



wwPDB EM Map/Model Validation Report ⓘ

Apr 10, 2016 – 03:38 PM BST

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 PDB ID : 3J79, 3J7A

This is a wwPDB EM Map/Model Validation Report for a publicly released PDB/EMDB entry.
For rigid body fitted models, validation errors reported here could stem from errors in the original structure(s) used in the fitting.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at
<http://wwpdb.org/validation/2016/EMValidationReportHelp>

MolProbity : 4.02b-467
Mogul : unknown
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : trunk27241

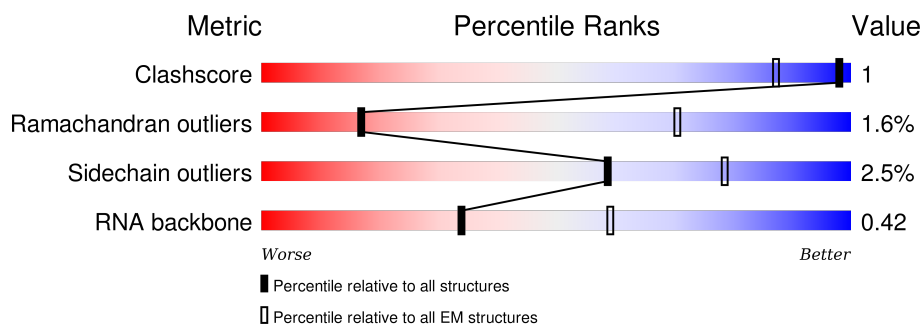
1 Overall quality at a glance

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.







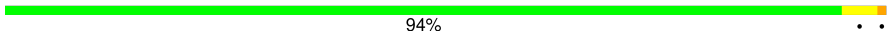
















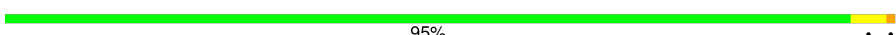



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	114402	924
Ramachandran outliers	111179	726
Sidechain outliers	111093	686
RNA backbone	3027	244

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

Mol	Chain	Length	Quality of chain
1	A	1608	34% 45% 19% .
2	7	76	28% 49% 20% .
3	D	209	72% . 25%
4	E	185	88% 12% .
5	G	224	93% 5% .
6	I	189	88% 5% . 5%
7	K	129	89% 10% .
8	M	138	90% 9% .


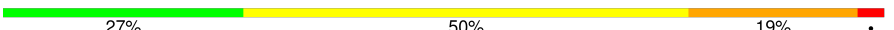








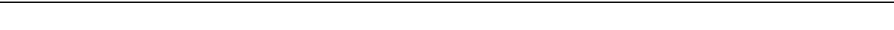

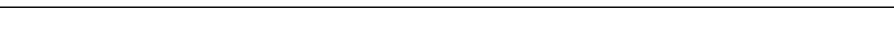
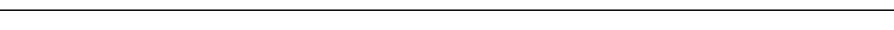



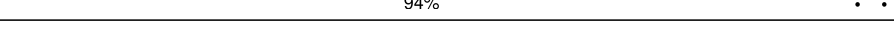

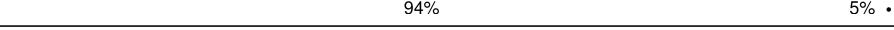





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Mol	Chain	Length	Quality of chain
9	W	108	
10	R	114	
11	O	79	
12	Y	154	
13	Z	72	
14	1	120	
15	2	68	
16	3	95	
17	4	76	
18	5	65	
19	6	43	
20	B	210	
21	F	257	
22	H	214	
23	J	188	
24	L	214	
25	N	98	
26	P	127	
27	Q	144	
28	S	128	
29	T	48	
30	U	149	
31	V	156	
32	X	103	
33	C	195	











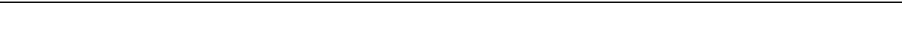

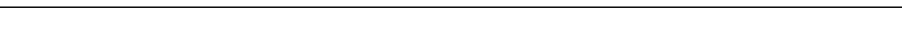
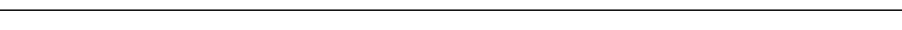
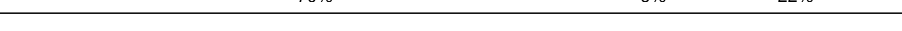




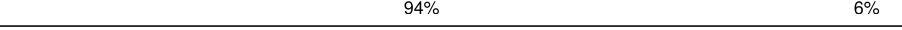
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Mol	Chain	Length	Quality of chain
34	AA	3193	
35	AC	151	
36	AB	118	
37	AL	211	
38	A1	145	
39	A2	118	
40	A4	66	
41	A6	98	
42	A7	102	
43	AN	146	
44	A8	125	
45	A9	103	
46	Aa	106	
47	Ab	105	
48	Ad	76	
49	Ae	50	
50	Af	51	
51	AP	204	
52	Ah	85	
53	Ai	95	
54	AI	213	
55	AJ	244	
56	Ac	89	
57	AK	201	
58	AM	132	

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Mol	Chain	Length	Quality of chain
59	AS	186	 88% 10% .
60	AO	147	 85% 12% ..
61	AQ	205	 80% 11% . 8%
62	AR	289	 77% 9% . 13%
63	AW	170	 89% 8% .
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	 92% 6% .
70	AE	380	 88% 11% .
71	AF	390	 90% 8% ..
72	AG	159	 70% 6% .. 22%
73	AU	180	 89% 8% .
74	AH	185	 91% 8% .
75	AV	155	 88% 11% .
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		

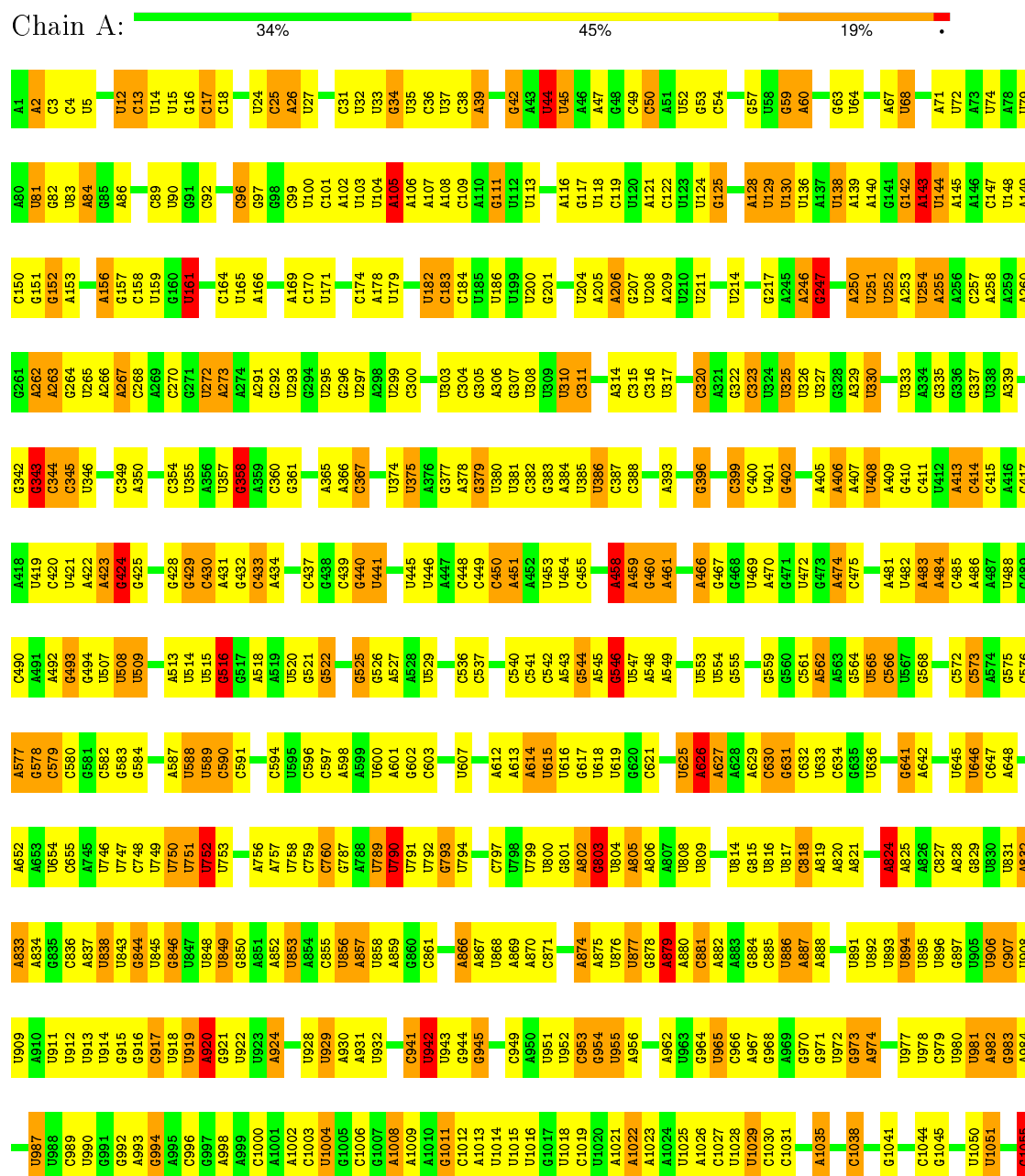
- Molecule 78 is a protein called 60S ribosomal protein eL24.

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

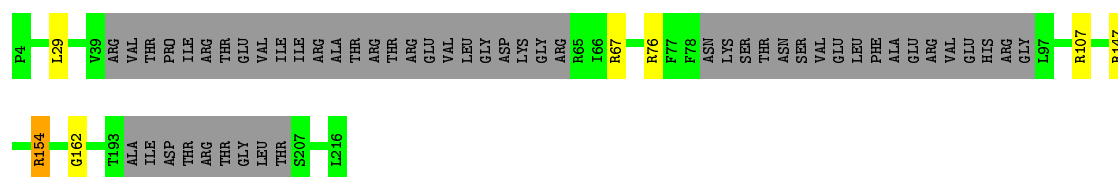
3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. 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 4: 40S ribosomal protein uS4

Chain E: 88% 12% •



- Molecule 5: 40S ribosomal protein uS5

Chain G: 93% 5% •



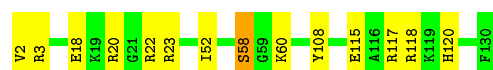
- Molecule 6: 40S ribosomal protein uS7

Chain I: 88% 5% • 5%



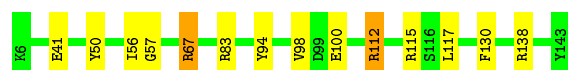
- Molecule 7: 40S ribosomal protein uS8

Chain K: 89% 10% •



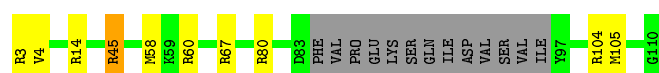
- Molecule 8: 40S ribosomal protein uS9

Chain M: 90% 9% •



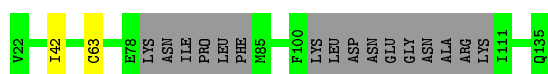
- Molecule 9: 40S ribosomal protein eS17

Chain W: 79% 8% • 12%

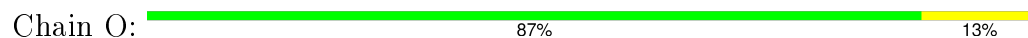


- Molecule 10: 40S ribosomal protein eS12

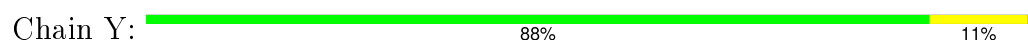
Chain R: 84% • 14%



- Molecule 11: 40S ribosomal protein eS10



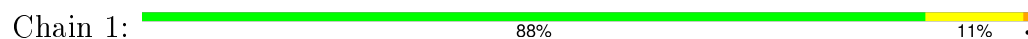
- Molecule 12: 40S ribosomal protein eS19



- Molecule 13: 40S ribosomal protein eS21



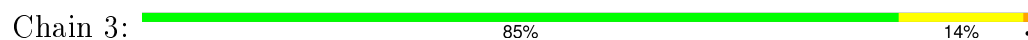
- Molecule 14: 40S ribosomal protein eS24



- Molecule 15: 40S ribosomal protein eS25



- Molecule 16: 40S ribosomal protein eS26

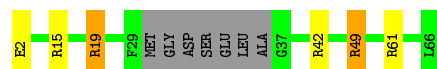


- Molecule 17: 40S ribosomal protein eS27

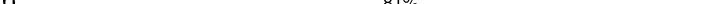


- Molecule 18: 40S ribosomal protein eS28

Chain 5: 80% 6% • 11%



- Molecule 19: 40S ribosomal protein eS30

Chain 6:  81% 14% 5%



- Molecule 20: 40S ribosomal protein eS1

Chain B: 93% 6%



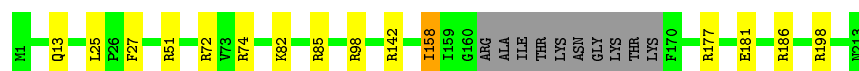
- Molecule 21: 40S ribosomal protein eS4

Chain F:  92% 7%



- Molecule 22: 40S ribosomal protein eS6

Chain H:  88% 7% 5%



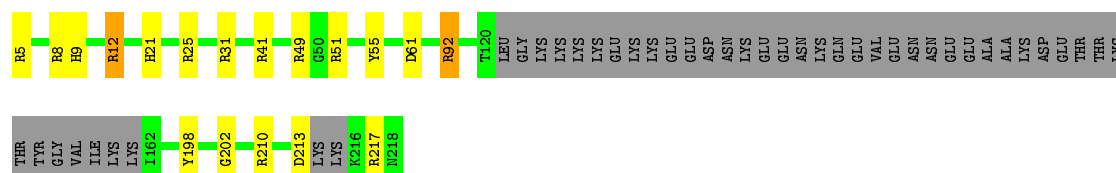
- Molecule 23: 40S ribosomal protein eS7

Chain J: 91% 9%



- Molecule 24: 40S ribosomal protein eS8

Chain L: 71% 7% 20%



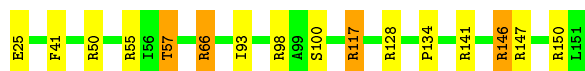
- Molecule 25: 40S ribosomal protein uS10

Chain N:  91% 8%




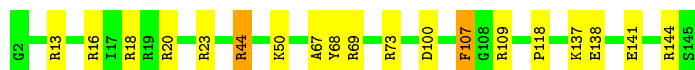
- Molecule 26: 40S ribosomal protein uS11

Chain P:  87% 9%




- Molecule 27: 40S ribosomal protein uS12

Chain Q:  87% 12%




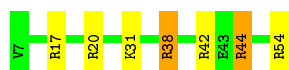
- Molecule 28: 40S ribosomal protein uS13

Chain S:  86% 13%



- Molecule 29: 40S ribosomal protein uS14

Chain T:  85% 10%




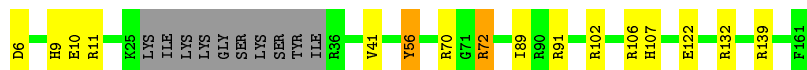
- Molecule 30: 40S ribosomal protein uS15

Chain U:  95%




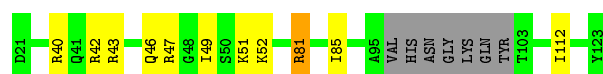
- Molecule 31: 40S ribosomal protein uS17

Chain V:  83% 9% 6%



- Molecule 32: 40S ribosomal protein uS19

Chain X:  83% 10% 7%



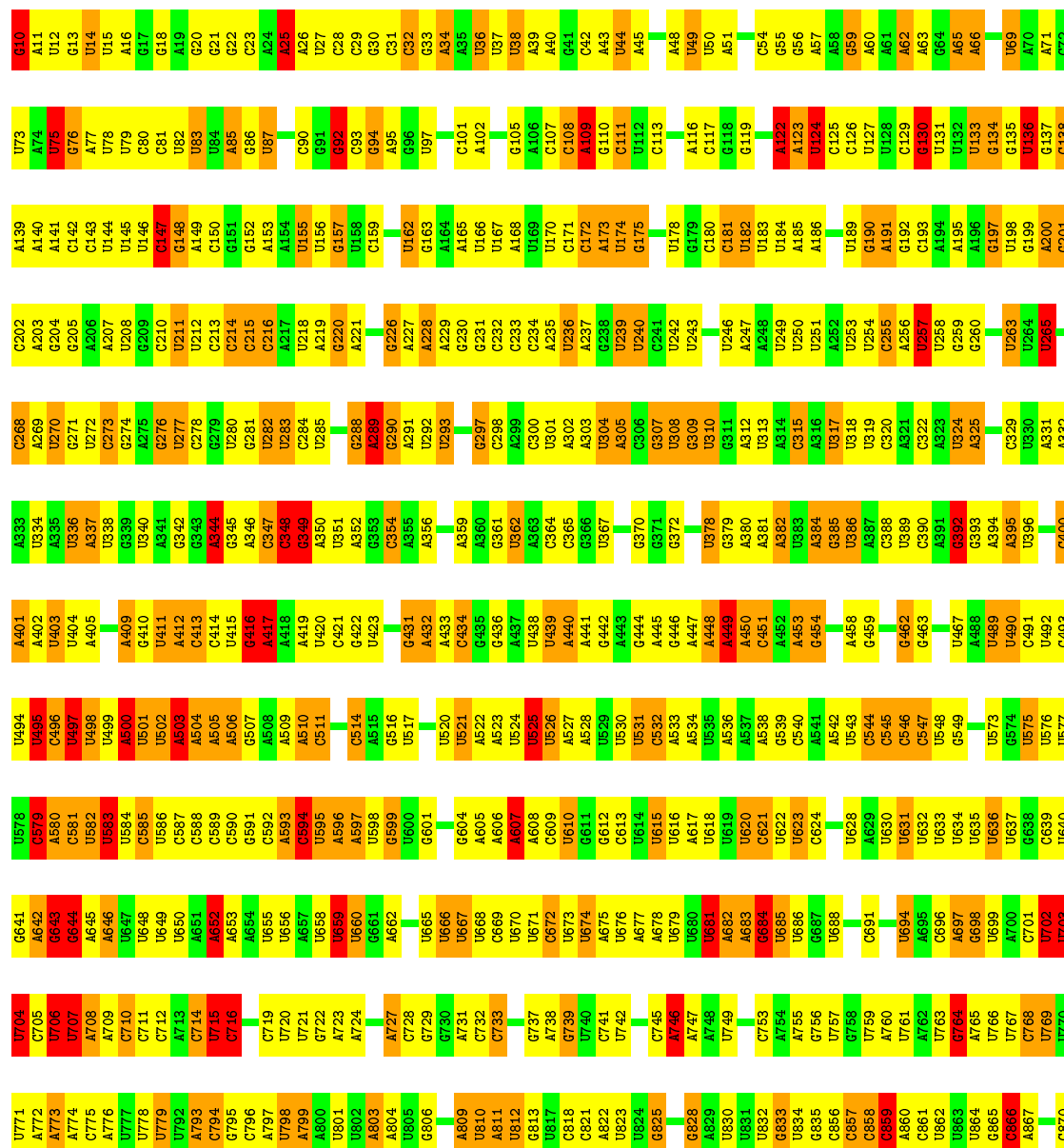
- Molecule 33: 40S ribosomal protein uS2

Chain C:  93% 7%



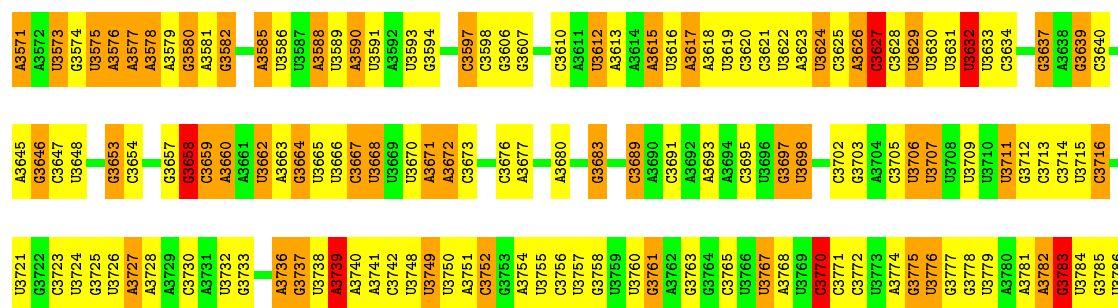
- Molecule 34: 28S ribosomal RNA

Chain AA:  31% 45% 20%

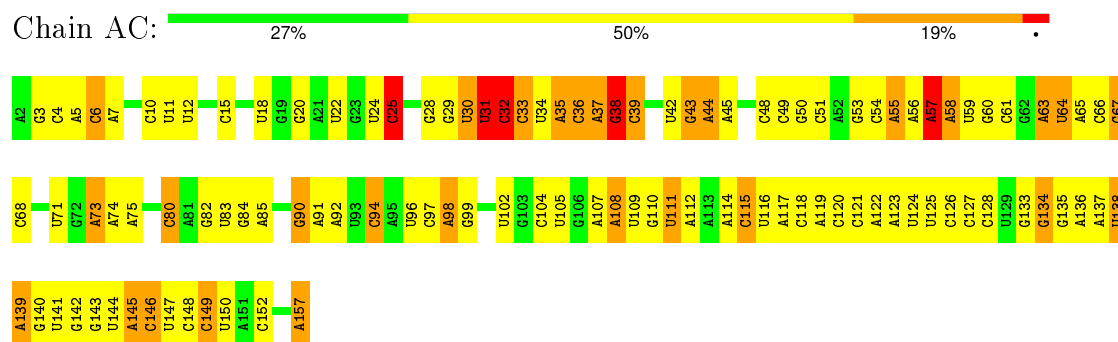


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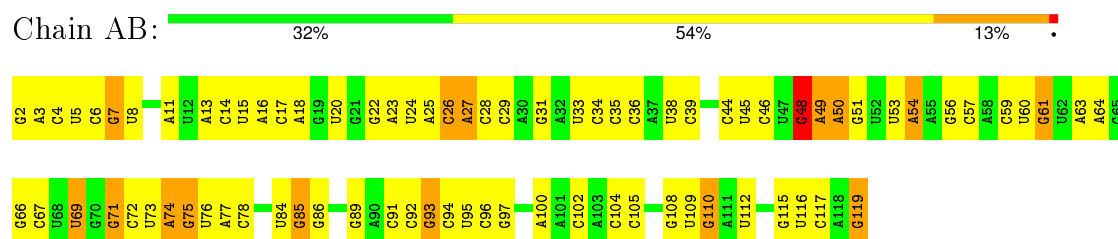
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C3512	C3442	U3363	G3296	U3232	U3166	U3098	A3028	G2957	U2813	G2694	A2626	U2559	C2488	G2414	G2173
G3513	A3443	U3364	G3297	G3233	A3167	C3099	G3029	C2958	U2814	A2695	U2627	C2560	C2489	G2415	G2174
A3514	G3444	A3373	U3234	U3234	C3168	G3100	A3030	C2959	G2815	G2696	U2628	U2561	C2490	G2416	C2175
A3515	C3445	U3374	C3235	C3235	A3169	C3102	U3032	C2960	U2816	G2697	U2629	A2563	C2491	A2417	A2176
A3516	U3449	A3375	C3236	C3236	A3170	C3103	A3033	C2961	U2817	C2698	U2630	A2564	U2492	A2419	A2177
C3517	U3452	U3376	U3239	U3239	C3171	C3104	A3034	G2962	U2818	C2699	C2631	A2565	U2493	U2420	U2180
C3518	U3453	A3377	C3240	C3240	A3172	U3105	A3035	A2966	U2820	C2700	C2632	C2566	C2494	C2421	
U3522	U3452	U3378	U3241	C3241	G3173	A3106	A3036	A2967	C2821	U2701	U2633	U2567	C2501	G2422	C2185
G3523	U3453	A3379	U3242	U3242	G3174	U3107	G3037	U2968	U2822	G2702	A2634	C2570	C2425	G2423	C2186
G3524	C3456	U3380	C3243	C3243	A3175	A3108	U3038	C2969	U2823	U2703	C2635	C2571	U2504	C2426	G2187
A3525	A3457	U3381	C3244	C3244	A3176	U3109	A3043	C2970	C2826	U2704	U2636	C2572	U2505	G2427	C2191
U3526	A3458	U3382	U3245	U3245	U3177	A3110	C3046	U2971	C2827	G2705	C2639	A2573	C2506	U2428	U2192
U3527	A3459	A3383	A3246	A3246	A3178	U3111	U3047	U2972	C2827	C2708	U2640	A2574	A2507	U2429	U2193
A3528	C3460	U3387	U3247	U3247	A3179	U3112	U3048	U2977	A2832	U2709	U2641	U2575	C2508	U2430	C2194
A3529	C3461	U3388	C3248	C3248	C3180	G3114	G3049	A2978	U2833	U2710	U2642	G2576	U2509	U2431	G2195
A3530	G3462	U3389	A3249	A3249	U3181	G3115	U3050	U2979	U2834	U2711	C2643	C2577	U2510	U2432	
C3531	G3463	U3390	U3250	U3250	A3185	A3116	U3051	A2980	G2835	A2712	U2644	C2578	G2511	U2433	
C3536	U3464	G3391	G3252	G3252	U3186	A3117	G3052	A2981	G2836	C2713	C2647	A2579	C2512	A2435	G2203
U3545	U3467	U3392	C3253	C3253	A3186	A3118	G3053	A2982	G2837	C2714	U2648	C2580	A2436	A2436	A2204
U3546	G3468	C3393	G3254	G3254	C3191	G3121	U3055	C2985	A2838	U2715	G2649	U2581	A2437	U2205	U2206
U3547	C3469	U3394	C3255	C3255	U3192	A3122	U3056	A2986	U2839	C2716	A2649	U2582	A2438	U2207	
U3548	G3470	A3397	A3256	A3256	C3193	G3123	U3057	G2987	A2885	G2718	U2650	U2583	U2517	G2208	
U3549	A3471	U3398	G3257	G3257	G3124	U3125	C3058	A2988	A2886	U2719	C2652	U2584	C2444	C2209	
U3550	A3472	C3399	A3258	A3258	C3194	G3126	U3059	U2989	U2887	C2720	C2653	U2586	U2447	U2210	U2211
G3473	G3473	U3401	A3261	A3261	A3196	A3126	U3060	C2990	U2888	U2721	A2654	U2587	G2448	G2212	
			G3263	G3263	A3197	A3127	U3063	C2991	U2889	G2722	C2655	U2588	U2449	G2450	G2215
			G3264	G3264	A3198	A3128	U3064	C2992	C2915	G2723	A2656	A2589	C2524	A2451	G2216
			G3265	G3265	C3199	U3129	C3065	C2993	C2916	C2724	G2657	U2590	A2526	A2452	G2217
			G3266	G3266	U3200	U3130	A3066	C2994	C2917	U2727	C2658	U2591	A2527	A2453	C2218
			G3267	G3267	A3201	A3131	G3067	A2995	A2919	C2728	C2659	G2592	A2454	A2454	A2219
					U3202	C3132	A3068	A2996				G2593			



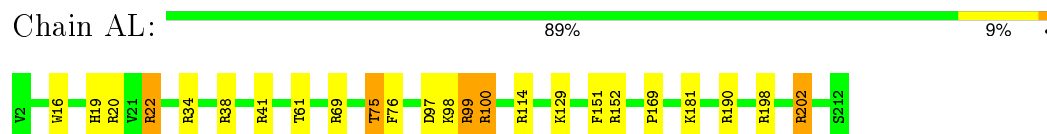
• Molecule 35: 5.8S ribosomal RNA



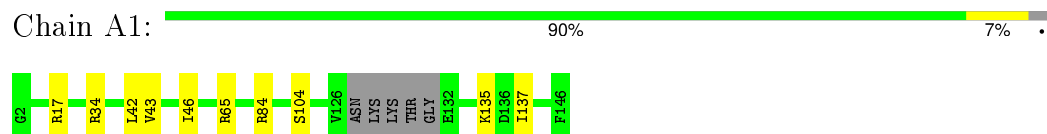
• Molecule 36: 5S ribosomal RNA



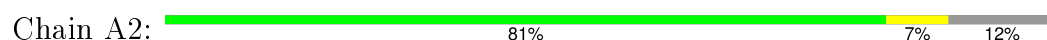
• Molecule 37: 60S ribosomal protein eL13



• Molecule 38: 60S ribosomal protein eL27



• Molecule 39: 60S ribosomal protein eL28





- Molecule 40: 60S ribosomal protein eL29

Chain A4: 94% 6%



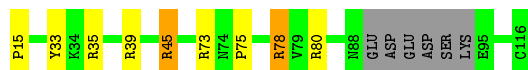
- Molecule 41: 60S ribosomal protein eL30

Chain A6: 96% .



- Molecule 42: 60S ribosomal protein eL31

Chain A7: 85% 7% 6%



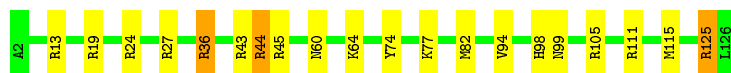
- Molecule 43: 60S ribosomal protein eL14

Chain AN: 90% 10%



- Molecule 44: 60S ribosomal protein eL32

Chain A8: 84% 14% .



- Molecule 45: 60S ribosomal protein eL33

Chain A9: 89% 10% .

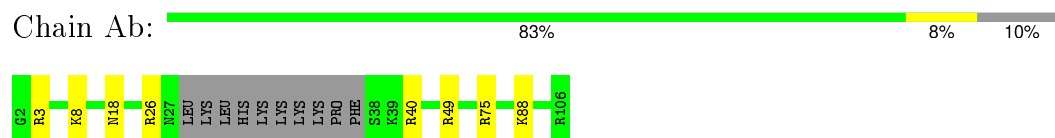


- Molecule 46: 60S ribosomal protein eL34

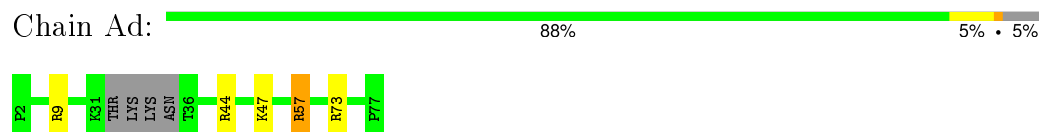
Chain Aa: 88% 8% .



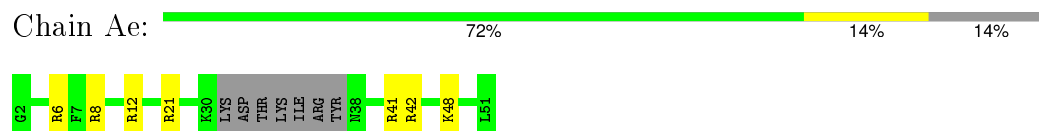
- Molecule 47: 60S ribosomal protein eL36



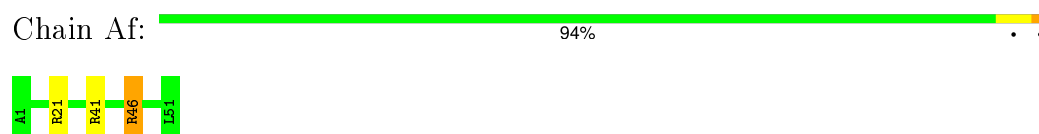
- Molecule 48: 60S ribosomal protein eL38



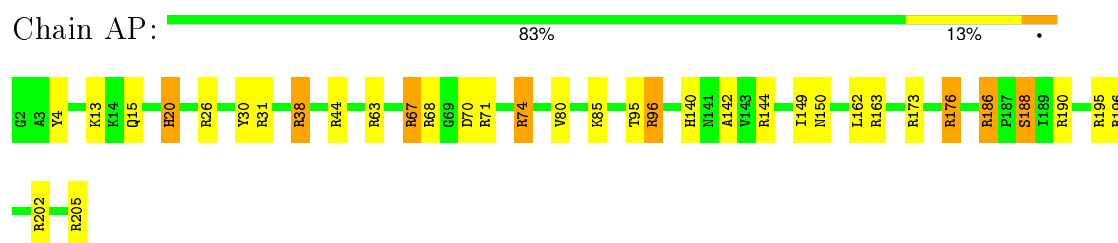
- Molecule 49: 60S ribosomal protein eL39



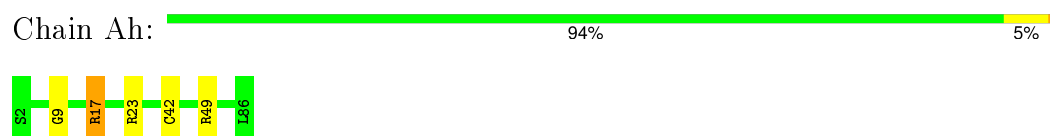
- Molecule 50: 60S ribosomal protein eL40



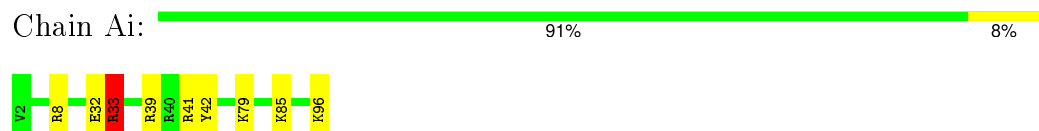
- Molecule 51: 60S ribosomal protein eL15



- Molecule 52: 60S ribosomal protein eL43

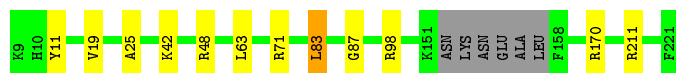


- Molecule 53: 60S ribosomal protein eL44




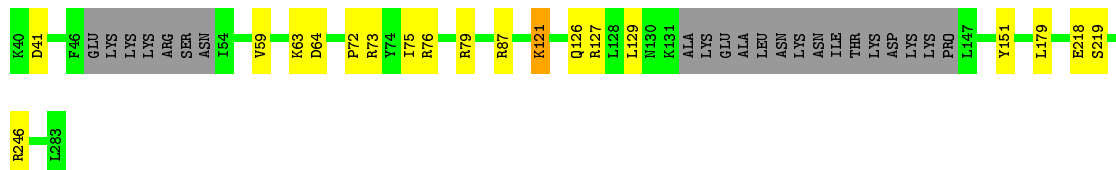
- Molecule 54: 60S ribosomal protein eL6

Chain AI:  92% 5%




- Molecule 55: 60S ribosomal protein eL8

Chain AJ:  83% 7% 9%



- Molecule 56: 60S ribosomal protein eL37

Chain Ac:  87% 10%



- Molecule 57: 60S ribosomal protein uL13

Chain AK:  92%



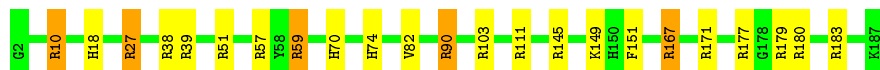
- Molecule 58: 60S ribosomal protein uL14

Chain AM:  95%



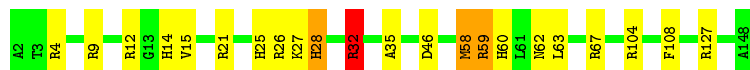
- Molecule 59: 60S ribosomal protein eL18

Chain AS:  88% 10%

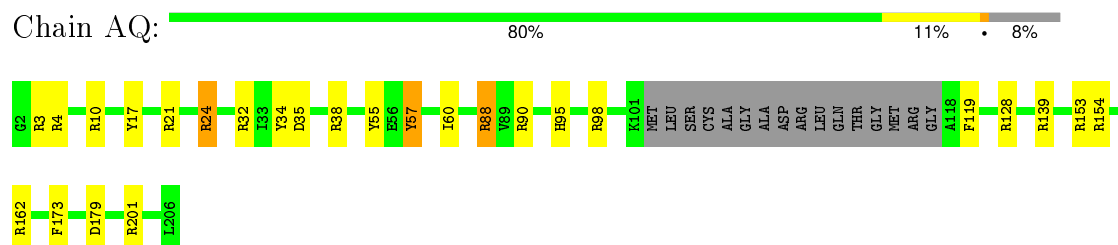


- Molecule 60: 60S ribosomal protein uL15

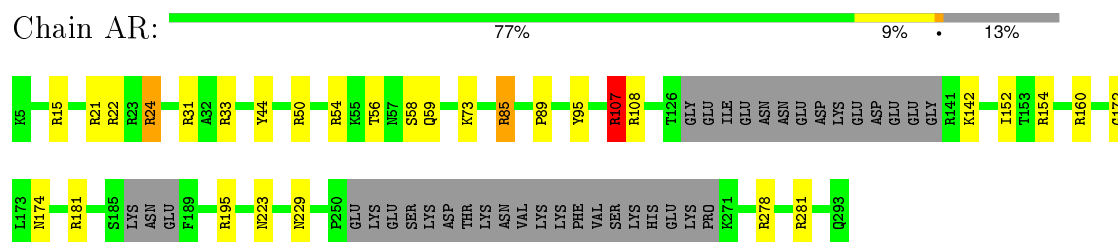
Chain AO:  85% 12%



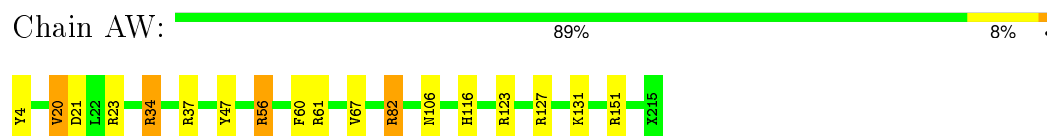
- Molecule 61: 60S ribosomal protein uL16



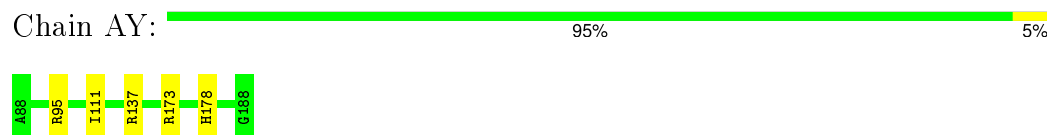
- Molecule 62: 60S ribosomal protein uL18



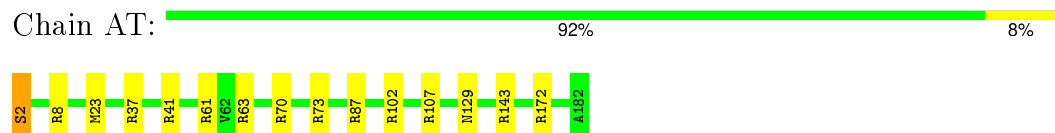
- Molecule 63: 60S ribosomal protein uL22



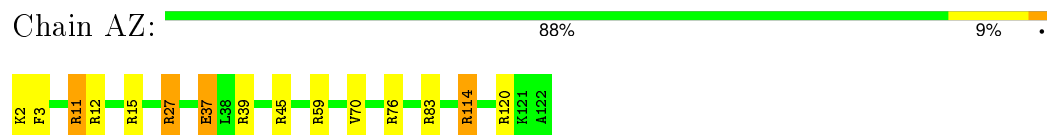
- Molecule 64: 60S ribosomal protein uL23



- Molecule 65: 60S ribosomal protein eL19



- Molecule 66: 60S ribosomal protein uL24



- Molecule 67: 60S ribosomal protein uL29





- Molecule 68: 60S ribosomal protein uL30

Chain A5: 88% 10% ..



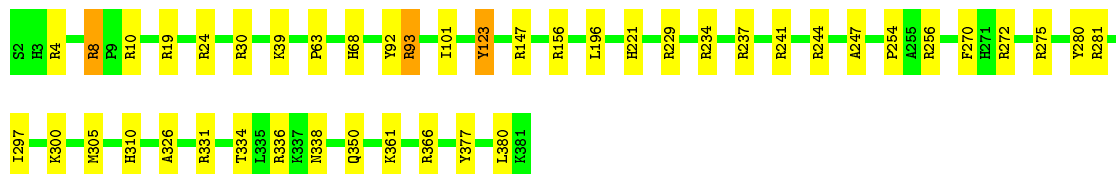
- Molecule 69: 60S ribosomal protein uL2

Chain AD: 92% 6% •



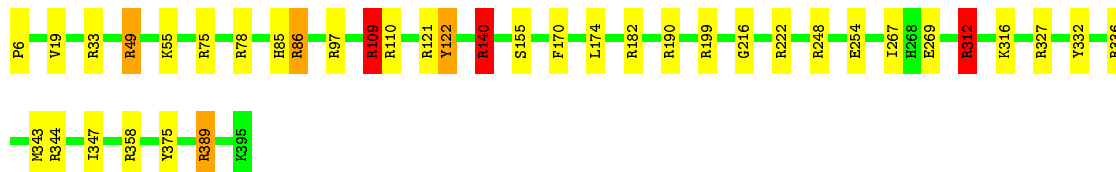
- Molecule 70: 60S ribosomal protein uL3

Chain AE: 88% 11% •



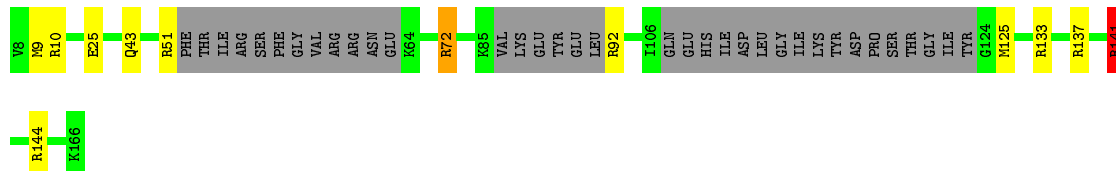
- Molecule 71: 60S ribosomal protein uL4

Chain AF: 90% 8% ..



- Molecule 72: 60S ribosomal protein uL5

Chain AG: 70% 6% .. 22%



- Molecule 73: 60S ribosomal protein eL20

Chain AU: 89% 8% •



- Molecule 74: 60S ribosomal protein uL6

Chain AH: 91% 8%



- Molecule 75: 60S ribosomal protein eL21

Chain AV: 88% 11%



- 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
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	Depositor
Number of images	14696	Depositor
Resolution determination method	FSC 0.143	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	23000	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	$\# Z > 2$	RMSZ	$\# Z > 2$
1	A	1.10	4/38275 (0.0%)	1.54	870/59596 (1.5%)
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%)
2	7	1.12	0/1810	1.64	62/2821 (2.2%)
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%)
3	D	0.76	0/1241	1.05	5/1652 (0.3%)
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%)
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%)
4	E	0.72	0/1539	1.14	14/2055 (0.7%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >2	RMSZ	# Z >2
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%)
5	G	0.70	0/1800	1.03	10/2429 (0.4%)
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%)
6	I	0.71	0/1443	1.10	12/1936 (0.6%)
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%)
7	K	0.72	0/1054	1.09	4/1411 (0.3%)
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%)
78	A0	0.79	0/534	1.19	5/711 (0.7%)
8	M	0.72	0/1114	1.12	8/1487 (0.5%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >2	RMSZ	# Z >2
9	W	0.72	0/793	1.14	5/1053 (0.5%)
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
12	Y	0	3
14	1	0	3
15	2	0	1
16	3	0	3
18	5	0	2
19	6	0	3
2	7	0	8
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
4	E	0	7
40	A4	0	1
41	A6	0	1
42	A7	0	3
43	AN	0	5
44	A8	0	4

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Mol	Chain	#Chirality outliers	#Planarity outliers
45	A9	0	2
46	Aa	0	3
47	Ab	0	1
48	Ad	0	1
49	Ae	0	2
5	G	0	1
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
6	I	0	2
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
7	K	0	3
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
8	M	0	3
9	W	0	2
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	Sidechain,Peptide
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 ⓘ

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	34207	0	17266	42	0
2	7	1620	0	827	1	0
3	D	1229	0	1311	0	0
4	E	1515	0	1605	0	0
5	G	1758	0	1811	1	0
6	I	1424	0	1471	0	0
7	K	1037	0	1099	3	0
8	M	1099	0	1183	1	0
9	W	786	0	858	0	0
10	R	747	0	754	0	0
11	O	687	0	695	0	0
12	Y	1267	0	1316	0	0
13	Z	557	0	558	2	0
14	1	986	0	1076	0	0
15	2	321	0	338	0	0
16	3	782	0	820	0	0
17	4	586	0	604	0	0
18	5	458	0	496	0	0
19	6	346	0	381	0	0
20	B	1714	0	1838	0	0
21	F	2062	0	2200	1	0
22	H	1648	0	1803	1	0
23	J	1529	0	1680	0	0
24	L	1383	0	1434	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
25	N	772	0	813	0	0
26	P	954	0	997	0	0
27	Q	1129	0	1196	1	0
28	S	1047	0	1101	1	0
29	T	405	0	419	0	0
30	U	1202	0	1299	0	0
31	V	1206	0	1239	1	0
32	X	777	0	832	0	0
33	C	1539	0	1600	1	0
34	AA	67884	0	34242	118	0
35	AC	3215	0	1633	4	0
36	AB	2522	0	1275	2	0
37	AL	1757	0	1888	3	0
38	A1	1134	0	1245	1	0
39	A2	831	0	887	1	0
40	A4	555	0	599	1	0
41	A6	741	0	763	0	0
42	A7	794	0	869	0	0
43	AN	1202	0	1316	1	0
44	A8	1037	0	1139	3	0
45	A9	845	0	886	0	0
46	Aa	859	0	912	0	0
47	Ab	757	0	842	0	0
48	Ad	604	0	686	0	0
49	Ae	388	0	421	0	0
50	Af	414	0	452	0	0
51	AP	1697	0	1802	2	0
52	Ah	659	0	727	0	0
53	Ai	779	0	861	0	0
54	AI	1685	0	1849	1	0
55	AJ	1813	0	1985	1	0
56	Ac	710	0	761	0	0
57	AK	1660	0	1785	0	0
58	AM	996	0	1044	0	0
59	AS	1503	0	1636	1	0
60	AO	1172	0	1230	5	0
61	AQ	1545	0	1582	1	0
62	AR	2050	0	2140	1	0
63	AW	1319	0	1303	3	0
64	AY	797	0	850	0	0
65	AT	1509	0	1682	1	0
66	AZ	1001	0	1099	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
67	A3	995	0	1121	0	0
68	A5	1879	0	2005	1	0
69	AD	1867	0	1964	1	0
70	AE	3062	0	3205	4	0
71	AF	3095	0	3333	2	0
72	AG	1011	0	1073	0	0
73	AU	1497	0	1556	2	0
74	AH	1476	0	1574	2	0
75	AV	1276	0	1355	1	0
76	Ag	343	0	388	0	0
77	AX	825	0	882	0	0
78	A0	522	0	539	0	0
All	All	193061	0	144306	200	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 1.

All (200) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AA:3770:C:H4'	70:AE:310:HIS:CE1	2.36	0.61
1:A:458:A:H3'	1:A:459:A:C5'	2.32	0.60
34:AA:445:A:C2	34:AA:702:U:C4	2.91	0.59
34:AA:236:U:HO2'	66:AZ:2:LYS:N	2.01	0.59
44:A8:36:ARG:HE	60:AO:14:HIS:CE1	2.22	0.57
34:AA:1080:C:HO2'	40:A4:2:ALA:N	2.02	0.57
34:AA:3626:A:H3'	34:AA:3627:C:H5''	1.88	0.56
34:AA:123:A:H3'	34:AA:124:U:H5''	1.87	0.56
73:AU:147:HIS:HE2	74:AH:2:LYS:N	2.03	0.56
1:A:1187:A:H2'	1:A:1188:A:C8	2.42	0.55
1:A:1035:A:HO2'	7:K:2:VAL:N	2.05	0.55
34:AA:3726:U:H4'	34:AA:3727:A:H5''	1.90	0.54
21:F:36:HIS:CD2	21:F:86:LEU:H	2.25	0.54
34:AA:746:A:H2'	34:AA:747:A:C8	2.42	0.54
34:AA:967:A:C5	34:AA:968:G:H1'	2.43	0.53
1:A:1434:U:H3	1:A:1665:G:H22	1.56	0.53
51:AP:15:GLN:HA	51:AP:20:HIS:CE1	2.44	0.53
1:A:955:U:H2'	1:A:956:A:C8	2.46	0.51
1:A:1938:C:H2'	1:A:1939:G:C8	2.45	0.51
34:AA:1322:G:H2'	34:AA:1323:A:C8	2.46	0.51
34:AA:173:A:H3'	34:AA:174:U:H5''	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AA:681:U:C6	34:AA:681:U:H5''	2.45	0.51
34:AA:3116:A:C6	60:AO:60:HIS:CD2	2.99	0.51
34:AA:2669:G:H2'	34:AA:2670:G:C8	2.46	0.51
1:A:886:U:H2'	1:A:887:A:C8	2.46	0.51
34:AA:912:U:H2'	34:AA:913:U:C6	2.47	0.50
1:A:1061:A:C2	1:A:1062:A:C8	3.00	0.50
37:AL:75:THR:HG22	37:AL:76:PHE:H	1.78	0.49
34:AA:659:U:H2'	34:AA:660:U:C6	2.47	0.49
1:A:484:A:C2	1:A:518:A:C2	3.01	0.49
1:A:1720:G:H2'	1:A:1721:A:C8	2.48	0.49
34:AA:2563:A:H2'	34:AA:2564:A:C8	2.48	0.49
34:AA:506:A:H2'	34:AA:507:G:C8	2.48	0.48
34:AA:2084:U:H5''	34:AA:2084:U:H6	1.79	0.48
34:AA:440:A:H2'	34:AA:441:A:C8	2.48	0.48
70:AE:63:PRO:HA	70:AE:68:HIS:CE1	2.49	0.48
34:AA:2506:A:H2'	34:AA:2507:A:C8	2.48	0.48
34:AA:2590:U:O2	34:AA:2590:U:H2'	2.13	0.48
34:AA:2709:U:H2'	34:AA:2710:U:C6	2.49	0.47
34:AA:2981:A:H2'	34:AA:2982:A:C8	2.49	0.47
35:AC:32:C:H2'	35:AC:33:C:C6	2.49	0.47
34:AA:858:C:H3'	34:AA:859:C:H5''	1.95	0.47
1:A:1022:A:H2'	1:A:1023:A:C8	2.50	0.47
1:A:1307:U:H2'	1:A:1308:C:C5	2.48	0.47
34:AA:95:A:H4'	60:AO:35:ALA:HA	1.96	0.47
34:AA:858:C:C5	34:AA:859:C:C6	3.03	0.47
34:AA:2961:C:C5	34:AA:2962:G:C8	3.02	0.47
1:A:413:A:H2'	1:A:414:C:C6	2.49	0.47
34:AA:348:C:C4	34:AA:349:G:C6	3.03	0.47
35:AC:57:A:H2'	35:AC:58:A:C8	2.50	0.47
34:AA:593:A:H4'	34:AA:594:C:H5'	1.96	0.46
60:AO:28:HIS:CE1	60:AO:32:ARG:NH1	2.83	0.46
34:AA:3433:C:H5'	70:AE:326:ALA:HA	1.97	0.46
34:AA:3054:A:C2	34:AA:3092:G:C6	3.04	0.46
34:AA:1901:A:HO2'	34:AA:1966:A:H8	1.60	0.46
34:AA:1727:U:H2'	34:AA:1728:C:C6	2.50	0.46
73:AU:68:LEU:HD13	75:AV:142:ILE:HD13	1.97	0.46
34:AA:122:A:C5	34:AA:155:U:C5	3.03	0.46
34:AA:525:U:H2'	34:AA:526:U:C6	2.50	0.46
34:AA:2657:G:H22	34:AA:2689:G:H1'	1.80	0.46
34:AA:715:U:H2'	34:AA:716:C:C5	2.51	0.46
34:AA:3511:C:H2'	34:AA:3512:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AA:344:A:H2'	34:AA:345:G:C8	2.51	0.46
34:AA:445:A:C2	34:AA:446:G:C4	3.03	0.46
34:AA:909:U:H2'	34:AA:910:A:C8	2.51	0.46
34:AA:288:G:H2'	34:AA:289:A:C8	2.50	0.45
63:AW:20:VAL:HG13	63:AW:21:ASP:H	1.82	0.45
34:AA:2940:A:H2'	34:AA:2941:G:C8	2.51	0.45
1:A:458:A:H3'	1:A:459:A:H5''	1.99	0.45
35:AC:30:U:H2'	35:AC:31:U:C6	2.52	0.45
70:AE:101:ILE:H	70:AE:101:ILE:HD12	1.81	0.45
34:AA:1819:U:H2'	34:AA:1820:U:C6	2.52	0.45
13:Z:60:GLN:HA	33:C:155:HIS:CE1	2.52	0.45
34:AA:1511:U:H2'	34:AA:1512:A:C8	2.51	0.45
34:AA:2650:A:H2'	34:AA:2651:A:C8	2.52	0.45
34:AA:516:G:H5''	71:AF:316:LYS:HA	1.99	0.45
1:A:1859:A:H2'	1:A:1860:A:C8	2.51	0.45
34:AA:1974:U:H2'	34:AA:1975:A:C8	2.52	0.45
38:A1:137:ILE:HD12	38:A1:137:ILE:H	1.82	0.45
66:AZ:37:GLU:CD	66:AZ:37:GLU:H	2.19	0.45
34:AA:1822:A:C2	34:AA:2004:U:C4	3.05	0.45
34:AA:965:A:C6	34:AA:966:A:H1'	2.52	0.45
39:A2:105:LYS:H	39:A2:105:LYS:HD2	1.82	0.45
2:7:24:U:H2'	2:7:25:C:C6	2.52	0.44
1:A:149:A:C2	1:A:161:U:C4	3.06	0.44
1:A:1743:A:C2	1:A:1787:U:C5	3.05	0.44
34:AA:1785:U:C5	34:AA:1786:A:C5	3.05	0.44
1:A:943:U:H2'	1:A:944:G:C8	2.52	0.44
36:AB:49:A:C5'	62:AR:223:ASN:HD22	2.31	0.44
34:AA:3632:U:H3	34:AA:3653:G:H1	1.66	0.44
34:AA:2450:G:H4'	34:AA:2451:A:H5'	1.99	0.44
34:AA:921:C:H2'	34:AA:922:C:C6	2.52	0.44
34:AA:1506:C:H2'	34:AA:1507:U:C6	2.52	0.44
34:AA:1739:C:H2'	34:AA:1740:A:C8	2.53	0.44
34:AA:2500:A:C4	34:AA:2502:U:C5	3.05	0.44
34:AA:606:A:H2'	34:AA:607:A:C8	2.53	0.44
1:A:262:A:C5	1:A:263:A:H1'	2.52	0.44
34:AA:510:A:H2'	34:AA:511:C:C6	2.52	0.44
34:AA:3242:U:H2'	34:AA:3243:C:C6	2.53	0.44
34:AA:3357:U:H4'	34:AA:3358:U:H5''	1.99	0.44
1:A:105:A:C8	1:A:366:A:C6	3.05	0.44
34:AA:1100:A:C4	68:A5:185:HIS:CE1	3.06	0.44
1:A:1876:G:H2'	1:A:1877:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AA:1467:C:H5'	44:A8:60:ASN:HA	2.00	0.44
34:AA:1620:U:HO2'	65:AT:2:SER:N	2.16	0.43
61:AQ:17:TYR:H	61:AQ:95:HIS:CD2	2.36	0.43
1:A:929:U:C5	1:A:930:A:C2	3.06	0.43
71:AF:170:PHE:CZ	71:AF:174:LEU:HD11	2.54	0.43
35:AC:73:A:C6	35:AC:74:A:H1'	2.53	0.43
34:AA:497:U:H5''	34:AA:497:U:C6	2.53	0.43
34:AA:916:U:H2'	34:AA:917:A:C8	2.52	0.43
34:AA:1644:U:C4	34:AA:2102:A:N1	2.86	0.43
34:AA:1822:A:C2	34:AA:1823:C:C2	3.07	0.43
34:AA:2809:A:C2	34:AA:2811:A:C4	3.06	0.43
34:AA:1212:U:H2'	34:AA:1213:U:C6	2.53	0.43
1:A:1957:A:H2'	1:A:1958:A:C8	2.54	0.43
44:A8:98:HIS:CG	44:A8:99:ASN:N	2.86	0.43
34:AA:3241:U:H2'	34:AA:3242:U:C6	2.54	0.43
34:AA:1572:U:C5	34:AA:1573:C:C5	3.06	0.43
34:AA:1184:A:H2'	34:AA:1185:A:C8	2.54	0.43
34:AA:1861:C:H2'	34:AA:1862:A:C8	2.54	0.43
34:AA:136:U:C4	34:AA:141:A:C2	3.07	0.43
37:AL:97:ASP:CG	37:AL:98:LYS:H	2.22	0.43
1:A:993:A:H2'	1:A:994:G:C8	2.53	0.43
1:A:12:U:H2'	1:A:13:C:C6	2.53	0.43
34:AA:642:A:C5	34:AA:684:G:C8	3.07	0.42
54:AI:83:LEU:HD13	54:AI:83:LEU:H	1.84	0.42
34:AA:1628:U:C5	34:AA:1629:G:C5	3.07	0.42
34:AA:3325:G:H2'	34:AA:3326:A:C8	2.54	0.42
1:A:802:A:C5	1:A:803:G:C5	3.07	0.42
34:AA:1064:U:H2'	34:AA:1065:U:C6	2.54	0.42
5:G:239:PRO:HA	5:G:242:TRP:CD2	2.54	0.42
34:AA:2207:G:C6	34:AA:2208:G:C5	3.08	0.42
34:AA:939:A:H2'	34:AA:940:A:C8	2.54	0.42
34:AA:3399:U:H2'	34:AA:3400:C:C6	2.54	0.42
37:AL:16:TRP:CZ2	37:AL:19:HIS:CD2	3.08	0.42
34:AA:2083:U:H2'	34:AA:2084:U:C6	2.54	0.42
1:A:1855:U:C2	28:S:122:HIS:CE1	3.08	0.42
7:K:18:GLU:CD	13:Z:22:ARG:HH22	2.22	0.42
63:AW:67:VAL:HG23	63:AW:82:ARG:HG3	2.01	0.42
34:AA:282:U:H2'	34:AA:283:U:C6	2.54	0.42
34:AA:3486:G:H2'	34:AA:3487:A:C8	2.54	0.42
34:AA:3022:U:H2'	34:AA:3023:C:C6	2.54	0.42
34:AA:1302:G:C6	34:AA:1446:A:C2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1928:A:C5	1:A:2056:C:H4'	2.54	0.42
31:V:122:GLU:CD	31:V:122:GLU:H	2.23	0.42
34:AA:1109:U:H2'	34:AA:1110:U:C6	2.55	0.42
1:A:104:U:H1'	24:L:21:HIS:CE1	2.55	0.41
63:AW:4:TYR:N	63:AW:116:HIS:HE2	2.17	0.41
1:A:1390:U:C5	1:A:1416:U:C4	3.08	0.41
34:AA:1786:A:H2'	34:AA:1787:A:C8	2.55	0.41
34:AA:1683:A:H2'	34:AA:1684:A:C8	2.54	0.41
34:AA:3637:G:H1	34:AA:3648:U:H3	1.66	0.41
1:A:2068:A:H2'	1:A:2069:G:C8	2.55	0.41
34:AA:2525:A:H2'	34:AA:2526:A:C8	2.55	0.41
22:H:158:ILE:HD12	22:H:158:ILE:H	1.84	0.41
55:AJ:121:LYS:H	55:AJ:121:LYS:HD3	1.85	0.41
34:AA:709:A:H2'	34:AA:710:C:C6	2.56	0.41
1:A:1226:A:C5	1:A:1227:G:H1'	2.55	0.41
1:A:1914:U:H2'	1:A:1915:C:C6	2.55	0.41
34:AA:449:A:H2'	34:AA:450:A:C5'	2.51	0.41
34:AA:1515:A:C6	34:AA:1516:G:C6	3.09	0.41
34:AA:1752:C:H2'	34:AA:1753:U:C6	2.54	0.41
34:AA:449:A:H2'	34:AA:450:A:H5'	2.03	0.41
34:AA:1257:A:H2'	34:AA:1258:A:C8	2.55	0.41
34:AA:723:A:C8	34:AA:727:A:C6	3.09	0.41
34:AA:453:A:C4	34:AA:503:A:C2	3.09	0.41
34:AA:392:G:N2	34:AA:395:A:C8	2.89	0.41
34:AA:2008:G:H2'	34:AA:2009:A:C8	2.56	0.41
1:A:1815:U:H2'	1:A:1816:U:C5	2.56	0.41
1:A:824:A:C2	1:A:825:A:C8	3.09	0.41
34:AA:1331:A:H2'	34:AA:1332:A:C8	2.55	0.41
1:A:1008:A:H2'	1:A:1009:A:C8	2.56	0.41
34:AA:445:A:N1	34:AA:702:U:C4	2.89	0.41
34:AA:2960:G:H2'	34:AA:2961:C:C6	2.55	0.41
36:AB:48:G:C6	36:AB:49:A:C6	3.09	0.41
34:AA:947:U:H2'	34:AA:948:G:C8	2.55	0.41
1:A:1845:U:H2'	1:A:1846:U:C6	2.56	0.41
34:AA:2719:U:H2'	34:AA:2720:C:C6	2.56	0.41
34:AA:1598:A:C2	34:AA:2649:A:C4	3.09	0.41
34:AA:706:U:H2'	34:AA:707:U:C6	2.56	0.41
43:AN:81:ILE:HG12	43:AN:99:THR:HG21	2.01	0.41
1:A:441:U:H5''	27:Q:50:LYS:HG3	2.02	0.41
34:AA:3087:A:C5	34:AA:3088:G:H1'	2.55	0.41
34:AA:715:U:H2'	34:AA:716:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AA:2559:U:H2'	34:AA:2560:C:C6	2.56	0.40
1:A:1821:A:H2'	1:A:1822:A:C8	2.55	0.40
8:M:100:GLU:H	8:M:100:GLU:CD	2.23	0.40
60:AO:28:HIS:CE1	60:AO:32:ARG:HH11	2.39	0.40
1:A:1743:A:C2	1:A:1744:A:C4	3.09	0.40
34:AA:2809:A:HO2'	34:AA:2811:A:H8	1.67	0.40
34:AA:2649:A:H61	34:AA:3342:C:H5	1.66	0.40
34:AA:866:C:H5'	59:AS:70:HIS:CE1	2.55	0.40
7:K:2:VAL:HG22	7:K:3:ARG:H	1.86	0.40
1:A:953:C:H2'	1:A:954:G:C8	2.55	0.40
69:AD:50:HIS:HD1	74:AH:54:ILE:HD12	156.58	0.40
51:AP:140:HIS:CD2	51:AP:142:ALA:H	2.39	0.40
34:AA:495:U:H2'	34:AA:496:C:C6	2.57	0.40
34:AA:1791:A:C4	34:AA:1798:A:C6	3.09	0.40
1:A:310:U:H2'	1:A:311:C:C6	2.56	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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%)	15	60
4	E	183/185 (99%)	175 (96%)	6 (3%)	2 (1%)	17	64
5	G	222/224 (99%)	206 (93%)	14 (6%)	2 (1%)	21	67
6	I	176/189 (93%)	161 (92%)	12 (7%)	3 (2%)	11	56
7	K	127/129 (98%)	118 (93%)	7 (6%)	2 (2%)	12	57
8	M	136/138 (99%)	127 (93%)	5 (4%)	4 (3%)	6	44
9	W	91/108 (84%)	84 (92%)	6 (7%)	1 (1%)	17	64
10	R	92/114 (81%)	80 (87%)	10 (11%)	2 (2%)	8	50

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
11	O	77/79 (98%)	67 (87%)	4 (5%)	6 (8%)	1	19
12	Y	152/154 (99%)	137 (90%)	11 (7%)	4 (3%)	7	47
13	Z	70/72 (97%)	65 (93%)	4 (6%)	1 (1%)	14	58
14	1	118/120 (98%)	111 (94%)	4 (3%)	3 (2%)	7	47
15	2	35/68 (52%)	31 (89%)	3 (9%)	1 (3%)	6	44
16	3	93/95 (98%)	81 (87%)	11 (12%)	1 (1%)	17	64
17	4	74/76 (97%)	65 (88%)	7 (10%)	2 (3%)	6	46
18	5	54/65 (83%)	53 (98%)	1 (2%)	0	100	100
19	6	41/43 (95%)	35 (85%)	5 (12%)	1 (2%)	7	48
20	B	208/210 (99%)	186 (89%)	19 (9%)	3 (1%)	14	58
21	F	255/257 (99%)	238 (93%)	13 (5%)	4 (2%)	12	57
22	H	200/214 (94%)	191 (96%)	8 (4%)	1 (0%)	34	77
23	J	186/188 (99%)	176 (95%)	5 (3%)	5 (3%)	6	46
24	L	165/214 (77%)	147 (89%)	14 (8%)	4 (2%)	7	48
25	N	96/98 (98%)	91 (95%)	3 (3%)	2 (2%)	9	52
26	P	125/127 (98%)	114 (91%)	8 (6%)	3 (2%)	7	48
27	Q	142/144 (99%)	130 (92%)	7 (5%)	5 (4%)	4	41
28	S	126/128 (98%)	108 (86%)	14 (11%)	4 (3%)	5	42
29	T	46/48 (96%)	44 (96%)	2 (4%)	0	100	100
30	U	147/149 (99%)	142 (97%)	4 (3%)	1 (1%)	26	71
31	V	142/156 (91%)	129 (91%)	10 (7%)	3 (2%)	9	52
32	X	92/103 (89%)	78 (85%)	10 (11%)	4 (4%)	3	34
33	C	193/195 (99%)	181 (94%)	9 (5%)	3 (2%)	12	57
37	AL	209/211 (99%)	190 (91%)	16 (8%)	3 (1%)	14	58
38	A1	136/145 (94%)	127 (93%)	7 (5%)	2 (2%)	13	58
39	A2	96/118 (81%)	89 (93%)	5 (5%)	2 (2%)	9	52
40	A4	64/66 (97%)	58 (91%)	4 (6%)	2 (3%)	5	43
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%)	14	58
44	A8	123/125 (98%)	114 (93%)	8 (6%)	1 (1%)	24	69

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
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%)	17	64
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%)	7	47
52	Ah	83/85 (98%)	76 (92%)	5 (6%)	2 (2%)	7	48
53	Ai	93/95 (98%)	87 (94%)	5 (5%)	1 (1%)	17	64
54	AI	203/213 (95%)	187 (92%)	14 (7%)	2 (1%)	19	65
55	AJ	216/244 (88%)	196 (91%)	13 (6%)	7 (3%)	5	42
56	Ac	87/89 (98%)	74 (85%)	12 (14%)	1 (1%)	17	64
57	AK	199/201 (99%)	191 (96%)	6 (3%)	2 (1%)	19	65
58	AM	130/132 (98%)	121 (93%)	9 (7%)	0	100	100
59	AS	184/186 (99%)	171 (93%)	12 (6%)	1 (0%)	34	77
60	AO	145/147 (99%)	132 (91%)	10 (7%)	3 (2%)	9	52
61	AQ	185/205 (90%)	170 (92%)	12 (6%)	3 (2%)	12	57
62	AR	244/289 (84%)	224 (92%)	13 (5%)	7 (3%)	6	44
63	AW	149/170 (88%)	135 (91%)	12 (8%)	2 (1%)	15	60
64	AY	99/101 (98%)	97 (98%)	2 (2%)	0	100	100
65	AT	179/181 (99%)	173 (97%)	5 (3%)	1 (1%)	30	74
66	AZ	119/121 (98%)	113 (95%)	5 (4%)	1 (1%)	24	69
67	A3	117/119 (98%)	108 (92%)	9 (8%)	0	100	100
68	A5	221/223 (99%)	201 (91%)	15 (7%)	5 (2%)	8	50
69	AD	245/247 (99%)	230 (94%)	14 (6%)	1 (0%)	39	80
70	AE	378/380 (100%)	346 (92%)	26 (7%)	6 (2%)	12	57
71	AF	388/390 (100%)	363 (94%)	21 (5%)	4 (1%)	19	65
72	AG	116/159 (73%)	107 (92%)	6 (5%)	3 (3%)	7	47
73	AU	178/180 (99%)	167 (94%)	9 (5%)	2 (1%)	17	64
74	AH	183/185 (99%)	168 (92%)	12 (7%)	3 (2%)	12	57
75	AV	153/155 (99%)	141 (92%)	9 (6%)	3 (2%)	9	53

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
76	Ag	35/37 (95%)	29 (83%)	5 (14%)	1 (3%)	6	44
77	AX	95/97 (98%)	90 (95%)	4 (4%)	1 (1%)	17	64
78	A0	60/62 (97%)	57 (95%)	2 (3%)	1 (2%)	11	56
All	All	10111/10698 (94%)	9361 (93%)	590 (6%)	160 (2%)	17	57

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

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Mol	Chain	Res	Type
52	Ah	42	CYS
55	AJ	75	ILE
55	AJ	219	SER
60	AO	15	VAL
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

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Mol	Chain	Res	Type
56	Ac	29	SER
61	AQ	24	ARG
62	AR	172	GLY
65	AT	129	ASN
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

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Mol	Chain	Res	Type
17	4	47	HIS
20	B	75	ASN
21	F	21	ASN
21	F	189	VAL
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

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Mol	Chain	Res	Type
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%)	58	83
4	E	161/164 (98%)	159 (99%)	2 (1%)	78	90
5	G	191/191 (100%)	185 (97%)	6 (3%)	47	78
6	I	154/160 (96%)	150 (97%)	4 (3%)	54	81
7	K	115/115 (100%)	112 (97%)	3 (3%)	54	81
8	M	116/116 (100%)	114 (98%)	2 (2%)	68	88
9	W	86/99 (87%)	83 (96%)	3 (4%)	43	76
10	R	83/97 (86%)	83 (100%)	0	100	100
11	O	76/76 (100%)	74 (97%)	2 (3%)	54	81
12	Y	137/137 (100%)	131 (96%)	6 (4%)	35	71
13	Z	60/60 (100%)	60 (100%)	0	100	100
14	1	104/104 (100%)	102 (98%)	2 (2%)	65	86
15	2	35/61 (57%)	34 (97%)	1 (3%)	50	79
16	3	87/87 (100%)	87 (100%)	0	100	100
17	4	70/70 (100%)	67 (96%)	3 (4%)	35	71
18	5	47/52 (90%)	45 (96%)	2 (4%)	35	71
19	6	36/36 (100%)	35 (97%)	1 (3%)	51	79
20	B	195/195 (100%)	192 (98%)	3 (2%)	72	89
21	F	233/233 (100%)	230 (99%)	3 (1%)	76	89
22	H	182/190 (96%)	178 (98%)	4 (2%)	60	84
23	J	177/177 (100%)	176 (99%)	1 (1%)	90	95
24	L	151/190 (80%)	148 (98%)	3 (2%)	63	86
25	N	91/91 (100%)	88 (97%)	3 (3%)	45	77

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
26	P	99/99 (100%)	95 (96%)	4 (4%)	38	72
27	Q	120/120 (100%)	117 (98%)	3 (2%)	55	82
28	S	114/114 (100%)	108 (95%)	6 (5%)	28	66
29	T	43/43 (100%)	41 (95%)	2 (5%)	32	69
30	U	132/132 (100%)	129 (98%)	3 (2%)	58	83
31	V	131/140 (94%)	127 (97%)	4 (3%)	47	78
32	X	88/94 (94%)	87 (99%)	1 (1%)	80	91
33	C	167/167 (100%)	164 (98%)	3 (2%)	66	87
37	AL	190/190 (100%)	187 (98%)	3 (2%)	70	88
38	A1	127/131 (97%)	124 (98%)	3 (2%)	57	83
39	A2	97/109 (89%)	93 (96%)	4 (4%)	37	72
40	A4	60/60 (100%)	60 (100%)	0	100	100
41	A6	83/83 (100%)	81 (98%)	2 (2%)	57	83
42	A7	90/96 (94%)	89 (99%)	1 (1%)	80	91
43	AN	135/135 (100%)	131 (97%)	4 (3%)	48	78
44	A8	114/114 (100%)	109 (96%)	5 (4%)	35	71
45	A9	90/90 (100%)	89 (99%)	1 (1%)	80	91
46	Aa	89/89 (100%)	84 (94%)	5 (6%)	26	65
47	Ab	82/92 (89%)	80 (98%)	2 (2%)	57	83
48	Ad	69/73 (94%)	68 (99%)	1 (1%)	74	89
49	Ae	40/47 (85%)	38 (95%)	2 (5%)	30	68
50	Af	45/45 (100%)	44 (98%)	1 (2%)	60	84
51	AP	179/179 (100%)	173 (97%)	6 (3%)	44	77
52	Ah	70/70 (100%)	69 (99%)	1 (1%)	74	89
53	Ai	87/87 (100%)	83 (95%)	4 (5%)	33	69
54	AI	189/195 (97%)	186 (98%)	3 (2%)	70	88
55	AJ	204/224 (91%)	199 (98%)	5 (2%)	55	82
56	Ac	74/74 (100%)	71 (96%)	3 (4%)	37	72
57	AK	181/181 (100%)	178 (98%)	3 (2%)	68	88
58	AM	106/106 (100%)	105 (99%)	1 (1%)	84	92
59	AS	158/158 (100%)	156 (99%)	2 (1%)	76	89

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
60	AO	121/121 (100%)	113 (93%)	8 (7%)	21	59
61	AQ	165/176 (94%)	161 (98%)	4 (2%)	57	83
62	AR	215/250 (86%)	208 (97%)	7 (3%)	45	77
63	AW	128/128 (100%)	127 (99%)	1 (1%)	86	93
64	AY	90/90 (100%)	88 (98%)	2 (2%)	60	84
65	AT	162/162 (100%)	162 (100%)	0	100	100
66	AZ	111/111 (100%)	110 (99%)	1 (1%)	84	92
67	A3	110/110 (100%)	107 (97%)	3 (3%)	52	80
68	A5	201/201 (100%)	195 (97%)	6 (3%)	48	78
69	AD	191/191 (100%)	184 (96%)	7 (4%)	41	75
70	AE	335/335 (100%)	325 (97%)	10 (3%)	48	78
71	AF	336/336 (100%)	323 (96%)	13 (4%)	39	73
72	AG	110/142 (78%)	108 (98%)	2 (2%)	66	87
73	AU	162/162 (100%)	156 (96%)	6 (4%)	41	75
74	AH	168/168 (100%)	163 (97%)	5 (3%)	48	78
75	AV	140/140 (100%)	136 (97%)	4 (3%)	50	79
76	Ag	34/34 (100%)	33 (97%)	1 (3%)	50	79
77	AX	92/92 (100%)	92 (100%)	0	100	100
78	A0	53/53 (100%)	52 (98%)	1 (2%)	65	86
All	All	9096/9417 (97%)	8870 (98%)	226 (2%)	59	82

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

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Mol	Chain	Res	Type
6	I	16	TYR
6	I	17	GLU
6	I	62	ARG
6	I	79	LYS
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

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Mol	Chain	Res	Type
24	L	213	ASP
25	N	26	LYS
25	N	71	GLU
25	N	88	ILE
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

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Mol	Chain	Res	Type
42	A7	15	PRO
43	AN	6	GLU
43	AN	13	TYR
43	AN	56	VAL
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

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Mol	Chain	Res	Type
56	Ac	78	LYS
56	Ac	83	GLU
57	AK	81	ARG
57	AK	153	LYS
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

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Mol	Chain	Res	Type
69	AD	159	ASP
69	AD	163	ARG
69	AD	209	HIS
69	AD	218	HIS
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

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Mol	Chain	Res	Type
75	AV	15	LYS
75	AV	30	LYS
75	AV	49	GLN
76	Ag	19	TRP
78	A0	26	GLN

Some 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

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Mol	Chain	Res	Type
1	A	129	U
1	A	130	U
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

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Mol	Chain	Res	Type
1	A	323	C
1	A	326	U
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

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Mol	Chain	Res	Type
1	A	451	A
1	A	454	U
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

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Mol	Chain	Res	Type
1	A	618	U
1	A	626	A
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

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Mol	Chain	Res	Type
1	A	858	U
1	A	866	A
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

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Mol	Chain	Res	Type
1	A	1011	G
1	A	1013	A
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

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Mol	Chain	Res	Type
1	A	1212	C
1	A	1214	A
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

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Mol	Chain	Res	Type
1	A	1385	U
1	A	1387	U
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

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Mol	Chain	Res	Type
1	A	1674	G
1	A	1677	C
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

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Mol	Chain	Res	Type
1	A	1830	C
1	A	1832	U
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

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Mol	Chain	Res	Type
1	A	1954	U
1	A	1955	G
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

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Mol	Chain	Res	Type
2	7	76	A
34	AA	11	A
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

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Mol	Chain	Res	Type
34	AA	144	U
34	AA	145	U
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

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Mol	Chain	Res	Type
34	AA	229	A
34	AA	231	G
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

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Mol	Chain	Res	Type
34	AA	354	C
34	AA	356	A
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

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Mol	Chain	Res	Type
34	AA	498	U
34	AA	499	U
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

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Mol	Chain	Res	Type
34	AA	598	U
34	AA	599	G
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

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Mol	Chain	Res	Type
34	AA	685	U
34	AA	694	U
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

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Mol	Chain	Res	Type
34	AA	859	C
34	AA	860	A
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

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Mol	Chain	Res	Type
34	AA	1024	U
34	AA	1026	G
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

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Mol	Chain	Res	Type
34	AA	1169	A
34	AA	1170	A
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

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Mol	Chain	Res	Type
34	AA	1287	A
34	AA	1288	C
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

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Mol	Chain	Res	Type
34	AA	1476	A
34	AA	1480	G
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

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Mol	Chain	Res	Type
34	AA	1643	U
34	AA	1649	G
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

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Mol	Chain	Res	Type
34	AA	1788	C
34	AA	1797	A
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

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Mol	Chain	Res	Type
34	AA	1990	A
34	AA	1991	U
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

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Mol	Chain	Res	Type
34	AA	2172	C
34	AA	2174	G
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

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Mol	Chain	Res	Type
34	AA	2539	G
34	AA	2542	G
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

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Mol	Chain	Res	Type
34	AA	2681	U
34	AA	2684	G
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

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Mol	Chain	Res	Type
34	AA	2959	G
34	AA	2960	G
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

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Mol	Chain	Res	Type
34	AA	3118	A
34	AA	3121	G
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

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Mol	Chain	Res	Type
34	AA	3253	G
34	AA	3257	G
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

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Mol	Chain	Res	Type
34	AA	3391	G
34	AA	3398	A
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

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Mol	Chain	Res	Type
34	AA	3588	A
34	AA	3589	U
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

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Mol	Chain	Res	Type
34	AA	3739	A
34	AA	3740	A
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

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Mol	Chain	Res	Type
35	AC	108	A
35	AC	109	U
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

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Mol	Chain	Res	Type
36	AB	84	U
36	AB	85	G
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

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Mol	Chain	Res	Type
1	A	803	G
1	A	805	A
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

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Mol	Chain	Res	Type
1	A	1719	U
1	A	1786	U
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

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Mol	Chain	Res	Type
34	AA	501	U
34	AA	504	A
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

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Mol	Chain	Res	Type
34	AA	1101	A
34	AA	1115	G
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

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Mol	Chain	Res	Type
34	AA	1990	A
34	AA	1996	C
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

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Mol	Chain	Res	Type
34	AA	3229	C
34	AA	3230	G
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

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Mol	Chain	Res	Type
35	AC	114	A
35	AC	134	G
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 carbohydrates 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](#)

There are no chain breaks in this entry.