



Full wwPDB EM Validation Report ⓘ

Sep 1, 2025 – 08:50 PM JST

PDB ID : 9LHL / pdb_00009lhl
EMDB ID : EMD-63101
Title : Composite map of Env38-Golld RNA
Authors : Zhang, K.; Li, S.
Deposited on : 2025-01-12
Resolution : 2.93 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.dev126
MolProbity : 4-5-2 with Phenix2.0rc1
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.45.1

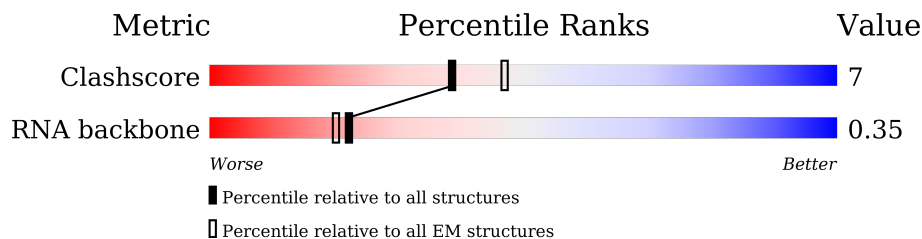
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 2.93 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	210492	15764
RNA backbone	6643	2191

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	833	9% 44% 40% 10% 6%
1	B	833	9% 43% 41% 10% 6%
1	C	833	9% 44% 40% 10% 6%
1	D	833	9% 44% 40% 11% 6%
1	E	833	9% 44% 40% 10% 6%
1	F	833	9% 43% 40% 11% 6%
1	G	833	9% 43% 40% 11% 6%
1	H	833	9% 44% 40% 11% 6%
1	I	833	9% 43% 40% 10% 6%

Continued on next page...

Mol	Chain	Length	Quality of chain				
1	J	833	9%	44%	40%	11%	6%
1	K	833	9%	44%	40%	10%	6%
1	L	833	9%	44%	40%	11%	6%
1	M	833	9%	43%	40%	11%	6%
1	N	833	9%	44%	40%	10%	6%

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 235564 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 Env38-Goldd RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	G	787	Total	C	N	O	P	0	0
			16826	7532	3043	5464	787		
1	A	787	Total	C	N	O	P	0	0
			16826	7532	3043	5464	787		
1	B	787	Total	C	N	O	P	0	0
			16826	7532	3043	5464	787		
1	C	787	Total	C	N	O	P	0	0
			16826	7532	3043	5464	787		
1	D	787	Total	C	N	O	P	0	0
			16826	7532	3043	5464	787		
1	E	787	Total	C	N	O	P	0	0
			16826	7532	3043	5464	787		
1	F	787	Total	C	N	O	P	0	0
			16826	7532	3043	5464	787		
1	H	787	Total	C	N	O	P	0	0
			16826	7532	3043	5464	787		
1	I	787	Total	C	N	O	P	0	0
			16826	7532	3043	5464	787		
1	J	787	Total	C	N	O	P	0	0
			16826	7532	3043	5464	787		
1	K	787	Total	C	N	O	P	0	0
			16826	7532	3043	5464	787		
1	L	787	Total	C	N	O	P	0	0
			16826	7532	3043	5464	787		
1	M	787	Total	C	N	O	P	0	0
			16826	7532	3043	5464	787		
1	N	787	Total	C	N	O	P	0	0
			16826	7532	3043	5464	787		

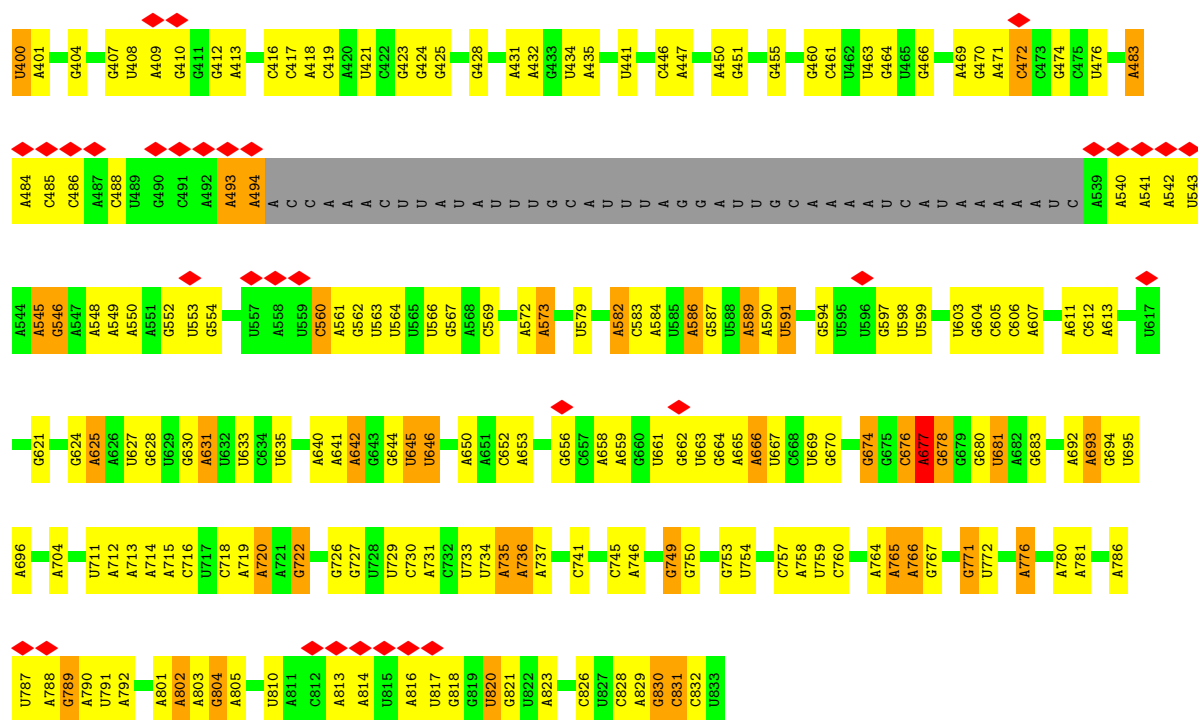


Chain B:

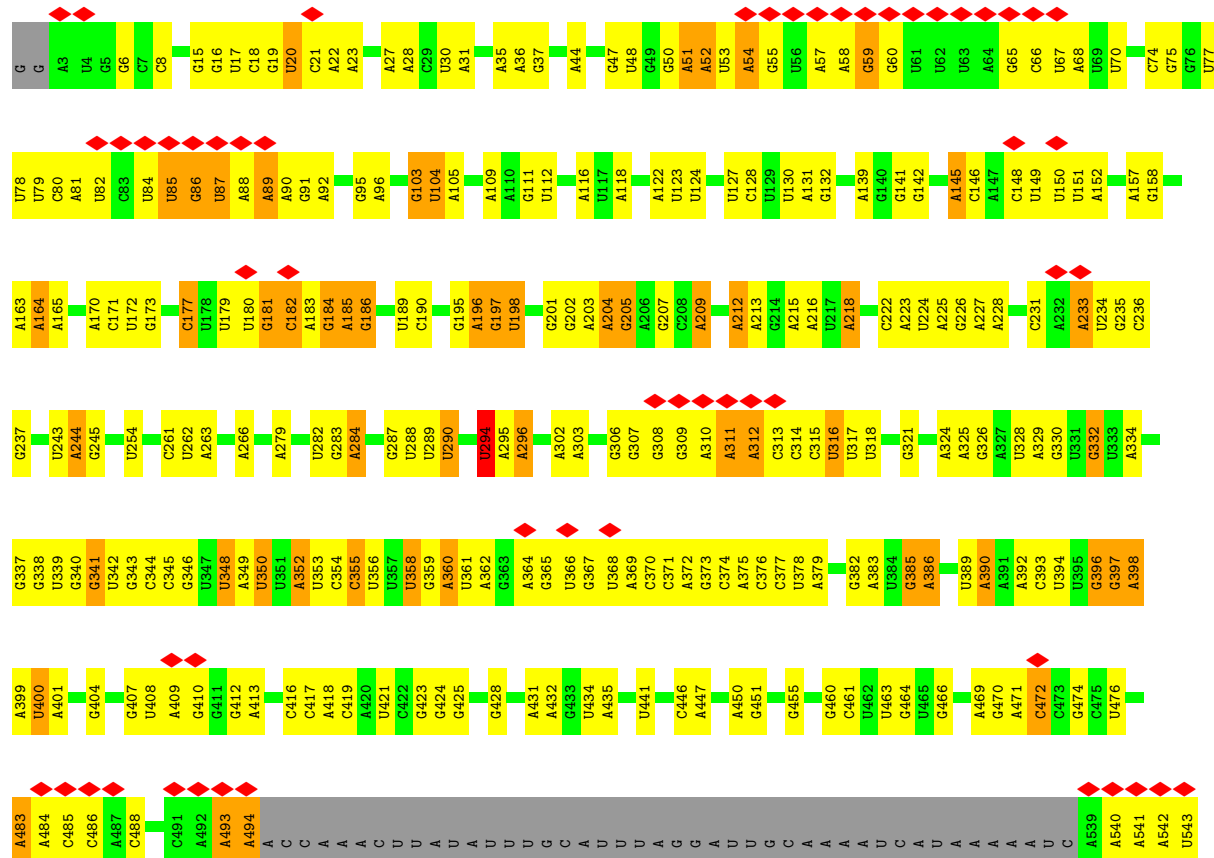
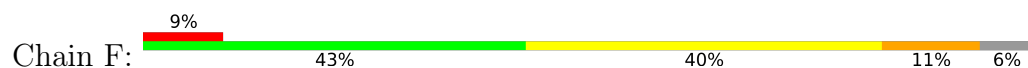
9% 43% 41% 10% 6%

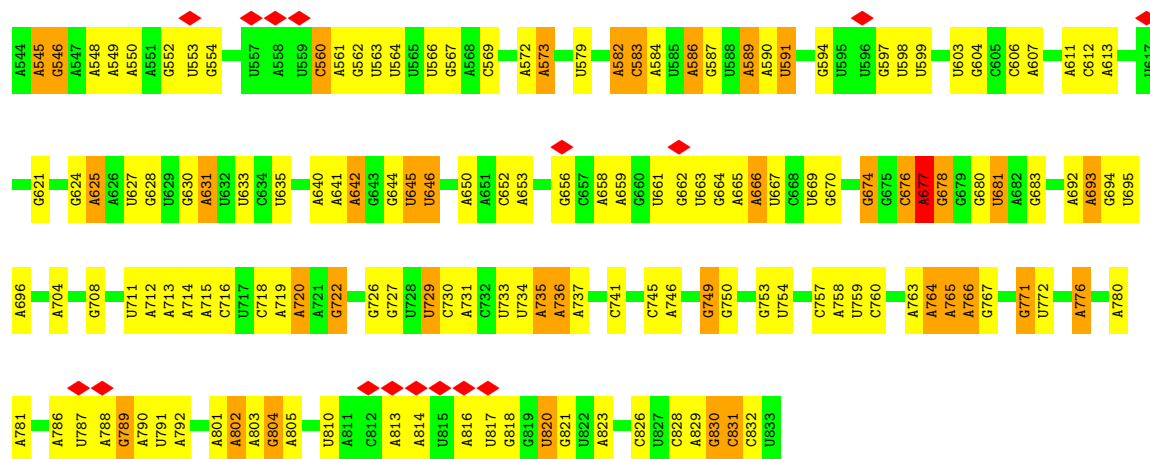
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Chain C:

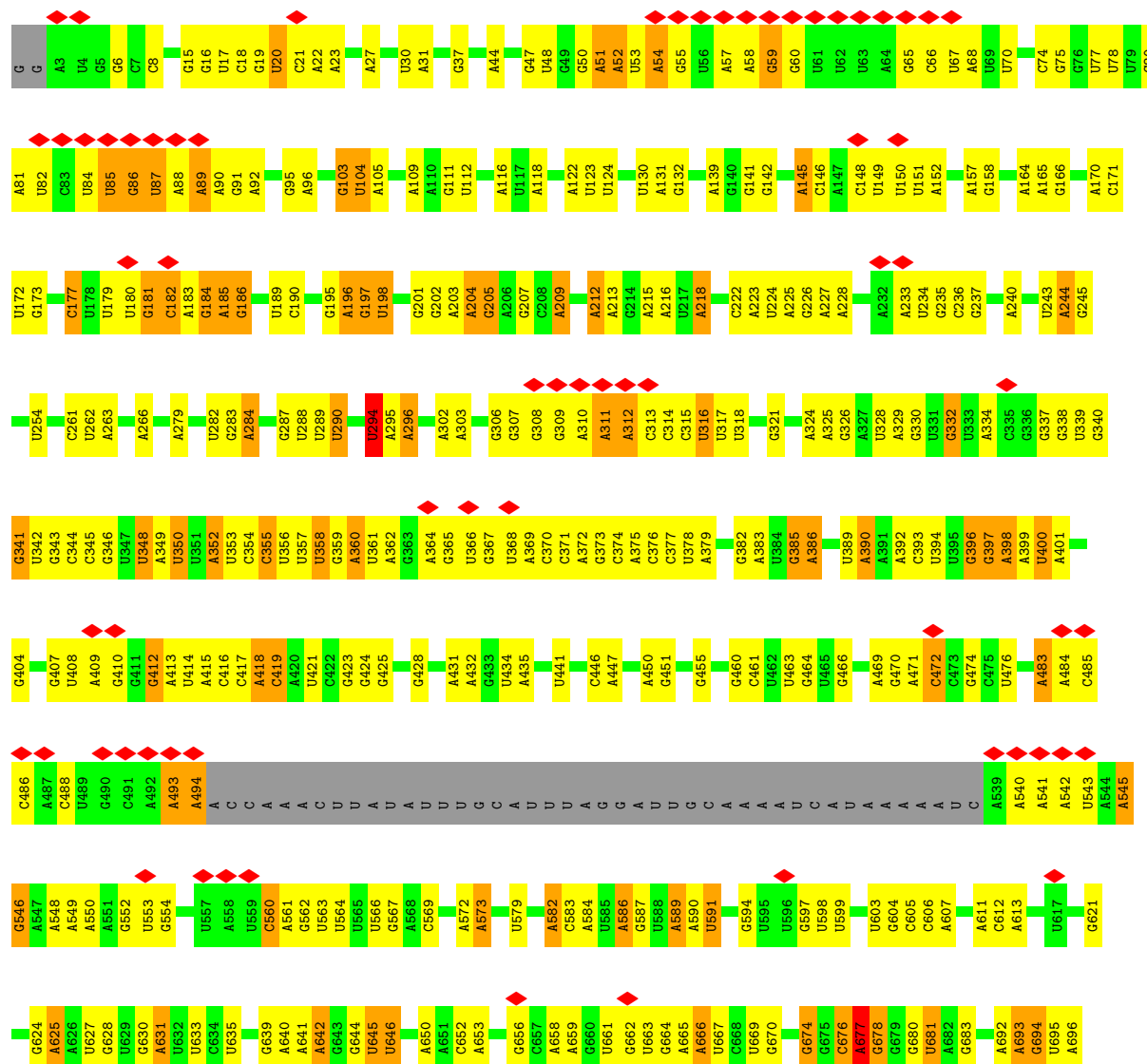


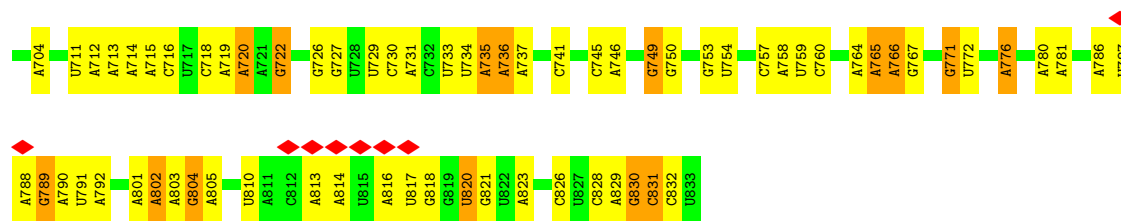
• Molecule 1: Env38-Golld RNA



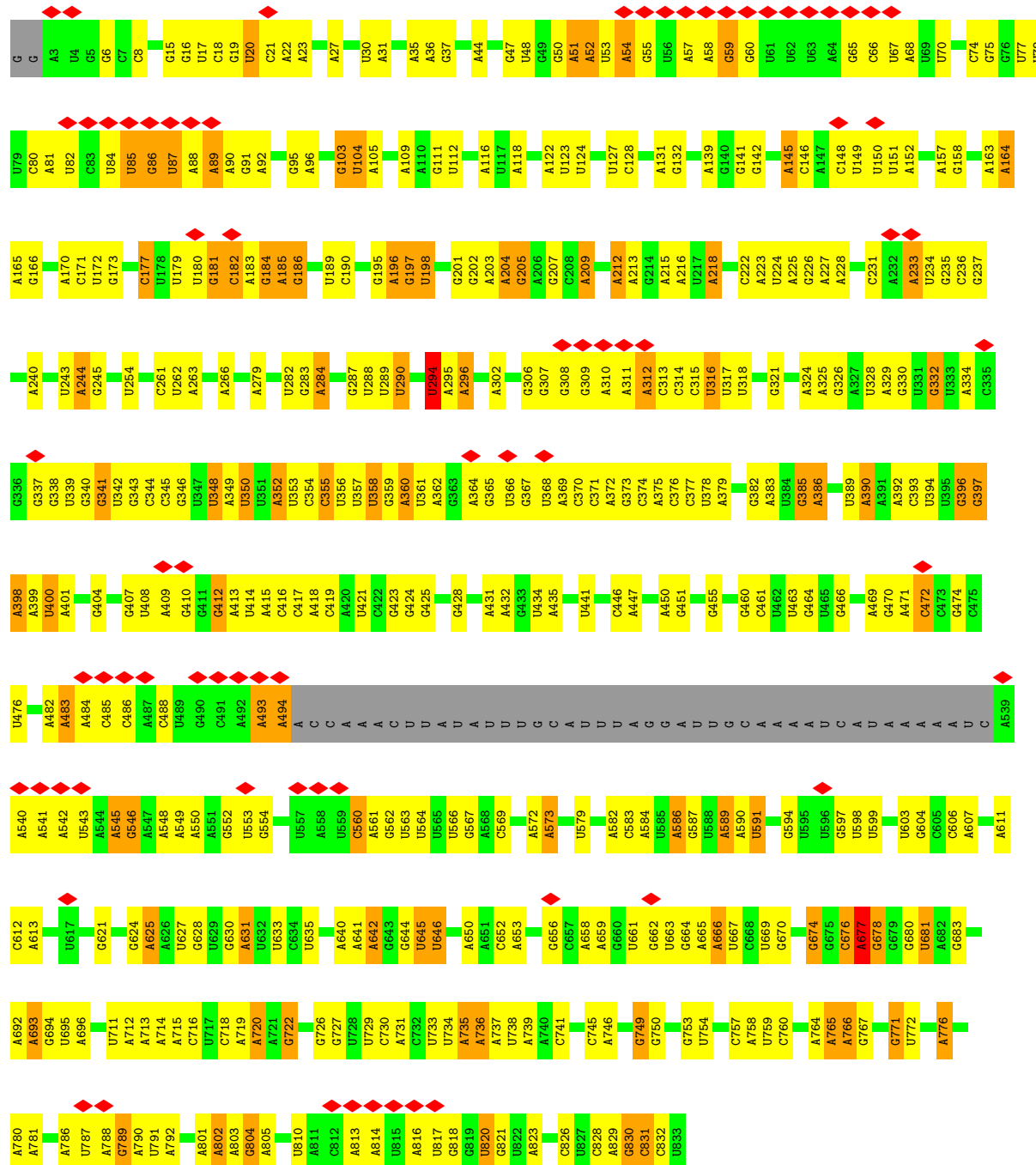
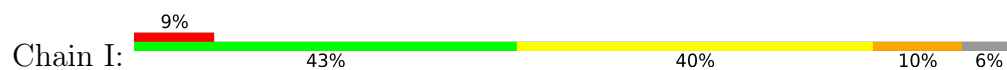


• Molecule 1: Env38-Golld RNA

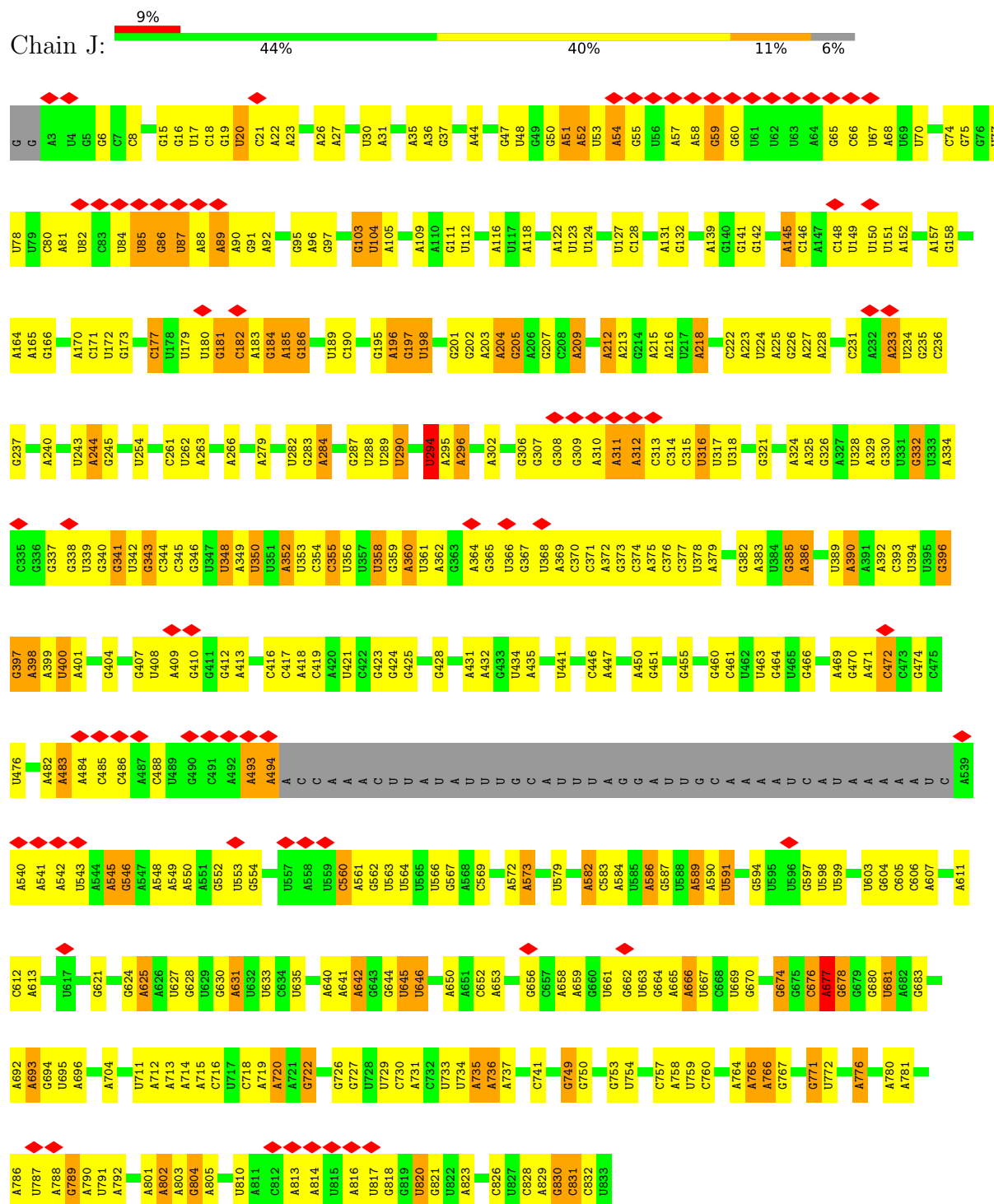




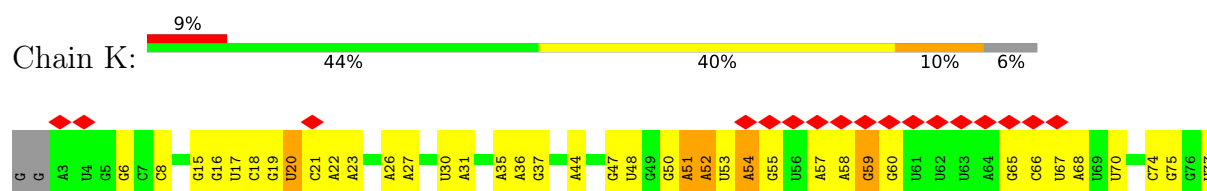
• Molecule 1: Env38-Golld RNA

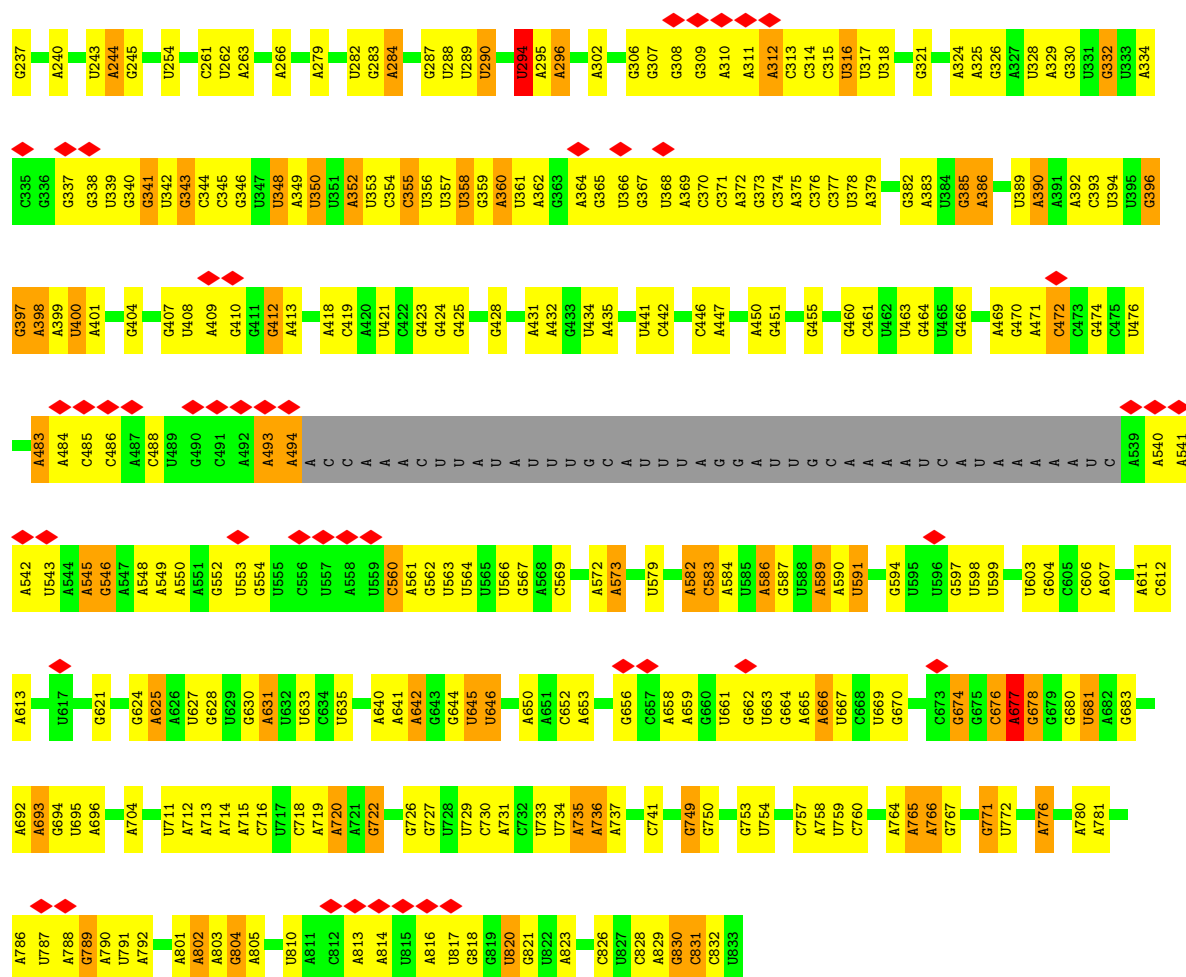


• Molecule 1: Env38-Golld RNA

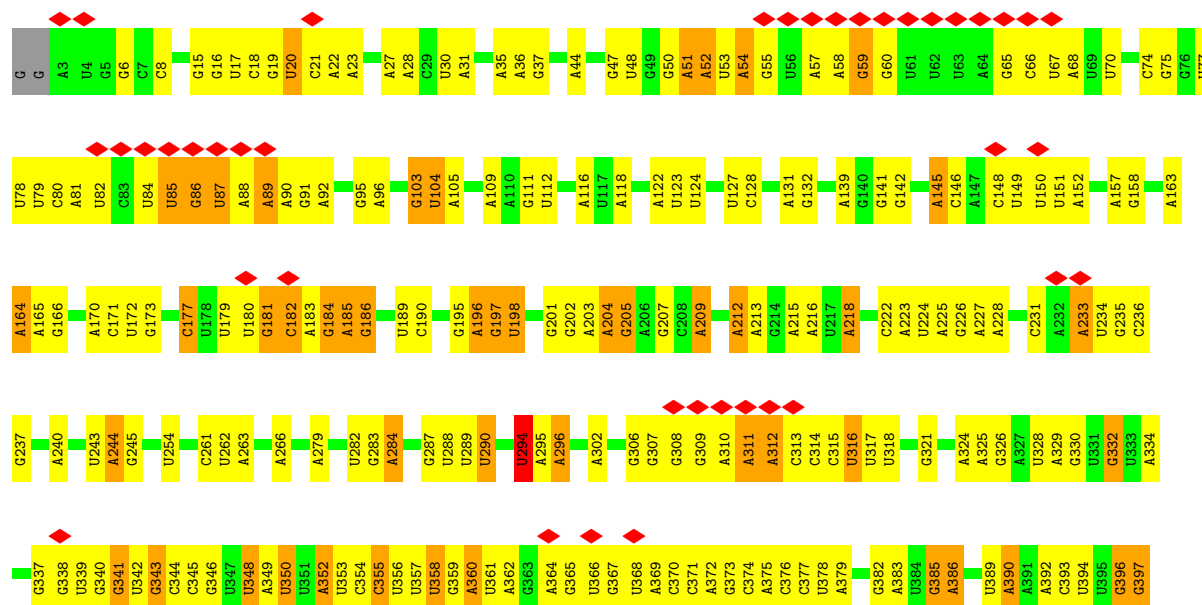
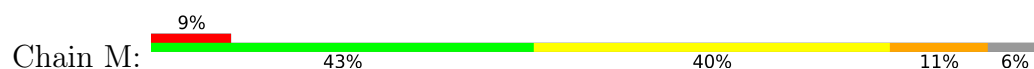


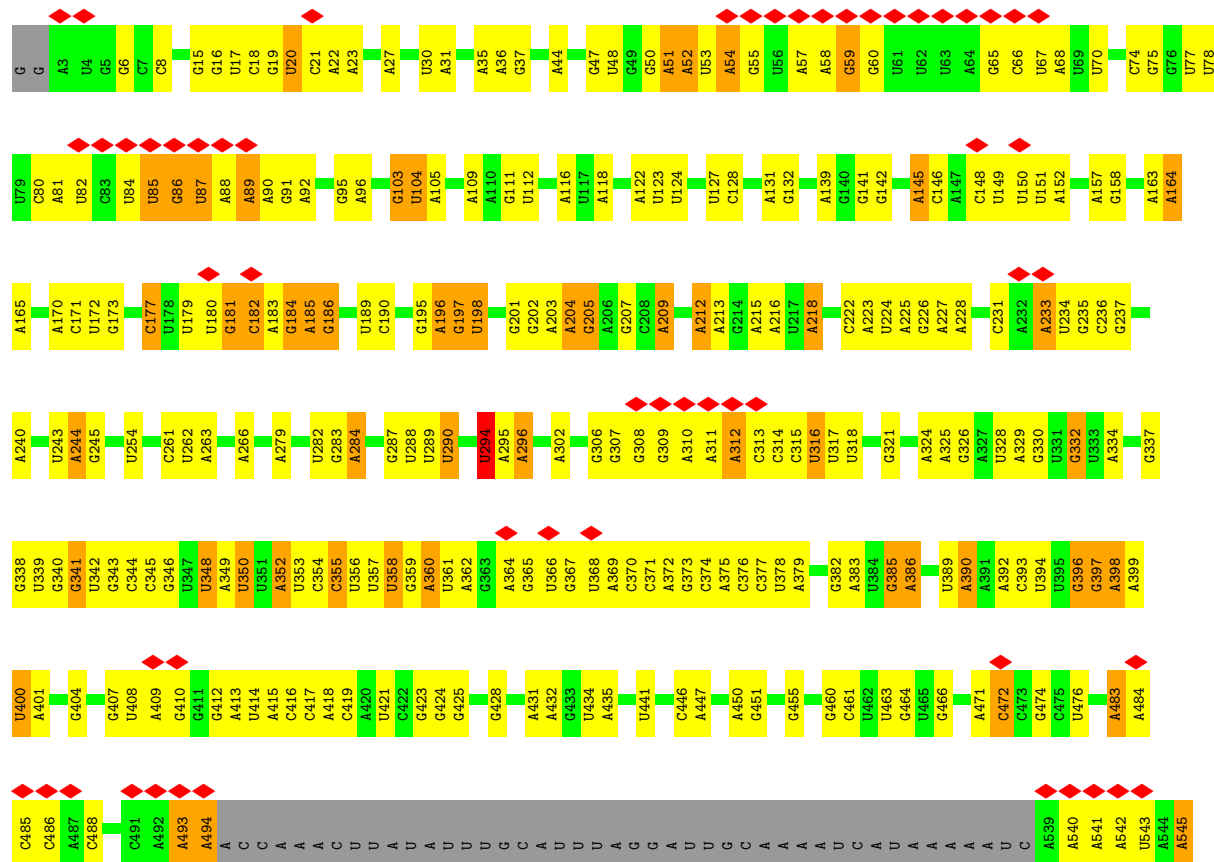
• Molecule 1: Env38-Golld RNA

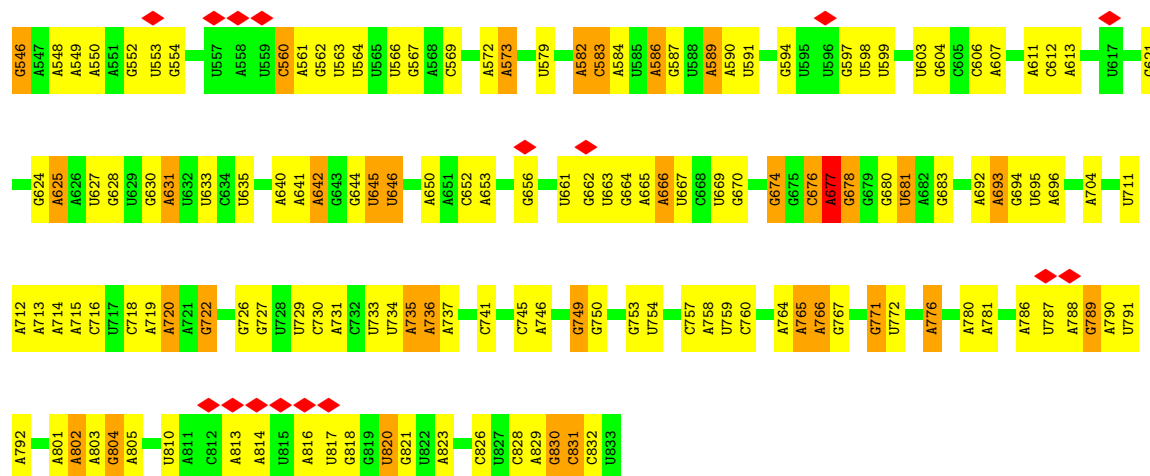




• Molecule 1: Env38-Golld RNA







4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, D7	Depositor
Number of particles used	5894560	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	46	Depositor
Minimum defocus (nm)	700	Depositor
Maximum defocus (nm)	1500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	82.672	Depositor
Minimum map value	-47.205	Depositor
Average map value	-0.002	Depositor
Map value standard deviation	1.870	Depositor
Recommended contour level	8	Depositor
Map size ($\text{\AA}$)	542.72, 542.72, 542.72	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.06, 1.06, 1.06	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	A	0.54	0/18847	0.60	8/29371 (0.0%)
1	B	0.54	0/18847	0.60	6/29371 (0.0%)
1	C	0.54	0/18847	0.60	7/29371 (0.0%)
1	D	0.53	0/18847	0.60	7/29371 (0.0%)
1	E	0.54	0/18847	0.60	7/29371 (0.0%)
1	F	0.54	0/18847	0.60	7/29371 (0.0%)
1	G	0.53	0/18847	0.60	7/29371 (0.0%)
1	H	0.53	0/18847	0.60	8/29371 (0.0%)
1	I	0.54	0/18847	0.60	8/29371 (0.0%)
1	J	0.54	0/18847	0.60	7/29371 (0.0%)
1	K	0.54	0/18847	0.60	7/29371 (0.0%)
1	L	0.54	0/18847	0.60	8/29371 (0.0%)
1	M	0.54	0/18847	0.60	8/29371 (0.0%)
1	N	0.54	0/18847	0.60	7/29371 (0.0%)
All	All	0.54	0/263858	0.60	102/411194 (0.0%)

There are no bond length outliers.

All (102) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	677	A	O4'-C1'-N9	7.84	120.27	108.50
1	C	677	A	O4'-C1'-N9	7.84	120.26	108.50
1	H	677	A	O4'-C1'-N9	7.83	120.25	108.50
1	I	677	A	O4'-C1'-N9	7.83	120.25	108.50
1	L	677	A	O4'-C1'-N9	7.82	120.23	108.50
1	A	677	A	O4'-C1'-N9	7.82	120.23	108.50
1	K	677	A	O4'-C1'-N9	7.82	120.23	108.50
1	B	677	A	O4'-C1'-N9	7.82	120.23	108.50
1	F	677	A	O4'-C1'-N9	7.82	120.23	108.50
1	J	677	A	O4'-C1'-N9	7.82	120.23	108.50
1	M	677	A	O4'-C1'-N9	7.82	120.23	108.50
1	G	677	A	O4'-C1'-N9	7.82	120.23	108.50
1	D	677	A	O4'-C1'-N9	7.81	120.21	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	677	A	O4'-C1'-N9	7.80	120.20	108.50
1	B	666	A	P-O3'-C3'	7.49	131.44	120.20
1	A	666	A	P-O3'-C3'	7.48	131.42	120.20
1	M	666	A	P-O3'-C3'	7.48	131.41	120.20
1	K	666	A	P-O3'-C3'	7.47	131.41	120.20
1	N	666	A	P-O3'-C3'	7.47	131.41	120.20
1	L	666	A	P-O3'-C3'	7.47	131.41	120.20
1	E	666	A	P-O3'-C3'	7.47	131.40	120.20
1	G	666	A	P-O3'-C3'	7.46	131.39	120.20
1	J	666	A	P-O3'-C3'	7.46	131.39	120.20
1	C	666	A	P-O3'-C3'	7.45	131.38	120.20
1	D	666	A	P-O3'-C3'	7.45	131.37	120.20
1	H	666	A	P-O3'-C3'	7.44	131.37	120.20
1	F	666	A	P-O3'-C3'	7.43	131.34	120.20
1	I	666	A	P-O3'-C3'	7.43	131.34	120.20
1	F	677	A	C3'-C2'-O2'	5.49	118.93	110.70
1	L	677	A	C3'-C2'-O2'	5.48	118.93	110.70
1	C	677	A	C3'-C2'-O2'	5.48	118.92	110.70
1	M	677	A	C3'-C2'-O2'	5.47	118.90	110.70
1	K	677	A	C3'-C2'-O2'	5.46	118.90	110.70
1	N	677	A	C3'-C2'-O2'	5.46	118.89	110.70
1	D	677	A	C3'-C2'-O2'	5.46	118.89	110.70
1	E	666	A	N9-C1'-C2'	5.46	122.19	114.00
1	H	677	A	C3'-C2'-O2'	5.46	118.89	110.70
1	M	666	A	N9-C1'-C2'	5.46	122.19	114.00
1	G	666	A	N9-C1'-C2'	5.46	122.19	114.00
1	H	666	A	N9-C1'-C2'	5.46	122.19	114.00
1	A	677	A	C3'-C2'-O2'	5.46	118.89	110.70
1	G	677	A	C3'-C2'-O2'	5.46	118.88	110.70
1	I	677	A	C3'-C2'-O2'	5.46	118.89	110.70
1	J	677	A	C3'-C2'-O2'	5.45	118.87	110.70
1	E	677	A	C3'-C2'-O2'	5.45	118.87	110.70
1	K	666	A	N9-C1'-C2'	5.44	122.17	114.00
1	F	666	A	N9-C1'-C2'	5.44	122.16	114.00
1	J	666	A	N9-C1'-C2'	5.44	122.16	114.00
1	A	666	A	N9-C1'-C2'	5.44	122.16	114.00
1	B	677	A	C3'-C2'-O2'	5.44	118.86	110.70
1	D	666	A	N9-C1'-C2'	5.44	122.16	114.00
1	L	666	A	N9-C1'-C2'	5.44	122.16	114.00
1	B	666	A	N9-C1'-C2'	5.43	122.14	114.00
1	I	666	A	N9-C1'-C2'	5.43	122.15	114.00
1	B	294	U	P-O3'-C3'	5.42	128.33	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	294	U	P-O3'-C3'	5.42	128.33	120.20
1	L	348	U	P-O3'-C3'	5.42	128.33	120.20
1	N	666	A	N9-C1'-C2'	5.42	122.13	114.00
1	C	666	A	N9-C1'-C2'	5.42	122.13	114.00
1	K	294	U	P-O3'-C3'	5.42	128.33	120.20
1	G	348	U	P-O3'-C3'	5.41	128.32	120.20
1	M	348	U	P-O3'-C3'	5.41	128.32	120.20
1	J	294	U	P-O3'-C3'	5.41	128.32	120.20
1	C	294	U	P-O3'-C3'	5.41	128.31	120.20
1	I	294	U	P-O3'-C3'	5.40	128.30	120.20
1	H	348	U	P-O3'-C3'	5.40	128.29	120.20
1	C	348	U	P-O3'-C3'	5.39	128.29	120.20
1	L	294	U	P-O3'-C3'	5.39	128.29	120.20
1	F	348	U	P-O3'-C3'	5.39	128.28	120.20
1	N	348	U	P-O3'-C3'	5.39	128.28	120.20
1	D	348	U	P-O3'-C3'	5.39	128.28	120.20
1	J	348	U	P-O3'-C3'	5.39	128.28	120.20
1	B	348	U	P-O3'-C3'	5.39	128.28	120.20
1	I	348	U	P-O3'-C3'	5.39	128.28	120.20
1	A	348	U	P-O3'-C3'	5.38	128.27	120.20
1	E	348	U	P-O3'-C3'	5.38	128.27	120.20
1	G	294	U	P-O3'-C3'	5.38	128.27	120.20
1	H	294	U	P-O3'-C3'	5.38	128.27	120.20
1	E	294	U	P-O3'-C3'	5.37	128.26	120.20
1	A	294	U	P-O3'-C3'	5.37	128.25	120.20
1	K	348	U	P-O3'-C3'	5.37	128.25	120.20
1	F	294	U	P-O3'-C3'	5.37	128.25	120.20
1	M	294	U	P-O3'-C3'	5.37	128.25	120.20
1	N	294	U	P-O3'-C3'	5.35	128.22	120.20
1	I	666	A	C2'-C3'-O3'	5.05	117.07	109.50
1	J	666	A	C2'-C3'-O3'	5.05	117.07	109.50
1	G	666	A	C2'-C3'-O3'	5.04	117.06	109.50
1	H	666	A	C2'-C3'-O3'	5.04	117.06	109.50
1	K	666	A	C2'-C3'-O3'	5.04	117.06	109.50
1	F	666	A	C2'-C3'-O3'	5.04	117.06	109.50
1	M	412	G	P-O3'-C3'	5.04	127.75	120.20
1	D	666	A	C2'-C3'-O3'	5.04	117.05	109.50
1	E	666	A	C2'-C3'-O3'	5.04	117.05	109.50
1	M	666	A	C2'-C3'-O3'	5.04	117.05	109.50
1	L	666	A	C2'-C3'-O3'	5.02	117.03	109.50
1	N	666	A	C2'-C3'-O3'	5.02	117.03	109.50
1	C	666	A	C2'-C3'-O3'	5.02	117.03	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	666	A	C2'-C3'-O3'	5.01	117.02	109.50
1	H	412	G	P-O3'-C3'	5.01	127.72	120.20
1	I	412	G	P-O3'-C3'	5.01	127.71	120.20
1	A	412	G	P-O3'-C3'	5.01	127.71	120.20
1	L	412	G	P-O3'-C3'	5.00	127.70	120.20

There are no chirality outliers.

There are no planarity outliers.

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	16826	0	8443	152	0
1	B	16826	0	8443	151	0
1	C	16826	0	8443	150	0
1	D	16826	0	8443	149	0
1	E	16826	0	8443	152	0
1	F	16826	0	8443	154	0
1	G	16826	0	8443	153	0
1	H	16826	0	8443	152	0
1	I	16826	0	8443	151	0
1	J	16826	0	8443	154	0
1	K	16826	0	8443	153	0
1	L	16826	0	8443	147	0
1	M	16826	0	8443	155	0
1	N	16826	0	8443	148	0
All	All	235564	0	118202	2064	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 7.

All (2064) 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:I:330:G:O6	1:I:350:U:N3	2.16	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:330:G:O6	1:F:350:U:N3	2.16	0.79
1:J:330:G:O6	1:J:350:U:N3	2.16	0.79
1:E:330:G:O6	1:E:350:U:N3	2.16	0.78
1:G:330:G:O6	1:G:350:U:N3	2.16	0.78
1:A:330:G:O6	1:A:350:U:N3	2.16	0.78
1:H:330:G:O6	1:H:350:U:N3	2.16	0.78
1:B:330:G:O6	1:B:350:U:N3	2.16	0.78
1:N:330:G:O6	1:N:350:U:N3	2.16	0.78
1:M:330:G:O6	1:M:350:U:N3	2.16	0.78
1:K:330:G:O6	1:K:350:U:N3	2.16	0.78
1:D:330:G:O6	1:D:350:U:N3	2.16	0.77
1:B:788:A:H5''	1:B:789:G:H21	1.50	0.77
1:G:788:A:H5''	1:G:789:G:H21	1.50	0.77
1:C:330:G:O6	1:C:350:U:N3	2.16	0.76
1:L:788:A:H5''	1:L:789:G:H21	1.50	0.76
1:N:788:A:H5''	1:N:789:G:H21	1.50	0.76
1:D:788:A:H5''	1:D:789:G:H21	1.50	0.76
1:J:788:A:H5''	1:J:789:G:H21	1.50	0.76
1:L:330:G:O6	1:L:350:U:N3	2.16	0.76
1:H:788:A:H5''	1:H:789:G:H21	1.51	0.76
1:F:788:A:H5''	1:F:789:G:H21	1.50	0.75
1:E:788:A:H5''	1:E:789:G:H21	1.50	0.75
1:M:788:A:H5''	1:M:789:G:H21	1.51	0.75
1:A:788:A:H5''	1:A:789:G:H21	1.51	0.75
1:I:788:A:H5''	1:I:789:G:H21	1.51	0.75
1:K:788:A:H5''	1:K:789:G:H21	1.50	0.75
1:C:788:A:H5''	1:C:789:G:H21	1.50	0.74
1:C:262:U:H2'	1:C:263:A:H8	1.57	0.70
1:B:262:U:H2'	1:B:263:A:H8	1.57	0.70
1:I:262:U:H2'	1:I:263:A:H8	1.57	0.70
1:J:262:U:H2'	1:J:263:A:H8	1.57	0.70
1:G:262:U:H2'	1:G:263:A:H8	1.57	0.70
1:F:262:U:H2'	1:F:263:A:H8	1.57	0.69
1:A:262:U:H2'	1:A:263:A:H8	1.57	0.69
1:K:460:G:H1'	1:K:786:A:H8	1.58	0.69
1:G:460:G:H1'	1:G:786:A:H8	1.58	0.69
1:N:460:G:H1'	1:N:786:A:H8	1.58	0.69
1:B:460:G:H1'	1:B:786:A:H8	1.58	0.69
1:D:262:U:H2'	1:D:263:A:H8	1.57	0.69
1:H:262:U:H2'	1:H:263:A:H8	1.57	0.69
1:E:262:U:H2'	1:E:263:A:H8	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:460:G:H1'	1:D:786:A:H8	1.58	0.69
1:F:460:G:H1'	1:F:786:A:H8	1.58	0.69
1:I:460:G:H1'	1:I:786:A:H8	1.58	0.69
1:K:262:U:H2'	1:K:263:A:H8	1.57	0.69
1:L:262:U:H2'	1:L:263:A:H8	1.57	0.69
1:H:460:G:H1'	1:H:786:A:H8	1.58	0.69
1:L:460:G:H1'	1:L:786:A:H8	1.58	0.68
1:C:460:G:H1'	1:C:786:A:H8	1.58	0.68
1:M:460:G:H1'	1:M:786:A:H8	1.58	0.68
1:E:460:G:H1'	1:E:786:A:H8	1.58	0.68
1:M:262:U:H2'	1:M:263:A:H8	1.57	0.68
1:J:460:G:H1'	1:J:786:A:H8	1.58	0.68
1:A:460:G:H1'	1:A:786:A:H8	1.58	0.68
1:N:262:U:H2'	1:N:263:A:H8	1.57	0.67
1:K:177:C:H5	1:K:186:G:H1	1.42	0.67
1:L:177:C:H5	1:L:186:G:H1	1.42	0.67
1:G:177:C:H5	1:G:186:G:H1	1.42	0.67
1:F:177:C:H5	1:F:186:G:H1	1.42	0.66
1:J:177:C:H5	1:J:186:G:H1	1.42	0.66
1:H:177:C:H5	1:H:186:G:H1	1.42	0.66
1:A:177:C:H5	1:A:186:G:H1	1.42	0.66
1:E:177:C:H5	1:E:186:G:H1	1.42	0.66
1:M:177:C:H5	1:M:186:G:H1	1.42	0.66
1:C:177:C:H5	1:C:186:G:H1	1.42	0.66
1:I:177:C:H5	1:I:186:G:H1	1.42	0.65
1:B:177:C:H5	1:B:186:G:H1	1.42	0.65
1:D:177:C:H5	1:D:186:G:H1	1.42	0.65
1:N:177:C:H5	1:N:186:G:H1	1.42	0.64
1:E:8:C:H5	1:E:15:G:H1	1.47	0.63
1:D:8:C:H5	1:D:15:G:H1	1.47	0.63
1:F:8:C:H5	1:F:15:G:H1	1.47	0.63
1:J:8:C:H5	1:J:15:G:H1	1.47	0.63
1:K:8:C:H5	1:K:15:G:H1	1.47	0.63
1:G:8:C:H5	1:G:15:G:H1	1.47	0.63
1:I:8:C:H5	1:I:15:G:H1	1.47	0.63
1:H:8:C:H5	1:H:15:G:H1	1.47	0.63
1:A:8:C:H5	1:A:15:G:H1	1.47	0.62
1:L:8:C:H5	1:L:15:G:H1	1.47	0.62
1:C:8:C:H5	1:C:15:G:H1	1.47	0.62
1:N:8:C:H5	1:N:15:G:H1	1.47	0.62
1:B:8:C:H5	1:B:15:G:H1	1.47	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:8:C:H5	1:M:15:G:H1	1.47	0.61
1:A:472:C:N4	1:A:554:G:O6	2.33	0.61
1:H:330:G:O6	1:H:350:U:C4	2.54	0.61
1:M:330:G:O6	1:M:350:U:C4	2.54	0.61
1:G:330:G:O6	1:G:350:U:C4	2.54	0.60
1:A:330:G:O6	1:A:350:U:C4	2.54	0.60
1:B:330:G:O6	1:B:350:U:C4	2.54	0.60
1:L:145:A:N6	1:M:141:G:O2'	2.34	0.60
1:A:145:A:N6	1:B:141:G:O2'	2.35	0.60
1:E:573:A:N1	1:E:741:C:O2'	2.33	0.60
1:J:145:A:N6	1:K:141:G:O2'	2.35	0.60
1:K:330:G:O6	1:K:350:U:C4	2.54	0.60
1:M:145:A:N6	1:N:141:G:O2'	2.35	0.60
1:B:145:A:N6	1:C:141:G:O2'	2.35	0.60
1:E:330:G:O6	1:E:350:U:C4	2.54	0.60
1:D:330:G:O6	1:D:350:U:C4	2.54	0.60
1:G:145:A:N6	1:A:141:G:O2'	2.35	0.60
1:C:145:A:N6	1:D:141:G:O2'	2.35	0.60
1:E:145:A:N6	1:F:141:G:O2'	2.35	0.60
1:H:86:G:O2'	1:H:89:A:N6	2.35	0.60
1:H:145:A:N6	1:I:141:G:O2'	2.35	0.60
1:J:330:G:O6	1:J:350:U:C4	2.54	0.60
1:L:330:G:O6	1:L:350:U:C4	2.54	0.60
1:N:85:U:H3	1:N:89:A:H61	1.50	0.60
1:N:472:C:N4	1:N:554:G:O6	2.33	0.60
1:G:86:G:O2'	1:G:89:A:N6	2.35	0.60
1:B:85:U:H3	1:B:89:A:H61	1.50	0.60
1:F:330:G:O6	1:F:350:U:C4	2.54	0.60
1:I:330:G:O6	1:I:350:U:C4	2.54	0.60
1:N:330:G:O6	1:N:350:U:C4	2.54	0.60
1:G:141:G:O2'	1:F:145:A:N6	2.35	0.60
1:C:85:U:H3	1:C:89:A:H61	1.50	0.60
1:C:86:G:O2'	1:C:89:A:N6	2.35	0.60
1:C:330:G:O6	1:C:350:U:C4	2.54	0.60
1:C:472:C:N4	1:C:554:G:O6	2.33	0.60
1:D:86:G:O2'	1:D:89:A:N6	2.35	0.60
1:H:141:G:O2'	1:N:145:A:N6	2.35	0.59
1:I:145:A:N6	1:J:141:G:O2'	2.35	0.59
1:M:85:U:H3	1:M:89:A:H61	1.50	0.59
1:D:145:A:N6	1:E:141:G:O2'	2.35	0.59
1:H:356:U:O2'	1:H:386:A:N3	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:86:G:O2'	1:K:89:A:N6	2.35	0.59
1:A:85:U:H3	1:A:89:A:H61	1.50	0.59
1:C:356:U:O2'	1:C:386:A:N3	2.36	0.59
1:D:356:U:O2'	1:D:386:A:N3	2.36	0.59
1:I:86:G:O2'	1:I:89:A:N6	2.35	0.59
1:L:86:G:O2'	1:L:89:A:N6	2.35	0.59
1:N:86:G:O2'	1:N:89:A:N6	2.35	0.59
1:A:86:G:O2'	1:A:89:A:N6	2.35	0.59
1:F:472:C:N4	1:F:554:G:O6	2.33	0.59
1:H:85:U:H3	1:H:89:A:H61	1.50	0.59
1:J:86:G:O2'	1:J:89:A:N6	2.35	0.59
1:M:86:G:O2'	1:M:89:A:N6	2.35	0.59
1:D:85:U:H3	1:D:89:A:H61	1.49	0.59
1:E:86:G:O2'	1:E:89:A:N6	2.35	0.59
1:F:86:G:O2'	1:F:89:A:N6	2.35	0.59
1:J:472:C:N4	1:J:554:G:O6	2.33	0.59
1:L:472:C:N4	1:L:554:G:O6	2.33	0.59
1:M:356:U:O2'	1:M:386:A:N3	2.36	0.59
1:B:86:G:O2'	1:B:89:A:N6	2.35	0.59
1:J:356:U:O2'	1:J:386:A:N3	2.36	0.59
1:L:85:U:H3	1:L:89:A:H61	1.50	0.59
1:N:356:U:O2'	1:N:386:A:N3	2.36	0.59
1:F:85:U:H3	1:F:89:A:H61	1.50	0.58
1:J:85:U:H3	1:J:89:A:H61	1.50	0.58
1:K:145:A:N6	1:L:141:G:O2'	2.35	0.58
1:K:472:C:N4	1:K:554:G:O6	2.33	0.58
1:N:722:G:H21	1:N:735:A:H62	1.51	0.58
1:A:356:U:O2'	1:A:386:A:N3	2.36	0.58
1:D:573:A:N1	1:D:741:C:O2'	2.33	0.58
1:E:472:C:N4	1:E:554:G:O6	2.33	0.58
1:A:19:G:H8	1:A:20:U:H3	1.51	0.58
1:E:356:U:O2'	1:E:386:A:N3	2.36	0.58
1:B:356:U:O2'	1:B:386:A:N3	2.36	0.58
1:H:722:G:H21	1:H:735:A:H62	1.51	0.58
1:D:19:G:H8	1:D:20:U:H3	1.51	0.58
1:D:722:G:H21	1:D:735:A:H62	1.51	0.58
1:I:356:U:O2'	1:I:386:A:N3	2.36	0.58
1:M:19:G:H8	1:M:20:U:H3	1.51	0.58
1:G:472:C:N4	1:G:554:G:O6	2.33	0.58
1:C:722:G:H21	1:C:735:A:H62	1.51	0.58
1:J:19:G:H8	1:J:20:U:H3	1.51	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:19:G:H8	1:L:20:U:H3	1.51	0.58
1:B:722:G:H21	1:B:735:A:H62	1.51	0.58
1:H:204:A:O2'	1:H:205:G:O4'	2.21	0.58
1:J:483:A:H3'	1:J:484:A:H2'	1.86	0.58
1:K:483:A:H3'	1:K:484:A:H2'	1.86	0.58
1:M:722:G:H21	1:M:735:A:H62	1.51	0.58
1:B:19:G:H8	1:B:20:U:H3	1.51	0.58
1:B:472:C:N4	1:B:554:G:O6	2.33	0.58
1:G:196:A:H62	1:G:209:A:H8	1.52	0.58
1:G:356:U:O2'	1:G:386:A:N3	2.36	0.58
1:E:483:A:H3'	1:E:484:A:H2'	1.86	0.58
1:I:85:U:H3	1:I:89:A:H61	1.50	0.58
1:J:196:A:H62	1:J:209:A:H8	1.52	0.58
1:G:85:U:H3	1:G:89:A:H61	1.50	0.58
1:F:356:U:O2'	1:F:386:A:N3	2.36	0.58
1:I:722:G:H21	1:I:735:A:H62	1.51	0.58
1:G:483:A:H3'	1:G:484:A:H2'	1.86	0.57
1:E:19:G:H8	1:E:20:U:H3	1.51	0.57
1:F:483:A:H3'	1:F:484:A:H2'	1.86	0.57
1:I:196:A:H62	1:I:209:A:H8	1.52	0.57
1:K:196:A:H62	1:K:209:A:H8	1.52	0.57
1:A:196:A:H62	1:A:209:A:H8	1.52	0.57
1:E:722:G:H21	1:E:735:A:H62	1.51	0.57
1:F:196:A:H62	1:F:209:A:H8	1.52	0.57
1:H:19:G:H8	1:H:20:U:H3	1.51	0.57
1:I:19:G:H8	1:I:20:U:H3	1.51	0.57
1:I:204:A:O2'	1:I:205:G:O4'	2.22	0.57
1:K:356:U:O2'	1:K:386:A:N3	2.36	0.57
1:L:196:A:H62	1:L:209:A:H8	1.52	0.57
1:G:19:G:H8	1:G:20:U:H3	1.51	0.57
1:E:196:A:H62	1:E:209:A:H8	1.52	0.57
1:K:85:U:H3	1:K:89:A:H61	1.50	0.57
1:A:722:G:H21	1:A:735:A:H62	1.51	0.57
1:E:85:U:H3	1:E:89:A:H61	1.50	0.57
1:H:196:A:H62	1:H:209:A:H8	1.52	0.57
1:N:19:G:H8	1:N:20:U:H3	1.51	0.57
1:F:19:G:H8	1:F:20:U:H3	1.51	0.57
1:I:483:A:H3'	1:I:484:A:H2'	1.86	0.57
1:L:356:U:O2'	1:L:386:A:N3	2.36	0.57
1:L:483:A:H3'	1:L:484:A:H2'	1.86	0.57
1:L:722:G:H21	1:L:735:A:H62	1.51	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:472:C:N4	1:M:554:G:O6	2.33	0.57
1:A:483:A:H3'	1:A:484:A:H2'	1.86	0.57
1:B:196:A:H62	1:B:209:A:H8	1.52	0.57
1:D:196:A:H62	1:D:209:A:H8	1.52	0.57
1:D:483:A:H3'	1:D:484:A:H2'	1.86	0.57
1:I:472:C:N4	1:I:554:G:O6	2.33	0.57
1:H:472:C:N4	1:H:554:G:O6	2.33	0.57
1:K:19:G:H8	1:K:20:U:H3	1.51	0.57
1:M:196:A:H62	1:M:209:A:H8	1.52	0.57
1:N:196:A:H62	1:N:209:A:H8	1.52	0.57
1:C:19:G:H8	1:C:20:U:H3	1.51	0.57
1:C:196:A:H62	1:C:209:A:H8	1.52	0.57
1:F:59:G:H2'	1:F:60:G:H8	1.70	0.57
1:J:573:A:N1	1:J:741:C:O2'	2.33	0.57
1:G:722:G:H21	1:G:735:A:H62	1.51	0.56
1:B:483:A:H3'	1:B:484:A:H2'	1.86	0.56
1:C:483:A:H3'	1:C:484:A:H2'	1.86	0.56
1:E:59:G:H2'	1:E:60:G:H8	1.70	0.56
1:I:59:G:H2'	1:I:60:G:H8	1.70	0.56
1:N:483:A:H3'	1:N:484:A:H2'	1.86	0.56
1:D:59:G:H2'	1:D:60:G:H8	1.70	0.56
1:F:722:G:H21	1:F:735:A:H62	1.51	0.56
1:G:59:G:H2'	1:G:60:G:H8	1.70	0.56
1:J:59:G:H2'	1:J:60:G:H8	1.70	0.56
1:K:59:G:H2'	1:K:60:G:H8	1.70	0.56
1:H:59:G:H2'	1:H:60:G:H8	1.70	0.56
1:J:722:G:H21	1:J:735:A:H62	1.51	0.56
1:K:722:G:H21	1:K:735:A:H62	1.51	0.56
1:L:59:G:H2'	1:L:60:G:H8	1.70	0.56
1:A:59:G:H2'	1:A:60:G:H8	1.70	0.56
1:C:573:A:N1	1:C:741:C:O2'	2.33	0.56
1:M:483:A:H3'	1:M:484:A:H2'	1.86	0.56
1:H:483:A:H3'	1:H:484:A:H2'	1.86	0.56
1:G:677:A:O2'	1:G:678:G:O4'	2.24	0.56
1:C:59:G:H2'	1:C:60:G:H8	1.70	0.56
1:G:284:A:N6	1:G:396:G:O2'	2.39	0.56
1:F:677:A:O2'	1:F:678:G:O4'	2.24	0.56
1:I:284:A:N6	1:I:396:G:O2'	2.39	0.56
1:M:284:A:N6	1:M:396:G:O2'	2.39	0.56
1:A:284:A:N6	1:A:396:G:O2'	2.39	0.56
1:B:59:G:H2'	1:B:60:G:H8	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:284:A:N6	1:B:396:G:O2'	2.39	0.56
1:D:472:C:N4	1:D:554:G:O6	2.33	0.56
1:K:284:A:N6	1:K:396:G:O2'	2.39	0.56
1:L:204:A:O2'	1:L:205:G:O4'	2.21	0.56
1:M:59:G:H2'	1:M:60:G:H8	1.70	0.56
1:N:59:G:H2'	1:N:60:G:H8	1.70	0.56
1:I:677:A:O2'	1:I:678:G:O4'	2.24	0.56
1:L:284:A:N6	1:L:396:G:O2'	2.39	0.56
1:A:573:A:N1	1:A:741:C:O2'	2.33	0.55
1:F:290:U:H3	1:F:390:A:H62	1.54	0.55
1:N:284:A:N6	1:N:396:G:O2'	2.39	0.55
1:A:677:A:O2'	1:A:678:G:O4'	2.24	0.55
1:D:284:A:N6	1:D:396:G:O2'	2.39	0.55
1:E:677:A:O2'	1:E:678:G:O4'	2.24	0.55
1:J:677:A:O2'	1:J:678:G:O4'	2.24	0.55
1:C:284:A:N6	1:C:396:G:O2'	2.39	0.55
1:F:284:A:N6	1:F:396:G:O2'	2.39	0.55
1:H:284:A:N6	1:H:396:G:O2'	2.39	0.55
1:H:677:A:O2'	1:H:678:G:O4'	2.24	0.55
1:E:284:A:N6	1:E:396:G:O2'	2.39	0.55
1:F:545:A:H5''	1:F:546:G:H5''	1.89	0.55
1:I:545:A:H5''	1:I:546:G:H5''	1.89	0.55
1:J:284:A:N6	1:J:396:G:O2'	2.39	0.55
1:K:290:U:H3	1:K:390:A:H62	1.54	0.55
1:L:28:A:HO2'	1:L:79:U:HO2'	1.54	0.55
1:C:204:A:O2'	1:C:205:G:O4'	2.21	0.55
1:G:573:A:N1	1:G:741:C:O2'	2.33	0.55
1:L:677:A:O2'	1:L:678:G:O4'	2.24	0.55
1:M:677:A:O2'	1:M:678:G:O4'	2.24	0.55
1:G:545:A:H5''	1:G:546:G:H5''	1.89	0.55
1:B:330:G:O6	1:B:350:U:O4	2.25	0.55
1:I:290:U:H3	1:I:390:A:H62	1.54	0.55
1:K:204:A:O2'	1:K:205:G:O4'	2.21	0.55
1:K:677:A:O2'	1:K:678:G:O4'	2.24	0.55
1:N:290:U:H3	1:N:390:A:H62	1.54	0.55
1:N:677:A:O2'	1:N:678:G:O4'	2.24	0.55
1:C:290:U:H3	1:C:390:A:H62	1.54	0.55
1:C:771:G:H21	1:C:802:A:H8	1.54	0.55
1:E:290:U:H3	1:E:390:A:H62	1.54	0.55
1:B:290:U:H3	1:B:390:A:H62	1.54	0.54
1:H:545:A:H5''	1:H:546:G:H5''	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:545:A:H5''	1:J:546:G:H5''	1.89	0.54
1:M:330:G:O6	1:M:350:U:O4	2.25	0.54
1:N:330:G:O6	1:N:350:U:O4	2.25	0.54
1:G:28:A:HO2'	1:G:79:U:HO2'	1.56	0.54
1:C:330:G:O6	1:C:350:U:O4	2.25	0.54
1:D:677:A:O2'	1:D:678:G:O4'	2.24	0.54
1:H:330:G:O6	1:H:350:U:O4	2.25	0.54
1:H:771:G:H21	1:H:802:A:H8	1.54	0.54
1:C:579:U:O2'	1:C:635:U:OP1	2.25	0.54
1:D:771:G:H21	1:D:802:A:H8	1.54	0.54
1:E:545:A:H5''	1:E:546:G:H5''	1.89	0.54
1:F:711:U:H2'	1:F:712:A:C8	2.43	0.54
1:L:290:U:H3	1:L:390:A:H62	1.54	0.54
1:M:204:A:O2'	1:M:205:G:O4'	2.22	0.54
1:N:771:G:H21	1:N:802:A:H8	1.54	0.54
1:B:677:A:O2'	1:B:678:G:O4'	2.24	0.54
1:C:711:U:H2'	1:C:712:A:C8	2.43	0.54
1:D:579:U:O2'	1:D:635:U:OP1	2.25	0.54
1:H:290:U:H3	1:H:390:A:H62	1.54	0.54
1:H:579:U:O2'	1:H:635:U:OP1	2.25	0.54
1:J:330:G:O6	1:J:350:U:O4	2.25	0.54
1:K:330:G:O6	1:K:350:U:O4	2.25	0.54
1:M:711:U:H2'	1:M:712:A:C8	2.43	0.54
1:A:330:G:O6	1:A:350:U:O4	2.25	0.54
1:B:711:U:H2'	1:B:712:A:C8	2.43	0.54
1:D:330:G:O6	1:D:350:U:O4	2.25	0.54
1:I:771:G:H21	1:I:802:A:H8	1.54	0.54
1:L:711:U:H2'	1:L:712:A:C8	2.43	0.54
1:G:711:U:H2'	1:G:712:A:C8	2.43	0.54
1:A:204:A:O2'	1:A:205:G:O4'	2.22	0.54
1:I:579:U:O2'	1:I:635:U:OP1	2.25	0.54
1:N:579:U:O2'	1:N:635:U:OP1	2.25	0.54
1:G:330:G:O6	1:G:350:U:O4	2.25	0.54
1:A:771:G:H21	1:A:802:A:H8	1.54	0.54
1:L:771:G:H21	1:L:802:A:H8	1.54	0.54
1:M:290:U:H3	1:M:390:A:H62	1.54	0.54
1:G:579:U:O2'	1:G:635:U:OP1	2.25	0.54
1:G:771:G:H21	1:G:802:A:H8	1.54	0.54
1:A:290:U:H3	1:A:390:A:H62	1.54	0.54
1:B:579:U:O2'	1:B:635:U:OP1	2.25	0.54
1:E:579:U:O2'	1:E:635:U:OP1	2.25	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:711:U:H2'	1:E:712:A:C8	2.43	0.54
1:I:573:A:N1	1:I:741:C:O2'	2.33	0.54
1:J:290:U:H3	1:J:390:A:H62	1.54	0.54
1:B:771:G:H21	1:B:802:A:H8	1.54	0.54
1:D:204:A:O2'	1:D:205:G:O4'	2.22	0.54
1:D:545:A:H5''	1:D:546:G:H5''	1.89	0.54
1:A:545:A:H5''	1:A:546:G:H5''	1.89	0.54
1:C:545:A:H5''	1:C:546:G:H5''	1.89	0.54
1:C:677:A:O2'	1:C:678:G:O4'	2.24	0.54
1:D:711:U:H2'	1:D:712:A:C8	2.43	0.54
1:E:330:G:O6	1:E:350:U:O4	2.25	0.54
1:I:330:G:O6	1:I:350:U:O4	2.25	0.54
1:D:290:U:H3	1:D:390:A:H62	1.54	0.53
1:H:711:U:H2'	1:H:712:A:C8	2.43	0.53
1:J:579:U:O2'	1:J:635:U:OP1	2.25	0.53
1:L:330:G:O6	1:L:350:U:O4	2.25	0.53
1:G:290:U:H3	1:G:390:A:H62	1.54	0.53
1:E:771:G:H21	1:E:802:A:H8	1.54	0.53
1:K:545:A:H5''	1:K:546:G:H5''	1.89	0.53
1:L:545:A:H5''	1:L:546:G:H5''	1.89	0.53
1:M:771:G:H21	1:M:802:A:H8	1.54	0.53
1:N:545:A:H5''	1:N:546:G:H5''	1.89	0.53
1:A:80:C:H2'	1:A:81:A:H8	1.74	0.53
1:F:330:G:O6	1:F:350:U:O4	2.25	0.53
1:K:80:C:H2'	1:K:81:A:H8	1.74	0.53
1:A:711:U:H2'	1:A:712:A:C8	2.43	0.53
1:D:80:C:H2'	1:D:81:A:H8	1.74	0.53
1:H:80:C:H2'	1:H:81:A:H8	1.74	0.53
1:J:611:A:H62	1:J:625:A:H8	1.57	0.53
1:M:545:A:H5''	1:M:546:G:H5''	1.89	0.53
1:B:545:A:H5''	1:B:546:G:H5''	1.89	0.53
1:E:80:C:H2'	1:E:81:A:H8	1.74	0.53
1:F:355:C:H41	1:F:385:G:H1	1.56	0.53
1:F:579:U:O2'	1:F:635:U:OP1	2.25	0.53
1:I:711:U:H2'	1:I:712:A:C8	2.43	0.53
1:J:204:A:O2'	1:J:205:G:O4'	2.21	0.53
1:K:711:U:H2'	1:K:712:A:C8	2.43	0.53
1:L:80:C:H2'	1:L:81:A:H8	1.74	0.53
1:N:711:U:H2'	1:N:712:A:C8	2.43	0.53
1:G:296:A:H2	1:G:324:A:H61	1.57	0.53
1:E:355:C:H41	1:E:385:G:H1	1.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:711:U:H2'	1:J:712:A:C8	2.43	0.53
1:M:579:U:O2'	1:M:635:U:OP1	2.25	0.53
1:F:296:A:H2	1:F:324:A:H61	1.57	0.53
1:I:80:C:H2'	1:I:81:A:H8	1.74	0.53
1:I:355:C:H41	1:I:385:G:H1	1.56	0.53
1:K:296:A:H2	1:K:324:A:H61	1.57	0.53
1:K:355:C:H41	1:K:385:G:H1	1.56	0.53
1:M:80:C:H2'	1:M:81:A:H8	1.74	0.53
1:G:611:A:H62	1:G:625:A:H8	1.57	0.53
1:K:771:G:H21	1:K:802:A:H8	1.54	0.53
1:L:296:A:H2	1:L:324:A:H61	1.57	0.53
1:G:80:C:H2'	1:G:81:A:H8	1.74	0.53
1:B:355:C:H41	1:B:385:G:H1	1.56	0.53
1:E:611:A:H62	1:E:625:A:H8	1.57	0.53
1:K:579:U:O2'	1:K:635:U:OP1	2.25	0.53
1:C:80:C:H2'	1:C:81:A:H8	1.74	0.53
1:F:80:C:H2'	1:F:81:A:H8	1.74	0.53
1:J:771:G:H21	1:J:802:A:H8	1.54	0.53
1:L:611:A:H62	1:L:625:A:H8	1.57	0.53
1:E:296:A:H2	1:E:324:A:H61	1.57	0.52
1:J:80:C:H2'	1:J:81:A:H8	1.74	0.52
1:J:296:A:H2	1:J:324:A:H61	1.57	0.52
1:M:355:C:H41	1:M:385:G:H1	1.56	0.52
1:N:355:C:H41	1:N:385:G:H1	1.56	0.52
1:L:579:U:O2'	1:L:635:U:OP1	2.25	0.52
1:A:296:A:H2	1:A:324:A:H61	1.57	0.52
1:A:579:U:O2'	1:A:635:U:OP1	2.25	0.52
1:F:573:A:N1	1:F:741:C:O2'	2.33	0.52
1:B:80:C:H2'	1:B:81:A:H8	1.74	0.52
1:B:204:A:O2'	1:B:205:G:O4'	2.21	0.52
1:E:204:A:O2'	1:E:205:G:O4'	2.21	0.52
1:F:611:A:H62	1:F:625:A:H8	1.57	0.52
1:M:28:A:HO2'	1:M:79:U:HO2'	1.57	0.52
1:M:296:A:H2	1:M:324:A:H61	1.57	0.52
1:H:355:C:H41	1:H:385:G:H1	1.56	0.52
1:L:355:C:H41	1:L:385:G:H1	1.56	0.52
1:B:307:G:H2'	1:B:308:G:H8	1.75	0.52
1:C:355:C:H41	1:C:385:G:H1	1.56	0.52
1:F:771:G:H21	1:F:802:A:H8	1.54	0.52
1:N:307:G:H2'	1:N:308:G:H8	1.75	0.52
1:A:355:C:H41	1:A:385:G:H1	1.56	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:307:G:H2'	1:D:308:G:H8	1.75	0.52
1:H:307:G:H2'	1:H:308:G:H8	1.75	0.52
1:N:80:C:H2'	1:N:81:A:H8	1.74	0.52
1:J:355:C:H41	1:J:385:G:H1	1.56	0.52
1:D:296:A:H2	1:D:324:A:H61	1.57	0.52
1:I:296:A:H2	1:I:324:A:H61	1.57	0.52
1:K:611:A:H62	1:K:625:A:H8	1.57	0.52
1:L:307:G:H2'	1:L:308:G:H8	1.75	0.52
1:D:611:A:H62	1:D:625:A:H8	1.57	0.51
1:F:28:A:HO2'	1:F:79:U:HO2'	1.58	0.51
1:D:355:C:H41	1:D:385:G:H1	1.56	0.51
1:H:611:A:H62	1:H:625:A:H8	1.57	0.51
1:N:296:A:H2	1:N:324:A:H61	1.57	0.51
1:N:611:A:H62	1:N:625:A:H8	1.57	0.51
1:G:355:C:H41	1:G:385:G:H1	1.56	0.51
1:A:307:G:H2'	1:A:308:G:H8	1.75	0.51
1:B:296:A:H2	1:B:324:A:H61	1.57	0.51
1:J:307:G:H2'	1:J:308:G:H8	1.75	0.51
1:B:611:A:H62	1:B:625:A:H8	1.57	0.51
1:H:296:A:H2	1:H:324:A:H61	1.57	0.51
1:C:611:A:H62	1:C:625:A:H8	1.57	0.51
1:E:307:G:H2'	1:E:308:G:H8	1.75	0.51
1:G:307:G:H2'	1:G:308:G:H8	1.75	0.51
1:F:718:C:O2	1:F:720:A:O2'	2.28	0.51
1:M:611:A:H62	1:M:625:A:H8	1.57	0.51
1:G:294:U:OP1	1:F:202:G:N2	2.37	0.51
1:C:296:A:H2	1:C:324:A:H61	1.57	0.51
1:E:772:U:O2'	1:E:804:G:OP2	2.29	0.51
1:I:772:U:O2'	1:I:804:G:OP2	2.29	0.51
1:L:727:G:OP1	1:L:776:A:O2'	2.26	0.51
1:D:772:U:O2'	1:D:804:G:OP2	2.29	0.51
1:I:307:G:H2'	1:I:308:G:H8	1.75	0.51
1:F:307:G:H2'	1:F:308:G:H8	1.75	0.51
1:J:772:U:O2'	1:J:804:G:OP2	2.29	0.51
1:A:772:U:O2'	1:A:804:G:OP2	2.29	0.50
1:I:611:A:H62	1:I:625:A:H8	1.56	0.50
1:A:611:A:H62	1:A:625:A:H8	1.57	0.50
1:H:772:U:O2'	1:H:804:G:OP2	2.29	0.50
1:M:307:G:H2'	1:M:308:G:H8	1.75	0.50
1:N:204:A:O2'	1:N:205:G:O4'	2.21	0.50
1:A:28:A:HO2'	1:A:79:U:HO2'	1.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:307:G:H2'	1:C:308:G:H8	1.75	0.50
1:I:718:C:O2	1:I:720:A:O2'	2.28	0.50
1:K:307:G:H2'	1:K:308:G:H8	1.75	0.50
1:F:772:U:O2'	1:F:804:G:OP2	2.29	0.50
1:L:772:U:O2'	1:L:804:G:OP2	2.29	0.50
1:M:772:U:O2'	1:M:804:G:OP2	2.29	0.50
1:J:6:G:H1	1:J:17:U:H3	1.60	0.50
1:A:91:G:H2'	1:A:92:A:H8	1.77	0.50
1:C:772:U:O2'	1:C:804:G:OP2	2.29	0.50
1:K:6:G:H1	1:K:17:U:H3	1.60	0.50
1:K:91:G:H2'	1:K:92:A:H8	1.77	0.50
1:N:641:A:OP2	1:N:693:A:N6	2.45	0.50
1:C:641:A:OP2	1:C:693:A:N6	2.45	0.50
1:C:757:C:H2'	1:C:758:A:H8	1.77	0.50
1:D:641:A:OP2	1:D:693:A:N6	2.45	0.50
1:J:757:C:H2'	1:J:758:A:H8	1.77	0.50
1:L:718:C:O2	1:L:720:A:O2'	2.28	0.50
1:M:641:A:OP2	1:M:693:A:N6	2.45	0.50
1:G:772:U:O2'	1:G:804:G:OP2	2.29	0.50
1:B:772:U:O2'	1:B:804:G:OP2	2.29	0.50
1:C:718:C:O2	1:C:720:A:O2'	2.28	0.50
1:F:204:A:O2'	1:F:205:G:O4'	2.21	0.50
1:F:355:C:H5	1:F:385:G:H22	1.60	0.50
1:G:91:G:H2'	1:G:92:A:H8	1.77	0.50
1:D:195:G:H21	1:D:212:A:H2	1.59	0.50
1:D:441:U:H3	1:D:455:G:H1	1.60	0.50
1:E:757:C:H2'	1:E:758:A:H8	1.77	0.50
1:F:6:G:H1	1:F:17:U:H3	1.60	0.50
1:H:641:A:OP2	1:H:693:A:N6	2.45	0.50
1:L:6:G:H1	1:L:17:U:H3	1.60	0.50
1:N:195:G:H21	1:N:212:A:H2	1.59	0.50
1:I:441:U:H3	1:I:455:G:H1	1.60	0.49
1:J:718:C:O2	1:J:720:A:O2'	2.28	0.49
1:L:355:C:H5	1:L:385:G:H22	1.60	0.49
1:N:91:G:H2'	1:N:92:A:H8	1.77	0.49
1:N:772:U:O2'	1:N:804:G:OP2	2.29	0.49
1:G:6:G:H1	1:G:17:U:H3	1.60	0.49
1:A:641:A:OP2	1:A:693:A:N6	2.45	0.49
1:B:641:A:OP2	1:B:693:A:N6	2.45	0.49
1:H:718:C:O2	1:H:720:A:O2'	2.28	0.49
1:H:757:C:H2'	1:H:758:A:H8	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:6:G:H1	1:I:17:U:H3	1.60	0.49
1:J:91:G:H2'	1:J:92:A:H8	1.77	0.49
1:L:641:A:OP2	1:L:693:A:N6	2.45	0.49
1:N:757:C:H2'	1:N:758:A:H8	1.77	0.49
1:G:718:C:O2	1:G:720:A:O2'	2.28	0.49
1:F:757:C:H2'	1:F:758:A:H8	1.77	0.49
1:K:772:U:O2'	1:K:804:G:OP2	2.29	0.49
1:G:195:G:H21	1:G:212:A:H2	1.60	0.49
1:A:820:U:H3	1:A:830:G:H1	1.61	0.49
1:B:195:G:H21	1:B:212:A:H2	1.60	0.49
1:H:441:U:H3	1:H:455:G:H1	1.60	0.49
1:L:573:A:N1	1:L:741:C:O2'	2.33	0.49
1:M:91:G:H2'	1:M:92:A:H8	1.77	0.49
1:G:355:C:H5	1:G:385:G:H22	1.60	0.49
1:A:757:C:H2'	1:A:758:A:H8	1.77	0.49
1:C:645:U:H2'	1:C:646:U:H6	1.78	0.49
1:E:6:G:H1	1:E:17:U:H3	1.60	0.49
1:E:641:A:OP2	1:E:693:A:N6	2.45	0.49
1:F:195:G:H21	1:F:212:A:H2	1.60	0.49
1:J:441:U:H3	1:J:455:G:H1	1.60	0.49
1:K:195:G:H21	1:K:212:A:H2	1.60	0.49
1:K:645:U:H2'	1:K:646:U:H6	1.78	0.49
1:D:757:C:H2'	1:D:758:A:H8	1.77	0.49
1:E:345:C:H2'	1:E:346:G:H8	1.78	0.49
1:E:441:U:H3	1:E:455:G:H1	1.60	0.49
1:E:645:U:H2'	1:E:646:U:H6	1.78	0.49
1:H:645:U:H2'	1:H:646:U:H6	1.78	0.49
1:J:431:A:H2'	1:J:432:A:H8	1.78	0.49
1:D:6:G:H1	1:D:17:U:H3	1.60	0.49
1:H:195:G:H21	1:H:212:A:H2	1.59	0.49
1:H:431:A:H2'	1:H:432:A:H8	1.78	0.49
1:I:172:U:H2'	1:I:173:G:H8	1.77	0.49
1:I:431:A:H2'	1:I:432:A:H8	1.78	0.49
1:I:645:U:H2'	1:I:646:U:H6	1.78	0.49
1:L:195:G:H21	1:L:212:A:H2	1.59	0.49
1:M:820:U:H3	1:M:830:G:H1	1.61	0.49
1:N:573:A:N1	1:N:741:C:O2'	2.33	0.49
1:I:345:C:H2'	1:I:346:G:H8	1.78	0.49
1:L:91:G:H2'	1:L:92:A:H8	1.77	0.49
1:L:820:U:H3	1:L:830:G:H1	1.61	0.49
1:M:355:C:H5	1:M:385:G:H22	1.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:645:U:H2'	1:G:646:U:H6	1.78	0.49
1:B:91:G:H2'	1:B:92:A:H8	1.77	0.49
1:B:820:U:H3	1:B:830:G:H1	1.61	0.49
1:C:441:U:H3	1:C:455:G:H1	1.60	0.49
1:D:345:C:H2'	1:D:346:G:H8	1.78	0.49
1:E:355:C:H5	1:E:385:G:H22	1.60	0.49
1:H:358:U:H2'	1:H:359:G:C8	2.48	0.49
1:I:91:G:H2'	1:I:92:A:H8	1.77	0.49
1:I:195:G:H21	1:I:212:A:H2	1.60	0.49
1:I:757:C:H2'	1:I:758:A:H8	1.77	0.49
1:J:202:G:N2	1:K:294:U:OP1	2.37	0.49
1:J:345:C:H2'	1:J:346:G:H8	1.78	0.49
1:J:355:C:H5	1:J:385:G:H22	1.60	0.49
1:K:355:C:H5	1:K:385:G:H22	1.60	0.49
1:K:757:C:H2'	1:K:758:A:H8	1.77	0.49
1:L:358:U:H2'	1:L:359:G:C8	2.48	0.49
1:L:757:C:H2'	1:L:758:A:H8	1.77	0.49
1:M:573:A:N1	1:M:741:C:O2'	2.33	0.49
1:M:645:U:H2'	1:M:646:U:H6	1.78	0.49
1:N:431:A:H2'	1:N:432:A:H8	1.78	0.49
1:N:645:U:H2'	1:N:646:U:H6	1.78	0.49
1:G:288:U:H2'	1:G:289:U:H6	1.78	0.49
1:G:307:G:H2'	1:G:308:G:C8	2.48	0.49
1:A:288:U:H2'	1:A:289:U:H6	1.78	0.49
1:A:355:C:H5	1:A:385:G:H22	1.60	0.49
1:A:431:A:H2'	1:A:432:A:H8	1.78	0.49
1:D:358:U:H2'	1:D:359:G:C8	2.48	0.49
1:E:172:U:H2'	1:E:173:G:H8	1.77	0.49
1:F:288:U:H2'	1:F:289:U:H6	1.78	0.49
1:F:345:C:H2'	1:F:346:G:H8	1.78	0.49
1:F:641:A:OP2	1:F:693:A:N6	2.45	0.49
1:H:91:G:H2'	1:H:92:A:H8	1.77	0.49
1:I:355:C:H5	1:I:385:G:H22	1.60	0.49
1:J:288:U:H2'	1:J:289:U:H6	1.78	0.49
1:K:288:U:H2'	1:K:289:U:H6	1.78	0.49
1:K:641:A:OP2	1:K:693:A:N6	2.45	0.49
1:L:288:U:H2'	1:L:289:U:H6	1.78	0.49
1:L:307:G:H2'	1:L:308:G:C8	2.48	0.49
1:M:6:G:H1	1:M:17:U:H3	1.60	0.49
1:M:358:U:H2'	1:M:359:G:C8	2.48	0.49
1:M:757:C:H2'	1:M:758:A:H8	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:358:U:H2'	1:N:359:G:C8	2.48	0.49
1:A:6:G:H1	1:A:17:U:H3	1.60	0.48
1:A:172:U:H2'	1:A:173:G:H8	1.78	0.48
1:A:358:U:H2'	1:A:359:G:C8	2.48	0.48
1:B:28:A:HO2'	1:B:79:U:HO2'	1.60	0.48
1:E:358:U:H2'	1:E:359:G:C8	2.48	0.48
1:I:641:A:OP2	1:I:693:A:N6	2.45	0.48
1:J:641:A:OP2	1:J:693:A:N6	2.45	0.48
1:K:431:A:H2'	1:K:432:A:H8	1.78	0.48
1:M:441:U:H3	1:M:455:G:H1	1.60	0.48
1:M:718:C:O2	1:M:720:A:O2'	2.28	0.48
1:G:757:C:H2'	1:G:758:A:H8	1.77	0.48
1:A:195:G:H21	1:A:212:A:H2	1.59	0.48
1:A:645:U:H2'	1:A:646:U:H6	1.78	0.48
1:B:355:C:H5	1:B:385:G:H22	1.60	0.48
1:B:358:U:H2'	1:B:359:G:C8	2.48	0.48
1:B:441:U:H3	1:B:455:G:H1	1.60	0.48
1:B:645:U:H2'	1:B:646:U:H6	1.78	0.48
1:C:306:G:H2'	1:C:307:G:C8	2.48	0.48
1:D:306:G:H2'	1:D:307:G:C8	2.48	0.48
1:D:645:U:H2'	1:D:646:U:H6	1.78	0.48
1:F:441:U:H3	1:F:455:G:H1	1.60	0.48
1:H:6:G:H1	1:H:17:U:H3	1.60	0.48
1:H:345:C:H2'	1:H:346:G:H8	1.78	0.48
1:J:195:G:H21	1:J:212:A:H2	1.60	0.48
1:K:358:U:H2'	1:K:359:G:C8	2.48	0.48
1:L:172:U:H2'	1:L:173:G:H8	1.78	0.48
1:M:288:U:H2'	1:M:289:U:H6	1.78	0.48
1:G:431:A:H2'	1:G:432:A:H8	1.78	0.48
1:G:820:U:H3	1:G:830:G:H1	1.61	0.48
1:A:441:U:H3	1:A:455:G:H1	1.60	0.48
1:B:306:G:H2'	1:B:307:G:C8	2.48	0.48
1:B:718:C:O2	1:B:720:A:O2'	2.28	0.48
1:B:757:C:H2'	1:B:758:A:H8	1.77	0.48
1:C:358:U:H2'	1:C:359:G:C8	2.48	0.48
1:E:91:G:H2'	1:E:92:A:H8	1.77	0.48
1:E:288:U:H2'	1:E:289:U:H6	1.78	0.48
1:M:727:G:OP1	1:M:776:A:O2'	2.26	0.48
1:N:441:U:H3	1:N:455:G:H1	1.60	0.48
1:G:172:U:H2'	1:G:173:G:H8	1.78	0.48
1:G:641:A:OP2	1:G:693:A:N6	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:202:G:N2	1:C:294:U:OP1	2.37	0.48
1:B:288:U:H2'	1:B:289:U:H6	1.78	0.48
1:B:345:C:H2'	1:B:346:G:H8	1.78	0.48
1:C:6:G:H1	1:C:17:U:H3	1.60	0.48
1:C:195:G:H21	1:C:212:A:H2	1.59	0.48
1:D:172:U:H2'	1:D:173:G:H8	1.78	0.48
1:D:307:G:H2'	1:D:308:G:C8	2.48	0.48
1:E:195:G:H21	1:E:212:A:H2	1.59	0.48
1:E:306:G:H2'	1:E:307:G:C8	2.48	0.48
1:E:307:G:H2'	1:E:308:G:C8	2.48	0.48
1:F:91:G:H2'	1:F:92:A:H8	1.77	0.48
1:F:306:G:H2'	1:F:307:G:C8	2.48	0.48
1:F:645:U:H2'	1:F:646:U:H6	1.78	0.48
1:I:307:G:H2'	1:I:308:G:C8	2.48	0.48
1:J:306:G:H2'	1:J:307:G:C8	2.48	0.48
1:K:718:C:O2	1:K:720:A:O2'	2.28	0.48
1:L:645:U:H2'	1:L:646:U:H6	1.78	0.48
1:M:642:A:N6	1:M:692:A:O2'	2.47	0.48
1:N:642:A:N6	1:N:692:A:O2'	2.47	0.48
1:B:6:G:H1	1:B:17:U:H3	1.60	0.48
1:B:431:A:H2'	1:B:432:A:H8	1.78	0.48
1:H:642:A:N6	1:H:692:A:O2'	2.47	0.48
1:H:670:G:H1	1:H:681:U:H3	1.62	0.48
1:I:306:G:H2'	1:I:307:G:C8	2.48	0.48
1:I:670:G:H1	1:I:681:U:H3	1.62	0.48
1:K:345:C:H2'	1:K:346:G:H8	1.78	0.48
1:M:306:G:H2'	1:M:307:G:C8	2.48	0.48
1:N:820:U:H3	1:N:830:G:H1	1.61	0.48
1:A:306:G:H2'	1:A:307:G:C8	2.49	0.48
1:A:307:G:H2'	1:A:308:G:C8	2.48	0.48
1:B:172:U:H2'	1:B:173:G:H8	1.78	0.48
1:D:91:G:H2'	1:D:92:A:H8	1.77	0.48
1:D:652:C:H2'	1:D:653:A:H8	1.79	0.48
1:H:355:C:H5	1:H:385:G:H22	1.60	0.48
1:I:652:C:H2'	1:I:653:A:H8	1.79	0.48
1:J:307:G:H2'	1:J:308:G:C8	2.48	0.48
1:M:172:U:H2'	1:M:173:G:H8	1.78	0.48
1:M:652:C:H2'	1:M:653:A:H8	1.79	0.48
1:N:288:U:H2'	1:N:289:U:H6	1.78	0.48
1:G:358:U:H2'	1:G:359:G:C8	2.48	0.48
1:C:345:C:H2'	1:C:346:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:355:C:H5	1:C:385:G:H22	1.60	0.48
1:C:642:A:N6	1:C:692:A:O2'	2.47	0.48
1:F:307:G:H2'	1:F:308:G:C8	2.48	0.48
1:H:306:G:H2'	1:H:307:G:C8	2.49	0.48
1:H:307:G:H2'	1:H:308:G:C8	2.48	0.48
1:I:288:U:H2'	1:I:289:U:H6	1.78	0.48
1:J:358:U:H2'	1:J:359:G:C8	2.48	0.48
1:K:151:U:H2'	1:K:152:A:H8	1.79	0.48
1:K:441:U:H3	1:K:455:G:H1	1.60	0.48
1:M:151:U:H2'	1:M:152:A:H8	1.79	0.48
1:N:306:G:H2'	1:N:307:G:C8	2.48	0.48
1:G:218:A:N3	1:G:394:U:O2'	2.45	0.48
1:G:345:C:H2'	1:G:346:G:H8	1.78	0.48
1:B:151:U:H2'	1:B:152:A:H8	1.79	0.48
1:C:307:G:H2'	1:C:308:G:C8	2.48	0.48
1:D:718:C:O2	1:D:720:A:O2'	2.28	0.48
1:F:151:U:H2'	1:F:152:A:H8	1.79	0.48
1:F:358:U:H2'	1:F:359:G:C8	2.48	0.48
1:I:358:U:H2'	1:I:359:G:C8	2.48	0.48
1:I:441:U:O2	1:I:455:G:N2	2.40	0.48
1:J:172:U:H2'	1:J:173:G:H8	1.78	0.48
1:J:645:U:H2'	1:J:646:U:H6	1.78	0.48
1:K:306:G:H2'	1:K:307:G:C8	2.48	0.48
1:K:441:U:O2	1:K:455:G:N2	2.41	0.48
1:L:202:G:N2	1:M:294:U:OP1	2.37	0.48
1:M:195:G:H21	1:M:212:A:H2	1.59	0.48
1:M:431:A:H2'	1:M:432:A:H8	1.78	0.48
1:N:6:G:H1	1:N:17:U:H3	1.60	0.48
1:B:307:G:H2'	1:B:308:G:C8	2.48	0.48
1:C:91:G:H2'	1:C:92:A:H8	1.77	0.48
1:H:573:A:N1	1:H:741:C:O2'	2.33	0.48
1:J:670:G:H1	1:J:681:U:H3	1.62	0.48
1:K:642:A:N6	1:K:692:A:O2'	2.47	0.48
1:L:306:G:H2'	1:L:307:G:C8	2.49	0.48
1:L:345:C:H2'	1:L:346:G:H8	1.78	0.48
1:N:307:G:H2'	1:N:308:G:C8	2.48	0.48
1:N:345:C:H2'	1:N:346:G:H8	1.78	0.48
1:N:670:G:H1	1:N:681:U:H3	1.62	0.48
1:A:560:C:H2'	1:A:561:A:H8	1.79	0.48
1:B:652:C:H2'	1:B:653:A:H8	1.79	0.48
1:C:288:U:H2'	1:C:289:U:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:431:A:H2'	1:C:432:A:H8	1.78	0.48
1:C:829:A:H3'	1:C:830:G:H8	1.79	0.48
1:D:355:C:H5	1:D:385:G:H22	1.60	0.48
1:D:642:A:N6	1:D:692:A:O2'	2.47	0.48
1:F:172:U:H2'	1:F:173:G:H8	1.77	0.48
1:H:294:U:OP1	1:N:202:G:N2	2.37	0.48
1:H:829:A:H3'	1:H:830:G:H8	1.79	0.48
1:I:603:U:H2'	1:I:604:G:H8	1.79	0.48
1:J:603:U:H2'	1:J:604:G:H8	1.79	0.48
1:K:172:U:H2'	1:K:173:G:H8	1.77	0.48
1:K:307:G:H2'	1:K:308:G:C8	2.48	0.48
1:K:603:U:H2'	1:K:604:G:H8	1.79	0.48
1:M:307:G:H2'	1:M:308:G:C8	2.48	0.48
1:N:172:U:H2'	1:N:173:G:H8	1.77	0.48
1:N:355:C:H5	1:N:385:G:H22	1.60	0.48
1:G:88:A:H3'	1:G:89:A:C8	2.49	0.47
1:A:151:U:H2'	1:A:152:A:H8	1.79	0.47
1:A:652:C:H2'	1:A:653:A:H8	1.79	0.47
1:C:652:C:H2'	1:C:653:A:H8	1.79	0.47
1:D:288:U:H2'	1:D:289:U:H6	1.78	0.47
1:D:431:A:H2'	1:D:432:A:H8	1.78	0.47
1:E:431:A:H2'	1:E:432:A:H8	1.78	0.47
1:H:652:C:H2'	1:H:653:A:H8	1.79	0.47
1:L:603:U:H2'	1:L:604:G:H8	1.79	0.47
1:L:642:A:N6	1:L:692:A:O2'	2.47	0.47
1:N:560:C:H2'	1:N:561:A:H8	1.79	0.47
1:C:172:U:H2'	1:C:173:G:H8	1.77	0.47
1:D:88:A:H3'	1:D:89:A:C8	2.49	0.47
1:E:91:G:H2'	1:E:92:A:C8	2.50	0.47
1:E:202:G:N2	1:F:294:U:OP1	2.37	0.47
1:E:603:U:H2'	1:E:604:G:H8	1.79	0.47
1:E:727:G:OP1	1:E:776:A:O2'	2.26	0.47
1:H:288:U:H2'	1:H:289:U:H6	1.78	0.47
1:H:560:C:H2'	1:H:561:A:H8	1.79	0.47
1:I:88:A:H3'	1:I:89:A:C8	2.49	0.47
1:I:642:A:N6	1:I:692:A:O2'	2.47	0.47
1:K:103:G:N2	1:K:421:U:OP2	2.48	0.47
1:K:218:A:N3	1:K:394:U:O2'	2.45	0.47
1:L:441:U:H3	1:L:455:G:H1	1.60	0.47
1:M:603:U:H2'	1:M:604:G:H8	1.79	0.47
1:M:780:A:H2'	1:M:781:A:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:151:U:H2'	1:N:152:A:H8	1.79	0.47
1:G:103:G:N2	1:G:421:U:OP2	2.48	0.47
1:G:204:A:O2'	1:G:205:G:O4'	2.21	0.47
1:G:441:U:H3	1:G:455:G:H1	1.60	0.47
1:A:441:U:O2	1:A:455:G:N2	2.40	0.47
1:A:606:C:H2'	1:A:607:A:H8	1.80	0.47
1:B:780:A:H2'	1:B:781:A:C8	2.50	0.47
1:E:642:A:N6	1:E:692:A:O2'	2.47	0.47
1:F:91:G:H2'	1:F:92:A:C8	2.50	0.47
1:F:431:A:H2'	1:F:432:A:H8	1.78	0.47
1:F:642:A:N6	1:F:692:A:O2'	2.47	0.47
1:F:829:A:H3'	1:F:830:G:H8	1.79	0.47
1:H:603:U:H2'	1:H:604:G:H8	1.79	0.47
1:I:91:G:H2'	1:I:92:A:C8	2.50	0.47
1:I:820:U:H3	1:I:830:G:H1	1.61	0.47
1:J:91:G:H2'	1:J:92:A:C8	2.50	0.47
1:J:829:A:H3'	1:J:830:G:H8	1.79	0.47
1:L:780:A:H2'	1:L:781:A:C8	2.50	0.47
1:M:345:C:H2'	1:M:346:G:H8	1.78	0.47
1:N:603:U:H2'	1:N:604:G:H8	1.79	0.47
1:B:88:A:H3'	1:B:89:A:C8	2.49	0.47
1:B:103:G:N2	1:B:421:U:OP2	2.48	0.47
1:B:560:C:H2'	1:B:561:A:H8	1.79	0.47
1:D:91:G:H2'	1:D:92:A:C8	2.50	0.47
1:E:88:A:H3'	1:E:89:A:C8	2.49	0.47
1:E:820:U:H3	1:E:830:G:H1	1.61	0.47
1:F:560:C:H2'	1:F:561:A:H8	1.79	0.47
1:J:151:U:H2'	1:J:152:A:H8	1.79	0.47
1:N:88:A:H3'	1:N:89:A:C8	2.50	0.47
1:G:560:C:H2'	1:G:561:A:H8	1.79	0.47
1:G:780:A:H2'	1:G:781:A:C8	2.50	0.47
1:A:358:U:H2'	1:A:359:G:H8	1.80	0.47
1:A:642:A:N6	1:A:692:A:O2'	2.47	0.47
1:B:642:A:N6	1:B:692:A:O2'	2.47	0.47
1:D:196:A:O2'	1:D:197:G:H8	1.98	0.47
1:D:820:U:H3	1:D:830:G:H1	1.61	0.47
1:H:88:A:H3'	1:H:89:A:C8	2.49	0.47
1:J:88:A:H3'	1:J:89:A:C8	2.50	0.47
1:J:606:C:H2'	1:J:607:A:H8	1.80	0.47
1:L:88:A:H3'	1:L:89:A:C8	2.50	0.47
1:M:91:G:H2'	1:M:92:A:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:306:G:H2'	1:G:307:G:C8	2.49	0.47
1:A:91:G:H2'	1:A:92:A:C8	2.50	0.47
1:C:91:G:H2'	1:C:92:A:C8	2.50	0.47
1:F:103:G:N2	1:F:421:U:OP2	2.48	0.47
1:F:652:C:H2'	1:F:653:A:H8	1.79	0.47
1:H:91:G:H2'	1:H:92:A:C8	2.50	0.47
1:H:820:U:H3	1:H:830:G:H1	1.61	0.47
1:I:374:C:H2'	1:I:375:A:H8	1.80	0.47
1:I:606:C:H2'	1:I:607:A:H8	1.80	0.47
1:K:48:U:O2'	1:K:236:C:O2	2.33	0.47
1:K:88:A:H3'	1:K:89:A:C8	2.50	0.47
1:K:196:A:O2'	1:K:197:G:H8	1.98	0.47
1:K:652:C:H2'	1:K:653:A:H8	1.79	0.47
1:K:780:A:H2'	1:K:781:A:C8	2.50	0.47
1:L:196:A:O2'	1:L:197:G:H8	1.98	0.47
1:L:431:A:H2'	1:L:432:A:H8	1.78	0.47
1:M:103:G:N2	1:M:421:U:OP2	2.48	0.47
1:M:358:U:H2'	1:M:359:G:H8	1.80	0.47
1:N:718:C:O2	1:N:720:A:O2'	2.28	0.47
1:G:151:U:H2'	1:G:152:A:H8	1.79	0.47
1:G:612:C:H2'	1:G:613:A:H8	1.80	0.47
1:G:642:A:N6	1:G:692:A:O2'	2.47	0.47
1:A:48:U:O2'	1:A:236:C:O2	2.33	0.47
1:B:91:G:H2'	1:B:92:A:C8	2.50	0.47
1:B:196:A:O2'	1:B:197:G:H8	1.98	0.47
1:B:606:C:H2'	1:B:607:A:H8	1.80	0.47
1:C:151:U:H2'	1:C:152:A:H8	1.79	0.47
1:D:829:A:H3'	1:D:830:G:H8	1.79	0.47
1:E:358:U:H2'	1:E:359:G:H8	1.80	0.47
1:E:374:C:H2'	1:E:375:A:H8	1.80	0.47
1:E:560:C:H2'	1:E:561:A:H8	1.79	0.47
1:F:48:U:O2'	1:F:236:C:O2	2.33	0.47
1:F:88:A:H3'	1:F:89:A:C8	2.50	0.47
1:H:172:U:H2'	1:H:173:G:H8	1.78	0.47
1:I:196:A:O2'	1:I:197:G:H8	1.98	0.47
1:I:829:A:H3'	1:I:830:G:H8	1.79	0.47
1:J:48:U:O2'	1:J:236:C:O2	2.33	0.47
1:J:727:G:OP1	1:J:776:A:O2'	2.26	0.47
1:J:820:U:H3	1:J:830:G:H1	1.61	0.47
1:K:374:C:H2'	1:K:375:A:H8	1.80	0.47
1:K:820:U:H3	1:K:830:G:H1	1.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:358:U:H2'	1:L:359:G:H8	1.80	0.47
1:L:652:C:H2'	1:L:653:A:H8	1.79	0.47
1:M:6:G:N2	1:M:17:U:O2	2.44	0.47
1:M:48:U:O2'	1:M:236:C:O2	2.33	0.47
1:M:202:G:N2	1:N:294:U:OP1	2.37	0.47
1:M:612:C:H2'	1:M:613:A:H8	1.80	0.47
1:N:196:A:O2'	1:N:197:G:H8	1.98	0.47
1:N:652:C:H2'	1:N:653:A:H8	1.79	0.47
1:N:780:A:H2'	1:N:781:A:C8	2.50	0.47
1:G:606:C:H2'	1:G:607:A:H8	1.80	0.47
1:A:345:C:H2'	1:A:346:G:H8	1.78	0.47
1:B:727:G:OP1	1:B:776:A:O2'	2.26	0.47
1:D:639:G:O6	1:D:694:G:O2'	2.31	0.47
1:D:736:A:H2'	1:D:737:A:C8	2.50	0.47
1:E:103:G:N2	1:E:421:U:OP2	2.48	0.47
1:E:652:C:H2'	1:E:653:A:H8	1.79	0.47
1:F:727:G:OP1	1:F:776:A:O2'	2.26	0.47
1:H:736:A:H2'	1:H:737:A:C8	2.50	0.47
1:J:358:U:H2'	1:J:359:G:H8	1.80	0.47
1:J:642:A:N6	1:J:692:A:O2'	2.47	0.47
1:L:91:G:H2'	1:L:92:A:C8	2.50	0.47
1:L:103:G:N2	1:L:421:U:OP2	2.48	0.47
1:N:829:A:H3'	1:N:830:G:H8	1.79	0.47
1:G:374:C:H2'	1:G:375:A:H8	1.80	0.47
1:A:670:G:H1	1:A:681:U:H3	1.62	0.47
1:A:829:A:H3'	1:A:830:G:H8	1.79	0.47
1:B:48:U:O2'	1:B:236:C:O2	2.33	0.47
1:C:103:G:N2	1:C:421:U:OP2	2.48	0.47
1:C:603:U:H2'	1:C:604:G:H8	1.79	0.47
1:C:780:A:H2'	1:C:781:A:C8	2.50	0.47
1:C:820:U:H3	1:C:830:G:H1	1.61	0.47
1:D:603:U:H2'	1:D:604:G:H8	1.79	0.47
1:E:51:A:H3'	1:E:52:A:H8	1.80	0.47
1:E:310:A:H4'	1:E:312:A:C6	2.50	0.47
1:F:196:A:O2'	1:F:197:G:H8	1.98	0.47
1:H:103:G:N2	1:H:421:U:OP2	2.48	0.47
1:I:103:G:N2	1:I:421:U:OP2	2.48	0.47
1:K:736:A:H2'	1:K:737:A:C8	2.50	0.47
1:M:88:A:H3'	1:M:89:A:C8	2.49	0.47
1:G:670:G:H1	1:G:681:U:H3	1.62	0.47
1:G:736:A:H2'	1:G:737:A:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:829:A:H3'	1:G:830:G:H8	1.79	0.47
1:A:88:A:H3'	1:A:89:A:C8	2.49	0.47
1:A:780:A:H2'	1:A:781:A:C8	2.50	0.47
1:C:736:A:H2'	1:C:737:A:C8	2.50	0.47
1:D:310:A:H4'	1:D:312:A:C6	2.50	0.47
1:D:560:C:H2'	1:D:561:A:H8	1.79	0.47
1:D:780:A:H2'	1:D:781:A:C8	2.50	0.47
1:E:151:U:H2'	1:E:152:A:H8	1.79	0.47
1:E:829:A:H3'	1:E:830:G:H8	1.79	0.47
1:H:606:C:H2'	1:H:607:A:H8	1.80	0.47
1:H:780:A:H2'	1:H:781:A:C8	2.50	0.47
1:I:310:A:H4'	1:I:312:A:C6	2.50	0.47
1:K:670:G:H1	1:K:681:U:H3	1.62	0.47
1:L:151:U:H2'	1:L:152:A:H8	1.79	0.47
1:L:736:A:H2'	1:L:737:A:C8	2.50	0.47
1:M:560:C:H2'	1:M:561:A:H8	1.79	0.47
1:M:606:C:H2'	1:M:607:A:H8	1.80	0.47
1:M:829:A:H3'	1:M:830:G:H8	1.79	0.47
1:N:91:G:H2'	1:N:92:A:C8	2.50	0.47
1:N:103:G:N2	1:N:421:U:OP2	2.48	0.47
1:N:606:C:H2'	1:N:607:A:H8	1.80	0.47
1:N:727:G:OP1	1:N:776:A:O2'	2.26	0.47
1:A:196:A:O2'	1:A:197:G:H8	1.98	0.46
1:B:358:U:H2'	1:B:359:G:H8	1.80	0.46
1:C:88:A:H3'	1:C:89:A:C8	2.50	0.46
1:C:606:C:H2'	1:C:607:A:H8	1.80	0.46
1:C:612:C:H2'	1:C:613:A:H8	1.80	0.46
1:D:606:C:H2'	1:D:607:A:H8	1.80	0.46
1:E:48:U:O2'	1:E:236:C:O2	2.33	0.46
1:E:441:U:O2	1:E:455:G:N2	2.41	0.46
1:F:310:A:O2'	1:F:311:A:O4'	2.31	0.46
1:F:374:C:H2'	1:F:375:A:H8	1.80	0.46
1:H:151:U:H2'	1:H:152:A:H8	1.79	0.46
1:H:196:A:O2'	1:H:197:G:H8	1.98	0.46
1:I:560:C:H2'	1:I:561:A:H8	1.79	0.46
1:I:736:A:H2'	1:I:737:A:C8	2.50	0.46
1:I:780:A:H2'	1:I:781:A:C8	2.50	0.46
1:J:560:C:H2'	1:J:561:A:H8	1.79	0.46
1:K:91:G:H2'	1:K:92:A:C8	2.50	0.46
1:K:606:C:H2'	1:K:607:A:H8	1.80	0.46
1:L:51:A:H62	1:L:70:U:H3	1.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:652:C:H2'	1:G:653:A:H8	1.79	0.46
1:A:27:A:N1	1:A:78:U:O2'	2.48	0.46
1:B:374:C:H2'	1:B:375:A:H8	1.80	0.46
1:D:48:U:O2'	1:D:236:C:O2	2.33	0.46
1:I:48:U:O2'	1:I:236:C:O2	2.33	0.46
1:I:218:A:N3	1:I:394:U:O2'	2.45	0.46
1:I:358:U:H2'	1:I:359:G:H8	1.80	0.46
1:J:310:A:H4'	1:J:312:A:C6	2.50	0.46
1:K:727:G:OP1	1:K:776:A:O2'	2.26	0.46
1:K:829:A:H3'	1:K:830:G:H8	1.79	0.46
1:L:606:C:H2'	1:L:607:A:H8	1.80	0.46
1:M:310:A:H4'	1:M:312:A:C6	2.50	0.46
1:N:358:U:H2'	1:N:359:G:H8	1.80	0.46
1:N:736:A:H2'	1:N:737:A:C8	2.50	0.46
1:G:358:U:H2'	1:G:359:G:H8	1.80	0.46
1:A:6:G:N2	1:A:17:U:O2	2.44	0.46
1:A:612:C:H2'	1:A:613:A:H8	1.80	0.46
1:B:310:A:H4'	1:B:312:A:C6	2.50	0.46
1:B:670:G:H1	1:B:681:U:H3	1.62	0.46
1:C:48:U:O2'	1:C:236:C:O2	2.33	0.46
1:C:374:C:H2'	1:C:375:A:H8	1.80	0.46
1:D:103:G:N2	1:D:421:U:OP2	2.48	0.46
1:D:374:C:H2'	1:D:375:A:H8	1.80	0.46
1:E:51:A:H62	1:E:70:U:H3	1.63	0.46
1:E:218:A:N3	1:E:394:U:O2'	2.45	0.46
1:F:736:A:H2'	1:F:737:A:C8	2.50	0.46
1:H:48:U:O2'	1:H:236:C:O2	2.33	0.46
1:H:310:A:H4'	1:H:312:A:C6	2.50	0.46
1:I:51:A:H62	1:I:70:U:H3	1.63	0.46
1:I:612:C:H2'	1:I:613:A:H8	1.80	0.46
1:J:780:A:H2'	1:J:781:A:C8	2.50	0.46
1:L:51:A:H3'	1:L:52:A:H8	1.80	0.46
1:M:51:A:H3'	1:M:52:A:H8	1.81	0.46
1:M:196:A:O2'	1:M:197:G:H8	1.98	0.46
1:N:310:A:H4'	1:N:312:A:C6	2.50	0.46
1:G:91:G:H2'	1:G:92:A:C8	2.50	0.46
1:G:603:U:H2'	1:G:604:G:H8	1.79	0.46
1:A:603:U:H2'	1:A:604:G:H8	1.79	0.46
1:A:718:C:O2	1:A:720:A:O2'	2.28	0.46
1:A:736:A:H2'	1:A:737:A:C8	2.50	0.46
1:A:780:A:H2'	1:A:781:A:H8	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:51:A:H62	1:B:70:U:H3	1.63	0.46
1:B:612:C:H2'	1:B:613:A:H8	1.80	0.46
1:E:196:A:O2'	1:E:197:G:H8	1.98	0.46
1:F:780:A:H2'	1:F:781:A:C8	2.50	0.46
1:I:727:G:OP1	1:I:776:A:O2'	2.26	0.46
1:J:103:G:N2	1:J:421:U:OP2	2.47	0.46
1:K:51:A:H3'	1:K:52:A:H8	1.81	0.46
1:M:374:C:H2'	1:M:375:A:H8	1.80	0.46
1:N:374:C:H2'	1:N:375:A:H8	1.80	0.46
1:G:48:U:O2'	1:G:236:C:O2	2.33	0.46
1:A:103:G:N2	1:A:421:U:OP2	2.48	0.46
1:A:310:A:H4'	1:A:312:A:C6	2.50	0.46
1:B:603:U:H2'	1:B:604:G:H8	1.79	0.46
1:C:670:G:H1	1:C:681:U:H3	1.62	0.46
1:D:670:G:H1	1:D:681:U:H3	1.62	0.46
1:E:606:C:H2'	1:E:607:A:H8	1.80	0.46
1:E:736:A:H2'	1:E:737:A:C8	2.50	0.46
1:E:780:A:H2'	1:E:781:A:C8	2.50	0.46
1:F:358:U:H2'	1:F:359:G:H8	1.80	0.46
1:F:606:C:H2'	1:F:607:A:H8	1.80	0.46
1:F:670:G:H1	1:F:681:U:H3	1.62	0.46
1:F:820:U:H3	1:F:830:G:H1	1.61	0.46
1:H:612:C:H2'	1:H:613:A:H8	1.80	0.46
1:J:310:A:O2'	1:J:311:A:O4'	2.31	0.46
1:A:374:C:H2'	1:A:375:A:H8	1.80	0.46
1:B:51:A:H3'	1:B:52:A:H8	1.80	0.46
1:C:196:A:O2'	1:C:197:G:H8	1.98	0.46
1:C:310:A:H4'	1:C:312:A:C6	2.50	0.46
1:C:780:A:H2'	1:C:781:A:H8	1.81	0.46
1:D:51:A:H3'	1:D:52:A:H8	1.80	0.46
1:D:51:A:H62	1:D:70:U:H3	1.63	0.46
1:D:95:G:H2'	1:D:96:A:H8	1.81	0.46
1:D:151:U:H2'	1:D:152:A:H8	1.79	0.46
1:D:358:U:H2'	1:D:359:G:H8	1.80	0.46
1:E:612:C:H2'	1:E:613:A:H8	1.80	0.46
1:I:151:U:H2'	1:I:152:A:H8	1.79	0.46
1:J:51:A:H62	1:J:70:U:H3	1.63	0.46
1:J:652:C:H2'	1:J:653:A:H8	1.79	0.46
1:J:736:A:H2'	1:J:737:A:C8	2.50	0.46
1:K:612:C:H2'	1:K:613:A:H8	1.80	0.46
1:L:310:A:H4'	1:L:312:A:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:374:C:H2'	1:L:375:A:H8	1.80	0.46
1:L:612:C:H2'	1:L:613:A:H8	1.80	0.46
1:M:670:G:H1	1:M:681:U:H3	1.62	0.46
1:N:48:U:O2'	1:N:236:C:O2	2.33	0.46
1:C:51:A:H3'	1:C:52:A:H8	1.81	0.46
1:E:718:C:O2	1:E:720:A:O2'	2.28	0.46
1:E:780:A:H2'	1:E:781:A:H8	1.81	0.46
1:F:310:A:H4'	1:F:312:A:C6	2.50	0.46
1:F:780:A:H2'	1:F:781:A:H8	1.81	0.46
1:J:612:C:H2'	1:J:613:A:H8	1.80	0.46
1:K:560:C:H2'	1:K:561:A:H8	1.79	0.46
1:L:48:U:O2'	1:L:236:C:O2	2.33	0.46
1:L:829:A:H3'	1:L:830:G:H8	1.79	0.46
1:M:441:U:O2	1:M:455:G:N2	2.41	0.46
1:N:51:A:H3'	1:N:52:A:H8	1.80	0.46
1:G:27:A:N1	1:G:78:U:O2'	2.48	0.46
1:B:95:G:H2'	1:B:96:A:H8	1.81	0.46
1:C:358:U:H2'	1:C:359:G:H8	1.80	0.46
1:C:727:G:OP1	1:C:776:A:O2'	2.26	0.46
1:E:670:G:H1	1:E:681:U:H3	1.62	0.46
1:F:603:U:H2'	1:F:604:G:H8	1.79	0.46
1:H:95:G:H2'	1:H:96:A:H8	1.81	0.46
1:I:95:G:H2'	1:I:96:A:H8	1.81	0.46
1:J:51:A:H3'	1:J:52:A:H8	1.80	0.46
1:M:51:A:H62	1:M:70:U:H3	1.63	0.46
1:N:95:G:H2'	1:N:96:A:H8	1.81	0.46
1:G:51:A:H62	1:G:70:U:H3	1.63	0.46
1:G:310:A:H4'	1:G:312:A:C6	2.50	0.46
1:B:736:A:H2'	1:B:737:A:C8	2.50	0.46
1:C:95:G:H2'	1:C:96:A:H8	1.81	0.46
1:C:560:C:H2'	1:C:561:A:H8	1.79	0.46
1:D:218:A:N3	1:D:394:U:O2'	2.45	0.46
1:F:51:A:H3'	1:F:52:A:H8	1.81	0.46
1:L:560:C:H2'	1:L:561:A:H8	1.79	0.46
1:M:780:A:H2'	1:M:781:A:H8	1.81	0.46
1:G:780:A:H2'	1:G:781:A:H8	1.81	0.46
1:D:612:C:H2'	1:D:613:A:H8	1.80	0.46
1:D:727:G:OP1	1:D:776:A:O2'	2.26	0.46
1:D:780:A:H2'	1:D:781:A:H8	1.81	0.46
1:F:51:A:H62	1:F:70:U:H3	1.63	0.46
1:H:6:G:N2	1:H:17:U:O2	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:51:A:H62	1:H:70:U:H3	1.63	0.46
1:H:358:U:H2'	1:H:359:G:H8	1.80	0.46
1:J:374:C:H2'	1:J:375:A:H8	1.80	0.46
1:K:393:C:H2'	1:K:394:U:H6	1.81	0.46
1:K:573:A:N1	1:K:741:C:O2'	2.33	0.46
1:M:736:A:H2'	1:M:737:A:C8	2.50	0.46
1:G:196:A:O2'	1:G:197:G:H8	1.97	0.45
1:G:441:U:O2	1:G:455:G:N2	2.41	0.45
1:A:51:A:H3'	1:A:52:A:H8	1.81	0.45
1:E:95:G:H2'	1:E:96:A:H8	1.81	0.45
1:F:27:A:N1	1:F:78:U:O2'	2.48	0.45
1:H:51:A:H3'	1:H:52:A:H8	1.81	0.45
1:H:780:A:H2'	1:H:781:A:H8	1.81	0.45
1:I:151:U:H2'	1:I:152:A:C8	2.52	0.45
1:I:202:G:N2	1:J:294:U:OP1	2.37	0.45
1:I:393:C:H2'	1:I:394:U:H6	1.81	0.45
1:J:196:A:O2'	1:J:197:G:H8	1.98	0.45
1:J:393:C:H2'	1:J:394:U:H6	1.82	0.45
1:K:332:G:N7	1:K:343:G:O2'	2.41	0.45
1:K:358:U:H2'	1:K:359:G:H8	1.80	0.45
1:L:670:G:H1	1:L:681:U:H3	1.62	0.45
1:N:780:A:H2'	1:N:781:A:H8	1.81	0.45
1:H:151:U:H2'	1:H:152:A:C8	2.52	0.45
1:K:310:A:H4'	1:K:312:A:C6	2.50	0.45
1:L:393:C:H2'	1:L:394:U:H6	1.81	0.45
1:M:151:U:H2'	1:M:152:A:C8	2.52	0.45
1:N:151:U:H2'	1:N:152:A:C8	2.52	0.45
1:N:393:C:H2'	1:N:394:U:H6	1.81	0.45
1:N:612:C:H2'	1:N:613:A:H8	1.80	0.45
1:A:51:A:H62	1:A:70:U:H3	1.63	0.45
1:B:829:A:H3'	1:B:830:G:H8	1.79	0.45
1:H:393:C:H2'	1:H:394:U:H6	1.82	0.45
1:H:727:G:OP1	1:H:776:A:O2'	2.26	0.45
1:J:54:A:H2'	1:J:55:G:C8	2.52	0.45
1:L:6:G:N2	1:L:17:U:O2	2.44	0.45
1:M:400:U:H2'	1:M:401:A:C8	2.52	0.45
1:G:202:G:N2	1:A:294:U:OP1	2.37	0.45
1:D:400:U:H2'	1:D:401:A:C8	2.52	0.45
1:E:54:A:H2'	1:E:55:G:C8	2.52	0.45
1:F:54:A:H2'	1:F:55:G:C8	2.52	0.45
1:F:400:U:H2'	1:F:401:A:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:374:C:H2'	1:H:375:A:H8	1.80	0.45
1:I:67:U:H2'	1:I:68:A:C8	2.52	0.45
1:L:780:A:H2'	1:L:781:A:H8	1.81	0.45
1:M:393:C:H2'	1:M:394:U:H6	1.81	0.45
1:G:151:U:H2'	1:G:152:A:C8	2.52	0.45
1:A:231:C:O2'	1:A:233:A:OP2	2.29	0.45
1:A:560:C:H2'	1:A:561:A:C8	2.52	0.45
1:B:573:A:N1	1:B:741:C:O2'	2.33	0.45
1:C:560:C:H2'	1:C:561:A:C8	2.52	0.45
1:D:67:U:H2'	1:D:68:A:C8	2.52	0.45
1:D:328:U:O4	1:D:329:A:N6	2.50	0.45
1:E:67:U:H2'	1:E:68:A:C8	2.52	0.45
1:E:328:U:O4	1:E:329:A:N6	2.50	0.45
1:I:328:U:O4	1:I:329:A:N6	2.50	0.45
1:J:151:U:H2'	1:J:152:A:C8	2.52	0.45
1:J:328:U:O4	1:J:329:A:N6	2.50	0.45
1:L:400:U:H2'	1:L:401:A:C8	2.52	0.45
1:M:95:G:H2'	1:M:96:A:H8	1.81	0.45
1:G:95:G:H2'	1:G:96:A:H8	1.81	0.45
1:G:431:A:H2'	1:G:432:A:C8	2.52	0.45
1:B:780:A:H2'	1:B:781:A:H8	1.81	0.45
1:C:400:U:H2'	1:C:401:A:C8	2.52	0.45
1:F:151:U:H2'	1:F:152:A:C8	2.52	0.45
1:H:328:U:O4	1:H:329:A:N6	2.50	0.45
1:I:400:U:H2'	1:I:401:A:C8	2.52	0.45
1:I:712:A:H2'	1:I:713:A:C8	2.52	0.45
1:J:27:A:N1	1:J:78:U:O2'	2.47	0.45
1:J:400:U:H2'	1:J:401:A:C8	2.52	0.45
1:K:151:U:H2'	1:K:152:A:C8	2.52	0.45
1:K:400:U:H2'	1:K:401:A:C8	2.52	0.45
1:K:780:A:H2'	1:K:781:A:H8	1.81	0.45
1:N:51:A:H62	1:N:70:U:H3	1.63	0.45
1:G:51:A:H3'	1:G:52:A:H8	1.81	0.45
1:G:645:U:H2'	1:G:646:U:C6	2.52	0.45
1:A:218:A:N3	1:A:394:U:O2'	2.45	0.45
1:A:431:A:H2'	1:A:432:A:C8	2.52	0.45
1:A:586:A:O2'	1:A:631:A:N7	2.50	0.45
1:B:28:A:O2'	1:B:79:U:O2'	2.32	0.45
1:C:51:A:H62	1:C:70:U:H3	1.63	0.45
1:C:54:A:H2'	1:C:55:G:C8	2.52	0.45
1:C:202:G:N2	1:D:294:U:OP1	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:645:U:H2'	1:C:646:U:C6	2.52	0.45
1:D:54:A:H2'	1:D:55:G:C8	2.52	0.45
1:D:393:C:H2'	1:D:394:U:H6	1.82	0.45
1:D:431:A:H2'	1:D:432:A:C8	2.52	0.45
1:F:218:A:N3	1:F:394:U:O2'	2.45	0.45
1:F:328:U:O4	1:F:329:A:N6	2.50	0.45
1:H:67:U:H2'	1:H:68:A:C8	2.52	0.45
1:H:645:U:H2'	1:H:646:U:C6	2.52	0.45
1:I:54:A:H2'	1:I:55:G:C8	2.52	0.45
1:I:231:C:O2'	1:I:233:A:OP2	2.29	0.45
1:J:712:A:H2'	1:J:713:A:C8	2.52	0.45
1:K:27:A:N1	1:K:78:U:O2'	2.47	0.45
1:K:51:A:H62	1:K:70:U:H3	1.63	0.45
1:K:95:G:H2'	1:K:96:A:H8	1.81	0.45
1:L:95:G:H2'	1:L:96:A:H8	1.81	0.45
1:L:151:U:H2'	1:L:152:A:C8	2.52	0.45
1:L:328:U:O4	1:L:329:A:N6	2.50	0.45
1:L:645:U:H2'	1:L:646:U:C6	2.52	0.45
1:M:218:A:N3	1:M:394:U:O2'	2.45	0.45
1:N:560:C:H2'	1:N:561:A:C8	2.52	0.45
1:N:712:A:H2'	1:N:713:A:C8	2.52	0.45
1:N:753:G:H2'	1:N:754:U:C6	2.52	0.45
1:A:328:U:O4	1:A:329:A:N6	2.50	0.45
1:A:645:U:H2'	1:A:646:U:C6	2.52	0.45
1:A:712:A:H2'	1:A:713:A:C8	2.52	0.45
1:B:441:U:O2	1:B:455:G:N2	2.41	0.45
1:D:202:G:N2	1:E:294:U:OP1	2.37	0.45
1:D:645:U:H2'	1:D:646:U:C6	2.52	0.45
1:E:310:A:O2'	1:E:311:A:O4'	2.31	0.45
1:E:400:U:H2'	1:E:401:A:C8	2.52	0.45
1:F:753:G:H2'	1:F:754:U:C6	2.52	0.45
1:H:54:A:H2'	1:H:55:G:C8	2.52	0.45
1:H:712:A:H2'	1:H:713:A:C8	2.52	0.45
1:J:95:G:H2'	1:J:96:A:H8	1.81	0.45
1:J:753:G:H2'	1:J:754:U:C6	2.52	0.45
1:J:780:A:H2'	1:J:781:A:H8	1.81	0.45
1:K:54:A:H2'	1:K:55:G:C8	2.52	0.45
1:K:328:U:O4	1:K:329:A:N6	2.50	0.45
1:M:328:U:O4	1:M:329:A:N6	2.50	0.45
1:M:560:C:H2'	1:M:561:A:C8	2.52	0.45
1:M:753:G:H2'	1:M:754:U:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:218:A:N3	1:N:394:U:O2'	2.45	0.45
1:N:431:A:H2'	1:N:432:A:C8	2.52	0.45
1:N:586:A:O2'	1:N:631:A:N7	2.50	0.45
1:G:328:U:O4	1:G:329:A:N6	2.50	0.45
1:B:645:U:H2'	1:B:646:U:C6	2.52	0.45
1:B:753:G:H2'	1:B:754:U:C6	2.52	0.45
1:E:431:A:H2'	1:E:432:A:C8	2.52	0.45
1:E:753:G:H2'	1:E:754:U:C6	2.52	0.45
1:H:431:A:H2'	1:H:432:A:C8	2.52	0.45
1:I:51:A:H3'	1:I:52:A:H8	1.81	0.45
1:K:202:G:N2	1:L:294:U:OP1	2.38	0.45
1:K:712:A:H2'	1:K:713:A:C8	2.52	0.45
1:L:560:C:H2'	1:L:561:A:C8	2.52	0.45
1:M:645:U:H2'	1:M:646:U:C6	2.52	0.45
1:G:67:U:H2'	1:G:68:A:C8	2.52	0.45
1:G:400:U:H2'	1:G:401:A:C8	2.52	0.45
1:A:151:U:H2'	1:A:152:A:C8	2.52	0.45
1:B:712:A:H2'	1:B:713:A:C8	2.52	0.45
1:C:67:U:H2'	1:C:68:A:C8	2.52	0.45
1:C:393:C:H2'	1:C:394:U:H6	1.81	0.45
1:F:431:A:H2'	1:F:432:A:C8	2.52	0.45
1:F:612:C:H2'	1:F:613:A:H8	1.80	0.45
1:F:645:U:H2'	1:F:646:U:C6	2.52	0.45
1:H:586:A:O2'	1:H:631:A:N7	2.50	0.45
1:H:753:G:H2'	1:H:754:U:C6	2.52	0.45
1:K:67:U:H2'	1:K:68:A:C8	2.52	0.45
1:K:431:A:H2'	1:K:432:A:C8	2.52	0.45
1:L:67:U:H2'	1:L:68:A:C8	2.52	0.45
1:N:54:A:H2'	1:N:55:G:C8	2.52	0.45
1:G:184:G:H2'	1:G:185:A:H8	1.82	0.44
1:G:712:A:H2'	1:G:713:A:C8	2.52	0.44
1:A:753:G:H2'	1:A:754:U:C6	2.52	0.44
1:B:393:C:H2'	1:B:394:U:H6	1.81	0.44
1:B:400:U:H2'	1:B:401:A:C8	2.52	0.44
1:B:586:A:O2'	1:B:631:A:N7	2.50	0.44
1:D:586:A:O2'	1:D:631:A:N7	2.50	0.44
1:E:184:G:H2'	1:E:185:A:H8	1.83	0.44
1:F:67:U:H2'	1:F:68:A:C8	2.52	0.44
1:H:261:C:H2'	1:H:262:U:C6	2.53	0.44
1:I:753:G:H2'	1:I:754:U:C6	2.52	0.44
1:J:67:U:H2'	1:J:68:A:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:203:A:H2'	1:J:204:A:C8	2.53	0.44
1:J:261:C:H2'	1:J:262:U:C6	2.52	0.44
1:J:431:A:H2'	1:J:432:A:C8	2.52	0.44
1:K:227:A:H2'	1:K:228:A:H8	1.83	0.44
1:K:645:U:H2'	1:K:646:U:C6	2.52	0.44
1:K:753:G:H2'	1:K:754:U:C6	2.52	0.44
1:L:261:C:H2'	1:L:262:U:C6	2.52	0.44
1:L:712:A:H2'	1:L:713:A:C8	2.52	0.44
1:M:712:A:H2'	1:M:713:A:C8	2.52	0.44
1:N:400:U:H2'	1:N:401:A:C8	2.52	0.44
1:N:645:U:H2'	1:N:646:U:C6	2.52	0.44
1:A:67:U:H2'	1:A:68:A:C8	2.52	0.44
1:B:184:G:H2'	1:B:185:A:H8	1.83	0.44
1:C:151:U:H2'	1:C:152:A:C8	2.52	0.44
1:C:328:U:O4	1:C:329:A:N6	2.50	0.44
1:C:712:A:H2'	1:C:713:A:C8	2.52	0.44
1:C:753:G:H2'	1:C:754:U:C6	2.52	0.44
1:D:151:U:H2'	1:D:152:A:C8	2.52	0.44
1:E:151:U:H2'	1:E:152:A:C8	2.52	0.44
1:E:189:U:H2'	1:E:190:C:C6	2.52	0.44
1:E:560:C:H2'	1:E:561:A:C8	2.52	0.44
1:F:95:G:H2'	1:F:96:A:H8	1.81	0.44
1:H:400:U:H2'	1:H:401:A:C8	2.52	0.44
1:H:560:C:H2'	1:H:561:A:C8	2.52	0.44
1:I:261:C:H2'	1:I:262:U:C6	2.53	0.44
1:I:431:A:H2'	1:I:432:A:C8	2.52	0.44
1:I:765:A:O2'	1:I:766:A:H8	2.01	0.44
1:J:189:U:H2'	1:J:190:C:C6	2.52	0.44
1:J:560:C:H2'	1:J:561:A:C8	2.52	0.44
1:L:227:A:H2'	1:L:228:A:H8	1.82	0.44
1:M:189:U:O2'	1:M:240:A:N3	2.50	0.44
1:G:753:G:H2'	1:G:754:U:C6	2.52	0.44
1:A:202:G:N2	1:B:294:U:OP1	2.37	0.44
1:B:203:A:H2'	1:B:204:A:C8	2.53	0.44
1:B:328:U:O4	1:B:329:A:N6	2.50	0.44
1:C:27:A:N1	1:C:78:U:O2'	2.47	0.44
1:C:203:A:H2'	1:C:204:A:C8	2.53	0.44
1:C:431:A:H2'	1:C:432:A:C8	2.52	0.44
1:C:765:A:O2'	1:C:766:A:H8	2.00	0.44
1:D:28:A:HO2'	1:D:79:U:HO2'	1.64	0.44
1:E:393:C:H2'	1:E:394:U:H6	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:189:U:H2'	1:F:190:C:C6	2.52	0.44
1:F:765:A:O2'	1:F:766:A:H8	2.01	0.44
1:H:203:A:H2'	1:H:204:A:C8	2.53	0.44
1:H:218:A:N3	1:H:394:U:O2'	2.45	0.44
1:I:560:C:H2'	1:I:561:A:C8	2.52	0.44
1:I:645:U:H2'	1:I:646:U:C6	2.52	0.44
1:L:586:A:O2'	1:L:631:A:N7	2.50	0.44
1:L:753:G:H2'	1:L:754:U:C6	2.52	0.44
1:M:184:G:H2'	1:M:185:A:H8	1.82	0.44
1:M:431:A:H2'	1:M:432:A:C8	2.52	0.44
1:N:261:C:H2'	1:N:262:U:C6	2.52	0.44
1:G:54:A:H2'	1:G:55:G:C8	2.52	0.44
1:A:400:U:H2'	1:A:401:A:C8	2.52	0.44
1:B:54:A:H2'	1:B:55:G:C8	2.52	0.44
1:B:151:U:H2'	1:B:152:A:C8	2.52	0.44
1:B:218:A:N3	1:B:394:U:O2'	2.45	0.44
1:B:341:G:N1	1:C:371:C:N3	2.66	0.44
1:C:227:A:H2'	1:C:228:A:H8	1.82	0.44
1:D:227:A:H2'	1:D:228:A:H8	1.83	0.44
1:D:753:G:H2'	1:D:754:U:C6	2.52	0.44
1:E:227:A:H2'	1:E:228:A:H8	1.82	0.44
1:E:261:C:H2'	1:E:262:U:C6	2.52	0.44
1:E:712:A:H2'	1:E:713:A:C8	2.52	0.44
1:E:749:G:H2'	1:E:750:G:H8	1.83	0.44
1:F:227:A:H2'	1:F:228:A:H8	1.82	0.44
1:F:560:C:H2'	1:F:561:A:C8	2.52	0.44
1:H:27:A:N1	1:H:78:U:O2'	2.48	0.44
1:H:202:G:N2	1:I:294:U:OP1	2.37	0.44
1:I:203:A:H2'	1:I:204:A:C8	2.53	0.44
1:J:765:A:O2'	1:J:766:A:H8	2.00	0.44
1:M:67:U:H2'	1:M:68:A:C8	2.52	0.44
1:M:341:G:N1	1:N:371:C:N3	2.66	0.44
1:G:261:C:H2'	1:G:262:U:C6	2.52	0.44
1:G:749:G:H2'	1:G:750:G:H8	1.83	0.44
1:A:95:G:H2'	1:A:96:A:H8	1.81	0.44
1:A:393:C:H2'	1:A:394:U:H6	1.81	0.44
1:B:189:U:H2'	1:B:190:C:C6	2.53	0.44
1:B:261:C:H2'	1:B:262:U:C6	2.52	0.44
1:C:261:C:H2'	1:C:262:U:C6	2.53	0.44
1:D:310:A:O2'	1:D:311:A:O4'	2.31	0.44
1:D:712:A:H2'	1:D:713:A:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:645:U:H2'	1:E:646:U:C6	2.52	0.44
1:F:261:C:H2'	1:F:262:U:C6	2.52	0.44
1:F:393:C:H2'	1:F:394:U:H6	1.82	0.44
1:H:765:A:O2'	1:H:766:A:H8	2.01	0.44
1:I:184:G:H2'	1:I:185:A:H8	1.83	0.44
1:I:189:U:H2'	1:I:190:C:C6	2.53	0.44
1:K:189:U:H2'	1:K:190:C:C6	2.52	0.44
1:K:586:A:O2'	1:K:631:A:N7	2.50	0.44
1:L:341:G:N1	1:M:371:C:N3	2.66	0.44
1:L:749:G:H2'	1:L:750:G:H8	1.83	0.44
1:N:27:A:N1	1:N:78:U:O2'	2.47	0.44
1:N:184:G:H2'	1:N:185:A:H8	1.83	0.44
1:N:227:A:H2'	1:N:228:A:H8	1.82	0.44
1:G:184:G:H2'	1:G:185:A:C8	2.53	0.44
1:G:393:C:H2'	1:G:394:U:H6	1.81	0.44
1:A:261:C:H2'	1:A:262:U:C6	2.52	0.44
1:C:341:G:N1	1:D:371:C:N3	2.66	0.44
1:E:203:A:H2'	1:E:204:A:C8	2.53	0.44
1:F:332:G:H21	1:F:334:A:H61	1.66	0.44
1:F:712:A:H2'	1:F:713:A:C8	2.52	0.44
1:I:749:G:H2'	1:I:750:G:H8	1.83	0.44
1:J:441:U:O2	1:J:455:G:N2	2.40	0.44
1:K:6:G:N2	1:K:17:U:O2	2.44	0.44
1:L:218:A:N3	1:L:394:U:O2'	2.45	0.44
1:M:54:A:H2'	1:M:55:G:C8	2.52	0.44
1:M:586:A:O2'	1:M:631:A:N7	2.50	0.44
1:N:67:U:H2'	1:N:68:A:C8	2.52	0.44
1:N:189:U:H2'	1:N:190:C:C6	2.52	0.44
1:G:107:G:HO2'	1:G:279:A:HO2'	1.65	0.44
1:G:203:A:H2'	1:G:204:A:C8	2.53	0.44
1:D:189:U:H2'	1:D:190:C:C6	2.52	0.44
1:J:184:G:H2'	1:J:185:A:C8	2.53	0.44
1:J:184:G:H2'	1:J:185:A:H8	1.83	0.44
1:K:184:G:H2'	1:K:185:A:H8	1.83	0.44
1:K:332:G:H21	1:K:334:A:H61	1.66	0.44
1:L:332:G:H21	1:L:334:A:H61	1.66	0.44
1:M:184:G:H2'	1:M:185:A:C8	2.53	0.44
1:M:203:A:H2'	1:M:204:A:C8	2.53	0.44
1:G:332:G:H21	1:G:334:A:H61	1.66	0.44
1:A:54:A:H2'	1:A:55:G:C8	2.52	0.44
1:A:189:U:O2'	1:A:240:A:N3	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:765:A:O2'	1:A:766:A:H8	2.01	0.44
1:B:67:U:H2'	1:B:68:A:C8	2.52	0.44
1:B:560:C:H2'	1:B:561:A:C8	2.52	0.44
1:C:189:U:H2'	1:C:190:C:C6	2.52	0.44
1:D:203:A:H2'	1:D:204:A:C8	2.53	0.44
1:D:765:A:O2'	1:D:766:A:H8	2.01	0.44
1:E:341:G:N1	1:F:371:C:N3	2.66	0.44
1:F:6:G:N2	1:F:17:U:O2	2.44	0.44
1:F:203:A:H2'	1:F:204:A:C8	2.53	0.44
1:F:586:A:O2'	1:F:631:A:N7	2.50	0.44
1:H:227:A:H2'	1:H:228:A:H8	1.82	0.44
1:J:645:U:H2'	1:J:646:U:C6	2.52	0.44
1:K:560:C:H2'	1:K:561:A:C8	2.52	0.44
1:L:54:A:H2'	1:L:55:G:C8	2.52	0.44
1:M:189:U:H2'	1:M:190:C:C6	2.53	0.44
1:M:227:A:H2'	1:M:228:A:H8	1.82	0.44
1:M:332:G:H21	1:M:334:A:H61	1.66	0.44
1:N:184:G:H2'	1:N:185:A:C8	2.53	0.44
1:N:189:U:O2'	1:N:240:A:N3	2.50	0.44
1:N:328:U:O4	1:N:329:A:N6	2.50	0.44
1:G:189:U:H2'	1:G:190:C:C6	2.53	0.44
1:G:586:A:O2'	1:G:631:A:N7	2.50	0.44
1:A:189:U:H2'	1:A:190:C:C6	2.53	0.44
1:A:332:G:H21	1:A:334:A:H61	1.66	0.44
1:D:612:C:H2'	1:D:613:A:C8	2.53	0.44
1:E:244:A:H2'	1:E:245:G:H8	1.83	0.44
1:J:332:G:H21	1:J:334:A:H61	1.66	0.44
1:J:612:C:H2'	1:J:613:A:C8	2.53	0.44
1:J:749:G:H2'	1:J:750:G:H8	1.83	0.44
1:L:184:G:H2'	1:L:185:A:H8	1.83	0.44
1:N:244:A:H2'	1:N:245:G:H8	1.83	0.44
1:A:227:A:H2'	1:A:228:A:H8	1.83	0.43
1:A:341:G:N1	1:B:371:C:N3	2.66	0.43
1:A:713:A:H2'	1:A:714:A:C8	2.53	0.43
1:A:749:G:H2'	1:A:750:G:H8	1.83	0.43
1:B:27:A:N1	1:B:78:U:O2'	2.47	0.43
1:B:184:G:H2'	1:B:185:A:C8	2.53	0.43
1:B:340:G:O6	1:C:372:A:N6	2.51	0.43
1:B:713:A:H2'	1:B:714:A:C8	2.53	0.43
1:C:586:A:O2'	1:C:631:A:N7	2.50	0.43
1:D:27:A:N1	1:D:78:U:O2'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:261:C:H2'	1:D:262:U:C6	2.52	0.43
1:E:332:G:H21	1:E:334:A:H61	1.66	0.43
1:E:612:C:H2'	1:E:613:A:C8	2.53	0.43
1:E:765:A:O2'	1:E:766:A:H8	2.01	0.43
1:H:189:U:H2'	1:H:190:C:C6	2.53	0.43
1:I:612:C:H2'	1:I:613:A:C8	2.53	0.43
1:M:713:A:H2'	1:M:714:A:C8	2.53	0.43
1:M:765:A:O2'	1:M:766:A:H8	2.01	0.43
1:N:203:A:H2'	1:N:204:A:C8	2.53	0.43
1:N:332:G:H21	1:N:334:A:H61	1.66	0.43
1:G:371:C:N3	1:F:341:G:N1	2.66	0.43
1:G:560:C:H2'	1:G:561:A:C8	2.52	0.43
1:G:612:C:H2'	1:G:613:A:C8	2.53	0.43
1:A:184:G:H2'	1:A:185:A:C8	2.53	0.43
1:B:227:A:H2'	1:B:228:A:H8	1.83	0.43
1:B:332:G:H21	1:B:334:A:H61	1.66	0.43
1:B:765:A:O2'	1:B:766:A:H8	2.01	0.43
1:D:184:G:H2'	1:D:185:A:C8	2.53	0.43
1:D:560:C:H2'	1:D:561:A:C8	2.52	0.43
1:D:713:A:H2'	1:D:714:A:C8	2.53	0.43
1:F:184:G:H2'	1:F:185:A:C8	2.53	0.43
1:F:627:U:H2'	1:F:628:G:C8	2.53	0.43
1:H:184:G:H2'	1:H:185:A:H8	1.83	0.43
1:H:612:C:H2'	1:H:613:A:C8	2.53	0.43
1:I:341:G:N1	1:J:371:C:N3	2.66	0.43
1:I:713:A:H2'	1:I:714:A:C8	2.53	0.43
1:J:244:A:H2'	1:J:245:G:H8	1.83	0.43
1:J:340:G:O6	1:K:372:A:N6	2.51	0.43
1:J:341:G:N1	1:K:371:C:N3	2.66	0.43
1:K:203:A:H2'	1:K:204:A:C8	2.53	0.43
1:K:612:C:H2'	1:K:613:A:C8	2.53	0.43
1:M:244:A:H2'	1:M:245:G:H8	1.83	0.43
1:N:181:G:H1'	1:N:182:C:H5'	2.00	0.43
1:G:713:A:H2'	1:G:714:A:C8	2.53	0.43
1:G:765:A:O2'	1:G:766:A:H8	2.01	0.43
1:C:6:G:N2	1:C:17:U:O2	2.44	0.43
1:D:184:G:H2'	1:D:185:A:H8	1.83	0.43
1:D:340:G:O6	1:E:372:A:N6	2.51	0.43
1:D:749:G:H2'	1:D:750:G:H8	1.83	0.43
1:E:27:A:N1	1:E:78:U:O2'	2.48	0.43
1:E:340:G:O6	1:F:372:A:N6	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:627:U:H2'	1:E:628:G:C8	2.53	0.43
1:F:184:G:H2'	1:F:185:A:H8	1.82	0.43
1:H:713:A:H2'	1:H:714:A:C8	2.53	0.43
1:I:586:A:O2'	1:I:631:A:N7	2.50	0.43
1:I:780:A:H2'	1:I:781:A:H8	1.81	0.43
1:J:227:A:H2'	1:J:228:A:H8	1.83	0.43
1:J:627:U:H2'	1:J:628:G:C8	2.53	0.43
1:L:26:A:N3	1:L:97:G:O2'	2.48	0.43
1:L:184:G:H2'	1:L:185:A:C8	2.53	0.43
1:L:189:U:H2'	1:L:190:C:C6	2.53	0.43
1:L:340:G:O6	1:M:372:A:N6	2.51	0.43
1:L:713:A:H2'	1:L:714:A:C8	2.53	0.43
1:A:184:G:H2'	1:A:185:A:H8	1.83	0.43
1:C:184:G:H2'	1:C:185:A:H8	1.83	0.43
1:E:713:A:H2'	1:E:714:A:C8	2.53	0.43
1:H:332:G:H21	1:H:334:A:H61	1.66	0.43
1:H:371:C:N3	1:N:341:G:N1	2.66	0.43
1:H:627:U:H2'	1:H:628:G:C8	2.53	0.43
1:I:27:A:N1	1:I:78:U:O2'	2.48	0.43
1:I:332:G:H21	1:I:334:A:H61	1.66	0.43
1:J:586:A:O2'	1:J:631:A:N7	2.50	0.43
1:K:749:G:H2'	1:K:750:G:H8	1.83	0.43
1:L:203:A:H2'	1:L:204:A:C8	2.53	0.43
1:G:244:A:H2'	1:G:245:G:H8	1.83	0.43
1:A:340:G:O6	1:B:372:A:N6	2.51	0.43
1:B:181:G:H1'	1:B:182:C:H5'	2.00	0.43
1:C:181:G:H1'	1:C:182:C:H5'	2.00	0.43
1:C:332:G:H21	1:C:334:A:H61	1.66	0.43
1:C:627:U:H2'	1:C:628:G:C8	2.53	0.43
1:C:713:A:H2'	1:C:714:A:C8	2.53	0.43
1:D:332:G:H21	1:D:334:A:H61	1.66	0.43
1:D:341:G:N1	1:E:371:C:N3	2.66	0.43
1:E:189:U:O2'	1:E:240:A:N3	2.50	0.43
1:K:184:G:H2'	1:K:185:A:C8	2.53	0.43
1:L:431:A:H2'	1:L:432:A:C8	2.52	0.43
1:L:765:A:O2'	1:L:766:A:H8	2.01	0.43
1:M:261:C:H2'	1:M:262:U:C6	2.52	0.43
1:N:713:A:H2'	1:N:714:A:C8	2.53	0.43
1:G:341:G:N1	1:A:371:C:N3	2.66	0.43
1:G:372:A:N6	1:F:340:G:O6	2.51	0.43
1:A:203:A:H2'	1:A:204:A:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:612:C:H2'	1:B:613:A:C8	2.53	0.43
1:C:674:G:H21	1:C:677:A:H2	1.67	0.43
1:F:612:C:H2'	1:F:613:A:C8	2.53	0.43
1:F:713:A:H2'	1:F:714:A:C8	2.53	0.43
1:H:181:G:H1'	1:H:182:C:H5'	2.00	0.43
1:H:184:G:H2'	1:H:185:A:C8	2.53	0.43
1:H:372:A:N6	1:N:340:G:O6	2.51	0.43
1:I:227:A:H2'	1:I:228:A:H8	1.83	0.43
1:I:340:G:O6	1:J:372:A:N6	2.51	0.43
1:K:261:C:H2'	1:K:262:U:C6	2.52	0.43
1:K:627:U:H2'	1:K:628:G:C8	2.53	0.43
1:K:713:A:H2'	1:K:714:A:C8	2.53	0.43
1:L:244:A:H2'	1:L:245:G:H8	1.83	0.43
1:M:181:G:H1'	1:M:182:C:H5'	2.00	0.43
1:M:749:G:H2'	1:M:750:G:H8	1.83	0.43
1:G:227:A:H2'	1:G:228:A:H8	1.82	0.43
1:G:711:U:H2'	1:G:712:A:H8	1.84	0.43
1:B:674:G:H21	1:B:677:A:H2	1.67	0.43
1:D:627:U:H2'	1:D:628:G:C8	2.53	0.43
1:D:674:G:H21	1:D:677:A:H2	1.67	0.43
1:F:181:G:H1'	1:F:182:C:H5'	2.00	0.43
1:H:244:A:H2'	1:H:245:G:H8	1.83	0.43
1:H:310:A:O2'	1:H:311:A:O4'	2.31	0.43
1:I:315:C:H2'	1:I:316:U:O4'	2.19	0.43
1:N:627:U:H2'	1:N:628:G:C8	2.53	0.43
1:G:181:G:H1'	1:G:182:C:H5'	2.00	0.43
1:G:627:U:H2'	1:G:628:G:C8	2.53	0.43
1:A:181:G:H1'	1:A:182:C:H5'	2.00	0.43
1:A:674:G:H21	1:A:677:A:H2	1.67	0.43
1:B:315:C:H2'	1:B:316:U:O4'	2.19	0.43
1:E:378:U:H2'	1:E:379:A:H8	1.84	0.43
1:H:341:G:N1	1:I:371:C:N3	2.66	0.43
1:I:184:G:H2'	1:I:185:A:C8	2.53	0.43
1:I:244:A:H2'	1:I:245:G:H8	1.83	0.43
1:I:627:U:H2'	1:I:628:G:C8	2.53	0.43
1:K:181:G:H1'	1:K:182:C:H5'	2.00	0.43
1:L:181:G:H1'	1:L:182:C:H5'	2.00	0.43
1:M:315:C:H2'	1:M:316:U:O4'	2.19	0.43
1:M:340:G:O6	1:N:372:A:N6	2.51	0.43
1:N:315:C:H2'	1:N:316:U:O4'	2.19	0.43
1:N:441:U:O2	1:N:455:G:N2	2.41	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:315:C:H2'	1:A:316:U:O4'	2.19	0.43
1:B:627:U:H2'	1:B:628:G:C8	2.53	0.43
1:C:378:U:H2'	1:C:379:A:H8	1.84	0.43
1:D:315:C:H2'	1:D:316:U:O4'	2.19	0.43
1:H:340:G:O6	1:I:372:A:N6	2.51	0.43
1:J:713:A:H2'	1:J:714:A:C8	2.53	0.43
1:K:189:U:O2'	1:K:240:A:N3	2.50	0.43
1:K:340:G:O6	1:L:372:A:N6	2.52	0.43
1:K:341:G:N1	1:L:371:C:N3	2.66	0.43
1:L:612:C:H2'	1:L:613:A:C8	2.53	0.43
1:N:612:C:H2'	1:N:613:A:C8	2.53	0.43
1:G:493:A:H1'	1:G:494:A:C5	2.54	0.43
1:B:397:G:H3'	1:B:398:A:H8	1.84	0.43
1:B:493:A:H1'	1:B:494:A:C5	2.54	0.43
1:C:340:G:O6	1:D:372:A:N6	2.51	0.43
1:C:460:G:H1'	1:C:786:A:C8	2.47	0.43
1:D:181:G:H1'	1:D:182:C:H5'	2.00	0.43
1:E:184:G:H2'	1:E:185:A:C8	2.53	0.43
1:H:493:A:H1'	1:H:494:A:C5	2.54	0.43
1:M:27:A:N1	1:M:78:U:O2'	2.48	0.43
1:M:310:A:O2'	1:M:311:A:O4'	2.31	0.43
1:M:378:U:H2'	1:M:379:A:H8	1.84	0.43
1:M:612:C:H2'	1:M:613:A:C8	2.53	0.43
1:N:493:A:H1'	1:N:494:A:C5	2.54	0.43
1:N:765:A:O2'	1:N:766:A:H8	2.01	0.43
1:G:315:C:H2'	1:G:316:U:O4'	2.19	0.42
1:A:397:G:H3'	1:A:398:A:H8	1.84	0.42
1:B:749:G:H2'	1:B:750:G:H8	1.83	0.42
1:C:184:G:H2'	1:C:185:A:C8	2.53	0.42
1:C:493:A:H1'	1:C:494:A:C5	2.54	0.42
1:E:315:C:H2'	1:E:316:U:O4'	2.19	0.42
1:E:332:G:N7	1:E:343:G:O2'	2.41	0.42
1:F:749:G:H2'	1:F:750:G:H8	1.83	0.42
1:H:397:G:H3'	1:H:398:A:H8	1.84	0.42
1:J:189:U:O2'	1:J:240:A:N3	2.50	0.42
1:L:315:C:H2'	1:L:316:U:O4'	2.19	0.42
1:M:397:G:H3'	1:M:398:A:H8	1.84	0.42
1:N:397:G:H3'	1:N:398:A:H8	1.84	0.42
1:N:749:G:H2'	1:N:750:G:H8	1.83	0.42
1:C:397:G:H3'	1:C:398:A:H8	1.84	0.42
1:E:493:A:H1'	1:E:494:A:C5	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:181:G:H1'	1:I:182:C:H5'	2.00	0.42
1:I:711:U:H2'	1:I:712:A:H8	1.84	0.42
1:J:6:G:N2	1:J:17:U:O2	2.44	0.42
1:J:181:G:H1'	1:J:182:C:H5'	2.00	0.42
1:J:378:U:H2'	1:J:379:A:H8	1.84	0.42
1:K:244:A:H2'	1:K:245:G:H8	1.83	0.42
1:K:493:A:H1'	1:K:494:A:C5	2.54	0.42
1:K:711:U:H2'	1:K:712:A:H8	1.84	0.42
1:K:765:A:O2'	1:K:766:A:H8	2.01	0.42
1:M:627:U:H2'	1:M:628:G:C8	2.53	0.42
1:G:639:G:O6	1:G:694:G:O2'	2.31	0.42
1:B:431:A:H2'	1:B:432:A:C8	2.52	0.42
1:C:189:U:O2'	1:C:240:A:N3	2.50	0.42
1:C:218:A:N3	1:C:394:U:O2'	2.45	0.42
1:D:397:G:H3'	1:D:398:A:H8	1.84	0.42
1:F:244:A:H2'	1:F:245:G:H8	1.83	0.42
1:H:378:U:H2'	1:H:379:A:H8	1.84	0.42
1:J:26:A:N3	1:J:97:G:O2'	2.48	0.42
1:N:197:G:H2'	1:N:198:U:C6	2.55	0.42
1:G:378:U:H2'	1:G:379:A:H8	1.84	0.42
1:A:197:G:H2'	1:A:198:U:C6	2.55	0.42
1:A:612:C:H2'	1:A:613:A:C8	2.53	0.42
1:B:197:G:H2'	1:B:198:U:C6	2.55	0.42
1:C:197:G:H2'	1:C:198:U:C6	2.55	0.42
1:C:244:A:H2'	1:C:245:G:H8	1.83	0.42
1:C:612:C:H2'	1:C:613:A:C8	2.53	0.42
1:D:493:A:H1'	1:D:494:A:C5	2.54	0.42
1:E:181:G:H1'	1:E:182:C:H5'	2.00	0.42
1:K:378:U:H2'	1:K:379:A:H8	1.84	0.42
1:K:674:G:H21	1:K:677:A:H2	1.67	0.42
1:L:627:U:H2'	1:L:628:G:C8	2.53	0.42
1:L:674:G:H21	1:L:677:A:H2	1.67	0.42
1:M:493:A:H1'	1:M:494:A:C5	2.54	0.42
1:G:26:A:N3	1:G:97:G:O2'	2.48	0.42
1:G:197:G:H2'	1:G:198:U:C6	2.55	0.42
1:G:340:G:O6	1:A:372:A:N6	2.51	0.42
1:A:352:A:H2'	1:A:353:U:C6	2.55	0.42
1:B:244:A:H2'	1:B:245:G:H8	1.83	0.42
1:C:77:U:H2'	1:C:78:U:C6	2.55	0.42
1:C:749:G:H2'	1:C:750:G:H8	1.83	0.42
1:D:244:A:H2'	1:D:245:G:H8	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:586:A:O2'	1:E:631:A:N7	2.50	0.42
1:F:231:C:O2'	1:F:233:A:OP2	2.29	0.42
1:F:352:A:H2'	1:F:353:U:C6	2.55	0.42
1:F:711:U:H2'	1:F:712:A:H8	1.84	0.42
1:H:197:G:H2'	1:H:198:U:C6	2.55	0.42
1:H:749:G:H2'	1:H:750:G:H8	1.83	0.42
1:H:753:G:H2'	1:H:754:U:H6	1.85	0.42
1:I:493:A:H1'	1:I:494:A:C5	2.54	0.42
1:J:231:C:O2'	1:J:233:A:OP2	2.29	0.42
1:K:315:C:H2'	1:K:316:U:O4'	2.19	0.42
1:L:197:G:H2'	1:L:198:U:C6	2.55	0.42
1:M:197:G:H2'	1:M:198:U:C6	2.55	0.42
1:A:359:G:H2'	1:A:360:A:H8	1.85	0.42
1:A:378:U:H2'	1:A:379:A:H8	1.84	0.42
1:A:627:U:H2'	1:A:628:G:C8	2.53	0.42
1:A:753:G:H2'	1:A:754:U:H6	1.85	0.42
1:B:77:U:H2'	1:B:78:U:C6	2.55	0.42
1:D:197:G:H2'	1:D:198:U:C6	2.55	0.42
1:E:104:U:H2'	1:E:105:A:H8	1.85	0.42
1:E:674:G:H21	1:E:677:A:H2	1.67	0.42
1:H:77:U:H2'	1:H:78:U:C6	2.55	0.42
1:H:352:A:H2'	1:H:353:U:C6	2.55	0.42
1:H:460:G:H1'	1:H:786:A:C8	2.47	0.42
1:J:315:C:H2'	1:J:316:U:O4'	2.19	0.42
1:J:352:A:H2'	1:J:353:U:C6	2.55	0.42
1:J:493:A:H1'	1:J:494:A:C5	2.54	0.42
1:L:441:U:O2	1:L:455:G:N2	2.41	0.42
1:M:674:G:H21	1:M:677:A:H2	1.67	0.42
1:M:753:G:H2'	1:M:754:U:H6	1.85	0.42
1:N:77:U:H2'	1:N:78:U:C6	2.55	0.42
1:N:674:G:H21	1:N:677:A:H2	1.67	0.42
1:A:244:A:H2'	1:A:245:G:H8	1.83	0.42
1:B:127:U:H2'	1:B:128:C:H6	1.85	0.42
1:C:315:C:H2'	1:C:316:U:O4'	2.19	0.42
1:D:352:A:H2'	1:D:353:U:C6	2.55	0.42
1:I:359:G:H2'	1:I:360:A:H8	1.85	0.42
1:I:378:U:H2'	1:I:379:A:H8	1.84	0.42
1:L:352:A:H2'	1:L:353:U:C6	2.55	0.42
1:M:77:U:H2'	1:M:78:U:C6	2.55	0.42
1:A:104:U:H2'	1:A:105:A:H8	1.85	0.42
1:C:123:U:H2'	1:C:124:U:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:753:G:H2'	1:C:754:U:H6	1.85	0.42
1:D:77:U:H2'	1:D:78:U:C6	2.55	0.42
1:D:359:G:H2'	1:D:360:A:H8	1.85	0.42
1:E:695:U:H2'	1:E:696:A:H8	1.85	0.42
1:F:315:C:H2'	1:F:316:U:O4'	2.19	0.42
1:F:460:G:H1'	1:F:786:A:C8	2.47	0.42
1:I:197:G:H2'	1:I:198:U:C6	2.55	0.42
1:M:359:G:H2'	1:M:360:A:H8	1.85	0.42
1:N:123:U:H2'	1:N:124:U:C6	2.55	0.42
1:N:695:U:H2'	1:N:696:A:H8	1.85	0.42
1:G:695:U:H2'	1:G:696:A:H8	1.85	0.42
1:A:77:U:H2'	1:A:78:U:C6	2.55	0.42
1:E:130:U:O2'	1:E:303:A:O2'	2.24	0.42
1:E:711:U:H2'	1:E:712:A:H8	1.84	0.42
1:E:753:G:H2'	1:E:754:U:H6	1.85	0.42
1:F:123:U:H2'	1:F:124:U:C6	2.55	0.42
1:F:397:G:H3'	1:F:398:A:H8	1.84	0.42
1:F:753:G:H2'	1:F:754:U:H6	1.85	0.42
1:H:315:C:H2'	1:H:316:U:O4'	2.19	0.42
1:H:674:G:H21	1:H:677:A:H2	1.67	0.42
1:I:104:U:H2'	1:I:105:A:H8	1.85	0.42
1:I:695:U:H2'	1:I:696:A:H8	1.85	0.42
1:K:123:U:H2'	1:K:124:U:C6	2.55	0.42
1:K:352:A:H2'	1:K:353:U:C6	2.55	0.42
1:K:397:G:H3'	1:K:398:A:H8	1.84	0.42
1:L:359:G:H2'	1:L:360:A:H8	1.85	0.42
1:N:359:G:H2'	1:N:360:A:H8	1.85	0.42
1:G:127:U:H2'	1:G:128:C:H6	1.85	0.42
1:A:674:G:N2	1:A:676:C:H3'	2.35	0.42
1:B:378:U:H2'	1:B:379:A:H8	1.84	0.42
1:B:674:G:N2	1:B:676:C:H3'	2.35	0.42
1:C:352:A:H2'	1:C:353:U:C6	2.55	0.42
1:C:695:U:H2'	1:C:696:A:H8	1.85	0.42
1:D:590:A:H2'	1:D:591:U:C6	2.55	0.42
1:E:197:G:H2'	1:E:198:U:C6	2.55	0.42
1:F:590:A:H2'	1:F:591:U:C6	2.55	0.42
1:I:36:A:H61	1:J:604:G:HO2'	1.64	0.42
1:I:352:A:H2'	1:I:353:U:C6	2.55	0.42
1:I:590:A:H2'	1:I:591:U:C6	2.55	0.42
1:J:104:U:H2'	1:J:105:A:H8	1.85	0.42
1:J:236:C:H2'	1:J:237:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:197:G:H2'	1:K:198:U:C6	2.55	0.42
1:K:590:A:H2'	1:K:591:U:C6	2.55	0.42
1:K:753:G:H2'	1:K:754:U:H6	1.85	0.42
1:L:695:U:H2'	1:L:696:A:H8	1.85	0.42
1:M:104:U:H2'	1:M:105:A:H8	1.85	0.42
1:M:352:A:H2'	1:M:353:U:C6	2.55	0.42
1:M:674:G:N2	1:M:676:C:H3'	2.35	0.42
1:A:493:A:H1'	1:A:494:A:C5	2.54	0.41
1:C:204:A:H8	1:C:204:A:H2'	1.70	0.41
1:F:236:C:H2'	1:F:237:G:C8	2.55	0.41
1:H:639:G:O6	1:H:694:G:O2'	2.31	0.41
1:H:674:G:N2	1:H:676:C:H3'	2.35	0.41
1:I:77:U:H2'	1:I:78:U:C6	2.55	0.41
1:I:189:U:O2'	1:I:240:A:N3	2.50	0.41
1:I:236:C:H2'	1:I:237:G:C8	2.55	0.41
1:J:359:G:H2'	1:J:360:A:H8	1.85	0.41
1:J:674:G:H21	1:J:677:A:H2	1.67	0.41
1:J:753:G:H2'	1:J:754:U:H6	1.85	0.41
1:K:127:U:H2'	1:K:128:C:H6	1.85	0.41
1:K:606:C:H2'	1:K:607:A:C8	2.55	0.41
1:L:104:U:H2'	1:L:105:A:H8	1.85	0.41
1:L:397:G:H3'	1:L:398:A:H8	1.84	0.41
1:L:493:A:H1'	1:L:494:A:C5	2.54	0.41
1:L:674:G:N2	1:L:676:C:H3'	2.35	0.41
1:L:831:C:H2'	1:L:832:C:C6	2.55	0.41
1:M:127:U:H2'	1:M:128:C:H6	1.85	0.41
1:N:127:U:H2'	1:N:128:C:H6	1.85	0.41
1:N:378:U:H2'	1:N:379:A:H8	1.84	0.41
1:N:674:G:N2	1:N:676:C:H3'	2.35	0.41
1:G:352:A:H2'	1:G:353:U:C6	2.55	0.41
1:G:674:G:H21	1:G:677:A:H2	1.67	0.41
1:B:244:A:H2'	1:B:245:G:C8	2.55	0.41
1:B:359:G:H2'	1:B:360:A:H8	1.85	0.41
1:B:831:C:H2'	1:B:832:C:C6	2.55	0.41
1:C:674:G:N2	1:C:676:C:H3'	2.35	0.41
1:D:674:G:N2	1:D:676:C:H3'	2.35	0.41
1:E:236:C:H2'	1:E:237:G:C8	2.55	0.41
1:E:352:A:H2'	1:E:353:U:C6	2.55	0.41
1:E:589:A:H2'	1:E:590:A:C8	2.56	0.41
1:F:197:G:H2'	1:F:198:U:C6	2.55	0.41
1:F:359:G:H2'	1:F:360:A:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:493:A:H1'	1:F:494:A:C5	2.54	0.41
1:H:236:C:H2'	1:H:237:G:C8	2.55	0.41
1:I:123:U:H2'	1:I:124:U:C6	2.55	0.41
1:I:589:A:H2'	1:I:590:A:C8	2.56	0.41
1:I:674:G:N2	1:I:676:C:H3'	2.35	0.41
1:J:197:G:H2'	1:J:198:U:C6	2.55	0.41
1:J:589:A:H2'	1:J:590:A:C8	2.55	0.41
1:K:695:U:H2'	1:K:696:A:H8	1.85	0.41
1:L:77:U:H2'	1:L:78:U:C6	2.55	0.41
1:L:753:G:H2'	1:L:754:U:H6	1.85	0.41
1:M:244:A:H2'	1:M:245:G:C8	2.55	0.41
1:M:589:A:H2'	1:M:590:A:H8	1.85	0.41
1:N:244:A:H2'	1:N:245:G:C8	2.55	0.41
1:N:352:A:H2'	1:N:353:U:C6	2.55	0.41
1:N:831:C:H2'	1:N:832:C:C6	2.55	0.41
1:G:674:G:N2	1:G:676:C:H3'	2.35	0.41
1:B:123:U:H2'	1:B:124:U:C6	2.55	0.41
1:C:359:G:H2'	1:C:360:A:H8	1.85	0.41
1:C:441:U:O2	1:C:455:G:N2	2.41	0.41
1:D:104:U:H2'	1:D:105:A:H8	1.85	0.41
1:D:236:C:H2'	1:D:237:G:C8	2.55	0.41
1:D:753:G:H2'	1:D:754:U:H6	1.85	0.41
1:E:6:G:N2	1:E:17:U:O2	2.44	0.41
1:F:441:U:O2	1:F:455:G:N2	2.41	0.41
1:H:590:A:H2'	1:H:591:U:C6	2.55	0.41
1:I:172:U:H2'	1:I:173:G:C8	2.55	0.41
1:I:397:G:H3'	1:I:398:A:H8	1.84	0.41
1:J:397:G:H3'	1:J:398:A:H8	1.85	0.41
1:J:695:U:H2'	1:J:696:A:H8	1.85	0.41
1:J:711:U:H2'	1:J:712:A:H8	1.84	0.41
1:K:236:C:H2'	1:K:237:G:C8	2.55	0.41
1:M:123:U:H2'	1:M:124:U:C6	2.55	0.41
1:A:123:U:H2'	1:A:124:U:C6	2.55	0.41
1:A:244:A:H2'	1:A:245:G:C8	2.55	0.41
1:B:236:C:H2'	1:B:237:G:C8	2.55	0.41
1:B:695:U:H2'	1:B:696:A:H8	1.85	0.41
1:C:244:A:H2'	1:C:245:G:C8	2.55	0.41
1:E:77:U:H2'	1:E:78:U:C6	2.55	0.41
1:E:123:U:H2'	1:E:124:U:C6	2.55	0.41
1:E:590:A:H2'	1:E:591:U:C6	2.55	0.41
1:F:127:U:H2'	1:F:128:C:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:123:U:H2'	1:H:124:U:C6	2.55	0.41
1:H:695:U:H2'	1:H:696:A:H8	1.85	0.41
1:J:123:U:H2'	1:J:124:U:C6	2.55	0.41
1:J:674:G:N2	1:J:676:C:H3'	2.35	0.41
1:K:674:G:N2	1:K:676:C:H3'	2.35	0.41
1:L:123:U:H2'	1:L:124:U:C6	2.55	0.41
1:L:589:A:H2'	1:L:590:A:C8	2.55	0.41
1:N:196:A:HO2'	1:N:197:G:C5'	2.34	0.41
1:G:123:U:H2'	1:G:124:U:C6	2.55	0.41
1:G:236:C:H2'	1:G:237:G:C8	2.55	0.41
1:G:606:C:H2'	1:G:607:A:C8	2.55	0.41
1:A:831:C:H2'	1:A:832:C:C6	2.55	0.41
1:B:189:U:O2'	1:B:240:A:N3	2.50	0.41
1:B:416:C:H2'	1:B:417:C:H6	1.85	0.41
1:C:236:C:H2'	1:C:237:G:C8	2.55	0.41
1:C:606:C:H2'	1:C:607:A:C8	2.55	0.41
1:D:172:U:H2'	1:D:173:G:C8	2.55	0.41
1:D:589:A:H2'	1:D:590:A:C8	2.56	0.41
1:E:172:U:H2'	1:E:173:G:C8	2.55	0.41
1:E:359:G:H2'	1:E:360:A:H8	1.85	0.41
1:E:674:G:N2	1:E:676:C:H3'	2.35	0.41
1:F:589:A:H2'	1:F:590:A:C8	2.56	0.41
1:I:753:G:H2'	1:I:754:U:H6	1.85	0.41
1:J:589:A:H2'	1:J:590:A:H8	1.86	0.41
1:L:189:U:O2'	1:L:240:A:N3	2.50	0.41
1:N:236:C:H2'	1:N:237:G:C8	2.55	0.41
1:G:77:U:H2'	1:G:78:U:C6	2.55	0.41
1:G:582:A:H61	1:G:704:A:P	2.44	0.41
1:G:590:A:H2'	1:G:591:U:C6	2.55	0.41
1:G:745:C:H2'	1:G:746:A:C8	2.56	0.41
1:G:753:G:H2'	1:G:754:U:H6	1.85	0.41
1:B:95:G:H2'	1:B:96:A:C8	2.56	0.41
1:D:123:U:H2'	1:D:124:U:C6	2.55	0.41
1:D:189:U:O2'	1:D:240:A:N3	2.50	0.41
1:D:378:U:H2'	1:D:379:A:H8	1.84	0.41
1:D:606:C:H2'	1:D:607:A:C8	2.55	0.41
1:E:589:A:H2'	1:E:590:A:H8	1.85	0.41
1:E:606:C:H2'	1:E:607:A:C8	2.55	0.41
1:F:77:U:H2'	1:F:78:U:C6	2.55	0.41
1:F:378:U:H2'	1:F:379:A:H8	1.84	0.41
1:F:708:G:OP1	1:F:729:U:O2'	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:745:C:H2'	1:F:746:A:C8	2.56	0.41
1:H:359:G:H2'	1:H:360:A:H8	1.85	0.41
1:H:606:C:H2'	1:H:607:A:C8	2.55	0.41
1:H:745:C:H2'	1:H:746:A:C8	2.56	0.41
1:I:95:G:H2'	1:I:96:A:C8	2.56	0.41
1:K:359:G:H2'	1:K:360:A:H8	1.85	0.41
1:L:127:U:H2'	1:L:128:C:H6	1.85	0.41
1:L:244:A:H2'	1:L:245:G:C8	2.55	0.41
1:L:378:U:H2'	1:L:379:A:H8	1.84	0.41
1:M:95:G:H2'	1:M:96:A:C8	2.56	0.41
1:M:469:A:H2'	1:M:470:G:C8	2.56	0.41
1:M:589:A:H2'	1:M:590:A:C8	2.56	0.41
1:M:695:U:H2'	1:M:696:A:H8	1.85	0.41
1:N:231:C:O2'	1:N:233:A:OP2	2.29	0.41
1:G:359:G:H2'	1:G:360:A:H8	1.85	0.41
1:G:589:A:H2'	1:G:590:A:C8	2.56	0.41
1:G:658:A:H3'	1:G:659:A:H8	1.86	0.41
1:G:831:C:H2'	1:G:832:C:C6	2.55	0.41
1:A:306:G:H2'	1:A:307:G:H8	1.86	0.41
1:A:606:C:H2'	1:A:607:A:C8	2.55	0.41
1:A:695:U:H2'	1:A:696:A:H8	1.85	0.41
1:A:745:C:H2'	1:A:746:A:C8	2.56	0.41
1:B:352:A:H2'	1:B:353:U:C6	2.55	0.41
1:B:606:C:H2'	1:B:607:A:C8	2.55	0.41
1:B:753:G:H2'	1:B:754:U:H6	1.85	0.41
1:C:163:A:H2'	1:C:164:A:C8	2.56	0.41
1:C:416:C:H2'	1:C:417:C:H6	1.85	0.41
1:C:589:A:H2'	1:C:590:A:H8	1.86	0.41
1:D:95:G:H2'	1:D:96:A:C8	2.56	0.41
1:D:658:A:H3'	1:D:659:A:H8	1.86	0.41
1:D:695:U:H2'	1:D:696:A:H8	1.85	0.41
1:D:745:C:H2'	1:D:746:A:C8	2.56	0.41
1:E:745:C:H2'	1:E:746:A:C8	2.56	0.41
1:F:104:U:H2'	1:F:105:A:H8	1.85	0.41
1:F:306:G:H2'	1:F:307:G:H8	1.86	0.41
1:F:469:A:H2'	1:F:470:G:C8	2.56	0.41
1:F:658:A:H3'	1:F:659:A:H8	1.86	0.41
1:F:674:G:N2	1:F:676:C:H3'	2.35	0.41
1:H:104:U:H2'	1:H:105:A:H8	1.85	0.41
1:H:189:U:O2'	1:H:240:A:N3	2.50	0.41
1:H:244:A:H2'	1:H:245:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:469:A:H2'	1:H:470:G:C8	2.56	0.41
1:I:244:A:H2'	1:I:245:G:C8	2.55	0.41
1:J:332:G:N7	1:J:343:G:O2'	2.41	0.41
1:J:582:A:H61	1:J:704:A:P	2.44	0.41
1:J:590:A:H2'	1:J:591:U:C6	2.55	0.41
1:K:416:C:H2'	1:K:417:C:H6	1.86	0.41
1:K:589:A:H2'	1:K:590:A:C8	2.56	0.41
1:K:658:A:H3'	1:K:659:A:H8	1.86	0.41
1:L:236:C:H2'	1:L:237:G:C8	2.55	0.41
1:L:582:A:H61	1:L:704:A:P	2.44	0.41
1:G:589:A:H2'	1:G:590:A:H8	1.86	0.41
1:A:582:A:H61	1:A:704:A:P	2.44	0.41
1:A:589:A:H2'	1:A:590:A:C8	2.56	0.41
1:B:35:A:H2'	1:B:36:A:C8	2.56	0.41
1:B:104:U:H2'	1:B:105:A:H8	1.85	0.41
1:C:95:G:H2'	1:C:96:A:C8	2.56	0.41
1:D:582:A:H61	1:D:704:A:P	2.44	0.41
1:E:397:G:H3'	1:E:398:A:H8	1.84	0.41
1:F:130:U:O2'	1:F:303:A:O2'	2.24	0.41
1:F:244:A:H2'	1:F:245:G:C8	2.55	0.41
1:F:831:C:H2'	1:F:832:C:C6	2.55	0.41
1:H:172:U:H2'	1:H:173:G:C8	2.55	0.41
1:H:196:A:HO2'	1:H:197:G:C5'	2.33	0.41
1:H:658:A:H3'	1:H:659:A:H8	1.86	0.41
1:I:606:C:H2'	1:I:607:A:C8	2.55	0.41
1:J:77:U:H2'	1:J:78:U:C6	2.55	0.41
1:K:77:U:H2'	1:K:78:U:C6	2.55	0.41
1:K:244:A:H2'	1:K:245:G:C8	2.55	0.41
1:L:658:A:H3'	1:L:659:A:H8	1.86	0.41
1:M:236:C:H2'	1:M:237:G:C8	2.55	0.41
1:M:582:A:H61	1:M:704:A:P	2.44	0.41
1:M:606:C:H2'	1:M:607:A:C8	2.55	0.41
1:M:658:A:H3'	1:M:659:A:H8	1.86	0.41
1:N:589:A:H2'	1:N:590:A:C8	2.55	0.41
1:N:606:C:H2'	1:N:607:A:C8	2.55	0.41
1:G:104:U:H2'	1:G:105:A:H8	1.85	0.41
1:G:172:U:H2'	1:G:173:G:C8	2.55	0.41
1:G:244:A:H2'	1:G:245:G:C8	2.55	0.41
1:G:357:U:H2'	1:G:358:U:O4'	2.21	0.41
1:G:397:G:H3'	1:G:398:A:H8	1.85	0.41
1:G:416:C:H2'	1:G:417:C:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:441:U:H2'	1:G:442:C:C6	2.56	0.41
1:G:482:A:H2'	1:G:483:A:H4'	2.03	0.41
1:A:35:A:H2'	1:A:36:A:C8	2.56	0.41
1:A:95:G:H2'	1:A:96:A:C8	2.56	0.41
1:A:236:C:H2'	1:A:237:G:C8	2.55	0.41
1:A:582:A:N3	1:A:583:C:H5''	2.36	0.41
1:A:589:A:H2'	1:A:590:A:H8	1.86	0.41
1:A:658:A:H3'	1:A:659:A:H8	1.86	0.41
1:B:163:A:H2'	1:B:164:A:C8	2.56	0.41
1:B:469:A:H2'	1:B:470:G:C8	2.56	0.41
1:B:582:A:H61	1:B:704:A:P	2.44	0.41
1:B:589:A:H2'	1:B:590:A:C8	2.56	0.41
1:C:332:G:N7	1:C:343:G:O2'	2.41	0.41
1:C:589:A:H2'	1:C:590:A:C8	2.56	0.41
1:C:590:A:H2'	1:C:591:U:C6	2.55	0.41
1:C:831:C:H2'	1:C:832:C:C6	2.55	0.41
1:D:244:A:H2'	1:D:245:G:C8	2.55	0.41
1:D:306:G:H2'	1:D:307:G:H8	1.86	0.41
1:D:357:U:H2'	1:D:358:U:O4'	2.21	0.41
1:D:441:U:O2	1:D:455:G:N2	2.41	0.41
1:D:469:A:H2'	1:D:470:G:C8	2.56	0.41
1:E:244:A:H2'	1:E:245:G:C8	2.55	0.41
1:E:416:C:H2'	1:E:417:C:H6	1.85	0.41
1:E:469:A:H2'	1:E:470:G:C8	2.56	0.41
1:E:582:A:H61	1:E:704:A:P	2.44	0.41
1:E:831:C:H2'	1:E:832:C:C6	2.55	0.41
1:F:172:U:H2'	1:F:173:G:C8	2.55	0.41
1:F:606:C:H2'	1:F:607:A:C8	2.55	0.41
1:H:95:G:H2'	1:H:96:A:C8	2.56	0.41
1:H:418:A:HO2'	1:H:419:C:H6	1.69	0.41
1:H:582:A:H61	1:H:704:A:P	2.44	0.41
1:I:127:U:H2'	1:I:128:C:H6	1.85	0.41
1:I:357:U:H2'	1:I:358:U:O4'	2.21	0.41
1:J:172:U:H2'	1:J:173:G:C8	2.55	0.41
1:J:218:A:N3	1:J:394:U:O2'	2.45	0.41
1:J:482:A:H2'	1:J:483:A:H4'	2.03	0.41
1:J:658:A:H3'	1:J:659:A:H8	1.86	0.41
1:J:831:C:H2'	1:J:832:C:C6	2.55	0.41
1:K:35:A:H2'	1:K:36:A:C8	2.56	0.41
1:K:172:U:H2'	1:K:173:G:C8	2.55	0.41
1:K:204:A:H8	1:K:204:A:H2'	1.70	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:35:A:H2'	1:L:36:A:C8	2.56	0.41
1:L:227:A:H2'	1:L:228:A:C8	2.56	0.41
1:L:332:G:N7	1:L:343:G:O2'	2.41	0.41
1:L:357:U:H2'	1:L:358:U:O4'	2.21	0.41
1:L:582:A:N3	1:L:583:C:H5''	2.36	0.41
1:L:606:C:H2'	1:L:607:A:C8	2.55	0.41
1:M:35:A:H2'	1:M:36:A:C8	2.56	0.41
1:M:332:G:N7	1:M:343:G:O2'	2.41	0.41
1:M:416:C:H2'	1:M:417:C:H6	1.86	0.41
1:M:590:A:H2'	1:M:591:U:C6	2.55	0.41
1:M:831:C:H2'	1:M:832:C:C6	2.55	0.41
1:N:35:A:H2'	1:N:36:A:C8	2.56	0.41
1:N:95:G:H2'	1:N:96:A:C8	2.56	0.41
1:N:227:A:H2'	1:N:228:A:C8	2.56	0.41
1:N:416:C:H2'	1:N:417:C:H6	1.86	0.41
1:N:582:A:H61	1:N:704:A:P	2.44	0.41
1:G:35:A:H2'	1:G:36:A:C8	2.56	0.41
1:G:469:A:H2'	1:G:470:G:C8	2.56	0.41
1:A:127:U:H2'	1:A:128:C:H6	1.85	0.41
1:A:172:U:H2'	1:A:173:G:C8	2.55	0.41
1:A:482:A:H2'	1:A:483:A:H4'	2.03	0.41
1:A:590:A:H2'	1:A:591:U:C6	2.55	0.41
1:B:441:U:H2'	1:B:442:C:C6	2.56	0.41
1:B:590:A:H2'	1:B:591:U:C6	2.55	0.41
1:C:104:U:H2'	1:C:105:A:H8	1.85	0.41
1:C:172:U:H2'	1:C:173:G:C8	2.55	0.41
1:C:227:A:H2'	1:C:228:A:C8	2.56	0.41
1:C:469:A:H2'	1:C:470:G:C8	2.56	0.41
1:C:745:C:H2'	1:C:746:A:C8	2.56	0.41
1:D:163:A:H2'	1:D:164:A:C8	2.56	0.41
1:E:227:A:H2'	1:E:228:A:C8	2.56	0.41
1:H:227:A:H2'	1:H:228:A:C8	2.56	0.41
1:H:416:C:H2'	1:H:417:C:H6	1.85	0.41
1:H:589:A:H2'	1:H:590:A:C8	2.56	0.41
1:I:416:C:H2'	1:I:417:C:H6	1.86	0.41
1:I:674:G:H21	1:I:677:A:H2	1.67	0.41
1:I:831:C:H2'	1:I:832:C:C6	2.55	0.41
1:J:227:A:H2'	1:J:228:A:C8	2.56	0.41
1:J:606:C:H2'	1:J:607:A:C8	2.55	0.41
1:K:163:A:H2'	1:K:164:A:C8	2.56	0.41
1:M:441:U:H2'	1:M:442:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:582:A:N3	1:M:583:C:H5''	2.36	0.41
1:N:104:U:H2'	1:N:105:A:H8	1.85	0.41
1:N:357:U:H2'	1:N:358:U:O4'	2.21	0.41
1:G:227:A:H2'	1:G:228:A:C8	2.56	0.40
1:A:87:U:H2'	1:A:88:A:C8	2.57	0.40
1:A:469:A:H2'	1:A:470:G:C8	2.56	0.40
1:B:87:U:H2'	1:B:88:A:C8	2.57	0.40
1:B:227:A:H2'	1:B:228:A:C8	2.56	0.40
1:B:357:U:H2'	1:B:358:U:O4'	2.21	0.40
1:D:460:G:H1'	1:D:786:A:C8	2.47	0.40
1:D:831:C:H2'	1:D:832:C:C6	2.55	0.40
1:E:87:U:H2'	1:E:88:A:C8	2.56	0.40
1:E:196:A:HO2'	1:E:197:G:C5'	2.33	0.40
1:E:658:A:H3'	1:E:659:A:H8	1.86	0.40
1:F:87:U:H2'	1:F:88:A:C8	2.57	0.40
1:F:227:A:H2'	1:F:228:A:C8	2.56	0.40
1:F:416:C:H2'	1:F:417:C:H6	1.86	0.40
1:H:130:U:O2'	1:H:303:A:O2'	2.24	0.40
1:H:414:U:H3'	1:H:415:A:H8	1.87	0.40
1:I:227:A:H2'	1:I:228:A:C8	2.56	0.40
1:I:658:A:H3'	1:I:659:A:H8	1.86	0.40
1:J:127:U:H2'	1:J:128:C:H6	1.85	0.40
1:J:332:G:O2'	1:J:343:G:N7	2.50	0.40
1:K:306:G:H2'	1:K:307:G:H8	1.86	0.40
1:K:482:A:H2'	1:K:483:A:H4'	2.03	0.40
1:K:582:A:H61	1:K:704:A:P	2.44	0.40
1:L:87:U:H2'	1:L:88:A:C8	2.57	0.40
1:L:172:U:H2'	1:L:173:G:C8	2.55	0.40
1:M:87:U:H2'	1:M:88:A:C8	2.57	0.40
1:M:231:C:O2'	1:M:233:A:OP2	2.29	0.40
1:N:589:A:H2'	1:N:590:A:H8	1.85	0.40
1:G:87:U:H2'	1:G:88:A:C8	2.57	0.40
1:G:582:A:N3	1:G:583:C:H5''	2.36	0.40
1:A:357:U:H2'	1:A:358:U:O4'	2.21	0.40
1:B:589:A:H2'	1:B:590:A:H8	1.86	0.40
1:C:127:U:H2'	1:C:128:C:H6	1.85	0.40
1:C:414:U:H3'	1:C:415:A:H8	1.87	0.40
1:D:127:U:H2'	1:D:128:C:H6	1.85	0.40
1:D:227:A:H2'	1:D:228:A:C8	2.56	0.40
1:D:414:U:H3'	1:D:415:A:H8	1.87	0.40
1:E:127:U:H2'	1:E:128:C:H6	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:35:A:H2'	1:F:36:A:C8	2.56	0.40
1:F:163:A:H2'	1:F:164:A:C8	2.56	0.40
1:F:589:A:H2'	1:F:590:A:H8	1.86	0.40
1:F:695:U:H2'	1:F:696:A:H8	1.85	0.40
1:H:357:U:H2'	1:H:358:U:O4'	2.21	0.40
1:I:745:C:H2'	1:I:746:A:C8	2.56	0.40
1:J:35:A:H2'	1:J:36:A:C8	2.56	0.40
1:J:87:U:H2'	1:J:88:A:C8	2.57	0.40
1:K:87:U:H2'	1:K:88:A:C8	2.57	0.40
1:K:441:U:H2'	1:K:442:C:C6	2.56	0.40
1:K:831:C:H2'	1:K:832:C:C6	2.55	0.40
1:L:590:A:H2'	1:L:591:U:C6	2.55	0.40
1:M:196:A:HO2'	1:M:197:G:C5'	2.34	0.40
1:N:87:U:H2'	1:N:88:A:C8	2.57	0.40
1:N:306:G:H2'	1:N:307:G:H8	1.86	0.40
1:N:414:U:H3'	1:N:415:A:H8	1.87	0.40
1:N:753:G:H2'	1:N:754:U:H6	1.85	0.40
1:G:332:G:N7	1:G:343:G:O2'	2.41	0.40
1:A:416:C:H2'	1:A:417:C:H6	1.85	0.40
1:B:658:A:H3'	1:B:659:A:H8	1.86	0.40
1:B:745:C:H2'	1:B:746:A:C8	2.56	0.40
1:C:658:A:H3'	1:C:659:A:H8	1.86	0.40
1:F:582:A:N3	1:F:583:C:H5''	2.36	0.40
1:H:393:C:H2'	1:H:394:U:C6	2.57	0.40
1:H:589:A:H2'	1:H:590:A:H8	1.86	0.40
1:H:831:C:H2'	1:H:832:C:C6	2.55	0.40
1:I:35:A:H2'	1:I:36:A:C8	2.56	0.40
1:I:482:A:H2'	1:I:483:A:H4'	2.03	0.40
1:J:80:C:H2'	1:J:81:A:C8	2.55	0.40
1:J:393:C:H2'	1:J:394:U:C6	2.57	0.40
1:K:26:A:N3	1:K:97:G:O2'	2.48	0.40
1:K:378:U:H2'	1:K:379:A:C8	2.57	0.40
1:K:582:A:N3	1:K:583:C:H5''	2.36	0.40
1:K:589:A:H2'	1:K:590:A:H8	1.86	0.40
1:L:441:U:H2'	1:L:442:C:C6	2.56	0.40
1:N:163:A:H2'	1:N:164:A:C8	2.56	0.40
1:G:414:U:H3'	1:G:415:A:H8	1.87	0.40
1:A:415:A:H2'	1:A:416:C:C6	2.57	0.40
1:B:414:U:H3'	1:B:415:A:H8	1.87	0.40
1:B:711:U:H2'	1:B:712:A:H8	1.84	0.40
1:B:738:U:H2'	1:B:739:A:C8	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:87:U:H2'	1:C:88:A:C8	2.57	0.40
1:D:416:C:H2'	1:D:417:C:H6	1.85	0.40
1:E:35:A:H2'	1:E:36:A:C8	2.56	0.40
1:E:357:U:H2'	1:E:358:U:O4'	2.21	0.40
1:F:378:U:H2'	1:F:379:A:C8	2.57	0.40
1:F:674:G:H21	1:F:677:A:H2	1.67	0.40
1:H:87:U:H2'	1:H:88:A:C8	2.57	0.40
1:H:306:G:H2'	1:H:307:G:H8	1.86	0.40
1:H:605:C:H2'	1:H:606:C:H6	1.87	0.40
1:I:87:U:H2'	1:I:88:A:C8	2.57	0.40
1:I:589:A:H2'	1:I:590:A:H8	1.85	0.40
1:J:244:A:H2'	1:J:245:G:C8	2.55	0.40
1:J:416:C:H2'	1:J:417:C:H6	1.86	0.40
1:J:469:A:H2'	1:J:470:G:C8	2.56	0.40
1:J:605:C:H2'	1:J:606:C:H6	1.87	0.40
1:K:357:U:H2'	1:K:358:U:O4'	2.21	0.40
1:L:95:G:H2'	1:L:96:A:C8	2.56	0.40
1:L:589:A:H2'	1:L:590:A:H8	1.85	0.40
1:M:163:A:H2'	1:M:164:A:C8	2.56	0.40
1:M:172:U:H2'	1:M:173:G:C8	2.55	0.40
1:M:227:A:H2'	1:M:228:A:C8	2.56	0.40
1:M:745:C:H2'	1:M:746:A:C8	2.56	0.40
1:N:80:C:H2'	1:N:81:A:C8	2.55	0.40
1:N:582:A:N3	1:N:583:C:H5''	2.36	0.40
1:N:745:C:H2'	1:N:746:A:C8	2.56	0.40
1:G:196:A:HO2'	1:G:197:G:C5'	2.34	0.40
1:G:378:U:H2'	1:G:379:A:C8	2.57	0.40
1:A:227:A:H2'	1:A:228:A:C8	2.56	0.40
1:A:393:C:H2'	1:A:394:U:C6	2.57	0.40
1:A:441:U:H2'	1:A:442:C:C6	2.56	0.40
1:B:332:G:N7	1:B:343:G:O2'	2.41	0.40
1:C:306:G:H2'	1:C:307:G:H8	1.86	0.40
1:C:393:C:H2'	1:C:394:U:C6	2.57	0.40
1:C:605:C:H2'	1:C:606:C:H6	1.87	0.40
1:D:87:U:H2'	1:D:88:A:C8	2.57	0.40
1:E:95:G:H2'	1:E:96:A:C8	2.56	0.40
1:E:483:A:H2'	1:E:484:A:C8	2.57	0.40
1:E:605:C:H2'	1:E:606:C:H6	1.87	0.40
1:F:582:A:H61	1:F:704:A:P	2.44	0.40
1:F:763:A:H2'	1:F:764:A:H8	1.87	0.40
1:I:163:A:H2'	1:I:164:A:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:414:U:H3'	1:I:415:A:H8	1.87	0.40
1:I:469:A:H2'	1:I:470:G:C8	2.56	0.40
1:I:483:A:H2'	1:I:484:A:C8	2.57	0.40
1:I:738:U:H2'	1:I:739:A:C8	2.57	0.40
1:J:196:A:HO2'	1:J:197:G:C5'	2.34	0.40
1:K:227:A:H2'	1:K:228:A:C8	2.56	0.40
1:K:469:A:H2'	1:K:470:G:C8	2.56	0.40
1:K:738:U:H2'	1:K:739:A:C8	2.57	0.40
1:L:469:A:H2'	1:L:470:G:C8	2.56	0.40
1:M:306:G:H2'	1:M:307:G:H8	1.86	0.40
1:M:357:U:H2'	1:M:358:U:O4'	2.21	0.40
1:M:711:U:H2'	1:M:712:A:H8	1.84	0.40
1:N:415:A:H2'	1:N:416:C:C6	2.57	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	A	785/833 (94%)	278 (35%)	18 (2%)
1	B	785/833 (94%)	279 (35%)	18 (2%)
1	C	785/833 (94%)	278 (35%)	18 (2%)
1	D	785/833 (94%)	279 (35%)	18 (2%)
1	E	785/833 (94%)	277 (35%)	18 (2%)
1	F	785/833 (94%)	278 (35%)	18 (2%)
1	G	785/833 (94%)	278 (35%)	18 (2%)
1	H	785/833 (94%)	279 (35%)	18 (2%)
1	I	785/833 (94%)	279 (35%)	18 (2%)
1	J	785/833 (94%)	279 (35%)	18 (2%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	K	785/833 (94%)	279 (35%)	18 (2%)
1	L	785/833 (94%)	279 (35%)	18 (2%)
1	M	785/833 (94%)	279 (35%)	18 (2%)
1	N	785/833 (94%)	278 (35%)	18 (2%)
All	All	10990/11662 (94%)	3899 (35%)	252 (2%)

All (3899) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	G	16	G
1	G	18	C
1	G	20	U
1	G	21	C
1	G	22	A
1	G	23	A
1	G	30	U
1	G	31	A
1	G	37	G
1	G	44	A
1	G	47	G
1	G	50	G
1	G	51	A
1	G	52	A
1	G	53	U
1	G	54	A
1	G	57	A
1	G	58	A
1	G	59	G
1	G	65	G
1	G	66	C
1	G	75	G
1	G	82	U
1	G	84	U
1	G	85	U
1	G	86	G
1	G	87	U
1	G	89	A
1	G	90	A
1	G	103	G
1	G	104	U
1	G	109	A
1	G	111	G

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Mol	Chain	Res	Type
1	G	112	U
1	G	116	A
1	G	118	A
1	G	122	A
1	G	131	A
1	G	132	G
1	G	139	A
1	G	142	G
1	G	145	A
1	G	146	C
1	G	148	C
1	G	149	U
1	G	150	U
1	G	157	A
1	G	158	G
1	G	165	A
1	G	170	A
1	G	171	C
1	G	177	C
1	G	179	U
1	G	180	U
1	G	181	G
1	G	182	C
1	G	183	A
1	G	184	G
1	G	185	A
1	G	186	G
1	G	196	A
1	G	197	G
1	G	198	U
1	G	201	G
1	G	204	A
1	G	205	G
1	G	209	A
1	G	212	A
1	G	213	A
1	G	215	A
1	G	216	A
1	G	218	A
1	G	222	C
1	G	223	A
1	G	224	U

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Mol	Chain	Res	Type
1	G	225	A
1	G	226	G
1	G	233	A
1	G	234	U
1	G	235	G
1	G	244	A
1	G	254	U
1	G	266	A
1	G	279	A
1	G	282	U
1	G	283	G
1	G	284	A
1	G	287	G
1	G	290	U
1	G	295	A
1	G	296	A
1	G	302	A
1	G	309	G
1	G	312	A
1	G	313	C
1	G	314	C
1	G	316	U
1	G	317	U
1	G	318	U
1	G	321	G
1	G	325	A
1	G	326	G
1	G	332	G
1	G	337	G
1	G	338	G
1	G	339	U
1	G	341	G
1	G	342	U
1	G	343	G
1	G	344	C
1	G	349	A
1	G	350	U
1	G	352	A
1	G	354	C
1	G	355	C
1	G	358	U
1	G	360	A

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Mol	Chain	Res	Type
1	G	361	U
1	G	362	A
1	G	364	A
1	G	365	G
1	G	366	U
1	G	367	G
1	G	368	U
1	G	369	A
1	G	370	C
1	G	373	G
1	G	376	C
1	G	377	C
1	G	382	G
1	G	383	A
1	G	385	G
1	G	386	A
1	G	389	U
1	G	390	A
1	G	392	A
1	G	396	G
1	G	397	G
1	G	398	A
1	G	400	U
1	G	404	G
1	G	407	G
1	G	408	U
1	G	409	A
1	G	410	G
1	G	412	G
1	G	413	A
1	G	418	A
1	G	419	C
1	G	423	G
1	G	424	G
1	G	425	G
1	G	428	G
1	G	434	U
1	G	435	A
1	G	446	C
1	G	447	A
1	G	450	A
1	G	451	G

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Mol	Chain	Res	Type
1	G	461	C
1	G	463	U
1	G	464	G
1	G	466	G
1	G	471	A
1	G	472	C
1	G	474	G
1	G	476	U
1	G	483	A
1	G	485	C
1	G	486	C
1	G	488	C
1	G	493	A
1	G	494	A
1	G	540	A
1	G	541	A
1	G	542	A
1	G	543	U
1	G	545	A
1	G	546	G
1	G	548	A
1	G	549	A
1	G	550	A
1	G	552	G
1	G	553	U
1	G	560	C
1	G	562	G
1	G	564	U
1	G	566	U
1	G	567	G
1	G	569	C
1	G	572	A
1	G	573	A
1	G	582	A
1	G	583	C
1	G	584	A
1	G	586	A
1	G	587	G
1	G	589	A
1	G	591	U
1	G	594	G
1	G	597	G

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Mol	Chain	Res	Type
1	G	598	U
1	G	599	U
1	G	621	G
1	G	624	G
1	G	625	A
1	G	630	G
1	G	631	A
1	G	633	U
1	G	640	A
1	G	642	A
1	G	644	G
1	G	645	U
1	G	646	U
1	G	650	A
1	G	656	G
1	G	661	U
1	G	662	G
1	G	663	U
1	G	664	G
1	G	665	A
1	G	666	A
1	G	667	U
1	G	669	U
1	G	674	G
1	G	676	C
1	G	677	A
1	G	678	G
1	G	680	G
1	G	681	U
1	G	683	G
1	G	693	A
1	G	694	G
1	G	715	A
1	G	716	C
1	G	719	A
1	G	720	A
1	G	722	G
1	G	726	G
1	G	729	U
1	G	730	C
1	G	731	A
1	G	733	U

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Mol	Chain	Res	Type
1	G	734	U
1	G	735	A
1	G	736	A
1	G	749	G
1	G	759	U
1	G	760	C
1	G	764	A
1	G	765	A
1	G	766	A
1	G	767	G
1	G	771	G
1	G	776	A
1	G	787	U
1	G	789	G
1	G	790	A
1	G	791	U
1	G	792	A
1	G	801	A
1	G	802	A
1	G	803	A
1	G	804	G
1	G	805	A
1	G	810	U
1	G	813	A
1	G	814	A
1	G	816	A
1	G	817	U
1	G	818	G
1	G	820	U
1	G	821	G
1	G	823	A
1	G	826	C
1	G	828	C
1	G	830	G
1	G	831	C
1	A	16	G
1	A	18	C
1	A	20	U
1	A	21	C
1	A	22	A
1	A	23	A
1	A	30	U

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Mol	Chain	Res	Type
1	A	31	A
1	A	37	G
1	A	44	A
1	A	47	G
1	A	50	G
1	A	51	A
1	A	52	A
1	A	53	U
1	A	54	A
1	A	57	A
1	A	58	A
1	A	59	G
1	A	65	G
1	A	66	C
1	A	75	G
1	A	82	U
1	A	84	U
1	A	85	U
1	A	86	G
1	A	87	U
1	A	89	A
1	A	90	A
1	A	103	G
1	A	104	U
1	A	109	A
1	A	111	G
1	A	112	U
1	A	116	A
1	A	118	A
1	A	122	A
1	A	131	A
1	A	132	G
1	A	139	A
1	A	142	G
1	A	145	A
1	A	146	C
1	A	148	C
1	A	149	U
1	A	150	U
1	A	157	A
1	A	158	G
1	A	165	A

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Mol	Chain	Res	Type
1	A	170	A
1	A	171	C
1	A	177	C
1	A	179	U
1	A	180	U
1	A	181	G
1	A	182	C
1	A	183	A
1	A	184	G
1	A	185	A
1	A	186	G
1	A	196	A
1	A	197	G
1	A	198	U
1	A	201	G
1	A	204	A
1	A	205	G
1	A	209	A
1	A	212	A
1	A	213	A
1	A	215	A
1	A	216	A
1	A	218	A
1	A	222	C
1	A	223	A
1	A	224	U
1	A	225	A
1	A	226	G
1	A	233	A
1	A	234	U
1	A	235	G
1	A	244	A
1	A	254	U
1	A	266	A
1	A	279	A
1	A	282	U
1	A	283	G
1	A	284	A
1	A	287	G
1	A	290	U
1	A	295	A
1	A	296	A

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Mol	Chain	Res	Type
1	A	302	A
1	A	309	G
1	A	312	A
1	A	313	C
1	A	314	C
1	A	316	U
1	A	317	U
1	A	318	U
1	A	321	G
1	A	325	A
1	A	326	G
1	A	332	G
1	A	337	G
1	A	338	G
1	A	339	U
1	A	341	G
1	A	342	U
1	A	343	G
1	A	344	C
1	A	349	A
1	A	350	U
1	A	352	A
1	A	354	C
1	A	355	C
1	A	358	U
1	A	360	A
1	A	361	U
1	A	362	A
1	A	364	A
1	A	365	G
1	A	366	U
1	A	367	G
1	A	368	U
1	A	369	A
1	A	370	C
1	A	373	G
1	A	376	C
1	A	377	C
1	A	382	G
1	A	383	A
1	A	385	G
1	A	386	A

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Mol	Chain	Res	Type
1	A	389	U
1	A	390	A
1	A	392	A
1	A	396	G
1	A	397	G
1	A	398	A
1	A	400	U
1	A	404	G
1	A	407	G
1	A	408	U
1	A	409	A
1	A	410	G
1	A	412	G
1	A	413	A
1	A	418	A
1	A	419	C
1	A	423	G
1	A	424	G
1	A	425	G
1	A	428	G
1	A	434	U
1	A	435	A
1	A	446	C
1	A	447	A
1	A	450	A
1	A	451	G
1	A	461	C
1	A	463	U
1	A	464	G
1	A	466	G
1	A	471	A
1	A	472	C
1	A	474	G
1	A	476	U
1	A	483	A
1	A	485	C
1	A	486	C
1	A	488	C
1	A	493	A
1	A	494	A
1	A	540	A
1	A	541	A

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Mol	Chain	Res	Type
1	A	542	A
1	A	543	U
1	A	545	A
1	A	546	G
1	A	548	A
1	A	549	A
1	A	550	A
1	A	552	G
1	A	553	U
1	A	560	C
1	A	562	G
1	A	564	U
1	A	566	U
1	A	567	G
1	A	569	C
1	A	572	A
1	A	573	A
1	A	582	A
1	A	583	C
1	A	584	A
1	A	586	A
1	A	587	G
1	A	589	A
1	A	591	U
1	A	594	G
1	A	597	G
1	A	598	U
1	A	599	U
1	A	621	G
1	A	624	G
1	A	625	A
1	A	630	G
1	A	631	A
1	A	633	U
1	A	640	A
1	A	642	A
1	A	644	G
1	A	645	U
1	A	646	U
1	A	650	A
1	A	656	G
1	A	661	U

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Mol	Chain	Res	Type
1	A	662	G
1	A	663	U
1	A	664	G
1	A	665	A
1	A	666	A
1	A	667	U
1	A	669	U
1	A	674	G
1	A	676	C
1	A	677	A
1	A	678	G
1	A	680	G
1	A	681	U
1	A	683	G
1	A	693	A
1	A	694	G
1	A	715	A
1	A	716	C
1	A	719	A
1	A	720	A
1	A	722	G
1	A	726	G
1	A	729	U
1	A	730	C
1	A	731	A
1	A	733	U
1	A	734	U
1	A	735	A
1	A	736	A
1	A	749	G
1	A	759	U
1	A	760	C
1	A	764	A
1	A	765	A
1	A	766	A
1	A	767	G
1	A	771	G
1	A	776	A
1	A	787	U
1	A	789	G
1	A	790	A
1	A	791	U

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Mol	Chain	Res	Type
1	A	792	A
1	A	801	A
1	A	802	A
1	A	803	A
1	A	804	G
1	A	805	A
1	A	810	U
1	A	813	A
1	A	814	A
1	A	816	A
1	A	817	U
1	A	818	G
1	A	820	U
1	A	821	G
1	A	823	A
1	A	826	C
1	A	828	C
1	A	830	G
1	A	831	C
1	B	16	G
1	B	18	C
1	B	20	U
1	B	21	C
1	B	22	A
1	B	23	A
1	B	30	U
1	B	31	A
1	B	37	G
1	B	44	A
1	B	47	G
1	B	50	G
1	B	51	A
1	B	52	A
1	B	53	U
1	B	54	A
1	B	57	A
1	B	58	A
1	B	59	G
1	B	65	G
1	B	66	C
1	B	75	G
1	B	82	U

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Mol	Chain	Res	Type
1	B	84	U
1	B	85	U
1	B	86	G
1	B	87	U
1	B	89	A
1	B	90	A
1	B	103	G
1	B	104	U
1	B	109	A
1	B	111	G
1	B	112	U
1	B	116	A
1	B	118	A
1	B	122	A
1	B	131	A
1	B	132	G
1	B	139	A
1	B	142	G
1	B	145	A
1	B	146	C
1	B	148	C
1	B	149	U
1	B	150	U
1	B	157	A
1	B	158	G
1	B	165	A
1	B	166	G
1	B	170	A
1	B	171	C
1	B	177	C
1	B	179	U
1	B	180	U
1	B	181	G
1	B	182	C
1	B	183	A
1	B	184	G
1	B	185	A
1	B	186	G
1	B	196	A
1	B	197	G
1	B	198	U
1	B	201	G

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Mol	Chain	Res	Type
1	B	204	A
1	B	205	G
1	B	209	A
1	B	212	A
1	B	213	A
1	B	215	A
1	B	216	A
1	B	218	A
1	B	222	C
1	B	223	A
1	B	224	U
1	B	225	A
1	B	226	G
1	B	233	A
1	B	234	U
1	B	235	G
1	B	244	A
1	B	254	U
1	B	266	A
1	B	279	A
1	B	282	U
1	B	283	G
1	B	284	A
1	B	287	G
1	B	290	U
1	B	295	A
1	B	296	A
1	B	302	A
1	B	309	G
1	B	312	A
1	B	313	C
1	B	314	C
1	B	316	U
1	B	317	U
1	B	318	U
1	B	321	G
1	B	325	A
1	B	326	G
1	B	332	G
1	B	337	G
1	B	338	G
1	B	339	U

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Mol	Chain	Res	Type
1	B	341	G
1	B	342	U
1	B	343	G
1	B	344	C
1	B	349	A
1	B	350	U
1	B	352	A
1	B	354	C
1	B	355	C
1	B	358	U
1	B	360	A
1	B	361	U
1	B	362	A
1	B	364	A
1	B	365	G
1	B	366	U
1	B	367	G
1	B	368	U
1	B	369	A
1	B	370	C
1	B	373	G
1	B	376	C
1	B	377	C
1	B	382	G
1	B	383	A
1	B	385	G
1	B	386	A
1	B	389	U
1	B	390	A
1	B	392	A
1	B	396	G
1	B	397	G
1	B	398	A
1	B	400	U
1	B	404	G
1	B	407	G
1	B	408	U
1	B	409	A
1	B	410	G
1	B	412	G
1	B	413	A
1	B	418	A

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Mol	Chain	Res	Type
1	B	419	C
1	B	423	G
1	B	424	G
1	B	425	G
1	B	428	G
1	B	434	U
1	B	435	A
1	B	446	C
1	B	447	A
1	B	450	A
1	B	451	G
1	B	461	C
1	B	463	U
1	B	464	G
1	B	466	G
1	B	471	A
1	B	472	C
1	B	474	G
1	B	476	U
1	B	483	A
1	B	485	C
1	B	486	C
1	B	488	C
1	B	493	A
1	B	494	A
1	B	540	A
1	B	541	A
1	B	542	A
1	B	543	U
1	B	545	A
1	B	546	G
1	B	548	A
1	B	549	A
1	B	550	A
1	B	552	G
1	B	553	U
1	B	560	C
1	B	562	G
1	B	564	U
1	B	566	U
1	B	567	G
1	B	569	C

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Mol	Chain	Res	Type
1	B	572	A
1	B	573	A
1	B	582	A
1	B	583	C
1	B	584	A
1	B	586	A
1	B	587	G
1	B	589	A
1	B	591	U
1	B	594	G
1	B	597	G
1	B	598	U
1	B	599	U
1	B	621	G
1	B	624	G
1	B	625	A
1	B	630	G
1	B	631	A
1	B	633	U
1	B	640	A
1	B	642	A
1	B	644	G
1	B	645	U
1	B	646	U
1	B	650	A
1	B	656	G
1	B	661	U
1	B	662	G
1	B	663	U
1	B	664	G
1	B	665	A
1	B	666	A
1	B	667	U
1	B	669	U
1	B	674	G
1	B	676	C
1	B	677	A
1	B	678	G
1	B	680	G
1	B	681	U
1	B	683	G
1	B	693	A

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Mol	Chain	Res	Type
1	B	694	G
1	B	715	A
1	B	716	C
1	B	719	A
1	B	720	A
1	B	722	G
1	B	726	G
1	B	729	U
1	B	730	C
1	B	731	A
1	B	733	U
1	B	734	U
1	B	735	A
1	B	736	A
1	B	749	G
1	B	759	U
1	B	760	C
1	B	764	A
1	B	765	A
1	B	766	A
1	B	767	G
1	B	771	G
1	B	776	A
1	B	787	U
1	B	789	G
1	B	790	A
1	B	791	U
1	B	792	A
1	B	801	A
1	B	802	A
1	B	803	A
1	B	804	G
1	B	805	A
1	B	810	U
1	B	813	A
1	B	814	A
1	B	816	A
1	B	817	U
1	B	818	G
1	B	820	U
1	B	821	G
1	B	823	A

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Mol	Chain	Res	Type
1	B	826	C
1	B	828	C
1	B	830	G
1	B	831	C
1	C	16	G
1	C	18	C
1	C	20	U
1	C	21	C
1	C	22	A
1	C	23	A
1	C	30	U
1	C	31	A
1	C	37	G
1	C	44	A
1	C	47	G
1	C	50	G
1	C	51	A
1	C	52	A
1	C	53	U
1	C	54	A
1	C	57	A
1	C	58	A
1	C	59	G
1	C	65	G
1	C	66	C
1	C	75	G
1	C	82	U
1	C	84	U
1	C	85	U
1	C	86	G
1	C	87	U
1	C	89	A
1	C	90	A
1	C	103	G
1	C	104	U
1	C	109	A
1	C	111	G
1	C	112	U
1	C	116	A
1	C	118	A
1	C	122	A
1	C	131	A

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Mol	Chain	Res	Type
1	C	132	G
1	C	139	A
1	C	142	G
1	C	145	A
1	C	146	C
1	C	148	C
1	C	149	U
1	C	150	U
1	C	157	A
1	C	158	G
1	C	165	A
1	C	170	A
1	C	171	C
1	C	177	C
1	C	179	U
1	C	180	U
1	C	181	G
1	C	182	C
1	C	183	A
1	C	184	G
1	C	185	A
1	C	186	G
1	C	196	A
1	C	197	G
1	C	198	U
1	C	201	G
1	C	204	A
1	C	205	G
1	C	209	A
1	C	212	A
1	C	213	A
1	C	215	A
1	C	216	A
1	C	218	A
1	C	222	C
1	C	223	A
1	C	224	U
1	C	225	A
1	C	226	G
1	C	233	A
1	C	234	U
1	C	235	G

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Mol	Chain	Res	Type
1	C	244	A
1	C	254	U
1	C	266	A
1	C	279	A
1	C	282	U
1	C	283	G
1	C	284	A
1	C	287	G
1	C	290	U
1	C	295	A
1	C	296	A
1	C	302	A
1	C	309	G
1	C	312	A
1	C	313	C
1	C	314	C
1	C	316	U
1	C	317	U
1	C	318	U
1	C	321	G
1	C	325	A
1	C	326	G
1	C	332	G
1	C	337	G
1	C	338	G
1	C	339	U
1	C	341	G
1	C	342	U
1	C	343	G
1	C	344	C
1	C	349	A
1	C	350	U
1	C	352	A
1	C	354	C
1	C	355	C
1	C	358	U
1	C	360	A
1	C	361	U
1	C	362	A
1	C	364	A
1	C	365	G
1	C	366	U

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Mol	Chain	Res	Type
1	C	367	G
1	C	368	U
1	C	369	A
1	C	370	C
1	C	373	G
1	C	376	C
1	C	377	C
1	C	382	G
1	C	383	A
1	C	385	G
1	C	386	A
1	C	389	U
1	C	390	A
1	C	392	A
1	C	396	G
1	C	397	G
1	C	398	A
1	C	400	U
1	C	404	G
1	C	407	G
1	C	408	U
1	C	409	A
1	C	410	G
1	C	412	G
1	C	413	A
1	C	418	A
1	C	419	C
1	C	423	G
1	C	424	G
1	C	425	G
1	C	428	G
1	C	434	U
1	C	435	A
1	C	446	C
1	C	447	A
1	C	450	A
1	C	451	G
1	C	461	C
1	C	463	U
1	C	464	G
1	C	466	G
1	C	471	A

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Mol	Chain	Res	Type
1	C	472	C
1	C	474	G
1	C	476	U
1	C	483	A
1	C	485	C
1	C	486	C
1	C	488	C
1	C	493	A
1	C	494	A
1	C	540	A
1	C	541	A
1	C	542	A
1	C	543	U
1	C	545	A
1	C	546	G
1	C	548	A
1	C	549	A
1	C	550	A
1	C	552	G
1	C	553	U
1	C	560	C
1	C	562	G
1	C	564	U
1	C	566	U
1	C	567	G
1	C	569	C
1	C	572	A
1	C	573	A
1	C	582	A
1	C	583	C
1	C	584	A
1	C	586	A
1	C	587	G
1	C	589	A
1	C	591	U
1	C	594	G
1	C	597	G
1	C	598	U
1	C	599	U
1	C	621	G
1	C	624	G
1	C	625	A

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Mol	Chain	Res	Type
1	C	630	G
1	C	631	A
1	C	633	U
1	C	640	A
1	C	642	A
1	C	644	G
1	C	645	U
1	C	646	U
1	C	650	A
1	C	656	G
1	C	661	U
1	C	662	G
1	C	663	U
1	C	664	G
1	C	665	A
1	C	666	A
1	C	667	U
1	C	669	U
1	C	674	G
1	C	676	C
1	C	677	A
1	C	678	G
1	C	680	G
1	C	681	U
1	C	683	G
1	C	693	A
1	C	694	G
1	C	715	A
1	C	716	C
1	C	719	A
1	C	720	A
1	C	722	G
1	C	726	G
1	C	729	U
1	C	730	C
1	C	731	A
1	C	733	U
1	C	734	U
1	C	735	A
1	C	736	A
1	C	749	G
1	C	759	U

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Mol	Chain	Res	Type
1	C	760	C
1	C	764	A
1	C	765	A
1	C	766	A
1	C	767	G
1	C	771	G
1	C	776	A
1	C	787	U
1	C	789	G
1	C	790	A
1	C	791	U
1	C	792	A
1	C	801	A
1	C	802	A
1	C	803	A
1	C	804	G
1	C	805	A
1	C	810	U
1	C	813	A
1	C	814	A
1	C	816	A
1	C	817	U
1	C	818	G
1	C	820	U
1	C	821	G
1	C	823	A
1	C	826	C
1	C	828	C
1	C	830	G
1	C	831	C
1	D	16	G
1	D	18	C
1	D	20	U
1	D	21	C
1	D	22	A
1	D	23	A
1	D	30	U
1	D	31	A
1	D	37	G
1	D	44	A
1	D	47	G
1	D	50	G

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Mol	Chain	Res	Type
1	D	51	A
1	D	52	A
1	D	53	U
1	D	54	A
1	D	57	A
1	D	58	A
1	D	59	G
1	D	65	G
1	D	66	C
1	D	75	G
1	D	82	U
1	D	84	U
1	D	85	U
1	D	86	G
1	D	87	U
1	D	89	A
1	D	90	A
1	D	103	G
1	D	104	U
1	D	109	A
1	D	111	G
1	D	112	U
1	D	116	A
1	D	118	A
1	D	122	A
1	D	131	A
1	D	132	G
1	D	139	A
1	D	142	G
1	D	145	A
1	D	146	C
1	D	148	C
1	D	149	U
1	D	150	U
1	D	157	A
1	D	158	G
1	D	165	A
1	D	166	G
1	D	170	A
1	D	171	C
1	D	177	C
1	D	179	U

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Mol	Chain	Res	Type
1	D	180	U
1	D	181	G
1	D	182	C
1	D	183	A
1	D	184	G
1	D	185	A
1	D	186	G
1	D	196	A
1	D	197	G
1	D	198	U
1	D	201	G
1	D	204	A
1	D	205	G
1	D	209	A
1	D	212	A
1	D	213	A
1	D	215	A
1	D	216	A
1	D	218	A
1	D	222	C
1	D	223	A
1	D	224	U
1	D	225	A
1	D	226	G
1	D	233	A
1	D	234	U
1	D	235	G
1	D	244	A
1	D	254	U
1	D	266	A
1	D	279	A
1	D	282	U
1	D	283	G
1	D	284	A
1	D	287	G
1	D	290	U
1	D	295	A
1	D	296	A
1	D	302	A
1	D	309	G
1	D	312	A
1	D	313	C

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Mol	Chain	Res	Type
1	D	314	C
1	D	316	U
1	D	317	U
1	D	318	U
1	D	321	G
1	D	325	A
1	D	326	G
1	D	332	G
1	D	337	G
1	D	338	G
1	D	339	U
1	D	341	G
1	D	342	U
1	D	343	G
1	D	344	C
1	D	349	A
1	D	350	U
1	D	352	A
1	D	354	C
1	D	355	C
1	D	358	U
1	D	360	A
1	D	361	U
1	D	362	A
1	D	364	A
1	D	365	G
1	D	366	U
1	D	367	G
1	D	368	U
1	D	369	A
1	D	370	C
1	D	373	G
1	D	376	C
1	D	377	C
1	D	382	G
1	D	383	A
1	D	385	G
1	D	386	A
1	D	389	U
1	D	390	A
1	D	392	A
1	D	396	G

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Mol	Chain	Res	Type
1	D	397	G
1	D	398	A
1	D	400	U
1	D	404	G
1	D	407	G
1	D	408	U
1	D	409	A
1	D	410	G
1	D	412	G
1	D	413	A
1	D	418	A
1	D	419	C
1	D	423	G
1	D	424	G
1	D	425	G
1	D	428	G
1	D	434	U
1	D	435	A
1	D	446	C
1	D	447	A
1	D	450	A
1	D	451	G
1	D	461	C
1	D	463	U
1	D	464	G
1	D	466	G
1	D	471	A
1	D	472	C
1	D	474	G
1	D	476	U
1	D	483	A
1	D	485	C
1	D	486	C
1	D	488	C
1	D	493	A
1	D	494	A
1	D	540	A
1	D	541	A
1	D	542	A
1	D	543	U
1	D	545	A
1	D	546	G

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Mol	Chain	Res	Type
1	D	548	A
1	D	549	A
1	D	550	A
1	D	552	G
1	D	553	U
1	D	560	C
1	D	562	G
1	D	564	U
1	D	566	U
1	D	567	G
1	D	569	C
1	D	572	A
1	D	573	A
1	D	582	A
1	D	583	C
1	D	584	A
1	D	586	A
1	D	587	G
1	D	589	A
1	D	591	U
1	D	594	G
1	D	597	G
1	D	598	U
1	D	599	U
1	D	621	G
1	D	624	G
1	D	625	A
1	D	630	G
1	D	631	A
1	D	633	U
1	D	640	A
1	D	642	A
1	D	644	G
1	D	645	U
1	D	646	U
1	D	650	A
1	D	656	G
1	D	661	U
1	D	662	G
1	D	663	U
1	D	664	G
1	D	665	A

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Mol	Chain	Res	Type
1	D	666	A
1	D	667	U
1	D	669	U
1	D	674	G
1	D	676	C
1	D	677	A
1	D	678	G
1	D	680	G
1	D	681	U
1	D	683	G
1	D	693	A
1	D	694	G
1	D	715	A
1	D	716	C
1	D	719	A
1	D	720	A
1	D	722	G
1	D	726	G
1	D	729	U
1	D	730	C
1	D	731	A
1	D	733	U
1	D	734	U
1	D	735	A
1	D	736	A
1	D	749	G
1	D	759	U
1	D	760	C
1	D	764	A
1	D	765	A
1	D	766	A
1	D	767	G
1	D	771	G
1	D	776	A
1	D	787	U
1	D	789	G
1	D	790	A
1	D	791	U
1	D	792	A
1	D	801	A
1	D	802	A
1	D	803	A

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Mol	Chain	Res	Type
1	D	804	G
1	D	805	A
1	D	810	U
1	D	813	A
1	D	814	A
1	D	816	A
1	D	817	U
1	D	818	G
1	D	820	U
1	D	821	G
1	D	823	A
1	D	826	C
1	D	828	C
1	D	830	G
1	D	831	C
1	E	16	G
1	E	18	C
1	E	20	U
1	E	21	C
1	E	22	A
1	E	23	A
1	E	30	U
1	E	31	A
1	E	37	G
1	E	44	A
1	E	47	G
1	E	50	G
1	E	51	A
1	E	52	A
1	E	53	U
1	E	54	A
1	E	57	A
1	E	58	A
1	E	59	G
1	E	65	G
1	E	66	C
1	E	75	G
1	E	82	U
1	E	84	U
1	E	85	U
1	E	86	G
1	E	87	U

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Mol	Chain	Res	Type
1	E	89	A
1	E	90	A
1	E	103	G
1	E	104	U
1	E	109	A
1	E	111	G
1	E	112	U
1	E	116	A
1	E	118	A
1	E	122	A
1	E	131	A
1	E	132	G
1	E	139	A
1	E	142	G
1	E	145	A
1	E	146	C
1	E	148	C
1	E	149	U
1	E	150	U
1	E	157	A
1	E	158	G
1	E	165	A
1	E	170	A
1	E	171	C
1	E	177	C
1	E	179	U
1	E	180	U
1	E	181	G
1	E	182	C
1	E	183	A
1	E	184	G
1	E	185	A
1	E	186	G
1	E	196	A
1	E	197	G
1	E	198	U
1	E	201	G
1	E	204	A
1	E	205	G
1	E	209	A
1	E	212	A
1	E	213	A

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Mol	Chain	Res	Type
1	E	215	A
1	E	216	A
1	E	218	A
1	E	222	C
1	E	223	A
1	E	224	U
1	E	225	A
1	E	226	G
1	E	233	A
1	E	234	U
1	E	235	G
1	E	244	A
1	E	254	U
1	E	266	A
1	E	279	A
1	E	282	U
1	E	283	G
1	E	284	A
1	E	287	G
1	E	290	U
1	E	295	A
1	E	296	A
1	E	302	A
1	E	309	G
1	E	312	A
1	E	313	C
1	E	314	C
1	E	316	U
1	E	317	U
1	E	318	U
1	E	321	G
1	E	325	A
1	E	326	G
1	E	332	G
1	E	337	G
1	E	338	G
1	E	339	U
1	E	341	G
1	E	342	U
1	E	343	G
1	E	344	C
1	E	349	A

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Mol	Chain	Res	Type
1	E	350	U
1	E	352	A
1	E	354	C
1	E	355	C
1	E	358	U
1	E	360	A
1	E	361	U
1	E	362	A
1	E	364	A
1	E	365	G
1	E	366	U
1	E	367	G
1	E	368	U
1	E	369	A
1	E	370	C
1	E	376	C
1	E	377	C
1	E	382	G
1	E	383	A
1	E	385	G
1	E	386	A
1	E	389	U
1	E	390	A
1	E	392	A
1	E	396	G
1	E	397	G
1	E	398	A
1	E	400	U
1	E	404	G
1	E	407	G
1	E	408	U
1	E	409	A
1	E	410	G
1	E	412	G
1	E	413	A
1	E	418	A
1	E	419	C
1	E	423	G
1	E	424	G
1	E	425	G
1	E	428	G
1	E	434	U

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Mol	Chain	Res	Type
1	E	435	A
1	E	446	C
1	E	447	A
1	E	450	A
1	E	451	G
1	E	461	C
1	E	463	U
1	E	464	G
1	E	466	G
1	E	471	A
1	E	472	C
1	E	474	G
1	E	476	U
1	E	483	A
1	E	485	C
1	E	486	C
1	E	488	C
1	E	493	A
1	E	494	A
1	E	540	A
1	E	541	A
1	E	542	A
1	E	543	U
1	E	545	A
1	E	546	G
1	E	548	A
1	E	549	A
1	E	550	A
1	E	552	G
1	E	553	U
1	E	560	C
1	E	562	G
1	E	564	U
1	E	566	U
1	E	567	G
1	E	569	C
1	E	572	A
1	E	573	A
1	E	582	A
1	E	583	C
1	E	584	A
1	E	586	A

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Mol	Chain	Res	Type
1	E	587	G
1	E	589	A
1	E	591	U
1	E	594	G
1	E	597	G
1	E	598	U
1	E	599	U
1	E	621	G
1	E	624	G
1	E	625	A
1	E	630	G
1	E	631	A
1	E	633	U
1	E	640	A
1	E	642	A
1	E	644	G
1	E	645	U
1	E	646	U
1	E	650	A
1	E	656	G
1	E	661	U
1	E	662	G
1	E	663	U
1	E	664	G
1	E	665	A
1	E	666	A
1	E	667	U
1	E	669	U
1	E	674	G
1	E	676	C
1	E	677	A
1	E	678	G
1	E	680	G
1	E	681	U
1	E	683	G
1	E	693	A
1	E	694	G
1	E	715	A
1	E	716	C
1	E	719	A
1	E	720	A
1	E	722	G

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Mol	Chain	Res	Type
1	E	726	G
1	E	729	U
1	E	730	C
1	E	731	A
1	E	733	U
1	E	734	U
1	E	735	A
1	E	736	A
1	E	749	G
1	E	759	U
1	E	760	C
1	E	764	A
1	E	765	A
1	E	766	A
1	E	767	G
1	E	771	G
1	E	776	A
1	E	787	U
1	E	789	G
1	E	790	A
1	E	791	U
1	E	792	A
1	E	801	A
1	E	802	A
1	E	803	A
1	E	804	G
1	E	805	A
1	E	810	U
1	E	813	A
1	E	814	A
1	E	816	A
1	E	817	U
1	E	818	G
1	E	820	U
1	E	821	G
1	E	823	A
1	E	826	C
1	E	828	C
1	E	830	G
1	E	831	C
1	F	16	G
1	F	18	C

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Mol	Chain	Res	Type
1	F	20	U
1	F	21	C
1	F	22	A
1	F	23	A
1	F	30	U
1	F	31	A
1	F	37	G
1	F	44	A
1	F	47	G
1	F	50	G
1	F	51	A
1	F	52	A
1	F	53	U
1	F	54	A
1	F	57	A
1	F	58	A
1	F	59	G
1	F	65	G
1	F	66	C
1	F	75	G
1	F	82	U
1	F	84	U
1	F	85	U
1	F	86	G
1	F	87	U
1	F	89	A
1	F	90	A
1	F	103	G
1	F	104	U
1	F	109	A
1	F	111	G
1	F	112	U
1	F	116	A
1	F	118	A
1	F	122	A
1	F	131	A
1	F	132	G
1	F	139	A
1	F	142	G
1	F	145	A
1	F	146	C
1	F	148	C

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Mol	Chain	Res	Type
1	F	149	U
1	F	150	U
1	F	157	A
1	F	158	G
1	F	165	A
1	F	170	A
1	F	171	C
1	F	177	C
1	F	179	U
1	F	180	U
1	F	181	G
1	F	182	C
1	F	183	A
1	F	184	G
1	F	185	A
1	F	186	G
1	F	196	A
1	F	197	G
1	F	198	U
1	F	201	G
1	F	204	A
1	F	205	G
1	F	209	A
1	F	212	A
1	F	213	A
1	F	215	A
1	F	216	A
1	F	218	A
1	F	222	C
1	F	223	A
1	F	224	U
1	F	225	A
1	F	226	G
1	F	233	A
1	F	234	U
1	F	235	G
1	F	244	A
1	F	254	U
1	F	266	A
1	F	279	A
1	F	282	U
1	F	283	G

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Mol	Chain	Res	Type
1	F	284	A
1	F	287	G
1	F	290	U
1	F	295	A
1	F	296	A
1	F	302	A
1	F	309	G
1	F	312	A
1	F	313	C
1	F	314	C
1	F	316	U
1	F	317	U
1	F	318	U
1	F	321	G
1	F	325	A
1	F	326	G
1	F	332	G
1	F	337	G
1	F	338	G
1	F	339	U
1	F	341	G
1	F	342	U
1	F	343	G
1	F	344	C
1	F	349	A
1	F	350	U
1	F	352	A
1	F	354	C
1	F	355	C
1	F	358	U
1	F	360	A
1	F	361	U
1	F	362	A
1	F	364	A
1	F	365	G
1	F	366	U
1	F	367	G
1	F	368	U
1	F	369	A
1	F	370	C
1	F	373	G
1	F	376	C

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Mol	Chain	Res	Type
1	F	377	C
1	F	382	G
1	F	383	A
1	F	385	G
1	F	386	A
1	F	389	U
1	F	390	A
1	F	392	A
1	F	396	G
1	F	397	G
1	F	398	A
1	F	400	U
1	F	404	G
1	F	407	G
1	F	408	U
1	F	409	A
1	F	410	G
1	F	412	G
1	F	413	A
1	F	418	A
1	F	419	C
1	F	423	G
1	F	424	G
1	F	425	G
1	F	428	G
1	F	434	U
1	F	435	A
1	F	446	C
1	F	447	A
1	F	450	A
1	F	451	G
1	F	461	C
1	F	463	U
1	F	464	G
1	F	466	G
1	F	471	A
1	F	472	C
1	F	474	G
1	F	476	U
1	F	483	A
1	F	485	C
1	F	486	C

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Mol	Chain	Res	Type
1	F	488	C
1	F	493	A
1	F	494	A
1	F	540	A
1	F	541	A
1	F	542	A
1	F	543	U
1	F	545	A
1	F	546	G
1	F	548	A
1	F	549	A
1	F	550	A
1	F	552	G
1	F	553	U
1	F	560	C
1	F	562	G
1	F	564	U
1	F	566	U
1	F	567	G
1	F	569	C
1	F	572	A
1	F	573	A
1	F	582	A
1	F	583	C
1	F	584	A
1	F	586	A
1	F	587	G
1	F	589	A
1	F	591	U
1	F	594	G
1	F	597	G
1	F	598	U
1	F	599	U
1	F	621	G
1	F	624	G
1	F	625	A
1	F	630	G
1	F	631	A
1	F	633	U
1	F	640	A
1	F	642	A
1	F	644	G

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Mol	Chain	Res	Type
1	F	645	U
1	F	646	U
1	F	650	A
1	F	656	G
1	F	661	U
1	F	662	G
1	F	663	U
1	F	664	G
1	F	665	A
1	F	666	A
1	F	667	U
1	F	669	U
1	F	674	G
1	F	676	C
1	F	677	A
1	F	678	G
1	F	680	G
1	F	681	U
1	F	683	G
1	F	693	A
1	F	694	G
1	F	715	A
1	F	716	C
1	F	719	A
1	F	720	A
1	F	722	G
1	F	726	G
1	F	729	U
1	F	730	C
1	F	731	A
1	F	733	U
1	F	734	U
1	F	735	A
1	F	736	A
1	F	749	G
1	F	759	U
1	F	760	C
1	F	764	A
1	F	765	A
1	F	766	A
1	F	767	G
1	F	771	G

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Mol	Chain	Res	Type
1	F	776	A
1	F	787	U
1	F	789	G
1	F	790	A
1	F	791	U
1	F	792	A
1	F	801	A
1	F	802	A
1	F	803	A
1	F	804	G
1	F	805	A
1	F	810	U
1	F	813	A
1	F	814	A
1	F	816	A
1	F	817	U
1	F	818	G
1	F	820	U
1	F	821	G
1	F	823	A
1	F	826	C
1	F	828	C
1	F	830	G
1	F	831	C
1	H	16	G
1	H	18	C
1	H	20	U
1	H	21	C
1	H	22	A
1	H	23	A
1	H	30	U
1	H	31	A
1	H	37	G
1	H	44	A
1	H	47	G
1	H	50	G
1	H	51	A
1	H	52	A
1	H	53	U
1	H	54	A
1	H	57	A
1	H	58	A

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Mol	Chain	Res	Type
1	H	59	G
1	H	65	G
1	H	66	C
1	H	75	G
1	H	82	U
1	H	84	U
1	H	85	U
1	H	86	G
1	H	87	U
1	H	89	A
1	H	90	A
1	H	103	G
1	H	104	U
1	H	109	A
1	H	111	G
1	H	112	U
1	H	116	A
1	H	118	A
1	H	122	A
1	H	131	A
1	H	132	G
1	H	139	A
1	H	142	G
1	H	145	A
1	H	146	C
1	H	148	C
1	H	149	U
1	H	150	U
1	H	157	A
1	H	158	G
1	H	165	A
1	H	166	G
1	H	170	A
1	H	171	C
1	H	177	C
1	H	179	U
1	H	180	U
1	H	181	G
1	H	182	C
1	H	183	A
1	H	184	G
1	H	185	A

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Mol	Chain	Res	Type
1	H	186	G
1	H	196	A
1	H	197	G
1	H	198	U
1	H	201	G
1	H	204	A
1	H	205	G
1	H	209	A
1	H	212	A
1	H	213	A
1	H	215	A
1	H	216	A
1	H	218	A
1	H	222	C
1	H	223	A
1	H	224	U
1	H	225	A
1	H	226	G
1	H	233	A
1	H	234	U
1	H	235	G
1	H	244	A
1	H	254	U
1	H	266	A
1	H	279	A
1	H	282	U
1	H	283	G
1	H	284	A
1	H	287	G
1	H	290	U
1	H	295	A
1	H	296	A
1	H	302	A
1	H	309	G
1	H	312	A
1	H	313	C
1	H	314	C
1	H	316	U
1	H	317	U
1	H	318	U
1	H	321	G
1	H	325	A

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Mol	Chain	Res	Type
1	H	326	G
1	H	332	G
1	H	337	G
1	H	338	G
1	H	339	U
1	H	341	G
1	H	342	U
1	H	343	G
1	H	344	C
1	H	349	A
1	H	350	U
1	H	352	A
1	H	354	C
1	H	355	C
1	H	358	U
1	H	360	A
1	H	361	U
1	H	362	A
1	H	364	A
1	H	365	G
1	H	366	U
1	H	367	G
1	H	368	U
1	H	369	A
1	H	370	C
1	H	373	G
1	H	376	C
1	H	377	C
1	H	382	G
1	H	383	A
1	H	385	G
1	H	386	A
1	H	389	U
1	H	390	A
1	H	392	A
1	H	396	G
1	H	397	G
1	H	398	A
1	H	400	U
1	H	404	G
1	H	407	G
1	H	408	U

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Mol	Chain	Res	Type
1	H	409	A
1	H	410	G
1	H	412	G
1	H	413	A
1	H	418	A
1	H	419	C
1	H	423	G
1	H	424	G
1	H	425	G
1	H	428	G
1	H	434	U
1	H	435	A
1	H	446	C
1	H	447	A
1	H	450	A
1	H	451	G
1	H	461	C
1	H	463	U
1	H	464	G
1	H	466	G
1	H	471	A
1	H	472	C
1	H	474	G
1	H	476	U
1	H	483	A
1	H	485	C
1	H	486	C
1	H	488	C
1	H	493	A
1	H	494	A
1	H	540	A
1	H	541	A
1	H	542	A
1	H	543	U
1	H	545	A
1	H	546	G
1	H	548	A
1	H	549	A
1	H	550	A
1	H	552	G
1	H	553	U
1	H	560	C

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Mol	Chain	Res	Type
1	H	562	G
1	H	564	U
1	H	566	U
1	H	567	G
1	H	569	C
1	H	572	A
1	H	573	A
1	H	582	A
1	H	583	C
1	H	584	A
1	H	586	A
1	H	587	G
1	H	589	A
1	H	591	U
1	H	594	G
1	H	597	G
1	H	598	U
1	H	599	U
1	H	621	G
1	H	624	G
1	H	625	A
1	H	630	G
1	H	631	A
1	H	633	U
1	H	640	A
1	H	642	A
1	H	644	G
1	H	645	U
1	H	646	U
1	H	650	A
1	H	656	G
1	H	661	U
1	H	662	G
1	H	663	U
1	H	664	G
1	H	665	A
1	H	666	A
1	H	667	U
1	H	669	U
1	H	674	G
1	H	676	C
1	H	677	A

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Mol	Chain	Res	Type
1	H	678	G
1	H	680	G
1	H	681	U
1	H	683	G
1	H	693	A
1	H	694	G
1	H	715	A
1	H	716	C
1	H	719	A
1	H	720	A
1	H	722	G
1	H	726	G
1	H	729	U
1	H	730	C
1	H	731	A
1	H	733	U
1	H	734	U
1	H	735	A
1	H	736	A
1	H	749	G
1	H	759	U
1	H	760	C
1	H	764	A
1	H	765	A
1	H	766	A
1	H	767	G
1	H	771	G
1	H	776	A
1	H	787	U
1	H	789	G
1	H	790	A
1	H	791	U
1	H	792	A
1	H	801	A
1	H	802	A
1	H	803	A
1	H	804	G
1	H	805	A
1	H	810	U
1	H	813	A
1	H	814	A
1	H	816	A

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Mol	Chain	Res	Type
1	H	817	U
1	H	818	G
1	H	820	U
1	H	821	G
1	H	823	A
1	H	826	C
1	H	828	C
1	H	830	G
1	H	831	C
1	I	16	G
1	I	18	C
1	I	20	U
1	I	21	C
1	I	22	A
1	I	23	A
1	I	30	U
1	I	31	A
1	I	37	G
1	I	44	A
1	I	47	G
1	I	50	G
1	I	51	A
1	I	52	A
1	I	53	U
1	I	54	A
1	I	57	A
1	I	58	A
1	I	59	G
1	I	65	G
1	I	66	C
1	I	75	G
1	I	82	U
1	I	84	U
1	I	85	U
1	I	86	G
1	I	87	U
1	I	89	A
1	I	90	A
1	I	103	G
1	I	104	U
1	I	109	A
1	I	111	G

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Mol	Chain	Res	Type
1	I	112	U
1	I	116	A
1	I	118	A
1	I	122	A
1	I	131	A
1	I	132	G
1	I	139	A
1	I	142	G
1	I	145	A
1	I	146	C
1	I	148	C
1	I	149	U
1	I	150	U
1	I	157	A
1	I	158	G
1	I	165	A
1	I	166	G
1	I	170	A
1	I	171	C
1	I	177	C
1	I	179	U
1	I	180	U
1	I	181	G
1	I	182	C
1	I	183	A
1	I	184	G
1	I	185	A
1	I	186	G
1	I	196	A
1	I	197	G
1	I	198	U
1	I	201	G
1	I	204	A
1	I	205	G
1	I	209	A
1	I	212	A
1	I	213	A
1	I	215	A
1	I	216	A
1	I	218	A
1	I	222	C
1	I	223	A

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Mol	Chain	Res	Type
1	I	224	U
1	I	225	A
1	I	226	G
1	I	233	A
1	I	234	U
1	I	235	G
1	I	244	A
1	I	254	U
1	I	266	A
1	I	279	A
1	I	282	U
1	I	283	G
1	I	284	A
1	I	287	G
1	I	290	U
1	I	295	A
1	I	296	A
1	I	302	A
1	I	309	G
1	I	312	A
1	I	313	C
1	I	314	C
1	I	316	U
1	I	317	U
1	I	318	U
1	I	321	G
1	I	325	A
1	I	326	G
1	I	332	G
1	I	337	G
1	I	338	G
1	I	339	U
1	I	341	G
1	I	342	U
1	I	343	G
1	I	344	C
1	I	349	A
1	I	350	U
1	I	352	A
1	I	354	C
1	I	355	C
1	I	358	U

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Mol	Chain	Res	Type
1	I	360	A
1	I	361	U
1	I	362	A
1	I	364	A
1	I	365	G
1	I	366	U
1	I	367	G
1	I	368	U
1	I	369	A
1	I	370	C
1	I	373	G
1	I	376	C
1	I	377	C
1	I	382	G
1	I	383	A
1	I	385	G
1	I	386	A
1	I	389	U
1	I	390	A
1	I	392	A
1	I	396	G
1	I	397	G
1	I	398	A
1	I	400	U
1	I	404	G
1	I	407	G
1	I	408	U
1	I	409	A
1	I	410	G
1	I	412	G
1	I	413	A
1	I	418	A
1	I	419	C
1	I	423	G
1	I	424	G
1	I	425	G
1	I	428	G
1	I	434	U
1	I	435	A
1	I	446	C
1	I	447	A
1	I	450	A

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Mol	Chain	Res	Type
1	I	451	G
1	I	461	C
1	I	463	U
1	I	464	G
1	I	466	G
1	I	471	A
1	I	472	C
1	I	474	G
1	I	476	U
1	I	483	A
1	I	485	C
1	I	486	C
1	I	488	C
1	I	493	A
1	I	494	A
1	I	540	A
1	I	541	A
1	I	542	A
1	I	543	U
1	I	545	A
1	I	546	G
1	I	548	A
1	I	549	A
1	I	550	A
1	I	552	G
1	I	553	U
1	I	560	C
1	I	562	G
1	I	564	U
1	I	566	U
1	I	567	G
1	I	569	C
1	I	572	A
1	I	573	A
1	I	582	A
1	I	583	C
1	I	584	A
1	I	586	A
1	I	587	G
1	I	589	A
1	I	591	U
1	I	594	G

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Mol	Chain	Res	Type
1	I	597	G
1	I	598	U
1	I	599	U
1	I	621	G
1	I	624	G
1	I	625	A
1	I	630	G
1	I	631	A
1	I	633	U
1	I	640	A
1	I	642	A
1	I	644	G
1	I	645	U
1	I	646	U
1	I	650	A
1	I	656	G
1	I	661	U
1	I	662	G
1	I	663	U
1	I	664	G
1	I	665	A
1	I	666	A
1	I	667	U
1	I	669	U
1	I	674	G
1	I	676	C
1	I	677	A
1	I	678	G
1	I	680	G
1	I	681	U
1	I	683	G
1	I	693	A
1	I	694	G
1	I	715	A
1	I	716	C
1	I	719	A
1	I	720	A
1	I	722	G
1	I	726	G
1	I	729	U
1	I	730	C
1	I	731	A

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Mol	Chain	Res	Type
1	I	733	U
1	I	734	U
1	I	735	A
1	I	736	A
1	I	749	G
1	I	759	U
1	I	760	C
1	I	764	A
1	I	765	A
1	I	766	A
1	I	767	G
1	I	771	G
1	I	776	A
1	I	787	U
1	I	789	G
1	I	790	A
1	I	791	U
1	I	792	A
1	I	801	A
1	I	802	A
1	I	803	A
1	I	804	G
1	I	805	A
1	I	810	U
1	I	813	A
1	I	814	A
1	I	816	A
1	I	817	U
1	I	818	G
1	I	820	U
1	I	821	G
1	I	823	A
1	I	826	C
1	I	828	C
1	I	830	G
1	I	831	C
1	J	16	G
1	J	18	C
1	J	20	U
1	J	21	C
1	J	22	A
1	J	23	A

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Mol	Chain	Res	Type
1	J	30	U
1	J	31	A
1	J	37	G
1	J	44	A
1	J	47	G
1	J	50	G
1	J	51	A
1	J	52	A
1	J	53	U
1	J	54	A
1	J	57	A
1	J	58	A
1	J	59	G
1	J	65	G
1	J	66	C
1	J	75	G
1	J	82	U
1	J	84	U
1	J	85	U
1	J	86	G
1	J	87	U
1	J	89	A
1	J	90	A
1	J	103	G
1	J	104	U
1	J	109	A
1	J	111	G
1	J	112	U
1	J	116	A
1	J	118	A
1	J	122	A
1	J	131	A
1	J	132	G
1	J	139	A
1	J	142	G
1	J	145	A
1	J	146	C
1	J	148	C
1	J	149	U
1	J	150	U
1	J	157	A
1	J	158	G

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Mol	Chain	Res	Type
1	J	165	A
1	J	166	G
1	J	170	A
1	J	171	C
1	J	177	C
1	J	179	U
1	J	180	U
1	J	181	G
1	J	182	C
1	J	183	A
1	J	184	G
1	J	185	A
1	J	186	G
1	J	196	A
1	J	197	G
1	J	198	U
1	J	201	G
1	J	204	A
1	J	205	G
1	J	209	A
1	J	212	A
1	J	213	A
1	J	215	A
1	J	216	A
1	J	218	A
1	J	222	C
1	J	223	A
1	J	224	U
1	J	225	A
1	J	226	G
1	J	233	A
1	J	234	U
1	J	235	G
1	J	244	A
1	J	254	U
1	J	266	A
1	J	279	A
1	J	282	U
1	J	283	G
1	J	284	A
1	J	287	G
1	J	290	U

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Mol	Chain	Res	Type
1	J	295	A
1	J	296	A
1	J	302	A
1	J	309	G
1	J	312	A
1	J	313	C
1	J	314	C
1	J	316	U
1	J	317	U
1	J	318	U
1	J	321	G
1	J	325	A
1	J	326	G
1	J	332	G
1	J	337	G
1	J	338	G
1	J	339	U
1	J	341	G
1	J	342	U
1	J	343	G
1	J	344	C
1	J	349	A
1	J	350	U
1	J	352	A
1	J	354	C
1	J	355	C
1	J	358	U
1	J	360	A
1	J	361	U
1	J	362	A
1	J	364	A
1	J	365	G
1	J	366	U
1	J	367	G
1	J	368	U
1	J	369	A
1	J	370	C
1	J	373	G
1	J	376	C
1	J	377	C
1	J	382	G
1	J	383	A

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Mol	Chain	Res	Type
1	J	385	G
1	J	386	A
1	J	389	U
1	J	390	A
1	J	392	A
1	J	396	G
1	J	397	G
1	J	398	A
1	J	400	U
1	J	404	G
1	J	407	G
1	J	408	U
1	J	409	A
1	J	410	G
1	J	412	G
1	J	413	A
1	J	418	A
1	J	419	C
1	J	423	G
1	J	424	G
1	J	425	G
1	J	428	G
1	J	434	U
1	J	435	A
1	J	446	C
1	J	447	A
1	J	450	A
1	J	451	G
1	J	461	C
1	J	463	U
1	J	464	G
1	J	466	G
1	J	471	A
1	J	472	C
1	J	474	G
1	J	476	U
1	J	483	A
1	J	485	C
1	J	486	C
1	J	488	C
1	J	493	A
1	J	494	A

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Mol	Chain	Res	Type
1	J	540	A
1	J	541	A
1	J	542	A
1	J	543	U
1	J	545	A
1	J	546	G
1	J	548	A
1	J	549	A
1	J	550	A
1	J	552	G
1	J	553	U
1	J	560	C
1	J	562	G
1	J	564	U
1	J	566	U
1	J	567	G
1	J	569	C
1	J	572	A
1	J	573	A
1	J	582	A
1	J	583	C
1	J	584	A
1	J	586	A
1	J	587	G
1	J	589	A
1	J	591	U
1	J	594	G
1	J	597	G
1	J	598	U
1	J	599	U
1	J	621	G
1	J	624	G
1	J	625	A
1	J	630	G
1	J	631	A
1	J	633	U
1	J	640	A
1	J	642	A
1	J	644	G
1	J	645	U
1	J	646	U
1	J	650	A

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Mol	Chain	Res	Type
1	J	656	G
1	J	661	U
1	J	662	G
1	J	663	U
1	J	664	G
1	J	665	A
1	J	666	A
1	J	667	U
1	J	669	U
1	J	674	G
1	J	676	C
1	J	677	A
1	J	678	G
1	J	680	G
1	J	681	U
1	J	683	G
1	J	693	A
1	J	694	G
1	J	715	A
1	J	716	C
1	J	719	A
1	J	720	A
1	J	722	G
1	J	726	G
1	J	729	U
1	J	730	C
1	J	731	A
1	J	733	U
1	J	734	U
1	J	735	A
1	J	736	A
1	J	749	G
1	J	759	U
1	J	760	C
1	J	764	A
1	J	765	A
1	J	766	A
1	J	767	G
1	J	771	G
1	J	776	A
1	J	787	U
1	J	789	G

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Mol	Chain	Res	Type
1	J	790	A
1	J	791	U
1	J	792	A
1	J	801	A
1	J	802	A
1	J	803	A
1	J	804	G
1	J	805	A
1	J	810	U
1	J	813	A
1	J	814	A
1	J	816	A
1	J	817	U
1	J	818	G
1	J	820	U
1	J	821	G
1	J	823	A
1	J	826	C
1	J	828	C
1	J	830	G
1	J	831	C
1	K	16	G
1	K	18	C
1	K	20	U
1	K	21	C
1	K	22	A
1	K	23	A
1	K	30	U
1	K	31	A
1	K	37	G
1	K	44	A
1	K	47	G
1	K	50	G
1	K	51	A
1	K	52	A
1	K	53	U
1	K	54	A
1	K	57	A
1	K	58	A
1	K	59	G
1	K	65	G
1	K	66	C

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Mol	Chain	Res	Type
1	K	75	G
1	K	82	U
1	K	84	U
1	K	85	U
1	K	86	G
1	K	87	U
1	K	89	A
1	K	90	A
1	K	103	G
1	K	104	U
1	K	109	A
1	K	111	G
1	K	112	U
1	K	116	A
1	K	118	A
1	K	122	A
1	K	131	A
1	K	132	G
1	K	139	A
1	K	142	G
1	K	145	A
1	K	146	C
1	K	148	C
1	K	149	U
1	K	150	U
1	K	157	A
1	K	158	G
1	K	165	A
1	K	166	G
1	K	170	A
1	K	171	C
1	K	177	C
1	K	179	U
1	K	180	U
1	K	181	G
1	K	182	C
1	K	183	A
1	K	184	G
1	K	185	A
1	K	186	G
1	K	196	A
1	K	197	G

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Mol	Chain	Res	Type
1	K	198	U
1	K	201	G
1	K	204	A
1	K	205	G
1	K	209	A
1	K	212	A
1	K	213	A
1	K	215	A
1	K	216	A
1	K	218	A
1	K	222	C
1	K	223	A
1	K	224	U
1	K	225	A
1	K	226	G
1	K	233	A
1	K	234	U
1	K	235	G
1	K	244	A
1	K	254	U
1	K	266	A
1	K	279	A
1	K	282	U
1	K	283	G
1	K	284	A
1	K	287	G
1	K	290	U
1	K	295	A
1	K	296	A
1	K	302	A
1	K	309	G
1	K	312	A
1	K	313	C
1	K	314	C
1	K	316	U
1	K	317	U
1	K	318	U
1	K	321	G
1	K	325	A
1	K	326	G
1	K	332	G
1	K	337	G

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Mol	Chain	Res	Type
1	K	338	G
1	K	339	U
1	K	341	G
1	K	342	U
1	K	343	G
1	K	344	C
1	K	349	A
1	K	350	U
1	K	352	A
1	K	354	C
1	K	355	C
1	K	358	U
1	K	360	A
1	K	361	U
1	K	362	A
1	K	364	A
1	K	365	G
1	K	366	U
1	K	367	G
1	K	368	U
1	K	369	A
1	K	370	C
1	K	373	G
1	K	376	C
1	K	377	C
1	K	382	G
1	K	383	A
1	K	385	G
1	K	386	A
1	K	389	U
1	K	390	A
1	K	392	A
1	K	396	G
1	K	397	G
1	K	398	A
1	K	400	U
1	K	404	G
1	K	407	G
1	K	408	U
1	K	409	A
1	K	410	G
1	K	412	G

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Mol	Chain	Res	Type
1	K	413	A
1	K	418	A
1	K	419	C
1	K	423	G
1	K	424	G
1	K	425	G
1	K	428	G
1	K	434	U
1	K	435	A
1	K	446	C
1	K	447	A
1	K	450	A
1	K	451	G
1	K	461	C
1	K	463	U
1	K	464	G
1	K	466	G
1	K	471	A
1	K	472	C
1	K	474	G
1	K	476	U
1	K	483	A
1	K	485	C
1	K	486	C
1	K	488	C
1	K	493	A
1	K	494	A
1	K	540	A
1	K	541	A
1	K	542	A
1	K	543	U
1	K	545	A
1	K	546	G
1	K	548	A
1	K	549	A
1	K	550	A
1	K	552	G
1	K	553	U
1	K	560	C
1	K	562	G
1	K	564	U
1	K	566	U

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Mol	Chain	Res	Type
1	K	567	G
1	K	569	C
1	K	572	A
1	K	573	A
1	K	582	A
1	K	583	C
1	K	584	A
1	K	586	A
1	K	587	G
1	K	589	A
1	K	591	U
1	K	594	G
1	K	597	G
1	K	598	U
1	K	599	U
1	K	621	G
1	K	624	G
1	K	625	A
1	K	630	G
1	K	631	A
1	K	633	U
1	K	640	A
1	K	642	A
1	K	644	G
1	K	645	U
1	K	646	U
1	K	650	A
1	K	656	G
1	K	661	U
1	K	662	G
1	K	663	U
1	K	664	G
1	K	665	A
1	K	666	A
1	K	667	U
1	K	669	U
1	K	674	G
1	K	676	C
1	K	677	A
1	K	678	G
1	K	680	G
1	K	681	U

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Mol	Chain	Res	Type
1	K	683	G
1	K	693	A
1	K	694	G
1	K	715	A
1	K	716	C
1	K	719	A
1	K	720	A
1	K	722	G
1	K	726	G
1	K	729	U
1	K	730	C
1	K	731	A
1	K	733	U
1	K	734	U
1	K	735	A
1	K	736	A
1	K	749	G
1	K	759	U
1	K	760	C
1	K	764	A
1	K	765	A
1	K	766	A
1	K	767	G
1	K	771	G
1	K	776	A
1	K	787	U
1	K	789	G
1	K	790	A
1	K	791	U
1	K	792	A
1	K	801	A
1	K	802	A
1	K	803	A
1	K	804	G
1	K	805	A
1	K	810	U
1	K	813	A
1	K	814	A
1	K	816	A
1	K	817	U
1	K	818	G
1	K	820	U

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Mol	Chain	Res	Type
1	K	821	G
1	K	823	A
1	K	826	C
1	K	828	C
1	K	830	G
1	K	831	C
1	L	16	G
1	L	18	C
1	L	20	U
1	L	21	C
1	L	22	A
1	L	23	A
1	L	30	U
1	L	31	A
1	L	37	G
1	L	44	A
1	L	47	G
1	L	50	G
1	L	51	A
1	L	52	A
1	L	53	U
1	L	54	A
1	L	57	A
1	L	58	A
1	L	59	G
1	L	65	G
1	L	66	C
1	L	75	G
1	L	82	U
1	L	84	U
1	L	85	U
1	L	86	G
1	L	87	U
1	L	89	A
1	L	90	A
1	L	103	G
1	L	104	U
1	L	109	A
1	L	111	G
1	L	112	U
1	L	116	A
1	L	118	A

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Mol	Chain	Res	Type
1	L	122	A
1	L	131	A
1	L	132	G
1	L	139	A
1	L	142	G
1	L	145	A
1	L	146	C
1	L	148	C
1	L	149	U
1	L	150	U
1	L	157	A
1	L	158	G
1	L	165	A
1	L	166	G
1	L	170	A
1	L	171	C
1	L	177	C
1	L	179	U
1	L	180	U
1	L	181	G
1	L	182	C
1	L	183	A
1	L	184	G
1	L	185	A
1	L	186	G
1	L	196	A
1	L	197	G
1	L	198	U
1	L	201	G
1	L	204	A
1	L	205	G
1	L	209	A
1	L	212	A
1	L	213	A
1	L	215	A
1	L	216	A
1	L	218	A
1	L	222	C
1	L	223	A
1	L	224	U
1	L	225	A
1	L	226	G

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Mol	Chain	Res	Type
1	L	233	A
1	L	234	U
1	L	235	G
1	L	244	A
1	L	254	U
1	L	266	A
1	L	279	A
1	L	282	U
1	L	283	G
1	L	284	A
1	L	287	G
1	L	290	U
1	L	295	A
1	L	296	A
1	L	302	A
1	L	309	G
1	L	312	A
1	L	313	C
1	L	314	C
1	L	316	U
1	L	317	U
1	L	318	U
1	L	321	G
1	L	325	A
1	L	326	G
1	L	332	G
1	L	337	G
1	L	338	G
1	L	339	U
1	L	341	G
1	L	342	U
1	L	343	G
1	L	344	C
1	L	349	A
1	L	350	U
1	L	352	A
1	L	354	C
1	L	355	C
1	L	358	U
1	L	360	A
1	L	361	U
1	L	362	A

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Mol	Chain	Res	Type
1	L	364	A
1	L	365	G
1	L	366	U
1	L	367	G
1	L	368	U
1	L	369	A
1	L	370	C
1	L	373	G
1	L	376	C
1	L	377	C
1	L	382	G
1	L	383	A
1	L	385	G
1	L	386	A
1	L	389	U
1	L	390	A
1	L	392	A
1	L	396	G
1	L	397	G
1	L	398	A
1	L	400	U
1	L	404	G
1	L	407	G
1	L	408	U
1	L	409	A
1	L	410	G
1	L	412	G
1	L	413	A
1	L	418	A
1	L	419	C
1	L	423	G
1	L	424	G
1	L	425	G
1	L	428	G
1	L	434	U
1	L	435	A
1	L	446	C
1	L	447	A
1	L	450	A
1	L	451	G
1	L	461	C
1	L	463	U

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Mol	Chain	Res	Type
1	L	464	G
1	L	466	G
1	L	471	A
1	L	472	C
1	L	474	G
1	L	476	U
1	L	483	A
1	L	485	C
1	L	486	C
1	L	488	C
1	L	493	A
1	L	494	A
1	L	540	A
1	L	541	A
1	L	542	A
1	L	543	U
1	L	545	A
1	L	546	G
1	L	548	A
1	L	549	A
1	L	550	A
1	L	552	G
1	L	553	U
1	L	560	C
1	L	562	G
1	L	564	U
1	L	566	U
1	L	567	G
1	L	569	C
1	L	572	A
1	L	573	A
1	L	582	A
1	L	583	C
1	L	584	A
1	L	586	A
1	L	587	G
1	L	589	A
1	L	591	U
1	L	594	G
1	L	597	G
1	L	598	U
1	L	599	U

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Mol	Chain	Res	Type
1	L	621	G
1	L	624	G
1	L	625	A
1	L	630	G
1	L	631	A
1	L	633	U
1	L	640	A
1	L	642	A
1	L	644	G
1	L	645	U
1	L	646	U
1	L	650	A
1	L	656	G
1	L	661	U
1	L	662	G
1	L	663	U
1	L	664	G
1	L	665	A
1	L	666	A
1	L	667	U
1	L	669	U
1	L	674	G
1	L	676	C
1	L	677	A
1	L	678	G
1	L	680	G
1	L	681	U
1	L	683	G
1	L	693	A
1	L	694	G
1	L	715	A
1	L	716	C
1	L	719	A
1	L	720	A
1	L	722	G
1	L	726	G
1	L	729	U
1	L	730	C
1	L	731	A
1	L	733	U
1	L	734	U
1	L	735	A

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Mol	Chain	Res	Type
1	L	736	A
1	L	749	G
1	L	759	U
1	L	760	C
1	L	764	A
1	L	765	A
1	L	766	A
1	L	767	G
1	L	771	G
1	L	776	A
1	L	787	U
1	L	789	G
1	L	790	A
1	L	791	U
1	L	792	A
1	L	801	A
1	L	802	A
1	L	803	A
1	L	804	G
1	L	805	A
1	L	810	U
1	L	813	A
1	L	814	A
1	L	816	A
1	L	817	U
1	L	818	G
1	L	820	U
1	L	821	G
1	L	823	A
1	L	826	C
1	L	828	C
1	L	830	G
1	L	831	C
1	M	16	G
1	M	18	C
1	M	20	U
1	M	21	C
1	M	22	A
1	M	23	A
1	M	30	U
1	M	31	A
1	M	37	G

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Mol	Chain	Res	Type
1	M	44	A
1	M	47	G
1	M	50	G
1	M	51	A
1	M	52	A
1	M	53	U
1	M	54	A
1	M	57	A
1	M	58	A
1	M	59	G
1	M	65	G
1	M	66	C
1	M	75	G
1	M	82	U
1	M	84	U
1	M	85	U
1	M	86	G
1	M	87	U
1	M	89	A
1	M	90	A
1	M	103	G
1	M	104	U
1	M	109	A
1	M	111	G
1	M	112	U
1	M	116	A
1	M	118	A
1	M	122	A
1	M	131	A
1	M	132	G
1	M	139	A
1	M	142	G
1	M	145	A
1	M	146	C
1	M	148	C
1	M	149	U
1	M	150	U
1	M	157	A
1	M	158	G
1	M	165	A
1	M	166	G
1	M	170	A

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Mol	Chain	Res	Type
1	M	171	C
1	M	177	C
1	M	179	U
1	M	180	U
1	M	181	G
1	M	182	C
1	M	183	A
1	M	184	G
1	M	185	A
1	M	186	G
1	M	196	A
1	M	197	G
1	M	198	U
1	M	201	G
1	M	204	A
1	M	205	G
1	M	209	A
1	M	212	A
1	M	213	A
1	M	215	A
1	M	216	A
1	M	218	A
1	M	222	C
1	M	223	A
1	M	224	U
1	M	225	A
1	M	226	G
1	M	233	A
1	M	234	U
1	M	235	G
1	M	244	A
1	M	254	U
1	M	266	A
1	M	279	A
1	M	282	U
1	M	283	G
1	M	284	A
1	M	287	G
1	M	290	U
1	M	295	A
1	M	296	A
1	M	302	A

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Mol	Chain	Res	Type
1	M	309	G
1	M	312	A
1	M	313	C
1	M	314	C
1	M	316	U
1	M	317	U
1	M	318	U
1	M	321	G
1	M	325	A
1	M	326	G
1	M	332	G
1	M	337	G
1	M	338	G
1	M	339	U
1	M	341	G
1	M	342	U
1	M	343	G
1	M	344	C
1	M	349	A
1	M	350	U
1	M	352	A
1	M	354	C
1	M	355	C
1	M	358	U
1	M	360	A
1	M	361	U
1	M	362	A
1	M	364	A
1	M	365	G
1	M	366	U
1	M	367	G
1	M	368	U
1	M	369	A
1	M	370	C
1	M	373	G
1	M	376	C
1	M	377	C
1	M	382	G
1	M	383	A
1	M	385	G
1	M	386	A
1	M	389	U

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Mol	Chain	Res	Type
1	M	390	A
1	M	392	A
1	M	396	G
1	M	397	G
1	M	398	A
1	M	400	U
1	M	404	G
1	M	407	G
1	M	408	U
1	M	409	A
1	M	410	G
1	M	412	G
1	M	413	A
1	M	418	A
1	M	419	C
1	M	423	G
1	M	424	G
1	M	425	G
1	M	428	G
1	M	434	U
1	M	435	A
1	M	446	C
1	M	447	A
1	M	450	A
1	M	451	G
1	M	461	C
1	M	463	U
1	M	464	G
1	M	466	G
1	M	471	A
1	M	472	C
1	M	474	G
1	M	476	U
1	M	483	A
1	M	485	C
1	M	486	C
1	M	488	C
1	M	493	A
1	M	494	A
1	M	540	A
1	M	541	A
1	M	542	A

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Mol	Chain	Res	Type
1	M	543	U
1	M	545	A
1	M	546	G
1	M	548	A
1	M	549	A
1	M	550	A
1	M	552	G
1	M	553	U
1	M	560	C
1	M	562	G
1	M	564	U
1	M	566	U
1	M	567	G
1	M	569	C
1	M	572	A
1	M	573	A
1	M	582	A
1	M	583	C
1	M	584	A
1	M	586	A
1	M	587	G
1	M	589	A
1	M	591	U
1	M	594	G
1	M	597	G
1	M	598	U
1	M	599	U
1	M	621	G
1	M	624	G
1	M	625	A
1	M	630	G
1	M	631	A
1	M	633	U
1	M	640	A
1	M	642	A
1	M	644	G
1	M	645	U
1	M	646	U
1	M	650	A
1	M	656	G
1	M	661	U
1	M	662	G

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Mol	Chain	Res	Type
1	M	663	U
1	M	664	G
1	M	665	A
1	M	666	A
1	M	667	U
1	M	669	U
1	M	674	G
1	M	676	C
1	M	677	A
1	M	678	G
1	M	680	G
1	M	681	U
1	M	683	G
1	M	693	A
1	M	694	G
1	M	715	A
1	M	716	C
1	M	719	A
1	M	720	A
1	M	722	G
1	M	726	G
1	M	729	U
1	M	730	C
1	M	731	A
1	M	733	U
1	M	734	U
1	M	735	A
1	M	736	A
1	M	749	G
1	M	759	U
1	M	760	C
1	M	764	A
1	M	765	A
1	M	766	A
1	M	767	G
1	M	771	G
1	M	776	A
1	M	787	U
1	M	789	G
1	M	790	A
1	M	791	U
1	M	792	A

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Mol	Chain	Res	Type
1	M	801	A
1	M	802	A
1	M	803	A
1	M	804	G
1	M	805	A
1	M	810	U
1	M	813	A
1	M	814	A
1	M	816	A
1	M	817	U
1	M	818	G
1	M	820	U
1	M	821	G
1	M	823	A
1	M	826	C
1	M	828	C
1	M	830	G
1	M	831	C
1	N	16	G
1	N	18	C
1	N	20	U
1	N	21	C
1	N	22	A
1	N	23	A
1	N	30	U
1	N	31	A
1	N	37	G
1	N	44	A
1	N	47	G
1	N	50	G
1	N	51	A
1	N	52	A
1	N	53	U
1	N	54	A
1	N	57	A
1	N	58	A
1	N	59	G
1	N	65	G
1	N	66	C
1	N	75	G
1	N	82	U
1	N	84	U

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Mol	Chain	Res	Type
1	N	85	U
1	N	86	G
1	N	87	U
1	N	89	A
1	N	90	A
1	N	103	G
1	N	104	U
1	N	109	A
1	N	111	G
1	N	112	U
1	N	116	A
1	N	118	A
1	N	122	A
1	N	131	A
1	N	132	G
1	N	139	A
1	N	142	G
1	N	145	A
1	N	146	C
1	N	148	C
1	N	149	U
1	N	150	U
1	N	157	A
1	N	158	G
1	N	165	A
1	N	170	A
1	N	171	C
1	N	177	C
1	N	179	U
1	N	180	U
1	N	181	G
1	N	182	C
1	N	183	A
1	N	184	G
1	N	185	A
1	N	186	G
1	N	196	A
1	N	197	G
1	N	198	U
1	N	201	G
1	N	204	A
1	N	205	G

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Mol	Chain	Res	Type
1	N	209	A
1	N	212	A
1	N	213	A
1	N	215	A
1	N	216	A
1	N	218	A
1	N	222	C
1	N	223	A
1	N	224	U
1	N	225	A
1	N	226	G
1	N	233	A
1	N	234	U
1	N	235	G
1	N	244	A
1	N	254	U
1	N	266	A
1	N	279	A
1	N	282	U
1	N	283	G
1	N	284	A
1	N	287	G
1	N	290	U
1	N	295	A
1	N	296	A
1	N	302	A
1	N	309	G
1	N	312	A
1	N	313	C
1	N	314	C
1	N	316	U
1	N	317	U
1	N	318	U
1	N	321	G
1	N	325	A
1	N	326	G
1	N	332	G
1	N	337	G
1	N	338	G
1	N	339	U
1	N	341	G
1	N	342	U

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Mol	Chain	Res	Type
1	N	343	G
1	N	344	C
1	N	349	A
1	N	350	U
1	N	352	A
1	N	354	C
1	N	355	C
1	N	358	U
1	N	360	A
1	N	361	U
1	N	362	A
1	N	364	A
1	N	365	G
1	N	366	U
1	N	367	G
1	N	368	U
1	N	369	A
1	N	370	C
1	N	373	G
1	N	376	C
1	N	377	C
1	N	382	G
1	N	383	A
1	N	385	G
1	N	386	A
1	N	389	U
1	N	390	A
1	N	392	A
1	N	396	G
1	N	397	G
1	N	398	A
1	N	400	U
1	N	404	G
1	N	407	G
1	N	408	U
1	N	409	A
1	N	410	G
1	N	412	G
1	N	413	A
1	N	418	A
1	N	419	C
1	N	423	G

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Mol	Chain	Res	Type
1	N	424	G
1	N	425	G
1	N	428	G
1	N	434	U
1	N	435	A
1	N	446	C
1	N	447	A
1	N	450	A
1	N	451	G
1	N	461	C
1	N	463	U
1	N	464	G
1	N	466	G
1	N	471	A
1	N	472	C
1	N	474	G
1	N	476	U
1	N	483	A
1	N	485	C
1	N	486	C
1	N	488	C
1	N	493	A
1	N	494	A
1	N	540	A
1	N	541	A
1	N	542	A
1	N	543	U
1	N	545	A
1	N	546	G
1	N	548	A
1	N	549	A
1	N	550	A
1	N	552	G
1	N	553	U
1	N	560	C
1	N	562	G
1	N	564	U
1	N	566	U
1	N	567	G
1	N	569	C
1	N	572	A
1	N	573	A

Continued on next page...

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Mol	Chain	Res	Type
1	N	582	A
1	N	583	C
1	N	584	A
1	N	586	A
1	N	587	G
1	N	589	A
1	N	591	U
1	N	594	G
1	N	597	G
1	N	598	U
1	N	599	U
1	N	621	G
1	N	624	G
1	N	625	A
1	N	630	G
1	N	631	A
1	N	633	U
1	N	640	A
1	N	642	A
1	N	644	G
1	N	645	U
1	N	646	U
1	N	650	A
1	N	656	G
1	N	661	U
1	N	662	G
1	N	663	U
1	N	664	G
1	N	665	A
1	N	666	A
1	N	667	U
1	N	669	U
1	N	674	G
1	N	676	C
1	N	677	A
1	N	678	G
1	N	680	G
1	N	681	U
1	N	683	G
1	N	693	A
1	N	694	G
1	N	715	A

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Mol	Chain	Res	Type
1	N	716	C
1	N	719	A
1	N	720	A
1	N	722	G
1	N	726	G
1	N	729	U
1	N	730	C
1	N	731	A
1	N	733	U
1	N	734	U
1	N	735	A
1	N	736	A
1	N	749	G
1	N	759	U
1	N	760	C
1	N	764	A
1	N	765	A
1	N	766	A
1	N	767	G
1	N	771	G
1	N	776	A
1	N	787	U
1	N	789	G
1	N	790	A
1	N	791	U
1	N	792	A
1	N	801	A
1	N	802	A
1	N	803	A
1	N	804	G
1	N	805	A
1	N	810	U
1	N	813	A
1	N	814	A
1	N	816	A
1	N	817	U
1	N	818	G
1	N	820	U
1	N	821	G
1	N	823	A
1	N	826	C
1	N	828	C

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Mol	Chain	Res	Type
1	N	830	G
1	N	831	C

All (252) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	G	74	C
1	G	103	G
1	G	164	A
1	G	181	G
1	G	182	C
1	G	207	G
1	G	243	U
1	G	294	U
1	G	311	A
1	G	348	U
1	G	399	A
1	G	412	G
1	G	563	U
1	G	645	U
1	G	666	A
1	G	676	C
1	G	677	A
1	G	735	A
1	A	74	C
1	A	103	G
1	A	164	A
1	A	181	G
1	A	182	C
1	A	207	G
1	A	243	U
1	A	294	U
1	A	311	A
1	A	348	U
1	A	399	A
1	A	412	G
1	A	563	U
1	A	645	U
1	A	666	A
1	A	676	C
1	A	677	A
1	A	735	A

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Mol	Chain	Res	Type
1	B	74	C
1	B	103	G
1	B	164	A
1	B	181	G
1	B	182	C
1	B	207	G
1	B	243	U
1	B	294	U
1	B	311	A
1	B	348	U
1	B	399	A
1	B	412	G
1	B	563	U
1	B	645	U
1	B	666	A
1	B	676	C
1	B	677	A
1	B	735	A
1	C	74	C
1	C	103	G
1	C	164	A
1	C	181	G
1	C	182	C
1	C	207	G
1	C	243	U
1	C	294	U
1	C	311	A
1	C	348	U
1	C	399	A
1	C	412	G
1	C	563	U
1	C	645	U
1	C	666	A
1	C	676	C
1	C	677	A
1	C	735	A
1	D	74	C
1	D	103	G
1	D	164	A
1	D	181	G
1	D	182	C
1	D	207	G

Continued on next page...

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Mol	Chain	Res	Type
1	D	243	U
1	D	294	U
1	D	311	A
1	D	348	U
1	D	399	A
1	D	412	G
1	D	563	U
1	D	645	U
1	D	666	A
1	D	676	C
1	D	677	A
1	D	735	A
1	E	74	C
1	E	103	G
1	E	164	A
1	E	181	G
1	E	182	C
1	E	207	G
1	E	243	U
1	E	294	U
1	E	311	A
1	E	348	U
1	E	399	A
1	E	412	G
1	E	563	U
1	E	645	U
1	E	666	A
1	E	676	C
1	E	677	A
1	E	735	A
1	F	74	C
1	F	103	G
1	F	164	A
1	F	181	G
1	F	182	C
1	F	207	G
1	F	243	U
1	F	294	U
1	F	311	A
1	F	348	U
1	F	399	A
1	F	412	G

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Mol	Chain	Res	Type
1	F	563	U
1	F	645	U
1	F	666	A
1	F	676	C
1	F	677	A
1	F	735	A
1	H	74	C
1	H	103	G
1	H	164	A
1	H	181	G
1	H	182	C
1	H	207	G
1	H	243	U
1	H	294	U
1	H	311	A
1	H	348	U
1	H	399	A
1	H	412	G
1	H	563	U
1	H	645	U
1	H	666	A
1	H	676	C
1	H	677	A
1	H	735	A
1	I	74	C
1	I	103	G
1	I	164	A
1	I	181	G
1	I	182	C
1	I	207	G
1	I	243	U
1	I	294	U
1	I	311	A
1	I	348	U
1	I	399	A
1	I	412	G
1	I	563	U
1	I	645	U
1	I	666	A
1	I	676	C
1	I	677	A
1	I	735	A

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Mol	Chain	Res	Type
1	J	74	C
1	J	103	G
1	J	164	A
1	J	181	G
1	J	182	C
1	J	207	G
1	J	243	U
1	J	294	U
1	J	311	A
1	J	348	U
1	J	399	A
1	J	412	G
1	J	563	U
1	J	645	U
1	J	666	A
1	J	676	C
1	J	677	A
1	J	735	A
1	K	74	C
1	K	103	G
1	K	164	A
1	K	181	G
1	K	182	C
1	K	207	G
1	K	243	U
1	K	294	U
1	K	311	A
1	K	348	U
1	K	399	A
1	K	412	G
1	K	563	U
1	K	645	U
1	K	666	A
1	K	676	C
1	K	677	A
1	K	735	A
1	L	74	C
1	L	103	G
1	L	164	A
1	L	181	G
1	L	182	C
1	L	207	G

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Mol	Chain	Res	Type
1	L	243	U
1	L	294	U
1	L	311	A
1	L	348	U
1	L	399	A
1	L	412	G
1	L	563	U
1	L	645	U
1	L	666	A
1	L	676	C
1	L	677	A
1	L	735	A
1	M	74	C
1	M	103	G
1	M	164	A
1	M	181	G
1	M	182	C
1	M	207	G
1	M	243	U
1	M	294	U
1	M	311	A
1	M	348	U
1	M	399	A
1	M	412	G
1	M	563	U
1	M	645	U
1	M	666	A
1	M	676	C
1	M	677	A
1	M	735	A
1	N	74	C
1	N	103	G
1	N	164	A
1	N	181	G
1	N	182	C
1	N	207	G
1	N	243	U
1	N	294	U
1	N	311	A
1	N	348	U
1	N	399	A
1	N	412	G

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Mol	Chain	Res	Type
1	N	563	U
1	N	645	U
1	N	666	A
1	N	676	C
1	N	677	A
1	N	735	A

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 oligosaccharides 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.

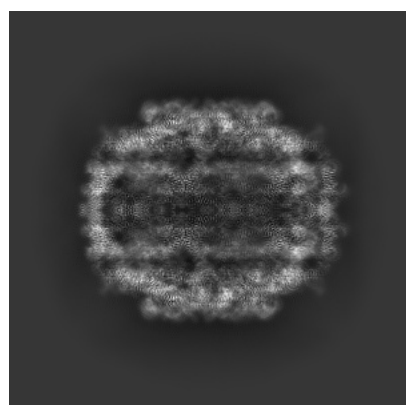
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-63101. These allow visual inspection of the internal detail of the map and identification of artifacts.

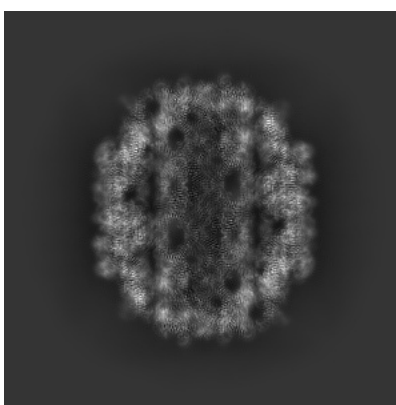
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

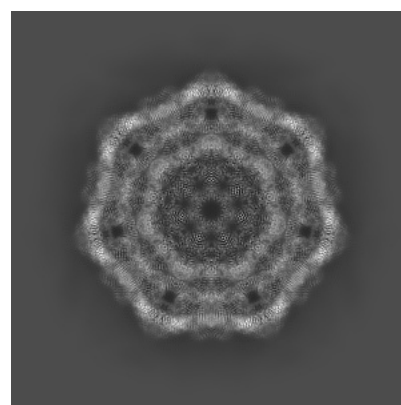
6.1.1 Primary map



X



Y

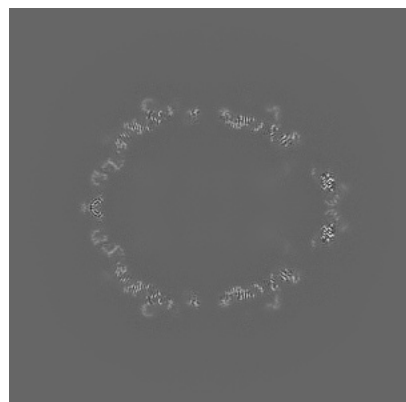


Z

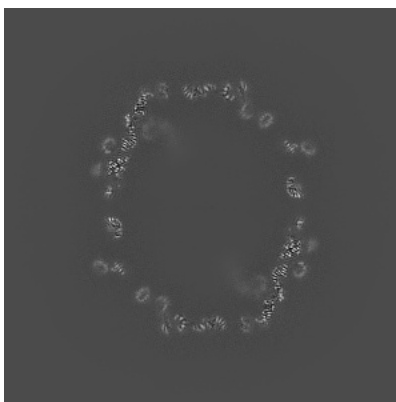
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

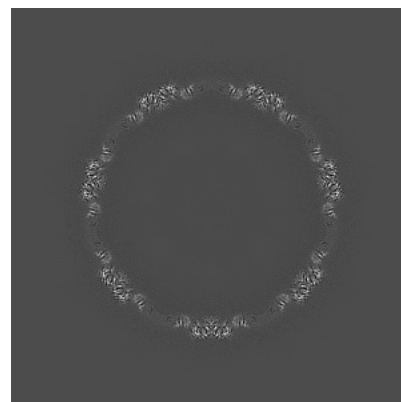
6.2.1 Primary map



X Index: 256



Y Index: 256

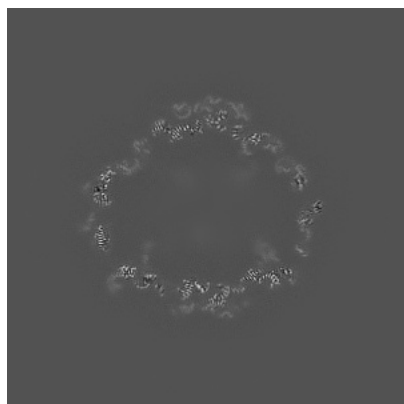


Z Index: 256

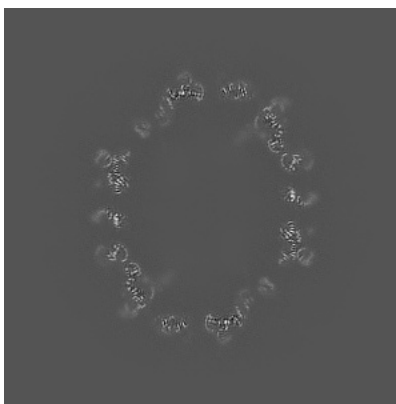
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

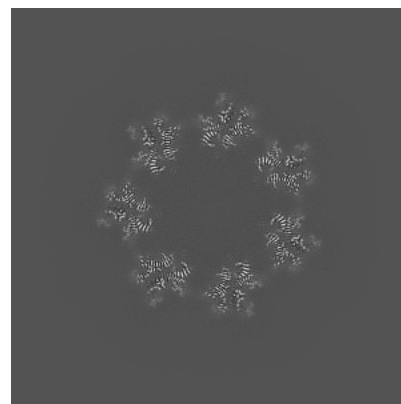
6.3.1 Primary map



X Index: 331



Y Index: 210

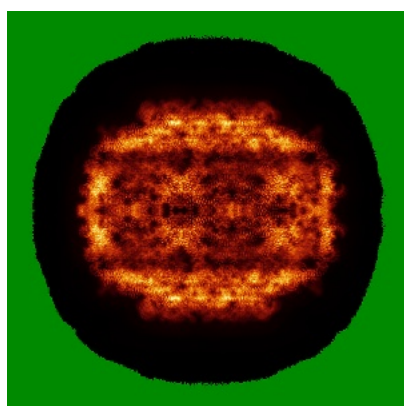


Z Index: 346

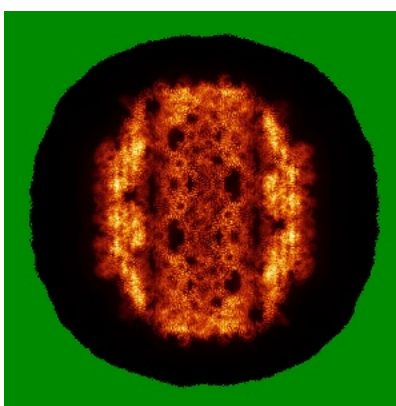
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

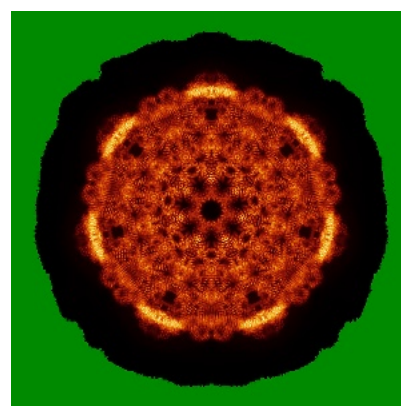
6.4.1 Primary map



X



Y

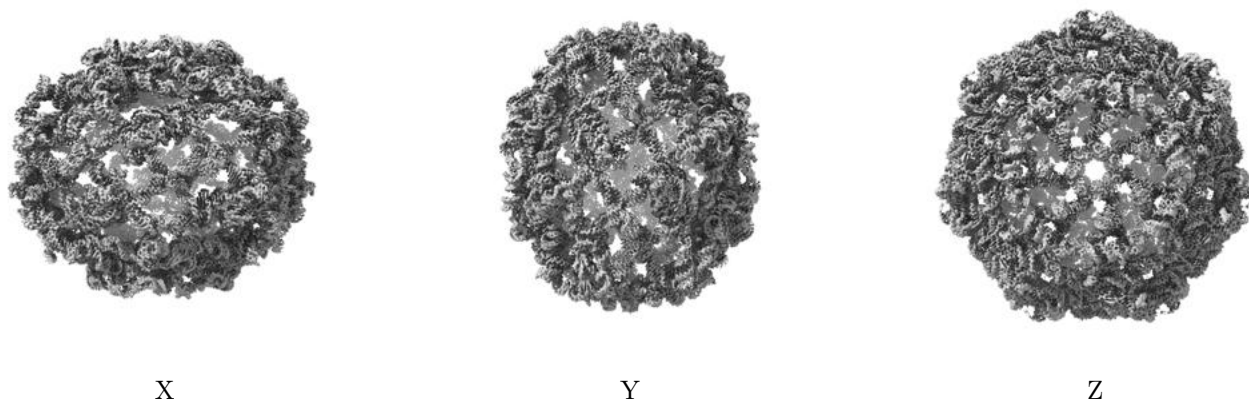


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 8.0. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

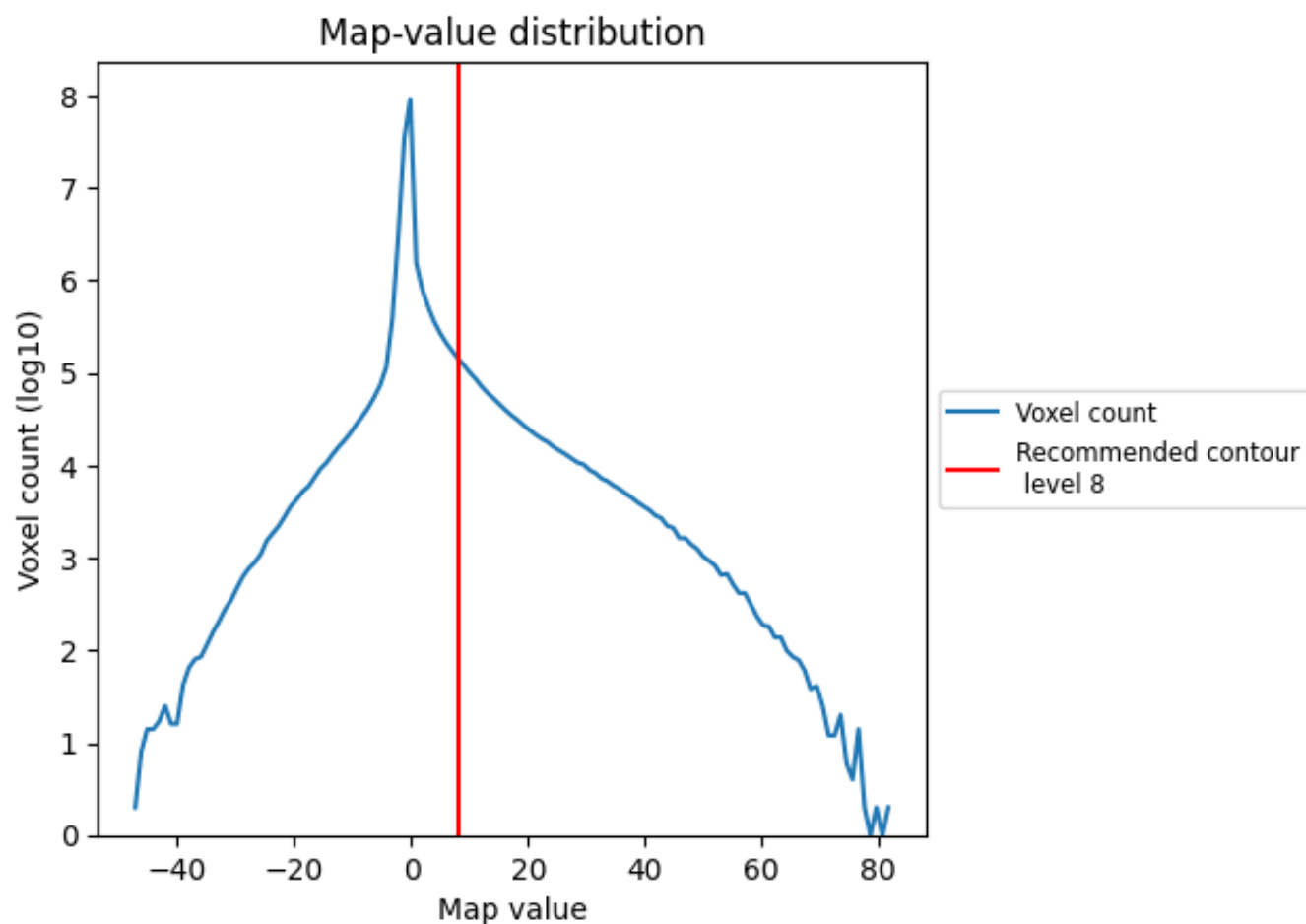
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

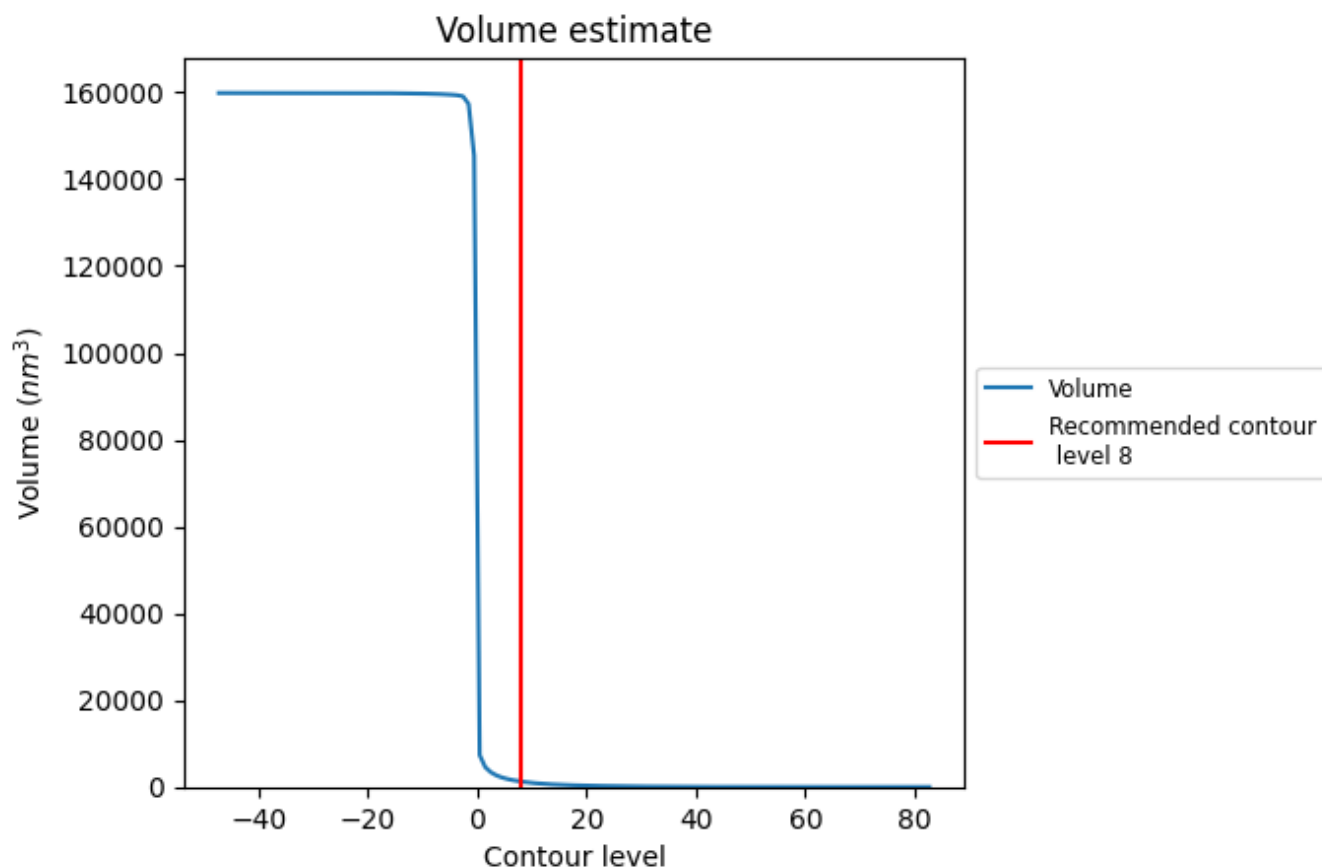
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

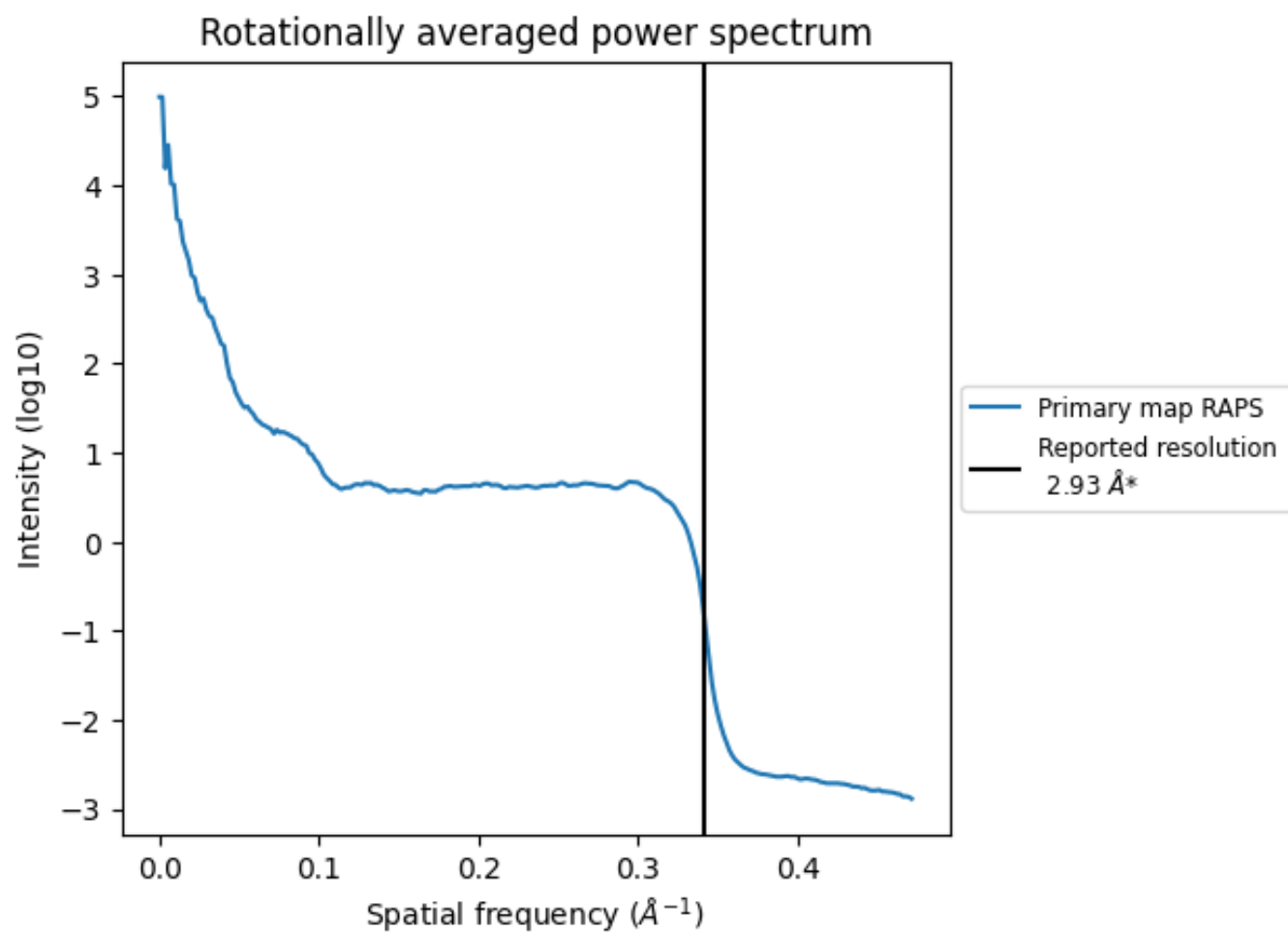
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1262 nm^3 ; this corresponds to an approximate mass of 1140 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum ⓘ



*Reported resolution corresponds to spatial frequency of 0.341 Å⁻¹

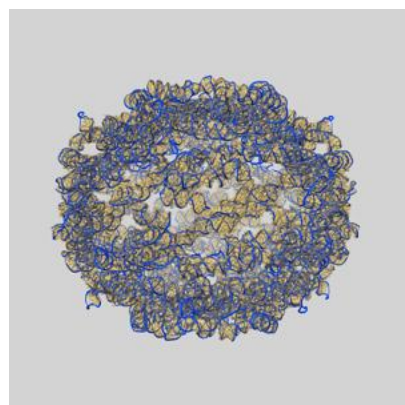
8 Fourier-Shell correlation

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

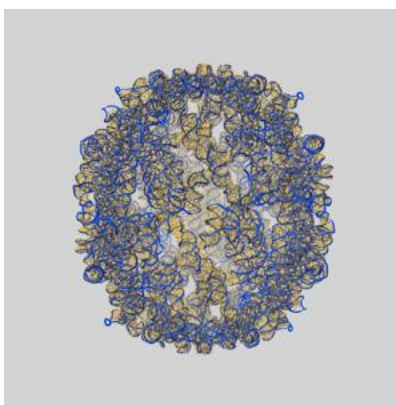
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-63101 and PDB model 9LHL. Per-residue inclusion information can be found in [section 3](#) on [page 5](#).

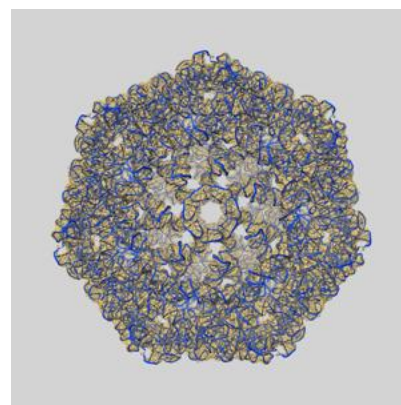
9.1 Map-model overlay [i](#)



X



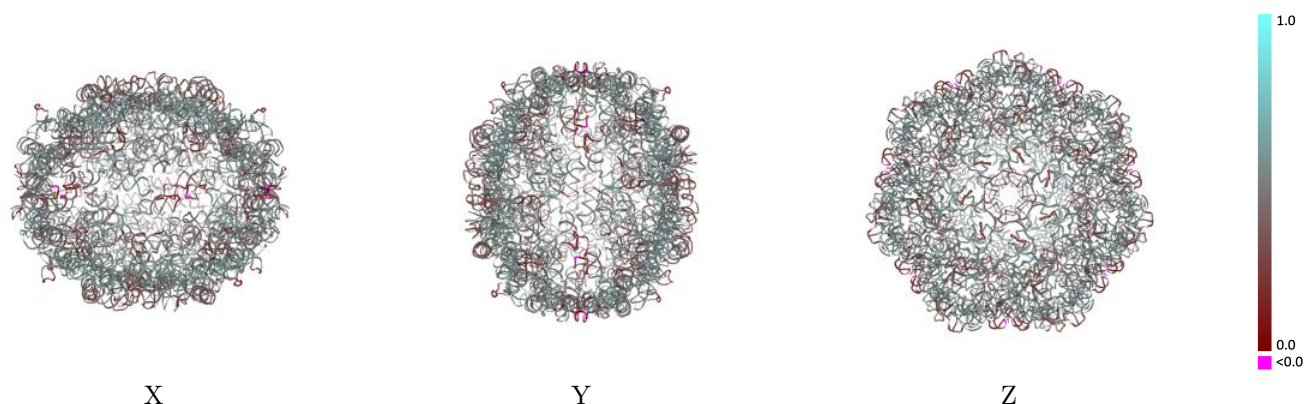
Y



Z

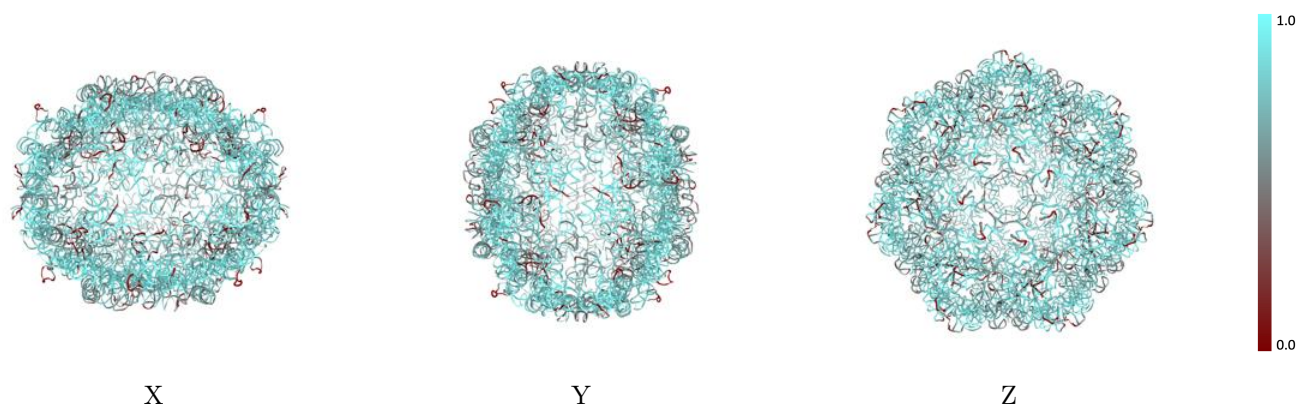
The images above show the 3D surface view of the map at the recommended contour level 8.0 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



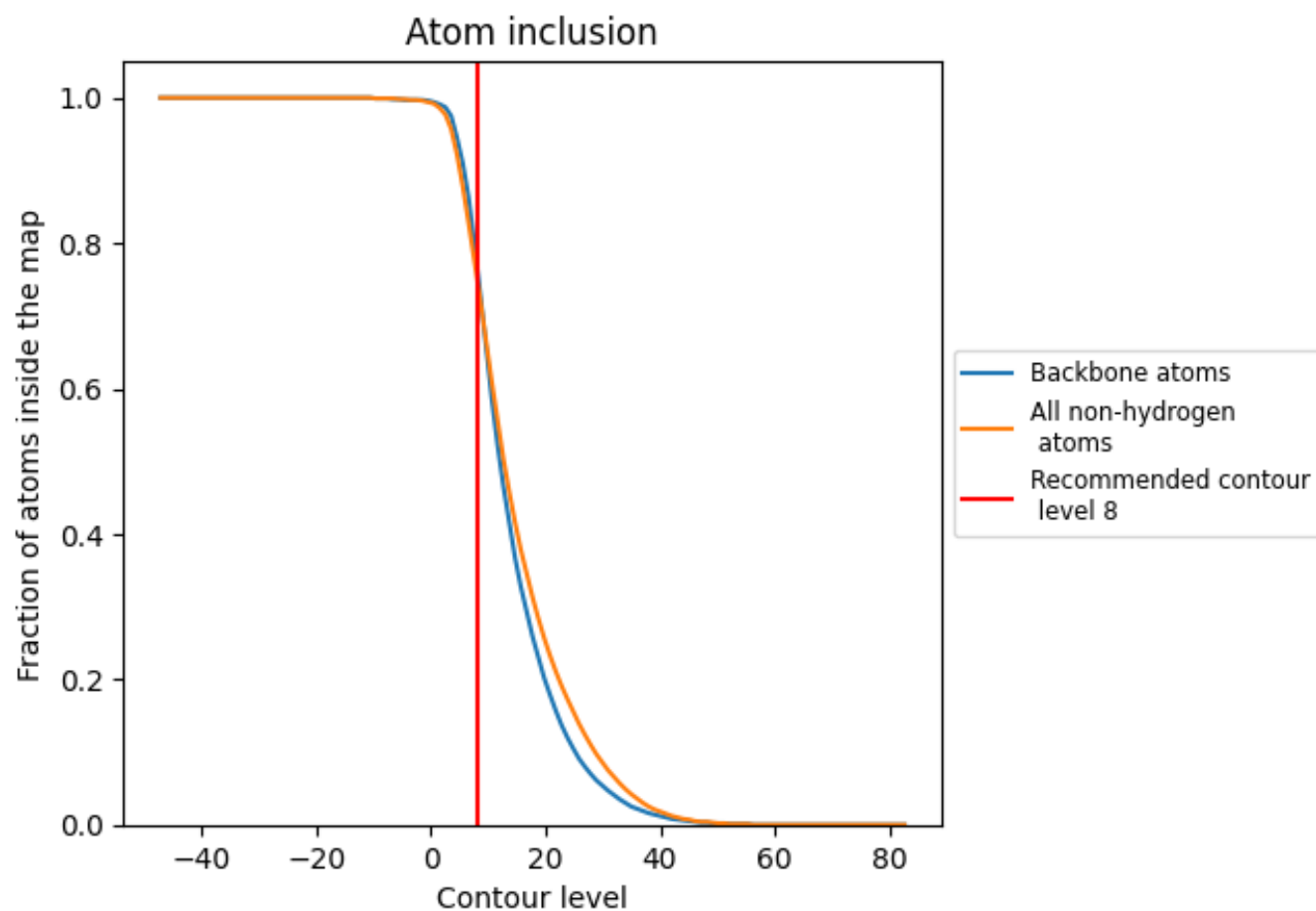
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (8).

9.4 Atom inclusion [i](#)



At the recommended contour level, 77% of all backbone atoms, 76% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (8) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7550	0.4680
A	0.7550	0.4680
B	0.7530	0.4680
C	0.7550	0.4670
D	0.7550	0.4670
E	0.7550	0.4680
F	0.7550	0.4680
G	0.7550	0.4670
H	0.7550	0.4680
I	0.7550	0.4680
J	0.7530	0.4680
K	0.7540	0.4670
L	0.7550	0.4680
M	0.7550	0.4680
N	0.7550	0.4680

