4'	15:14:1955:G:OP1	2.00	0.59
15:14:2302:A:H62	15:14:2359:U:H3	1.50	0.59
23:21:111:ARG:HD2	23:21:160:TYR:CE2	2.37	0.59
44:12:163:PHE:HD1	44:12:185:ILE:HG13	1.67	0.59
8:2E:26:LYS:HG3	8:2E:27:LYS:NZ	2.17	0.59
1:13:1618:C:O2	33:5I:4:LYS:NZ	2.35	0.59
1:13:2004:U:H2'	1:13:2005:A:H8	1.67	0.59
1:13:2080:G:OP1	37:BI:39:LYS:NZ	2.26	0.59
1:1G:1508:G:O2'	1:1G:1537:A:N1	2.32	0.59
10:58:131:GLN:NE2	10:58:132:ALA:HB2	2.16	0.59
15:14:640:U:H1'	15:14:641:G:H5"	1.84	0.59
15:14:888:U:H2'	15:14:889:C:C6	2.38	0.59
15:14:901:G:H2'	15:14:902:G:H8	1.68	0.59
15:14:1642:G:H2'	15:14:1643:G:C8	2.37	0.59
35:D8:59:ALA:HB2	35:D8:96:ILE:HD13	1.82	0.59
45:98:27:SER:HB3	45:98:34:ILE:HD11	1.85	0.59
50:7E:109:ILE:HG12	50:7E:137:VAL:HG23	1.84	0.59
52:V1:9:A:H2'	52:V1:10:G:N7	2.17	0.59
52:V1:36:A:HO2'	52:V1:37:A:P	2.25	0.59
52:V4:72:C:H2'	52:V4:73:A:H5"	1.85	0.59
3:B5:8:ILE:O	46:G5:36:ARG:NH2	2.35	0.59
13:3I:83:VAL:HG21	13:3I:100:ILE:HD13	1.85	0.59
15:1H:2651:U:OP2	23:21:79:ARG:NH2	2.35	0.59
15:1H:2772:U:H1'	15:1H:2773:A:H5"	1.84	0.59
15:14:612:C:O2	30:35:33:ARG:NH1	2.36	0.59
15:14:735:G:N2	15:14:837:A:H61	2.01	0.59
15:14:1805:C:H1'	15:14:1820:A:C8	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:95:43:GLU:HG3	35:95:44:LYS:HZ1	1.67	0.59
47:59:42:ARG:NH1	47:59:53:GLU:O	2.32	0.59
52:V1:16:U:H1'	52:V1:60:U:O2	2.03	0.59
52:V1:72:C:C2'	52:V1:73:A:H5"	2.30	0.59
1:13:1278:G:H2'	1:13:1279:G:H8	1.67	0.59
2:A8:83:LYS:HE3	2:A8:110:LEU:HD12	1.83	0.59
1:1G:1638:A:H2'	1:1G:1639:A:C8	2.38	0.59
15:1H:2708:A:H2'	15:1H:2709:G:H8	1.67	0.59
11:C5:59:GLY:O	11:C5:61:ILE:HG12	2.01	0.59
12:M5:32:LEU:HD12	12:M5:36:LYS:HG2	1.85	0.59
29:AI:5:LEU:HB3	29:AI:10:PHE:HE1	1.67	0.59
34:52:11:ASN:O	34:52:14:LEU:HD22	2.01	0.59
43:A5:71:VAL:HA	43:A5:107:LEU:HD12	1.85	0.59
43:A5:84:ARG:HB2	43:A5:96:ILE:HD11	1.84	0.59
48:1A:3:LYS:HD2	48:1A:77:PRO:HG3	1.84	0.59
51:Y4:35:A:H8	51:Y4:35:A:OP2	1.86	0.59
1:1G:804:U:H2'	1:1G:805:C:C6	2.37	0.59
1:1G:1881:C:H5"	48:1A:45:ARG:HH12	1.66	0.59
14:3E:22:LYS:HB2	14:3E:26:CYS:SG	2.43	0.59
15:1H:1158:G:HO2'	15:1H:1159:A:P	2.25	0.59
13:3A:41:ARG:HB3	13:3A:41:ARG:NH1	2.12	0.59
15:14:2136:C:H42	15:14:2172:G:H21	1.51	0.59
23:29:151:TYR:HD2	23:29:154:LYS:HZ3	1.50	0.59
31:I8:63:VAL:HG23	31:I8:64:ASP:O	2.02	0.59
42:62:113:GLU:HB2	42:62:119:ARG:HG2	1.83	0.59
47:59:42:ARG:HD2	47:59:53:GLU:HB3	1.84	0.59
1:13:1638:A:H4'	29:AI:14:HIS:ND1	2.18	0.59
9:8E:47:LEU:H	9:8E:47:LEU:HD22	1.68	0.59
1:1G:1099:G:N2	1:1G:1102:G:N7	2.51	0.59
1:1G:1291:G:O2'	1:1G:1465:G:OP1	2.20	0.59
1:1G:1932:G:H22	1:1G:1958:G:C2'	2.16	0.59
4:19:208:LYS:HZ3	15:14:778:G:P	2.25	0.59
15:1H:2160:A:H4'	15:1H:2185:G:H4'	1.84	0.59
16:75:1:MET:HA	16:75:5:ALA:HB3	1.84	0.59
23:21:51:PHE:CE2	23:21:52:LEU:HG	2.37	0.59
42:6E:144:MET:HE1	52:V1:30:G:H21	1.67	0.59
52:X1:67:C:H2'	52:X1:68:C:H6	1.66	0.59
1:13:2002:A:O2'	42:6E:28:ASN:HB3	2.03	0.59
2:A8:27:SER:HA	2:A8:88:ASP:HB2	1.84	0.59
2:65:34:HIS:NE2	2:65:54:LEU:HD13	2.18	0.59
12:Q8:34:TRP:O	12:Q8:36:LYS:N	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1583:G:N3	15:1H:1583:G:H3'	2.17	0.59
15:1H:2290:C:H6	15:1H:2290:C:H5'	1.68	0.59
15:1H:2533:A:H5'	15:1H:2533:A:H8	1.68	0.59
15:14:355:A:H2	15:14:1258:A:O2'	1.85	0.59
15:14:1198:G:H2'	15:14:1199:C:C6	2.37	0.59
36:N8:52:TYR:HD1	36:N8:53:ALA:H	1.51	0.59
42:62:111:ARG:NH2	42:62:122:HIS:HB3	2.18	0.59
47:51:77:LYS:HE2	47:51:138:LYS:HD2	1.85	0.59
44:12:19:HIS:CE1	44:12:206:ASP:HB2	2.37	0.59
1:13:1495:A:C4	1:13:1497:G:N7	2.71	0.59
1:13:1714:U:H3	1:13:1727:G:H22	1.49	0.59
1:13:1958:G:OP1	1:13:1958:G:H4'	2.03	0.59
2:A8:41:ASP:OD2	2:A8:44:LYS:HB2	2.03	0.59
1:1G:1130:C:H2'	1:1G:1131:G:C8	2.38	0.59
1:1G:1253:C:H2'	1:1G:1254:G:C8	2.37	0.59
1:1G:1806:A:OP2	9:82:93:ARG:NH2	2.35	0.59
10:58:39:ARG:NH2	10:58:41:ASP:OD2	2.35	0.59
15:1H:2056:A:C6	15:1H:2513:C:H1'	2.37	0.59
28:M8:43:TYR:CG	28:M8:44:THR:N	2.71	0.59
25:42:110:LEU:HD13	25:42:118:ILE:HG21	1.83	0.59
34:52:77:ARG:HH21	34:52:81:ILE:HD11	1.68	0.59
35:95:41:GLY:HA3	35:95:46:VAL:HG13	1.85	0.59
1:1G:1106:G:H2'	1:1G:1107:G:C8	2.38	0.58
1:1G:1890:C:H5'	1:1G:1891:C:OP2	2.03	0.58
2:65:41:ASP:HB2	2:65:48:LEU:HD21	1.84	0.58
15:1H:2150:G:H1	15:1H:2196:A:H5"	1.68	0.58
15:1H:2327:U:H5'	40:41:88:ILE:HD12	1.84	0.58
25:42:142:LEU:O	25:42:143:ARG:NE	2.36	0.58
34:52:11:ASN:HB3	34:52:14:LEU:HD13	1.85	0.58
39:J8:21:ARG:HG3	39:J8:21:ARG:NH1	2.11	0.58
49:7I:21:VAL:O	49:7I:33:ILE:N	2.34	0.58
1:13:677:G:O2'	1:13:694:C:N4	2.36	0.58
1:13:1046:U:O4	14:3E:2:GLY:N	2.36	0.58
1:13:1639:A:H2'	1:13:1640:A:C8	2.38	0.58
1:13:1918:G:OP1	42:6E:37:ASN:ND2	2.36	0.58
8:22:84:ILE:HG12	8:22:88:ARG:HH21	1.67	0.58
1:1G:870:U:O2'	49:7A:23:ASP:OD2	2.21	0.58
1:1G:1165:C:OP2	56:1G:2404:HOH:O	2.16	0.58
10:58:46:VAL:CG1	10:58:48:MET:HG3	2.33	0.58
15:1H:276:C:H2'	15:1H:277:C:C6	2.38	0.58
15:1H:1483:A:H61	15:1H:1608:A:H62	1.51	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2415:G:H2'	15:1H:2416:U:C6	2.38	0.58
15:1H:2533:A:H5'	15:1H:2533:A:C8	2.39	0.58
11:C5:39:VAL:O	11:C5:40:GLU:HB2	2.03	0.58
15:14:38:A:H1'	32:39:48:THR:HB	1.85	0.58
15:14:518:G:H2'	15:14:519:A:C8	2.38	0.58
15:14:1301:G:N3	27:85:33:ARG:HD2	2.18	0.58
15:14:2572:G:H2'	15:14:2573:C:H6	1.67	0.58
27:C8:92:ARG:HD2	35:D8:11:GLN:HB2	1.83	0.58
28:M8:16:CYS:HB3	28:M8:18:CYS:SG	2.43	0.58
33:5I:41:ARG:HB2	48:1I:49:VAL:HG23	1.84	0.58
45:98:13:HIS:CE1	45:98:15:SER:HB2	2.38	0.58
52:V1:16:U:H2'	52:V1:17:C:H5'	1.86	0.58
1:13:1691:C:H3'	1:13:1692:G:H2'	1.86	0.58
1:1G:1088:A:O5'	1:1G:1115:G:N2	2.35	0.58
12:Q8:26:LYS:HG2	15:1H:2376:A:OP1	2.03	0.58
15:1H:155:C:N4	15:1H:161:G:H1	1.99	0.58
15:1H:1582:C:C2	15:1H:1583:G:N2	2.72	0.58
15:1H:1637:C:H2'	15:1H:1638:C:H6	1.67	0.58
15:1H:2416:U:H2'	15:1H:2417:C:C1'	2.33	0.58
26:1J:82:U:H2'	26:1J:83:G:N2	2.16	0.58
38:88:25:ASP:N	38:88:102:VAL:HG22	2.18	0.58
1:13:769:G:H4'	1:13:770:A:H5"	1.85	0.58
1:13:806:G:H2'	1:13:807:G:H8	1.69	0.58
4:11:50:THR:HB	15:1H:1839:U:O2	2.03	0.58
1:1G:897:U:H2'	1:1G:898:G:C8	2.38	0.58
1:1G:1379:G:H1'	41:6A:22:THR:OG1	2.02	0.58
15:14:1585:A:C8	15:14:1586:C:H1'	2.37	0.58
15:14:2149:G:H1	15:14:2198:A:N6	2.02	0.58
18:69:73:GLU:HG3	18:69:136:VAL:HG23	1.85	0.58
26:16:93:C:H5'	38:88:18:LYS:HA	1.85	0.58
24:4A:34:LEU:O	24:4A:38:GLY:N	2.36	0.58
42:6E:27:ILE:HD12	42:6E:40:ALA:HA	1.85	0.58
44:1E:8:LYS:HG2	44:1E:9:GLU:H	1.67	0.58
49:7I:53:VAL:HG13	49:7I:79:VAL:HG22	1.85	0.58
47:59:41:MET:N	47:59:41:MET:SD	2.77	0.58
1:13:720:C:HO2'	1:13:734:G:H22	1.50	0.58
1:13:1853:C:H2'	24:4I:103:THR:HB	1.85	0.58
7:8I:55:ASP:HA	7:8I:79:SER:HA	1.84	0.58
9:8E:43:ALA:HA	9:8E:74:ILE:HD13	1.85	0.58
1:1G:1974:G:O2'	1:1G:2001:G:O6	2.18	0.58
12:Q8:50:LEU:C	12:Q8:52:LYS:H	2.07	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2247:U:P	39:J8:40:ARG:HH12	2.26	0.58
12:M5:6:THR:OG1	15:14:233:U:OP1	2.16	0.58
12:M5:52:LYS:HG2	12:M5:52:LYS:O	2.00	0.58
15:14:1252:A:H2	15:14:1290:A:N1	2.01	0.58
15:14:1987:C:O2'	15:14:1989:G:OP2	2.22	0.58
15:14:2367:A:C2	31:E5:33:ALA:O	2.57	0.58
22:H8:79:ARG:CZ	38:88:20:ALA:HB3	2.32	0.58
28:I5:56:VAL:HG22	28:I5:57:GLU:HG3	1.85	0.58
38:88:89:ASN:O	38:88:91:GLU:HB2	2.03	0.58
42:6E:31:MET:HB2	42:6E:39:ALA:HB2	1.85	0.58
39:F5:92:LYS:O	39:F5:94:LEU:N	2.36	0.58
47:51:37:VAL:HG22	47:51:68:THR:HG22	1.85	0.58
47:51:86:GLU:HG3	47:51:165:ALA:HB3	1.84	0.58
48:1A:4:ILE:HA	48:1A:100:THR:HG22	1.85	0.58
50:7E:120:THR:OG1	50:7E:123:GLU:HG3	2.02	0.58
8:2E:58:GLU:HB2	8:2E:65:ALA:HB3	1.86	0.58
50:72:99:GLU:OE2	50:72:100:ILE:N	2.24	0.58
1:13:1703:C:H4'	44:1E:175:ARG:HH22	1.69	0.58
1:13:1867:U:OP2	42:6E:116:ALA:N	2.36	0.58
1:1G:1865:A:N3	1:1G:1868:G:O2'	2.27	0.58
10:58:40:PRO:O	27:C8:64:ARG:HG2	2.03	0.58
2:65:89:ARG:HH22	15:14:2309:C:P	2.27	0.58
13:3I:93:LEU:HB2	13:3I:96:VAL:CG1	2.33	0.58
15:1H:355:A:O2'	15:1H:356:A:H8	1.86	0.58
15:14:673:A:H2'	15:14:674:G:O4'	2.04	0.58
15:14:1135:G:H2'	15:14:1137:G:H1'	1.86	0.58
22:H8:81:ARG:NH2	38:88:138:ASP:OD1	2.34	0.58
24:4A:29:ARG:HB3	24:4A:64:TRP:CZ2	2.38	0.58
32:31:177:ALA:HB1	32:31:178:PRO:HD2	1.84	0.58
35:D8:5:VAL:HG11	35:D8:57:VAL:HG11	1.85	0.58
1:13:1018:G:H5'	49:7I:5:ARG:HH12	1.68	0.58
1:1G:1543:U:H2'	1:1G:1544:U:C6	2.38	0.58
1:1G:1602:C:H5	1:1G:1603:C:C6	2.21	0.58
15:1H:1478:G:H2'	15:1H:1479:C:C6	2.38	0.58
16:B8:26:ASP:CB	16:B8:92:GLY:H	2.17	0.58
16:B8:74:ARG:HD3	16:B8:76:PHE:CZ	2.39	0.58
16:B8:99:LEU:HB3	16:B8:101:PHE:CE1	2.38	0.58
15:14:1059:G:O2'	15:14:1061:C:O4'	2.18	0.58
27:85:83:LEU:HD23	27:85:88:ILE:HB	1.84	0.58
32:39:157:VAL:HB	32:39:194:MET:HB3	1.86	0.58
40:41:33:ARG:O	40:41:162:THR:HG23	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:98:20:LEU:HD21	45:98:40:LYS:HD3	1.84	0.58
46:K8:14:ARG:NH1	46:K8:66:GLU:OE2	2.36	0.58
8:2E:17:ASP:O	8:2E:54:ARG:NH2	2.36	0.58
8:22:153:VAL:HG22	8:22:198:VAL:HG13	1.86	0.58
1:1G:1579:U:H4'	29:AA:83:HIS:HB3	1.86	0.58
1:1G:1596:G:O3'	33:5A:41:ARG:NH2	2.25	0.58
1:1G:1757:C:N3	1:1G:1767:G:N1	2.52	0.58
1:1G:1785:A:H8	1:1G:1786:C:C5	2.22	0.58
12:Q8:7:HIS:CD2	30:78:50:ARG:HD3	2.39	0.58
15:1H:69:G:H21	15:1H:70:A:N6	2.02	0.58
15:1H:1106:U:H3	15:1H:1128:A:H61	1.50	0.58
15:1H:1924:G:H1	15:1H:1927:C:N4	2.01	0.58
15:1H:2803:C:H1'	23:21:62:PRO:HG3	1.84	0.58
11:C5:86:ARG:NE	11:C5:87:LYS:O	2.37	0.58
12:M5:61:LEU:H	12:M5:61:LEU:CD1	2.17	0.58
27:85:92:ARG:C	27:85:94:ASN:H	2.07	0.58
32:39:65:TRP:CZ3	32:39:72:ARG:HB3	2.37	0.58
38:88:60:ARG:HB3	38:88:60:ARG:HH11	1.68	0.58
37:BA:74:LYS:HG3	37:BA:75:ASN:H	1.69	0.58
45:98:53:HIS:HD1	45:98:94:TYR:HH	1.50	0.58
47:51:170:ARG:O	47:51:171:LEU:HD12	2.04	0.58
44:12:76:GLN:NE2	44:12:206:ASP:OD1	2.37	0.58
3:F8:3:THR:HA	3:F8:6:ASP:HB2	1.86	0.58
1:13:2079:G:H2'	37:BI:39:LYS:HE2	1.86	0.58
1:1G:1050:G:H1	1:1G:1074:C:H42	1.51	0.58
1:1G:1975:U:N3	1:1G:2002:A:H2	1.91	0.58
7:8A:17:LYS:HD3	7:8A:47:PRO:HA	1.85	0.58
15:1H:70:A:C2	3:F8:31:HIS:CE1	2.87	0.58
15:1H:535:G:H5"	15:1H:535:G:N3	2.19	0.58
16:B8:58:ASN:C	16:B8:58:ASN:HD22	2.07	0.58
12:M5:58:ILE:HG22	30:35:49:ARG:HD2	1.86	0.58
22:D5:5:LEU:HD11	22:D5:44:PHE:HA	1.86	0.58
23:29:49:LEU:HD22	23:29:91:VAL:HG21	1.86	0.58
39:J8:92:LYS:H	39:J8:95:LEU:HD12	1.69	0.58
52:V4:9:A:H2'	52:V4:10:G:N7	2.18	0.58
1:13:800:A:H1'	1:13:985:A:C8	2.39	0.58
1:13:1586:G:H5'	56:13:2445:HOH:O	2.04	0.58
1:13:1952:C:H4'	20:1F:17:THR:HG21	1.85	0.58
1:1G:1052:A:C5	1:1G:1054:G:H1'	2.39	0.58
1:1G:1313:A:N6	56:1G:2410:HOH:O	2.33	0.58
1:1G:1456:U:H3	1:1G:1495:A:N6	1.99	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:82:112:LYS:HE3	9:82:118:LYS:N	2.19	0.58
15:1H:1707:C:H2'	15:1H:1708:C:C6	2.39	0.58
15:14:657:G:N2	15:14:660:A:OP2	2.33	0.58
19:9A:22:VAL:HG22	19:9A:23:LYS:H	1.69	0.58
29:AA:20:LEU:O	29:AA:23:ASN:N	2.36	0.58
30:35:82:GLY:HA2	30:35:113:LYS:O	2.04	0.58
30:35:144:GLU:CD	30:35:144:GLU:N	2.57	0.58
42:62:15:ASP:OD1	42:62:44:TYR:OH	2.21	0.58
1:13:1114:G:O2'	1:13:1115:G:OP2	2.18	0.57
1:13:1681:G:N7	1:13:1826:U:H3'	2.19	0.57
8:22:76:VAL:HG21	8:22:103:VAL:HG21	1.86	0.57
1:1G:1647:G:H3'	1:1G:1648:G:H5"	1.85	0.57
7:8A:88:TYR:OH	7:8A:92:ARG:NH1	2.37	0.57
15:1H:26:G:C6	15:1H:27:G:N1	2.71	0.57
15:1H:593:U:O4	56:1H:3643:HOH:O	2.17	0.57
15:1H:2150:G:H21	15:1H:2198:A:N6	2.01	0.57
15:14:1044:A:H4'	27:85:92:ARG:NE	2.19	0.57
15:14:1127:C:N4	15:14:1136:A:OP1	2.37	0.57
15:14:1662:G:O2'	56:14:3663:HOH:O	2.17	0.57
16:75:88:ILE:HD11	16:75:125:ARG:HH12	1.69	0.57
24:4I:39:ILE:HD12	24:4I:56:LEU:HD23	1.85	0.57
29:AI:78:ARG:HD3	29:AI:78:ARG:O	2.04	0.57
26:1J:46:G:H1'	26:1J:49:C:H42	1.69	0.57
49:7I:4:ILE:HG13	49:7I:66:PRO:HA	1.86	0.57
47:59:76:VAL:HA	47:59:79:VAL:HG22	1.85	0.57
1:13:1303:G:H2'	1:13:1304:A:C8	2.39	0.57
9:8E:83:ARG:HA	9:8E:86:VAL:HG12	1.86	0.57
11:G8:84:ARG:HD2	11:G8:84:ARG:O	2.04	0.57
15:1H:1557:A:H4'	15:1H:1558:C:C1'	2.34	0.57
15:1H:2875:G:H2'	15:1H:2876:C:H6	1.70	0.57
14:32:178:VAL:HA	14:32:181:MET:H	1.68	0.57
15:14:1389:U:H4'	15:14:1390:U:OP2	2.04	0.57
15:14:1828:U:H2'	15:14:1829:C:C6	2.40	0.57
23:29:55:ASN:O	23:29:57:LYS:NZ	2.27	0.57
26:1J:23:G:H2'	26:1J:24:U:O4'	2.04	0.57
36:N8:30:LEU:HD23	36:N8:41:PRO:HA	1.85	0.57
46:K8:37:PHE:O	46:K8:41:ILE:HG22	2.05	0.57
50:7E:9:MET:HG3	50:7E:26:VAL:HG21	1.86	0.57
3:F8:1:MET:O	3:F8:3:THR:N	2.37	0.57
47:59:6:ARG:HH11	47:59:6:ARG:N	1.98	0.57
47:59:163:TYR:CE1	47:59:169:VAL:HG21	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:2E:83:ARG:O	8:2E:86:VAL:HG22	2.04	0.57
8:2E:130:VAL:O	8:2E:134:ILE:HG12	2.04	0.57
1:13:877:G:H5"	7:8I:42:TYR:HE2	1.69	0.57
1:13:1504:G:P	13:3I:12:ARG:HH22	2.27	0.57
1:13:1779:A:H5'	48:1I:41:PRO:HA	1.86	0.57
1:13:2051:G:OP1	21:68:49:ARG:NH2	2.35	0.57
1:1G:1856:A:OP1	24:4A:116:THR:HG23	2.04	0.57
12:Q8:45:GLY:O	12:Q8:46:ARG:HG2	2.05	0.57
15:1H:1820:A:H2	15:1H:2621:C:H1'	1.69	0.57
15:1H:1892:G:H8	15:1H:1892:G:OP2	1.88	0.57
16:B8:99:LEU:HB3	16:B8:101:PHE:HE1	1.69	0.57
15:14:271:C:N4	15:14:273:U:O2	2.37	0.57
15:14:1435:C:OP2	15:14:1445:U:H5	1.87	0.57
15:14:1486:C:H6	15:14:1486:C:H5"	1.68	0.57
21:68:9:GLU:OE1	21:68:18:LYS:HE3	2.04	0.57
22:H8:111:VAL:HG11	22:H8:146:ILE:HB	1.85	0.57
23:21:39:PRO:HA	23:21:44:TYR:N	2.19	0.57
37:BI:56:MET:HG3	37:BI:88:VAL:HG21	1.84	0.57
38:45:21:THR:HG22	38:45:23:GLY:HA3	1.85	0.57
3:B5:31:HIS:NE2	15:14:70:A:C2	2.69	0.57
1:1G:2050:G:H5"	21:25:48:PRO:HB3	1.85	0.57
11:G8:94:LYS:HG3	11:G8:95:LYS:H	1.70	0.57
15:1H:1067:U:H3	15:1H:1191:A:H62	1.53	0.57
15:14:85:C:O2'	15:14:102:U:O2'	2.18	0.57
15:14:95:G:H4'	46:G5:48:HIS:CD2	2.40	0.57
15:14:1373:G:C2	15:14:1380:A:C2	2.93	0.57
29:AI:51:VAL:O	29:AI:57:HIS:HA	2.05	0.57
38:45:12:GLN:HG2	38:45:73:PRO:HD2	1.85	0.57
39:F5:64:ALA:HA	39:F5:67:ILE:HG12	1.86	0.57
48:1A:32:ALA:HA	48:1A:76:ASN:HB2	1.84	0.57
49:7I:4:ILE:HA	49:7I:20:VAL:O	2.04	0.57
1:13:695:U:C2	1:13:1002:G:N2	2.72	0.57
1:1G:1759:G:H2'	1:1G:1760:C:H6	1.68	0.57
1:1G:1786:C:N3	1:1G:1788:G:C8	2.73	0.57
4:19:69:ARG:NE	4:19:105:ILE:HD11	2.20	0.57
13:3I:38:THR:HG22	13:3I:39:VAL:HG23	1.86	0.57
15:1H:2695:C:H5'	23:21:189:PRO:HA	1.87	0.57
15:14:1229:C:H2'	15:14:1230:A:C8	2.39	0.57
15:14:1327:A:H5"	45:55:36:THR:HG22	1.84	0.57
15:14:2713:U:H2'	15:14:2714:C:C6	2.39	0.57
21:68:87:ILE:HD12	21:68:91:LEU:HA	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:68:93:PRO:HG3	21:68:114:ILE:HG12	1.86	0.57
18:69:6:LEU:HD13	18:69:37:VAL:HG23	1.86	0.57
21:25:68:GLU:OE2	21:25:78:ARG:NH1	2.37	0.57
29:AI:18:LYS:HB3	29:AI:31:ILE:HD12	1.85	0.57
29:AI:41:VAL:HB	29:AI:42:PRO:HA	1.86	0.57
29:AA:80:TYR:CZ	29:AA:82:GLY:HA2	2.39	0.57
40:49:50:ALA:HA	40:49:53:LEU:HD21	1.85	0.57
44:1E:184:VAL:N	44:1E:198:ASP:OD2	2.36	0.57
52:V4:19:G:O2'	52:V4:57:G:N3	2.34	0.57
1:13:1325:A:N1	1:13:1426:C:O2'	2.35	0.57
2:A8:56:LEU:HB3	2:A8:58:LEU:HD21	1.86	0.57
1:1G:1876:C:O2'	9:82:73:GLN:OE1	2.22	0.57
1:1G:2066:G:N1	1:1G:2086:C:N3	2.44	0.57
10:58:137:LYS:HE3	10:58:138:LEU:O	2.05	0.57
2:65:54:LEU:O	2:65:56:LEU:N	2.36	0.57
13:3I:8:ASN:HA	13:3I:11:VAL:HG23	1.85	0.57
15:1H:1131:U:H3'	15:1H:1132:A:H5"	1.87	0.57
14:32:14:ARG:HA	14:32:39:PRO:HB3	1.86	0.57
15:14:1391:A:H2	15:14:1651:U:N3	2.03	0.57
15:14:2626:U:C4	36:J5:3:LYS:HG3	2.38	0.57
15:14:2836:A:OP1	23:29:113:PHE:HB2	2.05	0.57
26:1J:44:C:O2'	40:49:67:LYS:O	2.14	0.57
32:31:127:GLU:HA	32:31:127:GLU:OE2	1.93	0.57
35:D8:35:LEU:HB2	35:D8:37:VAL:HG23	1.86	0.57
36:N8:40:LYS:HD3	36:N8:46:CYS:SG	2.45	0.57
37:BI:38:LYS:O	37:BI:41:ILE:HG13	2.05	0.57
38:88:110:THR:HG23	38:88:113:GLN:OE1	2.04	0.57
3:F8:1:MET:C	3:F8:3:THR:H	2.08	0.57
8:2E:136:GLN:HG2	8:2E:140:ARG:NH1	2.19	0.57
1:13:769:G:N3	1:13:835:U:H5"	2.19	0.57
1:13:1761:G:H2'	1:13:1762:G:C8	2.39	0.57
1:13:1860:G:H2'	1:13:1861:C:C6	2.40	0.57
12:Q8:27:THR:HG23	12:Q8:42:ARG:HH21	1.70	0.57
12:Q8:59:LYS:CE	12:Q8:60:LEU:HD21	2.33	0.57
15:1H:930:G:H3'	15:1H:931:G:H5"	1.86	0.57
15:1H:2800:C:O2'	23:21:42:ASP:OD1	2.19	0.57
18:61:40:THR:O	18:61:44:LEU:HB2	2.05	0.57
15:14:287:C:O2'	15:14:288:G:H5'	2.05	0.57
15:14:2330:G:H2'	15:14:2331:C:H6	1.69	0.57
23:21:51:PHE:O	23:21:74:PRO:HB2	2.05	0.57
26:16:2:A:N6	26:16:122:A:H61	2.00	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:M8:62:ARG:HD2	29:AI:6:LYS:HE3	1.86	0.57
40:41:72:ARG:HH21	40:41:87:PRO:HG3	1.70	0.57
37:BA:26:ASN:HB2	37:BA:71:THR:HG23	1.86	0.57
47:51:154:PRO:HD3	47:51:162:ILE:O	2.05	0.57
4:11:136:ILE:O	4:11:168:ARG:NH2	2.38	0.57
1:1G:1602:C:C5	1:1G:1603:C:C6	2.92	0.57
1:1G:1639:A:H8	1:1G:1639:A:O5'	1.88	0.57
15:1H:720:C:OP1	30:78:42:SER:O	2.23	0.57
15:1H:912:A:H2'	15:1H:913:G:C8	2.39	0.57
11:C5:17:SER:CB	11:C5:71:LYS:HD2	2.34	0.57
15:14:1341:U:H2'	15:14:1342:C:C6	2.40	0.57
20:1B:2:GLY:O	20:1B:4:GLY:N	2.38	0.57
22:D5:39:VAL:HG21	22:D5:44:PHE:HD2	1.70	0.57
26:1J:17:A:H5"	26:1J:18:G:H8	1.68	0.57
27:85:8:VAL:HG21	27:85:12:ARG:HH21	1.69	0.57
1:13:1379:G:N3	41:6I:23:GLY:HA3	2.20	0.57
6:2A:85:ARG:HD3	6:2A:113:PRO:HD3	1.86	0.57
1:1G:1254:G:H2'	1:1G:1255:U:H6	1.70	0.57
1:1G:1762:G:C2	1:1G:1763:U:H1'	2.39	0.57
11:G8:9:LYS:HA	11:G8:27:VAL:HG22	1.87	0.57
13:3I:93:LEU:HB2	13:3I:96:VAL:HG13	1.85	0.57
15:1H:939:A:H2'	15:1H:940:G:H5'	1.87	0.57
15:1H:1381:G:N2	15:1H:1658:A:H2'	2.20	0.57
15:1H:1640:G:H2'	15:1H:1641:C:H6	1.70	0.57
15:1H:2324:A:C5	15:1H:2325:A:H8	2.22	0.57
11:C5:44:ILE:HD12	11:C5:45:VAL:H	1.70	0.57
15:14:17:G:H4'	27:85:25:TRP:CH2	2.39	0.57
15:14:1574:G:H2'	15:14:1575:G:H8	1.70	0.57
29:AI:40:ILE:HA	29:AI:44:MET:SD	2.43	0.57
38:88:14:ARG:HG2	38:88:41:TRP:HH2	1.70	0.57
42:6E:62:PHE:HD1	42:6E:124:LEU:HD11	1.70	0.57
45:98:57:ARG:HB3	45:98:59:ASP:OD2	2.05	0.57
51:Y1:35:A:H2'	51:Y1:36:G:O4'	2.04	0.57
8:22:8:ILE:O	8:22:11:ARG:N	2.38	0.57
1:1G:1688:C:HO2'	48:1A:56:HIS:HD1	1.53	0.57
1:1G:1745:G:O3'	9:82:104:ARG:HD2	2.05	0.57
15:1H:2248:U:H2'	15:1H:2249:G:C8	2.40	0.57
15:14:2277:U:O2'	15:14:2278:C:H5'	2.05	0.57
15:14:2417:C:H5	15:14:2430:G:H22	1.52	0.57
22:D5:81:ARG:HE	38:45:132:VAL:HG21	1.70	0.57
41:6A:2:PRO:O	41:6A:38:ARG:NH2	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:98:29:LEU:HD23	45:98:70:LEU:HD11	1.86	0.57
47:51:154:PRO:HB3	47:51:163:TYR:CE2	2.39	0.57
49:7A:22:THR:HA	49:7A:33:ILE:HG13	1.86	0.57
1:13:1047:G:H2'	1:13:1048:G:H8	1.70	0.56
1:13:1456:U:C5	1:13:1493:U:C4	2.92	0.56
1:13:1562:G:H2'	1:13:1563:C:C6	2.39	0.56
4:19:8:PRO:O	15:14:1745:G:H1'	2.04	0.56
4:19:261:LYS:NZ	15:14:2243:G:OP1	2.34	0.56
12:Q8:18:ALA:O	12:Q8:19:SER:OG	2.21	0.56
7:8A:81:ARG:HB3	7:8A:84:LEU:HD12	1.85	0.56
15:14:1038:A:H5'	15:14:1038:A:C8	2.36	0.56
15:14:2852:G:H5'	45:55:46:GLY:HA2	1.87	0.56
22:H8:111:VAL:HG21	22:H8:146:ILE:HG13	1.87	0.56
23:29:23:VAL:HA	23:29:184:VAL:O	2.05	0.56
31:I8:53:MET:HG3	31:I8:59:LEU:CD2	2.34	0.56
42:62:126:ASP:HB3	42:62:131:LYS:O	2.04	0.56
48:1A:78:ASN:OD1	48:1A:81:THR:HG23	2.05	0.56
52:X4:18:G:H3'	52:X4:57:G:N2	2.19	0.56
1:13:1890:C:H2'	1:13:1891:C:H6	1.68	0.56
1:13:1996:G:OP2	9:8E:112:LYS:HD2	2.05	0.56
9:8E:34:ASN:OD1	9:8E:34:ASN:N	2.37	0.56
1:1G:1700:G:C6	1:1G:1701:U:C4	2.93	0.56
1:1G:1804:G:OP2	1:1G:1804:G:H8	1.88	0.56
9:82:117:HIS:O	9:82:118:LYS:HB2	2.04	0.56
15:1H:222:G:H8	15:1H:222:G:OP2	1.88	0.56
15:1H:711:G:P	30:78:15:ARG:HE	2.28	0.56
15:1H:2416:U:H2'	15:1H:2417:C:H1'	1.87	0.56
11:C5:63:LYS:NZ	11:C5:63:LYS:HA	2.21	0.56
25:4E:152:ARG:HA	50:7E:64:LYS:HZ3	1.70	0.56
47:59:6:ARG:H	47:59:6:ARG:HD2	1.70	0.56
1:13:1739:A:H2'	1:13:1740:C:C6	2.40	0.56
6:2A:54:ARG:NH1	42:62:151:TYR:OH	2.39	0.56
1:1G:1079:G:H4'	14:32:123:HIS:ND1	2.19	0.56
1:1G:1805:G:H5"	9:82:93:ARG:HH22	1.70	0.56
10:58:65:LYS:NZ	15:1H:1069:A:OP2	2.30	0.56
15:1H:841:G:H5"	15:1H:842:A:H5'	1.87	0.56
15:1H:880:G:N2	30:78:53:GLY:O	2.38	0.56
15:1H:1574:G:H2'	15:1H:1575:G:H8	1.69	0.56
15:1H:1820:A:C2	15:1H:2621:C:H1'	2.41	0.56
15:1H:2801:C:OP1	23:21:41:LYS:HE3	2.06	0.56
11:C5:18:GLY:HA3	15:14:334:G:H4'	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:M5:4:MET:HB2	12:M5:61:LEU:HD21	1.87	0.56
15:14:38:A:H2'	15:14:39:C:C6	2.41	0.56
15:14:666:U:H2'	15:14:667:C:C6	2.39	0.56
15:14:1089:C:N4	15:14:1162:G:H22	2.02	0.56
15:14:1656:C:H4'	15:14:1657:A:O5'	2.04	0.56
15:14:2145:G:H2'	15:14:2146:G:C8	2.40	0.56
15:14:2862:U:O4	16:75:23:ARG:NH2	2.37	0.56
23:21:128:SER:OG	23:21:129:HIS:N	2.38	0.56
25:42:41:VAL:O	25:42:67:VAL:HG12	2.06	0.56
26:1J:92:A:H5'	26:1J:93:C:OP2	2.06	0.56
32:31:9:ILE:HD12	32:31:10:PRO:HD2	1.87	0.56
38:88:90:VAL:HG23	38:88:91:GLU:N	2.20	0.56
35:95:28:GLU:O	35:95:61:VAL:HG11	2.05	0.56
35:95:46:VAL:CG2	35:95:52:VAL:HG21	2.36	0.56
43:A5:86:LEU:HD12	43:A5:87:PRO:HD2	1.87	0.56
48:1I:34:VAL:HG12	48:1I:74:ILE:HG12	1.86	0.56
48:1I:48:THR:HA	48:1I:62:HIS:HB3	1.88	0.56
44:12:92:TYR:HE2	44:12:94:ASN:HB2	1.70	0.56
52:V4:72:C:H3'	52:V4:73:A:H5"	1.87	0.56
1:13:710:G:H4'	1:13:711:U:H5'	1.88	0.56
1:13:848:A:O2'	1:13:849:A:H2'	2.05	0.56
1:13:1366:A:H2'	1:13:1367:C:H6	1.70	0.56
1:13:1821:U:H2'	1:13:1822:C:C6	2.40	0.56
7:8I:9:VAL:HG21	7:8I:84:LEU:HD12	1.87	0.56
15:1H:390:G:H2'	15:1H:391:G:H8	1.70	0.56
15:1H:555:A:N1	15:1H:2067:A:H2'	2.20	0.56
15:1H:612:C:P	30:78:21:ARG:HH22	2.29	0.56
19:9I:53:ARG:HH21	19:9I:60:ALA:N	2.03	0.56
15:14:387:U:H5'	15:14:388:G:OP2	2.05	0.56
15:14:1738:U:O2	15:14:1750:A:H5'	2.05	0.56
15:14:1770:A:H2'	15:14:1772:G:H22	1.70	0.56
22:H8:77:ASP:OD1	22:H8:80:ARG:HD2	2.05	0.56
44:1E:82:ARG:HG3	44:1E:92:TYR:CZ	2.41	0.56
52:W1:44:G:H2'	52:W1:45:U:C6	2.40	0.56
1:13:674:G:O2'	1:13:937:U:OP1	2.22	0.56
1:13:777:C:H42	1:13:867:G:H1	1.52	0.56
1:1G:781:A:H1'	1:1G:822:U:C2	2.39	0.56
15:1H:2745:G:H1'	23:21:187:ALA:HB2	1.87	0.56
13:3A:70:ILE:HD13	13:3A:77:LEU:HD12	1.87	0.56
15:14:1469:U:HO2'	15:14:1470:G:P	2.27	0.56
16:75:4:GLY:O	16:75:8:LYS:N	2.29	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:H8:45:ASP:O	22:H8:49:ARG:HG3	2.05	0.56
26:16:42:U:C5	28:M8:2:LYS:HG2	2.41	0.56
22:D5:11:GLU:HG3	22:D5:12:GLY:H	1.70	0.56
26:1J:17:A:H1'	26:1J:112:G:C8	2.40	0.56
33:5I:21:TYR:OH	33:5I:23:ARG:NH2	2.38	0.56
33:5I:41:ARG:HB2	48:1I:49:VAL:CG2	2.36	0.56
52:V4:9:A:N6	52:V4:23:A:H62	2.03	0.56
1:1G:1943:G:H5"	33:5A:17:LYS:NZ	2.20	0.56
4:19:37:LEU:HB2	4:19:38:LYS:HG2	1.86	0.56
15:1H:612:C:O2	30:78:33:ARG:NH1	2.38	0.56
15:1H:810:A:H8	56:1H:3649:HOH:O	1.88	0.56
15:1H:1574:G:H2'	15:1H:1575:G:C8	2.41	0.56
15:1H:1647:C:O2'	15:1H:1648:C:H5'	2.05	0.56
15:14:237:G:H4'	15:14:414:G:C5	2.40	0.56
15:14:519:A:H2'	15:14:520:G:O4'	2.05	0.56
18:69:120:ILE:HG22	18:69:122:GLU:H	1.71	0.56
27:C8:92:ARG:NH2	35:D8:11:GLN:H	2.03	0.56
41:6I:78:TYR:CZ	41:6I:82:ILE:HD11	2.41	0.56
37:BA:49:ALA:HA	37:BA:52:ALA:HB3	1.87	0.56
37:BA:74:LYS:CG	37:BA:75:ASN:H	2.18	0.56
40:49:11:TYR:OH	40:49:16:ARG:NH1	2.39	0.56
1:13:1746:C:H1'	1:13:1806:A:C4	2.41	0.56
3:B5:55:ASN:HB2	3:B5:80:ILE:HG13	1.87	0.56
4:11:239:ARG:HG3	15:1H:2606:C:P	2.46	0.56
5:L5:19:ARG:HD3	15:14:123:G:H5"	1.88	0.56
1:1G:1596:G:H3'	1:1G:1597:A:H5"	1.87	0.56
12:Q8:46:ARG:HH11	12:Q8:46:ARG:CB	2.00	0.56
9:82:114:TYR:HB2	48:1A:60:ARG:HD2	1.87	0.56
15:1H:1828:U:H2'	15:1H:1829:C:C6	2.41	0.56
15:1H:2313:A:H2'	15:1H:2314:G:O4'	2.05	0.56
16:B8:6:LEU:HA	16:B8:9:LEU:HB2	1.86	0.56
19:9I:73:ALA:HB3	19:9I:79:LEU:HD12	1.88	0.56
15:14:1044:A:C2	15:14:1045:G:C8	2.94	0.56
15:14:2815:A:C5'	15:14:2907:U:H4'	2.36	0.56
44:1E:77:ALA:HB1	44:1E:165:VAL:HG11	1.88	0.56
8:2E:78:GLY:CA	8:2E:83:ARG:HB3	2.34	0.56
52:X4:53:G:H2'	52:X4:54:U:C6	2.41	0.56
1:13:656:A:OP2	25:4E:126:ARG:HD3	2.06	0.56
1:13:1104:G:H2'	1:13:1105:G:C8	2.41	0.56
7:8I:34:LYS:HD3	13:3I:11:VAL:HG21	1.87	0.56
1:1G:897:U:H2'	1:1G:898:G:H8	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:58:38:HIS:O	27:C8:67:ALA:HB1	2.05	0.56
10:58:57:ALA:C	10:58:59:LYS:H	2.06	0.56
15:1H:484:C:H3'	3:F8:68:ARG:NH2	2.21	0.56
15:1H:2330:G:H2'	15:1H:2331:C:C6	2.41	0.56
10:15:62:VAL:HG22	10:15:66:LYS:HD2	1.88	0.56
13:3A:41:ARG:HH12	13:3A:43:VAL:HG23	1.70	0.56
15:14:901:G:H2'	15:14:902:G:C8	2.39	0.56
15:14:1103:G:H22	15:14:1134:A:H5'	1.71	0.56
15:14:1158:G:O2'	15:14:1159:A:O4'	2.20	0.56
22:H8:52:SER:O	22:H8:52:SER:OG	2.14	0.56
22:H8:53:ILE:HG22	22:H8:71:VAL:HG22	1.87	0.56
23:21:201:THR:HG22	23:21:203:LYS:H	1.71	0.56
29:AI:39:THR:HG22	29:AI:40:ILE:H	1.70	0.56
32:31:129:PHE:HB2	32:31:132:VAL:HG13	1.88	0.56
30:35:125:VAL:HG13	30:35:144:GLU:HB3	1.87	0.56
31:E5:51:VAL:N	31:E5:62:LEU:HD12	2.21	0.56
40:49:125:PHE:HB3	40:49:166:ASP:CB	2.32	0.56
45:98:117:VAL:HG22	45:98:118:GLU:H	1.69	0.56
1:13:1577:G:H2'	1:13:1578:U:C6	2.41	0.56
6:2A:87:THR:O	6:2A:87:THR:OG1	2.23	0.56
8:22:181:ASN:OD1	8:22:204:LEU:HB2	2.06	0.56
1:1G:1293:G:H22	1:1G:1370:G:H1	1.54	0.56
1:1G:1319:G:H2'	1:1G:1320:G:O4'	2.05	0.56
1:1G:1409:A:OP2	56:1G:2405:HOH:O	2.17	0.56
15:14:2788:C:H2'	15:14:2789:C:C6	2.41	0.56
24:4A:81:LEU:HD21	24:4A:88:ARG:NH2	2.20	0.56
24:4A:91:ARG:HB2	24:4A:98:VAL:HG12	1.86	0.56
39:J8:18:ILE:HG12	39:J8:37:ILE:HG12	1.87	0.56
43:A5:15:ARG:O	43:A5:19:LEU:HD13	2.06	0.56
46:K8:35:LEU:HD12	46:K8:53:LEU:HD12	1.87	0.56
52:V1:68:C:H2'	52:V1:69:G:H8	1.70	0.56
1:13:1696:G:N7	1:13:1722:G:H2'	2.21	0.56
7:8I:29:HIS:CD2	7:8I:30:PRO:HD2	2.41	0.56
1:1G:843:G:H1'	37:BA:104:LEU:O	2.05	0.56
11:G8:40:GLU:HB2	11:G8:41:GLY:HA2	1.88	0.56
15:1H:809:G:OP1	56:1H:3665:HOH:O	2.17	0.56
15:1H:1069:A:H8	15:1H:1069:A:H3'	1.71	0.56
15:1H:1557:A:H4'	15:1H:1558:C:H1'	1.88	0.56
15:1H:2805:C:H2'	15:1H:2806:A:H5"	1.88	0.56
14:32:8:VAL:O	14:32:11:LEU:N	2.35	0.56
15:14:345:A:N3	32:39:169:ASN:ND2	2.50	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:888:U:H2'	15:14:889:C:H6	1.69	0.56
15:14:1914:A:O2'	15:14:2112:G:H5'	2.06	0.56
26:1J:4:C:H2'	26:1J:5:C:C6	2.41	0.56
30:78:121:LYS:O	30:78:123:LEU:N	2.39	0.56
35:95:14:VAL:HB	35:95:96:ILE:HG13	1.88	0.56
39:F5:73:LEU:HB3	39:F5:90:ILE:HG23	1.87	0.56
48:1I:45:ARG:HD3	48:1I:47:PHE:CZ	2.41	0.56
44:12:27:LYS:NZ	44:12:193:ASP:OD2	2.37	0.56
47:59:74:ASN:O	47:59:78:GLY:N	2.39	0.56
47:59:99:VAL:HG13	47:59:100:GLY:H	1.71	0.56
6:2I:34:ASP:HB3	6:2I:40:ILE:HD11	1.88	0.56
1:13:1189:U:H5'	1:13:1195:G:N2	2.21	0.55
1:13:1756:C:N4	1:13:1771:G:H1	2.03	0.55
1:13:1761:G:H1	1:13:1769:C:H42	1.54	0.55
1:13:1853:C:H4'	29:AI:80:TYR:OH	2.06	0.55
2:A8:17:ARG:HH22	15:1H:2307:C:P	2.29	0.55
2:A8:87:PHE:CE2	2:A8:102:ALA:HB2	2.41	0.55
1:1G:805:C:H2'	1:1G:806:G:H8	1.70	0.55
1:1G:1047:G:C2	1:1G:1048:G:C8	2.94	0.55
1:1G:1756:C:H1'	1:1G:1774:A:H61	1.71	0.55
2:65:11:LYS:HG3	2:65:91:PRO:HD3	1.87	0.55
12:Q8:27:THR:CG2	12:Q8:42:ARG:HH21	2.18	0.55
14:3E:108:LEU:HB3	14:3E:110:PHE:CD1	2.41	0.55
15:1H:745:G:O2'	15:1H:746:C:H5'	2.06	0.55
15:1H:2777:G:H1'	47:51:143:GLN:OE1	2.07	0.55
15:14:628:A:O4'	15:14:704:A:N6	2.39	0.55
15:14:2558:G:H2'	15:14:2559:G:C8	2.41	0.55
15:14:2716:C:H3'	15:14:2717:U:C5'	2.29	0.55
26:16:75:A:C4	26:16:107:A:C2	2.94	0.55
23:29:33:VAL:H	23:29:89:ASP:CG	2.09	0.55
24:4A:37:THR:O	24:4A:55:ARG:NH2	2.33	0.55
32:39:40:GLN:NE2	32:39:182:ASN:HB2	2.20	0.55
46:K8:2:LYS:HD2	46:K8:5:GLU:OE1	2.06	0.55
1:13:1586:G:C2	48:1I:55:LYS:NZ	2.73	0.55
1:13:1763:U:H4'	1:13:1764:U:H5	1.71	0.55
15:1H:2407:A:H1'	30:78:61:ARG:NH1	2.21	0.55
11:C5:39:VAL:HG23	11:C5:41:GLY:H	1.71	0.55
11:C5:83:THR:HG23	15:14:361:C:OP1	2.06	0.55
15:14:1232:G:H5'	17:H5:29:ARG:HH21	1.72	0.55
15:14:1500:G:H2'	15:14:1501:C:C6	2.41	0.55
15:14:1569:U:H2'	15:14:1570:G:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2773:A:N1	47:59:67:LEU:HD23	2.21	0.55
26:16:17:A:H1'	26:16:112:G:N9	2.21	0.55
26:1J:17:A:H5"	26:1J:18:G:C8	2.40	0.55
29:AA:41:VAL:HG12	29:AA:42:PRO:HD2	1.88	0.55
52:X4:72:C:C4	52:X4:73:A:N7	2.74	0.55
1:13:1255:U:H2'	1:13:1256:G:H8	1.71	0.55
1:1G:999:U:H2'	1:1G:1000:U:H6	1.71	0.55
1:1G:2007:G:OP1	42:62:6:ARG:NH1	2.39	0.55
1:1G:2051:G:OP1	21:25:49:ARG:NH2	2.39	0.55
12:Q8:46:ARG:HA	12:Q8:47:LYS:O	2.04	0.55
15:14:1246:U:H2'	15:14:1247:U:C6	2.41	0.55
15:14:2704:U:H4'	15:14:2705:C:H5'	1.88	0.55
22:H8:8:TYR:HB2	22:H8:38:TYR:CZ	2.41	0.55
18:69:101:LEU:HA	18:69:105:HIS:HB2	1.89	0.55
25:4E:101:ILE:O	25:4E:120:THR:OG1	2.23	0.55
20:1B:9:ARG:HG3	20:1B:10:ARG:N	2.20	0.55
32:31:12:LEU:O	32:31:127:GLU:N	2.40	0.55
33:5I:23:ARG:HD2	33:5I:28:GLY:O	2.05	0.55
52:X4:18:G:N3	52:X4:18:G:H2'	2.20	0.55
1:13:1488:A:H2	1:13:1541:A:H4'	1.72	0.55
1:13:2133:U:H2'	1:13:2134:G:C8	2.41	0.55
9:8E:10:ARG:NH2	9:8E:105:ASP:OD2	2.40	0.55
2:65:60:GLY:O	2:65:64:GLU:HB3	2.06	0.55
14:3E:19:LEU:HB3	14:3E:21:LEU:HD21	1.88	0.55
14:3E:149:ALA:O	14:3E:153:ARG:HG2	2.07	0.55
15:1H:10:G:H2'	15:1H:11:G:C8	2.40	0.55
15:1H:166:G:O2'	15:1H:167:G:H5'	2.07	0.55
15:1H:1238:G:H5"	15:1H:1238:G:H8	1.70	0.55
15:14:66:U:N3	15:14:73:A:H2	2.01	0.55
15:14:1161:U:OP1	47:59:3:ARG:N	2.35	0.55
15:14:1898:U:OP1	15:14:2425:G:O2'	2.24	0.55
22:H8:113:ALA:N	22:H8:114:GLY:HA2	2.22	0.55
18:69:4:ILE:HG12	18:69:18:VAL:HG22	1.88	0.55
19:9A:22:VAL:O	19:9A:23:LYS:HB3	2.07	0.55
27:C8:88:ILE:O	27:C8:88:ILE:HG22	2.06	0.55
28:M8:37:SER:H	40:41:112:PRO:HB3	1.72	0.55
34:52:44:GLY:HA2	34:52:59:TYR:CZ	2.41	0.55
38:88:20:ALA:HB2	38:88:99:PRO:HD2	1.88	0.55
43:E8:24:ILE:HD12	43:E8:24:ILE:O	2.05	0.55
44:1E:237:ALA:O	44:1E:239:VAL:HG23	2.06	0.55
46:K8:15:LYS:HE3	46:K8:15:LYS:N	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:K8:42:GLY:C	46:K8:44:LEU:H	2.08	0.55
8:2E:62:ASP:CG	8:2E:97:LYS:HG2	2.26	0.55
52:V4:9:A:H4'	52:V4:46:G:H4'	1.87	0.55
1:13:1235:G:N2	1:13:1261:A:N1	2.55	0.55
1:13:1918:G:O2'	9:8E:38:GLN:OE1	2.24	0.55
1:13:1945:A:H5"	29:AI:10:PHE:CD2	2.41	0.55
1:1G:1912:A:H4'	1:1G:1913:A:O5'	2.06	0.55
14:3E:13:ARG:HD2	14:3E:38:TYR:O	2.05	0.55
15:1H:1607:C:OP2	15:1H:1608:A:O2'	2.20	0.55
15:1H:2850:G:N7	56:1H:3702:HOH:O	2.33	0.55
15:14:4:C:H42	15:14:2911:G:N2	1.92	0.55
15:14:1042:C:O2'	15:14:1044:A:OP1	2.18	0.55
15:14:2271:G:O6	56:14:3662:HOH:O	2.17	0.55
26:1J:17:A:H1'	26:1J:112:G:C4	2.42	0.55
32:39:53:THR:HG22	32:39:56:GLU:HG3	1.88	0.55
32:39:123:LEU:O	32:39:193:VAL:HA	2.05	0.55
32:39:155:LEU:HB2	32:39:189:THR:HG21	1.87	0.55
47:59:19:VAL:HG12	47:59:20:ALA:H	1.72	0.55
49:7A:57:ARG:HA	49:7A:60:LEU:HD12	1.88	0.55
50:72:10:LEU:HD22	50:72:83:ILE:HD11	1.87	0.55
51:Y1:34:G:H3'	51:Y1:35:A:C8	2.42	0.55
1:13:1936:G:OP1	24:4I:88:ARG:NH1	2.40	0.55
1:13:2160:U:H2'	1:13:2161:C:C6	2.42	0.55
1:1G:1303:G:N2	1:1G:1346:C:O2	2.40	0.55
1:1G:1770:G:H3'	1:1G:1771:G:H8	1.71	0.55
4:19:68:LYS:HB3	4:19:70:TRP:CH2	2.42	0.55
15:1H:804:C:H2'	15:1H:805:C:C6	2.41	0.55
15:1H:1956:U:H5	15:1H:1994:A:N7	2.04	0.55
15:1H:2342:A:H2'	15:1H:2343:A:C8	2.41	0.55
10:15:28:THR:HG21	15:14:1060:U:C5	2.42	0.55
15:14:1494:A:H2'	15:14:1494:A:N3	2.21	0.55
25:4E:100:VAL:HG12	25:4E:118:ILE:HG22	1.87	0.55
28:M8:7:PRO:HG2	40:41:65:GLY:HA2	1.87	0.55
28:M8:33:VAL:HG13	40:41:113:ARG:HD2	1.87	0.55
25:42:12:LEU:HD22	25:42:13:ILE:N	2.21	0.55
38:88:51:ARG:HH12	38:88:52:VAL:HG23	1.71	0.55
44:1E:17:PHE:HB3	44:1E:44:LEU:HD11	1.88	0.55
46:K8:52:ASP:N	46:K8:52:ASP:OD1	2.36	0.55
47:51:56:SER:OG	47:51:58:GLU:HG3	2.07	0.55
44:12:61:LEU:HD23	44:12:68:ILE:HD11	1.89	0.55
52:V1:33:U:H3'	52:V1:34:G:H3'	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:713:C:H2'	1:13:714:G:H8	1.71	0.55
1:13:749:C:O2'	49:7I:25:ARG:O	2.24	0.55
1:13:844:U:H2'	1:13:845:C:H6	1.72	0.55
1:13:1128:A:H4'	1:13:1129:G:OP1	2.06	0.55
1:13:1705:G:N2	1:13:1708:A:OP2	2.38	0.55
1:13:1788:G:H22	1:13:1804:G:N2	2.05	0.55
1:13:1973:A:OP1	9:8E:120:ARG:NH1	2.25	0.55
1:13:2057:C:H2'	1:13:2058:C:H6	1.72	0.55
4:11:10:THR:OG1	4:11:13:ARG:HB2	2.07	0.55
9:82:18:PHE:HD2	9:82:62:TYR:HD2	1.55	0.55
15:1H:1158:G:O2'	15:1H:1159:A:H8	1.90	0.55
15:1H:2275:C:OP1	56:1H:3663:HOH:O	2.17	0.55
15:1H:2356:G:H2'	15:1H:2357:C:C6	2.42	0.55
15:14:1069:A:H62	15:14:1189:U:H3	1.53	0.55
23:21:70:ALA:O	23:21:73:GLU:N	2.40	0.55
25:4E:69:VAL:O	25:4E:71:LEU:HG	2.05	0.55
25:4E:126:ARG:HG3	25:4E:126:ARG:HH11	1.71	0.55
27:85:99:ALA:HB2	27:85:106:PHE:CD1	2.41	0.55
30:35:30:THR:HG21	30:35:35:HIS:H	1.72	0.55
36:J5:38:ALA:HB3	36:J5:48:GLU:HG3	1.88	0.55
42:6E:132:GLY:O	42:6E:135:VAL:HG23	2.06	0.55
38:45:26:TYR:O	38:45:26:TYR:CD1	2.60	0.55
45:98:117:VAL:O	45:98:118:GLU:HB2	2.07	0.55
50:7E:39:LEU:HB3	50:7E:45:ILE:HG12	1.88	0.55
52:W1:18:G:H1	52:W1:55:U:H1'	1.71	0.55
52:X1:61:C:O2'	52:X1:62:C:H5'	2.07	0.55
1:13:941:A:H1'	1:13:1194:U:O2	2.07	0.55
1:13:997:A:N3	1:13:1009:U:O2'	2.38	0.55
1:13:1221:G:H2'	1:13:1222:G:H8	1.72	0.55
1:13:2019:U:H2'	1:13:2020:G:C8	2.41	0.55
4:11:274:ARG:CZ	15:1H:1831:C:H41	2.20	0.55
8:22:94:LEU:HD12	8:22:95:THR:N	2.22	0.55
1:1G:1156:G:O2'	1:1G:1164:A:N1	2.36	0.55
1:1G:1343:G:H2'	1:1G:1344:A:C8	2.42	0.55
1:1G:1908:U:OP2	1:1G:1909:C:N4	2.27	0.55
11:G8:82:PRO:HB3	11:G8:99:CYS:HB3	1.88	0.55
4:19:112:GLN:O	4:19:115:GLN:HG3	2.07	0.55
15:1H:723:G:C1'	32:31:74:ARG:HD3	2.36	0.55
15:1H:1559:A:N3	15:1H:1559:A:H2'	2.22	0.55
15:1H:2130:C:H2'	15:1H:2131:G:H8	1.71	0.55
15:1H:2713:U:H2'	15:1H:2714:C:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:5:A:H2'	15:14:6:A:C8	2.41	0.55
25:4E:41:VAL:HG13	25:4E:113:ALA:HB2	1.88	0.55
22:D5:53:ILE:HG22	22:D5:71:VAL:HG13	1.88	0.55
30:78:1:MET:HE1	30:78:6:LEU:HA	1.89	0.55
44:1E:189:ASP:OD1	44:1E:190:THR:N	2.40	0.55
52:V1:18:G:HO2'	52:V1:19:G:P	2.29	0.55
1:13:783:A:H2	1:13:861:G:H1	1.54	0.55
1:13:1243:A:H2'	1:13:1244:C:C6	2.41	0.55
2:A8:106:ARG:NH1	2:A8:107:GLU:HB2	2.22	0.55
6:2A:81:ASP:OD2	6:2A:107:SER:OG	2.25	0.55
14:3E:29:PRO:O	14:3E:30:LYS:HG2	2.06	0.55
15:1H:11:G:H2'	15:1H:12:U:H5'	1.87	0.55
15:1H:1187:G:O2'	15:1H:1192:A:N1	2.36	0.55
15:1H:1235:G:H5"	35:D8:81:TYR:CE2	2.42	0.55
15:1H:1503:A:O2'	15:1H:1504:U:H2'	2.07	0.55
15:1H:2324:A:C6	15:1H:2325:A:H8	2.24	0.55
15:1H:2328:C:H4'	40:41:91:ARG:HG3	1.87	0.55
14:32:92:VAL:O	14:32:96:LEU:HD12	2.07	0.55
15:14:282:G:N7	56:14:3702:HOH:O	2.33	0.55
15:14:969:G:H4'	15:14:2284:A:C5	2.42	0.55
15:14:2173:G:H2'	15:14:2174:G:C8	2.42	0.55
22:H8:59:LEU:O	22:H8:60:GLU:HB2	2.07	0.55
18:69:76:THR:HG21	18:69:140:LEU:HA	1.88	0.55
26:16:17:A:H1'	26:16:112:G:C8	2.42	0.55
22:D5:130:PRO:HA	22:D5:133:ILE:HD11	1.89	0.55
30:78:85:LEU:HA	30:78:88:LEU:HD22	1.89	0.55
32:31:129:PHE:HA	32:31:142:TRP:NE1	2.22	0.55
33:5I:15:LYS:HE2	33:5I:16:PHE:HE2	1.72	0.55
35:95:43:GLU:O	35:95:45:THR:OG1	2.07	0.55
42:6E:27:ILE:HA	42:6E:30:ILE:HD12	1.89	0.55
44:12:104:ASN:OD1	44:12:107:THR:OG1	2.25	0.55
1:13:1456:U:H5	1:13:1495:A:N1	2.05	0.55
1:1G:720:C:H42	1:1G:734:G:H1	1.55	0.55
1:1G:1217:G:H1	1:1G:1280:C:H42	1.55	0.55
1:1G:1782:G:H2'	1:1G:1783:G:H8	1.71	0.55
11:G8:56:PRO:HD2	11:G8:57:GLN:OE1	2.07	0.55
15:1H:614:C:H2'	15:1H:615:A:C8	2.42	0.55
15:1H:681:A:H2'	15:1H:682:A:C8	2.42	0.55
15:1H:1528:G:H2'	15:1H:1529:G:C8	2.42	0.55
10:15:30:ILE:HG22	10:15:34:LEU:HD22	1.87	0.55
12:M5:61:LEU:CD1	12:M5:61:LEU:N	2.69	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:866:C:O2'	15:14:888:U:OP1	2.21	0.55
15:14:2594:C:H4'	23:29:134:ILE:HG12	1.89	0.55
22:H8:98:MET:O	22:H8:125:LEU:HD12	2.07	0.55
41:6I:18:PHE:CZ	41:6I:21:ASP:HB2	2.42	0.55
39:F5:85:LEU:HD13	39:F5:88:LYS:HD2	1.89	0.55
46:K8:47:ASN:C	46:K8:49:LYS:H	2.10	0.55
52:X1:45:U:OP2	52:X1:45:U:H6	1.90	0.55
52:X4:48:C:H2'	52:X4:59:U:O4'	2.07	0.55
1:13:980:C:OP2	21:68:97:ARG:HD3	2.07	0.54
1:13:1233:G:H2'	1:13:1234:U:O4'	2.07	0.54
1:13:1576:G:H2'	1:13:1577:G:O4'	2.07	0.54
4:11:47:GLY:HA3	15:1H:822:U:C4'	2.37	0.54
8:22:111:LEU:HD11	8:22:144:SER:HB3	1.89	0.54
4:19:85:ASP:OD2	4:19:88:ARG:NH1	2.37	0.54
15:1H:590:C:H4'	56:1H:3743:HOH:O	2.07	0.54
15:1H:1454:U:H2'	15:1H:1455:U:H6	1.71	0.54
15:1H:2134:U:H1'	15:1H:2206:G:N2	2.22	0.54
16:B8:3:ARG:HG3	16:B8:3:ARG:O	2.06	0.54
16:B8:120:ARG:HA	16:B8:123:GLN:HG2	1.89	0.54
12:M5:32:LEU:HA	12:M5:33:ASN:OD1	2.06	0.54
15:14:717:G:H2'	15:14:719:A:H62	1.72	0.54
15:14:1124:C:C5	15:14:1125:A:H1'	2.42	0.54
16:75:26:ASP:OD1	16:75:120:ARG:NH2	2.40	0.54
25:4E:102:ALA:HB1	25:4E:106:PRO:HG2	1.88	0.54
25:4E:152:ARG:HB3	50:7E:43:GLY:O	2.07	0.54
32:39:4:VAL:HA	32:39:19:GLU:HB3	1.88	0.54
45:98:1:MET:O	45:98:1:MET:HG2	2.07	0.54
45:98:9:LYS:HA	45:98:17:ARG:NE	2.22	0.54
46:K8:64:LEU:HD11	46:K8:68:ARG:NH1	2.22	0.54
48:1A:54:PHE:CD2	48:1A:55:LYS:HD2	2.42	0.54
44:12:19:HIS:CD2	44:12:20:GLU:HG2	2.43	0.54
52:V1:36:A:O2'	52:V1:37:A:OP1	2.20	0.54
1:13:1586:G:H21	48:1I:55:LYS:NZ	2.05	0.54
1:13:1974:G:O2'	1:13:2001:G:O6	2.21	0.54
8:22:16:ARG:HH12	8:22:181:ASN:ND2	2.05	0.54
2:65:34:HIS:HD2	2:65:54:LEU:N	2.05	0.54
15:1H:1093:A:H1'	15:1H:1095:G:C4	2.42	0.54
15:1H:1288:G:H2'	15:1H:1289:U:O4'	2.07	0.54
15:1H:1770:A:O2'	15:1H:1771:U:P	2.66	0.54
15:1H:2187:G:H2'	15:1H:2188:C:C6	2.42	0.54
20:1F:12:LYS:O	20:1F:16:GLY:N	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1472:G:OP1	15:14:1541:G:O2'	2.22	0.54
16:75:67:SER:OG	21:25:101:PRO:HG3	2.06	0.54
26:1J:46:G:H1'	26:1J:49:C:N4	2.23	0.54
34:5E:3:ARG:NH1	34:5E:38:GLU:OE2	2.39	0.54
35:95:77:ALA:O	35:95:79:VAL:HG22	2.07	0.54
41:6A:55:GLY:HA2	41:6A:58:MET:HE3	1.89	0.54
45:98:53:HIS:ND1	45:98:94:TYR:OH	2.40	0.54
47:51:88:LEU:HB3	47:51:130:ARG:HG2	1.89	0.54
48:1A:30:SER:HB2	48:1A:81:THR:HA	1.90	0.54
51:Y4:38:U:H2'	51:Y4:39:U:O4'	2.08	0.54
1:13:865:C:H2'	1:13:866:C:C6	2.42	0.54
1:13:907:G:H5'	1:13:909:C:H41	1.72	0.54
1:13:1805:G:N2	1:13:1808:G:H8	2.05	0.54
1:1G:1248:U:N3	14:32:134:ASP:OD1	2.37	0.54
1:1G:1782:G:H2'	1:1G:1783:G:C8	2.42	0.54
13:3I:24:VAL:HB	13:3I:27:LEU:HD12	1.90	0.54
15:1H:326:G:HO2'	15:1H:327:C:H6	1.55	0.54
15:1H:931:G:H4'	15:1H:931:G:OP1	2.08	0.54
15:1H:1106:U:H3	15:1H:1128:A:N6	2.05	0.54
15:1H:1236:U:C4'	35:D8:79:VAL:HG22	2.36	0.54
15:1H:1435:C:OP2	15:1H:1445:U:H5	1.90	0.54
15:1H:1663:A:N1	43:E8:91:GLY:HA2	2.20	0.54
15:1H:2324:A:C5	15:1H:2325:A:C8	2.94	0.54
11:C5:82:PRO:HB3	11:C5:99:CYS:HB2	1.89	0.54
18:61:39:ALA:HB1	18:61:44:LEU:HD13	1.90	0.54
13:3A:47:LYS:HG2	13:3A:48:PRO:HD3	1.89	0.54
20:1F:10:ARG:HA	20:1F:10:ARG:HE	1.72	0.54
15:14:330:U:H2'	15:14:331:U:C6	2.43	0.54
15:14:412:U:H2'	15:14:413:C:C6	2.42	0.54
22:H8:117:LEU:H	22:H8:117:LEU:HD13	1.72	0.54
25:4E:121:LYS:HG3	25:4E:122:GLU:N	2.22	0.54
27:C8:83:LEU:HD13	27:C8:113:ALA:HB2	1.89	0.54
28:M8:66:SER:CB	29:AI:8:GLY:H	2.20	0.54
35:95:98:GLU:OE1	35:95:100:ARG:HD3	2.07	0.54
42:6E:5:ARG:HE	42:6E:7:ALA:HA	1.73	0.54
1:13:870:U:O2'	49:7I:23:ASP:OD2	2.20	0.54
1:13:1017:G:OP1	49:7I:5:ARG:HB2	2.07	0.54
1:13:1297:G:O2'	41:6I:46:HIS:HB3	2.07	0.54
1:13:1456:U:C5	1:13:1495:A:N1	2.75	0.54
1:1G:1379:G:N3	41:6A:23:GLY:HA3	2.22	0.54
1:1G:1932:G:O2'	1:1G:1933:A:H8	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:860:U:H2'	30:78:21:ARG:HA	1.88	0.54
15:1H:1397:G:C2'	15:1H:1398:A:H5"	2.35	0.54
15:1H:1954:G:H4'	15:1H:1955:G:OP1	2.08	0.54
15:1H:2044:A:N7	36:N8:9:LYS:HE3	2.21	0.54
15:14:711:G:H5"	30:35:16:ARG:HG2	1.90	0.54
15:14:1067:U:OP1	15:14:1083:U:O2'	2.20	0.54
15:14:2159:A:C2	15:14:2184:G:H1'	2.43	0.54
25:42:122:GLU:HG2	25:42:131:ILE:HD12	1.90	0.54
32:31:29:ASN:H	32:31:112:MET:HE3	1.71	0.54
40:41:34:LEU:HD23	40:41:172:LEU:HD21	1.90	0.54
43:A5:1:MET:HG3	43:A5:2:GLU:N	2.20	0.54
46:G5:47:ASN:N	46:G5:47:ASN:ND2	2.56	0.54
6:2I:46:GLY:HA2	6:2I:50:TYR:O	2.07	0.54
51:Y1:33:G:H5'	51:Y1:34:G:OP2	2.08	0.54
1:13:799:G:N2	1:13:801:A:H5"	2.22	0.54
1:13:862:C:H2'	1:13:863:U:C6	2.42	0.54
1:13:1488:A:C2	1:13:1541:A:H4'	2.43	0.54
8:22:14:ILE:HG12	8:22:15:THR:H	1.72	0.54
8:22:94:LEU:HD12	8:22:95:THR:H	1.72	0.54
1:1G:1299:G:H21	34:52:73:ASN:ND2	2.05	0.54
1:1G:1732:G:O2'	44:12:110:GLN:OE1	2.23	0.54
1:1G:1862:U:O2'	1:1G:1932:G:O5'	2.25	0.54
13:3I:42:THR:HA	13:3I:53:ARG:O	2.08	0.54
15:1H:312:C:H2'	15:1H:313:C:H6	1.73	0.54
15:1H:643:G:OP1	32:31:40:GLN:NE2	2.41	0.54
15:1H:997:G:H2'	15:1H:998:C:C6	2.43	0.54
15:1H:1069:A:H3'	15:1H:1069:A:C8	2.43	0.54
15:1H:1078:G:OP2	38:88:128:LYS:NZ	2.37	0.54
15:1H:1892:G:O2'	15:1H:1893:A:H8	1.91	0.54
15:1H:2160:A:N6	15:1H:2181:G:O2'	2.40	0.54
15:1H:2230:G:H2'	15:1H:2231:G:C2	2.43	0.54
15:1H:2831:G:OP2	45:98:42:LYS:NZ	2.40	0.54
13:3A:38:THR:OG1	13:3A:57:LYS:HB2	2.08	0.54
15:14:219:A:H5'	15:14:220:U:OP1	2.08	0.54
15:14:1029:A:N1	15:14:2052:G:O2'	2.34	0.54
15:14:1075:A:H5'	26:1J:90:C:H41	1.73	0.54
15:14:1229:C:H2'	15:14:1230:A:H8	1.72	0.54
15:14:1381:G:N2	15:14:1659:A:C8	2.76	0.54
15:14:1862:G:OP2	56:14:3664:HOH:O	2.18	0.54
15:14:1892:G:H1'	15:14:1909:A:H62	1.73	0.54
15:14:2809:G:N2	15:14:2818:C:O2	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:21:51:PHE:CD2	23:21:52:LEU:HG	2.42	0.54
40:49:113:ARG:NH1	40:49:142:PRO:HB3	2.23	0.54
41:6A:82:ILE:HD13	41:6A:88:ARG:HB2	1.90	0.54
52:X1:18:G:H1'	52:X1:58:A:C2	2.43	0.54
1:13:807:G:H2'	1:13:808:G:C8	2.43	0.54
1:13:921:C:C2	7:8I:38:ARG:HG3	2.43	0.54
1:13:1803:A:C2	1:13:1804:G:C6	2.95	0.54
7:8I:70:ARG:C	7:8I:71:PHE:HD1	2.11	0.54
8:22:94:LEU:HD12	8:22:95:THR:HG23	1.88	0.54
1:1G:1075:U:H2'	1:1G:1076:C:C6	2.43	0.54
15:1H:142:G:H1'	3:F8:37:THR:CG2	2.38	0.54
15:1H:331:U:H2'	15:1H:332:G:O4'	2.07	0.54
15:1H:337:G:H5'	15:1H:356:A:O2'	2.08	0.54
15:1H:534:A:H5"	15:1H:535:G:H3'	1.90	0.54
15:1H:2615:A:H2'	15:1H:2616:C:C6	2.42	0.54
15:1H:2801:C:H2'	15:1H:2802:U:O4'	2.06	0.54
19:9A:22:VAL:HG12	19:9A:56:THR:HA	1.90	0.54
25:4E:35:GLY:H	25:4E:112:LEU:HD13	1.73	0.54
21:25:24:VAL:HB	21:25:33:ALA:HB2	1.90	0.54
24:4A:10:PRO:HG2	24:4A:45:VAL:HG21	1.88	0.54
32:31:136:THR:O	32:31:140:LEU:HB2	2.08	0.54
48:1A:32:ALA:HB2	48:1A:81:THR:HG21	1.88	0.54
44:12:22:LYS:HB3	44:12:40:HIS:NE2	2.23	0.54
45:55:98:LEU:HD12	45:55:113:LEU:HD21	1.88	0.54
8:2E:96:GLY:H	8:2E:97:LYS:NZ	2.04	0.54
52:V1:8:U:H4'	52:V1:9:A:OP1	2.07	0.54
1:13:1319:G:H2'	1:13:1320:G:O4'	2.08	0.54
1:13:1602:C:N4	56:13:2412:HOH:O	2.40	0.54
1:13:1703:C:OP1	44:1E:179:LYS:NZ	2.21	0.54
1:13:1809:G:H4'	1:13:1810:A:H5"	1.90	0.54
1:1G:1927:G:HO2'	1:1G:1928:U:P	2.30	0.54
2:65:85:VAL:H	2:65:110:LEU:HB3	1.73	0.54
4:19:8:PRO:HB3	4:19:14:ARG:HB2	1.90	0.54
15:1H:1247:U:H2'	15:1H:1248:C:C6	2.43	0.54
15:1H:2409:C:N4	52:V1:76:A:C8	2.68	0.54
18:61:88:ILE:O	18:61:121:LYS:HE3	2.08	0.54
15:14:1435:C:H2'	15:14:1436:C:C6	2.43	0.54
23:21:50:GLY:HA2	23:21:76:ARG:O	2.08	0.54
25:4E:75:THR:OG1	25:4E:76:ILE:N	2.41	0.54
28:M8:1:MET:HG3	40:41:98:ARG:HH21	1.73	0.54
44:1E:70:PHE:O	44:1E:93:VAL:N	2.35	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A8:14:VAL:O	2:A8:18:ILE:HD13	2.08	0.54
1:1G:1815:A:O3'	33:5A:58:LYS:HE3	2.07	0.54
10:58:67:LEU:HD23	10:58:88:GLU:HB3	1.90	0.54
11:G8:94:LYS:HG3	11:G8:95:LYS:N	2.22	0.54
4:19:146:GLU:HB2	4:19:189:CYS:HB3	1.89	0.54
14:3E:108:LEU:HD23	14:3E:110:PHE:HE1	1.73	0.54
14:3E:141:ARG:HB2	14:3E:141:ARG:CZ	2.37	0.54
15:1H:1565:U:H2'	15:1H:1566:G:H8	1.72	0.54
15:1H:1639:U:H2'	15:1H:1640:G:C8	2.42	0.54
15:1H:1640:G:H2'	15:1H:1641:C:C6	2.43	0.54
15:1H:1970:G:H2'	15:1H:1971:U:C6	2.42	0.54
15:1H:2411:G:H5"	39:J8:25:LYS:HE3	1.90	0.54
15:1H:2843:G:H5"	15:1H:2843:G:H8	1.73	0.54
15:14:175:U:H4'	15:14:208:A:H4'	1.90	0.54
15:14:1387:G:N3	15:14:1442:A:H2	2.05	0.54
15:14:1631:G:H2'	15:14:1632:C:O4'	2.08	0.54
15:14:2778:G:H5'	15:14:2779:G:OP2	2.08	0.54
15:14:2852:G:H21	45:55:92:GLY:HA2	1.72	0.54
16:75:58:ASN:HD21	23:29:12:THR:HG22	1.73	0.54
18:69:112:LYS:HA	18:69:114:LEU:H	1.72	0.54
24:4I:88:ARG:HB3	24:4I:88:ARG:HH11	1.73	0.54
26:16:42:U:H5	28:M8:2:LYS:HG2	1.73	0.54
30:78:46:LYS:O	30:78:47:ASP:HB3	2.08	0.54
44:1E:134:GLU:HA	44:1E:137:ARG:HB3	1.90	0.54
42:62:15:ASP:HB3	42:62:19:GLY:H	1.71	0.54
45:98:42:LYS:O	45:98:45:ARG:HD3	2.08	0.54
46:K8:51:ARG:NH1	46:K8:55:ARG:HH11	2.06	0.54
48:1I:16:LEU:HD11	48:1I:70:ARG:HB2	1.90	0.54
3:F8:57:LEU:N	3:F8:57:LEU:HD23	2.23	0.54
52:W1:60:U:H5"	52:W1:61:C:H5	1.73	0.54
52:V1:58:A:O2'	52:V1:59:U:OP1	2.23	0.54
52:X4:17:C:H6	52:X4:17:C:H3'	1.72	0.54
1:13:1627:G:H1	1:13:1665:C:H42	1.56	0.54
1:13:1890:C:H2'	1:13:1891:C:C6	2.43	0.54
1:1G:753:U:O2'	1:1G:754:G:H5'	2.08	0.54
1:1G:1385:C:H2'	1:1G:1386:U:O4'	2.08	0.54
1:1G:1806:A:H2'	1:1G:1807:A:O4'	2.07	0.54
7:8A:5:VAL:HG22	7:8A:60:ILE:HG12	1.90	0.54
7:8A:67:LYS:O	7:8A:68:ARG:HB3	2.08	0.54
15:1H:473:C:O2'	15:1H:474:G:H5'	2.08	0.54
15:1H:685:G:N2	15:1H:698:C:H41	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1258:A:H5'	15:1H:1258:A:H8	1.73	0.54
15:1H:2407:A:H2	15:1H:2439:C:N4	2.02	0.54
10:15:134:ARG:N	10:15:135:PRO:HD3	2.23	0.54
15:14:1381:G:N2	15:14:1659:A:H8	2.06	0.54
26:16:42:U:H1'	26:16:47:A:N6	2.22	0.54
28:I5:43:TYR:CG	28:I5:43:TYR:O	2.61	0.54
32:31:129:PHE:HA	32:31:142:TRP:CD1	2.43	0.54
32:39:7:TYR:CE1	32:39:16:GLY:HA3	2.42	0.54
52:V4:18:G:H2'	52:V4:57:G:N2	2.22	0.54
1:13:747:G:N2	1:13:967:G:O6	2.41	0.54
1:13:1773:C:H4'	1:13:1774:A:O5'	2.07	0.54
1:13:1802:G:C6	1:13:1803:A:C2	2.96	0.54
1:13:2159:C:H2'	1:13:2160:U:O4'	2.07	0.54
1:1G:1063:C:OP1	1:1G:1063:C:H4'	2.08	0.54
1:1G:1469:C:H1'	1:1G:1471:C:N3	2.23	0.54
1:1G:1754:U:C4	1:1G:1908:U:C6	2.96	0.54
15:1H:1512:C:H4'	15:1H:2718:C:O4'	2.08	0.54
15:1H:2225:C:P	39:J8:48:LYS:HD3	2.48	0.54
16:B8:8:LYS:HA	16:B8:11:GLU:HG2	1.89	0.54
15:14:157:U:H4'	15:14:161:G:C4	2.43	0.54
15:14:2913:C:H2'	15:14:2914:C:H5'	1.90	0.54
23:21:78:LEU:O	23:21:79:ARG:HB2	2.05	0.54
21:25:92:GLU:HG2	21:25:113:LYS:HZ1	1.71	0.54
28:M8:59:PHE:HD2	29:AI:68:GLY:HA3	1.72	0.54
30:78:82:GLY:HA2	30:78:113:LYS:O	2.08	0.54
33:5I:4:LYS:HD3	33:5I:7:ILE:HD11	1.90	0.54
37:BA:63:ILE:HG21	37:BA:81:LYS:HG3	1.90	0.54
39:F5:44:PRO:HB2	39:F5:46:LEU:HD13	1.89	0.54
47:59:44:VAL:O	47:59:50:VAL:HA	2.07	0.54
52:V4:9:A:H4'	52:V4:46:G:C4'	2.37	0.54
1:13:788:G:H2'	1:13:789:A:H8	1.73	0.53
1:13:1752:G:HO2'	1:13:1773:C:N4	2.05	0.53
1:13:1756:C:O2'	1:13:1767:G:N7	2.38	0.53
1:13:2063:G:H2'	1:13:2064:U:C6	2.42	0.53
7:8I:76:LEU:HD12	7:8I:77:VAL:H	1.72	0.53
1:1G:1883:A:N6	1:1G:1905:U:OP2	2.40	0.53
4:19:16:MET:HG3	4:19:211:ARG:HH21	1.73	0.53
4:19:42:GLY:O	15:14:1847:G:O2'	2.26	0.53
12:Q8:50:LEU:C	12:Q8:52:LYS:N	2.61	0.53
15:1H:628:A:H4'	15:1H:629:G:O5'	2.08	0.53
20:1F:8:THR:OG1	20:1F:11:GLY:N	2.32	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:975:G:H2'	15:14:976:G:O4'	2.09	0.53
15:14:2804:C:O2'	15:14:2822:A:N3	2.40	0.53
15:14:2824:G:OP1	23:29:61:ARG:HB3	2.07	0.53
22:H8:152:ALA:HB1	22:H8:163:LEU:HD21	1.89	0.53
25:4E:153:LYS:HD2	25:4E:154:GLY:H	1.72	0.53
30:35:8:PRO:HB3	32:39:34:TRP:CZ3	2.43	0.53
48:1A:58:ASP:N	48:1A:58:ASP:OD1	2.41	0.53
52:V1:34:G:O2'	52:V1:35:A:O4'	2.26	0.53
1:13:749:C:H2'	1:13:750:G:O4'	2.08	0.53
2:A8:78:LEU:HD12	2:A8:108:GLY:HA2	1.90	0.53
7:8I:22:LEU:HD11	7:8I:39:SER:HB3	1.90	0.53
8:22:32:LEU:HB3	8:22:59:ARG:HH12	1.74	0.53
8:22:152:ILE:HB	8:22:199:LYS:HB2	1.90	0.53
9:8E:99:LEU:HD12	9:8E:101:PHE:CZ	2.43	0.53
15:1H:417:G:H1	30:78:71:VAL:HG12	1.72	0.53
15:1H:2346:G:H4'	31:I8:42:GLY:HA3	1.90	0.53
12:M5:32:LEU:HG	12:M5:36:LYS:HE2	1.89	0.53
14:32:127:THR:HG23	14:32:147:ALA:HB3	1.89	0.53
15:14:1089:C:H2'	15:14:1090:G:H8	1.71	0.53
15:14:2136:C:N3	15:14:2143:U:O2'	2.38	0.53
15:14:2163:C:O2	15:14:2179:G:N1	2.41	0.53
22:D5:8:TYR:HA	22:D5:62:PRO:HD3	1.91	0.53
28:M8:62:ARG:HB2	29:AI:6:LYS:NZ	2.23	0.53
26:1J:46:G:H5"	26:1J:47:A:OP1	2.08	0.53
27:85:92:ARG:O	27:85:94:ASN:N	2.37	0.53
1:1G:786:G:H1	1:1G:816:C:H42	1.56	0.53
12:Q8:50:LEU:HD23	12:Q8:51:ALA:N	2.11	0.53
15:1H:623:G:C5'	30:78:11:GLY:HA3	2.36	0.53
15:14:1258:A:H5'	15:14:1260:G:C5'	2.39	0.53
15:14:2409:C:N4	52:V4:76:A:H8	2.04	0.53
15:14:2703:U:C5	15:14:2736:U:OP2	2.60	0.53
25:4E:65:ASN:ND2	25:4E:65:ASN:O	2.41	0.53
28:M8:63:TYR:CE2	29:AI:42:PRO:HD3	2.44	0.53
26:1J:93:C:OP2	38:45:16:ARG:NH2	2.42	0.53
44:1E:80:ILE:HD11	44:1E:208:ILE:HG23	1.91	0.53
45:98:55:ALA:HA	45:98:80:PHE:CE1	2.44	0.53
43:A5:84:ARG:O	43:A5:96:ILE:HD13	2.08	0.53
48:1I:77:PRO:HB2	48:1I:79:ARG:HH12	1.72	0.53
52:W1:1:G:O6	52:W1:73:A:N6	2.41	0.53
52:W4:74:C:H2'	52:W4:75:C:C5'	2.39	0.53
1:13:1453:C:H4'	50:7E:1:MET:HB2	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:724:G:H8	1:1G:724:G:O5'	1.92	0.53
1:1G:1063:C:O2'	1:1G:1064:G:N3	2.40	0.53
1:1G:2020:G:H21	1:1G:2125:A:H8	1.56	0.53
7:8A:21:VAL:HG21	7:8A:59:ILE:HD11	1.90	0.53
9:82:99:LEU:HB3	9:82:101:PHE:HE1	1.72	0.53
15:1H:1587:G:H2'	15:1H:1588:G:C8	2.43	0.53
16:B8:56:GLY:O	16:B8:59:THR:HG22	2.08	0.53
14:32:30:LYS:HB3	14:32:35:ARG:HD2	1.91	0.53
15:14:764:G:C2	41:6A:56:LEU:HD21	2.43	0.53
15:14:1044:A:N6	15:14:1209:G:C6	2.76	0.53
15:14:1053:C:H2'	15:14:1054:C:H6	1.74	0.53
15:14:1479:C:H2'	15:14:1480:U:C6	2.43	0.53
21:25:107:ARG:HB2	21:25:115:VAL:HG21	1.91	0.53
32:31:135:LYS:HB3	32:31:138:GLU:HG3	1.91	0.53
29:AA:27:GLU:O	29:AA:47:HIS:NE2	2.41	0.53
35:D8:34:GLU:HB2	35:D8:58:VAL:HG22	1.90	0.53
35:95:5:VAL:HB	35:95:37:VAL:CG1	2.38	0.53
40:41:96:ARG:O	40:41:97:ASP:HB2	2.09	0.53
43:A5:50:VAL:HG22	43:A5:105:VAL:HG23	1.89	0.53
8:2E:43:LEU:O	8:2E:47:LEU:HB2	2.08	0.53
8:2E:152:ILE:HG12	8:2E:167:TRP:HB2	1.91	0.53
52:V4:2:C:O5'	52:V4:2:C:H6	1.92	0.53
4:11:251:GLY:HA3	15:1H:2254:G:H5'	1.91	0.53
1:1G:1017:G:H5"	49:7A:5:ARG:HB2	1.91	0.53
1:1G:1757:C:O5'	1:1G:1758:A:H5'	2.08	0.53
1:1G:2019:U:H2'	1:1G:2020:G:C8	2.44	0.53
4:19:50:THR:OG1	15:14:1847:G:H1'	2.09	0.53
7:8A:45:HIS:CD2	7:8A:47:PRO:HD3	2.44	0.53
9:82:53:VAL:HG11	9:82:92:TYR:CZ	2.42	0.53
15:1H:140:A:C8	15:1H:1457:C:H1'	2.44	0.53
15:1H:867:G:H5'	15:1H:888:U:OP1	2.08	0.53
15:1H:1158:G:H4'	47:51:3:ARG:CD	2.38	0.53
16:B8:36:GLU:HG2	21:68:107:ARG:NH1	2.20	0.53
20:1F:9:ARG:HH11	20:1F:22:ARG:HG2	1.74	0.53
15:14:631:U:H4'	15:14:707:C:H4'	1.91	0.53
15:14:797:G:C8	43:A5:89:ALA:HB1	2.44	0.53
15:14:1072:G:C3'	15:14:1073:G:H5"	2.38	0.53
15:14:2763:G:O6	15:14:2771:C:H5"	2.09	0.53
44:12:92:TYR:CE2	44:12:94:ASN:HB2	2.44	0.53
52:X1:64:A:H8	52:X1:64:A:OP2	1.92	0.53
52:V1:75:C:HO2'	52:V1:76:A:H2	1.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1296:G:H4'	41:6I:51:HIS:CE1	2.43	0.53
1:13:1306:U:H3	1:13:1342:G:H22	1.56	0.53
1:13:1923:C:H5'	24:4I:14:ARG:NH1	2.24	0.53
15:1H:1925:A:H8	15:1H:1925:A:C5'	2.22	0.53
15:1H:2314:G:N1	15:1H:2333:G:C8	2.76	0.53
15:1H:2323:G:H22	15:1H:2326:A:H2	1.56	0.53
15:1H:2641:C:H2'	15:1H:2642:G:O4'	2.08	0.53
13:3A:58:VAL:O	13:3A:65:GLU:HA	2.09	0.53
15:14:1221:G:H2'	15:14:1223:U:H5"	1.91	0.53
15:14:2484:A:H2	15:14:2496:G:N2	2.07	0.53
23:21:75:VAL:HG12	23:21:76:ARG:HD2	1.90	0.53
28:M8:62:ARG:HB2	29:AI:6:LYS:HZ1	1.73	0.53
26:1J:4:C:H2'	26:1J:5:C:H6	1.73	0.53
30:78:49:ARG:HG3	30:78:49:ARG:NH1	2.24	0.53
28:I5:22:ILE:HD13	28:I5:22:ILE:H	1.74	0.53
35:D8:15:GLU:HB3	35:D8:16:PRO:HD2	1.91	0.53
40:49:47:LYS:HE2	40:49:81:LYS:HB2	1.90	0.53
3:F8:84:ALA:HB3	3:F8:87:GLN:OE1	2.09	0.53
1:13:681:G:O2'	13:3I:118:SER:O	2.21	0.53
1:13:1255:U:C2	1:13:1256:G:C8	2.97	0.53
1:1G:1057:G:H1	1:1G:1068:U:H3	1.55	0.53
1:1G:2071:G:C8	16:75:118:ARG:HG2	2.44	0.53
10:58:37:LYS:NZ	15:1H:1057:A:OP1	2.34	0.53
15:1H:647:G:H4'	15:1H:648:A:H5"	1.91	0.53
15:1H:1490:G:H2'	15:1H:1491:G:H8	1.73	0.53
15:1H:1646:A:H5"	15:1H:1647:C:OP1	2.09	0.53
11:C5:83:THR:HG22	11:C5:84:ARG:H	1.73	0.53
14:32:112:VAL:HG12	14:32:116:GLN:OE1	2.08	0.53
15:14:312:C:H2'	15:14:313:C:C6	2.44	0.53
15:14:1820:A:H1'	15:14:1963:A:N6	2.23	0.53
15:14:2487:G:H3'	15:14:2488:U:C5'	2.39	0.53
23:21:78:LEU:O	23:21:78:LEU:HD23	2.08	0.53
18:69:79:ILE:HB	18:69:142:VAL:HA	1.91	0.53
21:25:88:ASN:HD21	21:25:92:GLU:HB2	1.74	0.53
28:M8:61:ARG:HA	28:M8:61:ARG:HE	1.74	0.53
23:29:89:ASP:C	23:29:91:VAL:H	2.12	0.53
25:42:60:TYR:CB	25:42:64:ARG:HH21	2.21	0.53
30:78:56:SER:OG	30:78:61:ARG:HD3	2.09	0.53
32:31:39:TRP:O	32:31:43:LYS:HG2	2.09	0.53
33:5I:23:ARG:HH11	33:5I:30:ALA:HB2	1.74	0.53
42:6E:5:ARG:HG2	42:6E:7:ALA:H	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:12:23:ARG:HH22	44:12:191:ASP:HB2	1.71	0.53
50:7E:13:ILE:O	50:7E:17:THR:HG23	2.09	0.53
46:G5:52:ASP:N	46:G5:52:ASP:OD1	2.40	0.53
1:13:1378:C:H2'	1:13:1379:G:H8	1.74	0.53
1:13:1590:C:O2'	9:8E:125:TYR:OH	2.24	0.53
4:11:3:VAL:HG13	4:11:17:THR:HG23	1.90	0.53
4:11:239:ARG:O	4:11:240:ALA:CB	2.56	0.53
6:2A:20:TYR:CE1	6:2A:83:ILE:HD12	2.44	0.53
9:8E:29:ASN:ND2	9:8E:65:VAL:O	2.38	0.53
1:1G:690:G:N7	56:1G:2411:HOH:O	2.33	0.53
1:1G:1265:U:H2'	1:1G:1266:G:H8	1.74	0.53
1:1G:1759:G:C8	1:1G:1760:C:H5	2.26	0.53
10:58:35:ARG:HD3	10:58:37:LYS:HD2	1.91	0.53
2:65:49:VAL:HG22	2:65:80:LEU:HD12	1.91	0.53
11:G8:28:LYS:HD2	11:G8:40:GLU:HG3	1.91	0.53
4:19:16:MET:HE1	4:19:208:LYS:HG2	1.90	0.53
15:1H:545:G:H2'	15:1H:546:U:C6	2.44	0.53
15:1H:2290:C:O2	38:88:85:LYS:HD3	2.07	0.53
18:61:110:ASP:OD1	18:61:111:PRO:HA	2.08	0.53
19:9I:31:LEU:HD23	34:5E:97:PHE:O	2.08	0.53
19:9I:52:PRO:O	19:9I:56:THR:HG23	2.09	0.53
15:14:139:A:H8	15:14:1457:C:HO2'	1.54	0.53
15:14:239:C:H4'	15:14:240:G:O5'	2.09	0.53
15:14:266:U:H2'	15:14:267:C:C6	2.44	0.53
15:14:555:A:O2'	15:14:556:A:H5"	2.08	0.53
15:14:1574:G:H2'	15:14:1575:G:C8	2.43	0.53
15:14:1583:G:H3'	15:14:1584:U:H5"	1.91	0.53
15:14:2667:C:H42	15:14:2683:G:H1	1.55	0.53
21:68:63:VAL:HG12	21:68:106:LEU:HD11	1.91	0.53
16:75:4:GLY:HA2	16:75:8:LYS:HB2	1.88	0.53
18:69:135:GLU:N	18:69:135:GLU:OE2	2.40	0.53
34:52:76:ALA:O	34:52:80:ARG:HG3	2.09	0.53
42:6E:15:ASP:HB3	42:6E:19:GLY:N	2.23	0.53
43:E8:88:ARG:HB3	43:E8:92:ARG:HB3	1.89	0.53
8:2E:76:VAL:CG2	8:2E:103:VAL:HG21	2.39	0.53
1:1G:2069:G:H5"	1:1G:2070:G:H5'	1.90	0.53
15:1H:558:C:OP1	15:1H:586:G:N1	2.41	0.53
15:1H:1252:A:N1	15:1H:1290:A:C2	2.77	0.53
15:1H:1925:A:H5'	15:1H:1925:A:C8	2.43	0.53
15:1H:2250:G:H2'	15:1H:2251:C:C6	2.44	0.53
11:C5:6:HIS:CD2	15:14:361:C:H5"	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C5:76:CYS:SG	11:C5:97:ARG:HG3	2.49	0.53
15:14:839:C:P	56:14:3647:HOH:O	2.67	0.53
15:14:1586:C:H4'	15:14:1586:C:OP1	2.09	0.53
15:14:2852:G:H5'	45:55:46:GLY:CA	2.38	0.53
23:29:111:ARG:HD3	23:29:160:TYR:CE2	2.44	0.53
24:4A:15:VAL:O	24:4A:19:LEU:HG	2.08	0.53
27:85:92:ARG:NH2	35:95:11:GLN:H	2.05	0.53
42:6E:69:VAL:HG22	42:6E:135:VAL:HG13	1.89	0.53
47:51:4:ILE:HD11	47:51:7:LEU:HD21	1.89	0.53
3:F8:12:VAL:HG13	3:F8:27:THR:O	2.08	0.53
8:2E:73:PRO:O	8:2E:76:VAL:HG22	2.08	0.53
50:72:86:ILE:HG21	50:72:133:LEU:HG	1.91	0.53
1:13:1048:G:O4'	14:3E:119:GLN:NE2	2.42	0.53
8:22:172:ARG:HG2	1:1G:1734:G:H5"	1.90	0.53
11:G8:94:LYS:HE3	11:G8:96:ILE:HG13	1.91	0.53
4:19:242:ARG:NE	15:14:1860:G:H4'	2.24	0.53
15:1H:104:C:H2'	15:1H:105:C:H6	1.74	0.53
15:1H:955:U:O2'	38:88:101:ARG:NH2	2.42	0.53
15:1H:1101:C:N4	15:1H:1154:G:H1	2.07	0.53
15:1H:1266:C:H6	15:1H:1266:C:H5"	1.74	0.53
15:1H:2339:C:H5"	15:1H:2340:G:H5'	1.90	0.53
14:32:13:ARG:HD2	14:32:38:TYR:O	2.09	0.53
15:14:312:C:H2'	15:14:313:C:H6	1.74	0.53
15:14:336:A:C6	15:14:353:U:C4	2.97	0.53
15:14:999:G:C6	15:14:1013:G:C6	2.97	0.53
15:14:1477:C:N4	15:14:1620:A:OP2	2.38	0.53
15:14:2788:C:H2'	15:14:2789:C:H6	1.74	0.53
22:D5:15:PRO:HB2	22:D5:19:ARG:NH2	2.24	0.53
31:I8:7:LEU:HD21	38:88:81:VAL:HG13	1.91	0.53
36:N8:50:GLY:H	36:N8:56:LYS:HB2	1.74	0.53
38:88:5:ARG:O	38:88:6:ARG:C	2.47	0.53
50:7E:4:ASP:OD1	50:7E:85:ARG:NH1	2.42	0.53
47:59:6:ARG:HB2	47:59:66:GLY:HA2	1.91	0.53
6:2I:79:SER:HB2	6:2I:106:LYS:HD2	1.91	0.53
8:2E:123:GLN:NE2	8:2E:136:GLN:OE1	2.41	0.53
52:W1:19:G:H3'	52:W1:20:U:C5	2.44	0.53
52:X1:62:C:H2'	52:X1:63:G:C8	2.44	0.53
52:X4:1:G:C6	52:X4:2:C:C4	2.97	0.53
52:V4:72:C:C2'	52:V4:73:A:H5"	2.39	0.53
1:13:2151:U:O2	1:13:2153:G:H5"	2.09	0.52
1:1G:1054:G:O2'	1:1G:1069:G:N2	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:817:G:O2'	15:1H:1428:A:N6	2.42	0.52
15:1H:1252:A:N1	15:1H:1290:A:H2	2.08	0.52
15:1H:1559:A:OP1	15:1H:1560:A:H5'	2.10	0.52
15:1H:1728:G:N2	15:1H:2014:G:N2	2.53	0.52
10:15:46:VAL:HG12	10:15:48:MET:HG3	1.91	0.52
14:32:157:LEU:HD12	14:32:161:ASN:ND2	2.20	0.52
15:14:897:G:H2'	15:14:898:A:H8	1.73	0.52
15:14:1228:C:H2'	15:14:1229:C:C6	2.45	0.52
29:AI:18:LYS:O	29:AI:22:LEU:HD13	2.09	0.52
28:I5:24:THR:HG22	40:49:105:LYS:HG2	1.91	0.52
43:A5:96:ILE:HD13	43:A5:96:ILE:N	2.24	0.52
8:2E:58:GLU:HB2	8:2E:65:ALA:CB	2.39	0.52
1:13:1752:G:N3	1:13:1755:G:N2	2.57	0.52
3:B5:67:GLY:C	3:B5:69:TYR:H	2.12	0.52
9:8E:114:TYR:CE2	48:1I:59:SER:HA	2.44	0.52
1:1G:703:G:C5	1:1G:704:C:C4	2.97	0.52
1:1G:1919:U:H2'	1:1G:1920:G:C8	2.44	0.52
2:65:62:LYS:O	2:65:66:ALA:N	2.32	0.52
15:1H:1435:C:H2'	15:1H:1436:C:C6	2.39	0.52
15:1H:1465:G:O2'	15:1H:1466:C:O5'	2.24	0.52
12:M5:59:LYS:HZ1	30:35:50:ARG:HG2	1.74	0.52
15:14:412:U:H2'	15:14:413:C:H6	1.72	0.52
15:14:1109:U:C5'	15:14:1118:A:H1'	2.35	0.52
15:14:2093:U:N3	15:14:2445:A:C2	2.72	0.52
15:14:2756:A:C6	15:14:2780:A:C8	2.97	0.52
24:4I:54:VAL:HA	24:4I:57:ARG:HB3	1.90	0.52
28:M8:66:SER:HB3	29:AI:8:GLY:H	1.73	0.52
26:1J:17:A:H1'	26:1J:112:G:N7	2.24	0.52
28:I5:40:HIS:ND1	28:I5:45:GLY:HA3	2.24	0.52
28:I5:62:ARG:HB2	29:AA:9:VAL:HG22	1.91	0.52
44:1E:82:ARG:NE	44:1E:92:TYR:OH	2.41	0.52
46:K8:32:LEU:HD11	46:K8:54:LYS:HG2	1.90	0.52
47:59:149:ARG:HD3	47:59:164:TYR:CE1	2.44	0.52
1:13:1255:U:H2'	1:13:1256:G:C8	2.43	0.52
1:13:1750:U:O4	1:13:1751:A:N6	2.42	0.52
2:A8:30:ARG:NH2	2:A8:92:TYR:CD1	2.78	0.52
4:11:239:ARG:O	4:11:240:ALA:HB2	2.09	0.52
1:1G:1622:C:H2'	1:1G:1623:U:C6	2.45	0.52
1:1G:2003:A:H4'	42:62:29:LYS:HE3	1.92	0.52
2:65:55:ALA:HB2	26:1J:119:G:C5'	2.39	0.52
4:19:70:TRP:CD1	4:19:70:TRP:C	2.82	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2521:U:H1'	52:W1:76:A:O3'	2.09	0.52
16:B8:3:ARG:HD2	16:B8:6:LEU:HB3	1.91	0.52
19:9I:48:GLY:O	19:9I:74:ARG:NH2	2.43	0.52
14:32:139:ARG:HH11	14:32:139:ARG:HG3	1.74	0.52
15:14:29:U:H2'	15:14:30:G:H8	1.74	0.52
15:14:70:A:H5"	15:14:72:A:C8	2.44	0.52
15:14:720:C:OP1	30:35:42:SER:O	2.27	0.52
15:14:1222:A:H62	15:14:1225:A:H4'	1.73	0.52
15:14:1224:G:H5'	15:14:1225:A:OP1	2.09	0.52
15:14:2288:A:H2'	15:14:2289:A:C8	2.44	0.52
15:14:2587:A:OP1	15:14:2589:G:O2'	2.25	0.52
15:14:2821:U:H5"	15:14:2903:G:O6	2.10	0.52
18:69:123:LEU:HD22	18:69:143:SER:HB3	1.91	0.52
22:D5:126:VAL:HA	22:D5:163:LEU:HA	1.91	0.52
43:E8:79:GLY:HA3	43:E8:100:THR:HG22	1.92	0.52
44:1E:163:PHE:HA	44:1E:185:ILE:HG13	1.90	0.52
43:A5:45:TYR:CZ	43:A5:49:LYS:HE3	2.44	0.52
44:12:109:SER:HA	44:12:112:VAL:HG23	1.92	0.52
52:V4:9:A:H62	52:V4:23:A:N6	2.05	0.52
1:13:719:G:N3	1:13:720:C:H5'	2.24	0.52
1:13:819:A:H2'	1:13:820:U:C6	2.44	0.52
1:13:819:A:H2'	1:13:820:U:H6	1.75	0.52
1:13:1293:G:N2	1:13:1370:G:H1	2.03	0.52
1:13:1586:G:N2	1:13:1595:C:C2	2.74	0.52
6:2A:12:ARG:NH1	6:2A:13:GLN:O	2.42	0.52
1:1G:1025:G:H2'	1:1G:1026:C:C6	2.45	0.52
1:1G:1688:C:O2'	48:1A:56:HIS:ND1	2.42	0.52
2:65:17:ARG:HH11	2:65:17:ARG:HG3	1.74	0.52
4:19:181:GLU:HA	4:19:272:ALA:HB1	1.90	0.52
15:1H:472:C:H4'	32:31:49:ALA:HB2	1.91	0.52
15:1H:912:A:H2'	15:1H:913:G:H8	1.74	0.52
15:1H:1498:G:H1'	15:1H:1577:A:H62	1.74	0.52
15:1H:2093:U:N3	15:1H:2445:A:C2	2.77	0.52
15:1H:2287:U:H5"	15:1H:2288:A:OP1	2.09	0.52
15:1H:2507:U:H2'	15:1H:2508:U:C6	2.44	0.52
11:C5:28:LYS:HE3	11:C5:64:GLU:OE2	2.09	0.52
12:M5:61:LEU:HD13	12:M5:62:LEU:N	2.19	0.52
12:M5:61:LEU:HD22	12:M5:62:LEU:HD22	1.92	0.52
15:14:2508:U:H2'	15:14:2509:G:O4'	2.09	0.52
15:14:2569:U:H2'	15:14:2570:U:C6	2.45	0.52
16:75:68:TYR:CE2	21:25:119:PRO:HB2	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:H8:165:VAL:HB	22:H8:167:PRO:HD3	1.91	0.52
25:42:107:ARG:O	25:42:111:GLU:N	2.39	0.52
37:BI:75:ASN:O	37:BI:79:ARG:HB2	2.09	0.52
44:12:131:PRO:HG2	44:12:134:GLU:HB2	1.91	0.52
1:13:885:U:H4'	1:13:886:C:O5'	2.10	0.52
1:1G:770:A:H1'	1:1G:904:A:O2'	2.10	0.52
1:1G:1752:G:H4'	48:1A:38:ILE:HD11	1.91	0.52
12:Q8:59:LYS:HE3	12:Q8:60:LEU:CD1	2.33	0.52
15:1H:104:C:H2'	15:1H:105:C:C6	2.45	0.52
15:1H:265:G:C6	15:1H:266:U:C4	2.97	0.52
15:1H:312:C:H2'	15:1H:313:C:C6	2.44	0.52
15:1H:2374:C:H2'	15:1H:2375:A:O4'	2.09	0.52
15:1H:2415:G:H2'	15:1H:2416:U:O4'	2.10	0.52
11:C5:11:ASP:OD2	11:C5:95:LYS:NZ	2.42	0.52
12:M5:50:LEU:HB3	12:M5:53:PRO:CD	2.40	0.52
15:14:21:A:O2'	15:14:22:C:H5'	2.09	0.52
15:14:1273:C:C3'	35:95:85:LYS:HA	2.39	0.52
15:14:1337:U:C2	15:14:1376:C:O2	2.62	0.52
15:14:1689:U:H5'	56:14:3979:HOH:O	2.10	0.52
15:14:2886:A:H8	45:55:6:SER:N	2.01	0.52
27:C8:102:GLU:OE1	35:D8:13:ARG:NH2	2.43	0.52
22:D5:7:ALA:O	22:D5:8:TYR:CG	2.63	0.52
32:39:116:ASP:O	32:39:120:GLU:HG2	2.08	0.52
45:98:17:ARG:HG2	45:98:21:TYR:CE2	2.45	0.52
46:K8:14:ARG:HB3	46:K8:15:LYS:NZ	2.23	0.52
49:7I:43:LYS:HA	49:7I:48:TRP:HB2	1.91	0.52
6:2I:21:ILE:HG12	6:2I:30:VAL:HG12	1.91	0.52
8:2E:3:ASN:O	8:2E:4:LYS:HG2	2.10	0.52
50:72:120:THR:HG23	50:72:123:GLU:H	1.74	0.52
52:V4:58:A:H2	52:V4:60:U:C2	2.28	0.52
1:1G:687:G:H2'	1:1G:688:G:H8	1.74	0.52
4:19:237:GLU:OE2	4:19:239:ARG:HA	2.09	0.52
15:14:2119:G:OP1	18:69:22:LYS:HD2	2.10	0.52
15:14:2770:U:H5'	15:14:2771:C:OP2	2.09	0.52
15:14:2790:C:H2'	15:14:2791:A:O4'	2.10	0.52
16:75:23:ARG:HG3	16:75:120:ARG:NH1	2.25	0.52
18:69:71:ILE:HG21	18:69:107:VAL:HG21	1.92	0.52
24:4I:82:MET:O	24:4I:84:ILE:N	2.37	0.52
26:1J:96:C:H2'	26:1J:97:C:H6	1.75	0.52
33:5I:43:CYS:HA	33:5I:46:GLU:HB2	1.91	0.52
30:35:113:LYS:HA	30:35:129:ALA:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:D8:18:LEU:HD22	35:D8:19:LYS:N	2.25	0.52
32:39:3:GLU:HA	32:39:24:LEU:HD23	1.92	0.52
32:39:163:VAL:O	32:39:167:ALA:HB2	2.10	0.52
41:6I:56:LEU:HA	41:6I:59:MET:HE2	1.92	0.52
42:6E:108:ALA:HA	42:6E:111:ARG:HD2	1.92	0.52
39:F5:85:LEU:CA	39:F5:87:PRO:HD2	2.38	0.52
48:1A:9:ARG:HE	48:1A:95:GLU:HG2	1.73	0.52
49:7I:77:ALA:HB3	49:7I:79:VAL:HG23	1.92	0.52
44:12:67:THR:HG21	44:12:155:LEU:HD21	1.92	0.52
50:7E:129:VAL:HG23	50:7E:130:GLY:H	1.75	0.52
8:2E:59:ARG:HA	8:2E:63:ASN:O	2.09	0.52
1:13:684:G:C2	1:13:1038:A:C2	2.97	0.52
1:13:813:U:H5"	1:13:849:A:O4'	2.10	0.52
1:13:877:G:H5"	7:8I:42:TYR:CE2	2.45	0.52
1:13:911:A:H2'	1:13:912:C:C6	2.45	0.52
1:13:1159:G:O6	51:Y1:51:U:H1'	2.10	0.52
1:1G:1050:G:H2'	1:1G:1051:G:O4'	2.09	0.52
1:1G:1755:G:H2'	1:1G:1775:C:H42	1.74	0.52
1:1G:1759:G:H2'	1:1G:1760:C:C6	2.45	0.52
1:1G:1878:A:H2'	1:1G:1879:A:C8	2.45	0.52
15:1H:768:C:H2'	15:1H:769:C:H6	1.75	0.52
15:1H:2230:G:H2'	15:1H:2231:G:C6	2.45	0.52
18:61:75:LEU:HD23	18:61:105:HIS:CD2	2.44	0.52
15:14:912:A:H2'	15:14:913:G:C8	2.45	0.52
18:69:76:THR:HG23	18:69:77:LEU:N	2.25	0.52
24:4I:80:ARG:NH1	29:AI:65:ASN:O	2.40	0.52
22:D5:28:MET:HA	22:D5:88:PHE:O	2.09	0.52
23:29:33:VAL:HG12	23:29:89:ASP:CB	2.39	0.52
32:39:83:PHE:O	32:39:84:VAL:HB	2.09	0.52
43:E8:37:ARG:HD3	43:E8:38:TYR:CE2	2.44	0.52
41:6A:74:ASP:OD2	41:6A:77:ARG:HG2	2.09	0.52
52:V4:57:G:H8	52:V4:57:G:O5'	1.93	0.52
1:13:1443:A:N7	1:13:1445:A:C4	2.78	0.52
3:B5:63:LYS:HA	3:B5:72:LYS:HA	1.92	0.52
7:8I:70:ARG:O	7:8I:71:PHE:HD1	1.93	0.52
8:22:141:VAL:HA	8:22:144:SER:HB2	1.92	0.52
1:1G:688:G:N3	1:1G:1251:A:H2	2.08	0.52
1:1G:1773:C:H4'	1:1G:1774:A:O5'	2.09	0.52
1:1G:1951:A:O4'	1:1G:1989:C:H4'	2.10	0.52
10:58:6:PRO:HG3	10:58:41:ASP:HB2	1.91	0.52
12:Q8:14:VAL:O	12:Q8:15:LYS:HD3	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:417:G:H22	30:78:72:PRO:HD3	1.73	0.52
15:1H:1254:G:C6	15:1H:1255:C:C4	2.98	0.52
15:1H:1535:A:H2'	15:1H:1536:G:H8	1.74	0.52
15:1H:1691:A:H2'	15:1H:1692:G:O4'	2.10	0.52
15:1H:1828:U:H2'	15:1H:1829:C:H6	1.74	0.52
15:14:661:C:H2'	15:14:662:C:C6	2.44	0.52
15:14:725:A:H1'	15:14:2458:C:H1'	1.92	0.52
23:21:32:PRO:HD2	23:21:50:GLY:O	2.09	0.52
23:21:119:ARG:HD3	23:21:160:TYR:HB2	1.92	0.52
27:C8:88:ILE:O	27:C8:90:VAL:N	2.43	0.52
28:I5:14:ILE:HG12	28:I5:33:VAL:HG21	1.90	0.52
30:35:47:ASP:HB3	30:35:49:ARG:N	2.25	0.52
40:49:124:SER:HB2	40:49:131:TYR:CE1	2.45	0.52
44:1E:71:VAL:HG12	44:1E:93:VAL:HB	1.90	0.52
47:51:137:ASP:HB3	47:51:140:LYS:HB3	1.91	0.52
1:13:1196:G:H2'	1:13:1197:G:O4'	2.10	0.52
1:13:1354:G:H2'	1:13:1355:C:H6	1.74	0.52
1:13:1581:A:N6	29:AI:77:THR:O	2.43	0.52
1:13:1953:C:H2'	1:13:1954:C:C6	2.45	0.52
4:11:65:ILE:HG12	4:11:67:PHE:CZ	2.45	0.52
6:2A:56:GLY:O	6:2A:89:ALA:HB3	2.10	0.52
1:1G:1882:G:OP1	48:1A:45:ARG:NH2	2.43	0.52
15:1H:408:U:H2'	15:1H:409:G:H8	1.75	0.52
15:1H:1207:C:H4'	17:L8:32:GLN:HB2	1.92	0.52
15:1H:1291:A:N1	30:78:4:SER:OG	2.38	0.52
15:1H:1499:A:H5'	15:1H:1500:G:OP2	2.10	0.52
15:1H:1582:C:H3'	15:1H:1583:G:C5'	2.40	0.52
15:1H:2417:C:O5'	15:1H:2417:C:C6	2.63	0.52
15:14:685:G:H22	15:14:698:C:H42	1.55	0.52
15:14:2041:U:H1'	36:J5:6:VAL:HG13	1.91	0.52
15:14:2153:C:H42	15:14:2185:G:N2	2.07	0.52
30:78:120:ALA:HB1	30:78:138:LEU:HD22	1.90	0.52
30:35:121:LYS:O	30:35:123:LEU:N	2.37	0.52
34:52:74:ASP:OD1	34:52:74:ASP:N	2.42	0.52
37:BA:37:SER:O	37:BA:41:ILE:HG23	2.10	0.52
43:E8:86:LEU:HD12	43:E8:87:PRO:HD2	1.91	0.52
47:51:10:PRO:HB2	47:51:50:VAL:HG13	1.91	0.52
44:12:16:HIS:CD2	44:12:210:SER:HA	2.45	0.52
44:12:134:GLU:O	44:12:138:LEU:HG	2.10	0.52
44:12:166:ASP:OD2	44:12:169:LYS:HB2	2.10	0.52
1:13:1418:U:H5	1:13:1421:A:OP2	1.93	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A8:27:SER:HA	2:A8:88:ASP:CB	2.40	0.52
6:2A:85:ARG:NH1	1:1G:1336:C:OP1	2.43	0.52
1:1G:1161:A:N7	1:1G:1834:G:H4'	2.24	0.52
1:1G:1265:U:H2'	1:1G:1266:G:C8	2.45	0.52
1:1G:1950:G:H2'	1:1G:1951:A:C8	2.45	0.52
1:1G:2071:G:N2	16:75:119:LYS:HB2	2.24	0.52
10:58:96:GLU:HG2	10:58:97:ARG:H	1.70	0.52
10:58:106:MET:CE	15:1H:1186:G:H21	2.22	0.52
15:1H:2835:G:OP1	23:21:159:HIS:NE2	2.41	0.52
15:14:912:A:H2'	15:14:913:G:H8	1.75	0.52
15:14:956:C:O2'	15:14:957:A:H5'	2.10	0.52
15:14:1346:C:OP2	56:14:3667:HOH:O	2.19	0.52
15:14:1583:G:H3'	15:14:1584:U:C5'	2.39	0.52
23:21:105:THR:HG21	23:21:164:ARG:CZ	2.40	0.52
25:4E:69:VAL:O	25:4E:71:LEU:N	2.43	0.52
32:31:8:GLN:H	32:31:8:GLN:CD	2.12	0.52
32:31:41:LEU:HA	32:31:44:ARG:HD3	1.92	0.52
46:K8:51:ARG:NH1	46:K8:55:ARG:NH1	2.58	0.52
47:51:86:GLU:HG3	47:51:165:ALA:H	1.74	0.52
1:13:1652:C:H42	1:13:1661:G:H22	1.57	0.51
6:2A:29:ILE:CG2	6:2A:44:SER:HB2	2.35	0.51
1:1G:994:A:H5'	1:1G:994:A:C8	2.40	0.51
1:1G:1271:A:N3	50:72:113:SER:OG	2.38	0.51
1:1G:1359:G:C5	1:1G:1360:G:H1'	2.45	0.51
1:1G:1760:C:H2'	1:1G:1761:G:C8	2.44	0.51
15:1H:342:G:C2	15:1H:343:C:C2	2.98	0.51
15:1H:403:C:H2'	15:1H:404:C:C6	2.45	0.51
15:1H:1854:U:H4'	15:1H:1855:A:OP2	2.10	0.51
15:14:332:G:N2	15:14:334:G:H3'	2.25	0.51
15:14:903:G:H2'	15:14:904:G:C8	2.45	0.51
15:14:1892:G:H8	15:14:1892:G:OP2	1.93	0.51
15:14:2556:A:H4'	15:14:2780:A:N1	2.24	0.51
27:85:8:VAL:O	27:85:12:ARG:HG3	2.09	0.51
32:31:108:LYS:O	32:31:112:MET:HG3	2.11	0.51
38:88:59:ARG:HA	38:88:59:ARG:NE	2.26	0.51
41:6I:17:ARG:HD3	41:6I:26:GLU:HG3	1.90	0.51
44:1E:102:LEU:HB3	44:1E:180:LEU:HD12	1.91	0.51
45:98:24:GLN:HE22	45:98:36:THR:HG21	1.75	0.51
52:W1:19:G:H3'	52:W1:20:U:H5	1.75	0.51
52:W4:1:G:H21	52:W4:73:A:H61	1.58	0.51
52:X4:43:C:O2'	52:X4:44:G:OP1	2.27	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1235:G:N3	1:13:1261:A:N6	2.58	0.51
1:13:1717:G:HO2'	1:13:1797:A:H2	1.56	0.51
1:13:1807:A:OP1	9:8E:103:THR:OG1	2.26	0.51
1:13:1975:U:N3	1:13:2002:A:H2	1.97	0.51
8:22:199:LYS:HB3	8:22:201:TYR:HE1	1.75	0.51
9:8E:9:ARG:HB3	9:8E:14:VAL:HG22	1.91	0.51
1:1G:800:A:H1'	1:1G:985:A:C5	2.45	0.51
1:1G:1467:G:H1	1:1G:1471:C:N4	2.07	0.51
1:1G:1755:G:H1'	1:1G:1776:U:C2	2.45	0.51
1:1G:1874:U:H2'	1:1G:1875:A:O4'	2.10	0.51
11:G8:35:TYR:CE2	11:G8:69:ALA:HB3	2.45	0.51
16:B8:24:PRO:HA	16:B8:49:VAL:HG13	1.92	0.51
15:14:311:C:H2'	15:14:312:C:C6	2.45	0.51
15:14:471:A:H1'	15:14:1249:C:O4'	2.09	0.51
15:14:1252:A:C2	15:14:1290:A:N1	2.78	0.51
15:14:2704:U:P	15:14:2735:G:H22	2.31	0.51
18:69:75:LEU:HD13	18:69:77:LEU:N	2.26	0.51
24:4I:8:GLU:OE2	24:4I:22:ILE:HA	2.09	0.51
28:M8:15:ILE:HG23	28:M8:20:ASN:ND2	2.25	0.51
35:D8:41:GLY:O	35:D8:45:THR:HA	2.09	0.51
35:D8:44:LYS:HA	35:D8:44:LYS:HE2	1.91	0.51
35:95:35:LEU:HB3	35:95:37:VAL:HG13	1.91	0.51
35:95:43:GLU:O	35:95:43:GLU:HG2	2.10	0.51
38:45:78:PRO:HG2	38:45:81:VAL:HG11	1.93	0.51
52:V1:62:C:O5'	52:V1:62:C:H6	1.93	0.51
1:13:1756:C:O2'	1:13:1757:C:H5"	2.10	0.51
1:1G:1052:A:N7	1:1G:1054:G:N3	2.58	0.51
1:1G:1153:G:H2'	1:1G:1154:C:C6	2.45	0.51
1:1G:1495:A:C4	1:1G:1497:G:C8	2.98	0.51
1:1G:1944:C:H5"	1:1G:1945:A:OP2	2.09	0.51
7:8A:45:HIS:O	7:8A:73:VAL:HG12	2.09	0.51
15:1H:804:C:H2'	15:1H:805:C:H6	1.74	0.51
15:1H:1583:G:H21	15:1H:1584:U:H5"	1.75	0.51
15:1H:1625:C:H2'	15:1H:1626:U:H6	1.74	0.51
15:1H:1768:U:H2'	15:1H:1769:G:O4'	2.10	0.51
15:1H:2104:U:OP1	39:J8:21:ARG:NH2	2.41	0.51
15:1H:2577:U:H1'	21:68:23:ARG:HD3	1.93	0.51
15:1H:2821:U:H5'	15:1H:2903:G:O6	2.10	0.51
14:32:96:LEU:HD23	14:32:139:ARG:NH1	2.26	0.51
15:14:643:G:OP1	32:39:40:GLN:HG3	2.11	0.51
15:14:1514:C:O2'	15:14:1577:A:H8	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1903:G:H2'	15:14:1904:C:C6	2.45	0.51
15:14:2319:G:H22	15:14:2327:U:H3	1.58	0.51
22:H8:117:LEU:HD22	22:H8:118:GLN:N	2.22	0.51
17:H5:46:ASN:O	17:H5:50:VAL:HG22	2.09	0.51
18:69:7:GLU:HG3	18:69:8:PRO:HD2	1.93	0.51
22:D5:40:ASP:OD1	22:D5:43:GLU:HG2	2.09	0.51
23:29:51:PHE:O	23:29:52:LEU:HB2	2.09	0.51
36:J5:25:LEU:HD12	43:A5:19:LEU:HB3	1.92	0.51
45:55:57:ARG:NE	45:55:59:ASP:OD1	2.25	0.51
1:13:1321:U:O2'	1:13:1323:A:N7	2.37	0.51
1:13:1339:G:H5"	34:5E:54:LYS:HE2	1.92	0.51
1:1G:1895:A:O2'	20:1B:19:GLY:HA2	2.11	0.51
1:1G:1901:G:H2'	1:1G:1902:A:H8	1.75	0.51
10:58:73:THR:HB	10:58:82:LEU:HD11	1.92	0.51
4:19:242:ARG:HG2	4:19:242:ARG:NH1	2.20	0.51
15:1H:20:C:OP1	27:C8:22:LYS:HE2	2.10	0.51
15:1H:2050:C:N4	56:1H:3689:HOH:O	2.30	0.51
15:1H:2329:C:H2'	15:1H:2330:G:H8	1.74	0.51
15:1H:2704:U:OP2	15:1H:2735:G:N2	2.37	0.51
15:14:1556:A:C2	15:14:1557:A:H1'	2.46	0.51
16:75:4:GLY:N	16:75:7:ILE:HG22	2.25	0.51
18:69:93:THR:O	18:69:97:ILE:HG13	2.10	0.51
31:I8:68:GLU:HG3	31:I8:80:HIS:HB2	1.92	0.51
32:39:153:SER:OG	32:39:190:GLU:HB2	2.11	0.51
38:88:36:ALA:O	38:88:99:PRO:HA	2.10	0.51
40:41:67:LYS:O	40:41:67:LYS:HE3	2.10	0.51
40:41:107:LEU:HD21	40:41:178:PHE:CD1	2.44	0.51
42:6E:48:LYS:HD2	42:6E:49:ILE:HD13	1.92	0.51
38:45:25:ASP:HB3	38:45:102:VAL:CG2	2.41	0.51
40:49:146:TYR:HA	40:49:149:VAL:HG22	1.91	0.51
44:1E:60:ASP:HB3	44:1E:64:ARG:NH1	2.24	0.51
47:51:6:ARG:HB3	47:51:65:HIS:ND1	2.26	0.51
47:59:20:ALA:HB1	47:59:23:ARG:HG3	1.91	0.51
1:13:950:G:H1'	1:13:1237:A:C2	2.45	0.51
1:13:1672:A:C5	1:13:1673:C:H1'	2.46	0.51
1:13:1776:U:H2'	1:13:1777:C:O4'	2.11	0.51
8:22:29:TYR:OH	33:5A:54:PRO:HD2	2.10	0.51
1:1G:1158:G:O6	13:3A:49:ASN:HA	2.10	0.51
1:1G:1753:U:O4	48:1A:5:ARG:NH2	2.44	0.51
14:3E:194:LEU:HD11	34:52:17:SER:OG	2.10	0.51
9:82:97:LYS:HB3	9:82:98:PRO:HD3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:311:C:H42	15:1H:380:G:H1	1.58	0.51
15:1H:470:G:C4	15:1H:472:C:C5	2.98	0.51
12:M5:61:LEU:HD23	15:14:618:G:H4'	1.92	0.51
15:14:1207:C:H4'	17:H5:32:GLN:HB2	1.92	0.51
15:14:2349:G:O6	31:E5:74:ARG:NH1	2.39	0.51
15:14:2769:A:H2'	15:14:2770:U:O4'	2.11	0.51
32:31:101:LEU:CD2	32:31:102:PRO:HD2	2.39	0.51
29:AA:15:LEU:O	29:AA:19:VAL:HG23	2.11	0.51
37:BI:75:ASN:HA	37:BI:78:ALA:HB3	1.92	0.51
39:J8:7:ILE:HD12	39:J8:91:LYS:HZ1	1.76	0.51
48:1I:6:ILE:HG22	48:1I:98:ILE:HG12	1.93	0.51
1:1G:833:C:H2'	1:1G:834:U:O4'	2.11	0.51
1:1G:986:C:HO2'	1:1G:987:G:P	2.32	0.51
1:1G:1377:C:H4'	1:1G:1378:C:O5'	2.11	0.51
11:G8:81:LYS:HE3	15:1H:327:C:O5'	2.10	0.51
14:3E:84:LYS:HD3	14:3E:85:LYS:O	2.11	0.51
15:1H:599:C:H4'	15:1H:600:A:O5'	2.11	0.51
15:1H:1637:C:O2'	15:1H:1638:C:H5'	2.09	0.51
15:1H:1639:U:H2'	15:1H:1640:G:H8	1.74	0.51
15:1H:2302:A:C2	15:1H:2361:A:H2	2.29	0.51
15:1H:2572:G:H2'	15:1H:2573:C:C6	2.46	0.51
15:1H:2698:C:H4'	23:21:13:ARG:NH2	2.26	0.51
14:32:7:PRO:HB2	14:32:10:ARG:HD2	1.91	0.51
15:14:615:A:H2'	15:14:616:C:C6	2.45	0.51
15:14:1298:U:P	56:14:3649:HOH:O	2.69	0.51
15:14:2510:G:H5'	38:45:81:VAL:O	2.11	0.51
24:4I:74:VAL:O	24:4I:78:ILE:HG12	2.11	0.51
23:29:12:THR:O	23:29:23:VAL:HG22	2.11	0.51
25:42:78:HIS:HA	50:72:105:ARG:HG2	1.92	0.51
34:52:33:TYR:CE2	34:52:78:GLU:HG3	2.46	0.51
35:95:35:LEU:C	35:95:37:VAL:HG13	2.31	0.51
35:95:46:VAL:HG21	35:95:52:VAL:HG21	1.91	0.51
40:41:131:TYR:O	40:41:159:VAL:HG22	2.11	0.51
44:1E:121:LEU:O	44:1E:139:LYS:NZ	2.44	0.51
52:V1:21:A:H2'	52:V1:22:G:H5"	1.91	0.51
1:13:731:U:H6	1:13:731:U:P	2.34	0.51
1:13:1171:G:H5'	14:3E:41:GLY:HA3	1.93	0.51
2:A8:28:VAL:HG11	2:A8:98:VAL:HG13	1.91	0.51
1:1G:1312:G:C6	1:1G:1313:A:C6	2.99	0.51
1:1G:1814:G:O5'	9:82:113:LYS:NZ	2.43	0.51
12:Q8:30:ARG:HH22	15:1H:2407:A:P	2.34	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:3E:85:LYS:HG2	14:3E:86:LYS:H	1.75	0.51
15:1H:143:C:H2'	15:1H:144:C:H6	1.74	0.51
15:1H:1174:A:H4'	15:1H:1175:A:O5'	2.11	0.51
15:1H:1925:A:C5'	15:1H:1925:A:C8	2.94	0.51
10:15:42:TRP:HA	10:15:48:MET:HE1	1.92	0.51
15:14:1053:C:H2'	15:14:1054:C:C6	2.45	0.51
15:14:2212:G:C5	15:14:2213:C:C4	2.98	0.51
15:14:2291:G:OP1	38:45:84:GLY:HA2	2.11	0.51
15:14:2909:U:H5'	15:14:2910:U:OP2	2.11	0.51
22:H8:45:ASP:OD2	22:H8:49:ARG:NH1	2.39	0.51
23:21:197:ILE:HD11	23:21:199:ARG:NE	2.25	0.51
25:42:53:LEU:O	25:42:57:LYS:HB2	2.11	0.51
26:1J:2:A:H2'	26:1J:3:U:C6	2.46	0.51
26:1J:6:C:H42	26:1J:119:G:H1	1.58	0.51
26:1J:14:C:N3	31:E5:74:ARG:NH2	2.57	0.51
30:35:126:VAL:HA	30:35:145:PRO:HD2	1.92	0.51
32:39:178:PRO:HB2	32:39:201:VAL:CG1	2.41	0.51
40:49:42:GLY:O	40:49:43:LEU:HD13	2.09	0.51
43:A5:1:MET:CE	43:A5:2:GLU:H	2.23	0.51
50:7E:116:LYS:HG3	50:7E:129:VAL:HG11	1.93	0.51
1:13:1088:A:P	1:13:1115:G:H22	2.34	0.51
1:13:1932:G:H8	1:13:1932:G:OP2	1.94	0.51
1:13:1963:C:C6	1:13:1963:C:H5"	2.45	0.51
1:13:2025:C:H4'	1:13:2026:A:OP2	2.09	0.51
1:1G:1588:A:C2	1:1G:1592:A:C2	2.98	0.51
10:58:96:GLU:HB2	10:58:122:VAL:HG12	1.92	0.51
10:58:130:HIS:CA	10:58:134:ARG:HH12	2.23	0.51
2:65:25:ARG:NH2	26:1J:11:G:OP1	2.44	0.51
12:Q8:13:ARG:HD2	30:78:59:LEU:O	2.11	0.51
13:3I:20:LYS:HB3	13:3I:20:LYS:NZ	2.26	0.51
15:1H:274:G:OP1	18:61:57:ARG:NH2	2.44	0.51
15:1H:433:U:H2'	15:1H:433:U:O2	2.10	0.51
15:1H:632:U:N3	15:1H:648:A:C2	2.69	0.51
15:1H:1257:G:N2	15:1H:1258:A:H62	2.09	0.51
15:1H:1434:G:HO2'	15:1H:1445:U:H6	1.55	0.51
15:1H:1466:C:H2'	15:1H:1467:G:O4'	2.10	0.51
15:1H:2805:C:H1'	15:1H:2904:A:H2	1.76	0.51
14:32:30:LYS:HA	14:32:33:MET:O	2.11	0.51
15:14:1309:G:H2'	15:14:1310:C:C6	2.46	0.51
15:14:1534:G:H2'	15:14:1535:A:H8	1.75	0.51
15:14:1828:U:H2'	15:14:1829:C:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2352:G:C2	15:14:2353:G:C8	2.99	0.51
25:4E:10:MET:SD	25:4E:13:ILE:HD12	2.51	0.51
28:M8:25:TYR:CE1	40:41:2:PRO:HB3	2.45	0.51
30:78:6:LEU:HD11	32:31:33:LEU:HB3	1.93	0.51
29:AA:23:ASN:ND2	29:AA:27:GLU:OE1	2.40	0.51
40:41:46:ALA:HB2	40:41:52:ILE:HB	1.93	0.51
37:BA:26:ASN:O	37:BA:30:LYS:HB2	2.10	0.51
48:1I:38:ILE:HG23	48:1I:71:LEU:HB3	1.93	0.51
47:59:129:THR:HB	47:59:130:ARG:HG3	1.93	0.51
1:13:1349:C:OP2	1:13:1350:G:O2'	2.22	0.51
1:13:1806:A:H2'	1:13:1807:A:O4'	2.10	0.51
2:A8:56:LEU:O	2:A8:58:LEU:HD23	2.10	0.51
4:11:145:VAL:HG12	4:11:146:GLU:O	2.10	0.51
1:1G:819:A:H2'	1:1G:820:U:C6	2.45	0.51
1:1G:1352:U:H5	1:1G:1478:G:O2'	1.93	0.51
1:1G:1599:G:N2	1:1G:1990:C:OP2	2.29	0.51
10:58:23:LEU:HB3	15:1H:1188:C:OP1	2.11	0.51
11:G8:59:GLY:HA2	15:1H:511:A:O2'	2.11	0.51
12:Q8:22:VAL:HG22	12:Q8:47:LYS:H	1.75	0.51
15:1H:810:A:C8	56:1H:3649:HOH:O	2.55	0.51
15:1H:869:A:H2'	15:1H:870:A:O4'	2.11	0.51
15:1H:1061:C:O2'	15:1H:1062:U:H5'	2.10	0.51
15:14:1009:G:H2'	15:14:1010:U:C6	2.46	0.51
15:14:2877:G:OP1	16:75:119:LYS:HD3	2.11	0.51
21:68:53:LYS:HA	21:68:53:LYS:HE3	1.91	0.51
25:42:150:ARG:O	25:42:154:GLY:HA2	2.11	0.51
30:35:85:LEU:HA	30:35:88:LEU:HB2	1.93	0.51
41:6I:7:GLU:OE1	41:6I:38:ARG:NH2	2.43	0.51
42:6E:15:ASP:OD1	42:6E:44:TYR:OH	2.29	0.51
46:K8:34:GLU:O	46:K8:38:GLN:HG3	2.11	0.51
44:12:72:GLY:C	44:12:74:LYS:H	2.14	0.51
6:2I:30:VAL:HG21	6:2I:65:ALA:HA	1.92	0.51
49:7A:40:ASP:HB3	49:7A:48:TRP:HB2	1.93	0.51
52:X4:42:C:C2'	52:X4:43:C:H5'	2.41	0.51
1:13:965:G:OP1	37:BI:70:SER:OG	2.17	0.51
1:13:1104:G:H2'	1:13:1105:G:H8	1.76	0.51
1:13:1421:A:H4'	1:13:1422:U:O5'	2.11	0.51
1:13:1756:C:H5"	9:8E:16:ARG:HH22	1.75	0.51
4:11:11:PRO:O	4:11:13:ARG:N	2.43	0.51
9:8E:104:ARG:HG2	9:8E:105:ASP:N	2.26	0.51
1:1G:1188:A:H4'	1:1G:1189:U:H5"	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1827:C:H5'	1:1G:1828:A:H5'	1.91	0.51
2:65:41:ASP:OD1	2:65:44:LYS:HB2	2.10	0.51
11:G8:93:GLY:O	11:G8:94:LYS:HB2	2.11	0.51
15:1H:1103:G:H1'	15:1H:1133:A:H2	1.76	0.51
15:1H:2302:A:C2	15:1H:2361:A:C2	2.98	0.51
15:1H:2484:A:N3	15:1H:2484:A:H5'	2.26	0.51
15:1H:2663:C:H2'	15:1H:2664:U:C6	2.46	0.51
15:1H:2710:C:H2'	15:1H:2711:U:C6	2.46	0.51
13:3A:41:ARG:HG3	13:3A:57:LYS:HZ3	1.75	0.51
14:32:107:ARG:HH22	14:32:196:LEU:HD21	1.74	0.51
15:14:1160:G:H2'	15:14:1161:U:C6	2.46	0.51
15:14:1301:G:O4'	27:85:33:ARG:HD3	2.10	0.51
15:14:1426:G:OP2	56:14:3668:HOH:O	2.19	0.51
15:14:1931:G:H5"	15:14:1954:G:O2'	2.10	0.51
15:14:2084:A:H5"	15:14:2085:A:OP2	2.10	0.51
15:14:2159:A:O2'	15:14:2184:G:N2	2.44	0.51
24:4I:7:VAL:H	40:41:115:ARG:NH1	2.09	0.51
23:29:111:ARG:HA	45:55:2:ARG:NH1	2.23	0.51
24:4A:97:PRO:HB2	24:4A:101:GLN:HG3	1.92	0.51
32:31:176:LEU:HD21	32:31:180:GLY:C	2.31	0.51
29:AA:27:GLU:HG2	29:AA:47:HIS:NE2	2.26	0.51
36:J5:28:PRO:HD2	43:A5:35:ILE:HG23	1.93	0.51
43:E8:79:GLY:CA	43:E8:100:THR:HG22	2.41	0.51
39:F5:14:VAL:HG11	39:F5:39:LYS:HD3	1.92	0.51
46:K8:18:PRO:O	46:K8:22:GLU:HG3	2.11	0.51
48:1I:89:ASP:OD1	48:1I:89:ASP:N	2.39	0.51
52:W4:64:A:OP2	52:W4:64:A:H8	1.93	0.51
1:13:1312:G:C6	1:13:1313:A:C6	3.00	0.50
3:B5:80:ILE:HG13	3:B5:80:ILE:O	2.11	0.50
11:G8:100:ALA:HB1	11:G8:101:LYS:CB	2.41	0.50
15:1H:49:U:H4'	15:1H:50:G:OP2	2.11	0.50
15:1H:683:C:H2'	15:1H:684:G:C8	2.45	0.50
15:1H:1073:G:C4	15:1H:1183:C:H1'	2.46	0.50
15:1H:1314:A:H3'	36:N8:19:ARG:NH1	2.26	0.50
15:1H:1582:C:H2'	15:1H:1583:G:C2	2.46	0.50
15:1H:1585:A:OP2	15:1H:1586:C:C4	2.64	0.50
15:1H:2277:U:OP1	15:1H:2402:U:O2'	2.19	0.50
12:M5:50:LEU:HB3	12:M5:53:PRO:HD3	1.93	0.50
18:61:40:THR:HB	18:61:43:ASN:H	1.75	0.50
15:14:1258:A:H5'	15:14:1260:G:H5'	1.92	0.50
15:14:1689:U:C2'	15:14:1690:C:H5'	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1925:A:N1	15:14:1995:A:C6	2.79	0.50
15:14:2105:G:O2'	15:14:2106:C:H5'	2.11	0.50
15:14:2168:C:H2'	15:14:2169:U:H4'	1.92	0.50
15:14:2324:A:C6	15:14:2325:A:C6	2.99	0.50
15:14:2552:U:H2'	15:14:2553:C:H6	1.75	0.50
22:D5:76:LEU:H	22:D5:76:LEU:HD23	1.76	0.50
28:M8:1:MET:HG3	40:41:98:ARG:NH2	2.26	0.50
31:I8:27:GLU:HG3	31:I8:69:PHE:H	1.75	0.50
30:35:57:THR:HB	30:35:60:MET:H	1.74	0.50
37:BI:59:ALA:O	37:BI:63:ILE:HG13	2.12	0.50
39:J8:83:GLU:HG2	39:J8:85:LEU:H	1.75	0.50
40:41:109:VAL:HG11	40:41:142:PRO:HD3	1.93	0.50
42:62:97:GLN:HG3	42:62:98:SER:N	2.26	0.50
46:K8:50:ILE:HD12	46:K8:51:ARG:H	1.75	0.50
3:F8:24:GLY:HA3	3:F8:82:GLN:HE22	1.76	0.50
1:13:1504:G:OP2	13:3I:12:ARG:NH2	2.45	0.50
1:1G:1755:G:H2'	1:1G:1755:G:N3	2.26	0.50
1:1G:1864:C:O2'	1:1G:1927:G:N2	2.41	0.50
2:65:86:ALA:O	2:65:87:PHE:HB2	2.11	0.50
9:82:105:ASP:OD1	9:82:107:ARG:HD3	2.11	0.50
15:1H:211:A:N1	15:1H:255:A:O2'	2.42	0.50
15:1H:390:G:H2'	15:1H:391:G:C8	2.46	0.50
15:1H:1931:G:H5"	15:1H:1954:G:O2'	2.12	0.50
18:61:29:TYR:O	18:61:32:PRO:HD2	2.11	0.50
15:14:897:G:N9	15:14:980:A:H8	2.09	0.50
15:14:1159:A:H4'	47:59:3:ARG:HD3	1.93	0.50
15:14:1901:A:H2'	15:14:1902:A:H8	1.74	0.50
15:14:2476:C:H2'	15:14:2477:U:C6	2.46	0.50
27:C8:104:GLN:NE2	27:C8:105:VAL:HG23	2.26	0.50
32:31:107:LYS:HD3	32:31:206:ILE:HA	1.92	0.50
34:5E:44:GLY:HA2	34:5E:59:TYR:CZ	2.47	0.50
37:BI:16:HIS:O	37:BI:19:SER:N	2.45	0.50
41:6I:7:GLU:O	41:6I:11:VAL:HG23	2.12	0.50
8:2E:26:LYS:HG3	8:2E:27:LYS:HZ2	1.76	0.50
50:72:116:LYS:HD2	50:72:129:VAL:HG11	1.93	0.50
51:Y4:34:G:C6	51:Y4:35:A:C6	3.00	0.50
1:13:1408:C:H2'	1:13:1409:A:O4'	2.11	0.50
7:8I:7:THR:OG1	7:8I:58:GLU:HG2	2.11	0.50
1:1G:844:U:H2'	1:1G:845:C:H6	1.76	0.50
1:1G:1115:G:H1'	1:1G:1116:U:H5	1.76	0.50
1:1G:2165:G:C6	51:Y4:29:G:N2	2.72	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:65:95:HIS:CD2	26:1J:50:A:H4'	2.45	0.50
15:1H:139:A:H8	15:1H:1457:C:HO2'	1.57	0.50
15:1H:665:G:H2'	15:1H:666:U:C6	2.46	0.50
15:1H:1273:C:O2'	35:D8:85:LYS:HA	2.10	0.50
15:1H:1341:U:H2'	15:1H:1342:C:C6	2.46	0.50
15:1H:2285:G:OP2	56:1H:3667:HOH:O	2.18	0.50
17:L8:46:ASN:O	17:L8:50:VAL:HG22	2.11	0.50
15:14:2253:G:N7	56:14:3703:HOH:O	2.34	0.50
15:14:2770:U:H6	15:14:2770:U:H5"	1.74	0.50
23:29:52:LEU:O	23:29:75:VAL:N	2.40	0.50
32:39:24:LEU:HD12	32:39:25:PRO:HD3	1.93	0.50
40:49:95:ARG:O	40:49:99:MET:HG2	2.10	0.50
48:1I:84:GLN:O	48:1I:88:LEU:HB2	2.11	0.50
49:7I:5:ARG:HE	49:7I:22:THR:HG21	1.76	0.50
1:13:1734:G:C6	1:13:1735:C:C4	3.00	0.50
1:13:2069:G:H5"	1:13:2070:G:H5'	1.93	0.50
4:11:108:PRO:HD2	4:11:111:LEU:HG	1.94	0.50
1:1G:695:U:O2	1:1G:1003:G:H1'	2.11	0.50
1:1G:1700:G:C5	1:1G:1701:U:C4	2.99	0.50
10:58:96:GLU:C	10:58:98:VAL:N	2.64	0.50
10:58:137:LYS:NZ	10:58:138:LEU:HB2	2.26	0.50
4:19:241:PRO:HB2	15:14:1928:G:OP1	2.10	0.50
15:1H:1126:U:H1'	15:1H:1136:A:C2	2.47	0.50
15:1H:1558:C:H2'	15:1H:1560:A:C8	2.47	0.50
15:1H:2454:A:H5'	15:1H:2454:A:C8	2.47	0.50
15:1H:2569:U:H2'	15:1H:2570:U:C6	2.46	0.50
12:M5:14:VAL:HG13	12:M5:22:VAL:HG13	1.93	0.50
18:61:114:LEU:HD12	18:61:114:LEU:N	2.27	0.50
15:14:10:G:C6	15:14:2644:A:N7	2.80	0.50
15:14:383:U:H2'	15:14:384:A:H8	1.76	0.50
15:14:1381:G:H5'	15:14:1381:G:C8	2.46	0.50
15:14:1493:G:N2	15:14:1598:C:C2	2.80	0.50
15:14:2032:C:H2'	15:14:2033:C:C6	2.47	0.50
16:75:45:PHE:CE2	16:75:74:ARG:HB2	2.46	0.50
23:21:52:LEU:O	23:21:75:VAL:N	2.38	0.50
18:69:90:GLY:O	18:69:121:LYS:HD2	2.12	0.50
24:4I:3:ARG:NE	24:4I:9:ILE:HD11	2.22	0.50
22:D5:158:PRO:HB2	22:D5:159:PRO:HD2	1.93	0.50
28:I5:20:ASN:OD1	28:I5:36:CYS:HB2	2.10	0.50
32:39:155:LEU:HD23	32:39:186:ILE:HD13	1.93	0.50
38:88:20:ALA:CB	38:88:99:PRO:HD2	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:41:135:LEU:N	40:41:135:LEU:HD12	2.27	0.50
42:6E:15:ASP:HB3	42:6E:19:GLY:H	1.76	0.50
44:1E:204:ASN:ND2	44:1E:207:ALA:HB3	2.26	0.50
47:51:59:ARG:O	47:51:63:SER:OG	2.26	0.50
47:51:83:TYR:HA	47:51:135:GLY:H	1.74	0.50
8:2E:10:PHE:HD2	8:2E:11:ARG:NH1	2.10	0.50
52:V1:15:G:C6	52:V1:48:C:N4	2.80	0.50
1:13:910:C:H2'	1:13:911:A:C8	2.47	0.50
1:13:1048:G:H2'	1:13:1049:A:C8	2.45	0.50
9:8E:114:TYR:H	9:8E:114:TYR:HD1	1.60	0.50
1:1G:1314:G:N2	1:1G:1334:U:O4	2.35	0.50
1:1G:1574:G:OP2	24:4A:102:ARG:NH2	2.44	0.50
1:1G:1950:G:H4'	1:1G:1990:C:N3	2.25	0.50
1:1G:1954:C:H2'	1:1G:1955:C:C6	2.47	0.50
13:3I:71:PRO:O	13:3I:102:ARG:NH1	2.41	0.50
15:1H:350:G:O2'	15:1H:351:G:H5'	2.12	0.50
15:1H:845:C:H2'	15:1H:846:C:C6	2.46	0.50
15:1H:970:U:H2'	15:1H:971:C:C6	2.46	0.50
15:1H:1579:G:H2'	15:1H:1580:C:C6	2.47	0.50
15:1H:1718:A:H4'	15:1H:1719:A:O5'	2.11	0.50
15:1H:2485:G:H5'	38:88:56:ARG:NH2	2.23	0.50
15:1H:2558:G:H2'	15:1H:2559:G:C8	2.46	0.50
15:1H:2582:G:H2'	15:1H:2583:C:C6	2.47	0.50
10:15:48:MET:O	10:15:48:MET:SD	2.69	0.50
18:61:3:VAL:HG12	18:61:38:LEU:HA	1.92	0.50
15:14:375:U:H2'	15:14:376:G:O4'	2.10	0.50
15:14:645:C:OP2	32:39:103:LYS:HE2	2.11	0.50
15:14:1042:C:OP1	27:85:53:ARG:NH2	2.44	0.50
15:14:2081:G:O3'	36:J5:8:LYS:NZ	2.44	0.50
15:14:2421:U:C2	30:35:72:PRO:HB2	2.47	0.50
15:14:2489:C:H5'	15:14:2490:C:OP2	2.11	0.50
24:4I:4:ILE:HG22	24:4I:5:ALA:H	1.75	0.50
22:D5:16:SER:O	22:D5:20:ARG:HG3	2.11	0.50
23:29:11:MET:HA	23:29:24:THR:HA	1.93	0.50
31:E5:36:ILE:HG12	31:E5:37:LEU:N	2.26	0.50
34:52:68:PRO:HG2	34:52:71:ARG:HG3	1.93	0.50
36:J5:51:TYR:HD1	36:J5:52:TYR:CZ	2.30	0.50
38:45:74:TYR:O	38:45:90:VAL:O	2.29	0.50
40:49:63:ILE:HD12	40:49:141:PHE:CD2	2.47	0.50
42:62:65:ALA:O	42:62:69:VAL:HG23	2.12	0.50
45:98:12:ARG:HD3	45:98:16:HIS:CG	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:V4:23:A:H2'	52:V4:24:G:H8	1.76	0.50
1:13:1368:C:O2'	41:6I:42:HIS:ND1	2.33	0.50
1:13:1495:A:C2	1:13:1497:G:C6	3.00	0.50
1:13:1523:A:H2'	1:13:1524:A:O4'	2.12	0.50
8:22:36:ASP:HA	8:22:39:ILE:HD12	1.94	0.50
1:1G:1169:G:H2'	1:1G:1170:G:O4'	2.11	0.50
1:1G:1997:C:H2'	1:1G:1998:G:C8	2.46	0.50
1:1G:2074:C:H2'	1:1G:2075:C:O4'	2.12	0.50
4:19:228:PRO:HD3	4:19:235:GLY:HA3	1.94	0.50
12:Q8:21:LYS:HZ1	12:Q8:48:PHE:CB	2.24	0.50
15:1H:138:G:N3	15:1H:140:A:N1	2.59	0.50
14:32:170:VAL:HG21	14:32:176:LEU:HD22	1.94	0.50
15:14:126:C:C6	15:14:126:C:H3'	2.46	0.50
15:14:280:G:C6	15:14:281:C:C4	3.00	0.50
15:14:1231:G:O3'	17:H5:29:ARG:NH2	2.45	0.50
15:14:2163:C:O2'	15:14:2179:G:N2	2.40	0.50
18:69:49:ALA:HA	18:69:52:ARG:NH1	2.26	0.50
24:4I:7:VAL:HB	40:41:115:ARG:CZ	2.41	0.50
26:1J:59:A:C2'	26:1J:60:A:H5'	2.41	0.50
43:E8:28:SER:OG	43:E8:31:GLU:HG2	2.11	0.50
44:1E:28:PHE:O	44:1E:32:ILE:HG22	2.11	0.50
48:1A:78:ASN:OD1	48:1A:80:LYS:HB3	2.12	0.50
48:1I:57:LYS:HD2	48:1I:60:ARG:NH1	2.22	0.50
48:1I:94:VAL:HG12	48:1I:95:GLU:H	1.77	0.50
8:2E:78:GLY:O	8:2E:79:ARG:NE	2.45	0.50
52:X4:61:C:H2'	52:X4:62:C:H6	1.77	0.50
1:13:748:A:H2'	1:13:967:G:N2	2.27	0.50
1:13:755:A:H61	1:13:954:A:H1'	1.76	0.50
1:13:1255:U:N3	1:13:1256:G:N7	2.58	0.50
1:13:2078:C:H4'	1:13:2079:G:O5'	2.12	0.50
8:22:117:ALA:HB2	8:22:200:ALA:HB2	1.93	0.50
1:1G:907:G:H5'	1:1G:909:C:H41	1.76	0.50
1:1G:1600:A:O2'	1:1G:1604:U:N3	2.40	0.50
1:1G:1904:C:HO2'	1:1G:1906:A:H1'	1.76	0.50
1:1G:2156:C:N4	1:1G:2157:A:C6	2.79	0.50
15:1H:594:U:C4	15:1H:595:G:C6	3.00	0.50
15:1H:1363:C:H5'	15:1H:1363:C:H6	1.77	0.50
15:1H:1663:A:N6	43:E8:88:ARG:H	2.10	0.50
15:1H:1892:G:O2'	15:1H:1893:A:O5'	2.30	0.50
10:15:4:TYR:CD2	27:85:100:VAL:HG11	2.47	0.50
20:1F:2:GLY:O	20:1F:4:GLY:N	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:234:A:C2	15:14:245:A:C4	3.00	0.50
15:14:627:G:O2'	15:14:704:A:N6	2.43	0.50
15:14:2290:C:H5'	15:14:2290:C:C6	2.47	0.50
18:69:111:PRO:O	18:69:113:ARG:HB2	2.12	0.50
24:4A:79:LYS:HA	24:4A:82:MET:HB3	1.94	0.50
30:78:2:LYS:NZ	30:78:4:SER:H	2.09	0.50
32:31:155:LEU:HD13	32:31:174:VAL:HG22	1.93	0.50
34:5E:33:TYR:CD2	34:5E:75:LEU:HD23	2.46	0.50
30:35:127:ALA:O	30:35:147:LEU:N	2.43	0.50
44:12:102:LEU:HD23	44:12:182:ILE:HD13	1.94	0.50
45:55:19:ALA:O	45:55:23:ASN:ND2	2.45	0.50
8:2E:150:LYS:HD3	8:2E:152:ILE:HD11	1.94	0.50
52:W1:11:C:H2'	52:W1:12:U:C6	2.47	0.50
52:X1:19:G:C5	52:X1:57:G:N2	2.80	0.50
1:13:984:U:O2'	1:13:987:G:O6	2.25	0.50
1:13:1904:C:O2'	1:13:1906:A:H1'	2.12	0.50
1:13:1933:A:H61	1:13:1958:G:H1'	1.77	0.50
2:A8:83:LYS:O	2:A8:110:LEU:HB2	2.11	0.50
7:8I:78:GLU:OE2	7:8I:81:ARG:HD2	2.11	0.50
1:1G:1148:C:H2'	1:1G:1149:A:O4'	2.11	0.50
12:Q8:30:ARG:CG	12:Q8:30:ARG:NH1	2.71	0.50
15:1H:959:A:H2'	38:88:9:TYR:OH	2.12	0.50
15:1H:1314:A:H8	15:1H:1314:A:OP1	1.93	0.50
15:1H:1770:A:H8	15:1H:1771:U:C6	2.30	0.50
15:1H:2133:C:H2'	15:1H:2134:U:O4'	2.12	0.50
10:15:134:ARG:O	10:15:134:ARG:HG2	2.12	0.50
15:14:835:C:O2'	15:14:836:U:H5'	2.12	0.50
15:14:898:A:N1	17:H5:25:ALA:HB2	2.26	0.50
15:14:1093:A:H1'	15:14:1095:G:C4	2.46	0.50
15:14:1108:U:H4'	15:14:1109:U:C5'	2.41	0.50
15:14:1169:C:H2'	15:14:1170:G:O4'	2.12	0.50
15:14:1582:C:C4	15:14:1583:G:H1'	2.47	0.50
15:14:1924:G:N2	15:14:1927:C:C5	2.80	0.50
15:14:2318:G:N3	40:49:132:ASN:ND2	2.60	0.50
15:14:2430:G:H4'	30:35:67:MET:H	1.76	0.50
25:4E:93:PRO:HG2	50:7E:105:ARG:HE	1.77	0.50
26:16:62:C:C2	26:16:63:G:C8	3.00	0.50
22:D5:74:VAL:HG13	22:D5:86:VAL:HG23	1.93	0.50
28:M8:17:GLY:H	28:M8:35:VAL:HA	1.76	0.50
33:5I:15:LYS:HG2	33:5I:16:PHE:CD2	2.46	0.50
30:35:93:GLY:H	30:35:123:LEU:HD22	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:95:2:PHE:H	35:95:42:GLY:HA3	1.77	0.50
35:95:38:LEU:HD23	35:95:40:LEU:O	2.11	0.50
36:J5:49:CYS:SG	36:J5:50:GLY:N	2.84	0.50
40:41:171:ALA:O	40:41:175:LEU:HG	2.11	0.50
44:1E:44:LEU:HA	44:1E:47:THR:OG1	2.12	0.50
42:62:70:LYS:HD3	42:62:96:GLN:HB3	1.93	0.50
52:V4:18:G:O2'	52:V4:19:G:OP1	2.28	0.50
1:13:720:C:O2'	1:13:734:G:N2	2.30	0.50
1:13:1194:U:H3'	1:13:1195:G:H2'	1.94	0.50
1:13:1805:G:N2	1:13:1808:G:C8	2.80	0.50
1:13:1932:G:O2'	1:13:1958:G:N2	2.45	0.50
9:8E:87:GLN:O	9:8E:90:PRO:HD3	2.12	0.50
1:1G:678:A:C2	1:1G:679:A:C4	3.00	0.50
1:1G:1012:G:O2'	1:1G:1014:A:N7	2.43	0.50
1:1G:1870:C:OP1	20:1B:8:THR:HG21	2.12	0.50
15:1H:52:A:H2'	15:1H:53:G:O4'	2.12	0.50
15:1H:1703:G:C6	45:98:9:LYS:HG3	2.47	0.50
15:1H:2323:G:N1	15:1H:2326:A:H2	2.06	0.50
12:M5:4:MET:HE1	15:14:618:G:H1'	1.93	0.50
12:M5:50:LEU:O	12:M5:51:ALA:HB3	2.12	0.50
18:61:109:ILE:HB	18:61:130:TYR:CE1	2.46	0.50
15:14:295:C:H5'	15:14:296:C:OP2	2.12	0.50
15:14:562:C:O2'	15:14:563:A:H5'	2.11	0.50
15:14:564:C:H5"	15:14:564:C:H6	1.77	0.50
15:14:1154:G:H2'	15:14:1155:G:C8	2.47	0.50
15:14:2708:A:H2'	15:14:2709:G:C8	2.45	0.50
27:C8:112:ARG:NH2	35:D8:47:VAL:HG13	2.26	0.50
22:D5:25:PRO:O	22:D5:85:HIS:HA	2.12	0.50
24:4A:79:LYS:HG2	24:4A:82:MET:SD	2.52	0.50
30:35:61:ARG:HH21	30:35:61:ARG:HG3	1.77	0.50
35:D8:21:ARG:HG2	35:D8:91:TYR:CD2	2.47	0.50
36:N8:36:CYS:SG	36:N8:48:GLU:O	2.66	0.50
32:39:95:ARG:HG3	32:39:97:TYR:CE1	2.46	0.50
40:49:27:ASN:HB3	40:49:30:GLU:HG3	1.94	0.50
44:1E:226:ARG:HG3	44:1E:227:GLY:H	1.77	0.50
45:98:100:LEU:HD11	45:98:113:LEU:HB2	1.94	0.50
47:51:74:ASN:O	47:51:78:GLY:N	2.44	0.50
44:12:235:SER:HG	44:12:236:TYR:HD2	1.59	0.50
50:7E:49:GLU:OE2	50:7E:62:TYR:OH	2.30	0.50
52:W4:1:G:N2	52:W4:73:A:N6	2.59	0.50
52:X4:31:A:C5	52:X4:32:U:C5	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:782:G:H2'	1:13:783:A:H8	1.77	0.49
1:13:828:C:N4	1:13:841:G:H1	2.10	0.49
1:13:1614:U:C5	1:13:1839:U:H1'	2.47	0.49
1:13:2079:G:H22	37:BI:54:LYS:NZ	2.09	0.49
7:8I:22:LEU:HD12	7:8I:40:LYS:O	2.12	0.49
9:8E:69:GLY:O	9:8E:73:GLN:HG3	2.12	0.49
1:1G:846:C:H2'	1:1G:847:A:H5"	1.94	0.49
1:1G:1600:A:C8	1:1G:1850:C:C4	3.00	0.49
1:1G:1639:A:N3	1:1G:1845:C:O2'	2.36	0.49
1:1G:1755:G:H1'	1:1G:1776:U:O2	2.12	0.49
11:G8:9:LYS:HB2	15:1H:84:G:OP2	2.12	0.49
12:Q8:9:GLY:O	12:Q8:13:ARG:HG2	2.12	0.49
9:82:114:TYR:HD2	48:1A:60:ARG:HG3	1.77	0.49
15:1H:417:G:H22	30:78:72:PRO:CD	2.25	0.49
15:1H:612:C:H4'	15:1H:613:U:OP2	2.12	0.49
15:1H:1226:C:H1'	15:1H:1227:C:C6	2.46	0.49
10:15:112:LEU:HD12	15:14:583:G:H5'	1.93	0.49
11:C5:60:PHE:CE1	15:14:511:A:H1'	2.46	0.49
15:14:487:U:H2'	15:14:488:A:H8	1.77	0.49
15:14:967:G:N2	15:14:2284:A:OP2	2.44	0.49
15:14:1198:G:C6	15:14:1199:C:N4	2.80	0.49
15:14:1478:G:H2'	15:14:1479:C:C6	2.47	0.49
15:14:1566:G:H2'	15:14:1567:C:C6	2.47	0.49
15:14:2484:A:O2'	38:45:56:ARG:HG2	2.12	0.49
23:21:116:VAL:HG13	23:21:122:PHE:CG	2.47	0.49
28:I5:21:VAL:HG22	28:I5:22:ILE:HD13	1.94	0.49
29:AA:23:ASN:O	29:AA:27:GLU:HB2	2.12	0.49
39:F5:49:VAL:CG2	39:F5:67:ILE:HD12	2.42	0.49
44:1E:76:GLN:NE2	44:1E:206:ASP:OD1	2.45	0.49
45:55:21:TYR:OH	45:55:43:GLU:HG2	2.12	0.49
47:59:17:VAL:HA	47:59:25:LYS:O	2.12	0.49
52:X4:44:G:H3'	52:X4:45:U:H6	1.75	0.49
1:13:1752:G:C2	1:13:1755:G:N2	2.80	0.49
1:13:2163:U:H2'	1:13:2164:U:O4'	2.12	0.49
2:A8:14:VAL:HG11	2:A8:90:GLY:O	2.11	0.49
1:1G:849:A:N6	1:1G:861:G:O2'	2.44	0.49
1:1G:1866:A:C4	1:1G:1925:C:N4	2.80	0.49
10:58:9:VAL:HG11	10:58:39:ARG:HH12	1.75	0.49
4:19:65:ILE:HD11	4:19:67:PHE:CE1	2.46	0.49
14:3E:85:LYS:CG	14:3E:86:LYS:H	2.24	0.49
15:1H:365:A:H2'	15:1H:366:G:O4'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:796:U:O2	15:1H:2039:A:H1'	2.13	0.49
15:1H:2482:C:H4'	38:88:123:HIS:CG	2.47	0.49
15:1H:2650:C:OP1	23:21:78:LEU:HD12	2.13	0.49
16:B8:93:ARG:HG3	16:B8:93:ARG:HH11	1.77	0.49
15:14:1872:C:O3'	56:14:3666:HOH:O	2.18	0.49
22:H8:73:GLN:HB2	22:H8:87:ASP:HB2	1.94	0.49
18:69:29:TYR:O	18:69:32:PRO:HD2	2.12	0.49
24:4I:88:ARG:HD2	24:4I:98:VAL:HG12	1.94	0.49
33:5I:6:LEU:HB3	33:5I:23:ARG:HH22	1.75	0.49
38:45:21:THR:HG21	38:45:101:ARG:HD2	1.93	0.49
39:F5:86:SER:N	39:F5:87:PRO:HD2	2.26	0.49
47:51:87:LEU:HA	47:51:163:TYR:O	2.12	0.49
48:1I:54:PHE:CZ	48:1I:55:LYS:NZ	2.74	0.49
49:7A:75:ARG:O	49:7A:78:GLY:N	2.32	0.49
1:13:1078:U:H5"	14:3E:155:LEU:HD21	1.92	0.49
1:13:1183:C:H2'	1:13:1184:C:C6	2.47	0.49
1:13:1245:G:H2'	1:13:1246:G:H8	1.77	0.49
1:13:1860:G:H2'	1:13:1861:C:H6	1.77	0.49
8:22:191:THR:OG1	8:22:194:GLY:O	2.27	0.49
1:1G:678:A:H2'	1:1G:679:A:C8	2.47	0.49
1:1G:765:G:OP1	1:1G:1234:U:O2'	2.23	0.49
1:1G:1750:U:O4	1:1G:1751:A:N6	2.44	0.49
1:1G:1785:A:H8	1:1G:1786:C:C4	2.28	0.49
1:1G:2152:G:H4'	1:1G:2153:G:OP2	2.12	0.49
12:Q8:58:ILE:O	12:Q8:58:ILE:HG22	2.11	0.49
15:1H:197:A:H2'	15:1H:198:C:O4'	2.13	0.49
15:1H:299:G:H8	15:1H:299:G:H3'	1.77	0.49
15:1H:326:G:C6	15:1H:342:G:C5	3.00	0.49
15:1H:557:G:C5	15:1H:2047:U:H5"	2.47	0.49
15:1H:1191:A:C4	15:1H:1193:G:C8	2.99	0.49
15:1H:2806:A:H2	15:1H:2906:G:H5"	1.78	0.49
15:1H:2807:C:H42	15:1H:2820:G:N2	2.11	0.49
13:3A:53:ARG:HG3	13:3A:93:LEU:HD21	1.94	0.49
14:32:88:VAL:HG13	25:42:97:GLY:HA3	1.94	0.49
15:14:26:G:OP1	43:A5:80:PRO:HB3	2.11	0.49
15:14:404:C:H2'	15:14:405:C:C6	2.47	0.49
15:14:606:C:H2'	15:14:607:G:H8	1.78	0.49
15:14:683:C:H2'	15:14:684:G:C8	2.47	0.49
15:14:769:C:H2'	15:14:770:C:C6	2.46	0.49
15:14:1252:A:O2'	15:14:1253:U:OP2	2.28	0.49
21:68:88:ASN:ND2	21:68:90:GLN:OE1	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:16:3:U:H2'	26:16:4:C:C6	2.47	0.49
21:25:68:GLU:HB3	21:25:78:ARG:HB3	1.94	0.49
23:29:27:LEU:HA	23:29:180:ASN:O	2.12	0.49
23:29:116:VAL:O	23:29:117:MET:CB	2.59	0.49
29:AI:51:VAL:HG12	29:AI:52:TYR:H	1.77	0.49
25:42:33:VAL:HG11	25:42:109:ILE:HA	1.93	0.49
28:I5:23:GLU:OE2	40:49:6:ALA:N	2.45	0.49
49:7I:71:ARG:O	49:7I:75:ARG:N	2.45	0.49
44:12:204:ASN:HB2	44:12:210:SER:HB3	1.94	0.49
52:V1:9:A:H62	52:V1:23:A:N6	2.04	0.49
1:13:826:C:H2'	1:13:827:C:H6	1.77	0.49
1:13:987:G:N2	1:13:988:G:C8	2.80	0.49
1:13:1080:A:C4	1:13:1126:A:C2	3.00	0.49
1:13:2016:C:H2'	1:13:2017:C:H6	1.76	0.49
6:2A:108:ILE:H	19:9A:87:ARG:HH12	1.61	0.49
1:1G:1050:G:H1	1:1G:1074:C:N4	2.10	0.49
1:1G:1600:A:H2'	1:1G:1601:A:H5'	1.93	0.49
1:1G:1887:C:H3'	1:1G:1887:C:H6	1.78	0.49
1:1G:1970:G:H2'	1:1G:1971:C:H6	1.77	0.49
14:3E:111:ALA:HB2	14:3E:120:LEU:CD1	2.41	0.49
14:3E:155:LEU:HB3	14:3E:158:ILE:HG13	1.95	0.49
15:1H:1443:U:C4	15:1H:1444:A:C5	3.01	0.49
15:1H:2703:U:C5	15:1H:2736:U:OP2	2.63	0.49
15:1H:2727:U:OP1	15:1H:2730:G:H4'	2.12	0.49
11:C5:87:LYS:HB3	11:C5:94:LYS:HA	1.94	0.49
13:3A:60:LEU:HB2	13:3A:64:TYR:HB3	1.94	0.49
15:14:875:U:H4'	30:35:55:ARG:HB2	1.94	0.49
15:14:950:C:H2'	15:14:951:C:C6	2.47	0.49
15:14:1117:A:H5"	15:14:1118:A:H5"	1.95	0.49
15:14:1210:C:H1'	35:95:8:GLY:O	2.12	0.49
15:14:2660:G:H3'	15:14:2661:C:H5'	1.94	0.49
15:14:2802:U:H2'	15:14:2803:C:H6	1.76	0.49
21:68:7:TYR:CZ	21:68:44:LYS:HG3	2.47	0.49
22:H8:92:SER:O	22:H8:130:PRO:HG2	2.12	0.49
23:21:105:THR:HG22	23:21:106:GLY:N	2.25	0.49
38:88:51:ARG:NH1	38:88:52:VAL:HG23	2.27	0.49
35:95:4:ILE:HA	35:95:12:TYR:O	2.12	0.49
44:1E:60:ASP:O	44:1E:64:ARG:HG2	2.12	0.49
46:K8:48:HIS:N	46:K8:50:ILE:HD11	2.27	0.49
49:7A:17:TYR:HE2	49:7A:41:PRO:HG3	1.77	0.49
1:13:1337:C:H2'	1:13:1338:G:H8	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1375:A:H2'	1:13:1376:C:C6	2.47	0.49
1:13:1581:A:C6	1:13:1582:A:C6	3.01	0.49
1:13:1866:A:H62	1:13:1926:A:H62	1.60	0.49
1:13:1923:C:H4'	1:13:1929:U:C5	2.47	0.49
8:22:32:LEU:O	8:22:36:ASP:HB2	2.12	0.49
1:1G:1104:G:H2'	1:1G:1105:G:C8	2.48	0.49
1:1G:1579:U:C2	1:1G:1852:A:C2	3.01	0.49
14:3E:90:GLY:O	14:3E:93:PHE:HB3	2.13	0.49
9:82:43:ALA:HA	9:82:74:ILE:HD13	1.94	0.49
15:1H:507:A:N3	15:1H:509:G:H5"	2.27	0.49
15:1H:513:C:H2'	15:1H:514:C:C6	2.47	0.49
15:1H:896:U:C5	15:1H:980:A:N1	2.80	0.49
15:1H:954:G:OP1	38:88:26:TYR:OH	2.18	0.49
15:1H:1116:G:H1'	15:1H:1144:A:H1'	1.93	0.49
15:1H:1205:A:O4'	27:C8:51:LYS:HE3	2.12	0.49
15:1H:1427:A:OP1	5:P8:10:ARG:NH2	2.46	0.49
15:1H:2355:G:O2'	15:1H:2356:G:H5'	2.12	0.49
15:1H:2512:A:N1	56:1H:3709:HOH:O	2.35	0.49
11:C5:50:ARG:CB	11:C5:53:PRO:HG3	2.42	0.49
13:3A:34:ARG:HG3	13:3A:35:GLY:N	2.25	0.49
15:14:1632:C:HO2'	15:14:1635:A:H8	1.53	0.49
23:21:29:GLY:H	23:21:51:PHE:HE1	1.61	0.49
25:4E:28:PHE:O	25:4E:47:LYS:HA	2.13	0.49
28:M8:33:VAL:HG21	40:41:109:VAL:HG22	1.94	0.49
27:85:88:ILE:HA	35:95:49:THR:O	2.12	0.49
33:5I:6:LEU:HB3	33:5I:23:ARG:NH2	2.27	0.49
37:BA:51:GLU:HG2	37:BA:54:LYS:NZ	2.28	0.49
44:12:97:TRP:HZ3	44:12:99:GLY:HA2	1.77	0.49
52:X4:70:G:H8	52:X4:70:G:OP2	1.96	0.49
1:1G:1131:G:OP2	13:3A:116:SER:HA	2.12	0.49
1:1G:2030:C:H2'	1:1G:2031:C:O4'	2.13	0.49
7:8A:88:TYR:CE1	7:8A:92:ARG:HD3	2.48	0.49
14:3E:187:ARG:HH22	14:3E:193:ASP:CG	2.15	0.49
15:1H:140:A:H8	15:1H:1457:C:H1'	1.77	0.49
15:1H:803:C:H2'	15:1H:804:C:C6	2.48	0.49
15:1H:2258:U:H2'	15:1H:2259:U:C6	2.48	0.49
14:32:45:GLN:O	14:32:46:LYS:HG2	2.12	0.49
15:14:216:G:N2	15:14:218:A:H62	2.11	0.49
15:14:1000:A:C2	15:14:1001:G:C8	3.00	0.49
15:14:1421:U:H2'	15:14:1422:A:O4'	2.11	0.49
15:14:2849:U:H2'	15:14:2850:G:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:D5:30:ASN:HD22	22:D5:90:VAL:HB	1.76	0.49
22:D5:132:ASN:OD1	22:D5:132:ASN:N	2.42	0.49
23:29:182:LEU:O	23:29:183:LEU:HD12	2.12	0.49
32:31:10:PRO:O	32:31:124:LEU:HD12	2.13	0.49
30:35:125:VAL:O	30:35:144:GLU:HB3	2.12	0.49
36:J5:11:THR:HG23	36:J5:15:ARG:HB3	1.95	0.49
38:45:138:ASP:N	38:45:138:ASP:OD1	2.42	0.49
40:49:9:ARG:HD3	40:49:13:GLU:OE2	2.12	0.49
50:7E:23:SER:HA	50:7E:61:VAL:O	2.13	0.49
47:59:82:GLY:HA3	47:59:135:GLY:O	2.12	0.49
47:59:168:PRO:HB2	47:59:170:ARG:HG3	1.95	0.49
6:2I:32:ILE:HD12	6:2I:72:ALA:HB2	1.92	0.49
8:2E:19:GLU:HA	8:2E:54:ARG:NH1	2.26	0.49
50:72:44:PHE:HB3	50:72:80:ILE:HG12	1.93	0.49
51:Y4:41:U:H3'	51:Y4:41:U:OP2	2.13	0.49
52:W4:66:U:C4	52:W4:67:C:N4	2.81	0.49
1:13:1762:G:H1	1:13:1768:C:H42	1.60	0.49
1:13:1973:A:H5"	9:8E:120:ARG:NH1	2.28	0.49
1:13:2072:A:H4'	1:13:2072:A:OP1	2.12	0.49
1:13:2156:C:H2'	1:13:2157:A:O4'	2.13	0.49
3:B5:44:GLU:OE2	15:14:137:G:N2	2.36	0.49
8:22:15:THR:HG21	8:22:181:ASN:HA	1.95	0.49
1:1G:999:U:H2'	1:1G:1000:U:C6	2.48	0.49
1:1G:2162:C:H2'	1:1G:2163:U:C6	2.48	0.49
15:1H:1552:U:H2'	15:1H:1553:C:H6	1.77	0.49
15:1H:1755:G:C6	15:1H:1756:U:C4	3.00	0.49
15:1H:1892:G:H2'	15:1H:1908:G:H22	1.77	0.49
15:1H:2651:U:OP1	23:21:80:GLU:HG3	2.13	0.49
16:B8:36:GLU:OE1	16:B8:41:ARG:HD3	2.12	0.49
11:C5:76:CYS:HB2	11:C5:97:ARG:HD3	1.92	0.49
18:61:110:ASP:HB2	18:61:112:LYS:H	1.78	0.49
13:3A:41:ARG:HH12	13:3A:43:VAL:CG2	2.25	0.49
15:14:67:G:H2'	15:14:68:C:H6	1.78	0.49
15:14:707:C:H2'	15:14:708:C:C6	2.47	0.49
15:14:880:G:H5"	15:14:881:G:OP2	2.13	0.49
15:14:2705:C:OP2	15:14:2705:C:H6	1.95	0.49
15:14:2762:U:H4'	47:59:138:LYS:HB3	1.95	0.49
22:H8:72:ARG:HD3	26:16:107:A:H5'	1.95	0.49
27:C8:95:LEU:HG	35:D8:4:ILE:HD13	1.95	0.49
28:M8:40:HIS:O	28:M8:47:GLN:HG2	2.13	0.49
23:29:51:PHE:CE2	23:29:52:LEU:HG	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:29:52:LEU:HD12	23:29:76:ARG:HD2	1.94	0.49
25:42:13:ILE:HA	25:42:29:GLY:O	2.12	0.49
36:N8:41:PRO:HD2	36:N8:44:THR:CG2	2.43	0.49
33:5A:45:ARG:NE	48:1A:51:ARG:O	2.45	0.49
35:95:21:ARG:HH21	35:95:91:TYR:CB	2.23	0.49
35:95:21:ARG:NH2	35:95:65:GLY:O	2.46	0.49
40:41:107:LEU:HD21	40:41:178:PHE:CE1	2.48	0.49
44:1E:178:ARG:HG3	50:7E:72:PRO:HA	1.95	0.49
4:11:71:ASP:N	4:11:71:ASP:OD1	2.40	0.49
1:1G:1753:U:H2'	1:1G:1754:U:C6	2.48	0.49
1:1G:1834:G:H2'	1:1G:1835:C:C6	2.48	0.49
1:1G:1846:U:OP1	33:5A:19:ARG:NH1	2.27	0.49
11:G8:28:LYS:NZ	11:G8:40:GLU:HG2	2.28	0.49
11:G8:94:LYS:HA	11:G8:94:LYS:NZ	2.25	0.49
12:Q8:26:LYS:HD3	15:1H:2376:A:P	2.53	0.49
15:1H:1866:C:H2'	15:1H:1867:U:O5'	2.13	0.49
15:1H:1867:U:O2'	15:1H:1994:A:N1	2.39	0.49
13:3A:89:ARG:HD2	13:3A:91:LYS:HA	1.94	0.49
15:14:67:G:H2'	15:14:68:C:C6	2.47	0.49
15:14:1102:A:N6	15:14:1152:C:H42	2.10	0.49
15:14:2803:C:H1'	23:29:62:PRO:HG3	1.94	0.49
15:14:2835:G:O2'	15:14:2838:C:N4	2.45	0.49
21:25:1:MET:HB2	21:25:32:TYR:HB3	1.95	0.49
29:AA:42:PRO:O	29:AA:45:VAL:HG22	2.13	0.49
35:95:87:HIS:CD2	35:95:89:GLN:HB2	2.48	0.49
36:J5:36:CYS:SG	36:J5:48:GLU:HB2	2.53	0.49
37:BA:89:ARG:NH1	37:BA:105:SER:O	2.37	0.49
41:6A:39:LEU:CD1	41:6A:56:LEU:HB2	2.43	0.49
44:1E:21:ARG:O	44:1E:23:ARG:N	2.42	0.49
49:7I:36:ILE:O	49:7I:36:ILE:HG13	2.13	0.49
6:2I:32:ILE:HD11	6:2I:68:ALA:HB1	1.94	0.49
50:72:12:ARG:NH2	50:72:27:PRO:HD3	2.27	0.49
1:13:796:G:H1	1:13:805:C:N4	2.09	0.49
1:13:1268:G:H2'	1:13:1269:A:H8	1.77	0.49
1:13:1479:C:O2	1:13:2162:C:H4'	2.13	0.49
1:13:1787:U:O4'	1:13:1809:G:N2	2.46	0.49
1:13:1845:C:H2'	1:13:1846:U:C6	2.48	0.49
8:22:16:ARG:HH12	8:22:181:ASN:HD22	1.61	0.49
8:22:20:SER:HB2	8:22:40:ARG:HH12	1.78	0.49
1:1G:834:U:O2'	1:1G:835:U:O5'	2.29	0.49
1:1G:882:C:H6	1:1G:882:C:O5'	1.96	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1195:G:H4'	1:1G:1196:G:OP1	2.13	0.49
14:3E:162:LEU:O	14:3E:165:MET:N	2.46	0.49
9:82:70:LYS:O	9:82:74:ILE:HG13	2.13	0.49
9:82:111:ARG:HD2	33:5A:61:TRP:C	2.32	0.49
15:1H:7:G:H2'	15:1H:8:A:O4'	2.12	0.49
15:1H:90:A:C5	15:1H:91:G:C8	3.01	0.49
15:1H:1153:U:H2'	15:1H:1154:G:C8	2.48	0.49
15:1H:1255:C:H2'	15:1H:1256:C:H6	1.78	0.49
15:14:1214:U:H2'	15:14:1215:C:C6	2.48	0.49
15:14:1461:A:H2'	15:14:1462:G:H8	1.75	0.49
15:14:2131:G:C2	15:14:2209:G:C2	3.01	0.49
18:69:40:THR:O	18:69:44:LEU:HB2	2.13	0.49
27:C8:88:ILE:C	27:C8:90:VAL:N	2.66	0.49
22:D5:3:TYR:HB3	22:D5:47:VAL:HG13	1.95	0.49
28:M8:59:PHE:CD2	29:AI:68:GLY:HA3	2.47	0.49
27:85:90:VAL:HG11	35:95:40:LEU:HD13	1.94	0.49
29:AA:36:ARG:HD2	29:AA:52:TYR:O	2.13	0.49
41:6I:37:ASN:O	41:6I:41:GLU:HG2	2.13	0.49
41:6I:82:ILE:O	41:6I:86:GLY:N	2.45	0.49
40:49:4:ASP:CG	40:49:5:VAL:H	2.14	0.49
41:6A:29:VAL:HG11	41:6A:67:LEU:HD21	1.95	0.49
44:12:158:LEU:HD22	44:12:182:ILE:HD11	1.94	0.49
51:Y1:36:G:H3'	51:Y1:37:G:H8	1.77	0.49
52:W4:74:C:N4	52:W4:75:C:O2	2.46	0.49
52:V4:8:U:H4'	52:V4:9:A:OP1	2.13	0.49
1:13:826:C:H2'	1:13:827:C:C6	2.48	0.49
1:13:1974:G:H22	1:13:2002:A:P	2.35	0.49
8:22:16:ARG:HH22	8:22:181:ASN:HA	1.78	0.49
8:22:83:ARG:NH1	8:22:87:LEU:HD12	2.28	0.49
1:1G:791:A:H2'	1:1G:792:A:O4'	2.13	0.49
1:1G:966:A:H2'	1:1G:967:G:O4'	2.12	0.49
1:1G:1360:G:OP1	1:1G:1395:A:H1'	2.13	0.49
1:1G:2015:G:H2'	1:1G:2016:C:C6	2.48	0.49
4:19:95:LEU:HD11	4:19:105:ILE:HD12	1.94	0.49
7:8A:56:VAL:O	7:8A:77:VAL:HB	2.12	0.49
15:1H:2859:G:H2'	15:1H:2860:U:O4'	2.11	0.49
14:32:148:VAL:HG12	14:32:152:SER:HB2	1.94	0.49
15:14:803:C:H2'	15:14:804:C:C6	2.48	0.49
15:14:1527:A:H2'	15:14:1528:G:O4'	2.13	0.49
15:14:2156:G:OP2	15:14:2157:U:H5'	2.13	0.49
22:H8:61:LEU:O	22:H8:64:GLY:HA2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:29:65:GLY:C	23:29:68:ALA:HB2	2.33	0.49
25:42:51:VAL:O	25:42:55:VAL:HG23	2.13	0.49
31:I8:23:VAL:HG22	31:I8:38:VAL:CG2	2.43	0.49
30:35:50:ARG:HG2	30:35:50:ARG:HH11	1.78	0.49
44:1E:100:GLY:O	44:1E:104:ASN:N	2.46	0.49
43:A5:75:TYR:CZ	43:A5:104:THR:HG21	2.48	0.49
48:1I:84:GLN:HG3	48:1I:88:LEU:HD13	1.95	0.49
49:7I:19:ILE:HB	49:7I:36:ILE:O	2.12	0.49
1:13:805:C:H2'	1:13:806:G:C8	2.47	0.48
1:13:895:G:O3'	7:8I:69:LYS:NZ	2.30	0.48
1:13:906:G:N2	1:13:908:C:H5'	2.28	0.48
1:13:1350:G:C6	1:13:1362:A:C2	3.01	0.48
1:13:1495:A:C5	1:13:1497:G:C8	3.01	0.48
1:13:2154:A:H2'	1:13:2155:U:C6	2.48	0.48
9:8E:112:LYS:HA	9:8E:119:ALA:HB2	1.95	0.48
1:1G:922:G:OP2	1:1G:922:G:H8	1.96	0.48
1:1G:1252:C:C4	1:1G:1253:C:C5	3.01	0.48
1:1G:1314:G:C2	1:1G:1315:U:C4	3.01	0.48
1:1G:1680:U:O2'	1:1G:1683:A:OP2	2.23	0.48
1:1G:1754:U:H4'	1:1G:1755:G:N7	2.28	0.48
10:58:57:ALA:O	10:58:59:LYS:N	2.43	0.48
10:58:77:GLY:HA3	23:21:152:LYS:HD2	1.95	0.48
11:G8:89:PHE:HD1	11:G8:90:LEU:N	2.11	0.48
4:19:239:ARG:HG3	15:14:2606:C:P	2.53	0.48
12:Q8:4:MET:C	12:Q8:59:LYS:HE2	2.33	0.48
14:3E:173:TRP:CZ3	14:3E:193:ASP:HB3	2.48	0.48
15:1H:37:C:H2'	15:1H:38:A:C8	2.48	0.48
15:1H:633:A:H1'	15:1H:648:A:N6	2.28	0.48
15:1H:711:G:OP1	30:78:15:ARG:NE	2.43	0.48
15:1H:1213:G:H2'	15:1H:1214:U:C6	2.47	0.48
15:1H:2172:G:H2'	15:1H:2173:G:H4'	1.94	0.48
15:1H:2555:C:H2'	15:1H:2556:A:O4'	2.12	0.48
15:1H:2663:C:H2'	15:1H:2664:U:H6	1.77	0.48
15:1H:2767:G:C2	47:51:3:ARG:HB2	2.48	0.48
15:1H:2820:G:H3'	15:1H:2821:U:H5"	1.95	0.48
16:B8:117:ASP:OD2	16:B8:120:ARG:NE	2.36	0.48
15:14:313:C:H2'	15:14:314:A:C8	2.48	0.48
15:14:315:G:H2'	15:14:316:C:O4'	2.12	0.48
15:14:1247:U:H2'	15:14:1248:C:C6	2.48	0.48
15:14:1525:G:H5'	15:14:1526:C:OP2	2.12	0.48
15:14:1582:C:N4	15:14:1586:C:H42	2.11	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1764:G:C6	15:14:1779:G:C6	3.01	0.48
26:16:31:A:H2'	26:16:32:C:C6	2.48	0.48
26:16:56:G:H2'	26:16:57:U:H6	1.78	0.48
22:D5:18:LEU:CD1	22:D5:23:LYS:HB2	2.43	0.48
24:4A:4:ILE:HG23	24:4A:5:ALA:H	1.78	0.48
30:78:106:LEU:O	30:78:106:LEU:HD22	2.12	0.48
30:35:80:TYR:CD2	30:35:111:ARG:HB3	2.48	0.48
32:39:135:LYS:HB3	32:39:138:GLU:HG3	1.95	0.48
37:BI:26:ASN:HB2	37:BI:71:THR:HG23	1.93	0.48
37:BI:67:ALA:HA	37:BI:72:LEU:O	2.13	0.48
36:J5:16:ARG:NH1	36:J5:17:ASP:OD1	2.45	0.48
44:12:5:ILE:HA	44:12:221:LEU:HD11	1.94	0.48
44:12:55:PHE:HD1	44:12:58:ILE:HG13	1.76	0.48
44:12:103:THR:HG23	44:12:176:GLU:HB3	1.95	0.48
52:W4:71:G:H2'	52:W4:72:C:H5"	1.95	0.48
52:X4:76:A:OP1	52:X4:76:A:H4'	2.13	0.48
1:13:1586:G:H1	1:13:1595:C:N4	2.02	0.48
1:13:1943:G:N2	1:13:1945:A:H3'	2.28	0.48
6:2A:73:MET:SD	6:2A:103:LEU:HD13	2.53	0.48
1:1G:1159:G:O6	51:Y4:51:U:H1'	2.14	0.48
1:1G:1987:A:H8	1:1G:1987:A:OP1	1.97	0.48
4:19:3:VAL:HG12	4:19:17:THR:HB	1.94	0.48
13:3I:58:VAL:O	13:3I:65:GLU:HA	2.13	0.48
14:3E:110:PHE:CE2	14:3E:148:VAL:HG23	2.48	0.48
15:1H:299:G:H3'	15:1H:299:G:C8	2.48	0.48
15:1H:409:G:C4	15:1H:422:A:C2	3.01	0.48
15:1H:451:A:H2'	15:1H:452:A:O4'	2.13	0.48
15:1H:771:A:H2'	15:1H:772:G:C8	2.48	0.48
15:1H:1101:C:H42	15:1H:1154:G:H1	1.59	0.48
15:1H:1413:G:OP2	39:J8:2:SER:OG	2.28	0.48
15:1H:2828:C:H5'	36:N8:29:THR:HG21	1.95	0.48
15:14:253:C:H2'	15:14:254:C:O4'	2.13	0.48
15:14:1718:A:H4'	15:14:1719:A:O5'	2.12	0.48
15:14:2477:U:H2'	15:14:2478:C:C6	2.48	0.48
22:H8:121:HIS:HB3	22:H8:123:ASP:O	2.12	0.48
24:4I:15:VAL:HA	24:4I:45:VAL:HG12	1.96	0.48
23:29:33:VAL:HG23	23:29:47:VAL:HG13	1.96	0.48
28:I5:11:PRO:HA	28:I5:25:TYR:CG	2.48	0.48
38:88:42:ILE:HD13	38:88:97:VAL:HB	1.95	0.48
39:F5:92:LYS:O	39:F5:93:GLU:C	2.50	0.48
41:6A:32:LEU:O	41:6A:36:ILE:HG13	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:62:111:ARG:CZ	42:62:122:HIS:HB3	2.43	0.48
6:2I:78:GLN:O	6:2I:103:LEU:HA	2.13	0.48
51:Y1:32:A:H5'	51:Y1:33:G:OP2	2.13	0.48
52:X1:36:A:H5"	52:X1:36:A:C8	2.44	0.48
1:13:1253:C:O3'	49:7I:10:GLY:HA2	2.13	0.48
1:13:1667:C:H2'	1:13:1668:U:C6	2.48	0.48
3:B5:3:THR:HG22	3:B5:6:ASP:OD2	2.12	0.48
4:11:65:ILE:HD12	4:11:66:ASP:H	1.78	0.48
1:1G:732:C:H2'	1:1G:733:C:C6	2.48	0.48
1:1G:1048:G:H2'	1:1G:1049:A:C8	2.48	0.48
1:1G:1275:U:H2'	1:1G:1276:C:C6	2.49	0.48
1:1G:1845:C:OP2	33:5A:9:LYS:NZ	2.26	0.48
1:1G:1853:C:H2'	24:4A:103:THR:HB	1.94	0.48
15:1H:614:C:H2'	15:1H:615:A:H8	1.77	0.48
15:1H:615:A:H2'	15:1H:616:C:C6	2.48	0.48
15:1H:1069:A:H62	15:1H:1189:U:H3	1.61	0.48
15:1H:1074:U:O2'	15:1H:1075:A:O5'	2.20	0.48
15:1H:1221:G:H8	15:1H:1221:G:OP2	1.96	0.48
15:1H:1238:G:H5"	15:1H:1238:G:C8	2.48	0.48
15:1H:1358:G:H4'	5:P8:7:PRO:HB2	1.95	0.48
15:1H:2081:G:C2	15:1H:2082:A:C8	3.00	0.48
15:1H:2803:C:O2'	23:21:61:ARG:HB3	2.12	0.48
15:1H:2806:A:C2	15:1H:2906:G:H5"	2.48	0.48
18:61:131:LYS:HB3	18:61:132:PRO:HA	1.94	0.48
15:14:66:U:H2'	15:14:67:G:H8	1.78	0.48
15:14:1054:C:C2	15:14:1186:G:N2	2.81	0.48
15:14:2482:C:H2'	15:14:2483:G:O4'	2.12	0.48
17:H5:18:ASP:HB2	17:H5:49:LYS:HE3	1.96	0.48
27:C8:61:TRP:O	27:C8:65:ILE:HG13	2.12	0.48
22:D5:122:ARG:NH1	38:45:134:ARG:HH22	2.10	0.48
28:M8:14:ILE:CG2	28:M8:21:VAL:HB	2.44	0.48
29:AA:23:ASN:HA	29:AA:27:GLU:HG3	1.94	0.48
35:D8:19:LYS:HG3	35:D8:95:LEU:HD23	1.95	0.48
41:6I:87:ILE:HG22	41:6I:88:ARG:N	2.28	0.48
38:45:19:GLY:H	38:45:98:LYS:HZ3	1.61	0.48
40:49:47:LYS:HG2	40:49:81:LYS:HB3	1.95	0.48
44:1E:212:GLN:OE1	44:1E:216:SER:OG	2.31	0.48
3:F8:35:THR:O	3:F8:39:ILE:HD12	2.13	0.48
47:59:8:PRO:HG2	47:59:69:ARG:HH21	1.78	0.48
52:X1:19:G:C4	52:X1:57:G:N2	2.81	0.48
52:W4:29:G:H2'	52:W4:30:G:H8	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1756:C:H5”	9:8E:16:ARG:HH12	1.78	0.48
1:13:1770:G:H2’	1:13:1771:G:O4’	2.13	0.48
2:A8:58:LEU:HD12	2:A8:65:VAL:HG13	1.95	0.48
6:2A:34:ASP:HB2	6:2A:35:PRO:HD2	1.95	0.48
6:2A:57:THR:HG22	6:2A:59:TYR:H	1.78	0.48
1:1G:1545:G:C2	1:1G:1546:A:C4	3.01	0.48
1:1G:1970:G:H4’	9:82:122:ALA:HB3	1.95	0.48
4:19:266:SER:O	4:19:269:PHE:HB2	2.13	0.48
12:Q8:49:VAL:C	12:Q8:50:LEU:O	2.48	0.48
12:Q8:54:GLU:HG2	30:78:49:ARG:HA	1.95	0.48
15:1H:38:A:H2’	15:1H:39:C:C6	2.48	0.48
15:1H:666:U:H2’	15:1H:667:C:C6	2.48	0.48
15:1H:2171:C:H4’	15:1H:2172:G:N7	2.28	0.48
10:15:35:ARG:HB3	10:15:42:TRP:CZ3	2.49	0.48
14:32:31:CYS:C	14:32:33:MET:H	2.16	0.48
15:14:867:G:H4’	15:14:887:C:O3’	2.14	0.48
15:14:2323:G:HO2’	15:14:2325:A:H2	1.60	0.48
16:75:125:ARG:HG3	16:75:129:ARG:HH21	1.79	0.48
18:69:130:TYR:HB3	18:69:136:VAL:CG1	2.40	0.48
21:25:22:ILE:HD12	21:25:22:ILE:HA	1.61	0.48
26:1J:68:A:C6	26:1J:111:C:C6	3.01	0.48
32:31:130:ALA:HA	32:31:132:VAL:HG22	1.95	0.48
35:D8:24:LYS:HD3	35:D8:90:PRO:HB2	1.96	0.48
36:N8:33:CYS:SG	36:N8:40:LYS:HD3	2.53	0.48
37:BI:49:ALA:HB1	37:BI:99:LEU:HB3	1.94	0.48
35:95:58:VAL:HG23	35:95:98:GLU:HB2	1.95	0.48
44:1E:42:ILE:HD13	44:1E:203:GLY:HA2	1.94	0.48
44:1E:124:SER:O	44:1E:127:ILE:HB	2.14	0.48
44:1E:160:ASP:O	44:1E:183:PRO:HD2	2.13	0.48
47:51:20:ALA:HB1	47:51:21:PRO:HD2	1.95	0.48
50:7E:20:TYR:CE2	50:7E:75:ARG:HD2	2.44	0.48
8:2E:142:MET:SD	8:2E:148:GLY:HA2	2.53	0.48
1:13:1583:U:C2	1:13:1852:A:N7	2.82	0.48
2:A8:25:ARG:O	2:A8:39:ILE:HA	2.13	0.48
1:1G:1014:A:C2	1:1G:1015:A:C8	3.02	0.48
1:1G:1697:C:O2’	1:1G:1819:C:H1’	2.14	0.48
1:1G:1757:C:N4	1:1G:1767:G:N2	2.62	0.48
1:1G:1776:U:OP1	9:82:7:THR:HG21	2.14	0.48
2:65:89:ARG:NH2	15:14:2309:C:OP2	2.46	0.48
12:Q8:23:VAL:HG21	30:78:62:LEU:HD13	1.94	0.48
15:1H:39:C:H2’	15:1H:40:C:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:639:U:H5'	15:1H:642:A:N6	2.28	0.48
15:1H:1378:U:H5"	15:1H:1379:C:H5	1.78	0.48
15:1H:1751:A:OP2	56:1H:3671:HOH:O	2.20	0.48
15:1H:2608:U:H2'	15:1H:2609:C:C6	2.48	0.48
15:1H:2704:U:P	15:1H:2735:G:H22	2.36	0.48
10:15:58:ASP:OD1	10:15:58:ASP:N	2.44	0.48
12:M5:27:THR:HG22	30:35:62:LEU:HA	1.95	0.48
20:1F:12:LYS:HB3	20:1F:22:ARG:HD2	1.96	0.48
15:14:1397:G:C6	15:14:1398:A:N1	2.81	0.48
15:14:1586:C:H2'	15:14:1587:G:H8	1.77	0.48
15:14:1914:A:N1	15:14:2249:G:H1'	2.28	0.48
15:14:2159:A:H2	15:14:2184:G:H1'	1.77	0.48
23:21:47:VAL:O	23:21:80:GLU:HA	2.14	0.48
18:69:29:TYR:C	18:69:32:PRO:HD2	2.33	0.48
22:D5:29:TYR:HA	22:D5:33:LEU:O	2.14	0.48
22:D5:30:ASN:OD1	22:D5:33:LEU:N	2.46	0.48
29:AI:15:LEU:O	29:AI:19:VAL:HG23	2.13	0.48
30:78:2:LYS:HZ2	30:78:4:SER:H	1.60	0.48
48:1A:24:VAL:HG21	48:1A:37:PRO:HD3	1.95	0.48
52:X1:53:G:H2'	52:X1:54:U:H6	1.78	0.48
8:22:40:ARG:O	8:22:44:GLU:HG2	2.13	0.48
8:22:178:LEU:HD23	1:1G:1740:C:C4	2.48	0.48
9:8E:114:TYR:HE2	48:1I:59:SER:HA	1.78	0.48
1:1G:800:A:H1'	1:1G:985:A:N7	2.28	0.48
1:1G:1229:C:H2'	1:1G:1230:C:H6	1.78	0.48
1:1G:1753:U:H2'	1:1G:1754:U:C5	2.49	0.48
1:1G:1954:C:OP1	20:1B:20:LYS:HB3	2.13	0.48
1:1G:2049:G:H2'	1:1G:2050:G:O4'	2.13	0.48
4:19:208:LYS:HB2	15:14:778:G:C6	2.49	0.48
7:8A:59:ILE:HD13	7:8A:73:VAL:HA	1.95	0.48
9:82:102:LEU:O	9:82:103:THR:OG1	2.25	0.48
15:1H:90:A:C4	15:1H:91:G:C8	3.02	0.48
15:1H:581:G:H2'	15:1H:582:U:C6	2.49	0.48
15:1H:646:G:H5"	15:1H:647:G:OP2	2.12	0.48
15:1H:1067:U:O2'	15:1H:1069:A:H2	1.95	0.48
15:1H:2326:A:H1'	40:41:88:ILE:HD13	1.94	0.48
15:1H:2447:A:C5	39:J8:33:LYS:HG2	2.48	0.48
15:1H:2849:U:H2'	15:1H:2850:G:C8	2.48	0.48
14:32:162:LEU:O	14:32:162:LEU:HD22	2.13	0.48
15:14:54:G:C2	15:14:114:C:C2	3.02	0.48
15:14:735:G:H21	15:14:837:A:H61	1.59	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1957:A:H2'	15:14:1958:G:O4'	2.13	0.48
15:14:2355:G:H2'	15:14:2356:G:C8	2.48	0.48
23:29:101:ARG:CZ	23:29:171:GLU:HB2	2.43	0.48
39:J8:8:SER:OG	39:J8:10:LYS:HG3	2.14	0.48
36:J5:33:CYS:HB2	36:J5:46:CYS:SG	2.54	0.48
36:J5:36:CYS:SG	36:J5:49:CYS:SG	3.11	0.48
43:E8:29:LEU:HD21	43:E8:33:ARG:NH2	2.28	0.48
40:49:10:LYS:O	40:49:14:GLU:HB2	2.12	0.48
46:G5:64:LEU:O	46:G5:64:LEU:HD23	2.13	0.48
6:2I:79:SER:HA	6:2I:104:GLN:O	2.14	0.48
1:13:1068:U:H5'	14:3E:41:GLY:HA2	1.94	0.48
1:13:1601:A:OP2	1:13:1990:C:N4	2.47	0.48
1:13:1712:G:H21	1:13:1730:A:H61	1.61	0.48
1:13:2153:G:O2'	1:13:2154:A:OP2	2.31	0.48
8:22:12:LEU:HD23	8:22:12:LEU:HA	1.72	0.48
1:1G:1097:C:H2'	1:1G:1098:C:C6	2.49	0.48
1:1G:1229:C:H5"	50:72:97:VAL:HG23	1.95	0.48
11:G8:40:GLU:HG2	11:G8:64:GLU:OE1	2.13	0.48
15:1H:262:A:N1	15:1H:292:G:O2'	2.37	0.48
15:1H:311:C:H2'	15:1H:312:C:H6	1.79	0.48
15:1H:642:A:C4	32:31:180:GLY:HA2	2.49	0.48
15:1H:862:U:H2'	15:1H:863:C:C6	2.48	0.48
15:1H:1095:G:H2'	15:1H:1158:G:N1	2.28	0.48
15:1H:1625:C:H2'	15:1H:1626:U:C6	2.48	0.48
15:1H:2346:G:O3'	31:I8:43:THR:HG22	2.13	0.48
15:1H:2867:G:H2'	15:1H:2868:C:C6	2.49	0.48
16:B8:16:ARG:HE	16:B8:19:LEU:HD11	1.78	0.48
16:B8:107:ASP:HA	16:B8:110:ILE:HG22	1.96	0.48
17:L8:6:VAL:HG13	17:L8:56:VAL:HG13	1.95	0.48
15:14:344:C:C2	15:14:358:G:N2	2.82	0.48
15:14:1337:U:H4'	15:14:1338:C:OP2	2.13	0.48
15:14:1582:C:N3	15:14:1583:G:O2'	2.40	0.48
15:14:2171:C:H4'	15:14:2172:G:C8	2.49	0.48
15:14:2313:A:N6	15:14:2333:G:C8	2.81	0.48
23:21:47:VAL:HG11	23:21:86:PRO:HD2	1.95	0.48
19:9A:56:THR:HB	19:9A:58:LEU:HD12	1.94	0.48
21:25:10:VAL:HG13	21:25:17:ARG:O	2.14	0.48
27:C8:93:LYS:O	27:C8:96:ALA:HB2	2.14	0.48
25:42:83:GLU:HG3	25:42:83:GLU:O	2.14	0.48
25:42:91:LEU:HD12	25:42:120:THR:HG22	1.95	0.48
27:85:76:TYR:CZ	27:85:80:ILE:HG13	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:31:8:GLN:OE1	32:31:8:GLN:N	2.39	0.48
34:5E:39:LYS:H	34:5E:64:GLN:HB2	1.78	0.48
33:5A:45:ARG:HG2	33:5A:49:HIS:HE1	1.79	0.48
34:52:33:TYR:HE2	34:52:78:GLU:HG3	1.78	0.48
38:88:66:ILE:O	38:88:104:PHE:N	2.46	0.48
40:49:107:LEU:HD11	40:49:178:PHE:CE1	2.48	0.48
45:98:48:VAL:O	45:98:51:LEU:N	2.47	0.48
50:7E:121:ASP:HB2	50:7E:125:ARG:HH22	1.78	0.48
47:59:137:ASP:CB	47:59:140:LYS:HB2	2.43	0.48
51:Y4:35:A:C4	51:Y4:36:G:C8	3.02	0.48
52:W4:75:C:C3'	52:W4:76:A:H5"	2.44	0.48
1:13:1547:C:H2'	1:13:1548:G:C8	2.49	0.48
1:13:1590:C:OP2	1:13:1591:A:O2'	2.24	0.48
1:13:1843:G:H5"	33:5I:5:ALA:HB2	1.96	0.48
6:2A:57:THR:HG22	6:2A:59:TYR:N	2.28	0.48
9:8E:125:TYR:CD1	9:8E:126:SER:N	2.76	0.48
1:1G:1281:U:C4	1:1G:1381:G:N3	2.82	0.48
1:1G:2154:A:H2'	1:1G:2155:U:C5	2.49	0.48
2:65:18:ILE:O	2:65:21:THR:HG22	2.13	0.48
4:19:37:LEU:HB2	4:19:38:LYS:HE3	1.96	0.48
9:82:17:VAL:HG22	9:82:63:ILE:HG12	1.96	0.48
9:82:114:TYR:H	9:82:114:TYR:HD1	1.62	0.48
15:1H:65:C:H2'	15:1H:66:U:H6	1.79	0.48
15:1H:345:A:H2'	32:31:136:THR:HG21	1.96	0.48
15:1H:554:C:H4'	15:1H:555:A:O5'	2.13	0.48
15:1H:606:C:H2'	15:1H:607:G:H8	1.79	0.48
15:1H:1143:A:H2'	15:1H:1143:A:N3	2.29	0.48
15:1H:1543:A:H2'	15:1H:1544:A:H8	1.78	0.48
15:1H:1565:U:H2'	15:1H:1566:G:C8	2.48	0.48
15:1H:2233:U:O2'	15:1H:2234:G:OP1	2.29	0.48
11:C5:47:LYS:HG3	11:C5:60:PHE:CE2	2.48	0.48
14:32:59:ARG:HH21	14:32:66:ARG:HH12	1.61	0.48
15:14:951:C:O2'	22:D5:168:GLU:OE2	2.19	0.48
15:14:1161:U:H2'	15:14:1162:G:O4'	2.12	0.48
15:14:1261:A:N3	15:14:1287:G:O2'	2.41	0.48
15:14:1498:G:H1'	15:14:1577:A:H62	1.79	0.48
15:14:2301:A:H4'	15:14:2302:A:O4'	2.13	0.48
15:14:2615:A:H2'	15:14:2616:C:C6	2.48	0.48
15:14:2661:C:H2'	15:14:2662:U:O4'	2.14	0.48
21:68:68:GLU:OE2	21:68:78:ARG:NH1	2.46	0.48
22:H8:141:VAL:O	22:H8:144:LEU:HG	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:H5:43:ILE:O	17:H5:47:VAL:HG23	2.13	0.48
18:69:4:ILE:HD11	18:69:44:LEU:HD22	1.96	0.48
18:69:81:VAL:HG23	18:69:143:SER:HB2	1.96	0.48
21:25:17:ARG:HB2	21:25:45:GLU:HG2	1.96	0.48
23:29:58:ARG:O	23:29:59:VAL:HG22	2.14	0.48
24:4A:68:GLY:HA3	40:49:116:ASP:OD1	2.14	0.48
26:1J:10:U:H6	26:1J:10:U:H5"	1.78	0.48
27:85:90:VAL:HG22	35:95:39:LEU:HB2	1.95	0.48
27:85:90:VAL:O	27:85:92:ARG:N	2.47	0.48
29:AA:42:PRO:HA	29:AA:45:VAL:HG13	1.96	0.48
30:35:8:PRO:HB3	32:39:34:TRP:CH2	2.49	0.48
31:E5:72:ARG:HH21	31:E5:75:LEU:HD13	1.78	0.48
39:J8:87:PRO:O	39:J8:91:LYS:N	2.36	0.48
39:J8:92:LYS:O	39:J8:93:GLU:C	2.50	0.48
43:A5:90:ARG:HH11	43:A5:90:ARG:HG3	1.78	0.48
6:2I:98:LEU:O	6:2I:101:SER:OG	2.28	0.48
52:V4:33:U:H2'	52:V4:35:A:OP2	2.14	0.48
1:13:1436:A:H2'	1:13:1437:C:C6	2.48	0.48
1:13:1577:G:H21	1:13:1854:A:H62	1.61	0.48
2:A8:10:ARG:NH1	15:1H:2310:C:OP1	2.46	0.48
8:22:121:ALA:O	8:22:125:GLU:HG3	2.14	0.48
9:8E:14:VAL:O	9:8E:65:VAL:HG23	2.14	0.48
1:1G:1017:G:H1	1:1G:1028:U:H3	1.62	0.48
1:1G:1212:A:H2'	1:1G:1213:G:O4'	2.13	0.48
1:1G:1877:A:H4'	9:82:68:GLY:N	2.28	0.48
1:1G:2162:C:H2'	1:1G:2163:U:H6	1.78	0.48
11:G8:55:TYR:N	11:G8:56:PRO:HD3	2.29	0.48
15:1H:665:G:H2'	15:1H:666:U:H6	1.79	0.48
15:1H:1000:A:OP2	38:88:16:ARG:NH1	2.45	0.48
15:1H:1434:G:H4'	15:1H:1435:C:OP1	2.14	0.48
15:1H:1552:U:H2'	15:1H:1553:C:C6	2.49	0.48
16:B8:102:ILE:HA	16:B8:105:LEU:HB2	1.94	0.48
18:61:67:ARG:O	18:61:71:ILE:HG22	2.14	0.48
14:32:4:TYR:CE2	14:32:11:LEU:HD11	2.49	0.48
14:32:61:LYS:HA	14:32:203:VAL:HG22	1.96	0.48
15:14:1110:G:OP1	15:14:1112:C:N4	2.46	0.48
15:14:1332:G:N2	15:14:1334:G:H3'	2.28	0.48
15:14:1821:A:O4'	15:14:2604:A:H4'	2.13	0.48
15:14:1924:G:N2	15:14:1927:C:H5	2.12	0.48
15:14:2032:C:H2'	15:14:2033:C:H6	1.78	0.48
15:14:2135:G:O2'	15:14:2145:G:OP1	2.20	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2288:A:O2'	15:14:2289:A:H5'	2.14	0.48
15:14:2342:A:H2'	15:14:2343:A:C8	2.48	0.48
15:14:2411:G:H4'	39:F5:30:VAL:H	1.78	0.48
16:75:2:ASN:O	16:75:7:ILE:HB	2.14	0.48
16:75:45:PHE:CE2	16:75:74:ARG:HD3	2.49	0.48
21:25:85:VAL:HG12	21:25:87:ILE:HD13	1.96	0.48
23:29:81:ILE:HG21	23:29:84:PHE:HD2	1.78	0.48
25:42:35:GLY:HA3	25:42:41:VAL:HG12	1.96	0.48
26:1J:75:A:C4	26:1J:107:A:C2	3.01	0.48
30:78:101:VAL:HG12	30:78:106:LEU:HD12	1.94	0.48
32:31:23:ASP:CG	32:31:24:LEU:H	2.16	0.48
31:E5:34:GLY:HA2	31:E5:61:ALA:O	2.14	0.48
40:41:44:GLY:O	40:41:47:LYS:HB2	2.13	0.48
43:A5:46:PHE:O	43:A5:50:VAL:HG12	2.13	0.48
48:1A:13:HIS:CE1	48:1A:14:LYS:HG3	2.49	0.48
44:12:60:ASP:OD1	44:12:64:ARG:HD3	2.13	0.48
51:Y4:37:G:OP1	51:Y4:37:G:H4'	2.13	0.48
1:13:1683:A:H2'	8:2E:156:ARG:HD2	1.96	0.48
1:13:1741:C:H2'	1:13:1742:C:H6	1.79	0.48
2:A8:17:ARG:NH2	15:1H:2307:C:P	2.87	0.48
9:8E:17:VAL:HA	9:8E:63:ILE:HG12	1.96	0.48
1:1G:713:C:H2'	1:1G:714:G:H8	1.78	0.48
1:1G:1088:A:OP2	1:1G:1115:G:N2	2.44	0.48
1:1G:1683:A:N7	1:1G:1827:C:N4	2.62	0.48
1:1G:1755:G:H22	1:1G:1772:G:H1	1.62	0.48
1:1G:1781:C:C4	1:1G:1782:G:N7	2.82	0.48
12:Q8:37:SER:HA	12:Q8:40:GLU:HB3	1.96	0.48
7:8A:59:ILE:HG22	7:8A:71:PHE:CD2	2.48	0.48
15:1H:18:C:O3'	27:C8:23:GLY:HA2	2.12	0.48
15:1H:608:G:OP2	27:C8:10:ARG:HD2	2.14	0.48
15:1H:1179:G:N2	15:1H:1180:A:N3	2.62	0.48
15:1H:2230:G:H2'	15:1H:2231:G:N1	2.28	0.48
18:61:126:TYR:HB2	18:61:140:LEU:CD1	2.44	0.48
15:14:769:C:H2'	15:14:770:C:H6	1.79	0.48
15:14:2193:G:N2	15:14:2195:A:OP2	2.47	0.48
22:H8:81:ARG:HG2	38:88:130:LYS:NZ	2.29	0.48
23:29:112:GLY:O	23:29:159:HIS:HA	2.14	0.48
30:35:19:VAL:HG13	30:35:31:ALA:HB1	1.96	0.48
39:J8:60:PHE:HE2	39:J8:91:LYS:HE2	1.78	0.48
38:45:79:LEU:H	38:45:79:LEU:HD22	1.79	0.48
44:12:101:MET:HB2	44:12:102:LEU:HD12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:55:87:TYR:CD1	45:55:90:ARG:HD2	2.48	0.48
5:P8:46:VAL:O	5:P8:47:ARG:HB2	2.14	0.48
52:W4:74:C:C2	52:W4:75:C:H5'	2.49	0.48
52:X4:60:U:H5"	52:X4:61:C:H5	1.79	0.48
1:13:1734:G:H5"	8:2E:172:ARG:HG2	1.95	0.47
1:13:2122:A:O2'	1:13:2143:G:H5'	2.13	0.47
1:1G:1901:G:H2'	1:1G:1902:A:C8	2.48	0.47
15:1H:233:U:O2'	15:1H:234:A:H5'	2.14	0.47
15:1H:725:A:H1'	15:1H:2458:C:H1'	1.95	0.47
15:1H:978:G:O2'	17:L8:24:LYS:HE3	2.14	0.47
15:1H:1058:A:N3	15:1H:1202:C:H1'	2.29	0.47
15:1H:1455:U:H2'	15:1H:1456:C:C6	2.48	0.47
15:14:218:A:H2'	15:14:220:U:O4'	2.14	0.47
15:14:1209:G:C6	15:14:1210:C:C4	3.02	0.47
15:14:2346:G:O3'	31:E5:43:THR:HG22	2.13	0.47
15:14:2777:G:H1'	47:59:143:GLN:HE22	1.79	0.47
15:14:2885:G:C4	15:14:2886:A:C2	3.01	0.47
17:H5:4:LEU:O	17:H5:36:VAL:HA	2.14	0.47
18:69:102:SER:OG	18:69:103:ARG:N	2.47	0.47
26:16:46:G:C2	26:16:50:A:C2	3.02	0.47
32:39:7:TYR:HE2	32:39:10:PRO:HG3	1.76	0.47
42:62:15:ASP:O	42:62:19:GLY:HA2	2.14	0.47
48:1I:92:THR:OG1	48:1I:93:GLY:N	2.47	0.47
3:F8:3:THR:HB	3:F8:6:ASP:HB2	1.96	0.47
3:F8:27:THR:HB	3:F8:80:ILE:HB	1.95	0.47
1:13:852:G:H1	1:13:858:C:H42	1.59	0.47
1:13:1370:G:H2'	1:13:1371:G:O4'	2.14	0.47
2:A8:5:THR:HG23	2:A8:8:GLU:OE2	2.14	0.47
4:11:182:LEU:HA	4:11:182:LEU:HD23	1.72	0.47
8:22:70:VAL:HG12	8:22:72:LYS:N	2.25	0.47
1:1G:786:G:H2'	1:1G:787:G:H8	1.78	0.47
1:1G:1257:G:H2'	1:1G:1258:G:C8	2.49	0.47
1:1G:1283:G:C2	1:1G:1382:A:C4	3.02	0.47
1:1G:1372:U:H2'	1:1G:1373:C:C6	2.48	0.47
10:58:25:ARG:HH22	15:1H:1191:A:H4'	1.79	0.47
2:65:55:ALA:HB2	26:1J:119:G:H5'	1.95	0.47
2:65:103:GLU:O	2:65:106:ARG:HG3	2.14	0.47
11:G8:84:ARG:HD2	11:G8:84:ARG:C	2.34	0.47
9:82:24:GLY:HA2	9:82:59:PHE:O	2.15	0.47
9:82:48:GLU:N	9:82:49:PRO:HD2	2.29	0.47
15:1H:64:C:H2'	15:1H:65:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:644:G:H2'	15:1H:645:C:C6	2.49	0.47
15:1H:769:C:H2'	15:1H:770:C:C6	2.49	0.47
15:1H:1434:G:O2'	15:1H:1445:U:H6	1.96	0.47
15:1H:1478:G:H2'	15:1H:1479:C:H6	1.79	0.47
15:1H:1606:C:H2'	15:1H:1607:C:C6	2.49	0.47
10:15:4:TYR:O	27:85:64:ARG:NH1	2.47	0.47
14:32:23:GLY:H	14:32:26:CYS:HB2	1.79	0.47
15:14:301:A:H2'	15:14:302:C:C6	2.49	0.47
15:14:665:G:H2'	15:14:666:U:C6	2.48	0.47
15:14:1970:G:H2'	15:14:1971:U:C6	2.49	0.47
15:14:2136:C:H42	15:14:2172:G:N2	2.12	0.47
15:14:2253:G:N3	15:14:2253:G:H2'	2.29	0.47
22:H8:19:ARG:HD3	22:H8:25:PRO:HD2	1.96	0.47
23:21:33:VAL:CG1	23:21:89:ASP:HA	2.44	0.47
28:M8:6:HIS:CE1	40:41:67:LYS:CE	2.96	0.47
28:M8:66:SER:OG	29:AI:8:GLY:N	2.47	0.47
29:AI:25:LYS:HG2	29:AI:27:GLU:OE2	2.14	0.47
26:1J:85:G:N1	26:1J:96:C:N3	2.41	0.47
32:31:7:TYR:O	32:31:21:ALA:HA	2.14	0.47
32:31:136:THR:HG22	32:31:166:ALA:O	2.14	0.47
30:35:6:LEU:HD12	30:35:6:LEU:HA	1.61	0.47
31:E5:49:LYS:HG3	31:E5:80:HIS:HB3	1.95	0.47
32:39:89:VAL:HG12	32:39:90:PHE:H	1.78	0.47
38:88:135:ASP:O	38:88:139:GLU:HG3	2.14	0.47
48:1A:17:ASP:OD2	48:1A:70:ARG:NH1	2.47	0.47
3:F8:1:MET:C	3:F8:3:THR:N	2.68	0.47
8:2E:47:LEU:CD2	8:2E:76:VAL:HG12	2.44	0.47
52:V1:51:U:H2'	52:V1:52:G:C8	2.49	0.47
52:V4:51:U:H2'	52:V4:52:G:C8	2.49	0.47
1:13:921:C:H3'	1:13:922:G:H5'	1.96	0.47
1:13:1047:G:H21	14:3E:119:GLN:HE22	1.62	0.47
1:13:1136:C:OP2	1:13:1137:C:O2'	2.24	0.47
1:13:1260:G:H2'	1:13:1261:A:N3	2.29	0.47
4:11:65:ILE:HD12	4:11:66:ASP:N	2.29	0.47
6:2A:59:TYR:CE2	42:62:149:ARG:HB3	2.49	0.47
8:22:155:GLY:HA3	8:22:196:LEU:HD13	1.96	0.47
1:1G:1070:U:H1'	1:1G:1071:A:H5"	1.96	0.47
1:1G:2133:U:H2'	1:1G:2134:G:C8	2.48	0.47
10:58:118:LYS:HE2	15:1H:2796:G:P	2.54	0.47
13:3I:32:PHE:HE1	13:3I:86:ARG:HG3	1.80	0.47
15:1H:123:G:C6	5:P8:10:ARG:HG3	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:613:U:O4	15:1H:719:A:H1'	2.14	0.47
15:1H:615:A:OP1	32:31:95:ARG:NH1	2.48	0.47
15:1H:685:G:N2	15:1H:698:C:N4	2.61	0.47
15:1H:1415:A:H2'	15:1H:1416:A:O4'	2.15	0.47
15:1H:1687:A:H4'	15:1H:2726:A:O2'	2.14	0.47
15:1H:2416:U:O2	15:1H:2417:C:O2	2.32	0.47
11:C5:97:ARG:HH11	11:C5:104:GLY:HA3	1.79	0.47
18:61:72:LEU:HD11	18:61:107:VAL:HG21	1.96	0.47
20:1F:18:TYR:HA	20:1F:22:ARG:HB3	1.96	0.47
15:14:4:C:N4	15:14:2911:G:H22	1.94	0.47
15:14:640:U:H4'	15:14:641:G:OP1	2.13	0.47
15:14:907:U:O2	15:14:2283:A:H2'	2.14	0.47
15:14:2151:A:C2	15:14:2188:C:H1'	2.49	0.47
15:14:2342:A:H2'	15:14:2343:A:O4'	2.14	0.47
15:14:2489:C:H3'	15:14:2490:C:C4'	2.44	0.47
15:14:2535:C:H41	15:14:2557:A:H62	1.62	0.47
15:14:2703:U:H1'	15:14:2737:A:N6	2.29	0.47
23:29:119:ARG:CG	23:29:160:TYR:HB2	2.44	0.47
31:I8:84:LEU:HD12	31:I8:84:LEU:HA	1.68	0.47
35:D8:35:LEU:C	35:D8:37:VAL:H	2.17	0.47
38:88:43:THR:HG22	38:88:94:VAL:HG12	1.95	0.47
48:1I:32:ALA:CB	48:1I:76:ASN:HB2	2.45	0.47
49:7I:25:ARG:HG3	49:7I:25:ARG:HH11	1.79	0.47
44:12:108:ILE:HA	44:12:108:ILE:HD13	1.72	0.47
45:55:70:LEU:O	45:55:72:ASP:N	2.48	0.47
8:2E:113:ALA:HB3	8:2E:114:PRO:HD3	1.96	0.47
8:2E:140:ARG:HA	8:2E:143:GLU:HB2	1.95	0.47
1:13:1287:G:H2'	1:13:1288:U:H6	1.79	0.47
1:13:1785:A:N6	1:13:1805:G:H21	2.13	0.47
1:13:1837:C:N4	1:13:1838:U:O4	2.47	0.47
1:13:1973:A:C4	42:6E:10:ARG:NH1	2.82	0.47
4:11:227:ASN:ND2	15:1H:833:A:O4'	2.48	0.47
5:L5:33:ARG:HG3	15:14:495:G:OP1	2.14	0.47
6:2A:20:TYR:HB2	6:2A:31:THR:HG23	1.95	0.47
7:8I:86:GLU:O	7:8I:90:ILE:HG12	2.14	0.47
1:1G:895:G:OP1	7:8A:67:LYS:O	2.32	0.47
1:1G:1302:G:O3'	34:52:87:ARG:NH2	2.46	0.47
1:1G:1420:G:O6	1:1G:1421:A:N6	2.44	0.47
1:1G:1942:U:H2'	1:1G:1943:G:O4'	2.14	0.47
4:19:50:THR:HG1	15:14:1847:G:H1'	1.80	0.47
15:1H:1306:C:H4'	32:31:83:PHE:CD1	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2391:A:H2'	15:1H:2392:A:O4'	2.14	0.47
15:1H:2419:C:O3'	30:78:77:ARG:NH2	2.48	0.47
15:14:1039:C:O2	15:14:1213:G:C2	2.68	0.47
15:14:2172:G:H2'	15:14:2173:G:H4'	1.97	0.47
15:14:2336:G:H5"	15:14:2337:A:OP2	2.15	0.47
23:21:15:PHE:HA	23:21:19:ARG:O	2.13	0.47
22:D5:54:HIS:HB3	22:D5:101:PRO:HD3	1.96	0.47
22:D5:166:SER:O	22:D5:168:GLU:N	2.47	0.47
40:41:131:TYR:HB3	40:41:159:VAL:CG2	2.45	0.47
37:BA:72:LEU:HB3	37:BA:73:HIS:H	1.56	0.47
38:45:11:LYS:NZ	38:45:88:GLY:O	2.32	0.47
47:59:94:TYR:N	47:59:94:TYR:CD1	2.83	0.47
8:2E:123:GLN:O	8:2E:128:PHE:HB2	2.15	0.47
52:W1:68:C:H2'	52:W1:69:G:H8	1.79	0.47
52:W4:75:C:H3'	52:W4:75:C:C6	2.47	0.47
1:13:1281:U:C4	1:13:1381:G:N3	2.82	0.47
1:1G:1639:A:N6	1:1G:1640:A:C6	2.83	0.47
1:1G:1712:G:H5'	1:1G:1730:A:OP2	2.14	0.47
10:58:95:PRO:O	10:58:96:GLU:CD	2.52	0.47
15:1H:604:G:H2'	15:1H:605:C:C6	2.49	0.47
15:1H:626:C:O2'	15:1H:630:C:OP1	2.19	0.47
15:1H:717:G:H2'	15:1H:719:A:H62	1.78	0.47
15:1H:907:U:O2	15:1H:2283:A:H2'	2.13	0.47
15:1H:1009:G:H2'	15:1H:1010:U:C6	2.49	0.47
15:1H:1159:A:N3	15:1H:1160:G:H1'	2.29	0.47
15:1H:1563:U:H2'	15:1H:1564:C:C6	2.50	0.47
15:1H:1637:C:H2'	15:1H:1638:C:C6	2.48	0.47
15:1H:2468:A:H2'	15:1H:2469:G:O4'	2.14	0.47
16:B8:67:SER:OG	21:68:101:PRO:HG3	2.14	0.47
11:C5:50:ARG:CG	11:C5:53:PRO:HG3	2.45	0.47
17:L8:7:LYS:HB2	17:L8:34:GLU:HG2	1.97	0.47
15:14:333:G:C8	15:14:528:A:H1'	2.50	0.47
15:14:496:G:H2'	15:14:497:G:O4'	2.14	0.47
15:14:604:G:H2'	15:14:605:C:H6	1.78	0.47
15:14:630:C:O2	15:14:706:U:O2'	2.30	0.47
15:14:1152:C:H2'	15:14:1153:U:C6	2.49	0.47
15:14:1216:U:C2	15:14:1231:G:N2	2.83	0.47
15:14:2344:G:H2'	15:14:2345:G:O4'	2.14	0.47
15:14:2644:A:N3	15:14:2644:A:H2'	2.30	0.47
20:1B:6:ARG:HD3	20:1B:15:ARG:CZ	2.44	0.47
20:1B:9:ARG:O	20:1B:13:ILE:HG13	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:16:13:C:H3'	26:16:14:C:H6	1.80	0.47
34:5E:22:GLU:O	34:5E:26:ILE:HG13	2.13	0.47
30:35:36:LYS:NZ	30:35:39:LYS:HB3	2.30	0.47
33:5A:12:ARG:HB2	33:5A:14:PRO:HD3	1.97	0.47
39:J8:8:SER:HB3	39:J8:66:HIS:CD2	2.50	0.47
44:1E:17:PHE:CD1	44:1E:17:PHE:N	2.83	0.47
42:62:85:TYR:N	42:62:85:TYR:CD1	2.83	0.47
45:98:9:LYS:HA	45:98:17:ARG:HE	1.79	0.47
46:K8:22:GLU:OE2	46:K8:68:ARG:NH2	2.45	0.47
47:51:149:ARG:NH1	47:51:167:GLU:OE2	2.47	0.47
45:55:54:LEU:HD12	45:55:54:LEU:HA	1.76	0.47
52:V1:18:G:H2'	52:V1:57:G:N2	2.29	0.47
1:13:1070:U:OP2	14:3E:36:ARG:NH2	2.48	0.47
1:13:1074:C:H2'	1:13:1075:U:C6	2.49	0.47
1:13:1599:G:N2	1:13:1990:C:OP2	2.43	0.47
1:13:1758:A:O2'	9:8E:3:GLN:NE2	2.47	0.47
1:13:2070:G:C8	1:13:2072:A:C2	3.02	0.47
4:11:182:LEU:N	4:11:272:ALA:HB3	2.23	0.47
9:8E:10:ARG:NE	9:8E:105:ASP:OD2	2.47	0.47
1:1G:1404:G:N2	1:1G:1433:U:O4	2.45	0.47
1:1G:1854:A:O3'	24:4A:115:LYS:HD2	2.14	0.47
1:1G:1974:G:H22	1:1G:2001:G:H2'	1.78	0.47
1:1G:2120:G:C2'	1:1G:2121:U:H5'	2.44	0.47
2:65:77:ALA:O	2:65:80:LEU:N	2.47	0.47
4:19:88:ARG:NH2	15:14:1851:G:OP1	2.48	0.47
15:1H:1269:C:H2'	15:1H:1270:C:H6	1.79	0.47
15:1H:2367:A:N6	15:1H:2380:G:O2'	2.48	0.47
14:32:4:TYR:CD2	14:32:11:LEU:HD11	2.49	0.47
15:14:249:G:N2	15:14:648:A:H8	2.02	0.47
15:14:867:G:H5'	15:14:888:U:OP1	2.13	0.47
15:14:1323:A:N1	15:14:1694:C:O2'	2.35	0.47
15:14:2330:G:OP1	40:49:36:LYS:NZ	2.37	0.47
15:14:2419:C:H2'	15:14:2420:G:H5'	1.96	0.47
25:4E:63:ARG:HA	25:4E:66:MET:HE2	1.97	0.47
25:4E:80:ILE:HG12	25:4E:81:GLU:N	2.29	0.47
26:16:80:A:C2	26:16:102:A:C4	3.03	0.47
22:D5:30:ASN:HA	22:D5:89:PHE:HE1	1.79	0.47
23:29:96:PHE:O	23:29:175:VAL:HG11	2.15	0.47
25:42:59:GLY:O	25:42:63:ARG:HG2	2.15	0.47
30:78:39:LYS:HB2	30:78:45:LEU:HD22	1.96	0.47
28:I5:22:ILE:HG12	28:I5:23:GLU:N	2.19	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:39:15:SER:OG	32:39:16:GLY:N	2.48	0.47
34:52:86:ARG:O	34:52:87:ARG:HG2	2.14	0.47
35:95:20:LEU:O	35:95:94:LEU:N	2.44	0.47
39:J8:25:LYS:HB3	39:J8:25:LYS:HE2	1.57	0.47
40:41:124:SER:HB2	40:41:131:TYR:CE1	2.49	0.47
43:E8:75:TYR:CZ	43:E8:104:THR:HG21	2.50	0.47
43:A5:59:VAL:HG12	43:A5:60:ASN:OD1	2.14	0.47
46:K8:15:LYS:HE3	46:K8:67:LYS:HZ3	1.80	0.47
44:12:115:LEU:HB2	44:12:145:LEU:HD12	1.95	0.47
45:55:97:VAL:HA	45:55:113:LEU:O	2.14	0.47
47:59:83:TYR:CD1	47:59:134:SER:HB3	2.50	0.47
49:7A:23:ASP:OD1	49:7A:25:ARG:HG3	2.14	0.47
1:13:906:G:O2'	7:8I:67:LYS:N	2.47	0.47
1:13:1018:G:H5'	49:7I:5:ARG:NH1	2.30	0.47
1:13:1176:A:OP1	14:3E:73:ARG:NH2	2.47	0.47
1:13:1221:G:C6	1:13:1277:A:C6	3.02	0.47
1:13:1639:A:H2'	1:13:1640:A:H8	1.79	0.47
1:13:1651:C:C2	1:13:1652:C:H5	2.32	0.47
1:13:1661:G:H2'	1:13:1662:G:C8	2.47	0.47
1:13:1942:U:H2'	1:13:1943:G:O4'	2.15	0.47
3:B5:57:LEU:N	3:B5:57:LEU:HD23	2.28	0.47
4:11:259:THR:OG1	15:1H:1832:U:H5'	2.14	0.47
7:8I:43:LEU:O	7:8I:69:LYS:HG3	2.15	0.47
9:8E:118:LYS:HE2	9:8E:118:LYS:HB3	1.36	0.47
1:1G:786:G:C2	1:1G:787:G:C5	3.02	0.47
1:1G:950:G:H1'	1:1G:1237:A:C2	2.49	0.47
1:1G:1079:G:H4'	14:32:123:HIS:CE1	2.49	0.47
1:1G:1117:A:H2'	1:1G:1118:C:O4'	2.15	0.47
1:1G:1229:C:H2'	1:1G:1230:C:C6	2.49	0.47
1:1G:1756:C:H2'	1:1G:1767:G:O6	2.15	0.47
1:1G:1931:G:N2	1:1G:1959:A:OP2	2.42	0.47
10:58:87:LEU:HD22	10:58:91:LEU:HG	1.97	0.47
2:65:110:LEU:HD23	2:65:112:PHE:CE1	2.50	0.47
12:Q8:25:MET:HB3	12:Q8:42:ARG:HB3	1.97	0.47
9:82:21:PRO:HA	9:82:59:PHE:HA	1.95	0.47
15:1H:53:G:O2'	5:P8:35:ARG:HD3	2.15	0.47
15:1H:355:A:H2	15:1H:1258:A:O2'	1.98	0.47
15:1H:488:A:H2'	15:1H:489:C:O4'	2.14	0.47
15:1H:658:A:H2'	15:1H:659:A:O4'	2.14	0.47
15:1H:781:C:H3'	56:1H:3659:HOH:O	2.14	0.47
15:1H:964:G:C2'	15:1H:965:A:H5"	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1279:C:H2'	15:1H:1280:G:H8	1.79	0.47
15:1H:1461:A:H2'	15:1H:1462:G:H8	1.78	0.47
15:1H:2210:C:H2'	15:1H:2211:G:C8	2.50	0.47
15:1H:2379:C:H2'	15:1H:2380:G:O4'	2.14	0.47
15:1H:2615:A:H2'	15:1H:2616:C:H6	1.79	0.47
15:1H:2708:A:H2'	15:1H:2709:G:C8	2.47	0.47
15:1H:2787:C:H2'	15:1H:2788:C:H6	1.79	0.47
10:15:67:LEU:O	10:15:88:GLU:HG3	2.14	0.47
11:C5:71:LYS:NZ	15:14:354:G:OP2	2.44	0.47
12:M5:27:THR:HG22	30:35:63:PRO:HD3	1.95	0.47
14:32:59:ARG:HH21	14:32:66:ARG:NH1	2.13	0.47
14:32:81:GLU:OE2	14:32:139:ARG:NH2	2.47	0.47
20:1F:10:ARG:HA	20:1F:10:ARG:NE	2.30	0.47
15:14:301:A:C4	15:14:302:C:N4	2.83	0.47
15:14:471:A:C5	32:39:45:ARG:HD2	2.50	0.47
15:14:518:G:H2'	15:14:519:A:H8	1.78	0.47
15:14:598:G:O2'	15:14:599:C:H3'	2.15	0.47
15:14:870:A:O2'	15:14:993:G:OP2	2.24	0.47
15:14:1067:U:HO2'	15:14:1069:A:H2	1.61	0.47
15:14:1203:G:OP1	27:85:58:ARG:HD3	2.14	0.47
15:14:1288:G:H2'	15:14:1289:U:O4'	2.15	0.47
15:14:1313:G:OP1	36:J5:19:ARG:NH2	2.39	0.47
15:14:1361:U:H4'	15:14:1362:U:O5'	2.14	0.47
15:14:1479:C:H2'	15:14:1480:U:H6	1.79	0.47
15:14:1512:C:H2'	15:14:1513:C:H6	1.80	0.47
15:14:1701:G:H2'	15:14:1702:A:O4'	2.15	0.47
15:14:2256:A:H2'	15:14:2257:G:C8	2.50	0.47
15:14:2350:A:C8	15:14:2352:G:C5	3.03	0.47
25:4E:110:LEU:O	25:4E:115:VAL:HB	2.15	0.47
27:C8:34:LYS:H	27:C8:34:LYS:HG2	1.38	0.47
27:C8:86:ALA:CB	27:C8:88:ILE:HG13	2.45	0.47
23:29:101:ARG:NH2	23:29:171:GLU:HB2	2.29	0.47
26:1J:42:U:C5	28:I5:1:MET:HB3	2.50	0.47
26:1J:107:A:H2'	26:1J:108:G:O4'	2.14	0.47
32:31:140:LEU:HA	32:31:140:LEU:HD12	1.63	0.47
32:31:178:PRO:HG2	32:31:179:GLU:OE1	2.15	0.47
35:D8:38:LEU:HD21	35:D8:40:LEU:O	2.15	0.47
38:88:5:ARG:H	38:88:5:ARG:HD3	1.79	0.47
38:88:32:TYR:O	38:88:105:GLU:HA	2.15	0.47
36:J5:48:GLU:OE2	43:A5:37:ARG:NH2	2.48	0.47
40:41:165:THR:OG1	40:41:168:GLU:HG3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:6E:6:ARG:HB3	42:6E:6:ARG:CZ	2.45	0.47
38:45:79:LEU:C	38:45:80:GLU:HG2	2.35	0.47
38:45:102:VAL:O	38:45:102:VAL:HG12	2.15	0.47
44:12:48:MET:HA	44:12:51:LEU:HD12	1.96	0.47
44:12:52:GLU:HG2	44:12:56:ARG:NH2	2.30	0.47
45:55:96:ARG:CZ	45:55:117:VAL:HG23	2.44	0.47
46:G5:16:LEU:HG	46:G5:16:LEU:O	2.14	0.47
6:2I:41:THR:HG22	6:2I:42:TRP:N	2.29	0.47
50:72:109:ILE:HG12	50:72:110:ALA:N	2.30	0.47
1:13:991:G:C6	1:13:992:G:O6	2.68	0.47
1:13:1034:A:OP2	49:7I:12:LYS:NZ	2.30	0.47
1:13:1359:G:C5	1:13:1360:G:H1'	2.49	0.47
1:13:1365:C:H2'	1:13:1366:A:C8	2.49	0.47
1:13:1792:G:C6	1:13:1793:C:C4	3.03	0.47
1:13:2154:A:H8	1:13:2154:A:O5'	1.98	0.47
7:8I:44:ALA:HA	7:8I:71:PHE:O	2.15	0.47
8:22:32:LEU:HB3	8:22:59:ARG:NH1	2.29	0.47
1:1G:734:G:H2'	1:1G:735:U:O4'	2.15	0.47
1:1G:1138:A:H5"	14:32:55:ALA:HB2	1.96	0.47
1:1G:1229:C:H5"	50:72:97:VAL:CG2	2.45	0.47
1:1G:1247:C:H5'	1:1G:1248:U:H5"	1.96	0.47
1:1G:1757:C:C4	1:1G:1767:G:C2	3.03	0.47
1:1G:1926:A:C2	1:1G:1928:U:C4	3.03	0.47
10:58:99:LEU:HD22	10:58:103:VAL:HG23	1.95	0.47
9:82:14:VAL:O	9:82:65:VAL:HG23	2.15	0.47
9:82:95:LYS:NZ	9:82:96:LEU:HD13	2.29	0.47
15:1H:302:C:H3'	15:1H:303:A:O4'	2.15	0.47
15:1H:520:G:H2'	15:1H:521:G:O4'	2.15	0.47
15:1H:554:C:OP2	15:1H:2795:U:H5	1.97	0.47
15:1H:1151:A:H3'	15:1H:1152:C:H6	1.80	0.47
15:1H:2302:A:N1	15:1H:2361:A:H2	2.13	0.47
10:15:120:LEU:HG	10:15:122:VAL:HG23	1.96	0.47
18:61:133:HIS:HB2	18:61:134:PRO:HD2	1.96	0.47
15:14:4:C:O2'	15:14:5:A:OP1	2.29	0.47
15:14:19:C:H2'	15:14:20:C:H6	1.80	0.47
15:14:211:A:N6	15:14:255:A:C8	2.83	0.47
15:14:634:A:H2'	15:14:635:G:O4'	2.15	0.47
15:14:1648:C:H2'	15:14:1649:C:H6	1.79	0.47
15:14:2897:U:H2'	15:14:2898:C:O4'	2.15	0.47
16:75:4:GLY:O	16:75:5:ALA:C	2.52	0.47
22:H8:60:GLU:HB3	22:H8:61:LEU:H	1.39	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:21:103:ASP:OD1	23:21:201:THR:HG23	2.15	0.47
19:9A:29:PHE:N	19:9A:29:PHE:CD1	2.82	0.47
21:25:116:SER:OG	21:25:117:LEU:N	2.48	0.47
28:M8:43:TYR:CE1	28:M8:44:THR:HG23	2.50	0.47
28:M8:48:ARG:HA	28:M8:48:ARG:HD3	1.63	0.47
23:29:65:GLY:O	23:29:68:ALA:HB2	2.15	0.47
29:AI:52:TYR:CE1	29:AI:56:GLN:HA	2.49	0.47
27:85:91:ASP:OD1	27:85:96:ALA:HB2	2.14	0.47
32:39:132:VAL:C	32:39:134:GLY:H	2.18	0.47
35:95:70:ILE:O	35:95:70:ILE:HG22	2.15	0.47
42:62:26:PHE:O	42:62:30:ILE:HG13	2.14	0.47
44:12:22:LYS:H	44:12:22:LYS:HG3	1.41	0.47
49:7A:14:ASN:OD1	49:7A:16:HIS:NE2	2.47	0.47
1:13:1017:G:N2	1:13:1028:U:O2	2.40	0.47
1:13:1426:C:OP1	6:2I:124:LYS:HE2	2.15	0.47
1:13:1804:G:H4'	1:13:1804:G:OP1	2.14	0.47
1:13:1963:C:H5"	1:13:1963:C:H6	1.80	0.47
1:13:1965:G:C6	1:13:1966:A:C6	3.03	0.47
4:11:105:ILE:CD1	4:11:105:ILE:CB	2.82	0.47
8:22:4:LYS:NZ	1:1G:1818:A:OP1	2.47	0.47
1:1G:849:A:H3'	1:1G:849:A:OP2	2.15	0.47
1:1G:1344:A:H2'	1:1G:1345:A:C8	2.50	0.47
4:19:17:THR:O	4:19:211:ARG:NH2	2.45	0.47
4:19:96:HIS:HD2	4:19:102:LYS:HG2	1.80	0.47
12:Q8:27:THR:HG23	12:Q8:42:ARG:NH2	2.30	0.47
15:1H:37:C:H2'	15:1H:38:A:H8	1.80	0.47
15:1H:174:C:H2'	15:1H:175:U:C6	2.50	0.47
15:1H:640:U:O4	32:31:175:THR:HG22	2.15	0.47
15:1H:794:G:OP2	23:21:133:LYS:HE2	2.14	0.47
15:1H:1689:U:O2'	15:1H:1690:C:H5'	2.15	0.47
15:1H:2416:U:H2'	15:1H:2417:C:N1	2.30	0.47
15:1H:2417:C:C2	15:1H:2418:C:H5	2.33	0.47
15:14:474:G:P	56:14:3679:HOH:O	2.73	0.47
15:14:614:C:H2'	15:14:615:A:C8	2.49	0.47
15:14:1391:A:C2	15:14:1446:U:C2	3.02	0.47
20:1B:8:THR:HB	20:1B:11:GLY:H	1.80	0.47
21:25:97:ARG:CZ	21:25:99:PHE:HE1	2.27	0.47
30:78:114:ILE:HD13	30:78:125:VAL:HG11	1.97	0.47
30:78:132:LYS:HE3	30:78:132:LYS:HB3	1.41	0.47
32:31:32:LEU:CD2	32:31:105:VAL:HG13	2.43	0.47
31:E5:69:PHE:CE2	31:E5:79:VAL:HG22	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:1E:74:LYS:H	44:1E:74:LYS:HG2	1.39	0.47
44:1E:102:LEU:HB3	44:1E:180:LEU:CD1	2.45	0.47
8:2E:150:LYS:HB3	8:2E:201:TYR:HB2	1.97	0.47
52:V1:58:A:H2	52:V1:60:U:N3	2.13	0.47
1:13:651:U:H4'	1:13:652:G:O5'	2.14	0.47
1:13:1292:A:H5'	1:13:1465:G:OP1	2.15	0.47
1:13:1647:G:H3'	1:13:1648:G:H5"	1.97	0.47
5:L5:10:ARG:O	5:L5:14:LYS:HB2	2.15	0.47
1:1G:1269:A:N3	50:72:115:SER:HB2	2.30	0.47
1:1G:1371:G:O6	53:1G:2202:8UZ:N4	2.48	0.47
1:1G:1653:C:H2'	1:1G:1654:C:H5"	1.97	0.47
1:1G:1779:A:O2'	1:1G:1780:A:O5'	2.33	0.47
1:1G:2109:G:H2'	1:1G:2110:G:C8	2.50	0.47
10:58:51:PHE:CE2	10:58:119:ARG:HG2	2.50	0.47
11:G8:85:VAL:HG23	11:G8:96:ILE:HG22	1.97	0.47
15:1H:628:A:O4'	15:1H:704:A:N6	2.48	0.47
15:1H:867:G:H4'	15:1H:887:C:O3'	2.15	0.47
15:1H:1172:C:H2'	15:1H:1173:G:O4'	2.15	0.47
15:1H:1476:A:H4'	15:1H:1477:C:O4'	2.15	0.47
15:1H:1561:G:H2'	15:1H:1562:C:C6	2.50	0.47
15:1H:2097:G:H2'	15:1H:2098:C:O4'	2.15	0.47
15:1H:2336:G:H5"	15:1H:2337:A:OP2	2.15	0.47
15:1H:2907:U:H2'	15:1H:2908:C:C6	2.50	0.47
14:32:24:GLU:OE2	14:32:24:GLU:N	2.41	0.47
15:14:710:C:O3'	30:35:14:LYS:HB3	2.15	0.47
15:14:893:C:H3'	15:14:894:G:C8	2.50	0.47
15:14:1258:A:H5'	15:14:1260:G:O4'	2.15	0.47
17:H5:9:VAL:HG22	17:H5:53:LEU:O	2.15	0.47
18:69:31:LEU:HD21	18:69:38:LEU:HG	1.97	0.47
24:4A:70:LEU:O	24:4A:74:VAL:HG23	2.14	0.47
28:I5:25:TYR:OH	40:49:4:ASP:OD2	2.33	0.47
36:N8:33:CYS:HB2	36:N8:40:LYS:CE	2.44	0.47
32:39:7:TYR:HE1	32:39:16:GLY:HA3	1.79	0.47
37:BI:53:LEU:O	37:BI:57:ARG:HD3	2.14	0.47
39:J8:23:LYS:HG2	39:J8:29:GLY:HA3	1.96	0.47
45:98:46:GLY:HA2	45:98:49:ASP:HB2	1.97	0.47
48:1A:4:ILE:HG12	48:1A:100:THR:HG22	1.97	0.47
48:1I:50:ILE:HD11	48:1I:57:LYS:HD2	1.97	0.47
48:1I:84:GLN:HE21	48:1I:88:LEU:HD22	1.79	0.47
49:7I:4:ILE:HG13	49:7I:66:PRO:CA	2.45	0.47
44:12:7:VAL:HG13	44:12:8:LYS:HG3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1023:A:C2	1:13:1024:A:C4	3.03	0.46
1:13:1732:G:OP1	44:1E:144:ARG:NH2	2.45	0.46
1:13:1977:A:C2	1:13:1978:U:C2	3.04	0.46
2:A8:33:LYS:HB3	2:A8:34:HIS:CD2	2.50	0.46
1:1G:876:C:H5'	7:8A:70:ARG:HG2	1.97	0.46
1:1G:1459:G:H2'	1:1G:1460:U:O4'	2.15	0.46
14:3E:63:LYS:O	14:3E:67:ILE:HG13	2.15	0.46
15:1H:1390:U:O4	3:F8:16:LYS:NZ	2.42	0.46
15:1H:1543:A:O2'	15:1H:1544:A:H5'	2.15	0.46
15:1H:2302:A:N1	15:1H:2361:A:C2	2.83	0.46
15:1H:2811:G:H2'	15:1H:2813:C:H5"	1.96	0.46
12:M5:58:ILE:CG2	30:35:49:ARG:HD2	2.45	0.46
15:14:30:G:H2'	15:14:31:C:C6	2.49	0.46
15:14:76:C:OP1	46:G5:59:ARG:HD3	2.15	0.46
15:14:202:G:H2'	15:14:203:A:O4'	2.15	0.46
15:14:1529:G:N2	15:14:1530:G:H1'	2.30	0.46
15:14:1689:U:H2'	15:14:1690:C:H5'	1.97	0.46
15:14:2374:C:H2'	15:14:2375:A:O4'	2.15	0.46
15:14:2375:A:H2'	15:14:2376:A:O4'	2.15	0.46
15:14:2819:G:H2'	15:14:2820:G:C8	2.50	0.46
23:21:16:ARG:HG3	23:21:16:ARG:O	2.15	0.46
23:21:46:ALA:HB2	23:21:82:ARG:HA	1.97	0.46
23:21:96:PHE:O	23:21:175:VAL:HG11	2.14	0.46
23:29:81:ILE:HD12	23:29:81:ILE:HG23	1.73	0.46
30:78:94:GLU:O	30:78:124:LYS:O	2.33	0.46
32:31:167:ALA:HB1	32:31:173:VAL:HG11	1.97	0.46
35:95:7:THR:HG23	35:95:22:VAL:HG21	1.96	0.46
35:95:79:VAL:C	35:95:80:GLN:OE1	2.54	0.46
39:J8:91:LYS:HE2	39:J8:91:LYS:HB2	1.58	0.46
40:41:67:LYS:HE2	40:41:67:LYS:N	2.28	0.46
38:45:25:ASP:HB3	38:45:102:VAL:N	2.29	0.46
44:1E:32:ILE:HG13	44:1E:41:ILE:O	2.14	0.46
49:7I:68:ASP:O	49:7I:71:ARG:HG2	2.15	0.46
44:12:165:VAL:HG23	44:12:166:ASP:N	2.30	0.46
8:2E:20:SER:OG	8:2E:40:ARG:NH2	2.37	0.46
1:13:1187:G:H5"	1:13:1188:A:OP2	2.15	0.46
1:13:2072:A:O2'	16:B8:125:ARG:NH2	2.48	0.46
2:A8:66:ALA:HA	2:A8:69:VAL:CG1	2.45	0.46
3:B5:40:LYS:HA	3:B5:51:VAL:HG11	1.97	0.46
5:L5:47:ARG:HB2	5:L5:47:ARG:NH1	2.29	0.46
1:1G:1167:G:H5"	13:3A:114:LYS:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1217:G:H1	1:1G:1280:C:N4	2.12	0.46
1:1G:1685:G:C4	1:1G:1831:A:C2	3.03	0.46
1:1G:1747:C:OP2	9:82:9:ARG:NH2	2.48	0.46
11:G8:35:TYR:CD2	11:G8:69:ALA:HB3	2.50	0.46
12:Q8:50:LEU:CD2	12:Q8:51:ALA:H	2.13	0.46
15:1H:487:U:H5"	5:P8:40:TRP:CD2	2.50	0.46
15:1H:909:U:C5	15:1H:965:A:N1	2.81	0.46
15:1H:2346:G:C4'	31:I8:42:GLY:HA3	2.44	0.46
15:1H:2772:U:H4'	15:1H:2773:A:OP1	2.14	0.46
16:B8:74:ARG:HG2	16:B8:74:ARG:NH1	2.20	0.46
19:9I:26:LEU:O	34:5E:100:ASN:ND2	2.48	0.46
15:14:909:U:C2	15:14:2283:A:C8	3.03	0.46
15:14:2482:C:H4'	38:45:123:HIS:CG	2.49	0.46
15:14:2487:G:H1	15:14:2492:C:P	2.38	0.46
22:D5:84:GLU:OE2	26:1J:79:U:H4'	2.15	0.46
29:AI:30:LEU:CD1	29:AI:30:LEU:H	2.29	0.46
25:42:99:GLY:O	25:42:117:ASP:HA	2.14	0.46
27:85:91:ASP:OD1	27:85:96:ALA:N	2.48	0.46
27:85:91:ASP:C	27:85:92:ARG:HG3	2.34	0.46
27:85:92:ARG:NH1	35:95:11:GLN:H	2.14	0.46
28:I5:40:HIS:CE1	28:I5:45:GLY:HA3	2.50	0.46
34:5E:3:ARG:O	34:5E:93:SER:HB2	2.15	0.46
38:88:59:ARG:C	38:88:61:GLY:H	2.18	0.46
35:95:47:VAL:O	35:95:47:VAL:HG22	2.15	0.46
40:49:77:ILE:HD12	40:49:78:SER:N	2.30	0.46
47:51:4:ILE:HG13	47:51:6:ARG:HB2	1.96	0.46
47:51:25:LYS:HG2	47:51:34:GLU:HG2	1.97	0.46
48:1A:36:GLY:O	48:1A:38:ILE:HG13	2.16	0.46
47:59:59:ARG:O	47:59:63:SER:OG	2.23	0.46
47:59:104:GLU:HG3	47:59:114:VAL:HG22	1.97	0.46
1:13:964:U:H5'	37:BI:23:ARG:HB2	1.97	0.46
1:13:1250:A:H2'	1:13:1251:A:O4'	2.15	0.46
1:13:1569:A:H2'	1:13:1570:G:C8	2.51	0.46
1:13:1586:G:N2	48:1I:55:LYS:NZ	2.63	0.46
1:13:1928:U:O2'	1:13:1929:U:H5'	2.15	0.46
4:11:110:GLY:O	4:11:112:GLN:HG3	2.16	0.46
7:8I:45:HIS:O	7:8I:73:VAL:HG23	2.16	0.46
7:8I:67:LYS:O	7:8I:68:ARG:HB3	2.14	0.46
1:1G:706:A:N6	1:1G:749:C:N3	2.61	0.46
1:1G:849:A:H1'	1:1G:850:G:O4'	2.15	0.46
1:1G:849:A:H8	1:1G:850:G:N9	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1048:G:C2	1:1G:1077:C:C2	3.03	0.46
1:1G:1077:C:H2'	1:1G:1078:U:H6	1.80	0.46
1:1G:1138:A:C8	1:1G:1138:A:H3'	2.50	0.46
1:1G:1396:A:H2'	1:1G:1397:A:O4'	2.15	0.46
1:1G:1853:C:P	24:4A:91:ARG:HH12	2.38	0.46
1:1G:2118:U:O4	53:1G:2201:8UZ:N2	2.47	0.46
2:65:10:ARG:O	2:65:14:VAL:HG23	2.14	0.46
15:1H:1044:A:O2'	27:C8:92:ARG:HG3	2.15	0.46
15:1H:1359:G:P	5:P8:9:ARG:HH11	2.38	0.46
15:1H:1408:A:C2	15:1H:1421:U:O4	2.62	0.46
15:1H:1739:A:N6	15:1H:1748:A:H2	2.03	0.46
15:1H:2862:U:H4'	15:1H:2881:A:C2	2.50	0.46
19:9I:32:ARG:HE	34:5E:97:PHE:HB2	1.80	0.46
15:14:34:C:O2'	15:14:35:G:OP1	2.32	0.46
15:14:94:G:H4'	46:G5:46:GLN:HB2	1.96	0.46
15:14:191:C:H4'	15:14:414:G:C2	2.50	0.46
15:14:684:G:H2'	15:14:685:G:O4'	2.16	0.46
15:14:755:A:H2'	15:14:756:G:O4'	2.16	0.46
15:14:802:C:O2'	15:14:803:C:H5'	2.14	0.46
15:14:1159:A:O3'	15:14:1160:G:H4'	2.15	0.46
15:14:1213:G:H2'	15:14:1214:U:C6	2.50	0.46
15:14:1435:C:OP2	15:14:1445:U:C5	2.69	0.46
15:14:1491:G:C2	15:14:1600:C:O2	2.68	0.46
15:14:1715:A:H2'	15:14:1716:G:O4'	2.16	0.46
15:14:1733:C:H2'	15:14:1734:C:C6	2.49	0.46
15:14:2159:A:HO2'	15:14:2184:G:N2	2.13	0.46
24:4I:40:ASN:HB3	24:4I:43:THR:HG23	1.98	0.46
25:4E:13:ILE:HA	25:4E:29:GLY:O	2.16	0.46
22:D5:94:GLU:O	22:D5:130:PRO:HD3	2.14	0.46
32:31:130:ALA:H	32:31:132:VAL:HG13	1.80	0.46
40:49:96:ARG:O	40:49:97:ASP:HB2	2.14	0.46
44:1E:5:ILE:HG13	44:1E:6:THR:N	2.29	0.46
44:1E:74:LYS:O	44:1E:78:GLN:HB2	2.14	0.46
45:98:70:LEU:HA	45:98:70:LEU:HD23	1.62	0.46
43:A5:92:ARG:NH1	43:A5:93:ALA:O	2.42	0.46
47:51:170:ARG:C	47:51:171:LEU:HD12	2.36	0.46
48:1A:22:LYS:HD2	48:1A:88:LEU:HD21	1.98	0.46
48:1A:99:LYS:HD3	48:1A:100:THR:H	1.80	0.46
44:12:7:VAL:O	44:12:217:ARG:NH2	2.48	0.46
50:7E:8:ASP:O	50:7E:12:ARG:HB2	2.15	0.46
47:59:30:LYS:HD3	47:59:79:VAL:C	2.36	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:2I:85:ARG:HD3	6:2I:113:PRO:HD3	1.96	0.46
50:72:21:LYS:HG2	50:72:23:SER:O	2.15	0.46
1:13:1086:G:H1	1:13:1118:C:H42	1.63	0.46
1:1G:1342:G:OP1	4:19:166:GLN:NE2	2.48	0.46
12:Q8:56:GLU:O	12:Q8:57:ARG:NE	2.45	0.46
13:3I:53:ARG:HB3	13:3I:69:TYR:HE1	1.80	0.46
15:1H:683:C:H2'	15:1H:684:G:H8	1.80	0.46
15:1H:1075:A:H2'	15:1H:1075:A:N3	2.30	0.46
15:1H:1630:A:H5'	15:1H:1631:G:OP2	2.15	0.46
15:1H:2290:C:H5'	15:1H:2290:C:C6	2.48	0.46
13:3A:47:LYS:O	13:3A:49:ASN:N	2.49	0.46
15:14:69:G:H21	15:14:70:A:N6	2.13	0.46
15:14:434:G:H8	15:14:434:G:O5'	1.98	0.46
15:14:1429:G:N2	15:14:1620:A:C2	2.82	0.46
15:14:1686:C:H2'	15:14:1687:A:C8	2.50	0.46
15:14:2057:G:H21	23:29:146:THR:CG2	2.22	0.46
15:14:2495:C:H2'	15:14:2496:G:H5'	1.96	0.46
15:14:2882:G:H2'	15:14:2883:C:O4'	2.16	0.46
23:21:16:ARG:NH2	23:21:171:GLU:OE2	2.48	0.46
22:D5:27:VAL:HG23	22:D5:36:LYS:HA	1.95	0.46
33:5I:24:CYS:HB2	33:5I:40:CYS:HB3	1.97	0.46
31:E5:82:ARG:HH11	31:E5:84:LEU:HB2	1.81	0.46
40:41:135:LEU:O	40:41:154:GLY:HA3	2.15	0.46
38:45:39:PRO:HA	38:45:97:VAL:O	2.15	0.46
49:7I:8:ARG:HB3	49:7I:28:ARG:NH1	2.31	0.46
49:7A:82:GLN:H	49:7A:82:GLN:HG2	1.45	0.46
8:2E:57:ILE:HG12	8:2E:66:VAL:HG22	1.97	0.46
52:X4:42:C:H2'	52:X4:43:C:H5'	1.98	0.46
1:13:830:C:H42	1:13:839:G:H1	1.62	0.46
1:13:1048:G:H2'	1:13:1049:A:H8	1.80	0.46
1:13:1236:A:C2	49:7I:31:LYS:HG3	2.51	0.46
1:13:1796:A:C6	1:13:1797:A:N1	2.84	0.46
1:13:1805:G:P	9:8E:93:ARG:HH21	2.37	0.46
4:11:238:GLY:HA2	15:1H:2605:A:OP2	2.16	0.46
1:1G:950:G:O2'	1:1G:1236:A:N1	2.49	0.46
1:1G:1785:A:H62	1:1G:1804:G:H22	1.63	0.46
1:1G:2031:C:H1'	1:1G:2123:A:N1	2.31	0.46
1:1G:2153:G:H2'	1:1G:2154:A:O4'	2.15	0.46
12:Q8:32:LEU:HG	12:Q8:33:ASN:N	2.30	0.46
12:Q8:46:ARG:NH2	12:Q8:48:PHE:CD1	2.84	0.46
13:3I:88:GLY:O	13:3I:99:HIS:ND1	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:631:U:H4'	15:1H:707:C:H4'	1.97	0.46
15:1H:1535:A:H2'	15:1H:1536:G:C8	2.50	0.46
15:1H:1811:U:O2'	15:1H:1812:U:H5'	2.15	0.46
15:1H:2545:A:H62	47:51:172:LYS:HZ1	1.63	0.46
15:1H:2653:G:P	23:21:82:ARG:NH2	2.89	0.46
15:1H:2888:C:O2'	16:B8:5:ALA:HB3	2.15	0.46
15:1H:2897:U:O2	36:N8:52:TYR:OH	2.33	0.46
15:14:120:G:C6	56:14:3641:HOH:O	2.65	0.46
15:14:691:A:H2'	15:14:692:C:C5	2.51	0.46
15:14:910:A:C2	15:14:965:A:C4	3.04	0.46
15:14:969:G:H2'	15:14:970:U:C6	2.51	0.46
15:14:1081:U:H1'	15:14:2766:A:N1	2.30	0.46
15:14:1805:C:C1'	15:14:1820:A:H8	2.28	0.46
15:14:1938:A:C6	52:W4:38:A:H5'	2.50	0.46
15:14:2246:C:OP1	39:F5:42:GLN:HA	2.15	0.46
15:14:2371:C:H4'	31:E5:20:ARG:HG3	1.97	0.46
19:9A:76:LEU:HG	34:52:89:MET:HE3	1.97	0.46
22:D5:23:LYS:HB3	22:D5:38:TYR:CD1	2.51	0.46
25:42:90:VAL:O	25:42:120:THR:HA	2.14	0.46
32:31:24:LEU:HD21	32:31:114:VAL:HG12	1.96	0.46
29:AA:66:MET:HA	29:AA:67:VAL:O	2.15	0.46
35:D8:1:MET:SD	35:D8:43:GLU:O	2.74	0.46
34:52:10:LEU:HD11	34:52:61:LEU:HD22	1.98	0.46
35:95:71:LEU:O	35:95:72:VAL:HG12	2.15	0.46
44:1E:223:ILE:H	44:1E:223:ILE:HG12	1.45	0.46
46:K8:14:ARG:HB3	46:K8:15:LYS:HZ1	1.80	0.46
52:W1:14:A:C6	52:W1:22:G:C4	3.04	0.46
52:V1:20:U:O2'	52:V1:21:A:H5'	2.16	0.46
1:13:1377:C:H4'	1:13:1378:C:O5'	2.15	0.46
1:13:1753:U:H6	1:13:1753:U:H5"	1.80	0.46
1:13:2057:C:H2'	1:13:2058:C:C6	2.50	0.46
3:B5:49:VAL:HB	3:B5:83:VAL:CG2	2.46	0.46
4:11:221:VAL:HG22	4:11:226:MET:CE	2.45	0.46
1:1G:1683:A:C5	1:1G:1833:G:C2	3.04	0.46
1:1G:1913:A:H2'	1:1G:1914:A:H4'	1.97	0.46
15:1H:237:G:H4'	15:1H:414:G:C5	2.51	0.46
15:1H:528:A:H8	15:1H:528:A:O5'	1.98	0.46
15:1H:2485:G:OP1	38:88:56:ARG:NH2	2.49	0.46
15:1H:2875:G:H2'	15:1H:2876:C:C6	2.50	0.46
14:32:13:ARG:C	14:32:15:GLU:H	2.18	0.46
14:32:101:LEU:HD23	14:32:121:VAL:CG1	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:19:C:H2'	15:14:20:C:C6	2.50	0.46
15:14:864:C:H2'	15:14:865:C:C6	2.51	0.46
15:14:1270:C:C2	15:14:1278:G:C2	3.03	0.46
15:14:2050:C:H2'	15:14:2051:C:C6	2.51	0.46
22:H8:85:HIS:CE1	26:16:77:G:H21	2.34	0.46
27:C8:90:VAL:O	27:C8:91:ASP:C	2.53	0.46
28:M8:63:TYR:HE2	29:AI:42:PRO:HD3	1.80	0.46
23:29:173:VAL:N	23:29:183:LEU:O	2.44	0.46
39:J8:58:ILE:HG23	39:J8:87:PRO:HG3	1.96	0.46
38:45:75:THR:HA	38:45:89:ASN:O	2.16	0.46
44:1E:233:SER:OG	44:1E:234:PRO:HD2	2.15	0.46
45:98:78:LYS:O	45:98:83:ILE:HG13	2.15	0.46
43:A5:33:ARG:HD3	43:A5:52:GLU:OE2	2.15	0.46
47:51:8:PRO:HG2	47:51:69:ARG:NH2	2.31	0.46
44:12:24:TRP:N	44:12:24:TRP:CD1	2.83	0.46
50:7E:7:ALA:HB2	50:7E:85:ARG:HD2	1.98	0.46
8:2E:47:LEU:HD23	8:2E:47:LEU:HA	1.78	0.46
51:Y1:35:A:H5"	51:Y1:36:G:OP2	2.14	0.46
1:13:770:A:OP2	7:8I:63:ARG:NE	2.44	0.46
1:13:1085:G:H2'	1:13:1086:G:C8	2.50	0.46
1:13:1775:C:O2'	9:8E:16:ARG:HD3	2.16	0.46
1:13:1795:A:C6	1:13:1796:A:C6	3.04	0.46
1:1G:769:G:N3	1:1G:835:U:H5'	2.31	0.46
1:1G:1236:A:H2'	1:1G:1237:A:O4'	2.15	0.46
1:1G:1452:G:H21	50:72:1:MET:HE1	1.81	0.46
1:1G:1757:C:H41	1:1G:1769:C:N4	2.14	0.46
15:1H:519:A:H2'	15:1H:520:G:O4'	2.16	0.46
15:1H:599:C:N3	23:21:145:LYS:NZ	2.63	0.46
15:1H:647:G:H4'	15:1H:648:A:C5'	2.46	0.46
15:1H:725:A:H2	15:1H:851:A:H61	1.64	0.46
15:1H:929:G:C6	15:1H:931:G:N2	2.84	0.46
15:1H:1350:A:H2	15:1H:1675:G:N3	2.13	0.46
15:1H:1577:A:H2'	15:1H:1578:A:O4'	2.16	0.46
15:1H:2767:G:H22	47:51:3:ARG:HE	1.64	0.46
11:C5:48:ALA:HB3	11:C5:59:GLY:O	2.16	0.46
18:61:92:VAL:HG13	18:61:120:ILE:HD13	1.98	0.46
15:14:2313:A:H1'	15:14:2336:G:N2	2.30	0.46
15:14:2717:U:O2'	15:14:2718:C:C5	2.69	0.46
21:68:64:ARG:O	21:68:82:ASN:HA	2.16	0.46
23:21:197:ILE:O	23:21:197:ILE:HG12	2.13	0.46
24:4I:37:THR:HG23	24:4I:59:TYR:CD2	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:4E:153:LYS:NZ	25:4E:155:GLU:O	2.48	0.46
26:16:46:G:H1'	26:16:49:C:H42	1.81	0.46
22:D5:77:ASP:OD1	22:D5:80:ARG:NH1	2.48	0.46
26:1J:59:A:H1'	40:49:29:TRP:HB2	1.98	0.46
39:J8:3:LYS:HG3	39:J8:46:LEU:HD22	1.97	0.46
38:45:2:LEU:HD23	38:45:44:ALA:HB1	1.97	0.46
38:45:98:LYS:HB3	38:45:99:PRO:HD2	1.98	0.46
39:F5:49:VAL:HG21	39:F5:67:ILE:HD12	1.97	0.46
40:49:51:ARG:HE	40:49:51:ARG:HB3	1.56	0.46
45:98:18:LEU:HD23	45:98:18:LEU:HA	1.79	0.46
46:K8:28:LYS:HE3	46:K8:56:GLN:NE2	2.31	0.46
47:59:55:PRO:HG2	47:59:61:HIS:CD2	2.51	0.46
52:V1:58:A:H2	52:V1:60:U:C2	2.33	0.46
51:Y4:43:U:O2'	51:Y4:44:U:H5'	2.16	0.46
1:13:707:G:H2'	1:13:708:U:O4'	2.15	0.46
1:13:1182:A:H5"	13:3I:24:VAL:HG21	1.98	0.46
1:13:1297:G:HO2'	41:6I:46:HIS:HB3	1.80	0.46
1:13:1639:A:N3	1:13:1845:C:O2'	2.41	0.46
1:1G:989:G:C2	1:1G:990:A:C8	3.04	0.46
1:1G:1365:C:H2'	1:1G:1366:A:C8	2.51	0.46
1:1G:1404:G:O2'	1:1G:1405:G:H5'	2.15	0.46
1:1G:1665:C:H2'	1:1G:1666:C:C6	2.51	0.46
1:1G:1904:C:O2'	1:1G:1906:A:H1'	2.16	0.46
1:1G:1932:G:HO2'	1:1G:1933:A:P	2.39	0.46
15:1H:35:G:H2'	15:1H:36:G:O4'	2.16	0.46
15:1H:658:A:OP1	30:78:65:ARG:NH2	2.38	0.46
15:1H:1480:U:C2	15:1H:1613:G:N2	2.83	0.46
15:1H:1490:G:H2'	15:1H:1491:G:C8	2.51	0.46
15:1H:1582:C:H3'	15:1H:1583:G:H5"	1.98	0.46
15:1H:2727:U:O2'	15:1H:2729:A:H5'	2.16	0.46
15:1H:2824:G:H8	15:1H:2824:G:OP2	1.99	0.46
12:M5:23:VAL:CG1	12:M5:47:LYS:HD3	2.46	0.46
14:32:90:GLY:HA2	14:32:204:ILE:HD11	1.96	0.46
14:32:189:PRO:HB2	14:32:194:LEU:HD21	1.98	0.46
15:14:142:G:H2'	15:14:143:C:C6	2.51	0.46
15:14:1481:C:H2'	15:14:1482:U:O4'	2.16	0.46
15:14:2689:G:H4'	21:25:30:ALA:HB2	1.96	0.46
16:75:61:PHE:CE1	16:75:76:PHE:HB2	2.50	0.46
22:H8:124:ILE:HD12	22:H8:124:ILE:HA	1.74	0.46
23:21:67:PHE:O	23:21:69:LYS:HD2	2.15	0.46
22:D5:72:ARG:NH2	22:D5:97:GLU:O	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:4A:65:LYS:HB3	28:I5:49:PHE:CE2	2.50	0.46
24:4A:84:ILE:HG23	29:AA:74:PHE:CZ	2.50	0.46
29:AI:6:LYS:HA	29:AI:6:LYS:NZ	2.27	0.46
25:42:70:PRO:HB3	25:42:144:THR:HG22	1.96	0.46
26:1J:72:C:H2'	26:1J:73:C:H6	1.81	0.46
32:31:93:LYS:HA	32:31:93:LYS:HD2	1.79	0.46
34:5E:86:ARG:O	34:5E:87:ARG:HG2	2.16	0.46
38:88:60:ARG:HB3	38:88:60:ARG:NH1	2.29	0.46
39:J8:91:LYS:HA	39:J8:91:LYS:NZ	2.31	0.46
41:6I:25:THR:HG21	41:6I:70:LEU:HB2	1.98	0.46
40:49:77:ILE:HD11	40:49:79:ASN:OD1	2.16	0.46
40:49:109:VAL:CG1	40:49:142:PRO:HG3	2.46	0.46
47:51:126:PRO:HG2	47:51:130:ARG:HH12	1.81	0.46
48:1I:5:ARG:HB2	48:1I:73:ASP:OD1	2.15	0.46
47:59:3:ARG:HD2	47:59:4:ILE:HG12	1.98	0.46
8:2E:62:ASP:OD1	8:2E:97:LYS:HG2	2.15	0.46
52:V1:23:A:H2'	52:V1:24:G:C8	2.51	0.46
52:X4:1:G:C6	52:X4:73:A:C6	3.03	0.46
1:13:668:G:O2'	1:13:1536:A:N1	2.43	0.46
1:13:835:U:C4	7:8I:72:ARG:NH2	2.84	0.46
1:13:847:A:C5	1:13:848:A:N1	2.84	0.46
1:13:1092:A:H2'	1:13:1093:A:C8	2.50	0.46
1:13:1093:A:C6	1:13:1094:C:C4	3.03	0.46
1:13:1277:A:C6	1:13:1278:G:C5	3.03	0.46
1:13:1343:G:H2'	1:13:1344:A:C8	2.51	0.46
1:13:1777:C:H2'	1:13:1778:U:C6	2.51	0.46
1:13:1852:A:N3	1:13:1852:A:H2'	2.31	0.46
1:13:2016:C:H2'	1:13:2017:C:C6	2.51	0.46
3:B5:60:ARG:NH1	3:B5:60:ARG:HB2	2.30	0.46
4:11:17:THR:HG22	4:11:204:ILE:HA	1.97	0.46
6:2A:34:ASP:HB3	6:2A:40:ILE:HD11	1.98	0.46
8:22:148:GLY:HA3	8:22:172:ARG:H	1.81	0.46
1:1G:692:G:O2'	1:1G:1006:U:H1'	2.16	0.46
1:1G:1233:G:H2'	1:1G:1234:U:O4'	2.16	0.46
1:1G:1386:U:H2'	1:1G:1387:G:O4'	2.15	0.46
1:1G:1421:A:H1'	1:1G:1423:A:N7	2.31	0.46
1:1G:1974:G:C8	9:82:107:ARG:HB3	2.50	0.46
1:1G:2060:G:OP1	16:75:107:ASP:HB2	2.15	0.46
10:58:32:THR:HG22	10:58:37:LYS:HB2	1.98	0.46
10:58:73:THR:HA	10:58:83:LYS:O	2.16	0.46
15:1H:90:A:C5	15:1H:91:G:N7	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:664:A:H2'	30:78:117:GLU:OE1	2.16	0.46
15:1H:1131:U:H3'	15:1H:1132:A:C5'	2.46	0.46
15:1H:1157:C:O2'	15:1H:1158:G:O4'	2.34	0.46
15:1H:1788:C:H5	16:B8:96:ARG:NH2	2.13	0.46
15:1H:1812:U:C4	15:1H:1818:A:C4	3.04	0.46
15:1H:2787:C:H2'	15:1H:2788:C:C6	2.51	0.46
18:61:77:LEU:HB2	18:61:140:LEU:HB3	1.97	0.46
14:32:108:LEU:HD23	14:32:110:PHE:CE1	2.41	0.46
14:32:176:LEU:HD12	14:32:176:LEU:HA	1.61	0.46
15:14:488:A:H2'	15:14:489:C:O4'	2.16	0.46
15:14:1534:G:H2'	15:14:1535:A:C8	2.50	0.46
15:14:2141:G:N1	15:14:2187:G:OP1	2.49	0.46
15:14:2277:U:H4'	15:14:2343:A:C2	2.51	0.46
22:H8:40:ASP:OD2	22:H8:43:GLU:HB2	2.16	0.46
22:H8:45:ASP:CG	22:H8:49:ARG:HH11	2.17	0.46
23:21:195:LEU:HD22	23:21:196:VAL:N	2.31	0.46
25:4E:71:LEU:HG	25:4E:71:LEU:H	1.38	0.46
23:29:1:MET:HG3	23:29:200:GLU:OE2	2.15	0.46
26:1J:82:U:O2'	26:1J:83:G:H5'	2.16	0.46
30:78:116:GLY:H	30:78:134:ALA:HB2	1.81	0.46
30:78:134:ALA:O	30:78:138:LEU:HB2	2.15	0.46
28:I5:34:GLU:H	28:I5:34:GLU:HG2	1.41	0.46
32:31:164:ARG:HG2	32:31:175:THR:OG1	2.16	0.46
40:41:83:ARG:N	40:41:86:MET:SD	2.86	0.46
37:BA:38:LYS:HB3	37:BA:38:LYS:HE2	1.74	0.46
42:6E:15:ASP:HB3	42:6E:20:ASP:H	1.80	0.46
47:51:130:ARG:NH1	47:51:130:ARG:HB3	2.31	0.46
47:59:41:MET:HA	47:59:53:GLU:O	2.16	0.46
6:2I:31:THR:HA	6:2I:42:TRP:HA	1.98	0.46
52:V1:3:C:N4	52:V1:70:G:H1	2.10	0.46
1:13:741:G:C6	1:13:742:C:C4	3.03	0.46
1:13:835:U:C2	7:8I:72:ARG:NH1	2.83	0.46
1:13:850:G:C6	1:13:861:G:C2	3.03	0.46
1:13:945:U:H2'	1:13:946:G:C8	2.51	0.46
1:13:1127:U:N3	1:13:1128:A:N7	2.64	0.46
1:13:1753:U:O4	48:1I:5:ARG:NE	2.36	0.46
1:13:2127:G:P	1:13:2127:G:H3'	2.56	0.46
7:8I:11:VAL:HG23	7:8I:20:THR:HB	1.97	0.46
7:8I:59:ILE:HG13	7:8I:71:PHE:HD2	1.81	0.46
8:22:175:LEU:HD21	8:22:201:TYR:HE2	1.81	0.46
9:8E:48:GLU:N	9:8E:49:PRO:HD2	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:684:G:N2	1:1G:1038:A:C4	2.84	0.46
1:1G:1352:U:H5	1:1G:1478:G:HO2'	1.64	0.46
1:1G:1523:A:H2'	1:1G:1524:A:O4'	2.16	0.46
1:1G:1606:A:N1	1:1G:1849:G:N2	2.64	0.46
1:1G:1700:G:C5	1:1G:1701:U:C5	3.04	0.46
2:65:42:ASP:O	2:65:43:GLU:HB2	2.15	0.46
4:19:242:ARG:NH2	15:14:1996:A:OP2	2.42	0.46
12:Q8:48:PHE:CE2	12:Q8:52:LYS:HG3	2.51	0.46
15:1H:299:G:H2'	15:1H:300:G:O3'	2.16	0.46
15:1H:832:A:C8	15:1H:832:A:H3'	2.51	0.46
15:1H:1406:U:H2'	15:1H:1407:G:O4'	2.16	0.46
15:1H:1514:C:HO2'	15:1H:1577:A:H8	1.64	0.46
15:1H:1569:U:H2'	15:1H:1570:G:O4'	2.16	0.46
15:1H:2026:A:H2'	15:1H:2027:G:C8	2.51	0.46
15:1H:2594:C:H2'	15:1H:2595:U:O4'	2.16	0.46
15:14:423:U:H2'	15:14:424:G:C8	2.51	0.46
15:14:958:A:C5	38:45:13:GLN:HG3	2.51	0.46
15:14:1162:G:H2'	15:14:1163:G:C8	2.51	0.46
15:14:1319:C:H5"	15:14:1320:G:O5'	2.15	0.46
15:14:1836:A:N1	15:14:1856:G:H1'	2.30	0.46
21:68:98:VAL:HG22	21:68:118:ALA:HA	1.98	0.46
16:75:7:ILE:HD11	23:29:181:LEU:HD11	1.97	0.46
18:69:77:LEU:HD13	18:69:141:LYS:HD2	1.97	0.46
18:69:104:GLN:HE22	18:69:105:HIS:CE1	2.33	0.46
28:M8:38:LYS:HE3	40:41:179:PRO:HG3	1.97	0.46
23:29:3:GLY:HA3	23:29:81:ILE:CD1	2.45	0.46
26:1J:43:U:C6	40:49:69:ALA:HB1	2.51	0.46
32:31:64:ILE:HA	32:31:64:ILE:HD13	1.53	0.46
32:31:114:VAL:HG21	32:31:202:PHE:CE1	2.51	0.46
34:5E:52:ILE:O	34:5E:55:ASP:HB2	2.16	0.46
30:35:14:LYS:HD3	30:35:16:ARG:HD2	1.97	0.46
35:95:48:GLY:CA	35:95:52:VAL:HG22	2.46	0.46
36:J5:34:PRO:HG2	36:J5:35:GLU:OE2	2.16	0.46
40:49:58:GLN:O	40:49:62:LEU:HB2	2.15	0.46
40:49:167:GLU:H	40:49:167:GLU:HG2	1.39	0.46
44:12:21:ARG:HA	44:12:39:ILE:HA	1.96	0.46
44:12:54:THR:HG23	44:12:199:TYR:HB3	1.98	0.46
46:G5:40:SER:C	46:G5:42:GLY:H	2.19	0.46
5:P8:5:TRP:NE1	5:P8:7:PRO:HG3	2.31	0.46
52:V4:10:G:N2	52:V4:26:A:H1'	2.31	0.46
1:13:903:A:C6	1:13:904:A:C6	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1286:G:C2	1:13:1287:G:C8	3.04	0.45
1:13:1542:A:O2'	1:13:1543:U:H5'	2.16	0.45
1:13:1547:C:H2'	1:13:1548:G:H8	1.82	0.45
1:13:1559:C:H2'	1:13:1560:A:O4'	2.16	0.45
1:13:1638:A:C2	1:13:1846:U:H1'	2.51	0.45
1:13:1919:U:H5'	9:8E:38:GLN:OE1	2.16	0.45
4:11:105:ILE:HD13	4:11:106:ILE:H	1.81	0.45
1:1G:1014:A:N3	1:1G:1015:A:C8	2.84	0.45
1:1G:1071:A:OP2	14:32:8:VAL:HG23	2.15	0.45
1:1G:1702:G:O2'	1:1G:1729:A:N1	2.37	0.45
2:65:95:HIS:HD2	26:1J:50:A:H4'	1.81	0.45
14:3E:170:VAL:HG13	14:3E:171:GLY:O	2.16	0.45
15:1H:554:C:OP2	15:1H:2795:U:C5	2.69	0.45
15:1H:1054:C:C2	15:1H:1186:G:N2	2.84	0.45
15:1H:1153:U:H2'	15:1H:1154:G:H8	1.80	0.45
15:1H:1193:G:C6	15:1H:1194:C:N4	2.84	0.45
15:1H:1279:C:H2'	15:1H:1280:G:C8	2.51	0.45
15:1H:1755:G:O2'	15:1H:1756:U:H5'	2.16	0.45
15:1H:2136:C:O2'	15:1H:2144:A:OP1	2.21	0.45
15:1H:2740:C:OP1	23:21:118:LYS:HE3	2.16	0.45
15:14:48:A:H5"	15:14:50:G:O4'	2.16	0.45
15:14:418:A:C6	30:35:71:VAL:HG11	2.51	0.45
15:14:1554:C:H2'	15:14:1555:C:C6	2.51	0.45
15:14:1772:G:H5"	15:14:1772:G:N3	2.31	0.45
15:14:2318:G:C2'	15:14:2319:G:H5'	2.46	0.45
24:4I:66:LEU:O	24:4I:70:LEU:N	2.46	0.45
28:M8:31:ILE:HD12	40:41:142:PRO:HB2	1.97	0.45
30:78:100:LEU:HA	30:78:100:LEU:HD12	1.62	0.45
27:85:92:ARG:CZ	35:95:11:GLN:H	2.28	0.45
28:I5:8:LYS:HD3	28:I5:8:LYS:HA	1.56	0.45
32:39:178:PRO:HG2	32:39:179:GLU:OE1	2.16	0.45
37:BI:73:HIS:HB3	37:BI:74:LYS:HG3	1.98	0.45
38:88:56:ARG:HD2	38:88:56:ARG:HA	1.73	0.45
39:J8:83:GLU:O	39:J8:85:LEU:N	2.49	0.45
36:J5:33:CYS:SG	36:J5:36:CYS:N	2.89	0.45
40:49:106:LEU:HD23	40:49:107:LEU:HD23	1.99	0.45
43:A5:1:MET:HA	43:A5:1:MET:HE3	1.98	0.45
47:51:52:VAL:O	47:51:65:HIS:NE2	2.29	0.45
44:12:78:GLN:C	44:12:94:ASN:HD21	2.18	0.45
52:V4:23:A:H2'	52:V4:24:G:C8	2.51	0.45
1:13:656:A:O2'	1:13:657:G:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:668:G:H2'	1:13:669:C:C6	2.51	0.45
1:13:1420:G:C6	1:13:1421:A:C2	3.04	0.45
1:13:1578:U:H1'	1:13:1854:A:N6	2.31	0.45
1:13:1712:G:C5	1:13:1713:U:C4	3.04	0.45
1:13:2139:G:N1	1:13:2142:A:OP2	2.49	0.45
2:A8:74:ALA:HB1	2:A8:108:GLY:HA3	1.97	0.45
1:1G:902:U:OP2	37:BA:79:ARG:NH2	2.49	0.45
1:1G:1351:A:H2	1:1G:1362:A:H61	1.62	0.45
1:1G:1447:G:O2'	1:1G:1448:A:H5'	2.17	0.45
1:1G:1569:A:H2'	1:1G:1570:G:C8	2.51	0.45
1:1G:1638:A:H5'	29:AA:15:LEU:HD11	1.98	0.45
1:1G:1842:G:C2	1:1G:1843:G:C8	3.05	0.45
2:65:54:LEU:HD12	2:65:54:LEU:HA	1.77	0.45
14:3E:43:HIS:HA	14:3E:46:LYS:HD2	1.98	0.45
15:1H:1142:U:HO2'	15:1H:1144:A:P	2.37	0.45
15:1H:1204:A:OP1	27:C8:55:ARG:HD3	2.16	0.45
15:1H:1234:G:H2'	15:1H:1235:G:O4'	2.16	0.45
15:1H:2470:G:H2'	15:1H:2471:C:C6	2.51	0.45
15:1H:2667:C:C2	15:1H:2684:G:C2	3.04	0.45
12:M5:5:LYS:HE2	15:14:244:G:N7	2.32	0.45
13:3A:27:LEU:HB3	13:3A:33:ARG:HD3	1.97	0.45
15:14:705:G:H2'	15:14:706:U:O4'	2.16	0.45
15:14:924:G:C2	15:14:951:C:C2	3.04	0.45
15:14:2153:C:H42	15:14:2185:G:H22	1.63	0.45
15:14:2546:A:C2'	15:14:2547:G:H5'	2.47	0.45
23:21:203:LYS:HD2	23:21:203:LYS:O	2.16	0.45
24:4I:10:PRO:CB	24:4I:18:ALA:HB1	2.44	0.45
22:D5:163:LEU:HD23	22:D5:163:LEU:H	1.81	0.45
33:5I:58:LYS:HE3	33:5I:58:LYS:HB2	1.69	0.45
39:J8:81:LYS:N	39:J8:81:LYS:HD2	2.31	0.45
40:41:53:LEU:O	40:41:56:ALA:N	2.49	0.45
41:6I:3:ILE:HA	41:6I:7:GLU:OE1	2.17	0.45
37:BA:67:ALA:HB2	37:BA:77:ALA:HB2	1.98	0.45
41:6A:41:GLU:HA	41:6A:44:LYS:HD2	1.97	0.45
47:51:80:SER:C	47:51:81:GLU:HG3	2.37	0.45
1:13:702:U:H4'	18:69:82:ARG:NH2	2.31	0.45
1:13:896:G:P	7:8I:69:LYS:HZ3	2.39	0.45
1:13:990:A:O2'	1:13:991:G:H5'	2.16	0.45
1:13:1596:G:OP1	48:1I:57:LYS:NZ	2.29	0.45
1:13:2027:C:H4'	1:13:2028:C:O5'	2.16	0.45
4:11:17:THR:CG2	4:11:204:ILE:HA	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:703:G:H2'	1:1G:704:C:C6	2.52	0.45
1:1G:1147:C:H5"	1:1G:1148:C:C6	2.50	0.45
11:G8:88:LYS:HD3	11:G8:88:LYS:HA	1.71	0.45
15:1H:768:C:H2'	15:1H:769:C:C6	2.51	0.45
15:1H:1631:G:C6	15:1H:1632:C:C4	3.05	0.45
15:1H:1792:G:C2	15:1H:2711:U:H5'	2.52	0.45
15:1H:1990:C:H3'	15:1H:1991:A:H2'	1.99	0.45
15:1H:2288:A:H2'	15:1H:2289:A:C8	2.51	0.45
15:1H:2599:U:H1'	52:W1:76:A:O2'	2.16	0.45
15:1H:2815:A:H5'	15:1H:2907:U:H1'	1.98	0.45
10:15:133:GLN:HG3	10:15:135:PRO:HG3	1.97	0.45
11:C5:52:SER:H	11:C5:56:PRO:HA	1.81	0.45
11:C5:81:LYS:HB2	11:C5:99:CYS:SG	2.57	0.45
15:14:685:G:H22	15:14:698:C:N4	2.14	0.45
15:14:1317:A:C2	15:14:2038:A:C4	3.04	0.45
15:14:1720:C:C5	15:14:1721:U:C4	3.05	0.45
15:14:2183:A:H1'	15:14:2184:G:C8	2.51	0.45
15:14:2314:G:N1	15:14:2333:G:C8	2.84	0.45
27:C8:88:ILE:C	27:C8:90:VAL:H	2.19	0.45
22:D5:52:SER:O	22:D5:54:HIS:N	2.50	0.45
23:29:37:ARG:O	23:29:45:THR:HA	2.17	0.45
35:95:95:LEU:HD13	35:95:97:LYS:HE2	1.98	0.45
38:45:4:PRO:HD3	38:45:70:PRO:O	2.16	0.45
39:F5:45:ASN:O	39:F5:63:ALA:HA	2.16	0.45
41:6A:25:THR:HG21	41:6A:70:LEU:HB2	1.99	0.45
48:1A:57:LYS:HD3	48:1A:60:ARG:NH2	2.31	0.45
48:1A:81:THR:HB	48:1A:85:LEU:HD12	1.98	0.45
50:7E:25:ASP:OD1	50:7E:60:ARG:HG3	2.16	0.45
1:13:1598:A:H8	1:13:1598:A:H5"	1.80	0.45
1:13:1759:G:H2'	1:13:1760:C:C6	2.52	0.45
1:13:2004:U:C2	1:13:2005:A:N7	2.85	0.45
4:11:254:THR:HG21	15:1H:1859:A:O4'	2.17	0.45
1:1G:793:C:H2'	1:1G:794:C:C6	2.52	0.45
1:1G:903:A:C6	1:1G:904:A:C6	3.04	0.45
1:1G:1735:C:C4	1:1G:1736:G:C8	3.04	0.45
1:1G:2103:G:C6	1:1G:2104:U:C4	3.05	0.45
10:58:46:VAL:O	10:58:47:ALA:HB3	2.16	0.45
4:19:92:ILE:HG21	4:19:92:ILE:HD13	1.72	0.45
4:19:242:ARG:N	4:19:242:ARG:HD3	2.26	0.45
7:8A:10:VAL:HG23	7:8A:54:GLY:H	1.80	0.45
15:1H:149:A:H2'	15:1H:150:C:H6	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:936:A:H4'	15:1H:937:C:H5'	1.98	0.45
15:1H:1168:G:H2'	15:1H:1169:C:O4'	2.16	0.45
15:1H:1756:U:C2	15:1H:1791:U:H5'	2.51	0.45
15:1H:1887:A:N1	15:1H:2112:G:H1'	2.32	0.45
15:1H:2019:C:O2'	15:1H:2020:U:H5'	2.17	0.45
15:1H:2790:C:H2'	15:1H:2791:A:O4'	2.16	0.45
15:1H:2888:C:C4'	16:B8:5:ALA:HB2	2.46	0.45
10:15:67:LEU:HD23	10:15:88:GLU:HG2	1.98	0.45
16:B8:1:MET:SD	16:B8:1:MET:O	2.75	0.45
15:14:994:G:N3	15:14:1032:A:H2	2.14	0.45
15:14:1784:G:O2'	15:14:1785:C:H5'	2.17	0.45
15:14:2305:G:C2	15:14:2358:C:O2	2.69	0.45
15:14:2727:U:H2'	15:14:2730:G:H5"	1.97	0.45
15:14:2833:A:C5	45:55:4:LEU:HD11	2.50	0.45
16:75:51:ARG:HG2	16:75:98:LYS:HD2	1.98	0.45
18:69:2:LYS:HB2	18:69:39:ALA:HB2	1.98	0.45
18:69:54:GLN:HA	18:69:57:ARG:HD3	1.98	0.45
24:4I:82:MET:C	24:4I:84:ILE:H	2.20	0.45
35:D8:98:GLU:OE1	35:D8:100:ARG:HD3	2.16	0.45
38:88:51:ARG:HB3	38:88:51:ARG:HH11	1.80	0.45
40:49:80:PHE:O	40:49:82:LEU:HB2	2.17	0.45
48:1A:22:LYS:HE3	48:1A:90:LEU:HD11	1.98	0.45
48:1I:46:ARG:NH2	48:1I:64:GLU:OE1	2.50	0.45
48:1I:89:ASP:C	48:1I:91:PRO:HD3	2.36	0.45
44:12:27:LYS:NZ	44:12:195:ASP:HB2	2.30	0.45
47:59:27:LYS:HD2	47:59:32:GLU:HG2	1.99	0.45
47:59:58:GLU:HB2	47:59:61:HIS:CE1	2.51	0.45
52:W4:1:G:H21	52:W4:73:A:N6	2.14	0.45
52:V4:19:G:H5"	52:V4:20:U:C5	2.50	0.45
1:13:2029:G:C2	1:13:2030:C:H1'	2.51	0.45
8:22:194:GLY:HA2	1:1G:1833:G:O4'	2.16	0.45
1:1G:850:G:H2'	1:1G:851:G:H8	1.81	0.45
1:1G:1428:G:O6	1:1G:1429:G:C2	2.69	0.45
1:1G:1596:G:O4'	48:1A:55:LYS:HG3	2.16	0.45
1:1G:1602:C:H5	1:1G:1603:C:C5	2.35	0.45
1:1G:1967:A:OP1	52:V4:35:A:H5'	2.17	0.45
10:58:15:LEU:HB2	10:58:134:ARG:HB3	1.99	0.45
10:58:46:VAL:HG11	10:58:48:MET:HG3	1.97	0.45
2:65:106:ARG:O	2:65:106:ARG:HD2	2.17	0.45
12:Q8:47:LYS:HA	12:Q8:47:LYS:HD2	1.66	0.45
13:3I:90:VAL:HG11	13:3I:93:LEU:HG	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:82:53:VAL:HG11	9:82:92:TYR:CE2	2.51	0.45
15:1H:317:C:H42	15:1H:373:G:H1	1.64	0.45
15:1H:499:A:H8	15:1H:499:A:OP2	2.00	0.45
15:1H:977:U:O4'	15:1H:977:U:O2	2.31	0.45
15:1H:977:U:H4'	15:1H:978:G:O5'	2.17	0.45
15:1H:1443:U:C4	15:1H:1444:A:C6	3.05	0.45
15:1H:2126:G:C6	15:1H:2127:U:N3	2.85	0.45
15:1H:2885:G:O2'	15:1H:2886:A:H5'	2.17	0.45
18:61:68:LEU:HA	18:61:68:LEU:HD12	1.74	0.45
15:14:739:G:H2'	15:14:740:C:C6	2.51	0.45
15:14:1090:G:C6	15:14:1162:G:N2	2.84	0.45
15:14:1476:A:H4'	15:14:1477:C:O4'	2.16	0.45
15:14:1538:U:HO2'	15:14:1539:A:H8	1.64	0.45
15:14:1554:C:H2'	15:14:1555:C:H6	1.81	0.45
15:14:1873:G:H5"	15:14:1874:G:OP2	2.16	0.45
15:14:2164:C:N4	15:14:2177:G:O6	2.49	0.45
15:14:2476:C:H2'	15:14:2477:U:H6	1.79	0.45
21:68:17:ARG:HG2	21:68:17:ARG:HH11	1.82	0.45
23:29:117:MET:HA	23:29:122:PHE:N	2.31	0.45
25:42:107:ARG:O	25:42:110:LEU:N	2.50	0.45
32:39:18:ARG:HG2	32:39:19:GLU:N	2.32	0.45
32:39:134:GLY:HA2	32:39:166:ALA:HB2	1.98	0.45
37:BI:10:LEU:HD11	37:BI:12:ALA:HB3	1.97	0.45
38:45:80:GLU:HB2	38:45:81:VAL:H	1.53	0.45
45:98:45:ARG:HB3	45:98:46:GLY:H	1.60	0.45
47:51:86:GLU:HG3	47:51:165:ALA:N	2.31	0.45
44:12:155:LEU:HD22	44:12:155:LEU:HA	1.73	0.45
44:12:213:LEU:O	44:12:213:LEU:HD23	2.16	0.45
3:F8:80:ILE:O	3:F8:80:ILE:HG12	2.17	0.45
52:V1:35:A:H2'	52:V1:36:A:H1'	1.97	0.45
52:X4:69:G:H2'	52:X4:70:G:O4'	2.17	0.45
1:13:651:U:O2	14:3E:84:LYS:HE3	2.16	0.45
1:13:1729:A:H4'	1:13:1730:A:O5'	2.17	0.45
1:13:1804:G:H8	1:13:1805:G:C4	2.34	0.45
1:13:1939:G:H5'	29:AI:6:LYS:HD2	1.99	0.45
6:2A:21:ILE:HB	6:2A:84:VAL:HG12	1.99	0.45
6:2A:59:TYR:CZ	6:2A:63:LEU:HD21	2.51	0.45
8:22:61:ALA:C	8:22:63:ASN:H	2.20	0.45
1:1G:701:A:C5	1:1G:702:U:C5	3.05	0.45
1:1G:1547:C:H2'	1:1G:1548:G:H8	1.80	0.45
1:1G:1577:G:O6	24:4A:104:ARG:NH1	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1947:C:OP1	29:AA:70:LYS:HE3	2.17	0.45
1:1G:2020:G:N2	1:1G:2125:A:H8	2.15	0.45
10:58:96:GLU:HB2	10:58:122:VAL:CG1	2.47	0.45
2:65:67:ARG:CZ	2:65:67:ARG:HB2	2.46	0.45
11:G8:15:VAL:HG21	11:G8:42:VAL:HG21	1.99	0.45
4:19:70:TRP:HZ3	4:19:146:GLU:OE2	1.99	0.45
4:19:267:SER:HA	4:19:270:ILE:HG13	1.99	0.45
15:1H:43:A:C2'	15:1H:44:G:H5'	2.46	0.45
15:1H:883:C:H2'	15:1H:884:A:O4'	2.17	0.45
15:1H:2660:G:C3'	15:1H:2661:C:H5'	2.45	0.45
56:1H:3865:HOH:O	39:J8:65:SER:HB2	2.16	0.45
17:L8:4:LEU:HD23	17:L8:4:LEU:HA	1.65	0.45
14:32:60:GLU:OE2	14:32:199:ASN:N	2.46	0.45
14:32:88:VAL:HG13	25:42:97:GLY:CA	2.47	0.45
15:14:35:G:H2'	15:14:36:G:O4'	2.17	0.45
15:14:240:G:OP1	30:35:60:MET:HE1	2.16	0.45
15:14:906:C:H4'	31:E5:23:VAL:HG21	1.98	0.45
15:14:1457:C:C2	15:14:1644:G:N2	2.85	0.45
15:14:1585:A:N7	15:14:1586:C:H1'	2.31	0.45
15:14:2559:G:H8	15:14:2559:G:O5'	1.99	0.45
15:14:2567:U:O2	15:14:2569:U:H5'	2.16	0.45
18:69:97:ILE:O	18:69:100:ALA:HB3	2.16	0.45
24:4I:78:ILE:HG12	24:4I:78:ILE:H	1.57	0.45
26:16:13:C:H3'	26:16:14:C:C6	2.51	0.45
32:31:196:LEU:C	32:31:197:ASP:O	2.52	0.45
32:39:89:VAL:O	32:39:91:GLY:N	2.49	0.45
40:41:35:GLU:OE1	40:41:35:GLU:HA	2.17	0.45
40:41:45:GLU:H	40:41:45:GLU:HG2	1.45	0.45
39:F5:56:GLN:NE2	39:F5:83:GLU:HA	2.28	0.45
45:98:118:GLU:OE1	45:98:118:GLU:HA	2.16	0.45
49:7I:19:ILE:HG22	49:7I:36:ILE:HG13	1.98	0.45
50:7E:86:ILE:O	50:7E:88:LYS:HG2	2.17	0.45
3:F8:24:GLY:O	3:F8:83:VAL:HG22	2.16	0.45
49:7A:15:PRO:O	49:7A:41:PRO:HD2	2.17	0.45
50:72:51:VAL:HG11	50:72:60:ARG:HE	1.80	0.45
52:V1:39:U:H2'	52:V1:40:C:C6	2.51	0.45
52:W4:75:C:P	52:W4:76:A:OP2	2.75	0.45
52:V4:14:A:N6	52:V4:22:G:C4	2.85	0.45
1:13:1296:G:OP1	1:13:1361:C:O2'	2.28	0.45
1:13:1347:G:N2	19:9I:82:THR:HG23	2.31	0.45
2:A8:106:ARG:HA	2:A8:109:GLY:N	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L5:39:ARG:HD2	5:L5:39:ARG:HA	1.56	0.45
8:22:43:LEU:O	8:22:47:LEU:HB2	2.17	0.45
1:1G:1291:G:N7	53:1G:2202:8UZ:N2	2.65	0.45
11:G8:76:CYS:SG	11:G8:97:ARG:CG	2.97	0.45
11:G8:95:LYS:O	11:G8:96:ILE:HG13	2.17	0.45
12:Q8:36:LYS:HA	12:Q8:39:LYS:HE2	1.98	0.45
9:82:16:ARG:CZ	9:82:64:THR:HG21	2.46	0.45
15:1H:854:G:OP2	30:78:41:ARG:HG2	2.17	0.45
15:1H:1515:G:C4	15:1H:1516:G:C8	3.05	0.45
15:1H:2182:G:HO2'	15:1H:2183:A:P	2.39	0.45
15:1H:2314:G:C2	15:1H:2333:G:H8	2.34	0.45
15:1H:2398:G:O2'	15:1H:2399:G:H5'	2.16	0.45
15:1H:2626:U:H5'	15:1H:2626:U:H6	1.81	0.45
15:1H:2756:A:C6	15:1H:2780:A:C8	3.04	0.45
15:14:658:A:H2'	15:14:659:A:O4'	2.17	0.45
15:14:2315:G:H2'	15:14:2316:C:C6	2.52	0.45
15:14:2518:A:P	56:14:3684:HOH:O	2.74	0.45
15:14:2737:A:H2'	15:14:2738:G:O4'	2.17	0.45
22:H8:44:PHE:CE2	22:H8:86:VAL:HG11	2.51	0.45
23:21:95:ILE:HD13	23:21:95:ILE:HA	1.65	0.45
24:4I:19:LEU:HA	24:4I:22:ILE:HD13	1.99	0.45
28:M8:13:ARG:NH1	28:M8:22:ILE:HG23	2.29	0.45
23:29:101:ARG:O	23:29:201:THR:OG1	2.35	0.45
30:78:71:VAL:HG12	30:78:72:PRO:HD3	1.97	0.45
34:5E:70:ASP:OD1	34:5E:70:ASP:N	2.37	0.45
36:N8:55:ARG:HB2	45:98:33:ARG:HH12	1.82	0.45
32:39:129:PHE:HA	32:39:142:TRP:CD1	2.52	0.45
35:95:51:VAL:HG12	35:95:52:VAL:N	2.32	0.45
38:45:19:GLY:O	38:45:99:PRO:HD2	2.16	0.45
40:49:56:ALA:CA	40:49:59:GLU:HB3	2.45	0.45
45:98:33:ARG:CZ	45:98:113:LEU:HD21	2.47	0.45
46:K8:14:ARG:HG2	46:K8:63:VAL:HG13	1.98	0.45
6:2I:54:ARG:HH21	52:V1:39:U:H4'	1.82	0.45
8:2E:12:LEU:O	8:2E:14:ILE:N	2.50	0.45
52:W4:74:C:OP2	52:W4:74:C:H4'	2.16	0.45
1:13:1397:A:H2'	1:13:1398:G:O4'	2.17	0.45
1:13:1597:A:P	33:5I:41:ARG:HH12	2.40	0.45
1:13:1685:G:H2'	1:13:1686:G:O4'	2.17	0.45
1:13:2033:G:O4'	1:13:2142:A:H4'	2.16	0.45
4:11:172:TYR:HD2	4:11:185:VAL:C	2.20	0.45
1:1G:1462:U:O2	1:1G:1477:G:C2	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1843:G:H5”	33:5A:5:ALA:HB3	1.99	0.45
1:1G:2082:C:H2’	1:1G:2083:A:O4’	2.16	0.45
10:58:111:PRO:HD2	15:1H:583:G:OP1	2.16	0.45
4:19:236:GLY:HA2	15:14:2614:G:H8	1.82	0.45
12:Q8:23:VAL:HG21	30:78:62:LEU:HB3	1.97	0.45
12:Q8:52:LYS:N	12:Q8:53:PRO:HD2	2.31	0.45
14:3E:30:LYS:HA	14:3E:35:ARG:NE	2.29	0.45
14:3E:84:LYS:HA	14:3E:85:LYS:C	2.37	0.45
15:1H:340:G:C6	15:1H:341:C:C4	3.05	0.45
15:1H:472:C:C4’	32:31:49:ALA:HB2	2.47	0.45
15:1H:699:C:C2’	15:1H:700:G:H5’	2.47	0.45
15:1H:1236:U:O2’	15:1H:1237:A:H5’	2.17	0.45
15:1H:2024:C:H4’	15:1H:2739:C:O2	2.17	0.45
15:1H:2334:G:H4’	15:1H:2335:A:OP1	2.16	0.45
16:B8:111:ARG:O	16:B8:112:ARG:HB3	2.17	0.45
16:B8:114:LEU:HA	16:B8:114:LEU:HD23	1.52	0.45
11:C5:85:VAL:HA	15:14:323:G:OP1	2.17	0.45
18:61:68:LEU:HA	18:61:71:ILE:CG2	2.47	0.45
18:61:85:GLU:OE1	18:61:86:THR:OG1	2.35	0.45
14:32:173:TRP:CD2	14:32:189:PRO:HB3	2.52	0.45
15:14:218:A:C4	15:14:220:U:H1’	2.52	0.45
15:14:1001:G:O2’	15:14:2289:A:N1	2.40	0.45
15:14:1763:U:O2’	15:14:1764:G:H5’	2.16	0.45
15:14:1764:G:C4	15:14:1765:G:C8	3.05	0.45
22:H8:53:ILE:HA	22:H8:71:VAL:HG13	1.98	0.45
23:21:101:ARG:HB3	23:21:201:THR:OG1	2.17	0.45
23:21:120:TRP:CD2	23:21:155:LYS:HD3	2.51	0.45
23:29:33:VAL:N	23:29:89:ASP:OD2	2.45	0.45
25:42:42:GLY:HA3	25:42:65:ASN:O	2.17	0.45
25:42:76:ILE:HG23	25:42:142:LEU:HD13	1.98	0.45
27:85:58:ARG:HA	27:85:61:TRP:CE3	2.52	0.45
32:31:184:TYR:O	32:31:188:ARG:HB2	2.17	0.45
35:D8:47:VAL:CG2	35:D8:48:GLY:N	2.80	0.45
36:N8:55:ARG:CB	45:98:33:ARG:HH12	2.29	0.45
42:6E:115:ARG:O	42:6E:118:VAL:HG13	2.17	0.45
38:45:18:LYS:H	38:45:98:LYS:NZ	2.15	0.45
43:E8:14:PRO:HB2	43:E8:18:ARG:NH2	2.32	0.45
44:1E:8:LYS:HG2	44:1E:9:GLU:N	2.30	0.45
44:1E:165:VAL:HG23	44:1E:166:ASP:H	1.82	0.45
45:98:29:LEU:HD12	45:98:29:LEU:HA	1.63	0.45
45:98:34:ILE:HG22	45:98:114:VAL:HG12	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:51:153:LYS:HE2	47:51:153:LYS:H	1.82	0.45
44:12:58:ILE:H	44:12:58:ILE:HG12	1.41	0.45
44:12:172:ILE:H	44:12:172:ILE:HG13	1.43	0.45
50:72:1:MET:HE2	50:72:2:LEU:H	1.82	0.45
52:X4:17:C:H3'	52:X4:17:C:C6	2.51	0.45
1:13:1453:C:C4'	50:7E:1:MET:HB2	2.46	0.45
1:13:2027:C:C2	1:13:2125:A:N6	2.85	0.45
8:22:9:GLY:HA2	8:22:12:LEU:HG	1.98	0.45
1:1G:694:C:H5"	1:1G:1006:U:O4	2.17	0.45
1:1G:1611:G:C6	1:1G:1612:C:C4	3.05	0.45
1:1G:1626:G:H2'	1:1G:1627:G:C8	2.52	0.45
10:58:46:VAL:HG13	10:58:48:MET:HG3	1.98	0.45
4:19:236:GLY:HA2	15:14:2614:G:C8	2.52	0.45
12:Q8:46:ARG:NH1	12:Q8:46:ARG:CB	2.59	0.45
14:3E:108:LEU:HD23	14:3E:110:PHE:CE1	2.52	0.45
9:82:20:ARG:O	9:82:60:ASP:HB2	2.16	0.45
15:1H:1016:U:OP1	17:L8:17:LYS:HG2	2.16	0.45
15:1H:1064:G:O6	56:1H:3673:HOH:O	2.21	0.45
15:1H:1191:A:C5	15:1H:1193:G:C5	3.05	0.45
15:1H:1424:C:H2'	15:1H:1425:C:H6	1.82	0.45
15:1H:1620:A:H2'	15:1H:1621:A:C8	2.52	0.45
15:1H:1955:G:O2'	15:1H:1956:U:P	2.75	0.45
15:1H:2224:A:O3'	39:J8:48:LYS:HD3	2.16	0.45
15:1H:2228:U:O2'	15:1H:2229:C:H5'	2.16	0.45
19:9I:70:ILE:O	19:9I:74:ARG:HG3	2.17	0.45
14:32:102:ASP:OD1	14:32:103:ASN:N	2.49	0.45
15:14:272:U:H3	18:69:50:ARG:NH1	2.14	0.45
15:14:299:G:H8	15:14:299:G:H3'	1.81	0.45
15:14:1208:U:H2'	15:14:1209:G:C8	2.49	0.45
15:14:1257:G:H21	15:14:1258:A:H62	1.64	0.45
15:14:2302:A:C2	15:14:2361:A:C2	3.05	0.45
26:16:92:A:N7	26:16:93:C:H1'	2.32	0.45
29:AA:66:MET:N	29:AA:67:VAL:HB	2.32	0.45
35:D8:12:TYR:N	35:D8:12:TYR:CD1	2.84	0.45
32:39:57:VAL:HG13	32:39:59:TYR:CD2	2.52	0.45
34:52:23:LYS:NZ	34:52:42:GLU:OE2	2.38	0.45
35:95:6:LYS:H	35:95:37:VAL:HG12	1.81	0.45
45:98:2:ARG:HB3	45:98:3:HIS:H	1.46	0.45
44:12:69:LEU:HD23	44:12:70:PHE:N	2.32	0.45
47:59:37:VAL:HG23	47:59:68:THR:HG21	1.99	0.45
52:W1:73:A:O2'	52:W1:74:C:H4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:X1:23:A:H2'	52:X1:24:G:C8	2.52	0.45
51:Y4:34:G:H2'	51:Y4:35:A:C8	2.52	0.45
52:W4:74:C:H2'	52:W4:75:C:H5'	1.98	0.45
1:13:1053:A:N6	14:3E:35:ARG:HA	2.31	0.45
1:13:1076:C:H2'	1:13:1077:C:H6	1.80	0.45
1:13:1353:G:C2	1:13:1354:G:C8	3.05	0.45
1:13:1676:G:H5"	33:5I:3:ARG:HB3	1.99	0.45
8:22:11:ARG:HE	8:22:180:ALA:HB3	1.82	0.45
1:1G:738:U:O5'	1:1G:738:U:H6	2.00	0.45
1:1G:969:C:H4'	1:1G:970:A:H5"	1.99	0.45
1:1G:1896:A:H5"	1:1G:1897:C:OP2	2.16	0.45
11:G8:87:LYS:O	11:G8:94:LYS:HB2	2.16	0.45
14:3E:108:LEU:HB3	14:3E:110:PHE:CE1	2.51	0.45
14:3E:155:LEU:HD12	14:3E:158:ILE:HD11	1.98	0.45
15:1H:80:G:H2'	15:1H:81:G:O4'	2.17	0.45
15:1H:584:G:H22	27:C8:49:HIS:CE1	2.34	0.45
15:1H:722:C:H5"	32:31:81:PRO:HD2	1.98	0.45
15:1H:828:U:O4	56:1H:3674:HOH:O	2.21	0.45
15:1H:936:A:H5'	15:1H:937:C:OP1	2.17	0.45
15:1H:1702:A:N6	45:98:11:ASN:OD1	2.49	0.45
15:1H:2645:G:H2'	15:1H:2646:G:C8	2.52	0.45
13:3A:69:TYR:HB2	13:3A:90:VAL:HG21	1.98	0.45
15:14:66:U:H2'	15:14:67:G:C8	2.52	0.45
15:14:75:C:O2'	15:14:76:C:H5'	2.16	0.45
15:14:798:C:OP2	56:14:3670:HOH:O	2.21	0.45
15:14:877:U:H4'	15:14:880:G:N1	2.32	0.45
15:14:1048:A:C6	15:14:1049:A:N1	2.85	0.45
15:14:1299:G:OP2	30:35:21:ARG:NH1	2.50	0.45
15:14:1589:G:H2'	15:14:1590:U:O4'	2.17	0.45
15:14:2447:A:C8	39:F5:33:LYS:HD2	2.52	0.45
15:14:2757:A:H2'	15:14:2758:C:O4'	2.17	0.45
16:75:3:ARG:O	16:75:4:GLY:C	2.55	0.45
18:69:61:ARG:HA	18:69:61:ARG:HD2	1.62	0.45
25:4E:37:ARG:HA	25:4E:114:GLY:H	1.82	0.45
24:4A:23:TYR:HB3	24:4A:67:GLU:HA	1.98	0.45
32:31:9:ILE:HD12	32:31:10:PRO:CD	2.47	0.45
32:31:125:LEU:HD11	32:31:199:TRP:CD2	2.52	0.45
36:N8:33:CYS:HB2	36:N8:40:LYS:CD	2.47	0.45
32:39:66:PRO:O	32:39:67:GLN:CB	2.56	0.45
39:J8:90:ILE:O	39:J8:94:LEU:HB2	2.16	0.45
39:F5:87:PRO:O	39:F5:90:ILE:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:51:86:GLU:O	47:51:131:VAL:O	2.33	0.45
44:12:114:ARG:O	44:12:114:ARG:HG3	2.16	0.45
5:P8:33:ARG:HH11	5:P8:33:ARG:HD2	1.55	0.45
47:59:137:ASP:O	47:59:141:VAL:HG23	2.17	0.45
51:Y4:33:G:H2'	51:Y4:34:G:C8	2.52	0.45
52:W4:9:A:H5'	52:W4:46:G:H1'	1.99	0.45
52:X4:1:G:C6	52:X4:2:C:N4	2.85	0.45
1:13:1357:A:C5	41:6I:54:ARG:HD2	2.52	0.44
1:13:1377:C:O5'	1:13:1377:C:H6	2.00	0.44
1:13:2133:U:H1'	1:13:2149:G:N2	2.32	0.44
1:1G:1063:C:O2'	1:1G:1064:G:C2	2.60	0.44
1:1G:1101:C:H2'	1:1G:1101:C:O2	2.15	0.44
1:1G:1483:A:H2'	1:1G:1484:G:O4'	2.17	0.44
1:1G:1805:G:C5'	9:82:93:ARG:HH22	2.30	0.44
1:1G:1853:C:N4	24:4A:104:ARG:HD2	2.32	0.44
2:65:91:PRO:HG2	2:65:92:TYR:CE1	2.51	0.44
15:1H:238:G:H5'	15:1H:240:G:N7	2.32	0.44
15:1H:486:G:C8	5:P8:37:LYS:HG3	2.52	0.44
15:1H:789:U:H2'	15:1H:790:G:C8	2.52	0.44
15:1H:1117:A:O2'	15:1H:1120:C:OP2	2.34	0.44
15:1H:1149:U:H2'	15:1H:1150:C:C6	2.52	0.44
15:1H:1238:G:OP1	30:78:30:THR:HG23	2.17	0.44
15:1H:1642:G:H2'	15:1H:1643:G:C8	2.52	0.44
15:1H:2490:C:H4'	15:1H:2491:A:OP1	2.17	0.44
15:1H:2693:C:H2'	15:1H:2694:A:O4'	2.16	0.44
15:1H:2710:C:H2'	15:1H:2711:U:H6	1.81	0.44
16:B8:106:SER:O	16:B8:110:ILE:HG22	2.17	0.44
11:C5:76:CYS:HB2	11:C5:97:ARG:NE	2.32	0.44
15:14:17:G:H2'	15:14:18:C:C6	2.52	0.44
15:14:326:G:C4	15:14:327:C:C5	3.05	0.44
15:14:383:U:H2'	15:14:384:A:C8	2.52	0.44
15:14:783:A:O2'	15:14:1685:G:H5'	2.17	0.44
15:14:803:C:H2'	15:14:804:C:H6	1.82	0.44
15:14:850:G:P	56:14:3642:HOH:O	2.76	0.44
15:14:2828:C:H5'	36:J5:29:THR:HG21	1.99	0.44
23:21:35:GLN:HG2	23:21:36:ARG:N	2.32	0.44
18:69:109:ILE:HG12	18:69:110:ASP:N	2.32	0.44
24:4I:65:LYS:NZ	28:M8:52:THR:HB	2.32	0.44
19:9A:87:ARG:HB3	19:9A:88:LYS:H	1.62	0.44
25:4E:76:ILE:HG13	25:4E:93:PRO:HB3	1.99	0.44
25:4E:152:ARG:HA	50:7E:64:LYS:NZ	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AI:42:PRO:HD2	29:AI:43:GLU:OE1	2.16	0.44
27:85:61:TRP:HB3	27:85:93:LYS:O	2.17	0.44
30:35:92:GLU:HG3	30:35:123:LEU:HD21	1.98	0.44
41:6I:74:ASP:CG	41:6I:77:ARG:HG2	2.37	0.44
42:6E:147:ALA:HB1	52:V1:40:C:H4'	1.98	0.44
45:98:55:ALA:HB2	45:98:79:LEU:HD13	1.97	0.44
47:51:87:LEU:HB2	47:51:131:VAL:CG1	2.42	0.44
50:7E:68:ARG:O	50:7E:68:ARG:HG3	2.17	0.44
47:59:8:PRO:HG2	47:59:69:ARG:NH2	2.32	0.44
51:Y1:34:G:H3'	51:Y1:35:A:H8	1.81	0.44
1:13:829:G:C5	1:13:841:G:C2	3.06	0.44
1:13:1357:A:H2'	1:13:1358:A:C8	2.52	0.44
1:13:1960:A:H2'	1:13:1961:G:O4'	2.17	0.44
3:B5:54:VAL:C	3:B5:55:ASN:HD22	2.19	0.44
3:B5:63:LYS:HE2	3:B5:63:LYS:N	2.33	0.44
4:11:47:GLY:HA3	15:1H:822:U:H5'	2.00	0.44
4:11:264:LYS:NZ	15:1H:1834:C:OP1	2.51	0.44
7:8I:101:ARG:HB2	7:8I:101:ARG:NH2	2.32	0.44
1:1G:696:A:N1	1:1G:1001:A:O2'	2.42	0.44
1:1G:1906:A:H5"	1:1G:1907:A:OP2	2.18	0.44
11:G8:54:LYS:O	11:G8:54:LYS:NZ	2.49	0.44
11:G8:55:TYR:CE1	11:G8:61:ILE:HD11	2.52	0.44
15:1H:207:G:P	56:1H:3821:HOH:O	2.76	0.44
15:1H:1037:G:C8	17:L8:13:ILE:HD11	2.52	0.44
15:1H:2077:G:H4'	23:21:143:ASN:O	2.18	0.44
15:1H:2654:A:H2'	15:1H:2655:G:O4'	2.17	0.44
15:1H:2821:U:O2'	15:1H:2822:A:H5'	2.17	0.44
11:C5:36:ALA:HA	11:C5:67:LEU:O	2.16	0.44
11:C5:47:LYS:HZ1	15:14:525:G:H21	1.65	0.44
11:C5:60:PHE:HE1	15:14:511:A:H1'	1.82	0.44
11:C5:90:LEU:HA	11:C5:91:GLU:HA	1.61	0.44
18:61:77:LEU:HD23	18:61:77:LEU:HA	1.84	0.44
14:32:36:ARG:HB3	14:32:38:TYR:CE1	2.53	0.44
15:14:50:G:N3	15:14:117:A:C2	2.86	0.44
15:14:639:U:O2	15:14:639:U:O4'	2.35	0.44
15:14:748:A:H2'	15:14:749:G:O4'	2.16	0.44
15:14:882:U:O2	30:35:55:ARG:NH1	2.49	0.44
15:14:898:A:H2	17:H5:24:LYS:HB3	1.82	0.44
15:14:1159:A:C5'	47:59:3:ARG:HD3	2.46	0.44
22:H8:53:ILE:HG13	22:H8:53:ILE:O	2.16	0.44
18:69:40:THR:O	18:69:44:LEU:N	2.40	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:9A:29:PHE:N	19:9A:29:PHE:HD1	2.15	0.44
19:9A:31:LEU:HD23	34:52:97:PHE:O	2.16	0.44
26:16:34:C:C2	26:16:53:G:N2	2.84	0.44
22:D5:9:TYR:CE1	22:D5:61:LEU:HD13	2.52	0.44
22:D5:96:VAL:N	22:D5:128:VAL:O	2.50	0.44
36:N8:16:ARG:HG3	36:N8:17:ASP:N	2.25	0.44
39:J8:92:LYS:C	39:J8:95:LEU:H	2.20	0.44
40:41:135:LEU:HD23	40:41:140:ILE:HD11	2.00	0.44
43:E8:90:ARG:HH11	43:E8:90:ARG:HD2	1.61	0.44
39:F5:87:PRO:O	39:F5:88:LYS:C	2.54	0.44
40:49:60:LEU:O	40:49:64:THR:HG23	2.16	0.44
44:1E:11:LEU:HD22	44:1E:217:ARG:HH12	1.81	0.44
48:1I:4:ILE:HG13	48:1I:100:THR:HG23	1.99	0.44
49:7I:74:LEU:HA	49:7I:77:ALA:HB2	1.98	0.44
3:F8:50:LYS:HG2	3:F8:84:ALA:HB2	1.99	0.44
49:7A:8:ARG:HD3	49:7A:17:TYR:CE1	2.53	0.44
8:2E:32:LEU:HD22	8:2E:59:ARG:HD3	1.99	0.44
50:72:41:ARG:HE	50:72:41:ARG:HB2	1.23	0.44
1:13:733:C:N4	1:13:734:G:O6	2.51	0.44
1:13:1047:G:N3	1:13:1048:G:C8	2.85	0.44
1:13:1052:A:C6	1:13:1070:U:C5	3.05	0.44
1:13:1103:A:H4'	49:7I:80:PHE:O	2.17	0.44
1:13:1183:C:H2'	1:13:1184:C:H6	1.82	0.44
1:13:1265:U:H2'	1:13:1266:G:H8	1.82	0.44
1:13:1312:G:C6	1:13:1313:A:C5	3.06	0.44
1:13:1757:C:C5	1:13:1760:C:N4	2.85	0.44
1:13:2042:U:H2'	1:13:2043:G:H8	1.82	0.44
2:A8:25:ARG:NH2	26:16:10:U:O3'	2.50	0.44
1:1G:1754:U:O2'	1:1G:1755:G:OP2	2.28	0.44
1:1G:1883:A:N6	1:1G:1904:C:H3'	2.25	0.44
2:65:39:ILE:HD12	2:65:85:VAL:HG11	1.99	0.44
2:65:67:ARG:HB2	2:65:67:ARG:NH1	2.32	0.44
4:19:12:SER:HB2	4:19:208:LYS:HB3	1.98	0.44
12:Q8:27:THR:CG2	12:Q8:42:ARG:NH2	2.80	0.44
15:1H:355:A:O2'	15:1H:356:A:C8	2.66	0.44
15:1H:748:A:H2'	15:1H:749:G:O4'	2.18	0.44
15:1H:811:U:H4'	15:1H:812:G:O5'	2.17	0.44
15:1H:1090:G:H1	15:1H:1161:U:H3	1.64	0.44
15:1H:1465:G:O2'	15:1H:1466:C:H6	2.00	0.44
15:1H:1577:A:C2	15:1H:1592:A:N1	2.86	0.44
15:1H:1688:C:H5"	15:1H:2725:C:O2'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1721:U:O5'	15:1H:1721:U:H6	1.99	0.44
15:1H:2357:C:O2'	15:1H:2389:C:H5"	2.17	0.44
15:1H:2745:G:H2'	15:1H:2746:C:O4'	2.17	0.44
16:B8:48:ILE:HD12	16:B8:110:ILE:HD11	1.99	0.44
11:C5:87:LYS:HB2	11:C5:96:ILE:HD13	1.99	0.44
15:14:408:U:H5'	39:F5:18:ILE:HD12	1.98	0.44
15:14:576:G:H5'	35:95:68:LYS:NZ	2.33	0.44
15:14:922:G:C2	15:14:953:U:O2	2.70	0.44
15:14:1002:C:OP1	38:45:87:LYS:NZ	2.42	0.44
15:14:1023:G:C5	15:14:1024:C:C5	3.06	0.44
15:14:1429:G:O2'	15:14:1619:A:N6	2.51	0.44
15:14:1474:G:H2'	15:14:1475:G:C8	2.53	0.44
15:14:1814:A:N6	56:14:3759:HOH:O	2.51	0.44
15:14:2146:G:H2'	15:14:2147:U:C6	2.52	0.44
15:14:2334:G:C2	15:14:2335:A:N1	2.86	0.44
16:75:18:ASP:OD1	16:75:19:LEU:HG	2.18	0.44
16:75:34:VAL:O	16:75:40:THR:HA	2.18	0.44
18:69:75:LEU:HD23	18:69:139:GLN:HB2	1.99	0.44
19:9A:86:VAL:HG12	19:9A:87:ARG:HH11	1.82	0.44
20:1B:8:THR:HG22	20:1B:10:ARG:H	1.82	0.44
27:C8:39:LEU:HA	27:C8:39:LEU:HD23	1.77	0.44
28:I5:21:VAL:HG22	28:I5:22:ILE:H	1.82	0.44
35:D8:31:ALA:O	35:D8:61:VAL:HG22	2.17	0.44
36:N8:49:CYS:H	36:N8:57:VAL:HG12	1.81	0.44
33:5A:53:LEU:HD23	33:5A:53:LEU:HA	1.63	0.44
40:41:74:LYS:O	40:41:84:LYS:HD2	2.17	0.44
43:E8:82:LEU:HD23	43:E8:82:LEU:HA	1.81	0.44
39:F5:29:GLY:O	39:F5:30:VAL:HG22	2.18	0.44
39:F5:91:LYS:O	39:F5:92:LYS:C	2.56	0.44
44:1E:131:PRO:O	44:1E:135:GLN:HB2	2.18	0.44
46:K8:64:LEU:HD22	46:K8:68:ARG:HD2	2.00	0.44
47:59:89:ILE:HD13	47:59:89:ILE:H	1.82	0.44
8:2E:3:ASN:C	8:2E:4:LYS:HG2	2.37	0.44
52:W1:41:C:H5'	52:W1:42:C:OP2	2.18	0.44
52:V1:54:U:H2'	52:V1:55:U:C5	2.52	0.44
52:X4:72:C:C2	52:X4:73:A:C8	3.05	0.44
52:V4:20:U:O2'	52:V4:21:A:H5'	2.17	0.44
1:13:1428:G:C6	1:13:1429:G:C4	3.05	0.44
1:13:1578:U:H1'	1:13:1854:A:H61	1.82	0.44
1:13:1734:G:C5	1:13:1735:C:C5	3.05	0.44
9:8E:48:GLU:O	9:8E:51:ARG:N	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:703:G:C6	1:1G:704:C:C4	3.06	0.44
1:1G:804:U:H2'	1:1G:805:C:H6	1.82	0.44
1:1G:816:C:OP1	37:BA:29:LYS:NZ	2.51	0.44
1:1G:1515:A:O2'	1:1G:2043:G:H4'	2.17	0.44
1:1G:1586:G:H21	48:1A:55:LYS:CD	2.30	0.44
1:1G:1826:U:H4'	48:1A:54:PHE:CE1	2.52	0.44
1:1G:1853:C:H4'	1:1G:1854:A:OP1	2.18	0.44
10:58:12:ARG:HG2	10:58:13:TRP:N	2.33	0.44
12:Q8:23:VAL:HG11	12:Q8:48:PHE:CD1	2.52	0.44
15:1H:43:A:O2'	15:1H:44:G:H5'	2.18	0.44
15:1H:152:G:H2'	15:1H:153:C:C6	2.52	0.44
15:1H:476:U:C4	15:1H:608:G:H1'	2.52	0.44
15:1H:863:C:H4'	15:1H:1273:C:O2	2.17	0.44
15:1H:1497:G:C6	15:1H:1515:G:C6	3.04	0.44
15:1H:2123:U:H2'	15:1H:2124:U:O4'	2.16	0.44
15:1H:2392:A:H2'	15:1H:2393:A:C8	2.52	0.44
15:1H:2759:C:H2'	15:1H:2760:G:O4'	2.17	0.44
10:15:25:ARG:HA	15:14:1060:U:O4	2.16	0.44
16:B8:36:GLU:HA	21:68:107:ARG:NH1	2.32	0.44
17:L8:4:LEU:O	17:L8:36:VAL:HA	2.18	0.44
12:M5:47:LYS:NZ	15:14:658:A:OP2	2.43	0.44
15:14:242:G:P	30:35:50:ARG:NH2	2.90	0.44
15:14:740:C:H2'	15:14:741:C:C6	2.53	0.44
15:14:1009:G:OP1	15:14:1010:U:OP2	2.35	0.44
15:14:1370:A:H2'	15:14:1371:A:O4'	2.17	0.44
15:14:2274:G:H1'	15:14:2442:C:H2'	1.99	0.44
15:14:2489:C:H3'	15:14:2490:C:O4'	2.17	0.44
15:14:2663:C:H2'	15:14:2664:U:C6	2.52	0.44
22:H8:28:MET:HG3	22:H8:37:VAL:HG11	1.98	0.44
22:H8:127:LYS:HB3	22:H8:162:GLU:HG3	1.99	0.44
30:78:37:GLY:O	30:78:41:ARG:HD2	2.18	0.44
27:85:95:LEU:O	27:85:98:LEU:HG	2.18	0.44
32:31:63:LYS:HE3	32:31:67:GLN:HB2	2.00	0.44
32:31:66:PRO:O	32:31:67:GLN:CB	2.54	0.44
38:45:139:GLU:HG2	38:45:140:ALA:H	1.83	0.44
40:49:32:PRO:HB3	40:49:163:ALA:HB2	1.98	0.44
44:1E:21:ARG:C	44:1E:23:ARG:H	2.20	0.44
43:A5:27:LYS:O	43:A5:71:VAL:HG23	2.18	0.44
52:V1:34:G:O2'	52:V1:35:A:P	2.75	0.44
52:V1:70:G:H2'	52:V1:71:G:C8	2.52	0.44
52:V4:45:U:O2	52:V4:47:U:O2'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:722:G:H2'	1:13:722:G:N3	2.33	0.44
1:13:1455:C:H2'	1:13:1456:U:O2	2.18	0.44
1:13:1714:U:H3	1:13:1727:G:N2	2.15	0.44
1:13:1726:C:C2	1:13:1727:G:C8	3.06	0.44
2:A8:34:HIS:HB3	2:A8:53:SER:OG	2.17	0.44
2:A8:93:LYS:HG2	2:A8:95:HIS:HB2	1.99	0.44
4:11:138:VAL:HG23	4:11:168:ARG:NH1	2.32	0.44
8:22:51:GLY:O	8:22:70:VAL:HG13	2.18	0.44
8:22:199:LYS:HB3	8:22:201:TYR:CE1	2.53	0.44
1:1G:691:U:H2'	1:1G:692:G:H8	1.82	0.44
1:1G:807:G:H2'	1:1G:808:G:H8	1.83	0.44
1:1G:1174:C:OP1	14:32:61:LYS:NZ	2.51	0.44
1:1G:1590:C:H2'	1:1G:1591:A:N7	2.33	0.44
1:1G:1599:G:OP1	33:5A:32:SER:N	2.46	0.44
1:1G:1653:C:H5	1:1G:1655:G:C5	2.34	0.44
1:1G:1830:C:H2'	1:1G:1831:A:H8	1.82	0.44
1:1G:1943:G:H4'	33:5A:18:VAL:HG11	2.00	0.44
1:1G:2079:G:H1	37:BA:54:LYS:NZ	2.12	0.44
15:1H:224:C:H2'	15:1H:225:U:H6	1.82	0.44
15:1H:408:U:H2'	15:1H:409:G:C8	2.52	0.44
15:1H:475:A:C4	15:1H:501:G:N7	2.86	0.44
15:1H:893:C:H2'	15:1H:894:G:O4'	2.18	0.44
15:1H:2224:A:C4	15:1H:2225:C:C6	3.06	0.44
15:1H:2332:C:C2'	15:1H:2333:G:H5'	2.47	0.44
10:15:43:THR:H	10:15:48:MET:HE3	1.83	0.44
16:B8:26:ASP:CB	16:B8:91:ARG:HA	2.48	0.44
15:14:174:C:H2'	15:14:175:U:C6	2.52	0.44
15:14:295:C:H42	15:14:391:G:H1	1.65	0.44
15:14:573:A:C6	15:14:574:A:N6	2.85	0.44
15:14:805:C:H2'	15:14:806:U:H5'	1.98	0.44
15:14:1041:G:H21	35:95:89:GLN:NE2	2.16	0.44
15:14:1065:G:N3	15:14:1065:G:H2'	2.32	0.44
15:14:1726:A:C2	15:14:2018:U:H5'	2.53	0.44
15:14:1761:C:H2'	15:14:1762:C:C6	2.53	0.44
15:14:1818:A:H4'	15:14:1819:A:C5'	2.48	0.44
16:75:3:ARG:CG	23:29:9:VAL:HA	2.48	0.44
16:75:53:ARG:HG3	16:75:53:ARG:O	2.17	0.44
23:21:50:GLY:HA2	23:21:77:ILE:HA	1.99	0.44
24:4I:5:ALA:HB2	24:4I:61:GLU:HG3	2.00	0.44
27:C8:57:PHE:O	27:C8:60:LEU:N	2.51	0.44
27:C8:92:ARG:HD3	27:C8:94:ASN:CB	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:4A:32:GLU:O	24:4A:35:GLU:HG2	2.16	0.44
25:42:41:VAL:HG13	25:42:113:ALA:HA	1.99	0.44
30:35:61:ARG:H	30:35:61:ARG:HG2	1.13	0.44
35:D8:34:GLU:O	35:D8:36:PRO:HD3	2.17	0.44
35:D8:49:THR:O	35:D8:50:PRO:C	2.55	0.44
35:95:43:GLU:HB2	35:95:44:LYS:HZ3	1.83	0.44
41:6I:6:GLU:CD	41:6I:6:GLU:H	2.21	0.44
40:49:70:VAL:HG12	40:49:90:LEU:CD2	2.47	0.44
40:49:111:LEU:HD23	40:49:111:LEU:HA	1.78	0.44
45:98:41:ALA:O	45:98:44:LEU:N	2.49	0.44
47:51:54:ARG:HE	47:51:62:LYS:HG3	1.83	0.44
47:51:166:GLY:O	47:51:167:GLU:HG2	2.17	0.44
48:1A:30:SER:HB3	48:1A:84:GLN:OE1	2.17	0.44
44:12:101:MET:HE2	44:12:108:ILE:HG21	2.00	0.44
8:2E:84:ILE:H	8:2E:84:ILE:HG13	1.55	0.44
51:Y4:51:U:H5"	51:Y4:52:U:OP2	2.18	0.44
52:W4:74:C:N4	52:W4:75:C:C2	2.86	0.44
7:8I:9:VAL:O	7:8I:21:VAL:HA	2.17	0.44
1:1G:1018:G:OP1	49:7A:3:LYS:NZ	2.40	0.44
1:1G:1525:G:O2'	1:1G:1526:G:H5'	2.18	0.44
10:58:30:ILE:O	10:58:34:LEU:HD22	2.17	0.44
14:3E:96:LEU:HG	14:3E:139:ARG:NH2	2.33	0.44
14:3E:141:ARG:HB2	14:3E:141:ARG:NH1	2.32	0.44
15:1H:644:G:H2'	15:1H:645:C:H6	1.82	0.44
15:1H:994:G:N3	15:1H:1032:A:H2	2.16	0.44
15:1H:1577:A:N1	15:1H:1592:A:C2	2.86	0.44
13:3A:109:GLY:HA3	13:3A:121:GLY:O	2.18	0.44
15:14:26:G:C6	15:14:27:G:N1	2.86	0.44
15:14:210:G:H2'	15:14:456:U:O4	2.17	0.44
15:14:506:A:N1	15:14:527:G:H4'	2.32	0.44
15:14:850:G:OP2	56:14:3669:HOH:O	2.21	0.44
15:14:2750:A:C8	15:14:2751:G:C8	3.06	0.44
18:69:101:LEU:H	18:69:101:LEU:HG	1.57	0.44
26:16:75:A:H5'	26:16:76:U:OP2	2.17	0.44
25:42:144:THR:HG23	25:42:147:ASP:OD2	2.17	0.44
26:1J:15:A:N1	26:1J:71:G:O2'	2.32	0.44
30:78:112:LEU:HD23	30:78:112:LEU:HA	1.64	0.44
29:AA:29:ARG:HH12	29:AA:47:HIS:CD2	2.36	0.44
35:D8:17:GLY:N	35:D8:96:ILE:O	2.40	0.44
36:N8:11:THR:HG23	36:N8:15:ARG:HB3	1.99	0.44
33:5A:12:ARG:H	33:5A:12:ARG:HG3	1.28	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:5A:39:LEU:HD13	33:5A:47:LEU:HD12	1.98	0.44
40:41:61:ALA:HB2	40:41:67:LYS:HA	2.00	0.44
38:45:25:ASP:HB3	38:45:102:VAL:CB	2.48	0.44
38:45:25:ASP:OD1	38:45:25:ASP:N	2.51	0.44
43:E8:86:LEU:HB2	43:E8:96:ILE:HG23	1.99	0.44
8:2E:50:ALA:O	8:2E:70:VAL:HB	2.17	0.44
51:Y4:37:G:C6	51:Y4:38:U:C4	3.06	0.44
1:13:753:U:H2'	1:13:754:G:C8	2.53	0.44
1:13:1277:A:C6	1:13:1278:G:C6	3.05	0.44
7:8I:45:HIS:CE1	7:8I:47:PRO:HG3	2.52	0.44
8:22:139:GLN:NE2	8:22:142:MET:SD	2.83	0.44
1:1G:838:G:C2	1:1G:839:G:C4	3.05	0.44
1:1G:896:G:H1'	7:8A:16:GLN:OE1	2.18	0.44
1:1G:1776:U:H2'	1:1G:1777:C:O4'	2.18	0.44
7:8A:10:VAL:HG21	7:8A:52:LYS:O	2.18	0.44
14:3E:103:ASN:O	14:3E:107:ARG:HG2	2.18	0.44
9:82:49:PRO:HD3	9:82:78:LYS:HZ2	1.82	0.44
9:82:125:TYR:O	9:82:125:TYR:HD1	2.00	0.44
15:1H:628:A:C8	15:1H:704:A:N1	2.86	0.44
15:1H:1161:U:H2'	15:1H:1162:G:C8	2.52	0.44
15:1H:1677:G:O2'	15:1H:1678:U:H5'	2.18	0.44
15:1H:1770:A:C5	15:1H:1772:G:C5	3.06	0.44
15:1H:2050:C:H2'	15:1H:2051:C:C6	2.53	0.44
15:1H:2122:C:H2'	15:1H:2123:U:O4'	2.18	0.44
12:M5:36:LYS:HD2	12:M5:40:GLU:HB3	1.99	0.44
15:14:140:A:C8	15:14:1457:C:H1'	2.53	0.44
15:14:554:C:H4'	15:14:555:A:O5'	2.18	0.44
15:14:873:A:H1'	15:14:2373:G:N7	2.32	0.44
15:14:910:A:H2'	15:14:911:G:O4'	2.16	0.44
15:14:960:C:OP1	38:45:8:LYS:NZ	2.41	0.44
15:14:1185:G:N2	15:14:1186:G:H1'	2.32	0.44
15:14:2154:C:C4	15:14:2155:U:C2	3.06	0.44
15:14:2276:C:H1'	15:14:2403:A:N3	2.32	0.44
15:14:2527:C:H2'	15:14:2528:G:O4'	2.17	0.44
15:14:2546:A:H61	15:14:2677:A:H61	1.65	0.44
15:14:2729:A:H8	15:14:2729:A:H2'	1.66	0.44
22:H8:69:THR:HA	22:H8:89:PHE:O	2.17	0.44
22:H8:122:ARG:HH12	38:88:139:GLU:HG2	1.83	0.44
17:H5:15:TYR:O	17:H5:20:LYS:NZ	2.44	0.44
18:69:3:VAL:HG12	18:69:38:LEU:HA	1.99	0.44
18:69:7:GLU:HA	18:69:15:VAL:HG22	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:16:62:C:N3	26:16:63:G:N7	2.66	0.44
26:16:68:A:H61	26:16:110:U:H2'	1.82	0.44
27:C8:85:LYS:HA	27:C8:85:LYS:NZ	2.33	0.44
26:1J:96:C:H2'	26:1J:97:C:C6	2.52	0.44
27:85:92:ARG:HH22	35:95:11:GLN:H	1.65	0.44
28:I5:6:HIS:CE1	40:49:67:LYS:H	2.35	0.44
32:31:120:GLU:HB2	32:31:122:LYS:HG2	1.99	0.44
32:39:32:LEU:HD11	32:39:105:VAL:HG13	1.99	0.44
32:39:74:ARG:O	32:39:74:ARG:HG2	2.18	0.44
41:6I:56:LEU:O	41:6I:60:VAL:HG23	2.18	0.44
44:1E:27:LYS:HB2	44:1E:194:PRO:HD2	2.00	0.44
44:1E:96:ARG:N	44:1E:96:ARG:HD2	2.32	0.44
42:62:27:ILE:H	42:62:27:ILE:HG12	1.42	0.44
45:98:4:LEU:HD12	45:98:4:LEU:HA	1.70	0.44
47:59:7:LEU:HB3	47:59:65:HIS:HE1	1.82	0.44
8:2E:73:PRO:HB3	8:2E:103:VAL:HG11	1.99	0.44
52:X4:1:G:C4	52:X4:2:C:C5	3.06	0.44
52:V4:9:A:H5"	52:V4:10:G:OP2	2.18	0.44
1:13:896:G:H2'	1:13:897:U:C6	2.53	0.44
1:13:1280:C:H2'	1:13:1281:U:C6	2.53	0.44
1:13:1993:G:C6	1:13:1994:C:C4	3.06	0.44
4:11:236:GLY:O	4:11:237:GLU:HB2	2.17	0.44
1:1G:1164:A:H5"	56:1G:2404:HOH:O	2.17	0.44
1:1G:1500:C:OP1	50:72:88:LYS:HE2	2.18	0.44
10:58:97:ARG:H	10:58:100:GLU:HG3	1.83	0.44
2:65:87:PHE:CZ	2:65:102:ALA:HB2	2.53	0.44
11:G8:89:PHE:CD1	11:G8:90:LEU:N	2.86	0.44
15:1H:253:C:H2'	15:1H:254:C:O4'	2.18	0.44
15:1H:324:A:H62	15:1H:325:A:H61	1.66	0.44
15:1H:1010:U:OP1	56:1H:3675:HOH:O	2.21	0.44
15:1H:1469:U:HO2'	15:1H:1470:G:P	2.41	0.44
15:1H:1532:G:C2	15:1H:1556:A:C8	3.05	0.44
15:1H:1740:A:H2'	15:1H:1741:C:O4'	2.17	0.44
15:1H:2323:G:N3	15:1H:2323:G:H2'	2.33	0.44
10:15:35:ARG:HB3	10:15:42:TRP:HZ3	1.83	0.44
18:61:73:GLU:OE2	18:61:137:PRO:HD2	2.17	0.44
14:32:146:ILE:H	14:32:146:ILE:HD12	1.82	0.44
15:14:162:C:H2'	15:14:163:G:H8	1.83	0.44
15:14:730:G:H2'	15:14:731:G:O4'	2.18	0.44
15:14:796:U:O2	15:14:2039:A:H1'	2.17	0.44
15:14:969:G:C6	15:14:970:U:C4	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2307:C:H2'	15:14:2308:C:C6	2.53	0.44
17:H5:39:ASP:O	17:H5:44:ARG:NH2	2.39	0.44
23:21:119:ARG:HB3	23:21:120:TRP:CD1	2.52	0.44
18:69:75:LEU:HD13	18:69:77:LEU:H	1.83	0.44
24:4I:14:ARG:NE	24:4I:42:ALA:HA	2.33	0.44
23:29:111:ARG:HD3	23:29:160:TYR:CD2	2.53	0.44
27:85:98:LEU:HB2	27:85:102:GLU:HB2	1.98	0.44
28:I5:2:LYS:HZ2	40:49:98:ARG:HH12	1.66	0.44
30:35:106:LEU:O	30:35:107:LYS:C	2.55	0.44
34:52:25:ILE:HD12	34:52:82:ARG:CD	2.47	0.44
41:6I:66:LEU:HD12	41:6I:66:LEU:HA	1.91	0.44
44:1E:166:ASP:C	44:1E:168:THR:H	2.21	0.44
48:1A:27:ALA:HA	48:1A:30:SER:OG	2.18	0.44
48:1A:91:PRO:HB2	48:1A:93:GLY:H	1.82	0.44
44:12:72:GLY:HA2	44:12:165:VAL:HG22	1.99	0.44
44:12:150:SER:O	44:12:153:ARG:HG2	2.18	0.44
49:7A:43:LYS:HG2	49:7A:48:TRP:CE2	2.53	0.44
52:W4:2:C:H2'	52:W4:3:C:C6	2.53	0.44
1:13:1626:G:C2	1:13:1627:G:H1'	2.53	0.44
2:A8:15:ARG:HD2	2:A8:88:ASP:OD1	2.18	0.44
4:11:66:ASP:OD1	4:11:68:LYS:O	2.35	0.44
8:22:124:ILE:HG12	8:22:130:VAL:HG22	1.99	0.44
1:1G:1352:U:O2'	1:1G:1353:G:P	2.76	0.44
1:1G:1366:A:H2'	1:1G:1367:C:C6	2.52	0.44
1:1G:1379:G:H21	41:6A:23:GLY:HA3	1.82	0.44
1:1G:1457:A:H2'	1:1G:1458:G:O4'	2.18	0.44
1:1G:1477:G:C2	1:1G:1478:G:C8	3.06	0.44
1:1G:1577:G:H2'	1:1G:1578:U:O4'	2.18	0.44
1:1G:1583:U:N3	1:1G:1852:A:C4	2.85	0.44
1:1G:1756:C:N3	1:1G:1767:G:N1	2.66	0.44
1:1G:1960:A:C8	1:1G:1961:G:C8	3.06	0.44
12:Q8:13:ARG:NH1	15:1H:2408:A:O2'	2.51	0.44
14:3E:162:LEU:HA	14:3E:162:LEU:HD23	1.69	0.44
15:1H:175:U:H2'	15:1H:176:G:H8	1.83	0.44
15:1H:1715:A:H2'	15:1H:1716:G:O4'	2.18	0.44
18:61:1:MET:O	18:61:20:ASP:HA	2.18	0.44
18:61:129:THR:HA	18:61:137:PRO:HA	2.00	0.44
19:9I:47:THR:O	19:9I:83:GLU:N	2.39	0.44
14:32:201:GLN:O	14:32:205:GLU:HB2	2.18	0.44
15:14:226:C:H2'	15:14:227:C:C6	2.53	0.44
15:14:512:C:H2'	15:14:513:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:872:G:H2'	15:14:873:A:C8	2.52	0.44
15:14:1240:G:OP2	30:35:17:LYS:NZ	2.49	0.44
15:14:1977:A:C5	21:25:22:ILE:HD11	2.53	0.44
15:14:2062:G:O2'	15:14:2063:G:H5'	2.17	0.44
15:14:2515:U:H5"	15:14:2516:C:OP2	2.18	0.44
21:68:2:ILE:HD12	21:68:6:THR:HG21	2.00	0.44
19:9A:76:LEU:HG	34:52:89:MET:CE	2.48	0.44
25:4E:8:GLU:HG2	25:4E:34:VAL:HG22	2.00	0.44
26:16:14:C:O2'	31:I8:74:ARG:HG2	2.18	0.44
21:25:87:ILE:HD12	21:25:87:ILE:HA	1.69	0.44
27:C8:11:ARG:HH11	27:C8:11:ARG:HD3	1.63	0.44
24:4A:65:LYS:HB2	24:4A:69:GLU:OE1	2.18	0.44
30:78:144:GLU:N	30:78:144:GLU:CD	2.72	0.44
28:I5:18:CYS:HB2	28:I5:36:CYS:HB3	2.00	0.44
30:35:111:ARG:HG2	30:35:128:HIS:CG	2.53	0.44
40:41:28:VAL:O	40:41:31:VAL:HG13	2.18	0.44
44:1E:163:PHE:CD1	44:1E:185:ILE:HG13	2.53	0.44
42:62:15:ASP:HB3	42:62:19:GLY:N	2.33	0.44
42:62:73:MET:HG3	42:62:90:GLU:HA	2.00	0.44
47:51:4:ILE:HG21	47:51:6:ARG:HH11	1.83	0.44
48:1A:28:ARG:HB2	48:1A:34:VAL:HG21	2.00	0.44
48:1I:8:LEU:CD2	48:1I:96:ILE:HG22	2.47	0.44
48:1I:45:ARG:HD3	48:1I:47:PHE:HZ	1.82	0.44
44:12:127:ILE:HD12	44:12:135:GLN:OE1	2.18	0.44
50:7E:25:ASP:C	50:7E:26:VAL:HG12	2.38	0.44
49:7A:67:THR:O	49:7A:71:ARG:N	2.46	0.44
52:X1:19:G:H4'	52:X1:20:U:OP2	2.18	0.44
52:V1:7:A:H5'	52:V1:8:U:OP2	2.18	0.44
1:13:663:U:H2'	1:13:664:C:C6	2.52	0.43
1:13:702:U:H4'	18:69:82:ARG:CZ	2.47	0.43
1:13:806:G:H2'	1:13:807:G:C8	2.50	0.43
1:13:1599:G:C8	1:13:1985:U:C2	3.06	0.43
1:13:1741:C:H2'	1:13:1742:C:C6	2.53	0.43
1:13:1785:A:O2'	1:13:1786:C:H5"	2.18	0.43
1:13:2055:U:H2'	1:13:2056:A:C8	2.52	0.43
1:1G:1050:G:C2	1:1G:1051:G:H1'	2.52	0.43
1:1G:1597:A:P	33:5A:41:ARG:HH12	2.41	0.43
1:1G:1785:A:H4'	1:1G:1786:C:O5'	2.17	0.43
1:1G:1969:C:H1'	9:82:124:GLN:NE2	2.33	0.43
10:58:48:MET:SD	10:58:48:MET:O	2.76	0.43
12:Q8:49:VAL:HG12	12:Q8:50:LEU:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:8A:66:SER:OG	7:8A:69:LYS:HB2	2.17	0.43
15:1H:591:U:O4	35:D8:78:LYS:HD3	2.18	0.43
15:1H:2131:G:C6	15:1H:2132:C:C2	3.05	0.43
15:1H:2490:C:H2'	15:1H:2492:C:OP2	2.18	0.43
12:M5:31:HIS:O	12:M5:33:ASN:OD1	2.35	0.43
15:14:10:G:N7	15:14:2644:A:N6	2.65	0.43
15:14:337:G:H4'	15:14:356:A:N3	2.33	0.43
15:14:665:G:C5	15:14:678:G:C2	3.06	0.43
15:14:864:C:H2'	15:14:865:C:H6	1.83	0.43
15:14:1340:C:H2'	15:14:1341:U:C6	2.53	0.43
15:14:1434:G:HO2'	15:14:1445:U:H6	1.66	0.43
15:14:2484:A:C8	15:14:2497:G:C4	3.06	0.43
15:14:2762:U:H2'	15:14:2763:G:H5'	1.99	0.43
25:4E:153:LYS:H	50:7E:64:LYS:HZ1	1.66	0.43
22:D5:72:ARG:HG2	26:1J:106:U:O2'	2.17	0.43
26:1J:80:A:C2	26:1J:102:A:C4	3.05	0.43
34:5E:44:GLY:HA2	34:5E:59:TYR:CE2	2.53	0.43
40:41:94:LEU:N	40:41:94:LEU:HD23	2.34	0.43
40:41:170:ARG:HH21	40:41:180:PHE:CB	2.31	0.43
41:6I:74:ASP:HB3	41:6I:77:ARG:HG2	2.00	0.43
37:BA:64:ASP:OD2	37:BA:81:LYS:NZ	2.39	0.43
44:1E:162:ILE:HD11	44:1E:184:VAL:HG13	2.00	0.43
44:1E:187:LEU:HD11	44:1E:204:ASN:O	2.18	0.43
43:A5:1:MET:HE2	43:A5:2:GLU:H	1.83	0.43
3:F8:88:LYS:HD2	3:F8:90:GLU:OE2	2.18	0.43
6:2I:66:LEU:HD21	6:2I:97:ALA:HB1	1.99	0.43
1:13:962:A:C2	1:13:974:G:C2	3.05	0.43
1:13:1022:C:H2'	1:13:1023:A:O4'	2.17	0.43
1:13:1915:A:H2'	1:13:1916:A:O4'	2.18	0.43
4:11:130:ALA:C	4:11:131:LEU:HD12	2.38	0.43
5:L5:34:ARG:HH11	5:L5:34:ARG:HD3	1.63	0.43
8:22:186:PHE:HA	8:22:198:VAL:O	2.18	0.43
9:8E:18:PHE:CD2	9:8E:62:TYR:HD2	2.35	0.43
9:8E:21:PRO:HA	9:8E:59:PHE:HA	2.00	0.43
1:1G:986:C:H1'	1:1G:987:G:N1	2.33	0.43
1:1G:1468:U:O2'	1:1G:1469:C:H5"	2.17	0.43
1:1G:1666:C:H2'	1:1G:1667:C:C6	2.53	0.43
1:1G:1780:A:H2'	1:1G:1781:C:C6	2.53	0.43
1:1G:1965:G:C6	1:1G:1966:A:C6	3.07	0.43
4:19:237:GLU:HB3	15:14:2605:A:OP2	2.18	0.43
13:3I:89:ARG:NH2	13:3I:91:LYS:HD2	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:267:C:H2'	15:1H:268:C:O4'	2.18	0.43
15:1H:705:G:H2'	15:1H:706:U:O4'	2.18	0.43
15:1H:735:G:H21	15:1H:837:A:H61	1.66	0.43
15:1H:1568:G:C6	15:1H:1569:U:C4	3.06	0.43
15:1H:1938:A:N1	52:W1:37:A:O2'	2.44	0.43
15:1H:2661:C:H2'	15:1H:2662:U:O4'	2.18	0.43
15:1H:2767:G:N1	47:51:3:ARG:NE	2.64	0.43
15:1H:2835:G:H2'	15:1H:2836:A:H5"	1.99	0.43
11:C5:35:TYR:CE2	11:C5:69:ALA:HB3	2.53	0.43
14:32:59:ARG:NH2	14:32:66:ARG:HH12	2.15	0.43
14:32:176:LEU:HG	14:32:178:VAL:CG1	2.48	0.43
15:14:241:A:C5	15:14:242:G:H1'	2.53	0.43
15:14:423:U:H2'	15:14:424:G:N7	2.33	0.43
15:14:676:G:C5	15:14:677:C:C4	3.06	0.43
15:14:806:U:H2'	15:14:807:C:O4'	2.18	0.43
15:14:881:G:H21	30:35:53:GLY:H	1.66	0.43
15:14:917:U:C4	15:14:918:G:N7	2.87	0.43
15:14:990:U:OP2	30:35:36:LYS:CD	2.66	0.43
15:14:1067:U:H2'	15:14:1068:A:C8	2.53	0.43
15:14:1873:G:H2'	15:14:1873:G:N3	2.33	0.43
15:14:2188:C:OP1	15:14:2197:U:H5"	2.18	0.43
22:H8:40:ASP:OD1	22:H8:42:VAL:HG23	2.18	0.43
24:4I:49:THR:O	24:4I:53:VAL:HG23	2.17	0.43
26:16:17:A:O2'	26:16:112:G:C8	2.60	0.43
25:42:121:LYS:HD2	25:42:122:GLU:H	1.82	0.43
30:78:88:LEU:HD12	30:78:95:VAL:HG11	2.00	0.43
35:D8:30:GLY:N	35:D8:61:VAL:HG23	2.33	0.43
35:95:24:LYS:HA	35:95:92:THR:OG1	2.17	0.43
39:J8:12:PRO:HB2	39:J8:41:ARG:HH21	1.82	0.43
39:J8:73:LEU:HA	39:J8:73:LEU:HD23	1.70	0.43
37:BA:51:GLU:HG2	37:BA:54:LYS:HZ2	1.82	0.43
39:F5:44:PRO:HB2	39:F5:46:LEU:CD1	2.47	0.43
41:6A:71:GLN:HB2	41:6A:78:TYR:CD1	2.53	0.43
44:12:32:ILE:HD11	44:12:40:HIS:CG	2.53	0.43
46:G5:4:SER:N	46:G5:7:ARG:HG3	2.33	0.43
47:59:74:ASN:OD1	47:59:138:LYS:HG2	2.18	0.43
8:2E:58:GLU:H	8:2E:65:ALA:HB3	1.83	0.43
51:Y1:30:C:H2'	51:Y1:31:A:H8	1.83	0.43
52:V4:18:G:HO2'	52:V4:19:G:P	2.38	0.43
1:13:881:C:H2'	1:13:882:C:C6	2.53	0.43
1:13:1487:A:H2'	1:13:1488:A:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B5:49:VAL:HB	3:B5:83:VAL:HG21	2.01	0.43
3:B5:50:LYS:HD2	3:B5:50:LYS:HA	1.77	0.43
4:11:85:ASP:OD2	4:11:88:ARG:NH1	2.47	0.43
7:8I:27:PHE:N	7:8I:27:PHE:CD1	2.86	0.43
8:22:3:ASN:HD22	8:22:3:ASN:H	1.66	0.43
9:8E:18:PHE:HD2	9:8E:62:TYR:HD2	1.66	0.43
1:1G:963:C:OP2	1:1G:969:C:N4	2.51	0.43
1:1G:1220:U:P	50:72:30:ARG:HH11	2.41	0.43
1:1G:1825:G:H2'	1:1G:1826:U:C6	2.54	0.43
1:1G:2043:G:C6	1:1G:2109:G:C6	3.06	0.43
11:G8:39:VAL:O	11:G8:39:VAL:HG12	2.18	0.43
4:19:61:LEU:HD13	4:19:61:LEU:HA	1.70	0.43
12:Q8:59:LYS:CD	12:Q8:60:LEU:HG	2.46	0.43
15:1H:342:G:N2	15:1H:343:C:H1'	2.33	0.43
15:1H:551:U:H2'	15:1H:552:U:C6	2.54	0.43
15:1H:1368:G:C6	15:1H:1369:C:N4	2.86	0.43
15:1H:1746:G:C6	15:1H:1747:G:C4	3.06	0.43
15:1H:1898:U:OP1	15:1H:2425:G:O2'	2.31	0.43
15:1H:2277:U:H4'	15:1H:2343:A:C2	2.53	0.43
15:1H:2466:A:O2'	52:X1:76:A:H2'	2.19	0.43
15:1H:2483:G:OP1	38:88:119:ARG:NH2	2.41	0.43
15:1H:2717:U:H4'	15:1H:2718:C:OP1	2.18	0.43
15:1H:2727:U:H1'	15:1H:2728:A:C8	2.53	0.43
13:3A:86:ARG:HB2	13:3A:101:VAL:HG23	2.00	0.43
15:14:88:G:OP2	15:14:89:U:O2'	2.30	0.43
15:14:262:A:N7	15:14:284:G:N2	2.65	0.43
15:14:911:G:C6	15:14:912:A:C4	3.06	0.43
15:14:967:G:C4	15:14:968:G:C8	3.06	0.43
15:14:1245:G:C2	15:14:1299:G:C6	3.06	0.43
15:14:1891:G:C6	15:14:1892:G:N1	2.86	0.43
15:14:1940:U:H2'	15:14:1941:A:O4'	2.17	0.43
15:14:2167:C:H2'	15:14:2168:C:C6	2.53	0.43
15:14:2555:C:H2'	15:14:2556:A:O4'	2.17	0.43
15:14:2774:A:C2	15:14:2775:G:H1'	2.52	0.43
15:14:2802:U:H2'	15:14:2803:C:C6	2.52	0.43
23:29:21:VAL:CG1	23:29:185:LYS:HG3	2.48	0.43
29:AI:19:VAL:O	29:AI:23:ASN:HB2	2.18	0.43
30:78:32:THR:O	30:78:32:THR:CG2	2.67	0.43
28:I5:42:PHE:O	28:I5:43:TYR:HB3	2.18	0.43
30:35:60:MET:HE2	30:35:60:MET:HB3	1.73	0.43
40:41:107:LEU:HD11	40:41:178:PHE:CD1	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:6I:17:ARG:HG3	41:6I:17:ARG:NH1	2.33	0.43
39:F5:34:THR:O	39:F5:34:THR:HG22	2.18	0.43
42:62:115:ARG:O	42:62:118:VAL:HG22	2.18	0.43
47:51:7:LEU:H	47:51:7:LEU:HD12	1.82	0.43
47:51:86:GLU:HG2	47:51:87:LEU:H	1.83	0.43
46:G5:32:LEU:HD12	46:G5:53:LEU:HB3	2.00	0.43
49:7A:43:LYS:HE2	49:7A:43:LYS:HB2	1.74	0.43
50:72:81:HIS:HB2	50:72:138:TRP:CE3	2.53	0.43
52:V4:31:A:H3'	52:V4:32:U:O4'	2.17	0.43
1:13:697:A:OP2	1:13:698:G:H8	2.01	0.43
1:13:943:G:C6	1:13:944:A:C5	3.07	0.43
1:13:1053:A:H4'	1:13:1054:G:O5'	2.19	0.43
1:13:1222:G:H2'	1:13:1223:G:C8	2.54	0.43
1:13:1562:G:C6	1:13:1563:C:N4	2.86	0.43
1:13:1629:A:H5"	1:13:1630:C:O4'	2.18	0.43
1:13:1759:G:H2'	1:13:1760:C:H6	1.83	0.43
3:B5:26:TYR:O	3:B5:81:VAL:HG22	2.18	0.43
4:11:70:TRP:HZ3	4:11:146:GLU:OE2	2.01	0.43
1:1G:728:U:HO2'	1:1G:729:A:P	2.37	0.43
1:1G:1065:G:O5'	1:1G:1065:G:H8	2.01	0.43
1:1G:1691:C:OP2	1:1G:1692:G:O2'	2.35	0.43
1:1G:1777:C:H2'	1:1G:1778:U:C6	2.53	0.43
2:65:55:ALA:HB2	26:1J:119:G:H5"	2.00	0.43
2:65:89:ARG:O	2:65:90:GLY:C	2.57	0.43
11:G8:6:HIS:HE1	11:G8:69:ALA:O	2.00	0.43
4:19:49:ILE:HD11	4:19:52:ARG:HA	2.01	0.43
12:Q8:21:LYS:NZ	12:Q8:48:PHE:CG	2.86	0.43
12:Q8:50:LEU:O	12:Q8:52:LYS:HG2	2.17	0.43
7:8A:78:GLU:OE2	7:8A:81:ARG:HD3	2.19	0.43
9:82:95:LYS:HE2	9:82:96:LEU:N	2.33	0.43
15:1H:862:U:OP2	30:78:23:PRO:O	2.37	0.43
15:1H:1045:G:C2	15:1H:1208:U:C2	3.06	0.43
15:1H:1179:G:C2	15:1H:1180:A:C4	3.07	0.43
15:1H:2151:A:N7	15:1H:2187:G:N2	2.66	0.43
15:1H:2196:A:O2'	15:1H:2197:U:O5'	2.35	0.43
15:1H:2229:C:C2	15:1H:2235:G:C2	3.06	0.43
16:B8:50:ILE:HA	16:B8:50:ILE:HD12	1.74	0.43
15:14:626:C:O2	15:14:630:C:H4'	2.19	0.43
15:14:1159:A:H4'	47:59:3:ARG:HH11	1.83	0.43
15:14:1236:U:H4'	35:95:79:VAL:HG12	2.01	0.43
15:14:2289:A:C6	15:14:2291:G:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:H8:81:ARG:HG3	22:H8:81:ARG:O	2.18	0.43
25:4E:43:LEU:O	25:4E:65:ASN:ND2	2.51	0.43
27:C8:9:VAL:HG12	27:C8:10:ARG:N	2.33	0.43
22:D5:52:SER:C	22:D5:54:HIS:H	2.20	0.43
23:29:197:ILE:HD11	23:29:199:ARG:HE	1.83	0.43
24:4A:7:VAL:HG13	40:49:115:ARG:HB3	1.99	0.43
29:AI:21:GLU:O	29:AI:25:LYS:HB2	2.19	0.43
27:85:92:ARG:HH11	27:85:95:LEU:HD12	1.84	0.43
29:AA:66:MET:HA	29:AA:67:VAL:C	2.38	0.43
35:D8:62:LEU:HA	35:D8:62:LEU:HD12	1.72	0.43
32:39:82:ILE:H	32:39:82:ILE:HG13	1.55	0.43
38:88:60:ARG:HD3	52:W1:53:G:OP1	2.19	0.43
35:95:39:LEU:H	35:95:39:LEU:HD12	1.82	0.43
37:BA:72:LEU:O	37:BA:73:HIS:HB2	2.18	0.43
38:45:43:THR:OG1	38:45:45:GLN:HG2	2.17	0.43
39:F5:14:VAL:CG1	39:F5:39:LYS:HD3	2.49	0.43
45:55:54:LEU:O	45:55:57:ARG:HB2	2.19	0.43
52:V4:1:G:HO5'	52:V4:1:G:H8	1.65	0.43
52:V4:35:A:H2'	52:V4:36:A:O4'	2.17	0.43
1:13:1132:C:H2'	1:13:1133:C:H6	1.83	0.43
1:13:1240:A:H61	1:13:1258:G:H1	1.64	0.43
1:13:1368:C:HO2'	41:6I:42:HIS:CE1	2.30	0.43
2:A8:42:ASP:OD2	2:A8:42:ASP:N	2.51	0.43
1:1G:940:G:H2'	1:1G:941:A:C8	2.53	0.43
1:1G:1138:A:H8	1:1G:1138:A:O5'	2.02	0.43
1:1G:1547:C:H2'	1:1G:1548:G:C8	2.54	0.43
1:1G:1667:C:H3'	1:1G:1668:U:H5"	2.01	0.43
1:1G:1982:G:H2'	1:1G:1983:G:O4'	2.17	0.43
10:58:34:LEU:HD21	10:58:120:LEU:HB2	2.01	0.43
10:58:35:ARG:O	10:58:42:TRP:HZ3	2.00	0.43
2:65:19:LYS:H	2:65:19:LYS:HG2	1.61	0.43
4:19:236:GLY:O	4:19:237:GLU:O	2.37	0.43
15:1H:96:C:H5"	46:K8:2:LYS:HB2	2.00	0.43
15:1H:772:G:H2'	15:1H:773:U:O4'	2.18	0.43
15:1H:1155:G:H2'	15:1H:1156:U:C6	2.53	0.43
15:1H:1531:U:O4	15:1H:1559:A:C8	2.71	0.43
15:1H:2201:A:H2'	15:1H:2202:C:C6	2.53	0.43
15:1H:2763:G:O6	15:1H:2771:C:H5"	2.18	0.43
10:15:55:VAL:HB	10:15:126:PRO:HA	2.01	0.43
11:C5:84:ARG:HH21	11:C5:85:VAL:C	2.21	0.43
14:32:99:SER:O	14:32:140:VAL:HG23	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:208:A:C2	15:14:225:U:H4'	2.53	0.43
15:14:1470:G:C2	15:14:1471:G:C8	3.06	0.43
15:14:1888:A:H2'	15:14:1889:G:O4'	2.18	0.43
15:14:2421:U:H2'	15:14:2421:U:OP2	2.18	0.43
15:14:2727:U:OP1	15:14:2730:G:H4'	2.18	0.43
17:H5:5:LYS:HB3	17:H5:5:LYS:HE3	1.45	0.43
23:21:116:VAL:HG13	23:21:122:PHE:CD2	2.53	0.43
18:69:56:LYS:O	18:69:60:GLU:HB3	2.19	0.43
21:25:47:ILE:HD12	21:25:47:ILE:HA	1.77	0.43
28:I5:5:ILE:HB	40:49:67:LYS:HE2	1.99	0.43
32:31:32:LEU:HD21	32:31:105:VAL:HG13	1.99	0.43
32:39:36:VAL:O	32:39:40:GLN:HB2	2.19	0.43
39:J8:83:GLU:C	39:J8:85:LEU:H	2.21	0.43
37:BA:74:LYS:CG	37:BA:75:ASN:N	2.81	0.43
38:45:59:ARG:O	38:45:60:ARG:HG3	2.17	0.43
38:45:65:PHE:O	38:45:104:PHE:HA	2.19	0.43
42:62:22:LEU:HD12	42:62:22:LEU:H	1.83	0.43
47:51:4:ILE:HD13	47:51:4:ILE:H	1.83	0.43
47:59:144:VAL:O	47:59:148:ILE:HG12	2.18	0.43
8:2E:47:LEU:HD13	8:2E:68:VAL:HG11	2.00	0.43
8:2E:73:PRO:O	8:2E:76:VAL:N	2.52	0.43
8:2E:79:ARG:HA	8:2E:79:ARG:HE	1.84	0.43
8:2E:125:GLU:HG2	8:2E:190:ARG:O	2.17	0.43
52:W1:50:U:C2	52:W1:65:G:N2	2.86	0.43
1:13:747:G:C2	1:13:748:A:N1	2.86	0.43
1:13:1390:G:H2'	1:13:1391:C:H6	1.84	0.43
1:13:1732:G:O5'	44:1E:111:ARG:HD2	2.18	0.43
1:13:1840:A:C8	1:13:1842:G:C5	3.06	0.43
4:11:176:ARG:HA	4:11:182:LEU:HD23	2.00	0.43
6:2A:120:ARG:HD3	1:1G:1408:C:O2'	2.18	0.43
1:1G:1034:A:H5'	1:1G:1113:C:O2'	2.18	0.43
1:1G:1370:G:H2'	1:1G:1371:G:O4'	2.19	0.43
1:1G:1759:G:C8	1:1G:1760:C:C5	3.06	0.43
1:1G:1816:C:P	48:1A:51:ARG:HH22	2.41	0.43
15:1H:476:U:O4	15:1H:608:G:H1'	2.17	0.43
15:1H:800:A:H5'	43:E8:90:ARG:HA	2.01	0.43
15:1H:927:A:C6	15:1H:948:A:C8	3.06	0.43
15:1H:1044:A:C2	15:1H:1045:G:C8	3.06	0.43
15:1H:1098:A:H2'	15:1H:1099:G:C8	2.54	0.43
15:1H:1108:U:C4	15:1H:1110:G:H4'	2.53	0.43
15:1H:1299:G:N7	30:78:18:ARG:NH2	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1682:A:O5'	15:1H:1682:A:H8	2.02	0.43
15:1H:1770:A:C8	15:1H:1771:U:C5	3.06	0.43
15:1H:1786:C:H42	15:1H:1790:G:H1	1.67	0.43
15:1H:2017:G:C2	15:1H:2022:G:C5	3.06	0.43
15:1H:2476:C:H2'	15:1H:2477:U:C6	2.53	0.43
15:1H:2898:C:N3	15:1H:2899:G:H1'	2.33	0.43
14:32:31:CYS:C	14:32:33:MET:N	2.72	0.43
15:14:48:A:H4'	15:14:49:U:H5"	2.00	0.43
15:14:347:A:H5'	15:14:365:A:H1'	2.01	0.43
15:14:970:U:H2'	15:14:971:C:C6	2.53	0.43
15:14:1118:A:H2'	15:14:1144:A:C2	2.54	0.43
15:14:1549:G:C6	15:14:1550:C:N4	2.87	0.43
15:14:1818:A:H4'	15:14:1819:A:O5'	2.19	0.43
15:14:1977:A:C2	21:25:22:ILE:HG13	2.53	0.43
15:14:2350:A:C8	15:14:2352:G:N7	2.87	0.43
15:14:2483:G:O2'	15:14:2484:A:O4'	2.36	0.43
16:75:95:ARG:HD2	16:75:95:ARG:HA	1.77	0.43
18:69:51:ILE:HG22	18:69:52:ARG:N	2.34	0.43
24:4I:108:ARG:N	24:4I:108:ARG:HD2	2.33	0.43
23:29:5:LEU:HD22	23:29:49:LEU:HD12	2.00	0.43
24:4A:79:LYS:HE3	24:4A:82:MET:SD	2.59	0.43
24:4A:84:ILE:HG12	29:AA:63:THR:HG21	2.00	0.43
31:I8:7:LEU:HD23	31:I8:7:LEU:HA	1.78	0.43
34:5E:35:ALA:HB1	34:5E:65:VAL:HB	2.00	0.43
38:45:109:VAL:HB	38:45:113:GLN:HB3	2.01	0.43
44:1E:178:ARG:NH1	44:1E:196:LEU:O	2.35	0.43
44:12:42:ILE:CD1	44:12:202:PRO:HB2	2.49	0.43
44:12:107:THR:O	44:12:110:GLN:NE2	2.51	0.43
3:F8:3:THR:CB	3:F8:4:ALA:HA	2.48	0.43
47:59:7:LEU:HB3	47:59:65:HIS:CE1	2.52	0.43
6:2I:34:ASP:HB2	6:2I:35:PRO:HD2	1.99	0.43
8:2E:182:ILE:HA	8:2E:202:ILE:O	2.19	0.43
52:V1:43:C:H5'	52:V1:44:G:OP2	2.19	0.43
1:13:703:G:C5	1:13:704:C:C4	3.07	0.43
1:13:992:G:H4'	1:13:993:C:OP1	2.19	0.43
1:13:1187:G:C5	1:13:1188:A:C2	3.07	0.43
1:13:1287:G:H2'	1:13:1288:U:C6	2.53	0.43
1:13:1731:C:H2'	1:13:1732:G:O4'	2.19	0.43
1:13:1762:G:H1	1:13:1768:C:N4	2.16	0.43
4:11:61:LEU:HD13	4:11:61:LEU:HA	1.89	0.43
6:2A:100:ALA:C	6:2A:102:GLY:H	2.22	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:695:U:C2	1:1G:1002:G:N2	2.87	0.43
1:1G:702:U:H2'	1:1G:703:G:C8	2.54	0.43
1:1G:1830:C:H2'	1:1G:1831:A:C8	2.54	0.43
1:1G:1950:G:H4'	1:1G:1990:C:C2	2.54	0.43
10:58:24:GLY:HA2	10:58:27:ALA:HB3	1.99	0.43
11:G8:78:ALA:C	11:G8:79:CYS:SG	2.96	0.43
14:3E:13:ARG:HD3	14:3E:36:ARG:O	2.18	0.43
15:1H:13:A:N1	15:1H:552:U:H2'	2.34	0.43
15:1H:606:C:H2'	15:1H:607:G:C8	2.54	0.43
15:1H:778:G:H2'	15:1H:1809:U:H1'	2.00	0.43
15:1H:1155:G:H2'	15:1H:1156:U:H6	1.84	0.43
15:1H:1302:A:N7	56:1H:3604:HOH:O	2.50	0.43
15:1H:1397:G:C2	15:1H:1648:C:N3	2.87	0.43
15:1H:2137:G:H1'	52:V1:19:G:C6	2.54	0.43
16:B8:65:LYS:HE3	16:B8:67:SER:HB2	1.99	0.43
15:14:699:C:N4	15:14:700:G:O6	2.51	0.43
15:14:1059:G:H5'	15:14:1060:U:OP2	2.19	0.43
15:14:1101:C:H42	15:14:1154:G:H1	1.66	0.43
15:14:1620:A:H2'	15:14:1621:A:C8	2.54	0.43
15:14:1813:U:H5"	15:14:1814:A:H5'	2.00	0.43
15:14:1844:A:H2'	15:14:1845:G:O4'	2.19	0.43
15:14:2386:G:C6	15:14:2387:G:N7	2.86	0.43
16:75:74:ARG:HG2	16:75:76:PHE:CZ	2.53	0.43
16:75:80:SER:HB3	16:75:83:ILE:HG13	2.01	0.43
22:H8:25:PRO:O	22:H8:85:HIS:HA	2.18	0.43
25:4E:16:THR:OG1	25:4E:17:ALA:N	2.50	0.43
27:C8:5:LYS:H	27:C8:5:LYS:HG3	1.42	0.43
27:C8:97:ASP:OD2	27:C8:101:ARG:NH1	2.47	0.43
25:42:93:PRO:HG2	50:72:105:ARG:NE	2.34	0.43
29:AA:63:THR:HG23	29:AA:74:PHE:HE2	1.84	0.43
30:35:19:VAL:HA	30:35:20:GLY:HA2	1.76	0.43
30:35:133:SER:O	30:35:137:LYS:HG3	2.19	0.43
33:5A:37:PHE:CE1	33:5A:53:LEU:HD13	2.54	0.43
35:95:20:LEU:HD12	35:95:20:LEU:HA	1.57	0.43
37:BA:29:LYS:HB3	37:BA:29:LYS:HE2	1.69	0.43
37:BA:69:GLY:O	37:BA:73:HIS:CD2	2.72	0.43
42:6E:18:TYR:HB3	42:6E:59:LEU:HD12	1.99	0.43
38:45:69:PHE:CD1	38:45:70:PRO:HD2	2.53	0.43
43:E8:1:MET:CE	43:E8:62:HIS:HB3	2.49	0.43
41:6A:24:SER:O	41:6A:28:GLN:HG3	2.18	0.43
44:1E:58:ILE:O	44:1E:61:LEU:N	2.42	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:1E:218:ALA:O	44:1E:222:ILE:HD12	2.18	0.43
45:98:12:ARG:HG2	45:98:12:ARG:HH11	1.83	0.43
48:1I:49:VAL:HG12	48:1I:61:GLU:O	2.18	0.43
44:12:168:THR:HG21	44:12:191:ASP:O	2.18	0.43
44:12:221:LEU:HA	44:12:224:GLN:HB3	1.99	0.43
50:7E:95:VAL:HG12	50:7E:99:GLU:HB2	2.01	0.43
3:F8:67:GLY:C	3:F8:69:TYR:H	2.22	0.43
50:72:119:LEU:HD23	50:72:119:LEU:HA	1.76	0.43
52:V1:29:G:H2'	52:V1:30:G:H5"	1.99	0.43
52:X4:19:G:C4	52:X4:57:G:N2	2.87	0.43
1:13:744:G:H2'	1:13:745:C:C6	2.53	0.43
1:13:1047:G:C5'	14:3E:5:ILE:HG12	2.47	0.43
1:13:1184:C:H2'	1:13:1185:C:C6	2.53	0.43
1:13:2144:G:H2'	1:13:2145:U:C6	2.54	0.43
2:A8:5:THR:HG23	2:A8:5:THR:H	1.55	0.43
2:A8:26:LEU:HD22	2:A8:87:PHE:HD2	1.82	0.43
1:1G:969:C:H2'	1:1G:969:C:O2	2.18	0.43
1:1G:1105:G:C6	1:1G:1106:G:N7	2.86	0.43
1:1G:1357:A:H2'	1:1G:1358:A:C8	2.53	0.43
1:1G:1626:G:H2'	1:1G:1627:G:H8	1.84	0.43
12:Q8:49:VAL:HG11	15:1H:2374:C:C4'	2.47	0.43
13:3I:93:LEU:O	13:3I:96:VAL:HG13	2.18	0.43
15:1H:509:G:C4	15:1H:534:A:C2	3.07	0.43
15:1H:511:A:C8	15:1H:512:C:C5	3.06	0.43
15:1H:1218:G:H1	15:1H:1228:C:H42	1.66	0.43
15:1H:1358:G:P	5:P8:9:ARG:HD3	2.59	0.43
15:1H:1788:C:OP1	16:B8:96:ARG:NH1	2.45	0.43
15:1H:1805:C:O2'	15:1H:1820:A:H8	1.75	0.43
15:1H:1924:G:H22	15:1H:1927:C:H41	1.66	0.43
15:1H:2213:C:H2'	15:1H:2214:U:O4'	2.19	0.43
15:1H:2579:A:C2	15:1H:2662:U:H4'	2.54	0.43
18:61:101:LEU:HG	18:61:107:VAL:HB	2.00	0.43
15:14:590:C:H2'	15:14:591:U:O4'	2.18	0.43
15:14:860:U:H2'	30:35:21:ARG:HA	2.01	0.43
15:14:1407:G:N2	15:14:1421:U:C5	2.87	0.43
15:14:1544:A:O2'	15:14:1545:A:H5'	2.19	0.43
15:14:2053:U:H2'	15:14:2054:G:O4'	2.18	0.43
15:14:2477:U:H2'	15:14:2478:C:H6	1.83	0.43
15:14:2587:A:OP1	23:29:144:ARG:HB2	2.19	0.43
15:14:2702:U:H2'	15:14:2703:U:O4'	2.19	0.43
15:14:2867:G:C2	15:14:2877:G:C2	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:16:15:A:N1	26:16:71:G:O2'	2.48	0.43
22:D5:81:ARG:HH22	38:45:135:ASP:HB2	1.84	0.43
25:42:101:ILE:H	25:42:101:ILE:HD13	1.84	0.43
26:1J:78:G:H2'	26:1J:79:U:O4'	2.18	0.43
30:78:96:THR:OG1	30:78:98:GLU:HG3	2.18	0.43
28:I5:15:ILE:O	28:I5:33:VAL:HG13	2.19	0.43
32:31:46:ARG:HH11	32:31:46:ARG:HD2	1.69	0.43
34:5E:82:ARG:HB2	34:5E:85:VAL:HG23	2.01	0.43
37:BI:63:ILE:HG22	37:BI:77:ALA:HB1	2.01	0.43
38:88:3:MET:HG2	38:88:4:PRO:O	2.18	0.43
38:88:24:GLY:O	38:88:25:ASP:CB	2.67	0.43
42:6E:38:LEU:HD22	42:6E:38:LEU:HA	1.70	0.43
44:1E:178:ARG:HH22	44:1E:196:LEU:HA	1.84	0.43
45:98:10:LEU:O	45:98:12:ARG:HG2	2.19	0.43
47:51:4:ILE:O	47:51:4:ILE:HG12	2.16	0.43
48:1A:46:ARG:HE	48:1A:46:ARG:HB2	1.37	0.43
52:V1:2:C:N3	52:V1:3:C:N4	2.66	0.43
1:13:1191:C:O2	13:3I:15:ARG:O	2.37	0.43
1:13:1307:U:H2'	1:13:1308:C:C6	2.54	0.43
1:13:1577:G:C6	1:13:1578:U:C4	3.07	0.43
2:A8:56:LEU:CB	2:A8:58:LEU:HD21	2.49	0.43
4:11:155:LEU:H	4:11:155:LEU:HD22	1.83	0.43
6:2A:18:ARG:HB3	6:2A:33:THR:OG1	2.19	0.43
1:1G:1408:C:H2'	1:1G:1409:A:O4'	2.19	0.43
1:1G:1433:U:H5"	1:1G:1434:C:OP2	2.19	0.43
1:1G:1746:C:P	9:82:104:ARG:HH11	2.41	0.43
1:1G:1854:A:H8	1:1G:1854:A:H3'	1.83	0.43
1:1G:1904:C:HO2'	1:1G:1906:A:C1'	2.31	0.43
2:65:74:ALA:HB1	2:65:107:GLU:HB2	2.01	0.43
12:Q8:57:ARG:HG3	30:78:49:ARG:HD2	2.01	0.43
13:3I:110:VAL:HG23	13:3I:120:TYR:HB3	2.01	0.43
15:1H:65:C:O2'	15:1H:66:U:H5'	2.18	0.43
15:1H:109:A:H2'	15:1H:110:U:O4'	2.19	0.43
15:1H:483:C:N3	15:1H:501:G:H5'	2.34	0.43
15:1H:518:G:O6	43:E8:49:LYS:NZ	2.50	0.43
15:1H:888:U:H2'	15:1H:889:C:C6	2.53	0.43
15:1H:1069:A:C8	15:1H:1069:A:C3'	3.02	0.43
15:1H:1308:G:H2'	15:1H:1309:G:C8	2.54	0.43
15:1H:1422:A:H2'	15:1H:1423:G:O4'	2.19	0.43
15:1H:2229:C:O2	15:1H:2235:G:C2	2.71	0.43
15:1H:2230:G:C5'	15:1H:2231:G:N7	2.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2253:G:N3	15:1H:2253:G:H2'	2.33	0.43
15:1H:2416:U:C2	15:1H:2417:C:C2	3.07	0.43
15:1H:2817:C:H2'	15:1H:2818:C:C6	2.54	0.43
15:1H:2875:G:C5	15:1H:2876:C:C5	3.07	0.43
15:1H:2877:G:C6	15:1H:2878:U:N3	2.86	0.43
10:15:86:PRO:O	10:15:89:LYS:N	2.49	0.43
11:C5:71:LYS:HD3	15:14:354:G:OP2	2.18	0.43
15:14:33:U:H4'	15:14:34:C:OP1	2.19	0.43
15:14:186:A:C8	30:35:46:LYS:HD2	2.53	0.43
15:14:311:C:H2'	15:14:312:C:H6	1.84	0.43
15:14:576:G:H5'	35:95:68:LYS:HZ1	1.84	0.43
15:14:899:C:O3'	17:H5:49:LYS:HE2	2.19	0.43
15:14:925:C:C4	15:14:926:U:C4	3.06	0.43
15:14:1044:A:N3	15:14:1045:G:C8	2.87	0.43
15:14:1191:A:C8	15:14:1193:G:N7	2.87	0.43
15:14:1450:G:H2'	15:14:1451:C:C6	2.54	0.43
15:14:1805:C:C1'	15:14:1820:A:C8	3.01	0.43
15:14:1849:A:C5	15:14:1851:G:C6	3.07	0.43
15:14:2313:A:C4	15:14:2336:G:N2	2.87	0.43
15:14:2569:U:O2	52:W4:74:C:H5	2.02	0.43
16:75:8:LYS:NZ	23:29:9:VAL:HG12	2.34	0.43
22:H8:79:ARG:NH2	26:16:94:C:H5"	2.34	0.43
23:21:111:ARG:HD2	23:21:160:TYR:CD2	2.52	0.43
22:D5:39:VAL:HG21	22:D5:44:PHE:HB2	2.00	0.43
22:D5:122:ARG:CZ	38:45:134:ARG:HH22	2.31	0.43
28:M8:39:CYS:SG	28:M8:41:PRO:HD3	2.59	0.43
29:AI:31:ILE:HG23	29:AI:49:ILE:HG12	2.00	0.43
25:42:76:ILE:HG23	25:42:77:PRO:HD2	2.01	0.43
32:31:9:ILE:CD1	32:31:125:LEU:HG	2.43	0.43
35:D8:34:GLU:HG2	35:D8:36:PRO:HD3	2.00	0.43
36:N8:3:LYS:HZ2	36:N8:3:LYS:HB3	1.83	0.43
32:39:28:ILE:HD13	32:39:119:ARG:NE	2.33	0.43
32:39:129:PHE:CE2	32:39:163:VAL:HG11	2.54	0.43
37:BI:29:LYS:O	37:BI:33:ILE:HG12	2.17	0.43
38:88:64:ILE:HG12	38:88:106:VAL:HG12	2.00	0.43
38:45:60:ARG:HH11	38:45:61:GLY:HA2	1.84	0.43
44:1E:222:ILE:O	44:1E:226:ARG:HG2	2.19	0.43
46:K8:64:LEU:HD22	46:K8:64:LEU:O	2.19	0.43
44:12:162:ILE:O	44:12:185:ILE:HG12	2.18	0.43
46:G5:24:LEU:HD13	46:G5:60:LEU:HD21	2.01	0.43
52:X1:45:U:OP2	52:X1:45:U:H2'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:878:C:H5”	7:8I:25:ARG:CZ	2.49	0.43
1:13:984:U:N3	1:13:988:G:C6	2.85	0.43
1:13:1214:G:N3	1:13:1502:C:H4’	2.32	0.43
1:13:1262:G:H5”	1:13:1263:C:OP2	2.19	0.43
1:13:1488:A:C2	1:13:1489:C:C2	3.07	0.43
1:13:1736:G:H5’	8:2E:176:HIS:CD2	2.54	0.43
1:13:1923:C:H5’	24:4I:14:ARG:HH12	1.84	0.43
1:13:2027:C:C2	1:13:2029:G:C5	3.07	0.43
8:22:40:ARG:NH2	8:22:55:VAL:O	2.44	0.43
8:22:113:ALA:HB3	8:22:114:PRO:HD3	2.01	0.43
9:8E:9:ARG:HG3	9:8E:104:ARG:NH1	2.34	0.43
1:1G:1064:G:H2’	1:1G:1065:G:O4’	2.19	0.43
1:1G:1776:U:O3’	9:82:14:VAL:HG11	2.19	0.43
1:1G:1833:G:C6	1:1G:1834:G:C5	3.07	0.43
1:1G:2079:G:H2’	37:BA:39:LYS:HZ2	1.83	0.43
1:1G:2127:G:H4’	1:1G:2128:G:C4	2.54	0.43
2:65:14:VAL:HG12	2:65:18:ILE:CD1	2.49	0.43
12:Q8:13:ARG:HB3	30:78:64:LYS:HA	2.01	0.43
14:3E:161:ASN:O	14:3E:165:MET:HB2	2.19	0.43
9:82:53:VAL:HG13	9:82:95:LYS:HE3	2.00	0.43
15:1H:175:U:H2’	15:1H:176:G:C8	2.54	0.43
15:1H:246:A:H8	15:1H:246:A:O5’	2.02	0.43
15:1H:249:G:N2	15:1H:648:A:H8	2.13	0.43
15:1H:326:G:C6	15:1H:342:G:C6	3.07	0.43
15:1H:555:A:C2	15:1H:2068:C:H4’	2.54	0.43
15:1H:1103:G:H1’	15:1H:1133:A:C2	2.52	0.43
15:1H:1315:G:O2’	15:1H:2037:G:O6	2.25	0.43
15:1H:1317:A:C2	15:1H:2038:A:C4	3.07	0.43
15:1H:1873:G:C8	15:1H:1952:A:H1’	2.54	0.43
15:1H:2404:G:H5”	15:1H:2405:U:O4’	2.18	0.43
19:9I:23:LYS:HE3	34:5E:99:ALA:HB1	2.00	0.43
14:32:108:LEU:HD11	14:32:174:LEU:HB3	2.00	0.43
15:14:299:G:H3’	15:14:299:G:C8	2.54	0.43
15:14:722:C:H5”	32:39:81:PRO:HD2	2.01	0.43
15:14:824:G:O5’	15:14:826:A:H1’	2.18	0.43
15:14:880:G:N2	30:35:53:GLY:O	2.51	0.43
15:14:905:C:O5’	15:14:905:C:H6	2.02	0.43
15:14:971:C:H2’	15:14:972:C:C6	2.53	0.43
15:14:1584:U:N3	15:14:1585:A:H2	2.16	0.43
15:14:2354:G:H2’	15:14:2355:G:H8	1.83	0.43
15:14:2371:C:H2’	15:14:2372:U:O4’	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:D5:5:LEU:HD22	22:D5:39:VAL:HB	2.01	0.43
23:29:25:VAL:HG12	23:29:26:ILE:N	2.31	0.43
24:4A:16:ASP:OD1	24:4A:16:ASP:N	2.52	0.43
24:4A:81:LEU:HD21	24:4A:88:ARG:CZ	2.48	0.43
31:I8:36:ILE:HA	31:I8:60:PHE:HA	2.00	0.43
32:39:124:LEU:HD12	32:39:124:LEU:HA	1.80	0.43
39:J8:83:GLU:HG2	39:J8:84:GLY:N	2.32	0.43
40:41:76:SER:OG	40:41:84:LYS:N	2.52	0.43
38:45:34:LEU:HD12	38:45:130:LYS:O	2.19	0.43
44:1E:33:TYR:HB2	44:1E:43:ASP:HB2	2.01	0.43
47:51:43:VAL:O	47:51:43:VAL:HG13	2.18	0.43
44:12:149:LEU:HD23	44:12:149:LEU:HA	1.65	0.43
50:7E:40:ALA:HB2	50:7E:47:GLY:HA2	2.01	0.43
45:55:55:ALA:HB2	45:55:79:LEU:HD13	2.01	0.43
45:55:57:ARG:HB3	45:55:59:ASP:OD1	2.19	0.43
52:X1:25:C:H2'	52:X1:26:A:O4'	2.19	0.43
1:13:1014:A:C2	1:13:1015:A:C8	3.07	0.42
1:13:1364:C:O2'	1:13:1365:C:H5'	2.19	0.42
1:13:1390:G:H2'	1:13:1391:C:C6	2.53	0.42
1:13:1497:G:C6	1:13:1498:C:C4	3.07	0.42
1:13:1798:G:H2'	1:13:1799:C:C6	2.54	0.42
1:13:1924:C:O2'	42:6E:114:ARG:NH1	2.49	0.42
8:22:4:LYS:NZ	1:1G:1818:A:H5"	2.34	0.42
1:1G:802:A:C5	1:1G:803:C:H1'	2.54	0.42
1:1G:824:G:O2'	1:1G:825:A:H5'	2.18	0.42
1:1G:1053:A:O2'	1:1G:1054:G:OP2	2.25	0.42
1:1G:1552:G:C6	1:1G:1553:C:C4	3.07	0.42
1:1G:1621:G:H22	1:1G:1671:C:H42	1.67	0.42
1:1G:2131:G:H2'	1:1G:2132:C:C6	2.53	0.42
12:Q8:10:ALA:O	12:Q8:14:VAL:HG22	2.19	0.42
12:Q8:25:MET:CB	12:Q8:42:ARG:HB3	2.49	0.42
12:Q8:58:ILE:HG22	12:Q8:61:LEU:HB2	2.01	0.42
15:1H:493:G:H8	15:1H:493:G:O5'	2.01	0.42
15:1H:2560:G:C2'	15:1H:2561:U:H5'	2.49	0.42
15:1H:2703:U:H1'	15:1H:2737:A:N6	2.34	0.42
15:1H:2833:A:OP2	45:98:2:ARG:NH2	2.52	0.42
16:B8:36:GLU:CG	21:68:104:ARG:HD3	2.50	0.42
11:C5:54:LYS:HD3	11:C5:54:LYS:HA	1.78	0.42
12:M5:33:ASN:OD1	12:M5:33:ASN:N	2.51	0.42
12:M5:50:LEU:HB3	12:M5:53:PRO:CG	2.49	0.42
15:14:647:G:H4'	15:14:648:A:H5"	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:835:C:H5”	56:14:3690:HOH:O	2.17	0.42
15:14:1228:C:H2’	15:14:1229:C:H6	1.83	0.42
15:14:1373:G:C4	15:14:1377:G:O6	2.72	0.42
15:14:2139:A:H4’	15:14:2140:G:OP1	2.18	0.42
15:14:2379:C:H2’	15:14:2380:G:O4’	2.19	0.42
15:14:2442:C:H5”	15:14:2443:G:OP1	2.19	0.42
15:14:2603:G:OP2	56:14:3672:HOH:O	2.22	0.42
23:21:20:ALA:O	23:21:21:VAL:HB	2.19	0.42
23:21:169:ASN:OD1	23:21:201:THR:HG21	2.19	0.42
18:69:77:LEU:HD22	18:69:141:LYS:HE3	2.01	0.42
23:29:134:ILE:H	23:29:134:ILE:HG13	1.70	0.42
30:35:135:LEU:O	30:35:139:LYS:HG2	2.18	0.42
32:39:21:ALA:C	32:39:23:ASP:N	2.70	0.42
34:52:10:LEU:HB2	34:52:59:TYR:HB3	2.01	0.42
38:88:75:THR:HA	38:88:89:ASN:O	2.19	0.42
44:1E:165:VAL:O	44:1E:187:LEU:O	2.37	0.42
43:A5:96:ILE:HG23	43:A5:96:ILE:HD12	1.75	0.42
48:1A:15:THR:HG21	48:1A:92:THR:HG21	2.01	0.42
52:V1:41:C:H2’	52:V1:42:C:O4’	2.19	0.42
1:13:743:G:N2	1:13:744:G:C4	2.87	0.42
1:13:1044:C:H4’	14:3E:122:ARG:NH1	2.34	0.42
1:13:1482:A:H2’	1:13:1483:A:O4’	2.19	0.42
1:13:1845:C:OP2	33:5I:9:LYS:NZ	2.37	0.42
4:11:11:PRO:C	4:11:13:ARG:H	2.22	0.42
4:11:74:GLY:O	4:11:76:PRO:HD3	2.19	0.42
8:22:87:LEU:O	8:22:90:GLU:HG2	2.19	0.42
8:22:136:GLN:HA	8:22:139:GLN:HB3	2.01	0.42
1:1G:720:C:N4	1:1G:734:G:H1	2.17	0.42
1:1G:1069:G:C5	1:1G:1071:A:C6	3.07	0.42
1:1G:1098:C:H2’	1:1G:1099:G:H8	1.84	0.42
1:1G:1902:A:H2’	1:1G:1903:G:O4’	2.20	0.42
4:19:15:PHE:HE2	15:14:1863:A:N3	2.17	0.42
4:19:30:GLU:HG3	4:19:30:GLU:O	2.20	0.42
4:19:70:TRP:CH2	4:19:150:LYS:HA	2.53	0.42
4:19:151:LYS:HG2	15:14:2228:U:H4’	2.00	0.42
4:19:263:ARG:HE	4:19:263:ARG:HB2	1.70	0.42
15:1H:1189:U:H4’	15:1H:1191:A:O4’	2.19	0.42
15:1H:1388:G:H21	15:1H:1652:A:H1’	1.83	0.42
15:1H:1388:G:N2	15:1H:1652:A:H1’	2.34	0.42
15:1H:1407:G:OP2	56:1H:3677:HOH:O	2.21	0.42
15:1H:1728:G:H8	15:1H:1728:G:O5’	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2156:G:H1'	15:1H:2183:A:N6	2.34	0.42
15:1H:2165:C:C2	15:1H:2177:G:N2	2.87	0.42
15:1H:2782:G:H5"	15:1H:2783:C:OP2	2.19	0.42
10:15:96:GLU:H	10:15:96:GLU:CD	2.21	0.42
15:14:1009:G:H2'	15:14:1010:U:H6	1.84	0.42
15:14:1048:A:N6	15:14:1049:A:N1	2.67	0.42
15:14:1495:C:H2'	15:14:1496:C:C6	2.54	0.42
15:14:2458:C:OP1	32:39:68:LYS:HG2	2.19	0.42
15:14:2670:G:N2	15:14:2680:A:OP2	2.49	0.42
15:14:2717:U:O2'	15:14:2718:C:H5	2.02	0.42
15:14:2865:G:H2'	15:14:2866:C:C6	2.53	0.42
15:14:2878:U:C4	15:14:2879:U:C4	3.07	0.42
20:1B:2:GLY:C	20:1B:4:GLY:N	2.73	0.42
21:25:10:VAL:HG12	21:25:19:ILE:HG12	2.00	0.42
21:25:117:LEU:HD13	21:25:117:LEU:HA	1.75	0.42
24:4A:14:ARG:HA	24:4A:43:THR:O	2.19	0.42
31:E5:36:ILE:HG13	31:E5:58:THR:HG23	2.00	0.42
32:39:36:VAL:HB	32:39:183:VAL:HG11	2.01	0.42
39:J8:48:LYS:HB3	39:J8:49:VAL:HG22	2.01	0.42
40:41:60:LEU:HD23	40:41:60:LEU:HA	1.72	0.42
41:6I:47:LYS:H	41:6I:47:LYS:HG2	1.42	0.42
42:6E:95:ARG:HG2	42:6E:99:LEU:HD12	2.01	0.42
42:6E:104:LEU:HD13	42:6E:104:LEU:HA	1.83	0.42
39:F5:92:LYS:HA	39:F5:95:LEU:HB2	2.01	0.42
40:49:144:ILE:HG21	40:49:149:VAL:HG13	2.01	0.42
46:K8:47:ASN:O	46:K8:49:LYS:HG3	2.19	0.42
44:12:163:PHE:HD1	44:12:185:ILE:CG1	2.32	0.42
50:7E:112:LEU:HD13	50:7E:133:LEU:HA	2.01	0.42
47:59:83:TYR:HD1	47:59:134:SER:HB3	1.83	0.42
8:2E:23:TYR:CD1	8:2E:24:ALA:N	2.87	0.42
8:2E:77:ILE:HG22	8:2E:78:GLY:O	2.20	0.42
52:X4:57:G:H2'	52:X4:58:A:H5'	2.01	0.42
52:X4:65:G:H2'	52:X4:66:U:H6	1.84	0.42
52:X4:73:A:H5"	52:X4:74:C:O5'	2.19	0.42
1:13:769:G:C2	1:13:834:U:O2'	2.73	0.42
1:13:771:C:H2'	1:13:772:C:C6	2.54	0.42
1:13:794:C:H42	1:13:807:G:H1	1.66	0.42
1:13:1063:C:H4'	1:13:1064:G:O5'	2.19	0.42
3:B5:64:LYS:HE2	3:B5:73:ARG:NH2	2.34	0.42
9:8E:42:ARG:HE	9:8E:42:ARG:HB2	1.48	0.42
1:1G:787:G:N2	1:1G:788:G:C4	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:934:G:H4'	1:1G:1238:A:N1	2.34	0.42
1:1G:1243:A:C6	1:1G:1244:C:C4	3.06	0.42
1:1G:1585:C:H1'	1:1G:1828:A:C6	2.54	0.42
1:1G:1877:A:H2'	1:1G:1878:A:C8	2.54	0.42
1:1G:1984:A:C5	1:1G:1985:U:C4	3.07	0.42
1:1G:2064:U:H2'	1:1G:2065:C:O4'	2.19	0.42
11:G8:94:LYS:HZ2	11:G8:95:LYS:H	1.67	0.42
15:1H:208:A:H2	15:1H:225:U:H4'	1.84	0.42
15:1H:224:C:H2'	15:1H:225:U:C6	2.53	0.42
15:1H:471:A:H3'	32:31:45:ARG:HH21	1.85	0.42
15:1H:530:A:C6	15:1H:533:G:C6	3.06	0.42
15:1H:935:C:H2'	15:1H:936:A:H4'	2.00	0.42
15:1H:1091:C:C4	15:1H:1092:G:N7	2.87	0.42
15:1H:1365:U:H2'	15:1H:1366:A:C8	2.55	0.42
15:1H:1524:C:H2'	15:1H:1525:G:C8	2.55	0.42
15:1H:2108:G:H2'	15:1H:2109:C:C6	2.54	0.42
15:1H:2567:U:H2'	15:1H:2569:U:H5"	2.01	0.42
15:1H:2704:U:H5"	15:1H:2729:A:C2	2.55	0.42
18:61:83:ALA:HB2	18:61:144:VAL:HG23	2.01	0.42
13:3A:124:LYS:HA	13:3A:125:PRO:HD3	1.86	0.42
15:14:94:G:O2'	46:G5:48:HIS:HB3	2.19	0.42
15:14:942:C:H3'	15:14:943:U:H5"	2.02	0.42
15:14:1109:U:H5"	15:14:1110:G:OP2	2.20	0.42
15:14:1133:A:OP2	15:14:1133:A:H2'	2.20	0.42
15:14:1201:C:H5"	27:85:80:ILE:HG22	2.02	0.42
15:14:1563:U:O2'	15:14:1564:C:H5'	2.19	0.42
15:14:2039:A:H2'	15:14:2040:A:C8	2.55	0.42
15:14:2126:G:H2'	15:14:2127:U:O4'	2.18	0.42
15:14:2154:C:H2'	15:14:2155:U:O4'	2.19	0.42
22:H8:104:PHE:CE2	22:H8:119:GLU:HG2	2.53	0.42
25:4E:152:ARG:CA	50:7E:64:LYS:HZ3	2.33	0.42
26:16:82:U:H2'	26:16:83:G:H21	1.84	0.42
23:29:4:ILE:HG22	23:29:5:LEU:O	2.19	0.42
30:78:116:GLY:N	30:78:134:ALA:HB2	2.34	0.42
28:I5:16:CYS:HA	28:I5:33:VAL:HG22	2.00	0.42
32:39:31:HIS:NE2	32:39:35:GLU:OE1	2.52	0.42
38:88:103:MET:HB2	38:88:104:PHE:CD2	2.53	0.42
44:1E:88:ALA:HB2	44:1E:219:VAL:HG13	1.99	0.42
46:K8:42:GLY:O	46:K8:44:LEU:HD23	2.20	0.42
47:51:92:ILE:H	47:51:92:ILE:HD12	1.84	0.42
44:12:212:GLN:O	44:12:216:SER:N	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:59:35:VAL:HG21	47:59:75:ALA:HB2	2.01	0.42
52:V1:7:A:N6	52:V1:49:C:C4	2.87	0.42
1:13:707:G:H1	1:13:745:C:H42	1.67	0.42
1:13:832:C:H5"	1:13:833:C:OP2	2.19	0.42
1:13:834:U:C2'	1:13:835:U:H5'	2.49	0.42
1:13:1016:U:O3'	49:7I:6:LEU:HB2	2.19	0.42
1:13:1067:G:OP1	14:3E:38:TYR:OH	2.32	0.42
1:13:1187:G:C4	1:13:1188:A:C2	3.08	0.42
1:13:1288:U:C2	1:13:1289:G:C8	3.07	0.42
1:13:1544:U:H2'	1:13:1545:G:O4'	2.20	0.42
1:13:1587:A:N3	1:13:1592:A:O2'	2.39	0.42
1:13:1900:G:H3'	1:13:1901:G:C8	2.54	0.42
1:13:2040:C:H2'	1:13:2041:A:C8	2.54	0.42
4:11:253:GLN:OE1	15:1H:1877:C:H5'	2.19	0.42
8:22:125:GLU:O	8:22:127:ARG:NH1	2.44	0.42
1:1G:849:A:N6	1:1G:862:C:H5'	2.34	0.42
1:1G:870:U:H5"	49:7A:33:ILE:HD13	2.00	0.42
1:1G:993:C:H4'	1:1G:995:G:OP1	2.20	0.42
1:1G:1088:A:H2'	1:1G:1089:C:O2	2.20	0.42
1:1G:1099:G:C6	1:1G:1101:C:H5'	2.54	0.42
10:58:12:ARG:HG2	10:58:13:TRP:H	1.85	0.42
14:3E:148:VAL:CG1	14:3E:153:ARG:HA	2.48	0.42
15:1H:326:G:C4	15:1H:327:C:C5	3.07	0.42
15:1H:344:C:C2	15:1H:358:G:N2	2.87	0.42
15:1H:483:C:N3	15:1H:500:A:H2'	2.35	0.42
15:1H:961:U:H4'	15:1H:962:C:OP1	2.19	0.42
15:1H:1022:C:OP2	15:1H:1022:C:H4'	2.18	0.42
15:1H:1315:G:O5'	43:E8:15:ARG:NH2	2.53	0.42
15:1H:1519:A:H2'	15:1H:1520:G:C8	2.54	0.42
15:1H:1635:A:H3'	15:1H:1636:A:H8	1.84	0.42
15:1H:1975:G:C2	15:1H:1976:U:O4	2.72	0.42
15:1H:1996:A:H5'	15:1H:1997:A:H5"	2.00	0.42
15:1H:2139:A:H2'	15:1H:2139:A:N3	2.34	0.42
15:1H:2445:A:H8	15:1H:2446:U:C5	2.38	0.42
10:15:118:LYS:HE2	15:14:2796:G:OP1	2.19	0.42
16:B8:24:PRO:HD3	16:B8:52:ILE:HD12	2.02	0.42
15:14:238:G:H2'	56:14:3653:HOH:O	2.20	0.42
15:14:554:C:C5	15:14:2795:U:H2'	2.54	0.42
15:14:969:G:H2'	15:14:970:U:H6	1.84	0.42
15:14:1106:U:H3	15:14:1128:A:H61	1.68	0.42
15:14:1238:G:O2'	15:14:1239:G:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1493:G:C2	15:14:1598:C:C2	3.08	0.42
15:14:1520:G:N2	15:14:1571:G:OP2	2.48	0.42
15:14:2212:G:C6	15:14:2213:C:C4	3.07	0.42
15:14:2474:A:C5	15:14:2475:U:C5	3.08	0.42
15:14:2568:G:H2'	15:14:2569:U:O4'	2.19	0.42
22:H8:59:LEU:HA	22:H8:59:LEU:HD23	1.66	0.42
23:21:23:VAL:HA	23:21:184:VAL:O	2.20	0.42
24:4I:44:ARG:HD2	24:4I:44:ARG:N	2.35	0.42
24:4I:66:LEU:HD23	24:4I:66:LEU:HA	1.76	0.42
26:16:18:G:N2	26:16:71:G:H1'	2.34	0.42
28:M8:41:PRO:HA	28:M8:47:GLN:HG3	2.01	0.42
23:29:56:PRO:O	23:29:57:LYS:HG2	2.20	0.42
23:29:103:ASP:OD1	23:29:201:THR:HG23	2.19	0.42
23:29:105:THR:HG21	23:29:164:ARG:CZ	2.49	0.42
29:AI:32:LYS:H	29:AI:32:LYS:HG2	1.55	0.42
29:AI:36:ARG:HD2	29:AI:52:TYR:O	2.19	0.42
26:1J:61:A:H5"	26:1J:62:C:OP2	2.19	0.42
32:31:24:LEU:HD23	32:31:115:ALA:HA	2.01	0.42
33:5I:29:ARG:HG3	33:5I:31:ARG:H	1.83	0.42
32:39:73:ALA:HB3	32:39:75:HIS:CE1	2.54	0.42
33:5A:47:LEU:HD23	33:5A:47:LEU:HA	1.87	0.42
34:52:2:ARG:HH11	34:52:92:LYS:HZ2	1.66	0.42
35:95:46:VAL:HG23	35:95:52:VAL:HG21	2.01	0.42
39:J8:85:LEU:HA	39:J8:85:LEU:HD13	1.51	0.42
40:49:60:LEU:HD23	40:49:64:THR:HG21	2.01	0.42
42:62:86:GLN:OE1	42:62:86:GLN:N	2.51	0.42
45:98:13:HIS:CE1	45:98:16:HIS:H	2.37	0.42
45:98:72:ASP:OD2	45:98:75:LEU:HB2	2.19	0.42
44:12:40:HIS:CB	44:12:190:THR:HG21	2.50	0.42
44:12:189:ASP:HB3	44:12:203:GLY:O	2.19	0.42
50:7E:94:TYR:HE1	50:7E:132:GLU:HB2	1.83	0.42
45:55:78:LYS:O	45:55:82:GLU:HG2	2.19	0.42
52:V1:14:A:N6	52:V1:22:G:C5	2.87	0.42
1:13:742:C:H2'	1:13:743:G:H8	1.84	0.42
1:13:1390:G:O2'	1:13:1391:C:H5'	2.20	0.42
1:13:1796:A:C6	1:13:1797:A:C6	3.06	0.42
1:13:1803:A:C8	1:13:1803:A:H3'	2.55	0.42
1:13:1817:G:OP1	8:2E:4:LYS:HA	2.19	0.42
2:A8:58:LEU:HD13	2:A8:68:GLN:OE1	2.20	0.42
3:B5:27:THR:HA	3:B5:79:ALA:O	2.19	0.42
4:11:183:ARG:NH2	15:1H:1834:C:OP2	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:11:221:VAL:HG22	4:11:226:MET:HE2	2.00	0.42
1:1G:1104:G:C2	1:1G:1105:G:C5	3.07	0.42
1:1G:1379:G:N2	41:6A:23:GLY:HA3	2.34	0.42
1:1G:1465:G:C6	1:1G:1474:G:C6	3.08	0.42
1:1G:1755:G:N2	1:1G:1772:G:H1	2.17	0.42
14:3E:24:GLU:H	14:3E:24:GLU:HG3	1.57	0.42
9:82:9:ARG:HA	9:82:13:ALA:O	2.19	0.42
9:82:45:ALA:O	9:82:78:LYS:NZ	2.49	0.42
15:1H:314:A:H2'	15:1H:315:G:O4'	2.20	0.42
15:1H:538:U:H5"	15:1H:539:G:OP2	2.19	0.42
15:1H:1427:A:C8	15:1H:1429:G:C6	3.08	0.42
15:1H:1504:U:P	45:98:77:ARG:HH11	2.42	0.42
15:1H:1564:C:H2'	15:1H:1565:U:H6	1.85	0.42
15:1H:1583:G:N2	15:1H:1587:G:H1	2.16	0.42
15:1H:1730:U:H2'	15:1H:1731:G:O4'	2.20	0.42
15:1H:2189:C:OP2	15:1H:2191:G:N2	2.53	0.42
15:1H:2653:G:OP2	23:21:82:ARG:NH2	2.53	0.42
15:1H:2729:A:H3'	15:1H:2730:G:H5"	2.00	0.42
18:61:104:GLN:HG2	18:61:105:HIS:ND1	2.35	0.42
18:61:110:ASP:OD1	18:61:110:ASP:N	2.52	0.42
13:3A:27:LEU:CG	13:3A:33:ARG:HG2	2.45	0.42
15:14:19:C:O2'	15:14:20:C:H5'	2.20	0.42
15:14:28:A:C2	15:14:540:A:C8	3.08	0.42
15:14:186:A:N3	15:14:186:A:H2'	2.35	0.42
15:14:869:A:O2'	15:14:870:A:H5'	2.20	0.42
15:14:1238:G:H2'	15:14:1239:G:H8	1.84	0.42
15:14:1860:G:H2'	15:14:1861:C:O4'	2.20	0.42
15:14:2149:G:H2'	15:14:2149:G:N3	2.34	0.42
15:14:2170:C:N4	15:14:2172:G:H22	2.18	0.42
15:14:2487:G:H22	15:14:2492:C:H5'	1.84	0.42
15:14:2695:C:H2'	15:14:2696:C:O2	2.19	0.42
22:H8:91:LEU:HD12	22:H8:96:VAL:HG11	2.01	0.42
24:4I:31:LYS:HE2	24:4I:31:LYS:HB2	1.82	0.42
25:4E:39:GLY:HA2	25:4E:113:ALA:HB1	2.02	0.42
25:4E:137:GLU:OE1	25:4E:141:GLN:NE2	2.51	0.42
23:29:8:LYS:HB3	23:29:193:GLY:H	1.84	0.42
30:78:50:ARG:HG3	30:78:50:ARG:NH2	2.21	0.42
30:78:71:VAL:CG1	30:78:72:PRO:HD3	2.49	0.42
32:31:33:LEU:HD13	32:31:112:MET:HE2	2.02	0.42
33:5A:25:VAL:O	33:5A:26:ARG:HB3	2.19	0.42
37:BI:43:LEU:HD22	37:BI:48:LYS:HE2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:88:20:ALA:HB1	38:88:99:PRO:HB2	2.01	0.42
39:J8:58:ILE:CG2	39:J8:87:PRO:HG3	2.49	0.42
40:41:22:ARG:NH1	40:41:175:LEU:HD21	2.33	0.42
37:BA:100:ILE:HG22	37:BA:101:GLY:O	2.20	0.42
39:F5:52:ARG:HD2	39:F5:57:GLU:HG3	2.02	0.42
44:1E:69:LEU:HB3	44:1E:162:ILE:HG22	2.01	0.42
43:A5:97:LYS:HE2	43:A5:99:ARG:NH2	2.34	0.42
47:51:131:VAL:HG22	47:51:132:ARG:H	1.83	0.42
47:51:152:ARG:HG3	47:51:161:GLY:HA2	2.01	0.42
48:1I:23:ILE:HA	48:1I:26:ALA:HB3	2.01	0.42
50:7E:39:LEU:HD12	50:7E:39:LEU:HA	1.79	0.42
52:V1:2:C:H2'	52:V1:3:C:C6	2.55	0.42
1:13:703:G:H2'	1:13:704:C:C6	2.54	0.42
1:13:819:A:O2'	1:13:820:U:H5'	2.20	0.42
1:13:1080:A:H2'	1:13:1081:A:O4'	2.19	0.42
1:13:1524:A:C5	1:13:1525:G:H1'	2.55	0.42
8:22:134:ILE:HD13	8:22:134:ILE:HA	1.73	0.42
8:22:173:VAL:HG12	8:22:175:LEU:HD12	2.00	0.42
1:1G:722:G:H5'	1:1G:723:G:OP2	2.19	0.42
1:1G:785:G:C4	1:1G:786:G:C8	3.07	0.42
1:1G:847:A:C6	1:1G:848:A:N1	2.88	0.42
1:1G:906:G:H5'	7:8A:64:PRO:O	2.19	0.42
1:1G:1014:A:H2'	1:1G:1015:A:H8	1.84	0.42
1:1G:1209:U:H2'	1:1G:1210:G:O4'	2.19	0.42
1:1G:1264:G:C6	1:1G:1265:U:C4	3.08	0.42
1:1G:1299:G:H21	34:52:73:ASN:HD21	1.67	0.42
1:1G:1638:A:C5	1:1G:1639:A:C6	3.08	0.42
1:1G:1723:U:H2'	1:1G:1724:C:O4'	2.19	0.42
1:1G:1876:C:O4'	9:82:70:LYS:HE2	2.20	0.42
10:58:96:GLU:CG	10:58:97:ARG:H	2.31	0.42
2:65:24:LEU:HD12	2:65:40:ILE:O	2.20	0.42
15:1H:511:A:C2'	15:1H:512:C:H5'	2.50	0.42
15:1H:908:G:O3'	15:1H:909:U:O2	2.38	0.42
15:1H:2208:C:H2'	15:1H:2209:G:H8	1.85	0.42
15:1H:2415:G:C2	15:1H:2416:U:C2	3.07	0.42
11:C5:35:TYR:CD2	11:C5:69:ALA:HB3	2.54	0.42
18:61:110:ASP:CB	18:61:112:LYS:H	2.31	0.42
14:32:162:LEU:HD21	14:32:178:VAL:CB	2.40	0.42
15:14:105:C:H2'	15:14:106:U:H6	1.85	0.42
15:14:591:U:OP1	30:35:29:LYS:HD2	2.19	0.42
15:14:664:A:H4'	15:14:665:G:O5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1584:U:C2	15:14:1585:A:C2	3.07	0.42
15:14:1708:C:H2'	15:14:1709:U:C6	2.55	0.42
15:14:1805:C:H1'	15:14:1820:A:H8	1.83	0.42
15:14:1827:C:H2'	15:14:1828:U:C6	2.54	0.42
15:14:2491:A:H4'	15:14:2492:C:C5	2.48	0.42
16:75:51:ARG:HD3	16:75:100:TYR:OH	2.20	0.42
26:16:90:C:H2'	26:16:91:G:O4'	2.19	0.42
28:M8:36:CYS:HA	40:41:112:PRO:CB	2.47	0.42
30:78:3:LEU:HD23	30:78:3:LEU:HA	1.61	0.42
34:5E:39:LYS:HD3	34:5E:64:GLN:HG3	2.00	0.42
30:35:94:GLU:HG3	30:35:124:LYS:HG2	2.00	0.42
32:39:24:LEU:O	32:39:25:PRO:O	2.37	0.42
32:39:102:PRO:O	32:39:105:VAL:N	2.51	0.42
32:39:181:LEU:CD2	32:39:186:ILE:HD11	2.49	0.42
38:88:42:ILE:HG22	38:88:47:ILE:HG13	2.01	0.42
35:95:3:ALA:HB1	35:95:38:LEU:HG	2.01	0.42
39:J8:3:LYS:HG3	39:J8:46:LEU:CD2	2.50	0.42
39:J8:60:PHE:CE2	39:J8:91:LYS:HE2	2.53	0.42
42:6E:113:GLU:H	42:6E:113:GLU:HG2	1.50	0.42
44:1E:68:ILE:O	44:1E:91:PRO:HD2	2.19	0.42
44:1E:84:GLU:O	44:1E:88:ALA:N	2.46	0.42
47:51:41:MET:HA	47:51:55:PRO:HD3	2.00	0.42
44:12:103:THR:HA	44:12:180:LEU:HD11	2.01	0.42
44:12:228:GLY:O	44:12:230:VAL:HG13	2.18	0.42
52:V1:20:U:C2'	52:V1:21:A:H5'	2.49	0.42
1:13:719:G:N3	1:13:719:G:H2'	2.33	0.42
1:13:1131:G:C6	1:13:1132:C:C4	3.07	0.42
1:13:1177:G:H2'	1:13:1178:C:H6	1.85	0.42
1:13:1296:G:H4'	41:6I:51:HIS:ND1	2.34	0.42
1:13:1523:A:H8	1:13:1523:A:O5'	2.02	0.42
1:13:1626:G:C5	1:13:1627:G:C8	3.07	0.42
1:13:1692:G:H4'	1:13:1693:U:OP1	2.19	0.42
1:13:1767:G:H4'	1:13:1768:C:H5'	2.02	0.42
6:2A:109:VAL:HG13	19:9A:86:VAL:HG13	2.02	0.42
9:8E:114:TYR:CD1	9:8E:114:TYR:N	2.86	0.42
1:1G:748:A:C6	1:1G:967:G:C6	3.07	0.42
1:1G:863:U:H2'	1:1G:864:U:C6	2.54	0.42
1:1G:907:G:O3'	7:8A:67:LYS:HB2	2.19	0.42
1:1G:939:A:H2'	1:1G:940:G:O4'	2.20	0.42
1:1G:1249:C:C2	14:32:135:LEU:HG	2.55	0.42
1:1G:1411:A:O3'	1:1G:2138:C:H4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1647:G:H2'	1:1G:1647:G:N3	2.35	0.42
1:1G:1890:C:H3'	1:1G:1891:C:H6	1.84	0.42
1:1G:2075:C:H3'	1:1G:2076:U:H4'	2.01	0.42
4:19:14:ARG:NH2	15:14:1745:G:N7	2.67	0.42
4:19:242:ARG:HH11	4:19:242:ARG:CG	2.19	0.42
14:3E:155:LEU:HD23	14:3E:155:LEU:HA	1.75	0.42
9:82:10:ARG:HD2	9:82:105:ASP:HB3	2.01	0.42
15:1H:832:A:C8	15:1H:832:A:C3'	3.01	0.42
15:1H:908:G:H5'	15:1H:2283:A:O2'	2.20	0.42
15:1H:1254:G:C5	15:1H:1255:C:C5	3.08	0.42
15:1H:1366:A:H2'	15:1H:1367:C:C6	2.54	0.42
15:1H:1453:C:O2'	15:1H:1454:U:H5'	2.20	0.42
15:1H:1478:G:C5	15:1H:1618:G:C6	3.08	0.42
15:1H:2709:G:C6	15:1H:2710:C:C4	3.07	0.42
10:15:28:THR:HA	10:15:106:MET:HE2	2.00	0.42
10:15:106:MET:HB3	15:14:1054:C:H1'	2.02	0.42
18:61:79:ILE:HB	18:61:142:VAL:HG12	2.00	0.42
15:14:139:A:H8	15:14:1457:C:O2'	2.02	0.42
15:14:345:A:H4'	15:14:347:A:N7	2.35	0.42
15:14:606:C:H2'	15:14:607:G:C8	2.54	0.42
15:14:724:A:N6	15:14:725:A:N6	2.68	0.42
15:14:862:U:H2'	15:14:863:C:C6	2.54	0.42
15:14:1051:G:O2'	15:14:1058:A:N1	2.43	0.42
15:14:1327:A:O2'	45:55:34:ILE:HD11	2.20	0.42
15:14:1483:A:O2'	15:14:1484:G:H5'	2.19	0.42
15:14:1648:C:H2'	15:14:1649:C:C6	2.55	0.42
15:14:1782:G:C2	15:14:1783:A:C4	3.08	0.42
21:68:17:ARG:NH2	21:68:47:ILE:HD13	2.35	0.42
16:75:119:LYS:O	16:75:123:GLN:HG3	2.20	0.42
23:21:3:GLY:HA3	23:21:81:ILE:HG21	2.02	0.42
18:69:6:LEU:HA	18:69:6:LEU:HD12	1.87	0.42
27:C8:34:LYS:HA	27:C8:34:LYS:HE3	2.01	0.42
27:C8:93:LYS:H	27:C8:93:LYS:HG3	1.63	0.42
23:29:59:VAL:HB	23:29:60:ASN:HA	2.01	0.42
25:42:110:LEU:HD21	25:42:139:LEU:HD21	2.00	0.42
26:1J:113:G:H2'	26:1J:114:U:O4'	2.20	0.42
30:78:6:LEU:HD22	32:31:187:VAL:HG11	2.02	0.42
31:E5:37:LEU:HG	31:E5:60:PHE:HA	2.01	0.42
32:39:4:VAL:HG13	32:39:19:GLU:CD	2.40	0.42
32:39:67:GLN:O	32:39:67:GLN:HG3	2.16	0.42
38:88:10:ARG:HH11	38:88:10:ARG:HG3	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:41:97:ASP:O	40:41:99:MET:N	2.53	0.42
41:6I:57:LEU:HA	41:6I:57:LEU:HD23	1.77	0.42
38:45:33:GLY:O	38:45:132:VAL:HG12	2.20	0.42
40:49:122:PRO:HB3	40:49:170:ARG:NH1	2.34	0.42
44:1E:80:ILE:O	44:1E:84:GLU:HG2	2.20	0.42
42:62:65:ALA:HB1	42:62:127:ALA:HB3	2.02	0.42
45:98:12:ARG:HD3	45:98:16:HIS:CD2	2.55	0.42
47:51:85:LYS:HD3	47:51:85:LYS:HA	1.83	0.42
49:7I:13:HIS:C	49:7I:15:PRO:HD3	2.40	0.42
44:12:195:ASP:O	50:72:74:PRO:HG3	2.20	0.42
45:55:79:LEU:HA	45:55:83:ILE:HB	2.01	0.42
3:F8:3:THR:CB	3:F8:6:ASP:HB2	2.49	0.42
3:F8:21:PHE:O	3:F8:23:GLU:O	2.37	0.42
1:13:898:G:C6	1:13:899:G:C5	3.06	0.42
1:13:1090:G:N7	1:13:1111:G:C6	2.87	0.42
1:13:1780:A:H4'	48:1I:13:HIS:CD2	2.55	0.42
5:L5:40:TRP:CZ3	15:14:487:U:H4'	2.54	0.42
8:22:112:SER:O	8:22:116:VAL:HG23	2.20	0.42
9:8E:92:TYR:O	9:8E:96:LEU:HB2	2.19	0.42
1:1G:992:G:H4'	1:1G:993:C:OP1	2.19	0.42
1:1G:1646:G:N3	1:1G:1647:G:H1'	2.35	0.42
1:1G:1779:A:HO2'	1:1G:1780:A:C5'	2.32	0.42
1:1G:2057:C:H2'	1:1G:2058:C:C6	2.55	0.42
11:G8:33:LYS:HD3	11:G8:33:LYS:H	1.85	0.42
13:3I:113:ARG:HH21	13:3I:116:SER:HB2	1.85	0.42
15:1H:554:C:N3	15:1H:2795:U:H2'	2.34	0.42
15:1H:1044:A:H4'	27:C8:92:ARG:CG	2.49	0.42
15:1H:1306:C:OP1	32:31:75:HIS:HE1	2.03	0.42
15:1H:1309:G:C6	15:1H:1310:C:C4	3.07	0.42
15:1H:1770:A:O2'	15:1H:1771:U:O5'	2.36	0.42
15:1H:2128:C:H2'	15:1H:2129:G:C8	2.55	0.42
15:1H:2356:G:H2'	15:1H:2357:C:H6	1.85	0.42
15:1H:2407:A:H2'	15:1H:2408:A:O4'	2.19	0.42
15:1H:2737:A:H2'	15:1H:2738:G:O4'	2.19	0.42
15:1H:2874:G:C2	15:1H:2875:G:C4	3.08	0.42
10:15:32:THR:HG22	10:15:37:LYS:HB3	2.02	0.42
13:3A:47:LYS:CD	13:3A:48:PRO:HD3	2.49	0.42
14:32:101:LEU:HD23	14:32:121:VAL:HG13	2.01	0.42
15:14:240:G:P	30:35:60:MET:HE1	2.59	0.42
15:14:662:C:O2'	15:14:666:U:OP1	2.32	0.42
15:14:800:A:P	56:14:3686:HOH:O	2.77	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:950:C:H2'	15:14:951:C:H6	1.85	0.42
15:14:992:A:C4	15:14:2463:A:C2	3.07	0.42
15:14:994:G:H2'	15:14:995:G:C8	2.54	0.42
15:14:1076:A:H2'	15:14:1077:A:C8	2.55	0.42
15:14:1159:A:H4'	47:59:3:ARG:HG2	2.01	0.42
15:14:1220:G:H4'	15:14:1221:G:OP1	2.20	0.42
15:14:1607:C:H5"	15:14:1608:A:OP2	2.20	0.42
15:14:1759:U:H1'	15:14:2873:A:N3	2.34	0.42
15:14:2652:U:C2'	15:14:2653:G:H5'	2.50	0.42
15:14:2698:C:OP1	16:75:53:ARG:NH2	2.51	0.42
15:14:2735:G:N7	56:14:3709:HOH:O	2.37	0.42
22:H8:19:ARG:HH22	26:16:79:U:P	2.43	0.42
23:21:70:ALA:O	23:21:71:GLY:C	2.57	0.42
26:16:5:C:H2'	26:16:6:C:C6	2.55	0.42
23:29:30:PRO:HB3	23:29:90:THR:HG22	2.01	0.42
23:29:151:TYR:HD2	23:29:154:LYS:NZ	2.15	0.42
25:42:19:MET:HE1	25:42:24:ARG:NH1	2.34	0.42
30:78:78:PRO:HB3	30:78:111:ARG:NH2	2.34	0.42
32:31:196:LEU:HD23	32:31:196:LEU:HA	1.71	0.42
30:35:35:HIS:HB3	30:35:36:LYS:H	1.52	0.42
32:39:3:GLU:O	32:39:19:GLU:HB2	2.20	0.42
40:41:96:ARG:HD3	40:41:96:ARG:C	2.40	0.42
38:45:16:ARG:HE	38:45:16:ARG:HB3	1.44	0.42
38:45:63:LYS:HG2	38:45:65:PHE:CZ	2.55	0.42
43:A5:6:ILE:HG23	43:A5:104:THR:OG1	2.20	0.42
43:A5:65:LEU:HD13	43:A5:68:ARG:CD	2.48	0.42
44:12:210:SER:O	44:12:214:ILE:HG12	2.19	0.42
3:F8:63:LYS:O	3:F8:64:LYS:HG2	2.19	0.42
8:2E:47:LEU:HD21	8:2E:76:VAL:HG12	2.02	0.42
50:72:105:ARG:HA	50:72:105:ARG:HD3	1.66	0.42
52:V4:13:C:H2'	52:V4:14:A:H5'	2.01	0.42
1:13:752:G:H2'	1:13:753:U:C6	2.54	0.42
1:13:1174:C:O2'	1:13:1178:C:OP1	2.31	0.42
1:13:1253:C:O2'	49:7I:14:ASN:ND2	2.53	0.42
1:13:1294:A:H2'	1:13:1354:G:N2	2.35	0.42
1:13:1349:C:N3	1:13:1350:G:C6	2.88	0.42
1:13:1507:U:H4'	1:13:1508:G:H5"	2.02	0.42
1:13:1628:A:C2	1:13:1649:U:H1'	2.54	0.42
1:13:1683:A:C5	1:13:1833:G:C2	3.08	0.42
2:A8:36:TYR:N	2:A8:36:TYR:CD1	2.87	0.42
4:11:232:PRO:HB3	4:11:244:ARG:CZ	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:22:113:ALA:HB2	8:22:202:ILE:HG13	2.02	0.42
1:1G:1610:G:H1	1:1G:1845:C:H42	1.68	0.42
10:58:41:ASP:OD1	10:58:41:ASP:N	2.46	0.42
11:G8:53:PRO:O	11:G8:54:LYS:NZ	2.53	0.42
4:19:92:ILE:HA	4:19:105:ILE:O	2.20	0.42
13:3I:33:ARG:HD3	13:3I:62:SER:HB3	2.01	0.42
7:8A:7:THR:O	7:8A:23:VAL:HG13	2.19	0.42
7:8A:10:VAL:HG23	7:8A:54:GLY:N	2.35	0.42
14:3E:81:GLU:CD	14:3E:139:ARG:HH22	2.24	0.42
14:3E:99:SER:O	14:3E:140:VAL:HG22	2.20	0.42
15:1H:347:A:C5	15:1H:365:A:C2	3.07	0.42
15:1H:355:A:H2	15:1H:1258:A:HO2'	1.67	0.42
15:1H:817:G:C6	15:1H:818:G:C5	3.08	0.42
15:1H:1521:A:C2	15:1H:1522:A:C4	3.08	0.42
15:1H:1830:U:H2'	15:1H:1831:C:C6	2.54	0.42
15:1H:2189:C:H5"	15:1H:2190:G:OP2	2.20	0.42
15:1H:2261:G:H2'	15:1H:2262:A:C8	2.54	0.42
15:1H:2644:A:H4'	15:1H:2644:A:OP1	2.20	0.42
10:15:32:THR:HG22	10:15:37:LYS:CB	2.50	0.42
10:15:47:ALA:HB2	10:15:112:LEU:CD2	2.47	0.42
10:15:111:PRO:HA	10:15:114:ARG:NH1	2.34	0.42
11:C5:96:ILE:HG23	11:C5:102:CYS:O	2.20	0.42
18:61:144:VAL:HG22	18:61:145:VAL:HG23	2.02	0.42
13:3A:23:LYS:NZ	13:3A:23:LYS:H	2.17	0.42
14:32:24:GLU:HG2	14:32:25:ARG:N	2.31	0.42
15:14:16:G:H5"	36:J5:17:ASP:HB2	2.02	0.42
15:14:185:A:H61	15:14:188:C:H3'	1.84	0.42
15:14:431:U:H4'	15:14:432:C:H5'	2.00	0.42
15:14:601:U:H2'	15:14:602:G:C8	2.55	0.42
21:68:120:GLU:HG2	21:68:122:LEU:HG	2.01	0.42
16:75:92:GLY:HA2	16:75:116:ALA:HA	2.02	0.42
22:H8:117:LEU:HD23	22:H8:119:GLU:OE1	2.20	0.42
25:4E:91:LEU:HD12	25:4E:120:THR:CG2	2.44	0.42
28:M8:65:ASP:CG	28:M8:66:SER:H	2.23	0.42
26:1J:42:U:H1'	26:1J:47:A:H61	1.85	0.42
32:31:29:ASN:H	32:31:112:MET:HE1	1.80	0.42
37:BI:86:ARG:HH12	37:BI:90:GLN:CB	2.33	0.42
35:95:25:LEU:HD23	35:95:25:LEU:HA	1.82	0.42
39:J8:75:GLU:O	39:J8:77:ALA:N	2.53	0.42
38:45:31:ASP:N	38:45:106:VAL:O	2.53	0.42
43:E8:96:ILE:HG23	43:E8:96:ILE:HD12	1.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:62:113:GLU:HB2	42:62:119:ARG:CG	2.47	0.42
46:K8:58:ALA:O	46:K8:62:THR:HG22	2.20	0.42
48:1I:90:LEU:N	48:1I:91:PRO:HD3	2.35	0.42
3:F8:35:THR:C	3:F8:39:ILE:HD12	2.40	0.42
47:59:66:GLY:O	47:59:70:THR:OG1	2.28	0.42
8:2E:77:ILE:HA	8:2E:84:ILE:CG1	2.50	0.42
50:72:39:LEU:HD12	50:72:39:LEU:HA	1.91	0.42
1:13:794:C:N4	1:13:807:G:H1	2.17	0.42
1:13:1448:A:H4'	1:13:1449:U:OP2	2.18	0.42
1:13:1628:A:P	1:13:1649:U:H3	2.43	0.42
1:13:1682:C:H6	1:13:1823:U:HO2'	1.64	0.42
1:13:1761:G:H2'	1:13:1762:G:H8	1.81	0.42
1:13:1873:C:C4	1:13:1874:U:C4	3.08	0.42
1:13:2087:G:H2'	1:13:2088:C:H6	1.85	0.42
2:A8:106:ARG:HH22	2:A8:107:GLU:HB2	1.83	0.42
8:22:73:PRO:O	8:22:76:VAL:HG22	2.20	0.42
9:8E:118:LYS:O	9:8E:119:ALA:HB3	2.20	0.42
1:1G:786:G:N3	1:1G:787:G:C8	2.88	0.42
1:1G:913:C:H2'	1:1G:914:A:C8	2.55	0.42
10:58:62:VAL:HG22	10:58:66:LYS:HD2	2.01	0.42
2:65:106:ARG:O	2:65:107:GLU:CD	2.58	0.42
11:G8:8:LYS:HE3	15:1H:83:A:O5'	2.19	0.42
7:8A:78:GLU:CD	7:8A:81:ARG:HD3	2.39	0.42
15:1H:10:G:H2'	15:1H:11:G:H8	1.85	0.42
15:1H:125:A:H5"	15:1H:126:C:C6	2.55	0.42
15:1H:324:A:H62	15:1H:325:A:N6	2.18	0.42
15:1H:324:A:N6	15:1H:325:A:N6	2.68	0.42
15:1H:330:U:H2'	15:1H:331:U:C6	2.54	0.42
15:1H:785:C:O5'	15:1H:785:C:H6	2.03	0.42
15:1H:1217:G:C2	15:1H:1230:A:C2	3.07	0.42
15:1H:1337:U:H4'	15:1H:1338:C:OP2	2.20	0.42
15:1H:1465:G:O2'	15:1H:1466:C:C6	2.73	0.42
15:1H:1738:U:O2	15:1H:1750:A:H5"	2.20	0.42
15:1H:1742:U:H2'	15:1H:1744:C:C5	2.55	0.42
15:1H:2027:G:C5	56:1H:3666:HOH:O	2.69	0.42
15:1H:2442:C:H5"	15:1H:2443:G:OP1	2.20	0.42
14:32:61:LYS:HE2	14:32:206:PHE:CE2	2.55	0.42
14:32:126:ILE:HG22	14:32:127:THR:N	2.35	0.42
15:14:239:C:O2'	30:35:64:LYS:HE2	2.20	0.42
15:14:522:G:C6	15:14:523:G:C5	3.08	0.42
15:14:1032:A:H5"	15:14:1033:C:H5	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1327:A:H2'	15:14:1328:G:C8	2.54	0.42
15:14:1380:A:O2'	15:14:1381:G:H8	2.02	0.42
15:14:1499:A:H5'	15:14:1500:G:OP2	2.19	0.42
15:14:1796:A:OP1	15:14:1796:A:H4'	2.20	0.42
15:14:2023:G:H4'	15:14:2740:C:O2'	2.19	0.42
15:14:2136:C:C4	15:14:2143:U:H4'	2.55	0.42
15:14:2489:C:H3'	15:14:2490:C:C5'	2.50	0.42
15:14:2567:U:C2	15:14:2569:U:H5'	2.55	0.42
16:75:3:ARG:HG2	16:75:4:GLY:N	2.35	0.42
22:H8:19:ARG:NH1	22:H8:84:GLU:HB2	2.34	0.42
17:H5:13:ILE:O	17:H5:13:ILE:HG22	2.20	0.42
23:21:119:ARG:HH11	23:21:119:ARG:HG3	1.85	0.42
18:69:112:LYS:O	18:69:113:ARG:HG2	2.20	0.42
24:4I:11:ARG:HD2	24:4I:11:ARG:HA	1.89	0.42
24:4I:45:VAL:O	24:4I:48:LEU:HD22	2.20	0.42
25:4E:77:PRO:HD2	25:4E:142:LEU:HD22	2.01	0.42
21:25:87:ILE:HD12	21:25:93:PRO:HA	2.02	0.42
23:29:53:PRO:HA	23:29:74:PRO:HB3	2.01	0.42
25:42:28:PHE:O	25:42:47:LYS:HA	2.20	0.42
30:78:83:VAL:CG1	30:78:112:LEU:HD21	2.50	0.42
31:I8:49:LYS:O	31:I8:50:ASN:HB2	2.20	0.42
29:AA:71:LEU:HD23	29:AA:71:LEU:HA	1.90	0.42
34:5E:72:VAL:HG23	34:5E:90:VAL:HG11	2.01	0.42
30:35:36:LYS:HB3	30:35:37:GLY:H	1.63	0.42
35:95:5:VAL:HB	35:95:37:VAL:HB	2.01	0.42
36:J5:31:VAL:HG13	36:J5:42:PRO:HG3	2.02	0.42
38:45:38:GLU:OE1	38:45:128:LYS:HG3	2.20	0.42
40:49:145:THR:O	40:49:146:TYR:HB3	2.20	0.42
45:98:22:ARG:HG2	45:98:69:ASP:HB3	2.00	0.42
45:98:44:LEU:HD22	45:98:48:VAL:HG13	2.01	0.42
47:51:30:LYS:HD2	47:51:81:GLU:H	1.84	0.42
1:13:983:C:N3	1:13:989:G:C2	2.88	0.41
1:13:1068:U:OP2	14:3E:36:ARG:NH1	2.50	0.41
1:13:1283:G:C4	1:13:1382:A:C6	3.08	0.41
1:13:1364:C:H2'	1:13:1365:C:C6	2.50	0.41
1:13:1447:G:O2'	1:13:1448:A:H5'	2.19	0.41
1:13:1626:G:N1	1:13:1627:G:H1'	2.35	0.41
6:2A:22:HIS:HB3	6:2A:29:ILE:HG12	2.01	0.41
6:2A:119:CYS:HB3	1:1G:1407:G:H1'	2.02	0.41
9:8E:53:VAL:HG13	9:8E:92:TYR:OH	2.20	0.41
1:1G:907:G:N3	1:1G:907:G:H2'	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1176:A:H4'	1:1G:1177:G:O5'	2.19	0.41
1:1G:1475:G:C6	1:1G:1476:G:N7	2.88	0.41
1:1G:1691:C:H3'	1:1G:1692:G:H2'	2.02	0.41
1:1G:1890:C:H3'	1:1G:1891:C:C6	2.55	0.41
1:1G:1907:A:O2'	1:1G:1908:U:H5'	2.20	0.41
10:58:28:THR:N	10:58:106:MET:HE1	2.35	0.41
10:58:57:ALA:C	10:58:59:LYS:N	2.73	0.41
10:58:118:LYS:HA	10:58:118:LYS:HD2	1.74	0.41
11:G8:40:GLU:CB	11:G8:41:GLY:HA2	2.50	0.41
12:Q8:59:LYS:HE3	12:Q8:60:LEU:HD21	2.01	0.41
7:8A:60:ILE:HB	7:8A:74:LEU:HD23	2.02	0.41
7:8A:83:ASP:OD1	7:8A:84:LEU:N	2.53	0.41
14:3E:118:ARG:HE	14:3E:118:ARG:HB3	1.76	0.41
15:1H:1243:G:N3	15:1H:1275:A:H2	2.18	0.41
15:1H:1472:G:OP1	15:1H:1541:G:O2'	2.38	0.41
15:1H:1473:G:H2'	15:1H:1474:G:O4'	2.21	0.41
15:1H:1770:A:O2'	15:1H:1771:U:OP1	2.38	0.41
15:1H:2123:U:O2	15:1H:2216:G:N2	2.38	0.41
15:1H:2638:G:H4'	15:1H:2838:C:O2	2.19	0.41
11:C5:14:LEU:HD23	11:C5:15:VAL:N	2.34	0.41
14:32:150:GLU:C	14:32:152:SER:N	2.72	0.41
15:14:13:A:N1	15:14:552:U:H2'	2.34	0.41
15:14:162:C:H2'	15:14:163:G:C8	2.55	0.41
15:14:242:G:P	30:35:50:ARG:HH21	2.42	0.41
15:14:594:U:H5"	56:14:3735:HOH:O	2.20	0.41
15:14:702:A:H2'	15:14:703:A:O4'	2.20	0.41
15:14:934:C:H3'	15:14:935:C:H5'	2.01	0.41
15:14:1716:G:OP1	21:25:66:LYS:HD3	2.20	0.41
15:14:1822:C:C2	15:14:1823:A:C8	3.08	0.41
15:14:2172:G:C5	15:14:2173:G:H1'	2.55	0.41
15:14:2295:G:O2'	15:14:2403:A:N1	2.46	0.41
15:14:2302:A:N6	15:14:2359:U:H3	2.14	0.41
15:14:2419:C:C2'	15:14:2420:G:H5'	2.50	0.41
22:H8:58:VAL:HA	22:H8:67:LEU:O	2.20	0.41
24:4A:22:ILE:HB	24:4A:25:ILE:CG1	2.46	0.41
25:42:70:PRO:O	25:42:77:PRO:HD3	2.20	0.41
25:42:101:ILE:HG12	25:42:101:ILE:O	2.20	0.41
26:1J:97:C:H2'	26:1J:98:U:C6	2.54	0.41
28:I5:1:MET:HG2	28:I5:2:LYS:N	2.35	0.41
35:D8:38:LEU:HD23	35:D8:38:LEU:C	2.40	0.41
32:39:83:PHE:O	32:39:85:GLY:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:39:89:VAL:HG12	32:39:90:PHE:N	2.34	0.41
34:52:3:ARG:HB2	34:52:93:SER:HB2	2.02	0.41
35:95:5:VAL:HB	35:95:37:VAL:HG11	2.00	0.41
36:J5:45:VAL:HG22	36:J5:51:TYR:CE2	2.55	0.41
42:6E:115:ARG:HB3	42:6E:118:VAL:HG12	2.02	0.41
42:62:92:SER:HB3	42:62:94:ARG:HG2	2.02	0.41
44:12:77:ALA:O	44:12:81:VAL:HG23	2.19	0.41
44:12:91:PRO:HG3	44:12:154:LEU:HB2	2.02	0.41
45:55:72:ASP:OD2	45:55:75:LEU:HB2	2.20	0.41
52:W4:75:C:C3'	52:W4:75:C:C6	3.03	0.41
1:13:1138:A:H5'	14:3E:55:ALA:HB2	2.01	0.41
1:13:1495:A:C8	1:13:1497:G:C8	3.08	0.41
1:13:2070:G:H1	1:13:2084:G:H21	1.67	0.41
6:2A:17:GLY:HA3	6:2A:77:MET:SD	2.60	0.41
8:22:54:ARG:HE	8:22:54:ARG:HB2	1.62	0.41
1:1G:1033:G:OP1	49:7A:8:ARG:NH2	2.53	0.41
1:1G:1091:A:N6	1:1G:1110:U:H2'	2.35	0.41
1:1G:1144:G:H2'	1:1G:1145:U:O4'	2.19	0.41
1:1G:1411:A:H4'	1:1G:2137:C:O2'	2.20	0.41
1:1G:1692:G:N2	1:1G:1817:G:H2'	2.35	0.41
1:1G:1873:C:H2'	1:1G:1874:U:C6	2.55	0.41
10:58:97:ARG:HA	10:58:100:GLU:HB2	2.01	0.41
12:Q8:9:GLY:HA2	12:Q8:12:LYS:CB	2.43	0.41
14:3E:33:MET:O	14:3E:37:PRO:HB3	2.20	0.41
14:3E:150:GLU:OE1	14:3E:150:GLU:N	2.48	0.41
15:1H:271:C:C4	15:1H:273:U:H5"	2.55	0.41
15:1H:510:A:OP2	15:1H:534:A:N6	2.49	0.41
15:1H:689:G:N7	15:1H:695:G:N2	2.64	0.41
15:1H:1251:G:H3'	15:1H:1252:A:H5"	2.02	0.41
17:L8:8:LEU:HB2	17:L8:28:LEU:HD22	2.02	0.41
19:9I:31:LEU:HD23	19:9I:31:LEU:H	1.85	0.41
15:14:136:G:H2'	15:14:138:G:N7	2.34	0.41
15:14:225:U:H2'	15:14:226:C:C6	2.55	0.41
15:14:897:G:C2	15:14:898:A:C5	3.08	0.41
15:14:1000:A:N3	15:14:1001:G:C8	2.89	0.41
15:14:1113:U:O4	15:14:1121:A:N6	2.53	0.41
15:14:2338:G:H2'	15:14:2339:C:O4'	2.20	0.41
15:14:2346:G:H4'	31:E5:43:THR:H	1.85	0.41
15:14:2370:C:O3'	31:E5:24:LYS:HE3	2.20	0.41
15:14:2482:C:H4'	38:45:123:HIS:NE2	2.34	0.41
15:14:2695:C:O2'	15:14:2696:C:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2727:U:H1'	15:14:2728:A:C8	2.55	0.41
21:68:17:ARG:HG2	21:68:17:ARG:NH1	2.35	0.41
22:H8:120:ILE:HG22	22:H8:121:HIS:ND1	2.35	0.41
21:25:113:LYS:O	21:25:117:LEU:HB2	2.20	0.41
24:4A:88:ARG:HG3	24:4A:98:VAL:HB	2.02	0.41
26:1J:42:U:H1'	26:1J:47:A:N6	2.35	0.41
27:85:25:TRP:CD1	27:85:26:GLY:N	2.88	0.41
33:5I:33:VAL:HA	33:5I:40:CYS:HA	2.01	0.41
34:5E:53:ALA:C	34:5E:54:LYS:HG2	2.39	0.41
34:5E:67:MET:HB2	34:5E:68:PRO:HD2	2.01	0.41
32:39:37:VAL:HG23	32:39:183:VAL:HG22	2.02	0.41
34:52:7:ASN:N	34:52:7:ASN:ND2	2.64	0.41
40:41:4:ASP:OD2	40:41:9:ARG:NH1	2.53	0.41
40:41:37:VAL:H	40:41:99:MET:HE3	1.86	0.41
40:41:37:VAL:HG23	40:41:99:MET:CE	2.50	0.41
40:41:84:LYS:O	40:41:84:LYS:HG3	2.17	0.41
40:41:139:LEU:H	40:41:139:LEU:HG	1.69	0.41
42:62:72:ARG:HG2	42:62:142:GLU:OE2	2.20	0.41
43:A5:90:ARG:HG3	43:A5:90:ARG:NH1	2.34	0.41
48:1A:22:LYS:CE	48:1A:90:LEU:HD11	2.50	0.41
48:1A:82:ILE:HG22	48:1A:86:MET:SD	2.60	0.41
45:55:107:ASP:OD1	45:55:107:ASP:C	2.59	0.41
3:F8:54:VAL:C	3:F8:55:ASN:HD22	2.23	0.41
46:G5:10:LEU:CD1	46:G5:59:ARG:HD2	2.50	0.41
47:59:103:LEU:H	47:59:103:LEU:HD23	1.85	0.41
8:2E:116:VAL:HG21	8:2E:202:ILE:HD11	2.01	0.41
52:X4:18:G:O6	52:X4:55:U:H1'	2.20	0.41
52:X4:65:G:H2'	52:X4:66:U:C6	2.55	0.41
52:V4:58:A:H2	52:V4:60:U:N3	2.18	0.41
1:13:660:U:O2	1:13:662:A:C8	2.73	0.41
1:13:1465:G:C6	1:13:1474:G:C6	3.08	0.41
1:13:2051:G:P	21:68:49:ARG:HH22	2.43	0.41
2:A8:26:LEU:HD22	2:A8:87:PHE:CD2	2.55	0.41
1:1G:902:U:H2'	1:1G:904:A:OP2	2.20	0.41
1:1G:1251:A:C8	1:1G:1252:C:C6	3.07	0.41
1:1G:1289:G:H2'	1:1G:1290:G:O4'	2.20	0.41
1:1G:1295:G:H5'	1:1G:1355:C:H1'	2.01	0.41
1:1G:1932:G:O2'	1:1G:1933:A:O5'	2.39	0.41
1:1G:1969:C:H4'	9:82:125:TYR:HB3	2.02	0.41
1:1G:2014:G:C2	1:1G:2015:G:C8	3.09	0.41
10:58:106:MET:HE2	15:1H:1186:G:H21	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Q8:21:LYS:HE3	12:Q8:21:LYS:HB3	1.31	0.41
13:3I:66:VAL:HG21	13:3I:98:TYR:HE1	1.85	0.41
15:1H:64:C:H2'	15:1H:65:C:H6	1.85	0.41
15:1H:311:C:N4	15:1H:380:G:H1	2.18	0.41
15:1H:347:A:H5'	15:1H:365:A:H1'	2.01	0.41
15:1H:1023:G:H1'	15:1H:1038:A:C2	2.54	0.41
15:1H:1403:A:H2'	15:1H:1404:G:O4'	2.20	0.41
15:1H:1414:A:P	39:J8:41:ARG:HH22	2.43	0.41
15:1H:1725:C:O2	23:21:128:SER:OG	2.38	0.41
15:1H:2021:C:OP1	21:68:31:LYS:HE3	2.20	0.41
15:1H:2416:U:O3'	15:1H:2417:C:O4'	2.38	0.41
15:1H:2474:A:C5	15:1H:2475:U:C5	3.08	0.41
15:1H:2653:G:P	23:21:82:ARG:HH22	2.43	0.41
15:1H:2884:C:H5"	15:1H:2885:G:OP1	2.21	0.41
16:B8:88:ILE:O	16:B8:88:ILE:HG13	2.19	0.41
11:C5:52:SER:N	11:C5:56:PRO:HA	2.34	0.41
18:61:104:GLN:HG2	18:61:105:HIS:CE1	2.56	0.41
15:14:332:G:H21	15:14:355:A:N6	2.12	0.41
15:14:1254:G:C6	15:14:1255:C:C4	3.09	0.41
15:14:1475:G:OP2	15:14:1476:A:O2'	2.37	0.41
15:14:1559:A:H2'	15:14:1560:A:C8	2.55	0.41
15:14:2286:G:OP1	31:E5:18:ALA:HB1	2.20	0.41
15:14:2290:C:H5'	15:14:2290:C:H6	1.84	0.41
21:68:22:ILE:HA	21:68:22:ILE:HD12	1.74	0.41
23:21:114:ALA:HB3	23:21:119:ARG:HG2	2.02	0.41
23:21:143:ASN:HB2	23:21:147:PRO:HD2	2.02	0.41
26:16:16:U:H5'	26:16:73:C:O4'	2.20	0.41
26:16:26:G:C2	26:16:58:G:C2	3.08	0.41
21:25:7:TYR:CE1	21:25:20:MET:HB2	2.55	0.41
23:29:11:MET:SD	23:29:24:THR:HG22	2.61	0.41
29:AI:42:PRO:O	29:AI:45:VAL:HG22	2.20	0.41
30:78:83:VAL:O	30:78:114:ILE:HA	2.20	0.41
27:85:19:LYS:O	27:85:22:LYS:HG3	2.20	0.41
35:D8:22:VAL:HG12	35:D8:23:GLU:O	2.20	0.41
36:N8:31:VAL:HB	36:N8:41:PRO:O	2.20	0.41
38:88:39:PRO:HA	38:88:97:VAL:O	2.21	0.41
40:41:57:ALA:HB2	40:41:90:LEU:HD21	2.01	0.41
42:6E:150:ALA:HB2	6:2I:50:TYR:CE2	2.49	0.41
38:45:116:GLU:O	38:45:117:ALA:HB3	2.20	0.41
43:E8:29:LEU:O	43:E8:29:LEU:HG	2.21	0.41
45:98:67:LEU:CD1	45:98:76:VAL:HG21	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:98:104:ARG:HB3	45:98:107:ASP:HB3	2.03	0.41
44:12:68:ILE:HG12	44:12:161:ALA:HB3	2.03	0.41
44:12:88:ALA:HB2	44:12:219:VAL:HB	2.02	0.41
44:12:223:ILE:H	44:12:223:ILE:HG12	1.57	0.41
50:7E:33:GLU:HG2	50:7E:48:TYR:CE2	2.56	0.41
45:55:117:VAL:HG22	45:55:118:GLU:N	2.35	0.41
8:2E:16:ARG:HH11	8:2E:16:ARG:HB2	1.86	0.41
51:Y1:47:U:C2	52:X1:36:A:C2	3.08	0.41
52:W1:7:A:H61	52:W1:66:U:H3	1.69	0.41
52:V1:70:G:N1	52:V1:71:G:C6	2.88	0.41
1:13:655:G:C6	1:13:672:A:N6	2.89	0.41
1:13:829:G:O6	1:13:841:G:C6	2.73	0.41
1:13:881:C:H2'	1:13:882:C:H6	1.86	0.41
1:13:1050:G:H2'	1:13:1051:G:O4'	2.20	0.41
1:13:1193:C:C6	7:8I:31:LEU:HD11	2.55	0.41
1:13:1653:C:H2'	1:13:1654:C:H5	1.86	0.41
1:13:1936:G:H2'	1:13:1937:G:O4'	2.21	0.41
1:13:2079:G:H22	37:BI:54:LYS:HZ3	1.68	0.41
3:B5:5:TYR:HD1	46:G5:33:MET:SD	2.43	0.41
6:2A:13:GLN:HA	6:2A:75:TYR:O	2.20	0.41
1:1G:1386:U:O2'	1:1G:1502:C:O2	2.37	0.41
1:1G:1756:C:C2	1:1G:1767:G:C6	3.08	0.41
1:1G:1927:G:O2'	1:1G:1928:U:P	2.78	0.41
10:58:66:LYS:NZ	15:1H:1070:G:N7	2.68	0.41
2:65:102:ALA:HA	2:65:105:ALA:HB3	2.02	0.41
11:G8:43:ASN:OD1	11:G8:65:ALA:HB3	2.20	0.41
11:G8:83:THR:HG22	11:G8:84:ARG:NE	2.35	0.41
4:19:172:TYR:OH	15:14:2238:G:OP1	2.35	0.41
12:Q8:46:ARG:HA	12:Q8:47:LYS:C	2.40	0.41
15:1H:627:G:H3'	15:1H:703:A:H61	1.85	0.41
15:1H:667:C:O2	15:1H:676:G:C2	2.74	0.41
15:1H:1252:A:H61	15:1H:1289:U:H2'	1.85	0.41
15:1H:1315:G:O4'	43:E8:15:ARG:NH2	2.50	0.41
15:1H:1327:A:O3'	45:98:34:ILE:HG12	2.20	0.41
15:1H:1425:C:H2'	15:1H:1426:G:O4'	2.21	0.41
15:1H:1590:U:H2'	15:1H:1591:G:O4'	2.20	0.41
15:1H:2104:U:O4	56:1H:3670:HOH:O	2.20	0.41
15:1H:2111:U:H2'	15:1H:2112:G:C8	2.55	0.41
15:1H:2136:C:H5	15:1H:2172:G:C6	2.38	0.41
15:1H:2323:G:N1	15:1H:2326:A:C2	2.74	0.41
15:1H:2416:U:H2'	15:1H:2417:C:O2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2814:A:N7	15:1H:2815:A:N6	2.69	0.41
10:15:137:LYS:HA	10:15:137:LYS:HD3	1.71	0.41
12:M5:33:ASN:HA	15:14:2435:C:P	2.60	0.41
18:61:128:LEU:O	18:61:137:PRO:HA	2.21	0.41
15:14:496:G:O6	15:14:497:G:C2	2.73	0.41
15:14:1514:C:O2'	15:14:1577:A:C8	2.69	0.41
15:14:1883:G:H2'	15:14:1884:G:H8	1.85	0.41
15:14:2849:U:C4	15:14:2896:A:N6	2.88	0.41
22:H8:5:LEU:HD11	22:H8:39:VAL:HB	2.02	0.41
23:21:181:LEU:HD12	23:21:181:LEU:HA	1.87	0.41
26:1J:87:G:C2	26:1J:88:G:C8	3.09	0.41
28:I5:5:ILE:O	28:I5:7:PRO:HD3	2.20	0.41
35:D8:21:ARG:NH2	35:D8:91:TYR:OH	2.44	0.41
31:E5:50:ASN:HB3	31:E5:63:VAL:HG22	2.01	0.41
36:N8:16:ARG:NH1	36:N8:16:ARG:HG2	2.35	0.41
32:39:155:LEU:HD11	32:39:176:LEU:HD23	2.03	0.41
33:5A:11:LYS:O	33:5A:13:THR:HG23	2.19	0.41
38:45:35:VAL:HG12	38:45:36:ALA:H	1.84	0.41
39:F5:88:LYS:O	39:F5:93:GLU:HG3	2.20	0.41
40:49:15:VAL:HG21	40:49:176:LEU:HD23	2.02	0.41
45:98:109:ALA:HA	45:98:110:PRO:HD2	1.97	0.41
48:1A:30:SER:CB	48:1A:81:THR:HA	2.50	0.41
45:55:65:LEU:HD12	45:55:65:LEU:HA	1.70	0.41
6:2I:99:GLN:HA	6:2I:105:VAL:CG1	2.42	0.41
52:X1:20:U:H3'	52:X1:21:A:C5'	2.49	0.41
52:V1:58:A:HO2'	52:V1:59:U:P	2.41	0.41
1:13:1949:C:H6	1:13:1949:C:OP1	2.02	0.41
7:8I:48:GLU:H	7:8I:48:GLU:HG3	1.66	0.41
7:8I:52:LYS:HE3	7:8I:52:LYS:HB3	1.88	0.41
8:22:119:ARG:HH22	8:22:140:ARG:HG2	1.85	0.41
1:1G:811:A:C2	1:1G:812:A:C4	3.09	0.41
1:1G:892:G:H4'	1:1G:893:U:O5'	2.20	0.41
1:1G:918:C:P	7:8A:68:ARG:HH12	2.44	0.41
1:1G:1097:C:H2'	1:1G:1098:C:H6	1.86	0.41
1:1G:1138:A:O4'	14:32:58:LEU:HD12	2.21	0.41
1:1G:1889:C:H42	1:1G:1900:G:H1	1.68	0.41
1:1G:1914:A:H2'	1:1G:1915:A:C8	2.55	0.41
2:65:40:ILE:HD13	26:1J:10:U:O2'	2.20	0.41
15:1H:280:G:C6	15:1H:281:C:C4	3.09	0.41
15:1H:292:G:N2	15:1H:396:C:C2	2.88	0.41
15:1H:511:A:H2'	15:1H:512:C:H5'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:780:C:H5”	56:1H:3769:HOH:O	2.20	0.41
15:1H:1583:G:H22	15:1H:1587:G:H22	1.68	0.41
15:1H:1607:C:H5”	15:1H:1608:A:OP2	2.21	0.41
15:1H:1630:A:OP2	15:1H:1630:A:H8	2.03	0.41
15:1H:2474:A:C5	15:1H:2475:U:C4	3.09	0.41
15:1H:2844:G:OP1	23:21:58:ARG:NH1	2.39	0.41
11:C5:30:VAL:HG12	11:C5:32:PRO:HD3	2.03	0.41
19:9I:50:ILE:HD13	19:9I:50:ILE:HG21	1.86	0.41
15:14:73:A:H4’	15:14:74:G:O5’	2.21	0.41
15:14:132:C:H2’	15:14:133:G:O4’	2.20	0.41
15:14:644:G:H2’	15:14:645:C:O4’	2.20	0.41
15:14:1179:G:O6	15:14:2065:C:H1’	2.20	0.41
15:14:1556:A:C4	15:14:1557:A:H1’	2.55	0.41
15:14:2190:G:OP2	15:14:2191:G:N2	2.53	0.41
15:14:2391:A:H2’	15:14:2392:A:O4’	2.20	0.41
15:14:2456:C:O2’	15:14:2457:C:H5’	2.21	0.41
15:14:2586:C:H5”	15:14:2587:A:H5”	2.02	0.41
15:14:2707:C:C2	15:14:2708:A:C8	3.08	0.41
18:69:76:THR:CG2	18:69:140:LEU:HA	2.50	0.41
26:16:52:G:C2	26:16:53:G:H1’	2.56	0.41
25:42:69:VAL:O	25:42:71:LEU:HG	2.19	0.41
26:1J:120:G:H8	26:1J:120:G:O5’	2.03	0.41
33:5I:39:LEU:HD11	33:5I:47:LEU:HD12	2.02	0.41
30:35:88:LEU:HA	30:35:88:LEU:HD12	1.80	0.41
31:E5:53:MET:HG3	31:E5:59:LEU:CD2	2.44	0.41
32:39:127:GLU:O	32:39:129:PHE:N	2.50	0.41
38:88:35:VAL:HA	38:88:101:ARG:O	2.20	0.41
37:BA:43:LEU:HD13	37:BA:51:GLU:HB3	2.02	0.41
44:1E:112:VAL:O	44:1E:115:LEU:N	2.54	0.41
44:1E:239:VAL:HG12	44:1E:239:VAL:O	2.21	0.41
44:12:70:PHE:HB2	44:12:92:TYR:CB	2.50	0.41
44:12:72:GLY:HA2	44:12:165:VAL:CG2	2.50	0.41
44:12:118:LEU:O	44:12:122:PHE:HB3	2.21	0.41
45:55:97:VAL:HB	45:55:114:VAL:HG22	2.02	0.41
49:7A:72:ARG:HD2	49:7A:73:LEU:HD23	2.02	0.41
50:72:109:ILE:HG12	50:72:110:ALA:H	1.85	0.41
52:V1:33:U:C3’	52:V1:34:G:H3’	2.50	0.41
52:X4:18:G:H5’	52:X4:57:G:H22	1.84	0.41
1:13:712:G:O4’	1:13:813:U:C4	2.73	0.41
1:13:821:G:N2	1:13:847:A:C4	2.88	0.41
1:13:834:U:H2’	1:13:835:U:H5’	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1597:A:P	33:5I:29:ARG:HH12	2.43	0.41
5:L5:11:LYS:HE2	15:14:735:G:H5"	2.02	0.41
6:2A:26:ASN:OD1	1:1G:1321:U:H5	2.02	0.41
7:8I:88:TYR:HD1	7:8I:89:LEU:HD22	1.85	0.41
1:1G:1210:G:OP1	41:6A:61:GLY:HA3	2.21	0.41
1:1G:1421:A:H4'	1:1G:1422:U:O5'	2.21	0.41
1:1G:1853:C:H4'	29:AA:80:TYR:OH	2.21	0.41
1:1G:1918:G:H2'	1:1G:1919:U:C6	2.56	0.41
1:1G:1983:G:H2'	1:1G:1984:A:C8	2.54	0.41
1:1G:2007:G:O6	42:62:2:ALA:HA	2.20	0.41
2:65:109:GLY:O	2:65:110:LEU:HD22	2.20	0.41
13:3I:102:ARG:HG3	13:3I:120:TYR:HA	2.02	0.41
14:3E:80:GLU:O	14:3E:83:SER:N	2.54	0.41
15:1H:4:C:O2	15:1H:2911:G:N2	2.53	0.41
15:1H:105:C:H2'	15:1H:106:U:H6	1.85	0.41
15:1H:213:A:H5"	15:1H:451:A:H5'	2.03	0.41
15:1H:222:G:OP2	15:1H:222:G:C8	2.72	0.41
15:1H:311:C:H2'	15:1H:312:C:C6	2.55	0.41
15:1H:382:A:H2'	15:1H:383:U:O4'	2.20	0.41
15:1H:557:G:O4'	15:1H:557:G:N3	2.54	0.41
15:1H:633:A:C4	15:1H:648:A:C6	3.09	0.41
15:1H:718:G:C2	15:1H:850:G:C6	3.09	0.41
15:1H:875:U:H2'	15:1H:877:U:O4'	2.21	0.41
15:1H:2350:A:C8	15:1H:2352:G:N7	2.89	0.41
15:1H:2365:C:H2'	15:1H:2366:G:O4'	2.21	0.41
18:61:44:LEU:HD12	18:61:44:LEU:HA	1.76	0.41
15:14:24:G:H2'	15:14:25:U:O4'	2.19	0.41
15:14:1023:G:C6	15:14:1024:C:C4	3.09	0.41
15:14:2107:A:H3'	15:14:2108:G:H8	1.85	0.41
22:H8:36:LYS:HE3	22:H8:36:LYS:HB2	1.79	0.41
22:H8:128:VAL:HG23	22:H8:161:VAL:HG12	2.02	0.41
23:21:66:HIS:O	23:21:66:HIS:ND1	2.54	0.41
24:4I:3:ARG:HD3	24:4I:7:VAL:HG13	2.03	0.41
26:16:56:G:H2'	26:16:57:U:C6	2.56	0.41
26:16:97:C:H2'	26:16:98:U:C6	2.55	0.41
23:29:58:ARG:HA	23:29:58:ARG:HD3	1.83	0.41
23:29:120:TRP:CD2	23:29:155:LYS:HD3	2.55	0.41
24:4A:83:ASP:O	24:4A:84:ILE:HB	2.20	0.41
29:AI:55:LYS:HG2	29:AI:56:GLN:HG3	2.03	0.41
25:42:107:ARG:NH2	25:42:108:ALA:HB2	2.36	0.41
26:1J:12:C:N3	26:1J:13:C:C5	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1J:41:A:O2'	26:1J:42:U:H5'	2.21	0.41
30:78:6:LEU:HA	30:78:6:LEU:HD13	1.90	0.41
28:I5:37:SER:HB3	28:I5:39:CYS:HB2	2.02	0.41
29:AA:41:VAL:O	29:AA:44:MET:HB2	2.21	0.41
30:35:34:GLY:O	30:35:36:LYS:HB2	2.20	0.41
30:35:62:LEU:HA	30:35:63:PRO:HD3	1.72	0.41
32:39:5:ALA:HB1	32:39:125:LEU:HD21	2.03	0.41
34:52:72:VAL:H	34:52:72:VAL:HG12	1.64	0.41
38:45:79:LEU:H	38:45:79:LEU:HD13	1.84	0.41
39:F5:85:LEU:H	39:F5:85:LEU:HG	1.51	0.41
40:49:63:ILE:O	40:49:105:LYS:NZ	2.47	0.41
48:1A:27:ALA:HA	48:1A:85:LEU:HD11	2.02	0.41
44:12:17:PHE:HD1	44:12:17:PHE:HA	1.63	0.41
50:72:36:LEU:HD12	50:72:59:LEU:HD13	2.03	0.41
50:72:56:LYS:HE2	50:72:56:LYS:HB2	1.78	0.41
51:Y4:44:U:H2'	51:Y4:45:U:O5'	2.19	0.41
52:X4:18:G:C6	52:X4:57:G:C6	3.08	0.41
1:13:873:G:C5	1:13:874:C:C4	3.09	0.41
1:13:1351:A:H5'	1:13:1352:U:OP2	2.21	0.41
1:13:1374:C:OP1	1:13:1474:G:O2'	2.34	0.41
1:13:1497:G:C6	1:13:1498:C:N4	2.89	0.41
8:22:111:LEU:HD11	8:22:144:SER:O	2.20	0.41
9:8E:28:VAL:HA	9:8E:63:ILE:O	2.20	0.41
9:8E:81:ILE:H	9:8E:81:ILE:HG12	1.71	0.41
1:1G:976:C:O2'	1:1G:977:C:H5'	2.21	0.41
1:1G:1158:G:H5'	1:1G:1159:G:OP2	2.20	0.41
1:1G:1618:C:H6	1:1G:1618:C:O5'	2.04	0.41
1:1G:1775:C:O2'	9:82:16:ARG:HD3	2.21	0.41
1:1G:1999:G:OP1	9:82:11:LYS:HB3	2.20	0.41
10:58:7:LYS:H	10:58:7:LYS:HD2	1.86	0.41
11:G8:70:SER:OG	15:1H:361:C:H1'	2.21	0.41
9:82:119:ALA:O	9:82:120:ARG:HB2	2.20	0.41
15:1H:143:C:H2'	15:1H:144:C:C6	2.54	0.41
15:1H:613:U:H1'	32:31:90:PHE:CG	2.55	0.41
15:1H:655:G:H2'	15:1H:656:G:C8	2.56	0.41
15:1H:782:G:O6	56:1H:3676:HOH:O	2.21	0.41
15:1H:2385:G:C6	15:1H:2386:G:C6	3.08	0.41
15:1H:2571:C:H2'	15:1H:2572:G:O4'	2.20	0.41
15:1H:2608:U:H2'	15:1H:2609:C:H6	1.84	0.41
56:1H:3622:HOH:O	32:31:55:GLY:HA2	2.20	0.41
10:15:90:MET:HB3	10:15:98:VAL:HG12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:B8:5:ALA:HA	16:B8:8:LYS:HE2	2.02	0.41
11:C5:87:LYS:N	11:C5:94:LYS:HB3	2.35	0.41
18:61:21:VAL:HG21	18:61:25:TYR:HD2	1.85	0.41
18:61:69:LYS:HA	18:61:136:VAL:HB	2.03	0.41
15:14:38:A:H2'	15:14:39:C:H6	1.84	0.41
15:14:785:C:H6	15:14:785:C:O5'	2.03	0.41
15:14:1841:G:N2	15:14:1844:A:OP2	2.52	0.41
15:14:2405:U:O2'	15:14:2406:G:H5'	2.21	0.41
15:14:2696:C:H5	15:14:2741:A:N6	2.02	0.41
15:14:2772:U:H4'	15:14:2773:A:OP1	2.21	0.41
16:75:7:ILE:O	16:75:10:VAL:HG12	2.20	0.41
25:4E:5:ASP:HB2	25:4E:6:PHE:H	1.72	0.41
25:4E:19:MET:SD	25:4E:24:ARG:HB3	2.61	0.41
25:4E:43:LEU:H	25:4E:65:ASN:ND2	2.17	0.41
26:16:5:C:H2'	26:16:6:C:H6	1.86	0.41
26:16:84:G:O2'	26:16:85:G:H5'	2.20	0.41
22:D5:39:VAL:HG21	22:D5:44:PHE:CD2	2.52	0.41
22:D5:45:ASP:O	22:D5:49:ARG:HG2	2.20	0.41
29:AI:70:LYS:O	29:AI:73:GLU:HG3	2.21	0.41
30:78:20:GLY:HA2	30:78:28:GLY:HA2	2.02	0.41
30:78:122:PRO:HA	30:78:142:GLY:HA3	2.01	0.41
27:85:88:ILE:HG22	27:85:90:VAL:H	1.85	0.41
27:85:88:ILE:HG23	27:85:90:VAL:HG23	2.03	0.41
31:I8:7:LEU:CD1	38:88:85:LYS:HG3	2.50	0.41
35:D8:8:GLY:O	35:D8:10:LYS:HE3	2.21	0.41
31:E5:49:LYS:HG3	31:E5:80:HIS:ND1	2.35	0.41
38:88:79:LEU:HD23	38:88:79:LEU:HA	1.78	0.41
38:45:18:LYS:H	38:45:98:LYS:HZ3	1.67	0.41
38:45:75:THR:HG22	38:45:89:ASN:O	2.21	0.41
43:E8:12:ILE:HG13	43:E8:42:ARG:NH1	2.36	0.41
44:1E:96:ARG:HD2	44:1E:96:ARG:H	1.86	0.41
45:98:97:VAL:HG22	45:98:114:VAL:CG2	2.51	0.41
47:51:6:ARG:HA	47:51:66:GLY:HA2	2.01	0.41
47:51:16:SER:O	47:51:26:VAL:O	2.38	0.41
49:7I:5:ARG:HE	49:7I:22:THR:CG2	2.33	0.41
44:12:7:VAL:O	44:12:217:ARG:CZ	2.69	0.41
50:7E:1:MET:HB3	50:7E:2:LEU:H	1.53	0.41
6:2I:98:LEU:HD23	6:2I:98:LEU:HA	1.79	0.41
8:2E:7:PRO:HG2	8:2E:184:TYR:HB2	2.03	0.41
50:72:111:ILE:C	50:72:112:LEU:HD23	2.41	0.41
52:W1:60:U:H5'	52:W1:61:C:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:716:G:H2'	1:13:717:C:O4'	2.20	0.41
1:13:873:G:H1'	1:13:903:A:N1	2.36	0.41
1:13:1245:G:C2	1:13:1246:G:N7	2.89	0.41
1:13:1534:U:H2'	1:13:1535:C:C6	2.55	0.41
1:13:1565:G:C2	1:13:1969:C:C2	3.09	0.41
1:13:1581:A:C6	1:13:1582:A:N1	2.89	0.41
1:13:1596:G:OP1	48:1I:57:LYS:HD3	2.21	0.41
1:13:1790:C:O5'	1:13:1790:C:H6	2.03	0.41
1:13:1900:G:H5'	1:13:1901:G:OP2	2.20	0.41
1:13:1980:G:H2'	1:13:1981:C:H6	1.85	0.41
8:22:5:ILE:HG12	8:22:6:HIS:N	2.35	0.41
8:22:35:GLU:OE2	8:22:59:ARG:NH2	2.54	0.41
9:8E:49:PRO:O	9:8E:53:VAL:HB	2.20	0.41
1:1G:749:C:H2'	1:1G:750:G:O4'	2.20	0.41
1:1G:769:G:C6	1:1G:834:U:H4'	2.56	0.41
1:1G:1375:A:H2'	1:1G:1376:C:C6	2.56	0.41
1:1G:1606:A:H1'	1:1G:1677:U:O2	2.20	0.41
1:1G:1890:C:C2	1:1G:1900:G:N2	2.89	0.41
1:1G:1984:A:C8	1:1G:1985:U:C5	3.08	0.41
1:1G:2089:C:H2'	1:1G:2090:G:O4'	2.21	0.41
4:19:135:PHE:HZ	14:3E:167:GLY:H	1.68	0.41
4:19:183:ARG:HG2	4:19:184:LYS:N	2.35	0.41
4:19:237:GLU:OE1	4:19:237:GLU:N	2.50	0.41
14:3E:89:THR:O	14:3E:92:VAL:N	2.54	0.41
14:3E:194:LEU:HD12	14:3E:194:LEU:HA	1.56	0.41
15:1H:138:G:N2	15:1H:140:A:N1	2.69	0.41
15:1H:965:A:N3	15:1H:965:A:O4'	2.54	0.41
15:1H:1866:C:C2'	15:1H:1867:U:O5'	2.69	0.41
15:1H:2123:U:H3	15:1H:2216:G:H1	1.67	0.41
15:1H:2465:A:C2	15:1H:2466:A:C4	3.09	0.41
15:1H:2678:G:C6	15:1H:2679:G:C4	3.09	0.41
15:1H:2795:U:O2	15:1H:2795:U:O4'	2.39	0.41
11:C5:75:ILE:CG2	11:C5:76:CYS:N	2.83	0.41
12:M5:52:LYS:N	12:M5:53:PRO:HD2	2.35	0.41
15:14:5:A:H2'	15:14:6:A:H8	1.84	0.41
15:14:49:U:H4'	15:14:50:G:OP2	2.20	0.41
15:14:1044:A:H4'	27:85:92:ARG:CZ	2.50	0.41
15:14:1961:A:C8	15:14:1965:U:O2	2.73	0.41
15:14:2287:U:H5"	15:14:2288:A:OP1	2.20	0.41
16:75:90:GLN:OE1	16:75:121:ILE:HD11	2.21	0.41
23:21:87:GLU:O	23:21:89:ASP:N	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:69:81:VAL:O	18:69:143:SER:OG	2.37	0.41
24:4I:116:THR:HG22	24:4I:117:VAL:N	2.36	0.41
20:1B:2:GLY:C	20:1B:4:GLY:H	2.24	0.41
21:25:7:TYR:HE1	21:25:20:MET:CE	2.34	0.41
21:25:63:VAL:HB	21:25:102:VAL:HG12	2.03	0.41
22:D5:128:VAL:HG22	22:D5:129:SER:H	1.86	0.41
23:29:81:ILE:HG21	23:29:84:PHE:CD2	2.56	0.41
27:85:90:VAL:HG22	35:95:39:LEU:CB	2.50	0.41
37:BI:100:ILE:HD12	37:BI:100:ILE:HA	1.95	0.41
34:52:2:ARG:HD3	34:52:92:LYS:HZ2	1.83	0.41
38:88:110:THR:OG1	38:88:112:GLU:HG2	2.20	0.41
35:95:76:LYS:O	35:95:79:VAL:HG23	2.21	0.41
39:J8:48:LYS:HZ3	39:J8:48:LYS:HG3	1.45	0.41
40:41:106:LEU:HD12	40:41:110:ALA:HB3	2.02	0.41
37:BA:66:ALA:HB1	37:BA:71:THR:HB	2.03	0.41
42:6E:153:HIS:CE1	6:2I:58:PRO:HG2	2.56	0.41
44:1E:36:ARG:C	44:1E:38:GLY:H	2.24	0.41
44:1E:187:LEU:HD22	44:1E:201:ILE:O	2.21	0.41
43:A5:62:HIS:O	43:A5:63:ASP:C	2.59	0.41
49:7I:40:ASP:O	49:7I:42:ARG:N	2.54	0.41
44:12:132:LYS:HA	44:12:135:GLN:NE2	2.36	0.41
44:12:168:THR:CG2	44:12:192:SER:HA	2.51	0.41
46:G5:13:ALA:HA	46:G5:16:LEU:CD2	2.48	0.41
47:59:105:LEU:HD11	47:59:115:VAL:HG21	2.03	0.41
52:V1:18:G:N2	52:V1:58:A:N7	2.68	0.41
52:V1:33:U:H2'	52:V1:34:G:H3'	2.02	0.41
52:V4:19:G:O4'	52:V4:57:G:N2	2.53	0.41
52:V4:67:C:H2'	52:V4:68:C:C6	2.55	0.41
1:13:935:U:C4	1:13:936:C:N4	2.89	0.41
1:13:1044:C:OP2	14:3E:74:GLN:NE2	2.53	0.41
1:13:1495:A:H4'	1:13:1496:A:OP1	2.21	0.41
1:13:1600:A:C8	1:13:1850:C:N3	2.88	0.41
1:13:2087:G:H2'	1:13:2088:C:C6	2.56	0.41
4:11:185:VAL:HG12	4:11:186:HIS:N	2.36	0.41
6:2A:31:THR:HA	6:2A:42:TRP:HA	2.02	0.41
7:8I:68:ARG:H	7:8I:70:ARG:NH1	2.19	0.41
9:8E:5:TYR:CG	9:8E:6:GLY:N	2.88	0.41
1:1G:1075:U:H2'	1:1G:1076:C:H6	1.85	0.41
1:1G:1189:U:H4'	1:1G:1190:U:O5'	2.21	0.41
1:1G:1220:U:C2	1:1G:1278:G:C2	3.09	0.41
1:1G:1414:G:N2	1:1G:1427:G:C4	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1595:C:O2'	48:1A:55:LYS:HB3	2.20	0.41
1:1G:1608:C:H2'	1:1G:1609:A:C8	2.56	0.41
1:1G:1781:C:H2'	1:1G:1782:G:O4'	2.20	0.41
1:1G:1853:C:O2'	24:4A:111:LYS:NZ	2.41	0.41
1:1G:1912:A:O3'	20:1B:25:LYS:HE2	2.21	0.41
1:1G:1954:C:H2'	1:1G:1955:C:H6	1.84	0.41
1:1G:1973:A:OP2	1:1G:1973:A:H3'	2.21	0.41
1:1G:2027:C:C2	1:1G:2125:A:N6	2.89	0.41
1:1G:2057:C:H2'	1:1G:2058:C:H6	1.86	0.41
2:65:80:LEU:HD23	2:65:80:LEU:HA	1.85	0.41
11:G8:68:HIS:CE1	11:G8:70:SER:HB2	2.56	0.41
4:19:117:VAL:O	4:19:118:VAL:HB	2.20	0.41
12:Q8:44:LYS:C	12:Q8:45:GLY:O	2.58	0.41
13:3I:54:LYS:HD2	13:3I:54:LYS:N	2.36	0.41
13:3I:87:GLY:HA2	13:3I:98:TYR:HA	2.02	0.41
14:3E:79:PHE:O	14:3E:83:SER:N	2.54	0.41
9:82:44:VAL:HG22	42:62:16:LEU:HD13	2.02	0.41
15:1H:107:G:H2'	15:1H:108:G:O4'	2.21	0.41
15:1H:184:G:H2'	15:1H:185:A:O4'	2.20	0.41
15:1H:484:C:H3'	3:F8:68:ARG:HH22	1.86	0.41
15:1H:618:G:C6	15:1H:619:U:C4	3.09	0.41
15:1H:637:C:H2'	15:1H:638:G:O4'	2.21	0.41
15:1H:805:C:C2'	15:1H:806:U:H5'	2.50	0.41
15:1H:917:U:C4	15:1H:918:G:N7	2.89	0.41
15:1H:940:G:H5"	15:1H:941:C:OP1	2.21	0.41
15:1H:1076:A:N3	15:1H:2501:G:O2'	2.45	0.41
15:1H:1537:G:C2'	15:1H:1538:U:H5'	2.51	0.41
15:1H:1589:G:H2'	15:1H:1590:U:O4'	2.21	0.41
15:1H:2060:G:P	56:1H:3645:HOH:O	2.72	0.41
15:1H:2081:G:H2'	15:1H:2081:G:N3	2.36	0.41
15:1H:2199:C:H2'	15:1H:2200:C:C6	2.55	0.41
15:1H:2367:A:C4	15:1H:2381:A:C2	3.09	0.41
11:C5:47:LYS:HD3	15:14:509:G:OP2	2.21	0.41
17:L8:8:LEU:HD13	17:L8:31:LEU:CD2	2.51	0.41
12:M5:60:LEU:HD23	12:M5:60:LEU:HA	1.87	0.41
14:32:14:ARG:HH11	14:32:14:ARG:HG3	1.85	0.41
15:14:17:G:H2'	15:14:18:C:H6	1.84	0.41
15:14:210:G:H5"	15:14:211:A:OP1	2.21	0.41
15:14:1013:G:H2'	15:14:1014:C:C6	2.54	0.41
15:14:1046:C:OP2	27:85:58:ARG:NH2	2.46	0.41
15:14:1082:G:H2'	15:14:1083:U:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1232:G:H5'	17:H5:29:ARG:NH2	2.36	0.41
15:14:1296:A:OP1	32:39:95:ARG:NH2	2.53	0.41
15:14:1646:A:H5"	15:14:1647:C:OP1	2.20	0.41
15:14:1948:U:H2'	15:14:1949:C:C6	2.56	0.41
15:14:2206:G:H2'	15:14:2207:G:O4'	2.21	0.41
15:14:2289:A:C5	15:14:2291:G:C8	3.08	0.41
15:14:2290:C:C2	38:45:85:LYS:HE3	2.56	0.41
15:14:2719:C:H2'	15:14:2720:A:O4'	2.20	0.41
16:75:24:PRO:HA	16:75:49:VAL:CG2	2.51	0.41
16:75:115:ARG:O	16:75:116:ALA:HB3	2.21	0.41
18:69:2:LYS:H	18:69:2:LYS:HG2	1.68	0.41
18:69:39:ALA:O	18:69:44:LEU:HD23	2.21	0.41
19:9A:40:LEU:HD23	19:9A:40:LEU:HA	1.80	0.41
25:4E:148:VAL:O	25:4E:151:LEU:HB2	2.21	0.41
21:25:113:LYS:H	21:25:113:LYS:HG2	1.42	0.41
22:D5:28:MET:SD	22:D5:37:VAL:HG11	2.61	0.41
23:29:98:PRO:HD3	23:29:175:VAL:CG1	2.51	0.41
29:AI:50:ALA:HA	29:AI:58:VAL:O	2.21	0.41
25:42:47:LYS:HE2	25:42:47:LYS:HB2	1.73	0.41
26:1J:42:U:H5	28:I5:1:MET:HB3	1.85	0.41
30:78:39:LYS:CB	30:78:45:LEU:HD22	2.51	0.41
28:I5:49:PHE:CD2	28:I5:50:VAL:HG22	2.56	0.41
32:31:63:LYS:NZ	32:31:67:GLN:HB2	2.35	0.41
32:31:155:LEU:HB2	32:31:189:THR:HG21	2.03	0.41
33:5I:37:PHE:HE2	48:1I:47:PHE:CE2	2.39	0.41
29:AA:34:TRP:HD1	29:AA:52:TYR:CD2	2.39	0.41
30:35:39:LYS:CG	30:35:45:LEU:HD22	2.43	0.41
36:N8:30:LEU:HA	36:N8:41:PRO:O	2.21	0.41
36:N8:40:LYS:HG3	36:N8:47:PRO:HD2	2.03	0.41
32:39:29:ASN:HA	32:39:30:PRO:HD3	1.87	0.41
32:39:140:LEU:HD13	32:39:140:LEU:HA	1.68	0.41
34:52:11:ASN:OD1	34:52:12:PRO:HD2	2.21	0.41
34:52:16:GLN:H	34:52:16:GLN:HG2	1.54	0.41
38:88:34:LEU:HD23	38:88:104:PHE:HD2	1.86	0.41
40:41:103:LEU:HD23	40:41:103:LEU:HA	1.74	0.41
40:41:173:LEU:HD13	40:41:178:PHE:CE2	2.56	0.41
37:BA:67:ALA:O	37:BA:73:HIS:CE1	2.74	0.41
42:6E:23:VAL:HG13	42:6E:43:PHE:CE2	2.56	0.41
42:6E:64:GLN:O	42:6E:67:GLU:N	2.54	0.41
38:45:75:THR:OG1	38:45:87:LYS:HE3	2.21	0.41
39:F5:16:ASN:HB3	39:F5:37:ILE:HG13	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:F5:85:LEU:O	39:F5:85:LEU:HD12	2.21	0.41
40:49:125:PHE:CB	40:49:166:ASP:HB2	2.42	0.41
40:49:162:THR:H	40:49:162:THR:HG23	1.67	0.41
40:49:172:LEU:HD23	40:49:173:LEU:HD23	2.03	0.41
44:1E:69:LEU:HD12	44:1E:70:PHE:H	1.84	0.41
44:1E:97:TRP:HH2	44:1E:176:GLU:OE2	2.03	0.41
42:62:124:LEU:HD23	42:62:124:LEU:HA	1.77	0.41
45:98:12:ARG:HG2	45:98:12:ARG:NH1	2.36	0.41
45:98:42:LYS:HA	45:98:45:ARG:HD2	2.02	0.41
46:K8:53:LEU:HD23	46:K8:53:LEU:HA	1.90	0.41
49:7I:2:VAL:H	49:7I:2:VAL:HG12	1.65	0.41
49:7I:23:ASP:OD1	49:7I:25:ARG:NH1	2.54	0.41
44:12:12:GLU:HB2	44:12:16:HIS:CG	2.56	0.41
44:12:22:LYS:HB3	44:12:40:HIS:CD2	2.56	0.41
44:12:84:GLU:O	44:12:219:VAL:HG11	2.21	0.41
45:55:44:LEU:O	45:55:45:ARG:C	2.60	0.41
49:7A:70:ALA:O	49:7A:74:LEU:HB2	2.21	0.41
52:X1:1:G:C4	52:X1:2:C:C5	3.09	0.41
1:13:678:A:H2'	1:13:679:A:C8	2.56	0.41
1:13:1404:G:O2'	1:13:1405:G:H5'	2.21	0.41
1:13:2018:U:H2'	1:13:2019:U:C6	2.55	0.41
6:2A:20:TYR:CZ	6:2A:83:ILE:HD12	2.56	0.41
1:1G:831:C:H42	1:1G:838:G:H1	1.69	0.41
1:1G:886:C:C2	1:1G:925:G:C2	3.08	0.41
1:1G:1047:G:H5'	14:32:5:ILE:CG2	2.50	0.41
1:1G:1047:G:H5'	14:32:5:ILE:HG22	2.03	0.41
1:1G:1054:G:N2	1:1G:1070:U:C6	2.89	0.41
1:1G:1716:G:H2'	1:1G:1717:G:O4'	2.21	0.41
1:1G:2128:G:H2'	51:Y4:45:U:OP2	2.21	0.41
10:58:42:TRP:HA	10:58:48:MET:CE	2.51	0.41
10:58:63:THR:O	10:58:66:LYS:HG3	2.21	0.41
4:19:69:ARG:CZ	4:19:105:ILE:HD11	2.50	0.41
14:3E:17:VAL:HG12	14:3E:18:LYS:N	2.36	0.41
14:3E:173:TRP:CE3	14:3E:193:ASP:HB3	2.56	0.41
15:1H:57:G:N2	15:1H:69:G:C4	2.89	0.41
15:1H:139:A:H8	15:1H:1457:C:O2'	2.03	0.41
15:1H:427:G:H2'	15:1H:428:G:O4'	2.21	0.41
15:1H:498:A:H2'	15:1H:499:A:O4'	2.21	0.41
15:1H:541:A:H1'	15:1H:606:C:O2'	2.20	0.41
15:1H:700:G:O2'	15:1H:701:A:H8	2.04	0.41
15:1H:711:G:H5'	30:78:15:ARG:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:874:C:O2	30:78:55:ARG:NH2	2.52	0.41
15:1H:1018:C:H2'	15:1H:1019:G:O4'	2.21	0.41
15:1H:1474:G:N2	15:1H:1623:G:N7	2.69	0.41
15:1H:1557:A:H8	15:1H:1557:A:OP2	2.04	0.41
15:1H:1559:A:H1'	15:1H:1561:G:O6	2.21	0.41
15:1H:1643:G:H2'	15:1H:1644:G:O4'	2.21	0.41
15:1H:1770:A:C8	15:1H:1771:U:H5	2.39	0.41
15:1H:2090:C:H2'	15:1H:2091:C:C6	2.56	0.41
15:1H:2314:G:N2	15:1H:2333:G:H1'	2.36	0.41
16:B8:51:ARG:HG2	16:B8:62:THR:HG23	2.03	0.41
11:C5:86:ARG:HG3	11:C5:87:LYS:N	2.35	0.41
18:61:121:LYS:HD2	18:61:121:LYS:HA	1.92	0.41
15:14:284:G:O6	15:14:285:G:N1	2.54	0.41
15:14:340:G:H2'	15:14:341:C:C6	2.56	0.41
15:14:1038:A:H8	15:14:1038:A:C5'	2.26	0.41
15:14:1089:C:H2'	15:14:1090:G:C8	2.54	0.41
15:14:1761:C:H2'	15:14:1762:C:H6	1.86	0.41
15:14:2103:C:C4	15:14:2104:U:C4	3.09	0.41
15:14:2104:U:OP1	39:F5:21:ARG:NH1	2.51	0.41
15:14:2800:C:O2	23:29:37:ARG:NH2	2.54	0.41
15:14:2833:A:O2'	15:14:2834:A:OP1	2.32	0.41
15:14:2889:G:O4'	16:75:1:MET:N	2.54	0.41
16:75:3:ARG:HG3	23:29:9:VAL:HA	2.03	0.41
18:69:128:LEU:O	18:69:137:PRO:HA	2.21	0.41
22:D5:19:ARG:HE	22:D5:19:ARG:HB2	1.40	0.41
22:D5:29:TYR:O	22:D5:89:PHE:HD1	2.04	0.41
23:29:12:THR:HB	23:29:13:ARG:H	1.71	0.41
23:29:33:VAL:HG13	23:29:33:VAL:O	2.21	0.41
23:29:60:ASN:OD1	23:29:63:LEU:HA	2.21	0.41
24:4A:3:ARG:HB2	28:I5:34:GLU:CG	2.51	0.41
25:42:122:GLU:O	25:42:126:ARG:NH1	2.54	0.41
37:BI:40:ALA:HB2	37:BI:55:ILE:HG22	2.02	0.41
34:52:53:ALA:HB3	34:52:86:ARG:HD3	2.03	0.41
38:88:104:PHE:N	38:88:104:PHE:CD1	2.86	0.41
38:88:133:ARG:O	38:88:134:ARG:CB	2.67	0.41
43:E8:57:ASN:HA	43:E8:61:ASN:HD22	1.86	0.41
40:49:2:PRO:HB2	40:49:3:LEU:H	1.63	0.41
40:49:143:GLU:N	40:49:143:GLU:OE2	2.53	0.41
45:98:97:VAL:HG22	45:98:114:VAL:HG23	2.03	0.41
47:51:151:ILE:H	47:51:151:ILE:HG13	1.53	0.41
49:7I:8:ARG:C	49:7I:9:PHE:HD1	2.24	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:7E:49:GLU:HG2	50:7E:62:TYR:HE2	1.86	0.41
8:2E:12:LEU:HD23	8:2E:12:LEU:HA	1.73	0.41
52:X4:67:C:H2'	52:X4:68:C:H6	1.86	0.41
1:13:787:G:C2	1:13:788:G:C8	3.09	0.40
1:13:913:C:C2	1:13:914:A:C8	3.09	0.40
1:13:962:A:H2'	1:13:963:C:C6	2.56	0.40
1:13:1189:U:O5'	1:13:1189:U:H6	2.04	0.40
1:13:1590:C:H6	1:13:1590:C:O5'	2.04	0.40
1:13:1856:A:H2'	1:13:1857:C:C6	2.56	0.40
1:13:1913:A:N6	1:13:1981:C:H5"	2.36	0.40
1:13:2000:U:C4	1:13:2001:G:C4	3.09	0.40
2:A8:83:LYS:HE3	2:A8:83:LYS:HB3	1.95	0.40
4:11:19:ALA:HB3	4:11:21:PHE:CE1	2.56	0.40
4:11:142:VAL:HG23	4:11:193:VAL:HA	2.02	0.40
1:1G:747:G:N3	1:1G:747:G:H5"	2.36	0.40
1:1G:987:G:OP1	16:75:43:GLN:NE2	2.54	0.40
1:1G:1245:G:C2	1:1G:1246:G:C8	3.09	0.40
1:1G:1535:C:O2'	1:1G:1536:A:H5'	2.20	0.40
1:1G:1543:U:H2'	1:1G:1544:U:H6	1.86	0.40
1:1G:1803:A:C2'	1:1G:1804:G:H5'	2.51	0.40
11:G8:101:LYS:C	11:G8:102:CYS:SG	3.00	0.40
4:19:65:ILE:HD12	4:19:66:ASP:N	2.36	0.40
4:19:68:LYS:HB3	4:19:70:TRP:CZ3	2.56	0.40
9:82:114:TYR:CD2	48:1A:60:ARG:HG3	2.56	0.40
15:1H:589:C:O2'	15:1H:590:C:H5'	2.21	0.40
15:1H:608:G:N2	15:1H:1307:C:C2	2.88	0.40
15:1H:612:C:C4'	15:1H:613:U:OP2	2.69	0.40
15:1H:969:G:H4'	15:1H:2284:A:C5	2.56	0.40
15:1H:1397:G:N2	15:1H:1648:C:C2	2.89	0.40
15:1H:1437:G:H2'	15:1H:1438:G:H8	1.85	0.40
15:1H:1463:G:C6	15:1H:1464:U:C4	3.09	0.40
15:1H:1939:C:O2	15:1H:1939:C:O4'	2.37	0.40
15:1H:2290:C:C2	38:88:85:LYS:HE3	2.55	0.40
15:1H:2323:G:N2	15:1H:2326:A:H2	2.19	0.40
15:1H:2407:A:O4'	15:1H:2407:A:N3	2.52	0.40
15:1H:2894:C:C2	15:1H:2895:A:C8	3.09	0.40
12:M5:59:LYS:NZ	30:35:50:ARG:HH11	2.19	0.40
14:32:150:GLU:HA	14:32:153:ARG:HG2	2.02	0.40
15:14:7:G:H2'	15:14:8:A:C8	2.56	0.40
15:14:417:G:N1	30:35:71:VAL:HG22	2.36	0.40
15:14:562:C:C2'	15:14:563:A:H5'	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:665:G:C5	15:14:666:U:C4	3.10	0.40
15:14:1039:C:N3	15:14:1213:G:C6	2.88	0.40
15:14:1207:C:O2'	15:14:1208:U:H5'	2.21	0.40
15:14:1235:G:H8	15:14:1235:G:O5'	2.04	0.40
15:14:1677:G:H2'	15:14:1678:U:C6	2.57	0.40
15:14:2436:G:C6	52:V4:76:A:C8	3.09	0.40
15:14:2617:A:N6	52:W4:76:A:H3'	2.37	0.40
15:14:2739:C:O5'	15:14:2739:C:H6	2.05	0.40
15:14:2752:G:C6	15:14:2753:G:C5	3.10	0.40
15:14:2862:U:H4'	15:14:2881:A:C2	2.56	0.40
21:68:12:ASP:OD1	21:68:14:THR:OG1	2.25	0.40
21:68:68:GLU:CD	21:68:68:GLU:H	2.24	0.40
17:H5:8:LEU:HD13	17:H5:31:LEU:HD12	2.03	0.40
17:H5:35:ARG:HE	17:H5:37:LEU:HD21	1.85	0.40
23:21:4:ILE:HG12	23:21:5:LEU:N	2.36	0.40
18:69:101:LEU:HB3	18:69:105:HIS:HB2	2.02	0.40
21:25:92:GLU:HG2	21:25:113:LYS:HZ2	1.84	0.40
27:C8:85:LYS:HA	27:C8:85:LYS:HZ2	1.86	0.40
24:4A:89:GLY:O	24:4A:92:HIS:HB2	2.21	0.40
28:I5:18:CYS:HB3	28:I5:19:GLY:HA2	2.03	0.40
32:31:130:ALA:C	32:31:132:VAL:H	2.24	0.40
39:J8:87:PRO:O	39:J8:88:LYS:C	2.59	0.40
38:45:25:ASP:HA	38:45:67:ARG:HH12	1.86	0.40
40:49:99:MET:HB2	40:49:99:MET:HE3	1.83	0.40
44:1E:121:LEU:HA	44:1E:124:SER:OG	2.21	0.40
50:7E:34:GLU:OE1	50:7E:37:ARG:HD3	2.21	0.40
47:59:101:ARG:HG3	47:59:102:ALA:N	2.36	0.40
52:X4:7:A:H3'	52:X4:8:U:H5'	2.03	0.40
1:13:851:G:N2	1:13:852:G:H1'	2.36	0.40
1:13:1214:G:O2'	1:13:1502:C:H5"	2.21	0.40
1:13:1294:A:C2	1:13:1361:C:C4	3.09	0.40
1:13:1556:G:OP2	42:6E:3:ARG:HB2	2.21	0.40
1:13:1720:A:C6	1:13:1721:A:C6	3.08	0.40
1:13:1781:C:C2	1:13:1782:G:C8	3.10	0.40
1:13:1980:G:H2'	1:13:1981:C:C6	2.56	0.40
1:1G:1294:A:H2'	1:1G:1361:C:O2	2.22	0.40
1:1G:1394:G:N2	1:1G:1442:U:OP2	2.48	0.40
1:1G:1704:C:OP1	44:12:175:ARG:NH1	2.52	0.40
1:1G:1757:C:C4	1:1G:1767:G:N1	2.89	0.40
1:1G:1761:G:H1	1:1G:1769:C:H42	1.69	0.40
1:1G:2158:C:H2'	1:1G:2159:C:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:58:56:ASN:N	10:58:125:GLY:O	2.36	0.40
10:58:58:ASP:CB	10:58:95:PRO:HB2	2.51	0.40
4:19:245:PRO:HA	4:19:246:PRO:HD3	1.98	0.40
12:Q8:45:GLY:O	12:Q8:46:ARG:CB	2.66	0.40
12:Q8:46:ARG:HB2	12:Q8:46:ARG:CZ	2.45	0.40
15:1H:332:G:H21	15:1H:355:A:H62	1.70	0.40
15:1H:1290:A:N3	15:1H:1290:A:O4'	2.53	0.40
15:1H:1328:G:N2	15:1H:1341:U:C2	2.90	0.40
15:1H:1437:G:O2'	15:1H:1438:G:H5'	2.22	0.40
15:1H:1491:G:H2'	15:1H:1492:G:C8	2.57	0.40
15:1H:1924:G:H22	15:1H:1927:C:N4	2.18	0.40
15:1H:2337:A:H2'	15:1H:2338:G:O4'	2.21	0.40
15:1H:2750:A:C8	15:1H:2750:A:C5'	3.03	0.40
15:1H:2815:A:H5'	15:1H:2907:U:C1'	2.51	0.40
10:15:16:ILE:HB	10:15:54:VAL:HG22	2.03	0.40
16:B8:23:ARG:HG3	16:B8:120:ARG:NH1	2.36	0.40
15:14:119:G:H4'	15:14:149:A:H5'	2.03	0.40
15:14:554:C:OP2	15:14:2795:U:H5	2.03	0.40
15:14:613:U:H2'	15:14:614:C:H6	1.81	0.40
15:14:626:C:O2'	15:14:630:C:H5"	2.21	0.40
15:14:830:A:H2	15:14:1810:G:N3	2.20	0.40
15:14:835:C:C2'	15:14:836:U:H5'	2.52	0.40
15:14:1215:C:O2	15:14:1232:G:C2	2.74	0.40
15:14:1295:A:OP1	32:39:38:ARG:NH1	2.54	0.40
15:14:1363:C:C2	15:14:1388:G:N2	2.89	0.40
15:14:1465:G:HO2'	15:14:1466:C:P	2.38	0.40
15:14:1675:G:H3'	56:14:3622:HOH:O	2.21	0.40
15:14:2456:C:OP2	15:14:2601:C:O2'	2.33	0.40
15:14:2546:A:N6	15:14:2677:A:H61	2.19	0.40
15:14:2623:G:H5"	15:14:2624:U:OP1	2.21	0.40
15:14:2764:A:P	47:59:70:THR:HG21	2.61	0.40
15:14:2804:C:H5"	15:14:2805:C:OP2	2.22	0.40
27:C8:58:ARG:HA	27:C8:61:TRP:CE3	2.56	0.40
23:29:65:GLY:HA3	23:29:68:ALA:HB2	2.02	0.40
23:29:90:THR:O	23:29:91:VAL:C	2.59	0.40
29:AI:40:ILE:HG21	29:AI:40:ILE:HD13	1.78	0.40
26:1J:33:C:H4'	40:49:29:TRP:CH2	2.57	0.40
27:85:52:ARG:HH11	27:85:52:ARG:HD3	1.74	0.40
32:31:183:VAL:O	32:31:187:VAL:HG23	2.21	0.40
29:AA:78:ARG:HH11	29:AA:79:THR:H	1.67	0.40
32:39:89:VAL:O	32:39:90:PHE:C	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:39:155:LEU:HD22	32:39:185:ASP:HB3	2.02	0.40
38:88:109:VAL:HG13	38:88:113:GLN:HB3	2.02	0.40
42:6E:139:GLU:H	42:6E:139:GLU:HG3	1.72	0.40
43:A5:69:LEU:HA	43:A5:108:GLY:O	2.21	0.40
47:51:4:ILE:HD11	47:51:7:LEU:HD11	2.03	0.40
48:1A:4:ILE:HG13	48:1A:77:PRO:HB3	2.03	0.40
44:12:15:VAL:HG23	44:12:16:HIS:ND1	2.36	0.40
44:12:136:VAL:HG12	44:12:139:LYS:HD2	2.03	0.40
47:59:62:LYS:H	47:59:62:LYS:HG3	1.60	0.40
47:59:88:LEU:HD13	47:59:164:TYR:O	2.21	0.40
6:2I:18:ARG:HA	6:2I:81:ASP:H	1.87	0.40
52:W1:2:C:H2'	52:W1:3:C:C6	2.56	0.40
52:V4:38:A:H5"	52:V4:38:A:H8	1.86	0.40
1:13:741:G:C5	1:13:742:C:C5	3.09	0.40
1:13:912:C:C2	1:13:913:C:C5	3.10	0.40
1:13:1897:C:H4'	1:13:1940:U:O2'	2.22	0.40
1:1G:763:G:H2'	1:1G:764:U:C6	2.56	0.40
1:1G:1628:A:N3	1:1G:1628:A:H3'	2.37	0.40
1:1G:1845:C:H2'	1:1G:1846:U:C6	2.55	0.40
1:1G:1867:U:O3'	42:62:38:LEU:HD21	2.21	0.40
13:3I:7:ILE:HG21	50:7E:91:ARG:HB2	2.03	0.40
13:3I:85:ILE:HD13	13:3I:85:ILE:HA	1.28	0.40
15:1H:271:C:N3	15:1H:273:U:H5"	2.36	0.40
15:1H:296:C:H2'	15:1H:297:U:C6	2.56	0.40
15:1H:895:C:C2	15:1H:896:U:C5	3.10	0.40
15:1H:938:C:N3	15:1H:939:A:H1'	2.36	0.40
15:1H:1477:C:C5	15:1H:1619:A:H5"	2.57	0.40
15:1H:2351:A:H61	31:I8:43:THR:CG2	2.35	0.40
15:1H:2587:A:N7	23:21:145:LYS:HB2	2.37	0.40
15:1H:2767:G:H1	47:51:3:ARG:NH2	2.19	0.40
11:C5:87:LYS:H	11:C5:94:LYS:HG2	1.86	0.40
13:3A:53:ARG:HB3	13:3A:69:TYR:HE1	1.86	0.40
15:14:163:G:H2'	15:14:164:C:C6	2.56	0.40
15:14:903:G:H2'	15:14:904:G:H8	1.84	0.40
15:14:1059:G:C6	15:14:1061:C:C4	3.09	0.40
15:14:1512:C:H2'	15:14:1513:C:C6	2.56	0.40
15:14:1622:A:H2'	15:14:1623:G:O4'	2.21	0.40
15:14:1732:G:H5'	15:14:1796:A:O2'	2.22	0.40
15:14:1803:G:O2'	15:14:1983:C:OP1	2.28	0.40
15:14:2430:G:C6	15:14:2431:C:C4	3.09	0.40
15:14:2547:G:N2	15:14:2678:G:O2'	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2570:U:C4	15:14:2571:C:C2	3.10	0.40
21:68:31:LYS:HB3	21:68:32:TYR:CD1	2.57	0.40
16:75:24:PRO:HD3	16:75:52:ILE:HD12	2.03	0.40
16:75:88:ILE:HD11	16:75:125:ARG:NH1	2.34	0.40
18:69:3:VAL:O	18:69:19:VAL:N	2.48	0.40
18:69:37:VAL:HG12	18:69:38:LEU:HD12	2.03	0.40
24:4I:23:TYR:CD1	24:4I:67:GLU:HA	2.41	0.40
19:9A:32:ARG:HD2	19:9A:65:ILE:HD12	2.04	0.40
26:16:31:A:C2	26:16:58:G:C2	3.09	0.40
22:D5:122:ARG:HH22	38:45:134:ARG:HH12	1.69	0.40
23:29:10:GLY:O	23:29:24:THR:O	2.39	0.40
30:78:81:GLN:OE1	30:78:107:LYS:HB2	2.21	0.40
32:31:181:LEU:HD23	32:31:181:LEU:HA	1.99	0.40
29:AA:29:ARG:NH1	29:AA:47:HIS:HA	2.36	0.40
34:5E:16:GLN:HA	34:5E:19:LEU:HD12	2.03	0.40
35:D8:52:VAL:HG22	35:D8:55:ALA:HB3	2.02	0.40
35:95:8:GLY:HA3	35:95:23:GLU:HB3	2.04	0.40
40:41:81:LYS:HA	40:41:81:LYS:HD3	1.75	0.40
42:6E:45:ASP:O	42:6E:48:LYS:HB3	2.22	0.40
42:6E:94:ARG:O	42:6E:97:GLN:HB3	2.22	0.40
38:45:18:LYS:N	38:45:98:LYS:HZ3	2.19	0.40
43:E8:4:LYS:HB3	43:E8:106:ILE:HG12	2.03	0.40
43:E8:73:ALA:HB3	43:E8:106:ILE:HB	2.02	0.40
39:F5:79:GLY:C	39:F5:80:LEU:HG	2.40	0.40
40:49:63:ILE:HD12	40:49:141:PHE:CG	2.56	0.40
40:49:105:LYS:HA	40:49:109:VAL:HG23	2.04	0.40
44:1E:120:ALA:O	44:1E:124:SER:OG	2.26	0.40
45:98:77:ARG:O	45:98:80:PHE:N	2.54	0.40
44:12:6:THR:HG21	44:12:217:ARG:HB3	2.02	0.40
45:55:28:LEU:HD23	45:55:28:LEU:HA	1.83	0.40
50:72:97:VAL:HG22	50:72:129:VAL:C	2.41	0.40
52:W1:63:G:H2'	52:W1:64:A:O4'	2.22	0.40
52:V1:28:G:N2	52:V1:43:C:O2	2.54	0.40
52:V4:58:A:O2'	52:V4:59:U:OP1	2.35	0.40
1:13:710:G:N2	1:13:713:C:N4	2.69	0.40
1:13:785:G:H2'	1:13:786:G:H8	1.87	0.40
1:13:980:C:H2'	1:13:981:U:H6	1.86	0.40
1:13:1315:U:O4	1:13:1332:G:H1'	2.21	0.40
1:13:1354:G:C4	1:13:1355:C:C5	3.09	0.40
1:13:1504:G:P	13:3I:12:ARG:NH2	2.94	0.40
1:13:1639:A:O5'	1:13:1639:A:H8	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1700:G:C5	1:13:1701:U:C4	3.09	0.40
1:13:1780:A:C6	1:13:1781:C:C4	3.09	0.40
1:13:1795:A:H8	1:13:1795:A:OP1	2.05	0.40
1:13:1840:A:C8	1:13:1842:G:C6	3.10	0.40
2:A8:3:ARG:N	15:1H:2333:G:H22	2.18	0.40
1:1G:927:G:N7	56:1G:2414:HOH:O	2.37	0.40
1:1G:1059:C:H1'	1:1G:1169:G:O2'	2.20	0.40
1:1G:1293:G:N7	53:1G:2202:8UZ:N3	2.70	0.40
1:1G:2119:C:H2'	1:1G:2120:G:O4'	2.20	0.40
1:1G:2120:G:H2'	1:1G:2121:U:H5'	2.04	0.40
1:1G:2121:U:O2	1:1G:2122:A:N6	2.51	0.40
4:19:168:ARG:HG2	4:19:173:VAL:HG12	2.03	0.40
9:82:14:VAL:O	9:82:65:VAL:HA	2.21	0.40
15:1H:684:G:H2'	15:1H:685:G:O4'	2.22	0.40
15:1H:910:A:H2'	15:1H:911:G:O4'	2.21	0.40
15:1H:1214:U:H2'	15:1H:1215:C:H6	1.79	0.40
15:1H:1219:G:N2	15:1H:1228:C:C2	2.90	0.40
15:1H:1269:C:H2'	15:1H:1270:C:C6	2.56	0.40
15:1H:1531:U:O4	15:1H:1559:A:H8	2.04	0.40
15:1H:1647:C:H2'	15:1H:1648:C:H6	1.86	0.40
15:1H:1924:G:N2	15:1H:1927:C:H41	2.20	0.40
15:1H:2326:A:O2'	40:41:88:ILE:HG21	2.21	0.40
15:1H:2548:A:H2'	15:1H:2549:A:O4'	2.21	0.40
15:1H:2700:G:OP2	16:B8:51:ARG:NH2	2.54	0.40
10:15:94:HIS:O	10:15:97:ARG:HB2	2.22	0.40
11:C5:87:LYS:CG	11:C5:88:LYS:H	2.35	0.40
18:61:58:LEU:HD23	18:61:59:ALA:N	2.36	0.40
18:61:72:LEU:HD11	18:61:107:VAL:HG11	2.03	0.40
15:14:366:G:H2'	15:14:367:G:O4'	2.20	0.40
15:14:403:C:H2'	15:14:404:C:C6	2.57	0.40
15:14:512:C:H2'	15:14:513:C:H6	1.86	0.40
15:14:894:G:H8	15:14:894:G:O5'	2.04	0.40
15:14:1096:A:OP2	15:14:1158:G:N2	2.54	0.40
15:14:1193:G:C6	15:14:1194:C:C4	3.09	0.40
15:14:1436:C:C2	15:14:1437:G:C8	3.09	0.40
15:14:1453:C:O2'	15:14:1454:U:H5'	2.21	0.40
15:14:2065:C:H2'	15:14:2066:U:O4'	2.21	0.40
15:14:2120:C:C4	15:14:2121:U:C5	3.10	0.40
15:14:2178:G:N2	15:14:2179:G:O6	2.40	0.40
15:14:2480:C:O2'	15:14:2481:C:H5'	2.21	0.40
15:14:2654:A:C2	15:14:2794:A:C8	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2689:G:O2'	21:25:29:ASN:OD1	2.16	0.40
15:14:2736:U:N3	15:14:2886:A:H2	2.03	0.40
22:H8:68:PRO:O	22:H8:91:LEU:HB2	2.20	0.40
23:21:26:ILE:O	23:21:26:ILE:HG12	2.20	0.40
23:21:119:ARG:HH11	23:21:119:ARG:CG	2.34	0.40
19:9A:74:ARG:HB3	19:9A:81:PHE:CE1	2.56	0.40
27:C8:28:ARG:O	27:C8:35:ALA:HA	2.20	0.40
22:D5:10:ARG:HG3	22:D5:37:VAL:C	2.41	0.40
25:42:30:ALA:O	25:42:45:PHE:HA	2.21	0.40
28:I5:23:GLU:O	28:I5:25:TYR:HD1	2.05	0.40
30:35:88:LEU:HD22	30:35:114:ILE:HD13	2.02	0.40
30:35:107:LYS:O	30:35:109:GLY:N	2.49	0.40
36:N8:40:LYS:HG2	36:N8:46:CYS:HA	2.04	0.40
38:88:37:LEU:HA	38:88:37:LEU:HD23	1.68	0.40
35:95:94:LEU:HD23	35:95:94:LEU:HA	1.86	0.40
39:J8:83:GLU:C	39:J8:85:LEU:N	2.75	0.40
39:J8:92:LYS:HD2	39:J8:95:LEU:HD12	2.03	0.40
40:41:107:LEU:HD23	40:41:107:LEU:HA	1.82	0.40
40:49:9:ARG:O	40:49:12:TYR:N	2.54	0.40
40:49:68:PRO:HB3	40:49:92:VAL:HB	2.04	0.40
40:49:88:ILE:HA	40:49:88:ILE:HD12	1.79	0.40
44:1E:7:VAL:HG11	44:1E:217:ARG:NH1	2.30	0.40
44:1E:189:ASP:HB2	44:1E:205:ASP:HB3	2.02	0.40
42:62:143:ARG:NH1	52:V4:41:C:O2'	2.54	0.40
43:A5:51:LEU:HD23	43:A5:51:LEU:HA	1.85	0.40
47:51:151:ILE:O	47:51:162:ILE:HD12	2.21	0.40
47:51:169:VAL:C	47:51:170:ARG:HE	2.25	0.40
44:12:54:THR:O	44:12:57:PHE:HB3	2.22	0.40
47:59:19:VAL:O	47:59:25:LYS:HE3	2.22	0.40
8:2E:188:LEU:HD23	8:2E:188:LEU:HA	1.71	0.40
52:W1:34:G:C6	52:W1:35:A:C6	3.09	0.40
52:W1:37:A:H2'	52:W1:38:A:O4'	2.22	0.40
52:V1:18:G:O2'	52:V1:19:G:OP1	2.26	0.40
52:V1:40:C:H2'	52:V1:41:C:C6	2.56	0.40
1:13:1593:C:N4	9:8E:128:ARG:O	2.51	0.40
1:13:1614:U:C4	1:13:1839:U:H1'	2.57	0.40
1:13:1723:U:P	1:13:1736:G:H1	2.44	0.40
1:13:2017:C:H2'	1:13:2018:U:O4'	2.21	0.40
1:13:2159:C:H6	1:13:2159:C:OP2	2.04	0.40
3:B5:67:GLY:C	3:B5:69:TYR:N	2.74	0.40
4:11:50:THR:OG1	15:1H:1847:G:H1'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:8I:88:TYR:CD1	7:8I:88:TYR:C	2.95	0.40
8:22:4:LYS:HB2	8:22:4:LYS:HE2	1.86	0.40
9:8E:97:LYS:HB2	9:8E:102:LEU:HD12	2.03	0.40
1:1G:808:G:N2	1:1G:809:C:C2	2.89	0.40
1:1G:947:G:O5'	1:1G:947:G:H8	2.03	0.40
1:1G:1098:C:H42	1:1G:1104:G:H1	1.69	0.40
1:1G:1166:G:H5"	13:3A:113:ARG:NH1	2.36	0.40
1:1G:1200:U:O4	1:1G:1487:A:N6	2.54	0.40
1:1G:1454:G:O2'	50:72:12:ARG:NH1	2.54	0.40
1:1G:1545:G:H4'	25:42:20:GLN:HA	2.03	0.40
1:1G:1755:G:H1'	1:1G:1776:U:N3	2.37	0.40
1:1G:1825:G:H2'	1:1G:1826:U:H6	1.86	0.40
1:1G:1871:C:H2'	1:1G:1872:A:C8	2.57	0.40
1:1G:1944:C:H3'	1:1G:1945:A:C8	2.57	0.40
10:58:42:TRP:O	27:C8:64:ARG:HD2	2.22	0.40
2:65:93:LYS:HE3	2:65:93:LYS:HB2	1.69	0.40
2:65:104:GLY:O	2:65:106:ARG:NH1	2.54	0.40
12:Q8:39:LYS:O	12:Q8:39:LYS:HG2	2.15	0.40
13:3I:77:LEU:HD23	13:3I:77:LEU:HA	1.72	0.40
14:3E:120:LEU:HA	14:3E:120:LEU:HD23	1.79	0.40
15:1H:50:G:N3	15:1H:117:A:C2	2.89	0.40
15:1H:320:G:C6	15:1H:369:G:C6	3.10	0.40
15:1H:512:C:H2'	15:1H:513:C:C6	2.56	0.40
15:1H:901:G:O2'	15:1H:902:G:H5'	2.21	0.40
15:1H:1076:A:N6	15:1H:1173:G:H2'	2.36	0.40
15:1H:1110:G:N7	15:1H:1112:C:C4	2.90	0.40
15:1H:1408:A:C2	15:1H:1421:U:N3	2.83	0.40
15:1H:1825:A:C8	15:1H:1826:G:C8	3.09	0.40
15:1H:1925:A:N1	15:1H:1995:A:C6	2.89	0.40
15:1H:2135:G:C6	15:1H:2145:G:N7	2.90	0.40
15:1H:2181:G:H2'	15:1H:2182:G:C2	2.56	0.40
12:M5:58:ILE:HG21	12:M5:58:ILE:HD13	1.80	0.40
18:61:77:LEU:CB	18:61:140:LEU:HB3	2.50	0.40
15:14:327:C:H2'	15:14:328:U:C6	2.57	0.40
15:14:867:G:C2	15:14:1238:G:O6	2.74	0.40
15:14:1246:U:H2'	15:14:1247:U:H6	1.86	0.40
15:14:1252:A:C2	15:14:1254:G:C2	3.09	0.40
15:14:1428:A:H4'	15:14:1429:G:OP2	2.22	0.40
15:14:1483:A:H2'	15:14:1484:G:C8	2.57	0.40
15:14:1516:G:H5'	15:14:1517:C:OP1	2.22	0.40
15:14:1582:C:H42	15:14:1586:C:H42	1.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2513:C:P	56:14:3655:HOH:O	2.78	0.40
15:14:2521:U:C6	15:14:2600:U:O4	2.75	0.40
15:14:2652:U:C4	15:14:2653:G:C6	3.08	0.40
22:H8:46:LYS:HE3	22:H8:46:LYS:HB2	1.97	0.40
22:H8:139:VAL:HG13	22:H8:155:LEU:HD21	2.04	0.40
22:D5:60:GLU:O	22:D5:65:GLN:O	2.39	0.40
22:D5:76:LEU:HA	22:D5:84:GLU:H	1.86	0.40
22:D5:85:HIS:CE1	26:1J:77:G:H21	2.39	0.40
22:D5:138:GLU:O	22:D5:139:VAL:HG13	2.22	0.40
29:AI:41:VAL:HG11	29:AI:67:VAL:HA	2.03	0.40
30:78:97:PRO:HD3	30:78:126:VAL:O	2.22	0.40
27:85:74:LEU:HD22	27:85:79:PHE:HA	2.03	0.40
32:31:63:LYS:HZ2	32:31:67:GLN:HB2	1.87	0.40
30:35:46:LYS:HB3	30:35:46:LYS:HE2	1.71	0.40
39:J8:53:VAL:HB	39:J8:58:ILE:HD13	2.02	0.40
42:6E:27:ILE:HD11	42:6E:43:PHE:CD2	2.56	0.40
42:6E:62:PHE:CD1	42:6E:124:LEU:HD11	2.53	0.40
40:49:130:ASN:HB3	40:49:160:VAL:HA	2.04	0.40
44:1E:19:HIS:CD2	44:1E:19:HIS:C	2.94	0.40
45:98:8:ARG:O	45:98:17:ARG:HD3	2.22	0.40
3:F8:1:MET:O	3:F8:3:THR:HG23	2.22	0.40
46:G5:31:GLU:O	46:G5:35:LEU:HD23	2.22	0.40
46:G5:37:PHE:O	46:G5:41:ILE:HG23	2.21	0.40
50:72:109:ILE:CG2	50:72:137:VAL:HB	2.52	0.40
50:72:120:THR:CG2	50:72:123:GLU:H	2.34	0.40
51:Y4:49:U:H6	51:Y4:49:U:O5'	2.05	0.40
52:W4:51:U:C2	52:W4:52:G:C8	3.10	0.40
52:X4:40:C:H2'	52:X4:41:C:H6	1.87	0.40
52:V4:10:G:H1	52:V4:25:C:H42	1.70	0.40
52:V4:41:C:H2'	52:V4:42:C:O4'	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	65	109/112 (97%)	86 (79%)	20 (18%)	3 (3%)	5 22
2	A8	109/112 (97%)	92 (84%)	15 (14%)	2 (2%)	8 33
3	B5	90/96 (94%)	82 (91%)	6 (7%)	2 (2%)	6 28
3	F8	92/96 (96%)	87 (95%)	3 (3%)	2 (2%)	6 28
4	11	271/276 (98%)	255 (94%)	12 (4%)	4 (2%)	10 38
4	19	271/276 (98%)	252 (93%)	13 (5%)	6 (2%)	6 28
5	L5	45/49 (92%)	43 (96%)	2 (4%)	0	100 100
5	P8	45/49 (92%)	42 (93%)	2 (4%)	1 (2%)	6 28
6	2A	114/129 (88%)	104 (91%)	8 (7%)	2 (2%)	8 33
6	2I	114/129 (88%)	102 (90%)	10 (9%)	2 (2%)	8 33
7	8A	97/105 (92%)	92 (95%)	5 (5%)	0	100 100
7	8I	98/105 (93%)	93 (95%)	5 (5%)	0	100 100
8	22	204/239 (85%)	179 (88%)	25 (12%)	0	100 100
8	2E	203/239 (85%)	182 (90%)	20 (10%)	1 (0%)	29 64
9	82	122/128 (95%)	112 (92%)	9 (7%)	1 (1%)	19 53
9	8E	125/128 (98%)	107 (86%)	17 (14%)	1 (1%)	19 53
10	15	136/140 (97%)	123 (90%)	12 (9%)	1 (1%)	22 56
10	58	136/140 (97%)	116 (85%)	17 (12%)	3 (2%)	6 28
11	C5	102/110 (93%)	72 (71%)	28 (28%)	2 (2%)	7 30
11	G8	101/110 (92%)	79 (78%)	16 (16%)	6 (6%)	1 7
12	M5	60/65 (92%)	50 (83%)	6 (10%)	4 (7%)	1 5
12	Q8	58/65 (89%)	37 (64%)	16 (28%)	5 (9%)	1 3
13	3A	123/132 (93%)	105 (85%)	15 (12%)	3 (2%)	6 26
13	3I	120/132 (91%)	105 (88%)	15 (12%)	0	100 100
14	32	206/209 (99%)	180 (87%)	26 (13%)	0	100 100
14	3E	206/209 (99%)	196 (95%)	9 (4%)	1 (0%)	29 64
16	75	135/146 (92%)	120 (89%)	13 (10%)	2 (2%)	10 38
16	B8	127/146 (87%)	118 (93%)	9 (7%)	0	100 100
17	H5	57/60 (95%)	53 (93%)	4 (7%)	0	100 100
17	L8	55/60 (92%)	48 (87%)	5 (9%)	2 (4%)	3 16

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
18	61	144/148 (97%)	117 (81%)	24 (17%)	3 (2%)	7 29
18	69	144/148 (97%)	111 (77%)	29 (20%)	4 (3%)	5 22
19	9A	67/88 (76%)	63 (94%)	4 (6%)	0	100 100
19	9I	65/88 (74%)	63 (97%)	1 (2%)	1 (2%)	10 38
20	1B	23/27 (85%)	21 (91%)	2 (9%)	0	100 100
20	1F	21/27 (78%)	20 (95%)	1 (5%)	0	100 100
21	25	120/122 (98%)	115 (96%)	5 (4%)	0	100 100
21	68	120/122 (98%)	114 (95%)	5 (4%)	1 (1%)	19 53
22	D5	129/206 (63%)	106 (82%)	19 (15%)	4 (3%)	4 19
22	H8	169/206 (82%)	137 (81%)	24 (14%)	8 (5%)	2 11
23	21	203/206 (98%)	161 (79%)	33 (16%)	9 (4%)	2 12
23	29	203/206 (98%)	157 (77%)	34 (17%)	12 (6%)	1 7
24	4A	114/126 (90%)	94 (82%)	19 (17%)	1 (1%)	17 51
24	4I	114/126 (90%)	95 (83%)	18 (16%)	1 (1%)	17 51
25	42	149/162 (92%)	142 (95%)	7 (5%)	0	100 100
25	4E	149/162 (92%)	142 (95%)	6 (4%)	1 (1%)	22 56
27	85	115/118 (98%)	106 (92%)	9 (8%)	0	100 100
27	C8	115/118 (98%)	107 (93%)	5 (4%)	3 (3%)	5 24
28	I5	61/71 (86%)	31 (51%)	28 (46%)	2 (3%)	4 18
28	M8	64/71 (90%)	41 (64%)	21 (33%)	2 (3%)	4 19
29	AA	76/93 (82%)	62 (82%)	12 (16%)	2 (3%)	5 24
29	AI	78/93 (84%)	67 (86%)	7 (9%)	4 (5%)	2 9
30	35	148/150 (99%)	112 (76%)	28 (19%)	8 (5%)	2 9
30	78	145/150 (97%)	117 (81%)	22 (15%)	6 (4%)	3 13
31	E5	82/85 (96%)	75 (92%)	5 (6%)	2 (2%)	6 26
31	I8	81/85 (95%)	76 (94%)	5 (6%)	0	100 100
32	31	200/210 (95%)	181 (90%)	16 (8%)	3 (2%)	10 38
32	39	206/210 (98%)	164 (80%)	33 (16%)	9 (4%)	2 12
33	5A	56/61 (92%)	48 (86%)	7 (12%)	1 (2%)	8 33
33	5I	58/61 (95%)	50 (86%)	6 (10%)	2 (3%)	3 17
34	52	99/101 (98%)	94 (95%)	5 (5%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
34	5E	99/101 (98%)	94 (95%)	5 (5%)	0	100 100
35	95	99/101 (98%)	77 (78%)	18 (18%)	4 (4%)	3 14
35	D8	99/101 (98%)	92 (93%)	5 (5%)	2 (2%)	7 30
36	J5	54/60 (90%)	48 (89%)	6 (11%)	0	100 100
36	N8	53/60 (88%)	44 (83%)	7 (13%)	2 (4%)	3 15
37	BA	97/106 (92%)	84 (87%)	11 (11%)	2 (2%)	7 29
37	BI	97/106 (92%)	85 (88%)	12 (12%)	0	100 100
38	45	138/141 (98%)	111 (80%)	25 (18%)	2 (1%)	11 39
38	88	139/141 (99%)	120 (86%)	13 (9%)	6 (4%)	2 12
39	F5	92/98 (94%)	85 (92%)	6 (6%)	1 (1%)	14 46
39	J8	93/98 (95%)	82 (88%)	8 (9%)	3 (3%)	4 19
40	41	179/182 (98%)	161 (90%)	15 (8%)	3 (2%)	9 34
40	49	179/182 (98%)	155 (87%)	22 (12%)	2 (1%)	14 46
41	6A	86/89 (97%)	81 (94%)	5 (6%)	0	100 100
41	6I	86/89 (97%)	80 (93%)	6 (7%)	0	100 100
42	62	143/156 (92%)	135 (94%)	8 (6%)	0	100 100
42	6E	140/156 (90%)	133 (95%)	6 (4%)	1 (1%)	22 56
43	A5	111/113 (98%)	104 (94%)	5 (4%)	2 (2%)	8 33
43	E8	110/113 (97%)	102 (93%)	8 (7%)	0	100 100
44	12	235/256 (92%)	199 (85%)	33 (14%)	3 (1%)	12 41
44	1E	235/256 (92%)	195 (83%)	38 (16%)	2 (1%)	17 51
45	55	115/118 (98%)	105 (91%)	7 (6%)	3 (3%)	5 24
45	98	116/118 (98%)	101 (87%)	12 (10%)	3 (3%)	5 24
46	G5	65/72 (90%)	59 (91%)	4 (6%)	2 (3%)	4 19
46	K8	66/72 (92%)	62 (94%)	1 (2%)	3 (4%)	2 12
47	51	172/180 (96%)	150 (87%)	16 (9%)	6 (4%)	3 17
47	59	168/180 (93%)	131 (78%)	32 (19%)	5 (3%)	4 20
48	1A	97/105 (92%)	91 (94%)	6 (6%)	0	100 100
48	1I	97/105 (92%)	89 (92%)	8 (8%)	0	100 100
49	7A	82/88 (93%)	76 (93%)	6 (7%)	0	100 100
49	7I	82/88 (93%)	78 (95%)	4 (5%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
50	72	136/138 (99%)	128 (94%)	7 (5%)	1 (1%)	22 56
50	7E	136/138 (99%)	125 (92%)	10 (7%)	1 (1%)	22 56
All	All	11145/11946 (93%)	9763 (88%)	1178 (11%)	204 (2%)	8 33

All (204) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	11	240	ALA
6	2A	48	ILE
4	19	237	GLU
12	Q8	51	ALA
14	3E	31	CYS
9	82	118	LYS
22	H8	6	LYS
22	H8	165	VAL
23	21	78	LEU
23	21	83	ASP
22	D5	53	ILE
22	D5	165	VAL
23	29	25	VAL
23	29	59	VAL
30	78	57	THR
28	I5	5	ILE
29	AA	11	VAL
30	35	57	THR
31	E5	33	ALA
36	N8	42	PRO
32	39	22	ALA
33	5A	29	ARG
35	95	79	VAL
35	95	85	LYS
37	BA	73	HIS
38	45	27	VAL
38	45	81	VAL
39	F5	30	VAL
46	K8	48	HIS
45	55	107	ASP
6	2A	101	SER
2	65	87	PHE
11	G8	54	LYS
11	G8	81	LYS

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Mol	Chain	Res	Type
4	19	33	LEU
4	19	273	ARG
12	Q8	6	THR
12	Q8	31	HIS
17	L8	54	VAL
12	M5	40	GLU
12	M5	51	ALA
13	3A	18	VAL
19	9I	22	VAL
22	H8	60	GLU
23	21	60	ASN
23	21	118	LYS
24	4I	83	ASP
27	C8	89	GLU
27	C8	90	VAL
27	C8	93	LYS
28	M8	50	VAL
23	29	26	ILE
23	29	81	ILE
29	AI	67	VAL
32	31	197	ASP
30	35	6	LEU
30	35	108	LYS
36	N8	41	PRO
32	39	25	PRO
32	39	128	ALA
38	88	66	ILE
42	6E	152	ALA
44	12	7	VAL
50	7E	86	ILE
3	F8	2	LYS
46	G5	48	HIS
4	11	122	ASP
10	58	97	ARG
11	G8	40	GLU
12	Q8	47	LYS
11	C5	20	TYR
11	C5	29	GLU
17	L8	53	LEU
12	M5	53	PRO
18	61	145	VAL
21	68	97	ARG

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Mol	Chain	Res	Type
16	75	2	ASN
22	H8	81	ARG
23	21	82	ARG
18	69	111	PRO
18	69	145	VAL
23	29	9	VAL
23	29	51	PHE
23	29	90	THR
30	35	35	HIS
32	39	89	VAL
32	39	124	LEU
32	39	167	ALA
38	88	90	VAL
39	J8	76	ARG
40	41	97	ASP
46	K8	43	GLN
47	51	83	TYR
45	55	3	HIS
46	G5	47	ASN
47	59	131	VAL
3	B5	68	ARG
10	58	22	THR
10	58	128	HIS
12	Q8	43	GLN
18	61	12	LEU
18	61	133	HIS
16	75	107	ASP
22	H8	59	LEU
23	21	21	VAL
22	D5	161	VAL
29	AI	7	LYS
33	5I	13	THR
38	88	6	ARG
38	88	134	ARG
35	95	71	LEU
39	J8	75	GLU
40	41	98	ARG
43	A5	44	ALA
46	K8	47	ASN
44	12	6	THR
47	59	92	ILE
8	2E	4	LYS

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Mol	Chain	Res	Type
50	72	73	ASP
2	A8	4	LEU
2	A8	88	ASP
2	65	111	GLU
11	G8	76	CYS
10	15	128	HIS
13	3A	47	LYS
23	21	56	PRO
22	D5	8	TYR
30	78	12	ALA
32	31	198	ALA
30	35	16	ARG
30	35	34	GLY
31	E5	44	ARG
32	39	21	ALA
32	39	24	LEU
38	88	3	MET
40	41	5	VAL
37	BA	10	LEU
40	49	47	LYS
44	1E	13	ALA
45	98	4	LEU
45	98	45	ARG
45	98	65	LEU
43	A5	93	ALA
47	51	12	PRO
47	51	167	GLU
45	55	82	GLU
3	F8	68	ARG
6	2I	82	VAL
4	11	3	VAL
4	11	123	ALA
9	8E	112	LYS
2	65	4	LEU
4	19	118	VAL
23	21	55	ASN
23	29	45	THR
23	29	52	LEU
23	29	77	ILE
23	29	91	VAL
28	I5	33	VAL
33	5I	14	PRO

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Mol	Chain	Res	Type
30	35	7	ARG
47	51	85	LYS
5	P8	46	VAL
6	2I	91	ARG
11	G8	53	PRO
4	19	3	VAL
22	H8	141	VAL
28	M8	5	ILE
23	29	62	PRO
30	78	7	ARG
30	35	62	LEU
32	39	84	VAL
35	95	72	VAL
40	49	5	VAL
44	1E	239	VAL
3	B5	51	VAL
4	19	240	ALA
22	H8	53	ILE
23	21	72	VAL
18	69	119	PRO
25	4E	115	VAL
30	78	95	VAL
32	31	24	LEU
35	D8	49	THR
44	12	39	ILE
47	59	168	PRO
11	G8	77	PRO
24	4A	84	ILE
29	AI	9	VAL
29	AI	41	VAL
35	D8	36	PRO
39	J8	84	GLY
47	51	92	ILE
47	51	127	GLU
12	M5	52	LYS
13	3A	96	VAL
18	69	144	VAL
30	78	47	ASP
29	AA	67	VAL
38	88	27	VAL
47	59	4	ILE
47	59	99	VAL

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Mol	Chain	Res	Type
22	H8	62	PRO
30	78	20	GLY

5.3.2 Protein sidechains (i)

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	65	87/88 (99%)	60 (69%)	27 (31%)	0 1
2	A8	87/88 (99%)	65 (75%)	22 (25%)	0 2
3	B5	74/78 (95%)	60 (81%)	14 (19%)	1 7
3	F8	76/78 (97%)	64 (84%)	12 (16%)	2 10
4	11	215/218 (99%)	178 (83%)	37 (17%)	2 8
4	19	214/218 (98%)	174 (81%)	40 (19%)	1 7
5	L5	40/42 (95%)	29 (72%)	11 (28%)	0 1
5	P8	40/42 (95%)	33 (82%)	7 (18%)	2 8
6	2A	88/99 (89%)	77 (88%)	11 (12%)	4 17
6	2I	88/99 (89%)	73 (83%)	15 (17%)	2 9
7	8A	94/97 (97%)	80 (85%)	14 (15%)	3 12
7	8I	95/97 (98%)	75 (79%)	20 (21%)	1 4
8	22	160/188 (85%)	121 (76%)	39 (24%)	0 2
8	2E	159/188 (85%)	122 (77%)	37 (23%)	1 3
9	82	95/99 (96%)	80 (84%)	15 (16%)	2 10
9	8E	98/99 (99%)	72 (74%)	26 (26%)	0 2
10	15	117/119 (98%)	91 (78%)	26 (22%)	1 3
10	58	117/119 (98%)	90 (77%)	27 (23%)	1 3
11	C5	85/91 (93%)	62 (73%)	23 (27%)	0 1
11	G8	84/91 (92%)	59 (70%)	25 (30%)	0 1
12	M5	52/55 (94%)	42 (81%)	10 (19%)	1 6
12	Q8	50/55 (91%)	34 (68%)	16 (32%)	0 1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
13	3A	104/109 (95%)	80 (77%)	24 (23%)	1 3
13	3I	103/109 (94%)	87 (84%)	16 (16%)	2 11
14	32	180/181 (99%)	146 (81%)	34 (19%)	1 7
14	3E	180/181 (99%)	151 (84%)	29 (16%)	2 10
16	75	120/127 (94%)	86 (72%)	34 (28%)	0 1
16	B8	115/127 (91%)	81 (70%)	34 (30%)	0 1
17	H5	51/52 (98%)	41 (80%)	10 (20%)	1 6
17	L8	49/52 (94%)	38 (78%)	11 (22%)	1 3
18	61	122/124 (98%)	87 (71%)	35 (29%)	0 1
18	69	122/124 (98%)	99 (81%)	23 (19%)	1 7
19	9A	60/77 (78%)	44 (73%)	16 (27%)	0 2
19	9I	59/77 (77%)	47 (80%)	12 (20%)	1 5
20	1B	20/22 (91%)	19 (95%)	1 (5%)	24 57
20	1F	18/22 (82%)	18 (100%)	0	100 100
21	25	100/100 (100%)	80 (80%)	20 (20%)	1 5
21	68	100/100 (100%)	83 (83%)	17 (17%)	2 9
22	D5	125/179 (70%)	93 (74%)	32 (26%)	0 2
22	H8	152/179 (85%)	122 (80%)	30 (20%)	1 6
23	21	165/166 (99%)	129 (78%)	36 (22%)	1 4
23	29	165/166 (99%)	128 (78%)	37 (22%)	1 3
24	4A	94/101 (93%)	78 (83%)	16 (17%)	2 9
24	4I	94/101 (93%)	77 (82%)	17 (18%)	1 7
25	42	116/123 (94%)	92 (79%)	24 (21%)	1 4
25	4E	116/123 (94%)	90 (78%)	26 (22%)	1 3
27	85	93/94 (99%)	77 (83%)	16 (17%)	2 8
27	C8	93/94 (99%)	75 (81%)	18 (19%)	1 6
28	I5	57/63 (90%)	42 (74%)	15 (26%)	0 2
28	M8	59/63 (94%)	43 (73%)	16 (27%)	0 1
29	AA	67/80 (84%)	50 (75%)	17 (25%)	0 2
29	AI	70/80 (88%)	49 (70%)	21 (30%)	0 1
30	35	116/116 (100%)	82 (71%)	34 (29%)	0 1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
30	78	114/116 (98%)	82 (72%)	32 (28%)	0 1
31	E5	62/67 (92%)	51 (82%)	11 (18%)	2 8
31	I8	66/67 (98%)	63 (96%)	3 (4%)	27 61
32	31	161/166 (97%)	133 (83%)	28 (17%)	2 8
32	39	165/166 (99%)	123 (74%)	42 (26%)	0 2
33	5A	48/50 (96%)	36 (75%)	12 (25%)	0 2
33	5I	49/50 (98%)	36 (74%)	13 (26%)	0 2
34	52	90/90 (100%)	69 (77%)	21 (23%)	1 3
34	5E	90/90 (100%)	78 (87%)	12 (13%)	4 15
35	95	82/82 (100%)	59 (72%)	23 (28%)	0 1
35	D8	82/82 (100%)	55 (67%)	27 (33%)	0 1
36	J5	48/52 (92%)	41 (85%)	7 (15%)	3 13
36	N8	48/52 (92%)	38 (79%)	10 (21%)	1 4
37	BA	76/82 (93%)	63 (83%)	13 (17%)	2 8
37	BI	76/82 (93%)	62 (82%)	14 (18%)	1 7
38	45	110/111 (99%)	85 (77%)	25 (23%)	1 3
38	88	111/111 (100%)	87 (78%)	24 (22%)	1 4
39	F5	79/83 (95%)	61 (77%)	18 (23%)	1 3
39	J8	80/83 (96%)	63 (79%)	17 (21%)	1 4
40	41	155/156 (99%)	118 (76%)	37 (24%)	0 2
40	49	155/156 (99%)	123 (79%)	32 (21%)	1 4
41	6A	79/80 (99%)	65 (82%)	14 (18%)	2 8
41	6I	79/80 (99%)	70 (89%)	9 (11%)	5 21
42	62	121/127 (95%)	98 (81%)	23 (19%)	1 6
42	6E	118/127 (93%)	97 (82%)	21 (18%)	2 8
43	A5	92/92 (100%)	75 (82%)	17 (18%)	1 7
43	E8	91/92 (99%)	73 (80%)	18 (20%)	1 6
44	12	205/220 (93%)	158 (77%)	47 (23%)	1 3
44	1E	205/220 (93%)	162 (79%)	43 (21%)	1 4
45	55	100/101 (99%)	77 (77%)	23 (23%)	1 3
45	98	101/101 (100%)	79 (78%)	22 (22%)	1 4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
46	G5	63/67 (94%)	46 (73%)	17 (27%)	0 2
46	K8	64/67 (96%)	43 (67%)	21 (33%)	0 1
47	51	145/148 (98%)	108 (74%)	37 (26%)	0 2
47	59	142/148 (96%)	105 (74%)	37 (26%)	0 2
48	1A	89/92 (97%)	72 (81%)	17 (19%)	1 6
48	1I	89/92 (97%)	73 (82%)	16 (18%)	1 7
49	7A	72/74 (97%)	62 (86%)	10 (14%)	3 14
49	7I	72/74 (97%)	57 (79%)	15 (21%)	1 4
50	72	119/119 (100%)	98 (82%)	21 (18%)	2 8
50	7E	119/119 (100%)	97 (82%)	22 (18%)	1 7
All	All	9412/9894 (95%)	7396 (79%)	2016 (21%)	1 4

All (2016) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	A8	4	LEU
2	A8	8	GLU
2	A8	15	ARG
2	A8	17	ARG
2	A8	24	LEU
2	A8	35	ILE
2	A8	36	TYR
2	A8	42	ASP
2	A8	44	LYS
2	A8	46	VAL
2	A8	50	SER
2	A8	54	LEU
2	A8	58	LEU
2	A8	69	VAL
2	A8	73	LEU
2	A8	78	LEU
2	A8	89	ARG
2	A8	101	LEU
2	A8	106	ARG
2	A8	107	GLU
2	A8	111	GLU
2	A8	112	PHE
3	B5	3	THR

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Mol	Chain	Res	Type
3	B5	27	THR
3	B5	45	THR
3	B5	48	LYS
3	B5	54	VAL
3	B5	55	ASN
3	B5	60	ARG
3	B5	62	LYS
3	B5	63	LYS
3	B5	66	LEU
3	B5	77	LYS
3	B5	78	LYS
3	B5	80	ILE
3	B5	88	LYS
4	11	13	ARG
4	11	16	MET
4	11	17	THR
4	11	23	GLU
4	11	27	THR
4	11	34	VAL
4	11	35	LYS
4	11	37	LEU
4	11	38	LYS
4	11	61	LEU
4	11	64	ILE
4	11	65	ILE
4	11	68	LYS
4	11	88	ARG
4	11	94	LEU
4	11	103	ARG
4	11	105	ILE
4	11	106	ILE
4	11	112	GLN
4	11	126	GLN
4	11	142	VAL
4	11	155	LEU
4	11	165	ILE
4	11	183	ARG
4	11	192	THR
4	11	217	ARG
4	11	218	ARG
4	11	229	VAL
4	11	237	GLU

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Mol	Chain	Res	Type
4	11	242	ARG
4	11	254	THR
4	11	255	LYS
4	11	257	LEU
4	11	261	LYS
4	11	262	ARG
4	11	263	ARG
4	11	273	ARG
5	L5	1	MET
5	L5	2	LYS
5	L5	4	THR
5	L5	8	ASN
5	L5	14	LYS
5	L5	33	ARG
5	L5	39	ARG
5	L5	41	ARG
5	L5	43	THR
5	L5	46	VAL
5	L5	47	ARG
6	2A	11	LYS
6	2A	12	ARG
6	2A	14	VAL
6	2A	30	VAL
6	2A	31	THR
6	2A	87	THR
6	2A	93	GLN
6	2A	105	VAL
6	2A	109	VAL
6	2A	114	VAL
6	2A	124	LYS
7	8I	6	LEU
7	8I	19	VAL
7	8I	27	PHE
7	8I	31	LEU
7	8I	34	LYS
7	8I	45	HIS
7	8I	48	GLU
7	8I	52	LYS
7	8I	60	ILE
7	8I	63	ARG
7	8I	68	ARG
7	8I	74	LEU

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Mol	Chain	Res	Type
7	8I	78	GLU
7	8I	86	GLU
7	8I	87	LYS
7	8I	88	TYR
7	8I	89	LEU
7	8I	92	ARG
7	8I	97	SER
7	8I	101	ARG
8	22	3	ASN
8	22	4	LYS
8	22	5	ILE
8	22	11	ARG
8	22	16	ARG
8	22	20	SER
8	22	21	ARG
8	22	22	TRP
8	22	29	TYR
8	22	31	HIS
8	22	36	ASP
8	22	47	LEU
8	22	54	ARG
8	22	76	VAL
8	22	82	GLU
8	22	83	ARG
8	22	84	ILE
8	22	86	VAL
8	22	90	GLU
8	22	94	LEU
8	22	101	LEU
8	22	103	VAL
8	22	104	GLN
8	22	107	GLN
8	22	115	LEU
8	22	119	ARG
8	22	122	GLU
8	22	131	ARG
8	22	140	ARG
8	22	144	SER
8	22	166	GLU
8	22	167	TRP
8	22	175	LEU
8	22	190	ARG

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Mol	Chain	Res	Type
8	22	192	THR
8	22	196	LEU
8	22	198	VAL
8	22	202	ILE
8	22	207	VAL
9	8E	2	GLU
9	8E	9	ARG
9	8E	10	ARG
9	8E	20	ARG
9	8E	25	LYS
9	8E	34	ASN
9	8E	35	GLU
9	8E	38	GLN
9	8E	40	LEU
9	8E	42	ARG
9	8E	44	VAL
9	8E	47	LEU
9	8E	70	LYS
9	8E	75	ASP
9	8E	79	LEU
9	8E	92	TYR
9	8E	93	ARG
9	8E	95	LYS
9	8E	99	LEU
9	8E	108	VAL
9	8E	112	LYS
9	8E	113	LYS
9	8E	118	LYS
9	8E	121	ARG
9	8E	124	GLN
9	8E	125	TYR
10	58	4	TYR
10	58	7	LYS
10	58	10	GLU
10	58	14	VAL
10	58	28	THR
10	58	29	LYS
10	58	32	THR
10	58	33	LEU
10	58	34	LEU
10	58	43	THR
10	58	48	MET

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Mol	Chain	Res	Type
10	58	58	ASP
10	58	60	ILE
10	58	61	ARG
10	58	62	VAL
10	58	67	LEU
10	58	87	LEU
10	58	90	MET
10	58	96	GLU
10	58	99	LEU
10	58	118	LYS
10	58	120	LEU
10	58	127	ASP
10	58	130	HIS
10	58	131	GLN
10	58	133	GLN
10	58	134	ARG
2	65	3	ARG
2	65	11	LYS
2	65	12	PHE
2	65	13	ARG
2	65	17	ARG
2	65	19	LYS
2	65	24	LEU
2	65	27	SER
2	65	36	TYR
2	65	38	GLN
2	65	42	ASP
2	65	50	SER
2	65	52	SER
2	65	56	LEU
2	65	63	THR
2	65	64	GLU
2	65	69	VAL
2	65	73	LEU
2	65	80	LEU
2	65	83	LYS
2	65	88	ASP
2	65	89	ARG
2	65	93	LYS
2	65	101	LEU
2	65	106	ARG
2	65	110	LEU

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Mol	Chain	Res	Type
2	65	112	PHE
11	G8	21	LYS
11	G8	24	VAL
11	G8	33	LYS
11	G8	38	ILE
11	G8	40	GLU
11	G8	42	VAL
11	G8	43	ASN
11	G8	44	ILE
11	G8	46	LYS
11	G8	54	LYS
11	G8	55	TYR
11	G8	57	GLN
11	G8	62	GLU
11	G8	63	LYS
11	G8	64	GLU
11	G8	67	LEU
11	G8	70	SER
11	G8	82	PRO
11	G8	84	ARG
11	G8	85	VAL
11	G8	86	ARG
11	G8	96	ILE
11	G8	97	ARG
11	G8	99	CYS
11	G8	102	CYS
4	19	13	ARG
4	19	24	ILE
4	19	28	GLU
4	19	32	SER
4	19	39	LYS
4	19	43	ARG
4	19	49	ILE
4	19	61	LEU
4	19	64	ILE
4	19	65	ILE
4	19	69	ARG
4	19	72	LYS
4	19	73	VAL
4	19	82	ILE
4	19	94	LEU
4	19	99	ASP

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Mol	Chain	Res	Type
4	19	105	ILE
4	19	111	LEU
4	19	140	THR
4	19	147	LEU
4	19	166	GLN
4	19	182	LEU
4	19	192	THR
4	19	204	ILE
4	19	211	ARG
4	19	212	SER
4	19	218	ARG
4	19	232	PRO
4	19	237	GLU
4	19	242	ARG
4	19	244	ARG
4	19	257	LEU
4	19	260	ARG
4	19	262	ARG
4	19	263	ARG
4	19	267	SER
4	19	268	ARG
4	19	270	ILE
4	19	271	ILE
4	19	273	ARG
12	Q8	11	LYS
12	Q8	22	VAL
12	Q8	27	THR
12	Q8	30	ARG
12	Q8	31	HIS
12	Q8	32	LEU
12	Q8	39	LYS
12	Q8	42	ARG
12	Q8	43	GLN
12	Q8	46	ARG
12	Q8	48	PHE
12	Q8	49	VAL
12	Q8	54	GLU
12	Q8	57	ARG
12	Q8	60	LEU
12	Q8	61	LEU
13	3I	7	ILE
13	3I	11	VAL

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Mol	Chain	Res	Type
13	3I	20	LYS
13	3I	33	ARG
13	3I	53	ARG
13	3I	60	LEU
13	3I	81	SER
13	3I	82	VAL
13	3I	83	VAL
13	3I	85	ILE
13	3I	91	LYS
13	3I	92	ASP
13	3I	96	VAL
13	3I	114	LYS
13	3I	116	SER
13	3I	126	LYS
7	8A	10	VAL
7	8A	22	LEU
7	8A	24	GLU
7	8A	31	LEU
7	8A	52	LYS
7	8A	53	LEU
7	8A	60	ILE
7	8A	63	ARG
7	8A	68	ARG
7	8A	70	ARG
7	8A	75	ARG
7	8A	81	ARG
7	8A	89	LEU
7	8A	97	SER
14	3E	3	ARG
14	3E	5	ILE
14	3E	8	VAL
14	3E	9	CYS
14	3E	10	ARG
14	3E	15	GLU
14	3E	19	LEU
14	3E	26	CYS
14	3E	35	ARG
14	3E	46	LYS
14	3E	47	ARG
14	3E	49	ARG
14	3E	53	ASP
14	3E	58	LEU

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Mol	Chain	Res	Type
14	3E	61	LYS
14	3E	70	ILE
14	3E	83	SER
14	3E	96	LEU
14	3E	106	TYR
14	3E	108	LEU
14	3E	122	ARG
14	3E	127	THR
14	3E	135	LEU
14	3E	141	ARG
14	3E	155	LEU
14	3E	170	VAL
14	3E	175	SER
14	3E	177	ASP
14	3E	184	LYS
9	82	7	THR
9	82	38	GLN
9	82	42	ARG
9	82	64	THR
9	82	88	TYR
9	82	89	ASN
9	82	91	ASP
9	82	95	LYS
9	82	104	ARG
9	82	112	LYS
9	82	113	LYS
9	82	117	HIS
9	82	118	LYS
9	82	124	GLN
9	82	125	TYR
10	15	1	MET
10	15	9	VAL
10	15	16	ILE
10	15	29	LYS
10	15	32	THR
10	15	33	LEU
10	15	34	LEU
10	15	37	LYS
10	15	39	ARG
10	15	41	ASP
10	15	42	TRP
10	15	48	MET

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Mol	Chain	Res	Type
10	15	58	ASP
10	15	63	THR
10	15	67	LEU
10	15	68	GLU
10	15	85	ILE
10	15	87	LEU
10	15	93	THR
10	15	94	HIS
10	15	97	ARG
10	15	99	LEU
10	15	106	MET
10	15	127	ASP
10	15	130	HIS
10	15	135	PRO
16	B8	1	MET
16	B8	10	VAL
16	B8	13	ARG
16	B8	15	VAL
16	B8	16	ARG
16	B8	17	THR
16	B8	18	ASP
16	B8	21	GLU
16	B8	23	ARG
16	B8	27	THR
16	B8	30	VAL
16	B8	35	LYS
16	B8	38	ASN
16	B8	41	ARG
16	B8	42	ILE
16	B8	50	ILE
16	B8	55	ASN
16	B8	58	ASN
16	B8	59	THR
16	B8	62	THR
16	B8	65	LYS
16	B8	74	ARG
16	B8	86	ILE
16	B8	87	ASP
16	B8	88	ILE
16	B8	89	VAL
16	B8	99	LEU
16	B8	102	ILE

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Mol	Chain	Res	Type
16	B8	109	GLU
16	B8	110	ILE
16	B8	111	ARG
16	B8	112	ARG
16	B8	113	LYS
16	B8	118	ARG
11	C5	2	ARG
11	C5	3	VAL
11	C5	6	HIS
11	C5	19	LYS
11	C5	23	ARG
11	C5	29	GLU
11	C5	31	LEU
11	C5	33	LYS
11	C5	37	VAL
11	C5	47	LYS
11	C5	50	ARG
11	C5	51	VAL
11	C5	52	SER
11	C5	55	TYR
11	C5	62	GLU
11	C5	63	LYS
11	C5	70	SER
11	C5	76	CYS
11	C5	84	ARG
11	C5	85	VAL
11	C5	89	PHE
11	C5	94	LYS
11	C5	97	ARG
17	L8	3	ARG
17	L8	6	VAL
17	L8	8	LEU
17	L8	30	ARG
17	L8	31	LEU
17	L8	32	GLN
17	L8	37	LEU
17	L8	40	THR
17	L8	44	ARG
17	L8	55	ARG
17	L8	56	VAL
12	M5	6	THR
12	M5	23	VAL

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Mol	Chain	Res	Type
12	M5	30	ARG
12	M5	31	HIS
12	M5	32	LEU
12	M5	33	ASN
12	M5	34	TRP
12	M5	52	LYS
12	M5	57	ARG
12	M5	61	LEU
18	61	7	GLU
18	61	9	LEU
18	61	11	ASN
18	61	20	ASP
18	61	21	VAL
18	61	25	TYR
18	61	38	LEU
18	61	40	THR
18	61	45	LYS
18	61	48	GLU
18	61	50	ARG
18	61	60	GLU
18	61	64	GLU
18	61	68	LEU
18	61	70	GLU
18	61	71	ILE
18	61	78	THR
18	61	81	VAL
18	61	82	ARG
18	61	86	THR
18	61	92	VAL
18	61	95	LYS
18	61	101	LEU
18	61	102	SER
18	61	105	HIS
18	61	110	ASP
18	61	114	LEU
18	61	118	LYS
18	61	120	ILE
18	61	122	GLU
18	61	135	GLU
18	61	136	VAL
18	61	139	GLN
18	61	140	LEU

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Mol	Chain	Res	Type
18	61	142	VAL
13	3A	17	LYS
13	3A	19	ARG
13	3A	23	LYS
13	3A	27	LEU
13	3A	28	LYS
13	3A	33	ARG
13	3A	34	ARG
13	3A	39	VAL
13	3A	41	ARG
13	3A	42	THR
13	3A	46	LYS
13	3A	54	LYS
13	3A	57	LYS
13	3A	60	LEU
13	3A	64	TYR
13	3A	78	GLN
13	3A	81	SER
13	3A	83	VAL
13	3A	84	LEU
13	3A	89	ARG
13	3A	96	VAL
13	3A	111	LYS
13	3A	118	SER
13	3A	122	THR
19	9I	26	LEU
19	9I	28	GLU
19	9I	31	LEU
19	9I	32	ARG
19	9I	44	LEU
19	9I	45	SER
19	9I	46	GLU
19	9I	54	ARG
19	9I	56	THR
19	9I	82	THR
19	9I	85	LEU
19	9I	86	VAL
14	32	3	ARG
14	32	5	ILE
14	32	8	VAL
14	32	17	VAL
14	32	24	GLU

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Mol	Chain	Res	Type
14	32	28	SER
14	32	30	LYS
14	32	36	ARG
14	32	42	GLN
14	32	53	ASP
14	32	58	LEU
14	32	76	ARG
14	32	81	GLU
14	32	83	SER
14	32	94	LEU
14	32	96	LEU
14	32	108	LEU
14	32	115	ARG
14	32	118	ARG
14	32	122	ARG
14	32	127	THR
14	32	135	LEU
14	32	141	ARG
14	32	150	GLU
14	32	155	LEU
14	32	162	LEU
14	32	168	ARG
14	32	176	LEU
14	32	177	ASP
14	32	187	ARG
14	32	191	ARG
14	32	192	GLU
14	32	200	GLU
14	32	205	GLU
21	68	8	LEU
21	68	9	GLU
21	68	17	ARG
21	68	22	ILE
21	68	23	ARG
21	68	24	VAL
21	68	31	LYS
21	68	38	VAL
21	68	47	ILE
21	68	53	LYS
21	68	66	LYS
21	68	78	ARG
21	68	94	ARG

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Mol	Chain	Res	Type
21	68	109	LYS
21	68	112	MET
21	68	113	LYS
21	68	115	VAL
16	75	7	ILE
16	75	8	LYS
16	75	9	LEU
16	75	11	GLU
16	75	13	ARG
16	75	15	VAL
16	75	19	LEU
16	75	21	GLU
16	75	23	ARG
16	75	24	PRO
16	75	27	THR
16	75	29	ARG
16	75	36	GLU
16	75	38	ASN
16	75	41	ARG
16	75	50	ILE
16	75	51	ARG
16	75	54	ARG
16	75	57	PHE
16	75	63	VAL
16	75	64	ARG
16	75	66	VAL
16	75	67	SER
16	75	86	ILE
16	75	87	ASP
16	75	91	ARG
16	75	93	ARG
16	75	106	SER
16	75	112	ARG
16	75	115	ARG
16	75	120	ARG
16	75	124	ASP
16	75	125	ARG
16	75	132	LYS
22	H8	1	MET
22	H8	5	LEU
22	H8	11	GLU
22	H8	16	SER

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Mol	Chain	Res	Type
22	H8	19	ARG
22	H8	23	LYS
22	H8	33	LEU
22	H8	37	VAL
22	H8	41	LEU
22	H8	42	VAL
22	H8	43	GLU
22	H8	53	ILE
22	H8	58	VAL
22	H8	60	GLU
22	H8	61	LEU
22	H8	71	VAL
22	H8	72	ARG
22	H8	86	VAL
22	H8	91	LEU
22	H8	94	GLU
22	H8	96	VAL
22	H8	105	VAL
22	H8	112	ARG
22	H8	116	VAL
22	H8	117	LEU
22	H8	129	SER
22	H8	145	GLU
22	H8	146	ILE
22	H8	154	ASP
22	H8	161	VAL
17	H5	5	LYS
17	H5	6	VAL
17	H5	8	LEU
17	H5	18	ASP
17	H5	24	LYS
17	H5	30	ARG
17	H5	33	GLN
17	H5	38	GLU
17	H5	44	ARG
17	H5	56	VAL
23	21	12	THR
23	21	13	ARG
23	21	14	ILE
23	21	16	ARG
23	21	19	ARG
23	21	26	ILE

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Mol	Chain	Res	Type
23	21	34	VAL
23	21	38	THR
23	21	41	LYS
23	21	45	THR
23	21	49	LEU
23	21	54	GLN
23	21	55	ASN
23	21	63	LEU
23	21	64	LYS
23	21	66	HIS
23	21	69	LYS
23	21	74	PRO
23	21	78	LEU
23	21	79	ARG
23	21	87	GLU
23	21	90	THR
23	21	95	ILE
23	21	101	ARG
23	21	119	ARG
23	21	138	PRO
23	21	149	ARG
23	21	167	VAL
23	21	175	VAL
23	21	179	GLU
23	21	181	LEU
23	21	188	VAL
23	21	195	LEU
23	21	197	ILE
23	21	200	GLU
23	21	202	LYS
18	69	9	LEU
18	69	38	LEU
18	69	44	LEU
18	69	47	LEU
18	69	58	LEU
18	69	60	GLU
18	69	67	ARG
18	69	69	LYS
18	69	75	LEU
18	69	77	LEU
18	69	78	THR
18	69	81	VAL

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Mol	Chain	Res	Type
18	69	87	LYS
18	69	101	LEU
18	69	104	GLN
18	69	109	ILE
18	69	114	LEU
18	69	117	GLU
18	69	125	GLU
18	69	131	LYS
18	69	133	HIS
18	69	135	GLU
18	69	138	ILE
24	4I	19	LEU
24	4I	31	LYS
24	4I	44	ARG
24	4I	48	LEU
24	4I	56	LEU
24	4I	57	ARG
24	4I	59	TYR
24	4I	64	TRP
24	4I	67	GLU
24	4I	70	LEU
24	4I	88	ARG
24	4I	99	ARG
24	4I	102	ARG
24	4I	105	THR
24	4I	106	ASN
24	4I	108	ARG
24	4I	115	LYS
19	9A	26	LEU
19	9A	28	GLU
19	9A	29	PHE
19	9A	31	LEU
19	9A	32	ARG
19	9A	36	ASN
19	9A	42	ARG
19	9A	44	LEU
19	9A	47	THR
19	9A	53	ARG
19	9A	54	ARG
19	9A	65	ILE
19	9A	82	THR
19	9A	84	LYS

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Mol	Chain	Res	Type
19	9A	86	VAL
19	9A	87	ARG
25	4E	5	ASP
25	4E	9	LYS
25	4E	12	LEU
25	4E	13	ILE
25	4E	16	THR
25	4E	18	ARG
25	4E	25	ARG
25	4E	27	ARG
25	4E	31	LEU
25	4E	41	VAL
25	4E	47	LYS
25	4E	56	GLN
25	4E	65	ASN
25	4E	68	GLU
25	4E	71	LEU
25	4E	72	GLN
25	4E	75	THR
25	4E	90	VAL
25	4E	91	LEU
25	4E	98	THR
25	4E	100	VAL
25	4E	112	LEU
25	4E	116	THR
25	4E	131	ILE
25	4E	152	ARG
25	4E	153	LYS
20	1B	9	ARG
21	25	5	GLN
21	25	8	LEU
21	25	9	GLU
21	25	22	ILE
21	25	24	VAL
21	25	28	SER
21	25	29	ASN
21	25	38	VAL
21	25	47	ILE
21	25	49	ARG
21	25	78	ARG
21	25	86	ILE
21	25	87	ILE

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Mol	Chain	Res	Type
21	25	91	LEU
21	25	94	ARG
21	25	96	THR
21	25	97	ARG
21	25	104	ARG
21	25	116	SER
21	25	117	LEU
27	C8	5	LYS
27	C8	8	VAL
27	C8	31	SER
27	C8	33	ARG
27	C8	34	LYS
27	C8	60	LEU
27	C8	74	LEU
27	C8	77	SER
27	C8	78	THR
27	C8	83	LEU
27	C8	89	GLU
27	C8	92	ARG
27	C8	94	ASN
27	C8	97	ASP
27	C8	98	LEU
27	C8	104	GLN
27	C8	108	GLU
27	C8	111	GLU
22	D5	10	ARG
22	D5	16	SER
22	D5	19	ARG
22	D5	24	LEU
22	D5	28	MET
22	D5	31	ARG
22	D5	32	HIS
22	D5	35	ARG
22	D5	41	LEU
22	D5	45	ASP
22	D5	50	GLN
22	D5	52	SER
22	D5	59	LEU
22	D5	63	ASP
22	D5	70	LEU
22	D5	71	VAL
22	D5	72	ARG

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Mol	Chain	Res	Type
22	D5	73	GLN
22	D5	74	VAL
22	D5	77	ASP
22	D5	93	ASP
22	D5	96	VAL
22	D5	103	ARG
22	D5	122	ARG
22	D5	129	SER
22	D5	132	ASN
22	D5	139	VAL
22	D5	157	LEU
22	D5	161	VAL
22	D5	162	GLU
22	D5	165	VAL
22	D5	168	GLU
28	M8	2	LYS
28	M8	15	ILE
28	M8	20	ASN
28	M8	27	THR
28	M8	31	ILE
28	M8	38	LYS
28	M8	43	TYR
28	M8	44	THR
28	M8	46	GLN
28	M8	50	VAL
28	M8	51	ASP
28	M8	55	ARG
28	M8	61	ARG
28	M8	62	ARG
28	M8	63	TYR
28	M8	66	SER
23	29	1	MET
23	29	4	ILE
23	29	5	LEU
23	29	7	VAL
23	29	16	ARG
23	29	27	LEU
23	29	44	TYR
23	29	45	THR
23	29	47	VAL
23	29	48	GLN
23	29	49	LEU

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Mol	Chain	Res	Type
23	29	58	ARG
23	29	60	ASN
23	29	63	LEU
23	29	64	LYS
23	29	67	PHE
23	29	69	LYS
23	29	76	ARG
23	29	78	LEU
23	29	79	ARG
23	29	87	GLU
23	29	90	THR
23	29	93	VAL
23	29	97	LYS
23	29	107	THR
23	29	111	ARG
23	29	117	MET
23	29	119	ARG
23	29	121	ASN
23	29	144	ARG
23	29	146	THR
23	29	154	LYS
23	29	170	LEU
23	29	175	VAL
23	29	181	LEU
23	29	197	ILE
23	29	201	THR
24	4A	7	VAL
24	4A	39	ILE
24	4A	43	THR
24	4A	44	ARG
24	4A	47	ASP
24	4A	48	LEU
24	4A	63	THR
24	4A	66	LEU
24	4A	69	GLU
24	4A	77	ASN
24	4A	79	LYS
24	4A	82	MET
24	4A	94	ARG
24	4A	101	GLN
24	4A	108	ARG
24	4A	113	PRO

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Mol	Chain	Res	Type
29	AI	5	LEU
29	AI	6	LYS
29	AI	7	LYS
29	AI	11	VAL
29	AI	25	LYS
29	AI	27	GLU
29	AI	29	ARG
29	AI	30	LEU
29	AI	32	LYS
29	AI	36	ARG
29	AI	37	ARG
29	AI	41	VAL
29	AI	43	GLU
29	AI	56	GLN
29	AI	58	VAL
29	AI	61	TYR
29	AI	64	GLU
29	AI	66	MET
29	AI	67	VAL
29	AI	71	LEU
29	AI	78	ARG
25	42	5	ASP
25	42	12	LEU
25	42	15	ARG
25	42	24	ARG
25	42	31	LEU
25	42	40	ARG
25	42	47	LYS
25	42	51	VAL
25	42	66	MET
25	42	68	GLU
25	42	72	GLN
25	42	75	THR
25	42	78	HIS
25	42	79	GLU
25	42	82	VAL
25	42	87	SER
25	42	91	LEU
25	42	101	ILE
25	42	137	GLU
25	42	141	GLN
25	42	143	ARG

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Mol	Chain	Res	Type
25	42	144	THR
25	42	148	VAL
25	42	151	LEU
30	78	2	LYS
30	78	6	LEU
30	78	7	ARG
30	78	15	ARG
30	78	41	ARG
30	78	45	LEU
30	78	46	LYS
30	78	49	ARG
30	78	50	ARG
30	78	57	THR
30	78	58	THR
30	78	74	GLU
30	78	76	LYS
30	78	77	ARG
30	78	83	VAL
30	78	88	LEU
30	78	98	GLU
30	78	99	LEU
30	78	100	LEU
30	78	101	VAL
30	78	105	LEU
30	78	106	LEU
30	78	112	LEU
30	78	115	LEU
30	78	119	GLU
30	78	126	VAL
30	78	133	SER
30	78	135	LEU
30	78	138	LEU
30	78	144	GLU
30	78	146	VAL
30	78	147	LEU
27	85	3	ARG
27	85	5	LYS
27	85	20	LEU
27	85	27	LEU
27	85	52	ARG
27	85	55	ARG
27	85	64	ARG

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Mol	Chain	Res	Type
27	85	74	LEU
27	85	78	THR
27	85	83	LEU
27	85	92	ARG
27	85	97	ASP
27	85	100	VAL
27	85	101	ARG
27	85	105	VAL
27	85	111	GLU
31	I8	36	ILE
31	I8	46	LYS
31	I8	74	ARG
28	I5	1	MET
28	I5	20	ASN
28	I5	22	ILE
28	I5	30	GLU
28	I5	33	VAL
28	I5	34	GLU
28	I5	39	CYS
28	I5	40	HIS
28	I5	44	THR
28	I5	46	GLN
28	I5	55	ARG
28	I5	59	PHE
28	I5	60	GLN
28	I5	61	ARG
28	I5	62	ARG
32	31	7	TYR
32	31	8	GLN
32	31	9	ILE
32	31	13	SER
32	31	15	SER
32	31	17	ARG
32	31	32	LEU
32	31	33	LEU
32	31	57	VAL
32	31	64	ILE
32	31	70	THR
32	31	74	ARG
32	31	78	ILE
32	31	82	ILE
32	31	101	LEU

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Mol	Chain	Res	Type
32	31	116	ASP
32	31	117	ARG
32	31	119	ARG
32	31	127	GLU
32	31	136	THR
32	31	158	THR
32	31	161	GLU
32	31	165	ARG
32	31	170	LEU
32	31	174	VAL
32	31	181	LEU
32	31	191	ARG
32	31	200	GLU
33	5I	3	ARG
33	5I	12	ARG
33	5I	18	VAL
33	5I	22	THR
33	5I	29	ARG
33	5I	32	SER
33	5I	33	VAL
33	5I	40	CYS
33	5I	41	ARG
33	5I	44	LEU
33	5I	46	GLU
33	5I	50	LYS
33	5I	58	LYS
29	AA	11	VAL
29	AA	13	ASP
29	AA	23	ASN
29	AA	25	LYS
29	AA	28	LYS
29	AA	29	ARG
29	AA	31	ILE
29	AA	37	ARG
29	AA	39	THR
29	AA	41	VAL
29	AA	51	VAL
29	AA	58	VAL
29	AA	60	VAL
29	AA	66	MET
29	AA	78	ARG
29	AA	79	THR

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Mol	Chain	Res	Type
29	AA	83	HIS
34	5E	21	LEU
34	5E	39	LYS
34	5E	43	LEU
34	5E	45	LEU
34	5E	54	LYS
34	5E	57	GLN
34	5E	64	GLN
34	5E	70	ASP
34	5E	72	VAL
34	5E	75	LEU
34	5E	80	ARG
34	5E	86	ARG
30	35	4	SER
30	35	6	LEU
30	35	15	ARG
30	35	19	VAL
30	35	21	ARG
30	35	30	THR
30	35	36	LYS
30	35	41	ARG
30	35	45	LEU
30	35	55	ARG
30	35	57	THR
30	35	61	ARG
30	35	65	ARG
30	35	67	MET
30	35	68	GLN
30	35	81	GLN
30	35	85	LEU
30	35	88	LEU
30	35	90	ARG
30	35	91	PHE
30	35	92	GLU
30	35	98	GLU
30	35	100	LEU
30	35	105	LEU
30	35	110	TYR
30	35	112	LEU
30	35	114	ILE
30	35	125	VAL
30	35	133	SER

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Mol	Chain	Res	Type
30	35	138	LEU
30	35	144	GLU
30	35	146	VAL
30	35	148	LEU
30	35	149	GLU
35	D8	1	MET
35	D8	6	LYS
35	D8	7	THR
35	D8	12	TYR
35	D8	18	LEU
35	D8	20	LEU
35	D8	25	LEU
35	D8	33	VAL
35	D8	34	GLU
35	D8	35	LEU
35	D8	37	VAL
35	D8	39	LEU
35	D8	40	LEU
35	D8	44	LYS
35	D8	47	VAL
35	D8	49	THR
35	D8	51	VAL
35	D8	52	VAL
35	D8	62	LEU
35	D8	64	HIS
35	D8	72	VAL
35	D8	73	SER
35	D8	78	LYS
35	D8	79	VAL
35	D8	89	GLN
35	D8	95	LEU
35	D8	98	GLU
31	E5	9	SER
31	E5	11	ARG
31	E5	12	ASN
31	E5	20	ARG
31	E5	32	ARG
31	E5	36	ILE
31	E5	46	LYS
31	E5	49	LYS
31	E5	68	GLU
31	E5	70	GLN

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Mol	Chain	Res	Type
31	E5	82	ARG
36	N8	3	LYS
36	N8	6	VAL
36	N8	16	ARG
36	N8	29	THR
36	N8	31	VAL
36	N8	35	GLU
36	N8	40	LYS
36	N8	49	CYS
36	N8	52	TYR
36	N8	56	LYS
32	39	2	LYS
32	39	7	TYR
32	39	8	GLN
32	39	20	LEU
32	39	24	LEU
32	39	27	GLU
32	39	29	ASN
32	39	32	LEU
32	39	33	LEU
32	39	36	VAL
32	39	38	ARG
32	39	40	GLN
32	39	43	LYS
32	39	53	THR
32	39	57	VAL
32	39	67	GLN
32	39	72	ARG
32	39	74	ARG
32	39	77	ASP
32	39	82	ILE
32	39	83	PHE
32	39	88	VAL
32	39	106	ARG
32	39	110	LEU
32	39	112	MET
32	39	123	LEU
32	39	136	THR
32	39	140	LEU
32	39	153	SER
32	39	154	VAL
32	39	158	THR

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Mol	Chain	Res	Type
32	39	162	LEU
32	39	165	ARG
32	39	181	LEU
32	39	183	VAL
32	39	190	GLU
32	39	191	ARG
32	39	192	LEU
32	39	194	MET
32	39	196	LEU
32	39	201	VAL
32	39	205	ARG
33	5A	6	LEU
33	5A	11	LYS
33	5A	12	ARG
33	5A	16	PHE
33	5A	17	LYS
33	5A	22	THR
33	5A	26	ARG
33	5A	27	CYS
33	5A	31	ARG
33	5A	33	VAL
33	5A	44	LEU
33	5A	50	LYS
37	BI	10	LEU
37	BI	13	LEU
37	BI	37	SER
37	BI	51	GLU
37	BI	56	MET
37	BI	57	ARG
37	BI	62	LEU
37	BI	65	LYS
37	BI	72	LEU
37	BI	75	ASN
37	BI	87	LYS
37	BI	89	ARG
37	BI	99	LEU
37	BI	104	LEU
34	52	1	MET
34	52	3	ARG
34	52	7	ASN
34	52	10	LEU
34	52	14	LEU

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Mol	Chain	Res	Type
34	52	16	GLN
34	52	21	LEU
34	52	27	GLN
34	52	28	ARG
34	52	39	LYS
34	52	40	VAL
34	52	46	ARG
34	52	54	LYS
34	52	63	TYR
34	52	64	GLN
34	52	74	ASP
34	52	83	ASP
34	52	89	MET
34	52	92	LYS
34	52	93	SER
34	52	98	LEU
38	88	1	MET
38	88	3	MET
38	88	5	ARG
38	88	6	ARG
38	88	10	ARG
38	88	11	LYS
38	88	18	LYS
38	88	25	ASP
38	88	26	TYR
38	88	35	VAL
38	88	45	GLN
38	88	48	GLU
38	88	55	VAL
38	88	56	ARG
38	88	58	PHE
38	88	59	ARG
38	88	67	ARG
38	88	80	GLU
38	88	85	LYS
38	88	102	VAL
38	88	109	VAL
38	88	110	THR
38	88	112	GLU
38	88	115	MET
35	95	7	THR
35	95	10	LYS

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Mol	Chain	Res	Type
35	95	19	LYS
35	95	32	THR
35	95	38	LEU
35	95	39	LEU
35	95	40	LEU
35	95	43	GLU
35	95	44	LYS
35	95	46	VAL
35	95	47	VAL
35	95	49	THR
35	95	52	VAL
35	95	57	VAL
35	95	62	LEU
35	95	66	ARG
35	95	71	LEU
35	95	76	LYS
35	95	81	TYR
35	95	83	ARG
35	95	84	LYS
35	95	85	LYS
35	95	95	LEU
39	J8	4	VAL
39	J8	19	GLN
39	J8	21	ARG
39	J8	25	LYS
39	J8	26	ARG
39	J8	41	ARG
39	J8	48	LYS
39	J8	52	ARG
39	J8	68	PRO
39	J8	74	VAL
39	J8	78	LYS
39	J8	80	LEU
39	J8	81	LYS
39	J8	82	LEU
39	J8	90	ILE
39	J8	91	LYS
39	J8	92	LYS
36	J5	15	ARG
36	J5	23	HIS
36	J5	29	THR
36	J5	33	CYS

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Mol	Chain	Res	Type
36	J5	35	GLU
36	J5	48	GLU
36	J5	55	ARG
40	41	3	LEU
40	41	14	GLU
40	41	20	ILE
40	41	22	ARG
40	41	26	GLN
40	41	28	VAL
40	41	31	VAL
40	41	34	LEU
40	41	43	LEU
40	41	45	GLU
40	41	53	LEU
40	41	58	GLN
40	41	60	LEU
40	41	63	ILE
40	41	64	THR
40	41	67	LYS
40	41	70	VAL
40	41	72	ARG
40	41	77	ILE
40	41	80	PHE
40	41	82	LEU
40	41	83	ARG
40	41	84	LYS
40	41	86	MET
40	41	90	LEU
40	41	94	LEU
40	41	96	ARG
40	41	101	ILE
40	41	115	ARG
40	41	128	ARG
40	41	130	ASN
40	41	139	LEU
40	41	149	VAL
40	41	161	THR
40	41	162	THR
40	41	166	ASP
40	41	168	GLU
41	6I	3	ILE
41	6I	10	LYS

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Mol	Chain	Res	Type
41	6I	24	SER
41	6I	26	GLU
41	6I	39	LEU
41	6I	47	LYS
41	6I	48	LYS
41	6I	59	MET
41	6I	66	LEU
37	BA	8	ARG
37	BA	10	LEU
37	BA	11	SER
37	BA	13	LEU
37	BA	24	LEU
37	BA	31	SER
37	BA	38	LYS
37	BA	41	ILE
37	BA	53	LEU
37	BA	72	LEU
37	BA	74	LYS
37	BA	84	LEU
37	BA	90	GLN
42	6E	32	ARG
42	6E	38	LEU
42	6E	45	ASP
42	6E	54	THR
42	6E	56	GLN
42	6E	66	VAL
42	6E	89	MET
42	6E	90	GLU
42	6E	94	ARG
42	6E	97	GLN
42	6E	104	LEU
42	6E	111	ARG
42	6E	113	GLU
42	6E	115	ARG
42	6E	118	VAL
42	6E	124	LEU
42	6E	135	VAL
42	6E	138	LYS
42	6E	139	GLU
42	6E	143	ARG
42	6E	153	HIS
38	45	2	LEU

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Mol	Chain	Res	Type
38	45	3	MET
38	45	5	ARG
38	45	16	ARG
38	45	22	LYS
38	45	25	ASP
38	45	26	TYR
38	45	45	GLN
38	45	59	ARG
38	45	60	ARG
38	45	66	ILE
38	45	75	THR
38	45	79	LEU
38	45	80	GLU
38	45	90	VAL
38	45	91	GLU
38	45	105	GLU
38	45	106	VAL
38	45	110	THR
38	45	112	GLU
38	45	116	GLU
38	45	134	ARG
38	45	138	ASP
38	45	139	GLU
38	45	141	GLN
43	E8	11	ARG
43	E8	15	ARG
43	E8	23	LEU
43	E8	28	SER
43	E8	41	LYS
43	E8	42	ARG
43	E8	51	LEU
43	E8	52	GLU
43	E8	62	HIS
43	E8	65	LEU
43	E8	67	ASP
43	E8	69	LEU
43	E8	76	VAL
43	E8	88	ARG
43	E8	96	ILE
43	E8	100	THR
43	E8	107	LEU
43	E8	111	HIS

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Mol	Chain	Res	Type
39	F5	4	VAL
39	F5	11	ARG
39	F5	19	GLN
39	F5	25	LYS
39	F5	26	ARG
39	F5	37	ILE
39	F5	38	SER
39	F5	42	GLN
39	F5	52	ARG
39	F5	56	GLN
39	F5	62	VAL
39	F5	74	VAL
39	F5	76	ARG
39	F5	78	LYS
39	F5	80	LEU
39	F5	82	LEU
39	F5	83	GLU
39	F5	85	LEU
40	49	3	LEU
40	49	7	LEU
40	49	9	ARG
40	49	13	GLU
40	49	14	GLU
40	49	28	VAL
40	49	33	ARG
40	49	40	ASN
40	49	48	GLU
40	49	53	LEU
40	49	59	GLU
40	49	60	LEU
40	49	63	ILE
40	49	64	THR
40	49	71	THR
40	49	80	PHE
40	49	81	LYS
40	49	82	LEU
40	49	96	ARG
40	49	97	ASP
40	49	106	LEU
40	49	109	VAL
40	49	115	ARG
40	49	118	ARG

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Mol	Chain	Res	Type
40	49	130	ASN
40	49	152	LEU
40	49	153	ARG
40	49	156	ASP
40	49	159	VAL
40	49	162	THR
40	49	165	THR
40	49	167	GLU
41	6A	5	LYS
41	6A	6	GLU
41	6A	17	ARG
41	6A	24	SER
41	6A	31	LEU
41	6A	38	ARG
41	6A	39	LEU
41	6A	47	LYS
41	6A	48	LYS
41	6A	68	ARG
41	6A	82	ILE
41	6A	83	GLU
41	6A	84	LYS
41	6A	88	ARG
44	1E	4	GLU
44	1E	7	VAL
44	1E	8	LYS
44	1E	17	PHE
44	1E	24	TRP
44	1E	28	PHE
44	1E	32	ILE
44	1E	37	ASN
44	1E	39	ILE
44	1E	41	ILE
44	1E	42	ILE
44	1E	48	MET
44	1E	59	GLU
44	1E	60	ASP
44	1E	67	THR
44	1E	71	VAL
44	1E	73	THR
44	1E	74	LYS
44	1E	76	GLN
44	1E	96	ARG

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Mol	Chain	Res	Type
44	1E	113	HIS
44	1E	121	LEU
44	1E	122	PHE
44	1E	135	GLN
44	1E	144	ARG
44	1E	145	LEU
44	1E	153	ARG
44	1E	155	LEU
44	1E	162	ILE
44	1E	163	PHE
44	1E	172	ILE
44	1E	178	ARG
44	1E	193	ASP
44	1E	195	ASP
44	1E	196	LEU
44	1E	200	ILE
44	1E	205	ASP
44	1E	215	LEU
44	1E	217	ARG
44	1E	223	ILE
44	1E	226	ARG
44	1E	230	VAL
44	1E	231	GLU
42	62	8	GLU
42	62	9	VAL
42	62	20	ASP
42	62	24	THR
42	62	27	ILE
42	62	31	MET
42	62	45	ASP
42	62	54	THR
42	62	61	VAL
42	62	63	LYS
42	62	73	MET
42	62	85	TYR
42	62	87	VAL
42	62	94	ARG
42	62	97	GLN
42	62	104	LEU
42	62	114	ARG
42	62	115	ARG
42	62	129	GLU

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Mol	Chain	Res	Type
42	62	140	ASP
42	62	146	GLU
42	62	149	ARG
42	62	153	HIS
45	98	4	LEU
45	98	9	LYS
45	98	12	ARG
45	98	18	LEU
45	98	28	LEU
45	98	29	LEU
45	98	30	THR
45	98	33	ARG
45	98	34	ILE
45	98	44	LEU
45	98	45	ARG
45	98	59	ASP
45	98	64	ARG
45	98	65	LEU
45	98	67	LEU
45	98	75	LEU
45	98	79	LEU
45	98	91	GLN
45	98	95	THR
45	98	105	ARG
45	98	114	VAL
45	98	118	GLU
43	A5	1	MET
43	A5	11	ARG
43	A5	15	ARG
43	A5	18	ARG
43	A5	23	LEU
43	A5	37	ARG
43	A5	39	THR
43	A5	51	LEU
43	A5	59	VAL
43	A5	65	LEU
43	A5	70	TYR
43	A5	76	VAL
43	A5	95	ILE
43	A5	96	ILE
43	A5	100	THR
43	A5	106	ILE

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Mol	Chain	Res	Type
43	A5	107	LEU
46	K8	3	LEU
46	K8	8	LYS
46	K8	9	GLN
46	K8	15	LYS
46	K8	16	LEU
46	K8	17	SER
46	K8	23	LYS
46	K8	24	LEU
46	K8	32	LEU
46	K8	40	SER
46	K8	41	ILE
46	K8	43	GLN
46	K8	45	SER
46	K8	48	HIS
46	K8	50	ILE
46	K8	53	LEU
46	K8	55	ARG
46	K8	62	THR
46	K8	64	LEU
46	K8	65	ASN
46	K8	67	LYS
47	51	2	SER
47	51	4	ILE
47	51	7	LEU
47	51	10	PRO
47	51	23	ARG
47	51	24	VAL
47	51	37	VAL
47	51	40	GLU
47	51	45	VAL
47	51	50	VAL
47	51	52	VAL
47	51	57	ASP
47	51	58	GLU
47	51	68	THR
47	51	71	LEU
47	51	77	LYS
47	51	80	SER
47	51	83	TYR
47	51	86	GLU
47	51	88	LEU

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Mol	Chain	Res	Type
47	51	95	ARG
47	51	97	ARG
47	51	103	LEU
47	51	104	GLU
47	51	107	VAL
47	51	119	GLU
47	51	129	THR
47	51	130	ARG
47	51	131	VAL
47	51	132	ARG
47	51	134	SER
47	51	136	ILE
47	51	139	GLN
47	51	153	LYS
47	51	160	LYS
47	51	169	VAL
47	51	170	ARG
48	1A	5	ARG
48	1A	8	LEU
48	1A	17	ASP
48	1A	22	LYS
48	1A	24	VAL
48	1A	34	VAL
48	1A	40	LEU
48	1A	51	ARG
48	1A	58	ASP
48	1A	59	SER
48	1A	60	ARG
48	1A	70	ARG
48	1A	72	VAL
48	1A	79	ARG
48	1A	89	ASP
48	1A	96	ILE
48	1A	98	ILE
48	1I	5	ARG
48	1I	29	ARG
48	1I	40	LEU
48	1I	43	ARG
48	1I	44	VAL
48	1I	51	ARG
48	1I	58	ASP
48	1I	60	ARG

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Mol	Chain	Res	Type
48	1I	62	HIS
48	1I	70	ARG
48	1I	88	LEU
48	1I	89	ASP
48	1I	92	THR
48	1I	95	GLU
48	1I	96	ILE
48	1I	101	VAL
49	7I	1	MET
49	7I	2	VAL
49	7I	4	ILE
49	7I	8	ARG
49	7I	11	SER
49	7I	18	ARG
49	7I	20	VAL
49	7I	26	ARG
49	7I	50	LYS
49	7I	54	GLU
49	7I	67	THR
49	7I	69	THR
49	7I	72	ARG
49	7I	82	GLN
49	7I	83	GLU
44	12	5	ILE
44	12	12	GLU
44	12	15	VAL
44	12	17	PHE
44	12	20	GLU
44	12	22	LYS
44	12	24	TRP
44	12	31	TYR
44	12	42	ILE
44	12	44	LEU
44	12	47	THR
44	12	48	MET
44	12	55	PHE
44	12	58	ILE
44	12	69	LEU
44	12	71	VAL
44	12	75	LYS
44	12	80	ILE
44	12	83	MET

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Mol	Chain	Res	Type
44	12	84	GLU
44	12	94	ASN
44	12	98	LEU
44	12	107	THR
44	12	108	ILE
44	12	110	GLN
44	12	111	ARG
44	12	122	PHE
44	12	137	ARG
44	12	139	LYS
44	12	142	LEU
44	12	143	GLU
44	12	144	ARG
44	12	147	LYS
44	12	155	LEU
44	12	170	GLU
44	12	172	ILE
44	12	178	ARG
44	12	185	ILE
44	12	189	ASP
44	12	191	ASP
44	12	196	LEU
44	12	200	ILE
44	12	205	ASP
44	12	209	ARG
44	12	213	LEU
44	12	219	VAL
44	12	223	ILE
50	7E	1	MET
50	7E	2	LEU
50	7E	6	ILE
50	7E	10	LEU
50	7E	24	THR
50	7E	25	ASP
50	7E	26	VAL
50	7E	39	LEU
50	7E	49	GLU
50	7E	60	ARG
50	7E	68	ARG
50	7E	70	GLN
50	7E	77	GLU
50	7E	80	ILE

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Mol	Chain	Res	Type
50	7E	84	ARG
50	7E	85	ARG
50	7E	91	ARG
50	7E	95	VAL
50	7E	98	LYS
50	7E	102	ARG
50	7E	109	ILE
50	7E	137	VAL
45	55	2	ARG
45	55	9	LYS
45	55	15	SER
45	55	17	ARG
45	55	18	LEU
45	55	24	GLN
45	55	27	SER
45	55	28	LEU
45	55	29	LEU
45	55	44	LEU
45	55	54	LEU
45	55	56	LYS
45	55	63	ARG
45	55	65	LEU
45	55	67	LEU
45	55	75	LEU
45	55	76	VAL
45	55	79	LEU
45	55	81	ASP
45	55	91	GLN
45	55	96	ARG
45	55	98	LEU
45	55	113	LEU
3	F8	2	LYS
3	F8	38	GLU
3	F8	45	THR
3	F8	49	VAL
3	F8	55	ASN
3	F8	65	ARG
3	F8	68	ARG
3	F8	70	LEU
3	F8	72	LYS
3	F8	80	ILE
3	F8	87	GLN

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Mol	Chain	Res	Type
3	F8	93	GLU
46	G5	5	GLU
46	G5	6	VAL
46	G5	14	ARG
46	G5	15	LYS
46	G5	16	LEU
46	G5	17	SER
46	G5	24	LEU
46	G5	27	GLU
46	G5	34	GLU
46	G5	44	LEU
46	G5	46	GLN
46	G5	47	ASN
46	G5	48	HIS
46	G5	53	LEU
46	G5	55	ARG
46	G5	60	LEU
46	G5	70	GLN
5	P8	8	ASN
5	P8	14	LYS
5	P8	23	ARG
5	P8	24	THR
5	P8	41	ARG
5	P8	43	THR
5	P8	47	ARG
47	59	3	ARG
47	59	4	ILE
47	59	6	ARG
47	59	7	LEU
47	59	11	VAL
47	59	16	SER
47	59	24	VAL
47	59	26	VAL
47	59	27	LYS
47	59	32	GLU
47	59	33	LEU
47	59	41	MET
47	59	42	ARG
47	59	43	VAL
47	59	44	VAL
47	59	45	VAL
47	59	49	VAL

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Mol	Chain	Res	Type
47	59	52	VAL
47	59	62	LYS
47	59	67	LEU
47	59	68	THR
47	59	69	ARG
47	59	89	ILE
47	59	94	TYR
47	59	98	LEU
47	59	101	ARG
47	59	104	GLU
47	59	105	LEU
47	59	125	VAL
47	59	127	GLU
47	59	129	THR
47	59	139	GLN
47	59	147	ASN
47	59	152	ARG
47	59	157	TYR
47	59	158	HIS
47	59	167	GLU
6	2I	12	ARG
6	2I	18	ARG
6	2I	30	VAL
6	2I	31	THR
6	2I	32	ILE
6	2I	83	ILE
6	2I	84	VAL
6	2I	93	GLN
6	2I	96	ARG
6	2I	103	LEU
6	2I	105	VAL
6	2I	106	LYS
6	2I	109	VAL
6	2I	114	VAL
6	2I	116	HIS
49	7A	1	MET
49	7A	2	VAL
49	7A	5	ARG
49	7A	21	VAL
49	7A	27	LYS
49	7A	54	GLU
49	7A	55	ARG

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Mol	Chain	Res	Type
49	7A	61	SER
49	7A	67	THR
49	7A	82	GLN
8	2E	3	ASN
8	2E	4	LYS
8	2E	5	ILE
8	2E	8	ILE
8	2E	14	ILE
8	2E	16	ARG
8	2E	17	ASP
8	2E	21	ARG
8	2E	29	TYR
8	2E	30	ARG
8	2E	34	LEU
8	2E	36	ASP
8	2E	45	LYS
8	2E	63	ASN
8	2E	79	ARG
8	2E	82	GLU
8	2E	83	ARG
8	2E	84	ILE
8	2E	99	VAL
8	2E	102	ASN
8	2E	108	ASN
8	2E	111	LEU
8	2E	127	ARG
8	2E	128	PHE
8	2E	136	GLN
8	2E	138	VAL
8	2E	150	LYS
8	2E	161	GLU
8	2E	165	THR
8	2E	166	GLU
8	2E	167	TRP
8	2E	178	LEU
8	2E	179	ARG
8	2E	190	ARG
8	2E	196	LEU
8	2E	202	ILE
8	2E	206	GLU
50	72	1	MET
50	72	2	LEU

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Mol	Chain	Res	Type
50	72	17	THR
50	72	18	ARG
50	72	22	GLU
50	72	25	ASP
50	72	41	ARG
50	72	52	ASP
50	72	73	ASP
50	72	82	HIS
50	72	91	ARG
50	72	92	ARG
50	72	97	VAL
50	72	99	GLU
50	72	100	ILE
50	72	102	ARG
50	72	105	ARG
50	72	109	ILE
50	72	112	LEU
50	72	116	LYS
50	72	125	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (27) such sidechains are listed below:

Mol	Chain	Res	Type
4	11	115	GLN
2	65	34	HIS
11	G8	6	HIS
4	19	143	HIS
14	32	161	ASN
21	68	88	ASN
23	21	55	ASN
18	69	104	GLN
19	9A	63	GLN
25	4E	65	ASN
28	M8	6	HIS
28	I5	20	ASN
35	D8	80	GLN
32	39	203	GLN
42	6E	13	GLN
38	45	57	HIS
40	49	132	ASN
44	1E	16	HIS
45	98	13	HIS

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Mol	Chain	Res	Type
43	A5	60	ASN
49	7I	14	ASN
49	7I	16	HIS
44	12	94	ASN
45	55	13	HIS
3	F8	31	HIS
3	F8	55	ASN
47	59	61	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	13	1506/1522 (98%)	313 (20%)	31 (2%)
1	1G	1512/1522 (99%)	323 (21%)	36 (2%)
15	14	2908/2917 (99%)	646 (22%)	49 (1%)
15	1H	2911/2917 (99%)	614 (21%)	54 (1%)
26	16	121/122 (99%)	19 (15%)	0
26	1J	121/122 (99%)	29 (23%)	2 (1%)
51	Y1	24/25 (96%)	8 (33%)	3 (12%)
51	Y4	24/25 (96%)	13 (54%)	1 (4%)
52	V1	75/76 (98%)	38 (50%)	6 (8%)
52	V4	75/76 (98%)	35 (46%)	4 (5%)
52	W1	75/76 (98%)	18 (24%)	0
52	W4	75/76 (98%)	19 (25%)	0
52	X1	75/76 (98%)	20 (26%)	1 (1%)
52	X4	75/76 (98%)	20 (26%)	3 (4%)
All	All	9577/9628 (99%)	2115 (22%)	190 (1%)

All (2115) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	13	651	U
1	13	652	G
1	13	653	G
1	13	654	A
1	13	667	G
1	13	678	A
1	13	685	G
1	13	694	C
1	13	696	A
1	13	697	A

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Mol	Chain	Res	Type
1	13	700	C
1	13	705	A
1	13	707	G
1	13	711	U
1	13	712	G
1	13	720	C
1	13	721	G
1	13	733	C
1	13	755	A
1	13	760	C
1	13	771	C
1	13	777	C
1	13	782	G
1	13	783	A
1	13	784	G
1	13	801	A
1	13	804	U
1	13	809	C
1	13	812	A
1	13	813	U
1	13	814	C
1	13	822	U
1	13	832	C
1	13	834	U
1	13	835	U
1	13	836	G
1	13	837	G
1	13	847	A
1	13	848	A
1	13	851	G
1	13	853	C
1	13	854	U
1	13	855	U
1	13	856	U
1	13	857	G
1	13	858	C
1	13	863	U
1	13	868	G
1	13	874	C
1	13	885	U
1	13	886	C
1	13	888	G

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Mol	Chain	Res	Type
1	13	892	G
1	13	897	U
1	13	903	A
1	13	907	G
1	13	908	C
1	13	911	A
1	13	914	A
1	13	922	G
1	13	930	G
1	13	940	G
1	13	957	G
1	13	958	G
1	13	962	A
1	13	969	C
1	13	970	A
1	13	971	C
1	13	973	G
1	13	983	C
1	13	985	A
1	13	986	C
1	13	987	G
1	13	988	G
1	13	993	C
1	13	994	A
1	13	995	G
1	13	1008	U
1	13	1013	C
1	13	1014	A
1	13	1024	A
1	13	1025	G
1	13	1031	C
1	13	1038	A
1	13	1039	C
1	13	1047	G
1	13	1051	G
1	13	1052	A
1	13	1053	A
1	13	1054	G
1	13	1055	A
1	13	1060	C
1	13	1064	G
1	13	1065	G

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Mol	Chain	Res	Type
1	13	1070	U
1	13	1071	A
1	13	1100	A
1	13	1101	C
1	13	1102	G
1	13	1115	G
1	13	1126	A
1	13	1127	U
1	13	1134	G
1	13	1140	C
1	13	1147	C
1	13	1150	G
1	13	1156	G
1	13	1160	U
1	13	1161	A
1	13	1176	A
1	13	1188	A
1	13	1190	U
1	13	1201	A
1	13	1202	A
1	13	1205	G
1	13	1206	G
1	13	1221	G
1	13	1225	C
1	13	1245	G
1	13	1248	U
1	13	1252	C
1	13	1259	G
1	13	1260	G
1	13	1261	A
1	13	1262	G
1	13	1268	G
1	13	1275	U
1	13	1279	G
1	13	1282	A
1	13	1294	A
1	13	1295	G
1	13	1316	A
1	13	1331	A
1	13	1333	A
1	13	1351	A
1	13	1352	U

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Mol	Chain	Res	Type
1	13	1353	G
1	13	1357	A
1	13	1377	C
1	13	1378	C
1	13	1382	A
1	13	1384	G
1	13	1388	A
1	13	1401	U
1	13	1403	G
1	13	1406	A
1	13	1421	A
1	13	1422	U
1	13	1423	A
1	13	1431	A
1	13	1438	G
1	13	1446	C
1	13	1457	A
1	13	1465	G
1	13	1468	U
1	13	1469	C
1	13	1470	U
1	13	1471	C
1	13	1476	G
1	13	1482	A
1	13	1493	U
1	13	1496	A
1	13	1497	G
1	13	1514	U
1	13	1525	G
1	13	1537	A
1	13	1549	G
1	13	1550	G
1	13	1557	C
1	13	1558	A
1	13	1563	C
1	13	1565	G
1	13	1583	U
1	13	1591	A
1	13	1592	A
1	13	1594	G
1	13	1597	A
1	13	1598	A

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Mol	Chain	Res	Type
1	13	1599	G
1	13	1600	A
1	13	1606	A
1	13	1616	G
1	13	1628	A
1	13	1630	C
1	13	1631	C
1	13	1632	C
1	13	1633	G
1	13	1641	G
1	13	1644	U
1	13	1645	G
1	13	1647	G
1	13	1648	G
1	13	1649	U
1	13	1650	G
1	13	1652	C
1	13	1655	G
1	13	1659	G
1	13	1661	G
1	13	1665	C
1	13	1668	U
1	13	1670	G
1	13	1674	A
1	13	1681	G
1	13	1692	G
1	13	1693	U
1	13	1694	C
1	13	1709	G
1	13	1722	G
1	13	1723	U
1	13	1729	A
1	13	1750	U
1	13	1752	G
1	13	1753	U
1	13	1754	U
1	13	1755	G
1	13	1757	C
1	13	1758	A
1	13	1759	G
1	13	1761	G
1	13	1762	G

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Mol	Chain	Res	Type
1	13	1764	U
1	13	1765	C
1	13	1766	G
1	13	1767	G
1	13	1772	G
1	13	1774	A
1	13	1777	C
1	13	1780	A
1	13	1782	G
1	13	1785	A
1	13	1786	C
1	13	1787	U
1	13	1804	G
1	13	1805	G
1	13	1808	G
1	13	1817	G
1	13	1818	A
1	13	1823	U
1	13	1824	G
1	13	1828	A
1	13	1839	U
1	13	1840	A
1	13	1845	C
1	13	1852	A
1	13	1853	C
1	13	1854	A
1	13	1865	A
1	13	1867	U
1	13	1868	G
1	13	1880	G
1	13	1883	A
1	13	1884	U
1	13	1885	G
1	13	1893	G
1	13	1897	C
1	13	1900	G
1	13	1905	U
1	13	1906	A
1	13	1907	A
1	13	1908	U
1	13	1909	C
1	13	1913	A

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Mol	Chain	Res	Type
1	13	1914	A
1	13	1926	A
1	13	1927	G
1	13	1929	U
1	13	1930	C
1	13	1932	G
1	13	1947	C
1	13	1949	C
1	13	1958	G
1	13	1963	C
1	13	1964	G
1	13	1965	G
1	13	1967	A
1	13	1973	A
1	13	1974	G
1	13	1980	G
1	13	1987	A
1	13	1990	C
1	13	1992	U
1	13	1998	G
1	13	2009	U
1	13	2010	C
1	13	2047	G
1	13	2070	G
1	13	2071	G
1	13	2072	A
1	13	2073	G
1	13	2077	A
1	13	2078	C
1	13	2079	G
1	13	2110	G
1	13	2115	A
1	13	2120	G
1	13	2121	U
1	13	2122	A
1	13	2126	A
1	13	2127	G
1	13	2128	G
1	13	2129	U
1	13	2140	G
1	13	2148	G
1	13	2152	G

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Mol	Chain	Res	Type
1	13	2153	G
1	13	2154	A
1	13	2157	A
1	13	2158	C
1	13	2159	C
1	13	2160	U
1	13	2161	C
1	13	2163	U
1	13	2164	U
1	1G	651	U
1	1G	655	G
1	1G	668	G
1	1G	677	G
1	1G	678	A
1	1G	685	G
1	1G	693	C
1	1G	694	C
1	1G	697	A
1	1G	700	C
1	1G	721	G
1	1G	722	G
1	1G	723	G
1	1G	724	G
1	1G	729	A
1	1G	730	C
1	1G	734	G
1	1G	736	G
1	1G	739	C
1	1G	740	A
1	1G	747	G
1	1G	755	A
1	1G	760	C
1	1G	771	C
1	1G	784	G
1	1G	803	C
1	1G	809	C
1	1G	813	U
1	1G	814	C
1	1G	822	U
1	1G	825	A
1	1G	832	C
1	1G	834	U

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Mol	Chain	Res	Type
1	1G	835	U
1	1G	836	G
1	1G	840	U
1	1G	847	A
1	1G	849	A
1	1G	850	G
1	1G	854	U
1	1G	855	U
1	1G	856	U
1	1G	857	G
1	1G	872	G
1	1G	885	U
1	1G	888	G
1	1G	891	A
1	1G	892	G
1	1G	907	G
1	1G	908	C
1	1G	911	A
1	1G	922	G
1	1G	930	G
1	1G	955	C
1	1G	957	G
1	1G	960	G
1	1G	962	A
1	1G	969	C
1	1G	970	A
1	1G	973	G
1	1G	986	C
1	1G	987	G
1	1G	988	G
1	1G	991	G
1	1G	992	G
1	1G	993	C
1	1G	994	A
1	1G	995	G
1	1G	1004	A
1	1G	1008	U
1	1G	1013	C
1	1G	1029	G
1	1G	1038	A
1	1G	1039	C
1	1G	1045	U

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Mol	Chain	Res	Type
1	1G	1047	G
1	1G	1052	A
1	1G	1053	A
1	1G	1054	G
1	1G	1063	C
1	1G	1064	G
1	1G	1065	G
1	1G	1070	U
1	1G	1071	A
1	1G	1080	A
1	1G	1081	A
1	1G	1092	A
1	1G	1101	C
1	1G	1102	G
1	1G	1105	G
1	1G	1108	A
1	1G	1114	G
1	1G	1115	G
1	1G	1116	U
1	1G	1126	A
1	1G	1127	U
1	1G	1134	G
1	1G	1138	A
1	1G	1139	A
1	1G	1140	C
1	1G	1142	C
1	1G	1146	G
1	1G	1147	C
1	1G	1150	G
1	1G	1156	G
1	1G	1159	G
1	1G	1160	U
1	1G	1161	A
1	1G	1162	A
1	1G	1176	A
1	1G	1188	A
1	1G	1190	U
1	1G	1201	A
1	1G	1202	A
1	1G	1205	G
1	1G	1206	G
1	1G	1210	G

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Mol	Chain	Res	Type
1	1G	1236	A
1	1G	1244	C
1	1G	1251	A
1	1G	1259	G
1	1G	1261	A
1	1G	1262	G
1	1G	1268	G
1	1G	1280	C
1	1G	1282	A
1	1G	1287	G
1	1G	1294	A
1	1G	1295	G
1	1G	1300	G
1	1G	1316	A
1	1G	1317	G
1	1G	1332	G
1	1G	1333	A
1	1G	1351	A
1	1G	1352	U
1	1G	1353	G
1	1G	1357	A
1	1G	1360	G
1	1G	1378	C
1	1G	1379	G
1	1G	1383	C
1	1G	1384	G
1	1G	1406	A
1	1G	1421	A
1	1G	1423	A
1	1G	1441	C
1	1G	1442	U
1	1G	1445	A
1	1G	1446	C
1	1G	1450	G
1	1G	1456	U
1	1G	1457	A
1	1G	1463	C
1	1G	1468	U
1	1G	1469	C
1	1G	1470	U
1	1G	1471	C
1	1G	1482	A

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Mol	Chain	Res	Type
1	1G	1496	A
1	1G	1510	G
1	1G	1537	A
1	1G	1539	G
1	1G	1549	G
1	1G	1550	G
1	1G	1557	C
1	1G	1558	A
1	1G	1571	C
1	1G	1581	A
1	1G	1583	U
1	1G	1584	U
1	1G	1591	A
1	1G	1592	A
1	1G	1594	G
1	1G	1595	C
1	1G	1597	A
1	1G	1598	A
1	1G	1599	G
1	1G	1600	A
1	1G	1601	A
1	1G	1603	C
1	1G	1605	U
1	1G	1612	C
1	1G	1614	U
1	1G	1615	U
1	1G	1616	G
1	1G	1619	A
1	1G	1628	A
1	1G	1630	C
1	1G	1633	G
1	1G	1640	A
1	1G	1643	C
1	1G	1645	G
1	1G	1648	G
1	1G	1649	U
1	1G	1650	G
1	1G	1652	C
1	1G	1654	C
1	1G	1655	G
1	1G	1656	C
1	1G	1657	G

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Mol	Chain	Res	Type
1	1G	1659	G
1	1G	1666	C
1	1G	1668	U
1	1G	1671	C
1	1G	1681	G
1	1G	1682	C
1	1G	1684	U
1	1G	1691	C
1	1G	1709	G
1	1G	1722	G
1	1G	1723	U
1	1G	1724	C
1	1G	1729	A
1	1G	1743	C
1	1G	1746	C
1	1G	1751	A
1	1G	1753	U
1	1G	1755	G
1	1G	1756	C
1	1G	1757	C
1	1G	1758	A
1	1G	1759	G
1	1G	1763	U
1	1G	1764	U
1	1G	1765	C
1	1G	1766	G
1	1G	1767	G
1	1G	1768	C
1	1G	1774	A
1	1G	1775	C
1	1G	1782	G
1	1G	1785	A
1	1G	1786	C
1	1G	1787	U
1	1G	1788	G
1	1G	1804	G
1	1G	1805	G
1	1G	1808	G
1	1G	1810	A
1	1G	1811	G
1	1G	1812	G
1	1G	1817	G

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Mol	Chain	Res	Type
1	1G	1823	U
1	1G	1824	G
1	1G	1827	C
1	1G	1828	A
1	1G	1829	G
1	1G	1839	U
1	1G	1840	A
1	1G	1841	C
1	1G	1845	C
1	1G	1854	A
1	1G	1863	A
1	1G	1865	A
1	1G	1867	U
1	1G	1868	G
1	1G	1882	G
1	1G	1884	U
1	1G	1885	G
1	1G	1887	C
1	1G	1890	C
1	1G	1894	C
1	1G	1896	A
1	1G	1897	C
1	1G	1902	A
1	1G	1905	U
1	1G	1906	A
1	1G	1907	A
1	1G	1913	A
1	1G	1914	A
1	1G	1915	A
1	1G	1922	G
1	1G	1924	C
1	1G	1925	C
1	1G	1926	A
1	1G	1928	U
1	1G	1929	U
1	1G	1932	G
1	1G	1933	A
1	1G	1939	G
1	1G	1944	C
1	1G	1946	A
1	1G	1947	C
1	1G	1949	C

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Mol	Chain	Res	Type
1	1G	1950	G
1	1G	1956	A
1	1G	1958	G
1	1G	1962	C
1	1G	1973	A
1	1G	1974	G
1	1G	1980	G
1	1G	1992	U
1	1G	1998	G
1	1G	2007	G
1	1G	2025	C
1	1G	2026	A
1	1G	2034	U
1	1G	2047	G
1	1G	2070	G
1	1G	2071	G
1	1G	2072	A
1	1G	2073	G
1	1G	2076	U
1	1G	2077	A
1	1G	2078	C
1	1G	2079	G
1	1G	2092	G
1	1G	2115	A
1	1G	2121	U
1	1G	2122	A
1	1G	2125	A
1	1G	2127	G
1	1G	2129	U
1	1G	2140	G
1	1G	2142	A
1	1G	2143	G
1	1G	2148	G
1	1G	2152	G
1	1G	2153	G
1	1G	2154	A
1	1G	2161	C
1	1G	2164	U
15	1H	2	G
15	1H	5	A
15	1H	7	G
15	1H	9	U

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Mol	Chain	Res	Type
15	1H	10	G
15	1H	12	U
15	1H	33	U
15	1H	34	C
15	1H	36	G
15	1H	45	C
15	1H	70	A
15	1H	73	A
15	1H	74	G
15	1H	84	G
15	1H	93	G
15	1H	94	G
15	1H	116	A
15	1H	117	A
15	1H	118	U
15	1H	123	G
15	1H	137	G
15	1H	155	C
15	1H	158	U
15	1H	159	U
15	1H	161	G
15	1H	171	A
15	1H	178	G
15	1H	186	A
15	1H	189	A
15	1H	203	A
15	1H	204	G
15	1H	205	G
15	1H	206	A
15	1H	211	A
15	1H	212	A
15	1H	213	A
15	1H	218	A
15	1H	219	A
15	1H	223	A
15	1H	238	G
15	1H	239	C
15	1H	240	G
15	1H	242	G
15	1H	251	G
15	1H	259	U
15	1H	271	C

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Mol	Chain	Res	Type
15	1H	273	U
15	1H	274	G
15	1H	276	C
15	1H	288	G
15	1H	289	U
15	1H	290	G
15	1H	297	U
15	1H	299	G
15	1H	300	G
15	1H	303	A
15	1H	324	A
15	1H	336	A
15	1H	349	A
15	1H	354	G
15	1H	355	A
15	1H	358	G
15	1H	359	C
15	1H	367	G
15	1H	377	G
15	1H	382	A
15	1H	388	G
15	1H	395	C
15	1H	400	G
15	1H	408	U
15	1H	410	G
15	1H	414	G
15	1H	417	G
15	1H	424	G
15	1H	433	U
15	1H	434	G
15	1H	435	G
15	1H	439	G
15	1H	440	A
15	1H	457	A
15	1H	471	A
15	1H	472	C
15	1H	475	A
15	1H	476	U
15	1H	483	C
15	1H	485	A
15	1H	498	A
15	1H	499	A

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Mol	Chain	Res	Type
15	1H	509	G
15	1H	510	A
15	1H	518	G
15	1H	528	A
15	1H	529	A
15	1H	532	A
15	1H	535	G
15	1H	536	C
15	1H	555	A
15	1H	556	A
15	1H	557	G
15	1H	558	C
15	1H	559	A
15	1H	560	G
15	1H	572	C
15	1H	573	A
15	1H	576	G
15	1H	581	G
15	1H	588	G
15	1H	598	G
15	1H	600	A
15	1H	605	C
15	1H	611	A
15	1H	612	C
15	1H	613	U
15	1H	628	A
15	1H	632	U
15	1H	635	G
15	1H	639	U
15	1H	641	G
15	1H	643	G
15	1H	646	G
15	1H	648	A
15	1H	649	G
15	1H	654	A
15	1H	659	A
15	1H	664	A
15	1H	671	A
15	1H	672	C
15	1H	673	A
15	1H	681	A
15	1H	683	C

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Mol	Chain	Res	Type
15	1H	687	C
15	1H	689	G
15	1H	690	C
15	1H	691	A
15	1H	692	C
15	1H	694	C
15	1H	696	G
15	1H	703	A
15	1H	713	C
15	1H	735	G
15	1H	739	G
15	1H	766	G
15	1H	779	C
15	1H	787	G
15	1H	794	G
15	1H	801	A
15	1H	802	C
15	1H	811	U
15	1H	813	A
15	1H	814	G
15	1H	825	G
15	1H	831	A
15	1H	833	A
15	1H	834	G
15	1H	838	A
15	1H	839	C
15	1H	841	G
15	1H	854	G
15	1H	861	C
15	1H	876	U
15	1H	877	U
15	1H	879	G
15	1H	895	C
15	1H	896	U
15	1H	907	U
15	1H	908	G
15	1H	915	A
15	1H	927	A
15	1H	931	G
15	1H	932	G
15	1H	933	C
15	1H	934	C

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Mol	Chain	Res	Type
15	1H	937	C
15	1H	939	A
15	1H	940	G
15	1H	941	C
15	1H	943	U
15	1H	944	A
15	1H	955	U
15	1H	958	A
15	1H	965	A
15	1H	974	A
15	1H	979	G
15	1H	988	A
15	1H	993	G
15	1H	1005	U
15	1H	1006	A
15	1H	1008	C
15	1H	1015	G
15	1H	1021	G
15	1H	1022	C
15	1H	1031	A
15	1H	1044	A
15	1H	1051	G
15	1H	1053	C
15	1H	1059	G
15	1H	1060	U
15	1H	1061	C
15	1H	1070	G
15	1H	1071	U
15	1H	1073	G
15	1H	1074	U
15	1H	1075	A
15	1H	1079	G
15	1H	1081	U
15	1H	1085	G
15	1H	1086	C
15	1H	1089	C
15	1H	1094	A
15	1H	1095	G
15	1H	1103	G
15	1H	1104	G
15	1H	1105	A
15	1H	1108	U

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Mol	Chain	Res	Type
15	1H	1109	U
15	1H	1110	G
15	1H	1111	G
15	1H	1112	C
15	1H	1114	U
15	1H	1116	G
15	1H	1118	A
15	1H	1119	G
15	1H	1120	C
15	1H	1122	G
15	1H	1124	C
15	1H	1125	A
15	1H	1126	U
15	1H	1129	U
15	1H	1130	U
15	1H	1131	U
15	1H	1132	A
15	1H	1133	A
15	1H	1134	A
15	1H	1135	G
15	1H	1136	A
15	1H	1138	U
15	1H	1143	A
15	1H	1144	A
15	1H	1145	U
15	1H	1152	C
15	1H	1159	A
15	1H	1160	G
15	1H	1177	A
15	1H	1179	G
15	1H	1183	C
15	1H	1184	G
15	1H	1187	G
15	1H	1190	U
15	1H	1191	A
15	1H	1200	G
15	1H	1218	G
15	1H	1221	G
15	1H	1222	A
15	1H	1223	U
15	1H	1224	G
15	1H	1225	A

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Mol	Chain	Res	Type
15	1H	1226	C
15	1H	1227	C
15	1H	1238	G
15	1H	1243	G
15	1H	1252	A
15	1H	1253	U
15	1H	1266	C
15	1H	1268	A
15	1H	1269	C
15	1H	1273	C
15	1H	1276	G
15	1H	1279	C
15	1H	1286	A
15	1H	1293	G
15	1H	1302	A
15	1H	1305	G
15	1H	1314	A
15	1H	1316	U
15	1H	1317	A
15	1H	1320	G
15	1H	1321	A
15	1H	1324	A
15	1H	1331	U
15	1H	1349	U
15	1H	1350	A
15	1H	1352	G
15	1H	1362	U
15	1H	1363	C
15	1H	1378	U
15	1H	1391	A
15	1H	1398	A
15	1H	1401	U
15	1H	1408	A
15	1H	1409	A
15	1H	1414	A
15	1H	1419	C
15	1H	1428	A
15	1H	1429	G
15	1H	1433	A
15	1H	1434	G
15	1H	1435	C
15	1H	1444	A

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Mol	Chain	Res	Type
15	1H	1446	U
15	1H	1465	G
15	1H	1466	C
15	1H	1469	U
15	1H	1470	G
15	1H	1477	C
15	1H	1486	C
15	1H	1494	A
15	1H	1499	A
15	1H	1500	G
15	1H	1503	A
15	1H	1505	G
15	1H	1508	C
15	1H	1509	G
15	1H	1510	A
15	1H	1511	G
15	1H	1517	C
15	1H	1521	A
15	1H	1532	G
15	1H	1538	U
15	1H	1542	C
15	1H	1543	A
15	1H	1544	A
15	1H	1546	U
15	1H	1557	A
15	1H	1559	A
15	1H	1560	A
15	1H	1566	G
15	1H	1571	G
15	1H	1574	G
15	1H	1583	G
15	1H	1584	U
15	1H	1585	A
15	1H	1586	C
15	1H	1587	G
15	1H	1592	A
15	1H	1594	A
15	1H	1597	C
15	1H	1598	C
15	1H	1604	A
15	1H	1605	G
15	1H	1608	A

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Mol	Chain	Res	Type
15	1H	1609	G
15	1H	1610	G
15	1H	1616	A
15	1H	1619	A
15	1H	1628	U
15	1H	1630	A
15	1H	1634	C
15	1H	1635	A
15	1H	1636	A
15	1H	1643	G
15	1H	1649	C
15	1H	1657	A
15	1H	1658	A
15	1H	1659	A
15	1H	1665	A
15	1H	1666	C
15	1H	1678	U
15	1H	1684	A
15	1H	1697	G
15	1H	1698	C
15	1H	1701	G
15	1H	1724	G
15	1H	1725	C
15	1H	1735	C
15	1H	1769	G
15	1H	1770	A
15	1H	1771	U
15	1H	1773	A
15	1H	1790	G
15	1H	1797	G
15	1H	1798	G
15	1H	1807	A
15	1H	1819	A
15	1H	1825	A
15	1H	1833	G
15	1H	1834	C
15	1H	1835	G
15	1H	1845	G
15	1H	1850	G
15	1H	1853	A
15	1H	1881	A
15	1H	1892	G

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Mol	Chain	Res	Type
15	1H	1893	A
15	1H	1894	G
15	1H	1914	A
15	1H	1920	C
15	1H	1921	G
15	1H	1925	A
15	1H	1926	A
15	1H	1931	G
15	1H	1939	C
15	1H	1944	A
15	1H	1954	G
15	1H	1955	G
15	1H	1956	U
15	1H	1957	A
15	1H	1961	A
15	1H	1963	A
15	1H	1977	A
15	1H	1980	U
15	1H	1988	U
15	1H	1990	C
15	1H	1992	C
15	1H	1994	A
15	1H	1995	A
15	1H	1996	A
15	1H	1997	A
15	1H	2007	C
15	1H	2008	C
15	1H	2011	A
15	1H	2017	G
15	1H	2018	U
15	1H	2045	A
15	1H	2046	C
15	1H	2048	G
15	1H	2056	A
15	1H	2057	G
15	1H	2058	A
15	1H	2068	C
15	1H	2080	C
15	1H	2081	G
15	1H	2085	A
15	1H	2086	G
15	1H	2087	A

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Mol	Chain	Res	Type
15	1H	2094	G
15	1H	2095	G
15	1H	2110	C
15	1H	2124	U
15	1H	2133	C
15	1H	2136	C
15	1H	2137	G
15	1H	2138	U
15	1H	2139	A
15	1H	2140	G
15	1H	2141	G
15	1H	2142	A
15	1H	2143	U
15	1H	2144	A
15	1H	2147	U
15	1H	2150	G
15	1H	2151	A
15	1H	2152	G
15	1H	2154	C
15	1H	2156	G
15	1H	2157	U
15	1H	2158	G
15	1H	2159	A
15	1H	2160	A
15	1H	2161	C
15	1H	2164	C
15	1H	2169	U
15	1H	2170	C
15	1H	2172	G
15	1H	2173	G
15	1H	2176	G
15	1H	2182	G
15	1H	2183	A
15	1H	2187	G
15	1H	2191	G
15	1H	2192	U
15	1H	2193	G
15	1H	2195	A
15	1H	2196	A
15	1H	2198	A
15	1H	2199	C
15	1H	2201	A

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Mol	Chain	Res	Type
15	1H	2206	G
15	1H	2215	G
15	1H	2216	G
15	1H	2223	A
15	1H	2225	C
15	1H	2230	G
15	1H	2231	G
15	1H	2232	A
15	1H	2233	U
15	1H	2234	G
15	1H	2240	A
15	1H	2241	C
15	1H	2253	G
15	1H	2255	C
15	1H	2282	A
15	1H	2284	A
15	1H	2288	A
15	1H	2290	C
15	1H	2295	G
15	1H	2298	C
15	1H	2301	A
15	1H	2302	A
15	1H	2303	A
15	1H	2320	A
15	1H	2322	G
15	1H	2323	G
15	1H	2324	A
15	1H	2325	A
15	1H	2326	A
15	1H	2327	U
15	1H	2329	C
15	1H	2334	G
15	1H	2335	A
15	1H	2336	G
15	1H	2337	A
15	1H	2339	C
15	1H	2340	G
15	1H	2341	C
15	1H	2342	A
15	1H	2350	A
15	1H	2351	A
15	1H	2357	C

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Mol	Chain	Res	Type
15	1H	2358	C
15	1H	2361	A
15	1H	2362	C
15	1H	2365	C
15	1H	2376	A
15	1H	2392	A
15	1H	2398	G
15	1H	2400	C
15	1H	2407	A
15	1H	2408	A
15	1H	2410	C
15	1H	2421	U
15	1H	2425	G
15	1H	2439	C
15	1H	2440	A
15	1H	2444	G
15	1H	2445	A
15	1H	2446	U
15	1H	2450	A
15	1H	2454	A
15	1H	2456	C
15	1H	2463	A
15	1H	2483	G
15	1H	2484	A
15	1H	2490	C
15	1H	2491	A
15	1H	2493	A
15	1H	2495	C
15	1H	2517	G
15	1H	2520	G
15	1H	2521	U
15	1H	2522	C
15	1H	2533	A
15	1H	2544	G
15	1H	2564	G
15	1H	2569	U
15	1H	2581	A
15	1H	2582	G
15	1H	2588	C
15	1H	2599	U
15	1H	2616	C
15	1H	2617	A

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Mol	Chain	Res	Type
15	1H	2624	U
15	1H	2626	U
15	1H	2627	C
15	1H	2630	U
15	1H	2644	A
15	1H	2649	G
15	1H	2651	U
15	1H	2661	C
15	1H	2669	A
15	1H	2676	G
15	1H	2680	A
15	1H	2684	G
15	1H	2688	G
15	1H	2704	U
15	1H	2705	C
15	1H	2717	U
15	1H	2720	A
15	1H	2722	G
15	1H	2728	A
15	1H	2729	A
15	1H	2730	G
15	1H	2742	U
15	1H	2749	A
15	1H	2750	A
15	1H	2760	G
15	1H	2773	A
15	1H	2774	A
15	1H	2778	G
15	1H	2780	A
15	1H	2781	A
15	1H	2782	G
15	1H	2794	A
15	1H	2795	U
15	1H	2803	C
15	1H	2805	C
15	1H	2807	C
15	1H	2809	G
15	1H	2810	C
15	1H	2811	G
15	1H	2812	U
15	1H	2813	C
15	1H	2814	A

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Mol	Chain	Res	Type
15	1H	2815	A
15	1H	2817	C
15	1H	2820	G
15	1H	2821	U
15	1H	2827	C
15	1H	2833	A
15	1H	2834	A
15	1H	2836	A
15	1H	2843	G
15	1H	2846	G
15	1H	2847	G
15	1H	2848	A
15	1H	2862	U
15	1H	2885	G
15	1H	2886	A
15	1H	2904	A
15	1H	2905	G
15	1H	2907	U
15	1H	2911	G
15	1H	2912	A
15	1H	2913	C
15	1H	2914	C
15	14	3	U
15	14	4	C
15	14	5	A
15	14	9	U
15	14	13	A
15	14	34	C
15	14	35	G
15	14	36	G
15	14	45	C
15	14	48	A
15	14	49	U
15	14	57	G
15	14	60	G
15	14	70	A
15	14	71	U
15	14	73	A
15	14	74	G
15	14	77	A
15	14	82	G
15	14	91	G

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Mol	Chain	Res	Type
15	14	92	C
15	14	94	G
15	14	98	U
15	14	100	G
15	14	110	U
15	14	117	A
15	14	118	U
15	14	123	G
15	14	127	C
15	14	139	A
15	14	152	G
15	14	154	G
15	14	155	C
15	14	156	U
15	14	157	U
15	14	162	C
15	14	163	G
15	14	164	C
15	14	165	G
15	14	172	A
15	14	178	G
15	14	186	A
15	14	189	A
15	14	195	G
15	14	204	G
15	14	205	G
15	14	206	A
15	14	211	A
15	14	212	A
15	14	215	A
15	14	219	A
15	14	222	G
15	14	223	A
15	14	238	G
15	14	239	C
15	14	240	G
15	14	271	C
15	14	272	U
15	14	273	U
15	14	275	U
15	14	276	C
15	14	288	G

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Mol	Chain	Res	Type
15	14	290	G
15	14	296	C
15	14	297	U
15	14	299	G
15	14	300	G
15	14	301	A
15	14	302	C
15	14	303	A
15	14	304	C
15	14	314	A
15	14	336	A
15	14	349	A
15	14	352	G
15	14	354	G
15	14	355	A
15	14	377	G
15	14	387	U
15	14	388	G
15	14	393	U
15	14	394	A
15	14	400	G
15	14	414	G
15	14	422	A
15	14	423	U
15	14	424	G
15	14	433	U
15	14	434	G
15	14	439	G
15	14	440	A
15	14	444	C
15	14	457	A
15	14	471	A
15	14	472	C
15	14	476	U
15	14	482	A
15	14	483	C
15	14	485	A
15	14	498	A
15	14	509	G
15	14	528	A
15	14	531	U
15	14	532	A

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Mol	Chain	Res	Type
15	14	536	C
15	14	540	A
15	14	555	A
15	14	556	A
15	14	558	C
15	14	559	A
15	14	560	G
15	14	563	A
15	14	575	G
15	14	581	G
15	14	588	G
15	14	593	U
15	14	598	G
15	14	600	A
15	14	605	C
15	14	611	A
15	14	628	A
15	14	632	U
15	14	639	U
15	14	640	U
15	14	641	G
15	14	643	G
15	14	648	A
15	14	649	G
15	14	654	A
15	14	664	A
15	14	672	C
15	14	673	A
15	14	681	A
15	14	685	G
15	14	689	G
15	14	690	C
15	14	693	G
15	14	694	C
15	14	695	G
15	14	701	A
15	14	735	G
15	14	758	U
15	14	764	G
15	14	766	G
15	14	770	C
15	14	771	A

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Mol	Chain	Res	Type
15	14	779	C
15	14	790	G
15	14	801	A
15	14	802	C
15	14	811	U
15	14	813	A
15	14	814	G
15	14	820	G
15	14	824	G
15	14	825	G
15	14	828	U
15	14	831	A
15	14	833	A
15	14	834	G
15	14	836	U
15	14	841	G
15	14	846	C
15	14	854	G
15	14	861	C
15	14	865	C
15	14	868	A
15	14	871	U
15	14	876	U
15	14	877	U
15	14	879	G
15	14	880	G
15	14	881	G
15	14	889	C
15	14	895	C
15	14	907	U
15	14	908	G
15	14	912	A
15	14	915	A
15	14	935	C
15	14	937	C
15	14	938	C
15	14	939	A
15	14	943	U
15	14	944	A
15	14	945	C
15	14	952	C
15	14	958	A

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Mol	Chain	Res	Type
15	14	965	A
15	14	967	G
15	14	972	C
15	14	974	A
15	14	979	G
15	14	980	A
15	14	985	G
15	14	988	A
15	14	992	A
15	14	993	G
15	14	1008	C
15	14	1015	G
15	14	1021	G
15	14	1031	A
15	14	1037	G
15	14	1038	A
15	14	1039	C
15	14	1044	A
15	14	1057	A
15	14	1060	U
15	14	1061	C
15	14	1070	G
15	14	1071	U
15	14	1072	G
15	14	1073	G
15	14	1074	U
15	14	1075	A
15	14	1085	G
15	14	1092	G
15	14	1093	A
15	14	1094	A
15	14	1095	G
15	14	1096	A
15	14	1097	C
15	14	1099	G
15	14	1102	A
15	14	1105	A
15	14	1108	U
15	14	1109	U
15	14	1112	C
15	14	1113	U
15	14	1114	U

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Mol	Chain	Res	Type
15	14	1115	A
15	14	1116	G
15	14	1118	A
15	14	1121	A
15	14	1125	A
15	14	1127	C
15	14	1130	U
15	14	1131	U
15	14	1133	A
15	14	1134	A
15	14	1135	G
15	14	1136	A
15	14	1137	G
15	14	1138	U
15	14	1139	G
15	14	1141	G
15	14	1143	A
15	14	1144	A
15	14	1145	U
15	14	1147	G
15	14	1153	U
15	14	1159	A
15	14	1160	G
15	14	1170	G
15	14	1176	A
15	14	1177	A
15	14	1178	U
15	14	1183	C
15	14	1184	G
15	14	1185	G
15	14	1187	G
15	14	1192	A
15	14	1200	G
15	14	1204	A
15	14	1219	G
15	14	1220	G
15	14	1221	G
15	14	1222	A
15	14	1223	U
15	14	1225	A
15	14	1226	C
15	14	1234	G

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Mol	Chain	Res	Type
15	14	1252	A
15	14	1253	U
15	14	1259	U
15	14	1260	G
15	14	1268	A
15	14	1286	A
15	14	1293	G
15	14	1298	U
15	14	1302	A
15	14	1305	G
15	14	1316	U
15	14	1317	A
15	14	1320	G
15	14	1321	A
15	14	1322	U
15	14	1324	A
15	14	1333	A
15	14	1349	U
15	14	1350	A
15	14	1355	C
15	14	1362	U
15	14	1381	G
15	14	1394	C
15	14	1397	G
15	14	1398	A
15	14	1408	A
15	14	1414	A
15	14	1417	G
15	14	1418	G
15	14	1419	C
15	14	1426	G
15	14	1427	A
15	14	1428	A
15	14	1429	G
15	14	1434	G
15	14	1435	C
15	14	1442	A
15	14	1449	G
15	14	1455	U
15	14	1456	C
15	14	1464	U
15	14	1465	G

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Mol	Chain	Res	Type
15	14	1466	C
15	14	1468	A
15	14	1469	U
15	14	1470	G
15	14	1477	C
15	14	1485	G
15	14	1486	C
15	14	1494	A
15	14	1495	C
15	14	1499	A
15	14	1500	G
15	14	1504	U
15	14	1505	G
15	14	1508	C
15	14	1509	G
15	14	1510	A
15	14	1511	G
15	14	1517	C
15	14	1521	A
15	14	1525	G
15	14	1528	G
15	14	1530	G
15	14	1531	U
15	14	1532	G
15	14	1539	A
15	14	1542	C
15	14	1543	A
15	14	1557	A
15	14	1558	C
15	14	1559	A
15	14	1571	G
15	14	1577	A
15	14	1582	C
15	14	1583	G
15	14	1584	U
15	14	1586	C
15	14	1592	A
15	14	1604	A
15	14	1605	G
15	14	1608	A
15	14	1609	G
15	14	1610	G

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Mol	Chain	Res	Type
15	14	1616	A
15	14	1619	A
15	14	1628	U
15	14	1634	C
15	14	1635	A
15	14	1636	A
15	14	1637	C
15	14	1646	A
15	14	1647	C
15	14	1657	A
15	14	1658	A
15	14	1659	A
15	14	1668	G
15	14	1674	C
15	14	1690	C
15	14	1697	G
15	14	1698	C
15	14	1704	A
15	14	1724	G
15	14	1725	C
15	14	1750	A
15	14	1751	A
15	14	1753	G
15	14	1766	G
15	14	1767	G
15	14	1770	A
15	14	1771	U
15	14	1772	G
15	14	1773	A
15	14	1779	G
15	14	1787	G
15	14	1796	A
15	14	1797	G
15	14	1798	G
15	14	1807	A
15	14	1813	U
15	14	1814	A
15	14	1816	C
15	14	1825	A
15	14	1834	C
15	14	1835	G
15	14	1845	G

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Mol	Chain	Res	Type
15	14	1850	G
15	14	1863	A
15	14	1873	G
15	14	1881	A
15	14	1882	A
15	14	1892	G
15	14	1903	G
15	14	1913	G
15	14	1914	A
15	14	1925	A
15	14	1931	G
15	14	1934	C
15	14	1954	G
15	14	1955	G
15	14	1956	U
15	14	1961	A
15	14	1980	U
15	14	1985	A
15	14	1988	U
15	14	1989	G
15	14	1992	C
15	14	1995	A
15	14	1996	A
15	14	1997	A
15	14	2009	G
15	14	2017	G
15	14	2018	U
15	14	2041	U
15	14	2048	G
15	14	2056	A
15	14	2057	G
15	14	2058	A
15	14	2068	C
15	14	2076	A
15	14	2080	C
15	14	2081	G
15	14	2084	A
15	14	2085	A
15	14	2086	G
15	14	2087	A
15	14	2094	G
15	14	2095	G

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Mol	Chain	Res	Type
15	14	2097	G
15	14	2107	A
15	14	2118	G
15	14	2122	C
15	14	2124	U
15	14	2125	G
15	14	2133	C
15	14	2136	C
15	14	2137	G
15	14	2138	U
15	14	2139	A
15	14	2140	G
15	14	2141	G
15	14	2142	A
15	14	2144	A
15	14	2145	G
15	14	2147	U
15	14	2148	G
15	14	2149	G
15	14	2150	G
15	14	2151	A
15	14	2152	G
15	14	2154	C
15	14	2156	G
15	14	2157	U
15	14	2158	G
15	14	2161	C
15	14	2162	C
15	14	2163	C
15	14	2164	C
15	14	2165	C
15	14	2169	U
15	14	2170	C
15	14	2171	C
15	14	2172	G
15	14	2173	G
15	14	2176	G
15	14	2177	G
15	14	2178	G
15	14	2180	G
15	14	2182	G
15	14	2183	A

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Mol	Chain	Res	Type
15	14	2185	G
15	14	2186	C
15	14	2187	G
15	14	2189	C
15	14	2191	G
15	14	2192	U
15	14	2193	G
15	14	2194	A
15	14	2196	A
15	14	2198	A
15	14	2199	C
15	14	2207	G
15	14	2214	U
15	14	2216	G
15	14	2223	A
15	14	2230	G
15	14	2231	G
15	14	2232	A
15	14	2234	G
15	14	2240	A
15	14	2241	C
15	14	2274	G
15	14	2284	A
15	14	2290	C
15	14	2291	G
15	14	2293	A
15	14	2298	C
15	14	2302	A
15	14	2303	A
15	14	2313	A
15	14	2320	A
15	14	2322	G
15	14	2323	G
15	14	2325	A
15	14	2326	A
15	14	2332	C
15	14	2333	G
15	14	2336	G
15	14	2340	G
15	14	2341	C
15	14	2351	A
15	14	2361	A

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Mol	Chain	Res	Type
15	14	2362	C
15	14	2365	C
15	14	2369	G
15	14	2398	G
15	14	2400	C
15	14	2403	A
15	14	2408	A
15	14	2411	G
15	14	2414	G
15	14	2416	U
15	14	2417	C
15	14	2418	C
15	14	2421	U
15	14	2426	A
15	14	2428	G
15	14	2429	G
15	14	2437	A
15	14	2439	C
15	14	2440	A
15	14	2444	G
15	14	2445	A
15	14	2446	U
15	14	2450	A
15	14	2454	A
15	14	2455	C
15	14	2456	C
15	14	2463	A
15	14	2484	A
15	14	2485	G
15	14	2488	U
15	14	2490	C
15	14	2491	A
15	14	2492	C
15	14	2497	G
15	14	2498	C
15	14	2499	G
15	14	2509	G
15	14	2510	G
15	14	2517	G
15	14	2520	G
15	14	2533	A
15	14	2535	C

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Mol	Chain	Res	Type
15	14	2544	G
15	14	2547	G
15	14	2556	A
15	14	2558	G
15	14	2564	G
15	14	2569	U
15	14	2570	U
15	14	2579	A
15	14	2581	A
15	14	2582	G
15	14	2584	G
15	14	2588	C
15	14	2594	C
15	14	2597	G
15	14	2617	A
15	14	2624	U
15	14	2626	U
15	14	2627	C
15	14	2628	U
15	14	2630	U
15	14	2645	G
15	14	2651	U
15	14	2653	G
15	14	2661	C
15	14	2675	A
15	14	2679	G
15	14	2680	A
15	14	2682	C
15	14	2688	G
15	14	2704	U
15	14	2705	C
15	14	2717	U
15	14	2722	G
15	14	2728	A
15	14	2729	A
15	14	2742	U
15	14	2745	G
15	14	2749	A
15	14	2755	U
15	14	2760	G
15	14	2766	A
15	14	2767	G

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Mol	Chain	Res	Type
15	14	2768	C
15	14	2770	U
15	14	2773	A
15	14	2778	G
15	14	2781	A
15	14	2782	G
15	14	2793	G
15	14	2794	A
15	14	2795	U
15	14	2805	C
15	14	2806	A
15	14	2807	C
15	14	2809	G
15	14	2810	C
15	14	2812	U
15	14	2813	C
15	14	2814	A
15	14	2820	G
15	14	2831	G
15	14	2833	A
15	14	2834	A
15	14	2836	A
15	14	2846	G
15	14	2847	G
15	14	2848	A
15	14	2849	U
15	14	2852	G
15	14	2857	G
15	14	2858	G
15	14	2873	A
15	14	2885	G
15	14	2892	C
15	14	2893	C
15	14	2902	C
15	14	2906	G
15	14	2908	C
15	14	2910	U
15	14	2911	G
26	16	2	A
26	16	9	G
26	16	10	U
26	16	15	A

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Mol	Chain	Res	Type
26	16	17	A
26	16	27	A
26	16	33	C
26	16	40	C
26	16	42	U
26	16	43	U
26	16	47	A
26	16	58	G
26	16	60	A
26	16	67	C
26	16	75	A
26	16	76	U
26	16	108	G
26	16	112	G
26	16	122	A
26	1J	2	A
26	1J	7	C
26	1J	10	U
26	1J	11	G
26	1J	15	A
26	1J	17	A
26	1J	18	G
26	1J	24	U
26	1J	28	A
26	1J	32	C
26	1J	42	U
26	1J	44	C
26	1J	47	A
26	1J	49	C
26	1J	55	A
26	1J	58	G
26	1J	60	A
26	1J	61	A
26	1J	63	G
26	1J	75	A
26	1J	76	U
26	1J	83	G
26	1J	90	C
26	1J	91	G
26	1J	92	A
26	1J	93	C
26	1J	102	A

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Mol	Chain	Res	Type
26	1J	111	C
26	1J	112	G
51	Y1	30	C
51	Y1	32	A
51	Y1	33	G
51	Y1	34	G
51	Y1	36	G
51	Y1	37	G
51	Y1	42	U
51	Y1	43	U
52	W1	7	A
52	W1	9	A
52	W1	10	G
52	W1	11	C
52	W1	16	U
52	W1	18	G
52	W1	19	G
52	W1	22	G
52	W1	34	G
52	W1	41	C
52	W1	44	G
52	W1	47	U
52	W1	48	C
52	W1	49	C
52	W1	61	C
52	W1	74	C
52	W1	75	C
52	W1	76	A
52	X1	2	C
52	X1	13	C
52	X1	14	A
52	X1	17	C
52	X1	18	G
52	X1	20	U
52	X1	21	A
52	X1	22	G
52	X1	30	G
52	X1	37	A
52	X1	44	G
52	X1	45	U
52	X1	46	G
52	X1	48	C

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Mol	Chain	Res	Type
52	X1	58	A
52	X1	61	C
52	X1	64	A
52	X1	69	G
52	X1	72	C
52	X1	76	A
52	V1	2	C
52	V1	3	C
52	V1	8	U
52	V1	9	A
52	V1	10	G
52	V1	13	C
52	V1	14	A
52	V1	17	C
52	V1	19	G
52	V1	21	A
52	V1	22	G
52	V1	26	A
52	V1	30	G
52	V1	33	U
52	V1	34	G
52	V1	35	A
52	V1	36	A
52	V1	37	A
52	V1	42	C
52	V1	43	C
52	V1	44	G
52	V1	45	U
52	V1	46	G
52	V1	47	U
52	V1	48	C
52	V1	49	C
52	V1	52	G
52	V1	55	U
52	V1	56	C
52	V1	58	A
52	V1	59	U
52	V1	60	U
52	V1	61	C
52	V1	66	U
52	V1	72	C
52	V1	73	A

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Mol	Chain	Res	Type
52	V1	74	C
52	V1	76	A
51	Y4	31	A
51	Y4	35	A
51	Y4	37	G
51	Y4	38	U
51	Y4	39	U
51	Y4	41	U
51	Y4	42	U
51	Y4	43	U
51	Y4	44	U
51	Y4	45	U
51	Y4	49	U
51	Y4	51	U
51	Y4	52	U
52	W4	14	A
52	W4	16	U
52	W4	17	C
52	W4	18	G
52	W4	19	G
52	W4	20	U
52	W4	21	A
52	W4	22	G
52	W4	41	C
52	W4	47	U
52	W4	49	C
52	W4	56	C
52	W4	64	A
52	W4	70	G
52	W4	72	C
52	W4	73	A
52	W4	74	C
52	W4	75	C
52	W4	76	A
52	X4	8	U
52	X4	17	C
52	X4	18	G
52	X4	19	G
52	X4	20	U
52	X4	21	A
52	X4	22	G
52	X4	37	A

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Mol	Chain	Res	Type
52	X4	41	C
52	X4	42	C
52	X4	43	C
52	X4	44	G
52	X4	45	U
52	X4	46	G
52	X4	48	C
52	X4	49	C
52	X4	58	A
52	X4	70	G
52	X4	74	C
52	X4	76	A
52	V4	3	C
52	V4	4	C
52	V4	8	U
52	V4	9	A
52	V4	10	G
52	V4	13	C
52	V4	14	A
52	V4	17	C
52	V4	19	G
52	V4	21	A
52	V4	22	G
52	V4	26	A
52	V4	31	A
52	V4	32	U
52	V4	33	U
52	V4	34	G
52	V4	35	A
52	V4	37	A
52	V4	38	A
52	V4	42	C
52	V4	44	G
52	V4	45	U
52	V4	46	G
52	V4	47	U
52	V4	48	C
52	V4	49	C
52	V4	55	U
52	V4	56	C
52	V4	58	A
52	V4	59	U

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Mol	Chain	Res	Type
52	V4	60	U
52	V4	61	C
52	V4	66	U
52	V4	73	A
52	V4	76	A

All (190) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	13	651	U
1	13	696	A
1	13	754	G
1	13	803	C
1	13	821	G
1	13	885	U
1	13	892	G
1	13	907	G
1	13	1053	A
1	13	1069	G
1	13	1070	U
1	13	1114	G
1	13	1189	U
1	13	1377	C
1	13	1422	U
1	13	1615	U
1	13	1649	U
1	13	1651	C
1	13	1692	G
1	13	1693	U
1	13	1773	C
1	13	1804	G
1	13	1867	U
1	13	1912	A
1	13	1927	G
1	13	1963	C
1	13	2071	G
1	13	2078	C
1	13	2121	U
1	13	2126	A
1	13	2127	G
1	1G	728	U
1	1G	754	G

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Mol	Chain	Res	Type
1	1G	849	A
1	1G	891	A
1	1G	907	G
1	1G	968	A
1	1G	986	C
1	1G	1053	A
1	1G	1070	U
1	1G	1115	G
1	1G	1138	A
1	1G	1157	C
1	1G	1189	U
1	1G	1204	G
1	1G	1261	A
1	1G	1316	A
1	1G	1352	U
1	1G	1377	C
1	1G	1441	C
1	1G	1536	A
1	1G	1597	A
1	1G	1615	U
1	1G	1649	U
1	1G	1681	G
1	1G	1756	C
1	1G	1773	C
1	1G	1785	A
1	1G	1852	A
1	1G	1912	A
1	1G	1925	C
1	1G	1927	G
1	1G	1928	U
1	1G	1973	A
1	1G	2025	C
1	1G	2121	U
1	1G	2152	G
15	1H	33	U
15	1H	185	A
15	1H	186	A
15	1H	239	C
15	1H	288	G
15	1H	432	C
15	1H	509	G
15	1H	535	G

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Mol	Chain	Res	Type
15	1H	555	A
15	1H	612	C
15	1H	734	A
15	1H	787	G
15	1H	801	A
15	1H	813	A
15	1H	825	G
15	1H	907	U
15	1H	908	G
15	1H	1021	G
15	1H	1070	G
15	1H	1074	U
15	1H	1108	U
15	1H	1109	U
15	1H	1133	A
15	1H	1158	G
15	1H	1176	A
15	1H	1226	C
15	1H	1361	U
15	1H	1427	A
15	1H	1428	A
15	1H	1445	U
15	1H	1469	U
15	1H	1608	A
15	1H	1657	A
15	1H	1658	A
15	1H	1666	C
15	1H	1770	A
15	1H	1796	A
15	1H	1833	G
15	1H	1892	G
15	1H	1925	A
15	1H	2087	A
15	1H	2182	G
15	1H	2197	U
15	1H	2230	G
15	1H	2232	A
15	1H	2290	C
15	1H	2334	G
15	1H	2361	A
15	1H	2454	A
15	1H	2490	C

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Mol	Chain	Res	Type
15	1H	2581	A
15	1H	2626	U
15	1H	2704	U
15	1H	2772	U
15	14	4	C
15	14	34	C
15	14	48	A
15	14	126	C
15	14	185	A
15	14	186	A
15	14	303	A
15	14	335	A
15	14	484	C
15	14	498	A
15	14	640	U
15	14	734	A
15	14	801	A
15	14	813	A
15	14	1021	G
15	14	1038	A
15	14	1059	G
15	14	1070	G
15	14	1133	A
15	14	1427	A
15	14	1428	A
15	14	1469	U
15	14	1608	A
15	14	1657	A
15	14	1658	A
15	14	1697	G
15	14	1772	G
15	14	1961	A
15	14	1988	U
15	14	2182	G
15	14	2230	G
15	14	2240	A
15	14	2290	C
15	14	2350	A
15	14	2417	C
15	14	2421	U
15	14	2425	G
15	14	2437	A

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Mol	Chain	Res	Type
15	14	2443	G
15	14	2454	A
15	14	2533	A
15	14	2557	A
15	14	2626	U
15	14	2644	A
15	14	2704	U
15	14	2772	U
15	14	2792	A
15	14	2872	G
15	14	2905	G
26	1J	17	A
26	1J	90	C
51	Y1	31	A
51	Y1	36	G
51	Y1	42	U
52	X1	45	U
52	V1	2	C
52	V1	8	U
52	V1	18	G
52	V1	34	G
52	V1	36	A
52	V1	58	A
51	Y4	44	U
52	X4	18	G
52	X4	43	C
52	X4	48	C
52	V4	8	U
52	V4	18	G
52	V4	58	A
52	V4	60	U

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

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 1656 ligands modelled in this entry, 1652 are monoatomic - leaving 4 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
53	8UZ	13	2201	-	35,35,35	0.44	0	49,52,52	1.25	4 (8%)
53	8UZ	1G	2201	-	35,35,35	0.33	0	49,52,52	0.90	1 (2%)
53	8UZ	13	2202	54	35,35,35	0.34	0	49,52,52	0.90	2 (4%)
53	8UZ	1G	2202	54	35,35,35	0.17	0	49,52,52	0.77	2 (4%)

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
53	8UZ	13	2201	-	-	0/12/72/72	0/3/3/3
53	8UZ	1G	2201	-	-	3/12/72/72	0/3/3/3
53	8UZ	13	2202	54	-	2/12/72/72	0/3/3/3
53	8UZ	1G	2202	54	-	3/12/72/72	0/3/3/3

There are no bond length outliers.

All (9) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	13	2201	8UZ	O1-C2-C15	-4.32	100.78	108.22
53	13	2202	8UZ	O1-C2-C15	-3.46	102.26	108.22
53	1G	2202	8UZ	C2-C15-N4	2.88	115.40	110.20
53	13	2202	8UZ	C2-C15-N4	2.59	114.87	110.20
53	13	2201	8UZ	C17-C16-C15	2.25	114.93	111.07
53	13	2201	8UZ	O6-C12-C10	-2.14	103.99	109.30
53	1G	2201	8UZ	O2-C7-C8	2.11	115.53	109.94
53	13	2201	8UZ	C2-C15-C16	2.08	115.67	110.21
53	1G	2202	8UZ	O1-C2-C15	-2.05	104.69	108.22

There are no chirality outliers.

All (8) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
53	1G	2202	8UZ	N-C-C1-C17
53	1G	2202	8UZ	N-C-C1-O
53	13	2202	8UZ	C12-C10-C11-O5
53	13	2202	8UZ	O4-C10-C11-O5
53	1G	2201	8UZ	N-C-C1-O
53	1G	2201	8UZ	O4-C10-C11-O5
53	1G	2201	8UZ	N-C-C1-C17
53	1G	2202	8UZ	C15-C2-O1-C3

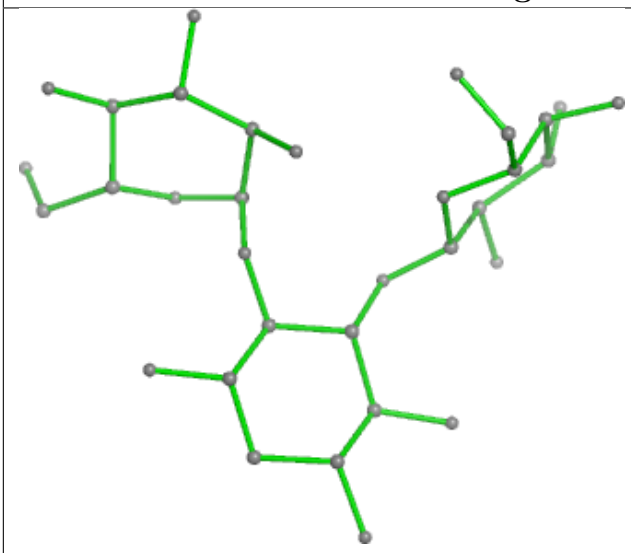
There are no ring outliers.

2 monomers are involved in 4 short contacts:

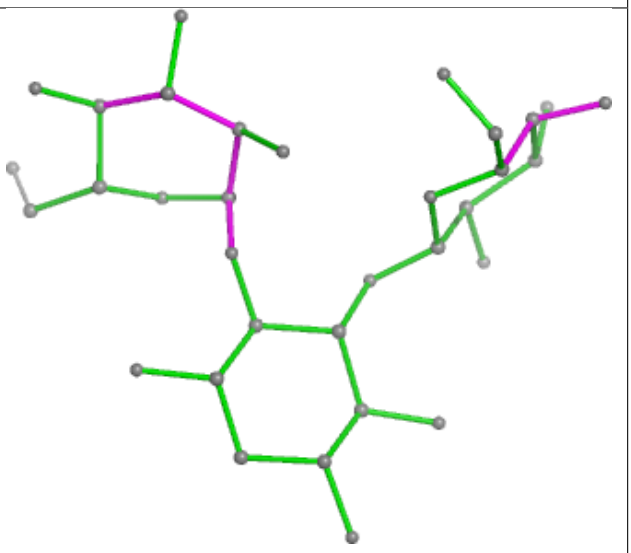
Mol	Chain	Res	Type	Clashes	Symm-Clashes
53	1G	2201	8UZ	1	0
53	1G	2202	8UZ	3	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

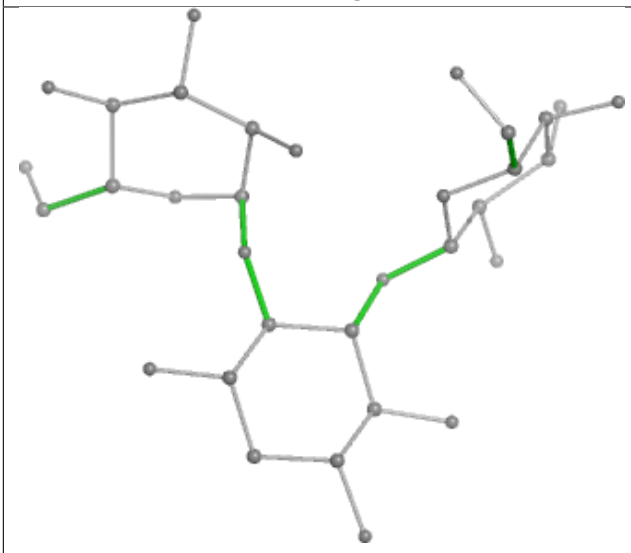
Ligand 8UZ 13 2201



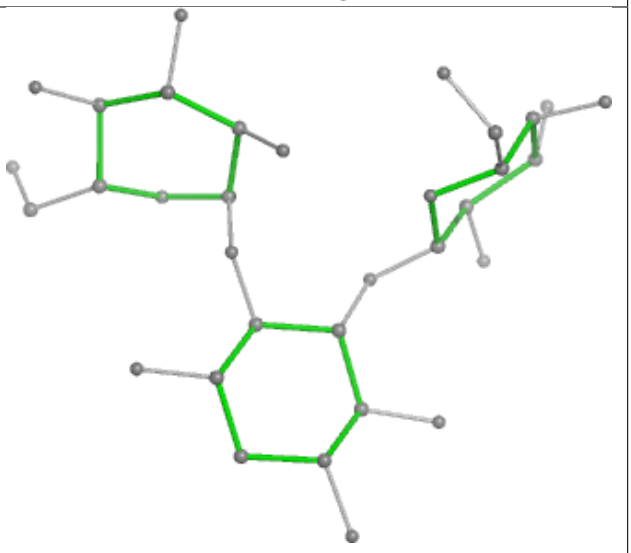
Bond lengths



Bond angles

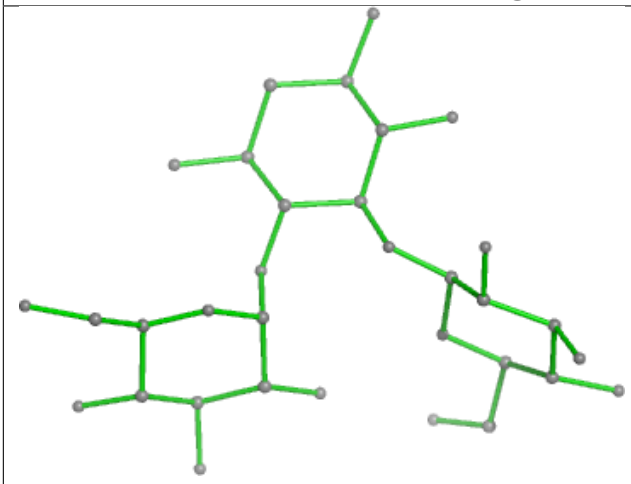


Torsions

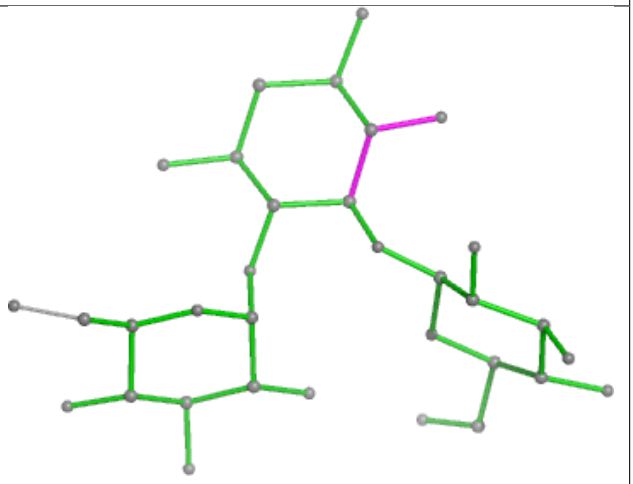


Rings

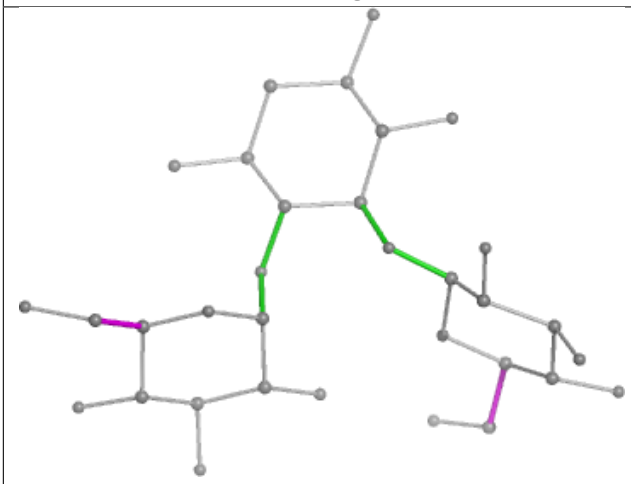
Ligand 8UZ 1G 2201



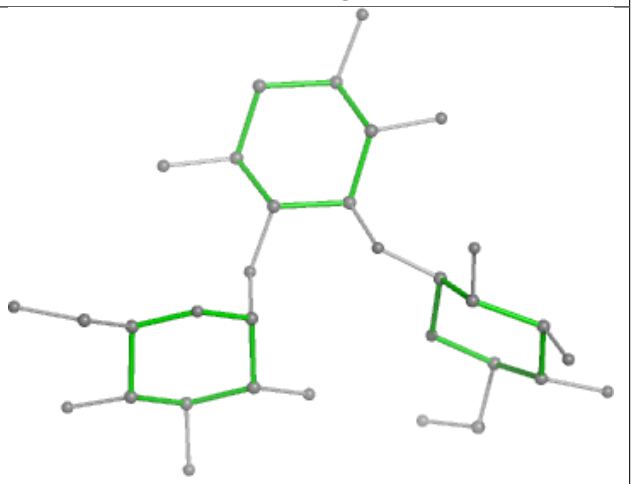
Bond lengths



Bond angles

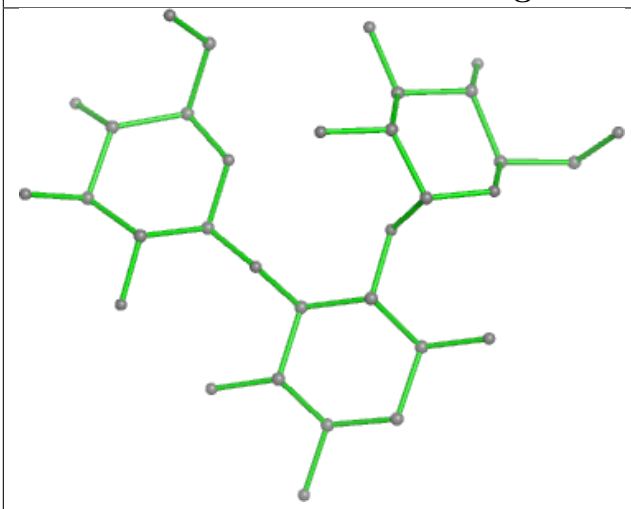


Torsions

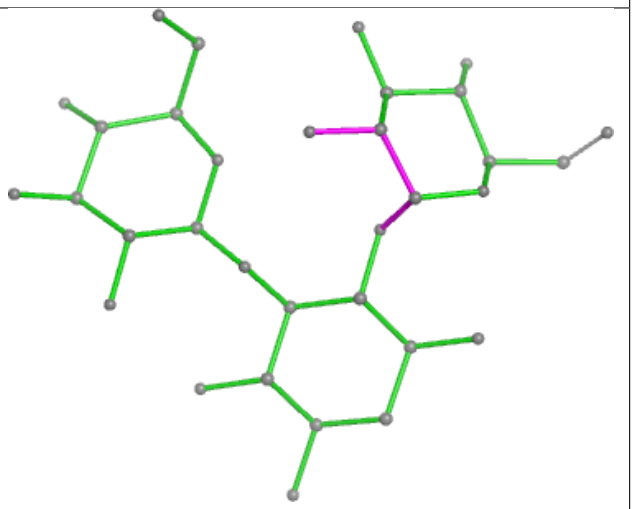


Rings

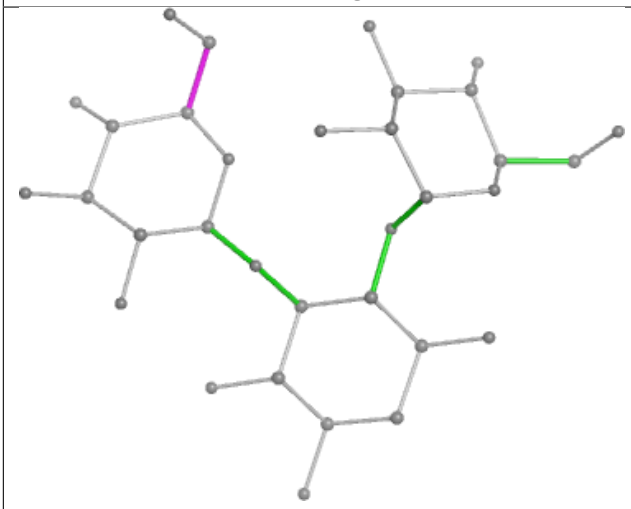
Ligand 8UZ 13 2202



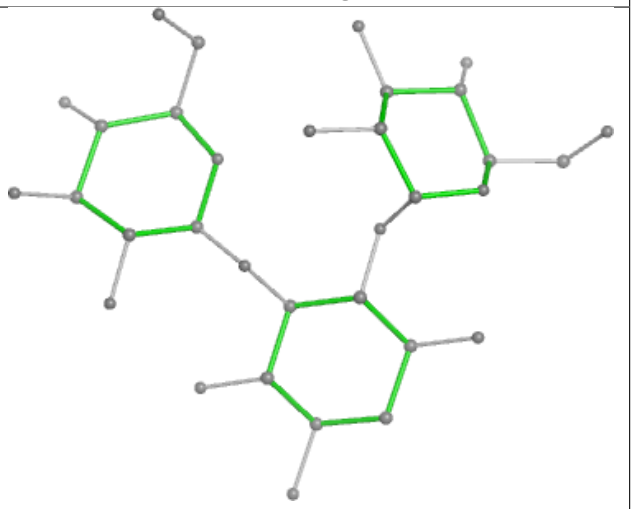
Bond lengths



Bond angles

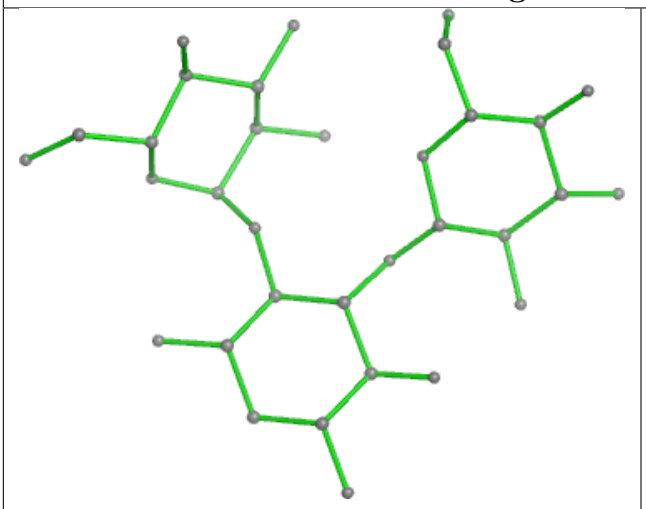


Torsions

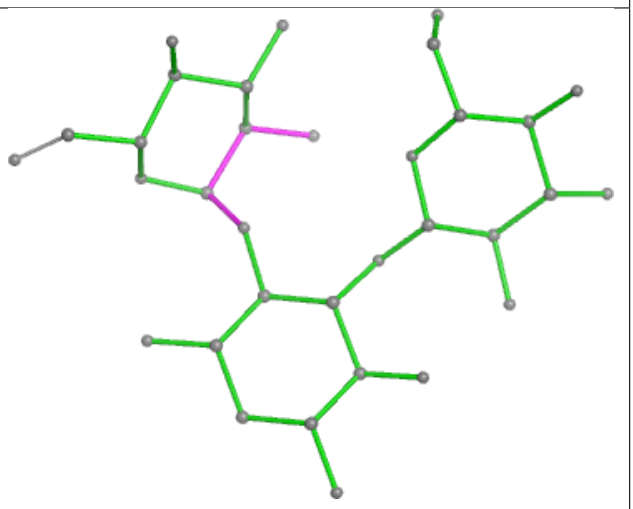


Rings

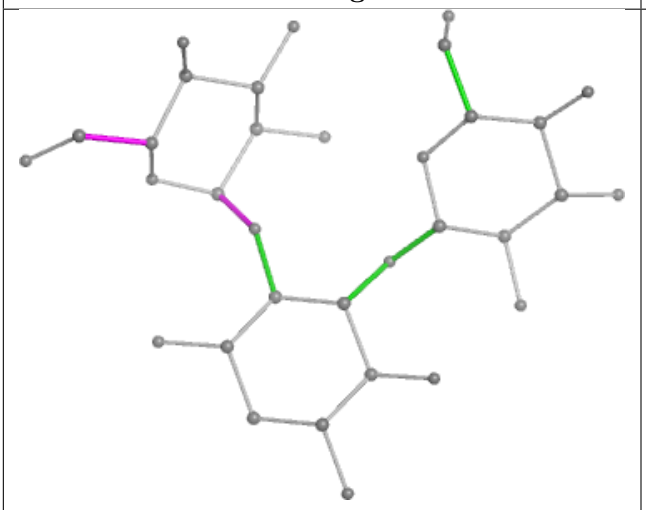
Ligand 8UZ 1G 2202



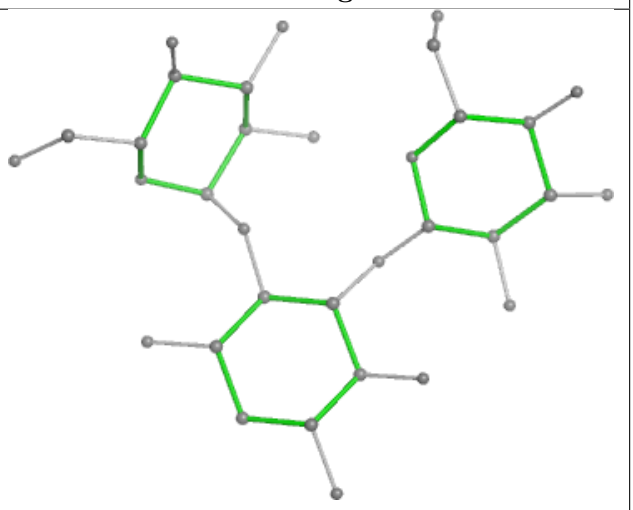
Bond lengths



Bond angles



Torsions



Rings

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

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	13	1508/1522 (99%)	-0.16	13 (0%) 84 71	44, 79, 139, 211	0
1	1G	1513/1522 (99%)	-0.17	15 (0%) 82 68	52, 86, 129, 216	0
2	65	111/112 (99%)	0.63	10 (9%) 9 5	69, 76, 82, 83	0
2	A8	111/112 (99%)	0.69	11 (9%) 7 4	58, 64, 72, 74	0
3	B5	92/96 (95%)	0.71	11 (11%) 4 2	54, 63, 71, 74	0
3	F8	94/96 (97%)	0.44	4 (4%) 35 22	44, 51, 59, 62	0
4	11	273/276 (98%)	0.17	6 (2%) 62 45	33, 48, 55, 60	0
4	19	273/276 (98%)	0.20	3 (1%) 80 65	39, 53, 61, 65	0
5	L5	47/49 (95%)	0.36	2 (4%) 35 22	40, 45, 49, 55	0
5	P8	47/49 (95%)	0.19	2 (4%) 35 22	34, 37, 43, 47	0
6	2A	116/129 (89%)	2.09	58 (50%) 0 0	64, 86, 97, 108	0
6	2I	116/129 (89%)	1.01	20 (17%) 1 1	56, 83, 93, 111	0
7	8A	99/105 (94%)	1.48	34 (34%) 0 0	71, 80, 87, 88	0
7	8I	100/105 (95%)	0.53	6 (6%) 21 13	67, 82, 87, 89	0
8	22	206/239 (86%)	0.55	18 (8%) 10 6	94, 108, 130, 132	0
8	2E	205/239 (85%)	1.12	38 (18%) 1 0	70, 85, 108, 111	0
9	82	124/128 (96%)	0.93	18 (14%) 2 1	86, 123, 131, 133	0
9	8E	127/128 (99%)	0.86	22 (17%) 1 1	64, 114, 123, 126	0
10	15	138/140 (98%)	1.11	26 (18%) 1 0	55, 76, 95, 107	0
10	58	138/140 (98%)	0.79	14 (10%) 7 4	48, 64, 91, 100	0
11	C5	104/110 (94%)	2.49	43 (41%) 0 0	70, 81, 97, 101	0
11	G8	103/110 (93%)	0.72	10 (9%) 7 4	59, 67, 81, 84	0
12	M5	62/65 (95%)	1.12	10 (16%) 1 1	52, 58, 69, 79	0
12	Q8	60/65 (92%)	0.73	4 (6%) 17 10	40, 49, 60, 62	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	3A	125/132 (94%)	1.37	32 (25%) 0 0	68, 71, 81, 108	0
13	3I	122/132 (92%)	0.50	13 (10%) 6 3	53, 57, 65, 78	0
14	32	208/209 (99%)	0.43	13 (6%) 20 11	78, 88, 100, 103	0
14	3E	208/209 (99%)	0.23	9 (4%) 35 22	67, 79, 88, 94	0
15	14	2909/2917 (99%)	-0.00	49 (1%) 70 53	39, 63, 177, 242	0
15	1H	2912/2917 (99%)	0.03	48 (1%) 72 55	31, 53, 154, 220	0
16	75	137/146 (93%)	0.74	15 (10%) 5 3	61, 71, 110, 130	0
16	B8	129/146 (88%)	0.66	12 (9%) 8 5	57, 66, 82, 90	0
17	H5	59/60 (98%)	1.00	10 (16%) 1 1	62, 72, 95, 103	0
17	L8	57/60 (95%)	0.44	3 (5%) 26 16	47, 56, 64, 69	0
18	61	146/148 (98%)	0.33	8 (5%) 25 15	61, 94, 112, 114	0
18	69	146/148 (98%)	0.69	16 (10%) 5 3	67, 97, 119, 121	0
19	9A	69/88 (78%)	0.53	5 (7%) 15 8	73, 82, 90, 98	0
19	9I	67/88 (76%)	0.01	0 100 100	72, 81, 90, 93	0
20	1B	25/27 (92%)	1.87	10 (40%) 0 0	98, 108, 114, 118	0
20	1F	23/27 (85%)	0.90	3 (13%) 3 2	85, 89, 91, 92	0
21	25	122/122 (100%)	0.92	14 (11%) 4 3	52, 63, 72, 73	0
21	68	122/122 (100%)	0.69	3 (2%) 57 40	44, 56, 66, 70	0
22	D5	135/206 (65%)	0.85	20 (14%) 2 1	80, 98, 117, 120	0
22	H8	171/206 (83%)	0.45	10 (5%) 23 14	64, 86, 138, 142	0
23	21	205/206 (99%)	0.99	32 (15%) 2 1	39, 64, 85, 92	0
23	29	205/206 (99%)	0.66	17 (8%) 11 6	46, 69, 90, 98	0
24	4A	116/126 (92%)	0.47	9 (7%) 13 7	88, 115, 121, 122	0
24	4I	116/126 (92%)	0.68	16 (13%) 2 1	73, 103, 110, 112	0
25	42	151/162 (93%)	0.19	6 (3%) 38 25	77, 88, 97, 106	0
25	4E	151/162 (93%)	0.20	4 (2%) 56 39	65, 74, 85, 97	0
26	16	122/122 (100%)	-0.33	1 (0%) 86 73	52, 67, 78, 116	0
26	1J	122/122 (100%)	-0.42	1 (0%) 86 73	67, 80, 93, 118	0
27	85	117/118 (99%)	0.69	9 (7%) 13 7	50, 72, 92, 99	0
27	C8	117/118 (99%)	0.40	2 (1%) 70 53	40, 58, 73, 76	0
28	I5	63/71 (88%)	5.40	62 (98%) 0 0	96, 130, 139, 143	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	M8	66/71 (92%)	4.48	61 (92%) 0 0	83, 114, 122, 123	0
29	AA	78/93 (83%)	0.60	9 (11%) 4 3	96, 123, 136, 137	0
29	AI	80/93 (86%)	0.74	12 (15%) 2 1	76, 98, 106, 108	0
30	35	150/150 (100%)	0.52	10 (6%) 17 10	45, 72, 95, 103	0
30	78	147/150 (98%)	0.23	4 (2%) 54 38	34, 57, 71, 74	0
31	E5	84/85 (98%)	0.92	9 (10%) 6 3	54, 63, 71, 80	0
31	I8	83/85 (97%)	0.29	4 (4%) 30 19	44, 51, 58, 64	0
32	31	202/210 (96%)	0.46	7 (3%) 44 29	35, 58, 73, 83	0
32	39	208/210 (99%)	0.42	11 (5%) 26 16	42, 77, 103, 110	0
33	5A	58/61 (95%)	1.33	17 (29%) 0 0	98, 104, 118, 119	0
33	5I	60/61 (98%)	1.35	12 (20%) 1 0	72, 80, 89, 89	0
34	52	101/101 (100%)	0.06	0 100 100	69, 76, 84, 93	0
34	5E	101/101 (100%)	0.20	0 100 100	71, 77, 86, 92	0
35	95	101/101 (100%)	1.28	24 (23%) 0 0	49, 86, 93, 97	0
35	D8	101/101 (100%)	0.57	6 (5%) 22 13	39, 74, 82, 84	0
36	J5	56/60 (93%)	0.59	4 (7%) 16 9	43, 65, 81, 83	0
36	N8	55/60 (91%)	0.86	8 (14%) 2 1	39, 69, 89, 91	0
37	BA	99/106 (93%)	0.74	11 (11%) 5 3	74, 87, 99, 105	0
37	BI	99/106 (93%)	1.08	18 (18%) 1 1	86, 101, 112, 116	0
38	45	140/141 (99%)	0.60	12 (8%) 10 6	52, 74, 90, 100	0
38	88	141/141 (100%)	0.23	1 (0%) 87 76	42, 59, 75, 91	0
39	F5	94/98 (95%)	0.80	7 (7%) 14 8	45, 60, 90, 97	0
39	J8	95/98 (96%)	0.98	8 (8%) 11 6	37, 53, 81, 86	0
40	41	181/182 (99%)	0.69	18 (9%) 7 4	69, 84, 102, 106	0
40	49	181/182 (99%)	0.77	20 (11%) 5 3	86, 100, 117, 122	0
41	6A	88/89 (98%)	0.51	5 (5%) 23 14	67, 81, 88, 88	0
41	6I	88/89 (98%)	-0.03	2 (2%) 60 43	63, 77, 82, 84	0
42	62	147/156 (94%)	1.04	30 (20%) 1 0	95, 103, 110, 113	0
42	6E	144/156 (92%)	1.03	20 (13%) 2 1	86, 96, 105, 109	0
43	A5	113/113 (100%)	0.92	8 (7%) 16 9	44, 55, 72, 102	0
43	E8	112/113 (99%)	0.58	7 (6%) 20 11	40, 54, 67, 83	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	12	237/256 (92%)	0.89	34 (14%) 2 1	104, 124, 135, 141	0
44	1E	237/256 (92%)	0.44	16 (6%) 17 10	90, 112, 129, 135	0
45	55	117/118 (99%)	0.52	4 (3%) 45 29	49, 58, 66, 72	0
45	98	118/118 (100%)	0.39	4 (3%) 45 29	47, 60, 68, 70	0
46	G5	67/72 (93%)	0.70	4 (5%) 21 13	67, 74, 81, 84	0
46	K8	68/72 (94%)	0.39	2 (2%) 51 35	51, 56, 61, 67	0
47	51	174/180 (96%)	0.54	13 (7%) 14 8	70, 81, 86, 100	0
47	59	170/180 (94%)	2.92	105 (61%) 0 0	116, 145, 162, 170	0
48	1A	99/105 (94%)	0.55	16 (16%) 1 1	92, 124, 132, 133	0
48	1I	99/105 (94%)	1.94	39 (39%) 0 0	68, 111, 126, 127	0
49	7A	84/88 (95%)	0.17	1 (1%) 79 63	71, 81, 94, 117	0
49	7I	84/88 (95%)	0.85	14 (16%) 1 1	76, 88, 103, 123	0
50	72	138/138 (100%)	0.67	16 (11%) 4 2	75, 91, 101, 107	0
50	7E	138/138 (100%)	0.26	1 (0%) 87 76	68, 82, 87, 92	0
51	Y1	25/25 (100%)	1.70	12 (48%) 0 0	55, 111, 161, 168	0
51	Y4	25/25 (100%)	2.28	14 (56%) 0 0	70, 122, 156, 160	0
52	V1	76/76 (100%)	1.33	19 (25%) 0 0	50, 161, 195, 197	0
52	V4	76/76 (100%)	1.19	11 (14%) 2 1	57, 168, 201, 204	0
52	W1	76/76 (100%)	0.40	8 (10%) 6 4	52, 137, 156, 158	0
52	W4	76/76 (100%)	0.16	5 (6%) 18 10	67, 149, 162, 163	0
52	X1	76/76 (100%)	-0.03	3 (3%) 39 25	46, 76, 90, 99	0
52	X4	76/76 (100%)	-0.16	1 (1%) 77 61	54, 85, 102, 108	0
All	All	20933/21574 (97%)	0.40	1557 (7%) 14 8	31, 74, 132, 242	0

All (1557) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
11	C5	59	GLY	17.6
15	14	2914	C	15.3
15	14	2812	U	14.8
15	14	2912	A	11.5
28	I5	18	CYS	10.9
47	59	96	ALA	10.7
11	C5	58	GLY	10.6

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Mol	Chain	Res	Type	RSRZ
15	1H	2912	A	10.5
40	41	2	PRO	10.2
15	14	1	G	10.2
28	M8	32	TYR	10.2
15	1H	2914	C	10.2
15	14	2813	C	10.2
35	95	45	THR	10.1
47	59	17	VAL	10.0
6	2A	11	LYS	10.0
47	59	105	LEU	9.9
11	C5	49	VAL	9.6
28	I5	44	THR	9.6
6	2A	13	GLN	9.5
15	14	691	A	9.5
28	I5	5	ILE	9.3
35	D8	36	PRO	9.3
28	I5	10	VAL	9.2
15	1H	2913	C	9.1
28	I5	46	GLN	9.0
52	W1	71	G	8.9
15	14	2911	G	8.8
28	M8	31	ILE	8.8
13	3A	128	ALA	8.7
28	M8	13	ARG	8.6
52	V4	17	C	8.6
6	2I	12	ARG	8.5
15	1H	1	G	8.5
23	21	205	ALA	8.5
11	C5	50	ARG	8.4
6	2A	12	ARG	8.3
47	59	44	VAL	8.3
47	59	95	ARG	8.2
47	59	128	PRO	8.2
15	14	2811	G	8.1
28	I5	36	CYS	8.1
28	M8	30	GLU	8.0
30	35	150	ALA	8.0
19	9A	88	LYS	8.0
47	59	100	GLY	7.9
15	14	2816	G	7.9
15	1H	692	C	7.9
23	21	204	ALA	7.9

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Mol	Chain	Res	Type	RSRZ
28	I5	29	PRO	7.9
47	59	45	VAL	7.7
47	59	101	ARG	7.6
36	N8	57	VAL	7.6
28	I5	31	ILE	7.5
28	I5	39	CYS	7.5
28	M8	40	HIS	7.5
47	59	26	VAL	7.5
28	I5	27	THR	7.4
28	I5	22	ILE	7.4
28	M8	5	ILE	7.2
43	A5	113	LYS	7.2
11	C5	44	ILE	7.2
13	3A	129	ALA	7.1
52	V4	12	U	7.1
28	M8	52	THR	7.1
11	C5	47	LYS	7.1
28	I5	61	ARG	7.1
28	M8	11	PRO	7.0
13	3A	64	TYR	7.0
28	I5	7	PRO	7.0
11	C5	53	PRO	6.9
28	M8	33	VAL	6.9
47	59	94	TYR	6.9
28	I5	25	TYR	6.9
30	35	110	TYR	6.9
28	I5	8	LYS	6.9
52	W4	71	G	6.9
23	29	205	ALA	6.8
28	I5	24	THR	6.8
28	I5	45	GLY	6.7
15	1H	691	A	6.7
28	I5	30	GLU	6.7
30	35	149	GLU	6.6
11	C5	2	ARG	6.6
43	A5	112	GLY	6.6
19	9A	87	ARG	6.5
51	Y4	32	A	6.5
47	59	115	VAL	6.5
28	M8	41	PRO	6.4
28	M8	65	ASP	6.4
18	61	146	ALA	6.4

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Mol	Chain	Res	Type	RSRZ
28	I5	32	TYR	6.4
28	I5	40	HIS	6.4
28	I5	9	LEU	6.4
47	59	41	MET	6.4
46	K8	43	GLN	6.4
39	J8	92	LYS	6.3
47	59	132	ARG	6.3
23	29	69	LYS	6.3
28	M8	25	TYR	6.3
28	I5	43	TYR	6.2
47	59	89	ILE	6.2
28	I5	11	PRO	6.2
28	I5	19	GLY	6.2
28	I5	28	LYS	6.2
23	21	88	GLY	6.1
11	C5	63	LYS	6.1
47	59	93	GLY	6.1
35	95	36	PRO	6.1
8	22	87	LEU	6.1
28	M8	28	LYS	6.0
47	59	103	LEU	6.0
27	C8	117	GLN	6.0
48	1I	4	ILE	6.0
32	39	133	ASN	6.0
47	59	88	LEU	6.0
28	M8	39	CYS	5.9
42	62	86	GLN	5.9
51	Y4	33	G	5.9
28	I5	60	GLN	5.9
47	59	169	VAL	5.9
28	M8	19	GLY	5.9
28	I5	50	VAL	5.9
28	I5	47	GLN	5.9
33	5A	39	LEU	5.9
1	1G	2165	G	5.9
35	95	91	TYR	5.9
44	12	14	GLY	5.8
28	M8	20	ASN	5.8
48	1I	6	ILE	5.8
52	V4	36	A	5.8
48	1I	5	ARG	5.8
47	59	29	PRO	5.7

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Mol	Chain	Res	Type	RSRZ
39	J8	96	LYS	5.7
51	Y4	30	C	5.7
46	G5	44	LEU	5.7
11	C5	45	VAL	5.7
52	V1	17	C	5.6
46	G5	43	GLN	5.6
13	3A	19	ARG	5.6
15	14	2910	U	5.6
52	W1	70	G	5.6
52	V1	12	U	5.6
40	41	26	GLN	5.6
15	1H	2911	G	5.6
28	M8	42	PHE	5.6
28	I5	42	PHE	5.5
15	1H	302	C	5.5
15	1H	690	C	5.5
15	14	2913	C	5.5
52	V4	11	C	5.5
13	3A	28	LYS	5.5
28	I5	33	VAL	5.5
15	14	2809	G	5.5
28	I5	48	ARG	5.4
15	14	2808	G	5.4
28	M8	18	CYS	5.4
44	1E	14	GLY	5.4
37	BA	99	LEU	5.4
28	I5	51	ASP	5.4
15	1H	1143	A	5.4
47	59	18	GLU	5.4
23	29	70	ALA	5.4
24	4A	4	ILE	5.4
8	2E	193	TYR	5.4
47	59	164	TYR	5.3
47	59	85	LYS	5.3
13	3A	62	SER	5.3
15	14	693	G	5.3
28	M8	4	GLY	5.3
16	75	129	ARG	5.3
28	I5	13	ARG	5.3
15	14	2	G	5.3
15	14	3	U	5.3
32	39	208	GLY	5.2

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Mol	Chain	Res	Type	RSRZ
11	C5	46	LYS	5.2
47	59	148	ILE	5.2
11	C5	90	LEU	5.2
47	59	154	PRO	5.2
43	E8	111	HIS	5.2
2	65	60	GLY	5.2
48	1I	101	VAL	5.2
36	N8	54	GLY	5.2
47	59	33	LEU	5.2
28	I5	12	ALA	5.2
31	E5	85	ALA	5.2
44	12	232	PRO	5.2
47	59	34	GLU	5.2
15	14	2810	C	5.1
47	59	81	GLU	5.1
1	1G	1656	C	5.1
15	14	692	C	5.1
11	C5	55	TYR	5.1
15	1H	2	G	5.1
28	M8	29	PRO	5.0
28	M8	12	ALA	5.0
42	62	85	TYR	5.0
28	I5	4	GLY	5.0
52	W1	72	C	5.0
32	39	12	LEU	5.0
36	J5	54	GLY	4.9
28	M8	43	TYR	4.9
11	C5	60	PHE	4.9
37	BI	18	GLN	4.9
52	V4	6	G	4.9
7	8A	7	THR	4.9
11	C5	29	GLU	4.9
47	59	155	SER	4.9
18	69	78	THR	4.8
28	I5	52	THR	4.8
47	59	11	VAL	4.8
47	59	13	LYS	4.8
28	M8	47	GLN	4.8
1	1G	1657	G	4.8
38	45	33	GLY	4.8
47	59	80	SER	4.8
29	AA	9	VAL	4.8

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Mol	Chain	Res	Type	RSRZ
44	1E	15	VAL	4.8
25	4E	154	GLY	4.7
47	59	125	VAL	4.7
28	M8	3	GLU	4.7
28	M8	58	ARG	4.7
47	59	168	PRO	4.7
28	M8	35	VAL	4.7
47	59	83	TYR	4.7
7	8A	11	VAL	4.7
20	1B	22	ARG	4.7
48	1I	8	LEU	4.7
6	2A	14	VAL	4.7
12	Q8	48	PHE	4.7
15	1H	2813	C	4.7
28	I5	41	PRO	4.6
22	H8	148	ASP	4.6
28	M8	34	GLU	4.6
51	Y1	39	U	4.6
8	2E	64	VAL	4.6
15	14	2171	C	4.6
48	1I	7	LYS	4.6
40	49	39	ILE	4.6
47	59	46	GLU	4.6
19	9A	85	LEU	4.6
15	1H	1224	G	4.6
9	82	90	PRO	4.6
51	Y4	40	U	4.6
28	M8	10	VAL	4.6
20	1F	14	TRP	4.6
48	1I	22	LYS	4.6
2	65	108	GLY	4.6
6	2A	95	ILE	4.5
13	3I	64	TYR	4.5
28	I5	53	GLU	4.5
42	62	153	HIS	4.5
52	V1	5	G	4.5
13	3A	20	LYS	4.5
7	8A	32	TYR	4.5
47	59	131	VAL	4.5
15	14	219	A	4.5
52	W1	3	C	4.5
47	59	123	PHE	4.5

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Mol	Chain	Res	Type	RSRZ
48	1I	94	VAL	4.5
1	1G	1655	G	4.5
19	9A	84	LYS	4.5
36	J5	56	LYS	4.5
47	59	24	VAL	4.5
51	Y4	31	A	4.5
11	C5	92	ASN	4.5
47	59	87	LEU	4.5
11	C5	84	ARG	4.5
6	2A	108	ILE	4.5
15	14	1586	C	4.5
18	69	144	VAL	4.5
47	59	35	VAL	4.5
6	2A	39	PRO	4.4
47	59	43	VAL	4.4
28	M8	15	ILE	4.4
15	14	2814	A	4.4
47	59	106	THR	4.4
42	6E	131	LYS	4.4
44	12	19	HIS	4.4
28	M8	46	GLN	4.4
51	Y1	38	U	4.4
7	8A	36	ILE	4.4
48	1A	47	PHE	4.4
24	4I	25	ILE	4.4
25	4E	155	GLU	4.4
7	8A	85	VAL	4.4
6	2A	32	ILE	4.4
43	E8	112	GLY	4.4
6	2I	13	GLN	4.4
28	I5	58	ARG	4.4
18	69	11	ASN	4.4
40	41	182	LYS	4.4
15	14	4	C	4.3
28	M8	14	ILE	4.3
52	V1	20	U	4.3
7	8A	22	LEU	4.3
28	I5	21	VAL	4.3
47	59	19	VAL	4.3
47	51	83	TYR	4.3
48	1I	95	GLU	4.3
36	J5	53	ALA	4.3

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Mol	Chain	Res	Type	RSRZ
47	59	16	SER	4.3
44	12	165	VAL	4.3
28	M8	22	ILE	4.3
28	M8	44	THR	4.3
6	2A	82	VAL	4.3
15	1H	2811	G	4.3
9	82	33	PHE	4.3
28	I5	59	PHE	4.3
48	1I	71	LEU	4.2
9	8E	90	PRO	4.2
40	49	48	GLU	4.2
52	V4	5	G	4.2
42	6E	55	GLY	4.2
52	W1	73	A	4.2
48	1I	72	VAL	4.2
6	2A	38	ASN	4.2
22	D5	95	PRO	4.2
28	I5	14	ILE	4.2
8	2E	65	ALA	4.2
23	21	69	LYS	4.2
47	59	4	ILE	4.2
48	1I	96	ILE	4.2
14	32	23	GLY	4.2
16	75	106	SER	4.2
48	1A	59	SER	4.2
47	51	3	ARG	4.2
47	59	51	ARG	4.2
6	2A	35	PRO	4.1
10	15	134	ARG	4.1
15	1H	936	A	4.1
30	35	148	LEU	4.1
42	62	41	ARG	4.1
42	62	154	TYR	4.1
15	1H	693	G	4.1
1	1G	2162	C	4.1
33	5I	13	THR	4.1
42	6E	16	LEU	4.1
48	1I	47	PHE	4.1
40	49	82	LEU	4.1
40	49	142	PRO	4.1
13	3A	127	GLU	4.1
28	I5	3	GLU	4.1

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Mol	Chain	Res	Type	RSRZ
9	8E	126	SER	4.1
31	I8	6	GLY	4.0
44	12	70	PHE	4.0
18	69	145	VAL	4.0
28	I5	6	HIS	4.0
10	15	51	PHE	4.0
13	3A	32	PHE	4.0
44	1E	123	ALA	4.0
11	C5	86	ARG	4.0
28	M8	53	GLU	4.0
15	1H	2150	G	4.0
32	31	6	VAL	4.0
6	2A	25	TYR	4.0
15	1H	4	C	4.0
6	2I	98	LEU	4.0
13	3A	60	LEU	4.0
44	12	163	PHE	4.0
28	M8	55	ARG	4.0
1	13	2164	U	4.0
28	M8	16	CYS	4.0
28	M8	54	GLY	4.0
28	I5	57	GLU	4.0
6	2A	83	ILE	3.9
28	M8	17	GLY	3.9
28	I5	49	PHE	3.9
42	6E	60	LYS	3.9
47	59	82	GLY	3.9
9	8E	37	PHE	3.9
13	3A	21	LYS	3.9
15	1H	2812	U	3.9
23	29	54	GLN	3.9
44	12	240	GLN	3.9
47	59	39	PRO	3.9
51	Y4	37	G	3.9
10	15	130	HIS	3.9
6	2A	84	VAL	3.9
13	3A	18	VAL	3.9
28	I5	16	CYS	3.9
8	2E	101	LEU	3.9
7	8A	23	VAL	3.9
28	I5	38	LYS	3.9
32	39	2	LYS	3.8

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Mol	Chain	Res	Type	RSRZ
13	3I	19	ARG	3.8
19	9A	86	VAL	3.8
39	F5	28	GLY	3.8
47	59	107	VAL	3.8
40	41	80	PHE	3.8
51	Y4	34	G	3.8
49	7I	66	PRO	3.8
12	M5	34	TRP	3.8
16	B8	1	MET	3.8
47	59	114	VAL	3.8
52	V1	13	C	3.8
8	2E	153	VAL	3.8
8	2E	182	ILE	3.8
47	59	15	VAL	3.8
6	2A	75	TYR	3.8
52	V1	6	G	3.8
13	3I	61	THR	3.8
2	A8	2	ALA	3.8
28	I5	2	LYS	3.8
47	59	86	GLU	3.8
51	Y1	37	G	3.8
4	11	274	ARG	3.8
15	14	2138	U	3.7
8	2E	184	TYR	3.7
42	62	156	TRP	3.7
48	1I	60	ARG	3.7
11	C5	88	LYS	3.7
28	M8	49	PHE	3.7
8	2E	85	ARG	3.7
28	M8	27	THR	3.7
3	B5	92	LEU	3.7
8	2E	84	ILE	3.7
48	1I	98	ILE	3.7
8	22	64	VAL	3.7
16	75	48	ILE	3.7
48	1I	79	ARG	3.7
52	V4	7	A	3.7
48	1I	10	GLY	3.7
47	59	49	VAL	3.7
15	1H	2170	C	3.7
47	59	127	GLU	3.7
29	AA	80	TYR	3.7

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Mol	Chain	Res	Type	RSRZ
13	3I	20	LYS	3.7
38	45	104	PHE	3.7
39	J8	91	LYS	3.7
41	6A	79	ARG	3.7
48	1I	66	ARG	3.7
20	1B	17	THR	3.7
49	7I	4	ILE	3.7
20	1B	9	ARG	3.7
48	1I	70	ARG	3.7
44	1E	10	LEU	3.7
47	59	129	THR	3.7
1	13	986	C	3.7
15	14	1132	A	3.7
28	M8	37	SER	3.7
15	1H	2192	U	3.6
42	62	2	ALA	3.6
9	82	53	VAL	3.6
47	59	141	VAL	3.6
21	25	1	MET	3.6
15	14	690	C	3.6
42	6E	57	GLU	3.6
10	15	9	VAL	3.6
29	AI	78	ARG	3.6
14	32	149	ALA	3.6
47	59	25	LYS	3.6
47	59	84	SER	3.6
52	W4	72	C	3.6
15	1H	158	U	3.6
22	D5	51	ALA	3.6
27	C8	118	GLY	3.6
42	6E	59	LEU	3.6
28	I5	26	SER	3.6
6	2A	37	GLY	3.6
11	C5	43	ASN	3.6
28	M8	57	GLU	3.6
35	95	34	GLU	3.6
32	39	14	PRO	3.6
28	I5	63	TYR	3.6
6	2I	11	LYS	3.6
7	8A	9	VAL	3.6
10	15	133	GLN	3.6
50	72	58	TYR	3.6

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Mol	Chain	Res	Type	RSRZ
52	V1	7	A	3.6
2	65	33	LYS	3.5
10	58	72	TYR	3.5
42	6E	12	LEU	3.5
42	62	147	ALA	3.5
1	1G	1658	A	3.5
35	95	38	LEU	3.5
27	85	90	VAL	3.5
13	3A	65	GLU	3.5
11	C5	48	ALA	3.5
32	39	22	ALA	3.5
47	59	121	ILE	3.5
1	1G	2076	U	3.5
28	M8	59	PHE	3.5
52	W1	17	C	3.5
37	BI	41	ILE	3.5
47	59	72	ILE	3.5
24	4I	8	GLU	3.5
1	13	2160	U	3.5
32	39	10	PRO	3.5
8	2E	81	GLY	3.5
6	2A	31	THR	3.5
33	5A	35	ARG	3.5
36	N8	55	ARG	3.5
8	2E	63	ASN	3.5
44	12	4	GLU	3.5
47	59	76	VAL	3.5
35	95	84	LYS	3.5
6	2A	68	ALA	3.5
24	4I	56	LEU	3.5
28	M8	63	TYR	3.5
24	4A	98	VAL	3.5
48	1I	3	LYS	3.4
23	29	76	ARG	3.4
48	1I	48	THR	3.4
49	7I	22	THR	3.4
31	E5	76	GLY	3.4
47	59	153	LYS	3.4
47	59	170	ARG	3.4
49	7A	84	ALA	3.4
11	C5	28	LYS	3.4
24	4A	117	VAL	3.4

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Mol	Chain	Res	Type	RSRZ
28	M8	21	VAL	3.4
36	N8	56	LYS	3.4
8	2E	39	ILE	3.4
11	C5	65	ALA	3.4
28	M8	38	LYS	3.4
22	H8	141	VAL	3.4
42	6E	120	ILE	3.4
44	12	71	VAL	3.4
8	22	142	MET	3.4
20	1B	13	ILE	3.4
23	21	1	MET	3.4
6	2A	59	TYR	3.4
7	8A	86	GLU	3.4
35	D8	101	GLY	3.4
11	C5	26	LYS	3.4
6	2I	25	TYR	3.4
33	5A	34	TYR	3.4
33	5A	37	PHE	3.4
13	3A	15	ARG	3.4
8	22	60	ALA	3.4
8	2E	55	VAL	3.4
7	8I	101	ARG	3.4
51	Y4	38	U	3.4
6	2A	89	ALA	3.4
9	82	37	PHE	3.4
28	M8	36	CYS	3.4
49	7I	32	TYR	3.4
6	2A	99	GLN	3.3
13	3A	27	LEU	3.3
39	F5	93	GLU	3.3
52	V1	16	U	3.3
13	3A	85	ILE	3.3
48	1I	75	ILE	3.3
26	1J	90	C	3.3
44	12	40	HIS	3.3
37	BA	9	ASN	3.3
28	M8	51	ASP	3.3
18	69	85	GLU	3.3
28	M8	24	THR	3.3
51	Y4	29	G	3.3
6	2A	21	ILE	3.3
23	21	72	VAL	3.3

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Mol	Chain	Res	Type	RSRZ
11	C5	64	GLU	3.3
7	8A	21	VAL	3.3
11	C5	30	VAL	3.3
24	4A	88	ARG	3.3
35	95	12	TYR	3.3
40	49	136	ARG	3.3
33	5I	8	GLU	3.3
33	5A	53	LEU	3.3
7	8A	92	ARG	3.3
9	8E	8	GLY	3.3
2	A8	37	ALA	3.3
44	1E	165	VAL	3.3
40	41	94	LEU	3.3
52	V1	70	G	3.3
28	M8	66	SER	3.3
9	8E	36	TYR	3.3
15	1H	2814	A	3.3
42	62	43	PHE	3.3
52	V1	11	C	3.3
13	3A	68	ALA	3.3
23	21	23	VAL	3.3
10	15	1	MET	3.3
7	8A	91	ARG	3.3
1	13	1657	G	3.3
31	E5	22	GLY	3.3
15	14	2815	A	3.2
44	1E	122	PHE	3.2
33	5A	38	GLY	3.2
37	BI	55	ILE	3.2
44	12	33	TYR	3.2
44	12	39	ILE	3.2
8	2E	66	VAL	3.2
38	45	103	MET	3.2
8	2E	87	LEU	3.2
13	3A	126	LYS	3.2
28	I5	15	ILE	3.2
33	5I	25	VAL	3.2
47	59	145	ALA	3.2
32	31	123	LEU	3.2
35	95	35	LEU	3.2
29	AI	49	ILE	3.2
47	59	9	ILE	3.2

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Mol	Chain	Res	Type	RSRZ
27	85	24	TYR	3.2
6	2A	70	LYS	3.2
15	14	1141	G	3.2
37	BA	104	LEU	3.2
40	49	3	LEU	3.2
51	Y1	35	A	3.2
38	45	6	ARG	3.2
29	AI	41	VAL	3.2
22	D5	68	PRO	3.2
28	M8	9	LEU	3.2
37	BI	17	ARG	3.2
43	A5	92	ARG	3.2
11	C5	75	ILE	3.2
15	1H	2910	U	3.2
29	AI	31	ILE	3.2
28	I5	56	VAL	3.2
47	59	37	VAL	3.2
9	82	88	TYR	3.2
28	I5	54	GLY	3.2
8	22	32	LEU	3.2
8	2E	21	ARG	3.2
28	I5	37	SER	3.2
40	49	25	TYR	3.2
29	AA	82	GLY	3.2
6	2A	98	LEU	3.2
24	4I	96	LEU	3.2
30	78	71	VAL	3.2
35	95	14	VAL	3.2
37	BI	40	ALA	3.2
52	W1	69	G	3.2
52	W4	73	A	3.2
22	D5	9	TYR	3.2
32	39	1	MET	3.2
40	49	23	PHE	3.2
10	15	10	GLU	3.2
15	14	937	C	3.2
15	14	1585	A	3.1
20	1B	2	GLY	3.1
40	41	178	PHE	3.1
47	59	8	PRO	3.1
15	1H	2818	C	3.1
33	5I	17	LYS	3.1

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Mol	Chain	Res	Type	RSRZ
24	4I	98	VAL	3.1
47	59	165	ALA	3.1
22	D5	69	THR	3.1
23	21	40	GLU	3.1
28	I5	23	GLU	3.1
20	1B	14	TRP	3.1
44	1E	127	ILE	3.1
9	8E	94	ALA	3.1
15	14	1584	U	3.1
28	I5	17	GLY	3.1
7	8A	58	GLU	3.1
23	21	182	LEU	3.1
35	95	93	GLU	3.1
40	49	19	LEU	3.1
42	62	88	PRO	3.1
48	1I	35	SER	3.1
52	W1	76	A	3.1
6	2A	40	ILE	3.1
31	I8	2	ALA	3.1
35	D8	37	VAL	3.1
10	58	130	HIS	3.1
12	Q8	27	THR	3.1
17	H5	26	LEU	3.1
35	95	74	LYS	3.1
44	1E	96	ARG	3.1
23	21	67	PHE	3.1
28	M8	64	GLY	3.1
35	95	5	VAL	3.1
51	Y4	39	U	3.1
52	V1	71	G	3.1
28	M8	62	ARG	3.1
18	69	72	LEU	3.1
9	82	36	TYR	3.1
10	15	72	TYR	3.1
40	41	88	ILE	3.1
37	BI	101	GLY	3.1
6	2A	69	ALA	3.1
47	59	99	VAL	3.1
10	58	138	LEU	3.1
30	35	59	LEU	3.1
44	1E	11	LEU	3.1
9	8E	33	PHE	3.1

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Mol	Chain	Res	Type	RSRZ
42	6E	43	PHE	3.1
23	29	1	MET	3.1
36	N8	51	TYR	3.1
17	H5	30	ARG	3.1
33	5A	51	GLY	3.1
47	59	32	GLU	3.1
10	15	116	LEU	3.1
42	6E	62	PHE	3.1
50	72	133	LEU	3.1
7	8A	18	THR	3.1
11	C5	54	LYS	3.1
22	D5	46	LYS	3.1
47	59	90	LYS	3.1
50	72	1	MET	3.1
11	C5	52	SER	3.1
28	M8	26	SER	3.1
23	29	116	VAL	3.1
48	1A	63	PHE	3.1
9	82	123	PRO	3.1
11	G8	92	ASN	3.1
11	C5	38	ILE	3.1
47	59	122	THR	3.1
9	82	94	ALA	3.0
13	3A	39	VAL	3.0
42	6E	87	VAL	3.0
47	59	144	VAL	3.0
15	1H	694	C	3.0
44	12	129	GLU	3.0
32	31	133	ASN	3.0
15	1H	2809	G	3.0
43	A5	93	ALA	3.0
48	1A	65	LEU	3.0
9	82	30	GLY	3.0
11	C5	81	LYS	3.0
50	72	86	ILE	3.0
24	4A	7	VAL	3.0
7	8A	74	LEU	3.0
14	32	110	PHE	3.0
36	J5	55	ARG	3.0
51	Y4	28	G	3.0
33	5I	7	ILE	3.0
37	BA	100	ILE	3.0

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Mol	Chain	Res	Type	RSRZ
28	M8	7	PRO	3.0
18	61	65	ALA	3.0
28	I5	20	ASN	3.0
37	BI	8	ARG	3.0
8	2E	91	LEU	3.0
35	D8	38	LEU	3.0
11	C5	5	MET	3.0
42	62	87	VAL	3.0
6	2A	72	ALA	3.0
16	75	6	LEU	3.0
44	12	238	LEU	3.0
47	59	27	LYS	3.0
40	41	177	GLY	3.0
8	2E	4	LYS	3.0
38	45	32	TYR	3.0
15	14	2908	C	3.0
44	12	155	LEU	3.0
11	C5	39	VAL	3.0
28	M8	23	GLU	3.0
33	5A	25	VAL	3.0
47	51	34	GLU	3.0
6	2A	16	SER	3.0
23	21	79	ARG	3.0
10	15	98	VAL	3.0
11	G8	102	CYS	3.0
51	Y4	36	G	3.0
15	1H	937	C	3.0
13	3A	23	LYS	3.0
6	2A	74	ALA	2.9
23	29	67	PHE	2.9
49	7I	59	TRP	2.9
15	1H	1585	A	2.9
47	51	39	PRO	2.9
10	58	133	GLN	2.9
16	B8	50	ILE	2.9
48	1A	46	ARG	2.9
17	H5	53	LEU	2.9
44	12	215	LEU	2.9
48	1A	62	HIS	2.9
1	1G	2164	U	2.9
7	8A	8	GLY	2.9
48	1A	10	GLY	2.9

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Mol	Chain	Res	Type	RSRZ
21	25	11	ALA	2.9
8	2E	201	TYR	2.9
10	15	84	LYS	2.9
28	M8	48	ARG	2.9
48	1I	100	THR	2.9
35	95	40	LEU	2.9
47	59	10	PRO	2.9
48	1I	62	HIS	2.9
52	V1	35	A	2.9
48	1I	23	ILE	2.9
9	82	19	LEU	2.9
23	21	183	LEU	2.9
40	41	48	GLU	2.9
47	59	73	ALA	2.9
24	4I	102	ARG	2.9
31	E5	82	ARG	2.9
52	V1	14	A	2.9
38	45	102	VAL	2.9
8	2E	196	LEU	2.9
8	2E	102	ASN	2.9
37	BI	9	ASN	2.9
37	BA	41	ILE	2.9
39	J8	70	VAL	2.9
44	12	152	PHE	2.9
37	BI	72	LEU	2.9
9	8E	117	HIS	2.9
35	95	1	MET	2.9
11	G8	79	CYS	2.8
44	12	146	GLN	2.8
18	69	80	PRO	2.8
11	C5	61	ILE	2.8
24	4I	100	GLY	2.8
41	6A	68	ARG	2.8
47	59	50	VAL	2.8
47	59	97	ARG	2.8
17	H5	12	PRO	2.8
44	12	187	LEU	2.8
15	14	2192	U	2.8
51	Y4	42	U	2.8
24	4A	102	ARG	2.8
51	Y1	36	G	2.8
6	2A	109	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
44	12	11	LEU	2.8
13	3A	33	ARG	2.8
7	8I	36	ILE	2.8
23	29	77	ILE	2.8
38	88	104	PHE	2.8
51	Y1	30	C	2.8
3	B5	18	TYR	2.8
40	49	139	LEU	2.8
23	29	81	ILE	2.8
38	45	37	LEU	2.8
47	59	133	VAL	2.8
49	7I	48	TRP	2.8
44	12	72	GLY	2.8
38	45	65	PHE	2.8
10	58	15	LEU	2.8
28	M8	50	VAL	2.8
29	AA	78	ARG	2.8
45	98	33	ARG	2.8
12	M5	21	LYS	2.8
21	25	42	SER	2.8
47	59	117	PRO	2.8
6	2A	92	GLU	2.8
13	3A	16	GLU	2.8
22	H8	11	GLU	2.8
15	14	5	A	2.8
39	F5	92	LYS	2.8
42	6E	56	GLN	2.8
8	22	39	ILE	2.8
6	2A	96	ARG	2.8
28	I5	55	ARG	2.8
33	5I	26	ARG	2.8
21	25	2	ILE	2.7
36	N8	37	LYS	2.7
43	A5	46	PHE	2.7
9	8E	40	LEU	2.7
29	AA	83	HIS	2.7
48	1I	90	LEU	2.7
6	2A	15	ALA	2.7
7	8A	75	ARG	2.7
8	2E	98	ASN	2.7
51	Y1	31	A	2.7
52	V1	36	A	2.7

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Mol	Chain	Res	Type	RSRZ
9	82	110	GLU	2.7
47	59	137	ASP	2.7
44	12	115	LEU	2.7
52	W4	70	G	2.7
6	2A	18	ARG	2.7
8	2E	78	GLY	2.7
10	15	113	GLY	2.7
14	32	167	GLY	2.7
10	15	42	TRP	2.7
5	P8	46	VAL	2.7
35	D8	40	LEU	2.7
8	22	6	HIS	2.7
8	2E	200	ALA	2.7
3	B5	69	TYR	2.7
22	H8	38	TYR	2.7
28	I5	1	MET	2.7
12	M5	23	VAL	2.7
16	B8	34	VAL	2.7
40	49	149	VAL	2.7
42	62	16	LEU	2.7
3	B5	68	ARG	2.7
3	B5	79	ALA	2.7
11	C5	62	GLU	2.7
7	8A	82	MET	2.7
16	75	1	MET	2.7
23	21	151	TYR	2.7
46	G5	37	PHE	2.7
51	Y1	40	U	2.7
51	Y4	41	U	2.7
14	32	169	LYS	2.7
48	1I	9	ARG	2.7
6	2I	43	SER	2.7
16	B8	11	GLU	2.7
7	8I	32	TYR	2.7
1	1G	2160	U	2.7
7	8A	20	THR	2.7
37	BA	55	ILE	2.7
4	19	177	LEU	2.7
52	V1	4	C	2.7
12	Q8	49	VAL	2.7
13	3A	14	GLY	2.7
28	M8	45	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
47	59	31	GLY	2.7
6	2I	83	ILE	2.7
42	6E	5	ARG	2.7
13	3I	94	PRO	2.7
29	AA	67	VAL	2.7
47	59	52	VAL	2.7
2	A8	83	LYS	2.7
2	65	83	LYS	2.7
6	2A	48	ILE	2.7
40	49	146	TYR	2.7
30	78	59	LEU	2.7
33	5I	39	LEU	2.7
15	14	1558	C	2.7
6	2I	60	ALA	2.7
8	2E	60	ALA	2.7
27	85	72	HIS	2.7
6	2I	48	ILE	2.6
13	3A	69	TYR	2.6
20	1B	18	TYR	2.6
29	AI	71	LEU	2.6
31	I8	84	LEU	2.6
42	6E	11	GLN	2.6
10	15	11	PRO	2.6
6	2A	64	ALA	2.6
38	45	140	ALA	2.6
50	72	134	ILE	2.6
33	5A	44	LEU	2.6
35	95	94	LEU	2.6
20	1B	8	THR	2.6
21	25	65	THR	2.6
22	D5	11	GLU	2.6
23	29	159	HIS	2.6
8	2E	94	LEU	2.6
47	59	7	LEU	2.6
1	13	802	A	2.6
6	2A	54	ARG	2.6
6	2I	96	ARG	2.6
43	E8	92	ARG	2.6
44	12	21	ARG	2.6
48	1I	28	ARG	2.6
2	65	37	ALA	2.6
23	29	204	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
24	4I	51	ALA	2.6
46	K8	15	LYS	2.6
49	7I	9	PHE	2.6
5	L5	1	MET	2.6
6	2A	91	ARG	2.6
24	4I	94	ARG	2.6
4	11	236	GLY	2.6
17	L8	54	VAL	2.6
1	13	2077	A	2.6
15	1H	944	A	2.6
39	J8	93	GLU	2.6
47	59	53	GLU	2.6
42	6E	110	GLN	2.6
40	49	133	LEU	2.6
49	7I	49	LEU	2.6
52	V4	16	U	2.6
10	15	41	ASP	2.6
6	2I	15	ALA	2.6
11	G8	91	GLU	2.6
18	61	70	GLU	2.6
33	5I	10	ALA	2.6
29	AI	48	THR	2.6
42	62	4	ARG	2.6
49	7I	35	LYS	2.6
6	2A	86	GLY	2.6
6	2A	36	ASP	2.6
30	35	126	VAL	2.6
48	1I	59	SER	2.6
8	2E	46	GLU	2.6
3	B5	21	PHE	2.6
16	B8	104	ASN	2.6
3	F8	68	ARG	2.6
1	1G	1659	G	2.6
39	F5	91	LYS	2.6
40	41	135	LEU	2.6
52	V1	47	U	2.6
8	2E	99	VAL	2.6
12	M5	56	GLU	2.6
13	3A	66	VAL	2.6
22	D5	56	VAL	2.6
47	51	17	VAL	2.6
49	7I	21	VAL	2.6

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Mol	Chain	Res	Type	RSRZ
9	82	55	ALA	2.6
50	7E	83	ILE	2.6
15	1H	2151	A	2.6
24	4I	7	VAL	2.6
25	42	81	GLU	2.6
25	42	155	GLU	2.6
25	4E	18	ARG	2.6
47	59	12	PRO	2.6
9	82	27	THR	2.5
15	14	1131	U	2.5
16	75	105	LEU	2.5
22	D5	125	LEU	2.5
37	BI	85	MET	2.5
45	98	113	LEU	2.5
4	19	5	LYS	2.5
6	2A	71	LYS	2.5
6	2I	82	VAL	2.5
10	58	55	VAL	2.5
15	1H	2816	G	2.5
18	69	103	ARG	2.5
23	21	89	ASP	2.5
30	35	71	VAL	2.5
47	59	109	PHE	2.5
47	59	146	ALA	2.5
22	D5	57	ILE	2.5
43	E8	96	ILE	2.5
9	8E	19	LEU	2.5
22	H8	5	LEU	2.5
37	BA	20	LEU	2.5
15	14	2909	U	2.5
15	1H	2819	G	2.5
15	14	1583	G	2.5
21	25	41	ALA	2.5
40	41	146	TYR	2.5
52	V1	69	G	2.5
23	21	32	PRO	2.5
43	E8	24	ILE	2.5
10	15	91	LEU	2.5
22	D5	67	LEU	2.5
12	Q8	23	VAL	2.5
13	3A	55	VAL	2.5
33	5A	36	PHE	2.5

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Mol	Chain	Res	Type	RSRZ
2	65	2	ALA	2.5
9	82	92	TYR	2.5
15	1H	5	A	2.5
10	58	136	GLU	2.5
17	H5	5	LYS	2.5
9	8E	30	GLY	2.5
11	C5	66	PRO	2.5
48	1A	55	LYS	2.5
15	14	1147	G	2.5
7	8A	37	LYS	2.5
39	F5	10	LYS	2.5
15	14	2807	C	2.5
44	12	96	ARG	2.5
6	2I	63	LEU	2.5
10	15	73	THR	2.5
11	C5	87	LYS	2.5
14	3E	24	GLU	2.5
7	8A	38	ARG	2.5
1	1G	1654	C	2.5
10	15	85	ILE	2.5
7	8A	31	LEU	2.5
1	1G	2163	U	2.5
18	61	144	VAL	2.5
47	51	123	PHE	2.5
11	C5	96	ILE	2.5
22	D5	1	MET	2.5
42	62	105	VAL	2.5
4	11	262	ARG	2.5
13	3I	33	ARG	2.5
43	A5	111	HIS	2.5
15	14	689	G	2.5
15	14	1103	G	2.5
52	V4	34	G	2.5
25	42	89	ILE	2.5
15	1H	687	C	2.5
15	1H	698	C	2.5
15	14	1148	C	2.5
33	5I	56	VAL	2.5
39	F5	62	VAL	2.5
42	62	135	VAL	2.5
6	2A	49	GLY	2.5
10	15	8	GLN	2.5

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Mol	Chain	Res	Type	RSRZ
23	21	3	GLY	2.5
7	8A	42	TYR	2.5
7	8A	59	ILE	2.5
29	AA	16	LEU	2.5
30	78	106	LEU	2.5
43	A5	86	LEU	2.5
18	61	113	ARG	2.4
23	21	198	VAL	2.4
48	1I	24	VAL	2.4
8	22	180	ALA	2.4
8	2E	100	ALA	2.4
10	15	92	ALA	2.4
47	59	166	GLY	2.4
9	8E	4	TYR	2.4
14	3E	26	CYS	2.4
14	32	31	CYS	2.4
14	32	146	ILE	2.4
18	69	38	LEU	2.4
21	25	48	PRO	2.4
50	72	87	SER	2.4
8	2E	186	PHE	2.4
21	25	58	VAL	2.4
14	32	168	ARG	2.4
31	E5	72	ARG	2.4
47	59	130	ARG	2.4
2	A8	48	LEU	2.4
24	4A	87	TYR	2.4
5	L5	46	VAL	2.4
7	8A	19	VAL	2.4
16	75	67	SER	2.4
49	7I	2	VAL	2.4
1	13	803	C	2.4
51	Y1	42	U	2.4
52	X4	17	C	2.4
13	3I	28	LYS	2.4
15	1H	301	A	2.4
40	49	90	LEU	2.4
42	62	27	ILE	2.4
48	1I	55	LYS	2.4
8	22	15	THR	2.4
30	35	30	THR	2.4
47	59	134	SER	2.4

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Mol	Chain	Res	Type	RSRZ
7	8I	8	GLY	2.4
32	31	72	ARG	2.4
37	BI	21	LYS	2.4
43	E8	109	GLU	2.4
47	59	47	GLU	2.4
7	8A	84	LEU	2.4
8	22	94	LEU	2.4
23	29	141	ILE	2.4
21	68	115	VAL	2.4
27	85	91	ASP	2.4
47	59	77	LYS	2.4
21	25	16	ALA	2.4
42	62	40	ALA	2.4
2	A8	73	LEU	2.4
6	2A	66	LEU	2.4
35	95	4	ILE	2.4
42	62	22	LEU	2.4
8	2E	164	ARG	2.4
9	8E	59	PHE	2.4
11	G8	89	PHE	2.4
22	D5	128	VAL	2.4
24	4I	97	PRO	2.4
6	2I	70	LYS	2.4
7	8A	52	LYS	2.4
13	3I	17	LYS	2.4
22	D5	12	GLY	2.4
24	4I	114	ARG	2.4
40	41	160	VAL	2.4
47	59	69	ARG	2.4
51	Y1	41	U	2.4
6	2I	19	ALA	2.4
24	4A	2	ALA	2.4
33	5A	26	ARG	2.4
40	41	118	ARG	2.4
6	2A	30	VAL	2.4
6	2A	42	TRP	2.4
6	2A	93	GLN	2.4
1	1G	2161	C	2.4
33	5I	47	LEU	2.4
22	H8	82	ARG	2.4
41	6I	89	GLY	2.4
47	51	32	GLU	2.4

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Mol	Chain	Res	Type	RSRZ
23	21	187	ALA	2.4
11	G8	96	ILE	2.4
23	21	4	ILE	2.4
30	35	106	LEU	2.4
2	A8	49	VAL	2.3
42	62	130	GLY	2.3
37	BI	98	PRO	2.3
40	41	142	PRO	2.3
44	12	31	TYR	2.3
14	3E	120	LEU	2.3
14	3E	135	LEU	2.3
20	1F	13	ILE	2.3
35	95	99	ILE	2.3
42	62	124	LEU	2.3
52	V1	23	A	2.3
8	2E	90	GLU	2.3
13	3I	18	VAL	2.3
17	H5	47	VAL	2.3
6	2A	20	TYR	2.3
37	BI	22	ARG	2.3
22	D5	59	LEU	2.3
40	41	133	LEU	2.3
51	Y1	28	G	2.3
27	85	106	PHE	2.3
52	W4	76	A	2.3
8	22	86	VAL	2.3
16	75	65	LYS	2.3
17	H5	54	VAL	2.3
18	69	3	VAL	2.3
10	15	95	PRO	2.3
48	1I	58	ASP	2.3
6	2A	65	ALA	2.3
16	75	52	ILE	2.3
23	21	49	LEU	2.3
42	62	120	ILE	2.3
30	35	65	ARG	2.3
6	2A	58	PRO	2.3
47	59	55	PRO	2.3
32	39	7	TYR	2.3
3	F8	89	ILE	2.3
21	25	87	ILE	2.3
42	62	42	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
44	1E	149	LEU	2.3
50	72	13	ILE	2.3
22	D5	48	PHE	2.3
33	5A	55	GLY	2.3
33	5A	31	ARG	2.3
37	BA	23	ARG	2.3
14	32	133	VAL	2.3
50	72	93	VAL	2.3
15	14	2817	C	2.3
16	B8	21	GLU	2.3
4	11	155	LEU	2.3
14	3E	64	LEU	2.3
16	B8	48	ILE	2.3
23	21	195	LEU	2.3
9	82	120	ARG	2.3
16	75	104	ASN	2.3
31	E5	45	PHE	2.3
48	1I	11	PHE	2.3
40	41	5	VAL	2.3
1	13	985	A	2.3
10	15	44	PRO	2.3
15	1H	2171	C	2.3
23	29	126	PRO	2.3
33	5A	11	LYS	2.3
52	V4	35	A	2.3
3	B5	5	TYR	2.3
3	B5	66	LEU	2.3
6	2A	77	MET	2.3
21	25	32	TYR	2.3
29	AI	15	LEU	2.3
46	G5	41	ILE	2.3
47	59	42	ARG	2.3
50	72	111	ILE	2.3
9	8E	17	VAL	2.3
11	C5	24	VAL	2.3
38	45	35	VAL	2.3
49	7I	53	VAL	2.3
13	3A	57	LYS	2.3
15	1H	3	U	2.3
15	14	1113	U	2.3
5	P8	1	MET	2.3
8	22	71	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
11	C5	31	LEU	2.3
18	69	35	LEU	2.3
22	H8	18	LEU	2.3
25	42	123	LEU	2.3
32	31	196	LEU	2.3
37	BI	23	ARG	2.3
41	6I	79	ARG	2.3
23	21	14	ILE	2.3
11	G8	99	CYS	2.3
8	2E	166	GLU	2.3
28	I5	34	GLU	2.3
42	62	131	LYS	2.3
48	1A	49	VAL	2.3
7	8A	30	PRO	2.3
32	31	66	PRO	2.3
31	E5	84	LEU	2.3
39	J8	73	LEU	2.3
45	55	21	TYR	2.3
50	72	83	ILE	2.3
40	41	137	GLU	2.3
47	51	86	GLU	2.3
10	58	73	THR	2.2
36	N8	49	CYS	2.2
2	65	109	GLY	2.2
12	M5	60	LEU	2.2
24	4I	6	GLY	2.2
37	BI	97	ALA	2.2
42	62	101	LEU	2.2
43	A5	54	ALA	2.2
47	59	14	GLY	2.2
47	59	21	PRO	2.2
25	42	88	LYS	2.2
2	A8	112	PHE	2.2
10	58	16	ILE	2.2
12	M5	3	LYS	2.2
48	1A	85	LEU	2.2
23	21	51	PHE	2.2
44	1E	33	TYR	2.2
14	32	179	GLU	2.2
29	AI	56	GLN	2.2
48	1A	84	GLN	2.2
44	12	197	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
48	1A	34	VAL	2.2
50	72	84	ARG	2.2
29	AI	38	SER	2.2
52	X1	44	G	2.2
10	15	87	LEU	2.2
13	3A	63	GLY	2.2
37	BI	106	ALA	2.2
41	6A	89	GLY	2.2
42	62	104	LEU	2.2
40	49	178	PHE	2.2
50	72	9	MET	2.2
15	1H	688	C	2.2
13	3A	83	VAL	2.2
15	1H	219	A	2.2
16	B8	38	ASN	2.2
10	58	100	GLU	2.2
25	4E	21	ALA	2.2
27	85	48	ALA	2.2
43	E8	86	LEU	2.2
50	72	119	LEU	2.2
51	Y1	33	G	2.2
2	A8	68	GLN	2.2
14	32	27	TYR	2.2
16	75	68	TYR	2.2
47	59	113	VAL	2.2
6	2A	102	GLY	2.2
7	8A	80	GLY	2.2
13	3I	62	SER	2.2
15	14	2806	A	2.2
23	21	52	LEU	2.2
31	E5	21	LEU	2.2
47	51	119	GLU	2.2
11	C5	56	PRO	2.2
50	72	80	ILE	2.2
9	82	87	GLN	2.2
33	5A	29	ARG	2.2
37	BI	79	ARG	2.2
48	1I	33	GLN	2.2
10	15	7	LYS	2.2
11	C5	34	LYS	2.2
35	D8	98	GLU	2.2
6	2A	43	SER	2.2

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Mol	Chain	Res	Type	RSRZ
15	1H	2087	A	2.2
20	1F	24	ARG	2.2
35	95	83	ARG	2.2
42	62	155	ARG	2.2
47	59	162	ILE	2.2
48	1A	54	PHE	2.2
48	1A	75	ILE	2.2
14	3E	9	CYS	2.2
8	22	101	LEU	2.2
10	15	12	ARG	2.2
12	M5	59	LYS	2.2
20	1B	25	LYS	2.2
23	29	2	LYS	2.2
41	6A	88	ARG	2.2
44	1E	213	LEU	2.2
6	2A	107	SER	2.2
29	AI	76	PRO	2.2
48	1I	74	ILE	2.2
23	21	66	HIS	2.2
7	8A	77	VAL	2.2
9	8E	114	TYR	2.2
16	75	28	VAL	2.2
22	H8	8	TYR	2.2
35	95	81	TYR	2.2
42	6E	135	VAL	2.2
2	65	43	GLU	2.2
15	1H	696	G	2.2
23	21	199	ARG	2.2
6	2A	34	ASP	2.2
8	22	91	LEU	2.2
13	3A	37	CYS	2.2
18	61	123	LEU	2.2
32	31	82	ILE	2.2
47	59	150	ALA	2.2
17	H5	11	SER	2.2
15	1H	2806	A	2.2
18	69	10	GLU	2.2
20	1B	21	TYR	2.2
35	95	46	VAL	2.2
49	7I	20	VAL	2.2
16	B8	3	ARG	2.2
47	59	22	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
8	2E	18	TRP	2.2
8	2E	62	ASP	2.2
6	2A	19	ALA	2.2
14	3E	110	PHE	2.2
22	D5	5	LEU	2.2
25	42	12	LEU	2.2
35	95	39	LEU	2.2
40	49	138	GLN	2.2
44	12	216	SER	2.2
3	B5	26	TYR	2.2
9	82	109	VAL	2.2
18	61	107	VAL	2.2
21	25	17	ARG	2.2
44	12	239	VAL	2.2
6	2A	45	GLY	2.1
23	21	106	GLY	2.1
35	95	30	GLY	2.1
37	BI	47	GLY	2.1
2	A8	110	LEU	2.1
3	F8	92	LEU	2.1
9	8E	101	PHE	2.1
39	J8	95	LEU	2.1
48	1I	65	LEU	2.1
6	2I	68	ALA	2.1
7	8A	90	ILE	2.1
24	4I	4	ILE	2.1
42	62	148	ASN	2.1
6	2A	126	ARG	2.1
22	H8	145	GLU	2.1
35	95	98	GLU	2.1
48	1A	60	ARG	2.1
11	G8	98	VAL	2.1
21	68	52	VAL	2.1
49	7I	17	TYR	2.1
10	15	26	LEU	2.1
16	B8	6	LEU	2.1
10	58	131	GLN	2.1
18	69	138	ILE	2.1
1	13	1656	C	2.1
1	1G	2159	C	2.1
8	22	206	GLU	2.1
23	21	76	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
27	85	64	ARG	2.1
44	12	231	GLU	2.1
1	13	1661	G	2.1
28	I5	35	VAL	2.1
44	12	112	VAL	2.1
3	F8	2	LYS	2.1
9	82	59	PHE	2.1
17	L8	53	LEU	2.1
18	69	77	LEU	2.1
40	41	175	LEU	2.1
40	49	152	LEU	2.1
44	12	122	PHE	2.1
1	13	2163	U	2.1
4	11	2	ALA	2.1
11	G8	86	ARG	2.1
42	6E	51	GLN	2.1
40	49	2	PRO	2.1
17	H5	6	VAL	2.1
28	M8	6	HIS	2.1
33	5A	56	VAL	2.1
35	95	37	VAL	2.1
15	14	2137	G	2.1
16	75	137	LYS	2.1
14	32	162	LEU	2.1
33	5I	41	ARG	2.1
47	59	149	ARG	2.1
8	2E	57	ILE	2.1
47	51	9	ILE	2.1
26	16	2	A	2.1
48	1I	69	ASN	2.1
37	BA	101	GLY	2.1
42	6E	58	PRO	2.1
42	6E	103	TRP	2.1
47	51	21	PRO	2.1
42	62	63	LYS	2.1
8	22	184	TYR	2.1
9	8E	88	TYR	2.1
37	BA	72	LEU	2.1
44	1E	209	ARG	2.1
1	13	1659	G	2.1
22	D5	2	GLU	2.1
3	B5	8	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
10	58	71	ILE	2.1
28	M8	60	GLN	2.1
37	BA	63	ILE	2.1
4	19	38	LYS	2.1
9	8E	127	LYS	2.1
12	M5	11	LYS	2.1
52	V1	31	A	2.1
45	55	114	VAL	2.1
52	X1	17	C	2.1
16	B8	108	ARG	2.1
32	39	33	LEU	2.1
40	49	60	LEU	2.1
44	12	143	GLU	2.1
45	55	10	LEU	2.1
48	1A	93	GLY	2.1
1	13	801	A	2.1
23	29	188	VAL	2.1
30	78	1	MET	2.1
45	98	114	VAL	2.1
48	1I	46	ARG	2.1
15	1H	2817	C	2.1
17	L8	57	GLU	2.1
22	H8	153	SER	2.1
6	2I	89	ALA	2.1
9	8E	119	ALA	2.1
13	3I	7	ILE	2.1
31	E5	65	GLY	2.1
9	8E	93	ARG	2.1
24	4A	114	ARG	2.1
13	3A	58	VAL	2.1
15	14	11	G	2.1
52	X1	1	G	2.1
44	1E	128	GLU	2.1
8	22	186	PHE	2.1
11	G8	63	LYS	2.1
18	61	140	LEU	2.1
29	AA	71	LEU	2.1
47	51	103	LEU	2.1
6	2I	29	ILE	2.1
7	8I	95	TYR	2.1
18	69	146	ALA	2.1
29	AI	40	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
7	8A	68	ARG	2.1
23	21	19	ARG	2.1
33	5A	23	ARG	2.1
8	22	68	VAL	2.1
11	C5	3	VAL	2.1
18	69	125	GLU	2.1
38	45	27	VAL	2.1
8	2E	32	LEU	2.0
17	H5	28	LEU	2.0
21	25	91	LEU	2.0
22	D5	136	PHE	2.1
23	21	78	LEU	2.0
33	5I	36	PHE	2.1
42	62	99	LEU	2.0
44	12	45	GLN	2.0
45	98	79	LEU	2.0
3	B5	89	ILE	2.0
27	85	99	ALA	2.0
29	AI	80	TYR	2.0
39	J8	7	ILE	2.0
45	55	69	ASP	2.0
6	2I	97	ALA	2.0
15	1H	289	U	2.0
24	4I	103	THR	2.0
47	59	163	TYR	2.0
10	58	83	LYS	2.0
12	M5	29	LYS	2.0
42	6E	52	GLU	2.0
10	58	53	VAL	2.0
21	25	43	VAL	2.0
7	8I	98	LEU	2.0
14	3E	21	LEU	2.0
16	75	99	LEU	2.0
44	1E	45	GLN	2.0
50	72	70	GLN	2.0
15	1H	685	G	2.0
21	68	81	ASP	2.0
42	62	94	ARG	2.0
13	3A	26	ALA	2.0
15	14	1143	A	2.0
44	12	41	ILE	2.0
52	V4	4	C	2.0

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Mol	Chain	Res	Type	RSRZ
2	A8	43	GLU	2.0
6	2A	17	GLY	2.0
7	8A	87	LYS	2.0
15	1H	272	U	2.0
31	I8	5	LYS	2.0
38	45	105	GLU	2.0
40	49	182	LYS	2.0
2	65	110	LEU	2.0
9	8E	47	LEU	2.0
14	32	120	LEU	2.0
9	8E	51	ARG	2.0
13	3I	59	ARG	2.0
2	A8	53	SER	2.0
8	2E	89	GLU	2.0
36	N8	53	ALA	2.0
22	D5	8	TYR	2.0
13	3I	90	VAL	2.0
23	21	25	VAL	2.0
39	F5	70	VAL	2.0
4	11	61	LEU	2.0
12	M5	32	LEU	2.0
24	4I	55	ARG	2.0
41	6A	57	LEU	2.0
47	51	27	LYS	2.0
7	8A	65	ILE	2.0
32	39	13	SER	2.0
14	3E	138	TYR	2.0
1	1G	2077	A	2.0
6	2I	14	VAL	2.0
16	75	66	VAL	2.0
23	21	90	THR	2.0
29	AA	79	THR	2.0
44	1E	230	VAL	2.0
16	B8	22	PHE	2.0
50	72	18	ARG	2.0
2	65	32	LEU	2.0
23	29	78	LEU	2.0
27	85	98	LEU	2.0

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

There are no non-standard protein/DNA/RNA residues in this entry.

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3092	1/1	0.18	0.28	44,44,44,44	0
54	MG	1J	208	1/1	0.32	0.18	71,71,71,71	0
54	MG	14	3460	1/1	0.44	0.51	91,91,91,91	0
54	MG	14	3068	1/1	0.47	0.14	77,77,77,77	0
54	MG	13	2317	1/1	0.48	0.24	69,69,69,69	0
54	MG	13	2338	1/1	0.49	0.37	69,69,69,69	0
54	MG	1G	2315	1/1	0.49	0.20	93,93,93,93	0
54	MG	E5	202	1/1	0.51	0.22	60,60,60,60	0
54	MG	14	3053	1/1	0.52	0.13	67,67,67,67	0
54	MG	14	3328	1/1	0.53	0.22	84,84,84,84	0
54	MG	14	3465	1/1	0.54	0.34	92,92,92,92	0
54	MG	11	303	1/1	0.55	0.29	79,79,79,79	0
54	MG	14	3091	1/1	0.56	0.08	82,82,82,82	0
54	MG	13	2356	1/1	0.56	0.20	67,67,67,67	0
54	MG	14	3320	1/1	0.56	0.30	59,59,59,59	0
54	MG	14	3075	1/1	0.56	0.13	63,63,63,63	0
54	MG	14	3333	1/1	0.57	0.24	61,61,61,61	0
54	MG	1H	3424	1/1	0.58	0.17	59,59,59,59	0
54	MG	1H	3042	1/1	0.58	0.11	33,33,33,33	0
54	MG	14	3088	1/1	0.58	0.27	59,59,59,59	0
54	MG	14	3192	1/1	0.59	0.24	66,66,66,66	0
54	MG	13	2234	1/1	0.59	0.28	84,84,84,84	0
54	MG	1H	3280	1/1	0.60	0.35	46,46,46,46	0
54	MG	14	3221	1/1	0.60	0.32	61,61,61,61	0
54	MG	14	3314	1/1	0.60	0.28	104,104,104,104	0
54	MG	1G	2347	1/1	0.60	0.17	74,74,74,74	0
54	MG	1H	3495	1/1	0.60	0.21	59,59,59,59	0
54	MG	14	3367	1/1	0.61	0.64	51,51,51,51	0
54	MG	14	3393	1/1	0.61	0.23	71,71,71,71	0
54	MG	1H	3082	1/1	0.61	0.34	57,57,57,57	0
54	MG	13	2376	1/1	0.62	0.23	75,75,75,75	0
54	MG	1G	2372	1/1	0.63	0.19	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3543	1/1	0.63	0.31	59,59,59,59	0
54	MG	1H	3463	1/1	0.63	0.32	60,60,60,60	0
54	MG	1H	3365	1/1	0.63	0.23	63,63,63,63	0
54	MG	13	2281	1/1	0.64	0.23	61,61,61,61	0
54	MG	1G	2338	1/1	0.64	0.14	72,72,72,72	0
54	MG	1G	2309	1/1	0.64	0.17	75,75,75,75	0
54	MG	X1	105	1/1	0.64	0.43	79,79,79,79	0
54	MG	14	3265	1/1	0.65	0.34	64,64,64,64	0
54	MG	13	2314	1/1	0.65	0.22	67,67,67,67	0
54	MG	14	3548	1/1	0.65	0.28	53,53,53,53	0
54	MG	X1	104	1/1	0.66	0.14	79,79,79,79	0
54	MG	X4	105	1/1	0.66	0.30	83,83,83,83	0
54	MG	13	2333	1/1	0.67	0.17	86,86,86,86	0
54	MG	1G	2273	1/1	0.67	0.20	69,69,69,69	0
54	MG	1H	3066	1/1	0.67	0.07	64,64,64,64	0
54	MG	13	2227	1/1	0.67	0.26	55,55,55,55	0
54	MG	1H	3478	1/1	0.67	0.16	52,52,52,52	0
54	MG	1H	3516	1/1	0.68	0.22	62,62,62,62	0
54	MG	85	201	1/1	0.68	0.34	90,90,90,90	0
54	MG	1H	3254	1/1	0.68	0.22	47,47,47,47	0
54	MG	1H	3027	1/1	0.68	0.21	51,51,51,51	0
54	MG	1H	3345	1/1	0.68	0.29	45,45,45,45	0
54	MG	W4	104	1/1	0.68	0.37	124,124,124,124	0
54	MG	58	201	1/1	0.68	0.46	88,88,88,88	0
54	MG	1G	2272	1/1	0.69	0.22	66,66,66,66	0
54	MG	14	3539	1/1	0.69	0.38	72,72,72,72	0
54	MG	1H	3572	1/1	0.69	0.17	60,60,60,60	0
54	MG	1H	3576	1/1	0.69	0.24	64,64,64,64	0
54	MG	14	3014	1/1	0.69	0.17	41,41,41,41	0
54	MG	1H	3061	1/1	0.69	0.10	68,68,68,68	0
54	MG	14	3383	1/1	0.69	0.38	66,66,66,66	0
54	MG	14	3060	1/1	0.69	0.14	57,57,57,57	0
54	MG	14	3409	1/1	0.69	0.23	51,51,51,51	0
54	MG	14	3447	1/1	0.69	0.19	59,59,59,59	0
54	MG	1H	3319	1/1	0.69	0.23	62,62,62,62	0
54	MG	1H	3197	1/1	0.70	0.22	46,46,46,46	0
54	MG	1H	3579	1/1	0.70	0.21	72,72,72,72	0
54	MG	14	3231	1/1	0.70	0.49	77,77,77,77	0
54	MG	1H	3057	1/1	0.70	0.15	46,46,46,46	0
54	MG	14	3070	1/1	0.70	0.32	49,49,49,49	0
54	MG	14	3423	1/1	0.71	0.21	68,68,68,68	0
54	MG	14	3549	1/1	0.71	0.26	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	25	201	1/1	0.71	0.22	79,79,79,79	0
54	MG	1H	3304	1/1	0.71	0.28	77,77,77,77	0
54	MG	13	2367	1/1	0.71	0.18	58,58,58,58	0
54	MG	5I	102	1/1	0.71	0.15	72,72,72,72	0
54	MG	1G	2346	1/1	0.71	0.12	69,69,69,69	0
54	MG	14	3482	1/1	0.71	0.17	58,58,58,58	0
54	MG	14	3483	1/1	0.71	0.23	55,55,55,55	0
54	MG	1H	3567	1/1	0.71	0.26	65,65,65,65	0
54	MG	14	3038	1/1	0.71	0.12	54,54,54,54	0
54	MG	1H	3010	1/1	0.72	0.09	58,58,58,58	0
54	MG	14	3118	1/1	0.72	0.18	62,62,62,62	0
54	MG	1H	3490	1/1	0.72	0.21	45,45,45,45	0
54	MG	16	204	1/1	0.72	0.22	63,63,63,63	0
54	MG	16	214	1/1	0.72	0.38	66,66,66,66	0
54	MG	1H	3052	1/1	0.72	0.10	36,36,36,36	0
54	MG	14	3417	1/1	0.72	0.32	51,51,51,51	0
54	MG	1H	3354	1/1	0.72	0.25	71,71,71,71	0
54	MG	1H	3553	1/1	0.72	0.20	46,46,46,46	0
54	MG	14	3308	1/1	0.72	0.43	93,93,93,93	0
54	MG	7A	101	1/1	0.72	0.21	70,70,70,70	0
54	MG	1H	3071	1/1	0.72	0.10	102,102,102,102	0
54	MG	1H	3368	1/1	0.72	0.21	57,57,57,57	0
54	MG	13	2287	1/1	0.72	0.45	89,89,89,89	0
54	MG	1H	3318	1/1	0.72	0.39	58,58,58,58	0
54	MG	1G	2379	1/1	0.73	0.22	85,85,85,85	0
54	MG	13	2235	1/1	0.73	0.27	81,81,81,81	0
54	MG	14	3291	1/1	0.73	0.18	49,49,49,49	0
54	MG	1H	3286	1/1	0.73	0.52	79,79,79,79	0
54	MG	1G	2303	1/1	0.73	0.33	72,72,72,72	0
54	MG	1H	3491	1/1	0.73	0.25	55,55,55,55	0
54	MG	13	2342	1/1	0.73	0.19	73,73,73,73	0
54	MG	1H	3029	1/1	0.73	0.13	52,52,52,52	0
54	MG	14	3364	1/1	0.73	0.43	67,67,67,67	0
54	MG	14	3083	1/1	0.73	0.10	66,66,66,66	0
54	MG	1H	3544	1/1	0.73	0.19	57,57,57,57	0
54	MG	1H	3040	1/1	0.73	0.13	49,49,49,49	0
54	MG	14	3397	1/1	0.73	0.34	57,57,57,57	0
54	MG	1H	3093	1/1	0.73	0.21	54,54,54,54	0
54	MG	88	305	1/1	0.73	0.23	76,76,76,76	0
54	MG	14	3414	1/1	0.73	0.27	67,67,67,67	0
54	MG	X1	103	1/1	0.73	0.11	76,76,76,76	0
54	MG	1H	3167	1/1	0.73	0.27	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	13	2372	1/1	0.73	0.45	87,87,87,87	0
54	MG	14	3220	1/1	0.73	0.25	70,70,70,70	0
54	MG	1H	3413	1/1	0.73	0.25	77,77,77,77	0
54	MG	1G	2287	1/1	0.74	0.18	77,77,77,77	0
54	MG	14	3403	1/1	0.74	0.36	63,63,63,63	0
54	MG	1H	3064	1/1	0.74	0.20	47,47,47,47	0
54	MG	1G	2370	1/1	0.74	0.25	59,59,59,59	0
54	MG	29	304	1/1	0.74	0.31	67,67,67,67	0
54	MG	1H	3591	1/1	0.74	0.26	62,62,62,62	0
54	MG	1H	3376	1/1	0.74	0.25	44,44,44,44	0
54	MG	1G	2210	1/1	0.74	0.21	67,67,67,67	0
54	MG	14	3451	1/1	0.74	0.20	52,52,52,52	0
54	MG	14	3046	1/1	0.74	0.05	71,71,71,71	0
54	MG	14	3342	1/1	0.74	0.18	66,66,66,66	0
54	MG	14	3353	1/1	0.74	0.13	82,82,82,82	0
54	MG	14	3051	1/1	0.74	0.17	71,71,71,71	0
54	MG	1H	3059	1/1	0.74	0.15	51,51,51,51	0
54	MG	1H	3428	1/1	0.74	0.22	40,40,40,40	0
54	MG	1H	3346	1/1	0.74	0.64	61,61,61,61	0
54	MG	1G	2269	1/1	0.75	0.54	103,103,103,103	0
54	MG	1H	3355	1/1	0.75	0.14	57,57,57,57	0
54	MG	14	3223	1/1	0.75	0.28	58,58,58,58	0
54	MG	14	3448	1/1	0.75	0.21	60,60,60,60	0
54	MG	1H	3068	1/1	0.75	0.09	64,64,64,64	0
54	MG	1H	3561	1/1	0.75	0.46	72,72,72,72	0
54	MG	14	3090	1/1	0.75	0.14	51,51,51,51	0
54	MG	14	3306	1/1	0.75	0.21	68,68,68,68	0
54	MG	1G	2212	1/1	0.75	0.08	104,104,104,104	0
54	MG	1H	3011	1/1	0.75	0.17	46,46,46,46	0
54	MG	14	3406	1/1	0.75	0.16	79,79,79,79	0
54	MG	1H	3396	1/1	0.75	0.31	75,75,75,75	0
54	MG	14	3411	1/1	0.75	0.29	66,66,66,66	0
54	MG	1G	2288	1/1	0.75	0.45	84,84,84,84	0
54	MG	1G	2253	1/1	0.76	0.51	87,87,87,87	0
54	MG	1G	2326	1/1	0.76	0.33	84,84,84,84	0
54	MG	16	201	1/1	0.76	0.15	69,69,69,69	0
54	MG	14	3325	1/1	0.76	0.28	65,65,65,65	0
54	MG	1H	3331	1/1	0.76	0.33	50,50,50,50	0
54	MG	13	2377	1/1	0.76	0.21	81,81,81,81	0
54	MG	1H	3379	1/1	0.76	0.13	64,64,64,64	0
54	MG	14	3433	1/1	0.76	0.26	67,67,67,67	0
54	MG	1H	3142	1/1	0.76	0.21	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3225	1/1	0.76	0.26	57,57,57,57	0
54	MG	1H	3060	1/1	0.76	0.12	45,45,45,45	0
54	MG	1H	3415	1/1	0.76	0.16	61,61,61,61	0
54	MG	14	3386	1/1	0.76	0.17	47,47,47,47	0
54	MG	1H	3521	1/1	0.76	0.30	43,43,43,43	0
54	MG	1H	3540	1/1	0.76	0.30	82,82,82,82	0
54	MG	14	3522	1/1	0.76	0.15	54,54,54,54	0
54	MG	14	3400	1/1	0.76	0.18	71,71,71,71	0
54	MG	14	3040	1/1	0.76	0.16	70,70,70,70	0
54	MG	1H	3358	1/1	0.77	0.24	49,49,49,49	0
54	MG	14	3276	1/1	0.77	0.45	45,45,45,45	0
54	MG	1H	3300	1/1	0.77	0.37	79,79,79,79	0
54	MG	1H	3085	1/1	0.77	0.16	45,45,45,45	0
54	MG	1G	2286	1/1	0.77	0.22	68,68,68,68	0
54	MG	1H	3492	1/1	0.77	0.53	84,84,84,84	0
54	MG	1G	2228	1/1	0.77	0.22	71,71,71,71	0
54	MG	1H	3388	1/1	0.77	0.29	62,62,62,62	0
54	MG	14	3123	1/1	0.77	0.34	45,45,45,45	0
54	MG	1H	3393	1/1	0.77	0.24	51,51,51,51	0
54	MG	13	2375	1/1	0.77	0.27	83,83,83,83	0
54	MG	13	2350	1/1	0.77	0.20	53,53,53,53	0
54	MG	13	2335	1/1	0.77	0.43	75,75,75,75	0
54	MG	1H	3081	1/1	0.77	0.33	49,49,49,49	0
54	MG	1G	2214	1/1	0.77	0.14	74,74,74,74	0
54	MG	14	3479	1/1	0.77	0.23	56,56,56,56	0
54	MG	14	3385	1/1	0.77	0.25	50,50,50,50	0
54	MG	14	3251	1/1	0.77	0.52	88,88,88,88	0
54	MG	14	3485	1/1	0.77	0.49	73,73,73,73	0
54	MG	14	3258	1/1	0.77	0.32	39,39,39,39	0
54	MG	14	3263	1/1	0.78	0.59	77,77,77,77	0
54	MG	14	3499	1/1	0.78	0.15	80,80,80,80	0
54	MG	14	3517	1/1	0.78	0.26	65,65,65,65	0
54	MG	1H	3438	1/1	0.78	0.18	54,54,54,54	0
54	MG	1H	3440	1/1	0.78	0.18	39,39,39,39	0
54	MG	14	3542	1/1	0.78	0.14	65,65,65,65	0
54	MG	13	2301	1/1	0.78	0.11	72,72,72,72	0
54	MG	14	3405	1/1	0.78	0.09	65,65,65,65	0
54	MG	13	2381	1/1	0.78	0.29	87,87,87,87	0
54	MG	1G	2351	1/1	0.78	0.21	66,66,66,66	0
54	MG	1H	3584	1/1	0.78	0.25	54,54,54,54	0
54	MG	1H	3590	1/1	0.78	0.46	67,67,67,67	0
54	MG	1H	3164	1/1	0.78	0.34	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1G	2262	1/1	0.78	0.22	87,87,87,87	0
54	MG	1J	204	1/1	0.78	0.24	67,67,67,67	0
54	MG	1J	205	1/1	0.78	0.36	64,64,64,64	0
54	MG	13	2307	1/1	0.78	0.45	77,77,77,77	0
54	MG	1J	214	1/1	0.78	0.24	71,71,71,71	0
54	MG	1H	3507	1/1	0.78	0.17	68,68,68,68	0
54	MG	13	2293	1/1	0.78	0.28	109,109,109,109	0
54	MG	35	201	1/1	0.78	0.21	60,60,60,60	0
54	MG	1H	3079	1/1	0.78	0.27	59,59,59,59	0
54	MG	13	2299	1/1	0.78	0.29	85,85,85,85	0
54	MG	P8	101	1/1	0.78	0.32	51,51,51,51	0
54	MG	14	3462	1/1	0.78	0.28	55,55,55,55	0
54	MG	X1	101	1/1	0.78	0.17	84,84,84,84	0
54	MG	14	3368	1/1	0.78	0.21	50,50,50,50	0
54	MG	13	2323	1/1	0.78	0.12	85,85,85,85	0
54	MG	14	3481	1/1	0.78	0.20	82,82,82,82	0
54	MG	14	3062	1/1	0.78	0.10	51,51,51,51	0
54	MG	1H	3434	1/1	0.78	0.31	59,59,59,59	0
54	MG	1H	3067	1/1	0.79	0.19	42,42,42,42	0
54	MG	1H	3342	1/1	0.79	0.36	62,62,62,62	0
54	MG	14	3472	1/1	0.79	0.25	58,58,58,58	0
54	MG	1J	203	1/1	0.79	0.39	67,67,67,67	0
54	MG	14	3399	1/1	0.79	0.29	70,70,70,70	0
54	MG	13	2364	1/1	0.79	0.15	69,69,69,69	0
54	MG	14	3322	1/1	0.79	0.19	51,51,51,51	0
54	MG	1H	3442	1/1	0.79	0.19	55,55,55,55	0
54	MG	1G	2284	1/1	0.79	0.49	90,90,90,90	0
54	MG	14	3032	1/1	0.79	0.09	46,46,46,46	0
54	MG	5E	201	1/1	0.79	0.20	66,66,66,66	0
54	MG	1H	3287	1/1	0.79	0.15	59,59,59,59	0
54	MG	14	3346	1/1	0.79	0.16	83,83,83,83	0
54	MG	88	303	1/1	0.79	0.19	56,56,56,56	0
54	MG	14	3525	1/1	0.79	0.11	51,51,51,51	0
54	MG	13	2278	1/1	0.79	0.37	62,62,62,62	0
54	MG	13	2320	1/1	0.79	0.38	75,75,75,75	0
54	MG	13	2294	1/1	0.79	0.19	57,57,57,57	0
54	MG	1H	3211	1/1	0.79	0.14	50,50,50,50	0
54	MG	14	3056	1/1	0.79	0.09	48,48,48,48	0
54	MG	14	3565	1/1	0.79	0.22	69,69,69,69	0
54	MG	14	3296	1/1	0.79	0.16	59,59,59,59	0
54	MG	14	3169	1/1	0.79	0.49	57,57,57,57	0
54	MG	1G	2330	1/1	0.80	0.17	93,93,93,93	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3529	1/1	0.80	0.18	42,42,42,42	0
54	MG	1G	2311	1/1	0.80	0.26	87,87,87,87	0
54	MG	1H	3058	1/1	0.80	0.08	39,39,39,39	0
54	MG	14	3222	1/1	0.80	0.41	70,70,70,70	0
54	MG	1H	3549	1/1	0.80	0.18	61,61,61,61	0
54	MG	1G	2380	1/1	0.80	0.12	70,70,70,70	0
54	MG	14	3357	1/1	0.80	0.17	53,53,53,53	0
54	MG	1G	2341	1/1	0.80	0.22	86,86,86,86	0
54	MG	1G	2313	1/1	0.80	0.36	62,62,62,62	0
54	MG	1H	3383	1/1	0.80	0.38	88,88,88,88	0
54	MG	1H	3479	1/1	0.80	0.19	67,67,67,67	0
54	MG	1H	3144	1/1	0.80	0.26	47,47,47,47	0
54	MG	13	2211	1/1	0.80	0.10	67,67,67,67	0
54	MG	14	3279	1/1	0.80	0.23	66,66,66,66	0
54	MG	14	3394	1/1	0.80	0.57	54,54,54,54	0
54	MG	1G	2319	1/1	0.80	0.22	77,77,77,77	0
54	MG	1G	2355	1/1	0.80	0.23	76,76,76,76	0
54	MG	14	3501	1/1	0.80	0.14	47,47,47,47	0
54	MG	14	3504	1/1	0.80	0.24	71,71,71,71	0
54	MG	14	3302	1/1	0.80	0.32	52,52,52,52	0
54	MG	14	3521	1/1	0.80	0.10	58,58,58,58	0
54	MG	C5	202	1/1	0.80	0.55	70,70,70,70	0
54	MG	14	3008	1/1	0.80	0.10	53,53,53,53	0
54	MG	14	3529	1/1	0.80	0.14	63,63,63,63	0
54	MG	1G	2356	1/1	0.80	0.10	74,74,74,74	0
54	MG	13	2297	1/1	0.80	0.32	62,62,62,62	0
54	MG	14	3410	1/1	0.80	0.20	59,59,59,59	0
54	MG	X4	106	1/1	0.80	0.23	73,73,73,73	0
54	MG	13	2374	1/1	0.81	0.08	79,79,79,79	0
54	MG	1G	2366	1/1	0.81	0.21	100,100,100,100	0
54	MG	1G	2292	1/1	0.81	0.17	67,67,67,67	0
54	MG	14	3241	1/1	0.81	0.19	72,72,72,72	0
54	MG	14	3247	1/1	0.81	0.41	68,68,68,68	0
54	MG	14	3250	1/1	0.81	0.57	83,83,83,83	0
54	MG	14	3541	1/1	0.81	0.24	71,71,71,71	0
54	MG	14	3057	1/1	0.81	0.19	48,48,48,48	0
54	MG	14	3059	1/1	0.81	0.07	58,58,58,58	0
54	MG	1G	2293	1/1	0.81	0.23	83,83,83,83	0
54	MG	1H	3226	1/1	0.81	0.29	43,43,43,43	0
54	MG	14	3554	1/1	0.81	0.23	62,62,62,62	0
54	MG	14	3269	1/1	0.81	0.11	55,55,55,55	0
54	MG	1H	3054	1/1	0.81	0.11	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1G	2295	1/1	0.81	0.23	75,75,75,75	0
54	MG	1H	3447	1/1	0.81	0.15	59,59,59,59	0
54	MG	1H	3460	1/1	0.81	0.33	61,61,61,61	0
54	MG	13	2316	1/1	0.81	0.37	74,74,74,74	0
54	MG	13	2321	1/1	0.81	0.30	81,81,81,81	0
54	MG	1H	3378	1/1	0.81	0.23	51,51,51,51	0
54	MG	13	2288	1/1	0.81	0.11	80,80,80,80	0
54	MG	14	3315	1/1	0.81	0.21	62,62,62,62	0
54	MG	1J	213	1/1	0.81	0.19	78,78,78,78	0
54	MG	1H	3140	1/1	0.81	0.19	42,42,42,42	0
54	MG	1H	3307	1/1	0.81	0.23	31,31,31,31	0
54	MG	14	3453	1/1	0.81	0.21	44,44,44,44	0
54	MG	14	3146	1/1	0.81	0.29	54,54,54,54	0
54	MG	14	3151	1/1	0.81	0.34	56,56,56,56	0
54	MG	14	3331	1/1	0.81	0.21	54,54,54,54	0
54	MG	13	2339	1/1	0.81	0.16	79,79,79,79	0
54	MG	14	3473	1/1	0.81	0.22	77,77,77,77	0
54	MG	14	3335	1/1	0.81	0.18	57,57,57,57	0
54	MG	14	3177	1/1	0.81	0.43	67,67,67,67	0
54	MG	14	3343	1/1	0.81	0.19	62,62,62,62	0
54	MG	13	2327	1/1	0.81	0.25	81,81,81,81	0
54	MG	14	3204	1/1	0.81	0.39	59,59,59,59	0
54	MG	1H	3403	1/1	0.81	0.19	46,46,46,46	0
54	MG	1H	3518	1/1	0.81	0.31	41,41,41,41	0
54	MG	1H	3153	1/1	0.81	0.43	45,45,45,45	0
54	MG	14	3512	1/1	0.81	0.39	57,57,57,57	0
54	MG	19	301	1/1	0.82	0.25	54,54,54,54	0
54	MG	13	2263	1/1	0.82	0.19	77,77,77,77	0
54	MG	14	3496	1/1	0.82	0.13	58,58,58,58	0
54	MG	1H	3090	1/1	0.82	0.24	49,49,49,49	0
54	MG	1H	3328	1/1	0.82	0.26	49,49,49,49	0
54	MG	14	3290	1/1	0.82	0.34	73,73,73,73	0
54	MG	14	3509	1/1	0.82	0.20	62,62,62,62	0
54	MG	13	2359	1/1	0.82	0.16	78,78,78,78	0
54	MG	14	3516	1/1	0.82	0.24	61,61,61,61	0
54	MG	78	202	1/1	0.82	0.23	54,54,54,54	0
54	MG	14	3361	1/1	0.82	0.24	64,64,64,64	0
54	MG	31	301	1/1	0.82	0.14	37,37,37,37	0
54	MG	1H	3340	1/1	0.82	0.27	59,59,59,59	0
54	MG	13	2290	1/1	0.82	0.29	67,67,67,67	0
54	MG	13	2284	1/1	0.82	0.25	73,73,73,73	0
54	MG	1H	3078	1/1	0.82	0.19	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3542	1/1	0.82	0.16	48,48,48,48	0
54	MG	1H	3468	1/1	0.82	0.10	51,51,51,51	0
54	MG	14	3388	1/1	0.82	0.57	70,70,70,70	0
54	MG	13	2328	1/1	0.82	0.31	76,76,76,76	0
54	MG	W1	104	1/1	0.82	0.20	120,120,120,120	0
54	MG	1H	3159	1/1	0.82	0.30	52,52,52,52	0
54	MG	14	3049	1/1	0.82	0.18	52,52,52,52	0
54	MG	1H	3488	1/1	0.82	0.16	54,54,54,54	0
54	MG	14	3558	1/1	0.82	0.26	88,88,88,88	0
54	MG	X1	107	1/1	0.82	0.24	78,78,78,78	0
54	MG	14	3126	1/1	0.82	0.32	63,63,63,63	0
54	MG	13	2226	1/1	0.82	0.13	82,82,82,82	0
54	MG	14	3404	1/1	0.82	0.21	60,60,60,60	0
54	MG	1H	3163	1/1	0.83	0.27	43,43,43,43	0
54	MG	A8	201	1/1	0.83	0.28	60,60,60,60	0
54	MG	14	3562	1/1	0.83	0.14	61,61,61,61	0
54	MG	1H	3554	1/1	0.83	0.20	53,53,53,53	0
54	MG	13	2207	1/1	0.83	0.08	69,69,69,69	0
54	MG	1H	3015	1/1	0.83	0.09	41,41,41,41	0
54	MG	1H	3391	1/1	0.83	0.26	56,56,56,56	0
54	MG	14	3257	1/1	0.83	0.26	42,42,42,42	0
54	MG	14	3469	1/1	0.83	0.12	78,78,78,78	0
54	MG	1H	3392	1/1	0.83	0.19	50,50,50,50	0
54	MG	1H	3577	1/1	0.83	0.14	51,51,51,51	0
54	MG	14	3377	1/1	0.83	0.23	49,49,49,49	0
54	MG	14	3381	1/1	0.83	0.23	65,65,65,65	0
54	MG	1J	210	1/1	0.83	0.19	70,70,70,70	0
54	MG	1G	2343	1/1	0.83	0.37	75,75,75,75	0
54	MG	1G	2263	1/1	0.83	0.33	61,61,61,61	0
54	MG	1H	3588	1/1	0.83	0.21	51,51,51,51	0
54	MG	14	3490	1/1	0.83	0.37	52,52,52,52	0
54	MG	1H	3397	1/1	0.83	0.43	60,60,60,60	0
54	MG	1H	3063	1/1	0.83	0.07	71,71,71,71	0
54	MG	1H	3493	1/1	0.83	0.26	62,62,62,62	0
54	MG	1H	3257	1/1	0.83	0.34	46,46,46,46	0
54	MG	14	3139	1/1	0.83	0.18	46,46,46,46	0
54	MG	14	3009	1/1	0.83	0.21	53,53,53,53	0
54	MG	13	2360	1/1	0.83	0.24	71,71,71,71	0
54	MG	1H	3041	1/1	0.83	0.14	40,40,40,40	0
54	MG	1H	3427	1/1	0.83	0.20	43,43,43,43	0
54	MG	1G	2350	1/1	0.83	0.17	80,80,80,80	0
54	MG	14	3407	1/1	0.83	0.23	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3364	1/1	0.83	0.42	57,57,57,57	0
54	MG	14	3217	1/1	0.83	0.15	58,58,58,58	0
54	MG	1G	2247	1/1	0.83	0.41	74,74,74,74	0
54	MG	1G	2310	1/1	0.83	0.27	75,75,75,75	0
54	MG	1H	3074	1/1	0.83	0.18	43,43,43,43	0
54	MG	1H	3545	1/1	0.83	0.31	66,66,66,66	0
54	MG	14	3341	1/1	0.83	0.18	65,65,65,65	0
54	MG	14	3234	1/1	0.84	0.42	57,57,57,57	0
54	MG	14	3442	1/1	0.84	0.61	73,73,73,73	0
54	MG	14	3443	1/1	0.84	0.17	52,52,52,52	0
54	MG	1H	3475	1/1	0.84	0.23	49,49,49,49	0
54	MG	1H	3575	1/1	0.84	0.13	59,59,59,59	0
54	MG	1G	2223	1/1	0.84	0.21	66,66,66,66	0
54	MG	14	3567	1/1	0.84	0.09	73,73,73,73	0
54	MG	1H	3303	1/1	0.84	0.42	59,59,59,59	0
54	MG	14	3359	1/1	0.84	0.37	62,62,62,62	0
54	MG	1G	2339	1/1	0.84	0.20	76,76,76,76	0
54	MG	13	2228	1/1	0.84	0.26	50,50,50,50	0
54	MG	1H	3174	1/1	0.84	0.39	50,50,50,50	0
54	MG	1H	3091	1/1	0.84	0.14	37,37,37,37	0
54	MG	1G	2246	1/1	0.84	0.21	68,68,68,68	0
54	MG	1H	3217	1/1	0.84	0.21	36,36,36,36	0
54	MG	1H	3222	1/1	0.84	0.24	40,40,40,40	0
54	MG	1H	3225	1/1	0.84	0.17	51,51,51,51	0
54	MG	1H	3135	1/1	0.84	0.20	49,49,49,49	0
54	MG	1H	3242	1/1	0.84	0.19	51,51,51,51	0
54	MG	14	3390	1/1	0.84	0.33	44,44,44,44	0
54	MG	14	3491	1/1	0.84	0.31	52,52,52,52	0
54	MG	14	3166	1/1	0.84	0.15	52,52,52,52	0
54	MG	14	3304	1/1	0.84	0.21	46,46,46,46	0
54	MG	1H	3527	1/1	0.84	0.14	45,45,45,45	0
54	MG	13	2352	1/1	0.84	0.15	52,52,52,52	0
54	MG	1G	2249	1/1	0.84	0.31	66,66,66,66	0
54	MG	1H	3262	1/1	0.84	0.40	68,68,68,68	0
54	MG	14	3513	1/1	0.84	0.46	66,66,66,66	0
54	MG	14	3209	1/1	0.84	0.19	47,47,47,47	0
54	MG	1H	3268	1/1	0.84	0.28	65,65,65,65	0
54	MG	1H	3037	1/1	0.84	0.27	44,44,44,44	0
54	MG	1H	3281	1/1	0.84	0.19	61,61,61,61	0
54	MG	13	2378	1/1	0.84	0.24	73,73,73,73	0
54	MG	1G	2259	1/1	0.84	0.32	80,80,80,80	0
54	MG	14	3537	1/1	0.84	0.26	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3334	1/1	0.84	0.22	75,75,75,75	0
54	MG	W4	103	1/1	0.84	0.23	81,81,81,81	0
54	MG	1H	3292	1/1	0.84	0.17	45,45,45,45	0
54	MG	14	3337	1/1	0.84	0.43	69,69,69,69	0
54	MG	1H	3471	1/1	0.84	0.17	71,71,71,71	0
54	MG	1H	3520	1/1	0.85	0.18	51,51,51,51	0
54	MG	1H	3404	1/1	0.85	0.30	68,68,68,68	0
54	MG	14	3520	1/1	0.85	0.13	77,77,77,77	0
54	MG	1H	3188	1/1	0.85	0.14	35,35,35,35	0
54	MG	1H	3528	1/1	0.85	0.22	58,58,58,58	0
54	MG	1H	3326	1/1	0.85	0.49	68,68,68,68	0
54	MG	14	3259	1/1	0.85	0.38	46,46,46,46	0
54	MG	14	3530	1/1	0.85	0.19	49,49,49,49	0
54	MG	14	3396	1/1	0.85	0.56	77,77,77,77	0
54	MG	14	3058	1/1	0.85	0.10	50,50,50,50	0
54	MG	1H	3534	1/1	0.85	0.15	43,43,43,43	0
54	MG	1H	3536	1/1	0.85	0.14	43,43,43,43	0
54	MG	1G	2294	1/1	0.85	0.41	75,75,75,75	0
54	MG	13	2358	1/1	0.85	0.11	74,74,74,74	0
54	MG	14	3280	1/1	0.85	0.18	56,56,56,56	0
54	MG	1G	2348	1/1	0.85	0.29	71,71,71,71	0
54	MG	14	3556	1/1	0.85	0.19	59,59,59,59	0
54	MG	13	2322	1/1	0.85	0.43	81,81,81,81	0
54	MG	14	3295	1/1	0.85	0.32	56,56,56,56	0
54	MG	13	2273	1/1	0.85	0.24	62,62,62,62	0
54	MG	14	3085	1/1	0.85	0.08	49,49,49,49	0
54	MG	11	301	1/1	0.85	0.25	34,34,34,34	0
54	MG	16	203	1/1	0.85	0.21	62,62,62,62	0
54	MG	13	2341	1/1	0.85	0.09	89,89,89,89	0
54	MG	16	209	1/1	0.85	0.12	54,54,54,54	0
54	MG	14	3307	1/1	0.85	0.29	71,71,71,71	0
54	MG	13	2292	1/1	0.85	0.23	54,54,54,54	0
54	MG	29	301	1/1	0.85	0.12	52,52,52,52	0
54	MG	14	3434	1/1	0.85	0.25	57,57,57,57	0
54	MG	1H	3448	1/1	0.85	0.17	50,50,50,50	0
54	MG	13	2368	1/1	0.85	0.11	84,84,84,84	0
54	MG	14	3445	1/1	0.85	0.20	58,58,58,58	0
54	MG	1H	3132	1/1	0.85	0.17	65,65,65,65	0
54	MG	13	2344	1/1	0.85	0.16	66,66,66,66	0
54	MG	1G	2374	1/1	0.85	0.49	86,86,86,86	0
54	MG	1G	2323	1/1	0.85	0.36	67,67,67,67	0
54	MG	13	2345	1/1	0.85	0.13	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3586	1/1	0.85	0.32	62,62,62,62	0
54	MG	14	3464	1/1	0.85	0.30	53,53,53,53	0
54	MG	13	2243	1/1	0.85	0.30	48,48,48,48	0
54	MG	1G	2240	1/1	0.85	0.40	81,81,81,81	0
54	MG	1H	3387	1/1	0.85	0.40	55,55,55,55	0
54	MG	14	3203	1/1	0.85	0.30	75,75,75,75	0
54	MG	39	302	1/1	0.85	0.18	49,49,49,49	0
54	MG	1H	3161	1/1	0.85	0.29	32,32,32,32	0
54	MG	1G	2242	1/1	0.85	0.62	81,81,81,81	0
54	MG	13	2302	1/1	0.85	0.30	69,69,69,69	0
54	MG	13	2233	1/1	0.85	0.34	84,84,84,84	0
54	MG	14	3015	1/1	0.85	0.16	40,40,40,40	0
54	MG	14	3018	1/1	0.85	0.09	58,58,58,58	0
54	MG	14	3022	1/1	0.85	0.15	45,45,45,45	0
54	MG	14	3362	1/1	0.85	0.15	59,59,59,59	0
54	MG	1H	3312	1/1	0.85	0.19	41,41,41,41	0
54	MG	1H	3508	1/1	0.85	0.32	36,36,36,36	0
54	MG	14	3232	1/1	0.85	0.77	74,74,74,74	0
54	MG	1H	3313	1/1	0.85	0.40	51,51,51,51	0
54	MG	14	3238	1/1	0.85	0.34	60,60,60,60	0
54	MG	1H	3022	1/1	0.85	0.11	45,45,45,45	0
55	ZN	G8	201	1/1	0.85	0.17	95,95,95,95	0
54	MG	13	2330	1/1	0.86	0.22	55,55,55,55	0
54	MG	68	202	1/1	0.86	0.20	63,63,63,63	0
54	MG	14	3043	1/1	0.86	0.11	47,47,47,47	0
54	MG	1H	3486	1/1	0.86	0.28	40,40,40,40	0
54	MG	13	2279	1/1	0.86	0.24	55,55,55,55	0
54	MG	1H	3232	1/1	0.86	0.17	34,34,34,34	0
54	MG	16	210	1/1	0.86	0.20	58,58,58,58	0
54	MG	16	211	1/1	0.86	0.20	59,59,59,59	0
54	MG	14	3389	1/1	0.86	0.17	63,63,63,63	0
54	MG	13	2222	1/1	0.86	0.25	75,75,75,75	0
54	MG	13	2282	1/1	0.86	0.30	57,57,57,57	0
54	MG	14	3205	1/1	0.86	0.53	61,61,61,61	0
54	MG	13	2212	1/1	0.86	0.08	89,89,89,89	0
54	MG	1H	3369	1/1	0.86	0.30	71,71,71,71	0
54	MG	1H	3500	1/1	0.86	0.21	71,71,71,71	0
54	MG	1H	3504	1/1	0.86	0.11	55,55,55,55	0
54	MG	1H	3370	1/1	0.86	0.35	62,62,62,62	0
54	MG	14	3066	1/1	0.86	0.07	86,86,86,86	0
54	MG	1H	3317	1/1	0.86	0.24	56,56,56,56	0
54	MG	78	201	1/1	0.86	0.13	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3326	1/1	0.86	0.22	70,70,70,70	0
54	MG	13	2324	1/1	0.86	0.14	63,63,63,63	0
54	MG	14	3074	1/1	0.86	0.12	52,52,52,52	0
54	MG	13	2325	1/1	0.86	0.43	77,77,77,77	0
54	MG	14	3079	1/1	0.86	0.06	54,54,54,54	0
54	MG	14	3413	1/1	0.86	0.21	79,79,79,79	0
54	MG	1H	3278	1/1	0.86	0.28	48,48,48,48	0
54	MG	14	3243	1/1	0.86	0.55	76,76,76,76	0
54	MG	14	3084	1/1	0.86	0.14	54,54,54,54	0
54	MG	13	2382	1/1	0.86	0.17	60,60,60,60	0
54	MG	41	201	1/1	0.86	0.16	68,68,68,68	0
54	MG	49	201	1/1	0.86	0.18	86,86,86,86	0
54	MG	14	3534	1/1	0.86	0.18	70,70,70,70	0
54	MG	13	2365	1/1	0.86	0.27	75,75,75,75	0
54	MG	W1	103	1/1	0.86	0.22	73,73,73,73	0
54	MG	14	3254	1/1	0.86	0.45	66,66,66,66	0
54	MG	13	2275	1/1	0.86	0.19	75,75,75,75	0
54	MG	1H	3465	1/1	0.86	0.35	47,47,47,47	0
54	MG	1H	3008	1/1	0.86	0.07	40,40,40,40	0
54	MG	14	3260	1/1	0.86	0.14	41,41,41,41	0
54	MG	1H	3535	1/1	0.86	0.29	39,39,39,39	0
54	MG	X1	109	1/1	0.86	0.09	71,71,71,71	0
54	MG	14	3452	1/1	0.86	0.18	59,59,59,59	0
54	MG	1H	3343	1/1	0.86	0.28	50,50,50,50	0
54	MG	13	2244	1/1	0.86	0.21	45,45,45,45	0
54	MG	1H	3477	1/1	0.86	0.28	51,51,51,51	0
54	MG	1H	3299	1/1	0.86	0.26	53,53,53,53	0
54	MG	14	3495	1/1	0.87	0.45	64,64,64,64	0
54	MG	14	3036	1/1	0.87	0.10	53,53,53,53	0
54	MG	1G	2367	1/1	0.87	0.29	92,92,92,92	0
54	MG	1G	2264	1/1	0.87	0.36	94,94,94,94	0
54	MG	1H	3411	1/1	0.87	0.21	50,50,50,50	0
54	MG	1H	3076	1/1	0.87	0.12	62,62,62,62	0
54	MG	13	2240	1/1	0.87	0.55	74,74,74,74	0
54	MG	14	3412	1/1	0.87	0.35	73,73,73,73	0
54	MG	1H	3419	1/1	0.87	0.16	63,63,63,63	0
54	MG	14	3344	1/1	0.87	0.14	81,81,81,81	0
54	MG	14	3262	1/1	0.87	0.15	53,53,53,53	0
54	MG	1G	2373	1/1	0.87	0.12	94,94,94,94	0
54	MG	1H	3367	1/1	0.87	0.20	57,57,57,57	0
54	MG	1H	3574	1/1	0.87	0.33	58,58,58,58	0
54	MG	I8	102	1/1	0.87	0.31	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3080	1/1	0.87	0.08	58,58,58,58	0
54	MG	1H	3429	1/1	0.87	0.14	41,41,41,41	0
54	MG	13	2210	1/1	0.87	0.13	82,82,82,82	0
54	MG	14	3207	1/1	0.87	0.41	63,63,63,63	0
54	MG	E5	201	1/1	0.87	0.13	55,55,55,55	0
54	MG	1G	2376	1/1	0.87	0.25	99,99,99,99	0
54	MG	14	3210	1/1	0.87	0.22	50,50,50,50	0
54	MG	13	2366	1/1	0.87	0.25	65,65,65,65	0
54	MG	1H	3031	1/1	0.87	0.12	49,49,49,49	0
54	MG	1G	2299	1/1	0.87	0.17	60,60,60,60	0
54	MG	45	202	1/1	0.87	0.23	65,65,65,65	0
54	MG	1G	2363	1/1	0.87	0.28	92,92,92,92	0
54	MG	6A	101	1/1	0.87	0.51	86,86,86,86	0
54	MG	A5	201	1/1	0.87	0.45	45,45,45,45	0
54	MG	1H	3334	1/1	0.87	0.30	50,50,50,50	0
54	MG	1H	3127	1/1	0.87	0.17	60,60,60,60	0
54	MG	14	3310	1/1	0.87	0.13	59,59,59,59	0
54	MG	1H	3464	1/1	0.87	0.23	53,53,53,53	0
54	MG	1G	2331	1/1	0.87	0.43	72,72,72,72	0
54	MG	14	3478	1/1	0.87	0.26	60,60,60,60	0
54	MG	14	3233	1/1	0.87	0.13	58,58,58,58	0
54	MG	21	303	1/1	0.87	0.23	72,72,72,72	0
54	MG	1H	3295	1/1	0.87	0.26	49,49,49,49	0
54	MG	1H	3297	1/1	0.87	0.16	51,51,51,51	0
54	MG	1H	3473	1/1	0.87	0.09	48,48,48,48	0
54	MG	16	205	1/1	0.87	0.44	58,58,58,58	0
54	MG	14	3402	1/1	0.87	0.22	70,70,70,70	0
54	MG	3E	302	1/1	0.87	0.47	84,84,84,84	0
54	MG	1H	3350	1/1	0.87	0.26	57,57,57,57	0
54	MG	14	3324	1/1	0.88	0.23	67,67,67,67	0
54	MG	1G	2225	1/1	0.88	0.40	72,72,72,72	0
54	MG	14	3421	1/1	0.88	0.40	42,42,42,42	0
54	MG	1H	3220	1/1	0.88	0.28	44,44,44,44	0
54	MG	14	3431	1/1	0.88	0.33	57,57,57,57	0
54	MG	14	3432	1/1	0.88	0.10	55,55,55,55	0
54	MG	14	3566	1/1	0.88	0.09	68,68,68,68	0
54	MG	1G	2365	1/1	0.88	0.47	84,84,84,84	0
54	MG	1H	3551	1/1	0.88	0.19	57,57,57,57	0
54	MG	1H	3470	1/1	0.88	0.30	43,43,43,43	0
54	MG	14	3228	1/1	0.88	0.52	65,65,65,65	0
54	MG	14	3444	1/1	0.88	0.25	62,62,62,62	0
54	MG	13	2340	1/1	0.88	0.16	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1G	2342	1/1	0.88	0.24	73,73,73,73	0
54	MG	16	207	1/1	0.88	0.39	53,53,53,53	0
54	MG	1H	3020	1/1	0.88	0.16	39,39,39,39	0
54	MG	1H	3236	1/1	0.88	0.11	62,62,62,62	0
54	MG	14	3073	1/1	0.88	0.27	53,53,53,53	0
54	MG	1H	3137	1/1	0.88	0.21	42,42,42,42	0
54	MG	14	3454	1/1	0.88	0.23	72,72,72,72	0
54	MG	25	202	1/1	0.88	0.12	67,67,67,67	0
54	MG	1G	2320	1/1	0.88	0.22	70,70,70,70	0
54	MG	14	3245	1/1	0.88	0.28	64,64,64,64	0
54	MG	14	3355	1/1	0.88	0.16	61,61,61,61	0
54	MG	14	3078	1/1	0.88	0.13	46,46,46,46	0
54	MG	14	3467	1/1	0.88	0.26	66,66,66,66	0
54	MG	1G	2344	1/1	0.88	0.20	76,76,76,76	0
54	MG	1J	209	1/1	0.88	0.05	69,69,69,69	0
54	MG	1H	3338	1/1	0.88	0.10	48,48,48,48	0
54	MG	14	3253	1/1	0.88	0.49	55,55,55,55	0
54	MG	14	3477	1/1	0.88	0.56	64,64,64,64	0
54	MG	1G	2321	1/1	0.88	0.38	75,75,75,75	0
54	MG	1H	3583	1/1	0.88	0.28	53,53,53,53	0
54	MG	1H	3407	1/1	0.88	0.32	65,65,65,65	0
54	MG	14	3369	1/1	0.88	0.33	62,62,62,62	0
54	MG	1H	3410	1/1	0.88	0.12	57,57,57,57	0
54	MG	1G	2305	1/1	0.88	0.10	77,77,77,77	0
54	MG	14	3489	1/1	0.88	0.21	49,49,49,49	0
54	MG	1H	3272	1/1	0.88	0.13	47,47,47,47	0
54	MG	14	3117	1/1	0.88	0.15	64,64,64,64	0
54	MG	14	3494	1/1	0.88	0.59	62,62,62,62	0
54	MG	39	301	1/1	0.88	0.32	74,74,74,74	0
54	MG	1H	3414	1/1	0.88	0.24	62,62,62,62	0
54	MG	1H	3157	1/1	0.88	0.30	61,61,61,61	0
54	MG	1H	3035	1/1	0.88	0.14	60,60,60,60	0
54	MG	1G	2236	1/1	0.88	0.30	70,70,70,70	0
54	MG	41	202	1/1	0.88	0.25	73,73,73,73	0
54	MG	1H	3353	1/1	0.88	0.44	57,57,57,57	0
54	MG	13	2262	1/1	0.88	0.13	70,70,70,70	0
54	MG	14	3161	1/1	0.88	0.23	45,45,45,45	0
54	MG	13	2272	1/1	0.88	0.15	54,54,54,54	0
54	MG	55	202	1/1	0.88	0.13	57,57,57,57	0
54	MG	14	3398	1/1	0.88	0.30	75,75,75,75	0
54	MG	1H	3291	1/1	0.88	0.32	68,68,68,68	0
54	MG	1H	3525	1/1	0.88	0.16	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3401	1/1	0.88	0.51	73,73,73,73	0
54	MG	14	3183	1/1	0.88	0.40	57,57,57,57	0
54	MG	14	3305	1/1	0.88	0.15	52,52,52,52	0
54	MG	1G	2337	1/1	0.88	0.13	70,70,70,70	0
54	MG	13	2343	1/1	0.88	0.14	62,62,62,62	0
54	MG	1H	3177	1/1	0.88	0.38	46,46,46,46	0
54	MG	1H	3445	1/1	0.88	0.22	73,73,73,73	0
54	MG	W4	101	1/1	0.88	0.22	88,88,88,88	0
54	MG	3I	201	1/1	0.88	0.25	52,52,52,52	0
54	MG	1G	2360	1/1	0.88	0.11	68,68,68,68	0
54	MG	1H	3209	1/1	0.88	0.23	52,52,52,52	0
54	MG	14	3321	1/1	0.88	0.16	68,68,68,68	0
54	MG	1H	3004	1/1	0.88	0.10	40,40,40,40	0
54	MG	14	3439	1/1	0.89	0.47	77,77,77,77	0
54	MG	13	2223	1/1	0.89	0.36	48,48,48,48	0
54	MG	13	2334	1/1	0.89	0.24	85,85,85,85	0
54	MG	1G	2203	1/1	0.89	0.43	68,68,68,68	0
54	MG	14	3047	1/1	0.89	0.08	64,64,64,64	0
54	MG	1H	3371	1/1	0.89	0.17	60,60,60,60	0
54	MG	1H	3530	1/1	0.89	0.25	48,48,48,48	0
54	MG	14	3230	1/1	0.89	0.16	67,67,67,67	0
54	MG	1H	3375	1/1	0.89	0.39	53,53,53,53	0
54	MG	14	3351	1/1	0.89	0.29	61,61,61,61	0
54	MG	1G	2251	1/1	0.89	0.24	67,67,67,67	0
54	MG	14	3459	1/1	0.89	0.17	49,49,49,49	0
54	MG	1H	3229	1/1	0.89	0.14	52,52,52,52	0
54	MG	1G	2209	1/1	0.89	0.10	68,68,68,68	0
54	MG	14	3463	1/1	0.89	0.23	65,65,65,65	0
54	MG	1H	3541	1/1	0.89	0.14	52,52,52,52	0
54	MG	1G	2298	1/1	0.89	0.21	71,71,71,71	0
54	MG	14	3061	1/1	0.89	0.11	48,48,48,48	0
54	MG	1J	202	1/1	0.89	0.10	79,79,79,79	0
54	MG	13	2237	1/1	0.89	0.19	61,61,61,61	0
54	MG	1H	3320	1/1	0.89	0.33	46,46,46,46	0
54	MG	1H	3546	1/1	0.89	0.35	69,69,69,69	0
54	MG	1J	207	1/1	0.89	0.10	80,80,80,80	0
54	MG	1G	2340	1/1	0.89	0.42	81,81,81,81	0
54	MG	14	3375	1/1	0.89	0.15	71,71,71,71	0
54	MG	13	2353	1/1	0.89	0.22	60,60,60,60	0
54	MG	1J	212	1/1	0.89	0.08	81,81,81,81	0
54	MG	1H	3260	1/1	0.89	0.27	37,37,37,37	0
54	MG	13	2250	1/1	0.89	0.31	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3336	1/1	0.89	0.13	45,45,45,45	0
54	MG	1H	3563	1/1	0.89	0.47	57,57,57,57	0
54	MG	1H	3400	1/1	0.89	0.38	66,66,66,66	0
54	MG	1H	3036	1/1	0.89	0.06	48,48,48,48	0
54	MG	1H	3481	1/1	0.89	0.27	57,57,57,57	0
54	MG	13	2311	1/1	0.89	0.32	71,71,71,71	0
54	MG	14	3089	1/1	0.89	0.11	56,56,56,56	0
54	MG	14	3395	1/1	0.89	0.24	67,67,67,67	0
54	MG	1H	3487	1/1	0.89	0.13	54,54,54,54	0
54	MG	1H	3406	1/1	0.89	0.45	63,63,63,63	0
54	MG	1H	3578	1/1	0.89	0.36	75,75,75,75	0
54	MG	1H	3276	1/1	0.89	0.34	57,57,57,57	0
54	MG	88	301	1/1	0.89	0.12	59,59,59,59	0
54	MG	1G	2268	1/1	0.89	0.12	77,77,77,77	0
54	MG	14	3120	1/1	0.89	0.19	45,45,45,45	0
54	MG	1H	3165	1/1	0.89	0.32	46,46,46,46	0
54	MG	13	2289	1/1	0.89	0.39	71,71,71,71	0
54	MG	13	2326	1/1	0.89	0.31	59,59,59,59	0
54	MG	1H	3499	1/1	0.89	0.30	49,49,49,49	0
54	MG	1H	3051	1/1	0.89	0.08	59,59,59,59	0
54	MG	B8	201	1/1	0.89	0.13	60,60,60,60	0
54	MG	14	3408	1/1	0.89	0.26	52,52,52,52	0
54	MG	13	2298	1/1	0.89	0.52	87,87,87,87	0
54	MG	C5	203	1/1	0.89	0.36	86,86,86,86	0
54	MG	14	3005	1/1	0.89	0.24	51,51,51,51	0
54	MG	1H	3506	1/1	0.89	0.31	59,59,59,59	0
54	MG	13	2214	1/1	0.89	0.15	88,88,88,88	0
54	MG	13	2300	1/1	0.89	0.26	76,76,76,76	0
54	MG	1G	2244	1/1	0.89	0.30	72,72,72,72	0
54	MG	1H	3517	1/1	0.89	0.18	53,53,53,53	0
54	MG	1H	3212	1/1	0.89	0.20	35,35,35,35	0
54	MG	14	3551	1/1	0.89	0.17	47,47,47,47	0
54	MG	14	3552	1/1	0.89	0.12	49,49,49,49	0
54	MG	1H	3430	1/1	0.89	0.32	56,56,56,56	0
54	MG	1H	3094	1/1	0.89	0.48	36,36,36,36	0
54	MG	X4	104	1/1	0.89	0.23	91,91,91,91	0
54	MG	1H	3524	1/1	0.89	0.20	45,45,45,45	0
54	MG	14	3560	1/1	0.89	0.22	51,51,51,51	0
54	MG	14	3218	1/1	0.89	0.24	50,50,50,50	0
54	MG	1G	2333	1/1	0.90	0.32	85,85,85,85	0
54	MG	1H	3421	1/1	0.90	0.26	62,62,62,62	0
54	MG	14	3318	1/1	0.90	0.10	78,78,78,78	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3319	1/1	0.90	0.11	67,67,67,67	0
54	MG	14	3422	1/1	0.90	0.26	66,66,66,66	0
54	MG	1G	2297	1/1	0.90	0.15	90,90,90,90	0
54	MG	14	3006	1/1	0.90	0.10	46,46,46,46	0
54	MG	1H	3513	1/1	0.90	0.43	63,63,63,63	0
54	MG	13	2303	1/1	0.90	0.09	70,70,70,70	0
54	MG	1H	3282	1/1	0.90	0.44	61,61,61,61	0
54	MG	13	2354	1/1	0.90	0.11	70,70,70,70	0
54	MG	21	301	1/1	0.90	0.28	40,40,40,40	0
54	MG	14	3440	1/1	0.90	0.33	61,61,61,61	0
54	MG	4I	201	1/1	0.90	0.06	75,75,75,75	0
54	MG	14	3441	1/1	0.90	0.11	76,76,76,76	0
54	MG	1H	3172	1/1	0.90	0.35	36,36,36,36	0
54	MG	14	3330	1/1	0.90	0.08	76,76,76,76	0
54	MG	1H	3432	1/1	0.90	0.15	43,43,43,43	0
54	MG	1H	3433	1/1	0.90	0.29	45,45,45,45	0
54	MG	1H	3289	1/1	0.90	0.40	56,56,56,56	0
54	MG	14	3215	1/1	0.90	0.23	49,49,49,49	0
54	MG	13	2285	1/1	0.90	0.07	72,72,72,72	0
54	MG	16	213	1/1	0.90	0.30	66,66,66,66	0
54	MG	14	3039	1/1	0.90	0.08	43,43,43,43	0
54	MG	1G	2304	1/1	0.90	0.59	85,85,85,85	0
54	MG	13	2308	1/1	0.90	0.21	78,78,78,78	0
54	MG	14	3044	1/1	0.90	0.07	75,75,75,75	0
54	MG	14	3345	1/1	0.90	0.09	60,60,60,60	0
54	MG	1G	2378	1/1	0.90	0.33	81,81,81,81	0
54	MG	13	2268	1/1	0.90	0.25	55,55,55,55	0
54	MG	1H	3088	1/1	0.90	0.09	37,37,37,37	0
54	MG	14	3050	1/1	0.90	0.07	61,61,61,61	0
54	MG	14	3356	1/1	0.90	0.30	51,51,51,51	0
54	MG	1H	3089	1/1	0.90	0.20	38,38,38,38	0
54	MG	1H	3537	1/1	0.90	0.35	60,60,60,60	0
54	MG	1H	3462	1/1	0.90	0.16	53,53,53,53	0
54	MG	13	2312	1/1	0.90	0.41	52,52,52,52	0
54	MG	13	2363	1/1	0.90	0.08	76,76,76,76	0
54	MG	1H	3310	1/1	0.90	0.15	30,30,30,30	0
54	MG	14	3480	1/1	0.90	0.20	58,58,58,58	0
54	MG	1G	2282	1/1	0.90	0.41	75,75,75,75	0
54	MG	1H	3469	1/1	0.90	0.29	47,47,47,47	0
54	MG	1H	3055	1/1	0.90	0.19	56,56,56,56	0
54	MG	13	2271	1/1	0.90	0.29	65,65,65,65	0
54	MG	1G	2349	1/1	0.90	0.12	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	13	2225	1/1	0.90	0.24	67,67,67,67	0
54	MG	14	3384	1/1	0.90	0.24	47,47,47,47	0
54	MG	1H	3556	1/1	0.90	0.16	59,59,59,59	0
54	MG	1H	3233	1/1	0.90	0.16	36,36,36,36	0
54	MG	13	2329	1/1	0.90	0.32	73,73,73,73	0
54	MG	14	3077	1/1	0.90	0.05	59,59,59,59	0
54	MG	1H	3399	1/1	0.90	0.21	55,55,55,55	0
54	MG	1H	3570	1/1	0.90	0.16	51,51,51,51	0
54	MG	14	3508	1/1	0.90	0.09	57,57,57,57	0
54	MG	1H	3241	1/1	0.90	0.25	48,48,48,48	0
54	MG	1G	2248	1/1	0.90	0.44	61,61,61,61	0
54	MG	1H	3243	1/1	0.90	0.23	59,59,59,59	0
54	MG	14	3514	1/1	0.90	0.11	60,60,60,60	0
54	MG	14	3515	1/1	0.90	0.17	60,60,60,60	0
54	MG	14	3275	1/1	0.90	0.13	46,46,46,46	0
54	MG	13	2257	1/1	0.90	0.27	82,82,82,82	0
54	MG	14	3518	1/1	0.90	0.29	86,86,86,86	0
54	MG	13	2283	1/1	0.90	0.17	63,63,63,63	0
54	MG	1H	3408	1/1	0.90	0.26	51,51,51,51	0
54	MG	14	3284	1/1	0.90	0.38	82,82,82,82	0
54	MG	1H	3146	1/1	0.90	0.39	55,55,55,55	0
54	MG	14	3527	1/1	0.90	0.15	52,52,52,52	0
54	MG	1H	3017	1/1	0.90	0.19	41,41,41,41	0
54	MG	14	3106	1/1	0.90	0.29	52,52,52,52	0
54	MG	13	2265	1/1	0.90	0.27	51,51,51,51	0
54	MG	1H	3585	1/1	0.90	0.26	39,39,39,39	0
54	MG	1H	3496	1/1	0.90	0.17	52,52,52,52	0
54	MG	1H	3587	1/1	0.90	0.14	47,47,47,47	0
54	MG	1H	3497	1/1	0.90	0.23	50,50,50,50	0
54	MG	X4	101	1/1	0.90	0.20	91,91,91,91	0
54	MG	13	2373	1/1	0.90	0.16	88,88,88,88	0
54	MG	14	3546	1/1	0.90	0.22	42,42,42,42	0
54	MG	1H	3069	1/1	0.90	0.22	45,45,45,45	0
54	MG	1H	3418	1/1	0.90	0.29	54,54,54,54	0
54	MG	11	305	1/1	0.91	0.25	31,31,31,31	0
54	MG	14	3559	1/1	0.91	0.27	70,70,70,70	0
54	MG	14	3437	1/1	0.91	0.60	69,69,69,69	0
54	MG	14	3001	1/1	0.91	0.47	57,57,57,57	0
54	MG	14	3564	1/1	0.91	0.10	50,50,50,50	0
54	MG	1G	2322	1/1	0.91	0.34	63,63,63,63	0
54	MG	1H	3416	1/1	0.91	0.48	72,72,72,72	0
54	MG	13	2221	1/1	0.91	0.23	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3261	1/1	0.91	0.19	39,39,39,39	0
54	MG	1H	3344	1/1	0.91	0.14	42,42,42,42	0
54	MG	14	3206	1/1	0.91	0.52	57,57,57,57	0
54	MG	1G	2361	1/1	0.91	0.19	92,92,92,92	0
54	MG	14	3208	1/1	0.91	0.31	50,50,50,50	0
54	MG	1H	3158	1/1	0.91	0.23	61,61,61,61	0
54	MG	1H	3270	1/1	0.91	0.17	55,55,55,55	0
54	MG	1G	2291	1/1	0.91	0.52	79,79,79,79	0
54	MG	1H	3021	1/1	0.91	0.11	46,46,46,46	0
54	MG	13	2269	1/1	0.91	0.26	57,57,57,57	0
54	MG	1G	2250	1/1	0.91	0.33	66,66,66,66	0
54	MG	1H	3359	1/1	0.91	0.41	54,54,54,54	0
54	MG	13	2348	1/1	0.91	0.22	58,58,58,58	0
54	MG	1H	3531	1/1	0.91	0.18	52,52,52,52	0
54	MG	13	2362	1/1	0.91	0.15	77,77,77,77	0
54	MG	13	2256	1/1	0.91	0.37	64,64,64,64	0
54	MG	14	3048	1/1	0.91	0.25	43,43,43,43	0
54	MG	14	3470	1/1	0.91	0.12	51,51,51,51	0
54	MG	13	2245	1/1	0.91	0.14	49,49,49,49	0
54	MG	13	2332	1/1	0.91	0.19	58,58,58,58	0
54	MG	14	3474	1/1	0.91	0.47	50,50,50,50	0
54	MG	1H	3038	1/1	0.91	0.06	51,51,51,51	0
54	MG	1H	3459	1/1	0.91	0.13	44,44,44,44	0
54	MG	1H	3194	1/1	0.91	0.47	46,46,46,46	0
54	MG	14	3365	1/1	0.91	0.17	56,56,56,56	0
54	MG	1G	2375	1/1	0.91	0.16	85,85,85,85	0
54	MG	13	2319	1/1	0.91	0.35	77,77,77,77	0
54	MG	1H	3210	1/1	0.91	0.22	44,44,44,44	0
54	MG	1H	3547	1/1	0.91	0.12	41,41,41,41	0
54	MG	14	3488	1/1	0.91	0.18	55,55,55,55	0
54	MG	1G	2266	1/1	0.91	0.11	71,71,71,71	0
54	MG	1H	3381	1/1	0.91	0.45	58,58,58,58	0
54	MG	14	3252	1/1	0.91	0.25	62,62,62,62	0
54	MG	1H	3552	1/1	0.91	0.14	52,52,52,52	0
54	MG	1H	3046	1/1	0.91	0.24	38,38,38,38	0
54	MG	1H	3384	1/1	0.91	0.23	57,57,57,57	0
54	MG	14	3498	1/1	0.91	0.34	44,44,44,44	0
54	MG	1G	2229	1/1	0.91	0.30	84,84,84,84	0
54	MG	1H	3557	1/1	0.91	0.19	45,45,45,45	0
54	MG	1H	3305	1/1	0.91	0.24	46,46,46,46	0
54	MG	14	3076	1/1	0.91	0.21	55,55,55,55	0
54	MG	1H	3306	1/1	0.91	0.24	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3565	1/1	0.91	0.19	67,67,67,67	0
54	MG	13	2355	1/1	0.91	0.31	65,65,65,65	0
54	MG	1G	2237	1/1	0.91	0.20	70,70,70,70	0
54	MG	1H	3394	1/1	0.91	0.23	55,55,55,55	0
54	MG	1H	3097	1/1	0.91	0.28	38,38,38,38	0
54	MG	1H	3102	1/1	0.91	0.24	41,41,41,41	0
54	MG	13	2384	1/1	0.91	0.13	70,70,70,70	0
54	MG	14	3289	1/1	0.91	0.31	63,63,63,63	0
54	MG	55	201	1/1	0.91	0.25	53,53,53,53	0
54	MG	1H	3130	1/1	0.91	0.53	71,71,71,71	0
54	MG	1H	3489	1/1	0.91	0.21	53,53,53,53	0
54	MG	14	3292	1/1	0.91	0.15	39,39,39,39	0
54	MG	14	3293	1/1	0.91	0.28	57,57,57,57	0
54	MG	1G	2277	1/1	0.91	0.33	56,56,56,56	0
54	MG	1H	3234	1/1	0.91	0.17	39,39,39,39	0
54	MG	14	3111	1/1	0.91	0.17	41,41,41,41	0
54	MG	1H	3405	1/1	0.91	0.12	62,62,62,62	0
54	MG	13	2296	1/1	0.91	0.37	110,110,110,110	0
54	MG	1H	3494	1/1	0.91	0.35	62,62,62,62	0
54	MG	13	2369	1/1	0.91	0.19	51,51,51,51	0
54	MG	1H	3007	1/1	0.91	0.08	72,72,72,72	0
54	MG	14	3128	1/1	0.91	0.30	39,39,39,39	0
54	MG	1H	3409	1/1	0.91	0.14	30,30,30,30	0
54	MG	13	2371	1/1	0.91	0.26	92,92,92,92	0
54	MG	14	3317	1/1	0.91	0.41	79,79,79,79	0
54	MG	1H	3597	1/1	0.91	0.20	45,45,45,45	0
54	MG	1H	3335	1/1	0.91	0.54	75,75,75,75	0
54	MG	1H	3246	1/1	0.91	0.48	58,58,58,58	0
54	MG	1H	3048	1/1	0.92	0.05	42,42,42,42	0
54	MG	1G	2332	1/1	0.92	0.28	64,64,64,64	0
54	MG	1H	3533	1/1	0.92	0.23	46,46,46,46	0
54	MG	1H	3349	1/1	0.92	0.22	39,39,39,39	0
54	MG	14	3239	1/1	0.92	0.30	58,58,58,58	0
54	MG	13	2379	1/1	0.92	0.28	68,68,68,68	0
54	MG	14	3242	1/1	0.92	0.31	59,59,59,59	0
54	MG	1H	3351	1/1	0.92	0.29	71,71,71,71	0
54	MG	1G	2335	1/1	0.92	0.12	71,71,71,71	0
54	MG	1H	3437	1/1	0.92	0.38	73,73,73,73	0
54	MG	14	3248	1/1	0.92	0.22	54,54,54,54	0
54	MG	1G	2256	1/1	0.92	0.25	67,67,67,67	0
54	MG	14	3545	1/1	0.92	0.30	47,47,47,47	0
54	MG	13	2218	1/1	0.92	0.19	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3145	1/1	0.92	0.30	45,45,45,45	0
54	MG	1G	2224	1/1	0.92	0.41	72,72,72,72	0
54	MG	1H	3361	1/1	0.92	0.16	51,51,51,51	0
54	MG	1H	3273	1/1	0.92	0.37	60,60,60,60	0
54	MG	14	3553	1/1	0.92	0.17	60,60,60,60	0
54	MG	1H	3548	1/1	0.92	0.07	51,51,51,51	0
54	MG	14	3067	1/1	0.92	0.12	43,43,43,43	0
54	MG	1H	3150	1/1	0.92	0.29	51,51,51,51	0
54	MG	14	3069	1/1	0.92	0.04	70,70,70,70	0
54	MG	13	2286	1/1	0.92	0.35	59,59,59,59	0
54	MG	14	3071	1/1	0.92	0.19	54,54,54,54	0
54	MG	14	3072	1/1	0.92	0.18	52,52,52,52	0
54	MG	14	3272	1/1	0.92	0.26	67,67,67,67	0
54	MG	14	3274	1/1	0.92	0.55	59,59,59,59	0
54	MG	1H	3279	1/1	0.92	0.17	40,40,40,40	0
54	MG	1H	3154	1/1	0.92	0.25	37,37,37,37	0
54	MG	13	2383	1/1	0.92	0.24	70,70,70,70	0
54	MG	1H	3555	1/1	0.92	0.37	53,53,53,53	0
54	MG	13	2315	1/1	0.92	0.34	67,67,67,67	0
54	MG	13	2264	1/1	0.92	0.47	74,74,74,74	0
54	MG	13	2220	1/1	0.92	0.24	60,60,60,60	0
54	MG	14	3430	1/1	0.92	0.28	46,46,46,46	0
54	MG	1H	3562	1/1	0.92	0.23	56,56,56,56	0
54	MG	1H	3065	1/1	0.92	0.10	70,70,70,70	0
54	MG	3E	303	1/1	0.92	0.20	81,81,81,81	0
54	MG	14	3294	1/1	0.92	0.32	62,62,62,62	0
54	MG	14	3087	1/1	0.92	0.13	49,49,49,49	0
54	MG	1H	3380	1/1	0.92	0.38	55,55,55,55	0
54	MG	14	3299	1/1	0.92	0.27	57,57,57,57	0
54	MG	13	2266	1/1	0.92	0.14	77,77,77,77	0
54	MG	13	2280	1/1	0.92	0.44	63,63,63,63	0
54	MG	1H	3170	1/1	0.92	0.35	32,32,32,32	0
54	MG	13	2236	1/1	0.92	0.17	54,54,54,54	0
54	MG	42	201	1/1	0.92	0.12	92,92,92,92	0
54	MG	14	3094	1/1	0.92	0.31	50,50,50,50	0
54	MG	1G	2280	1/1	0.92	0.24	62,62,62,62	0
54	MG	1H	3390	1/1	0.92	0.12	39,39,39,39	0
54	MG	1G	2314	1/1	0.92	0.35	74,74,74,74	0
54	MG	1G	2281	1/1	0.92	0.16	70,70,70,70	0
54	MG	1H	3580	1/1	0.92	0.44	58,58,58,58	0
54	MG	1G	2352	1/1	0.92	0.36	65,65,65,65	0
54	MG	1G	2353	1/1	0.92	0.48	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3395	1/1	0.92	0.47	72,72,72,72	0
54	MG	14	3134	1/1	0.92	0.35	53,53,53,53	0
54	MG	1G	2354	1/1	0.92	0.37	62,62,62,62	0
54	MG	1G	2317	1/1	0.92	0.33	91,91,91,91	0
54	MG	1G	2205	1/1	0.92	0.19	71,71,71,71	0
54	MG	14	3466	1/1	0.92	0.10	68,68,68,68	0
54	MG	1H	3084	1/1	0.92	0.07	41,41,41,41	0
54	MG	1G	2206	1/1	0.92	0.09	80,80,80,80	0
54	MG	1H	3218	1/1	0.92	0.41	48,48,48,48	0
54	MG	1H	3030	1/1	0.92	0.07	48,48,48,48	0
54	MG	14	3180	1/1	0.92	0.51	65,65,65,65	0
54	MG	1G	2207	1/1	0.92	0.10	70,70,70,70	0
54	MG	14	3190	1/1	0.92	0.19	38,38,38,38	0
54	MG	1H	3503	1/1	0.92	0.23	52,52,52,52	0
54	MG	14	3339	1/1	0.92	0.22	46,46,46,46	0
54	MG	14	3340	1/1	0.92	0.14	54,54,54,54	0
54	MG	14	3193	1/1	0.92	0.31	49,49,49,49	0
54	MG	14	3201	1/1	0.92	0.24	42,42,42,42	0
54	MG	L8	101	1/1	0.92	0.34	54,54,54,54	0
54	MG	1H	3322	1/1	0.92	0.34	58,58,58,58	0
54	MG	14	3487	1/1	0.92	0.23	45,45,45,45	0
54	MG	13	2206	1/1	0.92	0.06	79,79,79,79	0
54	MG	1H	3327	1/1	0.92	0.20	54,54,54,54	0
54	MG	14	3348	1/1	0.92	0.28	59,59,59,59	0
54	MG	13	2213	1/1	0.92	0.18	62,62,62,62	0
54	MG	1H	3512	1/1	0.92	0.43	56,56,56,56	0
54	MG	14	3354	1/1	0.92	0.46	68,68,68,68	0
54	MG	1G	2289	1/1	0.92	0.22	80,80,80,80	0
54	MG	1H	3412	1/1	0.92	0.20	49,49,49,49	0
54	MG	14	3211	1/1	0.92	0.30	44,44,44,44	0
54	MG	1H	3333	1/1	0.92	0.21	46,46,46,46	0
54	MG	14	3502	1/1	0.92	0.23	51,51,51,51	0
54	MG	1G	2329	1/1	0.92	0.24	87,87,87,87	0
54	MG	1G	2369	1/1	0.92	0.12	82,82,82,82	0
54	MG	14	3363	1/1	0.92	0.35	63,63,63,63	0
54	MG	X1	108	1/1	0.92	0.17	77,77,77,77	0
54	MG	14	3510	1/1	0.92	0.16	50,50,50,50	0
54	MG	13	2209	1/1	0.92	0.07	67,67,67,67	0
54	MG	1H	3111	1/1	0.92	0.33	45,45,45,45	0
54	MG	1H	3114	1/1	0.92	0.34	43,43,43,43	0
54	MG	1H	3118	1/1	0.92	0.34	38,38,38,38	0
54	MG	14	3041	1/1	0.92	0.13	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3042	1/1	0.92	0.11	51,51,51,51	0
54	MG	1G	2371	1/1	0.92	0.14	58,58,58,58	0
54	MG	1G	2252	1/1	0.92	0.54	78,78,78,78	0
54	MG	1H	3248	1/1	0.93	0.40	56,56,56,56	0
54	MG	1H	3075	1/1	0.93	0.30	48,48,48,48	0
54	MG	1H	3422	1/1	0.93	0.14	45,45,45,45	0
53	8UZ	13	2202	33/33	0.93	0.14	70,70,70,70	0
54	MG	1H	3259	1/1	0.93	0.31	49,49,49,49	0
54	MG	14	3366	1/1	0.93	0.14	53,53,53,53	0
54	MG	1H	3156	1/1	0.93	0.32	42,42,42,42	0
54	MG	2A	201	1/1	0.93	0.15	74,74,74,74	0
54	MG	13	2254	1/1	0.93	0.12	64,64,64,64	0
54	MG	14	3373	1/1	0.93	0.23	46,46,46,46	0
54	MG	14	3374	1/1	0.93	0.21	70,70,70,70	0
54	MG	1H	3265	1/1	0.93	0.30	58,58,58,58	0
54	MG	14	3052	1/1	0.93	0.08	50,50,50,50	0
54	MG	14	3378	1/1	0.93	0.25	59,59,59,59	0
54	MG	1H	3267	1/1	0.93	0.10	44,44,44,44	0
54	MG	14	3533	1/1	0.93	0.32	58,58,58,58	0
54	MG	14	3054	1/1	0.93	0.08	48,48,48,48	0
54	MG	13	2295	1/1	0.93	0.14	65,65,65,65	0
54	MG	14	3538	1/1	0.93	0.40	74,74,74,74	0
54	MG	14	3240	1/1	0.93	0.27	59,59,59,59	0
54	MG	14	3540	1/1	0.93	0.35	81,81,81,81	0
54	MG	1H	3269	1/1	0.93	0.55	46,46,46,46	0
54	MG	1G	2258	1/1	0.93	0.21	82,82,82,82	0
54	MG	1H	3356	1/1	0.93	0.25	45,45,45,45	0
54	MG	13	2276	1/1	0.93	0.31	62,62,62,62	0
54	MG	1H	3443	1/1	0.93	0.30	52,52,52,52	0
54	MG	1G	2238	1/1	0.93	0.24	69,69,69,69	0
54	MG	1H	3275	1/1	0.93	0.40	51,51,51,51	0
54	MG	1G	2239	1/1	0.93	0.27	82,82,82,82	0
54	MG	1H	3450	1/1	0.93	0.18	50,50,50,50	0
54	MG	1H	3453	1/1	0.93	0.25	43,43,43,43	0
54	MG	1H	3457	1/1	0.93	0.37	35,35,35,35	0
54	MG	14	3555	1/1	0.93	0.35	71,71,71,71	0
54	MG	1H	3086	1/1	0.93	0.16	42,42,42,42	0
54	MG	1H	3169	1/1	0.93	0.23	36,36,36,36	0
54	MG	1H	3087	1/1	0.93	0.06	45,45,45,45	0
54	MG	19	302	1/1	0.93	0.34	55,55,55,55	0
54	MG	14	3561	1/1	0.93	0.20	60,60,60,60	0
54	MG	1H	3047	1/1	0.93	0.09	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3284	1/1	0.93	0.15	44,44,44,44	0
54	MG	1H	3175	1/1	0.93	0.45	57,57,57,57	0
54	MG	1H	3566	1/1	0.93	0.14	48,48,48,48	0
54	MG	13	2304	1/1	0.93	0.24	55,55,55,55	0
54	MG	68	201	1/1	0.93	0.19	62,62,62,62	0
54	MG	13	2347	1/1	0.93	0.17	57,57,57,57	0
54	MG	1G	2267	1/1	0.93	0.17	81,81,81,81	0
54	MG	13	2336	1/1	0.93	0.45	54,54,54,54	0
54	MG	1H	3200	1/1	0.93	0.35	37,37,37,37	0
54	MG	1H	3296	1/1	0.93	0.49	77,77,77,77	0
54	MG	1H	3202	1/1	0.93	0.21	38,38,38,38	0
54	MG	1H	3385	1/1	0.93	0.22	61,61,61,61	0
54	MG	1H	3386	1/1	0.93	0.18	65,65,65,65	0
54	MG	1H	3205	1/1	0.93	0.28	45,45,45,45	0
54	MG	13	2277	1/1	0.93	0.14	66,66,66,66	0
54	MG	14	3425	1/1	0.93	0.28	54,54,54,54	0
54	MG	14	3099	1/1	0.93	0.32	45,45,45,45	0
54	MG	14	3105	1/1	0.93	0.31	63,63,63,63	0
54	MG	1H	3100	1/1	0.93	0.24	43,43,43,43	0
54	MG	1G	2270	1/1	0.93	0.45	67,67,67,67	0
54	MG	14	3297	1/1	0.93	0.12	61,61,61,61	0
54	MG	14	3298	1/1	0.93	0.57	69,69,69,69	0
54	MG	13	2258	1/1	0.93	0.21	76,76,76,76	0
54	MG	1G	2301	1/1	0.93	0.27	88,88,88,88	0
54	MG	14	3303	1/1	0.93	0.34	62,62,62,62	0
54	MG	1H	3013	1/1	0.93	0.12	52,52,52,52	0
54	MG	1H	3589	1/1	0.93	0.18	45,45,45,45	0
54	MG	14	3124	1/1	0.93	0.24	67,67,67,67	0
54	MG	1G	2302	1/1	0.93	0.17	86,86,86,86	0
54	MG	1H	3311	1/1	0.93	0.14	34,34,34,34	0
54	MG	14	3309	1/1	0.93	0.43	39,39,39,39	0
54	MG	1H	3016	1/1	0.93	0.09	40,40,40,40	0
54	MG	1H	3398	1/1	0.93	0.11	55,55,55,55	0
54	MG	1G	2336	1/1	0.93	0.30	72,72,72,72	0
54	MG	14	3316	1/1	0.93	0.20	59,59,59,59	0
54	MG	14	3456	1/1	0.93	0.15	56,56,56,56	0
54	MG	14	3457	1/1	0.93	0.49	84,84,84,84	0
54	MG	14	3147	1/1	0.93	0.43	53,53,53,53	0
54	MG	1G	2218	1/1	0.93	0.38	54,54,54,54	0
54	MG	14	3156	1/1	0.93	0.41	41,41,41,41	0
54	MG	1G	2274	1/1	0.93	0.23	63,63,63,63	0
54	MG	14	3163	1/1	0.93	0.38	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3165	1/1	0.93	0.30	52,52,52,52	0
54	MG	11	302	1/1	0.93	0.24	46,46,46,46	0
54	MG	1H	3141	1/1	0.93	0.52	67,67,67,67	0
54	MG	14	3468	1/1	0.93	0.20	66,66,66,66	0
54	MG	14	3171	1/1	0.93	0.29	40,40,40,40	0
54	MG	14	3327	1/1	0.93	0.58	66,66,66,66	0
54	MG	14	3471	1/1	0.93	0.25	62,62,62,62	0
54	MG	1H	3023	1/1	0.93	0.10	39,39,39,39	0
54	MG	14	3178	1/1	0.93	0.45	61,61,61,61	0
54	MG	1H	3323	1/1	0.93	0.34	62,62,62,62	0
54	MG	14	3475	1/1	0.93	0.25	64,64,64,64	0
54	MG	14	3476	1/1	0.93	0.17	57,57,57,57	0
54	MG	1H	3235	1/1	0.93	0.66	76,76,76,76	0
54	MG	14	3184	1/1	0.93	0.21	45,45,45,45	0
54	MG	14	3012	1/1	0.93	0.18	43,43,43,43	0
54	MG	14	3336	1/1	0.93	0.30	51,51,51,51	0
54	MG	14	3013	1/1	0.93	0.15	41,41,41,41	0
54	MG	14	3338	1/1	0.93	0.24	63,63,63,63	0
54	MG	W1	101	1/1	0.93	0.32	64,64,64,64	0
54	MG	1G	2306	1/1	0.93	0.12	76,76,76,76	0
54	MG	1H	3237	1/1	0.93	0.51	50,50,50,50	0
54	MG	1H	3329	1/1	0.93	0.14	46,46,46,46	0
54	MG	14	3021	1/1	0.93	0.11	45,45,45,45	0
54	MG	1H	3239	1/1	0.93	0.45	59,59,59,59	0
54	MG	14	3025	1/1	0.93	0.10	45,45,45,45	0
54	MG	14	3028	1/1	0.93	0.07	59,59,59,59	0
54	MG	14	3030	1/1	0.93	0.10	42,42,42,42	0
54	MG	1H	3070	1/1	0.93	0.15	36,36,36,36	0
54	MG	1G	2279	1/1	0.93	0.22	76,76,76,76	0
54	MG	14	3352	1/1	0.93	0.26	74,74,74,74	0
54	MG	1H	3148	1/1	0.93	0.45	30,30,30,30	0
54	MG	13	2255	1/1	0.93	0.34	53,53,53,53	0
54	MG	14	3216	1/1	0.93	0.29	56,56,56,56	0
54	MG	1H	3417	1/1	0.93	0.33	38,38,38,38	0
54	MG	1H	3247	1/1	0.93	0.21	46,46,46,46	0
54	MG	14	3219	1/1	0.93	0.70	53,53,53,53	0
54	MG	1H	3594	1/1	0.94	0.26	41,41,41,41	0
54	MG	13	2247	1/1	0.94	0.27	61,61,61,61	0
54	MG	1G	2271	1/1	0.94	0.28	81,81,81,81	0
54	MG	14	3167	1/1	0.94	0.33	39,39,39,39	0
54	MG	1G	2368	1/1	0.94	0.22	82,82,82,82	0
54	MG	1G	2334	1/1	0.94	0.21	86,86,86,86	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3173	1/1	0.94	0.52	60,60,60,60	0
54	MG	14	3503	1/1	0.94	0.12	45,45,45,45	0
54	MG	1H	3230	1/1	0.94	0.50	62,62,62,62	0
54	MG	13	2349	1/1	0.94	0.30	53,53,53,53	0
54	MG	1H	3309	1/1	0.94	0.24	37,37,37,37	0
54	MG	14	3181	1/1	0.94	0.37	41,41,41,41	0
54	MG	1G	2300	1/1	0.94	0.26	86,86,86,86	0
54	MG	13	2208	1/1	0.94	0.17	78,78,78,78	0
54	MG	14	3187	1/1	0.94	0.23	47,47,47,47	0
54	MG	1H	3152	1/1	0.94	0.20	41,41,41,41	0
54	MG	14	3010	1/1	0.94	0.08	42,42,42,42	0
54	MG	13	2351	1/1	0.94	0.33	59,59,59,59	0
54	MG	14	3194	1/1	0.94	0.24	52,52,52,52	0
54	MG	14	3519	1/1	0.94	0.11	71,71,71,71	0
54	MG	14	3198	1/1	0.94	0.49	40,40,40,40	0
54	MG	1G	2275	1/1	0.94	0.27	52,52,52,52	0
54	MG	1G	2276	1/1	0.94	0.25	82,82,82,82	0
54	MG	14	3523	1/1	0.94	0.21	52,52,52,52	0
54	MG	14	3524	1/1	0.94	0.17	65,65,65,65	0
54	MG	1H	3505	1/1	0.94	0.37	66,66,66,66	0
54	MG	1H	3402	1/1	0.94	0.17	40,40,40,40	0
54	MG	13	2270	1/1	0.94	0.19	59,59,59,59	0
54	MG	1G	2278	1/1	0.94	0.44	81,81,81,81	0
54	MG	14	3531	1/1	0.94	0.09	59,59,59,59	0
54	MG	1H	3511	1/1	0.94	0.36	56,56,56,56	0
54	MG	14	3026	1/1	0.94	0.20	41,41,41,41	0
54	MG	13	2313	1/1	0.94	0.20	78,78,78,78	0
54	MG	1H	3245	1/1	0.94	0.43	49,49,49,49	0
54	MG	1H	3514	1/1	0.94	0.32	57,57,57,57	0
54	MG	1H	3515	1/1	0.94	0.38	38,38,38,38	0
54	MG	14	3371	1/1	0.94	0.15	50,50,50,50	0
54	MG	1H	3160	1/1	0.94	0.34	53,53,53,53	0
54	MG	13	2260	1/1	0.94	0.27	63,63,63,63	0
54	MG	1H	3162	1/1	0.94	0.42	55,55,55,55	0
54	MG	1H	3519	1/1	0.94	0.13	34,34,34,34	0
54	MG	14	3547	1/1	0.94	0.13	48,48,48,48	0
54	MG	1H	3250	1/1	0.94	0.28	47,47,47,47	0
54	MG	1H	3330	1/1	0.94	0.22	51,51,51,51	0
54	MG	1H	3523	1/1	0.94	0.09	42,42,42,42	0
54	MG	14	3224	1/1	0.94	0.43	55,55,55,55	0
54	MG	1H	3252	1/1	0.94	0.25	47,47,47,47	0
54	MG	14	3226	1/1	0.94	0.34	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3227	1/1	0.94	0.31	51,51,51,51	0
54	MG	1H	3332	1/1	0.94	0.35	75,75,75,75	0
54	MG	1G	2227	1/1	0.94	0.06	67,67,67,67	0
54	MG	1G	2312	1/1	0.94	0.11	63,63,63,63	0
54	MG	1H	3258	1/1	0.94	0.39	55,55,55,55	0
54	MG	13	2251	1/1	0.94	0.21	62,62,62,62	0
54	MG	19	303	1/1	0.94	0.30	37,37,37,37	0
54	MG	14	3237	1/1	0.94	0.30	56,56,56,56	0
54	MG	1H	3339	1/1	0.94	0.40	62,62,62,62	0
54	MG	1H	3168	1/1	0.94	0.17	34,34,34,34	0
54	MG	1G	2283	1/1	0.94	0.13	68,68,68,68	0
54	MG	1H	3263	1/1	0.94	0.50	65,65,65,65	0
54	MG	1H	3426	1/1	0.94	0.37	56,56,56,56	0
54	MG	1H	3538	1/1	0.94	0.10	45,45,45,45	0
54	MG	13	2252	1/1	0.94	0.48	68,68,68,68	0
54	MG	1H	3266	1/1	0.94	0.30	46,46,46,46	0
54	MG	1G	2231	1/1	0.94	0.39	57,57,57,57	0
54	MG	14	3064	1/1	0.94	0.15	68,68,68,68	0
54	MG	1H	3347	1/1	0.94	0.23	36,36,36,36	0
54	MG	1G	2233	1/1	0.94	0.42	59,59,59,59	0
54	MG	13	2217	1/1	0.94	0.20	66,66,66,66	0
54	MG	1H	3103	1/1	0.94	0.30	42,42,42,42	0
54	MG	14	3255	1/1	0.94	0.27	57,57,57,57	0
54	MG	1H	3271	1/1	0.94	0.41	57,57,57,57	0
54	MG	1H	3178	1/1	0.94	0.26	46,46,46,46	0
54	MG	1H	3181	1/1	0.94	0.51	37,37,37,37	0
54	MG	1H	3182	1/1	0.94	0.12	39,39,39,39	0
54	MG	1H	3357	1/1	0.94	0.14	58,58,58,58	0
54	MG	1H	3183	1/1	0.94	0.29	43,43,43,43	0
54	MG	1H	3277	1/1	0.94	0.33	51,51,51,51	0
54	MG	1H	3186	1/1	0.94	0.19	38,38,38,38	0
54	MG	14	3270	1/1	0.94	0.23	78,78,78,78	0
54	MG	1H	3363	1/1	0.94	0.12	57,57,57,57	0
54	MG	1H	3452	1/1	0.94	0.29	52,52,52,52	0
54	MG	1H	3107	1/1	0.94	0.36	33,33,33,33	0
54	MG	14	3436	1/1	0.94	0.14	39,39,39,39	0
54	MG	13	2229	1/1	0.94	0.21	68,68,68,68	0
54	MG	1H	3564	1/1	0.94	0.28	47,47,47,47	0
54	MG	14	3086	1/1	0.94	0.10	49,49,49,49	0
54	MG	14	3281	1/1	0.94	0.28	61,61,61,61	0
54	MG	13	2331	1/1	0.94	0.15	69,69,69,69	0
54	MG	14	3285	1/1	0.94	0.22	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3286	1/1	0.94	0.13	40,40,40,40	0
54	MG	14	3288	1/1	0.94	0.26	43,43,43,43	0
54	MG	13	2361	1/1	0.94	0.27	81,81,81,81	0
54	MG	I8	101	1/1	0.94	0.29	43,43,43,43	0
54	MG	1H	3283	1/1	0.94	0.36	76,76,76,76	0
54	MG	14	3449	1/1	0.94	0.11	53,53,53,53	0
54	MG	31	303	1/1	0.94	0.12	63,63,63,63	0
54	MG	1H	3568	1/1	0.94	0.09	61,61,61,61	0
54	MG	1H	3569	1/1	0.94	0.13	47,47,47,47	0
54	MG	1G	2357	1/1	0.94	0.12	74,74,74,74	0
54	MG	1H	3285	1/1	0.94	0.47	69,69,69,69	0
54	MG	14	3098	1/1	0.94	0.28	46,46,46,46	0
54	MG	1H	3372	1/1	0.94	0.17	54,54,54,54	0
54	MG	14	3102	1/1	0.94	0.35	45,45,45,45	0
54	MG	52	201	1/1	0.94	0.20	63,63,63,63	0
54	MG	1H	3466	1/1	0.94	0.35	65,65,65,65	0
54	MG	88	302	1/1	0.94	0.10	58,58,58,58	0
54	MG	14	3461	1/1	0.94	0.30	70,70,70,70	0
54	MG	1H	3373	1/1	0.94	0.15	55,55,55,55	0
54	MG	14	3107	1/1	0.94	0.39	55,55,55,55	0
54	MG	14	3108	1/1	0.94	0.23	47,47,47,47	0
54	MG	1H	3374	1/1	0.94	0.26	36,36,36,36	0
54	MG	14	3112	1/1	0.94	0.29	47,47,47,47	0
54	MG	14	3116	1/1	0.94	0.31	70,70,70,70	0
54	MG	1H	3129	1/1	0.94	0.29	49,49,49,49	0
54	MG	1G	2359	1/1	0.94	0.48	62,62,62,62	0
54	MG	14	3119	1/1	0.94	0.39	39,39,39,39	0
54	MG	1H	3377	1/1	0.94	0.30	51,51,51,51	0
54	MG	14	3313	1/1	0.94	0.16	50,50,50,50	0
54	MG	1H	3581	1/1	0.94	0.27	54,54,54,54	0
54	MG	13	2306	1/1	0.94	0.38	46,46,46,46	0
54	MG	1H	3134	1/1	0.94	0.12	43,43,43,43	0
53	8UZ	1G	2202	33/33	0.94	0.14	78,78,78,78	0
54	MG	14	3130	1/1	0.94	0.34	48,48,48,48	0
54	MG	1H	3293	1/1	0.94	0.11	37,37,37,37	0
54	MG	14	3136	1/1	0.94	0.21	44,44,44,44	0
54	MG	X1	106	1/1	0.94	0.29	84,84,84,84	0
54	MG	14	3138	1/1	0.94	0.28	47,47,47,47	0
54	MG	1H	3480	1/1	0.94	0.18	46,46,46,46	0
54	MG	1H	3214	1/1	0.94	0.23	44,44,44,44	0
54	MG	1G	2243	1/1	0.94	0.51	76,76,76,76	0
54	MG	14	3484	1/1	0.94	0.13	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3139	1/1	0.94	0.19	37,37,37,37	0
54	MG	14	3152	1/1	0.94	0.28	53,53,53,53	0
54	MG	14	3155	1/1	0.94	0.41	39,39,39,39	0
54	MG	1G	2296	1/1	0.94	0.14	69,69,69,69	0
54	MG	14	3157	1/1	0.94	0.25	45,45,45,45	0
54	MG	1H	3593	1/1	0.94	0.36	46,46,46,46	0
55	ZN	C5	201	1/1	0.94	0.19	110,110,110,110	0
54	MG	1H	3467	1/1	0.95	0.21	37,37,37,37	0
54	MG	1G	2257	1/1	0.95	0.29	66,66,66,66	0
54	MG	1H	3155	1/1	0.95	0.28	56,56,56,56	0
54	MG	14	3358	1/1	0.95	0.13	46,46,46,46	0
54	MG	1G	2325	1/1	0.95	0.33	71,71,71,71	0
54	MG	14	3360	1/1	0.95	0.46	59,59,59,59	0
54	MG	1H	3039	1/1	0.95	0.09	41,41,41,41	0
54	MG	13	2249	1/1	0.95	0.34	56,56,56,56	0
54	MG	14	3229	1/1	0.95	0.30	64,64,64,64	0
54	MG	1H	3474	1/1	0.95	0.17	51,51,51,51	0
54	MG	14	3080	1/1	0.95	0.13	60,60,60,60	0
54	MG	1G	2327	1/1	0.95	0.10	69,69,69,69	0
54	MG	1H	3571	1/1	0.95	0.09	57,57,57,57	0
54	MG	13	2357	1/1	0.95	0.20	59,59,59,59	0
54	MG	14	3236	1/1	0.95	0.24	56,56,56,56	0
54	MG	1H	3316	1/1	0.95	0.14	40,40,40,40	0
54	MG	14	3372	1/1	0.95	0.33	62,62,62,62	0
54	MG	1H	3044	1/1	0.95	0.12	38,38,38,38	0
54	MG	1G	2260	1/1	0.95	0.31	77,77,77,77	0
54	MG	14	3526	1/1	0.95	0.26	50,50,50,50	0
54	MG	1G	2219	1/1	0.95	0.26	59,59,59,59	0
54	MG	1H	3092	1/1	0.95	0.09	54,54,54,54	0
54	MG	1H	3321	1/1	0.95	0.14	44,44,44,44	0
54	MG	1G	2358	1/1	0.95	0.11	68,68,68,68	0
54	MG	14	3532	1/1	0.95	0.27	59,59,59,59	0
54	MG	14	3093	1/1	0.95	0.38	40,40,40,40	0
54	MG	1H	3249	1/1	0.95	0.36	44,44,44,44	0
54	MG	1H	3324	1/1	0.95	0.12	59,59,59,59	0
54	MG	1H	3049	1/1	0.95	0.08	35,35,35,35	0
54	MG	1H	3095	1/1	0.95	0.34	46,46,46,46	0
54	MG	1H	3253	1/1	0.95	0.40	63,63,63,63	0
54	MG	1H	3096	1/1	0.95	0.30	37,37,37,37	0
54	MG	14	3391	1/1	0.95	0.26	47,47,47,47	0
54	MG	1G	2222	1/1	0.95	0.08	66,66,66,66	0
54	MG	1H	3005	1/1	0.95	0.15	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3256	1/1	0.95	0.20	38,38,38,38	0
54	MG	14	3109	1/1	0.95	0.29	44,44,44,44	0
54	MG	14	3110	1/1	0.95	0.27	56,56,56,56	0
54	MG	13	2205	1/1	0.95	0.13	64,64,64,64	0
53	8UZ	1G	2201	33/33	0.95	0.18	65,65,65,65	0
54	MG	14	3113	1/1	0.95	0.14	63,63,63,63	0
54	MG	14	3115	1/1	0.95	0.19	54,54,54,54	0
54	MG	1H	3592	1/1	0.95	0.19	57,57,57,57	0
54	MG	14	3266	1/1	0.95	0.28	46,46,46,46	0
54	MG	14	3267	1/1	0.95	0.23	53,53,53,53	0
54	MG	1H	3009	1/1	0.95	0.12	50,50,50,50	0
54	MG	1H	3502	1/1	0.95	0.17	52,52,52,52	0
54	MG	1H	3109	1/1	0.95	0.29	38,38,38,38	0
54	MG	1H	3179	1/1	0.95	0.35	55,55,55,55	0
54	MG	1H	3337	1/1	0.95	0.30	55,55,55,55	0
54	MG	1G	2362	1/1	0.95	0.31	91,91,91,91	0
54	MG	14	3277	1/1	0.95	0.24	46,46,46,46	0
54	MG	1H	3112	1/1	0.95	0.41	36,36,36,36	0
54	MG	14	3127	1/1	0.95	0.30	66,66,66,66	0
54	MG	1H	3113	1/1	0.95	0.36	34,34,34,34	0
54	MG	14	3416	1/1	0.95	0.17	46,46,46,46	0
54	MG	1H	3510	1/1	0.95	0.61	48,48,48,48	0
54	MG	14	3419	1/1	0.95	0.45	41,41,41,41	0
54	MG	14	3131	1/1	0.95	0.44	44,44,44,44	0
54	MG	14	3133	1/1	0.95	0.34	49,49,49,49	0
54	MG	16	202	1/1	0.95	0.34	64,64,64,64	0
54	MG	1G	2307	1/1	0.95	0.51	70,70,70,70	0
54	MG	14	3424	1/1	0.95	0.36	44,44,44,44	0
54	MG	1H	3187	1/1	0.95	0.14	35,35,35,35	0
54	MG	16	206	1/1	0.95	0.52	52,52,52,52	0
54	MG	14	3426	1/1	0.95	0.42	56,56,56,56	0
54	MG	14	3429	1/1	0.95	0.24	50,50,50,50	0
54	MG	1H	3012	1/1	0.95	0.12	36,36,36,36	0
54	MG	1H	3190	1/1	0.95	0.42	38,38,38,38	0
54	MG	1H	3192	1/1	0.95	0.38	38,38,38,38	0
53	8UZ	13	2201	33/33	0.95	0.23	55,55,55,55	0
54	MG	1H	3420	1/1	0.95	0.33	46,46,46,46	0
54	MG	14	3435	1/1	0.95	0.26	58,58,58,58	0
54	MG	1H	3348	1/1	0.95	0.22	47,47,47,47	0
54	MG	29	303	1/1	0.95	0.10	51,51,51,51	0
54	MG	1H	3274	1/1	0.95	0.45	56,56,56,56	0
54	MG	14	3019	1/1	0.95	0.12	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3423	1/1	0.95	0.23	55,55,55,55	0
54	MG	14	3159	1/1	0.95	0.38	43,43,43,43	0
54	MG	14	3300	1/1	0.95	0.23	67,67,67,67	0
54	MG	14	3301	1/1	0.95	0.23	65,65,65,65	0
54	MG	1J	206	1/1	0.95	0.21	75,75,75,75	0
54	MG	1H	3195	1/1	0.95	0.18	34,34,34,34	0
54	MG	1H	3196	1/1	0.95	0.36	35,35,35,35	0
54	MG	14	3164	1/1	0.95	0.30	49,49,49,49	0
54	MG	1H	3352	1/1	0.95	0.37	61,61,61,61	0
54	MG	13	2259	1/1	0.95	0.37	55,55,55,55	0
54	MG	14	3450	1/1	0.95	0.16	57,57,57,57	0
54	MG	1H	3526	1/1	0.95	0.20	56,56,56,56	0
54	MG	13	2274	1/1	0.95	0.17	50,50,50,50	0
54	MG	14	3170	1/1	0.95	0.40	42,42,42,42	0
54	MG	1G	2290	1/1	0.95	0.27	70,70,70,70	0
54	MG	14	3455	1/1	0.95	0.18	60,60,60,60	0
54	MG	14	3312	1/1	0.95	0.40	64,64,64,64	0
54	MG	1H	3431	1/1	0.95	0.15	45,45,45,45	0
54	MG	31	302	1/1	0.95	0.12	56,56,56,56	0
54	MG	14	3458	1/1	0.95	0.22	70,70,70,70	0
54	MG	1H	3204	1/1	0.95	0.24	40,40,40,40	0
54	MG	13	2242	1/1	0.95	0.33	59,59,59,59	0
54	MG	1H	3532	1/1	0.95	0.23	41,41,41,41	0
54	MG	1G	2230	1/1	0.95	0.15	57,57,57,57	0
54	MG	1H	3435	1/1	0.95	0.10	40,40,40,40	0
54	MG	13	2337	1/1	0.95	0.37	56,56,56,56	0
54	MG	1G	2316	1/1	0.95	0.10	58,58,58,58	0
54	MG	1H	3025	1/1	0.95	0.14	39,39,39,39	0
54	MG	14	3191	1/1	0.95	0.22	60,60,60,60	0
54	MG	14	3323	1/1	0.95	0.15	46,46,46,46	0
54	MG	1H	3213	1/1	0.95	0.47	34,34,34,34	0
54	MG	1H	3539	1/1	0.95	0.25	76,76,76,76	0
54	MG	1G	2232	1/1	0.95	0.29	52,52,52,52	0
54	MG	14	3196	1/1	0.95	0.24	68,68,68,68	0
54	MG	45	201	1/1	0.95	0.20	53,53,53,53	0
54	MG	14	3197	1/1	0.95	0.26	45,45,45,45	0
54	MG	14	3329	1/1	0.95	0.15	46,46,46,46	0
54	MG	1H	3366	1/1	0.95	0.22	68,68,68,68	0
54	MG	1H	3216	1/1	0.95	0.20	48,48,48,48	0
54	MG	K8	101	1/1	0.95	0.17	57,57,57,57	0
54	MG	14	3332	1/1	0.95	0.19	52,52,52,52	0
54	MG	1H	3543	1/1	0.95	0.17	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1G	2318	1/1	0.95	0.21	73,73,73,73	0
54	MG	1H	3143	1/1	0.95	0.38	64,64,64,64	0
54	MG	1H	3451	1/1	0.95	0.40	37,37,37,37	0
54	MG	13	2346	1/1	0.95	0.18	56,56,56,56	0
54	MG	1G	2234	1/1	0.95	0.25	66,66,66,66	0
54	MG	1H	3454	1/1	0.95	0.35	41,41,41,41	0
54	MG	1H	3077	1/1	0.95	0.09	43,43,43,43	0
54	MG	14	3486	1/1	0.95	0.10	55,55,55,55	0
54	MG	1H	3147	1/1	0.95	0.27	54,54,54,54	0
54	MG	14	3212	1/1	0.95	0.49	59,59,59,59	0
54	MG	14	3213	1/1	0.95	0.32	52,52,52,52	0
54	MG	1H	3032	1/1	0.95	0.14	43,43,43,43	0
54	MG	1H	3461	1/1	0.95	0.12	51,51,51,51	0
54	MG	14	3492	1/1	0.95	0.20	42,42,42,42	0
54	MG	1H	3033	1/1	0.95	0.06	46,46,46,46	0
54	MG	1H	3301	1/1	0.95	0.45	69,69,69,69	0
54	MG	14	3349	1/1	0.95	0.26	63,63,63,63	0
54	MG	X4	102	1/1	0.95	0.43	79,79,79,79	0
54	MG	14	3497	1/1	0.95	0.13	59,59,59,59	0
54	MG	1H	3231	1/1	0.95	0.16	35,35,35,35	0
54	MG	1H	3558	1/1	0.95	0.26	56,56,56,56	0
54	MG	1G	2254	1/1	0.95	0.43	62,62,62,62	0
54	MG	1G	2213	1/1	0.95	0.05	60,60,60,60	0
54	MG	14	3544	1/1	0.96	0.17	57,57,57,57	0
54	MG	13	2318	1/1	0.96	0.43	68,68,68,68	0
54	MG	1H	3302	1/1	0.96	0.42	44,44,44,44	0
54	MG	1H	3073	1/1	0.96	0.15	44,44,44,44	0
54	MG	1H	3256	1/1	0.96	0.33	69,69,69,69	0
54	MG	1H	3043	1/1	0.96	0.08	45,45,45,45	0
54	MG	14	3438	1/1	0.96	0.18	64,64,64,64	0
54	MG	14	3114	1/1	0.96	0.27	36,36,36,36	0
54	MG	13	2309	1/1	0.96	0.23	54,54,54,54	0
54	MG	13	2215	1/1	0.96	0.10	63,63,63,63	0
54	MG	14	3027	1/1	0.96	0.14	40,40,40,40	0
54	MG	1H	3484	1/1	0.96	0.18	52,52,52,52	0
54	MG	14	3557	1/1	0.96	0.08	68,68,68,68	0
54	MG	14	3029	1/1	0.96	0.04	50,50,50,50	0
54	MG	1H	3550	1/1	0.96	0.27	58,58,58,58	0
54	MG	14	3121	1/1	0.96	0.24	57,57,57,57	0
54	MG	14	3031	1/1	0.96	0.12	52,52,52,52	0
54	MG	1H	3485	1/1	0.96	0.20	52,52,52,52	0
54	MG	14	3563	1/1	0.96	0.15	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3362	1/1	0.96	0.30	59,59,59,59	0
54	MG	1G	2324	1/1	0.96	0.17	60,60,60,60	0
54	MG	1G	2208	1/1	0.96	0.07	70,70,70,70	0
54	MG	B5	101	1/1	0.96	0.49	63,63,63,63	0
54	MG	1G	2261	1/1	0.96	0.40	95,95,95,95	0
54	MG	1H	3264	1/1	0.96	0.35	52,52,52,52	0
54	MG	1H	3314	1/1	0.96	0.33	44,44,44,44	0
54	MG	21	302	1/1	0.96	0.18	47,47,47,47	0
54	MG	14	3350	1/1	0.96	0.13	77,77,77,77	0
54	MG	14	3135	1/1	0.96	0.29	45,45,45,45	0
54	MG	1H	3559	1/1	0.96	0.08	61,61,61,61	0
54	MG	14	3045	1/1	0.96	0.12	64,64,64,64	0
54	MG	1H	3560	1/1	0.96	0.36	69,69,69,69	0
54	MG	14	3142	1/1	0.96	0.37	51,51,51,51	0
54	MG	14	3145	1/1	0.96	0.35	60,60,60,60	0
54	MG	1H	3315	1/1	0.96	0.36	68,68,68,68	0
54	MG	1H	3425	1/1	0.96	0.13	46,46,46,46	0
54	MG	14	3148	1/1	0.96	0.45	45,45,45,45	0
54	MG	1H	3024	1/1	0.96	0.12	40,40,40,40	0
54	MG	1H	3053	1/1	0.96	0.10	36,36,36,36	0
54	MG	16	212	1/1	0.96	0.13	67,67,67,67	0
54	MG	1H	3083	1/1	0.96	0.23	50,50,50,50	0
54	MG	1H	3498	1/1	0.96	0.32	52,52,52,52	0
54	MG	1H	3219	1/1	0.96	0.35	44,44,44,44	0
54	MG	1G	2328	1/1	0.96	0.45	69,69,69,69	0
54	MG	14	3160	1/1	0.96	0.25	54,54,54,54	0
54	MG	29	302	1/1	0.96	0.33	47,47,47,47	0
54	MG	13	2203	1/1	0.96	0.06	80,80,80,80	0
54	MG	1H	3223	1/1	0.96	0.40	48,48,48,48	0
54	MG	13	2267	1/1	0.96	0.40	82,82,82,82	0
54	MG	1J	201	1/1	0.96	0.20	78,78,78,78	0
54	MG	14	3370	1/1	0.96	0.25	43,43,43,43	0
54	MG	14	3273	1/1	0.96	0.13	46,46,46,46	0
54	MG	1H	3001	1/1	0.96	0.39	33,33,33,33	0
54	MG	1H	3227	1/1	0.96	0.38	44,44,44,44	0
54	MG	1H	3228	1/1	0.96	0.40	45,45,45,45	0
54	MG	13	2305	1/1	0.96	0.40	53,53,53,53	0
54	MG	14	3376	1/1	0.96	0.12	51,51,51,51	0
54	MG	11	304	1/1	0.96	0.29	48,48,48,48	0
54	MG	1H	3006	1/1	0.96	0.06	45,45,45,45	0
54	MG	1J	211	1/1	0.96	0.19	73,73,73,73	0
54	MG	14	3379	1/1	0.96	0.09	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3380	1/1	0.96	0.28	57,57,57,57	0
54	MG	14	3172	1/1	0.96	0.30	48,48,48,48	0
54	MG	1H	3180	1/1	0.96	0.21	52,52,52,52	0
54	MG	14	3175	1/1	0.96	0.71	72,72,72,72	0
54	MG	78	203	1/1	0.96	0.65	40,40,40,40	0
54	MG	1H	3444	1/1	0.96	0.12	50,50,50,50	0
54	MG	14	3287	1/1	0.96	0.24	56,56,56,56	0
54	MG	14	3387	1/1	0.96	0.11	64,64,64,64	0
54	MG	1H	3062	1/1	0.96	0.07	51,51,51,51	0
54	MG	14	3179	1/1	0.96	0.39	53,53,53,53	0
54	MG	1H	3582	1/1	0.96	0.29	71,71,71,71	0
54	MG	1H	3034	1/1	0.96	0.04	47,47,47,47	0
54	MG	1G	2215	1/1	0.96	0.15	71,71,71,71	0
54	MG	14	3500	1/1	0.96	0.20	42,42,42,42	0
54	MG	1H	3449	1/1	0.96	0.18	48,48,48,48	0
54	MG	1H	3389	1/1	0.96	0.34	55,55,55,55	0
54	MG	14	3188	1/1	0.96	0.31	53,53,53,53	0
54	MG	1G	2217	1/1	0.96	0.24	66,66,66,66	0
54	MG	14	3505	1/1	0.96	0.13	64,64,64,64	0
54	MG	14	3506	1/1	0.96	0.15	91,91,91,91	0
54	MG	14	3507	1/1	0.96	0.14	50,50,50,50	0
54	MG	13	2231	1/1	0.96	0.18	64,64,64,64	0
54	MG	1G	2285	1/1	0.96	0.30	67,67,67,67	0
54	MG	1H	3189	1/1	0.96	0.14	32,32,32,32	0
54	MG	1H	3455	1/1	0.96	0.39	36,36,36,36	0
54	MG	1H	3456	1/1	0.96	0.34	62,62,62,62	0
54	MG	14	3082	1/1	0.96	0.15	47,47,47,47	0
54	MG	13	2241	1/1	0.96	0.33	45,45,45,45	0
54	MG	14	3199	1/1	0.96	0.25	47,47,47,47	0
54	MG	1H	3288	1/1	0.96	0.33	55,55,55,55	0
54	MG	1H	3341	1/1	0.96	0.54	61,61,61,61	0
54	MG	1H	3151	1/1	0.96	0.26	42,42,42,42	0
54	MG	1H	3290	1/1	0.96	0.42	39,39,39,39	0
54	MG	1H	3244	1/1	0.96	0.37	33,33,33,33	0
54	MG	1H	3193	1/1	0.96	0.33	46,46,46,46	0
54	MG	14	3311	1/1	0.96	0.35	71,71,71,71	0
54	MG	1H	3098	1/1	0.96	0.23	35,35,35,35	0
54	MG	14	3002	1/1	0.96	0.15	41,41,41,41	0
54	MG	14	3415	1/1	0.96	0.25	59,59,59,59	0
54	MG	14	3004	1/1	0.96	0.11	48,48,48,48	0
54	MG	14	3528	1/1	0.96	0.21	66,66,66,66	0
54	MG	1H	3294	1/1	0.96	0.17	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3099	1/1	0.96	0.30	36,36,36,36	0
54	MG	14	3097	1/1	0.96	0.28	41,41,41,41	0
54	MG	14	3007	1/1	0.96	0.11	43,43,43,43	0
54	MG	13	2246	1/1	0.96	0.36	62,62,62,62	0
54	MG	14	3101	1/1	0.96	0.27	40,40,40,40	0
54	MG	W4	102	1/1	0.96	0.07	83,83,83,83	0
54	MG	14	3535	1/1	0.96	0.07	60,60,60,60	0
54	MG	14	3536	1/1	0.96	0.27	62,62,62,62	0
54	MG	1H	3101	1/1	0.96	0.42	43,43,43,43	0
54	MG	14	3103	1/1	0.96	0.37	43,43,43,43	0
54	MG	X4	103	1/1	0.96	0.12	92,92,92,92	0
54	MG	14	3427	1/1	0.96	0.28	52,52,52,52	0
54	MG	1H	3298	1/1	0.96	0.27	45,45,45,45	0
54	MG	1H	3199	1/1	0.96	0.35	38,38,38,38	0
54	MG	1H	3472	1/1	0.96	0.17	57,57,57,57	0
55	ZN	3E	301	1/1	0.96	0.41	81,81,81,81	0
54	MG	1G	2377	1/1	0.96	0.05	78,78,78,78	0
54	MG	14	3185	1/1	0.97	0.20	48,48,48,48	0
54	MG	1H	3224	1/1	0.97	0.23	42,42,42,42	0
54	MG	1H	3002	1/1	0.97	0.11	36,36,36,36	0
54	MG	14	3189	1/1	0.97	0.54	76,76,76,76	0
54	MG	1H	3173	1/1	0.97	0.31	50,50,50,50	0
54	MG	1H	3003	1/1	0.97	0.11	43,43,43,43	0
54	MG	14	3104	1/1	0.97	0.14	47,47,47,47	0
54	MG	13	2219	1/1	0.97	0.24	60,60,60,60	0
54	MG	14	3382	1/1	0.97	0.30	54,54,54,54	0
54	MG	14	3034	1/1	0.97	0.09	46,46,46,46	0
54	MG	14	3195	1/1	0.97	0.37	63,63,63,63	0
54	MG	13	2238	1/1	0.97	0.46	75,75,75,75	0
54	MG	13	2239	1/1	0.97	0.47	70,70,70,70	0
54	MG	16	208	1/1	0.97	0.48	58,58,58,58	0
54	MG	1H	3509	1/1	0.97	0.22	34,34,34,34	0
54	MG	1H	3136	1/1	0.97	0.38	47,47,47,47	0
54	MG	14	3200	1/1	0.97	0.17	50,50,50,50	0
54	MG	1G	2226	1/1	0.97	0.17	97,97,97,97	0
54	MG	14	3202	1/1	0.97	0.24	42,42,42,42	0
54	MG	1H	3138	1/1	0.97	0.11	38,38,38,38	0
54	MG	1G	2245	1/1	0.97	0.30	67,67,67,67	0
54	MG	1H	3573	1/1	0.97	0.19	47,47,47,47	0
54	MG	13	2261	1/1	0.97	0.40	53,53,53,53	0
54	MG	14	3493	1/1	0.97	0.23	57,57,57,57	0
54	MG	1H	3184	1/1	0.97	0.34	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3185	1/1	0.97	0.26	39,39,39,39	0
54	MG	29	305	1/1	0.97	0.14	64,64,64,64	0
54	MG	1G	2211	1/1	0.97	0.08	63,63,63,63	0
54	MG	1H	3458	1/1	0.97	0.14	51,51,51,51	0
54	MG	1H	3240	1/1	0.97	0.44	56,56,56,56	0
54	MG	1H	3401	1/1	0.97	0.30	31,31,31,31	0
54	MG	14	3122	1/1	0.97	0.35	52,52,52,52	0
54	MG	14	3214	1/1	0.97	0.49	62,62,62,62	0
54	MG	13	2253	1/1	0.97	0.21	49,49,49,49	0
54	MG	13	2310	1/1	0.97	0.46	54,54,54,54	0
54	MG	14	3125	1/1	0.97	0.54	48,48,48,48	0
54	MG	13	2230	1/1	0.97	0.17	71,71,71,71	0
54	MG	1H	3014	1/1	0.97	0.08	42,42,42,42	0
54	MG	1H	3191	1/1	0.97	0.37	29,29,29,29	0
54	MG	13	2291	1/1	0.97	0.36	59,59,59,59	0
54	MG	G8	202	1/1	0.97	0.55	53,53,53,53	0
54	MG	1G	2216	1/1	0.97	0.09	73,73,73,73	0
54	MG	14	3511	1/1	0.97	0.26	48,48,48,48	0
54	MG	1H	3072	1/1	0.97	0.04	55,55,55,55	0
54	MG	1H	3018	1/1	0.97	0.11	36,36,36,36	0
54	MG	14	3063	1/1	0.97	0.06	46,46,46,46	0
54	MG	1H	3251	1/1	0.97	0.15	47,47,47,47	0
54	MG	14	3418	1/1	0.97	0.25	59,59,59,59	0
54	MG	14	3065	1/1	0.97	0.09	68,68,68,68	0
54	MG	14	3140	1/1	0.97	0.28	44,44,44,44	0
54	MG	14	3141	1/1	0.97	0.30	51,51,51,51	0
54	MG	1H	3045	1/1	0.97	0.08	41,41,41,41	0
54	MG	14	3143	1/1	0.97	0.34	56,56,56,56	0
54	MG	14	3144	1/1	0.97	0.47	63,63,63,63	0
54	MG	1H	3198	1/1	0.97	0.40	36,36,36,36	0
54	MG	14	3235	1/1	0.97	0.21	45,45,45,45	0
54	MG	1H	3360	1/1	0.97	0.11	46,46,46,46	0
54	MG	1H	3019	1/1	0.97	0.12	38,38,38,38	0
54	MG	1H	3255	1/1	0.97	0.35	51,51,51,51	0
54	MG	14	3149	1/1	0.97	0.46	42,42,42,42	0
54	MG	14	3150	1/1	0.97	0.28	46,46,46,46	0
54	MG	13	2380	1/1	0.97	0.11	50,50,50,50	0
54	MG	1H	3108	1/1	0.97	0.39	30,30,30,30	0
54	MG	14	3153	1/1	0.97	0.41	60,60,60,60	0
54	MG	14	3244	1/1	0.97	0.30	48,48,48,48	0
54	MG	14	3154	1/1	0.97	0.27	53,53,53,53	0
54	MG	1H	3203	1/1	0.97	0.24	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	13	2224	1/1	0.97	0.37	59,59,59,59	0
54	MG	1H	3483	1/1	0.97	0.21	42,42,42,42	0
54	MG	98	201	1/1	0.97	0.16	56,56,56,56	0
54	MG	14	3158	1/1	0.97	0.45	56,56,56,56	0
54	MG	14	3347	1/1	0.97	0.21	65,65,65,65	0
54	MG	14	3003	1/1	0.97	0.09	44,44,44,44	0
54	MG	1G	2255	1/1	0.97	0.27	67,67,67,67	0
54	MG	14	3446	1/1	0.97	0.21	48,48,48,48	0
54	MG	1H	3207	1/1	0.97	0.25	56,56,56,56	0
54	MG	14	3162	1/1	0.97	0.45	44,44,44,44	0
54	MG	1H	3208	1/1	0.97	0.23	32,32,32,32	0
54	MG	1H	3050	1/1	0.97	0.15	42,42,42,42	0
54	MG	13	2248	1/1	0.97	0.50	57,57,57,57	0
54	MG	X1	102	1/1	0.97	0.32	66,66,66,66	0
54	MG	1G	2221	1/1	0.97	0.17	68,68,68,68	0
54	MG	1H	3116	1/1	0.97	0.27	43,43,43,43	0
54	MG	14	3550	1/1	0.97	0.13	63,63,63,63	0
54	MG	14	3168	1/1	0.97	0.37	47,47,47,47	0
54	MG	1H	3117	1/1	0.97	0.46	42,42,42,42	0
54	MG	14	3264	1/1	0.97	0.21	44,44,44,44	0
54	MG	13	2232	1/1	0.97	0.22	64,64,64,64	0
54	MG	1H	3119	1/1	0.97	0.22	36,36,36,36	0
54	MG	1H	3124	1/1	0.97	0.15	38,38,38,38	0
54	MG	1H	3166	1/1	0.97	0.36	34,34,34,34	0
54	MG	14	3174	1/1	0.97	0.43	53,53,53,53	0
54	MG	1H	3125	1/1	0.97	0.23	40,40,40,40	0
54	MG	1H	3126	1/1	0.97	0.41	52,52,52,52	0
54	MG	1H	3221	1/1	0.97	0.35	42,42,42,42	0
54	MG	14	3024	1/1	0.97	0.14	48,48,48,48	0
54	MG	1H	3026	1/1	0.97	0.09	40,40,40,40	0
54	MG	14	3096	1/1	0.97	0.28	44,44,44,44	0
54	MG	14	3278	1/1	0.97	0.19	39,39,39,39	0
54	MG	1H	3128	1/1	0.97	0.23	29,29,29,29	0
54	MG	1H	3501	1/1	0.97	0.21	44,44,44,44	0
55	ZN	5A	101	1/1	0.97	0.11	99,99,99,99	0
54	MG	1H	3171	1/1	0.98	0.18	39,39,39,39	0
54	MG	1H	3105	1/1	0.98	0.36	41,41,41,41	0
54	MG	1H	3106	1/1	0.98	0.21	44,44,44,44	0
54	MG	14	3568	1/1	0.98	0.23	53,53,53,53	0
54	MG	1H	3120	1/1	0.98	0.19	33,33,33,33	0
54	MG	14	3081	1/1	0.98	0.06	48,48,48,48	0
54	MG	14	3261	1/1	0.98	0.23	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3482	1/1	0.98	0.11	48,48,48,48	0
54	MG	1H	3121	1/1	0.98	0.29	44,44,44,44	0
54	MG	1H	3382	1/1	0.98	0.30	53,53,53,53	0
54	MG	1H	3123	1/1	0.98	0.29	40,40,40,40	0
54	MG	1G	2235	1/1	0.98	0.36	64,64,64,64	0
54	MG	14	3129	1/1	0.98	0.48	45,45,45,45	0
54	MG	88	304	1/1	0.98	0.24	48,48,48,48	0
54	MG	1G	2220	1/1	0.98	0.08	66,66,66,66	0
54	MG	1H	3238	1/1	0.98	0.50	57,57,57,57	0
54	MG	14	3271	1/1	0.98	0.30	68,68,68,68	0
54	MG	14	3176	1/1	0.98	0.70	60,60,60,60	0
54	MG	1H	3028	1/1	0.98	0.15	49,49,49,49	0
54	MG	1H	3110	1/1	0.98	0.31	47,47,47,47	0
54	MG	13	2204	1/1	0.98	0.07	61,61,61,61	0
54	MG	14	3428	1/1	0.98	0.37	47,47,47,47	0
54	MG	1H	3436	1/1	0.98	0.25	47,47,47,47	0
54	MG	14	3137	1/1	0.98	0.24	46,46,46,46	0
54	MG	1H	3522	1/1	0.98	0.30	50,50,50,50	0
54	MG	1G	2308	1/1	0.98	0.31	56,56,56,56	0
54	MG	14	3095	1/1	0.98	0.31	44,44,44,44	0
54	MG	14	3186	1/1	0.98	0.22	45,45,45,45	0
54	MG	14	3282	1/1	0.98	0.35	47,47,47,47	0
54	MG	W1	102	1/1	0.98	0.21	67,67,67,67	0
54	MG	14	3283	1/1	0.98	0.21	44,44,44,44	0
54	MG	14	3055	1/1	0.98	0.12	54,54,54,54	0
54	MG	14	3016	1/1	0.98	0.09	47,47,47,47	0
54	MG	14	3017	1/1	0.98	0.08	51,51,51,51	0
54	MG	13	2370	1/1	0.98	0.08	86,86,86,86	0
54	MG	1H	3439	1/1	0.98	0.17	53,53,53,53	0
54	MG	1H	3325	1/1	0.98	0.22	60,60,60,60	0
54	MG	1H	3441	1/1	0.98	0.25	59,59,59,59	0
54	MG	14	3023	1/1	0.98	0.07	46,46,46,46	0
54	MG	14	3392	1/1	0.98	0.27	49,49,49,49	0
54	MG	1H	3131	1/1	0.98	0.30	62,62,62,62	0
54	MG	1H	3056	1/1	0.98	0.07	45,45,45,45	0
54	MG	1H	3206	1/1	0.98	0.39	44,44,44,44	0
54	MG	1H	3133	1/1	0.98	0.41	47,47,47,47	0
54	MG	1H	3446	1/1	0.98	0.20	39,39,39,39	0
54	MG	1H	3308	1/1	0.98	0.14	32,32,32,32	0
54	MG	1G	2345	1/1	0.98	0.25	55,55,55,55	0
54	MG	1H	3595	1/1	0.98	0.33	43,43,43,43	0
54	MG	14	3249	1/1	0.98	0.15	55,55,55,55	0

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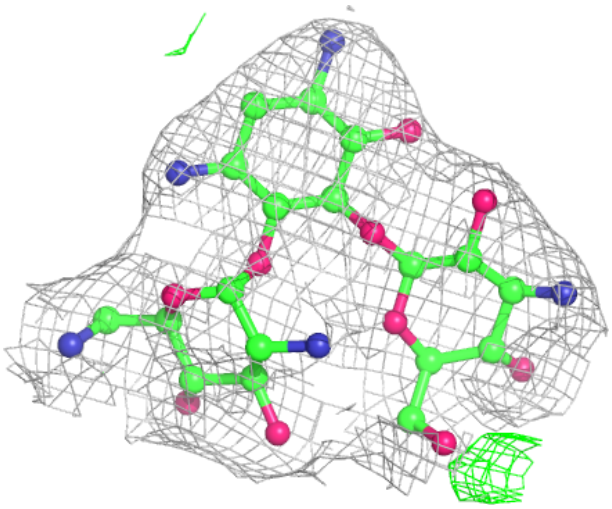
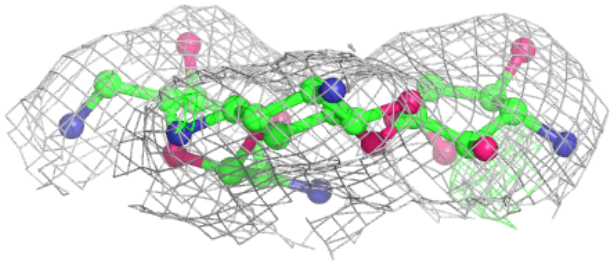
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3596	1/1	0.98	0.26	49,49,49,49	0
54	MG	14	3033	1/1	0.98	0.06	52,52,52,52	0
54	MG	1H	3476	1/1	0.98	0.26	52,52,52,52	0
54	MG	14	3035	1/1	0.98	0.12	46,46,46,46	0
54	MG	1G	2364	1/1	0.98	0.18	93,93,93,93	0
55	ZN	32	301	1/1	0.98	0.37	90,90,90,90	0
55	ZN	5I	101	1/1	0.98	0.12	74,74,74,74	0
54	MG	14	3037	1/1	0.98	0.12	59,59,59,59	0
54	MG	1G	2265	1/1	0.99	0.18	81,81,81,81	0
54	MG	1G	2241	1/1	0.99	0.37	71,71,71,71	0
54	MG	13	2216	1/1	0.99	0.30	53,53,53,53	0
54	MG	14	3246	1/1	0.99	0.43	64,64,64,64	0
54	MG	14	3182	1/1	0.99	0.43	44,44,44,44	0
54	MG	1H	3104	1/1	0.99	0.32	30,30,30,30	0
54	MG	1H	3149	1/1	0.99	0.34	53,53,53,53	0
54	MG	1H	3201	1/1	0.99	0.43	33,33,33,33	0
54	MG	14	3268	1/1	0.99	0.43	51,51,51,51	0
54	MG	1H	3115	1/1	0.99	0.32	30,30,30,30	0
54	MG	14	3020	1/1	0.99	0.09	45,45,45,45	0
54	MG	1H	3122	1/1	0.99	0.31	30,30,30,30	0
54	MG	14	3100	1/1	0.99	0.31	45,45,45,45	0
54	MG	1H	3176	1/1	0.99	0.40	40,40,40,40	0
54	MG	1H	3215	1/1	0.99	0.31	45,45,45,45	0
54	MG	14	3011	1/1	0.99	0.10	42,42,42,42	0
54	MG	14	3420	1/1	0.99	0.46	44,44,44,44	0
54	MG	14	3132	1/1	0.99	0.37	38,38,38,38	0
54	MG	1G	2204	1/1	0.99	0.12	58,58,58,58	0
54	MG	4E	201	1/1	0.99	0.24	78,78,78,78	0

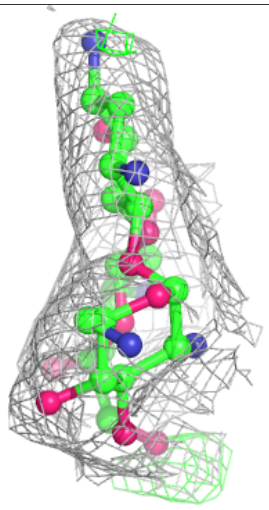
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around 8UZ 13 2202:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

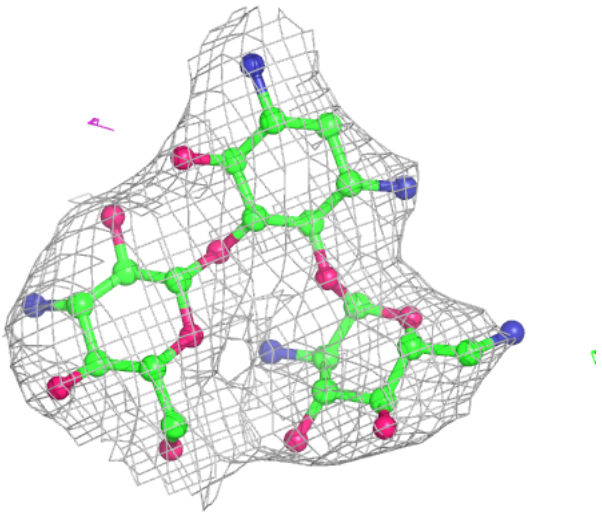


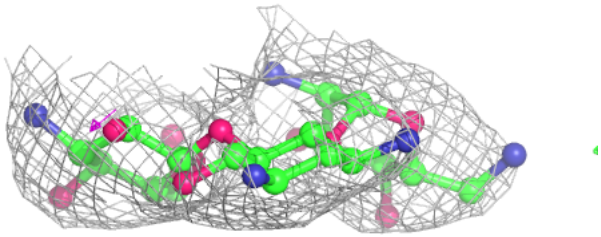


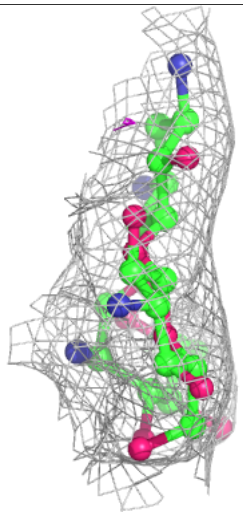


Electron density around 8UZ 1G 2202:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

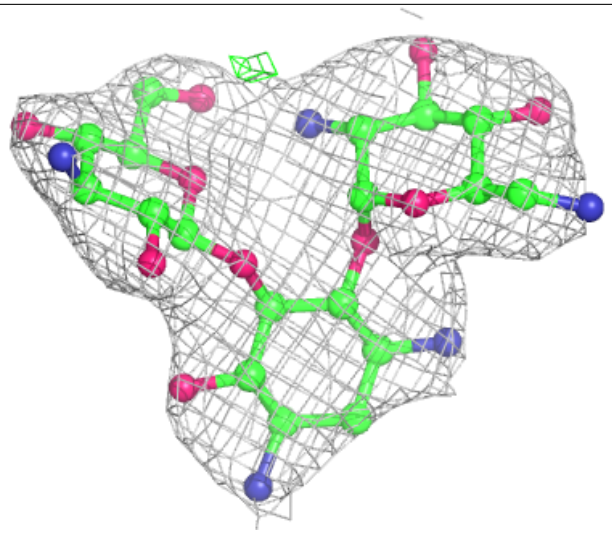


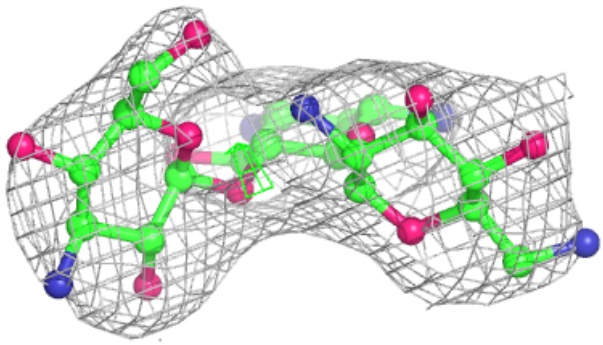


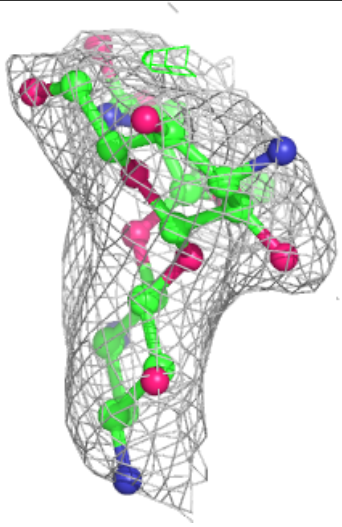


Electron density around 8UZ 1G 2201:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

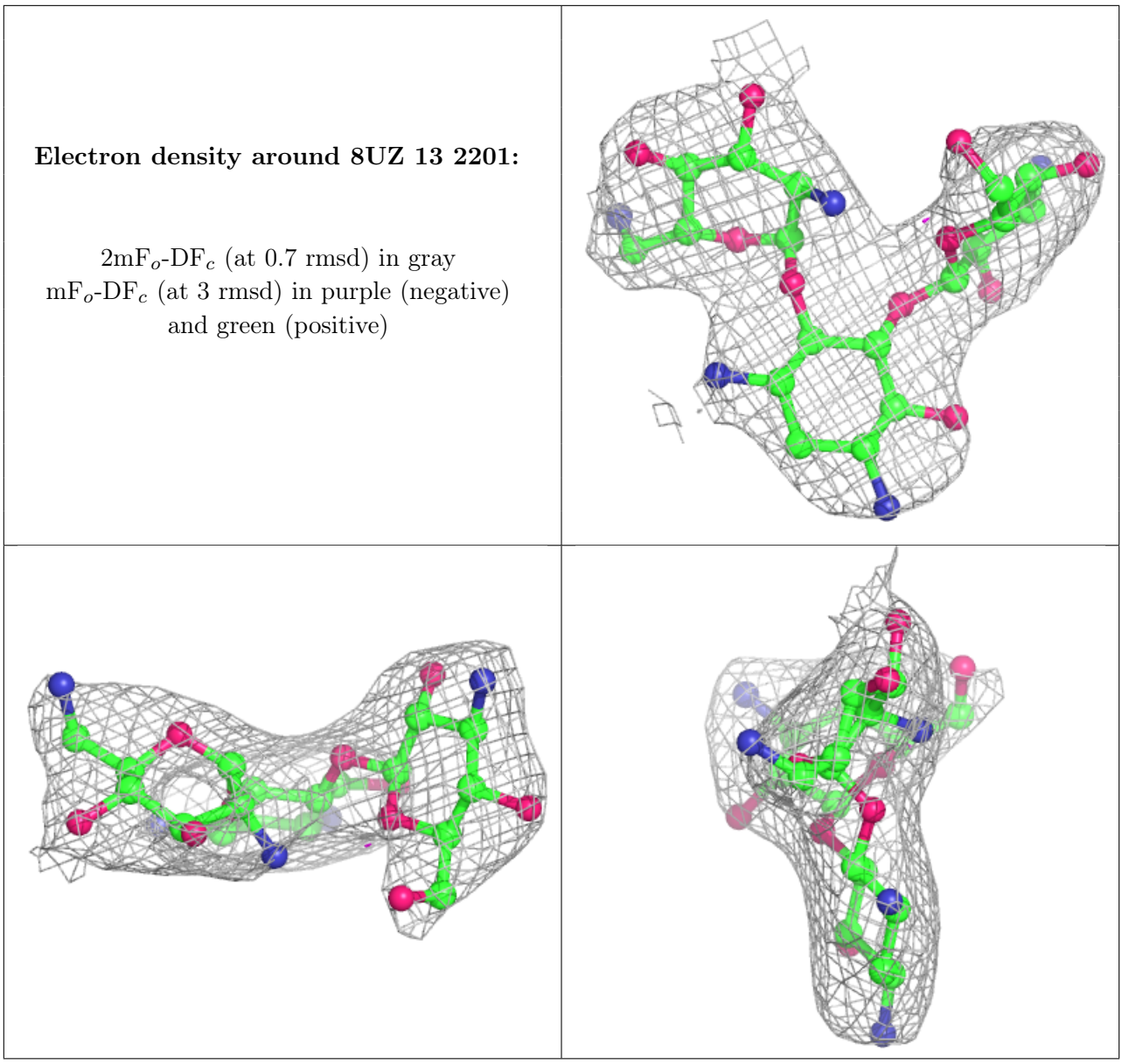






Electron density around 8UZ 13 2201:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



6.5 Other polymers

There are no such residues in this entry.