Full wwPDB EM Validation Report ⓘ

Feb 12, 2024 – 09:44 AM EST

PDB ID	:	3JBO
EMDB ID	:	EMD-6452
Title	:	Cryo-electron microscopy reconstruction of the Plasmodium falciparum 80S ribosome bound to P/E-tRNA
Authors	:	Sun, M.; Li, W.; Blomqvist, K.; Das, S.; Hashem, Y.; Dvorin, J.D.; Frank, J.
Deposited on	:	2015-09-16
Resolution	:	5.80 Å(reported)
Based on initial models	:	3J7A, 3J79

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

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

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

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

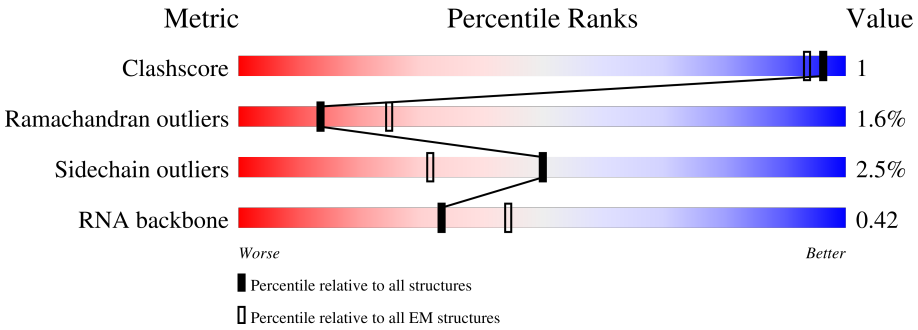
EMDB validation analysis	:	0.0.1.dev70
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	FAILED
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

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 5.80 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	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

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

Mol	Chain	Length	Quality of chain
1	A	1608	32% 45% 20% ·
2	7	75	17% 49% 32% ·
3	Q	144	86% 12% ·
4	S	128	85% 12% ·
5	T	48	90% 8% ·
6	M	138	90% 9% ·
7	U	149	92% 7% ··

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Mol	Chain	Length	Quality of chain
8	V	156	83% 9% 6%
9	E	185	91% 8%
10	X	103	83% 9% 7%
11	G	224	95%
12	W	108	81% 7% 12%
13	R	114	82% 14%
14	I	189	87% 7% 5%
15	O	79	87% 13%
16	Y	154	86% 14%
17	Z	72	97%
18	1	120	88% 12%
19	2	68	54% 6% 40%
20	C	195	95% 5%
21	3	95	87% 12%
22	4	76	92% 7%
23	5	65	77% 12% 11%
24	6	43	86% 9% 5%
25	B	210	93% 5%
26	D	209	70% 25%
27	F	257	92% 6%
28	H	214	88% 7% 5%
29	K	129	90% 9%
30	J	188	91% 9%
31	N	98	97%
32	P	127	89% 9%

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Mol	Chain	Length	Quality of chain
33	L	214	71% 8% 20%
34	AA	3192	30% 45% 20%
35	AC	151	31% 40% 23% 6%
36	AB	118	30% 53% 16%
37	AL	211	87% 13%
38	A0	62	94% 6%
39	AO	147	90% 10%
40	Ai	95	88% 8%
41	A2	118	81% 8% 12%
42	A4	66	94%
43	A6	98	94%
44	A7	102	87% 6% 6%
45	A1	145	92%
46	AN	146	91% 8%
47	A8	125	89% 8%
48	A9	103	83% 14%
49	Aa	106	93%
50	Ab	105	83% 7% 10%
51	Ad	76	87% 5% 5%
52	Ae	50	70% 12% 14%
53	Af	51	96%
54	AP	204	82% 16%
55	Ah	85	94% 5%
56	AI	213	91% 6%
57	Ac	89	84% 11%

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Mol	Chain	Length	Quality of chain
58	AK	201	90% 8%
59	AM	132	95% 5%
60	AS	186	87% 8% 5%
61	AQ	205	79% 10% 8%
62	AR	289	79% 6% 13%
63	AW	170	91% 8%
64	AY	101	96%
65	AT	181	89% 9%
66	AZ	121	88% 11%
67	A3	119	88% 9%
68	A5	223	89% 9%
69	AD	247	89% 9%
70	AE	380	92% 7%
71	AF	390	89% 10%
72	AG	159	68% 9% 22%
73	AU	180	88% 10%
74	AH	185	95%
75	AV	155	90% 9%
76	Ag	37	76% 19% 5%
77	AX	97	92% 7%
78	AJ	244	86% 9%

2 Entry composition

There are 78 unique types of molecules in this entry. The entry contains 193017 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
			Total	C	N	O	P		
1	A	1608	34207	15346	6106	11169	1586	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	7	75	1598	713	290	521	74	0	0

- Molecule 3 is a protein called 40S ribosomal protein uS12.

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

- Molecule 4 is a protein called 40S ribosomal protein uS13.

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

- Molecule 5 is a protein called 40S ribosomal protein uS14.

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

- Molecule 6 is a protein called 40S ribosomal protein uS9.

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

- Molecule 7 is a protein called 40S ribosomal protein uS15.

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

- Molecule 8 is a protein called 40S ribosomal protein uS17.

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

- Molecule 9 is a protein called 40S ribosomal protein uS4.

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

- Molecule 10 is a protein called 40S ribosomal protein uS19.

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

- Molecule 11 is a protein called 40S ribosomal protein uS5.

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

- Molecule 12 is a protein called 40S ribosomal protein eS17.

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

- Molecule 13 is a protein called 40S ribosomal protein eS12.

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

- Molecule 14 is a protein called 40S ribosomal protein uS7.

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

- Molecule 15 is a protein called 40S ribosomal protein eS10.

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

- Molecule 16 is a protein called 40S ribosomal protein eS19.

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

- Molecule 17 is a protein called 40S ribosomal protein eS21.

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

- Molecule 18 is a protein called 40S ribosomal protein eS24.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	1	120	Total	C	N	O	S	0	0
			986	632	189	163	2		

- Molecule 19 is a protein called 40S ribosomal protein eS25.

Mol	Chain	Residues	Atoms				AltConf	Trace
19	2	41	Total	C	N	O	0	0
			321	208	56	57		

- Molecule 20 is a protein called 40S ribosomal protein uS2.

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

- Molecule 21 is a protein called 40S ribosomal protein eS26.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	3	95	Total	C	N	O	S	0	0
			782	478	169	129	6		

- Molecule 22 is a protein called 40S ribosomal protein eS27.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	4	76	Total	C	N	O	S	0	0
			586	368	102	107	9		

- Molecule 23 is a protein called 40S ribosomal protein eS28.

Mol	Chain	Residues	Atoms				AltConf	Trace
23	5	58	Total	C	N	O	0	0
			458	285	93	80		

- Molecule 24 is a protein called 40S ribosomal protein eS30.

Mol	Chain	Residues	Atoms				AltConf	Trace
24	6	43	Total	C	N	O	0	0
			346	213	75	58		

- Molecule 25 is a protein called 40S ribosomal protein eS1.

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

- Molecule 26 is a protein called 40S ribosomal protein uS3.

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

- Molecule 27 is a protein called 40S ribosomal protein eS4.

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

- Molecule 28 is a protein called 40S ribosomal protein eS6.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	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 29 is a protein called 40S ribosomal protein uS8.

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

- Molecule 30 is a protein called 40S ribosomal protein eS7.

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

- Molecule 31 is a protein called 40S ribosomal protein uS10.

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

- Molecule 32 is a protein called 40S ribosomal protein uS11.

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

- Molecule 33 is a protein called 40S ribosomal protein eS8.

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
34	AA	3192	Total	C	N	O	P	0	0
			67862	30436	12049	22217	3160		

- 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 eL24.

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

- Molecule 39 is a protein called 60S ribosomal protein uL15.

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

- Molecule 40 is a protein called 60S ribosomal protein eL44.

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

- Molecule 41 is a protein called 60S ribosomal protein eL28.

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

- Molecule 42 is a protein called 60S ribosomal protein eL29.

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

- Molecule 43 is a protein called 60S ribosomal protein eL30.

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

- Molecule 44 is a protein called 60S ribosomal protein eL31.

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

- Molecule 45 is a protein called 60S ribosomal protein eL27.

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

- Molecule 46 is a protein called 60S ribosomal protein eL14.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	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 47 is a protein called 60S ribosomal protein eL32.

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

- Molecule 48 is a protein called 60S ribosomal protein eL33.

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

- Molecule 49 is a protein called 60S ribosomal protein eL34.

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

- Molecule 50 is a protein called 60S ribosomal protein eL36.

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

- Molecule 51 is a protein called 60S ribosomal protein eL38.

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

- Molecule 52 is a protein called 60S ribosomal protein eL39.

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

- Molecule 53 is a protein called 60S ribosomal protein eL40.

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

- Molecule 54 is a protein called 60S ribosomal protein eL15.

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

- Molecule 55 is a protein called 60S ribosomal protein eL43.

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

- Molecule 56 is a protein called 60S ribosomal protein eL6.

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

- Molecule 57 is a protein called 60S ribosomal protein eL37.

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

- Molecule 58 is a protein called 60S ribosomal protein uL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	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 59 is a protein called 60S ribosomal protein uL14.

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

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

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

- 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 eL8.

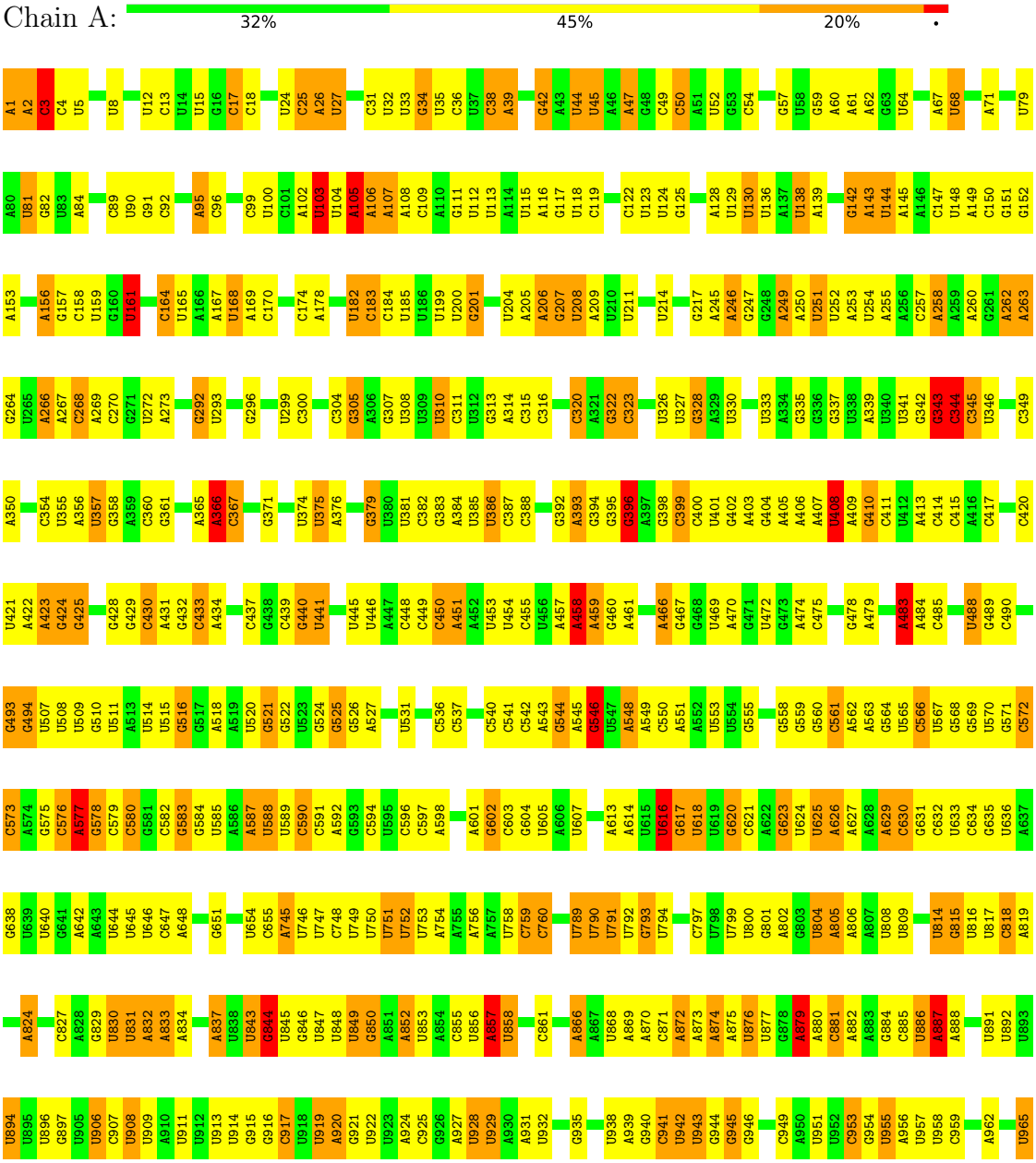
Mol	Chain	Residues	Atoms					AltConf	Trace
78	AJ	222	Total	C	N	O	S	0	0
			1813	1174	323	309	7		

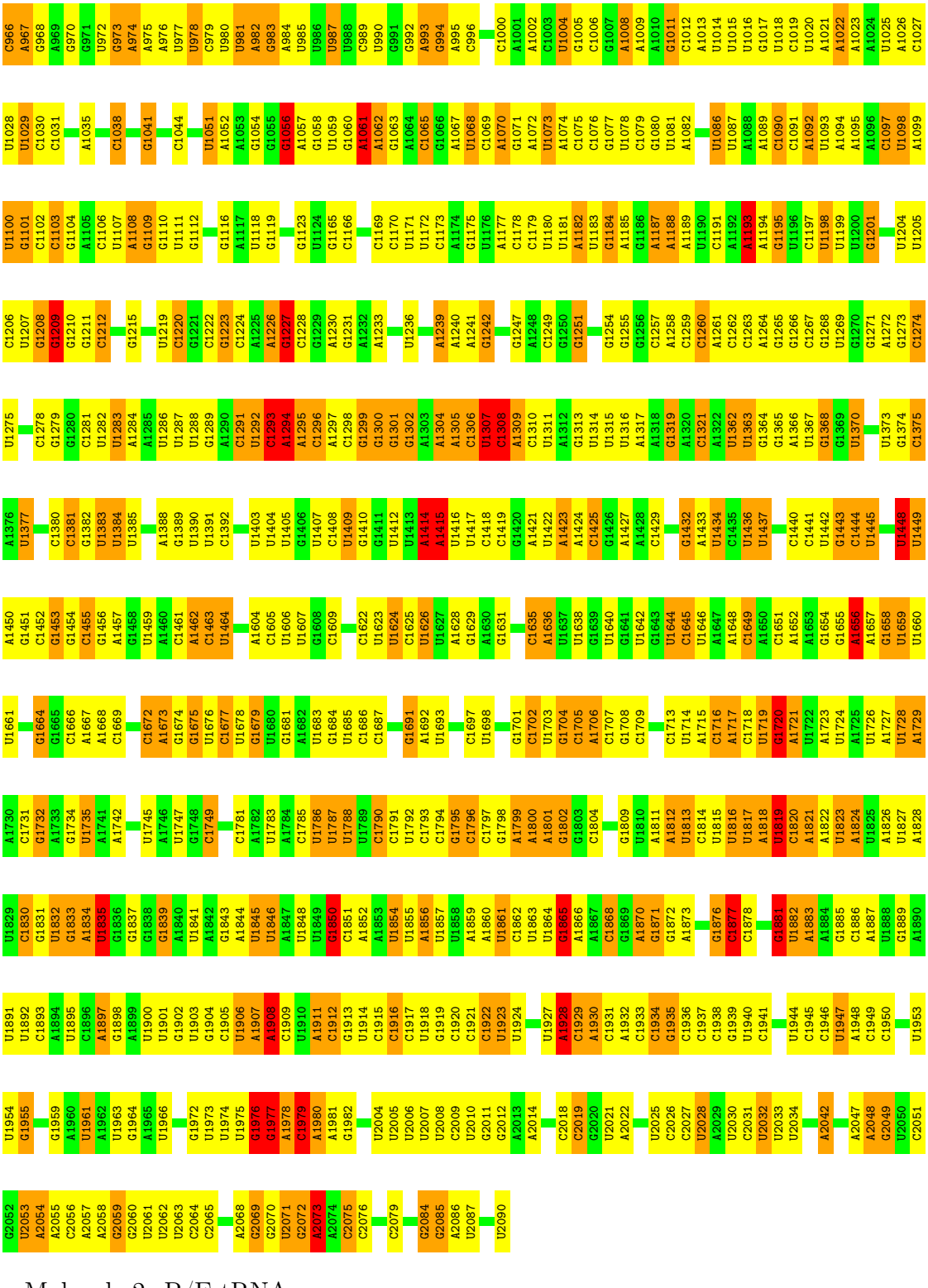
3 Residue-property plots (i)

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

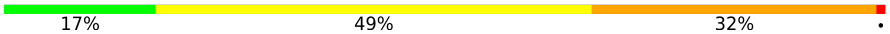
Chain A:

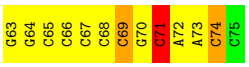




• Molecule 2: P/E-tRNA

Chain 7:



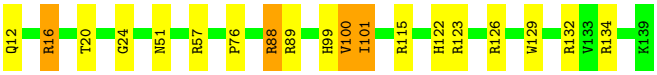


• Molecule 3: 40S ribosomal protein uS12

Chain Q:

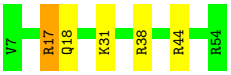
• Molecule 4: 40S ribosomal protein uS13

Chain S:



• Molecule 5: 40S ribosomal protein uS14

Chain T:

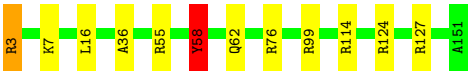


• Molecule 6: 40S ribosomal protein uS9

Chain M:

• Molecule 7: 40S ribosomal protein uS15

Chain U:



• Molecule 8: 40S ribosomal protein uS17

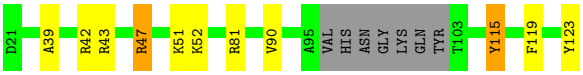
Chain V:

• Molecule 9: 40S ribosomal protein uS4

Chain E:

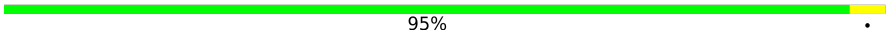
• Molecule 10: 40S ribosomal protein uS19

Chain X:



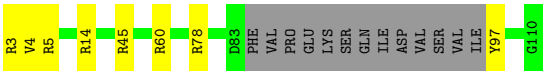
• Molecule 11: 40S ribosomal protein uS5

Chain G:



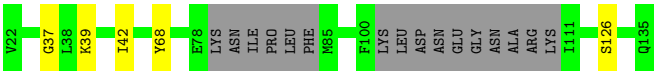
• Molecule 12: 40S ribosomal protein eS17

Chain W:



• Molecule 13: 40S ribosomal protein eS12

Chain R:

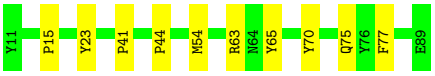


• Molecule 14: 40S ribosomal protein uS7

Chain I:

• Molecule 15: 40S ribosomal protein eS10

Chain O:

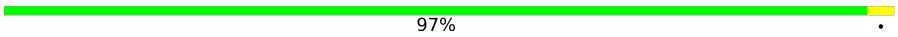


• Molecule 16: 40S ribosomal protein eS19

Chain Y:

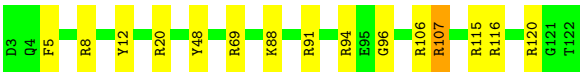
• Molecule 17: 40S ribosomal protein eS21

Chain Z:



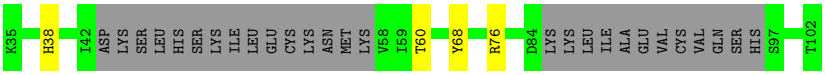
• Molecule 18: 40S ribosomal protein eS24

Chain 1:



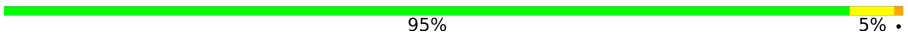
• Molecule 19: 40S ribosomal protein eS25

Chain 2:



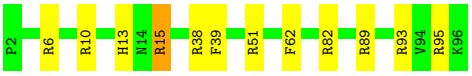
• Molecule 20: 40S ribosomal protein uS2

Chain C:



• Molecule 21: 40S ribosomal protein eS26

Chain 3:



• Molecule 22: 40S ribosomal protein eS27

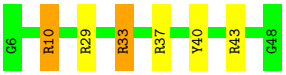
Chain 4:

• Molecule 23: 40S ribosomal protein eS28

Chain 5:

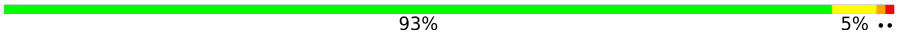
• Molecule 24: 40S ribosomal protein eS30

Chain 6:



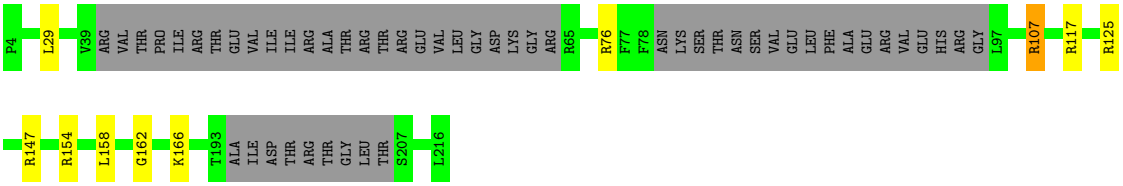
• Molecule 25: 40S ribosomal protein eS1

Chain B:



• Molecule 26: 40S ribosomal protein uS3

Chain D:

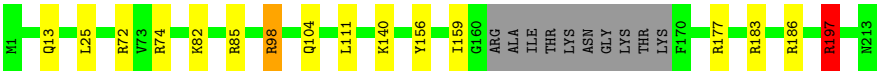


• Molecule 27: 40S ribosomal protein eS4

Chain F:

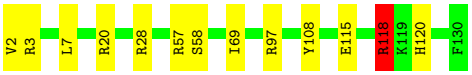
• Molecule 28: 40S ribosomal protein eS6

Chain H:



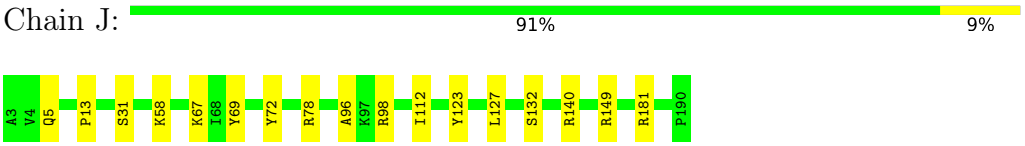
• Molecule 29: 40S ribosomal protein uS8

Chain K:



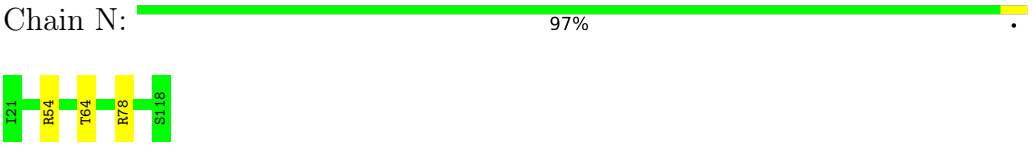
• Molecule 30: 40S ribosomal protein eS7

Chain J:



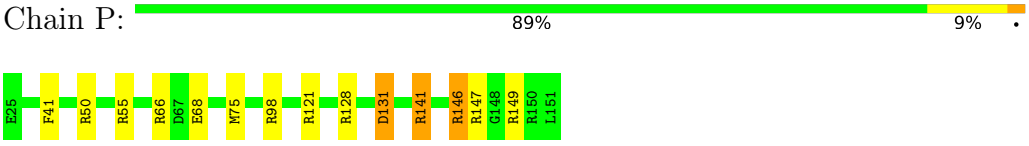
• Molecule 31: 40S ribosomal protein uS10

Chain N:



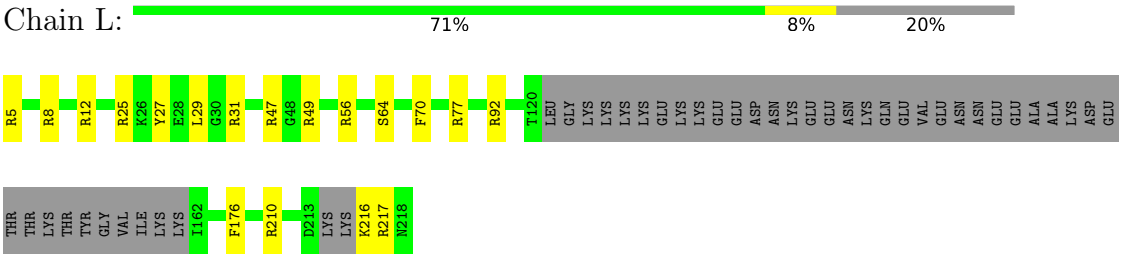
• Molecule 32: 40S ribosomal protein uS11

Chain P:



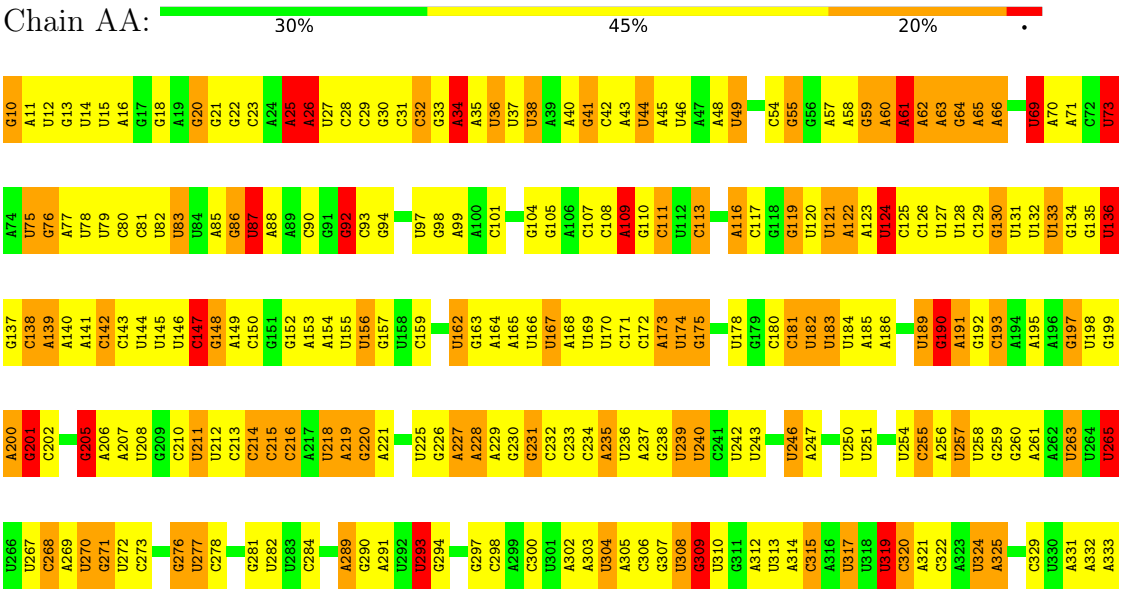
• Molecule 33: 40S ribosomal protein eS8

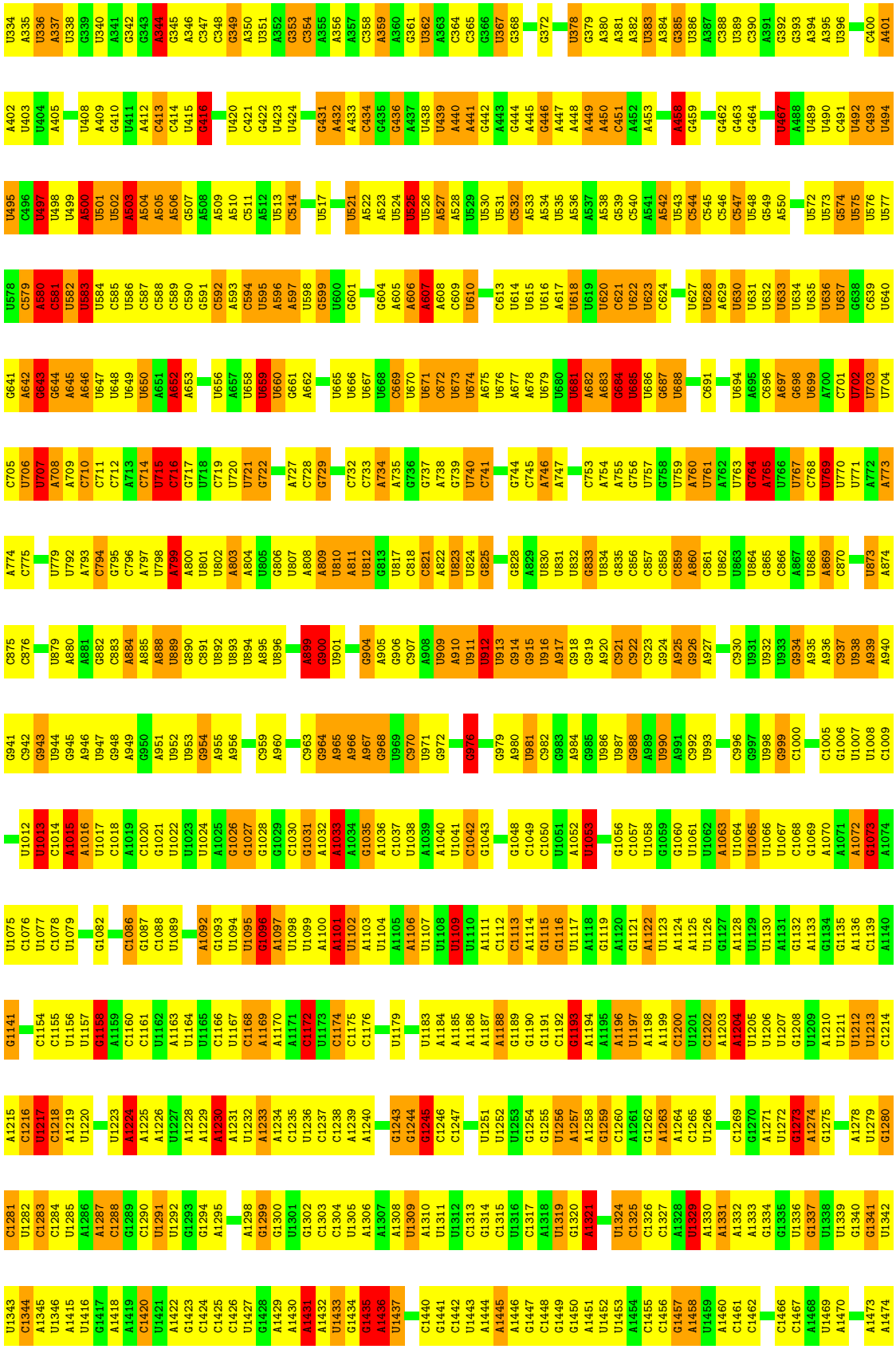
Chain L:

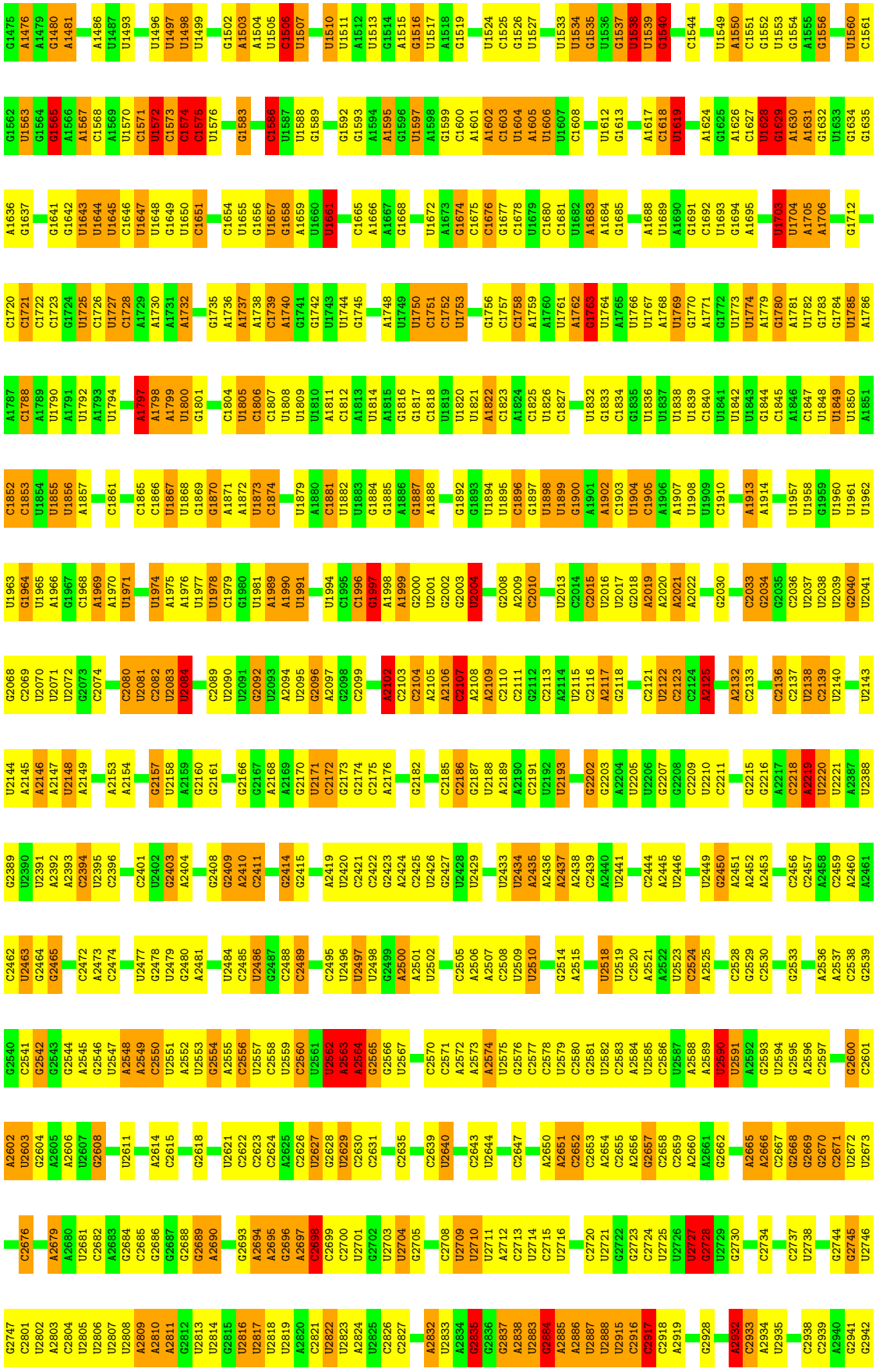


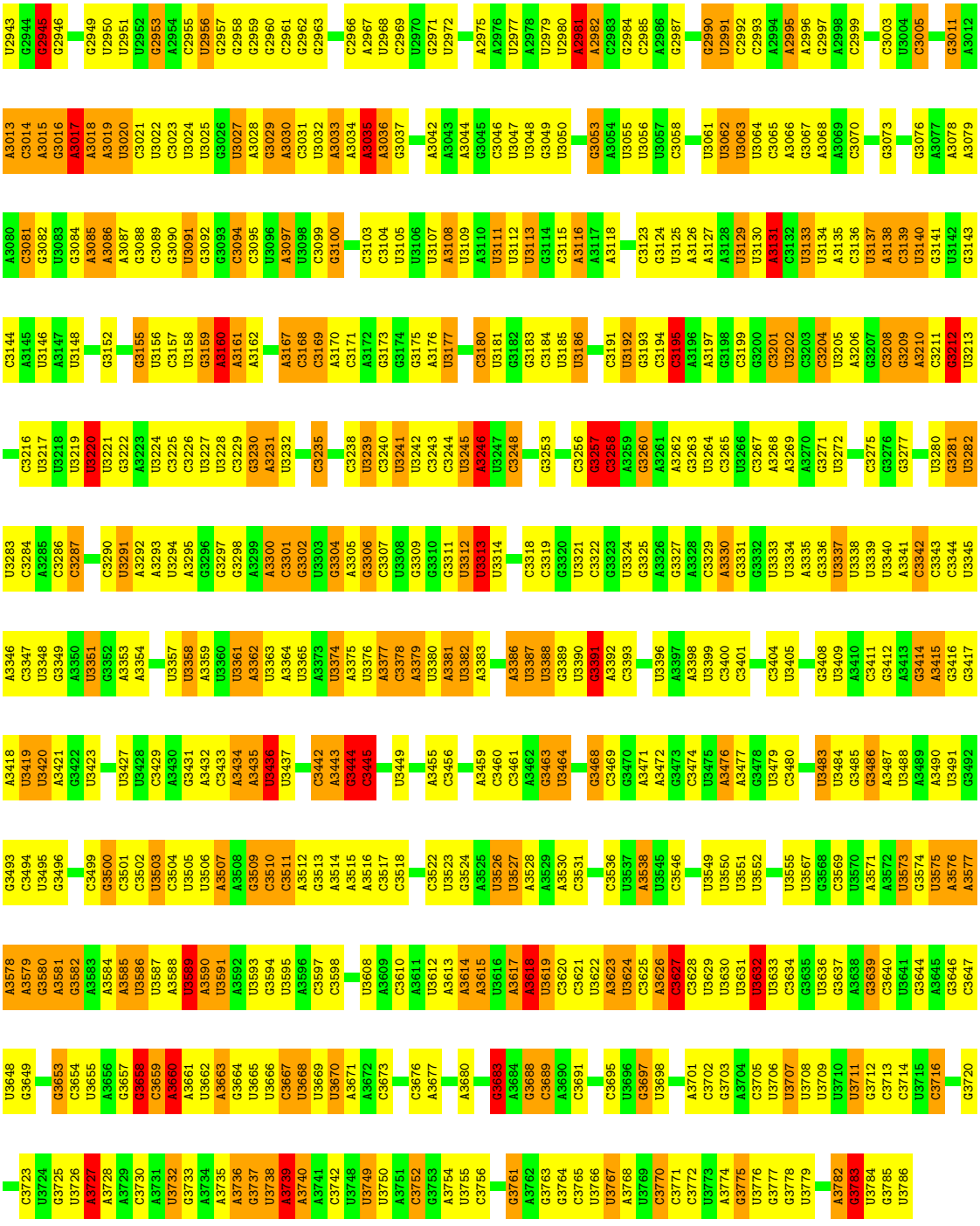
• Molecule 34: 28S ribosomal RNA

Chain AA:



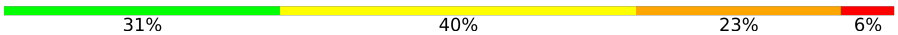


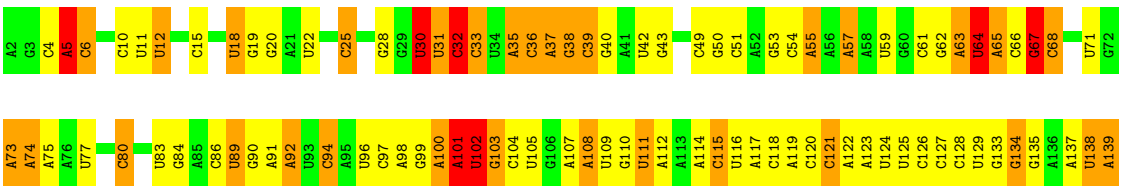


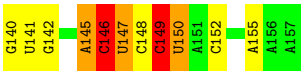


• Molecule 35: 5.8S ribosomal RNA

Chain AC:

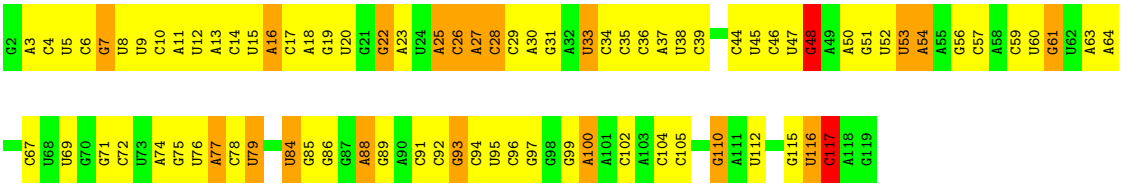






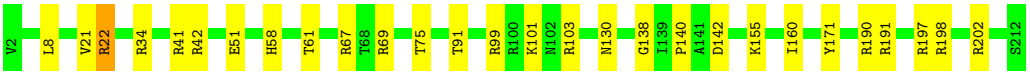
• Molecule 36: 5S ribosomal RNA

Chain AB:



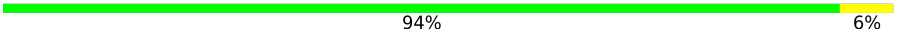
• Molecule 37: 60S ribosomal protein eL13

Chain AL:



• Molecule 38: 60S ribosomal protein eL24

Chain A0:

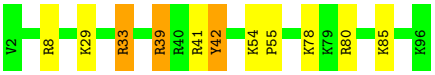


• Molecule 39: 60S ribosomal protein uL15

Chain AO:

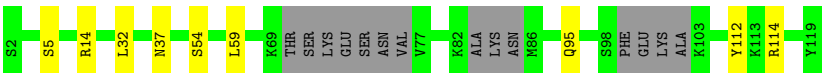
• Molecule 40: 60S ribosomal protein eL44

Chain Ai:



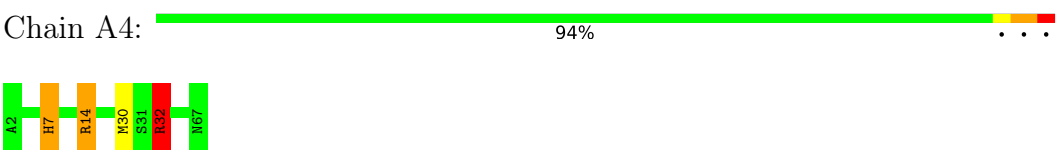
• Molecule 41: 60S ribosomal protein eL28

Chain A2:



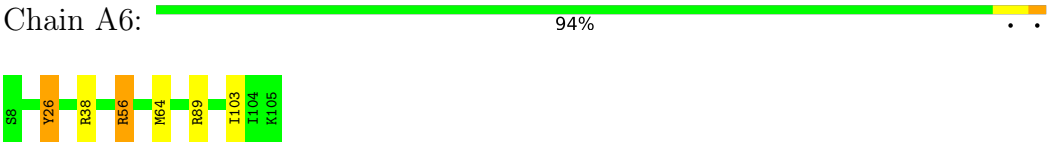
• Molecule 42: 60S ribosomal protein eL29

Chain A4:



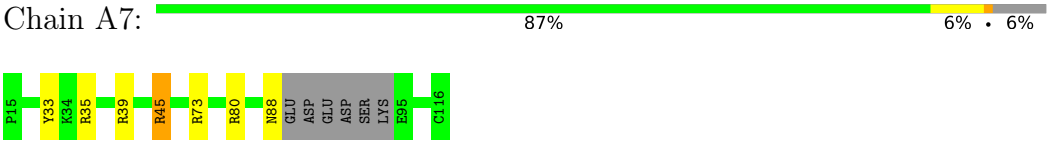
• Molecule 43: 60S ribosomal protein eL30

Chain A6:



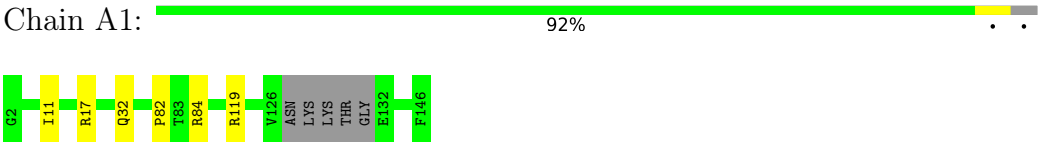
• Molecule 44: 60S ribosomal protein eL31

Chain A7:



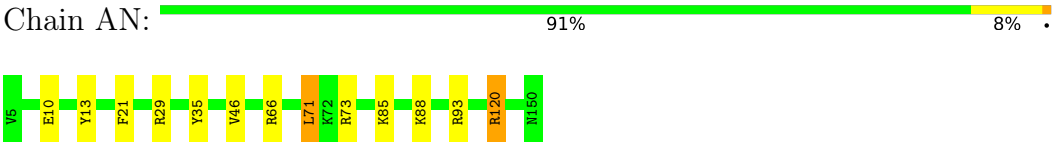
• Molecule 45: 60S ribosomal protein eL27

Chain A1:



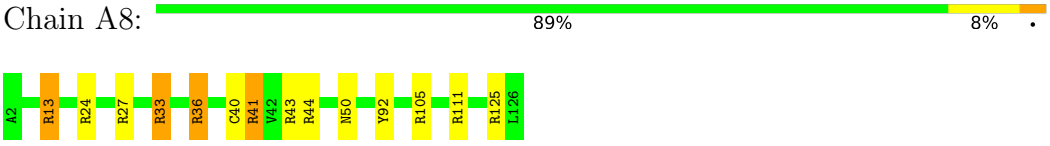
• Molecule 46: 60S ribosomal protein eL14

Chain AN:



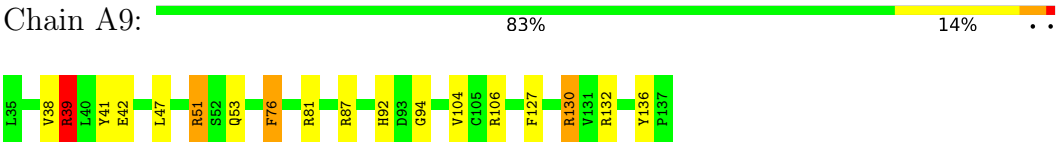
• Molecule 47: 60S ribosomal protein eL32

Chain A8:



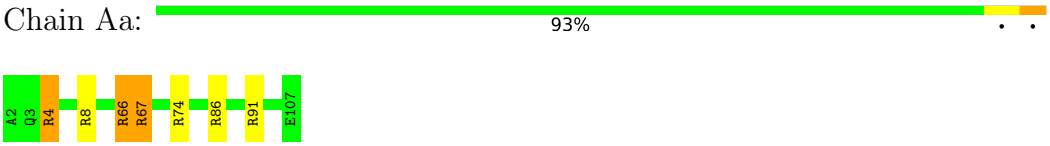
• Molecule 48: 60S ribosomal protein eL33

Chain A9:



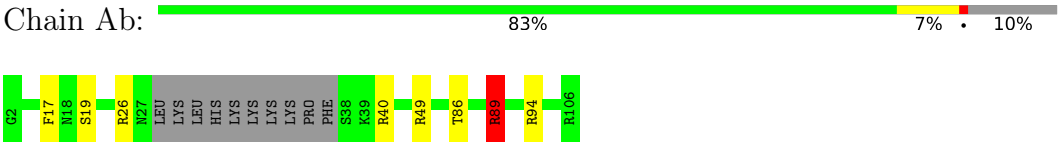
• Molecule 49: 60S ribosomal protein eL34

Chain Aa:



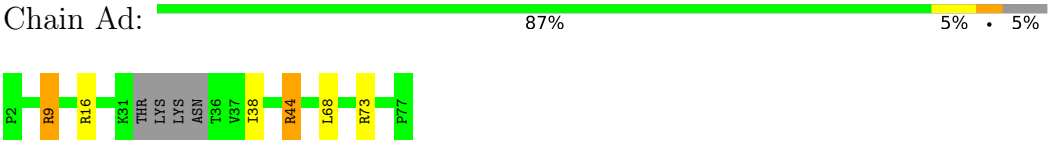
• Molecule 50: 60S ribosomal protein eL36

Chain Ab:



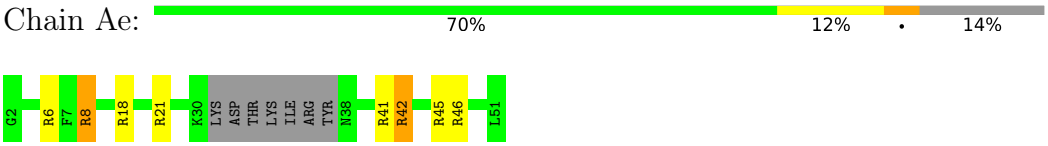
• Molecule 51: 60S ribosomal protein eL38

Chain Ad:



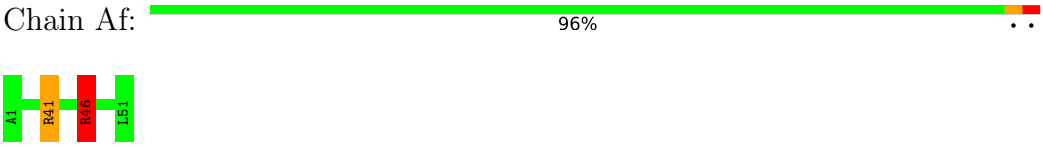
• Molecule 52: 60S ribosomal protein eL39

Chain Ae:



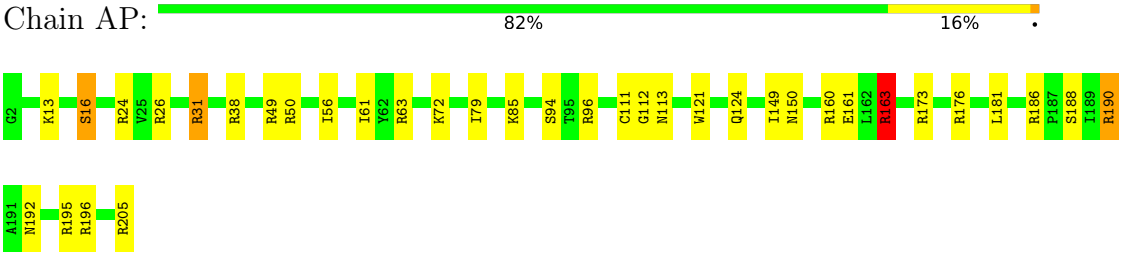
• Molecule 53: 60S ribosomal protein eL40

Chain Af:



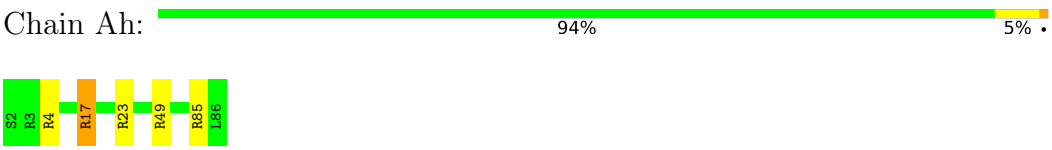
• Molecule 54: 60S ribosomal protein eL15

Chain AP:



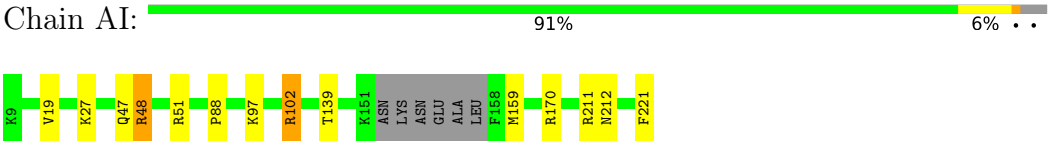
• Molecule 55: 60S ribosomal protein eL43

Chain Ah:



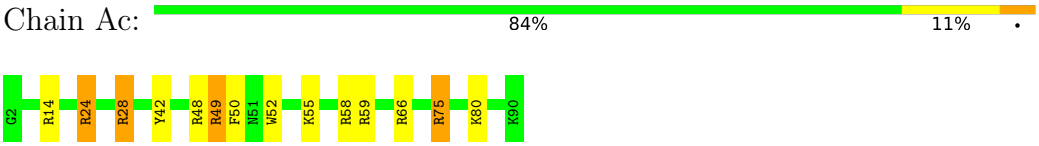
• Molecule 56: 60S ribosomal protein eL6

Chain AI:



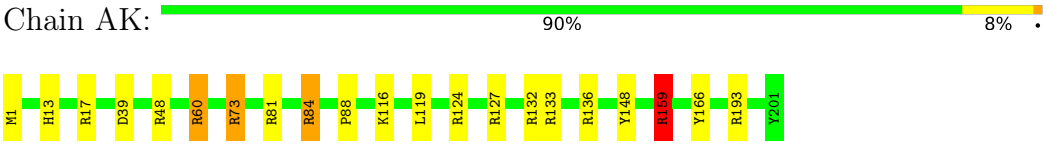
• Molecule 57: 60S ribosomal protein eL37

Chain Ac:



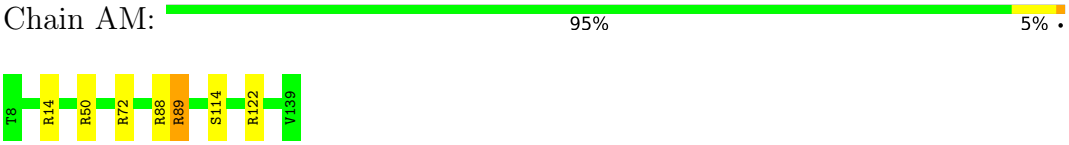
• Molecule 58: 60S ribosomal protein uL13

Chain AK:



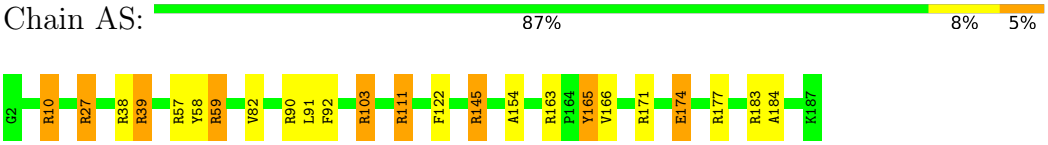
• Molecule 59: 60S ribosomal protein uL14

Chain AM:



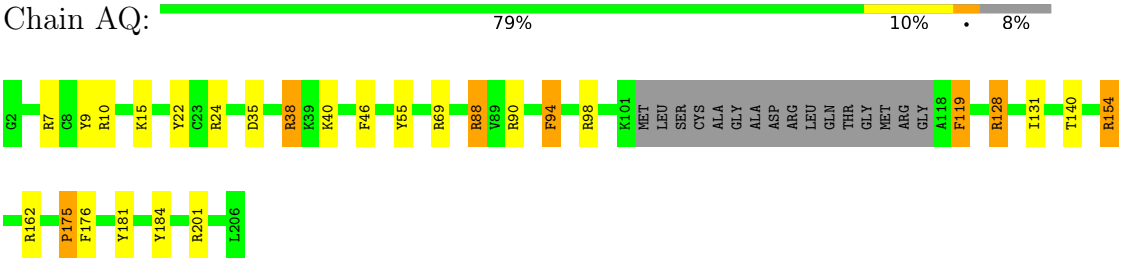
• Molecule 60: 60S ribosomal protein eL18

Chain AS:



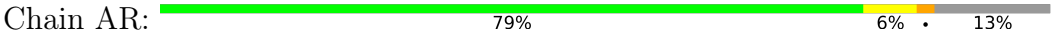
• Molecule 61: 60S ribosomal protein uL16

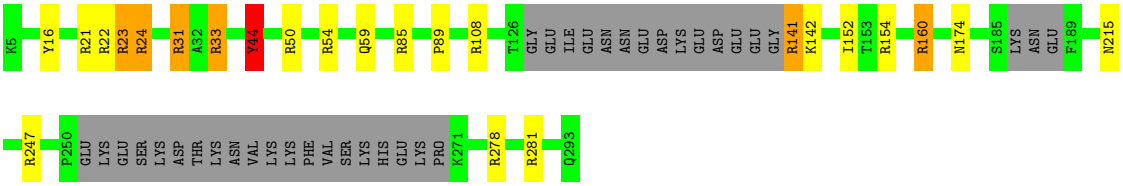
Chain AQ:



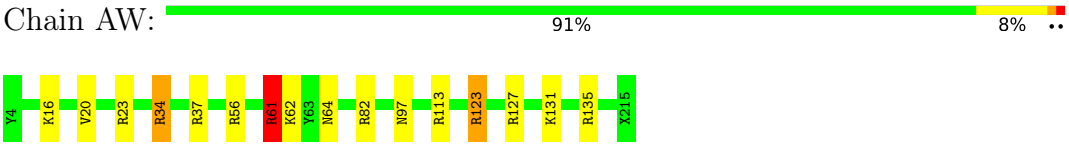
• Molecule 62: 60S ribosomal protein uL18

Chain AR:

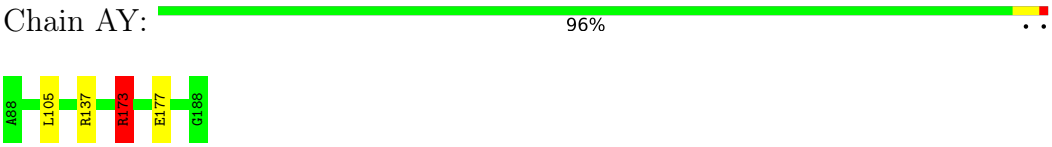




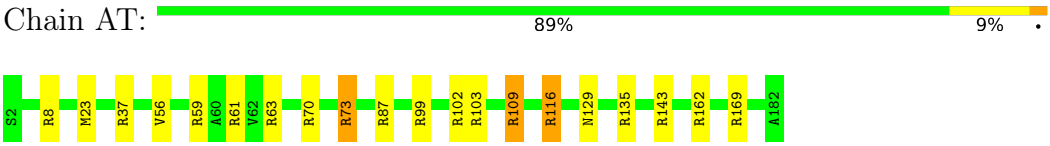
• Molecule 63: 60S ribosomal protein uL22



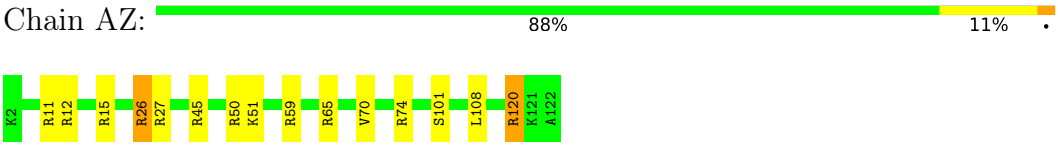
• Molecule 64: 60S ribosomal protein uL23



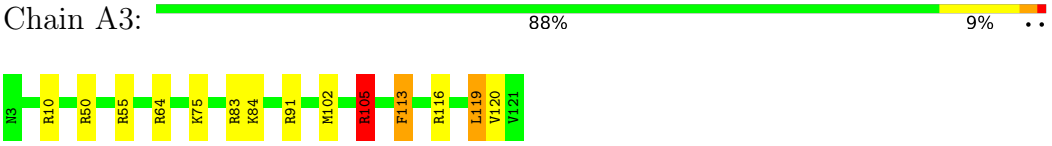
• Molecule 65: 60S ribosomal protein eL19



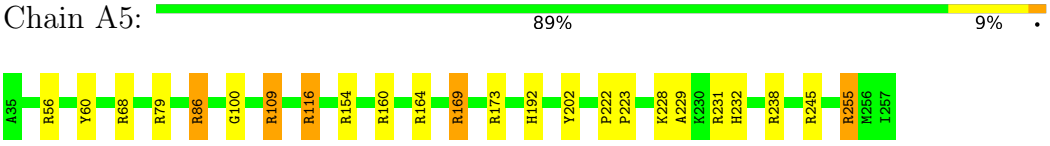
• Molecule 66: 60S ribosomal protein uL24



• Molecule 67: 60S ribosomal protein uL29

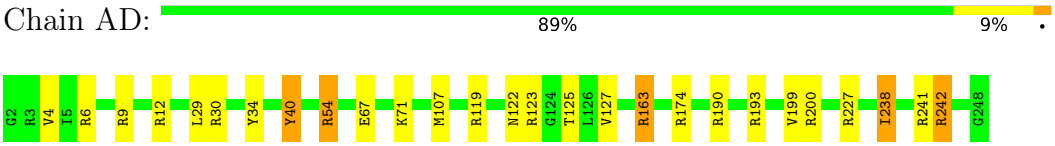


• Molecule 68: 60S ribosomal protein uL30



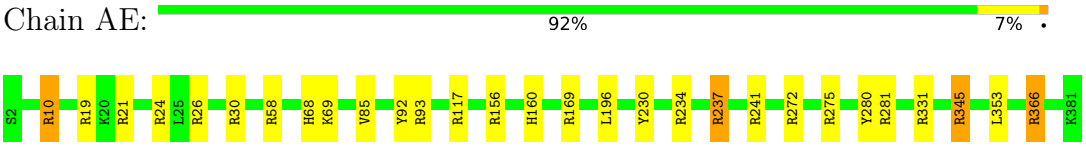
• Molecule 69: 60S ribosomal protein uL2

Chain AD:



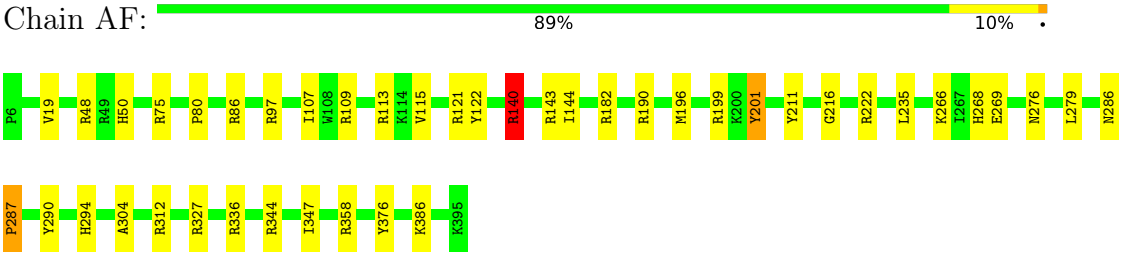
• Molecule 70: 60S ribosomal protein uL3

Chain AE:



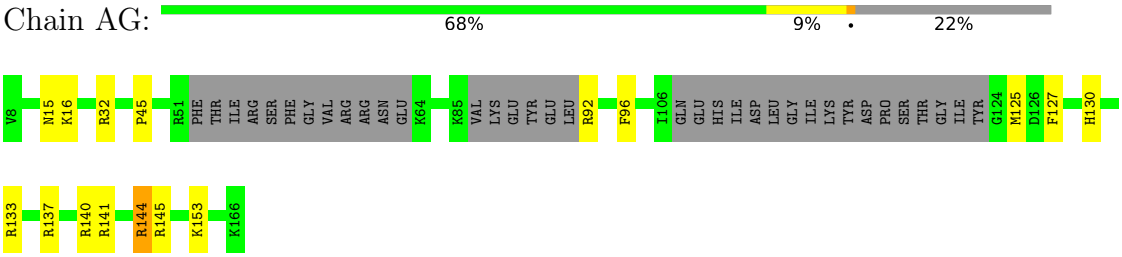
• Molecule 71: 60S ribosomal protein uL4

Chain AF:



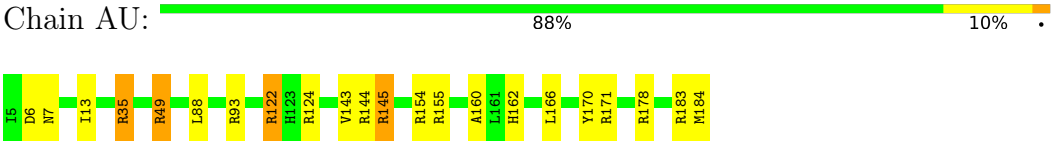
• Molecule 72: 60S ribosomal protein uL5

Chain AG:



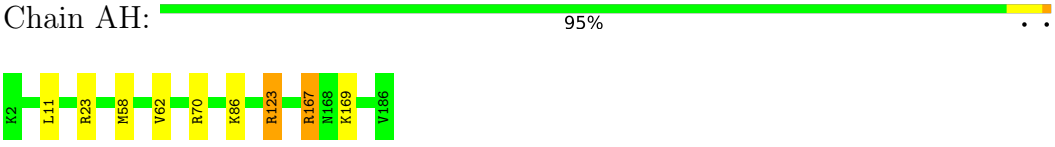
• Molecule 73: 60S ribosomal protein eL20

Chain AU:



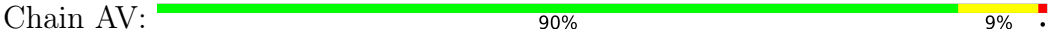
• Molecule 74: 60S ribosomal protein uL6

Chain AH:



• Molecule 75: 60S ribosomal protein eL21

Chain AV:



• Molecule 76: 60S ribosomal protein eL41

Chain Ag:

• Molecule 77: 60S ribosomal protein eL22

Chain AX:

• Molecule 78: 60S ribosomal protein eL8

Chain AJ:

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	22793	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	Each micrograph	Depositor
Microscope	FEI POLARA 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	25	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	3500	Depositor
Magnification	30120	Depositor
Image detector	GATAN K2 (4k x 4k)	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	1.10	7/38275 (0.0%)	1.52	877/59596 (1.5%)
2	7	1.15	0/1785	1.70	63/2782 (2.3%)
3	Q	0.72	0/1149	1.13	11/1532 (0.7%)
4	S	0.65	0/1063	1.17	10/1425 (0.7%)
5	T	0.79	0/412	1.14	5/544 (0.9%)
6	M	0.71	0/1114	1.14	9/1487 (0.6%)
7	U	0.68	0/1223	1.10	10/1634 (0.6%)
8	V	0.73	0/1233	1.12	10/1645 (0.6%)
9	E	0.71	0/1539	1.12	14/2055 (0.7%)
10	X	0.70	0/788	1.18	7/1050 (0.7%)
11	G	0.69	0/1800	1.00	5/2429 (0.2%)
12	W	0.71	0/793	1.13	4/1053 (0.4%)
13	R	0.73	0/755	1.02	2/1013 (0.2%)
14	I	0.71	0/1443	1.06	7/1936 (0.4%)
15	O	0.74	0/706	1.08	8/950 (0.8%)
16	Y	0.70	0/1295	1.17	15/1742 (0.9%)
17	Z	0.70	0/565	0.97	1/758 (0.1%)
18	1	0.73	0/999	1.26	13/1321 (1.0%)
19	2	0.78	0/324	0.92	0/435
20	C	0.68	0/1570	1.06	7/2129 (0.3%)
21	3	0.73	0/794	1.26	13/1055 (1.2%)
22	4	0.67	0/597	0.98	0/801
23	5	0.76	0/459	1.20	6/606 (1.0%)
24	6	0.75	0/349	1.23	4/458 (0.9%)
25	B	0.67	0/1738	1.05	8/2321 (0.3%)
26	D	0.76	0/1241	1.09	6/1652 (0.4%)
27	F	0.68	0/2098	1.11	12/2819 (0.4%)
28	H	0.69	0/1665	1.08	9/2210 (0.4%)
29	K	0.71	0/1054	1.12	8/1411 (0.6%)
30	J	0.69	0/1545	1.03	5/2064 (0.2%)
31	N	0.69	0/780	1.10	2/1053 (0.2%)
32	P	0.69	0/966	1.21	12/1295 (0.9%)
33	L	0.72	0/1407	1.12	15/1879 (0.8%)
34	AA	1.23	16/75922 (0.0%)	1.52	1781/118216 (1.5%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
35	AC	1.12	0/3599	1.55	91/5603 (1.6%)
36	AB	1.13	2/2823 (0.1%)	1.48	71/4400 (1.6%)
37	AL	0.69	0/1789	1.15	13/2381 (0.5%)
38	A0	0.76	0/534	1.16	3/711 (0.4%)
39	AO	0.68	0/1199	1.17	10/1597 (0.6%)
40	Ai	0.69	0/789	1.17	9/1032 (0.9%)
41	A2	0.74	0/840	0.98	4/1114 (0.4%)
42	A4	0.68	0/564	1.00	2/737 (0.3%)
43	A6	0.70	0/749	1.06	4/1001 (0.4%)
44	A7	0.71	0/806	1.20	8/1073 (0.7%)
45	A1	0.69	0/1151	1.00	5/1531 (0.3%)
46	AN	0.71	0/1218	1.11	7/1621 (0.4%)
47	A8	0.72	0/1054	1.28	15/1399 (1.1%)
48	A9	0.71	0/865	1.22	12/1160 (1.0%)
49	Aa	0.68	0/872	1.20	7/1161 (0.6%)
50	Ab	0.72	0/763	1.06	3/1008 (0.3%)
51	Ad	0.72	0/612	1.15	5/812 (0.6%)
52	Ae	0.77	0/396	1.45	8/521 (1.5%)
53	Af	0.68	0/419	1.19	4/556 (0.7%)
54	AP	0.72	0/1735	1.22	16/2320 (0.7%)
55	Ah	0.68	0/668	1.16	6/887 (0.7%)
56	AI	0.67	0/1708	1.03	7/2274 (0.3%)
57	Ac	0.74	0/723	1.24	10/951 (1.1%)
58	AK	0.70	0/1690	1.08	9/2260 (0.4%)
59	AM	0.68	0/1012	1.10	9/1363 (0.7%)
60	AS	0.71	0/1531	1.22	18/2040 (0.9%)
61	AQ	0.74	0/1580	1.21	21/2113 (1.0%)
62	AR	0.71	0/2079	1.17	18/2777 (0.6%)
63	AW	0.71	0/1244	1.15	10/1663 (0.6%)
64	AY	0.67	0/806	0.97	2/1074 (0.2%)
65	AT	0.69	0/1525	1.18	20/2016 (1.0%)
66	AZ	0.70	0/1013	1.24	14/1339 (1.0%)
67	A3	0.69	0/1005	1.18	11/1329 (0.8%)
68	A5	0.71	0/1917	1.18	22/2562 (0.9%)
69	AD	0.68	0/1902	1.16	17/2544 (0.7%)
70	AE	0.68	0/3130	1.12	21/4195 (0.5%)
71	AF	0.70	0/3145	1.10	19/4205 (0.5%)
72	AG	0.75	0/1021	1.16	7/1349 (0.5%)
73	AU	0.71	0/1527	1.18	15/2043 (0.7%)
74	AH	0.67	0/1501	1.08	6/2025 (0.3%)
75	AV	0.69	0/1301	1.10	9/1732 (0.5%)
76	Ag	0.82	0/348	1.50	10/448 (2.2%)
77	AX	0.72	0/842	1.14	8/1125 (0.7%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
78	AJ	0.84	1/1840 (0.1%)	0.99	5/2456 (0.2%)
All	All	1.01	26/207281 (0.0%)	1.39	3550/303864 (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	141
2	7	1	5
3	Q	0	4
5	T	0	1
6	M	0	2
7	U	0	1
8	V	0	3
9	E	0	3
10	X	0	2
12	W	0	3
14	I	0	3
16	Y	0	2
18	1	0	3
19	2	0	1
21	3	0	2
23	5	0	1
24	6	0	4
25	B	1	4
27	F	0	4
28	H	0	4
29	K	0	1
32	P	0	5
33	L	0	2
34	AA	1	328
35	AC	0	13
36	AB	0	8
37	AL	0	7
38	A0	0	1
39	AO	0	1
40	Ai	0	3
41	A2	2	0
42	A4	0	5
43	A6	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
44	A7	0	1
46	AN	0	3
47	A8	0	3
48	A9	0	3
49	Aa	0	2
50	Ab	0	3
51	Ad	0	2
52	Ae	0	2
53	Af	0	2
54	AP	0	7
55	Ah	0	1
56	AI	0	2
57	Ac	0	3
58	AK	0	8
60	AS	0	9
61	AQ	0	6
62	AR	0	7
63	AW	0	4
64	AY	0	1
65	AT	0	3
66	AZ	0	4
67	A3	0	1
68	A5	0	5
69	AD	0	4
70	AE	0	6
71	AF	0	10
72	AG	0	3
73	AU	0	5
74	AH	0	2
75	AV	0	6
76	Ag	0	3
77	AX	0	1
78	AJ	0	2
All	All	5	692

All (26) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	AA	2915	U	C2-N3	70.80	1.87	1.37
34	AA	2915	U	C4-C5	67.04	2.03	1.43
34	AA	2915	U	N1-C2	60.98	1.93	1.38
34	AA	2915	U	N1-C6	57.12	1.89	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	AA	2915	U	N3-C4	56.47	1.89	1.38
34	AA	2915	U	C5-C6	37.45	1.67	1.34
78	AJ	55	ILE	CG1-CD1	20.87	2.94	1.50
34	AA	1202	C	O3'-P	-6.28	1.53	1.61
34	AA	3346	A	N9-C4	-6.17	1.34	1.37
1	A	1831	G	P-O5'	-6.13	1.53	1.59
36	AB	28	C	P-O5'	-6.03	1.53	1.59
34	AA	644	G	O3'-P	-5.92	1.54	1.61
34	AA	3586	U	O3'-P	-5.64	1.54	1.61
34	AA	3585	A	O3'-P	-5.58	1.54	1.61
36	AB	5	U	O3'-P	-5.56	1.54	1.61
1	A	1819	U	C5'-C4'	5.51	1.57	1.51
1	A	1826	A	O3'-P	-5.43	1.54	1.61
1	A	337	G	O3'-P	-5.40	1.54	1.61
34	AA	2932	A	C5'-C4'	5.40	1.57	1.51
1	A	249	A	O3'-P	-5.39	1.54	1.61
34	AA	3015	A	C5'-C4'	5.36	1.57	1.51
1	A	1827	U	P-O5'	-5.24	1.54	1.59
34	AA	1576	U	P-O5'	-5.23	1.54	1.59
34	AA	2932	A	C4'-C3'	5.10	1.58	1.53
34	AA	3683	G	C5'-C4'	5.01	1.57	1.51
1	A	320	C	C5'-C4'	5.01	1.57	1.51

All (3550) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	181	C	P-O3'-C3'	14.44	137.03	119.70
1	A	981	U	P-O3'-C3'	14.26	136.81	119.70
1	A	844	G	P-O3'-C3'	13.99	136.49	119.70
1	A	1912	C	P-O3'-C3'	13.97	136.47	119.70
34	AA	1202	C	P-O3'-C3'	13.95	136.44	119.70
1	A	1300	G	P-O3'-C3'	13.73	136.18	119.70
34	AA	2810	A	P-O3'-C3'	13.30	135.66	119.70
34	AA	581	C	P-O3'-C3'	13.14	135.46	119.70
34	AA	2219	A	P-O3'-C3'	12.94	135.22	119.70
1	A	249	A	P-O3'-C3'	12.79	135.05	119.70
1	A	1056	G	P-O3'-C3'	12.78	135.04	119.70
1	A	1381	C	P-O3'-C3'	12.53	134.74	119.70
1	A	789	U	P-O3'-C3'	12.51	134.72	119.70
34	AA	257	U	P-O3'-C3'	12.44	134.63	119.70
1	A	1897	A	P-O3'-C3'	12.43	134.61	119.70
34	AA	2915	U	C2-N3-C4	-12.42	119.55	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	2563	A	P-O3'-C3'	12.42	134.60	119.70
1	A	1865	G	P-O3'-C3'	12.39	134.57	119.70
34	AA	674	U	P-O3'-C3'	12.38	134.56	119.70
34	AA	3019	A	P-O3'-C3'	12.38	134.56	119.70
18	1	115	ARG	NE-CZ-NH1	12.35	126.48	120.30
34	AA	1101	A	P-O3'-C3'	12.35	134.52	119.70
47	A8	41	ARG	NE-CZ-NH2	12.28	126.44	120.30
34	AA	270	U	P-O3'-C3'	12.23	134.38	119.70
34	AA	1989	A	P-O3'-C3'	12.10	134.22	119.70
18	1	106	ARG	NE-CZ-NH2	12.08	126.34	120.30
34	AA	3754	A	O4'-C1'-N9	12.01	117.81	108.20
27	F	108	ARG	NE-CZ-NH1	12.00	126.30	120.30
34	AA	580	A	P-O3'-C3'	11.97	134.06	119.70
7	U	55	ARG	NE-CZ-NH2	11.83	126.21	120.30
34	AA	764	G	P-O3'-C3'	11.81	133.87	119.70
1	A	544	G	P-O3'-C3'	11.75	133.80	119.70
34	AA	1224	A	P-O3'-C3'	11.71	133.75	119.70
35	AC	37	A	P-O3'-C3'	11.68	133.71	119.70
35	AC	35	A	P-O3'-C3'	11.60	133.62	119.70
2	7	55	U	P-O3'-C3'	11.51	133.51	119.70
2	7	53	G	P-O3'-C3'	11.50	133.50	119.70
34	AA	1217	U	P-O3'-C3'	11.41	133.39	119.70
34	AA	579	C	P-O3'-C3'	11.37	133.34	119.70
35	AC	67	G	O4'-C1'-N9	11.30	117.24	108.20
52	Ae	45	ARG	NE-CZ-NH2	-11.06	114.77	120.30
34	AA	3688	G	P-O3'-C3'	11.05	132.97	119.70
34	AA	500	A	P-O3'-C3'	11.05	132.96	119.70
34	AA	697	A	P-O3'-C3'	11.02	132.93	119.70
34	AA	702	U	O4'-C1'-N1	10.97	116.97	108.20
34	AA	803	A	O4'-C1'-N9	10.80	116.84	108.20
1	A	1448	U	P-O3'-C3'	10.79	132.65	119.70
34	AA	3140	U	P-O3'-C3'	10.76	132.61	119.70
1	A	1448	U	O4'-C1'-N1	10.76	116.81	108.20
34	AA	3658	G	P-O3'-C3'	10.71	132.56	119.70
73	AU	171	ARG	NE-CZ-NH1	10.58	125.59	120.30
1	A	1788	U	O4'-C1'-N1	10.56	116.64	108.20
1	A	1455	C	P-O3'-C3'	10.54	132.35	119.70
66	AZ	12	ARG	NE-CZ-NH2	-10.50	115.05	120.30
1	A	1857	U	O4'-C1'-N1	10.47	116.57	108.20
1	A	1251	G	O4'-C1'-N9	10.45	116.56	108.20
34	AA	1881	C	P-O3'-C3'	10.35	132.12	119.70
34	AA	1873	U	P-O3'-C3'	10.35	132.11	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	1278	A	O4'-C1'-N9	10.31	116.45	108.20
34	AA	2727	U	O4'-C1'-N1	10.27	116.41	108.20
34	AA	218	U	P-O3'-C3'	10.26	132.02	119.70
34	AA	621	C	P-O3'-C3'	10.20	131.94	119.70
1	A	246	A	P-O3'-C3'	10.14	131.87	119.70
34	AA	121	U	P-O3'-C3'	10.13	131.85	119.70
34	AA	698	G	P-O3'-C3'	10.11	131.83	119.70
34	AA	3476	A	P-O3'-C3'	10.10	131.82	119.70
1	A	1375	C	O4'-C1'-N1	10.08	116.26	108.20
4	S	132	ARG	NE-CZ-NH1	10.03	125.31	120.30
1	A	1818	A	O4'-C1'-N9	10.02	116.21	108.20
34	AA	1574	C	O4'-C1'-N1	10.01	116.21	108.20
61	AQ	88	ARG	NE-CZ-NH2	-9.92	115.34	120.30
34	AA	715	U	P-O3'-C3'	9.91	131.59	119.70
34	AA	811	A	P-O3'-C3'	9.91	131.59	119.70
34	AA	859	C	P-O3'-C3'	9.89	131.56	119.70
34	AA	1035	G	P-O3'-C3'	9.87	131.54	119.70
34	AA	2822	U	P-O3'-C3'	9.84	131.51	119.70
1	A	525	G	P-O3'-C3'	9.84	131.50	119.70
1	A	1198	U	O4'-C1'-N1	9.84	116.07	108.20
36	AB	28	C	P-O5'-C5'	9.83	136.63	120.90
1	A	1979	C	O4'-C1'-N1	9.76	116.01	108.20
59	AM	122	ARG	NE-CZ-NH1	9.73	125.16	120.30
34	AA	594	C	C2-N1-C1'	9.70	129.47	118.80
1	A	1976	G	P-O3'-C3'	9.69	131.33	119.70
34	AA	1574	C	P-O3'-C3'	9.68	131.32	119.70
34	AA	597	A	P-O3'-C3'	9.68	131.31	119.70
46	AN	120	ARG	NE-CZ-NH1	9.68	125.14	120.30
34	AA	2394	C	P-O3'-C3'	9.67	131.31	119.70
8	V	102	ARG	NE-CZ-NH2	-9.63	115.48	120.30
34	AA	1435	G	P-O3'-C3'	9.63	131.26	119.70
34	AA	3617	A	O4'-C1'-N9	9.61	115.89	108.20
34	AA	858	C	P-O3'-C3'	9.61	131.24	119.70
34	AA	205	G	P-O3'-C3'	9.59	131.21	119.70
52	Ae	45	ARG	NE-CZ-NH1	9.58	125.09	120.30
34	AA	1503	A	P-O3'-C3'	9.58	131.19	119.70
10	X	47	ARG	NE-CZ-NH2	9.56	125.08	120.30
34	AA	3027	U	P-O3'-C3'	9.55	131.16	119.70
34	AA	3195	C	O4'-C1'-N1	9.53	115.83	108.20
34	AA	289	A	P-O3'-C3'	9.52	131.12	119.70
53	Af	41	ARG	NE-CZ-NH2	-9.51	115.54	120.30
34	AA	2095	U	P-O3'-C3'	9.51	131.11	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	101	C	O4'-C1'-N1	9.49	115.79	108.20
1	A	1414	A	P-O3'-C3'	9.45	131.04	119.70
1	A	1908	A	O4'-C1'-N9	9.43	115.74	108.20
62	AR	44	TYR	CB-CG-CD2	-9.38	115.37	121.00
1	A	1818	A	C1'-O4'-C4'	-9.34	102.42	109.90
37	AL	69	ARG	NE-CZ-NH1	9.34	124.97	120.30
62	AR	44	TYR	CB-CG-CD1	9.34	126.61	121.00
1	A	1691	G	P-O3'-C3'	9.34	130.90	119.70
34	AA	721	U	P-O3'-C3'	9.33	130.90	119.70
1	A	1295	A	O4'-C1'-N9	9.33	115.66	108.20
34	AA	607	A	P-O3'-C3'	9.31	130.87	119.70
34	AA	162	U	P-O3'-C3'	9.30	130.86	119.70
34	AA	2393	A	O4'-C1'-N9	9.30	115.64	108.20
34	AA	504	A	P-O3'-C3'	9.28	130.84	119.70
34	AA	1904	U	P-O3'-C3'	9.26	130.81	119.70
34	AA	620	U	P-O3'-C3'	9.23	130.78	119.70
75	AV	6	ARG	NE-CZ-NH1	9.20	124.90	120.30
27	F	49	ARG	NE-CZ-NH1	9.19	124.89	120.30
2	7	61	C	P-O3'-C3'	9.17	130.71	119.70
1	A	752	U	P-O3'-C3'	9.15	130.68	119.70
34	AA	2577	C	O4'-C1'-N1	9.15	115.52	108.20
34	AA	1805	U	P-O3'-C3'	9.14	130.67	119.70
34	AA	3020	U	O4'-C1'-N1	9.13	115.50	108.20
37	AL	69	ARG	NE-CZ-NH2	-9.13	115.73	120.30
1	A	973	G	O4'-C1'-N9	9.10	115.48	108.20
34	AA	200	A	O4'-C1'-N9	9.09	115.47	108.20
34	AA	754	A	O4'-C1'-N9	9.09	115.47	108.20
60	AS	90	ARG	NE-CZ-NH2	-9.08	115.76	120.30
1	A	2053	U	P-O3'-C3'	9.07	130.58	119.70
54	AP	38	ARG	NE-CZ-NH2	9.06	124.83	120.30
35	AC	134	G	P-O3'-C3'	9.03	130.54	119.70
35	AC	145	A	P-O3'-C3'	9.03	130.54	119.70
34	AA	337	A	P-O3'-C3'	9.03	130.54	119.70
34	AA	228	A	O4'-C1'-N9	9.03	115.42	108.20
73	AU	122	ARG	NE-CZ-NH2	9.03	124.81	120.30
1	A	423	A	P-O3'-C3'	9.01	130.51	119.70
1	A	2071	U	P-O3'-C3'	8.99	130.49	119.70
34	AA	2816	U	P-O3'-C3'	8.99	130.49	119.70
34	AA	1999	A	P-O3'-C3'	8.98	130.47	119.70
1	A	818	C	O4'-C1'-N1	8.96	115.37	108.20
34	AA	2685	C	O4'-C1'-N1	8.96	115.37	108.20
36	AB	27	A	O3'-P-O5'	-8.96	86.98	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	353	G	P-O3'-C3'	8.95	130.44	119.70
56	AI	48	ARG	NE-CZ-NH1	8.92	124.76	120.30
1	A	647	C	C2-N1-C1'	8.91	128.60	118.80
34	AA	62	A	P-O3'-C3'	8.90	130.39	119.70
9	E	23	ARG	NE-CZ-NH2	-8.88	115.86	120.30
16	Y	124	ARG	NE-CZ-NH2	8.86	124.73	120.30
34	AA	61	A	P-O3'-C3'	8.86	130.33	119.70
6	M	83	ARG	NE-CZ-NH1	8.85	124.72	120.30
1	A	818	C	P-O3'-C3'	8.84	130.31	119.70
1	A	1636	A	O4'-C1'-N9	8.84	115.28	108.20
34	AA	3660	A	P-O3'-C3'	8.82	130.28	119.70
34	AA	2216	G	N1-C6-O6	8.81	125.18	119.90
1	A	1070	A	P-O3'-C3'	8.80	130.26	119.70
1	A	1870	A	P-O3'-C3'	8.80	130.27	119.70
1	A	424	G	C5-C6-O6	-8.79	123.33	128.60
34	AA	138	C	P-O3'-C3'	8.79	130.25	119.70
34	AA	501	U	P-O3'-C3'	8.78	130.24	119.70
34	AA	215	C	P-O3'-C3'	8.76	130.22	119.70
34	AA	771	U	O4'-C1'-N1	8.75	115.20	108.20
34	AA	3577	A	P-O3'-C3'	8.72	130.16	119.70
71	AF	86	ARG	NE-CZ-NH2	8.71	124.66	120.30
34	AA	823	U	O4'-C1'-N1	8.71	115.17	108.20
71	AF	75	ARG	NE-CZ-NH1	8.70	124.65	120.30
44	A7	39	ARG	NE-CZ-NH2	-8.69	115.95	120.30
34	AA	1840	C	O4'-C1'-N1	8.69	115.15	108.20
34	AA	2915	U	N1-C2-N3	8.68	120.11	114.90
39	AO	21	ARG	NE-CZ-NH2	8.68	124.64	120.30
34	AA	673	U	O4'-C1'-N1	8.68	115.14	108.20
34	AA	1230	A	O4'-C1'-N9	8.67	115.14	108.20
34	AA	3663	A	P-O3'-C3'	8.67	130.11	119.70
4	S	134	ARG	NE-CZ-NH1	8.67	124.64	120.30
34	AA	2696	G	P-O3'-C3'	8.67	130.10	119.70
34	AA	1996	C	P-O3'-C3'	8.67	130.10	119.70
75	AV	13	ARG	NE-CZ-NH2	8.67	124.63	120.30
34	AA	702	U	C2-N1-C1'	8.66	128.09	117.70
34	AA	3085	A	P-O3'-C3'	8.65	130.08	119.70
1	A	1294	A	P-O3'-C3'	8.64	130.07	119.70
39	AO	127	ARG	NE-CZ-NH2	-8.64	115.98	120.30
34	AA	900	G	P-O5'-C5'	8.60	134.67	120.90
34	AA	3361	U	P-O3'-C3'	8.60	130.02	119.70
67	A3	105	ARG	NE-CZ-NH1	-8.60	116.00	120.30
34	AA	2550	C	O4'-C1'-N1	8.59	115.07	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	2917	C	C6-N1-C2	-8.59	116.86	120.30
2	7	22	G	C5-C6-O6	-8.57	123.46	128.60
34	AA	1204	A	P-O3'-C3'	8.55	129.96	119.70
69	AD	163	ARG	NE-CZ-NH2	8.54	124.57	120.30
69	AD	30	ARG	NE-CZ-NH1	8.54	124.57	120.30
35	AC	100	A	P-O3'-C3'	8.54	129.94	119.70
1	A	25	C	P-O3'-C3'	8.53	129.94	119.70
34	AA	1480	G	C5-C6-O6	-8.53	123.48	128.60
34	AA	315	C	O4'-C1'-N1	8.53	115.02	108.20
55	Ah	4	ARG	NE-CZ-NH1	8.52	124.56	120.30
34	AA	2216	G	C5-C6-O6	-8.50	123.50	128.60
34	AA	416	G	O4'-C1'-N9	8.49	115.00	108.20
1	A	970	G	O4'-C1'-N9	8.49	114.99	108.20
21	3	6	ARG	NE-CZ-NH2	8.48	124.54	120.30
1	A	206	A	P-O3'-C3'	8.47	129.87	119.70
9	E	107	ARG	NE-CZ-NH1	8.47	124.54	120.30
1	A	156	A	P-O3'-C3'	8.47	129.86	119.70
62	AR	33	ARG	NE-CZ-NH1	8.46	124.53	120.30
34	AA	10	G	P-O3'-C3'	8.46	129.85	119.70
68	A5	86	ARG	NE-CZ-NH1	8.46	124.53	120.30
47	A8	44	ARG	NE-CZ-NH2	-8.45	116.07	120.30
34	AA	1605	A	P-O3'-C3'	8.45	129.84	119.70
34	AA	2932	A	P-O3'-C3'	8.44	129.83	119.70
43	A6	26	TYR	CB-CG-CD1	8.43	126.06	121.00
18	1	91	ARG	NE-CZ-NH1	-8.43	116.08	120.30
34	AA	1881	C	O4'-C1'-N1	8.43	114.94	108.20
69	AD	174	ARG	NE-CZ-NH1	8.42	124.51	120.30
1	A	872	A	P-O3'-C3'	8.41	129.79	119.70
67	A3	105	ARG	NE-CZ-NH2	8.40	124.50	120.30
43	A6	26	TYR	CB-CG-CD2	-8.39	115.97	121.00
34	AA	1197	U	P-O3'-C3'	8.38	129.75	119.70
1	A	253	A	O4'-C1'-N9	8.37	114.90	108.20
29	K	57	ARG	NE-CZ-NH2	-8.37	116.11	120.30
34	AA	1154	C	O4'-C1'-N1	8.37	114.90	108.20
1	A	1799	A	O4'-C1'-N9	8.37	114.89	108.20
1	A	857	A	O4'-C1'-N9	8.36	114.89	108.20
35	AC	54	C	P-O3'-C3'	8.36	129.73	119.70
34	AA	2997	G	C5-C6-O6	-8.35	123.59	128.60
47	A8	44	ARG	NE-CZ-NH1	8.35	124.47	120.30
65	AT	87	ARG	NE-CZ-NH2	-8.34	116.13	120.30
47	A8	24	ARG	NE-CZ-NH1	8.33	124.46	120.30
65	AT	37	ARG	NE-CZ-NH1	-8.32	116.14	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
70	AE	24	ARG	NE-CZ-NH1	8.32	124.46	120.30
34	AA	150	C	O4'-C1'-N1	8.32	114.85	108.20
77	AX	121	ARG	NE-CZ-NH2	8.32	124.46	120.30
34	AA	116	A	O4'-C1'-N9	8.31	114.85	108.20
34	AA	136	U	O4'-C1'-N1	8.30	114.84	108.20
47	A8	27	ARG	NE-CZ-NH1	8.30	124.45	120.30
1	A	320	C	O4'-C1'-N1	8.30	114.84	108.20
1	A	573	C	O4'-C1'-N1	8.29	114.83	108.20
2	7	22	G	N1-C6-O6	8.27	124.86	119.90
71	AF	86	ARG	NE-CZ-NH1	-8.27	116.17	120.30
1	A	1262	C	O4'-C1'-N1	8.27	114.81	108.20
1	A	31	C	O4'-C1'-N1	8.26	114.81	108.20
34	AA	255	C	P-O5'-C5'	8.25	134.09	120.90
62	AR	278	ARG	NE-CZ-NH2	-8.24	116.18	120.30
1	A	832	A	P-O3'-C3'	8.23	129.57	119.70
34	AA	2574	A	O4'-C1'-N9	8.22	114.78	108.20
34	AA	830	U	O4'-C1'-N1	8.21	114.77	108.20
25	B	220	ARG	NE-CZ-NH2	8.21	124.40	120.30
62	AR	54	ARG	NE-CZ-NH1	8.21	124.41	120.30
1	A	885	C	O4'-C1'-N1	8.20	114.76	108.20
34	AA	3342	C	O4'-C1'-N1	8.20	114.76	108.20
9	E	126	ARG	NE-CZ-NH1	8.20	124.40	120.30
34	AA	2004	U	O4'-C1'-N1	8.20	114.76	108.20
34	AA	255	C	O4'-C1'-N1	8.19	114.75	108.20
34	AA	101	C	C2-N1-C1'	8.18	127.80	118.80
67	A3	55	ARG	NE-CZ-NH1	8.18	124.39	120.30
34	AA	2934	A	O4'-C1'-N9	8.18	114.74	108.20
1	A	817	U	O4'-C1'-N1	8.17	114.74	108.20
68	A5	169	ARG	NE-CZ-NH1	8.17	124.39	120.30
34	AA	2801	C	O4'-C1'-N1	8.17	114.73	108.20
34	AA	1073	G	O4'-C1'-N9	8.16	114.73	108.20
34	AA	2172	C	O4'-C1'-N1	8.15	114.72	108.20
34	AA	1705	A	P-O3'-C3'	8.14	129.47	119.70
34	AA	3291	U	P-O3'-C3'	8.14	129.47	119.70
1	A	170	C	O4'-C1'-N1	8.13	114.71	108.20
34	AA	136	U	C2-N1-C1'	8.13	127.45	117.70
34	AA	2734	C	O4'-C1'-N1	8.13	114.70	108.20
1	A	1209	G	C5-C6-O6	-8.11	123.73	128.60
34	AA	3161	A	P-O3'-C3'	8.08	129.40	119.70
65	AT	8	ARG	NE-CZ-NH1	8.08	124.34	120.30
40	Ai	42	TYR	CB-CG-CD1	-8.07	116.16	121.00
1	A	977	U	O4'-C1'-N1	8.07	114.65	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	745	C	O4'-C1'-N1	8.07	114.65	108.20
34	AA	1216	C	O4'-C1'-N1	8.07	114.65	108.20
34	AA	870	C	O4'-C1'-N1	8.06	114.65	108.20
34	AA	1905	C	O4'-C1'-N1	8.06	114.65	108.20
34	AA	646	A	P-O5'-C5'	8.05	133.78	120.90
34	AA	799	A	O4'-C1'-N9	8.03	114.63	108.20
44	A7	45	ARG	NE-CZ-NH1	8.03	124.31	120.30
1	A	1409	U	O4'-C1'-N1	8.03	114.62	108.20
32	P	141	ARG	NE-CZ-NH2	8.03	124.31	120.30
2	7	69	C	P-O3'-C3'	8.02	129.33	119.70
34	AA	1720	C	O4'-C1'-N1	8.02	114.61	108.20
34	AA	3044	A	O4'-C1'-N9	8.02	114.61	108.20
69	AD	119	ARG	NE-CZ-NH2	-8.01	116.30	120.30
39	AO	59	ARG	NE-CZ-NH1	-8.00	116.30	120.30
37	AL	99	ARG	NE-CZ-NH1	7.99	124.30	120.30
47	A8	33	ARG	NE-CZ-NH1	7.99	124.30	120.30
34	AA	1681	C	O4'-C1'-N1	7.99	114.59	108.20
34	AA	3511	C	O4'-C1'-N1	7.99	114.59	108.20
2	7	56	C	O4'-C1'-N1	7.99	114.59	108.20
76	Ag	39	ARG	NE-CZ-NH2	7.98	124.29	120.30
1	A	25	C	O4'-C1'-N1	7.98	114.58	108.20
66	AZ	26	ARG	NE-CZ-NH1	7.98	124.29	120.30
2	7	61	C	O4'-C1'-N1	7.98	114.58	108.20
67	A3	116	ARG	NE-CZ-NH1	7.97	124.29	120.30
34	AA	596	A	P-O3'-C3'	7.97	129.27	119.70
77	AX	134	TYR	CB-CG-CD2	-7.96	116.22	121.00
34	AA	3621	C	O4'-C1'-N1	7.96	114.57	108.20
59	AM	89	ARG	NE-CZ-NH1	7.96	124.28	120.30
34	AA	643	G	C5-C6-O6	-7.95	123.83	128.60
44	A7	73	ARG	NE-CZ-NH1	7.94	124.27	120.30
39	AO	12	ARG	NE-CZ-NH1	7.94	124.27	120.30
34	AA	25	A	O4'-C1'-N9	7.93	114.54	108.20
34	AA	650	U	O4'-C1'-N1	7.93	114.54	108.20
1	A	1069	C	O4'-C1'-N1	7.92	114.54	108.20
34	AA	65	A	P-O3'-C3'	7.92	129.21	119.70
60	AS	103	ARG	NE-CZ-NH1	7.92	124.26	120.30
27	F	161	ARG	NE-CZ-NH2	-7.91	116.34	120.30
1	A	251	U	O4'-C1'-N1	7.90	114.52	108.20
47	A8	36	ARG	NE-CZ-NH2	7.90	124.25	120.30
34	AA	703	U	P-O3'-C3'	7.90	129.18	119.70
34	AA	963	C	O4'-C1'-N1	7.89	114.52	108.20
34	AA	3067	G	O4'-C1'-N9	7.89	114.52	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
63	AW	123	ARG	NE-CZ-NH2	-7.89	116.36	120.30
48	A9	51	ARG	NE-CZ-NH1	7.89	124.25	120.30
71	AF	140	ARG	NE-CZ-NH2	-7.89	116.36	120.30
34	AA	2821	C	O4'-C1'-N1	7.88	114.51	108.20
34	AA	239	U	O4'-C1'-N1	7.88	114.50	108.20
34	AA	213	C	O4'-C1'-N1	7.88	114.50	108.20
56	AI	102	ARG	NE-CZ-NH1	-7.88	116.36	120.30
1	A	1934	C	P-O3'-C3'	7.87	129.15	119.70
60	AS	27	ARG	NE-CZ-NH2	-7.87	116.36	120.30
34	AA	3587	U	P-O3'-C3'	7.87	129.14	119.70
34	AA	769	U	O4'-C1'-N1	7.87	114.49	108.20
34	AA	3494	C	O4'-C1'-N1	7.86	114.49	108.20
61	AQ	24	ARG	NE-CZ-NH2	7.86	124.23	120.30
34	AA	949	A	O4'-C1'-N9	7.86	114.48	108.20
75	AV	101	ARG	NE-CZ-NH2	-7.86	116.37	120.30
34	AA	621	C	O4'-C1'-N1	7.85	114.48	108.20
34	AA	2676	C	O4'-C1'-N1	7.85	114.48	108.20
34	AA	2501	A	O4'-C1'-N9	7.85	114.48	108.20
18	1	91	ARG	NE-CZ-NH2	7.84	124.22	120.30
45	A1	17	ARG	NE-CZ-NH2	7.83	124.22	120.30
34	AA	3647	C	O4'-C1'-N1	7.83	114.46	108.20
34	AA	1000	C	O4'-C1'-N1	7.82	114.46	108.20
34	AA	2956	U	O4'-C1'-N1	7.82	114.46	108.20
56	AI	102	ARG	NE-CZ-NH2	7.82	124.21	120.30
1	A	102	A	P-O3'-C3'	7.82	129.08	119.70
1	A	979	C	O4'-C1'-N1	7.82	114.45	108.20
73	AU	154	ARG	NE-CZ-NH1	7.81	124.21	120.30
66	AZ	11	ARG	NE-CZ-NH1	-7.81	116.39	120.30
34	AA	1269	C	O4'-C1'-N1	7.80	114.44	108.20
40	Ai	33	ARG	NE-CZ-NH1	7.80	124.20	120.30
1	A	1911	A	O4'-C1'-N9	7.80	114.44	108.20
34	AA	3723	C	O4'-C1'-N1	7.80	114.44	108.20
71	AF	48	ARG	NE-CZ-NH2	7.80	124.20	120.30
34	AA	3199	C	O4'-C1'-N1	7.79	114.44	108.20
34	AA	3507	A	O4'-C1'-N9	7.79	114.44	108.20
34	AA	414	C	O4'-C1'-N1	7.79	114.44	108.20
34	AA	2885	A	O4'-C1'-N9	7.79	114.43	108.20
34	AA	184	U	P-O3'-C3'	7.79	129.05	119.70
69	AD	40	TYR	CB-CG-CD2	-7.79	116.33	121.00
1	A	1012	C	O4'-C1'-N1	7.79	114.43	108.20
34	AA	2682	C	O4'-C1'-N1	7.79	114.43	108.20
52	Ae	46	ARG	NE-CZ-NH1	-7.79	116.41	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	3081	C	O4'-C1'-N1	7.78	114.42	108.20
34	AA	683	A	P-O3'-C3'	7.77	129.03	119.70
34	AA	2945	G	O4'-C1'-N9	7.77	114.42	108.20
1	A	161	U	O4'-C1'-N1	7.77	114.42	108.20
69	AD	40	TYR	CB-CG-CD1	7.77	125.66	121.00
35	AC	101	A	O4'-C1'-N9	7.76	114.41	108.20
55	Ah	17	ARG	NE-CZ-NH1	7.75	124.17	120.30
34	AA	1990	A	P-O3'-C3'	7.75	129.00	119.70
34	AA	3627	C	O4'-C1'-N1	7.75	114.40	108.20
34	AA	2136	C	O4'-C1'-N1	7.74	114.39	108.20
4	S	88	ARG	NE-CZ-NH2	7.73	124.17	120.30
10	X	81	ARG	NE-CZ-NH2	-7.73	116.43	120.30
73	AU	144	ARG	NE-CZ-NH2	7.73	124.17	120.30
1	A	315	C	O4'-C1'-N1	7.73	114.38	108.20
1	A	1886	C	O4'-C1'-N1	7.72	114.38	108.20
34	AA	3230	G	P-O3'-C3'	7.71	128.96	119.70
1	A	1030	C	O4'-C1'-N1	7.70	114.36	108.20
1	A	1824	A	O4'-C1'-N9	7.70	114.36	108.20
34	AA	3014	C	O4'-C1'-N1	7.69	114.35	108.20
47	A8	105	ARG	NE-CZ-NH1	7.69	124.14	120.30
10	X	42	ARG	NE-CZ-NH1	7.69	124.14	120.30
1	A	1441	C	O4'-C1'-N1	7.69	114.35	108.20
18	1	20	ARG	NE-CZ-NH2	7.68	124.14	120.30
72	AG	32	ARG	NE-CZ-NH2	-7.68	116.46	120.30
34	AA	3095	C	O4'-C1'-N1	7.68	114.34	108.20
1	A	1061	A	O4'-C1'-N9	7.67	114.34	108.20
34	AA	451	C	O4'-C1'-N1	7.67	114.34	108.20
34	AA	2107	C	O4'-C1'-N1	7.67	114.34	108.20
34	AA	2622	C	O4'-C1'-N1	7.67	114.33	108.20
49	Aa	8	ARG	NE-CZ-NH1	7.67	124.13	120.30
34	AA	1739	C	O4'-C1'-N1	7.67	114.33	108.20
34	AA	3443	A	O4'-C1'-N9	7.67	114.33	108.20
1	A	360	C	O4'-C1'-N1	7.66	114.33	108.20
34	AA	1568	C	O4'-C1'-N1	7.66	114.33	108.20
34	AA	3456	C	O4'-C1'-N1	7.66	114.33	108.20
74	AH	167	ARG	NE-CZ-NH1	-7.66	116.47	120.30
34	AA	3400	C	O4'-C1'-N1	7.66	114.33	108.20
77	AX	134	TYR	CB-CG-CD1	7.66	125.59	121.00
34	AA	1480	G	O4'-C1'-N9	7.65	114.32	108.20
1	A	833	A	O4'-C1'-N9	7.64	114.31	108.20
34	AA	2191	C	O4'-C1'-N1	7.64	114.31	108.20
34	AA	1722	C	O4'-C1'-N1	7.63	114.31	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	7	74	C	O4'-C1'-N1	7.63	114.30	108.20
26	D	125	ARG	NE-CZ-NH2	-7.63	116.48	120.30
30	J	123	TYR	CB-CG-CD2	-7.63	116.42	121.00
35	AC	120	C	O4'-C1'-N1	7.63	114.30	108.20
34	AA	1572	U	O4'-C1'-N1	7.62	114.30	108.20
34	AA	3180	C	O4'-C1'-N1	7.62	114.30	108.20
35	AC	49	C	O4'-C1'-N1	7.62	114.30	108.20
18	1	120	ARG	NE-CZ-NH2	-7.62	116.49	120.30
26	D	154	ARG	NE-CZ-NH2	7.62	124.11	120.30
34	AA	3107	U	P-O3'-C3'	7.61	128.83	119.70
34	AA	2698	C	O4'-C1'-N1	7.61	114.28	108.20
1	A	316	C	O4'-C1'-N1	7.61	114.28	108.20
34	AA	3736	A	O4'-C1'-N9	7.61	114.28	108.20
1	A	1785	C	O4'-C1'-N1	7.60	114.28	108.20
34	AA	2553	U	O4'-C1'-N1	7.60	114.28	108.20
1	A	1865	G	O4'-C1'-N9	7.60	114.28	108.20
34	AA	2955	C	O4'-C1'-N1	7.60	114.28	108.20
34	AA	2558	C	O4'-C1'-N1	7.59	114.27	108.20
34	AA	3099	C	O4'-C1'-N1	7.59	114.27	108.20
39	AO	59	ARG	NE-CZ-NH2	7.59	124.10	120.30
43	A6	56	ARG	NE-CZ-NH2	7.59	124.09	120.30
62	AR	23	ARG	NE-CZ-NH2	-7.59	116.51	120.30
8	V	132	ARG	NE-CZ-NH2	-7.58	116.51	120.30
34	AA	2957	G	O4'-C1'-N9	7.58	114.27	108.20
1	A	1440	C	O4'-C1'-N1	7.58	114.26	108.20
34	AA	159	C	O4'-C1'-N1	7.58	114.26	108.20
34	AA	1166	C	O4'-C1'-N1	7.58	114.26	108.20
37	AL	22	ARG	NE-CZ-NH2	7.58	124.09	120.30
34	AA	3235	C	O4'-C1'-N1	7.58	114.26	108.20
1	A	1298	C	O4'-C1'-N1	7.57	114.26	108.20
10	X	42	ARG	NE-CZ-NH2	-7.57	116.51	120.30
36	AB	59	C	O4'-C1'-N1	7.57	114.26	108.20
58	AK	81	ARG	NE-CZ-NH2	7.57	124.08	120.30
1	A	1945	C	O4'-C1'-N1	7.57	114.25	108.20
14	I	195	ARG	NE-CZ-NH1	7.57	124.08	120.30
1	A	1659	U	P-O3'-C3'	7.56	128.77	119.70
34	AA	1440	C	O4'-C1'-N1	7.56	114.25	108.20
34	AA	32	C	O4'-C1'-N1	7.56	114.25	108.20
44	A7	33	TYR	CB-CG-CD2	-7.56	116.47	121.00
65	AT	37	ARG	NE-CZ-NH2	7.56	124.08	120.30
1	A	2051	C	O4'-C1'-N1	7.55	114.24	108.20
34	AA	80	C	O4'-C1'-N1	7.55	114.24	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1292	U	P-O3'-C3'	7.54	128.75	119.70
1	A	760	C	O4'-C1'-N1	7.54	114.23	108.20
1	A	1419	C	O4'-C1'-N1	7.54	114.23	108.20
34	AA	3282	U	O4'-C1'-N1	7.54	114.23	108.20
59	AM	14	ARG	NE-CZ-NH1	7.53	124.06	120.30
1	A	831	U	P-O3'-C3'	7.53	128.73	119.70
1	A	385	U	O4'-C1'-N1	7.53	114.22	108.20
34	AA	111	C	O4'-C1'-N1	7.53	114.22	108.20
34	AA	609	C	O4'-C1'-N1	7.53	114.22	108.20
34	AA	3017	A	P-O3'-C3'	7.53	128.73	119.70
76	Ag	16	ARG	NE-CZ-NH1	7.53	124.06	120.30
1	A	793	G	O4'-C1'-N9	7.52	114.22	108.20
34	AA	1018	C	O4'-C1'-N1	7.52	114.22	108.20
34	AA	3483	U	O4'-C1'-N1	7.52	114.22	108.20
1	A	536	C	O4'-C1'-N1	7.52	114.21	108.20
15	O	65	TYR	CB-CG-CD2	-7.52	116.49	121.00
34	AA	171	C	O4'-C1'-N1	7.51	114.21	108.20
60	AS	57	ARG	NE-CZ-NH2	7.50	124.05	120.30
7	U	114	ARG	NE-CZ-NH1	7.50	124.05	120.30
34	AA	2572	A	O4'-C1'-N9	7.50	114.20	108.20
34	AA	3401	C	O4'-C1'-N1	7.49	114.19	108.20
65	AT	102	ARG	NE-CZ-NH1	7.49	124.05	120.30
34	AA	2577	C	C2-N1-C1'	7.49	127.04	118.80
34	AA	3067	G	C1'-O4'-C4'	-7.49	103.91	109.90
34	AA	3691	C	O4'-C1'-N1	7.49	114.19	108.20
1	A	1687	C	O4'-C1'-N1	7.49	114.19	108.20
1	A	566	C	O4'-C1'-N1	7.49	114.19	108.20
16	Y	107	ARG	NE-CZ-NH1	7.49	124.04	120.30
34	AA	1845	C	O4'-C1'-N1	7.49	114.19	108.20
46	AN	66	ARG	NE-CZ-NH1	7.48	124.04	120.30
1	A	759	C	O4'-C1'-N1	7.48	114.18	108.20
34	AA	122	A	O4'-C1'-N9	7.48	114.18	108.20
1	A	109	C	O4'-C1'-N1	7.47	114.18	108.20
34	AA	1076	C	O4'-C1'-N1	7.47	114.18	108.20
36	AB	102	C	O4'-C1'-N1	7.47	114.18	108.20
69	AD	9	ARG	NE-CZ-NH1	7.47	124.04	120.30
54	AP	195	ARG	NE-CZ-NH2	7.47	124.03	120.30
1	A	485	C	O4'-C1'-N1	7.47	114.17	108.20
66	AZ	45	ARG	NE-CZ-NH1	7.47	124.03	120.30
16	Y	145	ARG	NE-CZ-NH1	7.46	124.03	120.30
2	7	31	G	C2'-C3'-O3'	7.46	125.91	109.50
8	V	155	ARG	NE-CZ-NH1	7.46	124.03	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	AB	67	C	O4'-C1'-N1	7.46	114.17	108.20
70	AE	21	ARG	NE-CZ-NH1	7.46	124.03	120.30
34	AA	432	A	P-O3'-C3'	7.46	128.65	119.70
49	Aa	67	ARG	NE-CZ-NH2	-7.46	116.57	120.30
1	A	2033	U	O4'-C1'-N1	7.45	114.16	108.20
10	X	47	ARG	NE-CZ-NH1	-7.45	116.58	120.30
34	AA	590	C	O4'-C1'-N1	7.45	114.16	108.20
1	A	1257	C	O4'-C1'-N1	7.45	114.16	108.20
23	5	15	ARG	NE-CZ-NH1	-7.45	116.58	120.30
34	AA	361	G	O4'-C1'-N9	7.45	114.16	108.20
69	AD	54	ARG	NE-CZ-NH1	7.45	124.02	120.30
1	A	932	U	O4'-C1'-N1	7.45	114.16	108.20
31	N	54	ARG	NE-CZ-NH1	7.45	124.02	120.30
1	A	1907	A	C4'-C3'-C2'	-7.44	95.16	102.60
1	A	974	A	O4'-C1'-N9	7.44	114.15	108.20
34	AA	1457	G	P-O3'-C3'	7.44	128.63	119.70
1	A	1716	C	O4'-C1'-N1	7.44	114.15	108.20
3	Q	18	ARG	NE-CZ-NH1	7.43	124.02	120.30
69	AD	200	ARG	NE-CZ-NH2	7.43	124.02	120.30
34	AA	866	C	O4'-C1'-N1	7.42	114.14	108.20
34	AA	3714	C	O4'-C1'-N1	7.42	114.14	108.20
63	AW	127	ARG	NE-CZ-NH2	7.42	124.01	120.30
1	A	1091	C	O4'-C1'-N1	7.42	114.14	108.20
34	AA	2883	U	P-O3'-C3'	7.42	128.60	119.70
35	AC	146	C	O4'-C1'-N1	7.41	114.13	108.20
1	A	119	C	O4'-C1'-N1	7.41	114.13	108.20
34	AA	3518	C	O4'-C1'-N1	7.41	114.13	108.20
1	A	357	U	P-O3'-C3'	7.41	128.59	119.70
1	A	424	G	N1-C6-O6	7.40	124.34	119.90
16	Y	66	ARG	NE-CZ-NH1	-7.40	116.60	120.30
1	A	647	C	C6-N1-C1'	-7.40	111.92	120.80
34	AA	449	A	O4'-C1'-N9	7.40	114.12	108.20
68	A5	68	ARG	NE-CZ-NH1	7.40	124.00	120.30
57	Ac	75	ARG	NE-CZ-NH1	7.40	124.00	120.30
34	AA	1325	C	O4'-C1'-N1	7.40	114.12	108.20
36	AB	88	A	P-O3'-C3'	7.40	128.57	119.70
1	A	920	A	O4'-C1'-N9	7.39	114.11	108.20
1	A	1706	A	O4'-C1'-N9	7.39	114.11	108.20
34	AA	1680	C	O4'-C1'-N1	7.39	114.11	108.20
34	AA	3244	C	O4'-C1'-N1	7.39	114.11	108.20
34	AA	3258	C	O4'-C1'-N1	7.38	114.11	108.20
34	AA	1013	U	O4'-C1'-N1	7.38	114.11	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	1852	C	O4'-C1'-N1	7.38	114.10	108.20
68	A5	173	ARG	NE-CZ-NH1	-7.38	116.61	120.30
1	A	184	C	O4'-C1'-N1	7.37	114.10	108.20
14	I	62	ARG	NE-CZ-NH2	7.37	123.98	120.30
34	AA	2969	C	O4'-C1'-N1	7.36	114.09	108.20
34	AA	1502	G	O4'-C1'-N9	7.36	114.09	108.20
20	C	101	ARG	NE-CZ-NH2	7.36	123.98	120.30
34	AA	1823	C	O4'-C1'-N1	7.36	114.08	108.20
1	A	894	U	O4'-C1'-N1	7.35	114.08	108.20
34	AA	3618	A	O4'-C1'-N9	7.35	114.08	108.20
1	A	843	U	O4'-C1'-N1	7.35	114.08	108.20
2	7	66	C	O4'-C1'-N1	7.35	114.08	108.20
23	5	15	ARG	NE-CZ-NH2	7.35	123.97	120.30
34	AA	3243	C	O4'-C1'-N1	7.35	114.08	108.20
34	AA	3191	C	O4'-C1'-N1	7.34	114.07	108.20
34	AA	1572	U	C2-N1-C1'	7.33	126.50	117.70
68	A5	202	TYR	CB-CG-CD1	-7.33	116.60	121.00
69	AD	6	ARG	NE-CZ-NH1	7.33	123.96	120.30
1	A	251	U	C1'-O4'-C4'	-7.32	104.04	109.90
68	A5	238	ARG	NE-CZ-NH2	-7.32	116.64	120.30
1	A	99	C	O4'-C1'-N1	7.32	114.05	108.20
1	A	415	C	O4'-C1'-N1	7.32	114.05	108.20
34	AA	3300	A	P-O3'-C3'	7.32	128.48	119.70
58	AK	48	ARG	NE-CZ-NH1	7.32	123.96	120.30
32	P	41	PHE	CB-CG-CD2	-7.31	115.68	120.80
34	AA	3013	A	O4'-C1'-N9	7.31	114.05	108.20
54	AP	163	ARG	NE-CZ-NH1	7.31	123.95	120.30
25	B	107	ARG	NE-CZ-NH1	7.31	123.95	120.30
34	AA	2004	U	C2-N1-C1'	7.31	126.47	117.70
1	A	1832	U	P-O3'-C3'	7.30	128.47	119.70
1	A	1079	C	O4'-C1'-N1	7.30	114.04	108.20
51	Ad	9	ARG	NE-CZ-NH2	-7.30	116.65	120.30
10	X	43	ARG	NE-CZ-NH2	7.30	123.95	120.30
1	A	2	A	P-O3'-C3'	7.30	128.46	119.70
36	AB	35	C	O4'-C1'-N1	7.30	114.04	108.20
1	A	458	A	O4'-C1'-N9	7.30	114.04	108.20
1	A	655	C	O4'-C1'-N1	7.30	114.04	108.20
34	AA	959	C	O4'-C1'-N1	7.29	114.04	108.20
14	I	51	ARG	NE-CZ-NH1	7.29	123.95	120.30
29	K	57	ARG	NE-CZ-NH1	7.29	123.95	120.30
34	AA	876	C	O4'-C1'-N1	7.29	114.03	108.20
44	A7	39	ARG	NE-CZ-NH1	7.29	123.95	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
73	AU	35	ARG	NE-CZ-NH2	7.29	123.95	120.30
9	E	108	ARG	NE-CZ-NH1	7.29	123.94	120.30
34	AA	3307	C	O4'-C1'-N1	7.29	114.03	108.20
1	A	420	C	O4'-C1'-N1	7.29	114.03	108.20
40	Ai	39	ARG	NE-CZ-NH2	-7.29	116.66	120.30
34	AA	268	C	O4'-C1'-N1	7.29	114.03	108.20
40	Ai	41	ARG	NE-CZ-NH2	-7.29	116.66	120.30
1	A	382	C	O4'-C1'-N1	7.28	114.03	108.20
34	AA	2459	C	O4'-C1'-N1	7.28	114.03	108.20
34	AA	3381	A	P-O3'-C3'	7.28	128.44	119.70
1	A	1936	C	O4'-C1'-N1	7.28	114.03	108.20
1	A	1978	A	O4'-C1'-N9	7.28	114.03	108.20
34	AA	2695	A	P-O5'-C5'	7.28	132.55	120.90
34	AA	1870	G	O4'-C1'-N9	7.28	114.02	108.20
34	AA	588	C	O4'-C1'-N1	7.28	114.02	108.20
34	AA	1106	A	O4'-C1'-N9	7.28	114.02	108.20
34	AA	2933	C	O4'-C1'-N1	7.28	114.02	108.20
1	A	1793	C	O4'-C1'-N1	7.27	114.02	108.20
34	AA	2425	C	O4'-C1'-N1	7.27	114.02	108.20
46	AN	13	TYR	CB-CG-CD1	-7.27	116.64	121.00
65	AT	8	ARG	NE-CZ-NH2	-7.27	116.66	120.30
68	A5	56	ARG	NE-CZ-NH2	-7.27	116.66	120.30
34	AA	3433	C	O4'-C1'-N1	7.27	114.02	108.20
1	A	367	C	O4'-C1'-N1	7.27	114.02	108.20
34	AA	3263	G	O4'-C1'-N9	7.27	114.01	108.20
1	A	1819	U	O4'-C1'-N1	7.26	114.01	108.20
1	A	2009	C	O4'-C1'-N1	7.26	114.01	108.20
1	A	634	C	O4'-C1'-N1	7.26	114.01	108.20
36	AB	78	C	O4'-C1'-N1	7.26	114.01	108.20
34	AA	3752	C	O4'-C1'-N1	7.26	114.01	108.20
34	AA	172	C	O4'-C1'-N1	7.26	114.01	108.20
34	AA	3654	C	O4'-C1'-N1	7.26	114.01	108.20
1	A	1370	U	O4'-C1'-N1	7.25	114.00	108.20
34	AA	3711	U	P-O3'-C3'	7.25	128.41	119.70
34	AA	3502	C	O4'-C1'-N1	7.25	114.00	108.20
34	AA	1618	C	O4'-C1'-N1	7.25	114.00	108.20
34	AA	336	U	O4'-C1'-N1	7.24	114.00	108.20
1	A	1917	C	O4'-C1'-N1	7.24	113.99	108.20
36	AB	29	C	O4'-C1'-N1	7.24	113.99	108.20
1	A	1794	C	O4'-C1'-N1	7.24	113.99	108.20
34	AA	278	C	O4'-C1'-N1	7.24	113.99	108.20
34	AA	594	C	C6-N1-C1'	-7.24	112.11	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	3756	C	O4'-C1'-N1	7.24	113.99	108.20
66	AZ	27	ARG	NE-CZ-NH1	7.24	123.92	120.30
34	AA	1280	G	O4'-C1'-N9	7.23	113.99	108.20
34	AA	2421	C	O4'-C1'-N1	7.23	113.98	108.20
1	A	437	C	O4'-C1'-N1	7.23	113.98	108.20
1	A	1718	C	O4'-C1'-N1	7.22	113.98	108.20
34	AA	1244	G	O4'-C1'-N9	7.22	113.98	108.20
34	AA	3137	U	P-O3'-C3'	7.22	128.36	119.70
1	A	1267	C	O4'-C1'-N1	7.22	113.97	108.20
34	AA	732	C	O4'-C1'-N1	7.21	113.97	108.20
63	AW	34	ARG	NE-CZ-NH2	-7.21	116.69	120.30
34	AA	28	C	O4'-C1'-N1	7.21	113.97	108.20
61	AQ	90	ARG	NE-CZ-NH2	-7.21	116.69	120.30
1	A	1719	U	O4'-C1'-N1	7.21	113.97	108.20
34	AA	137	G	O4'-C1'-N9	7.21	113.97	108.20
30	J	78	ARG	NE-CZ-NH2	7.20	123.90	120.30
1	A	1182	A	P-O3'-C3'	7.20	128.34	119.70
6	M	50	TYR	CB-CG-CD1	-7.20	116.68	121.00
34	AA	504	A	N1-C6-N6	-7.20	114.28	118.60
62	AR	50	ARG	NE-CZ-NH1	7.20	123.90	120.30
34	AA	2528	C	O4'-C1'-N1	7.20	113.96	108.20
34	AA	1057	C	O4'-C1'-N1	7.20	113.96	108.20
34	AA	2993	C	O4'-C1'-N1	7.20	113.96	108.20
36	AB	36	C	O4'-C1'-N1	7.20	113.96	108.20
34	AA	672	C	O4'-C1'-N1	7.19	113.95	108.20
30	J	123	TYR	CB-CG-CD1	7.19	125.32	121.00
34	AA	138	C	O4'-C1'-N1	7.19	113.95	108.20
1	A	1224	C	O4'-C1'-N1	7.19	113.95	108.20
34	AA	803	A	P-O3'-C3'	7.19	128.33	119.70
34	AA	3770	C	O4'-C1'-N1	7.19	113.95	108.20
40	Ai	42	TYR	CB-CG-CD2	7.19	125.31	121.00
34	AA	93	C	O4'-C1'-N1	7.19	113.95	108.20
31	N	78	ARG	NE-CZ-NH2	7.18	123.89	120.30
70	AE	234	ARG	NE-CZ-NH2	7.18	123.89	120.30
35	AC	128	C	O4'-C1'-N1	7.18	113.95	108.20
61	AQ	162	ARG	NE-CZ-NH1	7.18	123.89	120.30
1	A	808	U	O4'-C1'-N1	7.18	113.94	108.20
34	AA	2623	C	O4'-C1'-N1	7.18	113.94	108.20
34	AA	1991	U	O4'-C1'-N1	7.18	113.94	108.20
34	AA	2630	C	O4'-C1'-N1	7.18	113.94	108.20
58	AK	133	ARG	NE-CZ-NH1	7.17	123.89	120.30
34	AA	511	C	O4'-C1'-N1	7.17	113.94	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	973	G	C1'-O4'-C4'	-7.17	104.17	109.90
1	A	1306	C	O4'-C1'-N1	7.17	113.93	108.20
75	AV	13	ARG	NE-CZ-NH1	-7.16	116.72	120.30
35	AC	118	C	O4'-C1'-N1	7.16	113.93	108.20
1	A	748	C	O4'-C1'-N1	7.16	113.93	108.20
37	AL	198	ARG	NE-CZ-NH2	7.16	123.88	120.30
73	AU	124	ARG	NE-CZ-NH2	7.16	123.88	120.30
34	AA	1155	C	O4'-C1'-N1	7.16	113.93	108.20
34	AA	284	C	O4'-C1'-N1	7.15	113.92	108.20
1	A	396	G	O4'-C1'-N9	7.15	113.92	108.20
34	AA	101	C	C6-N1-C1'	-7.15	112.22	120.80
1	A	414	C	O4'-C1'-N1	7.15	113.92	108.20
34	AA	1758	C	O4'-C1'-N1	7.15	113.92	108.20
1	A	1835	U	O4'-C1'-N1	7.15	113.92	108.20
1	A	1707	C	O4'-C1'-N1	7.15	113.92	108.20
1	A	1839	G	O4'-C1'-N9	7.15	113.92	108.20
34	AA	2123	C	O4'-C1'-N1	7.14	113.92	108.20
74	AH	123	ARG	NE-CZ-NH1	-7.14	116.73	120.30
1	A	36	C	O4'-C1'-N1	7.14	113.92	108.20
34	AA	2103	C	O4'-C1'-N1	7.14	113.91	108.20
34	AA	193	C	O4'-C1'-N1	7.14	113.91	108.20
1	A	408	U	O4'-C1'-N1	7.14	113.91	108.20
1	A	483	A	O4'-C1'-N9	7.14	113.91	108.20
34	AA	202	C	O4'-C1'-N1	7.14	113.91	108.20
34	AA	922	C	O4'-C1'-N1	7.14	113.91	108.20
34	AA	3461	C	O4'-C1'-N1	7.14	113.91	108.20
34	AA	3522	C	O4'-C1'-N1	7.14	113.91	108.20
2	7	23	C	O4'-C1'-N1	7.13	113.91	108.20
34	AA	1994	U	O4'-C1'-N1	7.13	113.91	108.20
34	AA	3628	C	O4'-C1'-N1	7.13	113.90	108.20
45	A1	119	ARG	NE-CZ-NH2	-7.12	116.74	120.30
65	AT	63	ARG	NE-CZ-NH1	7.12	123.86	120.30
61	AQ	88	ARG	NE-CZ-NH1	7.12	123.86	120.30
34	AA	589	C	O4'-C1'-N1	7.12	113.89	108.20
1	A	621	C	O4'-C1'-N1	7.12	113.89	108.20
1	A	1169	C	O4'-C1'-N1	7.12	113.89	108.20
18	1	106	ARG	NE-CZ-NH1	-7.11	116.74	120.30
34	AA	1757	C	O4'-C1'-N1	7.11	113.89	108.20
28	H	74	ARG	NE-CZ-NH1	7.11	123.86	120.30
34	AA	1175	C	O4'-C1'-N1	7.11	113.89	108.20
34	AA	2727	U	C2-N1-C1'	7.11	126.23	117.70
39	AO	104	ARG	NE-CZ-NH1	7.11	123.86	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
68	A5	255	ARG	NE-CZ-NH2	-7.11	116.75	120.30
1	A	122	C	O4'-C1'-N1	7.11	113.89	108.20
67	A3	50	ARG	NE-CZ-NH1	7.11	123.86	120.30
34	AA	1506	C	O4'-C1'-N1	7.11	113.89	108.20
2	7	44	A	O4'-C1'-N9	7.11	113.88	108.20
34	AA	1283	C	O4'-C1'-N1	7.11	113.88	108.20
35	AC	138	U	P-O3'-C3'	7.11	128.23	119.70
35	AC	32	C	O4'-C1'-N1	7.10	113.88	108.20
1	A	345	C	O4'-C1'-N1	7.10	113.88	108.20
6	M	112	ARG	NE-CZ-NH2	-7.10	116.75	120.30
1	A	1651	C	O4'-C1'-N1	7.09	113.88	108.20
34	AA	491	C	O4'-C1'-N1	7.09	113.88	108.20
1	A	1296	C	O4'-C1'-N1	7.09	113.87	108.20
15	O	23	TYR	CB-CG-CD1	-7.09	116.74	121.00
36	AB	26	C	O4'-C1'-N1	7.09	113.87	108.20
36	AB	34	C	O4'-C1'-N1	7.09	113.87	108.20
1	A	590	C	O4'-C1'-N1	7.08	113.87	108.20
34	AA	926	G	O4'-C1'-N9	7.08	113.87	108.20
1	A	919	U	O4'-C1'-N1	7.08	113.86	108.20
34	AA	3312	U	O4'-C1'-N1	7.08	113.87	108.20
77	AX	117	ARG	NE-CZ-NH2	7.08	123.84	120.30
3	Q	23	ARG	NE-CZ-NH1	7.08	123.84	120.30
34	AA	719	C	O4'-C1'-N1	7.08	113.86	108.20
67	A3	113	PHE	CB-CG-CD2	7.08	125.75	120.80
51	Ad	73	ARG	NE-CZ-NH2	-7.07	116.76	120.30
75	AV	101	ARG	NE-CZ-NH1	7.07	123.83	120.30
34	AA	1573	C	O4'-C1'-N1	7.07	113.85	108.20
34	AA	2036	C	O4'-C1'-N1	7.07	113.86	108.20
35	AC	105	U	O4'-C1'-N1	7.07	113.86	108.20
1	A	2026	C	O4'-C1'-N1	7.07	113.85	108.20
58	AK	136	ARG	NE-CZ-NH1	7.07	123.83	120.30
28	H	156	TYR	CB-CG-CD1	-7.06	116.76	121.00
34	AA	234	C	O4'-C1'-N1	7.06	113.85	108.20
34	AA	1480	G	N1-C6-O6	7.06	124.14	119.90
34	AA	3620	C	O4'-C1'-N1	7.06	113.85	108.20
68	A5	116	ARG	NE-CZ-NH1	-7.06	116.77	120.30
1	A	1873	A	N1-C6-N6	7.05	122.83	118.60
34	AA	107	C	O4'-C1'-N1	7.05	113.84	108.20
34	AA	2647	C	O4'-C1'-N1	7.05	113.84	108.20
34	AA	3617	A	P-O3'-C3'	7.05	128.16	119.70
1	A	449	C	O4'-C1'-N1	7.05	113.84	108.20
1	A	1686	C	O4'-C1'-N1	7.05	113.84	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
78	AJ	55	ILE	CB-CG1-CD1	7.05	133.63	113.90
34	AA	624	C	O4'-C1'-N1	7.04	113.84	108.20
34	AA	1794	U	O4'-C1'-N1	7.04	113.83	108.20
34	AA	954	G	O4'-C1'-N9	7.04	113.83	108.20
34	AA	2713	C	O4'-C1'-N1	7.04	113.83	108.20
1	A	874	A	P-O3'-C3'	7.04	128.14	119.70
34	AA	1456	C	O4'-C1'-N1	7.04	113.83	108.20
34	AA	2175	C	O4'-C1'-N1	7.04	113.83	108.20
36	AB	93	G	C5-C6-O6	-7.04	124.38	128.60
34	AA	2591	U	O4'-C1'-N1	7.03	113.82	108.20
1	A	871	C	O4'-C1'-N1	7.03	113.82	108.20
34	AA	2626	C	O4'-C1'-N1	7.03	113.82	108.20
34	AA	1676	C	O4'-C1'-N1	7.02	113.82	108.20
1	A	919	U	P-O3'-C3'	7.02	128.12	119.70
1	A	1452	C	O4'-C1'-N1	7.02	113.81	108.20
69	AD	242	ARG	NE-CZ-NH2	7.02	123.81	120.30
16	Y	15	ARG	NE-CZ-NH1	-7.02	116.79	120.30
34	AA	3526	U	O4'-C1'-N1	7.01	113.81	108.20
65	AT	109	ARG	NE-CZ-NH1	-7.01	116.79	120.30
1	A	2018	C	O4'-C1'-N1	7.01	113.81	108.20
34	AA	1086	C	O4'-C1'-N1	7.01	113.81	108.20
60	AS	90	ARG	NE-CZ-NH1	7.01	123.80	120.30
1	A	632	C	O4'-C1'-N1	7.01	113.81	108.20
35	AC	39	C	O4'-C1'-N1	7.00	113.80	108.20
1	A	894	U	P-O3'-C3'	-7.00	111.30	119.70
34	AA	143	C	O4'-C1'-N1	7.00	113.80	108.20
35	AC	15	C	O4'-C1'-N1	7.00	113.80	108.20
35	AC	100	A	O4'-C1'-N9	7.00	113.80	108.20
34	AA	2185	C	O4'-C1'-N1	7.00	113.80	108.20
1	A	475	C	O4'-C1'-N1	6.99	113.79	108.20
13	R	68	TYR	CB-CG-CD1	-6.99	116.80	121.00
34	AA	607	A	N1-C6-N6	6.99	122.79	118.60
34	AA	1431	A	O4'-C1'-N9	6.99	113.79	108.20
35	AC	33	C	O4'-C1'-N1	6.99	113.79	108.20
1	A	18	C	O4'-C1'-N1	6.98	113.79	108.20
34	AA	2991	U	O4'-C1'-N1	6.98	113.79	108.20
26	D	147	ARG	NE-CZ-NH2	-6.98	116.81	120.30
34	AA	2597	C	O4'-C1'-N1	6.98	113.79	108.20
34	AA	2574	A	C1'-O4'-C4'	-6.98	104.32	109.90
3	Q	13	ARG	NE-CZ-NH1	-6.98	116.81	120.30
34	AA	3414	G	P-O3'-C3'	6.97	128.07	119.70
34	AA	3257	G	C5-C6-O6	-6.97	124.42	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	300	C	O4'-C1'-N1	6.97	113.78	108.20
1	A	879	A	O4'-C1'-N9	6.97	113.78	108.20
32	P	41	PHE	CB-CG-CD1	6.97	125.68	120.80
34	AA	830	U	C2-N1-C1'	6.97	126.06	117.70
34	AA	42	C	O4'-C1'-N1	6.97	113.77	108.20
34	AA	3021	C	O4'-C1'-N1	6.96	113.77	108.20
48	A9	39	ARG	NE-CZ-NH1	6.96	123.78	120.30
48	A9	87	ARG	NE-CZ-NH1	6.96	123.78	120.30
1	A	827	C	O4'-C1'-N1	6.96	113.77	108.20
34	AA	982	C	O4'-C1'-N1	6.96	113.77	108.20
71	AF	336	ARG	NE-CZ-NH1	6.95	123.78	120.30
52	Ae	41	ARG	NE-CZ-NH1	6.95	123.77	120.30
1	A	1319	G	O4'-C1'-N9	6.95	113.76	108.20
34	AA	1788	C	O4'-C1'-N1	6.94	113.75	108.20
1	A	917	C	O4'-C1'-N1	6.94	113.75	108.20
1	A	1209	G	O4'-C1'-N9	6.94	113.75	108.20
20	C	35	ARG	NE-CZ-NH2	6.94	123.77	120.30
34	AA	347	C	O4'-C1'-N1	6.94	113.75	108.20
1	A	150	C	O4'-C1'-N1	6.94	113.75	108.20
34	AA	1424	C	O4'-C1'-N1	6.94	113.75	108.20
36	AB	17	C	O4'-C1'-N1	6.93	113.75	108.20
34	AA	2394	C	O4'-C1'-N1	6.93	113.75	108.20
1	A	1100	U	P-O3'-C3'	6.93	128.01	119.70
37	AL	197	ARG	NE-CZ-NH1	-6.93	116.84	120.30
34	AA	2658	C	O4'-C1'-N1	6.92	113.74	108.20
34	AA	801	U	O4'-C1'-N1	6.92	113.74	108.20
1	A	1432	G	P-O3'-C3'	6.92	128.00	119.70
35	AC	148	C	O4'-C1'-N1	6.92	113.74	108.20
1	A	1220	C	O4'-C1'-N1	6.92	113.73	108.20
34	AA	237	A	O4'-C1'-N9	6.92	113.73	108.20
34	AA	525	U	O4'-C1'-N1	6.92	113.73	108.20
34	AA	2002	G	O4'-C1'-N9	6.92	113.73	108.20
71	AF	312	ARG	NE-CZ-NH2	-6.92	116.84	120.30
1	A	1090	C	O4'-C1'-N1	6.92	113.73	108.20
1	A	439	C	O4'-C1'-N1	6.91	113.73	108.20
34	AA	779	U	O4'-C1'-N1	6.91	113.73	108.20
34	AA	2116	C	O4'-C1'-N1	6.91	113.73	108.20
34	AA	3575	U	O4'-C1'-N1	6.91	113.73	108.20
34	AA	2485	C	O4'-C1'-N1	6.91	113.72	108.20
34	AA	1321	A	O4'-C1'-N9	6.90	113.72	108.20
34	AA	888	A	O4'-C1'-N9	6.90	113.72	108.20
34	AA	2125	A	O4'-C1'-N9	6.90	113.72	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	AC	10	C	O4'-C1'-N1	6.90	113.72	108.20
34	AA	952	U	O4'-C1'-N1	6.90	113.72	108.20
34	AA	3241	U	O4'-C1'-N1	6.90	113.72	108.20
34	AA	702	U	C6-N1-C1'	-6.90	111.54	121.20
34	AA	775	C	O4'-C1'-N1	6.90	113.72	108.20
2	7	47	U	O4'-C1'-N1	6.89	113.71	108.20
61	AQ	7	ARG	NE-CZ-NH1	6.89	123.75	120.30
39	AO	67	ARG	NE-CZ-NH1	6.89	123.75	120.30
1	A	1404	U	O4'-C1'-N1	6.89	113.71	108.20
34	AA	1979	C	O4'-C1'-N1	6.88	113.71	108.20
1	A	1461	C	O4'-C1'-N1	6.88	113.71	108.20
34	AA	722	G	C5-C6-O6	-6.88	124.47	128.60
34	AA	3005	C	O4'-C1'-N1	6.88	113.70	108.20
34	AA	1160	C	O4'-C1'-N1	6.87	113.70	108.20
34	AA	233	C	O4'-C1'-N1	6.87	113.70	108.20
34	AA	3053	G	O4'-C1'-N9	6.87	113.70	108.20
34	AA	2422	C	O4'-C1'-N1	6.87	113.69	108.20
1	A	1019	C	O4'-C1'-N1	6.87	113.69	108.20
34	AA	3318	C	O4'-C1'-N1	6.87	113.69	108.20
55	Ah	4	ARG	NE-CZ-NH2	-6.87	116.87	120.30
1	A	49	C	O4'-C1'-N1	6.86	113.69	108.20
34	AA	2495	C	O4'-C1'-N1	6.86	113.68	108.20
1	A	1249	C	O4'-C1'-N1	6.85	113.68	108.20
1	A	1380	C	O4'-C1'-N1	6.85	113.68	108.20
9	E	23	ARG	NE-CZ-NH1	6.85	123.73	120.30
54	AP	160	ARG	NE-CZ-NH1	6.85	123.73	120.30
34	AA	3782	A	P-O3'-C3'	6.85	127.92	119.70
68	A5	231	ARG	NE-CZ-NH2	6.85	123.72	120.30
34	AA	1303	C	O4'-C1'-N1	6.84	113.67	108.20
65	AT	169	ARG	NE-CZ-NH1	6.84	123.72	120.30
34	AA	320	C	O4'-C1'-N1	6.84	113.67	108.20
34	AA	574	G	O4'-C1'-N9	6.84	113.67	108.20
76	Ag	39	ARG	NE-CZ-NH1	-6.84	116.88	120.30
34	AA	532	C	O4'-C1'-N1	6.84	113.67	108.20
34	AA	3322	C	O4'-C1'-N1	6.84	113.67	108.20
34	AA	3659	C	O4'-C1'-N1	6.84	113.67	108.20
15	O	65	TYR	CB-CG-CD1	6.84	125.10	121.00
44	A7	80	ARG	NE-CZ-NH1	6.84	123.72	120.30
34	AA	3129	U	P-O3'-C3'	6.83	127.90	119.70
34	AA	69	U	O4'-C1'-N1	6.83	113.67	108.20
34	AA	142	C	O4'-C1'-N1	6.83	113.67	108.20
34	AA	1665	C	O4'-C1'-N1	6.83	113.67	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	2437	A	O4'-C1'-N9	6.83	113.66	108.20
34	AA	2918	C	O4'-C1'-N1	6.83	113.66	108.20
34	AA	3337	U	O4'-C1'-N1	6.83	113.66	108.20
1	A	1946	C	O4'-C1'-N1	6.83	113.66	108.20
35	AC	104	C	O4'-C1'-N1	6.83	113.66	108.20
34	AA	3016	G	O4'-C1'-N9	6.83	113.66	108.20
34	AA	1904	U	C4'-C3'-C2'	-6.82	95.78	102.60
34	AA	2074	C	O4'-C1'-N1	6.82	113.66	108.20
1	A	270	C	O4'-C1'-N1	6.82	113.66	108.20
1	A	1732	G	O4'-C1'-N9	6.82	113.66	108.20
34	AA	1537	G	P-O5'-C5'	6.82	131.82	120.90
34	AA	930	C	O4'-C1'-N1	6.82	113.66	108.20
1	A	1609	C	O4'-C1'-N1	6.82	113.65	108.20
34	AA	821	C	O4'-C1'-N1	6.81	113.65	108.20
34	AA	990	U	O4'-C1'-N1	6.81	113.65	108.20
34	AA	857	C	O4'-C1'-N1	6.81	113.64	108.20
34	AA	2401	C	O4'-C1'-N1	6.81	113.64	108.20
68	A5	160	ARG	NE-CZ-NH1	-6.81	116.90	120.30
18	1	120	ARG	NE-CZ-NH1	6.80	123.70	120.30
34	AA	1281	C	O4'-C1'-N1	6.80	113.64	108.20
1	A	1731	C	O4'-C1'-N1	6.80	113.64	108.20
34	AA	3673	C	O4'-C1'-N1	6.80	113.64	108.20
34	AA	2033	C	P-O3'-C3'	6.80	127.86	119.70
34	AA	3192	U	O4'-C1'-N1	6.80	113.64	108.20
1	A	400	C	O4'-C1'-N1	6.80	113.64	108.20
32	P	149	ARG	NE-CZ-NH1	-6.79	116.90	120.30
34	AA	3713	C	O4'-C1'-N1	6.79	113.63	108.20
34	AA	1726	C	O4'-C1'-N1	6.79	113.63	108.20
69	AD	119	ARG	NE-CZ-NH1	6.79	123.69	120.30
2	7	31	G	O4'-C1'-N9	6.79	113.63	108.20
34	AA	2932	A	O4'-C1'-N9	6.79	113.63	108.20
72	AG	137	ARG	NE-CZ-NH2	6.79	123.69	120.30
1	A	1909	C	O4'-C1'-N1	6.78	113.63	108.20
2	7	34	C	O4'-C1'-N1	6.78	113.63	108.20
34	AA	329	C	O4'-C1'-N1	6.78	113.63	108.20
62	AR	281	ARG	NE-CZ-NH1	-6.78	116.91	120.30
52	Ae	42	ARG	NE-CZ-NH1	6.78	123.69	120.30
34	AA	109	A	P-O3'-C3'	6.77	127.83	119.70
1	A	118	U	O4'-C1'-N1	6.77	113.62	108.20
34	AA	2999	C	O4'-C1'-N1	6.77	113.62	108.20
34	AA	1474	A	O4'-C1'-N9	6.77	113.62	108.20
34	AA	2577	C	C6-N1-C1'	-6.77	112.68	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	AC	127	C	O4'-C1'-N1	6.77	113.61	108.20
34	AA	685	U	C2-N1-C1'	6.77	125.82	117.70
34	AA	1654	C	O4'-C1'-N1	6.77	113.61	108.20
3	Q	13	ARG	NE-CZ-NH2	6.76	123.68	120.30
34	AA	3501	C	O4'-C1'-N1	6.76	113.61	108.20
34	AA	90	C	O4'-C1'-N1	6.76	113.61	108.20
39	AO	26	ARG	NE-CZ-NH1	6.76	123.68	120.30
34	AA	2015	C	O4'-C1'-N1	6.76	113.61	108.20
34	AA	1037	C	O4'-C1'-N1	6.76	113.61	108.20
34	AA	2039	U	P-O3'-C3'	6.76	127.81	119.70
34	AA	2215	G	P-O3'-C3'	6.76	127.81	119.70
34	AA	81	C	O4'-C1'-N1	6.75	113.60	108.20
34	AA	1656	G	O4'-C1'-N9	6.75	113.60	108.20
34	AA	2700	C	O4'-C1'-N1	6.75	113.60	108.20
34	AA	3265	C	O4'-C1'-N1	6.75	113.60	108.20
48	A9	76	PHE	CB-CG-CD1	6.75	125.53	120.80
34	AA	2655	C	O4'-C1'-N1	6.75	113.60	108.20
1	A	1830	C	O4'-C1'-N1	6.75	113.60	108.20
1	A	2076	C	O4'-C1'-N1	6.75	113.60	108.20
9	E	79	ARG	NE-CZ-NH2	6.75	123.67	120.30
1	A	647	C	O4'-C1'-N1	6.74	113.59	108.20
33	L	8	ARG	NE-CZ-NH1	6.74	123.67	120.30
36	AB	93	G	O4'-C1'-N9	6.74	113.59	108.20
34	AA	3469	C	O4'-C1'-N1	6.74	113.59	108.20
1	A	1950	C	O4'-C1'-N1	6.74	113.59	108.20
42	A4	32	ARG	NE-CZ-NH2	6.74	123.67	120.30
34	AA	3658	G	C5-C6-O6	-6.74	124.56	128.60
35	AC	61	C	O4'-C1'-N1	6.74	113.59	108.20
1	A	754	A	O4'-C1'-N9	6.74	113.59	108.20
29	K	118	ARG	NE-CZ-NH1	6.73	123.67	120.30
34	AA	1704	U	O4'-C1'-N1	6.73	113.59	108.20
34	AA	155	U	O4'-C1'-N1	6.73	113.58	108.20
73	AU	171	ARG	NE-CZ-NH2	-6.73	116.94	120.30
34	AA	712	C	O4'-C1'-N1	6.73	113.58	108.20
34	AA	1343	U	O4'-C1'-N1	6.73	113.58	108.20
34	AA	916	U	O4'-C1'-N1	6.73	113.58	108.20
34	AA	1202	C	O4'-C1'-N1	6.73	113.58	108.20
39	AO	127	ARG	NE-CZ-NH1	6.72	123.66	120.30
1	A	1075	C	O4'-C1'-N1	6.72	113.58	108.20
1	A	1812	A	O4'-C1'-N9	6.72	113.58	108.20
34	AA	2624	C	O4'-C1'-N1	6.72	113.58	108.20
34	AA	3775	G	O4'-C1'-N9	6.72	113.58	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
60	AS	171	ARG	NE-CZ-NH1	6.72	123.66	120.30
65	AT	61	ARG	NE-CZ-NH1	6.72	123.66	120.30
1	A	1179	C	O4'-C1'-N1	6.72	113.57	108.20
47	A8	36	ARG	NE-CZ-NH1	-6.72	116.94	120.30
1	A	311	C	O4'-C1'-N1	6.71	113.57	108.20
6	M	50	TYR	CB-CG-CD2	6.71	125.03	121.00
16	Y	145	ARG	NE-CZ-NH2	-6.71	116.94	120.30
34	AA	2215	G	C5-C6-O6	-6.71	124.57	128.60
34	AA	2961	C	O4'-C1'-N1	6.71	113.57	108.20
34	AA	1461	C	O4'-C1'-N1	6.71	113.57	108.20
34	AA	753	C	O4'-C1'-N1	6.71	113.57	108.20
34	AA	1866	C	O4'-C1'-N1	6.71	113.57	108.20
1	A	89	C	C6-N1-C2	-6.71	117.62	120.30
2	7	49	G	C5-C6-O6	-6.71	124.58	128.60
34	AA	1415	A	O4'-C1'-N9	6.71	113.56	108.20
1	A	2031	C	O4'-C1'-N1	6.71	113.56	108.20
34	AA	3089	C	O4'-C1'-N1	6.71	113.56	108.20
68	A5	116	ARG	NE-CZ-NH2	6.71	123.65	120.30
1	A	1004	U	O4'-C1'-N1	6.70	113.56	108.20
34	AA	3613	A	O4'-C1'-N9	6.70	113.56	108.20
48	A9	76	PHE	CB-CG-CD2	-6.70	116.11	120.80
34	AA	113	C	O4'-C1'-N1	6.70	113.56	108.20
1	A	411	C	O4'-C1'-N1	6.70	113.56	108.20
34	AA	2571	C	O4'-C1'-N1	6.70	113.56	108.20
65	AT	143	ARG	NE-CZ-NH2	-6.69	116.95	120.30
1	A	257	C	O4'-C1'-N1	6.69	113.55	108.20
1	A	1097	C	O4'-C1'-N1	6.69	113.55	108.20
34	AA	1678	C	O4'-C1'-N1	6.69	113.55	108.20
34	AA	421	C	O4'-C1'-N1	6.69	113.55	108.20
34	AA	2694	A	O4'-C1'-N9	6.69	113.55	108.20
76	Ag	37	ARG	NE-CZ-NH2	-6.69	116.95	120.30
1	A	107	A	P-O3'-C3'	6.69	127.72	119.70
34	AA	701	C	O4'-C1'-N1	6.69	113.55	108.20
34	AA	2671	C	O4'-C1'-N1	6.69	113.55	108.20
34	AA	2883	U	O4'-C1'-N1	6.69	113.55	108.20
34	AA	3434	A	O4'-C1'-N9	6.69	113.55	108.20
34	AA	860	A	P-O5'-C5'	6.68	131.59	120.90
34	AA	1247	C	O4'-C1'-N1	6.68	113.55	108.20
34	AA	2457	C	O4'-C1'-N1	6.68	113.55	108.20
1	A	1403	U	O4'-C1'-N1	6.68	113.55	108.20
68	A5	79	ARG	NE-CZ-NH1	6.68	123.64	120.30
34	AA	1436	A	O4'-C1'-N9	6.68	113.54	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
66	AZ	12	ARG	NE-CZ-NH1	6.68	123.64	120.30
33	L	31	ARG	NE-CZ-NH1	6.68	123.64	120.30
34	AA	3115	C	O4'-C1'-N1	6.68	113.54	108.20
34	AA	521	U	P-O3'-C3'	6.68	127.71	119.70
34	AA	2033	C	O4'-C1'-N1	6.68	113.54	108.20
34	AA	1827	C	O4'-C1'-N1	6.67	113.54	108.20
34	AA	1721	C	O4'-C1'-N1	6.67	113.53	108.20
34	AA	3702	C	O4'-C1'-N1	6.67	113.53	108.20
54	AP	96	ARG	NE-CZ-NH1	6.67	123.63	120.30
18	1	8	ARG	NE-CZ-NH1	6.67	123.63	120.30
70	AE	280	TYR	CB-CG-CD2	-6.67	117.00	121.00
76	Ag	37	ARG	NE-CZ-NH1	6.67	123.63	120.30
34	AA	3536	C	O4'-C1'-N1	6.66	113.53	108.20
34	AA	2631	C	O4'-C1'-N1	6.66	113.53	108.20
1	A	1749	C	O4'-C1'-N1	6.66	113.53	108.20
1	A	1292	U	O4'-C1'-N1	6.66	113.53	108.20
54	AP	31	ARG	NE-CZ-NH1	6.66	123.63	120.30
1	A	949	C	O4'-C1'-N1	6.65	113.52	108.20
1	A	1709	C	O4'-C1'-N1	6.65	113.52	108.20
36	AB	105	C	O4'-C1'-N1	6.65	113.52	108.20
1	A	541	C	O4'-C1'-N1	6.65	113.52	108.20
54	AP	49	ARG	NE-CZ-NH2	-6.65	116.98	120.30
34	AA	2699	C	O4'-C1'-N1	6.65	113.52	108.20
34	AA	3427	U	O4'-C1'-N1	6.64	113.52	108.20
34	AA	438	U	O4'-C1'-N1	6.64	113.51	108.20
34	AA	1430	A	O4'-C1'-N9	6.64	113.51	108.20
34	AA	1481	A	O4'-C1'-N9	6.64	113.51	108.20
35	AC	67	G	P-O3'-C3'	6.64	127.67	119.70
1	A	1263	C	O4'-C1'-N1	6.64	113.51	108.20
34	AA	364	C	O4'-C1'-N1	6.64	113.51	108.20
71	AF	344	ARG	NE-CZ-NH1	6.64	123.62	120.30
1	A	379	G	C5-C6-O6	-6.63	124.62	128.60
34	AA	3411	C	O4'-C1'-N1	6.63	113.51	108.20
35	AC	126	C	O4'-C1'-N1	6.63	113.51	108.20
36	AB	92	C	O4'-C1'-N1	6.63	113.51	108.20
1	A	1381	C	O4'-C1'-N1	6.63	113.50	108.20
34	AA	1539	U	O4'-C1'-N1	6.63	113.50	108.20
35	AC	108	A	N1-C6-N6	-6.63	114.62	118.60
34	AA	685	U	C6-N1-C1'	-6.63	111.92	121.20
1	A	1455	C	O4'-C1'-N1	6.63	113.50	108.20
34	AA	2013	U	O3'-P-O5'	-6.63	91.41	104.00
34	AA	87	U	O4'-C1'-N1	6.62	113.50	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	2027	C	O4'-C1'-N1	6.62	113.50	108.20
1	A	1912	C	O4'-C1'-N1	6.62	113.50	108.20
2	7	1	C	O4'-C1'-N1	6.62	113.50	108.20
27	F	54	TYR	CB-CG-CD1	-6.62	117.03	121.00
34	AA	2488	C	O4'-C1'-N1	6.62	113.50	108.20
74	AH	123	ARG	NE-CZ-NH2	6.62	123.61	120.30
34	AA	1572	U	C6-N1-C1'	-6.62	111.94	121.20
34	AA	2824	A	N1-C6-N6	6.62	122.57	118.60
34	AA	3429	C	O4'-C1'-N1	6.62	113.49	108.20
1	A	989	C	O4'-C1'-N1	6.62	113.49	108.20
1	A	1429	C	O4'-C1'-N1	6.62	113.49	108.20
1	A	1463	C	O4'-C1'-N1	6.62	113.49	108.20
37	AL	103	ARG	NE-CZ-NH1	6.62	123.61	120.30
34	AA	2804	C	O4'-C1'-N1	6.61	113.49	108.20
34	AA	544	C	O4'-C1'-N1	6.61	113.49	108.20
1	A	1791	C	O4'-C1'-N1	6.61	113.49	108.20
34	AA	1139	C	O4'-C1'-N1	6.61	113.49	108.20
34	AA	3344	C	O4'-C1'-N1	6.61	113.49	108.20
1	A	451	A	C5'-C4'-O4'	6.61	117.03	109.10
34	AA	124	U	O4'-C1'-N1	6.61	113.49	108.20
54	AP	16	SER	N-CA-CB	6.61	120.41	110.50
1	A	174	C	O4'-C1'-N1	6.60	113.48	108.20
1	A	354	C	O4'-C1'-N1	6.60	113.48	108.20
1	A	548	A	P-O3'-C3'	-6.60	111.78	119.70
1	A	1787	U	O4'-C1'-N1	6.60	113.48	108.20
34	AA	3290	C	O4'-C1'-N1	6.60	113.48	108.20
34	AA	300	C	O4'-C1'-N1	6.60	113.48	108.20
34	AA	971	U	O4'-C1'-N1	6.59	113.48	108.20
34	AA	3186	U	O4'-C1'-N1	6.59	113.48	108.20
34	AA	365	C	O4'-C1'-N1	6.59	113.47	108.20
34	AA	3177	U	O4'-C1'-N1	6.59	113.47	108.20
49	Aa	66	ARG	NE-CZ-NH1	-6.59	117.00	120.30
1	A	448	C	O4'-C1'-N1	6.59	113.47	108.20
34	AA	38	U	O4'-C1'-N1	6.59	113.47	108.20
54	AP	31	ARG	NE-CZ-NH2	-6.59	117.00	120.30
34	AA	3590	A	P-O3'-C3'	6.59	127.60	119.70
1	A	2087	U	O4'-C1'-N1	6.58	113.47	108.20
34	AA	1038	U	O4'-C1'-N1	6.58	113.46	108.20
34	AA	809	A	P-O3'-C3'	6.58	127.59	119.70
34	AA	3306	G	O4'-C1'-N9	6.58	113.46	108.20
1	A	42	G	O4'-C1'-N9	6.58	113.46	108.20
2	7	39	C	O4'-C1'-N1	6.58	113.46	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	583	U	O4'-C1'-N1	6.58	113.46	108.20
34	AA	3390	U	O4'-C1'-N1	6.58	113.46	108.20
1	A	1713	C	O4'-C1'-N1	6.57	113.46	108.20
34	AA	2489	C	O4'-C1'-N1	6.57	113.46	108.20
61	AQ	181	TYR	CB-CG-CD2	-6.57	117.06	121.00
1	A	588	U	O4'-C1'-N1	6.57	113.46	108.20
1	A	1781	C	O4'-C1'-N1	6.57	113.46	108.20
34	AA	2168	A	N1-C6-N6	-6.57	114.66	118.60
36	AB	72	C	O4'-C1'-N1	6.57	113.46	108.20
47	A8	13	ARG	NE-CZ-NH2	-6.57	117.02	120.30
34	AA	273	C	P-O3'-C3'	-6.57	111.82	119.70
34	AA	1818	C	O4'-C1'-N1	6.57	113.45	108.20
1	A	1788	U	C2-N1-C1'	6.57	125.58	117.70
34	AA	125	C	O4'-C1'-N1	6.57	113.45	108.20
1	A	214	U	O4'-C1'-N1	6.57	113.45	108.20
24	6	33	ARG	NE-CZ-NH2	6.57	123.58	120.30
34	AA	259	G	O4'-C1'-N9	6.57	113.45	108.20
34	AA	3765	C	O4'-C1'-N1	6.57	113.45	108.20
1	A	1375	C	C2-N1-C1'	6.56	126.02	118.80
34	AA	1797	A	O4'-C1'-N9	6.56	113.45	108.20
34	AA	3065	C	O4'-C1'-N1	6.56	113.45	108.20
34	AA	2083	U	P-O3'-C3'	6.56	127.57	119.70
34	AA	505	A	P-O3'-C3'	6.56	127.57	119.70
41	A2	14	ARG	NE-CZ-NH1	6.56	123.58	120.30
1	A	1031	C	O4'-C1'-N1	6.56	113.45	108.20
34	AA	3031	C	O4'-C1'-N1	6.55	113.44	108.20
34	AA	992	C	O4'-C1'-N1	6.55	113.44	108.20
34	AA	66	A	O4'-C1'-N9	6.55	113.44	108.20
12	W	3	ARG	NE-CZ-NH1	6.55	123.58	120.30
34	AA	1751	C	O4'-C1'-N1	6.55	113.44	108.20
1	A	1370	U	C1'-O4'-C4'	-6.55	104.66	109.90
1	A	1930	A	O4'-C1'-N9	6.55	113.44	108.20
71	AF	358	ARG	NE-CZ-NH1	6.55	123.57	120.30
34	AA	334	U	O4'-C1'-N1	6.55	113.44	108.20
34	AA	3201	C	O4'-C1'-N1	6.55	113.44	108.20
1	A	4	C	O4'-C1'-N1	6.54	113.44	108.20
1	A	13	C	O4'-C1'-N1	6.54	113.44	108.20
34	AA	136	U	C6-N1-C1'	-6.54	112.04	121.20
1	A	540	C	O4'-C1'-N1	6.54	113.43	108.20
34	AA	883	C	O4'-C1'-N1	6.54	113.43	108.20
34	AA	2601	C	O4'-C1'-N1	6.54	113.43	108.20
1	A	1645	C	O4'-C1'-N1	6.54	113.43	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	587	C	O4'-C1'-N1	6.54	113.43	108.20
77	AX	105	TYR	CB-CG-CD1	-6.53	117.08	121.00
78	AJ	73	ARG	NE-CZ-NH1	6.53	123.56	120.30
34	AA	277	U	O4'-C1'-N1	6.53	113.42	108.20
57	Ac	14	ARG	NE-CZ-NH2	6.53	123.56	120.30
34	AA	3581	A	O4'-C1'-N9	6.53	113.42	108.20
1	A	594	C	O4'-C1'-N1	6.52	113.42	108.20
2	7	53	G	O4'-C1'-N9	6.52	113.42	108.20
34	AA	3168	C	O4'-C1'-N1	6.52	113.42	108.20
1	A	1804	C	O4'-C1'-N1	6.52	113.42	108.20
34	AA	181	C	O4'-C1'-N1	6.52	113.42	108.20
67	A3	64	ARG	NE-CZ-NH1	6.52	123.56	120.30
35	AC	28	G	O4'-C1'-N9	6.52	113.42	108.20
1	A	1377	U	O4'-C1'-N1	6.52	113.41	108.20
18	1	115	ARG	NE-CZ-NH2	-6.52	117.04	120.30
34	AA	1425	C	O4'-C1'-N1	6.52	113.42	108.20
34	AA	2137	C	O4'-C1'-N1	6.52	113.41	108.20
66	AZ	11	ARG	NE-CZ-NH2	6.52	123.56	120.30
68	A5	154	ARG	NE-CZ-NH1	6.52	123.56	120.30
47	A8	125	ARG	NE-CZ-NH1	6.51	123.56	120.30
1	A	106	A	O4'-C1'-N9	6.51	113.41	108.20
1	A	2064	C	O4'-C1'-N1	6.51	113.41	108.20
21	3	89	ARG	NE-CZ-NH2	-6.51	117.04	120.30
34	AA	674	U	O4'-C1'-N1	6.51	113.41	108.20
1	A	1702	C	C2-N1-C1'	6.51	125.96	118.80
34	AA	2826	C	O4'-C1'-N1	6.51	113.41	108.20
34	AA	691	C	O4'-C1'-N1	6.51	113.41	108.20
9	E	40	ARG	NE-CZ-NH1	6.51	123.55	120.30
1	A	855	C	O4'-C1'-N1	6.50	113.40	108.20
1	A	455	C	O4'-C1'-N1	6.50	113.40	108.20
34	AA	699	U	O4'-C1'-N1	6.50	113.40	108.20
34	AA	3231	A	P-O3'-C3'	-6.50	111.90	119.70
34	AA	714	C	O4'-C1'-N1	6.50	113.40	108.20
34	AA	1200	C	O4'-C1'-N1	6.50	113.40	108.20
34	AA	3419	U	O4'-C1'-N1	6.50	113.40	108.20
1	A	866	A	O4'-C1'-N9	6.50	113.40	108.20
57	Ac	49	ARG	NE-CZ-NH1	6.50	123.55	120.30
1	A	144	U	O4'-C1'-N1	6.50	113.40	108.20
1	A	1222	C	O4'-C1'-N1	6.50	113.40	108.20
1	A	941	C	O4'-C1'-N1	6.49	113.39	108.20
27	F	113	ARG	NE-CZ-NH1	6.49	123.55	120.30
36	AB	39	C	O4'-C1'-N1	6.49	113.39	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1425	C	O4'-C1'-N1	6.49	113.39	108.20
34	AA	501	U	O4'-C1'-N1	6.49	113.39	108.20
34	AA	3460	C	O4'-C1'-N1	6.49	113.39	108.20
34	AA	595	U	O4'-C1'-N1	6.49	113.39	108.20
34	AA	2096	G	O4'-C1'-N9	6.49	113.39	108.20
36	AB	4	C	O4'-C1'-N1	6.49	113.39	108.20
57	Ac	66	ARG	NE-CZ-NH1	6.49	123.55	120.30
34	AA	3526	U	C1'-O4'-C4'	-6.49	104.71	109.90
34	AA	904	G	P-O3'-C3'	6.49	127.48	119.70
62	AR	278	ARG	NE-CZ-NH1	6.48	123.54	120.30
1	A	953	C	O4'-C1'-N1	6.48	113.39	108.20
34	AA	2524	C	O4'-C1'-N1	6.48	113.39	108.20
1	A	1278	C	O4'-C1'-N1	6.48	113.39	108.20
34	AA	129	C	O4'-C1'-N1	6.48	113.38	108.20
1	A	161	U	C2-N1-C1'	6.48	125.47	117.70
34	AA	3730	C	O4'-C1'-N1	6.48	113.38	108.20
35	AC	152	C	O4'-C1'-N1	6.48	113.38	108.20
34	AA	1661	U	O4'-C1'-N1	6.48	113.38	108.20
34	AA	1969	A	O4'-C1'-N9	6.48	113.38	108.20
34	AA	964	G	O4'-C1'-N9	6.47	113.38	108.20
34	AA	1112	C	O4'-C1'-N1	6.47	113.38	108.20
53	Af	41	ARG	NE-CZ-NH1	6.47	123.54	120.30
57	Ac	28	ARG	NE-CZ-NH1	6.47	123.54	120.30
69	AD	190	ARG	NE-CZ-NH1	6.47	123.54	120.30
34	AA	1571	C	O4'-C1'-N1	6.47	113.38	108.20
34	AA	2643	C	O4'-C1'-N1	6.47	113.38	108.20
34	AA	875	C	O4'-C1'-N1	6.47	113.38	108.20
34	AA	987	U	O4'-C1'-N1	6.47	113.38	108.20
34	AA	2148	U	O4'-C1'-N1	6.47	113.38	108.20
34	AA	2695	A	O4'-C1'-N9	6.47	113.38	108.20
34	AA	2938	C	O4'-C1'-N1	6.47	113.38	108.20
34	AA	3676	C	O4'-C1'-N1	6.47	113.38	108.20
57	Ac	48	ARG	NE-CZ-NH1	6.47	123.53	120.30
34	AA	3703	G	O4'-C1'-N9	6.47	113.37	108.20
33	L	12	ARG	NE-CZ-NH2	6.47	123.53	120.30
34	AA	711	C	O4'-C1'-N1	6.47	113.37	108.20
34	AA	1806	C	O4'-C1'-N1	6.47	113.37	108.20
34	AA	2935	U	O4'-C1'-N1	6.47	113.37	108.20
34	AA	126	C	O4'-C1'-N1	6.46	113.37	108.20
35	AC	57	A	O4'-C1'-N9	6.46	113.37	108.20
34	AA	3319	C	O4'-C1'-N1	6.46	113.37	108.20
1	A	814	U	O4'-C1'-N1	6.46	113.37	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	1961	U	O4'-C1'-N1	6.46	113.37	108.20
1	A	1228	C	O4'-C1'-N1	6.46	113.36	108.20
34	AA	1627	C	O4'-C1'-N1	6.45	113.36	108.20
63	AW	82	ARG	NE-CZ-NH1	6.45	123.53	120.30
75	AV	84	ARG	NE-CZ-NH1	-6.45	117.07	120.30
1	A	1409	U	C2-N1-C1'	6.45	125.44	117.70
2	7	42	G	O4'-C1'-N9	6.45	113.36	108.20
34	AA	3058	C	O4'-C1'-N1	6.45	113.36	108.20
1	A	1790	C	O4'-C1'-N1	6.45	113.36	108.20
34	AA	291	A	O4'-C1'-N9	6.45	113.36	108.20
34	AA	999	G	O4'-C1'-N9	6.45	113.36	108.20
1	A	790	U	P-O3'-C3'	6.45	127.44	119.70
28	H	156	TYR	CB-CG-CD2	6.45	124.87	121.00
61	AQ	90	ARG	NE-CZ-NH1	6.45	123.52	120.30
34	AA	3257	G	N1-C6-O6	6.44	123.77	119.90
1	A	1624	U	O4'-C1'-N1	6.44	113.35	108.20
34	AA	1176	C	O4'-C1'-N1	6.44	113.35	108.20
34	AA	1538	U	O4'-C1'-N1	6.44	113.36	108.20
34	AA	1601	A	O4'-C1'-N9	6.44	113.35	108.20
34	AA	3240	C	O4'-C1'-N1	6.44	113.35	108.20
34	AA	3248	C	O4'-C1'-N1	6.44	113.35	108.20
1	A	850	G	O4'-C1'-N9	6.44	113.35	108.20
1	A	909	U	O4'-C1'-N1	6.44	113.35	108.20
1	A	1206	C	O4'-C1'-N1	6.44	113.35	108.20
1	A	3	C	O4'-C1'-N1	6.44	113.35	108.20
34	AA	322	C	O4'-C1'-N1	6.44	113.35	108.20
34	AA	865	G	O4'-C1'-N9	6.44	113.35	108.20
1	A	537	C	O4'-C1'-N1	6.44	113.35	108.20
36	AB	117	C	C6-N1-C2	-6.44	117.72	120.30
1	A	1645	C	C2-N1-C1'	6.43	125.88	118.80
1	A	2071	U	O4'-C1'-N1	6.43	113.35	108.20
34	AA	581	C	O4'-C1'-N1	6.43	113.35	108.20
34	AA	2747	G	O4'-C1'-N9	6.43	113.35	108.20
35	AC	91	A	O4'-C1'-N9	6.43	113.35	108.20
34	AA	388	C	O4'-C1'-N1	6.43	113.35	108.20
34	AA	2615	C	O4'-C1'-N1	6.43	113.35	108.20
1	A	15	U	O4'-C1'-N1	6.43	113.34	108.20
34	AA	1130	U	O4'-C1'-N1	6.43	113.34	108.20
73	AU	145	ARG	NE-CZ-NH1	6.43	123.51	120.30
61	AQ	184	TYR	CB-CG-CD1	-6.43	117.14	121.00
34	AA	888	A	P-O3'-C3'	6.43	127.41	119.70
1	A	1862	C	O4'-C1'-N1	6.42	113.34	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	108	C	O4'-C1'-N1	6.42	113.34	108.20
34	AA	306	C	O4'-C1'-N1	6.42	113.34	108.20
34	AA	796	C	O4'-C1'-N1	6.42	113.34	108.20
34	AA	2508	C	O4'-C1'-N1	6.42	113.34	108.20
71	AF	182	ARG	NE-CZ-NH1	6.42	123.51	120.30
35	AC	86	C	O4'-C1'-N1	6.42	113.33	108.20
34	AA	682	A	O4'-C1'-N9	6.42	113.33	108.20
29	K	28	ARG	NE-CZ-NH1	6.41	123.50	120.30
60	AS	10	ARG	NE-CZ-NH1	6.41	123.50	120.30
62	AR	23	ARG	NE-CZ-NH1	6.41	123.50	120.30
72	AG	32	ARG	NE-CZ-NH1	6.41	123.50	120.30
1	A	553	U	O4'-C1'-N1	6.41	113.32	108.20
34	AA	670	U	O4'-C1'-N1	6.41	113.32	108.20
34	AA	1752	C	O4'-C1'-N1	6.41	113.32	108.20
53	Af	46	ARG	NE-CZ-NH2	6.41	123.50	120.30
34	AA	1493	U	O4'-C1'-N1	6.40	113.32	108.20
34	AA	2886	A	P-O3'-C3'	6.40	127.39	119.70
1	A	1818	A	P-O3'-C3'	6.40	127.38	119.70
34	AA	413	C	O4'-C1'-N1	6.40	113.32	108.20
62	AR	22	ARG	NE-CZ-NH1	6.40	123.50	120.30
1	A	1786	U	O4'-C1'-N1	6.40	113.32	108.20
34	AA	595	U	C5'-C4'-O4'	6.40	116.78	109.10
34	AA	1996	C	O4'-C1'-N1	6.40	113.32	108.20
34	AA	3351	U	O4'-C1'-N1	6.40	113.32	108.20
34	AA	216	C	O4'-C1'-N1	6.40	113.32	108.20
1	A	579	C	O4'-C1'-N1	6.40	113.32	108.20
34	AA	2111	C	O4'-C1'-N1	6.40	113.32	108.20
1	A	399	C	O4'-C1'-N1	6.39	113.32	108.20
1	A	1625	C	O4'-C1'-N1	6.39	113.32	108.20
34	AA	2392	A	O4'-C1'-N9	6.39	113.32	108.20
72	AG	145	ARG	NE-CZ-NH2	6.39	123.50	120.30
1	A	1	A	P-O3'-C3'	6.39	127.37	119.70
34	AA	3624	U	P-O3'-C3'	6.39	127.37	119.70
34	AA	3634	C	O4'-C1'-N1	6.39	113.31	108.20
1	A	1076	C	O4'-C1'-N1	6.39	113.31	108.20
33	L	12	ARG	NE-CZ-NH1	-6.39	117.10	120.30
46	AN	13	TYR	CB-CG-CD2	6.39	124.83	121.00
36	AB	93	G	N1-C6-O6	6.39	123.73	119.90
1	A	1745	U	O4'-C1'-N1	6.38	113.31	108.20
1	A	1889	G	O4'-C1'-N9	6.38	113.31	108.20
1	A	1444	C	O4'-C1'-N1	6.38	113.31	108.20
34	AA	639	C	O4'-C1'-N1	6.38	113.31	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	2444	C	O4'-C1'-N1	6.38	113.31	108.20
34	AA	3697	G	O4'-C1'-N9	6.38	113.30	108.20
1	A	1029	U	O4'-C1'-N1	6.38	113.30	108.20
7	U	58	TYR	CB-CG-CD2	-6.38	117.17	121.00
34	AA	1825	C	O4'-C1'-N1	6.38	113.30	108.20
34	AA	1887	G	O4'-C1'-N9	6.38	113.30	108.20
73	AU	155	ARG	NE-CZ-NH1	6.38	123.49	120.30
33	L	217	ARG	NE-CZ-NH2	6.38	123.49	120.30
1	A	546	G	O4'-C1'-N9	6.37	113.30	108.20
34	AA	3284	C	O4'-C1'-N1	6.37	113.30	108.20
62	AR	108	ARG	NE-CZ-NH2	-6.37	117.11	120.30
1	A	2053	U	O4'-C1'-N1	6.37	113.29	108.20
2	7	25	C	O4'-C1'-N1	6.37	113.29	108.20
34	AA	1534	U	P-O3'-C3'	6.37	127.34	119.70
67	A3	83	ARG	NE-CZ-NH1	6.37	123.48	120.30
1	A	1735	U	O4'-C1'-N1	6.37	113.29	108.20
1	A	1916	C	O4'-C1'-N1	6.37	113.29	108.20
34	AA	29	C	O4'-C1'-N1	6.37	113.29	108.20
34	AA	3286	C	O4'-C1'-N1	6.37	113.29	108.20
34	AA	3598	C	O4'-C1'-N1	6.37	113.29	108.20
1	A	603	C	O4'-C1'-N1	6.36	113.29	108.20
34	AA	3169	C	O4'-C1'-N1	6.36	113.29	108.20
1	A	1392	C	O4'-C1'-N1	6.36	113.29	108.20
34	AA	260	G	O4'-C1'-N9	6.36	113.29	108.20
1	A	32	U	O4'-C1'-N1	6.36	113.29	108.20
34	AA	1896	C	O4'-C1'-N1	6.36	113.29	108.20
34	AA	3405	U	O4'-C1'-N1	6.36	113.28	108.20
35	AC	125	U	O4'-C1'-N1	6.36	113.29	108.20
61	AQ	154	ARG	NE-CZ-NH1	6.36	123.48	120.30
34	AA	3029	G	O4'-C1'-N9	6.36	113.28	108.20
1	A	1106	C	O4'-C1'-N1	6.35	113.28	108.20
1	A	1313	G	O4'-C1'-N9	6.35	113.28	108.20
2	7	71	C	O4'-C1'-N1	6.35	113.28	108.20
34	AA	1290	C	O4'-C1'-N1	6.35	113.28	108.20
34	AA	3125	U	O4'-C1'-N1	6.35	113.28	108.20
34	AA	1299	G	O4'-C1'-N9	6.35	113.28	108.20
34	AA	3216	C	O4'-C1'-N1	6.35	113.28	108.20
34	AA	1172	C	O4'-C1'-N1	6.35	113.28	108.20
2	7	3	C	O4'-C1'-N1	6.34	113.28	108.20
34	AA	858	C	O4'-C1'-N1	6.34	113.28	108.20
34	AA	2737	C	O4'-C1'-N1	6.34	113.27	108.20
34	AA	3479	U	O4'-C1'-N1	6.34	113.27	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	1246	C	O4'-C1'-N1	6.34	113.27	108.20
34	AA	1728	C	O4'-C1'-N1	6.34	113.27	108.20
1	A	1937	C	O4'-C1'-N1	6.34	113.27	108.20
34	AA	2041	U	P-O5'-C5'	6.33	131.03	120.90
1	A	1821	A	O4'-C1'-N9	6.33	113.27	108.20
34	AA	200	A	N1-C6-N6	6.33	122.40	118.60
34	AA	3783	G	O4'-C1'-N9	6.33	113.27	108.20
36	AB	91	C	O4'-C1'-N1	6.33	113.27	108.20
21	3	62	PHE	CB-CG-CD1	-6.33	116.37	120.80
34	AA	493	C	O4'-C1'-N1	6.33	113.26	108.20
34	AA	1550	A	O4'-C1'-N9	6.33	113.26	108.20
35	AC	121	C	O4'-C1'-N1	6.33	113.26	108.20
1	A	130	U	O4'-C1'-N1	6.33	113.26	108.20
1	A	1209	G	N1-C6-O6	6.33	123.70	119.90
1	A	1701	G	P-O3'-C3'	-6.33	112.11	119.70
34	AA	23	C	O4'-C1'-N1	6.33	113.26	108.20
34	AA	3144	C	O4'-C1'-N1	6.33	113.26	108.20
58	AK	73	ARG	NE-CZ-NH1	6.33	123.46	120.30
4	S	57	ARG	NE-CZ-NH1	6.32	123.46	120.30
34	AA	2652	C	O4'-C1'-N1	6.32	113.26	108.20
37	AL	42	ARG	NE-CZ-NH1	6.32	123.46	120.30
6	M	136	ARG	NE-CZ-NH1	6.32	123.46	120.30
34	AA	3382	U	O4'-C1'-N1	6.32	113.26	108.20
20	C	201	PHE	CB-CG-CD1	-6.32	116.38	120.80
35	AC	94	C	O4'-C1'-N1	6.32	113.26	108.20
54	AP	26	ARG	NE-CZ-NH1	6.32	123.46	120.30
34	AA	1020	C	O4'-C1'-N1	6.32	113.25	108.20
1	A	585	U	O4'-C1'-N1	6.32	113.25	108.20
34	AA	907	C	O4'-C1'-N1	6.32	113.25	108.20
41	A2	14	ARG	NE-CZ-NH2	-6.32	117.14	120.30
1	A	1726	U	O4'-C1'-N1	6.31	113.25	108.20
8	V	72	ARG	NE-CZ-NH1	6.31	123.46	120.30
42	A4	14	ARG	NE-CZ-NH1	6.31	123.46	120.30
11	G	186	ARG	NE-CZ-NH2	-6.31	117.14	120.30
59	AM	50	ARG	NE-CZ-NH1	6.31	123.46	120.30
34	AA	733	C	O4'-C1'-N1	6.31	113.25	108.20
36	AB	116	U	O4'-C1'-N1	6.31	113.25	108.20
2	7	13	C	O4'-C1'-N1	6.30	113.24	108.20
34	AA	1095	U	O4'-C1'-N1	6.30	113.24	108.20
34	AA	2089	C	O4'-C1'-N1	6.30	113.24	108.20
34	AA	2562	U	O4'-C1'-N1	6.30	113.24	108.20
1	A	1310	C	O4'-C1'-N1	6.30	113.24	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	H	186	ARG	NE-CZ-NH1	6.30	123.45	120.30
34	AA	944	U	O4'-C1'-N1	6.30	113.24	108.20
34	AA	3181	U	O4'-C1'-N1	6.30	113.24	108.20
35	AC	111	U	O4'-C1'-N1	6.30	113.24	108.20
39	AO	67	ARG	NE-CZ-NH2	-6.30	117.15	120.30
34	AA	86	G	O4'-C1'-N9	6.30	113.24	108.20
1	A	1044	C	O4'-C1'-N1	6.30	113.24	108.20
3	Q	107	PHE	CB-CG-CD1	6.30	125.21	120.80
34	AA	1847	C	O4'-C1'-N1	6.30	113.24	108.20
34	AA	2816	U	O4'-C1'-N1	6.29	113.23	108.20
5	T	17	ARG	NE-CZ-NH2	-6.29	117.15	120.30
34	AA	210	C	O4'-C1'-N1	6.29	113.23	108.20
36	AB	104	C	O4'-C1'-N1	6.29	113.23	108.20
34	AA	3408	G	O4'-C1'-N9	6.29	113.23	108.20
70	AE	156	ARG	NE-CZ-NH1	6.29	123.44	120.30
1	A	1708	G	O4'-C1'-N9	6.29	113.23	108.20
34	AA	272	U	O4'-C1'-N1	6.29	113.23	108.20
34	AA	817	U	O4'-C1'-N1	6.29	113.23	108.20
34	AA	3116	A	O4'-C1'-N9	6.29	113.23	108.20
1	A	178	A	O4'-C1'-N9	6.28	113.23	108.20
34	AA	681	U	C5'-C4'-C3'	-6.28	105.95	116.00
34	AA	1256	U	O4'-C1'-N1	6.28	113.23	108.20
34	AA	2590	U	C2-N1-C1'	6.28	125.24	117.70
2	7	55	U	O4'-C1'-N1	6.28	113.22	108.20
34	AA	1126	U	O4'-C1'-N1	6.28	113.22	108.20
34	AA	3329	C	O4'-C1'-N1	6.28	113.22	108.20
34	AA	3695	C	O4'-C1'-N1	6.28	113.22	108.20
1	A	1963	U	O4'-C1'-N1	6.28	113.22	108.20
1	A	356	A	O4'-C1'-N9	6.28	113.22	108.20
2	7	31	G	O4'-C4'-C3'	-6.28	97.72	104.00
1	A	2019	C	O4'-C1'-N1	6.28	113.22	108.20
2	7	4	G	N1-C6-O6	6.28	123.67	119.90
34	AA	3238	C	O4'-C1'-N1	6.28	113.22	108.20
60	AS	92	PHE	CB-CG-CD1	6.27	125.19	120.80
72	AG	144	ARG	NE-CZ-NH1	6.27	123.44	120.30
1	A	388	C	O4'-C1'-N1	6.27	113.22	108.20
35	AC	149	C	O4'-C1'-N1	6.27	113.22	108.20
21	3	62	PHE	CB-CG-CD2	6.27	125.19	120.80
36	AB	28	C	O4'-C1'-N1	6.27	113.22	108.20
7	U	127	ARG	NE-CZ-NH1	6.27	123.43	120.30
33	L	210	ARG	NE-CZ-NH2	6.27	123.43	120.30
34	AA	3086	A	O4'-C1'-N9	6.27	113.21	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	AB	52	U	O4'-C1'-N1	6.27	113.21	108.20
27	F	54	TYR	CB-CG-CD2	6.26	124.76	121.00
34	AA	548	U	O4'-C1'-N1	6.26	113.21	108.20
34	AA	2099	C	O4'-C1'-N1	6.26	113.21	108.20
23	5	49	ARG	NE-CZ-NH1	6.26	123.43	120.30
1	A	1231	G	C5-C6-O6	-6.26	124.84	128.60
34	AA	996	C	O4'-C1'-N1	6.26	113.21	108.20
34	AA	2530	C	O4'-C1'-N1	6.26	113.21	108.20
34	AA	1560	U	O4'-C1'-N1	6.26	113.21	108.20
2	7	32	C	O4'-C1'-N1	6.26	113.20	108.20
1	A	1949	C	O4'-C1'-N1	6.25	113.20	108.20
34	AA	706	U	O4'-C1'-N1	6.25	113.20	108.20
60	AS	58	TYR	CB-CG-CD2	6.25	124.75	121.00
62	AR	108	ARG	NE-CZ-NH1	6.25	123.43	120.30
36	AB	117	C	O4'-C1'-N1	6.25	113.20	108.20
34	AA	720	U	O4'-C1'-N1	6.25	113.20	108.20
34	AA	3047	U	O4'-C1'-N1	6.25	113.20	108.20
54	AP	24	ARG	NE-CZ-NH2	6.25	123.43	120.30
1	A	268	C	O4'-C1'-N1	6.25	113.20	108.20
34	AA	3133	U	O4'-C1'-N1	6.25	113.20	108.20
65	AT	116	ARG	NE-CZ-NH1	6.24	123.42	120.30
34	AA	1692	C	O4'-C1'-N1	6.24	113.19	108.20
34	AA	354	C	O4'-C1'-N1	6.24	113.19	108.20
34	AA	3399	U	O4'-C1'-N1	6.24	113.19	108.20
35	AC	84	G	O4'-C1'-N9	6.24	113.19	108.20
34	AA	1971	U	O4'-C1'-N1	6.24	113.19	108.20
34	AA	3280	U	O4'-C1'-N1	6.24	113.19	108.20
34	AA	3527	U	O4'-C1'-N1	6.24	113.19	108.20
34	AA	594	C	O4'-C1'-N1	6.24	113.19	108.20
61	AQ	184	TYR	CB-CG-CD2	6.24	124.74	121.00
34	AA	705	C	O4'-C1'-N1	6.23	113.19	108.20
34	AA	2727	U	C6-N1-C1'	-6.23	112.47	121.20
1	A	430	C	O4'-C1'-N1	6.23	113.19	108.20
2	7	31	G	C4'-C3'-C2'	6.23	108.83	102.60
67	A3	91	ARG	NE-CZ-NH1	6.23	123.42	120.30
34	AA	1058	U	O4'-C1'-N1	6.23	113.18	108.20
1	A	1201	G	O4'-C1'-N9	6.23	113.18	108.20
52	Ae	21	ARG	NE-CZ-NH1	6.23	123.41	120.30
73	AU	49	ARG	NE-CZ-NH1	6.23	123.41	120.30
34	AA	3111	U	O4'-C1'-N1	6.22	113.18	108.20
36	AB	44	C	O4'-C1'-N1	6.22	113.18	108.20
34	AA	361	G	C5-C6-O6	-6.22	124.87	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	1157	U	O4'-C1'-N1	6.22	113.18	108.20
34	AA	3517	C	O4'-C1'-N1	6.22	113.17	108.20
1	A	1921	C	O4'-C1'-N1	6.22	113.17	108.20
2	7	40	C	O4'-C1'-N1	6.22	113.17	108.20
1	A	1390	U	O4'-C1'-N1	6.22	113.17	108.20
26	D	125	ARG	NE-CZ-NH1	6.22	123.41	120.30
34	AA	1567	A	O4'-C1'-N9	6.22	113.17	108.20
1	A	92	C	O4'-C1'-N1	6.21	113.17	108.20
34	AA	1561	C	O4'-C1'-N1	6.21	113.17	108.20
1	A	1922	C	O4'-C1'-N1	6.21	113.17	108.20
34	AA	2992	C	O4'-C1'-N1	6.21	113.17	108.20
1	A	1418	C	O4'-C1'-N1	6.21	113.17	108.20
34	AA	2541	C	P-O3'-C3'	6.21	127.14	119.70
34	AA	1556	G	C5-C6-O6	-6.20	124.88	128.60
34	AA	2092	G	C5-C6-O6	-6.20	124.88	128.60
1	A	375	U	O4'-C1'-N1	6.20	113.16	108.20
34	AA	3784	U	O4'-C1'-N1	6.20	113.16	108.20
65	AT	87	ARG	NE-CZ-NH1	6.20	123.40	120.30
1	A	1442	U	C5'-C4'-C3'	-6.20	106.08	116.00
1	A	1102	C	O4'-C1'-N1	6.20	113.16	108.20
1	A	1797	C	O4'-C1'-N1	6.20	113.16	108.20
36	AB	15	U	O4'-C1'-N1	6.20	113.16	108.20
1	A	33	U	O4'-C1'-N1	6.19	113.16	108.20
1	A	355	U	O4'-C1'-N1	6.19	113.15	108.20
34	AA	861	C	O4'-C1'-N1	6.19	113.15	108.20
1	A	1166	C	O4'-C1'-N1	6.19	113.15	108.20
21	3	38	ARG	NE-CZ-NH1	6.19	123.39	120.30
48	A9	81	ARG	NE-CZ-NH1	6.19	123.39	120.30
1	A	490	C	O4'-C1'-N1	6.19	113.15	108.20
34	AA	1284	C	O4'-C1'-N1	6.19	113.15	108.20
34	AA	1957	U	O4'-C1'-N1	6.19	113.15	108.20
55	Ah	23	ARG	NE-CZ-NH1	6.19	123.39	120.30
34	AA	59	G	C5-C6-O6	-6.19	124.89	128.60
34	AA	175	G	O4'-C1'-N9	6.19	113.15	108.20
34	AA	362	U	O4'-C1'-N1	6.19	113.15	108.20
34	AA	1466	C	O4'-C1'-N1	6.19	113.15	108.20
34	AA	1689	U	O4'-C1'-N1	6.19	113.15	108.20
1	A	344	C	O4'-C1'-N1	6.19	113.15	108.20
34	AA	2462	C	O4'-C1'-N1	6.19	113.15	108.20
1	A	1980	A	P-O3'-C3'	6.18	127.12	119.70
34	AA	3067	G	C5'-C4'-O4'	6.18	116.52	109.10
1	A	401	U	O4'-C1'-N1	6.18	113.15	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	3213	U	O4'-C1'-N1	6.18	113.15	108.20
34	AA	3362	A	O4'-C1'-N9	6.18	113.15	108.20
34	AA	3468	G	C5-C6-O6	-6.18	124.89	128.60
34	AA	3480	C	O4'-C1'-N1	6.18	113.15	108.20
27	F	108	ARG	NE-CZ-NH2	-6.18	117.21	120.30
1	A	1025	U	O4'-C1'-N1	6.18	113.14	108.20
34	AA	350	A	O4'-C1'-N9	6.18	113.14	108.20
34	AA	2071	U	O4'-C1'-N1	6.18	113.14	108.20
34	AA	78	U	O4'-C1'-N1	6.17	113.14	108.20
34	AA	3391	G	O4'-C1'-N9	6.17	113.14	108.20
1	A	54	C	O4'-C1'-N1	6.17	113.14	108.20
34	AA	2548	A	P-O3'-C3'	6.17	127.11	119.70
1	A	1677	C	O4'-C1'-N1	6.17	113.14	108.20
34	AA	1798	A	O4'-C1'-N9	6.17	113.14	108.20
34	AA	610	U	O4'-C1'-N1	6.17	113.14	108.20
34	AA	2827	C	O4'-C1'-N1	6.17	113.14	108.20
34	AA	3023	C	O4'-C1'-N1	6.17	113.13	108.20
34	AA	3056	U	O4'-C1'-N1	6.17	113.14	108.20
71	AF	182	ARG	NE-CZ-NH2	-6.17	117.22	120.30
34	AA	1657	U	O4'-C1'-N1	6.16	113.13	108.20
50	Ab	26	ARG	NE-CZ-NH2	6.16	123.38	120.30
34	AA	1265	C	O4'-C1'-N1	6.16	113.13	108.20
34	AA	2083	U	O4'-C1'-N1	6.16	113.13	108.20
34	AA	2560	C	O4'-C1'-N1	6.16	113.13	108.20
34	AA	3025	U	O4'-C1'-N1	6.16	113.13	108.20
34	AA	3220	U	O4'-C1'-N1	6.16	113.13	108.20
1	A	2004	U	O4'-C1'-N1	6.16	113.13	108.20
34	AA	1646	C	O4'-C1'-N1	6.16	113.13	108.20
1	A	597	C	O4'-C1'-N1	6.16	113.13	108.20
34	AA	970	C	O4'-C1'-N1	6.16	113.12	108.20
34	AA	3167	A	O4'-C1'-N9	6.16	113.13	108.20
1	A	1843	G	O4'-C1'-N9	6.16	113.12	108.20
3	Q	107	PHE	CB-CG-CD2	-6.16	116.49	120.80
34	AA	3275	C	O4'-C1'-N1	6.16	113.12	108.20
40	Ai	41	ARG	NE-CZ-NH1	6.16	123.38	120.30
34	AA	348	C	O4'-C1'-N1	6.15	113.12	108.20
34	AA	2951	U	O4'-C1'-N1	6.15	113.12	108.20
70	AE	280	TYR	CB-CG-CD1	6.15	124.69	121.00
71	AF	140	ARG	NE-CZ-NH1	6.15	123.38	120.30
34	AA	2997	G	N1-C6-O6	6.15	123.59	119.90
2	7	65	C	O4'-C1'-N1	6.14	113.12	108.20
34	AA	3640	C	O4'-C1'-N1	6.14	113.12	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	AC	51	C	O4'-C1'-N1	6.14	113.11	108.20
44	A7	33	TYR	CB-CG-CD1	6.14	124.69	121.00
34	AA	899	A	C1'-O4'-C4'	-6.14	104.98	109.90
34	AA	3357	U	O4'-C1'-N1	6.14	113.11	108.20
34	AA	3419	U	C1'-O4'-C4'	-6.14	104.99	109.90
34	AA	2621	U	O4'-C1'-N1	6.14	113.11	108.20
34	AA	2985	C	O4'-C1'-N1	6.14	113.11	108.20
34	AA	3546	C	O4'-C1'-N1	6.14	113.11	108.20
36	AB	94	C	O4'-C1'-N1	6.14	113.11	108.20
26	D	147	ARG	NE-CZ-NH1	6.14	123.37	120.30
34	AA	1100	A	O4'-C1'-N9	6.14	113.11	108.20
34	AA	1978	U	O4'-C1'-N1	6.14	113.11	108.20
34	AA	2884	G	O4'-C1'-N9	6.14	113.11	108.20
34	AA	3343	C	O4'-C1'-N1	6.14	113.11	108.20
65	AT	73	ARG	NE-CZ-NH1	6.14	123.37	120.30
1	A	1275	U	O4'-C1'-N1	6.13	113.11	108.20
1	A	323	C	O4'-C1'-N1	6.13	113.11	108.20
34	AA	976	G	O4'-C1'-N9	6.13	113.11	108.20
34	AA	1462	C	O4'-C1'-N1	6.13	113.11	108.20
63	AW	34	ARG	NE-CZ-NH1	6.13	123.37	120.30
34	AA	761	U	O4'-C1'-N1	6.13	113.10	108.20
1	A	1178	C	O4'-C1'-N1	6.13	113.10	108.20
1	A	2079	C	O4'-C1'-N1	6.13	113.10	108.20
34	AA	1807	C	O4'-C1'-N1	6.13	113.10	108.20
1	A	1893	C	O4'-C1'-N1	6.12	113.10	108.20
34	AA	3003	C	O4'-C1'-N1	6.12	113.10	108.20
25	B	165	ARG	NE-CZ-NH1	6.12	123.36	120.30
34	AA	934	G	N1-C6-O6	6.12	123.57	119.90
34	AA	2202	G	O4'-C1'-N9	6.12	113.09	108.20
63	AW	61	ARG	NE-CZ-NH2	-6.12	117.24	120.30
35	AC	96	U	O4'-C1'-N1	6.12	113.09	108.20
1	A	576	C	O4'-C1'-N1	6.11	113.09	108.20
1	A	1103	C	O4'-C1'-N1	6.11	113.09	108.20
25	B	107	ARG	NE-CZ-NH2	-6.11	117.24	120.30
34	AA	3208	C	O4'-C1'-N1	6.11	113.09	108.20
53	Af	46	ARG	NE-CZ-NH1	-6.11	117.24	120.30
61	AQ	69	ARG	NE-CZ-NH1	6.11	123.36	120.30
34	AA	117	C	O4'-C1'-N1	6.11	113.09	108.20
34	AA	1102	U	O4'-C1'-N1	6.11	113.09	108.20
34	AA	832	U	O4'-C1'-N1	6.11	113.09	108.20
34	AA	2720	C	O4'-C1'-N1	6.11	113.09	108.20
60	AS	92	PHE	CB-CG-CD2	-6.11	116.52	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	136	U	O4'-C1'-N1	6.11	113.09	108.20
34	AA	2414	G	O4'-C1'-N9	6.11	113.09	108.20
1	A	1365	G	O4'-C1'-N9	6.11	113.08	108.20
2	7	45	G	O4'-C1'-N9	6.11	113.08	108.20
4	S	89	ARG	NE-CZ-NH2	6.10	123.35	120.30
1	A	1109	G	P-O5'-C5'	6.10	130.66	120.90
1	A	1198	U	C2-N1-C1'	6.10	125.02	117.70
34	AA	312	A	P-O3'-C3'	-6.10	112.38	119.70
28	H	98	ARG	NE-CZ-NH1	6.10	123.35	120.30
1	A	1845	U	O4'-C1'-N1	6.10	113.08	108.20
34	AA	1538	U	C1'-O4'-C4'	-6.10	105.02	109.90
34	AA	3531	C	O4'-C1'-N1	6.09	113.08	108.20
47	A8	43	ARG	NE-CZ-NH1	6.09	123.35	120.30
48	A9	106	ARG	NE-CZ-NH1	6.09	123.35	120.30
33	L	77	ARG	NE-CZ-NH2	-6.09	117.25	120.30
34	AA	75	U	O4'-C1'-N1	6.09	113.07	108.20
34	AA	1849	U	O4'-C1'-N1	6.09	113.07	108.20
34	AA	2813	U	O4'-C1'-N1	6.09	113.07	108.20
1	A	349	C	O4'-C1'-N1	6.09	113.07	108.20
1	A	582	C	O4'-C1'-N1	6.09	113.07	108.20
34	AA	1898	U	O4'-C1'-N1	6.09	113.07	108.20
34	AA	1968	C	O4'-C1'-N1	6.09	113.07	108.20
34	AA	934	G	C5-C6-O6	-6.09	124.95	128.60
1	A	1900	U	O4'-C1'-N1	6.08	113.07	108.20
15	O	77	PHE	CB-CG-CD2	6.08	125.06	120.80
16	Y	15	ARG	NE-CZ-NH2	6.08	123.34	120.30
34	AA	256	A	O4'-C1'-N9	6.08	113.07	108.20
34	AA	3205	U	O4'-C1'-N1	6.08	113.07	108.20
34	AA	3705	C	O4'-C1'-N1	6.08	113.07	108.20
61	AQ	38	ARG	NE-CZ-NH1	6.08	123.34	120.30
1	A	1006	C	O4'-C1'-N1	6.08	113.07	108.20
5	T	17	ARG	NE-CZ-NH1	6.08	123.34	120.30
34	AA	648	U	O4'-C1'-N1	6.08	113.06	108.20
52	Ae	46	ARG	NE-CZ-NH2	6.08	123.34	120.30
16	Y	86	ARG	NE-CZ-NH1	6.08	123.34	120.30
1	A	1932	A	P-O3'-C3'	-6.08	112.41	119.70
34	AA	381	A	P-O3'-C3'	6.08	126.99	119.70
34	AA	2639	C	O4'-C1'-N1	6.08	113.06	108.20
34	AA	2463	U	O4'-C1'-N1	6.08	113.06	108.20
1	A	1605	C	O4'-C1'-N1	6.07	113.06	108.20
1	A	310	U	O4'-C1'-N1	6.07	113.06	108.20
1	A	1795	G	O4'-C1'-N9	6.07	113.06	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	7	62	C	C6-N1-C2	-6.07	117.87	120.30
70	AE	26	ARG	NE-CZ-NH1	6.07	123.34	120.30
34	AA	2205	U	O4'-C1'-N1	6.07	113.05	108.20
34	AA	1910	C	O4'-C1'-N1	6.07	113.05	108.20
34	AA	2586	C	O4'-C1'-N1	6.07	113.05	108.20
34	AA	2593	G	O4'-C1'-N9	6.07	113.05	108.20
59	AM	50	ARG	NE-CZ-NH2	-6.07	117.27	120.30
68	A5	173	ARG	NE-CZ-NH2	6.07	123.33	120.30
4	S	123	ARG	NE-CZ-NH2	6.06	123.33	120.30
1	A	994	G	C5-C6-O6	-6.06	124.96	128.60
1	A	1260	C	O4'-C1'-N1	6.06	113.05	108.20
34	AA	2080	C	O4'-C1'-N1	6.06	113.05	108.20
34	AA	127	U	O4'-C1'-N1	6.06	113.05	108.20
34	AA	514	C	O4'-C1'-N1	6.06	113.05	108.20
34	AA	3171	C	O4'-C1'-N1	6.06	113.05	108.20
51	Ad	44	ARG	NE-CZ-NH2	6.06	123.33	120.30
4	S	89	ARG	NE-CZ-NH1	-6.06	117.27	120.30
38	A0	57	ARG	NE-CZ-NH1	6.06	123.33	120.30
6	M	112	ARG	NE-CZ-NH1	6.06	123.33	120.30
23	5	61	ARG	NE-CZ-NH2	6.06	123.33	120.30
1	A	940	G	O4'-C1'-N9	6.06	113.05	108.20
29	K	3	ARG	NE-CZ-NH2	6.05	123.33	120.30
34	AA	740	U	O4'-C1'-N1	6.05	113.04	108.20
1	A	393	A	O4'-C1'-N9	6.05	113.04	108.20
16	Y	85	ARG	NE-CZ-NH1	6.05	123.33	120.30
34	AA	239	U	C2-N1-C1'	6.05	124.96	117.70
34	AA	1498	U	O4'-C1'-N1	6.05	113.04	108.20
34	AA	1750	U	P-O3'-C3'	6.05	126.96	119.70
13	R	68	TYR	CB-CG-CD2	6.05	124.63	121.00
34	AA	1049	C	O4'-C1'-N1	6.05	113.04	108.20
34	AA	1723	C	O4'-C1'-N1	6.05	113.04	108.20
20	C	190	ARG	NE-CZ-NH2	6.05	123.32	120.30
34	AA	3500	G	O4'-C1'-N9	6.05	113.04	108.20
34	AA	21	G	O4'-C1'-N9	6.04	113.04	108.20
34	AA	899	A	O4'-C1'-N9	6.04	113.03	108.20
1	A	916	G	O4'-C1'-N9	6.04	113.03	108.20
34	AA	1551	C	O4'-C1'-N1	6.04	113.03	108.20
35	AC	6	C	O4'-C1'-N1	6.04	113.03	108.20
56	AI	211	ARG	NE-CZ-NH1	-6.04	117.28	120.30
70	AE	345	ARG	NE-CZ-NH1	6.04	123.32	120.30
1	A	478	G	C5-C6-O6	-6.04	124.98	128.60
34	AA	73	U	O4'-C1'-N1	6.04	113.03	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	685	U	P-O3'-C3'	6.04	126.94	119.70
34	AA	2105	A	P-O3'-C3'	6.04	126.95	119.70
1	A	861	C	O4'-C1'-N1	6.04	113.03	108.20
34	AA	2139	C	O4'-C1'-N1	6.04	113.03	108.20
1	A	633	U	O4'-C1'-N1	6.04	113.03	108.20
34	AA	2186	C	O4'-C1'-N1	6.03	113.03	108.20
34	AA	3504	C	O4'-C1'-N1	6.03	113.03	108.20
34	AA	1426	C	O4'-C1'-N1	6.03	113.03	108.20
2	7	68	C	O4'-C1'-N1	6.03	113.03	108.20
34	AA	652	A	P-O3'-C3'	6.03	126.94	119.70
34	AA	710	C	O4'-C1'-N1	6.03	113.02	108.20
34	AA	1304	C	O4'-C1'-N1	6.03	113.03	108.20
34	AA	3716	C	O4'-C1'-N1	6.03	113.02	108.20
1	A	145	A	O4'-C1'-N9	6.03	113.02	108.20
34	AA	1861	C	O4'-C1'-N1	6.03	113.02	108.20
34	AA	2690	A	O4'-C1'-N9	6.03	113.02	108.20
34	AA	686	U	O4'-C1'-N1	6.02	113.02	108.20
36	AB	28	C	C5'-C4'-C3'	6.02	125.64	116.00
34	AA	1009	C	O4'-C1'-N1	6.02	113.02	108.20
35	AC	25	C	O4'-C1'-N1	6.02	113.02	108.20
1	A	1905	C	O4'-C1'-N1	6.02	113.01	108.20
34	AA	921	C	O4'-C1'-N1	6.02	113.01	108.20
70	AE	331	ARG	NE-CZ-NH2	-6.02	117.29	120.30
32	P	149	ARG	NE-CZ-NH2	6.01	123.31	120.30
34	AA	2456	C	O4'-C1'-N1	6.01	113.01	108.20
36	AB	7	G	O4'-C1'-N9	6.01	113.01	108.20
1	A	1170	C	O4'-C1'-N1	6.01	113.01	108.20
70	AE	272	ARG	NE-CZ-NH1	-6.01	117.30	120.30
34	AA	317	U	P-O5'-C5'	6.01	130.51	120.90
34	AA	1448	C	O4'-C1'-N1	6.01	113.01	108.20
1	A	1935	G	O4'-C1'-N9	6.01	113.00	108.20
34	AA	715	U	O4'-C1'-N1	6.01	113.00	108.20
34	AA	1214	C	O4'-C1'-N1	6.00	113.00	108.20
27	F	161	ARG	NE-CZ-NH1	6.00	123.30	120.30
34	AA	3409	U	O4'-C1'-N1	6.00	113.00	108.20
67	A3	113	PHE	CB-CG-CD1	-6.00	116.60	120.80
34	AA	1779	A	O4'-C1'-N9	6.00	113.00	108.20
34	AA	2110	C	O4'-C1'-N1	6.00	113.00	108.20
34	AA	3610	C	O4'-C1'-N1	6.00	113.00	108.20
36	AB	6	C	O4'-C1'-N1	6.00	113.00	108.20
78	AJ	73	ARG	NE-CZ-NH2	-6.00	117.30	120.30
1	A	876	U	O4'-C1'-N1	6.00	113.00	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	C	201	PHE	CB-CG-CD2	6.00	125.00	120.80
34	AA	676	U	O4'-C1'-N1	6.00	113.00	108.20
34	AA	2070	U	P-O5'-C5'	6.00	130.50	120.90
34	AA	3442	C	O4'-C1'-N1	6.00	113.00	108.20
1	A	1669	C	O4'-C1'-N1	6.00	113.00	108.20
34	AA	1238	C	O4'-C1'-N1	6.00	113.00	108.20
34	AA	2557	U	O4'-C1'-N1	6.00	113.00	108.20
60	AS	38	ARG	NE-CZ-NH1	6.00	123.30	120.30
8	V	132	ARG	NE-CZ-NH1	5.99	123.30	120.30
34	AA	1308	A	O4'-C1'-N9	5.99	113.00	108.20
66	AZ	26	ARG	NE-CZ-NH2	-5.99	117.30	120.30
34	AA	79	U	O4'-C1'-N1	5.99	112.99	108.20
36	AB	14	C	O4'-C1'-N1	5.99	112.99	108.20
70	AE	19	ARG	NE-CZ-NH1	5.99	123.30	120.30
1	A	428	G	O4'-C1'-N9	5.99	112.99	108.20
34	AA	1497	U	P-O3'-C3'	5.99	126.89	119.70
66	AZ	15	ARG	NE-CZ-NH1	5.99	123.30	120.30
1	A	514	U	O4'-C1'-N1	5.99	112.99	108.20
1	A	1714	U	O4'-C1'-N1	5.99	112.99	108.20
34	AA	240	U	O4'-C1'-N1	5.99	112.99	108.20
34	AA	298	C	O4'-C1'-N1	5.99	112.99	108.20
34	AA	3184	C	O4'-C1'-N1	5.99	112.99	108.20
34	AA	1586	C	C6-N1-C2	-5.99	117.91	120.30
34	AA	1313	C	O4'-C1'-N1	5.99	112.99	108.20
34	AA	3777	G	O4'-C1'-N9	5.99	112.99	108.20
1	A	2062	U	O4'-C1'-N1	5.98	112.99	108.20
1	A	44	U	C5'-C4'-O4'	5.98	116.28	109.10
34	AA	180	C	O4'-C1'-N1	5.98	112.98	108.20
1	A	1642	U	O4'-C1'-N1	5.98	112.98	108.20
34	AA	1750	U	O4'-C1'-N1	5.98	112.98	108.20
34	AA	2069	C	O4'-C1'-N1	5.98	112.98	108.20
34	AA	2746	U	O4'-C1'-N1	5.98	112.98	108.20
34	AA	3148	U	O4'-C1'-N1	5.98	112.98	108.20
34	AA	3767	U	O4'-C1'-N1	5.98	112.98	108.20
35	AC	4	C	O4'-C1'-N1	5.98	112.98	108.20
34	AA	1017	U	O4'-C1'-N1	5.98	112.98	108.20
34	AA	3104	C	O4'-C1'-N1	5.98	112.98	108.20
34	AA	37	U	O4'-C1'-N1	5.98	112.98	108.20
34	AA	543	U	O4'-C1'-N1	5.98	112.98	108.20
1	A	580	C	O4'-C1'-N1	5.97	112.98	108.20
2	7	16	C	O4'-C1'-N1	5.97	112.98	108.20
1	A	32	U	P-O3'-C3'	-5.97	112.53	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	2436	A	O4'-C1'-N9	5.97	112.98	108.20
60	AS	111	ARG	NE-CZ-NH2	-5.97	117.31	120.30
34	AA	1432	A	O4'-C1'-N9	5.97	112.98	108.20
34	AA	892	U	O4'-C1'-N1	5.97	112.97	108.20
34	AA	2578	C	O4'-C1'-N1	5.97	112.98	108.20
34	AA	1262	G	O4'-C1'-N9	5.97	112.97	108.20
1	A	797	C	O4'-C1'-N1	5.97	112.97	108.20
1	A	1051	U	O4'-C1'-N1	5.97	112.97	108.20
1	A	1215	G	O4'-C1'-N9	5.97	112.97	108.20
34	AA	3053	G	C5'-C4'-O4'	5.97	116.26	109.10
34	AA	3573	U	O4'-C1'-N1	5.97	112.97	108.20
1	A	1814	C	O4'-C1'-N1	5.96	112.97	108.20
34	AA	937	C	O4'-C1'-N1	5.96	112.97	108.20
34	AA	1337	G	O4'-C1'-N9	5.96	112.97	108.20
34	AA	1467	C	O4'-C1'-N1	5.96	112.97	108.20
34	AA	3523	U	O4'-C1'-N1	5.96	112.97	108.20
1	A	911	U	O4'-C1'-N1	5.96	112.97	108.20
1	A	2005	U	O4'-C1'-N1	5.96	112.97	108.20
2	7	49	G	N1-C6-O6	5.96	123.48	119.90
34	AA	467	U	O4'-C1'-N1	5.96	112.97	108.20
74	AH	70	ARG	NE-CZ-NH2	5.96	123.28	120.30
1	A	1635	C	C2-N1-C1'	5.96	125.35	118.80
1	A	996	C	O4'-C1'-N1	5.96	112.97	108.20
34	AA	2696	G	O4'-C1'-N9	5.96	112.97	108.20
54	AP	190	ARG	NE-CZ-NH1	5.96	123.28	120.30
34	AA	1005	C	O4'-C1'-N1	5.96	112.96	108.20
34	AA	1525	C	O4'-C1'-N1	5.96	112.96	108.20
32	P	66	ARG	NE-CZ-NH2	5.95	123.28	120.30
34	AA	2688	G	O4'-C1'-N9	5.95	112.96	108.20
48	A9	127	PHE	CB-CG-CD1	5.95	124.97	120.80
1	A	1924	U	O4'-C1'-N1	5.95	112.96	108.20
1	A	1288	U	O4'-C1'-N1	5.95	112.96	108.20
1	A	1903	U	O4'-C1'-N1	5.95	112.96	108.20
36	AB	16	A	O4'-C1'-N9	5.95	112.96	108.20
1	A	208	U	O4'-C1'-N1	5.95	112.96	108.20
1	A	981	U	O4'-C1'-N1	5.95	112.96	108.20
15	O	23	TYR	CB-CG-CD2	5.95	124.57	121.00
34	AA	2806	U	O4'-C1'-N1	5.95	112.96	108.20
34	AA	703	U	O4'-C1'-N1	5.94	112.95	108.20
34	AA	1027	G	C5-C6-O6	-5.94	125.03	128.60
34	AA	1792	U	O4'-C1'-N1	5.94	112.95	108.20
1	A	1975	U	O4'-C1'-N1	5.94	112.95	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	792	U	O4'-C1'-N1	5.94	112.95	108.20
34	AA	148	G	O4'-C1'-N9	5.94	112.95	108.20
34	AA	2941	G	O4'-C1'-N9	5.94	112.95	108.20
1	A	12	U	O4'-C1'-N1	5.94	112.95	108.20
1	A	881	C	O4'-C1'-N1	5.94	112.95	108.20
35	AC	36	C	O4'-C1'-N1	5.94	112.95	108.20
35	AC	68	C	O4'-C1'-N1	5.94	112.95	108.20
36	AB	60	U	O4'-C1'-N1	5.94	112.95	108.20
66	AZ	120	ARG	NE-CZ-NH1	5.94	123.27	120.30
34	AA	2215	G	N1-C6-O6	5.93	123.46	119.90
1	A	980	U	O4'-C1'-N1	5.93	112.95	108.20
34	AA	923	C	O4'-C1'-N1	5.93	112.95	108.20
34	AA	1507	U	O4'-C1'-N1	5.93	112.95	108.20
2	7	62	C	O4'-C1'-N1	5.93	112.94	108.20
1	A	1626	U	O4'-C1'-N1	5.93	112.94	108.20
34	AA	231	G	O4'-C1'-N9	5.93	112.94	108.20
34	AA	592	C	O4'-C1'-N1	5.93	112.94	108.20
34	AA	2118	G	C5-C6-O6	-5.93	125.04	128.60
34	AA	2538	C	O4'-C1'-N1	5.93	112.94	108.20
34	AA	3771	C	O4'-C1'-N1	5.93	112.94	108.20
34	AA	1053	U	O4'-C1'-N1	5.93	112.94	108.20
34	AA	1245	G	O4'-C1'-N9	5.93	112.94	108.20
34	AA	1260	C	O4'-C1'-N1	5.93	112.94	108.20
34	AA	2219	A	C2'-C3'-O3'	5.93	123.18	113.70
2	7	44	A	C5'-C4'-C3'	-5.92	106.52	116.00
60	AS	39	ARG	NE-CZ-NH1	5.92	123.26	120.30
1	A	50	C	O4'-C1'-N1	5.92	112.94	108.20
1	A	1193	A	O4'-C1'-N9	5.92	112.94	108.20
1	A	2049	G	O4'-C1'-N9	5.92	112.94	108.20
34	AA	773	A	O4'-C1'-N9	5.92	112.94	108.20
1	A	158	C	O4'-C1'-N1	5.92	112.94	108.20
34	AA	82	U	O4'-C1'-N1	5.92	112.94	108.20
34	AA	3569	C	O4'-C1'-N1	5.92	112.93	108.20
73	AU	183	ARG	NE-CZ-NH1	5.92	123.26	120.30
2	7	67	C	O4'-C1'-N1	5.92	112.93	108.20
5	T	44	ARG	NE-CZ-NH2	-5.92	117.34	120.30
34	AA	906	G	O4'-C1'-N9	5.92	112.93	108.20
44	A7	35	ARG	NE-CZ-NH1	5.92	123.26	120.30
1	A	868	U	O4'-C1'-N1	5.92	112.93	108.20
34	AA	1212	U	O4'-C1'-N1	5.92	112.93	108.20
34	AA	3528	A	O4'-C1'-N9	5.92	112.93	108.20
1	A	920	A	N1-C6-N6	-5.91	115.05	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	C	183	TYR	CB-CG-CD2	-5.91	117.45	121.00
1	A	161	U	C5'-C4'-O4'	5.91	116.19	109.10
1	A	1011	G	O4'-C1'-N9	5.91	112.93	108.20
34	AA	218	U	O4'-C1'-N1	5.91	112.93	108.20
34	AA	2817	U	O4'-C1'-N1	5.91	112.93	108.20
70	AE	241	ARG	NE-CZ-NH2	5.91	123.25	120.30
32	P	146	ARG	NE-CZ-NH2	5.91	123.25	120.30
33	L	56	ARG	NE-CZ-NH1	5.91	123.25	120.30
1	A	1059	U	O4'-C1'-N1	5.91	112.93	108.20
3	Q	20	ARG	NE-CZ-NH1	5.91	123.25	120.30
34	AA	293	U	O4'-C1'-N1	5.91	112.93	108.20
34	AA	684	G	C5-C6-O6	-5.91	125.06	128.60
34	AA	2627	U	O4'-C1'-N1	5.91	112.92	108.20
35	AC	11	U	O4'-C1'-N1	5.91	112.92	108.20
35	AC	100	A	C4'-C3'-C2'	-5.91	96.69	102.60
34	AA	3445	C	O4'-C1'-N1	5.90	112.92	108.20
34	AA	1612	U	O4'-C1'-N1	5.90	112.92	108.20
36	AB	47	U	O4'-C1'-N1	5.90	112.92	108.20
34	AA	340	U	O4'-C1'-N1	5.90	112.92	108.20
34	AA	359	A	P-O5'-C5'	5.90	130.34	120.90
49	Aa	4	ARG	NE-CZ-NH1	5.90	123.25	120.30
15	O	77	PHE	CB-CG-CD1	-5.90	116.67	120.80
34	AA	3706	U	O4'-C1'-N1	5.90	112.92	108.20
1	A	138	U	O4'-C1'-N1	5.90	112.92	108.20
1	A	1980	A	O4'-C1'-N9	5.90	112.92	108.20
34	AA	1236	U	O4'-C1'-N1	5.90	112.92	108.20
61	AQ	119	PHE	CB-CG-CD1	5.90	124.93	120.80
34	AA	972	G	O4'-C1'-N9	5.89	112.92	108.20
34	AA	1033	A	O4'-C1'-N9	5.89	112.92	108.20
34	AA	2608	G	O4'-C1'-N9	5.89	112.92	108.20
55	Ah	85	ARG	NE-CZ-NH1	5.89	123.25	120.30
68	A5	109	ARG	NE-CZ-NH2	5.89	123.25	120.30
34	AA	1497	U	O4'-C1'-N1	5.89	112.92	108.20
34	AA	1672	U	O4'-C1'-N1	5.89	112.91	108.20
34	AA	2209	C	O4'-C1'-N1	5.89	112.91	108.20
34	AA	3046	C	O4'-C1'-N1	5.89	112.91	108.20
34	AA	1298	A	O4'-C1'-N9	5.89	112.91	108.20
34	AA	1332	A	O4'-C1'-N9	5.89	112.91	108.20
34	AA	3256	C	O4'-C1'-N1	5.89	112.91	108.20
34	AA	2121	C	O4'-C1'-N1	5.89	112.91	108.20
21	3	95	ARG	NE-CZ-NH2	-5.88	117.36	120.30
34	AA	3608	U	O4'-C1'-N1	5.88	112.91	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
73	AU	35	ARG	NE-CZ-NH1	-5.88	117.36	120.30
1	A	314	A	O4'-C1'-N9	5.88	112.90	108.20
1	A	123	U	O4'-C1'-N1	5.88	112.90	108.20
34	AA	2635	C	O4'-C1'-N1	5.88	112.90	108.20
9	E	168	ARG	NE-CZ-NH1	5.88	123.24	120.30
34	AA	1826	U	O4'-C1'-N1	5.88	112.90	108.20
1	A	914	U	O4'-C1'-N1	5.88	112.90	108.20
34	AA	1556	G	N1-C6-O6	5.88	123.42	119.90
34	AA	2653	C	O4'-C1'-N1	5.88	112.90	108.20
34	AA	3739	A	O4'-C1'-N9	5.88	112.90	108.20
34	AA	1628	U	O4'-C1'-N1	5.87	112.90	108.20
1	A	654	U	O4'-C1'-N1	5.87	112.90	108.20
1	A	1931	C	O4'-C1'-N1	5.87	112.90	108.20
34	AA	282	U	O4'-C1'-N1	5.87	112.90	108.20
34	AA	914	G	O4'-C1'-N9	5.87	112.90	108.20
34	AA	2695	A	C5'-C4'-C3'	-5.87	106.61	116.00
34	AA	3221	U	O4'-C1'-N1	5.87	112.90	108.20
1	A	1302	G	O4'-C1'-N9	5.87	112.90	108.20
1	A	907	C	O4'-C1'-N1	5.87	112.89	108.20
34	AA	2446	U	O4'-C1'-N1	5.87	112.89	108.20
66	AZ	120	ARG	NE-CZ-NH2	-5.87	117.36	120.30
1	A	2069	G	O4'-C1'-N9	5.87	112.89	108.20
34	AA	372	G	N1-C6-O6	5.87	123.42	119.90
16	Y	66	ARG	NE-CZ-NH2	5.87	123.23	120.30
34	AA	254	U	O3'-P-O5'	-5.87	92.85	104.00
34	AA	1790	U	O4'-C1'-N1	5.87	112.89	108.20
34	AA	3495	U	O4'-C1'-N1	5.87	112.89	108.20
1	A	1698	U	O4'-C1'-N1	5.86	112.89	108.20
26	D	107	ARG	NE-CZ-NH1	5.86	123.23	120.30
34	AA	769	U	C1'-O4'-C4'	-5.86	105.21	109.90
1	A	542	C	O4'-C1'-N1	5.86	112.89	108.20
34	AA	3667	C	P-O3'-C3'	5.86	126.73	119.70
36	AB	12	U	O4'-C1'-N1	5.86	112.89	108.20
1	A	1269	U	O4'-C1'-N1	5.86	112.89	108.20
60	AS	58	TYR	CB-CG-CD1	-5.86	117.48	121.00
34	AA	372	G	C5-C6-O6	-5.86	125.08	128.60
34	AA	410	G	O4'-C1'-N9	5.86	112.89	108.20
34	AA	1895	U	O4'-C1'-N1	5.86	112.89	108.20
1	A	1299	G	O4'-C1'-N9	5.86	112.88	108.20
34	AA	205	G	O4'-C1'-N9	5.86	112.89	108.20
34	AA	1804	C	O4'-C1'-N1	5.86	112.89	108.20
71	AF	109	ARG	NE-CZ-NH2	5.86	123.23	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1974	U	O4'-C1'-N1	5.85	112.88	108.20
34	AA	618	U	O4'-C1'-N1	5.85	112.88	108.20
34	AA	2500	A	O4'-C1'-N9	5.85	112.88	108.20
36	AB	45	U	O4'-C1'-N1	5.85	112.88	108.20
34	AA	424	U	O4'-C1'-N1	5.85	112.88	108.20
34	AA	3136	C	O4'-C1'-N1	5.85	112.88	108.20
35	AC	133	G	O4'-C1'-N9	5.85	112.88	108.20
69	AD	163	ARG	NE-CZ-NH1	-5.85	117.37	120.30
3	Q	73	ARG	NE-CZ-NH2	5.85	123.22	120.30
34	AA	3503	U	O4'-C1'-N1	5.85	112.88	108.20
77	AX	101	ARG	NE-CZ-NH1	5.85	123.22	120.30
1	A	1118	U	O4'-C1'-N1	5.85	112.88	108.20
63	AW	123	ARG	NE-CZ-NH1	5.85	123.22	120.30
1	A	1018	U	O4'-C1'-N1	5.84	112.88	108.20
1	A	1191	C	O4'-C1'-N1	5.84	112.88	108.20
34	AA	34	A	O4'-C1'-N9	5.84	112.88	108.20
1	A	95	A	O4'-C1'-N9	5.84	112.87	108.20
34	AA	818	C	O4'-C1'-N1	5.84	112.87	108.20
34	AA	1119	G	O4'-C1'-N9	5.84	112.87	108.20
34	AA	3720	G	O4'-C1'-N9	5.84	112.87	108.20
1	A	1251	G	C4-N9-C1'	5.84	134.09	126.50
1	A	1831	G	C5-C6-O6	-5.84	125.10	128.60
34	AA	1113	C	O4'-C1'-N1	5.84	112.87	108.20
34	AA	3737	G	C5-C6-O6	-5.84	125.10	128.60
35	AC	63	A	O4'-C1'-N9	5.84	112.87	108.20
1	A	1027	C	O4'-C1'-N1	5.84	112.87	108.20
34	AA	15	U	O4'-C1'-N1	5.84	112.87	108.20
34	AA	1645	U	O4'-C1'-N1	5.84	112.87	108.20
9	E	44	ARG	NE-CZ-NH2	5.83	123.22	120.30
34	AA	3738	U	O4'-C1'-N1	5.83	112.87	108.20
1	A	1856	A	O4'-C1'-N9	5.83	112.86	108.20
34	AA	83	U	O4'-C1'-N1	5.83	112.86	108.20
34	AA	966	A	O4'-C1'-N9	5.83	112.87	108.20
34	AA	3170	A	O4'-C1'-N9	5.83	112.86	108.20
1	A	1813	U	O4'-C1'-N1	5.83	112.86	108.20
34	AA	1030	C	O4'-C1'-N1	5.83	112.86	108.20
62	AR	85	ARG	NE-CZ-NH2	5.83	123.21	120.30
71	AF	143	ARG	NE-CZ-NH1	5.83	123.21	120.30
1	A	386	U	O4'-C1'-N1	5.83	112.86	108.20
1	A	1644	U	O4'-C1'-N1	5.83	112.86	108.20
1	A	2084	G	O4'-C1'-N9	5.83	112.86	108.20
1	A	479	A	O4'-C1'-N9	5.82	112.86	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1293	C	O4'-C1'-N1	5.82	112.86	108.20
1	A	1878	C	O4'-C1'-N1	5.82	112.86	108.20
34	AA	2445	A	O4'-C1'-N9	5.82	112.86	108.20
34	AA	3134	U	O4'-C1'-N1	5.82	112.86	108.20
34	AA	1502	G	C5'-C4'-O4'	5.82	116.08	109.10
61	AQ	10	ARG	NE-CZ-NH1	5.82	123.21	120.30
34	AA	3435	A	P-O3'-C3'	5.82	126.68	119.70
1	A	1436	U	O4'-C1'-N1	5.82	112.85	108.20
34	AA	1433	U	O4'-C1'-N1	5.82	112.85	108.20
1	A	1	A	O4'-C1'-N9	5.82	112.85	108.20
16	Y	99	ARG	NE-CZ-NH1	-5.82	117.39	120.30
34	AA	2132	A	O4'-C1'-N9	5.82	112.85	108.20
34	AA	630	U	O4'-C1'-N1	5.81	112.85	108.20
1	A	749	U	O4'-C1'-N1	5.81	112.85	108.20
1	A	1796	C	O4'-C1'-N1	5.81	112.85	108.20
34	AA	3772	C	O4'-C1'-N1	5.81	112.85	108.20
11	G	186	ARG	NE-CZ-NH1	5.81	123.20	120.30
1	A	625	U	O4'-C1'-N1	5.81	112.85	108.20
34	AA	1651	C	O4'-C1'-N1	5.81	112.85	108.20
34	AA	2211	C	O4'-C1'-N1	5.81	112.85	108.20
35	AC	124	U	O4'-C1'-N1	5.81	112.85	108.20
34	AA	1874	C	O4'-C1'-N1	5.81	112.84	108.20
34	AA	3298	G	O4'-C1'-N9	5.81	112.84	108.20
1	A	1959	G	O4'-C1'-N9	5.80	112.84	108.20
34	AA	1068	C	O4'-C1'-N1	5.80	112.84	108.20
34	AA	1336	U	P-O3'-C3'	-5.80	112.73	119.70
34	AA	2210	U	O4'-C1'-N1	5.80	112.84	108.20
34	AA	3585	A	O4'-C1'-N9	5.80	112.84	108.20
34	AA	640	U	O4'-C1'-N1	5.80	112.84	108.20
34	AA	1339	U	O4'-C1'-N1	5.80	112.84	108.20
34	AA	3086	A	P-O3'-C3'	5.80	126.66	119.70
48	A9	127	PHE	CB-CG-CD2	-5.80	116.74	120.80
1	A	965	U	O4'-C1'-N1	5.80	112.84	108.20
51	Ad	9	ARG	NE-CZ-NH1	5.80	123.20	120.30
34	AA	1342	U	O4'-C1'-N1	5.80	112.84	108.20
34	AA	1544	C	O4'-C1'-N1	5.80	112.84	108.20
34	AA	2021	A	O4'-C1'-N9	5.80	112.84	108.20
34	AA	2104	C	O4'-C1'-N1	5.80	112.84	108.20
34	AA	3232	U	O4'-C1'-N1	5.80	112.84	108.20
27	F	235	TYR	CB-CG-CD1	-5.80	117.52	121.00
34	AA	178	U	O4'-C1'-N1	5.80	112.84	108.20
34	AA	2144	U	O4'-C1'-N1	5.80	112.84	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	2505	C	O4'-C1'-N1	5.80	112.84	108.20
34	AA	502	U	O4'-C1'-N1	5.79	112.84	108.20
34	AA	2157	G	O4'-C1'-N9	5.79	112.84	108.20
76	Ag	12	ARG	NE-CZ-NH1	-5.79	117.40	120.30
1	A	887	A	N1-C6-N6	5.79	122.08	118.60
1	A	1058	G	C5-C6-O6	-5.79	125.12	128.60
14	I	88	PHE	CB-CG-CD1	5.79	124.86	120.80
34	AA	3281	G	O4'-C1'-N9	5.79	112.83	108.20
34	AA	3526	U	P-O3'-C3'	5.79	126.65	119.70
1	A	1321	C	O4'-C1'-N1	5.79	112.83	108.20
21	3	15	ARG	NE-CZ-NH1	5.79	123.20	120.30
34	AA	698	G	O4'-C1'-N9	5.79	112.83	108.20
1	A	983	G	C5'-C4'-O4'	5.79	116.05	109.10
32	P	66	ARG	NE-CZ-NH1	-5.79	117.41	120.30
34	AA	2502	U	O4'-C1'-N1	5.79	112.83	108.20
34	AA	3226	C	O4'-C1'-N1	5.79	112.83	108.20
34	AA	3314	U	O4'-C1'-N1	5.79	112.83	108.20
1	A	607	U	O4'-C1'-N1	5.78	112.83	108.20
1	A	758	U	O4'-C1'-N1	5.78	112.83	108.20
34	AA	263	U	O4'-C1'-N1	5.78	112.83	108.20
34	AA	1252	U	O4'-C1'-N1	5.78	112.83	108.20
1	A	461	A	O4'-C1'-N9	5.78	112.82	108.20
1	A	1923	U	O4'-C1'-N1	5.78	112.83	108.20
2	7	4	G	C5-C6-O6	-5.78	125.13	128.60
34	AA	1799	A	O4'-C1'-N9	5.78	112.82	108.20
34	AA	2939	C	O4'-C1'-N1	5.78	112.82	108.20
34	AA	3732	U	O4'-C1'-N1	5.78	112.82	108.20
71	AF	201	TYR	CB-CG-CD2	-5.78	117.53	121.00
1	A	2056	C	O4'-C1'-N1	5.78	112.82	108.20
12	W	14	ARG	NE-CZ-NH1	5.78	123.19	120.30
34	AA	420	U	O4'-C1'-N1	5.78	112.82	108.20
1	A	994	G	O4'-C1'-N9	5.78	112.82	108.20
34	AA	741	C	O4'-C1'-N1	5.78	112.82	108.20
34	AA	1442	C	O4'-C1'-N1	5.78	112.82	108.20
73	AU	93	ARG	NE-CZ-NH1	5.78	123.19	120.30
34	AA	1344	C	O4'-C1'-N1	5.77	112.82	108.20
34	AA	2689	G	O4'-C1'-N9	5.77	112.82	108.20
62	AR	281	ARG	NE-CZ-NH2	5.77	123.19	120.30
34	AA	1211	U	O4'-C1'-N1	5.77	112.82	108.20
1	A	1181	U	O4'-C1'-N1	5.77	112.82	108.20
34	AA	1510	U	O4'-C1'-N1	5.77	112.82	108.20
34	AA	3228	U	O4'-C1'-N1	5.77	112.81	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1654	G	O4'-C1'-N9	5.77	112.81	108.20
34	AA	868	U	O4'-C1'-N1	5.77	112.81	108.20
34	AA	1900	G	O4'-C1'-N9	5.77	112.81	108.20
28	H	183	ARG	NE-CZ-NH1	5.76	123.18	120.30
34	AA	892	U	P-O3'-C3'	-5.76	112.78	119.70
34	AA	2154	A	O4'-C1'-N9	5.76	112.81	108.20
34	AA	3622	U	O4'-C1'-N1	5.76	112.81	108.20
34	AA	1894	U	O4'-C1'-N1	5.76	112.81	108.20
34	AA	1007	U	O4'-C1'-N1	5.76	112.81	108.20
34	AA	3103	C	O4'-C1'-N1	5.76	112.81	108.20
34	AA	1117	U	O4'-C1'-N1	5.76	112.81	108.20
36	AB	77	A	O4'-C1'-N9	5.76	112.81	108.20
40	Ai	8	ARG	NE-CZ-NH1	5.76	123.18	120.30
1	A	1783	U	O4'-C1'-N1	5.76	112.81	108.20
16	Y	135	TYR	CB-CG-CD1	-5.76	117.55	121.00
34	AA	122	A	C5'-C4'-O4'	5.76	116.01	109.10
34	AA	2668	G	O4'-C1'-N9	5.76	112.81	108.20
74	AH	58	MET	CG-SD-CE	-5.76	90.99	100.20
1	A	747	U	P-O5'-C5'	5.75	130.11	120.90
34	AA	1109	U	O4'-C1'-N1	5.75	112.80	108.20
34	AA	1913	A	P-O3'-C3'	5.75	126.61	119.70
1	A	1098	U	O4'-C1'-N1	5.75	112.80	108.20
34	AA	546	C	O4'-C1'-N1	5.75	112.80	108.20
34	AA	1235	C	O4'-C1'-N1	5.75	112.80	108.20
34	AA	2982	A	O4'-C1'-N9	5.75	112.80	108.20
1	A	1015	U	O4'-C1'-N1	5.75	112.80	108.20
1	A	1857	U	C2-N1-C1'	5.75	124.60	117.70
1	A	1973	U	O4'-C1'-N1	5.75	112.80	108.20
34	AA	1183	U	O4'-C1'-N1	5.75	112.80	108.20
34	AA	3204	C	O4'-C1'-N1	5.75	112.80	108.20
40	Ai	80	ARG	NE-CZ-NH1	5.75	123.17	120.30
34	AA	771	U	C2-N1-C1'	5.75	124.60	117.70
34	AA	1158	G	C5-C6-O6	-5.75	125.15	128.60
34	AA	2072	U	O4'-C1'-N1	5.75	112.80	108.20
1	A	1881	G	C5-C6-O6	-5.75	125.15	128.60
16	Y	135	TYR	CB-CG-CD2	5.75	124.45	121.00
1	A	2063	U	O4'-C1'-N1	5.75	112.80	108.20
1	A	96	C	O4'-C1'-N1	5.74	112.80	108.20
1	A	1364	G	O4'-C1'-N9	5.74	112.80	108.20
34	AA	2744	G	O4'-C1'-N9	5.74	112.79	108.20
34	AA	3510	C	O4'-C1'-N1	5.74	112.79	108.20
1	A	478	G	N1-C6-O6	5.74	123.34	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	547	C	O4'-C1'-N1	5.74	112.79	108.20
34	AA	643	G	N1-C6-O6	5.74	123.34	119.90
35	AC	19	G	O4'-C1'-N9	5.74	112.79	108.20
36	AB	96	C	O4'-C1'-N1	5.74	112.79	108.20
34	AA	415	U	O4'-C1'-N1	5.74	112.79	108.20
34	AA	2835	G	O4'-C1'-N9	5.74	112.79	108.20
32	P	75	MET	CG-SD-CE	-5.74	91.02	100.20
34	AA	1416	U	O4'-C1'-N1	5.74	112.79	108.20
34	AA	2953	G	O4'-C1'-N9	5.74	112.79	108.20
1	A	1219	U	O4'-C1'-N1	5.73	112.79	108.20
1	A	1646	U	O4'-C1'-N1	5.73	112.79	108.20
34	AA	3013	A	C5'-C4'-O4'	5.73	115.98	109.10
34	AA	808	A	P-O3'-C3'	-5.73	112.82	119.70
34	AA	3324	U	O4'-C1'-N1	5.73	112.79	108.20
35	AC	80	C	O4'-C1'-N1	5.73	112.78	108.20
59	AM	122	ARG	NE-CZ-NH2	-5.73	117.44	120.30
1	A	8	U	O4'-C1'-N1	5.73	112.78	108.20
9	E	13	ARG	NE-CZ-NH2	5.73	123.16	120.30
34	AA	1516	G	O4'-C1'-N9	5.73	112.78	108.20
54	AP	205	ARG	NE-CZ-NH2	5.73	123.17	120.30
61	AQ	201	ARG	NE-CZ-NH1	5.73	123.16	120.30
66	AZ	45	ARG	NE-CZ-NH2	-5.73	117.44	120.30
1	A	38	C	O4'-C1'-N1	5.73	112.78	108.20
1	A	2057	A	O4'-C1'-N9	5.73	112.78	108.20
34	AA	315	C	C5'-C4'-O4'	5.73	115.97	109.10
34	AA	669	C	O4'-C1'-N1	5.73	112.78	108.20
1	A	81	U	P-O3'-C3'	5.73	126.57	119.70
5	T	38	ARG	NE-CZ-NH2	5.73	123.16	120.30
34	AA	627	U	O4'-C1'-N1	5.73	112.78	108.20
34	AA	739	G	O4'-C1'-N9	5.73	112.78	108.20
34	AA	3783	G	C5'-C4'-O4'	5.73	115.97	109.10
9	E	171	ARG	NE-CZ-NH2	5.72	123.16	120.30
34	AA	809	A	O4'-C1'-N9	5.72	112.78	108.20
34	AA	182	U	O4'-C1'-N1	5.72	112.78	108.20
1	A	450	C	O4'-C1'-N1	5.72	112.78	108.20
34	AA	36	U	O4'-C1'-N1	5.72	112.78	108.20
34	AA	864	U	O4'-C1'-N1	5.72	112.77	108.20
1	A	1073	U	O4'-C1'-N1	5.72	112.77	108.20
34	AA	2670	G	C5-C6-O6	-5.72	125.17	128.60
1	A	908	U	O4'-C1'-N1	5.71	112.77	108.20
34	AA	2133	C	O4'-C1'-N1	5.71	112.77	108.20
34	AA	2949	G	O4'-C1'-N9	5.71	112.77	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	3763	G	C5-C6-O6	-5.71	125.17	128.60
35	AC	62	G	O4'-C1'-N9	5.71	112.77	108.20
34	AA	2919	A	O4'-C1'-N9	5.71	112.77	108.20
8	V	102	ARG	NE-CZ-NH1	5.71	123.16	120.30
34	AA	1266	U	O4'-C1'-N1	5.71	112.77	108.20
34	AA	3211	C	O4'-C1'-N1	5.71	112.77	108.20
70	AE	117	ARG	NE-CZ-NH2	5.71	123.16	120.30
77	AX	101	ARG	NE-CZ-NH2	-5.71	117.44	120.30
1	A	183	C	O4'-C1'-N1	5.71	112.77	108.20
1	A	429	G	O4'-C1'-N9	5.71	112.77	108.20
34	AA	2724	C	O4'-C1'-N1	5.71	112.77	108.20
35	AC	54	C	O4'-C1'-N1	5.71	112.77	108.20
34	AA	643	G	O4'-C1'-N9	5.71	112.77	108.20
1	A	1914	U	O4'-C1'-N1	5.71	112.77	108.20
34	AA	1302	G	O4'-C1'-N9	5.71	112.77	108.20
1	A	304	C	O4'-C1'-N1	5.71	112.76	108.20
1	A	1111	U	O4'-C1'-N1	5.70	112.76	108.20
1	A	1719	U	C2-N1-C1'	5.70	124.54	117.70
40	Ai	39	ARG	NE-CZ-NH1	5.70	123.15	120.30
34	AA	671	U	O4'-C1'-N1	5.70	112.76	108.20
1	A	199	U	O4'-C1'-N1	5.70	112.76	108.20
1	A	1851	C	O4'-C1'-N1	5.70	112.76	108.20
34	AA	1836	U	O4'-C1'-N1	5.70	112.76	108.20
34	AA	2579	U	O4'-C1'-N1	5.70	112.76	108.20
34	AA	3404	C	O4'-C1'-N1	5.70	112.76	108.20
5	T	44	ARG	NE-CZ-NH1	5.70	123.15	120.30
34	AA	576	U	O4'-C1'-N1	5.70	112.76	108.20
34	AA	1563	U	O4'-C1'-N1	5.70	112.76	108.20
64	AY	173	ARG	NE-CZ-NH2	-5.70	117.45	120.30
34	AA	1107	U	O4'-C1'-N1	5.70	112.76	108.20
1	A	1622	C	O4'-C1'-N1	5.70	112.76	108.20
1	A	2030	U	O4'-C1'-N1	5.70	112.76	108.20
34	AA	2887	U	O4'-C1'-N1	5.69	112.75	108.20
1	A	1628	A	O4'-C1'-N9	5.69	112.75	108.20
34	AA	1167	U	O4'-C1'-N1	5.69	112.75	108.20
34	AA	1573	C	C2-N1-C1'	5.69	125.06	118.80
34	AA	3644	G	O4'-C1'-N9	5.69	112.75	108.20
35	AC	102	U	P-O3'-C3'	-5.69	112.87	119.70
72	AG	92	ARG	NE-CZ-NH2	5.69	123.15	120.30
1	A	17	C	O4'-C1'-N1	5.69	112.75	108.20
34	AA	31	C	O4'-C1'-N1	5.69	112.75	108.20
34	AA	1329	U	O4'-C1'-N1	5.69	112.75	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	2546	G	O4'-C1'-N9	5.69	112.75	108.20
34	AA	3503	U	P-O3'-C3'	5.69	126.53	119.70
1	A	804	U	O4'-C1'-N1	5.69	112.75	108.20
34	AA	431	G	C5-C6-O6	-5.69	125.19	128.60
34	AA	2888	U	O4'-C1'-N1	5.69	112.75	108.20
1	A	943	U	O4'-C1'-N1	5.69	112.75	108.20
1	A	1314	U	O4'-C1'-N1	5.69	112.75	108.20
2	7	25	C	C5'-C4'-O4'	-5.69	102.27	109.10
34	AA	1169	A	P-O3'-C3'	-5.69	112.88	119.70
1	A	1442	U	O4'-C1'-N1	5.68	112.75	108.20
1	A	376	A	O4'-C1'-N9	5.68	112.75	108.20
1	A	1056	G	O4'-C1'-N9	5.68	112.75	108.20
1	A	1391	U	O4'-C1'-N1	5.68	112.75	108.20
61	AQ	119	PHE	CB-CG-CD2	-5.68	116.82	120.80
1	A	745	A	P-O3'-C3'	5.68	126.52	119.70
34	AA	584	U	O4'-C1'-N1	5.68	112.75	108.20
34	AA	1208	G	P-O5'-C5'	5.68	129.99	120.90
34	AA	3055	U	O4'-C1'-N1	5.68	112.74	108.20
37	AL	41	ARG	NE-CZ-NH2	5.68	123.14	120.30
45	A1	84	ARG	NE-CZ-NH2	-5.68	117.46	120.30
1	A	1681	G	C5-C6-O6	-5.68	125.19	128.60
34	AA	2962	G	O4'-C1'-N9	5.68	112.74	108.20
9	E	82	ARG	NE-CZ-NH1	5.68	123.14	120.30
34	AA	1169	A	P-O5'-C5'	5.68	129.98	120.90
34	AA	3668	U	O4'-C1'-N1	5.67	112.74	108.20
34	AA	544	C	C2-N1-C1'	5.67	125.04	118.80
34	AA	3090	G	C5-C6-O6	-5.67	125.20	128.60
34	AA	1608	C	O4'-C1'-N1	5.67	112.74	108.20
34	AA	2449	U	O4'-C1'-N1	5.67	112.74	108.20
57	Ac	28	ARG	NE-CZ-NH2	-5.67	117.46	120.30
36	AB	86	G	O4'-C1'-N9	5.67	112.73	108.20
1	A	366	A	O4'-C1'-N9	5.67	112.73	108.20
1	A	630	C	O4'-C1'-N1	5.67	112.73	108.20
8	V	72	ARG	NE-CZ-NH2	-5.67	117.47	120.30
2	7	2	G	P-O3'-C3'	5.66	126.50	119.70
10	X	81	ARG	NE-CZ-NH1	5.66	123.13	120.30
1	A	995	A	O4'-C1'-N9	5.66	112.73	108.20
34	AA	3224	U	O4'-C1'-N1	5.66	112.73	108.20
34	AA	3304	G	O4'-C1'-N9	5.66	112.73	108.20
32	P	55	ARG	NE-CZ-NH2	5.66	123.13	120.30
34	AA	1606	U	O4'-C1'-N1	5.66	112.73	108.20
69	AD	227	ARG	NE-CZ-NH2	5.66	123.13	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	272	U	O4'-C1'-N1	5.66	112.73	108.20
1	A	596	C	O4'-C1'-N1	5.66	112.73	108.20
34	AA	737	G	C5-C6-O6	-5.66	125.20	128.60
14	I	88	PHE	CB-CG-CD2	-5.66	116.84	120.80
1	A	1702	C	C6-N1-C1'	-5.65	114.02	120.80
24	6	10	ARG	NE-CZ-NH1	5.65	123.13	120.30
34	AA	146	U	P-O3'-C3'	5.65	126.48	119.70
34	AA	2556	C	O4'-C1'-N1	5.65	112.72	108.20
34	AA	2603	U	O4'-C1'-N1	5.65	112.72	108.20
34	AA	3524	G	O4'-C1'-N9	5.65	112.72	108.20
34	AA	2182	G	O4'-C1'-N9	5.65	112.72	108.20
34	AA	3210	A	O4'-C1'-N9	5.65	112.72	108.20
1	A	1823	U	O4'-C1'-N1	5.65	112.72	108.20
57	Ac	59	ARG	NE-CZ-NH1	5.65	123.12	120.30
70	AE	169	ARG	NE-CZ-NH1	5.65	123.12	120.30
73	AU	93	ARG	NE-CZ-NH2	-5.65	117.47	120.30
1	A	115	U	O4'-C1'-N1	5.65	112.72	108.20
34	AA	953	U	O4'-C1'-N1	5.65	112.72	108.20
78	AJ	127	ARG	NE-CZ-NH1	5.65	123.12	120.30
1	A	572	C	O4'-C1'-N1	5.65	112.72	108.20
34	AA	2439	C	O4'-C1'-N1	5.65	112.72	108.20
1	A	1281	C	O4'-C1'-N1	5.64	112.72	108.20
6	M	136	ARG	NE-CZ-NH2	-5.64	117.48	120.30
11	G	109	ARG	NE-CZ-NH1	5.64	123.12	120.30
34	AA	3032	U	O4'-C1'-N1	5.64	112.72	108.20
34	AA	349	G	C5-C6-O6	-5.64	125.22	128.60
34	AA	613	C	O4'-C1'-N1	5.64	112.71	108.20
34	AA	1291	U	O4'-C1'-N1	5.64	112.71	108.20
34	AA	1674	G	O4'-C1'-N9	5.64	112.71	108.20
1	A	1187	A	P-O3'-C3'	5.64	126.47	119.70
1	A	1309	A	O4'-C1'-N9	5.64	112.71	108.20
34	AA	3212	G	C5-C6-O6	-5.64	125.22	128.60
34	AA	3786	U	O4'-C1'-N1	5.64	112.71	108.20
1	A	1864	U	O4'-C1'-N1	5.64	112.71	108.20
34	AA	3094	C	O4'-C1'-N1	5.64	112.71	108.20
34	AA	1570	U	O4'-C1'-N1	5.64	112.71	108.20
1	A	987	U	O4'-C1'-N1	5.64	112.71	108.20
34	AA	1075	U	O4'-C1'-N1	5.64	112.71	108.20
34	AA	3629	U	O4'-C1'-N1	5.64	112.71	108.20
35	AC	12	U	O4'-C1'-N1	5.64	112.71	108.20
34	AA	3109	U	O4'-C1'-N1	5.63	112.71	108.20
36	AB	99	G	C5-C6-O6	-5.63	125.22	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	3386	A	O4'-C1'-N9	5.63	112.71	108.20
34	AA	458	A	O4'-C1'-N9	5.63	112.71	108.20
34	AA	636	U	O4'-C1'-N1	5.63	112.70	108.20
34	AA	49	U	O4'-C1'-N1	5.63	112.70	108.20
34	AA	92	G	O4'-C1'-N9	5.63	112.70	108.20
34	AA	383	U	O4'-C1'-N1	5.63	112.70	108.20
34	AA	1648	U	O4'-C1'-N1	5.63	112.70	108.20
1	A	460	G	O4'-C1'-N9	5.63	112.70	108.20
2	7	64	G	O4'-C1'-N9	5.63	112.70	108.20
34	AA	76	G	O4'-C1'-N9	5.63	112.70	108.20
34	AA	2450	G	C5-C6-O6	-5.63	125.22	128.60
34	AA	390	C	O4'-C1'-N1	5.63	112.70	108.20
45	A1	84	ARG	NE-CZ-NH1	5.63	123.11	120.30
1	A	805	A	P-O3'-C3'	5.62	126.45	119.70
1	A	379	G	N1-C6-O6	5.62	123.27	119.90
1	A	2054	A	O4'-C1'-N9	5.62	112.70	108.20
34	AA	3140	U	O4'-C1'-N1	5.62	112.70	108.20
34	AA	894	U	O4'-C1'-N1	5.62	112.70	108.20
34	AA	1104	U	O4'-C1'-N1	5.62	112.70	108.20
34	AA	1179	U	O4'-C1'-N1	5.62	112.70	108.20
34	AA	2218	C	C6-N1-C2	-5.62	118.05	120.30
1	A	103	U	C2'-C3'-O3'	5.62	122.69	113.70
34	AA	1287	A	O4'-C1'-N9	5.62	112.69	108.20
34	AA	2689	G	N1-C6-O6	5.62	123.27	119.90
1	A	993	A	O4'-C1'-N9	5.62	112.69	108.20
1	A	1069	C	C5'-C4'-O4'	5.62	115.84	109.10
1	A	1110	G	O4'-C1'-N9	5.62	112.69	108.20
1	A	1408	C	O4'-C1'-N1	5.62	112.69	108.20
4	S	123	ARG	NE-CZ-NH1	-5.62	117.49	120.30
34	AA	794	C	O4'-C1'-N1	5.62	112.69	108.20
34	AA	2697	A	O4'-C1'-N9	5.62	112.69	108.20
1	A	1873	A	C5-C6-N6	-5.61	119.21	123.70
12	W	97	TYR	CB-CG-CD1	-5.61	117.63	121.00
34	AA	513	U	O4'-C1'-N1	5.61	112.69	108.20
34	AA	1838	U	O4'-C1'-N1	5.61	112.69	108.20
34	AA	2550	C	C2-N1-C1'	5.61	124.97	118.80
34	AA	2570	C	O4'-C1'-N1	5.61	112.69	108.20
34	AA	981	U	O4'-C1'-N1	5.61	112.69	108.20
34	AA	1958	U	O4'-C1'-N1	5.61	112.69	108.20
1	A	1321	C	C5'-C4'-C3'	-5.61	107.02	116.00
34	AA	884	A	O4'-C1'-N9	5.61	112.69	108.20
49	Aa	67	ARG	NE-CZ-NH1	5.61	123.11	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	AC	145	A	C2'-C3'-O3'	5.61	122.67	113.70
62	AR	31	ARG	NE-CZ-NH1	5.61	123.11	120.30
1	A	111	G	O4'-C1'-N9	5.61	112.69	108.20
34	AA	2039	U	C5'-C4'-C3'	5.61	124.97	116.00
34	AA	3490	A	O4'-C1'-N9	5.61	112.69	108.20
1	A	1373	U	O4'-C1'-N1	5.61	112.68	108.20
2	7	48	C	O4'-C1'-N1	5.61	112.68	108.20
34	AA	707	U	O4'-C1'-N1	5.61	112.69	108.20
34	AA	2518	U	O4'-C1'-N1	5.61	112.68	108.20
34	AA	3050	U	O4'-C1'-N1	5.61	112.68	108.20
76	Ag	7	ARG	NE-CZ-NH1	5.61	123.10	120.30
34	AA	1538	U	P-O3'-C3'	5.60	126.42	119.70
34	AA	1600	C	P-O3'-C3'	-5.60	112.97	119.70
34	AA	2146	A	O4'-C1'-N9	5.60	112.68	108.20
1	A	913	U	O4'-C1'-N1	5.60	112.68	108.20
1	A	1172	U	O4'-C1'-N1	5.60	112.68	108.20
34	AA	2437	A	C1'-O4'-C4'	-5.60	105.42	109.90
34	AA	1233	A	O4'-C1'-N9	5.60	112.68	108.20
34	AA	1326	C	O4'-C1'-N1	5.60	112.68	108.20
36	AB	46	C	O4'-C1'-N1	5.60	112.68	108.20
72	AG	140	ARG	NE-CZ-NH1	5.60	123.10	120.30
7	U	55	ARG	NE-CZ-NH1	-5.60	117.50	120.30
34	AA	1728	C	C6-N1-C2	-5.60	118.06	120.30
34	AA	1753	U	O4'-C1'-N1	5.60	112.68	108.20
34	AA	2950	U	O4'-C1'-N1	5.60	112.68	108.20
1	A	1728	U	O4'-C1'-N1	5.60	112.68	108.20
34	AA	2479	U	O4'-C1'-N1	5.59	112.67	108.20
34	AA	3631	U	O4'-C1'-N1	5.59	112.68	108.20
3	Q	73	ARG	NE-CZ-NH1	-5.59	117.50	120.30
34	AA	25	A	C1'-O4'-C4'	-5.59	105.42	109.90
34	AA	73	U	C2-N1-C1'	5.59	124.41	117.70
1	A	466	A	N1-C6-N6	-5.59	115.25	118.60
1	A	591	C	O4'-C1'-N1	5.59	112.67	108.20
1	A	789	U	O4'-C1'-N1	5.59	112.67	108.20
1	A	1184	G	O4'-C1'-N9	5.59	112.67	108.20
21	3	51	ARG	NE-CZ-NH2	5.59	123.10	120.30
34	AA	98	G	C5-C6-O6	-5.59	125.25	128.60
34	AA	497	U	O4'-C1'-N1	5.59	112.67	108.20
1	A	578	G	O4'-C1'-N9	5.59	112.67	108.20
34	AA	389	U	O4'-C1'-N1	5.59	112.67	108.20
34	AA	2585	U	O4'-C1'-N1	5.59	112.67	108.20
1	A	1078	U	O4'-C1'-N1	5.59	112.67	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	W	5	ARG	NE-CZ-NH1	5.59	123.09	120.30
34	AA	1065	U	O4'-C1'-N1	5.59	112.67	108.20
34	AA	1273	G	P-O5'-C5'	5.59	129.84	120.90
1	A	630	C	C2-N1-C1'	5.59	124.95	118.80
34	AA	616	U	O4'-C1'-N1	5.59	112.67	108.20
34	AA	859	C	O4'-C1'-N1	5.59	112.67	108.20
34	AA	2146	A	C1'-O4'-C4'	-5.59	105.43	109.90
34	AA	2818	U	O4'-C1'-N1	5.59	112.67	108.20
34	AA	1161	C	O4'-C1'-N1	5.58	112.67	108.20
28	H	85	ARG	NE-CZ-NH2	5.58	123.09	120.30
34	AA	3491	U	O4'-C1'-N1	5.58	112.67	108.20
37	AL	197	ARG	NE-CZ-NH2	5.58	123.09	120.30
34	AA	403	U	O4'-C1'-N1	5.58	112.67	108.20
34	AA	859	C	C6-N1-C2	-5.58	118.07	120.30
34	AA	1834	C	O4'-C1'-N1	5.58	112.67	108.20
49	Aa	86	ARG	NE-CZ-NH1	5.58	123.09	120.30
1	A	844	G	P-O5'-C5'	5.58	129.83	120.90
34	AA	55	G	C5'-C4'-O4'	5.58	115.80	109.10
1	A	750	U	O4'-C1'-N1	5.58	112.66	108.20
34	AA	3280	U	C5'-C4'-O4'	5.58	115.79	109.10
34	AA	3374	U	O4'-C1'-N1	5.58	112.66	108.20
68	A5	56	ARG	NE-CZ-NH1	5.58	123.09	120.30
34	AA	270	U	C2'-C3'-O3'	5.58	122.62	113.70
34	AA	2140	U	O4'-C1'-N1	5.58	112.66	108.20
34	AA	3417	G	P-O3'-C3'	-5.58	113.01	119.70
34	AA	2701	U	O4'-C1'-N1	5.58	112.66	108.20
34	AA	3070	C	O4'-C1'-N1	5.58	112.66	108.20
34	AA	3202	U	O4'-C1'-N1	5.58	112.66	108.20
34	AA	3514	A	O4'-C1'-N9	5.58	112.66	108.20
34	AA	446	G	O4'-C1'-N9	5.57	112.66	108.20
34	AA	3619	U	O4'-C1'-N1	5.57	112.66	108.20
48	A9	130	ARG	NE-CZ-NH1	5.57	123.09	120.30
68	A5	202	TYR	CB-CG-CD2	5.57	124.34	121.00
1	A	100	U	O4'-C1'-N1	5.57	112.66	108.20
1	A	1087	U	O4'-C1'-N1	5.57	112.66	108.20
1	A	1198	U	C3'-C2'-C1'	-5.57	97.04	101.50
34	AA	133	U	O4'-C1'-N1	5.57	112.66	108.20
34	AA	431	G	N1-C6-O6	5.57	123.24	119.90
34	AA	1527	U	O4'-C1'-N1	5.57	112.66	108.20
35	AC	97	C	O4'-C1'-N1	5.57	112.66	108.20
71	AF	48	ARG	NE-CZ-NH1	-5.57	117.52	120.30
1	A	929	U	O4'-C1'-N1	5.57	112.65	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	986	U	O4'-C1'-N1	5.57	112.66	108.20
34	AA	1814	U	O4'-C1'-N1	5.57	112.65	108.20
34	AA	2484	U	O4'-C1'-N1	5.57	112.66	108.20
59	AM	72	ARG	NE-CZ-NH1	5.57	123.08	120.30
1	A	1295	A	C4'-C3'-C2'	-5.57	97.03	102.60
34	AA	1885	G	O4'-C1'-N9	5.57	112.65	108.20
34	AA	2837	G	C5-C6-O6	-5.57	125.26	128.60
1	A	1734	G	O4'-C1'-N9	5.56	112.65	108.20
2	7	4	G	O4'-C1'-N9	5.56	112.65	108.20
1	A	1063	G	O4'-C1'-N9	5.56	112.65	108.20
34	AA	197	G	O4'-C1'-N9	5.56	112.65	108.20
34	AA	696	C	O4'-C1'-N1	5.56	112.65	108.20
34	AA	1780	G	P-O5'-C5'	5.56	129.80	120.90
34	AA	767	U	O4'-C1'-N1	5.56	112.65	108.20
34	AA	1712	G	O4'-C1'-N9	5.56	112.65	108.20
25	B	213	ARG	NE-CZ-NH1	5.56	123.08	120.30
34	AA	2708	C	O4'-C1'-N1	5.56	112.65	108.20
46	AN	93	ARG	NE-CZ-NH1	5.56	123.08	120.30
34	AA	1745	G	C5-C6-O6	-5.56	125.27	128.60
34	AA	3775	G	C5'-C4'-O4'	5.56	115.77	109.10
34	AA	1742	G	O4'-C1'-N9	5.56	112.64	108.20
1	A	1065	C	O4'-C1'-N1	5.55	112.64	108.20
14	I	86	TYR	CB-CG-CD2	-5.55	117.67	121.00
34	AA	717	G	P-O3'-C3'	-5.55	113.03	119.70
34	AA	3195	C	C6-N1-C1'	-5.55	114.13	120.80
35	AC	83	U	O4'-C1'-N1	5.55	112.64	108.20
1	A	551	A	O4'-C1'-N9	5.55	112.64	108.20
34	AA	1960	U	O4'-C1'-N1	5.55	112.64	108.20
34	AA	3272	U	O4'-C1'-N1	5.55	112.64	108.20
34	AA	3364	A	O4'-C1'-N9	5.55	112.64	108.20
38	A0	37	PHE	CB-CG-CD1	-5.55	116.91	120.80
1	A	1311	U	O4'-C1'-N1	5.55	112.64	108.20
34	AA	1315	C	O4'-C1'-N1	5.55	112.64	108.20
34	AA	1617	A	O4'-C1'-N9	5.55	112.64	108.20
34	AA	3761	G	O4'-C1'-N9	5.55	112.64	108.20
34	AA	2679	A	N1-C6-N6	-5.55	115.27	118.60
34	AA	2689	G	C5-C6-O6	-5.55	125.27	128.60
34	AA	3113	U	O4'-C1'-N1	5.55	112.64	108.20
34	AA	1839	U	O4'-C1'-N1	5.55	112.64	108.20
34	AA	3595	U	O4'-C1'-N1	5.55	112.64	108.20
1	A	994	G	N1-C6-O6	5.54	123.23	119.90
34	AA	2738	U	O4'-C1'-N1	5.54	112.63	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	3376	U	O4'-C1'-N1	5.54	112.64	108.20
1	A	258	A	O4'-C1'-N9	5.54	112.63	108.20
1	A	555	G	O4'-C1'-N9	5.54	112.63	108.20
1	A	992	G	O4'-C1'-N9	5.54	112.63	108.20
2	7	5	G	O4'-C1'-N9	5.54	112.63	108.20
16	Y	160	ARG	NE-CZ-NH2	5.54	123.07	120.30
34	AA	879	U	O4'-C1'-N1	5.54	112.63	108.20
34	AA	1324	U	P-O3'-C3'	-5.54	113.05	119.70
34	AA	1469	U	O4'-C1'-N1	5.54	112.63	108.20
34	AA	3260	G	O4'-C1'-N9	5.54	112.63	108.20
34	AA	1220	U	O4'-C1'-N1	5.54	112.63	108.20
34	AA	2082	C	O4'-C1'-N1	5.54	112.63	108.20
34	AA	3183	G	O4'-C1'-N9	5.54	112.63	108.20
34	AA	3358	U	P-O3'-C3'	5.54	126.35	119.70
1	A	1929	C	O4'-C1'-N1	5.54	112.63	108.20
14	I	46	ARG	NE-CZ-NH2	5.54	123.07	120.30
34	AA	728	C	O4'-C1'-N1	5.53	112.63	108.20
34	AA	1727	U	O4'-C1'-N1	5.53	112.63	108.20
34	AA	3496	G	C5-C6-O6	-5.53	125.28	128.60
34	AA	2480	G	C5'-C4'-O4'	5.53	115.74	109.10
34	AA	3365	U	O4'-C1'-N1	5.53	112.63	108.20
1	A	747	U	O4'-C1'-N1	5.53	112.62	108.20
34	AA	1631	A	O4'-C1'-N9	5.53	112.62	108.20
34	AA	3264	U	O4'-C1'-N1	5.53	112.62	108.20
34	AA	3347	C	O4'-C1'-N1	5.53	112.62	108.20
34	AA	1811	A	O4'-C1'-N9	5.53	112.62	108.20
34	AA	3217	U	P-O3'-C3'	5.53	126.33	119.70
58	AK	60	ARG	NE-CZ-NH1	5.53	123.06	120.30
1	A	1086	U	O4'-C1'-N1	5.53	112.62	108.20
34	AA	214	C	O4'-C1'-N1	5.53	112.62	108.20
34	AA	517	U	O4'-C1'-N1	5.53	112.62	108.20
34	AA	1275	G	O4'-C1'-N9	5.53	112.62	108.20
52	Ae	6	ARG	NE-CZ-NH1	5.53	123.06	120.30
34	AA	3630	U	O4'-C1'-N1	5.52	112.62	108.20
1	A	39	A	O4'-C1'-N9	5.52	112.62	108.20
1	A	1638	U	O4'-C1'-N1	5.52	112.62	108.20
1	A	1906	U	O4'-C1'-N1	5.52	112.62	108.20
34	AA	831	U	O4'-C1'-N1	5.52	112.62	108.20
34	AA	1125	A	O4'-C1'-N9	5.52	112.62	108.20
1	A	1273	G	O4'-C1'-N9	5.52	112.62	108.20
1	A	1716	C	P-O3'-C3'	5.52	126.33	119.70
34	AA	810	U	O4'-C1'-N1	5.52	112.62	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	3637	G	O4'-C1'-N9	5.52	112.62	108.20
34	AA	2441	U	O4'-C1'-N1	5.52	112.62	108.20
34	AA	2716	U	O4'-C1'-N1	5.52	112.62	108.20
34	AA	167	U	O4'-C1'-N1	5.52	112.61	108.20
34	AA	351	U	O4'-C1'-N1	5.52	112.61	108.20
34	AA	3740	A	O4'-C1'-N9	5.52	112.61	108.20
34	AA	2725	U	O4'-C1'-N1	5.52	112.61	108.20
1	A	404	G	C5-C6-O6	-5.51	125.29	128.60
34	AA	3232	U	C5'-C4'-O4'	5.51	115.72	109.10
34	AA	120	U	O4'-C1'-N1	5.51	112.61	108.20
34	AA	1884	G	P-O3'-C3'	5.51	126.31	119.70
65	AT	135	ARG	NE-CZ-NH1	5.51	123.06	120.30
35	AC	65	A	P-O3'-C3'	-5.51	113.09	119.70
24	6	29	ARG	NE-CZ-NH1	5.51	123.06	120.30
34	AA	1066	U	O4'-C1'-N1	5.51	112.61	108.20
34	AA	1586	C	O4'-C1'-N1	5.51	112.61	108.20
1	A	469	U	O4'-C1'-N1	5.51	112.61	108.20
34	AA	1156	U	O4'-C1'-N1	5.51	112.61	108.20
1	A	1820	C	O4'-C1'-N1	5.51	112.61	108.20
34	AA	1031	G	N3-C2-N2	5.51	123.75	119.90
34	AA	1437	U	O4'-C1'-N1	5.50	112.60	108.20
34	AA	3474	C	O4'-C1'-N1	5.50	112.60	108.20
1	A	2075	C	O4'-C1'-N1	5.50	112.60	108.20
34	AA	1869	G	N1-C6-O6	5.50	123.20	119.90
34	AA	2089	C	P-O3'-C3'	5.50	126.30	119.70
1	A	211	U	O4'-C1'-N1	5.50	112.60	108.20
1	A	1316	U	O4'-C1'-N1	5.50	112.60	108.20
34	AA	3552	U	O4'-C1'-N1	5.50	112.60	108.20
34	AA	3581	A	C1'-O4'-C4'	-5.50	105.50	109.90
65	AT	103	ARG	NE-CZ-NH1	5.50	123.05	120.30
75	AV	84	ARG	NE-CZ-NH2	5.50	123.05	120.30
1	A	887	A	O4'-C1'-N9	5.50	112.60	108.20
34	AA	637	U	O4'-C1'-N1	5.50	112.60	108.20
34	AA	1027	G	N1-C6-O6	5.50	123.20	119.90
1	A	337	G	N1-C6-O6	5.50	123.20	119.90
1	A	620	G	C5-C6-O6	-5.50	125.30	128.60
33	L	70	PHE	CB-CG-CD1	5.50	124.65	120.80
34	AA	130	G	N1-C6-O6	5.50	123.20	119.90
34	AA	265	U	O4'-C1'-N1	5.50	112.60	108.20
34	AA	873	U	O4'-C1'-N1	5.50	112.60	108.20
34	AA	1285	U	O4'-C1'-N1	5.50	112.60	108.20
34	AA	1305	U	O4'-C1'-N1	5.50	112.60	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	3388	U	O4'-C1'-N1	5.50	112.60	108.20
36	AB	5	U	O4'-C1'-N1	5.50	112.60	108.20
2	7	6	G	O4'-C1'-N9	5.50	112.60	108.20
34	AA	1061	U	O4'-C1'-N1	5.50	112.60	108.20
1	A	2070	G	O4'-C1'-N9	5.50	112.60	108.20
34	AA	1977	U	O4'-C1'-N1	5.50	112.60	108.20
2	7	28	C	O4'-C1'-N1	5.49	112.59	108.20
34	AA	220	G	O4'-C1'-N9	5.49	112.59	108.20
34	AA	1903	C	C2-N1-C1'	5.49	124.84	118.80
34	AA	2659	C	O4'-C1'-N1	5.49	112.59	108.20
34	AA	3551	U	O4'-C1'-N1	5.49	112.59	108.20
70	AE	366	ARG	NE-CZ-NH1	5.49	123.05	120.30
1	A	337	G	C5-C6-O6	-5.49	125.31	128.60
34	AA	3378	C	O4'-C1'-N1	5.49	112.59	108.20
34	AA	891	C	O4'-C1'-N1	5.49	112.59	108.20
34	AA	1050	C	O4'-C1'-N1	5.49	112.59	108.20
34	AA	3393	C	O4'-C1'-N1	5.49	112.59	108.20
71	AF	211	TYR	CB-CG-CD1	-5.49	117.70	121.00
1	A	1729	A	P-O5'-C5'	-5.49	112.12	120.90
34	AA	1259	G	C5-C6-O6	-5.49	125.31	128.60
34	AA	1666	A	O4'-C1'-N9	5.49	112.59	108.20
34	AA	2666	A	O4'-C1'-N9	5.49	112.59	108.20
1	A	570	U	O4'-C1'-N1	5.49	112.59	108.20
1	A	1279	G	O4'-C1'-N9	5.49	112.59	108.20
20	C	84	ARG	NE-CZ-NH1	5.49	123.04	120.30
34	AA	2984	G	O4'-C1'-N9	5.49	112.59	108.20
1	A	1635	C	C5'-C4'-O4'	5.48	115.68	109.10
36	AB	61	G	O4'-C1'-N9	5.48	112.59	108.20
1	A	333	U	O4'-C1'-N1	5.48	112.59	108.20
4	S	16	ARG	NE-CZ-NH1	5.48	123.04	120.30
23	5	19	ARG	NE-CZ-NH1	5.48	123.04	120.30
50	Ab	49	ARG	NE-CZ-NH2	5.48	123.04	120.30
1	A	313	G	O4'-C1'-N9	5.48	112.58	108.20
1	A	1448	U	C2-N1-C1'	5.48	124.28	117.70
1	A	1661	U	O4'-C1'-N1	5.48	112.58	108.20
1	A	1944	U	O4'-C1'-N1	5.48	112.58	108.20
34	AA	3197	A	O4'-C1'-N9	5.48	112.58	108.20
51	Ad	73	ARG	NE-CZ-NH1	5.48	123.04	120.30
70	AE	58	ARG	NE-CZ-NH1	-5.48	117.56	120.30
2	7	36	U	O4'-C1'-N1	5.48	112.58	108.20
34	AA	2727	U	C1'-O4'-C4'	-5.48	105.52	109.90
34	AA	3131	A	O4'-C1'-N9	5.48	112.58	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	AL	191	ARG	NE-CZ-NH2	5.48	123.04	120.30
1	A	955	U	O4'-C1'-N1	5.48	112.58	108.20
1	A	1251	G	C8-N9-C1'	-5.48	119.88	127.00
1	A	1841	U	O4'-C1'-N1	5.48	112.58	108.20
3	Q	19	ARG	NE-CZ-NH2	5.48	123.04	120.30
34	AA	98	G	N1-C6-O6	5.48	123.19	119.90
34	AA	169	U	O4'-C1'-N1	5.48	112.58	108.20
34	AA	3313	U	O4'-C1'-N1	5.48	112.58	108.20
36	AB	95	U	O4'-C1'-N1	5.48	112.58	108.20
1	A	1212	C	O4'-C1'-N1	5.48	112.58	108.20
34	AA	833	G	P-O5'-C5'	5.48	129.66	120.90
34	AA	1725	U	O4'-C1'-N1	5.48	112.58	108.20
1	A	346	U	O4'-C1'-N1	5.47	112.58	108.20
34	AA	378	U	O4'-C1'-N1	5.47	112.58	108.20
34	AA	2001	U	O4'-C1'-N1	5.47	112.58	108.20
1	A	26	A	C4'-C3'-C2'	-5.47	97.13	102.60
34	AA	1174	C	O4'-C1'-N1	5.47	112.58	108.20
34	AA	2420	U	O4'-C1'-N1	5.47	112.58	108.20
34	AA	2583	C	O4'-C1'-N1	5.47	112.58	108.20
34	AA	2977	U	O4'-C1'-N1	5.47	112.58	108.20
34	AA	3339	U	O4'-C1'-N1	5.47	112.58	108.20
34	AA	3689	C	C6-N1-C2	-5.47	118.11	120.30
57	Ac	24	ARG	NE-CZ-NH2	5.47	123.03	120.30
1	A	1816	U	C5'-C4'-O4'	5.47	115.66	109.10
55	Ah	49	ARG	NE-CZ-NH2	5.47	123.03	120.30
34	AA	490	U	O4'-C1'-N1	5.47	112.57	108.20
34	AA	2832	A	O4'-C1'-N9	5.47	112.57	108.20
34	AA	3185	U	O4'-C1'-N1	5.47	112.57	108.20
34	AA	3423	U	O4'-C1'-N1	5.47	112.57	108.20
47	A8	111	ARG	NE-CZ-NH2	5.47	123.03	120.30
1	A	832	A	O4'-C1'-N9	5.46	112.57	108.20
34	AA	119	G	O4'-C1'-N9	5.46	112.57	108.20
34	AA	1435	G	O4'-C1'-N9	5.46	112.57	108.20
34	AA	3065	C	C2-N1-C1'	5.46	124.81	118.80
66	AZ	74	ARG	NE-CZ-NH1	5.46	123.03	120.30
1	A	322	G	O4'-C1'-N9	5.46	112.57	108.20
1	A	1207	U	O4'-C1'-N1	5.46	112.57	108.20
15	O	63	ARG	NE-CZ-NH2	-5.46	117.57	120.30
45	A1	119	ARG	NE-CZ-NH1	5.46	123.03	120.30
34	AA	3763	G	O4'-C1'-N9	5.46	112.57	108.20
1	A	1868	C	O4'-C1'-N1	5.46	112.57	108.20
34	AA	41	G	O4'-C1'-N9	5.46	112.57	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	2822	U	O4'-C1'-N1	5.46	112.57	108.20
34	AA	3377	A	O4'-C1'-N9	5.46	112.57	108.20
35	AC	147	U	O4'-C1'-N1	5.46	112.57	108.20
61	AQ	9	TYR	CB-CG-CD2	-5.46	117.72	121.00
1	A	1861	U	O4'-C1'-N1	5.46	112.56	108.20
34	AA	1879	U	O4'-C1'-N1	5.46	112.56	108.20
34	AA	3157	C	O4'-C1'-N1	5.46	112.56	108.20
34	AA	1853	C	O4'-C1'-N1	5.45	112.56	108.20
34	AA	1868	U	O4'-C1'-N1	5.45	112.56	108.20
34	AA	3302	G	N1-C6-O6	5.45	123.17	119.90
34	AA	3632	U	O4'-C1'-N1	5.45	112.56	108.20
1	A	305	G	O4'-C1'-N9	5.45	112.56	108.20
21	3	93	ARG	NE-CZ-NH2	5.45	123.02	120.30
34	AA	210	C	P-O3'-C3'	5.45	126.24	119.70
34	AA	423	U	O4'-C1'-N1	5.45	112.56	108.20
34	AA	660	U	O4'-C1'-N1	5.45	112.56	108.20
1	A	884	G	C5-C6-O6	-5.45	125.33	128.60
34	AA	2138	U	O4'-C1'-N1	5.45	112.56	108.20
34	AA	3509	G	O4'-C1'-N9	5.45	112.56	108.20
34	AA	3589	U	O4'-C1'-N1	5.44	112.55	108.20
1	A	1443	G	O4'-C1'-N9	5.44	112.55	108.20
1	A	1863	U	C5'-C4'-O4'	5.44	115.63	109.10
18	1	116	ARG	NE-CZ-NH1	5.44	123.02	120.30
34	AA	1867	U	O4'-C1'-N1	5.44	112.55	108.20
34	AA	3574	G	O4'-C1'-N9	5.44	112.55	108.20
1	A	1384	U	O4'-C1'-N1	5.44	112.55	108.20
34	AA	1060	G	O4'-C1'-N9	5.44	112.55	108.20
34	AA	1583	G	O4'-C1'-N9	5.44	112.55	108.20
34	AA	2510	U	O4'-C1'-N1	5.44	112.55	108.20
34	AA	2728	G	N1-C6-O6	5.44	123.16	119.90
34	AA	799	A	P-O3'-C3'	5.44	126.23	119.70
37	AL	103	ARG	NE-CZ-NH2	-5.44	117.58	120.30
34	AA	3287	C	O4'-C1'-N1	5.44	112.55	108.20
34	AA	807	U	O4'-C1'-N1	5.43	112.55	108.20
34	AA	2979	U	O4'-C1'-N1	5.43	112.55	108.20
34	AA	49	U	P-O3'-C3'	5.43	126.22	119.70
34	AA	128	U	O4'-C1'-N1	5.43	112.55	108.20
37	AL	190	ARG	NE-CZ-NH1	5.43	123.02	120.30
8	V	140	PHE	CB-CG-CD1	5.43	124.60	120.80
34	AA	2629	U	O4'-C1'-N1	5.43	112.55	108.20
34	AA	1865	C	O4'-C1'-N1	5.43	112.54	108.20
34	AA	1897	G	O4'-C1'-N9	5.43	112.54	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	3333	U	O4'-C1'-N1	5.43	112.54	108.20
34	AA	1028	G	O4'-C1'-N9	5.43	112.54	108.20
1	A	507	U	O4'-C1'-N1	5.43	112.54	108.20
1	A	985	U	O4'-C1'-N1	5.43	112.54	108.20
1	A	1226	A	O4'-C1'-N9	5.43	112.54	108.20
34	AA	3485	G	O4'-C1'-N9	5.43	112.54	108.20
1	A	925	C	O4'-C1'-N1	5.42	112.54	108.20
34	AA	2542	G	O4'-C1'-N9	5.42	112.54	108.20
35	AC	55	A	P-O5'-C5'	-5.42	112.22	120.90
35	AC	77	U	O4'-C1'-N1	5.42	112.54	108.20
1	A	957	U	O4'-C1'-N1	5.42	112.53	108.20
2	7	64	G	C5-C6-O6	-5.42	125.35	128.60
34	AA	1042	C	O4'-C1'-N1	5.42	112.53	108.20
34	AA	2166	G	O4'-C1'-N9	5.42	112.53	108.20
68	A5	60	TYR	CB-CG-CD2	-5.42	117.75	121.00
34	AA	911	U	O4'-C1'-N1	5.42	112.53	108.20
34	AA	1279	U	P-O5'-C5'	5.42	129.56	120.90
34	AA	3129	U	O4'-C1'-N1	5.42	112.53	108.20
76	Ag	12	ARG	NE-CZ-NH2	5.42	123.01	120.30
1	A	472	U	O4'-C1'-N1	5.41	112.53	108.20
34	AA	309	G	O4'-C1'-N9	5.41	112.53	108.20
35	AC	74	A	O4'-C1'-N9	5.41	112.53	108.20
1	A	1704	G	O4'-C1'-N9	5.41	112.53	108.20
1	A	2042	A	N1-C6-N6	5.41	121.85	118.60
34	AA	48	A	P-O3'-C3'	-5.41	113.21	119.70
34	AA	1997	G	O4'-C1'-N9	5.41	112.53	108.20
34	AA	2410	A	O4'-C1'-N9	5.41	112.53	108.20
35	AC	42	U	O4'-C1'-N1	5.41	112.53	108.20
1	A	117	G	C5-C6-O6	-5.41	125.36	128.60
34	AA	232	C	O4'-C1'-N1	5.41	112.53	108.20
34	AA	254	U	O4'-C1'-N1	5.41	112.53	108.20
34	AA	965	A	O4'-C1'-N9	5.41	112.53	108.20
34	AA	3755	U	O4'-C1'-N1	5.41	112.53	108.20
35	AC	129	U	O4'-C1'-N1	5.41	112.53	108.20
1	A	1747	U	O4'-C1'-N1	5.41	112.53	108.20
1	A	1895	U	O4'-C1'-N1	5.41	112.52	108.20
1	A	2010	U	O4'-C1'-N1	5.41	112.53	108.20
34	AA	856	C	O4'-C1'-N1	5.41	112.52	108.20
34	AA	2388	U	O4'-C1'-N1	5.41	112.52	108.20
2	7	64	G	N1-C6-O6	5.40	123.14	119.90
34	AA	540	C	O4'-C1'-N1	5.40	112.52	108.20
75	AV	71	ARG	NE-CZ-NH1	5.40	123.00	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	524	G	O4'-C1'-N9	5.40	112.52	108.20
1	A	858	U	O4'-C1'-N1	5.40	112.52	108.20
34	AA	1008	U	O4'-C1'-N1	5.40	112.52	108.20
34	AA	3468	G	O4'-C1'-N9	5.40	112.52	108.20
34	AA	3670	U	O4'-C1'-N1	5.40	112.52	108.20
2	7	60	U	O4'-C1'-N1	5.40	112.52	108.20
57	Ac	58	ARG	NE-CZ-NH1	5.40	123.00	120.30
34	AA	1191	G	C5-C6-O6	-5.40	125.36	128.60
34	AA	1251	U	O4'-C1'-N1	5.40	112.52	108.20
34	AA	2802	U	O4'-C1'-N1	5.40	112.52	108.20
34	AA	3431	G	O4'-C1'-N9	5.40	112.52	108.20
1	A	433	C	O4'-C1'-N1	5.40	112.52	108.20
35	AC	141	U	O4'-C1'-N1	5.40	112.52	108.20
1	A	848	U	O4'-C1'-N1	5.39	112.52	108.20
34	AA	225	U	O4'-C1'-N1	5.39	112.52	108.20
34	AA	492	U	O4'-C1'-N1	5.39	112.51	108.20
34	AA	979	G	O4'-C1'-N9	5.39	112.51	108.20
34	AA	2814	U	O4'-C1'-N1	5.39	112.51	108.20
34	AA	3022	U	O4'-C1'-N1	5.39	112.51	108.20
77	AX	105	TYR	CB-CG-CD2	5.39	124.23	121.00
34	AA	2426	U	O4'-C1'-N1	5.39	112.51	108.20
66	AZ	65	ARG	NE-CZ-NH1	5.39	123.00	120.30
70	AE	237	ARG	NE-CZ-NH1	5.39	123.00	120.30
1	A	152	G	O4'-C1'-N9	5.39	112.51	108.20
1	A	616	U	O4'-C1'-N1	5.39	112.51	108.20
1	A	1893	C	C2-N1-C1'	5.39	124.73	118.80
34	AA	119	G	C5-C6-O6	-5.39	125.37	128.60
34	AA	901	U	O4'-C1'-N1	5.39	112.51	108.20
34	AA	1809	U	O4'-C1'-N1	5.39	112.51	108.20
34	AA	2095	U	O4'-C1'-N1	5.39	112.51	108.20
34	AA	2942	G	O4'-C1'-N9	5.39	112.51	108.20
34	AA	3550	U	O4'-C1'-N1	5.39	112.51	108.20
35	AC	89	U	O4'-C1'-N1	5.39	112.51	108.20
36	AB	33	U	O4'-C1'-N1	5.39	112.51	108.20
36	AB	57	C	O4'-C1'-N1	5.39	112.51	108.20
34	AA	215	C	C2'-C3'-O3'	5.39	122.32	113.70
1	A	112	U	O4'-C1'-N1	5.39	112.51	108.20
1	A	1308	C	O4'-C1'-N1	5.39	112.51	108.20
34	AA	1021	G	O4'-C1'-N9	5.39	112.51	108.20
34	AA	2010	C	O4'-C1'-N1	5.39	112.51	108.20
1	A	847	U	O4'-C1'-N1	5.38	112.51	108.20
34	AA	361	G	N1-C6-O6	5.38	123.13	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	1517	U	O4'-C1'-N1	5.38	112.51	108.20
34	AA	3666	U	O4'-C1'-N1	5.38	112.51	108.20
65	AT	162	ARG	NE-CZ-NH1	5.38	122.99	120.30
6	M	69	ARG	NE-CZ-NH1	5.38	122.99	120.30
34	AA	542	A	C5'-C4'-O4'	5.38	115.56	109.10
34	AA	681	U	O4'-C1'-N1	5.38	112.50	108.20
34	AA	2509	U	O4'-C1'-N1	5.38	112.50	108.20
34	AA	3194	C	O4'-C1'-N1	5.38	112.50	108.20
54	AP	173	ARG	NE-CZ-NH1	5.38	122.99	120.30
1	A	1629	G	O4'-C1'-N9	5.38	112.50	108.20
1	A	1802	G	C5'-C4'-O4'	5.38	115.55	109.10
34	AA	1744	U	O4'-C1'-N1	5.38	112.50	108.20
59	AM	88	ARG	NE-CZ-NH1	5.38	122.99	120.30
34	AA	2533	G	O4'-C1'-N9	5.38	112.50	108.20
34	AA	2972	U	O4'-C1'-N1	5.38	112.50	108.20
1	A	824	A	O4'-C1'-N9	5.37	112.50	108.20
1	A	1254	G	O4'-C1'-N9	5.37	112.50	108.20
1	A	1645	C	C6-N1-C1'	-5.37	114.35	120.80
1	A	1697	C	O4'-C1'-N1	5.37	112.50	108.20
1	A	1947	U	O4'-C1'-N1	5.37	112.50	108.20
34	AA	385	G	O4'-C1'-N9	5.37	112.50	108.20
1	A	52	U	O4'-C1'-N1	5.37	112.50	108.20
1	A	381	U	O4'-C1'-N1	5.37	112.50	108.20
29	K	108	TYR	CB-CG-CD2	-5.37	117.78	121.00
34	AA	1974	U	O4'-C1'-N1	5.37	112.50	108.20
34	AA	2917	C	P-O5'-C5'	-5.37	112.31	120.90
34	AA	3670	U	P-O3'-C3'	5.37	126.15	119.70
1	A	982	A	O4'-C1'-N9	5.37	112.50	108.20
34	AA	3387	U	O4'-C1'-N1	5.37	112.50	108.20
1	A	1052	A	O4'-C1'-N9	5.37	112.50	108.20
34	AA	2388	U	P-O3'-C3'	5.37	126.14	119.70
74	AH	167	ARG	NE-CZ-NH2	5.37	122.98	120.30
34	AA	2081	U	O4'-C1'-N1	5.37	112.49	108.20
34	AA	1213	U	O4'-C1'-N1	5.37	112.49	108.20
34	AA	2188	U	O4'-C1'-N1	5.37	112.49	108.20
27	F	77	ARG	NE-CZ-NH1	5.36	122.98	120.30
1	A	1702	C	O4'-C1'-N1	5.36	112.49	108.20
33	L	31	ARG	NE-CZ-NH2	-5.36	117.62	120.30
34	AA	3363	U	C5'-C4'-C3'	-5.36	107.42	116.00
34	AA	3567	U	O4'-C1'-N1	5.36	112.49	108.20
1	A	1801	A	O4'-C1'-N9	5.36	112.49	108.20
1	A	2014	A	O4'-C1'-N9	5.36	112.49	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	1535	G	O4'-C1'-N9	5.36	112.49	108.20
34	AA	2932	A	N1-C6-N6	-5.36	115.38	118.60
34	AA	3302	G	C5-C6-O6	-5.36	125.38	128.60
34	AA	104	G	O4'-C1'-N9	5.36	112.49	108.20
1	A	1877	C	O4'-C1'-N1	5.36	112.49	108.20
34	AA	1773	U	O4'-C1'-N1	5.36	112.49	108.20
34	AA	3379	A	P-O5'-C5'	5.36	129.47	120.90
34	AA	3506	U	P-O5'-C5'	-5.36	112.33	120.90
35	AC	108	A	O4'-C1'-N9	5.36	112.48	108.20
49	Aa	66	ARG	NE-CZ-NH2	5.36	122.98	120.30
60	AS	145	ARG	NE-CZ-NH2	5.36	122.98	120.30
1	A	2008	U	O4'-C1'-N1	5.36	112.48	108.20
34	AA	3099	C	P-O3'-C3'	-5.36	113.27	119.70
34	AA	3735	A	O4'-C1'-N9	5.36	112.48	108.20
1	A	651	G	O4'-C1'-N9	5.35	112.48	108.20
1	A	1014	U	O4'-C1'-N1	5.35	112.48	108.20
1	A	2032	U	O4'-C1'-N1	5.35	112.48	108.20
34	AA	572	U	O4'-C1'-N1	5.35	112.48	108.20
34	AA	1800	U	O4'-C1'-N1	5.35	112.48	108.20
34	AA	2549	A	O4'-C1'-N9	5.35	112.48	108.20
34	AA	2604	G	C5-C6-O6	-5.35	125.39	128.60
35	AC	71	U	O4'-C1'-N1	5.35	112.48	108.20
35	AC	139	A	O4'-C1'-N9	5.35	112.48	108.20
46	AN	29	ARG	NE-CZ-NH1	5.35	122.98	120.30
1	A	618	U	O4'-C1'-N1	5.35	112.48	108.20
1	A	2006	U	O4'-C1'-N1	5.35	112.48	108.20
1	A	164	C	O4'-C1'-N1	5.35	112.48	108.20
1	A	299	U	O4'-C1'-N1	5.35	112.48	108.20
1	A	421	U	O4'-C1'-N1	5.35	112.48	108.20
34	AA	954	G	C5'-C4'-O4'	5.35	115.52	109.10
34	AA	1533	U	O4'-C1'-N1	5.35	112.48	108.20
34	AA	2038	U	O4'-C1'-N1	5.35	112.48	108.20
34	AA	3396	U	O4'-C1'-N1	5.35	112.48	108.20
34	AA	3697	G	P-O5'-C5'	5.35	129.46	120.90
36	AB	8	U	O4'-C1'-N1	5.35	112.48	108.20
36	AB	85	G	O4'-C1'-N9	5.35	112.48	108.20
34	AA	3112	U	O4'-C1'-N1	5.35	112.48	108.20
61	AQ	176	PHE	CB-CG-CD2	5.35	124.54	120.80
1	A	204	U	O4'-C1'-N1	5.34	112.47	108.20
34	AA	434	C	O4'-C1'-N1	5.34	112.47	108.20
34	AA	2723	G	C5-C6-O6	-5.34	125.39	128.60
34	AA	2810	A	C2'-C3'-O3'	5.34	122.25	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1000	C	O4'-C1'-N1	5.34	112.47	108.20
34	AA	3785	G	O4'-C1'-N9	5.34	112.47	108.20
1	A	1041	G	O4'-C1'-N9	5.34	112.47	108.20
2	7	30	G	C5-C6-O6	-5.34	125.39	128.60
25	B	136	ARG	NE-CZ-NH2	5.34	122.97	120.30
34	AA	54	C	O4'-C1'-N1	5.34	112.47	108.20
1	A	1038	C	O4'-C1'-N1	5.34	112.47	108.20
34	AA	1189	G	O4'-C1'-N9	5.34	112.47	108.20
34	AA	1511	U	O4'-C1'-N1	5.34	112.47	108.20
34	AA	3342	C	C2-N1-C1'	5.34	124.67	118.80
35	AC	22	U	O4'-C1'-N1	5.34	112.47	108.20
54	AP	63	ARG	NE-CZ-NH2	-5.34	117.63	120.30
34	AA	580	A	C5'-C4'-C3'	5.34	124.54	116.00
34	AA	1427	U	O4'-C1'-N1	5.34	112.47	108.20
73	AU	178	ARG	NE-CZ-NH2	5.34	122.97	120.30
16	Y	99	ARG	NE-CZ-NH2	5.34	122.97	120.30
34	AA	2824	A	C5-C6-N6	-5.34	119.43	123.70
36	AB	110	G	O4'-C1'-N9	5.34	112.47	108.20
34	AA	367	U	O4'-C1'-N1	5.33	112.47	108.20
38	A0	37	PHE	CB-CG-CD2	5.33	124.53	120.80
1	A	1649	C	O4'-C1'-N1	5.33	112.47	108.20
30	J	140	ARG	NE-CZ-NH2	5.33	122.97	120.30
34	AA	1480	G	C4-N9-C1'	5.33	133.43	126.50
34	AA	2959	G	O4'-C1'-N9	5.33	112.47	108.20
34	AA	2990	G	O4'-C1'-N9	5.33	112.47	108.20
28	H	197	ARG	NE-CZ-NH1	5.33	122.97	120.30
34	AA	494	U	O4'-C1'-N1	5.33	112.47	108.20
34	AA	1088	C	O4'-C1'-N1	5.33	112.47	108.20
34	AA	2595	G	O4'-C1'-N9	5.33	112.47	108.20
1	A	1441	C	P-O5'-C5'	5.33	129.43	120.90
1	A	624	U	O4'-C1'-N1	5.33	112.46	108.20
1	A	1184	G	C5-C6-O6	-5.33	125.40	128.60
34	AA	2474	C	O4'-C1'-N1	5.33	112.46	108.20
34	AA	3311	G	O4'-C1'-N9	5.33	112.46	108.20
34	AA	3331	G	O4'-C1'-N9	5.33	112.46	108.20
34	AA	684	G	O4'-C1'-N9	5.33	112.46	108.20
34	AA	1292	U	O4'-C1'-N1	5.33	112.46	108.20
1	A	374	U	O4'-C1'-N1	5.33	112.46	108.20
1	A	1464	U	O4'-C1'-N1	5.33	112.46	108.20
34	AA	208	U	O4'-C1'-N1	5.33	112.46	108.20
34	AA	1309	U	O4'-C1'-N1	5.33	112.46	108.20
34	AA	1780	G	C5-C6-O6	-5.33	125.41	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1919	G	O4'-C1'-N9	5.32	112.46	108.20
34	AA	869	A	O4'-C1'-N9	5.32	112.46	108.20
34	AA	1257	A	O4'-C1'-N9	5.32	112.46	108.20
34	AA	1603	C	O4'-C1'-N1	5.32	112.46	108.20
34	AA	97	U	O4'-C1'-N1	5.32	112.46	108.20
36	AB	20	U	O4'-C1'-N1	5.32	112.46	108.20
1	A	1231	G	N1-C6-O6	5.32	123.09	119.90
1	A	1231	G	O4'-C1'-N9	5.32	112.46	108.20
1	A	1242	G	O4'-C1'-N9	5.32	112.46	108.20
34	AA	54	C	P-O5'-C5'	5.32	129.41	120.90
34	AA	170	U	O4'-C1'-N1	5.32	112.46	108.20
34	AA	2092	G	N1-C6-O6	5.32	123.09	119.90
1	A	1675	G	O4'-C1'-N9	5.32	112.45	108.20
68	A5	231	ARG	NE-CZ-NH1	-5.32	117.64	120.30
1	A	1227	G	O4'-C1'-N9	5.32	112.45	108.20
1	A	1788	U	C6-N1-C1'	-5.32	113.75	121.20
1	A	2007	U	O4'-C1'-N1	5.32	112.45	108.20
34	AA	2520	C	O4'-C1'-N1	5.32	112.45	108.20
36	AB	22	G	O4'-C1'-N9	5.32	112.45	108.20
1	A	387	C	O4'-C1'-N1	5.32	112.45	108.20
1	A	1434	U	O4'-C1'-N1	5.32	112.45	108.20
34	AA	1452	U	O4'-C1'-N1	5.32	112.45	108.20
34	AA	3392	A	O4'-C1'-N9	5.32	112.45	108.20
1	A	1383	U	O4'-C1'-N1	5.31	112.45	108.20
1	A	441	U	O4'-C1'-N1	5.31	112.45	108.20
1	A	493	G	O4'-C1'-N9	5.31	112.45	108.20
34	AA	236	U	O4'-C1'-N1	5.31	112.45	108.20
34	AA	1658	G	P-O3'-C3'	5.31	126.08	119.70
1	A	2059	G	O4'-C1'-N9	5.31	112.45	108.20
34	AA	2068	G	O4'-C1'-N9	5.31	112.45	108.20
34	AA	3420	U	O4'-C1'-N1	5.31	112.45	108.20
1	A	1966	U	O4'-C1'-N1	5.31	112.45	108.20
48	A9	132	ARG	NE-CZ-NH2	5.31	122.95	120.30
34	AA	1064	U	O4'-C1'-N1	5.31	112.45	108.20
34	AA	3219	U	O4'-C1'-N1	5.31	112.45	108.20
34	AA	3764	G	O4'-C1'-N9	5.31	112.45	108.20
36	AB	53	U	O4'-C1'-N1	5.31	112.45	108.20
36	AB	112	U	O4'-C1'-N1	5.31	112.44	108.20
50	Ab	89	ARG	NE-CZ-NH1	5.31	122.95	120.30
2	7	38	A	O4'-C1'-N9	5.31	112.44	108.20
34	AA	580	A	O4'-C1'-N9	5.31	112.44	108.20
34	AA	1271	A	O4'-C1'-N9	5.31	112.44	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	1769	U	O4'-C1'-N1	5.31	112.44	108.20
1	A	167	A	P-O3'-C3'	5.30	126.07	119.70
1	A	1685	U	O4'-C1'-N1	5.30	112.44	108.20
34	AA	595	U	C2-N1-C1'	5.30	124.07	117.70
34	AA	622	U	O4'-C1'-N1	5.30	112.44	108.20
34	AA	1602	A	P-O3'-C3'	5.30	126.07	119.70
34	AA	3213	U	P-O3'-C3'	-5.30	113.33	119.70
34	AA	3239	U	O4'-C1'-N1	5.30	112.44	108.20
1	A	1604	A	O4'-C1'-N9	5.30	112.44	108.20
34	AA	659	U	O4'-C1'-N1	5.30	112.44	108.20
34	AA	942	C	O4'-C1'-N1	5.30	112.44	108.20
36	AB	19	G	O4'-C1'-N9	5.30	112.44	108.20
69	AD	12	ARG	NE-CZ-NH1	5.30	122.95	120.30
1	A	1375	C	C6-N1-C1'	-5.30	114.44	120.80
34	AA	1575	C	C6-N1-C2	-5.30	118.18	120.30
34	AA	1597	U	O4'-C1'-N1	5.30	112.44	108.20
34	AA	1892	G	O4'-C1'-N9	5.30	112.44	108.20
34	AA	3348	U	O4'-C1'-N1	5.30	112.44	108.20
35	AC	155	A	N1-C6-N6	5.30	121.78	118.60
1	A	544	G	O4'-C1'-N9	5.30	112.44	108.20
1	A	892	U	O4'-C1'-N1	5.30	112.44	108.20
34	AA	205	G	C5-C6-O6	-5.30	125.42	128.60
34	AA	1619	U	O4'-C1'-N1	5.30	112.44	108.20
1	A	623	G	O4'-C1'-N9	5.29	112.44	108.20
1	A	1691	G	O4'-C1'-N9	5.29	112.44	108.20
11	G	178	ARG	NE-CZ-NH2	5.29	122.95	120.30
34	AA	1480	G	C8-N9-C1'	-5.29	120.12	127.00
34	AA	3445	C	C5'-C4'-O4'	5.29	115.45	109.10
34	AA	3689	C	O4'-C1'-N1	5.29	112.44	108.20
65	AT	143	ARG	NE-CZ-NH1	5.29	122.95	120.30
1	A	978	U	O4'-C1'-N1	5.29	112.43	108.20
34	AA	1420	C	O4'-C1'-N1	5.29	112.43	108.20
1	A	201	G	O4'-C1'-N9	5.29	112.43	108.20
1	A	1933	C	O4'-C1'-N1	5.29	112.43	108.20
34	AA	932	U	O4'-C1'-N1	5.29	112.43	108.20
34	AA	1553	U	O4'-C1'-N1	5.29	112.43	108.20
1	A	1405	U	O4'-C1'-N1	5.29	112.43	108.20
34	AA	2562	U	C5'-C4'-O4'	5.29	115.44	109.10
34	AA	3766	U	O4'-C1'-N1	5.29	112.43	108.20
1	A	142	G	O4'-C1'-N9	5.29	112.43	108.20
1	A	1187	A	O4'-C1'-N9	5.29	112.43	108.20
34	AA	3159	G	O4'-C1'-N9	5.29	112.43	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	3653	G	O4'-C1'-N9	5.29	112.43	108.20
70	AE	10	ARG	NE-CZ-NH1	5.29	122.94	120.30
76	Ag	35	ARG	NE-CZ-NH1	5.29	122.94	120.30
34	AA	721	U	O4'-C1'-N1	5.28	112.43	108.20
1	A	371	G	C5'-C4'-C3'	-5.28	107.55	116.00
1	A	2085	G	O4'-C1'-N9	5.28	112.43	108.20
34	AA	439	U	O4'-C1'-N1	5.28	112.43	108.20
1	A	398	G	O4'-C1'-N9	5.28	112.42	108.20
35	AC	145	A	C5'-C4'-O4'	5.28	115.44	109.10
1	A	1069	C	C2-N1-C1'	5.28	124.61	118.80
34	AA	1526	G	O4'-C1'-N9	5.28	112.42	108.20
1	A	2053	U	C2-N1-C1'	5.28	124.03	117.70
34	AA	59	G	N1-C6-O6	5.28	123.07	119.90
34	AA	656	U	O4'-C1'-N1	5.28	112.42	108.20
34	AA	3334	U	O4'-C1'-N1	5.28	112.42	108.20
1	A	951	U	O4'-C1'-N1	5.28	112.42	108.20
34	AA	2958	G	O4'-C1'-N9	5.28	112.42	108.20
34	AA	3063	U	O4'-C1'-N1	5.28	112.42	108.20
34	AA	3139	C	C2-N1-C1'	5.28	124.60	118.80
34	AA	1785	U	O4'-C1'-N1	5.27	112.42	108.20
63	AW	56	ARG	NE-CZ-NH2	-5.27	117.66	120.30
1	A	1640	U	O4'-C1'-N1	5.27	112.42	108.20
34	AA	2396	C	O4'-C1'-N1	5.27	112.42	108.20
35	AC	115	C	O4'-C1'-N1	5.27	112.42	108.20
8	V	36	ARG	NE-CZ-NH2	5.27	122.94	120.30
34	AA	544	C	C6-N1-C1'	-5.27	114.47	120.80
35	AC	67	G	C1'-O4'-C4'	-5.27	105.68	109.90
1	A	91	G	O4'-C1'-N9	5.27	112.42	108.20
1	A	2011	G	O4'-C1'-N9	5.27	112.42	108.20
34	AA	830	U	C6-N1-C1'	-5.27	113.82	121.20
34	AA	2981	A	O4'-C1'-N9	5.27	112.42	108.20
33	L	70	PHE	CB-CG-CD2	-5.27	117.11	120.80
34	AA	2547	U	O4'-C1'-N1	5.27	112.42	108.20
34	AA	2640	U	O4'-C1'-N1	5.27	112.41	108.20
36	AB	54	A	O4'-C1'-N9	5.27	112.41	108.20
1	A	604	G	C5-C6-O6	-5.27	125.44	128.60
1	A	1368	G	O4'-C1'-N9	5.27	112.41	108.20
34	AA	1141	G	O4'-C1'-N9	5.27	112.41	108.20
1	A	1017	G	O4'-C1'-N9	5.26	112.41	108.20
34	AA	1647	U	O4'-C1'-N1	5.26	112.41	108.20
35	AC	64	U	O4'-C1'-N1	5.26	112.41	108.20
34	AA	450	A	O4'-C1'-N9	5.26	112.41	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	634	U	O4'-C1'-N1	5.26	112.41	108.20
1	A	2070	G	C5-C6-O6	-5.26	125.44	128.60
34	AA	2805	U	O4'-C1'-N1	5.26	112.41	108.20
34	AA	3708	U	O4'-C1'-N1	5.26	112.41	108.20
1	A	395	G	O4'-C1'-N9	5.26	112.41	108.20
1	A	815	G	O4'-C1'-N9	5.26	112.41	108.20
1	A	1300	G	C5-C6-O6	-5.26	125.44	128.60
34	AA	2604	G	O4'-C1'-N9	5.26	112.41	108.20
34	AA	3742	C	O4'-C1'-N1	5.26	112.41	108.20
34	AA	3749	U	O4'-C1'-N1	5.26	112.41	108.20
35	AC	5	A	O4'-C1'-N9	5.26	112.41	108.20
62	AR	247	ARG	NE-CZ-NH1	5.26	122.93	120.30
68	A5	255	ARG	NE-CZ-NH1	5.26	122.93	120.30
1	A	307	G	C5-C6-O6	-5.26	125.45	128.60
34	AA	2567	U	O4'-C1'-N1	5.26	112.41	108.20
34	AA	2955	C	P-O5'-C5'	5.26	129.31	120.90
35	AC	150	U	O4'-C1'-N1	5.26	112.41	108.20
34	AA	1317	C	O4'-C1'-N1	5.25	112.40	108.20
34	AA	1816	G	O4'-C1'-N9	5.25	112.40	108.20
75	AV	131	ARG	NE-CZ-NH1	5.25	122.93	120.30
2	7	62	C	P-O5'-C5'	5.25	129.31	120.90
34	AA	2040	G	N1-C6-O6	5.25	123.05	119.90
41	A2	112	TYR	CB-CG-CD1	-5.25	117.85	121.00
1	A	511	U	O4'-C1'-N1	5.25	112.40	108.20
34	AA	416	G	C1'-O4'-C4'	-5.25	105.70	109.90
34	AA	1630	A	P-O3'-C3'	-5.25	113.40	119.70
69	AD	30	ARG	NE-CZ-NH2	-5.25	117.67	120.30
1	A	1961	U	O4'-C1'-N1	5.25	112.40	108.20
34	AA	1089	U	O4'-C1'-N1	5.25	112.40	108.20
35	AC	18	U	O4'-C1'-N1	5.25	112.40	108.20
1	A	516	G	O4'-C1'-N9	5.25	112.40	108.20
1	A	1362	U	O4'-C1'-N1	5.25	112.40	108.20
34	AA	1764	U	O4'-C1'-N1	5.25	112.40	108.20
33	L	77	ARG	NE-CZ-NH1	5.25	122.92	120.30
34	AA	353	G	C2'-C3'-O3'	5.25	122.09	113.70
34	AA	1962	U	O4'-C1'-N1	5.25	112.40	108.20
34	AA	2728	G	C5-C6-O6	-5.25	125.45	128.60
1	A	976	A	O4'-C1'-N9	5.25	112.40	108.20
1	A	1462	A	P-O3'-C3'	-5.25	113.41	119.70
34	AA	575	U	O4'-C1'-N1	5.25	112.40	108.20
34	AA	882	G	O4'-C1'-N9	5.25	112.40	108.20
34	AA	909	U	O4'-C1'-N1	5.25	112.40	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	200	U	O4'-C1'-N1	5.24	112.39	108.20
1	A	494	G	O4'-C1'-N9	5.24	112.39	108.20
1	A	1016	U	O4'-C1'-N1	5.24	112.39	108.20
34	AA	77	A	O4'-C1'-N9	5.24	112.39	108.20
34	AA	2472	C	O4'-C1'-N1	5.24	112.39	108.20
1	A	1891	U	P-O3'-C3'	5.24	125.99	119.70
1	A	2055	A	O4'-C1'-N9	5.24	112.39	108.20
7	U	76	ARG	NE-CZ-NH2	-5.24	117.68	120.30
34	AA	281	G	O4'-C1'-N9	5.24	112.39	108.20
34	AA	1856	U	O4'-C1'-N1	5.24	112.39	108.20
34	AA	2037	U	O4'-C1'-N1	5.24	112.39	108.20
34	AA	3327	G	O4'-C1'-N9	5.24	112.39	108.20
1	A	577	A	C4'-C3'-C2'	-5.24	97.36	102.60
60	AS	165	TYR	CB-CG-CD1	-5.24	117.86	121.00
34	AA	797	A	O4'-C1'-N9	5.24	112.39	108.20
34	AA	1634	G	O4'-C1'-N9	5.24	112.39	108.20
36	AB	75	G	O4'-C1'-N9	5.24	112.39	108.20
1	A	1223	G	C5-C6-O6	-5.24	125.46	128.60
34	AA	1022	U	O4'-C1'-N1	5.24	112.39	108.20
34	AA	3585	A	P-O3'-C3'	5.24	125.98	119.70
70	AE	237	ARG	NE-CZ-NH2	-5.24	117.68	120.30
1	A	972	U	O4'-C1'-N1	5.23	112.39	108.20
34	AA	189	U	O4'-C1'-N1	5.23	112.39	108.20
34	AA	1496	U	O4'-C1'-N1	5.23	112.39	108.20
34	AA	2104	C	C6-N1-C2	-5.23	118.21	120.30
34	AA	2656	A	O4'-C1'-N9	5.23	112.39	108.20
1	A	1236	U	O4'-C1'-N1	5.23	112.38	108.20
8	V	140	PHE	CB-CG-CD2	-5.23	117.14	120.80
34	AA	960	A	O4'-C1'-N9	5.23	112.39	108.20
34	AA	1015	A	O4'-C1'-N9	5.23	112.39	108.20
34	AA	3538	A	O4'-C1'-N9	5.23	112.38	108.20
34	AA	3727	A	O4'-C1'-N9	5.23	112.38	108.20
1	A	636	U	O4'-C1'-N1	5.23	112.38	108.20
1	A	1370	U	C2-N1-C1'	5.23	123.97	117.70
34	AA	1589	G	O4'-C1'-N9	5.23	112.38	108.20
34	AA	2611	U	C5'-C4'-O4'	5.23	115.37	109.10
34	AA	3701	A	O4'-C1'-N9	5.23	112.38	108.20
68	A5	160	ARG	NE-CZ-NH2	5.23	122.91	120.30
34	AA	659	U	C5'-C4'-O4'	5.23	115.37	109.10
1	A	117	G	N1-C6-O6	5.22	123.03	119.90
34	AA	1218	C	O4'-C1'-N1	5.22	112.38	108.20
34	AA	2995	A	P-O3'-C3'	5.22	125.97	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
63	AW	61	ARG	NE-CZ-NH1	5.22	122.91	120.30
78	AJ	76	ARG	NE-CZ-NH2	5.22	122.91	120.30
1	A	1412	U	O4'-C1'-N1	5.22	112.38	108.20
1	A	1652	A	O4'-C1'-N9	5.22	112.38	108.20
11	G	109	ARG	NE-CZ-NH2	-5.22	117.69	120.30
34	AA	1254	G	C5-C6-O6	-5.22	125.47	128.60
60	AS	163	ARG	NE-CZ-NH2	-5.22	117.69	120.30
34	AA	1554	G	P-O3'-C3'	5.22	125.97	119.70
1	A	34	G	O4'-C1'-N9	5.22	112.38	108.20
1	A	417	C	O4'-C1'-N1	5.22	112.38	108.20
2	7	33	U	O4'-C1'-N1	5.22	112.38	108.20
34	AA	831	U	C5'-C4'-O4'	5.22	115.36	109.10
34	AA	1763	G	N1-C6-O6	5.22	123.03	119.90
1	A	266	A	O4'-C1'-N9	5.22	112.37	108.20
1	A	1817	U	O4'-C1'-N1	5.22	112.37	108.20
35	AC	59	U	O4'-C1'-N1	5.22	112.37	108.20
34	AA	231	G	C5'-C4'-O4'	5.21	115.36	109.10
34	AA	3614	A	O4'-C1'-N9	5.21	112.37	108.20
76	Ag	16	ARG	NE-CZ-NH2	-5.21	117.69	120.30
1	A	1081	U	C5'-C4'-O4'	5.21	115.36	109.10
34	AA	3078	A	N1-C6-N6	-5.21	115.47	118.60
33	L	176	PHE	CB-CG-CD2	5.21	124.45	120.80
34	AA	230	G	O4'-C1'-N9	5.21	112.37	108.20
1	A	1918	U	O4'-C1'-N1	5.21	112.37	108.20
34	AA	1288	C	O4'-C1'-N1	5.21	112.37	108.20
34	AA	2811	A	O4'-C1'-N9	5.21	112.37	108.20
34	AA	3267	C	O4'-C1'-N1	5.21	112.37	108.20
1	A	613	A	O4'-C1'-N9	5.21	112.36	108.20
1	A	886	U	O4'-C1'-N1	5.21	112.36	108.20
1	A	968	G	C5-C6-O6	-5.21	125.48	128.60
1	A	1854	U	P-O3'-C3'	5.21	125.95	119.70
34	AA	1193	G	O4'-C1'-N9	5.21	112.36	108.20
1	A	1729	A	C5'-C4'-O4'	5.21	115.35	109.10
35	AC	67	G	C3'-C2'-C1'	-5.21	97.34	101.50
1	A	569	G	O4'-C1'-N9	5.20	112.36	108.20
34	AA	1455	C	O4'-C1'-N1	5.20	112.36	108.20
34	AA	3444	G	O4'-C1'-N9	5.20	112.36	108.20
65	AT	59	ARG	NE-CZ-NH1	5.20	122.90	120.30
1	A	1211	G	O4'-C1'-N9	5.20	112.36	108.20
25	B	118	TYR	CB-CG-CD2	-5.20	117.88	121.00
1	A	881	C	C5'-C4'-O4'	5.20	115.34	109.10
1	A	439	C	P-O3'-C3'	5.20	125.94	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1058	G	N1-C6-O6	5.20	123.02	119.90
34	AA	2478	G	O4'-C1'-N9	5.20	112.36	108.20
34	AA	2807	U	O4'-C1'-N1	5.20	112.36	108.20
1	A	124	U	O4'-C1'-N1	5.20	112.36	108.20
1	A	510	G	O4'-C1'-N9	5.20	112.36	108.20
29	K	20	ARG	NE-CZ-NH1	5.20	122.90	120.30
1	A	488	U	O4'-C1'-N1	5.20	112.36	108.20
1	A	1305	A	P-O3'-C3'	5.20	125.94	119.70
2	7	46	G	O4'-C1'-N9	5.20	112.36	108.20
34	AA	3649	G	O4'-C1'-N9	5.20	112.36	108.20
71	AF	312	ARG	NE-CZ-NH1	5.20	122.90	120.30
1	A	89	C	O4'-C1'-N1	5.19	112.36	108.20
1	A	1080	G	O4'-C1'-N9	5.19	112.36	108.20
34	AA	1311	U	O4'-C1'-N1	5.19	112.36	108.20
9	E	6	ARG	NE-CZ-NH1	5.19	122.90	120.30
34	AA	59	G	O4'-C1'-N9	5.19	112.36	108.20
34	AA	247	A	N1-C6-N6	5.19	121.72	118.60
34	AA	1026	G	N1-C6-O6	5.19	123.02	119.90
1	A	27	U	O4'-C1'-N1	5.19	112.35	108.20
1	A	751	U	O4'-C1'-N1	5.19	112.35	108.20
1	A	1606	U	O4'-C1'-N1	5.19	112.35	108.20
34	AA	22	G	O4'-C1'-N9	5.19	112.35	108.20
34	AA	722	G	N1-C6-O6	5.19	123.01	119.90
34	AA	1706	A	O4'-C1'-N9	5.19	112.35	108.20
34	AA	1833	G	O4'-C1'-N9	5.19	112.35	108.20
34	AA	2662	G	O4'-C1'-N9	5.19	112.35	108.20
1	A	52	U	C5'-C4'-O4'	5.19	115.33	109.10
23	5	42	ARG	NE-CZ-NH1	5.19	122.89	120.30
34	AA	27	U	O4'-C1'-N1	5.19	112.35	108.20
34	AA	792	U	C1'-O4'-C4'	-5.19	105.75	109.90
34	AA	2556	C	C5'-C4'-O4'	5.19	115.33	109.10
34	AA	2709	U	O4'-C1'-N1	5.19	112.35	108.20
34	AA	3330	A	O4'-C1'-N9	5.19	112.35	108.20
58	AK	124	ARG	NE-CZ-NH2	5.19	122.89	120.30
34	AA	1327	C	O4'-C1'-N1	5.19	112.35	108.20
1	A	1180	U	O4'-C1'-N1	5.18	112.35	108.20
34	AA	2745	G	O4'-C1'-N9	5.18	112.35	108.20
35	AC	38	G	C5'-C4'-C3'	-5.18	107.70	116.00
1	A	269	A	O4'-C1'-N9	5.18	112.34	108.20
34	AA	1908	U	O4'-C1'-N1	5.18	112.34	108.20
56	AI	170	ARG	NE-CZ-NH2	5.18	122.89	120.30
1	A	1171	U	O4'-C1'-N1	5.18	112.34	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1928	A	C5'-C4'-O4'	5.18	115.32	109.10
32	P	98	ARG	NE-CZ-NH1	5.18	122.89	120.30
34	AA	422	G	O4'-C1'-N9	5.18	112.34	108.20
1	A	1798	G	C5-C6-O6	-5.18	125.49	128.60
1	A	1885	G	O4'-C1'-N9	5.18	112.34	108.20
34	AA	3018	A	O4'-C1'-N9	5.18	112.34	108.20
34	AA	577	U	O4'-C1'-N1	5.18	112.34	108.20
34	AA	2158	U	O4'-C1'-N1	5.18	112.34	108.20
1	A	2025	U	O4'-C1'-N1	5.18	112.34	108.20
34	AA	812	U	C1'-O4'-C4'	-5.18	105.76	109.90
34	AA	2034	G	O4'-C1'-N9	5.18	112.34	108.20
34	AA	2594	U	O4'-C1'-N1	5.18	112.34	108.20
34	AA	2884	G	P-O3'-C3'	-5.18	113.49	119.70
34	AA	3206	A	O4'-C1'-N9	5.18	112.34	108.20
34	AA	1576	U	O4'-C1'-N1	5.17	112.34	108.20
1	A	1101	G	O4'-C1'-N9	5.17	112.34	108.20
1	A	1831	G	N1-C6-O6	5.17	123.00	119.90
34	AA	524	U	O4'-C1'-N1	5.17	112.34	108.20
34	AA	1694	G	C5-C6-O6	-5.17	125.50	128.60
1	A	1920	C	O4'-C1'-N1	5.17	112.34	108.20
18	1	94	ARG	NE-CZ-NH1	5.17	122.89	120.30
34	AA	3291	U	O4'-C1'-N1	5.17	112.34	108.20
56	AI	221	PHE	CB-CG-CD2	5.17	124.42	120.80
34	AA	1259	G	N1-C6-O6	5.17	123.00	119.90
36	AB	37	A	O4'-C1'-N9	5.17	112.33	108.20
1	A	1205	U	O4'-C1'-N1	5.17	112.33	108.20
34	AA	1031	G	N1-C2-N2	-5.17	111.55	116.20
34	AA	1515	A	O4'-C1'-N9	5.17	112.33	108.20
34	AA	1907	A	O4'-C1'-N9	5.17	112.33	108.20
34	AA	2019	A	O4'-C1'-N9	5.17	112.33	108.20
34	AA	2187	G	N3-C2-N2	5.17	123.52	119.90
34	AA	2465	G	O4'-C1'-N9	5.17	112.33	108.20
36	AB	31	G	O4'-C1'-N9	5.17	112.33	108.20
34	AA	436	G	O4'-C1'-N9	5.17	112.33	108.20
34	AA	3633	U	O4'-C1'-N1	5.17	112.33	108.20
1	A	45	U	O4'-C1'-N1	5.16	112.33	108.20
1	A	876	U	C1'-O4'-C4'	-5.16	105.77	109.90
1	A	2022	A	O4'-C1'-N9	5.16	112.33	108.20
2	7	32	C	P-O5'-C5'	5.16	129.16	120.90
7	U	3	ARG	NE-CZ-NH1	5.16	122.88	120.30
34	AA	495	U	O4'-C1'-N1	5.16	112.33	108.20
34	AA	2943	U	O4'-C1'-N1	5.16	112.33	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	3156	U	O4'-C1'-N1	5.16	112.33	108.20
34	AA	3737	G	N1-C6-O6	5.16	123.00	119.90
1	A	886	U	P-O3'-C3'	5.16	125.89	119.70
7	U	124	ARG	NE-CZ-NH1	-5.16	117.72	120.30
34	AA	535	U	O4'-C1'-N1	5.16	112.33	108.20
34	AA	1423	G	O4'-C1'-N9	5.16	112.33	108.20
34	AA	3301	C	P-O3'-C3'	-5.16	113.51	119.70
34	AA	3709	U	O4'-C1'-N1	5.16	112.33	108.20
48	A9	41	TYR	CB-CG-CD1	-5.16	117.90	121.00
34	AA	1006	G	O4'-C1'-N9	5.16	112.33	108.20
34	AA	1279	U	O4'-C1'-N1	5.16	112.33	108.20
34	AA	2022	A	O4'-C1'-N9	5.16	112.33	108.20
35	AC	67	G	C4'-C3'-C2'	-5.16	97.44	102.60
36	AB	79	U	O4'-C1'-N1	5.16	112.32	108.20
34	AA	190	G	C5-C6-O6	-5.15	125.51	128.60
1	A	644	U	O4'-C1'-N1	5.15	112.32	108.20
1	A	946	G	O4'-C1'-N9	5.15	112.32	108.20
34	AA	3591	U	O4'-C1'-N1	5.15	112.32	108.20
35	AC	110	G	O4'-C1'-N9	5.15	112.32	108.20
36	AB	76	U	O4'-C1'-N1	5.15	112.32	108.20
34	AA	2529	G	O4'-C1'-N9	5.15	112.32	108.20
47	A8	27	ARG	NH1-CZ-NH2	-5.15	113.73	119.40
1	A	293	U	O4'-C1'-N1	5.15	112.32	108.20
21	3	82	ARG	NE-CZ-NH1	5.15	122.87	120.30
36	AB	23	A	O4'-C1'-N9	5.15	112.32	108.20
1	A	897	G	O4'-C1'-N9	5.15	112.32	108.20
1	A	1462	A	O4'-C1'-N9	5.15	112.32	108.20
1	A	1881	G	N1-C6-O6	5.15	122.99	119.90
2	7	50	U	O4'-C1'-N1	5.15	112.32	108.20
34	AA	652	A	C2'-C3'-O3'	5.15	121.94	113.70
34	AA	3434	A	C1'-O4'-C4'	-5.15	105.78	109.90
35	AC	92	A	O4'-C1'-N9	5.15	112.32	108.20
1	A	1274	C	O4'-C1'-N1	5.15	112.32	108.20
34	AA	12	U	O4'-C1'-N1	5.15	112.32	108.20
34	AA	2519	U	O4'-C1'-N1	5.14	112.31	108.20
34	AA	3065	C	C6-N1-C1'	-5.14	114.63	120.80
34	AA	3648	U	O4'-C1'-N1	5.14	112.31	108.20
60	AS	59	ARG	NE-CZ-NH2	-5.14	117.73	120.30
61	AQ	46	PHE	CB-CG-CD2	5.14	124.40	120.80
1	A	296	G	O4'-C1'-N9	5.14	112.31	108.20
34	AA	1538	U	C5'-C4'-O4'	5.14	115.27	109.10
34	AA	3340	U	O4'-C1'-N1	5.14	112.31	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	AC	74	A	C5'-C4'-C3'	-5.14	107.78	116.00
1	A	959	C	O4'-C1'-N1	5.14	112.31	108.20
33	L	176	PHE	CB-CG-CD1	-5.14	117.20	120.80
34	AA	164	A	O4'-C1'-N9	5.14	112.31	108.20
36	AB	84	U	O4'-C1'-N1	5.14	112.31	108.20
70	AE	58	ARG	NE-CZ-NH2	5.14	122.87	120.30
1	A	935	G	O4'-C1'-N9	5.14	112.31	108.20
9	E	78	ARG	NE-CZ-NH2	5.14	122.87	120.30
2	7	35	A	O4'-C1'-N9	5.14	112.31	108.20
3	Q	16	ARG	NE-CZ-NH2	5.14	122.87	120.30
34	AA	722	G	O4'-C1'-N9	5.14	112.31	108.20
34	AA	1069	G	N3-C2-N2	5.14	123.50	119.90
34	AA	1331	A	N1-C6-N6	5.14	121.68	118.60
34	AA	3048	U	O4'-C1'-N1	5.14	112.31	108.20
34	AA	3313	U	C5'-C4'-O4'	5.14	115.26	109.10
1	A	24	U	O4'-C1'-N1	5.13	112.31	108.20
30	J	98	ARG	NE-CZ-NH1	5.13	122.87	120.30
33	L	49	ARG	NE-CZ-NH2	-5.13	117.73	120.30
58	AK	84	ARG	NE-CZ-NH2	5.13	122.87	120.30
1	A	1658	G	P-O3'-C3'	-5.13	113.54	119.70
34	AA	533	A	O4'-C1'-N9	5.13	112.31	108.20
6	M	124	ARG	NE-CZ-NH2	5.13	122.87	120.30
34	AA	628	U	O4'-C1'-N1	5.13	112.31	108.20
34	AA	635	U	O4'-C1'-N1	5.13	112.31	108.20
34	AA	687	G	O4'-C1'-N9	5.13	112.31	108.20
2	7	51	C	O4'-C1'-N1	5.13	112.30	108.20
34	AA	1732	A	O4'-C1'-N9	5.13	112.30	108.20
17	Z	59	ARG	NE-CZ-NH1	5.13	122.86	120.30
34	AA	166	U	O4'-C1'-N1	5.13	112.30	108.20
34	AA	267	U	O4'-C1'-N1	5.13	112.30	108.20
65	AT	70	ARG	NE-CZ-NH1	5.13	122.86	120.30
1	A	68	U	O4'-C1'-N1	5.13	112.30	108.20
1	A	891	U	O4'-C1'-N1	5.13	112.30	108.20
1	A	1681	G	O4'-C1'-N9	5.13	112.30	108.20
34	AA	673	U	C1'-O4'-C4'	-5.13	105.80	109.90
34	AA	828	G	N1-C6-O6	5.13	122.98	119.90
34	AA	1082	G	O4'-C1'-N9	5.13	112.30	108.20
34	AA	1331	A	O4'-C1'-N9	5.13	112.30	108.20
34	AA	1805	U	C2'-C3'-O3'	5.13	121.90	113.70
34	AA	2168	A	C5-C6-N6	5.13	127.80	123.70
34	AA	2971	G	O4'-C1'-N9	5.13	112.30	108.20
34	AA	227	A	O4'-C1'-N9	5.12	112.30	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	105	A	P-O3'-C3'	5.12	125.85	119.70
1	A	799	U	O4'-C1'-N1	5.12	112.30	108.20
1	A	1631	G	O4'-C1'-N9	5.12	112.30	108.20
34	AA	271	G	O4'-C1'-N9	5.12	112.30	108.20
34	AA	938	U	O4'-C1'-N1	5.12	112.30	108.20
34	AA	1869	G	C5-C6-O6	-5.12	125.53	128.60
1	A	571	G	O4'-C1'-N9	5.12	112.30	108.20
1	A	1321	C	C5'-C4'-O4'	5.12	115.25	109.10
1	A	1809	G	O4'-C1'-N9	5.12	112.30	108.20
34	AA	2837	G	N1-C6-O6	5.12	122.97	119.90
1	A	1307	U	O4'-C1'-N1	5.12	112.30	108.20
1	A	1631	G	P-O3'-C3'	-5.12	113.56	119.70
1	A	1980	A	C4'-C3'-C2'	-5.12	97.48	102.60
34	AA	33	G	C5'-C4'-C3'	-5.12	107.81	116.00
34	AA	1096	G	O4'-C1'-N9	5.12	112.30	108.20
34	AA	2721	U	O4'-C1'-N1	5.12	112.30	108.20
34	AA	2728	G	O4'-C1'-N9	5.12	112.30	108.20
34	AA	3576	A	O4'-C1'-N9	5.12	112.30	108.20
1	A	817	U	C2-N1-C1'	5.12	123.84	117.70
34	AA	1641	G	O4'-C1'-N9	5.12	112.29	108.20
1	A	531	U	O4'-C1'-N1	5.12	112.29	108.20
21	3	89	ARG	NE-CZ-NH1	5.12	122.86	120.30
34	AA	131	U	O4'-C1'-N1	5.12	112.29	108.20
34	AA	1513	U	O4'-C1'-N1	5.12	112.29	108.20
34	AA	3464	U	O4'-C1'-N1	5.12	112.29	108.20
1	A	837	A	C5'-C4'-C3'	5.11	124.18	116.00
34	AA	2618	G	C5'-C4'-O4'	5.11	115.23	109.10
34	AA	3064	U	P-O3'-C3'	-5.11	113.56	119.70
1	A	1410	G	O4'-C1'-N9	5.11	112.29	108.20
34	AA	1540	G	C3'-C2'-C1'	-5.11	97.41	101.50
34	AA	2723	G	N1-C6-O6	5.11	122.97	119.90
1	A	1239	A	O4'-C1'-N9	5.11	112.29	108.20
34	AA	1537	G	P-O3'-C3'	-5.11	113.57	119.70
34	AA	2644	U	O4'-C1'-N1	5.11	112.29	108.20
34	AA	3750	U	O4'-C1'-N1	5.11	112.29	108.20
1	A	605	U	O4'-C1'-N1	5.11	112.29	108.20
1	A	1679	G	O4'-C1'-N9	5.11	112.29	108.20
59	AM	88	ARG	NE-CZ-NH2	-5.11	117.75	120.30
1	A	849	U	O4'-C1'-N1	5.11	112.29	108.20
1	A	1184	G	N1-C6-O6	5.11	122.96	119.90
1	A	1664	G	C5-C6-O6	-5.11	125.54	128.60
1	A	1818	A	C5'-C4'-O4'	5.11	115.23	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	2220	U	O4'-C1'-N1	5.11	112.29	108.20
34	AA	2916	C	C6-N1-C2	-5.11	118.26	120.30
1	A	1381	C	C2'-C3'-O3'	5.11	121.87	113.70
34	AA	591	G	O4'-C1'-N9	5.11	112.28	108.20
34	AA	1683	A	O4'-C1'-N9	5.11	112.28	108.20
34	AA	3437	U	O4'-C1'-N1	5.11	112.28	108.20
1	A	185	U	O4'-C1'-N1	5.10	112.28	108.20
71	AF	222	ARG	NE-CZ-NH1	5.10	122.85	120.30
34	AA	1655	U	O4'-C1'-N1	5.10	112.28	108.20
34	AA	2173	G	O4'-C1'-N9	5.10	112.28	108.20
34	AA	2582	U	O4'-C1'-N1	5.10	112.28	108.20
34	AA	3776	U	O4'-C1'-N1	5.10	112.28	108.20
41	A2	54	SER	C-N-CA	5.10	134.46	121.70
34	AA	1808	U	O4'-C1'-N1	5.10	112.28	108.20
34	AA	2143	U	O4'-C1'-N1	5.10	112.28	108.20
34	AA	2704	U	O4'-C1'-N1	5.10	112.28	108.20
1	A	640	U	O4'-C1'-N1	5.10	112.28	108.20
36	AB	99	G	N1-C6-O6	5.10	122.96	119.90
34	AA	941	G	C5'-C4'-C3'	5.10	124.16	116.00
34	AA	2984	G	C5-C6-O6	-5.10	125.54	128.60
1	A	425	G	C5-C6-O6	-5.10	125.54	128.60
1	A	394	G	O4'-C1'-N9	5.09	112.28	108.20
1	A	830	U	O4'-C1'-N1	5.09	112.28	108.20
1	A	1108	A	P-O3'-C3'	5.09	125.81	119.70
1	A	1976	G	C5'-C4'-C3'	-5.09	107.85	116.00
24	6	37	ARG	NE-CZ-NH1	5.09	122.85	120.30
25	B	146	ARG	NE-CZ-NH1	5.09	122.85	120.30
34	AA	1449	G	O4'-C1'-N9	5.09	112.28	108.20
34	AA	2434	U	C5'-C4'-O4'	5.09	115.21	109.10
34	AA	2486	U	O4'-C1'-N1	5.09	112.28	108.20
34	AA	3345	U	O4'-C1'-N1	5.09	112.28	108.20
61	AQ	128	ARG	NE-CZ-NH1	5.09	122.85	120.30
1	A	1720	G	O4'-C1'-N9	5.09	112.27	108.20
34	AA	1324	U	O4'-C1'-N1	5.09	112.28	108.20
34	AA	1333	A	O4'-C1'-N9	5.09	112.28	108.20
34	AA	3159	G	C5-C6-O6	-5.09	125.55	128.60
34	AA	3160	A	O4'-C1'-N9	5.09	112.27	108.20
34	AA	3335	A	O4'-C1'-N9	5.09	112.27	108.20
1	A	343	G	P-O3'-C3'	-5.09	113.59	119.70
1	A	379	G	O4'-C1'-N9	5.09	112.27	108.20
1	A	561	C	P-O3'-C3'	5.09	125.81	119.70
1	A	944	G	O4'-C1'-N9	5.09	112.27	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1717	A	P-O3'-C3'	-5.09	113.59	119.70
21	3	39	PHE	CB-CG-CD2	-5.09	117.24	120.80
34	AA	1629	G	O4'-C1'-N9	5.09	112.27	108.20
34	AA	2411	C	O4'-C1'-N1	5.09	112.27	108.20
1	A	745	A	O4'-C1'-N9	5.09	112.27	108.20
34	AA	2714	U	O4'-C1'-N1	5.09	112.27	108.20
34	AA	3582	G	O4'-C1'-N9	5.09	112.27	108.20
34	AA	393	G	P-O3'-C3'	5.09	125.80	119.70
34	AA	757	U	O4'-C1'-N1	5.09	112.27	108.20
34	AA	756	G	O4'-C1'-N9	5.08	112.27	108.20
34	AA	2564	A	O4'-C1'-N9	5.08	112.27	108.20
34	AA	3049	G	C5-C6-O6	-5.08	125.55	128.60
1	A	410	G	O4'-C1'-N9	5.08	112.27	108.20
1	A	489	G	O4'-C1'-N9	5.08	112.27	108.20
34	AA	44	U	O4'-C1'-N1	5.08	112.27	108.20
34	AA	243	U	O4'-C1'-N1	5.08	112.27	108.20
34	AA	623	U	O4'-C1'-N1	5.08	112.27	108.20
34	AA	661	G	O4'-C1'-N9	5.08	112.27	108.20
34	AA	2117	A	O4'-C1'-N9	5.08	112.27	108.20
34	AA	3486	G	O4'-C1'-N9	5.08	112.27	108.20
36	AB	115	G	O4'-C1'-N9	5.08	112.27	108.20
1	A	1893	C	C6-N1-C1'	-5.08	114.70	120.80
34	AA	1067	U	O4'-C1'-N1	5.08	112.27	108.20
34	AA	2601	C	P-O3'-C3'	5.08	125.80	119.70
62	AR	24	ARG	NE-CZ-NH1	5.08	122.84	120.30
34	AA	3030	A	O4'-C1'-N9	5.08	112.26	108.20
34	AA	2885	A	C1'-O4'-C4'	-5.08	105.84	109.90
1	A	558	G	O4'-C1'-N9	5.08	112.26	108.20
1	A	906	U	O4'-C1'-N1	5.08	112.26	108.20
34	AA	716	C	O4'-C1'-N1	5.08	112.26	108.20
34	AA	3246	A	O4'-C1'-N9	5.08	112.26	108.20
18	1	69	ARG	NE-CZ-NH2	-5.07	117.76	120.30
34	AA	1012	U	O4'-C1'-N1	5.07	112.26	108.20
34	AA	1604	U	O4'-C1'-N1	5.07	112.26	108.20
34	AA	2122	U	O4'-C1'-N1	5.07	112.26	108.20
34	AA	2956	U	C2-N1-C1'	5.07	123.79	117.70
34	AA	3100	G	C5-C6-O6	-5.07	125.56	128.60
1	A	392	G	O4'-C1'-N9	5.07	112.26	108.20
34	AA	773	A	C4'-C3'-C2'	-5.07	97.53	102.60
34	AA	1190	G	O4'-C1'-N9	5.07	112.26	108.20
35	AC	37	A	C2'-C3'-O3'	5.07	121.82	113.70
1	A	1198	U	C1'-O4'-C4'	-5.07	105.84	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
32	P	121	ARG	NE-CZ-NH2	5.07	122.83	120.30
34	AA	147	C	O4'-C1'-N1	5.07	112.26	108.20
34	AA	3522	C	P-O3'-C3'	-5.07	113.61	119.70
1	A	1266	G	O4'-C1'-N9	5.07	112.25	108.20
1	A	1407	U	O4'-C1'-N1	5.07	112.25	108.20
34	AA	215	C	O4'-C1'-N1	5.07	112.25	108.20
58	AK	159	ARG	NE-CZ-NH1	5.07	122.83	120.30
7	U	99	ARG	NE-CZ-NH1	5.07	122.83	120.30
27	F	87	MET	CG-SD-CE	-5.07	92.09	100.20
34	AA	594	C	C6-N1-C2	-5.07	118.27	120.30
1	A	809	U	O4'-C1'-N1	5.07	112.25	108.20
34	AA	431	G	C4-N9-C1'	5.07	133.09	126.50
34	AA	431	G	C8-N9-C1'	-5.07	120.41	127.00
34	AA	1774	U	O4'-C1'-N1	5.07	112.25	108.20
34	AA	2391	U	O4'-C1'-N1	5.07	112.25	108.20
34	AA	3105	U	O4'-C1'-N1	5.07	112.25	108.20
34	AA	3449	U	O4'-C1'-N1	5.06	112.25	108.20
63	AW	23	ARG	NE-CZ-NH1	5.06	122.83	120.30
1	A	1291	C	O4'-C1'-N1	5.06	112.25	108.20
7	U	76	ARG	NE-CZ-NH1	5.06	122.83	120.30
34	AA	64	G	O4'-C1'-N9	5.06	112.25	108.20
34	AA	317	U	O4'-C1'-N1	5.06	112.25	108.20
1	A	928	U	O4'-C1'-N1	5.06	112.25	108.20
1	A	1185	A	O4'-C1'-N9	5.06	112.25	108.20
1	A	1283	U	O4'-C1'-N1	5.06	112.25	108.20
34	AA	3062	U	O4'-C1'-N1	5.06	112.25	108.20
1	A	1165	G	O4'-C1'-N9	5.06	112.25	108.20
1	A	2065	C	O4'-C1'-N1	5.06	112.25	108.20
34	AA	1341	G	N1-C6-O6	5.06	122.93	119.90
34	AA	1593	G	O4'-C1'-N9	5.06	112.25	108.20
47	A8	13	ARG	NE-CZ-NH1	5.06	122.83	120.30
1	A	583	G	C5-C6-O6	-5.06	125.57	128.60
1	A	1724	U	O4'-C1'-N1	5.06	112.24	108.20
34	AA	1092	A	O4'-C1'-N9	5.06	112.25	108.20
34	AA	2715	C	O4'-C1'-N1	5.06	112.25	108.20
34	AA	2960	G	O4'-C1'-N9	5.06	112.25	108.20
34	AA	3408	G	C5-C6-O6	-5.06	125.57	128.60
67	A3	10	ARG	NE-CZ-NH1	5.06	122.83	120.30
1	A	567	U	O4'-C1'-N1	5.05	112.24	108.20
1	A	938	U	O4'-C1'-N1	5.05	112.24	108.20
34	AA	2550	C	C6-N1-C1'	-5.05	114.73	120.80
34	AA	3593	U	O4'-C1'-N1	5.05	112.24	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	3	95	ARG	NE-CZ-NH1	5.05	122.83	120.30
34	AA	83	U	C5'-C4'-O4'	5.05	115.16	109.10
34	AA	3248	C	C5'-C4'-O4'	5.05	115.16	109.10
34	AA	3580	G	O4'-C1'-N9	5.05	112.24	108.20
70	AE	281	ARG	NE-CZ-NH2	5.05	122.83	120.30
1	A	341	U	O4'-C1'-N1	5.05	112.24	108.20
1	A	550	C	O4'-C1'-N1	5.05	112.24	108.20
4	S	115	ARG	NE-CZ-NH2	5.05	122.83	120.30
34	AA	1519	G	O4'-C1'-N9	5.05	112.24	108.20
34	AA	1897	G	P-O3'-C3'	5.05	125.76	119.70
34	AA	2041	U	C5'-C4'-O4'	5.05	115.16	109.10
34	AA	2602	A	O4'-C1'-N9	5.05	112.24	108.20
1	A	153	A	C5'-C4'-O4'	5.05	115.16	109.10
1	A	453	U	O4'-C1'-N1	5.05	112.24	108.20
34	AA	212	U	O4'-C1'-N1	5.05	112.24	108.20
34	AA	645	A	O4'-C1'-N9	5.05	112.24	108.20
34	AA	20	G	O4'-C1'-N9	5.05	112.24	108.20
1	A	1964	G	O4'-C1'-N9	5.05	112.24	108.20
34	AA	319	U	O4'-C1'-N1	5.05	112.24	108.20
34	AA	1703	U	P-O3'-C3'	5.05	125.75	119.70
34	AA	3024	U	O4'-C1'-N1	5.04	112.24	108.20
34	AA	10	G	N1-C6-O6	5.04	122.93	119.90
34	AA	1319	U	P-O3'-C3'	5.04	125.75	119.70
34	AA	3027	U	O4'-C1'-N1	5.04	112.24	108.20
34	AA	3636	U	O4'-C1'-N1	5.04	112.23	108.20
1	A	635	G	N3-C2-N2	5.04	123.43	119.90
1	A	1319	G	C5-C6-O6	-5.04	125.58	128.60
34	AA	464	G	O4'-C1'-N9	5.04	112.23	108.20
34	AA	1048	G	O4'-C1'-N9	5.04	112.23	108.20
34	AA	3337	U	C5'-C4'-O4'	5.04	115.15	109.10
1	A	2073	A	C5'-C4'-O4'	5.04	115.15	109.10
15	O	63	ARG	NE-CZ-NH1	5.04	122.82	120.30
34	AA	215	C	C5'-C4'-O4'	5.04	115.15	109.10
34	AA	1989	A	O4'-C1'-N9	5.04	112.23	108.20
34	AA	2554	G	C5-C6-O6	-5.04	125.58	128.60
34	AA	3139	C	O4'-C1'-N1	5.04	112.23	108.20
34	AA	3436	U	O4'-C1'-N1	5.04	112.23	108.20
46	AN	21	PHE	CB-CG-CD1	-5.04	117.27	120.80
1	A	1173	C	O4'-C1'-N1	5.04	112.23	108.20
1	A	1208	G	O4'-C1'-N9	5.04	112.23	108.20
27	F	252	ARG	NE-CZ-NH1	5.04	122.82	120.30
34	AA	200	A	C5-C6-N6	-5.04	119.67	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	235	A	C5'-C4'-O4'	5.04	115.14	109.10
34	AA	798	U	P-O3'-C3'	-5.04	113.66	119.70
1	A	560	G	O4'-C1'-N9	5.03	112.23	108.20
1	A	958	U	O4'-C1'-N1	5.03	112.23	108.20
1	A	1705	C	C5'-C4'-O4'	5.03	115.14	109.10
34	AA	633	U	O4'-C1'-N1	5.03	112.23	108.20
34	AA	1188	A	O4'-C1'-N9	5.03	112.23	108.20
34	AA	1738	A	O4'-C1'-N9	5.03	112.23	108.20
34	AA	2590	U	P-O3'-C3'	-5.03	113.66	119.70
34	AA	2651	A	O4'-C1'-N9	5.03	112.23	108.20
34	AA	3311	G	P-O3'-C3'	-5.03	113.66	119.70
34	AA	3623	A	O4'-C1'-N9	5.03	112.23	108.20
56	AI	51	ARG	NE-CZ-NH2	5.03	122.82	120.30
34	AA	828	G	C5-C6-O6	-5.03	125.58	128.60
34	AA	2819	U	O4'-C1'-N1	5.03	112.22	108.20
34	AA	3321	U	O4'-C1'-N1	5.03	112.22	108.20
1	A	44	U	P-O3'-C3'	-5.03	113.67	119.70
34	AA	3549	U	O4'-C1'-N1	5.03	112.22	108.20
1	A	1282	U	O4'-C1'-N1	5.03	112.22	108.20
1	A	1363	U	O4'-C1'-N1	5.03	112.22	108.20
34	AA	2189	A	O4'-C1'-N9	5.03	112.22	108.20
36	AB	30	A	O4'-C1'-N9	5.03	112.22	108.20
1	A	168	U	P-O3'-C3'	-5.03	113.67	119.70
1	A	602	G	O4'-C1'-N9	5.03	112.22	108.20
1	A	852	A	O4'-C1'-N9	5.03	112.22	108.20
34	AA	614	U	O4'-C1'-N1	5.03	112.22	108.20
34	AA	1237	C	O4'-C1'-N1	5.03	112.22	108.20
34	AA	2808	U	O4'-C1'-N1	5.03	112.22	108.20
34	AA	2917	C	O4'-C1'-N1	5.03	112.22	108.20
34	AA	3342	C	C6-N1-C1'	-5.03	114.77	120.80
34	AA	3655	U	O4'-C1'-N1	5.03	112.22	108.20
34	AA	3639	G	N1-C6-O6	5.02	122.92	119.90
34	AA	3657	G	O4'-C1'-N9	5.02	112.22	108.20
1	A	1871	G	O4'-C1'-N9	5.02	112.22	108.20
2	7	15	G	C5-C6-O6	-5.02	125.59	128.60
34	AA	139	A	O4'-C1'-N9	5.02	112.22	108.20
34	AA	2171	U	O4'-C1'-N1	5.02	112.22	108.20
34	AA	1538	U	C6-N1-C1'	-5.02	114.17	121.20
1	A	90	U	O4'-C1'-N1	5.02	112.22	108.20
1	A	1108	A	C4'-C3'-C2'	-5.02	97.58	102.60
1	A	1453	G	O4'-C1'-N9	5.02	112.22	108.20
1	A	2070	G	N1-C6-O6	5.02	122.91	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	AA	201	G	O4'-C1'-N9	5.02	112.22	108.20
34	AA	257	U	C2'-C3'-O3'	5.02	121.73	113.70
34	AA	550	A	O4'-C1'-N9	5.02	112.22	108.20
34	AA	821	C	C1'-O4'-C4'	-5.02	105.89	109.90
34	AA	1822	A	O4'-C1'-N9	5.02	112.22	108.20
35	AC	30	U	O4'-C1'-N1	5.02	112.22	108.20
36	AB	25	A	O4'-C1'-N9	5.02	112.22	108.20
1	A	884	G	N1-C6-O6	5.02	122.91	119.90
1	A	1437	U	O4'-C1'-N1	5.02	112.21	108.20
1	A	2028	U	O4'-C1'-N1	5.02	112.21	108.20
29	K	97	ARG	NE-CZ-NH1	5.02	122.81	120.30
34	AA	1027	G	P-O5'-C5'	-5.02	112.87	120.90
43	A6	38	ARG	NE-CZ-NH2	5.02	122.81	120.30
54	AP	63	ARG	NE-CZ-NH1	5.02	122.81	120.30
1	A	147	C	O4'-C1'-N1	5.01	112.21	108.20
1	A	1215	G	C5-C6-O6	-5.01	125.59	128.60
28	H	85	ARG	NE-CZ-NH1	-5.01	117.79	120.30
34	AA	798	U	O4'-C1'-N1	5.01	112.21	108.20
34	AA	1077	U	O4'-C1'-N1	5.01	112.21	108.20
34	AA	2408	G	C5'-C4'-O4'	5.01	115.12	109.10
34	AA	2600	G	N1-C6-O6	5.01	122.91	119.90
34	AA	3660	A	O4'-C1'-N9	5.01	112.21	108.20
1	A	844	G	N1-C6-O6	5.01	122.91	119.90
1	A	1703	U	O4'-C1'-N1	5.01	112.21	108.20
34	AA	912	U	O4'-C1'-N1	5.01	112.21	108.20
34	AA	1192	C	O4'-C1'-N1	5.01	112.21	108.20
1	A	1092	A	O4'-C1'-N9	5.01	112.21	108.20
34	AA	324	U	C5'-C4'-O4'	5.01	115.11	109.10
34	AA	607	A	C5-C6-N6	-5.01	119.69	123.70
34	AA	1016	A	C5'-C4'-O4'	5.01	115.11	109.10
34	AA	3363	U	O4'-C1'-N1	5.01	112.21	108.20
36	AB	48	G	O4'-C1'-N9	5.01	112.21	108.20
1	A	818	C	C5'-C4'-O4'	5.01	115.11	109.10
1	A	1941	C	O4'-C1'-N1	5.01	112.21	108.20
34	AA	238	G	O4'-C1'-N9	5.01	112.21	108.20
34	AA	943	G	O4'-C1'-N9	5.01	112.21	108.20
34	AA	2689	G	C8-N9-C4	5.01	108.40	106.40
64	AY	137	ARG	NE-CZ-NH1	5.01	122.80	120.30
34	AA	1168	C	O4'-C1'-N1	5.01	112.20	108.20
34	AA	2193	U	O4'-C1'-N1	5.01	112.20	108.20
1	A	413	A	O4'-C1'-N9	5.00	112.20	108.20
1	A	1068	U	O4'-C1'-N1	5.00	112.20	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	103	U	P-O3'-C3'	5.00	125.70	119.70
1	A	1901	U	O4'-C1'-N1	5.00	112.20	108.20
1	A	79	U	O4'-C1'-N1	5.00	112.20	108.20
1	A	103	U	O4'-C1'-N1	5.00	112.20	108.20
1	A	1848	U	O4'-C1'-N1	5.00	112.20	108.20
35	AC	103	G	O4'-C1'-N9	5.00	112.20	108.20

All (5) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
2	7	31	G	C3'
25	B	225	ILE	CB
34	AA	3018	A	C3'
41	A2	55	THR	CA
41	A2	116	SER	CA

All (692) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
18	1	107	ARG	Sidechain
18	1	12	TYR	Sidechain
18	1	88	LYS	Peptide
19	2	76	ARG	Sidechain
21	3	10	ARG	Sidechain
21	3	15	ARG	Sidechain
23	5	26	ARG	Sidechain
24	6	10	ARG	Sidechain
24	6	33	ARG	Sidechain
24	6	40	TYR	Sidechain
24	6	43	ARG	Peptide
2	7	12	G	Sidechain
2	7	19	G	Sidechain
2	7	27	U	Sidechain
2	7	54	U	Sidechain
2	7	69	C	Sidechain
1	A	1008	A	Sidechain
1	A	1022	A	Sidechain
1	A	1026	A	Sidechain
1	A	103	U	Sidechain
1	A	1041	G	Sidechain
1	A	1056	G	Sidechain
1	A	1060	G	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1068	U	Sidechain
1	A	1077	G	Sidechain
1	A	1086	U	Sidechain
1	A	1104	G	Sidechain
1	A	1123	G	Sidechain
1	A	1188	A	Sidechain
1	A	1193	A	Sidechain
1	A	1195	G	Sidechain
1	A	1198	U	Sidechain
1	A	1201	G	Sidechain
1	A	1204	U	Sidechain
1	A	1208	G	Sidechain
1	A	1209	G	Sidechain
1	A	1220	C	Sidechain
1	A	1223	G	Sidechain
1	A	1240	A	Sidechain
1	A	1241	A	Sidechain
1	A	1242	G	Sidechain
1	A	1258	A	Sidechain
1	A	1264	A	Sidechain
1	A	1272	A	Sidechain
1	A	1283	U	Sidechain
1	A	1289	G	Sidechain
1	A	1307	U	Sidechain
1	A	1308	C	Sidechain
1	A	1362	U	Sidechain
1	A	1368	G	Sidechain
1	A	1377	U	Sidechain
1	A	1414	A	Sidechain
1	A	1415	A	Sidechain
1	A	1423	A	Sidechain
1	A	143	A	Sidechain
1	A	1436	U	Sidechain
1	A	1445	U	Sidechain
1	A	1457	A	Sidechain
1	A	148	U	Sidechain
1	A	161	U	Sidechain
1	A	1655	G	Sidechain
1	A	1656	A	Sidechain
1	A	1658	G	Sidechain
1	A	168	U	Sidechain
1	A	1683	U	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1684	G	Sidechain
1	A	1719	U	Sidechain
1	A	1720	G	Sidechain
1	A	1800	A	Sidechain
1	A	1819	U	Sidechain
1	A	182	U	Sidechain
1	A	1823	U	Sidechain
1	A	1828	A	Sidechain
1	A	1834	A	Sidechain
1	A	1835	U	Sidechain
1	A	1839	G	Sidechain
1	A	1845	U	Sidechain
1	A	1850	G	Sidechain
1	A	1865	G	Sidechain
1	A	1872	G	Sidechain
1	A	1876	G	Sidechain
1	A	1877	C	Sidechain
1	A	1881	G	Sidechain
1	A	1882	U	Sidechain
1	A	1906	U	Sidechain
1	A	1928	A	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	1977	G	Sidechain
1	A	1979	C	Sidechain
1	A	201	G	Sidechain
1	A	2032	U	Sidechain
1	A	2059	G	Sidechain
1	A	207	G	Sidechain
1	A	2072	G	Sidechain
1	A	2073	A	Sidechain
1	A	245	A	Sidechain
1	A	263	A	Sidechain
1	A	292	G	Sidechain
1	A	3	C	Sidechain
1	A	310	U	Sidechain
1	A	328	G	Sidechain
1	A	343	G	Sidechain
1	A	38	C	Sidechain

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Mol	Chain	Res	Type	Group
1	A	39	A	Sidechain
1	A	393	A	Sidechain
1	A	396	G	Sidechain
1	A	402	G	Sidechain
1	A	403	A	Sidechain
1	A	408	U	Sidechain
1	A	440	G	Sidechain
1	A	441	U	Sidechain
1	A	457	A	Sidechain
1	A	47	A	Sidechain
1	A	493	G	Sidechain
1	A	522	G	Sidechain
1	A	546	G	Sidechain
1	A	559	G	Sidechain
1	A	573	C	Sidechain
1	A	577	A	Sidechain
1	A	580	C	Sidechain
1	A	583	G	Sidechain
1	A	587	A	Sidechain
1	A	589	U	Sidechain
1	A	598	A	Sidechain
1	A	616	U	Sidechain
1	A	617	G	Sidechain
1	A	62	A	Sidechain
1	A	620	G	Sidechain
1	A	623	G	Sidechain
1	A	625	U	Sidechain
1	A	626	A	Sidechain
1	A	629	A	Sidechain
1	A	638	G	Sidechain
1	A	64	U	Sidechain
1	A	751	U	Sidechain
1	A	759	C	Sidechain
1	A	791	U	Sidechain
1	A	802	A	Sidechain
1	A	814	U	Sidechain
1	A	829	G	Sidechain
1	A	850	G	Sidechain
1	A	857	A	Sidechain
1	A	879	A	Sidechain
1	A	894	U	Sidechain
1	A	939	A	Sidechain

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Mol	Chain	Res	Type	Group
1	A	942	U	Sidechain
1	A	943	U	Sidechain
1	A	953	C	Sidechain
1	A	954	G	Sidechain
1	A	966	C	Sidechain
1	A	967	A	Sidechain
1	A	975	A	Sidechain
1	A	987	U	Sidechain
38	A0	38	TYR	Sidechain
67	A3	105	ARG	Sidechain
42	A4	14	ARG	Sidechain
42	A4	30	MET	Peptide
42	A4	32	ARG	Sidechain
42	A4	7	HIS	Sidechain,Peptide
68	A5	109	ARG	Sidechain
68	A5	164	ARG	Sidechain
68	A5	222	PRO	Peptide
68	A5	245	ARG	Sidechain
68	A5	255	ARG	Sidechain
43	A6	56	ARG	Sidechain
44	A7	45	ARG	Sidechain
47	A8	13	ARG	Sidechain
47	A8	36	ARG	Sidechain
47	A8	92	TYR	Sidechain
48	A9	130	ARG	Sidechain
48	A9	39	ARG	Sidechain
48	A9	51	ARG	Sidechain
34	AA	1013	U	Sidechain
34	AA	1053	U	Sidechain
34	AA	1065	U	Sidechain
34	AA	1073	G	Sidechain
34	AA	109	A	Sidechain
34	AA	1095	U	Sidechain
34	AA	1096	G	Sidechain
34	AA	1101	A	Sidechain
34	AA	1103	A	Sidechain
34	AA	1109	U	Sidechain
34	AA	1115	G	Sidechain
34	AA	1116	G	Sidechain
34	AA	1122	A	Sidechain
34	AA	1135	G	Sidechain
34	AA	1141	G	Sidechain

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Mol	Chain	Res	Type	Group
34	AA	1158	G	Sidechain
34	AA	116	A	Sidechain
34	AA	1172	C	Sidechain
34	AA	1188	A	Sidechain
34	AA	1193	G	Sidechain
34	AA	1196	A	Sidechain
34	AA	1204	A	Sidechain
34	AA	1224	A	Sidechain
34	AA	1243	G	Sidechain
34	AA	1255	G	Sidechain
34	AA	1256	U	Sidechain
34	AA	1264	A	Sidechain
34	AA	1274	A	Sidechain
34	AA	1280	G	Sidechain
34	AA	1282	U	Sidechain
34	AA	1294	G	Sidechain
34	AA	132	U	Sidechain
34	AA	1321	A	Sidechain
34	AA	1329	U	Sidechain
34	AA	1330	A	Sidechain
34	AA	1331	A	Sidechain
34	AA	136	U	Sidechain
34	AA	1429	A	Sidechain
34	AA	1436	A	Sidechain
34	AA	1443	U	Sidechain
34	AA	1445	A	Sidechain
34	AA	1446	A	Sidechain
34	AA	1447	G	Sidechain
34	AA	1458	A	Sidechain
34	AA	147	C	Sidechain
34	AA	1470	A	Sidechain
34	AA	1476	A	Sidechain
34	AA	1497	U	Sidechain
34	AA	1510	U	Sidechain
34	AA	1516	G	Sidechain
34	AA	153	A	Sidechain
34	AA	1534	U	Sidechain
34	AA	1538	U	Sidechain
34	AA	1540	G	Sidechain
34	AA	1552	G	Sidechain
34	AA	156	U	Sidechain
34	AA	1560	U	Sidechain

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Mol	Chain	Res	Type	Group
34	AA	1563	U	Sidechain
34	AA	1565	G	Sidechain
34	AA	1575	C	Sidechain
34	AA	1586	C	Sidechain
34	AA	1588	U	Sidechain
34	AA	1595	A	Sidechain
34	AA	1597	U	Sidechain
34	AA	1613	G	Sidechain
34	AA	1618	C	Sidechain
34	AA	1619	U	Sidechain
34	AA	1628	U	Sidechain
34	AA	1629	G	Sidechain
34	AA	1643	U	Sidechain
34	AA	1644	U	Sidechain
34	AA	1645	U	Sidechain
34	AA	1647	U	Sidechain
34	AA	1650	U	Sidechain
34	AA	1661	U	Sidechain
34	AA	1674	G	Sidechain
34	AA	1695	A	Sidechain
34	AA	1703	U	Sidechain
34	AA	1735	G	Sidechain
34	AA	1740	A	Sidechain
34	AA	1763	G	Sidechain
34	AA	1784	G	Sidechain
34	AA	1785	U	Sidechain
34	AA	1786	A	Sidechain
34	AA	1797	A	Sidechain
34	AA	1820	U	Sidechain
34	AA	1821	U	Sidechain
34	AA	183	U	Sidechain
34	AA	1844	G	Sidechain
34	AA	1848	U	Sidechain
34	AA	1849	U	Sidechain
34	AA	1853	C	Sidechain
34	AA	1855	U	Sidechain
34	AA	1867	U	Sidechain
34	AA	1870	G	Sidechain
34	AA	1896	C	Sidechain
34	AA	1899	U	Sidechain
34	AA	190	G	Sidechain
34	AA	1902	A	Sidechain

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Mol	Chain	Res	Type	Group
34	AA	191	A	Sidechain
34	AA	1913	A	Sidechain
34	AA	193	C	Sidechain
34	AA	1964	G	Sidechain
34	AA	1997	G	Sidechain
34	AA	20	G	Sidechain
34	AA	2004	U	Sidechain
34	AA	201	G	Sidechain
34	AA	2040	G	Sidechain
34	AA	205	G	Sidechain
34	AA	2081	U	Sidechain
34	AA	2084	U	Sidechain
34	AA	2102	A	Sidechain
34	AA	2104	C	Sidechain
34	AA	2107	C	Sidechain
34	AA	2109	A	Sidechain
34	AA	211	U	Sidechain
34	AA	2125	A	Sidechain
34	AA	2153	A	Sidechain
34	AA	2157	G	Sidechain
34	AA	2172	C	Sidechain
34	AA	2176	A	Sidechain
34	AA	219	A	Sidechain
34	AA	2202	G	Sidechain
34	AA	2207	G	Sidechain
34	AA	2219	A	Sidechain
34	AA	240	U	Sidechain
34	AA	2403	G	Sidechain
34	AA	2409	G	Sidechain
34	AA	2423	G	Sidechain
34	AA	2429	U	Sidechain
34	AA	2435	A	Sidechain
34	AA	2450	G	Sidechain
34	AA	2452	A	Sidechain
34	AA	246	U	Sidechain
34	AA	2460	A	Sidechain
34	AA	2473	A	Sidechain
34	AA	2481	A	Sidechain
34	AA	2497	U	Sidechain
34	AA	2498	U	Sidechain
34	AA	25	A	Sidechain
34	AA	2514	G	Sidechain

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Mol	Chain	Res	Type	Group
34	AA	2515	A	Sidechain
34	AA	2551	U	Sidechain
34	AA	2554	G	Sidechain
34	AA	2562	U	Sidechain
34	AA	2564	A	Sidechain
34	AA	2565	G	Sidechain
34	AA	2590	U	Sidechain
34	AA	26	A	Sidechain
34	AA	261	A	Sidechain
34	AA	2614	A	Sidechain
34	AA	265	U	Sidechain
34	AA	2652	C	Sidechain
34	AA	2654	A	Sidechain
34	AA	2657	G	Sidechain
34	AA	2660	A	Sidechain
34	AA	2665	A	Sidechain
34	AA	2669	G	Sidechain
34	AA	2679	A	Sidechain
34	AA	2693	G	Sidechain
34	AA	2698	C	Sidechain
34	AA	2727	U	Sidechain
34	AA	2728	G	Sidechain
34	AA	2809	A	Sidechain
34	AA	2835	G	Sidechain
34	AA	2838	A	Sidechain
34	AA	2917	C	Sidechain
34	AA	293	U	Sidechain
34	AA	2932	A	Sidechain
34	AA	2945	G	Sidechain
34	AA	2956	U	Sidechain
34	AA	2963	G	Sidechain
34	AA	297	G	Sidechain
34	AA	2981	A	Sidechain
34	AA	3011	G	Sidechain
34	AA	3016	G	Sidechain
34	AA	3017	A	Sidechain
34	AA	3033	A	Sidechain
34	AA	3035	A	Sidechain
34	AA	3036	A	Sidechain
34	AA	3037	G	Sidechain
34	AA	304	U	Sidechain
34	AA	3062	U	Sidechain

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Mol	Chain	Res	Type	Group
34	AA	3063	U	Sidechain
34	AA	3066	A	Sidechain
34	AA	308	U	Sidechain
34	AA	3082	G	Sidechain
34	AA	3084	G	Sidechain
34	AA	309	G	Sidechain
34	AA	3091	U	Sidechain
34	AA	3097	A	Sidechain
34	AA	3108	A	Sidechain
34	AA	3138	A	Sidechain
34	AA	3152	G	Sidechain
34	AA	3155	G	Sidechain
34	AA	3160	A	Sidechain
34	AA	3186	U	Sidechain
34	AA	319	U	Sidechain
34	AA	3192	U	Sidechain
34	AA	3195	C	Sidechain
34	AA	3209	G	Sidechain
34	AA	3210	A	Sidechain
34	AA	3220	U	Sidechain
34	AA	3222	G	Sidechain
34	AA	3227	U	Sidechain
34	AA	3239	U	Sidechain
34	AA	3245	U	Sidechain
34	AA	325	A	Sidechain
34	AA	3257	G	Sidechain
34	AA	3260	G	Sidechain
34	AA	3268	A	Sidechain
34	AA	3271	G	Sidechain
34	AA	3283	U	Sidechain
34	AA	3300	A	Sidechain
34	AA	331	A	Sidechain
34	AA	3313	U	Sidechain
34	AA	3325	G	Sidechain
34	AA	3341	A	Sidechain
34	AA	3388	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	3455	A	Sidechain

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Mol	Chain	Res	Type	Group
34	AA	346	A	Sidechain
34	AA	3463	G	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	3509	G	Sidechain
34	AA	3538	A	Sidechain
34	AA	3589	U	Sidechain
34	AA	36	U	Sidechain
34	AA	3614	A	Sidechain
34	AA	3618	A	Sidechain
34	AA	3639	G	Sidechain
34	AA	3646	G	Sidechain
34	AA	3658	G	Sidechain
34	AA	3660	A	Sidechain
34	AA	367	U	Sidechain
34	AA	368	G	Sidechain
34	AA	3683	G	Sidechain
34	AA	3707	U	Sidechain
34	AA	3725	G	Sidechain
34	AA	3738	U	Sidechain
34	AA	3739	A	Sidechain
34	AA	3749	U	Sidechain
34	AA	3783	G	Sidechain
34	AA	379	G	Sidechain
34	AA	38	U	Sidechain
34	AA	380	A	Sidechain
34	AA	401	A	Sidechain
34	AA	41	G	Sidechain
34	AA	416	G	Sidechain
34	AA	436	G	Sidechain
34	AA	440	A	Sidechain
34	AA	441	A	Sidechain
34	AA	458	A	Sidechain
34	AA	46	U	Sidechain
34	AA	467	U	Sidechain
34	AA	497	U	Sidechain
34	AA	500	A	Sidechain
34	AA	503	A	Sidechain
34	AA	525	U	Sidechain

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Mol	Chain	Res	Type	Group
34	AA	527	A	Sidechain
34	AA	528	A	Sidechain
34	AA	582	U	Sidechain
34	AA	583	U	Sidechain
34	AA	599	G	Sidechain
34	AA	606	A	Sidechain
34	AA	61	A	Sidechain
34	AA	632	U	Sidechain
34	AA	633	U	Sidechain
34	AA	643	G	Sidechain
34	AA	644	G	Sidechain
34	AA	652	A	Sidechain
34	AA	673	U	Sidechain
34	AA	684	G	Sidechain
34	AA	685	U	Sidechain
34	AA	688	U	Sidechain
34	AA	69	U	Sidechain
34	AA	70	A	Sidechain
34	AA	702	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	729	G	Sidechain
34	AA	734	A	Sidechain
34	AA	744	G	Sidechain
34	AA	746	A	Sidechain
34	AA	76	G	Sidechain
34	AA	760	A	Sidechain
34	AA	765	A	Sidechain
34	AA	769	U	Sidechain
34	AA	795	G	Sidechain
34	AA	802	U	Sidechain
34	AA	824	U	Sidechain
34	AA	825	G	Sidechain
34	AA	86	G	Sidechain
34	AA	869	A	Sidechain
34	AA	87	U	Sidechain
34	AA	884	A	Sidechain
34	AA	910	A	Sidechain
34	AA	911	U	Sidechain

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Mol	Chain	Res	Type	Group
34	AA	912	U	Sidechain
34	AA	913	U	Sidechain
34	AA	915	G	Sidechain
34	AA	917	A	Sidechain
34	AA	919	G	Sidechain
34	AA	92	G	Sidechain
34	AA	924	G	Sidechain
34	AA	925	A	Sidechain
34	AA	926	G	Sidechain
34	AA	938	U	Sidechain
34	AA	939	A	Sidechain
34	AA	94	G	Sidechain
34	AA	943	G	Sidechain
34	AA	954	G	Sidechain
34	AA	964	G	Sidechain
34	AA	967	A	Sidechain
34	AA	976	G	Sidechain
34	AA	981	U	Sidechain
34	AA	988	G	Sidechain
36	AB	11	A	Sidechain
36	AB	117	C	Sidechain
36	AB	48	G	Sidechain
36	AB	50	A	Sidechain
36	AB	56	G	Sidechain
36	AB	61	G	Sidechain
36	AB	79	U	Sidechain
36	AB	9	U	Sidechain
35	AC	103	G	Sidechain
35	AC	12	U	Sidechain
35	AC	121	C	Sidechain
35	AC	18	U	Sidechain
35	AC	20	G	Sidechain
35	AC	30	U	Sidechain
35	AC	31	U	Sidechain
35	AC	32	C	Sidechain
35	AC	40	G	Sidechain
35	AC	5	A	Sidechain
35	AC	64	U	Sidechain
35	AC	67	G	Sidechain
35	AC	89	U	Sidechain
69	AD	122	ASN	Peptide
69	AD	123	ARG	Sidechain

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Mol	Chain	Res	Type	Group
69	AD	163	ARG	Sidechain
69	AD	193	ARG	Sidechain
70	AE	10	ARG	Sidechain
70	AE	275	ARG	Sidechain
70	AE	345	ARG	Sidechain
70	AE	366	ARG	Sidechain
70	AE	92	TYR	Sidechain
70	AE	93	ARG	Sidechain
71	AF	113	ARG	Sidechain
71	AF	121	ARG	Sidechain
71	AF	140	ARG	Sidechain
71	AF	190	ARG	Sidechain
71	AF	199	ARG	Sidechain
71	AF	201	TYR	Peptide
71	AF	286	ASN	Peptide
71	AF	327	ARG	Sidechain
71	AF	50	HIS	Peptide
71	AF	97	ARG	Sidechain
72	AG	133	ARG	Sidechain
72	AG	141	ARG	Sidechain
72	AG	144	ARG	Sidechain
74	AH	123	ARG	Sidechain
74	AH	23	ARG	Sidechain
56	AI	102	ARG	Sidechain
56	AI	48	ARG	Sidechain
78	AJ	188	ARG	Sidechain
78	AJ	73	ARG	Sidechain
58	AK	132	ARG	Sidechain
58	AK	148	TYR	Sidechain
58	AK	159	ARG	Sidechain
58	AK	166	TYR	Sidechain
58	AK	17	ARG	Sidechain
58	AK	60	ARG	Sidechain
58	AK	73	ARG	Sidechain
58	AK	84	ARG	Sidechain
37	AL	138	GLY	Peptide
37	AL	140	PRO	Peptide
37	AL	202	ARG	Sidechain
37	AL	22	ARG	Sidechain
37	AL	34	ARG	Sidechain
37	AL	67	ARG	Sidechain
37	AL	8	LEU	Peptide

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Mol	Chain	Res	Type	Group
46	AN	120	ARG	Sidechain
46	AN	35	TYR	Sidechain
46	AN	73	ARG	Sidechain
39	AO	9	ARG	Sidechain
54	AP	111	CYS	Peptide
54	AP	112	GLY	Peptide
54	AP	163	ARG	Sidechain
54	AP	176	ARG	Sidechain
54	AP	186	ARG	Sidechain
54	AP	196	ARG	Sidechain
54	AP	50	ARG	Sidechain
61	AQ	128	ARG	Sidechain
61	AQ	154	ARG	Sidechain
61	AQ	22	TYR	Sidechain
61	AQ	38	ARG	Sidechain
61	AQ	88	ARG	Sidechain
61	AQ	98	ARG	Sidechain
62	AR	141	ARG	Sidechain
62	AR	154	ARG	Sidechain
62	AR	160	ARG	Sidechain
62	AR	21	ARG	Sidechain
62	AR	24	ARG	Sidechain
62	AR	31	ARG	Sidechain
62	AR	33	ARG	Sidechain
60	AS	10	ARG	Sidechain
60	AS	103	ARG	Sidechain
60	AS	111	ARG	Sidechain
60	AS	145	ARG	Sidechain
60	AS	165	TYR	Sidechain
60	AS	183	ARG	Sidechain
60	AS	27	ARG	Sidechain
60	AS	39	ARG	Sidechain
60	AS	59	ARG	Sidechain
65	AT	109	ARG	Sidechain
65	AT	116	ARG	Sidechain
65	AT	99	ARG	Sidechain
73	AU	122	ARG	Sidechain
73	AU	145	ARG	Sidechain
73	AU	170	TYR	Sidechain
73	AU	35	ARG	Sidechain
73	AU	49	ARG	Sidechain
75	AV	31	TYR	Sidechain,Peptide

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Mol	Chain	Res	Type	Group
75	AV	33	GLU	Peptide
75	AV	40	TYR	Sidechain
75	AV	71	ARG	Sidechain
75	AV	80	ARG	Sidechain
63	AW	113	ARG	Sidechain
63	AW	123	ARG	Sidechain
63	AW	135	ARG	Sidechain
63	AW	61	ARG	Sidechain
77	AX	117	ARG	Sidechain
64	AY	173	ARG	Sidechain
66	AZ	120	ARG	Sidechain
66	AZ	26	ARG	Sidechain
66	AZ	50	ARG	Sidechain
66	AZ	59	ARG	Sidechain
49	Aa	4	ARG	Sidechain
49	Aa	66	ARG	Sidechain
50	Ab	40	ARG	Sidechain
50	Ab	89	ARG	Sidechain
50	Ab	94	ARG	Sidechain
57	Ac	24	ARG	Sidechain
57	Ac	28	ARG	Sidechain
57	Ac	49	ARG	Sidechain
51	Ad	16	ARG	Sidechain
51	Ad	44	ARG	Sidechain
52	Ae	18	ARG	Sidechain
52	Ae	8	ARG	Sidechain
53	Af	41	ARG	Sidechain
53	Af	46	ARG	Sidechain
76	Ag	16	ARG	Sidechain
76	Ag	25	ARG	Sidechain
76	Ag	32	ARG	Sidechain
55	Ah	17	ARG	Sidechain
40	Ai	33	ARG	Sidechain
40	Ai	39	ARG	Sidechain
40	Ai	54	LYS	Peptide
25	B	107	ARG	Sidechain
25	B	118	TYR	Sidechain
25	B	136	ARG	Sidechain
25	B	165	ARG	Sidechain
9	E	171	ARG	Sidechain
9	E	69	ARG	Sidechain
9	E	8	TYR	Sidechain

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Mol	Chain	Res	Type	Group
27	F	145	ARG	Sidechain
27	F	221	ARG	Sidechain
27	F	235	TYR	Sidechain
27	F	98	TYR	Sidechain
28	H	104	GLN	Peptide
28	H	177	ARG	Sidechain
28	H	197	ARG	Sidechain
28	H	98	ARG	Sidechain
14	I	136	ARG	Sidechain
14	I	46	ARG	Sidechain
14	I	72	ARG	Sidechain
29	K	118	ARG	Sidechain
33	L	25	ARG	Sidechain
33	L	47	ARG	Sidechain
6	M	112	ARG	Sidechain
6	M	115	ARG	Sidechain
32	P	128	ARG	Sidechain
32	P	141	ARG	Sidechain
32	P	146	ARG	Sidechain
32	P	147	ARG	Sidechain
32	P	50	ARG	Sidechain
3	Q	109	ARG	Sidechain
3	Q	44	ARG	Sidechain
3	Q	69	ARG	Sidechain
3	Q	73	ARG	Sidechain
5	T	17	ARG	Sidechain
7	U	58	TYR	Sidechain
8	V	72	ARG	Sidechain
8	V	85	ARG	Sidechain
8	V	91	ARG	Sidechain
12	W	45	ARG	Sidechain
12	W	60	ARG	Sidechain
12	W	78	ARG	Sidechain
10	X	115	TYR	Sidechain
10	X	123	TYR	Sidechain
16	Y	53	TYR	Peptide
16	Y	79	ARG	Sidechain

5.2 Too-close contacts (i)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen

atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	34207	0	17266	45	0
2	7	1598	0	816	1	0
3	Q	1129	0	1196	3	0
4	S	1047	0	1101	2	0
5	T	405	0	419	0	0
6	M	1099	0	1183	1	0
7	U	1202	0	1299	1	0
8	V	1206	0	1239	1	0
9	E	1515	0	1605	0	0
10	X	777	0	832	2	0
11	G	1758	0	1811	1	0
12	W	786	0	858	0	0
13	R	747	0	754	0	0
14	I	1424	0	1471	1	0
15	O	687	0	695	0	0
16	Y	1267	0	1316	0	0
17	Z	557	0	558	0	0
18	1	986	0	1076	0	0
19	2	321	0	338	0	0
20	C	1539	0	1600	0	0
21	3	782	0	820	1	0
22	4	586	0	604	1	0
23	5	458	0	496	0	0
24	6	346	0	381	0	0
25	B	1714	0	1838	2	0
26	D	1229	0	1311	0	0
27	F	2062	0	2200	1	0
28	H	1648	0	1803	0	0
29	K	1037	0	1099	3	0
30	J	1529	0	1680	1	0
31	N	772	0	813	0	0
32	P	954	0	997	1	0
33	L	1383	0	1434	1	0
34	AA	67862	0	34233	156	0
35	AC	3215	0	1633	6	0
36	AB	2522	0	1275	2	0
37	AL	1757	0	1888	1	0
38	A0	522	0	539	0	0
39	AO	1172	0	1230	1	0
40	Ai	779	0	861	0	0
41	A2	831	0	887	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
42	A4	555	0	599	3	0
43	A6	741	0	763	1	0
44	A7	794	0	869	0	0
45	A1	1134	0	1245	1	0
46	AN	1202	0	1316	1	0
47	A8	1037	0	1139	1	0
48	A9	845	0	886	1	0
49	Aa	859	0	912	0	0
50	Ab	757	0	842	0	0
51	Ad	604	0	686	0	0
52	Ae	388	0	421	0	0
53	Af	414	0	452	0	0
54	AP	1697	0	1802	2	0
55	Ah	659	0	727	0	0
56	AI	1685	0	1849	0	0
57	Ac	710	0	761	0	0
58	AK	1660	0	1785	1	0
59	AM	996	0	1044	0	0
60	AS	1503	0	1636	0	0
61	AQ	1545	0	1582	0	0
62	AR	2050	0	2140	1	0
63	AW	1319	0	1303	0	0
64	AY	797	0	850	0	0
65	AT	1509	0	1682	0	0
66	AZ	1001	0	1099	1	0
67	A3	995	0	1121	1	0
68	A5	1879	0	2005	0	0
69	AD	1867	0	1964	1	0
70	AE	3062	0	3205	4	0
71	AF	3095	0	3333	3	0
72	AG	1011	0	1073	1	0
73	AU	1497	0	1556	2	0
74	AH	1476	0	1574	0	0
75	AV	1276	0	1355	1	0
76	Ag	343	0	388	0	0
77	AX	825	0	882	1	0
78	AJ	1813	0	1985	25	0
All	All	193017	0	144286	249	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 (249) 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:2915:U:C5	34:AA:2915:U:C4	2.03	1.46
34:AA:2915:U:N3	34:AA:2915:U:C2	1.87	1.42
34:AA:2915:U:N1	34:AA:2915:U:C6	1.89	1.39
34:AA:2915:U:C4	34:AA:2915:U:N3	1.89	1.37
34:AA:2915:U:C2	34:AA:2915:U:N1	1.93	1.35
34:AA:2915:U:C4	78:AJ:55:ILE:CD1	2.35	1.09
34:AA:2915:U:C5	78:AJ:55:ILE:CD1	2.35	1.09
34:AA:2915:U:C6	78:AJ:55:ILE:CD1	2.36	1.08
34:AA:2915:U:C2	78:AJ:55:ILE:CD1	2.38	1.06
34:AA:2915:U:C5	78:AJ:55:ILE:CG1	2.39	1.05
34:AA:2915:U:C4	78:AJ:55:ILE:CG1	2.39	1.05
34:AA:2915:U:C2	78:AJ:55:ILE:CG1	2.42	1.02
34:AA:2915:U:C6	78:AJ:55:ILE:CG1	2.41	1.02
34:AA:2915:U:C6	78:AJ:55:ILE:HG12	2.03	0.92
34:AA:2915:U:N3	78:AJ:55:ILE:CD1	2.38	0.87
34:AA:2915:U:C2	78:AJ:55:ILE:HG13	2.10	0.87
34:AA:2915:U:N1	78:AJ:55:ILE:CD1	2.39	0.85
34:AA:2915:U:C5	78:AJ:55:ILE:HG12	2.09	0.85
34:AA:2915:U:N3	78:AJ:55:ILE:CG1	2.42	0.83
34:AA:2915:U:C5	78:AJ:55:ILE:HD13	2.13	0.82
34:AA:2915:U:C4	78:AJ:55:ILE:HD13	2.14	0.82
34:AA:2915:U:C6	78:AJ:55:ILE:HD11	2.14	0.82
34:AA:2915:U:N1	78:AJ:55:ILE:CG1	2.43	0.81
34:AA:2915:U:C2	78:AJ:55:ILE:HD12	2.16	0.81
34:AA:2838:A:N1	34:AA:2916:C:N3	2.40	0.69
34:AA:2915:U:C4	78:AJ:55:ILE:CB	2.77	0.68
34:AA:2915:U:N3	78:AJ:55:ILE:HD12	2.09	0.65
34:AA:2915:U:N1	78:AJ:55:ILE:HD11	2.10	0.65
34:AA:2915:U:N1	78:AJ:55:ILE:HG13	2.10	0.65
34:AA:1072:A:H4'	34:AA:1073:G:H21	1.63	0.63
70:AE:68:HIS:CG	70:AE:69:LYS:H	2.19	0.60
1:A:1103:C:HO2'	29:K:2:VAL:N	2.00	0.60
34:AA:2838:A:C2	34:AA:2916:C:C2	2.89	0.59
66:AZ:108:LEU:H	66:AZ:108:LEU:HD23	1.69	0.57
34:AA:123:A:H3'	34:AA:124:U:H5"	1.85	0.57
34:AA:1273:G:H2'	34:AA:1274:A:C8	2.40	0.57
34:AA:1204:A:N6	62:AR:141:ARG:HH22	2.02	0.57
34:AA:3626:A:H3'	34:AA:3627:C:H5"	1.86	0.57
34:AA:3726:U:H4'	34:AA:3727:A:H5"	1.86	0.56
1:A:458:A:H3'	1:A:459:A:C5'	2.35	0.56
4:S:122:HIS:CE1	4:S:126:ARG:HE	2.23	0.56
34:AA:799:A:N6	39:AO:113:ASN:HD21	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AA:2915:U:C4	78:AJ:55:ILE:HB	2.43	0.54
34:AA:2083:U:H2'	34:AA:2084:U:C6	2.43	0.54
34:AA:1263:A:H4'	42:A4:7:HIS:CG	2.43	0.54
34:AA:2981:A:C4	42:A4:7:HIS:CE1	2.96	0.53
34:AA:746:A:H2'	34:AA:747:A:C8	2.43	0.53
34:AA:2657:G:H22	34:AA:2689:G:H1'	1.74	0.53
34:AA:681:U:C6	34:AA:681:U:H5"	2.44	0.53
54:AP:181:LEU:H	54:AP:181:LEU:HD12	1.75	0.52
1:A:1061:A:C2	1:A:1062:A:C8	2.98	0.52
34:AA:2838:A:C6	34:AA:2916:C:N3	2.77	0.52
69:AD:238:ILE:H	69:AD:238:ILE:HD12	1.74	0.52
34:AA:445:A:C2	34:AA:446:G:C4	2.98	0.51
1:A:1672:C:H3'	1:A:1673:A:H5"	1.91	0.51
34:AA:1727:U:H2'	34:AA:1728:C:C6	2.45	0.51
34:AA:2084:U:H5"	34:AA:2084:U:H6	1.74	0.51
34:AA:3632:U:H3	34:AA:3653:G:H1	1.59	0.51
6:M:44:ILE:HD12	6:M:44:ILE:H	1.76	0.50
34:AA:909:U:H2'	34:AA:910:A:C8	2.46	0.50
43:A6:103:ILE:HD12	43:A6:103:ILE:H	1.77	0.50
71:AF:268:HIS:CG	71:AF:269:GLU:H	2.30	0.50
1:A:1307:U:H2'	1:A:1308:C:C5	2.46	0.50
34:AA:967:A:C5	34:AA:968:G:H1'	2.47	0.50
1:A:1022:A:H2'	1:A:1023:A:C8	2.47	0.50
34:AA:1822:A:N1	34:AA:2004:U:C4	2.80	0.50
34:AA:2915:U:C2	34:AA:2915:U:C1'	2.89	0.49
34:AA:3035:A:H2'	34:AA:3036:A:C8	2.47	0.49
34:AA:2669:G:H2'	34:AA:2670:G:C8	2.46	0.49
34:AA:3257:G:H3'	34:AA:3258:C:C5'	2.42	0.49
35:AC:149:C:H2'	35:AC:150:U:C6	2.48	0.49
35:AC:30:U:H2'	35:AC:31:U:C6	2.47	0.49
70:AE:68:HIS:CG	70:AE:69:LYS:N	2.79	0.48
1:A:1187:A:H2'	1:A:1188:A:C8	2.49	0.48
34:AA:2496:U:H2'	34:AA:2497:U:C6	2.48	0.48
34:AA:173:A:H3'	34:AA:174:U:H5"	1.95	0.48
34:AA:715:U:H2'	34:AA:716:C:C5	2.49	0.48
1:A:886:U:H2'	1:A:887:A:C8	2.47	0.48
34:AA:34:A:H2'	34:AA:35:A:C8	2.48	0.48
34:AA:445:A:N1	34:AA:702:U:C4	2.81	0.48
34:AA:1644:U:C4	34:AA:2102:A:N1	2.82	0.48
1:A:1832:U:H4'	1:A:1833:G:C4	2.48	0.48
67:A3:119:LEU:HD13	67:A3:120:VAL:H	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1859:A:H2'	1:A:1860:A:C8	2.49	0.48
34:AA:440:A:H2'	34:AA:441:A:C8	2.48	0.47
34:AA:1758:C:H2'	34:AA:1759:A:C8	2.49	0.47
1:A:344:C:HO2'	33:L:5:ARG:N	2.12	0.47
34:AA:642:A:C5	34:AA:684:G:C8	3.02	0.47
34:AA:2838:A:C2	34:AA:2916:C:N3	2.82	0.47
1:A:2047:A:H3'	1:A:2048:A:H5'	1.96	0.47
34:AA:506:A:H2'	34:AA:507:G:C8	2.50	0.47
34:AA:1257:A:H2'	34:AA:1258:A:C8	2.50	0.47
34:AA:2106:A:H5'	34:AA:2107:C:C5	2.49	0.47
27:F:249:ILE:HD12	27:F:249:ILE:H	1.79	0.47
34:AA:916:U:H2'	34:AA:917:A:C8	2.50	0.47
1:A:843:U:H2'	1:A:844:G:C8	2.49	0.46
34:AA:1762:A:HO2'	34:AA:1763:G:H8	1.62	0.46
14:I:117:THR:HG1	14:I:128:GLN:N	2.13	0.46
1:A:1424:A:H2'	1:A:1425:C:C6	2.50	0.46
34:AA:912:U:H2'	34:AA:913:U:C6	2.50	0.46
34:AA:1506:C:H2'	34:AA:1507:U:C6	2.50	0.46
29:K:115:GLU:CD	29:K:118:ARG:HH12	2.19	0.46
78:AJ:55:ILE:CD1	78:AJ:55:ILE:CG1	2.94	0.46
34:AA:2589:A:H2'	34:AA:2590:U:H5'	1.98	0.46
34:AA:525:U:H2'	34:AA:526:U:C6	2.51	0.46
1:A:955:U:H2'	1:A:956:A:C8	2.51	0.46
4:S:100:VAL:HG23	4:S:101:ILE:H	1.81	0.46
34:AA:939:A:H2'	34:AA:940:A:C8	2.51	0.46
34:AA:3615:A:C6	34:AA:3618:A:C5	3.04	0.45
34:AA:2008:G:H2'	34:AA:2009:A:C8	2.51	0.45
34:AA:2590:U:H2'	34:AA:2590:U:O2	2.16	0.45
34:AA:687:G:H2'	34:AA:688:U:C6	2.51	0.45
34:AA:921:C:H2'	34:AA:922:C:C6	2.52	0.45
34:AA:2020:A:H2'	34:AA:2021:A:C8	2.51	0.45
34:AA:293:U:H2'	34:AA:294:G:C8	2.52	0.45
34:AA:2084:U:C6	34:AA:2084:U:H5"	2.52	0.45
34:AA:1574:C:H2'	34:AA:1575:C:C6	2.52	0.45
1:A:1850:G:H3'	10:X:47:ARG:HH12	1.82	0.45
34:AA:320:C:H2'	34:AA:321:A:C8	2.51	0.45
1:A:1720:G:H2'	1:A:1721:A:C8	2.52	0.45
34:AA:88:A:C2	34:AA:99:A:C4	3.05	0.45
34:AA:1216:C:H2'	34:AA:1217:U:H5'	1.98	0.45
34:AA:1675:C:H4'	34:AA:1737:A:C4	2.51	0.45
41:A2:32:LEU:HD23	41:A2:37:ASN:HD21	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:520:U:H2'	1:A:521:G:C8	2.52	0.44
30:J:69:TYR:CD1	30:J:96:ALA:HB2	2.51	0.44
34:AA:63:A:H2'	34:AA:64:G:C8	2.52	0.44
1:A:149:A:N1	1:A:161:U:C4	2.85	0.44
34:AA:2559:U:H2'	34:AA:2560:C:C6	2.52	0.44
34:AA:2709:U:H2'	34:AA:2710:U:C6	2.52	0.44
1:A:1976:G:H3'	1:A:1977:G:C8	2.52	0.44
1:A:1299:G:C6	1:A:1301:G:C6	3.06	0.44
34:AA:659:U:H2'	34:AA:660:U:C6	2.53	0.44
34:AA:1133:A:C2	34:AA:1163:A:C2	3.05	0.44
34:AA:2506:A:H2'	34:AA:2507:A:C8	2.52	0.44
34:AA:3131:A:C6	34:AA:3133:U:H1'	2.52	0.44
34:AA:3511:C:H2'	34:AA:3512:A:C8	2.52	0.44
1:A:2068:A:H2'	1:A:2069:G:C8	2.53	0.44
34:AA:888:A:H3'	34:AA:889:U:H5"	2.00	0.44
34:AA:1628:U:C5	34:AA:1629:G:C5	3.05	0.44
34:AA:1974:U:H2'	34:AA:1975:A:C8	2.52	0.44
34:AA:2672:U:H2'	34:AA:2673:U:C6	2.53	0.44
1:A:1883:A:C5	1:A:1908:A:C2	3.05	0.44
8:V:6:ASP:N	8:V:9:HIS:HE2	2.16	0.44
1:A:1448:U:H2'	1:A:1449:U:H2'	2.00	0.44
34:AA:2138:U:H2'	34:AA:2139:C:C6	2.53	0.44
1:A:458:A:H3'	1:A:459:A:H5"	1.99	0.43
1:A:1293:C:H3'	1:A:1294:A:H2'	2.00	0.43
1:A:1815:U:H2'	1:A:1816:U:C5	2.52	0.43
25:B:30:TYR:CE2	25:B:94:ARG:HA	2.54	0.43
34:AA:1093:G:H2'	34:AA:1094:U:C6	2.53	0.43
34:AA:26:A:N6	34:AA:58:A:H61	2.15	0.43
21:3:13:HIS:CD2	21:3:13:HIS:H	2.37	0.43
34:AA:629:A:C2	34:AA:630:U:C2	3.06	0.43
34:AA:1072:A:H3'	34:AA:1245:G:C8	2.53	0.43
34:AA:1096:G:HO2'	34:AA:1097:A:H8	1.66	0.43
35:AC:32:C:H2'	35:AC:33:C:C6	2.54	0.43
34:AA:1435:G:C5	34:AA:1436:A:C6	3.05	0.43
34:AA:2838:A:C2	34:AA:2917:C:C5	3.07	0.43
34:AA:764:G:H2'	34:AA:765:A:C8	2.54	0.43
34:AA:2981:A:H2'	34:AA:2982:A:C8	2.54	0.43
75:AV:45:CYS:H	75:AV:59:HIS:CD2	2.37	0.43
34:AA:136:U:C4	34:AA:141:A:C2	3.07	0.43
11:G:75:ILE:HD12	11:G:75:ILE:H	1.84	0.43
34:AA:740:U:H2'	34:AA:741:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AA:1263:A:H4'	42:A4:7:HIS:ND1	2.34	0.42
25:B:107:ARG:HH21	32:P:131:ASP:CG	2.22	0.42
34:AA:344:A:C2	34:AA:345:G:C5	3.07	0.42
34:AA:1572:U:C5	34:AA:1573:C:C5	3.07	0.42
70:AE:353:LEU:H	70:AE:353:LEU:HD23	1.83	0.42
34:AA:276:G:H2'	54:AP:121:TRP:CE2	2.55	0.42
34:AA:3578:A:HO2'	34:AA:3579:A:H8	1.67	0.42
34:AA:899:A:H3'	34:AA:900:G:H5"	2.01	0.42
1:A:1675:G:H2'	1:A:1676:U:C6	2.54	0.42
34:AA:3386:A:H2'	34:AA:3387:U:C6	2.54	0.42
45:A1:11:ILE:HG22	45:A1:82:PRO:HA	2.02	0.42
34:AA:1683:A:H2'	34:AA:1684:A:C8	2.54	0.42
46:AN:71:LEU:HD13	73:AU:162:HIS:CD2	2.55	0.42
34:AA:734:A:H2'	34:AA:735:A:C8	2.55	0.42
34:AA:2650:A:H2'	34:AA:2651:A:C8	2.55	0.42
34:AA:2884:G:H2'	34:AA:2885:A:H5'	2.01	0.42
1:A:993:A:H2'	1:A:994:G:C8	2.55	0.42
22:4:71:LEU:HG	22:4:72:THR:H	1.84	0.42
34:AA:2122:U:H2'	34:AA:2123:C:C6	2.55	0.42
34:AA:332:A:H2'	34:AA:333:A:C8	2.55	0.42
34:AA:1739:C:H2'	34:AA:1740:A:C8	2.55	0.42
71:AF:290:TYR:CZ	71:AF:294:HIS:CE1	3.08	0.42
1:A:1922:C:H2'	1:A:1923:U:C6	2.55	0.42
34:AA:136:U:O4	34:AA:141:A:C2	2.73	0.42
34:AA:1540:G:C8	34:AA:1565:G:C2	3.08	0.42
34:AA:2563:A:H2'	34:AA:2564:A:C8	2.54	0.42
1:A:1876:G:H2'	1:A:1877:C:C6	2.55	0.41
34:AA:73:U:C6	37:AL:58:HIS:CE1	3.09	0.41
34:AA:580:A:H2'	34:AA:581:C:C6	2.54	0.41
34:AA:1675:C:H4'	34:AA:1737:A:C5	2.55	0.41
72:AG:15:ASN:H	72:AG:130:HIS:CD2	2.38	0.41
77:AX:110:TYR:CE1	77:AX:114:HIS:CE1	3.08	0.41
1:A:576:C:H41	3:Q:69:ARG:NH2	2.17	0.41
1:A:1846:U:C5	10:X:39:ALA:HB3	2.55	0.41
34:AA:914:G:H2'	34:AA:915:G:C8	2.54	0.41
34:AA:3241:U:H2'	34:AA:3242:U:C6	2.55	0.41
1:A:945:G:C6	1:A:1005:G:C6	3.08	0.41
3:Q:29:TYR:CE2	3:Q:33:HIS:CE1	3.08	0.41
34:AA:1184:A:H2'	34:AA:1185:A:C8	2.56	0.41
35:AC:73:A:C6	35:AC:74:A:H1'	2.54	0.41
70:AE:85:VAL:HB	70:AE:160:HIS:CE1	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AA:140:A:C5	34:AA:141:A:H1'	2.56	0.41
34:AA:314:A:C2	34:AA:3143:G:H1'	2.56	0.41
35:AC:101:A:H3'	35:AC:102:U:C6	2.56	0.41
1:A:1008:A:H2'	1:A:1009:A:C8	2.55	0.41
1:A:1304:A:C6	1:A:1852:A:C6	3.08	0.41
34:AA:1063:A:H4'	47:A8:33:ARG:HE	1.86	0.41
34:AA:3486:G:H2'	34:AA:3487:A:C8	2.54	0.41
34:AA:1015:A:C2	34:AA:1032:A:C2	3.08	0.41
36:AB:77:A:C2	36:AB:100:A:C4	3.09	0.41
36:AB:116:U:H2'	36:AB:117:C:C6	2.55	0.41
1:A:105:A:C8	1:A:366:A:C6	3.09	0.41
1:A:1226:A:C5	1:A:1227:G:H1'	2.56	0.41
35:AC:146:C:H2'	35:AC:147:U:C6	2.56	0.41
1:A:483:A:N6	1:A:518:A:H61	2.19	0.41
1:A:1656:A:H2'	1:A:1657:A:C8	2.56	0.41
1:A:1947:U:H2'	1:A:1948:A:C8	2.56	0.41
3:Q:102:VAL:HG12	3:Q:127:VAL:HG12	2.03	0.41
7:U:36:ALA:HB1	7:U:58:TYR:CE2	2.56	0.41
29:K:7:LEU:HD12	29:K:7:LEU:H	1.86	0.41
34:AA:709:A:H2'	34:AA:710:C:C6	2.55	0.41
34:AA:1031:G:H2'	34:AA:1033:A:C5	2.56	0.41
34:AA:1752:C:H2'	34:AA:1753:U:C6	2.56	0.41
58:AK:13:HIS:CE1	58:AK:119:LEU:H	2.37	0.41
73:AU:6:ASP:CG	73:AU:7:ASN:H	2.24	0.41
34:AA:1431:A:C2	34:AA:3246:A:C4	3.08	0.41
34:AA:3195:C:C5	34:AA:3212:G:C2	3.09	0.41
1:A:1414:A:H4'	1:A:1415:A:OP1	2.21	0.40
34:AA:492:U:H2'	34:AA:493:C:C6	2.56	0.40
34:AA:1212:U:H2'	34:AA:1213:U:C6	2.56	0.40
48:A9:39:ARG:HH22	48:A9:42:GLU:CD	2.24	0.40
71:AF:107:ILE:HD12	71:AF:107:ILE:H	1.85	0.40
34:AA:60:A:C8	34:AA:335:A:C6	3.10	0.40
34:AA:453:A:C4	34:AA:503:A:C2	3.09	0.40
34:AA:947:U:H2'	34:AA:948:G:C8	2.57	0.40
1:A:262:A:C5	1:A:263:A:H1'	2.57	0.40
1:A:1821:A:H2'	1:A:1822:A:C8	2.56	0.40
34:AA:606:A:H2'	34:AA:607:A:C8	2.57	0.40
1:A:1188:A:H2'	1:A:1189:A:C8	2.57	0.40
2:7:70:G:C3'	2:7:71:C:H5"	2.52	0.40
34:AA:141:A:C2	34:AA:142:C:N3	2.90	0.40
34:AA:445:A:C2	34:AA:702:U:C5	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AA:1228:A:C6	34:AA:1230:A:C5	3.09	0.40
34:AA:3444:G:H2'	34:AA:3445: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	Q	142/144 (99%)	134 (94%)	6 (4%)	2 (1%)	11 46
4	S	126/128 (98%)	107 (85%)	11 (9%)	8 (6%)	1 16
5	T	46/48 (96%)	44 (96%)	2 (4%)	0	100 100
6	M	136/138 (99%)	128 (94%)	6 (4%)	2 (2%)	10 45
7	U	147/149 (99%)	144 (98%)	2 (1%)	1 (1%)	22 62
8	V	142/156 (91%)	134 (94%)	4 (3%)	4 (3%)	5 30
9	E	183/185 (99%)	176 (96%)	7 (4%)	0	100 100
10	X	92/103 (89%)	82 (89%)	6 (6%)	4 (4%)	2 22
11	G	222/224 (99%)	209 (94%)	10 (4%)	3 (1%)	11 46
12	W	91/108 (84%)	87 (96%)	3 (3%)	1 (1%)	14 51
13	R	92/114 (81%)	78 (85%)	10 (11%)	4 (4%)	2 22
14	I	176/189 (93%)	166 (94%)	7 (4%)	3 (2%)	9 42
15	O	77/79 (98%)	70 (91%)	3 (4%)	4 (5%)	2 19
16	Y	152/154 (99%)	141 (93%)	7 (5%)	4 (3%)	5 31
17	Z	70/72 (97%)	65 (93%)	4 (6%)	1 (1%)	11 46
18	1	118/120 (98%)	109 (92%)	7 (6%)	2 (2%)	9 42
19	2	35/68 (52%)	32 (91%)	1 (3%)	2 (6%)	1 17
20	C	193/195 (99%)	180 (93%)	11 (6%)	2 (1%)	15 54

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
21	3	93/95 (98%)	81 (87%)	12 (13%)	0	100	100
22	4	74/76 (97%)	67 (90%)	4 (5%)	3 (4%)	3	22
23	5	54/65 (83%)	52 (96%)	1 (2%)	1 (2%)	8	38
24	6	41/43 (95%)	38 (93%)	3 (7%)	0	100	100
25	B	208/210 (99%)	188 (90%)	16 (8%)	4 (2%)	8	38
26	D	149/209 (71%)	143 (96%)	4 (3%)	2 (1%)	12	48
27	F	255/257 (99%)	244 (96%)	10 (4%)	1 (0%)	34	72
28	H	200/214 (94%)	186 (93%)	13 (6%)	1 (0%)	29	69
29	K	127/129 (98%)	119 (94%)	6 (5%)	2 (2%)	9	43
30	J	186/188 (99%)	175 (94%)	7 (4%)	4 (2%)	6	35
31	N	96/98 (98%)	90 (94%)	6 (6%)	0	100	100
32	P	125/127 (98%)	110 (88%)	15 (12%)	0	100	100
33	L	165/214 (77%)	149 (90%)	15 (9%)	1 (1%)	25	66
37	AL	209/211 (99%)	190 (91%)	13 (6%)	6 (3%)	4	29
38	A0	60/62 (97%)	58 (97%)	2 (3%)	0	100	100
39	AO	145/147 (99%)	134 (92%)	8 (6%)	3 (2%)	7	36
40	Ai	93/95 (98%)	84 (90%)	6 (6%)	3 (3%)	4	26
41	A2	96/118 (81%)	92 (96%)	3 (3%)	1 (1%)	15	54
42	A4	64/66 (97%)	56 (88%)	8 (12%)	0	100	100
43	A6	96/98 (98%)	94 (98%)	2 (2%)	0	100	100
44	A7	92/102 (90%)	90 (98%)	2 (2%)	0	100	100
45	A1	136/145 (94%)	131 (96%)	5 (4%)	0	100	100
46	AN	144/146 (99%)	138 (96%)	4 (3%)	2 (1%)	11	46
47	A8	123/125 (98%)	111 (90%)	10 (8%)	2 (2%)	9	43
48	A9	101/103 (98%)	93 (92%)	5 (5%)	3 (3%)	4	28
49	Aa	104/106 (98%)	97 (93%)	7 (7%)	0	100	100
50	Ab	91/105 (87%)	86 (94%)	3 (3%)	2 (2%)	6	35
51	Ad	68/76 (90%)	65 (96%)	2 (3%)	1 (2%)	10	45
52	Ae	39/50 (78%)	38 (97%)	1 (3%)	0	100	100
53	Af	49/51 (96%)	44 (90%)	5 (10%)	0	100	100
54	AP	202/204 (99%)	182 (90%)	11 (5%)	9 (4%)	2	21

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
55	Ah	83/85 (98%)	79 (95%)	4 (5%)	0	100	100
56	AI	203/213 (95%)	188 (93%)	10 (5%)	5 (2%)	5	32
57	Ac	87/89 (98%)	78 (90%)	6 (7%)	3 (3%)	3	26
58	AK	199/201 (99%)	190 (96%)	8 (4%)	1 (0%)	29	69
59	AM	130/132 (98%)	122 (94%)	7 (5%)	1 (1%)	19	60
60	AS	184/186 (99%)	166 (90%)	13 (7%)	5 (3%)	5	31
61	AQ	185/205 (90%)	169 (91%)	11 (6%)	5 (3%)	5	31
62	AR	244/289 (84%)	219 (90%)	19 (8%)	6 (2%)	5	32
63	AW	149/170 (88%)	137 (92%)	10 (7%)	2 (1%)	12	48
64	AY	99/101 (98%)	96 (97%)	2 (2%)	1 (1%)	15	54
65	AT	179/181 (99%)	174 (97%)	3 (2%)	2 (1%)	14	51
66	AZ	119/121 (98%)	113 (95%)	5 (4%)	1 (1%)	19	60
67	A3	117/119 (98%)	110 (94%)	5 (4%)	2 (2%)	9	42
68	A5	221/223 (99%)	197 (89%)	19 (9%)	5 (2%)	6	33
69	AD	245/247 (99%)	232 (95%)	9 (4%)	4 (2%)	9	43
70	AE	378/380 (100%)	350 (93%)	27 (7%)	1 (0%)	41	76
71	AF	388/390 (100%)	355 (92%)	24 (6%)	9 (2%)	6	33
72	AG	116/159 (73%)	106 (91%)	7 (6%)	3 (3%)	5	31
73	AU	178/180 (99%)	162 (91%)	12 (7%)	4 (2%)	6	35
74	AH	183/185 (99%)	163 (89%)	17 (9%)	3 (2%)	9	43
75	AV	153/155 (99%)	142 (93%)	10 (6%)	1 (1%)	22	62
76	Ag	35/37 (95%)	29 (83%)	5 (14%)	1 (3%)	4	29
77	AX	95/97 (98%)	91 (96%)	4 (4%)	0	100	100
78	AJ	216/244 (88%)	201 (93%)	12 (6%)	3 (1%)	11	46
All	All	10111/10698 (94%)	9380 (93%)	565 (6%)	166 (2%)	13	43

All (166) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
6	M	41	GLU
8	V	41	VAL
10	X	52	LYS
13	R	42	ILE
14	I	70	HIS

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Mol	Chain	Res	Type
16	Y	55	LYS
25	B	98	THR
28	H	25	LEU
29	K	120	HIS
33	L	29	LEU
39	AO	25	HIS
54	AP	16	SER
54	AP	188	SER
56	AI	47	GLN
57	Ac	42	TYR
57	Ac	80	LYS
60	AS	174	GLU
61	AQ	175	PRO
65	AT	56	VAL
70	AE	196	LEU
71	AF	235	LEU
73	AU	13	ILE
3	Q	8	GLY
3	Q	137	LYS
4	S	20	THR
4	S	101	ILE
8	V	10	GLU
10	X	51	LYS
10	X	90	VAL
12	W	4	VAL
13	R	39	LYS
30	J	112	ILE
37	AL	101	LYS
37	AL	160	ILE
40	Ai	85	LYS
50	Ab	19	SER
54	AP	150	ASN
57	Ac	75	ARG
60	AS	166	VAL
61	AQ	35	ASP
62	AR	44	TYR
62	AR	142	LYS
64	AY	105	LEU
68	A5	229	ALA
71	AF	287	PRO
73	AU	160	ALA
75	AV	14	TYR

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Mol	Chain	Res	Type
78	AJ	45	ILE
78	AJ	66	SER
4	S	88	ARG
11	G	121	GLY
13	R	37	GLY
15	O	15	PRO
17	Z	30	GLY
18	1	5	PHE
22	4	19	LEU
25	B	146	ARG
26	D	29	LEU
29	K	58	SER
30	J	31	SER
37	AL	61	THR
37	AL	130	ASN
37	AL	171	TYR
47	A8	50	ASN
48	A9	94	GLY
54	AP	113	ASN
56	AI	88	PRO
60	AS	184	ALA
61	AQ	131	ILE
62	AR	59	GLN
63	AW	64	ASN
65	AT	129	ASN
67	A3	75	LYS
68	A5	116	ARG
69	AD	29	LEU
71	AF	80	PRO
76	Ag	8	TYR
4	S	51	ASN
7	U	16	LEU
8	V	115	SER
11	G	101	GLN
14	I	174	GLU
16	Y	19	PRO
18	1	96	GLY
19	2	38	HIS
20	C	143	VAL
22	4	18	LYS
22	4	47	HIS
25	B	132	ASN

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Mol	Chain	Res	Type
37	AL	21	VAL
39	AO	64	LEU
41	A2	95	GLN
47	A8	40	CYS
50	Ab	17	PHE
54	AP	72	LYS
56	AI	212	ASN
60	AS	154	ALA
62	AR	89	PRO
62	AR	174	ASN
63	AW	20	VAL
68	A5	100	GLY
68	A5	223	PRO
69	AD	199	VAL
71	AF	115	VAL
71	AF	279	LEU
72	AG	96	PHE
74	AH	11	LEU
74	AH	169	LYS
4	S	24	GLY
4	S	99	HIS
10	X	115	TYR
11	G	80	GLN
13	R	126	SER
15	O	41	PRO
15	O	70	TYR
16	Y	143	LYS
20	C	202	LEU
23	5	4	SER
26	D	162	GLY
30	J	132	SER
39	AO	40	HIS
40	Ai	29	LYS
46	AN	88	LYS
54	AP	94	SER
56	AI	19	VAL
59	AM	114	SER
61	AQ	140	THR
67	A3	84	LYS
68	A5	228	LYS
71	AF	19	VAL
71	AF	144	ILE

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Mol	Chain	Res	Type
71	AF	216	GLY
71	AF	304	ALA
74	AH	86	LYS
8	V	16	GLN
25	B	75	ASN
27	F	133	LYS
48	A9	47	LEU
56	AI	139	THR
61	AQ	94	PHE
72	AG	153	LYS
73	AU	143	VAL
73	AU	166	LEU
78	AJ	248	LYS
6	M	98	VAL
16	Y	110	VAL
46	AN	46	VAL
48	A9	38	VAL
54	AP	56	ILE
66	AZ	70	VAL
19	2	60	THR
54	AP	149	ILE
58	AK	88	PRO
60	AS	82	VAL
69	AD	4	VAL
72	AG	45	PRO
4	S	76	PRO
4	S	100	VAL
30	J	13	PRO
54	AP	79	ILE
15	O	44	PRO
40	Ai	55	PRO
62	AR	152	ILE
69	AD	127	VAL
14	I	71	GLY
51	Ad	68	LEU

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	Q	120/120 (100%)	116 (97%)	4 (3%)	38	61
4	S	114/114 (100%)	111 (97%)	3 (3%)	46	66
5	T	43/43 (100%)	41 (95%)	2 (5%)	26	51
6	M	116/116 (100%)	112 (97%)	4 (3%)	37	60
7	U	132/132 (100%)	129 (98%)	3 (2%)	50	70
8	V	131/140 (94%)	128 (98%)	3 (2%)	50	70
9	E	161/164 (98%)	159 (99%)	2 (1%)	71	83
10	X	88/94 (94%)	87 (99%)	1 (1%)	73	84
11	G	191/191 (100%)	186 (97%)	5 (3%)	46	66
12	W	86/99 (87%)	86 (100%)	0	100	100
13	R	83/97 (86%)	83 (100%)	0	100	100
14	I	154/160 (96%)	150 (97%)	4 (3%)	46	66
15	O	76/76 (100%)	74 (97%)	2 (3%)	46	66
16	Y	137/137 (100%)	132 (96%)	5 (4%)	35	59
17	Z	60/60 (100%)	60 (100%)	0	100	100
18	1	104/104 (100%)	102 (98%)	2 (2%)	57	75
19	2	35/61 (57%)	34 (97%)	1 (3%)	42	64
20	C	167/167 (100%)	164 (98%)	3 (2%)	59	77
21	3	87/87 (100%)	87 (100%)	0	100	100
22	4	70/70 (100%)	68 (97%)	2 (3%)	42	64
23	5	47/52 (90%)	46 (98%)	1 (2%)	53	72
24	6	36/36 (100%)	36 (100%)	0	100	100
25	B	195/195 (100%)	191 (98%)	4 (2%)	53	72
26	D	132/177 (75%)	127 (96%)	5 (4%)	33	57
27	F	233/233 (100%)	223 (96%)	10 (4%)	29	53
28	H	182/190 (96%)	175 (96%)	7 (4%)	33	57
29	K	115/115 (100%)	114 (99%)	1 (1%)	78	87
30	J	177/177 (100%)	170 (96%)	7 (4%)	31	55
31	N	91/91 (100%)	90 (99%)	1 (1%)	73	84
32	P	99/99 (100%)	97 (98%)	2 (2%)	55	74
33	L	151/190 (80%)	147 (97%)	4 (3%)	46	66

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
37	AL	190/190 (100%)	185 (97%)	5 (3%)	46	66
38	A0	53/53 (100%)	52 (98%)	1 (2%)	57	75
39	AO	121/121 (100%)	117 (97%)	4 (3%)	38	61
40	Ai	87/87 (100%)	85 (98%)	2 (2%)	50	70
41	A2	97/109 (89%)	94 (97%)	3 (3%)	40	62
42	A4	60/60 (100%)	59 (98%)	1 (2%)	60	78
43	A6	83/83 (100%)	80 (96%)	3 (4%)	35	59
44	A7	90/96 (94%)	89 (99%)	1 (1%)	73	84
45	A1	127/131 (97%)	126 (99%)	1 (1%)	81	89
46	AN	135/135 (100%)	132 (98%)	3 (2%)	52	71
47	A8	114/114 (100%)	113 (99%)	1 (1%)	78	87
48	A9	90/90 (100%)	84 (93%)	6 (7%)	16	40
49	Aa	89/89 (100%)	86 (97%)	3 (3%)	37	60
50	Ab	82/92 (89%)	80 (98%)	2 (2%)	49	69
51	Ad	69/73 (94%)	67 (97%)	2 (3%)	42	64
52	Ae	40/47 (85%)	38 (95%)	2 (5%)	24	49
53	Af	45/45 (100%)	44 (98%)	1 (2%)	52	71
54	AP	179/179 (100%)	170 (95%)	9 (5%)	24	49
55	Ah	70/70 (100%)	70 (100%)	0	100	100
56	AI	189/195 (97%)	186 (98%)	3 (2%)	62	79
57	Ac	74/74 (100%)	71 (96%)	3 (4%)	30	55
58	AK	181/181 (100%)	175 (97%)	6 (3%)	38	61
59	AM	106/106 (100%)	105 (99%)	1 (1%)	78	87
60	AS	158/158 (100%)	154 (98%)	4 (2%)	47	68
61	AQ	165/176 (94%)	159 (96%)	6 (4%)	35	59
62	AR	215/250 (86%)	210 (98%)	5 (2%)	50	70
63	AW	128/128 (100%)	121 (94%)	7 (6%)	21	47
64	AY	90/90 (100%)	88 (98%)	2 (2%)	52	71
65	AT	162/162 (100%)	160 (99%)	2 (1%)	71	83
66	AZ	111/111 (100%)	109 (98%)	2 (2%)	59	77
67	A3	110/110 (100%)	106 (96%)	4 (4%)	35	59

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
68	A5	201/201 (100%)	197 (98%)	4 (2%)	55 74
69	AD	191/191 (100%)	181 (95%)	10 (5%)	23 48
70	AE	335/335 (100%)	332 (99%)	3 (1%)	78 87
71	AF	336/336 (100%)	327 (97%)	9 (3%)	44 65
72	AG	110/142 (78%)	107 (97%)	3 (3%)	44 65
73	AU	162/162 (100%)	160 (99%)	2 (1%)	71 83
74	AH	168/168 (100%)	166 (99%)	2 (1%)	71 83
75	AV	140/140 (100%)	137 (98%)	3 (2%)	53 72
76	Ag	34/34 (100%)	33 (97%)	1 (3%)	42 64
77	AX	92/92 (100%)	91 (99%)	1 (1%)	73 84
78	AJ	204/224 (91%)	200 (98%)	4 (2%)	55 74
All	All	9096/9417 (97%)	8871 (98%)	225 (2%)	50 68

All (225) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	Q	27	LYS
3	Q	30	LYS
3	Q	60	GLU
3	Q	107	PHE
4	S	12	GLN
4	S	16	ARG
4	S	129	TRP
5	T	18	GLN
5	T	31	LYS
6	M	10	THR
6	M	62	LYS
6	M	64	LEU
6	M	107	LYS
7	U	3	ARG
7	U	7	LYS
7	U	62	GLN
8	V	16	GLN
8	V	38	TRP
8	V	107	HIS
9	E	47	TYR
9	E	69	ARG
10	X	119	PHE

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Mol	Chain	Res	Type
11	G	109	ARG
11	G	168	MET
11	G	189	GLN
11	G	215	LYS
11	G	242	TRP
14	I	7	ASP
14	I	25	SER
14	I	62	ARG
14	I	132	VAL
15	O	54	MET
15	O	75	GLN
16	Y	25	THR
16	Y	29	ILE
16	Y	30	LYS
16	Y	105	LYS
16	Y	119	SER
18	1	48	TYR
18	1	107	ARG
19	2	68	TYR
20	C	12	GLU
20	C	168	GLU
20	C	202	LEU
22	4	18	LYS
22	4	32	ASP
23	5	28	GLN
25	B	37	MET
25	B	146	ARG
25	B	149	GLN
25	B	229	MET
26	D	76	ARG
26	D	107	ARG
26	D	117	ARG
26	D	158	LEU
26	D	166	LYS
27	F	17	HIS
27	F	18	TRP
27	F	59	ASP
27	F	87	MET
27	F	102	LEU
27	F	103	TYR
27	F	132	ARG
27	F	133	LYS

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Mol	Chain	Res	Type
27	F	249	ILE
27	F	252	ARG
28	H	13	GLN
28	H	72	ARG
28	H	82	LYS
28	H	111	LEU
28	H	140	LYS
28	H	159	ILE
28	H	197	ARG
29	K	69	ILE
30	J	5	GLN
30	J	58	LYS
30	J	67	LYS
30	J	72	TYR
30	J	127	LEU
30	J	149	ARG
30	J	181	ARG
31	N	64	THR
32	P	68	GLU
32	P	131	ASP
33	L	27	TYR
33	L	64	SER
33	L	92	ARG
33	L	216	LYS
37	AL	51	GLU
37	AL	75	THR
37	AL	91	THR
37	AL	142	ASP
37	AL	155	LYS
38	A0	10	THR
39	AO	12	ARG
39	AO	32	ARG
39	AO	58	MET
39	AO	132	VAL
40	Ai	42	TYR
40	Ai	78	LYS
41	A2	5	SER
41	A2	59	LEU
41	A2	114	ARG
42	A4	32	ARG
43	A6	26	TYR
43	A6	64	MET

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Mol	Chain	Res	Type
43	A6	89	ARG
44	A7	88	ASN
45	A1	32	GLN
46	AN	10	GLU
46	AN	71	LEU
46	AN	85	LYS
47	A8	41	ARG
48	A9	39	ARG
48	A9	53	GLN
48	A9	76	PHE
48	A9	92	HIS
48	A9	104	VAL
48	A9	136	TYR
49	Aa	67	ARG
49	Aa	74	ARG
49	Aa	91	ARG
50	Ab	86	THR
50	Ab	89	ARG
51	Ad	9	ARG
51	Ad	38	ILE
52	Ae	8	ARG
52	Ae	42	ARG
53	Af	46	ARG
54	AP	13	LYS
54	AP	31	ARG
54	AP	61	ILE
54	AP	85	LYS
54	AP	124	GLN
54	AP	161	GLU
54	AP	163	ARG
54	AP	190	ARG
54	AP	192	ASN
56	AI	27	LYS
56	AI	97	LYS
56	AI	159	MET
57	Ac	50	PHE
57	Ac	52	TRP
57	Ac	55	LYS
58	AK	1	MET
58	AK	39	ASP
58	AK	116	LYS
58	AK	127	ARG

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Mol	Chain	Res	Type
58	AK	159	ARG
58	AK	193	ARG
59	AM	89	ARG
60	AS	91	LEU
60	AS	122	PHE
60	AS	174	GLU
60	AS	177	ARG
61	AQ	15	LYS
61	AQ	40	LYS
61	AQ	55	TYR
61	AQ	94	PHE
61	AQ	119	PHE
61	AQ	175	PRO
62	AR	16	TYR
62	AR	23	ARG
62	AR	44	TYR
62	AR	160	ARG
62	AR	215	ASN
63	AW	16	LYS
63	AW	34	ARG
63	AW	37	ARG
63	AW	61	ARG
63	AW	62	LYS
63	AW	97	ASN
63	AW	131	LYS
64	AY	173	ARG
64	AY	177	GLU
65	AT	23	MET
65	AT	73	ARG
66	AZ	51	LYS
66	AZ	101	SER
67	A3	102	MET
67	A3	105	ARG
67	A3	113	PHE
67	A3	119	LEU
68	A5	86	ARG
68	A5	169	ARG
68	A5	192	HIS
68	A5	232	HIS
69	AD	34	TYR
69	AD	40	TYR
69	AD	54	ARG

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Mol	Chain	Res	Type
69	AD	67	GLU
69	AD	71	LYS
69	AD	107	MET
69	AD	125	THR
69	AD	238	ILE
69	AD	241	ARG
69	AD	242	ARG
70	AE	30	ARG
70	AE	230	TYR
70	AE	237	ARG
71	AF	122	TYR
71	AF	140	ARG
71	AF	196	MET
71	AF	266	LYS
71	AF	276	ASN
71	AF	287	PRO
71	AF	347	ILE
71	AF	376	TYR
71	AF	386	LYS
72	AG	16	LYS
72	AG	125	MET
72	AG	127	PHE
73	AU	88	LEU
73	AU	184	MET
74	AH	62	VAL
74	AH	167	ARG
75	AV	34	LYS
75	AV	68	ILE
75	AV	71	ARG
76	Ag	8	TYR
77	AX	48	LYS
78	AJ	45	ILE
78	AJ	147	LEU
78	AJ	179	LEU
78	AJ	262	LYS

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

Mol	Chain	Res	Type
7	U	28	GLN
8	V	107	HIS
20	C	23	HIS

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Mol	Chain	Res	Type
26	D	22	ASN
29	K	113	HIS
32	P	79	GLN
33	L	21	HIS
37	AL	58	HIS
39	AO	113	ASN
42	A4	7	HIS
44	A7	29	HIS
46	AN	97	ASN
46	AN	130	GLN
49	Aa	10	HIS
54	AP	159	HIS
55	Ah	34	HIS
61	AQ	59	GLN
61	AQ	92	HIS
62	AR	221	HIS
63	AW	25	HIS
63	AW	145	HIS
63	AW	147	GLN
68	A5	185	HIS
70	AE	174	HIS
70	AE	253	HIS
70	AE	310	HIS
73	AU	15	GLN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1588/1608 (98%)	480 (30%)	100 (6%)
2	7	74/75 (98%)	33 (44%)	5 (6%)
34	AA	3165/3192 (99%)	971 (30%)	189 (5%)
35	AC	148/151 (98%)	49 (33%)	10 (6%)
36	AB	117/118 (99%)	27 (23%)	2 (1%)
All	All	5092/5144 (98%)	1560 (30%)	306 (6%)

All (1560) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	2	A
1	A	3	C
1	A	5	U

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Mol	Chain	Res	Type
1	A	17	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	61	A
1	A	67	A
1	A	68	U
1	A	71	A
1	A	81	U
1	A	82	G
1	A	84	A
1	A	103	U
1	A	104	U
1	A	106	A
1	A	107	A
1	A	108	A
1	A	113	U
1	A	116	A
1	A	125	G
1	A	128	A
1	A	129	U
1	A	130	U
1	A	138	U
1	A	139	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

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Mol	Chain	Res	Type
1	A	182	U
1	A	183	C
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	250	A
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	268	C
1	A	273	A
1	A	292	G
1	A	305	G
1	A	308	U
1	A	320	C
1	A	322	G
1	A	323	C
1	A	326	U
1	A	327	U
1	A	328	G
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

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Mol	Chain	Res	Type
1	A	366	A
1	A	367	C
1	A	375	U
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	424	G
1	A	425	G
1	A	430	C
1	A	431	A
1	A	432	G
1	A	433	C
1	A	434	A
1	A	440	G
1	A	445	U
1	A	446	U
1	A	450	C
1	A	451	A
1	A	454	U
1	A	458	A
1	A	459	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	494	G
1	A	508	U
1	A	509	U
1	A	515	U
1	A	516	G
1	A	521	G

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Mol	Chain	Res	Type
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	563	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	588	U
1	A	590	C
1	A	592	A
1	A	601	A
1	A	602	G
1	A	616	U
1	A	617	G
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	746	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

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Mol	Chain	Res	Type
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	818	C
1	A	819	A
1	A	824	A
1	A	830	U
1	A	831	U
1	A	832	A
1	A	833	A
1	A	834	A
1	A	837	A
1	A	844	G
1	A	845	U
1	A	846	G
1	A	849	U
1	A	852	A
1	A	853	U
1	A	856	U
1	A	857	A
1	A	858	U
1	A	866	A
1	A	869	A
1	A	870	A
1	A	873	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

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Mol	Chain	Res	Type
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	927	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	974	A
1	A	978	U
1	A	982	A
1	A	983	G
1	A	984	A
1	A	990	U
1	A	1002	A
1	A	1004	U
1	A	1011	G
1	A	1013	A
1	A	1020	U
1	A	1021	A
1	A	1029	U
1	A	1035	A
1	A	1038	C
1	A	1051	U
1	A	1054	G
1	A	1057	A
1	A	1061	A
1	A	1062	A
1	A	1065	C
1	A	1067	A
1	A	1070	A
1	A	1071	G
1	A	1072	A

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Mol	Chain	Res	Type
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	1098	U
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	1184	G
1	A	1193	A
1	A	1194	A
1	A	1195	G
1	A	1197	C
1	A	1199	U
1	A	1209	G
1	A	1210	G
1	A	1212	C
1	A	1227	G
1	A	1230	A
1	A	1233	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

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Mol	Chain	Res	Type
1	A	1268	G
1	A	1271	G
1	A	1274	C
1	A	1284	A
1	A	1286	U
1	A	1287	U
1	A	1291	C
1	A	1292	U
1	A	1293	C
1	A	1294	A
1	A	1295	A
1	A	1296	C
1	A	1297	A
1	A	1300	G
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	1319	G
1	A	1321	C
1	A	1363	U
1	A	1366	A
1	A	1367	U
1	A	1370	U
1	A	1374	G
1	A	1375	C
1	A	1382	G
1	A	1383	U
1	A	1384	U
1	A	1385	U
1	A	1388	A
1	A	1389	G
1	A	1409	U
1	A	1415	A
1	A	1416	U
1	A	1417	U
1	A	1422	U
1	A	1423	A

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Mol	Chain	Res	Type
1	A	1427	A
1	A	1433	A
1	A	1434	U
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	1462	A
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	1648	A
1	A	1649	C
1	A	1656	A
1	A	1659	U
1	A	1660	U
1	A	1664	G
1	A	1666	C
1	A	1667	A
1	A	1668	A
1	A	1673	A
1	A	1674	G
1	A	1677	C
1	A	1678	U
1	A	1679	G
1	A	1692	A
1	A	1693	U
1	A	1702	C

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Mol	Chain	Res	Type
1	A	1705	C
1	A	1706	A
1	A	1715	A
1	A	1716	C
1	A	1717	A
1	A	1720	G
1	A	1721	A
1	A	1723	A
1	A	1727	A
1	A	1728	U
1	A	1729	A
1	A	1732	G
1	A	1735	U
1	A	1742	A
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	1800	A
1	A	1801	A
1	A	1802	G
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	1830	C
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

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Mol	Chain	Res	Type
1	A	1856	A
1	A	1861	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	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	2021	U
1	A	2028	U

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Mol	Chain	Res	Type
1	A	2034	U
1	A	2042	A
1	A	2048	A
1	A	2049	G
1	A	2054	A
1	A	2058	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	2090	U
2	7	2	G
2	7	4	G
2	7	5	G
2	7	6	G
2	7	8	U
2	7	9	G
2	7	13	C
2	7	15	G
2	7	16	C
2	7	17	C
2	7	19	G
2	7	20	U
2	7	21	A
2	7	24	U
2	7	25	C
2	7	27	U
2	7	28	C
2	7	35	A
2	7	44	A
2	7	45	G
2	7	48	C
2	7	52	G
2	7	53	G
2	7	54	U
2	7	55	U
2	7	56	C
2	7	59	A

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Mol	Chain	Res	Type
2	7	61	C
2	7	62	C
2	7	63	G
2	7	71	C
2	7	72	A
2	7	74	C
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	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	62	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	109	A
34	AA	110	G
34	AA	111	C
34	AA	113	C
34	AA	119	G
34	AA	122	A
34	AA	124	U

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Mol	Chain	Res	Type
34	AA	130	G
34	AA	133	U
34	AA	134	G
34	AA	135	G
34	AA	136	U
34	AA	139	A
34	AA	144	U
34	AA	145	U
34	AA	147	C
34	AA	148	G
34	AA	149	A
34	AA	152	G
34	AA	154	A
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	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	206	A
34	AA	207	A
34	AA	211	U
34	AA	214	C
34	AA	215	C
34	AA	216	C

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Mol	Chain	Res	Type
34	AA	219	A
34	AA	220	G
34	AA	221	A
34	AA	226	G
34	AA	227	A
34	AA	228	A
34	AA	229	A
34	AA	231	G
34	AA	235	A
34	AA	239	U
34	AA	242	U
34	AA	246	U
34	AA	250	U
34	AA	251	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	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

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Mol	Chain	Res	Type
34	AA	338	U
34	AA	342	G
34	AA	344	A
34	AA	354	C
34	AA	356	A
34	AA	358	C
34	AA	359	A
34	AA	362	U
34	AA	378	U
34	AA	382	A
34	AA	383	U
34	AA	384	A
34	AA	385	G
34	AA	386	U
34	AA	392	G
34	AA	394	A
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	408	U
34	AA	409	A
34	AA	412	A
34	AA	413	C
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

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Mol	Chain	Res	Type
34	AA	467	U
34	AA	489	U
34	AA	494	U
34	AA	495	U
34	AA	497	U
34	AA	498	U
34	AA	499	U
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	530	U
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	544	C
34	AA	545	C
34	AA	547	C
34	AA	549	G
34	AA	573	U
34	AA	574	G
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

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Mol	Chain	Res	Type
34	AA	592	C
34	AA	593	A
34	AA	594	C
34	AA	595	U
34	AA	597	A
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	645	A
34	AA	646	A
34	AA	647	U
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	669	C
34	AA	671	U
34	AA	672	C
34	AA	674	U
34	AA	675	A
34	AA	677	A

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Mol	Chain	Res	Type
34	AA	678	A
34	AA	679	U
34	AA	681	U
34	AA	682	A
34	AA	683	A
34	AA	684	G
34	AA	685	U
34	AA	694	U
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	722	G
34	AA	727	A
34	AA	729	G
34	AA	738	A
34	AA	755	A
34	AA	759	U
34	AA	760	A
34	AA	761	U
34	AA	763	U
34	AA	765	A
34	AA	767	U
34	AA	769	U
34	AA	770	U
34	AA	773	A
34	AA	774	A
34	AA	793	A
34	AA	794	C
34	AA	799	A
34	AA	800	A
34	AA	804	A
34	AA	806	G
34	AA	809	A
34	AA	810	U
34	AA	812	U
34	AA	822	A

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Mol	Chain	Res	Type
34	AA	823	U
34	AA	825	G
34	AA	833	G
34	AA	834	U
34	AA	835	G
34	AA	859	C
34	AA	860	A
34	AA	862	U
34	AA	873	U
34	AA	874	A
34	AA	880	A
34	AA	885	A
34	AA	889	U
34	AA	890	G
34	AA	893	U
34	AA	895	A
34	AA	896	U
34	AA	899	A
34	AA	900	G
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	955	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

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Mol	Chain	Res	Type
34	AA	999	G
34	AA	1013	U
34	AA	1014	C
34	AA	1015	A
34	AA	1016	A
34	AA	1024	U
34	AA	1026	G
34	AA	1027	G
34	AA	1033	A
34	AA	1035	G
34	AA	1036	A
34	AA	1040	A
34	AA	1041	U
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	1097	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

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Mol	Chain	Res	Type
34	AA	1124	A
34	AA	1128	A
34	AA	1132	G
34	AA	1136	A
34	AA	1158	G
34	AA	1164	U
34	AA	1168	C
34	AA	1169	A
34	AA	1170	A
34	AA	1172	C
34	AA	1174	C
34	AA	1186	A
34	AA	1187	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	1202	C
34	AA	1203	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	1223	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

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Mol	Chain	Res	Type
34	AA	1244	G
34	AA	1245	G
34	AA	1259	G
34	AA	1263	A
34	AA	1272	U
34	AA	1273	G
34	AA	1281	C
34	AA	1283	C
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	1314	G
34	AA	1320	G
34	AA	1321	A
34	AA	1324	U
34	AA	1325	C
34	AA	1329	U
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	1418	A
34	AA	1420	C
34	AA	1431	A
34	AA	1433	U
34	AA	1434	G
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

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Mol	Chain	Res	Type
34	AA	1451	A
34	AA	1453	U
34	AA	1458	A
34	AA	1460	A
34	AA	1473	A
34	AA	1476	A
34	AA	1480	G
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	1567	A
34	AA	1571	C
34	AA	1572	U
34	AA	1575	C
34	AA	1583	G
34	AA	1586	C
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	1606	U
34	AA	1619	U
34	AA	1624	A
34	AA	1626	A
34	AA	1630	A
34	AA	1631	A

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Mol	Chain	Res	Type
34	AA	1635	G
34	AA	1636	A
34	AA	1637	G
34	AA	1643	U
34	AA	1649	G
34	AA	1651	C
34	AA	1657	U
34	AA	1659	A
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	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	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

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Mol	Chain	Res	Type
34	AA	1782	U
34	AA	1783	G
34	AA	1788	C
34	AA	1797	A
34	AA	1799	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	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	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	2080	C
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	2097	A
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	2115	U
34	AA	2117	A
34	AA	2125	A
34	AA	2132	A
34	AA	2136	C
34	AA	2145	A
34	AA	2147	A
34	AA	2148	U
34	AA	2149	A
34	AA	2160	G
34	AA	2161	G
34	AA	2171	U
34	AA	2174	G

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Mol	Chain	Res	Type
34	AA	2186	C
34	AA	2203	G
34	AA	2218	C
34	AA	2219	A
34	AA	2220	U
34	AA	2221	U
34	AA	2389	G
34	AA	2394	C
34	AA	2395	U
34	AA	2403	G
34	AA	2404	A
34	AA	2409	G
34	AA	2410	A
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	2433	U
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	2510	U
34	AA	2518	U
34	AA	2521	A
34	AA	2524	C
34	AA	2525	A
34	AA	2536	A
34	AA	2537	A
34	AA	2539	G
34	AA	2542	G

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Mol	Chain	Res	Type
34	AA	2544	G
34	AA	2545	A
34	AA	2548	A
34	AA	2549	A
34	AA	2550	C
34	AA	2552	A
34	AA	2555	A
34	AA	2556	C
34	AA	2562	U
34	AA	2564	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	2591	U
34	AA	2596	A
34	AA	2600	G
34	AA	2602	A
34	AA	2603	U
34	AA	2606	A
34	AA	2608	G
34	AA	2627	U
34	AA	2628	G
34	AA	2629	U
34	AA	2640	U
34	AA	2665	A
34	AA	2666	A
34	AA	2667	C
34	AA	2668	G
34	AA	2671	C
34	AA	2676	C
34	AA	2681	U
34	AA	2684	G
34	AA	2686	G
34	AA	2690	A
34	AA	2694	A

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Mol	Chain	Res	Type
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	2727	U
34	AA	2728	G
34	AA	2730	G
34	AA	2745	G
34	AA	2803	A
34	AA	2809	A
34	AA	2810	A
34	AA	2811	A
34	AA	2817	U
34	AA	2822	U
34	AA	2823	U
34	AA	2832	A
34	AA	2833	U
34	AA	2835	G
34	AA	2837	G
34	AA	2884	G
34	AA	2886	A
34	AA	2887	U
34	AA	2888	U
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	2967	A
34	AA	2968	U
34	AA	2975	A
34	AA	2980	U
34	AA	2981	A
34	AA	2987	G
34	AA	2990	G

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Mol	Chain	Res	Type
34	AA	2991	U
34	AA	2995	A
34	AA	2996	A
34	AA	3005	C
34	AA	3011	G
34	AA	3013	A
34	AA	3014	C
34	AA	3015	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	3042	A
34	AA	3053	G
34	AA	3061	U
34	AA	3068	A
34	AA	3073	G
34	AA	3076	G
34	AA	3079	A
34	AA	3081	C
34	AA	3086	A
34	AA	3087	A
34	AA	3088	G
34	AA	3091	U
34	AA	3092	G
34	AA	3094	C
34	AA	3100	G
34	AA	3108	A
34	AA	3111	U
34	AA	3113	U
34	AA	3116	A
34	AA	3118	A
34	AA	3123	C
34	AA	3124	G
34	AA	3126	A
34	AA	3127	A
34	AA	3130	U
34	AA	3131	A

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Mol	Chain	Res	Type
34	AA	3135	A
34	AA	3138	A
34	AA	3139	C
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	3162	A
34	AA	3167	A
34	AA	3168	C
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	3220	U
34	AA	3225	C
34	AA	3230	G
34	AA	3231	A
34	AA	3235	C
34	AA	3245	U
34	AA	3246	A
34	AA	3248	C
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

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Mol	Chain	Res	Type
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	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	3377	A
34	AA	3378	C
34	AA	3379	A
34	AA	3380	U
34	AA	3381	A
34	AA	3382	U
34	AA	3383	A
34	AA	3389	G
34	AA	3391	G
34	AA	3398	A
34	AA	3415	A
34	AA	3416	G
34	AA	3418	A
34	AA	3419	U
34	AA	3420	U

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Mol	Chain	Res	Type
34	AA	3421	A
34	AA	3432	A
34	AA	3435	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	3555	U
34	AA	3571	A
34	AA	3573	U
34	AA	3575	U
34	AA	3576	A
34	AA	3578	A
34	AA	3579	A
34	AA	3580	G
34	AA	3581	A
34	AA	3582	G
34	AA	3585	A
34	AA	3586	U
34	AA	3588	A
34	AA	3589	U
34	AA	3590	A

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Mol	Chain	Res	Type
34	AA	3591	U
34	AA	3594	G
34	AA	3597	C
34	AA	3612	U
34	AA	3615	A
34	AA	3618	A
34	AA	3619	U
34	AA	3623	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	3661	A
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	3669	U
34	AA	3670	U
34	AA	3671	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	3711	U
34	AA	3712	G
34	AA	3716	C
34	AA	3727	A
34	AA	3728	A
34	AA	3732	U
34	AA	3733	G
34	AA	3736	A
34	AA	3737	G
34	AA	3739	A

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Mol	Chain	Res	Type
34	AA	3740	A
34	AA	3752	C
34	AA	3761	G
34	AA	3767	U
34	AA	3768	A
34	AA	3770	C
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	50	G
35	AC	53	G
35	AC	55	A
35	AC	57	A
35	AC	63	A
35	AC	64	U
35	AC	65	A
35	AC	66	C
35	AC	67	G
35	AC	68	C
35	AC	73	A
35	AC	75	A
35	AC	80	C
35	AC	90	G
35	AC	92	A
35	AC	94	C
35	AC	98	A
35	AC	99	G
35	AC	100	A
35	AC	101	A
35	AC	102	U
35	AC	107	A
35	AC	108	A
35	AC	109	U

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Mol	Chain	Res	Type
35	AC	111	U
35	AC	112	A
35	AC	114	A
35	AC	115	C
35	AC	116	U
35	AC	117	A
35	AC	119	A
35	AC	122	A
35	AC	123	A
35	AC	135	G
35	AC	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
36	AB	3	A
36	AB	7	G
36	AB	10	C
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	28	C
36	AB	33	U
36	AB	38	U
36	AB	48	G
36	AB	51	G
36	AB	53	U
36	AB	54	A
36	AB	63	A
36	AB	64	A
36	AB	69	U
36	AB	71	G
36	AB	74	A
36	AB	89	G
36	AB	93	G

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

All (306) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	1	A
1	A	2	A
1	A	25	C
1	A	44	U
1	A	45	U
1	A	95	A
1	A	103	U
1	A	105	A
1	A	107	A
1	A	156	A
1	A	161	U
1	A	206	A
1	A	246	A
1	A	249	A
1	A	251	U
1	A	326	U
1	A	327	U
1	A	357	U
1	A	358	G
1	A	383	G
1	A	406	A
1	A	408	U
1	A	423	A
1	A	474	A
1	A	525	G
1	A	544	G
1	A	561	C
1	A	577	A
1	A	614	A
1	A	616	U
1	A	745	A
1	A	752	U
1	A	753	U
1	A	789	U
1	A	790	U

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Mol	Chain	Res	Type
1	A	793	G
1	A	804	U
1	A	805	A
1	A	815	G
1	A	818	C
1	A	831	U
1	A	844	G
1	A	872	A
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	1056	G
1	A	1070	A
1	A	1100	U
1	A	1182	A
1	A	1209	G
1	A	1259	C
1	A	1292	U
1	A	1295	A
1	A	1300	G
1	A	1301	G
1	A	1305	A
1	A	1370	U
1	A	1381	C
1	A	1414	A
1	A	1416	U
1	A	1421	A
1	A	1423	A
1	A	1432	G
1	A	1448	U
1	A	1455	C
1	A	1659	U
1	A	1666	C
1	A	1667	A
1	A	1672	C
1	A	1691	G
1	A	1692	A

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Mol	Chain	Res	Type
1	A	1704	G
1	A	1705	C
1	A	1729	A
1	A	1786	U
1	A	1788	U
1	A	1799	A
1	A	1818	A
1	A	1819	U
1	A	1834	A
1	A	1854	U
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	2048	A
1	A	2053	U
1	A	2060	G
1	A	2071	U
2	7	34	C
2	7	44	A
2	7	53	G
2	7	55	U
2	7	73	A
34	AA	10	G
34	AA	25	A
34	AA	43	A
34	AA	61	A
34	AA	62	A
34	AA	65	A
34	AA	121	U
34	AA	122	A
34	AA	124	U
34	AA	138	C
34	AA	149	A
34	AA	162	U
34	AA	181	C
34	AA	205	G

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Mol	Chain	Res	Type
34	AA	215	C
34	AA	218	U
34	AA	228	A
34	AA	257	U
34	AA	270	U
34	AA	289	A
34	AA	315	C
34	AA	337	A
34	AA	353	G
34	AA	416	G
34	AA	432	A
34	AA	497	U
34	AA	500	A
34	AA	501	U
34	AA	504	A
34	AA	505	A
34	AA	579	C
34	AA	580	A
34	AA	581	C
34	AA	594	C
34	AA	595	U
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	650	U
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	721	U
34	AA	764	G
34	AA	768	C
34	AA	769	U

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Mol	Chain	Res	Type
34	AA	803	A
34	AA	809	A
34	AA	811	A
34	AA	821	C
34	AA	859	C
34	AA	889	U
34	AA	899	A
34	AA	904	G
34	AA	935	A
34	AA	965	A
34	AA	998	U
34	AA	1013	U
34	AA	1027	G
34	AA	1035	G
34	AA	1042	C
34	AA	1078	C
34	AA	1098	U
34	AA	1101	A
34	AA	1115	G
34	AA	1186	A
34	AA	1197	U
34	AA	1202	C
34	AA	1204	A
34	AA	1217	U
34	AA	1223	U
34	AA	1224	A
34	AA	1243	G
34	AA	1272	U
34	AA	1319	U
34	AA	1422	A
34	AA	1435	G
34	AA	1457	G
34	AA	1503	A
34	AA	1538	U
34	AA	1539	U
34	AA	1574	C
34	AA	1602	A
34	AA	1603	C
34	AA	1605	A
34	AA	1632	G
34	AA	1642	G
34	AA	1658	G

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Mol	Chain	Res	Type
34	AA	1703	U
34	AA	1705	A
34	AA	1750	U
34	AA	1798	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	1989	A
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	2146	A
34	AA	2170	G
34	AA	2193	U
34	AA	2219	A
34	AA	2394	C
34	AA	2409	G
34	AA	2434	U
34	AA	2437	A
34	AA	2523	U
34	AA	2563	A
34	AA	2574	A
34	AA	2665	A
34	AA	2696	G
34	AA	2727	U
34	AA	2810	A
34	AA	2816	U
34	AA	2822	U
34	AA	2883	U
34	AA	2886	A
34	AA	2932	A
34	AA	2966	C
34	AA	3013	A
34	AA	3017	A
34	AA	3018	A
34	AA	3019	A

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Mol	Chain	Res	Type
34	AA	3027	U
34	AA	3034	A
34	AA	3085	A
34	AA	3097	A
34	AA	3129	U
34	AA	3137	U
34	AA	3140	U
34	AA	3158	U
34	AA	3161	A
34	AA	3167	A
34	AA	3195	C
34	AA	3229	C
34	AA	3230	G
34	AA	3245	U
34	AA	3291	U
34	AA	3309	G
34	AA	3337	U
34	AA	3361	U
34	AA	3379	A
34	AA	3381	A
34	AA	3382	U
34	AA	3414	G
34	AA	3419	U
34	AA	3434	A
34	AA	3435	A
34	AA	3476	A
34	AA	3500	G
34	AA	3526	U
34	AA	3575	U
34	AA	3577	A
34	AA	3579	A
34	AA	3584	A
34	AA	3585	A
34	AA	3588	A
34	AA	3590	A
34	AA	3617	A
34	AA	3624	U
34	AA	3627	C
34	AA	3658	G
34	AA	3660	A
34	AA	3663	A
34	AA	3667	C

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Mol	Chain	Res	Type
34	AA	3669	U
34	AA	3670	U
34	AA	3688	G
34	AA	3711	U
34	AA	3732	U
34	AA	3774	A
34	AA	3782	A
35	AC	35	A
35	AC	37	A
35	AC	64	U
35	AC	90	G
35	AC	100	A
35	AC	108	A
35	AC	114	A
35	AC	134	G
35	AC	139	A
35	AC	145	A
36	AB	84	U
36	AB	88	A

5.4 Non-standard residues in protein, DNA, RNA chains

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
63	AW	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AW	154:ASN	C	197:UNK	N	36.79

6 Map visualisation

This section contains visualisations of the EMDB entry EMD-6452. These allow visual inspection of the internal detail of the map and identification of artifacts.

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

6.1 Orthogonal projections

This section was not generated.

6.2 Central slices

This section was not generated.

6.3 Largest variance slices

This section was not generated.

6.4 Orthogonal standard-deviation projections (False-color)

This section was not generated.

6.5 Orthogonal surface views

This section was not generated.

6.6 Mask visualisation

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

7 Map analysis

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

7.1 Map-value distribution

This section was not generated.

7.2 Volume estimate versus contour level

This section was not generated.

7.3 Rotationally averaged power spectrum

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

8 Fourier-Shell correlation

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

9 Map-model fit

This section was not generated.