Full wwPDB EM Validation Report ⓘ

Dec 6, 2023 – 04:40 pm GMT

PDB ID	:	7QDU
EMDB ID	:	EMD-13926
Title	:	Twist-corrected RNA origami 5-helix Tile A
Authors	:	McRae, E.K.S.; Andersen, E.S.
Deposited on	:	2021-11-30
Resolution	:	5.14 Å(reported)

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:

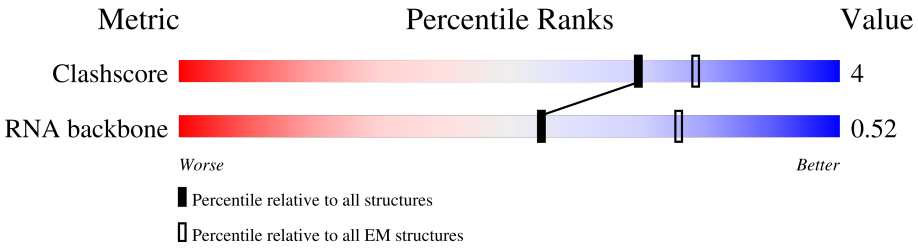
EMDB validation analysis	:	0.0.1.dev70
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	FAILED
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 5.14 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
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	Q	552	8% 42% 37% 14%

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 17693 atoms, of which 5941 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 Chains: Q.

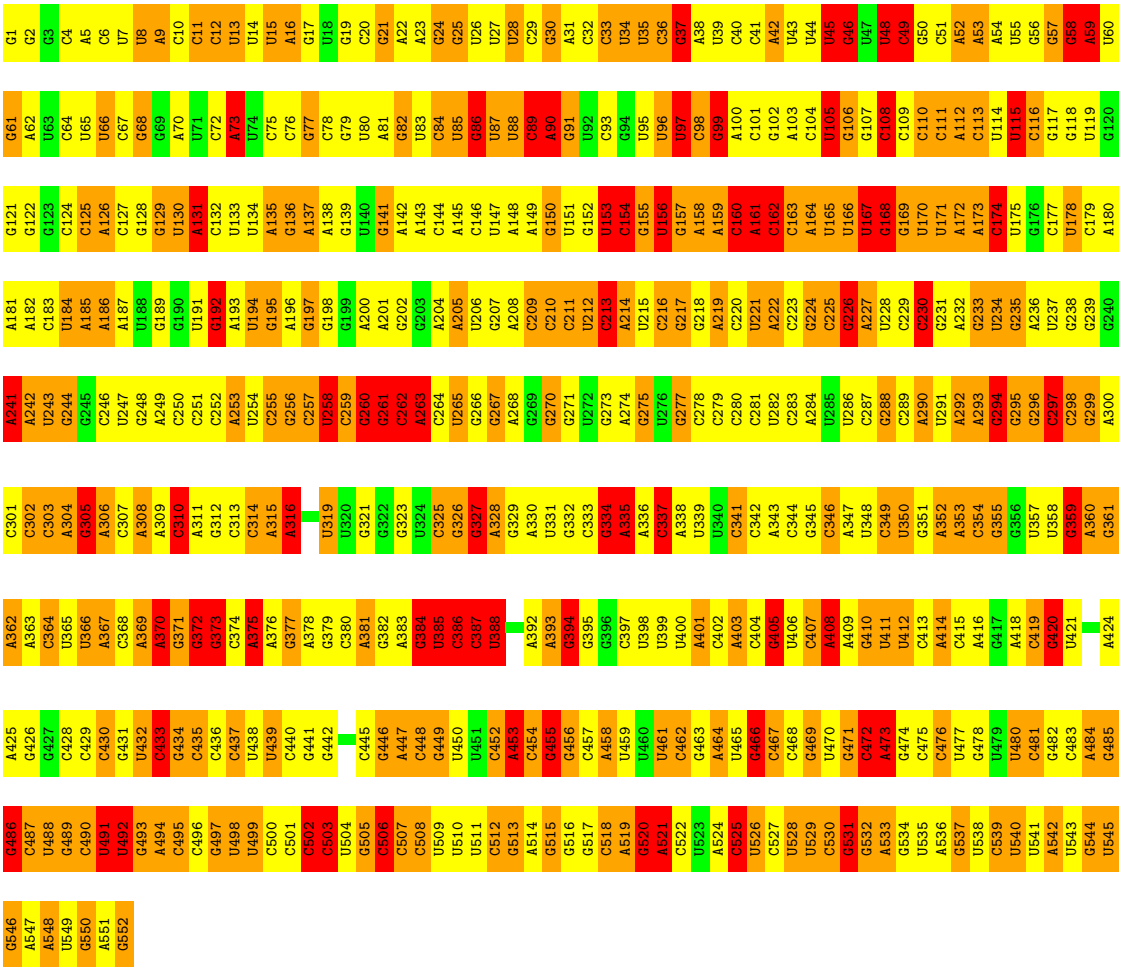
Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	P		
1	Q	552	17693	5246	5941	2080	3874	552	0	0

3 Residue-property plots (i)

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

Chain Q: 8% 42% 37% 14%



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	166751	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION; Patch CTF estimation (multi) from cryoSPARC.	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	60	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	130000	Depositor
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	Q	1.51	32/13133 (0.2%)	2.40	1022/20466 (5.0%)

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	Q	0	216

All (32) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	Q	392	A	C5-C4	-5.75	1.34	1.38
1	Q	261	G	C4'-O4'	-5.72	1.38	1.45
1	Q	219	A	C5-C4	-5.72	1.34	1.38
1	Q	208	A	C5-C4	-5.56	1.34	1.38
1	Q	249	A	C5-C4	-5.51	1.34	1.38
1	Q	90	A	C5-C4	-5.49	1.34	1.38
1	Q	187	A	C5-C4	-5.36	1.35	1.38
1	Q	383	A	C5-C4	-5.30	1.35	1.38
1	Q	453	A	C5-C4	-5.27	1.35	1.38
1	Q	161	A	C5-C4	-5.26	1.35	1.38
1	Q	213	C	N3-C4	-5.22	1.30	1.33
1	Q	126	A	C5-C4	-5.22	1.35	1.38
1	Q	159	A	C5-C4	-5.20	1.35	1.38
1	Q	353	A	C5-C4	-5.17	1.35	1.38
1	Q	84	C	C4-N4	-5.17	1.29	1.33
1	Q	325	C	C4-N4	-5.16	1.29	1.33
1	Q	416	A	C5-C4	-5.16	1.35	1.38
1	Q	38	A	C5-C4	-5.15	1.35	1.38
1	Q	360	A	C5-C4	-5.15	1.35	1.38
1	Q	393	A	C5-C4	-5.14	1.35	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	Q	211	C	C4-N4	-5.13	1.29	1.33
1	Q	186	A	C5-C4	-5.11	1.35	1.38
1	Q	494	A	C5-C4	-5.11	1.35	1.38
1	Q	352	A	C5-C4	-5.11	1.35	1.38
1	Q	162	C	C4-N4	-5.10	1.29	1.33
1	Q	447	A	C5-C4	-5.09	1.35	1.38
1	Q	343	A	C5-C4	-5.09	1.35	1.38
1	Q	149	A	C5-C4	-5.07	1.35	1.38
1	Q	361	G	N1-C2	-5.07	1.33	1.37
1	Q	224	G	C2-N2	-5.04	1.29	1.34
1	Q	425	A	C5-C4	-5.03	1.35	1.38
1	Q	347	A	C5-C4	-5.02	1.35	1.38

All (1022) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	327	G	C5'-C4'-O4'	13.84	125.71	109.10
1	Q	162	C	O4'-C1'-N1	11.56	117.45	108.20
1	Q	200	A	N1-C6-N6	-11.38	111.78	118.60
1	Q	528	U	O4'-C1'-N1	11.01	117.01	108.20
1	Q	145	A	N1-C6-N6	-10.68	112.19	118.60
1	Q	241	A	N1-C6-N6	-10.58	112.25	118.60
1	Q	335	A	N1-C6-N6	-10.49	112.30	118.60
1	Q	327	G	O4'-C4'-C3'	10.49	114.49	106.10
1	Q	174	C	O4'-C1'-N1	10.38	116.50	108.20
1	Q	180	A	N1-C6-N6	-10.12	112.53	118.60
1	Q	172	A	N1-C6-N6	-10.10	112.54	118.60
1	Q	236	A	N1-C6-N6	-9.87	112.68	118.60
1	Q	299	G	O4'-C1'-N9	9.73	115.98	108.20
1	Q	242	A	N1-C6-N6	-9.70	112.78	118.60
1	Q	408	A	N1-C6-N6	-9.65	112.81	118.60
1	Q	316	A	N1-C6-N6	-9.54	112.87	118.60
1	Q	361	G	O4'-C1'-N9	9.43	115.74	108.20
1	Q	30	G	O4'-C1'-N9	9.43	115.74	108.20
1	Q	35	U	O4'-C1'-N1	9.33	115.67	108.20
1	Q	137	A	N1-C6-N6	-9.26	113.05	118.60
1	Q	458	A	N1-C6-N6	-9.26	113.05	118.60
1	Q	336	A	N1-C6-N6	-9.23	113.06	118.60
1	Q	22	A	N1-C6-N6	-9.18	113.09	118.60
1	Q	173	A	N1-C6-N6	-9.14	113.12	118.60
1	Q	348	U	O4'-C1'-N1	9.11	115.49	108.20
1	Q	23	A	N1-C6-N6	-9.04	113.18	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	308	A	N1-C6-N6	-9.04	113.17	118.60
1	Q	38	A	C5-C6-N1	9.03	122.21	117.70
1	Q	42	A	N1-C6-N6	-9.01	113.19	118.60
1	Q	347	A	N1-C6-N6	-9.01	113.20	118.60
1	Q	91	G	O4'-C1'-N9	9.00	115.40	108.20
1	Q	375	A	N1-C6-N6	-8.95	113.23	118.60
1	Q	236	A	O4'-C1'-N9	8.88	115.31	108.20
1	Q	90	A	C5-C6-N1	8.88	122.14	117.70
1	Q	290	A	N1-C6-N6	-8.83	113.30	118.60
1	Q	137	A	C5-C6-N1	8.79	122.10	117.70
1	Q	5	A	N1-C6-N6	-8.77	113.34	118.60
1	Q	249	A	C5-C6-N1	8.76	122.08	117.70
1	Q	519	A	O4'-C1'-N9	8.72	115.17	108.20
1	Q	205	A	N1-C6-N6	-8.67	113.40	118.60
1	Q	383	A	C5-C6-N1	8.64	122.02	117.70
1	Q	343	A	N1-C6-N6	-8.62	113.43	118.60
1	Q	309	A	N1-C6-N6	-8.62	113.43	118.60
1	Q	208	A	C5-C6-N1	8.61	122.01	117.70
1	Q	392	A	C5-C6-N1	8.60	122.00	117.70
1	Q	90	A	N1-C6-N6	-8.59	113.44	118.60
1	Q	416	A	C5-C6-N1	8.57	121.99	117.70
1	Q	292	A	N1-C6-N6	-8.55	113.47	118.60
1	Q	467	C	C5'-C4'-O4'	8.55	119.36	109.10
1	Q	370	A	N1-C6-N6	-8.53	113.48	118.60
1	Q	376	A	N1-C6-N6	-8.49	113.50	118.60
1	Q	46	G	O4'-C1'-N9	8.49	114.99	108.20
1	Q	232	A	N1-C6-N6	-8.49	113.51	118.60
1	Q	213	C	N3-C2-O2	-8.46	115.98	121.90
1	Q	227	A	C5-C6-N1	8.46	121.93	117.70
1	Q	284	A	N1-C6-N6	-8.45	113.53	118.60
1	Q	149	A	C5-C6-N1	8.41	121.91	117.70
1	Q	500	C	N3-C2-O2	-8.39	116.02	121.90
1	Q	316	A	C5-C6-N1	8.38	121.89	117.70
1	Q	103	A	N1-C6-N6	-8.37	113.58	118.60
1	Q	184	U	O4'-C1'-N1	8.36	114.89	108.20
1	Q	381	A	N1-C6-N6	-8.33	113.60	118.60
1	Q	304	A	N1-C6-N6	-8.30	113.62	118.60
1	Q	54	A	N1-C6-N6	-8.30	113.62	118.60
1	Q	473	A	C5-C6-N1	8.30	121.85	117.70
1	Q	533	A	N1-C6-N6	-8.26	113.64	118.60
1	Q	70	A	N1-C6-N6	-8.24	113.66	118.60
1	Q	409	A	C5-C6-N1	8.23	121.82	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	158	A	C5-C6-N1	8.23	121.81	117.70
1	Q	201	A	N1-C6-N6	-8.20	113.68	118.60
1	Q	453	A	C5-C6-N1	8.20	121.80	117.70
1	Q	253	A	N1-C6-N6	-8.18	113.69	118.60
1	Q	514	A	N1-C6-N6	-8.18	113.69	118.60
1	Q	129	G	N1-C6-O6	-8.15	115.01	119.90
1	Q	311	A	N1-C6-N6	-8.13	113.72	118.60
1	Q	353	A	N1-C6-N6	-8.12	113.73	118.60
1	Q	315	A	C5-C6-N1	8.10	121.75	117.70
1	Q	50	G	O4'-C1'-N9	8.09	114.67	108.20
1	Q	364	C	N3-C2-O2	-8.08	116.25	121.90
1	Q	138	A	N1-C6-N6	-8.07	113.76	118.60
1	Q	360	A	N1-C6-N6	-8.06	113.76	118.60
1	Q	473	A	C5'-C4'-O4'	8.06	118.78	109.10
1	Q	263	A	C5-C6-N1	8.05	121.73	117.70
1	Q	547	A	N1-C6-N6	-8.05	113.77	118.60
1	Q	217	G	N1-C6-O6	-8.03	115.08	119.90
1	Q	383	A	N1-C6-N6	-8.03	113.78	118.60
1	Q	242	A	C5-C6-N1	8.03	121.71	117.70
1	Q	424	A	C5-C6-N1	8.02	121.71	117.70
1	Q	196	A	C5-C6-N1	8.02	121.71	117.70
1	Q	84	C	N3-C2-O2	-8.00	116.30	121.90
1	Q	101	C	O4'-C1'-N1	7.99	114.59	108.20
1	Q	161	A	C5-C6-N1	7.98	121.69	117.70
1	Q	261	G	O4'-C1'-N9	-7.96	101.84	108.20
1	Q	180	A	C5-C6-N1	7.95	121.67	117.70
1	Q	148	A	C5-C6-N1	7.93	121.67	117.70
1	Q	369	A	C5-C6-N1	7.92	121.66	117.70
1	Q	360	A	C5-C6-N1	7.92	121.66	117.70
1	Q	116	C	N3-C2-O2	-7.90	116.37	121.90
1	Q	453	A	N1-C6-N6	-7.90	113.86	118.60
1	Q	492	U	O4'-C1'-N1	7.90	114.52	108.20
1	Q	429	C	N3-C2-O2	-7.90	116.37	121.90
1	Q	261	G	C5'-C4'-C3'	7.89	128.63	116.00
1	Q	180	A	C4-C5-C6	-7.89	113.05	117.00
1	Q	447	A	C5-C6-N1	7.89	121.65	117.70
1	Q	186	A	C5-C6-N1	7.88	121.64	117.70
1	Q	172	A	C5-C6-N1	7.87	121.63	117.70
1	Q	152	G	N1-C6-O6	-7.86	115.18	119.90
1	Q	343	A	C5-C6-N1	7.86	121.63	117.70
1	Q	309	A	C5-C6-N1	7.86	121.63	117.70
1	Q	362	A	C5-C6-N1	7.85	121.62	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	474	G	O4'-C1'-N9	7.85	114.48	108.20
1	Q	81	A	C5-C6-N1	7.84	121.62	117.70
1	Q	135	A	N1-C6-N6	-7.84	113.90	118.60
1	Q	376	A	C5-C6-N1	7.83	121.61	117.70
1	Q	388	U	C3'-C2'-C1'	7.82	107.76	101.50
1	Q	393	A	C5-C6-N1	7.82	121.61	117.70
1	Q	226	G	N3-C4-C5	-7.81	124.70	128.60
1	Q	201	A	C5-C6-N1	7.80	121.60	117.70
1	Q	90	A	C4-C5-C6	-7.79	113.10	117.00
1	Q	143	A	C5-C6-N1	7.79	121.59	117.70
1	Q	36	C	O4'-C1'-N1	7.78	114.43	108.20
1	Q	192	G	O4'-C1'-N9	7.78	114.42	108.20
1	Q	449	G	P-O3'-C3'	7.78	129.03	119.70
1	Q	328	A	C5-C6-N1	7.77	121.58	117.70
1	Q	110	C	O4'-C1'-N1	7.77	114.41	108.20
1	Q	159	A	C5-C6-N1	7.76	121.58	117.70
1	Q	9	A	C5-C6-N1	7.76	121.58	117.70
1	Q	38	A	C4-C5-C6	-7.76	113.12	117.00
1	Q	236	A	C4-C5-C6	-7.75	113.12	117.00
1	Q	131	A	C5-C6-N1	7.75	121.57	117.70
1	Q	393	A	N1-C6-N6	-7.74	113.95	118.60
1	Q	41	C	N3-C2-O2	-7.73	116.49	121.90
1	Q	105	U	O4'-C1'-N1	7.72	114.37	108.20
1	Q	200	A	C4-C5-C6	-7.71	113.14	117.00
1	Q	336	A	C5-C6-N1	7.71	121.56	117.70
1	Q	338	A	N1-C6-N6	-7.71	113.98	118.60
1	Q	37	G	C4'-C3'-C2'	-7.70	94.90	102.60
1	Q	542	A	N1-C6-N6	-7.69	113.99	118.60
1	Q	347	A	C4-C5-C6	-7.68	113.16	117.00
1	Q	54	A	C5-C6-N1	7.67	121.53	117.70
1	Q	249	A	C4-C5-C6	-7.66	113.17	117.00
1	Q	213	C	N1-C2-O2	7.66	123.50	118.90
1	Q	182	A	N1-C6-N6	-7.66	114.01	118.60
1	Q	426	G	N1-C6-O6	-7.65	115.31	119.90
1	Q	412	U	O4'-C1'-N1	7.65	114.32	108.20
1	Q	222	A	C5-C6-N1	7.64	121.52	117.70
1	Q	38	A	N1-C6-N6	-7.63	114.02	118.60
1	Q	145	A	C4-C5-C6	-7.62	113.19	117.00
1	Q	173	A	C5-C6-N1	7.62	121.51	117.70
1	Q	346	C	N3-C2-O2	-7.62	116.56	121.90
1	Q	501	C	N3-C2-O2	-7.62	116.56	121.90
1	Q	196	A	N1-C6-N6	-7.62	114.03	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	161	A	N1-C6-N6	-7.61	114.03	118.60
1	Q	5	A	C4-C5-C6	-7.61	113.19	117.00
1	Q	293	A	O4'-C1'-N9	7.61	114.29	108.20
1	Q	306	A	C5-C6-N1	7.60	121.50	117.70
1	Q	414	A	N1-C6-N6	-7.59	114.04	118.60
1	Q	524	A	C5-C6-N1	7.59	121.50	117.70
1	Q	59	A	C5-C6-N1	7.59	121.50	117.70
1	Q	459	U	O4'-C1'-N1	7.59	114.27	108.20
1	Q	264	C	N3-C2-O2	-7.58	116.59	121.90
1	Q	132	C	N3-C2-O2	-7.58	116.59	121.90
1	Q	452	C	N3-C2-O2	-7.57	116.60	121.90
1	Q	476	C	N3-C2-O2	-7.55	116.61	121.90
1	Q	494	A	O4'-C1'-N9	7.55	114.24	108.20
1	Q	219	A	C5-C6-N1	7.55	121.48	117.70
1	Q	363	A	C5-C6-N1	7.55	121.47	117.70
1	Q	181	A	N1-C6-N6	-7.55	114.07	118.60
1	Q	530	C	N3-C2-O2	-7.55	116.62	121.90
1	Q	229	C	N3-C2-O2	-7.54	116.62	121.90
1	Q	425	A	C5-C6-N1	7.54	121.47	117.70
1	Q	184	U	C3'-C2'-C1'	7.53	107.53	101.50
1	Q	125	C	N3-C2-O2	-7.53	116.63	121.90
1	Q	187	A	N1-C6-N6	-7.53	114.08	118.60
1	Q	20	C	N3-C2-O2	-7.52	116.63	121.90
1	Q	52	A	N1-C6-N6	-7.52	114.09	118.60
1	Q	193	A	C5-C6-N1	7.52	121.46	117.70
1	Q	37	G	C5'-C4'-O4'	7.52	118.12	109.10
1	Q	496	C	N3-C2-O2	-7.52	116.64	121.90
1	Q	160	C	N3-C2-O2	-7.52	116.64	121.90
1	Q	468	C	N3-C2-O2	-7.51	116.64	121.90
1	Q	508	C	N3-C2-O2	-7.51	116.64	121.90
1	Q	126	A	N1-C6-N6	-7.49	114.10	118.60
1	Q	303	C	N3-C2-O2	-7.49	116.66	121.90
1	Q	183	C	N3-C2-O2	-7.49	116.66	121.90
1	Q	370	A	C5-C6-N1	7.49	121.44	117.70
1	Q	352	A	N1-C6-N6	-7.48	114.11	118.60
1	Q	42	A	C5-C6-N1	7.47	121.44	117.70
1	Q	494	A	C5-C6-N1	7.47	121.44	117.70
1	Q	519	A	N1-C6-N6	-7.47	114.12	118.60
1	Q	168	G	N1-C6-O6	-7.47	115.42	119.90
1	Q	342	C	N3-C2-O2	-7.47	116.67	121.90
1	Q	509	U	O4'-C1'-N1	7.47	114.17	108.20
1	Q	113	C	O4'-C1'-N1	7.46	114.17	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	142	A	C5-C6-N1	7.46	121.43	117.70
1	Q	229	C	N1-C2-O2	7.46	123.37	118.90
1	Q	241	A	C4-C5-C6	-7.45	113.27	117.00
1	Q	249	A	N1-C6-N6	-7.45	114.13	118.60
1	Q	51	C	O4'-C1'-N1	7.45	114.16	108.20
1	Q	330	A	N1-C6-N6	-7.45	114.13	118.60
1	Q	338	A	C5-C6-N1	7.45	121.42	117.70
1	Q	533	A	C5-C6-N1	7.44	121.42	117.70
1	Q	378	A	C5-C6-N1	7.44	121.42	117.70
1	Q	374	C	N3-C2-O2	-7.42	116.70	121.90
1	Q	526	U	O4'-C1'-N1	7.42	114.14	108.20
1	Q	274	A	N1-C6-N6	-7.42	114.15	118.60
1	Q	40	C	N3-C2-O2	-7.41	116.71	121.90
1	Q	162	C	N3-C2-O2	-7.41	116.71	121.90
1	Q	430	C	N3-C2-O2	-7.41	116.71	121.90
1	Q	306	A	N1-C6-N6	-7.40	114.16	118.60
1	Q	419	C	N3-C2-O2	-7.40	116.72	121.90
1	Q	482	G	O4'-C1'-N9	7.40	114.12	108.20
1	Q	308	A	C5-C6-N1	7.40	121.40	117.70
1	Q	5	A	C5-C6-N1	7.38	121.39	117.70
1	Q	164	A	C5-C6-N1	7.38	121.39	117.70
1	Q	48	U	O4'-C1'-N1	7.38	114.10	108.20
1	Q	536	A	C5-C6-N1	7.38	121.39	117.70
1	Q	64	C	N3-C2-O2	-7.37	116.74	121.90
1	Q	259	C	N3-C2-O2	-7.36	116.75	121.90
1	Q	214	A	N1-C6-N6	-7.34	114.19	118.60
1	Q	367	A	C5-C6-N1	7.34	121.37	117.70
1	Q	168	G	O4'-C1'-N9	7.34	114.07	108.20
1	Q	33	C	N3-C2-O2	-7.34	116.76	121.90
1	Q	347	A	C5-C6-N1	7.33	121.37	117.70
1	Q	397	C	N3-C2-O2	-7.33	116.77	121.90
1	Q	12	C	N3-C2-O2	-7.32	116.78	121.90
1	Q	458	A	C4-C5-C6	-7.32	113.34	117.00
1	Q	325	C	N3-C2-O2	-7.31	116.78	121.90
1	Q	279	C	N3-C2-O2	-7.30	116.79	121.90
1	Q	343	A	C4-C5-C6	-7.30	113.35	117.00
1	Q	138	A	C5-C6-N1	7.30	121.35	117.70
1	Q	483	C	O4'-C1'-N1	7.29	114.04	108.20
1	Q	298	C	O4'-C1'-N1	7.29	114.03	108.20
1	Q	134	U	O4'-C1'-N1	7.29	114.03	108.20
1	Q	292	A	C5-C6-N1	7.29	121.34	117.70
1	Q	506	C	O4'-C1'-N1	7.29	114.03	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	499	U	O4'-C1'-N1	7.28	114.02	108.20
1	Q	93	C	N3-C2-O2	-7.27	116.81	121.90
1	Q	127	C	N3-C2-O2	-7.27	116.81	121.90
1	Q	352	A	C4-C5-C6	-7.26	113.37	117.00
1	Q	75	C	O4'-C1'-N1	7.26	114.01	108.20
1	Q	81	A	N1-C6-N6	-7.24	114.26	118.60
1	Q	393	A	C4-C5-C6	-7.24	113.38	117.00
1	Q	196	A	C4-C5-C6	-7.23	113.38	117.00
1	Q	392	A	C4-C5-C6	-7.23	113.39	117.00
1	Q	204	A	N1-C6-N6	-7.22	114.27	118.60
1	Q	113	C	N3-C2-O2	-7.22	116.85	121.90
1	Q	174	C	N3-C2-O2	-7.22	116.85	121.90
1	Q	311	A	C4-C5-C6	-7.21	113.39	117.00
1	Q	62	A	N1-C6-N6	-7.21	114.27	118.60
1	Q	472	C	N3-C2-O2	-7.21	116.85	121.90
1	Q	368	C	N3-C2-O2	-7.20	116.86	121.90
1	Q	204	A	C5-C6-N1	7.20	121.30	117.70
1	Q	387	C	C4'-C3'-O3'	7.17	127.33	113.00
1	Q	432	U	O4'-C1'-N1	7.17	113.93	108.20
1	Q	381	A	C4-C5-C6	-7.16	113.42	117.00
1	Q	42	A	C4-C5-C6	-7.15	113.42	117.00
1	Q	6	C	N3-C2-O2	-7.15	116.89	121.90
1	Q	260	G	C4'-C3'-C2'	-7.15	95.45	102.60
1	Q	383	A	C4-C5-C6	-7.15	113.42	117.00
1	Q	209	C	N3-C2-O2	-7.15	116.90	121.90
1	Q	277	G	O4'-C1'-N9	7.15	113.92	108.20
1	Q	22	A	C5-C6-N1	7.14	121.27	117.70
1	Q	186	A	N1-C6-N6	-7.14	114.31	118.60
1	Q	183	C	O4'-C1'-N1	7.14	113.91	108.20
1	Q	403	A	N1-C6-N6	-7.14	114.32	118.60
1	Q	436	C	N3-C2-O2	-7.14	116.90	121.90
1	Q	242	A	C4-C5-C6	-7.13	113.43	117.00
1	Q	8	U	O4'-C1'-N1	7.13	113.90	108.20
1	Q	306	A	C4-C5-C6	-7.13	113.44	117.00
1	Q	551	A	N1-C6-N6	-7.13	114.32	118.60
1	Q	257	C	N3-C2-O2	-7.12	116.92	121.90
1	Q	301	C	O4'-C1'-N1	7.12	113.89	108.20
1	Q	386	C	N1-C2-O2	7.11	123.16	118.90
1	Q	112	A	N1-C6-N6	-7.10	114.34	118.60
1	Q	109	C	N3-C2-O2	-7.10	116.93	121.90
1	Q	187	A	C5-C6-N1	7.10	121.25	117.70
1	Q	341	C	N3-C2-O2	-7.09	116.93	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	415	C	N3-C2-O2	-7.09	116.93	121.90
1	Q	484	A	C5-C6-N1	7.08	121.24	117.70
1	Q	539	C	N3-C2-O2	-7.07	116.95	121.90
1	Q	112	A	C5-C6-N1	7.06	121.23	117.70
1	Q	393	A	O4'-C1'-N9	7.06	113.85	108.20
1	Q	298	C	N3-C2-O2	-7.06	116.96	121.90
1	Q	23	A	C5-C6-N1	7.05	121.23	117.70
1	Q	386	C	N3-C2-O2	-7.05	116.96	121.90
1	Q	55	U	O4'-C1'-N1	7.05	113.84	108.20
1	Q	84	C	O4'-C1'-N1	7.05	113.84	108.20
1	Q	352	A	C5-C6-N1	7.05	121.22	117.70
1	Q	223	C	N3-C2-O2	-7.04	116.97	121.90
1	Q	304	A	C4-C5-C6	-7.04	113.48	117.00
1	Q	10	C	N3-C2-O2	-7.03	116.98	121.90
1	Q	219	A	C4-C5-C6	-7.03	113.48	117.00
1	Q	414	A	C4-C5-C6	-7.03	113.48	117.00
1	Q	315	A	N1-C6-N6	-7.03	114.38	118.60
1	Q	409	A	N1-C6-N6	-7.02	114.39	118.60
1	Q	124	C	N3-C2-O2	-7.02	116.99	121.90
1	Q	266	G	N1-C6-O6	-7.02	115.69	119.90
1	Q	464	A	N1-C6-N6	-7.01	114.39	118.60
1	Q	220	C	N3-C2-O2	-7.00	117.00	121.90
1	Q	234	U	O4'-C1'-N1	7.00	113.80	108.20
1	Q	404	C	N3-C2-O2	-7.00	117.00	121.90
1	Q	454	C	N3-C2-O2	-7.00	117.00	121.90
1	Q	495	C	N3-C2-O2	-7.00	117.00	121.90
1	Q	425	A	C4-C5-C6	-6.99	113.50	117.00
1	Q	448	C	O4'-C1'-N1	6.99	113.79	108.20
1	Q	89	C	N3-C2-O2	-6.99	117.01	121.90
1	Q	521	A	N1-C6-N6	-6.99	114.41	118.60
1	Q	112	A	C4-C5-C6	-6.99	113.50	117.00
1	Q	532	G	O4'-C1'-N9	6.99	113.79	108.20
1	Q	338	A	C4-C5-C6	-6.97	113.51	117.00
1	Q	366	U	O4'-C1'-N1	6.97	113.78	108.20
1	Q	354	C	N3-C2-O2	-6.96	117.02	121.90
1	Q	381	A	C5-C6-N1	6.96	121.18	117.70
1	Q	433	C	C5'-C4'-O4'	6.96	117.46	109.10
1	Q	205	A	C4-C5-C6	-6.96	113.52	117.00
1	Q	22	A	C4-C5-C6	-6.96	113.52	117.00
1	Q	158	A	N1-C6-N6	-6.96	114.43	118.60
1	Q	161	A	C4-C5-C6	-6.96	113.52	117.00
1	Q	73	A	C5-C6-N1	6.96	121.18	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	539	C	O4'-C1'-N1	6.95	113.76	108.20
1	Q	75	C	N3-C2-O2	-6.95	117.03	121.90
1	Q	208	A	C4-C5-C6	-6.95	113.53	117.00
1	Q	500	C	O4'-C1'-N1	6.95	113.76	108.20
1	Q	301	C	N3-C2-O2	-6.94	117.04	121.90
1	Q	205	A	C5-C6-N1	6.93	121.17	117.70
1	Q	506	C	N3-C2-O2	-6.93	117.05	121.90
1	Q	548	A	C5-C6-N1	6.92	121.16	117.70
1	Q	185	A	C5-C6-N1	6.91	121.16	117.70
1	Q	253	A	C5-C6-N1	6.91	121.16	117.70
1	Q	255	C	N3-C2-O2	-6.91	117.06	121.90
1	Q	409	A	C4-C5-C6	-6.91	113.55	117.00
1	Q	126	A	C4-C5-C6	-6.91	113.55	117.00
1	Q	253	A	C4-C5-C6	-6.91	113.55	117.00
1	Q	468	C	O4'-C1'-N1	6.91	113.72	108.20
1	Q	232	A	C5-C6-N1	6.90	121.15	117.70
1	Q	466	G	O4'-C1'-N9	6.90	113.72	108.20
1	Q	453	A	C4-C5-C6	-6.90	113.55	117.00
1	Q	99	G	O4'-C1'-N9	6.89	113.72	108.20
1	Q	54	A	C4-C5-C6	-6.89	113.56	117.00
1	Q	300	A	C5-C6-N1	6.88	121.14	117.70
1	Q	256	G	N1-C6-O6	-6.88	115.77	119.90
1	Q	304	A	C5-C6-N1	6.88	121.14	117.70
1	Q	96	U	O4'-C1'-N1	6.88	113.70	108.20
1	Q	334	G	C2'-C3'-O3'	6.88	124.70	113.70
1	Q	20	C	N1-C2-O2	6.87	123.02	118.90
1	Q	330	A	C5-C6-N1	6.87	121.14	117.70
1	Q	145	A	C5-C6-N1	6.87	121.13	117.70
1	Q	335	A	C5-C6-N1	6.87	121.14	117.70
1	Q	519	A	C5-C6-N1	6.87	121.13	117.70
1	Q	35	U	C3'-C2'-C1'	6.86	106.99	101.50
1	Q	102	G	N7-C8-N9	6.85	116.53	113.10
1	Q	462	C	N3-C2-O2	-6.85	117.11	121.90
1	Q	525	C	C3'-C2'-C1'	6.84	106.97	101.50
1	Q	250	C	N3-C2-O2	-6.84	117.11	121.90
1	Q	416	A	N1-C6-N6	-6.83	114.50	118.60
1	Q	53	A	N1-C6-N6	-6.83	114.50	118.60
1	Q	375	A	C5-C6-N1	6.83	121.12	117.70
1	Q	418	A	C5-C6-N1	6.83	121.11	117.70
1	Q	12	C	O4'-C1'-N1	6.82	113.66	108.20
1	Q	156	U	O4'-C1'-N1	6.82	113.66	108.20
1	Q	135	A	C5-C6-N1	6.82	121.11	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	413	C	N3-C2-O2	-6.82	117.13	121.90
1	Q	132	C	O4'-C1'-N1	6.81	113.65	108.20
1	Q	312	G	O4'-C1'-N9	6.81	113.65	108.20
1	Q	111	C	N3-C2-O2	-6.81	117.14	121.90
1	Q	388	U	O4'-C1'-N1	6.80	113.64	108.20
1	Q	154	C	N3-C2-O2	-6.79	117.14	121.90
1	Q	344	C	N3-C2-O2	-6.79	117.15	121.90
1	Q	481	C	N3-C2-O2	-6.79	117.15	121.90
1	Q	246	C	N3-C2-O2	-6.79	117.15	121.90
1	Q	369	A	C4-C5-C6	-6.78	113.61	117.00
1	Q	53	A	C5-C6-N1	6.78	121.09	117.70
1	Q	467	C	N3-C2-O2	-6.77	117.16	121.90
1	Q	316	A	C4-C5-C6	-6.76	113.62	117.00
1	Q	414	A	C5-C6-N1	6.76	121.08	117.70
1	Q	11	C	N3-C2-O2	-6.76	117.17	121.90
1	Q	193	A	N1-C6-N6	-6.76	114.55	118.60
1	Q	146	C	N3-C2-O2	-6.75	117.17	121.90
1	Q	380	C	N3-C2-O2	-6.75	117.17	121.90
1	Q	447	A	N1-C6-N6	-6.75	114.55	118.60
1	Q	392	A	N1-C6-N6	-6.74	114.56	118.60
1	Q	64	C	O4'-C1'-N1	6.74	113.59	108.20
1	Q	187	A	C4-C5-C6	-6.74	113.63	117.00
1	Q	222	A	N1-C6-N6	-6.74	114.56	118.60
1	Q	179	C	N3-C2-O2	-6.73	117.19	121.90
1	Q	225	C	N3-C2-O2	-6.73	117.19	121.90
1	Q	216	C	N3-C2-O2	-6.73	117.19	121.90
1	Q	177	C	N3-C2-O2	-6.72	117.19	121.90
1	Q	428	C	N3-C2-O2	-6.72	117.19	121.90
1	Q	407	C	N3-C2-O2	-6.72	117.20	121.90
1	Q	424	A	C4-C5-C6	-6.71	113.64	117.00
1	Q	270	G	O4'-C1'-N9	6.71	113.57	108.20
1	Q	290	A	C4-C5-C6	-6.71	113.65	117.00
1	Q	507	C	N3-C2-O2	-6.71	117.20	121.90
1	Q	181	A	C4-C5-C6	-6.70	113.65	117.00
1	Q	424	A	N1-C6-N6	-6.70	114.58	118.60
1	Q	501	C	N1-C2-O2	6.70	122.92	118.90
1	Q	230	C	N3-C2-O2	-6.70	117.21	121.90
1	Q	70	A	C4-C5-C6	-6.69	113.65	117.00
1	Q	232	A	C4-C5-C6	-6.69	113.66	117.00
1	Q	279	C	O4'-C1'-N1	6.69	113.55	108.20
1	Q	548	A	N1-C6-N6	-6.69	114.59	118.60
1	Q	378	A	N1-C6-N6	-6.68	114.59	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	268	A	N1-C6-N6	-6.68	114.59	118.60
1	Q	435	C	N3-C2-O2	-6.68	117.22	121.90
1	Q	310	C	N3-C2-O2	-6.67	117.23	121.90
1	Q	464	A	C5-C6-N1	6.67	121.04	117.70
1	Q	135	A	C4-C5-C6	-6.67	113.66	117.00
1	Q	494	A	C5'-C4'-O4'	6.67	117.11	109.10
1	Q	73	A	N1-C6-N6	-6.67	114.60	118.60
1	Q	311	A	C5-C6-N1	6.67	121.03	117.70
1	Q	148	A	C4-C5-C6	-6.67	113.67	117.00
1	Q	15	U	O4'-C1'-N1	6.66	113.53	108.20
1	Q	268	A	C5-C6-N1	6.66	121.03	117.70
1	Q	284	A	C5-C6-N1	6.66	121.03	117.70
1	Q	335	A	C4-C5-C6	-6.66	113.67	117.00
1	Q	62	A	C4-C5-C6	-6.66	113.67	117.00
1	Q	28	U	O4'-C1'-N1	6.65	113.52	108.20
1	Q	156	U	N1-C1'-C2'	-6.65	104.69	112.00
1	Q	62	A	C5-C6-N1	6.65	121.02	117.70
1	Q	23	A	C4-C5-C6	-6.64	113.68	117.00
1	Q	359	G	N1-C6-O6	-6.64	115.91	119.90
1	Q	252	C	N3-C2-O2	-6.64	117.25	121.90
1	Q	416	A	C4-C5-C6	-6.64	113.68	117.00
1	Q	207	G	N9-C1'-C2'	-6.64	104.70	112.00
1	Q	23	A	O4'-C1'-N9	6.63	113.51	108.20
1	Q	210	C	N3-C2-O2	-6.63	117.26	121.90
1	Q	271	G	O4'-C1'-N9	6.63	113.50	108.20
1	Q	533	A	C4-C5-C6	-6.63	113.69	117.00
1	Q	353	A	C4-C5-C6	-6.63	113.69	117.00
1	Q	16	A	C4-C5-C6	-6.62	113.69	117.00
1	Q	52	A	C4-C5-C6	-6.62	113.69	117.00
1	Q	211	C	N3-C2-O2	-6.62	117.27	121.90
1	Q	302	C	N3-C2-O2	-6.62	117.27	121.90
1	Q	260	G	O4'-C1'-N9	6.62	113.49	108.20
1	Q	353	A	C5-C6-N1	6.62	121.01	117.70
1	Q	507	C	C5'-C4'-O4'	6.61	117.03	109.10
1	Q	173	A	C4-C5-C6	-6.61	113.70	117.00
1	Q	472	C	N1-C2-O2	6.61	122.86	118.90
1	Q	527	C	N3-C2-O2	-6.60	117.28	121.90
1	Q	297	C	N1-C2-O2	6.60	122.86	118.90
1	Q	429	C	N1-C2-O2	6.60	122.86	118.90
1	Q	542	A	C5-C6-N1	6.60	121.00	117.70
1	Q	364	C	N1-C2-O2	6.59	122.86	118.90
1	Q	31	A	C5-C6-N1	6.59	120.99	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	309	A	C4-C5-C6	-6.59	113.71	117.00
1	Q	181	A	C5-C6-N1	6.58	120.99	117.70
1	Q	536	A	C4-C5-C6	-6.58	113.71	117.00
1	Q	251	C	N3-C2-O2	-6.57	117.30	121.90
1	Q	262	C	N3-C2-O2	-6.56	117.31	121.90
1	Q	16	A	C5-C6-N1	6.55	120.98	117.70
1	Q	116	C	N1-C2-O2	6.55	122.83	118.90
1	Q	172	A	C4-C5-C6	-6.55	113.72	117.00
1	Q	445	C	N3-C2-O2	-6.55	117.31	121.90
1	Q	68	G	O4'-C1'-N9	6.55	113.44	108.20
1	Q	16	A	N1-C6-N6	-6.54	114.67	118.60
1	Q	159	A	N1-C6-N6	-6.53	114.68	118.60
1	Q	131	A	C4-C5-C6	-6.53	113.73	117.00
1	Q	278	C	N3-C2-O2	-6.53	117.33	121.90
1	Q	336	A	C4-C5-C6	-6.53	113.73	117.00
1	Q	487	C	O4'-C1'-N1	6.53	113.42	108.20
1	Q	40	C	N1-C2-O2	6.53	122.81	118.90
1	Q	294	G	C8-N9-C4	-6.53	103.79	106.40
1	Q	103	A	C4-C5-C6	-6.52	113.74	117.00
1	Q	162	C	N1-C2-O2	6.52	122.81	118.90
1	Q	418	A	N1-C6-N6	-6.51	114.69	118.60
1	Q	193	A	C4-C5-C6	-6.51	113.75	117.00
1	Q	287	C	O4'-C1'-N1	6.51	113.41	108.20
1	Q	536	A	N1-C6-N6	-6.50	114.70	118.60
1	Q	531	G	N3-C4-C5	-6.50	125.35	128.60
1	Q	149	A	C4-C5-C6	-6.50	113.75	117.00
1	Q	101	C	C3'-C2'-C1'	6.49	106.69	101.50
1	Q	27	U	O4'-C1'-N1	6.49	113.39	108.20
1	Q	32	C	N3-C2-O2	-6.48	117.36	121.90
1	Q	20	C	O4'-C1'-N1	6.48	113.39	108.20
1	Q	200	A	C5-C6-N1	6.48	120.94	117.70
1	Q	362	A	N1-C6-N6	-6.48	114.71	118.60
1	Q	130	U	O4'-C1'-N1	6.48	113.38	108.20
1	Q	280	C	N3-C2-O2	-6.48	117.37	121.90
1	Q	159	A	C4-C5-C6	-6.47	113.76	117.00
1	Q	36	C	N3-C2-O2	-6.47	117.37	121.90
1	Q	493	G	N1-C6-O6	-6.47	116.02	119.90
1	Q	475	C	N3-C2-O2	-6.47	117.37	121.90
1	Q	78	C	N3-C2-O2	-6.46	117.37	121.90
1	Q	104	C	N3-C2-O2	-6.46	117.38	121.90
1	Q	110	C	N3-C2-O2	-6.46	117.38	121.90
1	Q	325	C	N1-C2-O2	6.46	122.78	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	452	C	O4'-C1'-N1	6.46	113.37	108.20
1	Q	32	C	O4'-C1'-N1	6.46	113.37	108.20
1	Q	337	C	N3-C2-O2	-6.46	117.38	121.90
1	Q	236	A	C5-C6-N1	6.46	120.93	117.70
1	Q	425	A	N1-C6-N6	-6.46	114.73	118.60
1	Q	437	C	N3-C2-O2	-6.45	117.38	121.90
1	Q	273	G	N1-C6-O6	-6.45	116.03	119.90
1	Q	449	G	N1-C6-O6	-6.45	116.03	119.90
1	Q	333	C	N3-C2-O2	-6.44	117.39	121.90
1	Q	378	A	C4-C5-C6	-6.44	113.78	117.00
1	Q	521	A	C4-C5-C6	-6.44	113.78	117.00
1	Q	29	C	N3-C2-O2	-6.43	117.40	121.90
1	Q	519	A	C4-C5-C6	-6.43	113.78	117.00
1	Q	53	A	C4-C5-C6	-6.42	113.79	117.00
1	Q	547	A	C4-C5-C6	-6.42	113.79	117.00
1	Q	194	U	O4'-C1'-N1	6.42	113.33	108.20
1	Q	369	A	N1-C6-N6	-6.41	114.75	118.60
1	Q	514	A	C4-C5-C6	-6.41	113.79	117.00
1	Q	164	A	N1-C6-N6	-6.41	114.75	118.60
1	Q	144	C	N3-C2-O2	-6.41	117.42	121.90
1	Q	433	C	N3-C2-O2	-6.41	117.42	121.90
1	Q	514	A	C5-C6-N1	6.41	120.90	117.70
1	Q	142	A	C4-C5-C6	-6.40	113.80	117.00
1	Q	268	A	C4-C5-C6	-6.40	113.80	117.00
1	Q	25	G	N3-C2-N2	-6.40	115.42	119.90
1	Q	482	G	N1-C6-O6	-6.40	116.06	119.90
1	Q	518	C	N3-C2-O2	-6.40	117.42	121.90
1	Q	44	U	C4'-C3'-C2'	-6.39	96.21	102.60
1	Q	222	A	C4-C5-C6	-6.39	113.81	117.00
1	Q	126	A	C5-C6-N1	6.38	120.89	117.70
1	Q	537	G	O4'-C1'-N9	6.38	113.30	108.20
1	Q	137	A	C4-C5-C6	-6.37	113.81	117.00
1	Q	292	A	C4-C5-C6	-6.37	113.81	117.00
1	Q	308	A	C4-C5-C6	-6.37	113.81	117.00
1	Q	528	U	C3'-C2'-C1'	6.37	106.59	101.50
1	Q	81	A	C4-C5-C6	-6.36	113.82	117.00
1	Q	72	C	N3-C2-O2	-6.36	117.45	121.90
1	Q	148	A	N1-C6-N6	-6.36	114.79	118.60
1	Q	293	A	C5-C6-N1	6.36	120.88	117.70
1	Q	360	A	C4-C5-C6	-6.35	113.82	117.00
1	Q	287	C	N3-C2-O2	-6.35	117.45	121.90
1	Q	103	A	C5-C6-N1	6.35	120.87	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	402	C	N3-C2-O2	-6.35	117.46	121.90
1	Q	547	A	C5-C6-N1	6.34	120.87	117.70
1	Q	486	G	O4'-C1'-N9	6.34	113.27	108.20
1	Q	503	C	N3-C2-O2	-6.33	117.47	121.90
1	Q	33	C	O4'-C1'-N1	6.33	113.26	108.20
1	Q	457	C	N3-C2-O2	-6.33	117.47	121.90
1	Q	257	C	O4'-C1'-N1	6.33	113.26	108.20
1	Q	551	A	C5-C6-N1	6.32	120.86	117.70
1	Q	403	A	C4-C5-C6	-6.32	113.84	117.00
1	Q	376	A	C4-C5-C6	-6.31	113.84	117.00
1	Q	498	U	O4'-C1'-N1	6.31	113.25	108.20
1	Q	4	C	N3-C2-O2	-6.30	117.49	121.90
1	Q	52	A	C5-C6-N1	6.29	120.84	117.70
1	Q	108	C	N3-C2-O2	-6.29	117.50	121.90
1	Q	531	G	C2-N3-C4	6.29	115.04	111.90
1	Q	283	C	N3-C2-O2	-6.28	117.50	121.90
1	Q	408	A	C5-C6-N1	6.28	120.84	117.70
1	Q	472	C	O4'-C1'-N1	6.28	113.22	108.20
1	Q	314	C	N3-C2-O2	-6.28	117.51	121.90
1	Q	484	A	C4-C5-C6	-6.28	113.86	117.00
1	Q	418	A	C4-C5-C6	-6.27	113.86	117.00
1	Q	100	A	C5-C6-N1	6.27	120.83	117.70
1	Q	363	A	N1-C6-N6	-6.27	114.84	118.60
1	Q	542	A	C4-C5-C6	-6.26	113.87	117.00
1	Q	448	C	N3-C2-O2	-6.26	117.52	121.90
1	Q	288	G	N1-C6-O6	-6.26	116.14	119.90
1	Q	330	A	C4-C5-C6	-6.26	113.87	117.00
1	Q	497	G	N1-C6-O6	-6.26	116.15	119.90
1	Q	73	A	C4-C5-C6	-6.25	113.88	117.00
1	Q	100	A	O4'-C1'-N9	6.24	113.19	108.20
1	Q	315	A	C4-C5-C6	-6.24	113.88	117.00
1	Q	101	C	N3-C2-O2	-6.24	117.53	121.90
1	Q	349	C	N3-C2-O2	-6.23	117.54	121.90
1	Q	300	A	C4-C5-C6	-6.23	113.89	117.00
1	Q	212	U	O4'-C1'-N1	6.23	113.18	108.20
1	Q	458	A	C5-C6-N1	6.22	120.81	117.70
1	Q	522	C	N3-C2-O2	-6.22	117.55	121.90
1	Q	467	C	N1-C2-O2	6.22	122.63	118.90
1	Q	363	A	C4-C5-C6	-6.22	113.89	117.00
1	Q	267	G	N1-C6-O6	-6.21	116.17	119.90
1	Q	138	A	C4-C5-C6	-6.21	113.90	117.00
1	Q	14	U	O4'-C1'-N1	6.20	113.16	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	208	A	N1-C6-N6	-6.20	114.88	118.60
1	Q	182	A	C5-C6-N1	6.20	120.80	117.70
1	Q	387	C	O4'-C1'-N1	6.20	113.16	108.20
1	Q	70	A	C5-C6-N1	6.19	120.80	117.70
1	Q	401	A	C5-C6-N1	6.19	120.80	117.70
1	Q	500	C	N1-C2-O2	6.18	122.61	118.90
1	Q	168	G	P-O3'-C3'	6.18	127.11	119.70
1	Q	286	U	O4'-C1'-N1	6.18	113.14	108.20
1	Q	175	U	O4'-C1'-N1	6.17	113.13	108.20
1	Q	201	A	C4-C5-C6	-6.17	113.92	117.00
1	Q	493	G	C5-C6-N1	6.17	114.58	111.50
1	Q	185	A	C4-C5-C6	-6.16	113.92	117.00
1	Q	204	A	C4-C5-C6	-6.15	113.92	117.00
1	Q	403	A	C5-C6-N1	6.15	120.78	117.70
1	Q	294	G	C5'-C4'-O4'	6.14	116.47	109.10
1	Q	328	A	N1-C6-N6	-6.14	114.92	118.60
1	Q	297	C	N3-C2-O2	-6.14	117.60	121.90
1	Q	274	A	C5-C6-N1	6.13	120.76	117.70
1	Q	436	C	O4'-C1'-N1	6.13	113.10	108.20
1	Q	348	U	N1-C1'-C2'	-6.13	105.26	112.00
1	Q	471	G	C5-C6-N1	6.13	114.56	111.50
1	Q	174	C	C3'-C2'-C1'	6.12	106.40	101.50
1	Q	551	A	C4-C5-C6	-6.12	113.94	117.00
1	Q	543	U	O4'-C1'-N1	6.12	113.09	108.20
1	Q	247	U	O4'-C1'-N1	6.11	113.09	108.20
1	Q	67	C	N3-C2-O2	-6.11	117.62	121.90
1	Q	182	A	C4-C5-C6	-6.11	113.95	117.00
1	Q	519	A	N9-C1'-C2'	-6.11	105.28	112.00
1	Q	397	C	N1-C2-O2	6.10	122.56	118.90
1	Q	446	G	O4'-C1'-N9	6.10	113.08	108.20
1	Q	150	G	O4'-C1'-N9	6.09	113.08	108.20
1	Q	483	C	N3-C2-O2	-6.09	117.63	121.90
1	Q	313	C	N3-C2-O2	-6.08	117.64	121.90
1	Q	25	G	O4'-C1'-N9	6.07	113.06	108.20
1	Q	21	G	N1-C6-O6	-6.07	116.26	119.90
1	Q	142	A	N1-C6-N6	-6.07	114.96	118.60
1	Q	305	G	N1-C6-O6	-6.07	116.26	119.90
1	Q	293	A	N1-C6-N6	-6.07	114.96	118.60
1	Q	476	C	N1-C2-O2	6.07	122.54	118.90
1	Q	490	C	N3-C2-O2	-6.07	117.65	121.90
1	Q	149	A	N1-C6-N6	-6.06	114.96	118.60
1	Q	7	U	O4'-C1'-N1	6.06	113.05	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	6	C	N1-C2-O2	6.05	122.53	118.90
1	Q	492	U	N1-C1'-C2'	-6.05	105.34	112.00
1	Q	200	A	O4'-C1'-N9	6.04	113.03	108.20
1	Q	214	A	C5-C6-N1	6.03	120.72	117.70
1	Q	260	G	N1-C6-O6	-6.03	116.28	119.90
1	Q	453	A	O4'-C1'-N9	6.03	113.03	108.20
1	Q	503	C	O4'-C1'-N1	6.03	113.02	108.20
1	Q	354	C	O4'-C1'-N1	6.02	113.02	108.20
1	Q	211	C	N1-C2-O2	6.02	122.51	118.90
1	Q	260	G	N9-C1'-C2'	-6.02	105.38	112.00
1	Q	78	C	O4'-C1'-N1	6.02	113.01	108.20
1	Q	447	A	C4-C5-C6	-6.01	113.99	117.00
1	Q	415	C	N1-C2-O2	6.01	122.51	118.90
1	Q	219	A	N1-C6-N6	-6.01	115.00	118.60
1	Q	129	G	O4'-C1'-N9	6.00	113.00	108.20
1	Q	258	U	O4'-C1'-N1	6.00	113.00	108.20
1	Q	487	C	N3-C2-O2	-6.00	117.70	121.90
1	Q	497	G	O4'-C1'-N9	5.99	112.99	108.20
1	Q	26	U	O4'-C1'-N1	5.99	112.99	108.20
1	Q	186	A	C4-C5-C6	-5.99	114.01	117.00
1	Q	328	A	C4-C5-C6	-5.98	114.01	117.00
1	Q	59	A	C4-C5-C6	-5.97	114.02	117.00
1	Q	289	C	N3-C2-O2	-5.97	117.72	121.90
1	Q	419	C	N1-C2-O2	5.96	122.48	118.90
1	Q	93	C	N1-C2-O2	5.96	122.48	118.90
1	Q	334	G	P-O3'-C3'	5.96	126.85	119.70
1	Q	452	C	N3-C4-C5	5.94	124.28	121.90
1	Q	132	C	N1-C2-O2	5.94	122.46	118.90
1	Q	346	C	N1-C2-O2	5.94	122.46	118.90
1	Q	293	A	C8-N9-C4	-5.93	103.43	105.80
1	Q	530	C	N1-C2-O2	5.92	122.45	118.90
1	Q	51	C	N3-C2-O2	-5.92	117.76	121.90
1	Q	370	A	C4-C5-C6	-5.92	114.04	117.00
1	Q	548	A	C4-C5-C6	-5.92	114.04	117.00
1	Q	476	C	O4'-C1'-N1	5.92	112.94	108.20
1	Q	136	G	O4'-C1'-N9	5.92	112.93	108.20
1	Q	95	U	O4'-C1'-N1	5.92	112.93	108.20
1	Q	521	A	C5-C6-N1	5.92	120.66	117.70
1	Q	264	C	N1-C2-O2	5.91	122.45	118.90
1	Q	433	C	C6-N1-C2	-5.91	117.94	120.30
1	Q	98	C	N3-C2-O2	-5.91	117.77	121.90
1	Q	329	G	N1-C6-O6	-5.90	116.36	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	58	G	C3'-C2'-C1'	5.90	106.22	101.50
1	Q	77	G	N1-C6-O6	-5.90	116.36	119.90
1	Q	502	C	N3-C2-O2	-5.90	117.77	121.90
1	Q	350	U	O4'-C1'-N1	5.89	112.92	108.20
1	Q	463	G	N3-C4-C5	-5.89	125.65	128.60
1	Q	393	A	C5'-C4'-C3'	-5.89	106.57	116.00
1	Q	299	G	C3'-C2'-C1'	5.89	106.21	101.50
1	Q	374	C	O4'-C1'-N1	5.89	112.91	108.20
1	Q	527	C	N1-C2-O2	5.88	122.43	118.90
1	Q	33	C	N1-C2-O2	5.88	122.43	118.90
1	Q	24	G	O4'-C1'-N9	5.88	112.90	108.20
1	Q	274	A	C4-C5-C6	-5.88	114.06	117.00
1	Q	241	A	C5-C6-N1	5.88	120.64	117.70
1	Q	382	G	N9-C1'-C2'	-5.88	105.54	112.00
1	Q	428	C	N1-C2-O2	5.86	122.42	118.90
1	Q	393	A	C3'-C2'-C1'	5.86	106.19	101.50
1	Q	503	C	N1-C2-O2	5.85	122.41	118.90
1	Q	436	C	N1-C2-O2	5.84	122.41	118.90
1	Q	425	A	N9-C1'-C2'	-5.83	105.58	112.00
1	Q	546	G	O4'-C1'-N9	5.83	112.86	108.20
1	Q	45	U	O4'-C1'-N1	5.83	112.86	108.20
1	Q	525	C	N3-C2-O2	-5.82	117.83	121.90
1	Q	440	C	N3-C2-O2	-5.82	117.83	121.90
1	Q	529	U	N3-C2-O2	-5.82	118.13	122.20
1	Q	184	U	N1-C1'-C2'	-5.81	105.61	112.00
1	Q	127	C	O4'-C1'-N1	5.80	112.84	108.20
1	Q	383	A	N9-C1'-C2'	-5.80	105.62	112.00
1	Q	50	G	N3-C4-C5	-5.80	125.70	128.60
1	Q	11	C	O4'-C1'-N1	5.79	112.83	108.20
1	Q	300	A	N1-C6-N6	-5.79	115.13	118.60
1	Q	431	G	N1-C6-O6	-5.79	116.43	119.90
1	Q	128	G	N1-C6-O6	-5.78	116.43	119.90
1	Q	19	G	O4'-C1'-N9	5.78	112.83	108.20
1	Q	327	G	C3'-C2'-C1'	5.78	106.12	101.50
1	Q	535	U	O4'-C1'-N1	5.78	112.82	108.20
1	Q	227	A	C4-C5-C6	-5.77	114.11	117.00
1	Q	548	A	O4'-C1'-N9	5.77	112.82	108.20
1	Q	464	A	C4-C5-C6	-5.77	114.12	117.00
1	Q	185	A	C5-N7-C8	-5.76	101.02	103.90
1	Q	85	U	O4'-C1'-N1	5.76	112.81	108.20
1	Q	124	C	N1-C2-O2	5.76	122.36	118.90
1	Q	124	C	O4'-C1'-N1	5.75	112.80	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	375	A	C4-C5-C6	-5.75	114.13	117.00
1	Q	420	G	C5'-C4'-O4'	5.75	116.00	109.10
1	Q	88	U	O4'-C1'-N1	5.74	112.79	108.20
1	Q	99	G	N3-C4-C5	-5.74	125.73	128.60
1	Q	470	U	C5-C6-N1	-5.74	119.83	122.70
1	Q	57	G	C5-C6-N1	5.73	114.37	111.50
1	Q	195	G	N1-C6-O6	-5.73	116.46	119.90
1	Q	84	C	N1-C2-O2	5.73	122.34	118.90
1	Q	342	C	N1-C2-O2	5.73	122.34	118.90
1	Q	540	U	O4'-C1'-N1	5.73	112.78	108.20
1	Q	170	U	O4'-C1'-N1	5.73	112.78	108.20
1	Q	437	C	N1-C2-O2	5.72	122.33	118.90
1	Q	538	U	O4'-C1'-N1	5.72	112.78	108.20
1	Q	41	C	N1-C2-O2	5.72	122.33	118.90
1	Q	263	A	C4-C5-C6	-5.72	114.14	117.00
1	Q	91	G	N9-C1'-C2'	-5.72	105.71	112.00
1	Q	100	A	C4-C5-C6	-5.71	114.14	117.00
1	Q	290	A	C5-C6-N1	5.71	120.56	117.70
1	Q	236	A	N9-C1'-C2'	-5.71	105.72	112.00
1	Q	513	G	O4'-C1'-N9	5.71	112.77	108.20
1	Q	358	U	O4'-C1'-N1	5.71	112.77	108.20
1	Q	441	G	O4'-C1'-N9	5.71	112.77	108.20
1	Q	512	C	N3-C2-O2	-5.70	117.91	121.90
1	Q	313	C	O4'-C1'-N1	5.70	112.76	108.20
1	Q	46	G	C8-N9-C4	-5.69	104.12	106.40
1	Q	25	G	N9-C4-C5	5.69	107.68	105.40
1	Q	236	A	C6-C5-N7	5.69	136.28	132.30
1	Q	432	U	C3'-C2'-C1'	5.69	106.05	101.50
1	Q	430	C	N1-C2-O2	5.68	122.31	118.90
1	Q	519	A	C4'-C3'-C2'	-5.68	96.92	102.60
1	Q	121	G	N9-C1'-C2'	-5.68	105.75	112.00
1	Q	221	U	O4'-C1'-N1	5.68	112.74	108.20
1	Q	401	A	N1-C6-N6	-5.68	115.19	118.60
1	Q	471	G	N1-C6-O6	-5.68	116.49	119.90
1	Q	101	C	N1-C1'-C2'	-5.67	105.76	112.00
1	Q	115	U	O4'-C1'-N1	5.67	112.74	108.20
1	Q	275	G	O4'-C1'-N9	5.67	112.74	108.20
1	Q	156	U	C5'-C4'-C3'	-5.67	106.93	116.00
1	Q	404	C	O4'-C1'-N1	5.66	112.73	108.20
1	Q	463	G	O4'-C1'-N9	5.66	112.72	108.20
1	Q	162	C	N3-C4-C5	5.65	124.16	121.90
1	Q	143	A	C4-C5-C6	-5.65	114.17	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	143	A	N1-C6-N6	-5.65	115.21	118.60
1	Q	445	C	O4'-C1'-N1	5.65	112.72	108.20
1	Q	495	C	N1-C2-O2	5.65	122.29	118.90
1	Q	155	G	N1-C6-O6	-5.64	116.51	119.90
1	Q	168	G	C5'-C4'-C3'	-5.64	106.97	116.00
1	Q	297	C	O4'-C1'-N1	5.64	112.72	108.20
1	Q	157	G	C5'-C4'-C3'	-5.64	106.98	116.00
1	Q	164	A	C4-C5-C6	-5.64	114.18	117.00
1	Q	158	A	C4-C5-C6	-5.63	114.18	117.00
1	Q	263	A	N1-C6-N6	-5.63	115.22	118.60
1	Q	284	A	C4-C5-C6	-5.63	114.18	117.00
1	Q	491	U	O4'-C1'-N1	5.63	112.71	108.20
1	Q	218	G	N9-C1'-C2'	-5.63	105.80	112.00
1	Q	160	C	N3-C4-C5	5.63	124.15	121.90
1	Q	449	G	C5-C6-N1	5.62	114.31	111.50
1	Q	452	C	N1-C2-O2	5.62	122.27	118.90
1	Q	224	G	N1-C6-O6	-5.61	116.53	119.90
1	Q	265	U	O4'-C1'-N1	5.61	112.69	108.20
1	Q	344	C	O4'-C1'-N1	5.61	112.69	108.20
1	Q	421	U	O4'-C1'-N1	5.61	112.69	108.20
1	Q	292	A	O4'-C1'-N9	5.60	112.68	108.20
1	Q	382	G	N1-C6-O6	-5.60	116.54	119.90
1	Q	49	C	N3-C2-O2	-5.59	117.98	121.90
1	Q	469	G	N1-C6-O6	-5.59	116.55	119.90
1	Q	362	A	C4-C5-C6	-5.58	114.21	117.00
1	Q	214	A	C4-C5-C6	-5.58	114.21	117.00
1	Q	401	A	C4-C5-C6	-5.58	114.21	117.00
1	Q	144	C	O4'-C1'-N1	5.57	112.66	108.20
1	Q	77	G	O4'-C1'-N9	5.57	112.66	108.20
1	Q	212	U	N3-C2-O2	-5.57	118.30	122.20
1	Q	200	A	C6-C5-N7	5.57	136.20	132.30
1	Q	64	C	N1-C2-O2	5.56	122.24	118.90
1	Q	512	C	C1'-O4'-C4'	-5.56	105.45	109.90
1	Q	393	A	N9-C1'-C2'	-5.56	105.89	112.00
1	Q	440	C	N1-C2-O2	5.56	122.24	118.90
1	Q	37	G	N3-C4-C5	-5.55	125.82	128.60
1	Q	76	C	N3-C2-O2	-5.55	118.01	121.90
1	Q	430	C	C5'-C4'-O4'	5.55	115.76	109.10
1	Q	83	U	O4'-C1'-N1	5.54	112.64	108.20
1	Q	91	G	C3'-C2'-C1'	5.54	105.94	101.50
1	Q	372	G	C5'-C4'-O4'	5.54	115.75	109.10
1	Q	524	A	C4-C5-C6	-5.54	114.23	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	210	C	O4'-C1'-N1	5.54	112.63	108.20
1	Q	374	C	N1-C2-O2	5.54	122.22	118.90
1	Q	398	U	O4'-C1'-N1	5.53	112.62	108.20
1	Q	481	C	N1-C2-O2	5.53	122.22	118.90
1	Q	326	G	O4'-C1'-N9	5.53	112.62	108.20
1	Q	281	C	N3-C2-O2	-5.53	118.03	121.90
1	Q	429	C	O4'-C1'-N1	5.52	112.62	108.20
1	Q	471	G	O4'-C1'-N9	5.52	112.62	108.20
1	Q	37	G	C8-N9-C4	-5.52	104.19	106.40
1	Q	30	G	N3-C4-C5	-5.51	125.84	128.60
1	Q	131	A	N1-C6-N6	-5.50	115.30	118.60
1	Q	104	C	N1-C2-O2	5.50	122.20	118.90
1	Q	197	G	O4'-C1'-N9	5.50	112.60	108.20
1	Q	367	A	C4-C5-C6	-5.50	114.25	117.00
1	Q	109	C	N1-C2-O2	5.49	122.19	118.90
1	Q	487	C	N1-C1'-C2'	-5.49	105.96	112.00
1	Q	366	U	C3'-C2'-C1'	5.49	105.89	101.50
1	Q	54	A	O4'-C1'-N9	5.48	112.59	108.20
1	Q	442	G	O4'-C1'-N9	5.48	112.58	108.20
1	Q	100	A	N1-C6-N6	-5.48	115.31	118.60
1	Q	468	C	N1-C2-O2	5.47	122.19	118.90
1	Q	522	C	N1-C2-O2	5.47	122.18	118.90
1	Q	407	C	N1-C2-O2	5.47	122.18	118.90
1	Q	508	C	N1-C2-O2	5.47	122.18	118.90
1	Q	342	C	O4'-C1'-N1	5.47	112.58	108.20
1	Q	87	U	N3-C2-O2	-5.46	118.38	122.20
1	Q	181	A	N9-C1'-C2'	-5.46	105.99	112.00
1	Q	474	G	N1-C6-O6	-5.46	116.62	119.90
1	Q	404	C	N3-C4-N4	-5.46	114.18	118.00
1	Q	411	U	O4'-C1'-N1	5.46	112.57	108.20
1	Q	82	G	N1-C6-O6	-5.44	116.64	119.90
1	Q	116	C	N3-C4-N4	-5.44	114.19	118.00
1	Q	119	U	O4'-C1'-N1	5.43	112.55	108.20
1	Q	36	C	N1-C1'-C2'	-5.43	106.02	112.00
1	Q	125	C	O4'-C1'-N1	5.43	112.55	108.20
1	Q	171	U	P-O3'-C3'	5.43	126.22	119.70
1	Q	302	C	N1-C2-O2	5.43	122.16	118.90
1	Q	86	G	P-O3'-C3'	5.43	126.21	119.70
1	Q	326	G	N1-C6-O6	-5.42	116.65	119.90
1	Q	230	C	N1-C2-O2	5.42	122.15	118.90
1	Q	307	C	N3-C2-O2	-5.42	118.11	121.90
1	Q	109	C	O4'-C1'-N1	5.42	112.53	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	163	C	N3-C2-O2	-5.42	118.11	121.90
1	Q	105	U	N1-C1'-C2'	-5.41	106.05	112.00
1	Q	473	A	N1-C6-N6	-5.41	115.35	118.60
1	Q	361	G	N1-C6-O6	-5.41	116.66	119.90
1	Q	233	G	N1-C6-O6	-5.40	116.66	119.90
1	Q	29	C	N1-C2-O2	5.40	122.14	118.90
1	Q	530	C	O4'-C1'-N1	5.40	112.52	108.20
1	Q	439	U	O4'-C1'-N1	5.39	112.51	108.20
1	Q	542	A	C4'-C3'-C2'	-5.39	97.21	102.60
1	Q	506	C	N3-C4-N4	-5.39	114.23	118.00
1	Q	544	G	O4'-C1'-N9	5.39	112.51	108.20
1	Q	480	U	O4'-C1'-N1	5.38	112.51	108.20
1	Q	531	G	C5-C6-N1	5.37	114.19	111.50
1	Q	506	C	N1-C1'-C2'	-5.37	106.09	112.00
1	Q	513	G	N1-C6-O6	-5.37	116.68	119.90
1	Q	485	G	N9-C1'-C2'	-5.36	106.10	112.00
1	Q	183	C	N1-C2-O2	5.36	122.12	118.90
1	Q	99	G	C5-C6-N1	5.36	114.18	111.50
1	Q	408	A	C4-C5-C6	-5.36	114.32	117.00
1	Q	97	U	O4'-C1'-N1	5.36	112.48	108.20
1	Q	234	U	C5-C6-N1	-5.35	120.02	122.70
1	Q	303	C	N3-C4-N4	-5.35	114.25	118.00
1	Q	104	C	N1-C1'-C2'	-5.35	106.12	112.00
1	Q	552	G	O4'-C1'-N9	5.35	112.48	108.20
1	Q	209	C	N1-C2-O2	5.35	122.11	118.90
1	Q	539	C	N1-C2-O2	5.35	122.11	118.90
1	Q	76	C	C5'-C4'-O4'	5.35	115.52	109.10
1	Q	85	U	C5-C6-N1	-5.34	120.03	122.70
1	Q	113	C	N1-C2-O2	5.34	122.11	118.90
1	Q	126	A	N9-C1'-C2'	-5.34	106.12	112.00
1	Q	251	C	N1-C2-O2	5.34	122.11	118.90
1	Q	89	C	N1-C2-O2	5.34	122.10	118.90
1	Q	102	G	C8-N9-C4	-5.34	104.26	106.40
1	Q	388	U	N3-C2-O2	-5.34	118.46	122.20
1	Q	405	G	N1-C6-O6	-5.34	116.70	119.90
1	Q	502	C	O4'-C1'-N1	5.33	112.47	108.20
1	Q	125	C	N1-C2-O2	5.33	122.10	118.90
1	Q	241	A	C6-C5-N7	5.32	136.03	132.30
1	Q	367	A	N1-C6-N6	-5.32	115.41	118.60
1	Q	341	C	N1-C2-O2	5.32	122.09	118.90
1	Q	136	G	P-O3'-C3'	5.32	126.08	119.70
1	Q	496	C	N1-C2-O2	5.32	122.09	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	531	G	C5'-C4'-O4'	5.32	115.48	109.10
1	Q	455	G	O4'-C1'-N9	5.31	112.45	108.20
1	Q	442	G	N9-C1'-C2'	-5.31	106.16	112.00
1	Q	67	C	N1-C2-O2	5.30	122.08	118.90
1	Q	162	C	C1'-O4'-C4'	-5.30	105.66	109.90
1	Q	474	G	N9-C1'-C2'	-5.30	106.17	112.00
1	Q	257	C	N1-C2-O2	5.30	122.08	118.90
1	Q	301	C	N1-C2-O2	5.30	122.08	118.90
1	Q	536	A	N9-C1'-C2'	-5.30	106.17	112.00
1	Q	470	U	O4'-C1'-N1	5.29	112.44	108.20
1	Q	321	G	N9-C1'-C2'	-5.29	106.18	112.00
1	Q	289	C	O4'-C1'-N1	5.29	112.43	108.20
1	Q	514	A	O4'-C1'-N9	5.29	112.43	108.20
1	Q	24	G	N9-C1'-C2'	-5.28	106.19	112.00
1	Q	216	C	O4'-C1'-N1	5.28	112.42	108.20
1	Q	167	U	O4'-C1'-N1	5.28	112.42	108.20
1	Q	31	A	N1-C6-N6	-5.27	115.44	118.60
1	Q	260	G	O3'-P-O5'	5.27	114.01	104.00
1	Q	371	G	C5-C6-N1	5.27	114.14	111.50
1	Q	455	G	N1-C6-O6	-5.26	116.74	119.90
1	Q	89	C	N3-C4-C5	5.26	124.00	121.90
1	Q	250	C	O4'-C1'-N1	5.26	112.41	108.20
1	Q	50	G	C5-C6-N1	5.25	114.13	111.50
1	Q	484	A	N1-C6-N6	-5.25	115.45	118.60
1	Q	178	U	O4'-C1'-N1	5.25	112.40	108.20
1	Q	246	C	O4'-C1'-N1	5.25	112.40	108.20
1	Q	321	G	O4'-C1'-N9	5.25	112.40	108.20
1	Q	371	G	N3-C2-N2	-5.25	116.23	119.90
1	Q	206	U	O4'-C1'-N1	5.24	112.39	108.20
1	Q	168	G	C2'-C3'-O3'	5.24	122.08	113.70
1	Q	183	C	N3-C4-N4	-5.24	114.34	118.00
1	Q	249	A	N9-C1'-C2'	-5.24	106.24	112.00
1	Q	278	C	N1-C2-O2	5.23	122.04	118.90
1	Q	31	A	C4-C5-C6	-5.23	114.39	117.00
1	Q	9	A	C5-N7-C8	-5.23	101.29	103.90
1	Q	540	U	C5-C6-N1	-5.22	120.09	122.70
1	Q	506	C	N1-C2-O2	5.22	122.03	118.90
1	Q	522	C	O4'-C1'-N1	5.22	112.37	108.20
1	Q	536	A	O4'-C1'-N9	5.22	112.37	108.20
1	Q	279	C	N1-C2-O2	5.21	122.03	118.90
1	Q	441	G	N1-C6-O6	-5.21	116.77	119.90
1	Q	160	C	N1-C2-O2	5.21	122.03	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	68	G	C5-C6-N1	5.21	114.10	111.50
1	Q	15	U	C3'-C2'-C1'	5.21	105.67	101.50
1	Q	14	U	C5-C6-N1	-5.20	120.10	122.70
1	Q	204	A	O4'-C1'-N9	5.20	112.36	108.20
1	Q	57	G	C5'-C4'-C3'	-5.20	107.68	116.00
1	Q	280	C	N1-C2-O2	5.20	122.02	118.90
1	Q	467	C	O4'-C1'-N1	5.20	112.36	108.20
1	Q	174	C	N1-C2-O2	5.19	122.02	118.90
1	Q	226	G	N3-C4-N9	5.19	129.12	126.00
1	Q	325	C	N3-C4-C5	5.19	123.98	121.90
1	Q	542	A	C5'-C4'-O4'	5.19	115.33	109.10
1	Q	394	G	C5-C6-N1	5.19	114.09	111.50
1	Q	491	U	C5-C6-N1	-5.19	120.11	122.70
1	Q	145	A	C6-C5-N7	5.19	135.93	132.30
1	Q	184	U	C5-C6-N1	-5.19	120.11	122.70
1	Q	130	U	C5-C6-N1	-5.18	120.11	122.70
1	Q	135	A	O4'-C1'-N9	5.18	112.34	108.20
1	Q	371	G	N1-C6-O6	-5.18	116.79	119.90
1	Q	380	C	N1-C2-O2	5.18	122.01	118.90
1	Q	153	U	O4'-C1'-N1	5.18	112.34	108.20
1	Q	382	G	O4'-C1'-N9	5.18	112.34	108.20
1	Q	182	A	O4'-C1'-N9	5.18	112.34	108.20
1	Q	262	C	N1-C2-O2	5.18	122.01	118.90
1	Q	507	C	N1-C2-O2	5.18	122.01	118.90
1	Q	154	C	O4'-C1'-N1	5.18	112.34	108.20
1	Q	80	U	O4'-C1'-N1	5.17	112.34	108.20
1	Q	114	U	C5-C6-N1	-5.17	120.11	122.70
1	Q	327	G	N3-C4-C5	-5.17	126.01	128.60
1	Q	206	U	C5-C6-N1	-5.17	120.12	122.70
1	Q	53	A	O4'-C1'-N9	5.17	112.33	108.20
1	Q	180	A	C6-C5-N7	5.17	135.92	132.30
1	Q	105	U	C5-C6-N1	-5.16	120.12	122.70
1	Q	462	C	N1-C2-O2	5.16	122.00	118.90
1	Q	508	C	O4'-C1'-N1	5.16	112.33	108.20
1	Q	532	G	N9-C1'-C2'	-5.16	106.32	112.00
1	Q	220	C	O4'-C1'-N1	5.16	112.33	108.20
1	Q	104	C	O4'-C1'-N1	5.16	112.33	108.20
1	Q	366	U	C5-C6-N1	-5.16	120.12	122.70
1	Q	225	C	N1-C2-O2	5.15	121.99	118.90
1	Q	529	U	O4'-C1'-N1	5.15	112.32	108.20
1	Q	130	U	C5'-C4'-C3'	-5.15	107.76	116.00
1	Q	355	G	N1-C6-O6	-5.15	116.81	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	507	C	C6-N1-C2	-5.15	118.24	120.30
1	Q	22	A	C6-C5-N7	5.15	135.90	132.30
1	Q	34	U	C5-C6-N1	-5.15	120.13	122.70
1	Q	88	U	N3-C2-O2	-5.15	118.60	122.20
1	Q	210	C	N1-C2-O2	5.15	121.99	118.90
1	Q	35	U	C5-C6-N1	-5.14	120.13	122.70
1	Q	435	C	N1-C2-O2	5.14	121.98	118.90
1	Q	292	A	C3'-C2'-C1'	5.14	105.61	101.50
1	Q	409	A	O4'-C1'-N9	5.13	112.31	108.20
1	Q	493	G	C3'-C2'-C1'	5.13	105.61	101.50
1	Q	117	G	N3-C4-C5	-5.13	126.04	128.60
1	Q	355	G	C5-C6-N1	5.13	114.06	111.50
1	Q	151	U	O4'-C1'-N1	5.12	112.30	108.20
1	Q	434	G	C8-N9-C4	-5.12	104.35	106.40
1	Q	271	G	N9-C1'-C2'	-5.12	106.37	112.00
1	Q	509	U	C5-C6-N1	-5.12	120.14	122.70
1	Q	516	G	O4'-C1'-N9	5.12	112.30	108.20
1	Q	39	U	O4'-C1'-N1	5.11	112.29	108.20
1	Q	529	U	C3'-C2'-C1'	5.11	105.59	101.50
1	Q	12	C	C6-N1-C2	-5.11	118.26	120.30
1	Q	385	U	N3-C2-O2	-5.10	118.63	122.20
1	Q	141	G	O4'-C1'-N9	5.10	112.28	108.20
1	Q	510	U	O4'-C1'-N1	5.10	112.28	108.20
1	Q	46	G	N9-C4-C5	5.10	107.44	105.40
1	Q	430	C	N3-C4-C5	5.10	123.94	121.90
1	Q	392	A	N9-C1'-C2'	-5.10	106.39	112.00
1	Q	293	A	C4'-C3'-O3'	5.09	123.17	113.00
1	Q	220	C	N1-C2-O2	5.08	121.95	118.90
1	Q	271	G	N1-C6-O6	-5.08	116.85	119.90
1	Q	457	C	N3-C4-N4	-5.08	114.45	118.00
1	Q	125	C	C5'-C4'-C3'	-5.08	107.88	116.00
1	Q	51	C	C3'-C2'-C1'	5.07	105.56	101.50
1	Q	59	A	N1-C6-N6	-5.07	115.56	118.60
1	Q	456	G	C5'-C4'-O4'	5.07	115.19	109.10
1	Q	155	G	O4'-C1'-N9	5.07	112.25	108.20
1	Q	545	U	C5-C6-N1	-5.06	120.17	122.70
1	Q	259	C	N1-C2-O2	5.06	121.94	118.90
1	Q	165	U	O4'-C1'-N1	5.06	112.25	108.20
1	Q	252	C	N1-C2-O2	5.06	121.93	118.90
1	Q	386	C	N3-C4-N4	-5.06	114.46	118.00
1	Q	27	U	C5-C6-N1	-5.05	120.17	122.70
1	Q	65	U	N1-C2-N3	5.05	117.93	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Q	449	G	C5'-C4'-C3'	-5.05	107.92	116.00
1	Q	304	A	C3'-C2'-C1'	-5.05	97.46	101.50
1	Q	379	G	N1-C6-O6	-5.05	116.87	119.90
1	Q	462	C	O4'-C1'-N1	5.05	112.24	108.20
1	Q	501	C	N3-C4-C5	5.05	123.92	121.90
1	Q	295	G	O4'-C1'-N9	5.04	112.23	108.20
1	Q	473	A	C4-C5-C6	-5.04	114.48	117.00
1	Q	474	G	N3-C2-N2	-5.04	116.37	119.90
1	Q	66	U	O4'-C1'-N1	5.04	112.23	108.20
1	Q	194	U	N3-C2-O2	-5.04	118.67	122.20
1	Q	339	U	O4'-C1'-N1	5.04	112.23	108.20
1	Q	368	C	N1-C2-O2	5.04	121.92	118.90
1	Q	41	C	O4'-C1'-N1	5.03	112.23	108.20
1	Q	189	G	N1-C6-O6	-5.03	116.88	119.90
1	Q	259	C	N3-C4-C5	5.03	123.91	121.90
1	Q	438	U	N1-C2-N3	5.03	117.92	114.90
1	Q	10	C	N1-C2-O2	5.03	121.92	118.90
1	Q	387	C	N3-C2-O2	-5.02	118.38	121.90
1	Q	377	G	O4'-C1'-N9	5.02	112.22	108.20
1	Q	255	C	O4'-C1'-N1	5.02	112.21	108.20
1	Q	492	U	C5-C6-N1	-5.02	120.19	122.70
1	Q	13	U	O4'-C1'-N1	5.02	112.21	108.20
1	Q	347	A	C6-C5-N7	5.02	135.81	132.30
1	Q	510	U	N1-C2-N3	5.01	117.91	114.90
1	Q	524	A	N1-C6-N6	-5.01	115.60	118.60
1	Q	482	G	N3-C4-C5	-5.00	126.10	128.60
1	Q	68	G	N1-C6-O6	-5.00	116.90	119.90
1	Q	78	C	N1-C1'-C2'	-5.00	106.50	112.00
1	Q	122	G	O4'-C1'-N9	5.00	112.20	108.20
1	Q	354	C	N1-C1'-C2'	-5.00	106.50	112.00

There are no chirality outliers.

All (216) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	Q	1	G	Sidechain
1	Q	105	U	Sidechain
1	Q	108	C	Sidechain
1	Q	110	C	Sidechain
1	Q	111	C	Sidechain
1	Q	112	A	Sidechain
1	Q	113	C	Sidechain

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Mol	Chain	Res	Type	Group
1	Q	125	C	Sidechain
1	Q	126	A	Sidechain
1	Q	129	G	Sidechain
1	Q	13	U	Sidechain
1	Q	131	A	Sidechain
1	Q	133	U	Sidechain
1	Q	141	G	Sidechain
1	Q	147	U	Sidechain
1	Q	153	U	Sidechain
1	Q	154	C	Sidechain
1	Q	155	G	Sidechain
1	Q	156	U	Sidechain
1	Q	158	A	Sidechain
1	Q	159	A	Sidechain
1	Q	160	C	Sidechain
1	Q	161	A	Sidechain
1	Q	163	C	Sidechain
1	Q	164	A	Sidechain
1	Q	165	U	Sidechain
1	Q	166	U	Sidechain
1	Q	167	U	Sidechain
1	Q	168	G	Sidechain
1	Q	169	G	Sidechain
1	Q	17	G	Sidechain
1	Q	170	U	Sidechain
1	Q	174	C	Sidechain
1	Q	178	U	Sidechain
1	Q	184	U	Sidechain
1	Q	186	A	Sidechain
1	Q	192	G	Sidechain
1	Q	195	G	Sidechain
1	Q	197	G	Sidechain
1	Q	198	G	Sidechain
1	Q	205	A	Sidechain
1	Q	209	C	Sidechain
1	Q	21	G	Sidechain
1	Q	210	C	Sidechain
1	Q	211	C	Sidechain
1	Q	212	U	Sidechain
1	Q	213	C	Sidechain
1	Q	214	A	Sidechain
1	Q	215	U	Sidechain

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Mol	Chain	Res	Type	Group
1	Q	216	C	Sidechain
1	Q	217	G	Sidechain
1	Q	219	A	Sidechain
1	Q	221	U	Sidechain
1	Q	222	A	Sidechain
1	Q	224	G	Sidechain
1	Q	225	C	Sidechain
1	Q	228	U	Sidechain
1	Q	230	C	Sidechain
1	Q	231	G	Sidechain
1	Q	233	G	Sidechain
1	Q	234	U	Sidechain
1	Q	235	G	Sidechain
1	Q	239	G	Sidechain
1	Q	24	G	Sidechain
1	Q	241	A	Sidechain
1	Q	243	U	Sidechain
1	Q	244	G	Sidechain
1	Q	248	G	Sidechain
1	Q	25	G	Sidechain
1	Q	253	A	Sidechain
1	Q	257	C	Sidechain
1	Q	258	U	Sidechain
1	Q	259	C	Sidechain
1	Q	260	G	Sidechain
1	Q	265	U	Sidechain
1	Q	267	G	Sidechain
1	Q	270	G	Sidechain
1	Q	275	G	Sidechain
1	Q	277	G	Sidechain
1	Q	288	G	Sidechain
1	Q	290	A	Sidechain
1	Q	291	U	Sidechain
1	Q	294	G	Sidechain
1	Q	296	G	Sidechain
1	Q	297	C	Sidechain
1	Q	298	C	Sidechain
1	Q	30	G	Sidechain
1	Q	302	C	Sidechain
1	Q	303	C	Sidechain
1	Q	305	G	Sidechain
1	Q	306	A	Sidechain

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Mol	Chain	Res	Type	Group
1	Q	308	A	Sidechain
1	Q	310	C	Sidechain
1	Q	314	C	Sidechain
1	Q	316	A	Sidechain
1	Q	319	U	Sidechain
1	Q	327	G	Sidechain
1	Q	33	C	Sidechain
1	Q	331	U	Sidechain
1	Q	332	G	Sidechain
1	Q	337	C	Sidechain
1	Q	34	U	Sidechain
1	Q	341	C	Sidechain
1	Q	345	G	Sidechain
1	Q	349	C	Sidechain
1	Q	350	U	Sidechain
1	Q	351	G	Sidechain
1	Q	352	A	Sidechain
1	Q	355	G	Sidechain
1	Q	357	U	Sidechain
1	Q	359	G	Sidechain
1	Q	364	C	Sidechain
1	Q	365	U	Sidechain
1	Q	369	A	Sidechain
1	Q	37	G	Sidechain
1	Q	370	A	Sidechain
1	Q	373	G	Sidechain
1	Q	375	A	Sidechain
1	Q	381	A	Sidechain
1	Q	384	G	Sidechain
1	Q	385	U	Sidechain
1	Q	386	C	Sidechain
1	Q	387	C	Sidechain
1	Q	388	U	Sidechain
1	Q	399	U	Sidechain
1	Q	400	U	Sidechain
1	Q	401	A	Sidechain
1	Q	403	A	Sidechain
1	Q	405	G	Sidechain
1	Q	407	C	Sidechain
1	Q	408	A	Sidechain
1	Q	410	G	Sidechain
1	Q	411	U	Sidechain

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Mol	Chain	Res	Type	Group
1	Q	412	U	Sidechain
1	Q	414	A	Sidechain
1	Q	42	A	Sidechain
1	Q	420	G	Sidechain
1	Q	43	U	Sidechain
1	Q	430	C	Sidechain
1	Q	433	C	Sidechain
1	Q	434	G	Sidechain
1	Q	435	C	Sidechain
1	Q	437	C	Sidechain
1	Q	446	G	Sidechain
1	Q	447	A	Sidechain
1	Q	448	C	Sidechain
1	Q	45	U	Sidechain
1	Q	452	C	Sidechain
1	Q	453	A	Sidechain
1	Q	455	G	Sidechain
1	Q	456	G	Sidechain
1	Q	458	A	Sidechain
1	Q	46	G	Sidechain
1	Q	461	U	Sidechain
1	Q	466	G	Sidechain
1	Q	469	G	Sidechain
1	Q	472	C	Sidechain
1	Q	473	A	Sidechain
1	Q	476	C	Sidechain
1	Q	477	U	Sidechain
1	Q	478	G	Sidechain
1	Q	48	U	Sidechain
1	Q	481	C	Sidechain
1	Q	484	A	Sidechain
1	Q	486	G	Sidechain
1	Q	488	U	Sidechain
1	Q	489	G	Sidechain
1	Q	49	C	Sidechain
1	Q	490	C	Sidechain
1	Q	491	U	Sidechain
1	Q	492	U	Sidechain
1	Q	495	C	Sidechain
1	Q	497	G	Sidechain
1	Q	498	U	Sidechain
1	Q	499	U	Sidechain

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Mol	Chain	Res	Type	Group
1	Q	502	C	Sidechain
1	Q	503	C	Sidechain
1	Q	505	G	Sidechain
1	Q	506	C	Sidechain
1	Q	508	C	Sidechain
1	Q	515	G	Sidechain
1	Q	517	G	Sidechain
1	Q	52	A	Sidechain
1	Q	520	G	Sidechain
1	Q	521	A	Sidechain
1	Q	525	C	Sidechain
1	Q	528	U	Sidechain
1	Q	529	U	Sidechain
1	Q	53	A	Sidechain
1	Q	531	G	Sidechain
1	Q	533	A	Sidechain
1	Q	534	G	Sidechain
1	Q	537	G	Sidechain
1	Q	539	C	Sidechain
1	Q	540	U	Sidechain
1	Q	541	U	Sidechain
1	Q	544	G	Sidechain
1	Q	548	A	Sidechain
1	Q	549	U	Sidechain
1	Q	550	G	Sidechain
1	Q	552	G	Sidechain
1	Q	56	G	Sidechain
1	Q	58	G	Sidechain
1	Q	59	A	Sidechain
1	Q	61	G	Sidechain
1	Q	73	A	Sidechain
1	Q	77	G	Sidechain
1	Q	79	G	Sidechain
1	Q	82	G	Sidechain
1	Q	84	C	Sidechain
1	Q	88	U	Sidechain
1	Q	89	C	Sidechain
1	Q	90	A	Sidechain
1	Q	91	G	Sidechain
1	Q	97	U	Sidechain
1	Q	99	G	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	Q	11752	5941	5927	66	0
All	All	11752	5941	5927	66	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 4.

All (66) 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)
1:Q:294:G:H3'	1:Q:520:G:H3'	1.81	0.62
1:Q:323:G:H5'	1:Q:542:A:H4'	1.86	0.56
1:Q:292:A:H2'	1:Q:293:A:C8	2.44	0.52
1:Q:334:G:C3'	1:Q:335:A:H2'	2.40	0.52
1:Q:393:A:H2'	1:Q:394:G:C8	2.45	0.51
1:Q:191:U:H2'	1:Q:192:G:C8	2.46	0.51
1:Q:260:G:H2'	1:Q:261:G:O4'	2.11	0.50
1:Q:360:A:H2'	1:Q:361:G:C8	2.47	0.49
1:Q:372:G:H2'	1:Q:373:G:C8	2.48	0.49
1:Q:359:G:C6	1:Q:493:G:C6	3.02	0.47
1:Q:8:U:H2'	1:Q:9:A:C8	2.49	0.47
1:Q:96:U:H2'	1:Q:98:C:C6	2.50	0.47
1:Q:130:U:H2'	1:Q:131:A:C8	2.49	0.47
1:Q:160:C:H2'	1:Q:161:A:C8	2.50	0.47
1:Q:60:U:H2'	1:Q:61:G:C8	2.51	0.46
1:Q:156:U:H2'	1:Q:157:G:C8	2.50	0.46
1:Q:237:U:H2'	1:Q:238:G:C8	2.51	0.46
1:Q:502:C:H2'	1:Q:503:C:C6	2.50	0.46
1:Q:491:U:C4	1:Q:492:U:C4	3.03	0.46
1:Q:37:G:H3'	1:Q:261:G:H4'	1.98	0.46
1:Q:85:U:H2'	1:Q:86:G:C8	2.50	0.46
1:Q:58:G:H2'	1:Q:59:A:C8	2.51	0.45
1:Q:294:G:H3'	1:Q:520:G:C3'	2.46	0.45
1:Q:58:G:H5"	1:Q:226:G:H2'	1.98	0.45
1:Q:58:G:C8	1:Q:58:G:H5'	2.52	0.45
1:Q:161:A:C5	1:Q:162:C:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Q:254:U:H2’	1:Q:255:C:C6	2.52	0.45
1:Q:465:U:H2’	1:Q:466:G:C8	2.52	0.45
1:Q:153:U:H2’	1:Q:154:C:C6	2.52	0.44
1:Q:105:U:H2’	1:Q:106:G:C8	2.53	0.44
1:Q:359:G:H2’	1:Q:360:A:C8	2.52	0.44
1:Q:519:A:H2’	1:Q:520:G:O4’	2.18	0.44
1:Q:323:G:C5’	1:Q:542:A:H4’	2.48	0.44
1:Q:506:C:H2’	1:Q:507:C:C6	2.53	0.44
1:Q:90:A:C2	1:Q:106:G:C2	3.06	0.43
1:Q:504:U:H2’	1:Q:505:G:C8	2.52	0.43
1:Q:488:U:H2’	1:Q:489:G:C8	2.53	0.43
1:Q:545:U:H2’	1:Q:546:G:C8	2.53	0.43
1:Q:453:A:C2	1:Q:471:G:C2	3.07	0.43
1:Q:262:C:H2’	1:Q:263:A:C8	2.54	0.43
1:Q:432:U:H2’	1:Q:433:C:C6	2.54	0.43
1:Q:89:C:H2’	1:Q:90:A:C8	2.53	0.42
1:Q:454:C:H2’	1:Q:455:G:C8	2.54	0.42
1:Q:15:U:H2’	1:Q:16:A:C8	2.54	0.42
1:Q:472:C:C6	1:Q:472:C:H5’	2.54	0.42
1:Q:61:G:C2	1:Q:73:A:C2	3.07	0.42
1:Q:36:C:O2’	1:Q:37:G:H4’	2.19	0.42
1:Q:293:A:H2’	1:Q:294:G:O4’	2.20	0.42
1:Q:45:U:H2’	1:Q:46:G:C8	2.54	0.42
1:Q:115:U:H5’	1:Q:116:C:C5	2.55	0.42
1:Q:366:U:H2’	1:Q:367:A:C8	2.55	0.42
1:Q:35:U:H2’	1:Q:36:C:C6	2.55	0.41
1:Q:296:G:H2’	1:Q:297:C:C6	2.55	0.41
1:Q:354:C:H4’	1:Q:515:G:H5’	2.01	0.41
1:Q:525:C:H2’	1:Q:526:U:C6	2.55	0.41
1:Q:230:C:C2	1:Q:261:G:C2	3.09	0.41
1:Q:384:G:C5	1:Q:385:U:C4	3.09	0.41
1:Q:518:C:H2’	1:Q:519:A:C8	2.56	0.41
1:Q:244:G:C2	1:Q:315:A:C2	3.09	0.40
1:Q:353:A:H2’	1:Q:354:C:C6	2.56	0.40
1:Q:370:A:H2’	1:Q:371:G:C8	2.56	0.40
1:Q:11:C:H2’	1:Q:12:C:C6	2.56	0.40
1:Q:166:U:H2’	1:Q:167:U:C6	2.56	0.40
1:Q:370:A:C6	1:Q:371:G:C6	3.10	0.40
1:Q:485:G:C6	1:Q:486:G:C5	3.09	0.40
1:Q:235:G:C6	1:Q:256:G:C6	3.09	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

There are no protein molecules in this entry.

5.3.2 Protein sidechains (i)

There are no protein molecules in this entry.

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	Q	551/552 (99%)	94 (17%)	26 (4%)

All (94) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	Q	2	G
1	Q	28	U
1	Q	37	G
1	Q	48	U
1	Q	49	C
1	Q	57	G
1	Q	58	G
1	Q	66	U
1	Q	68	G
1	Q	87	U
1	Q	97	U
1	Q	99	G
1	Q	106	G
1	Q	107	G
1	Q	108	C
1	Q	115	U
1	Q	118	G
1	Q	135	A
1	Q	137	A
1	Q	139	G
1	Q	150	G
1	Q	156	U
1	Q	162	C
1	Q	169	G
1	Q	171	U

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Mol	Chain	Res	Type
1	Q	172	A
1	Q	173	A
1	Q	174	C
1	Q	185	A
1	Q	194	U
1	Q	202	G
1	Q	213	C
1	Q	226	G
1	Q	227	A
1	Q	241	A
1	Q	242	A
1	Q	243	U
1	Q	258	U
1	Q	261	G
1	Q	262	C
1	Q	263	A
1	Q	294	G
1	Q	295	G
1	Q	299	G
1	Q	304	A
1	Q	305	G
1	Q	310	C
1	Q	316	A
1	Q	319	U
1	Q	326	G
1	Q	327	G
1	Q	328	A
1	Q	334	G
1	Q	335	A
1	Q	337	C
1	Q	346	C
1	Q	362	A
1	Q	372	G
1	Q	373	G
1	Q	375	A
1	Q	377	G
1	Q	384	G
1	Q	385	U
1	Q	386	C
1	Q	387	C
1	Q	388	U
1	Q	395	G

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Mol	Chain	Res	Type
1	Q	405	G
1	Q	406	U
1	Q	408	A
1	Q	410	G
1	Q	419	C
1	Q	420	G
1	Q	439	U
1	Q	450	U
1	Q	461	U
1	Q	462	C
1	Q	464	A
1	Q	467	C
1	Q	472	C
1	Q	473	A
1	Q	480	U
1	Q	487	C
1	Q	494	A
1	Q	502	C
1	Q	511	U
1	Q	512	C
1	Q	513	G
1	Q	520	G
1	Q	521	A
1	Q	530	C
1	Q	531	G
1	Q	532	G
1	Q	550	G

All (26) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	Q	49	C
1	Q	57	G
1	Q	58	G
1	Q	86	G
1	Q	106	G
1	Q	136	G
1	Q	168	G
1	Q	171	U
1	Q	172	A
1	Q	260	G
1	Q	261	G

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Mol	Chain	Res	Type
1	Q	282	U
1	Q	294	G
1	Q	304	A
1	Q	325	C
1	Q	328	A
1	Q	334	G
1	Q	346	C
1	Q	385	U
1	Q	387	C
1	Q	394	G
1	Q	449	G
1	Q	472	C
1	Q	512	C
1	Q	520	G
1	Q	530	C

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Map visualisation

This section contains visualisations of the EMDB entry EMD-13926. These allow visual inspection of the internal detail of the map and identification of artifacts.

Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

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 (i)

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

9 Map-model fit

This section was not generated.