



# Full wwPDB X-ray Structure Validation Report ⓘ

Jan 4, 2024 – 08:13 pm GMT

PDB ID : 4WQ1  
Title : Complex of 70S ribosome with tRNA-Tyr and mRNA with C-A mismatch in the first position in the A-site.  
Authors : Rozov, A.; Demeshkina, N.; Yusupov, M.; Yusupova, G.  
Deposited on : 2014-10-21  
Resolution : 3.10 Å(reported)

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

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4.02b-467  
Mogul : 1.8.4, CSD as541be (2020)  
Xtriage (Phenix) : 1.13  
EDS : 2.36  
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

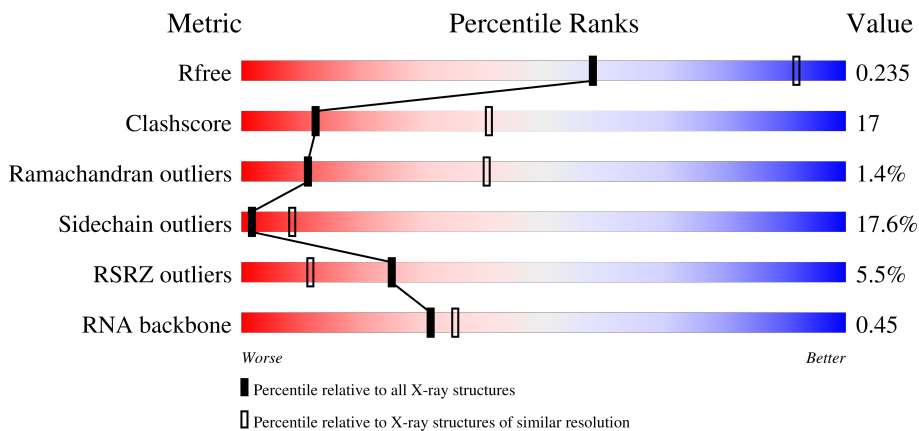
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.10 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	130704	1094 (3.10-3.10)
Clashscore	141614	1184 (3.10-3.10)
Ramachandran outliers	138981	1141 (3.10-3.10)
Sidechain outliers	138945	1141 (3.10-3.10)
RSRZ outliers	127900	1067 (3.10-3.10)
RNA backbone	3102	1116 (3.40-2.80)

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  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	13	1522	<div style="display: flex; align-items: center;"> <div style="width: 10%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 30%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 45%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 20%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: grey;"></div> </div> <p style="margin-left: 10px;">30%      45%      20%      • •</p>
2	12	256	<div style="display: flex; align-items: center;"> <div style="width: 5%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 48%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 38%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 7%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 7%; height: 10px; background-color: grey;"></div> </div> <p style="margin-left: 10px;">5%      48%      38%      7%      7%</p>
2	1E	256	<div style="display: flex; align-items: center;"> <div style="width: 10%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 47%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 39%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 7%; height: 10px; background-color: grey;"></div> </div> <p style="margin-left: 10px;">47%      39%      5%      •      7%</p>
3	22	239	<div style="display: flex; align-items: center;"> <div style="width: 11%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 49%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 31%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 6%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 14%; height: 10px; background-color: grey;"></div> </div> <p style="margin-left: 10px;">11%      49%      31%      6%      14%</p>

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Mol	Chain	Length	Quality of chain
3	2E	239	4% 54% 27% 5% 14%
4	32	208	11% 50% 42% 8%
4	3E	208	6% 51% 39% 9%
5	42	162	2% 50% 34% 9% 7%
5	4E	162	2% 54% 30% 10% 7%
6	52	101	% 65% 29% 6%
6	5E	101	% 56% 41% .
7	62	156	18% 61% 31% 8% .
7	6E	156	4% 61% 33% 6% .
8	72	138	13% 71% 25% .
8	7E	138	% 53% 40% 7%
9	82	128	10% 49% 42% 8% .
9	8E	128	4% 45% 44% 11% .
10	1A	105	10% 41% 49% 5% 6%
10	1I	105	3% 48% 43% . 6%
11	2A	129	12% 57% 32% . 8%
11	2I	129	9% 57% 30% 5% 8%
12	3A	132	27% 57% 27% 11% . 5%
12	3I	132	4% 57% 34% . 5%
13	4A	126	34% 43% 41% 9% 7%
13	4I	126	6% 45% 37% 10% 8%
14	5A	61	44% 51% 41% . . 5%
14	5I	61	44% 43% 11% .
15	6A	89	6% 61% 31% 7% .
15	6I	89	58% 37% . .

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Mol	Chain	Length	Quality of chain
16	7A	88	
16	7I	88	
17	8A	105	
17	8I	105	
18	9A	88	
18	9I	88	
19	AA	93	
19	AI	93	
20	BA	106	
20	BI	106	
21	1B	27	
21	1F	27	
22	1K	85	
22	1L	85	
22	3K	85	
22	3L	85	
23	2K	77	
23	2L	77	
24	4K	30	
24	4L	30	
25	14	2912	
25	1H	2912	
26	16	122	
26	1J	122	
27	11	272	

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Mol	Chain	Length	Quality of chain
28	21	205	5% 48% 39% 12%
28	29	205	5% 49% 37% 12%
29	31	202	58% 31% 10%
30	41	181	9% 48% 45% 7%
30	49	181	29% 51% 42% 7%
31	51	180	3% 50% 33% 12%
31	59	180	25% 56% 33% 6% 5%
32	61	146	3% 45% 42% 13%
32	69	146	6% 51% 39% 10%
33	15	138	53% 40% 7%
33	58	138	9% 49% 41% 9%
34	25	122	3% 54% 39% 6%
34	68	122	58% 39%
35	35	150	9% 39% 41% 16% 5%
35	78	150	2% 41% 37% 19%
36	45	141	6% 50% 38% 12%
36	88	141	6% 47% 42% 10%
37	55	118	47% 44% 8%
37	98	118	8% 44% 42% 14%
38	65	111	15% 50% 41% 7%
38	A8	111	5% 38% 52% 7%
39	75	137	48% 42% 10%
39	B8	137	47% 42% 10%
40	85	117	52% 39% 8%
40	C8	117	12% 50% 41% 7%

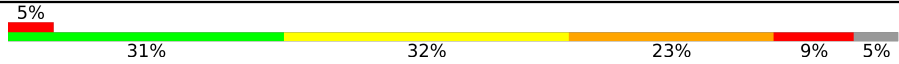

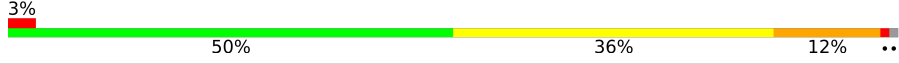
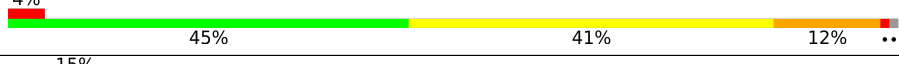

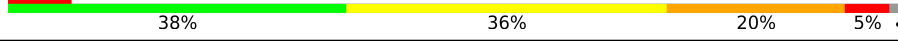
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Mol	Chain	Length	Quality of chain
41	95	101	7% 47% 38% 16%
41	D8	101	9% 52% 38% 10%
42	A5	113	% 53% 38% 9%
42	E8	113	5% 52% 37% 11%
43	B5	94	% 51% 38% 9%
43	F8	94	3% 48% 40% 11%
44	C5	110	14% 45% 33% 17% 5%
44	G8	110	3% 38% 45% 9% 5%
45	H8	175	38% 45% 44% 9%
46	E5	85	5% 44% 40% 7% 9%
46	I8	85	% 52% 33% 6% 9%
47	F5	98	10% 57% 33% 8% ..
47	J8	98	8% 52% 37% 9% ..
48	G5	66	6% 42% 47% 8%
48	K8	66	3% 42% 36% 18%
49	H5	59	% 56% 37% 7%
49	L8	59	3% 56% 34% 10%
50	I5	66	74% 38% 48% 9% 5%
50	M8	66	38% 52% 41% 8%
51	J5	59	3% 56% 31% 12%
51	N8	59	15% 49% 39% 12%
52	K5	45	82% 42% 49% 9%
52	O8	45	58% 40% 38% 22%
53	L5	49	% 53% 37% 8%
53	P8	49	% 43% 43% 6% 8%

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Mol	Chain	Length	Quality of chain
54	Q8	65	
55	1G	1522	
56	19	276	
57	39	210	
58	D5	206	
59	M5	61	

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
60	MG	13	1667	-	-	-	X
60	MG	13	1668	-	-	-	X
60	MG	13	1711	-	-	-	X
60	MG	14	3064	-	-	-	X
60	MG	14	3069	-	-	-	X
60	MG	14	3093	-	-	-	X
60	MG	14	3143	-	-	-	X
60	MG	14	3144	-	-	-	X
60	MG	14	3145	-	-	-	X
60	MG	14	3189	-	-	-	X
60	MG	14	3211	-	-	-	X
60	MG	14	3216	-	-	-	X
60	MG	14	3253	-	-	-	X
60	MG	14	3294	-	-	-	X
60	MG	1H	3030	-	-	-	X
60	MG	1H	3108	-	-	-	X
60	MG	1H	3147	-	-	-	X
60	MG	1H	3155	-	-	-	X
60	MG	1H	3222	-	-	-	X
60	MG	1H	3256	-	-	-	X
60	MG	1H	3288	-	-	-	X
60	MG	1H	3298	-	-	-	X
60	MG	68	201	-	-	-	X

## 2 Entry composition [i](#)

There are 62 unique types of molecules in this entry. The entry contains 299951 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
			Total	C	N	O	P			
1	13	1498	32207	14334	5973	10402	1498	0	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
14	5I	61	Total 498	C 316	N 105	O 72	S 5	0	0	0
14	5A	58	Total 475	C 303	N 99	O 69	S 4	0	0	0

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AI	83	Total	C	N	O	S	0	0	0
			665	424	124	115	2			
19	AA	82	Total	C	N	O	S	0	0	0
			640	407	118	113	2			

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

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

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

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

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

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

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
			Total	C	N	O	P	S			
22	1K	85	1825	822	323	593	85	2	0	0	0
22	3K	74	1595	719	286	514	74	2	0	0	0
22	1L	74	1595	719	286	514	74	2	0	0	0
22	3L	75	1615	728	288	522	75	2	0	0	0

- Molecule 23 is a RNA chain called tRNA-fMET.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
			Total	C	N	O	P	S			
23	2K	77	1645	734	298	535	77	1	0	0	0
23	2L	77	1645	734	298	535	77	1	0	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
2K	18	C	U	conflict	GB 675817920
2L	18	C	U	conflict	GB 675817920

- Molecule 24 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
24	4K	15	325	147	68	95	15	0	0	0
24	4L	16	347	157	73	101	16	0	0	0

- Molecule 25 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
25	1H	2912	62707	27911	11722	20163	2911	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
25	14	2907	62605	27865	11708	20126	2906	0	0	0

There are 6 discrepancies between the modelled and reference sequences:

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
27	11	272	2115	1335	420	357	3	0	0	0

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
29	31	202	1585	1011	297	275	2	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	41	181	Total	C	N	O	S	0	0	0
			1473	942	268	259	4			
30	49	181	Total	C	N	O	S	0	0	0
			1473	942	268	259	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	51	174	Total	C	N	O	S	0	0	0
			1336	848	251	236	1			
31	59	171	Total	C	N	O	S	0	0	0
			1316	835	247	233	1			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace	
39	B8	136	Total	C	N	O	0	0	0	
			1133	705	233	195				
39	75	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	I8	77	Total	C	N	O	S	0	0	0
			612	379	129	103	1			

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
51	N8	59	458	288	90	75	5	0	0	0
51	J5	58	453	285	89	74	5	0	0	0

- Molecule 52 is a protein called 50S ribosomal protein L33.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
53	P8	45	Total 391	C 240	N 97	O 52	S 2	0	0	0
53	L5	45	Total 391	C 240	N 97	O 52	S 2	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
54	Q8	62	Total 442	C 281	N 83	O 76	S 2	0	0	0

- Molecule 55 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
55	1G	1498	Total 32204	C 14334	N 5973	O 10400	P 1497	0	0	0

- Molecule 56 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
56	19	273	Total 2120	C 1338	N 421	O 358	S 3	0	0	0

- Molecule 57 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
57	39	208	Total 1627	C 1037	N 304	O 283	S 3	0	0	0

- Molecule 58 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
58	D5	179	Total	C	N	O	S	0	0	0
			1428	911	255	259	3			

- Molecule 59 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
59	M5	60	Total	C	N	O	S	0	0	0
			480	306	98	74	2			

- Molecule 60 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
60	13	140	Total	Mg	0	0
			140	140		
60	3I	1	Total	Mg	0	0
			1	1		
60	4I	1	Total	Mg	0	0
			1	1		
60	5I	1	Total	Mg	0	0
			1	1		
60	1K	1	Total	Mg	0	0
			1	1		
60	2K	4	Total	Mg	0	0
			4	4		
60	3K	1	Total	Mg	0	0
			1	1		
60	1H	438	Total	Mg	0	0
			438	438		
60	16	12	Total	Mg	0	0
			12	12		
60	11	2	Total	Mg	0	0
			2	2		
60	21	2	Total	Mg	0	0
			2	2		
60	41	1	Total	Mg	0	0
			1	1		
60	68	1	Total	Mg	0	0
			1	1		
60	78	3	Total	Mg	0	0
			3	3		
60	88	2	Total	Mg	0	0
			2	2		
60	98	2	Total	Mg	0	0
			2	2		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	B8	1	Total Mg 1 1	0	0
60	C8	1	Total Mg 1 1	0	0
60	I8	2	Total Mg 2 2	0	0
60	K8	1	Total Mg 1 1	0	0
60	P8	1	Total Mg 1 1	0	0
60	1G	104	Total Mg 104 104	0	0
60	52	1	Total Mg 1 1	0	0
60	2L	3	Total Mg 3 3	0	0
60	14	386	Total Mg 386 386	0	0
60	1J	7	Total Mg 7 7	0	0
60	19	1	Total Mg 1 1	0	0
60	29	2	Total Mg 2 2	0	0
60	39	1	Total Mg 1 1	0	0
60	49	1	Total Mg 1 1	0	0
60	25	1	Total Mg 1 1	0	0
60	45	3	Total Mg 3 3	0	0
60	85	1	Total Mg 1 1	0	0
60	C5	1	Total Mg 1 1	0	0
60	E5	1	Total Mg 1 1	0	0

- Molecule 61 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	3E	1	Total Zn 1 1	0	0
61	5I	1	Total Zn 1 1	0	0
61	G8	1	Total Zn 1 1	0	0
61	32	1	Total Zn 1 1	0	0
61	5A	1	Total Zn 1 1	0	0
61	C5	1	Total Zn 1 1	0	0

- Molecule 62 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	13	125	Total O 125 125	0	0
62	3E	4	Total O 4 4	0	0
62	3I	1	Total O 1 1	0	0
62	5I	2	Total O 2 2	0	0
62	7I	1	Total O 1 1	0	0
62	1K	4	Total O 4 4	0	0
62	3K	1	Total O 1 1	0	0
62	4K	1	Total O 1 1	0	0
62	1H	738	Total O 738 738	0	0
62	16	15	Total O 15 15	0	0
62	11	10	Total O 10 10	0	0
62	21	4	Total O 4 4	0	0
62	31	5	Total O 5 5	0	0
62	78	3	Total O 3 3	0	0

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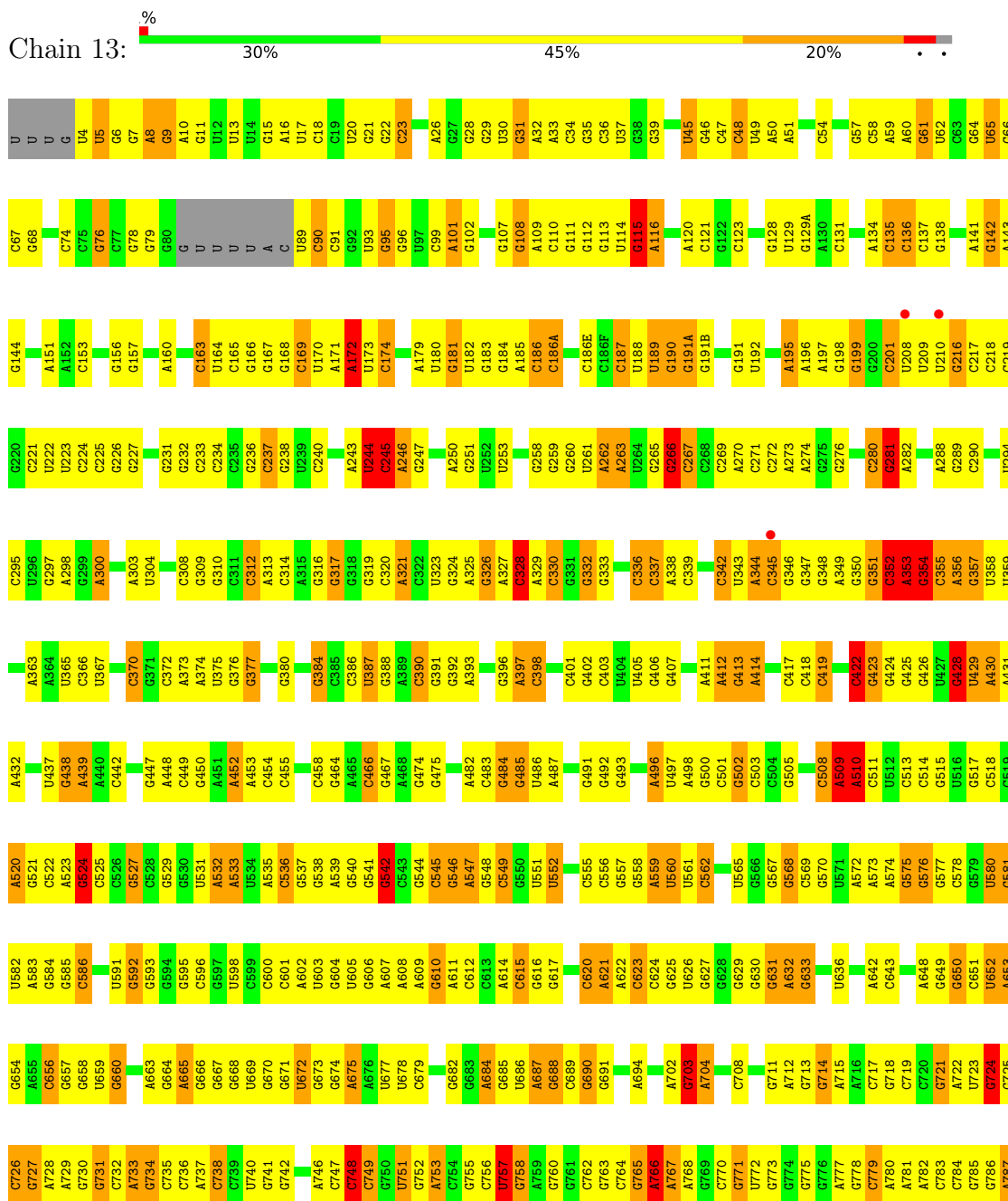
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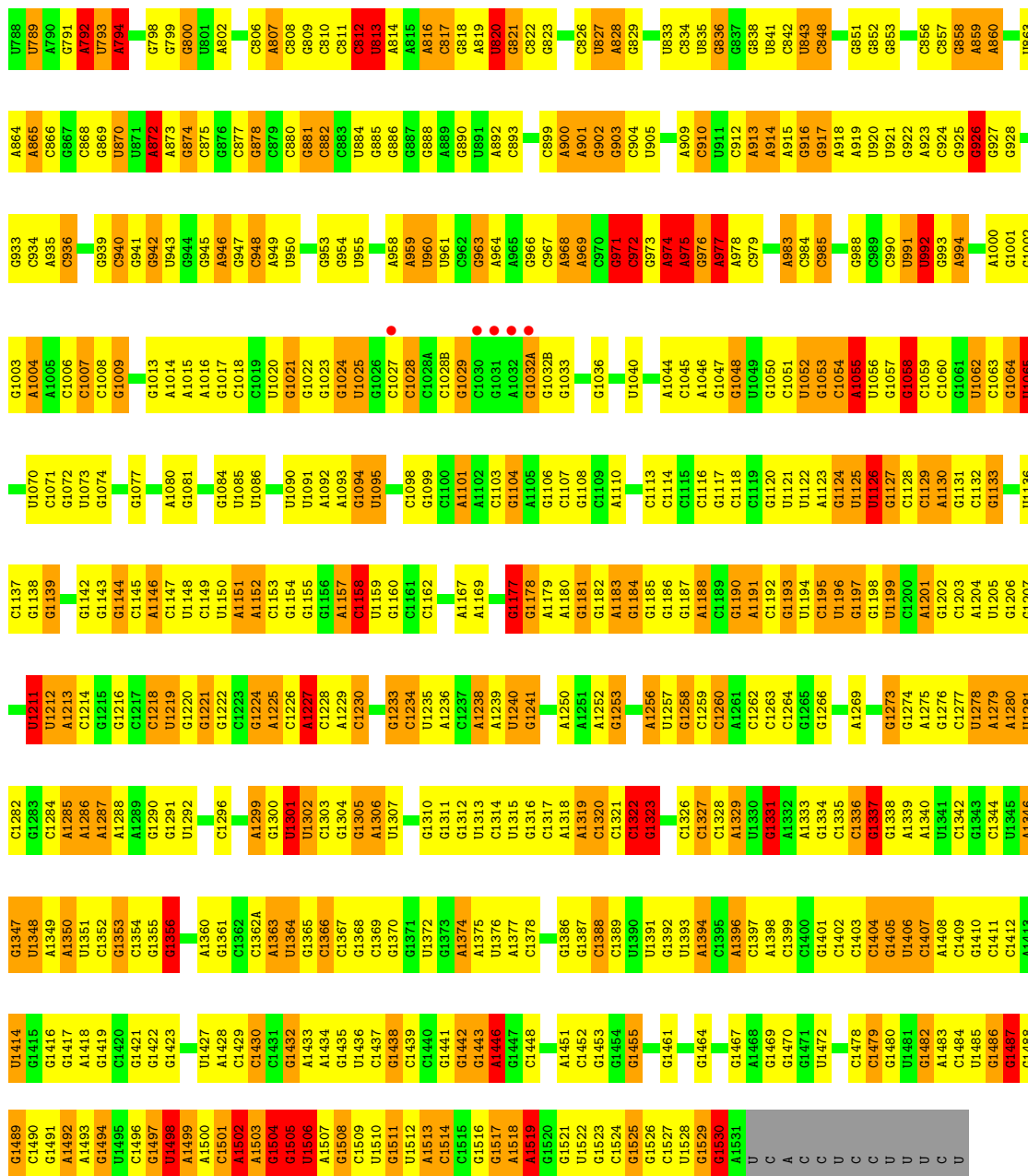
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	98	3	Total O 3 3	0	0
62	B8	1	Total O 1 1	0	0
62	C8	2	Total O 2 2	0	0
62	D8	2	Total O 2 2	0	0
62	G8	2	Total O 2 2	0	0
62	L8	3	Total O 3 3	0	0
62	Q8	1	Total O 1 1	0	0
62	1G	74	Total O 74 74	0	0
62	82	1	Total O 1 1	0	0
62	BA	2	Total O 2 2	0	0
62	4L	1	Total O 1 1	0	0
62	14	446	Total O 446 446	0	0
62	1J	12	Total O 12 12	0	0
62	19	8	Total O 8 8	0	0
62	39	1	Total O 1 1	0	0
62	25	6	Total O 6 6	0	0
62	85	2	Total O 2 2	0	0
62	A5	1	Total O 1 1	0	0
62	E5	1	Total O 1 1	0	0
62	L5	1	Total O 1 1	0	0
62	M5	2	Total O 2 2	0	0

### 3 Residue-property plots i

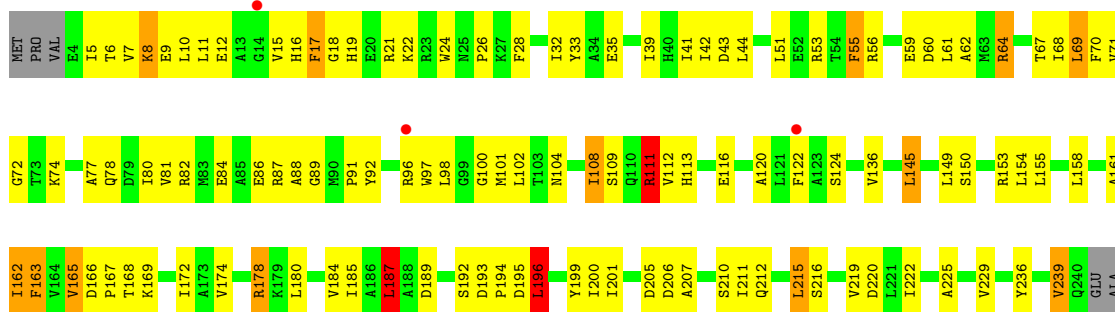
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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





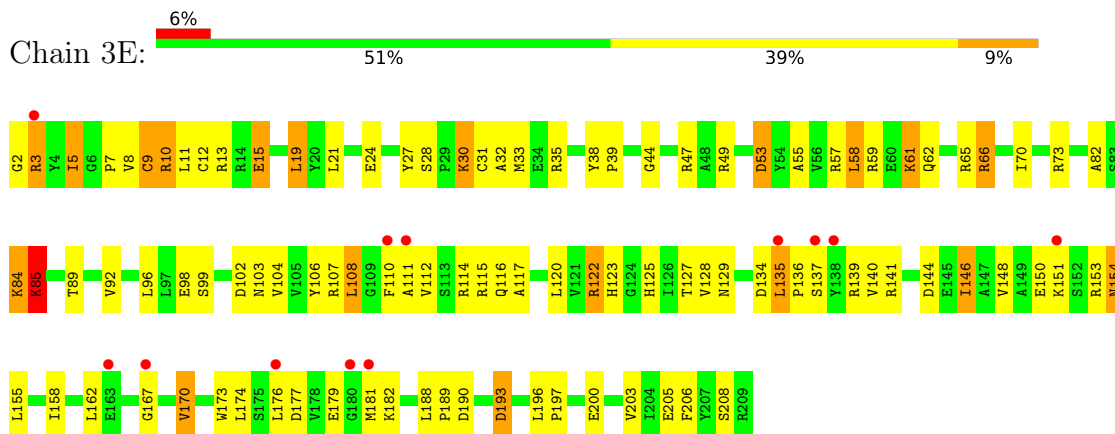
• Molecule 2: 30S ribosomal protein S2



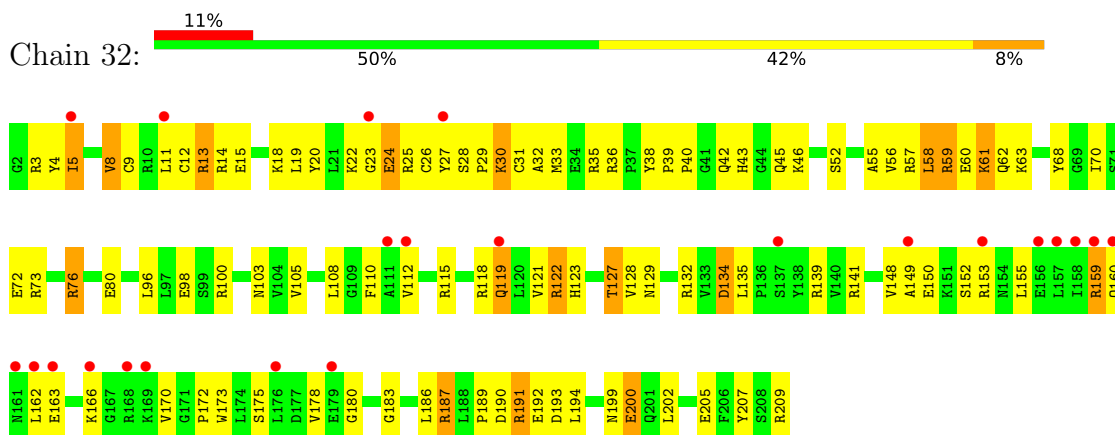




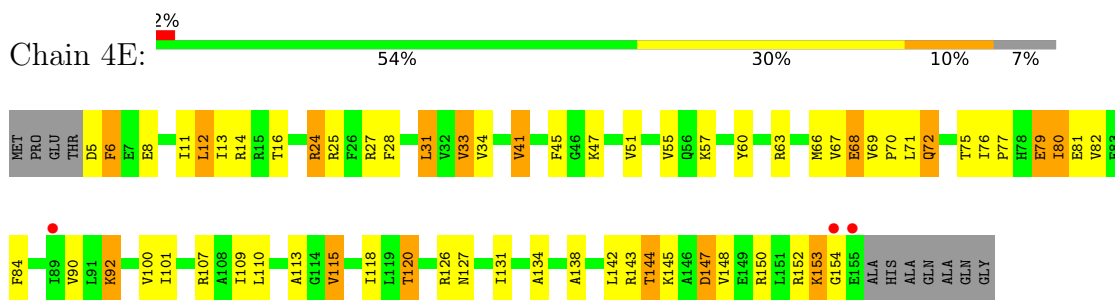
- Molecule 4: 30S ribosomal protein S4



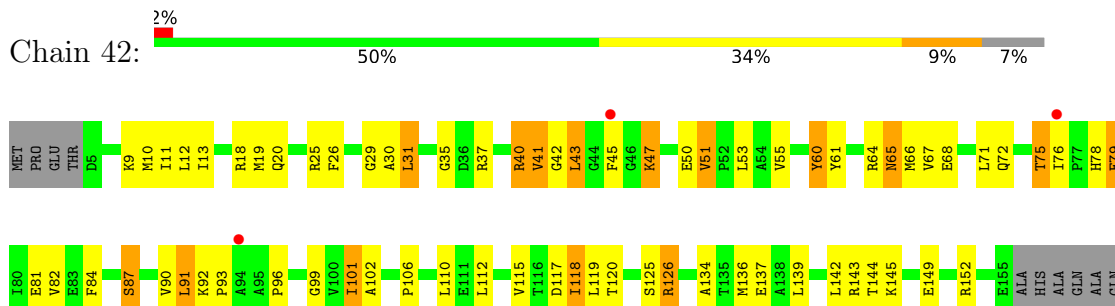
- Molecule 4: 30S ribosomal protein S4



- Molecule 5: 30S ribosomal protein S5

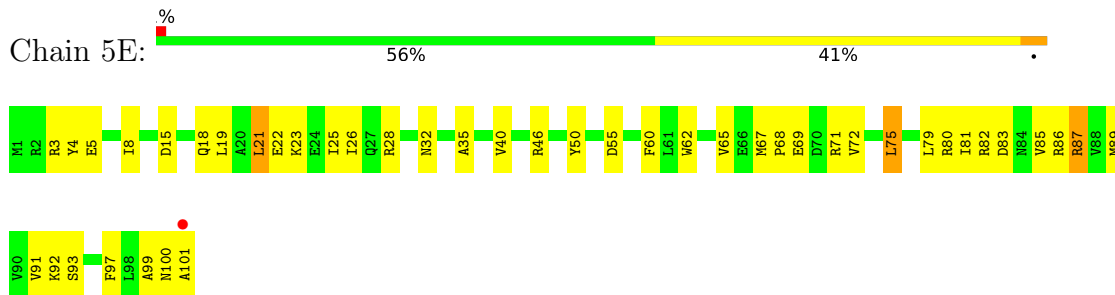


- Molecule 5: 30S ribosomal protein S5

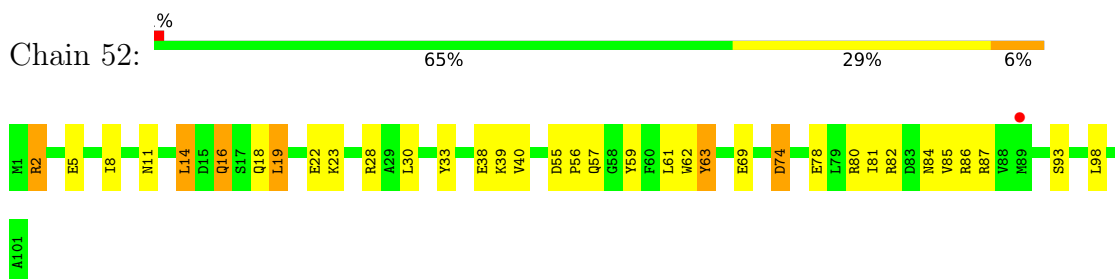


GLY

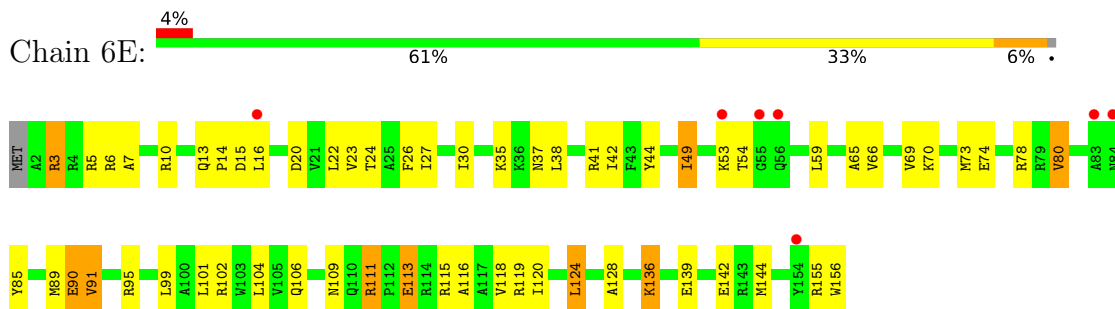
- Molecule 6: 30S ribosomal protein S6



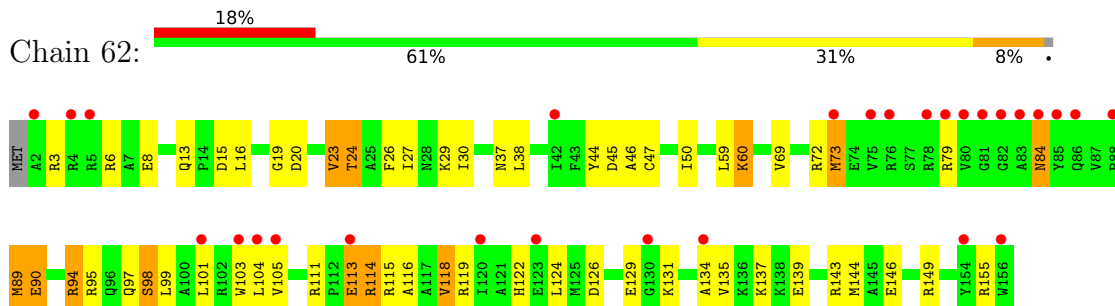
- Molecule 6: 30S ribosomal protein S6



- Molecule 7: 30S ribosomal protein S7

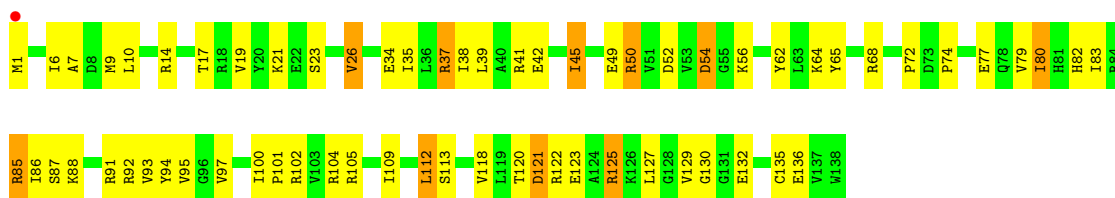


- Molecule 7: 30S ribosomal protein S7

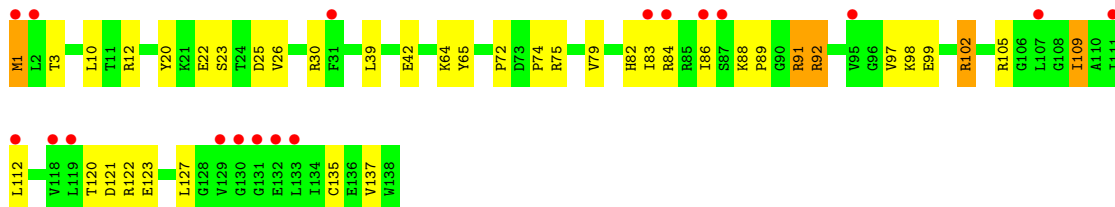


- Molecule 8: 30S ribosomal protein S8

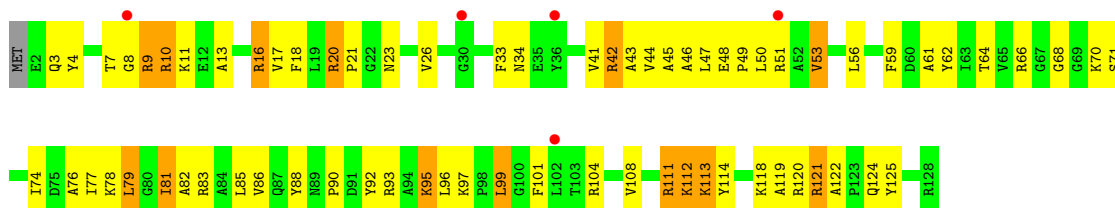




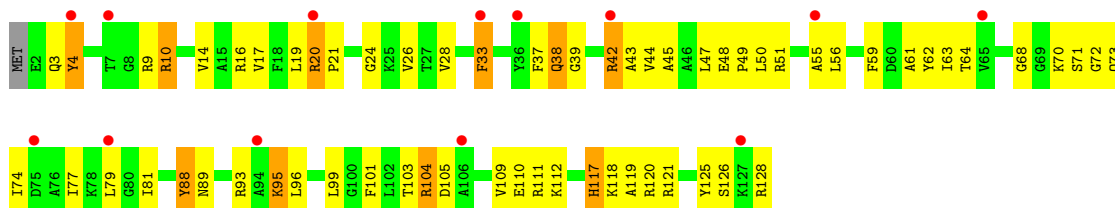
• Molecule 8: 30S ribosomal protein S8



• Molecule 9: 30S ribosomal protein S9



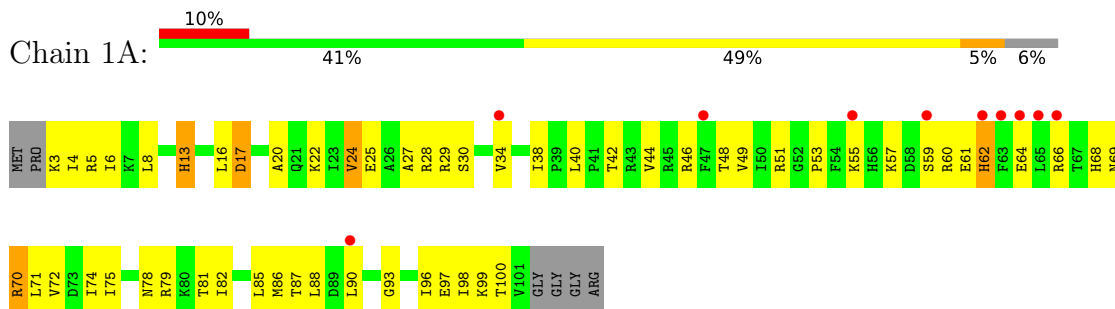
• Molecule 9: 30S ribosomal protein S9



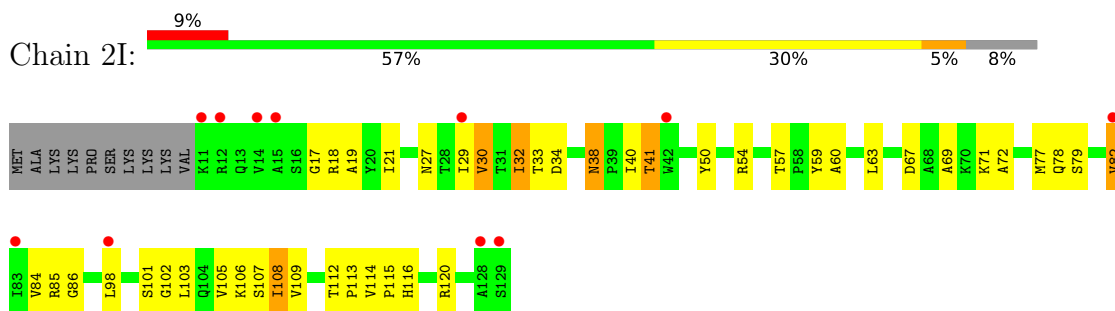
• Molecule 10: 30S ribosomal protein S10



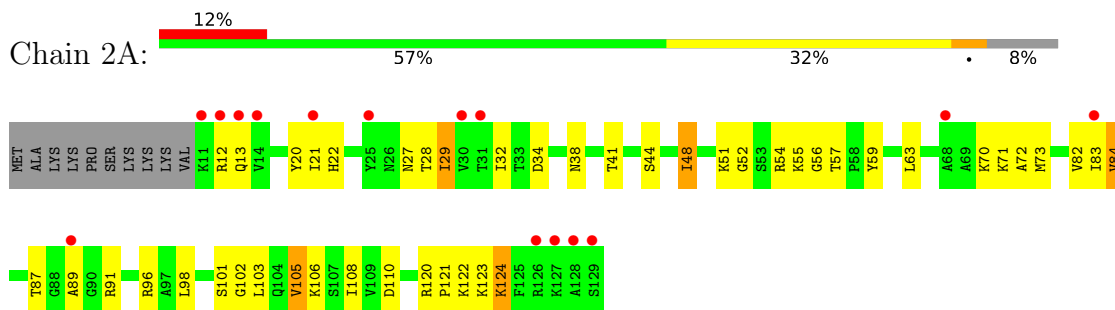
- Molecule 10: 30S ribosomal protein S10



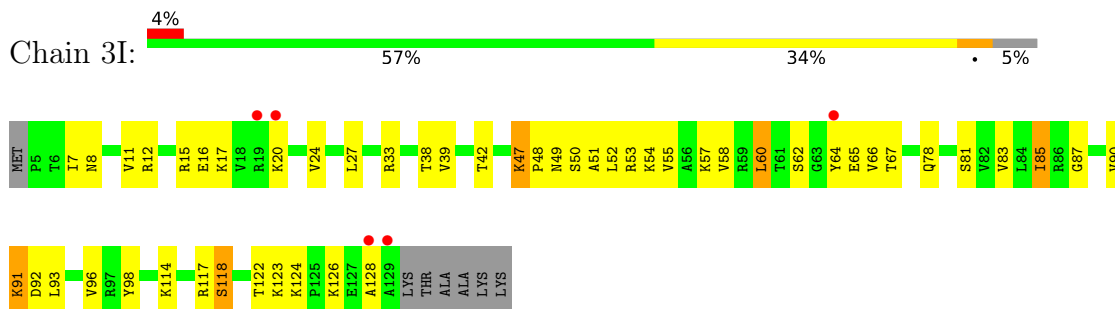
- Molecule 11: 30S ribosomal protein S11



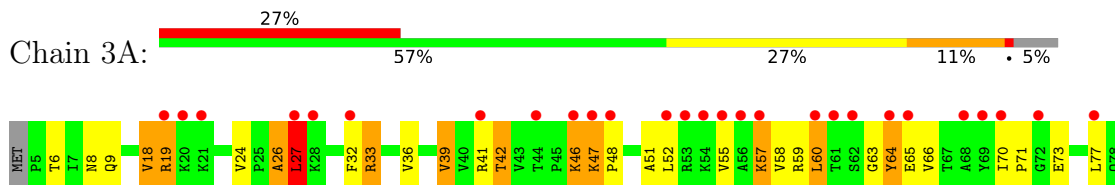
- Molecule 11: 30S ribosomal protein S11



- Molecule 12: 30S ribosomal protein S12



- Molecule 12: 30S ribosomal protein S12

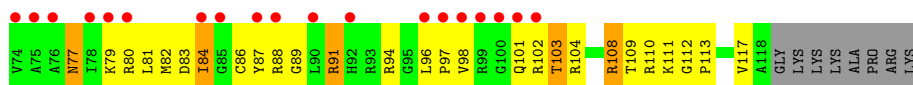
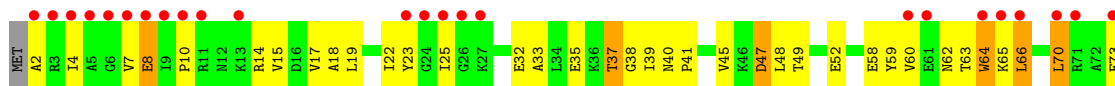
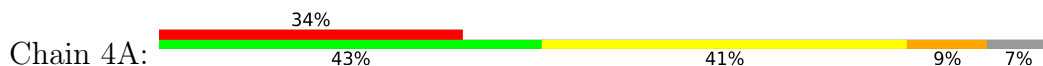




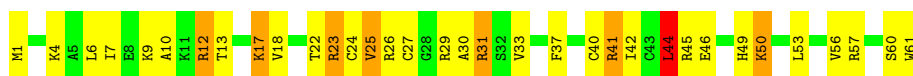
- Molecule 13: 30S ribosomal protein S13



- Molecule 13: 30S ribosomal protein S13



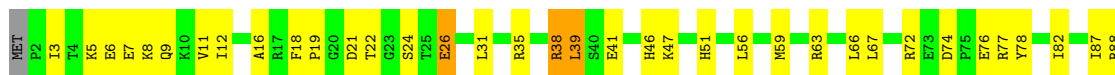
- Molecule 14: 30S ribosomal protein S14 type Z



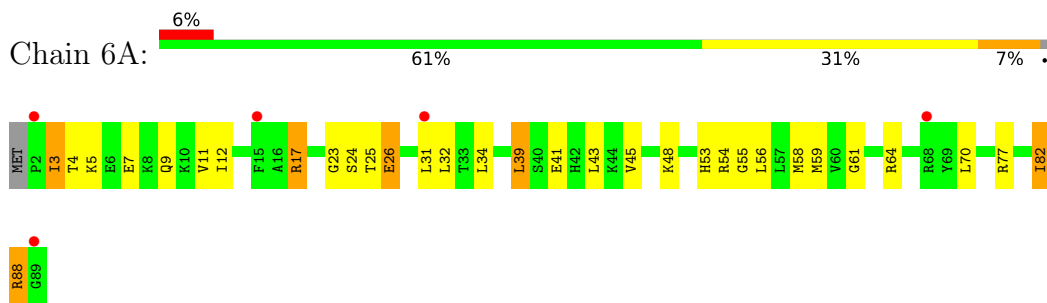
- Molecule 14: 30S ribosomal protein S14 type Z



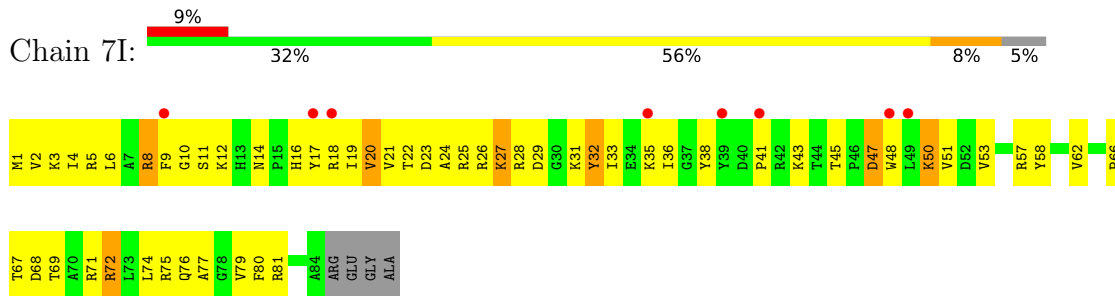
- Molecule 15: 30S ribosomal protein S15



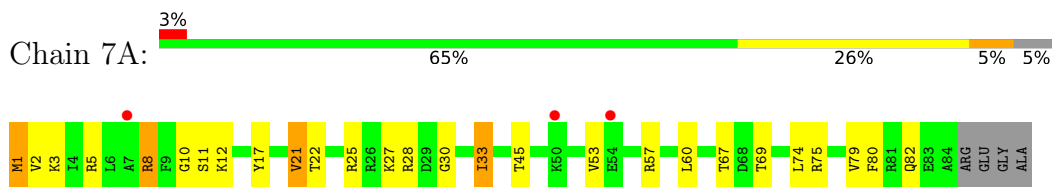
- Molecule 15: 30S ribosomal protein S15



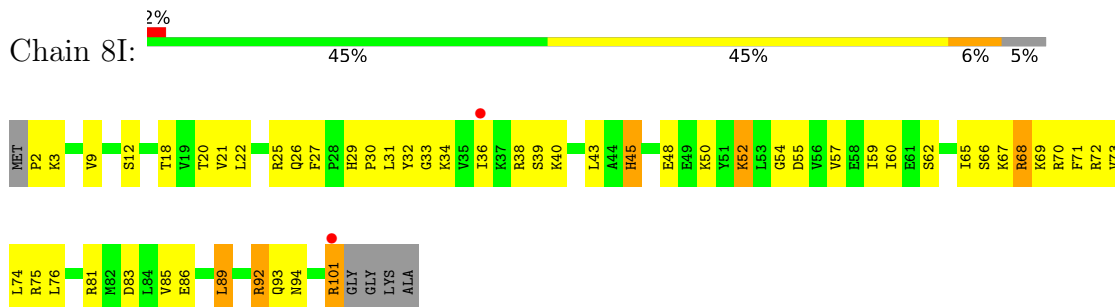
- Molecule 16: 30S ribosomal protein S16



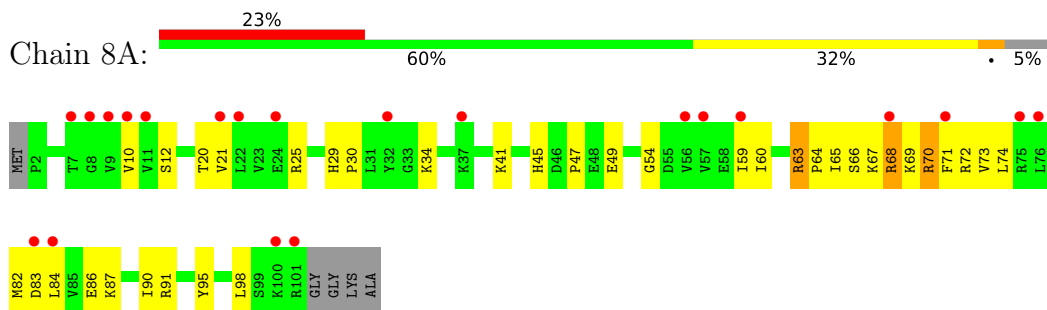
- Molecule 16: 30S ribosomal protein S16



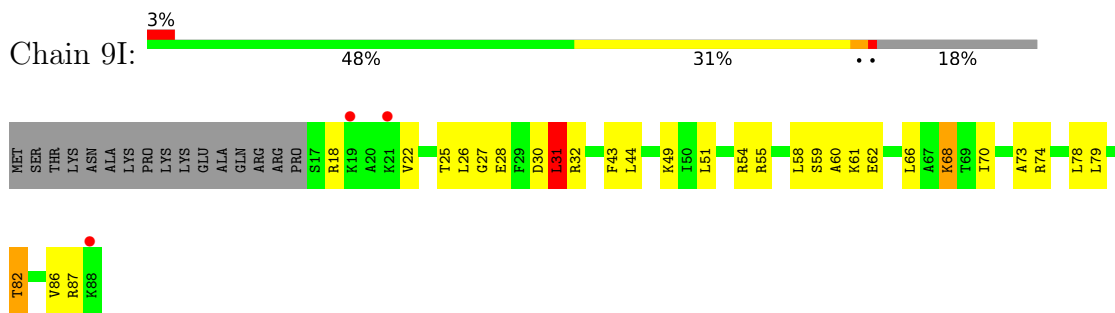
- Molecule 17: 30S ribosomal protein S17



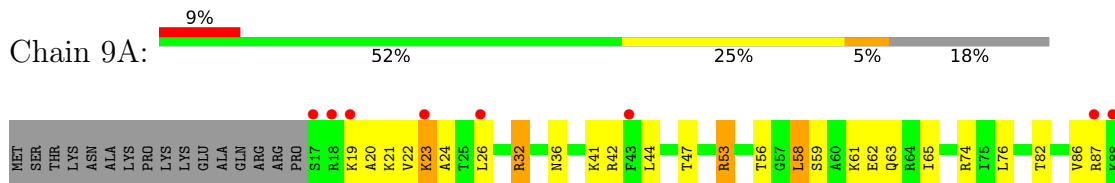
- Molecule 17: 30S ribosomal protein S17



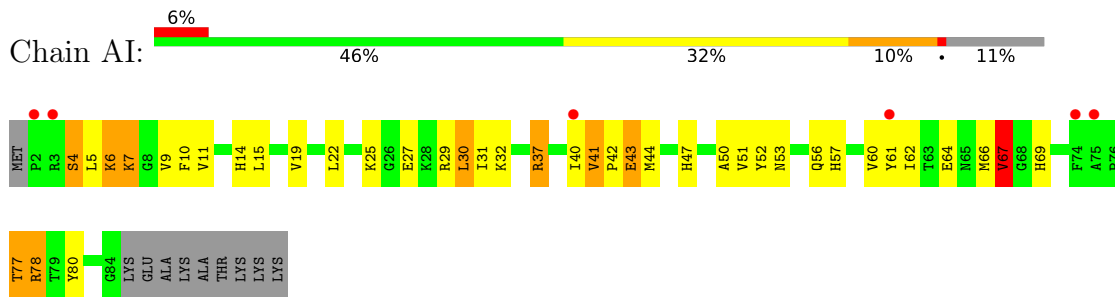
- Molecule 18: 30S ribosomal protein S18



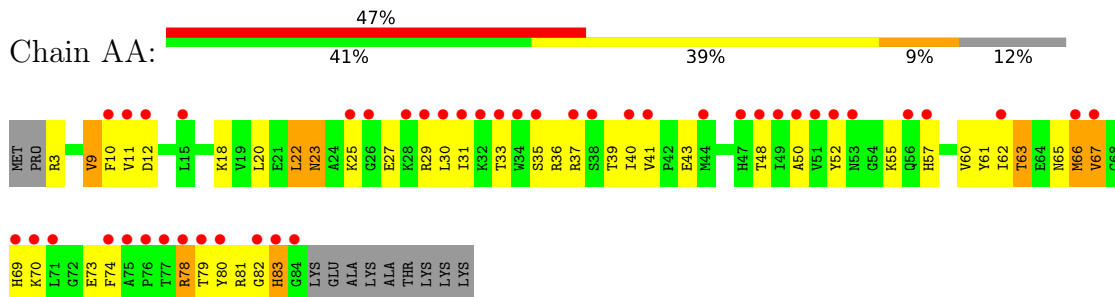
• Molecule 18: 30S ribosomal protein S18



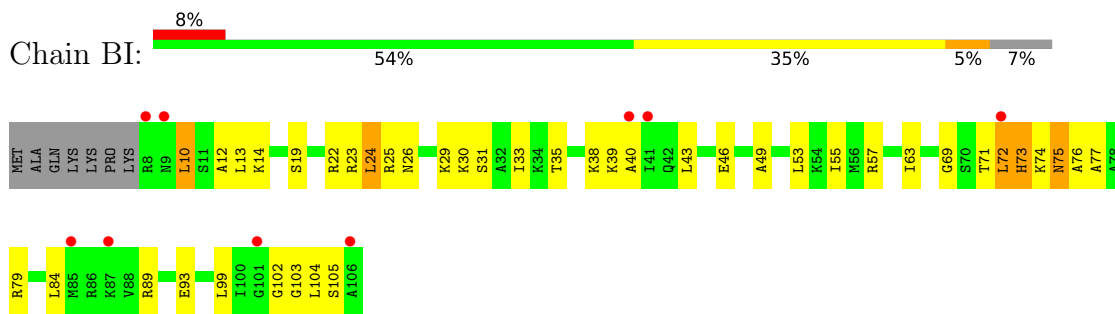
• Molecule 19: 30S ribosomal protein S19



• Molecule 19: 30S ribosomal protein S19

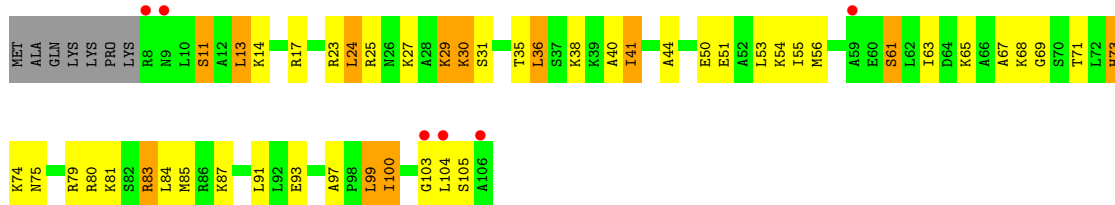


• Molecule 20: 30S ribosomal protein S20



• Molecule 20: 30S ribosomal protein S20

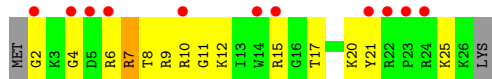
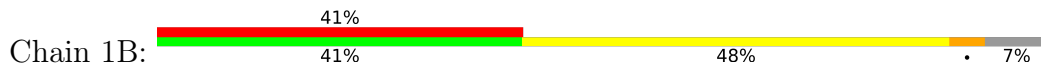




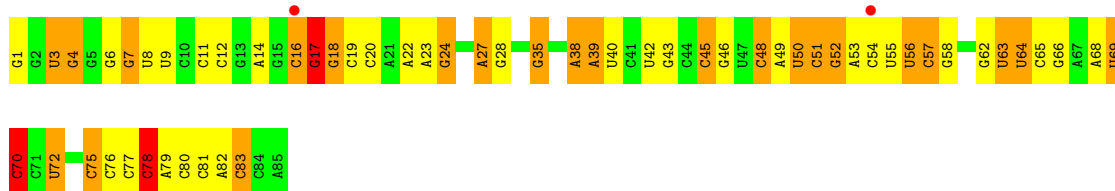
• Molecule 21: 30S ribosomal protein Thx



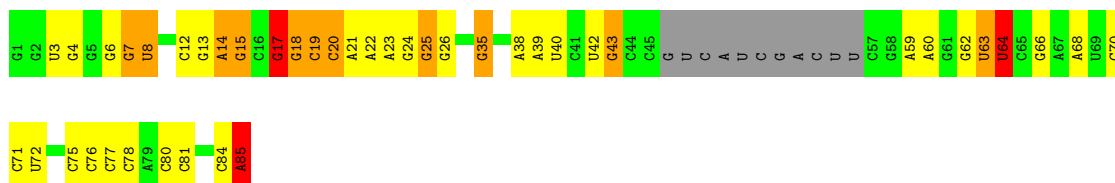
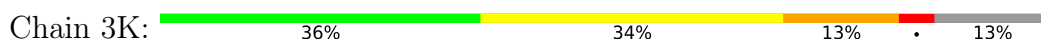
• Molecule 21: 30S ribosomal protein Thx



• Molecule 22: tRNA-Tyr



• Molecule 22: tRNA-Tyr

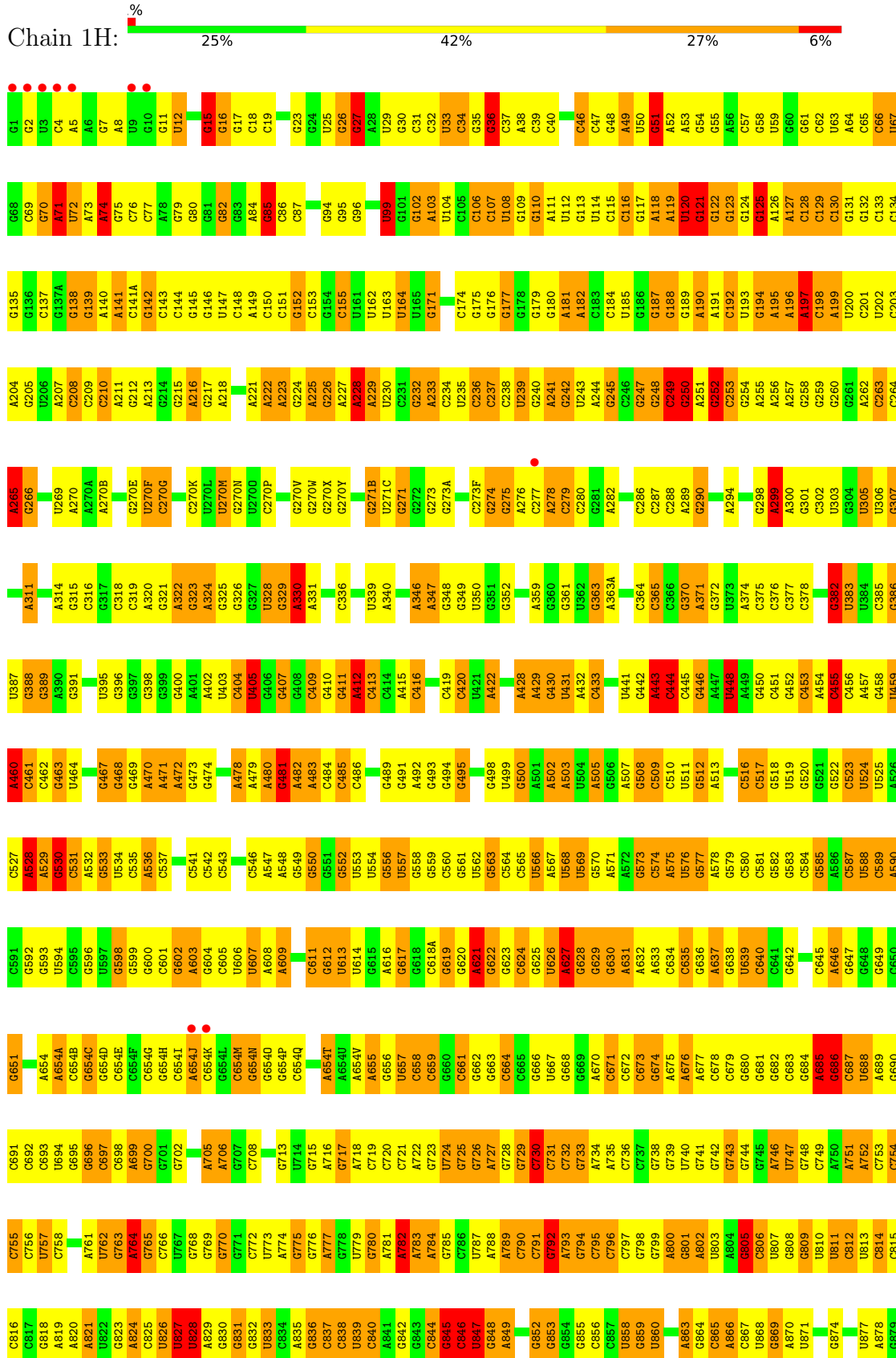


• Molecule 22: tRNA-Tyr



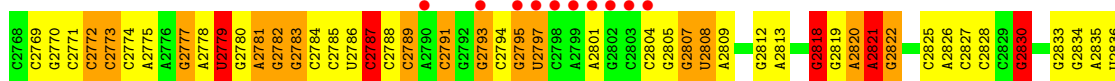


• Molecule 25: 23S ribosomal RNA

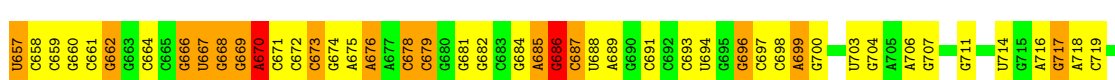
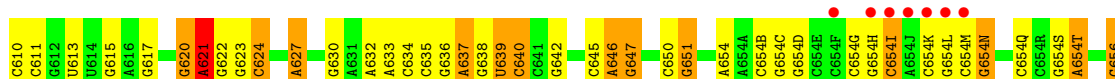
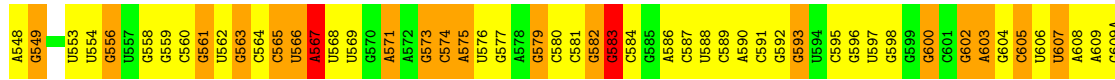
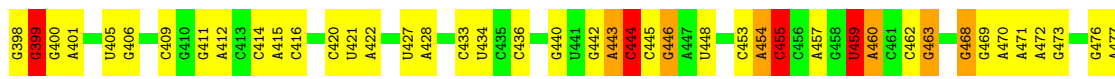
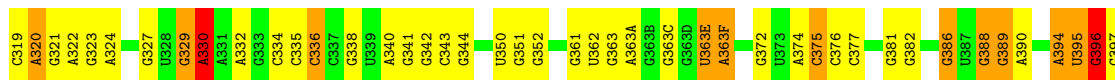
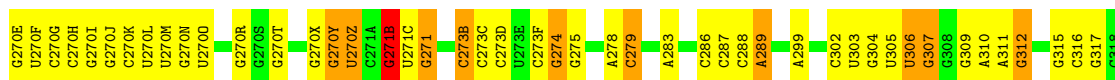
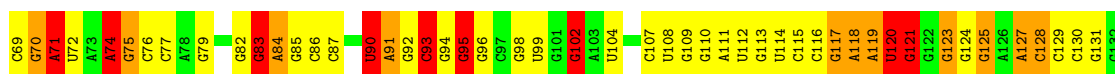
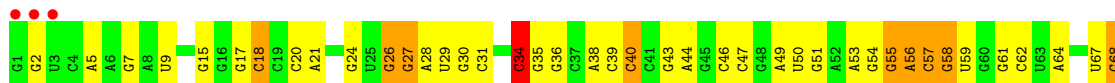


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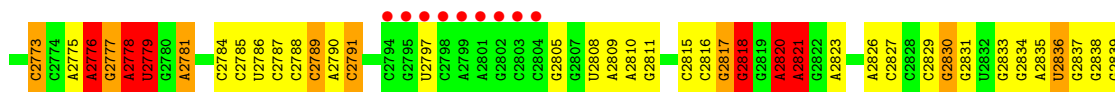
● Molecule 25: 23S ribosomal RNA



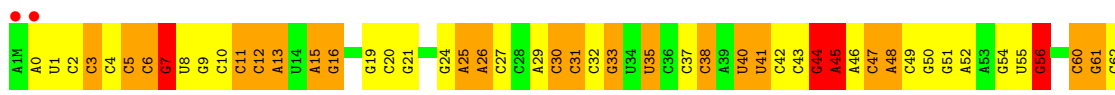
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U1723	A1653	A1582	U1510	U1369	U1310	G1248	U1168	U1097	A1029	C967	G836	G836
G1724	G1654	A1583	U1511	G1370	G1311	U1249	G1169	A1098	U1030	C968	C837	C837
U1725	U1655	A1584	G1512	U1371	U1312	G1250	U1170	G1099	G1031	U969	U839	U839
G1726	C1656	A1585	U1513	G1372	G1313	C1251	G1171	U1100	A1032	U970	G842	G842
U1727	A1657	A1586	G1514	U1373	U1314	A1252	U1172	U1101	U1035	C971	G843	G843
G1728	U1658	A1587	U1515	A1374	G1315	U1253	G1173	G1102	U1036	G972	G844	G844
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G1730	U1660	A1589	U1517	U1376	U1317	U1255	U1175	C1104	U1037	A909	G846	G846
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G1732	A1662	A1591	U1519	U1378	U1319	U1257	U1177	G1106	C1040	C975	C912	C912
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U1710	U1642	A1571	G1501	G1359	U1300	G1228	A1155	A1088	U1019	C955	U826	U826
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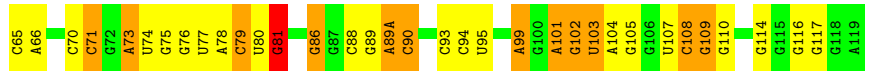




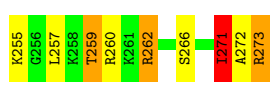
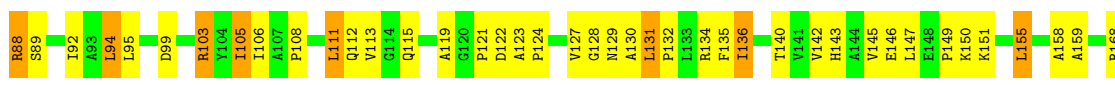
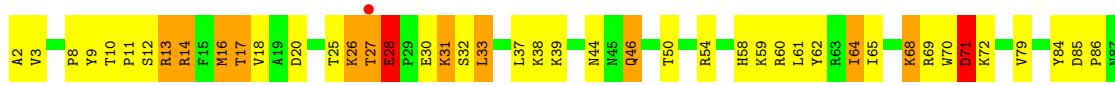
• Molecule 26: 5S ribosomal RNA



• Molecule 26: 5S ribosomal RNA

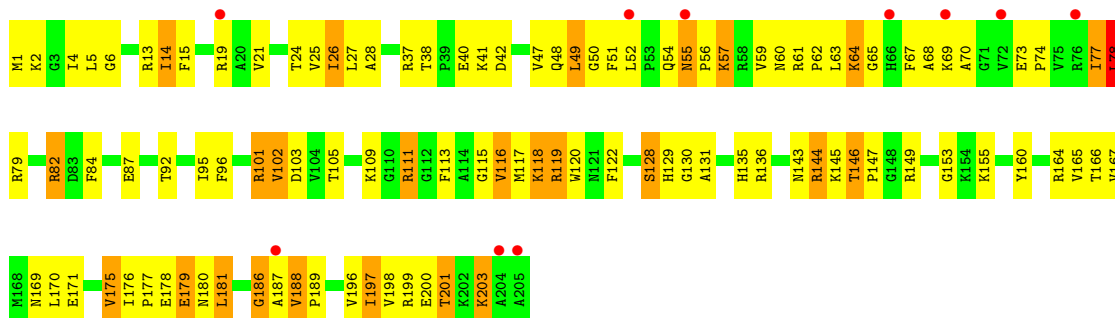


• Molecule 27: 50S ribosomal protein L2

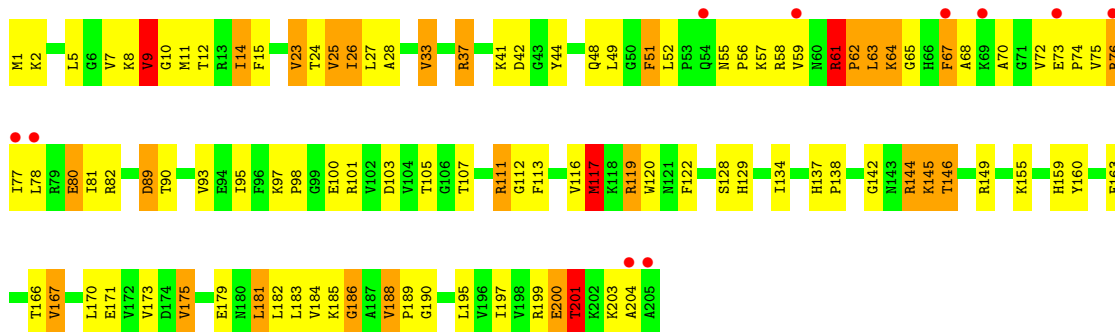


• Molecule 28: 50S ribosomal protein L3

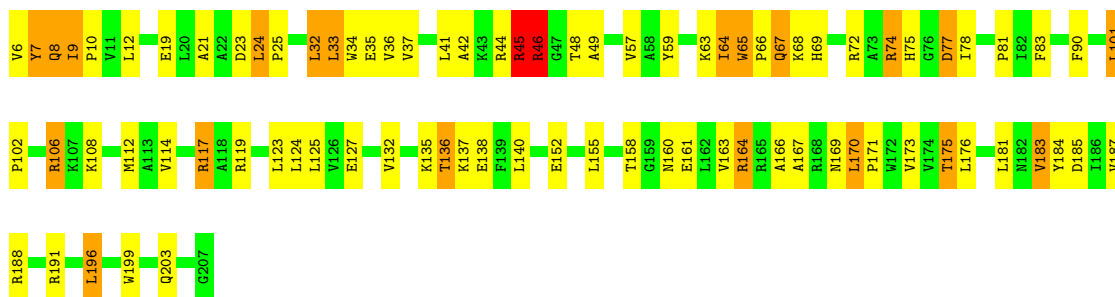




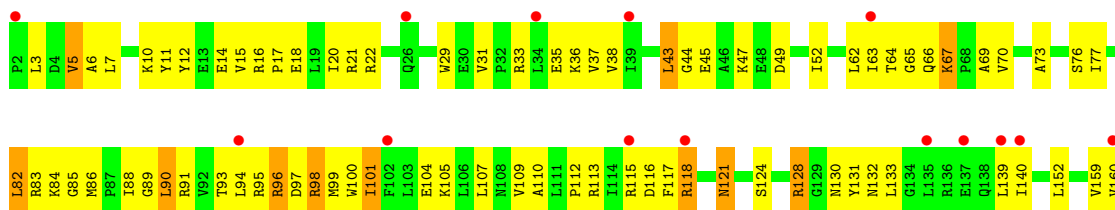
- Molecule 28: 50S ribosomal protein L3

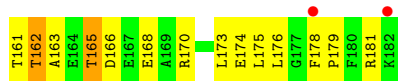


- Molecule 29: 50S ribosomal protein L4

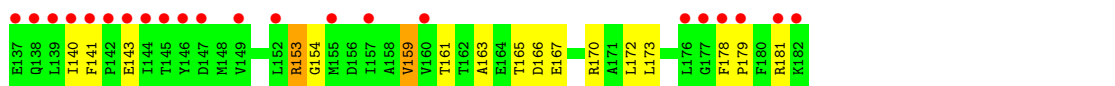
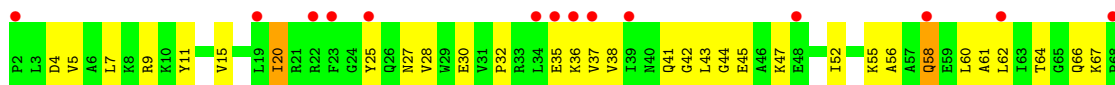


- Molecule 30: 50S ribosomal protein L5





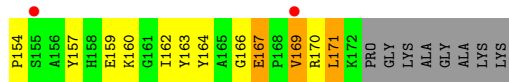
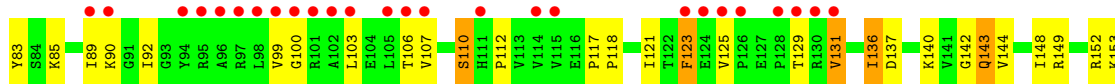
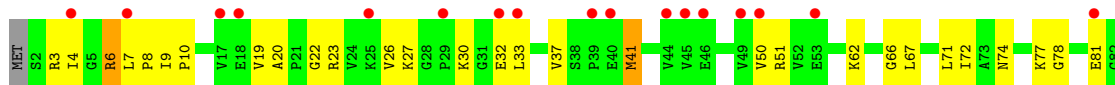
- Molecule 30: 50S ribosomal protein L5



- Molecule 31: 50S ribosomal protein L6

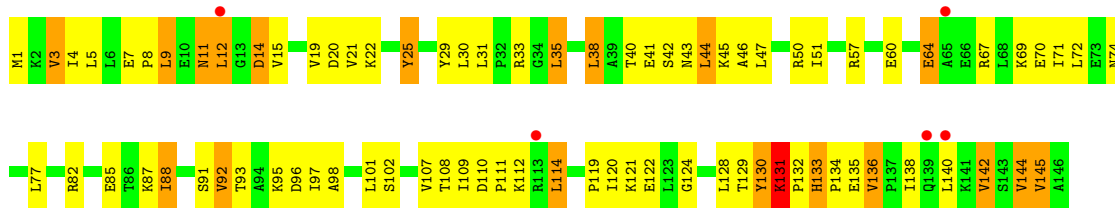


- Molecule 31: 50S ribosomal protein L6

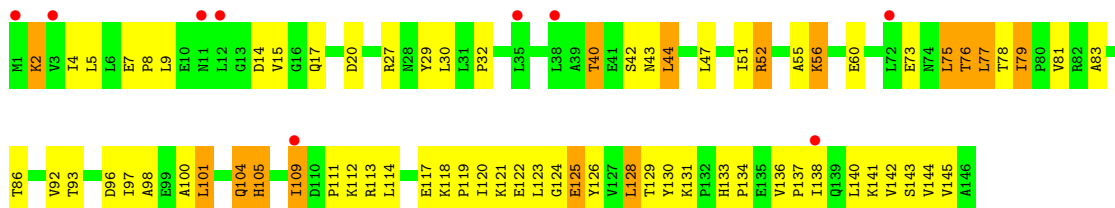


- Molecule 32: 50S ribosomal protein L9

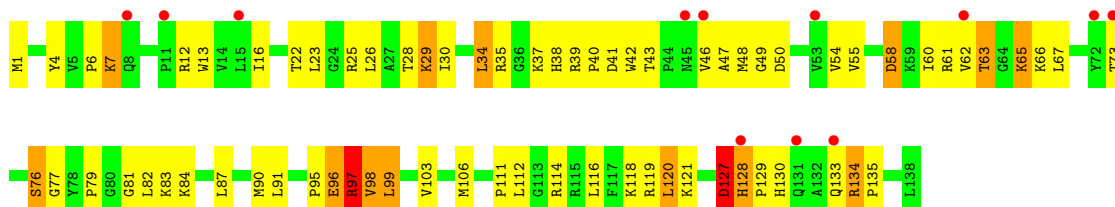




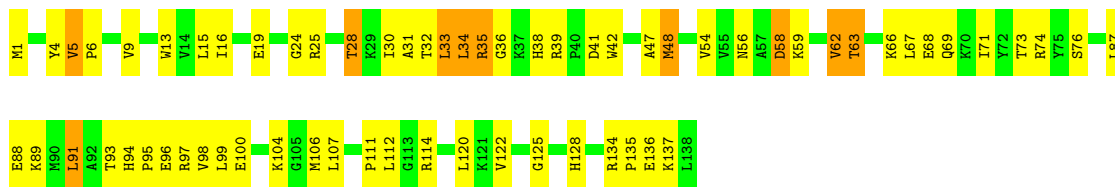
• Molecule 32: 50S ribosomal protein L9



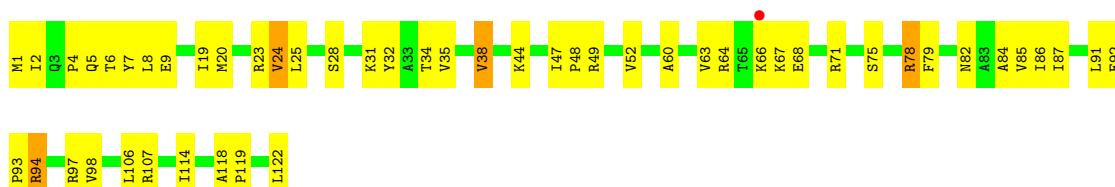
• Molecule 33: 50S ribosomal protein L13



• Molecule 33: 50S ribosomal protein L13

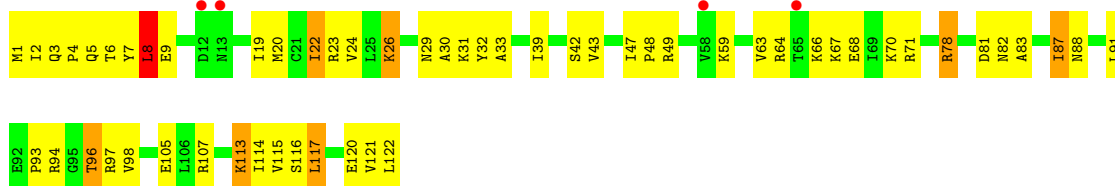


• Molecule 34: 50S ribosomal protein L14



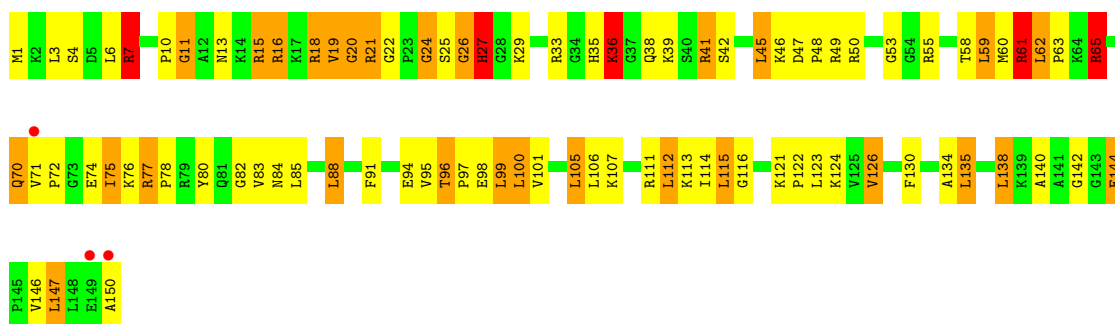
- Molecule 34: 50S ribosomal protein L14

Chain 25: 



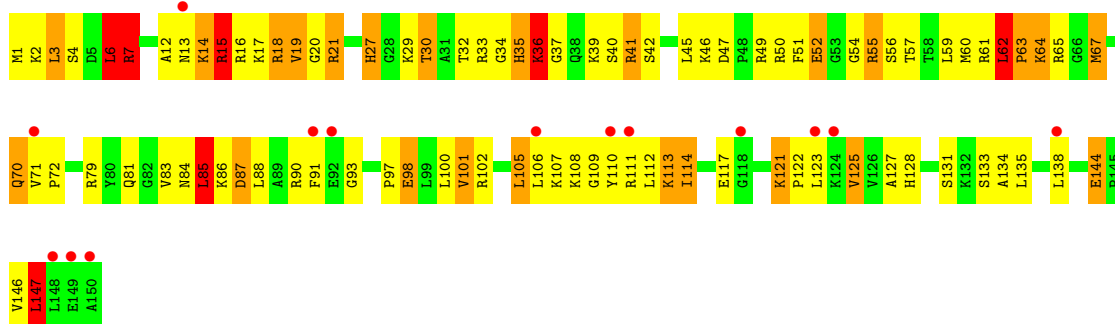
- Molecule 35: 50S ribosomal protein L15

Chain 78: 



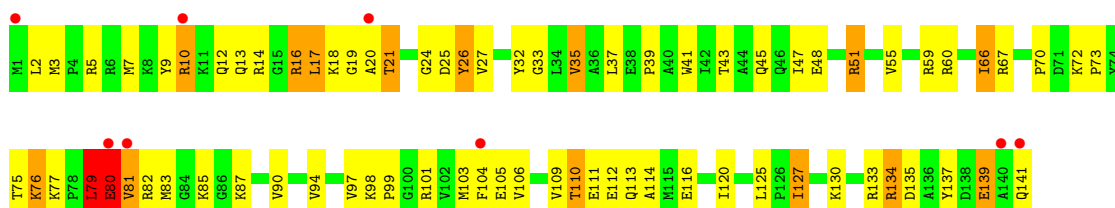
- Molecule 35: 50S ribosomal protein L15

Chain 35: 

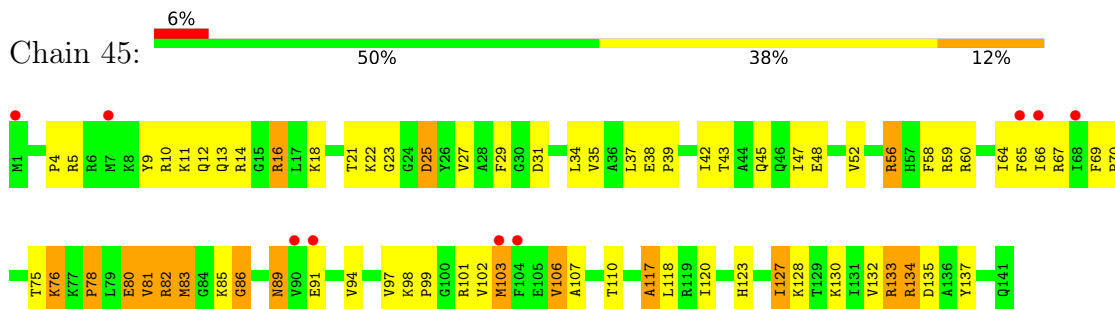


- Molecule 36: 50S ribosomal protein L16

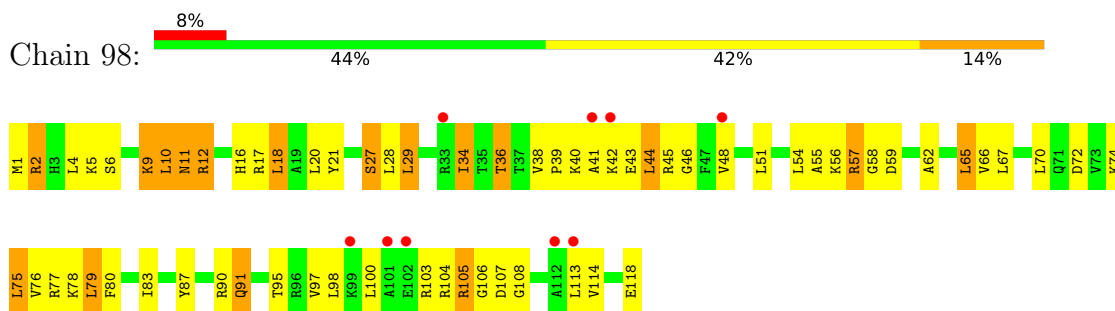
Chain 88: 



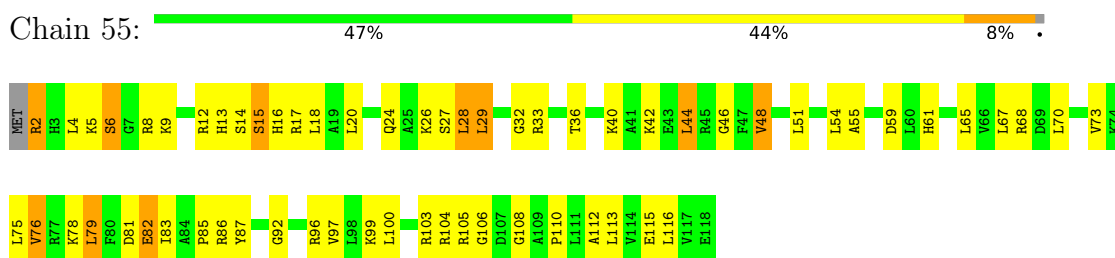
- Molecule 36: 50S ribosomal protein L16



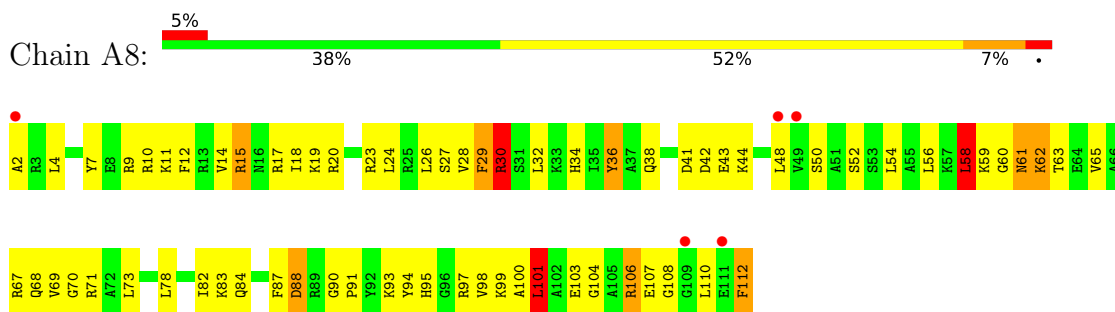
- Molecule 37: 50S ribosomal protein L17



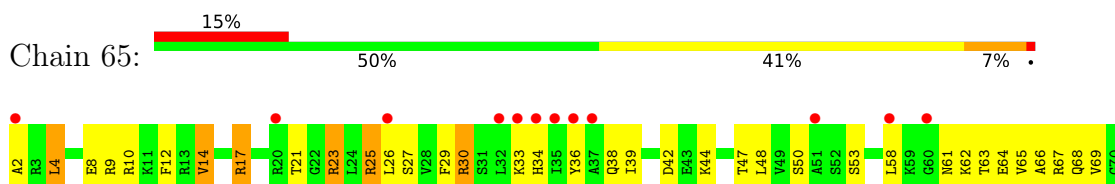
- Molecule 37: 50S ribosomal protein L17

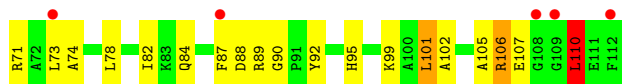


- Molecule 38: 50S ribosomal protein L18



- Molecule 38: 50S ribosomal protein L18

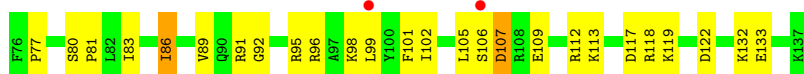




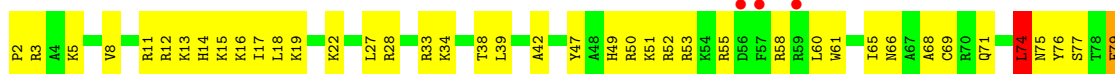
- Molecule 39: 50S ribosomal protein L19



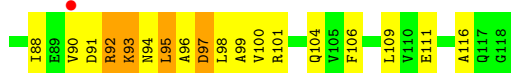
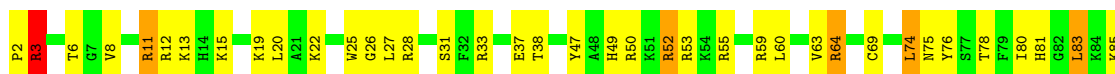
- Molecule 39: 50S ribosomal protein L19



- Molecule 40: 50S ribosomal protein L20

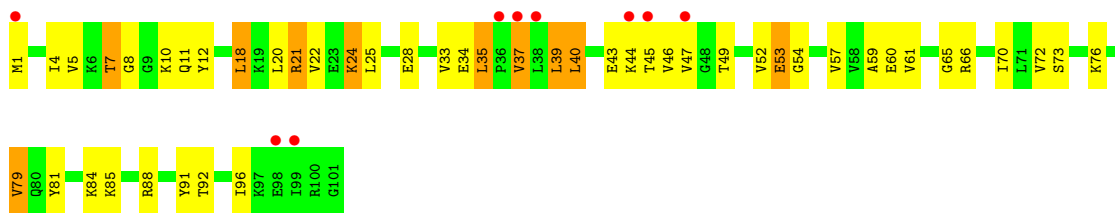


- Molecule 40: 50S ribosomal protein L20



- Molecule 41: 50S ribosomal protein L21

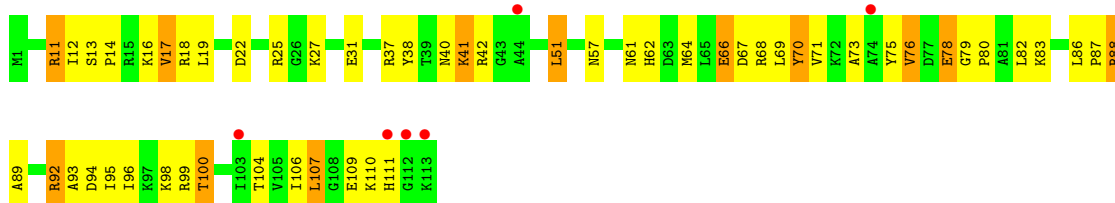




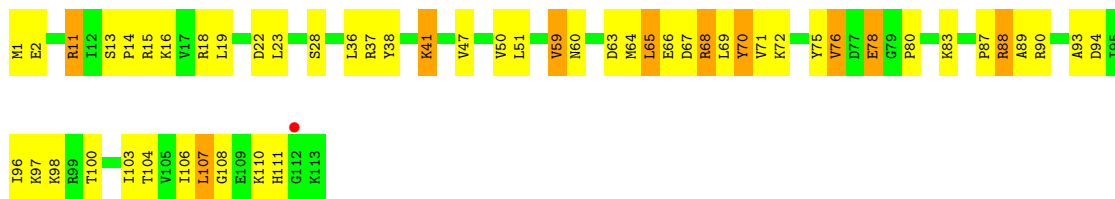
• Molecule 41: 50S ribosomal protein L21



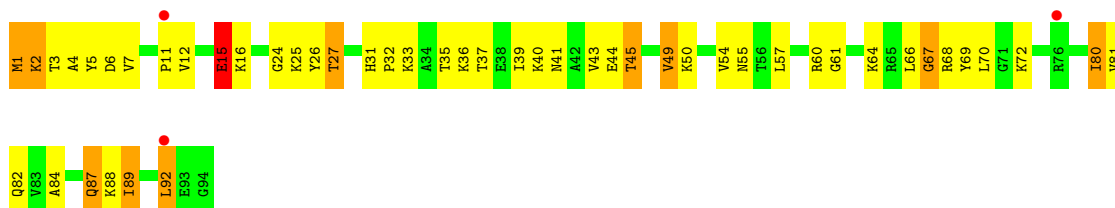
• Molecule 42: 50S ribosomal protein L22



• Molecule 42: 50S ribosomal protein L22

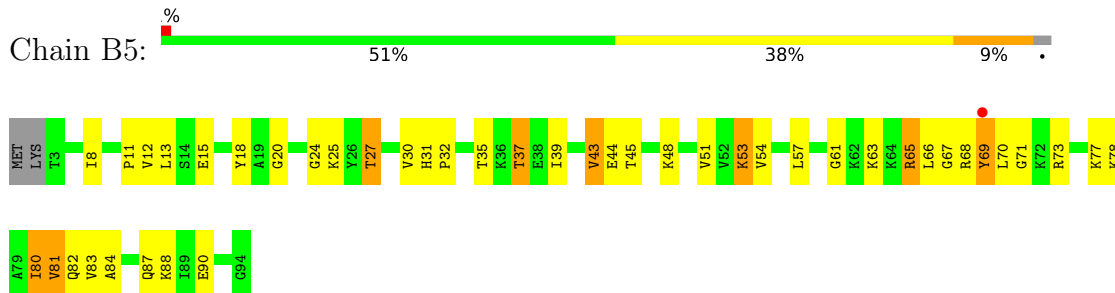


• Molecule 43: 50S ribosomal protein L23

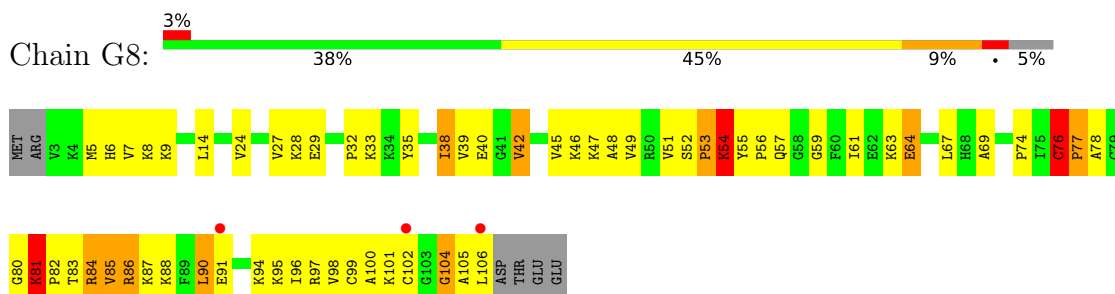




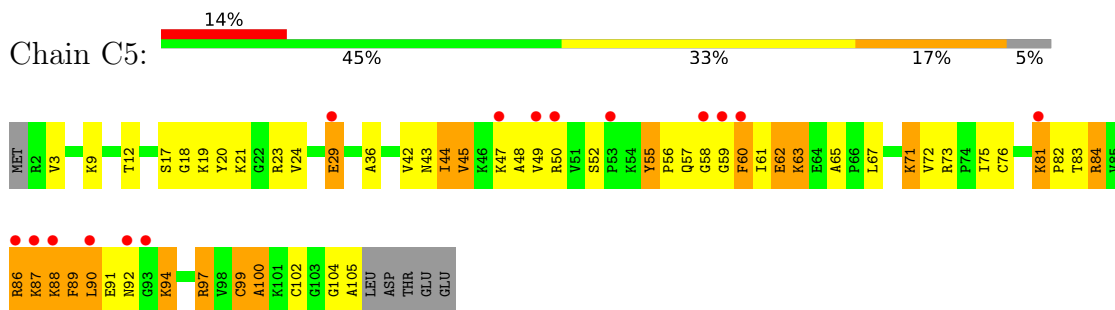
- Molecule 43: 50S ribosomal protein L23



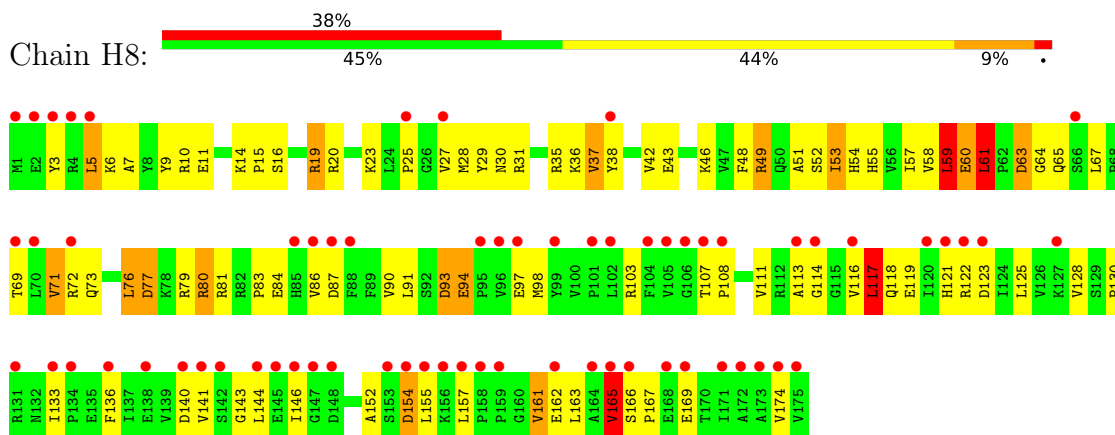
- Molecule 44: 50S ribosomal protein L24



- Molecule 44: 50S ribosomal protein L24

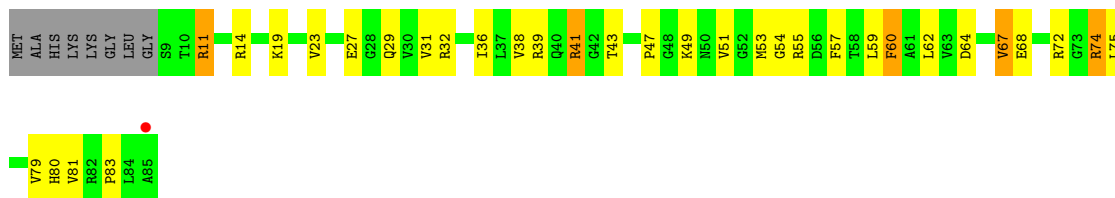


- Molecule 45: 50S ribosomal protein L25

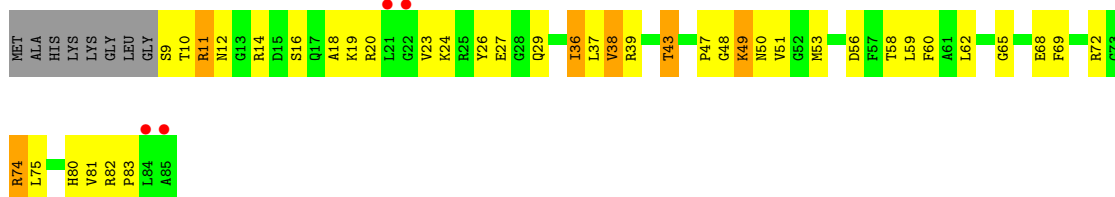
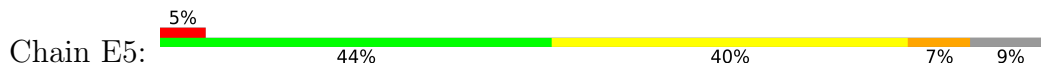


- Molecule 46: 50S ribosomal protein L27

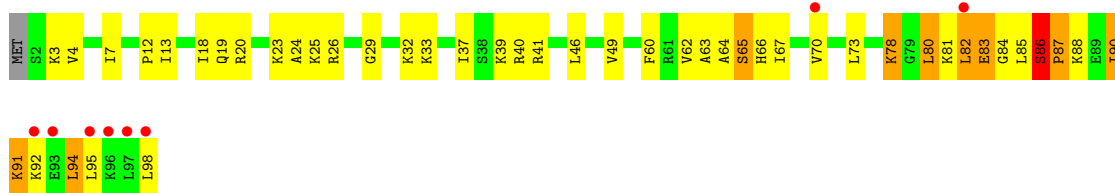




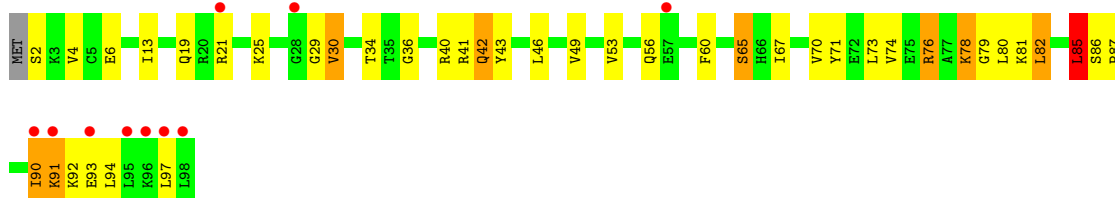
• Molecule 46: 50S ribosomal protein L27



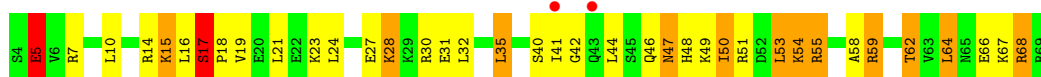
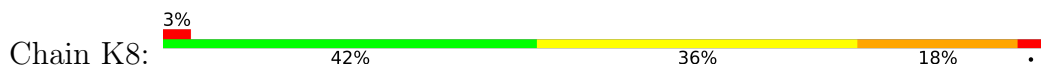
• Molecule 47: 50S ribosomal protein L28



• Molecule 47: 50S ribosomal protein L28



• Molecule 48: 50S ribosomal protein L29



• Molecule 48: 50S ribosomal protein L29





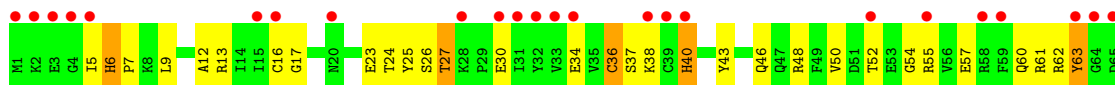
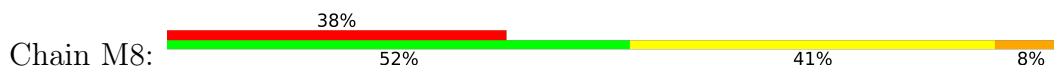
• Molecule 49: 50S ribosomal protein L30



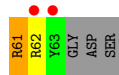
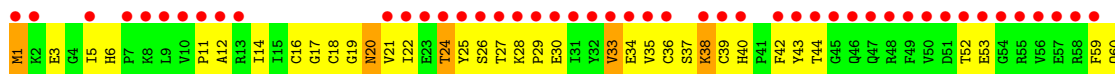
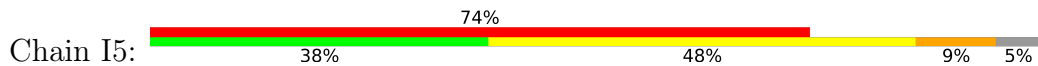
• Molecule 49: 50S ribosomal protein L30



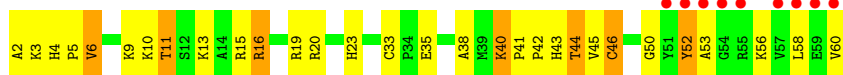
• Molecule 50: 50S ribosomal protein L31



• Molecule 50: 50S ribosomal protein L31



• Molecule 51: 50S ribosomal protein L32

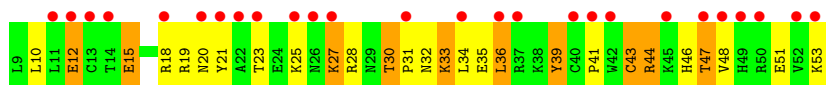
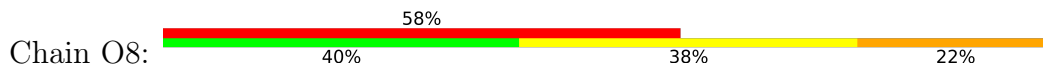


• Molecule 51: 50S ribosomal protein L32

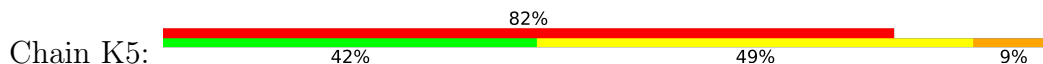




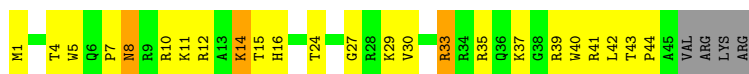
• Molecule 52: 50S ribosomal protein L33



• Molecule 52: 50S ribosomal protein L33



• Molecule 53: 50S ribosomal protein L34



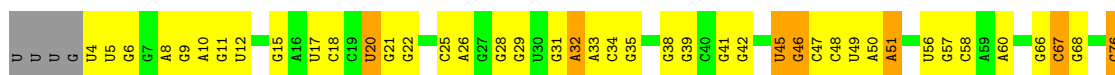
• Molecule 53: 50S ribosomal protein L34



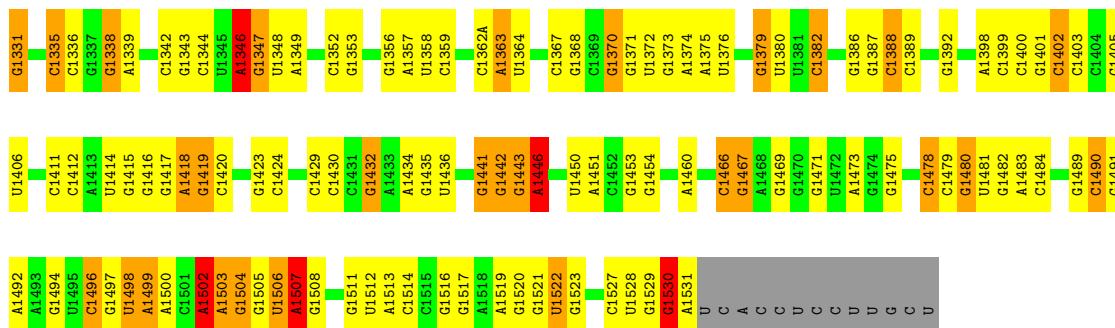
• Molecule 54: 50S ribosomal protein L35



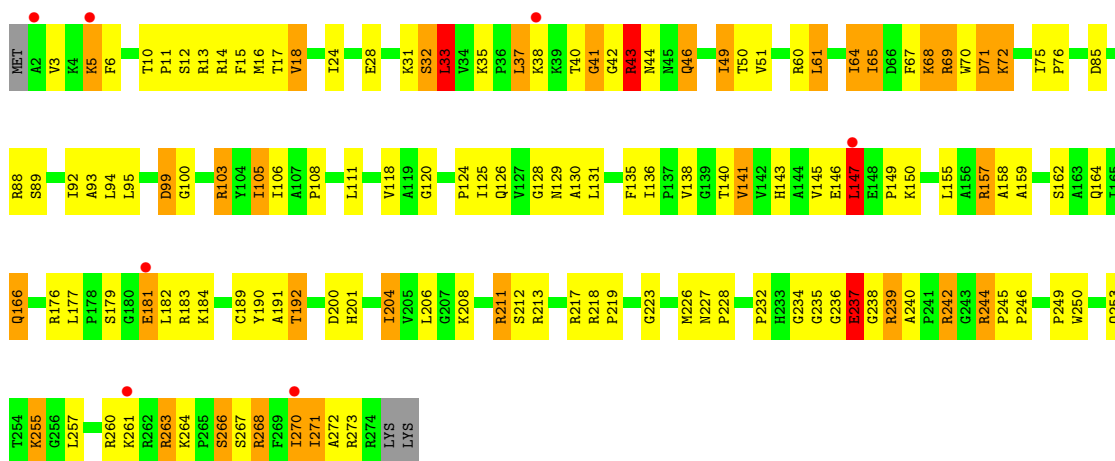
• Molecule 55: 16S ribosomal RNA



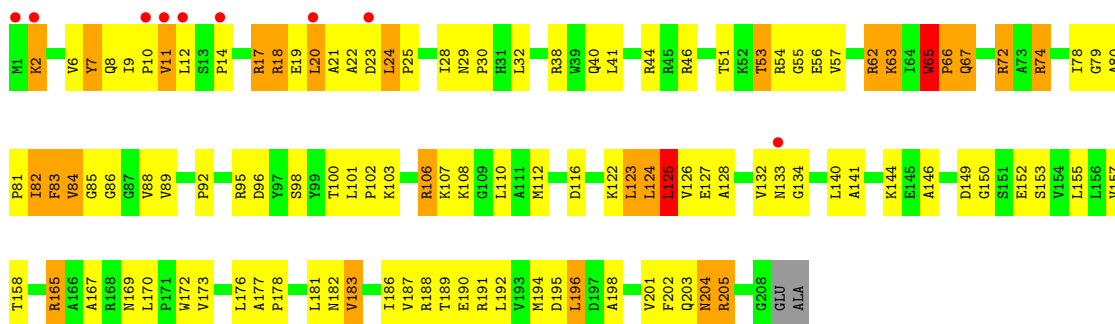




• Molecule 56: 50S ribosomal protein L2

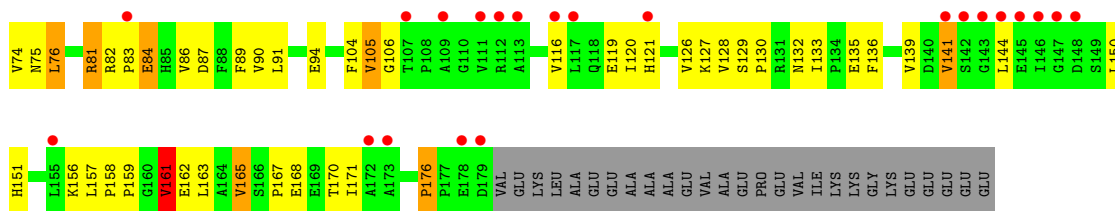


• Molecule 57: 50S ribosomal protein L4



• Molecule 58: 50S ribosomal protein L25





• Molecule 59: 50S ribosomal protein L35



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	209.90Å 448.70Å 618.50Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	151.80 – 3.10 187.34 – 3.10	Depositor EDS
% Data completeness (in resolution range)	99.9 (151.80-3.10) 94.5 (187.34-3.10)	Depositor EDS
$R_{merge}$	0.41	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.08 (at 3.07Å)	Xtrriage
Refinement program	PHENIX	Depositor
R, $R_{free}$	0.188 , 0.235 0.189 , 0.235	Depositor DCC
$R_{free}$ test set	2000 reflections (0.19%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	78.6	Xtrriage
Anisotropy	0.285	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.28 , 77.2	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.44$ , $\langle L^2 \rangle = 0.27$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.94	EDS
Total number of atoms	299951	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	105.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.43% of the height of the origin peak. No significant pseudotranslation is detected.*

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

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.



## 5 Model quality i

### 5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: 5MU, H2U, ZN, MG, 4SU, QUO, OMC, PSU, MIA, OMG

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 5$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z  > 5$	RMSZ	# $ Z  > 5$
1	13	0.83	25/36053 (0.1%)	1.49	573/56270 (1.0%)
2	12	0.34	0/1959	0.57	0/2642
2	1E	0.42	0/1959	0.65	4/2642 (0.2%)
3	22	0.37	0/1636	0.56	0/2205
3	2E	0.49	0/1629	0.68	1/2195 (0.0%)
4	32	0.46	0/1732	0.66	0/2318
4	3E	0.61	2/1732 (0.1%)	0.73	1/2318 (0.0%)
5	42	0.43	0/1171	0.67	0/1576
5	4E	0.58	0/1171	0.75	1/1576 (0.1%)
6	52	0.54	0/855	0.68	0/1154
6	5E	0.54	0/855	0.75	0/1154
7	62	0.41	0/1275	0.58	0/1709
7	6E	0.46	0/1275	0.59	0/1709
8	72	0.42	0/1135	0.59	0/1527
8	7E	0.52	0/1135	0.70	0/1527
9	82	0.38	0/1028	0.60	0/1379
9	8E	0.41	0/1028	0.66	0/1379
10	1A	0.35	0/814	0.59	0/1095
10	1I	0.43	0/814	0.61	0/1095
11	2A	0.47	0/899	0.67	0/1213
11	2I	0.54	0/899	0.76	1/1213 (0.1%)
12	3A	0.52	0/991	0.78	2/1327 (0.2%)
12	3I	0.73	0/991	0.88	0/1327
13	4A	0.38	0/943	0.59	0/1265
13	4I	0.48	0/938	0.73	0/1258
14	5A	0.42	0/484	0.73	0/643
14	5I	0.63	0/507	0.88	1/672 (0.1%)
15	6A	0.48	0/744	0.63	0/992
15	6I	0.57	0/744	0.75	1/992 (0.1%)
16	7A	0.51	0/721	0.69	0/970
16	7I	0.48	0/721	0.74	0/970
17	8A	0.49	0/847	0.63	0/1131

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	8I	0.53	0/847	0.75	0/1131
18	9A	0.49	0/595	0.71	0/790
18	9I	0.50	0/595	0.71	1/790 (0.1%)
19	AA	0.37	0/654	0.61	0/884
19	AI	0.48	0/680	0.75	0/915
20	BA	0.47	0/764	0.73	1/1007 (0.1%)
20	BI	0.40	0/764	0.69	1/1007 (0.1%)
21	1B	0.43	0/221	0.66	0/288
21	1F	0.40	0/221	0.58	0/288
22	1K	0.44	0/1851	1.06	7/2877 (0.2%)
22	1L	0.38	0/1594	0.92	3/2475 (0.1%)
22	3K	0.46	0/1594	0.98	1/2475 (0.0%)
22	3L	0.41	0/1616	0.92	1/2509 (0.0%)
23	2K	0.94	1/1725 (0.1%)	1.60	30/2689 (1.1%)
23	2L	0.76	1/1725 (0.1%)	1.35	10/2689 (0.4%)
24	4K	0.87	0/366	1.25	1/568 (0.2%)
24	4L	0.60	0/391	1.19	2/607 (0.3%)
25	14	0.97	94/70119 (0.1%)	1.69	1912/109464 (1.7%)
25	1H	1.16	199/70233 (0.3%)	1.94	3139/109643 (2.9%)
26	16	0.91	0/2928	1.65	54/4568 (1.2%)
26	1J	0.78	0/2928	1.48	38/4568 (0.8%)
27	11	0.87	1/2165 (0.0%)	1.03	6/2919 (0.2%)
28	21	0.68	0/1601	0.93	1/2160 (0.0%)
28	29	0.66	0/1601	0.89	1/2160 (0.0%)
29	31	0.79	3/1620 (0.2%)	0.93	6/2194 (0.3%)
30	41	0.52	0/1498	0.73	0/2016
30	49	0.40	0/1498	0.66	0/2016
31	51	0.58	0/1362	0.87	1/1841 (0.1%)
31	59	0.34	0/1341	0.59	0/1813
32	61	0.49	0/1151	0.75	2/1558 (0.1%)
32	69	0.47	0/1151	0.71	1/1558 (0.1%)
33	15	0.48	0/1131	0.67	0/1525
33	58	0.60	0/1131	0.82	0/1525
34	25	0.65	0/942	0.80	1/1269 (0.1%)
34	68	0.70	0/942	0.78	0/1269
35	35	0.64	0/1161	1.05	4/1544 (0.3%)
35	78	0.75	0/1161	1.10	6/1544 (0.4%)
36	45	0.65	1/1142 (0.1%)	0.88	2/1527 (0.1%)
36	88	0.84	1/1142 (0.1%)	1.03	3/1527 (0.2%)
37	55	0.65	0/973	0.84	0/1302
37	98	0.69	0/981	0.92	1/1312 (0.1%)
38	65	0.55	0/891	0.84	2/1187 (0.2%)
38	A8	0.62	0/891	0.93	4/1187 (0.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
39	75	0.61	0/1155	0.79	2/1542 (0.1%)
39	B8	0.65	0/1147	0.83	1/1532 (0.1%)
40	85	0.62	0/981	0.81	2/1306 (0.2%)
40	C8	0.72	0/981	0.96	3/1306 (0.2%)
41	95	0.58	0/789	0.81	0/1057
41	D8	0.64	0/789	0.82	1/1057 (0.1%)
42	A5	0.69	0/910	0.85	0/1220
42	E8	0.73	0/910	0.93	1/1220 (0.1%)
43	B5	0.75	0/739	0.81	0/993
43	F8	0.89	2/756 (0.3%)	0.96	1/1014 (0.1%)
44	C5	0.55	0/807	0.79	0/1076
44	G8	0.71	0/804	1.02	3/1073 (0.3%)
45	H8	0.48	0/1427	0.78	1/1935 (0.1%)
46	E5	0.68	0/620	0.90	0/827
46	I8	0.80	0/620	0.96	0/827
47	F5	0.64	0/769	0.93	1/1022 (0.1%)
47	J8	0.72	0/769	0.94	2/1022 (0.2%)
48	G5	0.58	0/560	0.81	1/741 (0.1%)
48	K8	0.82	2/560 (0.4%)	0.94	1/741 (0.1%)
49	H5	0.50	0/473	0.67	0/635
49	L8	0.64	0/473	0.78	0/635
50	I5	0.36	0/527	0.67	0/709
50	M8	0.38	0/545	0.62	0/733
51	J5	0.64	0/467	0.84	1/632 (0.2%)
51	N8	0.66	0/472	0.86	0/639
52	K5	0.46	0/396	0.78	0/529
52	O8	0.61	0/396	0.80	1/529 (0.2%)
53	L5	0.74	0/399	0.92	0/526
53	P8	0.99	0/399	1.07	2/526 (0.4%)
54	Q8	1.16	0/448	1.48	5/600 (0.8%)
55	1G	0.71	4/36049 (0.0%)	1.33	281/56262 (0.5%)
56	19	0.75	0/2170	0.96	5/2926 (0.2%)
57	39	0.63	1/1662 (0.1%)	0.87	2/2249 (0.1%)
58	D5	0.38	0/1460	0.62	0/1982
59	M5	0.74	0/486	1.13	2/638 (0.3%)
All	All	0.87	337/322487 (0.1%)	1.49	6146/482889 (1.3%)

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
4	3E	0	1
10	1A	0	1
12	3I	0	1
13	4I	0	1
14	5A	0	1
14	5I	0	1
19	AI	0	2
20	BA	0	1
27	11	0	3
28	21	0	4
28	29	0	5
30	41	0	1
31	51	0	1
31	59	0	1
32	61	0	4
32	69	0	1
33	58	0	1
35	35	0	3
35	78	0	6
36	45	0	3
36	88	0	2
37	98	0	1
39	75	0	1
39	B8	0	1
40	85	0	1
40	C8	0	2
41	95	0	1
43	B5	0	1
44	C5	0	2
44	G8	0	4
45	H8	0	3
47	F5	0	1
48	G5	0	3
48	K8	0	1
50	M8	0	1
52	K5	0	1
54	Q8	0	6
56	19	0	4
57	39	0	1
59	M5	0	3
All	All	0	82

All (337) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	1H	1614	A	N9-C4	-12.72	1.30	1.37
25	1H	2430	A	N9-C4	-12.06	1.30	1.37
1	13	792	A	N9-C4	-11.71	1.30	1.37
25	1H	774	A	N9-C4	-11.62	1.30	1.37
25	1H	71	A	N9-C4	-11.59	1.30	1.37
25	14	774	A	N9-C4	-11.06	1.31	1.37
25	1H	1698	A	N9-C4	-10.99	1.31	1.37
25	1H	2287	A	N9-C4	-10.63	1.31	1.37
25	14	783	A	N9-C4	-10.43	1.31	1.37
25	1H	2346	A	N3-C4	-10.30	1.28	1.34
25	1H	945	A	N7-C5	-10.29	1.33	1.39
25	1H	1786	A	N3-C4	-10.13	1.28	1.34
25	1H	1142(A)	A	N9-C4	-9.63	1.32	1.37
25	14	1332	G	N9-C4	-9.42	1.30	1.38
25	1H	1899	G	N9-C4	-9.39	1.30	1.38
25	1H	1698	A	N3-C4	-9.34	1.29	1.34
25	1H	197	A	N3-C4	-9.23	1.29	1.34
25	1H	1021	A	N9-C4	-9.14	1.32	1.37
25	1H	783	A	C5-C6	-9.14	1.32	1.41
25	14	1786	A	N9-C4	-9.09	1.32	1.37
25	1H	676	A	N9-C4	-9.04	1.32	1.37
25	1H	138	G	N9-C8	9.00	1.44	1.37
25	1H	1332	G	N9-C4	-8.82	1.30	1.38
25	14	2287	A	N9-C4	-8.80	1.32	1.37
25	1H	1698	A	C5-C6	-8.75	1.33	1.41
25	1H	676	A	N9-C8	8.74	1.44	1.37
25	1H	1616	A	N9-C4	-8.67	1.32	1.37
25	1H	2713	A	N9-C4	-8.55	1.32	1.37
25	1H	528	A	N9-C4	-8.55	1.32	1.37
4	3E	9	CYS	CB-SG	8.49	1.96	1.82
1	13	792	A	C5-C6	-8.47	1.33	1.41
25	1H	2346	A	N9-C4	-8.43	1.32	1.37
25	1H	1899	G	N9-C8	8.41	1.43	1.37
25	1H	783	A	N7-C5	-8.37	1.34	1.39
25	14	2518	A	N9-C4	-8.30	1.32	1.37
25	1H	74	A	N9-C4	-8.24	1.32	1.37
25	1H	1786	A	N7-C5	-8.24	1.34	1.39
25	14	783	A	N3-C4	-8.18	1.29	1.34
25	1H	1786	A	N9-C4	-8.17	1.32	1.37
25	1H	2490	G	N9-C8	8.14	1.43	1.37
29	31	65	TRP	NE1-CE2	-8.13	1.26	1.37
25	1H	1950	G	N7-C5	-8.04	1.34	1.39
25	1H	676	A	C5-C4	8.03	1.44	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	14	1678	G	N9-C4	-7.93	1.31	1.38
25	1H	783	A	N9-C4	-7.92	1.33	1.37
25	14	2346	A	N3-C4	-7.88	1.30	1.34
25	1H	621	A	N9-C4	-7.87	1.33	1.37
25	1H	1899	G	C2-N3	-7.84	1.26	1.32
25	1H	783	A	N3-C4	-7.78	1.30	1.34
25	1H	821	A	N7-C5	-7.68	1.34	1.39
25	14	783	A	C5-C6	-7.65	1.34	1.41
25	1H	1823	G	C6-N1	-7.54	1.34	1.39
25	14	783	A	N7-C5	-7.50	1.34	1.39
25	1H	917	A	C5-C6	-7.48	1.34	1.41
25	1H	960	A	N9-C4	-7.36	1.33	1.37
1	13	810	C	N1-C6	-7.36	1.32	1.37
25	1H	1616	A	C5-C6	-7.34	1.34	1.41
4	3E	12	CYS	CB-SG	7.28	1.94	1.82
25	14	676	A	N9-C4	-7.27	1.33	1.37
25	1H	682	G	C5-C4	-7.25	1.33	1.38
25	1H	1786	A	C5-C6	-7.24	1.34	1.41
25	1H	1969	A	N7-C5	-7.21	1.34	1.39
25	1H	860	U	N1-C2	7.18	1.45	1.38
25	1H	774	A	N9-C8	7.18	1.43	1.37
25	1H	2392	A	N9-C4	-7.14	1.33	1.37
25	1H	2051	A	N7-C5	-7.08	1.35	1.39
25	14	2713	A	N9-C4	-7.07	1.33	1.37
48	K8	5	GLU	CG-CD	7.06	1.62	1.51
25	14	676	A	N9-C8	7.05	1.43	1.37
25	14	74	A	N9-C4	-7.05	1.33	1.37
25	1H	2053	G	C5-C4	-6.93	1.33	1.38
25	1H	829	A	N9-C4	-6.91	1.33	1.37
25	14	621	A	N9-C4	-6.82	1.33	1.37
25	1H	2509	G	C5-C4	-6.81	1.33	1.38
25	1H	1616	A	N7-C5	-6.81	1.35	1.39
25	14	1379	A	N9-C4	-6.80	1.33	1.37
25	1H	71	A	N9-C8	6.79	1.43	1.37
25	14	788	A	N7-C5	-6.78	1.35	1.39
25	14	693	C	N3-C4	-6.75	1.29	1.33
25	1H	2442	C	N1-C6	-6.73	1.33	1.37
48	K8	5	GLU	CB-CG	6.72	1.65	1.52
25	1H	1698	A	N7-C5	-6.71	1.35	1.39
25	14	2346	A	N9-C4	-6.71	1.33	1.37
25	14	945	A	N3-C4	-6.70	1.30	1.34
25	14	945	A	N9-C4	-6.70	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	1H	2610	C	N1-C6	-6.70	1.33	1.37
23	2L	77	A	N9-C4	-6.68	1.33	1.37
25	1H	2277	G	N9-C8	-6.68	1.33	1.37
25	1H	1610	A	C5-C6	-6.67	1.35	1.41
25	1H	698	C	N1-C6	-6.66	1.33	1.37
25	1H	676	A	N3-C4	-6.66	1.30	1.34
25	14	1786	A	C5-C6	-6.66	1.35	1.41
25	14	528	A	N9-C4	-6.62	1.33	1.37
25	1H	695	G	C6-N1	-6.61	1.34	1.39
1	13	1529	G	C2-N3	6.60	1.38	1.32
25	1H	2392	A	N9-C8	6.58	1.43	1.37
25	1H	680	G	C6-N1	-6.58	1.34	1.39
25	14	2873	A	N9-C4	-6.57	1.33	1.37
25	1H	330	A	N9-C4	-6.55	1.33	1.37
25	14	2430	A	N9-C4	-6.55	1.33	1.37
25	1H	824	A	N9-C4	-6.53	1.33	1.37
25	1H	1021	A	N7-C5	-6.50	1.35	1.39
25	1H	71	A	C6-N6	-6.49	1.28	1.33
25	1H	71	A	C5-C6	-6.49	1.35	1.41
25	1H	1678	G	N9-C8	6.46	1.42	1.37
25	1H	2713	A	C5-C4	6.43	1.43	1.38
25	1H	140	A	N9-C4	-6.43	1.33	1.37
25	14	945	A	C5-C6	-6.41	1.35	1.41
25	1H	917	A	C2-N3	-6.40	1.27	1.33
25	1H	1984	G	C6-N1	-6.38	1.35	1.39
25	1H	140	A	C5-C6	-6.38	1.35	1.41
25	1H	793	A	N7-C5	-6.38	1.35	1.39
25	1H	805	G	N7-C5	-6.36	1.35	1.39
25	1H	1966	A	N3-C4	-6.34	1.31	1.34
25	14	1890	A	N9-C4	-6.34	1.34	1.37
25	1H	262	A	N9-C4	-6.33	1.34	1.37
25	1H	140	A	N7-C5	-6.29	1.35	1.39
25	1H	1966	A	N9-C4	-6.29	1.34	1.37
25	1H	2452	C	N1-C6	-6.28	1.33	1.37
25	1H	1661	G	C5-C4	-6.27	1.33	1.38
25	14	676	A	C5-C4	6.26	1.43	1.38
25	14	1332	G	N9-C8	6.23	1.42	1.37
25	1H	693	C	N3-C4	-6.21	1.29	1.33
25	14	1785	A	N7-C5	-6.21	1.35	1.39
25	1H	2392	A	C5-C4	6.20	1.43	1.38
25	1H	2246	G	N9-C8	-6.19	1.33	1.37
57	39	65	TRP	CB-CG	-6.16	1.39	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	1H	463	G	N1-C2	-6.15	1.32	1.37
25	1H	2622	C	N1-C6	-6.15	1.33	1.37
55	1G	690	G	N9-C4	-6.14	1.33	1.38
25	1H	1951	U	N1-C2	-6.13	1.33	1.38
25	1H	1564	C	N3-C4	-6.13	1.29	1.33
25	14	1781	C	N3-C4	6.12	1.38	1.33
25	14	1829	A	N7-C5	-6.12	1.35	1.39
25	1H	945	A	C5-C6	-6.11	1.35	1.41
27	11	122	ASP	CB-CG	6.11	1.64	1.51
25	1H	530	G	N9-C8	6.08	1.42	1.37
25	1H	770	G	C5-C4	-6.07	1.34	1.38
25	14	828	U	N3-C4	-6.03	1.33	1.38
25	1H	692	C	N1-C6	-6.02	1.33	1.37
25	14	1784	A	N3-C4	-6.00	1.31	1.34
25	1H	1434	A	N9-C4	-6.00	1.34	1.37
25	14	1612	C	N1-C6	-5.98	1.33	1.37
25	1H	470	A	N3-C4	-5.96	1.31	1.34
25	1H	812	C	N1-C2	-5.93	1.34	1.40
25	1H	1275	A	N7-C5	-5.93	1.35	1.39
25	1H	1332	G	C5-C4	5.92	1.42	1.38
1	13	888	G	N9-C4	-5.90	1.33	1.38
25	14	74	A	C5-C6	-5.89	1.35	1.41
25	14	1678	G	N3-C4	-5.88	1.31	1.35
25	1H	448	U	N1-C6	-5.88	1.32	1.38
25	1H	1937	A	C5-C4	-5.88	1.34	1.38
25	14	71	A	N9-C4	-5.87	1.34	1.37
25	1H	1613	G	C6-N1	-5.87	1.35	1.39
25	14	398	G	N9-C8	-5.86	1.33	1.37
25	1H	1632	A	C5-C6	-5.86	1.35	1.41
25	14	1365	A	N3-C4	-5.86	1.31	1.34
25	14	1698	A	N7-C5	-5.86	1.35	1.39
25	1H	774	A	C2-N3	-5.84	1.28	1.33
25	14	216	A	N9-C4	-5.83	1.34	1.37
25	1H	2448	A	N7-C5	-5.83	1.35	1.39
25	14	1786	A	N7-C5	-5.83	1.35	1.39
25	1H	1899	G	N3-C4	-5.82	1.31	1.35
25	1H	1210	A	N9-C4	-5.81	1.34	1.37
25	14	1643	G	N7-C5	-5.81	1.35	1.39
25	14	2606	C	N3-C4	-5.81	1.29	1.33
1	13	792	A	N3-C4	-5.78	1.31	1.34
25	14	751	A	N9-C4	-5.78	1.34	1.37
25	1H	775	G	N7-C5	-5.77	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	1H	74	A	N3-C4	-5.76	1.31	1.34
25	1H	2599	G	N9-C8	-5.76	1.33	1.37
25	1H	71	A	C5-C4	5.75	1.42	1.38
25	1H	945	A	N9-C4	-5.75	1.34	1.37
1	13	760	G	N7-C5	-5.74	1.35	1.39
29	31	65	TRP	CD2-CE2	5.73	1.48	1.41
25	14	1142(A)	A	N3-C4	-5.72	1.31	1.34
25	1H	2026	C	N1-C6	-5.71	1.33	1.37
25	14	1142(A)	A	N9-C4	-5.70	1.34	1.37
25	14	1614	A	N7-C5	-5.70	1.35	1.39
25	1H	1241	A	N9-C4	-5.70	1.34	1.37
1	13	1529	G	N9-C8	5.69	1.41	1.37
25	1H	265	A	N9-C4	-5.69	1.34	1.37
36	88	139	GLU	CG-CD	5.68	1.60	1.51
1	13	1227	A	N9-C4	-5.68	1.34	1.37
25	1H	1210	A	C5-C6	-5.68	1.35	1.41
25	1H	2453	A	N7-C5	-5.67	1.35	1.39
25	1H	749	C	N1-C6	-5.67	1.33	1.37
25	1H	2430	A	C5-C6	-5.67	1.35	1.41
25	14	1827	C	N3-C4	-5.67	1.29	1.33
1	13	1502	A	N7-C5	-5.65	1.35	1.39
25	1H	1021	A	C5-C6	-5.65	1.35	1.41
25	14	2510	C	N3-C4	-5.64	1.30	1.33
25	1H	805	G	N9-C8	-5.63	1.33	1.37
25	14	1698	A	N9-C4	-5.63	1.34	1.37
25	1H	2448	A	N9-C4	-5.61	1.34	1.37
25	1H	939	G	C6-N1	-5.61	1.35	1.39
25	14	2446	G	N7-C5	-5.61	1.35	1.39
25	14	2707	G	C2-N3	5.61	1.37	1.32
25	1H	780	G	N7-C5	-5.60	1.35	1.39
25	1H	2712	U	C2-N3	-5.60	1.33	1.37
25	14	2502	G	N3-C4	-5.60	1.31	1.35
25	14	1784	A	C6-N1	-5.58	1.31	1.35
25	14	1286	A	N7-C5	-5.57	1.35	1.39
25	14	1902	C	C4-N4	-5.57	1.28	1.33
25	1H	945	A	N1-C2	5.57	1.39	1.34
25	1H	2490	G	N9-C4	-5.56	1.33	1.38
25	14	2593	U	C4-O4	5.56	1.28	1.23
25	1H	1937	A	C8-N7	-5.55	1.27	1.31
55	1G	631	G	C6-N1	5.54	1.43	1.39
25	1H	2575	C	N3-C4	-5.54	1.30	1.33
1	13	766	A	N9-C4	-5.53	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	1H	1204	A	C5-C6	-5.53	1.36	1.41
25	1H	1349	A	C5-C4	5.53	1.42	1.38
25	1H	2072	G	C8-N7	-5.53	1.27	1.30
25	1H	727	A	N9-C4	-5.52	1.34	1.37
25	1H	2712	U	N3-C4	-5.52	1.33	1.38
25	1H	2761	G	N9-C4	-5.51	1.33	1.38
25	1H	245	G	N7-C5	-5.51	1.35	1.39
25	1H	774	A	C5-C6	-5.51	1.36	1.41
43	F8	15	GLU	CG-CD	5.51	1.60	1.51
25	1H	945	A	N3-C4	-5.50	1.31	1.34
1	13	47	C	N1-C6	-5.49	1.33	1.37
43	F8	15	GLU	CB-CG	5.49	1.62	1.52
25	1H	1950	G	C5-C6	-5.48	1.36	1.42
25	1H	1824	G	N7-C5	-5.48	1.35	1.39
25	1H	988	A	N7-C5	-5.45	1.35	1.39
1	13	694	A	N9-C4	-5.45	1.34	1.37
25	14	472	A	N3-C4	-5.45	1.31	1.34
1	13	787	A	N7-C5	-5.44	1.35	1.39
25	1H	2570	G	N9-C4	-5.42	1.33	1.38
25	1H	2327	A	N3-C4	-5.42	1.31	1.34
25	1H	682	G	C8-N7	-5.42	1.27	1.30
25	1H	1332	G	N9-C8	5.41	1.41	1.37
23	2K	77	A	C5-C6	-5.40	1.36	1.41
25	1H	1606	G	N9-C8	-5.40	1.34	1.37
25	14	682	G	C6-N1	-5.39	1.35	1.39
25	14	2582	G	N7-C5	-5.39	1.36	1.39
1	13	1513	A	N9-C4	-5.39	1.34	1.37
36	45	80	GLU	CB-CG	5.39	1.62	1.52
25	1H	2582	G	C6-N1	-5.38	1.35	1.39
25	1H	1313	U	C4-C5	-5.38	1.38	1.43
25	1H	1332	G	N1-C2	5.38	1.42	1.37
25	1H	1771	C	N3-C4	-5.38	1.30	1.33
55	1G	1473	A	N9-C4	-5.37	1.34	1.37
25	1H	1900	A	N9-C4	5.36	1.41	1.37
1	13	1523	G	N3-C4	-5.36	1.31	1.35
1	13	694	A	N3-C4	-5.36	1.31	1.34
25	14	1616	A	N7-C5	-5.35	1.36	1.39
25	1H	836	G	C8-N7	-5.34	1.27	1.30
1	13	1502	A	N3-C4	-5.33	1.31	1.34
25	1H	1678	G	N3-C4	-5.33	1.31	1.35
25	1H	1331	A	N3-C4	-5.32	1.31	1.34
25	1H	472	A	N3-C4	-5.32	1.31	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	1H	966	G	N9-C8	-5.31	1.34	1.37
25	1H	138	G	C6-N1	5.31	1.43	1.39
25	1H	2688	U	N3-C4	-5.30	1.33	1.38
25	14	1633	G	N7-C5	-5.30	1.36	1.39
25	1H	1892	C	N1-C2	-5.30	1.34	1.40
25	1H	533	G	N7-C5	5.29	1.42	1.39
25	14	746	A	N9-C4	-5.29	1.34	1.37
25	1H	744	G	N7-C5	-5.29	1.36	1.39
25	14	204	A	N3-C4	-5.29	1.31	1.34
25	1H	621	A	C5-C4	5.29	1.42	1.38
25	14	821	A	N7-C5	-5.28	1.36	1.39
25	14	74	A	N7-C5	-5.28	1.36	1.39
25	1H	774	A	C6-N1	5.26	1.39	1.35
25	14	2005	A	C5-C4	-5.25	1.35	1.38
25	14	1698	A	C5-C6	-5.25	1.36	1.41
25	1H	686	G	N7-C5	-5.24	1.36	1.39
25	1H	2246	G	C8-N7	-5.23	1.27	1.30
25	1H	2062	A	P-O5'	-5.22	1.54	1.59
25	1H	722	A	N9-C4	-5.22	1.34	1.37
1	13	544	G	N7-C5	-5.22	1.36	1.39
29	31	65	TRP	CB-CG	-5.22	1.40	1.50
25	14	1678	G	N9-C8	5.22	1.41	1.37
25	14	945	A	N7-C5	-5.21	1.36	1.39
25	14	2873	A	N3-C4	-5.21	1.31	1.34
25	14	1780	A	N3-C4	-5.21	1.31	1.34
25	14	1605	C	N1-C6	-5.21	1.34	1.37
1	13	524	G	N3-C4	-5.19	1.31	1.35
25	14	2013	A	N9-C4	-5.19	1.34	1.37
1	13	760	G	C5-C6	-5.18	1.37	1.42
25	1H	789	A	N9-C4	-5.18	1.34	1.37
25	14	1366	A	C5-C6	-5.18	1.36	1.41
25	14	2599	G	C6-N1	-5.17	1.35	1.39
25	1H	2256	G	C8-N7	-5.17	1.27	1.30
25	1H	2713	A	N9-C8	5.17	1.41	1.37
25	1H	2422	A	N9-C4	-5.16	1.34	1.37
25	1H	2467	C	N3-C4	-5.15	1.30	1.33
25	1H	2393	A	N7-C5	-5.14	1.36	1.39
25	14	34	C	N1-C2	5.14	1.45	1.40
25	1H	517	C	N1-C6	-5.14	1.34	1.37
25	1H	1678	G	C5-C4	5.13	1.42	1.38
25	14	563	G	N3-C4	-5.13	1.31	1.35
25	1H	1142(A)	A	N3-C4	-5.13	1.31	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	14	141	A	N9-C4	-5.13	1.34	1.37
1	13	1529	G	C5-C4	5.13	1.42	1.38
25	1H	473	G	N1-C2	-5.13	1.33	1.37
25	1H	694	U	C2-N3	-5.13	1.34	1.37
25	14	2598	A	C6-N6	-5.12	1.29	1.33
25	1H	2377	A	N9-C4	-5.12	1.34	1.37
25	1H	2453	A	C5-C4	-5.12	1.35	1.38
25	1H	1904	G	N9-C8	-5.11	1.34	1.37
25	14	1308	A	N7-C5	-5.11	1.36	1.39
25	1H	1317	A	N3-C4	-5.10	1.31	1.34
25	1H	2048	G	N7-C5	-5.10	1.36	1.39
25	14	794	G	N9-C8	-5.09	1.34	1.37
25	1H	1332	G	N3-C4	-5.09	1.31	1.35
25	1H	783	A	C6-N1	-5.09	1.31	1.35
25	14	1803	A	C5-C6	-5.09	1.36	1.41
25	1H	1593	G	C2-N3	-5.09	1.28	1.32
25	14	2587	A	C5-C6	-5.08	1.36	1.41
25	1H	676	A	C5-C6	-5.08	1.36	1.41
25	14	34	C	N1-C6	5.07	1.40	1.37
25	14	2644	G	N9-C4	-5.07	1.33	1.38
25	1H	2594	C	N1-C6	-5.07	1.34	1.37
25	1H	729	G	N7-C5	-5.07	1.36	1.39
25	14	1983	C	N1-C6	-5.07	1.34	1.37
25	1H	205	G	C2-N3	5.05	1.36	1.32
55	1G	631	G	N1-C2	5.05	1.41	1.37
25	1H	757	U	N3-C4	-5.04	1.33	1.38
25	14	1650	G	N3-C4	-5.04	1.31	1.35
25	1H	1616	A	N3-C4	-5.04	1.31	1.34
1	13	1529	G	N1-C2	5.04	1.41	1.37
25	1H	2271	G	C2-N3	5.04	1.36	1.32
25	1H	1989	G	N9-C8	-5.03	1.34	1.37
25	14	2439	A	N7-C5	-5.03	1.36	1.39
1	13	915	A	N3-C4	-5.03	1.31	1.34
25	1H	233	A	N9-C4	-5.03	1.34	1.37
1	13	1486	G	N3-C4	-5.03	1.31	1.35
25	14	2873	A	C5-C4	5.02	1.42	1.38
25	1H	503	A	N3-C4	-5.02	1.31	1.34
25	1H	1825	A	C6-N6	-5.02	1.29	1.33
25	1H	536	A	N7-C5	-5.01	1.36	1.39
25	1H	422	A	N7-C5	-5.01	1.36	1.39
25	14	1786	A	N3-C4	-5.01	1.31	1.34
25	1H	430	G	C2-N3	5.00	1.36	1.32

All (6146) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1899	G	N3-C4-N9	-25.74	110.56	126.00
25	1H	676	A	C2-N3-C4	-22.98	99.11	110.60
25	1H	1899	G	N3-C4-C5	22.06	139.63	128.60
25	14	1332	G	N3-C4-N9	-21.72	112.97	126.00
25	14	1332	G	N3-C4-C5	20.07	138.63	128.60
25	1H	945	A	C6-C5-N7	-19.76	118.47	132.30
25	1H	1332	G	C2-N3-C4	-19.29	102.26	111.90
1	13	792	A	C2-N3-C4	-19.26	100.97	110.60
25	1H	2430	A	C2-N3-C4	-18.82	101.19	110.60
25	14	1786	A	C5-N7-C8	-18.05	94.88	103.90
25	1H	1786	A	N7-C8-N9	17.93	122.77	113.80
25	1H	945	A	N1-C6-N6	17.62	129.17	118.60
25	1H	2287	A	C2-N3-C4	-17.16	102.02	110.60
25	1H	71	A	C2-N3-C4	-17.12	102.04	110.60
25	1H	1698	A	C2-N3-C4	-17.11	102.04	110.60
25	1H	1786	A	C5-N7-C8	-16.92	95.44	103.90
25	14	945	A	N1-C6-N6	16.82	128.69	118.60
25	1H	945	A	C4-C5-C6	16.50	125.25	117.00
25	1H	1786	A	C6-C5-N7	-16.50	120.75	132.30
25	1H	774	A	N3-C4-C5	16.48	138.34	126.80
25	1H	74	A	C2-N3-C4	-16.39	102.41	110.60
25	14	74	A	C2-N3-C4	-16.32	102.44	110.60
25	14	1332	G	C2-N3-C4	-16.22	103.79	111.90
25	1H	1332	G	C5-N7-C8	-16.00	96.30	104.30
25	14	1899	G	N1-C2-N2	-15.93	101.86	116.20
25	1H	801	G	O5'-P-OP2	-15.90	91.39	105.70
25	1H	1678	G	C5-N7-C8	-15.80	96.40	104.30
25	1H	1496	A	C8-N9-C4	-15.71	99.52	105.80
25	14	1786	A	N7-C8-N9	15.68	121.64	113.80
25	1H	1786	A	N1-C2-N3	15.67	137.14	129.30
25	1H	2346	A	C2-N3-C4	-15.44	102.88	110.60
25	1H	1899	G	N3-C2-N2	-15.36	109.14	119.90
25	1H	1899	G	C2-N3-C4	-15.12	104.34	111.90
25	1H	1332	G	N3-C4-C5	15.07	136.14	128.60
25	1H	49	A	O5'-P-OP2	-14.96	92.23	105.70
25	1H	2430	A	O5'-P-OP2	-14.96	92.23	105.70
25	1H	774	A	N3-C4-N9	-14.83	115.54	127.40
25	1H	1021	A	C2-N3-C4	-14.83	103.19	110.60
25	14	945	A	C2-N3-C4	-14.81	103.19	110.60
25	14	2430	A	C2-N3-C4	-14.66	103.27	110.60
25	1H	945	A	N7-C8-N9	14.65	121.13	113.80
25	1H	1786	A	C2-N3-C4	-14.59	103.31	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	774	A	C2-N3-C4	-14.57	103.31	110.60
25	1H	2490	G	C5-N7-C8	-14.52	97.04	104.30
25	1H	1496	A	N7-C8-N9	14.40	121.00	113.80
25	1H	676	A	N3-C4-N9	-14.38	115.89	127.40
25	14	2287	A	C2-N3-C4	-14.31	103.45	110.60
25	14	2873	A	C2-N3-C4	-14.24	103.48	110.60
25	1H	2490	G	N3-C4-C5	14.22	135.71	128.60
25	1H	1678	G	N7-C8-N9	14.22	120.21	113.10
25	1H	774	A	C2-N3-C4	-14.20	103.50	110.60
25	1H	621	A	C2-N3-C4	-14.20	103.50	110.60
25	1H	676	A	C5-N7-C8	-14.20	96.80	103.90
25	1H	1678	G	C2-N3-C4	-14.16	104.82	111.90
25	14	783	A	C5-N7-C8	-14.13	96.83	103.90
25	14	945	A	C6-C5-N7	-14.13	122.41	132.30
25	1H	1616	A	C5-N7-C8	-14.10	96.85	103.90
25	1H	2430	A	N1-C6-N6	14.10	127.06	118.60
25	1H	945	A	C5-N7-C8	-14.06	96.87	103.90
25	1H	783	A	C5-N7-C8	-14.04	96.88	103.90
25	1H	2253	G	N1-C6-O6	13.95	128.27	119.90
25	1H	783	A	C2-N3-C4	-13.94	103.63	110.60
25	1H	1931	U	N3-C2-O2	-13.88	112.48	122.20
25	1H	2253	G	C5-C6-O6	-13.88	120.28	128.60
25	14	1698	A	N1-C6-N6	13.84	126.91	118.60
25	1H	2392	A	C5-N7-C8	-13.80	97.00	103.90
25	1H	1204	A	C2-N3-C4	-13.78	103.71	110.60
1	13	690	G	C6-C5-N7	-13.71	122.17	130.40
25	14	774	A	N3-C4-C5	13.69	136.38	126.80
25	1H	1950	G	C6-C5-N7	-13.62	122.23	130.40
25	1H	676	A	N7-C8-N9	13.62	120.61	113.80
25	1H	2346	A	N1-C2-N3	13.61	136.11	129.30
25	1H	676	A	C8-N9-C4	-13.58	100.37	105.80
25	1H	1021	A	C5-N7-C8	-13.56	97.12	103.90
25	1H	1698	A	C5-N7-C8	-13.55	97.12	103.90
25	1H	783	A	C6-C5-N7	-13.49	122.86	132.30
55	1G	690	G	N3-C4-N9	-13.43	117.94	126.00
25	14	2063	C	O5'-P-OP2	-13.38	93.66	105.70
25	1H	140	A	C5-N7-C8	-13.36	97.22	103.90
25	1H	621	A	N1-C6-N6	13.35	126.61	118.60
25	1H	860	U	C4-C5-C6	13.32	127.69	119.70
25	1H	2713	A	C5-N7-C8	-13.31	97.25	103.90
25	1H	676	A	N3-C4-C5	13.30	136.11	126.80
25	1H	1786	A	N1-C6-N6	13.29	126.57	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1899	G	N3-C2-N2	13.28	129.19	119.90
25	1H	2430	A	N3-C4-C5	13.19	136.03	126.80
1	13	1055	A	O5'-P-OP1	-13.17	93.85	105.70
25	14	783	A	C2-N3-C4	-13.16	104.02	110.60
25	1H	2490	G	C4-C5-N7	13.14	116.06	110.80
25	14	2873	A	N7-C8-N9	13.10	120.35	113.80
25	14	1786	A	C4-C5-N7	13.04	117.22	110.70
25	14	783	A	N1-C6-N6	13.01	126.41	118.60
25	1H	1332	G	N1-C6-O6	12.96	127.67	119.90
25	1H	71	A	C5-N7-C8	-12.86	97.47	103.90
25	14	687	C	O5'-P-OP1	-12.82	94.16	105.70
25	1H	1786	A	C8-N9-C4	-12.81	100.68	105.80
25	1H	1616	A	C4-C5-N7	12.78	117.09	110.70
25	1H	1614	A	C5-N7-C8	-12.77	97.51	103.90
1	13	792	A	N1-C6-N6	12.77	126.26	118.60
25	1H	676	A	C5-C6-N1	-12.76	111.32	117.70
25	1H	917	A	C2-N3-C4	-12.69	104.25	110.60
25	14	774	A	N3-C4-N9	-12.66	117.27	127.40
25	1H	1678	G	C4-C5-N7	12.60	115.84	110.80
25	1H	621	A	C5-N7-C8	-12.59	97.60	103.90
25	1H	1332	G	N3-C4-N9	-12.57	118.46	126.00
25	14	991	C	O5'-P-OP1	-12.56	94.39	105.70
25	14	2873	A	C5-N7-C8	-12.55	97.63	103.90
25	1H	945	A	C2-N3-C4	-12.53	104.33	110.60
25	1H	1332	G	N7-C8-N9	12.53	119.36	113.10
25	14	2056	G	C5-C6-O6	-12.52	121.09	128.60
25	1H	860	U	C5-C6-N1	-12.51	116.44	122.70
25	14	1647	G	O5'-P-OP1	-12.49	94.46	105.70
25	1H	464	U	C5-C6-N1	-12.37	116.51	122.70
25	1H	1210	A	C5-N7-C8	-12.37	97.72	103.90
25	1H	2598	A	O5'-P-OP1	-12.37	94.57	105.70
25	1H	1284	A	O5'-P-OP2	-12.35	94.59	105.70
25	1H	1332	G	C4-C5-N7	12.35	115.74	110.80
25	1H	1970	A	O5'-P-OP2	-12.30	94.63	105.70
25	14	676	A	C2-N3-C4	-12.29	104.45	110.60
25	1H	1776	G	O5'-P-OP2	-12.27	94.66	105.70
25	1H	2392	A	C2-N3-C4	-12.27	104.47	110.60
25	1H	1614	A	C2-N3-C4	-12.25	104.47	110.60
25	1H	2392	A	N7-C8-N9	12.24	119.92	113.80
25	1H	1314	C	O5'-P-OP2	-12.23	94.69	105.70
25	1H	783	A	N1-C6-N6	12.22	125.93	118.60
25	14	2273	A	O5'-P-OP2	-12.22	94.70	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1496	A	C5-N7-C8	-12.21	97.79	103.90
25	1H	1786	A	C4-C5-C6	12.21	123.11	117.00
25	14	566	U	C5-C6-N1	-12.18	116.61	122.70
25	14	2873	A	N1-C2-N3	12.13	135.37	129.30
25	1H	124	G	C8-N9-C4	12.10	111.24	106.40
25	1H	698	C	C6-N1-C2	12.09	125.14	120.30
25	1H	2713	A	C2-N3-C4	-12.09	104.55	110.60
25	14	2346	A	C2-N3-C4	-12.05	104.57	110.60
25	1H	195	A	N1-C6-N6	12.05	125.83	118.60
25	1H	2688	U	C5-C4-O4	12.03	133.12	125.90
25	14	1698	A	C6-C5-N7	-12.03	123.88	132.30
25	14	1602	U	O5'-P-OP2	12.01	125.12	110.70
25	1H	1021	A	N7-C8-N9	12.01	119.80	113.80
25	14	1698	A	C2-N3-C4	-11.99	104.61	110.60
25	1H	140	A	N1-C6-N6	11.96	125.78	118.60
25	14	1678	G	N3-C4-N9	-11.96	118.83	126.00
25	14	1673	U	O5'-P-OP1	-11.94	94.95	105.70
25	1H	945	A	N1-C2-N3	11.94	135.27	129.30
25	14	74	A	N1-C6-N6	11.93	125.75	118.60
25	14	1678	G	N3-C4-C5	11.91	134.56	128.60
1	13	792	A	C5-N7-C8	-11.87	97.96	103.90
25	14	676	A	C5-N7-C8	-11.87	97.96	103.90
25	1H	140	A	C4-C5-N7	11.87	116.63	110.70
25	1H	974(A)	C	N3-C2-O2	-11.84	113.61	121.90
25	14	1342	A	N1-C2-N3	11.83	135.21	129.30
25	1H	966	G	C5-C6-O6	11.80	135.68	128.60
25	1H	1698	A	C6-C5-N7	-11.79	124.05	132.30
25	1H	2544	G	C5-C6-O6	-11.77	121.54	128.60
25	1H	1617	C	O5'-P-OP1	-11.74	95.13	105.70
25	1H	1678	G	C6-C5-N7	-11.68	123.39	130.40
25	1H	1698	A	N1-C6-N6	11.66	125.60	118.60
25	14	945	A	C5-N7-C8	-11.66	98.07	103.90
25	1H	828	U	C5-C4-O4	11.65	132.89	125.90
25	1H	1786	A	C4-N9-C1'	11.65	147.27	126.30
25	1H	860	U	N3-C2-O2	-11.64	114.05	122.20
1	13	1529	G	C5-N7-C8	-11.64	98.48	104.30
25	14	783	A	C4-C5-N7	11.63	116.52	110.70
25	1H	917	A	N1-C6-N6	11.63	125.58	118.60
25	14	945	A	C4-C5-N7	11.63	116.51	110.70
25	1H	2567	G	O5'-P-OP1	-11.62	95.24	105.70
25	1H	966	G	N1-C6-O6	-11.55	112.97	119.90
25	1H	2490	G	C2-N3-C4	-11.55	106.13	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	2430	A	N1-C2-N3	11.53	135.06	129.30
25	14	1678	G	C2-N3-C4	-11.52	106.14	111.90
25	14	945	A	N1-C2-N3	11.52	135.06	129.30
25	1H	74	A	N1-C2-N3	11.51	135.06	129.30
25	1H	783	A	C4-C5-N7	11.50	116.45	110.70
25	1H	2554	U	O5'-P-OP2	-11.49	95.36	105.70
25	1H	2713	A	N1-C6-N6	11.47	125.48	118.60
25	14	1899	G	C2-N3-C4	-11.46	106.17	111.90
25	1H	974(A)	C	N1-C2-O2	11.46	125.77	118.90
25	14	835	A	O5'-P-OP2	-11.45	95.39	105.70
25	1H	1647	G	O5'-P-OP1	-11.42	95.43	105.70
25	1H	736	C	N1-C2-O2	-11.38	112.07	118.90
25	1H	2070	G	O5'-P-OP2	-11.38	95.46	105.70
25	1H	735	A	C8-N9-C4	11.34	110.34	105.80
25	1H	691	C	C6-N1-C2	11.30	124.82	120.30
1	13	914	A	O5'-P-OP1	-11.30	95.53	105.70
25	1H	2591	C	N1-C2-O2	-11.29	112.13	118.90
25	1H	774	A	C6-N1-C2	11.28	125.37	118.60
25	1H	2490	G	N3-C4-N9	-11.26	119.25	126.00
25	1H	783	A	N7-C8-N9	11.25	119.43	113.80
25	14	783	A	C6-C5-N7	-11.25	124.42	132.30
25	14	828	U	C5-C4-O4	11.24	132.64	125.90
25	1H	788	A	N9-C4-C5	-11.20	101.32	105.80
1	13	792	A	C4-C5-N7	11.18	116.29	110.70
25	1H	945	A	C4-C5-N7	11.16	116.28	110.70
55	1G	121	C	N1-C2-O2	11.15	125.59	118.90
25	1H	789	A	O5'-P-OP1	-11.12	95.69	105.70
25	1H	2689	U	N3-C4-O4	-11.11	111.62	119.40
25	1H	774	A	C5-C6-N1	-11.10	112.15	117.70
25	14	1332	G	C8-N9-C1'	11.09	141.41	127.00
1	13	1529	G	C4-C5-N7	11.08	115.23	110.80
25	14	1786	A	C6-C5-N7	-11.03	124.58	132.30
25	14	1284	A	O5'-P-OP2	-11.01	95.79	105.70
25	14	1249	U	O5'-P-OP1	-11.00	95.80	105.70
25	1H	1142(A)	A	C2-N3-C4	-10.99	105.10	110.60
25	1H	788	A	N1-C6-N6	10.97	125.18	118.60
25	14	74	A	C5-C6-N1	-10.97	112.22	117.70
25	1H	917	A	C5-N7-C8	-10.96	98.42	103.90
25	1H	1602	U	O5'-P-OP2	10.96	123.86	110.70
25	14	598	G	C5-C6-O6	-10.96	122.02	128.60
25	1H	1899	G	N9-C4-C5	10.96	109.78	105.40
1	13	792	A	N3-C4-C5	10.95	134.47	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	917	A	C4-C5-N7	10.94	116.17	110.70
25	14	2086	U	O5'-P-OP2	-10.94	95.86	105.70
25	1H	140	A	N7-C8-N9	10.92	119.26	113.80
25	1H	2392	A	C5-C6-N1	-10.90	112.25	117.70
25	14	2357	U	O5'-P-OP2	-10.86	95.92	105.70
25	14	2307	G	O4'-C1'-N9	10.85	116.88	108.20
25	1H	1786	A	C4-C5-N7	10.84	116.12	110.70
25	14	2430	A	N1-C6-N6	10.84	125.11	118.60
25	14	1408	C	N1-C2-O2	-10.84	112.40	118.90
25	14	2688	U	N3-C2-O2	-10.82	114.63	122.20
25	1H	265	A	C2-N3-C4	-10.80	105.20	110.60
25	1H	1021	A	N1-C6-N6	10.77	125.06	118.60
1	13	1502	A	C5-N7-C8	-10.77	98.52	103.90
25	14	530	G	C8-N9-C4	10.77	110.71	106.40
25	14	1786	A	N1-C6-N6	10.75	125.05	118.60
25	14	2591	C	N1-C2-O2	-10.74	112.45	118.90
25	1H	1698	A	C4-C5-N7	10.74	116.07	110.70
55	1G	1322	C	N1-C2-O2	10.74	125.34	118.90
25	1H	2468	G	O4'-C1'-N9	10.73	116.78	108.20
25	14	528	A	C2-N3-C4	-10.72	105.24	110.60
25	1H	678	C	N3-C4-C5	10.72	126.19	121.90
25	1H	1899	G	C8-N9-C1'	10.70	140.91	127.00
25	1H	74	A	N7-C8-N9	10.69	119.15	113.80
25	1H	1225	C	C6-N1-C2	10.68	124.57	120.30
25	14	1678	G	C5-N7-C8	-10.68	98.96	104.30
25	1H	2380	C	C6-N1-C2	10.67	124.57	120.30
1	13	1517	G	O5'-P-OP2	-10.66	96.10	105.70
25	1H	2346	A	O4'-C1'-N9	10.66	116.73	108.20
25	1H	2430	A	O5'-P-OP1	10.64	123.47	110.70
1	13	1502	A	N7-C8-N9	10.64	119.12	113.80
25	14	133	C	C6-N1-C2	10.63	124.55	120.30
25	1H	678	C	C2-N3-C4	-10.62	114.59	119.90
25	14	1816	G	O5'-P-OP1	-10.61	96.15	105.70
25	14	510	C	O5'-P-OP2	-10.60	96.16	105.70
25	1H	1559	G	N1-C6-O6	10.60	126.26	119.90
25	1H	2499	C	N3-C4-N4	10.60	125.42	118.00
25	1H	1332	G	C6-C5-N7	-10.59	124.05	130.40
25	14	704	G	N1-C6-O6	10.58	126.25	119.90
25	14	2544	G	N1-C6-O6	10.56	126.24	119.90
25	1H	1602	U	O5'-P-OP1	-10.54	96.21	105.70
25	1H	2287	A	N3-C4-C5	10.52	134.16	126.80
25	1H	853	G	O5'-P-OP2	-10.51	96.24	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	2490	G	C8-N9-C4	-10.51	102.20	106.40
25	14	678	C	C6-N1-C2	10.48	124.49	120.30
25	14	922	U	O5'-P-OP1	-10.47	96.28	105.70
25	1H	2430	A	C5-N7-C8	-10.47	98.67	103.90
25	1H	825	C	N3-C4-N4	10.47	125.33	118.00
25	1H	2490	G	N7-C8-N9	10.46	118.33	113.10
25	1H	120	U	C5-C6-N1	-10.46	117.47	122.70
25	14	188	G	C5-C6-O6	-10.46	122.33	128.60
25	14	531	C	O5'-P-OP1	-10.46	96.29	105.70
25	1H	574	C	O5'-P-OP2	-10.46	96.29	105.70
25	1H	210	C	C6-N1-C2	10.45	124.48	120.30
1	13	792	A	O4'-C1'-N9	10.45	116.56	108.20
25	1H	396	G	C5-C6-O6	-10.44	122.33	128.60
25	1H	71	A	N3-C4-C5	10.44	134.10	126.80
25	1H	409	C	C6-N1-C2	10.44	124.47	120.30
1	13	690	G	N1-C6-O6	10.43	126.16	119.90
25	1H	1610	A	N1-C6-N6	10.43	124.86	118.60
25	14	621	A	C2-N3-C4	-10.41	105.39	110.60
25	1H	330	A	C2-N3-C4	-10.41	105.40	110.60
25	1H	774	A	C5-N7-C8	-10.40	98.70	103.90
55	1G	690	G	N3-C4-C5	10.39	133.80	128.60
25	14	2607	G	O5'-P-OP2	-10.38	96.35	105.70
25	14	2502	G	C8-N9-C4	-10.38	102.25	106.40
25	1H	138	G	C5-N7-C8	-10.36	99.12	104.30
25	1H	459	U	O5'-P-OP2	-10.35	96.38	105.70
25	1H	945	A	C8-N9-C4	-10.35	101.66	105.80
25	1H	120	U	C4-C5-C6	10.33	125.90	119.70
25	1H	140	A	C6-C5-N7	-10.32	125.07	132.30
25	14	788	A	N1-C6-N6	10.32	124.79	118.60
25	14	1786	A	C2-N3-C4	-10.32	105.44	110.60
25	1H	1594	G	O5'-P-OP1	-10.29	96.43	105.70
25	14	2490	G	N7-C8-N9	10.30	118.25	113.10
25	1H	1790	C	C6-N1-C2	10.29	124.42	120.30
25	1H	945	A	C4-N9-C1'	10.28	144.81	126.30
25	1H	678	C	C6-N1-C2	10.26	124.40	120.30
25	14	330	A	C2-N3-C4	-10.26	105.47	110.60
1	13	690	G	O4'-C1'-N9	10.25	116.40	108.20
25	1H	141	A	C5-N7-C8	-10.24	98.78	103.90
25	1H	679	C	C5-C6-N1	-10.24	115.88	121.00
25	14	2056	G	C4-C5-N7	10.23	114.89	110.80
25	1H	1332	G	C5-C6-N1	-10.22	106.39	111.50
25	1H	2392	A	C8-N9-C4	-10.22	101.71	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1902	C	N3-C4-C5	10.22	125.99	121.90
25	1H	678	C	C5-C6-N1	-10.21	115.89	121.00
25	14	2873	A	C8-N9-C4	-10.21	101.72	105.80
25	14	1769	G	C5-C6-O6	-10.20	122.48	128.60
25	1H	2403	C	N1-C2-O2	-10.17	112.80	118.90
25	1H	138	G	C8-N9-C4	-10.15	102.34	106.40
25	1H	1610	A	N9-C4-C5	-10.14	101.74	105.80
25	1H	1595	G	O5'-P-OP1	-10.13	96.58	105.70
25	14	2392	A	C5-C6-N1	-10.13	112.64	117.70
25	1H	74	A	C5-N7-C8	-10.12	98.84	103.90
25	14	2712	U	C5-C6-N1	-10.12	117.64	122.70
25	1H	138	G	N7-C8-N9	10.11	118.16	113.10
25	1H	2430	A	N3-C4-N9	-10.11	119.31	127.40
25	14	1200	C	O5'-P-OP1	-10.11	96.60	105.70
25	1H	788	A	C8-N9-C4	10.11	109.84	105.80
25	1H	2713	A	C4-C5-N7	10.10	115.75	110.70
25	14	929	G	N1-C6-O6	10.09	125.96	119.90
25	1H	510	C	O5'-P-OP2	-10.08	96.62	105.70
25	1H	2577	A	N1-C6-N6	-10.08	112.55	118.60
25	1H	1249	U	C5-C6-N1	-10.06	117.67	122.70
55	1G	449	C	C6-N1-C2	-10.05	116.28	120.30
1	13	966	G	C5-C6-O6	-10.05	122.57	128.60
25	1H	2698	U	O5'-P-OP2	-10.03	96.67	105.70
25	1H	2392	A	C4-C5-N7	10.01	115.71	110.70
25	14	783	A	N7-C8-N9	10.01	118.81	113.80
25	14	1332	G	C5-N7-C8	-10.00	99.30	104.30
25	1H	2712	U	N3-C4-O4	-9.99	112.41	119.40
25	14	801	G	C5-C6-O6	9.98	134.59	128.60
25	14	2778	A	O5'-P-OP2	-9.98	96.72	105.70
25	1H	2838	G	O5'-P-OP1	-9.96	96.73	105.70
25	1H	829	A	O5'-P-OP1	-9.94	96.76	105.70
25	1H	2688	U	N3-C2-O2	-9.93	115.25	122.20
25	14	2056	G	N1-C6-O6	9.93	125.86	119.90
25	14	2056	G	N9-C4-C5	-9.92	101.43	105.40
25	14	621	A	C5-N7-C8	-9.90	98.95	103.90
25	1H	1672	C	N1-C2-O2	-9.86	112.98	118.90
25	1H	2713	A	N7-C8-N9	9.86	118.73	113.80
25	1H	765	G	O5'-P-OP1	-9.86	96.83	105.70
25	1H	1899	G	C6-C5-N7	9.85	136.31	130.40
25	14	2287	A	N3-C4-C5	9.84	133.69	126.80
25	1H	2584	U	N3-C2-O2	-9.84	115.32	122.20
25	1H	1649	G	N3-C4-C5	-9.83	123.68	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	633	A	N1-C6-N6	9.83	124.50	118.60
25	14	1342	A	C2-N3-C4	-9.82	105.69	110.60
25	1H	835	A	O5'-P-OP2	-9.80	96.88	105.70
25	1H	1931	U	N1-C2-N3	9.80	120.78	114.90
25	1H	1698	A	C5-C6-N1	-9.79	112.80	117.70
25	14	1804	C	N3-C4-C5	9.79	125.82	121.90
25	1H	621	A	C4-C5-N7	9.79	115.59	110.70
25	14	676	A	N7-C8-N9	9.78	118.69	113.80
25	1H	1022	G	C8-N9-C4	-9.78	102.49	106.40
25	1H	2520	C	N1-C2-O2	-9.77	113.03	118.90
25	1H	2544	G	N1-C6-O6	9.77	125.76	119.90
25	1H	115	C	N1-C2-O2	-9.77	113.04	118.90
25	14	1619	G	O5'-P-OP2	-9.77	96.91	105.70
25	1H	632	A	O5'-P-OP2	9.76	122.41	110.70
25	14	2392	A	C2-N3-C4	-9.76	105.72	110.60
25	14	1625	C	O5'-P-OP2	-9.75	96.92	105.70
1	13	789	U	C5-C4-O4	9.75	131.75	125.90
25	1H	772	C	C4-C5-C6	9.74	122.27	117.40
25	1H	2518	A	C5-N7-C8	-9.73	99.03	103.90
25	1H	1614	A	C4-C5-N7	9.73	115.56	110.70
26	1J	102	G	C5-C6-O6	9.72	134.44	128.60
25	1H	664	C	C2-N3-C4	-9.72	115.04	119.90
25	1H	1210	A	N7-C8-N9	9.72	118.66	113.80
25	1H	2392	A	N3-C4-C5	9.71	133.60	126.80
25	1H	731	C	O5'-P-OP1	-9.70	96.97	105.70
25	14	1698	A	C5-N7-C8	-9.70	99.05	103.90
25	14	453	C	C6-N1-C2	9.70	124.18	120.30
25	14	2713	A	C2-N3-C4	-9.69	105.75	110.60
25	14	1698	A	C4-C5-N7	9.67	115.53	110.70
25	1H	2271	G	N3-C4-N9	9.66	131.79	126.00
25	1H	2518	A	N1-C6-N6	9.65	124.39	118.60
25	14	793	A	O5'-P-OP2	-9.65	97.02	105.70
25	14	1496	A	N7-C8-N9	9.65	118.62	113.80
25	1H	1379	A	C5-N7-C8	-9.64	99.08	103.90
25	1H	1616	A	N7-C8-N9	9.64	118.62	113.80
25	1H	840	C	C6-N1-C2	9.64	124.16	120.30
25	14	1786	A	C8-N9-C4	-9.64	101.94	105.80
25	1H	691	C	C5-C6-N1	-9.64	116.18	121.00
25	14	1618	A	O5'-P-OP2	-9.63	97.03	105.70
25	1H	1210	A	N1-C6-N6	9.62	124.37	118.60
25	1H	133	C	C6-N1-C2	9.61	124.14	120.30
25	1H	795	C	C6-N1-C2	9.60	124.14	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1980	G	C5-C6-O6	-9.59	122.85	128.60
25	1H	2042	A	O5'-P-OP2	-9.58	97.08	105.70
25	1H	1616	A	N1-C6-N6	9.58	124.34	118.60
25	1H	2430	A	C5-C6-N1	-9.58	112.91	117.70
25	14	912	C	C6-N1-C2	-9.57	116.47	120.30
25	1H	1681	G	N3-C4-C5	9.56	133.38	128.60
25	1H	1241	A	C2-N3-C4	-9.55	105.82	110.60
1	13	690	G	C4-C5-N7	9.54	114.62	110.80
25	1H	1210	A	C4-C5-N7	9.54	115.47	110.70
25	14	856	C	C6-N1-C2	-9.54	116.48	120.30
1	13	690	G	C4-N9-C1'	9.54	138.90	126.50
25	14	2779	U	N3-C2-O2	-9.53	115.53	122.20
25	1H	481	G	O5'-P-OP2	-9.51	97.14	105.70
25	1H	1819	A	C5-C6-N6	-9.50	116.10	123.70
25	1H	847	U	C5-C6-N1	-9.49	117.95	122.70
25	1H	2374	C	C5-C6-N1	-9.48	116.26	121.00
25	1H	1816	G	O5'-P-OP1	-9.48	97.17	105.70
25	1H	2242	G	C5-C6-O6	-9.48	122.91	128.60
1	13	760	G	N1-C6-O6	9.47	125.58	119.90
25	1H	1643	G	N1-C6-O6	-9.47	114.22	119.90
25	14	1984	G	O5'-P-OP2	-9.47	97.18	105.70
25	1H	1022	G	C6-N1-C2	-9.46	119.42	125.10
25	1H	2287	A	N3-C4-N9	-9.47	119.83	127.40
25	14	1326	U	O5'-P-OP1	-9.46	97.18	105.70
1	13	827	U	N3-C2-O2	-9.45	115.58	122.20
25	1H	2236	C	O5'-P-OP1	-9.45	97.20	105.70
25	14	676	A	O4'-C1'-N9	9.44	115.75	108.20
25	1H	1022	G	N9-C4-C5	9.43	109.17	105.40
25	14	2433	A	N1-C6-N6	9.42	124.25	118.60
25	1H	2269	A	N1-C6-N6	9.42	124.25	118.60
25	1H	74	A	C5-C6-N1	-9.41	112.99	117.70
25	1H	2819	G	C5-C6-O6	-9.41	122.95	128.60
25	1H	2503	A	N1-C2-N3	-9.41	124.59	129.30
1	13	738	C	C6-N1-C2	-9.41	116.54	120.30
25	14	1496	A	C5-N7-C8	-9.41	99.20	103.90
25	1H	463	G	N3-C2-N2	9.38	126.47	119.90
25	1H	528	A	C2-N3-C4	-9.38	105.91	110.60
25	1H	213	A	N9-C4-C5	-9.37	102.05	105.80
1	13	1502	A	C2-N3-C4	-9.37	105.92	110.60
25	1H	751	A	OP1-P-OP2	-9.37	105.55	119.60
25	1H	2499	C	N1-C2-O2	-9.37	113.28	118.90
25	14	1332	G	C4-N9-C1'	-9.37	114.33	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	329	G	O5'-P-OP2	-9.36	97.28	105.70
25	1H	2069	G	C8-N9-C4	9.35	110.14	106.40
25	1H	863	A	O5'-P-OP2	-9.35	97.29	105.70
25	14	2702	U	C6-N1-C2	-9.35	115.39	121.00
25	1H	1621	U	O5'-P-OP1	-9.34	97.29	105.70
25	1H	698	C	C5-C6-N1	-9.34	116.33	121.00
25	1H	729	G	C8-N9-C4	-9.32	102.67	106.40
25	14	1950	G	C8-N9-C4	-9.32	102.67	106.40
25	14	1950	G	N7-C8-N9	9.31	117.75	113.10
25	1H	2710	C	C6-N1-C2	9.30	124.02	120.30
25	14	810	U	C5-C4-O4	-9.30	120.32	125.90
25	1H	1373	A	C8-N9-C4	9.30	109.52	105.80
25	14	2679	A	O5'-P-OP2	-9.30	97.33	105.70
25	14	676	A	N3-C4-N9	-9.29	119.97	127.40
25	1H	1021	A	C6-C5-N7	-9.29	125.80	132.30
25	14	796	C	N3-C4-C5	9.28	125.61	121.90
25	1H	1021	A	C4-C5-N7	9.28	115.34	110.70
54	Q8	61	LEU	CA-CB-CG	9.27	136.62	115.30
1	13	892	A	C2-N3-C4	-9.24	105.98	110.60
25	1H	2284	C	N1-C2-O2	-9.22	113.37	118.90
1	13	792	A	C6-C5-N7	-9.22	125.85	132.30
25	1H	216	A	O5'-P-OP1	-9.21	97.41	105.70
26	16	47	C	C6-N1-C2	9.21	123.98	120.30
1	13	23	C	C6-N1-C2	-9.21	116.62	120.30
25	1H	140	A	C2-N3-C4	-9.20	106.00	110.60
25	1H	1614	A	N1-C6-N6	9.20	124.12	118.60
25	1H	825	C	N1-C2-O2	-9.20	113.38	118.90
25	1H	984	A	O5'-P-OP2	-9.19	97.43	105.70
25	1H	676	A	N1-C2-N3	9.18	133.89	129.30
1	13	352	C	C5-C6-N1	9.18	125.59	121.00
25	14	684	G	C8-N9-C4	-9.18	102.73	106.40
25	14	2011	U	O5'-P-OP1	-9.18	97.44	105.70
25	1H	133	C	C5-C6-N1	-9.17	116.42	121.00
25	14	774	A	C5-N7-C8	-9.17	99.32	103.90
1	13	1502	A	C8-N9-C4	-9.16	102.14	105.80
25	1H	791	C	C6-N1-C2	9.16	123.97	120.30
25	1H	2287	A	C5-C6-N1	-9.16	113.12	117.70
25	14	945	A	C5-C6-N6	-9.15	116.38	123.70
25	14	2575	C	C5-C4-N4	9.15	126.61	120.20
25	14	2386	C	C6-N1-C2	9.15	123.96	120.30
1	13	892	A	N1-C6-N6	9.15	124.09	118.60
25	14	74	A	C6-C5-N7	-9.15	125.90	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	2880	C	C6-N1-C2	-9.14	116.64	120.30
25	1H	783	A	C8-N9-C4	-9.13	102.15	105.80
25	1H	1853	A	O5'-P-OP1	-9.12	97.49	105.70
1	13	422	C	C6-N1-C2	-9.12	116.65	120.30
25	1H	945	A	C5-C6-N1	-9.12	113.14	117.70
25	1H	2712	U	C5-C6-N1	-9.12	118.14	122.70
25	14	2420	C	O5'-P-OP1	-9.12	97.49	105.70
25	1H	1344	G	N1-C6-O6	9.12	125.37	119.90
25	1H	2773	C	C6-N1-C2	9.12	123.95	120.30
25	1H	1610	A	C4-C5-N7	9.11	115.25	110.70
25	14	2007	C	N1-C2-O2	-9.11	113.44	118.90
25	1H	774	A	C8-N9-C1'	9.11	144.09	127.70
25	1H	2573	C	C6-N1-C2	-9.10	116.66	120.30
25	1H	1021	A	C8-N9-C4	-9.09	102.16	105.80
25	1H	247	G	C8-N9-C4	9.09	110.03	106.40
25	14	2003	G	C5-C6-O6	-9.08	123.15	128.60
25	1H	1204	A	O4'-C1'-N9	9.07	115.46	108.20
25	14	621	A	N7-C8-N9	9.07	118.33	113.80
25	14	2346	A	N1-C2-N3	9.06	133.83	129.30
25	1H	1698	A	N7-C8-N9	9.05	118.33	113.80
25	1H	213	A	N1-C6-N6	9.05	124.03	118.60
25	1H	140	A	O4'-C1'-N9	9.05	115.44	108.20
25	1H	122	G	C2-N3-C4	-9.05	107.38	111.90
25	1H	1678	G	C8-N9-C4	-9.04	102.78	106.40
25	1H	774	A	N1-C6-N6	9.04	124.02	118.60
25	1H	1122	G	C8-N9-C4	9.04	110.02	106.40
25	1H	2036	C	O5'-P-OP1	-9.04	97.57	105.70
25	14	1899	G	C6-C5-N7	-9.04	124.98	130.40
25	1H	1129	A	O5'-P-OP2	-9.04	97.57	105.70
25	1H	1899	G	C4-N9-C1'	-9.03	114.77	126.50
25	1H	593	G	O5'-P-OP2	-9.02	97.58	105.70
25	14	676	A	N3-C4-C5	9.02	133.11	126.80
25	14	1700	A	O5'-P-OP2	9.02	121.52	110.70
25	1H	528	A	N3-C4-C5	9.01	133.11	126.80
25	1H	1950	G	C4-N9-C1'	9.01	138.21	126.50
26	1J	102	G	N1-C6-O6	-9.00	114.50	119.90
25	1H	1899	G	C4-C5-C6	-8.99	113.41	118.80
25	1H	723	G	C8-N9-C4	8.98	109.99	106.40
25	14	1695	G	C6-C5-N7	-8.97	125.02	130.40
25	1H	735	A	N7-C8-N9	-8.96	109.32	113.80
25	1H	528	A	C5-C6-N1	-8.96	113.22	117.70
25	1H	2311	A	C2-N3-C4	-8.96	106.12	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1931	U	C4-C5-C6	8.96	125.07	119.70
25	1H	692	C	C5-C4-N4	-8.95	113.94	120.20
25	1H	71	A	N3-C4-N9	-8.94	120.25	127.40
25	1H	2318	G	C8-N9-C4	-8.94	102.83	106.40
25	14	74	A	C5-N7-C8	-8.94	99.43	103.90
25	14	312	G	O5'-P-OP1	-8.93	97.66	105.70
25	14	2324	C	C6-N1-C2	8.93	123.87	120.30
25	1H	2584	U	C5-C4-O4	8.92	131.25	125.90
25	1H	2698	U	C5-C6-N1	-8.91	118.24	122.70
25	1H	682	G	C8-N9-C4	8.91	109.96	106.40
25	1H	2380	C	N3-C4-C5	8.91	125.46	121.90
25	1H	124	G	N7-C8-N9	-8.91	108.65	113.10
25	1H	71	A	C4-C5-N7	8.90	115.15	110.70
25	1H	1673	U	C6-N1-C2	8.90	126.34	121.00
25	1H	1807	G	C5-C6-O6	-8.90	123.26	128.60
25	14	1299	G	O5'-P-OP1	-8.90	97.69	105.70
25	1H	19	C	C5-C6-N1	-8.89	116.55	121.00
25	1H	517	C	N3-C4-N4	8.89	124.23	118.00
25	1H	621	A	N7-C8-N9	8.89	118.25	113.80
25	14	613	U	N3-C2-O2	-8.89	115.97	122.20
25	1H	679	C	C2-N3-C4	-8.89	115.45	119.90
1	13	1195	C	C6-N1-C2	-8.89	116.75	120.30
25	1H	1781	C	N3-C4-N4	-8.88	111.78	118.00
25	1H	131	G	C5-C6-O6	-8.88	123.27	128.60
25	1H	1616	A	C6-C5-N7	-8.88	126.09	132.30
55	1G	687	A	C8-N9-C4	-8.88	102.25	105.80
25	1H	2827	C	C6-N1-C2	8.87	123.85	120.30
25	14	1367	A	N1-C6-N6	8.87	123.92	118.60
25	14	827	U	N3-C2-O2	8.87	128.41	122.20
25	1H	1313	U	C5-C6-N1	8.86	127.13	122.70
25	1H	2282	G	O5'-P-OP1	-8.86	97.72	105.70
25	14	1024	G	N1-C6-O6	8.86	125.22	119.90
25	1H	621	A	C5-C6-N1	-8.86	113.27	117.70
25	14	195	A	N1-C6-N6	8.86	123.91	118.60
25	1H	1193	G	C8-N9-C4	8.85	109.94	106.40
55	1G	897	C	N1-C2-O2	-8.84	113.60	118.90
25	1H	674	G	C8-N9-C4	8.83	109.93	106.40
25	1H	1950	G	C4-C5-C6	8.83	124.10	118.80
25	1H	2363	C	C6-N1-C2	8.83	123.83	120.30
25	1H	2084	C	C5-C6-N1	-8.83	116.59	121.00
26	1J	102	G	C4-C5-N7	-8.82	107.27	110.80
25	14	2518	A	C2-N3-C4	-8.82	106.19	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	2330	G	C8-N9-C4	8.82	109.93	106.40
25	14	530	G	C2-N3-C4	-8.81	107.49	111.90
25	1H	1899	G	N1-C2-N2	8.81	124.13	116.20
25	14	664	C	C5-C6-N1	-8.81	116.60	121.00
25	1H	793	A	N1-C6-N6	8.81	123.88	118.60
25	1H	2440	C	C5-C4-N4	8.80	126.36	120.20
25	1H	621	A	C6-C5-N7	-8.80	126.14	132.30
25	14	801	G	N1-C6-O6	-8.78	114.63	119.90
25	14	188	G	N1-C6-O6	8.78	125.17	119.90
25	1H	1900	A	O5'-P-OP2	-8.78	97.80	105.70
25	1H	1376	C	O5'-P-OP1	-8.77	97.81	105.70
25	14	682	G	O5'-P-OP2	-8.77	97.80	105.70
25	1H	2856	C	C6-N1-C2	-8.77	116.79	120.30
25	14	1909	C	O5'-P-OP2	-8.77	97.81	105.70
25	1H	2712	U	C5-C4-O4	8.77	131.16	125.90
25	14	746	A	O5'-P-OP1	-8.77	97.81	105.70
25	1H	1318	C	O5'-P-OP1	-8.76	97.81	105.70
25	1H	2689	U	P-O3'-C3'	8.76	130.21	119.70
1	13	1058	G	C8-N9-C4	8.76	109.90	106.40
25	1H	1786	A	C8-N9-C1'	-8.75	111.94	127.70
25	1H	1678	G	N1-C6-O6	8.75	125.15	119.90
25	1H	2380	C	C2-N3-C4	-8.75	115.53	119.90
25	14	1965	C	N3-C4-C5	8.75	125.40	121.90
25	1H	1201	C	C6-N1-C2	8.74	123.80	120.30
25	1H	2518	A	N7-C8-N9	8.74	118.17	113.80
1	13	690	G	C8-N9-C1'	-8.74	115.64	127.00
25	14	34	C	N1-C2-O2	8.74	124.14	118.90
1	13	1331	G	O5'-P-OP2	-8.73	97.85	105.70
25	1H	396	G	N1-C6-O6	8.73	125.14	119.90
25	1H	739	G	O5'-P-OP2	-8.72	97.85	105.70
25	1H	2275	C	C6-N1-C2	-8.72	116.81	120.30
25	1H	2503	A	C2-N3-C4	8.71	114.96	110.60
25	14	1558	A	N1-C2-N3	8.71	133.66	129.30
25	1H	213	A	C5-C6-N6	-8.71	116.73	123.70
25	1H	1307	A	N1-C6-N6	8.71	123.83	118.60
25	1H	1275	A	N1-C6-N6	8.71	123.83	118.60
25	1H	828	U	N3-C4-C5	-8.70	109.38	114.60
25	1H	197	A	OP2-P-O3'	8.70	124.33	105.20
25	1H	1776	G	N9-C4-C5	-8.70	101.92	105.40
25	1H	2316	C	C6-N1-C2	-8.70	116.82	120.30
25	1H	989	G	C5-C6-O6	-8.69	123.39	128.60
25	1H	2518	A	C6-C5-N7	-8.69	126.22	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1029	A	N1-C6-N6	8.69	123.81	118.60
25	1H	2591	C	N3-C2-O2	8.68	127.98	121.90
25	1H	1967	C	C4-C5-C6	8.68	121.74	117.40
25	1H	681	G	N1-C2-N2	-8.68	108.39	116.20
25	14	2438	U	O5'-P-OP2	-8.68	97.89	105.70
25	1H	108	U	O5'-P-OP1	-8.68	97.89	105.70
25	1H	659	C	C5-C6-N1	-8.67	116.66	121.00
25	1H	1142(A)	A	N3-C4-N9	-8.67	120.46	127.40
25	1H	1314	C	C2-N1-C1'	8.67	128.34	118.80
25	1H	1142(A)	A	N3-C4-C5	8.67	132.87	126.80
25	1H	774	A	C4-C5-N7	8.66	115.03	110.70
25	1H	1767	C	O5'-P-OP1	-8.66	97.91	105.70
55	1G	1469	G	N1-C6-O6	8.66	125.09	119.90
25	1H	1496	A	C4-C5-N7	8.65	115.03	110.70
1	13	1529	G	N7-C8-N9	8.65	117.43	113.10
25	1H	945	A	O4'-C1'-N9	8.65	115.12	108.20
25	1H	1300	U	C2-N1-C1'	-8.65	107.32	117.70
55	1G	197	A	C8-N9-C4	-8.64	102.34	105.80
25	1H	966	G	N3-C2-N2	8.63	125.94	119.90
25	14	2443	C	C5-C4-N4	-8.63	114.16	120.20
25	1H	1204	A	N1-C2-N3	8.62	133.61	129.30
25	1H	193	U	N1-C2-O2	-8.61	116.77	122.80
25	1H	1159	U	O5'-P-OP2	-8.61	97.95	105.70
25	1H	696	G	N1-C6-O6	-8.60	114.74	119.90
25	1H	432	A	N1-C6-N6	8.60	123.76	118.60
25	1H	528	A	N3-C4-N9	-8.59	120.53	127.40
25	1H	1915	U	N3-C2-O2	-8.59	116.19	122.20
25	14	2005	A	C8-N9-C4	8.59	109.23	105.80
25	1H	576	U	O5'-P-OP1	-8.59	97.97	105.70
25	1H	2574	G	C5-C6-N1	8.59	115.79	111.50
25	14	2490	G	C5-N7-C8	-8.58	100.01	104.30
25	1H	1255	U	N3-C4-O4	8.57	125.40	119.40
25	1H	2506	U	N1-C2-O2	8.57	128.80	122.80
25	14	74	A	N1-C2-N3	8.57	133.59	129.30
25	1H	451	C	N1-C2-O2	-8.57	113.76	118.90
25	1H	2620	C	N3-C4-C5	8.57	125.33	121.90
25	14	205	G	O5'-P-OP2	-8.57	97.99	105.70
25	1H	1695	G	N3-C4-N9	8.56	131.13	126.00
25	14	2430	A	C6-C5-N7	-8.55	126.31	132.30
25	14	2607	G	N3-C4-N9	8.55	131.13	126.00
1	13	1260	C	C6-N1-C2	-8.54	116.88	120.30
25	1H	1698	A	N1-C2-N3	8.54	133.57	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	2598	A	N9-C4-C5	-8.53	102.39	105.80
26	1J	102	G	N7-C8-N9	-8.54	108.83	113.10
35	35	147	LEU	CA-CB-CG	8.53	134.93	115.30
1	13	1404	C	N3-C4-C5	8.52	125.31	121.90
25	1H	2643	G	O5'-P-OP1	-8.52	98.03	105.70
25	1H	2689	U	C5-C4-O4	8.52	131.01	125.90
25	14	141	A	C2-N3-C4	-8.52	106.34	110.60
25	1H	474	G	O5'-P-OP2	-8.51	98.04	105.70
25	1H	74	A	C8-N9-C4	-8.51	102.40	105.80
40	C8	95	LEU	CA-CB-CG	-8.50	95.74	115.30
25	1H	1304	C	N3-C4-C5	8.50	125.30	121.90
25	1H	2392	A	C6-N1-C2	8.50	123.70	118.60
25	1H	676	A	O4'-C1'-N9	8.49	115.00	108.20
25	1H	1936	A	O4'-C1'-N9	8.49	114.99	108.20
25	1H	1327	C	N1-C2-O2	-8.49	113.81	118.90
25	1H	2552	U	N1-C2-N3	8.48	119.99	114.90
25	1H	330	A	N1-C2-N3	8.48	133.54	129.30
25	1H	197	A	N1-C2-N3	8.47	133.53	129.30
25	1H	1528	A	C8-N9-C4	-8.47	102.41	105.80
25	1H	140	A	C5-C6-N6	-8.47	116.93	123.70
25	1H	1006	C	O5'-P-OP1	-8.47	98.08	105.70
25	1H	2010	G	O5'-P-OP1	-8.47	98.08	105.70
25	14	1558	A	C2-N3-C4	-8.47	106.37	110.60
1	13	812	C	N1-C2-O2	8.46	123.98	118.90
25	1H	829	A	O5'-P-OP2	-8.47	98.08	105.70
25	1H	831	G	C8-N9-C4	8.47	109.79	106.40
55	1G	690	G	N3-C2-N2	-8.47	113.97	119.90
25	14	71	A	C5-N7-C8	-8.47	99.67	103.90
25	14	1950	G	C5-N7-C8	-8.46	100.07	104.30
25	1H	956	G	N1-C6-O6	8.45	124.97	119.90
25	14	605	C	C6-N1-C2	8.45	123.68	120.30
25	1H	127	A	N1-C6-N6	8.44	123.66	118.60
1	13	792	A	C5-C6-N1	-8.44	113.48	117.70
25	14	1965	C	C6-N1-C2	8.44	123.67	120.30
1	13	775	G	N1-C6-O6	8.44	124.96	119.90
25	1H	271(B)	G	N3-C4-C5	-8.44	124.38	128.60
25	14	2430	A	C5-C6-N1	-8.44	113.48	117.70
25	1H	859	G	N3-C4-C5	8.43	132.82	128.60
1	13	975	A	N1-C6-N6	8.43	123.66	118.60
25	1H	1658	C	N1-C2-O2	-8.43	113.84	118.90
1	13	542	G	O5'-P-OP1	-8.43	98.12	105.70
25	1H	1386	C	C6-N1-C2	-8.43	116.93	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	2424	C	N1-C2-O2	8.42	123.95	118.90
25	14	2249	U	N3-C2-O2	-8.42	116.30	122.20
25	1H	1021	A	C5-C6-N1	-8.42	113.49	117.70
25	14	468	G	C5-C6-O6	-8.42	123.55	128.60
25	1H	1274	A	O5'-P-OP2	-8.42	98.12	105.70
25	14	1812	A	O5'-P-OP2	-8.42	98.12	105.70
25	1H	491	G	O5'-P-OP1	-8.41	98.13	105.70
25	1H	1786	A	N9-C1'-C2'	8.41	124.94	114.00
25	1H	1673	U	C5-C6-N1	-8.41	118.50	122.70
25	14	1790	C	C6-N1-C2	8.41	123.66	120.30
25	1H	569	U	C5-C6-N1	-8.41	118.50	122.70
25	1H	1610	A	C5-C6-N6	-8.41	116.97	123.70
25	1H	1428	C	O5'-P-OP1	-8.40	98.14	105.70
25	14	148	C	C6-N1-C2	8.40	123.66	120.30
25	14	1614	A	C2-N3-C4	-8.40	106.40	110.60
25	14	671	C	C2-N3-C4	-8.40	115.70	119.90
25	1H	793	A	C5-C6-N6	-8.40	116.98	123.70
25	14	1899	G	N1-C2-N3	8.40	128.94	123.90
25	1H	1321	A	N1-C2-N3	8.39	133.50	129.30
23	2K	42	C	O5'-P-OP2	-8.39	98.15	105.70
25	1H	1950	G	C8-N9-C1'	-8.38	116.11	127.00
25	14	1786	A	C5-C6-N1	-8.38	113.51	117.70
25	14	2253	G	C5-C6-O6	-8.38	123.57	128.60
25	14	1277	G	C2-N3-C4	-8.37	107.72	111.90
25	1H	2688	U	N1-C2-N3	8.36	119.92	114.90
25	14	1342	A	C6-C5-N7	-8.36	126.44	132.30
25	1H	774	A	C4-N9-C1'	-8.36	111.25	126.30
25	1H	821	A	C8-N9-C4	-8.35	102.46	105.80
25	1H	829	A	OP1-P-OP2	8.35	132.12	119.60
25	14	2776	A	C8-N9-C4	-8.35	102.46	105.80
25	1H	1661	G	N7-C8-N9	-8.34	108.93	113.10
25	1H	2713	A	N3-C4-C5	8.34	132.64	126.80
25	1H	2707	G	N3-C2-N2	-8.34	114.06	119.90
25	14	1616	A	C8-N9-C4	-8.34	102.46	105.80
25	14	2617	C	C6-N1-C2	8.34	123.64	120.30
25	1H	751	A	O5'-P-OP2	8.34	120.70	110.70
55	1G	1499	A	C8-N9-C4	8.34	109.14	105.80
25	1H	736	C	C2-N3-C4	-8.33	115.73	119.90
25	1H	2430	A	C4-C5-N7	8.33	114.87	110.70
25	14	2335	A	O4'-C1'-N9	8.33	114.87	108.20
25	1H	966	G	N1-C2-N2	-8.33	108.70	116.20
59	M5	50	LEU	CA-CB-CG	8.33	134.45	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	760	G	C5-C6-O6	-8.32	123.61	128.60
25	1H	2328	A	C2-N3-C4	-8.32	106.44	110.60
25	1H	664	C	C5-C6-N1	-8.31	116.84	121.00
25	14	1813	G	O5'-P-OP1	-8.31	98.22	105.70
25	14	2600	A	N1-C6-N6	-8.31	113.61	118.60
25	1H	659	C	C6-N1-C2	8.31	123.62	120.30
25	1H	2269	A	C8-N9-C4	8.31	109.12	105.80
25	1H	2392	A	N3-C4-N9	-8.31	120.75	127.40
1	13	1416	G	N1-C6-O6	-8.29	114.92	119.90
25	1H	1204	A	C6-C5-N7	-8.29	126.50	132.30
25	1H	2638	G	N3-C4-N9	8.29	130.97	126.00
25	14	21	A	O5'-P-OP1	-8.29	98.24	105.70
25	14	704	G	C5-C6-O6	-8.29	123.63	128.60
23	2L	10	G	O5'-P-OP1	-8.29	98.24	105.70
25	14	2346	A	C5-C6-N1	-8.29	113.56	117.70
25	14	829	A	O5'-P-OP2	-8.28	98.25	105.70
1	13	690	G	C2-N3-C4	-8.28	107.76	111.90
25	1H	140	A	C8-N9-C4	-8.28	102.49	105.80
25	1H	774	A	C4-C5-C6	-8.28	112.86	117.00
25	14	1598	C	O5'-P-OP2	8.27	120.63	110.70
1	13	1502	A	C6-C5-N7	-8.27	126.51	132.30
25	1H	138	G	C4-C5-N7	8.27	114.11	110.80
25	1H	528	A	C5-N7-C8	-8.27	99.77	103.90
1	13	760	G	C4-C5-N7	8.26	114.11	110.80
25	14	2713	A	C5-N7-C8	-8.25	99.77	103.90
1	13	789	U	N3-C2-O2	-8.25	116.42	122.20
25	1H	192	C	C6-N1-C2	8.25	123.60	120.30
55	1G	11	G	O5'-P-OP1	-8.25	98.28	105.70
25	1H	1356	G	O5'-P-OP1	-8.24	98.28	105.70
25	1H	103	A	C8-N9-C4	8.24	109.10	105.80
25	14	1376	C	O5'-P-OP1	-8.24	98.28	105.70
25	14	1698	A	N1-C2-N3	8.24	133.42	129.30
25	1H	1373	A	N7-C8-N9	-8.23	109.68	113.80
25	1H	2070	G	N1-C2-N2	-8.23	108.79	116.20
25	1H	1663	C	O5'-P-OP2	-8.23	98.29	105.70
25	1H	1614	A	N3-C4-C5	8.23	132.56	126.80
25	14	774	A	C8-N9-C1'	8.23	142.51	127.70
22	3K	85	A	O5'-P-OP1	-8.22	98.30	105.70
25	14	2301	C	C6-N1-C2	-8.22	117.01	120.30
25	14	2320	A	P-O3'-C3'	8.22	129.57	119.70
25	14	2689	U	N1-C2-N3	8.22	119.83	114.90
25	1H	1382	G	C5-C6-O6	-8.22	123.67	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	2610	C	N3-C4-C5	8.22	125.19	121.90
25	14	1774	C	O5'-P-OP1	-8.21	98.31	105.70
25	1H	144	C	C5-C6-N1	-8.21	116.89	121.00
25	14	201	C	C5-C6-N1	-8.21	116.90	121.00
25	14	1779	U	O5'-P-OP2	-8.20	98.32	105.70
25	14	1981	A	C8-N9-C4	8.20	109.08	105.80
25	14	2502	G	O5'-P-OP1	-8.20	98.32	105.70
25	1H	1940	U	N3-C4-O4	8.20	125.14	119.40
25	1H	1616	A	O4'-C1'-N9	8.19	114.75	108.20
25	14	788	A	C6-C5-N7	-8.19	126.56	132.30
25	14	2249	U	C6-N1-C2	-8.19	116.08	121.00
25	14	2324	C	C5-C4-N4	-8.19	114.47	120.20
25	14	130	C	N3-C4-C5	8.19	125.18	121.90
25	14	2595	G	C5-C6-O6	-8.19	123.69	128.60
25	14	575	A	O5'-P-OP1	-8.18	98.34	105.70
25	14	801	G	N3-C4-N9	-8.18	121.09	126.00
25	1H	1398	C	O5'-P-OP2	8.17	120.51	110.70
25	1H	1955	U	N1-C2-N3	8.17	119.80	114.90
25	1H	444	C	O5'-P-OP1	8.17	120.50	110.70
25	1H	867	C	N3-C2-O2	8.17	127.62	121.90
55	1G	690	G	C5-N7-C8	-8.16	100.22	104.30
25	14	1142(A)	A	C2-N3-C4	-8.16	106.52	110.60
1	13	520	A	N1-C6-N6	8.16	123.50	118.60
25	14	2392	A	C8-N9-C4	-8.16	102.54	105.80
25	1H	1821	A	N1-C6-N6	-8.16	113.70	118.60
25	14	676	A	C8-N9-C4	-8.16	102.54	105.80
25	1H	1313	U	C2-N1-C1'	8.15	127.49	117.70
25	1H	2726	U	C5-C6-N1	-8.15	118.62	122.70
25	1H	1606	G	C8-N9-C4	8.15	109.66	106.40
25	1H	2589	A	C8-N9-C4	8.15	109.06	105.80
25	1H	2726	U	C5-C4-O4	8.14	130.79	125.90
25	1H	2330	G	C2-N3-C4	-8.14	107.83	111.90
25	14	746	A	O5'-P-OP2	8.14	120.47	110.70
25	1H	2575	C	C5-C6-N1	-8.14	116.93	121.00
25	14	1965	C	C2-N3-C4	-8.14	115.83	119.90
25	14	945	A	C4-C5-C6	8.13	121.06	117.00
25	1H	917	A	C6-C5-N7	-8.12	126.61	132.30
25	1H	2441	C	N3-C4-N4	-8.12	112.31	118.00
25	1H	2271	G	N3-C2-N2	8.12	125.58	119.90
25	1H	1025	G	N1-C6-O6	-8.12	115.03	119.90
25	1H	226	G	O4'-C1'-N9	8.11	114.69	108.20
25	1H	2298	A	O5'-P-OP2	-8.11	98.40	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	661	C	C2-N3-C4	-8.11	115.85	119.90
25	1H	2519	U	N1-C2-O2	-8.11	117.13	122.80
25	1H	2295	C	C6-N1-C2	-8.10	117.06	120.30
25	14	459	U	N3-C2-O2	-8.10	116.53	122.20
25	14	130	C	C6-N1-C2	8.10	123.54	120.30
25	1H	463	G	N1-C2-N2	-8.10	108.91	116.20
25	1H	217	G	C4-C5-N7	-8.09	107.56	110.80
55	1G	690	G	C8-N9-C4	-8.09	103.16	106.40
25	14	1558	A	P-O3'-C3'	8.09	129.41	119.70
25	14	2392	A	N7-C8-N9	8.09	117.85	113.80
25	1H	2377	A	C8-N9-C4	8.09	109.03	105.80
25	14	2873	A	C6-C5-N7	-8.09	126.64	132.30
25	1H	1269	A	N7-C8-N9	8.08	117.84	113.80
25	1H	694	U	O5'-P-OP2	-8.07	98.43	105.70
25	1H	1404	C	O5'-P-OP2	-8.07	98.43	105.70
31	51	9	ILE	C-N-CD	-8.07	102.84	120.60
25	14	1616	A	N7-C8-N9	8.07	117.84	113.80
25	14	2544	G	C5-C6-O6	-8.07	123.76	128.60
25	14	330	A	N1-C2-N3	8.07	133.34	129.30
25	1H	2346	A	C8-N9-C4	-8.07	102.57	105.80
25	1H	867	C	N1-C2-O2	-8.07	114.06	118.90
25	14	2005	A	N7-C8-N9	-8.06	109.77	113.80
25	1H	1681	G	N1-C6-O6	8.06	124.73	119.90
25	1H	2269	A	N9-C4-C5	-8.06	102.58	105.80
25	14	2029	G	O5'-P-OP2	8.05	120.37	110.70
25	1H	2593	U	N3-C4-C5	8.05	119.43	114.60
25	1H	1431	U	C5-C6-N1	8.05	126.72	122.70
25	14	1029	A	C8-N9-C4	8.05	109.02	105.80
25	1H	444	C	N3-C2-O2	-8.04	116.27	121.90
25	14	671	C	N1-C2-N3	8.04	124.83	119.20
25	14	827	U	O5'-P-OP2	-8.04	98.46	105.70
25	1H	123	G	C6-N1-C2	-8.04	120.28	125.10
25	1H	762	U	C2-N1-C1'	8.04	127.35	117.70
25	1H	2065	C	N3-C4-C5	8.04	125.11	121.90
25	1H	2238	G	O5'-P-OP2	-8.03	98.47	105.70
25	1H	1771	C	N3-C4-C5	8.03	125.11	121.90
25	14	1614	A	O4'-C1'-N9	8.03	114.62	108.20
1	13	562	C	O5'-P-OP2	-8.02	98.48	105.70
25	1H	799	G	C8-N9-C4	8.02	109.61	106.40
25	1H	1804	C	OP1-P-OP2	-8.02	107.56	119.60
25	1H	2447	G	N3-C4-N9	8.02	130.81	126.00
25	1H	271(B)	G	P-O3'-C3'	8.02	129.32	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1332	G	C8-N9-C4	-8.02	103.19	106.40
25	14	2688	U	C5-C6-N1	-8.02	118.69	122.70
25	14	1813	G	O5'-P-OP2	8.01	120.31	110.70
25	1H	512	G	O4'-C1'-N9	8.01	114.61	108.20
25	1H	1528	A	N7-C8-N9	8.01	117.81	113.80
25	1H	2819	G	N1-C6-O6	8.01	124.70	119.90
25	1H	2004	G	O5'-P-OP1	-8.01	98.50	105.70
26	16	41	U	C5-C6-N1	-8.01	118.70	122.70
25	14	2038	G	C8-N9-C4	8.01	109.60	106.40
25	14	2258	C	C5-C4-N4	-8.01	114.60	120.20
25	1H	1437	C	C6-N1-C2	-8.00	117.10	120.30
25	1H	2871	C	O5'-P-OP1	8.00	120.30	110.70
25	14	1312	U	O5'-P-OP1	-8.00	98.50	105.70
25	14	1784	A	N1-C6-N6	-8.00	113.80	118.60
25	1H	1300	U	C6-N1-C1'	8.00	132.40	121.20
25	14	1837	C	O5'-P-OP1	-8.00	98.50	105.70
25	14	2821	A	C2-N3-C4	-8.00	106.60	110.60
25	1H	1006	C	N1-C2-O2	-7.99	114.10	118.90
25	1H	657	U	C5-C6-N1	-7.99	118.70	122.70
1	13	266	G	C4-C5-N7	7.99	114.00	110.80
25	1H	825	C	C5-C4-N4	-7.98	114.61	120.20
25	1H	2574	G	C5-C6-O6	-7.98	123.81	128.60
25	1H	2589	A	N7-C8-N9	-7.98	109.81	113.80
55	1G	1322	C	N3-C2-O2	-7.98	116.32	121.90
25	1H	940	G	C5-C6-O6	-7.97	123.82	128.60
25	1H	1776	G	C8-N9-C4	7.97	109.59	106.40
25	14	1342	A	N7-C8-N9	7.97	117.78	113.80
25	1H	1681	G	C2-N3-C4	-7.97	107.92	111.90
25	1H	124	G	C2-N3-C4	-7.96	107.92	111.90
25	1H	1573	G	C8-N9-C4	7.96	109.58	106.40
25	14	2029	G	N3-C4-N9	-7.96	121.22	126.00
1	13	816	A	C8-N9-C4	-7.96	102.61	105.80
1	13	1504	G	O5'-P-OP1	-7.96	98.53	105.70
25	1H	141	A	C4-C5-N7	7.96	114.68	110.70
25	1H	1759	A	O5'-P-OP1	-7.96	98.54	105.70
25	1H	1022	G	N3-C2-N2	-7.95	114.33	119.90
25	14	1271	G	N3-C4-N9	7.95	130.77	126.00
25	14	783	A	C8-N9-C4	-7.94	102.62	105.80
25	1H	1035	U	C5-C6-N1	-7.94	118.73	122.70
25	1H	210	C	C5-C6-N1	-7.94	117.03	121.00
25	1H	1379	A	C4-C5-N7	7.94	114.67	110.70
25	1H	528	A	C6-N1-C2	7.94	123.36	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	87	C	N1-C2-O2	-7.93	114.14	118.90
25	14	566	U	C2-N3-C4	-7.93	122.24	127.00
25	1H	141	A	N7-C8-N9	7.93	117.76	113.80
22	1K	83	C	N1-C2-O2	7.92	123.65	118.90
25	14	562	U	N3-C2-O2	-7.92	116.65	122.20
23	2K	77	A	C4-C5-N7	7.92	114.66	110.70
25	1H	836	G	C2-N3-C4	7.92	115.86	111.90
25	1H	1678	G	N3-C4-C5	7.92	132.56	128.60
25	14	835	A	O5'-P-OP1	7.92	120.20	110.70
25	1H	1022	G	N3-C4-C5	-7.91	124.64	128.60
25	1H	1210	A	C6-C5-N7	-7.91	126.76	132.30
23	2L	40	C	C6-N1-C2	-7.91	117.14	120.30
25	1H	1660	C	C2-N3-C4	-7.91	115.95	119.90
1	13	1407	C	N3-C4-N4	-7.91	112.47	118.00
25	1H	773	U	C5-C4-O4	7.90	130.64	125.90
25	14	2542	A	O5'-P-OP2	-7.90	98.59	105.70
25	14	2622	C	C6-N1-C2	7.90	123.46	120.30
25	1H	71	A	N7-C8-N9	7.89	117.75	113.80
25	1H	908	C	N1-C2-O2	-7.89	114.17	118.90
25	1H	1838	C	C5-C4-N4	-7.89	114.68	120.20
25	1H	77	C	N3-C4-N4	7.88	123.52	118.00
25	14	1600	C	O5'-P-OP2	-7.88	98.61	105.70
1	13	1467	G	O5'-P-OP2	-7.88	98.61	105.70
1	13	1525	G	C8-N9-C4	7.88	109.55	106.40
25	1H	945	A	C8-N9-C1'	-7.88	113.52	127.70
25	1H	1780	A	N9-C4-C5	7.88	108.95	105.80
25	14	945	A	O5'-P-OP1	-7.87	98.61	105.70
25	14	1145	C	C6-N1-C2	-7.87	117.15	120.30
1	13	1498	U	P-O3'-C3'	7.87	129.15	119.70
25	14	1934	C	C6-N1-C2	7.87	123.45	120.30
25	14	2287	A	C5-C6-N1	-7.87	113.77	117.70
25	1H	1192	G	C8-N9-C4	7.87	109.55	106.40
25	1H	1528	A	O4'-C1'-N9	7.87	114.49	108.20
25	1H	1427	A	C6-N1-C2	-7.87	113.88	118.60
25	1H	1594	G	O5'-P-OP2	7.87	120.14	110.70
25	14	2346	A	C5-N7-C8	-7.86	99.97	103.90
25	14	130	C	C2-N3-C4	-7.86	115.97	119.90
25	1H	1843	C	C2-N3-C4	-7.86	115.97	119.90
25	14	2712	U	N3-C4-O4	-7.86	113.90	119.40
25	1H	1558	A	N1-C2-N3	7.86	133.23	129.30
25	1H	1979	C	C6-N1-C2	-7.85	117.16	120.30
55	1G	197	A	N7-C8-N9	7.85	117.72	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	99	U	N3-C2-O2	-7.85	116.71	122.20
25	1H	1632	A	N1-C6-N6	7.84	123.31	118.60
26	1J	102	G	C6-C5-N7	7.84	135.11	130.40
25	1H	195	A	C5-C6-N6	-7.83	117.44	123.70
25	14	1796	U	O5'-P-OP2	7.83	120.10	110.70
1	13	900	A	C8-N9-C4	7.83	108.93	105.80
25	1H	2440	C	N3-C4-C5	-7.83	118.77	121.90
25	14	1661	G	C8-N9-C4	7.83	109.53	106.40
55	1G	812	C	P-O3'-C3'	7.83	129.09	119.70
25	1H	148	C	C6-N1-C2	7.82	123.43	120.30
25	1H	1823	G	C5-C6-O6	7.82	133.29	128.60
25	14	1769	G	N1-C6-O6	7.82	124.59	119.90
25	14	1769	G	N3-C4-N9	7.82	130.69	126.00
25	1H	74	A	C6-C5-N7	-7.82	126.83	132.30
25	1H	124	G	N3-C4-C5	7.82	132.51	128.60
25	1H	1004	C	N3-C4-C5	-7.82	118.77	121.90
25	1H	1607	C	N3-C4-N4	7.82	123.47	118.00
25	14	1980	G	N1-C6-O6	7.82	124.59	119.90
25	1H	1300	U	N1-C2-O2	-7.81	117.33	122.80
25	14	2253	G	C4-C5-N7	7.81	113.92	110.80
25	1H	2441	C	C5-C6-N1	-7.81	117.10	121.00
25	1H	2568	C	C2-N3-C4	-7.80	116.00	119.90
25	1H	1602	U	N1-C2-N3	7.80	119.58	114.90
25	1H	2252	G	C8-N9-C4	7.80	109.52	106.40
25	14	1781	C	C6-N1-C1'	-7.80	111.44	120.80
25	1H	2501	C	C2-N1-C1'	-7.80	110.22	118.80
25	1H	602	G	N3-C4-N9	7.80	130.68	126.00
25	14	729	G	C5-C6-O6	-7.80	123.92	128.60
25	14	624	C	N1-C2-O2	-7.79	114.22	118.90
25	14	2518	A	N3-C4-C5	7.79	132.25	126.80
25	1H	1203	G	O5'-P-OP2	-7.78	98.70	105.70
25	1H	1344	G	C5-C6-O6	-7.77	123.94	128.60
25	1H	1661	G	C8-N9-C4	7.77	109.51	106.40
25	14	2880	C	C5-C6-N1	7.77	124.89	121.00
25	1H	443	A	N1-C6-N6	7.77	123.26	118.60
25	1H	2469	A	N1-C6-N6	7.77	123.26	118.60
25	1H	139	G	N3-C4-C5	-7.76	124.72	128.60
25	14	829	A	OP1-P-OP2	7.76	131.24	119.60
25	14	1955	U	N1-C2-N3	7.76	119.56	114.90
25	1H	2427	C	N1-C2-O2	-7.76	114.25	118.90
25	14	929	G	C6-C5-N7	-7.76	125.75	130.40
25	1H	2525	G	N9-C4-C5	-7.75	102.30	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	2264	C	O5'-P-OP2	7.75	120.01	110.70
25	14	2702	U	C5-C6-N1	7.75	126.58	122.70
25	1H	569	U	C2-N3-C4	-7.75	122.35	127.00
25	14	2601	C	N3-C2-O2	-7.75	116.47	121.90
25	1H	576	U	C5-C4-O4	-7.75	121.25	125.90
25	1H	1940	U	N1-C2-O2	-7.75	117.38	122.80
25	14	1604	C	N1-C2-O2	-7.75	114.25	118.90
25	1H	1603	A	C8-N9-C4	-7.75	102.70	105.80
1	13	770	C	O5'-P-OP2	7.74	119.99	110.70
25	1H	1640	C	O5'-P-OP1	7.74	119.99	110.70
25	14	2362	G	C8-N9-C4	7.74	109.50	106.40
25	1H	1204	A	N1-C6-N6	7.73	123.24	118.60
25	14	691	C	C5-C6-N1	-7.73	117.13	121.00
25	1H	1204	A	C5-N7-C8	-7.73	100.04	103.90
55	1G	1499	A	N7-C8-N9	-7.72	109.94	113.80
25	14	2253	G	N1-C6-O6	7.72	124.53	119.90
1	13	893	C	C6-N1-C2	7.72	123.39	120.30
25	1H	2412	A	C6-N1-C2	-7.72	113.97	118.60
25	1H	1142(A)	A	C5-C6-N1	-7.72	113.84	117.70
25	1H	1496	A	C6-C5-N7	-7.72	126.90	132.30
25	14	2346	A	N7-C8-N9	7.72	117.66	113.80
25	1H	596	G	C5-C6-O6	-7.72	123.97	128.60
25	1H	706	A	C2-N3-C4	-7.72	106.74	110.60
25	1H	1558	A	C2-N3-C4	-7.72	106.74	110.60
25	1H	2307	G	N1-C6-O6	7.71	124.53	119.90
27	11	111	LEU	CA-CB-CG	7.71	133.03	115.30
25	14	2429	G	O5'-P-OP1	7.71	119.95	110.70
1	13	266	G	C5-N7-C8	-7.71	100.45	104.30
25	1H	1269	A	C5-N7-C8	-7.71	100.05	103.90
25	1H	1306	C	C6-N1-C2	7.71	123.38	120.30
25	1H	2352	A	O5'-P-OP1	-7.70	98.77	105.70
25	14	1899	G	C5-C6-O6	7.70	133.22	128.60
25	1H	974(A)	C	C5-C4-N4	7.70	125.59	120.20
25	1H	111	A	O5'-P-OP2	-7.70	98.77	105.70
1	13	1529	G	C6-C5-N7	-7.70	125.78	130.40
25	1H	1314	C	C6-N1-C1'	-7.70	111.56	120.80
25	1H	1396	U	C5-C4-O4	7.70	130.52	125.90
25	1H	2346	A	C5-C6-N1	-7.69	113.85	117.70
25	14	1681	G	C5-N7-C8	-7.69	100.46	104.30
25	14	2607	G	N1-C2-N2	-7.69	109.28	116.20
25	14	1806	C	C6-N1-C2	7.69	123.37	120.30
26	1J	102	G	C5-N7-C8	7.69	108.14	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	2847	U	C5-C4-O4	-7.68	121.29	125.90
26	1J	86	G	C8-N9-C4	7.68	109.47	106.40
25	1H	1843	C	C5-C6-N1	-7.68	117.16	121.00
25	1H	1574	C	OP2-P-O3'	7.67	122.08	105.20
25	1H	2374	C	C6-N1-C2	7.67	123.37	120.30
25	1H	2552	U	N1-C2-O2	-7.67	117.43	122.80
25	14	1162	G	O5'-P-OP1	-7.67	98.80	105.70
25	1H	2063	C	O5'-P-OP2	-7.67	98.80	105.70
25	1H	630	G	C5-C6-O6	-7.67	124.00	128.60
25	1H	1255	U	N3-C4-C5	-7.67	110.00	114.60
25	14	1678	G	N7-C8-N9	7.67	116.94	113.10
1	13	1416	G	C5-C6-O6	7.66	133.20	128.60
25	1H	1902	C	C4-C5-C6	7.66	121.23	117.40
25	1H	71	A	O4'-C1'-N9	-7.66	102.07	108.20
25	1H	762	U	C5-C4-O4	-7.66	121.31	125.90
25	14	916	G	O5'-P-OP1	-7.66	98.81	105.70
25	1H	2401	U	C5-C6-N1	7.65	126.53	122.70
25	1H	2688	U	C4-C5-C6	7.65	124.29	119.70
25	14	2015	A	OP2-P-O3'	7.65	122.03	105.20
25	1H	2329	G	C8-N9-C4	7.65	109.46	106.40
25	1H	1825	A	N1-C6-N6	-7.65	114.01	118.60
4	3E	12	CYS	CA-CB-SG	7.65	127.77	114.00
25	1H	446	G	N1-C6-O6	7.65	124.49	119.90
25	1H	1189	A	N1-C6-N6	7.65	123.19	118.60
25	1H	2422	A	O4'-C1'-N9	7.64	114.31	108.20
25	1H	2242	G	N1-C6-O6	7.64	124.48	119.90
25	1H	2577	A	C5-C6-N6	7.64	129.81	123.70
25	1H	2447	G	N3-C4-C5	-7.64	124.78	128.60
25	1H	2577	A	N9-C4-C5	7.64	108.86	105.80
1	13	963	G	N3-C4-N9	7.63	130.58	126.00
25	14	1332	G	N3-C2-N2	-7.63	114.56	119.90
25	14	2700	C	C6-N1-C2	7.63	123.35	120.30
25	1H	1349	A	C2-N3-C4	-7.63	106.78	110.60
25	14	1261	C	N3-C4-C5	7.63	124.95	121.90
25	1H	1931	U	C5-C4-O4	7.63	130.48	125.90
25	1H	859	G	C8-N9-C4	7.63	109.45	106.40
25	14	1366	A	N1-C6-N6	7.62	123.17	118.60
25	1H	1241	A	C5-C6-N1	-7.62	113.89	117.70
25	1H	772	C	N1-C2-O2	-7.62	114.33	118.90
26	16	30	C	C6-N1-C2	-7.62	117.25	120.30
1	13	1158	C	C2-N1-C1'	7.62	127.18	118.80
55	1G	197	A	P-O3'-C3'	7.61	128.84	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	982	C	N1-C2-O2	-7.61	114.33	118.90
25	14	187	G	C8-N9-C1'	-7.61	117.11	127.00
25	14	2688	U	C5-C4-O4	7.61	130.47	125.90
55	1G	819	A	N1-C6-N6	7.61	123.17	118.60
25	14	613	U	C5-C4-O4	7.61	130.47	125.90
25	1H	964	C	O5'-P-OP1	-7.61	98.86	105.70
25	14	1279	G	O5'-P-OP2	-7.61	98.86	105.70
1	13	1158	C	N1-C2-O2	7.60	123.46	118.90
25	1H	1388	G	O5'-P-OP2	-7.60	98.86	105.70
25	14	1266	G	C8-N9-C4	7.60	109.44	106.40
55	1G	553	A	O5'-P-OP2	-7.60	98.86	105.70
25	1H	195	A	C5-N7-C8	-7.60	100.10	103.90
25	1H	846	C	O5'-P-OP1	-7.60	98.86	105.70
25	1H	330	A	C5-N7-C8	-7.59	100.10	103.90
25	14	2392	A	C5-N7-C8	-7.59	100.10	103.90
25	1H	2031	A	C2-N3-C4	7.59	114.39	110.60
25	14	774	A	C4-N9-C1'	-7.59	112.64	126.30
25	1H	1698	A	N3-C4-C5	7.59	132.11	126.80
25	1H	989	G	N1-C6-O6	7.58	124.45	119.90
1	13	966	G	N9-C4-C5	-7.58	102.37	105.40
55	1G	913	A	P-O3'-C3'	7.58	128.80	119.70
1	13	1487	G	C8-N9-C4	7.58	109.43	106.40
25	1H	621	A	N3-C4-C5	7.58	132.10	126.80
25	1H	1939	U	N3-C4-C5	7.58	119.15	114.60
25	1H	2346	A	N3-C4-N9	-7.58	121.34	127.40
25	1H	2254	C	N1-C2-O2	-7.58	114.36	118.90
25	1H	870	A	O5'-P-OP1	-7.57	98.89	105.70
25	1H	263	C	O5'-P-OP2	-7.57	98.89	105.70
38	65	110	LEU	CA-CB-CG	7.57	132.70	115.30
25	1H	708	C	C6-N1-C2	7.56	123.33	120.30
25	1H	942	G	O5'-P-OP1	-7.56	98.89	105.70
25	14	774	A	C4-C5-C6	-7.56	113.22	117.00
25	14	835	A	C2-N3-C4	7.56	114.38	110.60
25	14	2600	A	N9-C4-C5	7.56	108.83	105.80
25	14	747	U	C6-N1-C2	7.56	125.53	121.00
25	1H	679	C	C6-N1-C2	7.55	123.32	120.30
55	1G	449	C	C5-C4-N4	7.55	125.48	120.20
1	13	238	G	C8-N9-C4	7.55	109.42	106.40
1	13	985	C	C6-N1-C2	-7.55	117.28	120.30
25	1H	783	A	N1-C2-N3	7.54	133.07	129.30
25	1H	798	G	C2-N3-C4	-7.54	108.13	111.90
25	14	565	C	C6-N1-C2	7.54	123.32	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	682	G	N7-C8-N9	-7.54	109.33	113.10
25	1H	2380	C	C5-C6-N1	-7.54	117.23	121.00
25	1H	2700	C	C6-N1-C2	7.54	123.31	120.30
25	1H	2259	G	O5'-P-OP2	7.53	119.74	110.70
25	1H	2442	C	C6-N1-C2	7.53	123.31	120.30
25	1H	705	A	N1-C6-N6	7.53	123.12	118.60
25	14	1920	C	O5'-P-OP2	-7.52	98.93	105.70
25	1H	1392	A	O5'-P-OP1	-7.52	98.93	105.70
25	14	2033	A	C2-N3-C4	7.52	114.36	110.60
25	1H	945	A	C5-C6-N6	-7.52	117.69	123.70
25	14	1189	A	OP1-P-OP2	-7.52	108.32	119.60
25	1H	1784	A	O4'-C1'-N9	-7.52	102.19	108.20
25	1H	1819	A	N1-C6-N6	7.51	123.11	118.60
1	13	23	C	C5-C6-N1	7.51	124.76	121.00
25	1H	705	A	C5-C6-N6	-7.51	117.69	123.70
25	1H	1004	C	C6-N1-C2	-7.51	117.30	120.30
25	1H	1271	G	O5'-P-OP2	-7.51	98.94	105.70
25	14	1616	A	C5-N7-C8	-7.51	100.15	103.90
25	14	2821	A	N1-C2-N3	7.51	133.05	129.30
25	14	2624	G	C5-C6-O6	-7.50	124.10	128.60
25	14	196	A	O4'-C1'-N9	7.50	114.20	108.20
1	13	1405	G	C5-C6-O6	-7.50	124.10	128.60
25	1H	2743	C	C2-N3-C4	-7.50	116.15	119.90
25	14	1210	A	C5-N7-C8	-7.50	100.15	103.90
25	1H	568	U	N3-C4-C5	7.50	119.10	114.60
25	1H	1559	G	C5-C6-O6	-7.50	124.10	128.60
25	1H	2499	C	C5-C4-N4	-7.49	114.96	120.20
1	13	789	U	N1-C2-N3	7.49	119.39	114.90
25	1H	1600	C	O5'-P-OP2	-7.49	98.96	105.70
25	1H	2346	A	N7-C8-N9	7.49	117.54	113.80
25	1H	213	A	C8-N9-C4	7.48	108.79	105.80
25	14	771	G	C5-C6-O6	-7.48	124.11	128.60
25	1H	2318	G	N7-C8-N9	7.48	116.84	113.10
25	14	74	A	C4-C5-N7	7.48	114.44	110.70
25	1H	1658	C	N3-C4-N4	7.47	123.23	118.00
25	14	252	G	N1-C6-O6	-7.47	115.42	119.90
25	14	1824	G	O5'-P-OP2	-7.47	98.97	105.70
25	1H	968	G	O5'-P-OP2	-7.47	98.98	105.70
25	1H	692	C	N3-C4-N4	7.47	123.23	118.00
25	1H	2375	G	C8-N9-C4	7.47	109.39	106.40
25	14	71	A	C2-N3-C4	-7.47	106.87	110.60
25	1H	203	C	N3-C4-C5	7.47	124.89	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	783	A	N3-C4-C5	7.46	132.02	126.80
25	1H	1122	G	N9-C4-C5	-7.46	102.42	105.40
25	14	2363	C	C6-N1-C2	7.46	123.28	120.30
25	1H	698	C	C5-C4-N4	-7.46	114.98	120.20
25	1H	994	C	O5'-P-OP2	-7.46	98.99	105.70
25	1H	2232	U	C5-C4-O4	7.46	130.37	125.90
25	1H	2550	G	C8-N9-C4	-7.46	103.42	106.40
25	1H	746	A	O5'-P-OP2	7.45	119.64	110.70
25	14	71	A	O4'-C1'-N9	-7.45	102.24	108.20
25	14	187	G	N3-C4-N9	7.45	130.47	126.00
25	1H	2070	G	N1-C2-N3	7.45	128.37	123.90
25	1H	201	C	C6-N1-C2	7.45	123.28	120.30
25	1H	1781	C	N3-C2-O2	-7.45	116.69	121.90
25	1H	2446	G	C6-C5-N7	-7.45	125.93	130.40
1	13	1354	C	C6-N1-C2	-7.45	117.32	120.30
25	1H	249	C	N3-C2-O2	-7.45	116.69	121.90
25	1H	2607	G	C5-C6-O6	-7.44	124.13	128.60
25	1H	806	C	N3-C4-C5	7.44	124.88	121.90
25	14	949	C	N1-C2-O2	-7.44	114.43	118.90
25	14	2560	C	O5'-P-OP1	-7.44	99.00	105.70
25	14	1332	G	N9-C4-C5	7.44	108.38	105.40
25	14	2029	G	C8-N9-C4	-7.44	103.42	106.40
25	14	1391	U	O5'-P-OP1	-7.44	99.01	105.70
25	14	2002	G	C4-C5-N7	7.44	113.78	110.80
25	14	754	C	N3-C4-N4	7.44	123.20	118.00
25	1H	2011	U	N3-C2-O2	7.43	127.40	122.20
25	14	1992	G	N1-C6-O6	-7.43	115.44	119.90
25	1H	216	A	O5'-P-OP2	7.43	119.61	110.70
25	1H	1931	U	C5-C6-N1	-7.42	118.99	122.70
25	14	1241	A	C2-N3-C4	-7.42	106.89	110.60
25	1H	2271	G	N3-C4-C5	-7.42	124.89	128.60
25	1H	2329	G	N7-C8-N9	-7.42	109.39	113.10
25	1H	2713	A	C6-C5-N7	-7.42	127.11	132.30
1	13	817	C	C6-N1-C2	7.41	123.27	120.30
29	31	45	ARG	NE-CZ-NH1	7.41	124.01	120.30
25	14	336	C	O5'-P-OP2	-7.41	99.03	105.70
25	14	1443	G	N1-C6-O6	7.41	124.35	119.90
25	14	1618	A	C8-N9-C4	-7.41	102.84	105.80
25	1H	740	U	O5'-P-OP1	7.41	119.59	110.70
25	14	2068	U	O5'-P-OP1	-7.41	99.03	105.70
25	14	2713	A	N3-C4-C5	7.41	131.98	126.80
25	1H	739	G	C8-N9-C4	7.40	109.36	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	1502	A	N1-C2-N3	7.40	133.00	129.30
25	1H	1332	G	N1-C2-N3	7.40	128.34	123.90
25	1H	236	C	C4-C5-C6	7.40	121.10	117.40
25	14	2587	A	N1-C6-N6	7.40	123.04	118.60
25	14	1992	G	P-O3'-C3'	7.39	128.57	119.70
25	1H	602	G	N9-C4-C5	-7.39	102.44	105.40
25	1H	2017	U	N3-C4-O4	7.39	124.57	119.40
25	1H	783	A	C4-C5-C6	7.39	120.69	117.00
25	1H	2440	C	C2-N1-C1'	-7.39	110.67	118.80
25	14	2236	C	O5'-P-OP1	-7.39	99.05	105.70
25	1H	1967	C	N3-C4-C5	-7.38	118.95	121.90
25	14	694	U	O5'-P-OP1	7.38	119.56	110.70
25	1H	686	G	C6-C5-N7	-7.38	125.97	130.40
25	1H	1819	A	N9-C4-C5	-7.38	102.85	105.80
25	1H	1823	G	N1-C6-O6	-7.38	115.47	119.90
25	1H	2073	C	OP2-P-O3'	7.38	121.43	105.20
25	14	2374	C	C2-N3-C4	-7.38	116.21	119.90
25	1H	2016	U	C5-C6-N1	-7.37	119.01	122.70
25	1H	2307	G	C4-C5-N7	7.37	113.75	110.80
25	1H	121	G	C5-C6-N1	7.37	115.18	111.50
25	1H	1193	G	N7-C8-N9	-7.37	109.42	113.10
25	14	659	C	N3-C4-C5	7.36	124.84	121.90
25	14	2873	A	C5-C6-N1	-7.36	114.02	117.70
25	1H	1403	C	C6-N1-C2	-7.36	117.36	120.30
25	1H	77	C	C5-C4-N4	-7.36	115.05	120.20
25	1H	856	C	O5'-P-OP1	-7.36	99.08	105.70
25	1H	812	C	N1-C2-O2	-7.36	114.48	118.90
25	1H	1996	C	C6-N1-C2	7.36	123.24	120.30
25	1H	940	G	C5-C6-N1	7.36	115.18	111.50
25	1H	1950	G	O4'-C1'-N9	7.36	114.09	108.20
25	14	1342	A	C8-N9-C4	-7.36	102.86	105.80
25	1H	678	C	O5'-P-OP2	-7.36	99.08	105.70
25	1H	698	C	C4-C5-C6	7.36	121.08	117.40
25	1H	1993	U	N1-C2-O2	-7.36	117.65	122.80
55	1G	547	A	C8-N9-C4	7.36	108.74	105.80
25	14	1204	A	C2-N3-C4	-7.36	106.92	110.60
1	13	784	C	O5'-P-OP2	7.35	119.53	110.70
25	14	1698	A	C5-C6-N6	-7.35	117.82	123.70
25	14	1781	C	O4'-C1'-N1	7.35	114.08	108.20
25	14	1313	U	C5-C6-N1	7.35	126.38	122.70
55	1G	1346	A	P-O3'-C3'	7.35	128.52	119.70
1	13	690	G	C4-C5-C6	7.35	123.21	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1771	C	N1-C2-O2	-7.35	114.49	118.90
25	1H	576	U	N1-C2-O2	-7.35	117.66	122.80
25	1H	1156	A	O5'-P-OP2	-7.34	99.09	105.70
25	14	2763	G	N3-C4-N9	7.34	130.41	126.00
25	1H	1223	C	N1-C2-O2	-7.34	114.50	118.90
25	1H	1312	U	O5'-P-OP2	7.34	119.50	110.70
25	1H	371	A	O5'-P-OP2	-7.33	99.10	105.70
25	14	784	A	O5'-P-OP1	-7.33	99.10	105.70
25	14	2324	C	N3-C4-C5	7.33	124.83	121.90
26	1J	81	G	C4-C5-N7	7.33	113.73	110.80
1	13	690	G	C5-N7-C8	-7.33	100.64	104.30
25	1H	1003	G	C8-N9-C4	7.33	109.33	106.40
1	13	760	G	C6-C5-N7	-7.33	126.00	130.40
25	14	1695	G	N9-C4-C5	-7.33	102.47	105.40
25	14	711	G	C5-C6-O6	-7.32	124.21	128.60
25	14	2595	G	C4-C5-N7	7.32	113.73	110.80
25	1H	517	C	N1-C2-O2	-7.32	114.51	118.90
25	14	945	A	N7-C8-N9	7.32	117.46	113.80
1	13	792	A	N9-C1'-C2'	7.32	123.51	114.00
25	1H	2598	A	N1-C6-N6	7.31	122.99	118.60
25	14	2057	A	N1-C6-N6	7.31	122.99	118.60
25	1H	1625	C	N3-C4-N4	-7.31	112.88	118.00
25	14	62	C	C6-N1-C2	7.31	123.22	120.30
25	1H	2688	U	N3-C4-O4	-7.31	114.28	119.40
25	14	188	G	C6-C5-N7	-7.31	126.01	130.40
25	1H	1938	A	N1-C6-N6	7.31	122.98	118.60
25	14	478	A	O5'-P-OP1	-7.31	99.12	105.70
35	78	61	ARG	NE-CZ-NH1	-7.31	116.65	120.30
25	1H	1253	A	C8-N9-C4	7.30	108.72	105.80
25	1H	2726	U	N3-C2-O2	-7.30	117.09	122.20
25	1H	1373	A	O5'-P-OP2	-7.30	99.13	105.70
25	1H	2591	C	C5-C4-N4	-7.30	115.09	120.20
22	1L	83	C	N1-C2-O2	7.30	123.28	118.90
25	1H	203	C	C6-N1-C2	7.30	123.22	120.30
25	1H	636	G	C5-C6-O6	-7.30	124.22	128.60
25	1H	784	A	N1-C6-N6	-7.30	114.22	118.60
25	14	982	C	N3-C2-O2	7.30	127.01	121.90
25	14	1802	A	N1-C2-N3	7.30	132.95	129.30
55	1G	320	C	C6-N1-C2	7.29	123.22	120.30
25	1H	1201	C	N3-C4-C5	7.29	124.82	121.90
25	14	1518	C	O5'-P-OP1	-7.29	99.14	105.70
25	14	2624	G	C5-C6-N1	7.29	115.15	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	810	U	N3-C4-O4	7.29	124.50	119.40
25	1H	733	G	C6-C5-N7	-7.29	126.03	130.40
25	1H	795	C	N1-C2-O2	-7.28	114.53	118.90
25	1H	1573	G	N9-C4-C5	-7.28	102.49	105.40
36	45	82	ARG	N-CA-C	7.28	130.66	111.00
25	1H	871	U	N3-C4-O4	7.28	124.49	119.40
25	1H	1266	G	C5-C6-O6	-7.28	124.23	128.60
25	14	2689	U	P-O3'-C3'	7.28	128.43	119.70
25	1H	446	G	N9-C4-C5	-7.27	102.49	105.40
25	14	1300	U	C5-C6-N1	-7.27	119.06	122.70
25	14	2689	U	C5-C4-O4	7.27	130.26	125.90
1	13	246	A	N1-C6-N6	7.27	122.96	118.60
25	1H	560	C	O5'-P-OP1	-7.27	99.16	105.70
25	14	2439	A	P-O3'-C3'	7.27	128.42	119.70
25	1H	62	C	C6-N1-C2	7.27	123.21	120.30
26	1J	6	C	C6-N1-C2	7.27	123.21	120.30
25	14	1258	C	N3-C4-C5	7.26	124.81	121.90
25	14	2681	C	C5-C4-N4	7.26	125.28	120.20
25	1H	1204	A	C5-C6-N1	-7.26	114.07	117.70
25	14	2506	U	OP2-P-O3'	7.26	121.18	105.20
25	1H	1671	U	C5-C4-O4	-7.26	121.55	125.90
42	E8	51	LEU	CA-CB-CG	7.26	132.00	115.30
25	14	1925	C	N1-C2-O2	-7.26	114.54	118.90
25	1H	694	U	N3-C2-O2	-7.26	117.12	122.20
25	1H	960	A	C2-N3-C4	-7.26	106.97	110.60
25	1H	2710	C	C5-C6-N1	-7.26	117.37	121.00
25	14	1780	A	N1-C2-N3	7.26	132.93	129.30
25	1H	2328	A	C4-C5-C6	7.25	120.63	117.00
25	1H	2699	C	C2-N3-C4	-7.25	116.27	119.90
25	14	2084	C	C6-N1-C2	7.25	123.20	120.30
1	13	355	C	O5'-P-OP2	-7.25	99.17	105.70
25	1H	71	A	N1-C2-N3	7.25	132.93	129.30
25	14	2258	C	C2-N3-C4	-7.25	116.27	119.90
26	1J	7	G	C8-N9-C4	7.25	109.30	106.40
25	1H	1673	U	N3-C2-O2	7.25	127.28	122.20
1	13	966	G	C8-N9-C4	7.25	109.30	106.40
25	1H	2271	G	C8-N9-C1'	-7.25	117.58	127.00
25	1H	2598	A	OP2-P-O3'	7.25	121.15	105.20
25	14	1400	G	O5'-P-OP1	7.25	119.40	110.70
25	14	1899	G	N7-C8-N9	7.25	116.72	113.10
25	1H	247	G	N9-C4-C5	-7.24	102.50	105.40
25	14	133	C	N3-C4-C5	7.24	124.80	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1332	G	C4-C5-C6	-7.24	114.45	118.80
25	1H	1349	A	N1-C6-N6	7.24	122.94	118.60
25	14	2027	G	N1-C6-O6	7.24	124.24	119.90
25	1H	2623	G	N3-C4-C5	-7.24	124.98	128.60
25	1H	860	U	C2-N3-C4	-7.24	122.66	127.00
25	14	2502	G	N7-C8-N9	7.24	116.72	113.10
23	2K	77	A	N1-C6-N6	7.23	122.94	118.60
25	1H	1564	C	N3-C2-O2	-7.23	116.84	121.90
25	1H	1653	G	N3-C4-N9	7.23	130.34	126.00
25	1H	2346	A	C5-N7-C8	-7.23	100.28	103.90
25	1H	1802	A	C8-N9-C4	7.23	108.69	105.80
25	1H	530	G	C5-N7-C8	-7.22	100.69	104.30
25	1H	2689	U	C2-N3-C4	-7.22	122.67	127.00
1	13	792	A	C3'-C2'-C1'	-7.22	95.72	101.50
25	14	2424	C	O5'-P-OP1	-7.22	99.20	105.70
25	1H	213	A	C4-C5-N7	7.22	114.31	110.70
25	1H	536	A	C6-N1-C2	-7.22	114.27	118.60
25	1H	1616	A	C8-N9-C4	-7.22	102.91	105.80
25	14	528	A	N3-C4-C5	7.22	131.85	126.80
25	1H	676	A	C6-N1-C2	7.21	122.93	118.60
25	14	1379	A	C5-N7-C8	-7.21	100.29	103.90
25	1H	2318	G	O4'-C1'-N9	7.21	113.97	108.20
25	14	1964	G	N1-C6-O6	-7.21	115.58	119.90
34	25	8	LEU	CA-CB-CG	7.21	131.87	115.30
25	1H	142	G	C4-N9-C1'	-7.20	117.13	126.50
25	1H	2440	C	C2-N3-C4	7.20	123.50	119.90
25	14	1304	C	N3-C4-C5	7.20	124.78	121.90
25	1H	2773	C	C5-C6-N1	-7.20	117.40	121.00
25	1H	208	C	C5-C6-N1	-7.20	117.40	121.00
25	14	2346	A	O4'-C1'-N9	7.20	113.96	108.20
25	14	2502	G	N9-C4-C5	7.20	108.28	105.40
25	1H	839	U	C4-C5-C6	7.20	124.02	119.70
25	1H	936	C	C6-N1-C2	7.20	123.18	120.30
25	1H	2388	A	O4'-C1'-N9	7.20	113.96	108.20
25	14	1673	U	O5'-P-OP2	7.20	119.33	110.70
25	1H	1021	A	N1-C2-N3	7.19	132.90	129.30
25	1H	747	U	O5'-P-OP1	-7.19	99.23	105.70
25	1H	1300	U	O5'-P-OP2	-7.19	99.23	105.70
25	14	1695	G	C4-C5-N7	7.19	113.67	110.80
25	1H	1382	G	N1-C6-O6	7.19	124.21	119.90
25	1H	1430	C	C5-C4-N4	7.18	125.23	120.20
25	1H	1790	C	C2-N3-C4	-7.18	116.31	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	1G	20	U	O5'-P-OP2	-7.18	99.23	105.70
25	14	1965	C	C5-C6-N1	-7.18	117.41	121.00
25	14	621	A	C8-N9-C4	-7.18	102.93	105.80
25	1H	2446	G	C4-C5-N7	7.18	113.67	110.80
25	14	691	C	C2-N3-C4	-7.18	116.31	119.90
1	13	108	G	C4-C5-N7	7.18	113.67	110.80
25	1H	1780	A	N1-C2-N3	7.18	132.89	129.30
25	1H	2617	C	C6-N1-C2	7.18	123.17	120.30
1	13	1502	A	C4-C5-N7	7.17	114.29	110.70
25	14	1698	A	C4-C5-C6	7.17	120.59	117.00
1	13	652	U	C5-C6-N1	7.17	126.29	122.70
25	1H	2518	A	C4-C5-N7	7.17	114.29	110.70
25	1H	1379	A	N1-C6-N6	7.17	122.90	118.60
25	1H	2303	G	OP1-P-O3'	7.17	120.98	105.20
25	1H	2312	U	O5'-P-OP1	-7.17	99.25	105.70
25	1H	1950	G	C4-C5-N7	7.17	113.67	110.80
25	1H	2307	G	C6-C5-N7	-7.17	126.10	130.40
25	1H	2689	U	C5-C6-N1	-7.17	119.12	122.70
25	14	2056	G	C6-C5-N7	-7.17	126.10	130.40
25	14	801	G	C4-C5-N7	-7.17	107.93	110.80
25	1H	1790	C	C5-C6-N1	-7.16	117.42	121.00
25	1H	2029	G	C4-C5-N7	7.16	113.67	110.80
25	1H	2593	U	C2-N3-C4	-7.16	122.70	127.00
1	13	775	G	C5-C6-O6	-7.16	124.30	128.60
25	1H	382	G	C8-N9-C4	7.16	109.26	106.40
25	1H	265	A	C5-N7-C8	-7.16	100.32	103.90
25	1H	723	G	N7-C8-N9	-7.16	109.52	113.10
25	1H	1899	G	C5-C6-O6	7.16	132.90	128.60
25	1H	667	U	N1-C2-O2	-7.16	117.79	122.80
25	1H	739	G	N1-C6-O6	7.16	124.19	119.90
25	1H	1249	U	C6-N1-C2	7.16	125.29	121.00
25	1H	1950	G	N3-C2-N2	7.16	124.91	119.90
25	1H	1021	A	N3-C4-C5	7.16	131.81	126.80
25	1H	1804	C	N3-C4-N4	-7.16	112.99	118.00
55	1G	690	G	N9-C4-C5	7.15	108.26	105.40
25	14	929	G	C5-C6-O6	-7.15	124.31	128.60
25	14	1380	G	O5'-P-OP2	-7.15	99.26	105.70
25	1H	828	U	C6-N1-C2	-7.15	116.71	121.00
25	1H	2422	A	C2-N3-C4	-7.15	107.03	110.60
25	1H	1516	U	N3-C2-O2	-7.15	117.20	122.20
25	14	1379	A	C4-C5-N7	7.15	114.27	110.70
1	13	888	G	N3-C4-C5	7.15	132.17	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	201	C	C2-N3-C4	-7.15	116.33	119.90
25	14	827	U	N1-C2-O2	-7.15	117.80	122.80
25	14	2689	U	C5-C6-N1	-7.14	119.13	122.70
25	14	2726	U	N3-C4-O4	-7.14	114.40	119.40
12	3A	27	LEU	CA-CB-CG	7.14	131.73	115.30
25	1H	2552	U	C4-C5-C6	7.14	123.98	119.70
25	1H	196	A	O5'-P-OP2	-7.14	99.28	105.70
25	1H	967	C	O5'-P-OP2	-7.14	99.28	105.70
25	1H	1602	U	C4-C5-C6	7.14	123.98	119.70
25	1H	2447	G	C6-N1-C2	-7.14	120.82	125.10
26	16	48	A	N1-C6-N6	7.14	122.88	118.60
55	1G	352	C	N1-C2-O2	-7.14	114.62	118.90
25	14	1304	C	N3-C4-N4	-7.14	113.00	118.00
25	1H	962	G	OP1-P-OP2	-7.13	108.90	119.60
25	1H	2007	C	C2-N3-C4	-7.13	116.33	119.90
25	14	446	G	N1-C6-O6	7.13	124.18	119.90
25	14	1640	C	N3-C4-C5	7.13	124.75	121.90
25	1H	1830	C	C5-C4-N4	-7.13	115.21	120.20
25	1H	1258	C	OP2-P-O3'	7.13	120.89	105.20
25	1H	684	G	N3-C4-C5	-7.13	125.03	128.60
55	1G	691	G	N1-C6-O6	7.13	124.18	119.90
25	1H	1616	A	C2-N3-C4	-7.12	107.04	110.60
25	14	671	C	N1-C2-O2	-7.12	114.62	118.90
25	1H	739	G	C5-C6-O6	-7.12	124.33	128.60
25	1H	1614	A	N7-C8-N9	7.12	117.36	113.80
25	1H	2490	G	C8-N9-C4	-7.12	103.55	106.40
25	1H	1430	C	N3-C2-O2	-7.12	116.92	121.90
25	1H	432	A	C5-C6-N6	-7.12	118.01	123.70
25	1H	982	C	C6-N1-C2	-7.12	117.45	120.30
25	14	1598	C	O5'-P-OP1	-7.12	99.30	105.70
25	1H	2324	C	C6-N1-C2	7.11	123.14	120.30
25	1H	2494	G	O5'-P-OP1	-7.11	99.30	105.70
1	13	963	G	N1-C2-N2	-7.11	109.80	116.20
25	1H	1820	U	C5-C6-N1	-7.11	119.14	122.70
25	1H	2830	G	O5'-P-OP2	-7.11	99.30	105.70
25	14	983	A	OP2-P-O3'	7.11	120.84	105.20
25	14	1496	A	C4-C5-N7	7.11	114.25	110.70
25	14	2700	C	C5-C4-N4	-7.11	115.22	120.20
25	1H	769	G	N1-C2-N2	-7.11	109.80	116.20
25	1H	1625	C	N1-C2-O2	7.11	123.17	118.90
25	1H	217	G	N9-C4-C5	7.11	108.24	105.40
25	1H	688	U	N1-C2-N3	7.11	119.16	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	141	A	C5-N7-C8	-7.11	100.35	103.90
25	1H	816	C	O5'-P-OP1	7.10	119.22	110.70
25	14	1742	C	C6-N1-C2	-7.10	117.46	120.30
1	13	1492	A	C2-N3-C4	-7.10	107.05	110.60
55	1G	237	C	C6-N1-C2	7.10	123.14	120.30
1	13	1499	A	O5'-P-OP1	-7.10	99.31	105.70
25	1H	628	G	C8-N9-C4	7.10	109.24	106.40
25	14	1653	G	O5'-P-OP2	-7.10	99.31	105.70
25	1H	237	C	C2-N3-C4	-7.10	116.35	119.90
25	1H	795	C	O5'-P-OP1	-7.10	99.31	105.70
25	1H	1496	A	N1-C6-N6	7.09	122.86	118.60
1	13	1499	A	C8-N9-C4	7.09	108.64	105.80
25	1H	1189	A	C5-C6-N6	-7.09	118.03	123.70
25	1H	2029	G	C5-C6-O6	-7.09	124.34	128.60
25	1H	2713	A	C5-C6-N1	-7.09	114.15	117.70
25	1H	115	C	C5-C4-N4	-7.09	115.24	120.20
56	19	272	ALA	N-CA-C	7.09	130.15	111.00
25	14	2443	C	N3-C4-N4	7.09	122.96	118.00
25	1H	1404	C	OP1-P-OP2	7.09	130.23	119.60
25	1H	2275	C	N3-C4-C5	-7.09	119.06	121.90
25	1H	574	C	N3-C4-C5	-7.09	119.06	121.90
25	14	949	C	C2-N1-C1'	-7.09	111.00	118.80
25	14	1992	G	C8-N9-C4	-7.08	103.57	106.40
25	14	2880	C	C2-N1-C1'	7.08	126.59	118.80
25	1H	2392	A	O5'-P-OP1	-7.08	99.33	105.70
25	1H	951	C	N3-C4-N4	-7.08	113.04	118.00
25	1H	1573	G	C5-C6-O6	-7.08	124.35	128.60
55	1G	1420	C	O5'-P-OP1	-7.08	99.33	105.70
1	13	1479	C	C5-C4-N4	-7.08	115.25	120.20
25	1H	482	A	C8-N9-C4	-7.08	102.97	105.80
25	14	241	A	O5'-P-OP2	-7.08	99.33	105.70
35	78	61	ARG	NE-CZ-NH2	7.08	123.84	120.30
25	1H	2088	G	O5'-P-OP2	7.07	119.19	110.70
25	1H	1837	C	O5'-P-OP1	-7.07	99.34	105.70
25	1H	2708	G	N1-C2-N3	7.07	128.14	123.90
25	14	2013	A	C2-N3-C4	-7.07	107.06	110.60
25	14	2610	C	O5'-P-OP1	-7.07	99.34	105.70
44	G8	76	CYS	CA-CB-SG	-7.07	101.28	114.00
55	1G	911	U	C5-C4-O4	7.07	130.14	125.90
25	14	2563	U	C5-C6-N1	-7.07	119.17	122.70
1	13	1158	C	N3-C2-O2	-7.07	116.95	121.90
25	1H	1378	A	C2-N3-C4	-7.06	107.07	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	640	C	C6-N1-C2	-7.06	117.47	120.30
25	1H	2552	U	C5-C6-N1	-7.06	119.17	122.70
25	14	2689	U	OP2-P-O3'	7.06	120.74	105.20
23	2L	27	G	C8-N9-C4	7.06	109.22	106.40
25	14	1302	A	OP1-P-OP2	7.06	130.19	119.60
25	14	2779	U	C5-C6-N1	-7.06	119.17	122.70
25	14	2675	A	C2-N3-C4	-7.06	107.07	110.60
25	1H	470	A	C5-N7-C8	-7.06	100.37	103.90
25	1H	1957	C	N1-C2-O2	-7.06	114.67	118.90
25	1H	47	C	C2-N3-C4	-7.05	116.37	119.90
1	13	975	A	C5-N7-C8	-7.05	100.37	103.90
25	14	1349	A	C5-N7-C8	-7.05	100.37	103.90
25	14	1827	C	N3-C2-O2	-7.05	116.96	121.90
1	13	263	A	O5'-P-OP1	-7.05	99.36	105.70
25	14	68	G	C5-C6-N1	-7.04	107.98	111.50
25	1H	407	G	N1-C2-N2	-7.04	109.86	116.20
25	1H	115	C	N3-C4-N4	7.04	122.93	118.00
25	1H	676	A	C4-C5-N7	7.04	114.22	110.70
25	1H	1544	C	N1-C2-O2	7.04	123.12	118.90
25	1H	1163	G	O5'-P-OP1	-7.04	99.37	105.70
28	21	186	GLY	N-CA-C	7.04	130.69	113.10
25	14	935	C	C6-N1-C2	7.04	123.11	120.30
1	13	917	G	O5'-P-OP1	-7.04	99.37	105.70
1	13	1227	A	O5'-P-OP2	-7.04	99.37	105.70
25	1H	698	C	C2-N3-C4	-7.04	116.38	119.90
25	1H	957	A	N1-C6-N6	7.04	122.82	118.60
25	1H	1607	C	C2-N1-C1'	7.04	126.54	118.80
25	1H	2066	C	O5'-P-OP1	-7.04	99.37	105.70
25	14	2518	A	N3-C4-N9	-7.04	121.77	127.40
25	1H	860	U	N1-C2-O2	7.03	127.72	122.80
25	14	74	A	N3-C4-C5	7.03	131.72	126.80
25	1H	1614	A	C6-C5-N7	-7.03	127.38	132.30
25	1H	1819	A	C4-C5-N7	7.03	114.21	110.70
25	1H	1310	G	O5'-P-OP1	-7.03	99.38	105.70
25	14	127	A	C5-C6-N1	7.03	121.21	117.70
25	14	2503	A	C2-N3-C4	7.03	114.11	110.60
26	16	99	A	OP1-P-OP2	7.02	130.14	119.60
1	13	1491	G	OP2-P-O3'	7.02	120.64	105.20
25	1H	2445	G	C8-N9-C4	-7.02	103.59	106.40
26	16	6	C	C5-C4-N4	-7.02	115.29	120.20
25	14	2430	A	C4-C5-C6	7.02	120.51	117.00
55	1G	254	G	O5'-P-OP1	-7.02	99.39	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	812	C	N3-C2-O2	7.01	126.81	121.90
25	14	1948	G	O5'-P-OP1	-7.01	99.39	105.70
25	1H	2593	U	C5-C4-O4	-7.01	121.69	125.90
25	1H	935	C	C5-C6-N1	-7.01	117.50	121.00
25	1H	1957	C	C2-N3-C4	-7.01	116.40	119.90
25	14	1804	C	OP1-P-OP2	-7.01	109.09	119.60
26	1J	102	G	C8-N9-C4	7.01	109.20	106.40
25	1H	1821	A	N9-C4-C5	7.00	108.60	105.80
25	1H	917	A	N3-C4-C5	7.00	131.70	126.80
55	1G	906	G	C8-N9-C4	7.00	109.20	106.40
1	13	250	A	N1-C6-N6	7.00	122.80	118.60
25	1H	2082	A	N1-C2-N3	7.00	132.80	129.30
25	14	1029	A	N9-C4-C5	-7.00	103.00	105.80
25	1H	2328	A	N1-C2-N3	7.00	132.80	129.30
1	13	1432	G	C6-C5-N7	-6.99	126.20	130.40
25	1H	1839	G	N9-C4-C5	-6.99	102.60	105.40
25	1H	1543	A	C2-N3-C4	-6.99	107.10	110.60
25	1H	1430	C	N1-C2-O2	6.99	123.09	118.90
25	1H	1623	G	C5-C6-O6	6.99	132.79	128.60
25	1H	131	G	C4-C5-N7	6.99	113.59	110.80
25	1H	470	A	O5'-P-OP1	-6.98	99.42	105.70
25	1H	2538	C	C5-C6-N1	-6.98	117.51	121.00
25	14	2601	C	C2-N3-C4	-6.98	116.41	119.90
25	1H	2392	A	O4'-C1'-N9	6.98	113.79	108.20
25	1H	2497	A	OP1-P-OP2	-6.98	109.13	119.60
1	13	1518	A	C8-N9-C4	6.98	108.59	105.80
25	1H	132	G	O5'-P-OP1	-6.98	99.42	105.70
25	1H	193	U	N1-C2-N3	6.98	119.09	114.90
25	1H	391	G	N3-C2-N2	-6.98	115.01	119.90
25	1H	874	G	O5'-P-OP2	-6.98	99.42	105.70
25	1H	2518	A	C5-C6-N6	-6.98	118.12	123.70
25	14	2522	U	C5-C6-N1	-6.98	119.21	122.70
1	13	580	U	N3-C2-O2	-6.98	117.32	122.20
25	1H	2440	C	C6-N1-C1'	6.98	129.17	120.80
25	1H	389	G	N9-C4-C5	-6.97	102.61	105.40
25	1H	794	G	C8-N9-C4	6.97	109.19	106.40
25	1H	1606	G	N7-C8-N9	-6.97	109.61	113.10
25	14	2702	U	N3-C2-O2	-6.97	117.32	122.20
25	1H	1535	U	C2-N1-C1'	6.97	126.07	117.70
25	1H	2084	C	C6-N1-C2	6.97	123.09	120.30
25	1H	793	A	C4-C5-C6	6.97	120.48	117.00
25	14	970	C	O5'-P-OP1	-6.97	99.43	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	2607	G	O5'-P-OP1	6.97	119.06	110.70
25	1H	594	U	C5-C6-N1	-6.97	119.22	122.70
25	1H	2845	G	O5'-P-OP2	-6.97	99.43	105.70
25	1H	1555	G	C5-C6-O6	-6.97	124.42	128.60
23	2L	77	A	C8-N9-C4	6.97	108.59	105.80
25	14	2346	A	N1-C6-N6	6.97	122.78	118.60
25	1H	299	A	OP2-P-O3'	6.96	120.52	105.20
25	1H	1489	U	N1-C2-N3	6.96	119.08	114.90
1	13	1455	G	C8-N9-C4	6.96	109.19	106.40
25	1H	663	G	C4-C5-C6	6.96	122.98	118.80
25	1H	1310	G	O5'-P-OP2	6.96	119.05	110.70
25	1H	621	A	N1-C2-N3	6.96	132.78	129.30
25	1H	2375	G	C5-C6-O6	-6.96	124.42	128.60
25	14	1400	G	O5'-P-OP2	-6.96	99.44	105.70
25	1H	1888	G	N3-C4-N9	6.96	130.18	126.00
25	1H	2023	G	O5'-P-OP1	-6.96	99.44	105.70
55	1G	906	G	C5-C6-O6	-6.96	124.43	128.60
25	1H	918	A	O5'-P-OP1	-6.96	99.44	105.70
25	14	2256	G	N1-C2-N2	-6.96	109.94	116.20
1	13	770	C	C5-C4-N4	-6.95	115.33	120.20
25	1H	195	A	C4-C5-N7	6.95	114.18	110.70
25	14	141	A	N3-C4-C5	6.95	131.67	126.80
25	14	2073	C	N1-C2-O2	-6.95	114.73	118.90
25	1H	23	G	N3-C2-N2	-6.95	115.03	119.90
25	1H	832	G	C8-N9-C4	-6.95	103.62	106.40
25	14	1395	A	O5'-P-OP2	6.95	119.04	110.70
25	14	1681	G	C4-C5-N7	6.95	113.58	110.80
25	1H	480	A	N1-C6-N6	6.95	122.77	118.60
25	1H	530	G	N3-C4-N9	-6.95	121.83	126.00
25	14	528	A	N3-C4-N9	-6.95	121.84	127.40
25	1H	2010	G	O5'-P-OP2	6.95	119.03	110.70
25	1H	2251	G	O5'-P-OP1	-6.94	99.45	105.70
25	1H	679	C	N1-C2-O2	-6.94	114.73	118.90
25	1H	1729	A	O4'-C1'-N9	6.94	113.75	108.20
25	1H	1993	U	O5'-P-OP1	-6.94	99.45	105.70
25	1H	2591	C	N3-C4-N4	6.94	122.86	118.00
1	13	281	G	O5'-P-OP1	-6.94	99.45	105.70
1	13	319	G	O5'-P-OP2	-6.94	99.45	105.70
25	1H	1771	C	N3-C4-N4	-6.94	113.14	118.00
25	14	1971	A	OP1-P-O3'	6.94	120.47	105.20
25	14	1496	A	C8-N9-C4	-6.94	103.03	105.80
25	1H	1347	G	N1-C6-O6	6.94	124.06	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	208	C	C2-N3-C4	-6.93	116.43	119.90
25	1H	443	A	C5-C6-N6	-6.93	118.15	123.70
25	1H	1387	C	C6-N1-C2	-6.93	117.53	120.30
25	14	1204	A	N1-C6-N6	6.93	122.76	118.60
25	1H	840	C	O5'-P-OP2	-6.93	99.46	105.70
25	14	2092	U	C5-C4-O4	6.93	130.06	125.90
25	14	2252	G	C8-N9-C4	6.93	109.17	106.40
1	13	47	C	C6-N1-C2	6.93	123.07	120.30
25	1H	1035	U	C5-C4-O4	6.93	130.06	125.90
11	2I	102	GLY	N-CA-C	-6.92	95.79	113.10
25	14	2386	C	C5-C6-N1	-6.92	117.54	121.00
1	13	990	C	C6-N1-C2	-6.92	117.53	120.30
25	1H	2434	A	C2-N3-C4	-6.92	107.14	110.60
25	1H	2327	A	N1-C6-N6	-6.92	114.45	118.60
55	1G	674	G	N1-C6-O6	6.92	124.05	119.90
55	1G	811	C	N1-C2-O2	-6.92	114.75	118.90
25	14	1342	A	O4'-C1'-N9	6.92	113.74	108.20
55	1G	266	G	P-O3'-C3'	6.92	128.00	119.70
25	1H	47	C	N3-C4-C5	6.92	124.67	121.90
25	1H	619	G	C8-N9-C4	6.91	109.17	106.40
25	14	1342	A	C4-C5-C6	6.91	120.46	117.00
25	14	2287	A	N1-C6-N6	6.91	122.75	118.60
25	1H	1554	A	C4-C5-C6	6.91	120.45	117.00
25	14	1633	G	C8-N9-C4	-6.91	103.64	106.40
25	14	1995	U	O5'-P-OP2	-6.91	99.48	105.70
25	1H	681	G	C8-N9-C4	6.90	109.16	106.40
25	14	752	A	P-O3'-C3'	6.90	127.98	119.70
25	14	1999	C	C5-C4-N4	-6.90	115.37	120.20
25	14	566	U	C6-N1-C2	6.90	125.14	121.00
1	13	890	G	O4'-C1'-N9	6.90	113.72	108.20
1	13	1404	C	N3-C4-N4	-6.90	113.17	118.00
25	1H	2584	U	N3-C4-O4	-6.90	114.57	119.40
55	1G	180	U	C5-C6-N1	6.90	126.15	122.70
25	14	1950	G	O4'-C1'-N9	6.90	113.72	108.20
25	14	2080	G	O5'-P-OP2	-6.90	99.49	105.70
1	13	357	G	C5-C6-O6	-6.90	124.46	128.60
55	1G	909	A	N1-C6-N6	6.90	122.74	118.60
25	14	2386	C	N1-C2-O2	-6.90	114.76	118.90
25	1H	138	G	O4'-C1'-N9	6.89	113.72	108.20
25	1H	1766	U	C5-C4-O4	-6.89	121.76	125.90
25	1H	1781	C	C5-C4-N4	6.89	125.03	120.20
25	14	2707	G	C6-N1-C2	-6.89	120.96	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1695	G	N1-C6-O6	6.89	124.03	119.90
1	13	974	A	N1-C6-N6	6.89	122.73	118.60
25	1H	792	G	N3-C2-N2	6.89	124.72	119.90
55	1G	826	C	O5'-P-OP2	-6.89	99.50	105.70
25	1H	1972	A	C5-C6-N1	6.89	121.14	117.70
25	1H	1342	A	C5-C6-N6	-6.89	118.19	123.70
26	16	16	G	N1-C6-O6	6.89	124.03	119.90
25	1H	148	C	C2-N3-C4	-6.88	116.46	119.90
55	1G	687	A	P-O3'-C3'	6.88	127.96	119.70
25	14	2258	C	N3-C4-N4	6.88	122.82	118.00
25	14	668	G	C8-N9-C4	6.88	109.15	106.40
25	14	2598	A	C5-C6-N1	6.88	121.14	117.70
1	13	768	A	C6-N1-C2	-6.88	114.47	118.60
25	1H	795	C	C5-C6-N1	-6.88	117.56	121.00
25	1H	2601	C	C6-N1-C2	-6.88	117.55	120.30
25	14	2688	U	N1-C2-N3	6.88	119.03	114.90
25	14	130	C	C5-C4-N4	-6.87	115.39	120.20
25	14	2591	C	N3-C2-O2	6.87	126.71	121.90
55	1G	913	A	C8-N9-C4	-6.87	103.05	105.80
25	1H	2045	C	C6-N1-C2	6.87	123.05	120.30
25	14	2068	U	OP1-P-O3'	6.87	120.31	105.20
1	13	656	C	C5-C6-N1	6.87	124.43	121.00
25	1H	2386	C	C6-N1-C2	6.87	123.05	120.30
25	1H	180	G	N9-C4-C5	-6.87	102.65	105.40
25	1H	1786	A	C6-N1-C2	-6.87	114.48	118.60
25	1H	2330	G	C5-C6-O6	-6.87	124.48	128.60
55	1G	1467	G	N1-C6-O6	6.87	124.02	119.90
25	14	1646	C	C6-N1-C2	6.87	123.05	120.30
25	14	1728	G	C2-N3-C4	6.87	115.33	111.90
25	1H	2311	A	N1-C2-N3	6.86	132.73	129.30
25	14	747	U	C5-C6-N1	-6.86	119.27	122.70
1	13	1058	G	N9-C4-C5	-6.86	102.66	105.40
25	1H	1898	U	O5'-P-OP2	-6.86	99.53	105.70
55	1G	1158	C	C2-N1-C1'	6.86	126.34	118.80
25	14	2211	G	O5'-P-OP2	-6.86	99.53	105.70
25	1H	1204	A	C4-C5-N7	6.86	114.13	110.70
25	1H	1559	G	N3-C4-C5	6.86	132.03	128.60
25	1H	187	G	C8-N9-C1'	-6.85	118.09	127.00
25	1H	2338	G	C5-C6-O6	-6.85	124.49	128.60
1	13	800	G	N1-C6-O6	6.85	124.01	119.90
25	1H	388	G	O5'-P-OP2	-6.85	99.54	105.70
25	14	203	C	C6-N1-C2	6.85	123.04	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	731	C	O5'-P-OP2	6.84	118.91	110.70
25	1H	793	A	C6-N1-C2	-6.84	114.49	118.60
25	1H	1312	U	C5-C4-O4	6.84	130.01	125.90
25	1H	249	C	N1-C2-O2	6.84	123.00	118.90
25	1H	1489	U	C5-C4-O4	6.84	130.00	125.90
25	1H	2502	G	C8-N9-C4	-6.84	103.66	106.40
25	14	265	A	N7-C8-N9	6.84	117.22	113.80
25	1H	2446	G	C5-C6-O6	-6.84	124.50	128.60
25	14	1344	G	N1-C6-O6	6.84	124.00	119.90
25	1H	908	C	OP2-P-O3'	6.84	120.24	105.20
25	1H	2307	G	C2-N3-C4	-6.84	108.48	111.90
25	1H	2718	G	N1-C6-O6	6.84	124.00	119.90
25	14	1342	A	C5-N7-C8	-6.84	100.48	103.90
25	1H	1307	A	C5-C6-N6	-6.83	118.23	123.70
25	14	2708	G	C8-N9-C4	6.83	109.13	106.40
25	1H	2253	G	C6-C5-N7	-6.83	126.30	130.40
25	1H	2466	C	C5-C4-N4	-6.83	115.42	120.20
25	14	209	C	C5-C4-N4	-6.83	115.42	120.20
25	14	2056	G	N3-C4-N9	6.83	130.10	126.00
25	1H	935	C	C6-N1-C2	6.83	123.03	120.30
1	13	767	A	C8-N9-C4	6.83	108.53	105.80
25	1H	1300	U	N1-C2-N3	6.83	119.00	114.90
25	14	786	C	N3-C4-C5	6.83	124.63	121.90
25	14	1984	G	C8-N9-C4	6.83	109.13	106.40
25	1H	148	C	C5-C6-N1	-6.83	117.59	121.00
25	1H	2467	C	N3-C4-N4	-6.83	113.22	118.00
25	14	1658	C	N3-C4-C5	-6.83	119.17	121.90
25	14	2045	C	N3-C4-C5	6.82	124.63	121.90
1	13	414	A	O5'-P-OP2	-6.82	99.56	105.70
25	1H	232	G	C6-C5-N7	-6.82	126.31	130.40
25	14	1549	C	O5'-P-OP1	-6.82	99.56	105.70
25	1H	1781	C	N1-C2-O2	6.82	122.99	118.90
25	1H	383	U	O5'-P-OP1	-6.82	99.56	105.70
25	1H	451	C	C6-N1-C2	6.82	123.03	120.30
25	1H	1348	G	O5'-P-OP2	6.82	118.88	110.70
1	13	687	A	P-O3'-C3'	6.81	127.88	119.70
25	14	2706	G	O5'-P-OP1	-6.81	99.57	105.70
25	1H	2053	G	C6-N1-C2	-6.81	121.01	125.10
25	1H	2494	G	C2-N3-C4	-6.81	108.50	111.90
25	1H	2578	G	C6-N1-C2	-6.81	121.02	125.10
1	13	1506	U	N1-C2-O2	-6.81	118.03	122.80
25	1H	1306	C	C5-C6-N1	-6.81	117.60	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1915	U	N1-C2-O2	6.81	127.56	122.80
25	14	2840	C	C5-C6-N1	-6.81	117.60	121.00
1	13	580	U	N3-C4-O4	-6.80	114.64	119.40
1	13	586	C	C6-N1-C2	6.80	123.02	120.30
25	1H	1210	A	C8-N9-C4	-6.80	103.08	105.80
25	1H	2240	C	O5'-P-OP1	6.80	118.86	110.70
25	14	803	U	O5'-P-OP2	-6.80	99.58	105.70
25	14	2433	A	C6-C5-N7	-6.80	127.54	132.30
25	1H	200	U	C5-C6-N1	-6.80	119.30	122.70
25	1H	1623	G	N1-C6-O6	-6.80	115.82	119.90
55	1G	1192	C	C6-N1-C2	-6.80	117.58	120.30
1	13	529	G	N1-C6-O6	6.80	123.98	119.90
25	1H	2253	G	O5'-P-OP1	6.80	118.86	110.70
25	1H	252	G	N1-C6-O6	-6.80	115.82	119.90
25	14	2502	G	C5-N7-C8	-6.80	100.90	104.30
25	1H	1166	C	C2-N1-C1'	6.79	126.27	118.80
25	14	2047	U	N3-C4-C5	6.79	118.68	114.60
25	1H	74	A	O4'-C1'-N9	-6.79	102.77	108.20
25	1H	1831	G	O5'-P-OP2	6.79	118.85	110.70
26	1J	47	C	C6-N1-C2	6.79	123.02	120.30
25	1H	59	U	N3-C4-C5	-6.79	110.53	114.60
25	1H	989	G	N3-C2-N2	-6.79	115.15	119.90
25	1H	917	A	C5-C6-N1	-6.79	114.31	117.70
25	1H	265	A	N3-C4-C5	6.78	131.55	126.80
25	1H	552	G	N3-C4-C5	6.78	131.99	128.60
25	1H	1673	U	C2-N3-C4	-6.78	122.93	127.00
25	1H	2761	G	N1-C2-N3	6.78	127.97	123.90
25	14	71	A	C4-C5-N7	6.78	114.09	110.70
25	14	530	G	N7-C8-N9	-6.78	109.71	113.10
25	14	1277	G	C8-N9-C4	6.78	109.11	106.40
25	14	2873	A	C4-C5-N7	6.78	114.09	110.70
1	13	502	G	C5-C6-O6	-6.78	124.53	128.60
1	13	888	G	N3-C4-N9	-6.78	121.93	126.00
25	1H	114	U	OP1-P-O3'	6.78	120.11	105.20
25	1H	716	A	O5'-P-OP2	6.78	118.83	110.70
25	1H	1983	C	C2-N3-C4	-6.78	116.51	119.90
25	14	801	G	C6-C5-N7	6.78	134.47	130.40
25	14	2287	A	C8-N9-C4	6.78	108.51	105.80
25	1H	1653	G	P-O3'-C3'	6.78	127.83	119.70
25	1H	1812	A	OP1-P-OP2	6.78	129.76	119.60
26	16	6	C	N3-C4-N4	6.78	122.74	118.00
25	14	2235	G	N3-C4-N9	6.78	130.06	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	1502	A	N9-C1'-C2'	6.77	122.80	114.00
25	1H	180	G	C5-C6-O6	-6.77	124.54	128.60
25	1H	1939	U	N3-C2-O2	6.77	126.94	122.20
25	1H	1984	G	C5-N7-C8	6.77	107.69	104.30
55	1G	690	G	N7-C8-N9	6.77	116.49	113.10
1	13	1432	G	N1-C6-O6	6.77	123.96	119.90
25	1H	695	G	N1-C6-O6	-6.77	115.84	119.90
25	14	2374	C	C5-C6-N1	-6.77	117.61	121.00
25	1H	990	A	C8-N9-C4	-6.77	103.09	105.80
25	1H	2689	U	OP2-P-O3'	6.77	120.09	105.20
25	14	2826	A	N1-C6-N6	-6.77	114.54	118.60
25	1H	198	C	N3-C2-O2	-6.77	117.16	121.90
25	1H	826	U	O5'-P-OP2	-6.77	99.61	105.70
25	1H	2071	A	N1-C2-N3	6.77	132.68	129.30
25	1H	1342	A	N1-C6-N6	6.76	122.66	118.60
25	14	203	C	N3-C4-C5	6.76	124.61	121.90
25	14	209	C	C2-N3-C4	-6.76	116.52	119.90
25	14	2700	C	C2-N3-C4	-6.76	116.52	119.90
25	1H	2444	G	N3-C2-N2	-6.76	115.17	119.90
25	14	2333	A	C5-N7-C8	6.76	107.28	103.90
25	1H	19	C	C4-C5-C6	6.76	120.78	117.40
25	1H	500	G	O5'-P-OP1	-6.76	99.62	105.70
26	1J	30	C	C6-N1-C2	-6.76	117.60	120.30
25	1H	205	G	O5'-P-OP2	-6.76	99.62	105.70
1	13	1374	A	C2-N3-C4	-6.76	107.22	110.60
25	1H	686	G	N9-C4-C5	-6.76	102.70	105.40
25	1H	1249	U	C2-N3-C4	-6.76	122.95	127.00
25	1H	2253	G	C4-C5-N7	6.76	113.50	110.80
59	M5	33	ASN	C-N-CA	6.76	138.59	121.70
25	1H	2822	G	C5-C6-O6	-6.75	124.55	128.60
55	1G	243	A	P-O3'-C3'	6.75	127.80	119.70
25	1H	594	U	C6-N1-C2	6.75	125.05	121.00
25	1H	2822	G	C6-C5-N7	-6.75	126.35	130.40
25	1H	1660	C	N3-C4-C5	6.75	124.60	121.90
25	1H	1210	A	C2-N3-C4	-6.74	107.23	110.60
25	14	2600	A	C4-C5-N7	-6.74	107.33	110.70
25	1H	138	G	O5'-P-OP2	-6.74	99.63	105.70
25	1H	1950	G	C2-N3-C4	-6.74	108.53	111.90
25	14	1241	A	N1-C6-N6	6.74	122.64	118.60
25	14	678	C	C5-C6-N1	-6.74	117.63	121.00
25	1H	1967	C	N1-C2-N3	6.74	123.92	119.20
25	1H	2446	G	N9-C4-C5	-6.74	102.71	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1021	A	C2-N3-C4	-6.74	107.23	110.60
25	14	1698	A	N7-C8-N9	6.74	117.17	113.80
25	1H	1129	A	OP1-P-OP2	6.73	129.70	119.60
25	14	2702	U	C5'-C4'-O4'	6.73	117.18	109.10
25	1H	1428	C	C5-C6-N1	-6.73	117.64	121.00
25	1H	1900	A	C8-N9-C4	-6.73	103.11	105.80
25	1H	739	G	N7-C8-N9	-6.72	109.74	113.10
25	1H	798	G	N1-C2-N3	6.72	127.94	123.90
25	1H	1328	G	N3-C4-N9	6.72	130.03	126.00
25	14	561	G	N3-C4-N9	-6.72	121.97	126.00
25	14	1236	G	C8-N9-C4	6.72	109.09	106.40
25	1H	508	G	N7-C8-N9	6.72	116.46	113.10
25	14	922	U	C5-C6-N1	6.72	126.06	122.70
25	14	2551	C	C2-N1-C1'	-6.72	111.41	118.80
25	1H	1307	A	N9-C4-C5	-6.72	103.11	105.80
1	13	903	G	O5'-P-OP2	-6.72	99.65	105.70
25	1H	245	G	C5-C6-O6	-6.72	124.57	128.60
1	13	865	A	N7-C8-N9	6.72	117.16	113.80
26	16	44	G	C4-N9-C1'	-6.72	117.77	126.50
25	14	1661	G	C5-C6-O6	-6.72	124.57	128.60
25	14	2726	U	C5-C6-N1	-6.72	119.34	122.70
25	1H	852	G	O5'-P-OP2	-6.71	99.66	105.70
25	1H	906	G	N3-C4-N9	-6.71	121.97	126.00
25	14	579	G	C5-C6-O6	-6.71	124.57	128.60
25	14	1614	A	C6-C5-N7	-6.71	127.60	132.30
26	1J	60	C	C6-N1-C2	-6.71	117.61	120.30
25	1H	443	A	N9-C4-C5	-6.71	103.11	105.80
25	1H	749	C	N3-C4-C5	-6.71	119.22	121.90
25	1H	2600	A	C6-N1-C2	-6.71	114.57	118.60
25	1H	208	C	C6-N1-C2	6.71	122.98	120.30
25	1H	636	G	N1-C6-O6	6.71	123.93	119.90
25	1H	1702	G	O5'-P-OP1	-6.71	99.66	105.70
25	14	1602	U	O5'-P-OP1	-6.71	99.66	105.70
25	1H	736	C	N3-C2-O2	6.71	126.60	121.90
25	1H	1241	A	N1-C6-N6	6.71	122.62	118.60
25	14	1784	A	C5-C6-N6	6.71	129.07	123.70
22	1K	39	A	N1-C6-N6	6.71	122.62	118.60
25	14	791	C	N1-C2-O2	-6.70	114.88	118.90
25	14	1616	A	OP1-P-OP2	6.70	129.66	119.60
25	1H	659	C	C2-N3-C4	-6.70	116.55	119.90
25	1H	682	G	C8-N9-C1'	-6.70	118.29	127.00
25	1H	188	G	C5-C6-O6	-6.70	124.58	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	598	G	N1-C6-O6	6.70	123.92	119.90
25	14	1617	C	N3-C4-C5	-6.70	119.22	121.90
25	14	1939	U	C2-N1-C1'	-6.70	109.66	117.70
25	1H	2229	C	C6-N1-C2	6.70	122.98	120.30
25	1H	2379	G	N3-C4-N9	6.70	130.02	126.00
53	P8	33	ARG	NE-CZ-NH1	-6.70	116.95	120.30
55	1G	449	C	N3-C2-O2	-6.69	117.21	121.90
25	1H	66	C	C6-N1-C2	-6.69	117.62	120.30
25	1H	999	U	N3-C2-O2	-6.69	117.52	122.20
25	1H	1558	A	P-O3'-C3'	6.69	127.73	119.70
25	14	2346	A	C6-C5-N7	-6.69	127.61	132.30
25	1H	517	C	C5-C4-N4	-6.69	115.52	120.20
25	1H	733	G	N9-C4-C5	-6.69	102.72	105.40
25	1H	931	G	N3-C4-C5	-6.69	125.26	128.60
25	14	1999	C	OP2-P-O3'	6.69	119.91	105.20
25	1H	1312	U	O5'-P-OP1	-6.68	99.68	105.70
25	1H	2062	A	O5'-P-OP2	-6.68	99.68	105.70
55	1G	360	A	C8-N9-C4	6.68	108.47	105.80
25	14	1128	A	C5-C6-N1	6.68	121.04	117.70
25	14	2198	A	O4'-C1'-N9	6.68	113.55	108.20
25	1H	1992	G	P-O3'-C3'	6.68	127.72	119.70
1	13	1356	G	C6-C5-N7	-6.68	126.39	130.40
25	1H	609	A	N1-C6-N6	6.68	122.61	118.60
25	1H	1363	C	O5'-P-OP2	-6.68	99.69	105.70
25	1H	2253	G	N3-C2-N2	-6.68	115.22	119.90
55	1G	990	C	C6-N1-C2	-6.68	117.63	120.30
25	14	1349	A	O5'-P-OP1	-6.68	99.69	105.70
1	13	575	G	O4'-C1'-N9	-6.68	102.86	108.20
25	1H	1201	C	N3-C2-O2	6.68	126.57	121.90
55	1G	361	G	O5'-P-OP2	6.68	118.71	110.70
25	14	1373	A	C8-N9-C4	6.68	108.47	105.80
25	1H	2828	C	N1-C2-O2	-6.67	114.89	118.90
25	14	1022	G	N9-C4-C5	6.67	108.07	105.40
25	1H	2433	A	N1-C2-N3	6.67	132.64	129.30
25	1H	838	C	C4-C5-C6	6.67	120.74	117.40
25	1H	1417	C	C6-N1-C2	-6.67	117.63	120.30
25	1H	1605	C	C2-N3-C4	-6.67	116.56	119.90
1	13	1506	U	N3-C4-O4	6.67	124.07	119.40
55	1G	108	G	C4-C5-N7	6.67	113.47	110.80
25	1H	428	A	C4-C5-C6	6.67	120.33	117.00
25	1H	1269	A	C8-N9-C4	-6.67	103.13	105.80
25	14	1771	C	C2-N3-C4	-6.67	116.57	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	2435	A	C5-C6-N1	6.67	121.03	117.70
25	1H	1224	G	C8-N9-C4	6.67	109.07	106.40
55	1G	354	G	O5'-P-OP2	-6.67	99.70	105.70
25	14	1366	A	C5-C6-N6	-6.67	118.37	123.70
25	1H	2337	G	C5-C6-O6	-6.67	124.60	128.60
25	14	2035	G	O4'-C1'-N9	6.67	113.53	108.20
55	1G	1301	U	C2-N1-C1'	6.66	125.70	117.70
25	14	2672	G	C5-C6-O6	-6.66	124.60	128.60
55	1G	1478	C	C5-C4-N4	6.66	124.86	120.20
25	14	2449	U	N3-C4-O4	6.66	124.06	119.40
1	13	977	A	N1-C6-N6	-6.66	114.61	118.60
25	1H	630	G	C8-N9-C4	6.66	109.06	106.40
25	14	2644	G	N3-C4-C5	6.66	131.93	128.60
1	13	1493	A	C8-N9-C4	-6.65	103.14	105.80
25	1H	127	A	C5-C6-N6	-6.65	118.38	123.70
25	1H	944	G	C5-C6-O6	6.65	132.59	128.60
25	1H	1268	A	O5'-P-OP2	-6.65	99.71	105.70
25	1H	133	C	C2-N3-C4	-6.65	116.58	119.90
25	1H	2232	U	N3-C2-O2	-6.65	117.55	122.20
25	1H	2277	G	C4-C5-N7	-6.65	108.14	110.80
25	14	659	C	C2-N3-C4	-6.65	116.58	119.90
25	1H	1425	G	C5-C6-O6	-6.65	124.61	128.60
54	Q8	32	LEU	CA-CB-CG	6.65	130.59	115.30
25	14	2032	G	C8-N9-C4	6.65	109.06	106.40
1	13	1437	C	N3-C4-C5	6.64	124.56	121.90
25	1H	1290	C	O5'-P-OP2	-6.64	99.72	105.70
25	1H	1369	G	N3-C4-N9	6.64	129.99	126.00
25	1H	2686	G	N3-C4-N9	6.64	129.99	126.00
25	14	2712	U	C2-N3-C4	-6.64	123.01	127.00
25	14	74	A	N7-C8-N9	6.64	117.12	113.80
25	14	750	A	C8-N9-C4	-6.64	103.14	105.80
25	14	1904	G	N1-C6-O6	-6.64	115.92	119.90
25	1H	1220	A	N1-C6-N6	-6.64	114.61	118.60
25	1H	1672	C	N3-C2-O2	6.64	126.55	121.90
25	14	693	C	N1-C2-O2	-6.64	114.92	118.90
25	14	2455	G	C5-C6-O6	-6.64	124.62	128.60
1	13	1055	A	N1-C6-N6	6.64	122.58	118.60
25	1H	290	G	N3-C4-N9	6.64	129.98	126.00
25	1H	405	U	N1-C2-O2	6.64	127.44	122.80
25	1H	1158	C	C5-C6-N1	-6.63	117.68	121.00
25	1H	2585	U	N1-C2-O2	6.63	127.44	122.80
25	1H	1691	C	C6-N1-C2	-6.63	117.65	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1852	C	C6-N1-C2	-6.63	117.65	120.30
25	14	989	G	O5'-P-OP1	-6.63	99.73	105.70
25	1H	141	A	N1-C6-N6	6.63	122.58	118.60
26	16	99	A	O5'-P-OP2	-6.63	99.73	105.70
25	14	828	U	N3-C4-O4	-6.63	114.76	119.40
25	1H	1658	C	N3-C4-C5	-6.63	119.25	121.90
25	1H	2069	G	N9-C4-C5	-6.62	102.75	105.40
25	1H	2442	C	C5-C6-N1	-6.62	117.69	121.00
25	1H	2592	G	N1-C2-N3	6.62	127.87	123.90
55	1G	1234	C	N3-C2-O2	-6.62	117.26	121.90
25	14	2436	G	C5-C6-O6	-6.62	124.63	128.60
25	1H	455	C	C4-C5-C6	-6.62	114.09	117.40
55	1G	442	C	C6-N1-C2	-6.62	117.65	120.30
25	1H	142	G	N3-C4-C5	6.62	131.91	128.60
25	1H	791	C	OP2-P-O3'	6.62	119.76	105.20
55	1G	1234	C	N1-C2-O2	6.62	122.87	118.90
55	1G	1484	C	C6-N1-C2	6.62	122.95	120.30
25	14	670	A	C5-C6-N6	-6.62	118.41	123.70
55	1G	1502	A	C5-N7-C8	-6.62	100.59	103.90
25	1H	55	G	C5-C6-O6	-6.62	124.63	128.60
25	1H	1393	A	O5'-P-OP2	-6.62	99.75	105.70
25	14	2688	U	C4-C5-C6	6.62	123.67	119.70
25	1H	561	G	N3-C2-N2	6.61	124.53	119.90
55	1G	1469	G	C5-C6-O6	-6.61	124.63	128.60
1	13	781	A	C5-C6-N6	-6.61	118.41	123.70
25	14	455	C	C6-N1-C2	6.61	122.94	120.30
25	14	1678	G	C4-C5-N7	6.61	113.44	110.80
25	1H	815	C	N3-C4-C5	6.61	124.54	121.90
25	14	138	G	O4'-C1'-N9	6.61	113.48	108.20
25	14	967	C	O5'-P-OP2	-6.61	99.75	105.70
1	13	792	A	N1-C2-N3	6.60	132.60	129.30
25	1H	2248	C	N3-C4-N4	-6.60	113.38	118.00
55	1G	11	G	O5'-P-OP2	6.60	118.62	110.70
25	1H	128	C	C6-N1-C2	6.60	122.94	120.30
25	1H	2029	G	C5-N7-C8	-6.60	101.00	104.30
1	13	1505	G	N9-C4-C5	6.60	108.04	105.40
25	1H	795	C	N3-C2-O2	6.60	126.52	121.90
25	14	1698	A	N9-C4-C5	-6.60	103.16	105.80
1	13	974	A	O4'-C1'-N9	6.60	113.48	108.20
1	13	1487	G	N7-C8-N9	-6.60	109.80	113.10
25	1H	115	C	N3-C2-O2	6.60	126.52	121.90
25	1H	790	C	N3-C2-O2	6.60	126.52	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1596	A	OP2-P-O3'	6.60	119.71	105.20
25	14	2649	U	N3-C4-O4	6.59	124.02	119.40
25	1H	2702	U	C5-C6-N1	6.59	126.00	122.70
25	14	446	G	C6-C5-N7	-6.59	126.44	130.40
25	14	621	A	C5-C6-N1	-6.59	114.41	117.70
25	14	668	G	N3-C4-C5	6.59	131.90	128.60
25	1H	365	C	N1-C2-O2	-6.59	114.95	118.90
25	1H	190	A	C5-C6-N1	6.59	120.99	117.70
25	14	1646	C	C2-N1-C1'	-6.59	111.56	118.80
25	1H	51	G	C8-N9-C4	6.58	109.03	106.40
25	1H	2699	C	C6-N1-C2	6.58	122.93	120.30
25	14	2374	C	N3-C4-C5	6.58	124.53	121.90
1	13	123	C	C5-C6-N1	-6.58	117.71	121.00
25	1H	1904	G	C8-N9-C4	6.58	109.03	106.40
25	1H	508	G	C5-N7-C8	-6.58	101.01	104.30
25	1H	451	C	C2-N1-C1'	-6.58	111.57	118.80
25	1H	639	U	C5-C4-O4	6.57	129.84	125.90
25	1H	1695	G	N3-C4-C5	-6.57	125.31	128.60
25	14	2253	G	C5-N7-C8	-6.57	101.01	104.30
25	1H	1029	A	N1-C6-N6	6.57	122.54	118.60
25	1H	1780	A	N1-C6-N6	-6.57	114.66	118.60
25	1H	1984	G	N1-C6-O6	-6.57	115.96	119.90
25	1H	2552	U	C2-N3-C4	-6.57	123.06	127.00
25	1H	115	C	O5'-P-OP1	-6.57	99.79	105.70
25	1H	1336	A	C2-N3-C4	6.57	113.89	110.60
25	14	2331	G	C6-N1-C2	-6.57	121.16	125.10
1	13	762	C	C6-N1-C2	6.57	122.93	120.30
25	1H	1189	A	C4-C5-N7	6.57	113.98	110.70
25	1H	839	U	N3-C4-C5	-6.57	110.66	114.60
55	1G	894	G	N1-C6-O6	6.57	123.84	119.90
25	1H	1161	C	C6-N1-C2	-6.56	117.67	120.30
25	1H	2028	U	O5'-P-OP1	-6.56	99.80	105.70
25	1H	815	C	C6-N1-C2	6.56	122.92	120.30
25	1H	917	A	N1-C2-N3	6.56	132.58	129.30
55	1G	893	C	C6-N1-C2	6.56	122.92	120.30
25	14	2238	G	O5'-P-OP2	-6.56	99.80	105.70
25	1H	2445	G	N7-C8-N9	6.56	116.38	113.10
25	1H	675	A	N9-C4-C5	-6.55	103.18	105.80
25	1H	772	C	C5-C6-N1	-6.55	117.72	121.00
25	1H	2001	A	C2-N3-C4	6.55	113.88	110.60
25	1H	1297	C	OP2-P-O3'	-6.55	90.79	105.20
25	1H	2598	A	O5'-P-OP2	6.55	118.56	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	682	G	N9-C4-C5	-6.55	102.78	105.40
25	1H	792	G	C6-C5-N7	-6.55	126.47	130.40
25	1H	2004	G	OP1-P-OP2	6.55	129.43	119.60
25	1H	2610	C	P-O3'-C3'	6.55	127.56	119.70
25	14	56	A	C2-N3-C4	-6.55	107.33	110.60
25	14	1617	C	C4-C5-C6	6.55	120.67	117.40
25	1H	2007	C	N3-C2-O2	-6.55	117.32	121.90
25	1H	2273	A	N1-C2-N3	-6.55	126.03	129.30
25	14	1496	A	N1-C6-N6	6.55	122.53	118.60
25	1H	1977	A	C2-N3-C4	-6.54	107.33	110.60
25	1H	1241	A	C4-C5-N7	6.54	113.97	110.70
25	1H	1649	G	C8-N9-C4	-6.54	103.78	106.40
25	1H	1838	C	C6-N1-C2	6.54	122.92	120.30
25	1H	1900	A	O5'-P-OP1	6.54	118.55	110.70
25	1H	779	U	C6-N1-C2	6.54	124.92	121.00
25	1H	796	C	O5'-P-OP2	-6.54	99.81	105.70
25	14	138	G	N3-C4-N9	6.54	129.93	126.00
25	1H	2819	G	C8-N9-C4	6.54	109.02	106.40
25	1H	951	C	C5-C4-N4	6.54	124.78	120.20
25	1H	1900	A	C5'-C4'-O4'	-6.54	101.25	109.10
25	1H	1967	C	N3-C2-O2	-6.54	117.32	121.90
25	14	2061	G	C8-N9-C4	6.54	109.02	106.40
25	14	113	G	C5-C6-O6	-6.54	124.68	128.60
25	14	2042	A	C8-N9-C4	6.54	108.41	105.80
25	14	2820	A	N1-C6-N6	6.54	122.52	118.60
1	13	585	G	C8-N9-C4	6.53	109.01	106.40
1	13	827	U	C5-C4-O4	6.53	129.82	125.90
25	1H	909	A	O5'-P-OP2	-6.53	99.82	105.70
25	1H	2401	U	C6-N1-C2	-6.53	117.08	121.00
25	1H	2519	U	N3-C2-O2	6.53	126.77	122.20
25	1H	217	G	N1-C2-N3	6.53	127.82	123.90
25	1H	796	C	C5-C6-N1	-6.53	117.73	121.00
25	1H	1670	C	C4-C5-C6	6.53	120.67	117.40
55	1G	898	G	C8-N9-C4	6.53	109.01	106.40
25	1H	639	U	N3-C2-O2	-6.53	117.63	122.20
25	1H	2026	C	C4-C5-C6	6.53	120.66	117.40
25	14	2423	U	C5-C6-N1	-6.53	119.44	122.70
25	1H	451	C	N3-C2-O2	6.53	126.47	121.90
25	1H	1621	U	N1-C2-O2	-6.53	118.23	122.80
25	1H	847	U	C4-C5-C6	6.53	123.62	119.70
25	1H	830	G	C2-N3-C4	-6.52	108.64	111.90
25	1H	1980	G	C8-N9-C4	-6.52	103.79	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	893	C	N3-C4-C5	6.52	124.51	121.90
25	14	565	C	C5-C6-N1	-6.52	117.74	121.00
25	1H	792	G	N1-C2-N2	-6.52	110.33	116.20
25	1H	2494	G	C5-C6-N1	-6.52	108.24	111.50
25	14	2038	G	N9-C4-C5	-6.52	102.79	105.40
25	14	2430	A	C5-N7-C8	-6.52	100.64	103.90
25	1H	1482	U	C2-N1-C1'	-6.52	109.88	117.70
25	14	1781	C	C2-N1-C1'	6.52	125.97	118.80
25	14	1953	A	O5'-P-OP1	-6.52	99.83	105.70
25	14	684	G	N7-C8-N9	6.52	116.36	113.10
25	1H	859	G	C5-C6-O6	-6.51	124.69	128.60
25	1H	1369	G	N3-C4-C5	-6.51	125.34	128.60
25	1H	1313	U	N3-C4-O4	6.51	123.96	119.40
25	14	1241	A	C4-C5-N7	6.51	113.96	110.70
25	14	102	G	O4'-C1'-N9	6.51	113.41	108.20
25	14	265	A	C5-N7-C8	-6.51	100.64	103.90
25	14	583	G	N3-C2-N2	-6.51	115.34	119.90
25	14	659	C	C6-N1-C2	6.51	122.90	120.30
1	13	1158	C	C6-N1-C2	-6.51	117.70	120.30
25	1H	137	C	N3-C4-C5	6.51	124.50	121.90
25	1H	1626	G	N3-C2-N2	-6.51	115.34	119.90
55	1G	782	A	C8-N9-C4	6.51	108.40	105.80
25	14	1934	C	N3-C4-N4	-6.51	113.44	118.00
25	1H	127	A	N9-C4-C5	-6.50	103.20	105.80
25	14	788	A	C5-C6-N6	-6.50	118.50	123.70
25	1H	371	A	N1-C6-N6	6.50	122.50	118.60
25	14	1254	A	N1-C2-N3	6.50	132.55	129.30
25	1H	141	A	C2-N3-C4	-6.50	107.35	110.60
25	1H	698	C	N3-C2-O2	6.50	126.45	121.90
25	1H	1141	U	O4'-C1'-N1	6.50	113.40	108.20
25	1H	1241	A	C6-N1-C2	6.50	122.50	118.60
25	1H	1255	U	C4-C5-C6	6.50	123.60	119.70
25	1H	2690	C	N3-C4-C5	-6.50	119.30	121.90
25	1H	2708	G	C8-N9-C4	6.50	109.00	106.40
25	1H	49	A	C5-N7-C8	6.50	107.15	103.90
25	1H	700	G	C8-N9-C4	-6.50	103.80	106.40
25	1H	814	C	O5'-P-OP2	-6.50	99.85	105.70
25	1H	1430	C	N3-C4-N4	-6.49	113.45	118.00
25	1H	1830	C	N3-C2-O2	6.49	126.44	121.90
25	14	150	C	N3-C4-N4	-6.49	113.45	118.00
25	14	2713	A	C4-C5-N7	6.49	113.95	110.70
25	1H	670	A	N1-C2-N3	-6.49	126.06	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	2446	G	N3-C4-N9	6.49	129.90	126.00
25	1H	1566	A	O5'-P-OP2	-6.49	99.86	105.70
25	1H	1939	U	O5'-P-OP1	-6.49	99.86	105.70
25	1H	2741	A	C8-N9-C4	6.49	108.39	105.80
25	14	698	C	OP1-P-OP2	6.49	129.33	119.60
25	14	1350	C	N1-C2-O2	-6.48	115.01	118.90
25	1H	1673	U	C5-C4-O4	-6.48	122.01	125.90
25	1H	2008	C	C2-N3-C4	-6.48	116.66	119.90
25	1H	2712(A)	A	O5'-P-OP1	-6.48	99.87	105.70
25	14	2290	G	O5'-P-OP1	-6.48	99.87	105.70
25	1H	1007	C	N1-C2-O2	-6.48	115.01	118.90
25	1H	1308	A	N1-C2-N3	6.48	132.54	129.30
25	1H	1376	C	C6-N1-C2	-6.48	117.71	120.30
25	1H	2259	G	OP1-P-OP2	-6.48	109.88	119.60
25	1H	1914	C	C2-N1-C1'	6.48	125.93	118.80
25	1H	762	U	C6-N1-C1'	-6.48	112.13	121.20
25	1H	2659	G	N1-C6-O6	6.48	123.79	119.90
25	1H	1616	A	C5-C6-N6	-6.48	118.52	123.70
25	1H	2427	C	O5'-P-OP2	6.47	118.47	110.70
25	14	1441	G	C8-N9-C4	6.47	108.99	106.40
25	1H	85	G	O5'-P-OP2	-6.47	99.88	105.70
25	14	2523	G	C5-C6-O6	-6.47	124.72	128.60
55	1G	898	G	N3-C4-C5	6.47	131.84	128.60
25	14	639	U	O5'-P-OP2	-6.47	99.88	105.70
55	1G	121	C	N3-C2-O2	-6.47	117.37	121.90
25	1H	193	U	C5-C6-N1	-6.47	119.47	122.70
25	1H	205	G	N3-C2-N2	6.47	124.43	119.90
25	1H	536	A	N9-C4-C5	6.47	108.39	105.80
25	1H	746	A	O4'-C1'-N9	6.47	113.37	108.20
25	1H	1603	A	N7-C8-N9	6.47	117.03	113.80
25	1H	389	G	C6-C5-N7	-6.46	126.52	130.40
25	1H	2626	C	N3-C4-C5	6.46	124.49	121.90
47	J8	80	LEU	CA-CB-CG	6.46	130.17	115.30
25	14	856	C	C5-C6-N1	6.46	124.23	121.00
25	14	1379	A	N3-C4-C5	6.46	131.32	126.80
25	14	2441	C	N3-C4-N4	-6.46	113.47	118.00
25	14	1827	C	C5-C6-N1	-6.46	117.77	121.00
25	1H	749	C	N1-C2-O2	6.46	122.78	118.90
25	1H	1396	U	N3-C4-O4	-6.46	114.88	119.40
1	13	1348	U	O5'-P-OP2	-6.46	99.89	105.70
25	1H	1801	G	N3-C4-N9	6.45	129.87	126.00
55	1G	906	G	N1-C6-O6	6.45	123.77	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1363	C	O5'-P-OP2	-6.45	99.89	105.70
25	1H	1400	G	N9-C4-C5	6.45	107.98	105.40
25	1H	2822	G	C4-C5-N7	6.45	113.38	110.80
55	1G	630	G	C8-N9-C4	-6.45	103.82	106.40
25	14	1982	C	C5-C6-N1	6.45	124.22	121.00
25	14	2029	G	N9-C4-C5	6.45	107.98	105.40
1	13	789	U	C4-C5-C6	6.45	123.57	119.70
1	13	1177	G	O5'-P-OP1	6.45	118.44	110.70
25	14	1406	U	N1-C2-O2	6.45	127.31	122.80
25	14	1619	G	C5-C6-N1	6.45	114.72	111.50
25	1H	2578	G	OP2-P-O3'	6.45	119.38	105.20
25	1H	1142(A)	A	C5-N7-C8	-6.45	100.68	103.90
25	14	2598	A	O5'-P-OP2	6.45	118.43	110.70
25	14	1827	C	N3-C4-N4	-6.44	113.49	118.00
1	13	800	G	O5'-P-OP2	-6.44	99.90	105.70
25	1H	757	U	C5-C6-N1	-6.44	119.48	122.70
25	1H	1249	U	O5'-P-OP1	-6.44	99.90	105.70
25	1H	2438	U	N1-C2-O2	6.44	127.31	122.80
44	G8	81	LYS	C-N-CD	-6.44	106.43	120.60
25	1H	2574	G	C6-N1-C2	-6.44	121.24	125.10
25	1H	2616	C	N1-C2-O2	-6.44	115.04	118.90
26	1J	7	G	N9-C4-C5	-6.44	102.83	105.40
25	1H	1392	A	OP2-P-O3'	6.43	119.36	105.20
25	1H	2049	G	C8-N9-C4	6.43	108.97	106.40
25	1H	2385	C	O5'-P-OP2	-6.43	99.91	105.70
25	1H	2765	A	OP1-P-OP2	6.43	129.25	119.60
25	14	1274	A	N1-C6-N6	6.43	122.46	118.60
25	14	1695	G	N3-C4-N9	6.43	129.86	126.00
25	14	2258	C	N1-C2-O2	-6.43	115.04	118.90
25	1H	2052	G	OP2-P-O3'	6.43	119.35	105.20
25	14	2276	G	O5'-P-OP1	-6.43	99.91	105.70
25	1H	228	A	N1-C6-N6	6.43	122.46	118.60
25	1H	992	C	OP1-P-O3'	6.43	119.34	105.20
25	1H	2578	G	C5-C6-N1	6.43	114.71	111.50
1	13	972	C	N3-C2-O2	-6.43	117.40	121.90
25	1H	1632	A	N9-C4-C5	-6.43	103.23	105.80
25	1H	2271	G	C4-N9-C1'	6.43	134.85	126.50
25	14	2401	U	C5-C6-N1	6.43	125.91	122.70
25	14	2707	G	C5-C6-N1	6.42	114.71	111.50
25	1H	736	C	C5-C4-N4	-6.42	115.70	120.20
25	1H	2327	A	N9-C4-C5	6.42	108.37	105.80
25	14	945	A	N9-C4-C5	-6.42	103.23	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	120	U	C5-C4-O4	6.42	129.75	125.90
25	1H	432	A	N9-C4-C5	-6.42	103.23	105.80
25	1H	1321	A	O5'-P-OP1	-6.42	99.92	105.70
25	1H	2029	G	N1-C6-O6	6.42	123.75	119.90
25	1H	2779	U	C5-C6-N1	-6.42	119.49	122.70
25	14	834	C	C4-C5-C6	6.42	120.61	117.40
47	F5	21	ARG	NE-CZ-NH1	-6.42	117.09	120.30
1	13	792	A	N3-C4-N9	-6.42	122.26	127.40
25	1H	787	U	N1-C2-N3	6.42	118.75	114.90
1	13	975	A	C4-C5-N7	6.42	113.91	110.70
25	1H	199	A	C2-N3-C4	6.42	113.81	110.60
25	1H	2412	A	N1-C2-N3	6.42	132.51	129.30
25	14	2436	G	O5'-P-OP1	-6.42	99.93	105.70
25	1H	330	A	C4-C5-N7	6.41	113.91	110.70
25	1H	772	C	N3-C4-N4	6.41	122.49	118.00
25	1H	1400	G	C8-N9-C4	-6.41	103.84	106.40
25	1H	1614	A	O4'-C1'-N9	6.41	113.33	108.20
25	14	2575	C	N3-C4-N4	-6.41	113.51	118.00
25	1H	951	C	N1-C2-O2	6.41	122.75	118.90
25	1H	1786	A	C5-C6-N6	-6.41	118.57	123.70
36	88	24	GLY	N-CA-C	-6.41	97.08	113.10
25	1H	1604	C	O5'-P-OP1	-6.41	99.93	105.70
1	13	992	U	P-O3'-C3'	6.41	127.39	119.70
25	1H	135	G	C8-N9-C4	6.40	108.96	106.40
25	1H	1607	C	C5-C4-N4	-6.40	115.72	120.20
55	1G	541	G	N1-C6-O6	6.40	123.74	119.90
38	A8	101	LEU	CA-CB-CG	6.40	130.02	115.30
25	1H	1977	A	C8-N9-C4	6.40	108.36	105.80
1	13	966	G	C4-C5-N7	6.40	113.36	110.80
25	1H	821	A	C4-C5-C6	6.40	120.20	117.00
25	1H	1797	C	C5-C6-N1	-6.40	117.80	121.00
25	1H	2525	G	OP2-P-O3'	6.40	119.27	105.20
55	1G	397	A	C8-N9-C4	-6.40	103.24	105.80
25	14	2580	U	C5-C4-O4	-6.40	122.06	125.90
25	1H	2078	C	C5-C4-N4	-6.40	115.72	120.20
25	1H	208	C	OP2-P-O3'	6.39	119.27	105.20
25	1H	695	G	N1-C2-N2	-6.39	110.44	116.20
25	14	1402	C	N1-C2-O2	-6.39	115.06	118.90
25	14	1830	C	C5-C4-N4	-6.39	115.72	120.20
25	1H	2069	G	N7-C8-N9	-6.39	109.90	113.10
25	1H	2437	U	C5-C4-O4	6.39	129.74	125.90
25	14	514	A	C8-N9-C4	6.39	108.36	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	774	A	C4-C5-N7	6.39	113.90	110.70
25	14	2386	C	N3-C2-O2	6.39	126.38	121.90
1	13	1404	C	C6-N1-C2	6.39	122.86	120.30
25	1H	1570	A	C8-N9-C4	6.39	108.36	105.80
25	14	741	G	O5'-P-OP2	6.39	118.37	110.70
25	14	1786	A	N3-C4-C5	6.39	131.27	126.80
25	1H	1535	U	N1-C2-O2	6.39	127.27	122.80
25	1H	971	C	N1-C2-O2	-6.39	115.07	118.90
25	1H	1306	C	C2-N3-C4	-6.39	116.71	119.90
25	1H	1950	G	C5-C6-N1	-6.39	108.31	111.50
55	1G	186	C	C6-N1-C2	-6.39	117.75	120.30
25	14	503	A	N1-C2-N3	6.39	132.49	129.30
25	1H	330	A	O5'-P-OP2	-6.38	99.95	105.70
25	14	2002	G	C5-C6-O6	-6.38	124.77	128.60
25	1H	568	U	C2-N3-C4	-6.38	123.17	127.00
25	1H	828	U	N3-C2-O2	-6.38	117.73	122.20
25	14	1298	C	N3-C4-C5	6.38	124.45	121.90
25	14	1475	G	N7-C8-N9	6.38	116.29	113.10
25	14	1978	A	OP2-P-O3'	6.38	119.24	105.20
25	14	1807	G	C8-N9-C4	6.38	108.95	106.40
25	14	2501	C	N1-C2-O2	-6.38	115.07	118.90
1	13	524	G	O5'-P-OP1	-6.38	99.96	105.70
25	1H	1607	C	C6-N1-C1'	-6.38	113.14	120.80
25	14	783	A	C5-C6-N1	-6.38	114.51	117.70
25	1H	94	G	C5-C6-O6	-6.38	124.77	128.60
25	1H	1799	G	P-O3'-C3'	6.38	127.35	119.70
25	1H	2246	G	N3-C4-N9	6.38	129.83	126.00
25	14	1785	A	C4-C5-C6	6.38	120.19	117.00
25	1H	1639	U	N3-C2-O2	-6.38	117.74	122.20
25	14	2506	U	P-O3'-C3'	6.38	127.35	119.70
25	1H	1835	G	N3-C4-C5	-6.38	125.41	128.60
25	14	574	C	N3-C4-N4	-6.38	113.54	118.00
25	1H	416	C	C6-N1-C2	6.37	122.85	120.30
25	1H	576	U	OP2-P-O3'	6.37	119.22	105.20
25	1H	988	A	C8-N9-C4	-6.37	103.25	105.80
25	1H	1784	A	O5'-P-OP1	-6.37	99.96	105.70
25	1H	2566	A	C8-N9-C4	-6.37	103.25	105.80
25	1H	2689	U	N1-C2-N3	6.37	118.72	114.90
25	1H	2821	A	N1-C6-N6	6.37	122.42	118.60
25	1H	2866	U	N3-C4-C5	-6.37	110.78	114.60
25	1H	524	U	N3-C2-O2	-6.37	117.74	122.20
25	1H	2059	A	O4'-C1'-N9	6.37	113.30	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	430	G	N3-C4-N9	6.37	129.82	126.00
25	1H	528	A	N1-C6-N6	6.37	122.42	118.60
25	1H	557	U	C5-C6-N1	-6.37	119.52	122.70
25	14	93	C	C6-N1-C2	-6.37	117.75	120.30
25	1H	141	A	O4'-C1'-N9	6.37	113.29	108.20
25	14	562	U	C2-N1-C1'	6.37	125.34	117.70
25	1H	689	A	N9-C4-C5	6.36	108.34	105.80
25	1H	1827	C	C5-C6-N1	-6.36	117.82	121.00
25	1H	2618	G	C8-N9-C4	-6.36	103.86	106.40
25	14	1790	C	C5-C4-N4	-6.36	115.75	120.20
25	1H	2247	A	N1-C2-N3	6.36	132.48	129.30
25	1H	2499	C	C4-C5-C6	6.36	120.58	117.40
25	1H	2618	G	N9-C4-C5	6.36	107.94	105.40
25	14	180	G	C8-N9-C4	6.36	108.94	106.40
25	14	2427	C	N1-C2-O2	-6.36	115.08	118.90
25	14	2235	G	N3-C4-C5	-6.36	125.42	128.60
1	13	813	U	C4-C5-C6	-6.36	115.89	119.70
25	1H	1610	A	C6-C5-N7	-6.36	127.85	132.30
25	14	2051	A	C8-N9-C4	-6.36	103.26	105.80
25	1H	1899	G	OP2-P-O3'	6.35	119.18	105.20
25	1H	1010	A	C8-N9-C4	6.35	108.34	105.80
25	14	1760	A	O5'-P-OP2	-6.35	99.98	105.70
25	14	2430	A	O5'-P-OP2	6.35	118.32	110.70
25	1H	1025	G	C5-C6-O6	6.35	132.41	128.60
25	1H	1360	A	N1-C6-N6	6.35	122.41	118.60
25	14	832	G	C8-N9-C4	-6.35	103.86	106.40
25	1H	738	G	O5'-P-OP1	6.35	118.32	110.70
25	14	2070	G	O5'-P-OP2	-6.35	99.99	105.70
25	1H	2576	G	C8-N9-C4	6.35	108.94	106.40
25	14	2669	G	C8-N9-C4	6.35	108.94	106.40
25	1H	2020	A	C6-C5-N7	-6.34	127.86	132.30
25	14	676	A	C4-C5-N7	6.34	113.87	110.70
25	14	2335	A	O5'-P-OP1	-6.34	99.99	105.70
1	13	740	U	O5'-P-OP2	-6.34	99.99	105.70
25	1H	1925	C	OP2-P-O3'	6.34	119.15	105.20
55	1G	377	G	N9-C4-C5	-6.34	102.86	105.40
1	13	1233	G	N1-C6-O6	-6.34	116.10	119.90
25	1H	754	C	N3-C2-O2	-6.34	117.46	121.90
25	1H	1752	C	C6-N1-C2	6.34	122.84	120.30
25	14	265	A	C2-N3-C4	-6.34	107.43	110.60
25	14	621	A	N3-C4-C5	6.34	131.24	126.80
25	14	1520	U	C5-C4-O4	6.34	129.70	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1444	G	N1-C6-O6	-6.34	116.10	119.90
25	1H	446	G	C6-C5-N7	-6.34	126.60	130.40
25	1H	688	U	C4-C5-C6	6.34	123.50	119.70
25	1H	1827	C	C2-N3-C4	-6.34	116.73	119.90
23	2K	6	G	C8-N9-C4	6.33	108.93	106.40
25	1H	321	G	C5-C6-O6	-6.33	124.80	128.60
25	1H	500	G	N9-C4-C5	6.33	107.93	105.40
25	1H	691	C	O5'-P-OP1	6.33	118.30	110.70
25	1H	708	C	C5-C6-N1	-6.33	117.83	121.00
25	1H	770	G	N7-C8-N9	-6.33	109.93	113.10
1	13	766	A	O5'-P-OP2	-6.33	100.00	105.70
1	13	812	C	P-O3'-C3'	6.33	127.30	119.70
25	14	268	C	C6-N1-C2	-6.33	117.77	120.30
25	14	531	C	C5-C6-N1	-6.33	117.83	121.00
26	1J	29	A	C8-N9-C4	-6.33	103.27	105.80
1	13	792	A	N9-C4-C5	-6.33	103.27	105.80
55	1G	1530	G	N3-C4-N9	-6.33	122.20	126.00
25	14	956	G	O5'-P-OP2	-6.33	100.00	105.70
25	14	1304	C	N3-C2-O2	-6.33	117.47	121.90
25	1H	2597	G	C5-C6-O6	-6.33	124.80	128.60
25	14	529	A	N1-C6-N6	6.33	122.40	118.60
25	14	2769	C	N3-C2-O2	-6.33	117.47	121.90
25	1H	1570	A	N7-C8-N9	-6.33	110.64	113.80
25	14	670	A	N1-C6-N6	6.33	122.39	118.60
25	1H	568	U	C5-C4-O4	-6.32	122.11	125.90
25	1H	2072	G	N9-C4-C5	-6.32	102.87	105.40
25	1H	2252	G	C2-N3-C4	-6.32	108.74	111.90
1	13	1344	C	O5'-P-OP2	-6.32	100.01	105.70
25	1H	691	C	N3-C4-C5	6.32	124.43	121.90
25	14	2036	C	O5'-P-OP1	6.32	118.29	110.70
1	13	47	C	C5-C6-N1	-6.32	117.84	121.00
1	13	1354	C	N3-C2-O2	-6.32	117.48	121.90
25	1H	180	G	C2-N3-C4	-6.32	108.74	111.90
25	1H	820	A	C2-N3-C4	-6.32	107.44	110.60
1	13	974	A	C4-C5-N7	6.32	113.86	110.70
25	1H	974	G	C5-C6-N1	6.32	114.66	111.50
25	1H	148	C	N3-C4-C5	6.32	124.43	121.90
25	1H	2513	G	O5'-P-OP2	-6.32	100.02	105.70
25	14	1211	U	O5'-P-OP2	-6.32	100.02	105.70
25	14	57	C	C6-N1-C2	6.31	122.83	120.30
25	14	729	G	N1-C2-N2	6.31	121.88	116.20
1	13	690	G	N7-C8-N9	6.31	116.26	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1950	G	N1-C2-N2	-6.31	110.52	116.20
25	1H	2056	G	C6-C5-N7	-6.31	126.61	130.40
25	1H	2379	G	C5-C6-O6	-6.31	124.81	128.60
25	14	1899	G	C4-C5-N7	6.31	113.33	110.80
35	35	36	LYS	C-N-CA	6.31	135.56	122.30
25	14	271(B)	G	N3-C4-C5	-6.31	125.44	128.60
25	1H	127	A	C8-N9-C4	6.31	108.32	105.80
25	1H	2347	C	OP2-P-O3'	6.31	119.08	105.20
25	14	1644	C	C6-N1-C2	-6.31	117.78	120.30
25	1H	141(A)	C	N3-C4-C5	6.31	124.42	121.90
25	1H	464	U	C4-C5-C6	6.31	123.48	119.70
25	1H	1241	A	N3-C4-C5	6.31	131.21	126.80
25	1H	1252	G	N7-C8-N9	-6.31	109.95	113.10
25	1H	1824	G	N1-C6-O6	6.31	123.68	119.90
1	13	1323	G	N1-C6-O6	6.30	123.68	119.90
25	1H	1417	C	C5-C6-N1	6.30	124.15	121.00
25	1H	2258	C	C4-C5-C6	6.30	120.55	117.40
25	14	2000	G	OP2-P-O3'	6.30	119.07	105.20
25	1H	770	G	C8-N9-C4	6.30	108.92	106.40
25	14	2388	A	O5'-P-OP1	6.30	118.26	110.70
25	1H	577	G	C5-C6-O6	-6.30	124.82	128.60
1	13	820	U	O5'-P-OP1	6.30	118.26	110.70
1	13	901	A	N1-C2-N3	6.30	132.45	129.30
25	1H	1482	U	C6-N1-C1'	6.30	130.02	121.20
55	1G	529	G	C4-C5-N7	6.30	113.32	110.80
25	14	1279	G	N1-C6-O6	-6.30	116.12	119.90
25	14	1313	U	C6-N1-C2	-6.30	117.22	121.00
26	16	61	G	C8-N9-C4	-6.30	103.88	106.40
25	14	1572	A	O5'-P-OP2	-6.30	100.03	105.70
25	14	748	G	N1-C6-O6	-6.29	116.12	119.90
25	14	932	G	N3-C4-N9	-6.29	122.22	126.00
25	14	1817	G	N3-C2-N2	6.29	124.31	119.90
25	1H	793	A	C6-C5-N7	-6.29	127.89	132.30
25	1H	2777	G	O4'-C1'-N9	-6.29	103.17	108.20
55	1G	1441	G	O5'-P-OP1	-6.29	100.04	105.70
25	14	1789	A	C6-N1-C2	-6.29	114.82	118.60
26	1J	56	G	N3-C4-N9	6.29	129.78	126.00
25	1H	263	C	N1-C2-O2	6.29	122.67	118.90
25	14	1950	G	C4-C5-N7	6.29	113.32	110.80
25	14	2332	U	N1-C2-O2	6.29	127.20	122.80
25	1H	1765	C	C2-N1-C1'	-6.29	111.88	118.80
25	1H	204	A	C6-N1-C2	-6.29	114.83	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	2023	G	N1-C2-N3	6.29	127.67	123.90
25	1H	2701	C	N3-C2-O2	-6.29	117.50	121.90
25	14	2607	G	N3-C4-C5	-6.29	125.46	128.60
25	1H	530	G	N3-C4-C5	6.29	131.74	128.60
25	14	409	C	C6-N1-C2	6.29	122.81	120.30
25	14	621	A	N3-C4-N9	-6.29	122.37	127.40
1	13	621	A	N1-C6-N6	-6.28	114.83	118.60
25	1H	2258	C	C2-N3-C4	-6.28	116.76	119.90
25	14	2374	C	C6-N1-C2	6.28	122.81	120.30
25	1H	2579	C	O5'-P-OP2	-6.28	100.05	105.70
25	14	2413	G	C5-C6-O6	-6.28	124.83	128.60
25	1H	76	C	N3-C2-O2	-6.28	117.50	121.90
55	1G	366	C	C6-N1-C2	6.28	122.81	120.30
25	14	1281	G	C5-C6-O6	-6.28	124.83	128.60
25	14	1644	C	N3-C2-O2	-6.28	117.50	121.90
25	1H	189	G	C8-N9-C4	6.28	108.91	106.40
25	1H	1647	G	O4'-C1'-N9	-6.28	103.18	108.20
26	16	87	G	C8-N9-C4	6.28	108.91	106.40
25	1H	1340	U	N3-C4-O4	6.28	123.79	119.40
25	14	754	C	C5-C4-N4	-6.28	115.81	120.20
25	1H	199	A	N1-C2-N3	-6.28	126.16	129.30
25	1H	1771	C	C5-C6-N1	-6.28	117.86	121.00
25	14	1366	A	C4-C5-N7	6.28	113.84	110.70
25	14	2592	G	C6-N1-C2	-6.28	121.33	125.10
25	14	2592	G	N3-C4-C5	-6.28	125.46	128.60
23	2K	77	A	N9-C4-C5	-6.27	103.29	105.80
25	14	459	U	C5-C4-O4	6.27	129.66	125.90
25	14	2307	G	C4-N9-C1'	6.27	134.66	126.50
1	13	1498	U	C2-N3-C4	-6.27	123.24	127.00
25	1H	377	C	C6-N1-C2	6.27	122.81	120.30
55	1G	291	C	C5-C6-N1	-6.27	117.86	121.00
55	1G	518	C	O5'-P-OP2	-6.27	100.06	105.70
25	14	2060	A	OP1-P-OP2	-6.27	110.19	119.60
25	14	2233	U	N1-C2-O2	-6.27	118.41	122.80
25	14	2712	U	N3-C2-O2	-6.27	117.81	122.20
25	1H	112	U	N3-C2-O2	6.27	126.59	122.20
25	1H	141(A)	C	OP1-P-O3'	-6.27	91.40	105.20
25	1H	126	A	O5'-P-OP2	-6.27	100.06	105.70
25	1H	252	G	C4-C5-N7	-6.27	108.29	110.80
25	1H	815	C	O5'-P-OP1	6.27	118.22	110.70
25	1H	1639	U	N1-C2-O2	6.27	127.19	122.80
25	1H	2036	C	OP2-P-O3'	6.27	118.99	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	265	A	C8-N9-C4	-6.27	103.29	105.80
25	1H	1003	G	N7-C8-N9	-6.27	109.97	113.10
25	1H	1970	A	O4'-C1'-N9	-6.27	103.19	108.20
25	14	2551	C	N1-C2-O2	-6.27	115.14	118.90
25	1H	569	U	N1-C2-O2	-6.27	118.41	122.80
25	1H	2258	C	O5'-P-OP1	-6.27	100.06	105.70
25	14	605	C	C5-C6-N1	-6.27	117.87	121.00
1	13	1301	U	P-O3'-C3'	6.26	127.22	119.70
25	1H	116	C	N1-C2-O2	-6.26	115.14	118.90
25	14	791	C	N3-C4-C5	6.26	124.41	121.90
25	14	530	G	N9-C4-C5	-6.26	102.89	105.40
1	13	1279	A	C8-N9-C4	-6.26	103.30	105.80
25	1H	265	A	N3-C4-N9	-6.26	122.39	127.40
25	1H	672	C	OP2-P-O3'	6.26	118.98	105.20
25	14	673	C	O5'-P-OP1	6.26	118.21	110.70
25	1H	195	A	C6-C5-N7	-6.26	127.92	132.30
25	1H	416	C	N3-C4-C5	6.26	124.40	121.90
55	1G	121	C	C2-N1-C1'	6.26	125.68	118.80
25	14	854	G	N9-C4-C5	6.26	107.90	105.40
25	1H	508	G	C4-C5-N7	6.26	113.30	110.80
25	1H	1938	A	O5'-P-OP1	-6.26	100.07	105.70
55	1G	1400	C	N3-C4-C5	6.26	124.40	121.90
1	13	781	A	N9-C4-C5	-6.26	103.30	105.80
25	14	1029	A	C5-C6-N6	-6.26	118.69	123.70
25	14	1349	A	N1-C6-N6	6.26	122.35	118.60
25	14	684	G	N3-C4-C5	-6.25	125.47	128.60
23	2K	74	A	N1-C6-N6	6.25	122.35	118.60
25	14	689	A	O5'-P-OP2	-6.25	100.07	105.70
25	14	1612	C	C5-C4-N4	-6.25	115.82	120.20
25	14	1783	A	O5'-P-OP1	6.25	118.20	110.70
25	1H	782	A	N1-C2-N3	6.25	132.43	129.30
25	1H	2378	A	O5'-P-OP2	6.25	118.20	110.70
25	14	1762	A	C2-N3-C4	-6.25	107.47	110.60
1	13	738	C	C5-C6-N1	6.25	124.12	121.00
1	13	363	A	O5'-P-OP2	-6.25	100.08	105.70
25	1H	123	G	N1-C2-N3	6.25	127.65	123.90
25	1H	657	U	C6-N1-C2	6.25	124.75	121.00
55	1G	12	U	C5-C4-O4	6.25	129.65	125.90
25	1H	835	A	C5-C6-N1	6.25	120.82	117.70
1	13	1470	G	N1-C6-O6	6.24	123.65	119.90
25	1H	80	G	O5'-P-OP1	-6.24	100.08	105.70
25	14	338	G	C6-C5-N7	-6.24	126.65	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	988	G	N1-C6-O6	-6.24	116.16	119.90
25	1H	1216	G	O5'-P-OP2	6.24	118.19	110.70
25	1H	2708	G	N1-C2-N2	-6.24	110.58	116.20
25	14	1661	G	C6-N1-C2	-6.24	121.36	125.10
25	14	2365	G	N9-C4-C5	-6.24	102.90	105.40
25	14	2570	G	N1-C6-O6	6.24	123.64	119.90
1	13	1512	U	O5'-P-OP2	-6.24	100.08	105.70
25	1H	917	A	N7-C8-N9	6.24	116.92	113.80
25	1H	930	U	C5-C4-O4	6.24	129.64	125.90
25	1H	483	A	C8-N9-C4	-6.24	103.31	105.80
25	1H	2392	A	N1-C6-N6	6.24	122.34	118.60
25	14	1614	A	N1-C2-N3	6.24	132.42	129.30
25	1H	181	A	O5'-P-OP1	-6.24	100.09	105.70
25	1H	2277	G	C5-N7-C8	6.23	107.42	104.30
25	1H	1224	G	C6-C5-N7	6.23	134.14	130.40
25	1H	2312	U	C5-C4-O4	-6.23	122.16	125.90
25	14	556	G	N3-C4-N9	6.23	129.74	126.00
3	2E	188	LEU	CA-CB-CG	6.23	129.63	115.30
25	1H	1379	A	N7-C8-N9	6.23	116.92	113.80
25	1H	2430	A	N1-C2-N3	6.23	132.41	129.30
25	1H	2769	C	C6-N1-C2	-6.23	117.81	120.30
25	1H	1972	A	C2-N3-C4	6.23	113.71	110.60
25	1H	681	G	N3-C2-N2	6.22	124.26	119.90
25	1H	1252	G	C8-N9-C4	6.22	108.89	106.40
25	14	2620	C	C5-C4-N4	-6.22	115.84	120.20
1	13	811	C	N3-C4-C5	6.22	124.39	121.90
25	1H	825	C	N3-C2-O2	6.22	126.26	121.90
25	1H	1829	A	O5'-P-OP2	-6.22	100.10	105.70
26	1J	12	C	C2-N1-C1'	6.22	125.64	118.80
25	1H	1648	C	N1-C2-O2	-6.22	115.17	118.90
1	13	320	C	O5'-P-OP2	-6.22	100.10	105.70
25	1H	825	C	C4-C5-C6	6.22	120.51	117.40
25	14	1813	G	C8-N9-C4	6.22	108.89	106.40
1	13	1529	G	N3-C2-N2	6.22	124.25	119.90
25	14	1971	A	N9-C1'-C2'	-6.22	105.16	112.00
25	1H	210	C	C2-N3-C4	-6.22	116.79	119.90
25	1H	1742	C	C6-N1-C2	-6.22	117.81	120.30
25	1H	2241	A	C8-N9-C4	6.22	108.29	105.80
55	1G	111	G	N1-C6-O6	6.22	123.63	119.90
25	14	1342	A	N1-C6-N6	6.22	122.33	118.60
25	14	1695	G	C8-N9-C1'	-6.22	118.92	127.00
25	1H	663	G	C5-C6-N1	-6.21	108.39	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	783	A	N9-C1'-C2'	-6.21	105.16	112.00
25	1H	1671	U	N3-C4-O4	6.21	123.75	119.40
25	1H	2871	C	N3-C4-N4	-6.21	113.65	118.00
25	14	1290	C	OP1-P-OP2	6.21	128.92	119.60
25	1H	1636	C	O5'-P-OP2	6.21	118.16	110.70
25	14	2068	U	OP2-P-O3'	-6.21	91.53	105.20
55	1G	960	U	N1-C2-N3	6.21	118.63	114.90
25	14	2313	C	C6-N1-C2	-6.21	117.81	120.30
25	1H	1804	C	O5'-P-OP1	6.21	118.15	110.70
25	14	1304	C	N1-C2-O2	6.21	122.63	118.90
25	14	1772	G	N9-C1'-C2'	-6.21	105.17	112.00
25	1H	2248	C	N3-C4-C5	6.21	124.38	121.90
25	1H	2554	U	C5-C4-O4	-6.21	122.17	125.90
55	1G	1490	C	O5'-P-OP2	-6.21	100.11	105.70
25	14	2003	G	C6-C5-N7	-6.21	126.67	130.40
25	14	2516	G	OP2-P-O3'	6.21	118.86	105.20
25	1H	1394	U	O5'-P-OP2	6.21	118.15	110.70
25	14	270(B)	A	C8-N9-C4	6.21	108.28	105.80
25	14	1981	A	N7-C8-N9	-6.21	110.70	113.80
25	1H	824	A	C2-N3-C4	-6.20	107.50	110.60
25	1H	929	G	N9-C4-C5	-6.20	102.92	105.40
25	1H	1979	C	N3-C4-N4	6.20	122.34	118.00
55	1G	1280	A	C8-N9-C4	6.20	108.28	105.80
1	13	419	C	C5-C6-N1	6.20	124.10	121.00
25	14	2443	C	O5'-P-OP2	6.20	118.14	110.70
25	1H	1471	A	N7-C8-N9	6.20	116.90	113.80
25	14	427	U	O5'-P-OP1	-6.20	100.12	105.70
25	14	1408	C	N3-C2-O2	6.20	126.24	121.90
25	1H	321	G	N1-C6-O6	6.20	123.62	119.90
25	1H	966	G	C4-C5-N7	-6.20	108.32	110.80
25	1H	2033	A	N7-C8-N9	6.20	116.90	113.80
25	14	1681	G	N3-C4-C5	6.20	131.70	128.60
1	13	966	G	N1-C6-O6	6.20	123.62	119.90
25	1H	2708	G	O5'-P-OP2	-6.20	100.12	105.70
25	14	189	G	C5-C6-O6	-6.20	124.88	128.60
25	14	530	G	N3-C4-C5	6.20	131.70	128.60
1	13	892	A	C6-C5-N7	-6.19	127.96	132.30
25	14	1598	C	C6-N1-C2	-6.19	117.82	120.30
1	13	1199	U	N3-C4-C5	-6.19	110.89	114.60
25	1H	931	G	N3-C4-N9	6.19	129.72	126.00
25	1H	1220	A	C5-C6-N6	6.19	128.65	123.70
25	1H	1516	U	N1-C2-O2	6.19	127.14	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1535	U	N3-C2-O2	-6.19	117.86	122.20
25	1H	1951	U	N1-C2-O2	-6.19	118.47	122.80
25	14	801	G	N9-C4-C5	6.19	107.88	105.40
1	13	422	C	P-O3'-C3'	6.19	127.13	119.70
25	1H	921	G	N1-C6-O6	6.19	123.61	119.90
25	1H	247	G	C5-C6-N1	6.19	114.59	111.50
25	1H	755	C	C6-N1-C2	-6.19	117.82	120.30
26	16	79	C	C2-N1-C1'	6.19	125.61	118.80
25	1H	576	U	N3-C2-O2	6.19	126.53	122.20
25	1H	2761	G	C2-N3-C4	-6.19	108.81	111.90
25	14	2037	G	C6-N1-C2	-6.19	121.39	125.10
25	1H	196	A	N7-C8-N9	6.19	116.89	113.80
25	1H	2270	G	C8-N9-C4	6.19	108.87	106.40
55	1G	790	A	N1-C6-N6	-6.18	114.89	118.60
25	14	1299	G	O5'-P-OP2	6.18	118.12	110.70
1	13	1323	G	C6-C5-N7	-6.18	126.69	130.40
25	1H	763	G	C6-N1-C2	-6.18	121.39	125.10
25	1H	1962	C	C5-C6-N1	6.18	124.09	121.00
25	14	693	C	N3-C4-N4	-6.18	113.67	118.00
25	14	2056	G	O5'-P-OP1	-6.18	100.14	105.70
25	1H	1564	C	N3-C4-N4	-6.18	113.67	118.00
55	1G	1528	U	C6-N1-C2	6.18	124.71	121.00
25	14	1379	A	C2-N3-C4	-6.18	107.51	110.60
25	14	1616	A	C4-C5-N7	6.18	113.79	110.70
25	14	2779	U	C5-C4-O4	6.18	129.61	125.90
1	13	266	G	N1-C6-O6	6.18	123.61	119.90
25	1H	509	C	N1-C2-O2	6.18	122.61	118.90
25	1H	1281	G	O5'-P-OP2	6.18	118.11	110.70
25	1H	1625	C	C5-C4-N4	6.18	124.53	120.20
25	1H	1819	A	C5-C6-N1	6.18	120.79	117.70
25	1H	2068	U	N1-C2-N3	-6.18	111.19	114.90
25	1H	2499	C	N3-C2-O2	6.18	126.22	121.90
25	1H	2638	G	C2-N3-C4	6.18	114.99	111.90
25	14	530	G	N1-C6-O6	6.18	123.61	119.90
25	14	694	U	N3-C2-O2	-6.18	117.87	122.20
25	14	992	C	N1-C2-O2	6.18	122.61	118.90
25	1H	574	C	C2-N3-C4	6.18	122.99	119.90
25	1H	1280	G	OP1-P-OP2	-6.18	110.34	119.60
25	1H	2392	A	C6-C5-N7	-6.18	127.98	132.30
25	14	1142(A)	A	N1-C2-N3	6.18	132.39	129.30
25	14	1241	A	C5-N7-C8	-6.18	100.81	103.90
25	14	1772	G	C5-C6-O6	-6.18	124.89	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	74	A	C4-C5-C6	6.17	120.09	117.00
25	1H	197	A	C2-N3-C4	-6.17	107.51	110.60
1	13	813	U	N3-C4-C5	6.17	118.30	114.60
25	1H	989	G	N7-C8-N9	6.17	116.19	113.10
25	1H	1831	G	N1-C6-O6	6.17	123.60	119.90
25	1H	2545	G	N3-C2-N2	-6.17	115.58	119.90
25	14	2287	A	N3-C4-N9	-6.17	122.46	127.40
1	13	751	U	O5'-P-OP1	-6.17	100.15	105.70
1	13	1517	G	C5-C6-N1	6.17	114.58	111.50
25	1H	1955	U	C4-C5-C6	6.17	123.40	119.70
25	14	730	C	N3-C4-C5	6.17	124.37	121.90
25	1H	528	A	O4'-C1'-N9	-6.17	103.26	108.20
25	1H	821	A	N9-C4-C5	6.17	108.27	105.80
25	14	774	A	C6-N1-C2	6.17	122.30	118.60
25	1H	187	G	N3-C4-N9	6.17	129.70	126.00
25	1H	1830	C	N1-C2-O2	-6.17	115.20	118.90
25	1H	130	C	C4-C5-C6	6.17	120.48	117.40
25	1H	1764	G	C5-C6-O6	6.17	132.30	128.60
25	1H	1855	G	N3-C4-N9	6.17	129.70	126.00
25	14	1771	C	C5-C4-N4	-6.17	115.88	120.20
25	14	338	G	N1-C6-O6	6.16	123.60	119.90
25	14	2667	C	C6-N1-C2	-6.16	117.83	120.30
25	14	2713	A	N1-C6-N6	6.16	122.30	118.60
32	69	131	LYS	C-N-CD	-6.16	107.04	120.60
25	1H	194	G	C5-C6-O6	-6.16	124.90	128.60
25	1H	630	G	C5-C6-N1	6.16	114.58	111.50
25	1H	860	U	C2-N1-C1'	6.16	125.09	117.70
55	1G	899	C	N1-C2-O2	6.16	122.60	118.90
1	13	881	G	OP1-P-OP2	-6.16	110.36	119.60
25	1H	734	A	C2-N3-C4	-6.16	107.52	110.60
55	1G	960	U	C5-C6-N1	-6.16	119.62	122.70
25	14	396	G	C8-N9-C4	-6.16	103.94	106.40
25	1H	1678	G	N1-C2-N3	6.16	127.59	123.90
25	1H	2586	C	N1-C2-O2	-6.16	115.20	118.90
25	14	2620	C	C6-N1-C2	6.16	122.76	120.30
25	1H	698	C	OP1-P-OP2	6.16	128.83	119.60
25	14	2048	G	N9-C4-C5	6.16	107.86	105.40
55	1G	885	G	C8-N9-C4	6.15	108.86	106.40
25	14	583	G	C8-N9-C4	-6.15	103.94	106.40
25	1H	389	G	N1-C6-O6	6.15	123.59	119.90
25	1H	455	C	N3-C4-C5	6.15	124.36	121.90
25	1H	2575	C	C4-C5-C6	6.15	120.48	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	1G	1158	C	N1-C2-O2	6.15	122.59	118.90
25	14	468	G	N1-C6-O6	6.15	123.59	119.90
25	14	2392	A	C6-N1-C2	6.15	122.29	118.60
1	13	276	G	N3-C2-N2	-6.15	115.59	119.90
25	1H	575	A	O5'-P-OP1	-6.15	100.16	105.70
25	1H	1638	C	OP2-P-O3'	6.15	118.73	105.20
25	1H	1728	G	C4-C5-N7	6.15	113.26	110.80
25	14	2087	G	C8-N9-C4	6.15	108.86	106.40
1	13	1356	G	N7-C8-N9	6.15	116.17	113.10
25	1H	19	C	C2-N3-C4	-6.15	116.83	119.90
25	1H	1701	A	OP1-P-O3'	6.15	118.73	105.20
25	1H	696	G	O5'-P-OP2	6.15	118.08	110.70
26	16	31	C	N3-C4-N4	-6.15	113.70	118.00
25	1H	2427	C	O5'-P-OP1	-6.15	100.17	105.70
25	14	2600	A	C5-N7-C8	6.15	106.97	103.90
25	1H	1224	G	C5-C6-N1	6.14	114.57	111.50
1	13	186	C	C6-N1-C2	-6.14	117.84	120.30
25	1H	947	G	O5'-P-OP1	-6.14	100.17	105.70
25	1H	2782	G	N1-C6-O6	6.14	123.58	119.90
25	1H	2837	G	C8-N9-C4	-6.14	103.94	106.40
54	Q8	45	GLY	N-CA-C	6.14	128.46	113.10
25	1H	2518	A	O4'-C1'-N9	-6.14	103.29	108.20
25	1H	781	A	O5'-P-OP1	-6.14	100.17	105.70
25	1H	2447	G	N1-C2-N2	-6.14	110.67	116.20
1	13	545	C	N3-C2-O2	-6.14	117.60	121.90
25	14	775	G	N3-C4-N9	6.14	129.68	126.00
1	13	792	A	C1'-O4'-C4'	-6.14	104.99	109.90
25	1H	2699	C	C5-C4-N4	-6.14	115.91	120.20
26	16	105	G	C5-C6-O6	-6.14	124.92	128.60
25	14	2818	G	C8-N9-C4	6.14	108.85	106.40
25	1H	1325	G	C5-C6-O6	-6.13	124.92	128.60
25	1H	2377	A	N9-C4-C5	-6.13	103.35	105.80
25	1H	2420	C	O5'-P-OP1	-6.13	100.18	105.70
25	14	110	G	C8-N9-C4	6.13	108.85	106.40
25	14	2277	G	N1-C6-O6	-6.13	116.22	119.90
1	13	181	G	N3-C4-C5	-6.13	125.53	128.60
1	13	1211	U	N3-C2-O2	-6.13	117.91	122.20
25	1H	1775	U	OP2-P-O3'	6.13	118.69	105.20
55	1G	690	G	N1-C2-N2	6.13	121.72	116.20
25	1H	599	G	N3-C4-N9	6.13	129.68	126.00
25	1H	663	G	C6-C5-N7	-6.13	126.72	130.40
25	14	1941	C	O5'-P-OP1	-6.13	100.18	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	106	C	C6-N1-C2	-6.13	117.85	120.30
25	1H	2715	C	N3-C4-C5	6.13	124.35	121.90
25	14	512	G	O4'-C1'-N9	6.13	113.10	108.20
40	85	3	ARG	NE-CZ-NH1	-6.13	117.24	120.30
25	1H	728	G	C8-N9-C4	6.13	108.85	106.40
25	1H	963	U	O5'-P-OP1	-6.13	100.19	105.70
25	1H	968	G	N1-C2-N2	-6.13	110.69	116.20
25	1H	1022	G	C5-C6-N1	6.13	114.56	111.50
25	14	83	G	N1-C6-O6	6.13	123.58	119.90
1	13	1519	A	C5-C6-N6	6.12	128.60	123.70
25	14	2688	U	N3-C4-O4	-6.12	115.11	119.40
25	14	2696	U	O5'-P-OP1	-6.12	100.19	105.70
1	13	963	G	C8-N9-C4	6.12	108.85	106.40
25	14	918	A	O5'-P-OP1	-6.12	100.19	105.70
25	14	2441	C	N1-C2-O2	6.12	122.57	118.90
25	14	68	G	N1-C6-O6	6.12	123.57	119.90
25	14	2576	G	O5'-P-OP1	6.12	118.04	110.70
25	14	2712	U	C5-C4-O4	6.12	129.57	125.90
1	13	960	U	C2-N1-C1'	6.12	125.04	117.70
1	13	1117	G	O5'-P-OP2	-6.12	100.19	105.70
25	1H	655	A	C8-N9-C4	-6.12	103.35	105.80
25	1H	1382	G	N3-C4-C5	6.12	131.66	128.60
25	1H	1616	A	N3-C4-C5	6.12	131.08	126.80
25	1H	2373	G	C6-N1-C2	-6.12	121.43	125.10
25	1H	2549	G	C8-N9-C4	6.12	108.85	106.40
25	14	1685	C	C5-C6-N1	-6.12	117.94	121.00
25	1H	1776	G	O5'-P-OP1	6.12	118.04	110.70
25	1H	49	A	N7-C8-N9	-6.12	110.74	113.80
25	1H	835	A	C6-N1-C2	-6.12	114.93	118.60
25	1H	1302	A	N9-C4-C5	6.12	108.25	105.80
25	1H	2330	G	N3-C4-C5	6.12	131.66	128.60
1	13	1484	C	N1-C2-O2	-6.11	115.23	118.90
25	1H	1382	G	OP2-P-O3'	6.11	118.65	105.20
1	13	784	C	O5'-P-OP1	-6.11	100.20	105.70
1	13	555	C	C6-N1-C2	-6.11	117.86	120.30
1	13	816	A	N9-C4-C5	6.11	108.24	105.80
25	1H	121	G	C5-C6-O6	-6.11	124.93	128.60
25	1H	2521	C	C6-N1-C2	6.11	122.75	120.30
25	14	133	C	C5-C6-N1	-6.11	117.94	121.00
25	14	145	G	C8-N9-C4	6.11	108.84	106.40
25	14	1685	C	N3-C4-C5	6.11	124.34	121.90
25	1H	200	U	O5'-P-OP1	-6.11	100.20	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	676	A	C5-C6-N6	6.11	128.59	123.70
1	13	1338	G	N1-C6-O6	-6.11	116.23	119.90
25	1H	708	C	C2-N3-C4	-6.11	116.85	119.90
25	1H	1440	G	C5-C6-O6	6.11	132.26	128.60
25	1H	1901	A	C5-C6-N1	6.11	120.75	117.70
25	1H	2636	U	C6-N1-C2	6.11	124.67	121.00
55	1G	1498	U	P-O3'-C3'	6.11	127.03	119.70
25	1H	16	G	C8-N9-C4	-6.11	103.96	106.40
25	1H	1271	G	N9-C4-C5	-6.11	102.96	105.40
25	1H	1279	G	O5'-P-OP1	6.11	118.03	110.70
25	14	621	A	O4'-C1'-N9	6.11	113.08	108.20
25	14	2365	G	N3-C4-N9	6.11	129.66	126.00
25	1H	2636	U	N3-C4-O4	-6.10	115.13	119.40
25	1H	533	G	C8-N9-C4	6.10	108.84	106.40
25	1H	1804	C	N3-C4-C5	6.10	124.34	121.90
25	14	1989	G	N3-C2-N2	-6.10	115.63	119.90
25	1H	2438	U	C6-N1-C2	6.10	124.66	121.00
25	14	2003	G	N1-C6-O6	6.10	123.56	119.90
25	1H	481	G	O4'-C1'-N9	6.10	113.08	108.20
25	1H	989	G	C8-N9-C4	-6.10	103.96	106.40
55	1G	690	G	O4'-C1'-N9	6.10	113.08	108.20
1	13	1488	G	C5-C6-O6	-6.10	124.94	128.60
25	1H	542	C	C2-N3-C4	-6.10	116.85	119.90
25	1H	636	G	O5'-P-OP1	-6.10	100.21	105.70
25	1H	2377	A	C2-N3-C4	-6.10	107.55	110.60
26	1J	8	U	O5'-P-OP2	-6.10	100.21	105.70
1	13	570	G	C5-C6-O6	-6.10	124.94	128.60
25	14	1610	A	O5'-P-OP2	-6.09	100.22	105.70
25	14	2510	C	C5-C6-N1	-6.09	117.95	121.00
25	14	2829	C	N1-C2-O2	-6.09	115.24	118.90
1	13	1227	A	C2-N3-C4	-6.09	107.55	110.60
25	1H	187	G	C4-N9-C1'	6.09	134.42	126.50
27	11	71	ASP	CB-CG-OD1	-6.09	112.82	118.30
25	14	2518	A	C5-N7-C8	-6.09	100.86	103.90
1	13	787	A	C8-N9-C4	-6.09	103.36	105.80
1	13	901	A	C2-N3-C4	-6.09	107.56	110.60
1	13	1356	G	C4-N9-C1'	6.09	134.42	126.50
25	1H	378	C	C5-C4-N4	-6.09	115.94	120.20
25	1H	782	A	C5-C6-N6	-6.09	118.83	123.70
25	1H	1351	C	OP2-P-O3'	6.09	118.60	105.20
25	1H	2318	G	C5-N7-C8	-6.09	101.26	104.30
25	1H	2596	U	N1-C2-O2	-6.09	118.54	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1934	C	N3-C4-C5	6.09	124.34	121.90
25	1H	2308	G	C6-N1-C2	6.09	128.75	125.10
25	14	560	C	C6-N1-C2	6.09	122.73	120.30
25	14	774	A	N1-C6-N6	6.09	122.25	118.60
25	14	955	C	N1-C2-O2	-6.09	115.25	118.90
55	1G	267	C	O5'-P-OP1	-6.08	100.22	105.70
25	14	1692	U	C2-N3-C4	-6.08	123.35	127.00
25	14	1992	G	C2'-C3'-O3'	6.08	123.43	113.70
25	1H	2237	G	C8-N9-C4	6.08	108.83	106.40
25	14	1992	G	N3-C4-C5	-6.08	125.56	128.60
25	14	2266	A	O5'-P-OP2	-6.08	100.23	105.70
25	14	2429	G	O5'-P-OP2	-6.08	100.23	105.70
25	1H	217	G	C5-C6-O6	6.08	132.25	128.60
25	1H	480	A	C5-N7-C8	-6.08	100.86	103.90
25	1H	1398	C	OP1-P-OP2	-6.08	110.48	119.60
25	1H	2053	G	N3-C2-N2	-6.08	115.64	119.90
1	13	975	A	O4'-C1'-N9	-6.08	103.34	108.20
25	14	330	A	C6-C5-N7	-6.08	128.05	132.30
25	1H	954	G	N3-C2-N2	-6.08	115.65	119.90
25	1H	1780	A	C8-N9-C4	-6.08	103.37	105.80
25	1H	2450	A	N1-C6-N6	-6.08	114.95	118.60
25	14	510	C	C6-N1-C2	-6.08	117.87	120.30
1	13	1492	A	O5'-P-OP1	6.07	117.99	110.70
25	1H	947	G	C5-C6-N1	-6.07	108.46	111.50
55	1G	183	G	N1-C6-O6	6.07	123.54	119.90
25	14	1597	A	C8-N9-C4	6.07	108.23	105.80
25	1H	916	G	O5'-P-OP2	6.07	117.99	110.70
25	1H	2417	C	O5'-P-OP2	-6.07	100.23	105.70
25	1H	2610	C	N1-C2-O2	6.07	122.54	118.90
25	14	1573	G	C5-C6-O6	-6.07	124.96	128.60
1	13	1506	U	C5-C4-O4	-6.07	122.26	125.90
25	1H	2844	G	OP2-P-O3'	6.07	118.55	105.20
25	14	1121	C	C6-N1-C2	6.07	122.73	120.30
25	1H	2328	A	N1-C6-N6	6.07	122.24	118.60
25	14	1271	G	N9-C4-C5	-6.07	102.97	105.40
1	13	552	U	C4-C5-C6	6.07	123.34	119.70
1	13	714	G	O5'-P-OP1	-6.07	100.24	105.70
25	1H	752	A	N1-C2-N3	6.07	132.33	129.30
25	1H	1972	A	C8-N9-C4	-6.07	103.37	105.80
55	1G	350	G	C4-N9-C1'	6.07	134.39	126.50
25	14	1933	G	C8-N9-C4	6.07	108.83	106.40
25	1H	314	A	N1-C6-N6	-6.07	114.96	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	180	G	C4-C5-N7	6.06	113.22	110.80
25	1H	528	A	N7-C8-N9	6.06	116.83	113.80
25	1H	1957	C	C5-C6-N1	-6.06	117.97	121.00
25	1H	2469	A	C4-C5-N7	6.06	113.73	110.70
25	14	630	G	C8-N9-C4	6.06	108.83	106.40
25	14	704	G	C8-N9-C4	6.06	108.83	106.40
25	14	1983	C	C5-C4-N4	-6.06	115.96	120.20
25	14	2706	G	C5-C6-N1	6.06	114.53	111.50
25	14	330	A	C5-N7-C8	-6.06	100.87	103.90
25	1H	1007	C	O5'-P-OP1	-6.06	100.25	105.70
25	1H	2506	U	C2-N1-C1'	6.06	124.97	117.70
25	14	679	C	N1-C2-O2	-6.06	115.27	118.90
25	14	1899	G	C8-N9-C4	-6.06	103.98	106.40
1	13	1502	A	C4-N9-C1'	6.06	137.20	126.30
25	1H	955	C	OP1-P-O3'	6.06	118.53	105.20
25	1H	1122	G	C5-C6-O6	-6.06	124.97	128.60
25	1H	1213	A	O5'-P-OP2	6.06	117.97	110.70
25	14	141	A	C6-N1-C2	6.06	122.23	118.60
25	14	1612	C	N3-C4-N4	6.06	122.24	118.00
25	1H	29	U	N3-C4-O4	6.05	123.64	119.40
25	1H	443	A	N1-C2-N3	-6.05	126.27	129.30
25	1H	577	G	C4-C5-N7	6.05	113.22	110.80
25	14	2702	U	N1-C2-N3	6.05	118.53	114.90
25	14	2724	C	OP2-P-O3'	6.05	118.52	105.20
25	1H	732	C	N1-C2-O2	-6.05	115.27	118.90
25	1H	228	A	C4-C5-N7	6.05	113.73	110.70
25	1H	944	G	C4-N9-C1'	6.05	134.37	126.50
25	1H	2549	G	N7-C8-N9	-6.05	110.07	113.10
25	1H	2850	A	OP1-P-OP2	-6.05	110.53	119.60
25	14	138	G	C5-C6-O6	-6.05	124.97	128.60
23	2K	17	C	N1-C2-O2	6.05	122.53	118.90
25	14	1791	A	OP1-P-OP2	-6.05	110.53	119.60
25	1H	271(B)	G	C5-C6-N1	6.05	114.52	111.50
25	1H	530	G	N7-C8-N9	6.05	116.12	113.10
55	1G	1498	U	O5'-P-OP1	-6.05	100.26	105.70
25	14	79	G	C5-C6-O6	-6.05	124.97	128.60
25	1H	2307	G	C5-C6-O6	-6.04	124.97	128.60
25	1H	128	C	N3-C4-C5	6.04	124.32	121.90
25	1H	858	U	O5'-P-OP2	-6.04	100.26	105.70
25	1H	1698	A	C8-N9-C4	-6.04	103.38	105.80
25	1H	2718	G	C5-C6-O6	-6.04	124.97	128.60
55	1G	782	A	N7-C8-N9	-6.04	110.78	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1806	C	O5'-P-OP2	-6.04	100.26	105.70
25	1H	1623	G	N1-C2-N2	-6.04	110.76	116.20
25	1H	1632	A	C5-C6-N6	-6.04	118.87	123.70
26	16	79	C	C6-N1-C2	-6.04	117.88	120.30
25	14	1395	A	O4'-C1'-N9	6.04	113.03	108.20
25	1H	2282	G	O5'-P-OP2	6.04	117.94	110.70
1	13	354	G	C4-C5-N7	6.04	113.21	110.80
25	1H	2318	G	N3-C4-N9	-6.04	122.38	126.00
55	1G	1467	G	O5'-P-OP2	-6.04	100.27	105.70
25	14	1347	G	OP1-P-O3'	6.04	118.48	105.20
25	1H	2231	C	N1-C2-O2	-6.03	115.28	118.90
25	14	228	A	N1-C6-N6	6.03	122.22	118.60
25	14	788	A	C4-C5-C6	6.03	120.02	117.00
25	14	2011	U	N3-C2-O2	6.03	126.42	122.20
26	16	11	C	N1-C2-O2	6.03	122.52	118.90
25	14	2331	G	C5-C6-O6	-6.03	124.98	128.60
25	14	113	G	N1-C6-O6	6.03	123.52	119.90
25	14	803	U	C5-C6-N1	-6.03	119.69	122.70
25	14	1346	G	C5-N7-C8	6.03	107.31	104.30
25	14	2871	C	O5'-P-OP2	-6.03	100.28	105.70
25	1H	695	G	C5-C6-O6	6.03	132.22	128.60
25	1H	1379	A	C5-C6-N6	-6.03	118.88	123.70
25	14	642	G	N1-C6-O6	6.03	123.52	119.90
25	14	729	G	N1-C6-O6	6.03	123.52	119.90
25	14	1257	C	N1-C2-O2	-6.03	115.28	118.90
25	1H	845	G	N3-C4-C5	6.02	131.61	128.60
25	1H	951	C	N3-C2-O2	-6.02	117.68	121.90
25	1H	1297	C	OP1-P-O3'	6.02	118.45	105.20
25	1H	1394	U	OP1-P-OP2	-6.02	110.56	119.60
25	14	1650	G	N9-C4-C5	6.02	107.81	105.40
25	1H	1559	G	C4-C5-N7	6.02	113.21	110.80
25	1H	1950	G	O5'-P-OP1	-6.02	100.28	105.70
25	1H	2577	A	C4-C5-N7	-6.02	107.69	110.70
25	1H	2608	G	O5'-P-OP2	6.02	117.93	110.70
55	1G	353	A	C5-N7-C8	-6.02	100.89	103.90
55	1G	1322	C	C2-N1-C1'	6.02	125.42	118.80
25	14	949	C	N3-C2-O2	6.02	126.12	121.90
25	1H	2374	C	C4-C5-C6	6.02	120.41	117.40
25	1H	410	G	N1-C6-O6	6.02	123.51	119.90
25	1H	2709	G	O5'-P-OP1	6.02	117.92	110.70
1	13	1062	U	O5'-P-OP2	-6.02	100.28	105.70
25	14	1955	U	N3-C2-O2	-6.02	117.99	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	2439	A	P-O3'-C3'	6.02	126.92	119.70
25	14	2741	A	C8-N9-C4	6.02	108.21	105.80
25	1H	906	G	C8-N9-C1'	6.01	134.82	127.00
26	16	49	C	N3-C2-O2	6.01	126.11	121.90
25	14	1300	U	C2-N3-C4	-6.01	123.39	127.00
25	14	1381	G	C5-C6-O6	-6.01	124.99	128.60
25	14	1394	U	OP1-P-OP2	-6.01	110.58	119.60
25	1H	1259	G	OP2-P-O3'	6.01	118.43	105.20
25	1H	779	U	C5-C6-N1	-6.01	119.69	122.70
25	1H	807	U	OP1-P-OP2	6.01	128.62	119.60
25	14	819	A	C8-N9-C4	-6.01	103.40	105.80
1	13	963	G	N3-C2-N2	6.01	124.11	119.90
25	1H	2317	C	N3-C4-N4	6.01	122.21	118.00
27	11	131	LEU	CB-CG-CD2	-6.01	100.78	111.00
25	14	1348	G	O5'-P-OP2	6.01	117.91	110.70
25	14	2518	A	O4'-C1'-N9	-6.01	103.39	108.20
25	14	2593	U	N3-C4-C5	-6.01	110.99	114.60
25	1H	764	A	C8-N9-C4	-6.01	103.40	105.80
25	14	1573	G	N1-C6-O6	6.01	123.50	119.90
25	14	1815	A	OP1-P-O3'	6.01	118.42	105.20
1	13	1050	G	N1-C6-O6	-6.01	116.30	119.90
25	1H	965	C	N3-C4-N4	6.01	122.20	118.00
25	1H	1602	U	C5-C6-N1	-6.01	119.70	122.70
25	14	2083	G	N1-C2-N2	-6.01	110.80	116.20
25	1H	970	C	N3-C4-N4	6.00	122.20	118.00
25	1H	2062	A	P-O3'-C3'	-6.00	112.49	119.70
25	14	2069	G	C5-C6-N1	6.00	114.50	111.50
1	13	1530	G	N3-C4-C5	6.00	131.60	128.60
25	1H	736	C	O5'-P-OP1	-6.00	100.30	105.70
25	1H	2611	U	N3-C2-O2	-6.00	118.00	122.20
25	1H	2779	U	C5-C4-O4	6.00	129.50	125.90
55	1G	354	G	C6-C5-N7	-6.00	126.80	130.40
55	1G	819	A	C5-C6-N6	-6.00	118.90	123.70
55	1G	1446	A	O5'-P-OP1	6.00	117.90	110.70
25	1H	1166	C	N1-C2-O2	6.00	122.50	118.90
25	1H	1835	G	N1-C6-O6	-6.00	116.30	119.90
25	14	2024	G	C2-N3-C4	-6.00	108.90	111.90
1	13	694	A	C2-N3-C4	-6.00	107.60	110.60
25	14	188	G	O5'-P-OP2	-6.00	100.30	105.70
1	13	881	G	C8-N9-C4	6.00	108.80	106.40
25	1H	2540	C	C6-N1-C2	6.00	122.70	120.30
25	14	693	C	C2-N3-C4	-6.00	116.90	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	131	G	C6-C5-N7	-6.00	126.80	130.40
25	1H	1574	C	OP1-P-O3'	-6.00	92.01	105.20
25	1H	2584	U	N1-C2-O2	6.00	127.00	122.80
25	14	1267	U	OP2-P-O3'	6.00	118.39	105.20
25	14	1322	A	N9-C4-C5	6.00	108.20	105.80
25	1H	729	G	C4-N9-C1'	6.00	134.29	126.50
25	14	1367	A	C2-N3-C4	-6.00	107.60	110.60
1	13	690	G	OP1-P-OP2	5.99	128.59	119.60
1	13	1279	A	N7-C8-N9	5.99	116.80	113.80
25	1H	782	A	C6-N1-C2	-5.99	115.00	118.60
25	1H	1502	C	C6-N1-C2	-5.99	117.90	120.30
55	1G	328	C	C6-N1-C2	-5.99	117.90	120.30
25	14	1786	A	N9-C1'-C2'	5.99	121.79	114.00
25	14	1998	G	C2-N3-C4	-5.99	108.90	111.90
25	1H	974	G	OP2-P-O3'	5.99	118.38	105.20
25	1H	651	G	C8-N9-C4	-5.99	104.00	106.40
25	1H	1518	C	O5'-P-OP2	5.99	117.89	110.70
25	1H	2217	G	C8-N9-C4	-5.99	104.00	106.40
25	14	2568	C	N1-C2-O2	-5.99	115.31	118.90
1	13	809	G	OP1-P-OP2	5.99	128.58	119.60
25	14	798	G	C6-C5-N7	-5.99	126.81	130.40
25	14	2607	G	C6-C5-N7	-5.99	126.81	130.40
25	1H	694	U	O5'-P-OP1	5.99	117.89	110.70
25	1H	1332	G	OP1-P-O3'	5.99	118.37	105.20
25	1H	77	C	C2-N1-C1'	5.99	125.39	118.80
25	1H	1456	G	N1-C6-O6	5.99	123.49	119.90
29	31	65	TRP	CE2-CD2-CG	-5.99	102.51	107.30
25	14	1775	U	OP1-P-O3'	5.99	118.37	105.20
25	1H	2639	A	C2-N3-C4	-5.98	107.61	110.60
25	1H	142	G	N3-C4-N9	-5.98	122.41	126.00
25	1H	422	A	N1-C2-N3	5.98	132.29	129.30
25	1H	508	G	OP1-P-OP2	5.98	128.57	119.60
25	1H	700	G	C5-N7-C8	-5.98	101.31	104.30
25	14	2498	C	C5-C6-N1	-5.98	118.01	121.00
25	1H	694	U	N1-C2-O2	5.98	126.99	122.80
25	1H	1955	U	C5-C4-O4	5.98	129.49	125.90
25	14	577	G	C5-C6-O6	-5.98	125.01	128.60
25	14	693	C	C5-C6-N1	-5.98	118.01	121.00
25	14	2240	C	C5-C6-N1	5.98	123.99	121.00
25	1H	48	G	N1-C6-O6	-5.98	116.31	119.90
25	1H	509	C	N3-C2-O2	-5.98	117.72	121.90
25	1H	1023	U	O5'-P-OP1	-5.98	100.32	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1555	G	N1-C6-O6	5.98	123.49	119.90
25	1H	1695	G	N3-C2-N2	5.98	124.08	119.90
41	D8	40	LEU	CA-CB-CG	5.98	129.05	115.30
55	1G	687	A	N7-C8-N9	5.98	116.79	113.80
25	14	1332	G	N7-C8-N9	5.98	116.09	113.10
25	1H	266	G	N7-C8-N9	-5.98	110.11	113.10
25	14	1142(A)	A	C5-C6-N1	-5.98	114.71	117.70
25	1H	2070	G	C6-N1-C2	-5.97	121.52	125.10
25	1H	2488	A	N1-C6-N6	5.97	122.18	118.60
55	1G	950	U	O5'-P-OP2	5.97	117.87	110.70
25	14	454	A	C8-N9-C4	5.97	108.19	105.80
1	13	356	A	O4'-C1'-N9	5.97	112.98	108.20
1	13	1151	A	O4'-C1'-N9	5.97	112.98	108.20
25	1H	180	G	N1-C6-O6	5.97	123.48	119.90
25	14	131	G	N3-C4-N9	5.97	129.58	126.00
25	14	252	G	C4-C5-N7	-5.97	108.41	110.80
25	14	2506	U	N1-C2-O2	5.97	126.98	122.80
25	1H	589	C	C2-N3-C4	-5.97	116.92	119.90
25	1H	1021	A	N3-C4-N9	-5.97	122.62	127.40
25	1H	593	G	N1-C2-N3	5.97	127.48	123.90
25	1H	1806	C	O5'-P-OP2	-5.97	100.33	105.70
25	14	138	G	C4-N9-C1'	5.97	134.26	126.50
25	14	2426	A	C5-N7-C8	-5.97	100.92	103.90
25	1H	693	C	C4-C5-C6	5.97	120.38	117.40
25	1H	837	C	N1-C2-O2	-5.97	115.32	118.90
25	14	657	U	C5-C6-N1	-5.97	119.72	122.70
25	14	1801	G	C5-C6-O6	-5.97	125.02	128.60
1	13	928	G	O5'-P-OP1	-5.97	100.33	105.70
25	1H	1980	G	C2-N3-C4	5.97	114.88	111.90
25	14	1322	A	OP2-P-O3'	5.97	118.33	105.20
25	14	1635	G	O5'-P-OP2	-5.97	100.33	105.70
25	14	2385	C	N1-C2-O2	-5.97	115.32	118.90
1	13	584	G	N1-C2-N2	-5.96	110.83	116.20
1	13	817	C	C5-C6-N1	-5.96	118.02	121.00
25	1H	103	A	N9-C4-C5	-5.96	103.42	105.80
25	1H	2490	G	O4'-C1'-N9	5.96	112.97	108.20
55	1G	631	G	C8-N9-C4	5.96	108.78	106.40
25	14	1961	C	O5'-P-OP1	5.96	117.86	110.70
25	14	2439	A	C8-N9-C4	-5.96	103.41	105.80
25	14	1778	U	OP2-P-O3'	5.96	118.32	105.20
25	1H	1187	G	C6-C5-N7	-5.96	126.82	130.40
25	14	1210	A	C2-N3-C4	-5.96	107.62	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1577	C	O5'-P-OP2	-5.96	100.33	105.70
25	14	2083	G	N1-C2-N3	5.96	127.48	123.90
25	14	2506	U	C2-N1-C1'	5.96	124.85	117.70
1	13	687	A	C8-N9-C4	-5.96	103.42	105.80
25	1H	1135	C	C2-N1-C1'	5.96	125.35	118.80
25	1H	1237	A	O5'-P-OP1	5.96	117.85	110.70
25	14	1616	A	C6-C5-N7	-5.96	128.13	132.30
25	1H	691	C	C2-N3-C4	-5.96	116.92	119.90
25	1H	967	C	C5-C6-N1	-5.96	118.02	121.00
25	1H	2538	C	C2-N3-C4	-5.96	116.92	119.90
26	1J	81	G	C5-N7-C8	-5.96	101.32	104.30
25	1H	192	C	C5-C6-N1	-5.95	118.02	121.00
25	1H	593	G	C8-N9-C4	5.95	108.78	106.40
25	1H	1394	U	C5-C6-N1	5.95	125.68	122.70
25	1H	1657	C	C4-C5-C6	5.95	120.38	117.40
25	1H	2244	U	OP1-P-OP2	-5.95	110.67	119.60
24	4L	21	C	C6-N1-C2	-5.95	117.92	120.30
25	14	2501	C	P-O3'-C3'	5.95	126.84	119.70
1	13	810	C	C4-C5-C6	5.95	120.38	117.40
25	14	205	G	N9-C4-C5	-5.95	103.02	105.40
1	13	890	G	C8-N9-C4	5.95	108.78	106.40
25	1H	758	C	N3-C4-C5	5.95	124.28	121.90
25	1H	1593	G	OP1-P-O3'	5.95	118.29	105.20
25	1H	2053	G	C2-N3-C4	5.95	114.88	111.90
25	14	664	C	OP1-P-OP2	5.95	128.53	119.60
25	14	1982	C	C6-N1-C2	-5.95	117.92	120.30
26	1J	12	C	N1-C2-O2	5.95	122.47	118.90
25	1H	40	C	C2-N3-C4	-5.95	116.93	119.90
25	1H	464	U	C6-N1-C2	5.95	124.57	121.00
25	1H	966	G	O5'-P-OP2	-5.95	100.34	105.70
25	14	2584	U	C2-N1-C1'	5.95	124.84	117.70
25	1H	211	A	N1-C6-N6	5.95	122.17	118.60
25	1H	741	G	C5-C6-O6	-5.95	125.03	128.60
25	1H	2243	U	N1-C2-N3	5.95	118.47	114.90
55	1G	960	U	C4-C5-C6	5.95	123.27	119.70
25	14	205	G	C8-N9-C4	5.95	108.78	106.40
25	14	1022	G	C8-N9-C4	-5.95	104.02	106.40
25	1H	2017	U	N1-C2-O2	-5.94	118.64	122.80
25	1H	2688	U	C5-C6-N1	-5.94	119.73	122.70
25	14	2457	U	N3-C2-O2	-5.94	118.04	122.20
1	13	872	A	O4'-C1'-N9	5.94	112.95	108.20
25	1H	517	C	OP2-P-O3'	5.94	118.28	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1625	C	N3-C2-O2	-5.94	117.74	121.90
25	1H	602	G	O5'-P-OP1	5.94	117.83	110.70
25	14	945	A	O4'-C1'-N9	5.94	112.95	108.20
25	14	1283	G	N3-C2-N2	5.94	124.06	119.90
25	1H	1138	G	O5'-P-OP1	-5.94	100.36	105.70
1	13	690	G	C5-C6-O6	-5.94	125.04	128.60
25	1H	757	U	C4-C5-C6	5.94	123.26	119.70
25	1H	1187	G	N9-C4-C5	-5.94	103.03	105.40
25	14	1141	U	P-O3'-C3'	5.94	126.83	119.70
25	14	2504	U	N3-C2-O2	-5.94	118.04	122.20
25	1H	122	G	OP1-P-OP2	5.94	128.50	119.60
25	1H	965	C	N1-C2-O2	-5.94	115.34	118.90
25	1H	2544	G	N9-C4-C5	-5.94	103.03	105.40
25	14	562	U	N1-C2-O2	5.94	126.95	122.80
25	1H	125	G	C5-C6-O6	-5.93	125.04	128.60
25	1H	1239	G	OP2-P-O3'	5.93	118.26	105.20
25	1H	205	G	N3-C4-N9	5.93	129.56	126.00
25	1H	1559	G	C2-N3-C4	-5.93	108.93	111.90
25	14	2432	A	N1-C6-N6	5.93	122.16	118.60
25	1H	2275	C	OP1-P-O3'	5.93	118.25	105.20
26	16	33	G	O5'-P-OP2	-5.93	100.36	105.70
55	1G	1301	U	N1-C2-O2	5.93	126.95	122.80
23	2L	11	A	N1-C6-N6	-5.93	115.04	118.60
25	14	669	G	P-O3'-C3'	5.93	126.82	119.70
25	14	2607	G	N3-C2-N2	5.93	124.05	119.90
1	13	892	A	N1-C2-N3	5.93	132.26	129.30
25	1H	2438	U	C5-C6-N1	-5.93	119.73	122.70
25	1H	142	G	C8-N9-C1'	5.93	134.71	127.00
25	1H	74	A	N1-C6-N6	5.93	122.16	118.60
25	1H	410	G	C5-C6-O6	-5.93	125.04	128.60
25	1H	1900	A	C2-N3-C4	5.93	113.56	110.60
25	1H	2252	G	N7-C8-N9	-5.93	110.14	113.10
25	1H	2606	C	OP1-P-OP2	5.93	128.49	119.60
25	14	564	C	C2-N3-C4	-5.93	116.94	119.90
25	14	620	G	C6-C5-N7	-5.93	126.84	130.40
25	14	2435	A	C6-N1-C2	-5.93	115.04	118.60
25	1H	918	A	O5'-P-OP2	5.92	117.81	110.70
25	1H	1904	G	N7-C8-N9	-5.92	110.14	113.10
25	1H	1942	C	C4-C5-C6	-5.92	114.44	117.40
25	1H	2441	C	C2-N3-C4	-5.92	116.94	119.90
25	14	728	G	N3-C4-N9	5.92	129.56	126.00
55	1G	819	A	C6-C5-N7	-5.92	128.15	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	422	A	C4-C5-C6	5.92	119.96	117.00
25	1H	651	G	OP1-P-OP2	-5.92	110.72	119.60
25	1H	835	A	OP2-P-O3'	5.92	118.23	105.20
28	29	80	GLU	N-CA-C	5.92	126.99	111.00
25	1H	2496	C	OP1-P-O3'	5.92	118.22	105.20
23	2K	77	A	C5-C6-N6	-5.92	118.96	123.70
25	1H	560	C	O5'-P-OP2	5.92	117.80	110.70
25	1H	742	G	C4-C5-N7	-5.92	108.43	110.80
25	1H	866	A	C4-N9-C1'	5.92	136.95	126.30
25	1H	1597	A	O4'-C1'-N9	5.92	112.94	108.20
25	1H	2743	C	N1-C2-O2	-5.92	115.35	118.90
25	14	1279	G	O5'-P-OP1	5.92	117.80	110.70
25	14	2440	C	C2-N3-C4	5.92	122.86	119.90
25	14	194	G	O5'-P-OP2	5.92	117.80	110.70
25	14	2252	G	N1-C2-N2	-5.92	110.88	116.20
25	1H	412	A	C8-N9-C4	5.92	108.17	105.80
25	1H	1528	A	C5-N7-C8	-5.92	100.94	103.90
55	1G	960	U	N1-C2-O2	-5.92	118.66	122.80
25	1H	252	G	N3-C4-C5	-5.91	125.64	128.60
25	1H	1445	C	C6-N1-C2	-5.91	117.94	120.30
25	1H	1772	G	N1-C6-O6	-5.91	116.35	119.90
25	1H	2620	C	C2-N3-C4	-5.91	116.94	119.90
25	14	1190	G	OP1-P-O3'	5.91	118.21	105.20
25	14	1959	G	C5-C6-O6	5.91	132.15	128.60
1	13	1356	G	N3-C4-C5	-5.91	125.64	128.60
25	1H	76	C	N1-C2-O2	5.91	122.45	118.90
25	1H	79	G	N3-C2-N2	-5.91	115.76	119.90
25	1H	735	A	N9-C4-C5	-5.91	103.44	105.80
25	1H	826	U	OP1-P-OP2	5.91	128.46	119.60
25	14	187	G	C4-N9-C1'	5.91	134.19	126.50
25	14	1332	G	OP1-P-O3'	5.91	118.20	105.20
25	14	1823	G	N1-C6-O6	-5.91	116.35	119.90
1	13	527	G	C5-C6-O6	5.91	132.15	128.60
1	13	943	U	O5'-P-OP2	5.91	117.79	110.70
25	1H	2818	G	N1-C2-N2	-5.91	110.88	116.20
55	1G	1530	G	C6-C5-N7	5.91	133.94	130.40
25	1H	76	C	C2-N1-C1'	5.91	125.30	118.80
25	1H	1839	G	C8-N9-C4	5.91	108.76	106.40
25	14	204	A	C6-N1-C2	-5.91	115.06	118.60
25	14	803	U	O5'-P-OP1	5.91	117.79	110.70
25	14	1686	C	C6-N1-C2	5.91	122.66	120.30
1	13	1221	G	OP2-P-O3'	5.90	118.19	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1394	U	O5'-P-OP2	5.90	117.78	110.70
25	14	2380	C	C5-C4-N4	-5.90	116.07	120.20
23	2K	77	A	C6-C5-N7	-5.90	128.17	132.30
25	1H	389	G	C8-N9-C4	5.90	108.76	106.40
25	1H	783	A	C5-C6-N1	-5.90	114.75	117.70
25	1H	1594	G	OP1-P-O3'	5.90	118.18	105.20
55	1G	1484	C	C5-C6-N1	-5.90	118.05	121.00
25	14	782	A	N1-C6-N6	-5.90	115.06	118.60
25	14	1998	G	C8-N9-C4	5.90	108.76	106.40
55	1G	1502	A	C6-C5-N7	-5.90	128.17	132.30
25	14	1351	C	C5-C6-N1	-5.90	118.05	121.00
1	13	1514	C	N1-C2-O2	-5.90	115.36	118.90
25	1H	2007	C	C4-C5-C6	5.90	120.35	117.40
25	1H	2007	C	C5-C6-N1	-5.90	118.05	121.00
25	1H	2040	C	N3-C2-O2	5.90	126.03	121.90
25	1H	2726	U	N3-C4-O4	-5.90	115.27	119.40
25	14	1932	A	O5'-P-OP1	-5.90	100.39	105.70
25	14	1638	C	C5-C6-N1	-5.90	118.05	121.00
25	14	798	G	N1-C6-O6	5.89	123.44	119.90
25	14	1769	G	C6-C5-N7	-5.89	126.86	130.40
25	14	2385	C	C5-C4-N4	-5.89	116.07	120.20
25	1H	1240	U	O5'-P-OP2	-5.89	100.40	105.70
25	1H	1482	U	C5-C4-O4	5.89	129.44	125.90
25	1H	1900	A	N3-C4-C5	-5.89	122.67	126.80
25	1H	1985	G	C5-C6-N1	5.89	114.45	111.50
25	1H	2616	C	C2-N3-C4	-5.89	116.95	119.90
25	14	704	G	N3-C2-N2	-5.89	115.78	119.90
25	1H	936	C	N3-C4-C5	5.89	124.26	121.90
55	1G	1483	A	N1-C2-N3	-5.89	126.36	129.30
25	14	668	G	C4-N9-C1'	-5.89	118.84	126.50
1	13	1504	G	P-O3'-C3'	5.89	126.77	119.70
25	1H	602	G	N1-C2-N2	-5.89	110.90	116.20
25	1H	811	U	C5-C6-N1	-5.89	119.75	122.70
25	1H	1187	G	C8-N9-C4	5.89	108.76	106.40
1	13	312	C	OP2-P-O3'	5.89	118.15	105.20
1	13	860	A	OP1-P-OP2	-5.89	110.77	119.60
25	1H	2210	G	C4-N9-C1'	5.89	134.15	126.50
1	13	582	U	N3-C4-C5	5.89	118.13	114.60
25	1H	805	G	C2-N3-C4	-5.89	108.96	111.90
25	1H	869	G	N1-C6-O6	-5.89	116.37	119.90
25	1H	1250	G	N3-C4-C5	-5.89	125.66	128.60
25	1H	2326	C	C5-C6-N1	5.89	123.94	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	812	C	C2-N3-C4	5.88	122.84	119.90
25	1H	530	G	C2-N3-C4	-5.88	108.96	111.90
25	1H	830	G	N1-C2-N3	5.88	127.43	123.90
25	1H	1266	G	N3-C4-N9	5.88	129.53	126.00
25	1H	1313	U	C6-N1-C2	-5.88	117.47	121.00
25	1H	1973	G	N1-C2-N2	-5.88	110.90	116.20
25	14	1678	G	C8-N9-C4	-5.88	104.05	106.40
26	1J	86	G	C5-C6-O6	-5.88	125.07	128.60
25	1H	1378	A	N1-C6-N6	5.88	122.13	118.60
25	1H	1620	G	OP1-P-O3'	5.88	118.14	105.20
25	14	2256	G	N3-C2-N2	5.88	124.02	119.90
1	13	1505	G	C4-C5-N7	-5.88	108.45	110.80
25	1H	840	C	C5-C6-N1	-5.88	118.06	121.00
25	1H	866	A	C8-N9-C1'	-5.88	117.11	127.70
25	1H	2023	G	N1-C2-N2	-5.88	110.91	116.20
25	1H	2449	U	N3-C4-O4	5.88	123.52	119.40
55	1G	1057	G	C8-N9-C4	5.88	108.75	106.40
25	14	1489	U	C2-N1-C1'	-5.88	110.64	117.70
25	1H	318	C	O5'-P-OP1	-5.88	100.41	105.70
25	1H	1669	A	N1-C2-N3	5.88	132.24	129.30
25	14	930	U	N3-C2-O2	-5.88	118.08	122.20
25	14	2588	G	O5'-P-OP2	-5.88	100.41	105.70
25	1H	252	G	O5'-P-OP1	5.88	117.75	110.70
25	1H	2294	C	C6-N1-C2	-5.88	117.95	120.30
25	1H	2550	G	C5-C6-O6	-5.88	125.07	128.60
55	1G	894	G	C5-C6-O6	-5.88	125.07	128.60
25	14	2445	G	N3-C4-N9	5.88	129.53	126.00
1	13	422	C	N3-C2-O2	-5.88	117.79	121.90
25	1H	378	C	C6-N1-C2	5.88	122.65	120.30
25	1H	1338	G	OP1-P-OP2	-5.88	110.78	119.60
25	1H	1784	A	N1-C2-N3	5.88	132.24	129.30
25	14	2779	U	N1-C2-O2	5.88	126.91	122.80
25	1H	1624	G	N7-C8-N9	-5.88	110.16	113.10
1	13	328	C	N1-C2-O2	5.87	122.42	118.90
23	2K	77	A	C5-N7-C8	-5.87	100.96	103.90
25	1H	1302	A	C8-N9-C4	-5.87	103.45	105.80
55	1G	900	A	N1-C6-N6	5.87	122.12	118.60
25	14	271(B)	G	C5-C6-N1	5.87	114.44	111.50
25	14	1926	U	N3-C2-O2	-5.87	118.09	122.20
26	1J	71	C	C2-N1-C1'	5.87	125.26	118.80
25	1H	599	G	C8-N9-C4	5.87	108.75	106.40
25	1H	1201	C	N1-C2-O2	-5.87	115.38	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1693	U	O5'-P-OP1	-5.87	100.42	105.70
25	1H	2050	C	N3-C4-N4	5.87	122.11	118.00
25	14	2335	A	N1-C6-N6	-5.87	115.08	118.60
25	1H	2442	C	C4-C5-C6	5.87	120.33	117.40
25	1H	668	G	C5-C6-O6	-5.87	125.08	128.60
25	1H	805	G	C6-C5-N7	-5.87	126.88	130.40
25	1H	1197	G	O5'-P-OP1	-5.87	100.42	105.70
25	1H	1380	G	N9-C4-C5	-5.87	103.05	105.40
25	1H	1761	C	C6-N1-C2	5.87	122.65	120.30
25	1H	2395	C	C6-N1-C2	5.87	122.65	120.30
25	1H	2869	G	C8-N9-C4	-5.87	104.05	106.40
25	14	574	C	C2-N1-C1'	-5.87	112.34	118.80
25	14	2552	U	C2-N3-C4	-5.87	123.48	127.00
25	14	664	C	C2-N3-C4	-5.87	116.97	119.90
25	14	1776	G	N3-C4-N9	5.87	129.52	126.00
1	13	819	A	O5'-P-OP1	-5.87	100.42	105.70
25	1H	981	A	N1-C2-N3	-5.87	126.37	129.30
25	1H	19	C	C6-N1-C2	5.86	122.65	120.30
25	1H	192	C	N1-C2-O2	-5.86	115.38	118.90
25	1H	633	A	C4-C5-N7	5.86	113.63	110.70
25	1H	1681	G	C4-C5-N7	5.86	113.14	110.80
25	1H	1983	C	N1-C2-O2	-5.86	115.38	118.90
25	1H	2509	G	C8-N9-C4	5.86	108.75	106.40
25	14	1204	A	C5-C6-N1	-5.86	114.77	117.70
25	14	2252	G	N7-C8-N9	-5.86	110.17	113.10
25	14	2324	C	C2-N3-C4	-5.86	116.97	119.90
25	1H	1022	G	P-O3'-C3'	5.86	126.73	119.70
25	1H	1543	A	C5-C6-N1	-5.86	114.77	117.70
25	1H	1994	C	C5-C6-N1	-5.86	118.07	121.00
25	1H	2515	C	O5'-P-OP1	5.86	117.73	110.70
25	1H	2554	U	N3-C4-O4	5.86	123.50	119.40
25	1H	2607	G	C6-N1-C2	-5.86	121.58	125.10
25	14	1661	G	N7-C8-N9	-5.86	110.17	113.10
25	1H	34	C	C2-N1-C1'	5.86	125.24	118.80
25	1H	2048	G	N9-C4-C5	5.86	107.74	105.40
25	1H	2235	G	C5-C6-O6	-5.86	125.09	128.60
25	1H	2256	G	N1-C2-N2	-5.86	110.93	116.20
25	1H	2349	G	N1-C6-O6	-5.86	116.39	119.90
25	14	120	U	OP1-P-OP2	-5.86	110.81	119.60
25	14	2048	G	C8-N9-C4	-5.86	104.06	106.40
25	1H	86	C	N1-C2-O2	-5.86	115.39	118.90
25	1H	1649	G	C2-N3-C4	5.86	114.83	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1644	C	C2-N1-C1'	5.86	125.24	118.80
38	65	101	LEU	CA-CB-CG	5.86	128.77	115.30
25	14	1771	C	N3-C4-C5	5.85	124.24	121.90
25	14	1777	U	N3-C2-O2	-5.85	118.10	122.20
25	14	2040	C	O5'-P-OP1	-5.85	100.43	105.70
25	1H	67	U	C6-N1-C2	-5.85	117.49	121.00
25	1H	784	A	O4'-C1'-N9	5.85	112.88	108.20
25	1H	1780	A	C5-C6-N6	5.85	128.38	123.70
25	1H	1914	C	N3-C2-O2	-5.85	117.80	121.90
1	13	1356	G	N3-C4-N9	5.85	129.51	126.00
26	16	19	G	N3-C4-C5	5.85	131.53	128.60
1	13	370	C	O5'-P-OP2	-5.85	100.44	105.70
25	1H	571	A	N1-C6-N6	-5.85	115.09	118.60
25	1H	949	C	OP2-P-O3'	5.85	118.07	105.20
25	1H	1790	C	N3-C4-C5	5.85	124.24	121.90
25	1H	2271	G	N1-C2-N2	-5.85	110.94	116.20
25	14	1695	G	C4-N9-C1'	5.85	134.10	126.50
25	14	2442	C	C2-N3-C4	-5.85	116.98	119.90
25	14	2532	G	C8-N9-C4	5.85	108.74	106.40
25	14	2582	G	C6-C5-N7	-5.85	126.89	130.40
25	1H	263	C	O5'-P-OP1	5.85	117.72	110.70
25	1H	271(B)	G	C6-N1-C2	-5.85	121.59	125.10
25	1H	2025	C	C6-N1-C2	-5.85	117.96	120.30
25	14	138	G	N3-C4-C5	-5.85	125.68	128.60
25	14	732	C	N3-C4-N4	5.85	122.09	118.00
25	1H	125	G	C4-C5-N7	5.85	113.14	110.80
25	1H	1309	G	C5-C6-N1	-5.85	108.58	111.50
25	14	1728	G	N3-C4-C5	-5.85	125.68	128.60
25	14	2392	A	N3-C4-C5	5.85	130.89	126.80
25	1H	2246	G	C5-C6-O6	-5.84	125.09	128.60
25	14	694	U	O5'-P-OP2	-5.84	100.44	105.70
25	14	1725	G	C4-N9-C1'	5.84	134.10	126.50
25	1H	1624	G	N1-C6-O6	-5.84	116.39	119.90
25	1H	1253	A	N7-C8-N9	-5.84	110.88	113.80
25	1H	2620	C	C6-N1-C2	5.84	122.64	120.30
25	1H	96	G	N1-C6-O6	5.84	123.40	119.90
25	1H	989	G	O5'-P-OP1	-5.84	100.44	105.70
25	1H	1188	U	C2-N3-C4	-5.84	123.50	127.00
43	F8	67	GLY	N-CA-C	-5.84	98.50	113.10
55	1G	1297	C	P-O3'-C3'	5.84	126.71	119.70
25	14	1839	G	N7-C8-N9	-5.84	110.18	113.10
25	14	2599	G	N1-C6-O6	-5.84	116.40	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	827	U	N1-C2-O2	5.84	126.89	122.80
25	1H	780	G	C4-C5-N7	5.84	113.14	110.80
25	14	134	C	C6-N1-C2	5.84	122.64	120.30
25	1H	307	G	OP1-P-O3'	5.84	118.04	105.20
25	1H	307	G	N3-C2-N2	5.84	123.99	119.90
25	1H	695	G	N3-C2-N2	5.84	123.98	119.90
25	1H	859	G	N3-C2-N2	-5.84	115.81	119.90
25	1H	990	A	N7-C8-N9	5.84	116.72	113.80
25	1H	1646	C	OP1-P-O3'	5.84	118.04	105.20
25	14	837	C	O5'-P-OP1	-5.83	100.45	105.70
25	14	1930	G	C4-N9-C1'	-5.83	118.91	126.50
1	13	724	G	OP1-P-O3'	5.83	118.03	105.20
25	1H	839	U	C5-C6-N1	-5.83	119.78	122.70
25	1H	1605	C	N3-C4-C5	5.83	124.23	121.90
25	14	2723	C	C6-N1-C2	-5.83	117.97	120.30
25	1H	271(B)	G	N3-C4-N9	5.83	129.50	126.00
25	1H	480	A	C4-C5-N7	5.83	113.62	110.70
25	1H	552	G	C5-N7-C8	-5.83	101.38	104.30
25	1H	560	C	C6-N1-C2	5.83	122.63	120.30
25	1H	621	A	O5'-P-OP1	-5.83	100.45	105.70
25	14	201	C	C6-N1-C2	5.83	122.63	120.30
1	13	690	G	N9-C4-C5	-5.83	103.07	105.40
25	1H	2424	C	OP1-P-OP2	5.83	128.35	119.60
25	14	486	C	N3-C4-N4	5.83	122.08	118.00
25	14	1254	A	C6-N1-C2	-5.83	115.10	118.60
25	14	2237	G	N3-C2-N2	5.83	123.98	119.90
1	13	873	A	C8-N9-C4	-5.83	103.47	105.80
25	1H	666	G	N3-C2-N2	-5.83	115.82	119.90
25	1H	763	G	N3-C2-N2	-5.83	115.82	119.90
25	1H	1241	A	C5-N7-C8	-5.83	100.98	103.90
25	1H	2530	A	O5'-P-OP2	-5.83	100.45	105.70
25	14	121	G	C8-N9-C1'	-5.83	119.42	127.00
23	2K	17	C	N3-C2-O2	-5.83	117.82	121.90
25	1H	1792	G	O5'-P-OP1	-5.83	100.46	105.70
25	1H	2363	C	OP2-P-O3'	5.83	118.01	105.20
26	16	101	A	C8-N9-C4	5.83	108.13	105.80
25	14	1141	U	OP2-P-O3'	5.83	118.02	105.20
25	14	1618	A	N9-C4-C5	5.83	108.13	105.80
25	14	1806	C	N3-C4-C5	5.83	124.23	121.90
25	14	2029	G	N7-C8-N9	5.83	116.01	113.10
25	1H	2841	C	N3-C4-C5	5.82	124.23	121.90
25	14	141	A	C4-C5-N7	5.82	113.61	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	482	A	O5'-P-OP2	-5.82	100.46	105.70
25	14	963	U	O5'-P-OP1	-5.82	100.46	105.70
25	14	1259	G	C6-C5-N7	-5.82	126.91	130.40
25	1H	729	G	N7-C8-N9	5.82	116.01	113.10
25	1H	1778	U	C2-N3-C4	-5.82	123.51	127.00
25	1H	1940	U	N1-C2-N3	5.82	118.39	114.90
55	1G	903	G	N1-C6-O6	5.82	123.39	119.90
25	14	801	G	C4-N9-C1'	-5.82	118.94	126.50
25	14	937	U	N1-C2-O2	-5.82	118.73	122.80
25	1H	400	G	N1-C6-O6	5.82	123.39	119.90
25	1H	2523	G	N1-C6-O6	-5.82	116.41	119.90
25	1H	67	U	C5-C6-N1	5.82	125.61	122.70
25	1H	579	G	C4-C5-N7	-5.82	108.47	110.80
25	1H	768	G	O5'-P-OP2	-5.82	100.47	105.70
25	14	115	C	C6-N1-C2	5.82	122.63	120.30
1	13	961	U	O5'-P-OP2	-5.82	100.47	105.70
25	1H	122	G	N1-C2-N3	5.82	127.39	123.90
25	1H	619	G	N9-C4-C5	-5.82	103.07	105.40
25	1H	1555	G	N1-C2-N2	5.82	121.43	116.20
25	1H	1771	C	C2-N3-C4	-5.82	116.99	119.90
25	1H	2638	G	N3-C4-C5	-5.82	125.69	128.60
55	1G	1420	C	O5'-P-OP2	5.82	117.68	110.70
25	14	245	G	N1-C6-O6	5.82	123.39	119.90
25	1H	82	G	OP1-P-O3'	5.81	117.99	105.20
1	13	366	C	N1-C2-O2	-5.81	115.41	118.90
1	13	775	G	N3-C2-N2	-5.81	115.83	119.90
25	1H	224	G	O5'-P-OP2	-5.81	100.47	105.70
25	1H	2703	C	C6-N1-C2	-5.81	117.97	120.30
55	1G	963	G	C4-N9-C1'	5.81	134.06	126.50
25	1H	2430	A	C4-N9-C1'	-5.81	115.84	126.30
25	14	1307	A	C2-N3-C4	-5.81	107.70	110.60
25	14	1329	U	N1-C2-N3	5.81	118.39	114.90
1	13	1408	A	N1-C6-N6	5.81	122.08	118.60
25	1H	629	G	N1-C6-O6	-5.81	116.42	119.90
25	1H	2592	G	N3-C4-N9	5.81	129.48	126.00
55	1G	894	G	C4-C5-N7	5.81	113.12	110.80
25	14	186	G	O5'-P-OP1	-5.81	100.47	105.70
25	14	733	G	N1-C2-N2	-5.81	110.97	116.20
25	14	783	A	N3-C4-N9	-5.81	122.75	127.40
25	14	1695	G	N1-C2-N2	-5.81	110.97	116.20
25	1H	1905	C	N3-C4-N4	5.81	122.06	118.00
25	14	486	C	C5-C4-N4	-5.81	116.14	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1204	A	C5-N7-C8	-5.81	101.00	103.90
1	13	263	A	O5'-P-OP2	5.80	117.67	110.70
25	1H	1330	C	C5-C6-N1	5.80	123.90	121.00
25	14	1260	G	C8-N9-C4	5.80	108.72	106.40
25	14	1277	G	N9-C4-C5	-5.80	103.08	105.40
1	13	238	G	N7-C8-N9	-5.80	110.20	113.10
1	13	384	G	N1-C6-O6	-5.80	116.42	119.90
1	13	833	U	C2-N1-C1'	-5.80	110.74	117.70
25	1H	15	G	OP2-P-O3'	5.80	117.96	105.20
25	1H	1939	U	C4-C5-C6	-5.80	116.22	119.70
1	13	47	C	C2-N3-C4	-5.80	117.00	119.90
25	1H	245	G	N1-C6-O6	5.80	123.38	119.90
25	1H	733	G	C8-N9-C1'	-5.80	119.46	127.00
25	14	2873	A	N1-C6-N6	5.80	122.08	118.60
26	1J	47	C	OP1-P-O3'	5.80	117.96	105.20
25	1H	2713	A	N3-C4-N9	-5.80	122.76	127.40
25	14	127	A	N7-C8-N9	-5.80	110.90	113.80
25	1H	909	A	OP2-P-O3'	5.80	117.95	105.20
25	1H	1428	C	C2-N3-C4	-5.80	117.00	119.90
25	1H	2513	G	C5-C6-O6	-5.80	125.12	128.60
25	14	2512	C	C6-N1-C2	5.80	122.62	120.30
25	14	2608	G	OP1-P-OP2	-5.80	110.91	119.60
39	75	10	VAL	N-CA-C	-5.80	95.35	111.00
25	1H	122	G	O5'-P-OP2	-5.79	100.48	105.70
25	1H	675	A	C4-C5-N7	5.79	113.60	110.70
25	14	1349	A	C4-C5-N7	5.79	113.60	110.70
25	1H	1623	G	OP2-P-O3'	5.79	117.94	105.20
25	14	2587	A	C4-C5-N7	5.79	113.60	110.70
25	1H	602	G	N3-C2-N2	5.79	123.95	119.90
25	1H	1159	U	N3-C2-O2	-5.79	118.14	122.20
55	1G	963	G	C6-C5-N7	-5.79	126.92	130.40
25	14	575	A	C6-N1-C2	-5.79	115.12	118.60
25	1H	793	A	O4'-C1'-N9	-5.79	103.57	108.20
25	14	197	A	C6-N1-C2	-5.79	115.13	118.60
25	14	1024	G	N3-C2-N2	-5.79	115.85	119.90
25	1H	201	C	C5-C6-N1	-5.79	118.11	121.00
25	1H	1136	G	C5-C6-O6	-5.79	125.13	128.60
25	1H	1323	U	OP1-P-OP2	-5.79	110.92	119.60
55	1G	251	G	O4'-C1'-N9	-5.79	103.57	108.20
25	14	1970	A	O4'-C1'-N9	-5.79	103.57	108.20
25	1H	2060	A	N1-C6-N6	-5.79	115.13	118.60
25	1H	1797	C	N1-C2-O2	-5.79	115.43	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	1430	C	O5'-P-OP1	-5.78	100.50	105.70
25	1H	2570	G	C5-N7-C8	-5.78	101.41	104.30
25	14	187	G	N3-C4-C5	-5.78	125.71	128.60
25	14	2436	G	N3-C2-N2	-5.78	115.85	119.90
25	14	2776	A	P-O3'-C3'	5.78	126.64	119.70
25	14	2836	U	C5-C4-O4	5.78	129.37	125.90
40	85	95	LEU	CA-CB-CG	-5.78	102.00	115.30
25	1H	2287	A	N1-C2-N3	5.78	132.19	129.30
25	1H	1757	U	OP1-P-O3'	5.78	117.92	105.20
25	1H	2563	U	C5-C6-N1	-5.78	119.81	122.70
55	1G	413	G	O4'-C1'-N9	5.78	112.83	108.20
25	14	2510	C	C5-C4-N4	5.78	124.25	120.20
25	1H	1573	G	C4-C5-N7	5.78	113.11	110.80
25	1H	1801	G	C5-C6-O6	-5.78	125.13	128.60
25	14	134	C	C5-C6-N1	-5.78	118.11	121.00
25	14	2066	C	OP1-P-O3'	5.78	117.91	105.20
25	1H	772	C	N3-C4-C5	-5.78	119.59	121.90
25	1H	853	G	O5'-P-OP1	5.78	117.63	110.70
25	1H	1446	C	C6-N1-C2	-5.78	117.99	120.30
25	1H	2258	C	C5-C4-N4	-5.78	116.16	120.20
25	14	640	C	O5'-P-OP2	-5.78	100.50	105.70
25	14	1528	A	C5-N7-C8	-5.78	101.01	103.90
25	14	2463	C	C6-N1-C2	5.78	122.61	120.30
1	13	913	A	P-O3'-C3'	5.78	126.63	119.70
25	1H	294	A	C8-N9-C4	5.78	108.11	105.80
25	1H	1413	G	C8-N9-C4	-5.78	104.09	106.40
25	14	84	A	C8-N9-C4	5.78	108.11	105.80
25	14	843	G	C8-N9-C4	5.78	108.71	106.40
25	1H	196	A	C8-N9-C4	-5.77	103.49	105.80
25	1H	1766	U	N3-C4-O4	5.77	123.44	119.40
25	1H	1787	A	O4'-C1'-N9	-5.77	103.58	108.20
25	1H	2034	U	N1-C2-N3	5.77	118.36	114.90
25	14	1659	U	N1-C2-O2	-5.77	118.76	122.80
25	1H	803	U	C5-C6-N1	-5.77	119.81	122.70
25	1H	1658	C	C6-N1-C2	-5.77	117.99	120.30
25	1H	1955	U	C5-C6-N1	-5.77	119.81	122.70
25	1H	2466	C	N3-C4-C5	5.77	124.21	121.90
25	14	70	G	N3-C4-C5	-5.77	125.71	128.60
25	14	783	A	C5-C6-N6	-5.77	119.08	123.70
26	1J	114	G	C8-N9-C4	5.77	108.71	106.40
25	1H	1695	G	C4-N9-C1'	5.77	134.00	126.50
25	1H	1805	U	C4-C5-C6	5.77	123.16	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	2070	G	N3-C4-N9	5.77	129.46	126.00
25	14	2045	C	C2-N3-C4	-5.77	117.02	119.90
25	14	2045	C	C6-N1-C2	5.77	122.61	120.30
25	1H	388	G	N3-C4-N9	5.77	129.46	126.00
25	1H	681	G	C2-N3-C4	-5.77	109.02	111.90
25	14	791	C	C2-N3-C4	-5.77	117.02	119.90
25	14	1313	U	C2-N1-C1'	5.77	124.62	117.70
25	14	2449	U	C5-C4-O4	-5.77	122.44	125.90
1	13	482	A	N1-C6-N6	-5.77	115.14	118.60
1	13	810	C	C2-N1-C1'	5.77	125.14	118.80
25	1H	265	A	C5-C6-N1	-5.77	114.82	117.70
25	1H	670	A	O4'-C1'-N9	-5.77	103.58	108.20
25	1H	1914	C	C6-N1-C2	-5.77	117.99	120.30
55	1G	266	G	O4'-C1'-N9	-5.77	103.59	108.20
25	14	70	G	N3-C4-N9	5.77	129.46	126.00
25	1H	2525	G	C8-N9-C4	5.77	108.71	106.40
1	13	529	G	C5-C6-O6	-5.76	125.14	128.60
25	1H	2549	G	C5-C6-O6	-5.76	125.14	128.60
25	1H	1211	U	OP1-P-OP2	5.76	128.25	119.60
25	14	774	A	C5-C6-N1	-5.76	114.82	117.70
51	J5	51	TYR	CA-CB-CG	5.76	124.35	113.40
25	1H	271	G	C5-C6-O6	-5.76	125.14	128.60
25	1H	403	U	N3-C2-O2	-5.76	118.17	122.20
25	1H	1284	A	OP1-P-OP2	5.76	128.24	119.60
25	1H	2212	A	O5'-P-OP2	-5.76	100.51	105.70
25	1H	2712	U	P-O3'-C3'	5.76	126.61	119.70
25	14	210	C	C6-N1-C2	5.76	122.61	120.30
25	14	670	A	O4'-C1'-N9	-5.76	103.59	108.20
25	14	2763	G	N3-C4-C5	-5.76	125.72	128.60
1	13	502	G	N1-C6-O6	5.76	123.36	119.90
25	1H	790	C	N1-C2-O2	-5.76	115.44	118.90
25	1H	1610	A	C5-N7-C8	-5.76	101.02	103.90
25	1H	2456	C	OP1-P-OP2	-5.76	110.96	119.60
25	14	196	A	OP1-P-OP2	5.76	128.24	119.60
25	14	211	A	C5-N7-C8	-5.76	101.02	103.90
25	14	788	A	O5'-P-OP1	-5.76	100.52	105.70
25	1H	796	C	O5'-P-OP1	5.76	117.61	110.70
25	1H	1153	C	N1-C2-O2	-5.76	115.44	118.90
25	1H	1698	A	C4-C5-C6	5.76	119.88	117.00
55	1G	317	G	C4-N9-C1'	5.76	133.99	126.50
25	14	90	U	O4'-C1'-N1	5.76	112.81	108.20
25	14	792	G	OP2-P-O3'	5.76	117.87	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	462	C	C5-C6-N1	-5.76	118.12	121.00
25	1H	681	G	N1-C2-N3	5.76	127.35	123.90
25	14	113	G	N3-C4-C5	5.76	131.48	128.60
25	14	462	C	C5-C6-N1	-5.76	118.12	121.00
25	14	2000	G	C5-C6-O6	-5.76	125.15	128.60
25	14	1790	C	OP1-P-O3'	5.75	117.86	105.20
25	1H	1482	U	N1-C2-O2	-5.75	118.77	122.80
25	1H	1698	A	N3-C4-N9	-5.75	122.80	127.40
25	1H	2582	G	N3-C2-N2	5.75	123.93	119.90
55	1G	1079	G	C5-C6-N1	-5.75	108.62	111.50
25	14	760	G	OP1-P-O3'	5.75	117.85	105.20
25	14	2078	C	N3-C4-C5	-5.75	119.60	121.90
25	14	2867	G	O5'-P-OP1	-5.75	100.52	105.70
1	13	893	C	N1-C2-O2	5.75	122.35	118.90
25	1H	1295	C	N3-C4-C5	5.75	124.20	121.90
25	1H	179	G	C8-N9-C4	5.75	108.70	106.40
25	1H	211	A	C2-N3-C4	-5.75	107.73	110.60
25	14	1365	A	N9-C4-C5	5.75	108.10	105.80
25	14	2323	G	C8-N9-C4	5.75	108.70	106.40
25	1H	1386	C	C5-C6-N1	5.75	123.87	121.00
25	1H	1773	A	N9-C1'-C2'	-5.75	105.68	112.00
55	1G	1059	C	C6-N1-C2	-5.75	118.00	120.30
25	14	188	G	OP1-P-OP2	5.75	128.22	119.60
25	14	1396	U	N3-C2-O2	-5.75	118.18	122.20
25	14	1614	A	N7-C8-N9	5.75	116.67	113.80
55	1G	111	G	O5'-P-OP2	-5.74	100.53	105.70
25	14	826	U	N3-C4-C5	-5.74	111.15	114.60
25	14	1475	G	C8-N9-C4	-5.74	104.10	106.40
25	14	1618	A	N1-C6-N6	-5.74	115.15	118.60
25	14	1790	C	N3-C4-N4	5.74	122.02	118.00
1	13	623	C	C6-N1-C2	-5.74	118.00	120.30
25	1H	628	G	N7-C8-N9	-5.74	110.23	113.10
25	14	929	G	N7-C8-N9	5.74	115.97	113.10
25	1H	978	G	OP1-P-O3'	5.74	117.83	105.20
25	1H	1352	U	C5-C6-N1	-5.74	119.83	122.70
55	1G	812	C	C2-N1-C1'	5.74	125.11	118.80
25	1H	791	C	C5-C6-N1	-5.74	118.13	121.00
25	14	1298	C	C4-C5-C6	-5.74	114.53	117.40
25	14	1443	G	C4-N9-C1'	5.74	133.96	126.50
25	14	1772	G	N1-C6-O6	5.74	123.34	119.90
25	14	1991	U	N3-C2-O2	-5.74	118.18	122.20
25	1H	463	G	N1-C6-O6	-5.74	116.46	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1155	A	C8-N9-C4	-5.74	103.51	105.80
25	1H	2085	C	C6-N1-C2	5.74	122.59	120.30
25	14	571	A	C2-N3-C4	5.74	113.47	110.60
25	14	698	C	C4-C5-C6	5.74	120.27	117.40
25	1H	1271	G	C8-N9-C4	5.73	108.69	106.40
25	14	569	U	OP1-P-OP2	5.73	128.20	119.60
25	1H	505	A	C5-C6-N6	-5.73	119.11	123.70
25	1H	845	G	P-O3'-C3'	5.73	126.58	119.70
25	1H	1347	G	N3-C2-N2	-5.73	115.89	119.90
25	1H	2266	A	N1-C2-N3	5.73	132.17	129.30
25	1H	2767	C	C2-N1-C1'	5.73	125.11	118.80
55	1G	31	G	N3-C4-C5	5.73	131.47	128.60
25	14	982	C	N3-C4-C5	-5.73	119.61	121.90
25	14	2562	U	C5-C6-N1	-5.73	119.83	122.70
25	1H	568	U	C6-N1-C2	5.73	124.44	121.00
25	14	2031	A	C6-N1-C2	-5.73	115.16	118.60
25	14	2399	G	N1-C6-O6	-5.73	116.46	119.90
25	1H	131	G	C5-C6-N1	5.73	114.36	111.50
25	1H	187	G	C4-C5-C6	5.73	122.24	118.80
25	1H	2084	C	C2-N3-C4	-5.73	117.04	119.90
26	16	6	C	C5-C6-N1	-5.73	118.14	121.00
25	14	2496	C	C5-C4-N4	-5.73	116.19	120.20
25	1H	483	A	N9-C4-C5	5.73	108.09	105.80
25	1H	1189	A	C5-N7-C8	-5.73	101.04	103.90
25	1H	1371	G	N3-C2-N2	-5.72	115.89	119.90
25	1H	1516	U	C5-C4-O4	5.72	129.34	125.90
25	1H	2553	G	OP1-P-O3'	5.72	117.79	105.20
25	14	1781	C	C6-N1-C2	5.72	122.59	120.30
25	1H	203	C	C2-N3-C4	-5.72	117.04	119.90
25	1H	831	G	N9-C4-C5	-5.72	103.11	105.40
25	1H	1204	A	N7-C8-N9	5.72	116.66	113.80
25	14	2237	G	C8-N9-C4	5.72	108.69	106.40
25	1H	194	G	C8-N9-C4	5.72	108.69	106.40
26	16	56	G	O5'-P-OP2	-5.72	100.55	105.70
25	14	2681	C	N3-C2-O2	-5.72	117.89	121.90
23	2K	4	G	OP1-P-OP2	5.72	128.18	119.60
25	1H	852	G	N1-C6-O6	-5.72	116.47	119.90
25	1H	1824	G	C4-C5-C6	5.72	122.23	118.80
25	1H	2020	A	C4-C5-C6	5.72	119.86	117.00
25	1H	2827	C	N3-C2-O2	5.72	125.90	121.90
25	14	71	A	N1-C6-N6	5.72	122.03	118.60
25	14	187	G	C5-N7-C8	5.72	107.16	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	136	C	O5'-P-OP2	-5.72	100.55	105.70
1	13	449	C	C2-N1-C1'	5.72	125.09	118.80
25	1H	866	A	N9-C4-C5	-5.72	103.51	105.80
25	1H	1186	G	N1-C2-N2	5.72	121.35	116.20
25	1H	2346	A	N3-C4-C5	5.72	130.80	126.80
25	14	2272	U	N3-C2-O2	-5.72	118.20	122.20
25	1H	198	C	N1-C2-O2	5.72	122.33	118.90
25	1H	699	A	N1-C6-N6	5.72	122.03	118.60
25	1H	2328	A	C8-N9-C4	5.72	108.09	105.80
25	1H	2375	G	N7-C8-N9	-5.72	110.24	113.10
26	16	45	A	C2-N3-C4	-5.72	107.74	110.60
25	14	693	C	C2-N1-C1'	-5.72	112.51	118.80
25	1H	140	A	OP2-P-O3'	5.71	117.77	105.20
25	1H	944	G	C8-N9-C1'	-5.71	119.57	127.00
25	1H	1957	C	C4-C5-C6	5.71	120.26	117.40
55	1G	320	C	N3-C2-O2	5.71	125.90	121.90
25	14	731	C	C4-C5-C6	5.71	120.26	117.40
1	13	250	A	N9-C4-C5	-5.71	103.52	105.80
55	1G	1414	U	C2-N1-C1'	-5.71	110.84	117.70
25	14	1271	G	C8-N9-C1'	-5.71	119.57	127.00
1	13	187	C	C6-N1-C2	-5.71	118.02	120.30
25	1H	736	C	N3-C4-C5	5.71	124.19	121.90
25	1H	1799	G	N3-C4-N9	5.71	129.43	126.00
25	1H	2861	G	C5-C6-O6	-5.71	125.17	128.60
26	16	105	G	OP2-P-O3'	5.71	117.77	105.20
25	14	24	G	O5'-P-OP1	-5.71	100.56	105.70
25	14	1652	A	O5'-P-OP1	-5.71	100.56	105.70
25	14	2386	C	C2-N3-C4	-5.71	117.05	119.90
1	13	422	C	O4'-C1'-N1	5.71	112.77	108.20
25	1H	936	C	C5-C4-N4	-5.71	116.20	120.20
25	1H	1764	G	N1-C6-O6	-5.71	116.47	119.90
1	13	783	C	C6-N1-C2	5.71	122.58	120.30
1	13	1519	A	C8-N9-C4	-5.71	103.52	105.80
25	1H	482	A	N7-C8-N9	5.71	116.65	113.80
25	1H	708	C	N3-C4-C5	5.71	124.18	121.90
25	1H	911	A	C8-N9-C4	-5.71	103.52	105.80
25	1H	999	U	OP1-P-OP2	-5.71	111.04	119.60
25	1H	1340	U	C5-C4-O4	-5.71	122.47	125.90
25	1H	2063	C	C2-N1-C1'	-5.71	112.52	118.80
25	14	1336	A	O5'-P-OP2	-5.71	100.56	105.70
1	13	219	C	C6-N1-C2	-5.71	118.02	120.30
1	13	872	A	C6-N1-C2	5.71	122.02	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1673	U	N3-C4-C5	5.71	118.02	114.60
25	1H	1899	G	C8-N9-C4	-5.71	104.12	106.40
25	1H	2822	G	N9-C4-C5	-5.71	103.12	105.40
55	1G	332	G	C8-N9-C4	5.71	108.68	106.40
55	1G	691	G	C6-C5-N7	-5.71	126.98	130.40
25	14	214	G	N3-C4-C5	-5.71	125.75	128.60
25	14	2037	G	C5-C6-N1	5.71	114.35	111.50
25	14	2271	G	OP2-P-O3'	5.71	117.75	105.20
25	14	2409	G	C6-C5-N7	-5.71	126.98	130.40
25	1H	2246	G	C5-N7-C8	5.71	107.15	104.30
25	1H	2499	C	N3-C4-C5	-5.71	119.62	121.90
25	1H	2521	C	C5-C6-N1	-5.71	118.15	121.00
25	1H	144	C	C2-N3-C4	-5.70	117.05	119.90
25	1H	799	G	N7-C8-N9	-5.70	110.25	113.10
25	1H	1601	G	C5-C6-N1	5.70	114.35	111.50
55	1G	1502	A	C2-N3-C4	-5.70	107.75	110.60
25	14	729	G	N3-C2-N2	-5.70	115.91	119.90
25	14	1367	A	C5-C6-N6	-5.70	119.14	123.70
1	13	892	A	C4-C5-N7	5.70	113.55	110.70
25	1H	2268	A	N9-C4-C5	-5.70	103.52	105.80
25	14	788	A	N9-C4-C5	-5.70	103.52	105.80
25	14	1012	U	N3-C2-O2	-5.70	118.21	122.20
1	13	881	G	N7-C8-N9	-5.70	110.25	113.10
25	1H	252	G	C2-N3-C4	5.70	114.75	111.90
25	1H	1554	A	N1-C6-N6	5.70	122.02	118.60
55	1G	1466	C	OP2-P-O3'	5.70	117.74	105.20
25	14	1827	C	C2-N3-C4	-5.70	117.05	119.90
1	13	1414	U	C6-N1-C2	5.70	124.42	121.00
25	1H	2068	U	C4-C5-C6	-5.70	116.28	119.70
25	1H	2405	G	OP1-P-O3'	5.70	117.73	105.20
25	1H	2439	A	N1-C6-N6	5.70	122.02	118.60
25	1H	2453	A	C6-N1-C2	-5.70	115.18	118.60
25	1H	2622	C	C4-C5-C6	5.70	120.25	117.40
26	16	40	U	C2-N1-C1'	5.70	124.54	117.70
26	16	78	A	C8-N9-C4	5.70	108.08	105.80
25	14	2587	A	C6-C5-N7	-5.70	128.31	132.30
25	14	95	G	C6-C5-N7	-5.70	126.98	130.40
25	1H	749	C	C4-C5-C6	5.70	120.25	117.40
25	1H	1516	U	N3-C4-O4	-5.70	115.41	119.40
25	1H	1786	A	C5-C6-N1	-5.70	114.85	117.70
25	1H	2603	G	O5'-P-OP1	-5.70	100.57	105.70
55	1G	328	C	N3-C2-O2	-5.70	117.91	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	711	G	N1-C6-O6	5.70	123.32	119.90
25	14	2552	U	N1-C2-O2	-5.70	118.81	122.80
1	13	858	G	C5-C6-O6	5.69	132.02	128.60
25	14	686	G	OP1-P-OP2	5.69	128.14	119.60
25	1H	663	G	C8-N9-C4	-5.69	104.12	106.40
25	1H	686	G	C5-C6-O6	-5.69	125.19	128.60
25	1H	735	A	N1-C6-N6	5.69	122.01	118.60
25	1H	835	A	O5'-P-OP1	5.69	117.53	110.70
25	1H	2056	G	N9-C4-C5	-5.69	103.12	105.40
25	1H	2252	G	N3-C4-C5	5.69	131.44	128.60
25	1H	2312	U	N3-C2-O2	5.69	126.18	122.20
55	1G	115	G	P-O3'-C3'	5.69	126.53	119.70
25	14	265	A	C6-C5-N7	-5.69	128.32	132.30
25	1H	1203	G	N3-C2-N2	5.69	123.88	119.90
25	14	935	C	N3-C4-C5	5.69	124.17	121.90
25	14	1654	A	N1-C6-N6	-5.69	115.19	118.60
25	14	1835	G	N1-C6-O6	-5.69	116.49	119.90
25	1H	441	U	C5-C4-O4	-5.69	122.49	125.90
25	1H	592	G	OP1-P-OP2	5.69	128.13	119.60
25	1H	1801	G	N3-C4-C5	-5.69	125.76	128.60
25	1H	1992	G	C5-C6-N1	5.69	114.34	111.50
25	14	47	C	N3-C4-C5	5.69	124.17	121.90
25	14	1968	G	N3-C4-N9	-5.69	122.59	126.00
25	14	2307	G	C8-N9-C1'	-5.68	119.61	127.00
25	14	2498	C	C6-N1-C2	5.68	122.57	120.30
25	1H	1835	G	C5-C6-N1	5.68	114.34	111.50
25	1H	1983	C	N3-C4-C5	5.68	124.17	121.90
25	14	667	U	O5'-P-OP2	5.68	117.52	110.70
1	13	748	C	P-O3'-C3'	5.68	126.52	119.70
25	1H	193	U	C2-N3-C4	-5.68	123.59	127.00
25	1H	975	G	N3-C2-N2	-5.68	115.92	119.90
25	14	26	G	C8-N9-C4	-5.68	104.13	106.40
25	14	693	C	N3-C4-C5	5.68	124.17	121.90
25	1H	62	C	C5-C6-N1	-5.68	118.16	121.00
25	1H	583	G	N1-C2-N2	5.68	121.31	116.20
25	1H	929	G	C8-N9-C4	5.68	108.67	106.40
25	14	270(X)	G	C5-C6-N1	-5.68	108.66	111.50
25	1H	70	G	N1-C2-N2	-5.68	111.09	116.20
25	1H	1891	G	OP2-P-O3'	5.68	117.69	105.20
25	1H	2239	G	N3-C2-N2	5.68	123.88	119.90
25	1H	1783	A	OP1-P-OP2	-5.68	111.08	119.60
25	14	2059	A	OP1-P-O3'	5.68	117.69	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	1335	C	C6-N1-C2	5.67	122.57	120.30
25	1H	40	C	C5-C4-N4	-5.67	116.23	120.20
25	1H	1661	G	C5-N7-C8	5.67	107.14	104.30
25	1H	1704	G	C8-N9-C4	5.67	108.67	106.40
25	1H	2271	G	C6-C5-N7	-5.67	127.00	130.40
55	1G	974	A	O4'-C1'-N9	5.67	112.74	108.20
25	1H	27	G	N3-C4-N9	5.67	129.40	126.00
25	1H	2247	A	C5-C6-N1	-5.67	114.86	117.70
25	1H	2430	A	C8-N9-C1'	5.67	137.91	127.70
25	1H	2515	C	N3-C4-C5	5.67	124.17	121.90
25	14	675	A	C8-N9-C4	5.67	108.07	105.80
25	1H	141	A	N3-C4-C5	5.67	130.77	126.80
25	14	1826	G	N3-C4-C5	-5.67	125.77	128.60
1	13	727	G	O5'-P-OP1	-5.67	100.60	105.70
25	1H	2039	C	O5'-P-OP2	-5.67	100.60	105.70
25	1H	2589	A	C5-N7-C8	5.67	106.73	103.90
55	1G	1528	U	C5-C6-N1	-5.67	119.87	122.70
25	14	212	G	O5'-P-OP2	-5.67	100.60	105.70
25	14	2067	G	C8-N9-C4	-5.67	104.13	106.40
23	2K	57	C	OP1-P-OP2	5.67	128.10	119.60
25	1H	46	C	C4-C5-C6	5.67	120.23	117.40
25	1H	1564	C	C6-N1-C2	-5.67	118.03	120.30
25	1H	2247	A	C4-C5-C6	5.67	119.83	117.00
55	1G	1498	U	C2-N1-C1'	5.67	124.50	117.70
25	14	1409	C	O5'-P-OP2	-5.67	100.60	105.70
25	1H	271(B)	G	C4-N9-C1'	5.67	133.86	126.50
1	13	827	U	C4-C5-C6	5.66	123.10	119.70
25	1H	2324	C	C6-N1-C1'	-5.66	114.00	120.80
25	1H	453	C	C6-N1-C2	5.66	122.56	120.30
25	1H	1318	C	O5'-P-OP2	5.66	117.49	110.70
25	14	801	G	C8-N9-C1'	5.66	134.36	127.00
25	14	1769	G	N3-C4-C5	-5.66	125.77	128.60
26	1J	114	G	OP1-P-OP2	5.66	128.09	119.60
1	13	811	C	C6-N1-C2	5.66	122.56	120.30
1	13	1058	G	N7-C8-N9	-5.66	110.27	113.10
25	1H	222	A	C8-N9-C4	5.66	108.06	105.80
25	1H	1649	G	N3-C4-N9	5.66	129.40	126.00
25	1H	1797	C	C4-C5-C6	5.66	120.23	117.40
25	1H	2056	G	C5-C6-N1	-5.66	108.67	111.50
55	1G	378	G	N3-C4-C5	5.66	131.43	128.60
55	1G	442	C	C5-C6-N1	5.66	123.83	121.00
25	1H	145	G	C5-C6-O6	-5.66	125.20	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	180	G	C8-N9-C4	5.66	108.66	106.40
25	1H	1669	A	C6-N1-C2	-5.66	115.20	118.60
25	1H	2040	C	C5-C4-N4	-5.66	116.24	120.20
25	1H	2638	G	N3-C2-N2	5.66	123.86	119.90
55	1G	691	G	N9-C4-C5	-5.66	103.14	105.40
25	1H	193	U	C4-C5-C6	5.66	123.09	119.70
25	14	2595	G	N1-C6-O6	5.66	123.29	119.90
1	13	266	G	C6-C5-N7	-5.66	127.01	130.40
1	13	1489	G	O5'-P-OP2	5.66	117.49	110.70
25	1H	290	G	N3-C4-C5	-5.66	125.77	128.60
25	1H	2599	G	C5-N7-C8	5.66	107.13	104.30
55	1G	117	G	N9-C4-C5	-5.66	103.14	105.40
25	14	1443	G	C8-N9-C1'	-5.66	119.65	127.00
1	13	300	A	N1-C6-N6	5.65	121.99	118.60
25	1H	205	G	C8-N9-C4	5.65	108.66	106.40
25	14	245	G	C5-C6-O6	-5.65	125.21	128.60
25	14	1333	C	OP1-P-OP2	-5.65	111.12	119.60
1	13	1356	G	C8-N9-C4	-5.65	104.14	106.40
1	13	1512	U	N1-C2-O2	5.65	126.76	122.80
25	14	2363	C	C2-N3-C4	-5.65	117.07	119.90
1	13	380	G	C4-N9-C1'	-5.65	119.15	126.50
25	1H	365	C	C4-C5-C6	5.65	120.22	117.40
25	1H	734	A	OP1-P-OP2	5.65	128.07	119.60
25	14	2579	C	N3-C4-C5	5.65	124.16	121.90
5	4E	12	LEU	CA-CB-CG	5.65	128.29	115.30
25	14	18	C	O5'-P-OP1	-5.65	100.62	105.70
25	14	1694	C	N3-C4-C5	5.65	124.16	121.90
1	13	437	U	C6-N1-C2	-5.65	117.61	121.00
1	13	508	C	O5'-P-OP1	-5.65	100.62	105.70
1	13	1508	G	O5'-P-OP1	-5.65	100.62	105.70
25	1H	542	C	C4-C5-C6	5.65	120.22	117.40
25	1H	809	G	C5-C6-N1	5.65	114.32	111.50
25	1H	2007	C	N1-C2-N3	5.65	123.15	119.20
25	1H	2700	C	C5-C4-N4	-5.65	116.25	120.20
25	14	2066	C	N3-C4-N4	5.65	121.95	118.00
25	14	2676	C	O5'-P-OP1	-5.65	100.62	105.70
25	14	1970	A	O5'-P-OP2	-5.65	100.62	105.70
25	1H	716	A	O5'-P-OP1	-5.64	100.62	105.70
25	1H	1224	G	C4-C5-C6	-5.64	115.41	118.80
26	16	12	C	C5-C6-N1	-5.64	118.18	121.00
25	14	1820	U	C2-N1-C1'	-5.64	110.93	117.70
25	14	2360	A	C8-N9-C4	5.64	108.06	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1659	U	N1-C2-N3	5.64	118.28	114.90
25	14	2847	U	N3-C4-O4	5.64	123.35	119.40
25	1H	596	G	N1-C6-O6	5.64	123.28	119.90
25	1H	827	U	C2-N1-C1'	-5.64	110.93	117.70
26	16	33	G	OP1-P-O3'	5.64	117.61	105.20
25	1H	495	G	C5-C6-O6	-5.64	125.22	128.60
25	1H	749	C	N3-C2-O2	-5.64	117.95	121.90
25	14	1594	G	O5'-P-OP2	5.64	117.47	110.70
1	13	1502	A	C5-C6-N1	-5.64	114.88	117.70
25	1H	633	A	C6-C5-N7	-5.64	128.35	132.30
25	1H	2640	G	C6-C5-N7	-5.64	127.02	130.40
55	1G	449	C	N3-C4-N4	-5.64	114.06	118.00
55	1G	701	C	N1-C2-O2	5.64	122.28	118.90
25	14	1616	A	C2-N3-C4	-5.64	107.78	110.60
2	1E	187	LEU	CA-CB-CG	5.63	128.26	115.30
25	1H	536	A	C8-N9-C4	-5.63	103.55	105.80
55	1G	519	C	C6-N1-C2	5.63	122.55	120.30
25	14	93	C	C2-N1-C1'	5.63	125.00	118.80
25	14	2426	A	N7-C8-N9	5.63	116.62	113.80
25	1H	1932	A	N1-C6-N6	5.63	121.98	118.60
1	13	865	A	C5-N7-C8	-5.63	101.08	103.90
25	1H	576	U	N3-C4-O4	5.63	123.34	119.40
25	1H	2494	G	N3-C2-N2	-5.63	115.96	119.90
25	14	1128	A	N7-C8-N9	-5.63	110.98	113.80
25	14	2019	A	C5-C6-N6	-5.63	119.19	123.70
23	2K	27	G	N1-C6-O6	5.63	123.28	119.90
25	1H	1815	A	O5'-P-OP2	-5.63	100.63	105.70
26	1J	56	G	C4-N9-C1'	5.63	133.82	126.50
1	13	428	G	N1-C2-N3	5.63	127.28	123.90
1	13	656	C	C6-N1-C2	-5.63	118.05	120.30
25	14	531	C	C2-N1-C1'	-5.63	112.61	118.80
25	1H	470	A	C8-N9-C4	-5.63	103.55	105.80
25	1H	838	C	C2-N3-C4	-5.63	117.09	119.90
25	1H	1300	U	C5-C4-O4	5.63	129.28	125.90
25	1H	2701	C	C6-N1-C2	-5.63	118.05	120.30
25	1H	674	G	N7-C8-N9	-5.62	110.29	113.10
25	1H	389	G	C2-N3-C4	-5.62	109.09	111.90
25	1H	664	C	N3-C4-C5	5.62	124.15	121.90
25	1H	2051	A	C8-N9-C4	-5.62	103.55	105.80
25	14	569	U	C5-C6-N1	-5.62	119.89	122.70
25	14	794	G	C4-C5-N7	-5.62	108.55	110.80
25	14	813	U	N1-C2-N3	5.62	118.27	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	1327	C	C6-N1-C2	5.62	122.55	120.30
25	1H	36	G	O5'-P-OP2	-5.62	100.64	105.70
26	16	111	U	C5-C6-N1	-5.62	119.89	122.70
55	1G	1335	C	O5'-P-OP1	-5.62	100.64	105.70
25	14	1403	C	N3-C4-C5	-5.62	119.65	121.90
25	14	2047	U	N3-C4-O4	-5.62	115.46	119.40
14	5I	44	LEU	CA-CB-CG	5.62	128.23	115.30
25	1H	2387	U	OP2-P-O3'	5.62	117.56	105.20
25	1H	2853	C	OP2-P-O3'	5.62	117.56	105.20
55	1G	1432	G	C4-C5-C6	5.62	122.17	118.80
1	13	281	G	C8-N9-C4	-5.62	104.15	106.40
55	1G	1471	G	C8-N9-C4	5.62	108.65	106.40
25	14	728	G	N7-C8-N9	-5.62	110.29	113.10
25	14	1765	C	C5-C6-N1	-5.62	118.19	121.00
25	14	1999	C	N3-C4-N4	5.62	121.93	118.00
25	14	2296	U	N3-C2-O2	-5.62	118.27	122.20
26	1J	117	G	N3-C4-C5	5.62	131.41	128.60
25	1H	1017	G	N1-C2-N2	5.62	121.25	116.20
25	14	2511	U	O5'-P-OP2	-5.62	100.64	105.70
25	1H	1279	G	N1-C6-O6	-5.62	116.53	119.90
25	1H	1338	G	C8-N9-C4	5.62	108.65	106.40
25	1H	2379	G	C8-N9-C1'	-5.62	119.70	127.00
25	1H	2425	A	O5'-P-OP2	-5.62	100.65	105.70
25	1H	2821	A	C5-C6-N6	-5.62	119.21	123.70
25	14	1342	A	C4-N9-C1'	5.62	136.41	126.30
25	1H	1489	U	N3-C4-C5	-5.61	111.23	114.60
25	1H	1648	C	C2-N1-C1'	-5.61	112.62	118.80
25	1H	1653	G	N3-C4-C5	-5.61	125.79	128.60
1	13	886	G	O5'-P-OP2	-5.61	100.65	105.70
25	1H	1694	C	P-O3'-C3'	5.61	126.43	119.70
25	1H	2346	A	P-O3'-C3'	5.61	126.44	119.70
25	14	1031	G	C5-C6-O6	-5.61	125.23	128.60
25	1H	859	G	N1-C2-N2	5.61	121.25	116.20
25	1H	937	U	N1-C2-O2	-5.61	118.87	122.80
25	1H	1261	C	N1-C2-O2	-5.61	115.53	118.90
25	1H	2515	C	OP1-P-OP2	-5.61	111.18	119.60
25	1H	2822	G	N1-C6-O6	5.61	123.27	119.90
26	16	114	G	C5-C6-O6	-5.61	125.23	128.60
25	14	1204	A	C4-C5-N7	5.61	113.51	110.70
25	1H	1931	U	N1-C2-O2	5.61	126.73	122.80
25	1H	637	A	C8-N9-C4	5.61	108.04	105.80
25	1H	1521	G	C8-N9-C4	-5.61	104.16	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	2084	C	N3-C4-C5	5.61	124.14	121.90
25	1H	2866	U	C2-N3-C4	5.61	130.37	127.00
55	1G	754	C	C2-N1-C1'	5.61	124.97	118.80
25	14	1836	C	OP1-P-O3'	5.61	117.54	105.20
1	13	386	C	C2-N1-C1'	-5.61	112.63	118.80
1	13	767	A	N1-C2-N3	5.61	132.10	129.30
1	13	1230	C	O5'-P-OP1	-5.61	100.66	105.70
25	1H	103	A	N7-C8-N9	-5.61	111.00	113.80
25	1H	188	G	C6-N1-C2	-5.61	121.74	125.10
25	1H	1623	G	N1-C2-N3	5.61	127.26	123.90
1	13	1329	A	N1-C6-N6	5.60	121.96	118.60
25	14	2779	U	N3-C4-O4	-5.60	115.48	119.40
25	1H	1440	G	N1-C6-O6	-5.60	116.54	119.90
25	14	776	G	C8-N9-C4	-5.60	104.16	106.40
25	1H	1812	A	O5'-P-OP2	-5.60	100.66	105.70
25	14	784	A	P-O3'-C3'	5.60	126.42	119.70
25	14	2681	C	N3-C4-N4	-5.60	114.08	118.00
25	1H	1275	A	N9-C4-C5	-5.60	103.56	105.80
25	1H	1682	G	C8-N9-C4	5.60	108.64	106.40
55	1G	630	G	N7-C8-N9	5.60	115.90	113.10
25	14	1762	A	C5-C6-N1	-5.60	114.90	117.70
1	13	169	C	C6-N1-C2	-5.60	118.06	120.30
1	13	1512	U	N3-C2-O2	-5.60	118.28	122.20
25	1H	197	A	OP1-P-O3'	-5.60	92.89	105.20
44	G8	81	LYS	C-N-CA	5.60	145.51	122.00
25	14	1623	G	N3-C2-N2	-5.60	115.98	119.90
25	14	2678	C	C5-C6-N1	-5.60	118.20	121.00
1	13	1339	A	C2-N3-C4	5.60	113.40	110.60
25	1H	686	G	OP1-P-OP2	5.60	127.99	119.60
25	14	1672	C	N1-C2-O2	-5.60	115.54	118.90
25	1H	201	C	C2-N3-C4	-5.59	117.10	119.90
25	1H	674	G	N9-C4-C5	-5.59	103.16	105.40
25	1H	968	G	N3-C2-N2	5.59	123.82	119.90
25	1H	1222	C	C2-N1-C1'	5.59	124.95	118.80
25	1H	2053	G	C5-C6-O6	-5.59	125.24	128.60
25	14	682	G	N3-C4-C5	-5.59	125.80	128.60
25	14	2598	A	OP2-P-O3'	5.59	117.51	105.20
25	1H	792	G	C4-N9-C1'	5.59	133.77	126.50
25	1H	407	G	N3-C2-N2	5.59	123.81	119.90
25	1H	528	A	C8-N9-C1'	5.59	137.77	127.70
25	1H	772	C	OP2-P-O3'	5.59	117.50	105.20
25	1H	828	U	C4-C5-C6	5.59	123.06	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	963	U	O5'-P-OP2	5.59	117.41	110.70
25	1H	1312	U	P-O3'-C3'	5.59	126.41	119.70
26	16	48	A	N9-C4-C5	-5.59	103.56	105.80
25	14	2375	G	C8-N9-C4	5.59	108.64	106.40
25	14	2581	G	OP1-P-OP2	5.59	127.99	119.60
25	14	250	G	C8-N9-C4	-5.59	104.16	106.40
25	14	735	A	C8-N9-C4	5.59	108.04	105.80
25	14	2445	G	N3-C4-C5	-5.59	125.81	128.60
23	2K	9	G	C2-N3-C4	5.59	114.69	111.90
25	1H	782	A	C2-N3-C4	-5.59	107.81	110.60
25	1H	913	U	OP1-P-OP2	5.59	127.98	119.60
27	11	206	LEU	CA-CB-CG	-5.59	102.45	115.30
25	14	459	U	C6-N1-C2	-5.59	117.65	121.00
25	14	1819	A	O5'-P-OP1	-5.59	100.67	105.70
25	1H	29	U	C5-C4-O4	-5.58	122.55	125.90
25	1H	1893	C	C4-C5-C6	5.58	120.19	117.40
25	1H	2086	U	O5'-P-OP2	-5.58	100.67	105.70
55	1G	328	C	N1-C2-O2	5.58	122.25	118.90
1	13	520	A	C5-C6-N6	-5.58	119.23	123.70
25	1H	2548	G	C5-C6-N1	5.58	114.29	111.50
25	1H	2702	U	C5'-C4'-O4'	5.58	115.80	109.10
25	14	187	G	C6-N1-C2	-5.58	121.75	125.10
25	14	679	C	C5-C6-N1	-5.58	118.21	121.00
25	14	2278	A	N1-C2-N3	5.58	132.09	129.30
25	1H	192	C	N3-C2-O2	5.58	125.81	121.90
25	1H	1513	C	C5-C6-N1	5.58	123.79	121.00
25	1H	1656	C	N3-C4-C5	5.58	124.13	121.90
25	1H	1829	A	OP1-P-OP2	5.58	127.97	119.60
25	1H	2582	G	N1-C2-N2	-5.58	111.18	116.20
25	1H	2639	A	N1-C6-N6	5.58	121.95	118.60
25	1H	2706	G	N1-C6-O6	-5.58	116.55	119.90
26	16	11	C	N3-C2-O2	-5.58	117.99	121.90
25	14	755	C	N1-C2-O2	-5.58	115.55	118.90
25	14	1377	G	O5'-P-OP2	-5.58	100.68	105.70
25	14	1517	G	OP1-P-O3'	5.58	117.48	105.20
25	14	2004	G	N1-C6-O6	5.58	123.25	119.90
1	13	1501	C	OP2-P-O3'	5.58	117.48	105.20
25	1H	2238	G	OP1-P-OP2	5.58	127.97	119.60
25	14	1417	C	C5-C6-N1	5.58	123.79	121.00
25	14	2347	C	N3-C2-O2	-5.58	117.99	121.90
25	1H	681	G	N9-C4-C5	-5.58	103.17	105.40
25	1H	1413	G	N7-C8-N9	5.58	115.89	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1827	C	OP1-P-OP2	-5.58	111.23	119.60
25	14	1975	G	N9-C4-C5	-5.58	103.17	105.40
25	14	1983	C	C6-N1-C2	5.58	122.53	120.30
25	1H	1240	U	OP2-P-O3'	5.58	117.47	105.20
25	1H	1265	A	C4-C5-C6	5.58	119.79	117.00
37	98	2	ARG	NE-CZ-NH1	5.58	123.09	120.30
25	14	1518	C	O5'-P-OP2	5.58	117.39	110.70
1	13	1432	G	N9-C4-C5	-5.58	103.17	105.40
25	1H	49	A	OP1-P-OP2	5.58	127.96	119.60
25	1H	74	A	N3-C4-N9	-5.58	122.94	127.40
25	1H	2509	G	C5-C6-N1	5.58	114.29	111.50
27	11	271	ILE	N-CA-C	5.58	126.05	111.00
55	1G	1478	C	N3-C4-N4	-5.58	114.10	118.00
25	14	666	G	C2-N3-C4	-5.58	109.11	111.90
25	14	1156	A	N9-C4-C5	-5.58	103.57	105.80
25	14	1338	G	N3-C4-N9	5.58	129.34	126.00
23	2K	1	C	C6-N1-C2	-5.57	118.07	120.30
25	1H	196	A	OP1-P-OP2	5.57	127.96	119.60
25	1H	205	G	C5-C6-N1	5.57	114.29	111.50
25	1H	575	A	N1-C2-N3	5.57	132.09	129.30
25	1H	1788	C	N1-C2-O2	5.57	122.24	118.90
25	1H	2736	G	N3-C4-C5	5.57	131.39	128.60
25	14	870	A	OP1-P-O3'	5.57	117.46	105.20
25	14	1590	U	O5'-P-OP1	-5.57	100.69	105.70
25	14	2523	G	C4-C5-N7	5.57	113.03	110.80
25	14	2843	G	N1-C6-O6	5.57	123.24	119.90
25	1H	489	G	C5-C6-O6	-5.57	125.26	128.60
25	1H	508	G	C8-N9-C4	-5.57	104.17	106.40
25	1H	768	G	N7-C8-N9	-5.57	110.31	113.10
25	1H	2871	C	N3-C2-O2	-5.57	118.00	121.90
55	1G	1530	G	C8-N9-C1'	5.57	134.24	127.00
25	14	394	A	N1-C6-N6	5.57	121.94	118.60
25	14	2339	G	O5'-P-OP2	-5.57	100.69	105.70
25	1H	523	C	C6-N1-C2	-5.57	118.07	120.30
1	13	567	G	O5'-P-OP1	-5.57	100.69	105.70
25	1H	1149	G	C5-C6-O6	-5.57	125.26	128.60
25	14	1605	C	N1-C2-O2	-5.57	115.56	118.90
25	1H	929	G	C5-C6-O6	-5.57	125.26	128.60
25	1H	1678	G	N3-C4-N9	-5.57	122.66	126.00
29	31	45	ARG	NE-CZ-NH2	-5.57	117.52	120.30
55	1G	353	A	N1-C6-N6	5.57	121.94	118.60
25	14	827	U	C6-N1-C2	5.57	124.34	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	2859	G	C8-N9-C4	-5.57	104.17	106.40
1	13	1227	A	C5-N7-C8	-5.56	101.12	103.90
25	1H	134	C	C5-C6-N1	-5.56	118.22	121.00
25	1H	2410	G	C8-N9-C4	-5.56	104.17	106.40
29	31	46	ARG	NE-CZ-NH2	-5.56	117.52	120.30
25	14	36	G	N3-C2-N2	-5.56	116.00	119.90
25	14	771	G	N1-C6-O6	5.56	123.24	119.90
25	14	2002	G	N9-C4-C5	-5.56	103.17	105.40
25	1H	209	C	C2-N3-C4	-5.56	117.12	119.90
25	1H	1191	G	N1-C6-O6	-5.56	116.56	119.90
25	1H	2023	G	C6-C5-N7	-5.56	127.06	130.40
38	A8	58	LEU	CA-CB-CG	5.56	128.09	115.30
25	14	1657	C	C6-N1-C2	-5.56	118.08	120.30
25	14	2779	U	C4-C5-C6	5.56	123.04	119.70
1	13	802	A	N1-C6-N6	5.56	121.94	118.60
25	1H	431	U	N3-C4-C5	-5.56	111.26	114.60
25	1H	1343	G	N3-C4-C5	-5.56	125.82	128.60
25	1H	1343	G	N3-C4-N9	5.56	129.34	126.00
25	1H	842	G	C8-N9-C4	5.56	108.62	106.40
25	1H	1348	G	O5'-P-OP1	-5.56	100.70	105.70
25	1H	1364	G	C5-C6-N1	5.56	114.28	111.50
55	1G	399	G	C8-N9-C4	5.56	108.62	106.40
25	14	179	G	C8-N9-C4	5.56	108.62	106.40
25	14	1780	A	N9-C4-C5	5.56	108.02	105.80
1	13	781	A	N1-C6-N6	5.56	121.94	118.60
25	1H	1166	C	C6-N1-C1'	-5.56	114.13	120.80
25	1H	1760	A	C8-N9-C4	5.56	108.02	105.80
25	1H	2458	G	C4-N9-C1'	5.56	133.72	126.50
25	1H	2702	U	O4'-C1'-N1	5.56	112.65	108.20
55	1G	660	G	C8-N9-C4	5.56	108.62	106.40
25	14	2542	A	C8-N9-C4	5.56	108.02	105.80
25	14	1993	U	O5'-P-OP1	-5.56	100.70	105.70
1	13	1205	U	N1-C2-N3	5.55	118.23	114.90
1	13	1432	G	C5-C6-O6	-5.55	125.27	128.60
25	1H	784	A	C4-C5-N7	-5.55	107.92	110.70
25	1H	842	G	C5-C6-O6	-5.55	125.27	128.60
25	1H	947	G	N1-C6-O6	5.55	123.23	119.90
25	1H	1967	C	C5-C4-N4	5.55	124.09	120.20
25	14	492	A	C6-N1-C2	-5.55	115.27	118.60
25	14	1137	G	C8-N9-C4	5.55	108.62	106.40
25	1H	1893	C	C5-C6-N1	-5.55	118.22	121.00
40	C8	74	LEU	CA-CB-CG	5.55	128.07	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	578	C	OP2-P-O3'	5.55	117.41	105.20
1	13	612	C	O5'-P-OP1	-5.55	100.70	105.70
1	13	1492	A	O5'-P-OP2	-5.55	100.70	105.70
23	2K	74	A	C5-C6-N6	-5.55	119.26	123.70
25	1H	1332	G	N3-C2-N2	-5.55	116.02	119.90
25	1H	2269	A	C2-N3-C4	-5.55	107.83	110.60
25	1H	2394	C	O5'-P-OP2	-5.55	100.70	105.70
25	1H	2446	G	N1-C6-O6	5.55	123.23	119.90
25	14	1684	C	C4-C5-C6	5.55	120.18	117.40
25	1H	430	G	N9-C4-C5	-5.55	103.18	105.40
25	1H	798	G	C5-C6-N1	-5.55	108.72	111.50
25	1H	1217	C	N1-C2-O2	-5.55	115.57	118.90
25	1H	1283	G	N3-C4-C5	-5.55	125.83	128.60
25	1H	2685	G	OP1-P-O3'	5.55	117.41	105.20
25	14	945	A	C5-C6-N1	-5.55	114.92	117.70
25	1H	145	G	N1-C6-O6	5.55	123.23	119.90
25	14	1197	G	C5-C6-O6	5.55	131.93	128.60
25	1H	725	G	C4-C5-N7	5.55	113.02	110.80
25	1H	859	G	N1-C6-O6	5.55	123.23	119.90
25	1H	937	U	O5'-P-OP1	5.55	117.36	110.70
25	1H	1693	U	N3-C2-O2	-5.55	118.32	122.20
25	1H	1992	G	C8-N9-C4	-5.55	104.18	106.40
25	14	150	C	C5-C4-N4	5.55	124.08	120.20
25	14	307	G	OP1-P-OP2	5.55	127.92	119.60
25	14	791	C	P-O3'-C3'	5.55	126.36	119.70
25	14	1528	A	N1-C6-N6	5.55	121.93	118.60
25	14	2327	A	C8-N9-C4	5.55	108.02	105.80
25	14	2596	U	C5-C6-N1	-5.55	119.93	122.70
25	1H	677	A	O5'-P-OP1	-5.54	100.71	105.70
25	14	842	G	N3-C4-N9	5.54	129.33	126.00
25	14	2595	G	C5-N7-C8	-5.54	101.53	104.30
1	13	570	G	N1-C6-O6	5.54	123.23	119.90
1	13	703	G	C4-N9-C1'	5.54	133.71	126.50
1	13	789	U	N3-C4-O4	-5.54	115.52	119.40
25	1H	860	U	N1-C2-N3	5.54	118.23	114.90
25	1H	1334	G	C4-N9-C1'	5.54	133.71	126.50
25	1H	1354	A	C4-C5-N7	5.54	113.47	110.70
25	1H	2638	G	C5-C6-O6	-5.54	125.27	128.60
25	14	440	G	C4-C5-N7	5.54	113.02	110.80
25	14	1192	G	C8-N9-C4	5.54	108.62	106.40
25	14	1373	A	N7-C8-N9	-5.54	111.03	113.80
25	14	2433	A	C4-C5-N7	5.54	113.47	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1188	U	C5-C6-N1	-5.54	119.93	122.70
55	1G	790	A	C5-C6-N6	5.54	128.13	123.70
25	14	647	G	C5-C6-O6	-5.54	125.28	128.60
25	14	2885	C	C6-N1-C2	-5.54	118.08	120.30
25	1H	245	G	C6-C5-N7	-5.54	127.08	130.40
25	1H	508	G	P-O3'-C3'	5.54	126.35	119.70
25	1H	1022	G	N1-C2-N3	5.54	127.22	123.90
26	16	48	A	C5-C6-N6	-5.54	119.27	123.70
25	14	2392	A	C4-C5-N7	5.54	113.47	110.70
1	13	244	U	P-O3'-C3'	5.54	126.35	119.70
1	13	580	U	N3-C4-C5	5.54	117.92	114.60
25	1H	824	A	N1-C2-N3	5.54	132.07	129.30
25	1H	1252	G	O4'-C1'-N9	-5.54	103.77	108.20
25	1H	1360	A	C5-N7-C8	-5.54	101.13	103.90
38	A8	30	ARG	NE-CZ-NH1	5.54	123.07	120.30
55	1G	1502	A	N7-C8-N9	5.54	116.57	113.80
25	14	188	G	N9-C4-C5	-5.54	103.18	105.40
25	14	2288	A	N1-C6-N6	5.54	121.92	118.60
1	13	884	U	O5'-P-OP2	-5.54	100.72	105.70
25	1H	940	G	C6-N1-C2	-5.54	121.78	125.10
25	1H	2236	C	N3-C2-O2	5.54	125.78	121.90
25	1H	2519	U	C5-C4-O4	-5.54	122.58	125.90
55	1G	377	G	C6-C5-N7	-5.54	127.08	130.40
1	13	765	G	C8-N9-C1'	-5.54	119.80	127.00
25	1H	596	G	C6-N1-C2	-5.54	121.78	125.10
25	1H	2239	G	OP1-P-OP2	-5.54	111.30	119.60
25	1H	2619	C	C5-C4-N4	-5.54	116.33	120.20
25	14	188	G	N3-C4-N9	5.54	129.32	126.00
25	14	1905	C	C4-C5-C6	5.54	120.17	117.40
1	13	817	C	C5-C4-N4	-5.53	116.33	120.20
25	1H	723	G	N3-C4-N9	5.53	129.32	126.00
25	1H	1158	C	C2-N3-C4	-5.53	117.13	119.90
26	1J	56	G	N3-C4-C5	-5.53	125.83	128.60
25	1H	1695	G	C8-N9-C1'	-5.53	119.81	127.00
55	1G	631	G	N1-C6-O6	5.53	123.22	119.90
25	14	1261	C	C5-C6-N1	-5.53	118.23	121.00
23	2K	74	A	N9-C4-C5	-5.53	103.59	105.80
25	1H	630	G	N7-C8-N9	-5.53	110.33	113.10
25	1H	1855	G	C8-N9-C1'	-5.53	119.81	127.00
25	1H	1978	A	C5-N7-C8	5.53	106.67	103.90
25	14	2665	A	O4'-C1'-N9	5.53	112.62	108.20
25	1H	2488	A	C8-N9-C4	5.53	108.01	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1795	C	C6-N1-C2	-5.53	118.09	120.30
25	14	2690	C	O5'-P-OP2	-5.53	100.72	105.70
25	1H	1681	G	C5-C6-N1	-5.53	108.74	111.50
25	1H	2251	G	N3-C2-N2	-5.53	116.03	119.90
25	1H	2287	A	C5-N7-C8	-5.53	101.14	103.90
25	1H	2328	A	C6-C5-N7	-5.53	128.43	132.30
25	1H	2688	U	C6-N1-C2	-5.53	117.68	121.00
55	1G	333	G	C8-N9-C4	5.53	108.61	106.40
25	14	777	A	C6-N1-C2	-5.53	115.28	118.60
25	14	1261	C	C2-N3-C4	-5.53	117.14	119.90
25	14	2057	A	C8-N9-C4	5.53	108.01	105.80
25	1H	252	G	O5'-P-OP2	-5.53	100.73	105.70
25	1H	928	G	N1-C6-O6	5.53	123.22	119.90
25	1H	2299	G	O5'-P-OP2	5.53	117.33	110.70
25	1H	2706	G	N1-C2-N2	-5.53	111.23	116.20
55	1G	121	C	C6-N1-C1'	-5.53	114.17	120.80
25	14	664	C	C6-N1-C2	5.53	122.51	120.30
25	14	681	G	C8-N9-C4	5.53	108.61	106.40
25	14	2000	G	C6-N1-C2	-5.53	121.78	125.10
1	13	899	C	C6-N1-C2	5.52	122.51	120.30
25	14	602	G	C8-N9-C1'	-5.52	119.82	127.00
1	13	1104	G	C5-C6-O6	-5.52	125.29	128.60
25	1H	322	A	OP2-P-O3'	5.52	117.35	105.20
25	1H	692	C	O5'-P-OP1	5.52	117.33	110.70
25	1H	1838	C	N3-C4-N4	5.52	121.87	118.00
25	1H	2427	C	C2-N1-C1'	-5.52	112.72	118.80
25	1H	2513	G	C8-N9-C4	-5.52	104.19	106.40
25	14	192	C	C4-C5-C6	5.52	120.16	117.40
25	14	1618	A	N7-C8-N9	5.52	116.56	113.80
25	14	2329	G	N7-C8-N9	-5.52	110.34	113.10
25	1H	814	C	N3-C4-C5	5.52	124.11	121.90
25	1H	2071	A	C2-N3-C4	-5.52	107.84	110.60
25	1H	2410	G	O5'-P-OP1	-5.52	100.73	105.70
25	1H	585	G	N3-C4-C5	-5.52	125.84	128.60
25	1H	590	A	C5-C6-N1	5.52	120.46	117.70
25	1H	965	C	N3-C4-C5	-5.52	119.69	121.90
55	1G	45	U	C5-C6-N1	-5.52	119.94	122.70
25	14	1332	G	C8-N9-C4	-5.52	104.19	106.40
25	14	1341	U	OP1-P-O3'	5.52	117.34	105.20
1	13	1266	G	C5-C6-O6	5.52	131.91	128.60
25	1H	67	U	C2-N3-C4	5.52	130.31	127.00
25	1H	102	G	OP1-P-O3'	5.52	117.34	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	222	A	N7-C8-N9	-5.52	111.04	113.80
25	1H	2594	C	C2-N3-C4	-5.52	117.14	119.90
25	14	2776	A	N7-C8-N9	5.52	116.56	113.80
1	13	1464	G	C5-C6-O6	-5.52	125.29	128.60
25	1H	428	A	N1-C2-N3	5.52	132.06	129.30
25	1H	2707	G	N1-C2-N2	5.52	121.17	116.20
1	13	527	G	N3-C4-N9	-5.51	122.69	126.00
1	13	1219	U	N3-C4-O4	5.51	123.26	119.40
23	2K	10	G	C8-N9-C4	5.51	108.61	106.40
25	1H	640	C	OP1-P-O3'	5.51	117.33	105.20
25	1H	769	G	N3-C2-N2	5.51	123.76	119.90
25	1H	999	U	N1-C2-O2	5.51	126.66	122.80
25	1H	1192	G	OP2-P-O3'	5.51	117.33	105.20
55	1G	353	A	C4-C5-N7	5.51	113.46	110.70
25	14	436	C	C6-N1-C2	5.51	122.51	120.30
25	14	508	G	O5'-P-OP1	-5.51	100.74	105.70
25	14	910	A	N1-C6-N6	5.51	121.91	118.60
25	14	1024	G	C5-C6-N1	-5.51	108.74	111.50
25	14	1236	G	N9-C4-C5	-5.51	103.19	105.40
25	14	2647	U	O5'-P-OP2	-5.51	100.74	105.70
25	1H	232	G	N3-C4-N9	5.51	129.31	126.00
25	1H	2326	C	C6-N1-C2	-5.51	118.09	120.30
25	14	671	C	C6-N1-C1'	5.51	127.42	120.80
25	14	1559	G	N1-C6-O6	5.51	123.21	119.90
25	14	2365	G	N3-C2-N2	5.51	123.76	119.90
1	13	812	C	O5'-P-OP2	5.51	117.31	110.70
25	1H	241	A	C2-N3-C4	-5.51	107.84	110.60
25	14	789	A	O5'-P-OP1	-5.51	100.74	105.70
25	14	835	A	C5-C6-N1	5.51	120.46	117.70
25	14	1443	G	C6-C5-N7	-5.51	127.09	130.40
25	14	1695	G	N3-C2-N2	5.51	123.76	119.90
25	1H	793	A	N3-C4-N9	5.51	131.81	127.40
25	1H	935	C	C2-N3-C4	-5.51	117.14	119.90
25	1H	1765	C	C6-N1-C1'	5.51	127.41	120.80
25	14	34	C	N3-C4-N4	-5.51	114.14	118.00
25	14	1368	G	OP1-P-O3'	5.51	117.32	105.20
25	14	2390	U	C6-N1-C2	-5.51	117.69	121.00
35	35	62	LEU	N-CA-C	5.51	125.88	111.00
25	1H	197	A	C5-N7-C8	-5.51	101.15	103.90
25	1H	1695	G	N1-C2-N2	-5.51	111.24	116.20
55	1G	1502	A	C4-C5-N7	5.51	113.45	110.70
25	14	854	G	C8-N9-C4	-5.51	104.20	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	2346	A	C8-N9-C4	-5.51	103.60	105.80
1	13	972	C	C6-N1-C2	-5.51	118.10	120.30
25	1H	743	G	OP1-P-OP2	5.51	127.86	119.60
25	1H	784	A	OP1-P-O3'	5.51	117.31	105.20
25	1H	1660	C	C5-C6-N1	-5.51	118.25	121.00
25	1H	1779	U	OP1-P-OP2	5.51	127.86	119.60
25	1H	1816	G	C4-N9-C1'	-5.51	119.34	126.50
25	1H	2020	A	N1-C6-N6	5.51	121.90	118.60
25	1H	2708	G	C2-N3-C4	-5.51	109.15	111.90
55	1G	481	G	N3-C4-C5	-5.51	125.85	128.60
25	14	1950	G	C6-C5-N7	-5.51	127.10	130.40
25	14	2002	G	C5-N7-C8	-5.51	101.55	104.30
24	4K	17	U	C5-C6-N1	-5.50	119.95	122.70
25	1H	909	A	C2-N3-C4	5.50	113.35	110.60
25	1H	1834	U	C4-C5-C6	5.50	123.00	119.70
25	14	1899	G	C5-N7-C8	-5.50	101.55	104.30
1	13	1416	G	N9-C4-C5	5.50	107.60	105.40
25	1H	404	C	P-O3'-C3'	5.50	126.31	119.70
25	1H	827	U	N1-C2-O2	-5.50	118.95	122.80
25	1H	1244	G	C5-C6-O6	-5.50	125.30	128.60
25	1H	2008	C	C5-C6-N1	-5.50	118.25	121.00
25	1H	2395	C	C5-C4-N4	-5.50	116.35	120.20
25	1H	2053	G	C5-C6-N1	5.50	114.25	111.50
25	1H	2271	G	OP2-P-O3'	5.50	117.30	105.20
25	1H	2495	G	N7-C8-N9	-5.50	110.35	113.10
25	14	1923	U	N1-C2-O2	5.50	126.65	122.80
25	14	2517	C	O4'-C1'-N1	5.50	112.60	108.20
1	13	336	C	N1-C2-O2	-5.50	115.60	118.90
1	13	757	U	C5-C6-N1	-5.50	119.95	122.70
25	14	1757	U	C6-N1-C2	5.50	124.30	121.00
25	14	1640	C	OP2-P-O3'	5.50	117.30	105.20
25	14	2067	G	N3-C2-N2	-5.50	116.05	119.90
25	14	211	A	C5-C6-N6	-5.50	119.30	123.70
1	13	1394	A	C8-N9-C4	5.50	108.00	105.80
25	14	2431	U	C5-C6-N1	-5.50	119.95	122.70
1	13	1438	G	C5-C6-O6	-5.49	125.30	128.60
25	1H	730	C	N3-C4-N4	-5.49	114.15	118.00
25	1H	1776	G	C4-C5-N7	5.49	113.00	110.80
25	1H	2578	G	N1-C6-O6	-5.49	116.60	119.90
25	1H	2606	C	OP1-P-O3'	5.49	117.28	105.20
55	1G	350	G	C8-N9-C1'	-5.49	119.86	127.00
25	14	567	A	N1-C6-N6	5.49	121.90	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1650	G	C8-N9-C4	-5.49	104.20	106.40
25	14	1700	A	P-O3'-C3'	5.49	126.29	119.70
25	14	2606	C	C5-C6-N1	-5.49	118.25	121.00
25	14	2880	C	N3-C4-C5	-5.49	119.70	121.90
25	1H	2821	A	C4-C5-C6	5.49	119.75	117.00
25	14	808	G	O5'-P-OP2	-5.49	100.76	105.70
25	1H	256	A	C2-N3-C4	-5.49	107.86	110.60
25	1H	589	C	N3-C4-C5	5.49	124.10	121.90
25	1H	1453	A	C8-N9-C4	5.49	108.00	105.80
25	1H	1224	G	N1-C6-O6	-5.49	116.61	119.90
25	1H	1905	C	C4-C5-C6	5.49	120.14	117.40
25	14	796	C	C2-N3-C4	-5.49	117.16	119.90
25	14	1259	G	C2-N3-C4	-5.49	109.16	111.90
25	14	2601	C	C4-C5-C6	5.49	120.14	117.40
25	1H	265	A	N7-C8-N9	5.49	116.54	113.80
25	1H	676	A	N9-C4-C5	5.49	108.00	105.80
25	1H	2027	G	C5-N7-C8	5.49	107.04	104.30
25	1H	1784	A	C2-N3-C4	-5.49	107.86	110.60
25	1H	2666	C	C6-N1-C2	-5.49	118.11	120.30
25	14	389	G	C5-C6-N1	5.49	114.24	111.50
25	14	1946	U	N3-C4-C5	5.49	117.89	114.60
55	1G	808	C	N3-C4-N4	-5.48	114.16	118.00
1	13	767	A	C2-N3-C4	-5.48	107.86	110.60
25	14	486	C	C5-C6-N1	5.48	123.74	121.00
25	14	1892	C	N1-C2-O2	-5.48	115.61	118.90
25	1H	508	G	C6-C5-N7	-5.48	127.11	130.40
25	1H	1395	A	O5'-P-OP2	-5.48	100.77	105.70
25	1H	2439	A	C8-N9-C4	-5.48	103.61	105.80
25	14	856	C	O5'-P-OP1	-5.48	100.77	105.70
57	39	24	LEU	CA-CB-CG	5.48	127.90	115.30
25	1H	2254	C	N3-C4-C5	-5.48	119.71	121.90
1	13	510	A	N7-C8-N9	5.48	116.54	113.80
25	1H	113	G	N3-C4-N9	-5.48	122.71	126.00
25	1H	258	G	C8-N9-C4	5.48	108.59	106.40
25	1H	1003	G	C8-N9-C1'	-5.48	119.88	127.00
25	1H	1807	G	C6-N1-C2	-5.48	121.81	125.10
25	1H	2025	C	N3-C4-N4	5.48	121.83	118.00
55	1G	317	G	C6-C5-N7	-5.48	127.11	130.40
25	14	933	A	C5-N7-C8	-5.48	101.16	103.90
25	14	1199	U	O5'-P-OP1	-5.48	100.77	105.70
25	14	2510	C	N3-C4-N4	-5.48	114.17	118.00
57	39	125	LEU	CA-CB-CG	5.48	127.90	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	783	A	C5-C6-N6	-5.48	119.32	123.70
25	1H	912	C	C6-N1-C2	-5.48	118.11	120.30
25	1H	198	C	N3-C4-C5	5.47	124.09	121.90
25	1H	972	G	N7-C8-N9	-5.47	110.36	113.10
25	1H	973	A	C2-N3-C4	-5.47	107.86	110.60
25	1H	1314	C	N1-C2-O2	5.47	122.19	118.90
25	1H	1937	A	N7-C8-N9	-5.47	111.06	113.80
25	14	211	A	C4-C5-N7	5.47	113.44	110.70
25	1H	202	U	C6-N1-C2	5.47	124.28	121.00
25	1H	869	G	OP1-P-O3'	5.47	117.24	105.20
25	1H	1517	G	OP1-P-O3'	5.47	117.24	105.20
25	1H	1634	A	OP1-P-OP2	5.47	127.81	119.60
25	14	954	G	O5'-P-OP1	-5.47	100.78	105.70
25	14	1191	G	O5'-P-OP2	-5.47	100.78	105.70
25	14	2622	C	C5-C6-N1	-5.47	118.26	121.00
1	13	1489	G	O5'-P-OP1	-5.47	100.78	105.70
25	14	53	A	C8-N9-C4	-5.47	103.61	105.80
25	14	114	U	C6-N1-C1'	-5.47	113.54	121.20
25	14	2391	G	N3-C4-N9	-5.47	122.72	126.00
25	1H	134	C	N3-C4-C5	5.47	124.09	121.90
25	1H	731	C	OP1-P-O3'	5.47	117.23	105.20
25	1H	929	G	N3-C4-N9	5.47	129.28	126.00
25	1H	1354	A	C2-N3-C4	-5.47	107.86	110.60
25	14	1653	G	N3-C4-N9	5.47	129.28	126.00
25	14	1800	C	N1-C2-O2	-5.47	115.62	118.90
25	14	2258	C	C4-C5-C6	5.47	120.14	117.40
25	1H	55	G	N3-C2-N2	-5.47	116.07	119.90
25	1H	142	G	C2-N3-C4	-5.47	109.17	111.90
25	1H	152	G	C5-C6-O6	5.47	131.88	128.60
1	13	1322	C	C5-C6-N1	5.47	123.73	121.00
55	1G	509	A	C8-N9-C4	-5.47	103.61	105.80
23	2L	72	C	N3-C4-C5	5.47	124.09	121.90
25	14	1145	C	C5-C6-N1	5.47	123.73	121.00
25	14	1823	G	C5-C6-O6	5.47	131.88	128.60
25	14	1827	C	N3-C4-C5	5.47	124.09	121.90
25	14	2087	G	N7-C8-N9	-5.47	110.37	113.10
25	14	2778	A	OP1-P-O3'	5.47	117.22	105.20
25	1H	210	C	OP2-P-O3'	5.46	117.22	105.20
25	1H	1352	U	C2-N3-C4	-5.46	123.72	127.00
25	1H	2770	G	N1-C6-O6	5.46	123.18	119.90
55	1G	1496	C	N3-C2-O2	-5.46	118.08	121.90
25	1H	204	A	N9-C4-C5	5.46	107.98	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1824	G	C5-C6-O6	-5.46	125.32	128.60
25	1H	1941	C	N3-C4-C5	-5.46	119.72	121.90
25	1H	2501	C	C6-N1-C2	5.46	122.48	120.30
25	14	236	C	C5-C6-N1	-5.46	118.27	121.00
25	1H	530	G	C8-N9-C4	-5.46	104.22	106.40
25	1H	937	U	C5-C6-N1	-5.46	119.97	122.70
25	1H	1203	G	N1-C6-O6	-5.46	116.62	119.90
25	1H	2258	C	N3-C4-N4	5.46	121.82	118.00
25	1H	2729	G	N1-C6-O6	5.46	123.18	119.90
25	14	453	C	N3-C4-C5	5.46	124.08	121.90
25	14	993	G	OP1-P-OP2	-5.46	111.41	119.60
25	14	2475	C	C6-N1-C2	-5.46	118.11	120.30
25	14	187	G	N7-C8-N9	-5.46	110.37	113.10
25	14	1803	A	OP2-P-O3'	5.46	117.21	105.20
25	1H	585	G	C4-N9-C1'	5.46	133.59	126.50
25	1H	1157	G	N1-C6-O6	5.46	123.17	119.90
39	B8	105	LEU	CA-CB-CG	5.46	127.86	115.30
55	1G	1480	G	C5-C6-O6	-5.46	125.33	128.60
25	14	1669	A	C8-N9-C4	-5.46	103.62	105.80
1	13	253	U	O5'-P-OP1	-5.46	100.79	105.70
1	13	1496	C	C2-N3-C4	-5.46	117.17	119.90
22	1K	70	C	N1-C2-O2	5.46	122.17	118.90
25	1H	461	C	N3-C4-C5	-5.46	119.72	121.90
25	1H	723	G	N9-C4-C5	-5.46	103.22	105.40
25	1H	1985	G	C2-N3-C4	5.46	114.63	111.90
25	14	59	U	N3-C2-O2	-5.46	118.38	122.20
25	14	1627	G	C5-C6-O6	5.46	131.87	128.60
25	14	1939	U	N3-C4-O4	-5.46	115.58	119.40
25	1H	96	G	C5-C6-O6	-5.46	125.33	128.60
25	1H	2507	C	C6-N1-C2	-5.46	118.12	120.30
25	1H	182	A	C8-N9-C4	5.45	107.98	105.80
25	1H	405	U	C2-N1-C1'	5.45	124.24	117.70
25	1H	1159	U	C5-C6-N1	-5.45	119.97	122.70
25	1H	1653	G	C8-N9-C1'	-5.45	119.91	127.00
25	1H	1807	G	C5-C6-N1	5.45	114.23	111.50
25	1H	1968	G	OP2-P-O3'	5.45	117.20	105.20
25	1H	2403	C	C6-N1-C2	-5.45	118.12	120.30
25	1H	2714	G	O5'-P-OP2	5.45	117.24	110.70
55	1G	1499	A	C4-C5-C6	-5.45	114.27	117.00
25	14	1496	A	C6-C5-N7	-5.45	128.48	132.30
25	1H	2226	C	C6-N1-C2	5.45	122.48	120.30
25	1H	2566	A	N9-C4-C5	5.45	107.98	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	172	A	C8-N9-C4	-5.45	103.62	105.80
23	2K	13	C	C6-N1-C2	-5.45	118.12	120.30
25	1H	1566	A	C5-C6-N6	-5.45	119.34	123.70
25	1H	1673	U	N1-C2-O2	-5.45	118.98	122.80
25	1H	2243	U	N1-C2-O2	-5.45	118.98	122.80
25	1H	2565	A	N1-C2-N3	-5.45	126.58	129.30
55	1G	328	C	P-O3'-C3'	5.45	126.24	119.70
55	1G	826	C	C6-N1-C2	5.45	122.48	120.30
25	14	2601	C	N1-C2-N3	5.45	123.02	119.20
1	13	1116	C	C5-C6-N1	-5.45	118.28	121.00
25	1H	1216	G	OP1-P-OP2	-5.45	111.43	119.60
55	1G	356	A	C8-N9-C4	-5.45	103.62	105.80
25	14	1314	C	N1-C2-O2	5.45	122.17	118.90
25	1H	956	G	C5-C6-O6	-5.45	125.33	128.60
25	1H	1611	C	C4-C5-C6	5.45	120.12	117.40
25	1H	1984	G	C5'-C4'-O4'	5.45	115.64	109.10
1	13	1177	G	C8-N9-C4	5.45	108.58	106.40
1	13	1517	G	C5-C6-O6	-5.45	125.33	128.60
25	1H	509	C	C6-N1-C2	-5.45	118.12	120.30
25	1H	528	A	C8-N9-C4	-5.45	103.62	105.80
25	1H	616	A	OP2-P-O3'	5.45	117.18	105.20
25	1H	1401	G	C8-N9-C4	-5.45	104.22	106.40
25	1H	1599	C	O5'-P-OP2	-5.45	100.80	105.70
25	14	1011	G	C8-N9-C4	5.45	108.58	106.40
25	14	1404	C	N1-C2-O2	5.45	122.17	118.90
25	1H	1937	A	C5-N7-C8	5.44	106.62	103.90
25	14	250	G	N7-C8-N9	5.44	115.82	113.10
25	1H	94	G	N1-C6-O6	5.44	123.17	119.90
25	1H	1471	A	C5-N7-C8	-5.44	101.18	103.90
25	1H	1992	G	C2'-C3'-O3'	5.44	122.41	113.70
25	14	1614	A	C5-N7-C8	-5.44	101.18	103.90
25	14	2681	C	C4-C5-C6	5.44	120.12	117.40
25	1H	82	G	C2-N3-C4	5.44	114.62	111.90
25	1H	659	C	O5'-P-OP2	-5.44	100.80	105.70
25	14	123	G	N3-C2-N2	5.44	123.71	119.90
25	14	422	A	N1-C2-N3	5.44	132.02	129.30
25	14	574	C	N3-C4-C5	5.44	124.08	121.90
25	14	1528	A	N7-C8-N9	5.44	116.52	113.80
25	14	2385	C	C2-N3-C4	-5.44	117.18	119.90
25	14	2506	U	C5-C6-N1	5.44	125.42	122.70
26	1J	56	G	C8-N9-C1'	-5.44	119.93	127.00
1	13	246	A	N9-C4-C5	-5.44	103.62	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	2440	C	O5'-P-OP1	-5.44	100.81	105.70
1	13	580	U	C2-N3-C4	-5.44	123.74	127.00
25	1H	238	C	C5-C6-N1	-5.44	118.28	121.00
25	1H	1347	G	N1-C2-N2	5.44	121.09	116.20
25	14	574	C	C6-N1-C2	5.44	122.47	120.30
25	14	788	A	C4-C5-N7	5.44	113.42	110.70
25	14	1656	C	OP2-P-O3'	5.44	117.16	105.20
25	14	2053	G	OP1-P-OP2	-5.44	111.44	119.60
25	14	2441	C	C6-N1-C2	5.44	122.47	120.30
25	1H	1495	A	C5-C6-N1	5.44	120.42	117.70
25	14	730	C	C2-N3-C4	-5.44	117.18	119.90
25	1H	1437	C	C2-N1-C1'	5.43	124.78	118.80
25	1H	1972	A	C6-N1-C2	-5.43	115.34	118.60
25	1H	2328	A	N9-C4-C5	-5.43	103.63	105.80
55	1G	377	G	N1-C6-O6	5.43	123.16	119.90
22	1L	83	C	N3-C2-O2	-5.43	118.09	121.90
25	14	1480	G	C6-C5-N7	-5.43	127.14	130.40
25	14	2045	C	C5-C4-N4	-5.43	116.40	120.20
1	13	782	A	N1-C6-N6	5.43	121.86	118.60
25	1H	238	C	C4-C5-C6	5.43	120.12	117.40
25	1H	973	A	N1-C2-N3	5.43	132.02	129.30
25	1H	1004	C	C4-C5-C6	5.43	120.12	117.40
25	1H	2281	C	C5-C4-N4	-5.43	116.40	120.20
25	14	2282	G	N3-C2-N2	-5.43	116.10	119.90
48	G5	16	LEU	CA-CB-CG	5.43	127.79	115.30
25	1H	2374	C	C2-N3-C4	-5.43	117.19	119.90
25	1H	552	G	C2-N3-C4	-5.43	109.19	111.90
25	1H	1572	A	C2-N3-C4	-5.43	107.89	110.60
25	14	737	C	C2-N3-C4	-5.43	117.19	119.90
25	14	1797	C	C5-C4-N4	-5.43	116.40	120.20
25	14	2598	A	O5'-P-OP1	-5.43	100.81	105.70
25	14	1142(A)	A	O4'-C1'-N9	-5.43	103.86	108.20
25	14	2361	A	C2-N3-C4	-5.43	107.89	110.60
25	1H	1476	C	C6-N1-C2	-5.42	118.13	120.30
25	1H	1831	G	C5-C6-O6	-5.42	125.34	128.60
25	1H	1853	A	C4-C5-C6	5.42	119.71	117.00
25	1H	2756	U	OP1-P-O3'	5.42	117.13	105.20
25	14	95	G	C8-N9-C1'	-5.42	119.95	127.00
25	14	191	A	C8-N9-C4	5.42	107.97	105.80
25	1H	247	G	N7-C8-N9	-5.42	110.39	113.10
25	1H	757	U	C5-C4-O4	5.42	129.15	125.90
25	1H	2040	C	O5'-P-OP1	-5.42	100.82	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	2277	G	C2-N3-C4	5.42	114.61	111.90
25	1H	2337	G	N1-C6-O6	5.42	123.15	119.90
1	13	717	C	N3-C4-C5	5.42	124.07	121.90
1	13	963	G	C8-N9-C1'	-5.42	119.95	127.00
25	1H	508	G	C4-N9-C1'	5.42	133.55	126.50
25	1H	578	A	O5'-P-OP2	-5.42	100.82	105.70
25	1H	1330	C	C6-N1-C2	-5.42	118.13	120.30
25	1H	1403	C	N3-C2-O2	-5.42	118.11	121.90
25	1H	2526	G	OP1-P-OP2	-5.42	111.47	119.60
25	14	1261	C	C6-N1-C2	5.42	122.47	120.30
1	13	1511	G	N1-C2-N2	-5.42	111.32	116.20
25	1H	698	C	N3-C4-N4	5.42	121.79	118.00
25	14	2392	A	N3-C4-N9	-5.42	123.06	127.40
25	14	2406	U	O4'-C1'-N1	-5.42	103.86	108.20
25	14	2413	G	N1-C6-O6	5.42	123.15	119.90
25	1H	528	A	C4-C5-N7	5.42	113.41	110.70
25	1H	1888	G	C5-C6-O6	-5.42	125.35	128.60
25	1H	2040	C	N3-C4-N4	5.42	121.79	118.00
25	1H	2287	A	C6-N1-C2	5.42	121.85	118.60
23	2L	76	C	N1-C2-O2	-5.42	115.65	118.90
25	14	204	A	P-O3'-C3'	5.42	126.20	119.70
25	14	796	C	C6-N1-C2	5.42	122.47	120.30
25	1H	681	G	N3-C4-N9	5.42	129.25	126.00
25	1H	2518	A	C8-N9-C4	-5.42	103.63	105.80
25	1H	2598	A	C8-N9-C4	5.42	107.97	105.80
25	14	725	G	C5-C6-N1	-5.42	108.79	111.50
25	14	2005	A	C2-N3-C4	5.42	113.31	110.60
25	14	2604	U	C5-C4-O4	-5.42	122.65	125.90
1	13	813	U	N3-C4-O4	-5.42	115.61	119.40
25	14	127	A	OP1-P-O3'	5.42	117.11	105.20
25	14	211	A	N1-C6-N6	5.42	121.85	118.60
1	13	1407	C	C5-C4-N4	5.41	123.99	120.20
25	1H	1940	U	C5-C4-O4	-5.41	122.65	125.90
1	13	792	A	N7-C8-N9	5.41	116.51	113.80
25	14	1908	C	OP2-P-O3'	5.41	117.11	105.20
1	13	294	U	OP2-P-O3'	5.41	117.10	105.20
25	14	600	G	N1-C6-O6	5.41	123.15	119.90
25	14	670	A	OP1-P-OP2	-5.41	111.48	119.60
25	14	1284	A	N1-C6-N6	5.41	121.85	118.60
25	14	1333	C	N3-C4-C5	5.41	124.06	121.90
25	14	1339	G	O5'-P-OP2	5.41	117.19	110.70
25	1H	30	G	N3-C4-N9	5.41	129.25	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1430	C	C6-N1-C2	-5.41	118.14	120.30
25	1H	2515	C	C6-N1-C2	5.41	122.46	120.30
25	14	1558	A	C8-N9-C4	-5.41	103.64	105.80
25	14	2084	C	C5-C6-N1	-5.41	118.30	121.00
1	13	758	G	N3-C4-C5	5.41	131.30	128.60
1	13	108	G	C6-C5-N7	-5.41	127.16	130.40
1	13	1234	C	N3-C2-O2	-5.41	118.12	121.90
25	1H	863	A	C5-C6-N1	5.41	120.40	117.70
25	1H	1664	A	O5'-P-OP2	5.41	117.19	110.70
55	1G	353	A	N7-C8-N9	5.41	116.50	113.80
25	14	672	C	O5'-P-OP1	5.41	117.19	110.70
25	14	2816	C	O5'-P-OP1	-5.41	100.83	105.70
25	14	57	C	N3-C2-O2	5.40	125.68	121.90
1	13	963	G	N3-C4-C5	-5.40	125.90	128.60
1	13	1144	G	N3-C4-N9	-5.40	122.76	126.00
25	1H	613	U	N3-C2-O2	-5.40	118.42	122.20
25	1H	1130	U	N3-C2-O2	-5.40	118.42	122.20
25	1H	1417	C	N3-C4-C5	-5.40	119.74	121.90
25	1H	2006	C	N3-C2-O2	5.40	125.68	121.90
55	1G	377	G	N3-C4-N9	5.40	129.24	126.00
1	13	583	A	O5'-P-OP1	-5.40	100.84	105.70
55	1G	332	G	N9-C4-C5	-5.40	103.24	105.40
25	14	197	A	P-O3'-C3'	5.40	126.18	119.70
25	14	1725	G	C8-N9-C1'	-5.40	119.98	127.00
1	13	690	G	C5-C6-N1	-5.40	108.80	111.50
25	1H	2450	A	O5'-P-OP2	-5.40	100.84	105.70
55	1G	345	C	P-O3'-C3'	5.40	126.18	119.70
25	14	703	U	C5-C4-O4	5.40	129.14	125.90
25	14	1835	G	O5'-P-OP1	-5.40	100.84	105.70
25	14	2713	A	N3-C4-N9	-5.40	123.08	127.40
22	1K	83	C	C2-N1-C1'	5.40	124.74	118.80
25	1H	992	C	C6-N1-C2	-5.40	118.14	120.30
25	1H	1017	G	N3-C2-N2	-5.40	116.12	119.90
25	1H	1825	A	C5-C6-N1	5.40	120.40	117.70
25	1H	1968	G	C5-C6-O6	-5.40	125.36	128.60
55	1G	427	U	N3-C2-O2	-5.40	118.42	122.20
55	1G	540	G	C8-N9-C4	5.40	108.56	106.40
25	14	140	A	C5-N7-C8	-5.40	101.20	103.90
25	14	1800	C	C2-N3-C4	-5.40	117.20	119.90
25	14	2433	A	C5-N7-C8	-5.40	101.20	103.90
25	1H	968	G	C5-C6-O6	5.40	131.84	128.60
25	1H	1839	G	N1-C6-O6	5.40	123.14	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	773	U	N1-C2-N3	5.40	118.14	114.90
1	13	586	C	C5-C6-N1	-5.39	118.30	121.00
25	1H	483	A	N1-C2-N3	5.39	132.00	129.30
25	1H	839	U	N1-C2-N3	5.39	118.14	114.90
25	1H	1322	A	OP2-P-O3'	5.39	117.07	105.20
25	1H	2337	G	C4-C5-N7	5.39	112.96	110.80
25	14	130	C	C5-C6-N1	-5.39	118.30	121.00
25	14	627	A	N1-C6-N6	5.39	121.84	118.60
25	1H	733	G	N1-C2-N2	-5.39	111.35	116.20
25	1H	811	U	N1-C2-N3	5.39	118.14	114.90
26	16	5	C	C6-N1-C2	5.39	122.46	120.30
25	14	479	A	C4-C5-N7	-5.39	108.00	110.70
25	14	621	A	C4-C5-N7	5.39	113.40	110.70
25	14	2442	C	C4-C5-C6	5.39	120.10	117.40
25	14	2508	G	C8-N9-C4	-5.39	104.24	106.40
25	1H	679	C	N3-C4-C5	5.39	124.06	121.90
25	14	2057	A	OP1-P-OP2	5.39	127.69	119.60
25	1H	1126	A	C2-N3-C4	-5.39	107.91	110.60
25	1H	1710	C	C6-N1-C2	5.39	122.45	120.30
25	14	835	A	C6-N1-C2	-5.39	115.37	118.60
1	13	1190	G	N1-C6-O6	5.39	123.13	119.90
25	1H	612	G	C5-C6-O6	-5.39	125.37	128.60
25	1H	1188	U	C6-N1-C2	5.39	124.23	121.00
25	14	2590	A	N7-C8-N9	-5.39	111.11	113.80
1	13	975	A	C6-C5-N7	-5.39	128.53	132.30
25	1H	844	C	C2-N1-C1'	5.39	124.73	118.80
25	1H	906	G	N9-C4-C5	5.39	107.56	105.40
25	1H	1132	A	N1-C6-N6	-5.39	115.37	118.60
25	1H	1187	G	C8-N9-C1'	-5.39	120.00	127.00
25	1H	1617	C	N1-C2-O2	-5.39	115.67	118.90
25	1H	2640	G	C8-N9-C4	-5.39	104.25	106.40
25	14	498	G	N3-C2-N2	-5.39	116.13	119.90
25	14	694	U	N1-C2-O2	5.39	126.57	122.80
25	14	1950	G	C4-N9-C1'	5.39	133.50	126.50
25	14	1954	G	C8-N9-C1'	5.39	134.00	127.00
25	14	2067	G	N9-C4-C5	5.39	107.56	105.40
25	14	2257	U	N3-C4-O4	5.39	123.17	119.40
1	13	544	G	C6-C5-N7	-5.38	127.17	130.40
1	13	811	C	O4'-C1'-N1	-5.38	103.89	108.20
1	13	985	C	C5-C6-N1	5.38	123.69	121.00
25	1H	2377	A	N3-C4-C5	5.38	130.57	126.80
25	14	1768	U	N3-C4-O4	-5.38	115.63	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1812	A	OP1-P-OP2	5.38	127.68	119.60
25	14	1939	U	C6-N1-C1'	5.38	128.74	121.20
25	14	2244	U	N1-C2-O2	-5.38	119.03	122.80
1	13	731	G	C8-N9-C4	-5.38	104.25	106.40
25	1H	46	C	N1-C2-O2	-5.38	115.67	118.90
25	1H	459	U	O5'-P-OP1	5.38	117.16	110.70
25	1H	1926	U	C2-N1-C1'	-5.38	111.24	117.70
25	1H	579	G	C5-N7-C8	5.38	106.99	104.30
26	16	44	G	N7-C8-N9	-5.38	110.41	113.10
25	14	71	A	N3-C4-C5	5.38	130.57	126.80
25	14	565	C	C4-C5-C6	5.38	120.09	117.40
25	14	1395	A	OP1-P-OP2	-5.38	111.53	119.60
25	14	1404	C	O5'-P-OP1	-5.38	100.86	105.70
25	14	2840	C	C4-C5-C6	5.38	120.09	117.40
25	1H	877	U	C5-C6-N1	5.38	125.39	122.70
25	14	691	C	C4-C5-C6	5.38	120.09	117.40
25	14	1442	G	C8-N9-C4	5.38	108.55	106.40
1	13	1327	C	N3-C4-C5	5.38	124.05	121.90
25	1H	1636	C	N3-C2-O2	5.38	125.67	121.90
25	1H	2060	A	C4-C5-C6	-5.38	114.31	117.00
25	1H	2296	U	N3-C4-O4	5.38	123.16	119.40
25	14	2436	G	N1-C6-O6	5.38	123.13	119.90
25	14	2848	G	O5'-P-OP2	-5.38	100.86	105.70
25	1H	441	U	N3-C4-O4	5.38	123.16	119.40
25	1H	500	G	OP1-P-OP2	5.38	127.67	119.60
25	1H	1728	G	C5-N7-C8	-5.38	101.61	104.30
25	1H	1857	G	N9-C4-C5	-5.38	103.25	105.40
25	14	210	C	C5-C6-N1	-5.38	118.31	121.00
25	14	306	U	N1-C2-O2	-5.38	119.04	122.80
25	14	1576	U	OP2-P-O3'	5.38	117.03	105.20
25	14	2031	A	C5-C6-N6	-5.38	119.40	123.70
55	1G	262	A	N1-C6-N6	5.38	121.83	118.60
55	1G	377	G	C5-C6-O6	-5.38	125.38	128.60
25	14	1665	A	OP2-P-O3'	5.38	117.03	105.20
25	14	2047	U	C4-C5-C6	-5.38	116.47	119.70
39	75	4	GLY	N-CA-C	-5.38	99.66	113.10
1	13	545	C	N1-C2-O2	5.37	122.12	118.90
25	1H	2622	C	C5-C6-N1	-5.37	118.31	121.00
25	14	771	G	N1-C2-N2	5.37	121.04	116.20
25	14	792	G	N1-C6-O6	-5.37	116.68	119.90
25	14	1278	A	C2-N3-C4	-5.37	107.91	110.60
25	1H	395	U	C5-C4-O4	-5.37	122.68	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1334	G	O5'-P-OP2	5.37	117.15	110.70
25	1H	1673	U	C2-N1-C1'	-5.37	111.25	117.70
32	61	131	LYS	C-N-CD	-5.37	108.78	120.60
54	Q8	7	HIS	N-CA-CB	-5.37	100.93	110.60
25	14	828	U	N3-C2-O2	-5.37	118.44	122.20
25	14	2210	G	C4-N9-C1'	5.37	133.48	126.50
25	14	2587	A	C5-C6-N6	-5.37	119.40	123.70
25	1H	2698	U	C4-C5-C6	5.37	122.92	119.70
55	1G	894	G	C6-C5-N7	-5.37	127.18	130.40
25	14	95	G	N3-C4-N9	5.37	129.22	126.00
25	14	698	C	N3-C4-C5	-5.37	119.75	121.90
25	14	1558	A	OP2-P-O3'	5.37	117.01	105.20
25	14	1728	G	N1-C6-O6	-5.37	116.68	119.90
25	1H	429	A	N1-C2-N3	5.37	131.98	129.30
25	1H	981	A	C6-N1-C2	5.37	121.82	118.60
25	1H	1977	A	O5'-P-OP2	-5.37	100.87	105.70
25	1H	2331	G	C2-N3-C4	-5.37	109.22	111.90
25	14	728	G	C8-N9-C4	5.37	108.55	106.40
25	14	1614	A	C8-N9-C4	-5.37	103.65	105.80
25	1H	696	G	C5-C6-N1	5.37	114.18	111.50
25	1H	866	A	O4'-C1'-N9	-5.37	103.91	108.20
25	1H	1368	G	N3-C4-C5	-5.37	125.92	128.60
25	14	2843	G	C8-N9-C4	5.37	108.55	106.40
25	1H	1325	G	C5-C6-N1	5.37	114.18	111.50
25	1H	1817	G	N1-C6-O6	-5.37	116.68	119.90
25	1H	1839	G	C4-C5-N7	5.37	112.95	110.80
25	1H	1888	G	C4-C5-N7	5.37	112.95	110.80
55	1G	1239	A	O5'-P-OP2	-5.37	100.87	105.70
25	14	1980	G	C4-C5-N7	5.37	112.95	110.80
25	14	2038	G	N3-C2-N2	5.37	123.66	119.90
1	13	1470	G	C5-C6-O6	-5.36	125.38	128.60
25	1H	250	G	N7-C8-N9	5.36	115.78	113.10
25	1H	541	C	N3-C4-C5	-5.36	119.75	121.90
25	1H	1313	U	N3-C4-C5	-5.36	111.38	114.60
25	1H	2582	G	N3-C4-N9	5.36	129.22	126.00
25	1H	2744	G	C2-N3-C4	-5.36	109.22	111.90
55	1G	1502	A	N1-C6-N6	5.36	121.82	118.60
25	14	1835	G	C5-C6-N1	5.36	114.18	111.50
25	14	2247	A	N1-C2-N3	5.36	131.98	129.30
25	1H	1831	G	C6-C5-N7	-5.36	127.18	130.40
25	1H	1955	U	N3-C2-O2	-5.36	118.45	122.20
25	1H	2555	U	N1-C2-O2	-5.36	119.05	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1826	G	N3-C4-N9	5.36	129.22	126.00
25	1H	609	A	C5-C6-N6	-5.36	119.41	123.70
25	1H	1489	U	C6-N1-C1'	5.36	128.71	121.20
25	1H	1519	G	C5-C6-O6	5.36	131.82	128.60
25	14	1601	G	N9-C4-C5	-5.36	103.26	105.40
1	13	652	U	O4'-C1'-N1	5.36	112.49	108.20
1	13	1530	G	C5-N7-C8	-5.36	101.62	104.30
25	1H	398	G	OP2-P-O3'	5.36	116.99	105.20
1	13	115	G	P-O3'-C3'	5.36	126.13	119.70
1	13	910	C	C6-N1-C2	5.36	122.44	120.30
25	1H	382	G	N9-C4-C5	-5.36	103.26	105.40
25	1H	410	G	C6-C5-N7	-5.36	127.19	130.40
25	1H	1831	G	C4-C5-N7	5.36	112.94	110.80
25	1H	2260	C	OP2-P-O3'	5.36	116.98	105.20
25	1H	2339	G	C8-N9-C4	5.36	108.54	106.40
55	1G	1432	G	C5-C6-N1	-5.36	108.82	111.50
25	14	662	G	O5'-P-OP1	-5.36	100.88	105.70
25	14	854	G	C5-C6-O6	5.36	131.81	128.60
25	14	1823	G	N9-C4-C5	5.36	107.54	105.40
1	13	380	G	C6-C5-N7	5.35	133.61	130.40
25	1H	25	U	C5-C4-O4	-5.35	122.69	125.90
25	1H	1806	C	C2-N1-C1'	-5.35	112.91	118.80
26	16	11	C	C2-N1-C1'	5.35	124.69	118.80
25	14	1965	C	C2-N1-C1'	-5.35	112.91	118.80
1	13	532	A	N1-C6-N6	5.35	121.81	118.60
25	1H	73	A	C2-N3-C4	5.35	113.28	110.60
55	1G	483	C	C6-N1-C2	5.35	122.44	120.30
55	1G	1242	C	C6-N1-C2	5.35	122.44	120.30
25	14	598	G	C6-N1-C2	-5.35	121.89	125.10
1	13	1432	G	C8-N9-C1'	-5.35	120.04	127.00
25	1H	1322	A	C5-N7-C8	-5.35	101.22	103.90
25	1H	2507	C	N1-C2-O2	5.35	122.11	118.90
1	13	684	A	C8-N9-C4	-5.35	103.66	105.80
2	1E	158	LEU	CA-CB-CG	5.35	127.61	115.30
23	2K	6	G	C5-C6-O6	-5.35	125.39	128.60
25	1H	779	U	OP1-P-O3'	5.35	116.97	105.20
25	1H	2441	C	OP1-P-OP2	-5.35	111.58	119.60
25	14	215	G	OP1-P-O3'	5.35	116.97	105.20
25	14	985	C	N1-C2-O2	5.35	122.11	118.90
25	14	2773	C	C5-C6-N1	-5.35	118.33	121.00
25	1H	768	G	C5-N7-C8	5.35	106.97	104.30
25	1H	808	G	OP1-P-OP2	5.35	127.62	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	844	C	N3-C4-N4	5.35	121.74	118.00
25	1H	1347	G	C5-C6-O6	-5.35	125.39	128.60
55	1G	20	U	OP1-P-OP2	5.35	127.62	119.60
25	14	670	A	C8-N9-C4	5.35	107.94	105.80
25	14	1685	C	C6-N1-C2	5.35	122.44	120.30
25	14	1687	G	O5'-P-OP2	5.35	117.12	110.70
25	1H	2560	C	O5'-P-OP1	-5.35	100.89	105.70
25	14	472	A	O5'-P-OP1	5.35	117.11	110.70
25	14	1653	G	OP1-P-OP2	5.35	127.62	119.60
25	14	2591	C	C2-N1-C1'	-5.35	112.92	118.80
1	13	690	G	N1-C2-N3	5.34	127.11	123.90
1	13	770	C	N3-C4-N4	5.34	121.74	118.00
1	13	928	G	C8-N9-C4	5.34	108.54	106.40
23	2K	31	G	O5'-P-OP2	5.34	117.11	110.70
25	1H	2368	C	N3-C4-C5	-5.34	119.76	121.90
48	K8	59	ARG	NE-CZ-NH2	5.34	122.97	120.30
25	14	27	G	OP1-P-O3'	5.34	116.96	105.20
25	14	574	C	OP1-P-O3'	5.34	116.96	105.20
55	1G	317	G	N7-C8-N9	5.34	115.77	113.10
25	14	480	A	N1-C6-N6	-5.34	115.39	118.60
25	14	1366	A	N9-C4-C5	-5.34	103.66	105.80
25	14	1788	C	N1-C2-O2	5.34	122.11	118.90
25	1H	141(A)	C	OP2-P-O3'	5.34	116.95	105.20
25	1H	1224	G	C4-N9-C1'	-5.34	119.56	126.50
25	1H	1960	A	OP1-P-O3'	5.34	116.95	105.20
55	1G	528	C	O4'-C1'-N1	5.34	112.47	108.20
25	14	177	G	N1-C6-O6	-5.34	116.69	119.90
25	14	2850	A	OP1-P-O3'	5.34	116.95	105.20
1	13	1432	G	N3-C4-N9	5.34	129.20	126.00
25	1H	470	A	N7-C8-N9	5.34	116.47	113.80
25	1H	594	U	OP2-P-O3'	5.34	116.95	105.20
25	1H	675	A	N1-C2-N3	-5.34	126.63	129.30
25	1H	1430	C	OP1-P-O3'	5.34	116.95	105.20
23	2L	68	C	N1-C2-O2	5.34	122.10	118.90
25	14	728	G	OP2-P-O3'	5.34	116.95	105.20
25	14	747	U	N3-C4-C5	5.34	117.80	114.60
25	14	2056	G	C8-N9-C4	5.34	108.54	106.40
25	14	2624	G	N3-C4-N9	5.34	129.20	126.00
25	1H	1816	G	C6-C5-N7	5.34	133.60	130.40
55	1G	301	G	N1-C6-O6	5.34	123.10	119.90
25	1H	131	G	C5-N7-C8	-5.34	101.63	104.30
25	14	566	U	C4-C5-C6	5.34	122.90	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1024	G	C6-C5-N7	-5.34	127.20	130.40
25	1H	110	G	C5-C6-N1	5.33	114.17	111.50
25	1H	1416	G	O4'-C1'-N9	5.33	112.47	108.20
25	1H	2232	U	N3-C4-O4	-5.33	115.67	119.40
25	14	479	A	C5-C6-N6	5.33	127.97	123.70
25	14	2843	G	N9-C4-C5	-5.33	103.27	105.40
25	1H	147	U	C6-N1-C2	5.33	124.20	121.00
25	1H	1938	A	N1-C2-N3	5.33	131.97	129.30
25	1H	138	G	C5-C6-O6	-5.33	125.40	128.60
25	1H	226	G	OP1-P-O3'	5.33	116.93	105.20
25	1H	602	G	C6-C5-N7	-5.33	127.20	130.40
25	1H	1266	G	N9-C4-C5	-5.33	103.27	105.40
25	1H	1572	A	N1-C2-N3	5.33	131.97	129.30
25	1H	1601	G	N1-C6-O6	-5.33	116.70	119.90
25	1H	2872	G	O5'-P-OP2	-5.33	100.90	105.70
25	14	805	G	OP1-P-O3'	5.33	116.93	105.20
25	14	821	A	C4-C5-C6	5.33	119.67	117.00
25	14	2345	G	N1-C2-N3	5.33	127.10	123.90
25	14	2754	U	C5-C6-N1	5.33	125.37	122.70
1	13	672	U	O5'-P-OP1	-5.33	100.90	105.70
25	1H	624	C	N1-C2-O2	-5.33	115.70	118.90
25	14	1984	G	N7-C8-N9	-5.33	110.44	113.10
25	14	2334	G	C8-N9-C4	5.33	108.53	106.40
25	1H	622	G	N9-C4-C5	-5.33	103.27	105.40
25	1H	702	G	O5'-P-OP2	-5.33	100.91	105.70
25	1H	2516	G	N1-C2-N2	5.33	121.00	116.20
25	14	388	G	N3-C4-N9	-5.33	122.80	126.00
25	14	945	A	N9-C1'-C2'	5.33	120.93	114.00
25	14	2564	A	C2-N3-C4	5.33	113.26	110.60
1	13	295	C	O5'-P-OP2	-5.33	100.91	105.70
25	1H	593	G	C6-N1-C2	-5.33	121.90	125.10
25	1H	2548	G	C5-C6-O6	-5.33	125.40	128.60
55	1G	963	G	N3-C4-N9	5.33	129.20	126.00
25	14	2591	C	C6-N1-C1'	5.33	127.19	120.80
1	13	771	G	C5-C6-O6	5.33	131.80	128.60
55	1G	1335	C	C6-N1-C2	5.33	122.43	120.30
25	14	74	A	C4-C5-C6	5.33	119.66	117.00
25	14	664	C	C4-C5-C6	5.33	120.06	117.40
25	14	1759	A	C8-N9-C4	5.33	107.93	105.80
25	14	1803	A	C5-C6-N6	-5.33	119.44	123.70
25	14	2826	A	C5-C6-N6	5.33	127.96	123.70
1	13	1479	C	N3-C4-N4	5.32	121.73	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	146	G	C8-N9-C4	5.32	108.53	106.40
25	1H	480	A	C6-C5-N7	-5.32	128.57	132.30
25	1H	618(A)	C	C5-C4-N4	-5.32	116.47	120.20
25	14	121	G	C4-N9-C1'	5.32	133.42	126.50
25	14	1923	U	N3-C2-O2	-5.32	118.47	122.20
25	14	2696	U	N3-C4-O4	-5.32	115.67	119.40
1	13	320	C	C2-N1-C1'	-5.32	112.95	118.80
25	1H	2544	G	C4-C5-N7	5.32	112.93	110.80
25	14	187	G	C8-N9-C4	5.32	108.53	106.40
1	13	135	C	N1-C2-O2	-5.32	115.71	118.90
25	1H	683	C	N3-C4-C5	5.32	124.03	121.90
25	14	1318	C	C6-N1-C2	-5.32	118.17	120.30
25	14	2249	U	C2-N1-C1'	5.32	124.08	117.70
25	1H	74	A	N3-C4-C5	5.32	130.52	126.80
55	1G	1228	C	N3-C2-O2	-5.32	118.18	121.90
25	14	863	A	O5'-P-OP2	-5.32	100.91	105.70
25	14	2441	C	OP1-P-OP2	-5.32	111.62	119.60
1	13	425	G	C8-N9-C4	-5.32	104.27	106.40
25	1H	541	C	C6-N1-C2	-5.32	118.17	120.30
25	1H	632	A	C4-C5-N7	5.32	113.36	110.70
25	1H	1548	C	OP1-P-O3'	5.32	116.90	105.20
25	1H	2390	U	O5'-P-OP2	5.32	117.08	110.70
55	1G	525	C	N3-C4-N4	5.32	121.72	118.00
25	14	2002	G	N1-C6-O6	5.32	123.09	119.90
25	14	2048	G	C5-C6-O6	5.32	131.79	128.60
1	13	245	C	OP2-P-O3'	5.32	116.89	105.20
25	1H	626	U	OP1-P-O3'	5.32	116.89	105.20
26	16	6	C	C6-N1-C2	5.32	122.43	120.30
25	14	1521	G	C8-N9-C4	-5.32	104.27	106.40
25	14	1790	C	N3-C2-O2	5.32	125.62	121.90
25	14	2551	C	C6-N1-C1'	5.32	127.18	120.80
25	14	2696	U	C2-N1-C1'	-5.32	111.32	117.70
25	1H	724	U	C5-C6-N1	-5.31	120.04	122.70
25	14	821	A	C8-N9-C4	-5.31	103.67	105.80
1	13	354	G	O5'-P-OP2	-5.31	100.92	105.70
1	13	1519	A	N9-C4-C5	5.31	107.92	105.80
25	1H	132	G	N1-C2-N2	-5.31	111.42	116.20
25	1H	698	C	N1-C2-O2	-5.31	115.71	118.90
25	1H	1188	U	C5-C4-O4	-5.31	122.71	125.90
25	1H	1281	G	OP1-P-OP2	-5.31	111.63	119.60
25	1H	1518	C	O5'-P-OP1	-5.31	100.92	105.70
25	1H	1578	U	C5-C4-O4	5.31	129.09	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	2843	G	O5'-P-OP1	-5.31	100.92	105.70
25	14	131	G	C8-N9-C4	5.31	108.53	106.40
25	14	1792	G	N7-C8-N9	-5.31	110.44	113.10
25	14	1914	C	C2-N1-C1'	5.31	124.64	118.80
25	14	1964	G	N3-C4-C5	-5.31	125.94	128.60
25	1H	1782	C	O5'-P-OP1	-5.31	100.92	105.70
25	14	823	G	N3-C2-N2	5.31	123.62	119.90
23	2K	48	U	P-O3'-C3'	5.31	126.07	119.70
25	1H	686	G	N3-C4-N9	5.31	129.19	126.00
25	1H	974(A)	C	N3-C4-C5	-5.31	119.78	121.90
25	1H	1352	U	O5'-P-OP2	-5.31	100.92	105.70
25	1H	1555	G	N3-C2-N2	-5.31	116.18	119.90
25	1H	2871	C	O5'-P-OP2	-5.31	100.92	105.70
23	2L	41	C	C6-N1-C2	-5.31	118.18	120.30
25	14	985	C	N3-C2-O2	-5.31	118.18	121.90
25	14	1955	U	C5-C4-O4	5.31	129.09	125.90
1	13	816	A	O5'-P-OP2	5.31	117.07	110.70
1	13	821	G	N3-C4-C5	-5.31	125.95	128.60
25	1H	1184	G	OP2-P-O3'	5.31	116.88	105.20
25	1H	1921	G	C8-N9-C4	5.31	108.52	106.40
55	1G	812	C	N3-C4-N4	5.31	121.72	118.00
25	14	213	A	C5-C6-N6	-5.31	119.45	123.70
1	13	988	G	N3-C4-C5	-5.31	125.95	128.60
25	1H	71	A	N1-C6-N6	5.31	121.78	118.60
25	1H	533	G	O5'-P-OP2	5.31	117.07	110.70
25	14	595	C	C5-C6-N1	5.31	123.65	121.00
25	14	1955	U	C2-N3-C4	-5.31	123.82	127.00
25	14	1968	G	N3-C4-C5	5.31	131.25	128.60
25	14	2830	G	N3-C4-N9	-5.31	122.82	126.00
1	13	666	G	O5'-P-OP1	-5.30	100.93	105.70
25	1H	411	G	N3-C4-C5	-5.30	125.95	128.60
25	1H	692	C	C6-N1-C2	5.30	122.42	120.30
25	1H	1355	G	C8-N9-C4	-5.30	104.28	106.40
25	1H	1643	G	C5-C6-O6	5.30	131.78	128.60
25	14	2624	G	C2-N3-C4	5.30	114.55	111.90
1	13	568	G	O5'-P-OP1	-5.30	100.93	105.70
1	13	1344	C	OP1-P-O3'	5.30	116.86	105.20
25	1H	121	G	C6-N1-C2	-5.30	121.92	125.10
25	1H	655	A	N7-C8-N9	5.30	116.45	113.80
25	1H	741	G	C5-N7-C8	-5.30	101.65	104.30
25	1H	1295	C	C2-N3-C4	-5.30	117.25	119.90
25	1H	2438	U	C6-N1-C1'	-5.30	113.78	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
45	H8	117	LEU	CA-CB-CG	5.30	127.50	115.30
55	1G	291	C	C2-N3-C4	-5.30	117.25	119.90
25	14	912	C	C2-N1-C1'	5.30	124.63	118.80
25	1H	2415	G	N3-C2-N2	-5.30	116.19	119.90
25	14	256	A	C2-N3-C4	-5.30	107.95	110.60
25	14	338	G	C8-N9-C1'	-5.30	120.11	127.00
25	14	2069	G	OP1-P-OP2	5.30	127.55	119.60
25	1H	199	A	C4-C5-C6	-5.30	114.35	117.00
25	1H	779	U	OP1-P-OP2	-5.30	111.65	119.60
25	1H	1984	G	N7-C8-N9	-5.30	110.45	113.10
25	1H	2062	A	C5'-C4'-C3'	-5.30	107.52	116.00
25	14	1999	C	C2-N3-C4	-5.30	117.25	119.90
25	1H	107	C	N1-C2-O2	-5.30	115.72	118.90
25	1H	1348	G	OP1-P-O3'	5.30	116.85	105.20
25	1H	2275	C	C5-C6-N1	5.30	123.65	121.00
55	1G	1074	G	C5-C6-N1	-5.30	108.85	111.50
25	14	110	G	C5-C6-O6	-5.30	125.42	128.60
25	14	2623	G	N3-C4-C5	-5.30	125.95	128.60
1	13	49	U	O5'-P-OP2	-5.29	100.94	105.70
1	13	1366	C	C5-C6-N1	5.29	123.65	121.00
25	1H	1905	C	C5-C4-N4	-5.29	116.49	120.20
25	14	2003	G	N3-C4-N9	5.29	129.18	126.00
1	13	975	A	N7-C8-N9	5.29	116.45	113.80
25	1H	509	C	C2-N1-C1'	5.29	124.62	118.80
25	1H	2452	C	N1-C2-O2	-5.29	115.72	118.90
25	1H	2467	C	N3-C4-C5	5.29	124.02	121.90
22	1L	83	C	C2-N1-C1'	5.29	124.62	118.80
25	14	832	G	N9-C4-C5	5.29	107.52	105.40
1	13	510	A	N1-C6-N6	5.29	121.78	118.60
25	1H	23	G	N9-C4-C5	5.29	107.52	105.40
25	1H	2447	G	N1-C2-N3	5.29	127.08	123.90
25	1H	2619	C	C2-N3-C4	-5.29	117.25	119.90
25	14	459	U	O5'-P-OP2	-5.29	100.94	105.70
25	14	988	A	N1-C6-N6	5.29	121.78	118.60
25	14	1031	G	N1-C6-O6	5.29	123.08	119.90
25	14	1269	A	C2-N3-C4	-5.29	107.95	110.60
25	14	1703	G	C8-N9-C4	5.29	108.52	106.40
25	14	2452	C	N3-C2-O2	5.29	125.61	121.90
25	14	2551	C	C5-C6-N1	-5.29	118.35	121.00
35	35	85	LEU	CA-CB-CG	5.29	127.47	115.30
25	1H	1017	G	N3-C4-N9	-5.29	122.83	126.00
25	1H	2178	C	C6-N1-C2	-5.29	118.18	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	2713	A	C8-N9-C4	-5.29	103.68	105.80
55	1G	1507	A	C6-N1-C2	-5.29	115.43	118.60
25	14	2061	G	N9-C4-C5	-5.29	103.28	105.40
25	14	2451	A	N1-C2-N3	5.29	131.94	129.30
25	1H	2545	G	C6-N1-C2	-5.29	121.93	125.10
55	1G	691	G	C5-C6-O6	-5.29	125.43	128.60
55	1G	897	C	N3-C2-O2	5.29	125.60	121.90
55	1G	900	A	N9-C4-C5	-5.29	103.69	105.80
25	1H	239	U	N3-C4-O4	-5.29	115.70	119.40
25	1H	773	U	N3-C2-O2	-5.29	118.50	122.20
25	1H	1820	U	O5'-P-OP2	-5.29	100.94	105.70
22	3L	36	U	O5'-P-OP2	-5.29	100.94	105.70
25	14	1646	C	OP1-P-O3'	5.29	116.83	105.20
25	1H	111	A	C5-C6-N1	5.29	120.34	117.70
25	1H	673	C	N1-C2-O2	-5.29	115.73	118.90
25	1H	801	G	N9-C4-C5	5.29	107.51	105.40
25	1H	1693	U	C4-C5-C6	5.29	122.87	119.70
25	1H	1818	U	C2-N3-C4	-5.29	123.83	127.00
26	16	35	U	N3-C2-O2	-5.29	118.50	122.20
25	14	246	C	O5'-P-OP1	-5.29	100.94	105.70
25	14	1346	G	N1-C6-O6	-5.29	116.73	119.90
25	14	1925	C	OP2-P-O3'	5.29	116.83	105.20
25	1H	383	U	C2-N1-C1'	-5.28	111.36	117.70
25	1H	633	A	C2-N3-C4	-5.28	107.96	110.60
25	1H	784	A	C5-N7-C8	5.28	106.54	103.90
25	1H	1622	G	N3-C2-N2	-5.28	116.20	119.90
25	1H	1678	G	C5-C6-N1	-5.28	108.86	111.50
25	1H	1789	A	C5-C6-N1	5.28	120.34	117.70
25	1H	1835	G	N3-C4-N9	5.28	129.17	126.00
25	14	954	G	C4-C5-N7	-5.28	108.69	110.80
25	14	1820	U	O5'-P-OP1	-5.28	100.94	105.70
25	1H	593	G	N7-C8-N9	-5.28	110.46	113.10
25	1H	621	A	O4'-C1'-N9	5.28	112.43	108.20
25	1H	630	G	C4-N9-C1'	-5.28	119.63	126.50
25	1H	1937	A	C8-N9-C4	5.28	107.91	105.80
25	1H	2028	U	O5'-P-OP2	5.28	117.04	110.70
25	1H	2502	G	N9-C4-C5	5.28	107.51	105.40
25	14	2301	C	C5-C6-N1	5.28	123.64	121.00
2	1E	196	LEU	CA-CB-CG	5.28	127.45	115.30
25	1H	821	A	O5'-P-OP2	-5.28	100.95	105.70
25	1H	1382	G	C2-N3-C4	-5.28	109.26	111.90
25	1H	2048	G	C8-N9-C4	-5.28	104.29	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	2230	G	N1-C6-O6	5.28	123.07	119.90
25	1H	253	C	O5'-P-OP2	5.28	117.03	110.70
25	1H	1672	C	O5'-P-OP2	5.28	117.03	110.70
25	1H	2019	A	N1-C6-N6	5.28	121.77	118.60
25	14	194	G	N3-C2-N2	-5.28	116.20	119.90
25	14	992	C	C6-N1-C2	-5.28	118.19	120.30
1	13	856	C	C6-N1-C2	-5.28	118.19	120.30
1	13	1527	C	N1-C2-O2	-5.28	115.73	118.90
25	1H	266	G	C8-N9-C4	5.28	108.51	106.40
25	1H	1728	G	N7-C8-N9	5.28	115.74	113.10
25	1H	2011	U	OP1-P-O3'	5.28	116.81	105.20
25	1H	2288	A	N1-C6-N6	5.28	121.77	118.60
25	1H	2501	C	C6-N1-C1'	5.28	127.13	120.80
55	1G	899	C	C6-N1-C2	5.28	122.41	120.30
1	13	872	A	N1-C2-N3	-5.28	126.66	129.30
25	1H	200	U	C2-N3-C4	-5.28	123.83	127.00
25	1H	1202	C	C4-C5-C6	5.28	120.04	117.40
25	1H	1344	G	C4-C5-N7	5.28	112.91	110.80
25	1H	1564	C	C5-C4-N4	5.28	123.89	120.20
25	1H	2427	C	C5-C6-N1	-5.28	118.36	121.00
25	14	598	G	N3-C4-N9	5.28	129.16	126.00
25	1H	1964	G	O4'-C1'-N9	-5.27	103.98	108.20
25	14	2425	A	N1-C2-N3	5.27	131.94	129.30
1	13	237	C	N1-C2-O2	-5.27	115.74	118.90
1	13	1337	G	N3-C4-N9	-5.27	122.84	126.00
25	1H	182	A	N1-C6-N6	5.27	121.76	118.60
25	1H	788	A	C5-C6-N6	-5.27	119.48	123.70
25	1H	793	A	O5'-P-OP2	-5.27	100.95	105.70
25	1H	816	C	N3-C4-N4	5.27	121.69	118.00
25	1H	1003	G	C5-N7-C8	5.27	106.94	104.30
25	1H	1830	C	N3-C4-C5	5.27	124.01	121.90
25	1H	2568	C	C5-C6-N1	-5.27	118.36	121.00
25	14	669	G	C6-N1-C2	-5.27	121.94	125.10
25	14	1333	C	C5-C4-N4	-5.27	116.51	120.20
25	14	2055	C	C6-N1-C2	5.27	122.41	120.30
25	1H	263	C	N3-C2-O2	-5.27	118.21	121.90
25	1H	1997	G	N1-C2-N2	-5.27	111.46	116.20
25	1H	2787	C	C5-C6-N1	5.27	123.64	121.00
25	14	375	C	C2-N3-C4	-5.27	117.27	119.90
25	14	2426	A	C4-C5-N7	5.27	113.34	110.70
1	13	428	G	C2-N3-C4	-5.27	109.27	111.90
1	13	882	C	C6-N1-C2	-5.27	118.19	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	273(A)	G	N9-C4-C5	-5.27	103.29	105.40
25	1H	1189	A	N1-C2-N3	-5.27	126.67	129.30
25	14	1808	U	O5'-P-OP1	-5.27	100.96	105.70
1	13	266	G	N7-C8-N9	5.27	115.73	113.10
1	13	926	G	N1-C6-O6	-5.27	116.74	119.90
25	1H	138	G	C5-C6-N1	5.27	114.13	111.50
25	1H	330	A	N1-C6-N6	5.27	121.76	118.60
25	1H	566	U	N3-C2-O2	5.27	125.89	122.20
36	88	2	LEU	CA-CB-CG	5.27	127.41	115.30
54	Q8	62	LEU	N-CA-C	-5.27	96.78	111.00
25	14	577	G	O5'-P-OP1	-5.27	100.96	105.70
25	1H	1520	U	O5'-P-OP2	-5.27	100.96	105.70
25	1H	2032	G	C8-N9-C1'	-5.27	120.16	127.00
25	1H	2600	A	N1-C2-N3	5.27	131.93	129.30
25	14	561	G	C8-N9-C1'	5.27	133.85	127.00
25	14	2387	U	C5-C6-N1	-5.27	120.07	122.70
1	13	1197	G	OP1-P-O3'	5.26	116.78	105.20
25	1H	202	U	N1-C2-N3	-5.26	111.74	114.90
25	1H	2308	G	C4-C5-N7	5.26	112.91	110.80
25	1H	2519	U	N3-C4-O4	5.26	123.08	119.40
25	14	2071	A	C6-N1-C2	-5.26	115.44	118.60
25	1H	1805	U	OP2-P-O3'	5.26	116.78	105.20
25	1H	2461	C	OP1-P-OP2	5.26	127.50	119.60
25	1H	2284	C	N3-C2-O2	5.26	125.58	121.90
55	1G	1190	G	C4-C5-N7	-5.26	108.69	110.80
25	14	912	C	C5-C6-N1	5.26	123.63	121.00
25	14	1786	A	C4-N9-C1'	5.26	135.77	126.30
25	14	2600	A	C5-C6-N6	5.26	127.91	123.70
1	13	612	C	N1-C2-O2	-5.26	115.75	118.90
1	13	703	G	C8-N9-C1'	-5.26	120.16	127.00
25	1H	99	U	N1-C2-O2	5.26	126.48	122.80
25	1H	658	C	O5'-P-OP2	-5.26	100.97	105.70
25	1H	686	G	C4-C5-N7	5.26	112.90	110.80
25	1H	1283	G	C2-N3-C4	5.26	114.53	111.90
25	1H	2507	C	C2-N3-C4	5.26	122.53	119.90
26	16	26	A	O5'-P-OP2	5.26	117.01	110.70
24	4L	21	C	C5-C6-N1	5.26	123.63	121.00
25	14	208	C	OP2-P-O3'	5.26	116.77	105.20
25	14	1349	A	N7-C8-N9	5.26	116.43	113.80
25	14	1610	A	N9-C4-C5	-5.26	103.70	105.80
25	1H	1648	C	N3-C2-O2	5.26	125.58	121.90
25	1H	2050	C	C5-C4-N4	-5.26	116.52	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	2266	A	C6-N1-C2	-5.26	115.45	118.60
25	1H	2617	C	N1-C2-O2	-5.26	115.75	118.90
25	1H	2700	C	N3-C4-C5	5.26	124.00	121.90
25	1H	2710	C	OP2-P-O3'	5.26	116.76	105.20
35	78	26	GLY	N-CA-C	-5.26	99.96	113.10
25	14	189	G	O5'-P-OP1	-5.26	100.97	105.70
25	14	1324	G	C8-N9-C4	-5.26	104.30	106.40
25	14	2606	C	N1-C2-N3	5.26	122.88	119.20
25	1H	1652	A	O5'-P-OP1	-5.25	100.97	105.70
25	14	1687	G	C8-N9-C4	5.25	108.50	106.40
1	13	905	U	C5-C4-O4	-5.25	122.75	125.90
1	13	946	A	C8-N9-C4	5.25	107.90	105.80
1	13	960	U	N3-C4-O4	5.25	123.08	119.40
25	1H	481	G	P-O3'-C3'	5.25	126.00	119.70
25	1H	693	C	OP2-P-O3'	5.25	116.76	105.20
25	1H	1338	G	N7-C8-N9	-5.25	110.47	113.10
25	1H	1489	U	C4-C5-C6	5.25	122.85	119.70
25	1H	2070	G	N9-C4-C5	-5.25	103.30	105.40
25	14	737	C	C6-N1-C2	5.25	122.40	120.30
25	1H	1318	C	N3-C4-C5	5.25	124.00	121.90
25	1H	1695	G	C6-C5-N7	-5.25	127.25	130.40
25	14	528	A	C5-N7-C8	-5.25	101.27	103.90
25	14	679	C	C6-N1-C2	5.25	122.40	120.30
25	14	1283	G	OP1-P-OP2	5.25	127.48	119.60
25	1H	1197	G	N1-C6-O6	-5.25	116.75	119.90
25	1H	1776	G	N3-C4-N9	5.25	129.15	126.00
25	1H	1984	G	OP2-P-O3'	5.25	116.75	105.20
25	14	575	A	O4'-C1'-N9	5.25	112.40	108.20
25	14	659	C	C5-C6-N1	-5.25	118.38	121.00
25	14	1899	G	C5-C6-N1	-5.25	108.88	111.50
25	14	2062	A	OP2-P-O3'	5.25	116.75	105.20
25	14	2444	G	N3-C2-N2	-5.25	116.22	119.90
1	13	1065	U	C2-N1-C1'	-5.25	111.40	117.70
22	1K	45	C	OP1-P-O3'	5.25	116.75	105.20
25	1H	792	G	C8-N9-C1'	-5.25	120.18	127.00
55	1G	237	C	C5-C6-N1	-5.25	118.38	121.00
25	14	624	C	N3-C2-O2	5.25	125.57	121.90
25	14	1407	C	C4-C5-C6	-5.25	114.78	117.40
25	14	1489	U	C6-N1-C1'	5.25	128.55	121.20
25	14	1959	G	N1-C6-O6	-5.25	116.75	119.90
25	1H	784	A	C5-C6-N6	5.25	127.90	123.70
25	1H	1188	U	N3-C4-C5	5.25	117.75	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1800	C	C6-N1-C1'	5.25	127.09	120.80
55	1G	576	G	C4-N9-C1'	5.25	133.32	126.50
23	2L	48	U	P-O3'-C3'	5.25	126.00	119.70
25	14	670	A	N9-C4-C5	-5.25	103.70	105.80
25	14	1807	G	O5'-P-OP2	-5.25	100.98	105.70
25	14	2197	U	C6-N1-C2	5.25	124.15	121.00
1	13	912	C	C6-N1-C2	5.25	122.40	120.30
1	13	1498	U	OP2-P-O3'	5.25	116.74	105.20
25	1H	752	A	C5'-C4'-O4'	-5.25	102.81	109.10
25	1H	1331	A	N1-C2-N3	5.25	131.92	129.30
25	1H	1370	C	O5'-P-OP2	5.25	116.99	110.70
25	14	1796	U	O5'-P-OP1	-5.25	100.98	105.70
1	13	794	A	C8-N9-C4	-5.24	103.70	105.80
1	13	1056	U	N3-C4-C5	-5.24	111.45	114.60
25	1H	108	U	OP1-P-OP2	5.24	127.47	119.60
25	1H	464	U	C2-N3-C4	-5.24	123.85	127.00
25	1H	569	U	N1-C2-N3	5.24	118.05	114.90
25	14	188	G	C4-C5-N7	5.24	112.90	110.80
25	14	2526	G	N3-C4-N9	-5.24	122.85	126.00
25	14	1786	A	C6-N1-C2	5.24	121.75	118.60
1	13	936	C	N3-C2-O2	-5.24	118.23	121.90
25	1H	87	C	C5-C4-N4	-5.24	116.53	120.20
25	1H	560	C	C5-C6-N1	-5.24	118.38	121.00
25	1H	2558	C	N1-C2-O2	-5.24	115.76	118.90
25	1H	2772	C	C6-N1-C2	5.24	122.40	120.30
25	1H	2827	C	C5-C4-N4	-5.24	116.53	120.20
25	1H	2827	C	N1-C2-O2	-5.24	115.75	118.90
55	1G	577	G	N1-C6-O6	-5.24	116.76	119.90
25	14	1012	U	N3-C4-O4	-5.24	115.73	119.40
25	14	1307	A	C8-N9-C4	5.24	107.90	105.80
25	14	1434	A	C8-N9-C4	5.24	107.90	105.80
1	13	1310	G	N3-C4-N9	5.24	129.14	126.00
25	1H	347	A	O5'-P-OP1	-5.24	100.98	105.70
55	1G	898	G	N9-C1'-C2'	-5.24	106.24	112.00
25	1H	906	G	C6-C5-N7	5.24	133.54	130.40
25	1H	663	G	N7-C8-N9	5.24	115.72	113.10
25	1H	2715	C	C2-N3-C4	-5.24	117.28	119.90
25	1H	2779	U	C4-C5-C6	5.24	122.84	119.70
26	16	105	G	C5-C6-N1	5.24	114.12	111.50
35	78	15	ARG	NE-CZ-NH1	-5.24	117.68	120.30
55	1G	890	G	O4'-C1'-N9	5.24	112.39	108.20
25	14	1281	G	OP1-P-OP2	-5.24	111.75	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1597	A	N7-C8-N9	-5.24	111.18	113.80
25	14	2847	U	C6-N1-C1'	-5.24	113.87	121.20
25	1H	59	U	C6-N1-C2	-5.23	117.86	121.00
25	1H	944	G	C5-C6-N1	-5.23	108.88	111.50
25	1H	1497	U	C6-N1-C2	-5.23	117.86	121.00
25	1H	1573	G	OP1-P-O3'	-5.23	93.69	105.20
25	1H	2272	U	O5'-P-OP1	5.23	116.98	110.70
55	1G	1380	U	C6-N1-C2	5.23	124.14	121.00
25	14	455	C	C5-C6-N1	-5.23	118.38	121.00
1	13	787	A	C4-C5-C6	5.23	119.62	117.00
1	13	878	G	C8-N9-C4	5.23	108.49	106.40
1	13	1446	A	O5'-P-OP1	5.23	116.98	110.70
25	1H	814	C	C2-N3-C4	-5.23	117.28	119.90
25	1H	1377	G	OP1-P-OP2	5.23	127.45	119.60
25	1H	2258	C	N1-C2-O2	-5.23	115.76	118.90
55	1G	690	G	C2-N3-C4	-5.23	109.28	111.90
55	1G	915	A	N7-C8-N9	-5.23	111.18	113.80
25	14	1031	G	C6-C5-N7	-5.23	127.26	130.40
25	14	2391	G	N9-C4-C5	5.23	107.49	105.40
25	14	2762	G	C5-C6-O6	-5.23	125.46	128.60
25	1H	2241	A	N7-C8-N9	-5.23	111.18	113.80
25	14	149	A	C2-N3-C4	-5.23	107.98	110.60
25	14	399	G	O5'-P-OP2	-5.23	100.99	105.70
25	14	532	A	OP1-P-O3'	5.23	116.71	105.20
25	14	1402	C	C5-C4-N4	-5.23	116.54	120.20
25	14	1653	G	OP1-P-O3'	5.23	116.70	105.20
25	14	2083	G	C2-N3-C4	-5.23	109.28	111.90
25	14	2362	G	N9-C4-C5	-5.23	103.31	105.40
25	1H	1554	A	N3-C4-C5	-5.23	123.14	126.80
25	14	1823	G	C6-C5-N7	5.23	133.54	130.40
25	14	2003	G	N3-C4-C5	-5.23	125.99	128.60
1	13	387	U	OP1-P-O3'	5.23	116.70	105.20
1	13	798	G	OP2-P-O3'	5.23	116.70	105.20
1	13	974	A	C5-N7-C8	-5.23	101.29	103.90
25	1H	2002	G	N1-C6-O6	5.23	123.04	119.90
26	16	9	G	OP2-P-O3'	5.23	116.70	105.20
38	A8	101	LEU	CB-CG-CD1	5.23	119.89	111.00
25	1H	1603	A	C5-N7-C8	-5.23	101.29	103.90
25	14	1339	G	OP1-P-OP2	-5.23	111.76	119.60
1	13	524	G	N9-C4-C5	5.22	107.49	105.40
1	13	621	A	N9-C4-C5	5.22	107.89	105.80
1	13	1493	A	C4-C5-C6	5.22	119.61	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	2K	71	G	N3-C4-C5	5.22	131.21	128.60
25	1H	478	A	C6-N1-C2	-5.22	115.47	118.60
25	1H	1836	C	N1-C2-O2	5.22	122.03	118.90
25	14	1402	C	N3-C4-N4	5.22	121.66	118.00
25	14	2441	C	C5-C6-N1	-5.22	118.39	121.00
25	1H	188	G	N3-C4-N9	5.22	129.13	126.00
25	1H	212	G	OP2-P-O3'	5.22	116.69	105.20
25	14	503	A	N9-C4-C5	5.22	107.89	105.80
25	14	613	U	N3-C4-O4	-5.22	115.74	119.40
1	13	274	A	N1-C6-N6	-5.22	115.47	118.60
25	1H	433	C	OP2-P-O3'	5.22	116.69	105.20
25	1H	1261	C	C2-N3-C4	-5.22	117.29	119.90
25	1H	2516	G	C5-C6-O6	-5.22	125.47	128.60
1	13	326	G	C5-C6-O6	5.22	131.73	128.60
25	1H	389	G	C4-C5-N7	5.22	112.89	110.80
25	1H	516	C	N3-C4-C5	5.22	123.99	121.90
25	1H	2618	G	C4-C5-N7	-5.22	108.71	110.80
25	14	1210	A	C4-C5-N7	5.22	113.31	110.70
25	14	1367	A	N9-C4-C5	-5.22	103.71	105.80
26	1J	25	A	OP1-P-O3'	5.22	116.68	105.20
1	13	1227	A	N3-C4-C5	5.22	130.45	126.80
25	1H	632	A	C2-N3-C4	-5.22	107.99	110.60
25	1H	1784	A	C8-N9-C4	5.22	107.89	105.80
26	1J	6	C	C5-C6-N1	-5.22	118.39	121.00
25	1H	460	A	C5-C6-N6	5.22	127.87	123.70
25	1H	2271	G	N9-C4-C5	-5.22	103.31	105.40
25	14	194	G	OP1-P-OP2	-5.22	111.77	119.60
25	14	950	G	N1-C6-O6	-5.22	116.77	119.90
25	14	1444	G	C5-C6-O6	5.22	131.73	128.60
25	14	2262	U	OP1-P-O3'	5.22	116.68	105.20
25	14	2375	G	C5-C6-O6	-5.22	125.47	128.60
1	13	108	G	C5-N7-C8	-5.21	101.69	104.30
1	13	966	G	N1-C2-N3	-5.21	120.77	123.90
25	1H	486	C	O5'-P-OP2	5.21	116.96	110.70
25	1H	623	G	C8-N9-C4	5.21	108.49	106.40
25	1H	1849	G	O5'-P-OP1	-5.21	101.01	105.70
25	1H	2541	A	N9-C4-C5	5.21	107.89	105.80
25	1H	2861	G	N1-C6-O6	5.21	123.03	119.90
1	13	1227	A	N3-C4-N9	-5.21	123.23	127.40
25	1H	2008	C	N3-C2-O2	-5.21	118.25	121.90
26	16	81	G	OP2-P-O3'	5.21	116.67	105.20
25	14	1459	G	N1-C6-O6	-5.21	116.77	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	577	G	N3-C4-N9	5.21	129.13	126.00
25	1H	2393	A	C8-N9-C4	-5.21	103.72	105.80
25	1H	2513	G	N3-C4-C5	-5.21	125.99	128.60
25	1H	2538	C	C6-N1-C2	5.21	122.39	120.30
27	11	229	VAL	CB-CA-C	-5.21	101.50	111.40
55	1G	699	C	O5'-P-OP2	5.21	116.95	110.70
25	14	1314	C	OP2-P-O3'	5.21	116.67	105.20
25	14	1934	C	C2-N1-C1'	-5.21	113.07	118.80
25	14	2333	A	C4-C5-N7	-5.21	108.09	110.70
25	14	2554	U	O5'-P-OP1	-5.21	101.01	105.70
25	14	2571	C	OP1-P-OP2	5.21	127.42	119.60
25	14	2847	U	C2-N1-C1'	5.21	123.95	117.70
25	1H	580	C	N1-C2-O2	-5.21	115.77	118.90
25	14	1266	G	N7-C8-N9	-5.21	110.50	113.10
25	14	2234	G	C8-N9-C4	-5.21	104.32	106.40
1	13	1290	G	C8-N9-C4	-5.21	104.32	106.40
25	1H	542	C	C5-C6-N1	-5.21	118.40	121.00
25	1H	611	C	C5-C6-N1	-5.21	118.40	121.00
25	1H	1336	A	C5-C6-N1	5.21	120.30	117.70
25	1H	2469	A	C2-N3-C4	-5.21	108.00	110.60
25	14	2253	G	O5'-P-OP1	5.21	116.95	110.70
25	14	2420	C	N3-C4-C5	5.21	123.98	121.90
1	13	916	G	C8-N9-C4	-5.21	104.32	106.40
1	13	1317	C	N3-C4-C5	-5.21	119.82	121.90
25	1H	536	A	C5-C6-N1	5.21	120.30	117.70
25	1H	706	A	N1-C6-N6	5.21	121.72	118.60
25	1H	816	C	OP1-P-OP2	-5.21	111.79	119.60
25	1H	963	U	C2-N3-C4	-5.21	123.88	127.00
25	1H	1355	G	N9-C4-C5	5.21	107.48	105.40
25	1H	1360	A	C4-C5-N7	5.21	113.30	110.70
25	1H	1554	A	C8-N9-C4	-5.21	103.72	105.80
12	3A	26	ALA	C-N-CA	5.21	134.72	121.70
25	14	786	C	OP2-P-O3'	5.21	116.66	105.20
25	14	822	U	N1-C2-N3	5.21	118.02	114.90
25	14	961	C	N3-C4-C5	5.21	123.98	121.90
25	14	1549	C	O5'-P-OP2	5.21	116.95	110.70
1	13	422	C	OP2-P-O3'	5.21	116.65	105.20
23	2K	34	U	OP1-P-OP2	5.21	127.41	119.60
25	1H	209	C	O4'-C1'-N1	5.21	112.36	108.20
25	1H	622	G	N3-C2-N2	5.21	123.54	119.90
26	16	7	G	N1-C6-O6	5.21	123.02	119.90
25	14	584	C	C6-N1-C2	5.21	122.38	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	731	G	OP1-P-O3'	5.20	116.65	105.20
25	1H	833	U	C4-C5-C6	5.20	122.82	119.70
25	1H	2283	C	N1-C2-O2	-5.20	115.78	118.90
25	1H	2441	C	C5-C4-N4	5.20	123.84	120.20
25	1H	2497	A	N1-C6-N6	-5.20	115.48	118.60
25	1H	2783	G	O5'-P-OP2	-5.20	101.02	105.70
25	14	252	G	C5-C6-O6	5.20	131.72	128.60
25	14	463	G	N3-C2-N2	5.20	123.54	119.90
25	1H	2772	C	C5-C6-N1	-5.20	118.40	121.00
25	1H	729	G	OP2-P-O3'	5.20	116.64	105.20
25	1H	1391	U	C2-N1-C1'	5.20	123.94	117.70
25	1H	2486	G	OP1-P-O3'	5.20	116.64	105.20
25	1H	2706	G	C6-N1-C2	-5.20	121.98	125.10
55	1G	896	C	C2-N3-C4	-5.20	117.30	119.90
25	14	488	G	N9-C4-C5	-5.20	103.32	105.40
25	14	1785	A	N1-C6-N6	5.20	121.72	118.60
25	1H	388	G	N1-C2-N2	-5.20	111.52	116.20
25	1H	1674	G	O4'-C1'-N9	-5.20	104.04	108.20
25	1H	1806	C	OP1-P-OP2	5.20	127.40	119.60
25	1H	1882	C	C6-N1-C2	-5.20	118.22	120.30
25	1H	2461	C	N3-C4-C5	5.20	123.98	121.90
25	14	1604	C	N3-C4-N4	5.20	121.64	118.00
25	14	2078	C	C6-N1-C2	-5.20	118.22	120.30
25	1H	766	C	C5-C4-N4	-5.20	116.56	120.20
25	14	2284	C	OP1-P-OP2	5.20	127.39	119.60
1	13	836	G	N1-C6-O6	5.20	123.02	119.90
25	1H	141(A)	C	C2-N3-C4	-5.20	117.30	119.90
25	1H	657	U	O5'-P-OP2	-5.20	101.02	105.70
25	1H	807	U	C2-N3-C4	-5.20	123.88	127.00
25	1H	1444(A)	A	O5'-P-OP1	-5.20	101.02	105.70
25	1H	2635	C	C6-N1-C2	5.20	122.38	120.30
25	14	750	A	OP1-P-O3'	5.20	116.63	105.20
25	14	1402	C	N3-C2-O2	5.20	125.54	121.90
25	14	2392	A	C6-C5-N7	-5.20	128.66	132.30
25	1H	388	G	N3-C2-N2	5.19	123.54	119.90
25	1H	2230	G	C5-C6-O6	-5.19	125.48	128.60
25	14	932	G	N3-C4-C5	5.19	131.20	128.60
1	13	778	G	O5'-P-OP2	-5.19	101.03	105.70
25	1H	936	C	C2-N3-C4	-5.19	117.30	119.90
25	1H	1814	G	C5-N7-C8	5.19	106.90	104.30
25	14	1210	A	N7-C8-N9	5.19	116.40	113.80
25	14	1346	G	N7-C8-N9	-5.19	110.50	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1348	G	O5'-P-OP1	-5.19	101.03	105.70
25	14	1968	G	C5-N7-C8	-5.19	101.70	104.30
23	2K	24	C	N3-C4-N4	-5.19	114.37	118.00
25	1H	262	A	N1-C6-N6	5.19	121.71	118.60
25	1H	794	G	O5'-P-OP2	5.19	116.93	110.70
25	1H	1636	C	N1-C2-O2	-5.19	115.79	118.90
25	1H	1790	C	P-O3'-C3'	5.19	125.93	119.70
25	1H	1818	U	N3-C4-C5	5.19	117.71	114.60
25	1H	1899	G	C5-C6-N1	-5.19	108.90	111.50
26	16	56	G	C8-N9-C4	-5.19	104.32	106.40
25	14	1781	C	C5-C4-N4	-5.19	116.57	120.20
25	14	1905	C	C5-C6-N1	-5.19	118.41	121.00
25	1H	1197	G	OP2-P-O3'	5.19	116.61	105.20
25	1H	1688	U	OP2-P-O3'	5.19	116.61	105.20
25	1H	2547	U	N3-C2-O2	5.19	125.83	122.20
25	14	767	U	N3-C4-O4	-5.19	115.77	119.40
25	1H	217	G	C5-C6-N1	-5.19	108.91	111.50
25	1H	242	G	O4'-C1'-N9	5.19	112.35	108.20
25	1H	1497	U	N3-C4-O4	5.19	123.03	119.40
25	1H	2036	C	OP1-P-O3'	-5.19	93.79	105.20
25	1H	2246	G	N3-C4-C5	-5.19	126.01	128.60
25	1H	2565	A	C8-N9-C4	5.19	107.88	105.80
25	14	1616	A	O4'-C1'-N9	5.19	112.35	108.20
20	BI	24	LEU	CA-CB-CG	5.19	127.23	115.30
25	1H	1996	C	C5-C6-N1	-5.19	118.41	121.00
25	1H	2296	U	N3-C4-C5	-5.19	111.49	114.60
25	1H	2359	C	N3-C4-N4	-5.19	114.37	118.00
25	14	1697	G	C2-N3-C4	-5.19	109.31	111.90
25	1H	260	G	C6-N1-C2	-5.18	121.99	125.10
25	1H	787	U	OP1-P-OP2	-5.18	111.82	119.60
25	1H	874	G	O5'-P-OP1	5.18	116.92	110.70
25	1H	915	C	OP1-P-OP2	-5.18	111.82	119.60
25	1H	1305	C	C5-C6-N1	-5.18	118.41	121.00
25	1H	2610	C	OP2-P-O3'	5.18	116.61	105.20
25	1H	2621	A	C8-N9-C4	5.18	107.87	105.80
55	1G	579	G	C8-N9-C4	-5.18	104.33	106.40
25	14	481	G	O4'-C1'-N9	5.18	112.35	108.20
25	14	668	G	C2-N3-C4	-5.18	109.31	111.90
25	14	686	G	C6-C5-N7	-5.18	127.29	130.40
25	14	711	G	C4-C5-N7	5.18	112.87	110.80
25	14	1785	A	C6-C5-N7	-5.18	128.67	132.30
25	14	2237	G	N9-C4-C5	-5.18	103.33	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	884	U	N1-C2-N3	-5.18	111.79	114.90
25	1H	1769	G	N1-C2-N3	5.18	127.01	123.90
25	14	556	G	N3-C4-C5	-5.18	126.01	128.60
25	14	1897	G	N9-C4-C5	-5.18	103.33	105.40
25	14	1929	G	N3-C4-N9	5.18	129.11	126.00
25	14	2365	G	N1-C2-N2	-5.18	111.54	116.20
25	14	2764	A	C8-N9-C4	5.18	107.87	105.80
26	16	52	A	N1-C6-N6	5.18	121.71	118.60
25	14	416	C	N3-C4-C5	5.18	123.97	121.90
25	14	778	G	C5-N7-C8	5.18	106.89	104.30
25	1H	1371	G	N1-C2-N2	5.18	120.86	116.20
25	1H	1569	A	OP1-P-OP2	5.18	127.37	119.60
25	1H	1802	A	N7-C8-N9	-5.18	111.21	113.80
25	1H	2070	G	C8-N9-C4	5.18	108.47	106.40
25	14	113	G	C8-N9-C4	5.18	108.47	106.40
25	14	728	G	C5-N7-C8	5.18	106.89	104.30
25	14	830	G	OP1-P-O3'	5.18	116.59	105.20
25	14	2194	G	N1-C6-O6	-5.18	116.79	119.90
25	14	2492	U	O5'-P-OP2	5.18	116.92	110.70
25	1H	145	G	C6-C5-N7	-5.18	127.29	130.40
25	14	117	G	OP1-P-OP2	-5.18	111.83	119.60
1	13	771	G	N1-C6-O6	-5.18	116.79	119.90
15	6I	38	ARG	NE-CZ-NH1	5.18	122.89	120.30
25	1H	26	G	C4-C5-N7	5.18	112.87	110.80
25	1H	225	A	C2-N3-C4	-5.18	108.01	110.60
25	1H	420	C	C6-N1-C2	5.18	122.37	120.30
25	1H	432	A	C4-C5-N7	5.18	113.29	110.70
25	1H	1374	G	N1-C6-O6	5.18	123.01	119.90
25	14	2453	A	C5-C6-N6	-5.18	119.56	123.70
1	13	943	U	O5'-P-OP1	-5.17	101.04	105.70
1	13	1356	G	C4-C5-C6	5.17	121.91	118.80
25	1H	34	C	OP1-P-OP2	5.17	127.36	119.60
25	1H	348	G	N1-C6-O6	5.17	123.00	119.90
25	1H	658	C	OP2-P-O3'	5.17	116.59	105.20
25	1H	780	G	O4'-C1'-N9	-5.17	104.06	108.20
25	1H	1939	U	C2-N1-C1'	-5.17	111.49	117.70
25	14	2401	U	C6-N1-C2	-5.17	117.89	121.00
1	13	818	G	N7-C8-N9	-5.17	110.51	113.10
25	1H	113	G	OP1-P-O3'	5.17	116.58	105.20
25	14	1660	C	N3-C4-C5	5.17	123.97	121.90
25	14	1903	G	OP2-P-O3'	5.17	116.58	105.20
25	1H	687	C	C2-N3-C4	5.17	122.49	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	764	A	C4-C5-C6	5.17	119.59	117.00
25	1H	988	A	OP1-P-OP2	-5.17	111.84	119.60
25	14	2031	A	N3-C4-C5	-5.17	123.18	126.80
25	14	2442	C	C5-C6-N1	-5.17	118.41	121.00
25	1H	2702	U	C6-N1-C2	-5.17	117.90	121.00
55	1G	353	A	OP2-P-O3'	5.17	116.58	105.20
25	14	630	G	C2-N3-C4	-5.17	109.31	111.90
25	1H	107	C	N3-C2-O2	5.17	125.52	121.90
25	1H	1036	G	C5-C6-O6	-5.17	125.50	128.60
25	1H	1967	C	OP1-P-OP2	5.17	127.35	119.60
25	1H	2000	G	C6-N1-C2	-5.17	122.00	125.10
25	1H	2674	G	N3-C4-C5	-5.17	126.02	128.60
25	1H	2713	A	OP1-P-O3'	-5.17	93.83	105.20
25	1H	2845	G	N1-C6-O6	5.17	123.00	119.90
26	16	46	A	C8-N9-C4	5.17	107.87	105.80
55	1G	46	G	C8-N9-C4	5.17	108.47	106.40
25	14	1332	G	C6-C5-N7	5.17	133.50	130.40
25	14	1930	G	C4-C5-N7	-5.17	108.73	110.80
25	14	2607	G	C6-N1-C2	-5.17	122.00	125.10
25	14	2712	U	N1-C2-N3	5.17	118.00	114.90
1	13	527	G	N1-C6-O6	-5.17	116.80	119.90
1	13	1369	C	O5'-P-OP2	-5.17	101.05	105.70
25	14	564	C	C5-C4-N4	-5.17	116.58	120.20
25	14	1156	A	C8-N9-C4	5.17	107.87	105.80
25	14	1574	C	OP2-P-O3'	5.17	116.56	105.20
1	13	290	C	C6-N1-C2	5.17	122.37	120.30
25	1H	533	G	N7-C8-N9	-5.17	110.52	113.10
25	1H	577	G	C5-C6-N1	5.17	114.08	111.50
1	13	612	C	N3-C2-O2	5.16	125.51	121.90
1	13	807	A	N1-C6-N6	-5.16	115.50	118.60
25	1H	120	U	N1-C2-N3	5.16	118.00	114.90
25	1H	120	U	N3-C2-O2	-5.16	118.59	122.20
25	1H	795	C	C2-N1-C1'	-5.16	113.12	118.80
55	1G	1478	C	N3-C2-O2	-5.16	118.29	121.90
25	14	1816	G	C2-N3-C4	5.16	114.48	111.90
25	1H	55	G	N1-C6-O6	5.16	123.00	119.90
25	1H	2638	G	N9-C4-C5	-5.16	103.33	105.40
25	14	330	A	C4-C5-N7	5.16	113.28	110.70
25	1H	210	C	N3-C4-C5	5.16	123.96	121.90
25	1H	860	U	C6-N1-C1'	-5.16	113.97	121.20
25	14	773	U	C5-C6-N1	-5.16	120.12	122.70
25	14	1528	A	C4-C5-N7	5.16	113.28	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1594	G	O5'-P-OP1	-5.16	101.06	105.70
25	14	2597	G	C6-C5-N7	-5.16	127.30	130.40
25	14	2696	U	C5-C4-O4	5.16	129.00	125.90
1	13	660	G	N1-C6-O6	5.16	123.00	119.90
25	1H	1614	A	N3-C4-N9	-5.16	123.27	127.40
25	1H	2316	C	C5-C6-N1	5.16	123.58	121.00
25	1H	2568	C	C4-C5-C6	5.16	119.98	117.40
25	14	472	A	O5'-P-OP2	-5.16	101.06	105.70
25	14	1595	G	O5'-P-OP2	5.16	116.89	110.70
25	14	2707	G	N3-C4-N9	5.16	129.10	126.00
25	1H	2282	G	C5-C6-O6	5.16	131.69	128.60
1	13	733	A	O5'-P-OP2	-5.16	101.06	105.70
25	1H	139	G	C2-N3-C4	5.16	114.48	111.90
25	1H	1823	G	N1-C2-N2	-5.16	111.56	116.20
25	1H	2019	A	C5-C6-N6	-5.16	119.58	123.70
25	14	40	C	C6-N1-C2	-5.16	118.24	120.30
25	14	492	A	N1-C2-N3	5.16	131.88	129.30
25	14	1774	C	C4-C5-C6	5.16	119.98	117.40
25	14	2867	G	O4'-C1'-N9	5.16	112.32	108.20
1	13	337	C	N3-C4-N4	5.15	121.61	118.00
25	1H	930	U	N3-C4-O4	-5.15	115.79	119.40
25	1H	1181	C	C6-N1-C2	5.15	122.36	120.30
25	1H	2328	A	C8-N9-C1'	-5.15	118.42	127.70
25	14	1965	C	N1-C2-O2	-5.15	115.81	118.90
36	45	78	PRO	N-CA-C	5.15	125.50	112.10
1	13	1213	A	O4'-C1'-N9	5.15	112.32	108.20
25	1H	26	G	C6-C5-N7	-5.15	127.31	130.40
25	1H	237	C	C5-C6-N1	-5.15	118.42	121.00
25	1H	443	A	C4-C5-N7	5.15	113.28	110.70
25	1H	636	G	O5'-P-OP2	5.15	116.88	110.70
25	1H	1013	C	C6-N1-C2	5.15	122.36	120.30
25	1H	1765	C	N3-C4-N4	-5.15	114.39	118.00
25	1H	1935	G	C5-C6-N1	-5.15	108.92	111.50
25	1H	2419	U	OP1-P-O3'	5.15	116.53	105.20
20	BA	80	ARG	NE-CZ-NH2	-5.15	117.72	120.30
25	14	729	G	C8-N9-C4	-5.15	104.34	106.40
25	14	737	C	C5-C6-N1	-5.15	118.42	121.00
25	14	1612	C	N1-C2-O2	-5.15	115.81	118.90
1	13	810	C	C6-N1-C1'	-5.15	114.62	120.80
25	1H	845	G	OP1-P-O3'	5.15	116.53	105.20
25	1H	847	U	N3-C2-O2	-5.15	118.59	122.20
25	1H	1192	G	N7-C8-N9	-5.15	110.53	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1234	U	O5'-P-OP2	-5.15	101.06	105.70
25	1H	1903	G	OP2-P-O3'	5.15	116.53	105.20
25	1H	2592	G	C6-C5-N7	-5.15	127.31	130.40
55	1G	412	A	P-O3'-C3'	5.15	125.88	119.70
55	1G	895	G	O5'-P-OP1	-5.15	101.06	105.70
55	1G	904	C	O5'-P-OP2	5.15	116.88	110.70
25	14	87	C	C6-N1-C2	-5.15	118.24	120.30
25	14	676	A	C5-C6-N1	-5.15	115.12	117.70
25	14	2452	C	N1-C2-O2	-5.15	115.81	118.90
55	1G	375	U	O5'-P-OP1	-5.15	101.07	105.70
1	13	585	G	N1-C6-O6	5.15	122.99	119.90
23	2K	57	C	C5-C6-N1	-5.15	118.43	121.00
25	1H	1778	U	N3-C4-C5	5.15	117.69	114.60
25	1H	1790	C	OP1-P-O3'	5.15	116.53	105.20
25	1H	1888	G	N9-C4-C5	-5.15	103.34	105.40
1	13	675	A	N1-C6-N6	5.15	121.69	118.60
25	1H	374	A	C8-N9-C4	-5.15	103.74	105.80
25	1H	865	C	O5'-P-OP2	5.15	116.88	110.70
25	1H	1135	C	N3-C2-O2	-5.15	118.30	121.90
55	1G	942	G	N3-C4-N9	5.15	129.09	126.00
25	14	1406	U	OP1-P-O3'	5.15	116.52	105.20
25	14	1806	C	OP2-P-O3'	5.15	116.52	105.20
1	13	520	A	C6-C5-N7	-5.14	128.70	132.30
1	13	1205	U	C5-C4-O4	5.14	128.99	125.90
1	13	1496	C	N1-C2-O2	-5.14	115.81	118.90
25	1H	696	G	N1-C2-N2	-5.14	111.57	116.20
25	1H	1364	G	N3-C2-N2	5.14	123.50	119.90
25	1H	2028	U	C5-C6-N1	-5.14	120.13	122.70
25	14	123	G	C8-N9-C4	5.14	108.46	106.40
25	14	751	A	OP1-P-OP2	-5.14	111.88	119.60
25	14	778	G	N1-C6-O6	-5.14	116.81	119.90
25	14	1237	A	O5'-P-OP1	5.14	116.87	110.70
1	13	1487	G	C5-N7-C8	5.14	106.87	104.30
1	13	1509	C	C6-N1-C2	5.14	122.36	120.30
25	1H	598	G	C5-C6-O6	-5.14	125.52	128.60
25	1H	631	A	N7-C8-N9	-5.14	111.23	113.80
25	1H	954	G	C8-N9-C4	-5.14	104.34	106.40
25	1H	1634	A	C4-C5-C6	5.14	119.57	117.00
25	1H	1681	G	N3-C4-N9	-5.14	122.91	126.00
25	1H	2032	G	C2-N3-C4	-5.14	109.33	111.90
35	78	36	LYS	C-N-CA	5.14	133.10	122.30
55	1G	1527	C	N3-C4-C5	5.14	123.96	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1403	C	O5'-P-OP1	-5.14	101.07	105.70
25	1H	305	U	C6-N1-C2	-5.14	117.92	121.00
25	1H	821	A	OP1-P-OP2	5.14	127.31	119.60
25	14	247	G	C8-N9-C4	5.14	108.46	106.40
25	14	453	C	C5-C6-N1	-5.14	118.43	121.00
1	13	1052	U	O5'-P-OP1	5.14	116.87	110.70
1	13	1421	G	OP2-P-O3'	5.14	116.51	105.20
25	1H	575	A	O5'-P-OP2	5.14	116.87	110.70
25	1H	664	C	OP1-P-OP2	5.14	127.31	119.60
25	1H	675	A	C4-C5-C6	-5.14	114.43	117.00
25	1H	1685	C	C2-N3-C4	-5.14	117.33	119.90
25	14	736	C	O5'-P-OP1	-5.14	101.08	105.70
25	14	2057	A	N9-C4-C5	-5.14	103.75	105.80
1	13	11	G	OP1-P-O3'	5.14	116.50	105.20
25	1H	132	G	OP1-P-OP2	5.14	127.31	119.60
25	1H	967	C	N3-C4-C5	5.14	123.95	121.90
55	1G	1346	A	OP2-P-O3'	5.14	116.50	105.20
25	14	2510	C	O5'-P-OP2	-5.14	101.08	105.70
1	13	726	C	O5'-P-OP1	-5.14	101.08	105.70
25	1H	690	G	C5-C6-O6	-5.14	125.52	128.60
25	1H	2454	G	N1-C2-N2	-5.14	111.58	116.20
25	1H	2614	A	C2-N3-C4	5.14	113.17	110.60
25	14	138	G	C6-C5-N7	-5.14	127.32	130.40
25	14	784	A	O5'-P-OP2	-5.14	101.08	105.70
25	14	954	G	O5'-P-OP2	5.14	116.86	110.70
25	14	1696	G	O5'-P-OP2	-5.14	101.08	105.70
25	14	1914	C	C6-N1-C2	-5.14	118.25	120.30
25	14	1975	G	C5-C6-O6	-5.14	125.52	128.60
25	14	2422	A	O5'-P-OP2	-5.14	101.08	105.70
25	14	2873	A	O4'-C1'-N9	5.14	112.31	108.20
1	13	45	U	OP2-P-O3'	5.13	116.50	105.20
1	13	1220	G	C8-N9-C4	-5.13	104.35	106.40
25	1H	110	G	N1-C6-O6	-5.13	116.82	119.90
25	1H	2252	G	OP1-P-OP2	5.13	127.30	119.60
25	1H	2516	G	C5-C6-N1	5.13	114.07	111.50
55	1G	1496	C	N1-C2-O2	5.13	121.98	118.90
25	14	187	G	C4-C5-C6	5.13	121.88	118.80
25	14	2001	A	C6-N1-C2	-5.13	115.52	118.60
25	14	2284	C	N1-C2-O2	-5.13	115.82	118.90
25	1H	1968	G	N1-C6-O6	5.13	122.98	119.90
25	1H	2609	U	C2-N3-C4	-5.13	123.92	127.00
25	1H	2659	G	C5-C6-O6	-5.13	125.52	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	791	C	N3-C2-O2	5.13	125.49	121.90
25	14	1763	G	O5'-P-OP2	-5.13	101.08	105.70
25	14	2453	A	N1-C6-N6	5.13	121.68	118.60
25	14	2669	G	N9-C4-C5	-5.13	103.35	105.40
1	13	767	A	N7-C8-N9	-5.13	111.23	113.80
25	1H	134	C	C2-N3-C4	-5.13	117.33	119.90
25	1H	422	A	C2-N3-C4	-5.13	108.03	110.60
25	1H	1332	G	O4'-C1'-N9	-5.13	104.09	108.20
25	1H	2330	G	N1-C6-O6	5.13	122.98	119.90
25	1H	2741	A	N7-C8-N9	-5.13	111.23	113.80
25	14	381	G	C8-N9-C4	5.13	108.45	106.40
25	14	1585	C	N1-C2-O2	5.13	121.98	118.90
25	14	1601	G	N1-C2-N2	-5.13	111.58	116.20
25	14	2072	G	OP1-P-OP2	-5.13	111.90	119.60
25	14	2461	C	O5'-P-OP1	-5.13	101.08	105.70
1	13	904	C	N3-C4-N4	-5.13	114.41	118.00
25	14	912	C	OP2-P-O3'	5.13	116.48	105.20
56	19	235	GLY	N-CA-C	5.13	125.93	113.10
25	1H	2042	A	O5'-P-OP1	5.13	116.85	110.70
25	1H	2506	U	C6-N1-C1'	-5.13	114.02	121.20
25	14	2013	A	N1-C2-N3	5.13	131.86	129.30
25	14	2052	G	OP2-P-O3'	5.13	116.48	105.20
1	13	1496	C	C5-C6-N1	-5.13	118.44	121.00
25	1H	635	C	C2-N3-C4	-5.13	117.34	119.90
25	1H	2304	G	O5'-P-OP1	-5.13	101.09	105.70
40	C8	90	VAL	N-CA-C	-5.13	97.16	111.00
25	14	20	C	OP1-P-O3'	5.13	116.48	105.20
25	14	444	C	OP2-P-O3'	5.13	116.48	105.20
25	14	1588	C	C6-N1-C2	-5.13	118.25	120.30
56	19	147	LEU	CA-CB-CG	5.12	127.09	115.30
25	1H	1303	G	C5-C6-O6	5.12	131.67	128.60
25	1H	1912	A	O4'-C1'-N9	5.12	112.30	108.20
26	16	30	C	O5'-P-OP2	5.12	116.85	110.70
25	14	1707	G	O5'-P-OP1	-5.12	101.09	105.70
25	14	1758	G	N3-C4-N9	5.12	129.07	126.00
25	14	2071	A	C5-C6-N1	5.12	120.26	117.70
25	14	2490	G	O4'-C1'-N9	5.12	112.30	108.20
25	14	2710	C	N1-C2-O2	-5.12	115.83	118.90
1	13	809	G	OP1-P-O3'	5.12	116.47	105.20
25	1H	48	G	OP2-P-O3'	5.12	116.47	105.20
25	1H	187	G	N3-C4-C5	-5.12	126.04	128.60
25	1H	250	G	C8-N9-C4	-5.12	104.35	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	968	G	N1-C6-O6	-5.12	116.83	119.90
25	1H	1418	G	N1-C6-O6	-5.12	116.83	119.90
25	1H	1944	U	C5-C6-N1	-5.12	120.14	122.70
25	1H	2363	C	N3-C4-C5	5.12	123.95	121.90
25	14	522	G	O5'-P-OP1	-5.12	101.09	105.70
25	14	2025	C	N3-C4-C5	-5.12	119.85	121.90
1	13	1511	G	C8-N9-C1'	-5.12	120.34	127.00
55	1G	569	C	C2-N1-C1'	5.12	124.43	118.80
55	1G	1192	C	C5-C6-N1	5.12	123.56	121.00
55	1G	1300	G	P-O3'-C3'	5.12	125.84	119.70
25	1H	791	C	OP1-P-O3'	-5.12	93.94	105.20
25	1H	1495	A	OP1-P-O3'	5.12	116.46	105.20
25	1H	2451	A	N1-C6-N6	-5.12	115.53	118.60
25	1H	2767	C	C6-N1-C1'	-5.12	114.66	120.80
25	1H	2782	G	C6-C5-N7	-5.12	127.33	130.40
55	1G	954	G	C8-N9-C4	5.12	108.45	106.40
25	14	180	G	N9-C4-C5	-5.12	103.35	105.40
25	14	2570	G	N3-C2-N2	-5.12	116.32	119.90
2	1E	111	ARG	NE-CZ-NH1	5.12	122.86	120.30
25	1H	713	G	C8-N9-C4	5.12	108.45	106.40
25	1H	2406	U	O4'-C1'-N1	-5.12	104.11	108.20
55	1G	1115	C	C6-N1-C2	-5.12	118.25	120.30
25	14	775	G	C5-C6-N1	5.12	114.06	111.50
25	14	2423	U	C6-N1-C2	5.12	124.07	121.00
1	13	1529	G	N3-C4-C5	5.12	131.16	128.60
25	1H	1183	G	OP2-P-O3'	5.12	116.45	105.20
25	1H	1514	U	OP2-P-O3'	5.12	116.45	105.20
25	1H	2439	A	OP1-P-OP2	5.12	127.27	119.60
55	1G	898	G	C4-N9-C1'	-5.12	119.85	126.50
25	14	2606	C	C2-N3-C4	-5.12	117.34	119.90
1	13	652	U	O5'-P-OP1	-5.11	101.10	105.70
25	1H	188	G	C6-C5-N7	-5.11	127.33	130.40
25	1H	848	G	O5'-P-OP1	5.11	116.84	110.70
25	1H	2048	G	N3-C2-N2	-5.11	116.32	119.90
25	1H	2334	G	OP2-P-O3'	5.11	116.45	105.20
25	14	582	G	C5-C6-O6	-5.11	125.53	128.60
25	14	762	U	N1-C2-N3	-5.11	111.83	114.90
25	14	1696	G	C2-N3-C4	5.11	114.46	111.90
25	14	2423	U	C2-N1-C1'	-5.11	111.56	117.70
25	14	2453	A	C8-N9-C4	5.11	107.84	105.80
1	13	1505	G	C8-N9-C1'	5.11	133.65	127.00
25	1H	2623	G	C6-N1-C2	-5.11	122.03	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	821	G	C8-N9-C1'	-5.11	120.36	127.00
1	13	1394	A	N9-C4-C5	-5.11	103.76	105.80
25	1H	755	C	N3-C4-C5	-5.11	119.86	121.90
25	1H	1482	U	N1-C2-N3	5.11	117.97	114.90
25	1H	2451	A	N9-C4-C5	5.11	107.84	105.80
55	1G	576	G	C6-C5-N7	-5.11	127.33	130.40
25	14	982	C	C5-C6-N1	5.11	123.56	121.00
25	14	1325	G	OP1-P-OP2	-5.11	111.93	119.60
25	14	2003	G	C6-N1-C2	-5.11	122.03	125.10
25	14	2073	C	OP2-P-O3'	5.11	116.44	105.20
25	14	2416	C	OP2-P-O3'	5.11	116.44	105.20
25	1H	1326	U	OP2-P-O3'	5.11	116.44	105.20
25	1H	1604	C	OP1-P-OP2	5.11	127.26	119.60
25	1H	1670	C	C2-N3-C4	-5.11	117.34	119.90
25	1H	2559	C	C6-N1-C2	5.11	122.34	120.30
25	14	2237	G	N1-C2-N2	-5.11	111.60	116.20
1	13	377	G	N1-C2-N2	-5.11	111.60	116.20
25	1H	849	A	N1-C6-N6	5.11	121.66	118.60
25	1H	1844	C	C6-N1-C2	5.11	122.34	120.30
55	1G	630	G	O4'-C1'-N9	5.11	112.29	108.20
55	1G	1200	C	N3-C2-O2	-5.11	118.33	121.90
25	14	598	G	C5-C6-N1	5.11	114.05	111.50
25	14	1934	C	N1-C2-O2	5.11	121.96	118.90
25	14	1984	G	C2-N3-C4	-5.11	109.35	111.90
25	14	2019	A	C8-N9-C4	5.11	107.84	105.80
25	1H	402	A	N1-C2-N3	5.11	131.85	129.30
25	1H	1917	U	N1-C2-O2	5.11	126.37	122.80
25	1H	2056	G	N1-C6-O6	5.11	122.96	119.90
25	1H	2317	C	C6-N1-C2	-5.11	118.26	120.30
55	1G	117	G	C4-C5-N7	5.11	112.84	110.80
25	14	320	A	O5'-P-OP2	-5.11	101.11	105.70
1	13	1224	G	O5'-P-OP1	5.10	116.82	110.70
25	1H	396	G	C4-C5-N7	5.10	112.84	110.80
25	1H	768	G	C5-C6-O6	5.10	131.66	128.60
25	14	488	G	N1-C6-O6	5.10	122.96	119.90
25	14	1396	U	O5'-P-OP1	-5.10	101.11	105.70
25	1H	1805	U	N3-C4-O4	5.10	122.97	119.40
25	1H	2422	A	N7-C8-N9	-5.10	111.25	113.80
25	14	1128	A	C8-N9-C4	5.10	107.84	105.80
25	14	1301	A	N9-C4-C5	-5.10	103.76	105.80
25	1H	751	A	O5'-P-OP1	-5.10	101.11	105.70
25	1H	1265	A	N1-C2-N3	5.10	131.85	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1559	G	C6-C5-N7	-5.10	127.34	130.40
25	1H	2375	G	N9-C4-C5	-5.10	103.36	105.40
25	14	1359	A	C8-N9-C4	5.10	107.84	105.80
25	14	1700	A	O5'-P-OP1	-5.10	101.11	105.70
25	1H	1349	A	C4-C5-N7	5.10	113.25	110.70
25	1H	1762	A	C4-C5-C6	-5.10	114.45	117.00
25	1H	2700	C	C6-N1-C1'	-5.10	114.68	120.80
55	1G	264	U	N3-C4-O4	5.10	122.97	119.40
55	1G	281	G	N3-C4-N9	5.10	129.06	126.00
25	14	1269	A	N1-C6-N6	5.10	121.66	118.60
25	14	1755	A	N1-C6-N6	-5.10	115.54	118.60
25	14	2085	C	C2-N3-C4	-5.10	117.35	119.90
25	14	2508	G	N7-C8-N9	5.10	115.65	113.10
26	1J	71	C	C6-N1-C1'	-5.10	114.68	120.80
1	13	1482	G	N1-C6-O6	5.10	122.96	119.90
25	1H	252	G	N9-C4-C5	5.10	107.44	105.40
25	1H	969	U	C5-C4-O4	-5.10	122.84	125.90
25	1H	1437	C	N3-C2-O2	-5.10	118.33	121.90
25	1H	2590	A	C2-N3-C4	-5.10	108.05	110.60
26	16	71	C	N3-C4-N4	5.10	121.57	118.00
25	14	140	A	N7-C8-N9	5.10	116.35	113.80
25	14	2441	C	N3-C2-O2	-5.10	118.33	121.90
1	13	351	G	C5-C6-O6	-5.09	125.54	128.60
25	1H	1241	A	C6-C5-N7	-5.09	128.74	132.30
25	1H	1804	C	N3-C2-O2	-5.09	118.33	121.90
25	1H	1843	C	C4-C5-C6	5.09	119.95	117.40
25	1H	2229	C	C5-C6-N1	-5.09	118.45	121.00
25	1H	2275	C	N3-C2-O2	-5.09	118.33	121.90
25	1H	2385	C	C2-N3-C4	-5.09	117.35	119.90
25	1H	2640	G	N1-C6-O6	5.09	122.96	119.90
55	1G	1475	G	N1-C6-O6	5.09	122.96	119.90
25	14	2364	C	C5-C6-N1	-5.09	118.45	121.00
25	1H	125	G	N1-C2-N2	-5.09	111.62	116.20
25	1H	946	G	C8-N9-C4	5.09	108.44	106.40
25	14	1617	C	N1-C2-N3	5.09	122.77	119.20
1	13	509	A	C2'-C3'-O3'	5.09	121.84	113.70
1	13	1519	A	C4-C5-C6	5.09	119.55	117.00
25	1H	699	A	N7-C8-N9	-5.09	111.25	113.80
25	1H	1786	A	OP1-P-O3'	5.09	116.40	105.20
25	1H	1990	C	C2-N3-C4	-5.09	117.35	119.90
26	16	6	C	C4-C5-C6	5.09	119.95	117.40
55	1G	538	G	O5'-P-OP1	-5.09	101.12	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	2700	C	C5-C6-N1	-5.09	118.45	121.00
25	1H	936	C	N1-C2-O2	-5.09	115.85	118.90
25	1H	1632	A	C4-C5-N7	5.09	113.25	110.70
25	1H	1844	C	N3-C4-N4	5.09	121.56	118.00
55	1G	1322	C	C6-N1-C1'	-5.09	114.69	120.80
25	14	1327	C	N3-C4-C5	-5.09	119.86	121.90
25	14	1639	U	C2-N3-C4	-5.09	123.95	127.00
25	14	2249	U	N1-C2-N3	5.09	117.95	114.90
1	13	884	U	N3-C2-O2	5.09	125.76	122.20
25	1H	228	A	C5-C6-N6	-5.09	119.63	123.70
25	1H	941	A	N1-C6-N6	5.09	121.65	118.60
25	1H	1327	C	C4-C5-C6	5.09	119.94	117.40
25	1H	2612	C	C6-N1-C2	5.09	122.33	120.30
25	1H	2743	C	N3-C4-C5	5.09	123.94	121.90
25	1H	2827	C	C2-N3-C4	-5.09	117.36	119.90
25	14	531	C	C2-N3-C4	-5.09	117.36	119.90
25	14	1803	A	C4-C5-N7	5.09	113.24	110.70
25	14	1925	C	C6-N1-C2	-5.09	118.27	120.30
25	14	2234	G	N3-C4-C5	-5.09	126.06	128.60
25	1H	468	G	C2-N3-C4	-5.09	109.36	111.90
25	1H	847	U	C2-N3-C4	-5.09	123.95	127.00
25	1H	2256	G	N3-C2-N2	5.09	123.46	119.90
25	14	669	G	C3'-C2'-C1'	5.09	105.57	101.50
25	14	2049	G	C2-N3-C4	-5.09	109.36	111.90
25	14	2817	G	C5-C6-N1	5.09	114.04	111.50
1	13	866	C	O5'-P-OP1	-5.08	101.12	105.70
25	1H	1942	C	C5-C6-N1	5.08	123.54	121.00
55	1G	377	G	C8-N9-C4	5.08	108.43	106.40
55	1G	970	C	O5'-P-OP2	5.08	116.80	110.70
1	13	915	A	OP1-P-O3'	5.08	116.38	105.20
25	1H	592	G	O5'-P-OP1	-5.08	101.12	105.70
25	1H	1192	G	N3-C4-N9	5.08	129.05	126.00
25	1H	2709	G	C8-N9-C4	-5.08	104.37	106.40
25	14	1252	G	O4'-C1'-N9	-5.08	104.13	108.20
25	1H	1298	C	N1-C2-O2	5.08	121.95	118.90
25	1H	2415	G	N1-C6-O6	5.08	122.95	119.90
32	61	35	LEU	CA-CB-CG	5.08	126.98	115.30
25	14	828	U	C4-C5-C6	5.08	122.75	119.70
25	14	834	C	N3-C4-C5	-5.08	119.87	121.90
25	14	2556	C	OP2-P-O3'	5.08	116.38	105.20
25	1H	685	A	C2-N3-C4	-5.08	108.06	110.60
25	1H	708	C	C5-C4-N4	-5.08	116.64	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	1839	G	C6-C5-N7	-5.08	127.35	130.40
25	1H	2422	A	N3-C4-N9	-5.08	123.34	127.40
25	14	2049	G	O5'-P-OP1	-5.08	101.13	105.70
1	13	865	A	C4-C5-N7	5.08	113.24	110.70
25	1H	455	C	N3-C4-N4	-5.08	114.44	118.00
53	P8	33	ARG	NE-CZ-NH2	5.08	122.84	120.30
25	14	77	C	N3-C4-C5	5.08	123.93	121.90
25	14	2364	C	C4-C5-C6	5.08	119.94	117.40
25	1H	430	G	C8-N9-C4	5.08	108.43	106.40
25	1H	2270	G	C2-N3-C4	-5.08	109.36	111.90
25	1H	2870	C	OP2-P-O3'	5.08	116.37	105.20
55	1G	915	A	C8-N9-C4	5.08	107.83	105.80
25	14	252	G	C5-N7-C8	5.08	106.84	104.30
1	13	328	C	N3-C2-O2	-5.08	118.35	121.90
25	1H	123	G	C5-C6-N1	5.08	114.04	111.50
25	1H	513	A	OP2-P-O3'	5.08	116.36	105.20
25	1H	2546	U	C5-C6-N1	-5.08	120.16	122.70
25	1H	2617	C	N3-C2-O2	5.08	125.45	121.90
25	14	1333	C	C2-N1-C1'	5.08	124.38	118.80
25	14	2263	C	OP1-P-O3'	5.08	116.37	105.20
25	14	2706	G	C6-N1-C2	-5.08	122.06	125.10
25	1H	671	C	N3-C4-C5	5.07	123.93	121.90
25	1H	808	G	C8-N9-C4	5.07	108.43	106.40
25	1H	1797	C	C2-N3-C4	-5.07	117.36	119.90
25	1H	2426	A	N9-C4-C5	-5.07	103.77	105.80
55	1G	258	G	N1-C6-O6	5.07	122.94	119.90
25	14	678	C	N3-C4-C5	5.07	123.93	121.90
25	14	1258	C	OP2-P-O3'	5.07	116.36	105.20
25	14	1758	G	C8-N9-C1'	-5.07	120.40	127.00
25	14	2624	G	C6-N1-C2	-5.07	122.06	125.10
1	13	1369	C	O5'-P-OP1	5.07	116.79	110.70
25	1H	2403	C	N3-C2-O2	5.07	125.45	121.90
55	1G	337	C	N3-C4-N4	5.07	121.55	118.00
25	14	953	A	N1-C6-N6	5.07	121.64	118.60
1	13	8	A	C2-N3-C4	-5.07	108.06	110.60
1	13	138	G	N1-C6-O6	5.07	122.94	119.90
1	13	863	U	N1-C2-N3	5.07	117.94	114.90
25	1H	1626	G	O5'-P-OP2	5.07	116.78	110.70
25	1H	1910	G	C5-C6-O6	5.07	131.64	128.60
25	1H	2026	C	C5-C6-N1	-5.07	118.47	121.00
25	1H	2346	A	N9-C4-C5	5.07	107.83	105.80
55	1G	180	U	C6-N1-C2	-5.07	117.96	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	1274	A	C5-C6-N6	-5.07	119.64	123.70
25	14	2584	U	N3-C2-O2	-5.07	118.65	122.20
56	19	41	GLY	N-CA-C	-5.07	100.42	113.10
18	9I	31	LEU	CA-CB-CG	5.07	126.96	115.30
22	1K	39	A	C5-C6-N6	-5.07	119.64	123.70
25	1H	471	A	N1-C6-N6	5.07	121.64	118.60
25	1H	2603	G	OP1-P-O3'	5.07	116.35	105.20
25	14	699	A	N9-C4-C5	5.07	107.83	105.80
1	13	326	G	C4-C5-N7	-5.07	108.77	110.80
1	13	402	G	O5'-P-OP1	5.07	116.78	110.70
25	1H	636	G	N3-C2-N2	-5.07	116.35	119.90
25	1H	2595	G	C4-N9-C1'	-5.07	119.91	126.50
55	1G	305	G	C5-C6-O6	5.07	131.64	128.60
25	14	1658	C	C2-N3-C4	5.07	122.43	119.90
25	14	1681	G	C2-N3-C4	-5.07	109.37	111.90
1	13	974	A	C6-C5-N7	-5.07	128.75	132.30
25	1H	683	C	C6-N1-C2	5.07	122.33	120.30
25	1H	726	G	N1-C2-N3	5.07	126.94	123.90
25	1H	863	A	OP2-P-O3'	5.07	116.34	105.20
25	1H	2718	G	O5'-P-OP1	-5.07	101.14	105.70
25	14	1372	U	N1-C2-O2	-5.07	119.25	122.80
56	19	43	ARG	CG-CD-NE	5.07	122.44	111.80
25	1H	571	A	C5-C6-N6	5.06	127.75	123.70
25	1H	1694	C	N3-C4-N4	5.06	121.55	118.00
25	14	657	U	C5-C4-O4	5.06	128.94	125.90
25	14	2688	U	N1-C2-O2	5.06	126.34	122.80
1	13	549	C	N3-C4-C5	5.06	123.92	121.90
1	13	1518	A	N7-C8-N9	-5.06	111.27	113.80
25	1H	339	U	OP1-P-OP2	-5.06	112.01	119.60
25	1H	1183	G	C5-C6-N1	-5.06	108.97	111.50
25	1H	1215	G	OP1-P-O3'	5.06	116.34	105.20
25	1H	1683	C	N1-C2-O2	-5.06	115.86	118.90
55	1G	110	C	C6-N1-C2	5.06	122.33	120.30
25	14	1929	G	OP1-P-OP2	5.06	127.19	119.60
25	1H	742	G	C5-N7-C8	5.06	106.83	104.30
25	1H	2549	G	N1-C6-O6	5.06	122.94	119.90
25	14	477	A	C5-C6-N6	5.06	127.75	123.70
25	14	1011	G	C4-N9-C1'	-5.06	119.92	126.50
25	14	1633	G	N7-C8-N9	5.06	115.63	113.10
25	14	2588	G	C5-N7-C8	5.06	106.83	104.30
1	13	520	A	C4-C5-N7	5.06	113.23	110.70
1	13	1201	A	O5'-P-OP2	-5.06	101.15	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	189	G	N7-C8-N9	-5.06	110.57	113.10
25	1H	627	A	OP1-P-O3'	5.06	116.33	105.20
25	1H	820	A	C5-C6-N1	-5.06	115.17	117.70
25	1H	1471	A	C8-N9-C4	-5.06	103.78	105.80
25	1H	1763	G	N7-C8-N9	-5.06	110.57	113.10
25	1H	2444	G	C8-N9-C4	-5.06	104.38	106.40
26	16	60	C	C5-C6-N1	5.06	123.53	121.00
29	31	46	ARG	NE-CZ-NH1	5.06	122.83	120.30
25	14	2087	G	O5'-P-OP2	-5.06	101.15	105.70
1	13	1489	G	OP2-P-O3'	5.06	116.33	105.20
23	2K	60	A	OP1-P-OP2	5.06	127.19	119.60
25	1H	139	G	C6-N1-C2	-5.06	122.06	125.10
25	1H	467	G	N7-C8-N9	-5.06	110.57	113.10
25	1H	639	U	N1-C2-O2	5.06	126.34	122.80
25	1H	1159	U	N1-C2-N3	5.06	117.93	114.90
25	1H	1546	C	O5'-P-OP1	-5.06	101.15	105.70
25	14	121	G	C6-N1-C2	-5.06	122.06	125.10
25	14	2582	G	C4-N9-C1'	5.06	133.07	126.50
25	14	142	G	C8-N9-C4	5.06	108.42	106.40
25	14	962	G	N1-C6-O6	5.06	122.93	119.90
25	14	1031	G	C4-C5-N7	5.06	112.82	110.80
25	1H	23	G	C4-C5-N7	-5.05	108.78	110.80
25	1H	201	C	C5-C4-N4	-5.05	116.66	120.20
25	1H	617	G	OP1-P-OP2	-5.05	112.02	119.60
25	1H	970	C	C5-C4-N4	-5.05	116.66	120.20
25	1H	2408	U	OP2-P-O3'	5.05	116.32	105.20
25	14	1418	G	C4-C5-N7	5.05	112.82	110.80
25	14	2029	G	C5-C6-N1	-5.05	108.97	111.50
25	14	2775	A	C8-N9-C4	5.05	107.82	105.80
1	13	20	U	N3-C2-O2	-5.05	118.66	122.20
25	1H	236	C	C5-C6-N1	-5.05	118.47	121.00
25	1H	708	C	O5'-P-OP2	-5.05	101.15	105.70
25	1H	2278	A	C6-N1-C2	-5.05	115.57	118.60
25	14	696	G	O5'-P-OP2	5.05	116.76	110.70
25	14	1275	A	N1-C6-N6	5.05	121.63	118.60
25	14	2433	A	N9-C4-C5	-5.05	103.78	105.80
25	14	2593	U	N3-C4-O4	5.05	122.94	119.40
25	1H	1303	G	OP2-P-O3'	5.05	116.31	105.20
25	1H	1934	C	C6-N1-C2	5.05	122.32	120.30
25	14	2211	G	C4-N9-C1'	5.05	133.07	126.50
1	13	770	C	C6-N1-C2	5.05	122.32	120.30
25	1H	1166	C	N3-C2-O2	-5.05	118.37	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	14	270(Y)	G	C5-C6-O6	5.05	131.63	128.60
25	14	2328	A	N1-C6-N6	5.05	121.63	118.60
25	14	2426	A	N1-C6-N6	5.05	121.63	118.60
1	13	1116	C	C4-C5-C6	5.05	119.92	117.40
1	13	1224	G	C5-C6-N1	5.05	114.02	111.50
25	1H	410	G	O5'-P-OP2	5.05	116.76	110.70
25	1H	520	G	N1-C2-N2	-5.05	111.66	116.20
25	1H	1826	G	C5-N7-C8	5.05	106.82	104.30
25	1H	1834	U	N3-C4-O4	5.05	122.93	119.40
25	14	468	G	C8-N9-C4	5.05	108.42	106.40
25	14	2333	A	C2-N3-C4	5.05	113.12	110.60
1	13	1055	A	C5-C6-N6	-5.05	119.66	123.70
25	1H	1286	A	O4'-C1'-N9	5.05	112.24	108.20
25	1H	2311	A	C5-N7-C8	-5.05	101.38	103.90
25	1H	2699	C	N3-C4-C5	5.05	123.92	121.90
55	1G	676	A	C8-N9-C4	-5.05	103.78	105.80
25	14	676	A	N1-C2-N3	5.05	131.82	129.30
25	14	729	G	C5-N7-C8	-5.05	101.78	104.30
25	14	2272	U	O5'-P-OP2	-5.05	101.16	105.70
25	14	2279	G	C4-C5-N7	5.05	112.82	110.80
25	14	2575	C	N3-C4-C5	-5.05	119.88	121.90
25	1H	2453	A	C5-C6-N1	5.04	120.22	117.70
55	1G	361	G	O5'-P-OP1	-5.04	101.16	105.70
25	14	2463	C	C5-C6-N1	-5.04	118.48	121.00
1	13	1480	G	C2-N3-C4	-5.04	109.38	111.90
23	2K	6	G	C2-N3-C4	-5.04	109.38	111.90
25	1H	684	G	C8-N9-C4	-5.04	104.38	106.40
25	1H	863	A	O5'-P-OP1	5.04	116.75	110.70
25	1H	960	A	C5-C6-N1	-5.04	115.18	117.70
25	1H	2250	G	OP1-P-O3'	5.04	116.30	105.20
25	1H	2819	G	N9-C4-C5	-5.04	103.38	105.40
25	14	934	G	O5'-P-OP2	-5.04	101.16	105.70
25	14	1958	C	C5-C6-N1	-5.04	118.48	121.00
1	13	1224	G	C2-N3-C4	5.04	114.42	111.90
1	13	1472	U	N3-C2-O2	-5.04	118.67	122.20
25	1H	754	C	C6-N1-C2	-5.04	118.28	120.30
25	1H	832	G	C5-C6-N1	-5.04	108.98	111.50
25	1H	2515	C	C5-C4-N4	-5.04	116.67	120.20
25	1H	2707	G	C6-N1-C2	-5.04	122.08	125.10
26	16	13	A	OP1-P-OP2	5.04	127.16	119.60
35	78	27	HIS	N-CA-C	5.04	124.61	111.00
25	14	141	A	N7-C8-N9	5.04	116.32	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1J	89(A)	A	C2-N3-C4	5.04	113.12	110.60
1	13	186(A)	C	C6-N1-C2	-5.04	118.28	120.30
25	1H	51	G	OP2-P-O3'	5.04	116.29	105.20
25	1H	2276	G	N3-C4-C5	-5.04	126.08	128.60
25	14	2887	U	N3-C4-C5	-5.04	111.58	114.60
1	13	31	G	C5-C6-O6	-5.04	125.58	128.60
22	1K	78	C	P-O3'-C3'	5.04	125.75	119.70
25	1H	420	C	N3-C4-C5	5.04	123.92	121.90
25	1H	1158	C	C6-N1-C2	5.04	122.31	120.30
25	1H	1241	A	N9-C4-C5	-5.04	103.78	105.80
25	1H	1569	A	C8-N9-C4	-5.04	103.78	105.80
25	1H	1980	G	N9-C4-C5	5.04	107.42	105.40
55	1G	118	U	C2-N1-C1'	5.04	123.75	117.70
55	1G	180	U	C2-N1-C1'	5.04	123.75	117.70
25	14	949	C	C6-N1-C1'	5.04	126.85	120.80
25	1H	177	G	C5-C6-O6	5.04	131.62	128.60
25	1H	1558	A	C6-C5-N7	-5.04	128.77	132.30
25	14	2620	C	C6-N1-C1'	-5.04	114.75	120.80
25	1H	510	C	N3-C4-C5	-5.04	119.89	121.90
25	1H	672	C	N3-C4-C5	5.04	123.91	121.90
25	1H	1326	U	N3-C2-O2	-5.04	118.67	122.20
25	1H	2616	C	O5'-P-OP2	5.04	116.74	110.70
25	14	961	C	C6-N1-C2	5.04	122.31	120.30
25	14	1955	U	N3-C4-O4	-5.04	115.88	119.40
25	14	2781	A	C2-N3-C4	-5.04	108.08	110.60
1	13	910	C	N3-C4-C5	5.03	123.91	121.90
25	1H	616	A	N1-C6-N6	5.03	121.62	118.60
25	1H	1857	G	C4-C5-N7	5.03	112.81	110.80
25	1H	2372	G	C8-N9-C4	5.03	108.41	106.40
25	1H	2826	A	N1-C2-N3	5.03	131.82	129.30
55	1G	1286	A	C8-N9-C4	-5.03	103.79	105.80
25	14	208	C	N3-C4-C5	5.03	123.91	121.90
25	14	503	A	N1-C6-N6	-5.03	115.58	118.60
25	14	791	C	OP2-P-O3'	5.03	116.28	105.20
25	14	1817	G	C5-C6-O6	5.03	131.62	128.60
25	14	1833	U	N3-C2-O2	-5.03	118.68	122.20
25	14	1839	G	O5'-P-OP1	-5.03	101.17	105.70
25	1H	217	G	N3-C2-N2	-5.03	116.38	119.90
25	1H	2217	G	N3-C4-C5	-5.03	126.08	128.60
25	14	729	G	OP2-P-O3'	5.03	116.27	105.20
26	1J	81	G	C6-C5-N7	-5.03	127.38	130.40
1	13	108	G	N9-C4-C5	-5.03	103.39	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	129	C	C5-C4-N4	-5.03	116.68	120.20
25	1H	662	G	C8-N9-C4	5.03	108.41	106.40
25	1H	689	A	C8-N9-C4	-5.03	103.79	105.80
25	1H	802	A	O5'-P-OP1	5.03	116.74	110.70
25	1H	992	C	C5-C6-N1	5.03	123.52	121.00
25	1H	1262	A	OP1-P-O3'	5.03	116.27	105.20
25	1H	2726	U	N1-C2-O2	5.03	126.32	122.80
55	1G	819	A	C4-C5-N7	5.03	113.22	110.70
25	14	1407	C	C5-C6-N1	5.03	123.52	121.00
25	14	1983	C	N3-C4-N4	5.03	121.52	118.00
25	14	2037	G	N3-C4-C5	-5.03	126.08	128.60
25	14	2386	C	N3-C4-C5	5.03	123.91	121.90
25	14	2845	G	N3-C2-N2	5.03	123.42	119.90
1	13	336	C	N3-C2-O2	5.03	125.42	121.90
25	1H	1758	G	C5-C6-O6	-5.03	125.58	128.60
25	1H	2307	G	N9-C4-C5	-5.03	103.39	105.40
26	16	19	G	N1-C6-O6	5.03	122.92	119.90
25	14	141	A	N3-C4-N9	-5.03	123.38	127.40
25	1H	118	A	N1-C6-N6	5.03	121.62	118.60
25	1H	127	A	C2-N3-C4	-5.03	108.09	110.60
25	1H	733	G	N3-C4-N9	5.03	129.02	126.00
25	1H	788	A	C6-N1-C2	5.03	121.62	118.60
25	1H	2257	U	O4'-C1'-N1	5.03	112.22	108.20
52	O8	36	LEU	CA-CB-CG	5.03	126.86	115.30
25	14	1355	G	N3-C2-N2	-5.03	116.38	119.90
25	14	1462	C	N1-C2-O2	-5.03	115.88	118.90
25	14	2356	C	C6-N1-C2	5.03	122.31	120.30
25	14	2827	C	N3-C4-C5	5.03	123.91	121.90
1	13	740	U	OP1-P-OP2	5.03	127.14	119.60
25	1H	1692	U	N3-C4-O4	5.03	122.92	119.40
25	1H	1999	C	OP2-P-O3'	5.03	116.26	105.20
25	1H	2427	C	C4-C5-C6	5.03	119.91	117.40
25	1H	2468	G	C4-N9-C1'	5.03	133.03	126.50
55	1G	890	G	C2-N3-C4	5.03	114.41	111.90
25	14	53	A	C6-N1-C2	-5.03	115.58	118.60
25	14	2356	C	C2-N1-C1'	-5.03	113.27	118.80
25	1H	827	U	O4'-C1'-N1	5.02	112.22	108.20
25	1H	1984	G	O5'-P-OP1	5.02	116.73	110.70
25	1H	2520	C	N3-C4-C5	-5.02	119.89	121.90
1	13	442	C	C6-N1-C2	-5.02	118.29	120.30
1	13	608	A	C2-N3-C4	-5.02	108.09	110.60
1	13	857	C	N3-C4-C5	-5.02	119.89	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	1104	G	C4-C5-N7	5.02	112.81	110.80
1	13	1524	C	C6-N1-C2	5.02	122.31	120.30
1	13	1529	G	C2-N3-C4	-5.02	109.39	111.90
25	1H	125	G	C6-C5-N7	-5.02	127.39	130.40
25	1H	431	U	N3-C4-O4	5.02	122.92	119.40
25	1H	667	U	N3-C4-O4	5.02	122.92	119.40
25	1H	1763	G	O5'-P-OP1	5.02	116.73	110.70
36	88	85	LYS	N-CA-C	-5.02	97.44	111.00
55	1G	811	C	N3-C2-O2	5.02	125.42	121.90
55	1G	1055	A	C8-N9-C4	-5.02	103.79	105.80
25	14	813	U	C4-C5-C6	5.02	122.71	119.70
1	13	818	G	C5-N7-C8	5.02	106.81	104.30
1	13	1494	G	C8-N9-C4	-5.02	104.39	106.40
25	1H	443	A	O5'-P-OP2	-5.02	101.18	105.70
1	13	971	G	O5'-P-OP1	5.02	116.72	110.70
1	13	1266	G	C6-C5-N7	5.02	133.41	130.40
25	1H	682	G	N3-C4-N9	5.02	129.01	126.00
25	1H	2327	A	C4-C5-N7	-5.02	108.19	110.70
25	1H	2481	G	C8-N9-C4	-5.02	104.39	106.40
25	14	577	G	O5'-P-OP2	5.02	116.72	110.70
1	13	1502	A	N1-C6-N6	5.02	121.61	118.60
25	1H	505	A	N1-C6-N6	5.02	121.61	118.60
25	1H	1942	C	N3-C4-N4	-5.02	114.49	118.00
55	1G	808	C	C6-N1-C1'	5.02	126.82	120.80
55	1G	1199	U	C2-N1-C1'	-5.02	111.68	117.70
25	14	177	G	C5-C6-O6	5.02	131.61	128.60
25	14	193	U	C5-C6-N1	-5.02	120.19	122.70
25	14	382	G	C8-N9-C4	5.02	108.41	106.40
25	14	2880	C	N3-C4-N4	5.02	121.51	118.00
1	13	317	G	OP1-P-O3'	5.02	116.23	105.20
1	13	1389	C	O5'-P-OP2	5.02	116.72	110.70
25	1H	906	G	N1-C6-O6	-5.02	116.89	119.90
25	14	733	G	N3-C2-N2	5.02	123.41	119.90
1	13	865	A	C6-C5-N7	-5.01	128.79	132.30
23	2K	27	G	C5-C6-O6	-5.01	125.59	128.60
55	1G	1054	C	C2-N1-C1'	5.01	124.31	118.80
25	14	228	A	C4-C5-N7	5.01	113.21	110.70
25	14	2329	G	C8-N9-C4	5.01	108.41	106.40
25	14	2365	G	C4-C5-N7	5.01	112.81	110.80
26	1J	22	U	C6-N1-C2	-5.01	117.99	121.00
25	1H	247	G	N3-C2-N2	5.01	123.41	119.90
25	1H	928	G	N3-C2-N2	-5.01	116.39	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	353	A	C8-N9-C4	-5.01	103.80	105.80
25	1H	604	G	O5'-P-OP1	-5.01	101.19	105.70
25	1H	1153	C	C6-N1-C2	-5.01	118.30	120.30
25	1H	1309	G	C5-N7-C8	5.01	106.81	104.30
55	1G	913	A	N9-C4-C5	5.01	107.81	105.80
1	13	181	G	N3-C4-N9	5.01	129.01	126.00
1	13	1433	A	N1-C2-N3	5.01	131.81	129.30
25	1H	104	U	C5-C6-N1	-5.01	120.19	122.70
25	1H	2074	U	C6-N1-C2	-5.01	118.00	121.00
25	1H	2190	G	N1-C6-O6	5.01	122.91	119.90
25	1H	2436	G	N3-C2-N2	-5.01	116.39	119.90
26	16	100	G	N3-C4-N9	5.01	129.01	126.00
55	1G	1198	G	O5'-P-OP1	-5.01	101.19	105.70
25	14	459	U	N1-C2-N3	5.01	117.91	114.90
25	14	2032	G	N9-C4-C5	-5.01	103.40	105.40
25	14	2346	A	C4-C5-C6	5.01	119.50	117.00
26	1J	103	U	C5-C6-N1	-5.01	120.19	122.70
1	13	522	C	O5'-P-OP2	-5.01	101.19	105.70
1	13	1126	U	N1-C2-O2	5.01	126.31	122.80
1	13	1329	A	N9-C4-C5	-5.01	103.80	105.80
25	1H	780	G	C6-C5-N7	-5.01	127.39	130.40
25	1H	2443	C	N3-C4-N4	5.01	121.50	118.00
25	14	2425	A	N9-C4-C5	5.01	107.80	105.80
1	13	190	G	C4-N9-C1'	5.01	133.01	126.50
25	1H	257	A	O5'-P-OP2	-5.01	101.19	105.70
25	1H	324	A	O5'-P-OP1	-5.01	101.19	105.70
25	1H	543	C	C5-C6-N1	-5.01	118.50	121.00
25	1H	982	C	N1-C2-O2	-5.01	115.90	118.90
25	1H	2512	C	C6-N1-C2	5.01	122.30	120.30
25	14	193	U	C4-C5-C6	5.01	122.70	119.70
25	14	493	G	N3-C4-C5	5.01	131.10	128.60
25	14	2363	C	N3-C4-C5	5.01	123.90	121.90
1	13	959	A	N1-C6-N6	5.00	121.60	118.60
29	31	32	LEU	CA-CB-CG	5.00	126.81	115.30
25	14	560	C	N3-C4-C5	5.00	123.90	121.90
25	14	1260	G	N1-C6-O6	5.00	122.90	119.90
25	14	2553	G	O5'-P-OP1	-5.00	101.19	105.70
1	13	569	C	OP1-P-OP2	5.00	127.11	119.60
25	1H	574	C	OP1-P-OP2	5.00	127.10	119.60
25	1H	633	A	C5-N7-C8	-5.00	101.40	103.90
25	1H	697	C	C5-C4-N4	-5.00	116.70	120.20
25	1H	1643	G	C5-C6-N1	5.00	114.00	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	1H	2012	G	N3-C4-N9	5.00	129.00	126.00
25	1H	2434	A	N1-C2-N3	5.00	131.80	129.30
25	14	666	G	C8-N9-C4	5.00	108.40	106.40
25	14	1441	G	N7-C8-N9	-5.00	110.60	113.10
25	14	1669	A	OP1-P-OP2	5.00	127.10	119.60
26	1J	79	C	OP2-P-O3'	5.00	116.21	105.20
25	1H	601	C	N1-C2-O2	5.00	121.90	118.90
25	1H	1973	G	N1-C2-N3	5.00	126.90	123.90
25	1H	2210	G	C8-N9-C4	-5.00	104.40	106.40
25	1H	2433	A	C5-C6-N1	-5.00	115.20	117.70
47	J8	86	SER	CB-CA-C	5.00	119.60	110.10
55	1G	1418	A	O5'-P-OP1	5.00	116.70	110.70
55	1G	1522	U	N1-C2-O2	-5.00	119.30	122.80
25	14	1254	A	C4-C5-C6	5.00	119.50	117.00

There are no chirality outliers.

All (82) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
27	11	197	GLY	Peptide
27	11	28	GLU	Peptide
27	11	32	SER	Peptide
56	19	237	GLU	Peptide
56	19	271	ILE	Peptide
56	19	32	SER	Peptide
56	19	37	LEU	Peptide
10	1A	87	THR	Peptide
28	21	153	GLY	Peptide
28	21	186	GLY	Peptide
28	21	64	LYS	Peptide
28	21	78	LEU	Peptide
28	29	117	MET	Peptide
28	29	186	GLY	Peptide
28	29	201	THR	Peptide
28	29	61	ARG	Peptide
28	29	77	ILE	Peptide
35	35	20	GLY	Peptide
35	35	52	GLU	Peptide
35	35	70	GLN	Peptide
57	39	85	GLY	Peptide
4	3E	85	LYS	Peptide
12	3I	87	GLY	Peptide

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
30	41	95	ARG	Peptide
36	45	117	ALA	Peptide
36	45	134	ARG	Peptide
36	45	86	GLY	Peptide
13	4I	107	ALA	Peptide
31	51	12	PRO	Peptide
33	58	77	GLY	Peptide
31	59	171	LEU	Peptide
14	5A	27	CYS	Peptide
14	5I	13	THR	Peptide
32	61	11	ASN	Peptide
32	61	114	LEU	Peptide
32	61	134	PRO	Peptide
32	61	82	ARG	Peptide
32	69	112	LYS	Peptide
39	75	54	ARG	Peptide
35	78	11	GLY	Peptide
35	78	115	LEU	Peptide
35	78	20	GLY	Peptide
35	78	24	GLY	Peptide
35	78	65	ARG	Peptide
35	78	70	GLN	Peptide
40	85	98	LEU	Peptide
36	88	79	LEU	Peptide
36	88	81	VAL	Peptide
41	95	86	GLY	Peptide
37	98	106	GLY	Peptide
19	AI	4	SER	Peptide
19	AI	6	LYS	Peptide
43	B5	61	GLY	Peptide
39	B8	58	ASN	Peptide
20	BA	11	SER	Peptide
44	C5	100	ALA	Peptide
44	C5	81	LYS	Peptide
40	C8	91	ASP	Peptide
40	C8	92	ARG	Peptide
47	F5	85	LEU	Peptide
48	G5	15	LYS	Peptide
48	G5	17	SER	Peptide
48	G5	43	GLN	Peptide
44	G8	104	GLY	Peptide
44	G8	53	PRO	Peptide

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Mol	Chain	Res	Type	Group
44	G8	54	LYS	Peptide
44	G8	80	GLY	Peptide
45	H8	165	VAL	Peptide
45	H8	59	LEU	Peptide
45	H8	63	ASP	Peptide
52	K5	44	ARG	Peptide
48	K8	17	SER	Peptide
59	M5	30	ARG	Peptide
59	M5	40	GLU	Peptide
59	M5	49	VAL	Peptide
50	M8	40	HIS	Peptide
54	Q8	36	LYS	Peptide
54	Q8	37	SER	Peptide
54	Q8	38	GLY	Peptide
54	Q8	62	LEU	Peptide
54	Q8	7	HIS	Peptide
54	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	32207	0	16254	796	0
2	12	1924	0	1975	84	0
2	1E	1924	0	1975	77	0
3	22	1612	0	1677	69	0
3	2E	1605	0	1668	53	0
4	32	1702	0	1763	85	1
4	3E	1702	0	1763	84	0
5	42	1155	0	1213	42	0
5	4E	1155	0	1213	50	0
6	52	842	0	857	30	0
6	5E	842	0	857	33	1
7	62	1256	0	1296	53	0
7	6E	1256	0	1296	43	0
8	72	1115	0	1177	30	0
8	7E	1115	0	1177	46	0
9	82	1009	0	1037	66	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
9	8E	1009	0	1037	52	0
10	1A	801	0	849	53	0
10	1I	801	0	849	46	0
11	2A	884	0	904	39	0
11	2I	884	0	904	28	0
12	3A	975	0	1062	42	0
12	3I	975	0	1062	38	0
13	4A	933	0	992	49	0
13	4I	928	0	987	50	0
14	5A	475	0	511	27	0
14	5I	498	0	537	30	0
15	6A	733	0	771	27	0
15	6I	733	0	771	22	0
16	7A	705	0	725	21	0
16	7I	705	0	725	49	0
17	8A	834	0	904	27	0
17	8I	834	0	904	39	0
18	9A	590	0	662	13	0
18	9I	590	0	662	23	0
19	AA	640	0	633	38	0
19	AI	665	0	686	34	0
20	BA	762	0	861	35	0
20	BI	762	0	861	36	0
21	1B	217	0	234	11	0
21	1F	217	0	234	9	0
22	1K	1825	0	946	36	0
22	1L	1595	0	830	24	0
22	3K	1595	0	830	36	0
22	3L	1615	0	840	30	0
23	2K	1645	0	843	36	0
23	2L	1645	0	843	31	0
24	4K	325	0	165	6	0
24	4L	347	0	176	6	0
25	14	62605	0	31558	1370	0
25	1H	62707	0	31607	1469	0
26	16	2617	0	1328	79	0
26	1J	2617	0	1328	75	0
27	11	2115	0	2195	120	0
28	21	1568	0	1634	107	0
28	29	1568	0	1634	100	0
29	31	1585	0	1632	84	0
30	41	1473	0	1535	76	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
30	49	1473	0	1535	56	0
31	51	1336	0	1418	61	0
31	59	1316	0	1395	52	0
32	61	1136	0	1223	48	1
32	69	1136	0	1223	53	0
33	15	1104	0	1180	45	0
33	58	1104	0	1180	64	0
34	25	932	0	996	41	0
34	68	932	0	996	34	0
35	35	1144	0	1228	102	0
35	78	1144	0	1228	89	0
36	45	1121	0	1179	65	0
36	88	1121	0	1179	59	0
37	55	959	0	1021	47	0
37	98	967	0	1033	59	0
38	65	881	0	943	46	0
38	A8	881	0	943	53	0
39	75	1141	0	1202	47	0
39	B8	1133	0	1190	55	0
40	85	963	0	1022	46	0
40	C8	963	0	1022	60	0
41	95	778	0	852	56	0
41	D8	778	0	852	21	0
42	A5	899	0	964	32	0
42	E8	899	0	964	34	0
43	B5	725	0	778	29	0
43	F8	742	0	803	42	0
44	C5	794	0	883	47	0
44	G8	791	0	880	61	0
45	H8	1397	0	1430	71	0
46	E5	612	0	633	39	0
46	I8	612	0	633	28	0
47	F5	762	0	848	30	0
47	J8	762	0	848	29	0
48	G5	558	0	610	24	0
48	K8	558	0	610	31	0
49	H5	468	0	518	18	0
49	L8	468	0	518	15	0
50	I5	515	0	514	34	0
50	M8	533	0	526	22	0
51	J5	453	0	475	20	0
51	N8	458	0	480	25	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
52	K5	389	0	404	24	0
52	O8	389	0	404	23	0
53	L5	391	0	432	14	0
53	P8	391	0	432	15	0
54	Q8	442	0	452	59	0
55	1G	32204	0	16256	685	1
56	19	2120	0	2197	107	0
57	39	1627	0	1680	91	0
58	D5	1428	0	1454	51	0
59	M5	480	0	549	43	0
60	11	2	0	0	0	0
60	13	140	0	0	0	0
60	14	386	0	0	0	0
60	16	12	0	0	0	0
60	19	1	0	0	0	0
60	1G	104	0	0	0	0
60	1H	438	0	0	0	0
60	1J	7	0	0	0	0
60	1K	1	0	0	0	0
60	21	2	0	0	0	0
60	25	1	0	0	0	0
60	29	2	0	0	0	0
60	2K	4	0	0	0	0
60	2L	3	0	0	0	0
60	39	1	0	0	0	0
60	3I	1	0	0	0	0
60	3K	1	0	0	0	0
60	41	1	0	0	0	0
60	45	3	0	0	0	0
60	49	1	0	0	0	0
60	4I	1	0	0	0	0
60	52	1	0	0	0	0
60	5I	1	0	0	0	0
60	68	1	0	0	0	0
60	78	3	0	0	0	0
60	85	1	0	0	0	0
60	88	2	0	0	0	0
60	98	2	0	0	0	0
60	B8	1	0	0	0	0
60	C5	1	0	0	0	0
60	C8	1	0	0	0	0
60	E5	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
60	I8	2	0	0	0	0
60	K8	1	0	0	0	0
60	P8	1	0	0	0	0
61	32	1	0	0	0	0
61	3E	1	0	0	0	0
61	5A	1	0	0	0	0
61	5I	1	0	0	0	0
61	C5	1	0	0	0	0
61	G8	1	0	0	0	0
62	11	10	0	0	0	0
62	13	125	0	0	36	0
62	14	446	0	0	126	0
62	16	15	0	0	3	0
62	19	8	0	0	1	0
62	1G	74	0	0	23	0
62	1H	738	0	0	226	0
62	1J	12	0	0	5	0
62	1K	4	0	0	0	0
62	21	4	0	0	2	0
62	25	6	0	0	1	0
62	31	5	0	0	0	0
62	39	1	0	0	0	0
62	3E	4	0	0	0	0
62	3I	1	0	0	0	0
62	3K	1	0	0	0	0
62	4K	1	0	0	0	0
62	4L	1	0	0	0	0
62	5I	2	0	0	0	0
62	78	3	0	0	0	0
62	7I	1	0	0	0	0
62	82	1	0	0	0	0
62	85	2	0	0	1	0
62	98	3	0	0	1	0
62	A5	1	0	0	0	0
62	B8	1	0	0	0	0
62	BA	2	0	0	1	0
62	C8	2	0	0	0	0
62	D8	2	0	0	0	0
62	E5	1	0	0	0	0
62	G8	2	0	0	0	0
62	L5	1	0	0	0	0
62	L8	3	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
62	M5	2	0	0	0	0
62	Q8	1	0	0	0	0
All	All	299951	0	200664	8116	2

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 17.

All (8116) 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)
22:1L:35:QUO:C4	22:1L:35:QUO:N3	1.71	1.53
22:1K:35:QUO:N3	22:1K:35:QUO:C4	1.69	1.53
22:3K:35:QUO:C4	22:3K:35:QUO:N3	1.71	1.52
22:3L:35:QUO:N3	22:3L:35:QUO:C4	1.72	1.49
25:1H:973:A:OP2	62:1H:3767:HOH:O	1.69	1.10
25:1H:761:A:OP1	62:1H:3598:HOH:O	1.73	1.05
28:21:77:ILE:HB	28:21:79:ARG:HE	1.21	1.05
25:1H:1780:A:OP1	62:1H:3535:HOH:O	1.73	1.04
25:1H:450:G:OP2	62:1H:3811:HOH:O	1.75	1.04
32:61:110:ASP:HB2	32:61:112:LYS:H	1.23	1.04
25:1H:2593:U:O4	62:1H:3588:HOH:O	1.76	1.03
25:14:1780:A:OP1	62:14:3409:HOH:O	1.76	1.03
1:13:664:G:H22	1:13:741:G:H1	1.07	1.03
25:14:1614:A:OP1	62:14:3428:HOH:O	1.75	1.03
9:82:112:LYS:HA	9:82:119:ALA:HB2	1.42	1.01
25:14:1582:C:HO2'	25:14:1586:A:H8	1.09	1.00
25:1H:567:A:OP1	62:1H:3504:HOH:O	1.77	1.00
54:Q8:50:LEU:O	54:Q8:52:LYS:N	1.93	1.00
25:14:2032:G:H21	28:29:146:THR:HG23	1.25	0.99
25:14:67:U:H3	25:14:74:A:H2	1.04	0.99
25:14:1774:C:OP1	62:14:3506:HOH:O	1.80	0.99
25:1H:945:A:OP1	62:1H:4009:HOH:O	1.80	0.99
25:1H:607:U:H3	25:1H:621:A:H2	1.11	0.99
25:1H:67:U:H3	25:1H:74:A:H2	1.04	0.98
25:14:187:G:N7	62:14:3757:HOH:O	1.96	0.97
25:1H:883:G:H1	25:1H:893:C:H42	1.11	0.96
25:1H:1496:A:H8	25:1H:1577:C:HO2'	1.04	0.96
1:13:352:C:OP2	62:13:1857:HOH:O	1.83	0.95
54:Q8:60:LEU:HD23	54:Q8:61:LEU:HD22	1.47	0.95
25:14:784:A:OP2	62:14:3533:HOH:O	1.82	0.95
25:14:1496:A:H8	25:14:1577:C:HO2'	1.05	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:676:A:H8	25:1H:2069:G:H21	1.14	0.95
45:H8:30:ASN:HD22	45:H8:90:VAL:HB	1.29	0.95
25:14:84:A:N6	25:14:102:G:O2'	1.99	0.95
20:BI:73:HIS:HB3	20:BI:74:LYS:HG2	1.48	0.95
25:1H:1798:U:H5'	27:11:259:THR:HG22	1.48	0.95
2:1E:185:ILE:HG22	2:1E:199:TYR:HB2	1.46	0.95
25:1H:2615:U:OP1	62:1H:3513:HOH:O	1.84	0.94
25:1H:192:C:N3	62:1H:3567:HOH:O	1.99	0.94
2:1E:111:ARG:HG2	2:1E:111:ARG:HH11	1.31	0.94
25:1H:568:U:O4	62:1H:3767:HOH:O	1.86	0.94
25:14:1783:A:OP2	62:14:3412:HOH:O	1.85	0.94
1:13:677:U:H3	1:13:713:G:H22	1.10	0.94
25:1H:2032:G:N7	62:1H:3606:HOH:O	1.98	0.94
25:14:676:A:H8	25:14:2069:G:H21	1.14	0.94
25:14:739:G:OP1	62:14:3406:HOH:O	1.84	0.94
55:1G:258:G:N7	62:1G:1864:HOH:O	2.01	0.93
25:1H:138:G:N2	43:F8:44:GLU:OE2	2.02	0.93
40:C8:91:ASP:HA	40:C8:92:ARG:HB2	1.51	0.93
26:1J:80:U:H2'	26:1J:81:G:H21	1.34	0.93
36:45:27:VAL:HG13	58:D5:81:ARG:HH22	1.33	0.93
25:1H:1113:U:H5'	31:51:2:SER:HB2	1.50	0.93
22:3L:19:C:H2'	22:3L:20:C:H4'	1.49	0.93
25:14:1664:A:OP2	62:14:3559:HOH:O	1.87	0.92
25:1H:1632:A:N7	62:1H:3650:HOH:O	2.00	0.92
25:1H:1997:G:OP2	62:1H:3908:HOH:O	1.87	0.92
1:13:1281:U:O2	62:13:1905:HOH:O	1.86	0.92
25:14:86:C:HO2'	25:14:104:U:HO2'	1.13	0.92
42:E8:18:ARG:HD3	42:E8:76:VAL:HG13	1.52	0.92
25:1H:574:C:OP2	62:1H:3914:HOH:O	1.86	0.91
55:1G:533:A:OP1	62:1G:1843:HOH:O	1.88	0.91
25:14:2032:G:N7	62:14:3597:HOH:O	2.02	0.91
25:1H:818:G:OP2	62:1H:3777:HOH:O	1.88	0.91
40:C8:8:VAL:HG23	40:C8:11:ARG:HH21	1.34	0.91
45:H8:128:VAL:HA	45:H8:161:VAL:HG11	1.50	0.91
54:Q8:49:VAL:HA	54:Q8:50:LEU:O	1.69	0.91
25:1H:2406:U:OP1	62:1H:3645:HOH:O	1.86	0.91
28:21:50:GLY:HA2	28:21:77:ILE:HA	1.52	0.91
25:14:141:A:H8	25:14:1595:G:H21	1.17	0.91
25:14:1689:A:H62	25:14:1698:A:H2	1.18	0.91
25:14:1782:C:OP1	62:14:3408:HOH:O	1.87	0.91
25:14:2552:U:OP2	62:14:3676:HOH:O	1.87	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2308:G:H1	25:1H:2311:A:H2	1.10	0.91
25:14:2505:G:O6	62:14:3680:HOH:O	1.86	0.91
25:1H:847:U:OP2	62:1H:3787:HOH:O	1.89	0.90
56:19:69:ARG:NH2	56:19:128:GLY:O	2.05	0.90
25:14:2096:U:H3	25:14:2193:G:H1	1.16	0.90
25:1H:1689:A:H62	25:1H:1698:A:H2	1.15	0.90
10:1A:30:SER:HB2	10:1A:81:THR:HG22	1.52	0.90
41:D8:24:LYS:HA	41:D8:92:THR:HG23	1.51	0.90
25:14:1327:C:OP2	62:14:3577:HOH:O	1.89	0.90
25:1H:1774:C:OP1	62:1H:3699:HOH:O	1.90	0.90
33:58:96:GLU:HG2	33:58:97:ARG:H	1.36	0.90
25:1H:1456:G:OP2	62:1H:3656:HOH:O	1.89	0.90
31:59:159:GLU:O	31:59:163:TYR:OH	1.89	0.90
1:13:1486:G:O6	62:13:1919:HOH:O	1.88	0.89
43:B5:24:GLY:HA3	43:B5:82:GLN:HE22	1.36	0.89
25:14:1899:G:H21	25:14:1902:C:N4	1.69	0.89
1:13:1502:A:H2	1:13:1505:G:H1	1.20	0.89
25:1H:2062:A:OP2	62:1H:3736:HOH:O	1.89	0.89
55:1G:1508:G:OP1	62:1G:1806:HOH:O	1.88	0.89
22:1K:17:OMG:N2	22:1K:64:PSU:O4	2.06	0.89
1:13:877:C:OP1	8:7E:88:LYS:NZ	2.05	0.89
1:13:1125:U:OP2	1:13:1145:C:N4	2.06	0.89
25:1H:142:G:H1'	43:F8:37:THR:HG21	1.54	0.89
25:1H:1614:A:OP1	62:1H:3844:HOH:O	1.91	0.89
27:11:8:PRO:HB3	27:11:14:ARG:HB3	1.55	0.89
32:61:92:VAL:HG13	32:61:120:ILE:HG23	1.55	0.89
25:1H:2058:A:N6	62:1H:3521:HOH:O	2.03	0.89
25:1H:751:A:OP1	62:1H:3846:HOH:O	1.91	0.88
25:14:686:G:H5''	53:L5:11:LYS:HE2	1.54	0.88
25:14:397:G:N7	62:14:3793:HOH:O	2.06	0.88
57:39:188:ARG:HA	35:35:3:LEU:HD11	1.55	0.88
37:55:48:VAL:HA	37:55:51:LEU:HD12	1.56	0.88
25:1H:2074:U:OP1	62:1H:3593:HOH:O	1.91	0.88
25:1H:2431:U:OP2	62:1H:3828:HOH:O	1.89	0.88
35:35:64:LYS:HB2	59:M5:30:ARG:HH22	1.36	0.88
25:1H:1639:U:OP1	62:1H:3587:HOH:O	1.89	0.88
25:1H:846:C:O2'	62:1H:3667:HOH:O	1.91	0.88
25:14:662:G:OP1	35:35:15:ARG:NH2	2.07	0.88
25:14:2136:C:H42	25:14:2155:G:H1	1.20	0.88
25:1H:1187:G:OP2	62:1H:3781:HOH:O	1.91	0.88
28:21:117:MET:HE1	28:21:136:ARG:HA	1.53	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2056:G:OP2	62:1H:3519:HOH:O	1.91	0.88
25:1H:2781:A:H5''	25:1H:2782:G:H5'	1.55	0.88
25:1H:187:G:N7	62:1H:4107:HOH:O	2.06	0.87
36:88:14:ARG:HG2	36:88:41:TRP:HH2	1.39	0.87
18:9I:58:LEU:HD23	18:9I:62:GLU:HB3	1.56	0.87
25:1H:531:C:OP2	62:1H:3939:HOH:O	1.92	0.87
25:14:1970:A:OP1	62:14:3517:HOH:O	1.93	0.87
25:1H:1250:G:N7	35:78:18:ARG:NH2	2.23	0.87
25:1H:1664:A:OP2	62:1H:3977:HOH:O	1.92	0.87
25:14:847:U:O4	25:14:933:A:N6	2.07	0.86
25:14:2720:U:H3	25:14:2873:A:H2	1.21	0.86
25:14:1022:G:H22	25:14:1142(A):A:H2	1.21	0.86
25:1H:370:G:OP2	62:1H:3717:HOH:O	1.93	0.86
25:1H:620:G:H4'	25:1H:621:A:H5''	1.55	0.86
25:1H:810:U:OP1	62:1H:3630:HOH:O	1.92	0.86
25:1H:1678:G:N2	25:1H:1989:G:H22	1.73	0.86
25:1H:1857:G:O6	62:1H:4172:HOH:O	1.91	0.86
25:1H:1771:C:HO2'	25:1H:1786:A:H8	0.89	0.86
25:14:517:C:OP1	51:J5:16:ARG:NH2	2.08	0.86
4:3E:190:ASP:H	4:3E:193:ASP:HB2	1.41	0.86
25:1H:49:A:N7	25:1H:120:U:H5	1.73	0.86
25:1H:2656:U:H3	25:1H:2665:A:H2	1.23	0.86
25:14:2791:C:H42	25:14:2805:G:H1	1.23	0.86
23:2L:50:G:H1	23:2L:66:C:H42	1.22	0.86
9:82:28:VAL:HG22	9:82:63:ILE:HB	1.56	0.86
25:14:1048:A:N6	25:14:1112:G:O2'	2.08	0.86
25:1H:929:G:O6	62:1H:3787:HOH:O	1.93	0.86
25:1H:674:G:H1'	29:31:74:ARG:HD3	1.57	0.85
25:14:660:G:H21	35:35:12:ALA:HB2	1.41	0.85
58:D5:40:ASP:HB3	58:D5:43:GLU:HG3	1.58	0.85
5:4E:153:LYS:HD3	5:4E:154:GLY:H	1.40	0.85
26:1J:40:U:O2	26:1J:45:A:N6	2.09	0.85
25:1H:1376:C:OP2	62:1H:3557:HOH:O	1.92	0.85
55:1G:1129:C:H4'	55:1G:1130:A:H5'	1.57	0.85
25:14:2588:G:OP2	62:14:3543:HOH:O	1.92	0.85
25:14:2589:A:OP1	62:14:3533:HOH:O	1.92	0.85
25:1H:1021:A:H62	25:1H:1141:U:H3	1.20	0.85
27:11:71:ASP:N	27:11:71:ASP:OD1	2.08	0.85
25:14:2357:U:OP1	46:E5:20:ARG:NH1	2.10	0.85
1:13:1525:G:OP1	11:2I:120:ARG:NH2	2.08	0.84
3:22:34:LEU:HG	3:22:38:ARG:HH21	1.41	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:2I:79:SER:HB2	11:2I:106:LYS:HD2	1.59	0.84
29:31:6:VAL:HG21	29:31:119:ARG:HB2	1.59	0.84
1:13:812:C:N3	62:13:1809:HOH:O	2.11	0.84
25:1H:2592:G:OP1	62:1H:3893:HOH:O	1.95	0.84
35:78:47:ASP:OD2	35:78:50:ARG:NH2	2.10	0.84
1:13:78:G:O6	1:13:90:C:N4	2.10	0.84
22:3K:62:G:H1	22:3K:70:C:H42	1.21	0.84
25:1H:1763:G:OP1	62:1H:3968:HOH:O	1.95	0.84
25:1H:2271:G:N7	62:1H:4113:HOH:O	2.11	0.84
55:1G:490:G:OP2	4:32:132:ARG:NH2	2.11	0.84
25:1H:453:C:OP1	62:1H:3817:HOH:O	1.95	0.84
25:1H:1636:C:OP2	62:1H:3511:HOH:O	1.94	0.84
25:1H:1982:C:OP2	62:1H:4220:HOH:O	1.96	0.84
25:1H:674:G:OP2	62:1H:3822:HOH:O	1.96	0.83
25:1H:1253:A:N7	62:1H:3634:HOH:O	2.09	0.83
25:1H:1395:A:OP2	62:1H:3549:HOH:O	1.94	0.83
56:19:242:ARG:O	62:19:407:HOH:O	1.95	0.83
1:13:74:C:H42	1:13:96:G:H1	1.21	0.83
55:1G:560:U:H5'	55:1G:566:G:N2	1.92	0.83
41:95:85:LYS:HG3	41:95:87:HIS:H	1.43	0.83
25:1H:577:G:O6	62:1H:3911:HOH:O	1.96	0.83
22:3L:20:C:H5''	22:3L:68:A:H62	1.42	0.83
25:14:463:G:OP2	62:14:3826:HOH:O	1.95	0.83
1:13:413:G:O2'	1:13:428:G:N2	2.11	0.83
1:13:1506:U:O2'	62:13:1803:HOH:O	1.94	0.83
12:3I:126:LYS:HG3	12:3I:128:ALA:H	1.41	0.83
52:O8:18:ARG:NH2	52:O8:43:CYS:SG	2.51	0.83
25:14:593:G:H4'	59:M5:61:LEU:HD22	1.60	0.83
25:1H:987:G:OP2	62:1H:3903:HOH:O	1.97	0.83
25:14:152:G:H1	25:14:174:C:H42	1.26	0.83
50:I5:1:MET:N	50:I5:1:MET:SD	2.50	0.83
28:21:78:LEU:HA	28:21:79:ARG:HD2	1.61	0.83
25:14:1332:G:N2	25:14:1609:A:O2'	2.11	0.83
13:4I:108:ARG:HG3	13:4I:108:ARG:HH11	1.44	0.83
25:1H:654(D):G:H1	25:1H:654(Q):C:H42	1.27	0.83
29:31:185:ASP:OD1	29:31:188:ARG:NH1	2.12	0.83
25:1H:2705:A:OP2	62:1H:3984:HOH:O	1.95	0.82
55:1G:1321:C:H41	55:1G:1322:C:H41	1.23	0.82
2:12:32:ILE:HD11	2:12:40:HIS:HB3	1.59	0.82
25:1H:1495:A:OP2	62:1H:4162:HOH:O	1.95	0.82
25:1H:1828:G:OP2	62:1H:3626:HOH:O	1.95	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1786:A:OP1	62:14:3502:HOH:O	1.96	0.82
25:1H:860:U:H5	25:1H:917:A:C2	1.97	0.82
25:14:1141:U:OP2	33:15:63:THR:OG1	1.95	0.82
25:14:2777:G:H5''	25:14:2778:A:H5'	1.58	0.82
25:14:741:G:OP1	62:14:3496:HOH:O	1.96	0.82
25:1H:2059:A:OP2	62:1H:4102:HOH:O	1.97	0.82
25:1H:2518:A:OP2	62:1H:3953:HOH:O	1.98	0.82
10:1A:44:VAL:HG22	10:1A:66:ARG:HG2	1.62	0.82
55:1G:448:A:OP2	55:1G:485:G:N2	2.09	0.82
25:14:2499:C:OP2	62:14:3455:HOH:O	1.98	0.82
1:13:1028:C:H42	1:13:1033:G:H1	1.27	0.82
37:98:51:LEU:HD22	37:98:66:VAL:HG13	1.61	0.82
10:1I:61:GLU:OE2	14:5I:45:ARG:NH1	2.12	0.81
25:1H:249:C:OP1	62:1H:3575:HOH:O	1.98	0.81
32:61:144:VAL:HG13	32:61:145:VAL:HG22	1.62	0.81
40:C8:52:ARG:HA	40:C8:55:ARG:HG3	1.62	0.81
1:13:21:G:OP1	62:13:1825:HOH:O	1.96	0.81
25:14:2393:A:H4'	35:35:62:LEU:H	1.44	0.81
19:AI:40:ILE:HG23	19:AI:41:VAL:HG13	1.63	0.81
25:1H:2502:G:OP2	62:1H:3537:HOH:O	1.99	0.81
55:1G:631:G:H2'	55:1G:632:A:H8	1.44	0.81
55:1G:1506:U:O2'	62:1G:1802:HOH:O	1.96	0.81
25:14:1130:U:O2	28:29:149:ARG:NH2	2.13	0.81
25:14:1226:G:H5'	41:95:85:LYS:H	1.45	0.81
55:1G:1129:C:N4	55:1G:1142:G:O6	2.13	0.81
26:1J:4:C:H42	26:1J:116:G:H1	1.28	0.81
6:52:2:ARG:HH21	6:52:69:GLU:HG3	1.43	0.81
25:14:2503:A:OP1	62:14:3579:HOH:O	1.98	0.81
1:13:1318:A:H1'	19:AI:37:ARG:HH21	1.44	0.81
31:59:4:ILE:HB	31:59:6:ARG:HE	1.44	0.81
26:16:100:G:OP2	62:16:303:HOH:O	1.98	0.81
37:98:2:ARG:O	62:98:302:HOH:O	1.99	0.81
25:14:2269:A:OP1	62:14:3811:HOH:O	1.99	0.81
13:4I:108:ARG:NH1	13:4I:112:GLY:O	2.13	0.81
25:1H:958:U:OP2	36:88:14:ARG:NH1	2.12	0.81
34:68:75:SER:OG	39:B8:74:ARG:NH2	2.14	0.81
25:1H:1138:G:H21	33:58:106:MET:HE3	1.46	0.81
25:1H:2576:G:OP1	62:1H:3701:HOH:O	1.99	0.81
35:35:39:LYS:HD2	35:35:45:LEU:HD21	1.63	0.81
25:1H:376:C:OP2	62:1H:3663:HOH:O	1.98	0.80
55:1G:1120:G:OP2	62:1G:1855:HOH:O	1.99	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:586:A:OP2	62:14:3443:HOH:O	1.98	0.80
25:1H:848:G:H2'	25:1H:849:A:C8	2.16	0.80
25:14:761:A:N7	62:14:3419:HOH:O	2.13	0.80
25:14:124:G:N7	62:14:3693:HOH:O	2.12	0.80
25:14:2598:A:OP1	62:14:3845:HOH:O	1.99	0.80
25:1H:422:A:OP2	62:1H:3719:HOH:O	1.97	0.80
37:98:67:LEU:HD13	37:98:76:VAL:HG21	1.63	0.80
15:6A:26:GLU:OE2	15:6A:77:ARG:NH1	2.15	0.80
20:BI:71:THR:HG22	20:BI:72:LEU:H	1.47	0.80
40:C8:90:VAL:HB	41:D8:39:LEU:HG	1.63	0.80
55:1G:1435:G:H2'	55:1G:1436:U:C6	2.16	0.80
40:85:88:ILE:HG22	41:95:49:THR:HA	1.62	0.80
41:95:37:VAL:HG21	41:95:57:VAL:HG12	1.64	0.80
13:4A:8:GLU:HG3	13:4A:22:ILE:HG12	1.64	0.80
11:2I:85:ARG:HD3	11:2I:113:PRO:HD3	1.63	0.80
25:1H:2789:C:O2	25:1H:2894:G:N2	2.12	0.80
5:42:91:LEU:HD12	5:42:120:THR:HG22	1.64	0.80
25:1H:71:A:H2	43:F8:31:HIS:HE1	1.30	0.80
55:1G:631:G:H5''	8:72:98:LYS:HE2	1.62	0.80
3:22:119:ARG:HH22	3:22:140:ARG:HD2	1.47	0.80
1:13:186(E):C:N3	1:13:191(B):G:N2	2.30	0.80
1:13:1110:A:OP2	62:13:1878:HOH:O	1.99	0.80
10:1I:38:ILE:HG23	10:1I:71:LEU:HB3	1.63	0.80
25:1H:1968:G:OP1	62:1H:3889:HOH:O	1.99	0.79
51:N8:45:VAL:HG13	51:N8:50:GLY:HA3	1.63	0.79
25:14:2:G:H1	25:14:2901:C:H42	1.30	0.79
25:1H:631:A:OP1	35:78:65:ARG:NH1	2.14	0.79
40:C8:95:LEU:O	40:C8:97:ASP:N	2.15	0.79
55:1G:673:G:H2'	55:1G:674:G:C8	2.18	0.79
22:1K:7:G:O6	22:1K:75:C:N4	2.16	0.79
25:1H:743:G:O3'	62:1H:3619:HOH:O	2.00	0.79
25:1H:1381:G:N7	62:1H:3915:HOH:O	2.16	0.79
55:1G:1502:A:H2	55:1G:1505:G:H1	1.29	0.79
3:22:8:ILE:HG23	3:22:16:ARG:HG2	1.63	0.79
25:14:270(F):U:H3	25:14:270(T):G:H1	1.30	0.79
25:14:2705:A:OP2	62:14:3562:HOH:O	2.00	0.79
1:13:786:G:N7	62:13:1863:HOH:O	2.15	0.79
25:1H:2053:G:OP1	62:1H:3702:HOH:O	2.01	0.79
54:Q8:62:LEU:HB3	54:Q8:63:PRO:HD3	1.63	0.79
34:25:98:VAL:HG12	34:25:117:LEU:HB3	1.63	0.79
25:1H:2061:G:OP2	62:1H:3538:HOH:O	1.99	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:31:185:ASP:HA	29:31:188:ARG:HD3	1.63	0.79
44:G8:87:LYS:HB2	44:G8:96:ILE:HD11	1.65	0.79
25:14:1364:G:OP2	47:F5:2:SER:N	2.16	0.79
25:1H:2758:A:OP2	62:1H:4184:HOH:O	1.99	0.79
35:35:63:PRO:HA	59:M5:13:ARG:HG2	1.64	0.79
1:13:186(E):C:H42	1:13:191(B):G:H1	1.27	0.79
1:13:737:A:H2'	1:13:738:C:C6	2.18	0.79
15:6I:26:GLU:OE2	15:6I:77:ARG:NH1	2.15	0.79
25:1H:2841:C:N4	25:1H:2876:G:O6	2.14	0.79
25:14:1225:C:H4'	41:95:85:LYS:HG2	1.65	0.79
25:14:1970:A:OP2	62:14:3524:HOH:O	1.99	0.79
1:13:1322:C:H5'	13:4I:100:GLY:HA2	1.63	0.79
1:13:1348:U:H4'	9:8E:120:ARG:HD2	1.65	0.79
25:1H:2210:G:H5'	25:1H:2211:G:C8	2.18	0.79
44:G8:76:CYS:HB2	44:G8:82:PRO:HD3	1.64	0.79
3:22:79:ARG:HE	3:22:79:ARG:H	1.31	0.79
25:14:2572:A:C8	28:29:144:ARG:HD2	2.16	0.79
1:13:454:C:OP1	16:7I:75:ARG:NH2	2.17	0.78
26:16:15:A:H5'	26:16:16:G:C8	2.18	0.78
55:1G:1298:C:OP2	7:62:114:ARG:NH2	2.16	0.78
7:62:113:GLU:HB2	7:62:119:ARG:HG2	1.64	0.78
30:49:161:THR:HG22	30:49:163:ALA:H	1.48	0.78
25:1H:1265:A:OP2	62:1H:3513:HOH:O	2.00	0.78
25:1H:1388:G:H2'	25:1H:1389:G:H8	1.48	0.78
25:1H:1900:A:H5'	25:1H:1900:A:H8	1.47	0.78
44:G8:82:PRO:HG3	44:G8:97:ARG:HD2	1.64	0.78
25:1H:2027:G:N7	62:1H:3949:HOH:O	2.14	0.78
35:35:63:PRO:HG3	59:M5:13:ARG:CZ	2.13	0.78
25:1H:1603:A:OP1	62:1H:3548:HOH:O	2.01	0.78
58:D5:24:LEU:HD11	58:D5:86:VAL:HG23	1.64	0.78
1:13:975:A:H4'	1:13:976:G:H5''	1.65	0.78
25:1H:1386:C:H2'	25:1H:1387:C:H6	1.47	0.78
39:B8:3:ARG:HG3	39:B8:7:ILE:HG13	1.65	0.78
25:1H:2577:A:OP1	62:1H:3701:HOH:O	2.00	0.78
28:29:101:ARG:HB2	28:29:203:LYS:HD2	1.65	0.78
25:1H:409:C:OP1	62:1H:3664:HOH:O	2.01	0.78
25:1H:1981:A:OP1	62:1H:4222:HOH:O	2.01	0.78
55:1G:1348:U:H3	55:1G:1374:A:H2	1.29	0.78
25:14:576:U:OP1	62:14:3579:HOH:O	2.00	0.78
25:14:2808:U:O2	25:14:2892:A:N6	2.17	0.78
3:2E:70:VAL:HG12	3:2E:72:LYS:H	1.47	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1500:A:OP1	62:13:1804:HOH:O	2.02	0.78
25:1H:2588:G:OP2	62:1H:3579:HOH:O	2.02	0.78
33:58:96:GLU:HG2	33:58:97:ARG:N	1.98	0.78
25:1H:2392:A:H2	25:1H:2424:C:H42	1.29	0.77
55:1G:591:U:OP2	8:72:30:ARG:NH1	2.17	0.77
25:14:259:G:H21	25:14:621:A:H8	1.31	0.77
8:7E:120:THR:H	8:7E:123:GLU:HB3	1.49	0.77
10:1I:48:THR:HA	10:1I:62:HIS:HB3	1.64	0.77
25:1H:993:G:OP1	40:C8:50:ARG:NH2	2.17	0.77
25:1H:1783:A:OP2	62:1H:3534:HOH:O	2.02	0.77
25:14:2439:A:H5'	25:14:2439:A:C8	2.19	0.77
35:35:62:LEU:HD23	59:M5:27:THR:HA	1.67	0.77
1:13:1126:U:OP2	62:13:1905:HOH:O	2.01	0.77
25:1H:450:G:O6	62:1H:3814:HOH:O	2.01	0.77
25:1H:731:C:OP2	62:1H:3601:HOH:O	2.02	0.77
55:1G:572:A:OP1	62:1G:1830:HOH:O	2.02	0.77
25:14:574:C:N3	28:29:145:LYS:NZ	2.29	0.77
39:75:50:ILE:HD11	39:75:102:ILE:HD11	1.64	0.77
25:1H:1022:G:N2	25:1H:1023:U:O4	2.16	0.77
44:G8:28:LYS:NZ	44:G8:64:GLU:OE2	2.18	0.77
47:J8:92:LYS:HA	47:J8:95:LEU:HB2	1.66	0.77
55:1G:1305:G:H22	55:1G:1331:G:H2'	1.49	0.77
27:11:60:ARG:HD3	27:11:86:PRO:HB2	1.65	0.77
55:1G:838:G:N2	55:1G:848:C:N3	2.31	0.77
25:14:1382:G:N7	62:14:3657:HOH:O	2.17	0.77
4:3E:84:LYS:N	4:3E:85:LYS:HB3	1.99	0.77
25:1H:751:A:OP1	62:1H:3843:HOH:O	2.00	0.77
47:J8:91:LYS:O	47:J8:94:LEU:N	2.17	0.77
50:M8:62:ARG:O	50:M8:66:SER:OG	2.03	0.77
5:42:102:ALA:HB1	5:42:106:PRO:HG2	1.67	0.77
9:82:48:GLU:OE1	9:82:51:ARG:NH1	2.16	0.77
1:13:1182:G:H4'	1:13:1183:A:H5''	1.66	0.77
29:31:6:VAL:N	29:31:24:LEU:O	2.18	0.77
32:61:7:GLU:HA	32:61:15:VAL:HG22	1.67	0.77
55:1G:1133:G:N2	55:1G:1141:C:O2	2.15	0.77
25:14:1676:A:OP2	62:14:3487:HOH:O	2.02	0.77
9:8E:3:GLN:OE1	9:8E:20:ARG:NH1	2.18	0.76
25:1H:810:U:OP1	62:1H:3632:HOH:O	2.03	0.76
55:1G:933:G:O6	7:62:3:ARG:NH2	2.18	0.76
10:1A:48:THR:HA	10:1A:62:HIS:HB3	1.68	0.76
35:35:55:ARG:HG2	35:35:56:SER:H	1.50	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1260:C:O2	1:13:1275:A:N6	2.18	0.76
25:1H:941:A:H4'	62:1H:3675:HOH:O	1.85	0.76
25:14:1249:U:OP1	62:14:3446:HOH:O	2.03	0.76
25:14:1298:C:OP2	62:14:3440:HOH:O	2.03	0.76
43:B5:88:LYS:HE2	43:B5:90:GLU:HG2	1.68	0.76
55:1G:664:G:H22	55:1G:741:G:H1	1.32	0.76
25:14:1342:A:H2	25:14:1602:U:H3	1.32	0.76
25:14:1639:U:OP1	62:14:3493:HOH:O	2.04	0.76
1:13:1145:C:H4'	1:13:1146:A:H8	1.50	0.76
5:4E:126:ARG:HG3	5:4E:126:ARG:HH11	1.49	0.76
50:M8:9:LEU:H	50:M8:27:THR:HG23	1.51	0.76
3:22:81:GLY:HA2	3:22:85:ARG:HD3	1.67	0.76
3:22:150:LYS:HG3	3:22:169:ALA:HB2	1.66	0.76
25:14:1828:G:OP2	62:14:3469:HOH:O	2.01	0.76
26:1J:42:C:O2	30:49:93:THR:N	2.15	0.76
1:13:1305:G:N2	1:13:1331:G:H2'	2.01	0.76
30:41:37:VAL:HG23	30:41:99:MET:HE3	1.67	0.76
25:14:125:G:H5''	53:L5:19:ARG:HD3	1.68	0.76
57:39:66:PRO:O	57:39:67:GLN:HB3	1.83	0.76
1:13:1126:U:OP1	62:13:1902:HOH:O	2.02	0.76
1:13:1130:A:H62	1:13:1144:G:H21	1.32	0.76
25:14:1858:G:O2'	25:14:1884:A:N6	2.18	0.76
1:13:664:G:N2	1:13:741:G:H1	1.83	0.76
25:14:123:G:O6	62:14:3472:HOH:O	2.03	0.76
25:14:784:A:OP2	62:14:3531:HOH:O	2.03	0.76
28:21:167:VAL:HG21	28:21:187:ALA:HB3	1.68	0.76
25:1H:1024:G:H3'	25:1H:1025:G:H5''	1.67	0.76
55:1G:539:A:OP2	12:3A:115:LYS:NZ	2.19	0.76
25:14:2255:G:OP2	62:14:3633:HOH:O	2.02	0.76
1:13:1240:U:OP2	7:6E:116:ALA:N	2.17	0.76
1:13:187:C:O2	1:13:191(A):G:N1	2.20	0.75
8:7E:41:ARG:NH2	8:7E:123:GLU:OE1	2.19	0.75
25:1H:2033:A:H8	62:1H:3947:HOH:O	1.69	0.75
25:1H:2429:G:OP1	62:1H:3830:HOH:O	2.03	0.75
25:1H:2502:G:N7	62:1H:3741:HOH:O	2.19	0.75
44:G8:85:VAL:HG23	44:G8:96:ILE:HB	1.68	0.75
10:1A:61:GLU:OE2	14:5A:45:ARG:NH1	2.19	0.75
57:39:157:VAL:HB	57:39:194:MET:HG3	1.68	0.75
25:1H:770:G:OP2	62:1H:4157:HOH:O	2.02	0.75
25:1H:2432:A:OP2	62:1H:3824:HOH:O	2.03	0.75
25:14:2420:C:H41	59:M5:31:HIS:HB3	1.51	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:78:50:ARG:HD3	54:Q8:58:ILE:HD11	1.67	0.75
25:14:2292:C:OP1	38:65:17:ARG:NH2	2.20	0.75
1:13:1306:A:H61	1:13:1331:G:H1'	1.51	0.75
16:7I:74:LEU:HA	16:7I:77:ALA:HB2	1.68	0.75
11:2A:101:SER:HB2	11:2A:103:LEU:H	1.52	0.75
25:1H:1782:C:OP1	62:1H:3532:HOH:O	2.05	0.75
12:3A:27:LEU:HB2	12:3A:33:ARG:HB2	1.67	0.75
25:14:1209:G:OP2	62:14:3827:HOH:O	2.03	0.75
25:14:2880:C:H1'	37:55:92:GLY:HA3	1.66	0.75
39:75:56:GLY:O	39:75:59:THR:HG23	1.85	0.75
25:1H:517:C:OP1	51:N8:16:ARG:NH2	2.18	0.75
45:H8:76:LEU:H	45:H8:76:LEU:HD22	1.51	0.75
25:14:2652:C:H42	25:14:2668:G:H1	1.33	0.75
25:1H:1828:G:OP1	62:1H:3880:HOH:O	2.04	0.75
29:31:66:PRO:O	29:31:67:GLN:HB3	1.87	0.75
25:14:2597:G:O3'	62:14:3846:HOH:O	2.05	0.75
1:13:974:A:OP2	14:5I:41:ARG:NH1	2.20	0.75
55:1G:1129:C:H41	55:1G:1141:C:H42	1.35	0.75
25:14:607:U:H3	25:14:621:A:H2	1.32	0.75
57:39:46:ARG:HG2	57:39:46:ARG:HH11	1.51	0.75
25:14:486:C:O2'	42:A5:60:ASN:ND2	2.19	0.75
58:D5:60:GLU:HB2	58:D5:66:SER:HA	1.68	0.75
25:1H:1778:U:H2'	25:1H:1784:A:N6	2.01	0.74
1:13:509:A:OP2	62:13:1817:HOH:O	2.05	0.74
25:1H:1061:U:H4'	25:1H:1070:A:H1'	1.70	0.74
37:98:12:ARG:HG2	37:98:12:ARG:HH11	1.52	0.74
45:H8:116:VAL:H	45:H8:174:VAL:HG13	1.50	0.74
48:G5:31:GLU:HB2	48:G5:53:LEU:HD11	1.68	0.74
26:16:12:C:O2	46:I8:74:ARG:NH1	2.20	0.74
17:8I:66:SER:O	17:8I:70:ARG:NH1	2.20	0.74
25:1H:2287:A:H62	25:1H:2344:U:H3	1.35	0.74
55:1G:353:A:H5'	55:1G:353:A:H8	1.52	0.74
55:1G:963:G:H21	10:1A:55:LYS:HZ2	1.35	0.74
40:85:92:ARG:HD2	40:85:95:LEU:HD12	1.69	0.74
1:13:136:C:H42	1:13:227:G:H1	1.35	0.74
25:1H:242:G:OP1	62:1H:4236:HOH:O	2.05	0.74
25:1H:730:C:OP2	62:1H:3598:HOH:O	2.05	0.74
55:1G:1119:C:OP2	9:82:9:ARG:NH2	2.20	0.74
14:5A:23:ARG:NH1	14:5A:29:ARG:O	2.19	0.74
25:14:1007:C:OP1	33:15:35:ARG:NH1	2.19	0.74
1:13:1311:G:N2	1:13:1326:C:O2	2.15	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:8E:8:GLY:HA3	9:8E:79:LEU:HB3	1.67	0.74
32:61:110:ASP:HB2	32:61:112:LYS:N	2.01	0.74
43:F8:11:PRO:HB3	43:F8:92:LEU:HD21	1.69	0.74
45:H8:7:ALA:HB2	45:H8:59:LEU:HD22	1.69	0.74
46:I8:53:MET:HG3	46:I8:59:LEU:HD23	1.68	0.74
36:45:21:THR:HG22	36:45:23:GLY:HA3	1.69	0.74
52:K5:34:LEU:HB2	52:K5:51:GLU:HB3	1.70	0.74
25:1H:731:C:OP1	62:1H:4192:HOH:O	2.06	0.74
25:1H:1779:U:H2'	62:1H:3530:HOH:O	1.86	0.74
55:1G:975:A:H4'	55:1G:976:G:H5''	1.69	0.74
55:1G:1505:G:OP1	62:1G:1804:HOH:O	2.05	0.74
25:14:751:A:OP1	62:14:3429:HOH:O	2.05	0.74
17:8I:18:THR:OG1	17:8I:69:LYS:NZ	2.16	0.74
25:1H:973:A:OP2	62:1H:3763:HOH:O	2.05	0.74
25:1H:1021:A:H8	25:1H:1022:G:H5''	1.52	0.74
30:49:37:VAL:HG23	30:49:99:MET:HE2	1.70	0.74
1:13:601:C:H2'	1:13:602:A:H8	1.51	0.74
4:32:70:ILE:HD11	4:32:100:ARG:HD2	1.70	0.74
25:14:588:U:H2'	25:14:589:C:C6	2.23	0.74
25:1H:818:G:OP2	62:1H:3774:HOH:O	2.06	0.74
48:K8:50:ILE:HD12	48:K8:51:ARG:H	1.53	0.74
25:14:889:C:H2'	25:14:890:A:H4'	1.69	0.74
57:39:103:LYS:HA	57:39:106:ARG:HG3	1.69	0.74
22:1K:1:G:O6	22:1K:81:C:N4	2.17	0.73
44:G8:76:CYS:SG	44:G8:97:ARG:HG3	2.28	0.73
25:14:1264:G:OP1	51:J5:19:ARG:NH2	2.18	0.73
25:1H:576:U:OP1	62:1H:3529:HOH:O	2.05	0.73
25:1H:1786:A:H2	25:1H:2606:C:H1'	1.53	0.73
25:1H:1899:G:H22	25:1H:1902:C:H5	1.36	0.73
26:16:102:G:N7	62:16:314:HOH:O	2.20	0.73
30:41:21:ARG:HG2	30:41:21:ARG:HH11	1.52	0.73
54:Q8:31:HIS:HB2	54:Q8:34:TRP:HD1	1.51	0.73
9:82:128:ARG:NH2	23:2L:34:U:OP2	2.22	0.73
25:14:1022:G:O2'	25:14:1023:U:OP2	2.05	0.73
25:14:2262:U:OP2	46:E5:19:LYS:NZ	2.21	0.73
1:13:1194:U:H2'	1:13:1195:C:C6	2.23	0.73
25:1H:422:A:O5'	62:1H:3718:HOH:O	2.07	0.73
36:88:35:VAL:HG13	36:88:130:LYS:HB3	1.70	0.73
41:D8:59:ALA:HB2	41:D8:96:ILE:HD13	1.70	0.73
25:14:138:G:N2	43:B5:44:GLU:OE2	2.21	0.73
1:13:673:G:H2'	1:13:674:G:C8	2.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2314:C:H2'	25:1H:2315:G:H8	1.53	0.73
25:1H:1187:G:N7	62:1H:3776:HOH:O	2.22	0.73
25:1H:1386:C:H2'	25:1H:1387:C:C6	2.23	0.73
55:1G:521:G:O6	55:1G:528:C:N4	2.17	0.73
25:14:1262:A:N3	51:J5:10:LYS:NZ	2.33	0.73
25:1H:2033:A:OP1	62:1H:3947:HOH:O	2.06	0.73
25:1H:2035:G:OP1	62:1H:3691:HOH:O	2.07	0.73
3:22:70:VAL:HG12	3:22:72:LYS:H	1.51	0.73
25:14:1783:A:OP2	62:14:3410:HOH:O	2.04	0.73
55:1G:572:A:OP1	62:1G:1832:HOH:O	2.07	0.73
55:1G:1075:C:OP1	2:12:179:LYS:NZ	2.22	0.73
55:1G:1500:A:OP1	62:1G:1806:HOH:O	2.07	0.73
19:AI:25:LYS:HD3	19:AI:27:GLU:HB2	1.69	0.73
20:BI:69:GLY:O	20:BI:73:HIS:NE2	2.22	0.73
25:1H:563:G:OP2	62:1H:3547:HOH:O	2.06	0.73
25:1H:941:A:O3'	62:1H:3672:HOH:O	2.06	0.73
25:1H:1632:A:OP2	62:1H:3648:HOH:O	2.06	0.73
25:14:1754:C:OP2	39:75:113:LYS:NZ	2.22	0.73
25:14:1757:U:H3	25:14:1762:A:H2	1.36	0.73
57:39:123:LEU:O	57:39:125:LEU:N	2.16	0.73
4:3E:31:CYS:HB3	4:3E:33:MET:HB2	1.70	0.73
25:1H:537:C:O2	25:1H:556:G:N2	2.17	0.73
25:1H:827:U:OP2	62:1H:3831:HOH:O	2.06	0.73
55:1G:765:G:N2	55:1G:813:U:OP2	2.21	0.73
3:22:7:PRO:O	3:22:11:ARG:NH1	2.21	0.73
5:42:152:ARG:O	8:72:64:LYS:NZ	2.21	0.73
23:2L:8:4SU:O2	23:2L:14:A:N6	2.20	0.73
59:M5:33:ASN:HA	59:M5:34:TRP:HB3	1.71	0.73
1:13:1062:U:H2'	1:13:1063:C:C6	2.24	0.72
4:3E:15:GLU:OE1	4:3E:66:ARG:NH1	2.22	0.72
25:1H:1430:C:H2'	25:1H:1431:U:H6	1.54	0.72
25:1H:2168:G:H22	25:1H:2170:A:H62	1.37	0.72
55:1G:108:G:H5'	55:1G:109:A:H5''	1.72	0.72
47:F5:92:LYS:O	47:F5:94:LEU:N	2.20	0.72
25:1H:1455:G:OP2	62:1H:3656:HOH:O	2.07	0.72
55:1G:352:C:OP2	62:1G:1827:HOH:O	2.07	0.72
25:14:90:U:HO2'	25:14:91:A:H8	1.37	0.72
25:1H:71:A:H2	43:F8:31:HIS:CE1	2.07	0.72
22:1L:62:G:H1	22:1L:70:C:H42	1.38	0.72
1:13:766:A:OP2	62:13:1810:HOH:O	2.08	0.72
25:1H:1664:A:OP1	62:1H:3636:HOH:O	2.07	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2635:C:H5'	28:21:79:ARG:CZ	2.19	0.72
46:I8:27:GLU:HG3	46:I8:68:GLU:HA	1.71	0.72
55:1G:278:G:OP2	17:8A:41:LYS:NZ	2.17	0.72
25:14:801:G:OP2	62:14:3709:HOH:O	2.07	0.72
1:13:1177:G:OP1	1:13:1177:G:H4'	1.88	0.72
25:14:399:G:OP2	62:14:3666:HOH:O	2.07	0.72
33:15:19:GLU:HB2	33:15:59:LYS:HE3	1.72	0.72
8:7E:34:GLU:OE1	8:7E:37:ARG:NH1	2.22	0.72
25:1H:761:A:N7	62:1H:3959:HOH:O	2.23	0.72
55:1G:1118:C:OP1	9:82:104:ARG:NH1	2.21	0.72
25:14:587:C:O2	35:35:33:ARG:NH1	2.23	0.72
3:2E:40:ARG:O	3:2E:44:GLU:HG2	1.89	0.72
25:1H:1798:U:C5'	27:11:259:THR:HG22	2.19	0.72
1:13:1160:G:H1	1:13:1177:G:H1	1.36	0.72
25:1H:71:A:C2	43:F8:31:HIS:HE1	2.08	0.72
39:B8:56:GLY:O	39:B8:59:THR:HG23	1.90	0.72
48:K8:48:HIS:H	48:K8:50:ILE:HD11	1.54	0.72
54:Q8:8:LYS:H	54:Q8:8:LYS:HD2	1.53	0.72
25:14:662:G:H5'	35:35:15:ARG:HA	1.72	0.72
25:14:2499:C:N3	62:14:3596:HOH:O	2.22	0.72
25:1H:624:C:OP1	62:1H:4237:HOH:O	2.07	0.72
25:1H:945:A:OP2	62:1H:4002:HOH:O	2.06	0.72
25:1H:2400:G:H2'	25:1H:2401:U:C6	2.25	0.72
28:21:78:LEU:HD12	28:21:79:ARG:NH2	2.05	0.72
55:1G:1321:C:N4	55:1G:1322:C:H41	1.87	0.72
23:2L:62:C:H2'	23:2L:63:C:H6	1.54	0.72
25:14:2392:A:H2	25:14:2424:C:H42	1.37	0.72
26:1J:52:A:H62	38:65:33:LYS:HG3	1.55	0.72
56:19:12:SER:HB2	56:19:208:LYS:HB3	1.70	0.72
25:1H:764:A:N3	27:11:213:ARG:NH1	2.38	0.72
29:31:46:ARG:HG2	29:31:46:ARG:HH11	1.53	0.72
33:58:39:ARG:NH1	33:58:41:ASP:OD2	2.21	0.72
45:H8:5:LEU:HD21	45:H8:43:GLU:HB3	1.72	0.72
25:14:399:G:OP2	62:14:3668:HOH:O	2.06	0.72
18:9I:59:SER:HB3	18:9I:62:GLU:HB2	1.71	0.71
25:1H:943:U:OP2	35:78:36:LYS:NZ	2.14	0.71
28:21:38:THR:HG22	28:21:40:GLU:H	1.53	0.71
57:39:8:GLN:HG2	57:39:124:LEU:HD11	1.72	0.71
25:1H:122:G:N7	62:1H:4032:HOH:O	2.22	0.71
25:1H:1264:G:OP1	51:N8:19:ARG:NH2	2.17	0.71
25:1H:2580:U:H4'	28:21:130:GLY:HA3	1.70	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:85:90:VAL:HG22	41:95:39:LEU:HB3	1.72	0.71
1:13:339:C:OP2	34:68:97:ARG:NH1	2.23	0.71
11:2A:98:LEU:O	11:2A:101:SER:HB3	1.89	0.71
25:1H:1047:G:O2'	25:1H:1111:A:N6	2.24	0.71
25:1H:1992:G:OP2	62:1H:3978:HOH:O	2.07	0.71
27:11:132:PRO:HD3	27:11:190:TYR:CZ	2.26	0.71
2:12:19:HIS:NE2	2:12:205:ASP:OD1	2.23	0.71
25:14:1477:A:N6	25:14:1516:U:O4	2.17	0.71
25:1H:1190:G:N7	62:1H:3770:HOH:O	2.22	0.71
42:E8:70:TYR:HD1	42:E8:70:TYR:H	1.36	0.71
55:1G:1460:A:OP2	20:BA:27:LYS:NZ	2.24	0.71
25:14:651:G:H5'	59:M5:18:ALA:HB3	1.71	0.71
33:15:4:TYR:O	40:85:64:ARG:NH1	2.24	0.71
37:55:20:LEU:HD21	37:55:40:LYS:HD3	1.70	0.71
1:13:330:C:O2	62:13:1862:HOH:O	2.06	0.71
1:13:1525:G:P	11:2I:120:ARG:HH22	2.13	0.71
25:1H:192:C:O2	62:1H:3563:HOH:O	2.06	0.71
55:1G:1147:C:O2	9:82:16:ARG:NH1	2.23	0.71
3:22:20:SER:HB2	3:22:40:ARG:HH22	1.55	0.71
25:14:1614:A:H61	42:A5:88:ARG:H	1.38	0.71
25:14:2250:G:C4	36:45:82:ARG:HG3	2.25	0.71
41:95:35:LEU:O	41:95:37:VAL:HG22	1.90	0.71
47:F5:92:LYS:C	47:F5:94:LEU:H	1.94	0.71
1:13:963:G:N3	10:1I:55:LYS:NZ	2.38	0.71
29:31:184:TYR:O	29:31:188:ARG:HG3	1.90	0.71
34:68:2:ILE:HD12	34:68:6:THR:HG21	1.72	0.71
39:B8:26:ASP:HB2	39:B8:91:ARG:HA	1.73	0.71
45:H8:72:ARG:NH2	45:H8:97:GLU:O	2.17	0.71
47:J8:85:LEU:HD12	47:J8:88:LYS:HB2	1.72	0.71
25:14:468:G:N7	53:L5:39:ARG:NH2	2.38	0.71
25:14:531:C:OP1	25:14:561:G:N2	2.24	0.71
25:14:2114:A:H61	25:14:2170:A:H62	1.36	0.71
1:13:438:G:O2'	1:13:496:A:N6	2.24	0.71
25:1H:1171:G:N2	25:1H:1178:C:N3	2.39	0.71
25:1H:1430:C:H2'	25:1H:1431:U:C6	2.25	0.71
25:1H:1434:A:H61	25:1H:1558:A:N6	1.88	0.71
28:21:119:ARG:HH11	28:21:119:ARG:HG3	1.56	0.71
28:21:128:SER:OG	28:21:129:HIS:N	2.23	0.71
25:14:780:G:H21	25:14:783:A:H62	1.39	0.71
25:14:1952:A:C6	34:25:22:ILE:HD11	2.25	0.71
26:1J:86:G:N2	26:1J:90:C:O2	2.19	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:K5:24:GLU:HG3	52:K5:25:LYS:H	1.56	0.71
1:13:1322:C:O2'	1:13:1323:G:O5'	2.09	0.71
55:1G:624:C:H2'	55:1G:625:G:H8	1.56	0.71
57:39:53:THR:HG22	57:39:56:GLU:HG3	1.73	0.71
45:H8:19:ARG:NH1	45:H8:84:GLU:O	2.21	0.71
19:AA:20:LEU:O	19:AA:23:ASN:ND2	2.23	0.71
31:59:6:ARG:NH1	31:59:62:LYS:O	2.24	0.71
1:13:21:G:OP1	62:13:1827:HOH:O	2.08	0.70
8:7E:10:LEU:HD22	8:7E:83:ILE:HD11	1.72	0.70
25:1H:943:U:OP2	35:78:36:LYS:HG3	1.91	0.70
25:1H:1780:A:OP2	62:1H:3532:HOH:O	2.09	0.70
25:14:1416:G:O2'	25:14:1417:C:O5'	2.08	0.70
25:14:2849:U:O4	39:75:23:ARG:NH2	2.23	0.70
25:1H:2256:G:N7	62:1H:4011:HOH:O	2.23	0.70
42:E8:13:SER:HB3	42:E8:16:LYS:HD2	1.72	0.70
44:G8:85:VAL:O	44:G8:86:ARG:HD3	1.91	0.70
57:39:195:ASP:HB3	57:39:198:ALA:H	1.56	0.70
16:7I:53:VAL:HG13	16:7I:79:VAL:HG22	1.74	0.70
25:1H:1253:A:N7	62:1H:3630:HOH:O	2.22	0.70
25:14:1434:A:H61	25:14:1558:A:H62	1.38	0.70
33:15:67:LEU:HG	33:15:88:GLU:HG2	1.72	0.70
42:A5:13:SER:HB3	42:A5:16:LYS:HD2	1.71	0.70
12:3I:49:ASN:ND2	12:3I:92:ASP:OD2	2.22	0.70
23:2K:16:C:OP2	23:2K:17:C:N4	2.25	0.70
46:E5:27:GLU:HB2	46:E5:69:PHE:HD1	1.55	0.70
7:6E:111:ARG:NH1	7:6E:113:GLU:OE2	2.24	0.70
25:1H:945:A:N3	62:1H:3752:HOH:O	2.23	0.70
28:21:51:PHE:HD2	28:21:52:LEU:HG	1.57	0.70
33:58:34:LEU:HD21	33:58:120:LEU:HB2	1.72	0.70
37:98:97:VAL:HG22	37:98:114:VAL:HG22	1.73	0.70
55:1G:1298:C:H4'	55:1G:1299:A:C8	2.27	0.70
25:14:2324:C:H5''	25:14:2325:G:H5'	1.73	0.70
1:13:1504:G:O3'	62:13:1804:HOH:O	2.10	0.70
12:3I:53:ARG:HG3	12:3I:93:LEU:HD21	1.72	0.70
25:1H:302:C:H2'	25:1H:303:U:C6	2.27	0.70
25:1H:1771:C:O2'	25:1H:1786:A:H8	1.70	0.70
25:1H:2053:G:OP1	28:21:144:ARG:HD3	1.91	0.70
26:16:42:C:H4'	30:41:67:LYS:HE3	1.73	0.70
27:11:27:THR:OG1	27:11:28:GLU:N	2.24	0.70
30:41:97:ASP:O	30:41:100:TRP:N	2.24	0.70
39:B8:77:PRO:HG2	39:B8:80:SER:HB2	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:811:U:H2'	35:78:21:ARG:HA	1.74	0.70
25:1H:1130:U:O2	28:21:149:ARG:NH2	2.24	0.70
25:1H:1665:A:OP2	62:1H:3637:HOH:O	2.10	0.70
55:1G:1379:G:OP1	7:62:6:ARG:NH1	2.25	0.70
10:1A:3:LYS:N	10:1A:74:ILE:O	2.24	0.70
25:14:785:G:OP2	62:14:3453:HOH:O	2.10	0.70
25:14:1614:A:H62	42:A5:93:ALA:HB2	1.55	0.70
22:1K:18:G:N7	25:1H:881:G:N2	2.39	0.70
22:1K:35:QUO:C4	22:1K:35:QUO:C2	2.67	0.70
25:1H:882:G:H22	25:1H:894:C:H42	1.37	0.70
49:L8:26:LEU:HB2	49:L8:28:LEU:HD12	1.73	0.70
25:14:90:U:O2'	25:14:91:A:H5''	1.92	0.70
39:75:24:PRO:HA	39:75:49:VAL:HG23	1.71	0.70
13:4I:4:ILE:HG21	13:4I:22:ILE:HD13	1.72	0.70
28:21:77:ILE:HB	28:21:79:ARG:NE	2.00	0.70
38:A8:93:LYS:HG2	38:A8:95:HIS:HB2	1.74	0.70
25:14:784:A:OP1	62:14:3541:HOH:O	2.09	0.70
25:14:2693:A:H2'	25:14:2694:G:H8	1.56	0.70
43:B5:65:ARG:HG3	43:B5:67:GLY:H	1.56	0.70
25:1H:2257:U:O2'	25:1H:2258:C:H5'	1.92	0.70
55:1G:56:U:H2'	55:1G:57:G:C8	2.27	0.70
1:13:682:G:N7	62:13:1914:HOH:O	2.23	0.69
1:13:1508:G:OP1	62:13:1805:HOH:O	2.10	0.69
25:1H:1973:G:OP1	62:1H:3890:HOH:O	2.10	0.69
25:1H:2062:A:OP2	62:1H:3733:HOH:O	2.09	0.69
28:21:135:HIS:NE2	62:21:402:HOH:O	2.25	0.69
25:14:102:G:OP1	48:G5:7:ARG:NH2	2.25	0.69
25:14:751:A:OP1	62:14:3427:HOH:O	2.10	0.69
40:C8:92:ARG:HD3	40:C8:95:LEU:HB2	1.72	0.69
8:72:20:TYR:HE2	8:72:75:ARG:HD2	1.57	0.69
25:14:2287:A:H62	25:14:2344:U:H3	1.39	0.69
25:1H:1580:A:H8	25:1H:1580:A:OP2	1.74	0.69
25:1H:2429:G:OP2	62:1H:3833:HOH:O	2.11	0.69
25:14:120:U:OP1	62:14:3694:HOH:O	2.10	0.69
25:14:2498:C:OP2	62:14:3456:HOH:O	2.09	0.69
1:13:153:C:H42	1:13:168:G:H1	1.38	0.69
27:11:68:LYS:HB3	27:11:70:TRP:CH2	2.27	0.69
55:1G:1507:A:O3'	62:1G:1803:HOH:O	2.09	0.69
10:1A:51:ARG:HB2	10:1A:60:ARG:HA	1.73	0.69
34:25:2:ILE:HD12	34:25:6:THR:HG21	1.74	0.69
39:75:80:SER:HB3	39:75:83:ILE:HG13	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1226:C:O2'	13:4I:111:LYS:NZ	2.26	0.69
25:1H:1088:A:H5'	25:1H:1089:G:H5'	1.73	0.69
25:1H:1899:G:N2	25:1H:1902:C:H5	1.91	0.69
25:14:142:G:H5''	25:14:1598:C:O2'	1.92	0.69
25:14:2503:A:OP1	62:14:3583:HOH:O	2.10	0.69
28:29:111:ARG:HA	37:55:2:ARG:HH12	1.58	0.69
25:1H:1094:U:O2'	25:1H:1096:A:OP1	2.09	0.69
3:22:172:ARG:HH21	3:22:174:PRO:HG2	1.58	0.69
25:14:491:G:H2'	25:14:492:A:C8	2.27	0.69
25:14:958:U:OP2	36:45:14:ARG:NH1	2.26	0.69
34:25:24:VAL:HB	34:25:33:ALA:HB2	1.73	0.69
25:1H:1479:G:N7	25:1H:1510:A:N6	2.41	0.69
27:11:182:LEU:H	27:11:272:ALA:HB3	1.58	0.69
55:1G:516:U:O4	62:1G:1843:HOH:O	2.09	0.69
2:12:236:TYR:HB2	2:12:239:VAL:HB	1.74	0.69
25:14:93:C:H5'	25:14:94:G:OP2	1.92	0.69
25:14:469:G:O6	53:L5:37:LYS:HE2	1.93	0.69
26:1J:22:U:H3	26:1J:61:G:H1	1.41	0.69
41:95:85:LYS:CG	41:95:87:HIS:H	2.04	0.69
1:13:407:G:OP1	4:3E:115:ARG:NH2	2.25	0.69
1:13:881:G:OP2	12:3I:12:ARG:NH2	2.25	0.69
5:4E:12:LEU:HD21	5:4E:14:ARG:HG3	1.75	0.69
25:1H:376:C:OP1	62:1H:3659:HOH:O	2.09	0.69
50:M8:54:GLY:HA2	50:M8:57:GLU:HB3	1.74	0.69
54:Q8:60:LEU:HD22	54:Q8:60:LEU:H	1.56	0.69
55:1G:352:C:OP2	62:1G:1824:HOH:O	2.09	0.69
25:14:635:C:O2'	25:14:639:U:OP1	2.11	0.69
26:1J:58:A:OP2	62:1J:305:HOH:O	2.10	0.69
1:13:659:U:H2'	1:13:660:G:C8	2.28	0.69
23:2K:57:C:H42	30:41:83:ARG:HH22	1.39	0.69
25:1H:1026:U:H1'	25:1H:1027:A:O5'	1.93	0.69
25:1H:1525:G:H2'	25:1H:1526:G:H8	1.56	0.69
25:1H:1803:A:O2'	27:11:259:THR:HG21	1.93	0.69
25:1H:2822:G:O6	62:1H:4231:HOH:O	2.08	0.69
30:41:37:VAL:HG22	30:41:159:VAL:HG12	1.75	0.69
55:1G:413:G:O2'	55:1G:428:G:N2	2.26	0.69
55:1G:619:U:O2	4:32:135:LEU:HD22	1.92	0.69
42:A5:65:LEU:HD13	42:A5:68:ARG:HD2	1.75	0.69
33:58:96:GLU:C	33:58:98:VAL:H	1.96	0.69
36:88:135:ASP:HB3	36:88:137:TYR:H	1.58	0.69
25:14:446:G:OP2	62:14:3664:HOH:O	2.09	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2256:G:O6	62:14:3634:HOH:O	2.09	0.69
35:35:65:ARG:HB2	35:35:65:ARG:HH11	1.58	0.69
1:13:1442:G:H1	1:13:1461:G:H21	1.41	0.68
25:1H:2492:U:H2'	25:1H:2493:U:C6	2.28	0.68
31:51:86:GLU:HG3	31:51:165:ALA:HB3	1.74	0.68
40:C8:97:ASP:O	40:C8:101:ARG:N	2.26	0.68
55:1G:438:G:H4'	4:32:123:HIS:HD2	1.57	0.68
55:1G:1125:U:O4	10:1A:5:ARG:NH1	2.25	0.68
4:32:60:GLU:OE2	4:32:199:ASN:N	2.25	0.68
25:14:2119:A:N6	25:14:2170:A:N7	2.40	0.68
35:35:19:VAL:HG13	35:35:21:ARG:H	1.58	0.68
25:1H:123:G:O6	62:1H:4034:HOH:O	2.08	0.68
25:1H:1633:G:O6	62:1H:3647:HOH:O	2.11	0.68
26:16:101:A:OP2	62:16:312:HOH:O	2.11	0.68
55:1G:974:A:OP2	14:5A:41:ARG:NH1	2.22	0.68
20:BI:49:ALA:HB1	20:BI:99:LEU:HB2	1.75	0.68
25:1H:1140:C:OP1	33:58:23:LEU:HB3	1.93	0.68
25:1H:1412:A:H2'	25:1H:1413:G:C8	2.28	0.68
55:1G:827:U:H3	55:1G:872:A:H62	1.41	0.68
3:22:131:ARG:HH21	3:22:166:GLU:HG2	1.58	0.68
12:3A:26:ALA:HA	12:3A:27:LEU:HD23	1.75	0.68
25:14:1772:G:N3	62:14:3506:HOH:O	2.26	0.68
25:14:1828:G:OP1	62:14:3512:HOH:O	2.11	0.68
25:14:2150:U:H2'	25:14:2151:G:H8	1.58	0.68
38:65:106:ARG:NH1	38:65:106:ARG:O	2.26	0.68
1:13:390:C:O3'	16:7I:28:ARG:NH2	2.26	0.68
4:3E:197:PRO:HD3	6:52:16:GLN:HG3	1.75	0.68
25:1H:796:C:H2'	25:1H:797:C:C6	2.28	0.68
25:1H:1139:G:O2'	25:1H:1143:A:N1	2.24	0.68
5:42:11:ILE:HD12	5:42:31:LEU:HD12	1.75	0.68
25:14:733:G:O6	62:14:3419:HOH:O	2.11	0.68
25:14:2127:G:O6	25:14:2161:C:N4	2.26	0.68
26:1J:15:A:H3'	26:1J:16:G:H5'	1.75	0.68
26:1J:80:U:H2'	26:1J:81:G:N2	2.07	0.68
25:1H:1510:A:O2'	25:1H:1512:G:N7	2.26	0.68
45:H8:117:LEU:HD13	45:H8:118:GLN:H	1.59	0.68
55:1G:114:U:H2'	55:1G:115:G:C8	2.29	0.68
2:12:73:THR:HG21	2:12:97:TRP:H	1.58	0.68
31:59:6:ARG:HH22	31:59:62:LYS:HB2	1.59	0.68
25:1H:780:G:H21	25:1H:783:A:H62	1.40	0.68
25:1H:1971:A:C4	27:11:241:PRO:HD3	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:1G:1023:G:H3'	55:1G:1024:G:H5''	1.76	0.68
20:BA:50:GLU:HB2	20:BA:100:ILE:HG12	1.75	0.68
25:14:1639:U:OP1	62:14:3489:HOH:O	2.11	0.68
3:2E:150:LYS:HE2	3:2E:152:ILE:HD11	1.75	0.68
7:6E:27:ILE:HA	7:6E:30:ILE:HD12	1.75	0.68
55:1G:588:G:H1	55:1G:651:C:H42	1.42	0.68
59:M5:56:GLU:O	59:M5:58:ILE:N	2.24	0.68
1:13:659:U:H2'	1:13:660:G:H8	1.57	0.68
25:1H:581:C:H2'	25:1H:582:G:H8	1.59	0.68
47:J8:60:PHE:HE2	47:J8:91:LYS:HZ1	1.42	0.68
25:14:192:C:P	62:14:3609:HOH:O	2.51	0.68
25:14:741:G:P	62:14:3496:HOH:O	2.51	0.68
25:1H:1177:A:H5''	25:1H:1178:C:H6	1.57	0.68
25:1H:1871:A:H2'	25:1H:1872:A:C8	2.29	0.68
25:1H:2154:G:H2'	25:1H:2155:G:H8	1.58	0.68
30:41:66:GLN:OE1	30:41:98:ARG:NH1	2.27	0.68
42:E8:86:LEU:HD12	42:E8:87:PRO:HD2	1.74	0.68
1:13:262:A:H2'	1:13:263:A:C8	2.29	0.67
25:1H:987:G:OP2	62:1H:3902:HOH:O	2.12	0.67
39:B8:3:ARG:HB2	39:B8:6:LEU:HB3	1.75	0.67
50:I5:1:MET:HG2	50:I5:3:GLU:HG2	1.76	0.67
25:1H:330:A:H2	25:1H:1210:A:HO2'	1.40	0.67
25:1H:568:U:H5'	25:1H:945:A:C2	2.28	0.67
32:61:21:VAL:HG21	32:61:25:TYR:HD2	1.58	0.67
4:32:189:PRO:HB2	4:32:194:LEU:HD21	1.76	0.67
25:14:654(D):G:N2	25:14:654(Q):C:N3	2.39	0.67
25:14:733:G:N7	62:14:3419:HOH:O	2.27	0.67
25:14:2681:C:H5	25:14:2725:A:H62	1.41	0.67
28:29:25:VAL:HG12	28:29:26:ILE:H	1.59	0.67
37:55:86:ARG:NH2	37:55:87:TYR:OH	2.26	0.67
1:13:1029:G:O2'	1:13:1032(A):G:N2	2.27	0.67
25:1H:527:C:OP2	25:1H:2779:U:H5	1.77	0.67
25:1H:1453:A:OP2	62:1H:3655:HOH:O	2.11	0.67
25:1H:1900:A:H5'	25:1H:1900:A:C8	2.29	0.67
25:14:2243:U:OP1	62:14:3613:HOH:O	2.13	0.67
26:1J:93:C:H2'	26:1J:94:C:H6	1.60	0.67
31:59:10:PRO:HD2	31:59:50:VAL:HG13	1.77	0.67
36:45:34:LEU:HB2	36:45:118:LEU:HD22	1.76	0.67
17:8I:81:ARG:NH2	17:8I:83:ASP:OD2	2.27	0.67
25:1H:732:C:H3'	62:1H:3961:HOH:O	1.93	0.67
25:1H:2701:C:H3'	25:1H:2702:U:H5''	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:1G:1054:C:O2'	55:1G:1055:A:O5'	2.11	0.67
25:14:2611:U:H6	25:14:2611:U:H5'	1.59	0.67
13:4I:23:TYR:HD2	13:4I:67:GLU:HA	1.59	0.67
25:1H:319:C:OP1	29:31:137:LYS:NZ	2.18	0.67
25:1H:1665:A:OP2	62:1H:3640:HOH:O	2.12	0.67
26:16:8:U:N3	26:16:112:G:O6	2.17	0.67
26:1J:15:A:H5''	26:1J:16:G:H8	1.60	0.67
28:29:2:LYS:HG2	28:29:95:ILE:HG23	1.77	0.67
1:13:510:A:OP2	4:3E:49:ARG:NH2	2.28	0.67
6:5E:68:PRO:HG2	6:5E:71:ARG:HG3	1.76	0.67
17:8I:22:LEU:HD11	17:8I:39:SER:HB3	1.77	0.67
28:21:51:PHE:CD2	28:21:52:LEU:HG	2.30	0.67
40:C8:14:HIS:O	40:C8:18:LEU:HD12	1.94	0.67
55:1G:750:G:N3	15:6A:23:GLY:HA3	2.08	0.67
55:1G:1235:U:O2'	55:1G:1305:G:O5'	2.12	0.67
12:3A:117:ARG:HB3	12:3A:122:THR:HB	1.76	0.67
25:14:1324:G:N7	62:14:3574:HOH:O	2.28	0.67
32:69:29:TYR:HD1	32:69:30:LEU:HD23	1.60	0.67
59:M5:40:GLU:H	59:M5:43:GLN:HG3	1.58	0.67
1:13:1054:C:H4'	1:13:1055:A:OP1	1.94	0.67
1:13:1423:G:OP1	34:68:49:ARG:NH2	2.28	0.67
22:3K:19:C:N4	22:3K:20:C:O2	2.27	0.67
29:31:101:LEU:O	29:31:106:ARG:NH1	2.27	0.67
30:41:17:PRO:HA	30:41:20:ILE:HD12	1.76	0.67
15:6A:87:ILE:HG22	15:6A:88:ARG:H	1.58	0.67
26:1J:22:U:O4	62:1J:302:HOH:O	2.11	0.67
25:1H:516:C:OP1	51:N8:13:LYS:NZ	2.28	0.67
25:1H:833:U:O2	35:78:55:ARG:NH2	2.28	0.67
27:11:136:ILE:O	27:11:168:ARG:NH2	2.28	0.67
28:21:79:ARG:HD2	28:21:79:ARG:N	2.10	0.67
35:78:39:LYS:HG3	35:78:45:LEU:HD22	1.77	0.67
55:1G:76:G:O6	55:1G:93:U:N3	2.19	0.67
55:1G:1086:U:H3	55:1G:1099:G:H22	1.43	0.67
57:39:192:LEU:HD22	57:39:194:MET:HE2	1.77	0.67
34:25:115:VAL:HG13	34:25:121:VAL:HG21	1.77	0.67
44:C5:19:LYS:HG3	44:C5:20:TYR:H	1.59	0.67
44:C5:73:ARG:NH2	44:C5:81:LYS:O	2.27	0.67
1:13:1305:G:H21	1:13:1331:G:H2'	1.59	0.67
10:1I:6:ILE:HG22	10:1I:98:ILE:HG13	1.77	0.67
25:1H:298:G:OP2	44:G8:84:ARG:NH1	2.28	0.67
26:16:44:G:H1'	26:16:47:C:H42	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:1G:963:G:N2	10:1A:55:LYS:HZ2	1.93	0.67
25:14:566:U:H5''	35:35:29:LYS:HE3	1.76	0.67
1:13:1391:U:H2'	1:13:1392:G:C8	2.30	0.66
25:1H:573:G:O2'	25:1H:574:C:H3'	1.94	0.66
25:1H:846:C:O3'	62:1H:3669:HOH:O	2.12	0.66
25:1H:2232:U:P	47:J8:40:ARG:HH12	2.18	0.66
25:1H:2334:G:O6	46:I8:74:ARG:NH2	2.20	0.66
55:1G:620:C:H2'	55:1G:621:A:O4'	1.95	0.66
25:14:586:A:H5'	57:39:89:VAL:HG21	1.77	0.66
1:13:1263:C:H2'	1:13:1264:C:H6	1.60	0.66
25:1H:320:A:H2'	29:31:136:THR:HG21	1.76	0.66
25:1H:674:G:C1'	29:31:74:ARG:HD3	2.25	0.66
25:1H:2787:C:H1'	28:21:62:PRO:HG3	1.77	0.66
44:G8:49:VAL:HG21	44:G8:55:TYR:CE2	2.29	0.66
55:1G:1015:A:N3	55:1G:1218:C:O2'	2.29	0.66
25:14:2392:A:OP2	59:M5:32:LEU:HD12	1.95	0.66
25:14:2784:C:H1'	28:29:37:ARG:HH21	1.60	0.66
28:29:11:MET:HA	28:29:24:THR:HA	1.77	0.66
25:1H:1352:U:OP2	62:1H:3553:HOH:O	2.13	0.66
55:1G:1508:G:OP1	62:1G:1802:HOH:O	2.14	0.66
3:22:152:ILE:HB	3:22:199:LYS:HB2	1.77	0.66
25:14:674:G:O2'	57:39:74:ARG:HG3	1.95	0.66
25:14:2126:A:N6	25:14:2163:C:O2'	2.18	0.66
25:14:2327:A:H2'	25:14:2328:A:C8	2.31	0.66
26:1J:15:A:H1'	26:1J:109:G:C8	2.30	0.66
26:1J:104:A:H2'	26:1J:105:G:O4'	1.94	0.66
1:13:973:G:H3'	1:13:974:A:H5''	1.75	0.66
1:13:1157:A:N6	1:13:1178:G:H21	1.94	0.66
1:13:1160:G:H1	1:13:1177:G:H22	1.43	0.66
4:3E:173:TRP:CD1	4:3E:174:LEU:HG	2.30	0.66
54:Q8:61:LEU:HA	54:Q8:62:LEU:HD22	1.76	0.66
55:1G:984:C:H2'	55:1G:985:C:H6	1.60	0.66
25:14:1945:G:H2'	25:14:1946:U:H6	1.61	0.66
25:14:2350:C:OP2	62:14:3769:HOH:O	2.12	0.66
36:45:80:GLU:HG3	36:45:81:VAL:H	1.60	0.66
46:E5:51:VAL:N	46:E5:62:LEU:HD12	2.10	0.66
16:7I:22:THR:HA	16:7I:33:ILE:HG13	1.78	0.66
20:BA:51:GLU:HA	20:BA:54:LYS:HB3	1.78	0.66
20:BA:61:SER:OG	20:BA:65:LYS:NZ	2.28	0.66
25:14:1639:U:OP2	62:14:3437:HOH:O	2.12	0.66
25:14:1952:A:C5	34:25:22:ILE:HD11	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2588:G:OP1	62:14:3539:HOH:O	2.14	0.66
25:14:2776:A:OP1	25:14:2776:A:H3'	1.96	0.66
40:85:92:ARG:HD3	40:85:94:ASN:HB3	1.78	0.66
46:E5:36:ILE:O	46:E5:36:ILE:HD13	1.96	0.66
1:13:657:G:N2	1:13:749:C:O2	2.28	0.66
25:1H:1250:G:OP1	62:1H:3806:HOH:O	2.12	0.66
25:1H:1728:G:H3'	25:1H:1729:A:H5''	1.77	0.66
55:1G:619:U:H3	4:32:135:LEU:HD13	1.59	0.66
13:4A:60:VAL:HG13	13:4A:64:TRP:HE1	1.60	0.66
25:14:1754:C:OP1	39:75:96:ARG:NH1	2.29	0.66
56:19:93:ALA:HB3	56:19:105:ILE:HG22	1.77	0.66
38:65:14:VAL:HG11	38:65:89:ARG:HH12	1.60	0.66
25:1H:945:A:OP1	62:1H:4008:HOH:O	2.14	0.66
9:82:43:ALA:HA	9:82:74:ILE:HD13	1.78	0.66
23:2L:16:C:O2'	23:2L:62:C:OP1	2.13	0.66
35:35:85:LEU:HA	35:35:88:LEU:HB3	1.76	0.66
1:13:963:G:N2	1:13:972:C:N3	2.38	0.66
1:13:963:G:H21	10:1I:55:LYS:HE2	1.60	0.66
1:13:1314:C:N4	19:AI:4:SER:OG	2.29	0.66
25:1H:2334:G:H5'	38:A8:9:ARG:HG2	1.78	0.66
40:C8:88:ILE:O	40:C8:90:VAL:N	2.29	0.66
22:3L:20:C:O2'	22:3L:22:A:O5'	2.13	0.66
26:1J:2:C:H2'	26:1J:3:C:H6	1.59	0.66
47:F5:85:LEU:HA	47:F5:87:PRO:HD2	1.78	0.66
52:K5:40:CYS:SG	52:K5:45:LYS:NZ	2.68	0.66
1:13:737:A:H2'	1:13:738:C:H6	1.57	0.66
25:1H:1525:G:H2'	25:1H:1526:G:C8	2.31	0.66
25:1H:2057:A:OP2	62:1H:3523:HOH:O	2.13	0.66
25:1H:2849:U:O4	39:B8:23:ARG:NH2	2.29	0.66
13:4A:39:ILE:HD13	13:4A:52:GLU:HB3	1.76	0.66
23:2L:24:C:H2'	23:2L:25:U:H6	1.60	0.66
25:14:990:A:H5'	25:14:990:A:H8	1.61	0.66
35:35:52:GLU:O	35:35:54:GLY:N	2.26	0.66
59:M5:49:VAL:HG12	59:M5:50:LEU:HD22	1.78	0.66
1:13:271:C:H2'	1:13:272:C:H6	1.60	0.66
25:1H:120:U:OP2	62:1H:4033:HOH:O	2.13	0.66
25:1H:1632:A:N6	62:1H:3647:HOH:O	2.07	0.66
25:1H:2751:G:OP2	31:51:4:ILE:HG23	1.94	0.66
50:M8:12:ALA:HB3	50:M8:24:THR:HB	1.78	0.66
55:1G:359:U:H2'	55:1G:360:A:C8	2.31	0.66
55:1G:957:U:H1'	55:1G:960:U:C5	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2447:G:O3'	62:14:3459:HOH:O	2.14	0.66
39:75:4:GLY:O	39:75:6:LEU:N	2.28	0.66
52:K5:35:GLU:HB2	52:K5:51:GLU:HB2	1.78	0.66
3:2E:177:THR:HB	3:2E:180:ALA:HB2	1.79	0.65
13:4I:13:LYS:O	13:4I:44:ARG:NH1	2.28	0.65
30:41:65:GLY:HA2	50:M8:7:PRO:HG2	1.78	0.65
39:B8:26:ASP:HB3	39:B8:92:GLY:H	1.61	0.65
42:E8:22:ASP:HA	42:E8:25:ARG:HH12	1.61	0.65
25:14:2032:G:N7	62:14:3601:HOH:O	2.28	0.65
25:14:2734:A:H1'	28:29:204:ALA:HB2	1.76	0.65
36:45:31:ASP:H	36:45:107:ALA:HB2	1.61	0.65
1:13:1187:G:O5'	9:8E:113:LYS:NZ	2.28	0.65
25:1H:2212:A:H1'	25:1H:2215:G:C5	2.31	0.65
25:1H:2392:A:H8	35:78:61:ARG:HG2	1.61	0.65
54:Q8:61:LEU:O	54:Q8:61:LEU:HD23	1.96	0.65
4:32:119:GLN:O	4:32:123:HIS:ND1	2.25	0.65
10:1A:34:VAL:HG22	10:1A:74:ILE:HG22	1.78	0.65
25:14:162:U:H4'	25:14:171:G:C4	2.32	0.65
25:14:2588:G:OP1	62:14:3537:HOH:O	2.13	0.65
30:49:76:SER:OG	30:49:84:LYS:N	2.30	0.65
32:69:75:LEU:HD23	32:69:76:THR:H	1.62	0.65
44:G8:40:GLU:HB2	44:G8:64:GLU:OE1	1.96	0.65
55:1G:501:C:H2'	55:1G:502:G:H8	1.61	0.65
2:12:5:ILE:HG12	2:12:6:THR:HG22	1.78	0.65
38:65:74:ALA:HB1	38:65:107:GLU:HB2	1.78	0.65
41:95:71:LEU:N	41:95:86:GLY:HA3	2.11	0.65
14:5I:24:CYS:SG	14:5I:40:CYS:HB3	2.35	0.65
25:1H:1188:U:H4'	41:D8:79:VAL:HG22	1.78	0.65
25:1H:1221:C:H2'	25:1H:1222:C:C6	2.32	0.65
45:H8:165:VAL:HB	45:H8:167:PRO:HD3	1.78	0.65
4:32:191:ARG:NH1	4:32:200:GLU:OE1	2.30	0.65
7:62:26:PHE:CE2	7:62:30:ILE:HD11	2.32	0.65
25:14:945:A:OP1	62:14:3641:HOH:O	2.14	0.65
25:14:1203:G:H3'	25:14:1204:A:H5''	1.77	0.65
25:14:2396:G:H4'	47:F5:30:VAL:H	1.61	0.65
36:45:66:ILE:HG13	36:45:67:ARG:H	1.60	0.65
25:1H:763:G:OP1	62:1H:3600:HOH:O	2.13	0.65
25:14:2296:U:OP2	38:65:9:ARG:NH1	2.25	0.65
28:29:55:ASN:O	28:29:57:LYS:NZ	2.30	0.65
25:14:323:G:HO2'	25:14:1205:U:H3	0.69	0.65
25:14:1174:A:N6	25:14:1176:G:O2'	2.28	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1500:A:OP1	62:13:1805:HOH:O	2.13	0.65
5:4E:45:PHE:CE2	5:4E:47:LYS:HD2	2.32	0.65
25:1H:2096:U:H3	25:1H:2193:G:H1	1.44	0.65
27:11:26:LYS:HE3	27:11:84:TYR:HB3	1.78	0.65
3:22:164:ARG:NH2	24:4L:25:A:O2'	2.30	0.65
25:14:607:U:OP1	57:39:102:PRO:HA	1.96	0.65
25:14:1020:A:N6	25:14:1141:U:O2'	2.30	0.65
1:13:971:G:N2	1:13:1363:A:OP2	2.25	0.65
26:16:15:A:H1'	26:16:109:G:C8	2.32	0.65
38:A8:11:LYS:HD3	38:A8:91:PRO:HD3	1.78	0.65
55:1G:67:C:H2'	55:1G:68:G:C8	2.32	0.65
3:22:65:ALA:HA	3:22:100:ALA:HB3	1.79	0.65
25:14:459:U:H5''	53:L5:40:TRP:CD2	2.32	0.65
25:14:848:G:H2'	25:14:849:A:C8	2.31	0.65
56:19:72:LYS:HB3	56:19:75:ILE:HD12	1.79	0.65
35:35:64:LYS:HB2	59:M5:30:ARG:NH2	2.10	0.65
52:K5:26:ASN:O	52:K5:28:ARG:NH1	2.29	0.65
1:13:376:G:H1	1:13:387:U:H3	1.44	0.65
1:13:1287:A:H2'	1:13:1288:A:C8	2.31	0.65
23:2K:62:C:H2'	23:2K:63:C:H6	1.62	0.65
25:1H:1143:A:OP1	33:58:25:ARG:NH2	2.26	0.65
25:1H:2468:G:H5''	36:88:120:ILE:HD12	1.77	0.65
38:A8:48:LEU:HD23	38:A8:82:ILE:HD11	1.79	0.65
39:B8:60:THR:HG22	39:B8:77:PRO:HA	1.78	0.65
54:Q8:31:HIS:CB	54:Q8:34:TRP:HD1	2.10	0.65
20:BA:71:THR:O	62:BA:201:HOH:O	2.15	0.65
25:14:586:A:OP1	62:14:3447:HOH:O	2.14	0.65
25:14:2393:A:O3'	35:35:63:PRO:HD2	1.97	0.65
25:14:2720:U:N3	25:14:2873:A:H2	1.93	0.65
29:31:45:ARG:HG2	29:31:45:ARG:HH11	1.61	0.65
33:58:96:GLU:O	33:58:98:VAL:HG12	1.97	0.65
42:E8:14:PRO:HG2	42:E8:78:GLU:HB2	1.79	0.65
55:1G:438:G:H4'	4:32:123:HIS:CD2	2.32	0.65
25:14:2557:G:H2'	25:14:2558:C:C6	2.31	0.65
2:1E:87:ARG:NH2	2:1E:220:ASP:OD1	2.30	0.64
2:1E:219:VAL:HA	2:1E:222:ILE:HD12	1.79	0.64
25:1H:881:G:H3'	25:1H:882:G:O4'	1.97	0.64
25:1H:2611:U:C4	51:N8:3:LYS:HG3	2.32	0.64
25:14:2689:U:P	25:14:2719:G:H22	2.21	0.64
33:15:33:LEU:HD12	33:15:38:HIS:CD2	2.32	0.64
1:13:515:G:N7	62:13:1838:HOH:O	2.29	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:860:U:C5	25:1H:917:A:C2	2.85	0.64
25:1H:1332:G:H21	25:1H:1610:A:H8	1.44	0.64
26:16:7:G:H4'	38:A8:29:PHE:CD2	2.32	0.64
54:Q8:26:LYS:HE2	54:Q8:41:ILE:HG23	1.79	0.64
55:1G:1221:G:OP1	55:1G:1321:C:N4	2.30	0.64
25:14:910:A:H62	36:45:12:GLN:HA	1.62	0.64
25:14:1011:G:H2''	25:14:1013:C:H5''	1.78	0.64
25:14:1327:C:OP2	62:14:3575:HOH:O	2.15	0.64
25:14:2245:U:H5''	25:14:2246:G:H5'	1.79	0.64
56:19:32:SER:O	56:19:32:SER:OG	2.14	0.64
50:I5:16:CYS:SG	50:I5:17:GLY:N	2.70	0.64
33:58:47:ALA:HB1	33:58:116:LEU:HD21	1.79	0.64
39:B8:50:ILE:HD11	39:B8:102:ILE:HD11	1.78	0.64
45:H8:27:VAL:HG12	45:H8:87:ASP:HB3	1.79	0.64
55:1G:1237:C:O2'	55:1G:1300:G:N2	2.31	0.64
7:62:115:ARG:HB3	7:62:118:VAL:HG13	1.78	0.64
25:14:142:G:H2'	25:14:143:C:C6	2.32	0.64
56:19:65:ILE:HD11	56:19:67:PHE:CE1	2.32	0.64
32:69:98:ALA:HA	32:69:109:ILE:HD11	1.79	0.64
35:35:55:ARG:HG2	35:35:56:SER:N	2.11	0.64
41:95:85:LYS:HG3	41:95:87:HIS:N	2.11	0.64
9:8E:111:ARG:O	9:8E:113:LYS:HD2	1.98	0.64
25:14:67:U:H2'	25:14:68:G:H8	1.61	0.64
25:14:94:G:N3	48:G5:47:ASN:ND2	2.45	0.64
25:14:1266:G:O5'	42:A5:15:ARG:NH2	2.30	0.64
25:14:1416:G:HO2'	25:14:1417:C:H6	1.46	0.64
25:14:1673:U:H5'	62:14:3677:HOH:O	1.96	0.64
28:29:12:THR:HG21	39:75:11:GLU:OE2	1.97	0.64
46:E5:27:GLU:HG3	46:E5:68:GLU:HA	1.79	0.64
50:I5:61:ARG:HB3	50:I5:62:ARG:HH11	1.62	0.64
1:13:547:A:OP1	4:3E:73:ARG:NH2	2.30	0.64
1:13:559:A:H4'	1:13:560:U:H5''	1.80	0.64
2:1E:69:LEU:HB3	2:1E:162:ILE:HG22	1.80	0.64
9:8E:13:ALA:HB2	9:8E:68:GLY:HA3	1.80	0.64
13:4I:10:PRO:HB2	13:4I:18:ALA:HB1	1.78	0.64
25:1H:141:A:C8	25:1H:1408:C:H1'	2.33	0.64
29:31:135:LYS:HB3	29:31:138:GLU:HG3	1.80	0.64
39:B8:108:ARG:HA	39:B8:111:ARG:NE	2.12	0.64
48:K8:47:ASN:HB2	48:K8:50:ILE:HD11	1.78	0.64
25:14:1298:C:OP2	62:14:3436:HOH:O	2.14	0.64
36:45:18:LYS:H	36:45:98:LYS:NZ	1.94	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:601:C:H2'	1:13:602:A:C8	2.32	0.64
25:1H:1021:A:H8	25:1H:1021:A:H3'	1.63	0.64
25:1H:1631:A:OP1	62:1H:3651:HOH:O	2.14	0.64
25:1H:1805:U:O2	27:11:50:THR:HB	1.97	0.64
25:1H:2327:A:H2'	25:1H:2328:A:C8	2.33	0.64
28:21:143:ASN:HD22	28:21:147:PRO:HD2	1.63	0.64
32:61:110:ASP:HB3	32:61:112:LYS:HG2	1.79	0.64
33:58:38:HIS:NE2	33:58:50:ASP:OD2	2.31	0.64
47:J8:86:SER:O	47:J8:88:LYS:N	2.31	0.64
25:14:259:G:N2	25:14:621:A:H8	1.96	0.64
39:75:64:ARG:HB2	39:75:73:GLU:HG2	1.80	0.64
50:I5:40:HIS:HA	50:I5:44:THR:HB	1.79	0.64
55:1G:1127:G:H22	55:1G:1144:G:H22	1.45	0.64
19:AA:41:VAL:HG12	19:AA:43:GLU:H	1.62	0.64
20:BA:65:LYS:HA	20:BA:68:LYS:HD3	1.80	0.64
25:14:67:U:N3	25:14:74:A:H2	1.87	0.64
25:14:993:G:H1'	41:95:87:HIS:CE1	2.33	0.64
25:14:1337:G:H2'	25:14:1338:G:H8	1.62	0.64
28:29:11:MET:HE3	28:29:186:GLY:HA2	1.79	0.64
59:M5:30:ARG:O	59:M5:32:LEU:N	2.30	0.64
25:1H:323:G:C8	29:31:171:PRO:HG3	2.32	0.64
25:1H:370:G:OP2	62:1H:3720:HOH:O	2.15	0.64
25:1H:1963:U:H6	25:1H:1963:U:OP1	1.81	0.64
36:88:14:ARG:HG2	36:88:41:TRP:CH2	2.27	0.64
37:98:20:LEU:HD21	37:98:40:LYS:HD3	1.79	0.64
45:H8:9:TYR:HE1	45:H8:35:ARG:HD3	1.63	0.64
48:K8:32:LEU:HD11	48:K8:54:LYS:HG2	1.79	0.64
55:1G:1189:C:P	10:1A:51:ARG:HH22	2.21	0.64
55:1G:1343:G:H2'	55:1G:1344:C:C6	2.33	0.64
2:12:42:ILE:HD11	2:12:202:PRO:HB2	1.79	0.64
5:42:18:ARG:HH21	5:42:25:ARG:HB3	1.62	0.64
6:52:33:TYR:CE2	6:52:78:GLU:HG3	2.32	0.64
25:14:796:C:H2'	25:14:797:C:C6	2.33	0.64
58:D5:1:MET:N	58:D5:135:GLU:OE2	2.31	0.64
1:13:1077:G:N2	1:13:1080:A:OP2	2.30	0.64
25:1H:1221:C:H2'	25:1H:1222:C:H6	1.63	0.64
45:H8:154:ASP:N	45:H8:154:ASP:OD1	2.30	0.64
45:H8:163:LEU:HB3	45:H8:165:VAL:H	1.62	0.64
15:6A:82:ILE:HD11	15:6A:88:ARG:HB2	1.79	0.64
25:14:2611:U:H2'	51:J5:3:LYS:HD3	1.80	0.64
26:1J:44:G:H1'	26:1J:47:C:H42	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:95:6:LYS:H	41:95:37:VAL:HG12	1.63	0.64
8:7E:87:SER:HA	8:7E:93:VAL:HG23	1.79	0.64
25:1H:1590:U:H2'	25:1H:1591:G:C8	2.33	0.64
27:11:26:LYS:HE3	27:11:84:TYR:H	1.62	0.64
54:Q8:49:VAL:HG23	54:Q8:53:PRO:HD2	1.79	0.64
55:1G:1141:C:H2'	55:1G:1142:G:H8	1.63	0.64
19:AA:50:ALA:HB1	19:AA:57:HIS:HB3	1.80	0.64
25:14:1247:A:OP1	57:39:95:ARG:NH2	2.31	0.64
25:14:2306:C:H3'	25:14:2307:G:H5''	1.80	0.64
25:14:2378:A:H4'	38:65:23:ARG:NH1	2.13	0.64
38:65:10:ARG:O	38:65:14:VAL:HG13	1.97	0.64
1:13:1506:U:H2'	62:13:1801:HOH:O	1.98	0.63
25:1H:141:A:H8	25:1H:1408:C:H1'	1.63	0.63
25:1H:1782:C:OP1	62:1H:3534:HOH:O	2.15	0.63
25:1H:2635:C:H5''	28:21:79:ARG:NE	2.13	0.63
55:1G:690:G:H2'	55:1G:691:G:O4'	1.97	0.63
55:1G:1300:G:O2'	55:1G:1301:U:O5'	2.16	0.63
55:1G:1305:G:H22	55:1G:1331:G:C2'	2.12	0.63
7:62:15:ASP:HB3	7:62:19:GLY:H	1.63	0.63
25:14:2238:G:N7	62:14:3602:HOH:O	2.31	0.63
1:13:310:G:OP2	16:7I:27:LYS:NZ	2.27	0.63
25:1H:1063:G:N2	25:1H:1076:C:O2	2.31	0.63
45:H8:63:ASP:OD1	45:H8:65:GLN:NE2	2.25	0.63
25:14:94:G:H21	48:G5:47:ASN:HD22	1.44	0.63
28:29:119:ARG:HG3	28:29:160:TYR:HB2	1.80	0.63
50:I5:61:ARG:HB3	50:I5:62:ARG:NH1	2.13	0.63
1:13:963:G:H21	10:1I:55:LYS:CE	2.11	0.63
31:51:4:ILE:O	31:51:6:ARG:NH1	2.31	0.63
36:88:19:GLY:O	36:88:21:THR:OG1	2.15	0.63
55:1G:80:G:H1	55:1G:89:U:H3	1.46	0.63
19:AA:18:LYS:O	19:AA:22:LEU:HB2	1.98	0.63
25:14:483:A:H5''	44:C5:49:VAL:HG13	1.80	0.63
25:14:2641:G:OP2	33:15:74:ARG:NH2	2.32	0.63
1:13:1505:G:P	62:13:1804:HOH:O	2.56	0.63
16:7I:28:ARG:HG2	16:7I:29:ASP:OD1	1.99	0.63
25:1H:607:U:OP1	29:31:102:PRO:HA	1.99	0.63
34:68:68:GLU:OE2	34:68:78:ARG:NH1	2.32	0.63
35:78:75:ILE:HG13	35:78:77:ARG:NH1	2.12	0.63
55:1G:991:U:O4	55:1G:1212:U:O2'	2.15	0.63
3:22:44:GLU:HG2	3:22:52:LEU:HD11	1.81	0.63
1:13:113:G:H2'	1:13:114:U:H6	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1507:A:O3'	62:13:1803:HOH:O	2.15	0.63
11:2I:18:ARG:HB3	11:2I:33:THR:OG1	1.98	0.63
25:1H:330:A:HO2'	25:1H:331:A:H8	1.43	0.63
25:1H:1728:G:H8	25:1H:1732:A:H62	1.45	0.63
55:1G:1305:G:O2'	55:1G:1306:A:H8	1.82	0.63
5:42:43:LEU:HD22	5:42:136:MET:HG3	1.80	0.63
25:14:1159:U:H2'	25:14:1160:G:H8	1.63	0.63
33:15:47:ALA:HB2	33:15:112:LEU:HD21	1.80	0.63
35:35:3:LEU:H	35:35:3:LEU:HD12	1.62	0.63
1:13:352:C:H6	1:13:352:C:H5''	1.63	0.63
2:1E:17:PHE:HB3	2:1E:44:LEU:HD11	1.80	0.63
18:9I:59:SER:OG	18:9I:60:ALA:N	2.31	0.63
28:21:105:THR:OG1	28:21:199:ARG:NH2	2.31	0.63
35:78:19:VAL:HG12	35:78:20:GLY:C	2.19	0.63
45:H8:28:MET:HB2	45:H8:37:VAL:HG11	1.80	0.63
47:J8:83:GLU:HG2	47:J8:84:GLY:O	1.97	0.63
19:AA:66:MET:SD	19:AA:66:MET:N	2.71	0.63
25:14:90:U:O2'	25:14:91:A:H8	1.81	0.63
25:14:2287:A:O2'	25:14:2288:A:H5''	1.97	0.63
25:14:2808:U:H2'	25:14:2809:A:H8	1.62	0.63
35:35:128:HIS:HA	35:35:147:LEU:HA	1.80	0.63
41:95:35:LEU:HB3	41:95:37:VAL:CG1	2.29	0.63
1:13:1129:C:N4	1:13:1142:G:O6	2.31	0.63
6:5E:82:ARG:HG3	6:5E:83:ASP:HA	1.80	0.63
25:1H:809:G:N7	62:1H:3503:HOH:O	2.31	0.63
25:1H:1899:G:H1	25:1H:1902:C:H41	1.45	0.63
55:1G:745:C:OP1	55:1G:851:G:O2'	2.17	0.63
2:12:54:THR:HG23	2:12:199:TYR:HB3	1.81	0.63
56:19:10:THR:OG1	56:19:13:ARG:HB2	1.99	0.63
28:29:61:ARG:O	28:29:63:LEU:N	2.32	0.63
2:1E:67:THR:HG21	2:1E:155:LEU:HG	1.80	0.63
13:4I:13:LYS:O	13:4I:44:ARG:HD2	1.99	0.63
25:1H:252:G:OP2	35:78:50:ARG:NH1	2.31	0.63
25:1H:1405:U:H2'	25:1H:1406:U:C6	2.33	0.63
25:1H:2065:C:H2'	25:1H:2066:C:C6	2.34	0.63
2:12:8:LYS:HB2	2:12:217:ARG:HE	1.62	0.63
5:42:101:ILE:HD11	5:42:119:LEU:HD23	1.81	0.63
25:1H:1021:A:H3'	25:1H:1021:A:C8	2.34	0.63
25:1H:1567:A:H5''	27:11:58:HIS:CD2	2.34	0.63
29:31:9:ILE:HD11	29:31:125:LEU:HG	1.80	0.63
2:12:98:LEU:O	2:12:101:MET:HG2	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2520:C:H41	25:14:2542:A:H62	1.46	0.63
46:E5:74:ARG:HH11	46:E5:74:ARG:HB2	1.64	0.63
1:13:452:A:H2'	1:13:453:A:C8	2.34	0.62
1:13:757:U:H5''	1:13:822:C:O2	1.99	0.62
1:13:812:C:H4'	1:13:813:U:H5'	1.81	0.62
1:13:1074:G:O2'	1:13:1101:A:N1	2.25	0.62
1:13:1149:C:H2'	1:13:1150:U:C6	2.34	0.62
17:8I:75:ARG:NH1	17:8I:76:LEU:O	2.31	0.62
25:1H:302:C:H2'	25:1H:303:U:H6	1.64	0.62
25:1H:1406:U:H2'	25:1H:1407:C:C6	2.34	0.62
25:1H:1466:G:N2	25:1H:1547:C:N3	2.47	0.62
25:1H:2635:C:O3'	28:21:79:ARG:HD3	1.98	0.62
36:88:79:LEU:N	36:88:80:GLU:HG2	2.14	0.62
37:98:79:LEU:HA	37:98:83:ILE:HD12	1.80	0.62
55:1G:1321:C:H41	55:1G:1322:C:N4	1.96	0.62
55:1G:1504:G:H3'	62:1G:1805:HOH:O	1.99	0.62
4:32:20:TYR:HA	4:32:26:CYS:HB3	1.81	0.62
15:6A:39:LEU:HD12	15:6A:56:LEU:HB2	1.81	0.62
25:14:1434:A:H61	25:14:1558:A:N6	1.97	0.62
25:14:1542:G:H3'	25:14:1543:A:H5''	1.81	0.62
25:14:1971:A:OP1	62:14:3514:HOH:O	2.16	0.62
25:14:2836:U:H2'	25:14:2837:G:C8	2.33	0.62
58:D5:8:TYR:HD1	58:D5:62:PRO:HG3	1.63	0.62
28:21:78:LEU:CA	28:21:79:ARG:HD2	2.29	0.62
37:98:12:ARG:HD3	37:98:16:HIS:CG	2.34	0.62
45:H8:60:GLU:O	45:H8:61:LEU:HB3	1.99	0.62
13:4A:2:ALA:HB1	50:I5:34:GLU:HB3	1.81	0.62
25:14:2773:C:OP1	28:29:166:THR:OG1	2.17	0.62
56:19:72:LYS:NZ	56:19:99:ASP:OD2	2.32	0.62
1:13:1497:G:H2'	1:13:1498:U:H5'	1.82	0.62
25:1H:600:G:N2	25:1H:605:C:O3'	2.32	0.62
25:1H:625:G:N7	35:78:107:LYS:NZ	2.46	0.62
25:1H:1570:A:H2'	25:1H:1571:A:C8	2.32	0.62
45:H8:31:ARG:NH1	45:H8:94:GLU:OE2	2.32	0.62
9:82:112:LYS:HA	9:82:119:ALA:CB	2.25	0.62
25:14:2448:A:OP2	62:14:3456:HOH:O	2.16	0.62
34:68:98:VAL:HG11	34:68:114:ILE:HG23	1.81	0.62
55:1G:1137:C:H4'	55:1G:1138:G:C2	2.34	0.62
19:AA:11:VAL:HG22	19:AA:12:ASP:H	1.64	0.62
25:14:1800:C:OP2	56:19:183:ARG:NH2	2.32	0.62
25:14:2138:C:O2	25:14:2154:G:N2	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:45:85:LYS:HG2	36:45:86:GLY:H	1.64	0.62
1:13:223:U:H2'	1:13:224:C:H6	1.63	0.62
2:1E:17:PHE:HD1	2:1E:17:PHE:H	1.46	0.62
9:8E:112:LYS:HA	9:8E:119:ALA:HB2	1.82	0.62
25:1H:443:A:H1'	25:1H:1201:C:O4'	1.99	0.62
25:1H:527:C:H4'	25:1H:528:A:O5'	2.00	0.62
25:1H:1416:G:O2'	25:1H:1417:C:O5'	2.13	0.62
25:1H:2314:C:H2'	25:1H:2315:G:C8	2.34	0.62
40:C8:66:ASN:HB2	40:C8:76:TYR:HB2	1.82	0.62
54:Q8:49:VAL:HA	54:Q8:50:LEU:C	2.17	0.62
25:14:1693:U:O2'	56:19:14:ARG:NH2	2.32	0.62
47:F5:80:LEU:HD12	47:F5:82:LEU:HD21	1.81	0.62
25:1H:1701:A:OP2	62:1H:4148:HOH:O	2.16	0.62
25:1H:2261:C:H1'	25:1H:2388:A:N3	2.13	0.62
26:16:7:G:H4'	38:A8:29:PHE:HD2	1.64	0.62
30:41:161:THR:HG22	30:41:163:ALA:H	1.65	0.62
55:1G:964:A:N3	55:1G:969:A:O2'	2.27	0.62
25:14:827:U:H2'	25:14:2430:A:H2	1.65	0.62
25:14:831:G:H5''	25:14:832:G:OP2	1.99	0.62
25:14:1709:U:H2'	25:14:1710:C:C6	2.34	0.62
32:69:14:ASP:OD1	32:69:15:VAL:N	2.30	0.62
47:F5:82:LEU:HD23	47:F5:82:LEU:H	1.63	0.62
27:11:112:GLN:CD	27:11:115:GLN:HE21	2.02	0.62
40:C8:92:ARG:CZ	40:C8:96:ALA:H	2.12	0.62
43:F8:5:TYR:CE1	48:K8:30:ARG:HG3	2.35	0.62
50:M8:16:CYS:SG	50:M8:17:GLY:N	2.73	0.62
55:1G:628:G:H2'	55:1G:629:G:C8	2.35	0.62
39:75:26:ASP:O	39:75:49:VAL:HG22	2.00	0.62
1:13:448:A:OP2	1:13:485:G:N2	2.21	0.62
25:1H:800:A:OP1	62:1H:3566:HOH:O	2.16	0.62
25:1H:1590:U:H2'	25:1H:1591:G:H8	1.64	0.62
51:N8:33:CYS:SG	51:N8:40:LYS:HD3	2.40	0.62
19:AA:18:LYS:HG2	19:AA:31:ILE:HG12	1.81	0.62
25:14:910:A:C5	36:45:13:GLN:HG3	2.35	0.62
25:14:2415:G:H4'	35:35:67:MET:N	2.15	0.62
32:69:2:LYS:HA	32:69:20:ASP:HA	1.82	0.62
36:45:37:LEU:HD21	36:45:130:LYS:HB2	1.82	0.62
1:13:1422:G:H5''	34:68:48:PRO:HB3	1.82	0.62
25:1H:2855:C:H2'	25:1H:2856:C:H6	1.64	0.62
31:51:153:LYS:H	31:51:153:LYS:HD2	1.63	0.62
45:H8:143:GLY:HA2	45:H8:144:LEU:HB2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:1G:631:G:H2'	55:1G:632:A:C8	2.30	0.62
55:1G:1298:C:H41	7:62:114:ARG:HB3	1.62	0.62
25:14:1342:A:H2	25:14:1602:U:N3	1.96	0.62
44:C5:42:VAL:HG13	44:C5:65:ALA:HB3	1.81	0.62
1:13:1313:U:C5	19:AI:4:SER:HB3	2.35	0.62
4:3E:190:ASP:N	4:3E:193:ASP:HB2	2.14	0.62
7:6E:16:LEU:HD12	9:8E:42:ARG:HA	1.81	0.62
25:1H:2761:G:H1'	31:51:143:GLN:OE1	2.00	0.62
25:1H:2845:G:H5''	39:B8:54:ARG:O	2.00	0.62
43:F8:67:GLY:O	43:F8:69:TYR:N	2.32	0.62
50:M8:37:SER:O	50:M8:40:HIS:N	2.33	0.62
55:1G:407:G:OP1	4:32:115:ARG:NE	2.31	0.62
55:1G:1320:C:O2	19:AA:36:ARG:NH2	2.33	0.62
5:42:60:TYR:HB2	5:42:64:ARG:HH21	1.65	0.62
25:14:2593:U:H2'	25:14:2594:C:C6	2.34	0.62
31:59:9:ILE:HG21	31:59:51:ARG:HG2	1.82	0.62
1:13:1128:C:O2'	1:13:1130:A:N7	2.31	0.61
1:13:1178:G:N7	9:8E:97:LYS:NZ	2.47	0.61
12:3I:90:VAL:HG12	12:3I:92:ASP:H	1.64	0.61
25:1H:676:A:H8	25:1H:2069:G:N2	1.94	0.61
25:1H:1165:U:H2'	25:1H:1166:C:C6	2.34	0.61
25:1H:1678:G:H22	25:1H:1989:G:H22	1.48	0.61
25:1H:2140:C:H2'	25:1H:2141:G:H8	1.65	0.61
25:1H:2784:C:H1'	28:21:37:ARG:HH12	1.64	0.61
33:58:49:GLY:H	33:58:119:ARG:HH12	1.48	0.61
11:2A:57:THR:HG22	11:2A:59:TYR:H	1.65	0.61
25:14:196:A:O2'	25:14:805:G:O6	2.15	0.61
25:14:527:C:OP2	25:14:2779:U:H5	1.83	0.61
25:14:1040:C:H2'	25:14:1041:C:C6	2.35	0.61
35:35:121:LYS:HG3	35:35:122:PRO:HD2	1.82	0.61
1:13:453:A:H4'	16:7I:72:ARG:HB2	1.82	0.61
1:13:974:A:OP2	14:5I:29:ARG:NH2	2.33	0.61
1:13:984:C:H2'	1:13:985:C:C6	2.35	0.61
33:58:58:ASP:N	33:58:58:ASP:OD1	2.33	0.61
55:1G:179:A:H2'	55:1G:180:U:C6	2.34	0.61
55:1G:736:C:H2'	55:1G:737:A:C8	2.35	0.61
4:32:15:GLU:OE1	4:32:59:ARG:NH2	2.25	0.61
22:3L:42:U:H2'	22:3L:43:G:H8	1.65	0.61
30:49:20:ILE:HG23	30:49:25:TYR:HB2	1.81	0.61
35:35:85:LEU:HB3	35:35:114:ILE:HD11	1.82	0.61
1:13:1057:G:H2'	1:13:1058:G:O4'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:2K:54:G:H2'	23:2K:55:5MU:H6	1.65	0.61
25:1H:2439:A:H5'	25:1H:2439:A:C8	2.35	0.61
42:E8:40:ASN:O	42:E8:41:LYS:HG2	2.00	0.61
45:H8:165:VAL:HB	45:H8:166:SER:HA	1.81	0.61
49:L8:7:LYS:HB2	49:L8:34:GLU:HG2	1.83	0.61
55:1G:1316:G:H4'	14:5A:18:VAL:HG11	1.81	0.61
25:14:639:U:H2'	25:14:640:C:C6	2.34	0.61
25:14:1430:C:H2'	25:14:1431:U:C6	2.36	0.61
25:14:1729:A:H2'	25:14:1731:G:N2	2.16	0.61
25:14:2429:G:O6	35:35:61:ARG:NH2	2.32	0.61
56:19:264:LYS:HG2	56:19:266:SER:HB3	1.80	0.61
16:7I:20:VAL:HG21	16:7I:32:TYR:CD2	2.34	0.61
25:1H:535:C:O3'	40:C8:53:ARG:NH1	2.34	0.61
25:1H:1111:A:N3	25:1H:1112:G:H1'	2.15	0.61
25:1H:1127:A:O2'	25:1H:2518:A:OP1	2.15	0.61
25:1H:1204:A:H2	25:1H:1241:A:N1	1.99	0.61
25:1H:1255:U:O2	62:1H:4101:HOH:O	2.16	0.61
25:1H:1689:A:N6	25:1H:1698:A:H2	1.94	0.61
25:1H:1796:U:H2'	25:1H:1797:C:C6	2.35	0.61
36:88:79:LEU:H	36:88:80:GLU:HG2	1.66	0.61
55:1G:1513:A:H2'	55:1G:1514:C:C6	2.34	0.61
7:62:143:ARG:NH1	22:3L:43:G:H5'	2.15	0.61
20:BA:69:GLY:O	20:BA:73:HIS:ND1	2.33	0.61
21:1B:6:ARG:HG2	21:1B:15:ARG:HH21	1.66	0.61
62:14:3417:HOH:O	56:19:244:ARG:NH2	2.33	0.61
44:C5:47:LYS:H	44:C5:60:PHE:HB3	1.65	0.61
5:4E:153:LYS:NZ	5:4E:154:GLY:O	2.18	0.61
25:1H:646:A:H2'	25:1H:647:G:O4'	2.01	0.61
25:1H:1516:U:H2'	25:1H:1517:G:H8	1.65	0.61
30:41:35:GLU:HG3	30:41:36:LYS:HB2	1.81	0.61
54:Q8:41:ILE:HA	54:Q8:43:GLN:H	1.65	0.61
55:1G:624:C:H2'	55:1G:625:G:C8	2.36	0.61
55:1G:652:U:H1'	55:1G:653:A:H2	1.66	0.61
4:32:175:SER:HB3	4:32:186:LEU:HD11	1.82	0.61
25:14:2557:G:H2'	25:14:2558:C:H6	1.65	0.61
25:14:2648:C:H2'	25:14:2649:U:C6	2.36	0.61
33:15:35:ARG:HB2	33:15:42:TRP:CZ3	2.35	0.61
36:45:25:ASP:HB3	36:45:102:VAL:HB	1.82	0.61
25:1H:518:G:H2'	25:1H:519:U:C6	2.36	0.61
25:1H:524:U:H2'	25:1H:525:U:C6	2.35	0.61
25:1H:946:G:OP2	62:1H:3999:HOH:O	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:H8:103:ARG:HG3	45:H8:136:PHE:CD2	2.36	0.61
47:J8:65:SER:OG	47:J8:66:HIS:ND1	2.29	0.61
55:1G:1251:A:H2'	55:1G:1252:A:C8	2.35	0.61
23:2L:62:C:H2'	23:2L:63:C:C6	2.36	0.61
25:14:1210:A:H5'	25:14:1210:A:H8	1.66	0.61
28:29:23:VAL:HG11	28:29:183:LEU:HD23	1.81	0.61
36:45:25:ASP:HA	36:45:67:ARG:NH1	2.16	0.61
47:F5:49:VAL:HG21	47:F5:67:ILE:HG23	1.82	0.61
30:41:73:ALA:HB3	30:41:85:GLY:H	1.65	0.61
41:D8:44:LYS:O	41:D8:46:VAL:N	2.34	0.61
25:14:521:G:H2'	25:14:522:G:H8	1.66	0.61
25:14:1962:C:O2'	25:14:1964:G:OP2	2.18	0.61
59:M5:40:GLU:HA	59:M5:43:GLN:HB2	1.81	0.61
1:13:727:G:N2	1:13:730:G:OP2	2.28	0.61
1:13:939:G:H2'	1:13:940:C:C6	2.36	0.61
1:13:1145:C:H4'	1:13:1146:A:C8	2.36	0.61
5:4E:12:LEU:HB3	5:4E:31:LEU:HB2	1.81	0.61
25:1H:446:G:OP2	62:1H:3612:HOH:O	2.16	0.61
25:1H:1189:A:OP2	62:1H:3770:HOH:O	2.16	0.61
25:1H:1593:G:H2'	25:1H:1594:G:C8	2.36	0.61
33:58:35:ARG:HD3	33:58:37:LYS:HD2	1.81	0.61
45:H8:10:ARG:HD3	45:H8:38:TYR:HB3	1.83	0.61
55:1G:976:G:N2	55:1G:1362(A):C:OP2	2.29	0.61
25:14:214:G:H4'	25:14:214:G:OP1	2.01	0.61
25:14:833:U:O2	35:35:55:ARG:NH1	2.33	0.61
25:14:889:C:N4	25:14:890:A:N3	2.48	0.61
25:14:2823:A:OP1	28:29:113:PHE:HB2	2.01	0.61
40:85:28:ARG:NH1	40:85:38:THR:OG1	2.29	0.61
1:13:498:A:H4'	1:13:500:G:OP1	1.99	0.61
1:13:975:A:N6	10:1I:60:ARG:HH12	1.97	0.61
4:3E:11:LEU:HD13	4:3E:66:ARG:HG3	1.82	0.61
25:1H:315:G:H2'	25:1H:316:C:C6	2.36	0.61
25:1H:2689:U:H5''	25:1H:2713:A:C2	2.36	0.61
29:31:101:LEU:HD22	29:31:102:PRO:HD2	1.82	0.61
36:88:66:ILE:O	36:88:104:PHE:N	2.34	0.61
6:52:61:LEU:HD23	6:52:63:TYR:OH	1.99	0.61
25:14:2272:U:O4	62:14:3751:HOH:O	2.15	0.61
56:19:255:LYS:CE	56:19:255:LYS:H	2.13	0.61
28:29:76:ARG:HG3	28:29:195:LEU:HD22	1.83	0.61
57:39:7:TYR:CD1	57:39:18:ARG:HB2	2.36	0.61
36:45:81:VAL:O	36:45:82:ARG:NH1	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:65:102:ALA:HA	38:65:105:ALA:HB3	1.82	0.61
58:D5:8:TYR:CD1	58:D5:62:PRO:HG3	2.36	0.61
6:5E:50:TYR:OH	18:9I:74:ARG:O	2.06	0.61
9:8E:17:VAL:HG11	9:8E:81:ILE:HD13	1.82	0.61
25:1H:1429:G:H2'	25:1H:1430:C:C6	2.36	0.61
36:88:127:ILE:HD13	36:88:127:ILE:H	1.65	0.61
55:1G:999:U:H2'	55:1G:1000:A:H8	1.66	0.61
11:2A:101:SER:CB	11:2A:103:LEU:H	2.14	0.61
25:14:74:A:H4'	25:14:75:G:O5'	2.01	0.61
25:14:395:U:H2'	25:14:396:G:N7	2.16	0.61
25:14:1041:C:H42	25:14:1114:G:H1	1.49	0.61
50:I5:16:CYS:HA	50:I5:33:VAL:HG13	1.81	0.61
22:3K:19:C:H2'	22:3K:20:C:H4'	1.83	0.60
25:1H:49:A:N7	25:1H:120:U:C5	2.63	0.60
25:1H:606:U:H4'	25:1H:658:C:H4'	1.83	0.60
2:12:87:ARG:NH1	2:12:220:ASP:OD1	2.33	0.60
25:14:1047:G:H21	25:14:1111:A:H62	1.49	0.60
32:69:101:LEU:HD23	32:69:101:LEU:H	1.66	0.60
1:13:1151:A:H5'	10:1I:41:PRO:HA	1.83	0.60
19:AI:50:ALA:HB1	19:AI:57:HIS:HB3	1.83	0.60
37:98:103:ARG:HD2	37:98:108:GLY:O	2.01	0.60
44:G8:97:ARG:NH2	44:G8:104:GLY:HA3	2.15	0.60
55:1G:920:U:H2'	55:1G:921:U:C6	2.36	0.60
55:1G:1291:G:OP1	7:62:37:ASN:ND2	2.34	0.60
2:12:7:VAL:O	2:12:217:ARG:NH2	2.32	0.60
4:32:8:VAL:O	4:32:11:LEU:N	2.33	0.60
20:BA:36:LEU:HD12	20:BA:55:ILE:HG23	1.82	0.60
25:14:1664:A:OP2	62:14:3556:HOH:O	2.16	0.60
25:14:1666:G:OP1	34:25:66:LYS:HD3	2.01	0.60
25:14:2658:C:OP1	31:59:160:LYS:NZ	2.30	0.60
57:39:116:ASP:OD2	35:35:1:MET:N	2.27	0.60
32:69:27:ARG:HG2	47:F5:71:TYR:CZ	2.36	0.60
58:D5:76:LEU:HA	58:D5:83:PRO:HA	1.83	0.60
7:6E:49:ILE:O	7:6E:53:LYS:HB2	2.01	0.60
23:2K:57:C:N4	30:41:83:ARG:HH22	2.00	0.60
25:1H:249:C:P	62:1H:3575:HOH:O	2.59	0.60
27:11:223:GLY:HA3	27:11:231:HIS:ND1	2.16	0.60
27:11:238:GLY:O	27:11:240:ALA:N	2.34	0.60
36:88:79:LEU:O	36:88:81:VAL:HG23	2.02	0.60
37:98:10:LEU:O	37:98:12:ARG:HG2	2.01	0.60
39:B8:55:ASN:N	39:B8:59:THR:HG22	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:1G:804:U:H5'	55:1G:805:C:OP2	2.01	0.60
55:1G:957:U:H1'	55:1G:960:U:H5	1.65	0.60
22:3L:35:QUO:C4	22:3L:35:QUO:C2	2.74	0.60
25:14:989:G:OP2	49:H5:11:SER:HB3	2.02	0.60
25:14:1153:C:OP1	40:85:93:LYS:NZ	2.34	0.60
25:14:1225:C:H4'	41:95:85:LYS:CG	2.32	0.60
25:14:1328:G:O6	62:14:3574:HOH:O	2.14	0.60
25:14:1894:C:O2'	25:14:1895:C:H5'	2.01	0.60
25:14:2419:U:H4'	52:K5:23:THR:HG21	1.82	0.60
30:49:125:PHE:HB3	30:49:166:ASP:HB2	1.81	0.60
35:35:98:GLU:O	35:35:102:ARG:HB2	2.01	0.60
1:13:864:A:H2'	1:13:865:A:C8	2.37	0.60
25:1H:848:G:H2'	25:1H:849:A:H8	1.67	0.60
25:1H:910:A:H62	36:88:12:GLN:HA	1.65	0.60
25:1H:2168:G:N2	25:1H:2170:A:H62	1.99	0.60
26:16:15:A:H5'	26:16:16:G:H8	1.67	0.60
55:1G:165:C:H2'	55:1G:166:G:C8	2.37	0.60
55:1G:359:U:H2'	55:1G:360:A:H8	1.64	0.60
55:1G:1127:G:H22	55:1G:1144:G:N2	1.98	0.60
7:62:143:ARG:NH1	22:3L:42:U:O2'	2.34	0.60
25:14:2420:C:N4	59:M5:31:HIS:HB3	2.15	0.60
25:14:2849:U:OP1	39:75:95:ARG:NH1	2.34	0.60
57:39:29:ASN:H	57:39:112:MET:HE3	1.65	0.60
41:95:21:ARG:HG3	41:95:93:GLU:HG3	1.84	0.60
1:13:920:U:H2'	1:13:921:U:C6	2.37	0.60
2:1E:189:ASP:HB2	2:1E:205:ASP:HB3	1.83	0.60
3:2E:130:VAL:O	3:2E:134:ILE:HG12	2.00	0.60
5:4E:153:LYS:HD3	5:4E:154:GLY:N	2.15	0.60
14:5I:29:ARG:HD3	14:5I:40:CYS:HB2	1.84	0.60
25:1H:259:G:O2'	25:1H:621:A:O2'	2.06	0.60
25:1H:588:U:H2'	25:1H:589:C:C6	2.37	0.60
25:1H:882:G:H1	25:1H:894:C:H42	1.49	0.60
25:1H:1434:A:H61	25:1H:1558:A:H62	1.48	0.60
27:11:59:LYS:HD2	27:11:60:ARG:H	1.66	0.60
31:51:20:ALA:HB1	31:51:21:PRO:HD2	1.83	0.60
43:F8:41:ASN:O	43:F8:45:THR:HG23	2.00	0.60
12:3A:117:ARG:HG3	12:3A:117:ARG:HH11	1.66	0.60
25:14:2074:U:OP1	62:14:3416:HOH:O	2.16	0.60
56:19:40:THR:OG1	56:19:41:GLY:N	2.34	0.60
56:19:43:ARG:HH11	56:19:43:ARG:CG	2.15	0.60
1:13:1239:A:H62	1:13:1299:A:H62	1.48	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:166:ASP:HB3	2:1E:169:LYS:HB2	1.82	0.60
7:6E:80:VAL:HG21	7:6E:85:TYR:CE2	2.37	0.60
25:1H:634:C:H2'	25:1H:635:C:C6	2.36	0.60
55:1G:1154:G:H2'	55:1G:1155:G:H8	1.67	0.60
2:12:168:THR:HG23	2:12:192:SER:HB3	1.83	0.60
10:1A:17:ASP:OD1	10:1A:70:ARG:NH1	2.35	0.60
25:14:1942:C:OP2	25:14:1943:U:O2'	2.12	0.60
25:14:2392:A:H2	25:14:2424:C:N4	1.98	0.60
26:1J:40:U:H3	26:1J:43:C:H5''	1.66	0.60
28:29:97:LYS:N	28:29:100:GLU:OE1	2.28	0.60
42:A5:41:LYS:HD2	51:J5:25:LEU:HD11	1.82	0.60
11:2I:98:LEU:O	11:2I:101:SER:OG	2.16	0.60
13:4I:39:ILE:HD12	13:4I:56:LEU:HD22	1.82	0.60
22:1K:57:C:O2'	22:1K:68:A:H4'	2.02	0.60
22:3K:8:4SU:O5'	22:3K:8:4SU:H6	2.02	0.60
25:1H:85:G:OP2	44:G8:9:LYS:HB2	2.02	0.60
25:1H:1321:A:H2'	25:1H:1322:A:O4'	2.00	0.60
25:1H:1388:G:H2'	25:1H:1389:G:C8	2.33	0.60
25:1H:1849:G:OP2	62:1H:4137:HOH:O	2.15	0.60
25:1H:2318:G:H22	38:A8:2:ALA:HA	1.66	0.60
25:1H:2853:C:H2'	25:1H:2854:G:H8	1.67	0.60
31:51:17:VAL:HG21	31:51:50:VAL:HG11	1.84	0.60
54:Q8:52:LYS:O	54:Q8:56:GLU:HB2	2.02	0.60
55:1G:564:C:O2'	8:72:91:ARG:NH2	2.34	0.60
3:22:14:ILE:HG12	3:22:15:THR:H	1.66	0.60
23:2L:48:U:O2'	23:2L:49:C:OP2	2.17	0.60
28:29:49:LEU:O	28:29:78:LEU:HA	2.01	0.60
58:D5:53:ILE:HG22	58:D5:71:VAL:HG13	1.83	0.60
4:3E:108:LEU:HD23	4:3E:110:PHE:HE1	1.67	0.60
25:1H:39:C:O2	29:31:46:ARG:NH2	2.35	0.60
25:1H:1899:G:H1	25:1H:1902:C:N4	2.00	0.60
25:1H:2065:C:H2'	25:1H:2066:C:H6	1.66	0.60
26:16:44:G:H1'	26:16:47:C:N4	2.17	0.60
31:51:91:GLY:HA3	31:51:160:LYS:HG2	1.84	0.60
55:1G:4:U:H3	8:72:102:ARG:HH11	1.48	0.60
55:1G:1292:U:H5'	9:82:38:GLN:HE21	1.66	0.60
25:14:83:G:N2	25:14:102:G:O2'	2.34	0.60
25:14:305:U:H2'	25:14:306:U:C6	2.36	0.60
36:45:11:LYS:NZ	36:45:86:GLY:O	2.25	0.60
38:65:34:HIS:ND1	38:65:53:SER:OG	2.31	0.60
4:3E:111:ALA:HB2	4:3E:120:LEU:HD12	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:563:G:OP2	62:1H:3545:HOH:O	2.16	0.60
26:16:73:A:C4	26:16:104:A:C2	2.90	0.60
36:88:106:VAL:HG21	36:88:114:ALA:HB1	1.83	0.60
39:B8:107:ASP:O	39:B8:110:ILE:HG23	2.01	0.60
40:C8:92:ARG:NE	40:C8:96:ALA:H	1.99	0.60
54:Q8:7:HIS:ND1	54:Q8:7:HIS:O	2.35	0.60
55:1G:837:G:N2	55:1G:850:U:O2	2.35	0.60
55:1G:1387:G:H2'	55:1G:1388:C:C6	2.37	0.60
55:1G:1530:G:H3'	55:1G:1531:A:OP2	2.02	0.60
25:14:1499:C:H2'	25:14:1500:G:C8	2.36	0.60
32:69:101:LEU:HB2	32:69:105:HIS:HB2	1.84	0.60
38:65:87:PHE:CE1	38:65:102:ALA:HB2	2.37	0.60
1:13:116:A:H61	1:13:313:A:H1'	1.67	0.60
25:1H:598:G:H5'	35:78:11:GLY:HA3	1.82	0.60
39:B8:74:ARG:HD3	39:B8:76:PHE:CZ	2.37	0.60
55:1G:1322:C:O2'	55:1G:1323:G:H5'	2.02	0.60
13:4A:97:PRO:HA	13:4A:110:ARG:HD3	1.83	0.60
19:AA:40:ILE:HD13	19:AA:62:ILE:HG13	1.84	0.60
25:14:271(B):G:N7	25:14:421:U:H2'	2.17	0.60
26:1J:90:C:P	36:45:16:ARG:HH21	2.24	0.60
57:39:53:THR:HG23	57:39:55:GLY:H	1.66	0.60
31:59:137:ASP:HB3	31:59:140:LYS:HB2	1.84	0.60
34:25:113:LYS:NZ	62:25:301:HOH:O	2.35	0.60
48:G5:47:ASN:O	48:G5:49:LYS:N	2.31	0.60
1:13:626:U:C2	1:13:627:G:C8	2.90	0.59
1:13:1149:C:H2'	1:13:1150:U:H6	1.66	0.59
8:7E:121:ASP:HB2	8:7E:125:ARG:NH2	2.16	0.59
25:1H:1509:C:H3'	25:1H:1510:A:H5''	1.84	0.59
25:1H:2211:G:H4'	25:1H:2212:A:OP2	2.02	0.59
25:1H:2238:G:H4'	25:1H:2239:G:OP1	2.02	0.59
35:78:19:VAL:HG13	35:78:21:ARG:HB2	1.84	0.59
55:1G:1310:G:OP1	13:4A:77:ASN:ND2	2.33	0.59
2:12:74:LYS:HD2	2:12:166:ASP:HB2	1.83	0.59
6:52:81:ILE:HD11	56:19:125:ILE:HG12	1.84	0.59
25:14:576:U:OP1	62:14:3581:HOH:O	2.16	0.59
57:39:80:ALA:O	57:39:83:PHE:HB2	2.02	0.59
38:65:33:LYS:HB3	38:65:34:HIS:CD2	2.36	0.59
44:C5:87:LYS:H	44:C5:94:LYS:HB3	1.67	0.59
58:D5:23:LYS:HB3	58:D5:38:TYR:CD1	2.37	0.59
1:13:953:G:N7	13:4I:104:ARG:NH2	2.49	0.59
1:13:1386:G:O2'	1:13:1387:G:H5'	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:730:C:H3'	62:1H:3603:HOH:O	2.02	0.59
25:1H:1412:A:H2'	25:1H:1413:G:H8	1.67	0.59
25:1H:2275:C:H5'	25:1H:2275:C:H6	1.66	0.59
25:1H:2685:G:OP2	39:B8:51:ARG:NH2	2.34	0.59
25:1H:2818:G:OP2	37:98:42:LYS:NZ	2.35	0.59
54:Q8:60:LEU:HD22	54:Q8:60:LEU:N	2.16	0.59
55:1G:963:G:H21	10:1A:55:LYS:NZ	1.99	0.59
25:14:71:A:H2	43:B5:31:HIS:HE2	1.49	0.59
25:14:668:G:H2'	25:14:670:A:H62	1.67	0.59
25:14:987:G:O2'	25:14:1000:A:N3	2.34	0.59
25:14:1780:A:P	62:14:3411:HOH:O	2.60	0.59
31:59:6:ARG:HH12	31:59:62:LYS:HB2	1.66	0.59
1:13:1160:G:H22	1:13:1177:G:H22	1.50	0.59
5:4E:81:GLU:HG2	5:4E:90:VAL:HG23	1.83	0.59
9:8E:9:ARG:HB2	9:8E:13:ALA:O	2.01	0.59
13:4I:16:ASP:HB3	13:4I:41:PRO:HB3	1.84	0.59
20:BI:26:ASN:HB2	20:BI:71:THR:HG23	1.83	0.59
20:BI:57:ARG:HH11	20:BI:102:GLY:HA2	1.67	0.59
25:1H:72:U:H3	48:K8:62:THR:HG23	1.67	0.59
25:1H:389:G:H22	35:78:72:PRO:HD3	1.65	0.59
25:1H:1339:G:H21	25:1H:1603:A:H1'	1.67	0.59
25:1H:1516:U:H2'	25:1H:1517:G:C8	2.37	0.59
25:1H:2292:C:P	38:A8:17:ARG:HH22	2.24	0.59
36:88:66:ILE:HG22	36:88:67:ARG:N	2.17	0.59
55:1G:345:C:H1'	55:1G:346:G:C2	2.37	0.59
9:82:16:ARG:HH21	9:82:64:THR:HG21	1.68	0.59
11:2A:27:ASN:OD1	11:2A:28:THR:N	2.35	0.59
25:14:184:C:H2'	25:14:185:U:C6	2.38	0.59
25:14:2107:C:H42	25:14:2182:G:H1	1.50	0.59
46:E5:47:PRO:HG3	46:E5:53:MET:HB2	1.84	0.59
59:M5:8:LYS:HB3	59:M5:12:LYS:HE3	1.82	0.59
1:13:113:G:H2'	1:13:114:U:C6	2.37	0.59
1:13:233:C:H2'	1:13:234:C:H6	1.66	0.59
1:13:405:U:O4	4:3E:2:GLY:N	2.35	0.59
1:13:1118:C:H1'	1:13:1179:A:C4	2.37	0.59
8:7E:49:GLU:HG2	8:7E:62:TYR:HE2	1.67	0.59
25:1H:298:G:N7	62:1H:4045:HOH:O	2.32	0.59
25:1H:800:A:OP1	62:1H:3564:HOH:O	2.17	0.59
27:11:108:PRO:HG3	27:11:143:HIS:CE1	2.37	0.59
40:C8:95:LEU:HD22	41:D8:4:ILE:HD13	1.85	0.59
48:K8:42:GLY:O	48:K8:44:LEU:N	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:82:26:VAL:HG13	9:82:61:ALA:HB3	1.85	0.59
25:14:1593:G:H2'	25:14:1594:G:C8	2.36	0.59
25:14:1945:G:H2'	25:14:1946:U:C6	2.36	0.59
44:C5:87:LYS:HE2	44:C5:88:LYS:HD2	1.84	0.59
1:13:353:A:H8	1:13:353:A:H5'	1.67	0.59
1:13:1122:U:O4	1:13:1123:A:N6	2.36	0.59
1:13:1263:C:H2'	1:13:1264:C:C6	2.37	0.59
1:13:1510:U:H2'	1:13:1511:G:C8	2.37	0.59
5:4E:144:THR:OG1	5:4E:147:ASP:OD1	2.11	0.59
25:1H:534:U:H5'	40:C8:42:ALA:HB1	1.83	0.59
30:41:7:LEU:HD11	30:41:176:LEU:HD22	1.84	0.59
45:H8:69:THR:HG22	45:H8:90:VAL:HG22	1.84	0.59
55:1G:690:G:H22	11:2A:55:LYS:HZ3	1.50	0.59
55:1G:1239:A:H4'	55:1G:1240:U:H5'	1.83	0.59
4:32:70:ILE:HD11	4:32:100:ARG:CD	2.32	0.59
14:5A:21:TYR:OH	14:5A:23:ARG:NH2	2.35	0.59
33:15:33:LEU:HD12	33:15:38:HIS:HD2	1.68	0.59
35:35:86:LYS:HG3	35:35:87:ASP:H	1.66	0.59
1:13:266:G:H5''	1:13:267:C:C5	2.38	0.59
2:1E:178:ARG:HG3	8:7E:72:PRO:HA	1.82	0.59
6:5E:4:TYR:HD1	6:5E:92:LYS:HA	1.68	0.59
7:6E:23:VAL:O	7:6E:27:ILE:HG13	2.03	0.59
25:1H:307:G:N7	62:1H:4135:HOH:O	2.32	0.59
25:1H:926:A:N7	62:1H:3788:HOH:O	2.31	0.59
36:88:133:ARG:O	36:88:134:ARG:HB2	2.01	0.59
38:A8:70:GLY:HA2	38:A8:101:LEU:HD13	1.85	0.59
55:1G:1500:A:OP1	62:1G:1804:HOH:O	2.17	0.59
23:2L:24:C:H2'	23:2L:25:U:C6	2.38	0.59
25:14:1828:G:OP1	62:14:3510:HOH:O	2.17	0.59
44:C5:42:VAL:O	44:C5:65:ALA:N	2.34	0.59
1:13:814:A:N7	1:13:816:A:C4	2.71	0.59
7:6E:35:LYS:HD3	7:6E:38:LEU:HD23	1.85	0.59
25:1H:1254:A:H5''	25:1H:1255:U:H5''	1.83	0.59
37:98:10:LEU:O	37:98:12:ARG:N	2.35	0.59
47:J8:85:LEU:H	47:J8:87:PRO:HD2	1.67	0.59
55:1G:261:U:OP2	20:BA:79:ARG:NH2	2.36	0.59
7:62:26:PHE:O	7:62:30:ILE:HG13	2.03	0.59
7:62:149:ARG:HD3	11:2A:59:TYR:CZ	2.38	0.59
10:1A:99:LYS:HD3	10:1A:100:THR:N	2.18	0.59
25:14:943:U:OP2	35:35:36:LYS:HG3	2.02	0.59
25:14:1776:G:OP2	62:14:3479:HOH:O	2.16	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1871:A:H2'	25:14:1872:A:C8	2.38	0.59
25:14:2001:A:H2'	25:14:2002:G:C8	2.38	0.59
25:14:2016:U:O2	51:J5:7:PRO:HG2	2.02	0.59
25:14:2784:C:O2	28:29:37:ARG:NH2	2.34	0.59
1:13:280:C:C2	17:8I:38:ARG:HG3	2.37	0.59
4:3E:30:LYS:O	4:3E:33:MET:N	2.35	0.59
4:3E:65:ARG:HG3	4:3E:70:ILE:HG22	1.84	0.59
9:8E:44:VAL:O	9:8E:51:ARG:NH2	2.35	0.59
17:8I:29:HIS:CD2	17:8I:30:PRO:HD2	2.37	0.59
25:1H:141:A:H8	25:1H:1595:G:H21	1.49	0.59
25:1H:2123:G:H1	25:1H:2175:C:H42	1.48	0.59
33:58:6:PRO:HG3	33:58:41:ASP:HB2	1.85	0.59
38:A8:23:ARG:NH2	38:A8:84:GLN:OE1	2.35	0.59
55:1G:1322:C:O2	55:1G:1322:C:H2'	2.03	0.59
10:1A:49:VAL:O	10:1A:60:ARG:HB2	2.03	0.59
25:14:1331:A:O2'	25:14:1332:G:H8	1.86	0.59
49:H5:46:ASN:O	49:H5:50:VAL:HG22	2.03	0.59
1:13:1014:A:C2	1:13:1219:U:H1'	2.38	0.59
2:1E:88:ALA:HB2	2:1E:219:VAL:HG13	1.85	0.59
25:1H:1348:G:H2'	25:1H:1349:A:H5''	1.85	0.59
25:1H:2061:G:P	62:1H:3538:HOH:O	2.59	0.59
25:1H:2110:G:H5''	25:1H:2145:C:H42	1.68	0.59
25:1H:2728:U:H2'	25:1H:2729:G:C8	2.38	0.59
26:16:10:C:H2'	26:16:11:C:H6	1.67	0.59
35:78:138:LEU:HD12	35:78:144:GLU:HG3	1.85	0.59
43:F8:12:VAL:HG13	43:F8:27:THR:O	2.02	0.59
55:1G:1226:C:N4	13:4A:104:ARG:HD2	2.18	0.59
25:14:1718:G:N2	25:14:1741:C:O2	2.27	0.59
25:14:2016:U:OP1	62:14:3743:HOH:O	2.17	0.59
1:13:74:C:N4	1:13:96:G:H1	1.97	0.59
2:1E:21:ARG:HB2	2:1E:39:ILE:HG12	1.84	0.59
25:1H:2053:G:H5'	28:21:144:ARG:O	2.02	0.59
28:21:101:ARG:CZ	28:21:171:GLU:HB2	2.33	0.59
36:88:17:LEU:HD13	36:88:39:PRO:HB2	1.85	0.59
25:14:2037:G:H2'	25:14:2038:G:C8	2.37	0.59
25:14:2273:A:O2'	25:14:2274:A:H5'	2.02	0.59
34:25:68:GLU:OE2	34:25:78:ARG:NH1	2.35	0.59
7:6E:38:LEU:H	7:6E:38:LEU:HD22	1.66	0.58
22:3K:62:G:N2	22:3K:70:C:N3	2.46	0.58
25:1H:450:G:O6	62:1H:3812:HOH:O	2.17	0.58
35:78:18:ARG:O	35:78:19:VAL:HG22	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:98:72:ASP:O	37:98:76:VAL:HG23	2.03	0.58
38:A8:100:ALA:HA	38:A8:103:GLU:HG2	1.84	0.58
51:N8:41:PRO:O	51:N8:44:THR:OG1	2.21	0.58
55:1G:1127:G:H1	55:1G:1144:G:H1	1.51	0.58
55:1G:1157:A:H62	55:1G:1178:G:H21	1.51	0.58
4:32:23:GLY:H	4:32:26:CYS:HB2	1.68	0.58
7:62:113:GLU:O	7:62:119:ARG:HD3	2.03	0.58
25:14:819:A:OP2	25:14:1187:G:N2	2.33	0.58
25:14:824:A:H1'	25:14:2358:G:N7	2.18	0.58
25:14:1449:A:O2'	25:14:1530:G:N2	2.30	0.58
26:1J:52:A:N6	38:65:33:LYS:HG3	2.18	0.58
28:29:105:THR:OG1	28:29:199:ARG:NH2	2.36	0.58
30:49:62:LEU:HD21	50:15:28:LYS:HE2	1.84	0.58
30:49:121:ASN:HD22	30:49:181:ARG:HH12	1.48	0.58
1:13:1502:A:H2	1:13:1505:G:N1	1.97	0.58
25:1H:32:C:O2'	25:1H:33:U:H5'	2.02	0.58
25:1H:1464:C:HO2'	25:1H:1528:A:H8	1.50	0.58
25:1H:1859:A:N6	25:1H:1883:G:O2'	2.37	0.58
35:78:59:LEU:HD22	35:78:60:MET:H	1.68	0.58
38:A8:34:HIS:HB2	38:A8:36:TYR:CE1	2.38	0.58
38:65:38:GLN:OE1	38:65:47:THR:OG1	2.19	0.58
1:13:1130:A:N6	1:13:1144:G:H21	2.00	0.58
1:13:1147:C:O2	9:8E:16:ARG:NH1	2.36	0.58
1:13:1368:G:H5''	9:8E:112:LYS:HB3	1.86	0.58
25:1H:2069:G:H4'	62:1H:4205:HOH:O	2.03	0.58
44:G8:39:VAL:HB	44:G8:42:VAL:CG2	2.32	0.58
55:1G:191(F):U:O2	20:BA:105:SER:HB2	2.04	0.58
55:1G:719:C:OP2	55:1G:720:C:N4	2.28	0.58
2:12:163:PHE:HD1	2:12:185:ILE:HB	1.69	0.58
6:52:38:GLU:HG2	6:52:39:LYS:HG3	1.85	0.58
13:4A:66:LEU:HA	13:4A:70:LEU:HB2	1.83	0.58
25:14:152:G:H1	25:14:174:C:N4	1.98	0.58
41:95:44:LYS:C	41:95:46:VAL:H	2.07	0.58
12:3I:117:ARG:HB3	12:3I:122:THR:HB	1.85	0.58
15:6I:16:ALA:HB1	15:6I:21:ASP:HB3	1.84	0.58
25:1H:50:U:H3'	25:1H:51:G:H5'	1.85	0.58
25:1H:484:C:H2'	25:1H:485:C:C6	2.38	0.58
25:1H:547:A:H2'	25:1H:548:A:C8	2.38	0.58
25:1H:2870:C:H5''	37:98:65:LEU:HD21	1.84	0.58
55:1G:243:A:H4'	55:1G:244:U:O5'	2.04	0.58
25:14:30:G:H2'	25:14:31:C:C6	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1669:A:H5''	25:14:1670:C:OP2	2.03	0.58
25:14:1794:U:H2'	25:14:1795:C:H6	1.68	0.58
25:14:2111:C:H41	25:14:2147:G:N2	2.02	0.58
28:29:188:VAL:HG23	28:29:189:PRO:HD2	1.85	0.58
39:75:4:GLY:O	39:75:7:ILE:N	2.29	0.58
51:J5:4:HIS:O	51:J5:4:HIS:ND1	2.31	0.58
1:13:376:G:OP1	16:7I:5:ARG:HB2	2.03	0.58
19:AI:5:LEU:CD1	19:AI:10:PHE:H	2.17	0.58
25:1H:928:G:N7	62:1H:3789:HOH:O	2.32	0.58
25:1H:1138:G:H21	33:58:106:MET:CE	2.16	0.58
25:1H:1330:C:OP1	62:1H:3866:HOH:O	2.17	0.58
25:1H:2313:C:H4'	30:41:91:ARG:HG3	1.84	0.58
25:1H:2404:C:O3'	35:78:77:ARG:NH2	2.35	0.58
25:1H:2438:U:O3'	25:1H:2439:A:H3'	2.04	0.58
25:1H:2572:A:N7	28:21:145:LYS:HB2	2.18	0.58
25:1H:2728:U:H2'	25:1H:2729:G:H8	1.68	0.58
52:O8:15:GLU:OE2	52:O8:44:ARG:NH2	2.37	0.58
2:12:6:THR:OG1	2:12:7:VAL:N	2.37	0.58
22:3L:15:G:N2	22:3L:57:C:O2	2.32	0.58
25:14:2402:C:N4	25:14:2416:C:H1'	2.19	0.58
36:45:58:PHE:HZ	36:45:106:VAL:HG11	1.68	0.58
37:55:103:ARG:HH11	37:55:110:PRO:HD3	1.68	0.58
1:13:157:G:H1	1:13:164:U:H3	1.51	0.58
1:13:171:A:H2'	1:13:172:A:C8	2.39	0.58
6:5E:97:PHE:N	18:9I:30:ASP:OD1	2.34	0.58
10:1I:29:ARG:HH12	10:1I:84:GLN:HE22	1.51	0.58
25:1H:459:U:H5''	53:P8:40:TRP:CD2	2.38	0.58
25:1H:607:U:N3	25:1H:621:A:H2	1.92	0.58
25:1H:1658:C:OP1	62:1H:3617:HOH:O	2.17	0.58
25:1H:1899:G:H22	25:1H:1902:C:H41	1.51	0.58
25:1H:1980:G:O2'	25:1H:1982:C:OP2	2.19	0.58
25:1H:2695:C:H2'	25:1H:2696:U:H6	1.68	0.58
26:16:30:C:OP2	38:A8:32:LEU:HD11	2.03	0.58
37:98:27:SER:HB3	37:98:34:ILE:HD11	1.85	0.58
55:1G:972:C:O3'	10:1A:57:LYS:HG3	2.02	0.58
55:1G:1055:A:H5'	55:1G:1055:A:H8	1.69	0.58
34:25:68:GLU:HB3	34:25:78:ARG:NH1	2.18	0.58
35:35:101:VAL:HA	35:35:105:LEU:O	2.04	0.58
58:D5:30:ASN:HA	58:D5:89:PHE:HE1	1.68	0.58
1:13:1129:C:N4	1:13:1139:G:H1	2.02	0.58
1:13:1414:U:N3	62:13:1919:HOH:O	2.25	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:16:90:C:H5'	36:88:18:LYS:HA	1.85	0.58
34:68:34:THR:OG1	34:68:35:VAL:N	2.37	0.58
38:A8:34:HIS:O	38:A8:97:ARG:NH2	2.36	0.58
7:62:16:LEU:HD12	9:82:42:ARG:HA	1.85	0.58
25:14:1678:G:H22	25:14:1989:G:H22	1.52	0.58
25:14:2134:A:H62	25:14:2157:G:H1'	1.69	0.58
28:29:167:VAL:HG11	28:29:189:PRO:HD3	1.86	0.58
57:39:63:LYS:HZ2	57:39:67:GLN:HB2	1.68	0.58
35:35:15:ARG:HH21	35:35:17:LYS:HE3	1.69	0.58
41:95:35:LEU:HB3	41:95:37:VAL:HG11	1.86	0.58
25:1H:953:A:OP2	36:88:16:ARG:HD3	2.04	0.58
25:1H:1013:C:O2'	25:1H:1014:U:H5'	2.03	0.58
25:1H:1520:U:H2'	25:1H:1521:G:O4'	2.04	0.58
25:1H:2702:U:H6	25:1H:2702:U:OP1	1.86	0.58
55:1G:45:U:H2'	55:1G:46:G:C8	2.38	0.58
55:1G:957:U:O2'	55:1G:959:A:N7	2.29	0.58
55:1G:999:U:H2'	55:1G:1000:A:C8	2.38	0.58
55:1G:1321:C:H4'	13:4A:87:TYR:CE1	2.39	0.58
55:1G:1423:G:H2'	55:1G:1424:C:C6	2.38	0.58
25:14:2293:C:H5''	38:65:89:ARG:HH21	1.68	0.58
25:14:2656:U:H3	25:14:2665:A:H2	1.51	0.58
38:65:89:ARG:HG3	38:65:92:TYR:O	2.04	0.58
1:13:736:C:H2'	1:13:737:A:C8	2.37	0.58
1:13:823:G:H21	8:7E:1:MET:HE3	1.69	0.58
13:4I:14:ARG:HB2	13:4I:17:VAL:HG23	1.85	0.58
13:4I:40:ASN:HB3	13:4I:43:THR:HG23	1.85	0.58
25:1H:67:U:N3	25:1H:74:A:H2	1.87	0.58
25:1H:780:G:H21	25:1H:783:A:N6	2.01	0.58
26:16:112:G:H2'	26:16:113:C:C6	2.38	0.58
28:21:181:LEU:HD21	39:B8:7:ILE:HG23	1.86	0.58
30:41:76:SER:OG	30:41:84:LYS:N	2.37	0.58
32:61:132:PRO:O	32:61:133:HIS:ND1	2.36	0.58
55:1G:192:U:H2'	55:1G:193:C:H6	1.68	0.58
55:1G:1352:C:H42	55:1G:1370:G:H1	1.50	0.58
3:22:13:GLY:HA2	14:5A:57:ARG:HD2	1.85	0.58
13:4A:79:LYS:O	13:4A:82:MET:HB3	2.03	0.58
25:14:1428:C:N4	25:14:1570:A:OP2	2.29	0.58
25:14:1434:A:H2'	25:14:1435:G:C8	2.39	0.58
25:14:1794:U:H2'	25:14:1795:C:C6	2.39	0.58
28:29:199:ARG:HB3	28:29:200:GLU:OE1	2.04	0.58
57:39:101:LEU:O	57:39:106:ARG:NH1	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:A5:71:VAL:HA	42:A5:107:LEU:HD12	1.86	0.58
43:B5:32:PRO:HA	43:B5:77:LYS:HB2	1.86	0.58
1:13:718:G:N2	18:9I:82:THR:HG23	2.19	0.58
18:9I:66:LEU:O	18:9I:70:ILE:HG13	2.04	0.58
25:1H:125:G:H5'	25:1H:125:G:H8	1.69	0.58
25:1H:1021:A:H3'	25:1H:1022:G:H5''	1.85	0.58
25:1H:1416:G:HO2'	25:1H:1417:C:H6	1.51	0.58
25:1H:1534:G:H2'	25:1H:1535:U:H4'	1.86	0.58
25:1H:2068:U:H3	25:1H:2430:A:H2	1.48	0.58
27:11:33:LEU:O	27:11:64:ILE:HG23	2.03	0.58
35:78:75:ILE:HD13	35:78:75:ILE:H	1.68	0.58
55:1G:1189:C:OP1	14:5A:58:LYS:NZ	2.37	0.58
55:1G:1443:G:N2	39:75:119:LYS:HB2	2.19	0.58
4:32:24:GLU:N	4:32:24:GLU:OE2	2.37	0.58
19:AA:48:THR:HG22	19:AA:61:TYR:HB2	1.86	0.58
25:14:34:C:O2	25:14:34:C:O2'	2.09	0.58
57:39:65:TRP:CZ3	57:39:72:ARG:HB3	2.38	0.58
32:69:56:LYS:O	32:69:60:GLU:HB3	2.03	0.58
33:15:104:LYS:HA	33:15:107:LEU:HD12	1.85	0.58
35:35:127:ALA:O	35:35:147:LEU:N	2.36	0.58
1:13:272:C:H2'	1:13:273:A:H8	1.69	0.57
1:13:484:G:O2'	1:13:485:G:OP2	2.21	0.57
1:13:1528:U:C2	1:13:1530:G:C8	2.92	0.57
25:1H:422:A:P	62:1H:3718:HOH:O	2.61	0.57
25:1H:1339:G:N2	25:1H:1603:A:H1'	2.19	0.57
25:1H:2552:U:H2'	25:1H:2554:U:OP2	2.04	0.57
25:1H:2774:C:H2'	25:1H:2775:A:O4'	2.03	0.57
30:41:124:SER:HB2	30:41:131:TYR:CE1	2.39	0.57
31:51:87:LEU:HB2	31:51:131:VAL:HG12	1.86	0.57
45:H8:73:GLN:HB2	45:H8:87:ASP:OD1	2.04	0.57
54:Q8:33:ASN:ND2	54:Q8:33:ASN:O	2.36	0.57
55:1G:411:A:H62	55:1G:413:G:H21	1.51	0.57
55:1G:827:U:H5''	55:1G:828:A:OP2	2.04	0.57
55:1G:973:G:H3'	55:1G:974:A:H5''	1.86	0.57
55:1G:1216:G:H5''	14:5A:5:ALA:HB3	1.85	0.57
55:1G:1376:U:OP1	7:62:98:SER:OG	2.21	0.57
19:AA:10:PHE:HB2	19:AA:39:THR:OG1	2.04	0.57
25:14:1019:U:H3	25:14:1142(A):A:H62	1.52	0.57
25:14:2331:G:O3'	46:E5:43:THR:HG22	2.04	0.57
40:85:76:TYR:CZ	40:85:80:ILE:HG13	2.40	0.57
43:B5:24:GLY:HA3	43:B5:82:GLN:NE2	2.14	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:D5:29:TYR:HE2	58:D5:87:ASP:HB3	1.68	0.57
46:E5:49:LYS:HG3	46:E5:80:HIS:HB3	1.85	0.57
1:13:652:U:O4	1:13:752:G:O2'	2.17	0.57
1:13:1000:A:H2'	1:13:1001:G:H8	1.69	0.57
1:13:1086:U:H3	1:13:1099:G:H22	1.52	0.57
11:2I:57:THR:HG23	11:2I:60:ALA:H	1.69	0.57
25:1H:176:G:O2'	25:1H:177:G:H5'	2.04	0.57
25:1H:469:G:O6	53:P8:37:LYS:NZ	2.37	0.57
25:1H:492:A:H2'	25:1H:493:G:O4'	2.04	0.57
25:1H:1404:C:O2'	25:1H:1405:U:H5'	2.04	0.57
41:D8:65:GLY:HA3	41:D8:91:TYR:CE1	2.40	0.57
44:G8:87:LYS:HG2	44:G8:88:LYS:H	1.68	0.57
55:1G:362:G:O2'	12:3A:33:ARG:NH2	2.36	0.57
55:1G:1125:U:OP2	55:1G:1145:C:N4	2.37	0.57
2:12:178:ARG:HH21	8:72:74:PRO:HG3	1.69	0.57
8:72:12:ARG:HD3	8:72:26:VAL:HG12	1.86	0.57
28:29:111:ARG:HA	37:55:2:ARG:NH1	2.18	0.57
37:55:100:LEU:HG	37:55:112:ALA:HA	1.86	0.57
43:B5:15:GLU:CD	43:B5:15:GLU:H	2.07	0.57
1:13:1333:A:H2'	1:13:1334:G:O4'	2.05	0.57
10:1I:50:ILE:HD11	10:1I:57:LYS:HD3	1.85	0.57
30:41:36:LYS:HG2	30:41:38:VAL:HG23	1.86	0.57
30:41:77:ILE:HG22	30:41:82:LEU:HD12	1.85	0.57
33:58:73:THR:HG22	33:58:84:LYS:HG2	1.85	0.57
39:B8:55:ASN:H	39:B8:59:THR:HG22	1.68	0.57
55:1G:1109:C:H2'	55:1G:1110:A:O4'	2.04	0.57
2:12:200:ILE:HG22	2:12:202:PRO:HD3	1.87	0.57
23:2L:54:G:H2'	23:2L:55:5MU:H6	1.69	0.57
22:3L:15:G:H4'	22:3L:15:G:OP1	2.04	0.57
25:14:1257:C:H4'	57:39:83:PHE:CE1	2.39	0.57
25:14:2438:U:O3'	25:14:2439:A:H3'	2.04	0.57
26:1J:2:C:H2'	26:1J:3:C:C6	2.39	0.57
31:59:74:ASN:O	31:59:78:GLY:N	2.35	0.57
35:35:65:ARG:HB2	35:35:65:ARG:NH1	2.18	0.57
3:2E:11:ARG:HH21	3:2E:180:ALA:HB3	1.68	0.57
7:6E:73:MET:HG2	7:6E:90:GLU:HA	1.86	0.57
25:1H:65:C:H2'	25:1H:66:C:H6	1.69	0.57
25:1H:330:A:O2'	25:1H:331:A:H8	1.87	0.57
25:1H:988:A:O5'	49:L8:11:SER:OG	2.22	0.57
25:1H:1416:G:O2'	25:1H:1417:C:H6	1.87	0.57
25:1H:2151:G:H2'	25:1H:2152:G:C8	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2171:A:O2'	25:1H:2172:U:O4'	2.22	0.57
25:1H:2849:U:H4'	25:1H:2868:A:C2	2.40	0.57
27:11:37:LEU:HD13	27:11:62:TYR:HB2	1.85	0.57
27:11:142:VAL:HG23	27:11:193:VAL:HA	1.86	0.57
30:41:98:ARG:HA	30:41:101:ILE:HG23	1.85	0.57
32:61:9:LEU:HD21	32:61:35:LEU:HD13	1.85	0.57
55:1G:404:U:H5'	4:32:122:ARG:HD2	1.85	0.57
55:1G:974:A:P	14:5A:41:ARG:HH12	2.28	0.57
55:1G:1240:U:O3'	7:62:38:LEU:HD21	2.04	0.57
55:1G:1382:C:O2'	7:62:79:ARG:NH1	2.37	0.57
4:32:187:ARG:NH2	4:32:193:ASP:OD2	2.37	0.57
9:82:16:ARG:NH2	9:82:64:THR:HG21	2.19	0.57
13:4A:58:GLU:O	13:4A:62:ASN:ND2	2.33	0.57
25:14:1071:G:H22	25:14:1090:U:H5	1.51	0.57
25:14:1642:G:N7	62:14:3794:HOH:O	2.32	0.57
25:14:2787:C:H1'	28:29:62:PRO:HB3	1.87	0.57
28:29:55:ASN:O	28:29:57:LYS:N	2.34	0.57
57:39:9:ILE:HG12	57:39:14:PRO:HA	1.85	0.57
31:59:117:PRO:HB3	31:59:123:PHE:HZ	1.69	0.57
1:13:464:G:C6	1:13:466:C:H5'	2.39	0.57
1:13:651:C:H2'	1:13:652:U:C6	2.40	0.57
25:1H:654(A):A:H2	25:1H:654(T):A:N1	2.02	0.57
25:1H:1316:U:H2'	25:1H:1317:A:H8	1.68	0.57
31:51:101:ARG:NH1	31:51:122:THR:OG1	2.37	0.57
33:58:40:PRO:HB3	40:C8:68:ALA:HB2	1.87	0.57
34:68:63:VAL:HG12	34:68:106:LEU:HD11	1.86	0.57
55:1G:1095:U:P	55:1G:1108:G:H1	2.27	0.57
2:12:50:GLU:O	2:12:54:THR:OG1	2.21	0.57
25:14:1839:G:C8	25:14:1927:A:H1'	2.39	0.57
26:1J:39:A:N1	50:I5:1:MET:N	2.50	0.57
35:35:14:LYS:O	35:35:16:ARG:N	2.37	0.57
36:45:38:GLU:HB2	36:45:127:ILE:HG22	1.86	0.57
40:85:52:ARG:HB3	40:85:52:ARG:HH11	1.67	0.57
46:E5:49:LYS:NZ	46:E5:68:GLU:OE2	2.22	0.57
1:13:201:C:H42	1:13:216:G:H1	1.51	0.57
1:13:1080:A:H5'	5:4E:14:ARG:NH2	2.20	0.57
1:13:1132:C:H2'	1:13:1133:G:C8	2.40	0.57
7:6E:5:ARG:HB3	7:6E:7:ALA:H	1.70	0.57
13:4I:107:ALA:HB3	13:4I:111:LYS:HD2	1.87	0.57
25:1H:883:G:H1	25:1H:893:C:N4	1.93	0.57
25:1H:1332:G:N2	25:1H:1610:A:C8	2.73	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1794:U:H2'	25:1H:1795:C:H6	1.69	0.57
25:1H:2787:C:O2'	28:21:61:ARG:HB3	2.05	0.57
35:78:85:LEU:HA	35:78:88:LEU:HD22	1.86	0.57
47:J8:85:LEU:N	47:J8:86:SER:HB2	2.18	0.57
55:1G:222:U:H2'	55:1G:223:U:C6	2.39	0.57
6:52:11:ASN:O	6:52:14:LEU:HD22	2.04	0.57
9:82:9:ARG:HG2	9:82:14:VAL:HG22	1.86	0.57
25:14:389:G:H22	35:35:72:PRO:HD3	1.69	0.57
62:14:3531:HOH:O	56:19:227:ASN:ND2	2.34	0.57
56:19:145:VAL:HG13	56:19:191:ALA:HB2	1.85	0.57
30:49:121:ASN:HB2	30:49:181:ARG:HH22	1.70	0.57
1:13:991:U:O2'	1:13:992:U:O5'	2.23	0.57
1:13:1286:A:H5''	21:1F:26:LYS:HD3	1.86	0.57
25:1H:1019:U:HO2'	25:1H:1021:A:H2	1.51	0.57
25:1H:1231:G:H2'	25:1H:1232:G:C8	2.40	0.57
25:1H:1678:G:H8	25:1H:1678:G:O5'	1.87	0.57
25:1H:1693:U:H1'	27:11:14:ARG:NH2	2.19	0.57
25:1H:2212:A:H1'	25:1H:2215:G:C4	2.39	0.57
34:68:8:LEU:HB2	34:68:19:ILE:HG13	1.86	0.57
38:A8:7:TYR:CE2	38:A8:11:LYS:HE2	2.40	0.57
52:O8:27:LYS:HB2	52:O8:27:LYS:HZ2	1.69	0.57
55:1G:4:U:H3	8:72:102:ARG:HD3	1.68	0.57
55:1G:108:G:OP1	55:1G:326:G:N2	2.36	0.57
4:32:13:ARG:NH1	4:32:38:TYR:O	2.34	0.57
13:4A:91:ARG:HB2	13:4A:98:VAL:HG12	1.87	0.57
22:1L:20:C:O2'	22:1L:68:A:N7	2.37	0.57
25:14:273(F):C:H3'	25:14:274:G:H5''	1.84	0.57
25:14:491:G:H2'	25:14:492:A:H8	1.70	0.57
25:14:2143:C:H2'	25:14:2144:U:O4'	2.04	0.57
33:15:91:LEU:O	33:15:95:PRO:HB3	2.03	0.57
1:13:439:A:OP2	1:13:493:G:N1	2.30	0.57
1:13:1226:C:OP1	19:AI:78:ARG:NH1	2.37	0.57
2:1E:8:LYS:HG2	2:1E:10:LEU:H	1.70	0.57
14:5I:10:ALA:HB2	14:5I:23:ARG:HE	1.70	0.57
16:7I:20:VAL:HG23	16:7I:35:LYS:HA	1.87	0.57
22:1K:48:C:H3'	22:1K:49:A:H8	1.69	0.57
22:1K:65:C:N4	25:1H:897:C:H4'	2.20	0.57
25:1H:1164:G:H2'	25:1H:1165:U:C6	2.39	0.57
25:1H:1453:A:O2'	25:1H:1454:U:H2'	2.04	0.57
25:1H:1542:G:OP2	25:1H:1543:A:O2'	2.23	0.57
27:11:26:LYS:O	27:11:26:LYS:HG2	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:41:128:ARG:HB2	30:41:128:ARG:NH2	2.20	0.57
42:E8:75:TYR:CZ	42:E8:104:THR:HG21	2.40	0.57
55:1G:316:G:H2'	55:1G:317:G:C8	2.39	0.57
55:1G:555:C:H2'	55:1G:556:C:C6	2.39	0.57
55:1G:1348:U:N3	55:1G:1374:A:H2	2.01	0.57
13:4A:59:TYR:O	13:4A:63:THR:OG1	2.14	0.57
17:8A:67:LYS:O	17:8A:68:ARG:HB3	2.05	0.57
25:14:67:U:H2'	25:14:68:G:C8	2.40	0.57
25:14:193:U:H5	62:14:3609:HOH:O	1.87	0.57
25:14:610:C:H2'	25:14:611:C:C6	2.39	0.57
25:14:1021:A:H62	25:14:1141:U:H3	1.51	0.57
25:14:1024:G:H3'	25:14:1025:G:H5''	1.84	0.57
26:1J:23:G:O6	62:1J:306:HOH:O	2.13	0.57
57:39:125:LEU:HD12	57:39:196:LEU:HD22	1.86	0.57
33:15:39:ARG:HD2	33:15:48:MET:HE3	1.86	0.57
38:65:17:ARG:HH11	38:65:17:ARG:HG3	1.69	0.57
38:65:66:ALA:HA	38:65:69:VAL:HG12	1.86	0.57
46:E5:26:TYR:O	46:E5:29:GLN:HB2	2.05	0.57
1:13:167:G:H2'	1:13:168:G:C8	2.40	0.57
7:6E:91:VAL:HG12	7:6E:95:ARG:HB3	1.86	0.57
25:1H:31:C:OP1	62:1H:3684:HOH:O	2.18	0.57
25:1H:1038:C:H2'	25:1H:1039:G:O4'	2.05	0.57
43:F8:1:MET:C	43:F8:3:THR:H	2.08	0.57
44:G8:49:VAL:HG21	44:G8:55:TYR:HE2	1.69	0.57
55:1G:108:G:H5'	55:1G:109:A:C5'	2.34	0.57
55:1G:485:G:H1'	55:1G:486:U:H5	1.70	0.57
2:12:88:ALA:HB2	2:12:219:VAL:HG23	1.87	0.57
15:6A:55:GLY:O	15:6A:59:MET:HG3	2.05	0.57
25:14:330:A:H2	25:14:1210:A:HO2'	1.50	0.57
25:14:443:A:H1'	25:14:1201:C:O4'	2.04	0.57
25:14:571:A:O2'	41:95:78:LYS:NZ	2.38	0.57
25:14:882:G:H1	25:14:894:C:H42	1.53	0.57
25:14:1210:A:H5''	25:14:1212:G:H5'	1.86	0.57
25:14:1443:G:H1	25:14:1548:C:H42	1.52	0.57
25:14:2114:A:H61	25:14:2170:A:N6	2.02	0.57
35:35:86:LYS:HG3	35:35:87:ASP:N	2.20	0.57
38:65:42:ASP:C	38:65:44:LYS:H	2.08	0.57
25:1H:1265:A:H8	25:1H:1265:A:OP1	1.88	0.57
27:11:68:LYS:HB3	27:11:70:TRP:CZ3	2.39	0.57
32:61:3:VAL:HG12	32:61:38:LEU:HA	1.85	0.57
36:88:104:PHE:HE2	36:88:125:LEU:HD11	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:1G:179:A:H2'	55:1G:180:U:H6	1.70	0.57
55:1G:600:C:H2'	55:1G:601:C:H6	1.70	0.57
2:12:91:PRO:HG3	2:12:154:LEU:HB2	1.87	0.57
3:22:155:GLY:HA3	3:22:196:LEU:HD13	1.86	0.57
14:5A:39:LEU:HD13	14:5A:47:LEU:HD12	1.85	0.57
25:14:579:G:H2'	25:14:580:C:C6	2.40	0.57
25:14:1405:U:H2'	25:14:1406:U:C6	2.40	0.57
25:14:1499:C:H2'	25:14:1500:G:H8	1.70	0.57
25:14:1678:G:N2	25:14:1989:G:H22	2.03	0.57
25:14:2342:C:O2'	25:14:2374:C:H5''	2.04	0.57
36:45:69:PHE:CD1	36:45:70:PRO:HD2	2.39	0.57
41:95:70:ILE:N	41:95:86:GLY:O	2.20	0.57
1:13:1485:U:O4	62:13:1918:HOH:O	2.16	0.56
4:3E:102:ASP:HB3	4:3E:136:PRO:HB3	1.86	0.56
4:3E:154:ASN:OD1	4:3E:154:ASN:N	2.38	0.56
9:8E:7:THR:O	9:8E:83:ARG:HD2	2.04	0.56
25:1H:299:A:H5'	25:1H:300:A:OP2	2.04	0.56
25:1H:307:G:H21	25:1H:330:A:H62	1.53	0.56
25:1H:1509:C:H2'	25:1H:1511:A:C8	2.39	0.56
37:98:9:LYS:HA	37:98:17:ARG:NE	2.20	0.56
42:E8:27:LYS:HB3	42:E8:31:GLU:HG3	1.87	0.56
55:1G:20:U:H2'	55:1G:21:G:O4'	2.04	0.56
55:1G:1131:G:H2'	55:1G:1132:C:C6	2.40	0.56
55:1G:1347:G:N2	55:1G:1373:G:H2'	2.20	0.56
3:22:79:ARG:HE	3:22:79:ARG:N	2.02	0.56
25:14:1190:G:H2'	25:14:1191:G:H8	1.70	0.56
25:14:2103:C:H2'	25:14:2104:G:C8	2.40	0.56
25:14:2285:C:C5	52:K5:27:LYS:HE3	2.40	0.56
33:15:56:ASN:H	33:15:125:GLY:HA3	1.70	0.56
34:25:1:MET:HE2	34:25:32:TYR:CE2	2.40	0.56
1:13:771:G:O2'	1:13:772:U:H5'	2.05	0.56
1:13:1060:C:OP1	14:5I:45:ARG:NH2	2.38	0.56
1:13:1448:C:H42	1:13:1455:G:H1	1.51	0.56
3:2E:123:GLN:O	3:2E:128:PHE:HB2	2.05	0.56
14:5I:23:ARG:NH1	14:5I:30:ALA:HB2	2.20	0.56
23:2K:21:H2U:H4'	23:2K:22:A:O5'	2.03	0.56
23:2K:73:A:C6	23:2K:74:A:C6	2.93	0.56
25:1H:581:C:OP1	40:C8:33:ARG:HG3	2.05	0.56
25:1H:673:C:H5''	29:31:81:PRO:HD2	1.85	0.56
31:51:77:LYS:HE2	31:51:138:LYS:HD2	1.85	0.56
52:O8:25:LYS:HE2	54:Q8:33:ASN:HB3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:1G:683:G:N2	55:1G:707:C:O2	2.36	0.56
25:14:1488:G:H5'	25:14:1489:U:OP2	2.05	0.56
25:14:1652:A:OP1	37:55:8:ARG:NH1	2.38	0.56
25:14:2292:C:P	38:65:17:ARG:HH21	2.28	0.56
1:13:1328:C:OP1	21:1F:21:TYR:OH	2.21	0.56
1:13:1367:C:H4'	10:1I:48:THR:HG21	1.87	0.56
2:1E:195:ASP:O	8:7E:74:PRO:HG3	2.05	0.56
7:6E:115:ARG:O	7:6E:118:VAL:HG12	2.06	0.56
22:1K:51:C:C4	22:1K:52:G:H1'	2.40	0.56
22:3K:24:G:H2'	22:3K:25:G:H8	1.70	0.56
22:3K:35:QUO:C4	22:3K:35:QUO:C2	2.73	0.56
25:1H:142:G:C1'	43:F8:37:THR:HG21	2.33	0.56
25:1H:1057:A:O2'	25:1H:1058:U:O4'	2.23	0.56
25:1H:1329:U:H5''	25:1H:1330:C:H5	1.71	0.56
25:1H:2048:G:N7	62:1H:3928:HOH:O	2.32	0.56
25:1H:2361:A:OP1	54:Q8:27:THR:OG1	2.22	0.56
25:1H:2400:G:H2'	25:1H:2401:U:H6	1.68	0.56
27:11:223:GLY:HA3	27:11:231:HIS:CE1	2.39	0.56
30:41:170:ARG:HE	30:41:174:GLU:HG2	1.70	0.56
34:68:93:PRO:HG3	34:68:114:ILE:HG12	1.87	0.56
55:1G:748:C:H4'	55:1G:749:C:O5'	2.05	0.56
55:1G:1285:A:H4'	55:1G:1286:A:O5'	2.05	0.56
10:1A:8:LEU:HD22	10:1A:20:ALA:HB2	1.85	0.56
12:3A:24:VAL:HG13	12:3A:98:TYR:HE1	1.70	0.56
25:14:71:A:H5'	25:14:71:A:C8	2.40	0.56
25:14:288:C:H2'	25:14:289:A:C8	2.41	0.56
25:14:1292:U:H2'	25:14:1293:C:C6	2.39	0.56
25:14:1420:U:HO2'	25:14:1421:G:P	2.28	0.56
57:39:29:ASN:N	57:39:112:MET:HE3	2.20	0.56
42:A5:1:MET:HG2	42:A5:2:GLU:H	1.69	0.56
58:D5:4:ARG:NH1	58:D5:60:GLU:OE2	2.38	0.56
6:5E:75:LEU:HD22	6:5E:79:LEU:HG	1.88	0.56
7:6E:74:GLU:HG2	7:6E:91:VAL:HG22	1.88	0.56
25:1H:270:A:OP1	62:1H:4038:HOH:O	2.18	0.56
25:1H:1105:U:H2'	25:1H:1106:G:C8	2.40	0.56
48:K8:48:HIS:H	48:K8:50:ILE:CD1	2.18	0.56
55:1G:1022:G:H2'	55:1G:1023:G:O4'	2.05	0.56
55:1G:1249:C:O2'	9:82:73:GLN:OE1	2.23	0.56
3:22:57:ILE:HG12	3:22:66:VAL:HG22	1.86	0.56
3:22:60:ALA:HA	10:1A:93:GLY:HA2	1.86	0.56
25:14:907:U:O2'	36:45:101:ARG:NH2	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:49:41:GLN:NE2	30:49:154:GLY:O	2.25	0.56
31:59:118:PRO:HG2	31:59:121:ILE:HG13	1.86	0.56
10:1I:3:LYS:N	10:1I:74:ILE:O	2.39	0.56
25:1H:565:C:H4'	62:1H:3631:HOH:O	2.04	0.56
25:1H:2635:C:H5''	28:21:79:ARG:HD3	1.87	0.56
28:21:14:ILE:HG22	28:21:21:VAL:HB	1.86	0.56
28:21:116:VAL:O	28:21:117:MET:HB3	2.04	0.56
35:78:39:LYS:HG3	35:78:45:LEU:CD2	2.34	0.56
53:P8:12:ARG:NH2	53:P8:44:PRO:HB3	2.19	0.56
11:2A:101:SER:OG	11:2A:102:GLY:N	2.34	0.56
15:6A:12:ILE:HG12	15:6A:31:LEU:HD11	1.86	0.56
25:14:605:C:O2	25:14:657:U:O2'	2.23	0.56
25:14:634:C:H2'	25:14:635:C:C6	2.40	0.56
47:F5:87:PRO:HA	47:F5:90:ILE:HG13	1.86	0.56
1:13:881:G:P	12:3I:12:ARG:HH22	2.29	0.56
4:3E:150:GLU:HG3	4:3E:153:ARG:HE	1.69	0.56
8:7E:86:ILE:HG12	8:7E:135:CYS:HA	1.88	0.56
20:BI:89:ARG:O	20:BI:93:GLU:N	2.39	0.56
25:1H:1064:C:N4	25:1H:1070:A:OP1	2.39	0.56
25:1H:1166:C:O2'	62:1H:3799:HOH:O	2.18	0.56
25:1H:2689:U:OP2	25:1H:2719:G:N2	2.34	0.56
48:K8:46:GLN:OE1	48:K8:46:GLN:HA	2.06	0.56
55:1G:952:U:H4'	55:1G:964:A:N1	2.21	0.56
4:32:159:ARG:HD3	4:32:160:GLN:H	1.71	0.56
6:52:61:LEU:HB3	6:52:63:TYR:HE1	1.69	0.56
25:14:226:G:H21	25:14:228:A:H62	1.52	0.56
38:65:26:LEU:HD22	38:65:87:PHE:CD1	2.41	0.56
58:D5:60:GLU:HA	58:D5:67:LEU:H	1.71	0.56
1:13:411:A:N6	1:13:413:G:H21	2.04	0.56
1:13:1256:A:OP2	3:2E:26:LYS:NZ	2.35	0.56
1:13:1336:C:H4'	1:13:1336:C:OP1	2.05	0.56
3:2E:6:HIS:CD2	14:5I:49:HIS:HB3	2.41	0.56
9:8E:86:VAL:O	9:8E:90:PRO:HB3	2.06	0.56
16:7I:50:LYS:HD3	16:7I:51:VAL:H	1.69	0.56
25:1H:818:G:H4'	25:1H:838:C:O3'	2.05	0.56
25:1H:882:G:N2	25:1H:894:C:H42	2.03	0.56
25:1H:1228:G:OP2	40:C8:16:LYS:NZ	2.34	0.56
25:1H:1231:G:H2'	25:1H:1232:G:H8	1.71	0.56
25:1H:1853:A:N1	25:1H:2087:G:H1'	2.20	0.56
25:1H:2154:G:H2'	25:1H:2155:G:C8	2.41	0.56
29:31:160:ASN:OD1	29:31:163:VAL:HG23	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:88:33:GLY:HA2	36:88:105:GLU:HA	1.88	0.56
37:98:21:TYR:OH	37:98:43:GLU:HG2	2.05	0.56
46:I8:29:GLN:H	46:I8:67:VAL:HG23	1.70	0.56
18:9A:61:LYS:O	18:9A:65:ILE:HG23	2.06	0.56
25:14:336:C:OP1	44:C5:83:THR:HG23	2.05	0.56
25:14:528:A:C2	25:14:2043:C:H4'	2.40	0.56
25:14:827:U:H2'	25:14:2430:A:C2	2.40	0.56
25:14:1864:U:OP1	25:14:2410:G:O2'	2.21	0.56
25:14:2610:C:O2'	62:14:3681:HOH:O	2.12	0.56
56:19:253:GLN:HB3	56:19:255:LYS:NZ	2.21	0.56
57:39:21:ALA:C	57:39:23:ASP:H	2.09	0.56
1:13:191:G:C4	20:BI:105:SER:HB2	2.41	0.56
1:13:535:A:H5''	62:13:1842:HOH:O	2.06	0.56
1:13:625:G:H2'	1:13:626:U:H6	1.71	0.56
11:2I:19:ALA:O	11:2I:82:VAL:HA	2.06	0.56
22:1K:52:G:H2'	22:1K:53:A:H8	1.71	0.56
23:2K:17:C:H2'	23:2K:18:C:H2'	1.87	0.56
25:1H:370:G:H4'	25:1H:371:A:OP2	2.05	0.56
25:1H:569:U:C4	25:1H:570:G:C6	2.94	0.56
25:1H:1265:A:H3'	51:N8:19:ARG:NH1	2.21	0.56
25:1H:1359:A:H2'	25:1H:1360:A:H5'	1.88	0.56
25:1H:1400:G:H2'	25:1H:1401:G:C8	2.41	0.56
25:1H:1899:G:H22	25:1H:1902:C:N4	2.03	0.56
25:1H:2785:C:H2'	25:1H:2786:U:O4'	2.05	0.56
42:E8:22:ASP:HA	42:E8:25:ARG:NH1	2.21	0.56
44:G8:83:THR:HG22	44:G8:84:ARG:HE	1.71	0.56
45:H8:111:VAL:HG11	45:H8:146:ILE:HG12	1.86	0.56
55:1G:1295:G:O2'	13:4A:14:ARG:NH1	2.38	0.56
5:42:50:GLU:HB2	5:42:53:LEU:HD13	1.87	0.56
25:14:603:A:H8	25:14:604:G:H1'	1.70	0.56
25:14:1291:C:H2'	25:14:1292:U:C6	2.41	0.56
42:A5:75:TYR:CZ	42:A5:104:THR:HG21	2.41	0.56
50:I5:18:CYS:H	50:I5:19:GLY:HA2	1.70	0.56
4:3E:148:VAL:HG21	4:3E:158:ILE:HG21	1.88	0.56
16:7I:43:LYS:HG2	16:7I:48:TRP:CE3	2.41	0.56
23:2K:64:G:H2'	23:2K:65:G:H8	1.71	0.56
25:1H:813:U:H2'	25:1H:814:C:C6	2.40	0.56
25:1H:827:U:H5'	25:1H:828:U:O5'	2.05	0.56
25:1H:882:G:H22	25:1H:894:C:N4	2.01	0.56
30:41:43:LEU:HB2	30:41:89:GLY:HA2	1.88	0.56
35:78:80:TYR:CE1	35:78:111:ARG:HD3	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:22:77:ILE:HA	3:22:84:ILE:HB	1.88	0.56
25:14:2815:C:H5'	51:J5:29:THR:HG21	1.88	0.56
31:59:77:LYS:HE2	31:59:81:GLU:HB3	1.86	0.56
32:69:124:GLY:H	32:69:142:VAL:HG12	1.71	0.56
35:35:97:PRO:HG3	35:35:112:LEU:HD12	1.88	0.56
1:13:10:A:OP2	5:4E:126:ARG:HD3	2.05	0.56
1:13:636:U:H5'	17:8I:2:PRO:HG3	1.88	0.56
9:8E:48:GLU:HG2	9:8E:51:ARG:HH21	1.71	0.56
20:BI:75:ASN:N	20:BI:75:ASN:OD1	2.38	0.56
22:1K:77:C:N3	22:1K:78:C:N4	2.53	0.56
25:1H:74:A:H5''	25:1H:74:A:H8	1.70	0.56
25:1H:234:C:H2'	25:1H:235:U:H6	1.71	0.56
25:1H:2588:G:P	62:1H:3579:HOH:O	2.64	0.56
27:11:213:ARG:HG3	27:11:213:ARG:HH11	1.70	0.56
28:21:57:LYS:HG2	28:21:59:VAL:HG12	1.87	0.56
37:98:42:LYS:HA	37:98:45:ARG:HD2	1.88	0.56
38:A8:34:HIS:HB2	38:A8:36:TYR:HE1	1.70	0.56
46:I8:51:VAL:HG21	46:I8:79:VAL:HG12	1.87	0.56
55:1G:552:U:O2'	12:3A:86:ARG:O	2.23	0.56
55:1G:1118:C:H1'	55:1G:1179:A:C4	2.41	0.56
55:1G:1292:U:H2'	55:1G:1293:G:C8	2.41	0.56
55:1G:1478:C:H2'	55:1G:1479:C:C6	2.41	0.56
13:4A:80:ARG:HH22	19:AA:66:MET:HG2	1.71	0.56
20:BA:53:LEU:HD11	20:BA:104:LEU:HD12	1.87	0.56
25:14:830:G:H4'	25:14:831:G:OP2	2.06	0.56
25:14:1858:G:H8	25:14:1858:G:OP2	1.88	0.56
25:14:2496:C:P	36:45:81:VAL:HG12	2.46	0.56
35:35:49:ARG:HD2	59:M5:58:ILE:HG23	1.88	0.56
47:F5:34:THR:HG22	47:F5:36:GLY:H	1.70	0.56
1:13:953:G:H2'	1:13:954:G:O4'	2.06	0.55
1:13:967:C:OP2	1:13:968:A:O2'	2.21	0.55
16:7I:19:ILE:HG22	16:7I:36:ILE:HG13	1.88	0.55
19:AI:40:ILE:HA	19:AI:44:MET:SD	2.46	0.55
25:1H:581:C:H2'	25:1H:582:G:C8	2.39	0.55
25:1H:603:A:O4'	25:1H:655:A:N6	2.39	0.55
25:1H:1253:A:C8	62:1H:3630:HOH:O	2.58	0.55
25:1H:1263:U:H2'	25:1H:1264:G:C8	2.41	0.55
25:1H:1754:C:OP1	39:B8:96:ARG:NH1	2.39	0.55
25:1H:2032:G:H21	28:21:146:THR:HG23	1.72	0.55
25:1H:2156:G:H2'	25:1H:2157:G:C2	2.42	0.55
25:1H:2320:A:H2'	25:1H:2320:A:N3	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2562:U:O2'	34:68:23:ARG:HD3	2.06	0.55
28:21:5:LEU:HD11	28:21:78:LEU:O	2.06	0.55
31:51:10:PRO:HB2	31:51:50:VAL:H	1.71	0.55
55:1G:464:G:C6	55:1G:466:C:H5'	2.41	0.55
55:1G:757:U:H2'	55:1G:758:G:O4'	2.05	0.55
55:1G:1131:G:H2'	55:1G:1132:C:H6	1.70	0.55
55:1G:1382:C:H1'	7:62:79:ARG:HD2	1.88	0.55
23:2L:24:C:C2	23:2L:25:U:C5	2.94	0.55
25:14:1449:A:HO2'	25:14:1530:G:H21	1.49	0.55
25:14:2787:C:C1'	28:29:62:PRO:HB3	2.36	0.55
56:19:206:LEU:HD22	56:19:211:ARG:HG2	1.88	0.55
31:59:163:TYR:CE1	31:59:169:VAL:HG21	2.42	0.55
39:75:12:SER:OG	39:75:13:ARG:N	2.38	0.55
40:85:97:ASP:OD1	40:85:101:ARG:NE	2.36	0.55
46:E5:12:ASN:HA	46:E5:14:ARG:HH21	1.71	0.55
59:M5:50:LEU:HG	59:M5:51:ALA:H	1.72	0.55
1:13:658:G:O2'	1:13:659:U:H5'	2.05	0.55
1:13:1202:G:O4'	14:5I:29:ARG:NH1	2.39	0.55
1:13:1504:G:OP1	1:13:1507:A:H4'	2.06	0.55
22:3K:25:G:H2'	22:3K:26:G:C8	2.41	0.55
25:1H:1125:G:OP2	25:1H:1126:A:O2'	2.23	0.55
25:1H:2433:A:OP2	62:1H:3826:HOH:O	2.18	0.55
25:1H:2593:U:H2'	25:1H:2594:C:C6	2.42	0.55
33:58:73:THR:HB	33:58:82:LEU:HD11	1.86	0.55
35:78:121:LYS:O	35:78:123:LEU:N	2.36	0.55
36:88:66:ILE:O	36:88:67:ARG:HB2	2.06	0.55
39:B8:107:ASP:OD1	39:B8:107:ASP:N	2.28	0.55
45:H8:113:ALA:N	45:H8:114:GLY:HA2	2.21	0.55
55:1G:222:U:H2'	55:1G:223:U:H6	1.70	0.55
55:1G:797:C:OP1	11:2A:124:LYS:HD2	2.06	0.55
55:1G:1141:C:H2'	55:1G:1142:G:C8	2.41	0.55
2:12:8:LYS:HE3	2:12:11:LEU:HD23	1.88	0.55
9:82:77:ILE:O	9:82:81:ILE:HG12	2.06	0.55
10:1A:61:GLU:OE1	14:5A:58:LYS:NZ	2.29	0.55
25:14:270(F):U:H2'	25:14:270(G):C:C6	2.41	0.55
25:14:1991:U:H2'	25:14:1992:G:H5''	1.88	0.55
26:1J:39:A:N6	50:I5:1:MET:HB3	2.20	0.55
1:13:1497:G:C2'	1:13:1498:U:H5'	2.37	0.55
25:1H:125:G:H5'	25:1H:125:G:C8	2.42	0.55
25:1H:1729:A:H8	25:1H:1730:U:H5	1.53	0.55
27:11:146:GLU:HB2	27:11:189:CYS:HB3	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:C8:92:ARG:C	40:C8:94:ASN:H	2.10	0.55
44:G8:104:GLY:H	44:G8:105:ALA:HB3	1.71	0.55
55:1G:78:G:H1	55:1G:91:C:H42	1.54	0.55
55:1G:783:C:H2'	55:1G:784:C:H6	1.72	0.55
4:32:58:LEU:HD22	4:32:62:GLN:HG2	1.88	0.55
4:32:72:GLU:OE1	4:32:207:TYR:OH	2.24	0.55
22:1L:29:C:H2'	22:1L:30:A:C8	2.41	0.55
25:14:864:G:C6	25:14:865:C:N4	2.74	0.55
25:14:1771:C:O2'	25:14:1786:A:H8	1.88	0.55
32:69:73:GLU:HG3	32:69:136:VAL:HG23	1.88	0.55
1:13:620:C:H5''	62:13:1897:HOH:O	2.05	0.55
25:1H:250:G:H2'	25:1H:251:A:C8	2.40	0.55
25:1H:481:G:H1'	25:1H:507:A:N1	2.21	0.55
25:1H:2142:C:H2'	25:1H:2143:C:C6	2.42	0.55
25:1H:2233:U:H2'	25:1H:2234:G:C8	2.41	0.55
45:H8:29:TYR:HE1	45:H8:87:ASP:HB2	1.71	0.55
54:Q8:32:LEU:HD13	54:Q8:33:ASN:H	1.71	0.55
55:1G:34:C:H2'	55:1G:35:G:C8	2.42	0.55
55:1G:1392:G:H21	55:1G:1502:A:H8	1.54	0.55
7:62:26:PHE:HE2	7:62:30:ILE:HD11	1.70	0.55
12:3A:26:ALA:HB1	12:3A:27:LEU:C	2.27	0.55
15:6A:87:ILE:HG22	15:6A:88:ARG:N	2.21	0.55
23:2L:76:C:H2'	23:2L:77:A:C8	2.41	0.55
25:14:188:G:H1	25:14:208:C:H42	1.54	0.55
25:14:1778:U:H2'	25:14:1784:A:N6	2.21	0.55
26:1J:8:U:O3'	38:65:25:ARG:NH2	2.37	0.55
39:75:99:LEU:HD22	39:75:101:PHE:HE1	1.71	0.55
40:85:91:ASP:O	40:85:92:ARG:HG3	2.05	0.55
58:D5:33:LEU:HD23	58:D5:90:VAL:HG21	1.89	0.55
46:E5:72:ARG:HB3	46:E5:75:LEU:HB2	1.87	0.55
1:13:323:U:H2'	1:13:324:G:O4'	2.05	0.55
1:13:827:U:C5	1:13:870:U:C4	2.95	0.55
1:13:963:G:H21	10:1I:55:LYS:NZ	2.04	0.55
12:3I:47:LYS:HB2	12:3I:48:PRO:HA	1.89	0.55
25:1H:185:U:H4'	25:1H:218:A:H4'	1.89	0.55
25:1H:2266:A:H4'	25:1H:2267:A:N3	2.22	0.55
25:1H:2688:U:H5	25:1H:2720:U:OP2	1.89	0.55
27:11:147:LEU:HD22	27:11:155:LEU:HD11	1.89	0.55
34:68:107:ARG:NH1	39:B8:36:GLU:OE2	2.40	0.55
55:1G:328:C:O2	55:1G:328:C:H2'	2.06	0.55
55:1G:878:G:H5'	8:72:89:PRO:HG2	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1420:U:O2'	25:14:1421:G:OP1	2.21	0.55
25:14:2293:C:H5''	38:65:89:ARG:NH2	2.21	0.55
25:14:2416:C:OP1	35:35:64:LYS:HG3	2.06	0.55
25:14:2702:U:H1'	25:14:2703:C:H5	1.70	0.55
56:19:68:LYS:HD3	56:19:70:TRP:CZ2	2.41	0.55
28:29:63:LEU:HD23	28:29:63:LEU:H	1.72	0.55
47:F5:49:VAL:HG11	47:F5:70:VAL:HG11	1.88	0.55
47:F5:92:LYS:C	47:F5:94:LEU:N	2.60	0.55
53:L5:19:ARG:HG2	53:L5:19:ARG:HH11	1.72	0.55
59:M5:33:ASN:HB3	59:M5:34:TRP:HD1	1.70	0.55
1:13:401:C:O2'	1:13:621:A:N3	2.31	0.55
2:1E:100:GLY:O	2:1E:104:ASN:N	2.39	0.55
14:5I:24:CYS:O	14:5I:25:VAL:HG22	2.07	0.55
25:1H:325:G:O2'	25:1H:326:G:H5'	2.07	0.55
25:1H:1371:G:N7	62:1H:3926:HOH:O	2.33	0.55
25:1H:1780:A:P	62:1H:3532:HOH:O	2.65	0.55
35:78:50:ARG:HD2	54:Q8:7:HIS:CD2	2.41	0.55
55:1G:129(A):G:C6	55:1G:188:U:H4'	2.41	0.55
55:1G:1238:A:H62	55:1G:1301:U:H3	1.53	0.55
11:2A:82:VAL:HB	11:2A:108:ILE:HG23	1.87	0.55
19:AA:78:ARG:H	19:AA:78:ARG:HD3	1.71	0.55
22:1L:75:C:H2'	22:1L:76:C:C6	2.42	0.55
25:14:39:C:O2	57:39:46:ARG:NH2	2.37	0.55
25:1H:2426:A:O2'	62:1H:3832:HOH:O	2.18	0.55
28:21:48:GLN:O	28:21:49:LEU:HD12	2.06	0.55
32:61:12:LEU:HG	32:61:19:VAL:HG21	1.89	0.55
37:98:105:ARG:HG3	37:98:105:ARG:O	2.07	0.55
45:H8:52:SER:O	45:H8:53:ILE:HG12	2.06	0.55
18:9A:22:VAL:HG22	18:9A:23:LYS:H	1.71	0.55
25:14:38:A:H2'	25:14:39:C:C6	2.41	0.55
25:14:142:G:H2'	25:14:143:C:H6	1.70	0.55
25:14:848:G:H2'	25:14:849:A:H8	1.70	0.55
25:14:1248:G:C5	40:85:3:ARG:HB2	2.42	0.55
25:14:2074:U:H2'	25:14:2075:U:C6	2.41	0.55
25:14:2107:C:N3	25:14:2182:G:N2	2.49	0.55
25:14:2355:C:H5''	25:14:2356:C:OP2	2.07	0.55
25:14:2414:G:H21	35:35:67:MET:CE	2.19	0.55
26:1J:44:G:H1'	26:1J:47:C:N4	2.20	0.55
1:13:376:G:H5''	16:7I:5:ARG:HD2	1.87	0.55
1:13:486:U:H2'	1:13:487:A:C8	2.42	0.55
2:1E:236:TYR:HA	2:1E:239:VAL:HG21	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:1I:46:ARG:NH2	10:1I:64:GLU:OE1	2.38	0.55
25:1H:1290:C:H2'	25:1H:1291:C:C6	2.42	0.55
25:1H:1777:U:O2'	25:1H:1778:U:H5'	2.07	0.55
25:1H:2028:U:H2'	25:1H:2029:G:O4'	2.07	0.55
25:1H:2150:U:H2'	25:1H:2151:G:C8	2.41	0.55
29:31:67:GLN:HG3	29:31:67:GLN:O	2.04	0.55
35:78:122:PRO:HA	35:78:142:GLY:HA3	1.89	0.55
44:G8:81:LYS:HB3	44:G8:82:PRO:HA	1.88	0.55
55:1G:322:C:O3'	20:BA:23:ARG:HG3	2.05	0.55
55:1G:1288:A:N1	55:1G:1371:G:H1'	2.21	0.55
55:1G:1478:C:H2'	55:1G:1479:C:H6	1.70	0.55
2:12:16:HIS:HD2	2:12:210:SER:HA	1.72	0.55
9:82:70:LYS:O	9:82:74:ILE:HG13	2.07	0.55
25:14:590:A:H2'	25:14:591:C:C6	2.42	0.55
25:14:623:G:H2'	25:14:624:C:C6	2.42	0.55
25:14:751:A:H5'	42:A5:90:ARG:HA	1.89	0.55
25:14:1857:G:O2'	25:14:1885:A:N6	2.39	0.55
56:19:71:ASP:OD2	56:19:103:ARG:NH2	2.36	0.55
1:13:102:G:O2'	1:13:151:A:N3	2.34	0.55
1:13:791:G:C6	1:13:792:A:C2	2.95	0.55
1:13:793:U:H5'	1:13:794:A:H5''	1.89	0.55
2:1E:6:THR:OG1	2:1E:7:VAL:N	2.39	0.55
25:1H:654(E):C:N3	25:1H:654(P):G:N2	2.45	0.55
25:1H:1022:G:N7	33:58:66:LYS:NZ	2.54	0.55
25:1H:2347:C:H4'	52:O8:39:TYR:HE1	1.72	0.55
43:F8:2:LYS:O	43:F8:3:THR:OG1	2.22	0.55
47:J8:73:LEU:HD13	47:J8:90:ILE:HG23	1.89	0.55
55:1G:411:A:C5	55:1G:413:G:H1'	2.41	0.55
55:1G:1116:C:H42	55:1G:1184:G:H1	1.55	0.55
55:1G:1289:A:P	21:1B:9:ARG:HH22	2.29	0.55
55:1G:1446:A:OP1	55:1G:1446:A:H4'	2.07	0.55
22:3L:18:G:H1'	22:3L:19:C:OP2	2.07	0.55
25:14:2299:G:N1	25:14:2318:G:H8	2.04	0.55
26:1J:93:C:H2'	26:1J:94:C:C6	2.41	0.55
39:75:20:PRO:HD2	39:75:86:ILE:HG23	1.88	0.55
43:B5:57:LEU:N	43:B5:57:LEU:HD23	2.22	0.55
1:13:413:G:HO2'	1:13:414:A:P	2.30	0.55
6:5E:35:ALA:HA	6:5E:67:MET:HB3	1.89	0.55
6:5E:86:ARG:O	6:5E:87:ARG:HG2	2.07	0.55
8:7E:9:MET:HG3	8:7E:26:VAL:HG11	1.89	0.55
16:7I:8:ARG:HB3	16:7I:28:ARG:NH1	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:4:C:H2'	25:1H:5:A:C8	2.42	0.55
25:1H:32:C:C2'	25:1H:33:U:H5'	2.36	0.55
25:1H:792:G:H5''	25:1H:793:A:H5'	1.89	0.55
25:1H:987:G:O2'	25:1H:1000:A:N3	2.37	0.55
25:1H:1126:A:H4'	25:1H:1127:A:O5'	2.06	0.55
25:1H:1216:G:OP2	40:C8:12:ARG:NH2	2.36	0.55
25:1H:1639:U:OP1	62:1H:3582:HOH:O	2.18	0.55
25:1H:2331:G:O3'	46:I8:43:THR:HG22	2.06	0.55
27:11:17:THR:HG22	27:11:204:ILE:HA	1.88	0.55
40:C8:95:LEU:C	40:C8:97:ASP:H	2.10	0.55
52:O8:19:ARG:NE	52:O8:21:TYR:OH	2.37	0.55
55:1G:345:C:O2'	55:1G:346:G:O5'	2.24	0.55
2:12:142:LEU:HA	2:12:145:LEU:HB2	1.89	0.55
5:42:37:ARG:HG2	5:42:112:LEU:HA	1.89	0.55
8:72:10:LEU:HD22	8:72:83:ILE:HD11	1.89	0.55
10:1A:42:THR:HG23	10:1A:68:HIS:HA	1.88	0.55
12:3A:58:VAL:O	12:3A:65:GLU:HA	2.07	0.55
22:1L:38:MIA:H152	22:1L:38:MIA:HN6	1.70	0.55
25:14:107:C:H2'	25:14:108:U:C6	2.42	0.55
25:14:2126:A:H2	25:14:2162:G:H21	1.55	0.55
25:14:2316:C:O2'	30:49:128:ARG:NH1	2.40	0.55
25:14:2674:G:H5'	34:25:26:LYS:HD2	1.88	0.55
25:14:2749:A:N1	25:14:2750:A:N6	2.55	0.55
25:14:2811:G:OP1	28:29:61:ARG:HB2	2.07	0.55
36:45:22:LYS:N	36:45:23:GLY:HA3	2.22	0.55
44:C5:17:SER:O	44:C5:21:LYS:HB2	2.07	0.55
44:C5:19:LYS:CG	44:C5:20:TYR:H	2.20	0.55
1:13:375:U:O3'	16:7I:6:LEU:HB2	2.06	0.54
1:13:658:G:H2'	1:13:659:U:H6	1.72	0.54
1:13:1070:U:H2'	1:13:1071:C:C6	2.41	0.54
1:13:1120:G:H2'	1:13:1121:U:C6	2.42	0.54
1:13:1346:A:OP1	9:8E:120:ARG:NH1	2.38	0.54
4:3E:7:PRO:HB2	4:3E:10:ARG:HG2	1.90	0.54
20:BI:40:ALA:HB2	20:BI:55:ILE:HG22	1.90	0.54
22:3K:18:G:H1'	22:3K:19:C:OP2	2.07	0.54
25:1H:1109:C:O2'	25:1H:1110:G:O4'	2.25	0.54
25:1H:2392:A:C8	35:78:61:ARG:HG2	2.42	0.54
26:16:15:A:H1'	26:16:109:G:N9	2.22	0.54
31:51:4:ILE:HB	31:51:6:ARG:HD3	1.89	0.54
36:88:109:VAL:HG13	36:88:113:GLN:HB3	1.89	0.54
40:C8:17:ILE:HG23	40:C8:39:LEU:HD12	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:H8:93:ASP:HA	45:H8:130:PRO:HG2	1.89	0.54
25:14:459:U:H2'	25:14:460:A:H8	1.72	0.54
25:14:753:C:O2'	25:14:754:C:H5'	2.07	0.54
25:14:881:G:O6	25:14:882:G:N1	2.39	0.54
25:14:1028:A:N3	25:14:2486:G:O2'	2.36	0.54
25:14:2019:A:OP2	51:J5:9:LYS:NZ	2.38	0.54
25:14:2808:U:H2'	25:14:2809:A:C8	2.42	0.54
26:1J:52:A:O2'	26:1J:53:A:N7	2.40	0.54
35:35:37:GLY:O	35:35:40:SER:OG	2.18	0.54
38:65:48:LEU:HD23	38:65:82:ILE:HD11	1.88	0.54
39:75:77:PRO:HG2	39:75:80:SER:HB2	1.89	0.54
41:95:21:ARG:HB3	41:95:91:TYR:HE1	1.73	0.54
1:13:8:A:H62	4:3E:208:SER:HB2	1.72	0.54
1:13:1186:G:H21	14:5I:61:TRP:C	2.11	0.54
1:13:1368:G:OP2	9:8E:112:LYS:HE2	2.07	0.54
2:1E:187:LEU:HD23	2:1E:201:ILE:HG22	1.87	0.54
2:1E:212:GLN:O	2:1E:216:SER:OG	2.25	0.54
6:5E:69:GLU:O	6:5E:72:VAL:HG12	2.07	0.54
13:4I:3:ARG:HE	13:4I:9:ILE:HD11	1.72	0.54
13:4I:4:ILE:HG22	13:4I:5:ALA:H	1.71	0.54
25:1H:191:A:H2'	25:1H:192:C:C6	2.42	0.54
25:1H:1332:G:H5'	25:1H:1332:G:C8	2.42	0.54
25:1H:1396:U:O2	25:1H:1396:U:H2'	2.08	0.54
25:1H:1785:A:OP2	62:1H:4225:HOH:O	2.18	0.54
25:1H:2263:C:H2'	25:1H:2264:C:H6	1.72	0.54
25:1H:2404:C:OP2	62:1H:4093:HOH:O	2.18	0.54
25:1H:2577:A:H5'	51:N8:3:LYS:HD3	1.88	0.54
36:88:66:ILE:HG22	36:88:67:ARG:H	1.71	0.54
36:88:79:LEU:O	36:88:81:VAL:N	2.40	0.54
55:1G:1356:G:H2'	55:1G:1357:A:C8	2.42	0.54
2:12:36:ARG:O	2:12:37:ASN:ND2	2.40	0.54
25:14:1444(A):A:H2'	25:14:1444(A):A:N3	2.22	0.54
56:19:141:VAL:HG23	56:19:162:SER:HB2	1.89	0.54
7:6E:35:LYS:HB3	7:6E:38:LEU:HD23	1.88	0.54
8:7E:7:ALA:HB2	8:7E:85:ARG:HD2	1.90	0.54
25:1H:142:G:H2'	25:1H:143:C:C6	2.43	0.54
25:1H:259:G:H21	25:1H:621:A:H8	1.54	0.54
25:1H:1204:A:C2	25:1H:1241:A:N1	2.75	0.54
25:1H:1257:C:H4'	29:31:83:PHE:CD1	2.42	0.54
25:1H:1316:U:H2'	25:1H:1317:A:C8	2.43	0.54
25:1H:2600:A:N6	62:1H:3588:HOH:O	2.14	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2756:U:H4'	25:1H:2757:A:OP1	2.05	0.54
25:1H:2845:G:O2'	25:1H:2846:G:H5'	2.07	0.54
28:21:105:THR:HG21	28:21:164:ARG:CZ	2.37	0.54
29:31:45:ARG:HH11	29:31:45:ARG:CG	2.19	0.54
32:61:8:PRO:HA	32:61:14:ASP:HA	1.89	0.54
48:K8:42:GLY:C	48:K8:44:LEU:H	2.09	0.54
51:N8:46:CYS:SG	51:N8:50:GLY:HA2	2.47	0.54
55:1G:1157:A:H62	55:1G:1178:G:N2	2.05	0.54
25:14:29:U:H2'	25:14:30:G:C8	2.42	0.54
25:14:1188:U:O2'	25:14:1189:A:H5'	2.07	0.54
25:14:1889:A:N1	25:14:2234:G:H1'	2.21	0.54
25:14:2520:C:H41	25:14:2542:A:N6	2.04	0.54
25:14:2854:G:C2	25:14:2864:G:C2	2.95	0.54
57:39:183:VAL:O	57:39:187:VAL:HG23	2.07	0.54
31:59:26:VAL:HG12	31:59:33:LEU:H	1.71	0.54
38:65:84:GLN:HA	38:65:110:LEU:HB2	1.90	0.54
38:65:106:ARG:NH1	38:65:107:GLU:OE1	2.39	0.54
1:13:486:U:H2'	1:13:487:A:H8	1.72	0.54
1:13:559:A:OP1	5:4E:126:ARG:NH2	2.41	0.54
1:13:1057:G:H5''	3:2E:154:SER:O	2.06	0.54
1:13:1106:G:H2'	1:13:1107:C:H6	1.72	0.54
25:1H:1901:A:OP2	27:11:255:LYS:HE2	2.07	0.54
25:1H:2759:G:OP2	62:1H:4188:HOH:O	2.18	0.54
31:51:8:PRO:HG2	31:51:69:ARG:NH2	2.22	0.54
4:32:3:ARG:HD2	4:32:118:ARG:HD3	1.88	0.54
9:82:95:LYS:HD3	9:82:96:LEU:H	1.72	0.54
25:14:226:G:H21	25:14:228:A:N6	2.06	0.54
25:14:1686:C:H2'	25:14:1687:G:O4'	2.07	0.54
25:14:2273:A:H2'	25:14:2274:A:C8	2.43	0.54
26:1J:102:G:N7	62:1J:312:HOH:O	2.33	0.54
33:15:13:TRP:O	33:15:135:PRO:HD2	2.07	0.54
34:25:68:GLU:HB3	34:25:78:ARG:HH11	1.72	0.54
1:13:667:G:H4'	15:6I:51:HIS:ND1	2.23	0.54
1:13:973:G:OP1	10:1I:57:LYS:NZ	2.41	0.54
25:1H:747:U:O2	25:1H:2014:A:H1'	2.08	0.54
25:1H:1913:A:H4'	25:1H:1914:C:H5'	1.89	0.54
26:16:7:G:H2'	26:16:8:U:O4'	2.07	0.54
27:11:69:ARG:HD3	27:11:105:ILE:HD11	1.88	0.54
28:21:119:ARG:HG3	28:21:119:ARG:NH1	2.22	0.54
30:41:49:ASP:OD2	30:41:52:ILE:HG12	2.08	0.54
33:58:38:HIS:CE1	33:58:39:ARG:HG3	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:B8:20:PRO:HD2	39:B8:86:ILE:HG23	1.89	0.54
2:12:204:ASN:HB2	2:12:210:SER:HB3	1.88	0.54
25:14:1357:U:H2'	25:14:1358:G:O4'	2.08	0.54
25:14:2232:U:P	47:F5:40:ARG:HH12	2.30	0.54
25:14:2572:A:OP1	25:14:2574:G:O2'	2.24	0.54
37:55:32:GLY:HA2	37:55:116:LEU:HD12	1.90	0.54
42:A5:70:TYR:O	42:A5:107:LEU:HD12	2.08	0.54
1:13:36:C:OP1	12:3I:123:LYS:NZ	2.37	0.54
1:13:109:A:C8	1:13:326:G:H2'	2.43	0.54
1:13:667:G:H4'	15:6I:51:HIS:CE1	2.42	0.54
1:13:1301:U:O2'	1:13:1302:U:OP1	2.26	0.54
1:13:1349:A:H2'	1:13:1350:A:H8	1.72	0.54
25:1H:671:C:OP1	35:78:42:SER:O	2.25	0.54
25:1H:1101:U:H2'	25:1H:1102:C:C6	2.43	0.54
25:1H:1899:G:N2	25:1H:1902:C:H41	2.06	0.54
25:1H:1968:G:OP1	62:1H:3892:HOH:O	2.19	0.54
25:1H:2499:C:N3	62:1H:3609:HOH:O	2.33	0.54
35:78:115:LEU:HA	35:78:134:ALA:HB2	1.89	0.54
52:O8:28:ARG:HE	52:O8:30:THR:HG22	1.73	0.54
55:1G:157:G:H1	55:1G:164:U:H3	1.55	0.54
25:14:2588:G:OP2	62:14:3546:HOH:O	2.18	0.54
25:14:2591:C:P	56:19:239:ARG:HG3	2.47	0.54
25:14:2602:A:H4'	25:14:2603:G:O5'	2.07	0.54
1:13:820:U:H4'	1:13:821:G:OP2	2.07	0.54
1:13:859:A:H2'	1:13:860:A:C8	2.43	0.54
5:4E:68:GLU:O	5:4E:70:PRO:HD3	2.07	0.54
25:1H:1641:A:H2'	25:1H:1642:G:O4'	2.07	0.54
25:1H:1796:U:H2'	25:1H:1797:C:H6	1.72	0.54
25:1H:2298:A:H2'	25:1H:2299:G:O4'	2.07	0.54
30:41:14:GLU:O	30:41:17:PRO:HG2	2.07	0.54
43:F8:3:THR:CB	43:F8:4:ALA:HA	2.38	0.54
44:G8:5:MET:HE1	44:G8:32:PRO:HB3	1.89	0.54
55:1G:316:G:H2'	55:1G:317:G:H8	1.72	0.54
55:1G:377:G:OP1	16:7A:3:LYS:NZ	2.39	0.54
55:1G:576:G:OP2	62:1G:1816:HOH:O	2.19	0.54
25:14:940:G:N3	25:14:1191:G:H4'	2.23	0.54
25:14:1053:C:H42	25:14:1106:G:H1	1.54	0.54
25:14:2274:A:C5	25:14:2276:G:C8	2.96	0.54
26:1J:56:G:H4'	26:1J:57:A:C8	2.43	0.54
1:13:396:G:O2'	1:13:398:C:OP1	2.17	0.54
1:13:1435:G:H2'	1:13:1436:U:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2E:134:ILE:HG22	3:2E:168:ALA:HB3	1.90	0.54
6:5E:99:ALA:O	18:9I:28:GLU:HA	2.08	0.54
32:61:124:GLY:H	32:61:142:VAL:HG23	1.72	0.54
38:A8:67:ARG:HG3	38:A8:104:GLY:HA3	1.90	0.54
43:F8:49:VAL:HG22	43:F8:87:GLN:HG2	1.89	0.54
44:G8:90:LEU:HG	44:G8:91:GLU:HA	1.89	0.54
48:K8:47:ASN:O	48:K8:48:HIS:ND1	2.41	0.54
54:Q8:31:HIS:ND1	54:Q8:31:HIS:O	2.41	0.54
54:Q8:55:ALA:O	54:Q8:57:ARG:N	2.41	0.54
55:1G:1206:G:O4'	3:22:194:GLY:HA2	2.07	0.54
3:22:9:GLY:HA3	14:5A:49:HIS:HA	1.89	0.54
4:32:98:GLU:OE2	4:32:103:ASN:ND2	2.35	0.54
11:2A:29:ILE:HG22	11:2A:44:SER:HB2	1.88	0.54
22:1L:73:U:H2'	22:1L:74:C:C6	2.41	0.54
25:14:1003:G:O2'	25:14:1010:A:N1	2.35	0.54
25:14:1006:C:H1'	33:15:106:MET:HE3	1.90	0.54
41:95:44:LYS:O	41:95:46:VAL:N	2.40	0.54
58:D5:29:TYR:CE2	58:D5:87:ASP:HB3	2.42	0.54
1:13:109:A:N7	1:13:326:G:H2'	2.22	0.54
1:13:112:G:OP2	16:7I:27:LYS:HD2	2.08	0.54
1:13:266:G:H5''	1:13:267:C:H5	1.71	0.54
1:13:501:C:H2'	1:13:502:G:H8	1.73	0.54
3:2E:121:ALA:O	3:2E:125:GLU:HG3	2.08	0.54
4:3E:153:ARG:NH1	4:3E:181:MET:HB2	2.23	0.54
10:1I:32:ALA:HB3	10:1I:76:ASN:O	2.07	0.54
25:1H:71:A:C2	43:F8:31:HIS:CE1	2.90	0.54
25:1H:1187:G:P	62:1H:3781:HOH:O	2.60	0.54
25:1H:1913:A:H4'	25:1H:1914:C:C5'	2.38	0.54
25:1H:2439:A:H3'	25:1H:2439:A:P	2.47	0.54
36:88:76:LYS:HD2	36:88:77:LYS:H	1.73	0.54
37:98:38:VAL:HB	37:98:39:PRO:HD3	1.89	0.54
42:E8:68:ARG:O	42:E8:110:LYS:N	2.38	0.54
54:Q8:31:HIS:HB2	54:Q8:34:TRP:CD1	2.37	0.54
55:1G:992:U:H3	55:1G:1044:A:H62	1.56	0.54
55:1G:1177:G:O2'	55:1G:1178:G:O4'	2.26	0.54
4:32:31:CYS:C	4:32:33:MET:H	2.11	0.54
23:2L:54:G:H2'	23:2L:55:5MU:C6	2.43	0.54
25:14:96:G:H4'	48:G5:48:HIS:CD2	2.42	0.54
25:14:620:G:H4'	25:14:621:A:H5''	1.90	0.54
25:14:666:G:H5''	35:35:47:ASP:O	2.08	0.54
25:14:1025:G:C4	25:14:1135:C:H1'	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1329:A:H5'	13:4I:29:ARG:HD2	1.90	0.54
1:13:1372:U:H5''	9:8E:71:SER:HB2	1.89	0.54
4:3E:141:ARG:HB2	4:3E:141:ARG:CZ	2.38	0.54
8:7E:64:LYS:HG2	8:7E:79:VAL:HG21	1.90	0.54
11:2I:21:ILE:HB	11:2I:84:VAL:HG12	1.90	0.54
22:1K:38:MIA:S10	24:4K:19:C:H1'	2.48	0.54
25:1H:71:A:H4'	25:1H:72:U:H5''	1.90	0.54
25:1H:330:A:H2	25:1H:1210:A:O2'	1.91	0.54
25:1H:1438:U:H2'	25:1H:1439:A:H8	1.73	0.54
25:1H:2492:U:H2'	25:1H:2493:U:H6	1.73	0.54
26:16:94:C:H2'	26:16:95:U:C6	2.43	0.54
30:41:96:ARG:N	30:41:99:MET:HG2	2.23	0.54
39:B8:99:LEU:HB3	39:B8:101:PHE:CE1	2.43	0.54
55:1G:281:G:H8	55:1G:281:G:OP2	1.91	0.54
2:12:179:LYS:HA	8:72:72:PRO:HG3	1.89	0.54
25:14:390:A:C6	35:35:71:VAL:HG21	2.43	0.54
25:14:1187:G:H8	25:14:1187:G:O5'	1.91	0.54
25:14:2543:G:H2'	25:14:2544:G:C8	2.43	0.54
25:14:2576:G:O2'	25:14:2579:C:OP2	2.24	0.54
25:14:2648:C:H2'	25:14:2649:U:H6	1.70	0.54
26:1J:45:A:OP2	30:49:96:ARG:NH1	2.41	0.54
26:1J:50:G:OP1	38:65:62:LYS:HB2	2.08	0.54
28:29:68:ALA:C	28:29:70:ALA:H	2.10	0.54
30:49:114:ILE:HB	30:49:117:PHE:HB2	1.90	0.54
33:15:15:LEU:HB2	33:15:134:ARG:HG2	1.89	0.54
39:75:50:ILE:HD11	39:75:102:ILE:CD1	2.37	0.54
41:95:48:GLY:HA3	41:95:51:VAL:C	2.28	0.54
1:13:316:G:OP2	1:13:351:G:O2'	2.26	0.53
1:13:933:G:OP2	7:6E:3:ARG:HB2	2.08	0.53
1:13:1301:U:HO2'	1:13:1302:U:P	2.30	0.53
5:4E:101:ILE:O	5:4E:120:THR:OG1	2.24	0.53
9:8E:118:LYS:O	9:8E:119:ALA:HB3	2.08	0.53
17:8I:59:ILE:HG13	17:8I:71:PHE:HD2	1.73	0.53
18:9I:31:LEU:H	18:9I:31:LEU:HD23	1.72	0.53
22:1K:35:QUO:H8	22:1K:35:QUO:O5'	2.07	0.53
25:1H:536:A:H2'	25:1H:537:C:C6	2.43	0.53
25:1H:2140:C:O2	25:1H:2151:G:N2	2.36	0.53
25:1H:2564:A:C2	25:1H:2647:U:H4'	2.43	0.53
25:1H:2784:C:H1'	28:21:37:ARG:NH1	2.23	0.53
27:11:26:LYS:HE3	27:11:84:TYR:N	2.23	0.53
28:21:119:ARG:HH11	28:21:119:ARG:CG	2.20	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:31:45:ARG:HG2	29:31:45:ARG:NH1	2.23	0.53
33:58:4:TYR:CE2	40:C8:100:VAL:HG11	2.43	0.53
35:78:122:PRO:HA	35:78:142:GLY:CA	2.39	0.53
38:A8:88:ASP:OD1	38:A8:90:GLY:N	2.41	0.53
45:H8:9:TYR:CE1	45:H8:35:ARG:HD3	2.43	0.53
48:K8:17:SER:HB3	48:K8:67:LYS:HE2	1.91	0.53
55:1G:146:G:H2'	55:1G:147:G:H8	1.73	0.53
55:1G:501:C:H2'	55:1G:502:G:C8	2.40	0.53
55:1G:1152:A:OP1	10:1A:68:HIS:ND1	2.41	0.53
55:1G:1321:C:H3'	55:1G:1322:C:H5''	1.90	0.53
25:14:600:G:H1	25:14:657:U:H3	1.55	0.53
25:14:890:A:H2'	25:14:892:G:C8	2.43	0.53
25:14:934:G:H2'	25:14:935:C:C6	2.43	0.53
25:14:1331:A:HO2'	25:14:1332:G:H8	1.56	0.53
25:14:1853:A:N1	25:14:2087:G:H1'	2.24	0.53
25:14:2116:G:H2'	25:14:2117:A:C4	2.43	0.53
25:14:2315:G:H2'	25:14:2316:C:H6	1.74	0.53
25:14:2865:U:C4	25:14:2866:U:C4	2.95	0.53
28:29:33:VAL:HG12	28:29:89:ASP:HA	1.89	0.53
10:1I:29:ARG:NH1	10:1I:84:GLN:HE22	2.06	0.53
25:1H:382:G:H5''	25:1H:383:U:OP2	2.08	0.53
25:1H:530:G:C5	25:1H:2022:U:H5''	2.43	0.53
25:1H:883:G:H2'	25:1H:884:C:H4'	1.89	0.53
25:1H:944:G:H5''	25:1H:945:A:H5'	1.90	0.53
25:1H:2599:G:N7	27:11:237:GLU:HG2	2.23	0.53
30:41:16:ARG:HG2	30:41:16:ARG:HH11	1.72	0.53
31:51:83:TYR:HB3	31:51:135:GLY:H	1.74	0.53
37:98:91:GLN:H	37:98:91:GLN:CD	2.11	0.53
40:C8:92:ARG:HH21	40:C8:98:LEU:HB3	1.73	0.53
52:O8:41:PRO:HD2	52:O8:46:HIS:H	1.72	0.53
55:1G:1324:A:H2'	55:1G:1325:C:H6	1.74	0.53
5:42:51:VAL:O	5:42:55:VAL:HG23	2.07	0.53
12:3A:41:ARG:NH1	12:3A:42:THR:O	2.41	0.53
12:3A:70:ILE:HD13	12:3A:77:LEU:HD12	1.89	0.53
25:14:243:U:OP1	59:M5:6:THR:OG1	2.19	0.53
25:14:476:G:N1	25:14:479:A:OP2	2.41	0.53
57:39:123:LEU:HA	57:39:192:LEU:O	2.08	0.53
32:69:133:HIS:CD2	32:69:134:PRO:HD3	2.44	0.53
59:M5:34:TRP:H	59:M5:36:LYS:HE2	1.73	0.53
1:13:1226:C:H4'	19:AI:80:TYR:CZ	2.43	0.53
3:2E:148:GLY:HA3	3:2E:172:ARG:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1470:G:H5'	25:1H:1471:A:OP1	2.09	0.53
25:1H:1478:G:H2'	25:1H:1479:G:H8	1.72	0.53
25:1H:2036:C:OP1	62:1H:3943:HOH:O	2.19	0.53
25:1H:2380:C:OP1	38:A8:20:ARG:NH2	2.41	0.53
26:16:11:C:OP2	26:16:12:C:H5	1.92	0.53
45:H8:15:PRO:O	45:H8:19:ARG:HB2	2.08	0.53
45:H8:152:ALA:HB1	45:H8:163:LEU:HD11	1.91	0.53
46:I8:49:LYS:HE2	46:I8:80:HIS:HB3	1.89	0.53
55:1G:8:A:N6	4:32:209:ARG:HB2	2.22	0.53
55:1G:219:C:H2'	55:1G:220:G:O4'	2.08	0.53
55:1G:730:G:C5	55:1G:731:G:H1'	2.43	0.53
55:1G:963:G:N3	10:1A:55:LYS:NZ	2.57	0.53
2:12:69:LEU:HD23	2:12:70:PHE:H	1.73	0.53
10:1A:38:ILE:HB	10:1A:71:LEU:HB3	1.91	0.53
25:14:140:A:C8	25:14:1408:C:O2'	2.61	0.53
25:14:943:U:P	35:35:36:LYS:HG3	2.49	0.53
33:15:39:ARG:HD3	33:15:41:ASP:HB2	1.90	0.53
36:45:117:ALA:HA	36:45:120:ILE:HB	1.88	0.53
41:95:34:GLU:OE1	41:95:56:SER:OG	2.11	0.53
1:13:93:U:H2'	1:13:95:G:O4'	2.07	0.53
1:13:501:C:H2'	1:13:502:G:C8	2.43	0.53
1:13:551:U:H2'	1:13:552:U:C6	2.43	0.53
1:13:712:A:H2'	1:13:713:G:C8	2.43	0.53
1:13:880:C:P	12:3I:8:ASN:HD22	2.31	0.53
1:13:917:G:H2'	1:13:918:A:C8	2.43	0.53
5:4E:100:VAL:HA	5:4E:118:ILE:HG22	1.89	0.53
12:3I:7:ILE:O	12:3I:11:VAL:HG23	2.09	0.53
16:7I:17:TYR:HE1	16:7I:41:PRO:HG3	1.74	0.53
25:1H:1677:A:H2'	25:1H:1678:G:C8	2.42	0.53
25:1H:2254:C:H3'	62:1H:4013:HOH:O	2.08	0.53
25:1H:2273:A:H2'	25:1H:2274:A:C8	2.43	0.53
25:1H:2502:G:OP2	62:1H:3540:HOH:O	2.19	0.53
36:88:110:THR:HG23	36:88:113:GLN:OE1	2.08	0.53
40:C8:92:ARG:C	40:C8:94:ASN:N	2.59	0.53
42:E8:82:LEU:HB2	42:E8:98:LYS:HB2	1.89	0.53
55:1G:677:U:H3	55:1G:713:G:H22	1.57	0.53
5:42:60:TYR:HB2	5:42:64:ARG:NH2	2.23	0.53
25:14:307:G:N2	25:14:309:G:H3'	2.23	0.53
25:14:828:U:H4'	25:14:831:G:N1	2.23	0.53
25:14:2340:G:O2'	25:14:2341:G:H5'	2.08	0.53
31:59:163:TYR:CD1	31:59:169:VAL:HG21	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:136:C:N4	1:13:227:G:H1	2.03	0.53
1:13:474:G:H2'	1:13:475:G:H8	1.71	0.53
1:13:580:U:H2'	1:13:581:G:O4'	2.08	0.53
1:13:1015:A:H2'	1:13:1016:A:C8	2.44	0.53
25:1H:162:U:N3	25:1H:164:U:O4	2.35	0.53
25:1H:270(K):C:N3	25:1H:270(M):U:H5''	2.23	0.53
25:1H:1188:U:C4'	41:D8:79:VAL:HG22	2.38	0.53
25:1H:1592:C:H2'	25:1H:1593:G:H8	1.74	0.53
25:1H:2610:C:H4'	25:1H:2611:U:OP2	2.09	0.53
25:1H:2690:C:H5''	25:1H:2872:G:H21	1.73	0.53
41:D8:53:GLU:HG3	41:D8:54:GLY:N	2.23	0.53
45:H8:152:ALA:O	45:H8:155:LEU:HB2	2.08	0.53
47:J8:82:LEU:H	47:J8:82:LEU:HD22	1.73	0.53
50:M8:46:GLN:HG2	50:M8:48:ARG:HG3	1.90	0.53
15:6A:17:ARG:HG3	15:6A:26:GLU:HG3	1.91	0.53
25:14:74:A:H5''	25:14:74:A:H8	1.73	0.53
25:14:198:C:O2'	25:14:199:A:H5'	2.09	0.53
25:14:309:G:H4'	44:C5:18:GLY:HA3	1.90	0.53
25:14:2212:A:H1'	25:14:2215:G:C4	2.43	0.53
31:59:20:ALA:O	31:59:22:GLY:N	2.38	0.53
44:C5:20:TYR:CZ	44:C5:42:VAL:HA	2.44	0.53
1:13:785:G:N7	62:13:1865:HOH:O	2.33	0.53
1:13:1278:U:H5''	1:13:1279:A:O4'	2.08	0.53
5:4E:8:GLU:HG2	5:4E:34:VAL:HG22	1.91	0.53
23:2K:8:4SU:O5'	23:2K:8:4SU:H6	2.08	0.53
25:1H:322:A:OP2	29:31:169:ASN:HB2	2.09	0.53
25:1H:1025:G:C4	25:1H:1135:C:H1'	2.44	0.53
25:1H:1858:G:H2'	25:1H:1883:G:N2	2.22	0.53
25:1H:1931:U:H5	25:1H:1969:A:N7	2.07	0.53
25:1H:2518:A:H8	25:1H:2518:A:H5'	1.73	0.53
25:1H:2562:U:H1'	34:68:23:ARG:NH1	2.24	0.53
26:16:60:C:H2'	26:16:61:G:H8	1.73	0.53
28:21:101:ARG:HG2	28:21:169:ASN:OD1	2.08	0.53
33:58:47:ALA:CB	33:58:116:LEU:HD21	2.38	0.53
33:58:133:GLN:OE1	33:58:133:GLN:N	2.36	0.53
55:1G:1132:C:H2'	55:1G:1133:G:H8	1.73	0.53
2:12:189:ASP:OD2	2:12:191:ASP:HB2	2.08	0.53
6:52:2:ARG:HE	6:52:69:GLU:HB3	1.74	0.53
6:52:74:ASP:OD1	6:52:74:ASP:N	2.42	0.53
25:14:2287:A:N6	25:14:2344:U:H3	2.07	0.53
31:59:99:VAL:HG13	31:59:100:GLY:H	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:69:133:HIS:CG	32:69:134:PRO:HD3	2.43	0.53
49:H5:18:ASP:OD1	49:H5:18:ASP:N	2.39	0.53
1:13:1513:A:H2'	1:13:1514:C:C6	2.44	0.53
25:1H:184:C:H2'	25:1H:185:U:C6	2.44	0.53
25:1H:754:C:H2'	25:1H:755:C:H6	1.73	0.53
25:1H:1093:G:H1'	25:1H:1099:G:N2	2.24	0.53
32:61:1:MET:O	32:61:20:ASP:HA	2.09	0.53
44:G8:28:LYS:HZ1	44:G8:40:GLU:HG3	1.74	0.53
50:M8:23:GLU:OE1	50:M8:24:THR:N	2.42	0.53
55:1G:520:A:N1	55:1G:536:C:H1'	2.24	0.53
55:1G:922:G:H4'	5:42:20:GLN:HA	1.91	0.53
17:8A:81:ARG:HE	17:8A:84:LEU:HD12	1.73	0.53
25:14:934:G:H2'	25:14:935:C:H6	1.73	0.53
25:14:1537:C:H2'	25:14:1538:G:O4'	2.09	0.53
25:14:1568:G:H5''	56:19:61:LEU:HD22	1.89	0.53
25:14:1709:U:H2'	25:14:1710:C:H6	1.74	0.53
25:14:2130:U:H2'	25:14:2158:A:N1	2.24	0.53
35:35:59:LEU:O	35:35:59:LEU:HD22	2.08	0.53
36:45:75:THR:HA	36:45:89:ASN:HA	1.90	0.53
38:65:33:LYS:HB3	38:65:34:HIS:HD2	1.73	0.53
1:13:539:A:H2'	1:13:540:G:C8	2.44	0.53
1:13:642:A:N3	8:7E:113:SER:OG	2.38	0.53
1:13:658:G:H2'	1:13:659:U:C6	2.44	0.53
1:13:1160:G:H22	1:13:1177:G:N2	2.05	0.53
5:4E:100:VAL:O	5:4E:107:ARG:NH2	2.40	0.53
13:4I:57:ARG:HB2	13:4I:57:ARG:HH11	1.74	0.53
25:1H:1657:C:P	28:21:136:ARG:HB2	2.48	0.53
25:1H:1932:A:H2'	25:1H:1933:G:O4'	2.09	0.53
25:1H:2427:C:H5''	25:1H:2428:G:OP1	2.08	0.53
25:1H:2518:A:H5'	25:1H:2518:A:C8	2.43	0.53
25:1H:2871:C:H5''	25:1H:2872:G:OP1	2.08	0.53
38:A8:26:LEU:HD22	38:A8:87:PHE:HD1	1.73	0.53
42:E8:37:ARG:HD3	42:E8:38:TYR:CE2	2.44	0.53
44:G8:9:LYS:HA	44:G8:27:VAL:HG22	1.91	0.53
54:Q8:26:LYS:HE2	54:Q8:41:ILE:CG2	2.38	0.53
55:1G:565:U:OP2	55:1G:566:G:O2'	2.20	0.53
4:32:33:MET:C	4:32:35:ARG:H	2.12	0.53
6:52:86:ARG:O	6:52:87:ARG:HG2	2.09	0.53
21:1B:7:ARG:HB3	21:1B:21:TYR:CD2	2.44	0.53
25:14:1024:G:H8	25:14:1024:G:O5'	1.92	0.53
25:14:2420:C:N4	59:M5:31:HIS:O	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:39:167:ALA:HB1	57:39:173:VAL:HG11	1.91	0.53
51:J5:41:PRO:O	51:J5:44:THR:OG1	2.25	0.53
1:13:545:C:O2'	1:13:549:C:OP1	2.26	0.53
1:13:633:G:OP2	1:13:633:G:H8	1.91	0.53
13:4I:4:ILE:HG22	13:4I:5:ALA:N	2.23	0.53
13:4I:81:LEU:HD13	13:4I:88:ARG:HD2	1.91	0.53
20:BI:26:ASN:O	20:BI:30:LYS:HB2	2.08	0.53
25:1H:906:G:OP1	36:88:26:TYR:OH	2.20	0.53
25:1H:1606:G:H5''	25:1H:1607:C:OP1	2.09	0.53
25:1H:2282:G:H4'	25:1H:2389:G:O2'	2.08	0.53
26:16:40:U:H1'	26:16:45:A:H61	1.73	0.53
43:F8:31:HIS:CD2	43:F8:33:LYS:H	2.27	0.53
55:1G:1127:G:N2	55:1G:1144:G:H22	2.07	0.53
55:1G:1342:C:H4'	9:82:125:TYR:HB3	1.91	0.53
55:1G:1508:G:H5'	62:1G:1803:HOH:O	2.09	0.53
7:62:143:ARG:CZ	22:3L:43:G:H5'	2.39	0.53
25:14:247:G:H4'	25:14:386:G:C5	2.44	0.53
25:14:2241:A:H2'	25:14:2242:G:C8	2.43	0.53
25:14:2315:G:H2'	25:14:2316:C:C6	2.44	0.53
26:1J:39:A:H61	50:I5:1:MET:HB3	1.74	0.53
57:39:150:GLY:HA2	57:39:172:TRP:CD2	2.44	0.53
35:35:15:ARG:HB2	35:35:15:ARG:CZ	2.38	0.53
35:35:47:ASP:OD1	35:35:49:ARG:NE	2.29	0.53
51:J5:49:CYS:SG	51:J5:50:GLY:N	2.82	0.53
1:13:163:C:H2'	1:13:164:U:C6	2.43	0.53
1:13:1157:A:H1'	1:13:1158:C:C4	2.44	0.53
1:13:1177:G:O2'	1:13:1178:G:O4'	2.27	0.53
1:13:1206:G:C6	1:13:1207:G:C5	2.97	0.53
1:13:1291:G:OP1	7:6E:41:ARG:NH2	2.40	0.53
4:3E:129:ASN:ND2	4:3E:144:ASP:OD1	2.34	0.53
13:4I:84:ILE:HD11	19:AI:66:MET:HE2	1.89	0.53
17:8I:83:ASP:N	17:8I:83:ASP:OD1	2.41	0.53
25:1H:1142(A):A:C4	25:1H:1144:G:C8	2.97	0.53
25:1H:1566:A:O2'	25:1H:1567:A:H5'	2.09	0.53
25:1H:1771:C:H1'	25:1H:1786:A:C8	2.44	0.53
25:1H:1799:G:H5''	25:1H:1819:A:N6	2.24	0.53
29:31:8:GLN:H	29:31:8:GLN:CD	2.12	0.53
46:I8:23:VAL:HA	46:I8:38:VAL:HG22	1.91	0.53
52:O8:33:LYS:O	52:O8:35:GLU:HG3	2.09	0.53
55:1G:34:C:H2'	55:1G:35:G:H8	1.74	0.53
55:1G:554:C:H2'	55:1G:555:C:C6	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:1G:1054:C:HO2'	55:1G:1055:A:P	2.30	0.53
3:22:8:ILE:O	3:22:11:ARG:N	2.40	0.53
4:32:57:ARG:NE	4:32:205:GLU:OE2	2.39	0.53
31:59:7:LEU:HG	31:59:8:PRO:HD3	1.90	0.53
58:D5:4:ARG:CZ	58:D5:58:VAL:HG11	2.39	0.53
49:H5:50:VAL:O	49:H5:54:VAL:HG23	2.08	0.53
50:I5:42:PHE:O	50:I5:43:TYR:HB3	2.09	0.53
1:13:411:A:H62	1:13:413:G:H21	1.55	0.52
1:13:922:G:C6	1:13:923:A:C6	2.98	0.52
1:13:1503:A:O2'	24:4K:13:A:N6	2.42	0.52
5:4E:142:LEU:O	5:4E:143:ARG:NH1	2.40	0.52
7:6E:120:ILE:HG22	7:6E:124:LEU:HD12	1.91	0.52
9:8E:10:ARG:HD2	9:8E:11:LYS:HG3	1.91	0.52
16:7I:58:TYR:O	16:7I:62:VAL:HG22	2.08	0.52
19:AI:40:ILE:O	19:AI:41:VAL:HG22	2.09	0.52
25:1H:17:G:H2'	25:1H:18:C:C6	2.44	0.52
25:1H:107:C:H2'	25:1H:108:U:H6	1.73	0.52
25:1H:685:A:OP1	25:1H:686:G:N2	2.41	0.52
25:1H:1607:C:H4'	25:1H:1608:A:O5'	2.09	0.52
25:1H:1811:G:H2'	25:1H:1812:A:O4'	2.09	0.52
25:1H:2281:C:O2'	25:1H:2282:G:H5'	2.10	0.52
25:1H:2324:C:H5''	25:1H:2325:G:H5'	1.91	0.52
25:1H:2729:G:N3	28:21:187:ALA:HB2	2.24	0.52
27:11:59:LYS:HD2	27:11:60:ARG:N	2.24	0.52
28:21:67:PHE:O	28:21:69:LYS:N	2.42	0.52
33:58:47:ALA:HB2	33:58:112:LEU:HD11	1.91	0.52
37:98:55:ALA:HB2	37:98:79:LEU:HD13	1.89	0.52
44:G8:52:SER:O	44:G8:56:PRO:HA	2.08	0.52
45:H8:98:MET:O	45:H8:125:LEU:HA	2.09	0.52
48:K8:64:LEU:HD11	48:K8:68:ARG:HH21	1.74	0.52
25:14:761:A:C8	62:14:3419:HOH:O	2.55	0.52
25:14:912:C:C2	25:14:913:U:C5	2.96	0.52
25:14:1028:A:N6	25:14:1125:G:H2'	2.24	0.52
25:14:1712:C:H2'	25:14:1716:U:H6	1.74	0.52
28:29:120:TRP:CE3	28:29:155:LYS:HD3	2.44	0.52
57:39:7:TYR:CE2	57:39:10:PRO:HG3	2.44	0.52
47:F5:41:ARG:HD3	47:F5:43:TYR:OH	2.09	0.52
1:13:61:G:H2'	1:13:62:U:O4'	2.09	0.52
1:13:523:A:H61	12:3I:92:ASP:HB2	1.74	0.52
1:13:1190:G:OP1	3:2E:4:LYS:HA	2.09	0.52
1:13:1226:C:H4'	19:AI:80:TYR:OH	2.07	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1313:U:H5	19:AI:4:SER:HB3	1.74	0.52
1:13:1486:G:H2'	1:13:1487:G:O4'	2.09	0.52
2:1E:174:VAL:HG13	2:1E:184:VAL:HG11	1.92	0.52
17:8I:67:LYS:O	17:8I:68:ARG:HB3	2.09	0.52
25:1H:1424:G:H2'	25:1H:1425:G:O4'	2.09	0.52
25:1H:1538:G:H2'	25:1H:1539:G:H8	1.74	0.52
29:31:42:ALA:O	29:31:45:ARG:HB2	2.09	0.52
34:68:64:ARG:HG2	34:68:79:PHE:CG	2.44	0.52
37:98:2:ARG:HA	37:98:5:LYS:HE3	1.91	0.52
37:98:12:ARG:HG2	37:98:12:ARG:NH1	2.22	0.52
54:Q8:40:GLU:HG2	54:Q8:41:ILE:HB	1.91	0.52
55:1G:518:C:H5''	55:1G:519:C:C6	2.44	0.52
55:1G:756:C:H2'	55:1G:757:U:O4'	2.10	0.52
25:14:717:G:H2'	25:14:718:A:O4'	2.10	0.52
25:14:1149:G:H2'	25:14:1150:C:C6	2.43	0.52
25:14:2410:G:C2	25:14:2411:A:H1'	2.43	0.52
30:49:67:LYS:H	50:15:6:HIS:CE1	2.26	0.52
32:69:75:LEU:CD2	32:69:76:THR:H	2.21	0.52
34:25:4:PRO:O	34:25:5:GLN:HB2	2.08	0.52
34:25:8:LEU:HD13	34:25:82:ASN:HB3	1.91	0.52
35:35:30:THR:HG21	35:35:35:HIS:H	1.74	0.52
41:95:76:LYS:HD2	41:95:80:GLN:O	2.09	0.52
50:15:34:GLU:HG2	50:15:35:VAL:H	1.74	0.52
1:13:8:A:N7	4:3E:208:SER:HB3	2.24	0.52
1:13:1227:A:O3'	13:4I:115:LYS:NZ	2.34	0.52
1:13:1352:C:H2'	1:13:1353:G:C8	2.43	0.52
3:2E:19:GLU:HG2	3:2E:54:ARG:NH1	2.24	0.52
10:1I:49:VAL:CG2	14:5I:41:ARG:HB2	2.40	0.52
10:1I:78:ASN:HB2	10:1I:81:THR:HG23	1.91	0.52
12:3I:24:VAL:HB	12:3I:27:LEU:HD12	1.90	0.52
16:7I:11:SER:HB2	16:7I:14:ASN:HB3	1.89	0.52
25:1H:945:A:OP2	25:1H:945:A:H4'	2.09	0.52
25:1H:1164:G:H2'	25:1H:1165:U:H6	1.74	0.52
25:1H:1213:A:H1'	25:1H:1238:G:N3	2.23	0.52
25:1H:1372:U:H2'	25:1H:1373:A:O4'	2.09	0.52
25:1H:2032:G:C4	28:21:145:LYS:HD3	2.44	0.52
27:11:213:ARG:NH1	27:11:213:ARG:HG3	2.25	0.52
42:E8:88:ARG:HB3	42:E8:92:ARG:HB3	1.89	0.52
54:Q8:7:HIS:HB3	54:Q8:58:ILE:HG23	1.92	0.52
55:1G:1277:C:HO2'	55:1G:1279:A:H8	1.55	0.52
2:12:178:ARG:NH2	8:72:74:PRO:HG3	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:22:131:ARG:NH1	5:42:50:GLU:HG3	2.23	0.52
9:82:42:ARG:HD3	9:82:71:SER:HB3	1.91	0.52
15:6A:25:THR:HG21	15:6A:70:LEU:HB2	1.92	0.52
25:14:111:A:H4'	48:G5:69:ARG:NH2	2.25	0.52
25:14:1047:G:H21	25:14:1111:A:N6	2.07	0.52
25:14:2261:C:H1'	25:14:2388:A:N3	2.23	0.52
25:14:2875:C:OP1	39:75:3:ARG:NH1	2.42	0.52
36:45:56:ARG:HB2	36:45:56:ARG:HH11	1.74	0.52
47:F5:86:SER:N	47:F5:87:PRO:HD2	2.23	0.52
1:13:1234:C:H2'	1:13:1235:U:C6	2.45	0.52
9:8E:77:ILE:O	9:8E:81:ILE:HG12	2.09	0.52
11:2I:78:GLN:O	11:2I:103:LEU:HA	2.10	0.52
20:BI:10:LEU:HD11	20:BI:12:ALA:HB3	1.91	0.52
25:1H:7:G:H1	25:1H:2896:C:H42	1.56	0.52
25:1H:775:G:O5'	25:1H:777:A:H1'	2.10	0.52
25:1H:860:U:C5	25:1H:917:A:H2	2.27	0.52
25:1H:1486:A:H2'	25:1H:1487:G:H8	1.74	0.52
25:1H:1903:G:OP1	27:11:241:PRO:HB2	2.10	0.52
25:1H:2321:G:H5''	25:1H:2322:A:OP2	2.09	0.52
25:1H:2862:G:H2'	25:1H:2863:C:H6	1.75	0.52
39:B8:29:ARG:HB2	39:B8:46:GLU:HB2	1.91	0.52
44:G8:87:LYS:O	44:G8:94:LYS:HB2	2.10	0.52
47:J8:18:ILE:HG12	47:J8:37:ILE:HG23	1.90	0.52
55:1G:4:U:N3	8:72:102:ARG:HD3	2.24	0.52
55:1G:607:A:H2'	55:1G:608:A:O4'	2.10	0.52
55:1G:1126:U:H5''	55:1G:1127:G:OP1	2.09	0.52
55:1G:1280:A:P	10:1A:40:LEU:HD21	2.49	0.52
2:12:68:ILE:HG12	2:12:161:ALA:HB3	1.90	0.52
25:14:860:U:C2	25:14:2268:A:C8	2.97	0.52
25:14:1040:C:H2'	25:14:1041:C:H6	1.73	0.52
25:14:1198:U:H2'	25:14:1199:U:H6	1.75	0.52
25:14:1786:A:C2	25:14:2606:C:H1'	2.44	0.52
25:14:1849:G:H2'	25:14:1850:G:H8	1.75	0.52
25:14:2680:C:H2'	25:14:2681:C:O2	2.09	0.52
25:14:2702:U:OP1	25:14:2702:U:C6	2.63	0.52
57:39:23:ASP:O	57:39:25:PRO:HD3	2.08	0.52
30:49:120:LEU:N	30:49:179:PRO:O	2.39	0.52
1:13:280:C:H3'	1:13:281:G:H5'	1.91	0.52
1:13:411:A:C4	1:13:413:G:H1'	2.45	0.52
1:13:1059:C:O2'	10:1I:53:PRO:HD3	2.09	0.52
1:13:1070:U:H2'	1:13:1071:C:H6	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:98:LEU:HB2	2:1E:101:MET:HG3	1.92	0.52
4:3E:24:GLU:O	4:3E:27:TYR:N	2.35	0.52
14:5I:9:LYS:HG3	14:5I:12:ARG:HE	1.75	0.52
19:AI:41:VAL:HG21	19:AI:67:VAL:HG12	1.89	0.52
25:1H:619:G:H5''	25:1H:620:G:OP2	2.08	0.52
25:1H:754:C:H2'	25:1H:755:C:C6	2.44	0.52
25:1H:2272:U:H5''	25:1H:2273:A:OP1	2.10	0.52
25:1H:2341:G:H2'	25:1H:2342:C:C6	2.44	0.52
25:1H:2371:G:O6	62:1H:4208:HOH:O	2.16	0.52
25:1H:2635:C:H5''	28:21:79:ARG:CD	2.39	0.52
25:1H:2689:U:H5''	25:1H:2713:A:H2	1.74	0.52
37:98:55:ALA:HA	37:98:80:PHE:CZ	2.44	0.52
43:F8:3:THR:HA	43:F8:6:ASP:HB2	1.92	0.52
48:K8:10:LEU:HG	48:K8:59:ARG:HG2	1.92	0.52
55:1G:409:G:H2'	55:1G:410:G:O4'	2.09	0.52
55:1G:519:C:H2'	55:1G:520:A:O4'	2.09	0.52
55:1G:674:G:N2	55:1G:717:C:O2	2.42	0.52
10:1A:4:ILE:HG12	10:1A:100:THR:HG22	1.91	0.52
23:2L:51:U:H2'	23:2L:52:C:C6	2.44	0.52
25:14:17:G:H2'	25:14:18:C:C6	2.45	0.52
25:14:363(F):A:OP2	25:14:363(F):A:H8	1.93	0.52
25:14:667:U:O2	59:M5:2:PRO:HD2	2.09	0.52
25:14:820:A:H2'	25:14:821:A:O4'	2.10	0.52
25:14:2541:A:H5''	25:14:2542:A:OP2	2.09	0.52
1:13:67:C:H2'	1:13:68:G:H8	1.74	0.52
14:5I:6:LEU:HB3	14:5I:23:ARG:NH2	2.24	0.52
22:3K:24:G:H2'	22:3K:25:G:C8	2.45	0.52
25:1H:500:G:N1	25:1H:503:A:OP2	2.41	0.52
25:1H:929:G:O6	62:1H:3668:HOH:O	2.19	0.52
25:1H:1168:G:C2	25:1H:1182:A:C2	2.97	0.52
25:1H:1568:G:H21	27:11:58:HIS:CE1	2.27	0.52
27:11:71:ASP:OD2	27:11:103:ARG:NH2	2.43	0.52
31:51:83:TYR:HB2	31:51:134:SER:HA	1.91	0.52
33:58:76:SER:N	33:58:81:GLY:O	2.37	0.52
39:B8:122:ASP:OD1	39:B8:125:ARG:NH2	2.43	0.52
55:1G:838:G:N2	55:1G:849:C:N3	2.57	0.52
4:32:105:VAL:HG13	4:32:110:PHE:HB2	1.90	0.52
7:62:111:ARG:NH2	7:62:122:HIS:HB3	2.25	0.52
24:4L:25:A:H8	24:4L:25:A:O5'	1.92	0.52
25:14:1101:U:H2'	25:14:1102:C:C6	2.44	0.52
25:14:2271:G:OP1	46:E5:18:ALA:HB1	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:19:255:LYS:H	56:19:255:LYS:HE3	1.75	0.52
44:C5:87:LYS:N	44:C5:94:LYS:HB3	2.24	0.52
51:J5:38:ALA:HB3	51:J5:48:GLU:HG3	1.92	0.52
1:13:1120:G:H2'	1:13:1121:U:H6	1.75	0.52
20:BI:13:LEU:HD12	20:BI:14:LYS:N	2.25	0.52
23:2K:24:C:H2'	23:2K:25:U:C6	2.44	0.52
25:1H:536:A:H5'	40:C8:53:ARG:HD3	1.90	0.52
25:1H:638:G:C5	25:1H:651:G:C2	2.97	0.52
25:1H:654(M):C:H5'	25:1H:654(N):G:N7	2.24	0.52
25:1H:1278:A:OP1	37:98:36:THR:HG22	2.08	0.52
25:1H:1945:G:H2'	25:1H:1946:U:C6	2.44	0.52
25:1H:2119:A:H2	25:1H:2171:A:H1'	1.75	0.52
25:1H:2432:A:OP2	62:1H:3826:HOH:O	2.18	0.52
28:21:48:GLN:HA	28:21:79:ARG:HB3	1.92	0.52
48:K8:23:LYS:NZ	48:K8:27:GLU:OE2	2.42	0.52
48:K8:31:GLU:HG2	48:K8:53:LEU:HD11	1.92	0.52
3:22:113:ALA:HB2	3:22:202:ILE:HG13	1.92	0.52
22:3L:42:U:H2'	22:3L:43:G:C8	2.45	0.52
25:14:817:C:O2'	25:14:839:U:H5''	2.09	0.52
25:14:952:G:C6	25:14:966:G:C6	2.98	0.52
25:14:1012:U:O4	33:15:25:ARG:HA	2.09	0.52
25:14:1252:G:N3	40:85:33:ARG:HD2	2.25	0.52
28:29:101:ARG:O	28:29:201:THR:OG1	2.28	0.52
58:D5:45:ASP:OD1	58:D5:49:ARG:NH2	2.41	0.52
2:1E:178:ARG:NH1	2:1E:196:LEU:O	2.20	0.52
8:7E:87:SER:CB	8:7E:93:VAL:H	2.22	0.52
25:1H:607:U:N3	25:1H:621:A:C2	2.71	0.52
25:1H:2335:A:C8	25:1H:2337:G:C5	2.98	0.52
26:16:31:C:H2'	26:16:32:C:H6	1.75	0.52
27:11:145:VAL:HG12	27:11:146:GLU:O	2.10	0.52
31:51:150:ALA:O	31:51:153:LYS:HE2	2.10	0.52
45:H8:93:ASP:OD1	45:H8:93:ASP:N	2.41	0.52
47:J8:23:LYS:HB3	47:J8:29:GLY:HA3	1.92	0.52
55:1G:584:G:H5'	17:8A:91:ARG:NH1	2.25	0.52
55:1G:853:G:H2'	55:1G:854:G:H8	1.74	0.52
55:1G:980:C:H5'	55:1G:981:U:OP2	2.10	0.52
55:1G:1004:A:C6	55:1G:1025:U:H1'	2.44	0.52
55:1G:1313:U:O4	19:AA:3:ARG:N	2.43	0.52
2:12:194:PRO:HG2	2:12:195:ASP:OD1	2.10	0.52
25:14:481:G:OP2	44:C5:47:LYS:HB2	2.10	0.52
25:14:654(I):C:N3	25:14:654(M):C:N4	2.54	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:876:C:N4	25:14:877:U:O4	2.42	0.52
25:14:996:A:N6	25:14:1160:G:C6	2.78	0.52
25:14:1711:C:H2'	25:14:1712:C:C6	2.44	0.52
25:14:1999:C:H4'	25:14:2723:C:O2	2.09	0.52
25:14:2133:G:O2'	25:14:2158:A:N6	2.41	0.52
25:14:2849:U:H4'	25:14:2868:A:C2	2.45	0.52
56:19:6:PHE:HE1	56:19:18:VAL:HG13	1.75	0.52
37:55:55:ALA:HB2	37:55:79:LEU:HD13	1.92	0.52
59:M5:56:GLU:C	59:M5:58:ILE:H	2.09	0.52
1:13:454:C:OP2	1:13:455:C:N4	2.33	0.52
1:13:735:C:H2'	1:13:736:C:H6	1.75	0.52
1:13:1129:C:H4'	1:13:1130:A:H5'	1.92	0.52
1:13:1442:G:H1	1:13:1461:G:N2	2.07	0.52
1:13:1489:G:H2'	1:13:1490:C:O4'	2.10	0.52
4:3E:190:ASP:HB2	4:3E:193:ASP:H	1.75	0.52
5:4E:76:ILE:HB	5:4E:77:PRO:HD2	1.92	0.52
10:1I:54:PHE:HZ	10:1I:55:LYS:HZ2	1.55	0.52
13:4I:49:THR:HB	13:4I:52:GLU:HG3	1.91	0.52
25:1H:1050:A:H1'	25:1H:2751:G:C8	2.45	0.52
25:1H:1195:G:N3	25:1H:1227:A:H2	2.07	0.52
25:1H:1678:G:N2	25:1H:1989:G:N2	2.52	0.52
36:88:116:GLU:O	36:88:120:ILE:HG12	2.09	0.52
41:D8:76:LYS:HB2	41:D8:81:TYR:HB3	1.91	0.52
55:1G:165:C:H2'	55:1G:166:G:H8	1.75	0.52
55:1G:600:C:H2'	55:1G:601:C:C6	2.44	0.52
55:1G:1056:U:H5'	3:22:163:ALA:HB2	1.92	0.52
25:14:582:G:H2'	25:14:583:G:C8	2.45	0.52
25:14:873:G:N2	25:14:905:U:C2	2.78	0.52
25:14:1051:G:H8	25:14:1051:G:OP2	1.92	0.52
25:14:1291:C:H2'	25:14:1292:U:H6	1.74	0.52
25:14:1754:C:H2'	25:14:1755:A:C8	2.45	0.52
25:14:1782:C:H3'	62:14:3410:HOH:O	2.09	0.52
25:14:1810:A:H2'	25:14:1811:G:O4'	2.10	0.52
32:69:52:ARG:HA	32:69:55:ALA:HB3	1.92	0.52
33:15:97:ARG:HA	33:15:100:GLU:HB2	1.92	0.52
1:13:458:C:H2'	1:13:464:G:H8	1.75	0.52
4:3E:108:LEU:HB3	4:3E:110:PHE:CD1	2.44	0.52
9:8E:21:PRO:HA	9:8E:59:PHE:HA	1.91	0.52
25:1H:1727:U:H2'	25:1H:1728:G:O4'	2.09	0.52
25:1H:1971:A:C5	27:11:241:PRO:HD3	2.44	0.52
25:1H:2058:A:H5''	62:1H:4102:HOH:O	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2156:G:H2'	25:1H:2157:G:N3	2.25	0.52
25:1H:2709:G:O2'	62:1H:3585:HOH:O	2.19	0.52
55:1G:1154:G:H2'	55:1G:1155:G:C8	2.45	0.52
55:1G:1386:G:C2	55:1G:1387:G:C8	2.98	0.52
7:62:16:LEU:HD11	9:82:45:ALA:HB2	1.92	0.52
7:62:144:MET:HE1	22:3L:31:G:H21	1.75	0.52
25:14:607:U:N3	25:14:621:A:C2	2.76	0.52
25:14:1332:G:N2	25:14:1610:A:C8	2.78	0.52
25:14:1341:U:OP2	25:14:1394:U:O2'	2.15	0.52
25:14:1759:A:H4'	25:14:2715:C:O4'	2.10	0.52
25:14:2153:G:H2'	25:14:2154:G:C8	2.45	0.52
25:14:2394:C:OP1	35:35:63:PRO:HB2	2.11	0.52
40:85:106:PHE:O	40:85:109:LEU:N	2.43	0.52
48:G5:25:VAL:HG12	48:G5:60:LEU:HD23	1.92	0.52
1:13:110:C:H2'	1:13:111:G:O4'	2.11	0.51
1:13:186:C:H2'	1:13:186(A):C:H6	1.74	0.51
1:13:1184:G:H2'	1:13:1185:G:C8	2.45	0.51
6:5E:18:GLN:HA	6:5E:21:LEU:HB2	1.91	0.51
9:8E:99:LEU:HB3	9:8E:101:PHE:CE2	2.45	0.51
13:4I:15:VAL:HG23	13:4I:43:THR:O	2.10	0.51
25:1H:620:G:H4'	25:1H:621:A:C5'	2.34	0.51
25:1H:639:U:H2'	25:1H:640:C:C6	2.44	0.51
25:1H:654(B):C:H2'	25:1H:654(C):G:C8	2.45	0.51
25:1H:989:G:OP2	49:L8:11:SER:HB3	2.10	0.51
25:1H:2343:C:O2'	25:1H:2373:G:O2'	2.27	0.51
25:1H:2695:C:H2'	25:1H:2696:U:C6	2.45	0.51
31:51:30:LYS:HD2	31:51:81:GLU:H	1.75	0.51
43:F8:67:GLY:C	43:F8:69:TYR:H	2.14	0.51
52:O8:41:PRO:HD2	52:O8:46:HIS:N	2.25	0.51
55:1G:619:U:C2	4:32:135:LEU:HD22	2.45	0.51
3:22:134:ILE:HG23	3:22:151:VAL:HB	1.93	0.51
25:14:895:U:H4'	25:14:896:A:C5	2.44	0.51
25:14:1783:A:H5'	25:14:2608:G:H4'	1.92	0.51
25:14:2262:U:O2'	25:14:2263:C:H5'	2.10	0.51
31:59:163:TYR:HE1	31:59:169:VAL:HG11	1.75	0.51
1:13:880:C:OP1	12:3I:8:ASN:ND2	2.40	0.51
1:13:1427:U:H2'	1:13:1428:A:C8	2.45	0.51
2:1E:8:LYS:HE3	2:1E:11:LEU:H	1.75	0.51
2:1E:33:TYR:HB2	2:1E:43:ASP:HB2	1.93	0.51
3:2E:59:ARG:HG2	3:2E:64:VAL:HG22	1.93	0.51
10:1I:6:ILE:HG12	10:1I:72:VAL:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AI:32:LYS:HD3	19:AI:57:HIS:CD2	2.46	0.51
22:1K:42:U:H2'	22:1K:43:G:C8	2.45	0.51
25:1H:748:G:C8	42:E8:89:ALA:HB1	2.45	0.51
25:1H:957:A:N1	25:1H:2458:G:H4'	2.25	0.51
25:1H:997:G:C2'	25:1H:998:C:H5'	2.40	0.51
25:1H:1019:U:H3	25:1H:1142(A):A:H62	1.59	0.51
31:51:64:LEU:HD23	31:51:67:LEU:HD23	1.93	0.51
31:51:154:PRO:HB3	31:51:163:TYR:CZ	2.46	0.51
39:B8:16:ARG:HB2	39:B8:18:ASP:OD1	2.10	0.51
40:C8:92:ARG:NH2	40:C8:96:ALA:HA	2.25	0.51
42:E8:64:MET:HE3	42:E8:109:GLU:HG3	1.92	0.51
45:H8:3:TYR:HE2	45:H8:55:HIS:HD2	1.57	0.51
55:1G:17:U:H2'	55:1G:18:C:C6	2.45	0.51
55:1G:1423:G:H2'	55:1G:1424:C:H6	1.75	0.51
7:62:116:ALA:HA	7:62:119:ARG:HE	1.75	0.51
19:AA:48:THR:HA	19:AA:61:TYR:HA	1.91	0.51
20:BA:79:ARG:O	20:BA:83:ARG:HG3	2.10	0.51
25:14:309:G:N3	25:14:329:G:O2'	2.43	0.51
25:14:478:A:N1	25:14:500:G:H4'	2.25	0.51
25:14:2318:G:H1	38:65:2:ALA:HA	1.74	0.51
25:14:2402:C:H41	25:14:2416:C:H1'	1.75	0.51
25:14:2599:G:C8	56:19:236:GLY:HA2	2.45	0.51
57:39:132:VAL:HG22	57:39:133:ASN:H	1.75	0.51
32:69:77:LEU:HD13	32:69:141:LYS:HB3	1.91	0.51
33:15:58:ASP:OD1	33:15:58:ASP:N	2.38	0.51
35:35:62:LEU:HB2	59:M5:27:THR:HG22	1.91	0.51
36:45:98:LYS:HB3	36:45:99:PRO:HD2	1.92	0.51
39:75:62:THR:HG22	39:75:75:ILE:HG12	1.90	0.51
1:13:509:A:H3'	62:13:1813:HOH:O	2.10	0.51
1:13:730:G:C5	1:13:731:G:H1'	2.45	0.51
1:13:751:U:H4'	15:6I:24:SER:HB2	1.93	0.51
1:13:909:A:H2'	1:13:910:C:O4'	2.10	0.51
1:13:1346:A:H5''	9:8E:120:ARG:NH1	2.25	0.51
2:1E:84:GLU:HB3	2:1E:219:VAL:HG21	1.91	0.51
6:5E:97:PHE:O	18:9I:31:LEU:HD23	2.10	0.51
6:5E:101:ALA:HB2	18:9I:28:GLU:HG2	1.92	0.51
22:1K:3:U:O2'	22:1K:4:G:O5'	2.23	0.51
22:1K:52:G:H2'	22:1K:53:A:C8	2.46	0.51
25:1H:389:G:H1	35:78:71:VAL:HG12	1.76	0.51
25:1H:568:U:H5'	25:1H:945:A:N1	2.25	0.51
25:1H:2592:G:N7	62:1H:3590:HOH:O	2.35	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:M8:38:LYS:HD2	50:M8:38:LYS:N	2.24	0.51
55:1G:1070:U:OP1	5:42:25:ARG:NH1	2.43	0.51
55:1G:1429:C:H2'	55:1G:1430:C:C6	2.45	0.51
55:1G:1443:G:O2'	39:75:122:ASP:OD2	2.28	0.51
2:12:74:LYS:NZ	2:12:205:ASP:O	2.36	0.51
2:12:172:ILE:H	2:12:172:ILE:HD12	1.75	0.51
3:22:46:GLU:O	3:22:83:ARG:NH2	2.43	0.51
13:4A:47:ASP:OD1	13:4A:47:ASP:N	2.39	0.51
13:4A:97:PRO:HB2	13:4A:101:GLN:HG3	1.91	0.51
17:8A:45:HIS:CD2	17:8A:47:PRO:HD3	2.45	0.51
25:14:1579:A:H2'	25:14:1580:A:C8	2.46	0.51
25:14:2745:C:H4'	31:59:142:GLY:O	2.10	0.51
28:29:57:LYS:HZ2	28:29:57:LYS:H	1.58	0.51
36:45:39:PRO:HA	36:45:97:VAL:O	2.10	0.51
1:13:1085:U:H3'	1:13:1086:U:H5	1.75	0.51
1:13:1348:U:H3	1:13:1374:A:H2	1.53	0.51
13:4I:3:ARG:HG2	13:4I:9:ILE:HG12	1.92	0.51
25:1H:197:A:N6	25:1H:2430:A:H2'	2.25	0.51
25:1H:270(B):A:H61	25:1H:270(Y):G:H1'	1.76	0.51
29:31:101:LEU:HD22	29:31:102:PRO:CD	2.40	0.51
34:68:23:ARG:HG3	34:68:24:VAL:N	2.24	0.51
49:L8:43:ILE:O	49:L8:47:VAL:HG23	2.11	0.51
55:1G:984:C:H2'	55:1G:985:C:C6	2.43	0.51
55:1G:1259:C:N4	55:1G:1260:C:O2	2.43	0.51
5:42:71:LEU:HD21	5:42:115:VAL:HG22	1.91	0.51
7:62:101:LEU:O	7:62:105:VAL:HG23	2.10	0.51
20:BA:50:GLU:CB	20:BA:100:ILE:HG12	2.39	0.51
25:14:587:C:OP2	35:35:21:ARG:NH2	2.43	0.51
25:14:1047:G:H2'	25:14:1110:G:H1	1.75	0.51
25:14:1964:G:H4'	25:14:1965:C:OP2	2.10	0.51
25:14:2261:C:C5	46:E5:16:SER:HB3	2.45	0.51
25:14:2688:U:H5	25:14:2720:U:OP2	1.94	0.51
26:1J:50:G:OP1	38:65:63:THR:HG23	2.09	0.51
58:D5:128:VAL:HG22	58:D5:129:SER:H	1.76	0.51
1:13:345:C:HO2'	1:13:346:G:N2	2.09	0.51
1:13:586:C:O2'	1:13:878:G:H4'	2.10	0.51
1:13:1072:G:H2'	1:13:1073:U:C6	2.45	0.51
4:3E:98:GLU:HG2	4:3E:189:PRO:HG2	1.93	0.51
14:5I:4:LYS:HA	14:5I:7:ILE:HG12	1.92	0.51
22:1K:66:G:OP2	36:88:60:ARG:NH2	2.43	0.51
25:1H:11:G:H2'	25:1H:12:U:H5'	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:444:C:H4'	29:31:49:ALA:HB2	1.92	0.51
25:1H:1657:C:H2'	25:1H:1658:C:C6	2.46	0.51
25:1H:2001:A:H2'	25:1H:2002:G:C8	2.45	0.51
25:1H:2635:C:OP1	28:21:79:ARG:NH2	2.43	0.51
46:I8:11:ARG:O	46:I8:14:ARG:NH2	2.43	0.51
49:L8:31:LEU:O	49:L8:32:GLN:HB2	2.09	0.51
55:1G:107:G:C2	55:1G:108:G:H1'	2.45	0.51
55:1G:1324:A:H2'	55:1G:1325:C:C6	2.45	0.51
55:1G:1489:G:H2'	55:1G:1490:C:O4'	2.11	0.51
3:22:39:ILE:O	3:22:43:LEU:HB2	2.10	0.51
3:22:112:SER:O	3:22:116:VAL:HG23	2.10	0.51
4:32:173:TRP:CZ3	4:32:193:ASP:HB3	2.45	0.51
7:62:23:VAL:O	7:62:27:ILE:HG12	2.10	0.51
18:9A:59:SER:HB2	18:9A:62:GLU:H	1.75	0.51
19:AA:63:THR:OG1	19:AA:65:ASN:OD1	2.28	0.51
20:BA:50:GLU:HA	20:BA:100:ILE:HG21	1.92	0.51
25:14:176:G:O2'	25:14:177:G:H5'	2.10	0.51
25:14:1138:G:H21	33:15:106:MET:HE3	1.75	0.51
25:14:2467:C:H4'	36:45:123:HIS:CD2	2.45	0.51
25:14:2542:A:H4'	25:14:2542:A:OP1	2.09	0.51
25:14:2610:C:O2	62:14:3678:HOH:O	2.18	0.51
26:1J:76:G:H2'	26:1J:77:U:O4'	2.11	0.51
35:35:93:GLY:O	35:35:123:LEU:HB2	2.11	0.51
1:13:851:G:H2'	1:13:852:G:C8	2.46	0.51
1:13:1053:G:H4'	1:13:1054:C:H5'	1.92	0.51
25:1H:207:A:H2'	25:1H:208:C:O4'	2.11	0.51
25:1H:467:G:OP1	53:P8:33:ARG:NH1	2.41	0.51
25:1H:1021:A:OP2	33:58:65:LYS:NZ	2.44	0.51
25:1H:1108:U:C2'	25:1H:1109:C:H5'	2.40	0.51
25:1H:1564:C:O2'	25:1H:1565:C:H5'	2.10	0.51
27:11:124:PRO:HG2	27:11:129:ASN:HD21	1.75	0.51
42:E8:92:ARG:NH1	42:E8:94:ASP:OD1	2.44	0.51
47:J8:85:LEU:HA	47:J8:86:SER:C	2.31	0.51
55:1G:626:U:C2	55:1G:627:G:C8	2.99	0.51
55:1G:986:A:H1'	19:AA:55:LYS:HA	1.92	0.51
7:62:26:PHE:HD1	7:62:101:LEU:HD22	1.76	0.51
15:6A:54:ARG:NH1	15:6A:58:MET:SD	2.84	0.51
25:14:638:G:H2'	25:14:639:U:C6	2.45	0.51
25:14:747:U:O2	25:14:2014:A:H1'	2.10	0.51
25:14:957:A:H5'	36:45:76:LYS:HD3	1.93	0.51
25:14:996:A:C2	25:14:997:G:C8	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1268:A:H2'	25:14:1269:A:O4'	2.11	0.51
25:14:1657:C:H2'	25:14:1658:C:H6	1.76	0.51
25:14:2468:G:N2	25:14:2481:G:O2'	2.36	0.51
31:59:144:VAL:O	31:59:148:ILE:HG12	2.11	0.51
1:13:779:C:H2'	1:13:780:A:O4'	2.11	0.51
1:13:807:A:H2'	1:13:808:C:C6	2.44	0.51
5:4E:82:VAL:HG21	5:4E:138:ALA:HA	1.93	0.51
25:1H:287:C:H2'	25:1H:288:C:H6	1.75	0.51
25:1H:1239:G:H2'	25:1H:1240:U:O4'	2.11	0.51
25:1H:1386:C:OP2	25:1H:1396:U:H5	1.93	0.51
25:1H:2156:G:N3	25:1H:2157:G:N2	2.58	0.51
25:1H:2168:G:H1	25:1H:2170:A:H62	1.58	0.51
25:1H:2246:G:H2'	25:1H:2247:A:C8	2.46	0.51
25:1H:2860:A:C8	25:1H:2861:G:H1'	2.45	0.51
26:16:87:G:N2	26:16:89(A):A:OP2	2.39	0.51
28:21:1:MET:HB3	28:21:200:GLU:OE1	2.11	0.51
29:31:183:VAL:O	29:31:187:VAL:HG23	2.11	0.51
52:O8:44:ARG:H	52:O8:44:ARG:HD3	1.76	0.51
54:Q8:48:PHE:O	54:Q8:49:VAL:HB	2.11	0.51
55:1G:920:U:H2'	55:1G:921:U:H6	1.75	0.51
55:1G:954:G:H2'	55:1G:955:U:C6	2.46	0.51
55:1G:1326:C:OP1	21:1B:17:THR:OG1	2.20	0.51
4:32:60:GLU:HG2	4:32:202:LEU:HB2	1.93	0.51
7:62:135:VAL:O	7:62:139:GLU:HG3	2.10	0.51
25:14:943:U:OP2	35:35:36:LYS:HE3	2.11	0.51
25:14:1055:G:O2'	25:14:1085:A:N1	2.33	0.51
25:14:1358:G:N2	25:14:1372:U:C5	2.79	0.51
25:14:1500:G:O2'	56:19:100:GLY:O	2.27	0.51
25:14:1636:C:H2'	25:14:1637:A:C8	2.46	0.51
25:14:1796:U:H2'	25:14:1797:C:C6	2.46	0.51
25:14:2537:U:H2'	25:14:2538:C:C6	2.45	0.51
32:69:125:GLU:OE1	32:69:141:LYS:HG3	2.11	0.51
1:13:690:G:H2'	1:13:691:G:O4'	2.11	0.51
1:13:1053:G:N7	1:13:1199:U:H3'	2.25	0.51
22:3K:17:OMG:H1'	22:3K:18:G:OP1	2.11	0.51
25:1H:226:G:H21	25:1H:228:A:H2	1.58	0.51
25:1H:1021:A:C8	25:1H:1022:G:H5''	2.39	0.51
25:1H:1997:G:P	62:1H:3908:HOH:O	2.65	0.51
40:C8:91:ASP:H	41:D8:11:GLN:HE22	1.58	0.51
43:F8:26:TYR:O	43:F8:81:VAL:HG12	2.11	0.51
4:32:22:LYS:HB2	4:32:26:CYS:SG	2.50	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:6A:11:VAL:HG21	15:6A:34:LEU:HD22	1.93	0.51
25:14:1266:G:O2'	25:14:2012:G:O6	2.21	0.51
25:14:1543:A:H2'	25:14:1544:C:H3'	1.93	0.51
25:14:1628:G:H2'	25:14:1629:U:C6	2.46	0.51
25:14:1819:A:H4'	25:14:1820:U:O5'	2.09	0.51
25:14:2638:G:O2'	25:14:2639:A:C8	2.64	0.51
26:1J:70:C:H2'	26:1J:71:C:H6	1.76	0.51
44:C5:47:LYS:N	44:C5:60:PHE:HB3	2.25	0.51
52:K5:15:GLU:HG2	52:K5:47:THR:HG21	1.92	0.51
1:13:313:A:H2'	1:13:314:C:H6	1.76	0.51
1:13:625:G:H4'	16:7I:16:HIS:ND1	2.25	0.51
1:13:665:A:N3	1:13:732:C:H2'	2.26	0.51
1:13:838:G:OP2	1:13:842:C:N4	2.43	0.51
1:13:1000:A:H2'	1:13:1001:G:C8	2.46	0.51
2:1E:8:LYS:HE2	2:1E:8:LYS:O	2.10	0.51
2:1E:163:PHE:CD1	2:1E:185:ILE:HG13	2.45	0.51
4:3E:134:ASP:HB2	4:3E:135:LEU:HD13	1.92	0.51
25:1H:1045:A:H1'	25:1H:1047:G:N3	2.26	0.51
25:1H:1794:U:H2'	25:1H:1795:C:C6	2.45	0.51
25:1H:2352:A:C4	25:1H:2366:A:C2	2.99	0.51
25:1H:2646:C:H2'	25:1H:2647:U:O4'	2.11	0.51
26:16:15:A:H3'	26:16:16:G:H5'	1.93	0.51
29:31:34:TRP:HB2	35:78:6:LEU:HG	1.92	0.51
29:31:152:GLU:HB2	29:31:191:ARG:HD2	1.93	0.51
31:51:125:VAL:HG12	31:51:127:GLU:O	2.10	0.51
38:A8:41:ASP:OD2	38:A8:44:LYS:HB2	2.11	0.51
46:I8:49:LYS:HG3	46:I8:80:HIS:ND1	2.26	0.51
54:Q8:9:GLY:HA2	54:Q8:12:LYS:H	1.76	0.51
55:1G:390:C:O2'	16:7A:28:ARG:NH1	2.44	0.51
2:12:69:LEU:HD23	2:12:70:PHE:N	2.26	0.51
9:82:17:VAL:HA	9:82:63:ILE:HG12	1.92	0.51
25:14:244:A:C2	25:14:255:A:C4	2.99	0.51
25:14:513:A:C2	25:14:514:A:C5	2.99	0.51
25:14:2469:A:O2'	36:45:56:ARG:HG2	2.11	0.51
57:39:28:ILE:HA	57:39:112:MET:HG2	1.93	0.51
32:69:29:TYR:O	32:69:32:PRO:HD2	2.10	0.51
33:15:120:LEU:HG	33:15:122:VAL:HG23	1.93	0.51
34:25:93:PRO:HD2	34:25:113:LYS:HG3	1.93	0.51
40:85:8:VAL:O	40:85:12:ARG:HG3	2.11	0.51
47:F5:85:LEU:HD23	47:F5:85:LEU:H	1.76	0.51
1:13:18:C:OP1	5:4E:127:ASN:ND2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1322:C:HO2'	1:13:1323:G:P	2.33	0.51
4:3E:15:GLU:OE2	4:3E:59:ARG:NE	2.44	0.51
16:7I:3:LYS:O	16:7I:21:VAL:HA	2.11	0.51
20:BI:89:ARG:HH21	20:BI:104:LEU:HD11	1.76	0.51
25:1H:1264:G:H5'	51:N8:11:THR:HG23	1.92	0.51
25:1H:1537:C:H2'	25:1H:1538:G:O4'	2.11	0.51
28:21:101:ARG:NH1	28:21:171:GLU:HB2	2.26	0.51
44:G8:29:GLU:HB3	44:G8:38:ILE:HG23	1.92	0.51
55:1G:1074:G:O2'	55:1G:1101:A:N1	2.41	0.51
55:1G:1129:C:H41	55:1G:1141:C:N4	2.05	0.51
4:32:13:ARG:C	4:32:15:GLU:H	2.14	0.51
4:32:26:CYS:HA	4:32:31:CYS:SG	2.50	0.51
9:82:4:TYR:HB2	9:82:19:LEU:HB2	1.93	0.51
12:3A:47:LYS:HG3	12:3A:48:PRO:HD2	1.92	0.51
25:14:1658:C:H2'	25:14:1659:U:C6	2.46	0.51
25:14:2311:A:H8	30:49:88:ILE:HG12	1.76	0.51
36:45:25:ASP:HB3	36:45:102:VAL:H	1.76	0.51
44:C5:23:ARG:HH11	44:C5:23:ARG:HG3	1.76	0.51
1:13:826:C:H2'	1:13:827:U:O2	2.11	0.50
1:13:1020:U:H2'	1:13:1021:G:C8	2.46	0.50
2:1E:18:GLY:N	2:1E:42:ILE:HG22	2.26	0.50
4:3E:61:LYS:HA	4:3E:203:VAL:HG22	1.93	0.50
25:1H:566:U:OP1	35:78:29:LYS:HD2	2.12	0.50
25:1H:642:G:H21	25:1H:646:A:H2	1.58	0.50
25:1H:910:A:C5	36:88:13:GLN:HG3	2.46	0.50
25:1H:2712:U:H1'	25:1H:2712(A):A:C8	2.45	0.50
26:16:6:C:H2'	26:16:7:G:H5''	1.93	0.50
34:68:7:TYR:CZ	34:68:44:LYS:HG3	2.46	0.50
55:1G:45:U:H2'	55:1G:46:G:H8	1.75	0.50
55:1G:963:G:H1	55:1G:972:C:H42	1.59	0.50
55:1G:1226:C:H2'	13:4A:103:THR:HB	1.93	0.50
2:12:97:TRP:CZ2	2:12:101:MET:HB2	2.45	0.50
3:22:130:VAL:O	3:22:134:ILE:HG12	2.11	0.50
16:7A:75:ARG:HG3	16:7A:80:PHE:CD2	2.46	0.50
22:1L:73:U:H2'	22:1L:74:C:H6	1.75	0.50
25:14:146:G:H2'	25:14:147:U:O4'	2.11	0.50
25:14:388:G:H5'	47:F5:25:LYS:HB2	1.94	0.50
25:14:1252:G:N1	40:85:37:GLU:OE2	2.42	0.50
25:14:1421:G:C2	25:14:1422:G:C8	2.99	0.50
25:14:2064:C:H2'	25:14:2065:C:C6	2.46	0.50
25:14:2150:U:H2'	25:14:2151:G:C8	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2439:A:C8	25:14:2439:A:C5'	2.93	0.50
25:14:2646:C:H2'	25:14:2647:U:O4'	2.11	0.50
56:19:70:TRP:CH2	56:19:150:LYS:HA	2.47	0.50
30:49:42:GLY:O	30:49:43:LEU:HD13	2.10	0.50
32:69:93:THR:H	32:69:96:ASP:HB2	1.75	0.50
36:45:25:ASP:CB	36:45:102:VAL:H	2.22	0.50
42:A5:19:LEU:HD23	51:J5:25:LEU:HD21	1.92	0.50
1:13:282:A:N3	1:13:282:A:H2'	2.26	0.50
1:13:1228:C:OP1	13:4I:115:LYS:HE3	2.11	0.50
13:4I:108:ARG:HG3	13:4I:108:ARG:NH1	2.18	0.50
22:1K:50:U:H2'	22:1K:51:C:O4'	2.11	0.50
25:1H:1105:U:H2'	25:1H:1106:G:H8	1.76	0.50
25:1H:1167:U:C2	25:1H:1183:G:N2	2.79	0.50
25:1H:1413:G:N2	25:1H:1589:C:O2	2.41	0.50
25:1H:1654:A:OP2	37:98:2:ARG:HD3	2.12	0.50
35:78:46:LYS:O	35:78:47:ASP:HB3	2.12	0.50
49:L8:4:LEU:O	49:L8:36:VAL:HA	2.11	0.50
55:1G:32:A:C2	55:1G:33:A:C4	2.99	0.50
4:32:159:ARG:O	4:32:163:GLU:N	2.43	0.50
12:3A:26:ALA:HB1	12:3A:27:LEU:HG	1.93	0.50
12:3A:59:ARG:NH2	12:3A:65:GLU:OE1	2.44	0.50
17:8A:87:LYS:O	17:8A:91:ARG:HG3	2.12	0.50
20:BA:67:ALA:HA	20:BA:73:HIS:H	1.75	0.50
25:14:7:G:H1	25:14:2896:C:H42	1.59	0.50
25:14:1053:C:N4	25:14:1106:G:H1	2.09	0.50
28:29:128:SER:OG	28:29:129:HIS:N	2.44	0.50
57:39:51:THR:HG23	57:39:92:PRO:HG2	1.94	0.50
35:35:62:LEU:HD23	59:M5:27:THR:HG22	1.92	0.50
44:C5:48:ALA:HB3	44:C5:59:GLY:HA2	1.92	0.50
1:13:224:C:H2'	1:13:225:C:C6	2.46	0.50
1:13:438:G:H4'	4:3E:123:HIS:CD2	2.45	0.50
1:13:1227:A:P	13:4I:111:LYS:HZ1	2.35	0.50
1:13:1277:C:O2'	1:13:1279:A:H1'	2.10	0.50
6:5E:100:ASN:ND2	18:9I:27:GLY:O	2.44	0.50
9:8E:95:LYS:O	9:8E:95:LYS:NZ	2.28	0.50
11:2I:41:THR:HG21	11:2I:71:LYS:HB2	1.92	0.50
14:5I:42:ILE:O	14:5I:46:GLU:HG3	2.12	0.50
16:7I:26:ARG:HE	16:7I:31:LYS:HB3	1.77	0.50
22:1K:16:C:H2'	22:1K:18:G:OP2	2.12	0.50
25:1H:1803:A:H4'	27:11:259:THR:HG23	1.92	0.50
25:1H:2303:G:O2'	30:4I:132:ASN:HB2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:41:173:LEU:HB3	30:41:178:PHE:CD2	2.46	0.50
55:1G:986:A:O2'	19:AA:55:LYS:O	2.28	0.50
7:62:149:ARG:HD3	11:2A:59:TYR:CE1	2.46	0.50
8:72:123:GLU:O	8:72:127:LEU:HB2	2.12	0.50
25:14:871:U:OP1	36:45:5:ARG:HG2	2.11	0.50
25:14:882:G:H1	25:14:894:C:N4	2.09	0.50
25:14:1450:C:H2'	25:14:1451:C:C6	2.46	0.50
25:14:1688:U:O2	25:14:1700:A:H5'	2.12	0.50
25:14:2056:G:C2	25:14:2057:A:C8	2.99	0.50
56:19:32:SER:O	56:19:33:LEU:HB2	2.09	0.50
58:D5:126:VAL:HG12	58:D5:163:LEU:HB2	1.94	0.50
50:I5:60:GLN:N	50:I5:60:GLN:OE1	2.44	0.50
1:13:1160:G:H1	1:13:1177:G:N2	2.08	0.50
1:13:1193:G:O2'	5:4E:25:ARG:NH2	2.44	0.50
1:13:1442:G:O6	1:13:1446:A:N6	2.44	0.50
3:2E:138:VAL:HG13	3:2E:149:ALA:HB3	1.93	0.50
3:2E:140:ARG:O	3:2E:144:SER:HB2	2.11	0.50
8:7E:38:ILE:HD11	8:7E:118:VAL:O	2.12	0.50
8:7E:65:TYR:HA	8:7E:79:VAL:HG23	1.93	0.50
12:3I:47:LYS:HA	12:3I:49:ASN:H	1.76	0.50
15:6I:38:ARG:HG2	15:6I:38:ARG:HH11	1.76	0.50
25:1H:1022:G:O6	33:58:66:LYS:NZ	2.36	0.50
25:1H:1441:G:H2'	25:1H:1442:G:H8	1.77	0.50
25:1H:1728:G:H3'	25:1H:1729:A:C5'	2.41	0.50
25:1H:1781:C:H3'	62:1H:3532:HOH:O	2.11	0.50
25:1H:1858:G:H8	25:1H:1858:G:OP2	1.94	0.50
25:1H:1968:G:H5'	62:1H:3892:HOH:O	2.11	0.50
25:1H:2127:G:H2'	25:1H:2128:C:O4'	2.12	0.50
25:1H:2208:U:H4'	27:11:151:LYS:HG2	1.94	0.50
26:16:31:C:H2'	26:16:32:C:C6	2.47	0.50
29:31:6:VAL:HG11	29:31:119:ARG:HA	1.92	0.50
31:51:139:GLN:HG3	31:51:140:LYS:N	2.25	0.50
32:61:33:ARG:HB3	32:61:35:LEU:HD23	1.94	0.50
45:H8:77:ASP:OD1	45:H8:80:ARG:NH1	2.44	0.50
55:1G:947:G:O3'	13:4A:109:THR:OG1	2.28	0.50
11:2A:87:THR:HG22	11:2A:91:ARG:NH2	2.26	0.50
21:1B:9:ARG:HG3	21:1B:10:ARG:H	1.76	0.50
25:14:273(C):C:H42	25:14:363(C):G:H1	1.58	0.50
25:14:527:C:H4'	25:14:528:A:H5'	1.93	0.50
25:14:975:G:H1'	25:14:990:A:C2	2.47	0.50
25:14:1021:A:H3'	25:14:1021:A:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1849:G:H2'	25:14:1850:G:C8	2.46	0.50
25:14:2567:G:H2'	25:14:2568:C:C6	2.47	0.50
28:29:55:ASN:ND2	28:29:73:GLU:O	2.44	0.50
43:B5:39:ILE:O	43:B5:43:VAL:HG13	2.11	0.50
44:C5:76:CYS:CB	44:C5:97:ARG:HD3	2.42	0.50
44:C5:99:CYS:SG	44:C5:100:ALA:N	2.84	0.50
1:13:9:G:C6	1:13:26:A:N6	2.79	0.50
1:13:22:G:H4'	1:13:885:G:C8	2.47	0.50
1:13:1064:G:H4'	1:13:1065:U:OP1	2.09	0.50
1:13:1404:C:H2'	1:13:1405:G:C8	2.47	0.50
2:1E:22:LYS:NZ	2:1E:35:GLU:OE2	2.43	0.50
5:4E:68:GLU:O	5:4E:68:GLU:HG3	2.12	0.50
25:1H:65:C:H2'	25:1H:66:C:C6	2.47	0.50
25:1H:142:G:H1'	43:F8:37:THR:CG2	2.33	0.50
25:1H:1113:U:H2'	25:1H:1114:G:C8	2.47	0.50
25:1H:2209:C:O2	25:1H:2216:G:C2	2.64	0.50
28:21:117:MET:CE	28:21:136:ARG:HA	2.34	0.50
29:31:164:ARG:HG3	29:31:175:THR:OG1	2.11	0.50
32:61:72:LEU:HD11	32:61:107:VAL:HG11	1.93	0.50
46:I8:60:PHE:CD1	46:I8:60:PHE:N	2.79	0.50
53:P8:5:TRP:NE1	53:P8:7:PRO:HG3	2.27	0.50
53:P8:8:ASN:OD1	53:P8:8:ASN:C	2.50	0.50
55:1G:390:C:H2'	55:1G:391:G:C8	2.46	0.50
4:32:108:LEU:HB3	4:32:110:PHE:CE1	2.46	0.50
25:14:528:A:N1	25:14:2042:A:H2'	2.26	0.50
25:14:678:C:H2'	25:14:679:C:C6	2.46	0.50
25:14:1159:U:H2'	25:14:1160:G:C8	2.46	0.50
25:14:1677:A:H2'	25:14:1678:G:C8	2.47	0.50
25:14:2572:A:N7	28:29:145:LYS:HB2	2.27	0.50
57:39:63:LYS:NZ	57:39:67:GLN:HE21	2.10	0.50
57:39:67:GLN:HG3	57:39:67:GLN:O	2.10	0.50
31:59:6:ARG:H	31:59:6:ARG:HD3	1.76	0.50
34:25:47:ILE:HG13	34:25:48:PRO:HD2	1.93	0.50
40:85:49:HIS:HA	40:85:52:ARG:HB2	1.94	0.50
47:F5:87:PRO:O	47:F5:91:LYS:N	2.40	0.50
1:13:243:A:H4'	1:13:244:U:H5''	1.94	0.50
1:13:411:A:C5	1:13:413:G:H1'	2.46	0.50
1:13:1004:A:O2'	1:13:1036:G:N1	2.40	0.50
1:13:1342:C:O2'	9:8E:124:GLN:HG3	2.11	0.50
2:1E:82:ARG:NE	2:1E:92:TYR:OH	2.45	0.50
4:3E:173:TRP:CG	4:3E:189:PRO:HG3	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:2I:59:TYR:CZ	11:2I:63:LEU:HD11	2.47	0.50
25:1H:218:A:H2	25:1H:235:U:H4'	1.76	0.50
25:1H:336:C:OP1	44:G8:83:THR:HG23	2.11	0.50
25:1H:911:A:H2'	36:88:9:TYR:OH	2.11	0.50
25:1H:1416:G:H21	25:1H:1586:A:H62	1.59	0.50
25:1H:1438:U:H2'	25:1H:1439:A:C8	2.46	0.50
25:1H:1935:G:H1'	25:1H:1964:G:N2	2.27	0.50
26:16:37:C:C2'	26:16:38:C:H5'	2.42	0.50
26:16:77:U:P	45:H8:19:ARG:HH22	2.35	0.50
48:K8:28:LYS:HB3	48:K8:53:LEU:HD21	1.92	0.50
52:O8:34:LEU:HB2	52:O8:36:LEU:HD22	1.94	0.50
55:1G:38:G:H4'	55:1G:547:A:N6	2.27	0.50
55:1G:1127:G:H21	55:1G:1146:A:H62	1.60	0.50
2:12:115:LEU:HD13	2:12:145:LEU:HB3	1.94	0.50
12:3A:71:PRO:O	12:3A:102:ARG:NH1	2.38	0.50
25:14:107:C:H2'	25:14:108:U:H6	1.75	0.50
25:14:185:U:H2'	25:14:186:G:H8	1.76	0.50
25:14:673:C:H4'	57:39:82:ILE:HG12	1.93	0.50
25:14:2138:C:N3	25:14:2153:G:N2	2.60	0.50
33:15:111:PRO:HA	33:15:114:ARG:NH1	2.26	0.50
40:85:92:ARG:CD	40:85:94:ASN:HB3	2.42	0.50
48:G5:63:VAL:O	48:G5:66:GLU:HG2	2.11	0.50
59:M5:14:VAL:HG13	59:M5:22:VAL:HG13	1.94	0.50
1:13:1044:A:C5	1:13:1045:C:H1'	2.46	0.50
1:13:1508:G:P	62:13:1803:HOH:O	2.69	0.50
6:5E:67:MET:SD	6:5E:75:LEU:HD12	2.52	0.50
10:1I:48:THR:OG1	10:1I:62:HIS:HD2	1.93	0.50
19:AI:41:VAL:HA	19:AI:44:MET:HB2	1.92	0.50
25:1H:2629:A:O2'	25:1H:2630:G:H5''	2.12	0.50
25:1H:2690:C:H5''	25:1H:2872:G:N2	2.27	0.50
25:1H:2789:C:H1'	25:1H:2892:A:H2	1.75	0.50
25:1H:2864:G:OP1	39:B8:119:LYS:HD2	2.11	0.50
28:21:131:ALA:HB1	62:21:401:HOH:O	2.12	0.50
31:51:102:ALA:HA	31:51:117:PRO:HD3	1.94	0.50
32:61:110:ASP:OD1	32:61:130:TYR:OH	2.25	0.50
38:A8:59:LYS:HG2	38:A8:60:GLY:H	1.77	0.50
46:I8:51:VAL:N	46:I8:62:LEU:HD12	2.27	0.50
49:L8:40:THR:HG23	49:L8:43:ILE:HG13	1.93	0.50
55:1G:690:G:H22	11:2A:55:LYS:NZ	2.10	0.50
25:14:94:G:N2	48:G5:47:ASN:HD22	2.10	0.50
25:14:826:U:H2'	25:14:828:U:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1198:U:H2'	25:14:1199:U:C6	2.47	0.50
25:14:1225:C:O3'	41:95:85:LYS:HA	2.11	0.50
25:14:1243:G:H1'	35:35:4:SER:O	2.11	0.50
25:14:1581:G:H2'	25:14:1582:C:O4'	2.10	0.50
25:14:2655:G:N2	25:14:2665:A:OP2	2.39	0.50
34:25:2:ILE:HG13	34:25:8:LEU:HD11	1.94	0.50
58:D5:127:LYS:O	58:D5:162:GLU:HB2	2.11	0.50
1:13:223:U:H2'	1:13:224:C:C6	2.44	0.50
1:13:652:U:C4	1:13:752:G:N3	2.80	0.50
1:13:1284:C:H3'	1:13:1285:A:C8	2.47	0.50
3:2E:78:GLY:HA3	3:2E:83:ARG:HB3	1.92	0.50
5:4E:147:ASP:HA	5:4E:150:ARG:NH1	2.27	0.50
23:2K:22:A:H5''	23:2K:22:A:H8	1.77	0.50
25:1H:1378:A:O2'	25:1H:1380:G:N7	2.33	0.50
25:1H:1991:U:H2'	25:1H:1992:G:H5''	1.93	0.50
25:1H:2152:G:H2'	25:1H:2153:G:C8	2.47	0.50
35:78:59:LEU:HD22	35:78:60:MET:N	2.27	0.50
44:G8:39:VAL:HB	44:G8:42:VAL:HG21	1.94	0.50
44:G8:100:ALA:HB1	44:G8:101:LYS:HB2	1.93	0.50
55:1G:604:G:H2'	55:1G:605:U:O4'	2.11	0.50
55:1G:1432:G:OP1	39:75:107:ASP:HB2	2.12	0.50
3:22:34:LEU:HG	3:22:38:ARG:NH2	2.20	0.50
9:82:24:GLY:HA2	9:82:59:PHE:O	2.12	0.50
19:AA:80:TYR:CZ	19:AA:82:GLY:HA2	2.46	0.50
25:14:1132:A:H2'	25:14:1133:U:C6	2.47	0.50
25:14:1520:U:H2'	25:14:1521:G:O4'	2.11	0.50
25:14:1728:G:H5''	25:14:1728:G:N3	2.27	0.50
25:14:2854:G:N2	25:14:2864:G:C4	2.80	0.50
32:69:101:LEU:HA	32:69:104:GLN:HE21	1.75	0.50
44:C5:44:ILE:HG13	44:C5:45:VAL:N	2.27	0.50
44:C5:82:PRO:HA	44:C5:99:CYS:HB3	1.94	0.50
48:G5:18:PRO:O	48:G5:21:LEU:HB2	2.11	0.50
1:13:1004:A:C2	1:13:1025:U:H1'	2.47	0.50
1:13:1028(B):C:N4	1:13:1032(B):G:O6	2.44	0.50
8:7E:121:ASP:OD1	8:7E:121:ASP:N	2.40	0.50
9:8E:114:TYR:HE2	10:1I:59:SER:HA	1.77	0.50
11:2I:32:ILE:HD12	11:2I:72:ALA:HB2	1.94	0.50
14:5I:41:ARG:HA	14:5I:44:LEU:HB3	1.94	0.50
25:1H:962:G:H2'	25:1H:963:U:C6	2.46	0.50
25:1H:1534:G:H3'	25:1H:1534:G:N3	2.27	0.50
25:1H:1999:C:H4'	25:1H:2723:C:O2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2152:G:H2'	25:1H:2153:G:H8	1.75	0.50
25:1H:2342:C:O2'	25:1H:2374:C:H5''	2.12	0.50
25:1H:2392:A:H2	25:1H:2424:C:N4	2.03	0.50
30:41:18:GLU:O	30:41:22:ARG:HG3	2.11	0.50
31:51:136:ILE:H	31:51:136:ILE:HD12	1.75	0.50
31:51:154:PRO:HB3	31:51:163:TYR:CE2	2.47	0.50
37:98:27:SER:HB3	37:98:34:ILE:CD1	2.42	0.50
42:E8:40:ASN:C	42:E8:41:LYS:HG2	2.33	0.50
55:1G:141:A:H1'	55:1G:182:U:O2	2.11	0.50
55:1G:624:C:H4'	16:7A:10:GLY:HA2	1.92	0.50
55:1G:625:G:H2'	55:1G:626:U:H6	1.77	0.50
55:1G:962:C:H42	55:1G:973:G:H1	1.60	0.50
55:1G:963:G:H21	10:1A:55:LYS:HD2	1.77	0.50
7:62:149:ARG:HG2	7:62:149:ARG:HH11	1.77	0.50
8:72:20:TYR:HA	8:72:65:TYR:CZ	2.46	0.50
8:72:120:THR:HG23	8:72:122:ARG:H	1.77	0.50
19:AA:23:ASN:HA	19:AA:27:GLU:CD	2.32	0.50
22:1L:35:QUO:C4	22:1L:35:QUO:C2	2.72	0.50
25:14:620:G:N3	25:14:620:G:H5'	2.27	0.50
25:14:756:C:H2'	25:14:757:U:H5'	1.93	0.50
25:14:2331:G:H4'	46:E5:43:THR:H	1.77	0.50
25:14:2506:U:O2'	25:14:2507:C:O5'	2.28	0.50
25:14:2542:A:N3	25:14:2542:A:H5''	2.26	0.50
25:14:2645:G:H3'	25:14:2646:C:H5'	1.94	0.50
44:C5:12:THR:HB	44:C5:75:ILE:HG21	1.93	0.50
1:13:4:U:O2'	1:13:5:U:OP1	2.27	0.49
1:13:313:A:H2'	1:13:314:C:C6	2.46	0.49
1:13:827:U:H5	1:13:872:A:N1	2.10	0.49
4:3E:158:ILE:O	4:3E:162:LEU:N	2.41	0.49
5:4E:28:PHE:O	5:4E:47:LYS:HA	2.11	0.49
10:1I:48:THR:OG1	10:1I:62:HIS:CD2	2.65	0.49
19:AI:42:PRO:HD3	50:M8:63:TYR:OH	2.12	0.49
22:3K:80:C:H4'	25:1H:1851:U:H4'	1.92	0.49
25:1H:11:G:C2'	25:1H:12:U:H5'	2.42	0.49
25:1H:240:G:H8	25:1H:240:G:O5'	1.93	0.49
25:1H:2023:G:H5'	25:1H:2617:C:H4'	1.93	0.49
26:16:112:G:H2'	26:16:113:C:H6	1.76	0.49
28:21:111:ARG:HD2	28:21:160:TYR:CD2	2.47	0.49
30:41:11:TYR:HA	30:41:15:VAL:HB	1.93	0.49
32:61:69:LYS:HA	32:61:136:VAL:HB	1.92	0.49
55:1G:720:C:O5'	55:1G:720:C:H6	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:1G:977:A:H2'	55:1G:978:A:H5'	1.94	0.49
55:1G:1213:A:N6	55:1G:1215:G:N3	2.60	0.49
5:42:142:LEU:O	5:42:143:ARG:NE	2.44	0.49
12:3A:117:ARG:HH21	12:3A:124:LYS:HA	1.77	0.49
21:1B:2:GLY:O	21:1B:4:GLY:N	2.45	0.49
22:3L:85:A:O2'	25:14:2394:C:O2	2.28	0.49
25:14:55:G:H2'	25:14:56:A:H8	1.76	0.49
25:14:963:U:OP1	62:14:3595:HOH:O	2.18	0.49
25:14:2127:G:H1	25:14:2161:C:H42	1.59	0.49
25:14:2233:U:H2'	25:14:2234:G:C8	2.46	0.49
25:14:2494:G:H2'	25:14:2495:G:H8	1.77	0.49
28:29:89:ASP:O	28:29:90:THR:OG1	2.28	0.49
57:39:78:ILE:HA	57:39:83:PHE:CD2	2.46	0.49
32:69:129:THR:HA	32:69:137:PRO:HA	1.94	0.49
36:45:66:ILE:HG13	36:45:67:ARG:N	2.25	0.49
1:13:417:C:H2'	1:13:418:C:C6	2.48	0.49
1:13:813:U:OP2	1:13:813:U:H6	1.95	0.49
2:1E:19:HIS:NE2	2:1E:206:ASP:OD2	2.40	0.49
2:1E:163:PHE:HA	2:1E:185:ILE:O	2.13	0.49
3:2E:79:ARG:HH22	11:2A:105:VAL:HG13	1.77	0.49
8:7E:82:HIS:HE1	8:7E:136:GLU:OE2	1.94	0.49
25:1H:498:G:C6	25:1H:499:U:C4	3.00	0.49
25:1H:1032:A:H2	25:1H:1122:G:H22	1.59	0.49
25:1H:1076:C:H2'	25:1H:1077:A:H5''	1.94	0.49
25:1H:2173:A:H3'	25:1H:2174:C:C6	2.47	0.49
25:1H:2340:G:O2'	25:1H:2341:G:H5'	2.11	0.49
25:1H:2461:C:H2'	25:1H:2462:U:C6	2.47	0.49
33:58:96:GLU:C	33:58:98:VAL:N	2.65	0.49
55:1G:1189:C:OP1	10:1A:51:ARG:NH2	2.34	0.49
55:1G:1466:C:H2'	55:1G:1467:G:O4'	2.12	0.49
5:42:96:PRO:HA	5:42:117:ASP:OD2	2.12	0.49
8:72:64:LYS:HG2	8:72:79:VAL:HG21	1.93	0.49
9:82:33:PHE:HE1	9:82:37:PHE:HD2	1.59	0.49
25:14:184:C:H2'	25:14:185:U:H6	1.78	0.49
25:14:654(C):G:H2'	25:14:654(D):G:O4'	2.11	0.49
25:14:2651:C:H42	25:14:2669:G:H1	1.59	0.49
25:14:2873:A:H8	37:55:6:SER:N	2.09	0.49
56:19:16:MET:HG3	56:19:206:LEU:O	2.12	0.49
30:49:106:LEU:HA	30:49:110:ALA:HB3	1.93	0.49
36:45:35:VAL:HB	36:45:130:LYS:HB3	1.94	0.49
37:55:103:ARG:HD2	37:55:108:GLY:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:65:88:ASP:OD1	38:65:90:GLY:N	2.39	0.49
58:D5:69:THR:HG22	58:D5:90:VAL:HG22	1.93	0.49
49:H5:6:VAL:O	49:H5:34:GLU:HA	2.12	0.49
1:13:501:C:OP2	12:3I:124:LYS:HE2	2.13	0.49
1:13:591:U:H2'	1:13:592:G:H8	1.77	0.49
1:13:735:C:O2'	1:13:736:C:H5'	2.12	0.49
1:13:946:A:H2'	1:13:947:G:C8	2.46	0.49
1:13:1132:C:H2'	1:13:1133:G:H8	1.75	0.49
15:6I:74:ASP:HB3	15:6I:77:ARG:HG2	1.94	0.49
20:BI:26:ASN:HB2	20:BI:71:THR:CG2	2.42	0.49
22:3K:71:C:H2'	22:3K:72:U:H6	1.78	0.49
25:1H:194:G:H2'	25:1H:195:A:O4'	2.12	0.49
25:1H:232:G:H8	25:1H:232:G:OP2	1.95	0.49
25:1H:244:A:H4'	35:78:74:GLU:HB2	1.93	0.49
25:1H:280:C:C2	25:1H:361:G:C2	3.01	0.49
25:1H:306:U:H2'	25:1H:307:G:O4'	2.12	0.49
25:1H:587:C:N3	35:78:33:ARG:NH1	2.60	0.49
25:1H:656:G:H2'	25:1H:657:U:O4'	2.12	0.49
25:1H:658:C:H2'	25:1H:659:C:C6	2.47	0.49
25:1H:826:U:H2'	25:1H:828:U:O4'	2.12	0.49
25:1H:1785:A:H4'	25:1H:1982:C:O2'	2.12	0.49
25:1H:1889:A:N1	25:1H:2234:G:H1'	2.28	0.49
25:1H:2356:C:H2'	25:1H:2357:U:O4'	2.12	0.49
33:58:96:GLU:O	33:58:98:VAL:N	2.42	0.49
39:B8:2:ASN:O	39:B8:3:ARG:HG2	2.12	0.49
48:K8:50:ILE:HD12	48:K8:51:ARG:N	2.24	0.49
55:1G:536:C:OP2	62:1G:1849:HOH:O	2.19	0.49
4:32:42:GLN:HG3	4:32:43:HIS:ND1	2.27	0.49
25:14:185:U:H4'	25:14:218:A:H4'	1.95	0.49
25:14:1045:A:N3	25:14:1047:G:N2	2.61	0.49
25:14:1769:G:O2'	25:14:1958:C:OP1	2.24	0.49
25:14:2262:U:P	46:E5:19:LYS:HZ3	2.35	0.49
56:19:44:ASN:ND2	56:19:46:GLN:HG3	2.27	0.49
30:49:143:GLU:N	30:49:143:GLU:OE2	2.45	0.49
31:59:103:LEU:HD23	31:59:103:LEU:H	1.76	0.49
37:55:12:ARG:HD3	37:55:16:HIS:CG	2.47	0.49
39:75:18:ASP:OD1	39:75:18:ASP:N	2.43	0.49
41:95:85:LYS:CD	41:95:87:HIS:H	2.26	0.49
1:13:748:C:H6	1:13:748:C:O5'	1.95	0.49
1:13:945:G:C2	1:13:946:A:C8	2.99	0.49
1:13:1187:G:N3	14:5I:60:SER:OG	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1349:A:H2'	1:13:1350:A:C8	2.46	0.49
3:2E:175:LEU:HD21	3:2E:201:TYR:CE2	2.48	0.49
7:6E:65:ALA:HB2	7:6E:128:ALA:HB2	1.94	0.49
15:6I:39:LEU:HD13	15:6I:56:LEU:HB2	1.93	0.49
25:1H:2:G:H1	25:1H:2901:C:H42	1.60	0.49
25:1H:527:C:N4	25:1H:2777:G:O2'	2.45	0.49
25:1H:1640:C:H2'	25:1H:1641:A:C8	2.48	0.49
25:1H:2378:A:H4'	38:A8:23:ARG:NH1	2.27	0.49
25:1H:2724:C:OP1	28:21:118:LYS:HE3	2.12	0.49
29:31:64:ILE:HG23	29:31:65:TRP:CD1	2.47	0.49
44:G8:97:ARG:CG	44:G8:102:CYS:HB2	2.41	0.49
55:1G:408:A:H2'	55:1G:409:G:O4'	2.13	0.49
55:1G:779:C:H2'	55:1G:780:A:O4'	2.12	0.49
55:1G:976:G:OP1	14:5A:31:ARG:HB3	2.13	0.49
6:52:81:ILE:HD11	56:19:125:ILE:CG1	2.42	0.49
9:82:63:ILE:HD11	9:82:81:ILE:HD11	1.94	0.49
19:AA:66:MET:N	19:AA:67:VAL:HB	2.28	0.49
23:2L:10:G:N2	23:2L:27:G:H1'	2.27	0.49
22:3L:14:A:H3'	22:3L:15:G:H5''	1.95	0.49
25:14:279:C:N4	25:14:361:G:H1	2.11	0.49
25:14:636:G:N7	35:35:113:LYS:HE2	2.27	0.49
25:14:982:C:O5'	25:14:982:C:H6	1.95	0.49
25:14:1268:A:C2	25:14:2013:A:C4	3.01	0.49
25:14:1784:A:H4'	25:14:1785:A:O5'	2.13	0.49
25:14:2250:G:C6	36:45:82:ARG:HD2	2.46	0.49
26:1J:46:A:H2'	26:1J:47:C:C6	2.47	0.49
30:49:32:PRO:HB2	30:49:172:LEU:HD22	1.93	0.49
35:35:39:LYS:HB2	35:35:45:LEU:HD11	1.93	0.49
50:I5:16:CYS:SG	50:I5:36:CYS:HA	2.52	0.49
52:K5:52:VAL:HG22	52:K5:53:LYS:H	1.77	0.49
1:13:128:G:H4'	17:8I:3:LYS:HG2	1.94	0.49
1:13:269:C:H2'	1:13:270:A:C8	2.47	0.49
1:13:1315:U:H2'	1:13:1316:G:O4'	2.12	0.49
2:1E:80:ILE:HD13	2:1E:212:GLN:HG2	1.94	0.49
22:3K:42:U:H2'	22:3K:43:G:C8	2.48	0.49
25:1H:550:G:O2'	25:1H:1220:A:N3	2.38	0.49
25:1H:821:A:H2'	25:1H:946:G:H5''	1.93	0.49
28:21:51:PHE:O	28:21:74:PRO:HB2	2.11	0.49
29:31:24:LEU:HD21	29:31:114:VAL:HG12	1.94	0.49
29:31:66:PRO:O	29:31:67:GLN:CB	2.60	0.49
31:51:22:GLY:O	31:51:37:VAL:HG23	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:61:29:TYR:O	32:61:33:ARG:HB2	2.13	0.49
32:61:67:ARG:O	32:61:71:ILE:HG22	2.12	0.49
33:58:39:ARG:HB3	33:58:41:ASP:OD1	2.12	0.49
37:98:48:VAL:O	37:98:51:LEU:N	2.45	0.49
40:C8:92:ARG:CZ	40:C8:96:ALA:HA	2.42	0.49
42:E8:12:ILE:HG13	42:E8:42:ARG:HH11	1.76	0.49
44:G8:85:VAL:HG22	44:G8:98:VAL:HB	1.94	0.49
52:O8:47:THR:HG22	52:O8:48:VAL:H	1.76	0.49
55:1G:1004:A:OP1	55:1G:1024:G:N1	2.45	0.49
55:1G:1053:G:O6	55:1G:1199:U:H2'	2.12	0.49
55:1G:1192:C:OP2	3:22:4:LYS:NZ	2.45	0.49
55:1G:1348:U:H4'	9:82:120:ARG:HD2	1.93	0.49
55:1G:1368:G:OP1	9:82:111:ARG:NH2	2.42	0.49
55:1G:1504:G:OP1	55:1G:1507:A:H4'	2.13	0.49
11:2A:32:ILE:HD13	11:2A:72:ALA:HB2	1.95	0.49
23:2L:65:G:OP1	46:E5:11:ARG:NH2	2.42	0.49
25:14:332:A:O2'	25:14:334:C:OP2	2.28	0.49
25:14:740:U:O3'	62:14:3496:HOH:O	2.19	0.49
25:14:1013:C:H2'	25:14:1014:U:H6	1.76	0.49
25:14:1432:C:H2'	25:14:1433:U:O4'	2.11	0.49
25:14:2768:C:O2'	33:15:89:LYS:HE2	2.12	0.49
28:29:14:ILE:HD11	28:29:173:VAL:HG11	1.94	0.49
28:29:41:LYS:HG3	28:29:42:ASP:H	1.78	0.49
31:59:106:THR:HG22	31:59:112:PRO:HB3	1.93	0.49
33:15:28:THR:HG22	33:15:106:MET:HE1	1.94	0.49
33:15:136:GLU:O	33:15:137:LYS:NZ	2.36	0.49
1:13:272:C:H2'	1:13:273:A:C8	2.47	0.49
1:13:520:A:N1	1:13:536:C:H1'	2.28	0.49
1:13:901:A:C5	1:13:902:G:H1'	2.47	0.49
1:13:1128:C:C2	1:13:1144:G:N2	2.79	0.49
2:1E:12:GLU:HA	2:1E:16:HIS:ND1	2.27	0.49
7:6E:26:PHE:CE2	7:6E:30:ILE:HD11	2.47	0.49
17:8I:27:PHE:CE1	17:8I:36:ILE:HD11	2.48	0.49
25:1H:249:C:H4'	25:1H:250:G:O5'	2.13	0.49
25:1H:286:C:H2'	25:1H:287:C:H6	1.77	0.49
25:1H:455:C:N3	25:1H:472:A:H2'	2.28	0.49
25:1H:1591:G:H2'	25:1H:1592:C:C6	2.47	0.49
35:78:94:GLU:OE2	35:78:124:LYS:HD3	2.12	0.49
38:A8:42:ASP:O	38:A8:43:GLU:HB2	2.12	0.49
10:1A:25:GLU:O	10:1A:29:ARG:HB3	2.13	0.49
20:BA:13:LEU:O	20:BA:17:ARG:HG3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:2L:32:G:H2'	23:2L:33:OMC:H6	1.78	0.49
25:14:117:G:C6	25:14:119:A:C6	3.01	0.49
25:14:1224:G:N2	25:14:1227:A:OP2	2.34	0.49
25:14:1337:G:H2'	25:14:1338:G:C8	2.44	0.49
25:14:1430:C:H2'	25:14:1431:U:H6	1.78	0.49
25:14:1495:A:O2'	25:14:1496:A:H5'	2.12	0.49
25:14:1614:A:N6	42:A5:87:PRO:HA	2.27	0.49
25:14:1776:G:OP2	62:14:3478:HOH:O	2.19	0.49
25:14:2820:A:C5	37:55:4:LEU:HD11	2.47	0.49
26:1J:40:U:N3	26:1J:43:C:H5''	2.28	0.49
57:39:107:LYS:HE2	57:39:205:ARG:HD2	1.94	0.49
36:45:120:ILE:O	36:45:123:HIS:HB2	2.13	0.49
58:D5:45:ASP:O	58:D5:49:ARG:HG2	2.12	0.49
1:13:1002:G:C4	1:13:1003:G:C8	3.00	0.49
1:13:1229:A:H2'	1:13:1230:C:C6	2.47	0.49
4:3E:19:LEU:HD23	4:3E:21:LEU:HD11	1.92	0.49
4:3E:92:VAL:O	4:3E:96:LEU:HD13	2.13	0.49
17:8I:31:LEU:HD23	17:8I:32:TYR:CZ	2.48	0.49
23:2K:20:G:O6	30:41:83:ARG:NH2	2.45	0.49
25:1H:298:G:P	44:G8:84:ARG:HH12	2.35	0.49
25:1H:1209:G:H21	25:1H:1210:A:H62	1.61	0.49
25:1H:2036:C:P	62:1H:3941:HOH:O	2.70	0.49
31:51:12:PRO:HG2	31:51:13:LYS:HE2	1.95	0.49
34:68:85:VAL:HG11	34:68:114:ILE:HD13	1.95	0.49
38:A8:36:TYR:N	38:A8:36:TYR:CD1	2.80	0.49
55:1G:187:C:H2'	55:1G:188:U:O4'	2.13	0.49
55:1G:411:A:H62	55:1G:413:G:N2	2.10	0.49
55:1G:1057:G:C4	55:1G:1204:A:C2	3.00	0.49
5:42:42:GLY:HA3	5:42:65:ASN:O	2.12	0.49
17:8A:45:HIS:O	17:8A:73:VAL:HG12	2.12	0.49
17:8A:64:PRO:HB3	17:8A:70:ARG:NH1	2.27	0.49
25:14:102:G:O6	44:C5:92:ASN:ND2	2.43	0.49
25:14:593:G:H1'	59:M5:4:MET:HE1	1.92	0.49
25:14:821:A:H5''	25:14:822:U:O5'	2.12	0.49
25:14:1833:U:O2'	25:14:1969:A:N1	2.34	0.49
25:14:1971:A:H5''	62:14:3514:HOH:O	2.13	0.49
25:14:2319:G:N1	25:14:2334:G:OP2	2.43	0.49
28:29:117:MET:HA	28:29:122:PHE:N	2.27	0.49
57:39:79:GLY:HA2	57:39:86:GLY:HA2	1.94	0.49
32:69:47:LEU:O	32:69:51:ILE:HG13	2.12	0.49
32:69:130:TYR:HB3	32:69:136:VAL:HG13	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:502:G:C6	1:13:503:C:C4	3.01	0.49
1:13:686:U:O4	1:13:703:G:H1'	2.13	0.49
1:13:713:G:N2	1:13:714:G:C2	2.80	0.49
1:13:714:G:H2'	1:13:715:A:C8	2.48	0.49
1:13:756:C:H2'	1:13:757:U:O4'	2.13	0.49
1:13:1262:C:H2'	1:13:1263:C:C6	2.47	0.49
1:13:1313:U:OP1	19:AI:6:LYS:HB2	2.13	0.49
1:13:1348:U:H2'	1:13:1349:A:H8	1.77	0.49
4:3E:30:LYS:C	4:3E:32:ALA:N	2.66	0.49
7:6E:113:GLU:CG	7:6E:119:ARG:HG2	2.42	0.49
9:8E:43:ALA:HA	9:8E:74:ILE:HD13	1.94	0.49
10:1I:40:LEU:HB2	10:1I:69:ASN:HB2	1.94	0.49
12:3I:27:LEU:HD23	12:3I:33:ARG:HB2	1.93	0.49
23:2K:8:4SU:O2	23:2K:22:A:H2	1.94	0.49
25:1H:229:A:OP2	35:78:150:ALA:HB1	2.13	0.49
25:1H:839:U:H2'	25:1H:840:C:C6	2.48	0.49
25:1H:918:A:H8	25:1H:918:A:O5'	1.96	0.49
25:1H:1110:G:O2'	25:1H:1111:A:H8	1.95	0.49
25:1H:1257:C:H4'	29:31:83:PHE:CE1	2.48	0.49
25:1H:1514:U:H2'	25:1H:1515:C:C6	2.47	0.49
25:1H:1899:G:N2	25:1H:1902:C:C5	2.65	0.49
25:1H:2461:C:H2'	25:1H:2462:U:H6	1.77	0.49
27:11:112:GLN:O	27:11:115:GLN:HG3	2.13	0.49
30:41:109:VAL:O	30:41:113:ARG:HG3	2.13	0.49
45:H8:111:VAL:HG21	45:H8:174:VAL:HG11	1.95	0.49
55:1G:1127:G:N2	55:1G:1146:A:H62	2.10	0.49
55:1G:1250:A:H4'	9:82:68:GLY:N	2.27	0.49
7:62:15:ASP:OD1	7:62:44:TYR:OH	2.31	0.49
11:2A:34:ASP:OD1	11:2A:38:ASN:N	2.44	0.49
13:4A:33:ALA:O	13:4A:37:THR:OG1	2.19	0.49
17:8A:59:ILE:HG22	17:8A:71:PHE:CD2	2.48	0.49
25:14:29:U:H2'	25:14:30:G:H8	1.76	0.49
25:14:522:G:H2'	25:14:523:C:C6	2.47	0.49
25:14:2310:A:H5'	25:14:2311:A:OP2	2.13	0.49
25:14:2459:A:C5	25:14:2460:U:C5	3.00	0.49
25:14:2818:G:OP2	37:55:42:LYS:NZ	2.46	0.49
36:45:75:THR:HB	36:45:86:GLY:HA3	1.94	0.49
41:95:67:GLY:O	41:95:88:ARG:NH1	2.41	0.49
42:A5:65:LEU:CD1	42:A5:68:ARG:HD2	2.41	0.49
59:M5:60:LEU:C	59:M5:61:LEU:HG	2.33	0.49
1:13:836:G:C6	1:13:851:G:C6	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1262:C:H2'	1:13:1263:C:H6	1.78	0.49
25:1H:330:A:O2'	25:1H:331:A:C8	2.65	0.49
25:1H:955:C:OP1	36:88:87:LYS:HE2	2.13	0.49
25:1H:1195:G:H5''	25:1H:1195:G:H8	1.77	0.49
25:1H:1680:U:H2'	25:1H:1681:G:O4'	2.12	0.49
25:1H:2836:U:H2'	25:1H:2837:G:C8	2.48	0.49
27:11:10:THR:OG1	27:11:13:ARG:HB2	2.12	0.49
27:11:131:LEU:HB2	27:11:136:ILE:HD11	1.94	0.49
28:21:144:ARG:HH11	28:21:144:ARG:HG3	1.78	0.49
38:A8:26:LEU:HD22	38:A8:87:PHE:CD1	2.48	0.49
53:P8:15:THR:HG22	53:P8:16:HIS:CE1	2.48	0.49
55:1G:717:C:H6	55:1G:717:C:H5''	1.77	0.49
55:1G:926:G:H5'	55:1G:927:G:O5'	2.12	0.49
55:1G:1119:C:H2'	55:1G:1120:G:H8	1.78	0.49
55:1G:1119:C:H2'	55:1G:1120:G:C8	2.47	0.49
4:32:127:THR:HG21	4:32:149:ALA:HB2	1.95	0.49
7:62:15:ASP:HB3	7:62:19:GLY:N	2.27	0.49
22:3L:79:A:H2'	22:3L:80:C:O4'	2.12	0.49
25:14:732:C:H3'	62:14:3423:HOH:O	2.11	0.49
25:14:2370:G:H21	52:K5:45:LYS:NZ	2.10	0.49
28:29:117:MET:HA	28:29:122:PHE:H	1.78	0.49
32:69:76:THR:HG23	32:69:77:LEU:H	1.76	0.49
34:25:7:TYR:HE1	34:25:20:MET:HE3	1.78	0.49
34:25:24:VAL:HA	34:25:39:ILE:HG22	1.95	0.49
39:75:2:ASN:O	39:75:2:ASN:ND2	2.45	0.49
39:75:5:ALA:HA	39:75:8:LYS:HB2	1.94	0.49
40:85:92:ARG:NH2	41:95:11:GLN:H	2.10	0.49
52:K5:16:CYS:H	52:K5:47:THR:HG21	1.78	0.49
1:13:1366:C:H2'	1:13:1367:C:C6	2.47	0.49
4:3E:11:LEU:HD12	4:3E:21:LEU:HD13	1.94	0.49
23:2K:20:G:C2	23:2K:58:A:N3	2.81	0.49
22:3K:71:C:H2'	22:3K:72:U:C6	2.48	0.49
25:1H:223:A:H5''	25:1H:422:A:H5'	1.95	0.49
25:1H:236:C:H2'	25:1H:237:C:H6	1.78	0.49
25:1H:557:U:H2'	25:1H:558:G:H8	1.78	0.49
25:1H:654(B):C:H2'	25:1H:654(C):G:H8	1.77	0.49
25:1H:1534:G:H22	25:1H:1538:G:N2	2.11	0.49
25:1H:2038:G:H2'	25:1H:2039:C:H6	1.78	0.49
38:A8:28:VAL:HG11	38:A8:98:VAL:HG13	1.95	0.49
55:1G:793:U:O2	55:1G:1516:G:H4'	2.13	0.49
55:1G:877:C:H5''	8:72:88:LYS:HD3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:1G:963:G:H21	10:1A:55:LYS:CE	2.25	0.49
55:1G:1105:A:H2'	55:1G:1106:G:H8	1.76	0.49
55:1G:1346:A:H5''	55:1G:1348:U:H1'	1.94	0.49
2:12:101:MET:O	2:12:105:PHE:HB2	2.12	0.49
25:14:303:U:H2'	25:14:304:G:O4'	2.13	0.49
25:14:330:A:H2	25:14:1210:A:O2'	1.95	0.49
25:14:606:U:H4'	25:14:658:C:H4'	1.95	0.49
25:14:2100:G:N2	25:14:2190:G:H1'	2.28	0.49
25:14:2712:U:H2'	25:14:2714:G:H5''	1.94	0.49
56:19:228:PRO:HD3	56:19:234:GLY:C	2.33	0.49
30:49:102:PHE:HA	30:49:105:LYS:HE3	1.95	0.49
35:35:57:THR:HB	35:35:60:MET:HB2	1.95	0.49
36:45:18:LYS:H	36:45:98:LYS:HZ3	1.59	0.49
42:A5:36:LEU:HD11	42:A5:47:VAL:HG12	1.95	0.49
58:D5:151:HIS:HB3	58:D5:167:PRO:HB3	1.95	0.49
1:13:474:G:H2'	1:13:475:G:C8	2.47	0.48
1:13:517:G:N1	1:13:533:A:OP2	2.44	0.48
2:1E:215:LEU:O	2:1E:219:VAL:HG23	2.13	0.48
7:6E:13:GLN:O	7:6E:24:THR:HG21	2.13	0.48
25:1H:559:G:H22	40:C8:49:HIS:CE1	2.31	0.48
25:1H:890:A:H8	25:1H:892:G:C8	2.30	0.48
25:1H:1204:A:H61	25:1H:1240:U:H2'	1.78	0.48
25:1H:2467:C:C2'	25:1H:2468:G:H5'	2.43	0.48
29:31:101:LEU:HB3	29:31:106:ARG:HD3	1.95	0.48
35:78:18:ARG:O	35:78:18:ARG:HG3	2.13	0.48
40:C8:75:ASN:HB3	40:C8:77:SER:N	2.28	0.48
47:J8:24:ALA:HB1	47:J8:26:ARG:HG3	1.94	0.48
54:Q8:40:GLU:HG3	54:Q8:41:ILE:HD13	1.95	0.48
55:1G:957:U:H2'	55:1G:959:A:OP2	2.12	0.48
55:1G:1208:C:H2'	55:1G:1209:C:C6	2.47	0.48
2:12:15:VAL:HB	2:12:16:HIS:ND1	2.28	0.48
6:52:33:TYR:CZ	6:52:78:GLU:HG3	2.48	0.48
10:1A:22:LYS:NZ	10:1A:88:LEU:O	2.40	0.48
11:2A:51:LYS:HB2	11:2A:51:LYS:HE3	1.58	0.48
13:4A:86:CYS:HB3	19:AA:74:PHE:HE1	1.77	0.48
25:14:118:A:N3	25:14:178:G:H1'	2.27	0.48
25:14:188:G:H1	25:14:208:C:N4	2.10	0.48
25:14:483:A:H4'	44:C5:49:VAL:HA	1.94	0.48
25:14:632:A:H2'	25:14:633:A:C8	2.48	0.48
25:14:661:C:H1'	35:35:12:ALA:HA	1.95	0.48
25:14:1511:A:H2'	25:14:1512:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1859:A:N6	25:14:1883:G:O2'	2.46	0.48
25:14:2340:G:H2'	25:14:2341:G:H8	1.78	0.48
25:14:2503:A:P	62:14:3583:HOH:O	2.71	0.48
56:19:218:ARG:HB3	56:19:219:PRO:HD2	1.94	0.48
28:29:26:ILE:HB	28:29:182:LEU:HB3	1.94	0.48
37:55:12:ARG:HH11	37:55:12:ARG:HG3	1.77	0.48
37:55:14:SER:HA	37:55:17:ARG:NH1	2.28	0.48
1:13:598:U:H4'	8:7E:94:TYR:CD2	2.47	0.48
1:13:624:C:O3'	16:7I:10:GLY:HA2	2.13	0.48
1:13:1402:C:H2'	1:13:1403:C:O4'	2.11	0.48
7:6E:120:ILE:O	7:6E:124:LEU:HB2	2.13	0.48
11:2I:69:ALA:HB1	11:2I:103:LEU:HD21	1.95	0.48
19:AI:40:ILE:HG22	19:AI:69:HIS:O	2.12	0.48
22:1K:27:A:H3'	22:1K:28:G:H8	1.78	0.48
23:2K:37:U:H2'	23:2K:38:A:H8	1.77	0.48
25:1H:973:A:O4'	25:1H:1188:U:C6	2.65	0.48
25:1H:1042:G:H1	25:1H:1113:U:H3	1.61	0.48
25:1H:1956:U:H1'	25:1H:2552:U:OP1	2.13	0.48
25:1H:2053:G:P	62:1H:3702:HOH:O	2.70	0.48
26:16:71:C:C2	26:16:72:G:C8	3.01	0.48
31:51:3:ARG:NE	31:51:3:ARG:HA	2.28	0.48
37:98:62:ALA:O	37:98:66:VAL:HG23	2.13	0.48
38:A8:67:ARG:O	38:A8:71:ARG:HG3	2.14	0.48
44:G8:94:LYS:HG3	44:G8:95:LYS:H	1.77	0.48
55:1G:95:G:H2'	55:1G:96:G:O4'	2.13	0.48
55:1G:540:G:H2'	55:1G:541:G:O4'	2.13	0.48
55:1G:735:C:H2'	55:1G:736:C:H6	1.78	0.48
55:1G:1167:A:H2'	55:1G:1169:A:O4'	2.13	0.48
55:1G:1226:C:H4'	19:AA:80:TYR:OH	2.12	0.48
55:1G:1306:A:N6	55:1G:1331:G:H1'	2.27	0.48
4:32:14:ARG:HH11	4:32:14:ARG:HG3	1.78	0.48
4:32:33:MET:O	4:32:35:ARG:N	2.46	0.48
15:6A:39:LEU:CD1	15:6A:56:LEU:HB2	2.42	0.48
25:14:1022:G:C6	25:14:1140:C:C4	3.00	0.48
25:14:1035:U:H2'	25:14:1036:G:C8	2.48	0.48
25:14:1224:G:OP2	41:95:66:ARG:NH2	2.47	0.48
25:14:1818:U:H2'	56:19:157:ARG:HG3	1.95	0.48
25:14:2153:G:O2'	25:14:2154:G:O4'	2.23	0.48
30:49:55:LYS:HA	30:49:58:GLN:HE21	1.78	0.48
38:65:74:ALA:HB1	38:65:107:GLU:CB	2.42	0.48
41:95:48:GLY:HA3	41:95:52:VAL:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:60:A:H4'	1:13:61:G:H5'	1.95	0.48
1:13:222:U:H2'	1:13:223:U:C6	2.48	0.48
1:13:1106:G:C4	1:13:1107:C:C5	3.01	0.48
1:13:1322:C:O2'	1:13:1323:G:P	2.71	0.48
3:2E:151:VAL:HA	3:2E:199:LYS:O	2.13	0.48
8:7E:39:LEU:HB3	8:7E:45:ILE:HD11	1.94	0.48
16:7I:77:ALA:HB3	16:7I:79:VAL:H	1.77	0.48
25:1H:654(H):G:N7	25:1H:654(N):G:N2	2.60	0.48
25:1H:1021:A:C8	25:1H:1021:A:C3'	2.95	0.48
25:1H:1093:G:N1	25:1H:1097:U:OP2	2.35	0.48
25:1H:1474:C:H2'	25:1H:1475:G:C8	2.48	0.48
25:1H:1567:A:H5''	27:11:58:HIS:CG	2.47	0.48
25:1H:2309:A:C2	25:1H:2310:A:N7	2.81	0.48
26:16:40:U:C2'	26:16:45:A:H61	2.25	0.48
30:41:107:LEU:HD11	30:41:178:PHE:CE1	2.49	0.48
33:58:28:THR:HA	33:58:106:MET:HE2	1.95	0.48
47:J8:60:PHE:HE2	47:J8:91:LYS:NZ	2.08	0.48
55:1G:78:G:H1	55:1G:91:C:N4	2.11	0.48
55:1G:192:U:H2'	55:1G:193:C:C6	2.49	0.48
55:1G:601:C:H2'	55:1G:602:A:C8	2.48	0.48
55:1G:741:G:H2'	55:1G:742:G:O4'	2.14	0.48
55:1G:1372:U:OP1	9:82:72:GLY:N	2.46	0.48
2:12:180:LEU:HB2	2:12:182:ILE:HD13	1.95	0.48
24:4L:13:A:O2'	24:4L:14:A:OP1	2.23	0.48
25:14:654(B):C:H2'	25:14:654(C):G:C8	2.47	0.48
25:14:746:A:H2'	25:14:2612:C:H5''	1.95	0.48
25:14:1060:U:H4'	25:14:1061:U:H5''	1.94	0.48
25:14:2465:C:O2	25:14:2486:G:C2	2.67	0.48
25:14:2600:A:H2'	25:14:2601:C:C6	2.48	0.48
28:29:56:PRO:HD2	28:29:58:ARG:NH2	2.28	0.48
40:85:11:ARG:HH11	40:85:11:ARG:HG3	1.77	0.48
1:13:258:G:H2'	1:13:259:G:H8	1.77	0.48
1:13:412:A:H4'	1:13:413:G:O5'	2.12	0.48
1:13:712:A:O2'	1:13:713:G:H5'	2.14	0.48
1:13:792:A:H4'	1:13:793:U:O5'	2.13	0.48
1:13:1238:A:N3	1:13:1241:G:O2'	2.38	0.48
1:13:1516:G:N1	1:13:1519:A:OP2	2.45	0.48
4:3E:82:ALA:O	4:3E:85:LYS:HB2	2.13	0.48
7:6E:15:ASP:OD1	7:6E:44:TYR:OH	2.31	0.48
10:1I:29:ARG:HH12	10:1I:84:GLN:NE2	2.10	0.48
17:8I:12:SER:HB2	17:8I:20:THR:HB	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:528:A:C2	25:1H:2043:C:H4'	2.49	0.48
25:1H:602:G:H3'	25:1H:654(V):A:H61	1.78	0.48
25:1H:1177:A:H5''	25:1H:1178:C:C6	2.44	0.48
25:1H:1181:C:O2'	25:1H:1182:A:H5'	2.13	0.48
25:1H:1207:C:H2'	25:1H:1208:C:H6	1.78	0.48
25:1H:1215:G:C6	25:1H:1216:G:N7	2.81	0.48
30:41:110:ALA:HA	30:41:140:ILE:O	2.14	0.48
30:41:165:THR:OG1	30:41:168:GLU:HG3	2.13	0.48
31:51:51:ARG:HG2	31:51:52:VAL:H	1.78	0.48
37:98:18:LEU:HA	37:98:18:LEU:HD23	1.68	0.48
40:C8:108:GLU:HG3	41:D8:44:LYS:HG2	1.93	0.48
44:G8:38:ILE:HD11	44:G8:64:GLU:HG3	1.94	0.48
45:H8:61:LEU:O	45:H8:64:GLY:HA2	2.12	0.48
46:I8:41:ARG:NE	46:I8:41:ARG:HA	2.28	0.48
55:1G:909:A:H2'	55:1G:910:C:O4'	2.13	0.48
5:42:79:GLU:HB3	5:42:92:LYS:HG3	1.95	0.48
25:14:918:A:N3	26:1J:80:U:O2'	2.38	0.48
25:14:1140:C:H5'	33:15:24:GLY:HA3	1.94	0.48
25:14:1287:A:H8	37:55:104:ARG:HD2	1.78	0.48
25:14:1317:A:H2'	25:14:1318:C:C6	2.48	0.48
32:69:126:TYR:HB2	32:69:140:LEU:HB3	1.94	0.48
40:85:8:VAL:HB	40:85:12:ARG:HE	1.78	0.48
43:B5:53:LYS:HB3	43:B5:82:GLN:HB3	1.95	0.48
44:C5:86:ARG:HG3	44:C5:87:LYS:N	2.28	0.48
1:13:4:U:HO2'	1:13:5:U:P	2.35	0.48
1:13:611:A:H61	1:13:629:G:H1	1.62	0.48
1:13:1191:A:H5''	1:13:1192:C:OP2	2.13	0.48
2:1E:8:LYS:HD3	2:1E:8:LYS:H	1.78	0.48
5:4E:126:ARG:HG3	5:4E:126:ARG:NH1	2.22	0.48
7:6E:113:GLU:HG3	7:6E:119:ARG:HG2	1.95	0.48
17:8I:18:THR:HG23	17:8I:69:LYS:HD2	1.96	0.48
22:1K:23:A:H2'	22:1K:24:G:H5'	1.95	0.48
25:1H:307:G:H21	25:1H:330:A:N6	2.10	0.48
25:1H:1965:C:H3'	25:1H:1966:A:H2'	1.96	0.48
25:1H:2562:U:H1'	34:68:23:ARG:HH11	1.79	0.48
26:16:31:C:N4	38:A8:32:LEU:HD22	2.28	0.48
32:61:77:LEU:HD23	32:61:101:LEU:HD13	1.94	0.48
33:58:35:ARG:O	33:58:42:TRP:HZ3	1.97	0.48
35:78:138:LEU:CD1	35:78:144:GLU:HG3	2.43	0.48
36:88:32:TYR:OH	36:88:111:GLU:OE1	2.27	0.48
36:88:76:LYS:HD2	36:88:77:LYS:N	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:G8:87:LYS:H	44:G8:94:LYS:HG2	1.78	0.48
55:1G:581:G:OP1	15:6A:61:GLY:HA3	2.13	0.48
55:1G:1327:C:OP1	21:1B:20:LYS:HB3	2.13	0.48
18:9A:58:LEU:HD13	18:9A:63:GLN:HB2	1.95	0.48
25:14:784:A:H5''	56:19:227:ASN:OD1	2.13	0.48
25:14:968:G:H2'	25:14:969:U:O4'	2.12	0.48
25:14:1313:U:H2'	25:14:1610:A:C2	2.48	0.48
25:14:1593:G:H2'	25:14:1594:G:H8	1.76	0.48
25:14:2324:C:H5''	25:14:2325:G:C5'	2.42	0.48
32:69:77:LEU:HA	32:69:141:LYS:HB3	1.94	0.48
39:75:16:ARG:NH2	39:75:19:LEU:HD21	2.28	0.48
1:13:271:C:H2'	1:13:272:C:C6	2.44	0.48
1:13:1092:A:H2'	1:13:1093:A:C8	2.48	0.48
4:3E:176:LEU:HD12	4:3E:182:LYS:O	2.13	0.48
5:4E:67:VAL:HG13	5:4E:69:VAL:HG23	1.95	0.48
18:9I:70:ILE:O	18:9I:74:ARG:HG3	2.13	0.48
25:1H:1332:G:N2	25:1H:1609:A:O2'	2.46	0.48
25:1H:2127:G:H22	25:1H:2162:G:H1'	1.78	0.48
25:1H:2804:C:H2'	25:1H:2805:G:C8	2.48	0.48
25:1H:2864:G:H2'	25:1H:2865:U:C6	2.49	0.48
29:31:78:ILE:HA	29:31:83:PHE:CD2	2.48	0.48
33:58:29:LYS:H	33:58:29:LYS:HG2	1.42	0.48
35:78:91:PHE:CD2	35:78:99:LEU:HD21	2.48	0.48
38:A8:32:LEU:O	38:A8:62:LYS:NZ	2.45	0.48
38:A8:36:TYR:N	38:A8:36:TYR:HD1	2.11	0.48
39:B8:120:ARG:HA	39:B8:123:GLN:HG2	1.96	0.48
40:C8:8:VAL:HG23	40:C8:11:ARG:NH2	2.14	0.48
48:K8:28:LYS:HB3	48:K8:53:LEU:CD2	2.43	0.48
55:1G:625:G:H2'	55:1G:626:U:C6	2.48	0.48
55:1G:1060:C:N3	55:1G:1198:G:C2	2.82	0.48
55:1G:1346:A:H3'	55:1G:1346:A:OP2	2.14	0.48
55:1G:1347:G:O2'	55:1G:1373:G:O6	2.24	0.48
55:1G:1372:U:H5''	9:82:71:SER:HB2	1.96	0.48
6:52:11:ASN:HB3	6:52:14:LEU:HD13	1.94	0.48
11:2A:87:THR:HG22	11:2A:91:ARG:CZ	2.43	0.48
18:9A:22:VAL:HG12	18:9A:56:THR:HA	1.96	0.48
25:14:74:A:H8	25:14:74:A:C5'	2.25	0.48
25:14:375:C:H2'	25:14:376:C:C6	2.49	0.48
25:14:1013:C:H2'	25:14:1014:U:C6	2.48	0.48
25:14:1416:G:H1	25:14:1582:C:H42	1.61	0.48
25:14:1628:G:H2'	25:14:1629:U:H6	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1932:A:H2'	25:14:1933:G:O4'	2.13	0.48
25:14:2415:G:H4'	35:35:67:MET:H	1.79	0.48
32:69:7:GLU:HG3	32:69:8:PRO:HD2	1.95	0.48
39:75:107:ASP:N	39:75:107:ASP:OD1	2.46	0.48
41:95:21:ARG:HG2	41:95:91:TYR:OH	2.13	0.48
49:H5:59:VAL:HG12	49:H5:60:GLU:H	1.78	0.48
52:K5:12:GLU:HB3	52:K5:23:THR:HG22	1.94	0.48
1:13:626:U:N3	1:13:627:G:N7	2.62	0.48
1:13:977:A:O2'	1:13:979:C:OP2	2.20	0.48
5:4E:84:PHE:HB3	5:4E:134:ALA:HB2	1.96	0.48
9:8E:121:ARG:NH1	9:8E:122:ALA:O	2.46	0.48
13:4I:3:ARG:HD3	13:4I:7:VAL:HG13	1.94	0.48
19:AI:44:MET:O	19:AI:47:HIS:HB2	2.14	0.48
20:BI:75:ASN:O	20:BI:79:ARG:HB2	2.13	0.48
23:2K:10:G:N2	23:2K:27:G:H1'	2.29	0.48
25:1H:699:A:H2'	25:1H:700:G:O4'	2.14	0.48
25:1H:2593:U:H2'	25:1H:2594:C:H6	1.77	0.48
25:1H:2615:U:P	62:1H:3515:HOH:O	2.72	0.48
25:1H:2771:C:H2'	25:1H:2772:C:C6	2.49	0.48
30:41:21:ARG:HG2	30:41:21:ARG:NH1	2.25	0.48
38:A8:14:VAL:O	38:A8:18:ILE:HG12	2.14	0.48
45:H8:155:LEU:O	45:H8:157:LEU:HG	2.14	0.48
55:1G:186(A):C:H2'	55:1G:186(B):C:C6	2.48	0.48
55:1G:956:U:H4'	19:AA:83:HIS:HB3	1.95	0.48
55:1G:991:U:O2	55:1G:993:G:H8	1.97	0.48
55:1G:1490:C:H2'	55:1G:1491:G:O4'	2.13	0.48
3:22:134:ILE:HG22	3:22:168:ALA:HB3	1.95	0.48
4:32:61:LYS:NZ	4:32:72:GLU:OE2	2.35	0.48
4:32:128:VAL:HG12	4:32:129:ASN:ND2	2.28	0.48
5:42:13:ILE:HA	5:42:29:GLY:O	2.14	0.48
7:62:13:GLN:O	7:62:24:THR:HG21	2.14	0.48
11:2A:21:ILE:HB	11:2A:84:VAL:HG12	1.96	0.48
25:14:548:A:C4	25:14:549:G:H1'	2.49	0.48
25:14:1278:A:OP1	37:55:36:THR:HG22	2.13	0.48
25:14:2134:A:C2	25:14:2159:G:H1'	2.49	0.48
36:45:34:LEU:HD12	36:45:130:LYS:O	2.13	0.48
1:13:603:U:H2'	1:13:604:G:C8	2.49	0.48
1:13:858:G:N1	1:13:870:U:OP2	2.41	0.48
4:3E:98:GLU:O	4:3E:103:ASN:ND2	2.47	0.48
21:1F:3:LYS:HB3	21:1F:14:TRP:CD1	2.48	0.48
25:1H:1592:C:H2'	25:1H:1593:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:61:128:LEU:O	32:61:138:ILE:HG22	2.13	0.48
35:78:96:THR:HG23	35:78:126:VAL:HG21	1.96	0.48
55:1G:584:G:H5'	17:8A:91:ARG:HH12	1.79	0.48
55:1G:1002:G:H2'	55:1G:1003:G:C8	2.49	0.48
13:4A:15:VAL:O	13:4A:19:LEU:HG	2.13	0.48
25:14:395:U:H3'	62:14:3789:HOH:O	2.13	0.48
25:14:729:G:O5'	56:19:208:LYS:NZ	2.46	0.48
25:14:733:G:C6	62:14:3419:HOH:O	2.64	0.48
25:14:817:C:H2'	25:14:818:G:O4'	2.13	0.48
25:14:918:A:C5	25:14:919:G:H1'	2.49	0.48
25:14:1321:A:H2'	25:14:1322:A:O4'	2.13	0.48
25:14:1839:G:H2'	25:14:1839:G:N3	2.27	0.48
25:14:2394:C:C5'	35:35:63:PRO:HG2	2.44	0.48
56:19:147:LEU:HD23	56:19:155:LEU:HD11	1.95	0.48
28:29:105:THR:HA	28:29:166:THR:HA	1.94	0.48
32:69:109:ILE:H	32:69:109:ILE:HD13	1.78	0.48
32:69:125:GLU:HG3	32:69:141:LYS:HE2	1.95	0.48
36:45:133:ARG:HB3	36:45:135:ASP:H	1.77	0.48
37:55:33:ARG:HG3	37:55:115:GLU:HG3	1.94	0.48
42:A5:2:GLU:OE1	42:A5:72:LYS:HE3	2.13	0.48
1:13:115:G:H4'	1:13:116:A:O5'	2.13	0.48
1:13:669:U:C2	1:13:670:G:C8	3.02	0.48
6:5E:4:TYR:CD1	6:5E:92:LYS:HA	2.49	0.48
7:6E:144:MET:HE1	22:3K:42:U:H1'	1.96	0.48
17:8I:67:LYS:HA	17:8I:70:ARG:NH1	2.29	0.48
25:1H:127:A:H5''	25:1H:128:C:C6	2.49	0.48
25:1H:265:A:H1'	25:1H:266:G:O4'	2.13	0.48
25:1H:500:G:N2	25:1H:502:A:H2'	2.29	0.48
25:1H:570:G:C6	25:1H:2030:A:C2	3.02	0.48
25:1H:1142(A):A:C4	25:1H:1144:G:N7	2.81	0.48
25:1H:1289:C:H2'	25:1H:1290:C:C6	2.49	0.48
25:1H:1609:A:O2'	25:1H:1610:A:H5'	2.14	0.48
25:1H:1900:A:H8	25:1H:1900:A:C5'	2.23	0.48
25:1H:2108:C:H2'	25:1H:2109:U:O4'	2.14	0.48
25:1H:2439:A:H5'	25:1H:2439:A:H8	1.76	0.48
25:1H:2635:C:H2'	25:1H:2636:U:O4'	2.13	0.48
27:11:121:PRO:HB3	27:11:135:PHE:CE2	2.49	0.48
36:88:137:TYR:HE2	45:H8:49:ARG:HH21	1.62	0.48
42:E8:57:ASN:O	42:E8:62:HIS:HD2	1.96	0.48
45:H8:54:HIS:NE2	45:H8:123:ASP:OD1	2.46	0.48
55:1G:942:G:C2	55:1G:1342:C:C2	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:1G:1220:G:O3'	19:AA:36:ARG:HD3	2.14	0.48
5:42:79:GLU:HA	5:42:91:LEU:O	2.14	0.48
20:BA:25:ARG:O	20:BA:29:LYS:HG2	2.13	0.48
25:14:389:G:H1	35:35:71:VAL:H	1.61	0.48
25:14:445:C:OP1	40:85:2:PRO:HA	2.13	0.48
25:14:516:C:P	51:J5:13:LYS:HZ1	2.37	0.48
25:14:573:G:O2'	25:14:574:C:H3'	2.14	0.48
25:14:1716:U:H2'	25:14:1717:G:H8	1.79	0.48
25:14:2068:U:N3	25:14:2430:A:C2	2.77	0.48
25:14:2274:A:C6	25:14:2276:G:C8	3.01	0.48
25:14:2335:A:C8	25:14:2337:G:C5	3.02	0.48
25:14:2638:G:O2'	25:14:2639:A:H8	1.97	0.48
56:19:95:LEU:HD11	56:19:105:ILE:HD12	1.95	0.48
57:39:18:ARG:HE	57:39:19:GLU:N	2.12	0.48
58:D5:139:VAL:HG22	58:D5:156:LYS:HE2	1.95	0.48
1:13:568:G:O2'	1:13:574:A:N1	2.45	0.48
1:13:649:G:H2'	1:13:650:G:H8	1.79	0.48
10:1I:49:VAL:HG12	10:1I:61:GLU:O	2.14	0.48
25:1H:478:A:C6	25:1H:480:A:C6	3.02	0.48
25:1H:587:C:OP2	35:78:21:ARG:NH2	2.47	0.48
25:1H:729:G:OP2	27:11:13:ARG:NH1	2.43	0.48
25:1H:1406:U:H2'	25:1H:1407:C:H6	1.78	0.48
25:1H:1448:G:H1'	25:1H:1528:A:H62	1.78	0.48
25:1H:2168:G:H22	25:1H:2170:A:N6	2.06	0.48
25:1H:2185:C:H2'	25:1H:2186:G:C8	2.49	0.48
25:1H:2262:U:OP1	25:1H:2387:U:O2'	2.23	0.48
25:1H:2503:A:OP1	62:1H:3529:HOH:O	2.20	0.48
26:16:2:C:H2'	26:16:3:C:C6	2.49	0.48
31:51:153:LYS:H	31:51:153:LYS:CD	2.22	0.48
38:A8:15:ARG:HD2	38:A8:88:ASP:OD2	2.14	0.48
38:A8:65:VAL:O	38:A8:68:GLN:HB2	2.13	0.48
43:F8:36:LYS:HE2	43:F8:54:VAL:O	2.14	0.48
45:H8:29:TYR:CE1	45:H8:87:ASP:HB2	2.49	0.48
49:L8:5:LYS:HB3	49:L8:57:GLU:HG2	1.95	0.48
55:1G:142:G:H2'	55:1G:143:A:H8	1.79	0.48
55:1G:509:A:H5''	4:32:55:ALA:HB2	1.95	0.48
55:1G:1508:G:P	62:1G:1802:HOH:O	2.71	0.48
2:12:9:GLU:HB2	2:12:217:ARG:NH2	2.29	0.48
4:32:33:MET:C	4:32:35:ARG:N	2.67	0.48
12:3A:109:GLY:HA3	12:3A:121:GLY:O	2.13	0.48
25:14:986:C:O2'	25:14:1001:A:O2'	2.20	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2261:C:C6	46:E5:16:SER:HB3	2.49	0.48
25:14:2349:G:OP2	59:M5:42:ARG:NE	2.40	0.48
25:14:2698:U:H2'	25:14:2699:C:C6	2.48	0.48
25:14:2810:A:O3'	28:29:61:ARG:HG2	2.14	0.48
56:19:85:ASP:HB2	56:19:92:ILE:HG12	1.96	0.48
28:29:37:ARG:NE	28:29:42:ASP:OD2	2.33	0.48
30:49:109:VAL:HG13	50:I5:33:VAL:HG23	1.95	0.48
36:45:34:LEU:HB2	36:45:118:LEU:CD2	2.44	0.48
36:45:75:THR:HG21	36:45:85:LYS:HE3	1.96	0.48
47:F5:78:LYS:HG2	47:F5:79:GLY:N	2.28	0.48
1:13:31:G:O2'	1:13:48:C:N4	2.45	0.47
1:13:851:G:H2'	1:13:852:G:H8	1.79	0.47
3:2E:8:ILE:O	3:2E:11:ARG:N	2.46	0.47
5:4E:152:ARG:HA	8:7E:64:LYS:HZ3	1.79	0.47
19:AI:40:ILE:HD11	19:AI:62:ILE:HD13	1.95	0.47
25:1H:26:G:C6	25:1H:27:G:N1	2.82	0.47
25:1H:566:U:P	35:78:29:LYS:HZ2	2.37	0.47
25:1H:1006:C:H1'	33:58:106:MET:HG2	1.96	0.47
25:1H:2050:C:H2'	25:1H:2051:A:C8	2.49	0.47
25:1H:2646:C:O5'	25:1H:2646:C:H6	1.96	0.47
25:1H:2688:U:C5	25:1H:2720:U:OP2	2.67	0.47
62:1H:4235:HOH:O	54:Q8:62:LEU:HD23	2.14	0.47
32:61:92:VAL:HG11	32:61:142:VAL:HG11	1.96	0.47
54:Q8:14:VAL:O	54:Q8:15:LYS:HD3	2.14	0.47
11:2A:48:ILE:HG13	11:2A:63:LEU:HB2	1.95	0.47
25:14:57:C:H2'	25:14:58:G:O4'	2.14	0.47
25:14:70:G:H21	25:14:71:A:H62	1.62	0.47
25:14:829:A:N7	25:14:2248:C:H5'	2.29	0.47
25:14:1098:A:H2'	25:14:1099:G:H5'	1.95	0.47
25:14:1288:U:O4	37:55:106:GLY:HA3	2.14	0.47
25:14:1996:C:OP1	34:25:31:LYS:HE2	2.12	0.47
25:14:2238:G:H4'	25:14:2239:G:OP1	2.14	0.47
25:14:2872:G:C4	25:14:2873:A:C2	3.02	0.47
26:1J:15:A:H5''	26:1J:16:G:C8	2.46	0.47
28:29:119:ARG:HD2	28:29:120:TRP:CE2	2.49	0.47
30:49:11:TYR:HA	30:49:15:VAL:HB	1.95	0.47
31:59:22:GLY:O	31:59:37:VAL:HG12	2.14	0.47
1:13:688:G:H2'	1:13:689:C:H6	1.79	0.47
1:13:838:G:H1	1:13:848:C:N4	2.12	0.47
1:13:963:G:H1	1:13:972:C:H42	1.59	0.47
1:13:1276:G:N3	1:13:1282:C:O2'	2.42	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:1K:62:G:H3'	22:1K:63:5MU:H71	1.96	0.47
25:1H:405:U:O2	25:1H:405:U:H2'	2.14	0.47
25:1H:654(A):A:C2	25:1H:654(T):A:N1	2.82	0.47
25:1H:907:U:O2'	36:88:101:ARG:NH2	2.47	0.47
25:1H:1049:C:H2'	25:1H:1050:A:H5'	1.96	0.47
25:1H:1254:A:H5''	25:1H:1255:U:C5'	2.44	0.47
25:1H:2298:A:H62	25:1H:2318:G:H8	1.58	0.47
25:1H:2364:C:H2'	25:1H:2365:G:O4'	2.13	0.47
25:1H:2531:A:H61	25:1H:2662:A:H61	1.63	0.47
26:16:15:A:O2'	26:16:109:G:C8	2.62	0.47
31:51:6:ARG:HG3	31:51:65:HIS:ND1	2.29	0.47
31:51:129:THR:O	31:51:129:THR:OG1	2.31	0.47
38:A8:78:LEU:HD12	38:A8:108:GLY:HA3	1.95	0.47
45:H8:52:SER:O	45:H8:52:SER:OG	2.13	0.47
51:N8:52:TYR:HD1	51:N8:53:ALA:H	1.62	0.47
53:P8:11:LYS:HE3	53:P8:15:THR:OG1	2.13	0.47
55:1G:428:G:O4'	55:1G:430:A:C8	2.67	0.47
55:1G:686:U:O4	55:1G:703:G:H1'	2.13	0.47
55:1G:1027:C:N3	55:1G:1036:G:N2	2.62	0.47
2:12:63:MET:CG	2:12:225:ALA:HB1	2.44	0.47
2:12:69:LEU:HG	2:12:91:PRO:HB2	1.96	0.47
3:22:60:ALA:HA	10:1A:93:GLY:CA	2.45	0.47
4:32:190:ASP:OD1	4:32:191:ARG:N	2.46	0.47
7:62:124:LEU:HD23	7:62:124:LEU:HA	1.74	0.47
9:82:16:ARG:O	9:82:63:ILE:HG23	2.15	0.47
25:14:1416:G:O2'	25:14:1417:C:H6	1.97	0.47
25:14:1771:C:OP1	62:14:3551:HOH:O	2.20	0.47
25:14:1820:U:O2	56:19:201:HIS:HB3	2.14	0.47
25:14:1829:A:N3	56:19:15:PHE:HE2	2.12	0.47
25:14:1992:G:O6	62:14:3557:HOH:O	2.20	0.47
26:1J:101:A:OP2	26:1J:101:A:H8	1.97	0.47
56:19:33:LEU:HD21	56:19:103:ARG:HA	1.96	0.47
56:19:69:ARG:NE	56:19:105:ILE:HD11	2.29	0.47
40:85:75:ASN:HB2	40:85:78:THR:HG23	1.96	0.47
47:F5:29:GLY:O	47:F5:30:VAL:HG22	2.14	0.47
1:13:46:G:O2'	1:13:365:U:H1'	2.15	0.47
1:13:542:G:OP1	4:3E:10:ARG:NH2	2.46	0.47
1:13:1350:A:C2	1:13:1351:U:C2	3.02	0.47
2:1E:42:ILE:HG13	2:1E:43:ASP:N	2.29	0.47
3:2E:156:ARG:HB3	3:2E:160:ALA:O	2.14	0.47
4:3E:30:LYS:HG3	4:3E:35:ARG:HE	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:6E:109:ASN:OD1	7:6E:119:ARG:NH2	2.40	0.47
25:1H:860:U:H5	25:1H:917:A:N1	2.10	0.47
25:1H:1053:C:H42	25:1H:1106:G:H1	1.61	0.47
25:1H:1486:A:H2'	25:1H:1487:G:C8	2.48	0.47
26:16:12:C:C2	46:I8:74:ARG:NH1	2.81	0.47
35:78:116:GLY:H	35:78:134:ALA:HB2	1.78	0.47
36:88:103:MET:HB2	36:88:104:PHE:CD2	2.50	0.47
41:D8:8:GLY:O	41:D8:10:LYS:HE3	2.14	0.47
45:H8:116:VAL:N	45:H8:174:VAL:HG13	2.23	0.47
50:M8:13:ARG:O	50:M8:30:GLU:HA	2.14	0.47
54:Q8:41:ILE:HG22	54:Q8:41:ILE:O	2.14	0.47
55:1G:509:A:C8	55:1G:509:A:H3'	2.49	0.47
55:1G:701:C:O2	55:1G:703:G:N1	2.47	0.47
2:12:95:GLN:HG3	2:12:147:LYS:HE3	1.95	0.47
2:12:189:ASP:OD1	2:12:189:ASP:N	2.46	0.47
4:32:52:SER:O	4:32:56:VAL:HG23	2.14	0.47
13:4A:73:GLU:O	13:4A:77:ASN:HB2	2.14	0.47
25:14:459:U:H2'	25:14:460:A:C8	2.49	0.47
25:14:1180:C:H2'	25:14:1181:C:C6	2.49	0.47
25:14:1441:G:H2'	25:14:1442:G:H8	1.77	0.47
25:14:2699:C:H2'	25:14:2700:C:O4'	2.14	0.47
56:19:68:LYS:HB3	56:19:70:TRP:CH2	2.50	0.47
56:19:263:ARG:HE	56:19:263:ARG:HB2	1.38	0.47
57:39:51:THR:HB	57:39:88:VAL:HG11	1.96	0.47
42:A5:66:GLU:HA	42:A5:69:LEU:HG	1.97	0.47
1:13:616:G:C2	1:13:617:G:N7	2.83	0.47
1:13:977:A:H2'	1:13:978:A:H5''	1.95	0.47
1:13:1211:U:H4'	1:13:1212:U:O5'	2.13	0.47
3:2E:151:VAL:HG22	3:2E:200:ALA:HA	1.97	0.47
8:7E:87:SER:HB2	8:7E:93:VAL:HB	1.95	0.47
12:3I:38:THR:HG22	12:3I:39:VAL:HG23	1.96	0.47
13:4I:90:LEU:HA	13:4I:93:ARG:HG3	1.96	0.47
23:2K:2:G:H2'	23:2K:3:C:H6	1.79	0.47
25:1H:442:G:C4	25:1H:444:C:C5	3.03	0.47
25:1H:654(M):C:H3'	25:1H:654(N):G:C8	2.49	0.47
25:1H:1006:C:O2	33:58:106:MET:HG2	2.13	0.47
25:1H:1026:U:H4'	25:1H:1027:A:OP1	2.15	0.47
25:1H:1187:G:O5'	62:1H:3781:HOH:O	2.20	0.47
25:1H:2518:A:P	62:1H:3956:HOH:O	2.72	0.47
27:11:172:TYR:HD1	27:11:185:VAL:C	2.17	0.47
27:11:182:LEU:O	27:11:271:ILE:HG13	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:G8:47:LYS:HB3	44:G8:47:LYS:HE2	1.71	0.47
54:Q8:9:GLY:HA2	54:Q8:12:LYS:HB2	1.96	0.47
55:1G:373:A:C2	55:1G:374:A:C8	3.03	0.47
55:1G:452:A:O2'	55:1G:453:A:O4'	2.15	0.47
55:1G:683:G:C6	55:1G:684:A:C6	3.03	0.47
55:1G:1327:C:H2'	55:1G:1328:C:C6	2.49	0.47
5:42:145:LYS:O	5:42:149:GLU:HG2	2.14	0.47
16:7A:57:ARG:HA	16:7A:60:LEU:HD12	1.96	0.47
20:BA:38:LYS:O	20:BA:41:ILE:HG13	2.13	0.47
22:3L:14:A:H3'	22:3L:15:G:C5'	2.44	0.47
25:14:96:G:H4'	48:G5:48:HIS:NE2	2.29	0.47
25:14:343:C:H2'	25:14:344:G:C8	2.49	0.47
25:14:796:C:H2'	25:14:797:C:H6	1.79	0.47
25:14:860:U:O2'	25:14:861:A:H5'	2.14	0.47
25:14:997:G:OP1	40:85:93:LYS:HB2	2.15	0.47
25:14:1417:C:H42	25:14:1581:G:H1	1.62	0.47
25:14:1479:G:H5'	25:14:1558:A:H2	1.79	0.47
25:14:2280:G:O2'	25:14:2388:A:N1	2.44	0.47
26:1J:43:C:O2	30:49:95:ARG:NH2	2.30	0.47
26:1J:53:A:H2'	26:1J:54:G:O4'	2.15	0.47
38:65:95:HIS:N	38:65:99:LYS:HB2	2.30	0.47
40:85:19:LYS:O	40:85:22:LYS:HG3	2.14	0.47
58:D5:7:ALA:O	58:D5:8:TYR:CG	2.67	0.47
1:13:37:U:O2'	1:13:500:G:H4'	2.14	0.47
1:13:663:A:H2'	1:13:664:G:O4'	2.14	0.47
1:13:711:G:H2'	1:13:712:A:H8	1.78	0.47
1:13:791:G:C5	1:13:792:A:C2	3.02	0.47
1:13:1118:C:P	9:8E:104:ARG:HH11	2.37	0.47
1:13:1150:U:O2	10:1I:39:PRO:HG2	2.14	0.47
1:13:1409:C:H2'	1:13:1410:G:H8	1.79	0.47
1:13:1432:G:N1	62:13:1895:HOH:O	2.13	0.47
2:1E:24:TRP:CZ3	2:1E:26:PRO:HA	2.50	0.47
13:4I:82:MET:O	13:4I:84:ILE:N	2.45	0.47
16:7I:9:PHE:CE2	16:7I:18:ARG:HD2	2.50	0.47
21:1F:5:ASP:O	21:1F:11:GLY:HA3	2.13	0.47
25:1H:218:A:C2	25:1H:235:U:H4'	2.49	0.47
25:1H:1268:A:H2'	25:1H:1269:A:O4'	2.13	0.47
25:1H:1530:G:O6	25:1H:1542:G:N2	2.48	0.47
25:1H:1782:C:H3'	62:1H:3534:HOH:O	2.14	0.47
35:78:19:VAL:HG11	35:78:25:SER:OG	2.15	0.47
40:C8:65:ILE:HG12	40:C8:92:ARG:HH12	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:D8:18:LEU:HD13	41:D8:20:LEU:HB2	1.97	0.47
54:Q8:62:LEU:HB3	54:Q8:63:PRO:CD	2.40	0.47
55:1G:474:G:C2	55:1G:475:G:C5	3.02	0.47
55:1G:575:G:O2'	62:1G:1818:HOH:O	2.20	0.47
2:12:197:VAL:HG12	2:12:200:ILE:HG13	1.96	0.47
3:22:71:ALA:HB2	3:22:109:PRO:HB3	1.96	0.47
4:32:25:ARG:CZ	4:32:30:LYS:HG3	2.45	0.47
18:9A:22:VAL:C	18:9A:24:ALA:H	2.16	0.47
19:AA:66:MET:HB3	19:AA:69:HIS:ND1	2.29	0.47
25:14:321:G:N3	57:39:165:ARG:HD3	2.29	0.47
28:29:103:ASP:OD1	28:29:201:THR:HG23	2.14	0.47
57:39:178:PRO:HB2	57:39:201:VAL:HG11	1.97	0.47
41:95:44:LYS:O	41:95:46:VAL:HG12	2.14	0.47
44:C5:75:ILE:HG23	44:C5:76:CYS:N	2.29	0.47
58:D5:141:VAL:HG21	58:D5:150:LEU:HD11	1.96	0.47
1:13:438:G:OP1	4:3E:125:HIS:HE1	1.98	0.47
1:13:1020:U:H2'	1:13:1021:G:H8	1.80	0.47
1:13:1084:G:C5	1:13:1085:U:C4	3.02	0.47
1:13:1188:A:N6	62:13:1874:HOH:O	2.47	0.47
1:13:1348:U:C2	1:13:1349:A:C8	3.03	0.47
8:7E:121:ASP:O	8:7E:125:ARG:HB2	2.15	0.47
19:AI:41:VAL:HB	19:AI:42:PRO:HA	1.96	0.47
19:AI:53:ASN:O	19:AI:77:THR:HG22	2.14	0.47
23:2K:38:A:H2'	23:2K:39:A:H8	1.80	0.47
25:1H:236:C:H2'	25:1H:237:C:C6	2.50	0.47
25:1H:763:G:O2'	25:1H:764:A:H3'	2.14	0.47
25:1H:847:U:P	62:1H:3669:HOH:O	2.71	0.47
25:1H:882:G:H1	25:1H:894:C:N4	2.12	0.47
25:1H:1290:C:H2'	25:1H:1291:C:H6	1.80	0.47
25:1H:2114:A:H61	25:1H:2119:A:H62	1.61	0.47
25:1H:2246:G:H2'	25:1H:2247:A:H8	1.78	0.47
25:1H:2255:G:OP2	62:1H:4013:HOH:O	2.20	0.47
26:16:16:G:N2	26:16:69:G:H1'	2.30	0.47
29:31:136:THR:HG22	29:31:166:ALA:O	2.15	0.47
39:B8:108:ARG:HA	39:B8:111:ARG:HE	1.78	0.47
52:O8:12:GLU:HA	52:O8:23:THR:HG22	1.96	0.47
54:Q8:55:ALA:O	54:Q8:56:GLU:C	2.53	0.47
55:1G:6:G:H4'	55:1G:298:A:H4'	1.96	0.47
55:1G:197:A:H3'	55:1G:197:A:OP2	2.14	0.47
55:1G:583:A:H2'	55:1G:584:G:O4'	2.15	0.47
55:1G:979:C:OP1	55:1G:1223:C:N4	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:1G:1122:U:N3	55:1G:1123:A:N7	2.63	0.47
2:12:103:THR:OG1	2:12:176:GLU:OE1	2.30	0.47
13:4A:81:LEU:HD21	13:4A:88:ARG:NH2	2.30	0.47
16:7A:53:VAL:HG13	16:7A:79:VAL:HG22	1.96	0.47
25:14:76:C:O3'	48:G5:59:ARG:HG3	2.15	0.47
25:14:376:C:H2'	25:14:377:C:C6	2.49	0.47
25:14:637:A:OP1	35:35:133:SER:OG	2.32	0.47
25:14:1384:A:N3	25:14:1405:U:H1'	2.29	0.47
25:14:1654:A:H1'	25:14:2823:A:H5'	1.95	0.47
40:85:69:CYS:O	40:85:74:LEU:HD12	2.13	0.47
43:B5:11:PRO:HG2	43:B5:13:LEU:HD21	1.96	0.47
43:B5:24:GLY:O	43:B5:83:VAL:HG12	2.15	0.47
50:I5:16:CYS:SG	50:I5:20:ASN:ND2	2.83	0.47
1:13:170:U:H2'	1:13:171:A:H8	1.80	0.47
1:13:303:A:H2'	1:13:304:U:O4'	2.15	0.47
1:13:323:U:O4'	20:BI:19:SER:OG	2.33	0.47
1:13:827:U:C5	1:13:872:A:N1	2.81	0.47
1:13:958:A:C6	1:13:959:A:C6	3.02	0.47
1:13:1224:G:C6	1:13:1322:C:H1'	2.50	0.47
1:13:1260:C:H4'	1:13:1284:C:H5'	1.96	0.47
1:13:1508:G:O5'	1:13:1508:G:H8	1.97	0.47
2:1E:102:LEU:HB3	2:1E:180:LEU:HD12	1.95	0.47
4:3E:99:SER:O	4:3E:140:VAL:HG22	2.15	0.47
4:3E:117:ALA:O	4:3E:120:LEU:HB2	2.15	0.47
8:7E:21:LYS:O	8:7E:65:TYR:OH	2.27	0.47
8:7E:42:GLU:HG3	8:7E:109:ILE:HD12	1.96	0.47
15:6I:6:GLU:OE2	15:6I:6:GLU:N	2.39	0.47
15:6I:7:GLU:O	15:6I:11:VAL:HG23	2.14	0.47
25:1H:120:U:H4'	25:1H:121:G:H5''	1.97	0.47
25:1H:459:U:H2'	25:1H:460:A:C8	2.49	0.47
25:1H:847:U:C5	25:1H:933:A:N1	2.83	0.47
25:1H:1480:G:C6	25:1H:1482:U:N3	2.82	0.47
25:1H:1510:A:H2'	25:1H:1510:A:N3	2.30	0.47
25:1H:1534:G:H22	25:1H:1538:G:H22	1.63	0.47
25:1H:1828:G:P	62:1H:3626:HOH:O	2.68	0.47
25:1H:2376:A:H2	38:A8:112:PHE:HB3	1.80	0.47
25:1H:2577:A:P	62:1H:3701:HOH:O	2.70	0.47
28:21:78:LEU:HD12	28:21:79:ARG:HH22	1.79	0.47
30:41:62:LEU:HD12	30:41:62:LEU:HA	1.63	0.47
30:41:66:GLN:HA	50:M8:6:HIS:CE1	2.50	0.47
30:41:107:LEU:HD21	30:41:178:PHE:CE1	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:61:131:LYS:HB3	32:61:132:PRO:HA	1.97	0.47
33:58:127:ASP:OD1	33:58:127:ASP:N	2.48	0.47
39:B8:74:ARG:HD3	39:B8:76:PHE:CE1	2.49	0.47
43:F8:24:GLY:CA	43:F8:82:GLN:HE22	2.28	0.47
46:I8:54:GLY:O	46:I8:57:PHE:N	2.45	0.47
52:O8:19:ARG:HH22	52:O8:53:LYS:HE2	1.79	0.47
55:1G:201:C:H4'	55:1G:208:U:OP1	2.14	0.47
55:1G:330:C:H2'	62:1G:1825:HOH:O	2.13	0.47
55:1G:338:A:H2	55:1G:351:G:H22	1.62	0.47
55:1G:376:G:OP1	16:7A:5:ARG:HB2	2.15	0.47
55:1G:390:C:O3'	16:7A:28:ARG:NH2	2.45	0.47
55:1G:427:U:H3'	55:1G:428:G:H2'	1.97	0.47
55:1G:487:A:H2'	55:1G:488:C:O4'	2.15	0.47
55:1G:538:G:H5''	12:3A:114:LYS:HB2	1.97	0.47
55:1G:554:C:H2'	55:1G:555:C:H6	1.80	0.47
55:1G:590:C:H2'	55:1G:591:U:H6	1.79	0.47
55:1G:960:U:H4'	55:1G:961:U:H5''	1.97	0.47
55:1G:983:A:N1	55:1G:1222:G:N2	2.63	0.47
55:1G:1256:A:H62	55:1G:1277:C:H3'	1.80	0.47
3:22:73:PRO:O	3:22:76:VAL:HG22	2.13	0.47
5:42:75:THR:OG1	5:42:117:ASP:O	2.17	0.47
9:82:33:PHE:HE2	9:82:47:LEU:HD23	1.78	0.47
9:82:44:VAL:O	9:82:51:ARG:NH2	2.46	0.47
13:4A:65:LYS:HE2	50:I5:52:THR:HA	1.96	0.47
15:6A:26:GLU:H	15:6A:26:GLU:HG2	1.45	0.47
23:2L:8:4SU:C2	23:2L:14:A:H62	2.24	0.47
22:3L:8:4SU:O5'	22:3L:8:4SU:H6	2.15	0.47
25:14:26:G:C6	25:14:27:G:C6	3.03	0.47
25:14:515:A:N1	25:14:1260:G:O2'	2.38	0.47
25:14:540:G:H2'	25:14:541:C:H6	1.79	0.47
25:14:571:A:N6	25:14:2499:C:O3'	2.47	0.47
25:14:896:A:OP1	58:D5:176:PRO:HG3	2.15	0.47
25:14:954:G:H4'	36:45:13:GLN:NE2	2.30	0.47
25:14:1310:G:OP2	53:L5:9:ARG:NE	2.46	0.47
25:14:1386:C:H2'	25:14:1387:C:H6	1.80	0.47
25:14:1599:C:H2'	25:14:1600:C:H6	1.79	0.47
25:14:1729:A:H2	25:14:1730:U:H5	1.61	0.47
25:14:2068:U:N3	25:14:2430:A:H2	2.12	0.47
25:14:2136:C:H2'	25:14:2137:C:O4'	2.14	0.47
25:14:2188:C:H2'	25:14:2189:U:O4'	2.15	0.47
25:14:2250:G:C2	36:45:82:ARG:HB3	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2748:A:H2'	25:14:2749:A:H8	1.80	0.47
26:1J:44:G:H5''	26:1J:45:A:OP1	2.15	0.47
56:19:70:TRP:CD1	56:19:70:TRP:C	2.87	0.47
56:19:201:HIS:O	56:19:204:ILE:HG23	2.15	0.47
28:29:25:VAL:HG12	28:29:26:ILE:N	2.29	0.47
28:29:112:GLY:O	28:29:159:HIS:HA	2.15	0.47
33:15:95:PRO:O	33:15:98:VAL:HG22	2.14	0.47
58:D5:161:VAL:HB	58:D5:162:GLU:H	1.39	0.47
47:F5:91:LYS:HZ3	47:F5:91:LYS:HA	1.79	0.47
49:H5:23:LEU:HG	49:H5:50:VAL:HG11	1.97	0.47
51:J5:4:HIS:HA	51:J5:5:PRO:HD3	1.61	0.47
1:13:626:U:H2'	1:13:627:G:H8	1.80	0.47
1:13:939:G:H2'	1:13:940:C:H6	1.80	0.47
1:13:1004:A:OP1	1:13:1025:U:N3	2.48	0.47
1:13:1412:C:OP1	12:3I:57:LYS:NZ	2.40	0.47
25:1H:289:A:H2'	25:1H:290:G:O4'	2.15	0.47
25:1H:731:C:OP1	62:1H:4194:HOH:O	2.20	0.47
25:1H:1206:G:C6	25:1H:1207:C:C4	3.03	0.47
25:1H:1387:C:C2	25:1H:1388:G:C8	3.02	0.47
25:1H:1475:G:C2	25:1H:1519:G:C2	3.03	0.47
25:1H:1551:C:C2'	25:1H:1552:G:H5'	2.45	0.47
25:1H:1799:G:C5'	25:1H:1819:A:H61	2.28	0.47
25:1H:2206:C:H2'	25:1H:2207:C:H6	1.79	0.47
25:1H:2473:U:C2'	25:1H:2474:C:H5'	2.45	0.47
26:16:95:U:C2	26:16:96:G:C8	3.03	0.47
27:11:25:THR:HG21	27:11:113:VAL:HG21	1.97	0.47
27:11:211:ARG:HG3	27:11:214:TRP:CE3	2.50	0.47
32:61:110:ASP:CB	32:61:112:LYS:HG2	2.43	0.47
35:78:82:GLY:HA2	35:78:113:LYS:O	2.14	0.47
44:G8:47:LYS:O	44:G8:49:VAL:HG12	2.15	0.47
55:1G:280:C:H3'	55:1G:281:G:H5'	1.96	0.47
55:1G:458:C:H2'	55:1G:464:G:H8	1.79	0.47
55:1G:537:G:H5''	12:3A:113:ARG:NH1	2.30	0.47
55:1G:728:A:H2'	55:1G:729:A:C8	2.50	0.47
55:1G:1240:U:OP2	7:62:116:ALA:N	2.39	0.47
13:4A:37:THR:HG23	13:4A:59:TYR:CD2	2.50	0.47
23:2L:14:A:C2	23:2L:23:G:C4	3.03	0.47
25:14:95:G:H4'	48:G5:46:GLN:HB2	1.97	0.47
25:14:492:A:H2'	25:14:493:G:O4'	2.14	0.47
25:14:610:C:H2'	25:14:611:C:H6	1.77	0.47
25:14:956:G:H2'	25:14:957:A:H2'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1779:U:OP2	25:14:1784:A:N6	2.46	0.47
25:14:2697:G:H2'	25:14:2698:U:O4'	2.15	0.47
25:14:2845:G:N2	25:14:2871:C:O2	2.43	0.47
26:1J:13:A:H2'	26:1J:70:C:O2'	2.14	0.47
57:39:46:ARG:HG2	57:39:46:ARG:NH1	2.24	0.47
57:39:140:LEU:HD21	57:39:170:LEU:HD21	1.95	0.47
35:35:27:HIS:HB3	35:35:32:THR:HG23	1.95	0.47
38:65:67:ARG:CZ	38:65:67:ARG:HB2	2.45	0.47
40:85:33:ARG:O	40:85:37:GLU:HG3	2.15	0.47
58:D5:59:LEU:HB3	58:D5:60:GLU:H	1.40	0.47
48:G5:31:GLU:O	48:G5:35:LEU:N	2.33	0.47
49:H5:43:ILE:O	49:H5:47:VAL:HG23	2.15	0.47
1:13:60:A:N6	1:13:110:C:N3	2.56	0.47
1:13:179:A:H2'	1:13:180:U:C6	2.50	0.47
1:13:297:G:H4'	1:13:557:G:H4'	1.97	0.47
1:13:524:G:H2'	1:13:525:C:C6	2.50	0.47
1:13:708:C:OP1	11:2I:85:ARG:NH2	2.46	0.47
1:13:874:G:C6	1:13:875:C:C4	3.03	0.47
1:13:984:C:H2'	1:13:985:C:H6	1.77	0.47
1:13:1004:A:N1	1:13:1025:U:H1'	2.30	0.47
1:13:1229:A:H2'	1:13:1230:C:H6	1.80	0.47
4:3E:128:VAL:HG22	4:3E:146:ILE:HG23	1.96	0.47
25:1H:155:C:H42	25:1H:171:G:H1	1.63	0.47
25:1H:349:G:H2'	25:1H:350:U:O4'	2.15	0.47
25:1H:562:U:C4	25:1H:2036:C:O4'	2.68	0.47
25:1H:863:A:H2'	25:1H:864:G:H8	1.80	0.47
25:1H:1340:U:H4'	25:1H:1341:U:OP2	2.15	0.47
25:1H:1474:C:H2'	25:1H:1475:G:H8	1.80	0.47
25:1H:1983:C:H4'	25:1H:2606:C:H4'	1.96	0.47
25:1H:2383:G:O2'	25:1H:2384:G:H5'	2.15	0.47
26:16:88:C:H2'	26:16:89:G:O4'	2.15	0.47
32:61:21:VAL:HG21	32:61:25:TYR:CD2	2.46	0.47
32:61:93:THR:O	32:61:97:ILE:HG12	2.15	0.47
34:68:4:PRO:O	34:68:5:GLN:HB2	2.14	0.47
36:88:35:VAL:CG1	36:88:130:LYS:HB3	2.44	0.47
38:A8:99:LYS:HE2	38:A8:103:GLU:OE1	2.15	0.47
55:1G:303:A:H2'	55:1G:304:U:O4'	2.14	0.47
55:1G:509:A:C6	55:1G:510:A:N1	2.83	0.47
55:1G:539:A:H2'	55:1G:540:G:C8	2.50	0.47
55:1G:1153:C:P	10:1A:13:HIS:HE2	2.37	0.47
2:12:178:ARG:HH11	2:12:178:ARG:HB2	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:39:PRO:HA	4:32:40:PRO:HD3	1.81	0.47
14:5A:53:LEU:HD23	14:5A:53:LEU:HA	1.61	0.47
20:BA:67:ALA:HA	20:BA:73:HIS:HA	1.96	0.47
25:14:1339:G:H21	25:14:1603:A:H1'	1.80	0.47
25:14:2022:U:O2'	25:14:2617:C:H5'	2.15	0.47
25:14:2346:A:H8	52:K5:24:GLU:HG2	1.80	0.47
25:14:2534:A:C6	25:14:2535:G:C8	3.03	0.47
25:14:2702:U:OP1	25:14:2702:U:H6	1.97	0.47
25:14:2777:G:OP2	25:14:2781:A:O2'	2.21	0.47
26:1J:31:C:H2'	26:1J:32:C:H5'	1.97	0.47
56:19:244:ARG:HB2	56:19:245:PRO:HD2	1.97	0.47
28:29:137:HIS:HB3	28:29:138:PRO:HD2	1.97	0.47
31:59:152:ARG:HD2	31:59:153:LYS:HG3	1.97	0.47
34:25:64:ARG:NH1	34:25:81:ASP:OD1	2.48	0.47
39:75:92:GLY:HA2	39:75:117:ASP:H	1.79	0.47
1:13:35:G:O2'	12:3I:118:SER:O	2.25	0.47
1:13:57:G:H2'	1:13:58:C:C6	2.50	0.47
1:13:342:C:H2'	1:13:343:U:O4'	2.15	0.47
1:13:942:G:C2	1:13:1342:C:C2	3.03	0.47
1:13:1347:G:H22	1:13:1374:A:P	2.37	0.47
18:9I:43:PHE:O	18:9I:51:LEU:HG	2.14	0.47
22:3K:17:OMG:H4'	22:3K:18:G:OP2	2.14	0.47
25:1H:588:U:C2	29:31:90:PHE:CE1	3.03	0.47
25:1H:1001:A:H2'	25:1H:1002:G:O4'	2.14	0.47
25:1H:1087:G:H2'	25:1H:1089:G:H4'	1.96	0.47
25:1H:1652:A:H2'	25:1H:1653:G:H5'	1.97	0.47
25:1H:2138:C:H42	25:1H:2153:G:H1	1.62	0.47
25:1H:2308:G:N1	25:1H:2311:A:H2	1.93	0.47
25:1H:2355:C:O2	46:I8:39:ARG:NH2	2.46	0.47
25:1H:2543:G:H2'	25:1H:2544:G:C8	2.49	0.47
25:1H:2584:U:H2'	25:1H:2585:U:H2'	1.97	0.47
25:1H:2771:C:H2'	25:1H:2772:C:H6	1.80	0.47
27:11:134:ARG:HG3	27:11:135:PHE:CD1	2.50	0.47
30:41:33:ARG:O	30:41:162:THR:HG23	2.14	0.47
32:61:46:ALA:O	32:61:50:ARG:N	2.48	0.47
34:68:25:LEU:HD12	34:68:38:VAL:HG22	1.95	0.47
40:C8:83:LEU:HG	40:C8:88:ILE:HB	1.95	0.47
55:1G:296:U:H2'	55:1G:297:G:O4'	2.15	0.47
55:1G:1202:G:H2'	55:1G:1203:C:O4'	2.15	0.47
55:1G:1298:C:P	7:62:114:ARG:HH22	2.37	0.47
2:12:188:ALA:O	2:12:203:GLY:N	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:72:1:MET:N	8:72:1:MET:SD	2.88	0.47
10:1A:82:ILE:O	10:1A:86:MET:HG3	2.15	0.47
12:3A:60:LEU:HB2	12:3A:64:TYR:HB2	1.96	0.47
12:3A:117:ARG:HH21	12:3A:124:LYS:CA	2.28	0.47
13:4A:86:CYS:HB3	19:AA:74:PHE:CE1	2.50	0.47
22:1L:23:A:N6	22:1L:24:G:O6	2.48	0.47
25:14:1250:G:OP2	35:35:21:ARG:HD3	2.15	0.47
25:14:1387:C:C2	25:14:1388:G:C8	3.02	0.47
25:14:1771:C:HO2'	25:14:1786:A:H8	1.63	0.47
25:14:1894:C:C2'	25:14:1895:C:H5'	2.45	0.47
25:14:2520:C:N4	25:14:2542:A:H62	2.13	0.47
25:14:2575:C:H2'	25:14:2578:G:O6	2.15	0.47
56:19:43:ARG:HA	56:19:49:ILE:HA	1.97	0.47
57:39:21:ALA:O	57:39:23:ASP:N	2.47	0.47
57:39:82:ILE:H	57:39:82:ILE:HG13	1.50	0.47
43:B5:44:GLU:HG3	43:B5:51:VAL:HG23	1.96	0.47
58:D5:105:VAL:HG13	58:D5:106:GLY:H	1.79	0.47
46:E5:53:MET:HG3	46:E5:59:LEU:HD23	1.97	0.47
1:13:491:G:H2'	1:13:492:G:O4'	2.16	0.46
1:13:736:C:H2'	1:13:737:A:H8	1.80	0.46
1:13:746:A:H2'	1:13:747:C:H6	1.80	0.46
1:13:836:G:OP1	18:9I:61:LYS:NZ	2.41	0.46
1:13:1051:C:O2'	1:13:1052:U:H5'	2.15	0.46
25:1H:270(E):G:C6	25:1H:270(F):U:C4	3.03	0.46
25:1H:480:A:OP2	44:G8:47:LYS:HD3	2.15	0.46
25:1H:2877:G:O2'	25:1H:2878:U:H5'	2.15	0.46
27:11:46:GLN:H	27:11:46:GLN:HG3	1.35	0.46
28:21:77:ILE:CG1	28:21:79:ARG:HH11	2.28	0.46
29:31:77:ASP:OD1	29:31:77:ASP:N	2.38	0.46
30:41:97:ASP:O	30:41:99:MET:N	2.48	0.46
30:41:130:ASN:HB3	30:41:159:VAL:O	2.15	0.46
35:78:35:HIS:HB3	35:78:36:LYS:H	1.37	0.46
38:A8:56:LEU:HB2	38:A8:58:LEU:HD22	1.97	0.46
51:N8:38:ALA:HB3	51:N8:40:LYS:HE3	1.95	0.46
55:1G:57:G:C6	55:1G:58:C:C4	3.03	0.46
55:1G:169:C:H5'	55:1G:170:U:OP2	2.15	0.46
55:1G:976:G:H5'	55:1G:1358:U:O2'	2.16	0.46
55:1G:1200:C:H5'	55:1G:1201:A:H5'	1.96	0.46
55:1G:1286:A:C8	55:1G:1287:A:H4'	2.50	0.46
55:1G:1429:C:H2'	55:1G:1430:C:H6	1.80	0.46
4:32:4:TYR:CE2	4:32:11:LEU:HD11	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:42:110:LEU:HD13	5:42:118:ILE:HG21	1.97	0.46
9:82:3:GLN:HG2	9:82:20:ARG:HG3	1.97	0.46
16:7A:22:THR:HA	16:7A:33:ILE:HG12	1.96	0.46
25:14:249:C:H4'	25:14:250:G:O5'	2.15	0.46
25:14:673:C:H5''	57:39:81:PRO:HD2	1.96	0.46
25:14:706:A:H2'	25:14:707:G:O4'	2.16	0.46
25:14:945:A:C4	25:14:2448:A:C2	3.03	0.46
25:14:1348:G:H2'	25:14:1349:A:H5''	1.95	0.46
25:14:1558:A:O2'	25:14:1559:G:OP2	2.22	0.46
25:14:1572:A:H2'	25:14:1573:G:O4'	2.15	0.46
25:14:2135:A:H8	25:14:2135:A:OP2	1.99	0.46
25:14:2702:U:H1'	25:14:2703:C:C5	2.49	0.46
26:1J:44:G:C2	26:1J:48:A:C2	3.03	0.46
57:39:181:LEU:CD2	57:39:186:ILE:HD11	2.45	0.46
30:49:36:LYS:HE3	30:49:38:VAL:HG21	1.97	0.46
30:49:96:ARG:H	30:49:96:ARG:HG3	1.34	0.46
32:69:29:TYR:C	32:69:32:PRO:HD2	2.36	0.46
33:15:30:ILE:HG22	33:15:34:LEU:HD22	1.97	0.46
2:1E:68:ILE:HG13	2:1E:161:ALA:HB3	1.98	0.46
5:4E:80:ILE:HG12	5:4E:81:GLU:H	1.80	0.46
12:3I:66:VAL:HG21	12:3I:98:TYR:CE1	2.50	0.46
16:7I:17:TYR:CE1	16:7I:41:PRO:HG3	2.51	0.46
20:BI:63:ILE:HG22	20:BI:77:ALA:HB1	1.96	0.46
25:1H:953:A:O2'	25:1H:2266:A:OP2	2.27	0.46
30:41:5:VAL:H	50:M8:25:TYR:HE2	1.62	0.46
34:68:86:ILE:HG22	34:68:94:ARG:HG3	1.97	0.46
36:88:135:ASP:HB3	36:88:137:TYR:N	2.27	0.46
40:C8:68:ALA:O	40:C8:71:GLN:HB2	2.15	0.46
42:E8:88:ARG:NH1	42:E8:94:ASP:OD2	2.48	0.46
46:I8:51:VAL:HG23	46:I8:81:VAL:HG23	1.96	0.46
55:1G:262:A:C6	55:1G:263:A:C6	3.03	0.46
2:12:87:ARG:NH2	2:12:233:SER:H	2.14	0.46
22:3L:37:A:N6	22:3L:38:MIA:H122	2.30	0.46
25:14:302:C:H2'	25:14:303:U:C6	2.50	0.46
25:14:540:G:H2'	25:14:541:C:C6	2.50	0.46
25:14:1019:U:O2'	25:14:1021:A:H2	1.98	0.46
25:14:1131:G:O6	25:14:2040:C:H1'	2.14	0.46
25:14:1485:G:H2'	25:14:1486:A:C8	2.51	0.46
25:14:1485:G:H2'	25:14:1486:A:H8	1.81	0.46
25:14:1639:U:P	62:14:3437:HOH:O	2.72	0.46
25:14:1729:A:C2	25:14:1730:U:H5	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2607:G:H2'	25:14:2608:G:O4'	2.15	0.46
25:14:2882:A:H5'	37:55:96:ARG:HG3	1.96	0.46
26:1J:40:U:O4	50:I5:1:MET:N	2.45	0.46
56:19:71:ASP:CG	56:19:103:ARG:HH22	2.16	0.46
56:19:108:PRO:HB3	56:19:143:HIS:NE2	2.29	0.46
28:29:52:LEU:C	28:29:74:PRO:HB3	2.36	0.46
33:15:15:LEU:HD23	33:15:134:ARG:HD2	1.97	0.46
35:35:63:PRO:HD3	59:M5:13:ARG:NH1	2.30	0.46
37:55:103:ARG:NH1	37:55:110:PRO:HD3	2.30	0.46
43:B5:48:LYS:HD3	43:B5:48:LYS:HA	1.78	0.46
58:D5:10:ARG:HH21	58:D5:26:GLY:N	2.12	0.46
46:E5:37:LEU:HG	46:E5:60:PHE:HA	1.98	0.46
50:I5:36:CYS:SG	50:I5:37:SER:N	2.88	0.46
50:I5:37:SER:OG	50:I5:38:LYS:N	2.46	0.46
1:13:188:U:H2'	1:13:189:U:H5'	1.97	0.46
1:13:221:C:H2'	1:13:222:U:H6	1.80	0.46
1:13:674:G:H2'	1:13:675:A:C8	2.50	0.46
1:13:1291:G:C6	1:13:1292:U:C4	3.03	0.46
1:13:1504:G:H3'	1:13:1504:G:P	2.55	0.46
2:1E:212:GLN:OE1	2:1E:216:SER:OG	2.33	0.46
8:7E:85:ARG:NE	8:7E:87:SER:O	2.48	0.46
8:7E:100:ILE:HA	8:7E:101:PRO:HD3	1.78	0.46
19:AI:64:GLU:O	19:AI:67:VAL:HG13	2.14	0.46
20:BI:89:ARG:NH2	20:BI:104:LEU:HD11	2.29	0.46
25:1H:64:A:C5	43:F8:66:LEU:HD22	2.50	0.46
25:1H:975:G:H1'	25:1H:990:A:C2	2.50	0.46
25:1H:1107:G:H2'	25:1H:1108:U:H6	1.79	0.46
25:1H:1911:U:H2'	25:1H:1918:A:N1	2.29	0.46
25:1H:2212:A:N3	25:1H:2215:G:N1	2.63	0.46
25:1H:2369:A:H2'	25:1H:2370:G:H8	1.80	0.46
25:1H:2473:U:H2'	25:1H:2474:C:H5'	1.96	0.46
25:1H:2881:C:C2	25:1H:2882:A:C8	3.03	0.46
26:16:11:C:OP2	26:16:12:C:C5	2.68	0.46
26:16:89:G:C6	26:16:89(A):A:C6	3.04	0.46
35:78:47:ASP:HA	35:78:48:PRO:HD3	1.68	0.46
41:D8:35:LEU:HB2	41:D8:37:VAL:HG23	1.98	0.46
46:I8:47:PRO:HB3	46:I8:51:VAL:HG12	1.97	0.46
49:L8:52:HIS:CD2	49:L8:53:LEU:HG	2.51	0.46
55:1G:1312:G:H2'	55:1G:1313:U:H6	1.81	0.46
55:1G:1423:G:P	34:25:49:ARG:HH12	2.39	0.46
13:4A:96:LEU:O	13:4A:110:ARG:NE	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:2L:22:A:N6	23:2L:47:G:H2'	2.30	0.46
25:14:948:G:C2	25:14:970:C:O2	2.68	0.46
25:14:1317:A:H2'	25:14:1318:C:H6	1.80	0.46
25:14:1952:A:C6	34:25:22:ILE:CD1	2.98	0.46
25:14:1954:G:H1'	25:14:1956:U:O4	2.15	0.46
25:14:2115:G:N2	25:14:2172:U:H3	2.13	0.46
28:29:56:PRO:HD2	28:29:58:ARG:HH22	1.80	0.46
57:39:83:PHE:O	57:39:84:VAL:HB	2.14	0.46
35:35:107:LYS:O	35:35:109:GLY:N	2.49	0.46
44:C5:29:GLU:OE1	44:C5:29:GLU:N	2.48	0.46
44:C5:52:SER:HA	44:C5:55:TYR:O	2.15	0.46
1:13:114:U:H2'	1:13:115:G:C8	2.51	0.46
1:13:265:G:O2'	17:8I:67:LYS:N	2.49	0.46
1:13:407:G:O2'	4:3E:116:GLN:HG3	2.14	0.46
1:13:600:C:OP1	8:7E:97:VAL:HG12	2.15	0.46
1:13:721:G:H4'	1:13:722:A:O4'	2.15	0.46
2:1E:60:ASP:HB3	2:1E:64:ARG:CZ	2.46	0.46
9:8E:26:VAL:HG13	9:8E:61:ALA:HB3	1.96	0.46
11:2I:34:ASP:HB3	11:2I:40:ILE:HD11	1.96	0.46
16:7I:53:VAL:O	16:7I:57:ARG:HG2	2.15	0.46
25:1H:182:A:H2	25:1H:433:C:O2	1.98	0.46
25:1H:242:G:H5''	54:Q8:61:LEU:HD21	1.97	0.46
25:1H:493:G:H2'	25:1H:494:G:O4'	2.14	0.46
25:1H:654(N):G:H2'	25:1H:654(O):G:C8	2.51	0.46
25:1H:1178:C:H4'	25:1H:1179:C:OP1	2.15	0.46
25:1H:1312:U:H4'	25:1H:1313:U:O5'	2.16	0.46
25:1H:2057:A:P	62:1H:3523:HOH:O	2.71	0.46
25:1H:2627:G:N2	25:1H:2777:G:OP2	2.46	0.46
27:11:213:ARG:HH11	27:11:213:ARG:CG	2.27	0.46
30:41:64:THR:HG22	30:41:66:GLN:N	2.31	0.46
33:58:62:VAL:HG22	33:58:63:THR:H	1.80	0.46
35:78:38:GLN:O	35:78:41:ARG:HB2	2.16	0.46
35:78:101:VAL:HA	35:78:105:LEU:O	2.16	0.46
36:88:32:TYR:O	36:88:105:GLU:HA	2.16	0.46
55:1G:854:G:C2	55:1G:855:G:C8	3.04	0.46
55:1G:971:G:N2	55:1G:1363:A:OP2	2.30	0.46
4:32:150:GLU:C	4:32:152:SER:H	2.18	0.46
8:72:86:ILE:HG12	8:72:135:CYS:HA	1.98	0.46
9:82:17:VAL:HG22	9:82:63:ILE:HG12	1.98	0.46
13:4A:79:LYS:HA	13:4A:82:MET:HB2	1.98	0.46
17:8A:59:ILE:HG22	17:8A:71:PHE:HD2	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:2L:32:G:C5	23:2L:33:OMC:C5	3.03	0.46
25:14:315:G:H2'	25:14:316:C:C6	2.50	0.46
25:14:1657:C:H2'	25:14:1658:C:C6	2.51	0.46
25:14:2817:G:OP1	37:55:99:LYS:HE2	2.16	0.46
57:39:141:ALA:O	57:39:144:LYS:HB3	2.16	0.46
34:25:87:ILE:HG23	34:25:88:ASN:O	2.16	0.46
35:35:39:LYS:CD	35:35:45:LEU:HD21	2.41	0.46
44:C5:83:THR:HG22	44:C5:84:ARG:H	1.80	0.46
1:13:67:C:H2'	1:13:68:G:C8	2.50	0.46
1:13:991:U:HO2'	1:13:992:U:P	2.38	0.46
1:13:1167:A:H8	1:13:1167:A:OP1	1.98	0.46
1:13:1417:G:N2	1:13:1482:G:H2'	2.31	0.46
1:13:1505:G:H5'	62:13:1806:HOH:O	2.14	0.46
3:2E:13:GLY:HA3	14:5I:57:ARG:NH1	2.31	0.46
6:5E:3:ARG:HB3	6:5E:93:SER:HB2	1.98	0.46
8:7E:34:GLU:HB3	8:7E:118:VAL:HG21	1.97	0.46
9:8E:70:LYS:O	9:8E:74:ILE:HG13	2.15	0.46
16:7I:20:VAL:HG21	16:7I:32:TYR:CG	2.51	0.46
25:1H:852:G:H2'	25:1H:853:G:C8	2.50	0.46
25:1H:908:C:O2'	25:1H:909:A:H5'	2.15	0.46
25:1H:991:C:H2'	25:1H:992:C:H6	1.80	0.46
25:1H:1094:U:HO2'	25:1H:1096:A:P	2.38	0.46
25:1H:1331:A:O2'	25:1H:1332:G:H8	1.98	0.46
25:1H:1420:U:O2'	25:1H:1421:G:OP1	2.33	0.46
25:1H:1541:U:H2'	25:1H:1542:G:O4'	2.16	0.46
25:1H:2054:A:H5''	25:1H:2055:C:O5'	2.16	0.46
26:16:24:G:N7	26:16:56:G:H2'	2.30	0.46
27:11:176:ARG:HA	27:11:182:LEU:HD23	1.96	0.46
33:58:47:ALA:CB	33:58:112:LEU:HD11	2.45	0.46
35:78:83:VAL:HG12	35:78:112:LEU:HD21	1.98	0.46
44:G8:94:LYS:HZ2	44:G8:95:LYS:H	1.64	0.46
50:M8:16:CYS:SG	50:M8:36:CYS:N	2.65	0.46
55:1G:1053:G:HO2'	55:1G:1054:C:P	2.38	0.46
55:1G:1062:U:H2'	55:1G:1063:C:C6	2.51	0.46
55:1G:1338:G:C6	55:1G:1339:A:C6	3.03	0.46
55:1G:1392:G:N2	55:1G:1502:A:H8	2.13	0.46
12:3A:51:ALA:O	12:3A:52:LEU:HD23	2.15	0.46
13:4A:86:CYS:O	13:4A:89:GLY:N	2.40	0.46
25:14:856:C:O5'	25:14:856:C:H6	1.98	0.46
25:14:921:G:H2'	25:14:922:U:C6	2.50	0.46
25:14:1257:C:H4'	57:39:83:PHE:CD1	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1435:G:H2'	25:14:1436:G:O4'	2.15	0.46
25:14:1466:G:N3	25:14:1466:G:H2'	2.31	0.46
25:14:2708:G:H5'	37:55:68:ARG:HG2	1.97	0.46
57:39:124:LEU:HG	57:39:126:VAL:HG12	1.96	0.46
31:59:107:VAL:HB	31:59:152:ARG:HG2	1.98	0.46
33:15:16:ILE:HB	33:15:54:VAL:HG22	1.98	0.46
35:35:18:ARG:O	35:35:19:VAL:HG23	2.16	0.46
36:45:103:MET:H	36:45:103:MET:HG3	1.60	0.46
43:B5:27:THR:HB	43:B5:80:ILE:HG22	1.97	0.46
44:C5:57:GLN:HB3	44:C5:58:GLY:H	1.52	0.46
4:3E:112:VAL:HG12	4:3E:116:GLN:OE1	2.16	0.46
21:1F:6:ARG:H	21:1F:6:ARG:HG3	1.41	0.46
25:1H:1086:A:H1'	25:1H:1103:A:N1	2.31	0.46
25:1H:1110:G:O2'	25:1H:1111:A:O5'	2.26	0.46
25:1H:1591:G:H2'	25:1H:1592:C:H6	1.80	0.46
25:1H:2134:A:C8	25:1H:2158:A:H2	2.33	0.46
25:1H:2318:G:H22	38:A8:2:ALA:CA	2.28	0.46
25:1H:2323:G:H2'	25:1H:2324:C:O4'	2.16	0.46
25:1H:2389:G:H5''	25:1H:2390:U:H5'	1.98	0.46
26:16:75:G:H5''	26:16:76:G:OP2	2.15	0.46
27:11:70:TRP:CH2	27:11:150:LYS:HA	2.50	0.46
27:11:182:LEU:N	27:11:272:ALA:HB3	2.27	0.46
31:51:88:LEU:HB3	31:51:130:ARG:HG2	1.97	0.46
36:88:20:ALA:HB2	36:88:99:PRO:HD2	1.98	0.46
36:88:35:VAL:HA	36:88:101:ARG:O	2.15	0.46
36:88:72:LYS:HB3	36:88:94:VAL:HG23	1.97	0.46
51:N8:20:ARG:HG2	51:N8:23:HIS:ND1	2.30	0.46
55:1G:502:G:OP1	12:3A:118:SER:HB3	2.14	0.46
55:1G:1010:G:N2	55:1G:1020:U:H1'	2.30	0.46
55:1G:1028(A):C:O2	55:1G:1033:G:N1	2.48	0.46
55:1G:1189:C:O5'	55:1G:1189:C:H6	1.99	0.46
55:1G:1238:A:N3	55:1G:1241:G:O2'	2.41	0.46
17:8A:45:HIS:HB3	17:8A:72:ARG:HG2	1.97	0.46
20:BA:51:GLU:HB3	20:BA:54:LYS:NZ	2.30	0.46
21:1B:8:THR:HG22	21:1B:11:GLY:H	1.80	0.46
25:14:144:C:H2'	25:14:145:G:H8	1.79	0.46
25:14:400:G:O6	62:14:3669:HOH:O	2.15	0.46
25:14:933:A:C5	25:14:934:G:C8	3.03	0.46
25:14:2432:A:H2'	25:14:2433:A:C8	2.50	0.46
26:1J:10:C:C4	26:1J:11:C:C5	3.04	0.46
57:39:63:LYS:NZ	57:39:67:GLN:HB2	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:49:4:ASP:OD1	30:49:9:ARG:NH2	2.34	0.46
33:15:134:ARG:HB3	33:15:134:ARG:NH1	2.30	0.46
34:25:64:ARG:HB2	34:25:83:ALA:HB3	1.97	0.46
41:95:5:VAL:HG11	41:95:57:VAL:HG11	1.98	0.46
44:C5:97:ARG:HG3	44:C5:102:CYS:HB2	1.98	0.46
1:13:164:U:H2'	1:13:165:C:C6	2.51	0.46
1:13:538:G:H5''	12:3I:114:LYS:HB2	1.96	0.46
1:13:859:A:H2'	1:13:860:A:H8	1.79	0.46
1:13:975:A:H62	10:1I:60:ARG:HH12	1.63	0.46
1:13:1203:C:H2'	1:13:1204:A:O4'	2.16	0.46
1:13:1233:G:H2'	1:13:1234:C:C6	2.50	0.46
1:13:1252:A:H2'	1:13:1253:G:O4'	2.15	0.46
2:1E:145:LEU:HD13	2:1E:149:LEU:HD12	1.97	0.46
3:2E:150:LYS:HG3	3:2E:169:ALA:HB2	1.97	0.46
5:4E:79:GLU:HB3	5:4E:92:LYS:HG3	1.97	0.46
8:7E:129:VAL:HG23	8:7E:130:GLY:H	1.81	0.46
9:8E:46:ALA:HB2	9:8E:74:ILE:HG23	1.98	0.46
12:3I:15:ARG:O	12:3I:16:GLU:HB3	2.16	0.46
13:4I:12:ASN:OD1	13:4I:13:LYS:N	2.47	0.46
13:4I:20:THR:HG23	13:4I:26:GLY:HA3	1.98	0.46
25:1H:443:A:C5	29:31:45:ARG:HD2	2.50	0.46
25:1H:805:G:H4'	25:1H:806:C:OP2	2.16	0.46
25:1H:1662:C:O2'	25:1H:2687:U:OP1	2.33	0.46
25:1H:2336:A:H61	46:I8:43:THR:HG21	1.80	0.46
25:1H:2336:A:H61	46:I8:43:THR:CG2	2.29	0.46
27:11:2:ALA:HA	27:11:20:ASP:HB2	1.98	0.46
33:58:7:LYS:HD2	33:58:7:LYS:H	1.80	0.46
45:H8:7:ALA:HB3	45:H8:61:LEU:CB	2.46	0.46
45:H8:27:VAL:HG12	45:H8:87:ASP:CB	2.43	0.46
55:1G:111:G:H8	55:1G:111:G:O5'	1.98	0.46
55:1G:151:A:H2'	55:1G:152:A:O4'	2.15	0.46
55:1G:673:G:O3'	6:52:87:ARG:NH2	2.49	0.46
55:1G:797:C:O2'	55:1G:798:G:H5'	2.16	0.46
55:1G:1305:G:HO2'	55:1G:1306:A:P	2.39	0.46
5:42:81:GLU:HG2	5:42:90:VAL:HG13	1.97	0.46
10:1A:22:LYS:HE2	10:1A:90:LEU:HD12	1.98	0.46
14:5A:27:CYS:O	14:5A:27:CYS:SG	2.74	0.46
15:6A:5:LYS:O	15:6A:9:GLN:HG2	2.16	0.46
20:BA:29:LYS:HG2	20:BA:29:LYS:H	1.45	0.46
23:2L:20:G:C2	23:2L:58:A:C2	3.04	0.46
25:14:185:U:H2'	25:14:186:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1011:G:C6	25:14:1013:C:C4	3.04	0.46
25:14:1338:G:N3	25:14:1393:A:H2	2.14	0.46
56:19:179:SER:OG	56:19:181:GLU:HB3	2.14	0.46
28:29:15:PHE:CD2	39:75:81:PRO:HD3	2.51	0.46
31:59:6:ARG:HB3	31:59:66:GLY:HA2	1.97	0.46
33:15:5:VAL:HA	33:15:6:PRO:HD2	1.81	0.46
36:45:48:GLU:O	36:45:52:VAL:HG23	2.15	0.46
38:65:14:VAL:HG11	38:65:89:ARG:NH1	2.28	0.46
46:E5:24:LYS:HB2	46:E5:36:ILE:HG12	1.98	0.46
50:I5:43:TYR:CG	50:I5:43:TYR:O	2.69	0.46
1:13:918:A:H2'	1:13:919:A:C8	2.51	0.46
1:13:1113:C:H2'	1:13:1114:C:H6	1.79	0.46
1:13:1286:A:C8	1:13:1287:A:H4'	2.51	0.46
2:1E:59:GLU:HG3	2:1E:225:ALA:HB2	1.98	0.46
22:3K:7:G:N2	22:3K:75:C:O2	2.41	0.46
25:1H:129:C:H2'	25:1H:130:C:C6	2.51	0.46
25:1H:363:G:H2'	25:1H:363(A):A:H8	1.80	0.46
25:1H:589:C:H2'	25:1H:590:A:C8	2.51	0.46
25:1H:1392:A:C6	25:1H:1393:A:N1	2.84	0.46
25:1H:1416:G:O2'	25:1H:1417:C:C6	2.66	0.46
25:1H:2591:C:OP1	27:11:239:ARG:HG3	2.16	0.46
26:16:11:C:OP2	46:I8:72:ARG:NH2	2.49	0.46
27:11:273:ARG:HG3	27:11:273:ARG:O	2.15	0.46
32:61:110:ASP:CB	32:61:112:LYS:H	2.10	0.46
39:B8:16:ARG:NH2	39:B8:83:ILE:O	2.47	0.46
44:G8:94:LYS:HA	44:G8:94:LYS:NZ	2.31	0.46
44:G8:104:GLY:N	44:G8:105:ALA:HB3	2.30	0.46
55:1G:314:C:O2'	55:1G:315:A:H5'	2.15	0.46
55:1G:872:A:C4	55:1G:874:G:C8	3.04	0.46
55:1G:1226:C:H41	13:4A:104:ARG:HD2	1.80	0.46
3:22:70:VAL:HG12	3:22:72:LYS:N	2.26	0.46
14:5A:37:PHE:HE1	14:5A:53:LEU:HD22	1.81	0.46
16:7A:25:ARG:HH11	16:7A:25:ARG:HG3	1.81	0.46
22:1L:85:A:H1'	25:14:2583:G:N2	2.31	0.46
25:14:1378:A:O2'	25:14:1380:G:N7	2.35	0.46
25:14:2392:A:C8	35:35:61:ARG:HD2	2.51	0.46
25:14:2558:C:H2'	25:14:2559:C:O4'	2.16	0.46
25:14:2786:U:H4'	28:29:65:GLY:N	2.31	0.46
25:14:2876:G:O5'	39:75:2:ASN:HA	2.16	0.46
30:49:103:LEU:HD23	30:49:106:LEU:HD23	1.98	0.46
31:59:149:ARG:HG3	31:59:162:ILE:HG22	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:69:76:THR:HG21	32:69:140:LEU:HA	1.98	0.46
36:45:4:PRO:HD3	36:45:70:PRO:O	2.16	0.46
36:45:35:VAL:HG22	36:45:102:VAL:HG22	1.97	0.46
40:85:91:ASP:OD1	40:85:96:ALA:HB2	2.16	0.46
40:85:99:ALA:HB2	40:85:106:PHE:CG	2.51	0.46
49:H5:23:LEU:HD11	49:H5:53:LEU:HD13	1.98	0.46
50:I5:37:SER:HB3	50:I5:39:CYS:HB2	1.98	0.46
1:13:501:C:OP1	12:3I:117:ARG:NH2	2.41	0.46
1:13:501:C:H1'	1:13:549:C:H1'	1.98	0.46
1:13:792:A:C8	1:13:794:A:C5	3.04	0.46
1:13:868:C:H2'	1:13:869:G:O4'	2.15	0.46
1:13:1394:A:C6	1:13:1501:C:H4'	2.51	0.46
18:9I:44:LEU:HD11	18:9I:70:ILE:HG21	1.96	0.46
25:1H:57:C:H2'	25:1H:58:G:O4'	2.15	0.46
25:1H:273(F):C:H3'	25:1H:274:G:H5''	1.98	0.46
25:1H:1215:G:C4	25:1H:1216:G:C8	3.04	0.46
25:1H:1441:G:H2'	25:1H:1442:G:C8	2.50	0.46
25:1H:1774:C:H5''	62:1H:3695:HOH:O	2.16	0.46
26:16:40:U:O2'	26:16:45:A:N6	2.43	0.46
31:51:56:SER:OG	31:51:61:HIS:ND1	2.46	0.46
43:F8:3:THR:HA	43:F8:6:ASP:OD2	2.15	0.46
55:1G:735:C:H2'	55:1G:736:C:C6	2.51	0.46
55:1G:1325:C:OP1	21:1B:15:ARG:HD2	2.15	0.46
10:1A:69:ASN:O	10:1A:70:ARG:NE	2.47	0.46
11:2A:122:LYS:HB2	11:2A:124:LYS:HG3	1.97	0.46
20:BA:40:ALA:HB2	20:BA:55:ILE:HG22	1.98	0.46
25:14:194:G:H2'	25:14:195:A:O4'	2.16	0.46
25:14:307:G:H21	25:14:330:A:H62	1.62	0.46
25:14:845:G:H21	25:14:933:A:H61	1.62	0.46
25:14:1209:G:H21	25:14:1210:A:H62	1.63	0.46
25:14:1386:C:OP2	25:14:1396:U:H5	1.99	0.46
25:14:1425:G:H2'	25:14:1426:G:O4'	2.16	0.46
25:14:1426:G:H5''	25:14:1427:A:OP2	2.16	0.46
25:14:2112:G:C2	25:14:2114:A:H2	2.34	0.46
25:14:2228:G:OP1	56:19:261:LYS:HE3	2.16	0.46
25:14:2845:G:H5''	39:75:55:ASN:HA	1.97	0.46
31:59:6:ARG:NH2	31:59:62:LYS:HB2	2.27	0.46
31:59:27:LYS:HA	31:59:32:GLU:HB3	1.98	0.46
31:59:117:PRO:HB3	31:59:123:PHE:CZ	2.50	0.46
35:35:111:ARG:HB3	35:35:112:LEU:H	1.64	0.46
37:55:82:GLU:H	37:55:85:PRO:HG2	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:E5:74:ARG:HB2	46:E5:74:ARG:NH1	2.29	0.46
1:13:280:C:O2	17:8I:38:ARG:HG3	2.16	0.46
1:13:536:C:H2'	1:13:537:G:C8	2.51	0.46
1:13:609:A:H2'	1:13:610:G:H5'	1.98	0.46
1:13:741:G:H2'	1:13:742:G:O4'	2.15	0.46
1:13:834:C:C2	1:13:853:G:C2	3.03	0.46
1:13:954:G:H2'	1:13:955:U:C6	2.51	0.46
1:13:1225:A:H2'	1:13:1225:A:N3	2.31	0.46
2:1E:77:ALA:HB2	2:1E:211:ILE:HD13	1.97	0.46
11:2I:17:GLY:HA3	11:2I:77:MET:SD	2.56	0.46
20:BI:104:LEU:HD12	20:BI:105:SER:H	1.81	0.46
25:1H:109:G:H2'	25:1H:110:G:O4'	2.16	0.46
25:1H:270(X):G:C6	25:1H:270(Y):G:C6	3.04	0.46
25:1H:783:A:C8	25:1H:783:A:H3'	2.51	0.46
25:1H:1024:G:C3'	25:1H:1025:G:H5''	2.40	0.46
25:1H:1352:U:H5	62:1H:3555:HOH:O	1.98	0.46
25:1H:1665:A:H4'	34:68:67:LYS:HB2	1.98	0.46
25:1H:1697:G:OP2	25:1H:1698:A:O2'	2.24	0.46
25:1H:1843:C:H5'	27:11:253:GLN:OE1	2.16	0.46
25:1H:1900:A:C8	25:1H:1900:A:C5'	2.97	0.46
25:1H:2068:U:N3	25:1H:2430:A:H2	2.12	0.46
25:1H:2291:U:H2'	25:1H:2292:C:C6	2.50	0.46
25:1H:2327:A:H2'	25:1H:2328:A:H8	1.78	0.46
25:1H:2431:U:P	62:1H:3828:HOH:O	2.66	0.46
25:1H:2864:G:O2'	25:1H:2865:U:H5'	2.16	0.46
26:16:48:A:OP2	38:A8:30:ARG:NH2	2.49	0.46
26:16:79:C:O5'	26:16:79:C:H6	1.98	0.46
28:21:96:PHE:O	28:21:175:VAL:HG11	2.14	0.46
28:21:119:ARG:HB3	28:21:120:TRP:CD1	2.51	0.46
30:41:131:TYR:O	30:41:159:VAL:HG22	2.16	0.46
32:61:93:THR:HG22	32:61:119:PRO:HB3	1.97	0.46
55:1G:238:G:OP1	17:8A:25:ARG:NH2	2.49	0.46
55:1G:240:C:H2'	55:1G:241:C:C6	2.51	0.46
55:1G:1321:C:H4'	13:4A:87:TYR:CZ	2.50	0.46
2:12:119:GLU:HG2	2:12:142:LEU:HD11	1.97	0.46
3:22:95:THR:HG22	3:22:97:LYS:H	1.81	0.46
4:32:178:VAL:C	4:32:180:GLY:H	2.19	0.46
7:62:20:ASP:O	7:62:23:VAL:HG23	2.15	0.46
10:1A:6:ILE:CG2	10:1A:98:ILE:HG23	2.46	0.46
13:4A:84:ILE:HG23	19:AA:74:PHE:CZ	2.51	0.46
25:14:218:A:H2	25:14:235:U:H4'	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:994:C:OP1	40:85:53:ARG:NH2	2.49	0.46
25:14:1011:G:C2	25:14:1151:G:C2	3.04	0.46
25:14:1111:A:H4'	31:59:3:ARG:HH11	1.79	0.46
25:14:1210:A:H5'	25:14:1210:A:C8	2.49	0.46
25:14:1826:G:H4'	56:19:242:ARG:CZ	2.46	0.46
25:14:2238:G:H2'	25:14:2238:G:N3	2.31	0.46
25:14:2787:C:O4'	28:29:62:PRO:HB3	2.16	0.46
56:19:92:ILE:HA	56:19:105:ILE:O	2.16	0.46
35:35:146:VAL:HG22	35:35:147:LEU:HD13	1.97	0.46
36:45:29:PHE:HD2	36:45:65:PHE:CE2	2.33	0.46
43:B5:43:VAL:HG22	43:B5:51:VAL:HG21	1.96	0.46
1:13:237:C:H5''	17:8I:25:ARG:CZ	2.46	0.45
1:13:1004:A:P	1:13:1025:U:H3	2.39	0.45
1:13:1160:G:N2	1:13:1177:G:H22	2.14	0.45
1:13:1427:U:H2'	1:13:1428:A:H8	1.81	0.45
4:3E:111:ALA:HB2	4:3E:120:LEU:CD1	2.46	0.45
11:2I:69:ALA:HB1	11:2I:103:LEU:CD2	2.45	0.45
16:7I:5:ARG:HE	16:7I:22:THR:HG21	1.81	0.45
18:9I:54:ARG:HG3	18:9I:55:ARG:N	2.31	0.45
25:1H:458:G:O2'	53:P8:39:ARG:HD3	2.16	0.45
25:1H:468:G:N7	53:P8:39:ARG:NH2	2.59	0.45
25:1H:880:G:N2	25:1H:897:C:N3	2.64	0.45
25:1H:1286:A:H4'	25:1H:1287:A:OP1	2.16	0.45
25:1H:1511:A:H2'	25:1H:1512:G:O4'	2.16	0.45
25:1H:1581:G:H2'	25:1H:1582:C:O4'	2.17	0.45
26:16:61:G:C6	26:16:62:C:C4	3.04	0.45
27:11:12:SER:O	27:11:16:MET:HB2	2.16	0.45
27:11:17:THR:CG2	27:11:204:ILE:HA	2.45	0.45
27:11:26:LYS:CE	27:11:84:TYR:H	2.29	0.45
27:11:70:TRP:CE2	27:11:150:LYS:HD3	2.51	0.45
27:11:245:PRO:HA	27:11:246:PRO:HD3	1.78	0.45
30:41:16:ARG:N	30:41:17:PRO:HD2	2.31	0.45
31:51:51:ARG:HG2	31:51:52:VAL:N	2.31	0.45
33:58:35:ARG:HB2	33:58:37:LYS:HG3	1.97	0.45
33:58:128:HIS:HE1	33:58:134:ARG:HD2	1.81	0.45
39:B8:108:ARG:O	39:B8:111:ARG:HG2	2.16	0.45
48:K8:55:ARG:O	48:K8:58:ALA:HB3	2.17	0.45
55:1G:889:A:H8	55:1G:889:A:OP1	2.00	0.45
55:1G:1129:C:OP2	9:82:62:TYR:OH	2.25	0.45
55:1G:1238:A:N7	55:1G:1303:C:H1'	2.31	0.45
55:1G:1521:G:H2'	55:1G:1522:U:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:22:14:ILE:HG12	3:22:15:THR:N	2.30	0.45
5:42:82:VAL:HG11	5:42:137:GLU:HB3	1.97	0.45
22:1L:18:G:N2	22:1L:65:C:O2	2.48	0.45
25:14:656:G:H2'	25:14:657:U:O4'	2.17	0.45
25:14:1260:G:H2'	25:14:1261:C:O4'	2.16	0.45
25:14:1419:A:N7	25:14:1421:G:C6	2.84	0.45
25:14:2142:C:H2'	25:14:2143:C:H6	1.81	0.45
25:14:2439:A:H5'	25:14:2439:A:H8	1.72	0.45
25:14:2600:A:C6	25:14:2601:C:N4	2.84	0.45
25:14:2754:U:H5'	25:14:2755:C:OP2	2.17	0.45
56:19:76:PRO:HA	56:19:118:VAL:HG23	1.98	0.45
28:29:2:LYS:HG2	28:29:95:ILE:CG2	2.44	0.45
39:75:53:ARG:HG3	39:75:53:ARG:O	2.16	0.45
43:B5:18:TYR:O	43:B5:20:GLY:N	2.49	0.45
43:B5:67:GLY:C	43:B5:69:TYR:H	2.19	0.45
58:D5:4:ARG:HG2	58:D5:58:VAL:HB	1.98	0.45
1:13:1129:C:H42	1:13:1143:G:N2	2.14	0.45
1:13:1280:A:H3'	1:13:1281:U:H5'	1.97	0.45
1:13:1521:G:H2'	1:13:1522:U:C6	2.51	0.45
5:4E:51:VAL:O	5:4E:55:VAL:HG23	2.16	0.45
13:4I:49:THR:HG22	13:4I:51:ALA:H	1.81	0.45
13:4I:82:MET:C	13:4I:84:ILE:H	2.20	0.45
25:1H:71:A:OP1	25:1H:72:U:H2'	2.16	0.45
25:1H:253:C:C2'	25:1H:254:G:H5'	2.46	0.45
25:1H:483:A:O2'	44:G8:59:GLY:HA2	2.16	0.45
25:1H:882:G:H3'	25:1H:883:G:H5''	1.98	0.45
25:1H:1614:A:N6	42:E8:88:ARG:H	2.14	0.45
25:1H:1831:G:H2'	25:1H:1832:C:C6	2.51	0.45
25:1H:2038:G:H2'	25:1H:2039:C:C6	2.52	0.45
25:1H:2309:A:H8	25:1H:2309:A:O5'	1.99	0.45
25:1H:2545:G:H2'	25:1H:2546:U:O4'	2.17	0.45
25:1H:2648:C:H2'	25:1H:2649:U:C6	2.52	0.45
36:88:75:THR:HA	36:88:90:VAL:HA	1.98	0.45
37:98:48:VAL:HA	37:98:51:LEU:HB2	1.97	0.45
37:98:57:ARG:HB3	37:98:59:ASP:OD1	2.16	0.45
40:C8:69:CYS:SG	40:C8:79:PHE:HD2	2.39	0.45
44:G8:55:TYR:CZ	44:G8:61:ILE:HD11	2.51	0.45
55:1G:1347:G:H22	55:1G:1373:G:H2'	1.81	0.45
2:12:100:GLY:N	2:12:176:GLU:OE2	2.35	0.45
4:32:59:ARG:HA	4:32:62:GLN:HB2	1.98	0.45
11:2A:12:ARG:NH2	11:2A:13:GLN:O	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BA:63:ILE:HG21	20:BA:81:LYS:HG3	1.97	0.45
25:14:350:U:H2'	25:14:351:G:O4'	2.16	0.45
25:14:1375:C:H2'	25:14:1376:C:H6	1.81	0.45
25:14:1758:G:C2	25:14:2696:U:H5'	2.51	0.45
25:14:1825:A:OP1	56:19:249:PRO:HD3	2.16	0.45
25:14:2728:U:P	34:25:70:LYS:HZ1	2.39	0.45
25:14:2757:A:N1	31:59:67:LEU:HD22	2.31	0.45
25:14:2839:G:H5'	37:55:46:GLY:HA2	1.98	0.45
56:19:12:SER:O	56:19:16:MET:HB2	2.16	0.45
32:69:128:LEU:HB2	32:69:138:ILE:HG22	1.98	0.45
41:95:3:ALA:HB2	41:95:99:ILE:HG23	1.96	0.45
58:D5:104:PHE:HB3	58:D5:105:VAL:H	1.42	0.45
52:K5:29:ASN:O	52:K5:32:ASN:HB2	2.17	0.45
53:L5:5:TRP:CD1	53:L5:7:PRO:HG3	2.51	0.45
1:13:337:C:H2'	1:13:338:A:C8	2.51	0.45
1:13:652:U:HO2'	1:13:653:A:P	2.40	0.45
1:13:875:C:O2'	8:7E:14:ARG:NH1	2.49	0.45
1:13:1284:C:H3'	1:13:1285:A:H8	1.80	0.45
4:3E:108:LEU:HD12	4:3E:170:VAL:HG21	1.97	0.45
6:5E:5:GLU:HB3	6:5E:62:TRP:NE1	2.31	0.45
23:2K:33:OMC:HM23	23:2K:33:OMC:H1'	1.61	0.45
25:1H:299:A:C6	25:1H:300:A:N1	2.84	0.45
25:1H:831:G:N2	35:78:53:GLY:O	2.50	0.45
25:1H:962:G:H2'	25:1H:963:U:H6	1.81	0.45
25:1H:1049:C:C2'	25:1H:1050:A:H5'	2.46	0.45
25:1H:1871:A:H2'	25:1H:1872:A:H8	1.80	0.45
25:1H:2025:C:H2'	25:1H:2026:C:C6	2.52	0.45
29:31:37:VAL:HG21	35:78:6:LEU:HD21	1.98	0.45
29:31:125:LEU:HB3	29:31:196:LEU:CD2	2.47	0.45
31:51:118:PRO:HD2	31:51:121:ILE:HB	1.98	0.45
32:61:88:ILE:O	32:61:121:LYS:HE3	2.16	0.45
45:H8:116:VAL:O	45:H8:174:VAL:HG22	2.16	0.45
51:N8:9:LYS:HD3	51:N8:9:LYS:HA	1.82	0.45
55:1G:375:U:OP1	16:7A:69:THR:OG1	2.21	0.45
55:1G:690:G:N2	11:2A:55:LYS:HZ3	2.14	0.45
55:1G:983:A:H2	55:1G:984:C:C6	2.34	0.45
4:32:9:CYS:O	4:32:12:CYS:HB2	2.15	0.45
5:42:18:ARG:HH21	5:42:25:ARG:CB	2.27	0.45
25:14:127:A:H5''	25:14:128:C:C6	2.51	0.45
25:14:639:U:H2'	25:14:640:C:H6	1.78	0.45
25:14:1069:A:H2	25:14:1094:U:H3	1.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1120:G:H2'	25:14:1121:C:O4'	2.16	0.45
25:14:1131:G:C2	25:14:1132:A:C4	3.05	0.45
25:14:2788:C:H5''	25:14:2789:C:OP2	2.16	0.45
25:14:2852:G:H2'	25:14:2853:C:C6	2.51	0.45
26:1J:31:C:C2'	26:1J:32:C:H5'	2.46	0.45
51:J5:36:CYS:SG	51:J5:49:CYS:SG	3.14	0.45
1:13:757:U:H2'	1:13:758:G:O4'	2.15	0.45
1:13:1429:C:H2'	1:13:1430:C:C6	2.51	0.45
3:2E:175:LEU:HD21	3:2E:201:TYR:CD2	2.52	0.45
4:3E:146:ILE:H	4:3E:146:ILE:HD12	1.82	0.45
5:4E:6:PHE:CE2	5:4E:66:MET:HE3	2.51	0.45
5:4E:33:VAL:HG11	5:4E:109:ILE:HA	1.97	0.45
20:BI:35:THR:O	20:BI:38:LYS:HB2	2.16	0.45
22:1K:51:C:C5	22:1K:52:G:H1'	2.51	0.45
22:3K:20:C:H6	22:3K:68:A:H61	1.65	0.45
25:1H:858:U:O2	25:1H:2268:A:H2'	2.17	0.45
25:1H:863:A:H2'	25:1H:864:G:C8	2.51	0.45
25:1H:1068:G:H4'	25:1H:1070:A:N6	2.32	0.45
25:1H:1268:A:C2	25:1H:2013:A:C4	3.04	0.45
25:1H:1705:G:C2'	25:1H:1706:U:H5'	2.47	0.45
25:1H:2119:A:C2	25:1H:2171:A:H1'	2.51	0.45
25:1H:2591:C:H2'	25:1H:2592:G:C8	2.52	0.45
26:16:42:C:O2	30:41:93:THR:N	2.43	0.45
30:41:69:ALA:O	30:41:90:LEU:HD12	2.15	0.45
30:41:118:ARG:O	30:41:181:ARG:HG3	2.16	0.45
31:51:12:PRO:HB2	31:51:13:LYS:HG3	1.97	0.45
35:78:75:ILE:H	35:78:75:ILE:CD1	2.26	0.45
38:A8:14:VAL:HG11	38:A8:90:GLY:O	2.17	0.45
54:Q8:9:GLY:CA	54:Q8:12:LYS:H	2.29	0.45
54:Q8:50:LEU:C	54:Q8:52:LYS:N	2.65	0.45
55:1G:521:G:O5'	12:3A:73:GLU:HG2	2.16	0.45
55:1G:1218:C:OP2	14:5A:9:LYS:NZ	2.29	0.45
55:1G:1227:A:OP2	13:4A:111:LYS:HD3	2.16	0.45
2:12:12:GLU:HB3	2:12:213:LEU:HD22	1.97	0.45
2:12:75:LYS:HA	2:12:78:GLN:HB2	1.99	0.45
2:12:77:ALA:O	2:12:81:VAL:HG23	2.16	0.45
3:22:44:GLU:HA	3:22:52:LEU:HD11	1.98	0.45
4:32:25:ARG:NH2	4:32:30:LYS:HG3	2.31	0.45
13:4A:79:LYS:HG2	13:4A:82:MET:SD	2.56	0.45
19:AA:33:THR:HG1	19:AA:35:SER:HG	1.64	0.45
20:BA:97:ALA:HB3	20:BA:99:LEU:HD12	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:3L:57:C:H4'	22:3L:58:G:O5'	2.16	0.45
25:14:120:U:P	62:14:3474:HOH:O	2.73	0.45
25:14:216:A:H2'	25:14:217:G:O4'	2.16	0.45
25:14:270(H):C:H2'	25:14:270(I):G:C8	2.52	0.45
25:14:522:G:H2'	25:14:523:C:H6	1.81	0.45
25:14:654(H):G:N7	25:14:654(N):G:N1	2.64	0.45
25:14:857:C:N3	25:14:858:U:C4	2.85	0.45
25:14:1198:U:C2	25:14:1199:U:C5	3.04	0.45
25:14:2014:A:H2'	25:14:2015:A:C8	2.52	0.45
25:14:2173:A:OP1	25:14:2173:A:H8	1.99	0.45
28:29:37:ARG:HD3	28:29:44:TYR:CE2	2.52	0.45
50:I5:26:SER:OG	50:I5:27:THR:N	2.49	0.45
3:2E:19:GLU:O	3:2E:40:ARG:NH2	2.48	0.45
3:2E:62:ASP:N	3:2E:62:ASP:OD1	2.49	0.45
3:2E:95:THR:HG22	3:2E:96:GLY:H	1.81	0.45
7:6E:102:ARG:O	7:6E:106:GLN:HG3	2.16	0.45
10:1I:21:GLN:O	10:1I:25:GLU:HG3	2.17	0.45
11:2I:86:GLY:N	11:2I:112:THR:OG1	2.31	0.45
22:3K:14:A:H3'	22:3K:15:G:H5''	1.99	0.45
25:1H:247:G:H4'	25:1H:386:G:C5	2.51	0.45
25:1H:459:U:H2'	25:1H:460:A:H8	1.82	0.45
25:1H:1124:C:H2'	25:1H:1125:G:O4'	2.17	0.45
25:1H:1405:U:H2'	25:1H:1406:U:H6	1.76	0.45
25:1H:1416:G:HO2'	25:1H:1417:C:P	2.36	0.45
25:1H:2432:A:C4	47:J8:33:LYS:HD2	2.51	0.45
25:1H:2808:U:H5'	25:1H:2891:G:O6	2.17	0.45
25:1H:2855:C:H2'	25:1H:2856:C:C6	2.50	0.45
28:21:78:LEU:HA	28:21:79:ARG:CD	2.41	0.45
33:58:133:GLN:O	33:58:134:ARG:NE	2.47	0.45
35:78:98:GLU:O	35:78:101:VAL:HG13	2.17	0.45
36:88:37:LEU:HD21	36:88:130:LYS:HE2	1.99	0.45
50:M8:9:LEU:HD12	50:M8:26:SER:HA	1.98	0.45
55:1G:790:A:N1	55:1G:1497:G:H5''	2.31	0.45
55:1G:1033:G:H2'	55:1G:1034:G:C8	2.51	0.45
55:1G:1272:G:H2'	55:1G:1273:G:O4'	2.15	0.45
2:12:48:MET:O	2:12:52:GLU:N	2.42	0.45
9:82:117:HIS:HB2	9:82:121:ARG:O	2.16	0.45
11:2A:70:LYS:HE3	11:2A:70:LYS:HB2	1.75	0.45
12:3A:59:ARG:HH11	12:3A:63:GLY:HA2	1.81	0.45
22:1L:30:A:H2'	22:1L:31:G:C8	2.52	0.45
25:14:50:U:H4'	25:14:51:G:OP2	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:455:C:N3	25:14:473:G:H5'	2.31	0.45
25:14:500:G:N2	25:14:502:A:H3'	2.31	0.45
25:14:646:A:H2'	25:14:647:G:O4'	2.16	0.45
25:14:764:A:O4'	56:19:213:ARG:HG3	2.16	0.45
25:14:806:C:OP2	35:35:41:ARG:HD3	2.16	0.45
25:14:1030:G:OP2	36:45:128:LYS:NZ	2.36	0.45
25:14:1260:G:C6	25:14:1261:C:C4	3.03	0.45
25:14:1336:A:H2'	25:14:1337:G:C8	2.51	0.45
25:14:1386:C:H2'	25:14:1387:C:C6	2.51	0.45
25:14:2046:G:H5'	51:J5:19:ARG:HG3	1.99	0.45
25:14:2543:G:H21	25:14:2646:C:H5''	1.82	0.45
25:14:2579:C:H2'	25:14:2580:U:O4'	2.16	0.45
25:14:2700:C:C2'	25:14:2701:C:H5'	2.47	0.45
25:14:2766:G:C2	25:14:2767:C:C6	3.04	0.45
25:14:2873:A:C8	37:55:5:LYS:HA	2.51	0.45
57:39:41:LEU:O	57:39:44:ARG:HG2	2.16	0.45
57:39:204:ASN:OD1	57:39:204:ASN:N	2.50	0.45
30:49:93:THR:HG21	30:49:95:ARG:NH2	2.31	0.45
31:59:20:ALA:HB3	31:59:23:ARG:HG3	1.99	0.45
33:15:62:VAL:HG22	33:15:66:LYS:HD2	1.97	0.45
36:45:43:THR:HA	36:45:94:VAL:HG12	1.98	0.45
37:55:29:LEU:HD23	37:55:70:LEU:HD11	1.98	0.45
58:D5:5:LEU:HD11	58:D5:44:PHE:HA	1.97	0.45
46:E5:48:GLY:HA3	46:E5:80:HIS:ND1	2.31	0.45
59:M5:59:LYS:HB3	59:M5:59:LYS:HE2	1.52	0.45
1:13:186(A):C:C2	20:BI:105:SER:HB3	2.51	0.45
6:5E:22:GLU:O	6:5E:26:ILE:HG13	2.17	0.45
9:8E:50:LEU:HD23	9:8E:85:LEU:HD11	1.99	0.45
13:4I:81:LEU:HD22	13:4I:88:ARG:HB3	1.98	0.45
19:AI:30:LEU:HD22	19:AI:30:LEU:H	1.81	0.45
23:2K:62:C:H2'	23:2K:63:C:C6	2.48	0.45
23:2K:63:C:O2	23:2K:64:G:C8	2.70	0.45
25:1H:676:A:H2	25:1H:802:A:H61	1.65	0.45
25:1H:1027:A:C2	25:1H:2488:A:H5'	2.52	0.45
25:1H:1170:G:N2	25:1H:1180:C:C2	2.84	0.45
25:1H:1262:A:N3	51:N8:10:LYS:HE3	2.32	0.45
25:1H:1264:G:H5'	51:N8:11:THR:CG2	2.47	0.45
25:1H:1598:C:H2'	25:1H:1599:C:H6	1.82	0.45
25:1H:2104:G:H2'	25:1H:2105:C:C6	2.51	0.45
25:1H:2111:C:H5	25:1H:2147:G:H1	1.63	0.45
27:11:37:LEU:HA	27:11:37:LEU:HD12	1.55	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:31:167:ALA:HB1	29:31:173:VAL:HG11	1.97	0.45
30:41:29:TRP:O	30:41:33:ARG:NH1	2.49	0.45
30:41:117:PHE:HZ	30:41:179:PRO:HG2	1.82	0.45
37:98:83:ILE:HG22	37:98:87:TYR:HE2	1.82	0.45
40:C8:69:CYS:HG	40:C8:79:PHE:HD2	1.63	0.45
42:E8:11:ARG:HH21	42:E8:99:ARG:N	2.14	0.45
42:E8:73:ALA:HB3	42:E8:106:ILE:HD12	1.98	0.45
44:G8:45:VAL:HG22	44:G8:46:LYS:H	1.81	0.45
46:I8:19:LYS:HD3	46:I8:19:LYS:HA	1.54	0.45
54:Q8:34:TRP:HE3	54:Q8:35:GLN:H	1.63	0.45
55:1G:689:C:H3'	55:1G:690:G:N2	2.31	0.45
55:1G:1505:G:H5'	62:1G:1805:HOH:O	2.17	0.45
2:12:53:ARG:HH12	2:12:199:TYR:HA	1.81	0.45
2:12:222:ILE:O	2:12:226:ARG:HG3	2.17	0.45
4:32:68:TYR:OH	4:32:98:GLU:OE1	2.24	0.45
4:32:149:ALA:O	4:32:153:ARG:NE	2.50	0.45
9:82:119:ALA:O	9:82:120:ARG:HB2	2.17	0.45
11:2A:20:TYR:CZ	11:2A:83:ILE:HD12	2.52	0.45
25:14:513:A:C2	25:14:514:A:C4	3.04	0.45
25:14:818:G:H4'	25:14:838:C:O3'	2.17	0.45
25:14:863:A:H2'	25:14:864:G:C8	2.51	0.45
25:14:908:C:OP2	36:45:22:LYS:HD3	2.16	0.45
25:14:1058:U:H2'	25:14:1059:G:C8	2.52	0.45
25:14:2591:C:OP1	56:19:239:ARG:HG3	2.16	0.45
25:14:2684:U:H3	25:14:2725:A:H61	1.62	0.45
25:14:2839:G:H21	37:55:92:GLY:HA2	1.81	0.45
26:1J:56:G:H4'	26:1J:57:A:H8	1.82	0.45
57:39:122:LYS:HD2	57:39:191:ARG:HE	1.81	0.45
31:59:41:MET:N	31:59:41:MET:SD	2.90	0.45
41:95:22:VAL:HG22	41:95:23:GLU:H	1.81	0.45
42:A5:96:ILE:O	42:A5:96:ILE:HG13	2.16	0.45
1:13:6:G:H4'	1:13:298:A:H4'	1.97	0.45
1:13:9:G:C2	1:13:10:A:C8	3.04	0.45
1:13:393:A:OP2	16:7I:12:LYS:HD2	2.15	0.45
1:13:945:G:C2	1:13:1337:G:C2	3.05	0.45
1:13:983:A:H2	1:13:984:C:C6	2.35	0.45
1:13:1504:G:H3'	1:13:1504:G:OP2	2.17	0.45
2:1E:82:ARG:HH21	2:1E:150:SER:HB3	1.82	0.45
3:2E:24:ALA:HB1	3:2E:28:GLN:HB2	1.98	0.45
4:3E:62:GLN:O	4:3E:66:ARG:HD3	2.17	0.45
7:6E:6:ARG:HE	7:6E:6:ARG:HB3	1.62	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:1I:47:PHE:CZ	14:5I:37:PHE:HE2	2.35	0.45
13:4I:70:LEU:O	13:4I:74:VAL:HG23	2.15	0.45
25:1H:270(B):A:H61	25:1H:270(Y):G:C1'	2.30	0.45
25:1H:389:G:N1	35:78:71:VAL:HG12	2.31	0.45
25:1H:527:C:OP2	25:1H:2779:U:C5	2.65	0.45
25:1H:950:G:H2'	25:1H:951:C:C6	2.52	0.45
25:1H:1675:C:H2'	25:1H:1676:A:O4'	2.17	0.45
25:1H:2016:U:H1'	51:N8:6:VAL:HG13	1.99	0.45
25:1H:2118:U:O2	25:1H:2148:G:O2'	2.26	0.45
25:1H:2182:G:H2'	25:1H:2183:C:C6	2.51	0.45
25:1H:2783:G:H2'	25:1H:2784:C:C6	2.52	0.45
25:1H:2875:C:H4'	39:B8:5:ALA:HB2	1.99	0.45
29:31:125:LEU:HD21	29:31:199:TRP:CE3	2.51	0.45
30:41:66:GLN:NE2	30:41:93:THR:O	2.48	0.45
32:61:4:ILE:HD11	32:61:44:LEU:HD13	1.98	0.45
32:61:31:LEU:HD21	32:61:38:LEU:HG	1.97	0.45
35:78:15:ARG:HA	35:78:16:ARG:HB2	1.99	0.45
38:A8:87:PHE:HZ	38:A8:98:VAL:HG12	1.81	0.45
45:H8:28:MET:HB2	45:H8:37:VAL:CG1	2.45	0.45
46:I8:31:VAL:HG23	46:I8:32:ARG:N	2.32	0.45
55:1G:565:U:H3'	55:1G:566:G:H2'	1.98	0.45
55:1G:828:A:H5''	55:1G:859:A:C2	2.51	0.45
55:1G:1511:G:H2'	55:1G:1512:U:O4'	2.16	0.45
2:12:54:THR:HG21	2:12:201:ILE:HD11	1.99	0.45
2:12:166:ASP:OD2	2:12:169:LYS:HB2	2.16	0.45
3:22:47:LEU:HD23	3:22:52:LEU:HB3	1.98	0.45
10:1A:46:ARG:HA	10:1A:64:GLU:HA	1.99	0.45
16:7A:33:ILE:HG12	16:7A:33:ILE:H	1.59	0.45
20:BA:87:LYS:HD2	20:BA:87:LYS:HA	1.63	0.45
22:3L:31:G:O6	22:3L:32:A:N6	2.50	0.45
25:14:850:C:H6	25:14:850:C:O5'	2.00	0.45
25:14:1069:A:O2'	25:14:1072:C:OP2	2.30	0.45
25:14:1228:G:OP1	40:85:13:LYS:HE2	2.16	0.45
25:14:1356:G:C5	25:14:1357:U:C5	3.04	0.45
25:14:1787:A:O4'	25:14:2589:A:H4'	2.17	0.45
26:1J:5:C:O2'	26:1J:27:C:O2	2.35	0.45
31:59:20:ALA:HB3	31:59:23:ARG:O	2.17	0.45
32:69:5:LEU:HD22	32:69:9:LEU:HD12	1.98	0.45
34:25:87:ILE:HD12	34:25:87:ILE:HA	1.72	0.45
41:95:21:ARG:HB3	41:95:91:TYR:CE1	2.51	0.45
1:13:342:C:N3	1:13:348:G:C2	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:411:A:H62	1:13:413:G:N2	2.15	0.45
1:13:474:G:H5''	16:7I:81:ARG:NH2	2.32	0.45
1:13:502:G:OP1	12:3I:118:SER:HB2	2.17	0.45
11:2I:107:SER:HA	18:9I:87:ARG:HD3	1.98	0.45
19:AI:41:VAL:H	19:AI:44:MET:HB2	1.82	0.45
22:3K:23:A:H3'	22:3K:24:G:H8	1.82	0.45
25:1H:116:C:O2'	25:1H:117:G:H5'	2.17	0.45
25:1H:547:A:C6	25:1H:548:A:C6	3.05	0.45
25:1H:556:G:H2'	25:1H:557:U:C6	2.51	0.45
25:1H:1078:U:O2'	25:1H:1088:A:OP1	2.29	0.45
25:1H:1111:A:H5'	31:5I:3:ARG:HD2	1.97	0.45
25:1H:1198:U:H2'	25:1H:1199:U:C6	2.52	0.45
25:1H:1568:G:H5'	27:11:60:ARG:HA	1.98	0.45
25:1H:1630(A):C:H2'	62:1H:3648:HOH:O	2.16	0.45
25:1H:1635:G:H3'	62:1H:3511:HOH:O	2.15	0.45
25:1H:1705:G:C6	25:1H:1706:U:C4	3.05	0.45
25:1H:2328:A:H2'	25:1H:2329:G:C8	2.52	0.45
25:1H:2345:G:H4'	25:1H:2346:A:O5'	2.17	0.45
25:1H:2612:C:OP2	51:N8:2:ALA:HB3	2.17	0.45
31:5I:98:LEU:HD12	31:5I:102:ALA:O	2.17	0.45
32:6I:42:SER:O	32:6I:45:LYS:HB2	2.16	0.45
34:68:60:ALA:HB1	34:68:84:ALA:HB1	1.99	0.45
36:88:43:THR:HG22	36:88:94:VAL:HG12	1.98	0.45
37:98:104:ARG:HD2	37:98:107:ASP:OD1	2.17	0.45
55:1G:41:G:H2'	55:1G:42:G:C8	2.51	0.45
55:1G:93:U:H2'	55:1G:95:G:H5''	1.99	0.45
55:1G:337:C:H2'	55:1G:338:A:C8	2.52	0.45
55:1G:588:G:H1	55:1G:651:C:N4	2.10	0.45
55:1G:1052:U:H5''	55:1G:1053:G:OP2	2.16	0.45
55:1G:1117:G:O3'	9:82:104:ARG:HD2	2.17	0.45
55:1G:1158:C:H2'	55:1G:1158:C:O2	2.16	0.45
55:1G:1370:G:N7	9:82:109:VAL:HG11	2.31	0.45
55:1G:1387:G:H2'	55:1G:1388:C:H6	1.81	0.45
55:1G:1418:A:H5''	55:1G:1419:G:OP2	2.17	0.45
4:32:45:GLN:O	4:32:46:LYS:HG3	2.17	0.45
4:32:96:LEU:HB3	4:32:139:ARG:HH12	1.82	0.45
4:32:159:ARG:H	4:32:159:ARG:HG3	1.53	0.45
11:2A:59:TYR:CE1	11:2A:63:LEU:HD21	2.52	0.45
15:6A:3:ILE:HA	15:6A:7:GLU:OE2	2.16	0.45
19:AA:78:ARG:HH11	19:AA:79:THR:H	1.64	0.45
25:14:64:A:O3'	43:B5:71:GLY:HA3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:221:A:N6	25:14:265:A:C8	2.84	0.45
25:14:1614:A:N6	42:A5:88:ARG:H	2.09	0.45
25:14:2674:G:H4'	34:25:30:ALA:HB2	1.99	0.45
26:1J:16:G:H2'	26:1J:17:C:C6	2.51	0.45
26:1J:38:C:O2	26:1J:48:A:H1'	2.17	0.45
56:19:17:THR:O	56:19:211:ARG:NH2	2.47	0.45
56:19:164:GLN:OE1	56:19:176:ARG:NH2	2.49	0.45
31:59:166:GLY:O	31:59:167:GLU:HG2	2.16	0.45
35:35:3:LEU:HD12	35:35:3:LEU:N	2.31	0.45
39:75:5:ALA:HB2	39:75:8:LYS:HE2	1.98	0.45
58:D5:76:LEU:H	58:D5:76:LEU:HD23	1.81	0.45
47:F5:73:LEU:HD23	47:F5:73:LEU:HA	1.73	0.45
1:13:135:C:H2'	1:13:136:C:H5'	1.99	0.45
1:13:448:A:P	1:13:485:G:H22	2.35	0.45
1:13:660:G:OP1	15:6I:5:LYS:HD3	2.17	0.45
1:13:719:C:H1'	18:9I:49:LYS:HB3	1.99	0.45
1:13:1080:A:H5'	5:4E:14:ARG:HH22	1.81	0.45
1:13:1178:G:N2	1:13:1181:G:H8	2.15	0.45
1:13:1446:A:H1'	39:B8:125:ARG:NH2	2.30	0.45
3:2E:162:GLN:HG2	24:4K:24:A:H1'	1.99	0.45
5:4E:110:LEU:O	5:4E:115:VAL:HB	2.16	0.45
6:5E:81:ILE:C	6:5E:82:ARG:HG2	2.37	0.45
7:6E:15:ASP:HB3	7:6E:20:ASP:H	1.82	0.45
7:6E:16:LEU:HD11	9:8E:45:ALA:HB2	1.99	0.45
8:7E:54:ASP:O	8:7E:56:LYS:HG3	2.17	0.45
12:3I:90:VAL:HG11	12:3I:93:LEU:HG	1.98	0.45
14:5I:17:LYS:H	14:5I:17:LYS:HG3	1.54	0.45
17:8I:92:ARG:HD3	17:8I:92:ARG:HA	1.65	0.45
21:1F:5:ASP:HB3	21:1F:8:THR:HG23	1.99	0.45
23:2K:44:A:H2'	23:2K:45:A:C8	2.52	0.45
25:1H:311:A:C6	25:1H:328:U:C4	3.04	0.45
25:1H:654(J):A:H2'	25:1H:654(K):C:H5	1.82	0.45
25:1H:733:G:N7	62:1H:3959:HOH:O	2.47	0.45
25:1H:1449:A:H5'	25:1H:1449(A):G:OP2	2.16	0.45
25:1H:2528:U:H2'	25:1H:2530:A:O5'	2.17	0.45
25:1H:2839:G:H5''	37:98:46:GLY:HA2	1.99	0.45
27:11:38:LYS:HD2	27:11:39:LYS:N	2.32	0.45
27:11:262:ARG:H	27:11:262:ARG:HG2	1.46	0.45
38:A8:27:SER:HA	38:A8:88:ASP:CB	2.47	0.45
41:D8:66:ARG:CZ	41:D8:88:ARG:HD3	2.47	0.45
43:F8:55:ASN:HB2	43:F8:80:ILE:HG13	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:N8:33:CYS:HB2	51:N8:38:ALA:O	2.16	0.45
52:O8:20:ASN:C	52:O8:21:TYR:CG	2.90	0.45
55:1G:4:U:O4	8:72:105:ARG:HD3	2.17	0.45
55:1G:384:G:H2'	55:1G:385:C:C6	2.51	0.45
55:1G:1239:A:O2'	55:1G:1298:C:N4	2.50	0.45
3:22:119:ARG:NH2	3:22:140:ARG:HD2	2.25	0.45
3:22:199:LYS:HB3	3:22:201:TYR:CE2	2.52	0.45
4:32:59:ARG:O	4:32:63:LYS:HB2	2.17	0.45
8:72:92:ARG:HA	8:72:92:ARG:HD2	1.58	0.45
11:2A:84:VAL:HG23	11:2A:110:ASP:HA	1.99	0.45
22:1L:83:C:C4	25:14:2555:U:C2	3.04	0.45
22:3L:62:G:C5	22:3L:63:5MU:H72	2.52	0.45
25:14:55:G:C2	25:14:116:C:C2	3.05	0.45
25:14:734:A:O2'	25:14:1635:G:H5'	2.17	0.45
25:14:863:A:H2'	25:14:864:G:H8	1.82	0.45
25:14:879:G:H22	25:14:899:A:H1'	1.81	0.45
25:14:1122:G:N3	25:14:1122:G:H2'	2.31	0.45
25:14:1783:A:P	62:14:3410:HOH:O	2.74	0.45
25:14:2191:G:O2'	25:14:2192:G:OP1	2.28	0.45
25:14:2355:C:H5'	46:E5:36:ILE:HD11	1.99	0.45
25:14:2414:G:H21	35:35:67:MET:HE1	1.81	0.45
56:19:166:GLN:OE1	56:19:166:GLN:HA	2.17	0.45
28:29:25:VAL:CG1	28:29:181:LEU:HG	2.47	0.45
28:29:67:PHE:HD1	28:29:67:PHE:H	1.65	0.45
57:39:152:GLU:HA	57:39:190:GLU:OE2	2.16	0.45
32:69:86:THR:O	32:69:123:LEU:HG	2.16	0.45
33:15:31:ALA:O	33:15:35:ARG:HG2	2.16	0.45
35:35:131:SER:HB3	35:35:134:ALA:HB2	1.99	0.45
39:75:27:THR:HG23	39:75:89:VAL:HG22	1.99	0.45
44:C5:104:GLY:HA2	44:C5:105:ALA:HA	1.74	0.45
58:D5:70:LEU:O	58:D5:89:PHE:N	2.38	0.45
1:13:308:C:H2'	1:13:309:G:H8	1.82	0.45
1:13:595:G:H22	1:13:643:C:N4	2.15	0.45
1:13:974:A:OP1	14:5I:31:ARG:HD3	2.16	0.45
1:13:1023:G:H3'	1:13:1024:G:H5''	1.98	0.45
1:13:1316:G:N1	1:13:1319:A:OP2	2.49	0.45
2:1E:61:LEU:HD23	2:1E:68:ILE:HD11	1.99	0.45
6:5E:8:ILE:HD11	6:5E:79:LEU:HD13	1.98	0.45
8:7E:94:TYR:HE1	8:7E:132:GLU:HB2	1.82	0.45
10:1I:76:ASN:HA	10:1I:77:PRO:HD2	1.81	0.45
11:2I:50:TYR:CD2	11:2I:54:ARG:HB3	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:4I:15:VAL:O	13:4I:19:LEU:HD22	2.17	0.45
16:7I:72:ARG:HA	16:7I:75:ARG:HB2	1.98	0.45
17:8I:65:ILE:HG21	17:8I:69:LYS:HE2	1.99	0.45
24:4K:24:A:H2'	24:4K:25:A:C8	2.51	0.45
25:1H:234:C:H2'	25:1H:235:U:C6	2.51	0.45
25:1H:868:U:C4	25:1H:869:G:N7	2.85	0.45
25:1H:1676:A:OP2	62:1H:3622:HOH:O	2.21	0.45
27:11:85:ASP:HB2	27:11:92:ILE:HD13	1.98	0.45
29:31:68:LYS:O	29:31:69:HIS:HB2	2.17	0.45
30:41:101:ILE:O	30:41:105:LYS:HE3	2.16	0.45
37:98:12:ARG:HD3	37:98:16:HIS:CD2	2.52	0.45
55:1G:15:G:H1'	5:42:19:MET:CE	2.47	0.45
55:1G:266:G:H2'	55:1G:266:G:N3	2.31	0.45
55:1G:440:A:H3'	55:1G:442:C:C6	2.52	0.45
55:1G:1523:G:OP1	11:2A:123:LYS:HD3	2.17	0.45
3:22:195:VAL:O	3:22:196:LEU:HD22	2.17	0.45
6:52:19:LEU:HD11	6:52:59:TYR:CE1	2.52	0.45
22:3L:10:C:H2'	22:3L:11:C:C6	2.52	0.45
25:14:1180:C:H2'	25:14:1181:C:H6	1.81	0.45
25:14:1858:G:H2'	25:14:1883:G:N2	2.32	0.45
56:19:267:SER:O	56:19:268:ARG:HG2	2.17	0.45
28:29:80:GLU:O	28:29:82:ARG:N	2.49	0.45
28:29:101:ARG:CZ	28:29:171:GLU:HB2	2.47	0.45
30:49:81:LYS:HB3	30:49:82:LEU:H	1.46	0.45
30:49:102:PHE:HE1	30:49:141:PHE:CE2	2.35	0.45
1:13:321:A:C2	1:13:333:G:C2	3.05	0.44
1:13:500:G:N2	1:13:546:G:H1'	2.32	0.44
1:13:724:G:C2	1:13:725:G:C8	3.06	0.44
1:13:1047:G:C2'	1:13:1048:G:H5'	2.47	0.44
1:13:1180:A:H5''	1:13:1181:G:OP1	2.17	0.44
5:4E:27:ARG:HE	5:4E:27:ARG:HB2	1.62	0.44
7:6E:66:VAL:O	7:6E:70:LYS:HG3	2.17	0.44
12:3I:58:VAL:HG21	12:3I:85:ILE:HD11	1.99	0.44
14:5I:37:PHE:CE1	14:5I:53:LEU:HD13	2.51	0.44
15:6I:9:GLN:HA	15:6I:12:ILE:HD12	1.99	0.44
22:1K:35:QUO:O13	22:1K:35:QUO:H102	2.17	0.44
22:3K:77:C:H2'	22:3K:78:C:C6	2.52	0.44
25:1H:184:C:H2'	25:1H:185:U:H6	1.81	0.44
25:1H:239:U:H2'	25:1H:240:G:C8	2.51	0.44
25:1H:270(B):A:N1	25:1H:273:G:O2'	2.40	0.44
25:1H:1380:G:N2	25:1H:1570:A:C2	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1494:A:C2'	25:1H:1495:A:H5'	2.47	0.44
25:1H:1668:A:OP1	34:68:5:GLN:HG3	2.17	0.44
25:1H:1858:G:H2'	25:1H:1883:G:H22	1.82	0.44
25:1H:2531:A:C8	31:51:175:LYS:HB3	2.53	0.44
25:1H:2689:U:P	25:1H:2719:G:H22	2.40	0.44
27:11:31:LYS:HB3	27:11:33:LEU:HD12	1.99	0.44
28:21:115:GLY:O	28:21:119:ARG:HB2	2.16	0.44
29:31:117:ARG:NH2	35:78:1:MET:O	2.50	0.44
30:41:83:ARG:H	30:41:86:MET:HE1	1.81	0.44
35:78:100:LEU:HD23	35:78:112:LEU:HD11	1.99	0.44
39:B8:93:ARG:HG3	39:B8:93:ARG:HH11	1.82	0.44
40:C8:94:ASN:O	40:C8:94:ASN:ND2	2.48	0.44
55:1G:109:A:H5'	55:1G:110:C:C5	2.52	0.44
55:1G:109:A:C6	55:1G:326:G:C6	3.05	0.44
55:1G:186(F):C:H2'	55:1G:187:C:O4'	2.15	0.44
55:1G:1018:C:H2'	55:1G:1019:C:O4'	2.18	0.44
55:1G:1277:C:O2'	55:1G:1279:A:H8	1.99	0.44
55:1G:1320:C:OP1	19:AA:70:LYS:HE3	2.17	0.44
2:12:17:PHE:CE2	2:12:44:LEU:HA	2.52	0.44
9:82:50:LEU:HB3	9:82:56:LEU:HA	1.99	0.44
10:1A:6:ILE:HA	10:1A:97:GLU:O	2.17	0.44
11:2A:56:GLY:O	11:2A:89:ALA:HB3	2.17	0.44
25:14:120:U:H4'	25:14:121:G:H5''	1.99	0.44
25:14:273(C):C:N4	25:14:363(C):G:H1	2.15	0.44
25:14:829:A:N7	25:14:2247:A:O2'	2.42	0.44
25:14:911:A:H2'	36:45:9:TYR:OH	2.17	0.44
25:14:1327:C:H2'	25:14:1328:G:O4'	2.17	0.44
25:14:1462:C:H4'	25:14:2703:C:H5'	1.99	0.44
25:14:2688:U:H1'	25:14:2721:A:N6	2.32	0.44
26:1J:15:A:OP2	26:1J:107:U:O2'	2.34	0.44
56:19:43:ARG:HH11	56:19:43:ARG:HG2	1.80	0.44
56:19:108:PRO:HG2	56:19:111:LEU:HB2	1.98	0.44
56:19:120:GLY:HA2	56:19:190:TYR:OH	2.17	0.44
57:39:132:VAL:O	57:39:134:GLY:N	2.50	0.44
33:15:71:ILE:HD12	33:15:71:ILE:O	2.17	0.44
42:A5:69:LEU:HA	42:A5:108:GLY:O	2.17	0.44
44:C5:52:SER:HB2	44:C5:56:PRO:HA	1.99	0.44
46:E5:72:ARG:CB	46:E5:75:LEU:HB2	2.47	0.44
1:13:160:A:H1'	1:13:344:A:C8	2.53	0.44
1:13:174:C:H5'	1:13:174:C:H6	1.81	0.44
1:13:1152:A:H2'	1:13:1153:C:H6	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1355:G:H2'	1:13:1356:G:C8	2.52	0.44
2:1E:205:ASP:OD1	2:1E:206:ASP:N	2.50	0.44
14:5I:27:CYS:SG	14:5I:29:ARG:HB2	2.57	0.44
15:6I:78:TYR:OH	15:6I:88:ARG:HD2	2.17	0.44
22:3K:7:G:OP2	22:3K:7:G:H8	2.00	0.44
25:1H:190:A:OP2	47:J8:39:LYS:HE3	2.17	0.44
25:1H:278:A:H3'	25:1H:279:C:C6	2.52	0.44
25:1H:1142(A):A:H4'	25:1H:1143:A:OP1	2.17	0.44
25:1H:1204:A:N1	25:1H:1241:A:C2	2.86	0.44
25:1H:2766:G:H2'	25:1H:2766:G:N3	2.33	0.44
25:1H:2772:C:H2'	25:1H:2773:C:C6	2.52	0.44
25:1H:2853:C:H2'	25:1H:2854:G:C8	2.49	0.44
27:11:155:LEU:HD23	27:11:177:LEU:HD21	2.00	0.44
28:21:144:ARG:HB3	28:21:145:LYS:H	1.60	0.44
31:51:9:ILE:H	31:51:9:ILE:HG13	1.62	0.44
36:88:10:ARG:HH22	46:I8:11:ARG:NH2	2.15	0.44
39:B8:13:ARG:H	39:B8:13:ARG:HG3	1.56	0.44
39:B8:20:PRO:HG2	39:B8:86:ILE:O	2.17	0.44
55:1G:373:A:N3	55:1G:374:A:C8	2.85	0.44
55:1G:558:G:H3'	55:1G:559:A:H5'	1.99	0.44
55:1G:685:G:C2	55:1G:686:U:C5	3.05	0.44
55:1G:833:U:O2	55:1G:854:G:C2	2.71	0.44
55:1G:924:C:H2'	55:1G:925:G:C8	2.52	0.44
5:42:35:GLY:HA3	5:42:41:VAL:HG12	1.99	0.44
25:14:95:G:O2'	48:G5:48:HIS:HB3	2.16	0.44
25:14:198:C:H4'	25:14:2243:U:O2'	2.17	0.44
25:14:274:G:H2'	25:14:275:G:O4'	2.17	0.44
25:14:1678:G:N2	25:14:1989:G:N2	2.64	0.44
25:14:1777:U:O2'	25:14:1778:U:H5'	2.16	0.44
25:14:2142:C:H2'	25:14:2143:C:C6	2.52	0.44
25:14:2370:G:H21	52:K5:45:LYS:HZ1	1.65	0.44
25:14:2439:A:C5'	25:14:2439:A:H8	2.28	0.44
25:14:2593:U:H2'	25:14:2594:C:H6	1.79	0.44
25:14:2754:U:H5''	25:14:2754:U:H6	1.82	0.44
28:29:63:LEU:HG	28:29:64:LYS:H	1.82	0.44
35:35:15:ARG:HB2	35:35:15:ARG:NH1	2.32	0.44
37:55:28:LEU:HD23	37:55:28:LEU:HA	1.66	0.44
39:75:105:LEU:HD23	39:75:109:GLU:HG3	1.98	0.44
46:E5:12:ASN:HA	46:E5:14:ARG:NH2	2.31	0.44
48:G5:21:LEU:O	48:G5:25:VAL:HG13	2.17	0.44
48:G5:32:LEU:HD11	48:G5:50:ILE:HG23	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:K5:44:ARG:O	52:K5:45:LYS:HB2	2.18	0.44
1:13:189:U:C2	17:8I:72:ARG:NH1	2.85	0.44
1:13:236:G:OP1	17:8I:40:LYS:NZ	2.44	0.44
1:13:648:A:H2'	1:13:649:G:C8	2.53	0.44
1:13:967:C:H3'	1:13:968:A:H2'	1.98	0.44
1:13:1291:G:OP1	7:6E:37:ASN:ND2	2.50	0.44
1:13:1296:C:OP1	13:4I:44:ARG:NH2	2.51	0.44
1:13:1392:G:O2'	1:13:1393:U:H5'	2.17	0.44
2:1E:69:LEU:HD12	2:1E:70:PHE:N	2.32	0.44
6:5E:79:LEU:HD23	6:5E:79:LEU:HA	1.87	0.44
25:1H:241:A:N1	62:1H:4180:HOH:O	2.36	0.44
25:1H:265:A:C8	25:1H:266:G:H1'	2.52	0.44
25:1H:273:G:N2	25:1H:365:C:C2	2.86	0.44
25:1H:459:U:H4'	53:P8:40:TRP:CZ3	2.53	0.44
25:1H:522:G:H2'	25:1H:523:C:C6	2.52	0.44
25:1H:1107:G:H2'	25:1H:1108:U:C6	2.53	0.44
25:1H:1287:A:N7	37:98:107:ASP:HB3	2.32	0.44
25:1H:1359:A:C2	25:1H:1372:U:O4	2.71	0.44
25:1H:1805:U:H5''	27:11:250:TRP:CD2	2.52	0.44
25:1H:2490:G:N3	25:1H:2490:G:H2'	2.33	0.44
25:1H:2779:U:O2	25:1H:2779:U:O4'	2.32	0.44
28:21:116:VAL:HG13	28:21:122:PHE:HB2	1.98	0.44
31:51:86:GLU:O	31:51:131:VAL:O	2.35	0.44
39:B8:88:ILE:O	39:B8:88:ILE:HG13	2.17	0.44
40:C8:11:ARG:O	40:C8:15:LYS:HG3	2.17	0.44
52:O8:41:PRO:HB2	52:O8:44:ARG:NH1	2.33	0.44
55:1G:51:A:C6	55:1G:353:A:C2	3.05	0.44
55:1G:376:G:H1	55:1G:387:U:H3	1.66	0.44
55:1G:406:G:H5'	4:32:5:ILE:HG22	1.99	0.44
55:1G:1016:A:HO2'	55:1G:1217:C:HO2'	1.59	0.44
3:22:37:GLN:O	3:22:41:GLY:N	2.49	0.44
4:32:9:CYS:HA	4:32:12:CYS:HB2	1.98	0.44
7:62:69:VAL:HG13	7:62:134:ALA:O	2.17	0.44
22:1L:75:C:H2'	22:1L:76:C:C5	2.52	0.44
25:14:602:G:OP2	25:14:602:G:H8	2.01	0.44
25:14:676:A:H8	25:14:2069:G:N2	1.97	0.44
25:14:833:U:O2'	35:35:52:GLU:HG2	2.18	0.44
25:14:1025:G:C5	25:14:1135:C:H1'	2.52	0.44
25:14:1980:G:H4'	62:14:3482:HOH:O	2.17	0.44
25:14:2205:C:H2'	25:14:2206:C:H6	1.81	0.44
26:1J:14:U:H5'	26:1J:71:C:C1'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:85:85:LYS:HD3	40:85:116:ALA:O	2.17	0.44
42:A5:59:VAL:O	42:A5:63:ASP:HA	2.18	0.44
1:13:129(A):G:C2	1:13:188:U:O2'	2.70	0.44
1:13:540:G:H2'	1:13:541:G:O4'	2.16	0.44
1:13:765:G:H5''	1:13:766:A:OP1	2.18	0.44
1:13:838:G:H1	1:13:848:C:H42	1.66	0.44
1:13:1179:A:H2'	1:13:1180:A:O4'	2.17	0.44
4:3E:84:LYS:H	4:3E:85:LYS:HD3	1.82	0.44
5:4E:147:ASP:OD1	5:4E:147:ASP:N	2.44	0.44
6:5E:82:ARG:CG	6:5E:83:ASP:HA	2.47	0.44
10:1I:26:ALA:O	10:1I:30:SER:OG	2.35	0.44
15:6I:63:ARG:HG2	15:6I:67:LEU:HD12	2.00	0.44
25:1H:130:C:O3'	25:1H:1349:A:H1'	2.18	0.44
25:1H:152:G:H2'	25:1H:153:C:C6	2.53	0.44
25:1H:627:A:H4'	25:1H:628:G:OP1	2.17	0.44
25:1H:685:A:H1'	25:1H:688:U:O4	2.18	0.44
25:1H:1358:G:N2	25:1H:1372:U:C5	2.86	0.44
25:1H:1858:G:H1'	25:1H:1884:A:N6	2.32	0.44
25:1H:2067:G:H4'	25:1H:2068:U:OP2	2.16	0.44
25:1H:2807:G:H3'	25:1H:2808:U:H5''	1.98	0.44
25:1H:2887:U:H2'	25:1H:2888:C:C6	2.53	0.44
27:11:17:THR:HG22	27:11:205:VAL:H	1.81	0.44
28:21:14:ILE:HA	28:21:14:ILE:HD12	1.70	0.44
28:21:15:PHE:HA	28:21:19:ARG:O	2.16	0.44
28:21:176:ILE:HB	28:21:181:LEU:HB2	1.99	0.44
29:31:64:ILE:HD13	29:31:64:ILE:HA	1.65	0.44
30:41:66:GLN:HA	50:M8:6:HIS:HE1	1.83	0.44
33:58:4:TYR:CD2	40:C8:100:VAL:HG11	2.52	0.44
35:78:24:GLY:C	35:78:26:GLY:H	2.21	0.44
37:98:41:ALA:O	37:98:44:LEU:N	2.45	0.44
37:98:56:LYS:NZ	37:98:90:ARG:O	2.50	0.44
40:C8:47:TYR:CD1	40:C8:47:TYR:C	2.91	0.44
46:I8:23:VAL:HG13	46:I8:38:VAL:HG23	1.98	0.44
51:N8:42:PRO:HB2	51:N8:43:HIS:ND1	2.32	0.44
55:1G:189:U:O2	17:8A:63:ARG:NH2	2.46	0.44
55:1G:468:A:H2'	55:1G:474:G:H5'	1.97	0.44
55:1G:616:G:C2	55:1G:617:G:C8	3.05	0.44
55:1G:719:C:C5	55:1G:720:C:C4	3.06	0.44
55:1G:828:A:H5''	55:1G:859:A:N1	2.32	0.44
55:1G:965:A:C2	55:1G:969:A:C2	3.06	0.44
55:1G:1128:C:H4'	9:82:16:ARG:NH2	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:1G:1148:U:O3'	9:82:14:VAL:HG11	2.17	0.44
55:1G:1443:G:H22	39:75:119:LYS:HB2	1.82	0.44
6:52:61:LEU:HB3	6:52:63:TYR:CE1	2.50	0.44
15:6A:41:GLU:O	15:6A:45:VAL:HG23	2.18	0.44
17:8A:45:HIS:HA	17:8A:69:LYS:HZ1	1.83	0.44
25:14:361:G:N2	25:14:362:U:O2	2.50	0.44
25:14:1000:A:C6	25:14:1001:A:N1	2.85	0.44
25:14:1048:A:P	25:14:1109:C:H42	2.40	0.44
25:14:1395:A:C6	25:14:1398:C:C2	3.06	0.44
25:14:1429:G:H2'	25:14:1430:C:C6	2.53	0.44
25:14:1673:U:P	62:14:3677:HOH:O	2.74	0.44
25:14:1786:A:H1'	25:14:1938:A:N6	2.32	0.44
25:14:2286:A:H5'	52:K5:28:ARG:NE	2.32	0.44
25:14:2364:C:H4'	46:E5:56:ASP:OD1	2.18	0.44
25:14:2873:A:C8	37:55:6:SER:N	2.86	0.44
56:19:11:PRO:C	56:19:13:ARG:H	2.21	0.44
56:19:42:GLY:N	56:19:43:ARG:HD2	2.33	0.44
31:59:6:ARG:NH1	31:59:62:LYS:HB2	2.33	0.44
35:35:125:VAL:HG13	35:35:144:GLU:HB3	2.00	0.44
44:C5:76:CYS:HB2	44:C5:82:PRO:HG3	2.00	0.44
1:13:345:C:O2'	1:13:346:G:N2	2.51	0.44
1:13:417:C:H2'	1:13:418:C:H6	1.83	0.44
1:13:606:G:H22	1:13:631:G:H5''	1.81	0.44
1:13:728:A:H2'	1:13:729:A:C8	2.52	0.44
1:13:940:C:H2'	1:13:941:G:C8	2.53	0.44
3:2E:27:LYS:HE2	3:2E:27:LYS:HA	1.99	0.44
3:2E:50:ALA:HB1	3:2E:70:VAL:HG11	1.98	0.44
13:4I:64:TRP:HA	50:M8:50:VAL:HG21	2.00	0.44
14:5I:53:LEU:HB3	14:5I:56:VAL:HG21	1.98	0.44
17:8I:101:ARG:HB2	17:8I:101:ARG:CZ	2.48	0.44
23:2K:37:U:H2'	23:2K:38:A:C8	2.53	0.44
25:1H:552:G:H2'	25:1H:553:U:O4'	2.18	0.44
25:1H:1087:G:C5	25:1H:1089:G:H1'	2.53	0.44
25:1H:1652:A:C2'	25:1H:1653:G:H5'	2.48	0.44
25:1H:1786:A:H2	25:1H:2606:C:C1'	2.27	0.44
25:1H:2248:C:H2'	25:1H:2249:U:O4'	2.18	0.44
25:1H:2280:G:C2'	25:1H:2281:C:H5'	2.48	0.44
25:1H:2600:A:H2'	25:1H:2601:C:C6	2.53	0.44
25:1H:2706:G:H2'	25:1H:2707:G:O4'	2.17	0.44
26:16:43:C:P	30:41:67:LYS:HZ1	2.40	0.44
28:21:82:ARG:O	28:21:84:PHE:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:61:57:ARG:HA	32:61:60:GLU:HB3	2.00	0.44
32:61:64:GLU:HG3	32:61:67:ARG:NH2	2.32	0.44
35:78:21:ARG:HB3	35:78:22:GLY:H	1.66	0.44
35:78:39:LYS:HA	35:78:45:LEU:HD13	2.00	0.44
35:78:63:PRO:HG2	54:Q8:25:MET:HB2	1.99	0.44
35:78:65:ARG:HD2	54:Q8:25:MET:HE3	1.99	0.44
55:1G:25:C:H2'	55:1G:26:A:C8	2.52	0.44
55:1G:807:A:H2'	55:1G:808:C:C6	2.52	0.44
55:1G:890:G:O2'	55:1G:906:G:O6	2.26	0.44
55:1G:1028(A):C:N4	55:1G:1028(B):C:H41	2.16	0.44
55:1G:1069:C:O2'	55:1G:1192:C:H1'	2.17	0.44
3:22:34:LEU:HD13	14:5A:25:VAL:HG11	2.00	0.44
5:42:40:ARG:HH21	5:42:66:MET:HG2	1.82	0.44
25:14:195:A:H61	25:14:198:C:H3'	1.81	0.44
25:14:565:C:H2'	25:14:566:U:O4'	2.17	0.44
25:14:810:U:O5'	25:14:810:U:H6	2.01	0.44
25:14:959:A:C6	25:14:960:A:N1	2.86	0.44
25:14:1901:A:N3	25:14:1901:A:H2'	2.33	0.44
25:14:2059:A:H5''	25:14:2060:A:OP2	2.17	0.44
25:14:2162:G:H5''	25:14:2172:U:C5	2.52	0.44
25:14:2419:U:O4	59:M5:31:HIS:CG	2.70	0.44
25:14:2851:A:H2'	25:14:2852:G:H8	1.83	0.44
25:14:2873:A:C8	37:55:6:SER:HB2	2.53	0.44
26:1J:11:C:OP2	26:1J:12:C:N4	2.39	0.44
30:49:64:THR:HG23	30:49:66:GLN:H	1.82	0.44
33:15:35:ARG:HB2	33:15:42:TRP:HZ3	1.82	0.44
41:95:76:LYS:HB2	41:95:79:VAL:HG23	1.98	0.44
58:D5:91:LEU:HB3	58:D5:130:PRO:HG3	1.99	0.44
46:E5:50:ASN:C	46:E5:62:LEU:HD12	2.38	0.44
1:13:156:G:H2'	1:13:157:G:H8	1.82	0.44
1:13:734:G:C6	1:13:735:C:C4	3.05	0.44
1:13:963:G:N2	10:1I:55:LYS:NZ	2.66	0.44
1:13:1234:C:H2'	1:13:1235:U:H6	1.83	0.44
9:8E:18:PHE:HD2	9:8E:62:TYR:HD2	1.65	0.44
10:1I:34:VAL:HG12	10:1I:74:ILE:HG12	2.00	0.44
16:7I:68:ASP:O	16:7I:71:ARG:HB3	2.17	0.44
22:3K:80:C:H2'	22:3K:81:C:C6	2.53	0.44
25:1H:69:C:H2'	25:1H:70:G:C8	2.53	0.44
25:1H:444:C:C4'	29:31:49:ALA:HB2	2.48	0.44
25:1H:761:A:N7	62:1H:3962:HOH:O	2.50	0.44
25:1H:844:C:H3'	25:1H:845:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:878:A:C6	25:1H:900:A:C8	3.05	0.44
25:1H:1047:G:HO2'	25:1H:1111:A:N6	2.15	0.44
25:1H:2115:G:C6	25:1H:2117:A:C8	3.06	0.44
25:1H:2302:G:C6	25:1H:2315:G:C6	3.06	0.44
25:1H:2683:C:OP1	39:B8:53:ARG:NH2	2.48	0.44
25:1H:2729:G:H2'	25:1H:2730:C:C6	2.52	0.44
25:1H:2820:A:O5'	37:98:4:LEU:HD23	2.18	0.44
26:16:15:A:H1'	26:16:109:G:C4	2.52	0.44
28:21:5:LEU:HD12	28:21:51:PHE:HB2	2.00	0.44
40:C8:75:ASN:HD22	40:C8:77:SER:HB2	1.82	0.44
55:1G:109:A:H2'	55:1G:326:G:N2	2.32	0.44
55:1G:313:A:H2'	55:1G:314:C:C6	2.53	0.44
55:1G:707:C:H2'	55:1G:708:C:C6	2.53	0.44
55:1G:983:A:H2	55:1G:984:C:C5	2.36	0.44
55:1G:1291:G:H4'	9:82:39:GLY:HA3	1.99	0.44
2:12:67:THR:HG21	2:12:155:LEU:HG	2.00	0.44
9:82:88:TYR:HB3	9:82:89:ASN:OD1	2.18	0.44
9:82:118:LYS:O	9:82:119:ALA:HB3	2.18	0.44
9:82:128:ARG:HH22	23:2L:34:U:P	2.41	0.44
12:3A:36:VAL:O	12:3A:59:ARG:N	2.47	0.44
13:4A:96:LEU:C	13:4A:110:ARG:HE	2.20	0.44
14:5A:12:ARG:HB2	14:5A:14:PRO:HD3	2.00	0.44
19:AA:66:MET:HA	19:AA:67:VAL:O	2.17	0.44
25:14:26:G:C6	25:14:27:G:N1	2.85	0.44
25:14:586:A:P	62:14:3447:HOH:O	2.75	0.44
25:14:590:A:H2'	25:14:591:C:O4'	2.17	0.44
25:14:729:G:OP2	56:19:13:ARG:NH1	2.41	0.44
25:14:756:C:C2'	25:14:757:U:H5'	2.47	0.44
25:14:797:C:OP2	57:39:62:ARG:HG3	2.18	0.44
25:14:1021:A:H3'	25:14:1021:A:H8	1.82	0.44
25:14:1024:G:C3'	25:14:1025:G:H5''	2.46	0.44
25:14:1323:U:H2'	25:14:1324:G:H5'	1.99	0.44
25:14:1366:A:H2'	25:14:1367:A:O4'	2.18	0.44
25:14:1416:G:O2'	25:14:1417:C:P	2.75	0.44
25:14:1678:G:H22	25:14:1989:G:N2	2.16	0.44
25:14:2329:G:H2'	25:14:2330:G:C8	2.52	0.44
25:14:2744:G:H21	31:59:143:GLN:HE22	1.66	0.44
25:14:2881:C:H2'	25:14:2882:A:O4'	2.18	0.44
56:19:126:GLN:HB2	56:19:129:ASN:ND2	2.33	0.44
28:29:37:ARG:HD3	28:29:44:TYR:CZ	2.53	0.44
31:59:149:ARG:CZ	31:59:154:PRO:HB3	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:45:137:TYR:CE2	58:D5:83:PRO:HG3	2.53	0.44
37:55:13:HIS:HD2	37:55:15:SER:H	1.65	0.44
41:95:2:PHE:O	41:95:42:GLY:N	2.50	0.44
41:95:94:LEU:HA	41:95:94:LEU:HD23	1.73	0.44
50:I5:11:PRO:HB3	50:I5:25:TYR:CE1	2.52	0.44
50:I5:20:ASN:ND2	50:I5:36:CYS:HB2	2.33	0.44
52:K5:27:LYS:HE2	52:K5:27:LYS:HB2	1.75	0.44
53:L5:24:THR:O	53:L5:28:ARG:HG3	2.17	0.44
1:13:799:G:C6	1:13:800:G:C4	3.06	0.44
1:13:1438:G:H2'	1:13:1439:C:C6	2.52	0.44
2:1E:215:LEU:HA	2:1E:215:LEU:HD13	1.82	0.44
25:1H:53:A:H2'	25:1H:54:G:O4'	2.17	0.44
25:1H:270(V):G:H2'	25:1H:270(W):G:O4'	2.18	0.44
25:1H:730:C:OP2	25:1H:731:C:OP2	2.35	0.44
25:1H:1144:G:C6	25:1H:1145:C:N4	2.86	0.44
25:1H:1535:U:O2	25:1H:1536:A:H5''	2.18	0.44
25:1H:1538:G:H2'	25:1H:1539:G:C8	2.53	0.44
25:1H:1776:G:H2'	25:1H:1776:G:N3	2.31	0.44
25:1H:1820:U:C2	27:11:202:LYS:HB3	2.53	0.44
25:1H:2029:G:N7	25:1H:2031:A:H5'	2.33	0.44
25:1H:2171:A:O2'	25:1H:2172:U:O5'	2.35	0.44
25:1H:2639:A:H2'	25:1H:2640:G:O4'	2.17	0.44
25:1H:2757:A:N1	31:51:67:LEU:HD22	2.33	0.44
26:16:1:U:H3	26:16:119:A:H2	1.65	0.44
27:11:26:LYS:HD2	27:11:84:TYR:H	1.82	0.44
28:21:181:LEU:HD12	28:21:181:LEU:HA	1.79	0.44
39:B8:92:GLY:HA2	39:B8:116:ALA:HA	2.00	0.44
45:H8:48:PHE:HE1	45:H8:71:VAL:HG11	1.83	0.44
47:J8:87:PRO:HA	47:J8:90:ILE:HB	1.99	0.44
55:1G:428:G:C5	55:1G:430:A:C6	3.05	0.44
55:1G:440:A:H8	55:1G:440:A:OP2	2.01	0.44
55:1G:582:U:C2	55:1G:760:G:C6	3.06	0.44
55:1G:1065:U:H6	55:1G:1190:G:H21	1.66	0.44
3:22:47:LEU:CD2	3:22:68:VAL:HG11	2.47	0.44
3:22:59:ARG:HH12	3:22:97:LYS:HD2	1.82	0.44
4:32:148:VAL:O	4:32:152:SER:OG	2.35	0.44
12:3A:24:VAL:HG13	12:3A:98:TYR:CE1	2.50	0.44
13:4A:22:ILE:HB	13:4A:25:ILE:CG1	2.48	0.44
17:8A:45:HIS:HB2	17:8A:65:ILE:HD13	2.00	0.44
25:14:54:G:O2'	53:L5:35:ARG:HD3	2.18	0.44
25:14:195:A:OP1	35:35:46:LYS:HE2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:244:A:H2'	25:14:245:G:O4'	2.18	0.44
25:14:271(B):G:N3	25:14:271:G:H1'	2.32	0.44
25:14:299:A:N1	25:14:322:A:O2'	2.47	0.44
25:14:320:A:H4'	25:14:322:A:C8	2.52	0.44
25:14:1064:C:O2	25:14:1074:G:N2	2.50	0.44
25:14:1287:A:C5	25:14:1288:U:C4	3.06	0.44
25:14:1427:A:H4'	25:14:1428:C:O4'	2.18	0.44
25:14:1751:C:O2'	25:14:1752:C:H5'	2.17	0.44
25:14:1757:U:N3	25:14:1762:A:H2	2.08	0.44
25:14:2469:A:H2	25:14:2481:G:N2	2.16	0.44
25:14:2637:U:H2'	25:14:2638:G:O4'	2.18	0.44
25:14:2836:U:C4	25:14:2883:A:N6	2.86	0.44
28:29:57:LYS:HD3	28:29:57:LYS:HA	1.72	0.44
57:39:181:LEU:HD22	57:39:186:ILE:HD11	1.99	0.44
30:49:27:ASN:HB3	30:49:30:GLU:HG3	1.99	0.44
31:59:26:VAL:CG1	31:59:33:LEU:H	2.30	0.44
37:55:79:LEU:HA	37:55:83:ILE:HB	2.00	0.44
40:85:92:ARG:HG2	41:95:11:GLN:OE1	2.18	0.44
42:A5:72:LYS:HB3	42:A5:106:ILE:HG13	1.99	0.44
44:C5:100:ALA:O	44:C5:102:CYS:SG	2.76	0.44
52:K5:38:LYS:HE3	52:K5:38:LYS:HB3	1.80	0.44
1:13:22:G:H2'	1:13:23:C:C6	2.53	0.44
1:13:562:C:H1'	12:3I:15:ARG:HD2	2.00	0.44
1:13:773:G:O3'	27:11:202:LYS:NZ	2.45	0.44
1:13:1060:C:C5'	10:1I:51:ARG:HG2	2.47	0.44
1:13:1218:C:H2'	1:13:1219:U:C6	2.53	0.44
1:13:1316:G:H22	1:13:1319:A:H5''	1.83	0.44
7:6E:13:GLN:HA	7:6E:14:PRO:HD3	1.90	0.44
9:8E:82:ALA:O	9:8E:86:VAL:HG23	2.17	0.44
10:1I:27:ALA:O	10:1I:31:GLY:N	2.51	0.44
14:5I:24:CYS:C	14:5I:26:ARG:H	2.21	0.44
16:7I:79:VAL:HG12	16:7I:80:PHE:HD1	1.83	0.44
22:1K:38:MIA:H122	22:1K:38:MIA:H162	1.60	0.44
25:1H:139:G:N3	25:1H:141:A:N1	2.65	0.44
25:1H:495:G:H1'	42:E8:57:ASN:OD1	2.17	0.44
25:1H:1215:G:C5	25:1H:1216:G:N7	2.86	0.44
25:1H:1668:A:H4'	25:1H:1669:A:O5'	2.17	0.44
25:1H:1790:C:H5''	25:1H:1791:A:OP1	2.16	0.44
25:1H:1916:A:H2'	25:1H:1917:U:O4'	2.18	0.44
25:1H:2262:U:H4'	25:1H:2328:A:C2	2.52	0.44
27:11:71:ASP:HB2	27:11:103:ARG:HH22	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:11:119:ALA:HB1	27:11:130:ALA:HB3	2.00	0.44
28:21:65:GLY:HA2	28:21:68:ALA:HA	1.99	0.44
35:78:13:ASN:OD1	35:78:15:ARG:HG3	2.17	0.44
38:A8:106:ARG:HH12	38:A8:107:GLU:HB2	1.82	0.44
43:F8:3:THR:HB	43:F8:4:ALA:HA	2.00	0.44
45:H8:10:ARG:HG3	45:H8:36:LYS:HB3	2.00	0.44
45:H8:28:MET:O	45:H8:35:ARG:N	2.42	0.44
55:1G:457:C:H2'	55:1G:458:C:C6	2.53	0.44
55:1G:998(A):C:H2'	55:1G:999:U:C6	2.52	0.44
55:1G:1206:G:C6	55:1G:1207:G:C5	3.06	0.44
4:32:30:LYS:C	4:32:32:ALA:H	2.21	0.44
9:82:21:PRO:HA	9:82:59:PHE:HA	2.00	0.44
13:4A:108:ARG:HG3	13:4A:112:GLY:O	2.18	0.44
25:14:27:G:O2'	25:14:28:A:OP2	2.32	0.44
25:14:476:G:H4'	25:14:502:A:N1	2.32	0.44
25:14:600:G:O3'	57:39:108:LYS:HE2	2.18	0.44
25:14:1343:G:O2'	25:14:1344:G:H5'	2.17	0.44
25:14:1802:A:N1	25:14:1822:G:H1'	2.33	0.44
25:14:1840:G:OP2	62:14:3685:HOH:O	2.20	0.44
25:14:1963:U:H5''	25:14:1963:U:O2	2.18	0.44
25:14:2061:G:H5''	25:14:2503:A:C2	2.53	0.44
25:14:2299:G:H2'	25:14:2300:G:C8	2.52	0.44
25:14:2689:U:H5''	25:14:2713:A:C2	2.52	0.44
25:14:2692:C:H1'	25:14:2847:U:H1'	1.99	0.44
25:14:2851:A:H2'	25:14:2852:G:C8	2.52	0.44
25:14:2854:G:N2	25:14:2864:G:N3	2.66	0.44
32:69:40:THR:O	32:69:44:LEU:HB2	2.18	0.44
35:35:15:ARG:NH2	35:35:17:LYS:HE3	2.33	0.44
58:D5:10:ARG:HH21	58:D5:26:GLY:H	1.66	0.44
1:13:33:A:C6	1:13:34:C:N4	2.85	0.44
1:13:112:G:P	16:7I:27:LYS:HD2	2.58	0.44
1:13:181:G:HO2'	1:13:182:U:H6	1.62	0.44
1:13:260:G:H2'	1:13:261:U:C6	2.52	0.44
1:13:403:C:O3'	4:3E:122:ARG:HD2	2.18	0.44
1:13:1190:G:OP2	3:2E:5:ILE:HG23	2.18	0.44
1:13:1423:G:P	34:68:49:ARG:HH22	2.40	0.44
2:1E:5:ILE:HG13	2:1E:6:THR:H	1.82	0.44
3:2E:4:LYS:HE2	3:2E:4:LYS:HB3	1.40	0.44
5:4E:145:LYS:HB3	5:4E:145:LYS:HE2	1.79	0.44
6:5E:80:ARG:HG3	6:5E:82:ARG:HH11	1.83	0.44
13:4I:4:ILE:CG2	13:4I:5:ALA:H	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:5I:4:LYS:HA	14:5I:7:ILE:CG1	2.48	0.44
18:9I:73:ALA:HB3	18:9I:79:LEU:HD12	1.99	0.44
19:AI:43:GLU:H	19:AI:43:GLU:HG2	1.55	0.44
20:BI:39:LYS:O	20:BI:43:LEU:HG	2.17	0.44
23:2K:2:G:C4	23:2K:3:C:C5	3.06	0.44
25:1H:705:A:C2	25:1H:706:A:C4	3.06	0.44
25:1H:1348:G:C2'	25:1H:1349:A:H5''	2.47	0.44
25:1H:1433:U:O2	25:1H:1561:G:C2	2.71	0.44
25:1H:1454:U:O2'	25:1H:1455:G:N7	2.45	0.44
25:1H:2068:U:H6	25:1H:2068:U:H5''	1.83	0.44
27:11:26:LYS:HE3	27:11:84:TYR:CB	2.47	0.44
28:21:59:VAL:HG21	28:21:73:GLU:HG2	2.00	0.44
29:31:65:TRP:CZ3	29:31:72:ARG:HB3	2.52	0.44
33:58:91:LEU:HA	33:58:95:PRO:HA	2.00	0.44
35:78:114:ILE:HG12	35:78:130:PHE:CD2	2.53	0.44
36:88:47:ILE:CD1	36:88:70:PRO:HD3	2.47	0.44
40:C8:108:GLU:OE2	40:C8:112:ARG:NH1	2.51	0.44
42:E8:71:VAL:HA	42:E8:107:LEU:HD12	1.98	0.44
48:K8:18:PRO:O	48:K8:21:LEU:N	2.51	0.44
52:O8:39:TYR:O	52:O8:46:HIS:HA	2.18	0.44
55:1G:562:C:H4'	55:1G:563:A:O5'	2.18	0.44
55:1G:841:U:H4'	55:1G:842:C:C5	2.53	0.44
55:1G:1388:C:H2'	55:1G:1389:C:C6	2.53	0.44
55:1G:1402:C:H2'	55:1G:1403:C:O4'	2.18	0.44
8:72:20:TYR:HD1	8:72:65:TYR:CD2	2.36	0.44
10:1A:8:LEU:HB3	10:1A:16:LEU:HD22	1.99	0.44
12:3A:8:ASN:HB2	17:8A:34:LYS:HE2	2.00	0.44
12:3A:39:VAL:HG23	12:3A:57:LYS:HE3	1.99	0.44
13:4A:81:LEU:HD21	13:4A:88:ARG:CZ	2.48	0.44
14:5A:12:ARG:H	14:5A:12:ARG:HG3	1.37	0.44
20:BA:41:ILE:HG22	20:BA:91:LEU:HD12	2.00	0.44
25:14:235:U:H2'	25:14:236:C:C6	2.52	0.44
25:14:957:A:N6	25:14:2459:A:C8	2.86	0.44
25:14:993:G:H1'	41:95:87:HIS:HE1	1.80	0.44
25:14:1171:G:N2	25:14:1174:A:N1	2.66	0.44
25:14:1181:C:H2'	25:14:1182:A:C8	2.53	0.44
25:14:1394:U:H3'	25:14:1394:U:H6	1.83	0.44
25:14:2353:G:H2'	25:14:2354:G:O4'	2.18	0.44
28:29:9:VAL:HG12	39:75:7:ILE:HD12	2.00	0.44
28:29:26:ILE:HG21	28:29:28:ALA:HB2	1.99	0.44
28:29:182:LEU:HD12	28:29:182:LEU:HA	1.69	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:49:80:PHE:O	30:49:82:LEU:HB2	2.18	0.44
30:49:102:PHE:CE1	30:49:141:PHE:CE2	3.06	0.44
38:65:106:ARG:HA	38:65:110:LEU:HD21	2.00	0.44
40:85:83:LEU:HA	40:85:83:LEU:HD12	1.73	0.44
43:B5:31:HIS:HA	43:B5:32:PRO:HD3	1.79	0.44
1:13:1316:G:N2	1:13:1318:A:H3'	2.33	0.43
1:13:1320:C:H2'	1:13:1321:C:O4'	2.17	0.43
2:1E:111:ARG:HG2	2:1E:111:ARG:NH1	2.10	0.43
4:3E:120:LEU:HD23	4:3E:120:LEU:HA	1.82	0.43
5:4E:57:LYS:HA	5:4E:60:TYR:HB3	1.99	0.43
20:BI:25:ARG:HH11	20:BI:25:ARG:HG3	1.83	0.43
25:1H:142:G:O3'	43:F8:35:THR:HG21	2.18	0.43
25:1H:498:G:O2'	25:1H:499:U:H5'	2.17	0.43
25:1H:524:U:O2'	25:1H:554:U:H4'	2.18	0.43
25:1H:1194:A:H8	25:1H:1194:A:OP2	2.01	0.43
25:1H:1568:G:N3	27:11:58:HIS:NE2	2.66	0.43
25:1H:2147:G:H2'	25:1H:2148:G:H4'	2.00	0.43
25:1H:2383:G:C2'	25:1H:2384:G:H5'	2.48	0.43
25:1H:2503:A:P	62:1H:3525:HOH:O	2.75	0.43
25:1H:2830:G:H5''	25:1H:2830:G:H8	1.83	0.43
27:11:238:GLY:O	27:11:239:ARG:C	2.57	0.43
31:51:52:VAL:HG21	31:51:68:THR:HG22	2.00	0.43
34:68:87:ILE:HD12	34:68:91:LEU:HG	2.00	0.43
36:88:39:PRO:HA	36:88:97:VAL:O	2.18	0.43
55:1G:814:A:N7	55:1G:816:A:C4	2.86	0.43
55:1G:1095:U:OP1	55:1G:1108:G:N1	2.46	0.43
4:32:30:LYS:C	4:32:32:ALA:N	2.71	0.43
4:32:172:PRO:HB2	4:32:187:ARG:HH12	1.83	0.43
6:52:63:TYR:CD1	6:52:63:TYR:N	2.86	0.43
7:62:46:ALA:O	7:62:50:ILE:HG12	2.17	0.43
8:72:39:LEU:HD12	8:72:39:LEU:HA	1.84	0.43
9:82:95:LYS:HD3	9:82:96:LEU:N	2.33	0.43
22:1L:83:C:O2'	22:1L:84:C:O5'	2.36	0.43
23:2L:38:A:H2'	23:2L:39:A:O4'	2.18	0.43
25:14:322:A:H3'	57:39:169:ASN:OD1	2.17	0.43
25:14:1418:G:H8	25:14:1418:G:O5'	2.01	0.43
25:14:1639:U:C2'	25:14:1640:C:H5'	2.48	0.43
25:14:1954:G:C2	25:14:2551:C:H5''	2.53	0.43
26:1J:14:U:H5'	26:1J:71:C:H1'	2.00	0.43
26:1J:109:G:C6	26:1J:110:G:C5	3.06	0.43
56:19:64:ILE:O	56:19:64:ILE:HG12	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:19:270:ILE:H	56:19:270:ILE:HG12	1.26	0.43
35:35:6:LEU:HB3	35:35:7:ARG:H	1.75	0.43
48:G5:22:GLU:HG2	48:G5:64:LEU:HD11	1.98	0.43
50:I5:18:CYS:SG	50:I5:36:CYS:HB3	2.58	0.43
1:13:134:A:H1'	1:13:325:A:C5	2.53	0.43
1:13:431:A:H2'	1:13:432:A:O4'	2.19	0.43
1:13:711:G:H2'	1:13:712:A:C8	2.54	0.43
1:13:1128:C:H2'	1:13:1139:G:O6	2.18	0.43
20:BI:53:LEU:HD22	20:BI:53:LEU:H	1.83	0.43
22:3K:12:C:H2'	22:3K:13:G:O4'	2.18	0.43
22:3K:18:G:OP1	22:3K:66:G:N2	2.51	0.43
25:1H:524:U:H4'	25:1H:554:U:H4'	2.00	0.43
25:1H:585:G:P	62:1H:3730:HOH:O	2.76	0.43
25:1H:686:G:H4'	25:1H:687:C:OP2	2.18	0.43
25:1H:1056:G:H4'	25:1H:1086:A:N7	2.33	0.43
25:1H:1203:G:H3'	25:1H:1204:A:H5''	2.00	0.43
25:1H:1291:C:H4'	25:1H:1536:A:OP1	2.18	0.43
25:1H:1593:G:H2'	25:1H:1594:G:H8	1.80	0.43
25:1H:2017:U:O2	51:N8:10:LYS:HB2	2.17	0.43
25:1H:2056:G:C2	25:1H:2057:A:C8	3.06	0.43
25:1H:2206:C:H2'	25:1H:2207:C:C6	2.52	0.43
25:1H:2287:A:N6	25:1H:2344:U:H3	2.07	0.43
25:1H:2723:C:OP2	28:21:109:LYS:NZ	2.47	0.43
25:1H:2758:A:C4	31:51:67:LEU:HD21	2.52	0.43
25:1H:2820:A:O2'	25:1H:2821:A:OP1	2.33	0.43
25:1H:2860:A:N7	25:1H:2861:G:H1'	2.33	0.43
26:16:20:C:H2'	26:16:21:G:O4'	2.18	0.43
27:11:70:TRP:CD1	27:11:70:TRP:C	2.91	0.43
28:21:67:PHE:C	28:21:69:LYS:H	2.20	0.43
28:21:111:ARG:HD2	28:21:160:TYR:CE2	2.54	0.43
29:31:46:ARG:HH11	29:31:46:ARG:CG	2.27	0.43
40:C8:58:ARG:HA	40:C8:61:TRP:CE3	2.52	0.43
43:F8:15:GLU:HG3	43:F8:16:LYS:N	2.33	0.43
55:1G:60:A:N6	55:1G:110:C:N3	2.64	0.43
55:1G:689:C:H3'	55:1G:690:G:H21	1.82	0.43
55:1G:993:G:O2'	55:1G:994:A:N7	2.50	0.43
2:12:213:LEU:O	2:12:213:LEU:HD23	2.18	0.43
5:42:30:ALA:O	5:42:45:PHE:HA	2.17	0.43
11:2A:57:THR:HG22	11:2A:59:TYR:N	2.31	0.43
16:7A:8:ARG:HD3	16:7A:17:TYR:CE1	2.53	0.43
18:9A:19:LYS:HG3	18:9A:20:ALA:H	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BA:30:LYS:HB2	20:BA:30:LYS:HE3	1.53	0.43
25:14:68:G:H2'	25:14:69:C:C6	2.53	0.43
25:14:142:G:H1'	43:B5:37:THR:CG2	2.49	0.43
25:14:528:A:OP2	33:15:114:ARG:NH1	2.50	0.43
25:14:877:U:O4	25:14:899:A:N6	2.51	0.43
25:14:1208:C:H3'	62:14:3827:HOH:O	2.17	0.43
25:14:1319:G:C6	25:14:1320:C:N4	2.86	0.43
25:14:1494:A:C2	25:14:1495:A:C4	3.07	0.43
25:14:2617:C:H2'	25:14:2618:G:O4'	2.18	0.43
25:14:2785:C:O2'	28:29:64:LYS:HE2	2.19	0.43
26:1J:58:A:OP2	62:1J:301:HOH:O	2.21	0.43
56:19:246:PRO:HD2	56:19:255:LYS:HD3	1.99	0.43
30:49:58:GLN:H	30:49:58:GLN:HG3	1.68	0.43
30:49:173:LEU:HD22	30:49:178:PHE:CE1	2.53	0.43
1:13:963:G:C2	10:1I:55:LYS:NZ	2.84	0.43
1:13:1326:C:H2'	1:13:1327:C:C6	2.53	0.43
2:1E:97:TRP:HZ2	2:1E:102:LEU:HD13	1.82	0.43
3:2E:12:LEU:HD23	3:2E:12:LEU:HA	1.80	0.43
22:1K:49:A:H2'	22:1K:50:U:H5''	1.99	0.43
25:1H:934:G:H2'	25:1H:935:C:H6	1.84	0.43
25:1H:2031:A:N3	25:1H:2455:G:O2'	2.36	0.43
25:1H:2117:A:N6	25:1H:2172:U:O2	2.51	0.43
25:1H:2238:G:H2'	25:1H:2238:G:N3	2.32	0.43
25:1H:2702:U:OP1	25:1H:2702:U:C6	2.69	0.43
26:16:54:G:H2'	26:16:55:U:H6	1.84	0.43
27:11:9:TYR:CZ	27:11:13:ARG:HG2	2.53	0.43
27:11:239:ARG:HG3	27:11:239:ARG:HH21	1.83	0.43
29:31:24:LEU:HA	29:31:25:PRO:HD2	1.82	0.43
29:31:64:ILE:O	29:31:65:TRP:CD1	2.71	0.43
33:58:128:HIS:ND1	33:58:129:PRO:O	2.49	0.43
34:68:71:ARG:NH2	34:68:122:LEU:O	2.51	0.43
37:98:2:ARG:HB3	37:98:5:LYS:HD2	2.01	0.43
37:98:51:LEU:HD23	37:98:51:LEU:HA	1.77	0.43
37:98:100:LEU:HD11	37:98:113:LEU:HD13	2.00	0.43
38:A8:108:GLY:H	38:A8:110:LEU:HD21	1.82	0.43
44:G8:40:GLU:C	44:G8:42:VAL:H	2.22	0.43
45:H8:59:LEU:HD23	45:H8:59:LEU:HA	1.71	0.43
47:J8:49:VAL:HG11	47:J8:70:VAL:HG11	1.99	0.43
55:1G:468:A:O2'	16:7A:82:GLN:HG2	2.19	0.43
55:1G:690:G:N3	55:1G:690:G:O4'	2.50	0.43
55:1G:691:G:H1	11:2A:52:GLY:HA2	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:1G:865:A:H5'	55:1G:1078:U:C5	2.53	0.43
6:52:2:ARG:HE	6:52:69:GLU:CB	2.31	0.43
18:9A:53:ARG:HA	18:9A:56:THR:OG1	2.18	0.43
25:14:91:A:H2'	25:14:92:G:O4'	2.18	0.43
25:14:252:G:P	35:35:50:ARG:HH21	2.41	0.43
25:14:433:C:H2'	25:14:434:U:C6	2.53	0.43
25:14:1157:G:C2	25:14:1158:C:C2	3.06	0.43
25:14:1261:C:OP2	42:A5:83:LYS:NZ	2.51	0.43
25:14:2395:C:H2'	25:14:2396:G:O4'	2.18	0.43
25:14:2416:C:H2'	25:14:2417:C:C6	2.53	0.43
25:14:2809:A:N6	25:14:2891:G:H2'	2.33	0.43
25:14:2820:A:O5'	37:55:4:LEU:HD23	2.18	0.43
26:1J:79:C:H2'	26:1J:80:U:O4'	2.18	0.43
56:19:70:TRP:HZ3	56:19:146:GLU:CD	2.22	0.43
56:19:242:ARG:H	56:19:242:ARG:HG2	1.36	0.43
32:69:4:ILE:HD12	32:69:43:ASN:HB3	1.99	0.43
32:69:29:TYR:CD1	32:69:30:LEU:HD23	2.47	0.43
32:69:97:ILE:O	32:69:100:ALA:HB3	2.17	0.43
40:85:100:VAL:O	40:85:101:ARG:HG2	2.18	0.43
49:H5:12:PRO:O	49:H5:15:TYR:HB2	2.18	0.43
1:13:17:U:H2'	1:13:18:C:C6	2.54	0.43
1:13:336:C:O2'	1:13:337:C:H5'	2.18	0.43
1:13:513:C:H2'	1:13:514:C:O4'	2.18	0.43
1:13:919:A:O2'	1:13:920:U:H5'	2.19	0.43
1:13:1500:A:P	62:13:1804:HOH:O	2.74	0.43
2:1E:109:SER:O	2:1E:112:VAL:N	2.51	0.43
3:2E:3:ASN:C	3:2E:4:LYS:HG2	2.38	0.43
4:3E:9:CYS:O	4:3E:13:ARG:HG3	2.18	0.43
8:7E:50:ARG:H	8:7E:50:ARG:HG3	1.59	0.43
11:2I:114:VAL:HA	11:2I:115:PRO:HD2	1.79	0.43
20:BI:73:HIS:O	20:BI:76:ALA:HB3	2.18	0.43
22:1K:48:C:H3'	22:1K:49:A:C8	2.50	0.43
25:1H:37:C:H2'	25:1H:38:A:C8	2.53	0.43
25:1H:1692:U:O2'	25:1H:1693:U:H2'	2.18	0.43
25:1H:1728:G:H1'	25:1H:1732:A:N6	2.33	0.43
25:1H:2250:G:C5	36:88:83:MET:HB2	2.54	0.43
25:1H:2392:A:O3'	54:Q8:27:THR:HG22	2.18	0.43
25:1H:2820:A:C4	37:98:4:LEU:HD11	2.53	0.43
28:21:103:ASP:OD1	28:21:201:THR:HG23	2.19	0.43
29:31:123:LEU:HD21	29:31:199:TRP:CZ3	2.53	0.43
29:31:155:LEU:HD11	29:31:176:LEU:HD13	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:51:9:ILE:HA	31:51:10:PRO:HD2	1.78	0.43
32:61:47:LEU:O	32:61:51:ILE:HG13	2.18	0.43
39:B8:19:LEU:HA	39:B8:20:PRO:HD3	1.80	0.43
39:B8:99:LEU:HB3	39:B8:101:PHE:HE1	1.83	0.43
40:C8:95:LEU:HD22	41:D8:4:ILE:CD1	2.48	0.43
45:H8:130:PRO:O	45:H8:133:ILE:HG13	2.18	0.43
52:O8:31:PRO:HG2	52:O8:35:GLU:HG2	2.00	0.43
55:1G:407:G:C2	55:1G:436:C:C2	3.06	0.43
55:1G:552:U:H1'	12:3A:32:PHE:CZ	2.53	0.43
55:1G:986:A:N3	19:AA:52:TYR:OH	2.43	0.43
55:1G:1035:A:H3'	55:1G:1036:G:H5''	1.99	0.43
55:1G:1084:G:H5'	55:1G:1102:A:OP2	2.18	0.43
2:12:97:TRP:CE2	2:12:101:MET:HG3	2.54	0.43
3:22:117:ALA:HB2	3:22:200:ALA:HB2	1.99	0.43
3:22:172:ARG:HE	3:22:172:ARG:HB3	1.61	0.43
7:62:146:GLU:O	7:62:149:ARG:HB2	2.18	0.43
11:2A:73:MET:HG2	11:2A:103:LEU:HD11	1.99	0.43
17:8A:95:TYR:HA	17:8A:98:LEU:HD12	2.01	0.43
20:BA:41:ILE:O	20:BA:44:ALA:N	2.51	0.43
23:2L:57:C:N4	30:49:83:ARG:HH22	2.17	0.43
25:14:51:G:N3	25:14:119:A:C2	2.87	0.43
25:14:68:G:H2'	25:14:69:C:H6	1.83	0.43
25:14:239:U:H2'	25:14:240:G:O4'	2.18	0.43
25:14:389:G:H22	35:35:72:PRO:CD	2.31	0.43
25:14:868:U:C2	25:14:869:G:C8	3.06	0.43
25:14:913:U:H4'	25:14:914:C:OP1	2.17	0.43
25:14:1460:A:O2'	25:14:1461:G:OP1	2.34	0.43
25:14:1654:A:C1'	25:14:2823:A:H5'	2.49	0.43
25:14:1784:A:H4'	25:14:1785:A:C5'	2.49	0.43
25:14:2055:C:H1'	28:29:145:LYS:HE2	1.99	0.43
25:14:2723:C:H4'	37:55:2:ARG:HH21	1.82	0.43
30:49:135:LEU:O	30:49:154:GLY:HA3	2.18	0.43
34:25:63:VAL:HG23	34:25:64:ARG:HG3	2.00	0.43
41:95:59:ALA:HA	41:95:95:LEU:O	2.19	0.43
42:A5:19:LEU:O	42:A5:22:ASP:HB2	2.19	0.43
1:13:114:U:O2'	1:13:115:G:H5'	2.18	0.43
1:13:186(A):C:O2	20:BI:105:SER:HB3	2.18	0.43
1:13:556:C:H2'	1:13:557:G:H8	1.84	0.43
1:13:689:C:OP1	11:2I:27:ASN:ND2	2.49	0.43
1:13:1103:C:H2'	1:13:1104:G:O4'	2.18	0.43
2:1E:167:PRO:HG2	2:1E:192:SER:HB3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:5E:46:ARG:HB3	6:5E:60:PHE:CE1	2.53	0.43
16:7I:28:ARG:NH1	16:7I:29:ASP:OD1	2.50	0.43
17:8I:70:ARG:O	17:8I:71:PHE:HD1	2.01	0.43
20:BI:71:THR:HG22	20:BI:72:LEU:N	2.25	0.43
23:2K:21:H2U:H4'	23:2K:22:A:OP2	2.11	0.43
22:3K:75:C:H2'	22:3K:76:C:C6	2.54	0.43
25:1H:783:A:C8	25:1H:783:A:C3'	3.00	0.43
25:1H:971:C:H2'	25:1H:972:G:O4'	2.19	0.43
25:1H:1265:A:C8	25:1H:1267:U:C2	3.06	0.43
25:1H:1698:A:H4'	25:1H:1699:G:OP1	2.18	0.43
25:1H:1786:A:H1'	25:1H:1938:A:N6	2.34	0.43
25:1H:2394:C:H2'	25:1H:2395:C:H6	1.83	0.43
25:1H:2503:A:OP1	62:1H:3526:HOH:O	2.21	0.43
25:1H:2793:G:H8	25:1H:2793:G:OP2	2.01	0.43
26:16:32:C:C2	26:16:51:G:N2	2.86	0.43
26:16:40:U:C1'	26:16:45:A:H61	2.31	0.43
33:58:62:VAL:HG22	33:58:63:THR:N	2.34	0.43
35:78:100:LEU:HD12	35:78:100:LEU:HA	1.85	0.43
36:88:72:LYS:HA	36:88:73:PRO:HD3	1.85	0.43
38:A8:29:PHE:CD1	38:A8:29:PHE:C	2.90	0.43
42:E8:61:ASN:HB2	42:E8:62:HIS:CD2	2.54	0.43
42:E8:88:ARG:HB2	42:E8:93:ALA:H	1.84	0.43
44:G8:76:CYS:HA	44:G8:77:PRO:HD2	1.87	0.43
45:H8:57:ILE:HG22	45:H8:59:LEU:H	1.83	0.43
48:K8:64:LEU:O	48:K8:64:LEU:HD22	2.19	0.43
49:L8:3:ARG:HG2	49:L8:38:GLU:HA	2.01	0.43
52:O8:28:ARG:HB3	52:O8:30:THR:H	1.84	0.43
55:1G:97:U:H2'	55:1G:99:C:C6	2.53	0.43
55:1G:688:G:H2'	55:1G:689:C:H6	1.83	0.43
55:1G:1060:C:H5''	10:1A:51:ARG:HG2	2.00	0.43
55:1G:1280:A:H5'	55:1G:1281:U:OP2	2.19	0.43
2:12:217:ARG:NH1	2:12:217:ARG:HB2	2.33	0.43
3:22:13:GLY:CA	14:5A:57:ARG:HD2	2.49	0.43
3:22:90:GLU:O	3:22:93:LYS:HB3	2.18	0.43
4:32:29:PRO:HD2	4:32:30:LYS:HE3	2.00	0.43
6:52:5:GLU:HB3	6:52:62:TRP:HE1	1.84	0.43
25:14:139:G:N3	25:14:141:A:N1	2.67	0.43
25:14:1100:C:H2'	25:14:1101:U:C6	2.53	0.43
25:14:1167:U:O2	25:14:1183:G:N2	2.50	0.43
25:14:1252:G:O4'	40:85:33:ARG:HD3	2.18	0.43
25:14:1788:C:C2	25:14:1789:A:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2294:C:P	38:65:89:ARG:HH22	2.41	0.43
56:19:6:PHE:CE1	56:19:18:VAL:HG13	2.51	0.43
28:29:9:VAL:HB	28:29:10:GLY:H	1.52	0.43
57:39:198:ALA:O	57:39:201:VAL:HG12	2.18	0.43
37:55:12:ARG:HG3	37:55:12:ARG:NH1	2.33	0.43
42:A5:59:VAL:HA	42:A5:64:MET:H	1.83	0.43
43:B5:84:ALA:O	43:B5:87:GLN:HG3	2.18	0.43
44:C5:88:LYS:O	44:C5:89:PHE:HB3	2.19	0.43
58:D5:132:ASN:OD1	58:D5:132:ASN:N	2.52	0.43
53:L5:35:ARG:HG3	53:L5:42:LEU:HD11	2.00	0.43
1:13:167:G:H2'	1:13:168:G:H8	1.81	0.43
1:13:1148:U:H2'	1:13:1149:C:O4'	2.17	0.43
1:13:1167:A:C6	1:13:1169:A:C6	3.06	0.43
4:3E:58:LEU:HD23	4:3E:206:PHE:CE1	2.53	0.43
11:2I:21:ILE:HG12	11:2I:30:VAL:HG12	1.99	0.43
22:1K:72:U:OP2	22:1K:72:U:H6	2.01	0.43
23:2K:64:G:H2'	23:2K:65:G:C8	2.52	0.43
22:3K:35:QUO:H162	22:3K:35:QUO:H101	1.39	0.43
25:1H:82:G:N1	25:1H:103:A:OP2	2.40	0.43
25:1H:460:A:H5''	25:1H:461:C:OP2	2.19	0.43
25:1H:589:C:H2'	25:1H:590:A:H8	1.84	0.43
25:1H:836:G:C5	25:1H:837:C:C4	3.06	0.43
25:1H:1028:A:N6	25:1H:1125:G:H2'	2.33	0.43
25:1H:1494:A:O2'	25:1H:1495:A:H5'	2.19	0.43
25:1H:1665:A:H1'	34:68:1:MET:HG3	2.01	0.43
25:1H:1783:A:P	62:1H:3534:HOH:O	2.73	0.43
25:1H:1912:A:H5''	25:1H:1913:A:P	2.59	0.43
25:1H:2082:A:H2'	25:1H:2083:G:O4'	2.19	0.43
25:1H:2331:G:O2'	25:1H:2336:A:N1	2.36	0.43
25:1H:2335:A:N7	25:1H:2337:G:C5	2.86	0.43
26:16:116:G:H2'	26:16:117:G:O4'	2.18	0.43
27:11:134:ARG:HG3	27:11:135:PHE:CE1	2.53	0.43
28:21:6:GLY:HA3	28:21:26:ILE:HD11	2.00	0.43
29:31:123:LEU:HD12	29:31:124:LEU:N	2.34	0.43
29:31:175:THR:O	29:31:176:LEU:HD12	2.18	0.43
35:78:121:LYS:HB3	35:78:123:LEU:HG	2.01	0.43
35:78:126:VAL:HG12	35:78:147:LEU:HD13	2.00	0.43
44:G8:38:ILE:O	44:G8:38:ILE:HG12	2.19	0.43
45:H8:76:LEU:HA	45:H8:83:PRO:HA	1.99	0.43
45:H8:103:ARG:HG3	45:H8:136:PHE:HD2	1.83	0.43
54:Q8:60:LEU:O	54:Q8:61:LEU:C	2.56	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:1G:116:A:C4	55:1G:117:G:C8	3.07	0.43
55:1G:232:G:H2'	55:1G:233:C:O4'	2.18	0.43
55:1G:278:G:O4'	55:1G:282:A:H1'	2.19	0.43
55:1G:1122:U:O4	55:1G:1123:A:N6	2.52	0.43
55:1G:1178:G:H5'	9:82:93:ARG:HH21	1.82	0.43
55:1G:1386:G:C2	55:1G:1387:G:N7	2.87	0.43
55:1G:1405:G:H1	55:1G:1496:C:H42	1.65	0.43
2:12:43:ASP:O	2:12:47:THR:OG1	2.37	0.43
4:32:5:ILE:H	4:32:5:ILE:HG13	1.64	0.43
12:3A:6:THR:OG1	12:3A:9:GLN:N	2.44	0.43
12:3A:71:PRO:O	12:3A:102:ARG:HD3	2.18	0.43
13:4A:86:CYS:HB2	19:AA:73:GLU:HB3	2.00	0.43
17:8A:21:VAL:HG21	17:8A:59:ILE:HD11	1.99	0.43
17:8A:29:HIS:CG	17:8A:30:PRO:HD2	2.53	0.43
17:8A:83:ASP:O	17:8A:87:LYS:HG2	2.17	0.43
25:14:242:G:O5'	59:M5:3:LYS:HE3	2.19	0.43
25:14:270(H):C:H2'	25:14:270(I):G:H8	1.82	0.43
25:14:667:U:H2'	25:14:668:G:O4'	2.19	0.43
25:14:754:C:H2'	25:14:755:C:C6	2.54	0.43
25:14:942:G:H4'	25:14:1190:G:H5'	2.00	0.43
25:14:1343:G:C2'	25:14:1344:G:H5'	2.48	0.43
25:14:1643:G:N7	62:14:3797:HOH:O	2.36	0.43
25:14:2307:G:H1	30:49:44:GLY:H	1.67	0.43
25:14:2453:A:H2'	25:14:2454:G:O4'	2.18	0.43
57:39:107:LYS:HD3	57:39:107:LYS:HA	1.50	0.43
30:49:122:PRO:O	30:49:125:PHE:HD2	2.02	0.43
35:35:2:LYS:HE3	35:35:4:SER:HB2	2.01	0.43
35:35:111:ARG:HD2	35:35:128:HIS:CG	2.53	0.43
36:45:58:PHE:CZ	36:45:106:VAL:HG11	2.50	0.43
42:A5:14:PRO:HG2	42:A5:78:GLU:HB2	2.00	0.43
52:K5:31:PRO:C	52:K5:33:LYS:H	2.22	0.43
1:13:595:G:N2	1:13:643:C:N4	2.67	0.43
1:13:671:G:C4	1:13:672:U:C6	3.07	0.43
3:2E:150:LYS:HB3	3:2E:201:TYR:HB2	1.99	0.43
4:3E:107:ARG:HD3	4:3E:107:ARG:HA	1.54	0.43
7:6E:49:ILE:HG22	7:6E:53:LYS:HD3	2.01	0.43
16:7I:4:ILE:HD12	16:7I:66:PRO:HD3	2.01	0.43
23:2K:21:H2U:C4'	23:2K:22:A:OP2	2.67	0.43
22:3K:17:OMG:N2	22:3K:64:PSU:HN3	2.17	0.43
25:1H:483:A:O4'	44:G8:48:ALA:HB1	2.19	0.43
25:1H:630:G:H4'	25:1H:640:C:H4'	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1798:U:H5'	27:11:259:THR:CG2	2.33	0.43
25:1H:2064:C:H1'	25:1H:2450:A:C2	2.54	0.43
25:1H:2574:G:O2'	28:21:143:ASN:HB3	2.18	0.43
25:1H:2592:G:C6	25:1H:2593:U:C4	3.06	0.43
25:1H:2773:C:OP1	28:21:166:THR:OG1	2.36	0.43
27:11:149:PRO:O	27:11:150:LYS:HB2	2.19	0.43
31:51:3:ARG:HH21	31:51:7:LEU:HD11	1.83	0.43
39:B8:113:LYS:HD2	39:B8:113:LYS:HA	1.75	0.43
40:C8:79:PHE:CD1	40:C8:79:PHE:C	2.92	0.43
44:G8:35:TYR:CE2	44:G8:69:ALA:HB3	2.53	0.43
54:Q8:50:LEU:HA	54:Q8:53:PRO:HD2	2.01	0.43
55:1G:66:G:C2	55:1G:67:C:C6	3.07	0.43
55:1G:146:G:H2'	55:1G:147:G:C8	2.52	0.43
55:1G:537:G:H5''	12:3A:113:ARG:HH12	1.83	0.43
55:1G:885:G:O2'	55:1G:914:A:N1	2.39	0.43
55:1G:986:A:H2'	55:1G:987:G:O4'	2.18	0.43
55:1G:1323:G:H4'	55:1G:1362(A):C:N3	2.33	0.43
55:1G:1352:C:N4	55:1G:1370:G:H1	2.14	0.43
5:42:110:LEU:HD21	5:42:139:LEU:HD21	2.01	0.43
11:2A:41:THR:HG21	11:2A:71:LYS:HB2	1.99	0.43
18:9A:41:LYS:O	18:9A:41:LYS:HD3	2.19	0.43
23:2L:60:A:H2'	23:2L:61:U:H5'	1.99	0.43
25:14:152:G:H2'	25:14:153:C:C6	2.54	0.43
25:14:188:G:N2	25:14:208:C:N3	2.59	0.43
25:14:581:C:H2'	25:14:582:G:H8	1.84	0.43
25:14:748:G:OP1	25:14:2612:C:N4	2.52	0.43
25:14:1155:A:C4	25:14:1157:G:C8	3.06	0.43
25:14:2115:G:O2'	25:14:2171:A:N1	2.35	0.43
25:14:2291:U:H5''	25:14:2380:C:O2'	2.19	0.43
25:14:2747:G:O6	25:14:2755:C:H5''	2.19	0.43
28:29:95:ILE:HD13	28:29:95:ILE:HG21	1.80	0.43
28:29:98:PRO:HD3	28:29:175:VAL:HG13	2.00	0.43
28:29:171:GLU:O	28:29:184:VAL:HA	2.18	0.43
32:69:109:ILE:HB	32:69:130:TYR:OH	2.17	0.43
41:95:70:ILE:O	41:95:70:ILE:HG22	2.19	0.43
47:F5:25:LYS:HB3	47:F5:25:LYS:HE2	1.80	0.43
53:L5:5:TRP:NE1	53:L5:7:PRO:HG3	2.33	0.43
1:13:429:U:H1'	1:13:430:A:H5''	2.01	0.43
1:13:872:A:C5	1:13:874:G:C8	3.07	0.43
1:13:939:G:C6	1:13:940:C:N4	2.86	0.43
4:3E:82:ALA:O	4:3E:89:THR:HG23	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3E:108:LEU:CD1	4:3E:174:LEU:HD13	2.49	0.43
11:2I:112:THR:HA	11:2I:113:PRO:HD3	1.83	0.43
16:7I:72:ARG:HA	16:7I:75:ARG:HH11	1.83	0.43
20:BI:57:ARG:NH1	20:BI:102:GLY:HA2	2.33	0.43
25:1H:36:G:N3	25:1H:450:G:O2'	2.52	0.43
25:1H:448:U:H5'	62:1H:3816:HOH:O	2.19	0.43
25:1H:1271:G:N2	25:1H:1617:C:O4'	2.52	0.43
25:1H:2110:G:H5''	25:1H:2145:C:N4	2.33	0.43
25:1H:2140:C:H2'	25:1H:2141:G:C8	2.48	0.43
25:1H:2352:A:H2'	25:1H:2353:G:O4'	2.18	0.43
26:16:44:G:C2	26:16:48:A:C2	3.07	0.43
27:11:44:ASN:O	27:11:46:GLN:O	2.36	0.43
28:21:119:ARG:HD3	28:21:160:TYR:HB2	2.00	0.43
28:21:201:THR:HG22	28:21:203:LYS:H	1.83	0.43
29:31:170:LEU:HD13	29:31:170:LEU:HA	1.78	0.43
30:41:44:GLY:O	30:41:47:LYS:HE2	2.19	0.43
33:58:13:TRP:O	33:58:135:PRO:HD2	2.18	0.43
33:58:73:THR:HA	33:58:83:LYS:O	2.18	0.43
39:B8:5:ALA:O	39:B8:9:LEU:HB2	2.19	0.43
46:I8:75:LEU:HA	46:I8:75:LEU:HD23	1.68	0.43
55:1G:186(A):C:H2'	55:1G:186(B):C:H6	1.83	0.43
55:1G:452:A:H2'	55:1G:453:A:C8	2.54	0.43
55:1G:664:G:N2	55:1G:741:G:H1	2.09	0.43
55:1G:751:U:H4'	15:6A:24:SER:HA	2.01	0.43
55:1G:1064:G:O6	55:1G:1191:A:N6	2.49	0.43
55:1G:1215:G:C2	55:1G:1216:G:C8	3.07	0.43
55:1G:1321:C:C5	55:1G:1322:C:C5	3.07	0.43
55:1G:1326:C:H5''	21:1B:12:LYS:HZ2	1.83	0.43
2:12:75:LYS:O	2:12:75:LYS:HD3	2.19	0.43
5:42:99:GLY:O	5:42:117:ASP:HA	2.19	0.43
6:52:69:GLU:H	6:52:69:GLU:CD	2.22	0.43
10:1A:27:ALA:HB2	10:1A:85:LEU:HD11	2.01	0.43
25:14:118:A:H1'	25:14:178:G:O4'	2.19	0.43
25:14:566:U:H2'	25:14:567:A:O4'	2.19	0.43
25:14:596:G:H2'	25:14:597:U:O4'	2.19	0.43
25:14:948:G:N2	25:14:970:C:O2	2.51	0.43
25:14:988:A:O5'	49:H5:11:SER:OG	2.37	0.43
25:14:1141:U:H3'	33:15:63:THR:HG21	2.01	0.43
25:14:1344:G:H4'	25:14:1384:A:C5	2.54	0.43
25:14:1779:U:C6	25:14:1783:A:N7	2.86	0.43
25:14:1808:U:H5''	25:14:1809:A:OP2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2720:U:H2'	25:14:2721:A:C8	2.54	0.43
25:14:2820:A:O2'	25:14:2821:A:OP1	2.33	0.43
25:14:2830:G:H2'	25:14:2831:G:O4'	2.19	0.43
57:39:140:LEU:HD13	57:39:140:LEU:HA	1.85	0.43
30:49:72:ARG:HD2	30:49:85:GLY:O	2.19	0.43
30:49:167:GLU:O	30:49:170:ARG:HB3	2.19	0.43
59:M5:54:GLU:HG2	59:M5:57:ARG:HE	1.84	0.43
1:13:343:U:H1'	1:13:347:G:H22	1.82	0.43
1:13:704:A:H8	1:13:704:A:OP2	2.00	0.43
1:13:1374:A:H2'	1:13:1375:A:H5'	2.00	0.43
1:13:1503:A:O2'	1:13:1504:G:P	2.76	0.43
4:3E:162:LEU:HD13	4:3E:181:MET:HG2	2.01	0.43
9:8E:112:LYS:HD2	9:8E:113:LYS:N	2.34	0.43
11:2I:18:ARG:O	11:2I:32:ILE:HG22	2.19	0.43
15:6I:8:LYS:O	15:6I:11:VAL:N	2.51	0.43
17:8I:45:HIS:O	17:8I:73:VAL:HG23	2.19	0.43
23:2K:24:C:H2'	23:2K:25:U:H6	1.84	0.43
25:1H:346:A:H5''	25:1H:347:A:OP2	2.19	0.43
25:1H:536:A:OP1	40:C8:53:ARG:NH1	2.52	0.43
25:1H:746:A:C6	25:1H:2611:U:H5''	2.54	0.43
25:1H:1243:G:H4'	35:78:7:ARG:HH21	1.83	0.43
25:1H:1336:A:OP2	43:F8:64:LYS:NZ	2.35	0.43
25:1H:2315:G:H2'	25:1H:2316:C:C6	2.54	0.43
25:1H:2390:U:O2'	25:1H:2391:G:H5'	2.18	0.43
27:11:89:SER:HB2	27:11:201:HIS:CD2	2.54	0.43
29:31:63:LYS:NZ	29:31:75:HIS:O	2.48	0.43
30:41:15:VAL:HG22	30:41:175:LEU:HB3	2.00	0.43
30:41:107:LEU:HD21	30:41:178:PHE:CD1	2.54	0.43
31:51:83:TYR:CB	31:51:134:SER:HA	2.49	0.43
38:A8:11:LYS:HD3	38:A8:91:PRO:CD	2.46	0.43
38:A8:48:LEU:CD2	38:A8:82:ILE:HD11	2.47	0.43
40:C8:79:PHE:CE1	40:C8:83:LEU:HD13	2.54	0.43
42:E8:17:VAL:HG13	42:E8:76:VAL:HG11	2.00	0.43
45:H8:46:LYS:HB2	45:H8:46:LYS:HE3	1.77	0.43
51:N8:4:HIS:O	51:N8:5:PRO:C	2.56	0.43
55:1G:259:G:H2'	55:1G:260:G:O4'	2.18	0.43
55:1G:455:C:H42	55:1G:477:G:H1	1.67	0.43
10:1A:78:ASN:OD1	10:1A:81:THR:HG23	2.19	0.43
10:1A:99:LYS:HD3	10:1A:100:THR:H	1.83	0.43
13:4A:35:GLU:O	13:4A:38:GLY:N	2.50	0.43
20:BA:24:LEU:HD13	20:BA:24:LEU:HA	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:108:U:H2'	25:14:109:G:C8	2.54	0.43
25:14:340:A:H2'	25:14:341:G:O4'	2.19	0.43
25:14:414:C:H2'	25:14:415:A:C8	2.54	0.43
25:14:799:G:C6	25:14:800:A:C6	3.07	0.43
25:14:886:C:H1'	25:14:890:A:C2	2.53	0.43
25:14:1169:G:H2'	25:14:1170:G:O4'	2.18	0.43
25:14:2157:G:O2'	25:14:2158:A:H8	2.02	0.43
25:14:2271:G:H5''	46:E5:20:ARG:NE	2.33	0.43
25:14:2693:A:H2'	25:14:2694:G:C8	2.45	0.43
25:14:2748:A:H2'	25:14:2749:A:C8	2.53	0.43
57:39:132:VAL:C	57:39:134:GLY:H	2.22	0.43
57:39:155:LEU:HD11	57:39:176:LEU:HD23	2.01	0.43
30:49:61:ALA:HA	30:49:66:GLN:O	2.18	0.43
34:25:19:ILE:HG22	34:25:43:VAL:HA	2.00	0.43
35:35:100:LEU:HB2	35:35:106:LEU:HD22	2.01	0.43
36:45:25:ASP:HA	36:45:67:ARG:HH12	1.81	0.43
38:65:42:ASP:C	38:65:44:LYS:N	2.72	0.43
40:85:92:ARG:CZ	41:95:11:GLN:H	2.32	0.43
44:C5:17:SER:HB2	44:C5:71:LYS:CE	2.49	0.43
44:C5:62:GLU:OE1	44:C5:63:LYS:N	2.34	0.43
51:J5:48:GLU:H	51:J5:48:GLU:HG2	1.68	0.43
1:13:76:G:H1'	1:13:95:G:H22	1.84	0.43
1:13:165:C:H2'	1:13:166:G:C8	2.54	0.43
1:13:233:C:H2'	1:13:234:C:C6	2.51	0.43
1:13:321:A:H62	1:13:328:C:H1'	1.84	0.43
1:13:323:U:C4'	20:BI:19:SER:HG	2.31	0.43
1:13:377:G:H5'	16:7I:5:ARG:HH12	1.84	0.43
1:13:592:G:C2	1:13:593:G:C8	3.06	0.43
1:13:789:U:H5	1:13:792:A:OP2	2.01	0.43
1:13:926:G:C6	1:13:1505:G:C5	3.06	0.43
7:6E:113:GLU:H	7:6E:113:GLU:HG2	1.48	0.43
10:1I:54:PHE:CD2	10:1I:55:LYS:HG2	2.54	0.43
13:4I:5:ALA:HB2	13:4I:61:GLU:HG3	2.01	0.43
15:6I:74:ASP:OD1	15:6I:77:ARG:N	2.33	0.43
16:7I:6:LEU:HB3	16:7I:17:TYR:CD2	2.54	0.43
17:8I:101:ARG:HB2	17:8I:101:ARG:NH2	2.34	0.43
25:1H:419:C:H2'	25:1H:420:C:O4'	2.19	0.43
25:1H:639:U:O2'	25:1H:640:C:H5'	2.19	0.43
25:1H:717:G:H2'	25:1H:718:A:O4'	2.19	0.43
25:1H:2068:U:N3	25:1H:2430:A:C2	2.71	0.43
27:11:72:LYS:HD2	27:11:72:LYS:HA	1.77	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:78:19:VAL:HG12	35:78:20:GLY:O	2.19	0.43
35:78:84:ASN:OD1	35:78:115:LEU:HD12	2.19	0.43
35:78:121:LYS:HE2	35:78:123:LEU:HD11	2.00	0.43
44:G8:7:VAL:HG12	44:G8:74:PRO:HG3	1.99	0.43
55:1G:49:U:C2	55:1G:361:G:N2	2.87	0.43
55:1G:353:A:H5'	55:1G:353:A:C8	2.41	0.43
55:1G:768:A:N3	55:1G:1512:U:O2'	2.49	0.43
55:1G:791:G:O6	55:1G:792:A:N6	2.48	0.43
2:12:134:GLU:HA	2:12:137:ARG:HB2	2.01	0.43
10:1A:24:VAL:O	10:1A:28:ARG:HB3	2.19	0.43
25:14:71:A:H2	43:B5:31:HIS:NE2	2.15	0.43
25:14:374:A:C2	25:14:401:A:C4	3.07	0.43
25:14:533:G:H2'	25:14:534:U:O4'	2.19	0.43
25:14:1048:A:H2	25:14:1112:G:H21	1.66	0.43
25:14:1072:C:N4	25:14:1098:A:OP2	2.52	0.43
25:14:1167:U:C2	25:14:1183:G:N2	2.87	0.43
25:14:1771:C:H1'	25:14:1786:A:C8	2.54	0.43
25:14:2363:C:O2	46:E5:39:ARG:NH2	2.51	0.43
62:14:3671:HOH:O	47:F5:65:SER:HA	2.19	0.43
56:19:42:GLY:HA3	56:19:51:VAL:O	2.19	0.43
56:19:223:GLY:HA2	56:19:226:MET:HG3	2.00	0.43
36:45:25:ASP:OD1	36:45:25:ASP:N	2.52	0.43
46:E5:56:ASP:CG	46:E5:58:THR:HG1	2.21	0.43
49:H5:59:VAL:HG12	49:H5:60:GLU:N	2.33	0.43
1:13:183:G:H2'	1:13:184:G:C8	2.54	0.42
1:13:199:G:O6	1:13:218:C:N4	2.52	0.42
1:13:439:A:C4	1:13:496:A:C2	3.06	0.42
1:13:816:A:OP1	1:13:1526:G:O2'	2.25	0.42
1:13:1126:U:O4	1:13:1127:G:N2	2.52	0.42
2:1E:28:PHE:HD1	2:1E:194:PRO:HD3	1.84	0.42
10:1I:80:LYS:NZ	10:1I:80:LYS:HA	2.34	0.42
15:6I:63:ARG:O	15:6I:67:LEU:HD12	2.19	0.42
17:8I:29:HIS:N	17:8I:34:LYS:O	2.45	0.42
19:AI:15:LEU:O	19:AI:19:VAL:HG23	2.19	0.42
23:2K:73:A:H2'	23:2K:74:A:C8	2.54	0.42
25:1H:120:U:C5	25:1H:149:A:N6	2.87	0.42
25:1H:250:G:H5'	35:78:60:MET:SD	2.59	0.42
25:1H:415:A:H2'	25:1H:416:C:O4'	2.19	0.42
25:1H:511:U:C5	25:1H:512:G:C5	3.07	0.42
25:1H:883:G:H2'	25:1H:884:C:C4'	2.48	0.42
25:1H:960:A:C8	25:1H:962:G:C8	3.06	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1816:G:H8	27:11:62:TYR:CZ	2.37	0.42
25:1H:2035:G:P	62:1H:3691:HOH:O	2.74	0.42
25:1H:2061:G:C2	25:1H:2063:C:C4	3.07	0.42
25:1H:2159:G:H2'	25:1H:2160:G:C8	2.53	0.42
25:1H:2239:G:H5'	27:11:251:GLY:HA3	2.01	0.42
25:1H:2270:G:H2'	25:1H:2271:G:O4'	2.19	0.42
25:1H:2393:A:P	54:Q8:27:THR:HG22	2.60	0.42
25:1H:2679:A:H4'	28:21:165:VAL:HG11	2.01	0.42
25:1H:2712:U:OP1	25:1H:2714:G:H4'	2.19	0.42
27:11:31:LYS:HA	27:11:31:LYS:HE3	2.01	0.42
27:11:79:VAL:HG12	27:11:113:VAL:HA	2.01	0.42
27:11:85:ASP:HA	27:11:86:PRO:HD2	1.89	0.42
28:21:64:LYS:O	28:21:70:ALA:HB3	2.18	0.42
29:31:101:LEU:HD23	29:31:101:LEU:HA	1.73	0.42
30:41:107:LEU:HD11	30:41:178:PHE:CD1	2.54	0.42
32:61:11:ASN:O	32:61:12:LEU:HB2	2.19	0.42
33:58:16:ILE:HB	33:58:54:VAL:HG22	2.00	0.42
35:78:19:VAL:HB	35:78:27:HIS:CB	2.49	0.42
36:88:10:ARG:HH22	46:18:11:ARG:HH22	1.66	0.42
36:88:110:THR:HG23	36:88:113:GLN:HB2	2.02	0.42
41:D8:28:GLU:O	41:D8:61:VAL:HG21	2.19	0.42
54:Q8:59:LYS:HE3	54:Q8:59:LYS:HB3	1.69	0.42
54:Q8:60:LEU:CD2	54:Q8:61:LEU:HD22	2.33	0.42
55:1G:297:G:N2	55:1G:300:A:OP2	2.42	0.42
55:1G:580:U:H2'	55:1G:581:G:O4'	2.19	0.42
55:1G:652:U:O2'	55:1G:653:A:O5'	2.37	0.42
55:1G:683:G:H2'	55:1G:684:A:C8	2.54	0.42
55:1G:818:G:HO2'	55:1G:820:U:H6	1.66	0.42
2:12:22:LYS:HE3	2:12:22:LYS:HB3	1.88	0.42
2:12:63:MET:HG2	2:12:225:ALA:HB1	2.01	0.42
4:32:42:GLN:HG3	4:32:43:HIS:CE1	2.54	0.42
6:52:55:ASP:HA	6:52:56:PRO:HD3	1.82	0.42
15:6A:34:LEU:HA	15:6A:34:LEU:HD12	1.79	0.42
16:7A:75:ARG:HA	16:7A:80:PHE:HD2	1.83	0.42
17:8A:66:SER:HB3	17:8A:69:LYS:HB2	2.00	0.42
22:1L:17:OMG:N2	22:1L:64:PSU:C6	2.87	0.42
25:14:111:A:C2	25:14:112:U:C2	3.06	0.42
25:14:674:G:H1'	57:39:74:ARG:HD3	2.00	0.42
25:14:733:G:C5	62:14:3419:HOH:O	2.71	0.42
25:14:868:U:C4	25:14:869:G:N7	2.87	0.42
25:14:997:G:O2'	25:14:998:C:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1010:A:H1'	25:14:1153:C:H1'	2.01	0.42
25:14:1535:U:H2'	25:14:1536:A:O4'	2.18	0.42
25:14:1568:G:H5'	56:19:60:ARG:HA	2.01	0.42
25:14:1813:G:H1'	56:19:50:THR:OG1	2.19	0.42
26:1J:103:U:O2'	58:D5:29:TYR:OH	2.32	0.42
30:49:60:LEU:O	30:49:64:THR:HG22	2.19	0.42
31:59:136:ILE:H	31:59:136:ILE:HD12	1.84	0.42
32:69:92:VAL:HB	32:69:120:ILE:HB	2.01	0.42
41:95:87:HIS:CE1	41:95:89:GLN:HB2	2.54	0.42
43:B5:67:GLY:O	43:B5:69:TYR:N	2.50	0.42
59:M5:56:GLU:OE1	59:M5:56:GLU:N	2.52	0.42
1:13:323:U:H5'	20:BI:23:ARG:HB2	2.01	0.42
1:13:712:A:C6	1:13:713:G:C6	3.07	0.42
1:13:1008:C:H3'	1:13:1009:G:H5''	2.00	0.42
2:1E:100:GLY:O	2:1E:102:LEU:N	2.51	0.42
6:5E:82:ARG:CB	6:5E:83:ASP:HA	2.50	0.42
12:3I:58:VAL:O	12:3I:65:GLU:HA	2.19	0.42
17:8I:54:GLY:CA	17:8I:81:ARG:H	2.32	0.42
17:8I:59:ILE:HG13	17:8I:71:PHE:CD2	2.53	0.42
22:3K:84:C:H5''	22:3K:85:A:OP1	2.19	0.42
25:1H:117:G:C6	25:1H:119:A:C6	3.08	0.42
25:1H:282:A:C4	25:1H:359:A:C2	3.07	0.42
25:1H:628:G:H2'	25:1H:629:G:C8	2.54	0.42
25:1H:654(E):C:H42	25:1H:654(P):G:H1	1.67	0.42
25:1H:657:U:H2'	25:1H:658:C:H6	1.84	0.42
25:1H:955:C:N4	25:1H:956:G:C5	2.87	0.42
25:1H:1575:C:H2'	25:1H:1576:U:C6	2.54	0.42
25:1H:1852:C:H3'	25:1H:1852:C:H6	1.85	0.42
26:16:37:C:H2'	26:16:38:C:O4'	2.19	0.42
26:16:78:A:C2	26:16:99:A:C4	3.07	0.42
26:16:95:U:H2'	26:16:96:G:C8	2.54	0.42
28:21:82:ARG:HD3	28:21:82:ARG:HA	1.78	0.42
30:41:99:MET:HE3	30:41:99:MET:HB2	1.93	0.42
32:61:5:LEU:HD23	32:61:5:LEU:HA	1.74	0.42
33:58:118:LYS:O	33:58:121:LYS:HE2	2.19	0.42
37:98:10:LEU:O	37:98:11:ASN:C	2.58	0.42
40:C8:92:ARG:CZ	40:C8:96:ALA:N	2.80	0.42
55:1G:266:G:H5''	55:1G:268:C:H41	1.84	0.42
55:1G:321:A:C2	55:1G:333:G:C2	3.07	0.42
55:1G:521:G:H4'	12:3A:73:GLU:HG2	2.00	0.42
55:1G:781:A:C3'	55:1G:782:A:H5'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:1G:1014:A:H2'	55:1G:1015:A:C8	2.54	0.42
55:1G:1207:G:C2	55:1G:1208:C:C2	3.06	0.42
55:1G:1411:C:H2'	55:1G:1412:C:C6	2.53	0.42
3:22:11:ARG:NH2	3:22:182:ILE:HD11	2.34	0.42
4:32:26:CYS:HA	4:32:31:CYS:CB	2.48	0.42
8:72:109:ILE:HG22	8:72:137:VAL:HB	2.00	0.42
9:82:33:PHE:CE2	9:82:47:LEU:HD23	2.54	0.42
10:1A:6:ILE:HG13	10:1A:72:VAL:HB	2.01	0.42
17:8A:12:SER:HB3	17:8A:20:THR:HB	2.01	0.42
17:8A:81:ARG:HE	17:8A:84:LEU:CD1	2.32	0.42
25:14:817:C:HO2'	25:14:839:U:H5''	1.82	0.42
25:14:1171:G:H2'	25:14:1171:G:OP2	2.19	0.42
25:14:1614:A:H2	62:14:3428:HOH:O	2.03	0.42
25:14:2701:C:H3'	25:14:2702:U:H5''	2.01	0.42
25:14:2887:U:H2'	25:14:2888:C:H6	1.84	0.42
26:1J:46:A:C5	26:1J:47:C:C4	3.07	0.42
56:19:33:LEU:HA	56:19:33:LEU:HD12	1.77	0.42
33:15:134:ARG:HB3	33:15:134:ARG:HH11	1.83	0.42
38:65:26:LEU:HD12	38:65:39:ILE:HD11	2.00	0.42
40:85:6:THR:N	62:85:301:HOH:O	2.52	0.42
41:95:71:LEU:HD13	41:95:71:LEU:HA	1.63	0.42
58:D5:105:VAL:HG13	58:D5:106:GLY:N	2.34	0.42
1:13:76:G:H1'	1:13:95:G:N2	2.33	0.42
1:13:396:G:C2	1:13:398:C:C4	3.07	0.42
1:13:659:U:C2	1:13:660:G:C8	3.07	0.42
1:13:1333:A:H3'	1:13:1334:G:H8	1.84	0.42
1:13:1365:G:H2'	1:13:1366:C:H6	1.84	0.42
3:2E:33:LEU:O	3:2E:36:ASP:HB2	2.20	0.42
4:3E:167:GLY:H	56:19:135:PHE:HZ	1.67	0.42
8:7E:87:SER:HB2	8:7E:93:VAL:H	1.83	0.42
9:8E:23:ASN:HD22	9:8E:23:ASN:H	1.68	0.42
11:2I:67:ASP:OD1	11:2I:71:LYS:HE3	2.19	0.42
12:3I:90:VAL:HG12	12:3I:91:LYS:N	2.33	0.42
17:8I:21:VAL:HG21	17:8I:59:ILE:HG21	2.01	0.42
22:1K:55:U:HO2'	22:1K:56:U:H6	1.66	0.42
25:1H:576:U:H5	62:1H:3910:HOH:O	2.02	0.42
25:1H:902:C:H2'	25:1H:903:C:C6	2.55	0.42
25:1H:1408:C:C2	25:1H:1595:G:N2	2.87	0.42
25:1H:1839:G:C8	25:1H:1927:A:H1'	2.54	0.42
25:1H:1858:G:N2	25:1H:1883:G:H2'	2.34	0.42
29:31:140:LEU:HD12	29:31:140:LEU:HA	1.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:78:19:VAL:HB	35:78:27:HIS:HB3	2.01	0.42
37:98:34:ILE:HG22	37:98:114:VAL:HB	2.00	0.42
38:A8:94:TYR:CE1	38:A8:99:LYS:HG3	2.55	0.42
39:B8:18:ASP:OD1	39:B8:18:ASP:N	2.50	0.42
39:B8:114:LEU:HA	39:B8:114:LEU:HD23	1.67	0.42
45:H8:107:THR:HB	45:H8:108:PRO:HD2	2.02	0.42
51:N8:42:PRO:O	51:N8:44:THR:N	2.53	0.42
53:P8:10:ARG:O	53:P8:14:LYS:HB2	2.19	0.42
54:Q8:5:LYS:O	54:Q8:6:THR:O	2.37	0.42
55:1G:134:A:H61	16:7A:25:ARG:NH1	2.17	0.42
55:1G:242:C:H2'	55:1G:243:A:H5'	2.01	0.42
55:1G:377:G:H1	55:1G:386:C:H42	1.67	0.42
55:1G:589:C:H42	55:1G:650:G:H1	1.67	0.42
55:1G:1016:A:O2'	55:1G:1217:C:O2'	2.32	0.42
55:1G:1256:A:N6	55:1G:1277:C:H3'	2.35	0.42
55:1G:1441:G:H4'	55:1G:1442:G:C4	2.54	0.42
2:12:4:GLU:N	2:12:4:GLU:OE2	2.52	0.42
2:12:7:VAL:HG22	2:12:8:LYS:H	1.84	0.42
9:82:118:LYS:HZ3	9:82:118:LYS:HB3	1.84	0.42
21:1B:25:LYS:HA	21:1B:25:LYS:HD2	1.81	0.42
23:2L:20:G:C2	23:2L:58:A:N3	2.87	0.42
25:14:343:C:H2'	25:14:344:G:H8	1.83	0.42
25:14:781:A:H2	25:14:1776:G:N3	2.17	0.42
25:14:1717:G:C6	25:14:1743:G:C6	3.07	0.42
25:14:2097:C:H2'	25:14:2098:U:C6	2.55	0.42
25:14:2393:A:H62	25:14:2422:A:H61	1.65	0.42
25:14:2459:A:C4	25:14:2460:U:C6	3.08	0.42
25:14:2469:A:H2	25:14:2481:G:H21	1.67	0.42
25:14:2715:C:O2'	25:14:2716:U:H5'	2.19	0.42
25:14:2747:G:C2	25:14:2754:U:C4	3.07	0.42
28:29:181:LEU:HA	28:29:181:LEU:HD12	1.72	0.42
33:15:96:GLU:H	33:15:96:GLU:CD	2.22	0.42
38:65:29:PHE:CD1	38:65:30:ARG:N	2.87	0.42
41:95:14:VAL:HB	41:95:96:ILE:HG13	2.02	0.42
48:G5:44:LEU:HD23	48:G5:44:LEU:HA	1.89	0.42
1:13:358:U:H2'	1:13:359:U:O4'	2.19	0.42
1:13:685:G:O2'	1:13:686:U:H5'	2.19	0.42
1:13:1029:G:H1'	1:13:1032(A):G:H1	1.84	0.42
1:13:1090:U:H2'	1:13:1091:U:H6	1.83	0.42
1:13:1142:G:H2'	1:13:1143:G:O4'	2.19	0.42
1:13:1162:C:O5'	1:13:1162:C:H6	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1177:G:O6	1:13:1181:G:N7	2.53	0.42
1:13:1360:A:H2'	1:13:1361:G:C8	2.54	0.42
1:13:1394:A:C5	1:13:1501:C:H4'	2.54	0.42
3:2E:7:PRO:O	3:2E:11:ARG:HG2	2.20	0.42
4:3E:62:GLN:O	4:3E:66:ARG:HB2	2.19	0.42
8:7E:49:GLU:HG2	8:7E:62:TYR:CE2	2.51	0.42
9:8E:96:LEU:HD12	9:8E:96:LEU:HA	1.68	0.42
21:1F:10:ARG:HG2	21:1F:13:ILE:HD12	2.00	0.42
22:1K:11:C:H2'	22:1K:12:C:H6	1.85	0.42
23:2K:54:G:H2'	23:2K:55:5MU:C6	2.52	0.42
25:1H:106:C:H2'	25:1H:107:C:H6	1.84	0.42
25:1H:456:C:C4	43:F8:69:TYR:CE1	3.06	0.42
25:1H:844:C:H3'	25:1H:845:G:H8	1.84	0.42
25:1H:900:A:H3'	25:1H:901:A:H8	1.85	0.42
25:1H:997:G:C2	25:1H:1159:U:C2	3.07	0.42
25:1H:1019:U:O2'	25:1H:1021:A:H2	2.03	0.42
25:1H:1093:G:H1'	25:1H:1099:G:H22	1.81	0.42
25:1H:1359:A:H2	25:1H:1372:U:O4	2.02	0.42
25:1H:1639:U:H5'	62:1H:3584:HOH:O	2.19	0.42
25:1H:2032:G:H1'	28:21:145:LYS:HE3	2.00	0.42
25:1H:2600:A:N7	27:11:237:GLU:HG3	2.34	0.42
25:1H:2746:U:O4	25:1H:2755:C:H4'	2.19	0.42
27:11:105:ILE:HA	27:11:105:ILE:HD12	1.43	0.42
39:B8:57:PHE:O	39:B8:58:ASN:OD1	2.37	0.42
44:G8:64:GLU:H	44:G8:64:GLU:HG2	1.42	0.42
45:H8:19:ARG:HD3	45:H8:25:PRO:HD2	2.01	0.42
54:Q8:57:ARG:O	54:Q8:60:LEU:HD12	2.19	0.42
55:1G:142:G:H2'	55:1G:143:A:C8	2.54	0.42
55:1G:309:G:H1'	55:1G:608:A:C2	2.55	0.42
55:1G:376:G:N2	55:1G:387:U:O2	2.41	0.42
55:1G:458:C:H2'	55:1G:464:G:C8	2.54	0.42
55:1G:1015:A:C6	55:1G:1016:A:C6	3.07	0.42
55:1G:1292:U:H5'	9:82:38:GLN:NE2	2.31	0.42
4:32:108:LEU:HD21	4:32:183:GLY:HA3	2.00	0.42
9:82:48:GLU:N	9:82:49:PRO:HD2	2.34	0.42
12:3A:46:LYS:HD2	12:3A:94:PRO:HD3	2.00	0.42
15:6A:7:GLU:O	15:6A:11:VAL:HG23	2.18	0.42
18:9A:32:ARG:HD3	18:9A:65:ILE:HD12	2.00	0.42
25:14:17:G:H2'	25:14:18:C:H6	1.83	0.42
25:14:748:G:C8	42:A5:89:ALA:HB1	2.55	0.42
25:14:980:A:N3	25:14:2037:G:O2'	2.39	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1124:C:H2'	25:14:1125:G:O4'	2.20	0.42
25:14:1651:G:P	37:55:40:LYS:HZ2	2.43	0.42
25:14:1889:A:O2'	25:14:2087:G:H5'	2.19	0.42
25:14:2115:G:C6	25:14:2117:A:H8	2.38	0.42
56:19:37:LEU:HA	56:19:38:LYS:HB3	2.01	0.42
31:59:164:TYR:HD1	31:59:164:TYR:HA	1.78	0.42
32:69:14:ASP:N	32:69:17:GLN:OE1	2.50	0.42
38:65:30:ARG:HE	38:65:30:ARG:HB3	1.46	0.42
41:95:71:LEU:O	41:95:72:VAL:HG12	2.20	0.42
49:H5:4:LEU:O	49:H5:36:VAL:HA	2.18	0.42
49:H5:20:LYS:HA	49:H5:23:LEU:HD12	2.02	0.42
1:13:141:A:H1'	1:13:182:U:O2	2.20	0.42
1:13:246:A:C2	1:13:282:A:C5	3.07	0.42
1:13:300:A:H1'	1:13:565:U:O2	2.19	0.42
1:13:422:C:H1'	1:13:423:G:C2	2.54	0.42
1:13:533:A:OP1	62:13:1836:HOH:O	2.21	0.42
1:13:813:U:H5''	1:13:903:G:O3'	2.20	0.42
1:13:1085:U:C2	1:13:1094:G:O6	2.73	0.42
15:6I:18:PHE:HD1	15:6I:19:PRO:O	2.02	0.42
16:7I:23:ASP:OD1	16:7I:24:ALA:N	2.53	0.42
25:1H:412:A:H5''	25:1H:413:C:OP2	2.19	0.42
25:1H:524:U:H2'	25:1H:525:U:H6	1.81	0.42
25:1H:1206:G:C4	25:1H:1207:C:C5	3.07	0.42
25:1H:1819:A:H5''	27:11:158:ALA:HB3	2.01	0.42
25:1H:1933:G:C6	25:1H:1934:C:C4	3.08	0.42
25:1H:2098:U:C4	25:1H:2099:U:C5	3.07	0.42
25:1H:2392:A:N1	25:1H:2424:C:N3	2.67	0.42
25:1H:2591:C:OP2	27:11:238:GLY:HA3	2.19	0.42
25:1H:2820:A:C5	37:98:4:LEU:HD11	2.55	0.42
28:21:102:VAL:HG21	28:21:198:VAL:HG13	2.01	0.42
28:21:197:ILE:HD11	28:21:199:ARG:HE	1.84	0.42
29:31:59:TYR:CD2	29:31:78:ILE:HG13	2.53	0.42
30:41:121:ASN:HB2	30:41:181:ARG:HH22	1.84	0.42
42:E8:80:PRO:O	42:E8:100:THR:HB	2.19	0.42
43:F8:25:LYS:HA	43:F8:81:VAL:O	2.20	0.42
43:F8:89:ILE:HG22	43:F8:92:LEU:HB2	2.01	0.42
45:H8:67:LEU:HD22	45:H8:90:VAL:HG11	2.01	0.42
48:K8:17:SER:CB	48:K8:67:LYS:HE2	2.49	0.42
54:Q8:4:MET:HE2	54:Q8:4:MET:HB3	1.96	0.42
55:1G:110:C:H2'	55:1G:111:G:O4'	2.19	0.42
55:1G:949:A:C2	55:1G:1233:G:N3	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:1G:1081:G:N7	5:42:47:LYS:NZ	2.63	0.42
55:1G:1258:G:H2'	55:1G:1259:C:C6	2.55	0.42
55:1G:1261:A:C6	55:1G:1262:C:C2	3.08	0.42
55:1G:1323:G:H4'	55:1G:1362(A):C:C2	2.54	0.42
55:1G:1402:C:O2	55:1G:1500:A:N1	2.52	0.42
7:62:95:ARG:HH21	7:62:99:LEU:HD11	1.85	0.42
12:3A:18:VAL:O	12:3A:19:ARG:HB2	2.18	0.42
16:7A:21:VAL:HG22	16:7A:33:ILE:HG13	2.02	0.42
18:9A:76:LEU:HA	18:9A:76:LEU:HD23	1.81	0.42
22:1L:18:G:O4'	22:1L:66:G:N2	2.52	0.42
22:1L:85:A:H8	25:14:2583:G:H21	1.66	0.42
23:2L:21:H2U:O2	23:2L:21:H2U:H2'	2.18	0.42
25:14:270(F):U:O2	25:14:270(T):G:N2	2.36	0.42
25:14:1032:A:H2	25:14:1122:G:H1	1.67	0.42
25:14:1359:A:N7	25:14:1372:U:C4	2.87	0.42
25:14:2048:G:H1'	25:14:2823:A:N6	2.34	0.42
56:19:106:ILE:O	56:19:108:PRO:HD3	2.18	0.42
28:29:101:ARG:CB	28:29:203:LYS:HD2	2.44	0.42
30:49:94:LEU:HD12	30:49:99:MET:HA	2.02	0.42
34:25:96:THR:OG1	34:25:97:ARG:N	2.53	0.42
37:55:24:GLN:HB3	37:55:44:LEU:HD11	2.01	0.42
37:55:73:VAL:O	37:55:76:VAL:HG12	2.18	0.42
39:75:19:LEU:HA	39:75:20:PRO:HD3	1.83	0.42
41:95:35:LEU:HB3	41:95:37:VAL:HG13	2.00	0.42
41:95:71:LEU:H	41:95:86:GLY:HA3	1.80	0.42
42:A5:18:ARG:HG3	42:A5:76:VAL:HG13	2.01	0.42
44:C5:36:ALA:HA	44:C5:67:LEU:O	2.19	0.42
58:D5:120:ILE:HG13	58:D5:170:THR:HG23	2.02	0.42
46:E5:26:TYR:HB2	46:E5:29:GLN:OE1	2.19	0.42
47:F5:76:ARG:HG3	47:F5:94:LEU:HD13	2.00	0.42
51:J5:20:ARG:HG2	51:J5:23:HIS:CD2	2.55	0.42
1:13:142:G:C2	1:13:143:A:C8	3.08	0.42
1:13:533:A:P	62:13:1834:HOH:O	2.78	0.42
1:13:600:C:H2'	1:13:601:C:C6	2.53	0.42
1:13:1014:A:H2	1:13:1219:U:H1'	1.84	0.42
1:13:1098:C:C2	1:13:1099:G:C8	3.07	0.42
1:13:1124:G:H3'	1:13:1145:C:H41	1.85	0.42
1:13:1304:G:C6	1:13:1305:G:N1	2.87	0.42
1:13:1409:C:H2'	1:13:1410:G:C8	2.55	0.42
1:13:1410:G:H2'	1:13:1411:C:C6	2.55	0.42
8:7E:127:LEU:N	8:7E:127:LEU:HD23	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:8E:45:ALA:O	9:8E:48:GLU:HB2	2.19	0.42
9:8E:48:GLU:N	9:8E:49:PRO:HD2	2.35	0.42
13:4I:27:LYS:HD3	13:4I:31:LYS:NZ	2.35	0.42
23:2K:2:G:H2'	23:2K:3:C:C6	2.53	0.42
25:1H:210:C:OP2	53:P8:29:LYS:HE3	2.19	0.42
25:1H:608:A:C4	25:1H:621:A:C6	3.07	0.42
25:1H:1227:A:OP1	41:D8:84:LYS:NZ	2.50	0.42
25:1H:1260:G:C6	25:1H:1261:C:C4	3.07	0.42
25:1H:1297:C:OP1	25:1H:2710:C:H4'	2.19	0.42
25:1H:1320:C:H4'	25:1H:1321:A:OP1	2.19	0.42
25:1H:1360:A:H2'	25:1H:1361:G:O4'	2.20	0.42
25:1H:2700:C:O2'	25:1H:2701:C:H5'	2.20	0.42
25:1H:2846:G:P	39:B8:54:ARG:HB2	2.60	0.42
26:16:92:G:H2'	26:16:93:C:H6	1.85	0.42
28:21:77:ILE:O	28:21:79:ARG:HG3	2.20	0.42
39:B8:42:ILE:HD12	39:B8:42:ILE:H	1.85	0.42
42:E8:70:TYR:CD1	42:E8:70:TYR:N	2.81	0.42
43:F8:3:THR:OG1	43:F8:4:ALA:HA	2.20	0.42
44:G8:94:LYS:HZ2	44:G8:95:LYS:N	2.18	0.42
48:K8:15:LYS:H	48:K8:67:LYS:NZ	2.17	0.42
52:O8:27:LYS:HB2	52:O8:27:LYS:NZ	2.34	0.42
54:Q8:26:LYS:HG2	54:Q8:43:GLN:O	2.19	0.42
55:1G:34:C:O2'	55:1G:35:G:H5'	2.19	0.42
55:1G:35:G:C4	55:1G:550:G:N2	2.88	0.42
55:1G:186(A):C:H1'	20:BA:104:LEU:HD23	2.01	0.42
55:1G:201:C:O2'	55:1G:209:U:OP2	2.34	0.42
55:1G:332:G:C2	55:1G:333:G:C8	3.08	0.42
55:1G:775:G:H2'	55:1G:776:G:O4'	2.20	0.42
55:1G:892:A:O2'	55:1G:1415:G:H4'	2.19	0.42
55:1G:1149:C:HO2'	55:1G:1280:A:H2	1.62	0.42
55:1G:1207:G:C6	55:1G:1208:C:C4	3.08	0.42
55:1G:1399:C:C2	55:1G:1502:A:N6	2.88	0.42
3:22:59:ARG:O	10:1A:93:GLY:HA3	2.20	0.42
3:22:114:PRO:HA	3:22:185:GLY:HA3	2.00	0.42
7:62:149:ARG:HG2	7:62:149:ARG:NH1	2.34	0.42
14:5A:47:LEU:HA	14:5A:47:LEU:HD23	1.73	0.42
16:7A:27:LYS:HG2	16:7A:30:GLY:HA3	2.02	0.42
22:1L:59:A:C6	22:1L:60:A:C5	3.07	0.42
25:14:580:C:H2'	25:14:581:C:C6	2.55	0.42
25:14:593:G:C1'	59:M5:4:MET:HE1	2.49	0.42
25:14:696:G:H2'	25:14:697:C:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:903:C:H2'	25:14:904:C:C6	2.54	0.42
25:14:1006:C:H1'	33:15:106:MET:CE	2.49	0.42
25:14:1217:C:OP2	40:85:15:LYS:HE3	2.20	0.42
25:14:1449:A:HO2'	25:14:1530:G:N2	2.13	0.42
25:14:1789:A:H2'	25:14:1790:C:O4'	2.20	0.42
25:14:1806:C:C4	25:14:1807:G:N7	2.88	0.42
25:14:2615:U:H2'	25:14:2616:C:H6	1.85	0.42
25:14:2766:G:N3	25:14:2766:G:H2'	2.33	0.42
56:19:37:LEU:HA	56:19:38:LYS:CB	2.49	0.42
56:19:146:GLU:HB2	56:19:189:CYS:HB3	2.01	0.42
28:29:107:THR:O	28:29:190:GLY:HA2	2.20	0.42
28:29:120:TRP:CD1	28:29:155:LYS:HB3	2.55	0.42
35:35:90:ARG:HG3	35:35:91:PHE:CD2	2.54	0.42
42:A5:11:ARG:NH1	42:A5:98:LYS:HG2	2.35	0.42
44:C5:67:LEU:HD12	44:C5:67:LEU:HA	1.70	0.42
59:M5:21:LYS:HB3	59:M5:50:LEU:HD13	2.01	0.42
1:13:99:C:H2'	1:13:101:A:C8	2.55	0.42
1:13:347:G:H2'	1:13:348:G:O4'	2.19	0.42
1:13:412:A:OP2	4:3E:35:ARG:NH2	2.53	0.42
1:13:575:G:C5	1:13:881:G:C2	3.07	0.42
1:13:684:A:H1'	11:2I:38:ASN:HB3	2.02	0.42
1:13:947:G:H2'	1:13:948:C:O4'	2.19	0.42
1:13:1022:G:C4	1:13:1023:G:C8	3.08	0.42
2:1E:78:GLN:O	2:1E:81:VAL:HG12	2.19	0.42
3:2E:116:VAL:HG21	3:2E:202:ILE:HD11	2.02	0.42
3:2E:178:LEU:HD13	3:2E:178:LEU:HA	1.84	0.42
5:4E:31:LEU:HD23	5:4E:31:LEU:HA	1.74	0.42
6:5E:28:ARG:O	6:5E:32:ASN:N	2.50	0.42
8:7E:94:TYR:CE1	8:7E:132:GLU:HB2	2.55	0.42
10:1I:54:PHE:CZ	10:1I:55:LYS:NZ	2.78	0.42
25:1H:445:C:OP1	40:C8:2:PRO:HA	2.19	0.42
25:1H:664:C:H4'	25:1H:941:A:OP1	2.20	0.42
25:1H:1045:A:O2'	25:1H:1047:G:C4	2.67	0.42
25:1H:1058:U:H2'	25:1H:1059:G:C8	2.55	0.42
25:1H:2556:C:H2'	25:1H:2557:G:O4'	2.20	0.42
26:16:0:A:H2'	26:16:1:U:C6	2.54	0.42
27:11:54:ARG:O	27:11:218:ARG:HD3	2.20	0.42
28:21:77:ILE:H	28:21:79:ARG:NH1	2.18	0.42
33:58:96:GLU:CG	33:58:97:ARG:N	2.74	0.42
33:58:111:PRO:HA	33:58:114:ARG:NH1	2.35	0.42
34:68:64:ARG:O	34:68:82:ASN:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:C8:28:ARG:HD3	40:C8:38:THR:OG1	2.20	0.42
55:1G:1205:U:O2'	3:22:195:VAL:HG13	2.20	0.42
55:1G:1227:A:OP1	19:AA:80:TYR:OH	2.16	0.42
55:1G:1300:G:HO2'	55:1G:1301:U:P	2.43	0.42
55:1G:1434:A:H2'	55:1G:1435:G:O4'	2.20	0.42
4:32:76:ARG:NH2	4:32:80:GLU:OE1	2.50	0.42
7:62:47:CYS:O	7:62:50:ILE:HB	2.20	0.42
25:14:780:G:C2	25:14:782:A:C2	3.08	0.42
25:14:1316:U:H2'	25:14:1317:A:C8	2.54	0.42
25:14:1894:C:H2'	25:14:1895:C:H6	1.84	0.42
25:14:1969:A:H5'	62:14:3513:HOH:O	2.19	0.42
25:14:2033:A:H4'	25:14:2034:U:OP1	2.20	0.42
25:14:2141:G:C6	25:14:2151:G:C6	3.07	0.42
25:14:2148:G:H2'	25:14:2149:G:H8	1.84	0.42
25:14:2185:C:H2'	25:14:2186:G:O4'	2.20	0.42
31:59:90:LYS:HE2	31:59:90:LYS:HB3	1.95	0.42
35:35:46:LYS:HD3	35:35:51:PHE:CD1	2.55	0.42
40:85:88:ILE:HB	40:85:90:VAL:HG23	2.02	0.42
47:F5:6:GLU:OE1	47:F5:60:PHE:HA	2.19	0.42
1:13:64:G:H4'	1:13:65:U:H5'	2.02	0.42
1:13:128:G:O2'	17:8I:3:LYS:HE2	2.19	0.42
1:13:137:C:H42	1:13:226:G:H1	1.66	0.42
1:13:591:U:H2'	1:13:592:G:C8	2.55	0.42
1:13:625:G:H2'	1:13:626:U:C6	2.51	0.42
1:13:1406:U:H2'	1:13:1407:C:H5'	2.01	0.42
1:13:1434:A:H2'	1:13:1435:G:O4'	2.20	0.42
9:8E:46:ALA:HA	9:8E:78:LYS:HB2	2.01	0.42
17:8I:9:VAL:O	17:8I:21:VAL:HA	2.19	0.42
23:2K:6:G:C2	23:2K:69:C:C2	3.07	0.42
25:1H:270(F):U:H2'	25:1H:270(G):C:C6	2.55	0.42
25:1H:277:C:H3'	25:1H:278:A:O4'	2.20	0.42
25:1H:322:A:H5'	25:1H:340:A:H1'	2.00	0.42
25:1H:720:C:H2'	25:1H:721:C:C6	2.54	0.42
25:1H:780:G:H8	25:1H:780:G:O5'	2.03	0.42
25:1H:827:U:P	62:1H:3831:HOH:O	2.76	0.42
25:1H:997:G:OP1	40:C8:93:LYS:N	2.43	0.42
25:1H:1019:U:OP1	25:1H:1120:G:N2	2.49	0.42
25:1H:1116:C:H2'	25:1H:1117:G:H8	1.84	0.42
25:1H:1142(A):A:C5	25:1H:1144:G:C5	3.08	0.42
25:1H:1638:C:H1'	25:1H:2698:U:O2'	2.20	0.42
25:1H:1728:G:H5'	25:1H:1729:A:OP2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2074:U:H2'	25:1H:2075:U:C6	2.55	0.42
25:1H:2243:U:H2'	25:1H:2244:U:C6	2.55	0.42
25:1H:2262:U:O2'	25:1H:2263:C:H5'	2.20	0.42
25:1H:2590:A:C2	25:1H:2605:U:C2	3.08	0.42
26:16:70:C:C2	26:16:71:C:C5	3.08	0.42
27:11:108:PRO:HD2	27:11:111:LEU:HG	2.02	0.42
28:21:4:ILE:HG12	28:21:28:ALA:HB1	2.02	0.42
31:51:6:ARG:NH1	31:51:6:ARG:HG2	2.35	0.42
33:58:95:PRO:O	33:58:96:GLU:CD	2.57	0.42
41:D8:21:ARG:HE	41:D8:21:ARG:HB2	1.68	0.42
48:K8:49:LYS:O	48:K8:53:LEU:HB2	2.20	0.42
53:P8:27:GLY:HA2	53:P8:30:VAL:HG23	2.02	0.42
55:1G:360:A:H2'	55:1G:361:G:C8	2.55	0.42
55:1G:1367:C:OP2	9:82:112:LYS:NZ	2.53	0.42
5:42:41:VAL:O	5:42:67:VAL:HG12	2.19	0.42
19:AA:66:MET:HA	19:AA:67:VAL:C	2.40	0.42
22:1L:75:C:O2'	22:1L:76:C:OP1	2.29	0.42
25:14:39:C:H2'	25:14:40:C:C6	2.54	0.42
25:14:71:A:C2	43:B5:31:HIS:NE2	2.87	0.42
25:14:342:G:C6	25:14:343:C:C4	3.07	0.42
25:14:442:G:C4	25:14:444:C:C5	3.08	0.42
25:14:558:G:H2'	25:14:559:G:H8	1.84	0.42
25:14:714:U:O2	25:14:716:A:C8	2.72	0.42
25:14:832:G:H5'	35:35:45:LEU:CD1	2.50	0.42
25:14:1425:G:N2	25:14:1573:G:N7	2.68	0.42
25:14:1475:G:H5'	25:14:1476:C:OP2	2.20	0.42
25:14:1680:U:O2	25:14:1763:G:H3'	2.20	0.42
25:14:1683:C:H2'	25:14:1684:C:H6	1.85	0.42
25:14:2296:U:H4'	25:14:2297:C:OP1	2.18	0.42
25:14:2299:G:H2'	25:14:2300:G:H8	1.85	0.42
25:14:2311:A:C8	30:49:88:ILE:HG12	2.53	0.42
25:14:2608:G:H8	25:14:2608:G:O5'	2.01	0.42
25:14:2817:G:OP1	37:55:42:LYS:NZ	2.48	0.42
56:19:130:ALA:HA	56:19:192:THR:HA	2.01	0.42
28:29:134:ILE:H	28:29:134:ILE:HG13	1.75	0.42
57:39:40:GLN:OE1	57:39:182:ASN:HB2	2.20	0.42
57:39:54:ARG:HB3	57:39:79:GLY:O	2.20	0.42
57:39:155:LEU:HB2	57:39:189:THR:HG21	2.01	0.42
32:69:81:VAL:HG22	32:69:143:SER:HB2	2.02	0.42
58:D5:29:TYR:OH	58:D5:72:ARG:HB3	2.19	0.42
1:13:198:G:H2'	1:13:199:G:H8	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:352:C:O2'	1:13:354:G:OP1	2.29	0.42
1:13:1184:G:H2'	1:13:1185:G:H8	1.85	0.42
1:13:1258:G:O2'	1:13:1259:C:H5'	2.19	0.42
1:13:1321:C:H3'	1:13:1322:C:H5''	2.02	0.42
1:13:1396:A:H4'	1:13:1397:C:H5''	2.01	0.42
4:3E:39:PRO:O	4:3E:44:GLY:HA3	2.20	0.42
22:3K:3:U:H2'	22:3K:4:G:C8	2.55	0.42
22:3K:76:C:H6	22:3K:76:C:O5'	2.02	0.42
25:1H:244:A:C2	25:1H:255:A:C4	3.08	0.42
25:1H:263:C:O4'	25:1H:430:G:H1'	2.20	0.42
25:1H:412:A:N3	25:1H:412:A:H2'	2.35	0.42
25:1H:479:A:O2'	25:1H:481:G:H2'	2.20	0.42
25:1H:705:A:H2'	25:1H:706:A:O4'	2.19	0.42
25:1H:724:U:H2'	25:1H:725:G:O4'	2.20	0.42
25:1H:1074:G:H2'	25:1H:1075:C:C5	2.55	0.42
25:1H:1156:A:C8	40:C8:51:LYS:HD2	2.55	0.42
25:1H:1688:U:H2'	25:1H:1698:A:N6	2.35	0.42
25:1H:1754:C:H2'	25:1H:1755:A:O4'	2.20	0.42
25:1H:2126:A:H8	25:1H:2127:G:N3	2.18	0.42
25:1H:2259:G:C2	25:1H:2282:G:C6	3.08	0.42
25:1H:2261:C:O4'	25:1H:2388:A:H1'	2.20	0.42
32:61:21:VAL:CG2	32:61:25:TYR:HD2	2.31	0.42
34:68:118:ALA:HA	34:68:119:PRO:HD2	1.83	0.42
37:98:58:GLY:HA2	37:98:80:PHE:HE2	1.85	0.42
42:E8:25:ARG:NH1	42:E8:25:ARG:HB2	2.34	0.42
44:G8:39:VAL:HB	44:G8:42:VAL:HG22	2.01	0.42
44:G8:63:LYS:HD2	44:G8:63:LYS:HA	1.95	0.42
44:G8:87:LYS:HG2	44:G8:88:LYS:N	2.34	0.42
47:J8:3:LYS:O	47:J8:12:PRO:HD3	2.20	0.42
47:J8:73:LEU:HD23	47:J8:73:LEU:HA	1.88	0.42
49:L8:30:ARG:O	49:L8:33:GLN:HB3	2.20	0.42
55:1G:114:U:O2'	55:1G:115:G:H5'	2.19	0.42
55:1G:191:G:C2	55:1G:192:U:C2	3.08	0.42
55:1G:302:G:O2'	55:1G:556:C:H5''	2.20	0.42
55:1G:1142:G:H3'	55:1G:1143:G:C8	2.55	0.42
55:1G:1179:A:H2'	55:1G:1180:A:O4'	2.19	0.42
15:6A:82:ILE:HG12	15:6A:87:ILE:HB	2.02	0.42
25:14:26:G:OP1	42:A5:80:PRO:HB3	2.20	0.42
25:14:320:A:H4'	25:14:322:A:N7	2.35	0.42
25:14:329:G:OP2	44:C5:71:LYS:HE3	2.19	0.42
25:14:838:C:C2	25:14:839:U:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1141:U:O2'	25:14:1142:U:OP2	2.38	0.42
25:14:1480:G:C6	25:14:1482:U:C4	3.08	0.42
25:14:2111:C:N3	25:14:2118:U:O2'	2.50	0.42
25:14:2859:G:C8	25:14:2859:G:H3'	2.55	0.42
56:19:237:GLU:HB3	56:19:238:GLY:H	1.65	0.42
30:49:56:ALA:HB2	30:49:153:ARG:NE	2.34	0.42
41:95:72:VAL:O	41:95:72:VAL:HG13	2.20	0.42
58:D5:75:ASN:O	58:D5:84:GLU:HG3	2.19	0.42
52:K5:15:GLU:HG2	52:K5:47:THR:CG2	2.50	0.42
1:13:107:G:H2'	1:13:108:G:O4'	2.20	0.42
1:13:604:G:C6	1:13:605:U:C4	3.08	0.42
1:13:626:U:H2'	1:13:627:G:C8	2.55	0.42
1:13:763:G:H2'	1:13:764:C:H6	1.85	0.42
1:13:865:A:H2	1:13:918:A:H4'	1.85	0.42
1:13:955:U:H1'	1:13:1227:A:N6	2.35	0.42
1:13:1007:C:H42	1:13:1022:G:H1	1.66	0.42
1:13:1013:G:N2	1:13:1016:A:OP2	2.47	0.42
1:13:1306:A:N6	1:13:1331:G:H1'	2.28	0.42
1:13:1399:C:C2	1:13:1502:A:N6	2.88	0.42
5:4E:148:VAL:O	5:4E:152:ARG:HG3	2.20	0.42
7:6E:80:VAL:HG21	7:6E:85:TYR:CD2	2.54	0.42
12:3I:60:LEU:HD12	12:3I:60:LEU:HA	1.85	0.42
15:6I:26:GLU:H	15:6I:26:GLU:HG2	1.49	0.42
19:AI:7:LYS:NZ	19:AI:7:LYS:HB3	2.34	0.42
19:AI:52:TYR:HA	19:AI:56:GLN:O	2.20	0.42
20:BI:13:LEU:HD12	20:BI:13:LEU:C	2.40	0.42
22:3K:59:A:H2'	22:3K:60:A:C8	2.54	0.42
25:1H:84:A:OP2	44:G8:8:LYS:NZ	2.31	0.42
25:1H:120:U:OP2	62:1H:4030:HOH:O	2.21	0.42
25:1H:243:U:OP1	54:Q8:6:THR:HG21	2.20	0.42
25:1H:245:G:O6	54:Q8:8:LYS:NZ	2.53	0.42
25:1H:248:G:H5'	25:1H:250:G:N7	2.34	0.42
25:1H:270(X):G:C6	25:1H:270(Y):G:N1	2.88	0.42
25:1H:823:G:H2'	25:1H:824:A:C8	2.55	0.42
25:1H:1056:G:H4'	25:1H:1086:A:C8	2.55	0.42
25:1H:1427:A:H4'	25:1H:1428:C:O4'	2.20	0.42
25:1H:1551:C:H2'	25:1H:1552:G:H5'	2.02	0.42
25:1H:2010:G:N7	62:1H:4168:HOH:O	2.37	0.42
25:1H:2679:A:O2'	28:21:187:ALA:O	2.35	0.42
25:1H:2687:U:C4	25:1H:2688:U:C5	3.06	0.42
29:31:10:PRO:HA	29:31:19:GLU:HG2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:41:82:LEU:HD21	30:41:88:ILE:HD11	2.02	0.42
31:51:94:TYR:HA	31:51:106:THR:O	2.20	0.42
32:61:21:VAL:HG22	32:61:22:LYS:N	2.35	0.42
34:68:7:TYR:C	34:68:8:LEU:HD22	2.39	0.42
44:G8:54:LYS:H	44:G8:54:LYS:NZ	2.18	0.42
44:G8:96:ILE:HG22	44:G8:97:ARG:N	2.35	0.42
45:H8:87:ASP:OD1	45:H8:87:ASP:N	2.53	0.42
54:Q8:26:LYS:HG3	54:Q8:41:ILE:HG23	2.02	0.42
55:1G:498:A:H4'	55:1G:500:G:OP1	2.19	0.42
55:1G:527:G:H2'	55:1G:528:C:H5'	2.01	0.42
55:1G:689:C:OP1	11:2A:27:ASN:ND2	2.50	0.42
55:1G:859:A:H2'	55:1G:860:A:O4'	2.20	0.42
55:1G:1278:U:H5'	55:1G:1279:A:O4'	2.20	0.42
55:1G:1503:A:O2'	24:4L:13:A:N1	2.33	0.42
2:12:19:HIS:CE1	2:12:206:ASP:HB2	2.54	0.42
2:12:25:ASN:OD1	2:12:27:LYS:N	2.46	0.42
6:52:19:LEU:O	6:52:23:LYS:HG3	2.20	0.42
7:62:73:MET:HG3	7:62:89:MET:O	2.20	0.42
10:1A:4:ILE:HA	10:1A:100:THR:HA	2.01	0.42
11:2A:22:HIS:HB3	11:2A:29:ILE:HG12	2.02	0.42
16:7A:82:GLN:HE21	16:7A:82:GLN:HB3	1.63	0.42
18:9A:19:LYS:HD2	18:9A:19:LYS:HA	1.72	0.42
22:3L:26:G:H2'	22:3L:27:A:O4'	2.19	0.42
25:14:30:G:H2'	25:14:31:C:H6	1.80	0.42
25:14:535:C:O2'	25:14:536:A:H5'	2.19	0.42
25:14:1337:G:C4	25:14:1338:G:C8	3.08	0.42
25:14:1664:A:P	62:14:3559:HOH:O	2.70	0.42
25:14:1755:A:N6	25:14:2694:G:O2'	2.53	0.42
25:14:1834:U:H4'	25:14:1969:A:C6	2.55	0.42
25:14:2272:U:H5''	25:14:2273:A:OP1	2.20	0.42
25:14:2732:G:H3'	25:14:2733:A:O4'	2.19	0.42
57:39:2:LYS:O	57:39:2:LYS:HG2	2.20	0.42
31:59:170:ARG:HB2	31:59:171:LEU:H	1.70	0.42
48:G5:27:GLU:O	48:G5:31:GLU:HG3	2.20	0.42
1:13:7:G:H5'	1:13:298:A:O4'	2.20	0.41
1:13:195:A:C5	1:13:196:A:N1	2.88	0.41
1:13:447:G:H8	1:13:447:G:O5'	2.03	0.41
1:13:1091:U:H1'	1:13:1095:U:O2	2.20	0.41
1:13:1363:A:H4'	1:13:1364:U:O5'	2.20	0.41
7:6E:136:LYS:HB3	7:6E:136:LYS:NZ	2.35	0.41
25:1H:198:C:H5'	25:1H:2244:U:OP1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:442:G:C6	25:1H:444:C:N4	2.88	0.41
25:1H:755:C:H2'	25:1H:756:C:C6	2.55	0.41
25:1H:959:A:C6	25:1H:960:A:N1	2.88	0.41
25:1H:1429:G:H2'	25:1H:1430:C:H6	1.83	0.41
25:1H:1658:C:H2'	25:1H:1659:U:C6	2.55	0.41
25:1H:2137:C:H42	25:1H:2154:G:N2	2.19	0.41
25:1H:2334:G:C2	38:A8:12:PHE:CD1	3.08	0.41
25:1H:2393:A:OP1	54:Q8:27:THR:HG22	2.19	0.41
25:1H:2635:C:C4'	28:21:79:ARG:HD3	2.50	0.41
25:1H:2704:C:H2'	25:1H:2705:A:C8	2.55	0.41
26:16:50:G:OP1	38:A8:63:THR:HG23	2.20	0.41
28:21:167:VAL:HG22	28:21:170:LEU:HD11	2.02	0.41
29:31:34:TRP:CZ3	29:31:35:GLU:HG2	2.54	0.41
30:41:43:LEU:HD23	30:41:90:LEU:HD22	2.02	0.41
31:51:92:ILE:CD1	31:51:93:GLY:H	2.32	0.41
37:98:98:LEU:HD23	37:98:98:LEU:HA	1.78	0.41
45:H8:60:GLU:O	45:H8:61:LEU:CB	2.67	0.41
50:M8:12:ALA:C	50:M8:24:THR:HG21	2.40	0.41
3:22:95:THR:CG2	3:22:97:LYS:HG2	2.49	0.41
5:42:26:PHE:CD1	5:42:26:PHE:N	2.88	0.41
7:62:69:VAL:HG12	7:62:103:TRP:HE3	1.85	0.41
10:1A:16:LEU:HD23	10:1A:16:LEU:HA	1.91	0.41
25:14:390:A:N6	35:35:71:VAL:HG21	2.35	0.41
25:14:752:A:H3'	53:L5:1:MET:SD	2.60	0.41
25:14:993:G:N3	41:95:89:GLN:NE2	2.48	0.41
25:14:1161:C:H1'	41:95:8:GLY:O	2.20	0.41
25:14:2126:A:H61	25:14:2163:C:HO2'	1.56	0.41
25:14:2328:A:H2'	25:14:2329:G:O4'	2.20	0.41
25:14:2531:A:H5''	31:59:157:TYR:CE2	2.55	0.41
26:1J:15:A:H1'	26:1J:109:G:N7	2.35	0.41
26:1J:94:C:H2'	26:1J:95:U:C6	2.55	0.41
57:39:177:ALA:HB1	57:39:178:PRO:HD2	2.02	0.41
30:49:114:ILE:HD11	30:49:140:ILE:HD13	2.01	0.41
30:49:125:PHE:HB3	30:49:166:ASP:CB	2.48	0.41
30:49:131:TYR:HB3	30:49:159:VAL:HG22	2.02	0.41
32:69:104:GLN:HE21	32:69:104:GLN:HB3	1.70	0.41
35:35:146:VAL:HG13	35:35:147:LEU:HD22	2.02	0.41
39:75:99:LEU:HA	39:75:99:LEU:HD23	1.77	0.41
1:13:1326:C:H2'	1:13:1327:C:H6	1.85	0.41
1:13:1346:A:H5''	9:8E:120:ARG:HH12	1.85	0.41
2:1E:64:ARG:HE	2:1E:64:ARG:HB3	1.62	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2E:93:LYS:O	3:2E:93:LYS:HD3	2.20	0.41
5:4E:41:VAL:HG22	5:4E:113:ALA:HB2	2.01	0.41
9:8E:99:LEU:HB3	9:8E:101:PHE:CD2	2.55	0.41
12:3I:42:THR:HA	12:3I:53:ARG:O	2.21	0.41
22:1K:38:MIA:H121	22:1K:39:A:C2	2.55	0.41
22:3K:20:C:H6	22:3K:68:A:N6	2.18	0.41
25:1H:569:U:O4	25:1H:570:G:C6	2.74	0.41
25:1H:657:U:H2'	25:1H:658:C:C6	2.55	0.41
25:1H:725:G:C6	25:1H:726:G:N1	2.89	0.41
25:1H:795:C:H2'	25:1H:796:C:H6	1.85	0.41
25:1H:824:A:H1'	25:1H:2358:G:N7	2.35	0.41
25:1H:1110:G:HO2'	25:1H:1111:A:H8	1.69	0.41
25:1H:1266:G:O2'	25:1H:2012:G:O6	2.31	0.41
25:1H:2308:G:H2'	25:1H:2308:G:N3	2.36	0.41
25:1H:2339:G:H2'	25:1H:2340:G:H8	1.85	0.41
25:1H:2377:A:H2'	25:1H:2378:A:C8	2.55	0.41
26:16:55:U:H2'	26:16:56:G:O4'	2.20	0.41
29:31:41:LEU:HA	29:31:44:ARG:HD3	2.02	0.41
30:41:130:ASN:OD1	30:41:160:VAL:HG13	2.20	0.41
31:51:43:VAL:HB	31:51:52:VAL:HG22	2.02	0.41
35:78:70:GLN:CD	35:78:70:GLN:N	2.74	0.41
38:A8:106:ARG:H	38:A8:106:ARG:HG3	1.38	0.41
40:C8:88:ILE:O	40:C8:88:ILE:HG22	2.19	0.41
40:C8:97:ASP:OD1	40:C8:98:LEU:N	2.53	0.41
42:E8:79:GLY:CA	42:E8:100:THR:HG22	2.50	0.41
43:F8:50:LYS:HG2	43:F8:84:ALA:HB2	2.02	0.41
44:G8:81:LYS:HB3	44:G8:82:PRO:CA	2.50	0.41
45:H8:116:VAL:HG12	45:H8:118:GLN:HB2	2.02	0.41
51:N8:58:LEU:HD22	51:N8:60:VAL:HG13	2.02	0.41
55:1G:836:G:C6	55:1G:851:G:C6	3.08	0.41
55:1G:939:G:H2'	55:1G:940:C:C6	2.54	0.41
55:1G:1044:A:C6	55:1G:1045:C:H1'	2.55	0.41
55:1G:1281:U:H3'	55:1G:1282:C:C5	2.54	0.41
55:1G:1411:C:H2'	55:1G:1412:C:H6	1.84	0.41
5:42:87:SER:HB3	5:42:125:SER:O	2.20	0.41
7:62:90:GLU:H	7:62:90:GLU:HG2	1.59	0.41
12:3A:41:ARG:O	12:3A:55:VAL:HG12	2.20	0.41
17:8A:82:MET:O	17:8A:86:GLU:N	2.25	0.41
25:14:175:G:H5''	25:14:175:G:H8	1.84	0.41
25:14:480:A:H2	25:14:499:U:O2	2.03	0.41
25:14:1062:G:H1	25:14:1076:C:H42	1.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1217:C:P	40:85:15:LYS:HE3	2.59	0.41
25:14:1514:U:H2'	25:14:1515:C:C6	2.54	0.41
25:14:2013:A:N6	25:14:2014:A:C6	2.88	0.41
25:14:2038:G:H2'	25:14:2039:C:C6	2.55	0.41
25:14:2052:G:O4'	28:29:142:GLY:HA3	2.19	0.41
25:14:2101:G:H2'	25:14:2102:U:O4'	2.21	0.41
25:14:2114:A:N6	25:14:2119:A:H62	2.18	0.41
25:14:2266:A:N3	25:14:2272:U:C4	2.88	0.41
25:14:2351:G:O6	59:M5:39:LYS:HG3	2.21	0.41
25:14:2356:C:H4'	46:E5:20:ARG:HG3	2.01	0.41
25:14:2392:A:N1	25:14:2424:C:N3	2.68	0.41
25:14:2569:G:C2	25:14:2570:G:C8	3.08	0.41
26:1J:40:U:C2'	26:1J:45:A:H61	2.33	0.41
26:1J:40:U:H1'	26:1J:46:A:N1	2.35	0.41
57:39:21:ALA:C	57:39:23:ASP:N	2.74	0.41
57:39:29:ASN:HA	57:39:30:PRO:HD3	1.92	0.41
32:69:83:ALA:CB	32:69:123:LEU:HD21	2.50	0.41
33:15:48:MET:HE3	33:15:48:MET:HB2	1.83	0.41
35:35:52:GLU:OE2	35:35:57:THR:HA	2.20	0.41
39:75:113:LYS:HA	39:75:113:LYS:HD2	1.82	0.41
44:C5:23:ARG:HG3	44:C5:23:ARG:NH1	2.36	0.41
47:F5:13:ILE:HG13	47:F5:42:GLN:HG3	2.02	0.41
1:13:45:U:H2'	1:13:46:G:C8	2.55	0.41
1:13:153:C:N4	1:13:168:G:H1	2.11	0.41
1:13:626:U:H5''	16:7I:38:TYR:CD2	2.55	0.41
1:13:900:A:H2'	1:13:901:A:C8	2.55	0.41
1:13:1063:C:H3'	1:13:1064:G:H2'	2.02	0.41
1:13:1072:G:C5	1:13:1073:U:C4	3.08	0.41
1:13:1124:G:C2	1:13:1126:U:O4	2.73	0.41
1:13:1269:A:H2	1:13:1312:G:N3	2.18	0.41
1:13:1331:G:OP2	13:4I:23:TYR:HD1	2.04	0.41
1:13:1362(A):C:H5'	1:13:1363:A:H2'	2.01	0.41
1:13:1478:C:H2'	1:13:1479:C:C6	2.56	0.41
6:5E:60:PHE:CE2	18:9I:78:LEU:HD21	2.56	0.41
9:8E:53:VAL:HG21	9:8E:92:TYR:CE2	2.55	0.41
17:8I:29:HIS:O	17:8I:33:GLY:N	2.41	0.41
17:8I:43:LEU:O	17:8I:69:LYS:HG3	2.20	0.41
23:2K:21:H2U:P	23:2K:21:H2U:H62	2.60	0.41
25:1H:99:U:C6	25:1H:102:G:C2	3.08	0.41
25:1H:484:C:OP1	44:G8:51:VAL:HG22	2.21	0.41
25:1H:529:A:H8	25:1H:530:G:C6	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:705:A:C8	25:1H:727:A:C2	3.08	0.41
25:1H:894:C:N4	25:1H:895:U:O4	2.53	0.41
25:1H:1344:G:H4'	25:1H:1384:A:C5	2.55	0.41
25:1H:1659:U:C4	25:1H:1660:C:C5	3.08	0.41
25:1H:2315:G:OP1	30:41:36:LYS:NZ	2.44	0.41
25:1H:2347:C:P	52:08:39:TYR:HH	2.43	0.41
25:1H:2389:G:C5'	25:1H:2390:U:H5'	2.50	0.41
25:1H:2666:C:H5''	25:1H:2667:C:OP2	2.19	0.41
27:11:69:ARG:HH11	27:11:69:ARG:HG3	1.84	0.41
28:21:120:TRP:CD1	28:21:155:LYS:HB3	2.55	0.41
43:F8:61:GLY:HA3	43:F8:72:LYS:HD2	2.03	0.41
48:K8:14:ARG:NH1	48:K8:66:GLU:OE2	2.54	0.41
54:Q8:8:LYS:HD2	54:Q8:8:LYS:N	2.22	0.41
55:1G:10:A:OP2	5:42:126:ARG:HG2	2.20	0.41
55:1G:616:G:N3	55:1G:617:G:C8	2.87	0.41
55:1G:811:C:H4'	55:1G:900:A:N6	2.36	0.41
55:1G:1157:A:H1'	55:1G:1158:C:C4	2.55	0.41
55:1G:1349:A:P	9:82:118:LYS:NZ	2.93	0.41
2:12:189:ASP:HB3	2:12:203:GLY:O	2.20	0.41
3:22:15:THR:HG21	3:22:181:ASN:HA	2.02	0.41
6:52:82:ARG:HB2	6:52:85:VAL:HG23	2.03	0.41
8:72:20:TYR:CE2	8:72:75:ARG:HB3	2.56	0.41
13:4A:112:GLY:HA3	13:4A:113:PRO:HD3	1.85	0.41
15:6A:84:LYS:HB2	15:6A:84:LYS:HE2	1.77	0.41
19:AA:37:ARG:O	19:AA:70:LYS:NZ	2.54	0.41
22:3L:22:A:C5	22:3L:57:C:N4	2.88	0.41
25:14:85:G:C5	25:14:98:G:C2	3.08	0.41
25:14:223:A:O2'	25:14:420:C:O2	2.35	0.41
25:14:588:U:O4	25:14:670:A:H1'	2.19	0.41
25:14:775:G:C4	25:14:794:G:C8	3.09	0.41
25:14:1151:G:H4'	40:85:81:HIS:CG	2.56	0.41
25:14:1252:G:C2	40:85:33:ARG:HD2	2.55	0.41
25:14:1425:G:H2'	25:14:1426:G:C8	2.55	0.41
25:14:1785:A:H2'	25:14:1787:A:N7	2.35	0.41
25:14:1790:C:H5''	25:14:1791:A:OP1	2.21	0.41
25:14:1805:U:H5''	56:19:250:TRP:CD2	2.55	0.41
25:14:2319:G:O6	38:65:4:LEU:HB3	2.20	0.41
25:14:2323:G:H2'	25:14:2324:C:O4'	2.21	0.41
25:14:2371:G:C6	25:14:2372:G:N7	2.89	0.41
25:14:2461:C:H2'	25:14:2462:U:H6	1.83	0.41
56:19:177:LEU:HD12	56:19:181:GLU:HG2	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:29:26:ILE:HG22	28:29:27:LEU:C	2.41	0.41
57:39:11:VAL:HG23	57:39:12:LEU:H	1.86	0.41
57:39:32:LEU:HB3	57:39:112:MET:HE1	2.01	0.41
37:55:59:ASP:OD2	37:55:61:HIS:HB3	2.20	0.41
37:55:78:LYS:O	37:55:83:ILE:HG13	2.21	0.41
39:75:50:ILE:HA	39:75:50:ILE:HD12	1.70	0.41
1:13:280:C:H4'	1:13:281:G:OP2	2.21	0.41
1:13:329:A:C5	1:13:332:G:C6	3.09	0.41
1:13:343:U:H1'	1:13:347:G:N2	2.35	0.41
1:13:558:G:C4	1:13:559:A:C2	3.08	0.41
1:13:1108:G:OP1	3:2E:175:LEU:HB2	2.20	0.41
1:13:1129:C:C4	1:13:1132:C:N4	2.88	0.41
1:13:1143:G:C6	1:13:1144:G:C6	3.08	0.41
1:13:1203:C:H2'	1:13:1204:A:H8	1.85	0.41
2:1E:55:PHE:HD1	2:1E:55:PHE:HA	1.69	0.41
2:1E:62:ALA:HB2	2:1E:222:ILE:HG23	2.02	0.41
2:1E:72:GLY:HA3	2:1E:165:VAL:CG2	2.49	0.41
3:2E:97:LYS:HE2	3:2E:97:LYS:HB2	1.88	0.41
5:4E:12:LEU:O	5:4E:13:ILE:HG13	2.20	0.41
5:4E:57:LYS:H	5:4E:57:LYS:HG2	1.52	0.41
6:5E:82:ARG:HA	6:5E:85:VAL:H	1.85	0.41
7:6E:49:ILE:H	7:6E:49:ILE:HG12	1.73	0.41
8:7E:80:ILE:H	8:7E:80:ILE:HG12	1.75	0.41
12:3I:78:GLN:O	12:3I:81:SER:OG	2.37	0.41
17:8I:52:LYS:HD2	17:8I:55:ASP:OD1	2.20	0.41
22:1K:39:A:H5'	25:1H:1913:A:C6	2.56	0.41
22:1K:70:C:O2	22:1K:70:C:H2'	2.19	0.41
25:1H:15:G:C2	25:1H:16:G:C8	3.07	0.41
25:1H:299:A:C2	25:1H:322:A:C4	3.08	0.41
25:1H:430:G:H5''	25:1H:431:U:OP2	2.20	0.41
25:1H:782:A:H5'	25:1H:783:A:C2	2.56	0.41
25:1H:844:C:H2'	25:1H:845:G:O4'	2.20	0.41
25:1H:1400:G:H2'	25:1H:1401:G:H8	1.84	0.41
25:1H:1478:G:O2'	25:1H:1558:A:C2	2.74	0.41
25:1H:1775:U:H5''	62:1H:4195:HOH:O	2.20	0.41
25:1H:2142:C:H2'	25:1H:2143:C:H6	1.82	0.41
25:1H:2567:G:H2'	25:1H:2568:C:C6	2.55	0.41
25:1H:2667:C:H2'	25:1H:2668:G:O4'	2.21	0.41
25:1H:2747:G:OP1	31:5I:138:LYS:NZ	2.47	0.41
26:16:94:C:H2'	26:16:95:U:H6	1.85	0.41
29:31:108:LYS:O	29:31:112:MET:HG3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:41:43:LEU:HD12	30:41:43:LEU:HA	1.89	0.41
30:41:96:ARG:O	30:41:97:ASP:HB2	2.19	0.41
34:68:122:LEU:HD23	39:B8:43:GLN:HE22	1.85	0.41
35:78:78:PRO:HB3	35:78:111:ARG:NH2	2.36	0.41
39:B8:50:ILE:CD1	39:B8:64:ARG:HB3	2.51	0.41
42:E8:95:ILE:HD13	42:E8:95:ILE:HG21	1.65	0.41
47:J8:20:ARG:HB3	47:J8:32:LYS:HD2	2.03	0.41
55:1G:446:G:H1	55:1G:488:C:H42	1.69	0.41
55:1G:465:A:N6	55:1G:467:G:C2	2.88	0.41
55:1G:627:G:H2'	55:1G:628:G:H8	1.85	0.41
55:1G:951:G:OP2	13:4A:102:ARG:NH2	2.54	0.41
55:1G:1443:G:H3'	55:1G:1446:A:C5'	2.50	0.41
2:12:61:LEU:HD11	2:12:66:GLY:HA3	2.03	0.41
7:62:60:LYS:HD2	7:62:60:LYS:HA	1.59	0.41
13:4A:7:VAL:HG11	30:49:115:ARG:CZ	2.50	0.41
16:7A:1:MET:HE3	16:7A:1:MET:HB2	1.86	0.41
25:14:270(R):G:OP1	32:69:42:SER:OG	2.32	0.41
25:14:718:A:H3'	25:14:719:C:H6	1.85	0.41
25:14:738:G:C6	25:14:739:G:C2	3.08	0.41
25:14:770:G:N3	25:14:1354:A:H2	2.18	0.41
25:14:827:U:O2	25:14:2246:G:H4'	2.20	0.41
25:14:1027:A:C2	25:14:2488:A:H5'	2.55	0.41
25:14:1299:G:H3'	25:14:1639:U:O4	2.20	0.41
25:14:1316:U:O2'	25:14:1317:A:H5'	2.21	0.41
25:14:1467:C:C5	25:14:1546:C:H2'	2.56	0.41
25:14:1782:C:OP1	62:14:3410:HOH:O	2.21	0.41
25:14:1909:C:H2'	25:14:1910:G:H8	1.85	0.41
25:14:1953:A:H2	25:14:2549:G:N3	2.17	0.41
25:14:2448:A:N1	62:14:3648:HOH:O	2.37	0.41
25:14:2540:C:O2'	25:14:2740:A:N3	2.48	0.41
26:1J:65:C:H41	26:1J:108:C:C2'	2.34	0.41
56:19:136:ILE:HG22	56:19:140:THR:OG1	2.19	0.41
58:D5:130:PRO:HA	58:D5:133:ILE:HD11	2.02	0.41
49:H5:23:LEU:HD11	49:H5:53:LEU:CD1	2.50	0.41
59:M5:14:VAL:HG12	59:M5:15:LYS:N	2.34	0.41
1:13:312:C:H2'	1:13:313:A:H8	1.86	0.41
2:1E:8:LYS:HZ2	2:1E:11:LEU:HD22	1.84	0.41
2:1E:53:ARG:HA	2:1E:56:ARG:NH1	2.36	0.41
2:1E:200:ILE:O	2:1E:201:ILE:HD13	2.21	0.41
3:2E:6:HIS:ND1	3:2E:7:PRO:HD2	2.35	0.41
4:3E:112:VAL:N	4:3E:116:GLN:OE1	2.44	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4E:69:VAL:O	5:4E:71:LEU:HG	2.20	0.41
6:5E:81:ILE:O	6:5E:81:ILE:HG22	2.19	0.41
8:7E:17:THR:HG21	8:7E:80:ILE:HD11	2.03	0.41
12:3I:93:LEU:O	12:3I:96:VAL:HG13	2.19	0.41
16:7I:28:ARG:HG2	16:7I:28:ARG:HH11	1.85	0.41
25:1H:117:G:C6	25:1H:119:A:N6	2.89	0.41
25:1H:696:G:O2'	25:1H:697:C:H5'	2.20	0.41
25:1H:932:G:H4'	25:1H:933:A:O5'	2.20	0.41
25:1H:1166:C:O2	25:1H:1183:G:N2	2.39	0.41
25:1H:2151:G:H2'	25:1H:2152:G:H8	1.85	0.41
25:1H:2791:C:H42	25:1H:2805:G:H1	1.67	0.41
27:11:18:VAL:HA	27:11:211:ARG:HH22	1.85	0.41
30:41:64:THR:HG22	30:41:66:GLN:H	1.84	0.41
32:61:40:THR:HB	32:61:43:ASN:H	1.85	0.41
32:61:114:LEU:HD12	32:61:129:THR:O	2.20	0.41
40:C8:39:LEU:HD23	40:C8:39:LEU:HA	1.66	0.41
55:1G:685:G:N2	55:1G:686:U:C4	2.89	0.41
55:1G:1208:C:H2'	55:1G:1209:C:H6	1.85	0.41
55:1G:1480:G:C5	55:1G:1481:U:C5	3.09	0.41
3:22:52:LEU:HD12	3:22:55:VAL:HG23	2.02	0.41
4:32:9:CYS:HB3	4:32:32:ALA:HB3	2.02	0.41
7:62:94:ARG:H	7:62:94:ARG:HD3	1.84	0.41
11:2A:120:ARG:HA	11:2A:121:PRO:HD3	1.83	0.41
23:2L:73:A:C6	23:2L:74:A:C6	3.09	0.41
25:14:43:G:H2'	25:14:44:A:O4'	2.21	0.41
25:14:108:U:H2'	25:14:109:G:H8	1.85	0.41
25:14:150:C:H42	25:14:176:G:H1	1.67	0.41
25:14:270(C):C:O2'	25:14:273(B):C:H5''	2.21	0.41
25:14:286:C:O2'	25:14:287:C:H5'	2.20	0.41
25:14:1011:G:C2	25:14:1013:C:C2	3.09	0.41
25:14:1036:G:H2'	25:14:1037:G:O4'	2.21	0.41
25:14:1070:A:H5'	25:14:1071:G:H5''	2.02	0.41
25:14:1437:C:H2'	25:14:1438:U:H6	1.85	0.41
25:14:1651:G:H2'	25:14:1652:A:O4'	2.21	0.41
25:14:1653:G:C6	37:55:9:LYS:HB2	2.56	0.41
25:14:1848:A:C4	25:14:1849:G:C8	3.09	0.41
25:14:2303:G:O2'	25:14:2304:G:H5'	2.21	0.41
25:14:2303:G:O2'	30:49:132:ASN:HB2	2.21	0.41
25:14:2346:A:H8	52:K5:24:GLU:CG	2.33	0.41
25:14:2744:G:H21	31:59:143:GLN:NE2	2.19	0.41
25:14:2820:A:C6	37:55:4:LEU:HD11	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1J:41:U:O4	30:49:70:VAL:HG23	2.20	0.41
26:1J:78:A:C2	26:1J:99:A:C4	3.08	0.41
28:29:48:GLN:OE1	28:29:78:LEU:HD13	2.19	0.41
28:29:51:PHE:O	28:29:52:LEU:HB2	2.21	0.41
31:59:6:ARG:HD3	31:59:6:ARG:N	2.35	0.41
32:69:93:THR:HG22	32:69:119:PRO:HG3	2.03	0.41
35:35:62:LEU:HD12	35:35:63:PRO:O	2.21	0.41
36:45:56:ARG:HB2	36:45:56:ARG:NH1	2.35	0.41
47:F5:53:VAL:CG2	47:F5:74:VAL:HG22	2.50	0.41
1:13:15:G:H4'	5:4E:24:ARG:NH1	2.35	0.41
1:13:156:G:H2'	1:13:157:G:C8	2.56	0.41
1:13:172:A:H8	1:13:172:A:OP2	2.04	0.41
1:13:280:C:N3	17:8I:39:SER:N	2.66	0.41
1:13:632:A:H8	1:13:633:G:N9	2.19	0.41
1:13:828:A:H2'	1:13:829:G:O4'	2.20	0.41
1:13:1014:A:H4'	19:AI:14:HIS:CG	2.55	0.41
1:13:1418:A:C2	1:13:1483:A:C2	3.09	0.41
2:1E:102:LEU:HB3	2:1E:180:LEU:CD1	2.50	0.41
7:6E:95:ARG:CZ	7:6E:99:LEU:HD11	2.51	0.41
7:6E:139:GLU:O	7:6E:142:GLU:N	2.54	0.41
25:1H:301:G:C4	25:1H:302:C:C5	3.08	0.41
25:1H:819:A:C4	25:1H:1189:A:C2	3.08	0.41
25:1H:1389:G:C2	25:1H:1399:C:O2	2.74	0.41
25:1H:1913:A:H4'	25:1H:1914:C:O5'	2.20	0.41
25:1H:2409:G:H2'	25:1H:2410:G:O4'	2.21	0.41
27:11:94:LEU:HD23	27:11:95:LEU:N	2.36	0.41
28:21:179:GLU:O	28:21:180:ASN:HB2	2.20	0.41
29:31:33:LEU:HD12	29:31:33:LEU:HA	1.83	0.41
29:31:136:THR:O	29:31:140:LEU:HB2	2.21	0.41
30:41:115:ARG:H	30:41:115:ARG:HG3	1.71	0.41
33:58:35:ARG:O	33:58:42:TRP:CZ3	2.74	0.41
38:A8:61:ASN:O	38:A8:61:ASN:ND2	2.52	0.41
43:F8:36:LYS:HG2	43:F8:54:VAL:HB	2.03	0.41
55:1G:28:G:C6	55:1G:29:G:C5	3.09	0.41
55:1G:393:A:OP2	16:7A:12:LYS:HD3	2.20	0.41
55:1G:1106:G:H5''	3:22:172:ARG:HG2	2.02	0.41
55:1G:1128:C:O2'	55:1G:1129:C:OP1	2.39	0.41
55:1G:1148:U:H2'	55:1G:1149:C:O4'	2.20	0.41
55:1G:1375:A:H4'	7:62:29:LYS:HE3	2.02	0.41
4:32:3:ARG:HD2	4:32:118:ARG:CD	2.50	0.41
4:32:148:VAL:HG12	4:32:152:SER:OG	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:52:80:ARG:HH11	6:52:80:ARG:HD3	1.69	0.41
9:82:99:LEU:HB3	9:82:101:PHE:CE1	2.55	0.41
10:1A:3:LYS:N	10:1A:75:ILE:HA	2.35	0.41
12:3A:46:LYS:HE3	12:3A:91:LYS:O	2.21	0.41
12:3A:126:LYS:HB2	12:3A:126:LYS:HE2	1.85	0.41
15:6A:39:LEU:HD12	15:6A:56:LEU:HD13	2.01	0.41
20:BA:31:SER:O	20:BA:35:THR:HG23	2.21	0.41
22:1L:34:U:O2'	22:1L:36:U:H5	2.02	0.41
22:1L:77:C:N3	22:1L:78:C:N4	2.68	0.41
22:3L:65:C:N4	25:14:2169:A:H62	2.18	0.41
25:14:177:G:OP2	25:14:177:G:N2	2.39	0.41
25:14:221:A:C4	25:14:266:G:N7	2.89	0.41
25:14:270(E):G:C6	25:14:270(F):U:C4	3.08	0.41
25:14:363(E):U:H5'	25:14:363(F):A:OP2	2.21	0.41
25:14:687:C:H42	25:14:787:U:H4'	1.85	0.41
25:14:848:G:C2	25:14:849:A:C5	3.09	0.41
25:14:1057:A:H2'	25:14:1058:U:O4'	2.21	0.41
25:14:1198:U:O2	25:14:1249:U:H1'	2.20	0.41
25:14:1301:A:O3'	25:14:1302:A:H2'	2.20	0.41
25:14:1418:G:OP1	25:14:1588:C:O2'	2.37	0.41
25:14:1525:G:C2	25:14:1526:G:C4	3.09	0.41
25:14:2228:G:C5	25:14:2229:C:C4	3.09	0.41
25:14:2250:G:OP1	36:45:83:MET:HE3	2.20	0.41
25:14:2292:C:H2'	25:14:2293:C:C6	2.55	0.41
25:14:2302:G:C6	25:14:2315:G:C6	3.08	0.41
25:14:2528:U:H4'	25:14:2529:G:N2	2.36	0.41
25:14:2630:G:OP2	25:14:2630:G:H4'	2.21	0.41
26:1J:28:C:OP1	38:65:36:TYR:OH	2.28	0.41
57:39:7:TYR:HE2	57:39:10:PRO:HG3	1.84	0.41
57:39:122:LYS:HB3	57:39:191:ARG:HB2	2.01	0.41
30:49:124:SER:HB2	30:49:131:TYR:CE1	2.55	0.41
31:59:30:LYS:HD2	31:59:30:LYS:HA	1.72	0.41
32:69:2:LYS:H	32:69:2:LYS:HG2	1.58	0.41
34:25:2:ILE:HG21	34:25:8:LEU:HD21	2.01	0.41
34:25:93:PRO:CD	34:25:113:LYS:HG3	2.50	0.41
43:B5:8:ILE:HD12	43:B5:8:ILE:H	1.86	0.41
43:B5:25:LYS:HA	43:B5:81:VAL:O	2.20	0.41
1:13:15:G:C4	1:13:16:A:C8	3.09	0.41
1:13:232:G:C5	1:13:233:C:C5	3.09	0.41
1:13:900:A:O5'	1:13:900:A:H8	2.04	0.41
1:13:976:G:N2	1:13:1362(A):C:OP2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1128:C:O2	1:13:1144:G:N2	2.54	0.41
1:13:1221:G:O3'	19:AI:77:THR:HG21	2.21	0.41
1:13:1301:U:O2'	1:13:1302:U:P	2.79	0.41
2:1E:120:ALA:O	2:1E:124:SER:OG	2.30	0.41
2:1E:163:PHE:HA	2:1E:163:PHE:HD1	1.71	0.41
4:3E:110:PHE:CE2	4:3E:148:VAL:HG23	2.55	0.41
9:8E:23:ASN:H	9:8E:23:ASN:ND2	2.19	0.41
10:1I:29:ARG:HH22	10:1I:84:GLN:NE2	2.18	0.41
15:6I:78:TYR:CZ	15:6I:82:ILE:HD11	2.56	0.41
16:7I:47:ASP:OD1	16:7I:47:ASP:N	2.54	0.41
25:1H:7:G:C2	25:1H:8:A:C4	3.09	0.41
25:1H:275:G:N2	25:1H:276:A:N1	2.45	0.41
25:1H:909:A:O2'	25:1H:910:A:H5''	2.21	0.41
25:1H:934:G:H2'	25:1H:935:C:C6	2.54	0.41
25:1H:1141:U:H6	33:58:63:THR:OG1	2.03	0.41
25:1H:1207:C:C2	25:1H:1208:C:C5	3.09	0.41
25:1H:1464:C:O2'	25:1H:1528:A:H8	2.03	0.41
25:1H:1671:U:O2'	25:1H:1673:U:H5	2.04	0.41
25:1H:1782:C:P	62:1H:3532:HOH:O	2.74	0.41
25:1H:2299:G:N1	25:1H:2318:G:C8	2.89	0.41
25:1H:2339:G:H2'	25:1H:2340:G:C8	2.55	0.41
25:1H:2660:A:H2'	25:1H:2661:G:O4'	2.21	0.41
27:11:159:ALA:HB1	27:11:198:ASN:O	2.20	0.41
31:51:55:PRO:HD2	31:51:61:HIS:CD2	2.56	0.41
31:51:171:LEU:HG	31:51:173:PRO:HA	2.02	0.41
32:61:40:THR:O	32:61:44:LEU:HD22	2.21	0.41
35:78:135:LEU:HD23	35:78:135:LEU:HA	1.82	0.41
36:88:20:ALA:HA	36:88:98:LYS:HB3	2.01	0.41
36:88:51:ARG:O	36:88:55:VAL:HG13	2.21	0.41
40:C8:19:LYS:O	40:C8:22:LYS:HG3	2.20	0.41
41:D8:7:THR:HG23	41:D8:12:TYR:CE1	2.56	0.41
43:F8:31:HIS:HA	43:F8:32:PRO:HD3	1.80	0.41
47:J8:13:ILE:HD13	47:J8:13:ILE:HG21	1.76	0.41
55:1G:328:C:H4'	55:1G:329:A:C5'	2.50	0.41
55:1G:1006:C:H2'	55:1G:1007:C:C6	2.55	0.41
55:1G:1056:U:O4	55:1G:1200:C:C2	2.74	0.41
55:1G:1162:C:C2	55:1G:1175:G:C2	3.08	0.41
2:12:108:ILE:HA	2:12:108:ILE:HD13	1.71	0.41
5:42:9:LYS:HB2	5:42:112:LEU:HD11	2.02	0.41
8:72:1:MET:HE2	8:72:3:THR:HG23	2.02	0.41
9:82:118:LYS:HB2	9:82:121:ARG:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:4A:40:ASN:OD1	13:4A:41:PRO:HD2	2.20	0.41
20:BA:50:GLU:CA	20:BA:100:ILE:HG12	2.50	0.41
23:2L:73:A:N6	23:2L:74:A:C6	2.88	0.41
22:3L:62:G:H2'	22:3L:63:5MU:C6	2.55	0.41
25:14:260:G:O4'	25:14:621:A:H1'	2.20	0.41
25:14:587:C:P	35:35:21:ARG:HH22	2.44	0.41
25:14:668:G:H2'	25:14:670:A:N6	2.34	0.41
25:14:1271:G:O3'	25:14:1272:A:H4'	2.21	0.41
25:14:2306:C:O5'	25:14:2307:G:H5''	2.20	0.41
56:19:158:ALA:O	56:19:159:ALA:C	2.59	0.41
28:29:8:LYS:O	28:29:8:LYS:HG3	2.20	0.41
57:39:110:LEU:HD22	57:39:202:PHE:HE1	1.85	0.41
57:39:178:PRO:HB3	57:39:198:ALA:CB	2.51	0.41
36:45:42:ILE:HG22	36:45:47:ILE:HG13	2.02	0.41
42:A5:38:TYR:CD2	51:J5:30:LEU:HD21	2.55	0.41
59:M5:50:LEU:O	59:M5:51:ALA:HB2	2.20	0.41
1:13:79:G:H22	1:13:89:U:H3	1.68	0.41
1:13:244:U:H4'	1:13:245:C:C5'	2.51	0.41
1:13:324:G:N1	1:13:327:A:OP2	2.50	0.41
1:13:342:C:H2'	1:13:343:U:C6	2.56	0.41
1:13:349:A:O2'	1:13:350:G:H5'	2.21	0.41
1:13:835:U:H3	1:13:851:G:H1	1.68	0.41
1:13:842:C:H4'	1:13:843:U:OP1	2.21	0.41
1:13:959:A:C2	1:13:1222:G:O4'	2.74	0.41
1:13:994:A:N7	1:13:1216:G:H4'	2.35	0.41
1:13:1073:U:H2'	1:13:1074:G:H8	1.86	0.41
2:1E:192:SER:OG	2:1E:193:ASP:N	2.53	0.41
2:1E:207:ALA:O	2:1E:210:SER:N	2.51	0.41
4:3E:102:ASP:OD1	4:3E:103:ASN:N	2.54	0.41
6:5E:19:LEU:O	6:5E:23:LYS:HB2	2.21	0.41
10:1I:9:ARG:HG2	10:1I:69:ASN:OD1	2.21	0.41
12:3I:17:LYS:H	12:3I:17:LYS:HG3	1.59	0.41
13:4I:25:ILE:HD11	13:4I:66:LEU:HD11	2.02	0.41
14:5I:50:LYS:HE2	14:5I:50:LYS:HB3	1.73	0.41
16:7I:4:ILE:HG12	16:7I:21:VAL:HG22	2.02	0.41
17:8I:89:LEU:O	17:8I:93:GLN:N	2.52	0.41
24:4K:20:A:C5	24:4K:21:C:C5	3.09	0.41
25:1H:139:G:N2	25:1H:141:A:N1	2.67	0.41
25:1H:263:C:H2'	25:1H:264:C:O4'	2.20	0.41
25:1H:1793:C:O2	25:1H:1900:A:H2	2.03	0.41
25:1H:2064:C:H2'	25:1H:2065:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2224:G:H4'	25:1H:2226:C:C2	2.56	0.41
26:16:95:U:N3	26:16:96:G:N7	2.68	0.41
28:21:24:THR:HG21	28:21:188:VAL:HG13	2.01	0.41
28:21:60:ASN:OD1	28:21:62:PRO:HD2	2.21	0.41
28:21:95:ILE:HA	28:21:95:ILE:HD13	1.76	0.41
28:21:120:TRP:CE3	28:21:155:LYS:HD3	2.55	0.41
29:31:7:TYR:O	29:31:21:ALA:HA	2.20	0.41
30:41:170:ARG:NE	30:41:174:GLU:HG2	2.35	0.41
31:51:11:VAL:HA	31:51:12:PRO:HD3	1.76	0.41
32:61:98:ALA:HB2	32:61:111:PRO:HB3	2.03	0.41
32:61:109:ILE:HB	32:61:130:TYR:CZ	2.55	0.41
33:58:39:ARG:HA	33:58:40:PRO:HD2	1.93	0.41
39:B8:50:ILE:CD1	39:B8:102:ILE:HD11	2.46	0.41
40:C8:69:CYS:O	40:C8:74:LEU:HD12	2.21	0.41
47:J8:64:ALA:HA	47:J8:67:ILE:HG13	2.02	0.41
48:K8:42:GLY:C	48:K8:44:LEU:N	2.72	0.41
55:1G:828:A:H2'	55:1G:829:G:O4'	2.21	0.41
55:1G:1179:A:O3'	9:82:103:THR:HG23	2.21	0.41
55:1G:1194:U:H2'	55:1G:1195:C:C6	2.55	0.41
55:1G:1280:A:OP1	10:1A:40:LEU:HD21	2.21	0.41
2:12:214:ILE:HD13	2:12:214:ILE:HA	1.91	0.41
3:22:26:LYS:HG3	3:22:27:LYS:N	2.36	0.41
8:72:42:GLU:HG3	8:72:109:ILE:HD11	2.02	0.41
8:72:86:ILE:HD13	8:72:86:ILE:HA	1.92	0.41
10:1A:55:LYS:HE2	10:1A:55:LYS:HB2	1.74	0.41
13:4A:45:VAL:O	13:4A:48:LEU:HD22	2.20	0.41
25:14:536:A:H2'	25:14:537:C:C6	2.56	0.41
25:14:739:G:OP2	25:14:739:G:H8	2.04	0.41
25:14:851:U:H5'	49:H5:49:LYS:HD2	2.02	0.41
25:14:971:C:H2'	25:14:972:G:O4'	2.21	0.41
25:14:1021:A:H2'	25:14:1023:U:H5'	2.03	0.41
25:14:1022:G:O2'	25:14:1024:G:O6	2.38	0.41
25:14:1299:G:H5'	25:14:1301:A:O4'	2.20	0.41
25:14:1327:C:C4	25:14:1328:G:C6	3.08	0.41
25:14:1826:G:C5	25:14:1827:C:C5	3.09	0.41
25:14:1927:A:H2'	25:14:1928:A:C8	2.56	0.41
25:14:2055:C:OP1	25:14:2056:G:H4'	2.21	0.41
26:1J:15:A:H1'	26:1J:109:G:C5	2.56	0.41
56:19:273:ARG:HG2	56:19:273:ARG:O	2.21	0.41
28:29:25:VAL:O	28:29:26:ILE:HG12	2.21	0.41
28:29:26:ILE:HG22	28:29:28:ALA:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:39:6:VAL:HG22	57:39:17:ARG:HE	1.85	0.41
34:25:122:LEU:HD13	39:75:72:VAL:HG11	2.02	0.41
38:65:17:ARG:HH11	38:65:17:ARG:CG	2.32	0.41
58:D5:52:SER:O	58:D5:54:HIS:N	2.54	0.41
46:E5:49:LYS:HG3	46:E5:80:HIS:ND1	2.35	0.41
48:G5:23:LYS:HE2	48:G5:27:GLU:OE2	2.21	0.41
50:I5:24:THR:HB	50:I5:25:TYR:H	1.58	0.41
59:M5:49:VAL:CG1	59:M5:50:LEU:HD22	2.48	0.41
1:13:28:G:N2	1:13:29:G:H1'	2.36	0.41
1:13:184:G:H2'	1:13:185:A:H8	1.86	0.41
1:13:187:C:O2	1:13:191(A):G:C2	2.74	0.41
1:13:192:U:C4'	20:BI:103:GLY:HA2	2.51	0.41
1:13:329:A:C4	1:13:332:G:C5	3.09	0.41
1:13:391:G:O3'	16:7I:8:ARG:NH2	2.53	0.41
1:13:509:A:H5''	4:3E:55:ALA:HB2	2.02	0.41
1:13:558:G:C5	1:13:559:A:C2	3.09	0.41
1:13:678:U:H2'	1:13:679:C:C6	2.56	0.41
1:13:734:G:C2	1:13:735:C:C2	3.09	0.41
1:13:964:A:N3	1:13:969:A:O2'	2.41	0.41
1:13:1017:G:H2'	1:13:1018:C:C6	2.55	0.41
1:13:1212:U:H4'	1:13:1213:A:C8	2.56	0.41
1:13:1376:U:H2'	1:13:1377:A:C8	2.56	0.41
1:13:1429:C:H2'	1:13:1430:C:H6	1.86	0.41
2:1E:108:ILE:O	2:1E:111:ARG:HB2	2.21	0.41
3:2E:83:ARG:O	3:2E:86:VAL:HG22	2.20	0.41
3:2E:149:ALA:HA	3:2E:201:TYR:O	2.20	0.41
4:3E:9:CYS:SG	4:3E:31:CYS:O	2.78	0.41
5:4E:34:VAL:O	5:4E:41:VAL:HA	2.20	0.41
5:4E:72:GLN:O	5:4E:75:THR:HG22	2.21	0.41
6:5E:5:GLU:HB3	6:5E:62:TRP:HE1	1.85	0.41
6:5E:97:PHE:HD1	18:9I:31:LEU:HD21	1.86	0.41
7:6E:69:VAL:O	7:6E:69:VAL:HG12	2.20	0.41
12:3I:51:ALA:O	12:3I:52:LEU:HD23	2.21	0.41
13:4I:64:TRP:CD1	13:4I:64:TRP:N	2.89	0.41
20:BI:25:ARG:O	20:BI:29:LYS:HG3	2.20	0.41
20:BI:26:ASN:HD22	20:BI:71:THR:HA	1.86	0.41
21:1F:9:ARG:O	21:1F:13:ILE:HG13	2.20	0.41
21:1F:10:ARG:HA	21:1F:13:ILE:HD12	2.03	0.41
22:1K:17:OMG:H5''	22:1K:69:U:O2'	2.21	0.41
25:1H:66:C:O2'	25:1H:67:U:H5'	2.21	0.41
25:1H:116:C:H2'	25:1H:117:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:429:A:H2'	25:1H:430:G:C8	2.56	0.41
25:1H:442:G:C6	25:1H:444:C:C4	3.08	0.41
25:1H:557:U:H2'	25:1H:558:G:C8	2.55	0.41
25:1H:588:U:H1'	29:31:90:PHE:CD1	2.56	0.41
25:1H:890:A:C8	25:1H:892:G:C8	3.08	0.41
25:1H:899:A:C2'	25:1H:900:A:H5''	2.51	0.41
25:1H:1036:G:H2'	25:1H:1037:G:O4'	2.21	0.41
25:1H:1182:A:H2'	25:1H:1183:G:O4'	2.21	0.41
25:1H:1241:A:N3	25:1H:1241:A:O4'	2.54	0.41
25:1H:1253:A:N6	62:1H:3634:HOH:O	2.40	0.41
25:1H:1301:A:H2'	25:1H:1301:A:N3	2.36	0.41
25:1H:1401:G:H2'	25:1H:1402:C:C6	2.55	0.41
25:1H:1847:A:O2'	25:1H:1848:A:H5'	2.21	0.41
25:1H:1888:G:H5'	25:1H:1889:A:P	2.61	0.41
25:1H:1965:C:H2'	25:1H:1966:A:C8	2.56	0.41
25:1H:2121:G:H2'	25:1H:2122:U:C6	2.56	0.41
25:1H:2391:G:O6	25:1H:2425:A:H8	2.02	0.41
25:1H:2531:A:H5'	31:51:157:TYR:CE1	2.56	0.41
25:1H:2785:C:P	28:21:41:LYS:HZ2	2.44	0.41
25:1H:2838:G:C6	25:1H:2839:G:C5	3.09	0.41
26:16:4:C:H2'	26:16:5:C:C6	2.56	0.41
26:16:25:A:H2'	26:16:26:A:O4'	2.21	0.41
27:11:249:PRO:HD2	27:11:250:TRP:CZ3	2.55	0.41
28:21:37:ARG:HA	28:21:42:ASP:OD2	2.20	0.41
28:21:77:ILE:HG13	28:21:79:ARG:HH11	1.85	0.41
28:21:143:ASN:ND2	28:21:147:PRO:HD2	2.31	0.41
28:21:177:PRO:HD2	28:21:178:GLU:OE1	2.20	0.41
30:41:112:PRO:HB3	50:M8:37:SER:HB2	2.02	0.41
30:41:176:LEU:HD23	30:41:176:LEU:HA	1.80	0.41
33:58:16:ILE:O	33:58:55:VAL:HG22	2.21	0.41
33:58:41:ASP:OD1	33:58:41:ASP:N	2.48	0.41
36:88:112:GLU:H	36:88:112:GLU:CD	2.25	0.41
37:98:40:LYS:HZ3	37:98:40:LYS:HG3	1.68	0.41
37:98:74:LYS:HD3	37:98:77:ARG:HH21	1.86	0.41
37:98:113:LEU:HA	37:98:113:LEU:HD12	1.85	0.41
44:G8:97:ARG:HG3	44:G8:102:CYS:HB2	2.03	0.41
45:H8:7:ALA:HB3	45:H8:61:LEU:HB2	2.03	0.41
45:H8:23:LYS:O	45:H8:25:PRO:HD3	2.20	0.41
47:J8:7:ILE:HD12	47:J8:62:VAL:HG11	2.02	0.41
47:J8:78:LYS:HG2	47:J8:78:LYS:O	2.21	0.41
48:K8:5:GLU:H	48:K8:5:GLU:HG3	1.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:M8:37:SER:HB3	50:M8:38:LYS:HD2	2.02	0.41
53:P8:35:ARG:HG3	53:P8:42:LEU:HD11	2.03	0.41
55:1G:114:U:H2'	55:1G:115:G:H8	1.79	0.41
55:1G:264:U:O2'	17:8A:63:ARG:HG2	2.21	0.41
55:1G:266:G:C5'	55:1G:268:C:H41	2.34	0.41
55:1G:567:G:H2'	55:1G:568:G:O4'	2.21	0.41
55:1G:619:U:H3	4:32:135:LEU:CD1	2.31	0.41
55:1G:946:A:H2'	55:1G:947:G:C8	2.56	0.41
55:1G:1243:C:O2	55:1G:1295:G:N2	2.54	0.41
55:1G:1312:G:H2'	55:1G:1313:U:C6	2.56	0.41
55:1G:1388:C:H2'	55:1G:1389:C:H6	1.85	0.41
2:12:63:MET:HG3	2:12:225:ALA:HB1	2.03	0.41
2:12:77:ALA:HB2	2:12:211:ILE:HD13	2.02	0.41
2:12:215:LEU:O	2:12:219:VAL:HG12	2.21	0.41
6:52:22:GLU:OE1	6:52:84:ASN:ND2	2.52	0.41
9:82:10:ARG:HD2	9:82:105:ASP:HB3	2.02	0.41
9:82:55:ALA:HB1	9:82:59:PHE:HE1	1.86	0.41
11:2A:105:VAL:HG22	11:2A:105:VAL:O	2.21	0.41
13:4A:10:PRO:HB2	13:4A:18:ALA:HB1	2.03	0.41
17:8A:10:VAL:HG23	17:8A:54:GLY:H	1.85	0.41
20:BA:36:LEU:HD13	20:BA:36:LEU:HA	1.76	0.41
25:14:123:G:H8	62:14:3695:HOH:O	2.04	0.41
25:14:144:C:H2'	25:14:145:G:C8	2.56	0.41
25:14:192:C:O2'	25:14:802:A:N3	2.39	0.41
25:14:506:G:O3'	25:14:507:A:H8	2.04	0.41
25:14:553:U:C4	25:14:554:U:C4	3.08	0.41
25:14:685:A:H1'	25:14:688:U:O4	2.21	0.41
25:14:757:U:H2'	25:14:758:C:O4'	2.20	0.41
25:14:1213:A:O5'	25:14:1213:A:H8	2.03	0.41
25:14:2027:G:H2'	25:14:2028:U:O4'	2.20	0.41
25:14:2286:A:H5'	52:K5:28:ARG:HE	1.85	0.41
25:14:2286:A:H4'	25:14:2287:A:O4'	2.20	0.41
25:14:2286:A:H8	25:14:2287:A:N6	2.19	0.41
25:14:2535:G:C4	25:14:2536:G:C8	3.09	0.41
25:14:2547:U:O2	34:25:23:ARG:NH2	2.54	0.41
25:14:2667:C:N3	31:59:110:SER:OG	2.54	0.41
25:14:2747:G:C6	25:14:2754:U:C5	3.08	0.41
26:1J:21:G:H2'	26:1J:22:U:O4'	2.20	0.41
56:19:71:ASP:OD1	56:19:71:ASP:N	2.53	0.41
56:19:124:PRO:HG2	56:19:129:ASN:ND2	2.36	0.41
56:19:147:LEU:HD23	56:19:155:LEU:CD1	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:29:26:ILE:HD12	28:29:26:ILE:HG23	1.77	0.41
28:29:27:LEU:HD22	28:29:27:LEU:HA	1.88	0.41
28:29:64:LYS:HD2	28:29:64:LYS:HA	1.97	0.41
57:39:20:LEU:HD12	57:39:203:GLN:HE21	1.86	0.41
57:39:169:ASN:ND2	57:39:169:ASN:O	2.54	0.41
33:15:36:GLY:H	33:15:42:TRP:HZ3	1.69	0.41
34:25:71:ARG:HH11	34:25:71:ARG:HG3	1.86	0.41
40:85:25:TRP:CD1	40:85:26:GLY:N	2.88	0.41
41:95:19:LYS:H	41:95:19:LYS:HG3	1.62	0.41
43:B5:65:ARG:HG3	43:B5:67:GLY:N	2.29	0.41
58:D5:132:ASN:HD22	58:D5:159:PRO:HB2	1.86	0.41
46:E5:23:VAL:HG13	46:E5:38:VAL:HG23	2.02	0.41
47:F5:79:GLY:O	47:F5:80:LEU:HD13	2.21	0.41
49:H5:18:ASP:HB2	49:H5:49:LYS:HE3	2.03	0.41
50:I5:38:LYS:HB2	50:I5:38:LYS:HZ2	1.86	0.41
1:13:308:C:H2'	1:13:309:G:C8	2.55	0.41
1:13:370:C:C2	1:13:392:G:N2	2.89	0.41
1:13:374:A:C4	1:13:375:U:C5	3.09	0.41
1:13:484:G:H8	1:13:484:G:O5'	2.04	0.41
1:13:614:A:C5	1:13:615:C:C5	3.09	0.41
1:13:859:A:H2'	1:13:860:A:O4'	2.21	0.41
1:13:865:A:C2	1:13:918:A:H4'	2.56	0.41
2:1E:178:ARG:HD3	2:1E:178:ARG:HA	1.88	0.41
7:6E:101:LEU:HD23	7:6E:101:LEU:HA	1.90	0.41
13:4I:108:ARG:HH11	13:4I:108:ARG:CG	2.24	0.41
25:1H:51:G:N3	25:1H:119:A:C2	2.89	0.41
25:1H:102:G:OP1	48:K8:7:ARG:NH2	2.54	0.41
25:1H:661:C:O2'	35:78:13:ASN:HA	2.21	0.41
25:1H:1058:U:H2'	25:1H:1059:G:H8	1.86	0.41
25:1H:1813:G:H2'	25:1H:1814:G:H5'	2.03	0.41
25:1H:2296:U:H4'	25:1H:2297:C:OP1	2.21	0.41
25:1H:2789:C:O2'	25:1H:2893:G:N2	2.48	0.41
26:16:29:A:H2'	26:16:30:C:O4'	2.20	0.41
27:11:38:LYS:HD2	27:11:38:LYS:C	2.41	0.41
29:31:23:ASP:OD1	29:31:23:ASP:N	2.54	0.41
30:41:12:TYR:CD1	30:41:16:ARG:HD3	2.56	0.41
36:88:79:LEU:H	36:88:80:GLU:CG	2.34	0.41
49:L8:31:LEU:HD22	49:L8:31:LEU:HA	1.95	0.41
55:1G:685:G:C2	55:1G:686:U:C4	3.09	0.41
55:1G:1095:U:H5''	55:1G:1109:C:O2	2.20	0.41
55:1G:1342:C:O2'	55:1G:1343:G:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:72:GLY:HA3	2:12:81:VAL:HG21	2.02	0.41
4:32:57:ARG:NH2	4:32:205:GLU:OE2	2.51	0.41
4:32:63:LYS:HB2	4:32:63:LYS:HE3	1.91	0.41
4:32:163:GLU:HA	4:32:166:LYS:HE3	2.02	0.41
6:52:14:LEU:HB2	6:52:18:GLN:OE1	2.21	0.41
15:6A:43:LEU:HD11	15:6A:53:HIS:HA	2.03	0.41
18:9A:63:GLN:O	18:9A:63:GLN:HG3	2.20	0.41
22:3L:24:G:H2'	22:3L:25:G:H8	1.85	0.41
25:14:120:U:OP2	62:14:3476:HOH:O	2.21	0.41
25:14:218:A:C2	25:14:235:U:H4'	2.56	0.41
25:14:221:A:N6	25:14:265:A:H8	2.18	0.41
25:14:699:A:H2'	25:14:700:G:O4'	2.21	0.41
25:14:735:A:H5''	25:14:736:C:OP2	2.21	0.41
25:14:828:U:C5	25:14:829:A:N6	2.89	0.41
25:14:1188:U:C2'	25:14:1189:A:H5'	2.50	0.41
25:14:1282:U:H2'	25:14:1283:G:O4'	2.21	0.41
25:14:1348:G:C2'	25:14:1349:A:H5''	2.51	0.41
25:14:1519:G:C6	25:14:1520:U:C4	3.09	0.41
25:14:2639:A:C2	25:14:2778:A:C8	3.09	0.41
56:19:130:ALA:C	56:19:131:LEU:HD12	2.42	0.41
56:19:149:PRO:O	56:19:150:LYS:HB2	2.21	0.41
28:29:111:ARG:HB2	28:29:160:TYR:O	2.21	0.41
34:25:107:ARG:HB2	34:25:115:VAL:HG21	2.03	0.41
34:25:120:GLU:HB2	39:75:68:TYR:HE2	1.86	0.41
41:95:72:VAL:HG12	41:95:86:GLY:HA2	2.03	0.41
1:13:216:G:H2'	1:13:217:C:C6	2.56	0.40
1:13:631:G:H3'	1:13:632:A:H5''	2.02	0.40
1:13:1387:G:H2'	1:13:1388:C:C6	2.55	0.40
2:1E:28:PHE:O	2:1E:32:ILE:HG13	2.22	0.40
2:1E:86:GLU:C	2:1E:89:GLY:H	2.25	0.40
4:3E:30:LYS:C	4:3E:32:ALA:H	2.24	0.40
4:3E:188:LEU:HA	4:3E:189:PRO:HD3	1.87	0.40
8:7E:100:ILE:HD11	8:7E:112:LEU:HD11	2.01	0.40
16:7I:3:LYS:HG3	16:7I:24:ALA:HB2	2.03	0.40
22:1K:16:C:H41	22:1K:68:A:H61	1.68	0.40
23:2K:21:H2U:H62	23:2K:21:H2U:OP1	2.21	0.40
24:4K:20:A:C6	24:4K:21:C:C4	3.09	0.40
25:1H:250:G:C6	25:1H:251:A:C6	3.09	0.40
25:1H:442:G:C4'	29:31:46:ARG:HD3	2.51	0.40
25:1H:756:C:C4	25:1H:757:U:C5	3.10	0.40
25:1H:1069:A:H4'	25:1H:1070:A:H5''	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1131:G:N2	25:1H:1132:A:N3	2.69	0.40
25:1H:1260:G:H2'	25:1H:1261:C:C6	2.56	0.40
25:1H:1312:U:C2	25:1H:1603:A:C2	3.09	0.40
25:1H:1498:C:O4'	25:1H:1577:C:H4'	2.21	0.40
25:1H:1639:U:C2'	25:1H:1640:C:H5'	2.51	0.40
25:1H:1691:C:C4	25:1H:1692:U:C4	3.09	0.40
25:1H:2168:G:N3	25:1H:2168:G:H3'	2.36	0.40
25:1H:2453:A:H2	62:1H:3607:HOH:O	2.03	0.40
25:1H:2682:U:O2'	39:B8:58:ASN:ND2	2.54	0.40
25:1H:2699:C:H2'	25:1H:2700:C:O4'	2.21	0.40
25:1H:2791:C:N3	25:1H:2807:G:N2	2.65	0.40
26:16:24:G:C2	26:16:56:G:C2	3.08	0.40
26:16:63:G:H2'	26:16:64:C:C6	2.56	0.40
28:21:188:VAL:HA	28:21:189:PRO:HD3	1.66	0.40
29:31:108:LYS:HE3	29:31:108:LYS:HB3	1.85	0.40
29:31:117:ARG:HD2	29:31:117:ARG:HA	1.79	0.40
31:51:154:PRO:HD3	31:51:162:ILE:O	2.21	0.40
32:61:130:TYR:HB3	32:61:136:VAL:HG13	2.03	0.40
34:68:4:PRO:O	34:68:5:GLN:CB	2.69	0.40
37:98:70:LEU:HA	37:98:70:LEU:HD23	1.72	0.40
39:B8:50:ILE:O	39:B8:99:LEU:HD12	2.21	0.40
43:F8:3:THR:HB	43:F8:7:VAL:HG23	2.02	0.40
49:L8:7:LYS:HE2	49:L8:32:GLN:O	2.21	0.40
50:M8:16:CYS:SG	50:M8:36:CYS:HB3	2.61	0.40
55:1G:504:C:C2	55:1G:542:G:C2	3.09	0.40
55:1G:590:C:H2'	55:1G:591:U:C6	2.55	0.40
55:1G:995:C:O2	14:5A:4:LYS:HE2	2.22	0.40
55:1G:1009:G:C2	55:1G:1010:G:C8	3.09	0.40
55:1G:1330:U:H4'	13:4A:23:TYR:CE2	2.56	0.40
55:1G:1441:G:H4'	55:1G:1442:G:C5	2.57	0.40
2:12:239:VAL:HG12	2:12:240:GLN:HG3	2.02	0.40
3:22:45:LYS:O	3:22:48:TYR:HB3	2.20	0.40
7:62:84:ASN:OD1	7:62:84:ASN:N	2.53	0.40
7:62:126:ASP:O	7:62:129:GLU:HG2	2.21	0.40
25:14:587:C:C2	35:35:33:ARG:NH1	2.89	0.40
25:14:1570:A:H2'	25:14:1571:A:C8	2.56	0.40
25:14:1788:C:H2'	25:14:1789:A:H8	1.86	0.40
25:14:2190:G:H2'	25:14:2191:G:O4'	2.21	0.40
25:14:2729:G:H2'	25:14:2730:C:C6	2.57	0.40
25:14:2729:G:H2'	25:14:2730:C:H6	1.86	0.40
56:19:183:ARG:HG2	56:19:184:LYS:N	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:29:33:VAL:CG1	28:29:89:ASP:HA	2.50	0.40
57:39:53:THR:HB	57:39:56:GLU:OE2	2.21	0.40
32:69:44:LEU:HD23	32:69:44:LEU:HA	1.76	0.40
32:69:93:THR:O	32:69:97:ILE:HG13	2.20	0.40
32:69:113:ARG:HA	32:69:113:ARG:HD3	1.91	0.40
32:69:121:LYS:HA	32:69:121:LYS:HD2	1.95	0.40
35:35:90:ARG:HG3	35:35:91:PHE:H	1.86	0.40
41:95:89:GLN:HG3	41:95:90:PRO:N	2.36	0.40
58:D5:157:LEU:HA	58:D5:158:PRO:HD2	1.90	0.40
49:H5:5:LYS:HE3	49:H5:59:VAL:HG21	2.02	0.40
50:I5:14:ILE:HD11	50:I5:33:VAL:HG11	2.04	0.40
52:K5:24:GLU:HG3	52:K5:25:LYS:N	2.32	0.40
1:13:632:A:H8	1:13:633:G:C8	2.39	0.40
1:13:654:G:C4	1:13:753:A:C5	3.09	0.40
1:13:721:G:N1	1:13:733:A:C2	2.89	0.40
1:13:725:G:H2'	1:13:726:C:H6	1.86	0.40
1:13:787:A:H5''	1:13:787:A:H8	1.86	0.40
1:13:872:A:C4	1:13:874:G:N7	2.89	0.40
1:13:1051:C:H2'	1:13:1052:U:C6	2.56	0.40
1:13:1054:C:H5	1:13:1196:U:HO2'	1.67	0.40
1:13:1273:G:C6	1:13:1274:G:C4	3.09	0.40
1:13:1443:G:H3'	1:13:1443:G:OP2	2.21	0.40
4:3E:173:TRP:CD1	4:3E:189:PRO:HG3	2.56	0.40
5:4E:63:ARG:HA	5:4E:66:MET:CE	2.51	0.40
9:8E:9:ARG:HA	9:8E:76:ALA:CB	2.51	0.40
9:8E:33:PHE:HD2	9:8E:34:ASN:OD1	2.04	0.40
10:1I:30:SER:HB2	10:1I:80:LYS:HG3	2.03	0.40
13:4I:66:LEU:HB3	13:4I:67:GLU:H	1.72	0.40
15:6I:63:ARG:CZ	15:6I:87:ILE:HD13	2.51	0.40
18:9I:68:LYS:HE2	18:9I:68:LYS:HB2	1.74	0.40
23:2K:20:G:H4'	23:2K:21:H2U:OP2	2.22	0.40
25:1H:150:C:H2'	25:1H:151:C:C6	2.56	0.40
25:1H:174:C:H2'	25:1H:175:G:O4'	2.21	0.40
25:1H:305:U:H2'	25:1H:306:U:C6	2.56	0.40
25:1H:375:C:H2'	25:1H:376:C:C6	2.56	0.40
25:1H:818:G:H5'	25:1H:839:U:OP1	2.22	0.40
25:1H:1009:A:OP2	33:58:37:LYS:NZ	2.51	0.40
25:1H:1222:C:H2'	25:1H:1223:C:C6	2.57	0.40
25:1H:1392:A:C6	25:1H:1393:A:C6	3.09	0.40
25:1H:1711:C:H2'	25:1H:1712:C:C6	2.56	0.40
25:1H:1904:G:C2'	25:1H:1905:C:O5'	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2428:G:N3	35:78:61:ARG:NH1	2.68	0.40
25:1H:2469:A:H5'	25:1H:2469:A:N3	2.36	0.40
25:1H:2590:A:H2'	25:1H:2591:C:C6	2.57	0.40
25:1H:2862:G:C5	25:1H:2863:C:C5	3.09	0.40
27:11:124:PRO:HG2	27:11:129:ASN:ND2	2.34	0.40
29:31:125:LEU:HB3	29:31:196:LEU:HD21	2.03	0.40
30:41:6:ALA:HB3	30:41:104:GLU:OE2	2.21	0.40
33:58:133:GLN:HG2	33:58:134:ARG:H	1.87	0.40
35:78:59:LEU:HA	35:78:62:LEU:HD22	2.04	0.40
35:78:96:THR:HG22	35:78:97:PRO:HD2	2.03	0.40
37:98:29:LEU:HD12	37:98:29:LEU:HA	1.79	0.40
37:98:78:LYS:O	37:98:83:ILE:HG13	2.21	0.40
43:F8:1:MET:C	43:F8:3:THR:N	2.73	0.40
43:F8:39:ILE:O	43:F8:43:VAL:HG23	2.21	0.40
49:L8:51:ALA:HA	49:L8:54:VAL:HG12	2.03	0.40
52:O8:19:ARG:NH2	52:O8:53:LYS:HE2	2.35	0.40
55:1G:222:U:C2	55:1G:223:U:C5	3.10	0.40
55:1G:389:A:C6	55:1G:390:C:H1'	2.57	0.40
55:1G:652:U:O4	55:1G:752:G:H1'	2.22	0.40
55:1G:737:A:H2'	55:1G:738:C:C6	2.56	0.40
55:1G:980:C:H3'	55:1G:981:U:C6	2.56	0.40
55:1G:1187:G:N3	55:1G:1187:G:H2'	2.36	0.40
55:1G:1219:U:P	14:5A:19:ARG:HH12	2.44	0.40
5:42:76:ILE:O	5:42:93:PRO:HB3	2.22	0.40
6:52:14:LEU:HD23	6:52:14:LEU:O	2.21	0.40
6:52:30:LEU:HA	6:52:30:LEU:HD23	1.69	0.40
7:62:115:ARG:O	7:62:119:ARG:HG3	2.20	0.40
9:82:95:LYS:HB2	9:82:95:LYS:HE2	1.82	0.40
14:5A:24:CYS:HB3	14:5A:27:CYS:O	2.21	0.40
15:6A:32:LEU:HA	15:6A:32:LEU:HD23	1.87	0.40
23:2L:59:A:H2	23:2L:61:U:HO2'	1.69	0.40
25:14:49:A:C6	25:14:177:G:C5	3.10	0.40
25:14:76:C:O2'	48:G5:62:THR:OG1	2.22	0.40
25:14:185:U:C2	25:14:186:G:C8	3.09	0.40
25:14:243:U:C2'	25:14:244:A:H5'	2.51	0.40
25:14:608:A:H2'	25:14:609:A:C8	2.56	0.40
25:14:984:A:H5''	25:14:985:C:H5	1.87	0.40
25:14:1297:C:H2'	25:14:1298:C:H6	1.86	0.40
25:14:1354:A:H2'	25:14:1355:G:O4'	2.21	0.40
25:14:1671:U:O2'	25:14:1673:U:H5	2.04	0.40
25:14:1774:C:H6	25:14:1774:C:O5'	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1939:U:OP1	25:14:2604:U:O2'	2.38	0.40
25:14:2057:A:H2'	25:14:2058:A:O4'	2.22	0.40
25:14:2388:A:C2'	25:14:2389:G:H5'	2.51	0.40
25:14:2630:G:H1'	25:14:2894:G:N9	2.36	0.40
26:1J:73:A:C4	26:1J:104:A:C2	3.10	0.40
26:1J:99:A:OP1	26:1J:99:A:H4'	2.19	0.40
28:29:8:LYS:NZ	28:29:188:VAL:O	2.50	0.40
28:29:119:ARG:HA	28:29:160:TYR:CD2	2.56	0.40
35:35:84:ASN:CG	35:35:117:GLU:HB3	2.41	0.40
38:65:63:THR:OG1	38:65:64:GLU:N	2.55	0.40
40:85:47:TYR:HA	40:85:50:ARG:NH2	2.36	0.40
46:E5:82:ARG:HA	46:E5:83:PRO:HD2	1.69	0.40
50:I5:12:ALA:HB1	50:I5:29:PRO:HB3	2.02	0.40
1:13:17:U:O4'	1:13:1080:A:H1'	2.21	0.40
1:13:323:U:H4'	20:BI:22:ARG:HB3	2.03	0.40
1:13:668:G:O2'	15:6I:46:HIS:HB3	2.22	0.40
1:13:685:G:N2	1:13:686:U:O4	2.54	0.40
1:13:924:C:H2'	1:13:925:G:C8	2.56	0.40
1:13:950:U:C5	13:4I:102:ARG:NH1	2.90	0.40
1:13:953:G:C2	1:13:954:G:H1'	2.56	0.40
3:2E:13:GLY:HA3	14:5I:57:ARG:HH11	1.86	0.40
4:3E:3:ARG:NH2	4:3E:5:ILE:HD11	2.36	0.40
4:3E:53:ASP:O	4:3E:57:ARG:HD2	2.21	0.40
4:3E:107:ARG:HH21	4:3E:114:ARG:HH22	1.69	0.40
4:3E:162:LEU:CD1	4:3E:181:MET:HG2	2.51	0.40
8:7E:86:ILE:HG22	8:7E:93:VAL:HG21	2.04	0.40
8:7E:88:LYS:O	8:7E:92:ARG:HD3	2.21	0.40
9:8E:4:TYR:CD2	9:8E:88:TYR:HB2	2.56	0.40
12:3I:52:LEU:O	12:3I:54:LYS:HD2	2.21	0.40
12:3I:85:ILE:HG23	12:3I:98:TYR:HB3	2.04	0.40
19:AI:51:VAL:O	19:AI:57:HIS:HA	2.22	0.40
25:1H:52:A:O2'	25:1H:53:A:H5'	2.21	0.40
25:1H:383:U:H2'	25:1H:385:C:H5	1.85	0.40
25:1H:611:C:C2	25:1H:612:G:C8	3.09	0.40
25:1H:720:C:H2'	25:1H:721:C:H6	1.87	0.40
25:1H:751:A:C6	25:1H:789:A:C5	3.10	0.40
25:1H:910:A:N1	25:1H:2277:G:H1'	2.35	0.40
25:1H:1515:C:H2'	25:1H:1516:U:H6	1.86	0.40
25:1H:1751:C:H2'	25:1H:1752:C:C6	2.57	0.40
25:1H:2788:C:O2'	25:1H:2809:A:N3	2.43	0.40
26:16:79:C:H2'	26:16:80:U:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:16:89(A):A:H8	26:16:89(A):A:O5'	2.03	0.40
26:16:91:C:H5''	45:H8:79:ARG:NH2	2.37	0.40
27:11:69:ARG:NH2	27:11:128:GLY:O	2.26	0.40
29:31:10:PRO:O	29:31:124:LEU:HD12	2.21	0.40
29:31:64:ILE:HG23	29:31:65:TRP:NE1	2.35	0.40
29:31:163:VAL:O	29:31:166:ALA:HB3	2.22	0.40
33:58:46:VAL:O	33:58:47:ALA:HB3	2.22	0.40
37:98:72:ASP:OD2	37:98:75:LEU:HB2	2.21	0.40
43:F8:24:GLY:HA3	43:F8:82:GLN:HE22	1.86	0.40
45:H8:161:VAL:HB	45:H8:162:GLU:H	1.71	0.40
48:K8:35:LEU:HD12	48:K8:35:LEU:HA	1.88	0.40
55:1G:192:U:C4'	20:BA:103:GLY:HA2	2.51	0.40
55:1G:382:A:H2'	55:1G:383:A:C8	2.57	0.40
55:1G:641:U:O3'	55:1G:642:A:H8	2.04	0.40
55:1G:745:C:H2'	55:1G:746:A:C8	2.56	0.40
55:1G:1068:G:N3	55:1G:1191:A:C2	2.89	0.40
55:1G:1111:A:H2'	55:1G:1112:C:H6	1.86	0.40
55:1G:1185:G:H2'	55:1G:1186:G:O4'	2.21	0.40
55:1G:1446:A:C6	39:75:118:ARG:NH2	2.89	0.40
3:22:72:LYS:NZ	3:22:75:VAL:HG23	2.36	0.40
5:42:84:PHE:HB3	5:42:134:ALA:HB2	2.03	0.40
6:52:8:ILE:N	6:52:8:ILE:HD12	2.37	0.40
10:1A:81:THR:OG1	10:1A:82:ILE:N	2.54	0.40
11:2A:124:LYS:H	11:2A:124:LYS:HG2	1.45	0.40
15:6A:61:GLY:O	15:6A:64:ARG:HB3	2.21	0.40
22:3L:17:OMG:C2	22:3L:67:A:C5	3.09	0.40
25:14:270(Y):G:C2	25:14:270(Z):U:O4	2.74	0.40
25:14:287:C:H2'	25:14:288:C:C6	2.56	0.40
25:14:332:A:C4	25:14:335:C:N4	2.89	0.40
25:14:638:G:C5	25:14:651:G:C2	3.09	0.40
25:14:686:G:N7	53:L5:5:TRP:CH2	2.90	0.40
25:14:844:C:C5	25:14:845:G:C6	3.09	0.40
25:14:950:G:C2	25:14:968:G:C2	3.10	0.40
25:14:966:G:H2'	25:14:967:C:C6	2.56	0.40
25:14:1385:G:C4	25:14:1386:C:C5	3.09	0.40
25:14:1509:C:H5'	25:14:1510:A:O4'	2.21	0.40
25:14:1519:G:H2'	25:14:1520:U:O4'	2.21	0.40
25:14:1695:G:N7	56:19:14:ARG:NH2	2.69	0.40
25:14:2115:G:C6	25:14:2117:A:C8	3.09	0.40
25:14:2256:G:O2'	25:14:2257:U:H5'	2.21	0.40
56:19:5:LYS:HG3	56:19:17:THR:HG22	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:29:10:GLY:O	28:29:24:THR:O	2.39	0.40
36:45:31:ASP:HA	36:45:134:ARG:HE	1.86	0.40
40:85:59:ARG:O	40:85:63:VAL:HG23	2.21	0.40
44:C5:17:SER:HB3	44:C5:71:LYS:HB3	2.01	0.40
46:E5:65:GLY:O	46:E5:81:VAL:HG13	2.21	0.40
1:13:397:A:C6	1:13:548:G:N7	2.89	0.40
1:13:426:G:OP1	4:3E:38:TYR:OH	2.24	0.40
1:13:605:U:H2'	1:13:606:G:O4'	2.21	0.40
1:13:991:U:O4	1:13:1212:U:O2'	2.34	0.40
1:13:1126:U:C4	1:13:1127:G:C2	3.09	0.40
1:13:1319:A:C2	1:13:1323:G:H1'	2.56	0.40
1:13:1516:G:H2'	1:13:1518:A:OP2	2.20	0.40
2:1E:69:LEU:HD13	2:1E:91:PRO:HB2	2.03	0.40
3:2E:181:ASN:OD1	3:2E:204:LEU:HB2	2.22	0.40
25:1H:387:U:H4'	25:1H:388:G:O5'	2.20	0.40
25:1H:775:G:C4	25:1H:794:G:C8	3.10	0.40
25:1H:1568:G:H4'	27:11:59:LYS:HG3	2.03	0.40
25:1H:2081:C:H2'	25:1H:2082:A:C8	2.57	0.40
25:1H:2345:G:N3	25:1H:2381:C:H2'	2.36	0.40
25:1H:2700:C:C2'	25:1H:2701:C:H5'	2.51	0.40
25:1H:2862:G:C4	25:1H:2863:C:C5	3.10	0.40
26:16:29:A:H2'	26:16:30:C:C6	2.57	0.40
27:11:11:PRO:O	27:11:12:SER:OG	2.28	0.40
27:11:85:ASP:OD2	27:11:88:ARG:HD2	2.22	0.40
29:31:36:VAL:HG11	29:31:183:VAL:HG11	2.03	0.40
32:61:29:TYR:HD2	32:61:30:LEU:HD23	1.85	0.40
33:58:26:LEU:O	33:58:30:ILE:HG13	2.20	0.40
35:78:19:VAL:HA	35:78:20:GLY:HA3	1.77	0.40
36:88:48:GLU:O	36:88:48:GLU:HG3	2.21	0.40
37:98:107:ASP:OD1	37:98:107:ASP:C	2.60	0.40
45:H8:14:LYS:HA	45:H8:15:PRO:HD2	1.88	0.40
55:1G:407:G:H2'	55:1G:408:A:C8	2.56	0.40
55:1G:727:G:N2	55:1G:730:G:OP2	2.44	0.40
55:1G:857:C:H2'	55:1G:858:G:O4'	2.22	0.40
3:22:4:LYS:HE3	3:22:4:LYS:HB2	1.94	0.40
3:22:127:ARG:NH2	3:22:192:THR:OG1	2.52	0.40
4:32:3:ARG:HB3	4:32:4:TYR:H	1.59	0.40
9:82:28:VAL:HA	9:82:63:ILE:O	2.22	0.40
9:82:118:LYS:HZ3	9:82:118:LYS:CB	2.34	0.40
10:1A:53:PRO:HA	14:5A:42:ILE:HD12	2.02	0.40
13:4A:33:ALA:HA	13:4A:59:TYR:HE2	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:1L:23:A:C6	22:1L:24:G:N7	2.90	0.40
24:4L:12:A:H4'	24:4L:13:A:OP1	2.21	0.40
25:14:319:C:O2'	25:14:320:A:H5'	2.21	0.40
25:14:654(S):G:H1'	25:14:654(T):A:N7	2.37	0.40
25:14:1027:A:H8	25:14:1027:A:OP2	2.05	0.40
25:14:1166:C:O2	25:14:1184:G:C2	2.75	0.40
25:14:1324:G:H4'	25:14:1616:A:C2	2.57	0.40
25:14:1328:G:H2'	25:14:1330:C:C4	2.57	0.40
25:14:1649:G:C6	25:14:2009:G:C6	3.09	0.40
25:14:1794:U:O2'	25:14:1795:C:H5'	2.22	0.40
25:14:2197:U:H1'	25:14:2198:A:C8	2.56	0.40
25:14:2238:G:N3	25:14:2238:G:H5''	2.36	0.40
25:14:2391:G:O6	25:14:2425:A:H8	2.04	0.40
25:14:2499:C:OP2	62:14:3459:HOH:O	2.22	0.40
25:14:2677:G:H2'	25:14:2678:C:C6	2.56	0.40
25:14:2687:U:C4	25:14:2688:U:C5	3.09	0.40
25:14:2784:C:H1'	28:29:37:ARG:NH2	2.33	0.40
56:19:37:LEU:HB3	56:19:38:LYS:HE2	2.04	0.40
57:39:127:GLU:OE1	57:39:127:GLU:HA	2.18	0.40
32:69:77:LEU:O	32:69:79:ILE:HG12	2.22	0.40
32:69:93:THR:N	32:69:96:ASP:HB2	2.36	0.40
35:35:14:LYS:C	35:35:16:ARG:N	2.73	0.40
36:45:42:ILE:HD13	36:45:97:VAL:CG2	2.52	0.40
39:75:45:PHE:CE2	39:75:74:ARG:HB2	2.57	0.40
44:C5:19:LYS:HB2	44:C5:20:TYR:HD1	1.86	0.40
44:C5:59:GLY:O	44:C5:61:ILE:HG13	2.21	0.40
1:13:8:A:N6	4:3E:205:GLU:O	2.55	0.40
1:13:355:C:H2'	1:13:356:A:O4'	2.22	0.40
1:13:438:G:H4'	4:3E:123:HIS:CG	2.57	0.40
1:13:452:A:H2'	1:13:453:A:H8	1.84	0.40
1:13:575:G:H4'	1:13:576:G:O5'	2.22	0.40
1:13:622:A:H2'	1:13:623:C:O4'	2.21	0.40
1:13:625:G:O2'	1:13:626:U:H5'	2.22	0.40
1:13:1053:G:O5'	1:13:1054:C:H3'	2.21	0.40
1:13:1177:G:H2'	1:13:1178:G:C8	2.57	0.40
2:1E:113:HIS:O	2:1E:116:GLU:HB2	2.21	0.40
3:2E:108:ASN:HA	3:2E:109:PRO:HD2	1.85	0.40
4:3E:139:ARG:HE	4:3E:139:ARG:HB2	1.62	0.40
22:3K:22:A:H5'	22:3K:23:A:OP1	2.22	0.40
25:1H:826:U:OP1	25:1H:2428:G:H3'	2.21	0.40
25:1H:864:G:O2'	25:1H:865:C:H5'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1051:G:H8	25:1H:1051:G:OP2	2.05	0.40
25:1H:1085:A:H4'	25:1H:1086:A:OP1	2.19	0.40
25:1H:1171:G:C6	25:1H:1174:A:C6	3.09	0.40
25:1H:1215:G:C5	25:1H:1216:G:C8	3.09	0.40
25:1H:1324:G:C4	25:1H:1328:G:O6	2.74	0.40
25:1H:1559:G:N3	25:1H:1559:G:H5'	2.37	0.40
25:1H:1759:A:H4'	25:1H:2715:C:O4'	2.22	0.40
25:1H:2014:A:H2'	25:1H:2015:A:C8	2.56	0.40
25:1H:2075:U:C4	25:1H:2238:G:C6	3.09	0.40
25:1H:2210:G:H5'	25:1H:2211:G:N7	2.34	0.40
25:1H:2692:C:OP1	25:1H:2871:C:H5'	2.21	0.40
25:1H:2795:G:H3'	25:1H:2797:U:C5'	2.50	0.40
28:21:69:LYS:HB2	28:21:69:LYS:HE2	1.78	0.40
29:31:12:LEU:HD12	29:31:12:LEU:HA	1.91	0.40
31:51:87:LEU:HA	31:51:163:TYR:O	2.22	0.40
31:51:169:VAL:HG13	31:51:170:ARG:N	2.36	0.40
33:58:99:LEU:HD23	33:58:99:LEU:HA	1.97	0.40
35:78:3:LEU:HD23	35:78:3:LEU:HA	1.93	0.40
37:98:118:GLU:HA	37:98:118:GLU:OE1	2.22	0.40
44:G8:28:LYS:HE3	44:G8:28:LYS:HB2	1.90	0.40
45:H8:58:VAL:O	45:H8:60:GLU:N	2.53	0.40
47:J8:63:ALA:C	47:J8:65:SER:N	2.75	0.40
48:K8:64:LEU:HD21	48:K8:68:ARG:NH2	2.36	0.40
55:1G:308:C:H2'	55:1G:309:G:H8	1.86	0.40
55:1G:652:U:C4	55:1G:752:G:N3	2.89	0.40
2:12:149:LEU:HD23	2:12:149:LEU:HA	1.72	0.40
3:22:79:ARG:HG2	3:22:79:ARG:O	2.21	0.40
4:32:121:VAL:O	4:32:134:ASP:HA	2.20	0.40
4:32:162:LEU:HD23	4:32:162:LEU:HA	1.87	0.40
12:3A:60:LEU:HD13	12:3A:60:LEU:HA	1.83	0.40
12:3A:60:LEU:HD23	12:3A:66:VAL:HG22	2.04	0.40
14:5A:29:ARG:HH21	14:5A:42:ILE:HG13	1.86	0.40
19:AA:81:ARG:HH11	19:AA:81:ARG:HG2	1.87	0.40
24:4L:17:U:O2'	24:4L:18:G:H5'	2.21	0.40
25:14:511:U:C5	25:14:512:G:C5	3.09	0.40
25:14:670:A:H5''	35:35:42:SER:O	2.21	0.40
25:14:688:U:H5'	25:14:1780:A:C2	2.56	0.40
25:14:1625:C:H2'	25:14:1626:G:O4'	2.21	0.40
25:14:1665:A:H4'	34:25:67:LYS:HB2	2.03	0.40
25:14:1885:A:H5'	25:14:1886:C:OP2	2.20	0.40
25:14:2050:C:H2'	25:14:2051:A:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2228:G:C6	25:14:2229:C:C4	3.10	0.40
25:14:2692:C:H2'	25:14:2693:A:C8	2.56	0.40
34:25:59:LYS:HB3	34:25:87:ILE:HG22	2.04	0.40
38:65:65:VAL:O	38:65:68:GLN:HB2	2.21	0.40
39:75:51:ARG:HG2	39:75:98:LYS:HD2	2.04	0.40
44:C5:90:LEU:HA	44:C5:91:GLU:HA	1.74	0.40
58:D5:30:ASN:N	58:D5:33:LEU:O	2.54	0.40
48:G5:25:VAL:O	48:G5:29:LYS:HG3	2.20	0.40

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

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:5E:15:ASP:OD2	4:32:27:TYR:OH[4_555]	2.10	0.10
32:61:91:SER:OG	55:1G:368:U:OP1[4_555]	2.18	0.02

## 5.3 Torsion angles [i](#)

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

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	12	235/256 (92%)	207 (88%)	25 (11%)	3 (1%)	12	42
2	1E	235/256 (92%)	202 (86%)	32 (14%)	1 (0%)	34	69
3	22	204/239 (85%)	188 (92%)	16 (8%)	0	100	100
3	2E	203/239 (85%)	187 (92%)	16 (8%)	0	100	100
4	32	206/208 (99%)	184 (89%)	22 (11%)	0	100	100
4	3E	206/208 (99%)	193 (94%)	13 (6%)	0	100	100
5	42	149/162 (92%)	145 (97%)	4 (3%)	0	100	100
5	4E	149/162 (92%)	145 (97%)	3 (2%)	1 (1%)	22	57
6	52	99/101 (98%)	98 (99%)	1 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
6	5E	99/101 (98%)	94 (95%)	5 (5%)	0	100	100
7	62	153/156 (98%)	146 (95%)	7 (5%)	0	100	100
7	6E	153/156 (98%)	145 (95%)	8 (5%)	0	100	100
8	72	136/138 (99%)	127 (93%)	8 (6%)	1 (1%)	22	57
8	7E	136/138 (99%)	129 (95%)	7 (5%)	0	100	100
9	82	125/128 (98%)	115 (92%)	10 (8%)	0	100	100
9	8E	125/128 (98%)	109 (87%)	15 (12%)	1 (1%)	19	54
10	1A	97/105 (92%)	89 (92%)	8 (8%)	0	100	100
10	1I	97/105 (92%)	88 (91%)	9 (9%)	0	100	100
11	2A	117/129 (91%)	105 (90%)	12 (10%)	0	100	100
11	2I	117/129 (91%)	102 (87%)	13 (11%)	2 (2%)	9	36
12	3A	123/132 (93%)	105 (85%)	14 (11%)	4 (3%)	4	21
12	3I	123/132 (93%)	108 (88%)	15 (12%)	0	100	100
13	4A	115/126 (91%)	98 (85%)	16 (14%)	1 (1%)	17	52
13	4I	114/126 (90%)	97 (85%)	17 (15%)	0	100	100
14	5A	56/61 (92%)	48 (86%)	8 (14%)	0	100	100
14	5I	59/61 (97%)	49 (83%)	9 (15%)	1 (2%)	9	36
15	6A	86/89 (97%)	81 (94%)	5 (6%)	0	100	100
15	6I	86/89 (97%)	76 (88%)	10 (12%)	0	100	100
16	7A	82/88 (93%)	78 (95%)	4 (5%)	0	100	100
16	7I	82/88 (93%)	78 (95%)	4 (5%)	0	100	100
17	8A	98/105 (93%)	90 (92%)	8 (8%)	0	100	100
17	8I	98/105 (93%)	94 (96%)	4 (4%)	0	100	100
18	9A	70/88 (80%)	65 (93%)	5 (7%)	0	100	100
18	9I	70/88 (80%)	62 (89%)	7 (10%)	1 (1%)	11	40
19	AA	80/93 (86%)	65 (81%)	13 (16%)	2 (2%)	5	27
19	AI	81/93 (87%)	70 (86%)	9 (11%)	2 (2%)	5	27
20	BA	97/106 (92%)	88 (91%)	9 (9%)	0	100	100
20	BI	97/106 (92%)	89 (92%)	8 (8%)	0	100	100
21	1B	23/27 (85%)	19 (83%)	4 (17%)	0	100	100
21	1F	23/27 (85%)	21 (91%)	2 (9%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
27	11	270/272 (99%)	251 (93%)	15 (6%)	4 (2%)	10	39
28	21	203/205 (99%)	172 (85%)	28 (14%)	3 (2%)	10	39
28	29	203/205 (99%)	162 (80%)	33 (16%)	8 (4%)	3	18
29	31	200/202 (99%)	185 (92%)	14 (7%)	1 (0%)	29	64
30	41	179/181 (99%)	159 (89%)	17 (10%)	3 (2%)	9	36
30	49	179/181 (99%)	160 (89%)	16 (9%)	3 (2%)	9	36
31	51	172/180 (96%)	150 (87%)	17 (10%)	5 (3%)	4	24
31	59	169/180 (94%)	138 (82%)	27 (16%)	4 (2%)	6	27
32	61	144/146 (99%)	120 (83%)	20 (14%)	4 (3%)	5	25
32	69	144/146 (99%)	120 (83%)	21 (15%)	3 (2%)	7	30
33	15	136/138 (99%)	123 (90%)	12 (9%)	1 (1%)	22	57
33	58	136/138 (99%)	121 (89%)	10 (7%)	5 (4%)	3	19
34	25	120/122 (98%)	114 (95%)	6 (5%)	0	100	100
34	68	120/122 (98%)	114 (95%)	6 (5%)	0	100	100
35	35	148/150 (99%)	109 (74%)	31 (21%)	8 (5%)	2	12
35	78	148/150 (99%)	116 (78%)	28 (19%)	4 (3%)	5	25
36	45	139/141 (99%)	115 (83%)	23 (16%)	1 (1%)	22	57
36	88	139/141 (99%)	109 (78%)	26 (19%)	4 (3%)	4	24
37	55	115/118 (98%)	107 (93%)	8 (7%)	0	100	100
37	98	116/118 (98%)	105 (90%)	10 (9%)	1 (1%)	17	52
38	65	109/111 (98%)	89 (82%)	19 (17%)	1 (1%)	17	52
38	A8	109/111 (98%)	93 (85%)	15 (14%)	1 (1%)	17	52
39	75	135/137 (98%)	117 (87%)	15 (11%)	3 (2%)	6	29
39	B8	134/137 (98%)	123 (92%)	11 (8%)	0	100	100
40	85	115/117 (98%)	109 (95%)	5 (4%)	1 (1%)	17	52
40	C8	115/117 (98%)	104 (90%)	8 (7%)	3 (3%)	5	26
41	95	99/101 (98%)	78 (79%)	17 (17%)	4 (4%)	3	17
41	D8	99/101 (98%)	94 (95%)	3 (3%)	2 (2%)	7	31
42	A5	111/113 (98%)	105 (95%)	6 (5%)	0	100	100
42	E8	111/113 (98%)	106 (96%)	4 (4%)	1 (1%)	17	52
43	B5	90/94 (96%)	83 (92%)	6 (7%)	1 (1%)	14	46

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
43	F8	92/94 (98%)	86 (94%)	4 (4%)	2 (2%)	6	29
44	C5	102/110 (93%)	76 (74%)	24 (24%)	2 (2%)	7	31
44	G8	102/110 (93%)	78 (76%)	18 (18%)	6 (6%)	1	10
45	H8	173/175 (99%)	146 (84%)	18 (10%)	9 (5%)	2	12
46	E5	75/85 (88%)	72 (96%)	3 (4%)	0	100	100
46	I8	75/85 (88%)	66 (88%)	8 (11%)	1 (1%)	12	42
47	F5	95/98 (97%)	88 (93%)	5 (5%)	2 (2%)	7	30
47	J8	95/98 (97%)	86 (90%)	7 (7%)	2 (2%)	7	30
48	G5	64/66 (97%)	60 (94%)	2 (3%)	2 (3%)	4	23
48	K8	64/66 (97%)	60 (94%)	4 (6%)	0	100	100
49	H5	57/59 (97%)	53 (93%)	4 (7%)	0	100	100
49	L8	57/59 (97%)	55 (96%)	2 (4%)	0	100	100
50	I5	61/66 (92%)	36 (59%)	23 (38%)	2 (3%)	4	21
50	M8	64/66 (97%)	43 (67%)	19 (30%)	2 (3%)	4	23
51	J5	56/59 (95%)	50 (89%)	5 (9%)	1 (2%)	8	34
51	N8	57/59 (97%)	51 (90%)	6 (10%)	0	100	100
52	K5	43/45 (96%)	27 (63%)	16 (37%)	0	100	100
52	O8	43/45 (96%)	32 (74%)	11 (26%)	0	100	100
53	L5	43/49 (88%)	42 (98%)	1 (2%)	0	100	100
53	P8	43/49 (88%)	41 (95%)	2 (5%)	0	100	100
54	Q8	60/65 (92%)	39 (65%)	11 (18%)	10 (17%)	0	0
56	19	271/276 (98%)	258 (95%)	9 (3%)	4 (2%)	10	39
57	39	206/210 (98%)	175 (85%)	26 (13%)	5 (2%)	6	27
58	D5	177/206 (86%)	139 (78%)	30 (17%)	8 (4%)	2	15
59	M5	58/61 (95%)	46 (79%)	9 (16%)	3 (5%)	2	12
All	All	11344/11923 (95%)	10035 (88%)	1149 (10%)	160 (1%)	11	40

All (160) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
14	5I	25	VAL
18	9I	22	VAL
36	88	80	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
44	G8	53	PRO
44	G8	81	LYS
47	J8	86	SER
54	Q8	48	PHE
54	Q8	50	LEU
54	Q8	51	ALA
56	19	237	GLU
28	29	25	VAL
28	29	62	PRO
28	29	81	ILE
57	39	84	VAL
35	35	63	PRO
39	75	5	ALA
58	D5	53	ILE
58	D5	165	VAL
47	F5	30	VAL
50	I5	5	ILE
59	M5	51	ALA
37	98	11	ASN
40	C8	89	GLU
44	G8	78	ALA
45	H8	53	ILE
45	H8	60	GLU
45	H8	165	VAL
54	Q8	8	LYS
54	Q8	49	VAL
12	3A	18	VAL
19	AA	9	VAL
56	19	33	LEU
28	29	51	PHE
28	29	61	ARG
57	39	128	ALA
35	35	108	LYS
48	G5	47	ASN
48	G5	48	HIS
51	J5	57	VAL
28	21	118	LYS
35	78	27	HIS
36	88	66	ILE
40	C8	96	ALA
41	D8	45	THR
42	E8	66	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
43	F8	68	ARG
44	G8	54	LYS
54	Q8	6	THR
54	Q8	56	GLU
28	29	9	VAL
57	39	124	LEU
57	39	146	ALA
32	69	145	VAL
35	35	6	LEU
35	35	35	HIS
35	35	64	LYS
36	45	78	PRO
58	D5	161	VAL
47	F5	93	GLU
59	M5	31	HIS
11	2I	82	VAL
19	AI	67	VAL
27	11	239	ARG
28	21	56	PRO
30	41	98	ARG
32	61	144	VAL
32	61	145	VAL
33	58	22	THR
33	58	76	SER
36	88	134	ARG
40	C8	93	LYS
43	F8	40	LYS
50	M8	34	GLU
2	12	7	VAL
57	39	22	ALA
30	49	47	LYS
31	59	92	ILE
35	35	15	ARG
39	75	11	GLU
44	C5	29	GLU
58	D5	105	VAL
58	D5	116	VAL
58	D5	171	ILE
30	41	96	ARG
31	51	10	PRO
31	51	83	TYR
31	51	92	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
32	61	12	LEU
33	58	97	ARG
33	58	127	ASP
33	58	128	HIS
35	78	140	ALA
38	A8	88	ASP
44	G8	77	PRO
45	H8	6	LYS
45	H8	51	ALA
54	Q8	46	ARG
8	72	22	GLU
12	3A	79	GLU
31	59	131	VAL
40	85	93	LYS
41	95	45	THR
43	B5	68	ARG
9	8E	56	LEU
11	2I	108	ILE
27	11	240	ALA
30	41	5	VAL
44	G8	76	CYS
45	H8	59	LEU
54	Q8	57	ARG
30	49	5	VAL
30	49	110	ALA
38	65	61	ASN
39	75	10	VAL
59	M5	50	LEU
2	1E	239	VAL
28	21	55	ASN
29	31	132	VAL
35	78	95	VAL
2	12	32	ILE
12	3A	47	LYS
56	19	3	VAL
56	19	240	ALA
27	11	3	VAL
32	61	133	HIS
46	I8	83	PRO
47	J8	87	PRO
50	M8	5	ILE
28	29	26	ILE

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Mol	Chain	Res	Type
28	29	59	VAL
32	69	111	PRO
50	I5	33	VAL
5	4E	115	VAL
19	AI	41	VAL
31	51	12	PRO
45	H8	61	LEU
54	Q8	41	ILE
13	4A	84	ILE
19	AA	67	VAL
31	59	169	VAL
33	15	128	HIS
41	95	37	VAL
31	51	127	GLU
35	78	7	ARG
36	88	27	VAL
41	D8	49	THR
45	H8	141	VAL
2	12	39	ILE
12	3A	96	VAL
32	69	144	VAL
35	35	7	ARG
35	35	34	GLY
41	95	72	VAL
41	95	99	ILE
58	D5	141	VAL
27	11	123	ALA
45	H8	161	VAL
31	59	167	GLU
44	C5	3	VAL
58	D5	176	PRO

### 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.

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	12	205/220 (93%)	181 (88%)	24 (12%)	5	22
2	1E	205/220 (93%)	176 (86%)	29 (14%)	3	15
3	22	160/188 (85%)	140 (88%)	20 (12%)	4	18
3	2E	159/188 (85%)	140 (88%)	19 (12%)	5	20
4	32	180/180 (100%)	153 (85%)	27 (15%)	3	12
4	3E	180/180 (100%)	148 (82%)	32 (18%)	2	8
5	42	116/123 (94%)	94 (81%)	22 (19%)	1	6
5	4E	116/123 (94%)	98 (84%)	18 (16%)	2	11
6	52	90/90 (100%)	79 (88%)	11 (12%)	5	19
6	5E	90/90 (100%)	81 (90%)	9 (10%)	7	28
7	62	126/127 (99%)	105 (83%)	21 (17%)	2	9
7	6E	126/127 (99%)	107 (85%)	19 (15%)	3	12
8	72	119/119 (100%)	106 (89%)	13 (11%)	6	25
8	7E	119/119 (100%)	96 (81%)	23 (19%)	1	6
9	82	98/99 (99%)	85 (87%)	13 (13%)	4	16
9	8E	98/99 (99%)	77 (79%)	21 (21%)	1	4
10	1A	89/92 (97%)	81 (91%)	8 (9%)	9	34
10	1I	89/92 (97%)	78 (88%)	11 (12%)	4	19
11	2A	90/99 (91%)	82 (91%)	8 (9%)	9	34
11	2I	90/99 (91%)	81 (90%)	9 (10%)	7	28
12	3A	104/109 (95%)	91 (88%)	13 (12%)	4	18
12	3I	104/109 (95%)	92 (88%)	12 (12%)	5	22
13	4A	94/101 (93%)	77 (82%)	17 (18%)	1	7
13	4I	94/101 (93%)	76 (81%)	18 (19%)	1	6
14	5A	48/50 (96%)	43 (90%)	5 (10%)	7	27
14	5I	50/50 (100%)	39 (78%)	11 (22%)	1	4
15	6A	79/80 (99%)	71 (90%)	8 (10%)	7	28
15	6I	79/80 (99%)	67 (85%)	12 (15%)	3	12
16	7A	72/74 (97%)	63 (88%)	9 (12%)	4	18
16	7I	72/74 (97%)	58 (81%)	14 (19%)	1	6

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
17	8A	95/97 (98%)	88 (93%)	7 (7%)	13	42
17	8I	95/97 (98%)	79 (83%)	16 (17%)	2	9
18	9A	63/77 (82%)	49 (78%)	14 (22%)	1	4
18	9I	63/77 (82%)	55 (87%)	8 (13%)	4	18
19	AA	66/80 (82%)	55 (83%)	11 (17%)	2	9
19	AI	72/80 (90%)	58 (81%)	14 (19%)	1	6
20	BA	76/82 (93%)	57 (75%)	19 (25%)	0	2
20	BI	76/82 (93%)	67 (88%)	9 (12%)	5	21
21	1B	20/22 (91%)	19 (95%)	1 (5%)	24	57
21	1F	20/22 (91%)	17 (85%)	3 (15%)	3	12
27	11	214/214 (100%)	174 (81%)	40 (19%)	1	7
28	21	165/165 (100%)	131 (79%)	34 (21%)	1	5
28	29	165/165 (100%)	131 (79%)	34 (21%)	1	5
29	31	161/161 (100%)	133 (83%)	28 (17%)	2	9
30	41	155/155 (100%)	133 (86%)	22 (14%)	3	14
30	49	155/155 (100%)	132 (85%)	23 (15%)	3	13
31	51	145/148 (98%)	112 (77%)	33 (23%)	1	3
31	59	143/148 (97%)	128 (90%)	15 (10%)	7	26
32	61	122/122 (100%)	97 (80%)	25 (20%)	1	5
32	69	122/122 (100%)	102 (84%)	20 (16%)	2	10
33	15	117/117 (100%)	96 (82%)	21 (18%)	2	8
33	58	117/117 (100%)	92 (79%)	25 (21%)	1	4
34	25	100/100 (100%)	83 (83%)	17 (17%)	2	9
34	68	100/100 (100%)	87 (87%)	13 (13%)	4	18
35	35	116/116 (100%)	82 (71%)	34 (29%)	0	1
35	78	116/116 (100%)	84 (72%)	32 (28%)	0	1
36	45	111/111 (100%)	92 (83%)	19 (17%)	2	9
36	88	111/111 (100%)	90 (81%)	21 (19%)	1	6
37	55	100/101 (99%)	79 (79%)	21 (21%)	1	5
37	98	101/101 (100%)	81 (80%)	20 (20%)	1	5
38	65	87/87 (100%)	69 (79%)	18 (21%)	1	5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
38	A8	87/87 (100%)	66 (76%)	21 (24%)	0	2
39	75	120/120 (100%)	95 (79%)	25 (21%)	1	5
39	B8	119/120 (99%)	91 (76%)	28 (24%)	1	3
40	85	93/93 (100%)	78 (84%)	15 (16%)	2	10
40	C8	93/93 (100%)	78 (84%)	15 (16%)	2	10
41	95	82/82 (100%)	63 (77%)	19 (23%)	1	3
41	D8	82/82 (100%)	57 (70%)	25 (30%)	0	0
42	A5	92/92 (100%)	70 (76%)	22 (24%)	0	2
42	E8	92/92 (100%)	74 (80%)	18 (20%)	1	6
43	B5	74/76 (97%)	56 (76%)	18 (24%)	0	2
43	F8	76/76 (100%)	62 (82%)	14 (18%)	1	7
44	C5	85/91 (93%)	64 (75%)	21 (25%)	0	2
44	G8	85/91 (93%)	69 (81%)	16 (19%)	1	6
45	H8	154/154 (100%)	129 (84%)	25 (16%)	2	10
46	E5	62/67 (92%)	54 (87%)	8 (13%)	4	18
46	I8	62/67 (92%)	54 (87%)	8 (13%)	4	18
47	F5	82/83 (99%)	68 (83%)	14 (17%)	2	9
47	J8	82/83 (99%)	67 (82%)	15 (18%)	1	7
48	G5	62/62 (100%)	46 (74%)	16 (26%)	0	1
48	K8	62/62 (100%)	44 (71%)	18 (29%)	0	1
49	H5	51/51 (100%)	41 (80%)	10 (20%)	1	6
49	L8	51/51 (100%)	41 (80%)	10 (20%)	1	6
50	I5	57/59 (97%)	47 (82%)	10 (18%)	2	8
50	M8	59/59 (100%)	50 (85%)	9 (15%)	2	12
51	J5	51/51 (100%)	42 (82%)	9 (18%)	2	8
51	N8	51/51 (100%)	41 (80%)	10 (20%)	1	6
52	K5	44/44 (100%)	38 (86%)	6 (14%)	3	16
52	O8	44/44 (100%)	32 (73%)	12 (27%)	0	1
53	L5	38/42 (90%)	31 (82%)	7 (18%)	1	7
53	P8	38/42 (90%)	31 (82%)	7 (18%)	1	7
54	Q8	41/55 (74%)	26 (63%)	15 (37%)	0	0

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
56	19	214/218 (98%)	165 (77%)	49 (23%)	1	3
57	39	165/166 (99%)	132 (80%)	33 (20%)	1	5
58	D5	158/179 (88%)	132 (84%)	26 (16%)	2	10
59	M5	50/51 (98%)	35 (70%)	15 (30%)	0	0
All	All	9568/9886 (97%)	7886 (82%)	1682 (18%)	2	8

All (1682) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	1E	8	LYS
2	1E	9	GLU
2	1E	15	VAL
2	1E	17	PHE
2	1E	41	ILE
2	1E	51	LEU
2	1E	55	PHE
2	1E	64	ARG
2	1E	69	LEU
2	1E	71	VAL
2	1E	74	LYS
2	1E	96	ARG
2	1E	108	ILE
2	1E	111	ARG
2	1E	122	PHE
2	1E	136	VAL
2	1E	145	LEU
2	1E	153	ARG
2	1E	154	LEU
2	1E	162	ILE
2	1E	163	PHE
2	1E	165	VAL
2	1E	168	THR
2	1E	172	ILE
2	1E	178	ARG
2	1E	187	LEU
2	1E	196	LEU
2	1E	215	LEU
2	1E	229	VAL
3	2E	3	ASN
3	2E	4	LYS
3	2E	5	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	2E	21	ARG
3	2E	49	SER
3	2E	52	LEU
3	2E	54	ARG
3	2E	62	ASP
3	2E	63	ASN
3	2E	86	VAL
3	2E	104	GLN
3	2E	127	ARG
3	2E	128	PHE
3	2E	154	SER
3	2E	178	LEU
3	2E	188	LEU
3	2E	190	ARG
3	2E	196	LEU
3	2E	202	ILE
4	3E	3	ARG
4	3E	5	ILE
4	3E	8	VAL
4	3E	10	ARG
4	3E	15	GLU
4	3E	19	LEU
4	3E	28	SER
4	3E	30	LYS
4	3E	47	ARG
4	3E	53	ASP
4	3E	58	LEU
4	3E	61	LYS
4	3E	66	ARG
4	3E	84	LYS
4	3E	85	LYS
4	3E	104	VAL
4	3E	106	TYR
4	3E	108	LEU
4	3E	122	ARG
4	3E	127	THR
4	3E	135	LEU
4	3E	137	SER
4	3E	146	ILE
4	3E	151	LYS
4	3E	154	ASN
4	3E	155	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
4	3E	170	VAL
4	3E	177	ASP
4	3E	179	GLU
4	3E	193	ASP
4	3E	196	LEU
4	3E	200	GLU
5	4E	5	ASP
5	4E	6	PHE
5	4E	11	ILE
5	4E	16	THR
5	4E	24	ARG
5	4E	31	LEU
5	4E	33	VAL
5	4E	41	VAL
5	4E	68	GLU
5	4E	72	GLN
5	4E	79	GLU
5	4E	80	ILE
5	4E	92	LYS
5	4E	120	THR
5	4E	131	ILE
5	4E	144	THR
5	4E	147	ASP
5	4E	153	LYS
6	5E	21	LEU
6	5E	25	ILE
6	5E	40	VAL
6	5E	55	ASP
6	5E	65	VAL
6	5E	75	LEU
6	5E	87	ARG
6	5E	89	MET
6	5E	91	VAL
7	6E	3	ARG
7	6E	10	ARG
7	6E	22	LEU
7	6E	42	ILE
7	6E	49	ILE
7	6E	54	THR
7	6E	59	LEU
7	6E	78	ARG
7	6E	80	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
7	6E	89	MET
7	6E	90	GLU
7	6E	91	VAL
7	6E	104	LEU
7	6E	111	ARG
7	6E	113	GLU
7	6E	124	LEU
7	6E	136	LYS
7	6E	155	ARG
7	6E	156	TRP
8	7E	6	ILE
8	7E	19	VAL
8	7E	23	SER
8	7E	26	VAL
8	7E	35	ILE
8	7E	37	ARG
8	7E	45	ILE
8	7E	50	ARG
8	7E	52	ASP
8	7E	54	ASP
8	7E	68	ARG
8	7E	77	GLU
8	7E	80	ILE
8	7E	85	ARG
8	7E	91	ARG
8	7E	95	VAL
8	7E	102	ARG
8	7E	104	ARG
8	7E	105	ARG
8	7E	112	LEU
8	7E	121	ASP
8	7E	122	ARG
8	7E	125	ARG
9	8E	9	ARG
9	8E	10	ARG
9	8E	16	ARG
9	8E	20	ARG
9	8E	41	VAL
9	8E	42	ARG
9	8E	47	LEU
9	8E	53	VAL
9	8E	64	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
9	8E	66	ARG
9	8E	79	LEU
9	8E	81	ILE
9	8E	93	ARG
9	8E	95	LYS
9	8E	99	LEU
9	8E	108	VAL
9	8E	111	ARG
9	8E	112	LYS
9	8E	113	LYS
9	8E	121	ARG
9	8E	125	TYR
10	1I	16	LEU
10	1I	38	ILE
10	1I	48	THR
10	1I	62	HIS
10	1I	66	ARG
10	1I	70	ARG
10	1I	75	ILE
10	1I	80	LYS
10	1I	91	PRO
10	1I	92	THR
10	1I	96	ILE
11	2I	29	ILE
11	2I	30	VAL
11	2I	32	ILE
11	2I	38	ASN
11	2I	41	THR
11	2I	105	VAL
11	2I	108	ILE
11	2I	109	VAL
11	2I	116	HIS
12	3I	20	LYS
12	3I	47	LYS
12	3I	50	SER
12	3I	55	VAL
12	3I	60	LEU
12	3I	62	SER
12	3I	64	TYR
12	3I	67	THR
12	3I	83	VAL
12	3I	85	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
12	3I	91	LYS
12	3I	118	SER
13	4I	19	LEU
13	4I	20	THR
13	4I	32	GLU
13	4I	48	LEU
13	4I	52	GLU
13	4I	56	LEU
13	4I	57	ARG
13	4I	64	TRP
13	4I	70	LEU
13	4I	83	ASP
13	4I	86	CYS
13	4I	88	ARG
13	4I	90	LEU
13	4I	99	ARG
13	4I	106	ASN
13	4I	108	ARG
13	4I	114	ARG
13	4I	115	LYS
14	5I	1	MET
14	5I	12	ARG
14	5I	17	LYS
14	5I	18	VAL
14	5I	22	THR
14	5I	23	ARG
14	5I	31	ARG
14	5I	33	VAL
14	5I	41	ARG
14	5I	44	LEU
14	5I	50	LYS
15	6I	3	ILE
15	6I	22	THR
15	6I	26	GLU
15	6I	31	LEU
15	6I	35	ARG
15	6I	39	LEU
15	6I	41	GLU
15	6I	47	LYS
15	6I	59	MET
15	6I	66	LEU
15	6I	72	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	6I	76	GLU
16	7I	1	MET
16	7I	2	VAL
16	7I	8	ARG
16	7I	20	VAL
16	7I	25	ARG
16	7I	27	LYS
16	7I	32	TYR
16	7I	45	THR
16	7I	47	ASP
16	7I	50	LYS
16	7I	67	THR
16	7I	69	THR
16	7I	72	ARG
16	7I	76	GLN
17	8I	26	GLN
17	8I	45	HIS
17	8I	48	GLU
17	8I	50	LYS
17	8I	52	LYS
17	8I	57	VAL
17	8I	60	ILE
17	8I	62	SER
17	8I	68	ARG
17	8I	74	LEU
17	8I	85	VAL
17	8I	86	GLU
17	8I	89	LEU
17	8I	92	ARG
17	8I	94	ASN
17	8I	101	ARG
18	9I	18	ARG
18	9I	25	THR
18	9I	26	LEU
18	9I	31	LEU
18	9I	32	ARG
18	9I	68	LYS
18	9I	82	THR
18	9I	86	VAL
19	AI	7	LYS
19	AI	9	VAL
19	AI	11	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
19	AI	22	LEU
19	AI	29	ARG
19	AI	30	LEU
19	AI	31	ILE
19	AI	37	ARG
19	AI	43	GLU
19	AI	60	VAL
19	AI	61	TYR
19	AI	67	VAL
19	AI	77	THR
19	AI	78	ARG
20	BI	10	LEU
20	BI	24	LEU
20	BI	31	SER
20	BI	33	ILE
20	BI	46	GLU
20	BI	72	LEU
20	BI	73	HIS
20	BI	75	ASN
20	BI	84	LEU
21	1F	6	ARG
21	1F	8	THR
21	1F	24	ARG
27	11	13	ARG
27	11	14	ARG
27	11	16	MET
27	11	17	THR
27	11	26	LYS
27	11	27	THR
27	11	28	GLU
27	11	30	GLU
27	11	31	LYS
27	11	33	LEU
27	11	46	GLN
27	11	61	LEU
27	11	64	ILE
27	11	65	ILE
27	11	68	LYS
27	11	71	ASP
27	11	88	ARG
27	11	94	LEU
27	11	99	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	11	103	ARG
27	11	105	ILE
27	11	106	ILE
27	11	127	VAL
27	11	136	ILE
27	11	140	THR
27	11	155	LEU
27	11	173	VAL
27	11	192	THR
27	11	200	ASP
27	11	217	ARG
27	11	229	VAL
27	11	232	PRO
27	11	242	ARG
27	11	257	LEU
27	11	259	THR
27	11	260	ARG
27	11	262	ARG
27	11	266	SER
27	11	271	ILE
27	11	273	ARG
28	21	2	LYS
28	21	13	ARG
28	21	14	ILE
28	21	25	VAL
28	21	26	ILE
28	21	27	LEU
28	21	47	VAL
28	21	49	LEU
28	21	54	GLN
28	21	55	ASN
28	21	57	LYS
28	21	63	LEU
28	21	77	ILE
28	21	78	LEU
28	21	82	ARG
28	21	87	GLU
28	21	92	THR
28	21	101	ARG
28	21	102	VAL
28	21	111	ARG
28	21	113	PHE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
28	21	116	VAL
28	21	119	ARG
28	21	128	SER
28	21	144	ARG
28	21	146	THR
28	21	175	VAL
28	21	179	GLU
28	21	181	LEU
28	21	188	VAL
28	21	196	VAL
28	21	197	ILE
28	21	201	THR
28	21	203	LYS
29	31	7	TYR
29	31	8	GLN
29	31	9	ILE
29	31	24	LEU
29	31	32	LEU
29	31	33	LEU
29	31	45	ARG
29	31	46	ARG
29	31	48	THR
29	31	57	VAL
29	31	64	ILE
29	31	67	GLN
29	31	74	ARG
29	31	77	ASP
29	31	101	LEU
29	31	106	ARG
29	31	117	ARG
29	31	127	GLU
29	31	136	THR
29	31	158	THR
29	31	161	GLU
29	31	164	ARG
29	31	170	LEU
29	31	175	THR
29	31	181	LEU
29	31	183	VAL
29	31	196	LEU
29	31	203	GLN
30	41	3	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
30	41	10	LYS
30	41	31	VAL
30	41	43	LEU
30	41	45	GLU
30	41	63	ILE
30	41	67	LYS
30	41	70	VAL
30	41	82	LEU
30	41	90	LEU
30	41	94	LEU
30	41	101	ILE
30	41	116	ASP
30	41	118	ARG
30	41	121	ASN
30	41	128	ARG
30	41	133	LEU
30	41	139	LEU
30	41	152	LEU
30	41	162	THR
30	41	165	THR
30	41	166	ASP
31	51	4	ILE
31	51	6	ARG
31	51	7	LEU
31	51	10	PRO
31	51	11	VAL
31	51	24	VAL
31	51	37	VAL
31	51	43	VAL
31	51	45	VAL
31	51	50	VAL
31	51	60	ARG
31	51	71	LEU
31	51	77	LYS
31	51	80	SER
31	51	86	GLU
31	51	88	LEU
31	51	92	ILE
31	51	95	ARG
31	51	97	ARG
31	51	105	LEU
31	51	107	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	51	116	GLU
31	51	122	THR
31	51	125	VAL
31	51	129	THR
31	51	131	VAL
31	51	132	ARG
31	51	139	GLN
31	51	149	ARG
31	51	153	LYS
31	51	169	VAL
31	51	170	ARG
31	51	171	LEU
32	61	3	VAL
32	61	9	LEU
32	61	14	ASP
32	61	25	TYR
32	61	38	LEU
32	61	41	GLU
32	61	44	LEU
32	61	64	GLU
32	61	70	GLU
32	61	74	ASN
32	61	85	GLU
32	61	87	LYS
32	61	88	ILE
32	61	92	VAL
32	61	95	LYS
32	61	96	ASP
32	61	102	SER
32	61	108	THR
32	61	122	GLU
32	61	130	TYR
32	61	131	LYS
32	61	135	GLU
32	61	136	VAL
32	61	140	LEU
32	61	142	VAL
33	58	1	MET
33	58	7	LYS
33	58	12	ARG
33	58	29	LYS
33	58	34	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
33	58	43	THR
33	58	48	MET
33	58	58	ASP
33	58	60	ILE
33	58	61	ARG
33	58	63	THR
33	58	65	LYS
33	58	67	LEU
33	58	79	PRO
33	58	87	LEU
33	58	90	MET
33	58	96	GLU
33	58	97	ARG
33	58	98	VAL
33	58	99	LEU
33	58	103	VAL
33	58	120	LEU
33	58	127	ASP
33	58	130	HIS
33	58	134	ARG
34	68	9	GLU
34	68	20	MET
34	68	24	VAL
34	68	28	SER
34	68	31	LYS
34	68	32	TYR
34	68	38	VAL
34	68	47	ILE
34	68	52	VAL
34	68	66	LYS
34	68	78	ARG
34	68	92	GLU
34	68	94	ARG
35	78	4	SER
35	78	7	ARG
35	78	10	PRO
35	78	16	ARG
35	78	18	ARG
35	78	19	VAL
35	78	21	ARG
35	78	36	LYS
35	78	41	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
35	78	45	LEU
35	78	49	ARG
35	78	58	THR
35	78	59	LEU
35	78	61	ARG
35	78	62	LEU
35	78	65	ARG
35	78	75	ILE
35	78	76	LYS
35	78	77	ARG
35	78	88	LEU
35	78	96	THR
35	78	99	LEU
35	78	100	LEU
35	78	105	LEU
35	78	106	LEU
35	78	112	LEU
35	78	126	VAL
35	78	135	LEU
35	78	138	LEU
35	78	144	GLU
35	78	146	VAL
35	78	147	LEU
36	88	3	MET
36	88	5	ARG
36	88	7	MET
36	88	10	ARG
36	88	16	ARG
36	88	17	LEU
36	88	21	THR
36	88	25	ASP
36	88	26	TYR
36	88	35	VAL
36	88	45	GLN
36	88	51	ARG
36	88	59	ARG
36	88	76	LYS
36	88	79	LEU
36	88	80	GLU
36	88	82	ARG
36	88	110	THR
36	88	127	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	88	139	GLU
36	88	141	GLN
37	98	1	MET
37	98	6	SER
37	98	9	LYS
37	98	10	LEU
37	98	12	ARG
37	98	18	LEU
37	98	27	SER
37	98	28	LEU
37	98	29	LEU
37	98	34	ILE
37	98	36	THR
37	98	44	LEU
37	98	54	LEU
37	98	57	ARG
37	98	65	LEU
37	98	75	LEU
37	98	79	LEU
37	98	91	GLN
37	98	95	THR
37	98	105	ARG
38	A8	4	LEU
38	A8	10	ARG
38	A8	15	ARG
38	A8	19	LYS
38	A8	24	LEU
38	A8	29	PHE
38	A8	30	ARG
38	A8	36	TYR
38	A8	38	GLN
38	A8	50	SER
38	A8	52	SER
38	A8	54	LEU
38	A8	58	LEU
38	A8	61	ASN
38	A8	62	LYS
38	A8	69	VAL
38	A8	73	LEU
38	A8	83	LYS
38	A8	101	LEU
38	A8	106	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
38	A8	112	PHE
39	B8	10	VAL
39	B8	12	SER
39	B8	13	ARG
39	B8	17	THR
39	B8	19	LEU
39	B8	21	GLU
39	B8	23	ARG
39	B8	27	THR
39	B8	30	VAL
39	B8	33	LYS
39	B8	42	ILE
39	B8	48	ILE
39	B8	49	VAL
39	B8	50	ILE
39	B8	62	THR
39	B8	86	ILE
39	B8	87	ASP
39	B8	88	ILE
39	B8	89	VAL
39	B8	98	LYS
39	B8	99	LEU
39	B8	104	ASN
39	B8	105	LEU
39	B8	106	SER
39	B8	108	ARG
39	B8	110	ILE
39	B8	111	ARG
39	B8	113	LYS
40	C8	3	ARG
40	C8	5	LYS
40	C8	13	LYS
40	C8	27	LEU
40	C8	34	LYS
40	C8	60	LEU
40	C8	74	LEU
40	C8	79	PHE
40	C8	89	GLU
40	C8	92	ARG
40	C8	94	ASN
40	C8	95	LEU
40	C8	104	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
40	C8	111	GLU
40	C8	112	ARG
41	D8	1	MET
41	D8	5	VAL
41	D8	7	THR
41	D8	18	LEU
41	D8	21	ARG
41	D8	22	VAL
41	D8	24	LYS
41	D8	25	LEU
41	D8	33	VAL
41	D8	34	GLU
41	D8	35	LEU
41	D8	37	VAL
41	D8	39	LEU
41	D8	40	LEU
41	D8	43	GLU
41	D8	47	VAL
41	D8	52	VAL
41	D8	53	GLU
41	D8	57	VAL
41	D8	60	GLU
41	D8	70	ILE
41	D8	72	VAL
41	D8	73	SER
41	D8	79	VAL
41	D8	85	LYS
42	E8	11	ARG
42	E8	17	VAL
42	E8	19	LEU
42	E8	41	LYS
42	E8	51	LEU
42	E8	66	GLU
42	E8	67	ASP
42	E8	69	LEU
42	E8	70	TYR
42	E8	76	VAL
42	E8	78	GLU
42	E8	83	LYS
42	E8	88	ARG
42	E8	92	ARG
42	E8	96	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
42	E8	100	THR
42	E8	107	LEU
42	E8	111	HIS
43	F8	1	MET
43	F8	2	LYS
43	F8	15	GLU
43	F8	27	THR
43	F8	45	THR
43	F8	49	VAL
43	F8	57	LEU
43	F8	60	ARG
43	F8	70	LEU
43	F8	80	ILE
43	F8	87	GLN
43	F8	88	LYS
43	F8	89	ILE
43	F8	92	LEU
44	G8	6	HIS
44	G8	14	LEU
44	G8	24	VAL
44	G8	33	LYS
44	G8	38	ILE
44	G8	42	VAL
44	G8	54	LYS
44	G8	57	GLN
44	G8	64	GLU
44	G8	67	LEU
44	G8	84	ARG
44	G8	85	VAL
44	G8	86	ARG
44	G8	90	LEU
44	G8	99	CYS
44	G8	106	LEU
45	H8	5	LEU
45	H8	11	GLU
45	H8	16	SER
45	H8	19	ARG
45	H8	20	ARG
45	H8	37	VAL
45	H8	42	VAL
45	H8	49	ARG
45	H8	61	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
45	H8	71	VAL
45	H8	76	LEU
45	H8	77	ASP
45	H8	80	ARG
45	H8	81	ARG
45	H8	86	VAL
45	H8	91	LEU
45	H8	93	ASP
45	H8	94	GLU
45	H8	117	LEU
45	H8	119	GLU
45	H8	121	HIS
45	H8	122	ARG
45	H8	140	ASP
45	H8	154	ASP
45	H8	169	GLU
46	I8	11	ARG
46	I8	36	ILE
46	I8	41	ARG
46	I8	55	ARG
46	I8	60	PHE
46	I8	64	ASP
46	I8	67	VAL
46	I8	74	ARG
47	J8	4	VAL
47	J8	19	GLN
47	J8	25	LYS
47	J8	41	ARG
47	J8	46	LEU
47	J8	65	SER
47	J8	78	LYS
47	J8	80	LEU
47	J8	81	LYS
47	J8	82	LEU
47	J8	83	GLU
47	J8	90	ILE
47	J8	91	LYS
47	J8	94	LEU
47	J8	98	LEU
48	K8	5	GLU
48	K8	15	LYS
48	K8	16	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
48	K8	17	SER
48	K8	19	VAL
48	K8	24	LEU
48	K8	28	LYS
48	K8	35	LEU
48	K8	40	SER
48	K8	41	ILE
48	K8	47	ASN
48	K8	50	ILE
48	K8	53	LEU
48	K8	54	LYS
48	K8	55	ARG
48	K8	62	THR
48	K8	64	LEU
48	K8	68	ARG
49	L8	6	VAL
49	L8	8	LEU
49	L8	11	SER
49	L8	28	LEU
49	L8	30	ARG
49	L8	31	LEU
49	L8	32	GLN
49	L8	37	LEU
49	L8	40	THR
49	L8	56	VAL
50	M8	6	HIS
50	M8	27	THR
50	M8	36	CYS
50	M8	43	TYR
50	M8	52	THR
50	M8	55	ARG
50	M8	60	GLN
50	M8	61	ARG
50	M8	63	TYR
51	N8	6	VAL
51	N8	11	THR
51	N8	15	ARG
51	N8	16	ARG
51	N8	35	GLU
51	N8	40	LYS
51	N8	44	THR
51	N8	46	CYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
51	N8	52	TYR
51	N8	56	LYS
52	O8	10	LEU
52	O8	12	GLU
52	O8	15	GLU
52	O8	27	LYS
52	O8	30	THR
52	O8	32	ASN
52	O8	33	LYS
52	O8	39	TYR
52	O8	43	CYS
52	O8	44	ARG
52	O8	47	THR
52	O8	51	GLU
53	P8	1	MET
53	P8	4	THR
53	P8	8	ASN
53	P8	14	LYS
53	P8	24	THR
53	P8	41	ARG
53	P8	43	THR
54	Q8	6	THR
54	Q8	7	HIS
54	Q8	8	LYS
54	Q8	11	LYS
54	Q8	13	ARG
54	Q8	27	THR
54	Q8	31	HIS
54	Q8	32	LEU
54	Q8	33	ASN
54	Q8	34	TRP
54	Q8	53	PRO
54	Q8	58	ILE
54	Q8	59	LYS
54	Q8	60	LEU
54	Q8	61	LEU
2	12	5	ILE
2	12	20	GLU
2	12	23	ARG
2	12	24	TRP
2	12	36	ARG
2	12	37	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	12	42	ILE
2	12	51	LEU
2	12	69	LEU
2	12	80	ILE
2	12	108	ILE
2	12	137	ARG
2	12	147	LYS
2	12	155	LEU
2	12	165	VAL
2	12	168	THR
2	12	172	ILE
2	12	178	ARG
2	12	179	LYS
2	12	185	ILE
2	12	195	ASP
2	12	196	LEU
2	12	217	ARG
2	12	238	LEU
3	22	4	LYS
3	22	5	ILE
3	22	16	ARG
3	22	21	ARG
3	22	29	TYR
3	22	36	ASP
3	22	43	LEU
3	22	76	VAL
3	22	79	ARG
3	22	85	ARG
3	22	112	SER
3	22	131	ARG
3	22	140	ARG
3	22	151	VAL
3	22	166	GLU
3	22	167	TRP
3	22	178	LEU
3	22	182	ILE
3	22	192	THR
3	22	196	LEU
4	32	5	ILE
4	32	8	VAL
4	32	13	ARG
4	32	18	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
4	32	19	LEU
4	32	24	GLU
4	32	28	SER
4	32	30	LYS
4	32	36	ARG
4	32	58	LEU
4	32	59	ARG
4	32	61	LYS
4	32	73	ARG
4	32	76	ARG
4	32	112	VAL
4	32	119	GLN
4	32	122	ARG
4	32	127	THR
4	32	134	ASP
4	32	141	ARG
4	32	155	LEU
4	32	159	ARG
4	32	170	VAL
4	32	187	ARG
4	32	191	ARG
4	32	192	GLU
4	32	200	GLU
5	42	10	MET
5	42	12	LEU
5	42	31	LEU
5	42	40	ARG
5	42	41	VAL
5	42	43	LEU
5	42	47	LYS
5	42	51	VAL
5	42	60	TYR
5	42	61	TYR
5	42	65	ASN
5	42	68	GLU
5	42	72	GLN
5	42	75	THR
5	42	78	HIS
5	42	79	GLU
5	42	87	SER
5	42	91	LEU
5	42	101	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
5	42	118	ILE
5	42	126	ARG
5	42	144	THR
6	52	2	ARG
6	52	14	LEU
6	52	16	GLN
6	52	19	LEU
6	52	28	ARG
6	52	40	VAL
6	52	57	GLN
6	52	63	TYR
6	52	74	ASP
6	52	93	SER
6	52	98	LEU
7	62	8	GLU
7	62	23	VAL
7	62	24	THR
7	62	45	ASP
7	62	59	LEU
7	62	60	LYS
7	62	72	ARG
7	62	73	MET
7	62	84	ASN
7	62	89	MET
7	62	90	GLU
7	62	94	ARG
7	62	97	GLN
7	62	98	SER
7	62	104	LEU
7	62	113	GLU
7	62	114	ARG
7	62	118	VAL
7	62	131	LYS
7	62	137	LYS
7	62	155	ARG
8	72	1	MET
8	72	23	SER
8	72	25	ASP
8	72	82	HIS
8	72	84	ARG
8	72	91	ARG
8	72	92	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
8	72	97	VAL
8	72	99	GLU
8	72	102	ARG
8	72	109	ILE
8	72	112	LEU
8	72	121	ASP
9	82	4	TYR
9	82	10	ARG
9	82	20	ARG
9	82	33	PHE
9	82	38	GLN
9	82	42	ARG
9	82	79	LEU
9	82	88	TYR
9	82	95	LYS
9	82	104	ARG
9	82	110	GLU
9	82	117	HIS
9	82	126	SER
10	1A	13	HIS
10	1A	17	ASP
10	1A	24	VAL
10	1A	59	SER
10	1A	62	HIS
10	1A	70	ARG
10	1A	79	ARG
10	1A	96	ILE
11	2A	29	ILE
11	2A	48	ILE
11	2A	54	ARG
11	2A	84	VAL
11	2A	96	ARG
11	2A	105	VAL
11	2A	106	LYS
11	2A	124	LYS
12	3A	19	ARG
12	3A	27	LEU
12	3A	33	ARG
12	3A	39	VAL
12	3A	42	THR
12	3A	46	LYS
12	3A	57	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
12	3A	60	LEU
12	3A	64	TYR
12	3A	85	ILE
12	3A	102	ARG
12	3A	117	ARG
12	3A	118	SER
13	4A	4	ILE
13	4A	8	GLU
13	4A	17	VAL
13	4A	32	GLU
13	4A	37	THR
13	4A	47	ASP
13	4A	49	THR
13	4A	64	TRP
13	4A	66	LEU
13	4A	70	LEU
13	4A	77	ASN
13	4A	83	ASP
13	4A	91	ARG
13	4A	94	ARG
13	4A	103	THR
13	4A	108	ARG
13	4A	117	VAL
14	5A	12	ARG
14	5A	15	LYS
14	5A	26	ARG
14	5A	27	CYS
14	5A	44	LEU
15	6A	3	ILE
15	6A	4	THR
15	6A	17	ARG
15	6A	26	GLU
15	6A	39	LEU
15	6A	48	LYS
15	6A	82	ILE
15	6A	88	ARG
16	7A	1	MET
16	7A	2	VAL
16	7A	8	ARG
16	7A	11	SER
16	7A	21	VAL
16	7A	33	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
16	7A	45	THR
16	7A	67	THR
16	7A	74	LEU
17	8A	49	GLU
17	8A	60	ILE
17	8A	63	ARG
17	8A	68	ARG
17	8A	70	ARG
17	8A	74	LEU
17	8A	90	ILE
18	9A	21	LYS
18	9A	23	LYS
18	9A	26	LEU
18	9A	32	ARG
18	9A	36	ASN
18	9A	42	ARG
18	9A	44	LEU
18	9A	47	THR
18	9A	53	ARG
18	9A	58	LEU
18	9A	74	ARG
18	9A	82	THR
18	9A	86	VAL
18	9A	87	ARG
19	AA	9	VAL
19	AA	22	LEU
19	AA	23	ASN
19	AA	25	LYS
19	AA	29	ARG
19	AA	30	LEU
19	AA	60	VAL
19	AA	63	THR
19	AA	66	MET
19	AA	78	ARG
19	AA	83	HIS
20	BA	11	SER
20	BA	13	LEU
20	BA	14	LYS
20	BA	24	LEU
20	BA	29	LYS
20	BA	30	LYS
20	BA	36	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
20	BA	41	ILE
20	BA	56	MET
20	BA	61	SER
20	BA	73	HIS
20	BA	74	LYS
20	BA	75	ASN
20	BA	83	ARG
20	BA	84	LEU
20	BA	85	MET
20	BA	93	GLU
20	BA	99	LEU
20	BA	100	ILE
21	1B	7	ARG
56	19	5	LYS
56	19	18	VAL
56	19	24	ILE
56	19	28	GLU
56	19	31	LYS
56	19	33	LEU
56	19	35	LYS
56	19	43	ARG
56	19	46	GLN
56	19	49	ILE
56	19	61	LEU
56	19	64	ILE
56	19	65	ILE
56	19	68	LYS
56	19	69	ARG
56	19	71	ASP
56	19	72	LYS
56	19	88	ARG
56	19	89	SER
56	19	94	LEU
56	19	99	ASP
56	19	103	ARG
56	19	105	ILE
56	19	138	VAL
56	19	141	VAL
56	19	147	LEU
56	19	157	ARG
56	19	166	GLN
56	19	181	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
56	19	182	LEU
56	19	192	THR
56	19	200	ASP
56	19	204	ILE
56	19	211	ARG
56	19	212	SER
56	19	217	ARG
56	19	232	PRO
56	19	237	GLU
56	19	239	ARG
56	19	242	ARG
56	19	244	ARG
56	19	255	LYS
56	19	257	LEU
56	19	260	ARG
56	19	263	ARG
56	19	266	SER
56	19	268	ARG
56	19	270	ILE
56	19	271	ILE
28	29	1	MET
28	29	5	LEU
28	29	7	VAL
28	29	9	VAL
28	29	14	ILE
28	29	23	VAL
28	29	33	VAL
28	29	37	ARG
28	29	63	LEU
28	29	64	LYS
28	29	67	PHE
28	29	72	VAL
28	29	75	VAL
28	29	76	ARG
28	29	89	ASP
28	29	93	VAL
28	29	111	ARG
28	29	116	VAL
28	29	117	MET
28	29	119	ARG
28	29	144	ARG
28	29	145	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
28	29	146	THR
28	29	163	GLU
28	29	167	VAL
28	29	170	LEU
28	29	175	VAL
28	29	179	GLU
28	29	181	LEU
28	29	185	LYS
28	29	188	VAL
28	29	197	ILE
28	29	200	GLU
28	29	201	THR
57	39	2	LYS
57	39	7	TYR
57	39	11	VAL
57	39	17	ARG
57	39	18	ARG
57	39	20	LEU
57	39	24	LEU
57	39	38	ARG
57	39	53	THR
57	39	57	VAL
57	39	62	ARG
57	39	63	LYS
57	39	65	TRP
57	39	66	PRO
57	39	67	GLN
57	39	72	ARG
57	39	74	ARG
57	39	82	ILE
57	39	83	PHE
57	39	96	ASP
57	39	98	SER
57	39	100	THR
57	39	106	ARG
57	39	123	LEU
57	39	125	LEU
57	39	149	ASP
57	39	153	SER
57	39	158	THR
57	39	165	ARG
57	39	183	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	39	196	LEU
57	39	204	ASN
57	39	205	ARG
30	49	7	LEU
30	49	20	ILE
30	49	28	VAL
30	49	35	GLU
30	49	45	GLU
30	49	52	ILE
30	49	58	GLN
30	49	71	THR
30	49	80	PHE
30	49	82	LEU
30	49	83	ARG
30	49	91	ARG
30	49	94	LEU
30	49	95	ARG
30	49	96	ARG
30	49	99	MET
30	49	116	ASP
30	49	118	ARG
30	49	133	LEU
30	49	136	ARG
30	49	153	ARG
30	49	159	VAL
30	49	165	THR
31	59	6	ARG
31	59	19	VAL
31	59	41	MET
31	59	71	LEU
31	59	72	ILE
31	59	83	TYR
31	59	85	LYS
31	59	89	ILE
31	59	110	SER
31	59	123	PHE
31	59	125	VAL
31	59	129	THR
31	59	131	VAL
31	59	136	ILE
31	59	143	GLN
32	69	2	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
32	69	40	THR
32	69	44	LEU
32	69	52	ARG
32	69	56	LYS
32	69	75	LEU
32	69	76	THR
32	69	77	LEU
32	69	78	THR
32	69	79	ILE
32	69	101	LEU
32	69	104	GLN
32	69	105	HIS
32	69	109	ILE
32	69	114	LEU
32	69	117	GLU
32	69	118	LYS
32	69	122	GLU
32	69	125	GLU
32	69	128	LEU
33	15	1	MET
33	15	5	VAL
33	15	9	VAL
33	15	28	THR
33	15	32	THR
33	15	33	LEU
33	15	34	LEU
33	15	35	ARG
33	15	48	MET
33	15	58	ASP
33	15	62	VAL
33	15	63	THR
33	15	68	GLU
33	15	69	GLN
33	15	73	THR
33	15	76	SER
33	15	87	LEU
33	15	91	LEU
33	15	93	THR
33	15	94	HIS
33	15	99	LEU
34	25	3	GLN
34	25	8	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
34	25	9	GLU
34	25	22	ILE
34	25	26	LYS
34	25	29	ASN
34	25	42	SER
34	25	78	ARG
34	25	87	ILE
34	25	91	LEU
34	25	94	ARG
34	25	96	THR
34	25	105	GLU
34	25	113	LYS
34	25	114	ILE
34	25	116	SER
34	25	117	LEU
35	35	3	LEU
35	35	6	LEU
35	35	7	ARG
35	35	13	ASN
35	35	14	LYS
35	35	15	ARG
35	35	18	ARG
35	35	19	VAL
35	35	21	ARG
35	35	27	HIS
35	35	30	THR
35	35	36	LYS
35	35	41	ARG
35	35	55	ARG
35	35	62	LEU
35	35	67	MET
35	35	70	GLN
35	35	79	ARG
35	35	81	GLN
35	35	83	VAL
35	35	85	LEU
35	35	87	ASP
35	35	98	GLU
35	35	101	VAL
35	35	105	LEU
35	35	110	TYR
35	35	113	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
35	35	114	ILE
35	35	121	LYS
35	35	125	VAL
35	35	135	LEU
35	35	138	LEU
35	35	144	GLU
35	35	147	LEU
36	45	10	ARG
36	45	16	ARG
36	45	25	ASP
36	45	45	GLN
36	45	56	ARG
36	45	59	ARG
36	45	60	ARG
36	45	64	ILE
36	45	76	LYS
36	45	81	VAL
36	45	83	MET
36	45	89	ASN
36	45	91	GLU
36	45	103	MET
36	45	106	VAL
36	45	110	THR
36	45	127	ILE
36	45	132	VAL
36	45	133	ARG
37	55	2	ARG
37	55	6	SER
37	55	15	SER
37	55	18	LEU
37	55	26	LYS
37	55	27	SER
37	55	28	LEU
37	55	29	LEU
37	55	44	LEU
37	55	48	VAL
37	55	54	LEU
37	55	65	LEU
37	55	67	LEU
37	55	75	LEU
37	55	76	VAL
37	55	79	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
37	55	81	ASP
37	55	82	GLU
37	55	97	VAL
37	55	105	ARG
37	55	113	LEU
38	65	4	LEU
38	65	8	GLU
38	65	12	PHE
38	65	14	VAL
38	65	17	ARG
38	65	21	THR
38	65	23	ARG
38	65	25	ARG
38	65	27	SER
38	65	30	ARG
38	65	50	SER
38	65	58	LEU
38	65	71	ARG
38	65	73	LEU
38	65	78	LEU
38	65	101	LEU
38	65	106	ARG
38	65	110	LEU
39	75	7	ILE
39	75	9	LEU
39	75	13	ARG
39	75	15	VAL
39	75	23	ARG
39	75	27	THR
39	75	28	VAL
39	75	33	LYS
39	75	36	GLU
39	75	40	THR
39	75	41	ARG
39	75	50	ILE
39	75	55	ASN
39	75	57	PHE
39	75	60	THR
39	75	63	VAL
39	75	64	ARG
39	75	74	ARG
39	75	86	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
39	75	91	ARG
39	75	106	SER
39	75	107	ASP
39	75	112	ARG
39	75	132	LYS
39	75	133	GLU
40	85	3	ARG
40	85	11	ARG
40	85	20	LEU
40	85	27	LEU
40	85	31	SER
40	85	52	ARG
40	85	55	ARG
40	85	60	LEU
40	85	64	ARG
40	85	74	LEU
40	85	83	LEU
40	85	92	ARG
40	85	97	ASP
40	85	104	GLN
40	85	111	GLU
41	95	5	VAL
41	95	10	LYS
41	95	19	LYS
41	95	24	LYS
41	95	33	VAL
41	95	40	LEU
41	95	44	LYS
41	95	47	VAL
41	95	49	THR
41	95	76	LYS
41	95	79	VAL
41	95	80	GLN
41	95	84	LYS
41	95	85	LYS
41	95	88	ARG
41	95	89	GLN
41	95	91	TYR
41	95	92	THR
41	95	95	LEU
42	A5	11	ARG
42	A5	23	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
42	A5	28	SER
42	A5	37	ARG
42	A5	41	LYS
42	A5	50	VAL
42	A5	51	LEU
42	A5	59	VAL
42	A5	65	LEU
42	A5	67	ASP
42	A5	68	ARG
42	A5	70	TYR
42	A5	76	VAL
42	A5	78	GLU
42	A5	88	ARG
42	A5	94	ASP
42	A5	97	LYS
42	A5	100	THR
42	A5	103	ILE
42	A5	107	LEU
42	A5	110	LYS
42	A5	111	HIS
43	B5	12	VAL
43	B5	27	THR
43	B5	30	VAL
43	B5	35	THR
43	B5	37	THR
43	B5	43	VAL
43	B5	45	THR
43	B5	53	LYS
43	B5	54	VAL
43	B5	63	LYS
43	B5	65	ARG
43	B5	66	LEU
43	B5	69	TYR
43	B5	70	LEU
43	B5	73	ARG
43	B5	78	LYS
43	B5	80	ILE
43	B5	81	VAL
44	C5	9	LYS
44	C5	24	VAL
44	C5	43	ASN
44	C5	44	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
44	C5	45	VAL
44	C5	50	ARG
44	C5	55	TYR
44	C5	60	PHE
44	C5	62	GLU
44	C5	63	LYS
44	C5	71	LYS
44	C5	72	VAL
44	C5	84	ARG
44	C5	86	ARG
44	C5	87	LYS
44	C5	88	LYS
44	C5	89	PHE
44	C5	90	LEU
44	C5	94	LYS
44	C5	97	ARG
44	C5	99	CYS
58	D5	5	LEU
58	D5	14	LYS
58	D5	16	SER
58	D5	18	LEU
58	D5	19	ARG
58	D5	24	LEU
58	D5	30	ASN
58	D5	32	HIS
58	D5	53	ILE
58	D5	59	LEU
58	D5	63	ASP
58	D5	70	LEU
58	D5	72	ARG
58	D5	74	VAL
58	D5	76	LEU
58	D5	81	ARG
58	D5	82	ARG
58	D5	84	GLU
58	D5	94	GLU
58	D5	119	GLU
58	D5	121	HIS
58	D5	136	PHE
58	D5	144	LEU
58	D5	161	VAL
58	D5	165	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
58	D5	168	GLU
46	E5	9	SER
46	E5	10	THR
46	E5	11	ARG
46	E5	36	ILE
46	E5	38	VAL
46	E5	43	THR
46	E5	49	LYS
46	E5	74	ARG
47	F5	4	VAL
47	F5	19	GLN
47	F5	42	GLN
47	F5	46	LEU
47	F5	56	GLN
47	F5	65	SER
47	F5	76	ARG
47	F5	78	LYS
47	F5	81	LYS
47	F5	82	LEU
47	F5	85	LEU
47	F5	90	ILE
47	F5	91	LYS
47	F5	97	LEU
48	G5	4	SER
48	G5	5	GLU
48	G5	12	GLU
48	G5	17	SER
48	G5	19	VAL
48	G5	24	LEU
48	G5	30	ARG
48	G5	46	GLN
48	G5	47	ASN
48	G5	48	HIS
48	G5	51	ARG
48	G5	53	LEU
48	G5	56	GLN
48	G5	60	LEU
48	G5	64	LEU
48	G5	67	LYS
49	H5	8	LEU
49	H5	11	SER
49	H5	17	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
49	H5	18	ASP
49	H5	32	GLN
49	H5	33	GLN
49	H5	35	ARG
49	H5	36	VAL
49	H5	40	THR
49	H5	53	LEU
50	I5	1	MET
50	I5	20	ASN
50	I5	21	VAL
50	I5	22	ILE
50	I5	24	THR
50	I5	30	GLU
50	I5	38	LYS
50	I5	53	GLU
50	I5	59	PHE
50	I5	61	ARG
51	J5	3	LYS
51	J5	4	HIS
51	J5	16	ARG
51	J5	23	HIS
51	J5	25	LEU
51	J5	29	THR
51	J5	35	GLU
51	J5	55	ARG
51	J5	57	VAL
52	K5	10	LEU
52	K5	15	GLU
52	K5	18	ARG
52	K5	34	LEU
52	K5	37	ARG
52	K5	47	THR
53	L5	1	MET
53	L5	2	LYS
53	L5	3	ARG
53	L5	4	THR
53	L5	8	ASN
53	L5	33	ARG
53	L5	43	THR
59	M5	4	MET
59	M5	6	THR
59	M5	22	VAL

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Mol	Chain	Res	Type
59	M5	23	VAL
59	M5	26	LYS
59	M5	29	LYS
59	M5	31	HIS
59	M5	32	LEU
59	M5	33	ASN
59	M5	34	TRP
59	M5	43	GLN
59	M5	50	LEU
59	M5	53	PRO
59	M5	59	LYS
59	M5	61	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (19) such sidechains are listed below:

Mol	Chain	Res	Type
10	1I	62	HIS
10	1I	84	GLN
19	AI	57	HIS
27	11	115	GLN
28	21	143	ASN
39	B8	58	ASN
40	C8	75	ASN
42	E8	60	ASN
43	F8	31	HIS
12	3A	9	GLN
18	9A	63	GLN
57	39	67	GLN
32	69	104	GLN
32	69	105	HIS
39	75	55	ASN
41	95	87	HIS
42	A5	60	ASN
48	G5	47	ASN
50	I5	20	ASN

### 5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	13	1496/1522 (98%)	320 (21%)	31 (2%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
22	1K	82/85 (96%)	30 (36%)	8 (9%)
22	1L	70/85 (82%)	26 (37%)	3 (4%)
22	3K	70/85 (82%)	15 (21%)	2 (2%)
22	3L	71/85 (83%)	16 (22%)	3 (4%)
23	2K	76/77 (98%)	19 (25%)	2 (2%)
23	2L	76/77 (98%)	14 (18%)	2 (2%)
24	4K	14/30 (46%)	6 (42%)	0
24	4L	15/30 (50%)	6 (40%)	1 (6%)
25	14	2905/2912 (99%)	646 (22%)	39 (1%)
25	1H	2911/2912 (99%)	636 (21%)	55 (1%)
26	16	121/122 (99%)	22 (18%)	1 (0%)
26	1J	121/122 (99%)	35 (28%)	1 (0%)
55	1G	1496/1522 (98%)	322 (21%)	36 (2%)
All	All	9524/9666 (98%)	2113 (22%)	184 (1%)

All (2113) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	13	5	U
1	13	9	G
1	13	13	U
1	13	30	U
1	13	32	A
1	13	39	G
1	13	48	C
1	13	50	A
1	13	51	A
1	13	54	C
1	13	59	A
1	13	61	G
1	13	65	U
1	13	66	G
1	13	76	G
1	13	90	C
1	13	91	C
1	13	95	G
1	13	101	A
1	13	116	A
1	13	120	A
1	13	121	C
1	13	129	U
1	13	131	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	13	142	G
1	13	144	G
1	13	163	C
1	13	169	C
1	13	172	A
1	13	173	U
1	13	174	C
1	13	189	U
1	13	190	G
1	13	191(A)	G
1	13	195	A
1	13	197	A
1	13	199	G
1	13	201	C
1	13	208	U
1	13	209	U
1	13	210	U
1	13	216	G
1	13	231	G
1	13	240	C
1	13	244	U
1	13	245	C
1	13	247	G
1	13	251	G
1	13	262	A
1	13	266	G
1	13	267	C
1	13	280	C
1	13	281	G
1	13	288	A
1	13	289	G
1	13	317	G
1	13	321	A
1	13	328	C
1	13	330	C
1	13	332	G
1	13	342	C
1	13	344	A
1	13	345	C
1	13	352	C
1	13	353	A
1	13	354	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	13	357	G
1	13	367	U
1	13	372	C
1	13	373	A
1	13	384	G
1	13	388	G
1	13	390	C
1	13	397	A
1	13	398	C
1	13	406	G
1	13	412	A
1	13	413	G
1	13	419	C
1	13	422	C
1	13	423	G
1	13	424	G
1	13	429	U
1	13	430	A
1	13	438	G
1	13	439	A
1	13	450	G
1	13	452	A
1	13	466	C
1	13	467	G
1	13	483	C
1	13	485	G
1	13	496	A
1	13	497	U
1	13	505	G
1	13	508	C
1	13	509	A
1	13	510	A
1	13	511	C
1	13	518	C
1	13	521	G
1	13	524	G
1	13	527	G
1	13	531	U
1	13	532	A
1	13	533	A
1	13	536	C
1	13	542	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	13	546	G
1	13	547	A
1	13	559	A
1	13	560	U
1	13	561	U
1	13	572	A
1	13	573	A
1	13	576	G
1	13	577	G
1	13	581	G
1	13	592	G
1	13	596	C
1	13	607	A
1	13	610	G
1	13	615	C
1	13	620	C
1	13	630	G
1	13	631	G
1	13	632	A
1	13	633	G
1	13	650	G
1	13	653	A
1	13	656	C
1	13	665	A
1	13	687	A
1	13	688	G
1	13	702	A
1	13	703	G
1	13	704	A
1	13	721	G
1	13	723	U
1	13	724	G
1	13	734	G
1	13	749	C
1	13	753	A
1	13	755	G
1	13	757	U
1	13	766	A
1	13	767	A
1	13	777	A
1	13	779	C
1	13	792	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	13	793	U
1	13	794	A
1	13	806	C
1	13	812	C
1	13	813	U
1	13	817	C
1	13	820	U
1	13	828	A
1	13	841	U
1	13	843	U
1	13	848	C
1	13	859	A
1	13	870	U
1	13	872	A
1	13	874	G
1	13	882	C
1	13	902	G
1	13	914	A
1	13	916	G
1	13	926	G
1	13	927	G
1	13	934	C
1	13	935	A
1	13	936	C
1	13	940	C
1	13	942	G
1	13	948	C
1	13	949	A
1	13	960	U
1	13	968	A
1	13	969	A
1	13	971	G
1	13	972	C
1	13	974	A
1	13	975	A
1	13	976	G
1	13	977	A
1	13	983	A
1	13	991	U
1	13	992	U
1	13	993	G
1	13	994	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	13	1004	A
1	13	1006	C
1	13	1007	C
1	13	1009	G
1	13	1021	G
1	13	1024	G
1	13	1025	U
1	13	1028	C
1	13	1029	G
1	13	1032(A)	G
1	13	1040	U
1	13	1046	A
1	13	1048	G
1	13	1053	G
1	13	1054	C
1	13	1055	A
1	13	1058	G
1	13	1064	G
1	13	1065	U
1	13	1081	G
1	13	1094	G
1	13	1095	U
1	13	1101	A
1	13	1124	G
1	13	1125	U
1	13	1126	U
1	13	1127	G
1	13	1129	C
1	13	1130	A
1	13	1131	G
1	13	1133	G
1	13	1136	U
1	13	1137	C
1	13	1138	G
1	13	1139	G
1	13	1146	A
1	13	1152	A
1	13	1154	G
1	13	1155	G
1	13	1157	A
1	13	1158	C
1	13	1159	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	13	1177	G
1	13	1178	G
1	13	1181	G
1	13	1183	A
1	13	1184	G
1	13	1188	A
1	13	1191	A
1	13	1193	G
1	13	1196	U
1	13	1197	G
1	13	1198	G
1	13	1201	A
1	13	1211	U
1	13	1212	U
1	13	1214	C
1	13	1218	C
1	13	1225	A
1	13	1227	A
1	13	1236	A
1	13	1238	A
1	13	1240	U
1	13	1241	G
1	13	1250	A
1	13	1253	G
1	13	1256	A
1	13	1257	U
1	13	1258	G
1	13	1273	G
1	13	1278	U
1	13	1280	A
1	13	1281	U
1	13	1286	A
1	13	1287	A
1	13	1299	A
1	13	1300	G
1	13	1302	U
1	13	1303	C
1	13	1305	G
1	13	1306	A
1	13	1307	U
1	13	1319	A
1	13	1320	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	13	1322	C
1	13	1323	G
1	13	1331	G
1	13	1336	C
1	13	1337	G
1	13	1340	A
1	13	1346	A
1	13	1347	G
1	13	1350	A
1	13	1353	G
1	13	1356	G
1	13	1363	A
1	13	1364	U
1	13	1370	G
1	13	1378	C
1	13	1388	C
1	13	1396	A
1	13	1398	A
1	13	1401	G
1	13	1406	U
1	13	1419	G
1	13	1441	G
1	13	1442	G
1	13	1443	G
1	13	1446	A
1	13	1451	A
1	13	1452	C
1	13	1453	G
1	13	1469	G
1	13	1487	G
1	13	1492	A
1	13	1494	G
1	13	1497	G
1	13	1498	U
1	13	1499	A
1	13	1502	A
1	13	1503	A
1	13	1504	G
1	13	1505	G
1	13	1506	U
1	13	1517	G
1	13	1519	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	13	1529	G
1	13	1530	G
22	1K	4	G
22	1K	6	G
22	1K	7	G
22	1K	9	U
22	1K	14	A
22	1K	16	C
22	1K	17	OMG
22	1K	18	G
22	1K	19	C
22	1K	20	C
22	1K	22	A
22	1K	24	G
22	1K	27	A
22	1K	46	G
22	1K	48	C
22	1K	50	U
22	1K	51	C
22	1K	52	G
22	1K	54	C
22	1K	56	U
22	1K	57	C
22	1K	58	G
22	1K	70	C
22	1K	72	U
22	1K	76	C
22	1K	78	C
22	1K	79	A
22	1K	80	C
22	1K	82	A
22	1K	83	C
23	2K	2	G
23	2K	6	G
23	2K	9	G
23	2K	13	C
23	2K	18	C
23	2K	20	G
23	2K	21	H2U
23	2K	22	A
23	2K	23	G
23	2K	31	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
23	2K	35	C
23	2K	39	A
23	2K	48	U
23	2K	49	C
23	2K	50	G
23	2K	53	G
23	2K	54	G
23	2K	68	C
23	2K	77	A
22	3K	6	G
22	3K	7	G
22	3K	14	A
22	3K	15	G
22	3K	17	OMG
22	3K	18	G
22	3K	19	C
22	3K	20	C
22	3K	21	A
22	3K	25	G
22	3K	39	A
22	3K	43	G
22	3K	63	5MU
22	3K	64	PSU
22	3K	85	A
24	4K	13	A
24	4K	14	A
24	4K	19	C
24	4K	23	A
24	4K	25	A
24	4K	26	A
25	1H	12	U
25	1H	15	G
25	1H	27	G
25	1H	33	U
25	1H	34	C
25	1H	35	G
25	1H	36	G
25	1H	46	C
25	1H	51	G
25	1H	61	G
25	1H	63	U
25	1H	71	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	1H	72	U
25	1H	74	A
25	1H	75	G
25	1H	85	G
25	1H	95	G
25	1H	99	U
25	1H	118	A
25	1H	119	A
25	1H	120	U
25	1H	121	G
25	1H	155	C
25	1H	163	U
25	1H	164	U
25	1H	171	G
25	1H	181	A
25	1H	188	G
25	1H	196	A
25	1H	197	A
25	1H	199	A
25	1H	215	G
25	1H	216	A
25	1H	221	A
25	1H	222	A
25	1H	223	A
25	1H	225	A
25	1H	227	A
25	1H	228	A
25	1H	229	A
25	1H	230	U
25	1H	233	A
25	1H	248	G
25	1H	249	C
25	1H	250	G
25	1H	252	G
25	1H	265	A
25	1H	269	U
25	1H	270(F)	U
25	1H	270(G)	C
25	1H	270(M)	U
25	1H	270(N)	G
25	1H	270(P)	C
25	1H	271(B)	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	1H	271(C)	U
25	1H	271	G
25	1H	274	G
25	1H	275	G
25	1H	278	A
25	1H	279	C
25	1H	299	A
25	1H	311	A
25	1H	323	G
25	1H	324	A
25	1H	328	U
25	1H	329	G
25	1H	330	A
25	1H	346	A
25	1H	352	G
25	1H	363	G
25	1H	364	C
25	1H	370	G
25	1H	372	G
25	1H	382	G
25	1H	386	G
25	1H	405	U
25	1H	407	G
25	1H	411	G
25	1H	412	A
25	1H	413	C
25	1H	428	A
25	1H	443	A
25	1H	444	C
25	1H	448	U
25	1H	452	G
25	1H	454	A
25	1H	455	C
25	1H	457	A
25	1H	460	A
25	1H	463	G
25	1H	470	A
25	1H	471	A
25	1H	481	G
25	1H	482	A
25	1H	485	C
25	1H	502	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	1H	505	A
25	1H	508	G
25	1H	509	C
25	1H	528	A
25	1H	529	A
25	1H	530	G
25	1H	531	C
25	1H	532	A
25	1H	533	G
25	1H	546	C
25	1H	549	G
25	1H	550	G
25	1H	556	G
25	1H	563	G
25	1H	564	C
25	1H	573	G
25	1H	575	A
25	1H	584	C
25	1H	587	C
25	1H	588	U
25	1H	603	A
25	1H	607	U
25	1H	609	A
25	1H	613	U
25	1H	614	U
25	1H	617	G
25	1H	621	A
25	1H	622	G
25	1H	626	U
25	1H	627	A
25	1H	637	A
25	1H	645	C
25	1H	646	A
25	1H	649	G
25	1H	654	A
25	1H	654(A)	A
25	1H	654(C)	G
25	1H	654(G)	C
25	1H	654(I)	C
25	1H	654(J)	A
25	1H	654(M)	C
25	1H	654(N)	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	1H	654(T)	A
25	1H	686	G
25	1H	715	G
25	1H	717	G
25	1H	719	C
25	1H	730	C
25	1H	752	A
25	1H	753	C
25	1H	762	U
25	1H	764	A
25	1H	765	G
25	1H	776	G
25	1H	777	A
25	1H	782	A
25	1H	784	A
25	1H	785	G
25	1H	790	C
25	1H	791	C
25	1H	792	G
25	1H	801	G
25	1H	805	G
25	1H	812	C
25	1H	827	U
25	1H	828	U
25	1H	845	G
25	1H	846	C
25	1H	847	U
25	1H	855	G
25	1H	859	G
25	1H	866	A
25	1H	880	G
25	1H	881	G
25	1H	882	G
25	1H	883	G
25	1H	884	C
25	1H	885	C
25	1H	886	C
25	1H	887	A
25	1H	888	C
25	1H	890	A
25	1H	893	C
25	1H	894	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	1H	895	U
25	1H	897	C
25	1H	898	C
25	1H	899	A
25	1H	900	A
25	1H	901	A
25	1H	902	C
25	1H	904	C
25	1H	907	U
25	1H	910	A
25	1H	917	A
25	1H	925	C
25	1H	926	A
25	1H	932	G
25	1H	938	G
25	1H	941	A
25	1H	946	G
25	1H	958	U
25	1H	959	A
25	1H	961	C
25	1H	968	G
25	1H	974	G
25	1H	974(A)	C
25	1H	983	A
25	1H	996	A
25	1H	997	G
25	1H	998	C
25	1H	1005	C
25	1H	1011	G
25	1H	1012	U
25	1H	1013	C
25	1H	1022	G
25	1H	1023	U
25	1H	1025	G
25	1H	1026	U
25	1H	1027	A
25	1H	1033	U
25	1H	1037	G
25	1H	1039	G
25	1H	1045	A
25	1H	1046	A
25	1H	1047	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	1H	1057	A
25	1H	1061	U
25	1H	1062	G
25	1H	1068	G
25	1H	1070	A
25	1H	1071	G
25	1H	1076	C
25	1H	1077	A
25	1H	1078	U
25	1H	1082	U
25	1H	1085	A
25	1H	1086	A
25	1H	1087	G
25	1H	1088	A
25	1H	1095	A
25	1H	1096	A
25	1H	1097	U
25	1H	1107	G
25	1H	1109	C
25	1H	1111	A
25	1H	1112	G
25	1H	1122	G
25	1H	1127	A
25	1H	1128	A
25	1H	1129	A
25	1H	1130	U
25	1H	1132	A
25	1H	1135	C
25	1H	1136	G
25	1H	1139	G
25	1H	1142	U
25	1H	1142(A)	A
25	1H	1144	G
25	1H	1149	G
25	1H	1151	G
25	1H	1156	A
25	1H	1176	G
25	1H	1178	C
25	1H	1179	C
25	1H	1187	G
25	1H	1188	U
25	1H	1192	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	1H	1194	A
25	1H	1195	G
25	1H	1204	A
25	1H	1205	U
25	1H	1220	A
25	1H	1241	A
25	1H	1244	G
25	1H	1250	G
25	1H	1253	A
25	1H	1256	G
25	1H	1265	A
25	1H	1267	U
25	1H	1271	G
25	1H	1272	A
25	1H	1273	U
25	1H	1275	A
25	1H	1292	U
25	1H	1300	U
25	1H	1301	A
25	1H	1312	U
25	1H	1313	U
25	1H	1314	C
25	1H	1321	A
25	1H	1329	U
25	1H	1338	G
25	1H	1344	G
25	1H	1345	C
25	1H	1349	A
25	1H	1352	U
25	1H	1358	G
25	1H	1359	A
25	1H	1360	A
25	1H	1365	A
25	1H	1368	G
25	1H	1369	G
25	1H	1378	A
25	1H	1380	G
25	1H	1385	G
25	1H	1386	C
25	1H	1395	A
25	1H	1397	U
25	1H	1407	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	1H	1412	A
25	1H	1416	G
25	1H	1417	C
25	1H	1420	U
25	1H	1421	G
25	1H	1428	C
25	1H	1437	C
25	1H	1444(A)	A
25	1H	1449	A
25	1H	1449(A)	G
25	1H	1453	A
25	1H	1455	G
25	1H	1458	C
25	1H	1459	G
25	1H	1460	A
25	1H	1461	G
25	1H	1467	C
25	1H	1470	G
25	1H	1471	A
25	1H	1483	G
25	1H	1493	C
25	1H	1494	A
25	1H	1495	A
25	1H	1497	U
25	1H	1507	A
25	1H	1508	A
25	1H	1509	C
25	1H	1510	A
25	1H	1511	A
25	1H	1517	G
25	1H	1522	G
25	1H	1526	G
25	1H	1534	G
25	1H	1535	U
25	1H	1536	A
25	1H	1537	C
25	1H	1538	G
25	1H	1540	G
25	1H	1543	A
25	1H	1545	A
25	1H	1547	C
25	1H	1548	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	1H	1552	G
25	1H	1554	A
25	1H	1558	A
25	1H	1559	G
25	1H	1560	G
25	1H	1561	G
25	1H	1566	A
25	1H	1567	A
25	1H	1569	A
25	1H	1578	U
25	1H	1580	A
25	1H	1582	C
25	1H	1586	A
25	1H	1587	A
25	1H	1595	G
25	1H	1608	A
25	1H	1609	A
25	1H	1610	A
25	1H	1617	C
25	1H	1618	A
25	1H	1640	C
25	1H	1644	C
25	1H	1647	G
25	1H	1648	C
25	1H	1651	G
25	1H	1654	A
25	1H	1672	C
25	1H	1674	G
25	1H	1675	C
25	1H	1678	G
25	1H	1695	G
25	1H	1699	G
25	1H	1728	G
25	1H	1729	A
25	1H	1731	G
25	1H	1743	G
25	1H	1756	G
25	1H	1758	G
25	1H	1762	A
25	1H	1763	G
25	1H	1764	G
25	1H	1773	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	1H	1780	A
25	1H	1782	C
25	1H	1791	A
25	1H	1799	G
25	1H	1800	C
25	1H	1801	G
25	1H	1811	G
25	1H	1816	G
25	1H	1819	A
25	1H	1829	A
25	1H	1836	C
25	1H	1839	G
25	1H	1847	A
25	1H	1858	G
25	1H	1878	G
25	1H	1889	A
25	1H	1900	A
25	1H	1901	A
25	1H	1905	C
25	1H	1906	G
25	1H	1910	G
25	1H	1913	A
25	1H	1914	C
25	1H	1915	U
25	1H	1929	G
25	1H	1930	G
25	1H	1931	U
25	1H	1938	A
25	1H	1955	U
25	1H	1956	U
25	1H	1963	U
25	1H	1965	C
25	1H	1967	C
25	1H	1968	G
25	1H	1969	A
25	1H	1970	A
25	1H	1971	A
25	1H	1972	A
25	1H	1982	C
25	1H	1993	U
25	1H	2020	A
25	1H	2021	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	1H	2023	G
25	1H	2031	A
25	1H	2033	A
25	1H	2034	U
25	1H	2039	C
25	1H	2043	C
25	1H	2049	G
25	1H	2051	A
25	1H	2055	C
25	1H	2056	G
25	1H	2060	A
25	1H	2061	G
25	1H	2062	A
25	1H	2068	U
25	1H	2069	G
25	1H	2070	G
25	1H	2087	G
25	1H	2111	C
25	1H	2112	G
25	1H	2113	U
25	1H	2114	A
25	1H	2115	G
25	1H	2118	U
25	1H	2126	A
25	1H	2128	C
25	1H	2131	G
25	1H	2132	U
25	1H	2133	G
25	1H	2136	C
25	1H	2146	C
25	1H	2147	G
25	1H	2148	G
25	1H	2161	C
25	1H	2166	G
25	1H	2168	G
25	1H	2169	A
25	1H	2172	U
25	1H	2173	A
25	1H	2181	G
25	1H	2190	G
25	1H	2194	G
25	1H	2198	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	1H	2209	C
25	1H	2210	G
25	1H	2212	A
25	1H	2213	U
25	1H	2215	G
25	1H	2224	G
25	1H	2225	A
25	1H	2238	G
25	1H	2240	C
25	1H	2267	A
25	1H	2273	A
25	1H	2275	C
25	1H	2278	A
25	1H	2280	G
25	1H	2281	C
25	1H	2283	C
25	1H	2287	A
25	1H	2294	C
25	1H	2305	A
25	1H	2307	G
25	1H	2308	G
25	1H	2310	A
25	1H	2311	A
25	1H	2312	U
25	1H	2314	C
25	1H	2320	A
25	1H	2325	G
25	1H	2326	C
25	1H	2327	A
25	1H	2334	G
25	1H	2335	A
25	1H	2336	A
25	1H	2337	G
25	1H	2341	G
25	1H	2342	C
25	1H	2346	A
25	1H	2347	C
25	1H	2348	U
25	1H	2350	C
25	1H	2377	A
25	1H	2379	G
25	1H	2383	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	1H	2385	C
25	1H	2393	A
25	1H	2396	G
25	1H	2402	C
25	1H	2403	C
25	1H	2405	G
25	1H	2406	U
25	1H	2410	G
25	1H	2418	A
25	1H	2424	C
25	1H	2425	A
25	1H	2426	A
25	1H	2428	G
25	1H	2429	G
25	1H	2430	A
25	1H	2431	U
25	1H	2435	A
25	1H	2439	A
25	1H	2440	C
25	1H	2441	C
25	1H	2448	A
25	1H	2449	U
25	1H	2468	G
25	1H	2469	A
25	1H	2474	C
25	1H	2476	A
25	1H	2477	C
25	1H	2478	A
25	1H	2480	C
25	1H	2481	G
25	1H	2484	G
25	1H	2494	G
25	1H	2497	A
25	1H	2502	G
25	1H	2505	G
25	1H	2506	U
25	1H	2507	C
25	1H	2518	A
25	1H	2520	C
25	1H	2525	G
25	1H	2529	G
25	1H	2531	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	1H	2554	U
25	1H	2566	A
25	1H	2567	G
25	1H	2573	C
25	1H	2582	G
25	1H	2601	C
25	1H	2602	A
25	1H	2608	G
25	1H	2609	U
25	1H	2611	U
25	1H	2612	C
25	1H	2621	A
25	1H	2629	A
25	1H	2632	A
25	1H	2634	G
25	1H	2636	U
25	1H	2637	U
25	1H	2641	G
25	1H	2654	A
25	1H	2663	G
25	1H	2665	A
25	1H	2666	C
25	1H	2673	G
25	1H	2676	C
25	1H	2682	U
25	1H	2689	U
25	1H	2690	C
25	1H	2691	C
25	1H	2701	C
25	1H	2702	U
25	1H	2704	C
25	1H	2707	G
25	1H	2712(A)	A
25	1H	2713	A
25	1H	2714	G
25	1H	2718	G
25	1H	2726	U
25	1H	2733	A
25	1H	2744	G
25	1H	2755	C
25	1H	2757	A
25	1H	2758	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	1H	2764	A
25	1H	2765	A
25	1H	2766	G
25	1H	2778	A
25	1H	2779	U
25	1H	2780	G
25	1H	2781	A
25	1H	2787	C
25	1H	2789	C
25	1H	2791	C
25	1H	2793	G
25	1H	2794	C
25	1H	2795	G
25	1H	2797	U
25	1H	2801	A
25	1H	2807	G
25	1H	2808	U
25	1H	2812	G
25	1H	2813	A
25	1H	2818	G
25	1H	2820	A
25	1H	2821	A
25	1H	2825	C
25	1H	2830	G
25	1H	2833	G
25	1H	2834	G
25	1H	2835	A
25	1H	2847	U
25	1H	2850	A
25	1H	2871	C
25	1H	2872	G
25	1H	2889	C
25	1H	2891	G
25	1H	2892	A
25	1H	2893	G
25	1H	2894	G
26	16	3	C
26	16	7	G
26	16	13	A
26	16	15	A
26	16	25	A
26	16	27	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
26	16	33	G
26	16	35	U
26	16	38	C
26	16	41	U
26	16	44	G
26	16	45	A
26	16	56	G
26	16	65	C
26	16	66	A
26	16	72	G
26	16	73	A
26	16	74	U
26	16	75	G
26	16	105	G
26	16	109	G
26	16	115	G
55	1G	5	U
55	1G	9	G
55	1G	22	G
55	1G	32	A
55	1G	39	G
55	1G	47	C
55	1G	48	C
55	1G	50	A
55	1G	51	A
55	1G	67	C
55	1G	76	G
55	1G	90	C
55	1G	91	C
55	1G	95	G
55	1G	101	A
55	1G	114	U
55	1G	116	A
55	1G	121	C
55	1G	131	C
55	1G	163	C
55	1G	174	C
55	1G	185	A
55	1G	187	C
55	1G	188	U
55	1G	189	U
55	1G	190	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
55	1G	191(A)	G
55	1G	191(D)	U
55	1G	195	A
55	1G	196	A
55	1G	197	A
55	1G	198	G
55	1G	209	U
55	1G	210	U
55	1G	216	G
55	1G	244	U
55	1G	247	G
55	1G	250	A
55	1G	251	G
55	1G	256	U
55	1G	266	G
55	1G	267	C
55	1G	274	A
55	1G	280	C
55	1G	281	G
55	1G	289	G
55	1G	298	A
55	1G	316	G
55	1G	321	A
55	1G	328	C
55	1G	329	A
55	1G	330	C
55	1G	332	G
55	1G	345	C
55	1G	346	G
55	1G	347	G
55	1G	349	A
55	1G	350	G
55	1G	352	C
55	1G	353	A
55	1G	354	G
55	1G	356	A
55	1G	363	A
55	1G	366	C
55	1G	367	U
55	1G	372	C
55	1G	384	G
55	1G	388	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
55	1G	397	A
55	1G	398	C
55	1G	406	G
55	1G	411	A
55	1G	412	A
55	1G	413	G
55	1G	421	U
55	1G	422	C
55	1G	423	G
55	1G	424	G
55	1G	429	U
55	1G	439	A
55	1G	442	C
55	1G	452	A
55	1G	457	C
55	1G	466	C
55	1G	467	G
55	1G	475	G
55	1G	484	G
55	1G	485	G
55	1G	486	U
55	1G	496	A
55	1G	497	U
55	1G	505	G
55	1G	509	A
55	1G	510	A
55	1G	511	C
55	1G	513	C
55	1G	517	G
55	1G	518	C
55	1G	521	G
55	1G	527	G
55	1G	530	G
55	1G	531	U
55	1G	532	A
55	1G	533	A
55	1G	544	G
55	1G	547	A
55	1G	553	A
55	1G	559	A
55	1G	562	C
55	1G	564	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
55	1G	566	G
55	1G	572	A
55	1G	573	A
55	1G	575	G
55	1G	576	G
55	1G	577	G
55	1G	596	C
55	1G	601	C
55	1G	607	A
55	1G	614	A
55	1G	615	C
55	1G	618	C
55	1G	630	G
55	1G	631	G
55	1G	633	G
55	1G	651	C
55	1G	653	A
55	1G	656	C
55	1G	661	G
55	1G	665	A
55	1G	686	U
55	1G	687	A
55	1G	688	G
55	1G	702	A
55	1G	704	A
55	1G	707	C
55	1G	722	A
55	1G	723	U
55	1G	724	G
55	1G	731	G
55	1G	749	C
55	1G	755	G
55	1G	769	G
55	1G	776	G
55	1G	777	A
55	1G	782	A
55	1G	792	A
55	1G	793	U
55	1G	794	A
55	1G	813	U
55	1G	816	A
55	1G	817	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
55	1G	821	G
55	1G	827	U
55	1G	828	A
55	1G	841	U
55	1G	842	C
55	1G	843	U
55	1G	848	C
55	1G	859	A
55	1G	873	A
55	1G	876	G
55	1G	885	G
55	1G	913	A
55	1G	914	A
55	1G	926	G
55	1G	927	G
55	1G	934	C
55	1G	935	A
55	1G	936	C
55	1G	958	A
55	1G	960	U
55	1G	961	U
55	1G	966	G
55	1G	968	A
55	1G	969	A
55	1G	971	G
55	1G	974	A
55	1G	975	A
55	1G	976	G
55	1G	977	A
55	1G	978	A
55	1G	979	C
55	1G	981	U
55	1G	982	U
55	1G	991	U
55	1G	992	U
55	1G	993	G
55	1G	1004	A
55	1G	1006	C
55	1G	1009	G
55	1G	1016	A
55	1G	1021	G
55	1G	1024	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
55	1G	1025	U
55	1G	1028	C
55	1G	1028(A)	C
55	1G	1029	G
55	1G	1032(A)	G
55	1G	1036	G
55	1G	1040	U
55	1G	1050	G
55	1G	1053	G
55	1G	1054	C
55	1G	1055	A
55	1G	1056	U
55	1G	1063	C
55	1G	1066	C
55	1G	1081	G
55	1G	1092	A
55	1G	1094	G
55	1G	1095	U
55	1G	1101	A
55	1G	1107	C
55	1G	1109	C
55	1G	1118	C
55	1G	1124	G
55	1G	1125	U
55	1G	1126	U
55	1G	1127	G
55	1G	1129	C
55	1G	1130	A
55	1G	1131	G
55	1G	1136	U
55	1G	1137	C
55	1G	1138	G
55	1G	1139	G
55	1G	1146	A
55	1G	1150	U
55	1G	1154	G
55	1G	1157	A
55	1G	1158	C
55	1G	1159	U
55	1G	1160	G
55	1G	1177	G
55	1G	1178	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
55	1G	1181	G
55	1G	1183	A
55	1G	1185	G
55	1G	1186	G
55	1G	1196	U
55	1G	1200	C
55	1G	1201	A
55	1G	1202	G
55	1G	1204	A
55	1G	1212	U
55	1G	1214	C
55	1G	1225	A
55	1G	1227	A
55	1G	1238	A
55	1G	1240	U
55	1G	1241	G
55	1G	1256	A
55	1G	1257	U
55	1G	1258	G
55	1G	1260	C
55	1G	1269	A
55	1G	1274	G
55	1G	1278	U
55	1G	1279	A
55	1G	1280	A
55	1G	1281	U
55	1G	1286	A
55	1G	1287	A
55	1G	1288	A
55	1G	1295	G
55	1G	1296	C
55	1G	1297	C
55	1G	1298	C
55	1G	1299	A
55	1G	1300	G
55	1G	1301	U
55	1G	1303	C
55	1G	1305	G
55	1G	1306	A
55	1G	1317	C
55	1G	1319	A
55	1G	1320	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
55	1G	1322	C
55	1G	1323	G
55	1G	1331	G
55	1G	1335	C
55	1G	1336	C
55	1G	1338	G
55	1G	1346	A
55	1G	1347	G
55	1G	1353	G
55	1G	1359	C
55	1G	1363	A
55	1G	1364	U
55	1G	1370	G
55	1G	1379	G
55	1G	1382	C
55	1G	1388	C
55	1G	1398	A
55	1G	1401	G
55	1G	1402	C
55	1G	1406	U
55	1G	1416	G
55	1G	1417	G
55	1G	1419	G
55	1G	1442	G
55	1G	1443	G
55	1G	1446	A
55	1G	1450	U
55	1G	1451	A
55	1G	1453	G
55	1G	1454	G
55	1G	1482	G
55	1G	1492	A
55	1G	1494	G
55	1G	1499	A
55	1G	1502	A
55	1G	1503	A
55	1G	1504	G
55	1G	1506	U
55	1G	1507	A
55	1G	1517	G
55	1G	1519	A
55	1G	1520	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
55	1G	1529	G
55	1G	1530	G
22	1L	4	G
22	1L	7	G
22	1L	8	4SU
22	1L	9	U
22	1L	14	A
22	1L	16	C
22	1L	17	OMG
22	1L	18	G
22	1L	19	C
22	1L	20	C
22	1L	21	A
22	1L	22	A
22	1L	23	A
22	1L	26	G
22	1L	27	A
22	1L	37	A
22	1L	41	C
22	1L	42	U
22	1L	70	C
22	1L	75	C
22	1L	76	C
22	1L	78	C
22	1L	79	A
22	1L	82	A
22	1L	83	C
22	1L	84	C
23	2L	6	G
23	2L	8	4SU
23	2L	9	G
23	2L	16	C
23	2L	17	C
23	2L	19	G
23	2L	20	G
23	2L	21	H2U
23	2L	22	A
23	2L	23	G
23	2L	48	U
23	2L	49	C
23	2L	57	C
23	2L	68	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	3L	8	4SU
22	3L	9	U
22	3L	11	C
22	3L	15	G
22	3L	17	OMG
22	3L	18	G
22	3L	19	C
22	3L	20	C
22	3L	21	A
22	3L	34	U
22	3L	39	A
22	3L	42	U
22	3L	58	G
22	3L	67	A
22	3L	82	A
22	3L	85	A
24	4L	11	A
24	4L	12	A
24	4L	13	A
24	4L	14	A
24	4L	19	C
24	4L	23	A
25	14	5	A
25	14	9	U
25	14	15	G
25	14	34	C
25	14	35	G
25	14	46	C
25	14	55	G
25	14	58	G
25	14	61	G
25	14	71	A
25	14	72	U
25	14	74	A
25	14	75	G
25	14	82	G
25	14	83	G
25	14	90	U
25	14	91	A
25	14	93	C
25	14	95	G
25	14	99	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	14	102	G
25	14	118	A
25	14	119	A
25	14	120	U
25	14	121	G
25	14	125	G
25	14	129	C
25	14	140	A
25	14	154	G
25	14	161	U
25	14	162	U
25	14	173	G
25	14	174	C
25	14	175	G
25	14	196	A
25	14	199	A
25	14	205	G
25	14	206	U
25	14	213	A
25	14	214	G
25	14	215	G
25	14	216	A
25	14	221	A
25	14	222	A
25	14	225	A
25	14	229	A
25	14	232	G
25	14	233	A
25	14	248	G
25	14	249	C
25	14	250	G
25	14	252	G
25	14	264	C
25	14	265	A
25	14	267	C
25	14	270(J)	G
25	14	270(K)	C
25	14	270(L)	U
25	14	270(M)	U
25	14	270(N)	G
25	14	270(O)	U
25	14	270(Z)	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	14	271(B)	G
25	14	271(C)	U
25	14	271	G
25	14	273(B)	C
25	14	273(D)	C
25	14	274	G
25	14	279	C
25	14	283	A
25	14	289	A
25	14	311	A
25	14	312	G
25	14	317	G
25	14	324	A
25	14	327	G
25	14	329	G
25	14	330	A
25	14	352	G
25	14	363	G
25	14	363(A)	A
25	14	363(E)	U
25	14	363(F)	A
25	14	372	G
25	14	386	G
25	14	394	A
25	14	395	U
25	14	396	G
25	14	399	G
25	14	405	U
25	14	406	G
25	14	411	G
25	14	412	A
25	14	428	A
25	14	443	A
25	14	444	C
25	14	448	U
25	14	454	A
25	14	455	C
25	14	457	A
25	14	459	U
25	14	460	A
25	14	470	A
25	14	471	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	14	481	G
25	14	501	A
25	14	504	U
25	14	505	A
25	14	509	C
25	14	519	U
25	14	530	G
25	14	531	C
25	14	532	A
25	14	533	G
25	14	537	C
25	14	543	C
25	14	547	A
25	14	549	G
25	14	556	G
25	14	563	G
25	14	567	A
25	14	568	U
25	14	573	G
25	14	575	A
25	14	583	G
25	14	592	G
25	14	593	G
25	14	603	A
25	14	607	U
25	14	609(A)	G
25	14	615	G
25	14	617	G
25	14	621	A
25	14	622	G
25	14	627	A
25	14	637	A
25	14	645	C
25	14	646	A
25	14	650	C
25	14	651	G
25	14	654	A
25	14	654(G)	C
25	14	654(I)	C
25	14	654(K)	C
25	14	654(L)	G
25	14	654(N)	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	14	654(T)	A
25	14	656	G
25	14	669	G
25	14	670	A
25	14	686	G
25	14	717	G
25	14	722	A
25	14	730	C
25	14	739	G
25	14	740	U
25	14	751	A
25	14	752	A
25	14	753	C
25	14	770	G
25	14	775	G
25	14	776	G
25	14	779	U
25	14	782	A
25	14	784	A
25	14	785	G
25	14	789	A
25	14	792	G
25	14	805	G
25	14	812	C
25	14	816	C
25	14	819	A
25	14	820	A
25	14	822	U
25	14	827	U
25	14	828	U
25	14	831	G
25	14	832	G
25	14	845	G
25	14	846	C
25	14	859	G
25	14	865	C
25	14	866	A
25	14	878	A
25	14	880	G
25	14	882	G
25	14	887	A
25	14	888	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	14	889	C
25	14	890	A
25	14	894	C
25	14	896	A
25	14	897	C
25	14	899	A
25	14	900	A
25	14	901	A
25	14	903	C
25	14	904	C
25	14	910	A
25	14	915	C
25	14	917	A
25	14	926	A
25	14	932	G
25	14	938	G
25	14	941	A
25	14	945	A
25	14	946	G
25	14	953	A
25	14	958	U
25	14	959	A
25	14	961	C
25	14	968	G
25	14	974	G
25	14	977	G
25	14	980	A
25	14	983	A
25	14	986	C
25	14	989	G
25	14	990	A
25	14	991	C
25	14	993	G
25	14	994	C
25	14	996	A
25	14	1012	U
25	14	1013	C
25	14	1017	G
25	14	1019	U
25	14	1020	A
25	14	1022	G
25	14	1023	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	14	1025	G
25	14	1026	U
25	14	1027	A
25	14	1028	A
25	14	1037	G
25	14	1044	G
25	14	1045	A
25	14	1047	G
25	14	1048	A
25	14	1051	G
25	14	1054	A
25	14	1057	A
25	14	1060	U
25	14	1061	U
25	14	1067	A
25	14	1068	G
25	14	1070	A
25	14	1073	A
25	14	1085	A
25	14	1086	A
25	14	1087	G
25	14	1088	A
25	14	1090	U
25	14	1091	G
25	14	1093	G
25	14	1095	A
25	14	1096	A
25	14	1099	G
25	14	1105	U
25	14	1111	A
25	14	1112	G
25	14	1122	G
25	14	1128	A
25	14	1129	A
25	14	1130	U
25	14	1135	C
25	14	1136	G
25	14	1139	G
25	14	1142	U
25	14	1142(A)	A
25	14	1143	A
25	14	1151	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	14	1155	A
25	14	1170	G
25	14	1171	G
25	14	1174	A
25	14	1175	U
25	14	1177	A
25	14	1178	C
25	14	1204	A
25	14	1205	U
25	14	1210	A
25	14	1212	G
25	14	1220	A
25	14	1248	G
25	14	1250	G
25	14	1253	A
25	14	1256	G
25	14	1268	A
25	14	1271	G
25	14	1272	A
25	14	1273	U
25	14	1287	A
25	14	1289	C
25	14	1300	U
25	14	1301	A
25	14	1303	G
25	14	1306	C
25	14	1313	U
25	14	1314	C
25	14	1317	A
25	14	1318	C
25	14	1319	G
25	14	1321	A
25	14	1325	G
25	14	1332	G
25	14	1338	G
25	14	1345	C
25	14	1349	A
25	14	1359	A
25	14	1360	A
25	14	1365	A
25	14	1368	G
25	14	1370	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	14	1377	G
25	14	1385	G
25	14	1386	C
25	14	1400	G
25	14	1403	C
25	14	1406	U
25	14	1407	C
25	14	1408	C
25	14	1416	G
25	14	1417	C
25	14	1419	A
25	14	1420	U
25	14	1421	G
25	14	1425	G
25	14	1427	A
25	14	1428	C
25	14	1444(A)	A
25	14	1445	C
25	14	1449	A
25	14	1449(A)	G
25	14	1458	C
25	14	1460	A
25	14	1461	G
25	14	1467	C
25	14	1471	A
25	14	1475	G
25	14	1482	U
25	14	1483	G
25	14	1488	G
25	14	1490	A
25	14	1493	C
25	14	1494	A
25	14	1506	C
25	14	1508	A
25	14	1509	C
25	14	1510	A
25	14	1515	C
25	14	1523	U
25	14	1533	C
25	14	1535	U
25	14	1543	A
25	14	1547	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	14	1554	A
25	14	1558	A
25	14	1559	G
25	14	1560	G
25	14	1566	A
25	14	1569	A
25	14	1573	G
25	14	1578	U
25	14	1581	G
25	14	1585	C
25	14	1586	A
25	14	1588	C
25	14	1593	G
25	14	1608	A
25	14	1609	A
25	14	1610	A
25	14	1617	C
25	14	1618	A
25	14	1640	C
25	14	1647	G
25	14	1648	C
25	14	1651	G
25	14	1669	A
25	14	1670	C
25	14	1672	C
25	14	1674	G
25	14	1675	C
25	14	1695	G
25	14	1696	G
25	14	1700	A
25	14	1701	A
25	14	1703	G
25	14	1725	G
25	14	1728	G
25	14	1729	A
25	14	1730	U
25	14	1731	G
25	14	1742	C
25	14	1743	G
25	14	1758	G
25	14	1762	A
25	14	1763	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	14	1764	G
25	14	1773	A
25	14	1776	G
25	14	1780	A
25	14	1781	C
25	14	1782	C
25	14	1783	A
25	14	1787	A
25	14	1791	A
25	14	1800	C
25	14	1801	G
25	14	1812	A
25	14	1816	G
25	14	1819	A
25	14	1820	U
25	14	1829	A
25	14	1835	G
25	14	1836	C
25	14	1847	A
25	14	1848	A
25	14	1858	G
25	14	1859	A
25	14	1860	G
25	14	1878	G
25	14	1888	G
25	14	1889	A
25	14	1895	C
25	14	1906	G
25	14	1914	C
25	14	1919	A
25	14	1929	G
25	14	1930	G
25	14	1936	A
25	14	1938	A
25	14	1955	U
25	14	1960	A
25	14	1963	U
25	14	1967	C
25	14	1968	G
25	14	1970	A
25	14	1971	A
25	14	1972	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	14	1985	G
25	14	1992	G
25	14	1993	U
25	14	2020	A
25	14	2023	G
25	14	2031	A
25	14	2033	A
25	14	2039	C
25	14	2043	C
25	14	2048	G
25	14	2049	G
25	14	2055	C
25	14	2056	G
25	14	2059	A
25	14	2060	A
25	14	2061	G
25	14	2062	A
25	14	2063	C
25	14	2069	G
25	14	2082	A
25	14	2093	G
25	14	2100	G
25	14	2108	C
25	14	2111	C
25	14	2112	G
25	14	2113	U
25	14	2114	A
25	14	2117	A
25	14	2118	U
25	14	2120	G
25	14	2126	A
25	14	2127	G
25	14	2128	C
25	14	2131	G
25	14	2132	U
25	14	2133	G
25	14	2136	C
25	14	2139	C
25	14	2145	C
25	14	2146	C
25	14	2147	G
25	14	2148	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	14	2166	G
25	14	2169	A
25	14	2171	A
25	14	2172	U
25	14	2173	A
25	14	2177	C
25	14	2181	G
25	14	2191	G
25	14	2192	G
25	14	2198	A
25	14	2210	G
25	14	2211	G
25	14	2212	A
25	14	2215	G
25	14	2225	A
25	14	2226	C
25	14	2231	C
25	14	2238	G
25	14	2239	G
25	14	2240	C
25	14	2249	U
25	14	2253	G
25	14	2267	A
25	14	2274	A
25	14	2275	C
25	14	2278	A
25	14	2280	G
25	14	2283	C
25	14	2287	A
25	14	2288	A
25	14	2307	G
25	14	2308	G
25	14	2311	A
25	14	2321	G
25	14	2324	C
25	14	2325	G
25	14	2326	C
25	14	2334	G
25	14	2335	A
25	14	2336	A
25	14	2342	C
25	14	2343	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	14	2346	A
25	14	2347	C
25	14	2350	C
25	14	2354	G
25	14	2355	C
25	14	2372	G
25	14	2383	G
25	14	2385	C
25	14	2388	A
25	14	2389	G
25	14	2392	A
25	14	2400	G
25	14	2401	U
25	14	2402	C
25	14	2406	U
25	14	2410	G
25	14	2414	G
25	14	2422	A
25	14	2423	U
25	14	2425	A
25	14	2429	G
25	14	2430	A
25	14	2431	U
25	14	2434	A
25	14	2435	A
25	14	2439	A
25	14	2440	C
25	14	2441	C
25	14	2445	G
25	14	2448	A
25	14	2449	U
25	14	2468	G
25	14	2469	A
25	14	2470	G
25	14	2474	C
25	14	2475	C
25	14	2482	G
25	14	2483	C
25	14	2484	G
25	14	2487	G
25	14	2496	C
25	14	2497	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	14	2502	G
25	14	2504	U
25	14	2505	G
25	14	2506	U
25	14	2507	C
25	14	2518	A
25	14	2525	G
25	14	2532	G
25	14	2542	A
25	14	2543	G
25	14	2554	U
25	14	2564	A
25	14	2566	A
25	14	2567	G
25	14	2569	G
25	14	2573	C
25	14	2584	U
25	14	2585	U
25	14	2602	A
25	14	2603	G
25	14	2608	G
25	14	2609	U
25	14	2611	U
25	14	2612	C
25	14	2613	U
25	14	2615	U
25	14	2621	A
25	14	2630	G
25	14	2636	U
25	14	2641	G
25	14	2646	C
25	14	2665	A
25	14	2667	C
25	14	2673	G
25	14	2682	U
25	14	2689	U
25	14	2690	C
25	14	2702	U
25	14	2706	G
25	14	2712(A)	A
25	14	2713	A
25	14	2726	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	14	2732	G
25	14	2733	A
25	14	2744	G
25	14	2748	A
25	14	2750	A
25	14	2751	G
25	14	2752	C
25	14	2754	U
25	14	2758	A
25	14	2761	G
25	14	2762	G
25	14	2764	A
25	14	2765	A
25	14	2766	G
25	14	2769	C
25	14	2777	G
25	14	2778	A
25	14	2779	U
25	14	2789	C
25	14	2790	A
25	14	2791	C
25	14	2797	U
25	14	2818	G
25	14	2820	A
25	14	2821	A
25	14	2833	G
25	14	2834	G
25	14	2835	A
25	14	2838	G
25	14	2845	G
25	14	2849	U
25	14	2860	A
25	14	2872	G
25	14	2873	A
25	14	2880	C
25	14	2892	A
25	14	2894	G
25	14	2896	C
26	1J	0	A
26	1J	3	C
26	1J	8	U
26	1J	13	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
26	1J	15	A
26	1J	16	G
26	1J	22	U
26	1J	25	A
26	1J	26	A
26	1J	28	C
26	1J	29	A
26	1J	30	C
26	1J	32	C
26	1J	34	U
26	1J	40	U
26	1J	41	U
26	1J	42	C
26	1J	45	A
26	1J	46	A
26	1J	47	C
26	1J	53	A
26	1J	54	G
26	1J	66	A
26	1J	73	A
26	1J	74	U
26	1J	75	G
26	1J	81	G
26	1J	88	C
26	1J	89	G
26	1J	89(A)	A
26	1J	90	C
26	1J	99	A
26	1J	101	A
26	1J	108	C
26	1J	109	G

All (184) RNA pucker outliers are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	13	115	G
1	13	190	G
1	13	244	U
1	13	251	G
1	13	266	G
1	13	412	A
1	13	422	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	13	428	G
1	13	429	U
1	13	484	G
1	13	509	A
1	13	687	A
1	13	703	G
1	13	748	C
1	13	793	U
1	13	812	C
1	13	913	A
1	13	991	U
1	13	992	U
1	13	1027	C
1	13	1054	C
1	13	1211	U
1	13	1225	A
1	13	1256	A
1	13	1285	A
1	13	1301	U
1	13	1322	C
1	13	1452	C
1	13	1498	U
1	13	1504	G
1	13	1529	G
22	1K	3	U
22	1K	18	G
22	1K	45	C
22	1K	50	U
22	1K	57	C
22	1K	69	U
22	1K	75	C
22	1K	78	C
23	2K	21	H2U
23	2K	48	U
22	3K	17	OMG
22	3K	18	G
25	1H	125	G
25	1H	196	A
25	1H	229	A
25	1H	271(B)	G
25	1H	404	C
25	1H	481	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	1H	508	G
25	1H	587	C
25	1H	685	A
25	1H	752	A
25	1H	764	A
25	1H	776	G
25	1H	800	A
25	1H	827	U
25	1H	859	G
25	1H	974	G
25	1H	1012	U
25	1H	1022	G
25	1H	1026	U
25	1H	1060	U
25	1H	1081	U
25	1H	1084	A
25	1H	1085	A
25	1H	1110	G
25	1H	1178	C
25	1H	1312	U
25	1H	1378	A
25	1H	1420	U
25	1H	1451	C
25	1H	1508	A
25	1H	1558	A
25	1H	1559	G
25	1H	1608	A
25	1H	1609	A
25	1H	1617	C
25	1H	1653	G
25	1H	1694	C
25	1H	1698	A
25	1H	1757	U
25	1H	1762	A
25	1H	1799	G
25	1H	1913	A
25	1H	1984	G
25	1H	1992	G
25	1H	2171	A
25	1H	2211	G
25	1H	2428	G
25	1H	2430	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	1H	2439	A
25	1H	2448	A
25	1H	2476	A
25	1H	2566	A
25	1H	2610	C
25	1H	2689	U
25	1H	2756	U
26	16	108	C
55	1G	89	U
55	1G	115	G
55	1G	119	A
55	1G	197	A
55	1G	209	U
55	1G	243	A
55	1G	250	A
55	1G	266	G
55	1G	327	A
55	1G	328	C
55	1G	345	C
55	1G	350	G
55	1G	412	A
55	1G	485	G
55	1G	509	A
55	1G	630	G
55	1G	686	U
55	1G	687	A
55	1G	748	C
55	1G	793	U
55	1G	812	C
55	1G	913	A
55	1G	992	U
55	1G	1053	G
55	1G	1054	C
55	1G	1128	C
55	1G	1145	C
55	1G	1157	A
55	1G	1285	A
55	1G	1297	C
55	1G	1300	G
55	1G	1305	G
55	1G	1346	A
55	1G	1442	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
55	1G	1453	G
55	1G	1498	U
22	1L	3	U
22	1L	75	C
22	1L	78	C
23	2L	21	H2U
23	2L	48	U
22	3L	17	OMG
22	3L	18	G
22	3L	57	C
24	4L	13	A
25	14	128	C
25	14	196	A
25	14	204	A
25	14	205	G
25	14	278	A
25	14	310	A
25	14	669	G
25	14	685	A
25	14	752	A
25	14	764	A
25	14	827	U
25	14	877	U
25	14	1022	G
25	14	1085	A
25	14	1141	U
25	14	1416	G
25	14	1420	U
25	14	1460	A
25	14	1558	A
25	14	1608	A
25	14	1647	G
25	14	1801	G
25	14	1819	A
25	14	1971	A
25	14	1984	G
25	14	1992	G
25	14	2191	G
25	14	2210	G
25	14	2225	A
25	14	2320	A
25	14	2406	U

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Mol	Chain	Res	Type
25	14	2439	A
25	14	2506	U
25	14	2602	A
25	14	2611	U
25	14	2629	A
25	14	2689	U
25	14	2776	A
25	14	2859	G
26	1J	56	G

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

38 non-standard protein/DNA/RNA residues are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
22	4SU	3L	8	22	18,21,22	1.95	3 (16%)	26,30,33	2.26	4 (15%)
22	PSU	3K	64	22	18,21,22	1.21	2 (11%)	22,30,33	1.80	5 (22%)
22	MIA	1K	38	22	24,31,32	2.37	4 (16%)	26,44,47	3.27	8 (30%)
22	PSU	1K	40	22	18,21,22	0.99	1 (5%)	22,30,33	1.67	4 (18%)
22	PSU	3K	40	22	18,21,22	1.01	1 (5%)	22,30,33	1.50	2 (9%)
22	5MU	3K	63	22	19,22,23	3.78	5 (26%)	28,32,35	3.35	8 (28%)
22	OMG	1L	17	22	18,26,27	5.26	9 (50%)	19,38,41	3.66	7 (36%)
23	OMC	2K	33	23	19,22,23	1.80	3 (15%)	26,31,34	0.82	1 (3%)
23	PSU	2K	56	23	18,21,22	1.20	1 (5%)	22,30,33	1.89	5 (22%)
22	OMG	3L	17	22	18,26,27	5.41	9 (50%)	19,38,41	3.73	8 (42%)
23	H2U	2L	21	23	18,21,22	2.19	4 (22%)	21,30,33	1.74	4 (19%)
22	4SU	3K	8	22	18,21,22	1.79	3 (16%)	26,30,33	2.43	6 (23%)
23	PSU	2L	56	23	18,21,22	1.23	2 (11%)	22,30,33	1.59	2 (9%)
23	5MU	2K	55	60,23	19,22,23	3.82	5 (26%)	28,32,35	3.28	8 (28%)
22	PSU	1L	40	22	18,21,22	1.12	1 (5%)	22,30,33	1.47	3 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
22	PSU	3L	64	22	18,21,22	1.12	1 (5%)	22,30,33	1.80	4 (18%)
23	OMC	2L	33	23	19,22,23	1.77	3 (15%)	26,31,34	0.88	0
22	QUO	1L	35	24,22	29,35,36	5.38	11 (37%)	31,52,55	4.15	9 (29%)
22	PSU	3L	40	22	18,21,22	1.11	1 (5%)	22,30,33	1.47	2 (9%)
22	PSU	1L	64	22	18,21,22	0.93	1 (5%)	22,30,33	1.58	3 (13%)
22	MIA	1L	38	22	24,31,32	2.38	3 (12%)	26,44,47	3.51	10 (38%)
23	H2U	2K	21	23	18,21,22	2.03	4 (22%)	21,30,33	2.08	5 (23%)
22	OMG	1K	17	22	18,26,27	5.18	8 (44%)	19,38,41	3.64	7 (36%)
22	5MU	1K	63	22	19,22,23	3.75	5 (26%)	28,32,35	3.15	9 (32%)
23	5MU	2L	55	23	19,22,23	3.83	5 (26%)	28,32,35	3.59	9 (32%)
22	MIA	3K	38	22	24,31,32	2.44	3 (12%)	26,44,47	2.72	8 (30%)
22	QUO	3L	35	22	29,35,36	5.38	11 (37%)	31,52,55	4.35	11 (35%)
22	MIA	3L	38	22	24,31,32	2.35	4 (16%)	26,44,47	2.41	8 (30%)
22	PSU	1K	64	22	18,21,22	1.23	3 (16%)	22,30,33	1.76	4 (18%)
22	5MU	1L	63	22	19,22,23	3.81	5 (26%)	28,32,35	3.23	10 (35%)
22	OMG	3K	17	22	18,26,27	5.39	9 (50%)	19,38,41	3.65	7 (36%)
22	4SU	1L	8	22	18,21,22	1.74	3 (16%)	26,30,33	2.18	5 (19%)
22	5MU	3L	63	22	19,22,23	3.86	5 (26%)	28,32,35	3.21	9 (32%)
22	QUO	3K	35	22	29,35,36	5.33	11 (37%)	31,52,55	3.91	9 (29%)
23	4SU	2K	8	23	18,21,22	1.93	3 (16%)	26,30,33	2.61	7 (26%)
23	4SU	2L	8	23	18,21,22	1.88	3 (16%)	26,30,33	2.70	4 (15%)
22	QUO	1K	35	24,22	29,35,36	5.20	12 (41%)	31,52,55	3.40	8 (25%)
22	4SU	1K	8	22	18,21,22	1.81	3 (16%)	26,30,33	2.22	5 (19%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	4SU	3L	8	22	-	0/7/25/26	0/2/2/2
22	PSU	3K	64	22	-	3/7/25/26	0/2/2/2
22	MIA	1K	38	22	-	6/11/33/34	0/3/3/3
22	PSU	1K	40	22	-	0/7/25/26	0/2/2/2
22	PSU	3K	40	22	-	0/7/25/26	0/2/2/2
22	5MU	3K	63	22	-	2/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	OMG	1L	17	22	-	3/5/27/28	0/3/3/3
23	OMC	2K	33	23	-	1/9/27/28	0/2/2/2
23	PSU	2K	56	23	-	0/7/25/26	0/2/2/2
22	OMG	3L	17	22	-	2/5/27/28	0/3/3/3
23	H2U	2L	21	23	-	6/7/38/39	0/2/2/2
22	4SU	3K	8	22	-	0/7/25/26	0/2/2/2
23	PSU	2L	56	23	-	0/7/25/26	0/2/2/2
23	5MU	2K	55	60,23	-	0/7/25/26	0/2/2/2
22	PSU	1L	40	22	-	0/7/25/26	0/2/2/2
22	PSU	3L	64	22	-	0/7/25/26	0/2/2/2
23	OMC	2L	33	23	-	1/9/27/28	0/2/2/2
22	QUO	1L	35	24,22	-	3/6/43/44	0/4/4/4
22	PSU	3L	40	22	-	0/7/25/26	0/2/2/2
22	PSU	1L	64	22	-	1/7/25/26	0/2/2/2
22	MIA	1L	38	22	-	7/11/33/34	0/3/3/3
23	H2U	2K	21	23	-	3/7/38/39	0/2/2/2
22	OMG	1K	17	22	-	2/5/27/28	0/3/3/3
22	5MU	1K	63	22	-	1/7/25/26	0/2/2/2
23	5MU	2L	55	23	-	0/7/25/26	0/2/2/2
22	MIA	3K	38	22	-	6/11/33/34	0/3/3/3
22	QUO	3L	35	22	-	2/6/43/44	0/4/4/4
22	MIA	3L	38	22	-	8/11/33/34	0/3/3/3
22	PSU	1K	64	22	-	0/7/25/26	0/2/2/2
22	5MU	1L	63	22	-	0/7/25/26	0/2/2/2
22	OMG	3K	17	22	-	2/5/27/28	0/3/3/3
22	4SU	1L	8	22	-	2/7/25/26	0/2/2/2
22	5MU	3L	63	22	-	0/7/25/26	0/2/2/2
22	QUO	3K	35	22	-	3/6/43/44	0/4/4/4
23	4SU	2K	8	23	-	0/7/25/26	0/2/2/2
23	4SU	2L	8	23	-	0/7/25/26	0/2/2/2
22	QUO	1K	35	24,22	-	4/6/43/44	0/4/4/4
22	4SU	1K	8	22	-	2/7/25/26	0/2/2/2

All (170) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	1L	35	QUO	C6-N1	-15.83	1.14	1.37
22	3L	17	OMG	C8-N7	-15.63	1.08	1.35
22	3K	17	OMG	C8-N7	-15.54	1.08	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	1K	35	QUO	C6-N1	-15.43	1.14	1.37
22	1K	17	OMG	C8-N7	-15.39	1.08	1.35
22	1L	17	OMG	C8-N7	-15.23	1.09	1.35
22	3L	35	QUO	C6-N1	-15.19	1.15	1.37
22	3K	35	QUO	C6-N1	-14.78	1.15	1.37
22	3L	35	QUO	C4-N3	14.32	1.72	1.37
22	1L	35	QUO	C4-N3	14.10	1.71	1.37
22	3K	35	QUO	C4-N3	14.06	1.71	1.37
22	1K	35	QUO	C4-N3	13.06	1.69	1.37
22	3L	63	5MU	C2-N1	12.49	1.58	1.38
23	2L	55	5MU	C2-N1	12.41	1.58	1.38
22	3K	63	5MU	C2-N1	12.22	1.58	1.38
22	1K	63	5MU	C2-N1	12.15	1.57	1.38
23	2K	55	5MU	C2-N1	12.13	1.57	1.38
22	1L	63	5MU	C2-N1	11.93	1.57	1.38
22	3K	35	QUO	C8-N9	-10.13	1.23	1.38
22	3L	17	OMG	C4-N3	10.09	1.61	1.37
22	3K	17	OMG	C4-N3	9.92	1.61	1.37
22	3L	35	QUO	C8-N9	-9.90	1.23	1.38
22	1L	35	QUO	C5-C7	9.81	1.57	1.39
22	1L	17	OMG	C4-N3	9.76	1.61	1.37
22	1L	35	QUO	C8-N9	-9.58	1.23	1.38
22	1K	35	QUO	C8-N9	-9.54	1.24	1.38
22	3L	35	QUO	C5-C7	9.35	1.56	1.39
22	1K	17	OMG	C4-N3	9.32	1.60	1.37
22	3K	35	QUO	C5-C7	9.28	1.56	1.39
22	1K	35	QUO	C5-C7	9.20	1.56	1.39
22	3K	17	OMG	C6-N1	-9.05	1.24	1.37
22	3L	17	OMG	C6-N1	-8.90	1.24	1.37
22	3K	35	QUO	C5-C6	-8.75	1.29	1.47
22	3L	35	QUO	C5-C6	-8.74	1.29	1.47
22	1K	35	QUO	C5-C6	-8.71	1.29	1.47
22	3L	38	MIA	C13-C14	8.67	1.57	1.32
22	1K	38	MIA	C13-C14	8.65	1.57	1.32
22	1L	38	MIA	C13-C14	8.52	1.56	1.32
22	1L	17	OMG	C6-N1	-8.48	1.25	1.37
22	1K	17	OMG	C6-N1	-8.48	1.25	1.37
22	1L	35	QUO	C5-C6	-8.37	1.30	1.47
22	3K	38	MIA	C13-C14	8.28	1.56	1.32
22	3L	35	QUO	C2-N3	7.98	1.52	1.33
22	3K	35	QUO	C2-N3	7.74	1.52	1.33
22	1L	35	QUO	C2-N3	7.46	1.51	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	3K	17	OMG	C5-C4	7.30	1.61	1.43
22	3L	17	OMG	C5-C4	7.29	1.61	1.43
22	1L	17	OMG	C5-C4	7.25	1.61	1.43
22	1K	17	OMG	C5-C4	7.14	1.61	1.43
22	1K	35	QUO	C2-N3	7.10	1.50	1.33
23	2L	21	H2U	C2-N1	6.72	1.45	1.35
22	1L	63	5MU	C4-N3	-6.52	1.26	1.38
22	3K	63	5MU	C4-N3	-6.37	1.27	1.38
23	2L	55	5MU	C4-N3	-6.31	1.27	1.38
22	3L	63	5MU	C4-N3	-6.27	1.27	1.38
22	1K	63	5MU	C4-N3	-6.24	1.27	1.38
23	2K	21	H2U	C2-N1	6.07	1.44	1.35
23	2L	8	4SU	C5-C4	5.86	1.50	1.42
23	2K	8	4SU	C5-C4	5.85	1.50	1.42
23	2K	55	5MU	C4-N3	-5.83	1.28	1.38
22	3L	8	4SU	C5-C4	5.74	1.50	1.42
22	3K	38	MIA	C6-N6	5.72	1.45	1.34
23	2K	55	5MU	C2-N3	5.68	1.48	1.38
22	3L	63	5MU	C2-N3	5.62	1.48	1.38
22	3K	35	QUO	C13-C12	-5.58	1.47	1.53
22	1L	38	MIA	C6-N6	5.57	1.44	1.34
22	1K	38	MIA	C6-N6	5.57	1.44	1.34
22	1L	63	5MU	C2-N3	5.52	1.47	1.38
23	2K	55	5MU	C6-N1	5.51	1.47	1.38
22	1L	8	4SU	C5-C4	5.51	1.49	1.42
22	3L	63	5MU	C6-N1	5.50	1.47	1.38
22	3L	38	MIA	C6-N6	5.46	1.44	1.34
22	3K	63	5MU	C2-N3	5.45	1.47	1.38
22	1L	63	5MU	C6-N1	5.42	1.47	1.38
22	1K	63	5MU	C2-N3	5.41	1.47	1.38
23	2L	55	5MU	C2-N3	5.40	1.47	1.38
22	1K	8	4SU	C5-C4	5.35	1.49	1.42
23	2K	55	5MU	C4-C5	5.33	1.53	1.44
22	1K	63	5MU	C6-N1	5.32	1.47	1.38
22	3K	63	5MU	C6-N1	5.31	1.47	1.38
22	3K	8	4SU	C5-C4	5.30	1.49	1.42
23	2L	55	5MU	C4-C5	5.14	1.53	1.44
22	1L	35	QUO	C13-C12	-5.12	1.48	1.53
22	3K	38	MIA	C2-S10	5.10	1.80	1.75
23	2L	55	5MU	C6-N1	5.07	1.46	1.38
22	1L	63	5MU	C4-C5	5.05	1.53	1.44
22	3L	35	QUO	C13-C12	-4.81	1.48	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	1K	35	QUO	C13-C12	-4.75	1.48	1.53
22	3L	63	5MU	C4-C5	4.71	1.52	1.44
23	2K	33	OMC	C4-N4	4.64	1.44	1.33
23	2K	33	OMC	C2-N3	4.54	1.45	1.36
23	2L	33	OMC	C4-N4	4.51	1.44	1.33
22	1K	63	5MU	C4-C5	4.39	1.52	1.44
22	3K	63	5MU	C4-C5	4.37	1.52	1.44
22	3L	35	QUO	C2-N2	4.28	1.44	1.34
22	3K	35	QUO	C2-N2	4.23	1.44	1.34
23	2L	33	OMC	C2-N3	4.21	1.44	1.36
23	2L	21	H2U	C2-N3	4.15	1.45	1.38
22	3K	17	OMG	C5-C6	-4.09	1.39	1.47
22	3L	8	4SU	C2-N1	4.04	1.44	1.38
22	3L	17	OMG	C5-C6	-4.02	1.39	1.47
22	1L	17	OMG	C5-C6	-4.00	1.39	1.47
22	1L	38	MIA	C2-S10	3.97	1.79	1.75
23	2L	56	PSU	C6-C5	3.94	1.39	1.35
23	2K	21	H2U	C2-N3	3.94	1.45	1.38
22	3K	64	PSU	C6-C5	3.88	1.39	1.35
22	1K	35	QUO	C2-N2	3.85	1.43	1.34
22	3L	64	PSU	C6-C5	3.81	1.39	1.35
23	2K	8	4SU	C2-N1	3.81	1.44	1.38
23	2L	33	OMC	C5-C4	3.74	1.51	1.42
23	2L	8	4SU	C2-N1	3.74	1.44	1.38
22	3K	8	4SU	C2-N1	3.73	1.44	1.38
23	2L	21	H2U	C4-N3	3.69	1.43	1.37
22	1L	40	PSU	C6-C5	3.64	1.39	1.35
22	1L	35	QUO	C2-N2	3.62	1.42	1.34
23	2K	56	PSU	C6-C5	3.58	1.39	1.35
22	1K	8	4SU	C2-N1	3.52	1.44	1.38
23	2K	33	OMC	C5-C4	3.51	1.50	1.42
22	1K	17	OMG	C5-C6	-3.47	1.40	1.47
22	3L	35	QUO	C14-C13	-3.33	1.48	1.53
23	2K	21	H2U	C4-N3	3.31	1.43	1.37
22	1K	64	PSU	C6-C5	3.25	1.39	1.35
22	1L	8	4SU	C2-N1	3.22	1.43	1.38
22	3K	40	PSU	C6-C5	3.20	1.39	1.35
22	1L	35	QUO	C14-C13	-3.17	1.48	1.53
22	3L	40	PSU	C6-C5	3.17	1.39	1.35
22	3L	17	OMG	C2-N3	3.06	1.40	1.33
23	2K	8	4SU	C6-N1	3.05	1.45	1.38
22	3K	17	OMG	C2-N3	3.05	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	1L	17	OMG	C2-N2	3.01	1.41	1.34
22	3L	8	4SU	C6-N1	2.93	1.45	1.38
22	3K	17	OMG	C2-N2	2.90	1.41	1.34
22	1L	64	PSU	C6-C5	2.89	1.38	1.35
22	1K	40	PSU	C6-C5	2.88	1.38	1.35
22	3K	35	QUO	C14-C13	-2.86	1.49	1.53
23	2L	8	4SU	C6-N1	2.84	1.44	1.38
22	3L	38	MIA	C6-N1	2.84	1.36	1.32
22	3L	17	OMG	C2-N2	2.83	1.40	1.34
22	1L	17	OMG	C2-N3	2.81	1.40	1.33
22	1K	17	OMG	C2-N2	2.79	1.40	1.34
22	1K	8	4SU	C6-N1	2.78	1.44	1.38
22	1L	35	QUO	C2-N1	-2.74	1.30	1.37
22	3L	38	MIA	C2-S10	2.69	1.78	1.75
22	1K	35	QUO	C16-C15	2.65	1.61	1.54
22	1L	8	4SU	C6-N1	2.64	1.44	1.38
22	3K	8	4SU	C6-N1	2.63	1.44	1.38
22	1K	35	QUO	C14-C13	-2.61	1.49	1.53
22	3K	17	OMG	O6-C6	-2.59	1.18	1.23
22	3L	35	QUO	C16-C15	2.56	1.61	1.54
22	3L	17	OMG	O6-C6	-2.55	1.18	1.23
22	3K	35	QUO	C16-C15	2.53	1.60	1.54
22	1L	17	OMG	O6-C6	-2.52	1.18	1.23
22	1K	17	OMG	C2-N3	2.51	1.39	1.33
22	1K	35	QUO	C5-C4	-2.45	1.37	1.40
22	3L	17	OMG	C2-N1	-2.39	1.31	1.37
23	2K	21	H2U	C6-N1	-2.38	1.42	1.47
23	2L	56	PSU	C2-N1	2.34	1.39	1.36
22	1K	38	MIA	C2-S10	2.31	1.77	1.75
22	3K	17	OMG	C2-N1	-2.31	1.32	1.37
22	3L	35	QUO	C2-N1	-2.28	1.32	1.37
23	2L	21	H2U	C6-N1	-2.26	1.43	1.47
22	3K	35	QUO	C2-N1	-2.24	1.32	1.37
22	1K	17	OMG	O6-C6	-2.22	1.18	1.23
22	1L	35	QUO	C16-C15	2.20	1.60	1.54
22	1K	64	PSU	C2-N1	2.18	1.39	1.36
22	1K	64	PSU	C4-C5	-2.15	1.38	1.44
22	1K	38	MIA	C6-N1	2.07	1.35	1.32
22	1L	17	OMG	C2-N1	-2.04	1.32	1.37
22	1K	35	QUO	C2-N1	-2.01	1.32	1.37
22	3K	64	PSU	O4'-C1'	-2.01	1.41	1.43

All (228) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	3L	35	QUO	C5-C6-N1	16.44	129.28	115.36
22	3K	35	QUO	C5-C6-N1	15.95	128.86	115.36
22	1L	35	QUO	C5-C6-N1	15.74	128.69	115.36
22	1K	35	QUO	C5-C6-N1	14.12	127.32	115.36
22	3L	35	QUO	C8-N9-C1'	-14.02	113.07	125.48
22	1L	35	QUO	C8-N9-C1'	-13.19	113.80	125.48
22	1L	38	MIA	C11-S10-C2	12.57	111.65	102.27
23	2L	55	5MU	C5-C4-N3	11.78	125.36	115.31
22	3K	63	5MU	C5-C4-N3	11.36	125.00	115.31
22	3K	35	QUO	C8-N9-C1'	-10.97	115.77	125.48
23	2K	55	5MU	C5-C4-N3	10.69	124.43	115.31
22	3L	63	5MU	C5-C4-N3	10.62	124.37	115.31
22	1K	63	5MU	C5-C4-N3	10.42	124.21	115.31
22	1L	63	5MU	C5-C4-N3	10.28	124.08	115.31
22	1K	38	MIA	C11-S10-C2	10.21	109.89	102.27
22	1K	17	OMG	C8-N7-C5	10.10	122.23	102.99
22	1L	17	OMG	C8-N7-C5	10.04	122.12	102.99
22	3L	17	OMG	C8-N7-C5	9.97	121.98	102.99
22	3K	17	OMG	C8-N7-C5	9.97	121.98	102.99
22	1K	38	MIA	C12-C13-C14	-9.59	108.49	127.14
22	3L	17	OMG	C5-C6-N1	9.28	130.33	113.95
22	3K	38	MIA	C12-C13-C14	-9.19	109.26	127.14
23	2L	8	4SU	C4-N3-C2	-9.11	118.49	127.34
22	3K	17	OMG	C5-C6-N1	9.09	130.00	113.95
22	1L	17	OMG	C5-C6-N1	8.98	129.81	113.95
22	1K	35	QUO	C8-N9-C1'	-8.91	117.59	125.48
22	1K	17	OMG	C5-C6-N1	8.53	129.02	113.95
23	2K	8	4SU	C4-N3-C2	-8.44	119.14	127.34
22	1L	38	MIA	C12-C13-C14	-8.44	110.72	127.14
22	3K	8	4SU	C4-N3-C2	-7.95	119.62	127.34
23	2L	8	4SU	C5-C4-N3	7.91	122.03	114.69
23	2L	55	5MU	C5-C6-N1	-7.71	115.41	123.34
22	3L	8	4SU	C4-N3-C2	-7.61	119.94	127.34
22	3L	38	MIA	C12-C13-C14	-7.57	112.42	127.14
22	1L	8	4SU	C4-N3-C2	-7.53	120.02	127.34
23	2K	8	4SU	C5-C4-N3	7.32	121.48	114.69
22	1K	8	4SU	C4-N3-C2	-7.28	120.27	127.34
23	2L	55	5MU	C4-N3-C2	-7.19	118.05	127.35
23	2K	55	5MU	C5-C6-N1	-6.87	116.27	123.34
23	2K	21	H2U	C4-N3-C2	-6.59	120.32	125.79
22	3K	63	5MU	C4-N3-C2	-6.56	118.86	127.35
22	1L	63	5MU	C4-N3-C2	-6.47	118.98	127.35
22	3K	63	5MU	C5-C6-N1	-6.35	116.81	123.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	3L	63	5MU	C4-N3-C2	-6.25	119.26	127.35
22	1L	35	QUO	O6-C6-N1	-6.16	113.38	120.65
23	2L	55	5MU	C6-C5-C4	6.11	123.14	118.03
23	2K	55	5MU	C4-N3-C2	-5.98	119.61	127.35
22	1K	63	5MU	C4-N3-C2	-5.94	119.66	127.35
22	1L	63	5MU	C5-C6-N1	-5.94	117.22	123.34
22	1K	63	5MU	C5-C6-N1	-5.80	117.37	123.34
22	3L	63	5MU	C5-C6-N1	-5.74	117.44	123.34
22	1K	8	4SU	C5-C4-N3	5.73	120.01	114.69
22	3K	63	5MU	O4-C4-C5	-5.71	118.28	124.90
22	3K	8	4SU	C5-C4-N3	5.71	119.98	114.69
22	1L	63	5MU	C6-C5-C4	5.68	122.78	118.03
22	3L	8	4SU	C5-C4-N3	5.60	119.88	114.69
22	1L	8	4SU	C5-C4-N3	5.46	119.75	114.69
22	3L	63	5MU	C6-C5-C4	5.43	122.57	118.03
23	2K	55	5MU	C5M-C5-C6	-5.43	115.59	122.85
22	3K	63	5MU	C6-C5-C4	5.41	122.55	118.03
23	2K	55	5MU	C6-C5-C4	5.39	122.54	118.03
22	1K	63	5MU	C6-C5-C4	5.37	122.52	118.03
22	1K	63	5MU	O4-C4-C5	-5.26	118.80	124.90
22	3L	35	QUO	O6-C6-N1	-5.25	114.45	120.65
23	2L	55	5MU	C5M-C5-C6	-5.22	115.87	122.85
22	3L	63	5MU	O4-C4-C5	-5.21	118.86	124.90
22	1K	64	PSU	C4-N3-C2	-5.09	119.01	126.34
22	1K	17	OMG	O6-C6-N1	-5.06	114.68	120.65
22	1L	17	OMG	O6-C6-C5	-5.04	114.53	124.37
22	3K	35	QUO	O6-C6-N1	-5.02	114.72	120.65
22	3L	17	OMG	O6-C6-C5	-5.01	114.59	124.37
22	1K	38	MIA	C15-C14-C13	-4.90	108.49	122.65
22	1K	35	QUO	O6-C6-N1	-4.85	114.92	120.65
22	3K	17	OMG	O6-C6-C5	-4.82	114.96	124.37
22	3K	38	MIA	C16-C14-C13	-4.78	108.83	122.65
23	2L	21	H2U	C4-N3-C2	-4.75	121.85	125.79
22	3K	17	OMG	O6-C6-N1	-4.75	115.04	120.65
22	3L	17	OMG	O6-C6-N1	-4.72	115.08	120.65
22	3K	38	MIA	C15-C14-C13	-4.70	109.07	122.65
22	3L	38	MIA	C15-C14-C13	-4.69	109.10	122.65
23	2L	55	5MU	O4-C4-C5	-4.67	119.48	124.90
22	3L	64	PSU	N1-C2-N3	4.66	120.41	115.13
23	2L	56	PSU	C4-N3-C2	-4.62	119.68	126.34
22	1L	63	5MU	C5M-C5-C6	-4.59	116.72	122.85
23	2K	55	5MU	O4-C4-C5	-4.56	119.61	124.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	2K	56	PSU	N1-C2-N3	4.54	120.28	115.13
22	3L	64	PSU	C4-N3-C2	-4.53	119.81	126.34
23	2K	8	4SU	N3-C2-N1	4.42	120.76	114.89
22	3K	64	PSU	N1-C2-N3	4.42	120.14	115.13
22	3K	8	4SU	C5-C4-S4	-4.40	118.80	124.47
22	3L	38	MIA	C16-C14-C13	-4.39	109.97	122.65
23	2K	56	PSU	C4-N3-C2	-4.38	120.03	126.34
22	3K	8	4SU	N3-C2-N1	4.37	120.69	114.89
22	1K	40	PSU	N1-C2-N3	4.37	120.08	115.13
22	3L	35	QUO	C16-C12-C13	4.36	109.65	103.18
22	3L	40	PSU	C4-N3-C2	-4.30	120.14	126.34
22	1L	35	QUO	C16-C12-C13	4.27	109.52	103.18
22	1K	40	PSU	C4-N3-C2	-4.26	120.20	126.34
22	3K	35	QUO	N1-C2-N3	-4.26	115.37	123.32
22	3L	8	4SU	N3-C2-N1	4.24	120.52	114.89
22	3K	38	MIA	C2-N3-C4	4.23	121.15	115.32
22	1L	17	OMG	O6-C6-N1	-4.22	115.66	120.65
22	3L	35	QUO	N1-C2-N3	-4.20	115.47	123.32
22	1L	38	MIA	C15-C14-C13	-4.18	110.58	122.65
22	1K	17	OMG	O6-C6-C5	-4.13	116.31	124.37
22	3L	63	5MU	C5M-C5-C6	-4.13	117.34	122.85
22	1K	63	5MU	C5M-C5-C6	-4.07	117.41	122.85
22	1L	38	MIA	C16-C14-C13	-4.06	110.90	122.65
22	3K	63	5MU	C5M-C5-C6	-4.04	117.45	122.85
22	1L	8	4SU	N3-C2-N1	4.04	120.25	114.89
22	1L	38	MIA	C2-N3-C4	4.03	120.88	115.32
22	1L	63	5MU	O4-C4-C5	-4.00	120.26	124.90
22	1L	40	PSU	C4-N3-C2	-3.99	120.59	126.34
22	3K	64	PSU	C4-N3-C2	-3.98	120.61	126.34
22	1K	8	4SU	C5-C4-S4	-3.96	119.37	124.47
23	2K	21	H2U	C5-C4-N3	3.95	121.08	116.65
22	1K	38	MIA	C16-C14-C13	-3.83	111.58	122.65
22	1L	64	PSU	C4-N3-C2	-3.82	120.83	126.34
22	1L	64	PSU	N1-C2-N3	3.78	119.42	115.13
22	1K	64	PSU	N1-C2-N3	3.76	119.39	115.13
23	2L	8	4SU	C5-C4-S4	-3.69	119.72	124.47
22	3L	35	QUO	O6-C6-C5	-3.68	116.27	123.98
23	2L	8	4SU	N3-C2-N1	3.66	119.74	114.89
22	3K	40	PSU	C4-N3-C2	-3.65	121.08	126.34
22	1L	35	QUO	C15-C14-C13	3.63	109.69	103.91
22	3K	35	QUO	O6-C6-C5	-3.61	116.42	123.98
22	1K	8	4SU	N3-C2-N1	3.60	119.67	114.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	1L	35	QUO	N1-C2-N3	-3.56	116.67	123.32
22	3L	38	MIA	C2-N3-C4	3.53	120.19	115.32
22	3L	8	4SU	C5-C4-S4	-3.53	119.92	124.47
23	2L	56	PSU	N1-C2-N3	3.49	119.08	115.13
22	1K	35	QUO	N2-C2-N1	3.44	124.04	116.71
23	2K	21	H2U	N3-C2-N1	3.43	120.28	116.65
23	2L	21	H2U	C5-C4-N3	3.42	120.49	116.65
22	3K	64	PSU	O2-C2-N1	-3.40	119.05	122.79
22	1L	40	PSU	N1-C2-N3	3.38	118.96	115.13
23	2L	21	H2U	C5-C6-N1	3.37	122.72	111.61
22	1K	17	OMG	N2-C2-N1	3.36	123.87	116.71
22	1L	63	5MU	C6-N1-C2	-3.34	117.91	121.30
22	3K	35	QUO	C15-C14-C13	3.30	109.16	103.91
22	1L	17	OMG	N2-C2-N1	3.27	123.68	116.71
22	3L	35	QUO	C15-C14-C13	3.19	108.99	103.91
22	3K	40	PSU	N1-C2-N3	3.18	118.74	115.13
22	1K	38	MIA	C2-N3-C4	3.15	119.67	115.32
22	1K	35	QUO	N1-C2-N3	-3.14	117.45	123.32
22	3L	63	5MU	C6-N1-C2	-3.13	118.13	121.30
23	2K	56	PSU	C6-N1-C2	-3.13	119.49	122.68
22	1L	63	5MU	N3-C2-N1	3.11	119.02	114.89
22	3L	38	MIA	C11-S10-C2	3.09	104.57	102.27
22	1K	38	MIA	C5-C6-N1	-3.08	118.25	120.81
22	3K	64	PSU	C6-N1-C2	-3.05	119.56	122.68
22	1L	8	4SU	C5-C4-S4	-3.04	120.55	124.47
22	1K	35	QUO	O6-C6-C5	-2.96	117.77	123.98
23	2K	56	PSU	C6-C5-C4	2.92	120.24	118.20
22	3K	35	QUO	C16-C12-C13	2.92	107.52	103.18
22	1L	35	QUO	O6-C6-C5	-2.89	117.93	123.98
22	1K	35	QUO	C7-C8-N9	-2.84	100.92	108.55
22	3L	40	PSU	N1-C2-N3	2.83	118.33	115.13
23	2K	55	5MU	C5M-C5-C4	2.82	121.87	118.77
22	1K	17	OMG	C2-N1-C6	2.80	130.25	125.10
22	3L	17	OMG	C2-N1-C6	2.79	130.23	125.10
23	2K	56	PSU	O2-C2-N1	-2.75	119.76	122.79
22	3K	38	MIA	O3'-C3'-C2'	2.75	120.71	111.82
22	3K	17	OMG	C2-N1-C6	2.75	130.15	125.10
23	2K	8	4SU	C5-C4-S4	-2.73	120.94	124.47
22	1L	17	OMG	C2-N1-C6	2.73	130.12	125.10
23	2K	21	H2U	C5-C6-N1	2.72	120.57	111.61
22	1K	63	5MU	C6-N1-C2	-2.71	118.56	121.30
23	2K	8	4SU	S4-C4-N3	-2.68	117.57	120.21

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	3K	38	MIA	C4-C5-N7	-2.68	106.61	109.40
22	3L	17	OMG	N1-C2-N3	-2.66	118.35	123.32
22	1L	17	OMG	N1-C2-N3	-2.64	118.39	123.32
22	1L	38	MIA	N3-C2-N1	-2.62	122.17	126.98
22	1L	38	MIA	C4-C5-N7	-2.62	106.67	109.40
22	1L	38	MIA	C5-C6-N1	-2.62	118.63	120.81
23	2L	55	5MU	O4-C4-N3	-2.59	115.15	120.12
23	2L	21	H2U	N3-C2-N1	2.55	119.36	116.65
22	3K	17	OMG	N1-C2-N3	-2.55	118.55	123.32
23	2K	21	H2U	O2-C2-N1	-2.54	119.92	123.11
22	1L	64	PSU	C6-N1-C2	-2.53	120.10	122.68
22	3L	63	5MU	N3-C2-N1	2.51	118.23	114.89
22	3K	35	QUO	N2-C2-N1	2.51	122.05	116.71
22	1L	35	QUO	C7-C8-N9	-2.51	101.82	108.55
22	1L	63	5MU	O2-C2-N1	-2.49	119.47	122.79
22	3K	8	4SU	C1 <sup>1</sup> -N1-C2	2.45	122.01	117.57
22	3L	35	QUO	C7-C8-N9	-2.45	101.96	108.55
22	3K	35	QUO	C7-C8-N9	-2.44	102.00	108.55
22	1L	8	4SU	O2-C2-N1	-2.44	119.55	122.79
22	3L	64	PSU	C6-N1-C2	-2.43	120.20	122.68
22	3L	64	PSU	O2-C2-N1	-2.41	120.14	122.79
22	3L	38	MIA	C5-C6-N1	-2.40	118.81	120.81
22	3K	17	OMG	N2-C2-N1	2.38	121.79	116.71
22	3L	38	MIA	C16-C14-C15	-2.38	109.34	114.60
22	1L	63	5MU	O4-C4-N3	-2.33	115.65	120.12
22	1L	38	MIA	C2-N1-C6	2.31	121.33	117.19
22	3K	38	MIA	N3-C2-N1	-2.31	122.73	126.98
22	1K	40	PSU	C6-N1-C2	-2.31	120.32	122.68
22	3L	38	MIA	C4-C5-N7	-2.30	107.00	109.40
22	1K	40	PSU	O2-C2-N1	-2.29	120.27	122.79
22	3K	63	5MU	C6-N1-C2	-2.29	118.98	121.30
22	3K	38	MIA	C16-C14-C15	-2.28	109.56	114.60
22	1K	63	5MU	C1 <sup>1</sup> -N1-C2	2.25	121.64	117.57
23	2K	8	4SU	C1 <sup>1</sup> -N1-C2	2.23	121.60	117.57
22	1K	64	PSU	C5-C4-N3	2.21	121.57	116.58
23	2K	8	4SU	O2-C2-N3	-2.19	117.42	121.50
22	3K	63	5MU	N3-C2-N1	2.19	117.79	114.89
22	3K	8	4SU	O2-C2-N1	-2.18	119.89	122.79
22	1L	40	PSU	O2-C2-N1	-2.18	120.39	122.79
23	2K	55	5MU	O4-C4-N3	-2.17	115.95	120.12
22	1K	17	OMG	N1-C2-N3	-2.17	119.27	123.32
22	3L	35	QUO	N2-C2-N1	2.16	121.31	116.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	3L	17	OMG	N2-C2-N1	2.16	121.30	116.71
22	3L	17	OMG	C3'-C2'-C1'	-2.16	98.84	102.89
22	1K	38	MIA	C4-C5-N7	-2.15	107.16	109.40
22	3L	35	QUO	O13-C13-C14	-2.15	106.87	112.04
22	3L	35	QUO	C10-N11-C12	-2.13	110.43	114.90
22	1K	35	QUO	C16-C15-C14	-2.11	102.07	105.68
22	1K	63	5MU	N3-C2-N1	2.11	117.68	114.89
22	3L	63	5MU	C1'-N1-C2	2.10	121.37	117.57
22	1K	64	PSU	O4-C4-C5	-2.09	118.57	124.05
23	2L	55	5MU	N3-C2-N1	2.09	117.67	114.89
22	1K	38	MIA	N3-C2-N1	-2.08	123.15	126.98
22	1L	35	QUO	N2-C2-N1	2.08	121.14	116.71
22	1K	8	4SU	C1'-N1-C2	2.06	121.31	117.57
23	2K	33	OMC	N4-C4-N3	2.03	121.53	117.97
23	2L	55	5MU	C5M-C5-C4	2.02	120.99	118.77
22	3K	64	PSU	C6-C5-C4	2.02	119.61	118.20
22	1L	38	MIA	C12-N6-C6	-2.01	119.57	122.55

There are no chirality outliers.

All (70) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
22	1K	35	QUO	C13-C12-N11-C10
22	1K	38	MIA	N1-C2-S10-C11
22	1K	38	MIA	N3-C2-S10-C11
22	1K	38	MIA	C12-C13-C14-C15
22	1K	38	MIA	C12-C13-C14-C16
23	2K	33	OMC	C1'-C2'-O2'-CM2
22	3K	35	QUO	C13-C12-N11-C10
22	3K	35	QUO	C16-C12-N11-C10
22	3K	38	MIA	O4'-C4'-C5'-O5'
22	3K	38	MIA	C3'-C4'-C5'-O5'
22	3K	38	MIA	C5-C6-N6-C12
22	3K	38	MIA	C12-C13-C14-C15
22	3K	38	MIA	C12-C13-C14-C16
22	3K	63	5MU	O4'-C4'-C5'-O5'
22	1L	35	QUO	O4'-C4'-C5'-O5'
22	1L	35	QUO	C3'-C4'-C5'-O5'
22	1L	38	MIA	O4'-C4'-C5'-O5'
22	1L	38	MIA	C3'-C4'-C5'-O5'
22	1L	38	MIA	N1-C2-S10-C11
22	1L	38	MIA	N3-C2-S10-C11

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Mol	Chain	Res	Type	Atoms
22	1L	38	MIA	N6-C12-C13-C14
22	1L	38	MIA	C12-C13-C14-C15
22	1L	38	MIA	C12-C13-C14-C16
23	2L	21	H2U	O4'-C1'-N1-C6
22	3L	38	MIA	C5-C6-N6-C12
22	3L	38	MIA	N1-C6-N6-C12
22	3L	38	MIA	N6-C12-C13-C14
22	3L	38	MIA	C12-C13-C14-C15
22	3L	38	MIA	C12-C13-C14-C16
22	3K	64	PSU	C4'-C5'-O5'-P
22	1L	17	OMG	C4'-C5'-O5'-P
23	2K	21	H2U	O4'-C4'-C5'-O5'
23	2K	21	H2U	C3'-C4'-C5'-O5'
22	3K	63	5MU	C3'-C4'-C5'-O5'
22	3K	64	PSU	C3'-C4'-C5'-O5'
22	1K	35	QUO	C7-C10-N11-C12
22	3K	35	QUO	C7-C10-N11-C12
22	3K	64	PSU	O4'-C4'-C5'-O5'
22	3L	35	QUO	C7-C10-N11-C12
22	3K	38	MIA	N1-C6-N6-C12
22	1K	8	4SU	O4'-C4'-C5'-O5'
22	1L	17	OMG	C3'-C4'-C5'-O5'
22	1L	35	QUO	C7-C10-N11-C12
22	1K	35	QUO	O4'-C4'-C5'-O5'
23	2L	21	H2U	C2'-C1'-N1-C2
23	2K	21	H2U	C4'-C5'-O5'-P
23	2L	21	H2U	C2'-C1'-N1-C6
22	1L	8	4SU	O4'-C4'-C5'-O5'
22	3L	38	MIA	C4'-C5'-O5'-P
23	2L	21	H2U	C3'-C4'-C5'-O5'
23	2L	21	H2U	O4'-C1'-N1-C2
22	3L	38	MIA	C3'-C4'-C5'-O5'
22	3K	17	OMG	C3'-C2'-O2'-CM2
22	1K	8	4SU	C3'-C4'-C5'-O5'
23	2L	21	H2U	O4'-C4'-C5'-O5'
22	1K	17	OMG	C4'-C5'-O5'-P
22	3L	17	OMG	C3'-C2'-O2'-CM2
22	1K	35	QUO	C3'-C4'-C5'-O5'
22	3L	17	OMG	C3'-C4'-C5'-O5'
22	3L	35	QUO	O4'-C4'-C5'-O5'
22	1L	64	PSU	O4'-C1'-C5-C6
22	1K	38	MIA	N1-C6-N6-C12

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Mol	Chain	Res	Type	Atoms
22	1K	17	OMG	O4'-C4'-C5'-O5'
22	1L	17	OMG	O4'-C4'-C5'-O5'
22	3L	38	MIA	O4'-C4'-C5'-O5'
23	2L	33	OMC	C2'-C1'-N1-C2
22	1K	63	5MU	C3'-C4'-C5'-O5'
22	3K	17	OMG	O4'-C4'-C5'-O5'
22	1L	8	4SU	C3'-C4'-C5'-O5'
22	1K	38	MIA	C5-C6-N6-C12

There are no ring outliers.

26 monomers are involved in 46 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	3L	8	4SU	1	0
22	3K	64	PSU	1	0
22	1K	38	MIA	3	0
22	1L	17	OMG	1	0
23	2K	33	OMC	1	0
22	3L	17	OMG	1	0
23	2L	21	H2U	1	0
22	3K	8	4SU	1	0
23	2K	55	5MU	2	0
23	2L	33	OMC	2	0
22	1L	35	QUO	2	0
22	1L	64	PSU	1	0
22	1L	38	MIA	1	0
23	2K	21	H2U	6	0
22	1K	17	OMG	2	0
22	1K	63	5MU	1	0
23	2L	55	5MU	2	0
22	3L	35	QUO	2	0
22	3L	38	MIA	1	0
22	1K	64	PSU	1	0
22	3K	17	OMG	3	0
22	3L	63	5MU	2	0
22	3K	35	QUO	3	0
23	2K	8	4SU	2	0
23	2L	8	4SU	2	0
22	1K	35	QUO	4	0

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 1137 ligands modelled in this entry, 1137 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
55	1G	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	1G	1530:G	O3'	1531:A	P	3.01

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

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

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	13	1498/1522 (98%)	-0.47	8 (0%) 91 81	52, 95, 191, 430	0
2	12	237/256 (92%)	0.24	12 (5%) 28 13	115, 168, 226, 251	0
2	1E	237/256 (92%)	-0.08	3 (1%) 77 59	104, 142, 195, 252	0
3	22	206/239 (86%)	0.83	27 (13%) 3 1	124, 151, 185, 240	0
3	2E	205/239 (85%)	0.29	10 (4%) 29 14	83, 109, 154, 191	0
4	32	208/208 (100%)	0.70	23 (11%) 5 2	90, 116, 161, 199	0
4	3E	208/208 (100%)	0.44	12 (5%) 23 10	75, 106, 145, 171	0
5	42	151/162 (93%)	0.32	3 (1%) 65 44	98, 124, 157, 188	0
5	4E	151/162 (93%)	0.10	3 (1%) 65 44	73, 98, 129, 175	0
6	52	101/101 (100%)	0.14	1 (0%) 82 67	78, 101, 133, 177	0
6	5E	101/101 (100%)	0.07	1 (0%) 82 67	75, 102, 131, 171	0
7	62	155/156 (99%)	1.02	28 (18%) 1 0	101, 128, 163, 204	0
7	6E	155/156 (99%)	0.28	7 (4%) 33 16	95, 117, 154, 199	0
8	72	138/138 (100%)	0.76	18 (13%) 3 1	93, 127, 152, 171	0
8	7E	138/138 (100%)	0.15	1 (0%) 87 75	81, 106, 133, 157	0
9	82	127/128 (99%)	0.77	13 (10%) 6 2	110, 159, 203, 214	0
9	8E	127/128 (99%)	0.12	5 (3%) 39 20	86, 139, 183, 217	0
10	1A	99/105 (94%)	0.64	10 (10%) 7 2	120, 162, 202, 221	0
10	1I	99/105 (94%)	0.06	3 (3%) 50 27	84, 134, 180, 197	0
11	2A	119/129 (92%)	1.16	15 (12%) 3 1	85, 111, 149, 259	0
11	2I	119/129 (92%)	0.45	11 (9%) 9 3	68, 101, 158, 186	0
12	3A	125/132 (94%)	1.43	35 (28%) 0 0	78, 103, 165, 208	0
12	3I	125/132 (94%)	0.13	5 (4%) 38 19	60, 72, 138, 239	0
13	4A	117/126 (92%)	1.75	43 (36%) 0 0	107, 146, 182, 217	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	4I	116/126 (92%)	0.36	7 (6%) 21 10	85, 122, 159, 196	0
14	5A	58/61 (95%)	1.91	27 (46%) 0 0	120, 150, 175, 199	0
14	5I	61/61 (100%)	0.04	0 100 100	83, 100, 131, 187	0
15	6A	88/89 (98%)	0.62	5 (5%) 23 11	78, 110, 141, 162	0
15	6I	88/89 (98%)	-0.23	0 100 100	75, 99, 133, 167	0
16	7A	84/88 (95%)	0.65	3 (3%) 42 22	87, 101, 148, 183	0
16	7I	84/88 (95%)	0.57	8 (9%) 8 2	95, 115, 160, 193	0
17	8A	100/105 (95%)	1.26	24 (24%) 0 0	88, 111, 142, 212	0
17	8I	100/105 (95%)	-0.08	2 (2%) 65 44	85, 108, 137, 174	0
18	9A	72/88 (81%)	0.93	8 (11%) 5 2	90, 117, 165, 216	0
18	9I	72/88 (81%)	0.24	3 (4%) 36 18	81, 106, 165, 192	0
19	AA	82/93 (88%)	2.10	44 (53%) 0 0	120, 163, 207, 254	0
19	AI	83/93 (89%)	0.23	6 (7%) 15 6	91, 122, 184, 229	0
20	BA	99/106 (93%)	0.55	6 (6%) 21 9	85, 110, 159, 210	0
20	BI	99/106 (93%)	0.51	9 (9%) 9 3	101, 123, 179, 208	0
21	1B	25/27 (92%)	1.85	11 (44%) 0 0	109, 131, 161, 194	0
21	1F	25/27 (92%)	0.45	1 (4%) 38 19	88, 106, 144, 196	0
22	1K	78/85 (91%)	-0.06	2 (2%) 56 33	78, 184, 302, 353	0
22	1L	67/85 (78%)	0.85	11 (16%) 1 1	118, 208, 263, 287	0
22	3K	67/85 (78%)	-0.51	0 100 100	64, 176, 247, 292	0
22	3L	68/85 (80%)	-0.28	0 100 100	72, 188, 243, 285	0
23	2K	72/77 (93%)	-0.53	0 100 100	60, 89, 126, 155	0
23	2L	72/77 (93%)	-0.39	0 100 100	72, 104, 146, 163	0
24	4K	15/30 (50%)	-0.33	0 100 100	64, 95, 185, 192	0
24	4L	16/30 (53%)	0.59	1 (6%) 20 8	84, 129, 213, 234	0
25	14	2907/2912 (99%)	-0.22	53 (1%) 68 47	48, 80, 246, 500	0
25	1H	2912/2912 (100%)	-0.13	35 (1%) 79 61	37, 68, 231, 416	0
26	16	122/122 (100%)	-0.33	2 (1%) 72 51	65, 88, 112, 273	0
26	1J	122/122 (100%)	-0.56	0 100 100	79, 111, 139, 235	0
27	11	272/272 (100%)	0.05	2 (0%) 87 75	39, 60, 90, 171	0
28	21	205/205 (100%)	0.52	10 (4%) 29 14	47, 86, 159, 216	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
28	29	205/205 (100%)	0.21	10 (4%) 29 14	55, 92, 186, 254	0
29	31	202/202 (100%)	-0.13	0 100 100	44, 75, 130, 195	0
30	41	181/181 (100%)	0.51	16 (8%) 10 4	80, 104, 154, 203	0
30	49	181/181 (100%)	1.51	52 (28%) 0 0	99, 133, 183, 213	0
31	51	174/180 (96%)	0.25	5 (2%) 51 28	74, 108, 142, 187	0
31	59	171/180 (95%)	1.28	45 (26%) 0 0	129, 194, 264, 306	0
32	61	146/146 (100%)	0.30	5 (3%) 45 24	71, 128, 164, 189	0
32	69	146/146 (100%)	0.43	9 (6%) 20 9	78, 126, 180, 217	0
33	15	138/138 (100%)	-0.30	0 100 100	73, 104, 157, 174	0
33	58	138/138 (100%)	0.80	12 (8%) 10 4	60, 90, 143, 192	0
34	25	122/122 (100%)	0.34	4 (3%) 46 24	64, 84, 113, 129	0
34	68	122/122 (100%)	0.40	1 (0%) 86 72	54, 72, 94, 105	0
35	35	150/150 (100%)	0.45	14 (9%) 8 3	55, 107, 169, 217	0
35	78	150/150 (100%)	-0.18	3 (2%) 65 44	45, 82, 117, 215	0
36	45	141/141 (100%)	0.35	9 (6%) 19 8	73, 107, 152, 190	0
36	88	141/141 (100%)	0.39	8 (5%) 23 11	55, 79, 127, 152	0
37	55	117/118 (99%)	-0.21	0 100 100	54, 77, 104, 141	0
37	98	118/118 (100%)	0.69	9 (7%) 13 5	55, 79, 105, 134	0
38	65	111/111 (100%)	0.97	17 (15%) 2 1	87, 113, 162, 234	0
38	A8	111/111 (100%)	0.35	5 (4%) 33 16	72, 90, 136, 206	0
39	75	137/137 (100%)	-0.14	2 (1%) 73 54	75, 95, 162, 229	0
39	B8	136/137 (99%)	0.08	1 (0%) 87 75	67, 90, 153, 191	0
40	85	117/117 (100%)	-0.07	1 (0%) 84 69	65, 89, 142, 206	0
40	C8	117/117 (100%)	0.67	14 (11%) 4 2	51, 79, 131, 184	0
41	95	101/101 (100%)	0.51	7 (6%) 16 7	61, 129, 158, 199	0
41	D8	101/101 (100%)	0.96	9 (8%) 9 3	53, 105, 180, 251	0
42	A5	113/113 (100%)	-0.02	1 (0%) 84 69	57, 72, 119, 205	0
42	E8	113/113 (100%)	0.83	6 (5%) 26 12	54, 69, 115, 197	0
43	B5	92/94 (97%)	0.02	1 (1%) 80 64	60, 80, 115, 161	0
43	F8	94/94 (100%)	0.50	3 (3%) 47 25	51, 66, 102, 136	0
44	C5	104/110 (94%)	0.83	15 (14%) 2 1	88, 130, 215, 257	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
44	G8	104/110 (94%)	0.22	3 (2%) 51 28	67, 98, 165, 204	0
45	H8	175/175 (100%)	1.85	66 (37%) 0 0	83, 136, 224, 250	0
46	E5	77/85 (90%)	0.45	4 (5%) 27 12	61, 85, 112, 202	0
46	I8	77/85 (90%)	0.30	1 (1%) 77 59	52, 69, 99, 223	0
47	F5	97/98 (98%)	0.75	10 (10%) 6 2	55, 80, 162, 236	0
47	J8	97/98 (98%)	0.39	8 (8%) 11 4	46, 69, 184, 208	0
48	G5	66/66 (100%)	0.38	4 (6%) 21 9	77, 102, 150, 231	0
48	K8	66/66 (100%)	0.24	2 (3%) 50 27	58, 77, 117, 208	0
49	H5	59/59 (100%)	0.09	0 100 100	76, 98, 151, 172	0
49	L8	59/59 (100%)	0.50	2 (3%) 45 24	59, 77, 114, 147	0
50	I5	63/66 (95%)	4.55	49 (77%) 0 0	165, 220, 260, 276	0
50	M8	66/66 (100%)	1.75	25 (37%) 0 0	114, 177, 241, 262	0
51	J5	58/59 (98%)	-0.07	2 (3%) 45 24	56, 81, 192, 229	0
51	N8	59/59 (100%)	1.43	9 (15%) 2 1	46, 82, 212, 227	0
52	K5	45/45 (100%)	4.29	37 (82%) 0 0	136, 199, 245, 278	0
52	O8	45/45 (100%)	2.50	26 (57%) 0 0	111, 162, 201, 227	0
53	L5	45/49 (91%)	-0.02	0 100 100	47, 56, 71, 90	0
53	P8	45/49 (91%)	-0.21	0 100 100	38, 46, 61, 76	0
54	Q8	62/65 (95%)	0.20	3 (4%) 30 14	56, 72, 111, 166	0
55	1G	1498/1522 (98%)	-0.28	5 (0%) 94 88	65, 110, 185, 415	0
56	19	273/276 (98%)	0.30	7 (2%) 56 33	47, 71, 97, 127	0
57	39	208/210 (99%)	0.30	9 (4%) 35 17	56, 99, 194, 251	0
58	D5	179/206 (86%)	0.89	31 (17%) 1 0	111, 162, 259, 295	0
59	M5	60/61 (98%)	0.45	4 (6%) 17 7	67, 81, 131, 191	0
All	All	21050/21589 (97%)	0.18	1168 (5%) 25 11	37, 98, 201, 500	0

All (1168) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
50	I5	31	ILE	17.4
51	N8	59	GLU	16.3
12	3I	129	ALA	13.8
25	1H	2799	A	13.7
28	29	205	ALA	13.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
25	1H	2901	C	13.5
50	I5	52	THR	12.7
50	I5	32	TYR	12.6
11	2A	129	SER	12.5
30	49	2	PRO	12.3
51	N8	60	VAL	12.3
31	59	99	VAL	12.2
25	1H	2798	C	12.2
50	I5	63	TYR	12.1
45	H8	106	GLY	11.9
25	1H	654(K)	C	11.4
25	14	654(J)	A	10.8
25	1H	2902	C	10.7
52	K5	42	TRP	10.7
45	H8	147	GLY	10.7
40	C8	118	GLY	10.4
41	D8	36	PRO	10.3
57	39	1	MET	10.3
50	I5	29	PRO	10.3
11	2A	128	ALA	10.2
47	F5	98	LEU	10.1
50	I5	46	GLN	10.0
50	I5	30	GLU	9.8
13	4A	6	GLY	9.8
52	K5	50	ARG	9.8
50	I5	28	LYS	9.7
11	2I	129	SER	9.7
52	K5	13	CYS	9.7
13	4A	7	VAL	9.5
2	12	240	GLN	9.5
51	N8	54	GLY	9.5
50	I5	40	HIS	9.4
13	4A	8	GLU	9.4
18	9A	88	LYS	9.3
47	F5	97	LEU	9.2
44	C5	59	GLY	8.9
28	21	205	ALA	8.9
25	14	2799	A	8.7
50	I5	54	GLY	8.7
25	1H	2	G	8.6
25	1H	1	G	8.6
44	C5	92	ASN	8.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
31	59	125	VAL	8.3
17	8A	101	ARG	8.3
41	D8	45	THR	8.2
50	I5	55	ARG	8.2
52	K5	25	LYS	8.0
52	K5	14	THR	8.0
25	14	2901	C	8.0
12	3A	129	ALA	8.0
40	C8	117	GLN	7.9
25	1H	2801	A	7.8
11	2A	11	LYS	7.8
13	4A	4	ILE	7.7
50	M8	32	TYR	7.7
38	65	109	GLY	7.7
52	K5	30	THR	7.6
31	59	98	LEU	7.6
52	K5	51	GLU	7.4
30	41	2	PRO	7.4
45	H8	146	ILE	7.4
25	14	2802	G	7.3
45	H8	105	VAL	7.3
1	13	1032	A	7.3
12	3A	64	TYR	7.3
25	14	2899	G	7.2
13	4A	3	ARG	7.2
31	59	96	ALA	7.2
7	62	82	GLY	7.1
50	I5	8	LYS	7.1
52	K5	22	ALA	7.0
30	49	138	GLN	7.0
45	H8	113	ALA	7.0
52	K5	49	HIS	6.9
50	I5	9	LEU	6.9
36	45	1	MET	6.9
46	I8	85	ALA	6.9
52	K5	53	LYS	6.9
25	14	654(K)	C	6.9
50	M8	34	GLU	6.9
31	59	128	PRO	6.8
38	65	108	GLY	6.8
7	62	81	GLY	6.7
25	1H	2900	A	6.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
50	I5	42	PHE	6.6
52	O8	42	TRP	6.6
30	49	146	TYR	6.6
25	1H	2795	G	6.5
14	5A	39	LEU	6.5
11	2A	13	GLN	6.5
51	N8	55	ARG	6.5
25	14	654(L)	G	6.5
25	14	2797	U	6.5
30	49	139	LEU	6.4
28	21	204	ALA	6.4
42	E8	113	LYS	6.4
25	14	654(I)	C	6.4
5	4E	155	GLU	6.3
45	H8	172	ALA	6.3
58	D5	146	ILE	6.2
11	2I	12	ARG	6.2
25	1H	4	C	6.2
52	K5	23	THR	6.2
25	1H	2797	U	6.1
13	4I	6	GLY	6.1
45	H8	173	ALA	6.1
22	1L	16	C	6.1
38	A8	2	ALA	6.1
52	K5	41	PRO	6.1
50	I5	51	ASP	6.1
50	I5	56	VAL	6.0
58	D5	112	ARG	6.0
31	59	124	GLU	5.9
13	4A	2	ALA	5.9
51	N8	57	VAL	5.9
45	H8	107	THR	5.9
50	I5	39	CYS	5.8
50	M8	31	ILE	5.8
50	I5	12	ALA	5.8
12	3A	128	ALA	5.8
26	16	1(M)	A	5.8
52	K5	31	PRO	5.7
25	1H	1536	A	5.7
50	I5	44	THR	5.7
19	AA	67	VAL	5.7
13	4A	100	GLY	5.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
25	1H	654(J)	A	5.7
57	39	133	ASN	5.6
25	14	2902	C	5.6
45	H8	104	PHE	5.6
31	59	115	VAL	5.5
51	N8	58	LEU	5.5
1	13	1031	G	5.4
25	1H	2803	C	5.4
31	59	32	GLU	5.4
25	14	2795	G	5.4
30	49	152	LEU	5.3
25	1H	896	A	5.3
18	9A	17	SER	5.3
45	H8	1	MET	5.3
13	4A	5	ALA	5.3
19	AI	2	PRO	5.2
38	A8	109	GLY	5.2
25	14	2900	A	5.2
52	K5	39	TYR	5.2
30	49	116	ASP	5.1
25	1H	3	U	5.1
13	4A	80	ARG	5.1
50	M8	3	GLU	5.1
52	K5	29	ASN	5.1
52	K5	35	GLU	5.1
50	I5	13	ARG	5.1
14	5A	29	ARG	5.0
36	45	91	GLU	5.0
52	O8	13	CYS	5.0
12	3A	94	PRO	5.0
19	AA	82	GLY	5.0
13	4I	5	ALA	5.0
52	K5	9	LEU	5.0
52	O8	53	LYS	5.0
38	65	33	LYS	5.0
19	AA	30	LEU	5.0
25	14	2798	C	5.0
28	29	73	GLU	5.0
45	H8	148	ASP	5.0
47	J8	96	LYS	4.9
30	49	39	ILE	4.9
52	K5	43	CYS	4.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
51	J5	59	GLU	4.9
32	61	113	ARG	4.9
19	AA	79	THR	4.9
51	N8	53	ALA	4.9
30	49	137	GLU	4.9
40	85	90	VAL	4.9
55	1G	1032	A	4.9
13	4A	10	PRO	4.8
47	J8	98	LEU	4.8
35	35	149	GLU	4.8
45	H8	145	GLU	4.8
7	62	79	ARG	4.8
57	39	11	VAL	4.8
19	AA	78	ARG	4.8
50	I5	24	THR	4.8
28	29	59	VAL	4.8
30	49	62	LEU	4.8
45	H8	108	PRO	4.7
8	72	131	GLY	4.7
4	32	161	ASN	4.7
45	H8	121	HIS	4.7
58	D5	141	VAL	4.7
44	C5	58	GLY	4.7
35	35	110	TYR	4.7
30	49	155	MET	4.7
25	14	654(F)	C	4.7
17	8A	7	THR	4.6
25	14	1064	C	4.6
7	62	84	ASN	4.6
14	5A	38	GLY	4.6
28	29	69	LYS	4.6
50	I5	45	GLY	4.6
50	I5	47	GLN	4.6
57	39	12	LEU	4.6
45	H8	96	VAL	4.6
31	59	103	LEU	4.5
50	I5	27	THR	4.5
52	O8	49	HIS	4.5
12	3I	128	ALA	4.5
50	I5	10	VAL	4.5
6	5E	101	ALA	4.5
31	59	45	VAL	4.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
3	2E	166	GLU	4.5
25	14	2801	A	4.5
10	1A	65	LEU	4.5
38	65	60	GLY	4.4
12	3A	62	SER	4.4
50	I5	43	TYR	4.4
7	62	83	ALA	4.4
30	49	140	ILE	4.4
47	J8	97	LEU	4.4
20	BA	104	LEU	4.4
30	49	145	THR	4.4
50	I5	22	ILE	4.4
25	14	2167	U	4.4
12	3A	55	VAL	4.4
38	65	37	ALA	4.4
50	I5	34	GLU	4.3
38	65	32	LEU	4.3
32	61	65	ALA	4.3
19	AA	71	LEU	4.3
50	M8	55	ARG	4.3
50	I5	33	VAL	4.3
52	O8	20	ASN	4.3
52	K5	40	CYS	4.3
2	12	5	ILE	4.2
58	D5	144	LEU	4.2
30	49	182	LYS	4.2
58	D5	121	HIS	4.2
52	O8	12	GLU	4.2
50	I5	11	PRO	4.2
52	O8	48	VAL	4.2
31	59	89	ILE	4.2
30	49	94	LEU	4.2
2	12	14	GLY	4.2
50	I5	26	SER	4.2
7	62	78	ARG	4.2
52	K5	19	ARG	4.2
14	5A	26	ARG	4.1
30	49	113	ARG	4.1
52	O8	23	THR	4.1
22	1L	24	G	4.1
12	3A	127	GLU	4.1
50	M8	40	HIS	4.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
52	O8	34	LEU	4.1
12	3I	19	ARG	4.1
8	72	1	MET	4.1
13	4I	8	GLU	4.1
14	5A	37	PHE	4.0
20	BI	41	ILE	4.0
45	H8	2	GLU	4.0
1	13	345	C	4.0
45	H8	144	LEU	4.0
14	5A	34	TYR	4.0
19	AA	52	TYR	4.0
19	AA	69	HIS	4.0
30	49	133	LEU	4.0
31	59	33	LEU	4.0
41	D8	47	VAL	4.0
19	AA	10	PHE	4.0
7	62	104	LEU	3.9
58	D5	143	GLY	3.9
30	41	182	LYS	3.9
17	8A	24	GLU	3.9
52	K5	12	GLU	3.9
36	45	90	VAL	3.9
25	1H	1534	G	3.9
7	62	4	ARG	3.9
13	4A	25	ILE	3.9
25	14	887	A	3.9
31	59	155	SER	3.9
41	95	93	GLU	3.9
52	O8	26	ASN	3.9
7	62	156	TRP	3.9
13	4A	97	PRO	3.9
31	59	49	VAL	3.9
4	3E	110	PHE	3.9
30	49	147	ASP	3.9
12	3A	68	ALA	3.9
22	1L	80	C	3.9
7	62	80	VAL	3.9
30	49	34	LEU	3.9
12	3A	69	TYR	3.9
9	82	4	TYR	3.8
52	O8	52	VAL	3.8
50	M8	5	ILE	3.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
30	49	118	ARG	3.8
7	62	85	TYR	3.8
21	1B	6	ARG	3.8
25	14	654(H)	G	3.8
44	C5	49	VAL	3.8
3	22	103	VAL	3.8
52	K5	21	TYR	3.8
31	59	105	LEU	3.8
45	H8	70	LEU	3.8
45	H8	99	TYR	3.8
31	59	106	THR	3.8
50	I5	5	ILE	3.8
52	K5	26	ASN	3.7
57	39	14	PRO	3.7
51	J5	60	VAL	3.7
25	1H	1176	G	3.7
52	K5	24	GLU	3.7
25	14	2	G	3.7
25	14	888	C	3.7
58	D5	51	ALA	3.7
28	21	187	ALA	3.7
52	K5	52	VAL	3.7
47	J8	92	LYS	3.7
19	AA	70	LYS	3.7
58	D5	147	GLY	3.7
3	22	101	LEU	3.7
31	51	171	LEU	3.7
52	K5	46	HIS	3.7
45	H8	140	ASP	3.6
31	59	97	ARG	3.6
45	H8	138	GLU	3.6
50	I5	35	VAL	3.6
19	AA	28	LYS	3.6
13	4A	65	LYS	3.6
14	5A	10	ALA	3.6
58	D5	179	ASP	3.6
12	3A	52	LEU	3.6
14	5A	6	LEU	3.6
44	C5	47	LYS	3.6
25	1H	5	A	3.6
3	22	64	VAL	3.6
47	J8	93	GLU	3.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
25	14	1093	G	3.6
7	62	86	GLN	3.6
39	B8	106	SER	3.6
3	22	124	ILE	3.6
45	H8	97	GLU	3.6
50	I5	23	GLU	3.6
9	8E	36	TYR	3.6
19	AA	29	ARG	3.6
15	6A	2	PRO	3.6
31	59	123	PHE	3.6
8	72	84	ARG	3.6
12	3A	27	LEU	3.6
30	49	35	GLU	3.6
47	F5	96	LYS	3.6
50	M8	66	SER	3.6
8	72	2	LEU	3.6
33	58	72	TYR	3.6
13	4A	102	ARG	3.5
7	62	42	ILE	3.5
8	72	112	LEU	3.5
13	4A	88	ARG	3.5
45	H8	155	LEU	3.5
30	49	142	PRO	3.5
21	1B	10	ARG	3.5
50	I5	7	PRO	3.5
49	L8	60	GLU	3.5
50	M8	38	LYS	3.5
2	12	163	PHE	3.5
40	C8	113	ALA	3.5
4	3E	180	GLY	3.5
30	49	144	ILE	3.5
20	BA	103	GLY	3.5
14	5A	35	ARG	3.5
30	49	109	VAL	3.5
58	D5	117	LEU	3.5
25	1H	2802	G	3.5
45	H8	156	LYS	3.5
11	2A	31	THR	3.5
30	49	177	GLY	3.5
12	3A	65	GLU	3.4
10	1A	34	VAL	3.4
42	A5	112	GLY	3.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
50	I5	25	TYR	3.4
25	1H	2899	G	3.4
7	62	5	ARG	3.4
14	5A	11	LYS	3.4
41	95	36	PRO	3.4
31	51	3	ARG	3.4
11	2A	12	ARG	3.4
17	8A	9	VAL	3.4
22	1L	23	A	3.4
13	4A	9	ILE	3.4
45	H8	66	SER	3.4
18	9A	87	ARG	3.4
38	65	20	ARG	3.4
13	4A	87	TYR	3.4
31	59	4	ILE	3.4
58	D5	145	GLU	3.4
30	49	181	ARG	3.4
11	2I	98	LEU	3.3
13	4A	98	VAL	3.3
50	M8	16	CYS	3.3
13	4I	3	ARG	3.3
28	29	204	ALA	3.3
35	78	150	ALA	3.3
30	49	157	ILE	3.3
15	6A	89	GLY	3.3
55	1G	1032(A)	G	3.3
12	3A	60	LEU	3.3
32	69	11	ASN	3.3
45	H8	131	ARG	3.3
19	AA	40	ILE	3.3
40	C8	89	GLU	3.3
41	95	94	LEU	3.3
14	5A	25	VAL	3.3
44	C5	93	GLY	3.3
36	45	104	PHE	3.3
45	H8	164	ALA	3.3
17	8A	22	LEU	3.3
35	35	148	LEU	3.3
30	49	108	ASN	3.3
25	14	1087	G	3.3
10	1A	66	ARG	3.3
30	49	149	VAL	3.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
30	49	115	ARG	3.2
38	65	2	ALA	3.2
3	22	198	VAL	3.2
13	4A	90	LEU	3.2
8	72	133	LEU	3.2
18	9I	88	LYS	3.2
36	45	103	MET	3.2
30	41	139	LEU	3.2
4	32	156	GLU	3.2
25	14	3	U	3.2
30	49	143	GLU	3.2
30	49	58	GLN	3.2
52	O8	37	ARG	3.2
30	49	117	PHE	3.2
51	N8	51	TYR	3.2
25	14	1	G	3.2
59	M5	29	LYS	3.2
12	3A	72	GLY	3.2
32	61	140	LEU	3.2
31	59	100	GLY	3.2
43	F8	92	LEU	3.2
13	4I	56	LEU	3.2
28	29	77	ILE	3.2
21	1B	15	ARG	3.2
48	G5	43	GLN	3.2
52	O8	22	ALA	3.2
45	H8	134	PRO	3.2
13	4A	79	LYS	3.2
9	8E	51	ARG	3.2
41	D8	98	GLU	3.2
17	8A	11	VAL	3.1
50	M8	30	GLU	3.1
19	AA	12	ASP	3.1
57	39	23	ASP	3.1
12	3A	48	PRO	3.1
9	8E	8	GLY	3.1
19	AA	34	TRP	3.1
52	K5	37	ARG	3.1
19	AA	44	MET	3.1
36	88	140	ALA	3.1
58	D5	113	ALA	3.1
19	AA	33	THR	3.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
59	M5	40	GLU	3.1
17	8A	75	ARG	3.1
44	C5	50	ARG	3.1
44	C5	53	PRO	3.1
45	H8	101	PRO	3.1
45	H8	169	GLU	3.1
50	I5	36	CYS	3.1
25	14	1063	G	3.1
13	4A	73	GLU	3.1
21	1B	14	TRP	3.1
45	H8	168	GLU	3.1
20	BI	72	LEU	3.1
28	29	54	GLN	3.1
11	2A	21	ILE	3.1
31	59	29	PRO	3.1
13	4A	24	GLY	3.1
22	1K	54	C	3.1
25	14	1177	A	3.1
25	14	2803	C	3.1
7	6E	16	LEU	3.1
32	69	35	LEU	3.1
21	1F	2	GLY	3.1
47	F5	28	GLY	3.1
45	H8	5	LEU	3.1
30	49	178	PHE	3.1
9	82	55	ALA	3.1
21	1B	2	GLY	3.1
8	72	129	VAL	3.1
37	98	102	GLU	3.1
25	14	2898	U	3.1
31	51	172	LYS	3.0
5	42	45	PHE	3.0
11	2A	25	TYR	3.0
12	3A	28	LYS	3.0
31	59	39	PRO	3.0
47	F5	93	GLU	3.0
30	41	135	LEU	3.0
48	G5	66	GLU	3.0
57	39	2	LYS	3.0
50	I5	48	ARG	3.0
4	32	160	GLN	3.0
7	62	130	GLY	3.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
25	1H	9	U	3.0
58	D5	116	VAL	3.0
40	C8	91	ASP	3.0
30	49	23	PHE	3.0
31	59	95	ARG	3.0
50	M8	4	GLY	3.0
52	O8	25	LYS	3.0
30	49	19	LEU	3.0
21	1B	22	ARG	3.0
8	72	86	ILE	3.0
10	1A	62	HIS	3.0
58	D5	111	VAL	3.0
52	O8	11	LEU	3.0
19	AA	53	ASN	3.0
11	2I	14	VAL	3.0
14	5A	23	ARG	3.0
25	1H	2898	U	3.0
2	12	72	GLY	3.0
50	I5	38	LYS	3.0
19	AA	77	THR	3.0
19	AA	57	HIS	3.0
17	8A	8	GLY	3.0
13	4A	66	LEU	3.0
52	K5	36	LEU	3.0
48	K8	43	GLN	3.0
30	49	141	PHE	3.0
25	1H	2897	U	2.9
35	35	106	LEU	2.9
50	M8	33	VAL	2.9
41	95	45	THR	2.9
58	D5	69	THR	2.9
50	M8	63	TYR	2.9
12	3A	19	ARG	2.9
25	14	2794	C	2.9
45	H8	159	PRO	2.9
45	H8	171	ILE	2.9
45	H8	136	PHE	2.9
21	1B	5	ASP	2.9
45	H8	87	ASP	2.9
11	2I	11	LYS	2.9
19	AA	47	HIS	2.9
44	C5	90	LEU	2.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
45	H8	174	VAL	2.9
35	35	92	GLU	2.9
19	AA	84	GLY	2.9
28	21	66	HIS	2.9
31	59	114	VAL	2.9
25	1H	2804	C	2.9
3	2E	60	ALA	2.9
50	M8	52	THR	2.9
44	C5	29	GLU	2.9
31	59	17	VAL	2.9
19	AA	50	ALA	2.9
1	13	208	U	2.9
25	1H	2790	A	2.9
4	32	23	GLY	2.9
8	72	119	LEU	2.9
14	5A	15	LYS	2.9
30	49	75	LYS	2.9
50	M8	28	LYS	2.9
3	2E	101	LEU	2.9
4	32	158	ILE	2.9
22	1L	85	A	2.9
13	4A	101	GLN	2.9
5	4E	154	GLY	2.9
31	59	131	VAL	2.9
4	32	179	GLU	2.9
28	29	76	ARG	2.9
38	A8	111	GLU	2.9
4	32	157	LEU	2.9
12	3A	56	ALA	2.8
14	5A	30	ALA	2.8
57	39	20	LEU	2.8
25	14	654(M)	C	2.8
4	32	176	LEU	2.8
18	9A	18	ARG	2.8
25	14	1057	A	2.8
3	22	19	GLU	2.8
25	1H	2793	G	2.8
12	3A	61	THR	2.8
50	M8	39	CYS	2.8
13	4A	61	GLU	2.8
14	5A	52	GLN	2.8
39	75	106	SER	2.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
13	4A	85	GLY	2.8
31	59	101	ARG	2.8
8	72	111	ILE	2.8
11	2I	83	ILE	2.8
9	82	75	ASP	2.8
52	K5	16	CYS	2.8
41	D8	38	LEU	2.8
45	H8	142	SER	2.8
25	14	1103	A	2.8
19	AI	40	ILE	2.8
52	K5	48	VAL	2.8
13	4A	71	ARG	2.8
19	AA	75	ALA	2.8
25	1H	277	C	2.8
3	22	42	LEU	2.8
5	42	94	ALA	2.8
20	BI	8	ARG	2.8
45	H8	95	PRO	2.8
30	49	82	LEU	2.8
50	I5	49	PHE	2.8
3	22	190	ARG	2.8
19	AA	32	LYS	2.8
19	AA	11	VAL	2.8
9	82	127	LYS	2.8
25	1H	2896	C	2.8
34	25	13	ASN	2.8
27	11	27	THR	2.8
41	95	12	TYR	2.8
7	62	75	VAL	2.8
38	65	35	ILE	2.8
35	35	138	LEU	2.8
19	AA	62	ILE	2.8
58	D5	52	SER	2.8
20	BI	9	ASN	2.8
45	H8	25	PRO	2.8
47	F5	95	LEU	2.7
14	5A	17	LYS	2.7
20	BI	106	ALA	2.7
25	14	1072	C	2.7
45	H8	157	LEU	2.7
2	12	152	PHE	2.7
19	AA	80	TYR	2.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
7	62	101	LEU	2.7
2	1E	14	GLY	2.7
3	2E	76	VAL	2.7
3	2E	193	TYR	2.7
58	D5	172	ALA	2.7
19	AA	38	SER	2.7
56	19	181	GLU	2.7
16	7I	18	ARG	2.7
18	9A	23	LYS	2.7
52	O8	18	ARG	2.7
1	13	1027	C	2.7
31	59	46	GLU	2.7
7	6E	56	GLN	2.7
17	8A	81	ARG	2.7
7	6E	84	ASN	2.7
48	G5	44	LEU	2.7
58	D5	148	ASP	2.7
13	4I	2	ALA	2.7
31	59	44	VAL	2.7
12	3A	21	LYS	2.7
13	4A	11	ARG	2.7
33	58	8	GLN	2.7
50	I5	21	VAL	2.7
56	19	2	ALA	2.7
55	1G	1032(B)	G	2.7
19	AA	76	PRO	2.7
41	D8	1	MET	2.7
3	22	79	ARG	2.7
8	72	31	PHE	2.7
19	AA	83	HIS	2.7
13	4A	74	VAL	2.7
4	3E	111	ALA	2.7
58	D5	173	ALA	2.7
2	12	70	PHE	2.7
19	AA	26	GLY	2.7
50	I5	58	ARG	2.7
20	BI	40	ALA	2.7
45	H8	162	GLU	2.7
1	13	1030	C	2.7
2	1E	122	PHE	2.7
14	5A	51	GLY	2.7
19	AA	31	ILE	2.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
25	14	1078	U	2.7
50	I5	62	ARG	2.7
30	49	92	VAL	2.7
19	AA	25	LYS	2.6
21	1B	21	TYR	2.6
31	59	130	ARG	2.6
12	3A	32	PHE	2.6
19	AA	41	VAL	2.6
41	D8	44	LYS	2.6
40	C8	86	ALA	2.6
45	H8	122	ARG	2.6
22	1L	15	G	2.6
35	78	149	GLU	2.6
58	D5	107	THR	2.6
13	4A	84	ILE	2.6
33	58	15	LEU	2.6
45	H8	102	LEU	2.6
16	7I	48	TRP	2.6
2	12	164	VAL	2.6
17	8A	80	GLY	2.6
30	49	136	ARG	2.6
58	D5	178	GLU	2.6
58	D5	50	GLN	2.6
8	72	83	ILE	2.6
2	12	71	VAL	2.6
10	1I	5	ARG	2.6
22	1L	12	C	2.6
25	14	1509	C	2.6
56	19	147	LEU	2.6
2	12	232	PRO	2.6
56	19	5	LYS	2.6
19	AA	15	LEU	2.6
13	4A	92	HIS	2.6
17	8A	57	VAL	2.6
30	41	137	GLU	2.6
3	22	196	LEU	2.6
11	2A	83	ILE	2.6
52	K5	34	LEU	2.6
2	12	188	ALA	2.6
43	B5	69	TYR	2.6
2	12	165	VAL	2.6
45	H8	114	GLY	2.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
37	98	113	LEU	2.6
50	M8	15	ILE	2.6
7	62	88	PRO	2.6
17	8A	10	VAL	2.6
17	8A	37	LYS	2.6
25	14	1062	G	2.6
52	O8	27	LYS	2.6
4	3E	3	ARG	2.6
15	6A	31	LEU	2.6
3	22	160	ALA	2.6
13	4A	75	ALA	2.6
14	5A	36	PHE	2.6
44	G8	102	CYS	2.6
17	8A	21	VAL	2.6
13	4A	64	TRP	2.6
4	32	111	ALA	2.6
12	3A	54	LYS	2.6
7	62	76	ARG	2.6
45	H8	85	HIS	2.6
56	19	38	LYS	2.5
4	32	112	VAL	2.5
25	1H	1535	U	2.5
35	35	71	VAL	2.5
10	1A	47	PHE	2.5
3	22	87	LEU	2.5
45	H8	154	ASP	2.5
19	AA	37	ARG	2.5
8	72	95	VAL	2.5
10	1A	90	LEU	2.5
19	AA	35	SER	2.5
33	58	11	PRO	2.5
52	K5	32	ASN	2.5
37	98	48	VAL	2.5
11	2A	127	LYS	2.5
12	3A	47	LYS	2.5
52	O8	45	LYS	2.5
9	82	33	PHE	2.5
42	E8	103	ILE	2.5
45	H8	4	ARG	2.5
56	19	270	ILE	2.5
30	49	179	PRO	2.5
35	35	13	ASN	2.5

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Mol	Chain	Res	Type	RSRZ
9	82	94	ALA	2.5
11	2I	82	VAL	2.5
18	9I	19	LYS	2.5
18	9I	21	LYS	2.5
12	3A	77	LEU	2.5
58	D5	55	HIS	2.5
25	14	1092	C	2.5
25	14	1096	A	2.5
36	88	104	PHE	2.5
9	82	36	TYR	2.5
38	65	36	TYR	2.5
51	N8	52	TYR	2.5
4	3E	135	LEU	2.5
32	69	12	LEU	2.5
31	51	39	PRO	2.5
31	59	126	PRO	2.5
38	A8	48	LEU	2.5
45	H8	38	TYR	2.5
17	8A	79	SER	2.5
18	9A	43	PHE	2.5
4	32	169	LYS	2.5
50	M8	2	LYS	2.5
55	1G	208	U	2.5
20	BA	8	ARG	2.5
45	H8	86	VAL	2.5
46	E5	21	LEU	2.5
54	Q8	62	LEU	2.5
7	62	2	ALA	2.5
19	AA	74	PHE	2.5
5	42	76	ILE	2.5
32	69	138	ILE	2.5
14	5A	12	ARG	2.5
19	AI	3	ARG	2.5
9	82	65	VAL	2.5
19	AI	74	PHE	2.5
36	45	65	PHE	2.5
3	22	45	LYS	2.4
9	82	106	ALA	2.4
19	AA	48	THR	2.4
10	1A	63	PHE	2.4
54	Q8	63	PRO	2.4
12	3A	46	LYS	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
16	7I	49	LEU	2.4
3	22	187	ALA	2.4
20	BA	9	ASN	2.4
10	1A	64	GLU	2.4
16	7I	41	PRO	2.4
31	59	81	GLU	2.4
20	BI	85	MET	2.4
50	M8	65	ASP	2.4
7	62	103	TRP	2.4
4	32	168	ARG	2.4
15	6A	68	ARG	2.4
45	H8	72	ARG	2.4
19	AA	49	ILE	2.4
52	K5	10	LEU	2.4
11	2A	68	ALA	2.4
50	I5	57	GLU	2.4
9	82	7	THR	2.4
21	1B	4	GLY	2.4
30	49	135	LEU	2.4
38	65	73	LEU	2.4
52	K5	11	LEU	2.4
25	14	1059	G	2.4
3	22	53	ALA	2.4
3	22	189	ALA	2.4
40	C8	57	PHE	2.4
12	3A	57	LYS	2.4
45	H8	166	SER	2.4
9	82	20	ARG	2.4
12	3A	53	ARG	2.4
35	35	123	LEU	2.4
44	C5	88	LYS	2.4
25	1H	887	A	2.4
25	14	1067	A	2.4
3	22	40	ARG	2.4
12	3A	41	ARG	2.4
30	49	68	PRO	2.4
43	F8	11	PRO	2.4
46	E5	22	GLY	2.4
30	41	39	ILE	2.4
11	2A	30	VAL	2.4
12	3A	93	LEU	2.4
24	4L	11	A	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	13	1032(A)	G	2.4
4	32	166	LYS	2.4
37	98	33	ARG	2.4
25	14	1065	U	2.4
25	14	1066	U	2.4
54	Q8	34	TRP	2.4
30	49	36	LYS	2.4
44	C5	87	LYS	2.4
14	5A	55	GLY	2.4
45	H8	165	VAL	2.4
37	98	101	ALA	2.4
17	8I	36	ILE	2.4
25	14	1061	U	2.4
45	H8	175	VAL	2.4
12	3A	70	ILE	2.4
13	4A	99	ARG	2.4
14	5A	19	ARG	2.4
50	M8	58	ARG	2.4
30	41	94	LEU	2.4
30	49	90	LEU	2.4
20	BI	101	GLY	2.3
25	14	1088	A	2.3
16	7I	39	TYR	2.3
20	BA	59	ALA	2.3
52	O8	31	PRO	2.3
52	O8	41	PRO	2.3
3	22	102	ASN	2.3
13	4A	60	VAL	2.3
25	14	1079	C	2.3
41	D8	37	VAL	2.3
43	F8	76	ARG	2.3
13	4A	13	LYS	2.3
14	5A	50	LYS	2.3
20	BA	106	ALA	2.3
28	21	72	VAL	2.3
38	65	34	HIS	2.3
12	3A	85	ILE	2.3
31	59	102	ALA	2.3
58	D5	109	ALA	2.3
1	13	210	U	2.3
31	51	61	HIS	2.3
50	M8	1	MET	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
32	61	139	GLN	2.3
4	32	5	ILE	2.3
11	2I	128	ALA	2.3
12	3A	100	ILE	2.3
13	4A	23	TYR	2.3
22	1L	25	G	2.3
45	H8	120	ILE	2.3
10	1A	59	SER	2.3
58	D5	27	VAL	2.3
33	58	128	HIS	2.3
3	22	104	GLN	2.3
4	32	159	ARG	2.3
31	59	25	LYS	2.3
44	C5	81	LYS	2.3
50	I5	2	LYS	2.3
10	1I	10	GLY	2.3
16	7I	9	PHE	2.3
22	1L	26	G	2.3
32	69	1	MET	2.3
22	1L	14	A	2.3
47	F5	91	LYS	2.3
19	AI	75	ALA	2.3
35	35	150	ALA	2.3
42	E8	44	ALA	2.3
58	D5	142	SER	2.3
35	35	124	LYS	2.3
13	4A	96	LEU	2.3
25	1H	2131	G	2.3
42	E8	111	HIS	2.3
40	C8	80	ILE	2.3
50	I5	59	PHE	2.3
7	6E	55	GLY	2.3
13	4A	70	LEU	2.3
14	5A	7	ILE	2.3
28	29	67	PHE	2.3
47	J8	70	VAL	2.3
58	D5	83	PRO	2.3
17	8A	59	ILE	2.3
7	6E	83	ALA	2.3
30	49	22	ARG	2.3
30	49	37	VAL	2.3
38	65	87	PHE	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
38	65	112	PHE	2.3
50	I5	53	GLU	2.3
4	32	162	LEU	2.3
17	8A	76	LEU	2.3
50	I5	1	MET	2.3
28	21	19	ARG	2.3
35	35	111	ARG	2.3
31	59	94	TYR	2.3
36	88	141	GLN	2.3
14	5A	58	LYS	2.3
37	98	112	ALA	2.3
45	H8	116	VAL	2.3
7	62	123	GLU	2.3
27	11	236	GLY	2.3
18	9A	26	LEU	2.3
15	6A	15	PHE	2.3
13	4A	26	GLY	2.2
35	35	118	GLY	2.2
59	M5	34	TRP	2.2
4	32	153	ARG	2.2
14	5A	53	LEU	2.2
32	69	38	LEU	2.2
34	25	65	THR	2.2
45	H8	69	THR	2.2
28	21	69	LYS	2.2
32	69	109	ILE	2.2
52	K5	27	LYS	2.2
3	22	60	ALA	2.2
50	M8	20	ASN	2.2
36	45	66	ILE	2.2
7	62	134	ALA	2.2
44	G8	106	LEU	2.2
30	41	140	ILE	2.2
17	8A	68	ARG	2.2
25	14	1068	G	2.2
12	3A	126	LYS	2.2
22	1K	16	C	2.2
25	14	2804	C	2.2
28	21	52	LEU	2.2
47	J8	95	LEU	2.2
45	H8	88	PHE	2.2
9	82	42	ARG	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
16	7A	54	GLU	2.2
17	8A	100	LYS	2.2
46	E5	85	ALA	2.2
3	22	52	LEU	2.2
30	41	34	LEU	2.2
30	49	176	LEU	2.2
7	62	73	MET	2.2
8	72	87	SER	2.2
14	5A	16	PHE	2.2
14	5A	56	VAL	2.2
7	62	154	TYR	2.2
31	59	40	GLU	2.2
25	1H	2476	A	2.2
25	14	1070	A	2.2
36	88	81	VAL	2.2
56	19	261	LYS	2.2
3	22	23	TYR	2.2
8	72	130	GLY	2.2
41	95	30	GLY	2.2
6	52	89	MET	2.2
40	C8	116	ALA	2.2
32	61	12	LEU	2.2
12	3I	20	LYS	2.2
20	BI	87	LYS	2.2
25	1H	10	G	2.2
8	7E	1	MET	2.2
4	3E	167	GLY	2.2
50	M8	64	GLY	2.2
37	98	41	ALA	2.2
45	H8	3	TYR	2.2
52	O8	21	TYR	2.2
4	32	163	GLU	2.2
41	D8	99	ILE	2.2
48	G5	45	SER	2.2
4	32	119	GLN	2.2
30	41	63	ILE	2.2
31	59	50	VAL	2.2
31	59	53	GLU	2.2
31	59	169	VAL	2.2
33	58	53	VAL	2.2
35	78	71	VAL	2.2
11	2A	126	ARG	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
8	72	107	LEU	2.2
47	J8	82	LEU	2.2
4	3E	137	SER	2.2
25	14	1094	U	2.2
30	41	26	GLN	2.2
7	62	105	VAL	2.2
34	25	12	ASP	2.2
36	45	7	MET	2.2
30	41	115	ARG	2.2
33	58	45	ASN	2.2
40	C8	94	ASN	2.2
52	O8	14	THR	2.2
3	22	188	LEU	2.1
4	32	11	LEU	2.1
52	O8	36	LEU	2.1
36	88	20	ALA	2.1
38	65	51	ALA	2.1
30	41	178	PHE	2.1
17	8A	56	VAL	2.1
48	K8	41	ILE	2.1
57	39	10	PRO	2.1
3	22	193	TYR	2.1
32	69	72	LEU	2.1
49	L8	53	LEU	2.1
17	8A	71	PHE	2.1
50	M8	59	PHE	2.1
2	1E	96	ARG	2.1
5	4E	89	ILE	2.1
34	68	66	LYS	2.1
25	14	1060	U	2.1
45	H8	123	ASP	2.1
31	59	7	LEU	2.1
3	2E	189	ALA	2.1
13	4A	76	ALA	2.1
30	49	25	TYR	2.1
33	58	73	THR	2.1
42	E8	74	ALA	2.1
4	3E	151	LYS	2.1
7	6E	53	LYS	2.1
18	9A	19	LYS	2.1
19	AA	56	GLN	2.1
21	1B	24	ARG	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
26	16	0	A	2.1
40	C8	59	ARG	2.1
45	H8	133	ILE	2.1
31	59	111	HIS	2.1
3	22	67	THR	2.1
31	59	129	THR	2.1
37	98	99	LYS	2.1
59	M5	36	LYS	2.1
11	2A	14	VAL	2.1
50	I5	50	VAL	2.1
19	AA	66	MET	2.1
9	82	79	LEU	2.1
11	2I	15	ALA	2.1
52	K5	28	ARG	2.1
3	2E	39	ILE	2.1
8	72	118	VAL	2.1
28	21	55	ASN	2.1
16	7A	50	LYS	2.1
44	C5	86	ARG	2.1
45	H8	153	SER	2.1
3	22	149	ALA	2.1
11	2A	89	ALA	2.1
12	3I	64	TYR	2.1
19	AI	61	TYR	2.1
7	62	113	GLU	2.1
25	14	2897	U	2.1
4	3E	176	LEU	2.1
13	4A	27	LYS	2.1
16	7I	35	LYS	2.1
45	H8	141	VAL	2.1
3	2E	87	LEU	2.1
3	2E	91	LEU	2.1
12	3A	44	THR	2.1
58	D5	5	LEU	2.1
21	1B	23	PRO	2.1
4	3E	163	GLU	2.1
4	32	149	ALA	2.1
10	1A	55	LYS	2.1
13	4A	78	ILE	2.1
40	C8	56	ASP	2.1
36	88	10	ARG	2.1
25	14	1077	A	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
22	1L	13	G	2.1
30	49	48	GLU	2.1
36	88	80	GLU	2.1
4	32	137	SER	2.1
11	2I	29	ILE	2.1
40	C8	90	VAL	2.1
17	8A	83	ASP	2.1
47	F5	90	ILE	2.1
58	D5	53	ILE	2.1
46	E5	84	LEU	2.1
58	D5	155	LEU	2.1
17	8A	32	TYR	2.1
10	1I	98	ILE	2.1
3	22	159	GLY	2.1
33	58	131	GLN	2.1
52	O8	40	CYS	2.1
30	41	118	ARG	2.1
16	7A	7	ALA	2.1
30	49	160	VAL	2.1
36	45	68	ILE	2.1
38	65	58	LEU	2.1
3	2E	72	LYS	2.0
4	3E	181	MET	2.1
12	3A	20	LYS	2.0
44	C5	60	PHE	2.0
44	G8	91	GLU	2.0
47	F5	57	GLU	2.0
52	O8	50	ARG	2.0
9	8E	30	GLY	2.0
28	29	78	LEU	2.0
39	75	99	LEU	2.0
42	E8	112	GLY	2.0
31	59	18	GLU	2.0
30	41	160	VAL	2.0
7	62	120	ILE	2.0
8	72	132	GLU	2.0
16	7I	17	TYR	2.0
33	58	46	VAL	2.0
33	58	62	VAL	2.0
55	1G	994	A	2.0
40	C8	83	LEU	2.0
33	58	133	GLN	2.0

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Mol	Chain	Res	Type	RSRZ
13	4I	7	VAL	2.0
31	59	90	LYS	2.0
34	25	58	VAL	2.0
17	8A	84	LEU	2.0
45	H8	127	LYS	2.0
58	D5	24	LEU	2.0
30	41	102	PHE	2.0
35	35	91	PHE	2.0
36	88	1	MET	2.0
4	32	27	TYR	2.0
11	2I	42	TRP	2.0
31	59	107	VAL	2.0
32	69	3	VAL	2.0
37	98	42	LYS	2.0
41	95	21	ARG	2.0
47	F5	21	ARG	2.0
45	H8	158	PRO	2.0
30	49	74	LYS	2.0
52	O8	47	THR	2.0
52	K5	20	ASN	2.0
4	3E	138	TYR	2.0
7	6E	154	TYR	2.0
9	8E	102	LEU	2.0
17	8I	101	ARG	2.0
19	AA	51	VAL	2.0
28	21	76	ARG	2.0
38	A8	49	VAL	2.0
38	65	26	LEU	2.0
45	H8	27	VAL	2.0

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

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
22	OMG	1L	17	24/25	0.67	0.38	214,233,260,267	0
22	PSU	3L	64	20/21	0.71	0.22	190,201,215,215	0
22	OMG	3L	17	24/25	0.73	0.22	197,218,241,244	0
22	4SU	3L	8	20/21	0.74	0.13	189,200,212,215	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
22	PSU	3K	64	20/21	0.78	0.17	204,248,266,281	0
22	4SU	1K	8	20/21	0.79	0.16	149,171,199,201	0
23	H2U	2L	21	20/21	0.81	0.21	165,170,178,179	0
22	4SU	3K	8	20/21	0.81	0.14	175,183,197,200	0
22	5MU	3K	63	21/22	0.85	0.17	197,231,241,247	0
22	4SU	1L	8	20/21	0.86	0.28	196,199,202,204	0
22	OMG	1K	17	24/25	0.86	0.16	148,195,234,241	0
23	H2U	2K	21	20/21	0.87	0.23	133,176,266,270	0
22	PSU	1L	64	20/21	0.87	0.13	160,190,212,217	0
22	5MU	3L	63	21/22	0.88	0.20	184,193,204,205	0
22	OMG	3K	17	24/25	0.88	0.18	198,221,226,229	0
22	5MU	1L	63	21/22	0.89	0.16	179,192,198,199	0
22	QUO	1L	35	32/33	0.90	0.32	107,128,151,155	0
22	PSU	1K	64	20/21	0.91	0.17	119,139,152,156	0
22	QUO	3L	35	32/33	0.91	0.31	124,129,153,158	0
22	PSU	1L	40	20/21	0.91	0.17	106,139,158,159	0
22	5MU	1K	63	21/22	0.91	0.22	137,144,151,152	0
23	4SU	2L	8	20/21	0.92	0.12	103,112,116,121	0
22	MIA	1L	38	29/30	0.93	0.29	102,126,149,151	0
22	MIA	3L	38	29/30	0.93	0.18	112,126,138,143	0
22	QUO	3K	35	32/33	0.94	0.14	109,116,133,141	0
22	PSU	3L	40	20/21	0.94	0.16	112,122,127,128	0
22	QUO	1K	35	32/33	0.94	0.18	73,84,105,108	0
23	PSU	2L	56	20/21	0.94	0.08	107,113,120,121	0
22	MIA	1K	38	29/30	0.95	0.18	64,83,97,102	0
22	MIA	3K	38	29/30	0.95	0.14	100,113,136,140	0
22	PSU	3K	40	20/21	0.95	0.12	101,110,114,118	0
23	5MU	2K	55	21/22	0.95	0.14	93,103,114,118	0
23	PSU	2K	56	20/21	0.95	0.09	92,99,106,110	0
22	PSU	1K	40	20/21	0.95	0.12	81,102,111,111	0
23	4SU	2K	8	20/21	0.95	0.14	87,91,98,101	0
23	5MU	2L	55	21/22	0.95	0.12	118,122,133,134	0
23	OMC	2K	33	21/22	0.97	0.17	72,75,81,86	0
23	OMC	2L	33	21/22	0.98	0.16	90,96,100,103	0

### 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<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
60	MG	14	3261	1/1	0.23	0.28	136,136,136,136	0
60	MG	14	3018	1/1	0.24	0.31	103,103,103,103	0
60	MG	13	1667	1/1	0.35	0.41	102,102,102,102	0
60	MG	2L	102	1/1	0.38	0.36	95,95,95,95	0
60	MG	1H	3251	1/1	0.41	0.28	73,73,73,73	0
60	MG	1G	1703	1/1	0.43	0.13	128,128,128,128	0
60	MG	14	3163	1/1	0.45	0.21	80,80,80,80	0
60	MG	13	1699	1/1	0.47	0.25	89,89,89,89	0
60	MG	13	1709	1/1	0.48	0.23	81,81,81,81	0
60	MG	1H	3295	1/1	0.50	0.32	87,87,87,87	0
60	MG	13	1653	1/1	0.51	0.32	83,83,83,83	0
60	MG	1G	1659	1/1	0.54	0.26	118,118,118,118	0
60	MG	13	1668	1/1	0.54	0.46	114,114,114,114	0
60	MG	13	1736	1/1	0.54	0.08	141,141,141,141	0
60	MG	1H	3103	1/1	0.55	0.36	88,88,88,88	0
60	MG	13	1618	1/1	0.58	0.24	77,77,77,77	0
60	MG	14	3039	1/1	0.58	0.23	75,75,75,75	0
60	MG	E5	101	1/1	0.58	0.20	80,80,80,80	0
60	MG	14	3294	1/1	0.59	0.41	91,91,91,91	0
60	MG	1G	1641	1/1	0.59	0.14	130,130,130,130	0
60	MG	14	3253	1/1	0.60	0.58	71,71,71,71	0
60	MG	14	3216	1/1	0.60	0.51	80,80,80,80	0
60	MG	1H	3136	1/1	0.61	0.26	72,72,72,72	0
60	MG	1H	3167	1/1	0.62	0.38	83,83,83,83	0
60	MG	1H	3239	1/1	0.63	0.25	48,48,48,48	0
60	MG	13	1656	1/1	0.63	0.32	84,84,84,84	0
60	MG	1H	3116	1/1	0.63	0.20	69,69,69,69	0
60	MG	13	1711	1/1	0.64	0.41	83,83,83,83	0
60	MG	1H	3293	1/1	0.64	0.39	80,80,80,80	0
60	MG	1H	3108	1/1	0.64	0.49	77,77,77,77	0
60	MG	1G	1635	1/1	0.64	0.38	104,104,104,104	0
60	MG	13	1696	1/1	0.64	0.17	82,82,82,82	0
60	MG	14	3064	1/1	0.64	0.48	70,70,70,70	0
61	ZN	C5	202	1/1	0.64	0.18	197,197,197,197	0
60	MG	1H	3267	1/1	0.65	0.26	83,83,83,83	0
60	MG	1H	3031	1/1	0.65	0.40	78,78,78,78	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	13	1710	1/1	0.65	0.33	104,104,104,104	0
60	MG	1J	202	1/1	0.67	0.29	85,85,85,85	0
60	MG	14	3245	1/1	0.67	0.27	82,82,82,82	0
60	MG	14	3128	1/1	0.67	0.31	86,86,86,86	0
60	MG	1H	3246	1/1	0.68	0.20	73,73,73,73	0
60	MG	1G	1656	1/1	0.69	0.38	86,86,86,86	0
60	MG	1H	3255	1/1	0.69	0.38	71,71,71,71	0
60	MG	14	3096	1/1	0.69	0.22	60,60,60,60	0
60	MG	18	101	1/1	0.69	0.22	70,70,70,70	0
60	MG	14	3371	1/1	0.69	0.07	106,106,106,106	0
60	MG	14	3152	1/1	0.69	0.14	96,96,96,96	0
60	MG	1H	3222	1/1	0.69	0.44	77,77,77,77	0
60	MG	1H	3155	1/1	0.69	0.50	60,60,60,60	0
60	MG	14	3195	1/1	0.70	0.38	90,90,90,90	0
60	MG	14	3145	1/1	0.70	0.64	82,82,82,82	0
60	MG	14	3153	1/1	0.71	0.35	61,61,61,61	0
60	MG	1H	3147	1/1	0.71	0.42	76,76,76,76	0
60	MG	16	204	1/1	0.71	0.18	83,83,83,83	0
60	MG	14	3028	1/1	0.71	0.35	77,77,77,77	0
60	MG	14	3167	1/1	0.72	0.22	93,93,93,93	0
60	MG	14	3288	1/1	0.72	0.26	61,61,61,61	0
60	MG	14	3192	1/1	0.72	0.20	80,80,80,80	0
60	MG	14	3147	1/1	0.72	0.32	99,99,99,99	0
60	MG	1H	3194	1/1	0.72	0.31	71,71,71,71	0
60	MG	13	1692	1/1	0.72	0.25	78,78,78,78	0
60	MG	1H	3030	1/1	0.72	0.58	70,70,70,70	0
60	MG	1H	3181	1/1	0.73	0.36	81,81,81,81	0
60	MG	13	1705	1/1	0.73	0.20	83,83,83,83	0
60	MG	14	3358	1/1	0.73	0.27	86,86,86,86	0
60	MG	14	3093	1/1	0.73	0.46	70,70,70,70	0
60	MG	68	201	1/1	0.73	0.46	83,83,83,83	0
60	MG	13	1701	1/1	0.73	0.27	85,85,85,85	0
60	MG	14	3143	1/1	0.73	0.58	76,76,76,76	0
60	MG	88	202	1/1	0.74	0.17	78,78,78,78	0
60	MG	14	3141	1/1	0.74	0.30	85,85,85,85	0
60	MG	1H	3421	1/1	0.74	0.14	138,138,138,138	0
60	MG	13	1689	1/1	0.74	0.14	83,83,83,83	0
60	MG	14	3091	1/1	0.74	0.39	67,67,67,67	0
60	MG	14	3378	1/1	0.74	0.10	75,75,75,75	0
60	MG	14	3237	1/1	0.74	0.21	66,66,66,66	0
60	MG	1H	3298	1/1	0.74	0.43	56,56,56,56	0
61	ZN	G8	201	1/1	0.74	0.30	209,209,209,209	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
60	MG	1G	1653	1/1	0.74	0.25	73,73,73,73	0
60	MG	1G	1657	1/1	0.75	0.30	102,102,102,102	0
60	MG	1H	3110	1/1	0.75	0.24	43,43,43,43	0
60	MG	13	1641	1/1	0.75	0.24	74,74,74,74	0
60	MG	1H	3207	1/1	0.75	0.24	63,63,63,63	0
60	MG	1G	1639	1/1	0.76	0.34	82,82,82,82	0
60	MG	14	3277	1/1	0.76	0.14	81,81,81,81	0
60	MG	13	1728	1/1	0.76	0.08	88,88,88,88	0
60	MG	1G	1701	1/1	0.76	0.08	106,106,106,106	0
60	MG	14	3356	1/1	0.76	0.08	66,66,66,66	0
60	MG	14	3144	1/1	0.76	0.45	80,80,80,80	0
60	MG	14	3285	1/1	0.77	0.14	62,62,62,62	0
60	MG	1H	3427	1/1	0.77	0.11	92,92,92,92	0
60	MG	1H	3154	1/1	0.77	0.30	89,89,89,89	0
60	MG	13	1690	1/1	0.77	0.32	86,86,86,86	0
60	MG	14	3211	1/1	0.77	0.48	108,108,108,108	0
60	MG	1H	3256	1/1	0.77	0.42	93,93,93,93	0
60	MG	1H	3371	1/1	0.77	0.08	91,91,91,91	0
60	MG	1G	1665	1/1	0.77	0.39	75,75,75,75	0
60	MG	1H	3390	1/1	0.77	0.14	74,74,74,74	0
60	MG	1H	3149	1/1	0.77	0.18	56,56,56,56	0
60	MG	14	3123	1/1	0.77	0.34	81,81,81,81	0
60	MG	I8	102	1/1	0.78	0.23	56,56,56,56	0
60	MG	14	3189	1/1	0.78	0.73	73,73,73,73	0
60	MG	1H	3288	1/1	0.78	0.45	92,92,92,92	0
60	MG	14	3276	1/1	0.78	0.20	66,66,66,66	0
60	MG	1G	1702	1/1	0.78	0.08	124,124,124,124	0
60	MG	1J	203	1/1	0.78	0.26	91,91,91,91	0
60	MG	49	201	1/1	0.78	0.12	93,93,93,93	0
60	MG	13	1630	1/1	0.78	0.15	51,51,51,51	0
60	MG	14	3081	1/1	0.78	0.40	86,86,86,86	0
60	MG	13	1678	1/1	0.78	0.24	163,163,163,163	0
60	MG	13	1677	1/1	0.79	0.13	67,67,67,67	0
60	MG	14	3256	1/1	0.79	0.14	64,64,64,64	0
60	MG	1H	3433	1/1	0.79	0.10	91,91,91,91	0
60	MG	14	3383	1/1	0.79	0.08	101,101,101,101	0
60	MG	13	1673	1/1	0.79	0.09	69,69,69,69	0
60	MG	13	1681	1/1	0.79	0.19	88,88,88,88	0
60	MG	1H	3186	1/1	0.79	0.32	79,79,79,79	0
60	MG	14	3069	1/1	0.79	0.61	78,78,78,78	0
60	MG	13	1703	1/1	0.79	0.22	111,111,111,111	0
60	MG	14	3252	1/1	0.79	0.38	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	14	3280	1/1	0.80	0.13	55,55,55,55	0
60	MG	1H	3291	1/1	0.80	0.28	71,71,71,71	0
60	MG	14	3193	1/1	0.80	0.35	76,76,76,76	0
60	MG	14	3291	1/1	0.80	0.18	80,80,80,80	0
60	MG	1G	1627	1/1	0.80	0.31	66,66,66,66	0
60	MG	14	3309	1/1	0.80	0.34	72,72,72,72	0
60	MG	1H	3153	1/1	0.80	0.36	59,59,59,59	0
60	MG	1H	3204	1/1	0.80	0.30	62,62,62,62	0
60	MG	16	201	1/1	0.80	0.20	78,78,78,78	0
60	MG	16	203	1/1	0.80	0.24	77,77,77,77	0
60	MG	1H	3172	1/1	0.80	0.18	71,71,71,71	0
60	MG	16	207	1/1	0.80	0.09	62,62,62,62	0
60	MG	1H	3279	1/1	0.80	0.38	71,71,71,71	0
60	MG	14	3257	1/1	0.80	0.14	69,69,69,69	0
60	MG	1H	3375	1/1	0.80	0.11	48,48,48,48	0
60	MG	1G	1675	1/1	0.80	0.19	86,86,86,86	0
60	MG	1H	3212	1/1	0.80	0.52	89,89,89,89	0
60	MG	14	3104	1/1	0.81	0.33	70,70,70,70	0
60	MG	1H	3162	1/1	0.81	0.14	67,67,67,67	0
60	MG	13	1642	1/1	0.81	0.29	63,63,63,63	0
60	MG	14	3135	1/1	0.81	0.36	78,78,78,78	0
60	MG	1H	3196	1/1	0.81	0.70	91,91,91,91	0
60	MG	1H	3093	1/1	0.81	0.20	64,64,64,64	0
60	MG	14	3223	1/1	0.81	0.30	67,67,67,67	0
60	MG	14	3325	1/1	0.81	0.10	50,50,50,50	0
60	MG	14	3226	1/1	0.81	0.44	68,68,68,68	0
60	MG	1H	3407	1/1	0.81	0.10	76,76,76,76	0
60	MG	14	3363	1/1	0.81	0.07	73,73,73,73	0
60	MG	13	1663	1/1	0.81	0.34	93,93,93,93	0
60	MG	1H	3252	1/1	0.81	0.43	66,66,66,66	0
60	MG	14	3148	1/1	0.81	0.32	86,86,86,86	0
60	MG	P8	101	1/1	0.81	0.55	70,70,70,70	0
60	MG	1G	1681	1/1	0.81	0.74	107,107,107,107	0
60	MG	1J	207	1/1	0.81	0.10	92,92,92,92	0
60	MG	14	3260	1/1	0.81	0.14	73,73,73,73	0
60	MG	25	201	1/1	0.81	0.04	125,125,125,125	0
60	MG	1H	3253	1/1	0.81	0.17	56,56,56,56	0
60	MG	14	3272	1/1	0.81	0.25	55,55,55,55	0
60	MG	1H	3254	1/1	0.81	0.42	57,57,57,57	0
60	MG	1H	3185	1/1	0.82	0.30	65,65,65,65	0
60	MG	1H	3294	1/1	0.82	0.22	66,66,66,66	0
60	MG	14	3232	1/1	0.82	0.66	92,92,92,92	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
60	MG	13	1688	1/1	0.82	0.34	66,66,66,66	0
60	MG	14	3346	1/1	0.82	0.07	108,108,108,108	0
60	MG	1G	1673	1/1	0.82	0.33	186,186,186,186	0
60	MG	1H	3428	1/1	0.82	0.06	102,102,102,102	0
60	MG	1G	1676	1/1	0.82	0.30	90,90,90,90	0
60	MG	1G	1613	1/1	0.82	0.14	116,116,116,116	0
60	MG	14	3165	1/1	0.82	0.24	84,84,84,84	0
60	MG	1H	3276	1/1	0.82	0.57	76,76,76,76	0
60	MG	14	3105	1/1	0.82	0.23	82,82,82,82	0
60	MG	1H	3302	1/1	0.82	0.27	67,67,67,67	0
60	MG	14	3273	1/1	0.82	0.21	65,65,65,65	0
60	MG	1H	3365	1/1	0.82	0.12	88,88,88,88	0
60	MG	13	1648	1/1	0.82	0.48	76,76,76,76	0
60	MG	13	1713	1/1	0.82	0.25	96,96,96,96	0
60	MG	14	3215	1/1	0.82	0.48	69,69,69,69	0
60	MG	1H	3159	1/1	0.82	0.35	77,77,77,77	0
60	MG	78	203	1/1	0.83	0.39	87,87,87,87	0
60	MG	1H	3262	1/1	0.83	0.39	80,80,80,80	0
60	MG	1H	3430	1/1	0.83	0.05	95,95,95,95	0
60	MG	1H	3299	1/1	0.83	0.24	72,72,72,72	0
60	MG	14	3299	1/1	0.83	0.18	60,60,60,60	0
60	MG	14	3305	1/1	0.83	0.28	94,94,94,94	0
60	MG	1G	1662	1/1	0.83	0.44	84,84,84,84	0
60	MG	1H	3400	1/1	0.83	0.07	82,82,82,82	0
60	MG	1G	1668	1/1	0.83	0.49	95,95,95,95	0
60	MG	1H	3213	1/1	0.83	0.38	95,95,95,95	0
60	MG	13	1702	1/1	0.83	0.21	80,80,80,80	0
60	MG	1H	3424	1/1	0.83	0.08	115,115,115,115	0
60	MG	1G	1680	1/1	0.83	0.37	162,162,162,162	0
60	MG	41	201	1/1	0.83	0.10	75,75,75,75	0
60	MG	14	3184	1/1	0.83	0.57	75,75,75,75	0
60	MG	14	3187	1/1	0.83	0.58	84,84,84,84	0
60	MG	14	3269	1/1	0.83	0.23	60,60,60,60	0
60	MG	1J	206	1/1	0.83	0.10	125,125,125,125	0
60	MG	14	3188	1/1	0.83	0.22	93,93,93,93	0
60	MG	1G	1689	1/1	0.83	0.38	86,86,86,86	0
60	MG	14	3121	1/1	0.83	0.42	64,64,64,64	0
60	MG	85	201	1/1	0.83	0.42	71,71,71,71	0
60	MG	1H	3296	1/1	0.83	0.17	69,69,69,69	0
60	MG	1G	1645	1/1	0.83	0.17	78,78,78,78	0
60	MG	14	3281	1/1	0.83	0.22	63,63,63,63	0
60	MG	1H	3280	1/1	0.84	0.22	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	14	3307	1/1	0.84	0.43	82,82,82,82	0
60	MG	1H	3218	1/1	0.84	0.39	84,84,84,84	0
60	MG	13	1617	1/1	0.84	0.17	99,99,99,99	0
60	MG	1G	1646	1/1	0.84	0.27	77,77,77,77	0
60	MG	13	1665	1/1	0.84	0.32	91,91,91,91	0
60	MG	14	3262	1/1	0.84	0.23	63,63,63,63	0
60	MG	14	3207	1/1	0.84	0.25	74,74,74,74	0
60	MG	14	3209	1/1	0.84	0.21	77,77,77,77	0
60	MG	13	1658	1/1	0.84	0.16	57,57,57,57	0
60	MG	14	3274	1/1	0.84	0.33	79,79,79,79	0
60	MG	14	3150	1/1	0.84	0.23	92,92,92,92	0
60	MG	1H	3184	1/1	0.84	0.25	58,58,58,58	0
60	MG	1H	3099	1/1	0.84	0.20	49,49,49,49	0
60	MG	1H	3165	1/1	0.84	0.27	77,77,77,77	0
60	MG	1G	1663	1/1	0.84	0.14	93,93,93,93	0
60	MG	1H	3409	1/1	0.84	0.17	99,99,99,99	0
60	MG	14	3244	1/1	0.84	0.29	75,75,75,75	0
60	MG	1H	3410	1/1	0.84	0.07	87,87,87,87	0
60	MG	14	3297	1/1	0.84	0.41	100,100,100,100	0
60	MG	14	3037	1/1	0.84	0.42	79,79,79,79	0
60	MG	13	1707	1/1	0.85	0.46	114,114,114,114	0
60	MG	4I	201	1/1	0.85	0.07	86,86,86,86	0
60	MG	14	3248	1/1	0.85	0.26	80,80,80,80	0
60	MG	1H	3306	1/1	0.85	0.48	77,77,77,77	0
60	MG	14	3308	1/1	0.85	0.57	66,66,66,66	0
60	MG	2K	103	1/1	0.85	0.34	76,76,76,76	0
60	MG	1H	3021	1/1	0.85	0.19	59,59,59,59	0
60	MG	13	1609	1/1	0.85	0.41	64,64,64,64	0
60	MG	14	3259	1/1	0.85	0.20	76,76,76,76	0
60	MG	1H	3209	1/1	0.85	0.44	81,81,81,81	0
60	MG	13	1682	1/1	0.85	0.33	85,85,85,85	0
60	MG	1H	3278	1/1	0.85	0.30	64,64,64,64	0
60	MG	1H	3164	1/1	0.85	0.25	60,60,60,60	0
60	MG	1H	3214	1/1	0.85	0.26	62,62,62,62	0
60	MG	1H	3118	1/1	0.85	0.13	56,56,56,56	0
60	MG	1G	1687	1/1	0.85	0.15	83,83,83,83	0
60	MG	1H	3127	1/1	0.85	0.18	44,44,44,44	0
60	MG	1H	3223	1/1	0.85	0.21	44,44,44,44	0
60	MG	29	302	1/1	0.85	0.23	79,79,79,79	0
60	MG	1H	3045	1/1	0.85	0.48	65,65,65,65	0
60	MG	1H	3141	1/1	0.85	0.53	70,70,70,70	0
60	MG	1H	3145	1/1	0.85	0.33	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	1G	1651	1/1	0.85	0.43	87,87,87,87	0
60	MG	1H	3090	1/1	0.85	0.30	67,67,67,67	0
60	MG	14	3031	1/1	0.85	0.14	75,75,75,75	0
60	MG	14	3286	1/1	0.86	0.93	60,60,60,60	0
60	MG	2K	101	1/1	0.86	0.15	81,81,81,81	0
60	MG	13	1708	1/1	0.86	0.36	167,167,167,167	0
60	MG	1H	3180	1/1	0.86	0.26	87,87,87,87	0
60	MG	1H	3335	1/1	0.86	0.10	74,74,74,74	0
60	MG	13	1683	1/1	0.86	0.32	89,89,89,89	0
60	MG	1H	3216	1/1	0.86	0.24	73,73,73,73	0
60	MG	13	1693	1/1	0.86	0.17	89,89,89,89	0
60	MG	14	3059	1/1	0.86	0.38	72,72,72,72	0
60	MG	1H	3378	1/1	0.86	0.12	67,67,67,67	0
60	MG	14	3318	1/1	0.86	0.11	76,76,76,76	0
60	MG	13	1738	1/1	0.86	0.08	81,81,81,81	0
60	MG	13	1680	1/1	0.86	0.16	68,68,68,68	0
60	MG	1H	3233	1/1	0.86	0.38	69,69,69,69	0
60	MG	14	3357	1/1	0.86	0.06	96,96,96,96	0
60	MG	14	3177	1/1	0.86	0.28	61,61,61,61	0
60	MG	14	3178	1/1	0.86	0.38	66,66,66,66	0
60	MG	14	3258	1/1	0.86	0.31	65,65,65,65	0
60	MG	14	3375	1/1	0.86	0.04	90,90,90,90	0
60	MG	1H	3047	1/1	0.86	0.33	73,73,73,73	0
60	MG	14	3185	1/1	0.86	0.42	76,76,76,76	0
60	MG	14	3384	1/1	0.86	0.04	122,122,122,122	0
60	MG	1H	3242	1/1	0.86	0.21	74,74,74,74	0
60	MG	1G	1625	1/1	0.86	0.27	72,72,72,72	0
60	MG	1H	3086	1/1	0.86	0.18	53,53,53,53	0
60	MG	1H	3250	1/1	0.86	0.41	68,68,68,68	0
60	MG	1H	3089	1/1	0.86	0.24	69,69,69,69	0
60	MG	1H	3205	1/1	0.86	0.37	60,60,60,60	0
60	MG	14	3198	1/1	0.86	0.34	63,63,63,63	0
60	MG	14	3200	1/1	0.86	0.80	91,91,91,91	0
60	MG	C5	201	1/1	0.86	0.74	107,107,107,107	0
60	MG	5I	101	1/1	0.86	0.13	83,83,83,83	0
60	MG	14	3136	1/1	0.86	0.34	90,90,90,90	0
60	MG	14	3210	1/1	0.86	0.44	79,79,79,79	0
60	MG	1H	3426	1/1	0.87	0.08	112,112,112,112	0
60	MG	1H	3048	1/1	0.87	0.26	51,51,51,51	0
60	MG	11	302	1/1	0.87	0.21	54,54,54,54	0
60	MG	1H	3140	1/1	0.87	0.28	59,59,59,59	0
60	MG	14	3380	1/1	0.87	0.09	92,92,92,92	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
60	MG	14	3264	1/1	0.87	0.39	91,91,91,91	0
60	MG	14	3301	1/1	0.87	0.21	75,75,75,75	0
60	MG	14	3302	1/1	0.87	0.34	87,87,87,87	0
60	MG	14	3303	1/1	0.87	0.59	93,93,93,93	0
60	MG	1H	3284	1/1	0.87	0.15	66,66,66,66	0
60	MG	1G	1633	1/1	0.87	0.41	95,95,95,95	0
60	MG	1H	3412	1/1	0.87	0.08	93,93,93,93	0
60	MG	1G	1684	1/1	0.87	0.23	91,91,91,91	0
60	MG	14	3048	1/1	0.87	0.27	59,59,59,59	0
60	MG	1G	1661	1/1	0.87	0.32	69,69,69,69	0
60	MG	14	3208	1/1	0.87	0.25	66,66,66,66	0
60	MG	13	1649	1/1	0.87	0.20	75,75,75,75	0
60	MG	14	3065	1/1	0.87	0.57	71,71,71,71	0
60	MG	13	1666	1/1	0.87	0.26	94,94,94,94	0
60	MG	1G	1632	1/1	0.88	0.41	89,89,89,89	0
60	MG	14	3133	1/1	0.88	0.37	80,80,80,80	0
60	MG	13	1640	1/1	0.88	0.32	76,76,76,76	0
60	MG	1H	3192	1/1	0.88	0.16	84,84,84,84	0
60	MG	1G	1700	1/1	0.88	0.09	152,152,152,152	0
60	MG	1H	3270	1/1	0.88	0.42	58,58,58,58	0
60	MG	1H	3332	1/1	0.88	0.10	49,49,49,49	0
60	MG	1G	1643	1/1	0.88	0.22	80,80,80,80	0
60	MG	1H	3193	1/1	0.88	0.34	67,67,67,67	0
60	MG	13	1631	1/1	0.88	0.28	74,74,74,74	0
60	MG	14	3317	1/1	0.88	0.10	54,54,54,54	0
60	MG	1G	1649	1/1	0.88	0.34	76,76,76,76	0
60	MG	14	3030	1/1	0.88	0.13	71,71,71,71	0
60	MG	13	1714	1/1	0.88	0.22	89,89,89,89	0
60	MG	1H	3198	1/1	0.88	0.27	64,64,64,64	0
60	MG	13	1716	1/1	0.88	0.19	77,77,77,77	0
60	MG	16	211	1/1	0.88	0.08	87,87,87,87	0
60	MG	1H	3285	1/1	0.88	0.17	61,61,61,61	0
60	MG	1H	3398	1/1	0.88	0.04	71,71,71,71	0
60	MG	14	3180	1/1	0.88	0.30	85,85,85,85	0
60	MG	13	1638	1/1	0.88	0.35	80,80,80,80	0
60	MG	14	3263	1/1	0.88	0.18	63,63,63,63	0
60	MG	1H	3169	1/1	0.88	0.21	63,63,63,63	0
60	MG	14	3186	1/1	0.88	0.53	62,62,62,62	0
60	MG	1H	3071	1/1	0.88	0.31	57,57,57,57	0
60	MG	13	1700	1/1	0.88	0.16	102,102,102,102	0
60	MG	1G	1671	1/1	0.88	0.18	77,77,77,77	0
60	MG	1H	3028	1/1	0.88	0.32	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	14	3101	1/1	0.88	0.53	65,65,65,65	0
60	MG	39	301	1/1	0.88	0.13	86,86,86,86	0
60	MG	14	3279	1/1	0.88	0.16	76,76,76,76	0
60	MG	1H	3413	1/1	0.88	0.11	103,103,103,103	0
60	MG	45	203	1/1	0.88	0.17	66,66,66,66	0
60	MG	1H	3415	1/1	0.88	0.10	75,75,75,75	0
60	MG	14	3117	1/1	0.88	0.32	74,74,74,74	0
60	MG	14	3118	1/1	0.88	0.23	60,60,60,60	0
60	MG	1H	3122	1/1	0.88	0.20	56,56,56,56	0
60	MG	1H	3125	1/1	0.88	0.14	34,34,34,34	0
60	MG	13	1662	1/1	0.89	0.17	89,89,89,89	0
60	MG	14	3275	1/1	0.89	0.52	76,76,76,76	0
60	MG	1G	1695	1/1	0.89	0.10	83,83,83,83	0
60	MG	1H	3339	1/1	0.89	0.15	75,75,75,75	0
60	MG	14	3174	1/1	0.89	0.44	77,77,77,77	0
60	MG	1H	3150	1/1	0.89	0.29	63,63,63,63	0
60	MG	13	1650	1/1	0.89	0.29	77,77,77,77	0
60	MG	14	3282	1/1	0.89	0.17	73,73,73,73	0
60	MG	14	3283	1/1	0.89	0.60	79,79,79,79	0
60	MG	1H	3060	1/1	0.89	0.32	64,64,64,64	0
60	MG	52	201	1/1	0.89	0.12	77,77,77,77	0
60	MG	1G	1610	1/1	0.89	0.15	78,78,78,78	0
60	MG	1H	3377	1/1	0.89	0.12	60,60,60,60	0
60	MG	1G	1616	1/1	0.89	0.14	125,125,125,125	0
60	MG	1G	1617	1/1	0.89	0.08	83,83,83,83	0
60	MG	1H	3197	1/1	0.89	0.30	70,70,70,70	0
60	MG	1H	3379	1/1	0.89	0.18	75,75,75,75	0
60	MG	13	1722	1/1	0.89	0.18	82,82,82,82	0
60	MG	1H	3203	1/1	0.89	0.38	91,91,91,91	0
60	MG	1H	3156	1/1	0.89	0.15	62,62,62,62	0
60	MG	14	3306	1/1	0.89	0.31	67,67,67,67	0
60	MG	1H	3077	1/1	0.89	0.39	70,70,70,70	0
60	MG	14	3201	1/1	0.89	0.58	81,81,81,81	0
60	MG	1H	3160	1/1	0.89	0.52	76,76,76,76	0
60	MG	1H	3082	1/1	0.89	0.32	39,39,39,39	0
60	MG	1H	3020	1/1	0.89	0.26	59,59,59,59	0
60	MG	14	3090	1/1	0.89	0.38	63,63,63,63	0
60	MG	1H	3129	1/1	0.89	0.61	72,72,72,72	0
60	MG	1G	1648	1/1	0.89	0.29	78,78,78,78	0
60	MG	1H	3135	1/1	0.89	0.28	50,50,50,50	0
60	MG	13	1620	1/1	0.89	0.33	64,64,64,64	0
60	MG	13	1735	1/1	0.89	0.12	153,153,153,153	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	14	3370	1/1	0.89	0.07	116,116,116,116	0
60	MG	14	3227	1/1	0.89	0.13	69,69,69,69	0
60	MG	1H	3178	1/1	0.89	0.31	80,80,80,80	0
60	MG	13	1629	1/1	0.89	0.34	62,62,62,62	0
60	MG	14	3379	1/1	0.89	0.09	104,104,104,104	0
60	MG	1H	3231	1/1	0.89	0.30	91,91,91,91	0
60	MG	1G	1660	1/1	0.89	0.36	78,78,78,78	0
60	MG	1H	3143	1/1	0.89	0.27	50,50,50,50	0
60	MG	1J	201	1/1	0.89	0.10	105,105,105,105	0
60	MG	1H	3182	1/1	0.89	0.62	91,91,91,91	0
60	MG	1H	3297	1/1	0.89	0.48	63,63,63,63	0
60	MG	16	202	1/1	0.89	0.51	82,82,82,82	0
60	MG	1H	3241	1/1	0.89	0.31	61,61,61,61	0
60	MG	1H	3144	1/1	0.89	0.23	78,78,78,78	0
60	MG	13	1637	1/1	0.89	0.48	76,76,76,76	0
60	MG	16	210	1/1	0.89	0.08	64,64,64,64	0
60	MG	1H	3304	1/1	0.89	0.18	69,69,69,69	0
60	MG	1H	3248	1/1	0.89	0.25	97,97,97,97	0
60	MG	1H	3309	1/1	0.89	0.10	56,56,56,56	0
60	MG	13	1706	1/1	0.89	0.35	85,85,85,85	0
60	MG	14	3151	1/1	0.89	0.23	55,55,55,55	0
60	MG	1G	1685	1/1	0.89	0.27	136,136,136,136	0
60	MG	78	202	1/1	0.89	0.20	46,46,46,46	0
60	MG	1G	1626	1/1	0.90	0.10	87,87,87,87	0
60	MG	14	3250	1/1	0.90	0.33	65,65,65,65	0
60	MG	14	3175	1/1	0.90	0.38	80,80,80,80	0
60	MG	1H	3058	1/1	0.90	0.20	57,57,57,57	0
60	MG	1H	3356	1/1	0.90	0.16	54,54,54,54	0
60	MG	14	3106	1/1	0.90	0.47	62,62,62,62	0
60	MG	14	3108	1/1	0.90	0.58	71,71,71,71	0
60	MG	14	3109	1/1	0.90	0.51	82,82,82,82	0
60	MG	1H	3111	1/1	0.90	0.18	49,49,49,49	0
60	MG	14	3338	1/1	0.90	0.16	52,52,52,52	0
60	MG	2L	103	1/1	0.90	0.27	67,67,67,67	0
60	MG	14	3355	1/1	0.90	0.08	68,68,68,68	0
60	MG	1H	3419	1/1	0.90	0.09	99,99,99,99	0
60	MG	14	3025	1/1	0.90	0.14	81,81,81,81	0
60	MG	14	3125	1/1	0.90	0.18	63,63,63,63	0
60	MG	13	1628	1/1	0.90	0.47	72,72,72,72	0
60	MG	1H	3374	1/1	0.90	0.11	86,86,86,86	0
60	MG	14	3197	1/1	0.90	0.28	79,79,79,79	0
60	MG	1H	3061	1/1	0.90	0.27	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	1H	3286	1/1	0.90	0.29	72,72,72,72	0
60	MG	1H	3087	1/1	0.90	0.33	72,72,72,72	0
60	MG	14	3205	1/1	0.90	0.35	72,72,72,72	0
60	MG	14	3278	1/1	0.90	0.29	71,71,71,71	0
60	MG	1H	3220	1/1	0.90	0.38	78,78,78,78	0
60	MG	1H	3173	1/1	0.90	0.18	72,72,72,72	0
60	MG	14	3063	1/1	0.90	0.51	70,70,70,70	0
60	MG	1G	1682	1/1	0.90	0.24	115,115,115,115	0
60	MG	1H	3312	1/1	0.90	0.12	45,45,45,45	0
60	MG	14	3284	1/1	0.90	0.43	75,75,75,75	0
60	MG	1G	1652	1/1	0.90	0.37	72,72,72,72	0
60	MG	1H	3329	1/1	0.90	0.08	51,51,51,51	0
60	MG	14	3085	1/1	0.90	0.23	52,52,52,52	0
60	MG	13	1675	1/1	0.90	0.29	67,67,67,67	0
60	MG	14	3158	1/1	0.90	0.19	54,54,54,54	0
60	MG	1H	3152	1/1	0.90	0.28	76,76,76,76	0
60	MG	14	3164	1/1	0.90	0.44	75,75,75,75	0
60	MG	14	3300	1/1	0.90	0.44	76,76,76,76	0
60	MG	1G	1658	1/1	0.90	0.33	71,71,71,71	0
60	MG	1H	3338	1/1	0.90	0.06	83,83,83,83	0
60	MG	1H	3272	1/1	0.91	0.30	72,72,72,72	0
60	MG	1H	3273	1/1	0.91	0.27	55,55,55,55	0
60	MG	14	3295	1/1	0.91	0.18	77,77,77,77	0
60	MG	1H	3418	1/1	0.91	0.08	81,81,81,81	0
60	MG	1G	1683	1/1	0.91	0.24	109,109,109,109	0
60	MG	1G	1619	1/1	0.91	0.25	82,82,82,82	0
60	MG	1H	3322	1/1	0.91	0.15	48,48,48,48	0
60	MG	1H	3326	1/1	0.91	0.16	57,57,57,57	0
60	MG	1H	3423	1/1	0.91	0.08	60,60,60,60	0
60	MG	14	3304	1/1	0.91	0.44	66,66,66,66	0
60	MG	13	1715	1/1	0.91	0.36	82,82,82,82	0
60	MG	1G	1698	1/1	0.91	0.10	113,113,113,113	0
60	MG	1G	1699	1/1	0.91	0.12	108,108,108,108	0
60	MG	14	3137	1/1	0.91	0.35	69,69,69,69	0
60	MG	13	1661	1/1	0.91	0.42	70,70,70,70	0
60	MG	1H	3240	1/1	0.91	0.28	109,109,109,109	0
60	MG	1G	1638	1/1	0.91	0.43	88,88,88,88	0
60	MG	1H	3041	1/1	0.91	0.48	58,58,58,58	0
60	MG	1H	3042	1/1	0.91	0.29	54,54,54,54	0
60	MG	1H	3349	1/1	0.91	0.09	58,58,58,58	0
60	MG	1H	3438	1/1	0.91	0.12	78,78,78,78	0
60	MG	14	3015	1/1	0.91	0.11	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	1H	3355	1/1	0.91	0.11	51,51,51,51	0
60	MG	1H	3245	1/1	0.91	0.17	50,50,50,50	0
60	MG	14	3156	1/1	0.91	0.26	54,54,54,54	0
60	MG	13	1695	1/1	0.91	0.21	90,90,90,90	0
60	MG	14	3162	1/1	0.91	0.31	83,83,83,83	0
60	MG	13	1634	1/1	0.91	0.39	67,67,67,67	0
60	MG	16	205	1/1	0.91	0.27	79,79,79,79	0
60	MG	1H	3003	1/1	0.91	0.33	45,45,45,45	0
60	MG	1G	1654	1/1	0.91	0.27	66,66,66,66	0
60	MG	1G	1655	1/1	0.91	0.26	96,96,96,96	0
60	MG	13	1698	1/1	0.91	0.19	86,86,86,86	0
60	MG	1H	3100	1/1	0.91	0.58	74,74,74,74	0
60	MG	1H	3187	1/1	0.91	0.26	60,60,60,60	0
60	MG	13	1654	1/1	0.91	0.30	69,69,69,69	0
60	MG	13	1686	1/1	0.91	0.19	76,76,76,76	0
60	MG	1H	3029	1/1	0.91	0.39	65,65,65,65	0
60	MG	1H	3259	1/1	0.91	0.18	59,59,59,59	0
60	MG	1H	3403	1/1	0.91	0.18	83,83,83,83	0
60	MG	1H	3072	1/1	0.91	0.45	70,70,70,70	0
60	MG	14	3092	1/1	0.91	0.27	62,62,62,62	0
60	MG	1H	3229	1/1	0.91	0.27	56,56,56,56	0
60	MG	1H	3305	1/1	0.91	0.31	99,99,99,99	0
60	MG	1G	1604	1/1	0.91	0.17	78,78,78,78	0
60	MG	1G	1674	1/1	0.91	0.24	84,84,84,84	0
60	MG	1H	3113	1/1	0.91	0.35	53,53,53,53	0
60	MG	1G	1612	1/1	0.91	0.31	84,84,84,84	0
60	MG	14	3022	1/1	0.92	0.24	48,48,48,48	0
60	MG	1H	3364	1/1	0.92	0.15	51,51,51,51	0
60	MG	1H	3120	1/1	0.92	0.36	63,63,63,63	0
60	MG	1H	3366	1/1	0.92	0.16	53,53,53,53	0
60	MG	1H	3265	1/1	0.92	0.25	75,75,75,75	0
60	MG	1H	3146	1/1	0.92	0.35	84,84,84,84	0
60	MG	1H	3432	1/1	0.92	0.07	107,107,107,107	0
60	MG	13	1616	1/1	0.92	0.23	100,100,100,100	0
60	MG	14	3053	1/1	0.92	0.61	66,66,66,66	0
60	MG	14	3149	1/1	0.92	0.36	73,73,73,73	0
60	MG	1H	3171	1/1	0.92	0.49	69,69,69,69	0
60	MG	14	3062	1/1	0.92	0.48	66,66,66,66	0
60	MG	1H	3148	1/1	0.92	0.65	67,67,67,67	0
60	MG	1H	3050	1/1	0.92	0.32	54,54,54,54	0
60	MG	14	3154	1/1	0.92	0.24	64,64,64,64	0
60	MG	1H	3389	1/1	0.92	0.11	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	14	3329	1/1	0.92	0.12	65,65,65,65	0
60	MG	14	3332	1/1	0.92	0.14	71,71,71,71	0
60	MG	1H	3106	1/1	0.92	0.18	66,66,66,66	0
60	MG	14	3339	1/1	0.92	0.13	62,62,62,62	0
60	MG	14	3341	1/1	0.92	0.10	66,66,66,66	0
60	MG	1H	3056	1/1	0.92	0.21	67,67,67,67	0
60	MG	14	3347	1/1	0.92	0.15	83,83,83,83	0
60	MG	1H	3131	1/1	0.92	0.46	76,76,76,76	0
60	MG	16	208	1/1	0.92	0.13	84,84,84,84	0
60	MG	13	1619	1/1	0.92	0.30	70,70,70,70	0
60	MG	14	3166	1/1	0.92	0.38	73,73,73,73	0
60	MG	1H	3405	1/1	0.92	0.06	73,73,73,73	0
60	MG	14	3365	1/1	0.92	0.07	90,90,90,90	0
60	MG	14	3366	1/1	0.92	0.06	102,102,102,102	0
60	MG	14	3171	1/1	0.92	0.38	78,78,78,78	0
60	MG	11	301	1/1	0.92	0.17	42,42,42,42	0
60	MG	14	3095	1/1	0.92	0.21	66,66,66,66	0
60	MG	1G	1690	1/1	0.92	0.43	75,75,75,75	0
60	MG	14	3098	1/1	0.92	0.47	59,59,59,59	0
60	MG	1G	1694	1/1	0.92	0.09	110,110,110,110	0
60	MG	13	1697	1/1	0.92	0.07	95,95,95,95	0
60	MG	1H	3137	1/1	0.92	0.25	72,72,72,72	0
60	MG	1H	3215	1/1	0.92	0.41	80,80,80,80	0
60	MG	78	201	1/1	0.92	0.21	66,66,66,66	0
60	MG	13	1659	1/1	0.92	0.33	79,79,79,79	0
60	MG	14	3114	1/1	0.92	0.68	91,91,91,91	0
60	MG	14	3191	1/1	0.92	0.33	69,69,69,69	0
60	MG	1H	3115	1/1	0.92	0.41	52,52,52,52	0
60	MG	1H	3191	1/1	0.92	0.33	73,73,73,73	0
60	MG	13	1704	1/1	0.92	0.19	71,71,71,71	0
60	MG	13	1676	1/1	0.92	0.23	63,63,63,63	0
60	MG	14	3124	1/1	0.92	0.32	82,82,82,82	0
60	MG	14	3199	1/1	0.92	0.59	66,66,66,66	0
60	MG	1H	3357	1/1	0.92	0.10	69,69,69,69	0
60	MG	1H	3360	1/1	0.92	0.14	99,99,99,99	0
60	MG	1G	1608	1/1	0.92	0.27	95,95,95,95	0
61	ZN	5A	101	1/1	0.92	0.12	129,129,129,129	0
60	MG	14	3206	1/1	0.92	0.26	63,63,63,63	0
60	MG	1G	1621	1/1	0.93	0.09	68,68,68,68	0
60	MG	13	1664	1/1	0.93	0.26	68,68,68,68	0
60	MG	1H	3331	1/1	0.93	0.09	44,44,44,44	0
60	MG	14	3196	1/1	0.93	0.82	82,82,82,82	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
60	MG	1G	1688	1/1	0.93	0.34	105,105,105,105	0
60	MG	1H	3130	1/1	0.93	0.38	73,73,73,73	0
60	MG	1G	1629	1/1	0.93	0.15	99,99,99,99	0
60	MG	1G	1630	1/1	0.93	0.26	80,80,80,80	0
60	MG	1H	3227	1/1	0.93	0.24	65,65,65,65	0
60	MG	14	3204	1/1	0.93	0.29	105,105,105,105	0
60	MG	1H	3337	1/1	0.93	0.15	66,66,66,66	0
60	MG	1H	3275	1/1	0.93	0.26	58,58,58,58	0
60	MG	1H	3101	1/1	0.93	0.45	77,77,77,77	0
60	MG	14	3129	1/1	0.93	0.28	56,56,56,56	0
60	MG	13	1730	1/1	0.93	0.08	103,103,103,103	0
60	MG	1H	3350	1/1	0.93	0.14	47,47,47,47	0
60	MG	1G	1642	1/1	0.93	0.16	87,87,87,87	0
60	MG	14	3212	1/1	0.93	0.47	106,106,106,106	0
60	MG	1H	3023	1/1	0.93	0.33	58,58,58,58	0
60	MG	1H	3234	1/1	0.93	0.45	53,53,53,53	0
60	MG	14	3217	1/1	0.93	0.20	71,71,71,71	0
60	MG	1H	3282	1/1	0.93	0.17	56,56,56,56	0
60	MG	14	3334	1/1	0.93	0.07	80,80,80,80	0
60	MG	1H	3195	1/1	0.93	0.52	75,75,75,75	0
60	MG	1H	3107	1/1	0.93	0.47	63,63,63,63	0
60	MG	1G	1650	1/1	0.93	0.46	88,88,88,88	0
60	MG	14	3233	1/1	0.93	0.27	69,69,69,69	0
60	MG	13	1674	1/1	0.93	0.23	184,184,184,184	0
60	MG	14	3348	1/1	0.93	0.10	83,83,83,83	0
60	MG	14	3351	1/1	0.93	0.14	93,93,93,93	0
60	MG	14	3354	1/1	0.93	0.09	74,74,74,74	0
60	MG	1H	3287	1/1	0.93	0.28	54,54,54,54	0
60	MG	1H	3166	1/1	0.93	0.36	83,83,83,83	0
60	MG	1H	3199	1/1	0.93	0.27	74,74,74,74	0
60	MG	13	1647	1/1	0.93	0.42	83,83,83,83	0
60	MG	14	3361	1/1	0.93	0.16	60,60,60,60	0
60	MG	13	1603	1/1	0.93	0.25	57,57,57,57	0
60	MG	14	3040	1/1	0.93	0.29	66,66,66,66	0
60	MG	14	3255	1/1	0.93	0.37	75,75,75,75	0
60	MG	13	1740	1/1	0.93	0.12	54,54,54,54	0
60	MG	1H	3114	1/1	0.93	0.38	61,61,61,61	0
60	MG	1H	3382	1/1	0.93	0.06	68,68,68,68	0
60	MG	14	3377	1/1	0.93	0.09	71,71,71,71	0
60	MG	14	3061	1/1	0.93	0.34	49,49,49,49	0
60	MG	13	1643	1/1	0.93	0.06	75,75,75,75	0
60	MG	1H	3211	1/1	0.93	0.26	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	1H	3395	1/1	0.93	0.09	69,69,69,69	0
60	MG	13	1644	1/1	0.93	0.32	55,55,55,55	0
60	MG	14	3169	1/1	0.93	0.18	46,46,46,46	0
60	MG	13	1671	1/1	0.93	0.13	64,64,64,64	0
60	MG	14	3173	1/1	0.93	0.43	61,61,61,61	0
60	MG	1J	204	1/1	0.93	0.33	92,92,92,92	0
60	MG	2K	102	1/1	0.93	0.21	84,84,84,84	0
60	MG	1G	1669	1/1	0.93	0.23	84,84,84,84	0
60	MG	1G	1670	1/1	0.93	0.08	93,93,93,93	0
60	MG	1H	3258	1/1	0.93	0.43	64,64,64,64	0
60	MG	13	1691	1/1	0.93	0.13	96,96,96,96	0
60	MG	14	3182	1/1	0.93	0.52	81,81,81,81	0
60	MG	45	201	1/1	0.93	0.20	81,81,81,81	0
60	MG	1H	3307	1/1	0.93	0.33	74,74,74,74	0
60	MG	1H	3124	1/1	0.93	0.29	68,68,68,68	0
60	MG	1H	3264	1/1	0.93	0.14	66,66,66,66	0
60	MG	1H	3317	1/1	0.93	0.16	74,74,74,74	0
60	MG	1H	3318	1/1	0.93	0.08	45,45,45,45	0
60	MG	1H	3049	1/1	0.93	0.29	66,66,66,66	0
60	MG	13	1727	1/1	0.93	0.07	86,86,86,86	0
60	MG	1G	1697	1/1	0.94	0.08	111,111,111,111	0
60	MG	1G	1618	1/1	0.94	0.49	86,86,86,86	0
60	MG	13	1625	1/1	0.94	0.49	75,75,75,75	0
60	MG	14	3270	1/1	0.94	0.31	57,57,57,57	0
60	MG	13	1615	1/1	0.94	0.31	75,75,75,75	0
60	MG	1G	1623	1/1	0.94	0.49	82,82,82,82	0
60	MG	1H	3176	1/1	0.94	0.21	73,73,73,73	0
60	MG	1H	3310	1/1	0.94	0.15	50,50,50,50	0
60	MG	1G	1704	1/1	0.94	0.15	91,91,91,91	0
60	MG	13	1660	1/1	0.94	0.37	70,70,70,70	0
60	MG	1H	3179	1/1	0.94	0.33	57,57,57,57	0
60	MG	1H	3022	1/1	0.94	0.14	51,51,51,51	0
60	MG	14	3159	1/1	0.94	0.37	64,64,64,64	0
60	MG	14	3003	1/1	0.94	0.34	45,45,45,45	0
60	MG	13	1739	1/1	0.94	0.13	68,68,68,68	0
60	MG	14	3017	1/1	0.94	0.28	68,68,68,68	0
60	MG	1H	3217	1/1	0.94	0.39	75,75,75,75	0
60	MG	1H	3026	1/1	0.94	0.31	80,80,80,80	0
60	MG	1H	3420	1/1	0.94	0.12	111,111,111,111	0
60	MG	14	3026	1/1	0.94	0.17	77,77,77,77	0
60	MG	1H	3330	1/1	0.94	0.11	51,51,51,51	0
60	MG	13	1724	1/1	0.94	0.05	82,82,82,82	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	1H	3151	1/1	0.94	0.43	77,77,77,77	0
60	MG	14	3032	1/1	0.94	0.10	103,103,103,103	0
60	MG	1H	3126	1/1	0.94	0.12	79,79,79,79	0
60	MG	1H	3102	1/1	0.94	0.32	61,61,61,61	0
60	MG	1H	3188	1/1	0.94	0.22	63,63,63,63	0
60	MG	14	3042	1/1	0.94	0.27	44,44,44,44	0
60	MG	1H	3230	1/1	0.94	0.11	39,39,39,39	0
60	MG	1H	3342	1/1	0.94	0.10	59,59,59,59	0
60	MG	14	3057	1/1	0.94	0.41	62,62,62,62	0
60	MG	1H	3348	1/1	0.94	0.07	82,82,82,82	0
60	MG	1H	3434	1/1	0.94	0.08	44,44,44,44	0
60	MG	13	1726	1/1	0.94	0.09	97,97,97,97	0
60	MG	1H	3281	1/1	0.94	0.15	69,69,69,69	0
60	MG	14	3312	1/1	0.94	0.16	57,57,57,57	0
60	MG	14	3313	1/1	0.94	0.17	53,53,53,53	0
60	MG	1H	3232	1/1	0.94	0.20	71,71,71,71	0
60	MG	1H	3105	1/1	0.94	0.09	59,59,59,59	0
60	MG	14	3324	1/1	0.94	0.08	63,63,63,63	0
60	MG	14	3066	1/1	0.94	0.43	47,47,47,47	0
60	MG	14	3327	1/1	0.94	0.15	58,58,58,58	0
60	MG	13	1613	1/1	0.94	0.28	66,66,66,66	0
60	MG	14	3330	1/1	0.94	0.13	58,58,58,58	0
60	MG	14	3074	1/1	0.94	0.49	53,53,53,53	0
60	MG	14	3075	1/1	0.94	0.40	49,49,49,49	0
60	MG	14	3336	1/1	0.94	0.06	80,80,80,80	0
60	MG	14	3078	1/1	0.94	0.27	59,59,59,59	0
60	MG	1H	3359	1/1	0.94	0.09	83,83,83,83	0
60	MG	1H	3237	1/1	0.94	0.12	63,63,63,63	0
60	MG	1H	3361	1/1	0.94	0.16	78,78,78,78	0
60	MG	1H	3362	1/1	0.94	0.15	47,47,47,47	0
60	MG	1H	3157	1/1	0.94	0.22	58,58,58,58	0
60	MG	16	212	1/1	0.94	0.10	71,71,71,71	0
60	MG	1H	3133	1/1	0.94	0.52	83,83,83,83	0
60	MG	1G	1664	1/1	0.94	0.20	74,74,74,74	0
60	MG	1H	3290	1/1	0.94	0.15	76,76,76,76	0
60	MG	1G	1666	1/1	0.94	0.39	113,113,113,113	0
60	MG	21	302	1/1	0.94	0.13	64,64,64,64	0
60	MG	14	3360	1/1	0.94	0.10	103,103,103,103	0
60	MG	1H	3134	1/1	0.94	0.51	64,64,64,64	0
60	MG	14	3362	1/1	0.94	0.08	74,74,74,74	0
60	MG	13	1614	1/1	0.94	0.27	82,82,82,82	0
60	MG	14	3364	1/1	0.94	0.12	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	14	3107	1/1	0.94	0.46	69,69,69,69	0
60	MG	14	3218	1/1	0.94	0.27	67,67,67,67	0
60	MG	14	3367	1/1	0.94	0.08	90,90,90,90	0
60	MG	14	3220	1/1	0.94	0.12	44,44,44,44	0
60	MG	1H	3035	1/1	0.94	0.26	63,63,63,63	0
60	MG	14	3372	1/1	0.94	0.05	79,79,79,79	0
60	MG	14	3374	1/1	0.94	0.05	107,107,107,107	0
60	MG	14	3224	1/1	0.94	0.56	51,51,51,51	0
60	MG	1H	3038	1/1	0.94	0.61	59,59,59,59	0
60	MG	1H	3201	1/1	0.94	0.52	65,65,65,65	0
60	MG	14	3230	1/1	0.94	0.16	51,51,51,51	0
60	MG	1H	3249	1/1	0.94	0.40	72,72,72,72	0
60	MG	1H	3081	1/1	0.94	0.21	34,34,34,34	0
60	MG	14	3234	1/1	0.94	0.18	57,57,57,57	0
60	MG	1G	1678	1/1	0.94	0.24	79,79,79,79	0
60	MG	14	3240	1/1	0.94	0.30	50,50,50,50	0
60	MG	1H	3384	1/1	0.94	0.08	85,85,85,85	0
60	MG	13	1657	1/1	0.94	0.47	73,73,73,73	0
60	MG	1J	205	1/1	0.94	0.10	119,119,119,119	0
60	MG	1G	1602	1/1	0.94	0.23	69,69,69,69	0
60	MG	14	3249	1/1	0.94	0.29	61,61,61,61	0
60	MG	1H	3142	1/1	0.94	0.26	57,57,57,57	0
60	MG	1G	1605	1/1	0.94	0.21	81,81,81,81	0
60	MG	14	3132	1/1	0.94	0.37	84,84,84,84	0
60	MG	14	3254	1/1	0.94	0.19	78,78,78,78	0
60	MG	1H	3392	1/1	0.94	0.14	53,53,53,53	0
60	MG	1H	3303	1/1	0.94	0.66	90,90,90,90	0
60	MG	1H	3396	1/1	0.94	0.10	56,56,56,56	0
60	MG	1H	3206	1/1	0.94	0.22	58,58,58,58	0
60	MG	14	3140	1/1	0.94	0.17	46,46,46,46	0
60	MG	1G	1615	1/1	0.94	0.30	87,87,87,87	0
60	MG	13	1733	1/1	0.94	0.08	75,75,75,75	0
60	MG	1H	3401	1/1	0.94	0.11	61,61,61,61	0
60	MG	14	3268	1/1	0.95	0.13	74,74,74,74	0
60	MG	13	1635	1/1	0.95	0.34	63,63,63,63	0
60	MG	13	1655	1/1	0.95	0.27	97,97,97,97	0
60	MG	1H	3202	1/1	0.95	0.46	43,43,43,43	0
60	MG	1G	1620	1/1	0.95	0.14	83,83,83,83	0
60	MG	1H	3085	1/1	0.95	0.26	47,47,47,47	0
60	MG	1H	3163	1/1	0.95	0.48	64,64,64,64	0
60	MG	1H	3406	1/1	0.95	0.11	44,44,44,44	0
60	MG	14	3001	1/1	0.95	0.11	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	14	3002	1/1	0.95	0.35	50,50,50,50	0
60	MG	13	1717	1/1	0.95	0.10	63,63,63,63	0
60	MG	14	3005	1/1	0.95	0.34	46,46,46,46	0
60	MG	14	3014	1/1	0.95	0.31	79,79,79,79	0
60	MG	1H	3311	1/1	0.95	0.11	42,42,42,42	0
60	MG	3I	201	1/1	0.95	0.15	59,59,59,59	0
60	MG	14	3161	1/1	0.95	0.30	69,69,69,69	0
60	MG	1H	3411	1/1	0.95	0.10	68,68,68,68	0
60	MG	14	3021	1/1	0.95	0.12	68,68,68,68	0
60	MG	1H	3314	1/1	0.95	0.14	38,38,38,38	0
60	MG	1H	3316	1/1	0.95	0.16	42,42,42,42	0
60	MG	1G	1634	1/1	0.95	0.19	112,112,112,112	0
60	MG	13	1720	1/1	0.95	0.06	96,96,96,96	0
60	MG	14	3029	1/1	0.95	0.20	75,75,75,75	0
60	MG	14	3298	1/1	0.95	0.33	64,64,64,64	0
60	MG	1H	3417	1/1	0.95	0.08	98,98,98,98	0
60	MG	1H	3208	1/1	0.95	0.11	56,56,56,56	0
60	MG	13	1679	1/1	0.95	0.18	70,70,70,70	0
60	MG	1H	3324	1/1	0.95	0.09	45,45,45,45	0
60	MG	1H	3168	1/1	0.95	0.38	72,72,72,72	0
60	MG	1H	3328	1/1	0.95	0.13	50,50,50,50	0
60	MG	1H	3091	1/1	0.95	0.18	60,60,60,60	0
60	MG	14	3181	1/1	0.95	0.18	73,73,73,73	0
60	MG	1H	3170	1/1	0.95	0.33	76,76,76,76	0
60	MG	1H	3039	1/1	0.95	0.33	46,46,46,46	0
60	MG	14	3056	1/1	0.95	0.31	65,65,65,65	0
60	MG	14	3311	1/1	0.95	0.12	58,58,58,58	0
60	MG	1H	3096	1/1	0.95	0.32	53,53,53,53	0
60	MG	1H	3429	1/1	0.95	0.11	61,61,61,61	0
60	MG	1H	3334	1/1	0.95	0.14	59,59,59,59	0
60	MG	1H	3431	1/1	0.95	0.08	73,73,73,73	0
60	MG	14	3319	1/1	0.95	0.06	98,98,98,98	0
60	MG	14	3320	1/1	0.95	0.10	52,52,52,52	0
60	MG	1H	3271	1/1	0.95	0.15	62,62,62,62	0
60	MG	13	1636	1/1	0.95	0.25	66,66,66,66	0
60	MG	14	3326	1/1	0.95	0.11	54,54,54,54	0
60	MG	13	1646	1/1	0.95	0.13	111,111,111,111	0
60	MG	14	3328	1/1	0.95	0.16	72,72,72,72	0
60	MG	13	1623	1/1	0.95	0.45	76,76,76,76	0
60	MG	1H	3001	1/1	0.95	0.31	36,36,36,36	0
60	MG	14	3070	1/1	0.95	0.42	61,61,61,61	0
60	MG	14	3333	1/1	0.95	0.11	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	1H	3345	1/1	0.95	0.09	65,65,65,65	0
60	MG	1H	3277	1/1	0.95	0.20	59,59,59,59	0
60	MG	13	1610	1/1	0.95	0.16	67,67,67,67	0
60	MG	1H	3006	1/1	0.95	0.27	42,42,42,42	0
60	MG	14	3203	1/1	0.95	0.31	66,66,66,66	0
60	MG	14	3344	1/1	0.95	0.15	54,54,54,54	0
60	MG	14	3082	1/1	0.95	0.44	65,65,65,65	0
60	MG	16	206	1/1	0.95	0.32	70,70,70,70	0
60	MG	14	3087	1/1	0.95	0.30	78,78,78,78	0
60	MG	14	3088	1/1	0.95	0.29	64,64,64,64	0
60	MG	1H	3352	1/1	0.95	0.09	46,46,46,46	0
60	MG	1H	3224	1/1	0.95	0.13	37,37,37,37	0
60	MG	1H	3012	1/1	0.95	0.52	49,49,49,49	0
60	MG	1G	1667	1/1	0.95	0.31	66,66,66,66	0
60	MG	1H	3054	1/1	0.95	0.27	56,56,56,56	0
60	MG	1H	3283	1/1	0.95	0.30	64,64,64,64	0
60	MG	13	1626	1/1	0.95	0.34	50,50,50,50	0
60	MG	13	1632	1/1	0.95	0.17	55,55,55,55	0
60	MG	14	3102	1/1	0.95	0.30	46,46,46,46	0
60	MG	13	1652	1/1	0.95	0.38	61,61,61,61	0
60	MG	1H	3112	1/1	0.95	0.14	62,62,62,62	0
60	MG	1H	3190	1/1	0.95	0.42	61,61,61,61	0
60	MG	1H	3235	1/1	0.95	0.17	59,59,59,59	0
60	MG	14	3368	1/1	0.95	0.07	83,83,83,83	0
60	MG	1H	3367	1/1	0.95	0.06	56,56,56,56	0
60	MG	14	3229	1/1	0.95	0.24	84,84,84,84	0
60	MG	1G	1679	1/1	0.95	0.11	71,71,71,71	0
60	MG	14	3111	1/1	0.95	0.49	72,72,72,72	0
60	MG	1H	3236	1/1	0.95	0.19	55,55,55,55	0
60	MG	1H	3292	1/1	0.95	0.38	89,89,89,89	0
60	MG	B8	201	1/1	0.95	0.19	97,97,97,97	0
60	MG	14	3238	1/1	0.95	0.20	56,56,56,56	0
60	MG	13	1622	1/1	0.95	0.48	86,86,86,86	0
60	MG	14	3381	1/1	0.95	0.10	79,79,79,79	0
60	MG	14	3382	1/1	0.95	0.11	100,100,100,100	0
60	MG	14	3241	1/1	0.95	0.20	65,65,65,65	0
60	MG	14	3243	1/1	0.95	0.48	61,61,61,61	0
60	MG	14	3122	1/1	0.95	0.39	66,66,66,66	0
60	MG	1H	3025	1/1	0.95	0.18	51,51,51,51	0
60	MG	13	1737	1/1	0.95	0.10	91,91,91,91	0
60	MG	1H	3074	1/1	0.95	0.40	57,57,57,57	0
60	MG	14	3126	1/1	0.95	0.20	82,82,82,82	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
60	MG	1H	3027	1/1	0.95	0.40	79,79,79,79	0
60	MG	1H	3243	1/1	0.95	0.22	60,60,60,60	0
60	MG	19	301	1/1	0.95	0.15	87,87,87,87	0
60	MG	14	3131	1/1	0.95	0.39	39,39,39,39	0
60	MG	1H	3387	1/1	0.95	0.11	53,53,53,53	0
60	MG	1H	3078	1/1	0.95	0.16	46,46,46,46	0
60	MG	14	3134	1/1	0.95	0.20	84,84,84,84	0
60	MG	1G	1611	1/1	0.95	0.24	103,103,103,103	0
60	MG	45	202	1/1	0.95	0.06	94,94,94,94	0
60	MG	1H	3300	1/1	0.95	0.28	52,52,52,52	0
60	MG	1H	3301	1/1	0.95	0.29	70,70,70,70	0
60	MG	14	3138	1/1	0.95	0.50	50,50,50,50	0
60	MG	1H	3080	1/1	0.95	0.29	59,59,59,59	0
60	MG	1H	3123	1/1	0.95	0.23	65,65,65,65	0
60	MG	14	3142	1/1	0.95	0.29	68,68,68,68	0
60	MG	14	3266	1/1	0.95	0.46	81,81,81,81	0
60	MG	14	3194	1/1	0.96	0.33	63,63,63,63	0
60	MG	1G	1631	1/1	0.96	0.32	83,83,83,83	0
60	MG	1H	3128	1/1	0.96	0.42	49,49,49,49	0
60	MG	1H	3158	1/1	0.96	0.49	65,65,65,65	0
60	MG	1H	3065	1/1	0.96	0.11	39,39,39,39	0
60	MG	1H	3068	1/1	0.96	0.40	52,52,52,52	0
60	MG	1H	3069	1/1	0.96	0.30	60,60,60,60	0
60	MG	1H	3381	1/1	0.96	0.12	41,41,41,41	0
60	MG	14	3202	1/1	0.96	0.43	72,72,72,72	0
60	MG	1G	1640	1/1	0.96	0.59	105,105,105,105	0
60	MG	1H	3070	1/1	0.96	0.47	45,45,45,45	0
60	MG	1H	3017	1/1	0.96	0.18	54,54,54,54	0
60	MG	14	3112	1/1	0.96	0.38	72,72,72,72	0
60	MG	13	1725	1/1	0.96	0.05	96,96,96,96	0
60	MG	1H	3040	1/1	0.96	0.12	58,58,58,58	0
60	MG	14	3314	1/1	0.96	0.12	63,63,63,63	0
60	MG	13	1605	1/1	0.96	0.22	71,71,71,71	0
60	MG	1G	1647	1/1	0.96	0.53	76,76,76,76	0
60	MG	14	3007	1/1	0.96	0.41	54,54,54,54	0
60	MG	14	3013	1/1	0.96	0.33	61,61,61,61	0
60	MG	14	3321	1/1	0.96	0.10	78,78,78,78	0
60	MG	14	3322	1/1	0.96	0.12	42,42,42,42	0
60	MG	1H	3138	1/1	0.96	0.52	81,81,81,81	0
60	MG	1H	3109	1/1	0.96	0.30	50,50,50,50	0
60	MG	13	1608	1/1	0.96	0.20	70,70,70,70	0
60	MG	13	1639	1/1	0.96	0.12	93,93,93,93	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	1H	3399	1/1	0.96	0.11	60,60,60,60	0
60	MG	14	3221	1/1	0.96	0.27	56,56,56,56	0
60	MG	14	3130	1/1	0.96	0.25	53,53,53,53	0
60	MG	1H	3244	1/1	0.96	0.28	56,56,56,56	0
60	MG	14	3225	1/1	0.96	0.24	53,53,53,53	0
60	MG	2K	104	1/1	0.96	0.28	54,54,54,54	0
60	MG	14	3335	1/1	0.96	0.15	60,60,60,60	0
60	MG	1H	3402	1/1	0.96	0.11	109,109,109,109	0
60	MG	14	3027	1/1	0.96	0.25	65,65,65,65	0
60	MG	1H	3289	1/1	0.96	0.48	71,71,71,71	0
60	MG	13	1729	1/1	0.96	0.04	76,76,76,76	0
60	MG	1H	3174	1/1	0.96	0.60	53,53,53,53	0
60	MG	98	202	1/1	0.96	0.11	69,69,69,69	0
60	MG	13	1723	1/1	0.96	0.06	85,85,85,85	0
60	MG	14	3036	1/1	0.96	0.37	66,66,66,66	0
60	MG	14	3350	1/1	0.96	0.09	65,65,65,65	0
60	MG	C8	201	1/1	0.96	0.23	89,89,89,89	0
60	MG	14	3038	1/1	0.96	0.52	60,60,60,60	0
60	MG	14	3242	1/1	0.96	0.34	53,53,53,53	0
60	MG	13	1684	1/1	0.96	0.34	66,66,66,66	0
60	MG	1H	3051	1/1	0.96	0.36	61,61,61,61	0
60	MG	14	3041	1/1	0.96	0.29	72,72,72,72	0
60	MG	14	3246	1/1	0.96	0.45	81,81,81,81	0
60	MG	14	3247	1/1	0.96	0.24	73,73,73,73	0
60	MG	K8	101	1/1	0.96	0.34	69,69,69,69	0
60	MG	14	3043	1/1	0.96	0.33	64,64,64,64	0
60	MG	14	3047	1/1	0.96	0.29	72,72,72,72	0
60	MG	1H	3117	1/1	0.96	0.31	57,57,57,57	0
60	MG	1G	1601	1/1	0.96	0.35	59,59,59,59	0
60	MG	1H	3088	1/1	0.96	0.25	66,66,66,66	0
60	MG	1G	1603	1/1	0.96	0.11	79,79,79,79	0
60	MG	14	3369	1/1	0.96	0.11	79,79,79,79	0
60	MG	1H	3351	1/1	0.96	0.06	68,68,68,68	0
60	MG	14	3157	1/1	0.96	0.34	69,69,69,69	0
60	MG	14	3060	1/1	0.96	0.29	63,63,63,63	0
60	MG	1H	3414	1/1	0.96	0.07	75,75,75,75	0
60	MG	14	3160	1/1	0.96	0.34	56,56,56,56	0
60	MG	14	3376	1/1	0.96	0.04	91,91,91,91	0
60	MG	1H	3007	1/1	0.96	0.26	33,33,33,33	0
60	MG	1G	1672	1/1	0.96	0.20	84,84,84,84	0
60	MG	1G	1609	1/1	0.96	0.21	74,74,74,74	0
60	MG	1H	3416	1/1	0.96	0.07	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	1H	3353	1/1	0.96	0.12	51,51,51,51	0
60	MG	14	3067	1/1	0.96	0.51	48,48,48,48	0
60	MG	1H	3183	1/1	0.96	0.30	61,61,61,61	0
60	MG	14	3168	1/1	0.96	0.49	77,77,77,77	0
60	MG	1H	3009	1/1	0.96	0.23	48,48,48,48	0
60	MG	14	3072	1/1	0.96	0.34	66,66,66,66	0
60	MG	1H	3257	1/1	0.96	0.08	52,52,52,52	0
60	MG	13	1734	1/1	0.96	0.10	108,108,108,108	0
60	MG	14	3076	1/1	0.96	0.34	44,44,44,44	0
60	MG	1H	3034	1/1	0.96	0.37	38,38,38,38	0
60	MG	1H	3221	1/1	0.96	0.37	58,58,58,58	0
60	MG	1H	3425	1/1	0.96	0.10	60,60,60,60	0
60	MG	14	3083	1/1	0.96	0.30	56,56,56,56	0
60	MG	14	3084	1/1	0.96	0.27	60,60,60,60	0
60	MG	1H	3015	1/1	0.96	0.22	56,56,56,56	0
60	MG	1H	3363	1/1	0.96	0.11	52,52,52,52	0
60	MG	1G	1622	1/1	0.96	0.43	52,52,52,52	0
60	MG	1H	3098	1/1	0.96	0.37	69,69,69,69	0
60	MG	1H	3189	1/1	0.96	0.24	62,62,62,62	0
60	MG	1H	3268	1/1	0.96	0.47	58,58,58,58	0
60	MG	14	3290	1/1	0.96	0.33	78,78,78,78	0
60	MG	14	3190	1/1	0.96	0.28	68,68,68,68	0
60	MG	1H	3064	1/1	0.96	0.20	51,51,51,51	0
60	MG	1H	3369	1/1	0.96	0.16	46,46,46,46	0
60	MG	1H	3228	1/1	0.96	0.12	42,42,42,42	0
60	MG	1H	3336	1/1	0.97	0.11	88,88,88,88	0
60	MG	1H	3014	1/1	0.97	0.33	52,52,52,52	0
60	MG	1H	3076	1/1	0.97	0.35	44,44,44,44	0
60	MG	13	1719	1/1	0.97	0.11	74,74,74,74	0
60	MG	14	3176	1/1	0.97	0.28	67,67,67,67	0
60	MG	1G	1614	1/1	0.97	0.19	109,109,109,109	0
60	MG	1H	3016	1/1	0.97	0.32	42,42,42,42	0
60	MG	1H	3344	1/1	0.97	0.17	47,47,47,47	0
60	MG	14	3292	1/1	0.97	0.14	77,77,77,77	0
60	MG	1H	3079	1/1	0.97	0.37	39,39,39,39	0
60	MG	14	3077	1/1	0.97	0.30	49,49,49,49	0
60	MG	14	3183	1/1	0.97	0.24	84,84,84,84	0
60	MG	1G	1686	1/1	0.97	0.18	115,115,115,115	0
60	MG	14	3080	1/1	0.97	0.27	78,78,78,78	0
60	MG	13	1731	1/1	0.97	0.08	63,63,63,63	0
60	MG	1H	3238	1/1	0.97	0.35	50,50,50,50	0
60	MG	1H	3119	1/1	0.97	0.46	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	1H	3043	1/1	0.97	0.22	70,70,70,70	0
60	MG	1G	1691	1/1	0.97	0.11	85,85,85,85	0
60	MG	1G	1693	1/1	0.97	0.09	76,76,76,76	0
60	MG	1H	3422	1/1	0.97	0.04	87,87,87,87	0
60	MG	14	3089	1/1	0.97	0.34	52,52,52,52	0
60	MG	1H	3044	1/1	0.97	0.21	73,73,73,73	0
60	MG	1G	1696	1/1	0.97	0.07	108,108,108,108	0
60	MG	1H	3083	1/1	0.97	0.37	44,44,44,44	0
60	MG	1H	3161	1/1	0.97	0.23	50,50,50,50	0
60	MG	1H	3018	1/1	0.97	0.28	53,53,53,53	0
60	MG	1G	1628	1/1	0.97	0.12	78,78,78,78	0
60	MG	14	3097	1/1	0.97	0.39	54,54,54,54	0
60	MG	1H	3046	1/1	0.97	0.17	90,90,90,90	0
60	MG	14	3099	1/1	0.97	0.34	58,58,58,58	0
60	MG	14	3100	1/1	0.97	0.46	49,49,49,49	0
60	MG	1H	3019	1/1	0.97	0.23	33,33,33,33	0
60	MG	1K	101	1/1	0.97	0.04	93,93,93,93	0
60	MG	13	1732	1/1	0.97	0.07	86,86,86,86	0
60	MG	13	1627	1/1	0.97	0.39	50,50,50,50	0
60	MG	2L	101	1/1	0.97	0.25	72,72,72,72	0
60	MG	13	1604	1/1	0.97	0.29	74,74,74,74	0
60	MG	1H	3052	1/1	0.97	0.11	44,44,44,44	0
60	MG	1G	1637	1/1	0.97	0.22	67,67,67,67	0
60	MG	1H	3094	1/1	0.97	0.13	35,35,35,35	0
60	MG	14	3331	1/1	0.97	0.10	51,51,51,51	0
60	MG	14	3213	1/1	0.97	0.28	69,69,69,69	0
60	MG	1H	3210	1/1	0.97	0.29	72,72,72,72	0
60	MG	1H	3024	1/1	0.97	0.26	51,51,51,51	0
60	MG	14	3115	1/1	0.97	0.34	39,39,39,39	0
60	MG	14	3116	1/1	0.97	0.40	53,53,53,53	0
60	MG	14	3337	1/1	0.97	0.08	59,59,59,59	0
60	MG	14	3219	1/1	0.97	0.20	48,48,48,48	0
60	MG	1H	3055	1/1	0.97	0.20	45,45,45,45	0
60	MG	14	3340	1/1	0.97	0.10	50,50,50,50	0
60	MG	14	3011	1/1	0.97	0.21	58,58,58,58	0
60	MG	14	3222	1/1	0.97	0.30	43,43,43,43	0
60	MG	14	3120	1/1	0.97	0.28	53,53,53,53	0
60	MG	1H	3370	1/1	0.97	0.12	45,45,45,45	0
60	MG	13	1670	1/1	0.97	0.07	66,66,66,66	0
60	MG	14	3349	1/1	0.97	0.07	61,61,61,61	0
60	MG	1H	3372	1/1	0.97	0.10	61,61,61,61	0
60	MG	13	1687	1/1	0.97	0.12	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	14	3228	1/1	0.97	0.36	76,76,76,76	0
60	MG	1H	3175	1/1	0.97	0.32	81,81,81,81	0
60	MG	14	3019	1/1	0.97	0.07	44,44,44,44	0
60	MG	14	3127	1/1	0.97	0.30	71,71,71,71	0
60	MG	1H	3376	1/1	0.97	0.10	43,43,43,43	0
60	MG	14	3359	1/1	0.97	0.11	69,69,69,69	0
60	MG	1H	3308	1/1	0.97	0.11	39,39,39,39	0
60	MG	14	3235	1/1	0.97	0.31	78,78,78,78	0
60	MG	14	3236	1/1	0.97	0.30	66,66,66,66	0
60	MG	14	3023	1/1	0.97	0.26	74,74,74,74	0
60	MG	1H	3260	1/1	0.97	0.15	62,62,62,62	0
60	MG	14	3239	1/1	0.97	0.37	83,83,83,83	0
60	MG	1H	3261	1/1	0.97	0.14	44,44,44,44	0
60	MG	1H	3059	1/1	0.97	0.46	41,41,41,41	0
60	MG	1H	3263	1/1	0.97	0.42	72,72,72,72	0
60	MG	1H	3313	1/1	0.97	0.09	36,36,36,36	0
60	MG	1H	3385	1/1	0.97	0.10	66,66,66,66	0
60	MG	1H	3177	1/1	0.97	0.32	62,62,62,62	0
60	MG	1H	3002	1/1	0.97	0.33	51,51,51,51	0
60	MG	14	3139	1/1	0.97	0.23	53,53,53,53	0
60	MG	1H	3219	1/1	0.97	0.25	123,123,123,123	0
60	MG	13	1651	1/1	0.97	0.30	54,54,54,54	0
60	MG	1H	3393	1/1	0.97	0.08	68,68,68,68	0
60	MG	1H	3321	1/1	0.97	0.12	57,57,57,57	0
60	MG	1H	3104	1/1	0.97	0.40	63,63,63,63	0
60	MG	1H	3323	1/1	0.97	0.10	58,58,58,58	0
60	MG	14	3146	1/1	0.97	0.25	74,74,74,74	0
60	MG	1H	3004	1/1	0.97	0.35	45,45,45,45	0
60	MG	13	1624	1/1	0.97	0.41	77,77,77,77	0
60	MG	14	3044	1/1	0.97	0.19	39,39,39,39	0
60	MG	14	3385	1/1	0.97	0.07	44,44,44,44	0
60	MG	14	3386	1/1	0.97	0.33	57,57,57,57	0
60	MG	14	3045	1/1	0.97	0.34	45,45,45,45	0
60	MG	14	3046	1/1	0.97	0.37	80,80,80,80	0
60	MG	1H	3067	1/1	0.97	0.26	46,46,46,46	0
60	MG	1H	3225	1/1	0.97	0.16	38,38,38,38	0
60	MG	14	3049	1/1	0.97	0.17	53,53,53,53	0
60	MG	14	3050	1/1	0.97	0.15	54,54,54,54	0
60	MG	14	3265	1/1	0.97	0.40	78,78,78,78	0
60	MG	14	3052	1/1	0.97	0.31	55,55,55,55	0
60	MG	13	1601	1/1	0.97	0.26	66,66,66,66	0
60	MG	14	3054	1/1	0.97	0.45	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	13	1606	1/1	0.97	0.30	78,78,78,78	0
60	MG	13	1718	1/1	0.97	0.13	54,54,54,54	0
60	MG	14	3058	1/1	0.97	0.35	64,64,64,64	0
60	MG	1H	3333	1/1	0.97	0.10	55,55,55,55	0
60	MG	1H	3408	1/1	0.97	0.10	50,50,50,50	0
60	MG	1G	1606	1/1	0.97	0.08	85,85,85,85	0
60	MG	1G	1607	1/1	0.97	0.20	98,98,98,98	0
60	MG	1H	3037	1/1	0.97	0.24	53,53,53,53	0
61	ZN	3E	301	1/1	0.97	0.39	90,90,90,90	0
60	MG	1H	3013	1/1	0.97	0.30	48,48,48,48	0
60	MG	1G	1677	1/1	0.97	0.22	88,88,88,88	0
60	MG	14	3170	1/1	0.97	0.37	81,81,81,81	0
60	MG	14	3323	1/1	0.98	0.09	57,57,57,57	0
60	MG	1H	3315	1/1	0.98	0.12	59,59,59,59	0
60	MG	1H	3358	1/1	0.98	0.10	55,55,55,55	0
60	MG	14	3033	1/1	0.98	0.27	58,58,58,58	0
60	MG	14	3034	1/1	0.98	0.28	62,62,62,62	0
60	MG	14	3172	1/1	0.98	0.20	57,57,57,57	0
60	MG	14	3103	1/1	0.98	0.13	55,55,55,55	0
60	MG	3K	101	1/1	0.98	0.20	83,83,83,83	0
60	MG	21	301	1/1	0.98	0.28	49,49,49,49	0
60	MG	1H	3226	1/1	0.98	0.08	41,41,41,41	0
60	MG	1H	3200	1/1	0.98	0.44	69,69,69,69	0
60	MG	14	3251	1/1	0.98	0.31	69,69,69,69	0
60	MG	1H	3319	1/1	0.98	0.11	46,46,46,46	0
60	MG	1G	1636	1/1	0.98	0.24	89,89,89,89	0
60	MG	14	3110	1/1	0.98	0.54	56,56,56,56	0
60	MG	13	1633	1/1	0.98	0.21	46,46,46,46	0
60	MG	1H	3053	1/1	0.98	0.23	51,51,51,51	0
60	MG	14	3113	1/1	0.98	0.34	58,58,58,58	0
60	MG	1H	3036	1/1	0.98	0.34	52,52,52,52	0
60	MG	14	3342	1/1	0.98	0.11	48,48,48,48	0
60	MG	14	3343	1/1	0.98	0.14	46,46,46,46	0
60	MG	88	201	1/1	0.98	0.30	81,81,81,81	0
60	MG	13	1621	1/1	0.98	0.42	62,62,62,62	0
60	MG	98	201	1/1	0.98	0.27	62,62,62,62	0
60	MG	1H	3325	1/1	0.98	0.11	41,41,41,41	0
60	MG	14	3119	1/1	0.98	0.22	65,65,65,65	0
60	MG	1G	1644	1/1	0.98	0.24	85,85,85,85	0
60	MG	13	1694	1/1	0.98	0.09	115,115,115,115	0
60	MG	14	3352	1/1	0.98	0.12	77,77,77,77	0
60	MG	14	3353	1/1	0.98	0.07	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	14	3051	1/1	0.98	0.26	61,61,61,61	0
60	MG	14	3267	1/1	0.98	0.26	71,71,71,71	0
60	MG	13	1685	1/1	0.98	0.06	80,80,80,80	0
60	MG	1H	3005	1/1	0.98	0.23	47,47,47,47	0
60	MG	13	1669	1/1	0.98	0.40	84,84,84,84	0
60	MG	1H	3373	1/1	0.98	0.09	70,70,70,70	0
60	MG	1H	3132	1/1	0.98	0.34	73,73,73,73	0
60	MG	1H	3084	1/1	0.98	0.14	43,43,43,43	0
60	MG	1H	3266	1/1	0.98	0.15	65,65,65,65	0
60	MG	13	1645	1/1	0.98	0.39	57,57,57,57	0
60	MG	13	1612	1/1	0.98	0.18	67,67,67,67	0
60	MG	1H	3269	1/1	0.98	0.34	58,58,58,58	0
60	MG	1H	3380	1/1	0.98	0.13	53,53,53,53	0
60	MG	1H	3010	1/1	0.98	0.38	50,50,50,50	0
60	MG	1H	3066	1/1	0.98	0.34	36,36,36,36	0
60	MG	1H	3383	1/1	0.98	0.13	64,64,64,64	0
60	MG	13	1672	1/1	0.98	0.28	63,63,63,63	0
60	MG	14	3068	1/1	0.98	0.37	53,53,53,53	0
60	MG	1H	3340	1/1	0.98	0.14	65,65,65,65	0
60	MG	14	3373	1/1	0.98	0.10	65,65,65,65	0
60	MG	13	1721	1/1	0.98	0.10	80,80,80,80	0
60	MG	14	3071	1/1	0.98	0.48	68,68,68,68	0
60	MG	14	3289	1/1	0.98	0.22	65,65,65,65	0
60	MG	14	3008	1/1	0.98	0.45	53,53,53,53	0
60	MG	14	3214	1/1	0.98	0.34	84,84,84,84	0
60	MG	14	3009	1/1	0.98	0.23	50,50,50,50	0
60	MG	14	3293	1/1	0.98	0.11	85,85,85,85	0
60	MG	14	3010	1/1	0.98	0.38	54,54,54,54	0
60	MG	1H	3388	1/1	0.98	0.10	57,57,57,57	0
60	MG	14	3296	1/1	0.98	0.24	135,135,135,135	0
60	MG	14	3012	1/1	0.98	0.32	59,59,59,59	0
60	MG	1H	3274	1/1	0.98	0.19	71,71,71,71	0
60	MG	14	3079	1/1	0.98	0.35	68,68,68,68	0
60	MG	1H	3435	1/1	0.98	0.09	36,36,36,36	0
60	MG	1H	3437	1/1	0.98	0.25	52,52,52,52	0
60	MG	14	3016	1/1	0.98	0.33	52,52,52,52	0
60	MG	13	1607	1/1	0.98	0.09	75,75,75,75	0
60	MG	1H	3391	1/1	0.98	0.06	58,58,58,58	0
60	MG	1H	3346	1/1	0.98	0.05	67,67,67,67	0
60	MG	14	3155	1/1	0.98	0.12	63,63,63,63	0
60	MG	14	3020	1/1	0.98	0.25	57,57,57,57	0
60	MG	29	301	1/1	0.98	0.30	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	13	1611	1/1	0.98	0.08	84,84,84,84	0
60	MG	13	1712	1/1	0.98	0.13	112,112,112,112	0
60	MG	14	3310	1/1	0.98	0.14	46,46,46,46	0
60	MG	14	3231	1/1	0.98	0.26	79,79,79,79	0
60	MG	1H	3247	1/1	0.98	0.20	60,60,60,60	0
60	MG	14	3024	1/1	0.98	0.33	81,81,81,81	0
60	MG	1H	3095	1/1	0.98	0.21	49,49,49,49	0
60	MG	14	3315	1/1	0.98	0.10	52,52,52,52	0
60	MG	1G	1624	1/1	0.98	0.38	70,70,70,70	0
60	MG	14	3094	1/1	0.98	0.40	58,58,58,58	0
60	MG	1H	3032	1/1	0.98	0.38	41,41,41,41	0
60	MG	1H	3097	1/1	0.98	0.43	60,60,60,60	0
61	ZN	32	301	1/1	0.98	0.35	108,108,108,108	0
60	MG	1H	3121	1/1	0.98	0.17	43,43,43,43	0
60	MG	1H	3073	1/1	0.98	0.35	53,53,53,53	0
60	MG	1H	3320	1/1	0.99	0.11	41,41,41,41	0
60	MG	14	3006	1/1	0.99	0.30	49,49,49,49	0
60	MG	1H	3347	1/1	0.99	0.10	70,70,70,70	0
60	MG	1H	3062	1/1	0.99	0.21	39,39,39,39	0
60	MG	14	3345	1/1	0.99	0.15	69,69,69,69	0
60	MG	14	3035	1/1	0.99	0.33	57,57,57,57	0
60	MG	1H	3063	1/1	0.99	0.20	43,43,43,43	0
60	MG	1G	1692	1/1	0.99	0.12	67,67,67,67	0
60	MG	1H	3057	1/1	0.99	0.40	47,47,47,47	0
60	MG	16	209	1/1	0.99	0.12	81,81,81,81	0
60	MG	14	3316	1/1	0.99	0.12	58,58,58,58	0
60	MG	1H	3404	1/1	0.99	0.18	79,79,79,79	0
60	MG	1H	3033	1/1	0.99	0.31	61,61,61,61	0
60	MG	1H	3368	1/1	0.99	0.08	46,46,46,46	0
60	MG	1H	3386	1/1	0.99	0.10	53,53,53,53	0
60	MG	14	3287	1/1	0.99	0.15	57,57,57,57	0
60	MG	13	1602	1/1	0.99	0.21	65,65,65,65	0
60	MG	14	3073	1/1	0.99	0.43	40,40,40,40	0
60	MG	1H	3008	1/1	0.99	0.27	47,47,47,47	0
60	MG	1H	3354	1/1	0.99	0.07	39,39,39,39	0
60	MG	1H	3327	1/1	0.99	0.15	45,45,45,45	0
60	MG	1H	3075	1/1	0.99	0.28	41,41,41,41	0
60	MG	1H	3341	1/1	0.99	0.06	77,77,77,77	0
60	MG	1H	3092	1/1	0.99	0.22	44,44,44,44	0
60	MG	1H	3436	1/1	0.99	0.22	63,63,63,63	0
60	MG	1H	3394	1/1	0.99	0.10	43,43,43,43	0
60	MG	1H	3343	1/1	0.99	0.11	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	1H	3011	1/1	0.99	0.20	37,37,37,37	0
60	MG	14	3055	1/1	0.99	0.40	60,60,60,60	0
60	MG	1H	3397	1/1	0.99	0.10	50,50,50,50	0
60	MG	14	3086	1/1	0.99	0.45	48,48,48,48	0
61	ZN	5I	102	1/1	0.99	0.14	90,90,90,90	0
60	MG	1H	3139	1/1	0.99	0.14	39,39,39,39	0
60	MG	14	3271	1/1	0.99	0.15	67,67,67,67	0
60	MG	14	3004	1/1	0.99	0.25	53,53,53,53	0
60	MG	14	3179	1/1	0.99	0.30	51,51,51,51	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.