



Full wwPDB EM Validation Report ⓘ

Nov 20, 2022 – 11:14 AM EST

PDB ID : 3JBN
EMDB ID : EMD-6456
Title : Cryo-electron microscopy reconstruction of the Plasmodium falciparum 80S ribosome bound to P-tRNA
Authors : Sun, M.; Li, W.; Blomqvist, K.; Das, S.; Hashem, Y.; Dvorin, J.D.; Frank, J.
Deposited on : 2015-09-16
Resolution : 4.70 Å (reported)
Based on initial models : 3J7A, 3J79

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

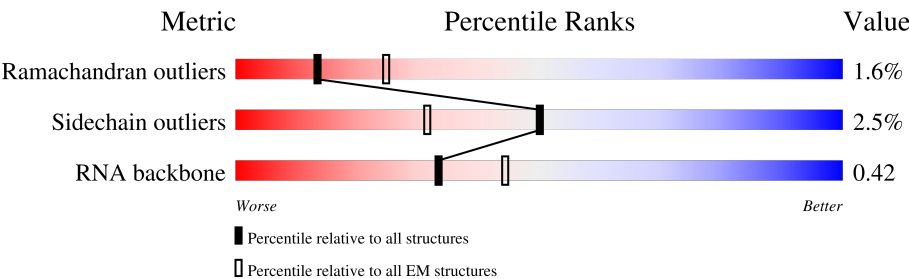
EMDB validation analysis : 0.0.1.dev43
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : **FAILED**
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.3

1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 4.70 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.






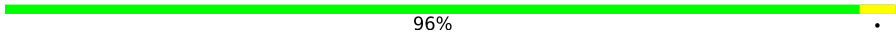
















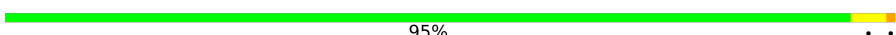




Metric	Whole archive (#Entries)	EM structures (#Entries)
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$.

Mol	Chain	Length	Quality of chain
1	A	1608	
2	7	76	
3	D	209	
4	E	185	
5	G	224	
6	I	189	
7	K	129	
8	M	138	
9	W	108	






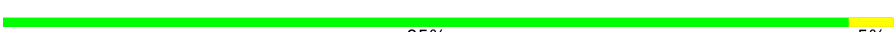






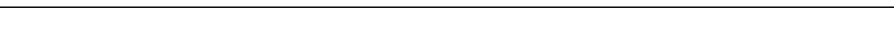

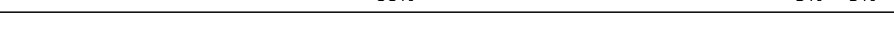

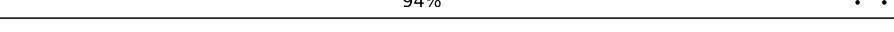

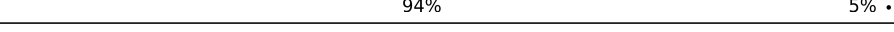





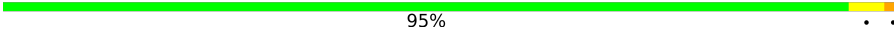
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Mol	Chain	Length	Quality of chain
10	R	114	
11	O	79	
12	Y	154	
13	Z	72	
14	1	120	
15	2	68	
16	3	95	
17	4	76	
18	5	65	
19	6	43	
20	B	210	
21	F	257	
22	H	214	
23	J	188	
24	L	214	
25	N	98	
26	P	127	
27	Q	144	
28	S	128	
29	T	48	
30	U	149	
31	V	156	
32	X	103	
33	C	195	
34	AA	3193	





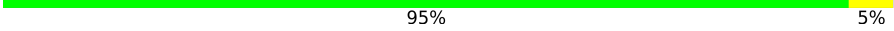




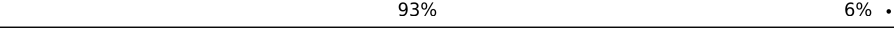

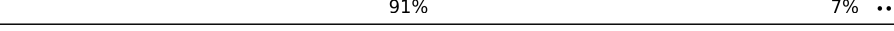


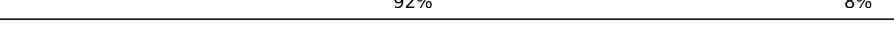


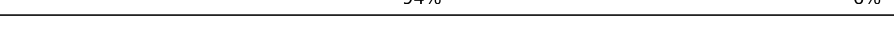

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Mol	Chain	Length	Quality of chain
35	AC	151	 28% 52% 19% .
36	AB	118	 32% 55% 13%
37	AL	211	 91% 7% .
38	A1	145	 90% 6% .
39	A2	118	 82% 6% 12%
40	A4	66	 95% 5%
41	A6	98	 96% .
42	A7	102	 85% 7% . 6%
43	AN	146	 91% 9%
44	A8	125	 86% 12% .
45	A9	103	 89% 10% .
46	Aa	106	 88% 8% .
47	Ab	105	 83% 8% 10%
48	Ad	76	 88% 5% . 5%
49	Ae	50	 72% 14% 14%
50	Af	51	 94% . .
51	AP	204	 84% 12% .
52	Ah	85	 94% 5% .
53	Ai	95	 91% 8% .
54	AI	213	 92% 6% .
55	AJ	244	 83% 8% 9%
56	Ac	89	 87% 10% .
57	AK	201	 92% . .
58	AM	132	 95% . .
59	AS	186	 88% 9% .

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Mol	Chain	Length	Quality of chain
60	AO	147	 87% 11% .
61	AQ	205	 80% 10% . 8%
62	AR	289	 77% 9% . 13%
63	AW	170	 92% 7% .
64	AY	101	 95% 5%
65	AT	181	 92% 8%
66	AZ	121	 88% 9% .
67	A3	119	 92% 8% .
68	A5	223	 88% 10% ..
69	AD	247	 93% 6% .
70	AE	380	 90% 9% .
71	AF	390	 91% 7% ..
72	AG	159	 70% 6% .. 22%
73	AU	180	 90% 7% .
74	AH	185	 92% 8% .
75	AV	155	 89% 10% .
76	Ag	37	 70% 24% 5%
77	AX	97	 94% 6%
78	A0	62	 90% 5% 5%

2 Entry composition

There are 78 unique types of molecules in this entry. The entry contains 193061 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 18S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	1608	Total	C	N	O	P	0	0
			34207	15346	6106	11169	1586		

- Molecule 2 is a RNA chain called P-tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	7	76	Total	C	N	O	P	0	0
			1620	723	295	527	75		

- Molecule 3 is a protein called 40S ribosomal protein uS3.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	D	157	Total	C	N	O	S	0	0
			1229	782	225	215	7		

- Molecule 4 is a protein called 40S ribosomal protein uS4.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	E	185	Total	C	N	O	S	0	0
			1515	962	290	261	2		

- Molecule 5 is a protein called 40S ribosomal protein uS5.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	G	224	Total	C	N	O	S	0	0
			1758	1132	307	310	9		

- Molecule 6 is a protein called 40S ribosomal protein uS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	I	180	Total	C	N	O	S	0	0
			1424	893	263	258	10		

- Molecule 7 is a protein called 40S ribosomal protein uS8.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	K	129	Total	C	N	O	S	0	0
			1037	665	189	178	5		

- Molecule 8 is a protein called 40S ribosomal protein uS9.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	M	138	Total	C	N	O	S	0	0
			1099	704	200	194	1		

- Molecule 9 is a protein called 40S ribosomal protein eS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	W	95	Total	C	N	O	S	0	0
			786	498	149	136	3		

- Molecule 10 is a protein called 40S ribosomal protein eS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	R	98	Total	C	N	O	S	0	0
			747	474	123	146	4		

- Molecule 11 is a protein called 40S ribosomal protein eS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	O	79	Total	C	N	O	S	0	0
			687	450	116	119	2		

- Molecule 12 is a protein called 40S ribosomal protein eS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	Y	154	Total	C	N	O	S	0	0
			1267	811	239	215	2		

- Molecule 13 is a protein called 40S ribosomal protein eS21.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	Z	72	Total	C	N	O	S	0	0
			557	346	102	105	4		

- Molecule 14 is a protein called 40S ribosomal protein eS24.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	1	120	Total	C	N	O	S	0	0
			986	632	189	163	2		

- Molecule 15 is a protein called 40S ribosomal protein eS25.

Mol	Chain	Residues	Atoms				AltConf	Trace
15	2	41	Total	C	N	O	0	0
			321	208	56	57		

- Molecule 16 is a protein called 40S ribosomal protein eS26.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	3	95	Total	C	N	O	S	0	0
			782	478	169	129	6		

- Molecule 17 is a protein called 40S ribosomal protein eS27.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	4	76	Total	C	N	O	S	0	0
			586	368	102	107	9		

- Molecule 18 is a protein called 40S ribosomal protein eS28.

Mol	Chain	Residues	Atoms				AltConf	Trace
18	5	58	Total	C	N	O	0	0
			458	285	93	80		

- Molecule 19 is a protein called 40S ribosomal protein eS30.

Mol	Chain	Residues	Atoms				AltConf	Trace
19	6	43	Total	C	N	O	0	0
			346	213	75	58		

- Molecule 20 is a protein called 40S ribosomal protein eS1.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	B	210	Total	C	N	O	S	0	0
			1714	1097	301	304	12		

- Molecule 21 is a protein called 40S ribosomal protein eS4.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	F	257	Total	C	N	O	S	0	0
			2062	1320	377	357	8		

- Molecule 22 is a protein called 40S ribosomal protein eS6.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	H	204	Total	C	N	O	S	0	0
			1648	1045	313	284	6		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
H	158	ILE	-	INSERTION	UNP Q8IDR9
H	195	ASP	GLU	CONFLICT	UNP Q8IDR9

- Molecule 23 is a protein called 40S ribosomal protein eS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	J	188	Total	C	N	O	S	0	0
			1529	982	264	279	4		

- Molecule 24 is a protein called 40S ribosomal protein eS8.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	L	171	Total	C	N	O	S	0	0
			1383	872	264	243	4		

- Molecule 25 is a protein called 40S ribosomal protein uS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	N	98	Total	C	N	O	S	0	0
			772	484	135	148	5		

- Molecule 26 is a protein called 40S ribosomal protein uS11.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	P	127	Total	C	N	O	S	0	0
			954	591	184	176	3		

- Molecule 27 is a protein called 40S ribosomal protein uS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	Q	144	Total	C	N	O	S	0	0
			1129	712	222	193	2		

- Molecule 28 is a protein called 40S ribosomal protein uS13.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	S	128	Total	C	N	O	S	0	0
			1047	657	205	181	4		

- Molecule 29 is a protein called 40S ribosomal protein uS14.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	T	48	Total	C	N	O	S	0	0
			405	252	85	64	4		

- Molecule 30 is a protein called 40S ribosomal protein uS15.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	U	149	Total	C	N	O	S	0	0
			1202	769	220	210	3		

- Molecule 31 is a protein called 40S ribosomal protein uS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	V	146	Total	C	N	O	S	0	0
			1206	772	227	200	7		

- Molecule 32 is a protein called 40S ribosomal protein uS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	X	96	Total	C	N	O	S	0	0
			777	497	137	139	4		

- Molecule 33 is a protein called 40S ribosomal protein uS2.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	C	195	Total	C	N	O	S	0	0
			1539	990	266	274	9		

- Molecule 34 is a RNA chain called 28S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	AA	3193	Total	C	N	O	P	0	0
			67884	30446	12054	22223	3161		

- Molecule 35 is a RNA chain called 5.8S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	AC	151	Total	C	N	O	P	0	0
			3215	1444	589	1034	148		

- Molecule 36 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	AB	118	Total	C	N	O	P	0	0
			2522	1128	461	816	117		

- Molecule 37 is a protein called 60S ribosomal protein eL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	AL	211	Total	C	N	O	S	0	0
			1757	1116	346	291	4		

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AL	19	HIS	ARG	CONFLICT	UNP Q8IAX6
AL	20	ARG	HIS	CONFLICT	UNP Q8IAX6
AL	201	CYS	ARG	CONFLICT	UNP Q8IAX6

- Molecule 38 is a protein called 60S ribosomal protein eL27.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	A1	140	Total	C	N	O	S	0	0
			1134	736	204	191	3		

- Molecule 39 is a protein called 60S ribosomal protein eL28.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	A2	104	Total	C	N	O	S	0	0
			831	529	151	148	3		

- Molecule 40 is a protein called 60S ribosomal protein eL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	A4	66	Total	C	N	O	S	0	0
			555	347	116	90	2		

- Molecule 41 is a protein called 60S ribosomal protein eL30.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	A6	98	Total	C	N	O	S	0	0
			741	462	132	140	7		

- Molecule 42 is a protein called 60S ribosomal protein eL31.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	A7	96	Total	C	N	O	S	0	0
			794	508	151	130	5		

- Molecule 43 is a protein called 60S ribosomal protein eL14.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	AN	146	Total	C	N	O	S	0	0
			1202	781	210	205	6		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AN	?	-	LYS	DELETION	UNP Q8ILE8

- Molecule 44 is a protein called 60S ribosomal protein eL32.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	A8	125	Total	C	N	O	S	0	0
			1037	660	206	164	7		

- Molecule 45 is a protein called 60S ribosomal protein eL33.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	A9	103	Total	C	N	O	S	0	0
			845	543	163	136	3		

- Molecule 46 is a protein called 60S ribosomal protein eL34.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	Aa	106	Total	C	N	O	S	0	0
			859	530	184	139	6		

- Molecule 47 is a protein called 60S ribosomal protein eL36.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	Ab	95	Total	C	N	O	S	0	0
			757	477	150	130			

- Molecule 48 is a protein called 60S ribosomal protein eL38.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	Ad	72	Total	C	N	O	S	0	0
			604	395	107	100	2		

- Molecule 49 is a protein called 60S ribosomal protein eL39.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	Ae	43	Total	C	N	O	S	0	0
			388	243	92	52	1		

- Molecule 50 is a protein called 60S ribosomal protein eL40.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	Af	51	Total	C	N	O	S	0	0
			414	255	87	67	5		

- Molecule 51 is a protein called 60S ribosomal protein eL15.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	AP	204	Total	C	N	O	S	0	0
			1697	1075	351	267	4		

- Molecule 52 is a protein called 60S ribosomal protein eL43.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	Ah	85	Total	C	N	O	S	0	0
			659	417	127	108	7		

- Molecule 53 is a protein called 60S ribosomal protein eL44.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	Ai	95	Total	C	N	O	S	0	0
			779	490	152	128	9		

- Molecule 54 is a protein called 60S ribosomal protein eL6.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	AI	207	Total	C	N	O	S	0	0
			1685	1096	298	286	5		

- Molecule 55 is a protein called 60S ribosomal protein eL8.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	AJ	222	Total	C	N	O	S	0	0
			1813	1174	323	309	7		

- Molecule 56 is a protein called 60S ribosomal protein eL37.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	Ac	89	Total	C	N	O	S	0	0
			710	441	150	114	5		

- Molecule 57 is a protein called 60S ribosomal protein uL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	AK	201	Total	C	N	O	S	0	0
			1660	1064	311	277	8		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AK	109	ALA	TYR	CONFLICT	UNP Q8IJZ7

- Molecule 58 is a protein called 60S ribosomal protein uL14.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	AM	132	Total	C	N	O	S	0	0
			996	631	179	178	8		

- Molecule 59 is a protein called 60S ribosomal protein eL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	AS	186	Total	C	N	O	S	0	0
			1503	958	299	241	5		

- Molecule 60 is a protein called 60S ribosomal protein uL15.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	AO	147	Total	C	N	O	S	0	0
			1172	747	232	189	4		

- Molecule 61 is a protein called 60S ribosomal protein uL16.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	AQ	189	Total	C	N	O	S	0	0
			1545	984	291	262	8		

- Molecule 62 is a protein called 60S ribosomal protein uL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	AR	252	Total	C	N	O	S	0	0
			2050	1300	385	359	6		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AR	?	-	LYS	DELETION	UNP Q8ILL3

- Molecule 63 is a protein called 60S ribosomal protein uL22.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	AW	170	Total	C	N	O	S	0	0
			1319	824	266	222	7		

- Molecule 64 is a protein called 60S ribosomal protein uL23.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	AY	101	Total	C	N	O	S	0	0
			797	502	144	145	6		

- Molecule 65 is a protein called 60S ribosomal protein eL19.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	AT	181	Total	C	N	O	S	0	0
			1509	952	309	244	4		

- Molecule 66 is a protein called 60S ribosomal protein uL24.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	AZ	121	Total	C	N	O	S	0	0
			1001	626	206	166	3		

- Molecule 67 is a protein called 60S ribosomal protein uL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	A3	119	Total	C	N	O	S	0	0
			995	635	194	164	2		

- Molecule 68 is a protein called 60S ribosomal protein uL30.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	A5	223	Total	C	N	O	S	0	0
			1879	1211	357	306	5		

- Molecule 69 is a protein called 60S ribosomal protein uL2.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	AD	247	Total	C	N	O	S	0	0
			1867	1166	374	318	9		

- Molecule 70 is a protein called 60S ribosomal protein uL3.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	AE	380	Total	C	N	O	S	0	0
			3062	1948	575	522	17		

- Molecule 71 is a protein called 60S ribosomal protein uL4.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	AF	390	Total	C	N	O	S	0	0
			3095	1962	594	528	11		

- Molecule 72 is a protein called 60S ribosomal protein uL5.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	AG	124	Total	C	N	O	S	0	0
			1011	636	197	172	6		

- Molecule 73 is a protein called 60S ribosomal protein eL20.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	AU	180	Total	C	N	O	S	0	0
			1497	946	289	255	7		

- Molecule 74 is a protein called 60S ribosomal protein uL6.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	AH	185	Total	C	N	O	S	0	0
			1476	950	264	256	6		

- Molecule 75 is a protein called 60S ribosomal protein eL21.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	AV	155	Total	C	N	O	S	0	0
			1276	814	241	215	6		

- Molecule 76 is a protein called 60S ribosomal protein eL41.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	Ag	37	Total	C	N	O	S	0	0
			343	210	86	45	2		

- Molecule 77 is a protein called 60S ribosomal protein eL22.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	AX	97	Total	C	N	O	S	0	0
			825	548	135	140	2		

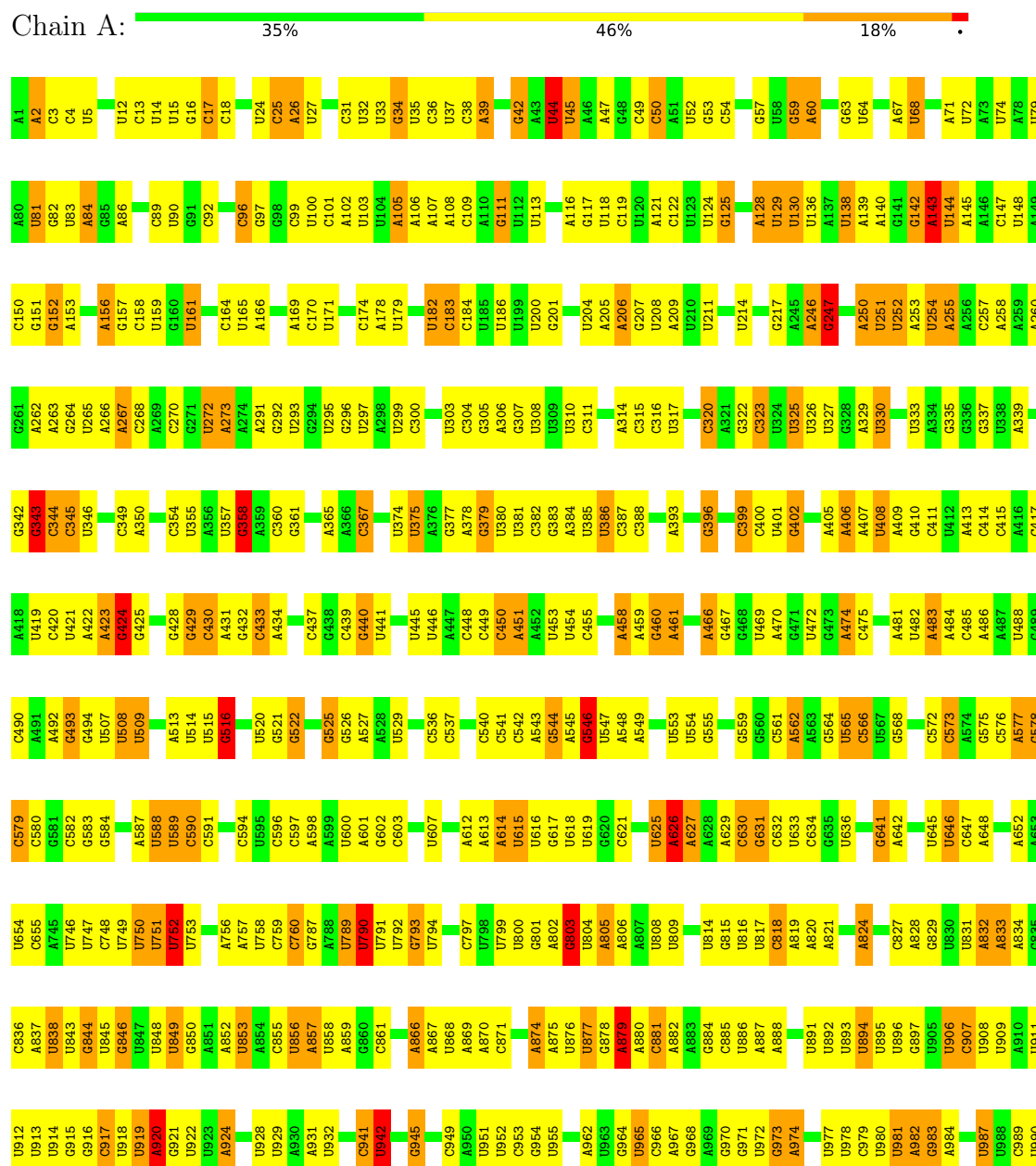
- Molecule 78 is a protein called 60S ribosomal protein eL24.

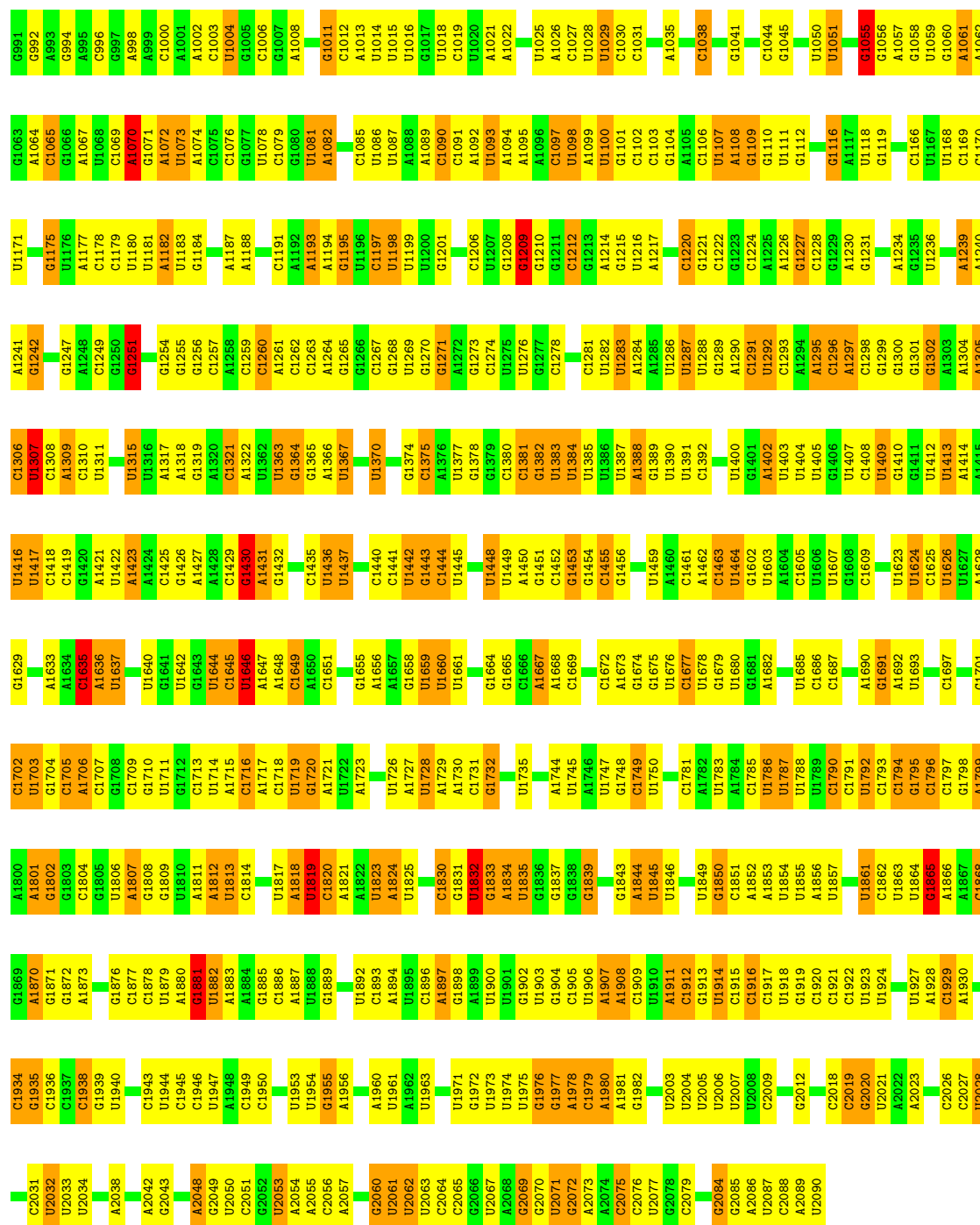
Mol	Chain	Residues	Atoms					AltConf	Trace
78	A0	62	Total	C	N	O	S	0	0
			522	336	97	88	1		

3 Residue-property plots

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. 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. 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.

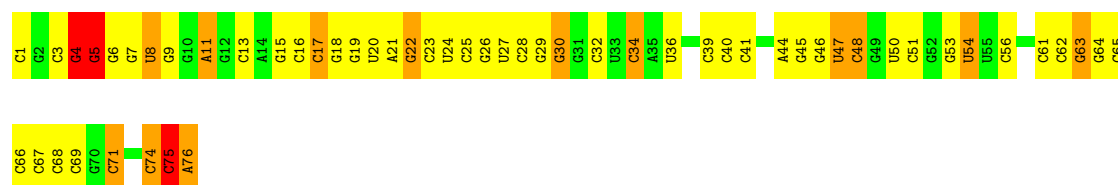
• Molecule 1: 18S ribosomal RNA



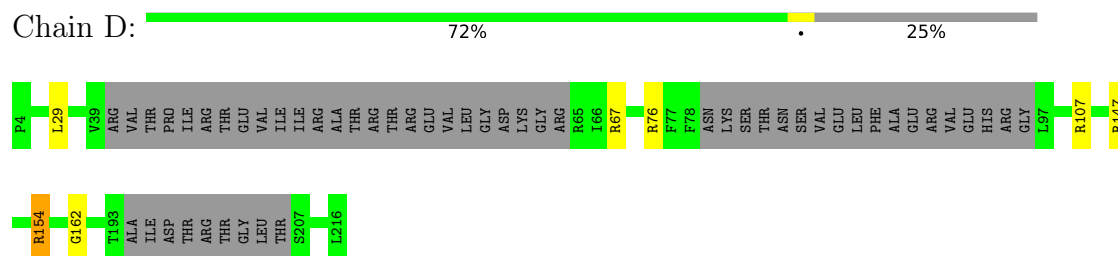


• Molecule 2: P-tRNA

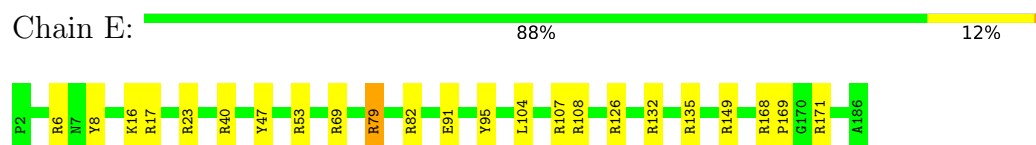
Chain 7: 28% 51% 17%



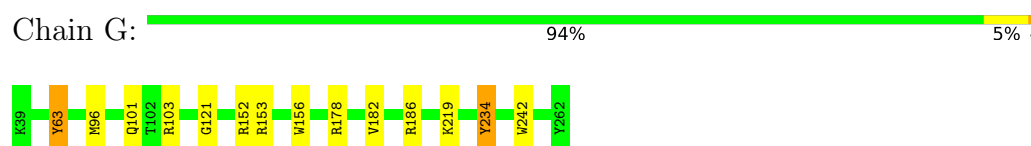
- Molecule 3: 40S ribosomal protein uS3



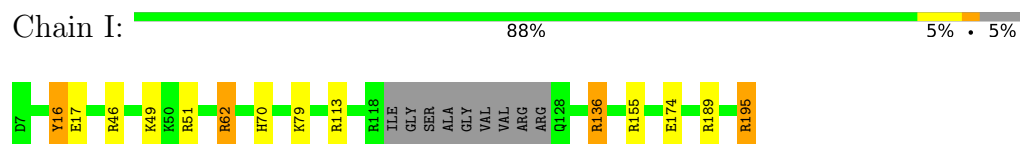
- Molecule 4: 40S ribosomal protein uS4



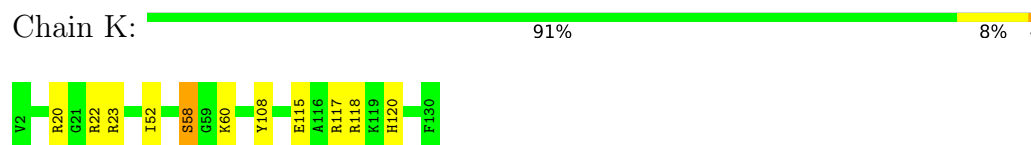
- Molecule 5: 40S ribosomal protein uS5



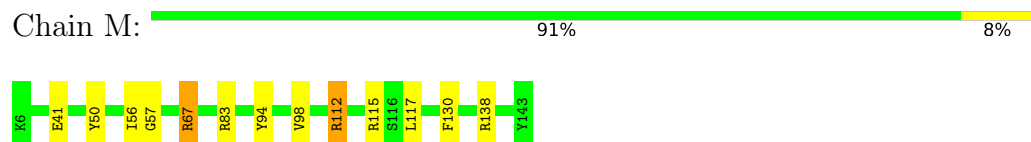
- Molecule 6: 40S ribosomal protein uS7



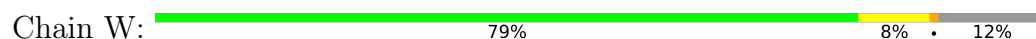
- Molecule 7: 40S ribosomal protein uS8

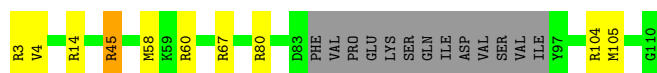


- Molecule 8: 40S ribosomal protein uS9



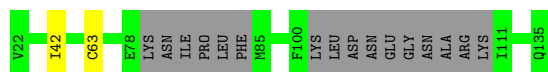
- Molecule 9: 40S ribosomal protein eS17





- Molecule 10: 40S ribosomal protein eS12

Chain R: 84% 14%



- Molecule 11: 40S ribosomal protein eS10

Chain O: 87% 13%



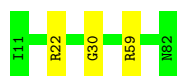
- Molecule 12: 40S ribosomal protein eS19

Chain Y: 88% 11%



- Molecule 13: 40S ribosomal protein eS21

Chain Z: 96%



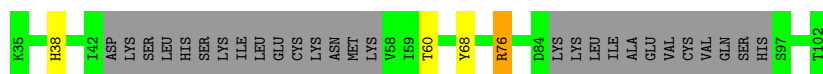
- Molecule 14: 40S ribosomal protein eS24

Chain 1: 88% 11%



- Molecule 15: 40S ribosomal protein eS25

Chain 2: 54% 40%

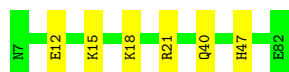


- Molecule 16: 40S ribosomal protein eS26

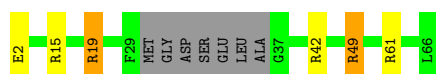
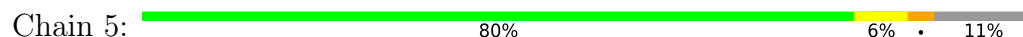
Chain 3: 85% 14%



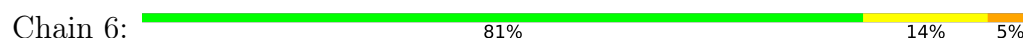
- Molecule 17: 40S ribosomal protein eS27



- Molecule 18: 40S ribosomal protein eS28



- Molecule 19: 40S ribosomal protein eS30



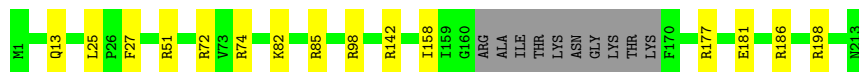
- Molecule 20: 40S ribosomal protein eS1



- Molecule 21: 40S ribosomal protein eS4



- Molecule 22: 40S ribosomal protein eS6

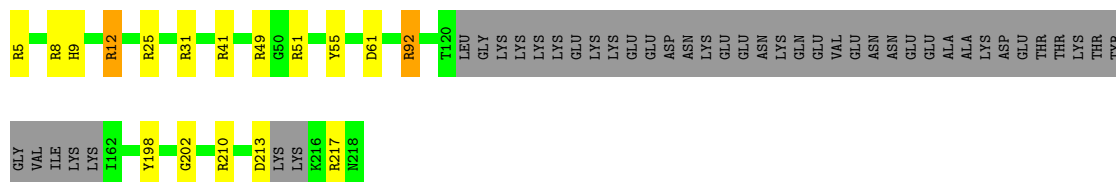


- Molecule 23: 40S ribosomal protein eS7





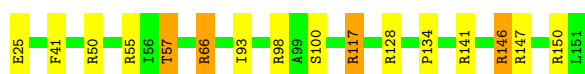
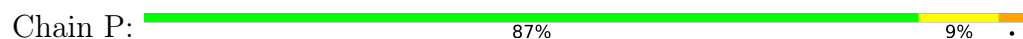
- Molecule 24: 40S ribosomal protein eS8



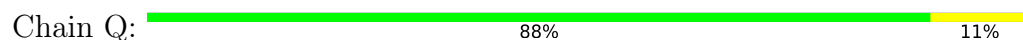
- Molecule 25: 40S ribosomal protein uS10



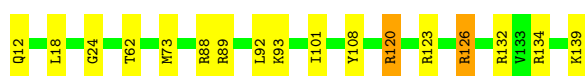
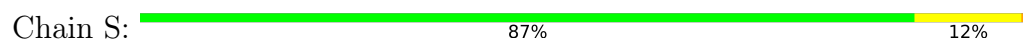
- Molecule 26: 40S ribosomal protein uS11



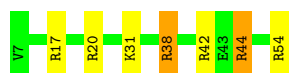
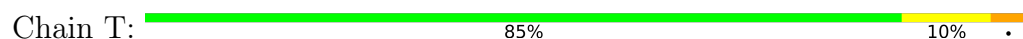
- Molecule 27: 40S ribosomal protein uS12



- Molecule 28: 40S ribosomal protein uS13



- Molecule 29: 40S ribosomal protein uS14




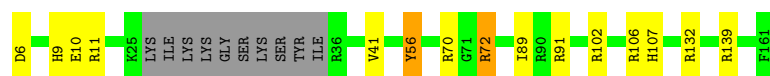
- Molecule 30: 40S ribosomal protein uS15

Chain U:  95% . .




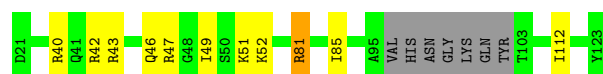
- Molecule 31: 40S ribosomal protein uS17

Chain V:  84% 8% 6%



- Molecule 32: 40S ribosomal protein uS19

Chain X:  83% 10% 7%



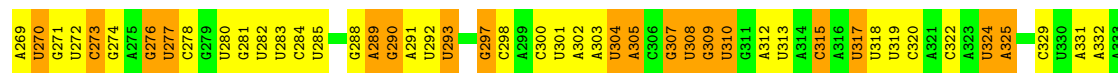
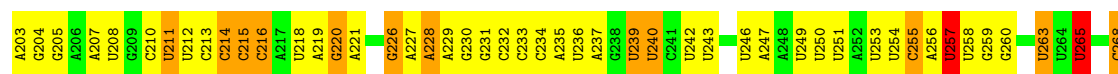
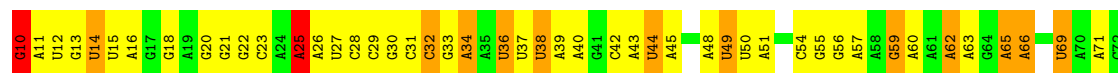
- Molecule 33: 40S ribosomal protein uS2

Chain C:  94% 6%



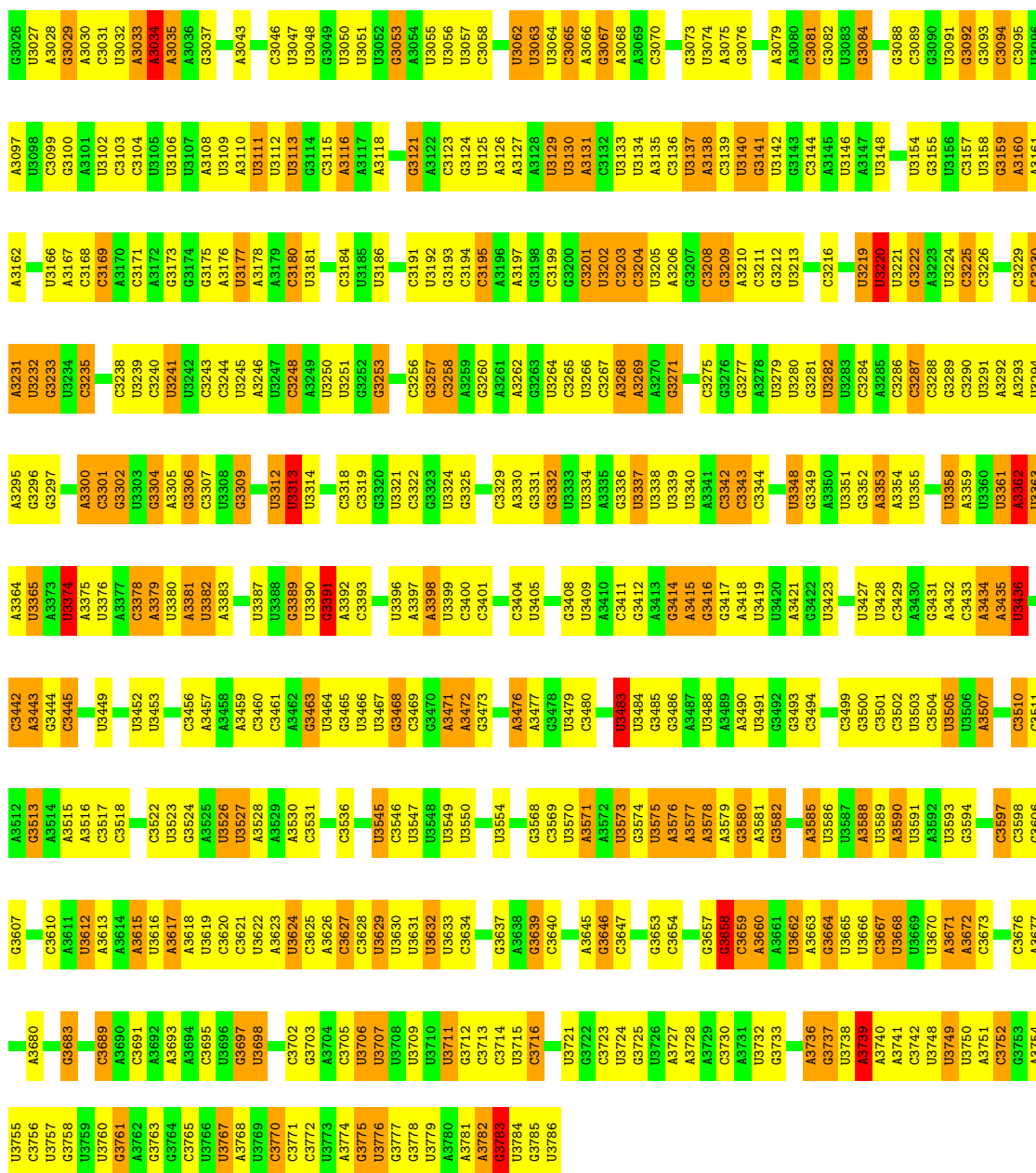
- Molecule 34: 28S ribosomal RNA

Chain AA:  33% 46% 19%



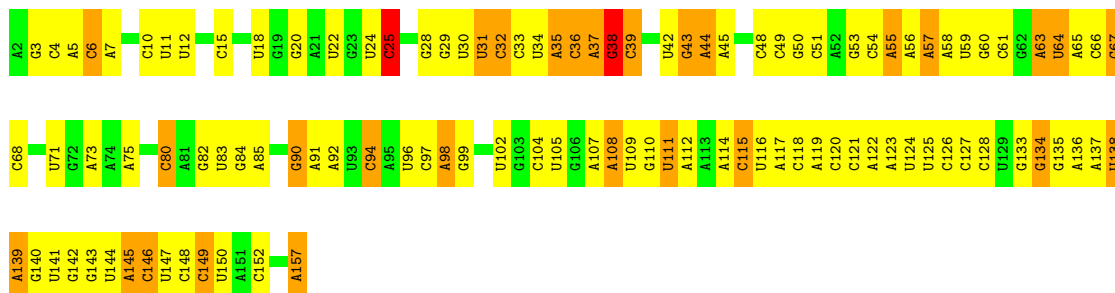
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U1421	A1422	G1423	C1424	G1425	G1426	U1427	G1428	A1429	A1430	A1431	A1432	U1433	U1434	G1435	A1436	U1437	G1440	G1441	U1442	U1443	A1444	G1445	G1446	G1447	G1448	G1449	G1450	A1451	U1452	G1453	G1454	G1455	G1456	G1457	A1458	U1459	A1460	C1461	C1462	C1463	C1464	C1465	C1466	A1467	A1468	U1469	A1472	A1473	A1474	G1475	A1476	A1477	G1478	G1479	G1480	A1481	A1482	A1483	A1484	A1485	A1486	U1487	U1488	U1489	U1490	U1491	U1492	U1493	U1494	U1495																																																																																																																																																																																																																																																																																																																																																																																																																																	
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U1008	C1009	U1010	U1011	U1012	C1013	U1014	U1015	U1016	U1017	C1018	U1019	U1020	U1021	U1022	U1023	U1024	A1025	G1026	G1027	U1028	U1029	U1030	G1031	U1032	A1033	U1034	G1035	U1036	U1037	U1038	U1039	U1040	U1041	U1042	U1043	U1044	U1045	U1046	U1047	U1048	U1049	U1050	U1051	U1052	U1053	U1054	U1055	U1056	U1057	U1058	U1059	U1060	U1061	U1062	U1063	U1064	U1065	U1066	U1067	U1068	U1069	U1070	U1071	U1072	U1073	U1074	U1075	U1076	U1077	U1078	U1079	U1080	U1081	U1082	U1083	U1084	U1085	U1086	U1087	U1088	U1089	U1090	U1091	U1092	U1093	U1094	U1095	U1096	U1097	U1098	U1099	U1100	U1101	U1102	U1103	U1104	U1105	U1106	U1107	U1108	U1109	U1110	U1111	U1112	U1113	U1114	U1115	U1116	U1117	U1118	U1119	U1120	U1121	U1122	U1123	U1124	U1125	U1126	U1127	U1128	U1129	U1130	U1131	U1132	U1133	U1134	U1135	U1136	U1137	U1138	U1139	U1140	U1141	U1142	U1143	U1144	U1145	U1146	U1147	U1148	U1149	U1150	U1151	U1152	U1153	U1154	U1155	U1156	U1157	U1158	U1159	U1160	U1161	U1162	U1163	U1164	U1165	U1166	U1167	U1168	U1169	U1170	U1171	U1172	U1173	U1174	U1175	U1176	U1177	U1178	U1179	U1180	U1181	U1182	U1183	U1184	U1185	U1186	U1187	U1188	U1189	U1190	U1191	U1192	U1193	U1194	U1195	U1196	U1197	U1198	U1199	U1200	U1201	U1202	U1203	U1204	U1205	U1206	U1207	U1208	U1209	U1210	U1211	U1212	U1213	U1214	U1215	U1216	U1217	U1218	U1219	U1220	U1221	U1222	U1223	U1224	U1225	U1226	U1227	U1228	U1229	U1230	U1231	U1232	U1233	U1234	U1235	U1236	U1237	U1238	U1239	U1240	U1241	U1242	U1243	U1244	U1245	U1246	U1247	U1248	U1249	U1250	U1251	U1252	U1253	U1254	U1255	U1256	U1257	U1258	U1259	U1260	U1261	U1262	U1263	U1264	U1265	U1266	U1267	U1268	U1269	U1270	U1271	U1272	U1273	U1274	U1275	U1276	U1277	U1278	U1279	U1280	U1281	U1282	U1283	U1284	U1285	U1286	U1287	U1288	U1289	U1290	U1291	U1292	U1293	U1294	U1295	U1296	U1297	U1298	U1299	U1300	U1301	U1302	U1303	U1304	U1305	U1306	U1307	U1308	U1309	U1310	U1311	U1312	U1313	U1314	U1315	U1316	U1317	U1318	U1319	U1320	U1321	U1322	U1323	U1324	U1325	U1326	U1327	U1328	U1329	U1330	U1331	U1332	U1333	U1334	U1335	U1336	U1337	U1338	U1339	U1340	U1341	U1342	U1343	U1344	U1345	U1346	U1347	U1348	U1349	U1350	U1351	U1352	U1353	U1354	U1355	U1356	U1357	U1358	U1359	U1360	U1361	U1362	U1363	U1364	U1365	U1366	U1367	U1368	U1369	U1370	U1371	U1372	U1373	U1374	U1375	U1376	U1377	U1378	U1379	U1380	U1381	U1382	U1383	U1384	U1385	U1386	U1387	U1388	U1389	U1390	U1391	U1392	U1393	U1394	U1395	U1396	U1397	U1398	U1399	U1400	U1401	U1402	U1403	U1404	U1405	U1406	U1407	U1408	U1409	U1410	U1411	U1412	U1413	U1414	U1415	U1416	U1417	U1418	U1419	U1420	U1421	U1422	U1423	U1424	U1425	U1426	U1427	U1428	U1429	U1430	U1431	U1432	U1433	U1434	U1435	U1436	U1437	U1438	U1439	U1440	U1441	U1442	U1443	U1444	U1445	U1446	U1447	U1448	U1449	U1450	U1451	U1452	U1453	U1454	U1455	U1456	U1457	U1458	U1459	U1460	U1461	U1462	U1463	U1464	U1465	U1466	U1467	U1468	U1469	U1470	U1471	U1472	U1473	U1474	U1475	U1476	U1477	U1478	U1479	U1480	U1481	U1482	U1483	U1484	U1485	U1486	U1487	U1488	U1489	U1490	U1491	U1492	U1493	U1494	U1495
U496	U497	U498	U499	U500	U501	U502	U503	U504	U505	U506	U507	U508	U509	U510	U511	U512	U513	U514	U515	U516	U517	U518	U519	U520	U521	U522	U523	U524	U525	U526	U527	U528	U529	U530	U531	U532	U533	U534	U535	U536	U537	U538	U539	U540	U541	U542	U543	U544	U545	U546	U547	U548	U549	U550	U551	U552	U553	U554	U555	U556	U557	U558	U559	U560	U561	U562	U563	U564	U565	U566	U567	U568	U569	U570	U571	U572																																																																																																																																																																																																																																																																																																																																																																																																																											
A402	U403	U404	U405	U406	U407	U408	U409	U410	U411	U412	U413	U414	U415	U416	U417	U418	U419	U420	U421	U422	U423	U424	U425	U426	U427	U428	U429	U430	U431	U432	U433	U434	U435	U436	U437	U438	U439	U440	U441	U442	U443	U444	U445	U446	U447	U448	U449	U450	U451	U452	U453	U454	U455	U456	U457	U458	U459	U460	U461	U462	U463	U464	U465	U466	U467	U468	U469	U470	U471	U472	U473	U474	U475	U476	U477	U478	U479	U480	U481	U482	U483	U484	U485	U486	U487	U488	U489	U490	U491	U492	U493	U494	U495																																																																																																																																																																																																																																																																																																																																																																																																										
U582	U583	U584	U585	U586	U587	U588	U589	U590	U591	U592	U593	U594	U595	U596	U597	U598	U599	U600	U601	U602	U603	U604	U605	U606	U607	U608	U609	U610	U611	U612	U613	U614	U615	U616	U617	U618	U619	U620	U621	U622	U623	U624	U625	U626	U627	U628	U629	U630	U631	U632	U633	U634	U635	U636	U637	U638	U639	U640	U641	U642	U643	U644	U645	U646	U647	U648	U649	U650	U651	U652	U653	U654	U655	U656	U657	U658	U659	U660	U661	U662	U663	U664	U665	U666	U667	U668	U669	U670	U671	U672	U673	U674	U675	U676	U677	U678	U679	U680	U681	U682	U683	U684	U685	U686	U687	U688	U689	U690	U691	U692	U693	U694	U695	U696	U697	U698	U699	U700	U701	U702	U703	U704	U705	U706	U707																																																																																																																																																																																																																																																																																																																																																																										
A708	A709	C710	C711	U712	U713	U714	U715	U716	U717	U718	U719	U720	U721	U722	U723	U724	U725	U726	U727	U728	U729	U730	U731	U732	U733	U734	U735	U736	U737	U738	U739	U740	U741	U742	U743	U744	U745	U746	U747	U748	U749	U750	U751	U752	U753	U754	U755	U756	U757	U758	U759	U760	U761	U762	U763	U764	U765	U766	U767	U768	U769	U770	U771	U772	U773	U774	U775																																																																																																																																																																																																																																																																																																																																																																																																																																				
A776	U777	U778	U779	U780	U781	U782	U783	U784	U785	U786	U787	U788	U789	U790	U791	U792	U793	U794	U795	U796	U797	U798	U799	U800	U801	U802	U803	U804	U805	U806	U807	U808	U809	U810	U811	U812	U813	U814	U815	U816	U817	U818	U819	U820	U821	U822	U823	U824	U825	U826	U827	U828	U829	U830	U831	U832	U833	U834	U835	U836	U837	U838	U839	U840	U841	U842	U843	U844	U845	U846	U847																																																																																																																																																																																																																																																																																																																																																																																																																																



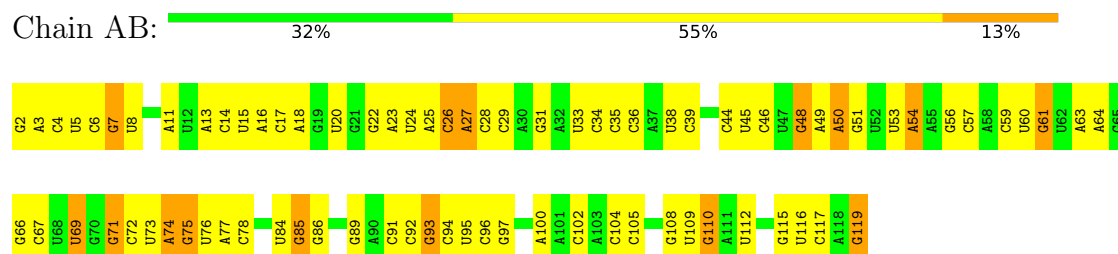


• Molecule 35: 5.8S ribosomal RNA

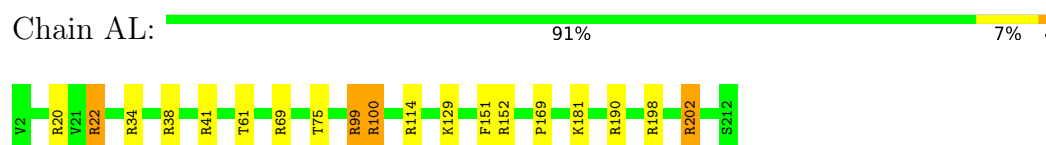
Chain AC: 28% 52% 19%



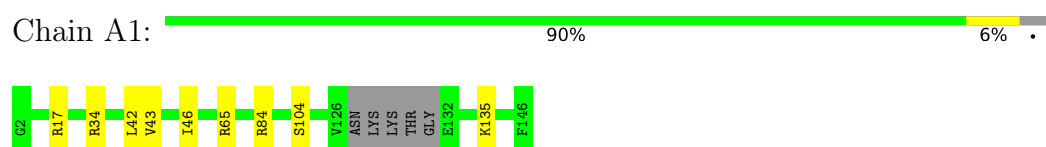
- Molecule 36: 5S ribosomal RNA



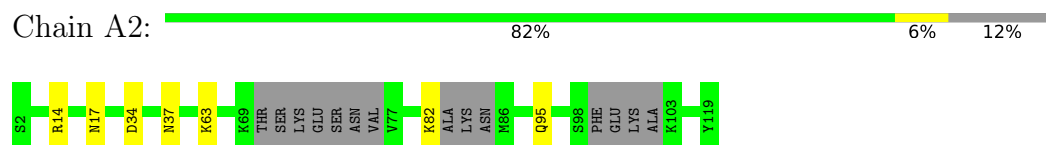
- Molecule 37: 60S ribosomal protein eL13



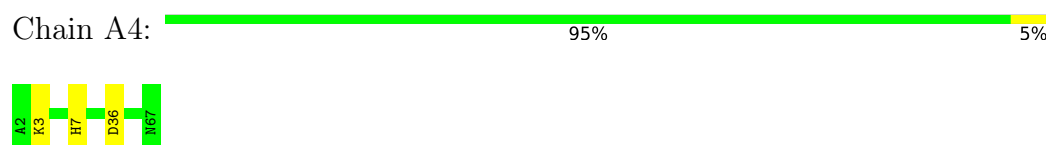
- Molecule 38: 60S ribosomal protein eL27



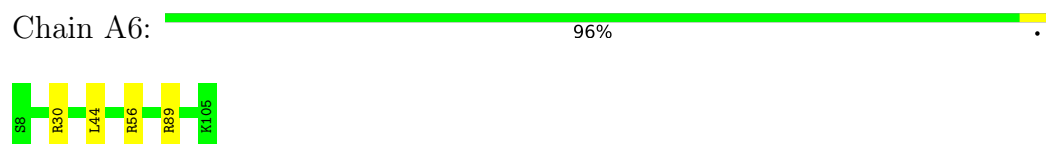
- Molecule 39: 60S ribosomal protein eL28



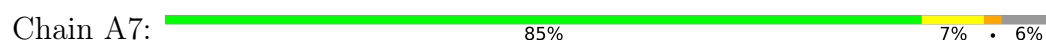
- Molecule 40: 60S ribosomal protein eL29

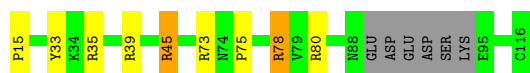


- Molecule 41: 60S ribosomal protein eL30



- Molecule 42: 60S ribosomal protein eL31





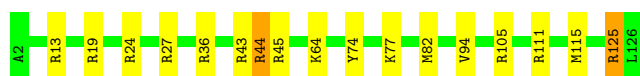
- Molecule 43: 60S ribosomal protein eL14

Chain AN: 91% 9%



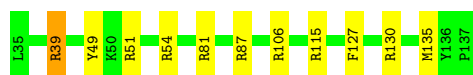
- Molecule 44: 60S ribosomal protein eL32

Chain A8: 86% 12%



- Molecule 45: 60S ribosomal protein eL33

Chain A9: 89% 10%



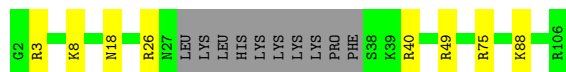
- Molecule 46: 60S ribosomal protein eL34

Chain Aa: 88% 8%



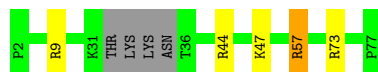
- Molecule 47: 60S ribosomal protein eL36

Chain Ab: 83% 8% 10%



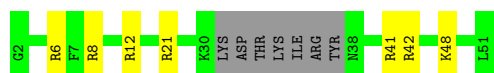
- Molecule 48: 60S ribosomal protein eL38

Chain Ad: 88% 5% 5%



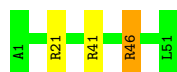
- Molecule 49: 60S ribosomal protein eL39

Chain Ae: 72% 14% 14%



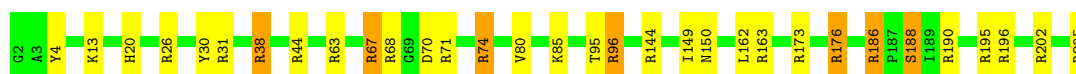
- Molecule 50: 60S ribosomal protein eL40

Chain Af: 94%



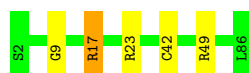
- Molecule 51: 60S ribosomal protein eL15

Chain AP: 84% 12%



- Molecule 52: 60S ribosomal protein eL43

Chain Ah: 94% 5%



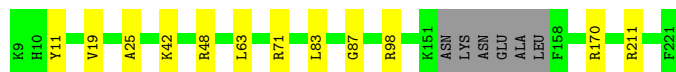
- Molecule 53: 60S ribosomal protein eL44

Chain Ai: 91% 8%



- Molecule 54: 60S ribosomal protein eL6

Chain AI: 92% 6%




- Molecule 55: 60S ribosomal protein eL8

Chain AJ: 83% 8% 9%



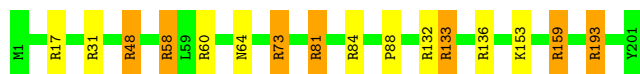
- Molecule 56: 60S ribosomal protein eL37

Chain Ac:  87% 10%



- Molecule 57: 60S ribosomal protein uL13

Chain AK:  92%




- Molecule 58: 60S ribosomal protein uL14

Chain AM:  95%




- Molecule 59: 60S ribosomal protein eL18

Chain AS:  88% 9%




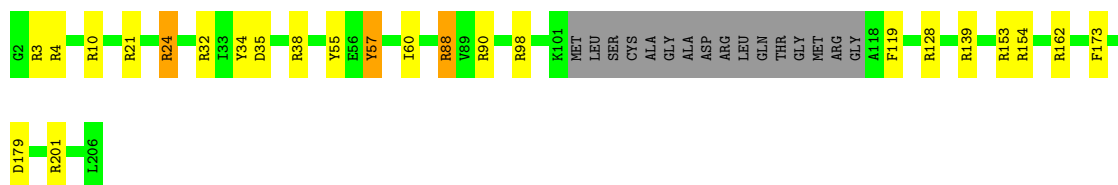
- Molecule 60: 60S ribosomal protein uL15

Chain AO:  87% 11%




- Molecule 61: 60S ribosomal protein uL16

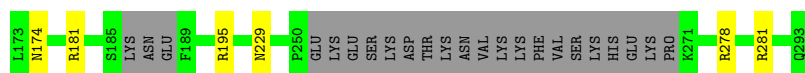
Chain AQ:  80% 10% 8%



- Molecule 62: 60S ribosomal protein uL18

Chain AR:  77% 9% 13%





- Molecule 63: 60S ribosomal protein uL22

Chain AW: 92% 7% .



- Molecule 64: 60S ribosomal protein uL23

Chain AY: 95% 5%



- Molecule 65: 60S ribosomal protein eL19

Chain AT: 92% 8%



- Molecule 66: 60S ribosomal protein uL24

Chain AZ: 88% 9% .



- Molecule 67: 60S ribosomal protein uL29

Chain A3: 92% 8% .



- Molecule 68: 60S ribosomal protein uL30

Chain A5: 88% 10% ..



- Molecule 69: 60S ribosomal protein uL2

Chain AD: 93% 6% .



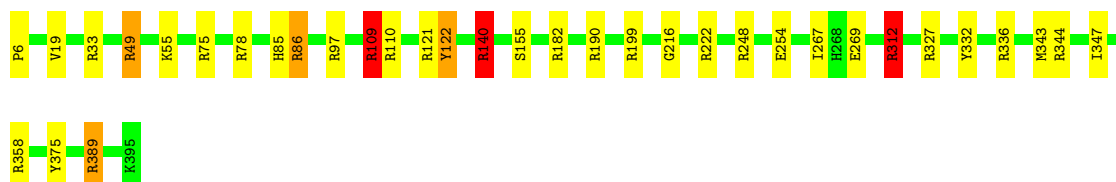
- Molecule 70: 60S ribosomal protein uL3

Chain AE: 90% 9% .



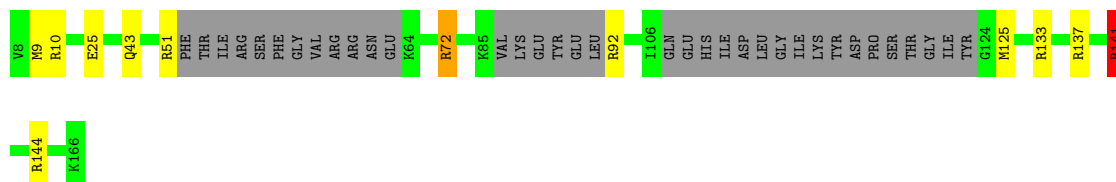
- Molecule 71: 60S ribosomal protein uL4

Chain AF: 91% 7% ..



- Molecule 72: 60S ribosomal protein uL5

Chain AG: 70% 6% .. 22%



- Molecule 73: 60S ribosomal protein eL20

Chain AU: 90% 7% .




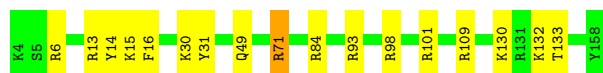
- Molecule 74: 60S ribosomal protein uL6

Chain AH: 92% 8% .



- Molecule 75: 60S ribosomal protein eL21

Chain AV:  89% 10%



- Molecule 76: 60S ribosomal protein eL41

Chain Ag:  70% 24% 5%



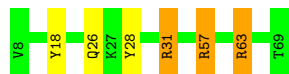
- Molecule 77: 60S ribosomal protein eL22

Chain AX:  94% 6%



- Molecule 78: 60S ribosomal protein eL24

Chain A0:  90% 5% 5%



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	14696	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	Each micrograph	Depositor
Microscope	FEI POLARA 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	25	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	3500	Depositor
Magnification	30120	Depositor
Image detector	GATAN K2 (4k x 4k)	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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	A	1.10	4/38275 (0.0%)	1.54	870/59596 (1.5%)
2	7	1.12	0/1810	1.64	62/2821 (2.2%)
3	D	0.76	0/1241	1.05	5/1652 (0.3%)
4	E	0.72	0/1539	1.14	14/2055 (0.7%)
5	G	0.70	0/1800	1.03	10/2429 (0.4%)
6	I	0.71	0/1443	1.10	12/1936 (0.6%)
7	K	0.72	0/1054	1.09	4/1411 (0.3%)
8	M	0.72	0/1114	1.12	8/1487 (0.5%)
9	W	0.72	0/793	1.14	5/1053 (0.5%)
10	R	0.75	0/755	0.94	0/1013
11	O	0.74	0/706	1.02	4/950 (0.4%)
12	Y	0.71	0/1295	1.15	10/1742 (0.6%)
13	Z	0.70	0/565	0.99	2/758 (0.3%)
14	1	0.72	0/999	1.17	9/1321 (0.7%)
15	2	0.76	0/324	1.01	3/435 (0.7%)
16	3	0.75	0/794	1.32	14/1055 (1.3%)
17	4	0.66	0/597	1.01	2/801 (0.2%)
18	5	0.78	0/459	1.24	5/606 (0.8%)
19	6	0.75	0/349	1.21	5/458 (1.1%)
20	B	0.67	0/1738	1.11	8/2321 (0.3%)
21	F	0.68	0/2098	1.11	18/2819 (0.6%)
22	H	0.69	0/1665	1.09	11/2210 (0.5%)
23	J	0.69	0/1545	1.07	8/2064 (0.4%)
24	L	0.73	0/1407	1.18	12/1879 (0.6%)
25	N	0.68	0/780	1.17	5/1053 (0.5%)
26	P	0.70	0/966	1.26	14/1295 (1.1%)
27	Q	0.72	0/1149	1.19	13/1532 (0.8%)
28	S	0.65	0/1063	1.17	10/1425 (0.7%)
29	T	0.76	0/412	1.13	3/544 (0.6%)
30	U	0.70	0/1223	1.03	6/1634 (0.4%)
31	V	0.74	0/1233	1.06	8/1645 (0.5%)
32	X	0.71	0/788	1.17	7/1050 (0.7%)
33	C	0.68	0/1570	1.04	4/2129 (0.2%)
34	AA	1.11	8/75947 (0.0%)	1.54	1829/118255 (1.5%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
35	AC	1.13	0/3599	1.55	91/5603 (1.6%)
36	AB	1.11	2/2823 (0.1%)	1.50	67/4400 (1.5%)
37	AL	0.70	0/1789	1.16	13/2381 (0.5%)
38	A1	0.71	0/1151	1.02	5/1531 (0.3%)
39	A2	0.73	0/840	0.97	1/1114 (0.1%)
40	A4	0.67	0/564	0.99	0/737
41	A6	0.71	0/749	0.98	1/1001 (0.1%)
42	A7	0.72	0/806	1.20	9/1073 (0.8%)
43	AN	0.70	0/1218	1.04	3/1621 (0.2%)
44	A8	0.71	0/1054	1.25	11/1399 (0.8%)
45	A9	0.72	0/865	1.24	12/1160 (1.0%)
46	Aa	0.70	0/872	1.24	12/1161 (1.0%)
47	Ab	0.72	0/763	1.11	4/1008 (0.4%)
48	Ad	0.72	0/612	1.14	5/812 (0.6%)
49	Ae	0.81	0/396	1.27	4/521 (0.8%)
50	Af	0.71	0/419	1.06	2/556 (0.4%)
51	AP	0.72	0/1735	1.24	26/2320 (1.1%)
52	Ah	0.69	0/668	1.10	2/887 (0.2%)
53	Ai	0.69	0/789	1.14	8/1032 (0.8%)
54	AI	0.68	0/1708	1.01	5/2274 (0.2%)
55	AJ	0.68	0/1840	1.02	6/2456 (0.2%)
56	Ac	0.74	0/723	1.24	9/951 (0.9%)
57	AK	0.70	0/1690	1.11	12/2260 (0.5%)
58	AM	0.69	0/1012	1.12	9/1363 (0.7%)
59	AS	0.71	0/1531	1.24	25/2040 (1.2%)
60	AO	0.70	0/1199	1.13	11/1597 (0.7%)
61	AQ	0.75	0/1580	1.21	20/2113 (0.9%)
62	AR	0.72	0/2079	1.15	19/2777 (0.7%)
63	AW	0.71	0/1244	1.18	14/1663 (0.8%)
64	AY	0.66	0/806	1.03	4/1074 (0.4%)
65	AT	0.70	0/1525	1.09	12/2016 (0.6%)
66	AZ	0.71	0/1013	1.20	12/1339 (0.9%)
67	A3	0.70	0/1005	1.09	9/1329 (0.7%)
68	A5	0.72	0/1917	1.15	21/2562 (0.8%)
69	AD	0.68	0/1902	1.17	18/2544 (0.7%)
70	AE	0.70	0/3130	1.14	23/4195 (0.5%)
71	AF	0.70	0/3145	1.10	23/4205 (0.5%)
72	AG	0.76	0/1021	1.14	9/1349 (0.7%)
73	AU	0.73	0/1527	1.18	13/2043 (0.6%)
74	AH	0.67	0/1501	1.14	11/2025 (0.5%)
75	AV	0.69	0/1301	1.18	12/1732 (0.7%)
76	Ag	0.80	0/348	1.54	10/448 (2.2%)
77	AX	0.72	0/842	1.10	8/1125 (0.7%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
78	A0	0.79	0/534	1.19	5/711 (0.7%)
All	All	0.96	14/207331 (0.0%)	1.40	3596/303942 (1.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	127
2	7	0	8
4	E	0	7
5	G	0	1
6	I	0	2
7	K	0	3
8	M	0	3
9	W	0	2
12	Y	0	3
14	1	0	3
15	2	0	1
16	3	0	3
18	5	0	2
19	6	0	3
20	B	1	5
21	F	0	3
22	H	0	2
23	J	0	4
24	L	0	4
25	N	0	1
26	P	0	3
27	Q	0	3
28	S	0	1
29	T	0	5
30	U	0	1
31	V	0	4
32	X	0	3
33	C	0	2
34	AA	1	304
35	AC	0	10
36	AB	0	9
37	AL	0	6
38	A1	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
40	A4	0	1
41	A6	0	1
42	A7	0	3
43	AN	0	5
44	A8	0	4
45	A9	0	2
46	Aa	0	3
47	Ab	0	1
48	Ad	0	1
49	Ae	0	2
50	Af	0	2
51	AP	0	7
52	Ah	0	1
53	Ai	0	1
54	AI	0	4
55	AJ	0	2
56	Ac	0	4
57	AK	0	7
58	AM	0	3
59	AS	0	7
60	AO	0	3
61	AQ	0	6
62	AR	0	4
63	AW	0	4
64	AY	0	1
65	AT	0	4
66	AZ	0	5
67	A3	0	1
68	A5	0	5
69	AD	0	1
70	AE	0	7
71	AF	0	10
72	AG	0	3
73	AU	0	5
75	AV	0	3
76	Ag	0	2
78	A0	0	4
All	All	2	668

All (14) bond length outliers are listed below:

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	AB	28	C	P-O5'	-6.19	1.53	1.59
1	A	1819	U	C5'-C4'	5.69	1.58	1.51
36	AB	5	U	O3'-P	-5.30	1.54	1.61
1	A	1853	A	P-O5'	-5.29	1.54	1.59
34	AA	211	U	N1-C2	-5.23	1.33	1.38
34	AA	1575	C	O3'-P	-5.23	1.54	1.61
34	AA	392	G	C2-N2	-5.21	1.29	1.34
34	AA	1623	A	N9-C4	-5.15	1.34	1.37
34	AA	644	G	O3'-P	-5.10	1.55	1.61
34	AA	3632	U	C5'-C4'	5.09	1.57	1.51
1	A	337	G	O3'-P	-5.06	1.55	1.61
34	AA	2602	A	C5'-C4'	5.04	1.57	1.51
1	A	1852	A	O3'-P	-5.02	1.55	1.61
34	AA	255	C	P-O5'	-5.01	1.54	1.59

All (3596) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1659	U	P-O3'-C3'	16.14	139.06	119.70
1	A	981	U	P-O3'-C3'	15.61	138.43	119.70
34	AA	811	A	P-O3'-C3'	15.26	138.02	119.70
1	A	1865	G	P-O3'-C3'	13.78	136.24	119.70
1	A	1912	C	P-O3'-C3'	13.59	136.01	119.70
34	AA	257	U	P-O3'-C3'	13.45	135.84	119.70
35	AC	37	A	P-O3'-C3'	13.22	135.56	119.70
34	AA	3667	C	P-O3'-C3'	13.21	135.55	119.70
34	AA	181	C	P-O3'-C3'	13.09	135.41	119.70
1	A	1897	A	P-O3'-C3'	13.09	135.40	119.70
34	AA	255	C	P-O5'-C5'	12.74	141.29	120.90
34	AA	504	A	P-O3'-C3'	12.50	134.70	119.70
34	AA	3140	U	P-O3'-C3'	12.38	134.55	119.70
35	AC	35	A	P-O3'-C3'	12.28	134.44	119.70
34	AA	3658	G	P-O3'-C3'	11.95	134.04	119.70
34	AA	674	U	P-O3'-C3'	11.84	133.91	119.70
34	AA	1206	U	P-O3'-C3'	11.84	133.91	119.70
34	AA	579	C	P-O3'-C3'	11.84	133.90	119.70
70	AE	8	ARG	NE-CZ-NH1	11.72	126.16	120.30
34	AA	1574	C	O4'-C1'-N1	11.71	117.57	108.20
34	AA	715	U	P-O3'-C3'	11.65	133.68	119.70
34	AA	1035	G	P-O3'-C3'	11.60	133.62	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	2932	A	P-O3'-C3'	11.55	133.56	119.70
1	A	844	G	P-O3'-C3'	11.53	133.53	119.70
1	A	789	U	P-O3'-C3'	11.52	133.53	119.70
16	3	87	ARG	NE-CZ-NH1	11.50	126.05	120.30
34	AA	1996	C	P-O3'-C3'	11.47	133.47	119.70
71	AF	182	ARG	NE-CZ-NH2	-11.38	114.61	120.30
1	A	1381	C	P-O3'-C3'	11.31	133.28	119.70
34	AA	596	A	P-O3'-C3'	11.20	133.13	119.70
34	AA	411	U	P-O3'-C3'	11.19	133.13	119.70
34	AA	620	U	P-O3'-C3'	10.99	132.89	119.70
32	X	43	ARG	NE-CZ-NH1	-10.96	114.82	120.30
34	AA	1224	A	P-O3'-C3'	10.87	132.75	119.70
1	A	544	G	P-O3'-C3'	10.78	132.64	119.70
34	AA	580	A	P-O3'-C3'	10.72	132.57	119.70
34	AA	3632	U	P-O5'-C5'	10.68	137.99	120.90
34	AA	859	C	P-O3'-C3'	10.63	132.46	119.70
36	AB	27	A	O3'-P-O5'	-10.62	83.82	104.00
1	A	1857	U	O4'-C1'-N1	10.60	116.68	108.20
34	AA	621	C	P-O3'-C3'	10.55	132.36	119.70
34	AA	1989	A	P-O3'-C3'	10.55	132.36	119.70
34	AA	2219	A	P-O3'-C3'	10.54	132.35	119.70
34	AA	162	U	P-O3'-C3'	10.39	132.16	119.70
75	AV	93	ARG	NE-CZ-NH2	-10.38	115.11	120.30
75	AV	84	ARG	NE-CZ-NH2	10.35	125.47	120.30
1	A	1832	U	P-O3'-C3'	10.30	132.06	119.70
34	AA	2959	G	P-O3'-C3'	10.29	132.05	119.70
34	AA	25	A	O4'-C1'-N9	10.25	116.40	108.20
34	AA	697	A	P-O3'-C3'	10.25	132.00	119.70
69	AD	163	ARG	NE-CZ-NH1	-10.24	115.18	120.30
62	AR	33	ARG	NE-CZ-NH1	10.22	125.41	120.30
44	A8	44	ARG	NE-CZ-NH2	-10.21	115.19	120.30
34	AA	581	C	P-O3'-C3'	10.19	131.93	119.70
51	AP	4	TYR	CB-CG-CD2	-10.13	114.92	121.00
34	AA	2004	U	O4'-C1'-N1	10.10	116.28	108.20
34	AA	101	C	O4'-C1'-N1	10.08	116.26	108.20
34	AA	702	U	O4'-C1'-N1	10.07	116.25	108.20
34	AA	500	A	P-O3'-C3'	10.05	131.76	119.70
58	AM	50	ARG	NE-CZ-NH2	-9.99	115.30	120.30
1	A	1455	C	P-O3'-C3'	9.96	131.66	119.70
34	AA	200	A	N1-C6-N6	9.93	124.56	118.60
34	AA	1574	C	P-O3'-C3'	9.91	131.59	119.70
1	A	156	A	P-O3'-C3'	9.90	131.58	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	2809	A	N1-C6-N6	9.89	124.54	118.60
34	AA	3018	A	O4'-C1'-N9	9.88	116.11	108.20
34	AA	3195	C	O4'-C1'-N1	9.88	116.10	108.20
51	AP	173	ARG	NE-CZ-NH1	9.87	125.23	120.30
1	A	246	A	P-O3'-C3'	9.84	131.51	119.70
62	AR	54	ARG	NE-CZ-NH1	9.80	125.20	120.30
34	AA	3576	A	P-O3'-C3'	9.78	131.43	119.70
1	A	423	A	P-O3'-C3'	9.77	131.42	119.70
34	AA	289	A	P-O3'-C3'	9.73	131.38	119.70
34	AA	3754	A	O4'-C1'-N9	9.69	115.95	108.20
34	AA	215	C	P-O3'-C3'	9.68	131.31	119.70
1	A	1448	U	O4'-C1'-N1	9.66	115.93	108.20
34	AA	1805	U	P-O3'-C3'	9.66	131.29	119.70
34	AA	2125	A	O4'-C1'-N9	9.64	115.91	108.20
1	A	1799	A	O4'-C1'-N9	9.61	115.88	108.20
44	A8	44	ARG	NE-CZ-NH1	9.61	125.10	120.30
37	AL	22	ARG	NE-CZ-NH2	9.60	125.10	120.30
27	Q	20	ARG	NE-CZ-NH1	9.59	125.09	120.30
34	AA	2394	C	P-O3'-C3'	9.59	131.20	119.70
34	AA	2727	U	O4'-C1'-N1	9.58	115.86	108.20
61	AQ	88	ARG	NE-CZ-NH2	-9.57	115.51	120.30
1	A	1448	U	P-O3'-C3'	9.53	131.13	119.70
34	AA	1881	C	P-O3'-C3'	9.52	131.12	119.70
71	AF	182	ARG	NE-CZ-NH1	9.52	125.06	120.30
69	AD	6	ARG	NE-CZ-NH1	9.51	125.06	120.30
1	A	1788	U	O4'-C1'-N1	9.50	115.80	108.20
1	A	1381	C	O4'-C1'-N1	9.49	115.80	108.20
34	AA	1217	U	P-O3'-C3'	9.49	131.09	119.70
34	AA	2577	C	O4'-C1'-N1	9.49	115.79	108.20
1	A	291	A	P-O3'-C3'	9.49	131.08	119.70
34	AA	1503	A	P-O3'-C3'	9.47	131.06	119.70
1	A	874	A	P-O3'-C3'	9.46	131.05	119.70
34	AA	1435	G	P-O3'-C3'	9.46	131.05	119.70
74	AH	167	ARG	NE-CZ-NH2	9.46	125.03	120.30
7	K	117	ARG	NE-CZ-NH1	9.44	125.02	120.30
8	M	83	ARG	NE-CZ-NH1	9.44	125.02	120.30
35	AC	145	A	P-O3'-C3'	9.40	130.98	119.70
75	AV	93	ARG	NE-CZ-NH1	9.37	124.99	120.30
71	AF	75	ARG	NE-CZ-NH1	9.35	124.97	120.30
34	AA	2131	A	O4'-C1'-N9	9.33	115.67	108.20
34	AA	698	G	P-O3'-C3'	9.29	130.85	119.70
34	AA	3782	A	P-O5'-C5'	9.28	135.75	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	492	A	P-O5'-C5'	9.28	135.75	120.90
1	A	1300	G	P-O3'-C3'	9.27	130.82	119.70
34	AA	2816	U	P-O3'-C3'	9.27	130.82	119.70
1	A	25	C	O4'-C1'-N1	9.26	115.61	108.20
36	AB	28	C	P-O5'-C5'	9.26	135.72	120.90
21	F	49	ARG	NE-CZ-NH1	9.24	124.92	120.30
34	AA	2822	U	P-O3'-C3'	9.20	130.74	119.70
34	AA	2693	G	P-O3'-C3'	9.19	130.72	119.70
1	A	1109	G	P-O5'-C5'	9.18	135.59	120.90
34	AA	607	A	P-O3'-C3'	9.17	130.70	119.70
1	A	1413	U	P-O3'-C3'	9.14	130.67	119.70
34	AA	62	A	P-O3'-C3'	9.14	130.67	119.70
2	7	16	C	O4'-C1'-N1	9.13	115.50	108.20
28	S	134	ARG	NE-CZ-NH1	9.11	124.85	120.30
34	AA	1873	U	P-O3'-C3'	9.10	130.62	119.70
34	AA	2693	G	O4'-C1'-N9	9.08	115.46	108.20
34	AA	3588	A	P-O3'-C3'	9.07	130.58	119.70
12	Y	124	ARG	NE-CZ-NH2	9.06	124.83	120.30
51	AP	4	TYR	CB-CG-CD1	9.05	126.43	121.00
1	A	1976	G	P-O3'-C3'	9.03	130.54	119.70
1	A	647	C	C2-N1-C1'	9.02	128.73	118.80
1	A	1070	A	P-O3'-C3'	8.98	130.48	119.70
1	A	25	C	P-O3'-C3'	8.98	130.48	119.70
34	AA	2810	A	O4'-C1'-N9	8.98	115.38	108.20
63	AW	82	ARG	NE-CZ-NH1	8.98	124.79	120.30
16	3	15	ARG	NE-CZ-NH1	8.97	124.79	120.30
36	AB	39	C	O4'-C1'-N1	8.96	115.37	108.20
59	AS	57	ARG	NE-CZ-NH1	-8.94	115.83	120.30
1	A	1431	A	P-O3'-C3'	8.94	130.42	119.70
34	AA	3230	G	P-O3'-C3'	8.92	130.41	119.70
34	AA	745	C	O4'-C1'-N1	8.91	115.33	108.20
45	A9	54	ARG	NE-CZ-NH1	8.90	124.75	120.30
34	AA	3139	C	O4'-C1'-N1	8.90	115.32	108.20
34	AA	501	U	P-O3'-C3'	8.89	130.36	119.70
34	AA	830	U	O4'-C1'-N1	8.88	115.30	108.20
1	A	1298	C	O4'-C1'-N1	8.88	115.30	108.20
1	A	1321	C	C5'-C4'-C3'	-8.86	101.83	116.00
34	AA	803	A	O4'-C1'-N9	8.86	115.28	108.20
34	AA	1572	U	O4'-C1'-N1	8.85	115.28	108.20
37	AL	69	ARG	NE-CZ-NH1	8.85	124.72	120.30
34	AA	228	A	O4'-C1'-N9	8.84	115.27	108.20
69	AD	174	ARG	NE-CZ-NH1	8.82	124.71	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	3111	U	O4'-C1'-N1	8.82	115.25	108.20
73	AU	183	ARG	NE-CZ-NH1	8.80	124.70	120.30
1	A	970	G	O4'-C1'-N9	8.79	115.23	108.20
34	AA	1705	A	P-O3'-C3'	8.78	130.23	119.70
1	A	250	A	P-O3'-C3'	8.77	130.22	119.70
44	A8	24	ARG	NE-CZ-NH1	8.76	124.68	120.30
69	AD	163	ARG	NE-CZ-NH2	8.73	124.67	120.30
34	AA	116	A	O4'-C1'-N9	8.73	115.18	108.20
34	AA	3782	A	P-O3'-C3'	8.72	130.17	119.70
69	AD	30	ARG	NE-CZ-NH1	8.72	124.66	120.30
1	A	1979	C	O4'-C1'-N1	8.72	115.17	108.20
34	AA	769	U	O4'-C1'-N1	8.71	115.17	108.20
1	A	1893	C	O4'-C1'-N1	8.71	115.17	108.20
1	A	161	U	O4'-C1'-N1	8.71	115.17	108.20
34	AA	3585	A	O4'-C1'-N9	8.69	115.16	108.20
28	S	88	ARG	NE-CZ-NH2	8.69	124.64	120.30
34	AA	926	G	O4'-C1'-N9	8.69	115.15	108.20
44	A8	27	ARG	NE-CZ-NH1	8.67	124.64	120.30
34	AA	1904	U	P-O3'-C3'	8.67	130.10	119.70
66	AZ	12	ARG	NE-CZ-NH2	-8.65	115.97	120.30
1	A	1292	U	P-O3'-C3'	8.64	130.07	119.70
20	B	220	ARG	NE-CZ-NH2	8.63	124.61	120.30
35	AC	57	A	P-O3'-C3'	8.61	130.03	119.70
68	A5	169	ARG	NE-CZ-NH1	8.59	124.59	120.30
1	A	1732	G	O4'-C1'-N9	8.58	115.07	108.20
63	AW	23	ARG	NE-CZ-NH1	8.58	124.59	120.30
34	AA	3280	U	O4'-C1'-N1	8.57	115.06	108.20
1	A	2053	U	P-O3'-C3'	8.56	129.98	119.70
34	AA	137	G	O4'-C1'-N9	8.56	115.05	108.20
1	A	1091	C	O4'-C1'-N1	8.55	115.04	108.20
68	A5	86	ARG	NE-CZ-NH2	-8.55	116.02	120.30
1	A	752	U	P-O3'-C3'	8.55	129.96	119.70
34	AA	2658	C	O4'-C1'-N1	8.55	115.04	108.20
34	AA	270	U	P-O3'-C3'	8.54	129.95	119.70
73	AU	100	TYR	CB-CG-CD2	-8.54	115.87	121.00
34	AA	2883	U	P-O3'-C3'	8.54	129.95	119.70
37	AL	69	ARG	NE-CZ-NH2	-8.54	116.03	120.30
34	AA	1101	A	P-O3'-C3'	8.54	129.94	119.70
34	AA	59	G	C5-C6-O6	-8.52	123.49	128.60
49	Ae	6	ARG	NE-CZ-NH2	-8.52	116.04	120.30
1	A	818	C	P-O3'-C3'	8.51	129.92	119.70
62	AR	107	ARG	NE-CZ-NH1	8.51	124.56	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	AK	84	ARG	NE-CZ-NH2	8.50	124.55	120.30
34	AA	1269	C	O4'-C1'-N1	8.49	115.00	108.20
34	AA	3167	A	O4'-C1'-N9	8.48	114.98	108.20
34	AA	1990	A	P-O3'-C3'	8.47	129.87	119.70
14	1	20	ARG	NE-CZ-NH2	8.46	124.53	120.30
2	7	39	C	P-O5'-C5'	8.45	134.42	120.90
34	AA	3018	A	P-O3'-C3'	8.45	129.84	119.70
34	AA	1568	C	P-O3'-C3'	-8.45	109.57	119.70
1	A	790	U	P-O3'-C3'	8.43	129.82	119.70
34	AA	416	G	O4'-C1'-N9	8.43	114.95	108.20
4	E	132	ARG	NE-CZ-NH2	8.42	124.51	120.30
34	AA	1430	A	O4'-C1'-N9	8.42	114.94	108.20
34	AA	3280	U	C5'-C4'-O4'	8.41	119.20	109.10
1	A	1851	C	O4'-C1'-N1	8.41	114.93	108.20
34	AA	1539	U	O4'-C1'-N1	8.40	114.92	108.20
54	AI	98	ARG	NE-CZ-NH1	8.39	124.50	120.30
1	A	1870	A	P-O3'-C3'	8.35	129.72	119.70
34	AA	1905	C	O4'-C1'-N1	8.35	114.88	108.20
1	A	818	C	O4'-C1'-N1	8.35	114.88	108.20
34	AA	1999	A	P-O3'-C3'	8.35	129.72	119.70
34	AA	3507	A	O4'-C1'-N9	8.34	114.87	108.20
62	AR	278	ARG	NE-CZ-NH2	-8.33	116.13	120.30
37	AL	100	ARG	NE-CZ-NH2	8.32	124.46	120.30
34	AA	3494	C	P-O3'-C3'	8.31	129.67	119.70
45	A9	54	ARG	NE-CZ-NH2	-8.31	116.14	120.30
42	A7	33	TYR	CB-CG-CD2	-8.30	116.02	121.00
1	A	1409	U	O4'-C1'-N1	8.30	114.84	108.20
1	A	1691	G	P-O3'-C3'	8.30	129.66	119.70
35	AC	108	A	N1-C6-N6	-8.29	113.63	118.60
34	AA	239	U	O4'-C1'-N1	8.28	114.83	108.20
77	AX	105	TYR	CB-CG-CD1	-8.28	116.03	121.00
24	L	92	ARG	NE-CZ-NH2	-8.26	116.17	120.30
34	AA	2393	A	O4'-C1'-N9	8.26	114.81	108.20
61	AQ	162	ARG	NE-CZ-NH1	8.26	124.43	120.30
1	A	1198	U	O4'-C1'-N1	8.26	114.81	108.20
21	F	191	ARG	NE-CZ-NH2	8.25	124.43	120.30
1	A	1785	C	O4'-C1'-N1	8.25	114.80	108.20
34	AA	2959	G	C5'-C4'-O4'	8.25	119.00	109.10
2	7	1	C	O4'-C1'-N1	8.25	114.80	108.20
32	X	47	ARG	NE-CZ-NH1	-8.25	116.17	120.30
73	AU	21	ARG	NE-CZ-NH1	-8.24	116.18	120.30
1	A	1824	A	O4'-C1'-N9	8.24	114.79	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	P	128	ARG	NE-CZ-NH2	8.24	124.42	120.30
34	AA	2997	G	C5-C6-O6	-8.24	123.66	128.60
1	A	1419	C	O4'-C1'-N1	8.23	114.78	108.20
42	A7	39	ARG	NE-CZ-NH2	-8.22	116.19	120.30
34	AA	3526	U	O4'-C1'-N1	8.22	114.77	108.20
1	A	1908	A	O4'-C1'-N9	8.21	114.77	108.20
23	J	123	TYR	CB-CG-CD2	-8.21	116.07	121.00
34	AA	3205	U	O4'-C1'-N1	8.21	114.77	108.20
1	A	573	C	O4'-C1'-N1	8.21	114.77	108.20
32	X	47	ARG	NE-CZ-NH2	8.21	124.40	120.30
34	AA	3590	A	P-O3'-C3'	8.21	129.55	119.70
64	AY	95	ARG	NE-CZ-NH2	-8.20	116.20	120.30
34	AA	3613	A	O4'-C1'-N9	8.18	114.75	108.20
75	AV	84	ARG	NE-CZ-NH1	-8.17	116.21	120.30
34	AA	722	G	C5-C6-O6	-8.16	123.70	128.60
34	AA	856	C	C2-N1-C1'	8.16	127.77	118.80
1	A	1865	G	O4'-C1'-N9	8.15	114.72	108.20
18	5	15	ARG	NE-CZ-NH2	8.15	124.38	120.30
34	AA	432	A	P-O3'-C3'	8.15	129.48	119.70
34	AA	32	C	O4'-C1'-N1	8.14	114.72	108.20
34	AA	2172	C	O4'-C1'-N1	8.14	114.71	108.20
34	AA	2123	C	O4'-C1'-N1	8.14	114.71	108.20
34	AA	3231	A	O4'-C1'-N9	8.13	114.71	108.20
34	AA	3483	U	O4'-C1'-N1	8.12	114.70	108.20
32	X	43	ARG	NE-CZ-NH2	8.12	124.36	120.30
34	AA	136	U	C2-N1-C1'	8.12	127.44	117.70
34	AA	255	C	O4'-C1'-N1	8.11	114.69	108.20
74	AH	110	ARG	NE-CZ-NH1	-8.11	116.25	120.30
1	A	1098	U	P-O3'-C3'	8.10	129.42	119.70
1	A	1787	U	O4'-C1'-N1	8.10	114.68	108.20
1	A	647	C	O4'-C1'-N1	8.10	114.68	108.20
17	4	21	ARG	NE-CZ-NH1	8.10	124.35	120.30
34	AA	3171	C	O4'-C1'-N1	8.09	114.67	108.20
35	AC	6	C	O4'-C1'-N1	8.09	114.67	108.20
34	AA	504	A	N1-C6-N6	-8.08	113.75	118.60
34	AA	643	G	C5-C6-O6	-8.08	123.75	128.60
34	AA	856	C	O4'-C1'-N1	8.08	114.67	108.20
61	AQ	32	ARG	NE-CZ-NH2	8.08	124.34	120.30
18	5	61	ARG	NE-CZ-NH2	8.07	124.33	120.30
68	A5	173	ARG	NE-CZ-NH1	-8.06	116.27	120.30
26	P	117	ARG	NE-CZ-NH2	8.06	124.33	120.30
68	A5	86	ARG	NE-CZ-NH1	8.06	124.33	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	2958	G	C5-C6-O6	-8.06	123.77	128.60
60	AO	12	ARG	NE-CZ-NH1	8.06	124.33	120.30
47	Ab	3	ARG	NE-CZ-NH2	8.05	124.33	120.30
34	AA	702	U	C2-N1-C1'	8.05	127.36	117.70
69	AD	242	ARG	NE-CZ-NH1	-8.05	116.28	120.30
34	AA	1100	A	O4'-C1'-N9	8.04	114.63	108.20
34	AA	2626	C	O4'-C1'-N1	8.03	114.63	108.20
51	AP	67	ARG	NE-CZ-NH2	8.03	124.31	120.30
1	A	253	A	O4'-C1'-N9	8.02	114.62	108.20
34	AA	3381	A	P-O3'-C3'	8.02	129.32	119.70
34	AA	1811	A	N1-C6-N6	-8.02	113.79	118.60
20	B	136	ARG	NE-CZ-NH2	8.02	124.31	120.30
34	AA	101	C	C2-N1-C1'	8.02	127.62	118.80
34	AA	2957	G	O4'-C1'-N9	8.02	114.61	108.20
1	A	634	C	O4'-C1'-N1	8.01	114.61	108.20
34	AA	3219	U	O4'-C1'-N1	8.01	114.61	108.20
69	AD	54	ARG	NE-CZ-NH1	8.01	124.31	120.30
34	AA	963	C	O4'-C1'-N1	8.01	114.61	108.20
34	AA	2095	U	P-O3'-C3'	8.01	129.31	119.70
35	AC	134	G	P-O3'-C3'	8.00	129.30	119.70
42	A7	35	ARG	NE-CZ-NH1	8.00	124.30	120.30
3	D	147	ARG	NE-CZ-NH2	-7.98	116.31	120.30
61	AQ	10	ARG	NE-CZ-NH1	7.98	124.29	120.30
1	A	1012	C	O4'-C1'-N1	7.97	114.58	108.20
34	AA	875	C	O4'-C1'-N1	7.97	114.58	108.20
34	AA	922	C	O4'-C1'-N1	7.97	114.58	108.20
34	AA	3627	C	O4'-C1'-N1	7.97	114.58	108.20
25	N	91	TYR	CB-CG-CD2	-7.96	116.22	121.00
34	AA	3577	A	P-O3'-C3'	7.96	129.25	119.70
58	AM	14	ARG	NE-CZ-NH2	-7.96	116.32	120.30
34	AA	3258	C	C2-N1-C1'	7.95	127.55	118.80
1	A	2071	U	P-O3'-C3'	7.95	129.24	119.70
34	AA	673	U	O4'-C1'-N1	7.95	114.56	108.20
1	A	759	C	O4'-C1'-N1	7.95	114.56	108.20
2	7	68	C	O4'-C1'-N1	7.95	114.56	108.20
34	AA	1457	G	P-O3'-C3'	7.94	129.23	119.70
34	AA	1324	U	O4'-C1'-N1	7.94	114.55	108.20
1	A	1786	U	P-O3'-C3'	7.92	129.21	119.70
34	AA	3053	G	O4'-C1'-N9	7.92	114.54	108.20
62	AR	50	ARG	NE-CZ-NH1	7.92	124.26	120.30
34	AA	505	A	P-O3'-C3'	7.91	129.19	119.70
53	Ai	39	ARG	NE-CZ-NH2	-7.91	116.35	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	P	66	ARG	NE-CZ-NH1	-7.90	116.35	120.30
34	AA	3691	C	O4'-C1'-N1	7.90	114.52	108.20
34	AA	2033	C	P-O3'-C3'	7.90	129.18	119.70
1	A	590	C	O4'-C1'-N1	7.90	114.52	108.20
34	AA	1076	C	O4'-C1'-N1	7.89	114.51	108.20
34	AA	291	A	O4'-C1'-N9	7.88	114.51	108.20
26	P	41	PHE	CB-CG-CD2	-7.88	115.28	120.80
1	A	2051	C	O4'-C1'-N1	7.87	114.50	108.20
34	AA	893	U	O4'-C1'-N1	7.87	114.49	108.20
59	AS	171	ARG	NE-CZ-NH1	7.87	124.23	120.30
65	AT	102	ARG	NE-CZ-NH1	7.87	124.23	120.30
34	AA	1739	C	O4'-C1'-N1	7.85	114.48	108.20
34	AA	2960	G	C5'-C4'-C3'	-7.84	103.45	116.00
30	U	55	ARG	NE-CZ-NH1	-7.84	116.38	120.30
22	H	74	ARG	NE-CZ-NH1	7.83	124.22	120.30
54	AI	98	ARG	NE-CZ-NH2	-7.83	116.39	120.30
34	AA	990	U	O4'-C1'-N1	7.83	114.46	108.20
34	AA	3181	U	O4'-C1'-N1	7.83	114.46	108.20
26	P	66	ARG	NE-CZ-NH2	7.83	124.21	120.30
34	AA	1572	U	C6-N1-C1'	-7.83	110.24	121.20
46	Aa	88	ARG	NE-CZ-NH2	-7.83	116.39	120.30
34	AA	865	G	O4'-C1'-N9	7.82	114.45	108.20
34	AA	3628	C	O4'-C1'-N1	7.82	114.45	108.20
2	7	76	A	P-O5'-C5'	7.81	133.39	120.90
34	AA	719	C	O4'-C1'-N1	7.81	114.45	108.20
34	AA	2884	G	O4'-C1'-N9	7.80	114.44	108.20
1	A	320	C	O4'-C1'-N1	7.78	114.43	108.20
34	AA	866	C	O4'-C1'-N1	7.78	114.43	108.20
2	7	7	G	P-O3'-C3'	7.78	129.03	119.70
76	Ag	16	ARG	NE-CZ-NH1	7.78	124.19	120.30
1	A	1452	C	O4'-C1'-N1	7.77	114.42	108.20
34	AA	3494	C	O4'-C1'-N1	7.77	114.42	108.20
73	AU	89	ARG	NE-CZ-NH1	7.77	124.18	120.30
77	AX	105	TYR	CB-CG-CD2	7.77	125.66	121.00
34	AA	315	C	O4'-C1'-N1	7.76	114.41	108.20
34	AA	2133	C	O4'-C1'-N1	7.76	114.41	108.20
39	A2	14	ARG	NE-CZ-NH1	7.76	124.18	120.30
34	AA	594	C	C2-N1-C1'	7.76	127.33	118.80
34	AA	1073	G	O4'-C1'-N9	7.75	114.40	108.20
12	Y	161	TYR	CB-CG-CD2	-7.75	116.35	121.00
34	AA	1823	C	O4'-C1'-N1	7.74	114.39	108.20
34	AA	2103	C	O4'-C1'-N1	7.73	114.39	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
65	AT	63	ARG	NE-CZ-NH2	-7.72	116.44	120.30
1	A	1306	C	O4'-C1'-N1	7.72	114.38	108.20
34	AA	2558	C	O4'-C1'-N1	7.71	114.37	108.20
1	A	562	A	P-O3'-C3'	7.71	128.96	119.70
14	1	91	ARG	NE-CZ-NH1	-7.71	116.45	120.30
34	AA	923	C	O4'-C1'-N1	7.70	114.36	108.20
34	AA	3511	C	O4'-C1'-N1	7.69	114.35	108.20
69	AD	119	ARG	NE-CZ-NH1	7.69	124.15	120.30
1	A	536	C	O4'-C1'-N1	7.69	114.35	108.20
27	Q	18	ARG	NE-CZ-NH1	7.69	124.14	120.30
36	AB	102	C	O4'-C1'-N1	7.68	114.35	108.20
59	AS	177	ARG	NE-CZ-NH1	-7.68	116.46	120.30
34	AA	3435	A	P-O3'-C3'	7.68	128.91	119.70
34	AA	2804	C	O4'-C1'-N1	7.68	114.34	108.20
34	AA	3714	C	O4'-C1'-N1	7.68	114.34	108.20
2	7	56	C	O4'-C1'-N1	7.67	114.34	108.20
1	A	109	C	O4'-C1'-N1	7.66	114.33	108.20
1	A	1978	A	O4'-C1'-N9	7.66	114.33	108.20
34	AA	213	C	O4'-C1'-N1	7.66	114.33	108.20
34	AA	1434	G	C5-C6-O6	-7.66	124.00	128.60
34	AA	3434	A	O4'-C1'-N9	7.66	114.33	108.20
34	AA	449	A	O4'-C1'-N9	7.66	114.33	108.20
34	AA	1758	C	O4'-C1'-N1	7.65	114.32	108.20
34	AA	2700	C	O4'-C1'-N1	7.65	114.32	108.20
6	I	51	ARG	NE-CZ-NH1	7.65	124.12	120.30
14	1	115	ARG	NE-CZ-NH1	7.65	124.12	120.30
2	7	23	C	O4'-C1'-N1	7.64	114.31	108.20
34	AA	278	C	O4'-C1'-N1	7.64	114.32	108.20
34	AA	1747	U	C2-N1-C1'	7.64	126.87	117.70
34	AA	809	A	O4'-C1'-N9	7.64	114.31	108.20
76	Ag	35	ARG	NE-CZ-NH1	7.64	124.12	120.30
34	AA	200	A	C5-C6-N6	-7.64	117.59	123.70
34	AA	621	C	O4'-C1'-N1	7.64	114.31	108.20
34	AA	1202	C	O4'-C1'-N1	7.64	114.31	108.20
34	AA	451	C	O4'-C1'-N1	7.63	114.31	108.20
1	A	1462	A	P-O3'-C3'	7.62	128.84	119.70
34	AA	2969	C	O4'-C1'-N1	7.62	114.30	108.20
1	A	206	A	P-O3'-C3'	7.62	128.84	119.70
34	AA	2694	A	O4'-C1'-N9	7.62	114.30	108.20
28	S	132	ARG	NE-CZ-NH1	7.62	124.11	120.30
1	A	885	C	O4'-C1'-N1	7.61	114.29	108.20
34	AA	136	U	O4'-C1'-N1	7.61	114.29	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
65	AT	8	ARG	NE-CZ-NH1	7.61	124.11	120.30
34	AA	1665	C	O4'-C1'-N1	7.61	114.29	108.20
34	AA	2959	G	C5'-C4'-C3'	-7.61	103.83	116.00
34	AA	715	U	O4'-C1'-N1	7.60	114.28	108.20
16	3	89	ARG	NE-CZ-NH1	7.60	124.10	120.30
34	AA	1480	G	O4'-C1'-N9	7.59	114.28	108.20
34	AA	3337	U	O4'-C1'-N1	7.59	114.28	108.20
34	AA	1539	U	P-O3'-C3'	7.58	128.80	119.70
34	AA	1656	G	O4'-C1'-N9	7.58	114.27	108.20
59	AS	90	ARG	NE-CZ-NH2	-7.58	116.51	120.30
59	AS	167	ARG	NE-CZ-NH1	7.58	124.09	120.30
34	AA	771	U	O4'-C1'-N1	7.58	114.26	108.20
1	A	1907	A	C4'-C3'-C2'	-7.57	95.03	102.60
34	AA	544	C	C2-N1-C1'	7.57	127.13	118.80
34	AA	3081	C	O4'-C1'-N1	7.57	114.26	108.20
5	G	103	ARG	NE-CZ-NH2	-7.57	116.52	120.30
34	AA	2074	C	O4'-C1'-N1	7.57	114.25	108.20
34	AA	3290	C	O4'-C1'-N1	7.56	114.25	108.20
1	A	1706	A	O4'-C1'-N9	7.56	114.25	108.20
1	A	1819	U	O4'-C1'-N1	7.55	114.24	108.20
73	AU	100	TYR	CB-CG-CD1	7.55	125.53	121.00
34	AA	858	C	P-O3'-C3'	7.55	128.76	119.70
34	AA	3575	U	O4'-C1'-N1	7.55	114.24	108.20
70	AE	8	ARG	NE-CZ-NH2	-7.54	116.53	120.30
34	AA	1728	C	O4'-C1'-N1	7.54	114.23	108.20
34	AA	864	U	O4'-C1'-N1	7.53	114.23	108.20
4	E	108	ARG	NE-CZ-NH1	7.53	124.06	120.30
63	AW	127	ARG	NE-CZ-NH2	7.53	124.06	120.30
34	AA	3280	U	O4'-C4'-C3'	7.52	112.12	106.10
34	AA	2069	C	O4'-C1'-N1	7.52	114.22	108.20
34	AA	1680	C	O4'-C1'-N1	7.52	114.22	108.20
34	AA	823	U	O4'-C1'-N1	7.52	114.21	108.20
34	AA	138	C	P-O3'-C3'	7.51	128.72	119.70
34	AA	683	A	P-O3'-C3'	7.51	128.72	119.70
34	AA	2104	C	O4'-C1'-N1	7.51	114.21	108.20
57	AK	58	ARG	NE-CZ-NH1	7.51	124.06	120.30
34	AA	3199	C	O4'-C1'-N1	7.51	114.21	108.20
1	A	345	C	O4'-C1'-N1	7.51	114.21	108.20
66	AZ	27	ARG	NE-CZ-NH1	7.51	124.05	120.30
34	AA	413	C	O4'-C1'-N1	7.50	114.20	108.20
34	AA	1205	U	P-O3'-C3'	7.50	128.71	119.70
34	AA	1969	A	O4'-C1'-N9	7.50	114.20	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	Ae	6	ARG	NE-CZ-NH1	7.50	124.05	120.30
11	O	23	TYR	CB-CG-CD1	-7.50	116.50	121.00
1	A	1209	G	C5-C6-O6	-7.50	124.10	128.60
1	A	2053	U	O4'-C1'-N1	7.49	114.19	108.20
42	A7	45	ARG	NE-CZ-NH1	7.49	124.05	120.30
34	AA	949	A	O4'-C1'-N9	7.49	114.19	108.20
27	Q	13	ARG	NE-CZ-NH2	7.49	124.05	120.30
34	AA	1323	A	P-O3'-C3'	7.49	128.68	119.70
25	N	54	ARG	NE-CZ-NH1	7.48	124.04	120.30
23	J	98	ARG	NE-CZ-NH1	7.48	124.04	120.30
34	AA	889	U	P-O3'-C3'	7.48	128.68	119.70
34	AA	821	C	O4'-C1'-N1	7.48	114.18	108.20
64	AY	173	ARG	NE-CZ-NH2	-7.48	116.56	120.30
34	AA	2462	C	O4'-C1'-N1	7.48	114.18	108.20
34	AA	594	C	O4'-C1'-N1	7.47	114.18	108.20
34	AA	3647	C	O4'-C1'-N1	7.47	114.18	108.20
52	Ah	17	ARG	NE-CZ-NH1	7.47	124.03	120.30
34	AA	3288	C	O4'-C1'-N1	7.47	114.17	108.20
2	7	41	C	O4'-C1'-N1	7.47	114.17	108.20
34	AA	1493	U	O4'-C1'-N1	7.47	114.17	108.20
35	AC	57	A	O4'-C1'-N9	7.47	114.17	108.20
74	AH	123	ARG	NE-CZ-NH1	-7.46	116.57	120.30
34	AA	298	C	O4'-C1'-N1	7.46	114.17	108.20
71	AF	86	ARG	NE-CZ-NH1	-7.46	116.57	120.30
71	AF	344	ARG	NE-CZ-NH1	7.46	124.03	120.30
3	D	67	ARG	NE-CZ-NH2	-7.46	116.57	120.30
20	B	94	ARG	NE-CZ-NH2	-7.46	116.57	120.30
34	AA	1788	C	O4'-C1'-N1	7.46	114.17	108.20
34	AA	2175	C	O4'-C1'-N1	7.46	114.17	108.20
34	AA	1440	C	O4'-C1'-N1	7.46	114.16	108.20
38	A1	34	ARG	NE-CZ-NH2	-7.46	116.57	120.30
34	AA	336	U	O4'-C1'-N1	7.45	114.16	108.20
34	AA	732	C	O4'-C1'-N1	7.45	114.16	108.20
34	AA	1155	C	O4'-C1'-N1	7.45	114.16	108.20
36	AB	28	C	C5'-C4'-C3'	7.45	127.91	116.00
1	A	832	A	O4'-C1'-N9	7.44	114.15	108.20
34	AA	1572	U	C2-N1-C1'	7.44	126.63	117.70
34	AA	150	C	O4'-C1'-N1	7.44	114.15	108.20
1	A	1429	C	O4'-C1'-N1	7.44	114.15	108.20
1	A	803	G	P-O3'-C3'	7.43	128.62	119.70
34	AA	113	C	O4'-C1'-N1	7.43	114.15	108.20
24	L	12	ARG	NE-CZ-NH2	7.43	124.01	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	1840	C	O4'-C1'-N1	7.43	114.14	108.20
4	E	23	ARG	NE-CZ-NH1	7.43	124.01	120.30
1	A	1069	C	O4'-C1'-N1	7.42	114.14	108.20
1	A	1365	G	O4'-C1'-N9	7.42	114.14	108.20
34	AA	361	G	O4'-C1'-N9	7.42	114.14	108.20
72	AG	144	ARG	NE-CZ-NH1	7.41	124.01	120.30
34	AA	2107	C	O4'-C1'-N1	7.41	114.13	108.20
36	AB	72	C	O4'-C1'-N1	7.41	114.13	108.20
1	A	1935	G	C5-C6-O6	-7.41	124.16	128.60
1	A	2064	C	O4'-C1'-N1	7.40	114.12	108.20
34	AA	184	U	P-O3'-C3'	7.40	128.58	119.70
36	AB	96	C	O4'-C1'-N1	7.40	114.12	108.20
34	AA	3723	C	O4'-C1'-N1	7.40	114.12	108.20
76	Ag	37	ARG	NE-CZ-NH1	7.40	124.00	120.30
34	AA	1247	C	O4'-C1'-N1	7.39	114.11	108.20
34	AA	1806	C	O4'-C1'-N1	7.39	114.11	108.20
59	AS	111	ARG	NE-CZ-NH2	-7.39	116.61	120.30
34	AA	2083	U	O4'-C1'-N1	7.39	114.11	108.20
1	A	1917	C	O4'-C1'-N1	7.39	114.11	108.20
34	AA	2221	U	O4'-C1'-N1	7.39	114.11	108.20
34	AA	3456	C	O4'-C1'-N1	7.39	114.11	108.20
37	AL	38	ARG	NE-CZ-NH1	7.39	123.99	120.30
34	AA	29	C	O4'-C1'-N1	7.38	114.11	108.20
34	AA	3480	C	O4'-C1'-N1	7.38	114.11	108.20
34	AA	107	C	O4'-C1'-N1	7.38	114.10	108.20
34	AA	90	C	O4'-C1'-N1	7.38	114.10	108.20
34	AA	722	G	N1-C6-O6	7.37	124.33	119.90
34	AA	1681	C	O4'-C1'-N1	7.37	114.10	108.20
1	A	396	G	O4'-C1'-N9	7.37	114.10	108.20
4	E	126	ARG	NE-CZ-NH1	7.37	123.99	120.30
1	A	1936	C	O4'-C1'-N1	7.37	114.10	108.20
59	AS	59	ARG	NE-CZ-NH1	7.37	123.98	120.30
34	AA	3577	A	O4'-C1'-N9	7.36	114.09	108.20
4	E	107	ARG	NE-CZ-NH1	7.36	123.98	120.30
9	W	3	ARG	NE-CZ-NH1	7.36	123.98	120.30
34	AA	10	G	P-O3'-C3'	7.36	128.53	119.70
1	A	919	U	P-O3'-C3'	7.36	128.53	119.70
1	A	647	C	C6-N1-C1'	-7.35	111.97	120.80
34	AA	2425	C	O4'-C1'-N1	7.35	114.08	108.20
1	A	96	C	O4'-C1'-N1	7.35	114.08	108.20
1	A	566	C	O4'-C1'-N1	7.35	114.08	108.20
34	AA	414	C	O4'-C1'-N1	7.35	114.08	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	3258	C	O4'-C1'-N1	7.35	114.08	108.20
1	A	850	G	O4'-C1'-N9	7.35	114.08	108.20
34	AA	268	C	O4'-C1'-N1	7.34	114.08	108.20
55	AJ	76	ARG	NE-CZ-NH2	7.34	123.97	120.30
36	AB	4	C	O4'-C1'-N1	7.34	114.07	108.20
34	AA	2556	C	O4'-C1'-N1	7.34	114.07	108.20
34	AA	1535	G	O4'-C1'-N9	7.33	114.07	108.20
1	A	2076	C	O4'-C1'-N1	7.33	114.06	108.20
9	W	80	ARG	NE-CZ-NH1	7.33	123.97	120.30
1	A	1169	C	O4'-C1'-N1	7.33	114.06	108.20
1	A	1808	G	P-O5'-C5'	7.33	132.62	120.90
34	AA	3180	C	O4'-C1'-N1	7.33	114.06	108.20
1	A	1251	G	O4'-C1'-N9	7.33	114.06	108.20
34	AA	1725	U	O4'-C1'-N1	7.33	114.06	108.20
12	Y	99	ARG	NE-CZ-NH2	7.32	123.96	120.30
9	W	14	ARG	NE-CZ-NH1	7.32	123.96	120.30
34	AA	2676	C	O4'-C1'-N1	7.32	114.05	108.20
1	A	1911	A	O4'-C1'-N9	7.32	114.05	108.20
34	AA	2015	C	O4'-C1'-N1	7.31	114.05	108.20
1	A	4	C	O4'-C1'-N1	7.31	114.05	108.20
1	A	42	G	O4'-C1'-N9	7.31	114.05	108.20
53	Ai	33	ARG	NE-CZ-NH1	7.31	123.95	120.30
34	AA	1154	C	O4'-C1'-N1	7.31	114.05	108.20
34	AA	200	A	O4'-C1'-N9	7.30	114.04	108.20
34	AA	753	C	O4'-C1'-N1	7.30	114.04	108.20
34	AA	3235	C	O4'-C1'-N1	7.30	114.04	108.20
1	A	1916	C	O4'-C1'-N1	7.30	114.04	108.20
1	A	655	C	O4'-C1'-N1	7.29	114.04	108.20
1	A	1686	C	O4'-C1'-N1	7.29	114.03	108.20
34	AA	691	C	O4'-C1'-N1	7.29	114.03	108.20
22	H	27	PHE	CB-CG-CD2	-7.29	115.70	120.80
34	AA	2961	C	O4'-C1'-N1	7.29	114.03	108.20
12	Y	66	ARG	NE-CZ-NH1	-7.29	116.66	120.30
1	A	621	C	O4'-C1'-N1	7.28	114.03	108.20
34	AA	3702	C	O4'-C1'-N1	7.28	114.03	108.20
1	A	316	C	O4'-C1'-N1	7.28	114.02	108.20
35	AC	61	C	O4'-C1'-N1	7.28	114.02	108.20
34	AA	1042	C	O4'-C1'-N1	7.28	114.02	108.20
34	AA	3443	A	O4'-C1'-N9	7.27	114.02	108.20
1	A	871	C	O4'-C1'-N1	7.27	114.02	108.20
34	AA	2727	U	C2-N1-C1'	7.27	126.42	117.70
36	AB	119	G	O4'-C1'-N9	7.27	114.02	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	1057	C	O4'-C1'-N1	7.26	114.01	108.20
34	AA	3664	G	P-O3'-C3'	7.26	128.42	119.70
1	A	1291	C	O4'-C1'-N1	7.26	114.00	108.20
34	AA	111	C	O4'-C1'-N1	7.25	114.00	108.20
34	AA	1657	U	O4'-C1'-N1	7.25	114.00	108.20
1	A	974	A	O4'-C1'-N9	7.25	114.00	108.20
34	AA	1827	C	O4'-C1'-N1	7.25	114.00	108.20
34	AA	1280	G	O4'-C1'-N9	7.25	114.00	108.20
34	AA	532	C	O4'-C1'-N1	7.24	114.00	108.20
34	AA	964	G	O4'-C1'-N9	7.24	114.00	108.20
34	AA	2538	C	O4'-C1'-N1	7.24	114.00	108.20
34	AA	2421	C	O4'-C1'-N1	7.24	113.99	108.20
1	A	367	C	O4'-C1'-N1	7.23	113.98	108.20
34	AA	2734	C	O4'-C1'-N1	7.22	113.98	108.20
1	A	1072	A	O4'-C1'-N9	7.22	113.98	108.20
26	P	146	ARG	NE-CZ-NH2	7.22	123.91	120.30
34	AA	2934	A	O4'-C1'-N9	7.22	113.98	108.20
1	A	99	C	O4'-C1'-N1	7.22	113.97	108.20
30	U	55	ARG	NE-CZ-NH2	7.22	123.91	120.30
34	AA	728	C	O4'-C1'-N1	7.21	113.97	108.20
34	AA	888	A	P-O3'-C3'	7.21	128.36	119.70
34	AA	3502	C	O4'-C1'-N1	7.21	113.97	108.20
34	AA	129	C	O4'-C1'-N1	7.21	113.97	108.20
34	AA	1086	C	O4'-C1'-N1	7.21	113.97	108.20
34	AA	1102	U	O4'-C1'-N1	7.21	113.97	108.20
2	7	74	C	O4'-C1'-N1	7.20	113.96	108.20
26	P	128	ARG	NE-CZ-NH1	-7.20	116.70	120.30
34	AA	3401	C	O4'-C1'-N1	7.20	113.96	108.20
34	AA	210	C	P-O3'-C3'	7.20	128.34	119.70
34	AA	93	C	O4'-C1'-N1	7.20	113.96	108.20
34	AA	976	G	O4'-C1'-N9	7.20	113.96	108.20
34	AA	3139	C	C2-N1-C1'	7.20	126.72	118.80
33	C	101	ARG	NE-CZ-NH2	7.19	123.90	120.30
1	A	1116	G	C5-C6-O6	-7.19	124.28	128.60
34	AA	2550	C	O4'-C1'-N1	7.19	113.95	108.20
12	Y	107	ARG	NE-CZ-NH1	7.19	123.89	120.30
34	AA	959	C	O4'-C1'-N1	7.19	113.95	108.20
34	AA	3620	C	O4'-C1'-N1	7.19	113.95	108.20
34	AA	2933	C	O4'-C1'-N1	7.19	113.95	108.20
1	A	525	G	P-O3'-C3'	7.18	128.32	119.70
34	AA	870	C	O4'-C1'-N1	7.18	113.95	108.20
34	AA	2506	A	O4'-C1'-N9	7.18	113.95	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
77	AX	117	ARG	NE-CZ-NH2	7.18	123.89	120.30
1	A	1448	U	C2-N1-C1'	7.18	126.32	117.70
34	AA	3752	C	O4'-C1'-N1	7.18	113.94	108.20
2	7	28	C	O4'-C1'-N1	7.18	113.94	108.20
1	A	423	A	O4'-C1'-N9	7.18	113.94	108.20
1	A	448	C	O4'-C1'-N1	7.18	113.94	108.20
8	M	112	ARG	NE-CZ-NH2	-7.18	116.71	120.30
34	AA	159	C	O4'-C1'-N1	7.18	113.94	108.20
34	AA	3201	C	O4'-C1'-N1	7.18	113.94	108.20
1	A	1793	C	O4'-C1'-N1	7.17	113.94	108.20
34	AA	42	C	O4'-C1'-N1	7.17	113.94	108.20
61	AQ	24	ARG	NE-CZ-NH2	7.17	123.89	120.30
34	AA	65	A	P-O3'-C3'	7.17	128.31	119.70
34	AA	609	C	O4'-C1'-N1	7.17	113.94	108.20
45	A9	87	ARG	NE-CZ-NH1	7.17	123.89	120.30
61	AQ	10	ARG	NE-CZ-NH2	-7.17	116.71	120.30
12	Y	161	TYR	CB-CG-CD1	7.17	125.30	121.00
34	AA	34	A	O4'-C1'-N9	7.17	113.93	108.20
34	AA	329	C	O4'-C1'-N1	7.17	113.93	108.20
36	AB	17	C	O4'-C1'-N1	7.17	113.93	108.20
76	Ag	39	ARG	NE-CZ-NH2	7.17	123.88	120.30
74	AH	123	ARG	NE-CZ-NH2	7.17	123.88	120.30
1	A	1292	U	O4'-C1'-N1	7.16	113.93	108.20
1	A	1862	C	O4'-C1'-N1	7.16	113.93	108.20
34	AA	320	C	O4'-C1'-N1	7.16	113.93	108.20
34	AA	2992	C	O4'-C1'-N1	7.16	113.93	108.20
34	AA	597	A	P-O3'-C3'	7.16	128.29	119.70
1	A	1097	C	O4'-C1'-N1	7.16	113.92	108.20
34	AA	1230	A	O4'-C1'-N9	7.16	113.93	108.20
34	AA	3131	A	O4'-C1'-N9	7.16	113.92	108.20
34	AA	3258	C	C6-N1-C1'	-7.16	112.21	120.80
34	AA	305	A	N1-C6-N6	7.15	122.89	118.60
26	P	41	PHE	CB-CG-CD1	7.15	125.81	120.80
34	AA	109	A	P-O3'-C3'	7.15	128.28	119.70
34	AA	3248	C	O4'-C1'-N1	7.15	113.92	108.20
59	AS	145	ARG	NE-CZ-NH2	7.15	123.87	120.30
74	AH	39	ARG	NE-CZ-NH2	7.15	123.87	120.30
34	AA	1720	C	O4'-C1'-N1	7.14	113.91	108.20
34	AA	1853	C	O4'-C1'-N1	7.14	113.91	108.20
34	AA	2501	A	O4'-C1'-N9	7.13	113.91	108.20
35	AC	57	A	C5'-C4'-O4'	7.13	117.66	109.10
34	AA	2622	C	O4'-C1'-N1	7.13	113.91	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	3099	C	O4'-C1'-N1	7.13	113.91	108.20
1	A	1820	C	O4'-C1'-N1	7.13	113.91	108.20
1	A	379	G	C5-C6-O6	-7.13	124.32	128.60
1	A	1635	C	C2-N1-C1'	7.13	126.64	118.80
1	A	430	C	O4'-C1'-N1	7.13	113.90	108.20
1	A	1079	C	O4'-C1'-N1	7.13	113.90	108.20
36	AB	67	C	O4'-C1'-N1	7.13	113.90	108.20
36	AB	104	C	O4'-C1'-N1	7.13	113.90	108.20
1	A	1388	A	O4'-C1'-N9	7.13	113.90	108.20
4	E	82	ARG	NE-CZ-NH1	7.13	123.86	120.30
74	AH	110	ARG	NE-CZ-NH2	7.13	123.86	120.30
1	A	1945	C	O4'-C1'-N1	7.12	113.90	108.20
34	AA	1722	C	O4'-C1'-N1	7.12	113.90	108.20
68	A5	160	ARG	NE-CZ-NH2	7.12	123.86	120.30
34	AA	1456	C	O4'-C1'-N1	7.12	113.89	108.20
34	AA	3329	C	O4'-C1'-N1	7.12	113.90	108.20
46	Aa	76	TYR	CB-CG-CD2	-7.12	116.73	121.00
1	A	1886	C	O4'-C1'-N1	7.12	113.89	108.20
34	AA	685	U	C2-N1-C1'	7.12	126.24	117.70
34	AA	2577	C	C6-N1-C1'	-7.12	112.26	120.80
22	H	51	ARG	NE-CZ-NH2	7.11	123.86	120.30
34	AA	1735	G	P-O3'-C3'	7.11	128.24	119.70
31	V	132	ARG	NE-CZ-NH2	-7.11	116.74	120.30
34	AA	1168	C	O4'-C1'-N1	7.11	113.89	108.20
34	AA	1757	C	O4'-C1'-N1	7.11	113.89	108.20
35	AC	128	C	O4'-C1'-N1	7.10	113.88	108.20
34	AA	1979	C	O4'-C1'-N1	7.10	113.88	108.20
1	A	437	C	O4'-C1'-N1	7.09	113.88	108.20
2	7	71	C	C6-N1-C2	-7.09	117.46	120.30
1	A	270	C	O4'-C1'-N1	7.09	113.87	108.20
34	AA	1203	A	P-O3'-C3'	7.09	128.21	119.70
34	AA	1797	A	O4'-C1'-N9	7.09	113.87	108.20
1	A	136	U	O4'-C1'-N1	7.08	113.87	108.20
2	7	5	G	O4'-C1'-N9	7.08	113.86	108.20
46	Aa	83	ARG	NE-CZ-NH2	-7.08	116.76	120.30
34	AA	540	C	O4'-C1'-N1	7.08	113.86	108.20
34	AA	1872	A	O4'-C1'-N9	7.08	113.86	108.20
34	AA	80	C	O4'-C1'-N1	7.08	113.86	108.20
34	AA	254	U	O3'-P-O5'	-7.08	90.56	104.00
34	AA	2960	G	C5'-C4'-O4'	7.08	117.59	109.10
1	A	360	C	O4'-C1'-N1	7.07	113.86	108.20
68	A5	109	ARG	NE-CZ-NH2	7.07	123.83	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	594	C	O4'-C1'-N1	7.07	113.85	108.20
34	AA	982	C	O4'-C1'-N1	7.07	113.85	108.20
34	AA	3711	U	P-O3'-C3'	7.07	128.18	119.70
78	A0	31	ARG	NE-CZ-NH1	7.07	123.83	120.30
34	AA	2437	A	O4'-C1'-N9	7.06	113.85	108.20
34	AA	2746	U	P-O3'-C3'	7.06	128.18	119.70
23	J	123	TYR	CB-CG-CD1	7.06	125.23	121.00
34	AA	1968	C	O4'-C1'-N1	7.06	113.85	108.20
37	AL	99	ARG	NE-CZ-NH1	7.06	123.83	120.30
64	AY	173	ARG	NE-CZ-NH1	7.06	123.83	120.30
67	A3	64	ARG	NE-CZ-NH1	7.05	123.83	120.30
1	A	1224	C	O4'-C1'-N1	7.05	113.84	108.20
34	AA	2630	C	O4'-C1'-N1	7.05	113.84	108.20
62	AR	31	ARG	NE-CZ-NH1	7.05	123.83	120.30
2	7	25	C	O4'-C1'-N1	7.05	113.84	108.20
53	Ai	41	ARG	NE-CZ-NH2	-7.05	116.78	120.30
34	AA	386	U	O4'-C1'-N1	7.04	113.83	108.20
34	AA	588	C	O4'-C1'-N1	7.04	113.83	108.20
34	AA	59	G	N1-C6-O6	7.03	124.12	119.90
66	AZ	15	ARG	NE-CZ-NH1	7.03	123.82	120.30
34	AA	108	C	O4'-C1'-N1	7.03	113.83	108.20
1	A	1455	C	O4'-C1'-N1	7.03	113.82	108.20
34	AA	2740	A	N1-C6-N6	7.03	122.82	118.60
34	AA	3414	G	P-O3'-C3'	7.03	128.14	119.70
34	AA	347	C	O4'-C1'-N1	7.03	113.82	108.20
1	A	1790	C	O4'-C1'-N1	7.03	113.82	108.20
1	A	161	U	C5'-C4'-O4'	7.02	117.53	109.10
25	N	91	TYR	CB-CG-CD1	7.02	125.21	121.00
34	AA	23	C	O4'-C1'-N1	7.02	113.82	108.20
34	AA	81	C	O4'-C1'-N1	7.02	113.82	108.20
34	AA	1852	C	O4'-C1'-N1	7.02	113.82	108.20
34	AA	2639	C	O4'-C1'-N1	7.02	113.82	108.20
34	AA	2577	C	C2-N1-C1'	7.02	126.52	118.80
34	AA	3518	C	O4'-C1'-N1	7.02	113.82	108.20
1	A	1061	A	O4'-C1'-N9	7.01	113.81	108.20
34	AA	1896	C	O4'-C1'-N1	7.01	113.81	108.20
42	A7	73	ARG	NE-CZ-NH1	7.01	123.81	120.30
34	AA	2958	G	N1-C6-O6	7.01	124.11	119.90
1	A	953	C	O4'-C1'-N1	7.01	113.81	108.20
1	A	1231	G	C5-C6-O6	-7.00	124.40	128.60
34	AA	3615	A	O4'-C1'-N9	7.00	113.80	108.20
1	A	144	U	O4'-C1'-N1	7.00	113.80	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	979	C	O4'-C1'-N1	7.00	113.80	108.20
1	A	1019	C	O4'-C1'-N1	7.00	113.80	108.20
34	AA	175	G	O4'-C1'-N9	7.00	113.80	108.20
68	A5	245	ARG	NE-CZ-NH2	6.99	123.80	120.30
38	A1	17	ARG	NE-CZ-NH2	6.99	123.80	120.30
1	A	170	C	O4'-C1'-N1	6.99	113.79	108.20
35	AC	91	A	O4'-C1'-N9	6.99	113.79	108.20
68	A5	231	ARG	NE-CZ-NH2	6.99	123.80	120.30
1	A	582	C	O4'-C1'-N1	6.99	113.79	108.20
1	A	793	G	O4'-C1'-N9	6.99	113.79	108.20
4	E	23	ARG	NE-CZ-NH2	-6.99	116.81	120.30
34	AA	525	U	O4'-C1'-N1	6.99	113.79	108.20
34	AA	1222	U	O4'-C1'-N1	6.99	113.79	108.20
34	AA	2624	C	O4'-C1'-N1	6.99	113.79	108.20
34	AA	2004	U	C2-N1-C1'	6.98	126.08	117.70
1	A	300	C	O4'-C1'-N1	6.98	113.78	108.20
1	A	382	C	O4'-C1'-N1	6.98	113.78	108.20
34	AA	2036	C	O4'-C1'-N1	6.98	113.78	108.20
70	AE	280	TYR	CB-CG-CD2	-6.98	116.81	121.00
1	A	122	C	O4'-C1'-N1	6.98	113.78	108.20
34	AA	37	U	O4'-C1'-N1	6.98	113.78	108.20
34	AA	1568	C	O4'-C1'-N1	6.98	113.78	108.20
34	AA	3103	C	O4'-C1'-N1	6.98	113.78	108.20
34	AA	3271	G	C5-C6-O6	-6.98	124.41	128.60
34	AA	2956	U	O4'-C1'-N1	6.97	113.78	108.20
76	Ag	25	ARG	NE-CZ-NH1	6.97	123.79	120.30
34	AA	1502	G	O4'-C1'-N9	6.97	113.78	108.20
34	AA	589	C	O4'-C1'-N1	6.97	113.78	108.20
1	A	1231	G	N1-C6-O6	6.97	124.08	119.90
34	AA	1799	A	O4'-C1'-N9	6.97	113.77	108.20
1	A	1267	C	O4'-C1'-N1	6.96	113.77	108.20
34	AA	3003	C	O4'-C1'-N1	6.96	113.77	108.20
34	AA	75	U	O4'-C1'-N1	6.96	113.77	108.20
1	A	632	C	O4'-C1'-N1	6.96	113.77	108.20
57	AK	133	ARG	NE-CZ-NH1	6.96	123.78	120.30
34	AA	686	U	O4'-C1'-N1	6.95	113.76	108.20
59	AS	27	ARG	NE-CZ-NH1	6.95	123.78	120.30
69	AD	242	ARG	NE-CZ-NH2	6.95	123.78	120.30
34	AA	3476	A	P-O3'-C3'	6.95	128.03	119.70
55	AJ	79	ARG	NE-CZ-NH1	6.94	123.77	120.30
34	AA	1506	C	O4'-C1'-N1	6.94	113.75	108.20
34	AA	76	G	C5-C6-O6	-6.93	124.44	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	2590	U	C2-N1-C1'	6.93	126.02	117.70
8	M	115	ARG	NE-CZ-NH1	6.93	123.77	120.30
34	AA	1139	C	O4'-C1'-N1	6.93	113.74	108.20
75	AV	6	ARG	NE-CZ-NH1	6.93	123.77	120.30
34	AA	937	C	O4'-C1'-N1	6.93	113.74	108.20
1	A	1787	U	C2-N1-C1'	6.92	126.01	117.70
34	AA	3267	C	O4'-C1'-N1	6.92	113.74	108.20
70	AE	241	ARG	NE-CZ-NH2	6.92	123.76	120.30
34	AA	233	C	O4'-C1'-N1	6.92	113.74	108.20
34	AA	421	C	O4'-C1'-N1	6.92	113.74	108.20
1	A	911	U	O4'-C1'-N1	6.92	113.74	108.20
34	AA	930	C	O4'-C1'-N1	6.92	113.74	108.20
34	AA	1618	C	O4'-C1'-N1	6.92	113.74	108.20
34	AA	142	C	O4'-C1'-N1	6.92	113.73	108.20
34	AA	3019	A	P-O5'-C5'	6.92	131.96	120.90
1	A	1835	U	O4'-C1'-N1	6.91	113.73	108.20
34	AA	1798	A	O4'-C1'-N9	6.91	113.73	108.20
59	AS	145	ARG	NE-CZ-NH1	-6.91	116.85	120.30
1	A	949	C	O4'-C1'-N1	6.91	113.72	108.20
1	A	1731	C	O4'-C1'-N1	6.91	113.72	108.20
34	AA	365	C	O4'-C1'-N1	6.90	113.72	108.20
34	AA	876	C	O4'-C1'-N1	6.90	113.72	108.20
36	AB	36	C	O4'-C1'-N1	6.90	113.72	108.20
34	AA	1738	A	O4'-C1'-N9	6.90	113.72	108.20
34	AA	2500	A	P-O3'-C3'	6.90	127.98	119.70
1	A	1645	C	C2-N1-C1'	6.90	126.39	118.80
34	AA	1847	C	O4'-C1'-N1	6.90	113.72	108.20
1	A	1257	C	O4'-C1'-N1	6.90	113.72	108.20
1	A	2027	C	O4'-C1'-N1	6.90	113.72	108.20
71	AF	140	ARG	NE-CZ-NH2	-6.90	116.85	120.30
1	A	1441	C	O4'-C1'-N1	6.89	113.72	108.20
35	AC	127	C	O4'-C1'-N1	6.89	113.72	108.20
45	A9	39	ARG	NE-CZ-NH2	-6.89	116.85	120.30
36	AB	29	C	O4'-C1'-N1	6.89	113.71	108.20
34	AA	996	C	O4'-C1'-N1	6.89	113.71	108.20
34	AA	1283	C	O4'-C1'-N1	6.89	113.71	108.20
34	AA	3025	U	O4'-C1'-N1	6.89	113.71	108.20
34	AA	3501	C	O4'-C1'-N1	6.89	113.71	108.20
34	AA	3191	C	O4'-C1'-N1	6.89	113.71	108.20
16	3	5	ARG	NE-CZ-NH1	6.88	123.74	120.30
34	AA	803	A	P-O3'-C3'	6.88	127.96	119.70
22	H	27	PHE	CB-CG-CD1	6.88	125.62	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	1573	C	C2-N1-C1'	6.88	126.37	118.80
36	AB	46	C	O4'-C1'-N1	6.88	113.71	108.20
69	AD	247	ARG	NE-CZ-NH1	6.88	123.74	120.30
1	A	1364	G	C5-C6-O6	-6.87	124.47	128.60
35	AC	104	C	O4'-C1'-N1	6.87	113.70	108.20
34	AA	367	U	O4'-C1'-N1	6.87	113.70	108.20
34	AA	2809	A	C5-C6-N6	-6.87	118.20	123.70
34	AA	1957	U	O4'-C1'-N1	6.87	113.69	108.20
64	AY	95	ARG	NE-CZ-NH1	6.87	123.73	120.30
1	A	1198	U	C1'-O4'-C4'	-6.87	104.41	109.90
34	AA	1305	U	O4'-C1'-N1	6.87	113.69	108.20
34	AA	2738	U	P-O3'-C3'	6.87	127.94	119.70
69	AD	190	ARG	NE-CZ-NH1	6.87	123.73	120.30
2	7	71	C	C2-N1-C1'	6.86	126.35	118.80
34	AA	272	U	O4'-C1'-N1	6.86	113.69	108.20
34	AA	2682	C	O4'-C1'-N1	6.86	113.69	108.20
62	AR	15	ARG	NE-CZ-NH1	6.86	123.73	120.30
34	AA	2195	G	O4'-C1'-N9	6.86	113.69	108.20
1	A	420	C	O4'-C1'-N1	6.86	113.69	108.20
34	AA	3411	C	O4'-C1'-N1	6.86	113.69	108.20
70	AE	156	ARG	NE-CZ-NH1	6.86	123.73	120.30
1	A	1076	C	O4'-C1'-N1	6.86	113.69	108.20
34	AA	595	U	O4'-C1'-N1	6.86	113.68	108.20
61	AQ	4	ARG	NE-CZ-NH1	6.86	123.73	120.30
62	AR	278	ARG	NE-CZ-NH1	6.86	123.73	120.30
1	A	1651	C	O4'-C1'-N1	6.85	113.68	108.20
1	A	578	G	O4'-C1'-N9	6.85	113.68	108.20
34	AA	1166	C	O4'-C1'-N1	6.85	113.68	108.20
51	AP	38	ARG	NE-CZ-NH2	6.85	123.73	120.30
1	A	45	U	C1'-O4'-C4'	-6.85	104.42	109.90
1	A	1051	U	O4'-C1'-N1	6.85	113.68	108.20
34	AA	101	C	C6-N1-C1'	-6.85	112.58	120.80
1	A	1669	C	O4'-C1'-N1	6.85	113.68	108.20
34	AA	3526	U	C1'-O4'-C4'	-6.85	104.42	109.90
34	AA	2450	G	C5-C6-O6	-6.84	124.49	128.60
50	Af	46	ARG	NE-CZ-NH1	-6.84	116.88	120.30
34	AA	3632	U	O4'-C1'-N1	6.84	113.67	108.20
26	P	141	ARG	NE-CZ-NH2	6.84	123.72	120.30
35	AC	120	C	O4'-C1'-N1	6.84	113.67	108.20
1	A	385	U	O4'-C1'-N1	6.84	113.67	108.20
34	AA	3144	C	O4'-C1'-N1	6.84	113.67	108.20
1	A	1106	C	O4'-C1'-N1	6.84	113.67	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	F	252	ARG	NE-CZ-NH1	6.84	123.72	120.30
1	A	119	C	O4'-C1'-N1	6.83	113.67	108.20
34	AA	92	G	O4'-C1'-N9	6.83	113.67	108.20
34	AA	1246	C	O4'-C1'-N1	6.83	113.67	108.20
1	A	1201	G	O4'-C1'-N9	6.83	113.67	108.20
34	AA	954	G	O4'-C1'-N9	6.83	113.67	108.20
11	O	23	TYR	CB-CG-CD2	6.83	125.10	121.00
2	7	34	C	O4'-C1'-N1	6.82	113.66	108.20
34	AA	544	C	C6-N1-C1'	-6.82	112.61	120.80
44	A8	13	ARG	NE-CZ-NH1	6.82	123.71	120.30
60	AO	21	ARG	NE-CZ-NH1	-6.82	116.89	120.30
36	AB	57	C	O4'-C1'-N1	6.82	113.66	108.20
1	A	833	A	O4'-C1'-N9	6.82	113.66	108.20
7	K	22	ARG	NE-CZ-NH1	6.82	123.71	120.30
58	AM	122	ARG	NE-CZ-NH1	6.82	123.71	120.30
34	AA	3582	G	O4'-C1'-N9	6.82	113.65	108.20
34	AA	2586	C	O4'-C1'-N1	6.82	113.65	108.20
1	A	1430	G	P-O3'-C3'	6.81	127.88	119.70
1	A	388	C	O4'-C1'-N1	6.81	113.65	108.20
1	A	475	C	O4'-C1'-N1	6.81	113.65	108.20
34	AA	234	C	O4'-C1'-N1	6.81	113.65	108.20
34	AA	2146	A	O4'-C1'-N9	6.81	113.65	108.20
72	AG	133	ARG	NE-CZ-NH1	6.81	123.71	120.30
34	AA	2671	C	O4'-C1'-N1	6.81	113.64	108.20
1	A	1220	C	O4'-C1'-N1	6.80	113.64	108.20
34	AA	3619	U	O4'-C1'-N1	6.80	113.64	108.20
36	AB	26	C	O4'-C1'-N1	6.80	113.64	108.20
34	AA	1608	C	O4'-C1'-N1	6.80	113.64	108.20
34	AA	2696	G	O4'-C1'-N9	6.80	113.64	108.20
1	A	424	G	O4'-C1'-N9	6.80	113.64	108.20
51	AP	176	ARG	NE-CZ-NH1	6.80	123.70	120.30
1	A	541	C	O4'-C1'-N1	6.80	113.64	108.20
36	AB	105	C	O4'-C1'-N1	6.80	113.64	108.20
57	AK	73	ARG	NE-CZ-NH1	6.80	123.70	120.30
34	AA	337	A	P-O3'-C3'	6.80	127.86	119.70
34	AA	1299	G	O4'-C1'-N9	6.79	113.64	108.20
65	AT	8	ARG	NE-CZ-NH2	-6.79	116.90	120.30
1	A	1702	C	O4'-C1'-N1	6.79	113.64	108.20
27	Q	23	ARG	NE-CZ-NH1	6.79	123.70	120.30
34	AA	944	U	O4'-C1'-N1	6.79	113.64	108.20
34	AA	181	C	O4'-C1'-N1	6.79	113.63	108.20
34	AA	1197	U	P-O3'-C3'	6.79	127.85	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	2955	C	O4'-C1'-N1	6.79	113.63	108.20
34	AA	733	C	O4'-C1'-N1	6.79	113.63	108.20
44	A8	125	ARG	NE-CZ-NH1	6.79	123.69	120.30
34	AA	2635	C	O4'-C1'-N1	6.79	113.63	108.20
1	A	184	C	O4'-C1'-N1	6.78	113.63	108.20
34	AA	3574	G	O4'-C1'-N9	6.78	113.63	108.20
34	AA	1415	A	O4'-C1'-N9	6.78	113.62	108.20
65	AT	172	ARG	NE-CZ-NH1	6.78	123.69	120.30
1	A	268	C	O4'-C1'-N1	6.78	113.62	108.20
1	A	439	C	O4'-C1'-N1	6.78	113.62	108.20
34	AA	409	A	O4'-C1'-N9	6.78	113.62	108.20
46	Aa	76	TYR	CB-CG-CD1	6.78	125.07	121.00
16	3	82	ARG	NE-CZ-NH2	-6.77	116.91	120.30
19	6	37	ARG	NE-CZ-NH1	6.77	123.69	120.30
34	AA	1303	C	O4'-C1'-N1	6.77	113.62	108.20
36	AB	44	C	O4'-C1'-N1	6.77	113.62	108.20
34	AA	3772	C	O4'-C1'-N1	6.77	113.62	108.20
34	AA	3136	C	O4'-C1'-N1	6.77	113.62	108.20
1	A	932	U	O4'-C1'-N1	6.77	113.61	108.20
76	Ag	26	ARG	NE-CZ-NH1	6.77	123.68	120.30
1	A	1649	C	O4'-C1'-N1	6.76	113.61	108.20
34	AA	1661	U	O4'-C1'-N1	6.76	113.61	108.20
1	A	748	C	O4'-C1'-N1	6.76	113.61	108.20
1	A	827	C	O4'-C1'-N1	6.76	113.61	108.20
62	AR	107	ARG	NE-CZ-NH2	-6.76	116.92	120.30
34	AA	277	U	O4'-C1'-N1	6.76	113.61	108.20
1	A	311	C	O4'-C1'-N1	6.76	113.61	108.20
1	A	354	C	O4'-C1'-N1	6.75	113.60	108.20
34	AA	2485	C	O4'-C1'-N1	6.75	113.60	108.20
34	AA	3220	U	O4'-C1'-N1	6.75	113.60	108.20
63	AW	34	ARG	NE-CZ-NH2	-6.75	116.92	120.30
34	AA	3312	U	O4'-C1'-N1	6.75	113.60	108.20
34	AA	27	U	O4'-C1'-N1	6.75	113.60	108.20
35	AC	33	C	O4'-C1'-N1	6.75	113.60	108.20
1	A	1707	C	O4'-C1'-N1	6.75	113.60	108.20
34	AA	216	C	O4'-C1'-N1	6.75	113.60	108.20
34	AA	3361	U	P-O3'-C3'	6.75	127.80	119.70
34	AA	3546	C	O4'-C1'-N1	6.75	113.60	108.20
34	AA	1287	A	O4'-C1'-N9	6.74	113.59	108.20
34	AA	1726	C	O4'-C1'-N1	6.74	113.59	108.20
34	AA	2571	C	O4'-C1'-N1	6.74	113.60	108.20
34	AA	2655	C	O4'-C1'-N1	6.74	113.59	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	400	C	O4'-C1'-N1	6.74	113.59	108.20
1	A	989	C	O4'-C1'-N1	6.74	113.59	108.20
34	AA	3287	C	C6-N1-C2	-6.74	117.61	120.30
21	F	54	TYR	CB-CG-CD2	-6.74	116.96	121.00
34	AA	2479	U	O4'-C1'-N1	6.74	113.59	108.20
1	A	537	C	O4'-C1'-N1	6.73	113.59	108.20
34	AA	3342	C	O4'-C1'-N1	6.73	113.59	108.20
72	AG	137	ARG	NE-CZ-NH2	6.73	123.67	120.30
1	A	18	C	O4'-C1'-N1	6.73	113.58	108.20
34	AA	2959	G	C4-N9-C1'	6.73	135.25	126.50
42	A7	33	TYR	CB-CG-CD1	6.73	125.04	121.00
1	A	1090	C	O4'-C1'-N1	6.73	113.58	108.20
1	A	1609	C	O4'-C1'-N1	6.73	113.58	108.20
2	7	22	G	O4'-C1'-N9	6.73	113.58	108.20
34	AA	3469	C	O4'-C1'-N1	6.73	113.58	108.20
34	AA	1012	U	O4'-C1'-N1	6.73	113.58	108.20
34	AA	2615	C	O4'-C1'-N1	6.72	113.58	108.20
34	AA	226	G	O4'-C1'-N9	6.72	113.58	108.20
1	A	178	A	O4'-C1'-N9	6.72	113.58	108.20
34	AA	1256	U	O4'-C1'-N1	6.72	113.58	108.20
34	AA	3640	C	O4'-C1'-N1	6.72	113.58	108.20
34	AA	3737	G	C5-C6-O6	-6.72	124.57	128.60
1	A	1791	C	O4'-C1'-N1	6.72	113.57	108.20
34	AA	1068	C	O4'-C1'-N1	6.72	113.57	108.20
1	A	161	U	C2-N1-C1'	6.71	125.76	117.70
1	A	1215	G	O4'-C1'-N9	6.71	113.57	108.20
34	AA	1290	C	O4'-C1'-N1	6.71	113.57	108.20
61	AQ	173	PHE	CB-CG-CD1	6.71	125.50	120.80
2	7	67	C	O4'-C1'-N1	6.71	113.57	108.20
34	AA	1690	A	N1-C6-N6	-6.71	114.57	118.60
34	AA	3510	C	O4'-C1'-N1	6.71	113.57	108.20
1	A	1287	U	O4'-C1'-N1	6.71	113.57	108.20
34	AA	349	G	C5-C6-O6	-6.71	124.58	128.60
68	A5	173	ARG	NE-CZ-NH2	6.71	123.66	120.30
34	AA	2550	C	C2-N1-C1'	6.71	126.17	118.80
1	A	1749	C	O4'-C1'-N1	6.70	113.56	108.20
34	AA	3289	G	O4'-C1'-N9	6.70	113.56	108.20
34	AA	3442	C	O4'-C1'-N1	6.70	113.56	108.20
34	AA	126	C	O4'-C1'-N1	6.70	113.56	108.20
34	AA	2708	C	O4'-C1'-N1	6.70	113.56	108.20
71	AF	110	ARG	NE-CZ-NH1	6.70	123.65	120.30
24	L	92	ARG	NE-CZ-NH1	6.70	123.65	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	979	G	O4'-C1'-N9	6.70	113.56	108.20
36	AB	117	C	O4'-C1'-N1	6.70	113.56	108.20
6	I	51	ARG	NE-CZ-NH2	-6.69	116.95	120.30
34	AA	438	U	O4'-C1'-N1	6.69	113.56	108.20
15	2	68	TYR	CB-CG-CD2	-6.69	116.98	121.00
34	AA	2508	C	O4'-C1'-N1	6.69	113.55	108.20
35	AC	10	C	O4'-C1'-N1	6.69	113.55	108.20
34	AA	2826	C	O4'-C1'-N1	6.69	113.55	108.20
34	AA	3157	C	O4'-C1'-N1	6.69	113.55	108.20
34	AA	3244	C	O4'-C1'-N1	6.69	113.55	108.20
2	7	24	U	O4'-C1'-N1	6.69	113.55	108.20
34	AA	124	U	O4'-C1'-N1	6.69	113.55	108.20
34	AA	2591	U	O4'-C1'-N1	6.69	113.55	108.20
34	AA	1207	U	O4'-C1'-N1	6.69	113.55	108.20
34	AA	1325	C	O4'-C1'-N1	6.68	113.55	108.20
34	AA	1881	C	O4'-C1'-N1	6.68	113.55	108.20
58	AM	50	ARG	NE-CZ-NH1	6.68	123.64	120.30
1	A	855	C	O4'-C1'-N1	6.67	113.54	108.20
34	AA	737	G	C5-C6-O6	-6.67	124.59	128.60
34	AA	3756	C	O4'-C1'-N1	6.67	113.54	108.20
35	AC	126	C	O4'-C1'-N1	6.67	113.54	108.20
1	A	38	C	O4'-C1'-N1	6.67	113.54	108.20
1	A	200	U	O4'-C1'-N1	6.67	113.54	108.20
1	A	919	U	O4'-C1'-N1	6.67	113.54	108.20
34	AA	1030	C	O4'-C1'-N1	6.67	113.54	108.20
34	AA	1538	U	O4'-C1'-N1	6.67	113.54	108.20
34	AA	54	C	O4'-C1'-N1	6.67	113.53	108.20
70	AE	280	TYR	CB-CG-CD1	6.67	125.00	121.00
34	AA	1583	G	O4'-C1'-N9	6.67	113.53	108.20
1	A	909	U	O4'-C1'-N1	6.66	113.53	108.20
1	A	74	U	O4'-C1'-N1	6.66	113.53	108.20
34	AA	1461	C	O4'-C1'-N1	6.66	113.53	108.20
23	J	74	ARG	NE-CZ-NH1	6.66	123.63	120.30
34	AA	501	U	O4'-C1'-N1	6.66	113.53	108.20
35	AC	146	C	O4'-C1'-N1	6.66	113.53	108.20
56	Ac	24	ARG	NE-CZ-NH2	6.66	123.63	120.30
74	AH	36	ARG	NE-CZ-NH1	6.66	123.63	120.30
1	A	2006	U	O4'-C1'-N1	6.66	113.53	108.20
68	A5	79	ARG	NE-CZ-NH1	6.66	123.63	120.30
1	A	1818	A	P-O3'-C3'	6.66	127.69	119.70
36	AB	27	A	C5'-C4'-C3'	6.66	126.65	116.00
34	AA	3765	C	O4'-C1'-N1	6.65	113.52	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	920	A	O4'-C1'-N9	6.65	113.52	108.20
67	A3	105	ARG	NE-CZ-NH2	6.65	123.63	120.30
34	AA	992	C	O4'-C1'-N1	6.65	113.52	108.20
1	A	414	C	O4'-C1'-N1	6.65	113.52	108.20
34	AA	764	G	P-O3'-C3'	6.65	127.67	119.70
34	AA	3148	U	O4'-C1'-N1	6.65	113.52	108.20
34	AA	284	C	O4'-C1'-N1	6.64	113.52	108.20
76	Ag	23	ARG	NE-CZ-NH1	6.64	123.62	120.30
34	AA	799	A	P-O3'-C3'	6.64	127.67	119.70
34	AA	1539	U	C1'-O4'-C4'	-6.64	104.59	109.90
34	AA	3279	U	O4'-C1'-N1	6.64	113.51	108.20
1	A	1263	C	O4'-C1'-N1	6.64	113.51	108.20
27	Q	13	ARG	NE-CZ-NH1	-6.64	116.98	120.30
1	A	808	U	O4'-C1'-N1	6.64	113.51	108.20
1	A	1382	G	P-O5'-C5'	6.63	131.51	120.90
34	AA	3713	C	O4'-C1'-N1	6.63	113.50	108.20
67	A3	69	ARG	NE-CZ-NH1	6.63	123.62	120.30
1	A	449	C	O4'-C1'-N1	6.63	113.50	108.20
34	AA	2668	G	O4'-C1'-N9	6.63	113.50	108.20
1	A	1262	C	O4'-C1'-N1	6.63	113.50	108.20
1	A	1635	C	C6-N1-C1'	-6.63	112.85	120.80
34	AA	385	G	O4'-C1'-N9	6.63	113.50	108.20
34	AA	3433	C	O4'-C1'-N1	6.63	113.50	108.20
49	Ae	21	ARG	NE-CZ-NH1	6.63	123.61	120.30
34	AA	706	U	O4'-C1'-N1	6.62	113.50	108.20
34	AA	94	G	O4'-C1'-N9	6.62	113.50	108.20
1	A	493	G	O4'-C1'-N9	6.62	113.50	108.20
1	A	1103	C	O4'-C1'-N1	6.62	113.50	108.20
2	7	61	C	O4'-C1'-N1	6.62	113.50	108.20
34	AA	2698	C	O4'-C1'-N1	6.62	113.49	108.20
34	AA	3405	U	O4'-C1'-N1	6.62	113.49	108.20
34	AA	2107	C	P-O3'-C3'	6.62	127.64	119.70
34	AA	125	C	O4'-C1'-N1	6.61	113.49	108.20
46	Aa	67	ARG	NE-CZ-NH1	6.61	123.61	120.30
49	Ae	41	ARG	NE-CZ-NH1	6.61	123.61	120.30
1	A	1249	C	O4'-C1'-N1	6.61	113.49	108.20
1	A	257	C	O4'-C1'-N1	6.61	113.48	108.20
34	AA	117	C	O4'-C1'-N1	6.61	113.48	108.20
34	AA	1809	U	O4'-C1'-N1	6.60	113.48	108.20
1	A	1166	C	O4'-C1'-N1	6.60	113.48	108.20
35	AC	105	U	O4'-C1'-N1	6.60	113.48	108.20
1	A	2084	G	O4'-C1'-N9	6.60	113.48	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	AC	149	C	O4'-C1'-N1	6.60	113.48	108.20
50	Af	46	ARG	NE-CZ-NH2	6.60	123.60	120.30
34	AA	202	C	O4'-C1'-N1	6.59	113.48	108.20
34	AA	3621	C	O4'-C1'-N1	6.59	113.47	108.20
1	A	1906	U	O4'-C1'-N1	6.59	113.47	108.20
45	A9	39	ARG	NE-CZ-NH1	6.59	123.60	120.30
34	AA	350	A	N1-C6-N6	-6.59	114.65	118.60
34	AA	2089	C	O4'-C1'-N1	6.59	113.47	108.20
34	AA	2219	A	C2'-C3'-O3'	6.59	124.24	113.70
70	AE	234	ARG	NE-CZ-NH2	6.59	123.59	120.30
34	AA	1018	C	O4'-C1'-N1	6.59	113.47	108.20
34	AA	2523	U	P-O3'-C3'	6.59	127.61	119.70
16	3	95	ARG	NE-CZ-NH1	6.59	123.59	120.30
34	AA	1866	C	O4'-C1'-N1	6.59	113.47	108.20
35	AC	36	C	O4'-C1'-N1	6.58	113.47	108.20
1	A	315	C	O4'-C1'-N1	6.58	113.47	108.20
34	AA	210	C	O4'-C1'-N1	6.58	113.47	108.20
36	AB	93	G	O4'-C1'-N9	6.58	113.47	108.20
1	A	2018	C	O4'-C1'-N1	6.58	113.46	108.20
1	A	49	C	O4'-C1'-N1	6.58	113.46	108.20
1	A	1946	C	O4'-C1'-N1	6.58	113.46	108.20
1	A	2019	C	O4'-C1'-N1	6.58	113.46	108.20
51	AP	163	ARG	NE-CZ-NH1	6.58	123.59	120.30
27	Q	44	ARG	NE-CZ-NH1	6.57	123.59	120.30
34	AA	3343	C	O4'-C1'-N1	6.57	113.46	108.20
34	AA	3204	C	O4'-C1'-N1	6.57	113.46	108.20
34	AA	702	U	C6-N1-C1'	-6.57	112.00	121.20
34	AA	1752	C	O4'-C1'-N1	6.57	113.46	108.20
34	AA	2601	C	O4'-C1'-N1	6.57	113.46	108.20
34	AA	3472	A	O4'-C1'-N9	6.57	113.46	108.20
1	A	428	G	O4'-C1'-N9	6.57	113.45	108.20
77	AX	121	ARG	NE-CZ-NH2	6.57	123.58	120.30
34	AA	769	U	C2-N1-C1'	6.57	125.58	117.70
35	AC	138	U	P-O3'-C3'	6.57	127.58	119.70
34	AA	1845	C	O4'-C1'-N1	6.56	113.45	108.20
34	AA	3260	G	O4'-C1'-N9	6.56	113.45	108.20
34	AA	3429	C	O4'-C1'-N1	6.56	113.45	108.20
34	AA	3654	C	O4'-C1'-N1	6.56	113.45	108.20
34	AA	3775	G	O4'-C1'-N9	6.56	113.45	108.20
34	AA	2015	C	P-O3'-C3'	6.56	127.57	119.70
36	AB	35	C	O4'-C1'-N1	6.56	113.45	108.20
1	A	630	C	O4'-C1'-N1	6.56	113.45	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	1089	U	O4'-C1'-N1	6.56	113.45	108.20
34	AA	3070	C	O4'-C1'-N1	6.56	113.45	108.20
48	Ad	57	ARG	NE-CZ-NH1	-6.56	117.02	120.30
1	A	1404	U	O4'-C1'-N1	6.56	113.45	108.20
1	A	1716	C	O4'-C1'-N1	6.56	113.45	108.20
34	AA	3730	C	O4'-C1'-N1	6.56	113.45	108.20
1	A	907	C	O4'-C1'-N1	6.55	113.44	108.20
5	G	152	ARG	NE-CZ-NH2	6.55	123.58	120.30
65	AT	107	ARG	NE-CZ-NH1	6.55	123.58	120.30
34	AA	1974	U	O4'-C1'-N1	6.55	113.44	108.20
1	A	861	C	O4'-C1'-N1	6.55	113.44	108.20
34	AA	2528	C	O4'-C1'-N1	6.55	113.44	108.20
46	Aa	83	ARG	NE-CZ-NH1	6.55	123.58	120.30
34	AA	648	U	O4'-C1'-N1	6.55	113.44	108.20
34	AA	2444	C	O4'-C1'-N1	6.55	113.44	108.20
24	L	217	ARG	NE-CZ-NH1	-6.54	117.03	120.30
34	AA	1204	A	P-O3'-C3'	6.54	127.55	119.70
34	AA	1601	A	O4'-C1'-N9	6.54	113.44	108.20
2	7	39	C	O4'-C1'-N1	6.54	113.44	108.20
34	AA	1265	C	O4'-C1'-N1	6.54	113.43	108.20
20	B	165	ARG	NE-CZ-NH1	6.54	123.57	120.30
34	AA	3461	C	O4'-C1'-N1	6.54	113.43	108.20
1	A	1030	C	O4'-C1'-N1	6.54	113.43	108.20
34	AA	1160	C	O4'-C1'-N1	6.54	113.43	108.20
70	AE	30	ARG	NE-CZ-NH1	6.54	123.57	120.30
1	A	1795	G	O4'-C1'-N9	6.54	113.43	108.20
44	A8	105	ARG	NE-CZ-NH1	6.54	123.57	120.30
60	AO	21	ARG	NE-CZ-NH2	6.53	123.57	120.30
34	AA	2938	C	O4'-C1'-N1	6.53	113.42	108.20
34	AA	3168	C	O4'-C1'-N1	6.53	113.42	108.20
1	A	1058	G	C5-C6-O6	-6.53	124.69	128.60
34	AA	274	G	P-O3'-C3'	6.53	127.53	119.70
34	AA	2647	C	O4'-C1'-N1	6.52	113.42	108.20
1	A	1281	C	O4'-C1'-N1	6.52	113.42	108.20
34	AA	1627	C	O4'-C1'-N1	6.52	113.42	108.20
59	AS	103	ARG	NE-CZ-NH1	6.52	123.56	120.30
34	AA	987	U	O4'-C1'-N1	6.52	113.42	108.20
1	A	1873	A	N1-C6-N6	6.51	122.51	118.60
34	AA	2191	C	O4'-C1'-N1	6.51	113.41	108.20
34	AA	3307	C	O4'-C1'-N1	6.51	113.41	108.20
34	AA	3457	A	O4'-C1'-N9	6.51	113.41	108.20
1	A	1934	C	O4'-C1'-N1	6.51	113.41	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	590	C	O4'-C1'-N1	6.51	113.41	108.20
1	A	150	C	O4'-C1'-N1	6.51	113.41	108.20
36	AB	78	C	O4'-C1'-N1	6.51	113.41	108.20
34	AA	1191	G	C5-C6-O6	-6.50	124.70	128.60
68	A5	255	ARG	NE-CZ-NH1	6.50	123.55	120.30
34	AA	138	C	O4'-C1'-N1	6.50	113.40	108.20
34	AA	2604	G	C5-C6-O6	-6.50	124.70	128.60
34	AA	3776	U	O4'-C1'-N1	6.50	113.40	108.20
66	AZ	12	ARG	NE-CZ-NH1	6.50	123.55	120.30
71	AF	327	ARG	NE-CZ-NH1	6.50	123.55	120.30
35	AC	39	C	O4'-C1'-N1	6.50	113.40	108.20
1	A	996	C	O4'-C1'-N1	6.50	113.40	108.20
34	AA	1750	U	O4'-C1'-N1	6.50	113.40	108.20
51	AP	71	ARG	NE-CZ-NH1	6.50	123.55	120.30
54	AI	71	ARG	NE-CZ-NH2	-6.50	117.05	120.30
34	AA	3094	C	O4'-C1'-N1	6.50	113.40	108.20
1	A	1943	C	O4'-C1'-N1	6.49	113.39	108.20
1	A	977	U	O4'-C1'-N1	6.49	113.39	108.20
34	AA	856	C	C6-N1-C1'	-6.49	113.01	120.80
34	AA	2999	C	O4'-C1'-N1	6.49	113.39	108.20
1	A	1687	C	O4'-C1'-N1	6.49	113.39	108.20
34	AA	136	U	C6-N1-C1'	-6.49	112.12	121.20
34	AA	2699	C	O4'-C1'-N1	6.49	113.39	108.20
1	A	641	G	O4'-C1'-N9	6.48	113.39	108.20
1	A	174	C	O4'-C1'-N1	6.48	113.39	108.20
34	AA	737	G	N1-C6-O6	6.48	123.79	119.90
34	AA	3226	C	O4'-C1'-N1	6.48	113.38	108.20
34	AA	1284	C	O4'-C1'-N1	6.48	113.38	108.20
58	AM	122	ARG	NE-CZ-NH2	-6.48	117.06	120.30
1	A	1363	U	O4'-C1'-N1	6.48	113.38	108.20
34	AA	349	G	N1-C6-O6	6.47	123.78	119.90
34	AA	1676	C	O4'-C1'-N1	6.47	113.38	108.20
34	AA	3344	C	O4'-C1'-N1	6.47	113.38	108.20
35	AC	68	C	O4'-C1'-N1	6.47	113.38	108.20
34	AA	31	C	O4'-C1'-N1	6.47	113.38	108.20
34	AA	2603	U	O4'-C1'-N1	6.47	113.38	108.20
34	AA	1646	C	O4'-C1'-N1	6.47	113.38	108.20
35	AC	152	C	O4'-C1'-N1	6.47	113.38	108.20
66	AZ	76	ARG	NE-CZ-NH1	6.47	123.53	120.30
1	A	103	U	O4'-C1'-N1	6.47	113.38	108.20
34	AA	3256	C	O4'-C1'-N1	6.47	113.37	108.20
1	A	1222	C	O4'-C1'-N1	6.47	113.37	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	2033	U	O4'-C1'-N1	6.47	113.37	108.20
34	AA	390	C	O4'-C1'-N1	6.47	113.37	108.20
34	AA	448	A	O4'-C1'-N9	6.47	113.37	108.20
34	AA	2918	C	O4'-C1'-N1	6.47	113.37	108.20
34	AA	3767	U	O4'-C1'-N1	6.47	113.37	108.20
35	AC	28	G	O4'-C1'-N9	6.47	113.37	108.20
34	AA	857	C	O4'-C1'-N1	6.46	113.37	108.20
34	AA	1174	C	O4'-C1'-N1	6.46	113.37	108.20
34	AA	1434	G	N1-C6-O6	6.46	123.78	119.90
35	AC	15	C	O4'-C1'-N1	6.46	113.37	108.20
34	AA	3362	A	O4'-C1'-N9	6.46	113.37	108.20
65	AT	61	ARG	NE-CZ-NH1	6.46	123.53	120.30
1	A	1055	G	P-O3'-C3'	6.46	127.45	119.70
1	A	1260	C	O4'-C1'-N1	6.46	113.37	108.20
34	AA	2430	U	O4'-C1'-N1	6.46	113.37	108.20
35	AC	32	C	O4'-C1'-N1	6.46	113.37	108.20
1	A	1463	C	O4'-C1'-N1	6.46	113.37	108.20
34	AA	3697	G	O4'-C1'-N9	6.46	113.37	108.20
1	A	746	U	O4'-C1'-N1	6.46	113.36	108.20
34	AA	1525	C	O4'-C1'-N1	6.46	113.37	108.20
34	AA	2727	U	C6-N1-C1'	-6.46	112.16	121.20
1	A	1006	C	O4'-C1'-N1	6.45	113.36	108.20
34	AA	1130	U	O4'-C1'-N1	6.45	113.36	108.20
60	AO	26	ARG	NE-CZ-NH1	6.45	123.53	120.30
34	AA	1088	C	O4'-C1'-N1	6.45	113.36	108.20
34	AA	830	U	C2-N1-C1'	6.45	125.44	117.70
34	AA	3705	C	O4'-C1'-N1	6.45	113.36	108.20
59	AS	27	ARG	NE-CZ-NH2	-6.45	117.08	120.30
69	AD	227	ARG	NE-CZ-NH2	6.45	123.52	120.30
1	A	576	C	O4'-C1'-N1	6.45	113.36	108.20
1	A	1950	C	O4'-C1'-N1	6.45	113.36	108.20
34	AA	721	U	O4'-C1'-N1	6.45	113.36	108.20
34	AA	1768	A	N1-C6-N6	6.45	122.47	118.60
34	AA	3089	C	O4'-C1'-N1	6.45	113.36	108.20
77	AX	101	ARG	NE-CZ-NH1	6.44	123.52	120.30
34	AA	282	U	O4'-C1'-N1	6.44	113.35	108.20
34	AA	583	U	O4'-C1'-N1	6.44	113.35	108.20
34	AA	2547	U	O4'-C1'-N1	6.44	113.35	108.20
34	AA	2550	C	P-O3'-C3'	6.44	127.43	119.70
2	7	13	C	P-O5'-C5'	6.43	131.19	120.90
34	AA	2505	C	O4'-C1'-N1	6.43	113.35	108.20
35	AC	148	C	O4'-C1'-N1	6.43	113.35	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	1834	C	O4'-C1'-N1	6.43	113.34	108.20
1	A	917	C	O4'-C1'-N1	6.43	113.34	108.20
34	AA	921	C	O4'-C1'-N1	6.43	113.34	108.20
1	A	838	U	O4'-C1'-N1	6.42	113.34	108.20
34	AA	1031	G	N1-C2-N2	-6.42	110.42	116.20
34	AA	1997	G	O4'-C1'-N9	6.42	113.34	108.20
34	AA	3631	U	O4'-C1'-N1	6.42	113.34	108.20
1	A	878	G	O4'-C1'-N9	6.42	113.34	108.20
1	A	1256	G	O4'-C1'-N9	6.42	113.34	108.20
34	AA	2125	A	C1'-O4'-C4'	-6.42	104.76	109.90
1	A	31	C	O4'-C1'-N1	6.42	113.34	108.20
1	A	1069	C	C2-N1-C1'	6.42	125.86	118.80
1	A	1086	U	O4'-C1'-N1	6.42	113.34	108.20
34	AA	2713	C	O4'-C1'-N1	6.42	113.33	108.20
47	Ab	26	ARG	NE-CZ-NH2	6.42	123.51	120.30
59	AS	90	ARG	NE-CZ-NH1	6.42	123.51	120.30
1	A	1935	G	N1-C6-O6	6.42	123.75	119.90
34	AA	3522	C	O4'-C1'-N1	6.42	113.33	108.20
1	A	36	C	O4'-C1'-N1	6.41	113.33	108.20
34	AA	381	A	P-O3'-C3'	6.41	127.39	119.70
34	AA	705	C	O4'-C1'-N1	6.41	113.33	108.20
34	AA	3208	C	O4'-C1'-N1	6.41	113.33	108.20
34	AA	3275	C	O4'-C1'-N1	6.41	113.33	108.20
1	A	1728	U	O4'-C1'-N1	6.41	113.33	108.20
34	AA	348	C	O4'-C1'-N1	6.41	113.33	108.20
34	AA	3536	C	O4'-C1'-N1	6.41	113.33	108.20
1	A	874	A	O4'-C1'-N9	6.41	113.33	108.20
1	A	1808	G	O4'-C1'-N9	6.41	113.33	108.20
21	F	108	ARG	NE-CZ-NH1	6.41	123.50	120.30
34	AA	2551	U	P-O3'-C3'	6.41	127.39	119.70
34	AA	3755	U	O4'-C1'-N1	6.40	113.32	108.20
59	AS	177	ARG	NE-CZ-NH2	6.40	123.50	120.30
34	AA	511	C	O4'-C1'-N1	6.40	113.32	108.20
34	AA	3095	C	O4'-C1'-N1	6.40	113.32	108.20
35	AC	118	C	O4'-C1'-N1	6.40	113.32	108.20
1	A	1031	C	O4'-C1'-N1	6.40	113.32	108.20
34	AA	404	U	P-O3'-C3'	6.40	127.38	119.70
34	AA	1794	U	O4'-C1'-N1	6.40	113.32	108.20
55	AJ	73	ARG	NE-CZ-NH1	6.40	123.50	120.30
34	AA	3192	U	O4'-C1'-N1	6.39	113.32	108.20
34	AA	3629	U	O4'-C1'-N1	6.39	113.32	108.20
63	AW	56	ARG	NE-CZ-NH2	-6.39	117.10	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	2553	U	O4'-C1'-N1	6.39	113.31	108.20
77	AX	102	TYR	CB-CG-CD2	-6.39	117.16	121.00
1	A	1857	U	C2-N1-C1'	6.39	125.36	117.70
15	2	68	TYR	CB-CG-CD1	6.39	124.83	121.00
1	A	1179	C	O4'-C1'-N1	6.39	113.31	108.20
34	AA	2401	C	O4'-C1'-N1	6.39	113.31	108.20
34	AA	3005	C	O4'-C1'-N1	6.39	113.31	108.20
33	C	35	ARG	NE-CZ-NH2	6.38	123.49	120.30
34	AA	798	U	P-O3'-C3'	-6.38	112.04	119.70
34	AA	904	G	P-O3'-C3'	6.38	127.36	119.70
34	AA	1020	C	O4'-C1'-N1	6.38	113.31	108.20
34	AA	3738	U	O4'-C1'-N1	6.38	113.31	108.20
60	AO	67	ARG	NE-CZ-NH1	6.38	123.49	120.30
34	AA	493	C	O4'-C1'-N1	6.38	113.31	108.20
34	AA	1123	U	O4'-C1'-N1	6.38	113.31	108.20
34	AA	1041	U	C2-N1-C1'	6.38	125.36	117.70
57	AK	159	ARG	NE-CZ-NH1	6.38	123.49	120.30
1	A	540	C	O4'-C1'-N1	6.38	113.30	108.20
34	AA	21	G	O4'-C1'-N9	6.38	113.30	108.20
34	AA	2599	C	O4'-C1'-N1	6.38	113.30	108.20
1	A	980	U	O4'-C1'-N1	6.38	113.30	108.20
34	AA	2689	G	O4'-C1'-N9	6.38	113.30	108.20
34	AA	3460	C	O4'-C1'-N1	6.38	113.30	108.20
51	AP	67	ARG	NE-CZ-NH1	-6.38	117.11	120.30
61	AQ	4	ARG	NE-CZ-NH2	-6.38	117.11	120.30
34	AA	1448	C	O4'-C1'-N1	6.37	113.30	108.20
48	Ad	44	ARG	NE-CZ-NH2	6.37	123.49	120.30
61	AQ	173	PHE	CB-CG-CD2	-6.37	116.34	120.80
1	A	1015	U	O4'-C1'-N1	6.37	113.30	108.20
1	A	1922	C	O4'-C1'-N1	6.37	113.30	108.20
34	AA	1444	A	O4'-C1'-N9	6.37	113.30	108.20
11	O	63	ARG	NE-CZ-NH2	-6.37	117.11	120.30
34	AA	1260	C	O4'-C1'-N1	6.37	113.30	108.20
56	Ac	74	ARG	NE-CZ-NH2	6.37	123.48	120.30
1	A	1409	U	C2-N1-C1'	6.37	125.34	117.70
13	Z	59	ARG	NE-CZ-NH1	6.37	123.48	120.30
34	AA	1049	C	O4'-C1'-N1	6.37	113.29	108.20
34	AA	419	A	O4'-C1'-N9	6.36	113.29	108.20
34	AA	668	U	O4'-C1'-N1	6.36	113.29	108.20
34	AA	2685	C	O4'-C1'-N1	6.36	113.29	108.20
34	AA	3400	C	O4'-C1'-N1	6.36	113.29	108.20
35	AC	124	U	O4'-C1'-N1	6.36	113.29	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
44	A8	36	ARG	NE-CZ-NH1	6.36	123.48	120.30
34	AA	971	U	O4'-C1'-N1	6.36	113.29	108.20
1	A	1310	C	O4'-C1'-N1	6.36	113.29	108.20
34	AA	685	U	C6-N1-C1'	-6.36	112.30	121.20
34	AA	1961	U	O4'-C1'-N1	6.36	113.29	108.20
1	A	458	A	O4'-C1'-N9	6.36	113.29	108.20
34	AA	907	C	O4'-C1'-N1	6.36	113.28	108.20
34	AA	3784	U	O4'-C1'-N1	6.36	113.28	108.20
34	AA	861	C	O4'-C1'-N1	6.35	113.28	108.20
34	AA	1172	C	O4'-C1'-N1	6.35	113.28	108.20
34	AA	2495	C	O4'-C1'-N1	6.35	113.28	108.20
34	AA	2687	G	O4'-C1'-N9	6.35	113.28	108.20
55	AJ	73	ARG	NE-CZ-NH2	-6.35	117.12	120.30
1	A	1628	A	O4'-C1'-N9	6.35	113.28	108.20
19	6	10	ARG	NE-CZ-NH1	6.35	123.47	120.30
34	AA	3528	A	O4'-C1'-N9	6.35	113.28	108.20
15	2	76	ARG	NE-CZ-NH1	6.35	123.47	120.30
34	AA	76	G	N1-C6-O6	6.35	123.71	119.90
34	AA	1480	G	C4-N9-C1'	6.35	134.75	126.50
35	AC	125	U	O4'-C1'-N1	6.35	113.28	108.20
1	A	145	A	O4'-C1'-N9	6.34	113.27	108.20
71	AF	78	ARG	NE-CZ-NH1	6.34	123.47	120.30
1	A	906	U	O4'-C1'-N1	6.34	113.27	108.20
34	AA	3023	C	O4'-C1'-N1	6.34	113.27	108.20
34	AA	3125	U	O4'-C1'-N1	6.34	113.27	108.20
1	A	1191	C	O4'-C1'-N1	6.34	113.27	108.20
1	A	1797	C	O4'-C1'-N1	6.34	113.27	108.20
34	AA	2542	G	O4'-C1'-N9	6.34	113.27	108.20
16	3	82	ARG	NE-CZ-NH1	6.34	123.47	120.30
34	AA	78	U	O4'-C1'-N1	6.34	113.27	108.20
34	AA	2916	C	O4'-C1'-N1	6.34	113.27	108.20
1	A	760	C	O4'-C1'-N1	6.33	113.27	108.20
1	A	1661	U	O4'-C1'-N1	6.33	113.27	108.20
36	AB	92	C	O4'-C1'-N1	6.33	113.27	108.20
34	AA	489	U	P-O3'-C3'	6.33	127.30	119.70
34	AA	893	U	C4'-C3'-C2'	-6.33	96.27	102.60
34	AA	3739	A	O4'-C1'-N9	6.33	113.27	108.20
34	AA	411	U	O4'-C1'-N1	6.33	113.26	108.20
1	A	759	C	P-O5'-C5'	6.33	131.03	120.90
34	AA	69	U	O4'-C1'-N1	6.33	113.26	108.20
1	A	1949	C	O4'-C1'-N1	6.33	113.26	108.20
34	AA	97	U	O4'-C1'-N1	6.33	113.26	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	411	C	O4'-C1'-N1	6.33	113.26	108.20
1	A	897	G	O4'-C1'-N9	6.33	113.26	108.20
1	A	1392	C	O4'-C1'-N1	6.33	113.26	108.20
34	AA	1836	U	O4'-C1'-N1	6.33	113.26	108.20
34	AA	3046	C	O4'-C1'-N1	6.33	113.26	108.20
34	AA	768	C	C2-N1-C1'	6.32	125.76	118.80
34	AA	3523	U	O4'-C1'-N1	6.32	113.26	108.20
1	A	1667	A	O4'-C1'-N9	6.32	113.26	108.20
34	AA	3058	C	O4'-C1'-N1	6.32	113.26	108.20
1	A	455	C	O4'-C1'-N1	6.32	113.25	108.20
1	A	633	U	O4'-C1'-N1	6.32	113.25	108.20
34	AA	2572	A	O4'-C1'-N9	6.32	113.25	108.20
34	AA	3113	U	O4'-C1'-N1	6.32	113.25	108.20
35	AC	139	A	O4'-C1'-N9	6.32	113.25	108.20
67	A3	80	TYR	CB-CG-CD2	-6.32	117.21	121.00
1	A	158	C	O4'-C1'-N1	6.32	113.25	108.20
34	AA	364	C	O4'-C1'-N1	6.32	113.25	108.20
34	AA	1996	C	O4'-C1'-N1	6.32	113.25	108.20
57	AK	31	ARG	NE-CZ-NH1	6.31	123.45	120.30
75	AV	98	ARG	NE-CZ-NH1	-6.31	117.14	120.30
1	A	2003	U	O4'-C1'-N1	6.31	113.25	108.20
2	7	40	C	O4'-C1'-N1	6.31	113.25	108.20
2	7	46	G	C5-C6-O6	-6.31	124.81	128.60
34	AA	858	C	O4'-C1'-N1	6.31	113.25	108.20
34	AA	2960	G	C4-N9-C1'	6.31	134.70	126.50
34	AA	1692	C	O4'-C1'-N1	6.31	113.25	108.20
34	AA	2652	C	O4'-C1'-N1	6.30	113.24	108.20
34	AA	2670	G	C5-C6-O6	-6.30	124.82	128.60
1	A	836	C	O4'-C1'-N1	6.30	113.24	108.20
34	AA	354	C	O4'-C1'-N1	6.30	113.24	108.20
34	AA	3021	C	O4'-C1'-N1	6.30	113.24	108.20
75	AV	6	ARG	NE-CZ-NH2	-6.30	117.15	120.30
1	A	45	U	O4'-C1'-N1	6.30	113.24	108.20
1	A	983	G	C5'-C4'-O4'	6.30	116.66	109.10
1	A	1291	C	P-O3'-C3'	-6.30	112.14	119.70
34	AA	684	G	O4'-C1'-N9	6.30	113.24	108.20
36	AB	34	C	O4'-C1'-N1	6.30	113.24	108.20
1	A	1295	A	O4'-C1'-N9	6.30	113.24	108.20
1	A	1408	C	O4'-C1'-N1	6.30	113.24	108.20
6	I	113	ARG	NE-CZ-NH1	6.30	123.45	120.30
34	AA	76	G	O4'-C1'-N9	6.30	113.24	108.20
1	A	291	A	O4'-C1'-N9	6.29	113.23	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	H	142	ARG	NE-CZ-NH1	6.29	123.45	120.30
35	AC	83	U	O4'-C1'-N1	6.29	113.23	108.20
51	AP	38	ARG	NE-CZ-NH1	-6.29	117.15	120.30
24	L	12	ARG	NE-CZ-NH1	-6.29	117.16	120.30
34	AA	1861	C	O4'-C1'-N1	6.29	113.23	108.20
1	A	90	U	O4'-C1'-N1	6.29	113.23	108.20
34	AA	3306	G	O4'-C1'-N9	6.29	113.23	108.20
65	AT	23	MET	CG-SD-CE	-6.29	90.14	100.20
1	A	583	G	O4'-C1'-N9	6.28	113.23	108.20
6	I	62	ARG	NE-CZ-NH2	6.28	123.44	120.30
37	AL	34	ARG	NE-CZ-NH2	6.28	123.44	120.30
67	A3	64	ARG	NE-CZ-NH2	-6.28	117.16	120.30
73	AU	21	ARG	NE-CZ-NH2	6.28	123.44	120.30
34	AA	3378	C	O4'-C1'-N1	6.28	113.23	108.20
71	AF	86	ARG	NE-CZ-NH2	6.28	123.44	120.30
1	A	1400	U	O4'-C1'-N1	6.28	113.22	108.20
34	AA	1095	U	O4'-C1'-N1	6.28	113.22	108.20
34	AA	3092	G	O4'-C1'-N9	6.28	113.22	108.20
61	AQ	88	ARG	NE-CZ-NH1	6.28	123.44	120.30
1	A	299	U	O4'-C1'-N1	6.28	113.22	108.20
34	AA	1887	G	O4'-C1'-N9	6.28	113.22	108.20
34	AA	2541	C	O4'-C1'-N1	6.28	113.22	108.20
34	AA	739	G	O4'-C1'-N9	6.27	113.22	108.20
34	AA	1910	C	O4'-C1'-N1	6.27	113.22	108.20
1	A	81	U	P-O3'-C3'	6.27	127.22	119.70
1	A	881	C	O4'-C1'-N1	6.27	113.22	108.20
34	AA	1037	C	O4'-C1'-N1	6.27	113.21	108.20
74	AH	167	ARG	NE-CZ-NH1	-6.27	117.17	120.30
1	A	2070	G	C5-C6-O6	-6.26	124.84	128.60
34	AA	28	C	O4'-C1'-N1	6.26	113.21	108.20
78	A0	57	ARG	NE-CZ-NH1	6.26	123.43	120.30
1	A	1425	C	O4'-C1'-N1	6.26	113.21	108.20
1	A	417	C	O4'-C1'-N1	6.26	113.21	108.20
1	A	2026	C	O4'-C1'-N1	6.26	113.21	108.20
1	A	2062	U	O4'-C1'-N1	6.26	113.21	108.20
34	AA	581	C	O4'-C1'-N1	6.26	113.21	108.20
34	AA	2667	C	O4'-C1'-N1	6.26	113.21	108.20
34	AA	3409	U	O4'-C1'-N1	6.26	113.21	108.20
1	A	1453	G	O4'-C1'-N9	6.26	113.20	108.20
34	AA	3286	C	O4'-C1'-N1	6.25	113.20	108.20
56	Ac	28	ARG	NE-CZ-NH2	-6.25	117.17	120.30
34	AA	1205	U	O4'-C1'-N1	6.25	113.20	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	3634	C	O4'-C1'-N1	6.25	113.20	108.20
34	AA	2099	C	O4'-C1'-N1	6.25	113.20	108.20
1	A	2	A	P-O3'-C3'	6.25	127.20	119.70
20	B	94	ARG	NE-CZ-NH1	6.25	123.42	120.30
34	AA	220	G	O4'-C1'-N9	6.25	113.20	108.20
34	AA	1200	C	O4'-C1'-N1	6.25	113.20	108.20
34	AA	1780	G	P-O5'-C5'	6.25	130.89	120.90
35	AC	37	A	O4'-C1'-N9	6.25	113.20	108.20
28	S	126	ARG	NE-CZ-NH1	6.25	123.42	120.30
34	AA	2439	C	O4'-C1'-N1	6.25	113.20	108.20
34	AA	1868	U	O4'-C1'-N1	6.24	113.19	108.20
35	AC	49	C	O4'-C1'-N1	6.24	113.19	108.20
1	A	1309	A	O4'-C1'-N9	6.24	113.19	108.20
34	AA	3751	A	P-O3'-C3'	6.24	127.19	119.70
34	AA	1540	G	P-O3'-C3'	6.24	127.19	119.70
30	U	114	ARG	NE-CZ-NH1	6.24	123.42	120.30
1	A	415	C	O4'-C1'-N1	6.24	113.19	108.20
3	D	147	ARG	NE-CZ-NH1	6.24	123.42	120.30
34	AA	1117	U	O4'-C1'-N1	6.24	113.19	108.20
1	A	1085	C	O4'-C1'-N1	6.23	113.19	108.20
34	AA	2590	U	C6-N1-C1'	-6.23	112.48	121.20
34	AA	172	C	O4'-C1'-N1	6.23	113.18	108.20
70	AE	270	PHE	CB-CG-CD1	6.23	125.16	120.80
34	AA	491	C	O4'-C1'-N1	6.23	113.18	108.20
34	AA	585	C	O4'-C1'-N1	6.23	113.18	108.20
34	AA	2465	G	O4'-C1'-N9	6.23	113.18	108.20
1	A	2056	C	O4'-C1'-N1	6.22	113.18	108.20
6	I	113	ARG	NE-CZ-NH2	-6.22	117.19	120.30
34	AA	2185	C	O4'-C1'-N1	6.22	113.18	108.20
1	A	1814	C	O4'-C1'-N1	6.22	113.18	108.20
34	AA	1625	G	O4'-C1'-N9	6.22	113.18	108.20
75	AV	16	PHE	CB-CG-CD1	6.22	125.16	120.80
1	A	1702	C	C2-N1-C1'	6.22	125.64	118.80
34	AA	2623	C	O4'-C1'-N1	6.22	113.17	108.20
34	AA	3169	C	O4'-C1'-N1	6.22	113.17	108.20
34	AA	334	U	O4'-C1'-N1	6.22	113.17	108.20
34	AA	2985	C	O4'-C1'-N1	6.22	113.17	108.20
1	A	542	C	O4'-C1'-N1	6.21	113.17	108.20
34	AA	2711	U	O4'-C1'-N1	6.21	113.17	108.20
1	A	485	C	O4'-C1'-N1	6.21	113.17	108.20
1	A	1102	C	O4'-C1'-N1	6.21	113.17	108.20
1	A	1170	C	O4'-C1'-N1	6.21	113.17	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1363	U	P-O3'-C3'	6.21	127.15	119.70
34	AA	1101	A	O4'-C1'-N9	6.21	113.17	108.20
34	AA	1218	C	C6-N1-C2	-6.21	117.82	120.30
34	AA	3646	G	O4'-C1'-N9	6.21	113.17	108.20
61	AQ	3	ARG	NE-CZ-NH1	-6.21	117.19	120.30
34	AA	2574	A	O4'-C1'-N9	6.21	113.17	108.20
61	AQ	128	ARG	NE-CZ-NH1	6.21	123.40	120.30
1	A	1118	U	O4'-C1'-N1	6.21	113.16	108.20
60	AO	32	ARG	NE-CZ-NH2	-6.20	117.20	120.30
34	AA	2422	C	O4'-C1'-N1	6.20	113.16	108.20
1	A	1794	C	O4'-C1'-N1	6.20	113.16	108.20
2	7	69	C	O4'-C1'-N1	6.20	113.16	108.20
34	AA	1216	C	O4'-C1'-N1	6.20	113.16	108.20
34	AA	2002	G	O4'-C1'-N9	6.20	113.16	108.20
1	A	1444	C	O4'-C1'-N1	6.20	113.16	108.20
34	AA	1603	C	O4'-C1'-N1	6.20	113.16	108.20
1	A	1377	U	O4'-C1'-N1	6.20	113.16	108.20
34	AA	711	C	O4'-C1'-N1	6.20	113.16	108.20
65	AT	37	ARG	NE-CZ-NH2	6.20	123.40	120.30
71	AF	336	ARG	NE-CZ-NH1	6.20	123.40	120.30
27	Q	20	ARG	NE-CZ-NH2	-6.19	117.20	120.30
34	AA	801	U	O4'-C1'-N1	6.19	113.16	108.20
12	Y	15	ARG	NE-CZ-NH2	6.19	123.40	120.30
34	AA	22	G	O4'-C1'-N9	6.19	113.15	108.20
34	AA	1112	C	O4'-C1'-N1	6.19	113.15	108.20
76	Ag	23	ARG	NE-CZ-NH2	-6.19	117.20	120.30
1	A	1182	A	P-O3'-C3'	6.19	127.13	119.70
2	7	27	U	O4'-C1'-N1	6.19	113.15	108.20
34	AA	300	C	O4'-C1'-N1	6.19	113.15	108.20
34	AA	2394	C	O4'-C1'-N1	6.19	113.15	108.20
34	AA	650	U	O4'-C1'-N1	6.19	113.15	108.20
34	AA	1678	C	O4'-C1'-N1	6.19	113.15	108.20
1	A	1440	C	O4'-C1'-N1	6.18	113.15	108.20
1	A	1963	U	O4'-C1'-N1	6.18	113.15	108.20
32	X	81	ARG	NE-CZ-NH2	-6.18	117.21	120.30
34	AA	2502	U	O4'-C1'-N1	6.18	113.15	108.20
4	E	40	ARG	NE-CZ-NH1	6.18	123.39	120.30
28	S	108	TYR	CB-CG-CD2	-6.18	117.29	121.00
29	T	17	ARG	NE-CZ-NH1	6.18	123.39	120.30
34	AA	1031	G	N3-C2-N2	6.18	124.23	119.90
34	AA	1235	C	O4'-C1'-N1	6.18	113.15	108.20
71	AF	49	ARG	NE-CZ-NH1	6.18	123.39	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1004	U	O4'-C1'-N1	6.18	113.14	108.20
1	A	1391	U	O4'-C1'-N1	6.18	113.14	108.20
8	M	112	ARG	NE-CZ-NH1	6.18	123.39	120.30
34	AA	2724	C	O4'-C1'-N1	6.18	113.14	108.20
56	Ac	42	TYR	CB-CG-CD2	-6.18	117.29	121.00
34	AA	2960	G	O4'-C1'-N9	6.18	113.14	108.20
34	AA	3134	U	O4'-C1'-N1	6.17	113.14	108.20
53	Ai	33	ARG	NE-CZ-NH2	-6.17	117.21	120.30
35	AC	97	C	O4'-C1'-N1	6.17	113.14	108.20
1	A	255	A	O4'-C1'-N9	6.17	113.14	108.20
34	AA	3517	C	O4'-C1'-N1	6.17	113.14	108.20
1	A	1903	U	O4'-C1'-N1	6.17	113.13	108.20
1	A	349	C	O4'-C1'-N1	6.17	113.13	108.20
1	A	973	G	O4'-C1'-N9	6.17	113.13	108.20
1	A	1364	G	N1-C6-O6	6.16	123.60	119.90
34	AA	2813	U	O4'-C1'-N1	6.16	113.13	108.20
34	AA	3617	A	O4'-C1'-N9	6.16	113.13	108.20
1	A	130	U	O4'-C1'-N1	6.16	113.13	108.20
1	A	1839	G	O4'-C1'-N9	6.16	113.13	108.20
34	AA	624	C	O4'-C1'-N1	6.16	113.13	108.20
34	AA	2578	C	O4'-C1'-N1	6.16	113.13	108.20
34	AA	2669	G	O4'-C1'-N9	6.16	113.13	108.20
34	AA	3195	C	C6-N1-C1'	-6.16	113.41	120.80
44	A8	111	ARG	NE-CZ-NH2	6.16	123.38	120.30
1	A	797	C	O4'-C1'-N1	6.16	113.13	108.20
1	A	1014	U	O4'-C1'-N1	6.16	113.13	108.20
62	AR	108	ARG	NE-CZ-NH1	6.16	123.38	120.30
75	AV	71	ARG	NE-CZ-NH1	6.16	123.38	120.30
1	A	1184	G	C5-C6-O6	-6.16	124.91	128.60
34	AA	1561	C	O4'-C1'-N1	6.16	113.12	108.20
34	AA	1904	U	C4'-C3'-C2'	-6.16	96.44	102.60
56	Ac	58	ARG	NE-CZ-NH1	6.15	123.38	120.30
34	AA	3133	U	O4'-C1'-N1	6.15	113.12	108.20
1	A	118	U	O4'-C1'-N1	6.15	113.12	108.20
34	AA	309	G	O4'-C1'-N9	6.15	113.12	108.20
35	AC	54	C	O4'-C1'-N1	6.15	113.12	108.20
34	AA	2737	C	O4'-C1'-N1	6.15	113.12	108.20
56	Ac	42	TYR	CB-CG-CD1	6.15	124.69	121.00
67	A3	83	ARG	NE-CZ-NH1	6.15	123.37	120.30
34	AA	2607	U	O4'-C1'-N1	6.15	113.12	108.20
1	A	965	U	O4'-C1'-N1	6.14	113.11	108.20
1	A	1845	U	O4'-C1'-N1	6.14	113.12	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	1009	C	O4'-C1'-N1	6.14	113.12	108.20
34	AA	1238	C	O4'-C1'-N1	6.14	113.11	108.20
45	A9	49	TYR	CB-CG-CD2	-6.14	117.31	121.00
68	A5	116	ARG	NE-CZ-NH2	6.14	123.37	120.30
34	AA	3115	C	O4'-C1'-N1	6.14	113.11	108.20
37	AL	41	ARG	NE-CZ-NH2	6.14	123.37	120.30
1	A	1624	U	O4'-C1'-N1	6.14	113.11	108.20
16	3	6	ARG	NE-CZ-NH2	6.14	123.37	120.30
34	AA	1588	U	O4'-C1'-N1	6.14	113.11	108.20
34	AA	3291	U	O4'-C1'-N1	6.14	113.11	108.20
62	AR	22	ARG	NE-CZ-NH1	6.14	123.37	120.30
1	A	59	G	O4'-C1'-N9	6.13	113.11	108.20
1	A	1003	C	P-O3'-C3'	-6.13	112.34	119.70
34	AA	1175	C	O4'-C1'-N1	6.13	113.11	108.20
34	AA	2457	C	O4'-C1'-N1	6.13	113.10	108.20
34	AA	1472	A	P-O3'-C3'	6.13	127.06	119.70
61	AQ	98	ARG	NE-CZ-NH2	6.13	123.36	120.30
14	1	120	ARG	NE-CZ-NH2	-6.13	117.24	120.30
34	AA	2952	U	O4'-C1'-N1	6.13	113.10	108.20
34	AA	3623	A	O4'-C1'-N9	6.12	113.10	108.20
34	AA	2437	A	C1'-O4'-C4'	-6.12	105.00	109.90
34	AA	3399	U	O4'-C1'-N1	6.12	113.10	108.20
51	AP	188	SER	N-CA-CB	6.12	119.68	110.50
62	AR	154	ARG	NE-CZ-NH1	6.12	123.36	120.30
34	AA	1672	U	O4'-C1'-N1	6.12	113.10	108.20
34	AA	2827	C	O4'-C1'-N1	6.12	113.10	108.20
34	AA	3159	G	C5-C6-O6	-6.12	124.93	128.60
34	AA	3771	C	O4'-C1'-N1	6.12	113.10	108.20
69	AD	3	ARG	NE-CZ-NH1	6.12	123.36	120.30
1	A	1788	U	C2-N1-C1'	6.12	125.04	117.70
34	AA	775	C	O4'-C1'-N1	6.12	113.09	108.20
34	AA	2716	U	O4'-C1'-N1	6.12	113.10	108.20
35	AC	4	C	O4'-C1'-N1	6.12	113.09	108.20
1	A	1307	U	O4'-C1'-N1	6.12	113.09	108.20
21	F	54	TYR	CB-CG-CD1	6.12	124.67	121.00
34	AA	293	U	O4'-C1'-N1	6.11	113.09	108.20
34	AA	2396	C	O4'-C1'-N1	6.11	113.09	108.20
34	AA	2451	A	O4'-C1'-N9	6.11	113.09	108.20
34	AA	3067	G	C1'-O4'-C4'	-6.11	105.01	109.90
34	AA	3112	U	O4'-C1'-N1	6.11	113.09	108.20
1	A	758	U	O4'-C1'-N1	6.11	113.09	108.20
1	A	490	C	O4'-C1'-N1	6.11	113.09	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	672	C	O4'-C1'-N1	6.11	113.08	108.20
34	AA	741	C	O4'-C1'-N1	6.11	113.08	108.20
34	AA	2090	U	O4'-C1'-N1	6.11	113.08	108.20
34	AA	3314	U	O4'-C1'-N1	6.11	113.08	108.20
34	AA	3322	C	O4'-C1'-N1	6.11	113.08	108.20
1	A	1321	C	O4'-C1'-N1	6.10	113.08	108.20
1	A	63	G	C5-C6-O6	-6.10	124.94	128.60
34	AA	2080	C	O4'-C1'-N1	6.10	113.08	108.20
1	A	2070	G	N1-C6-O6	6.10	123.56	119.90
34	AA	883	C	O4'-C1'-N1	6.10	113.08	108.20
34	AA	900	G	P-O5'-C5'	6.10	130.66	120.90
34	AA	1233	A	O4'-C1'-N9	6.10	113.08	108.20
34	AA	2037	U	O4'-C1'-N1	6.10	113.08	108.20
34	AA	2962	G	O4'-C1'-N9	6.10	113.08	108.20
34	AA	2583	C	O4'-C1'-N1	6.09	113.08	108.20
34	AA	3139	C	C6-N1-C1'	-6.09	113.49	120.80
34	AA	3160	A	O4'-C1'-N9	6.09	113.08	108.20
34	AA	3524	G	O4'-C1'-N9	6.09	113.08	108.20
1	A	387	C	O4'-C1'-N1	6.09	113.07	108.20
1	A	451	A	C5'-C4'-O4'	6.09	116.41	109.10
34	AA	3213	U	O4'-C1'-N1	6.09	113.08	108.20
34	AA	3284	C	O4'-C1'-N1	6.09	113.07	108.20
45	A9	115	ARG	NE-CZ-NH1	6.09	123.35	120.30
1	A	204	U	O4'-C1'-N1	6.09	113.07	108.20
21	F	235	TYR	CB-CG-CD2	6.09	124.65	121.00
34	AA	1586	C	O4'-C1'-N1	6.09	113.07	108.20
34	AA	3393	C	O4'-C1'-N1	6.09	113.07	108.20
34	AA	607	A	N1-C6-N6	6.09	122.25	118.60
34	AA	3233	G	C5'-C4'-C3'	-6.08	106.27	116.00
35	AC	24	U	O4'-C1'-N1	6.08	113.07	108.20
1	A	596	C	O4'-C1'-N1	6.08	113.06	108.20
34	AA	999	G	O4'-C1'-N9	6.08	113.07	108.20
36	AB	45	U	O4'-C1'-N1	6.08	113.07	108.20
34	AA	2473	A	O4'-C1'-N9	6.08	113.06	108.20
34	AA	2935	U	O4'-C1'-N1	6.08	113.06	108.20
1	A	89	C	O4'-C1'-N1	6.08	113.06	108.20
1	A	1011	G	C5-C6-O6	-6.08	124.95	128.60
34	AA	2885	A	O4'-C1'-N9	6.08	113.06	108.20
34	AA	3067	G	O3'-P-O5'	-6.08	92.45	104.00
34	AA	3504	C	O4'-C1'-N1	6.08	113.06	108.20
35	AC	22	U	O4'-C1'-N1	6.08	113.06	108.20
34	AA	1674	G	O4'-C1'-N9	6.08	113.06	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	1960	U	O4'-C1'-N1	6.08	113.06	108.20
34	AA	2559	U	O4'-C1'-N1	6.08	113.06	108.20
34	AA	403	U	O4'-C1'-N1	6.07	113.06	108.20
34	AA	1281	C	O4'-C1'-N1	6.07	113.06	108.20
34	AA	1721	C	O4'-C1'-N1	6.07	113.06	108.20
34	AA	3031	C	O4'-C1'-N1	6.07	113.06	108.20
1	A	1321	C	C5'-C4'-O4'	6.07	116.38	109.10
1	A	1680	U	O4'-C1'-N1	6.07	113.06	108.20
34	AA	1056	G	N3-C2-N2	6.07	124.15	119.90
34	AA	1251	U	O4'-C1'-N1	6.07	113.06	108.20
34	AA	1423	G	O4'-C1'-N9	6.07	113.06	108.20
1	A	1108	A	P-O3'-C3'	6.07	126.98	119.70
1	A	1709	C	O4'-C1'-N1	6.07	113.06	108.20
1	A	2061	U	O4'-C1'-N1	6.07	113.05	108.20
27	Q	107	PHE	CB-CG-CD2	-6.07	116.55	120.80
34	AA	193	C	O4'-C1'-N1	6.07	113.05	108.20
1	A	1278	C	O4'-C1'-N1	6.07	113.05	108.20
4	E	171	ARG	NE-CZ-NH2	6.07	123.33	120.30
6	I	16	TYR	CB-CG-CD1	-6.07	117.36	121.00
34	AA	3673	C	O4'-C1'-N1	6.06	113.05	108.20
1	A	2087	U	O4'-C1'-N1	6.06	113.05	108.20
34	AA	2510	U	O4'-C1'-N1	6.06	113.05	108.20
1	A	994	G	C5-C6-O6	-6.06	124.96	128.60
34	AA	2530	C	O4'-C1'-N1	6.06	113.05	108.20
34	AA	3750	U	O4'-C1'-N1	6.06	113.05	108.20
35	AC	25	C	C6-N1-C2	-6.06	117.88	120.30
36	AB	59	C	O4'-C1'-N1	6.06	113.05	108.20
34	AA	232	C	O4'-C1'-N1	6.06	113.05	108.20
34	AA	1573	C	O4'-C1'-N1	6.06	113.05	108.20
56	Ac	14	ARG	NE-CZ-NH2	6.06	123.33	120.30
57	AK	48	ARG	NE-CZ-NH1	6.06	123.33	120.30
34	AA	2111	C	O4'-C1'-N1	6.06	113.05	108.20
34	AA	1266	U	O4'-C1'-N1	6.05	113.04	108.20
34	AA	2690	A	O4'-C1'-N9	6.05	113.04	108.20
58	AM	89	ARG	NE-CZ-NH1	6.05	123.33	120.30
34	AA	2951	U	O4'-C1'-N1	6.05	113.04	108.20
51	AP	195	ARG	NE-CZ-NH2	6.05	123.33	120.30
60	AO	108	PHE	CB-CG-CD1	6.05	125.04	120.80
34	AA	2653	C	O4'-C1'-N1	6.05	113.04	108.20
34	AA	3742	C	O4'-C1'-N1	6.05	113.04	108.20
1	A	295	U	O4'-C1'-N1	6.05	113.04	108.20
5	G	103	ARG	NE-CZ-NH1	6.05	123.32	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	599	G	O4'-C1'-N9	6.05	113.04	108.20
59	AS	57	ARG	NE-CZ-NH2	6.05	123.32	120.30
31	V	72	ARG	NE-CZ-NH1	6.04	123.32	120.30
34	AA	2959	G	C8-N9-C1'	-6.04	119.14	127.00
34	AA	2186	C	O4'-C1'-N1	6.04	113.03	108.20
34	AA	2817	U	O4'-C1'-N1	6.04	113.03	108.20
35	AC	84	G	O4'-C1'-N9	6.04	113.03	108.20
62	AR	181	ARG	NE-CZ-NH2	-6.04	117.28	120.30
1	A	214	U	O4'-C1'-N1	6.04	113.03	108.20
1	A	1893	C	C2-N1-C1'	6.04	125.45	118.80
71	AF	121	ARG	NE-CZ-NH2	-6.04	117.28	120.30
34	AA	3318	C	O4'-C1'-N1	6.04	113.03	108.20
1	A	310	U	O4'-C1'-N1	6.04	113.03	108.20
34	AA	794	C	O4'-C1'-N1	6.04	113.03	108.20
1	A	1416	U	O4'-C1'-N1	6.04	113.03	108.20
34	AA	650	U	P-O5'-C5'	-6.04	111.24	120.90
34	AA	931	U	O4'-C1'-N1	6.04	113.03	108.20
34	AA	3243	C	O4'-C1'-N1	6.03	113.03	108.20
34	AA	3633	U	O4'-C1'-N1	6.03	113.03	108.20
1	A	1044	C	O4'-C1'-N1	6.03	113.02	108.20
34	AA	796	C	O4'-C1'-N1	6.03	113.03	108.20
34	AA	2154	A	O4'-C1'-N9	6.03	113.02	108.20
35	AC	51	C	O4'-C1'-N1	6.03	113.02	108.20
2	7	6	G	O4'-C1'-N9	6.03	113.02	108.20
34	AA	3202	U	O4'-C1'-N1	6.03	113.02	108.20
1	A	32	U	O4'-C1'-N1	6.03	113.02	108.20
34	AA	3104	C	O4'-C1'-N1	6.03	113.02	108.20
42	A7	80	ARG	NE-CZ-NH1	6.03	123.31	120.30
1	A	72	U	O4'-C1'-N1	6.03	113.02	108.20
1	A	379	G	N1-C6-O6	6.03	123.52	119.90
34	AA	547	C	O4'-C1'-N1	6.03	113.02	108.20
34	AA	2139	C	O4'-C1'-N1	6.03	113.02	108.20
34	AA	3241	U	O4'-C1'-N1	6.03	113.02	108.20
34	AA	1617	A	O4'-C1'-N9	6.02	113.02	108.20
1	A	603	C	O4'-C1'-N1	6.02	113.02	108.20
9	W	45	ARG	NE-CZ-NH2	-6.02	117.29	120.30
21	F	235	TYR	CB-CG-CD1	-6.02	117.39	121.00
34	AA	454	G	C5-C6-O6	-6.02	124.99	128.60
34	AA	1467	C	O4'-C1'-N1	6.02	113.02	108.20
34	AA	2480	G	C5'-C4'-O4'	6.02	116.33	109.10
1	A	117	G	C5-C6-O6	-6.02	124.99	128.60
34	AA	268	C	P-O3'-C3'	6.02	126.93	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	251	U	P-O3'-C3'	6.02	126.92	119.70
1	A	1823	U	O4'-C1'-N1	6.02	113.02	108.20
34	AA	3324	U	O4'-C1'-N1	6.02	113.02	108.20
47	Ab	40	ARG	NE-CZ-NH1	6.02	123.31	120.30
34	AA	3427	U	O4'-C1'-N1	6.02	113.01	108.20
58	AM	14	ARG	NE-CZ-NH1	6.02	123.31	120.30
1	A	400	C	O4'-C1'-N1	6.01	113.01	108.20
19	6	29	ARG	NE-CZ-NH1	6.01	123.31	120.30
34	AA	2456	C	O4'-C1'-N1	6.01	113.01	108.20
63	AW	127	ARG	NH1-CZ-NH2	-6.01	112.78	119.40
1	A	848	U	O4'-C1'-N1	6.01	113.01	108.20
1	A	13	C	O4'-C1'-N1	6.01	113.01	108.20
34	AA	87	U	O4'-C1'-N1	6.01	113.01	108.20
34	AA	793	A	O4'-C1'-N9	6.01	113.01	108.20
2	7	16	C	C1'-O4'-C4'	-6.01	105.09	109.90
34	AA	322	C	O4'-C1'-N1	6.01	113.01	108.20
34	AA	1176	C	O4'-C1'-N1	6.01	113.00	108.20
34	AA	2137	C	O4'-C1'-N1	6.01	113.01	108.20
34	AA	2411	C	O4'-C1'-N1	6.01	113.01	108.20
34	AA	3404	C	O4'-C1'-N1	6.01	113.00	108.20
34	AA	256	A	O4'-C1'-N9	6.00	113.00	108.20
34	AA	33	G	O3'-P-O5'	-6.00	92.59	104.00
34	AA	2463	U	O4'-C1'-N1	6.00	113.00	108.20
70	AE	93	ARG	NE-CZ-NH1	6.00	123.30	120.30
1	A	971	G	C5-C6-O6	-6.00	125.00	128.60
34	AA	378	U	O4'-C1'-N1	6.00	113.00	108.20
34	AA	1104	U	O4'-C1'-N1	6.00	113.00	108.20
34	AA	1425	C	O4'-C1'-N1	6.00	113.00	108.20
34	AA	1469	U	O4'-C1'-N1	6.00	113.00	108.20
34	AA	1865	C	O4'-C1'-N1	6.00	113.00	108.20
34	AA	2643	C	O4'-C1'-N1	6.00	113.00	108.20
34	AA	913	U	P-O3'-C3'	-6.00	112.50	119.70
58	AM	88	ARG	NE-CZ-NH1	6.00	123.30	120.30
34	AA	171	C	O4'-C1'-N1	6.00	113.00	108.20
1	A	92	C	O4'-C1'-N1	5.99	113.00	108.20
34	AA	2140	U	O4'-C1'-N1	5.99	113.00	108.20
36	AB	94	C	O4'-C1'-N1	5.99	113.00	108.20
16	3	22	ARG	NE-CZ-NH1	5.99	123.30	120.30
34	AA	1189	G	O4'-C1'-N9	5.99	112.99	108.20
35	AC	56	A	P-O3'-C3'	-5.99	112.51	119.70
65	AT	63	ARG	NE-CZ-NH1	5.99	123.30	120.30
36	AB	60	U	O4'-C1'-N1	5.99	112.99	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	553	U	O4'-C1'-N1	5.99	112.99	108.20
34	AA	1075	U	O4'-C1'-N1	5.99	112.99	108.20
1	A	597	C	O4'-C1'-N1	5.99	112.99	108.20
34	AA	1870	G	O4'-C1'-N9	5.99	112.99	108.20
70	AE	10	ARG	NE-CZ-NH1	5.99	123.29	120.30
1	A	1430	G	N1-C6-O6	5.98	123.49	119.90
34	AA	239	U	C2-N1-C1'	5.98	124.88	117.70
34	AA	1712	G	O4'-C1'-N9	5.98	112.99	108.20
34	AA	3238	C	O4'-C1'-N1	5.98	112.99	108.20
51	AP	63	ARG	NE-CZ-NH1	5.98	123.29	120.30
34	AA	2993	C	O4'-C1'-N1	5.98	112.98	108.20
34	AA	3265	C	O4'-C1'-N1	5.98	112.98	108.20
34	AA	3353	A	P-O3'-C3'	5.98	126.88	119.70
34	AA	3490	A	O4'-C1'-N9	5.98	112.98	108.20
1	A	1929	C	O4'-C1'-N1	5.98	112.98	108.20
1	A	1602	G	O4'-C1'-N9	5.98	112.98	108.20
34	AA	1452	U	O4'-C1'-N1	5.98	112.98	108.20
34	AA	2529	G	O4'-C1'-N9	5.98	112.98	108.20
1	A	1625	C	P-O3'-C3'	5.98	126.87	119.70
34	AA	3639	G	O4'-C1'-N9	5.98	112.98	108.20
37	AL	114	ARG	NE-CZ-NH1	5.98	123.29	120.30
1	A	1045	G	O4'-C1'-N9	5.97	112.98	108.20
1	A	1923	U	O4'-C1'-N1	5.97	112.98	108.20
1	A	1974	U	O4'-C1'-N1	5.97	112.98	108.20
34	AA	749	U	O4'-C1'-N1	5.97	112.98	108.20
34	AA	2945	G	O4'-C1'-N9	5.97	112.98	108.20
34	AA	1257	A	O4'-C1'-N9	5.97	112.98	108.20
34	AA	2821	C	O4'-C1'-N1	5.97	112.98	108.20
35	AC	144	U	O4'-C1'-N1	5.97	112.98	108.20
34	AA	1703	U	P-O3'-C3'	5.97	126.86	119.70
34	AA	3065	C	C2-N1-C1'	5.97	125.37	118.80
36	AB	28	C	O4'-C1'-N1	5.97	112.98	108.20
34	AA	1790	U	O4'-C1'-N1	5.97	112.97	108.20
2	7	75	C	P-O3'-C3'	5.97	126.86	119.70
34	AA	639	C	O4'-C1'-N1	5.97	112.97	108.20
35	AC	63	A	O4'-C1'-N9	5.97	112.97	108.20
35	AC	150	U	O4'-C1'-N1	5.97	112.97	108.20
14	1	43	ARG	NE-CZ-NH1	5.96	123.28	120.30
36	AB	93	G	C5-C6-O6	-5.96	125.02	128.60
34	AA	2524	C	O4'-C1'-N1	5.96	112.97	108.20
36	AB	91	C	O4'-C1'-N1	5.96	112.97	108.20
67	A3	50	ARG	NE-CZ-NH1	5.96	123.28	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	A3	80	TYR	CB-CG-CD1	5.96	124.58	121.00
1	A	323	C	O4'-C1'-N1	5.96	112.97	108.20
2	7	8	U	O4'-C1'-N1	5.96	112.97	108.20
2	7	53	G	O4'-C1'-N9	5.96	112.97	108.20
34	AA	1442	C	O4'-C1'-N1	5.96	112.97	108.20
32	X	81	ARG	NE-CZ-NH1	5.96	123.28	120.30
34	AA	1279	U	O4'-C1'-N1	5.96	112.97	108.20
34	AA	2144	U	O4'-C1'-N1	5.96	112.97	108.20
34	AA	3703	G	O4'-C1'-N9	5.96	112.96	108.20
45	A9	81	ARG	NE-CZ-NH1	5.96	123.28	120.30
2	7	62	C	O4'-C1'-N1	5.95	112.96	108.20
34	AA	20	G	O4'-C1'-N9	5.95	112.96	108.20
34	AA	2092	G	C5-C6-O6	-5.95	125.03	128.60
1	A	494	G	O4'-C1'-N9	5.95	112.96	108.20
27	Q	107	PHE	CB-CG-CD1	5.95	124.97	120.80
21	F	132	ARG	NE-CZ-NH2	5.95	123.28	120.30
34	AA	879	U	O4'-C1'-N1	5.95	112.96	108.20
34	AA	33	G	P-O3'-C3'	-5.95	112.56	119.70
34	AA	986	U	O4'-C1'-N1	5.95	112.96	108.20
34	AA	3257	G	C5-C6-O6	-5.95	125.03	128.60
4	E	53	ARG	NE-CZ-NH1	5.95	123.27	120.30
34	AA	2071	U	O4'-C1'-N1	5.95	112.96	108.20
28	S	89	ARG	NE-CZ-NH2	5.95	123.27	120.30
34	AA	1339	U	O4'-C1'-N1	5.95	112.96	108.20
35	AC	59	U	O4'-C1'-N1	5.95	112.96	108.20
70	AE	281	ARG	NE-CZ-NH2	5.95	123.27	120.30
34	AA	2136	C	O4'-C1'-N1	5.94	112.95	108.20
4	E	79	ARG	NE-CZ-NH2	5.94	123.27	120.30
34	AA	462	G	P-O3'-C3'	5.94	126.83	119.70
34	AA	1480	G	C8-N9-C1'	-5.94	119.28	127.00
34	AA	2575	U	O4'-C1'-N1	5.94	112.95	108.20
1	A	1193	A	O4'-C1'-N9	5.94	112.95	108.20
1	A	2055	A	O4'-C1'-N9	5.94	112.95	108.20
34	AA	1344	C	O4'-C1'-N1	5.94	112.95	108.20
34	AA	1785	U	O4'-C1'-N1	5.94	112.95	108.20
34	AA	3240	C	O4'-C1'-N1	5.94	112.95	108.20
60	AO	4	ARG	NE-CZ-NH1	5.94	123.27	120.30
45	A9	51	ARG	NE-CZ-NH1	5.94	123.27	120.30
1	A	591	C	O4'-C1'-N1	5.93	112.95	108.20
34	AA	3606	G	O4'-C1'-N9	5.93	112.95	108.20
45	A9	127	PHE	CB-CG-CD1	5.93	124.95	120.80
34	AA	575	U	O4'-C1'-N1	5.93	112.95	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	587	C	O4'-C1'-N1	5.93	112.94	108.20
34	AA	1214	C	O4'-C1'-N1	5.93	112.95	108.20
34	AA	1326	C	O4'-C1'-N1	5.93	112.95	108.20
34	AA	3485	G	O4'-C1'-N9	5.93	112.94	108.20
35	AC	96	U	O4'-C1'-N1	5.93	112.95	108.20
54	AI	71	ARG	NE-CZ-NH1	5.93	123.27	120.30
34	AA	3055	U	O4'-C1'-N1	5.93	112.94	108.20
1	A	1403	U	O4'-C1'-N1	5.93	112.94	108.20
1	A	1868	C	O4'-C1'-N1	5.93	112.94	108.20
34	AA	3065	C	O4'-C1'-N1	5.93	112.94	108.20
70	AE	244	ARG	NE-CZ-NH1	5.93	123.27	120.30
34	AA	746	A	O4'-C1'-N9	5.93	112.94	108.20
1	A	1181	U	O4'-C1'-N1	5.93	112.94	108.20
34	AA	190	G	C5-C6-O6	-5.93	125.04	128.60
34	AA	1825	C	O4'-C1'-N1	5.93	112.94	108.20
34	AA	3659	C	O4'-C1'-N1	5.92	112.94	108.20
1	A	1900	U	O4'-C1'-N1	5.92	112.94	108.20
34	AA	1971	U	O4'-C1'-N1	5.92	112.94	108.20
46	Aa	8	ARG	NE-CZ-NH1	5.92	123.26	120.30
53	Ai	42	TYR	CB-CG-CD2	-5.92	117.45	121.00
61	AQ	57	TYR	CB-CG-CD2	5.92	124.55	121.00
60	AO	4	ARG	NE-CZ-NH2	-5.92	117.34	120.30
34	AA	3361	U	O4'-C1'-N1	5.91	112.93	108.20
34	AA	3653	G	O4'-C1'-N9	5.91	112.93	108.20
1	A	1905	C	O4'-C1'-N1	5.91	112.93	108.20
34	AA	710	C	O4'-C1'-N1	5.91	112.93	108.20
4	E	168	ARG	NE-CZ-NH1	5.91	123.25	120.30
34	AA	237	A	O4'-C1'-N9	5.91	112.93	108.20
34	AA	2640	U	O4'-C1'-N1	5.91	112.93	108.20
51	AP	31	ARG	NE-CZ-NH1	5.91	123.25	120.30
51	AP	63	ARG	NE-CZ-NH2	-5.91	117.35	120.30
1	A	1383	U	O4'-C1'-N1	5.91	112.92	108.20
34	AA	259	G	O4'-C1'-N9	5.91	112.92	108.20
34	AA	502	U	O4'-C1'-N1	5.91	112.92	108.20
34	AA	1090	G	O4'-C1'-N9	5.91	112.92	108.20
34	AA	1466	C	O4'-C1'-N1	5.91	112.92	108.20
34	AA	1880	A	P-O5'-C5'	-5.91	111.45	120.90
34	AA	2450	G	N1-C6-O6	5.91	123.44	119.90
36	AB	61	G	O4'-C1'-N9	5.91	112.92	108.20
35	AC	94	C	O4'-C1'-N1	5.90	112.92	108.20
1	A	829	G	C5-C6-O6	-5.90	125.06	128.60
1	A	1410	G	O4'-C1'-N9	5.90	112.92	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1975	U	O4'-C1'-N1	5.90	112.92	108.20
34	AA	676	U	O4'-C1'-N1	5.90	112.92	108.20
35	AC	38	G	O4'-C1'-N9	5.90	112.92	108.20
34	AA	652	A	C2'-C3'-O3'	5.90	123.14	113.70
34	AA	3486	G	O4'-C1'-N9	5.90	112.92	108.20
24	L	217	ARG	NE-CZ-NH2	5.90	123.25	120.30
34	AA	1571	C	O4'-C1'-N1	5.90	112.92	108.20
1	A	1713	C	O4'-C1'-N1	5.90	112.92	108.20
1	A	1947	U	O4'-C1'-N1	5.90	112.92	108.20
1	A	304	C	O4'-C1'-N1	5.89	112.92	108.20
1	A	805	A	P-O3'-C3'	5.89	126.77	119.70
1	A	1682	A	O4'-C1'-N9	5.89	112.92	108.20
34	AA	2484	U	O4'-C1'-N1	5.89	112.92	108.20
1	A	1461	C	O4'-C1'-N1	5.89	112.91	108.20
1	A	1645	C	P-O3'-C3'	-5.89	112.63	119.70
6	I	16	TYR	CB-CG-CD2	5.89	124.54	121.00
34	AA	3374	U	O4'-C1'-N1	5.89	112.91	108.20
34	AA	3479	U	O4'-C1'-N1	5.89	112.92	108.20
1	A	555	G	O4'-C1'-N9	5.89	112.91	108.20
1	A	1804	C	O4'-C1'-N1	5.89	112.91	108.20
22	H	198	ARG	NE-CZ-NH1	5.89	123.25	120.30
22	H	98	ARG	NE-CZ-NH1	5.89	123.24	120.30
34	AA	3549	U	O4'-C1'-N1	5.89	112.91	108.20
66	AZ	114	ARG	NE-CZ-NH2	5.89	123.24	120.30
8	M	50	TYR	CB-CG-CD2	-5.88	117.47	121.00
34	AA	3232	U	O4'-C1'-N1	5.88	112.91	108.20
23	J	78	ARG	NE-CZ-NH2	5.88	123.24	120.30
34	AA	716	C	C6-N1-C2	-5.88	117.95	120.30
34	AA	1589	G	O4'-C1'-N9	5.88	112.91	108.20
34	AA	3763	G	C5-C6-O6	-5.88	125.07	128.60
63	AW	82	ARG	NE-CZ-NH2	-5.88	117.36	120.30
1	A	1418	C	O4'-C1'-N1	5.88	112.90	108.20
1	A	1430	G	C5-C6-O6	-5.88	125.07	128.60
34	AA	1544	C	O4'-C1'-N1	5.88	112.90	108.20
66	AZ	11	ARG	NE-CZ-NH2	5.88	123.24	120.30
31	V	106	ARG	NE-CZ-NH1	5.88	123.24	120.30
34	AA	2807	U	O4'-C1'-N1	5.88	112.90	108.20
1	A	1783	U	O4'-C1'-N1	5.88	112.90	108.20
34	AA	3194	C	O4'-C1'-N1	5.88	112.90	108.20
34	AA	3304	G	O4'-C1'-N9	5.88	112.90	108.20
34	AA	2147	A	P-O3'-C3'	-5.88	112.65	119.70
34	AA	696	C	O4'-C1'-N1	5.87	112.90	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	1714	U	O4'-C1'-N1	5.87	112.90	108.20
34	AA	1747	U	C6-N1-C1'	-5.87	112.98	121.20
34	AA	2950	U	O4'-C1'-N1	5.87	112.90	108.20
34	AA	3221	U	O4'-C1'-N1	5.87	112.90	108.20
1	A	273	A	O4'-C1'-N9	5.87	112.90	108.20
36	AB	7	G	O4'-C1'-N9	5.87	112.89	108.20
37	AL	198	ARG	NE-CZ-NH2	5.87	123.23	120.30
46	Aa	88	ARG	NE-CZ-NH1	5.87	123.23	120.30
52	Ah	49	ARG	NE-CZ-NH2	5.87	123.23	120.30
63	AW	123	ARG	NE-CZ-NH1	5.87	123.23	120.30
34	AA	1437	U	O4'-C1'-N1	5.86	112.89	108.20
34	AA	3205	U	C2-N1-C1'	5.86	124.74	117.70
62	AR	31	ARG	NE-CZ-NH2	-5.86	117.37	120.30
1	A	1675	G	O4'-C1'-N9	5.86	112.89	108.20
63	AW	34	ARG	NE-CZ-NH1	5.86	123.23	120.30
1	A	1069	C	C6-N1-C1'	-5.86	113.77	120.80
34	AA	643	G	N1-C6-O6	5.86	123.42	119.90
34	AA	2073	G	C5-C6-O6	-5.86	125.08	128.60
1	A	1878	C	O4'-C1'-N1	5.86	112.89	108.20
24	L	41	ARG	NE-CZ-NH1	5.86	123.23	120.30
34	AA	1427	U	O4'-C1'-N1	5.86	112.89	108.20
34	AA	2110	C	O4'-C1'-N1	5.86	112.89	108.20
36	AB	23	A	O4'-C1'-N9	5.86	112.89	108.20
1	A	912	U	O4'-C1'-N1	5.86	112.89	108.20
34	AA	2997	G	N1-C6-O6	5.86	123.41	119.90
34	AA	2524	C	C2-N1-C1'	5.85	125.24	118.80
2	7	13	C	O4'-C1'-N1	5.85	112.88	108.20
34	AA	3063	U	O4'-C1'-N1	5.85	112.88	108.20
1	A	105	A	P-O3'-C3'	5.85	126.72	119.70
34	AA	1027	G	P-O5'-C5'	-5.85	111.54	120.90
66	AZ	3	PHE	CB-CG-CD1	5.85	124.89	120.80
1	A	314	A	O4'-C1'-N9	5.85	112.88	108.20
34	AA	1424	C	O4'-C1'-N1	5.85	112.88	108.20
34	AA	2960	G	C8-N9-C1'	-5.85	119.40	127.00
57	AK	81	ARG	NE-CZ-NH2	5.85	123.22	120.30
1	A	460	G	O4'-C1'-N9	5.85	112.88	108.20
34	AA	2420	U	O4'-C1'-N1	5.85	112.88	108.20
34	AA	3689	C	O4'-C1'-N1	5.85	112.88	108.20
1	A	96	C	P-O3'-C3'	5.85	126.72	119.70
34	AA	1298	A	O4'-C1'-N9	5.84	112.88	108.20
35	AC	133	G	O4'-C1'-N9	5.84	112.88	108.20
34	AA	3431	G	O4'-C1'-N9	5.84	112.87	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	AD	9	ARG	NE-CZ-NH1	5.84	123.22	120.30
1	A	60	A	O4'-C1'-N9	5.84	112.87	108.20
34	AA	2720	C	O4'-C1'-N1	5.84	112.87	108.20
1	A	1296	C	O4'-C1'-N1	5.84	112.87	108.20
34	AA	1968	C	C5'-C4'-C3'	-5.84	106.66	116.00
1	A	1877	C	O4'-C1'-N1	5.83	112.87	108.20
34	AA	59	G	O4'-C1'-N9	5.83	112.87	108.20
34	AA	182	U	O4'-C1'-N1	5.83	112.87	108.20
34	AA	1537	G	P-O5'-C5'	5.83	130.24	120.90
34	AA	1808	U	O4'-C1'-N1	5.83	112.87	108.20
1	A	2079	C	O4'-C1'-N1	5.83	112.87	108.20
24	L	31	ARG	NE-CZ-NH2	-5.83	117.38	120.30
34	AA	577	U	O4'-C1'-N1	5.83	112.87	108.20
63	AW	56	ARG	NE-CZ-NH1	5.83	123.22	120.30
34	AA	1462	C	O4'-C1'-N1	5.83	112.86	108.20
34	AA	3184	C	O4'-C1'-N1	5.83	112.86	108.20
1	A	580	C	O4'-C1'-N1	5.83	112.86	108.20
34	AA	1270	G	O4'-C1'-N9	5.83	112.86	108.20
34	AA	3671	A	O4'-C1'-N9	5.83	112.86	108.20
34	AA	652	A	P-O3'-C3'	5.83	126.69	119.70
1	A	333	U	O4'-C1'-N1	5.82	112.86	108.20
34	AA	38	U	O4'-C1'-N1	5.82	112.86	108.20
34	AA	251	U	O4'-C1'-N1	5.82	112.86	108.20
34	AA	674	U	O4'-C1'-N1	5.82	112.86	108.20
34	AA	3051	U	O4'-C1'-N1	5.82	112.86	108.20
34	AA	3436	U	O4'-C1'-N1	5.82	112.86	108.20
1	A	1299	G	O4'-C1'-N9	5.82	112.86	108.20
34	AA	2801	C	O4'-C1'-N1	5.82	112.86	108.20
34	AA	3053	G	C5'-C4'-O4'	5.82	116.08	109.10
35	AC	110	G	C5'-C6'-O6	-5.82	125.11	128.60
57	AK	73	ARG	NE-CZ-NH2	-5.82	117.39	120.30
34	AA	1064	U	O4'-C1'-N1	5.82	112.86	108.20
1	A	12	U	O4'-C1'-N1	5.82	112.85	108.20
1	A	2057	A	O4'-C1'-N9	5.82	112.85	108.20
34	AA	3296	G	O4'-C1'-N9	5.82	112.85	108.20
1	A	981	U	O4'-C1'-N1	5.82	112.85	108.20
1	A	978	U	O4'-C1'-N1	5.81	112.85	108.20
2	7	29	G	O4'-C1'-N9	5.81	112.85	108.20
34	AA	1313	C	O4'-C1'-N1	5.81	112.85	108.20
1	A	1228	C	O4'-C1'-N1	5.81	112.85	108.20
1	A	1239	A	N1-C6-N6	-5.81	115.11	118.60
34	AA	1007	U	O4'-C1'-N1	5.81	112.85	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	1028	G	O4'-C1'-N9	5.81	112.85	108.20
34	AA	2068	G	C5-C6-O6	-5.81	125.11	128.60
46	Aa	70	ARG	NE-CZ-NH1	5.81	123.20	120.30
1	A	1819	U	P-O5'-C5'	5.81	130.19	120.90
34	AA	630	U	O4'-C1'-N1	5.81	112.85	108.20
35	AC	12	U	O4'-C1'-N1	5.81	112.85	108.20
1	A	972	U	O4'-C1'-N1	5.81	112.84	108.20
1	A	1209	G	N1-C6-O6	5.81	123.38	119.90
34	AA	36	U	O4'-C1'-N1	5.81	112.84	108.20
34	AA	2608	G	O4'-C1'-N9	5.81	112.84	108.20
1	A	1748	G	C5-C6-O6	-5.80	125.12	128.60
1	A	2023	A	N1-C6-N6	5.80	122.08	118.60
34	AA	640	U	P-O3'-C3'	5.80	126.66	119.70
34	AA	1285	U	O4'-C1'-N1	5.80	112.84	108.20
1	A	613	A	O4'-C1'-N9	5.80	112.84	108.20
1	A	1703	U	O4'-C1'-N1	5.80	112.84	108.20
34	AA	15	U	O4'-C1'-N1	5.80	112.84	108.20
34	AA	2573	A	O4'-C1'-N9	5.80	112.84	108.20
35	AC	110	G	N1-C6-O6	5.80	123.38	119.90
36	AB	6	C	O4'-C1'-N1	5.80	112.84	108.20
1	A	72	U	P-O3'-C3'	-5.80	112.74	119.70
1	A	1973	U	O4'-C1'-N1	5.80	112.84	108.20
34	AA	270	U	C2'-C3'-O3'	5.80	122.97	113.70
34	AA	2121	C	O4'-C1'-N1	5.79	112.84	108.20
34	AA	2959	G	O4'-C1'-N9	5.79	112.84	108.20
1	A	344	C	O4'-C1'-N1	5.79	112.83	108.20
34	AA	681	U	O4'-C1'-N1	5.79	112.83	108.20
11	O	63	ARG	NE-CZ-NH1	5.79	123.19	120.30
70	AE	147	ARG	NE-CZ-NH1	5.79	123.19	120.30
31	V	91	ARG	NE-CZ-NH2	5.79	123.19	120.30
34	AA	1800	U	O4'-C1'-N1	5.79	112.83	108.20
2	7	66	C	O4'-C1'-N1	5.79	112.83	108.20
17	4	21	ARG	NE-CZ-NH2	-5.79	117.41	120.30
34	AA	2642	U	O4'-C1'-N1	5.79	112.83	108.20
34	AA	2972	U	O4'-C1'-N1	5.79	112.83	108.20
1	A	1029	U	O4'-C1'-N1	5.79	112.83	108.20
34	AA	3468	G	C5-C6-O6	-5.79	125.13	128.60
78	A0	57	ARG	NE-CZ-NH2	-5.79	117.41	120.30
34	AA	2486	U	P-O3'-C3'	5.79	126.64	119.70
34	AA	1898	U	O4'-C1'-N1	5.78	112.83	108.20
34	AA	3102	U	O4'-C1'-N1	5.78	112.83	108.20
34	AA	811	A	O4'-C1'-N9	5.78	112.83	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	818	C	C2-N1-C1'	5.78	125.16	118.80
34	AA	3408	G	O4'-C1'-N9	5.78	112.83	108.20
34	AA	591	G	O4'-C1'-N9	5.78	112.83	108.20
1	A	1625	C	O4'-C1'-N1	5.78	112.82	108.20
59	AS	10	ARG	NE-CZ-NH1	5.78	123.19	120.30
34	AA	1575	C	O4'-C1'-N1	5.78	112.82	108.20
1	A	1081	U	C5'-C4'-O4'	5.78	116.03	109.10
34	AA	3050	U	O4'-C1'-N1	5.78	112.82	108.20
34	AA	1065	U	O4'-C1'-N1	5.77	112.82	108.20
51	AP	205	ARG	NE-CZ-NH1	5.77	123.19	120.30
34	AA	1000	C	O4'-C1'-N1	5.77	112.82	108.20
56	Ac	59	ARG	NE-CZ-NH1	5.77	123.19	120.30
1	A	147	C	O4'-C1'-N1	5.77	112.82	108.20
1	A	2031	C	O4'-C1'-N1	5.77	112.81	108.20
35	AC	121	C	O4'-C1'-N1	5.77	112.82	108.20
47	Ab	49	ARG	NE-CZ-NH2	5.77	123.19	120.30
23	J	140	ARG	NE-CZ-NH2	5.77	123.18	120.30
28	S	134	ARG	NE-CZ-NH2	-5.77	117.42	120.30
42	A7	78	ARG	NE-CZ-NH2	-5.77	117.42	120.30
66	AZ	3	PHE	CB-CG-CD2	-5.77	116.76	120.80
1	A	1367	U	O4'-C1'-N1	5.77	112.81	108.20
1	A	1626	U	O4'-C1'-N1	5.77	112.81	108.20
1	A	1705	C	C5'-C4'-O4'	5.77	116.02	109.10
76	Ag	12	ARG	NE-CZ-NH2	5.77	123.18	120.30
1	A	1729	A	O4'-C1'-N9	5.76	112.81	108.20
16	3	93	ARG	NE-CZ-NH2	5.76	123.18	120.30
34	AA	240	U	O4'-C1'-N1	5.76	112.81	108.20
34	AA	1645	U	O4'-C1'-N1	5.76	112.81	108.20
34	AA	3211	C	O4'-C1'-N1	5.76	112.81	108.20
34	AA	3668	U	O4'-C1'-N1	5.76	112.81	108.20
34	AA	3711	U	O4'-C1'-N1	5.76	112.81	108.20
59	AS	180	ARG	NE-CZ-NH1	5.76	123.18	120.30
34	AA	1526	G	O4'-C1'-N9	5.76	112.81	108.20
34	AA	3736	A	O4'-C1'-N9	5.76	112.81	108.20
1	A	472	U	O4'-C1'-N1	5.76	112.81	108.20
1	A	607	U	O4'-C1'-N1	5.76	112.81	108.20
34	AA	1551	C	O4'-C1'-N1	5.76	112.81	108.20
34	AA	2488	C	O4'-C1'-N1	5.76	112.81	108.20
36	AB	8	U	O4'-C1'-N1	5.76	112.81	108.20
1	A	1691	G	O4'-C1'-N9	5.76	112.81	108.20
34	AA	2392	A	O4'-C1'-N9	5.76	112.81	108.20
36	AB	93	G	N1-C6-O6	5.76	123.36	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	F	145	ARG	NE-CZ-NH1	5.76	123.18	120.30
30	U	99	ARG	NE-CZ-NH1	5.75	123.18	120.30
34	AA	1107	U	O4'-C1'-N1	5.75	112.80	108.20
38	A1	34	ARG	NE-CZ-NH1	5.75	123.18	120.30
34	AA	685	U	P-O3'-C3'	5.75	126.61	119.70
34	AA	1156	U	O4'-C1'-N1	5.75	112.80	108.20
34	AA	1304	C	O4'-C1'-N1	5.75	112.80	108.20
34	AA	1474	A	O4'-C1'-N9	5.75	112.80	108.20
34	AA	1553	U	O4'-C1'-N1	5.75	112.80	108.20
34	AA	2621	U	O4'-C1'-N1	5.75	112.80	108.20
34	AA	3074	U	O4'-C1'-N1	5.75	112.80	108.20
34	AA	3382	U	O4'-C1'-N1	5.75	112.80	108.20
69	AD	123	ARG	NE-CZ-NH1	5.75	123.18	120.30
34	AA	1293	G	O4'-C1'-N9	5.75	112.80	108.20
1	A	247	G	O4'-C1'-N9	5.75	112.80	108.20
1	A	1100	U	P-O3'-C3'	5.75	126.60	119.70
34	AA	290	G	C5-C6-O6	-5.75	125.15	128.60
34	AA	2659	C	O4'-C1'-N1	5.75	112.80	108.20
2	7	20	U	P-O3'-C3'	5.75	126.60	119.70
18	5	19	ARG	NE-CZ-NH2	-5.75	117.43	120.30
34	AA	147	C	O4'-C1'-N1	5.75	112.80	108.20
34	AA	1538	U	P-O3'-C3'	5.75	126.60	119.70
34	AA	2116	C	O4'-C1'-N1	5.75	112.80	108.20
34	AA	3014	C	O4'-C1'-N1	5.75	112.80	108.20
2	7	4	G	O4'-C1'-N9	5.75	112.80	108.20
34	AA	1822	A	O4'-C1'-N9	5.75	112.80	108.20
1	A	1403	U	C5'-C4'-C3'	-5.74	106.81	116.00
34	AA	797	A	O4'-C1'-N9	5.74	112.80	108.20
34	AA	1460	A	P-O5'-C5'	5.74	130.09	120.90
1	A	1283	U	O4'-C1'-N1	5.74	112.79	108.20
18	5	42	ARG	NE-CZ-NH1	5.74	123.17	120.30
72	AG	9	MET	CG-SD-CE	-5.74	91.02	100.20
1	A	1744	A	O4'-C1'-N9	5.74	112.79	108.20
34	AA	810	U	P-O3'-C3'	5.74	126.59	119.70
72	AG	51	ARG	NE-CZ-NH1	-5.74	117.43	120.30
1	A	1912	C	O4'-C1'-N1	5.74	112.79	108.20
1	A	1938	C	O4'-C1'-N1	5.74	112.79	108.20
34	AA	749	U	P-O3'-C3'	-5.74	112.82	119.70
34	AA	3471	A	C5'-C4'-O4'	5.74	115.98	109.10
1	A	857	A	O4'-C1'-N9	5.73	112.79	108.20
34	AA	3568	G	O4'-C1'-N9	5.73	112.79	108.20
1	A	483	A	O4'-C1'-N9	5.73	112.79	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1375	C	C2-N1-C1'	5.73	125.11	118.80
1	A	1909	C	O4'-C1'-N1	5.73	112.78	108.20
34	AA	981	U	O4'-C1'-N1	5.73	112.79	108.20
34	AA	2884	G	C5'-C4'-O4'	5.73	115.98	109.10
34	AA	681	U	C5'-C4'-C3'	-5.73	106.83	116.00
1	A	630	C	C2-N1-C1'	5.72	125.10	118.80
34	AA	1161	C	O4'-C1'-N1	5.72	112.78	108.20
34	AA	3676	C	O4'-C1'-N1	5.72	112.78	108.20
70	AE	270	PHE	CB-CG-CD2	-5.72	116.79	120.80
1	A	102	A	O4'-C1'-N9	5.72	112.78	108.20
34	AA	892	U	O4'-C1'-N1	5.72	112.78	108.20
34	AA	1109	U	O4'-C1'-N1	5.72	112.78	108.20
34	AA	1550	A	O4'-C1'-N9	5.72	112.78	108.20
34	AA	1337	G	O4'-C1'-N9	5.72	112.78	108.20
34	AA	2210	U	O4'-C1'-N1	5.72	112.78	108.20
34	AA	514	C	O4'-C1'-N1	5.72	112.78	108.20
1	A	2050	U	O4'-C1'-N1	5.72	112.78	108.20
34	AA	1113	C	O4'-C1'-N1	5.72	112.77	108.20
1	A	1302	G	O4'-C1'-N9	5.72	112.77	108.20
1	A	2065	C	O4'-C1'-N1	5.72	112.77	108.20
34	AA	703	U	O4'-C1'-N1	5.71	112.77	108.20
53	Ai	39	ARG	NE-CZ-NH1	5.71	123.16	120.30
34	AA	2215	G	P-O3'-C3'	5.71	126.56	119.70
34	AA	3721	U	O4'-C1'-N1	5.71	112.77	108.20
1	A	1076	C	P-O3'-C3'	-5.71	112.85	119.70
1	A	1171	U	O4'-C1'-N1	5.71	112.77	108.20
35	AC	25	C	O4'-C1'-N1	5.71	112.77	108.20
35	AC	157	A	O4'-C1'-N9	5.71	112.77	108.20
75	AV	16	PHE	CB-CG-CD2	-5.71	116.80	120.80
2	7	65	C	O4'-C1'-N1	5.71	112.77	108.20
34	AA	3319	C	O4'-C1'-N1	5.71	112.77	108.20
34	AA	3453	U	O4'-C1'-N1	5.71	112.77	108.20
34	AA	2415	G	O4'-C1'-N9	5.71	112.77	108.20
34	AA	3216	C	O4'-C1'-N1	5.71	112.77	108.20
65	AT	73	ARG	NE-CZ-NH1	5.71	123.15	120.30
34	AA	423	U	O4'-C1'-N1	5.71	112.77	108.20
1	A	1861	U	O4'-C1'-N1	5.71	112.76	108.20
1	A	293	U	O4'-C1'-N1	5.70	112.76	108.20
5	G	178	ARG	NE-CZ-NH2	5.70	123.15	120.30
34	AA	283	U	O4'-C1'-N1	5.70	112.76	108.20
34	AA	2991	U	O4'-C1'-N1	5.70	112.76	108.20
1	A	1697	C	O4'-C1'-N1	5.70	112.76	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	3770	C	O4'-C1'-N1	5.70	112.76	108.20
1	A	1448	U	C6-N1-C1'	-5.70	113.22	121.20
34	AA	2550	C	C6-N1-C1'	-5.70	113.96	120.80
34	AA	3231	A	C1'-O4'-C4'	-5.70	105.34	109.90
1	A	1645	C	C6-N1-C1'	-5.70	113.97	120.80
21	F	221	ARG	NE-CZ-NH1	-5.70	117.45	120.30
34	AA	2426	U	O4'-C1'-N1	5.70	112.76	108.20
51	AP	186	ARG	NE-CZ-NH2	5.70	123.15	120.30
59	AS	180	ARG	NE-CZ-NH2	-5.70	117.45	120.30
1	A	128	A	P-O3'-C3'	-5.69	112.87	119.70
33	C	119	ARG	NE-CZ-NH1	5.69	123.15	120.30
34	AA	382	A	N1-C6-N6	-5.69	115.18	118.60
34	AA	1977	U	P-O3'-C3'	5.69	126.53	119.70
34	AA	3224	U	O4'-C1'-N1	5.69	112.75	108.20
1	A	1059	U	O4'-C1'-N1	5.69	112.75	108.20
1	A	1178	C	O4'-C1'-N1	5.69	112.75	108.20
34	AA	682	A	O4'-C1'-N9	5.69	112.75	108.20
34	AA	3365	U	O4'-C1'-N1	5.69	112.75	108.20
74	AH	114	ARG	NE-CZ-NH1	-5.69	117.45	120.30
34	AA	361	G	C5-C6-O6	-5.69	125.19	128.60
3	D	67	ARG	NE-CZ-NH1	5.68	123.14	120.30
34	AA	3398	A	O4'-C1'-N9	5.68	112.75	108.20
1	A	1212	C	O4'-C1'-N1	5.68	112.75	108.20
20	B	213	ARG	NE-CZ-NH1	5.68	123.14	120.30
24	L	31	ARG	NE-CZ-NH1	5.68	123.14	120.30
34	AA	2560	C	O4'-C1'-N1	5.68	112.74	108.20
71	AF	121	ARG	NE-CZ-NH1	5.68	123.14	120.30
1	A	789	U	O4'-C1'-N1	5.68	112.74	108.20
19	6	42	ARG	NE-CZ-NH1	5.68	123.14	120.30
34	AA	1078	C	O4'-C1'-N1	5.68	112.74	108.20
34	AA	2887	U	O4'-C1'-N1	5.68	112.74	108.20
1	A	124	U	O4'-C1'-N1	5.68	112.74	108.20
1	A	1402	A	O4'-C1'-N9	5.68	112.74	108.20
34	AA	1650	U	P-O3'-C3'	5.68	126.51	119.70
34	AA	3154	U	O4'-C1'-N1	5.68	112.74	108.20
69	AD	227	ARG	NE-CZ-NH1	-5.68	117.46	120.30
1	A	121	A	N1-C6-N6	-5.67	115.19	118.60
1	A	2063	U	O4'-C1'-N1	5.67	112.74	108.20
34	AA	3029	G	O4'-C1'-N9	5.67	112.74	108.20
38	A1	84	ARG	NE-CZ-NH2	-5.67	117.46	120.30
51	AP	196	ARG	NE-CZ-NH2	5.67	123.14	120.30
55	AJ	87	ARG	NE-CZ-NH1	5.67	123.14	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	2489	C	O4'-C1'-N1	5.67	112.74	108.20
34	AA	2958	G	O4'-C1'-N9	5.67	112.74	108.20
34	AA	3329	C	P-O3'-C3'	-5.67	112.89	119.70
1	A	1644	U	O4'-C1'-N1	5.67	112.74	108.20
30	U	131	ARG	NE-CZ-NH2	5.67	123.14	120.30
51	AP	44	ARG	NE-CZ-NH2	5.67	123.14	120.30
34	AA	779	U	O4'-C1'-N1	5.67	112.74	108.20
1	A	1422	U	O4'-C1'-N1	5.67	112.73	108.20
1	A	1745	U	O4'-C1'-N1	5.67	112.73	108.20
34	AA	2174	G	N1-C6-O6	5.67	123.30	119.90
34	AA	3428	U	O4'-C1'-N1	5.67	112.73	108.20
1	A	34	G	O4'-C1'-N9	5.67	112.73	108.20
34	AA	3554	U	O4'-C1'-N1	5.67	112.73	108.20
35	AC	145	A	C2'-C3'-O3'	5.66	122.76	113.70
34	AA	1078	C	P-O3'-C3'	5.66	126.49	119.70
34	AA	2819	U	O4'-C1'-N1	5.66	112.73	108.20
1	A	429	G	O4'-C1'-N9	5.66	112.73	108.20
1	A	815	G	P-O5'-C5'	-5.66	111.84	120.90
45	A9	127	PHE	CB-CG-CD2	-5.66	116.84	120.80
34	AA	301	U	O4'-C1'-N1	5.66	112.73	108.20
62	AR	95	TYR	CB-CG-CD2	-5.66	117.61	121.00
34	AA	203	A	O4'-C1'-N9	5.66	112.72	108.20
34	AA	318	U	C5'-C4'-O4'	5.66	115.89	109.10
34	AA	594	C	C6-N1-C1'	-5.66	114.01	120.80
71	AF	140	ARG	NE-CZ-NH1	5.66	123.13	120.30
1	A	89	C	C6-N1-C2	-5.66	118.04	120.30
1	A	2009	C	O4'-C1'-N1	5.66	112.72	108.20
34	AA	215	C	C2'-C3'-O3'	5.66	122.75	113.70
34	AA	3280	U	C5'-C4'-C3'	5.66	125.05	116.00
73	AU	122	ARG	NE-CZ-NH2	5.66	123.13	120.30
1	A	893	U	O4'-C1'-N1	5.65	112.72	108.20
34	AA	1017	U	O4'-C1'-N1	5.65	112.72	108.20
34	AA	1648	U	O4'-C1'-N1	5.65	112.72	108.20
34	AA	3239	U	O4'-C1'-N1	5.65	112.72	108.20
36	AB	26	C	P-O3'-C3'	5.65	126.48	119.70
60	AO	108	PHE	CB-CG-CD2	-5.65	116.84	120.80
34	AA	3067	G	O4'-C1'-N9	5.65	112.72	108.20
1	A	54	C	O4'-C1'-N1	5.65	112.72	108.20
1	A	204	U	P-O5'-C5'	5.65	129.94	120.90
61	AQ	57	TYR	CB-CG-CD1	-5.65	117.61	121.00
34	AA	3047	U	O4'-C1'-N1	5.65	112.72	108.20
34	AA	3715	U	O4'-C1'-N1	5.65	112.72	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1064	A	O3'-P-O5'	-5.65	93.27	104.00
34	AA	935	A	O4'-C1'-N9	5.65	112.72	108.20
34	AA	1183	U	O4'-C1'-N1	5.65	112.72	108.20
1	A	1297	A	P-O5'-C5'	5.64	129.93	120.90
34	AA	1431	A	O4'-C1'-N9	5.64	112.72	108.20
34	AA	2174	G	C5-C6-O6	-5.64	125.21	128.60
34	AA	2567	U	O4'-C1'-N1	5.64	112.72	108.20
1	A	1000	C	O4'-C1'-N1	5.64	112.71	108.20
26	P	55	ARG	NE-CZ-NH2	5.64	123.12	120.30
34	AA	958	U	O4'-C1'-N1	5.64	112.71	108.20
34	AA	2211	C	O4'-C1'-N1	5.64	112.71	108.20
27	Q	16	ARG	NE-CZ-NH2	5.64	123.12	120.30
1	A	2005	U	O4'-C1'-N1	5.64	112.71	108.20
34	AA	2688	G	O4'-C1'-N9	5.64	112.71	108.20
34	AA	703	U	P-O3'-C3'	5.64	126.47	119.70
51	AP	26	ARG	NE-CZ-NH1	5.64	123.12	120.30
26	P	147	ARG	NE-CZ-NH2	5.64	123.12	120.30
34	AA	1517	U	O4'-C1'-N1	5.64	112.71	108.20
67	A3	116	ARG	NE-CZ-NH1	5.64	123.12	120.30
34	AA	134	G	C5-C6-O6	-5.63	125.22	128.60
34	AA	3138	A	O4'-C1'-N9	5.63	112.71	108.20
34	AA	3445	C	O4'-C1'-N1	5.63	112.71	108.20
46	Aa	21	ARG	NE-CZ-NH1	5.63	123.12	120.30
1	A	750	U	O4'-C1'-N1	5.63	112.70	108.20
1	A	879	A	O4'-C1'-N9	5.63	112.70	108.20
34	AA	495	U	O4'-C1'-N1	5.63	112.70	108.20
34	AA	832	U	O4'-C1'-N1	5.63	112.70	108.20
63	AW	127	ARG	NE-CZ-NH1	5.63	123.11	120.30
1	A	866	A	O4'-C1'-N9	5.63	112.70	108.20
34	AA	1513	U	O4'-C1'-N1	5.62	112.70	108.20
34	AA	2138	U	O4'-C1'-N1	5.62	112.70	108.20
34	AA	667	U	C2-N1-C1'	5.62	124.45	117.70
34	AA	1197	U	O4'-C1'-N1	5.62	112.70	108.20
34	AA	2434	U	O4'-C1'-N1	5.62	112.70	108.20
1	A	1921	C	O4'-C1'-N1	5.62	112.70	108.20
1	A	2075	C	O4'-C1'-N1	5.62	112.70	108.20
34	AA	2082	C	O4'-C1'-N1	5.62	112.70	108.20
34	AA	2604	G	N1-C6-O6	5.62	123.27	119.90
1	A	1064	A	P-O3'-C3'	5.62	126.44	119.70
16	3	89	ARG	NE-CZ-NH2	-5.62	117.49	120.30
34	AA	3251	U	O4'-C1'-N1	5.62	112.69	108.20
34	AA	3352	G	C5-C6-O6	-5.62	125.23	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	AB	14	C	O4'-C1'-N1	5.62	112.69	108.20
34	AA	2019	A	O4'-C1'-N9	5.62	112.69	108.20
34	AA	2509	U	O4'-C1'-N1	5.62	112.69	108.20
1	A	849	U	O4'-C1'-N1	5.61	112.69	108.20
34	AA	812	U	O4'-C1'-N1	5.61	112.69	108.20
34	AA	3300	A	P-O3'-C3'	5.61	126.44	119.70
63	AW	61	ARG	NE-CZ-NH2	-5.61	117.49	120.30
73	AU	122	ARG	NE-CZ-NH1	-5.61	117.49	120.30
34	AA	1498	U	O4'-C1'-N1	5.61	112.69	108.20
1	A	138	U	O4'-C1'-N1	5.61	112.69	108.20
1	A	433	C	O4'-C1'-N1	5.61	112.69	108.20
34	AA	2388	U	O4'-C1'-N1	5.61	112.69	108.20
41	A6	30	ARG	NE-CZ-NH2	5.61	123.11	120.30
1	A	1031	C	P-O3'-C3'	5.61	126.43	119.70
34	AA	912	U	O4'-C1'-N1	5.61	112.69	108.20
26	P	98	ARG	NE-CZ-NH1	5.61	123.10	120.30
34	AA	230	G	O4'-C1'-N9	5.61	112.69	108.20
34	AA	2715	C	O4'-C1'-N1	5.61	112.69	108.20
42	A7	39	ARG	NE-CZ-NH1	5.61	123.10	120.30
34	AA	412	A	O4'-C1'-N9	5.61	112.68	108.20
34	AA	1812	C	C5'-C4'-C3'	-5.61	107.03	116.00
34	AA	280	U	O4'-C1'-N1	5.60	112.68	108.20
1	A	814	U	O4'-C1'-N1	5.60	112.68	108.20
1	A	1464	U	O4'-C1'-N1	5.60	112.68	108.20
1	A	402	G	P-O3'-C3'	-5.60	112.98	119.70
34	AA	467	U	O4'-C1'-N1	5.60	112.68	108.20
34	AA	1728	C	C6-N1-C2	-5.60	118.06	120.30
34	AA	1493	U	C2-N1-C1'	5.60	124.42	117.70
1	A	1813	U	O4'-C1'-N1	5.60	112.68	108.20
34	AA	113	C	C6-N1-C2	-5.60	118.06	120.30
29	T	44	ARG	NE-CZ-NH1	5.59	123.10	120.30
34	AA	1616	A	N1-C6-N6	-5.59	115.24	118.60
43	AN	73	ARG	NE-CZ-NH2	-5.59	117.50	120.30
1	A	1057	A	O4'-C1'-N9	5.59	112.67	108.20
34	AA	415	U	O4'-C1'-N1	5.59	112.67	108.20
34	AA	659	U	O4'-C1'-N1	5.59	112.67	108.20
34	AA	1958	U	O4'-C1'-N1	5.59	112.67	108.20
34	AA	2814	U	O4'-C1'-N1	5.59	112.67	108.20
1	A	1748	G	N1-C6-O6	5.59	123.25	119.90
1	A	2032	U	O4'-C1'-N1	5.59	112.67	108.20
34	AA	434	C	O4'-C1'-N1	5.59	112.67	108.20
34	AA	497	U	O4'-C1'-N1	5.59	112.67	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	1689	U	O4'-C1'-N1	5.59	112.67	108.20
34	AA	3027	U	O4'-C1'-N1	5.59	112.67	108.20
1	A	1201	G	P-O3'-C3'	-5.59	113.00	119.70
34	AA	584	U	O4'-C1'-N1	5.59	112.67	108.20
57	AK	136	ARG	NE-CZ-NH1	5.59	123.09	120.30
1	A	757	A	O4'-C1'-N9	5.58	112.67	108.20
1	A	1603	U	O4'-C1'-N1	5.58	112.67	108.20
74	AH	172	ARG	NE-CZ-NH1	5.58	123.09	120.30
1	A	588	U	O4'-C1'-N1	5.58	112.67	108.20
1	A	799	U	O4'-C1'-N1	5.58	112.67	108.20
34	AA	83	U	O4'-C1'-N1	5.58	112.67	108.20
34	AA	2673	U	O4'-C1'-N1	5.58	112.67	108.20
1	A	117	G	N1-C6-O6	5.58	123.25	119.90
1	A	1018	U	O4'-C1'-N1	5.58	112.66	108.20
34	AA	2013	U	O3'-P-O5'	-5.58	93.40	104.00
1	A	381	U	O4'-C1'-N1	5.58	112.66	108.20
34	AA	1894	U	O4'-C1'-N1	5.58	112.66	108.20
34	AA	3062	U	O4'-C1'-N1	5.58	112.66	108.20
34	AA	1962	U	O4'-C1'-N1	5.58	112.66	108.20
1	A	846	G	O4'-C1'-N9	5.58	112.66	108.20
1	A	1305	A	O4'-C1'-N9	5.58	112.66	108.20
34	AA	214	C	O4'-C1'-N1	5.58	112.66	108.20
38	A1	84	ARG	NE-CZ-NH1	5.58	123.09	120.30
1	A	941	C	O4'-C1'-N1	5.57	112.66	108.20
2	7	45	G	O4'-C1'-N9	5.57	112.66	108.20
13	Z	22	ARG	NE-CZ-NH1	5.57	123.09	120.30
1	A	1796	C	C5'-C4'-C3'	-5.57	107.09	116.00
66	AZ	83	ARG	NE-CZ-NH1	5.57	123.08	120.30
68	A5	255	ARG	NE-CZ-NH2	-5.57	117.51	120.30
8	M	83	ARG	NE-CZ-NH2	-5.57	117.52	120.30
1	A	401	U	O4'-C1'-N1	5.57	112.65	108.20
1	A	1282	U	O4'-C1'-N1	5.57	112.65	108.20
34	AA	1723	C	O4'-C1'-N1	5.57	112.65	108.20
34	AA	3666	U	O4'-C1'-N1	5.57	112.65	108.20
1	A	1924	U	O4'-C1'-N1	5.57	112.65	108.20
1	A	1322	A	O4'-C1'-N9	5.56	112.65	108.20
34	AA	1288	C	O4'-C1'-N1	5.56	112.65	108.20
1	A	254	U	O4'-C1'-N1	5.56	112.65	108.20
34	AA	439	U	O4'-C1'-N1	5.56	112.65	108.20
59	AS	183	ARG	NE-CZ-NH1	5.56	123.08	120.30
34	AA	2735	G	O4'-C1'-N9	5.56	112.65	108.20
1	A	1705	C	O4'-C1'-N1	5.56	112.65	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	3020	U	O4'-C1'-N1	5.56	112.65	108.20
59	AS	151	PHE	CB-CG-CD1	5.56	124.69	120.80
1	A	1426	G	O4'-C1'-N9	5.56	112.65	108.20
1	A	1980	A	O4'-C1'-N9	5.56	112.65	108.20
34	AA	1292	U	O4'-C1'-N1	5.56	112.65	108.20
2	7	51	C	O4'-C1'-N1	5.55	112.64	108.20
31	V	132	ARG	NE-CZ-NH1	5.55	123.08	120.30
34	AA	236	U	O4'-C1'-N1	5.55	112.64	108.20
34	AA	1818	C	O4'-C1'-N1	5.55	112.64	108.20
34	AA	3301	C	O4'-C1'-N1	5.55	112.64	108.20
34	AA	3786	U	O4'-C1'-N1	5.55	112.64	108.20
71	AF	375	TYR	CB-CG-CD2	-5.55	117.67	121.00
1	A	1421	A	O4'-C1'-N9	5.55	112.64	108.20
34	AA	1416	U	O4'-C1'-N1	5.55	112.64	108.20
1	A	525	G	O4'-C1'-N9	5.55	112.64	108.20
1	A	1197	C	O4'-C1'-N1	5.55	112.64	108.20
28	S	108	TYR	CB-CG-CD1	5.55	124.33	121.00
1	A	37	U	O4'-C1'-N1	5.55	112.64	108.20
1	A	546	G	O4'-C1'-N9	5.55	112.64	108.20
1	A	945	G	C5-C6-O6	-5.55	125.27	128.60
1	A	1676	U	O4'-C1'-N1	5.55	112.64	108.20
34	AA	3177	U	O4'-C1'-N1	5.55	112.64	108.20
34	AA	3777	G	O4'-C1'-N9	5.55	112.64	108.20
1	A	1058	G	N1-C6-O6	5.55	123.23	119.90
34	AA	1741	G	O4'-C1'-N9	5.55	112.64	108.20
71	AF	122	TYR	CB-CG-CD2	-5.54	117.67	121.00
1	A	982	A	O4'-C1'-N9	5.54	112.64	108.20
1	A	1801	A	O4'-C1'-N9	5.54	112.64	108.20
1	A	1889	G	O4'-C1'-N9	5.54	112.64	108.20
34	AA	895	A	C5'-C4'-C3'	-5.54	107.13	116.00
34	AA	2888	U	O4'-C1'-N1	5.54	112.63	108.20
34	AA	3022	U	O4'-C1'-N1	5.54	112.63	108.20
1	A	307	G	C5-C6-O6	-5.54	125.28	128.60
1	A	1980	A	C4'-C3'-C2'	-5.54	97.06	102.60
34	AA	340	U	O4'-C1'-N1	5.54	112.63	108.20
34	AA	3531	C	O4'-C1'-N1	5.54	112.63	108.20
34	AA	3785	G	O4'-C1'-N9	5.54	112.63	108.20
1	A	1831	G	C5-C6-O6	-5.54	125.28	128.60
6	I	195	ARG	NE-CZ-NH1	5.54	123.07	120.30
34	AA	324	U	C5'-C4'-O4'	5.54	115.75	109.10
34	AA	2977	U	O4'-C1'-N1	5.54	112.63	108.20
1	A	1881	G	O4'-C1'-N9	5.54	112.63	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	756	G	O4'-C1'-N9	5.54	112.63	108.20
34	AA	906	G	O4'-C1'-N9	5.54	112.63	108.20
34	AA	1342	U	O4'-C1'-N1	5.54	112.63	108.20
34	AA	2176	A	N1-C6-N6	5.54	121.92	118.60
34	AA	3313	U	C5'-C4'-O4'	5.54	115.74	109.10
34	AA	3724	U	O4'-C1'-N1	5.54	112.63	108.20
2	7	46	G	P-O3'-C3'	-5.53	113.06	119.70
34	AA	200	A	C8-N9-C4	5.53	108.01	105.80
34	AA	650	U	C4'-C3'-C2'	-5.53	97.07	102.60
1	A	100	U	O4'-C1'-N1	5.53	112.62	108.20
34	AA	757	U	O4'-C1'-N1	5.53	112.62	108.20
34	AA	1302	G	O4'-C1'-N9	5.53	112.62	108.20
34	AA	3140	U	O4'-C1'-N1	5.53	112.62	108.20
34	AA	3271	G	N1-C6-O6	5.53	123.22	119.90
1	A	1792	U	O4'-C1'-N1	5.53	112.62	108.20
34	AA	772	A	P-O5'-C5'	-5.53	112.06	120.90
34	AA	952	U	O4'-C1'-N1	5.53	112.62	108.20
34	AA	1573	C	C6-N1-C1'	-5.53	114.17	120.80
34	AA	1849	U	O4'-C1'-N1	5.53	112.62	108.20
68	A5	224	ARG	NE-CZ-NH1	5.53	123.06	120.30
1	A	579	C	O4'-C1'-N1	5.53	112.62	108.20
1	A	1437	U	O4'-C1'-N1	5.53	112.62	108.20
34	AA	1308	A	O4'-C1'-N9	5.53	112.62	108.20
34	AA	2405	A	P-O3'-C3'	5.52	126.33	119.70
1	A	337	G	C5-C6-O6	-5.52	125.29	128.60
34	AA	65	A	O4'-C1'-N9	5.52	112.62	108.20
34	AA	388	C	O4'-C1'-N1	5.52	112.62	108.20
34	AA	669	C	O4'-C1'-N1	5.52	112.62	108.20
34	AA	3130	U	P-O3'-C3'	5.52	126.33	119.70
1	A	1781	C	O4'-C1'-N1	5.52	112.62	108.20
2	7	17	C	O4'-C1'-N1	5.52	112.62	108.20
34	AA	546	C	O4'-C1'-N1	5.52	112.61	108.20
34	AA	1126	U	O4'-C1'-N1	5.52	112.62	108.20
34	AA	1317	C	O4'-C1'-N1	5.52	112.62	108.20
34	AA	1756	G	O4'-C1'-N9	5.52	112.61	108.20
34	AA	943	G	O4'-C1'-N9	5.52	112.61	108.20
68	A5	154	ARG	NE-CZ-NH1	5.52	123.06	120.30
1	A	346	U	O4'-C1'-N1	5.51	112.61	108.20
2	7	48	C	O4'-C1'-N1	5.51	112.61	108.20
2	7	54	U	O4'-C1'-N1	5.51	112.61	108.20
21	F	240	ARG	NE-CZ-NH2	-5.51	117.54	120.30
34	AA	3137	U	P-O3'-C3'	5.51	126.32	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	670	U	O4'-C1'-N1	5.51	112.61	108.20
35	AC	44	A	O4'-C1'-N9	5.51	112.61	108.20
1	A	1821	A	O4'-C1'-N9	5.51	112.61	108.20
34	AA	714	C	P-O3'-C3'	5.51	126.31	119.70
34	AA	1220	U	O4'-C1'-N1	5.51	112.61	108.20
34	AA	350	A	O4'-C1'-N9	5.51	112.61	108.20
34	AA	1426	C	O4'-C1'-N1	5.51	112.61	108.20
34	AA	170	U	O4'-C1'-N1	5.51	112.61	108.20
34	AA	942	C	O4'-C1'-N1	5.51	112.61	108.20
34	AA	1807	C	O4'-C1'-N1	5.51	112.61	108.20
66	AZ	45	ARG	NE-CZ-NH1	5.51	123.05	120.30
1	A	1288	U	O4'-C1'-N1	5.51	112.61	108.20
2	7	15	G	O4'-C1'-N9	5.51	112.61	108.20
34	AA	419	A	N1-C6-N6	-5.51	115.30	118.60
34	AA	2570	C	O4'-C1'-N1	5.51	112.61	108.20
1	A	1677	C	C4'-C3'-C2'	5.50	108.11	102.60
1	A	892	U	O4'-C1'-N1	5.50	112.60	108.20
34	AA	936	A	O4'-C1'-N9	5.50	112.60	108.20
1	A	461	A	O4'-C1'-N9	5.50	112.60	108.20
1	A	914	U	O4'-C1'-N1	5.50	112.60	108.20
1	A	1011	G	O4'-C1'-N9	5.50	112.60	108.20
27	Q	73	ARG	NE-CZ-NH2	5.50	123.05	120.30
34	AA	143	C	O4'-C1'-N1	5.50	112.60	108.20
34	AA	372	G	N1-C6-O6	5.50	123.20	119.90
34	AA	384	A	P-O5'-C5'	5.50	129.70	120.90
34	AA	891	C	O4'-C1'-N1	5.50	112.60	108.20
34	AA	2177	A	O4'-C1'-N9	5.50	112.60	108.20
34	AA	2416	G	O4'-C1'-N9	5.50	112.60	108.20
61	AQ	3	ARG	NE-CZ-NH2	5.50	123.05	120.30
66	AZ	39	ARG	NE-CZ-NH1	5.50	123.05	120.30
1	A	859	A	O4'-C1'-N9	5.50	112.60	108.20
34	AA	1315	C	O4'-C1'-N1	5.50	112.60	108.20
34	AA	2697	A	O4'-C1'-N9	5.50	112.60	108.20
6	I	46	ARG	NE-CZ-NH2	5.50	123.05	120.30
34	AA	2611	U	O4'-C1'-N1	5.50	112.60	108.20
34	AA	3048	U	O4'-C1'-N1	5.50	112.60	108.20
1	A	1812	A	O4'-C1'-N9	5.50	112.60	108.20
34	AA	688	U	O4'-C1'-N1	5.50	112.60	108.20
34	AA	3709	U	P-O3'-C3'	5.50	126.29	119.70
34	AA	49	U	P-O3'-C3'	-5.49	113.11	119.70
34	AA	1874	C	O4'-C1'-N1	5.49	112.59	108.20
34	AA	2807	U	P-O5'-C5'	5.49	129.69	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	52	U	C5'-C4'-O4'	5.49	115.69	109.10
1	A	1234	A	O4'-C1'-N9	5.49	112.59	108.20
34	AA	2554	G	C5-C6-O6	-5.49	125.31	128.60
45	A9	106	ARG	NE-CZ-NH1	5.49	123.05	120.30
1	A	913	U	O4'-C1'-N1	5.49	112.59	108.20
35	AC	42	U	O4'-C1'-N1	5.49	112.59	108.20
1	A	1220	C	C6-N1-C2	-5.49	118.10	120.30
34	AA	1801	G	O4'-C1'-N9	5.49	112.59	108.20
34	AA	1519	G	O4'-C1'-N9	5.49	112.59	108.20
34	AA	310	U	O4'-C1'-N1	5.49	112.59	108.20
30	U	3	ARG	NE-CZ-NH1	5.48	123.04	120.30
34	AA	3342	C	C5'-C4'-O4'	5.48	115.68	109.10
1	A	358	G	O4'-C1'-N9	5.48	112.59	108.20
16	3	38	ARG	NE-CZ-NH1	5.48	123.04	120.30
34	AA	1343	U	O4'-C1'-N1	5.48	112.59	108.20
74	AH	70	ARG	NE-CZ-NH2	5.48	123.04	120.30
27	Q	73	ARG	NE-CZ-NH1	-5.48	117.56	120.30
34	AA	1507	U	O4'-C1'-N1	5.48	112.58	108.20
1	A	924	A	O4'-C1'-N9	5.48	112.58	108.20
48	Ad	73	ARG	NE-CZ-NH1	5.48	123.04	120.30
1	A	1188	A	N1-C6-N6	5.48	121.89	118.60
34	AA	961	G	O4'-C1'-N9	5.48	112.58	108.20
34	AA	127	U	O4'-C1'-N1	5.48	112.58	108.20
34	AA	1005	C	O4'-C1'-N1	5.48	112.58	108.20
1	A	183	C	O4'-C1'-N1	5.47	112.58	108.20
22	H	85	ARG	NE-CZ-NH1	-5.47	117.56	120.30
34	AA	635	U	O4'-C1'-N1	5.47	112.58	108.20
34	AA	712	C	O4'-C1'-N1	5.47	112.58	108.20
34	AA	1981	U	O4'-C1'-N1	5.47	112.58	108.20
70	AE	272	ARG	NE-CZ-NH2	5.47	123.04	120.30
73	AU	116	TYR	CB-CG-CD1	-5.47	117.72	121.00
1	A	853	U	C5'-C4'-O4'	5.47	115.67	109.10
34	AA	3622	U	O4'-C1'-N1	5.47	112.58	108.20
34	AA	3571	A	O4'-C1'-N9	5.47	112.58	108.20
34	AA	1212	U	O4'-C1'-N1	5.47	112.58	108.20
1	A	337	G	N1-C6-O6	5.47	123.18	119.90
34	AA	1161	C	C6-N1-C2	-5.47	118.11	120.30
34	AA	2917	C	O4'-C1'-N1	5.47	112.58	108.20
2	7	26	G	O4'-C1'-N9	5.47	112.57	108.20
26	P	117	ARG	NE-CZ-NH1	-5.47	117.57	120.30
34	AA	2939	C	O4'-C1'-N1	5.47	112.57	108.20
34	AA	3282	U	O4'-C1'-N1	5.47	112.57	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	53	G	P-O3'-C3'	5.46	126.26	119.70
1	A	1646	U	O4'-C1'-N1	5.46	112.57	108.20
34	AA	394	A	P-O3'-C3'	5.46	126.26	119.70
34	AA	1457	G	C5-C6-O6	-5.46	125.32	128.60
34	AA	3624	U	C1'-O4'-C4'	-5.46	105.53	109.90
36	AB	77	A	O4'-C1'-N9	5.46	112.57	108.20
1	A	1011	G	N1-C6-O6	5.46	123.18	119.90
1	A	1971	U	O4'-C1'-N1	5.46	112.57	108.20
34	AA	1180	A	O4'-C1'-N9	5.46	112.57	108.20
34	AA	2033	C	O4'-C1'-N1	5.46	112.57	108.20
36	AB	115	G	O4'-C1'-N9	5.46	112.57	108.20
34	AA	698	G	O4'-C1'-N9	5.46	112.57	108.20
1	A	886	U	P-O3'-C3'	5.46	126.25	119.70
1	A	1375	C	O4'-C1'-N1	5.46	112.57	108.20
1	A	44	U	C5'-C4'-O4'	5.46	115.65	109.10
34	AA	938	U	O4'-C1'-N1	5.46	112.57	108.20
34	AA	1193	G	P-O3'-C3'	5.46	126.25	119.70
34	AA	1335	G	O4'-C1'-N9	5.46	112.56	108.20
35	AC	84	G	P-O3'-C3'	5.46	126.25	119.70
46	Aa	58	ARG	NE-CZ-NH2	5.46	123.03	120.30
59	AS	183	ARG	NE-CZ-NH2	-5.46	117.57	120.30
1	A	32	U	P-O3'-C3'	-5.46	113.15	119.70
1	A	787	G	O4'-C1'-N9	5.46	112.56	108.20
1	A	1907	A	O4'-C1'-N9	5.45	112.56	108.20
1	A	1918	U	O4'-C1'-N1	5.45	112.56	108.20
34	AA	3526	U	P-O3'-C3'	5.45	126.24	119.70
1	A	1802	G	C5'-C4'-O4'	5.45	115.64	109.10
34	AA	1435	G	C5-C6-O6	-5.45	125.33	128.60
1	A	619	U	O4'-C1'-N1	5.45	112.56	108.20
34	AA	3610	C	O4'-C1'-N1	5.45	112.56	108.20
36	AB	50	A	P-O5'-C5'	5.45	129.62	120.90
72	AG	133	ARG	NE-CZ-NH2	-5.45	117.58	120.30
1	A	111	G	O4'-C1'-N9	5.45	112.56	108.20
1	A	325	U	O4'-C1'-N1	5.45	112.56	108.20
1	A	1184	G	N1-C6-O6	5.45	123.17	119.90
34	AA	370	G	C5'-C4'-C3'	-5.45	107.28	116.00
34	AA	533	A	O4'-C1'-N9	5.45	112.56	108.20
1	A	1390	U	O4'-C1'-N1	5.45	112.56	108.20
1	A	450	C	O4'-C1'-N1	5.45	112.56	108.20
1	A	1881	G	C5-C6-O6	-5.45	125.33	128.60
1	A	2004	U	O4'-C1'-N1	5.45	112.56	108.20
34	AA	970	C	O4'-C1'-N1	5.45	112.56	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	2556	C	C5'-C4'-C3'	-5.45	107.29	116.00
34	AA	3057	U	O4'-C1'-N1	5.45	112.56	108.20
36	AB	116	U	O4'-C1'-N1	5.45	112.56	108.20
58	AM	72	ARG	NE-CZ-NH1	5.45	123.02	120.30
25	N	82	ARG	NE-CZ-NH2	5.44	123.02	120.30
33	C	190	ARG	NE-CZ-NH2	5.44	123.02	120.30
34	AA	260	G	O4'-C1'-N9	5.44	112.55	108.20
34	AA	873	U	O4'-C1'-N1	5.44	112.56	108.20
34	AA	1008	U	O4'-C1'-N1	5.44	112.56	108.20
34	AA	1061	U	O4'-C1'-N1	5.44	112.55	108.20
35	AC	108	A	C5-C6-N6	5.44	128.06	123.70
65	AT	143	ARG	NE-CZ-NH1	5.44	123.02	120.30
70	AE	19	ARG	NE-CZ-NH1	5.44	123.02	120.30
1	A	971	G	N1-C6-O6	5.44	123.17	119.90
1	A	1209	G	O4'-C1'-N9	5.44	112.55	108.20
22	H	198	ARG	NE-CZ-NH2	-5.44	117.58	120.30
34	AA	2504	U	O4'-C1'-N1	5.44	112.55	108.20
34	AA	3142	U	O4'-C1'-N1	5.44	112.55	108.20
34	AA	3162	A	O4'-C1'-N9	5.44	112.55	108.20
34	AA	1268	G	O4'-C1'-N9	5.44	112.55	108.20
34	AA	2593	G	O4'-C1'-N9	5.44	112.55	108.20
78	A0	63	ARG	NE-CZ-NH1	5.44	123.02	120.30
1	A	32	U	C5'-C4'-O4'	5.44	115.62	109.10
2	7	64	G	O4'-C1'-N9	5.44	112.55	108.20
34	AA	77	A	O4'-C1'-N9	5.44	112.55	108.20
34	AA	885	A	O4'-C1'-N9	5.44	112.55	108.20
34	AA	3358	U	O4'-C1'-N1	5.44	112.55	108.20
2	7	11	A	P-O5'-C5'	5.44	129.60	120.90
34	AA	1540	G	C4-N9-C1'	5.44	133.57	126.50
16	3	51	ARG	NE-CZ-NH2	5.43	123.02	120.30
35	AC	111	U	O4'-C1'-N1	5.43	112.55	108.20
1	A	2048	A	P-O3'-C3'	5.43	126.22	119.70
1	A	2077	U	O4'-C1'-N1	5.43	112.55	108.20
12	Y	79	ARG	NE-CZ-NH2	5.43	123.02	120.30
14	1	8	ARG	NE-CZ-NH1	5.43	123.02	120.30
34	AA	285	U	O4'-C1'-N1	5.43	112.55	108.20
34	AA	1596	G	C5-C6-O6	-5.43	125.34	128.60
34	AA	2556	C	C5'-C4'-O4'	5.43	115.62	109.10
1	A	992	G	O4'-C1'-N9	5.43	112.54	108.20
20	B	64	ARG	NE-CZ-NH1	5.43	123.02	120.30
34	AA	2562	U	O4'-C1'-N1	5.43	112.54	108.20
34	AA	1516	G	O4'-C1'-N9	5.43	112.54	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	768	C	O4'-C1'-N1	5.43	112.54	108.20
34	AA	2960	G	C1'-O4'-C4'	-5.43	105.56	109.90
34	AA	3737	G	O4'-C1'-N9	5.43	112.54	108.20
34	AA	3716	C	O4'-C1'-N1	5.42	112.54	108.20
34	AA	180	C	O4'-C1'-N1	5.42	112.54	108.20
1	A	1065	C	C6-N1-C2	-5.42	118.13	120.30
31	V	139	ARG	NE-CZ-NH1	5.42	123.01	120.30
34	AA	1330	A	O4'-C1'-N9	5.42	112.54	108.20
71	AF	122	TYR	CB-CG-CD1	5.42	124.25	121.00
34	AA	901	U	O4'-C1'-N1	5.42	112.54	108.20
34	AA	1597	U	O4'-C1'-N1	5.42	112.54	108.20
1	A	1108	A	C4'-C3'-C2'	-5.42	97.18	102.60
34	AA	828	G	O4'-C1'-N9	5.42	112.53	108.20
34	AA	1278	A	P-O3'-C3'	-5.42	113.20	119.70
34	AA	3334	U	O4'-C1'-N1	5.42	112.53	108.20
53	Ai	8	ARG	NE-CZ-NH1	5.42	123.01	120.30
1	A	1726	U	O4'-C1'-N1	5.42	112.53	108.20
34	AA	2959	G	C1'-O4'-C4'	-5.42	105.57	109.90
34	AA	3313	U	O4'-C1'-N1	5.42	112.53	108.20
34	AA	3465	G	C5-C6-O6	-5.42	125.35	128.60
62	AR	85	ARG	NE-CZ-NH2	5.42	123.01	120.30
1	A	1003	C	C2-N1-C1'	5.42	124.76	118.80
34	AA	389	U	O4'-C1'-N1	5.42	112.53	108.20
34	AA	1058	U	O4'-C1'-N1	5.42	112.53	108.20
34	AA	2013	U	O4'-C1'-N1	5.42	112.53	108.20
34	AA	1038	U	O4'-C1'-N1	5.41	112.53	108.20
34	AA	1309	U	O4'-C1'-N1	5.41	112.53	108.20
34	AA	2148	U	O4'-C1'-N1	5.41	112.53	108.20
34	AA	3110	A	P-O3'-C3'	5.41	126.20	119.70
34	AA	1585	U	O4'-C1'-N1	5.41	112.53	108.20
1	A	1605	C	O4'-C1'-N1	5.41	112.53	108.20
34	AA	372	G	C5-C6-O6	-5.41	125.35	128.60
34	AA	644	G	C5'-C4'-C3'	-5.41	107.35	116.00
36	AB	75	G	O4'-C1'-N9	5.41	112.53	108.20
1	A	303	U	O4'-C1'-N1	5.41	112.53	108.20
1	A	1629	G	O4'-C1'-N9	5.41	112.53	108.20
34	AA	1537	G	C5-C6-O6	-5.41	125.36	128.60
34	AA	2695	A	O4'-C1'-N9	5.41	112.52	108.20
34	AA	3056	U	O4'-C1'-N1	5.41	112.52	108.20
1	A	843	U	O4'-C1'-N1	5.40	112.52	108.20
34	AA	200	A	N9-C4-C5	-5.40	103.64	105.80
34	AA	130	G	N1-C6-O6	5.40	123.14	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	K	58	SER	N-CA-CB	5.40	118.60	110.50
34	AA	3749	U	O4'-C1'-N1	5.40	112.52	108.20
1	A	343	G	O4'-C1'-N9	5.40	112.52	108.20
2	7	29	G	P-O3'-C3'	-5.40	113.22	119.70
34	AA	1647	U	O4'-C1'-N1	5.40	112.52	108.20
34	AA	3695	C	O4'-C1'-N1	5.40	112.52	108.20
6	I	189	ARG	NE-CZ-NH1	5.40	123.00	120.30
34	AA	632	U	O4'-C1'-N1	5.40	112.52	108.20
34	AA	1476	A	O4'-C1'-N9	5.40	112.52	108.20
34	AA	1839	U	O4'-C1'-N1	5.40	112.52	108.20
34	AA	1963	U	O4'-C1'-N1	5.40	112.52	108.20
34	AA	2105	A	P-O3'-C3'	5.40	126.18	119.70
34	AA	2803	A	O4'-C1'-N9	5.40	112.52	108.20
36	AB	54	A	O4'-C1'-N9	5.40	112.52	108.20
34	AA	3757	U	O4'-C1'-N1	5.40	112.52	108.20
51	AP	202	ARG	NE-CZ-NH1	5.40	123.00	120.30
1	A	2069	G	O4'-C1'-N9	5.39	112.52	108.20
34	AA	2611	U	C5'-C4'-O4'	5.39	115.58	109.10
35	AC	45	A	O4'-C1'-N9	5.39	112.52	108.20
2	7	44	A	O4'-C1'-N9	5.39	112.51	108.20
16	3	95	ARG	NE-CZ-NH2	-5.39	117.60	120.30
34	AA	644	G	C5'-C4'-O4'	5.39	115.57	109.10
34	AA	2989	U	O4'-C1'-N1	5.39	112.51	108.20
34	AA	3206	A	O4'-C1'-N9	5.39	112.51	108.20
34	AA	3257	G	N1-C6-O6	5.39	123.14	119.90
1	A	868	U	O4'-C1'-N1	5.39	112.51	108.20
2	7	50	U	O4'-C1'-N1	5.39	112.51	108.20
1	A	559	G	O4'-C1'-N9	5.39	112.51	108.20
34	AA	3387	U	O4'-C1'-N1	5.39	112.51	108.20
1	A	143	A	O4'-C1'-N9	5.39	112.51	108.20
1	A	747	U	O4'-C1'-N1	5.39	112.51	108.20
34	AA	417	A	N1-C6-N6	5.39	121.83	118.60
34	AA	646	A	O4'-C1'-N9	5.39	112.51	108.20
34	AA	1487	U	O4'-C1'-N1	5.39	112.51	108.20
34	AA	3527	U	O4'-C1'-N1	5.39	112.51	108.20
34	AA	3657	G	O4'-C1'-N9	5.39	112.51	108.20
34	AA	1497	U	O4'-C1'-N1	5.38	112.51	108.20
1	A	751	U	O4'-C1'-N1	5.38	112.51	108.20
1	A	1180	U	O4'-C1'-N1	5.38	112.51	108.20
34	AA	2717	A	N1-C6-N6	5.38	121.83	118.60
1	A	994	G	N1-C6-O6	5.38	123.13	119.90
1	A	1405	U	O4'-C1'-N1	5.38	112.50	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	I	136	ARG	NE-CZ-NH1	5.38	122.99	120.30
35	AC	115	C	O4'-C1'-N1	5.38	112.51	108.20
1	A	1111	U	O4'-C1'-N1	5.38	112.50	108.20
34	AA	1331	A	O4'-C1'-N9	5.38	112.50	108.20
1	A	636	U	O4'-C1'-N1	5.38	112.50	108.20
43	AN	80	ARG	NE-CZ-NH2	-5.38	117.61	120.30
1	A	884	G	O4'-C1'-N9	5.37	112.50	108.20
27	Q	144	ARG	NE-CZ-NH1	5.37	122.99	120.30
34	AA	1768	A	C5'-C4'-O4'	5.37	115.55	109.10
36	AB	71	G	O4'-C1'-N9	5.37	112.50	108.20
1	A	1276	U	O4'-C1'-N1	5.37	112.50	108.20
2	7	46	G	N1-C6-O6	5.37	123.12	119.90
34	AA	2004	U	C6-N1-C1'	-5.37	113.68	121.20
34	AA	2701	U	O4'-C1'-N1	5.37	112.50	108.20
2	7	36	U	O4'-C1'-N1	5.37	112.50	108.20
34	AA	1882	U	C5'-C4'-O4'	5.37	115.54	109.10
34	AA	1048	G	O4'-C1'-N9	5.37	112.50	108.20
34	AA	1556	G	C5-C6-O6	-5.37	125.38	128.60
34	AA	1662	G	N1-C6-O6	-5.37	116.68	119.90
34	AA	2459	C	O4'-C1'-N1	5.37	112.49	108.20
34	AA	12	U	O4'-C1'-N1	5.37	112.49	108.20
34	AA	155	U	C2-N1-C1'	5.37	124.14	117.70
34	AA	2816	U	O4'-C1'-N1	5.37	112.49	108.20
34	AA	3758	G	O4'-C1'-N9	5.37	112.49	108.20
1	A	1703	U	P-O3'-C3'	5.36	126.14	119.70
34	AA	212	U	O4'-C1'-N1	5.36	112.49	108.20
34	AA	997	G	P-O3'-C3'	5.36	126.14	119.70
34	AA	1895	U	O4'-C1'-N1	5.36	112.49	108.20
36	AB	46	C	OP1-P-OP2	-5.36	111.55	119.60
73	AU	144	ARG	NE-CZ-NH2	5.36	122.98	120.30
34	AA	2127	G	O4'-C1'-N9	5.36	112.49	108.20
34	AA	3129	U	P-O3'-C3'	5.36	126.13	119.70
1	A	1786	U	O4'-C1'-N1	5.36	112.49	108.20
8	M	138	ARG	NE-CZ-NH2	5.36	122.98	120.30
34	AA	1851	A	N1-C6-N6	5.36	121.82	118.60
54	AI	170	ARG	NE-CZ-NH2	5.36	122.98	120.30
34	AA	410	G	C5-C6-O6	-5.36	125.39	128.60
34	AA	1143	G	O4'-C1'-N9	5.36	112.48	108.20
51	AP	30	TYR	CB-CG-CD2	-5.36	117.79	121.00
78	A0	31	ARG	NE-CZ-NH2	-5.36	117.62	120.30
21	F	240	ARG	NE-CZ-NH1	5.36	122.98	120.30
34	AA	1889	A	O4'-C1'-N9	5.36	112.48	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	3737	G	N1-C6-O6	5.35	123.11	119.90
1	A	600	U	P-O3'-C3'	-5.35	113.28	119.70
7	K	20	ARG	NE-CZ-NH1	5.35	122.98	120.30
34	AA	3598	C	O4'-C1'-N1	5.35	112.48	108.20
1	A	654	U	O4'-C1'-N1	5.35	112.48	108.20
28	S	123	ARG	NE-CZ-NH2	5.35	122.97	120.30
34	AA	1252	U	O4'-C1'-N1	5.35	112.48	108.20
34	AA	2662	G	O4'-C1'-N9	5.35	112.48	108.20
34	AA	3364	A	O4'-C1'-N9	5.35	112.48	108.20
75	AV	101	ARG	NE-CZ-NH1	5.35	122.97	120.30
1	A	2020	G	O4'-C1'-N9	5.35	112.48	108.20
34	AA	1157	U	O4'-C1'-N1	5.35	112.48	108.20
34	AA	3706	U	O4'-C1'-N1	5.35	112.48	108.20
1	A	1807	A	O4'-C1'-N9	5.35	112.48	108.20
77	AX	102	TYR	CB-CG-CD1	5.35	124.21	121.00
1	A	26	A	C4'-C3'-C2'	-5.34	97.26	102.60
1	A	1315	U	O4'-C1'-N1	5.34	112.48	108.20
34	AA	633	U	O4'-C1'-N1	5.34	112.47	108.20
34	AA	1170	A	O4'-C1'-N9	5.34	112.47	108.20
35	AC	145	A	C5'-C4'-O4'	5.34	115.51	109.10
1	A	1435	C	O4'-C1'-N1	5.34	112.47	108.20
34	AA	162	U	O4'-C1'-N1	5.34	112.47	108.20
34	AA	3662	U	O4'-C1'-N1	5.34	112.47	108.20
36	AB	86	G	O4'-C1'-N9	5.34	112.47	108.20
68	A5	170	ARG	NE-CZ-NH2	5.34	122.97	120.30
1	A	894	U	O4'-C1'-N1	5.34	112.47	108.20
34	AA	1502	G	C5'-C4'-O4'	5.34	115.51	109.10
34	AA	1628	U	O4'-C1'-N1	5.34	112.47	108.20
34	AA	1651	C	O4'-C1'-N1	5.34	112.47	108.20
34	AA	1710	G	O4'-C1'-N9	5.34	112.47	108.20
34	AA	2970	U	O4'-C1'-N1	5.34	112.47	108.20
34	AA	3597	C	C6-N1-C2	-5.34	118.16	120.30
70	AE	305	MET	CG-SD-CE	-5.34	91.66	100.20
1	A	329	A	O4'-C1'-N9	5.34	112.47	108.20
34	AA	3064	U	P-O3'-C3'	5.34	126.11	119.70
1	A	1864	U	O4'-C1'-N1	5.34	112.47	108.20
34	AA	2747	G	C5-C6-O6	-5.34	125.40	128.60
34	AA	3225	C	O4'-C1'-N1	5.34	112.47	108.20
34	AA	3637	G	O4'-C1'-N9	5.34	112.47	108.20
68	A5	238	ARG	NE-CZ-NH2	-5.34	117.63	120.30
70	AE	123	TYR	CB-CG-CD2	-5.34	117.80	121.00
1	A	522	G	O4'-C1'-N9	5.33	112.47	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	254	U	O4'-C1'-N1	5.33	112.47	108.20
34	AA	644	G	C5-C6-O6	-5.33	125.40	128.60
34	AA	660	U	O4'-C1'-N1	5.33	112.47	108.20
34	AA	2808	U	O4'-C1'-N1	5.33	112.47	108.20
1	A	749	U	O4'-C1'-N1	5.33	112.47	108.20
71	AF	248	ARG	NE-CZ-NH1	5.33	122.97	120.30
73	AU	145	ARG	NE-CZ-NH1	5.33	122.97	120.30
1	A	399	C	O4'-C1'-N1	5.33	112.46	108.20
1	A	1894	A	O4'-C1'-N9	5.33	112.47	108.20
34	AA	616	U	O4'-C1'-N1	5.33	112.47	108.20
34	AA	3693	A	O4'-C1'-N9	5.33	112.46	108.20
35	AC	60	G	O4'-C1'-N9	5.33	112.47	108.20
2	7	46	G	O4'-C1'-N9	5.33	112.46	108.20
34	AA	230	G	C5-C6-O6	-5.33	125.40	128.60
34	AA	530	U	O4'-C1'-N1	5.33	112.46	108.20
34	AA	3084	G	C5'-C4'-O4'	5.33	115.49	109.10
59	AS	38	ARG	NE-CZ-NH1	5.33	122.96	120.30
34	AA	312	A	P-O3'-C3'	-5.33	113.31	119.70
1	A	529	U	O4'-C1'-N1	5.33	112.46	108.20
34	AA	1420	C	O4'-C1'-N1	5.33	112.46	108.20
34	AA	3178	A	N1-C6-N6	-5.32	115.41	118.60
36	AB	89	G	O4'-C1'-N9	5.32	112.46	108.20
61	AQ	153	ARG	NE-CZ-NH2	5.32	122.96	120.30
69	AD	174	ARG	NE-CZ-NH2	-5.32	117.64	120.30
34	AA	2477	U	O4'-C1'-N1	5.32	112.46	108.20
73	AU	184	MET	CG-SD-CE	-5.32	91.69	100.20
1	A	625	U	O4'-C1'-N1	5.32	112.45	108.20
1	A	916	G	O4'-C1'-N9	5.32	112.45	108.20
34	AA	453	A	O4'-C1'-N9	5.32	112.45	108.20
34	AA	768	C	C6-N1-C1'	-5.32	114.42	120.80
1	A	419	U	O4'-C1'-N1	5.32	112.45	108.20
34	AA	197	G	O4'-C1'-N9	5.32	112.45	108.20
34	AA	623	U	O4'-C1'-N1	5.32	112.45	108.20
34	AA	2424	A	P-O3'-C3'	-5.32	113.32	119.70
34	AA	2486	U	O4'-C1'-N1	5.32	112.45	108.20
35	AC	55	A	P-O5'-C5'	-5.32	112.39	120.90
1	A	1198	U	P-O3'-C3'	5.32	126.08	119.70
1	A	1642	U	O4'-C1'-N1	5.32	112.45	108.20
34	AA	613	C	O4'-C1'-N1	5.32	112.45	108.20
34	AA	1658	G	O4'-C1'-N9	5.32	112.45	108.20
34	AA	615	U	O4'-C1'-N1	5.31	112.45	108.20
34	AA	1530	G	O4'-C1'-N9	5.31	112.45	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	3473	G	C5-C6-O6	-5.31	125.41	128.60
34	AA	2205	U	O4'-C1'-N1	5.31	112.45	108.20
1	A	17	C	O4'-C1'-N1	5.31	112.45	108.20
1	A	544	G	O4'-C1'-N9	5.31	112.45	108.20
1	A	1845	U	C5'-C4'-C3'	-5.31	107.50	116.00
34	AA	644	G	O4'-C1'-N9	5.31	112.45	108.20
1	A	307	G	N1-C6-O6	5.31	123.08	119.90
34	AA	818	C	O4'-C1'-N1	5.31	112.44	108.20
34	AA	1433	U	O4'-C1'-N1	5.31	112.44	108.20
34	AA	2209	C	O4'-C1'-N1	5.31	112.45	108.20
57	AK	193	ARG	NE-CZ-NH1	-5.31	117.65	120.30
34	AA	768	C	P-O3'-C3'	-5.31	113.33	119.70
34	AA	2447	U	O4'-C1'-N1	5.31	112.44	108.20
36	AB	112	U	O4'-C1'-N1	5.31	112.44	108.20
1	A	1231	G	O4'-C1'-N9	5.30	112.44	108.20
34	AA	924	G	O4'-C1'-N9	5.30	112.44	108.20
34	AA	2518	U	O4'-C1'-N1	5.30	112.44	108.20
34	AA	2554	G	N1-C6-O6	5.30	123.08	119.90
36	AB	73	U	O4'-C1'-N1	5.30	112.44	108.20
1	A	1380	C	O4'-C1'-N1	5.30	112.44	108.20
24	L	51	ARG	NE-CZ-NH2	5.30	122.95	120.30
34	AA	953	U	O4'-C1'-N1	5.30	112.44	108.20
34	AA	1903	C	C2-N1-C1'	5.30	124.63	118.80
34	AA	2580	C	O4'-C1'-N1	5.30	112.44	108.20
61	AQ	201	ARG	NE-CZ-NH1	5.30	122.95	120.30
1	A	507	U	O4'-C1'-N1	5.30	112.44	108.20
1	A	1217	A	O4'-C1'-N9	5.30	112.44	108.20
34	AA	122	A	C5'-C4'-O4'	5.30	115.46	109.10
34	AA	3423	U	O4'-C1'-N1	5.30	112.44	108.20
34	AA	3435	A	C4'-C3'-C2'	-5.30	97.30	102.60
35	AC	80	C	O4'-C1'-N1	5.30	112.44	108.20
34	AA	1766	U	O4'-C1'-N1	5.30	112.44	108.20
34	AA	2180	U	O4'-C1'-N1	5.30	112.44	108.20
34	AA	94	G	C5-C6-O6	-5.30	125.42	128.60
34	AA	134	G	N1-C6-O6	5.30	123.08	119.90
1	A	891	U	O4'-C1'-N1	5.29	112.44	108.20
1	A	964	G	N1-C6-O6	5.29	123.08	119.90
1	A	1750	U	O4'-C1'-N1	5.29	112.44	108.20
1	A	50	C	O4'-C1'-N1	5.29	112.44	108.20
1	A	1980	A	P-O3'-C3'	5.29	126.05	119.70
34	AA	215	C	C5'-C4'-O4'	5.29	115.45	109.10
34	AA	253	U	O4'-C1'-N1	5.29	112.44	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	AB	76	U	O4'-C1'-N1	5.29	112.44	108.20
1	A	1239	A	O4'-C1'-N9	5.29	112.43	108.20
5	G	234	TYR	CB-CG-CD2	-5.29	117.83	121.00
1	A	201	G	O4'-C1'-N9	5.29	112.43	108.20
1	A	1378	G	O4'-C1'-N9	5.29	112.43	108.20
34	AA	3339	U	O4'-C1'-N1	5.29	112.43	108.20
36	AB	20	U	O4'-C1'-N1	5.29	112.43	108.20
1	A	83	U	O4'-C1'-N1	5.29	112.43	108.20
31	V	11	ARG	NE-CZ-NH2	5.29	122.94	120.30
34	AA	172	C	P-O3'-C3'	5.29	126.05	119.70
34	AA	317	U	O4'-C1'-N1	5.29	112.43	108.20
34	AA	655	U	O4'-C1'-N1	5.29	112.43	108.20
34	AA	2143	U	C5'-C4'-O4'	5.29	115.44	109.10
34	AA	3230	G	O4'-C1'-N9	5.29	112.43	108.20
34	AA	3550	U	O4'-C1'-N1	5.29	112.43	108.20
36	AB	95	U	O4'-C1'-N1	5.29	112.43	108.20
1	A	520	U	O4'-C1'-N1	5.29	112.43	108.20
25	N	67	SER	N-CA-CB	5.29	118.43	110.50
34	AA	146	U	P-O3'-C3'	5.29	126.04	119.70
1	A	1830	C	O4'-C1'-N1	5.29	112.43	108.20
29	T	17	ARG	NE-CZ-NH2	-5.29	117.66	120.30
34	AA	3392	A	O4'-C1'-N9	5.29	112.43	108.20
71	AF	109	ARG	NE-CZ-NH2	5.29	122.94	120.30
34	AA	1615	G	C5-C6-O6	-5.28	125.43	128.60
34	AA	2602	A	O4'-C1'-N9	5.28	112.43	108.20
34	AA	2627	U	O4'-C1'-N1	5.28	112.43	108.20
1	A	1242	G	O4'-C1'-N9	5.28	112.43	108.20
34	AA	362	U	O4'-C1'-N1	5.28	112.42	108.20
34	AA	1560	U	O4'-C1'-N1	5.28	112.43	108.20
34	AA	79	U	O4'-C1'-N1	5.28	112.42	108.20
34	AA	454	G	N1-C6-O6	5.28	123.07	119.90
34	AA	1259	G	C5-C6-O6	-5.28	125.43	128.60
34	AA	1699	G	O4'-C1'-N9	5.28	112.42	108.20
34	AA	2092	G	N1-C6-O6	5.28	123.07	119.90
34	AA	2477	U	OP1-P-OP2	-5.28	111.68	119.60
34	AA	2885	A	C5'-C4'-O4'	5.28	115.44	109.10
34	AA	3097	A	O4'-C1'-N9	5.28	112.42	108.20
34	AA	3445	C	C5'-C4'-O4'	5.28	115.44	109.10
36	AB	85	G	O4'-C1'-N9	5.28	112.42	108.20
34	AA	1479	A	O4'-C1'-N9	5.28	112.42	108.20
34	AA	3032	U	O4'-C1'-N1	5.28	112.42	108.20
34	AA	581	C	P-O5'-C5'	5.28	129.34	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	1320	G	O4'-C1'-N9	5.28	112.42	108.20
34	AA	2631	C	O4'-C1'-N1	5.28	112.42	108.20
34	AA	2651	A	O4'-C1'-N9	5.28	112.42	108.20
70	AE	256	ARG	NE-CZ-NH2	5.28	122.94	120.30
2	7	32	C	O4'-C1'-N1	5.27	112.42	108.20
34	AA	648	U	C1'-O4'-C4'	-5.27	105.68	109.90
34	AA	1540	G	C8-N9-C1'	-5.27	120.15	127.00
34	AA	3612	U	O4'-C1'-N1	5.27	112.42	108.20
34	AA	281	G	O4'-C1'-N9	5.27	112.42	108.20
1	A	86	A	O4'-C1'-N9	5.27	112.42	108.20
1	A	343	G	C5'-C4'-C3'	-5.27	107.57	116.00
34	AA	1026	G	O4'-C1'-C2'	-5.27	100.53	105.80
34	AA	1218	C	O4'-C1'-N1	5.27	112.42	108.20
34	AA	2954	A	O4'-C1'-N9	5.27	112.42	108.20
34	AA	3302	G	O4'-C1'-N9	5.27	112.42	108.20
68	A5	56	ARG	NE-CZ-NH1	5.27	122.94	120.30
1	A	408	U	O4'-C1'-N1	5.27	112.41	108.20
14	1	91	ARG	NE-CZ-NH2	5.27	122.93	120.30
34	AA	1294	G	O4'-C1'-N9	5.27	112.41	108.20
34	AA	1679	U	O4'-C1'-N1	5.27	112.41	108.20
34	AA	3434	A	C1'-O4'-C4'	-5.27	105.69	109.90
1	A	1308	C	O4'-C1'-N1	5.27	112.41	108.20
1	A	1914	U	O4'-C1'-N1	5.27	112.41	108.20
34	AA	1768	A	C5-C6-N6	-5.27	119.49	123.70
1	A	349	C	C5'-C4'-O4'	5.26	115.42	109.10
34	AA	524	U	O4'-C1'-N1	5.26	112.41	108.20
34	AA	1615	G	N1-C6-O6	5.26	123.06	119.90
34	AA	2478	G	O4'-C1'-N9	5.26	112.41	108.20
34	AA	2728	G	N1-C6-O6	5.26	123.06	119.90
1	A	306	A	O4'-C1'-N9	5.26	112.41	108.20
34	AA	911	U	O4'-C1'-N1	5.26	112.41	108.20
1	A	856	U	O4'-C1'-N1	5.26	112.41	108.20
19	6	43	ARG	NE-CZ-NH2	-5.26	117.67	120.30
34	AA	422	G	O4'-C1'-N9	5.26	112.41	108.20
34	AA	1959	G	O4'-C1'-N9	5.26	112.41	108.20
55	AJ	127	ARG	NE-CZ-NH1	5.26	122.93	120.30
34	AA	595	U	C2-N1-C1'	5.26	124.01	117.70
34	AA	2422	C	C6-N1-C2	-5.26	118.20	120.30
34	AA	3226	C	P-O3'-C3'	-5.26	113.39	119.70
59	AS	179	ARG	NE-CZ-NH2	-5.26	117.67	120.30
1	A	1685	U	O4'-C1'-N1	5.26	112.41	108.20
12	Y	66	ARG	NE-CZ-NH2	5.26	122.93	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	576	U	O4'-C1'-N1	5.25	112.40	108.20
1	A	1116	G	N1-C6-O6	5.25	123.05	119.90
34	AA	1035	G	O4'-C1'-N9	5.25	112.40	108.20
34	AA	3082	G	O4'-C1'-N9	5.25	112.40	108.20
1	A	1003	C	O4'-C1'-N1	5.25	112.40	108.20
34	AA	941	G	O4'-C1'-N9	5.25	112.40	108.20
34	AA	1567	A	O4'-C1'-N9	5.25	112.40	108.20
34	AA	2481	A	P-O3'-C3'	-5.25	113.40	119.70
35	AC	11	U	O4'-C1'-N1	5.25	112.40	108.20
1	A	1384	U	O4'-C1'-N1	5.25	112.40	108.20
5	G	186	ARG	NE-CZ-NH2	-5.25	117.67	120.30
1	A	386	U	C2-N1-C1'	5.25	124.00	117.70
3	D	154	ARG	NE-CZ-NH2	5.25	122.92	120.30
34	AA	431	G	C4-N9-C1'	5.25	133.32	126.50
75	AV	13	ARG	NE-CZ-NH2	5.25	122.92	120.30
1	A	125	G	O4'-C1'-N9	5.25	112.40	108.20
1	A	355	U	O4'-C1'-N1	5.25	112.40	108.20
34	AA	2449	U	O4'-C1'-N1	5.25	112.40	108.20
34	AA	3159	G	N1-C6-O6	5.25	123.05	119.90
34	AA	3197	A	O4'-C1'-N9	5.25	112.40	108.20
37	AL	151	PHE	CB-CG-CD2	-5.25	117.13	120.80
62	AR	195	ARG	NE-CZ-NH2	5.25	122.92	120.30
1	A	996	C	C6-N1-C2	-5.25	118.20	120.30
34	AA	2212	U	O4'-C1'-N1	5.25	112.40	108.20
1	A	612	A	O4'-C1'-N9	5.24	112.39	108.20
21	F	113	ARG	NE-CZ-NH1	5.24	122.92	120.30
34	AA	764	G	O4'-C1'-N9	5.24	112.39	108.20
34	AA	2428	U	O4'-C1'-N1	5.24	112.39	108.20
44	A8	24	ARG	NH1-CZ-NH2	-5.24	113.63	119.40
1	A	1093	U	O4'-C1'-N1	5.24	112.39	108.20
2	7	30	G	C5-C6-O6	-5.24	125.45	128.60
34	AA	3513	G	C5'-C4'-O4'	5.24	115.39	109.10
1	A	272	U	O4'-C1'-N1	5.24	112.39	108.20
1	A	1920	C	O4'-C1'-N1	5.24	112.39	108.20
34	AA	2632	C	O4'-C1'-N1	5.24	112.39	108.20
34	AA	2034	G	O4'-C1'-N9	5.24	112.39	108.20
34	AA	2036	C	P-O5'-C5'	5.24	129.28	120.90
34	AA	2095	U	C4'-C3'-C2'	-5.24	97.36	102.60
34	AA	2195	G	C5-C6-O6	-5.24	125.46	128.60
34	AA	3624	U	C5'-C4'-O4'	5.24	115.39	109.10
1	A	1050	U	O4'-C1'-N1	5.24	112.39	108.20
34	AA	975	G	O4'-C1'-N9	5.24	112.39	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	L	210	ARG	NE-CZ-NH2	5.24	122.92	120.30
34	AA	1568	C	O3'-P-O5'	-5.24	94.05	104.00
34	AA	1591	U	O4'-C1'-N1	5.24	112.39	108.20
34	AA	3352	G	N1-C6-O6	5.24	123.04	119.90
72	AG	72	ARG	NE-CZ-NH1	5.24	122.92	120.30
34	AA	1026	G	N1-C6-O6	5.23	123.04	119.90
34	AA	1099	U	O4'-C1'-N1	5.23	112.39	108.20
34	AA	2041	U	O4'-C1'-N1	5.23	112.39	108.20
34	AA	2557	U	O4'-C1'-N1	5.23	112.39	108.20
34	AA	3109	U	O4'-C1'-N1	5.23	112.39	108.20
36	AB	15	U	O4'-C1'-N1	5.23	112.39	108.20
1	A	951	U	O4'-C1'-N1	5.23	112.39	108.20
34	AA	769	U	C6-N1-C1'	-5.23	113.88	121.20
34	AA	1034	A	N1-C6-N6	-5.23	115.46	118.60
1	A	578	G	C5-C6-O6	-5.23	125.46	128.60
14	1	120	ARG	NE-CZ-NH1	5.23	122.91	120.30
34	AA	107	C	P-O5'-C5'	5.23	129.27	120.90
34	AA	131	U	O4'-C1'-N1	5.23	112.38	108.20
34	AA	1903	C	O4'-C1'-N1	5.23	112.38	108.20
35	AC	102	U	O4'-C1'-N1	5.23	112.38	108.20
1	A	918	U	P-O3'-C3'	5.23	125.97	119.70
1	A	1658	G	C1'-O4'-C4'	-5.23	105.72	109.90
1	A	1747	U	O4'-C1'-N1	5.23	112.38	108.20
34	AA	204	G	O4'-C1'-N9	5.23	112.38	108.20
34	AA	297	G	O4'-C1'-N9	5.23	112.38	108.20
34	AA	2511	G	O4'-C1'-N9	5.23	112.38	108.20
34	AA	3233	G	O4'-C1'-N9	5.23	112.38	108.20
34	AA	3264	U	O4'-C1'-N1	5.23	112.38	108.20
35	AC	34	U	O4'-C1'-N1	5.23	112.38	108.20
1	A	1714	U	O4'-C1'-N1	5.23	112.38	108.20
34	AA	2010	C	O4'-C1'-N1	5.23	112.38	108.20
1	A	964	G	C5-C6-O6	-5.22	125.47	128.60
1	A	2007	U	O4'-C1'-N1	5.22	112.38	108.20
34	AA	1211	U	O4'-C1'-N1	5.22	112.38	108.20
1	A	142	G	O4'-C1'-N9	5.22	112.38	108.20
1	A	474	A	O4'-C1'-N9	5.22	112.38	108.20
34	AA	2805	U	O4'-C1'-N1	5.22	112.38	108.20
34	AA	265	U	O4'-C1'-N1	5.22	112.38	108.20
34	AA	972	G	O4'-C1'-N9	5.22	112.38	108.20
34	AA	2474	C	O4'-C1'-N1	5.22	112.38	108.20
1	A	1110	G	O4'-C1'-N9	5.22	112.38	108.20
34	AA	3389	G	O4'-C1'-N9	5.22	112.38	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	AC	48	C	O4'-C1'-N1	5.22	112.38	108.20
37	AL	151	PHE	CB-CG-CD1	5.22	124.45	120.80
1	A	1960	A	P-O3'-C3'	5.22	125.96	119.70
2	7	25	C	C6-N1-C2	-5.22	118.21	120.30
22	H	85	ARG	NE-CZ-NH2	5.22	122.91	120.30
34	AA	2714	U	O4'-C1'-N1	5.22	112.37	108.20
34	AA	3660	A	O4'-C1'-N9	5.22	112.37	108.20
35	AC	111	U	C5'-C4'-O4'	5.22	115.36	109.10
1	A	850	G	C5-C6-O6	-5.21	125.47	128.60
1	A	1227	G	O4'-C1'-N9	5.21	112.37	108.20
34	AA	1162	U	O4'-C1'-N1	5.21	112.37	108.20
34	AA	3783	G	O4'-C1'-N9	5.21	112.37	108.20
34	AA	957	G	C5-C6-O6	-5.21	125.47	128.60
34	AA	1117	U	C5'-C4'-O4'	5.21	115.35	109.10
34	AA	1536	U	O4'-C1'-N1	5.21	112.37	108.20
34	AA	2073	G	N1-C6-O6	5.21	123.03	119.90
34	AA	2979	U	O4'-C1'-N1	5.21	112.37	108.20
34	AA	3340	U	O4'-C1'-N1	5.21	112.37	108.20
34	AA	3391	G	O4'-C1'-N9	5.21	112.37	108.20
34	AA	2482	U	O4'-C1'-N1	5.21	112.37	108.20
1	A	565	U	C1'-O4'-C4'	-5.21	105.73	109.90
1	A	1833	G	C5-C6-O6	-5.21	125.47	128.60
34	AA	714	C	O4'-C1'-N1	5.21	112.37	108.20
34	AA	720	U	O4'-C1'-N1	5.21	112.37	108.20
34	AA	986	U	P-O5'-C5'	5.21	129.23	120.90
34	AA	1496	U	O4'-C1'-N1	5.21	112.37	108.20
71	AF	358	ARG	NE-CZ-NH1	5.21	122.90	120.30
34	AA	631	U	O4'-C1'-N1	5.21	112.37	108.20
34	AA	876	C	O3'-P-O5'	-5.21	94.11	104.00
34	AA	1230	A	P-O3'-C3'	5.21	125.95	119.70
76	Ag	32	ARG	NE-CZ-NH1	5.21	122.90	120.30
34	AA	1700	U	O4'-C1'-N1	5.21	112.36	108.20
14	1	116	ARG	NE-CZ-NH1	5.20	122.90	120.30
26	P	50	ARG	NE-CZ-NH1	5.20	122.90	120.30
34	AA	580	A	O4'-C1'-N9	5.20	112.36	108.20
34	AA	1892	G	O4'-C1'-N9	5.20	112.36	108.20
34	AA	2075	U	O4'-C1'-N1	5.20	112.36	108.20
34	AA	612	G	O4'-C1'-N9	5.20	112.36	108.20
34	AA	636	U	O4'-C1'-N1	5.20	112.36	108.20
34	AA	3767	U	C4'-C3'-C2'	-5.20	97.40	102.60
1	A	1104	G	O4'-C1'-N9	5.20	112.36	108.20
2	7	3	C	O4'-C1'-N1	5.20	112.36	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	634	U	O4'-C1'-N1	5.20	112.36	108.20
34	AA	1108	U	O4'-C1'-N1	5.20	112.36	108.20
34	AA	3419	U	O4'-C1'-N1	5.20	112.36	108.20
35	AC	56	A	O4'-C1'-N9	5.20	112.36	108.20
35	AC	82	G	O4'-C1'-N9	5.20	112.36	108.20
57	AK	60	ARG	NE-CZ-NH1	5.20	122.90	120.30
1	A	68	U	O4'-C1'-N1	5.20	112.36	108.20
1	A	514	U	O4'-C1'-N1	5.20	112.36	108.20
34	AA	2187	G	N3-C2-N2	5.20	123.54	119.90
34	AA	2436	A	O4'-C1'-N9	5.20	112.36	108.20
34	AA	3325	G	C5-C6-O6	-5.20	125.48	128.60
34	AA	3417	G	C5-C6-O6	-5.20	125.48	128.60
1	A	423	A	C1'-O4'-C4'	-5.20	105.74	109.90
1	A	1637	U	O4'-C1'-N1	5.20	112.36	108.20
21	F	161	ARG	NE-CZ-NH2	-5.20	117.70	120.30
34	AA	3321	U	O4'-C1'-N1	5.20	112.36	108.20
1	A	516	G	O4'-C1'-N9	5.20	112.36	108.20
34	AA	1612	U	O4'-C1'-N1	5.20	112.36	108.20
34	AA	3573	U	O4'-C1'-N1	5.20	112.36	108.20
1	A	1844	A	C5'-C4'-O4'	5.19	115.33	109.10
34	AA	51	A	O4'-C1'-N9	5.19	112.36	108.20
1	A	1311	U	O4'-C1'-N1	5.19	112.35	108.20
34	AA	305	A	C5'-C4'-O4'	5.19	115.33	109.10
34	AA	307	G	C5-C6-O6	-5.19	125.48	128.60
34	AA	3468	G	O4'-C1'-N9	5.19	112.35	108.20
63	AW	47	TYR	CB-CG-CD2	-5.19	117.88	121.00
1	A	265	U	O4'-C1'-N1	5.19	112.35	108.20
34	AA	228	A	P-O3'-C3'	5.19	125.93	119.70
34	AA	1533	U	O4'-C1'-N1	5.19	112.35	108.20
34	AA	1753	U	O4'-C1'-N1	5.19	112.35	108.20
70	AE	272	ARG	NE-CZ-NH1	-5.19	117.70	120.30
1	A	1711	U	O4'-C1'-N1	5.19	112.35	108.20
1	A	2043	G	O4'-C1'-N9	5.19	112.35	108.20
59	AS	39	ARG	NE-CZ-NH1	5.19	122.89	120.30
1	A	1078	U	O4'-C1'-N1	5.19	112.35	108.20
34	AA	133	U	O4'-C1'-N1	5.19	112.35	108.20
34	AA	140	A	O4'-C1'-N9	5.19	112.35	108.20
34	AA	1641	G	O4'-C1'-N9	5.19	112.35	108.20
34	AA	1915	A	O4'-C1'-N9	5.19	112.35	108.20
34	AA	2030	G	O4'-C1'-N9	5.19	112.35	108.20
35	AC	64	U	O4'-C1'-N1	5.19	112.35	108.20
1	A	809	U	O4'-C1'-N1	5.19	112.35	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	832	A	P-O3'-C3'	5.19	125.92	119.70
34	AA	48	A	O4'-C1'-N9	5.19	112.35	108.20
1	A	1274	C	O4'-C1'-N1	5.18	112.35	108.20
1	A	1787	U	C6-N1-C1'	-5.18	113.94	121.20
34	AA	1158	G	C5-C6-O6	-5.18	125.49	128.60
34	AA	2994	A	C1'-O4'-C4'	-5.18	105.75	109.90
34	AA	3390	U	O4'-C1'-N1	5.18	112.35	108.20
1	A	1720	G	C5-C6-O6	-5.18	125.49	128.60
34	AA	909	U	O4'-C1'-N1	5.18	112.34	108.20
1	A	1720	G	O4'-C1'-N9	5.18	112.34	108.20
1	A	1872	G	O4'-C1'-N9	5.18	112.34	108.20
34	AA	56	G	N1-C6-O6	5.18	123.01	119.90
34	AA	859	C	O4'-C1'-N1	5.18	112.34	108.20
1	A	377	G	O4'-C1'-N9	5.18	112.34	108.20
1	A	1977	G	O4'-C1'-N9	5.18	112.34	108.20
34	AA	1179	U	O4'-C1'-N1	5.18	112.34	108.20
34	AA	3401	C	C6-N1-C2	-5.18	118.23	120.30
1	A	325	U	P-O3'-C3'	-5.17	113.49	119.70
1	A	942	U	C2-N3-C4	-5.17	123.89	127.00
1	A	1443	G	O4'-C1'-N9	5.17	112.34	108.20
1	A	1633	A	P-O3'-C3'	5.17	125.91	119.70
23	J	160	ARG	NE-CZ-NH2	5.17	122.89	120.30
34	AA	436	G	O4'-C1'-N9	5.17	112.34	108.20
36	AB	74	A	O4'-C1'-N9	5.17	112.34	108.20
24	L	49	ARG	NE-CZ-NH2	-5.17	117.71	120.30
34	AA	530	U	C2-N1-C1'	5.17	123.91	117.70
34	AA	2021	A	O4'-C1'-N9	5.17	112.34	108.20
34	AA	123	A	O4'-C1'-N9	5.17	112.34	108.20
34	AA	1529	G	O4'-C1'-N9	5.17	112.34	108.20
34	AA	1897	G	O4'-C1'-N9	5.17	112.34	108.20
34	AA	3331	G	O4'-C1'-N9	5.17	112.34	108.20
34	AA	3379	A	O4'-C1'-N9	5.17	112.34	108.20
34	AA	3397	A	C5'-C4'-O4'	5.17	115.31	109.10
35	AC	43	G	C5-C6-O6	-5.17	125.50	128.60
1	A	829	G	N1-C6-O6	5.17	123.00	119.90
34	AA	1481	A	O4'-C1'-N9	5.17	112.34	108.20
34	AA	1687	G	O4'-C1'-N9	5.17	112.33	108.20
34	AA	1744	U	O4'-C1'-N1	5.17	112.33	108.20
44	A8	45	ARG	NE-CZ-NH2	5.17	122.88	120.30
71	AF	312	ARG	NE-CZ-NH1	5.17	122.89	120.30
1	A	63	G	N1-C6-O6	5.17	123.00	119.90
1	A	323	C	C5'-C4'-O4'	5.17	115.30	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	934	G	C5-C6-O6	-5.17	125.50	128.60
34	AA	3466	U	O4'-C1'-N1	5.17	112.33	108.20
34	AA	3545	U	O4'-C1'-N1	5.17	112.33	108.20
6	I	155	ARG	NE-CZ-NH2	5.16	122.88	120.30
34	AA	1453	U	O4'-C1'-N1	5.16	112.33	108.20
34	AA	1872	A	P-O3'-C3'	5.16	125.89	119.70
34	AA	3024	U	O4'-C1'-N1	5.16	112.33	108.20
34	AA	3491	U	O4'-C1'-N1	5.16	112.33	108.20
53	Ai	42	TYR	CB-CG-CD1	5.16	124.10	121.00
62	AR	181	ARG	NE-CZ-NH1	5.16	122.88	120.30
34	AA	1978	U	O4'-C1'-N1	5.16	112.33	108.20
34	AA	3646	G	C5-C6-O6	-5.16	125.50	128.60
1	A	820	A	O4'-C1'-N9	5.16	112.33	108.20
1	A	1187	A	O4'-C1'-N9	5.16	112.33	108.20
1	A	1956	A	N1-C6-N6	5.16	121.70	118.60
34	AA	3309	G	O4'-C1'-N9	5.16	112.33	108.20
72	AG	51	ARG	NE-CZ-NH2	5.16	122.88	120.30
1	A	1690	A	O4'-C1'-N9	5.16	112.33	108.20
34	AA	50	U	O4'-C1'-N1	5.16	112.33	108.20
34	AA	1570	U	O4'-C1'-N1	5.16	112.33	108.20
1	A	1206	C	O4'-C1'-N1	5.16	112.33	108.20
34	AA	517	U	O4'-C1'-N1	5.16	112.33	108.20
34	AA	3065	C	C6-N1-C1'	-5.16	114.61	120.80
1	A	1844	A	P-O3'-C3'	-5.16	113.51	119.70
34	AA	257	U	C2'-C3'-O3'	5.16	121.95	113.70
34	AA	1579	U	O4'-C1'-N1	5.16	112.33	108.20
35	AC	67	G	O4'-C1'-N9	5.16	112.33	108.20
36	AB	93	G	P-O5'-C5'	5.16	129.15	120.90
77	AX	101	ARG	NE-CZ-NH2	-5.16	117.72	120.30
4	E	135	ARG	NE-CZ-NH2	5.15	122.88	120.30
34	AA	773	A	O4'-C1'-N9	5.15	112.32	108.20
68	A5	238	ARG	NE-CZ-NH1	5.15	122.88	120.30
1	A	1658	G	O4'-C1'-N9	5.15	112.32	108.20
34	AA	505	A	N1-C6-N6	5.15	121.69	118.60
34	AA	2740	A	C5-C6-N6	-5.15	119.58	123.70
1	A	987	U	O4'-C1'-N1	5.15	112.32	108.20
1	A	1065	C	O4'-C1'-N1	5.15	112.32	108.20
1	A	1876	G	N1-C6-O6	5.15	122.99	119.90
34	AA	892	U	P-O3'-C3'	-5.15	113.52	119.70
48	Ad	9	ARG	NE-CZ-NH1	5.15	122.87	120.30
1	A	330	U	O4'-C1'-N1	5.15	112.32	108.20
1	A	386	U	O4'-C1'-N1	5.15	112.32	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1236	U	O4'-C1'-N1	5.15	112.32	108.20
2	7	63	G	C5-C6-O6	-5.15	125.51	128.60
9	W	67	ARG	NE-CZ-NH2	5.15	122.87	120.30
34	AA	82	U	O4'-C1'-N1	5.15	112.32	108.20
34	AA	273	C	P-O3'-C3'	-5.15	113.52	119.70
34	AA	673	U	C1'-O4'-C4'	-5.15	105.78	109.90
34	AA	894	U	O4'-C1'-N1	5.15	112.32	108.20
34	AA	898	G	P-O3'-C3'	5.15	125.88	119.70
34	AA	3376	U	P-O3'-C3'	5.15	125.88	119.70
35	AC	98	A	O4'-C1'-N9	5.15	112.32	108.20
69	AD	123	ARG	NE-CZ-NH2	-5.15	117.73	120.30
1	A	26	A	O4'-C1'-N9	5.14	112.32	108.20
34	AA	545	C	O4'-C1'-N1	5.14	112.31	108.20
46	Aa	4	ARG	NE-CZ-NH1	5.14	122.87	120.30
1	A	1729	A	C5'-C4'-C3'	5.14	124.23	116.00
34	AA	2448	G	O4'-C1'-N9	5.14	112.31	108.20
1	A	1719	U	O4'-C1'-N1	5.14	112.31	108.20
34	AA	1788	C	C5'-C4'-O4'	5.14	115.27	109.10
34	AA	1885	G	O4'-C1'-N9	5.14	112.31	108.20
1	A	614	A	C5'-C4'-O4'	5.14	115.26	109.10
12	Y	108	ARG	NE-CZ-NH1	5.14	122.87	120.30
34	AA	66	A	O4'-C1'-N9	5.14	112.31	108.20
34	AA	2136	C	C5'-C4'-O4'	5.14	115.26	109.10
34	AA	2216	G	N1-C6-O6	5.14	122.98	119.90
35	AC	7	A	C5'-C4'-O4'	5.14	115.26	109.10
51	AP	30	TYR	CB-CG-CD1	5.14	124.08	121.00
1	A	1658	G	N1-C6-O6	5.13	122.98	119.90
34	AA	1429	A	P-O3'-C3'	5.13	125.86	119.70
35	AC	54	C	P-O3'-C3'	5.13	125.86	119.70
1	A	1038	C	C5'-C4'-C3'	-5.13	107.79	116.00
34	AA	2818	U	O4'-C1'-N1	5.13	112.31	108.20
1	A	39	A	O4'-C1'-N9	5.13	112.31	108.20
1	A	626	A	C5'-C4'-C3'	5.13	124.21	116.00
1	A	1216	U	O4'-C1'-N1	5.13	112.31	108.20
1	A	1226	A	O4'-C1'-N9	5.13	112.31	108.20
34	AA	1158	G	N1-C6-O6	5.13	122.98	119.90
34	AA	448	A	N1-C6-N6	-5.13	115.52	118.60
1	A	1647	A	O4'-C1'-N9	5.13	112.30	108.20
34	AA	731	A	N1-C6-N6	5.13	121.68	118.60
34	AA	2004	U	P-O3'-C3'	-5.13	113.55	119.70
34	AA	3266	U	O4'-C1'-N1	5.13	112.30	108.20
1	A	171	U	O4'-C1'-N1	5.13	112.30	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	190	G	N1-C6-O6	5.13	122.98	119.90
34	AA	714	C	C4'-C3'-C2'	-5.13	97.47	102.60
34	AA	3763	G	O4'-C1'-N9	5.13	112.30	108.20
1	A	1254	G	O4'-C1'-N9	5.12	112.30	108.20
34	AA	704	U	O4'-C1'-N1	5.12	112.30	108.20
34	AA	2001	U	O4'-C1'-N1	5.12	112.30	108.20
60	AO	127	ARG	NE-CZ-NH1	5.12	122.86	120.30
1	A	513	A	O4'-C1'-N9	5.12	112.30	108.20
1	A	824	A	O4'-C1'-N9	5.12	112.30	108.20
34	AA	85	A	C5'-C4'-O4'	5.12	115.25	109.10
51	AP	96	ARG	NE-CZ-NH1	5.12	122.86	120.30
1	A	297	U	O4'-C1'-N1	5.12	112.30	108.20
34	AA	742	U	O4'-C1'-N1	5.12	112.30	108.20
34	AA	1556	G	N1-C6-O6	5.12	122.97	119.90
34	AA	2575	U	C5'-C4'-O4'	5.12	115.25	109.10
34	AA	3417	G	N1-C6-O6	5.12	122.97	119.90
37	AL	152	ARG	NE-CZ-NH1	5.12	122.86	120.30
70	AE	275	ARG	NE-CZ-NH1	-5.12	117.74	120.30
1	A	380	U	O4'-C1'-N1	5.12	112.30	108.20
34	AA	44	U	O4'-C1'-N1	5.12	112.30	108.20
34	AA	401	A	C5'-C4'-O4'	5.12	115.24	109.10
51	AP	74	ARG	NE-CZ-NH1	5.12	122.86	120.30
1	A	2071	U	O4'-C1'-N1	5.12	112.30	108.20
32	X	42	ARG	NE-CZ-NH1	5.12	122.86	120.30
34	AA	226	G	C5'-C4'-O4'	5.12	115.24	109.10
34	AA	1654	C	O4'-C1'-N1	5.12	112.30	108.20
1	A	2060	G	O4'-C1'-N9	5.12	112.29	108.20
34	AA	2387	A	O4'-C1'-N9	5.12	112.29	108.20
34	AA	3268	A	O4'-C1'-N9	5.12	112.29	108.20
1	A	148	U	O4'-C1'-N1	5.12	112.29	108.20
34	AA	166	U	O4'-C1'-N1	5.12	112.29	108.20
34	AA	249	U	O4'-C1'-N1	5.12	112.29	108.20
34	AA	1610	A	O4'-C1'-N9	5.12	112.29	108.20
34	AA	2407	C	O4'-C1'-N1	5.12	112.29	108.20
34	AA	3205	U	C6-N1-C1'	-5.12	114.04	121.20
35	AC	147	U	O4'-C1'-N1	5.12	112.29	108.20
36	AB	110	G	O4'-C1'-N9	5.12	112.29	108.20
5	G	153	ARG	NE-CZ-NH1	5.11	122.86	120.30
34	AA	2089	C	P-O3'-C3'	5.11	125.83	119.70
34	AA	548	U	O4'-C1'-N1	5.11	112.29	108.20
1	A	153	A	C5'-C4'-O4'	5.11	115.23	109.10
1	A	1016	U	O4'-C1'-N1	5.11	112.29	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	305	A	C5-C6-N6	-5.11	119.61	123.70
34	AA	1690	A	C5-C6-N6	5.11	127.79	123.70
34	AA	2644	U	O4'-C1'-N1	5.11	112.29	108.20
1	A	469	U	O4'-C1'-N1	5.11	112.29	108.20
1	A	561	C	P-O3'-C3'	5.11	125.83	119.70
34	AA	1838	U	O4'-C1'-N1	5.11	112.29	108.20
1	A	14	U	O4'-C1'-N1	5.11	112.28	108.20
1	A	211	U	O4'-C1'-N1	5.11	112.28	108.20
34	AA	420	U	O4'-C1'-N1	5.11	112.29	108.20
1	A	589	U	C5'-C4'-O4'	5.11	115.23	109.10
34	AA	3639	G	C5-C6-O6	-5.11	125.54	128.60
71	AF	190	ARG	NE-CZ-NH2	5.11	122.85	120.30
1	A	1412	U	O4'-C1'-N1	5.10	112.28	108.20
34	AA	3760	U	O4'-C1'-N1	5.10	112.28	108.20
1	A	413	A	O4'-C1'-N9	5.10	112.28	108.20
1	A	952	U	P-O5'-C5'	5.10	129.06	120.90
34	AA	701	C	O4'-C1'-N1	5.10	112.28	108.20
34	AA	3467	U	O4'-C1'-N1	5.10	112.28	108.20
51	AP	144	ARG	NE-CZ-NH1	5.10	122.85	120.30
1	A	143	A	C4'-C3'-C2'	-5.10	97.50	102.60
34	AA	899	A	P-O3'-C3'	5.10	125.82	119.70
1	A	63	G	O4'-C1'-N9	5.10	112.28	108.20
1	A	1082	A	O4'-C1'-N9	5.10	112.28	108.20
1	A	1843	G	O4'-C1'-N9	5.10	112.28	108.20
34	AA	2728	G	C5-C6-O6	-5.10	125.54	128.60
1	A	1073	U	O4'-C1'-N1	5.10	112.28	108.20
1	A	1295	A	C1'-O4'-C4'	-5.10	105.82	109.90
21	F	51	ARG	NE-CZ-NH1	5.10	122.85	120.30
34	AA	716	C	O4'-C1'-N1	5.10	112.28	108.20
34	AA	2004	U	C5'-C4'-O4'	5.10	115.22	109.10
34	AA	2648	G	C5-C6-O6	-5.10	125.54	128.60
35	AC	31	U	O4'-C1'-N1	5.10	112.28	108.20
34	AA	2820	A	O4'-C1'-N9	5.10	112.28	108.20
34	AA	3034	A	C5'-C4'-C3'	-5.10	107.85	116.00
70	AE	331	ARG	NE-CZ-NH2	-5.10	117.75	120.30
1	A	252	U	O4'-C1'-N1	5.09	112.28	108.20
22	H	72	ARG	NE-CZ-NH1	5.09	122.85	120.30
35	AC	143	G	N3-C2-N2	5.09	123.47	119.90
59	AS	151	PHE	CB-CG-CD2	-5.09	117.23	120.80
36	AB	24	U	O4'-C1'-N1	5.09	112.27	108.20
1	A	402	G	O4'-C1'-N9	5.09	112.27	108.20
1	A	508	U	O4'-C1'-N1	5.09	112.27	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1640	U	O4'-C1'-N1	5.09	112.27	108.20
28	S	120	ARG	NE-CZ-NH1	5.09	122.85	120.30
34	AA	2520	C	O4'-C1'-N1	5.09	112.27	108.20
72	AG	141	ARG	NE-CZ-NH2	5.09	122.85	120.30
34	AA	3664	G	O4'-C1'-N9	5.09	112.27	108.20
36	AB	31	G	O4'-C1'-N9	5.09	112.27	108.20
1	A	45	U	C5'-C4'-O4'	5.09	115.20	109.10
1	A	1436	U	O4'-C1'-N1	5.09	112.27	108.20
18	5	15	ARG	NE-CZ-NH1	-5.09	117.76	120.30
34	AA	178	U	O4'-C1'-N1	5.09	112.27	108.20
34	AA	890	G	O4'-C1'-N9	5.08	112.27	108.20
34	AA	2173	G	O4'-C1'-N9	5.08	112.27	108.20
34	AA	3037	G	O4'-C1'-N9	5.08	112.27	108.20
1	A	970	G	C4-N9-C1'	5.08	133.11	126.50
34	AA	1034	A	O4'-C1'-N9	5.08	112.27	108.20
34	AA	1043	G	C5-C6-O6	-5.08	125.55	128.60
34	AA	2124	C	O4'-C1'-N1	5.08	112.27	108.20
34	AA	3116	A	O4'-C1'-N9	5.08	112.27	108.20
34	AA	3363	U	O4'-C1'-N1	5.08	112.27	108.20
34	AA	3396	U	O4'-C1'-N1	5.08	112.27	108.20
34	AA	3476	A	C2'-C3'-O3'	5.08	121.83	113.70
68	A5	79	ARG	NE-CZ-NH2	-5.08	117.76	120.30
34	AA	867	A	O4'-C1'-N9	5.08	112.27	108.20
34	AA	1092	A	O4'-C1'-N9	5.08	112.27	108.20
1	A	554	U	O4'-C1'-N1	5.08	112.26	108.20
34	AA	1258	A	O4'-C1'-N9	5.08	112.26	108.20
34	AA	431	G	P-O3'-C3'	-5.08	113.61	119.70
34	AA	3043	A	C2'-C3'-O3'	5.08	121.82	113.70
34	AA	3580	G	C5'-C4'-O4'	5.08	115.19	109.10
1	A	1702	C	C6-N1-C1'	-5.08	114.71	120.80
34	AA	431	G	C8-N9-C1'	-5.08	120.40	127.00
34	AA	2661	A	O4'-C1'-N9	5.08	112.26	108.20
35	AC	94	C	C6-N1-C2	-5.08	118.27	120.30
1	A	64	U	O4'-C1'-N1	5.07	112.26	108.20
1	A	577	A	C4'-C3'-C2'	-5.07	97.53	102.60
1	A	832	A	C3'-C2'-C1'	-5.07	97.44	101.50
34	AA	243	U	O4'-C1'-N1	5.07	112.26	108.20
48	Ad	57	ARG	NE-CZ-NH2	5.07	122.84	120.30
1	A	152	G	P-O3'-C3'	5.07	125.79	119.70
4	E	149	ARG	NE-CZ-NH1	5.07	122.84	120.30
34	AA	1794	U	C1'-O4'-C4'	-5.07	105.84	109.90
34	AA	3630	U	O4'-C1'-N1	5.07	112.26	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	3781	A	O4'-C1'-N9	5.07	112.26	108.20
1	A	631	G	O4'-C1'-N9	5.07	112.26	108.20
20	B	115	ARG	NE-CZ-NH2	-5.07	117.76	120.30
34	AA	276	G	O4'-C1'-N9	5.07	112.26	108.20
34	AA	1173	U	O4'-C1'-N1	5.07	112.26	108.20
34	AA	1190	G	O4'-C1'-N9	5.07	112.26	108.20
34	AA	1515	A	O4'-C1'-N9	5.07	112.26	108.20
34	AA	2091	U	P-O3'-C3'	5.07	125.79	119.70
1	A	1873	A	C5-C6-N6	-5.07	119.64	123.70
34	AA	1324	U	P-O3'-C3'	-5.07	113.62	119.70
1	A	33	U	O4'-C1'-N1	5.07	112.25	108.20
1	A	374	U	O4'-C1'-N1	5.07	112.25	108.20
1	A	1270	G	C5-C6-O6	-5.07	125.56	128.60
1	A	1701	G	O4'-C1'-N9	5.07	112.25	108.20
34	AA	3106	U	O4'-C1'-N1	5.07	112.25	108.20
34	AA	3672	A	O4'-C1'-N9	5.07	112.25	108.20
1	A	981	U	C5'-C4'-C3'	-5.07	107.89	116.00
34	AA	2583	C	P-O3'-C3'	5.07	125.78	119.70
34	AA	1480	G	P-O3'-C3'	5.06	125.78	119.70
34	AA	2072	U	O4'-C1'-N1	5.06	112.25	108.20
34	AA	2812	G	P-O5'-C5'	5.06	129.00	120.90
68	A5	113	ARG	NE-CZ-NH2	5.06	122.83	120.30
1	A	2038	A	N1-C6-N6	5.06	121.64	118.60
34	AA	3452	U	O4'-C1'-N1	5.06	112.25	108.20
1	A	296	G	O4'-C1'-N9	5.06	112.25	108.20
1	A	317	U	O4'-C1'-N1	5.06	112.25	108.20
1	A	1857	U	C6-N1-C1'	-5.06	114.12	121.20
23	J	7	ARG	NE-CZ-NH1	5.06	122.83	120.30
34	AA	1614	A	O4'-C1'-N9	5.06	112.25	108.20
1	A	868	U	P-O3'-C3'	5.06	125.77	119.70
1	A	1027	C	O4'-C1'-N1	5.06	112.25	108.20
1	A	1269	U	O4'-C1'-N1	5.06	112.25	108.20
1	A	1710	G	C5-C6-O6	-5.06	125.56	128.60
34	AA	1167	U	O4'-C1'-N1	5.06	112.25	108.20
34	AA	1750	U	C1'-O4'-C4'	-5.06	105.85	109.90
34	AA	2629	U	C5'-C4'-O4'	5.06	115.17	109.10
34	AA	3348	U	O4'-C1'-N1	5.06	112.25	108.20
36	AB	2	G	N1-C6-O6	5.06	122.94	119.90
1	A	509	U	O4'-C1'-N1	5.06	112.24	108.20
1	A	15	U	O4'-C1'-N1	5.05	112.24	108.20
1	A	24	U	O4'-C1'-N1	5.05	112.24	108.20
1	A	578	G	N1-C6-O6	5.05	122.93	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1919	G	O4'-C1'-N9	5.05	112.24	108.20
34	AA	263	U	O4'-C1'-N1	5.05	112.24	108.20
34	AA	1191	G	N1-C6-O6	5.05	122.93	119.90
1	A	945	G	O4'-C1'-N9	5.05	112.24	108.20
1	A	1885	G	O4'-C1'-N9	5.05	112.24	108.20
34	AA	496	C	O4'-C1'-N1	5.05	112.24	108.20
34	AA	833	G	P-O5'-C5'	5.05	128.98	120.90
34	AA	1201	U	O4'-C1'-N1	5.05	112.24	108.20
34	AA	2115	U	O4'-C1'-N1	5.05	112.24	108.20
34	AA	3332	G	C5'-C4'-O4'	5.05	115.16	109.10
34	AA	3507	A	N1-C6-N6	-5.05	115.57	118.60
36	AB	69	U	O4'-C1'-N1	5.05	112.24	108.20
34	AA	521	U	P-O3'-C3'	5.05	125.76	119.70
34	AA	610	U	O4'-C1'-N1	5.05	112.24	108.20
34	AA	1634	G	O4'-C1'-N9	5.05	112.24	108.20
34	AA	1842	U	C5'-C4'-O4'	5.05	115.16	109.10
34	AA	2633	U	O4'-C1'-N1	5.05	112.24	108.20
34	AA	3569	C	O4'-C1'-N1	5.05	112.24	108.20
1	A	955	U	O4'-C1'-N1	5.05	112.24	108.20
1	A	1893	C	C6-N1-C1'	-5.05	114.74	120.80
34	AA	492	U	O4'-C1'-N1	5.05	112.24	108.20
34	AA	2160	G	O4'-C1'-N9	5.05	112.24	108.20
34	AA	2618	G	O4'-C1'-N9	5.05	112.24	108.20
63	AW	60	PHE	CB-CG-CD1	5.05	124.33	120.80
1	A	17	C	C5'-C4'-O4'	5.05	115.16	109.10
1	A	1363	U	C5'-C4'-O4'	5.05	115.16	109.10
1	A	1635	C	C5'-C4'-O4'	5.05	115.16	109.10
34	AA	1021	G	O4'-C1'-N9	5.05	112.24	108.20
34	AA	1856	U	P-O5'-C5'	5.05	128.98	120.90
34	AA	2597	C	O4'-C1'-N1	5.05	112.24	108.20
34	AA	3064	U	O4'-C1'-N1	5.05	112.24	108.20
34	AA	2723	G	O4'-C1'-N9	5.04	112.24	108.20
1	A	893	U	C5'-C4'-O4'	5.04	115.15	109.10
1	A	1271	G	C5-C6-O6	-5.04	125.57	128.60
34	AA	218	U	O4'-C1'-N1	5.04	112.23	108.20
34	AA	1036	A	N1-C6-N6	-5.04	115.57	118.60
34	AA	1980	G	O4'-C1'-N9	5.04	112.23	108.20
34	AA	2956	U	C5'-C4'-O4'	5.04	115.15	109.10
34	AA	3645	A	O4'-C1'-N9	5.04	112.23	108.20
35	AC	71	U	O4'-C1'-N1	5.04	112.23	108.20
1	A	421	U	O4'-C1'-N1	5.04	112.23	108.20
5	G	234	TYR	CB-CG-CD1	5.04	124.03	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	1041	U	C6-N1-C1'	-5.04	114.14	121.20
34	AA	1311	U	O4'-C1'-N1	5.04	112.23	108.20
34	AA	3250	U	O4'-C1'-N1	5.04	112.23	108.20
8	M	67	ARG	NE-CZ-NH1	5.04	122.82	120.30
34	AA	932	U	O4'-C1'-N1	5.04	112.23	108.20
34	AA	1828	G	C5-C6-O6	-5.04	125.58	128.60
34	AA	2618	G	C5'-C4'-O4'	5.04	115.14	109.10
35	AC	141	U	O4'-C1'-N1	5.04	112.23	108.20
34	AA	416	G	C1'-O4'-C4'	-5.04	105.87	109.90
1	A	1087	U	O4'-C1'-N1	5.03	112.23	108.20
1	A	1370	U	O4'-C1'-N1	5.03	112.23	108.20
5	G	63	TYR	CB-CG-CD2	-5.03	117.98	121.00
34	AA	694	U	P-O3'-C3'	-5.03	113.66	119.70
34	AA	905	A	O4'-C1'-N9	5.03	112.23	108.20
2	7	9	G	C5-C6-O6	-5.03	125.58	128.60
5	G	186	ARG	NE-CZ-NH1	5.03	122.82	120.30
34	AA	833	G	C5-C6-O6	-5.03	125.58	128.60
34	AA	1082	G	C5'-C4'-O4'	5.03	115.14	109.10
43	AN	80	ARG	NE-CZ-NH1	5.03	122.82	120.30
2	7	47	U	P-O3'-C3'	5.03	125.74	119.70
34	AA	607	A	C5-C6-N6	-5.03	119.68	123.70
34	AA	1237	C	O4'-C1'-N1	5.03	112.22	108.20
34	AA	1338	U	O4'-C1'-N1	5.03	112.22	108.20
34	AA	1564	G	C5-C6-O6	-5.03	125.58	128.60
34	AA	1876	A	O4'-C1'-N9	5.03	112.22	108.20
34	AA	949	A	N1-C6-N6	-5.03	115.58	118.60
1	A	161	U	C6-N1-C1'	-5.03	114.16	121.20
1	A	968	G	C5-C6-O6	-5.03	125.58	128.60
34	AA	644	G	N1-C6-O6	5.03	122.92	119.90
34	AA	3203	C	O4'-C1'-N1	5.03	112.22	108.20
73	AU	134	ARG	NE-CZ-NH2	5.03	122.81	120.30
34	AA	1751	C	O4'-C1'-N1	5.03	112.22	108.20
1	A	803	G	O4'-C1'-N9	5.02	112.22	108.20
34	AA	431	G	O4'-C1'-N9	5.02	112.22	108.20
36	AB	66	G	C5-C6-O6	-5.02	125.59	128.60
1	A	101	C	P-O3'-C3'	-5.02	113.67	119.70
1	A	1025	U	O4'-C1'-N1	5.02	112.22	108.20
1	A	1389	G	O4'-C1'-N9	5.02	112.22	108.20
34	AA	1909	U	O4'-C1'-N1	5.02	112.22	108.20
34	AA	3002	G	O4'-C1'-N9	5.02	112.22	108.20
34	AA	3607	G	C5-C6-O6	-5.02	125.59	128.60
34	AA	1788	C	P-O3'-C3'	-5.02	113.67	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	3075	A	O4'-C1'-N9	5.02	112.22	108.20
1	A	1442	U	C5'-C4'-O4'	5.02	115.12	109.10
1	A	1864	U	P-O5'-C5'	5.02	128.93	120.90
34	AA	739	G	N1-C6-O6	5.02	122.91	119.90
34	AA	1291	U	O4'-C1'-N1	5.02	112.22	108.20
34	AA	1811	A	C5-C6-N6	5.02	127.72	123.70
34	AA	2096	G	O4'-C1'-N9	5.02	112.22	108.20
61	AQ	21	ARG	NE-CZ-NH1	5.02	122.81	120.30
34	AA	2208	G	O4'-C1'-N9	5.02	112.21	108.20
34	AA	2403	G	O4'-C1'-N9	5.02	112.21	108.20
34	AA	2806	U	O4'-C1'-N1	5.02	112.21	108.20
34	AA	3195	C	C2-N1-C1'	5.02	124.32	118.80
34	AA	3593	U	O4'-C1'-N1	5.02	112.21	108.20
21	F	132	ARG	NE-CZ-NH1	-5.02	117.79	120.30
1	A	179	U	O4'-C1'-N1	5.01	112.21	108.20
34	AA	1475	G	O4'-C1'-N9	5.01	112.21	108.20
31	V	72	ARG	NE-CZ-NH2	-5.01	117.79	120.30
34	AA	1811	A	O4'-C1'-N9	5.01	112.21	108.20
1	A	1168	U	O4'-C1'-N1	5.01	112.21	108.20
34	AA	2595	G	O4'-C1'-N9	5.01	112.21	108.20
34	AA	2919	A	O4'-C1'-N9	5.01	112.21	108.20
56	Ac	28	ARG	NE-CZ-NH1	5.01	122.81	120.30
1	A	481	A	O4'-C1'-N9	5.01	112.21	108.20
34	AA	393	G	O4'-C1'-N9	5.01	112.21	108.20
34	AA	2636	U	O4'-C1'-N1	5.01	112.21	108.20
1	A	466	A	N1-C6-N6	-5.01	115.60	118.60
34	AA	25	A	C1'-O4'-C4'	-5.01	105.89	109.90
34	AA	3698	U	O4'-C1'-N1	5.01	112.20	108.20
2	7	48	C	C2-N1-C1'	5.00	124.31	118.80
34	AA	1224	A	O4'-C1'-N9	5.00	112.20	108.20
1	A	83	U	C5'-C4'-C3'	5.00	124.01	116.00
34	AA	102	A	C5'-C4'-O4'	5.00	115.10	109.10
34	AA	290	G	N1-C6-O6	5.00	122.90	119.90
34	AA	1667	A	O4'-C1'-N9	5.00	112.20	108.20
34	AA	1763	G	O4'-C1'-N9	5.00	112.20	108.20
34	AA	2722	G	O4'-C1'-N9	5.00	112.20	108.20
34	AA	3416	G	O4'-C1'-N9	5.00	112.20	108.20
36	AB	91	C	C5'-C4'-C3'	-5.00	108.00	116.00
62	AR	24	ARG	NE-CZ-NH1	5.00	122.80	120.30
1	A	16	G	P-O3'-C3'	5.00	125.70	119.70
1	A	1882	U	C2-N1-C1'	5.00	123.70	117.70
21	F	161	ARG	NE-CZ-NH1	5.00	122.80	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	AA	1241	G	O4'-C1'-N9	5.00	112.20	108.20
34	AA	1542	A	C5'-C4'-O4'	5.00	115.10	109.10
34	AA	1855	U	O4'-C1'-N1	5.00	112.20	108.20
34	AA	2095	U	O4'-C1'-N1	5.00	112.20	108.20

All (2) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
20	B	225	ILE	CB
34	AA	3018	A	C3'

All (668) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
14	1	106	ARG	Sidechain
14	1	12	TYR	Sidechain
14	1	90	TYR	Sidechain
15	2	76	ARG	Sidechain
16	3	28	ARG	Sidechain
16	3	46	ASP	Peptide
16	3	89	ARG	Sidechain
18	5	19	ARG	Sidechain
18	5	49	ARG	Sidechain
19	6	37	ARG	Sidechain
19	6	40	TYR	Sidechain
19	6	43	ARG	Sidechain
2	7	11	A	Sidechain
2	7	22	G	Sidechain
2	7	30	G	Sidechain
2	7	4	G	Sidechain
2	7	5	G	Sidechain
2	7	54	U	Sidechain
2	7	74	C	Sidechain
2	7	75	C	Sidechain
1	A	1008	A	Sidechain
1	A	1022	A	Sidechain
1	A	1026	A	Sidechain
1	A	1041	G	Sidechain
1	A	1055	G	Sidechain
1	A	1060	G	Sidechain
1	A	1070	A	Sidechain
1	A	1081	U	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1107	U	Sidechain
1	A	1175	G	Sidechain
1	A	1195	G	Sidechain
1	A	1208	G	Sidechain
1	A	1209	G	Sidechain
1	A	1220	C	Sidechain
1	A	1221	G	Sidechain
1	A	1240	A	Sidechain
1	A	1241	A	Sidechain
1	A	1242	G	Sidechain
1	A	1251	G	Sidechain
1	A	1264	A	Sidechain
1	A	1273	G	Sidechain
1	A	1283	U	Sidechain
1	A	1289	G	Sidechain
1	A	129	U	Sidechain
1	A	1290	A	Sidechain
1	A	1307	U	Sidechain
1	A	1364	G	Sidechain
1	A	1402	A	Sidechain
1	A	1407	U	Sidechain
1	A	1417	U	Sidechain
1	A	1423	A	Sidechain
1	A	143	A	Sidechain
1	A	1430	G	Sidechain
1	A	1436	U	Sidechain
1	A	1442	U	Sidechain
1	A	152	G	Sidechain
1	A	1635	C	Sidechain
1	A	1636	A	Sidechain
1	A	1637	U	Sidechain
1	A	1646	U	Sidechain
1	A	1655	G	Sidechain
1	A	166	A	Sidechain
1	A	1660	U	Sidechain
1	A	1665	G	Sidechain
1	A	1730	A	Sidechain
1	A	1794	C	Sidechain
1	A	1798	G	Sidechain
1	A	1807	A	Sidechain
1	A	1809	G	Sidechain
1	A	1819	U	Sidechain

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Mol	Chain	Res	Type	Group
1	A	182	U	Sidechain
1	A	1823	U	Sidechain
1	A	1832	U	Sidechain
1	A	1834	A	Sidechain
1	A	1839	G	Sidechain
1	A	1845	U	Sidechain
1	A	1849	U	Sidechain
1	A	1850	G	Sidechain
1	A	1865	G	Sidechain
1	A	1879	U	Sidechain
1	A	1880	A	Sidechain
1	A	1881	G	Sidechain
1	A	1896	C	Sidechain
1	A	1914	U	Sidechain
1	A	1939	G	Sidechain
1	A	1940	U	Sidechain
1	A	1953	U	Sidechain
1	A	1955	G	Sidechain
1	A	1972	G	Sidechain
1	A	2028	U	Sidechain
1	A	2032	U	Sidechain
1	A	2062	U	Sidechain
1	A	2067	U	Sidechain
1	A	2069	G	Sidechain
1	A	2072	G	Sidechain
1	A	247	G	Sidechain
1	A	263	A	Sidechain
1	A	267	A	Sidechain
1	A	325	U	Sidechain
1	A	343	G	Sidechain
1	A	358	G	Sidechain
1	A	375	U	Sidechain
1	A	39	A	Sidechain
1	A	393	A	Sidechain
1	A	402	G	Sidechain
1	A	406	A	Sidechain
1	A	424	G	Sidechain
1	A	429	G	Sidechain
1	A	44	U	Sidechain
1	A	440	G	Sidechain
1	A	441	U	Sidechain
1	A	453	U	Sidechain

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Mol	Chain	Res	Type	Group
1	A	482	U	Sidechain
1	A	486	A	Sidechain
1	A	493	G	Sidechain
1	A	516	G	Sidechain
1	A	522	G	Sidechain
1	A	546	G	Sidechain
1	A	573	C	Sidechain
1	A	579	C	Sidechain
1	A	598	A	Sidechain
1	A	615	U	Sidechain
1	A	625	U	Sidechain
1	A	626	A	Sidechain
1	A	627	A	Sidechain
1	A	641	G	Sidechain
1	A	646	U	Sidechain
1	A	652	A	Sidechain
1	A	750	U	Sidechain
1	A	751	U	Sidechain
1	A	752	U	Sidechain
1	A	790	U	Sidechain
1	A	802	A	Sidechain
1	A	803	G	Sidechain
1	A	831	U	Sidechain
1	A	834	A	Sidechain
1	A	838	U	Sidechain
1	A	84	A	Sidechain
1	A	877	U	Sidechain
1	A	879	A	Sidechain
1	A	894	U	Sidechain
1	A	895	U	Sidechain
1	A	907	C	Sidechain
1	A	920	A	Sidechain
1	A	942	U	Sidechain
1	A	954	G	Sidechain
1	A	987	U	Sidechain
78	A0	28	TYR	Sidechain
78	A0	31	ARG	Sidechain
78	A0	57	ARG	Sidechain
78	A0	63	ARG	Sidechain
38	A1	65	ARG	Sidechain
67	A3	105	ARG	Sidechain
40	A4	7	HIS	Peptide

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Mol	Chain	Res	Type	Group
68	A5	109	ARG	Sidechain
68	A5	169	ARG	Sidechain
68	A5	224	ARG	Sidechain
68	A5	54	ARG	Sidechain
68	A5	68	ARG	Sidechain
41	A6	56	ARG	Sidechain
42	A7	45	ARG	Sidechain
42	A7	75	PRO	Peptide
42	A7	78	ARG	Sidechain
44	A8	125	ARG	Sidechain
44	A8	43	ARG	Sidechain
44	A8	44	ARG	Peptide
44	A8	74	TYR	Sidechain
45	A9	130	ARG	Sidechain
45	A9	39	ARG	Sidechain
34	AA	10	G	Sidechain
34	AA	1001	A	Sidechain
34	AA	1023	U	Sidechain
34	AA	1044	A	Sidechain
34	AA	1045	A	Sidechain
34	AA	1056	G	Sidechain
34	AA	1073	G	Sidechain
34	AA	1078	C	Sidechain
34	AA	109	A	Sidechain
34	AA	1096	G	Sidechain
34	AA	1103	A	Sidechain
34	AA	1109	U	Sidechain
34	AA	1110	U	Sidechain
34	AA	1115	G	Sidechain
34	AA	1116	G	Sidechain
34	AA	1157	U	Sidechain
34	AA	119	G	Sidechain
34	AA	1201	U	Sidechain
34	AA	1213	U	Sidechain
34	AA	1224	A	Sidechain
34	AA	1232	U	Sidechain
34	AA	1236	U	Sidechain
34	AA	1243	G	Sidechain
34	AA	1255	G	Sidechain
34	AA	1256	U	Sidechain
34	AA	1272	U	Sidechain
34	AA	130	G	Sidechain

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Mol	Chain	Res	Type	Group
34	AA	1300	G	Sidechain
34	AA	1324	U	Sidechain
34	AA	1330	A	Sidechain
34	AA	136	U	Sidechain
34	AA	14	U	Sidechain
34	AA	1423	G	Sidechain
34	AA	1429	A	Sidechain
34	AA	1432	A	Sidechain
34	AA	1447	G	Sidechain
34	AA	1456	C	Sidechain
34	AA	147	C	Sidechain
34	AA	148	G	Sidechain
34	AA	1499	U	Sidechain
34	AA	1502	G	Sidechain
34	AA	1516	G	Sidechain
34	AA	1517	U	Sidechain
34	AA	153	A	Sidechain
34	AA	1534	U	Sidechain
34	AA	1536	U	Sidechain
34	AA	1538	U	Sidechain
34	AA	1563	U	Sidechain
34	AA	157	G	Sidechain
34	AA	1572	U	Sidechain
34	AA	1596	G	Sidechain
34	AA	1601	A	Sidechain
34	AA	1613	G	Sidechain
34	AA	1619	U	Sidechain
34	AA	1628	U	Sidechain
34	AA	1629	G	Sidechain
34	AA	1631	A	Sidechain
34	AA	1643	U	Sidechain
34	AA	1644	U	Sidechain
34	AA	1676	C	Sidechain
34	AA	1677	G	Sidechain
34	AA	1679	U	Sidechain
34	AA	1683	A	Sidechain
34	AA	1695	A	Sidechain
34	AA	1701	G	Sidechain
34	AA	1702	U	Sidechain
34	AA	1703	U	Sidechain
34	AA	1713	G	Sidechain
34	AA	1725	U	Sidechain

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Mol	Chain	Res	Type	Group
34	AA	1740	A	Sidechain
34	AA	1745	G	Sidechain
34	AA	1749	U	Sidechain
34	AA	1750	U	Sidechain
34	AA	1763	G	Sidechain
34	AA	1772	G	Sidechain
34	AA	1780	G	Sidechain
34	AA	1785	U	Sidechain
34	AA	1811	A	Sidechain
34	AA	1820	U	Sidechain
34	AA	1844	G	Sidechain
34	AA	1849	U	Sidechain
34	AA	1851	A	Sidechain
34	AA	1853	C	Sidechain
34	AA	1855	U	Sidechain
34	AA	1870	G	Sidechain
34	AA	1901	A	Sidechain
34	AA	1902	A	Sidechain
34	AA	191	A	Sidechain
34	AA	1997	G	Sidechain
34	AA	2004	U	Sidechain
34	AA	201	G	Sidechain
34	AA	2011	U	Sidechain
34	AA	2018	G	Sidechain
34	AA	205	G	Sidechain
34	AA	2084	U	Sidechain
34	AA	2102	A	Sidechain
34	AA	2105	A	Sidechain
34	AA	2107	C	Sidechain
34	AA	2120	U	Sidechain
34	AA	2125	A	Sidechain
34	AA	2142	G	Sidechain
34	AA	2167	G	Sidechain
34	AA	2170	G	Sidechain
34	AA	2176	A	Sidechain
34	AA	2180	U	Sidechain
34	AA	2193	U	Sidechain
34	AA	2215	G	Sidechain
34	AA	2219	A	Sidechain
34	AA	2220	U	Sidechain
34	AA	240	U	Sidechain
34	AA	2403	G	Sidechain

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Mol	Chain	Res	Type	Group
34	AA	2412	A	Sidechain
34	AA	2414	G	Sidechain
34	AA	2429	U	Sidechain
34	AA	2450	G	Sidechain
34	AA	2452	A	Sidechain
34	AA	2455	G	Sidechain
34	AA	2460	A	Sidechain
34	AA	2480	G	Sidechain
34	AA	2498	U	Sidechain
34	AA	25	A	Sidechain
34	AA	2500	A	Sidechain
34	AA	2502	U	Sidechain
34	AA	2515	A	Sidechain
34	AA	2517	A	Sidechain
34	AA	2549	A	Sidechain
34	AA	2566	G	Sidechain
34	AA	257	U	Sidechain
34	AA	2577	C	Sidechain
34	AA	2589	A	Sidechain
34	AA	2590	U	Sidechain
34	AA	265	U	Sidechain
34	AA	2657	G	Sidechain
34	AA	2666	A	Sidechain
34	AA	2669	G	Sidechain
34	AA	2693	G	Sidechain
34	AA	2696	G	Sidechain
34	AA	2709	U	Sidechain
34	AA	2710	U	Sidechain
34	AA	2711	U	Sidechain
34	AA	2728	G	Sidechain
34	AA	273	C	Sidechain
34	AA	2739	U	Sidechain
34	AA	2802	U	Sidechain
34	AA	2803	A	Sidechain
34	AA	2808	U	Sidechain
34	AA	2809	A	Sidechain
34	AA	2823	U	Sidechain
34	AA	2838	A	Sidechain
34	AA	288	G	Sidechain
34	AA	2915	U	Sidechain
34	AA	2926	A	Sidechain
34	AA	2948	A	Sidechain

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Mol	Chain	Res	Type	Group
34	AA	2957	G	Sidechain
34	AA	2958	G	Sidechain
34	AA	2959	G	Sidechain
34	AA	297	G	Sidechain
34	AA	2980	U	Sidechain
34	AA	3017	A	Sidechain
34	AA	3018	A	Sidechain
34	AA	3033	A	Sidechain
34	AA	3034	A	Sidechain
34	AA	3035	A	Sidechain
34	AA	304	U	Sidechain
34	AA	3062	U	Sidechain
34	AA	3063	U	Sidechain
34	AA	3065	C	Sidechain
34	AA	3066	A	Sidechain
34	AA	308	U	Sidechain
34	AA	3084	G	Sidechain
34	AA	3121	G	Sidechain
34	AA	3141	G	Sidechain
34	AA	3166	U	Sidechain
34	AA	3186	U	Sidechain
34	AA	3195	C	Sidechain
34	AA	3203	C	Sidechain
34	AA	3209	G	Sidechain
34	AA	3210	A	Sidechain
34	AA	3220	U	Sidechain
34	AA	3222	G	Sidechain
34	AA	3233	G	Sidechain
34	AA	3241	U	Sidechain
34	AA	325	A	Sidechain
34	AA	3253	G	Sidechain
34	AA	3268	A	Sidechain
34	AA	3269	A	Sidechain
34	AA	3271	G	Sidechain
34	AA	3300	A	Sidechain
34	AA	331	A	Sidechain
34	AA	3313	U	Sidechain
34	AA	332	A	Sidechain
34	AA	3348	U	Sidechain
34	AA	3355	U	Sidechain
34	AA	3362	A	Sidechain
34	AA	3363	U	Sidechain

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Mol	Chain	Res	Type	Group
34	AA	3365	U	Sidechain
34	AA	3374	U	Sidechain
34	AA	3391	G	Sidechain
34	AA	3412	G	Sidechain
34	AA	3415	A	Sidechain
34	AA	3436	U	Sidechain
34	AA	344	A	Sidechain
34	AA	3449	U	Sidechain
34	AA	346	A	Sidechain
34	AA	3463	G	Sidechain
34	AA	348	C	Sidechain
34	AA	3483	U	Sidechain
34	AA	3484	U	Sidechain
34	AA	349	G	Sidechain
34	AA	3499	C	Sidechain
34	AA	3503	U	Sidechain
34	AA	3505	U	Sidechain
34	AA	352	A	Sidechain
34	AA	3545	U	Sidechain
34	AA	3547	U	Sidechain
34	AA	3570	U	Sidechain
34	AA	3578	A	Sidechain
34	AA	3579	A	Sidechain
34	AA	36	U	Sidechain
34	AA	3629	U	Sidechain
34	AA	3639	G	Sidechain
34	AA	3646	G	Sidechain
34	AA	3658	G	Sidechain
34	AA	3660	A	Sidechain
34	AA	3683	G	Sidechain
34	AA	3706	U	Sidechain
34	AA	3707	U	Sidechain
34	AA	3725	G	Sidechain
34	AA	3739	A	Sidechain
34	AA	3748	U	Sidechain
34	AA	3749	U	Sidechain
34	AA	3761	G	Sidechain
34	AA	3776	U	Sidechain
34	AA	3783	G	Sidechain
34	AA	379	G	Sidechain
34	AA	38	U	Sidechain
34	AA	380	A	Sidechain

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Mol	Chain	Res	Type	Group
34	AA	39	A	Sidechain
34	AA	403	U	Sidechain
34	AA	416	G	Sidechain
34	AA	417	A	Sidechain
34	AA	440	A	Sidechain
34	AA	454	G	Sidechain
34	AA	490	U	Sidechain
34	AA	497	U	Sidechain
34	AA	498	U	Sidechain
34	AA	500	A	Sidechain
34	AA	503	A	Sidechain
34	AA	520	U	Sidechain
34	AA	525	U	Sidechain
34	AA	526	U	Sidechain
34	AA	528	A	Sidechain
34	AA	531	U	Sidechain
34	AA	579	C	Sidechain
34	AA	582	U	Sidechain
34	AA	583	U	Sidechain
34	AA	607	A	Sidechain
34	AA	643	G	Sidechain
34	AA	644	G	Sidechain
34	AA	652	A	Sidechain
34	AA	656	U	Sidechain
34	AA	666	U	Sidechain
34	AA	684	G	Sidechain
34	AA	702	U	Sidechain
34	AA	703	U	Sidechain
34	AA	704	U	Sidechain
34	AA	706	U	Sidechain
34	AA	707	U	Sidechain
34	AA	708	A	Sidechain
34	AA	71	A	Sidechain
34	AA	716	C	Sidechain
34	AA	724	A	Sidechain
34	AA	733	C	Sidechain
34	AA	739	G	Sidechain
34	AA	746	A	Sidechain
34	AA	75	U	Sidechain
34	AA	759	U	Sidechain
34	AA	76	G	Sidechain
34	AA	764	G	Sidechain

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Mol	Chain	Res	Type	Group
34	AA	776	A	Sidechain
34	AA	795	G	Sidechain
34	AA	798	U	Sidechain
34	AA	825	G	Sidechain
34	AA	828	G	Sidechain
34	AA	86	G	Sidechain
34	AA	910	A	Sidechain
34	AA	912	U	Sidechain
34	AA	913	U	Sidechain
34	AA	914	G	Sidechain
34	AA	916	U	Sidechain
34	AA	92	G	Sidechain
34	AA	924	G	Sidechain
34	AA	938	U	Sidechain
34	AA	939	A	Sidechain
34	AA	94	G	Sidechain
34	AA	941	G	Sidechain
34	AA	943	G	Sidechain
34	AA	954	G	Sidechain
34	AA	964	G	Sidechain
34	AA	966	A	Sidechain
34	AA	967	A	Sidechain
34	AA	976	G	Sidechain
34	AA	985	G	Sidechain
34	AA	988	G	Sidechain
36	AB	108	G	Sidechain
36	AB	109	U	Sidechain
36	AB	11	A	Sidechain
36	AB	48	G	Sidechain
36	AB	49	A	Sidechain
36	AB	50	A	Sidechain
36	AB	56	G	Sidechain
36	AB	61	G	Sidechain
36	AB	75	G	Sidechain
35	AC	18	U	Sidechain
35	AC	20	G	Sidechain
35	AC	25	C	Sidechain
35	AC	29	G	Sidechain
35	AC	3	G	Sidechain
35	AC	30	U	Sidechain
35	AC	31	U	Sidechain
35	AC	32	C	Sidechain

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Mol	Chain	Res	Type	Group
35	AC	38	G	Sidechain
35	AC	90	G	Sidechain
69	AD	242	ARG	Sidechain
70	AE	229	ARG	Sidechain
70	AE	24	ARG	Sidechain
70	AE	336	ARG	Sidechain
70	AE	4	ARG	Sidechain
70	AE	8	ARG	Sidechain
70	AE	92	TYR	Sidechain
70	AE	93	ARG	Sidechain
71	AF	109	ARG	Sidechain
71	AF	140	ARG	Sidechain
71	AF	199	ARG	Sidechain
71	AF	312	ARG	Sidechain
71	AF	33	ARG	Sidechain
71	AF	332	TYR	Sidechain
71	AF	389	ARG	Sidechain
71	AF	49	ARG	Sidechain
71	AF	86	ARG	Sidechain
71	AF	97	ARG	Sidechain
72	AG	141	ARG	Sidechain
72	AG	72	ARG	Sidechain
72	AG	92	ARG	Sidechain
54	AI	11	TYR	Sidechain
54	AI	211	ARG	Sidechain
54	AI	48	ARG	Sidechain
54	AI	87	GLY	Peptide
55	AJ	151	TYR	Sidechain
55	AJ	246	ARG	Sidechain
57	AK	132	ARG	Sidechain
57	AK	133	ARG	Sidechain
57	AK	17	ARG	Sidechain
57	AK	193	ARG	Sidechain
57	AK	48	ARG	Sidechain
57	AK	58	ARG	Sidechain
57	AK	73	ARG	Sidechain
37	AL	100	ARG	Sidechain
37	AL	190	ARG	Sidechain
37	AL	20	ARG	Sidechain
37	AL	202	ARG	Sidechain
37	AL	22	ARG	Sidechain
37	AL	99	ARG	Sidechain

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Mol	Chain	Res	Type	Group
58	AM	14	ARG	Sidechain
58	AM	50	ARG	Peptide,Sidechain
43	AN	120	ARG	Sidechain
43	AN	128	ARG	Sidechain
43	AN	23	ARG	Sidechain
43	AN	35	TYR	Sidechain
43	AN	66	ARG	Sidechain
60	AO	104	ARG	Sidechain
60	AO	59	ARG	Sidechain
60	AO	9	ARG	Sidechain
51	AP	176	ARG	Sidechain
51	AP	186	ARG	Sidechain
51	AP	38	ARG	Sidechain
51	AP	67	ARG	Sidechain
51	AP	68	ARG	Sidechain
51	AP	74	ARG	Sidechain
51	AP	96	ARG	Sidechain
61	AQ	139	ARG	Sidechain
61	AQ	154	ARG	Sidechain
61	AQ	34	TYR	Sidechain
61	AQ	38	ARG	Sidechain
61	AQ	88	ARG	Sidechain
61	AQ	90	ARG	Sidechain
62	AR	107	ARG	Sidechain
62	AR	21	ARG	Sidechain
62	AR	24	ARG	Sidechain
62	AR	85	ARG	Sidechain
59	AS	10	ARG	Sidechain
59	AS	167	ARG	Sidechain
59	AS	27	ARG	Sidechain
59	AS	51	ARG	Sidechain
59	AS	59	ARG	Sidechain
59	AS	74	HIS	Peptide
59	AS	90	ARG	Sidechain
65	AT	2	SER	Peptide
65	AT	41	ARG	Sidechain
65	AT	70	ARG	Sidechain
65	AT	87	ARG	Sidechain
73	AU	122	ARG	Sidechain
73	AU	124	ARG	Sidechain
73	AU	157	ARG	Sidechain
73	AU	171	ARG	Sidechain

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Mol	Chain	Res	Type	Group
73	AU	49	ARG	Sidechain
75	AV	109	ARG	Sidechain
75	AV	31	TYR	Sidechain
75	AV	71	ARG	Sidechain
63	AW	151	ARG	Sidechain
63	AW	34	ARG	Sidechain
63	AW	37	ARG	Sidechain
63	AW	56	ARG	Sidechain
64	AY	137	ARG	Sidechain
66	AZ	11	ARG	Sidechain
66	AZ	114	ARG	Sidechain
66	AZ	120	ARG	Sidechain
66	AZ	27	ARG	Sidechain
66	AZ	59	ARG	Sidechain
46	Aa	4	ARG	Sidechain
46	Aa	83	ARG	Sidechain
46	Aa	88	ARG	Sidechain
47	Ab	75	ARG	Sidechain
56	Ac	28	ARG	Sidechain
56	Ac	49	ARG	Sidechain
56	Ac	59	ARG	Peptide
56	Ac	66	ARG	Sidechain
48	Ad	57	ARG	Sidechain
49	Ae	12	ARG	Sidechain
49	Ae	8	ARG	Sidechain
50	Af	21	ARG	Sidechain
50	Af	41	ARG	Sidechain
76	Ag	16	ARG	Sidechain
76	Ag	35	ARG	Sidechain
52	Ah	23	ARG	Sidechain
53	Ai	33	ARG	Sidechain
20	B	136	ARG	Sidechain
20	B	165	ARG	Sidechain
20	B	55	LYS	Peptide
20	B	64	ARG	Sidechain
20	B	66	TYR	Sidechain
33	C	62	ARG	Sidechain
33	C	84	ARG	Sidechain
4	E	17	ARG	Peptide
4	E	47	TYR	Sidechain
4	E	6	ARG	Sidechain
4	E	69	ARG	Sidechain

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Mol	Chain	Res	Type	Group
4	E	79	ARG	Sidechain
4	E	8	TYR	Sidechain
4	E	95	TYR	Sidechain
21	F	145	ARG	Sidechain
21	F	191	ARG	Sidechain
21	F	240	ARG	Sidechain
5	G	63	TYR	Sidechain
22	H	177	ARG	Sidechain
22	H	186	ARG	Sidechain
6	I	136	ARG	Sidechain
6	I	195	ARG	Sidechain
23	J	162	ARG	Sidechain
23	J	39	ALA	Peptide
23	J	72	TYR	Sidechain
23	J	76	ILE	Peptide
7	K	108	TYR	Sidechain
7	K	118	ARG	Sidechain
7	K	23	ARG	Sidechain
24	L	12	ARG	Sidechain
24	L	25	ARG	Sidechain
24	L	5	ARG	Sidechain
24	L	55	TYR	Sidechain
8	M	112	ARG	Sidechain
8	M	67	ARG	Sidechain
8	M	94	TYR	Sidechain
25	N	65	ARG	Sidechain
26	P	146	ARG	Sidechain
26	P	57	THR	Peptide
26	P	66	ARG	Sidechain
27	Q	109	ARG	Sidechain
27	Q	68	TYR	Sidechain
27	Q	69	ARG	Sidechain
28	S	126	ARG	Sidechain
29	T	20	ARG	Sidechain
29	T	38	ARG	Sidechain
29	T	42	ARG	Sidechain
29	T	44	ARG	Sidechain
29	T	54	ARG	Sidechain
30	U	114	ARG	Sidechain
31	V	102	ARG	Sidechain
31	V	56	TYR	Sidechain
31	V	70	ARG	Sidechain

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Mol	Chain	Res	Type	Group
31	V	72	ARG	Sidechain
9	W	45	ARG	Sidechain
9	W	60	ARG	Sidechain
32	X	40	ARG	Sidechain
32	X	81	ARG	Sidechain
32	X	85	ILE	Peptide
12	Y	160	ARG	Sidechain
12	Y	53	TYR	Peptide
12	Y	79	ARG	Sidechain

5.2 Too-close contacts [i](#)

Due to software issues we are unable to calculate clashes - this section is therefore empty.

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 PDB entries followed by that with respect to all EM entries.

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	
3	D	149/209 (71%)	144 (97%)	3 (2%)	2 (1%)	12	48
4	E	183/185 (99%)	175 (96%)	6 (3%)	2 (1%)	14	52
5	G	222/224 (99%)	206 (93%)	14 (6%)	2 (1%)	17	56
6	I	176/189 (93%)	161 (92%)	12 (7%)	3 (2%)	9	43
7	K	127/129 (98%)	118 (93%)	7 (6%)	2 (2%)	9	45
8	M	136/138 (99%)	127 (93%)	5 (4%)	4 (3%)	4	32
9	W	91/108 (84%)	84 (92%)	6 (7%)	1 (1%)	14	52
10	R	92/114 (81%)	80 (87%)	10 (11%)	2 (2%)	6	37
11	O	77/79 (98%)	67 (87%)	4 (5%)	6 (8%)	1	15
12	Y	152/154 (99%)	137 (90%)	11 (7%)	4 (3%)	5	34
13	Z	70/72 (97%)	65 (93%)	4 (6%)	1 (1%)	11	47

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	1	118/120 (98%)	111 (94%)	4 (3%)	3 (2%)	5	35
15	2	35/68 (52%)	31 (89%)	3 (9%)	1 (3%)	4	32
16	3	93/95 (98%)	81 (87%)	11 (12%)	1 (1%)	14	52
17	4	74/76 (97%)	65 (88%)	7 (10%)	2 (3%)	5	34
18	5	54/65 (83%)	53 (98%)	1 (2%)	0	100	100
19	6	41/43 (95%)	35 (85%)	5 (12%)	1 (2%)	6	35
20	B	208/210 (99%)	186 (89%)	19 (9%)	3 (1%)	11	47
21	F	255/257 (99%)	238 (93%)	13 (5%)	4 (2%)	9	45
22	H	200/214 (94%)	191 (96%)	8 (4%)	1 (0%)	29	68
23	J	186/188 (99%)	176 (95%)	5 (3%)	5 (3%)	5	34
24	L	165/214 (77%)	147 (89%)	14 (8%)	4 (2%)	6	35
25	N	96/98 (98%)	91 (95%)	3 (3%)	2 (2%)	7	38
26	P	125/127 (98%)	114 (91%)	8 (6%)	3 (2%)	6	35
27	Q	142/144 (99%)	130 (92%)	7 (5%)	5 (4%)	3	28
28	S	126/128 (98%)	108 (86%)	14 (11%)	4 (3%)	4	30
29	T	46/48 (96%)	44 (96%)	2 (4%)	0	100	100
30	U	147/149 (99%)	142 (97%)	4 (3%)	1 (1%)	22	62
31	V	142/156 (91%)	129 (91%)	10 (7%)	3 (2%)	7	38
32	X	92/103 (89%)	78 (85%)	10 (11%)	4 (4%)	2	25
33	C	193/195 (99%)	181 (94%)	9 (5%)	3 (2%)	9	45
37	AL	209/211 (99%)	190 (91%)	16 (8%)	3 (1%)	11	47
38	A1	136/145 (94%)	127 (93%)	7 (5%)	2 (2%)	10	46
39	A2	96/118 (81%)	89 (93%)	5 (5%)	2 (2%)	7	38
40	A4	64/66 (97%)	58 (91%)	4 (6%)	2 (3%)	4	30
41	A6	96/98 (98%)	93 (97%)	3 (3%)	0	100	100
42	A7	92/102 (90%)	89 (97%)	3 (3%)	0	100	100
43	AN	144/146 (99%)	140 (97%)	2 (1%)	2 (1%)	11	47
44	A8	123/125 (98%)	114 (93%)	8 (6%)	1 (1%)	19	60
45	A9	101/103 (98%)	92 (91%)	9 (9%)	0	100	100
46	Aa	104/106 (98%)	99 (95%)	5 (5%)	0	100	100
47	Ab	91/105 (87%)	85 (93%)	5 (6%)	1 (1%)	14	52

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
48	Ad	68/76 (90%)	68 (100%)	0	0	100	100
49	Ae	39/50 (78%)	39 (100%)	0	0	100	100
50	Af	49/51 (96%)	46 (94%)	3 (6%)	0	100	100
51	AP	202/204 (99%)	183 (91%)	14 (7%)	5 (2%)	5	35
52	Ah	83/85 (98%)	76 (92%)	5 (6%)	2 (2%)	6	35
53	Ai	93/95 (98%)	87 (94%)	5 (5%)	1 (1%)	14	52
54	AI	203/213 (95%)	187 (92%)	14 (7%)	2 (1%)	15	54
55	AJ	216/244 (88%)	196 (91%)	13 (6%)	7 (3%)	4	30
56	Ac	87/89 (98%)	74 (85%)	12 (14%)	1 (1%)	14	52
57	AK	199/201 (99%)	191 (96%)	6 (3%)	2 (1%)	15	54
58	AM	130/132 (98%)	121 (93%)	9 (7%)	0	100	100
59	AS	184/186 (99%)	171 (93%)	12 (6%)	1 (0%)	29	68
60	AO	145/147 (99%)	132 (91%)	10 (7%)	3 (2%)	7	38
61	AQ	185/205 (90%)	170 (92%)	12 (6%)	3 (2%)	9	45
62	AR	244/289 (84%)	224 (92%)	13 (5%)	7 (3%)	4	32
63	AW	149/170 (88%)	135 (91%)	12 (8%)	2 (1%)	12	48
64	AY	99/101 (98%)	97 (98%)	2 (2%)	0	100	100
65	AT	179/181 (99%)	173 (97%)	5 (3%)	1 (1%)	25	65
66	AZ	119/121 (98%)	113 (95%)	5 (4%)	1 (1%)	19	60
67	A3	117/119 (98%)	108 (92%)	9 (8%)	0	100	100
68	A5	221/223 (99%)	201 (91%)	15 (7%)	5 (2%)	6	36
69	AD	245/247 (99%)	230 (94%)	14 (6%)	1 (0%)	34	72
70	AE	378/380 (100%)	346 (92%)	26 (7%)	6 (2%)	9	45
71	AF	388/390 (100%)	363 (94%)	21 (5%)	4 (1%)	15	54
72	AG	116/159 (73%)	107 (92%)	6 (5%)	3 (3%)	5	34
73	AU	178/180 (99%)	167 (94%)	9 (5%)	2 (1%)	14	52
74	AH	183/185 (99%)	168 (92%)	12 (7%)	3 (2%)	9	45
75	AV	153/155 (99%)	141 (92%)	9 (6%)	3 (2%)	7	40
76	Ag	35/37 (95%)	29 (83%)	5 (14%)	1 (3%)	4	32
77	AX	95/97 (98%)	90 (95%)	4 (4%)	1 (1%)	14	52
78	A0	60/62 (97%)	57 (95%)	2 (3%)	1 (2%)	9	43

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
All	All	10111/10698 (94%)	9361 (93%)	590 (6%)	160 (2%)	13	45

All (160) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
7	K	120	HIS
8	M	41	GLU
9	W	4	VAL
10	R	42	ILE
12	Y	55	LYS
22	H	25	LEU
24	L	9	HIS
27	Q	137	LYS
28	S	101	ILE
30	U	62	GLN
32	X	51	LYS
32	X	52	LYS
44	A8	64	LYS
51	AP	188	SER
60	AO	25	HIS
62	AR	152	ILE
70	AE	196	LEU
70	AE	247	ALA
71	AF	267	ILE
6	I	174	GLU
11	O	34	VAL
12	Y	68	LEU
14	1	117	LYS
20	B	146	ARG
27	Q	138	GLU
31	V	41	VAL
32	X	49	ILE
32	X	112	ILE
33	C	27	LYS
37	AL	169	PRO
39	A2	95	GLN
40	A4	3	LYS
51	AP	150	ASN
52	Ah	42	CYS
55	AJ	75	ILE
55	AJ	219	SER
60	AO	15	VAL

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Mol	Chain	Res	Type
61	AQ	35	ASP
62	AR	44	TYR
62	AR	59	GLN
62	AR	229	ASN
63	AW	20	VAL
70	AE	300	LYS
73	AU	10	ASN
75	AV	133	THR
4	E	16	LYS
5	G	101	GLN
5	G	121	GLY
6	I	49	LYS
6	I	70	HIS
7	K	58	SER
8	M	130	PHE
11	O	15	PRO
11	O	76	TYR
12	Y	60	VAL
16	3	92	ARG
17	4	18	LYS
20	B	130	LEU
23	J	31	SER
23	J	112	ILE
24	L	61	ASP
25	N	67	SER
25	N	117	ASP
26	P	100	SER
26	P	134	PRO
27	Q	118	PRO
27	Q	141	GLU
28	S	24	GLY
31	V	56	TYR
37	AL	61	THR
38	A1	42	LEU
43	AN	25	VAL
51	AP	149	ILE
53	Ai	85	LYS
55	AJ	64	ASP
56	Ac	29	SER
61	AQ	24	ARG
62	AR	172	GLY
65	AT	129	ASN

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Mol	Chain	Res	Type
72	AG	10	ARG
72	AG	125	MET
74	AH	42	PRO
74	AH	115	ASN
75	AV	130	LYS
75	AV	132	LYS
78	A0	18	TYR
3	D	29	LEU
4	E	169	PRO
10	R	63	CYS
11	O	41	PRO
12	Y	27	ASN
13	Z	30	GLY
19	6	11	ALA
21	F	195	ILE
23	J	165	ILE
24	L	8	ARG
26	P	57	THR
28	S	18	LEU
31	V	9	HIS
37	AL	129	LYS
39	A2	17	ASN
47	Ab	8	LYS
51	AP	70	ASP
55	AJ	59	VAL
60	AO	58	MET
63	AW	106	ASN
70	AE	221	HIS
70	AE	254	PRO
71	AF	19	VAL
71	AF	155	SER
72	AG	141	ARG
74	AH	53	TYR
76	Ag	13	ALA
77	AX	78	LYS
8	M	98	VAL
11	O	72	TRP
14	1	11	LYS
17	4	47	HIS
20	B	75	ASN
21	F	21	ASN
21	F	189	VAL

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Mol	Chain	Res	Type
23	J	57	LYS
23	J	132	SER
27	Q	67	ALA
28	S	92	LEU
33	C	28	ASN
33	C	143	VAL
38	A1	104	SER
54	AI	19	VAL
54	AI	25	ALA
55	AJ	41	ASP
55	AJ	63	LYS
62	AR	58	SER
66	AZ	70	VAL
68	A5	116	ARG
68	A5	171	TYR
68	A5	229	ALA
8	M	57	GLY
11	O	12	SER
14	1	104	ALA
40	A4	36	ASP
51	AP	80	VAL
61	AQ	60	ILE
62	AR	89	PRO
68	A5	177	GLN
69	AD	29	LEU
73	AU	134	ARG
24	L	202	GLY
43	AN	46	VAL
68	A5	100	GLY
71	AF	216	GLY
15	2	60	THR
21	F	239	PRO
52	Ah	9	GLY
57	AK	88	PRO
59	AS	82	VAL
55	AJ	72	PRO
57	AK	64	ASN
3	D	162	GLY
70	AE	297	ILE

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	D	132/177 (75%)	129 (98%)	3 (2%)	50	70
4	E	161/164 (98%)	159 (99%)	2 (1%)	71	84
5	G	191/191 (100%)	185 (97%)	6 (3%)	40	62
6	I	154/160 (96%)	150 (97%)	4 (3%)	46	67
7	K	115/115 (100%)	112 (97%)	3 (3%)	46	67
8	M	116/116 (100%)	114 (98%)	2 (2%)	60	78
9	W	86/99 (87%)	83 (96%)	3 (4%)	36	60
10	R	83/97 (86%)	83 (100%)	0	100	100
11	O	76/76 (100%)	74 (97%)	2 (3%)	46	67
12	Y	137/137 (100%)	131 (96%)	6 (4%)	28	54
13	Z	60/60 (100%)	60 (100%)	0	100	100
14	1	104/104 (100%)	102 (98%)	2 (2%)	57	75
15	2	35/61 (57%)	34 (97%)	1 (3%)	42	64
16	3	87/87 (100%)	87 (100%)	0	100	100
17	4	70/70 (100%)	67 (96%)	3 (4%)	29	54
18	5	47/52 (90%)	45 (96%)	2 (4%)	29	54
19	6	36/36 (100%)	35 (97%)	1 (3%)	43	65
20	B	195/195 (100%)	192 (98%)	3 (2%)	65	80
21	F	233/233 (100%)	230 (99%)	3 (1%)	69	82
22	H	182/190 (96%)	178 (98%)	4 (2%)	52	71
23	J	177/177 (100%)	176 (99%)	1 (1%)	86	92
24	L	151/190 (80%)	148 (98%)	3 (2%)	55	73
25	N	91/91 (100%)	88 (97%)	3 (3%)	38	61
26	P	99/99 (100%)	95 (96%)	4 (4%)	31	56
27	Q	120/120 (100%)	117 (98%)	3 (2%)	47	68
28	S	114/114 (100%)	108 (95%)	6 (5%)	22	49

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
29	T	43/43 (100%)	41 (95%)	2 (5%)	26	52
30	U	132/132 (100%)	129 (98%)	3 (2%)	50	70
31	V	131/140 (94%)	127 (97%)	4 (3%)	40	62
32	X	88/94 (94%)	87 (99%)	1 (1%)	73	85
33	C	167/167 (100%)	164 (98%)	3 (2%)	59	77
37	AL	190/190 (100%)	187 (98%)	3 (2%)	62	79
38	A1	127/131 (97%)	124 (98%)	3 (2%)	49	69
39	A2	97/109 (89%)	93 (96%)	4 (4%)	30	56
40	A4	60/60 (100%)	60 (100%)	0	100	100
41	A6	83/83 (100%)	81 (98%)	2 (2%)	49	69
42	A7	90/96 (94%)	89 (99%)	1 (1%)	73	85
43	AN	135/135 (100%)	131 (97%)	4 (3%)	41	63
44	A8	114/114 (100%)	109 (96%)	5 (4%)	28	54
45	A9	90/90 (100%)	89 (99%)	1 (1%)	73	85
46	Aa	89/89 (100%)	84 (94%)	5 (6%)	21	48
47	Ab	82/92 (89%)	80 (98%)	2 (2%)	49	69
48	Ad	69/73 (94%)	68 (99%)	1 (1%)	67	81
49	Ae	40/47 (85%)	38 (95%)	2 (5%)	24	51
50	Af	45/45 (100%)	44 (98%)	1 (2%)	52	71
51	AP	179/179 (100%)	173 (97%)	6 (3%)	37	61
52	Ah	70/70 (100%)	69 (99%)	1 (1%)	67	81
53	Ai	87/87 (100%)	83 (95%)	4 (5%)	27	53
54	AI	189/195 (97%)	186 (98%)	3 (2%)	62	79
55	AJ	204/224 (91%)	199 (98%)	5 (2%)	47	68
56	Ac	74/74 (100%)	71 (96%)	3 (4%)	30	56
57	AK	181/181 (100%)	178 (98%)	3 (2%)	60	78
58	AM	106/106 (100%)	105 (99%)	1 (1%)	78	88
59	AS	158/158 (100%)	156 (99%)	2 (1%)	69	82
60	AO	121/121 (100%)	113 (93%)	8 (7%)	16	43
61	AQ	165/176 (94%)	161 (98%)	4 (2%)	49	69
62	AR	215/250 (86%)	208 (97%)	7 (3%)	38	61

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
63	AW	128/128 (100%)	127 (99%)	1 (1%)	81	89
64	AY	90/90 (100%)	88 (98%)	2 (2%)	52	71
65	AT	162/162 (100%)	162 (100%)	0	100	100
66	AZ	111/111 (100%)	110 (99%)	1 (1%)	78	88
67	A3	110/110 (100%)	107 (97%)	3 (3%)	44	66
68	A5	201/201 (100%)	195 (97%)	6 (3%)	41	63
69	AD	191/191 (100%)	184 (96%)	7 (4%)	34	59
70	AE	335/335 (100%)	325 (97%)	10 (3%)	41	63
71	AF	336/336 (100%)	323 (96%)	13 (4%)	32	57
72	AG	110/142 (78%)	108 (98%)	2 (2%)	59	77
73	AU	162/162 (100%)	156 (96%)	6 (4%)	34	59
74	AH	168/168 (100%)	163 (97%)	5 (3%)	41	63
75	AV	140/140 (100%)	136 (97%)	4 (3%)	42	64
76	Ag	34/34 (100%)	33 (97%)	1 (3%)	42	64
77	AX	92/92 (100%)	92 (100%)	0	100	100
78	A0	53/53 (100%)	52 (98%)	1 (2%)	57	75
All	All	9096/9417 (97%)	8870 (98%)	226 (2%)	50	68

All (226) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	D	76	ARG
3	D	107	ARG
3	D	154	ARG
4	E	91	GLU
4	E	104	LEU
5	G	96	MET
5	G	156	TRP
5	G	182	VAL
5	G	219	LYS
5	G	234	TYR
5	G	242	TRP
6	I	16	TYR
6	I	17	GLU
6	I	62	ARG
6	I	79	LYS

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Mol	Chain	Res	Type
7	K	52	ILE
7	K	60	LYS
7	K	115	GLU
8	M	56	ILE
8	M	117	LEU
9	W	58	MET
9	W	104	ARG
9	W	105	MET
11	O	20	LYS
11	O	75	GLN
12	Y	30	LYS
12	Y	32	VAL
12	Y	39	ARG
12	Y	53	TYR
12	Y	64	LYS
12	Y	105	LYS
14	1	4	GLN
14	1	116	ARG
15	2	38	HIS
17	4	12	GLU
17	4	15	LYS
17	4	40	GLN
18	5	2	GLU
18	5	49	ARG
19	6	20	LYS
20	B	59	ASP
20	B	119	THR
20	B	151	LYS
21	F	145	ARG
21	F	174	LYS
21	F	233	LYS
22	H	13	GLN
22	H	82	LYS
22	H	158	ILE
22	H	181	GLU
23	J	149	ARG
24	L	92	ARG
24	L	198	TYR
24	L	213	ASP
25	N	26	LYS
25	N	71	GLU
25	N	88	ILE

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Mol	Chain	Res	Type
26	P	25	GLU
26	P	93	ILE
26	P	117	ARG
26	P	150	ARG
27	Q	44	ARG
27	Q	100	ASP
27	Q	107	PHE
28	S	12	GLN
28	S	62	THR
28	S	73	MET
28	S	93	LYS
28	S	120	ARG
28	S	139	LYS
29	T	31	LYS
29	T	38	ARG
30	U	3	ARG
30	U	87	ASP
30	U	149	LEU
31	V	6	ASP
31	V	10	GLU
31	V	89	ILE
31	V	107	HIS
32	X	46	GLN
33	C	58	GLN
33	C	121	LEU
33	C	168	GLU
37	AL	75	THR
37	AL	181	LYS
37	AL	202	ARG
38	A1	43	VAL
38	A1	46	ILE
38	A1	135	LYS
39	A2	34	ASP
39	A2	37	ASN
39	A2	63	LYS
39	A2	82	LYS
41	A6	44	LEU
41	A6	89	ARG
42	A7	15	PRO
43	AN	6	GLU
43	AN	13	TYR
43	AN	56	VAL

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Mol	Chain	Res	Type
43	AN	67	MET
44	A8	19	ARG
44	A8	77	LYS
44	A8	82	MET
44	A8	94	VAL
44	A8	115	MET
45	A9	135	MET
46	Aa	13	TYR
46	Aa	21	ARG
46	Aa	32	ILE
46	Aa	52	GLN
46	Aa	66	ARG
47	Ab	18	ASN
47	Ab	88	LYS
48	Ad	47	LYS
49	Ae	42	ARG
49	Ae	48	LYS
50	Af	46	ARG
51	AP	13	LYS
51	AP	20	HIS
51	AP	85	LYS
51	AP	95	THR
51	AP	162	LEU
51	AP	190	ARG
52	Ah	17	ARG
53	Ai	32	GLU
53	Ai	33	ARG
53	Ai	79	LYS
53	Ai	96	LYS
54	AI	42	LYS
54	AI	63	LEU
54	AI	83	LEU
55	AJ	121	LYS
55	AJ	126	GLN
55	AJ	129	LEU
55	AJ	179	LEU
55	AJ	218	GLU
56	Ac	66	ARG
56	Ac	78	LYS
56	Ac	83	GLU
57	AK	81	ARG
57	AK	153	LYS

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Mol	Chain	Res	Type
57	AK	159	ARG
58	AM	93	TYR
59	AS	18	HIS
59	AS	149	LYS
60	AO	27	LYS
60	AO	28	HIS
60	AO	32	ARG
60	AO	46	ASP
60	AO	58	MET
60	AO	59	ARG
60	AO	62	ASN
60	AO	63	LEU
61	AQ	55	TYR
61	AQ	57	TYR
61	AQ	119	PHE
61	AQ	179	ASP
62	AR	56	THR
62	AR	73	LYS
62	AR	107	ARG
62	AR	142	LYS
62	AR	160	ARG
62	AR	174	ASN
62	AR	281	ARG
63	AW	131	LYS
64	AY	111	ILE
64	AY	178	HIS
66	AZ	37	GLU
67	A3	102	MET
67	A3	118	TYR
67	A3	119	LEU
68	A5	84	PHE
68	A5	85	TYR
68	A5	149	THR
68	A5	169	ARG
68	A5	219	LYS
68	A5	224	ARG
69	AD	54	ARG
69	AD	107	MET
69	AD	159	ASP
69	AD	163	ARG
69	AD	209	HIS
69	AD	218	HIS

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Mol	Chain	Res	Type
69	AD	242	ARG
70	AE	39	LYS
70	AE	123	TYR
70	AE	237	ARG
70	AE	334	THR
70	AE	338	ASN
70	AE	350	GLN
70	AE	361	LYS
70	AE	366	ARG
70	AE	377	TYR
70	AE	380	LEU
71	AF	6	PRO
71	AF	55	LYS
71	AF	85	HIS
71	AF	109	ARG
71	AF	122	TYR
71	AF	140	ARG
71	AF	222	ARG
71	AF	254	GLU
71	AF	269	GLU
71	AF	312	ARG
71	AF	343	MET
71	AF	347	ILE
71	AF	389	ARG
72	AG	25	GLU
72	AG	43	GLN
73	AU	7	ASN
73	AU	100	TYR
73	AU	108	LYS
73	AU	144	ARG
73	AU	157	ARG
73	AU	174	PHE
74	AH	14	GLU
74	AH	46	ARG
74	AH	54	ILE
74	AH	70	ARG
74	AH	131	VAL
75	AV	14	TYR
75	AV	15	LYS
75	AV	30	LYS
75	AV	49	GLN
76	Ag	19	TRP

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Mol	Chain	Res	Type
78	A0	26	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (32) such sidechains are listed below:

Mol	Chain	Res	Type
4	E	133	HIS
5	G	80	GLN
7	K	56	HIS
7	K	113	HIS
9	W	56	HIS
12	Y	138	GLN
24	L	21	HIS
28	S	127	HIS
30	U	101	HIS
33	C	46	HIS
33	C	179	GLN
40	A4	17	HIS
44	A8	107	GLN
45	A9	73	HIS
46	Aa	12	HIS
50	Af	11	GLN
51	AP	20	HIS
57	AK	71	HIS
59	AS	14	HIS
59	AS	18	HIS
60	AO	28	HIS
60	AO	118	HIS
61	AQ	100	ASN
62	AR	223	ASN
68	A5	185	HIS
69	AD	118	HIS
70	AE	240	HIS
70	AE	264	HIS
70	AE	310	HIS
72	AG	20	ASN
73	AU	114	GLN
73	AU	162	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1586/1608 (98%)	481 (30%)	89 (5%)
2	7	75/76 (98%)	13 (17%)	2 (2%)
34	AA	3168/3193 (99%)	979 (30%)	187 (5%)
35	AC	148/151 (98%)	50 (33%)	9 (6%)
36	AB	117/118 (99%)	27 (23%)	1 (0%)
All	All	5094/5146 (98%)	1550 (30%)	288 (5%)

All (1550) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	3	C
1	A	5	U
1	A	17	C
1	A	25	C
1	A	26	A
1	A	27	U
1	A	34	G
1	A	35	U
1	A	42	G
1	A	45	U
1	A	47	A
1	A	50	C
1	A	57	G
1	A	59	G
1	A	60	A
1	A	67	A
1	A	68	U
1	A	71	A
1	A	79	U
1	A	81	U
1	A	82	G
1	A	84	A
1	A	97	G
1	A	106	A
1	A	107	A
1	A	108	A
1	A	111	G
1	A	113	U
1	A	116	A
1	A	125	G
1	A	128	A
1	A	129	U
1	A	130	U

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Mol	Chain	Res	Type
1	A	138	U
1	A	139	A
1	A	140	A
1	A	142	G
1	A	143	A
1	A	144	U
1	A	151	G
1	A	157	G
1	A	159	U
1	A	161	U
1	A	164	C
1	A	165	U
1	A	169	A
1	A	182	U
1	A	183	C
1	A	186	U
1	A	205	A
1	A	206	A
1	A	207	G
1	A	208	U
1	A	209	A
1	A	217	G
1	A	247	G
1	A	251	U
1	A	252	U
1	A	254	U
1	A	255	A
1	A	258	A
1	A	260	A
1	A	262	A
1	A	264	G
1	A	266	A
1	A	267	A
1	A	272	U
1	A	273	A
1	A	292	G
1	A	305	G
1	A	308	U
1	A	320	C
1	A	322	G
1	A	323	C
1	A	326	U

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Mol	Chain	Res	Type
1	A	327	U
1	A	330	U
1	A	335	G
1	A	339	A
1	A	342	G
1	A	343	G
1	A	344	C
1	A	345	C
1	A	350	A
1	A	357	U
1	A	358	G
1	A	361	G
1	A	365	A
1	A	367	C
1	A	375	U
1	A	378	A
1	A	379	G
1	A	384	A
1	A	386	U
1	A	396	G
1	A	399	C
1	A	405	A
1	A	406	A
1	A	407	A
1	A	408	U
1	A	409	A
1	A	410	G
1	A	422	A
1	A	423	A
1	A	424	G
1	A	425	G
1	A	430	C
1	A	431	A
1	A	432	G
1	A	433	C
1	A	434	A
1	A	440	G
1	A	445	U
1	A	446	U
1	A	450	C
1	A	451	A
1	A	454	U

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Mol	Chain	Res	Type
1	A	458	A
1	A	459	A
1	A	460	G
1	A	461	A
1	A	466	A
1	A	467	G
1	A	470	A
1	A	483	A
1	A	484	A
1	A	488	U
1	A	508	U
1	A	509	U
1	A	515	U
1	A	516	G
1	A	521	G
1	A	526	G
1	A	527	A
1	A	543	A
1	A	545	A
1	A	546	G
1	A	548	A
1	A	549	A
1	A	562	A
1	A	564	G
1	A	565	U
1	A	566	C
1	A	568	G
1	A	572	C
1	A	575	G
1	A	578	G
1	A	584	G
1	A	587	A
1	A	589	U
1	A	590	C
1	A	601	A
1	A	602	G
1	A	614	A
1	A	615	U
1	A	616	U
1	A	617	G
1	A	618	U
1	A	626	A

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Mol	Chain	Res	Type
1	A	627	A
1	A	629	A
1	A	630	C
1	A	631	G
1	A	642	A
1	A	645	U
1	A	646	U
1	A	648	A
1	A	752	U
1	A	753	U
1	A	756	A
1	A	760	C
1	A	790	U
1	A	791	U
1	A	792	U
1	A	793	G
1	A	794	U
1	A	800	U
1	A	801	G
1	A	804	U
1	A	805	A
1	A	806	A
1	A	816	U
1	A	817	U
1	A	818	C
1	A	819	A
1	A	821	A
1	A	824	A
1	A	828	A
1	A	832	A
1	A	833	A
1	A	837	A
1	A	844	G
1	A	845	U
1	A	846	G
1	A	849	U
1	A	852	A
1	A	853	U
1	A	856	U
1	A	857	A
1	A	858	U
1	A	866	A

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Mol	Chain	Res	Type
1	A	867	A
1	A	869	A
1	A	870	A
1	A	874	A
1	A	875	A
1	A	876	U
1	A	877	U
1	A	880	A
1	A	881	C
1	A	882	A
1	A	887	A
1	A	888	A
1	A	896	U
1	A	906	U
1	A	908	U
1	A	915	G
1	A	917	C
1	A	920	A
1	A	921	G
1	A	922	U
1	A	924	A
1	A	928	U
1	A	929	U
1	A	931	A
1	A	941	C
1	A	942	U
1	A	945	G
1	A	962	A
1	A	965	U
1	A	966	C
1	A	967	A
1	A	973	G
1	A	974	A
1	A	982	A
1	A	983	G
1	A	984	A
1	A	990	U
1	A	998	A
1	A	1002	A
1	A	1004	U
1	A	1011	G
1	A	1013	A

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Mol	Chain	Res	Type
1	A	1021	A
1	A	1029	U
1	A	1035	A
1	A	1038	C
1	A	1051	U
1	A	1056	G
1	A	1061	A
1	A	1062	A
1	A	1065	C
1	A	1067	A
1	A	1071	G
1	A	1072	A
1	A	1073	U
1	A	1074	A
1	A	1082	A
1	A	1089	A
1	A	1090	C
1	A	1092	A
1	A	1093	U
1	A	1094	A
1	A	1095	A
1	A	1097	C
1	A	1099	A
1	A	1101	G
1	A	1107	U
1	A	1108	A
1	A	1109	G
1	A	1112	G
1	A	1116	G
1	A	1119	G
1	A	1175	G
1	A	1177	A
1	A	1183	U
1	A	1193	A
1	A	1194	A
1	A	1195	G
1	A	1197	C
1	A	1199	U
1	A	1209	G
1	A	1210	G
1	A	1212	C
1	A	1214	A

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Mol	Chain	Res	Type
1	A	1227	G
1	A	1230	A
1	A	1239	A
1	A	1247	G
1	A	1251	G
1	A	1255	G
1	A	1259	C
1	A	1260	C
1	A	1261	A
1	A	1265	G
1	A	1268	G
1	A	1271	G
1	A	1284	A
1	A	1286	U
1	A	1287	U
1	A	1292	U
1	A	1293	C
1	A	1295	A
1	A	1296	C
1	A	1297	A
1	A	1301	G
1	A	1302	G
1	A	1304	A
1	A	1306	C
1	A	1307	U
1	A	1309	A
1	A	1315	U
1	A	1317	A
1	A	1318	A
1	A	1319	G
1	A	1321	C
1	A	1363	U
1	A	1366	A
1	A	1367	U
1	A	1370	U
1	A	1374	G
1	A	1375	C
1	A	1382	G
1	A	1383	U
1	A	1384	U
1	A	1385	U
1	A	1387	U

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Mol	Chain	Res	Type
1	A	1388	A
1	A	1409	U
1	A	1414	A
1	A	1416	U
1	A	1417	U
1	A	1423	A
1	A	1427	A
1	A	1431	A
1	A	1432	G
1	A	1437	U
1	A	1443	G
1	A	1444	C
1	A	1445	U
1	A	1449	U
1	A	1450	A
1	A	1451	G
1	A	1453	G
1	A	1454	G
1	A	1456	G
1	A	1459	U
1	A	1463	C
1	A	1464	U
1	A	1607	U
1	A	1623	U
1	A	1624	U
1	A	1626	U
1	A	1635	C
1	A	1636	A
1	A	1644	U
1	A	1645	C
1	A	1646	U
1	A	1648	A
1	A	1649	C
1	A	1656	A
1	A	1659	U
1	A	1660	U
1	A	1664	G
1	A	1667	A
1	A	1668	A
1	A	1673	A
1	A	1674	G
1	A	1677	C

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Mol	Chain	Res	Type
1	A	1678	U
1	A	1679	G
1	A	1691	G
1	A	1692	A
1	A	1693	U
1	A	1702	C
1	A	1703	U
1	A	1704	G
1	A	1705	C
1	A	1706	A
1	A	1715	A
1	A	1716	C
1	A	1717	A
1	A	1718	C
1	A	1720	G
1	A	1721	A
1	A	1723	A
1	A	1727	A
1	A	1728	U
1	A	1732	G
1	A	1735	U
1	A	1749	C
1	A	1787	U
1	A	1790	C
1	A	1792	U
1	A	1795	G
1	A	1796	C
1	A	1799	A
1	A	1801	A
1	A	1802	G
1	A	1806	U
1	A	1811	A
1	A	1812	A
1	A	1813	U
1	A	1817	U
1	A	1818	A
1	A	1819	U
1	A	1820	C
1	A	1824	A
1	A	1825	U
1	A	1830	C
1	A	1832	U

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Mol	Chain	Res	Type
1	A	1833	G
1	A	1834	A
1	A	1835	U
1	A	1837	G
1	A	1844	A
1	A	1846	U
1	A	1850	G
1	A	1854	U
1	A	1855	U
1	A	1856	A
1	A	1861	U
1	A	1863	U
1	A	1866	A
1	A	1868	C
1	A	1870	A
1	A	1871	G
1	A	1881	G
1	A	1882	U
1	A	1883	A
1	A	1887	A
1	A	1892	U
1	A	1897	A
1	A	1898	G
1	A	1902	G
1	A	1904	G
1	A	1907	A
1	A	1908	A
1	A	1911	A
1	A	1912	C
1	A	1913	G
1	A	1915	C
1	A	1916	C
1	A	1927	U
1	A	1928	A
1	A	1929	C
1	A	1930	A
1	A	1934	C
1	A	1935	G
1	A	1938	C
1	A	1944	U
1	A	1954	U
1	A	1955	G

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Mol	Chain	Res	Type
1	A	1961	U
1	A	1977	G
1	A	1978	A
1	A	1979	C
1	A	1980	A
1	A	1981	A
1	A	1982	G
1	A	2012	G
1	A	2019	C
1	A	2020	G
1	A	2021	U
1	A	2028	U
1	A	2034	U
1	A	2042	A
1	A	2048	A
1	A	2049	G
1	A	2054	A
1	A	2060	G
1	A	2061	U
1	A	2072	G
1	A	2073	A
1	A	2075	C
1	A	2084	G
1	A	2085	G
1	A	2086	A
1	A	2088	C
1	A	2089	A
1	A	2090	U
2	7	4	G
2	7	5	G
2	7	8	U
2	7	18	G
2	7	19	G
2	7	21	A
2	7	34	C
2	7	47	U
2	7	48	C
2	7	63	G
2	7	71	C
2	7	75	C
2	7	76	A
34	AA	11	A

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Mol	Chain	Res	Type
34	AA	13	G
34	AA	14	U
34	AA	16	A
34	AA	18	G
34	AA	25	A
34	AA	26	A
34	AA	30	G
34	AA	32	C
34	AA	34	A
34	AA	40	A
34	AA	43	A
34	AA	44	U
34	AA	45	A
34	AA	49	U
34	AA	55	G
34	AA	57	A
34	AA	59	G
34	AA	60	A
34	AA	63	A
34	AA	66	A
34	AA	69	U
34	AA	73	U
34	AA	75	U
34	AA	83	U
34	AA	85	A
34	AA	87	U
34	AA	92	G
34	AA	105	G
34	AA	108	C
34	AA	109	A
34	AA	110	G
34	AA	111	C
34	AA	122	A
34	AA	124	U
34	AA	130	G
34	AA	133	U
34	AA	134	G
34	AA	135	G
34	AA	136	U
34	AA	139	A
34	AA	144	U
34	AA	145	U

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Mol	Chain	Res	Type
34	AA	147	C
34	AA	148	G
34	AA	149	A
34	AA	152	G
34	AA	156	U
34	AA	157	G
34	AA	163	G
34	AA	165	A
34	AA	167	U
34	AA	168	A
34	AA	172	C
34	AA	173	A
34	AA	174	U
34	AA	175	G
34	AA	182	U
34	AA	183	U
34	AA	185	A
34	AA	186	A
34	AA	189	U
34	AA	190	G
34	AA	191	A
34	AA	192	G
34	AA	195	A
34	AA	197	G
34	AA	198	U
34	AA	199	G
34	AA	200	A
34	AA	201	G
34	AA	207	A
34	AA	208	U
34	AA	211	U
34	AA	214	C
34	AA	215	C
34	AA	216	C
34	AA	219	A
34	AA	220	G
34	AA	221	A
34	AA	226	G
34	AA	227	A
34	AA	228	A
34	AA	229	A
34	AA	231	G

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Mol	Chain	Res	Type
34	AA	235	A
34	AA	239	U
34	AA	242	U
34	AA	246	U
34	AA	247	A
34	AA	250	U
34	AA	255	C
34	AA	257	U
34	AA	258	U
34	AA	263	U
34	AA	265	U
34	AA	268	C
34	AA	269	A
34	AA	271	G
34	AA	276	G
34	AA	277	U
34	AA	290	G
34	AA	292	U
34	AA	293	U
34	AA	302	A
34	AA	303	A
34	AA	304	U
34	AA	305	A
34	AA	307	G
34	AA	308	U
34	AA	309	G
34	AA	310	U
34	AA	313	U
34	AA	315	C
34	AA	317	U
34	AA	319	U
34	AA	324	U
34	AA	325	A
34	AA	336	U
34	AA	337	A
34	AA	338	U
34	AA	342	G
34	AA	344	A
34	AA	347	C
34	AA	351	U
34	AA	354	C
34	AA	356	A

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Mol	Chain	Res	Type
34	AA	359	A
34	AA	362	U
34	AA	378	U
34	AA	382	A
34	AA	384	A
34	AA	385	G
34	AA	386	U
34	AA	392	G
34	AA	395	A
34	AA	396	U
34	AA	400	C
34	AA	401	A
34	AA	402	A
34	AA	405	A
34	AA	409	A
34	AA	411	U
34	AA	412	A
34	AA	413	C
34	AA	417	A
34	AA	431	G
34	AA	432	A
34	AA	433	A
34	AA	434	C
34	AA	439	U
34	AA	442	G
34	AA	444	G
34	AA	447	A
34	AA	448	A
34	AA	449	A
34	AA	450	A
34	AA	451	C
34	AA	458	A
34	AA	459	G
34	AA	462	G
34	AA	463	G
34	AA	489	U
34	AA	490	U
34	AA	494	U
34	AA	495	U
34	AA	497	U
34	AA	498	U
34	AA	499	U

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Mol	Chain	Res	Type
34	AA	500	A
34	AA	501	U
34	AA	502	U
34	AA	503	A
34	AA	504	A
34	AA	505	A
34	AA	506	A
34	AA	509	A
34	AA	510	A
34	AA	514	C
34	AA	521	U
34	AA	522	A
34	AA	523	A
34	AA	527	A
34	AA	531	U
34	AA	532	C
34	AA	534	A
34	AA	536	A
34	AA	538	A
34	AA	539	G
34	AA	542	A
34	AA	543	U
34	AA	544	C
34	AA	545	C
34	AA	546	C
34	AA	547	C
34	AA	549	G
34	AA	573	U
34	AA	575	U
34	AA	579	C
34	AA	580	A
34	AA	581	C
34	AA	582	U
34	AA	583	U
34	AA	585	C
34	AA	586	U
34	AA	592	C
34	AA	594	C
34	AA	595	U
34	AA	597	A
34	AA	598	U
34	AA	599	G

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Mol	Chain	Res	Type
34	AA	601	G
34	AA	604	G
34	AA	605	A
34	AA	608	A
34	AA	610	U
34	AA	615	U
34	AA	617	A
34	AA	618	U
34	AA	620	U
34	AA	621	C
34	AA	622	U
34	AA	623	U
34	AA	628	U
34	AA	631	U
34	AA	636	U
34	AA	637	U
34	AA	641	G
34	AA	642	A
34	AA	643	G
34	AA	644	G
34	AA	645	A
34	AA	646	A
34	AA	649	U
34	AA	653	A
34	AA	658	U
34	AA	659	U
34	AA	662	A
34	AA	665	U
34	AA	666	U
34	AA	671	U
34	AA	672	C
34	AA	674	U
34	AA	675	A
34	AA	677	A
34	AA	678	A
34	AA	679	U
34	AA	681	U
34	AA	682	A
34	AA	683	A
34	AA	684	G
34	AA	685	U
34	AA	694	U

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Mol	Chain	Res	Type
34	AA	697	A
34	AA	698	G
34	AA	699	U
34	AA	704	U
34	AA	707	U
34	AA	708	A
34	AA	714	C
34	AA	715	U
34	AA	716	C
34	AA	727	A
34	AA	729	G
34	AA	738	A
34	AA	755	A
34	AA	760	A
34	AA	761	U
34	AA	763	U
34	AA	765	A
34	AA	766	U
34	AA	767	U
34	AA	769	U
34	AA	773	A
34	AA	774	A
34	AA	778	U
34	AA	779	U
34	AA	793	A
34	AA	794	C
34	AA	799	A
34	AA	804	A
34	AA	806	G
34	AA	809	A
34	AA	810	U
34	AA	811	A
34	AA	812	U
34	AA	813	G
34	AA	822	A
34	AA	825	G
34	AA	833	G
34	AA	834	U
34	AA	835	G
34	AA	857	C
34	AA	859	C
34	AA	860	A

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Mol	Chain	Res	Type
34	AA	862	U
34	AA	866	C
34	AA	873	U
34	AA	874	A
34	AA	880	A
34	AA	889	U
34	AA	890	G
34	AA	893	U
34	AA	894	U
34	AA	896	U
34	AA	900	G
34	AA	903	C
34	AA	905	A
34	AA	918	G
34	AA	920	A
34	AA	925	A
34	AA	927	A
34	AA	934	G
34	AA	936	A
34	AA	937	C
34	AA	945	G
34	AA	946	A
34	AA	951	A
34	AA	956	A
34	AA	966	A
34	AA	968	G
34	AA	970	C
34	AA	976	G
34	AA	980	A
34	AA	984	A
34	AA	988	G
34	AA	990	U
34	AA	993	U
34	AA	998	U
34	AA	999	G
34	AA	1000	C
34	AA	1013	U
34	AA	1014	C
34	AA	1015	A
34	AA	1016	A
34	AA	1024	U
34	AA	1026	G

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Mol	Chain	Res	Type
34	AA	1027	G
34	AA	1033	A
34	AA	1034	A
34	AA	1035	G
34	AA	1036	A
34	AA	1042	C
34	AA	1043	G
34	AA	1052	A
34	AA	1053	U
34	AA	1056	G
34	AA	1063	A
34	AA	1070	A
34	AA	1072	A
34	AA	1073	G
34	AA	1078	C
34	AA	1079	U
34	AA	1086	C
34	AA	1087	G
34	AA	1092	A
34	AA	1098	U
34	AA	1099	U
34	AA	1101	A
34	AA	1102	U
34	AA	1106	A
34	AA	1109	U
34	AA	1111	A
34	AA	1113	C
34	AA	1114	A
34	AA	1115	G
34	AA	1116	G
34	AA	1121	G
34	AA	1122	A
34	AA	1123	U
34	AA	1124	A
34	AA	1128	A
34	AA	1132	G
34	AA	1136	A
34	AA	1158	G
34	AA	1164	U
34	AA	1168	C
34	AA	1169	A
34	AA	1170	A

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Mol	Chain	Res	Type
34	AA	1172	C
34	AA	1174	C
34	AA	1186	A
34	AA	1193	G
34	AA	1194	A
34	AA	1196	A
34	AA	1197	U
34	AA	1198	A
34	AA	1199	A
34	AA	1200	C
34	AA	1203	A
34	AA	1204	A
34	AA	1205	U
34	AA	1206	U
34	AA	1207	U
34	AA	1210	A
34	AA	1215	A
34	AA	1217	U
34	AA	1218	C
34	AA	1219	A
34	AA	1221	A
34	AA	1222	U
34	AA	1224	A
34	AA	1225	A
34	AA	1226	A
34	AA	1229	A
34	AA	1230	A
34	AA	1231	A
34	AA	1232	U
34	AA	1233	A
34	AA	1234	A
34	AA	1239	A
34	AA	1240	A
34	AA	1244	G
34	AA	1245	G
34	AA	1259	G
34	AA	1263	A
34	AA	1272	U
34	AA	1281	C
34	AA	1283	C
34	AA	1287	A
34	AA	1288	C

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Mol	Chain	Res	Type
34	AA	1291	U
34	AA	1295	A
34	AA	1299	G
34	AA	1300	G
34	AA	1306	A
34	AA	1309	U
34	AA	1310	A
34	AA	1313	C
34	AA	1314	G
34	AA	1320	G
34	AA	1321	A
34	AA	1324	U
34	AA	1325	C
34	AA	1329	U
34	AA	1330	A
34	AA	1334	G
34	AA	1337	G
34	AA	1340	G
34	AA	1341	G
34	AA	1344	C
34	AA	1345	A
34	AA	1346	U
34	AA	1416	U
34	AA	1418	A
34	AA	1420	C
34	AA	1431	A
34	AA	1432	A
34	AA	1433	U
34	AA	1435	G
34	AA	1436	A
34	AA	1437	U
34	AA	1441	G
34	AA	1444	A
34	AA	1445	A
34	AA	1450	G
34	AA	1451	A
34	AA	1453	U
34	AA	1458	A
34	AA	1460	A
34	AA	1473	A
34	AA	1476	A
34	AA	1480	G

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Mol	Chain	Res	Type
34	AA	1481	A
34	AA	1486	A
34	AA	1498	U
34	AA	1499	U
34	AA	1503	A
34	AA	1504	A
34	AA	1505	U
34	AA	1506	C
34	AA	1524	U
34	AA	1535	G
34	AA	1537	G
34	AA	1539	U
34	AA	1540	G
34	AA	1549	U
34	AA	1550	A
34	AA	1556	G
34	AA	1565	G
34	AA	1566	A
34	AA	1567	A
34	AA	1569	A
34	AA	1571	C
34	AA	1572	U
34	AA	1575	C
34	AA	1583	G
34	AA	1586	C
34	AA	1587	U
34	AA	1592	G
34	AA	1595	A
34	AA	1599	G
34	AA	1603	C
34	AA	1604	U
34	AA	1605	A
34	AA	1619	U
34	AA	1624	A
34	AA	1626	A
34	AA	1630	A
34	AA	1631	A
34	AA	1635	G
34	AA	1636	A
34	AA	1637	G
34	AA	1643	U
34	AA	1649	G

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Mol	Chain	Res	Type
34	AA	1651	C
34	AA	1657	U
34	AA	1661	U
34	AA	1668	G
34	AA	1676	C
34	AA	1677	G
34	AA	1685	G
34	AA	1688	A
34	AA	1691	G
34	AA	1693	U
34	AA	1703	U
34	AA	1704	U
34	AA	1705	A
34	AA	1706	A
34	AA	1707	A
34	AA	1721	C
34	AA	1725	U
34	AA	1730	A
34	AA	1732	A
34	AA	1736	A
34	AA	1737	A
34	AA	1748	A
34	AA	1750	U
34	AA	1751	C
34	AA	1756	G
34	AA	1760	A
34	AA	1761	U
34	AA	1762	A
34	AA	1763	G
34	AA	1766	U
34	AA	1767	U
34	AA	1768	A
34	AA	1769	U
34	AA	1770	G
34	AA	1771	A
34	AA	1774	U
34	AA	1780	G
34	AA	1781	A
34	AA	1782	U
34	AA	1783	G
34	AA	1788	C
34	AA	1797	A

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Mol	Chain	Res	Type
34	AA	1798	A
34	AA	1800	U
34	AA	1801	G
34	AA	1805	U
34	AA	1806	C
34	AA	1812	C
34	AA	1817	G
34	AA	1832	U
34	AA	1842	U
34	AA	1850	U
34	AA	1852	C
34	AA	1855	U
34	AA	1856	U
34	AA	1857	A
34	AA	1871	A
34	AA	1872	A
34	AA	1873	U
34	AA	1874	C
34	AA	1881	C
34	AA	1882	U
34	AA	1887	G
34	AA	1888	A
34	AA	1898	U
34	AA	1899	U
34	AA	1900	G
34	AA	1902	A
34	AA	1904	U
34	AA	1905	C
34	AA	1914	A
34	AA	1963	U
34	AA	1964	G
34	AA	1965	U
34	AA	1966	A
34	AA	1969	A
34	AA	1970	A
34	AA	1971	U
34	AA	1976	A
34	AA	1978	U
34	AA	1980	G
34	AA	1981	U
34	AA	1990	A
34	AA	1991	U

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Mol	Chain	Res	Type
34	AA	1996	C
34	AA	1997	G
34	AA	1998	A
34	AA	1999	A
34	AA	2000	G
34	AA	2003	G
34	AA	2010	C
34	AA	2016	U
34	AA	2017	U
34	AA	2018	G
34	AA	2019	A
34	AA	2030	G
34	AA	2034	G
34	AA	2072	U
34	AA	2082	C
34	AA	2084	U
34	AA	2090	U
34	AA	2092	G
34	AA	2094	A
34	AA	2096	G
34	AA	2102	A
34	AA	2106	A
34	AA	2107	C
34	AA	2108	A
34	AA	2109	A
34	AA	2113	C
34	AA	2114	A
34	AA	2115	U
34	AA	2125	A
34	AA	2136	C
34	AA	2145	A
34	AA	2146	A
34	AA	2147	A
34	AA	2148	U
34	AA	2149	A
34	AA	2160	G
34	AA	2161	G
34	AA	2169	A
34	AA	2170	G
34	AA	2171	U
34	AA	2172	C
34	AA	2174	G

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Mol	Chain	Res	Type
34	AA	2186	C
34	AA	2203	G
34	AA	2218	C
34	AA	2219	A
34	AA	2220	U
34	AA	2221	U
34	AA	2389	G
34	AA	2394	C
34	AA	2395	U
34	AA	2403	G
34	AA	2404	A
34	AA	2406	A
34	AA	2409	G
34	AA	2411	C
34	AA	2414	G
34	AA	2415	G
34	AA	2419	A
34	AA	2424	A
34	AA	2427	G
34	AA	2434	U
34	AA	2435	A
34	AA	2437	A
34	AA	2438	A
34	AA	2451	A
34	AA	2453	A
34	AA	2463	U
34	AA	2464	G
34	AA	2465	G
34	AA	2477	U
34	AA	2486	U
34	AA	2489	C
34	AA	2500	A
34	AA	2501	A
34	AA	2510	U
34	AA	2516	A
34	AA	2518	U
34	AA	2521	A
34	AA	2524	C
34	AA	2536	A
34	AA	2537	A
34	AA	2539	G
34	AA	2542	G

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Mol	Chain	Res	Type
34	AA	2544	G
34	AA	2545	A
34	AA	2548	A
34	AA	2549	A
34	AA	2550	C
34	AA	2551	U
34	AA	2552	A
34	AA	2555	A
34	AA	2556	C
34	AA	2563	A
34	AA	2565	G
34	AA	2566	G
34	AA	2573	A
34	AA	2574	A
34	AA	2575	U
34	AA	2576	G
34	AA	2580	C
34	AA	2581	G
34	AA	2584	A
34	AA	2588	A
34	AA	2589	A
34	AA	2591	U
34	AA	2596	A
34	AA	2599	C
34	AA	2600	G
34	AA	2601	C
34	AA	2602	A
34	AA	2603	U
34	AA	2606	A
34	AA	2607	U
34	AA	2608	G
34	AA	2627	U
34	AA	2628	G
34	AA	2629	U
34	AA	2640	U
34	AA	2656	A
34	AA	2667	C
34	AA	2668	G
34	AA	2671	C
34	AA	2676	C
34	AA	2681	U
34	AA	2684	G

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Mol	Chain	Res	Type
34	AA	2686	G
34	AA	2690	A
34	AA	2694	A
34	AA	2695	A
34	AA	2696	G
34	AA	2697	A
34	AA	2698	C
34	AA	2703	U
34	AA	2704	U
34	AA	2705	G
34	AA	2710	U
34	AA	2711	U
34	AA	2712	A
34	AA	2728	G
34	AA	2730	G
34	AA	2745	G
34	AA	2746	U
34	AA	2747	G
34	AA	2809	A
34	AA	2811	A
34	AA	2817	U
34	AA	2822	U
34	AA	2823	U
34	AA	2833	U
34	AA	2834	A
34	AA	2835	G
34	AA	2837	G
34	AA	2884	G
34	AA	2885	A
34	AA	2886	A
34	AA	2887	U
34	AA	2888	U
34	AA	2926	A
34	AA	2928	G
34	AA	2932	A
34	AA	2933	C
34	AA	2945	G
34	AA	2946	G
34	AA	2953	G
34	AA	2958	G
34	AA	2959	G
34	AA	2960	G

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Mol	Chain	Res	Type
34	AA	2967	A
34	AA	2968	U
34	AA	2980	U
34	AA	2981	A
34	AA	2987	G
34	AA	2990	G
34	AA	2991	U
34	AA	2994	A
34	AA	2995	A
34	AA	2996	A
34	AA	3005	C
34	AA	3011	G
34	AA	3013	A
34	AA	3016	G
34	AA	3017	A
34	AA	3018	A
34	AA	3019	A
34	AA	3020	U
34	AA	3028	A
34	AA	3029	G
34	AA	3030	A
34	AA	3033	A
34	AA	3035	A
34	AA	3053	G
34	AA	3067	G
34	AA	3068	A
34	AA	3073	G
34	AA	3076	G
34	AA	3079	A
34	AA	3081	C
34	AA	3088	G
34	AA	3091	U
34	AA	3092	G
34	AA	3093	G
34	AA	3094	C
34	AA	3100	G
34	AA	3108	A
34	AA	3111	U
34	AA	3113	U
34	AA	3116	A
34	AA	3118	A
34	AA	3121	G

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Mol	Chain	Res	Type
34	AA	3123	C
34	AA	3124	G
34	AA	3126	A
34	AA	3127	A
34	AA	3130	U
34	AA	3131	A
34	AA	3135	A
34	AA	3138	A
34	AA	3140	U
34	AA	3141	G
34	AA	3146	U
34	AA	3155	G
34	AA	3158	U
34	AA	3159	G
34	AA	3160	A
34	AA	3161	A
34	AA	3169	C
34	AA	3173	G
34	AA	3175	G
34	AA	3176	A
34	AA	3177	U
34	AA	3180	C
34	AA	3193	G
34	AA	3201	C
34	AA	3202	U
34	AA	3204	C
34	AA	3208	C
34	AA	3209	G
34	AA	3212	G
34	AA	3219	U
34	AA	3220	U
34	AA	3222	G
34	AA	3225	C
34	AA	3230	G
34	AA	3231	A
34	AA	3232	U
34	AA	3235	C
34	AA	3245	U
34	AA	3246	A
34	AA	3248	C
34	AA	3253	G
34	AA	3257	G

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Mol	Chain	Res	Type
34	AA	3258	C
34	AA	3262	A
34	AA	3269	A
34	AA	3277	G
34	AA	3281	G
34	AA	3282	U
34	AA	3287	C
34	AA	3292	A
34	AA	3293	A
34	AA	3294	U
34	AA	3295	A
34	AA	3297	G
34	AA	3301	C
34	AA	3302	G
34	AA	3304	G
34	AA	3305	A
34	AA	3306	G
34	AA	3312	U
34	AA	3313	U
34	AA	3330	A
34	AA	3336	G
34	AA	3338	U
34	AA	3342	C
34	AA	3343	C
34	AA	3349	G
34	AA	3351	U
34	AA	3353	A
34	AA	3354	A
34	AA	3358	U
34	AA	3359	A
34	AA	3361	U
34	AA	3362	A
34	AA	3374	U
34	AA	3375	A
34	AA	3378	C
34	AA	3380	U
34	AA	3381	A
34	AA	3382	U
34	AA	3383	A
34	AA	3389	G
34	AA	3391	G
34	AA	3398	A

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Mol	Chain	Res	Type
34	AA	3415	A
34	AA	3416	G
34	AA	3418	A
34	AA	3421	A
34	AA	3432	A
34	AA	3436	U
34	AA	3442	C
34	AA	3443	A
34	AA	3444	G
34	AA	3445	C
34	AA	3459	A
34	AA	3463	G
34	AA	3464	U
34	AA	3468	G
34	AA	3471	A
34	AA	3472	A
34	AA	3476	A
34	AA	3477	A
34	AA	3483	U
34	AA	3488	U
34	AA	3493	G
34	AA	3500	G
34	AA	3507	A
34	AA	3510	C
34	AA	3513	G
34	AA	3515	A
34	AA	3516	A
34	AA	3527	U
34	AA	3530	A
34	AA	3571	A
34	AA	3573	U
34	AA	3575	U
34	AA	3576	A
34	AA	3577	A
34	AA	3578	A
34	AA	3580	G
34	AA	3581	A
34	AA	3582	G
34	AA	3585	A
34	AA	3586	U
34	AA	3588	A
34	AA	3589	U

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Mol	Chain	Res	Type
34	AA	3590	A
34	AA	3591	U
34	AA	3594	G
34	AA	3597	C
34	AA	3612	U
34	AA	3615	A
34	AA	3616	U
34	AA	3617	A
34	AA	3618	A
34	AA	3624	U
34	AA	3625	C
34	AA	3626	A
34	AA	3627	C
34	AA	3632	U
34	AA	3658	G
34	AA	3659	C
34	AA	3662	U
34	AA	3663	A
34	AA	3664	G
34	AA	3665	U
34	AA	3667	C
34	AA	3668	U
34	AA	3670	U
34	AA	3671	A
34	AA	3672	A
34	AA	3677	A
34	AA	3680	A
34	AA	3683	G
34	AA	3689	C
34	AA	3697	G
34	AA	3698	U
34	AA	3707	U
34	AA	3712	G
34	AA	3716	C
34	AA	3727	A
34	AA	3728	A
34	AA	3732	U
34	AA	3733	G
34	AA	3736	A
34	AA	3737	G
34	AA	3739	A
34	AA	3740	A

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Mol	Chain	Res	Type
34	AA	3741	A
34	AA	3752	C
34	AA	3761	G
34	AA	3767	U
34	AA	3768	A
34	AA	3770	C
34	AA	3774	A
34	AA	3775	G
34	AA	3778	G
34	AA	3779	U
34	AA	3782	A
34	AA	3783	G
35	AC	5	A
35	AC	6	C
35	AC	25	C
35	AC	36	C
35	AC	38	G
35	AC	39	C
35	AC	43	G
35	AC	44	A
35	AC	50	G
35	AC	53	G
35	AC	55	A
35	AC	57	A
35	AC	58	A
35	AC	63	A
35	AC	64	U
35	AC	65	A
35	AC	66	C
35	AC	67	G
35	AC	73	A
35	AC	75	A
35	AC	80	C
35	AC	85	A
35	AC	90	G
35	AC	92	A
35	AC	94	C
35	AC	98	A
35	AC	99	G
35	AC	107	A
35	AC	108	A
35	AC	109	U

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Mol	Chain	Res	Type
35	AC	111	U
35	AC	112	A
35	AC	114	A
35	AC	115	C
35	AC	116	U
35	AC	117	A
35	AC	119	A
35	AC	122	A
35	AC	123	A
35	AC	135	G
35	AC	136	A
35	AC	137	A
35	AC	138	U
35	AC	139	A
35	AC	140	G
35	AC	142	G
35	AC	145	A
35	AC	146	C
35	AC	149	C
35	AC	157	A
36	AB	3	A
36	AB	7	G
36	AB	13	A
36	AB	16	A
36	AB	18	A
36	AB	22	G
36	AB	25	A
36	AB	26	C
36	AB	27	A
36	AB	33	U
36	AB	38	U
36	AB	48	G
36	AB	51	G
36	AB	53	U
36	AB	54	A
36	AB	63	A
36	AB	64	A
36	AB	69	U
36	AB	71	G
36	AB	74	A
36	AB	84	U
36	AB	85	G

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Mol	Chain	Res	Type
36	AB	93	G
36	AB	97	G
36	AB	100	A
36	AB	110	G
36	AB	119	G

All (288) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	2	A
1	A	25	C
1	A	44	U
1	A	45	U
1	A	96	C
1	A	105	A
1	A	139	A
1	A	156	A
1	A	161	U
1	A	206	A
1	A	246	A
1	A	250	A
1	A	251	U
1	A	358	G
1	A	383	G
1	A	406	A
1	A	422	A
1	A	423	A
1	A	461	A
1	A	474	A
1	A	525	G
1	A	544	G
1	A	547	U
1	A	577	A
1	A	588	U
1	A	614	A
1	A	752	U
1	A	753	U
1	A	789	U
1	A	790	U
1	A	793	G
1	A	803	G
1	A	805	A

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Mol	Chain	Res	Type
1	A	818	C
1	A	844	G
1	A	874	A
1	A	876	U
1	A	879	A
1	A	919	U
1	A	973	G
1	A	981	U
1	A	983	G
1	A	1028	U
1	A	1055	G
1	A	1070	A
1	A	1098	U
1	A	1100	U
1	A	1182	A
1	A	1183	U
1	A	1198	U
1	A	1209	G
1	A	1259	C
1	A	1291	C
1	A	1292	U
1	A	1295	A
1	A	1301	G
1	A	1305	A
1	A	1370	U
1	A	1381	C
1	A	1383	U
1	A	1413	U
1	A	1423	A
1	A	1430	G
1	A	1431	A
1	A	1448	U
1	A	1455	C
1	A	1659	U
1	A	1667	A
1	A	1672	C
1	A	1691	G
1	A	1692	A
1	A	1704	G
1	A	1705	C
1	A	1719	U
1	A	1786	U

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Mol	Chain	Res	Type
1	A	1818	A
1	A	1819	U
1	A	1834	A
1	A	1865	G
1	A	1870	A
1	A	1871	G
1	A	1897	A
1	A	1898	G
1	A	1912	C
1	A	1934	C
1	A	1976	G
1	A	1977	G
1	A	2053	U
1	A	2071	U
2	7	17	C
2	7	75	C
34	AA	10	G
34	AA	11	A
34	AA	25	A
34	AA	62	A
34	AA	65	A
34	AA	124	U
34	AA	138	C
34	AA	149	A
34	AA	156	U
34	AA	162	U
34	AA	181	C
34	AA	198	U
34	AA	215	C
34	AA	228	A
34	AA	257	U
34	AA	270	U
34	AA	289	A
34	AA	337	A
34	AA	344	A
34	AA	411	U
34	AA	416	G
34	AA	432	A
34	AA	497	U
34	AA	500	A
34	AA	501	U
34	AA	504	A

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Mol	Chain	Res	Type
34	AA	505	A
34	AA	573	U
34	AA	579	C
34	AA	580	A
34	AA	581	C
34	AA	593	A
34	AA	594	C
34	AA	596	A
34	AA	597	A
34	AA	607	A
34	AA	620	U
34	AA	621	C
34	AA	641	G
34	AA	645	A
34	AA	652	A
34	AA	667	U
34	AA	674	U
34	AA	681	U
34	AA	683	A
34	AA	697	A
34	AA	698	G
34	AA	703	U
34	AA	715	U
34	AA	764	G
34	AA	768	C
34	AA	803	A
34	AA	809	A
34	AA	810	U
34	AA	811	A
34	AA	859	C
34	AA	888	A
34	AA	889	U
34	AA	904	G
34	AA	935	A
34	AA	998	U
34	AA	999	G
34	AA	1027	G
34	AA	1035	G
34	AA	1080	C
34	AA	1099	U
34	AA	1101	A
34	AA	1115	G

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Mol	Chain	Res	Type
34	AA	1197	U
34	AA	1204	A
34	AA	1206	U
34	AA	1217	U
34	AA	1224	A
34	AA	1234	A
34	AA	1243	G
34	AA	1272	U
34	AA	1277	G
34	AA	1415	A
34	AA	1422	A
34	AA	1431	A
34	AA	1435	G
34	AA	1457	G
34	AA	1459	U
34	AA	1479	A
34	AA	1503	A
34	AA	1538	U
34	AA	1539	U
34	AA	1566	A
34	AA	1574	C
34	AA	1602	A
34	AA	1603	C
34	AA	1632	G
34	AA	1642	G
34	AA	1643	U
34	AA	1703	U
34	AA	1705	A
34	AA	1735	G
34	AA	1748	A
34	AA	1750	U
34	AA	1779	A
34	AA	1805	U
34	AA	1872	A
34	AA	1873	U
34	AA	1881	C
34	AA	1898	U
34	AA	1964	G
34	AA	1965	U
34	AA	1989	A
34	AA	1990	A
34	AA	1996	C

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Mol	Chain	Res	Type
34	AA	1999	A
34	AA	2015	C
34	AA	2033	C
34	AA	2096	G
34	AA	2107	C
34	AA	2146	A
34	AA	2193	U
34	AA	2219	A
34	AA	2394	C
34	AA	2403	G
34	AA	2405	A
34	AA	2434	U
34	AA	2437	A
34	AA	2506	A
34	AA	2523	U
34	AA	2575	U
34	AA	2665	A
34	AA	2693	G
34	AA	2694	A
34	AA	2727	U
34	AA	2746	U
34	AA	2810	A
34	AA	2816	U
34	AA	2822	U
34	AA	2832	A
34	AA	2883	U
34	AA	2884	G
34	AA	2886	A
34	AA	2932	A
34	AA	2959	G
34	AA	2966	C
34	AA	2994	A
34	AA	3016	G
34	AA	3018	A
34	AA	3034	A
34	AA	3129	U
34	AA	3130	U
34	AA	3137	U
34	AA	3140	U
34	AA	3158	U
34	AA	3229	C
34	AA	3230	G

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Mol	Chain	Res	Type
34	AA	3231	A
34	AA	3245	U
34	AA	3309	G
34	AA	3332	G
34	AA	3337	U
34	AA	3342	C
34	AA	3361	U
34	AA	3379	A
34	AA	3381	A
34	AA	3382	U
34	AA	3414	G
34	AA	3434	A
34	AA	3435	A
34	AA	3476	A
34	AA	3505	U
34	AA	3526	U
34	AA	3575	U
34	AA	3576	A
34	AA	3577	A
34	AA	3581	A
34	AA	3588	A
34	AA	3589	U
34	AA	3590	A
34	AA	3624	U
34	AA	3627	C
34	AA	3658	G
34	AA	3662	U
34	AA	3664	G
34	AA	3667	C
34	AA	3668	U
34	AA	3671	A
34	AA	3711	U
34	AA	3767	U
34	AA	3774	A
34	AA	3782	A
35	AC	35	A
35	AC	37	A
35	AC	57	A
35	AC	75	A
35	AC	108	A
35	AC	114	A
35	AC	134	G

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Mol	Chain	Res	Type
35	AC	139	A
35	AC	145	A
36	AB	84	U

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

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
63	AW	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AW	154:ASN	C	197:UNK	N	33.92

6 Map visualisation

This section contains visualisations of the EMDB entry EMD-6456. These allow visual inspection of the internal detail of the map and identification of artifacts.

No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

This section was not generated.

6.2 Central slices

This section was not generated.

6.3 Largest variance slices

This section was not generated.

6.4 Orthogonal surface views

This section was not generated.

6.5 Mask visualisation

This section was not generated. No masks/segmentation were deposited.

7 Map analysis ⓘ

This section contains the results of statistical analysis of the map.

7.1 Map-value distribution ⓘ

This section was not generated.

7.2 Volume estimate versus contour level ⓘ

This section was not generated.

7.3 Rotationally averaged power spectrum ⓘ

This section was not generated. The rotationally averaged power spectrum had issues being displayed.

8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit

This section was not generated.