



Full wwPDB X-ray Structure Validation Report

Mar 31, 2014 – 07:50 PM BST

PDB ID : 3O2Z
Title : Yeast 80S ribosome. This entry consists of the 40S subunit of the first 80S in the asymmetric unit.
Authors : Ben-Shem, A.; Jenner, L.; Yusupova, G.; Yusupov, M.
Deposited on : 2010-07-23
Resolution : 4.00 Å(reported)

This is a full wwPDB validation report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at <http://wwpdb.org/ValidationPDFNotes.html>

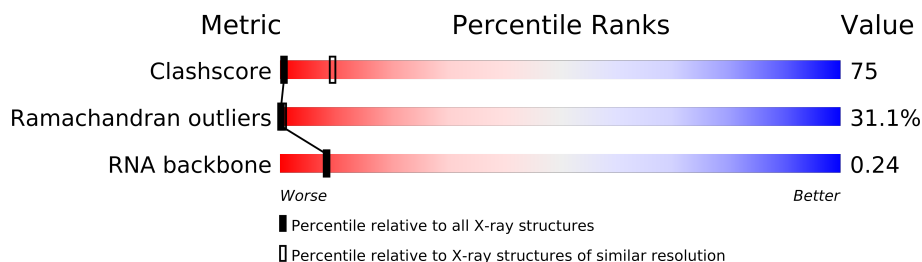
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.15 2013
Xtriage (Phenix) : dev-1323
EDS : **NOT EXECUTED**
Percentile statistics : 21963
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : stable23004

1 Overall quality at a glance

The reported resolution of this entry is 4.00 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)	Similar resolution (#Entries, resolution range(Å))
Clashscore	79885	1235 (4.50-3.50)
Ramachandran outliers	78287	1170 (4.50-3.50)
RNA backbone	1838	1018 (5.00-2.80)


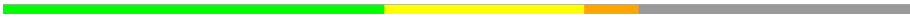




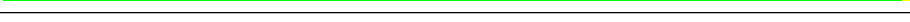

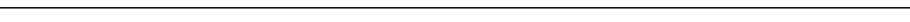


The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	1	1800	
2	A	252	
3	B	254	
4	C	240	
5	D	225	
6	E	197	
7	F	156	
8	G	151	
9	H	137	
10	I	142	
11	J	143	
12	K	136	
13	L	146	
14	M	144	
15	N	121	
16	O	130	
17	P	145	

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Mol	Chain	Length	Quality of chain
18	Q	108	
19	R	67	
20	S	56	
21	T	319	
22	a	20	
23	b	105	
24	c	93	
25	d	35	
26	e	21	
27	f	11	
28	h	41	

2 Entry composition

There are 29 unique types of molecules in this entry. The entry contains 55248 atoms, of which 0 are hydrogen and 0 are deuterium.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a RNA chain called 18S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	1	1789	Total	C	N	O	P	0	0	0
			38107	17037	6732	12549	1789			

- Molecule 2 is a protein called 40S ribosomal protein S0-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
2	A	220	Total	C	N	O	0	0	0
			1090	650	220	220			

- Molecule 3 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
3	B	219	Total	C	N	O	0	0	0
			1074	636	219	219			

- Molecule 4 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
4	C	189	Total	C	N	O	0	0	0
			928	550	189	189			

- Molecule 5 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
5	D	169	Total	C	N	O	0	0	0
			836	498	169	169			

- Molecule 6 is a protein called 40S ribosomal protein S9-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
6	E	157	Total	C	N	O	0	0	0
			777	463	157	157			

- Molecule 7 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
7	F	77	Total	C	N	O	0	0	0
			382	228	77	77			

- Molecule 8 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
8	G	117	Total	C	N	O	0	0	0
			580	346	117	117			

- Molecule 9 is a protein called 40S ribosomal protein S14-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	H	128	Total	C	N	O	0	0	0
			627	371	128	128			

- Molecule 10 is a protein called 40S ribosomal protein S15.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
10	I	121	Total	C	N	O	0	0	0
			596	354	121	121			

- Molecule 11 is a protein called 40S ribosomal protein S16.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
11	J	134	Total	C	N	O	0	0	0
			658	390	134	134			

- Molecule 12 is a protein called 40S ribosomal protein S17-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
12	K	67	Total	C	N	O	0	0	0
			332	198	67	67			

- Molecule 13 is a protein called 40S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
13	L	120	Total	C	N	O	0	0	0
			591	351	120	120			

- Molecule 14 is a protein called 40S ribosomal protein S19-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
14	M	106	Total	C	N	O	0	0	0
			521	309	106	106			

- Molecule 15 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
15	N	111	Total	C	N	O	0	0	0
			551	329	111	111			

- Molecule 16 is a protein called 40S ribosomal protein S22-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
16	O	127	Total	C	N	O	0	0	0
			622	368	127	127			

- Molecule 17 is a protein called 40S ribosomal protein S23.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
17	P	116	Total	C	N	O	0	0	0
			566	334	116	116			

- Molecule 18 is a protein called 40S ribosomal protein S25-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	Q	67	Total	C	N	O	0	0	0
			332	198	67	67			

- Molecule 19 is a protein called 40S ribosomal protein S28-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
19	R	47	Total	C	N	O	0	0	0
			230	136	47	47			

- Molecule 20 is a protein called 40S ribosomal protein S29-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
20	S	39	Total	C	N	O	0	0	0
			190	112	39	39			

- Molecule 21 is a protein called Guanine nucleotide-binding protein subunit beta-like protein; RACK-1.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	T	313	Total	C	N	O	0	0	0
			1543	917	313	313			

- Molecule 22 is a protein called Unassigned secondary structure.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
22	a	20	Total	C	N	O	0	0	0
			100	60	20	20			

- Molecule 23 is a protein called Unassigned secondary structure.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
23	b	105	Total	C	N	O	0	0	0
			525	315	105	105			

- Molecule 24 is a protein called Unassigned secondary structure.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
24	c	93	Total	C	N	O	0	0	0
			465	279	93	93			

- Molecule 25 is a protein called Unassigned secondary structure.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
25	d	35	Total	C	N	O	0	0	0
			175	105	35	35			

- Molecule 26 is a protein called Unassigned secondary structure.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
26	e	21	Total	C	N	O	0	0	0
			105	63	21	21			

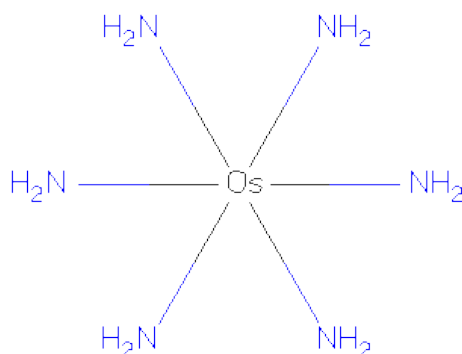
- Molecule 27 is a protein called Unassigned secondary structure.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
27	f	11	Total	C	N	O	0	0	0
			55	33	11	11			

- Molecule 28 is a protein called Unassigned secondary structure.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
28	h	41	Total	C	N	O	0	0	0
			205	123	41	41			

- Molecule 29 is OSMIUM (III) HEXAMMINE (three-letter code: OHX) (formula: $\text{H}_{12}\text{N}_6\text{Os}$).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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			7	6	1		
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29	g	1	Total	N	Os	0	0
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29	1	1	Total	N	Os	0	0
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29	g	1	Total	N	Os	0	0
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29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
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			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
29	g	1	Total 7	N 6	Os 1	0	0
29	g	1	Total 7	N 6	Os 1	0	0
29	g	1	Total 7	N 6	Os 1	0	0
29	1	1	Total 7	N 6	Os 1	0	0
29	1	1	Total 7	N 6	Os 1	0	0
29	1	1	Total 7	N 6	Os 1	0	0
29	g	1	Total 7	N 6	Os 1	0	0
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29	1	1	Total 7	N 6	Os 1	0	0
29	g	1	Total 7	N 6	Os 1	0	0
29	g	1	Total 7	N 6	Os 1	0	0
29	1	1	Total 7	N 6	Os 1	0	0
29	c	1	Total 7	N 6	Os 1	0	0
29	1	1	Total 7	N 6	Os 1	0	0
29	1	1	Total 7	N 6	Os 1	0	0
29	g	1	Total 7	N 6	Os 1	0	0

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
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			7	6	1		
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			7	6	1		
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			7	6	1		
29	1	1	Total	N	Os	0	0
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			7	6	1		
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			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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			7	6	1		
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			7	6	1		
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			7	6	1		
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			7	6	1		
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			7	6	1		
29	g	1	Total	N	Os	0	0
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			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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			7	6	1		
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			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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29	g	1	Total	N	Os	0	0
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			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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			7	6	1		
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			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
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			7	6	1		
29	1	1	Total	N	Os	0	0
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29	g	1	Total	N	Os	0	0
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			7	6	1		
29	g	1	Total	N	Os	0	0
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29	g	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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			7	6	1		
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			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
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29	g	1	Total	N	Os	0	0
			7	6	1		
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29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	T	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	S	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
29	g	1	Total 7	N 6	Os 1	0	0
29	g	1	Total 7	N 6	Os 1	0	0
29	g	1	Total 7	N 6	Os 1	0	0
29	1	1	Total 7	N 6	Os 1	0	0
29	g	1	Total 7	N 6	Os 1	0	0
29	1	1	Total 7	N 6	Os 1	0	0
29	g	1	Total 7	N 6	Os 1	0	0
29	g	1	Total 7	N 6	Os 1	0	0
29	g	1	Total 7	N 6	Os 1	0	0
29	g	1	Total 7	N 6	Os 1	0	0
29	g	1	Total 7	N 6	Os 1	0	0
29	1	1	Total 7	N 6	Os 1	0	0
29	1	1	Total 7	N 6	Os 1	0	0
29	e	1	Total 7	N 6	Os 1	0	0
29	g	1	Total 7	N 6	Os 1	0	0
29	g	1	Total 7	N 6	Os 1	0	0
29	1	1	Total 7	N 6	Os 1	0	0
29	g	1	Total 7	N 6	Os 1	0	0
29	g	1	Total 7	N 6	Os 1	0	0
29	g	1	Total 7	N 6	Os 1	0	0
29	1	1	Total 7	N 6	Os 1	0	0

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	e	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	1	1	Total	N	Os	0	0
			7	6	1		

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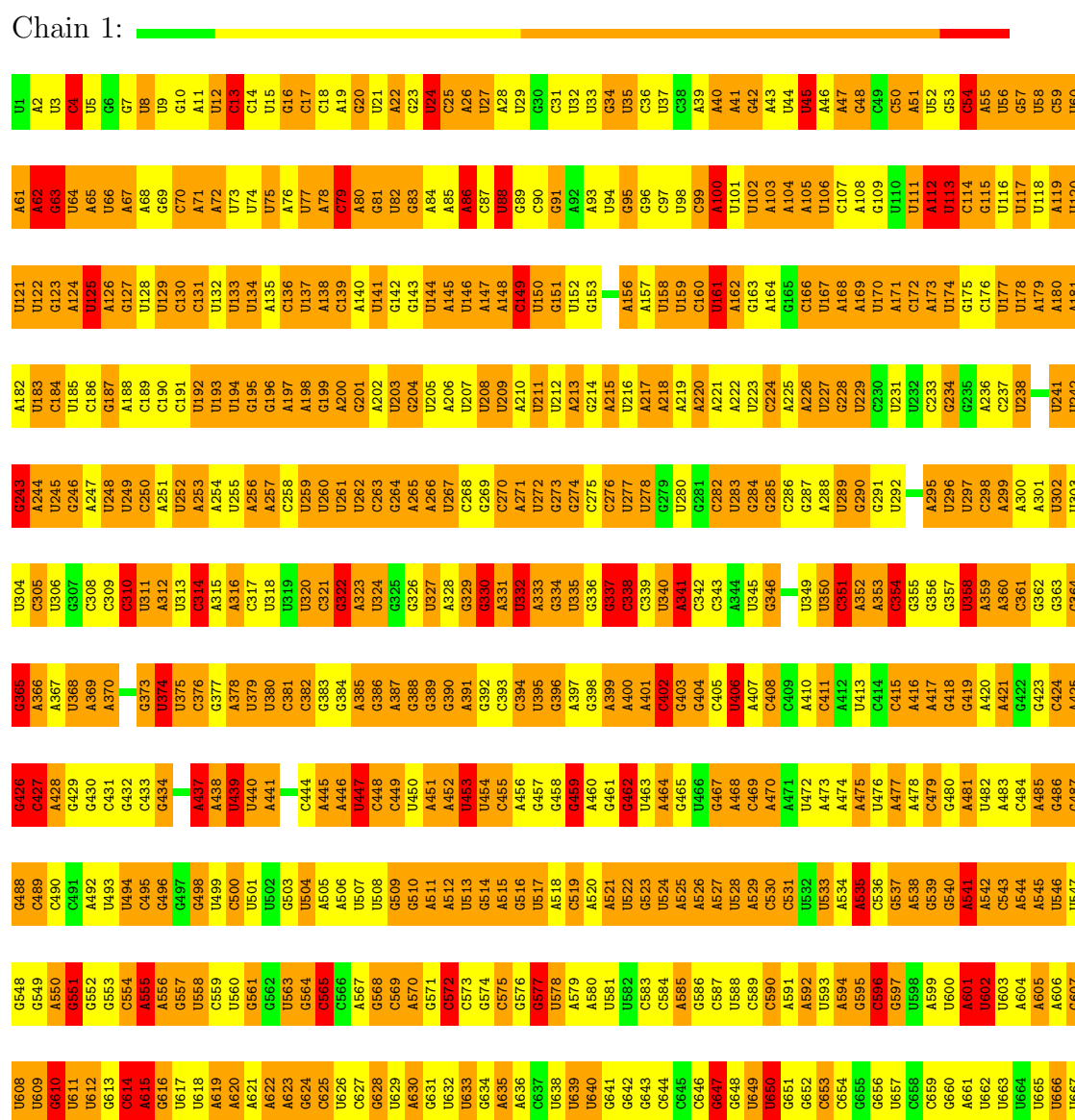
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
29	1	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		
29	g	1	Total	N	Os	0	0
			7	6	1		

3 Residue-property plots

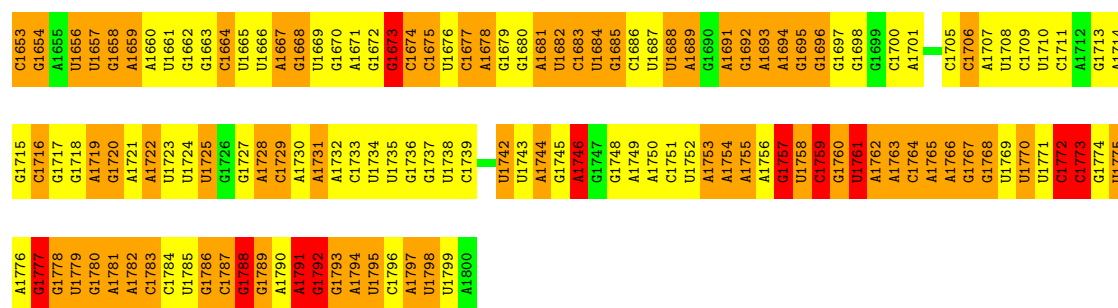
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

Note EDS was not executed.

• Molecule 1: 18S ribosomal RNA

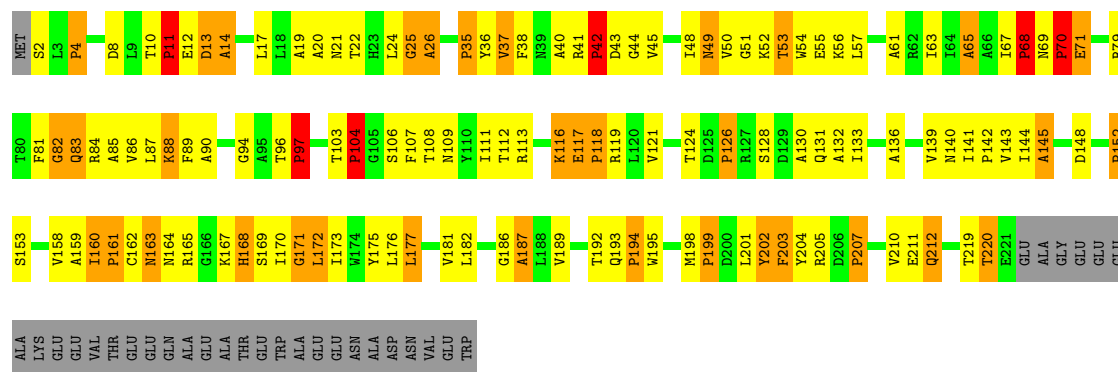


A1592	G1531	A1471	C1342	U1282	A1221	G1100	A1039	G976	U912	C852	U790	G729	C
A1593	U1532	C1472	U1343	U1283	C1222	G1101	G1040	A977	G913	G853	U791	G730	G
G1594	G1408	U1473	A1344	A1223	A1223	G1102	G1041	A978	G914	U854	A792	G731	U
U1595	G1409	A1345	A1345	U1285	A1163	U1103	G1042	A979	A915	A855	U793	G732	G
G1596	A1475	A1410	A1346	U1225	U1225	U1104	U1043	G980	U916	A856	U794	A733	U
A1597	U1347	A1411	U1347	A1287	A1226	C1105	U1044	U981	U917	U857	U795	A734	A
U1598	G1412	G1477	A1348	G1288	A1227	U1106	C1045	U982	U920	G858	A796	C735	C
C1599	U1413	G1478	G1349	U1289	G1228	G1107	G1046	A983	U921	A859	U800	C736	U
A1600	U1414	A1479	U1350	U1290	G1229	G1108	G1047	U921	U921	U860	U800	A737	G
G1601	G1415	G1480	G1351	G1291	A1230	G1109	G1048	G985	A922	U861	G802	G738	A
C1602	U1416	G1481	G1352	G1292	U1231	G1110	U1049	G986	A923	A862	G802	G739	G
U1603	A1417	A1482	U1353	G1293	G1233	G1111	G1050	G987	A926	A863	A803	A740	U
G1604	G1418	A1483	G1354	G1294	A1234	G1112	G1051	A988	U926	U864	A804	C741	U
G1605	C1355	G1419	C1355	G1295	A1234	A1113	U1052	U989	C927	A865	U805	U742	U
C1606	U1296	C1420	U1356	A1296	C1235	G1114	G1053	C990	U928	G866	A906	U743	C
G1607	G1297	G1486	C1358	G1297	C1235	G1115	U1054	C991	U929	G867	A807	U744	G
U1608	U1298	A1487	C1359	G1298	A1236	U1116	U1055	A992	A930	G868	U808	U745	A
G1609	G1299	A1488	A1360	U1299	G1237	G1117	U1056	A993	A931	A869	A809	A746	U
A1610	U1301	U1361	U1361	A1300	U1239	G1118	U1057	G994	U932	C870	G810	C747	U
C1611	U1302	U1362	U1362	U1301	U1240	G1119	U1058	A995	A933	G871	A811	U748	U
U1612	G1303	G1363	U1363	U1302	G1241	G1120	U1059	U996	C934	G872	A812	U749	U
A1613	U1304	G1364	G1364	U1303	A1242	G1121	U1060	A998	U935	U873	A813	U750	U
C1614	G1305	U1365	U1365	U1304	U1243	G1122	U1061	U999	U936	C874	A814	G751	U
G1615	U1306	U1366	U1366	U1305	A1244	C1123	U1062	U999	U937	G875	G815	A752	U
G1616	G1307	G1367	G1367	U1306	A1245	A1124	G1063	A1000	A938	G876	G816	A753	U
U1617	U1307	G1368	U1368	U1307	C1246	A1125	G1064	A1001	A940	G877	A817	A754	U
C1618	G1308	U1369	G1369	G1308	U1247	U1186	C1066	G1002	C818	G878	C818	A755	U
G1619	U1309	U1370	U1370	G1309	C1248	G1127	C1067	A1003	G942	U879	G819	A756	U
U1620	A1371	U1437	A1371	U1310	U1249	G1128	C1068	U1004	C943	C880	U820	A757	U
C1621	U1372	U1438	U1372	U1311	U1250	U1129	U1069	A1005	A944	A881	U821	C697	U
U1622	G1373	U1439	U1373	A1312	U1251	G1130	C1070	C1006	U945	U882	U822	U759	U
C1623	C1374	U1440	C1374	A1313	C1252	A1131	U1071	C1007	U946	G883	G823	A760	U
G1624	U1375	U1441	U1375	U1314	C1253	A1132	U1072	G1008	U947	A884	G824	G761	U
C1625	G1376	U1442	C1376	U1315	U1254	A1133	U1073	U1009	G948	G885	U825	A762	U
U1626	U1377	G1443	U1377	G1316	G1255	A1134	G1074	C1010	C949	U886	U826	U763	U
G1627	A1446	A1446	U1378	C1317	A1256	U1135	C1075	G1011	C950	A887	C927	U764	U
U1628	U1447	G1447	U1379	G1318	U1257	U1136	A1076	U1012	A951	U888	U828	G765	U
G1629	U1448	U1448	U1380	A1319	U1258	A1137	C1077	A1013	A952	U889	A829	U766	U
U1630	U1449	U1449	U1381	U1320	U1259	A1138	C1078	G1014	G953	C890	U830	U767	U
C1631	U1450	U1450	A1382	A1321	U1260	U1139	U1079	U1015	G954	A891	U831	C768	U
G1632	U1451	U1451	G1383	A1322	U1261	G1140	U1080	A955	A955	A892	U832	A769	U
C1633	U1452	U1452	A1384	C1323	G1263	A1141	A1081	U1018	U958	U893	U833	G772	U
G1634	G1453	U1453	G1385	G1324	G1264	A1142	G1082	A1019	U959	U894	G834	A774	U
A1635	U1454	G1454	G1386	A1325	G1265	A1143	G1083	U1022	U960	U895	U835	G775	U
C1636	G1455	G1455	U1387	A1326	U1266	U1144	A1084	C1022	U961	U896	U836	G776	U
G1637	U1456	C1456	C1388	C1327	G1267	U1145	G1085	A1023	C962	A897	G837	C777	U
C1638	U1457	C1457	C1389	G1328	U1268	A1147	A1086	U1024	U963	U898	U838	G778	U
U1639	G1458	U1458	U1390	A1329	U1269	C1148	A1087	A1025	A963	A900	U839	U779	U
G1640	U1459	U1459	A1391	G1330	G1270	A1149	U1088	A1026	U964	G901	U840	A780	U
C1641	U1460	U1460	U1392	A1331	G1271	C1209	U1089	A1027	U965	G902	U841	U781	U
U1642	C1461	U1461	C1393	C1332	U1272	G1150	C1090	C1028	U966	U903	C842	U782	U
G1643	U1462	G1462	G1394	U1334	U1273	A1211	U1091	U1029	A967	G904	C843	U783	U
C1644	C1463	U1463	U1395	A1275	C1274	G1153	A1093	U1031	A970	A905	G845	G784	U
G1645	U1397	U1397	U1398	U1335	A1276	G1154	G1094	C1032	A971	A906	G846	C785	U
U1646	U1398	U1398	U1399	A1337	G1277	G1155	U1095	C1033	A972	A907	A847	U786	U
C1647	A1400	G1467	A1400	C1338	G1278	C1156	C1096	C1034	G972	U908	C848	C787	U
G1648	U1401	U1468	A1401	U1339	G1279	A1157	U1097	C1035	A973	U909	C849	G788	U
U1649	G1402	C1280	G1402	C1340	C1280	A1158	U1098	A1036	A850	U911	C910	A789	U
C1650	A1403	C1403	A1403	A1341	G1281	C1159	U1099	C975	C975	U912	U851	U790	U



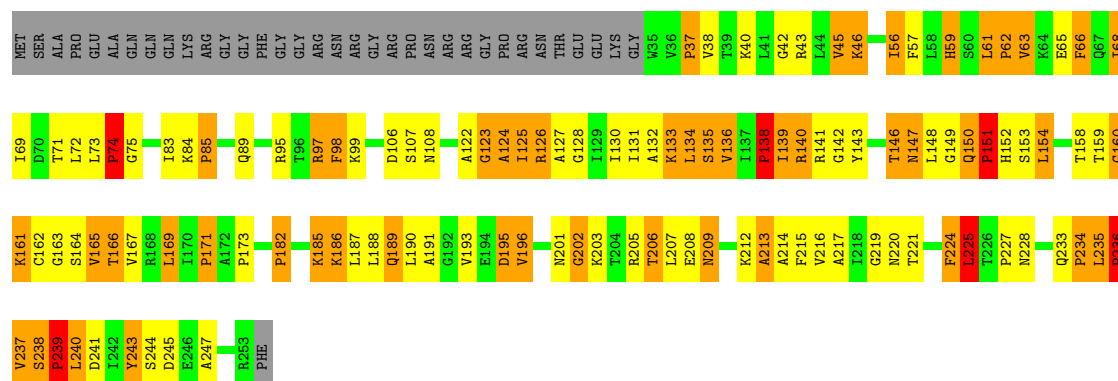
- Molecule 2: 40S ribosomal protein S0-A

Chain A:



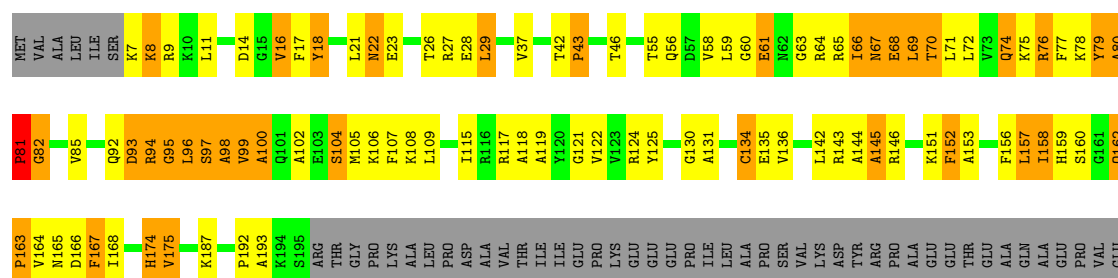
- Molecule 3: 40S ribosomal protein S2

Chain B:



- Molecule 4: 40S ribosomal protein S3

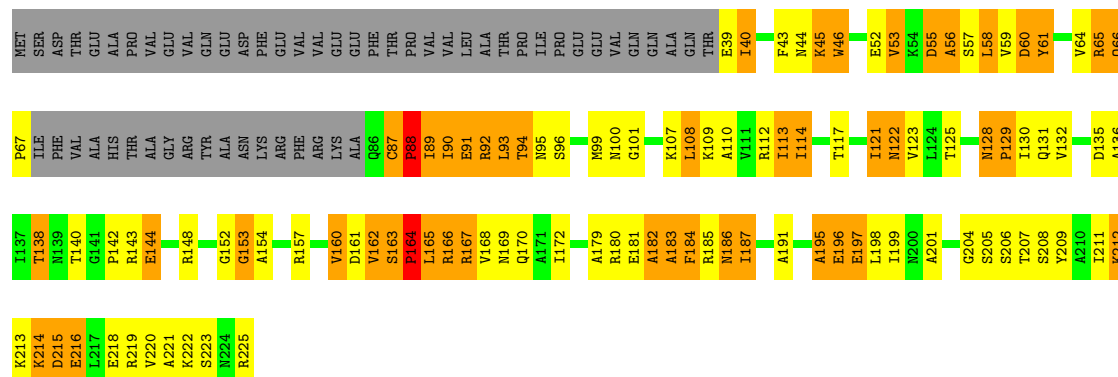
Chain C:



ALA

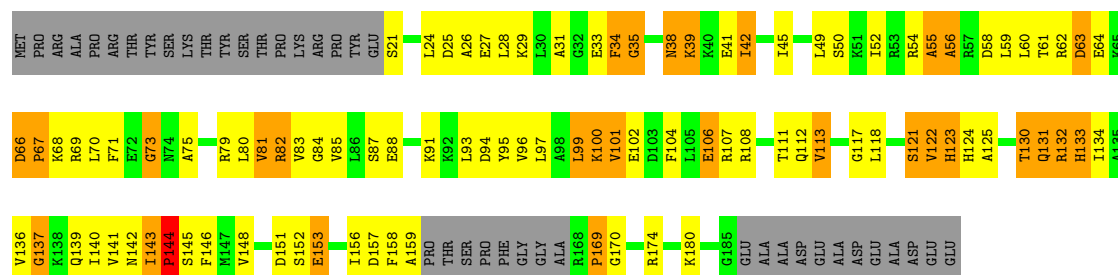
- Molecule 5: 40S ribosomal protein S5

Chain D:



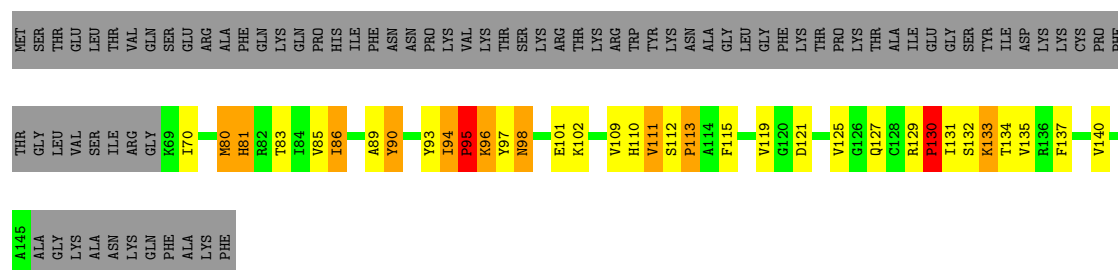
- Molecule 6: 40S ribosomal protein S9-A

Chain E:



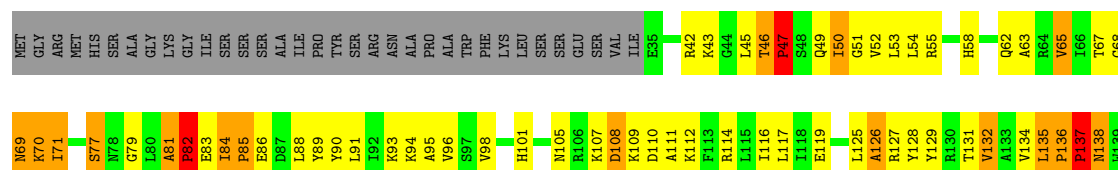
- Molecule 7: 40S ribosomal protein S11

Chain F:



- Molecule 8: 40S ribosomal protein S13

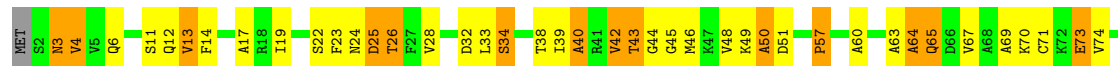
Chain G:





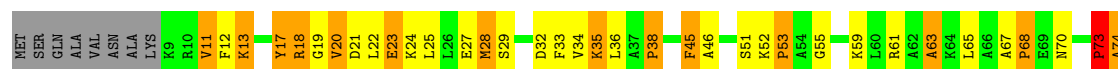
• Molecule 9: 40S ribosomal protein S14-A

Chain H:



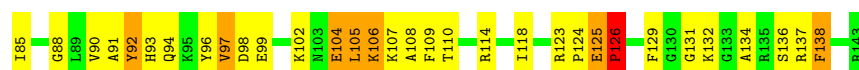
• Molecule 10: 40S ribosomal protein S15

Chain I:



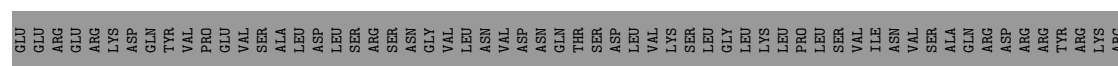
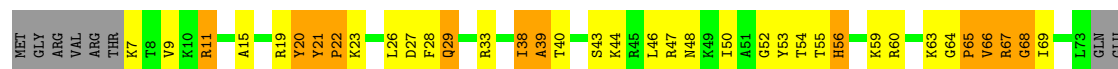
• Molecule 11: 40S ribosomal protein S16

Chain J:



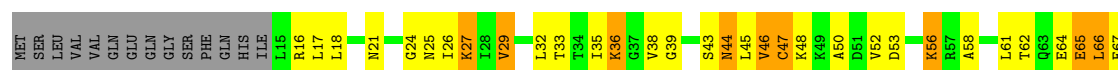
• Molecule 12: 40S ribosomal protein S17-A

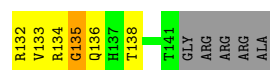
Chain K:



• Molecule 13: 40S ribosomal protein S18

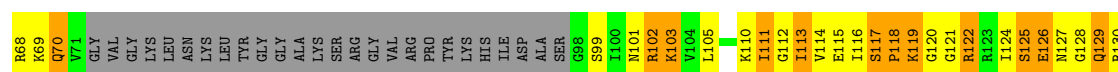
Chain L:





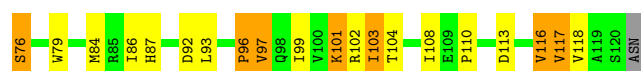
• Molecule 14: 40S ribosomal protein S19-A

Chain M:



• Molecule 15: 40S ribosomal protein S20

Chain N:



• Molecule 16: 40S ribosomal protein S22-A

Chain O:



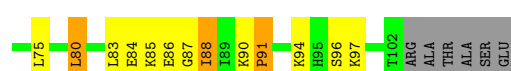
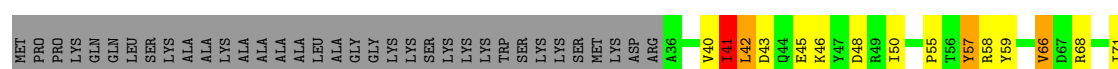
• Molecule 17: 40S ribosomal protein S23

Chain P:



• Molecule 18: 40S ribosomal protein S25-A

Chain Q:



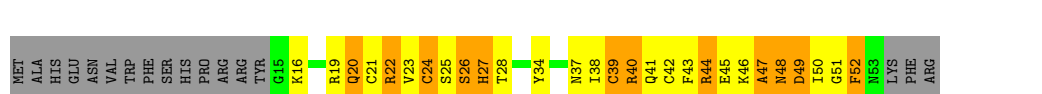
- Molecule 19: 40S ribosomal protein S28-A

Chain R:



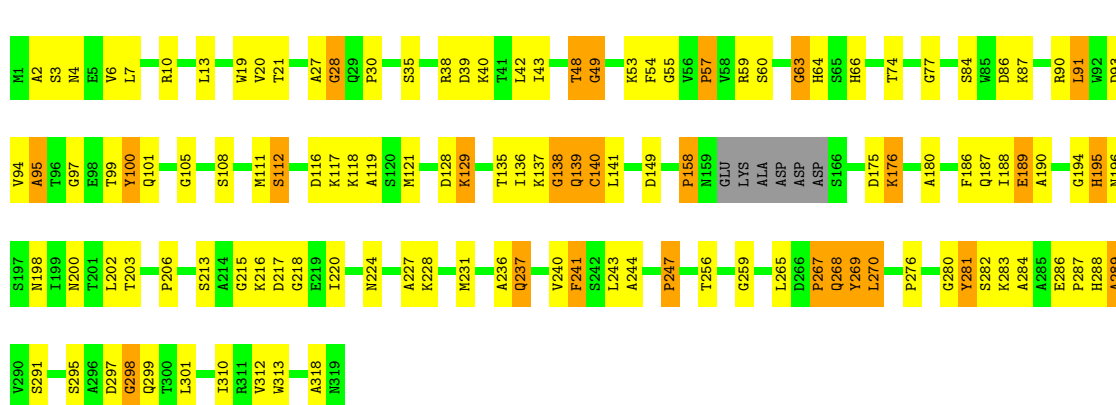
- Molecule 20: 40S ribosomal protein S29-A

Chain S:



- Molecule 21: Guanine nucleotide-binding protein subunit beta-like protein; RACK-1

Chain T:



- Molecule 22: Unassigned secondary structure

Chain a:



There are no outlier residues recorded for this chain.

- Molecule 23: Unassigned secondary structure

Chain b:



- Molecule 24: Unassigned secondary structure

Chain c:



- Molecule 25: Unassigned secondary structure

Chain d:



There are no outlier residues recorded for this chain.

- Molecule 26: Unassigned secondary structure

Chain e: 

There are no outlier residues recorded for this chain.

- Molecule 27: Unassigned secondary structure

Chain f: 

There are no outlier residues recorded for this chain.

- Molecule 28: Unassigned secondary structure

Chain h: 

There are no outlier residues recorded for this chain.

4 Data and refinement statistics

EDS was not executed - this section will therefore be incomplete.

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	437.11Å 288.38Å 306.56Å 90.00° 99.13° 90.00°	Depositor
Resolution (Å)	268.00 – 4.00	Depositor
% Data completeness (in resolution range)	(Not available) (268.00-4.00)	Depositor
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.57 (at 4.02Å)	Xtriage
Refinement program	Phenix	Depositor
R, R_{free}	0.278 , 0.341	Depositor
Wilson B-factor (Å ²)	147.1	Xtriage
Anisotropy	0.257	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle L \rangle = 0.42$, $\langle L^2 \rangle = 0.25$	Xtriage
Outliers	0 of 617642 reflections	Xtriage
Total number of atoms	55248	wwPDB-VP
Average B, all atoms (Å ²)	171.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.68% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: OHX

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	1	0.77	20/42619 (0.0%)	1.32	552/66408 (0.8%)
2	A	0.45	0/1089	0.86	16/1517 (1.1%)
3	B	0.54	0/1073	0.91	13/1488 (0.9%)
4	C	0.50	0/927	0.68	4/1286 (0.3%)
5	D	0.45	0/834	0.71	5/1159 (0.4%)
6	E	0.49	0/775	0.70	3/1077 (0.3%)
7	F	0.60	0/381	0.88	3/530 (0.6%)
8	G	0.51	0/579	0.78	5/806 (0.6%)
9	H	0.43	0/626	0.71	4/867 (0.5%)
10	I	0.45	0/595	0.90	8/826 (1.0%)
11	J	0.49	0/657	0.78	5/911 (0.5%)
12	K	0.44	0/331	0.74	2/460 (0.4%)
13	L	0.47	0/589	0.70	2/816 (0.2%)
14	M	0.54	0/518	0.83	3/715 (0.4%)
15	N	0.51	0/550	0.84	5/766 (0.7%)
16	O	0.53	0/621	0.83	3/860 (0.3%)
17	P	0.61	0/565	0.92	4/781 (0.5%)
18	Q	0.41	0/331	0.68	2/460 (0.4%)
19	R	0.40	0/229	0.63	1/316 (0.3%)
20	S	0.54	0/189	0.70	0/260
21	T	0.43	0/1541	0.61	8/2141 (0.4%)
All	All	0.72	20/55619 (0.0%)	1.23	648/84450 (0.8%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
3	B	0	2
17	P	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
18	Q	0	1
23	b	0	1
24	c	0	1
All	All	0	6

All (20) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	1	1421	A	N9-C4	10.64	1.44	1.37
1	1	825	U	C2-O2	-9.58	1.13	1.22
1	1	391	A	N9-C4	-6.63	1.33	1.37
1	1	243	G	C1'-N9	-6.55	1.37	1.46
1	1	1030	A	N9-C4	-5.94	1.34	1.37
1	1	337	G	C5-C6	-5.88	1.36	1.42
1	1	572	C	N1-C2	5.72	1.45	1.40
1	1	1455	G	C5-C6	5.70	1.48	1.42
1	1	337	G	N7-C5	-5.62	1.35	1.39
1	1	1421	A	N3-C4	5.42	1.38	1.34
1	1	45	U	C5-C6	-5.40	1.29	1.34
1	1	610	G	N7-C5	-5.36	1.36	1.39
1	1	426	G	C6-N1	-5.33	1.35	1.39
1	1	127	G	C1'-N9	-5.31	1.39	1.46
1	1	1746	A	N9-C4	-5.29	1.34	1.37
1	1	555	A	N9-C4	5.22	1.41	1.37
1	1	615	A	N9-C4	5.21	1.41	1.37
1	1	453	U	P-OP1	-5.21	1.40	1.49
1	1	95	G	N9-C4	-5.12	1.33	1.38
1	1	1421	A	C5-C6	5.06	1.45	1.41

All (648) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	1455	G	N3-C2-N2	-28.67	99.83	119.90
1	1	1455	G	N1-C6-O6	28.06	136.74	119.90
1	1	1455	G	N1-C2-N2	23.87	137.69	116.20
1	1	1455	G	C5-C6-O6	-19.72	116.77	128.60
1	1	1455	G	C5-C6-N1	-19.63	101.69	111.50
1	1	825	U	N1-C2-N3	16.02	124.51	114.90
1	1	45	U	C2-N1-C1'	15.19	135.92	117.70
1	1	1647	U	N3-C2-O2	14.64	132.45	122.20
1	1	517	U	C2-N1-C1'	-14.08	100.80	117.70
1	1	572	C	N1-C2-O2	13.75	127.15	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	1437	U	C2-N1-C1'	-13.38	101.64	117.70
1	1	1455	G	C6-N1-C2	13.37	133.12	125.10
1	1	610	G	C6-C5-N7	-13.30	122.42	130.40
1	1	572	C	C2-N1-C1'	13.20	133.31	118.80
1	1	1647	U	C5-C4-O4	-12.83	118.20	125.90
1	1	1234	A	N1-C6-N6	12.79	126.28	118.60
1	1	45	U	C5-C4-O4	-12.52	118.39	125.90
1	1	1647	U	N3-C4-O4	12.49	128.14	119.40
1	1	45	U	C6-N1-C1'	-12.13	104.22	121.20
1	1	610	G	C4-N9-C1'	11.90	141.97	126.50
1	1	1455	G	N1-C2-N3	-11.64	116.92	123.90
1	1	62	A	N1-C6-N6	-11.59	111.65	118.60
1	1	437	A	C5-C6-N6	-11.54	114.47	123.70
1	1	1455	G	C4-C5-N7	-11.15	106.34	110.80
1	1	337	G	C4-C5-N7	11.10	115.24	110.80
1	1	437	A	C6-N1-C2	-11.01	111.99	118.60
1	1	1639	C	C6-N1-C2	10.82	124.63	120.30
1	1	517	U	C6-N1-C1'	10.79	136.31	121.20
1	1	650	U	C5-C4-O4	-10.79	119.42	125.90
1	1	610	G	C8-N9-C1'	-10.56	113.27	127.00
1	1	358	U	N3-C2-O2	-10.52	114.84	122.20
1	1	572	C	C5-C6-N1	10.51	126.25	121.00
1	1	686	C	C2-N3-C4	-10.38	114.71	119.90
1	1	437	A	N1-C6-N6	10.25	124.75	118.60
1	1	1647	U	N1-C2-O2	-10.10	115.73	122.80
1	1	647	G	C6-N1-C2	-9.97	119.12	125.10
1	1	869	A	C6-N1-C2	-9.93	112.64	118.60
1	1	610	G	N1-C6-O6	9.92	125.85	119.90
1	1	1045	C	N1-C2-O2	9.64	124.68	118.90
1	1	1455	G	N9-C4-C5	9.63	109.25	105.40
1	1	1090	C	C6-N1-C2	-9.62	116.45	120.30
1	1	647	G	C5-C6-O6	-9.60	122.84	128.60
1	1	1437	U	C6-N1-C1'	9.58	134.61	121.20
1	1	1073	G	N3-C4-N9	9.40	131.64	126.00
1	1	1620	C	C6-N1-C2	-9.40	116.54	120.30
1	1	1620	C	C2-N1-C1'	9.30	129.03	118.80
1	1	572	C	C6-N1-C2	-9.26	116.59	120.30
1	1	1045	C	N3-C2-O2	-9.23	115.44	121.90
1	1	364	G	C5-C6-O6	9.22	134.13	128.60
1	1	846	G	C5-C6-O6	9.18	134.11	128.60
1	1	825	U	C5-C4-O4	9.15	131.39	125.90
1	1	1234	A	C6-N1-C2	9.11	124.07	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	610	G	C4-C5-N7	9.04	114.42	110.80
1	1	62	A	C5-C6-N6	9.02	130.92	123.70
1	1	686	C	N1-C2-O2	-8.99	113.51	118.90
1	1	846	G	N1-C6-O6	-8.95	114.53	119.90
1	1	572	C	C6-N1-C1'	-8.93	110.09	120.80
1	1	825	U	C4-C5-C6	8.90	125.04	119.70
1	1	572	C	N3-C2-O2	-8.79	115.75	121.90
1	1	391	A	C8-N9-C4	8.76	109.31	105.80
1	1	337	G	C6-C5-N7	-8.71	125.17	130.40
1	1	1198	G	C8-N9-C4	-8.67	102.93	106.40
1	1	1135	U	N1-C2-O2	-8.66	116.74	122.80
1	1	337	G	C5-C6-O6	-8.63	123.42	128.60
1	1	1651	A	N1-C6-N6	8.61	123.77	118.60
1	1	825	U	C6-N1-C2	-8.57	115.86	121.00
1	1	1033	C	C6-N1-C2	8.53	123.71	120.30
1	1	1244	A	N1-C6-N6	-8.46	113.53	118.60
1	1	1421	A	C8-N9-C4	-8.41	102.44	105.80
1	1	1109	G	C5-C6-O6	-8.40	123.56	128.60
1	1	1109	G	N1-C6-O6	8.35	124.91	119.90
1	1	517	U	N1-C2-O2	-8.32	116.98	122.80
1	1	1377	U	C5-C4-O4	-8.30	120.92	125.90
1	1	337	G	C5-N7-C8	-8.24	100.18	104.30
1	1	650	U	N3-C4-O4	8.22	125.16	119.40
1	1	847	A	C6-N1-C2	-8.21	113.67	118.60
1	1	1481	C	C6-N1-C2	-8.18	117.03	120.30
1	1	1187	U	C5-C4-O4	-8.18	120.99	125.90
1	1	1421	A	C2-N3-C4	8.18	114.69	110.60
1	1	1174	C	C6-N1-C2	8.13	123.55	120.30
1	1	1046	G	N3-C4-N9	8.12	130.87	126.00
1	1	1498	G	N3-C4-N9	8.03	130.82	126.00
1	1	423	G	C8-N9-C4	-8.03	103.19	106.40
1	1	1234	A	C5-C6-N1	-8.00	113.70	117.70
1	1	869	A	C5-C6-N1	7.99	121.69	117.70
1	1	1173	C	C6-N1-C2	7.97	123.49	120.30
1	1	1486	G	N1-C6-O6	7.96	124.67	119.90
1	1	1453	G	C8-N9-C4	7.95	109.58	106.40
1	1	569	C	C6-N1-C2	7.89	123.46	120.30
1	1	1141	G	C8-N9-C1'	-7.89	116.74	127.00
1	1	374	U	C5-C4-O4	-7.87	121.18	125.90
1	1	1579	U	C5-C4-O4	-7.85	121.19	125.90
1	1	358	U	N1-C2-O2	7.84	128.29	122.80
1	1	45	U	N3-C4-O4	7.74	124.82	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	1085	G	C8-N9-C4	7.69	109.48	106.40
1	1	1620	C	N3-C2-O2	-7.68	116.53	121.90
1	1	358	U	C2-N1-C1'	7.65	126.88	117.70
1	1	1725	U	C2-N1-C1'	7.65	126.88	117.70
1	1	1591	C	C2-N1-C1'	-7.64	110.40	118.80
1	1	1418	G	C5-C6-O6	-7.59	124.05	128.60
1	1	1606	C	C6-N1-C2	7.58	123.33	120.30
1	1	54	C	C6-N1-C2	7.56	123.33	120.30
1	1	1220	C	C2-N1-C1'	7.54	127.09	118.80
1	1	1073	G	N3-C4-C5	-7.54	124.83	128.60
1	1	1541	G	C4-N9-C1'	7.53	136.28	126.50
1	1	63	G	C4-C5-N7	-7.52	107.79	110.80
1	1	517	U	C5-C6-N1	-7.49	118.95	122.70
1	1	1620	C	N1-C2-O2	7.47	123.38	118.90
1	1	517	U	C5-C4-O4	7.47	130.38	125.90
1	1	13	C	C2-N1-C1'	7.44	126.98	118.80
1	1	1159	C	C2-N1-C1'	7.43	126.97	118.80
1	1	1073	G	C4-N9-C1'	7.42	136.14	126.50
1	1	1028	C	C6-N1-C1'	-7.40	111.92	120.80
1	1	610	G	N7-C8-N9	7.40	116.80	113.10
1	1	1421	A	N1-C6-N6	-7.40	114.16	118.60
1	1	1772	C	C6-N1-C2	7.39	123.26	120.30
1	1	1141	G	C4-N9-C1'	7.39	136.11	126.50
1	1	1121	C	N1-C2-O2	-7.39	114.47	118.90
1	1	1547	A	C8-N9-C4	7.36	108.75	105.80
1	1	1421	A	N3-C4-C5	-7.36	121.65	126.80
1	1	1377	U	N3-C4-O4	7.31	124.51	119.40
16	O	95	PRO	N-CA-CB	7.30	112.06	103.30
1	1	631	G	C8-N9-C4	-7.30	103.48	106.40
1	1	337	G	N1-C6-O6	7.29	124.28	119.90
1	1	610	G	C4-C5-C6	7.27	123.16	118.80
1	1	427	C	N3-C2-O2	7.22	126.95	121.90
1	1	1301	U	C6-N1-C2	7.20	125.32	121.00
1	1	1789	G	C8-N9-C4	7.20	109.28	106.40
1	1	1498	G	N3-C4-C5	-7.19	125.00	128.60
1	1	373	G	N3-C4-C5	7.18	132.19	128.60
1	1	310	C	C5-C4-N4	-7.17	115.18	120.20
1	1	62	A	N9-C4-C5	7.17	108.67	105.80
1	1	1567	U	C2-N1-C1'	7.16	126.29	117.70
1	1	1220	C	C6-N1-C1'	-7.15	112.22	120.80
1	1	825	U	N1-C2-O2	-7.14	117.80	122.80
1	1	332	U	N3-C2-O2	-7.11	117.22	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	55	A	N1-C6-N6	-7.09	114.34	118.60
1	1	306	U	C5-C6-N1	-7.09	119.15	122.70
1	1	596	C	C6-N1-C2	7.09	123.14	120.30
1	1	1591	C	C6-N1-C1'	7.08	129.29	120.80
1	1	1335	U	N1-C2-O2	7.04	127.73	122.80
1	1	338	C	C2-N1-C1'	7.01	126.51	118.80
1	1	610	G	C5-N7-C8	-6.97	100.82	104.30
1	1	1567	U	C5-C6-N1	6.96	126.18	122.70
1	1	939	A	C8-N9-C4	-6.96	103.02	105.80
1	1	1141	G	C6-C5-N7	-6.96	126.23	130.40
1	1	95	G	C8-N9-C4	6.95	109.18	106.40
1	1	577	G	C4-N9-C1'	6.93	135.51	126.50
1	1	1792	G	C5-C6-O6	-6.91	124.46	128.60
1	1	1773	C	N3-C2-O2	6.89	126.73	121.90
12	K	65	PRO	N-CA-CB	6.89	111.56	103.30
1	1	1486	G	C5-C6-O6	-6.87	124.48	128.60
1	1	1331	A	N9-C4-C5	6.86	108.55	105.80
1	1	343	C	C2-N3-C4	-6.86	116.47	119.90
1	1	1606	C	N1-C2-O2	-6.86	114.78	118.90
1	1	1560	U	N3-C4-O4	-6.85	114.60	119.40
1	1	1028	C	C2-N1-C1'	6.85	126.33	118.80
1	1	1773	C	N1-C2-O2	-6.83	114.80	118.90
17	P	64	PRO	N-CA-CB	6.83	111.49	103.30
10	I	68	PRO	N-CA-CB	6.80	111.46	103.30
17	P	42	PRO	N-CA-CB	6.80	111.46	103.30
1	1	1541	G	C8-N9-C1'	-6.79	118.17	127.00
1	1	4	C	N3-C4-C5	6.78	124.61	121.90
1	1	373	G	C5-C6-N1	-6.78	108.11	111.50
1	1	343	C	C5-C6-N1	-6.77	117.61	121.00
1	1	1463	C	C6-N1-C2	6.77	123.01	120.30
1	1	958	U	C2-N3-C4	-6.77	122.94	127.00
1	1	686	C	N3-C4-C5	6.76	124.60	121.90
1	1	1198	G	N9-C4-C5	6.76	108.10	105.40
1	1	1159	C	C6-N1-C1'	-6.75	112.69	120.80
1	1	346	G	N9-C4-C5	-6.75	102.70	105.40
1	1	993	A	N9-C4-C5	6.75	108.50	105.80
1	1	95	G	N3-C4-C5	6.75	131.97	128.60
8	G	137	PRO	N-CA-CB	6.73	111.38	103.30
15	N	59	PRO	N-CA-CB	6.73	111.37	103.30
1	1	305	C	N1-C2-O2	-6.71	114.88	118.90
1	1	301	A	C8-N9-C4	6.70	108.48	105.80
1	1	1335	U	N3-C2-O2	-6.70	117.51	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	364	G	N1-C6-O6	-6.69	115.89	119.90
1	1	628	G	C8-N9-C4	6.68	109.07	106.40
1	1	1073	G	C6-C5-N7	-6.67	126.40	130.40
1	1	79	C	C2-N1-C1'	6.66	126.13	118.80
1	1	1331	A	C8-N9-C4	-6.66	103.14	105.80
1	1	45	U	N3-C2-O2	-6.66	117.54	122.20
1	1	825	U	N3-C2-O2	-6.65	117.55	122.20
1	1	1645	G	N1-C6-O6	6.65	123.89	119.90
1	1	1437	U	N1-C2-O2	-6.64	118.15	122.80
11	J	51	PRO	N-CA-CB	6.63	111.26	103.30
1	1	577	G	C6-C5-N7	-6.63	126.42	130.40
1	1	565	C	C2-N1-C1'	-6.63	111.51	118.80
1	1	45	U	C2-N3-C4	-6.63	123.02	127.00
1	1	517	U	N3-C4-O4	-6.62	114.77	119.40
1	1	647	G	N3-C4-C5	-6.61	125.30	128.60
1	1	1418	G	C8-N9-C4	-6.61	103.76	106.40
1	1	1073	G	C8-N9-C1'	-6.60	118.42	127.00
1	1	1149	G	N3-C4-N9	6.60	129.96	126.00
1	1	1121	C	C2-N1-C1'	-6.59	111.55	118.80
10	I	73	PRO	N-CA-CB	6.58	111.20	103.30
1	1	1778	G	N1-C6-O6	6.56	123.84	119.90
11	J	41	PRO	N-CA-CB	6.55	111.16	103.30
1	1	684	A	C5-C6-N1	6.55	120.97	117.70
4	C	163	PRO	N-CA-CB	6.54	111.15	103.30
1	1	647	G	C5-C6-N1	6.54	114.77	111.50
1	1	1453	G	C4-N9-C1'	-6.54	118.00	126.50
18	Q	91	PRO	N-CA-CB	6.53	111.14	103.30
1	1	1206	U	C5-C6-N1	6.53	125.97	122.70
2	A	70	PRO	N-CA-CB	6.52	111.13	103.30
1	1	353	A	N1-C6-N6	-6.52	114.69	118.60
1	1	1294	G	C8-N9-C4	-6.51	103.80	106.40
3	B	37	PRO	N-CA-CB	6.51	111.11	103.30
1	1	62	A	C6-C5-N7	6.50	136.85	132.30
1	1	1141	G	N3-C4-N9	6.49	129.90	126.00
1	1	373	G	N1-C6-O6	6.49	123.79	119.90
1	1	1046	G	C6-C5-N7	-6.49	126.51	130.40
1	1	1453	G	N3-C4-C5	6.48	131.84	128.60
1	1	1541	G	N3-C4-N9	6.48	129.89	126.00
1	1	647	G	N3-C4-N9	6.48	129.89	126.00
1	1	1591	C	C2-N3-C4	-6.48	116.66	119.90
1	1	1109	G	C6-C5-N7	-6.47	126.52	130.40
1	1	1651	A	C5-C6-N6	-6.47	118.53	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	346	G	C4-C5-N7	6.47	113.39	110.80
1	1	1348	A	N1-C6-N6	6.46	122.47	118.60
1	1	625	C	N1-C2-O2	6.45	122.77	118.90
4	C	81	PRO	N-CA-CB	6.44	111.03	103.30
1	1	1778	G	C5-C6-O6	-6.42	124.75	128.60
1	1	16	G	N3-C4-N9	6.41	129.84	126.00
10	I	38	PRO	N-CA-CB	6.40	110.98	103.30
13	L	76	PRO	N-CA-CB	6.38	110.96	103.30
1	1	1046	G	N3-C4-C5	-6.37	125.42	128.60
1	1	1606	C	N3-C2-O2	6.37	126.36	121.90
1	1	439	U	C2-N1-C1'	6.36	125.33	117.70
1	1	329	G	N3-C4-C5	6.35	131.77	128.60
3	B	239	PRO	N-CA-CB	6.34	110.91	103.30
1	1	1322	A	C8-N9-C4	6.34	108.34	105.80
15	N	96	PRO	N-CA-CB	6.33	110.89	103.30
2	A	68	PRO	N-CA-CB	6.32	110.89	103.30
9	H	94	PRO	N-CA-CB	6.32	110.88	103.30
1	1	479	C	N1-C2-O2	-6.32	115.11	118.90
1	1	1632	C	C6-N1-C2	-6.31	117.78	120.30
1	1	437	A	N1-C2-N3	6.30	132.45	129.30
1	1	986	G	C8-N9-C4	-6.29	103.89	106.40
1	1	45	U	N1-C2-O2	6.28	127.20	122.80
3	B	173	PRO	N-CA-CB	6.27	110.83	103.30
1	1	577	G	C8-N9-C1'	-6.25	118.87	127.00
4	C	43	PRO	N-CA-CB	6.25	110.80	103.30
1	1	1431	C	C6-N1-C2	6.25	122.80	120.30
1	1	1450	U	N3-C4-C5	6.25	118.35	114.60
1	1	614	C	C6-N1-C2	6.25	122.80	120.30
1	1	1450	U	N1-C2-O2	6.24	127.17	122.80
1	1	1599	C	N1-C2-O2	6.22	122.64	118.90
1	1	1431	C	N3-C4-C5	6.22	124.39	121.90
1	1	869	A	N3-C4-C5	-6.22	122.45	126.80
1	1	1408	G	C4-N9-C1'	6.22	134.58	126.50
1	1	1045	C	N3-C4-N4	-6.20	113.66	118.00
1	1	1591	C	N1-C2-O2	-6.20	115.18	118.90
1	1	1173	C	N3-C4-C5	6.19	124.38	121.90
6	E	67	PRO	N-CA-CB	6.19	110.73	103.30
1	1	869	A	N3-C4-N9	6.19	132.35	127.40
1	1	1788	G	N3-C4-N9	-6.18	122.29	126.00
3	B	85	PRO	N-CA-CB	6.17	110.71	103.30
1	1	1498	G	C8-N9-C1'	-6.17	118.97	127.00
1	1	1303	U	N1-C2-O2	-6.17	118.48	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	R	47	PRO	N-CA-CB	6.17	110.70	103.30
12	K	22	PRO	N-CA-CB	6.17	110.70	103.30
1	1	13	C	C6-N1-C1'	-6.17	113.40	120.80
1	1	752	A	N1-C6-N6	6.16	122.30	118.60
1	1	1455	G	C8-N9-C4	-6.16	103.94	106.40
1	1	1611	A	N7-C8-N9	6.16	116.88	113.80
3	B	74	PRO	N-CA-CB	6.15	110.67	103.30
15	N	55	PRO	N-CA-CB	6.14	110.67	103.30
1	1	1498	G	C4-N9-C1'	6.14	134.48	126.50
21	T	247	PRO	N-CA-CB	6.14	110.67	103.30
1	1	406	U	N3-C2-O2	6.14	126.50	122.20
4	C	192	PRO	N-CA-CB	6.14	110.66	103.30
1	1	825	U	C5-C6-N1	-6.13	119.63	122.70
1	1	1541	G	C6-C5-N7	-6.13	126.72	130.40
14	M	118	PRO	N-CA-CB	6.13	110.66	103.30
1	1	1476	C	C6-N1-C2	6.12	122.75	120.30
8	G	85	PRO	N-CA-CB	6.12	110.65	103.30
1	1	481	A	C6-N1-C2	6.12	122.27	118.60
1	1	1438	G	C6-C5-N7	-6.12	126.72	130.40
1	1	1792	G	N1-C6-O6	6.12	123.57	119.90
6	E	169	PRO	N-CA-CB	6.12	110.64	103.30
1	1	437	A	C6-C5-N7	-6.11	128.02	132.30
3	B	171	PRO	N-CA-CB	6.11	110.63	103.30
1	1	437	A	C5-C6-N1	6.09	120.74	117.70
1	1	825	U	C2-N3-C4	-6.09	123.35	127.00
1	1	1141	G	N9-C4-C5	-6.09	102.97	105.40
1	1	427	C	C6-N1-C2	6.08	122.73	120.30
1	1	459	G	C5-C6-N1	-6.07	108.47	111.50
9	H	120	PRO	N-CA-CB	6.06	110.58	103.30
1	1	1497	U	C5-C4-O4	6.05	129.53	125.90
1	1	610	G	N3-C4-N9	6.05	129.63	126.00
7	F	113	PRO	N-CA-CB	6.05	110.56	103.30
1	1	338	C	N1-C2-O2	6.04	122.52	118.90
1	1	890	C	C2-N1-C1'	-6.03	112.17	118.80
1	1	684	A	C6-N1-C2	-6.02	114.99	118.60
8	G	82	PRO	N-CA-CB	6.01	110.52	103.30
10	I	75	PRO	N-CA-CB	6.01	110.52	103.30
1	1	1792	G	C6-C5-N7	-6.01	126.79	130.40
1	1	1579	U	C2-N1-C1'	6.00	124.90	117.70
1	1	1787	C	N3-C4-C5	6.00	124.30	121.90
1	1	1104	U	N3-C2-O2	5.99	126.40	122.20
1	1	63	G	C5-N7-C8	5.98	107.29	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	590	C	C6-N1-C2	-5.97	117.91	120.30
3	B	182	PRO	N-CA-CB	5.97	110.46	103.30
15	N	71	PRO	N-CA-CB	5.96	110.46	103.30
17	P	118	PRO	N-CA-CB	5.96	110.45	103.30
1	1	1149	G	C5-C6-N1	5.95	114.48	111.50
1	1	1073	G	C5-C6-O6	-5.95	125.03	128.60
3	B	138	PRO	N-CA-CB	5.95	110.44	103.30
10	I	53	PRO	N-CA-CB	5.94	110.43	103.30
18	Q	55	PRO	N-CA-CB	5.94	110.43	103.30
16	O	77	PRO	N-CA-CB	5.94	110.43	103.30
2	A	118	PRO	N-CA-CB	5.94	110.43	103.30
1	1	429	G	C8-N9-C4	-5.93	104.03	106.40
2	A	194	PRO	N-CA-CB	5.93	110.41	103.30
8	G	136	PRO	N-CA-CB	5.93	110.41	103.30
21	T	206	PRO	N-CA-CB	5.93	110.41	103.30
1	1	1028	C	N3-C4-C5	5.92	124.27	121.90
1	1	1378	U	C5-C6-N1	5.92	125.66	122.70
1	1	1637	C	N1-C2-O2	5.92	122.45	118.90
1	1	874	C	N1-C2-O2	5.92	122.45	118.90
1	1	1137	A	C8-N9-C4	5.92	108.17	105.80
5	D	67	PRO	N-CA-CB	5.92	110.40	103.30
1	1	1353	U	N3-C2-O2	-5.91	118.06	122.20
1	1	1520	U	N1-C2-O2	-5.91	118.66	122.80
1	1	1135	U	N3-C2-O2	5.91	126.33	122.20
1	1	572	C	C2-N3-C4	5.90	122.85	119.90
1	1	100	A	N1-C6-N6	-5.90	115.06	118.60
1	1	1615	C	C6-N1-C2	-5.90	117.94	120.30
1	1	1759	C	C6-N1-C2	5.89	122.66	120.30
9	H	57	PRO	N-CA-CB	5.89	110.37	103.30
1	1	614	C	C6-N1-C1'	-5.89	113.74	120.80
1	1	1498	G	C5-C6-N1	5.88	114.44	111.50
1	1	950	C	C6-N1-C2	5.88	122.65	120.30
1	1	329	G	C2-N3-C4	-5.88	108.96	111.90
2	A	42	PRO	N-CA-CB	5.88	110.36	103.30
1	1	161	U	C5-C6-N1	-5.88	119.76	122.70
1	1	1033	C	C2-N1-C1'	-5.88	112.33	118.80
1	1	1529	C	C6-N1-C2	5.88	122.65	120.30
1	1	958	U	C5-C4-O4	-5.88	122.37	125.90
2	A	11	PRO	N-CA-CB	5.88	110.35	103.30
1	1	388	G	C8-N9-C4	-5.87	104.05	106.40
21	T	287	PRO	N-CA-CB	5.87	110.34	103.30
2	A	97	PRO	N-CA-CB	5.87	110.34	103.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	1188	G	C5-C6-O6	-5.86	125.08	128.60
1	1	1138	A	N1-C6-N6	-5.86	115.08	118.60
1	1	337	G	N9-C4-C5	-5.85	103.06	105.40
1	1	402	C	C3'-C2'-C1'	-5.85	96.82	101.50
1	1	625	C	C2-N1-C1'	5.85	125.23	118.80
21	T	267	PRO	N-CA-CB	5.84	110.31	103.30
1	1	1547	A	C4-C5-C6	-5.84	114.08	117.00
2	A	4	PRO	N-CA-CB	5.83	110.29	103.30
5	D	142	PRO	N-CA-CB	5.83	110.29	103.30
1	1	1639	C	N1-C2-N3	-5.82	115.13	119.20
1	1	63	G	N3-C2-N2	-5.80	115.84	119.90
8	G	47	PRO	N-CA-CB	5.80	110.25	103.30
1	1	1373	C	N1-C2-O2	-5.79	115.42	118.90
1	1	847	A	C5-C6-N6	-5.79	119.07	123.70
1	1	888	U	C2-N1-C1'	5.79	124.64	117.70
1	1	1418	G	N1-C6-O6	5.79	123.37	119.90
1	1	993	A	C4-C5-N7	-5.79	107.81	110.70
1	1	1274	C	C6-N1-C2	-5.79	117.99	120.30
1	1	1438	G	C8-N9-C1'	-5.78	119.48	127.00
1	1	1638	G	C2-N3-C4	-5.78	109.01	111.90
3	B	236	PRO	N-CA-CB	5.78	110.24	103.30
14	M	2	PRO	N-CA-CB	5.78	110.23	103.30
1	1	437	A	N3-C4-N9	5.78	132.02	127.40
1	1	597	G	C4-C5-N7	5.77	113.11	110.80
1	1	792	U	C2-N1-C1'	5.77	124.62	117.70
2	A	207	PRO	N-CA-CB	5.77	110.22	103.30
1	1	1788	G	N3-C2-N2	-5.76	115.86	119.90
1	1	1437	U	C5-C6-N1	-5.76	119.82	122.70
10	I	109	PRO	N-CA-CB	5.76	110.21	103.30
17	P	88	PRO	N-CA-CB	5.75	110.20	103.30
1	1	1303	U	C2-N1-C1'	-5.75	110.80	117.70
1	1	373	G	C2-N3-C4	-5.75	109.03	111.90
1	1	610	G	C5-C6-N1	-5.75	108.63	111.50
21	T	57	PRO	N-CA-CB	5.75	110.20	103.30
1	1	24	U	C5-C4-O4	-5.74	122.45	125.90
1	1	1421	A	N9-C4-C5	5.74	108.10	105.80
1	1	647	G	C4-N9-C1'	5.74	133.96	126.50
1	1	1109	G	N9-C4-C5	-5.73	103.11	105.40
1	1	1602	C	C2-N1-C1'	5.72	125.10	118.80
15	N	110	PRO	N-CA-CB	5.72	110.17	103.30
5	D	129	PRO	N-CA-CB	5.71	110.15	103.30
1	1	1138	A	N9-C4-C5	5.70	108.08	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	880	C	C6-N1-C2	5.70	122.58	120.30
1	1	374	U	C6-N1-C1'	-5.70	113.22	121.20
1	1	1673	G	C6-N1-C2	-5.70	121.68	125.10
1	1	1638	G	N1-C2-N3	5.69	127.31	123.90
2	A	199	PRO	N-CA-CB	5.69	110.12	103.30
1	1	1520	U	N3-C2-O2	5.68	126.18	122.20
1	1	358	U	C6-N1-C1'	-5.68	113.25	121.20
1	1	592	A	C6-N1-C2	5.68	122.01	118.60
3	B	227	PRO	N-CA-CB	5.68	110.11	103.30
14	M	31	PRO	N-CA-CB	5.68	110.11	103.30
1	1	1549	C	N1-C2-O2	-5.67	115.50	118.90
1	1	1602	C	C6-N1-C1'	-5.67	113.99	120.80
21	T	30	PRO	N-CA-CB	5.67	110.10	103.30
1	1	1085	G	N7-C8-N9	-5.67	110.27	113.10
2	A	35	PRO	N-CA-CB	5.67	110.10	103.30
10	I	125	PRO	N-CA-CB	5.67	110.10	103.30
10	I	87	PRO	N-CA-CB	5.67	110.10	103.30
1	1	869	A	C2-N3-C4	5.66	113.43	110.60
1	1	1725	U	C6-N1-C1'	-5.65	113.29	121.20
1	1	1437	U	N3-C2-O2	5.64	126.15	122.20
1	1	354	C	C6-N1-C2	5.64	122.56	120.30
1	1	870	C	C6-N1-C2	5.63	122.55	120.30
1	1	1786	G	C5-C6-O6	5.63	131.98	128.60
1	1	615	A	C6-N1-C2	-5.63	115.22	118.60
1	1	1095	U	C2-N1-C1'	5.63	124.46	117.70
1	1	1455	G	C5-N7-C8	5.63	107.12	104.30
1	1	1453	G	C5-C6-O6	-5.63	125.22	128.60
1	1	1789	G	C8-N9-C1'	-5.63	119.68	127.00
1	1	91	G	N3-C4-C5	5.62	131.41	128.60
1	1	1234	A	N1-C2-N3	-5.62	126.49	129.30
1	1	565	C	C5-C6-N1	-5.62	118.19	121.00
1	1	13	C	C5-C4-N4	-5.61	116.27	120.20
1	1	1495	C	C6-N1-C2	5.61	122.55	120.30
1	1	1331	A	C6-N1-C2	-5.61	115.24	118.60
1	1	1645	G	C5-C6-O6	-5.61	125.24	128.60
5	D	88	PRO	N-CA-CB	5.60	110.02	103.30
9	H	122	PRO	N-CA-CB	5.60	110.02	103.30
1	1	1541	G	N3-C4-C5	-5.59	125.80	128.60
1	1	1141	G	C4-C5-N7	5.59	113.03	110.80
1	1	1149	G	N3-C4-C5	-5.58	125.81	128.60
1	1	1634	C	C2-N3-C4	5.58	122.69	119.90
1	1	63	G	N3-C4-N9	-5.58	122.65	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	D	164	PRO	N-CA-CB	5.58	110.00	103.30
1	1	628	G	N1-C2-N2	-5.58	111.18	116.20
1	1	427	C	N1-C2-O2	-5.58	115.56	118.90
1	1	1166	A	C5-C6-N6	-5.58	119.24	123.70
3	B	234	PRO	N-CA-CB	5.57	109.98	103.30
1	1	541	A	C8-N9-C4	-5.57	103.57	105.80
1	1	86	A	C8-N9-C4	-5.56	103.58	105.80
1	1	1205	C	C6-N1-C1'	-5.56	114.13	120.80
1	1	827	C	N1-C2-O2	-5.55	115.57	118.90
1	1	95	G	C4-N9-C1'	-5.55	119.29	126.50
1	1	1636	C	C6-N1-C2	5.54	122.52	120.30
1	1	993	A	N1-C6-N6	-5.54	115.27	118.60
1	1	1174	C	C5-C6-N1	-5.54	118.23	121.00
1	1	1791	A	C4-C5-N7	5.54	113.47	110.70
1	1	1244	A	C5-C6-N6	5.54	128.13	123.70
1	1	847	A	C5-C6-N1	5.54	120.47	117.70
1	1	939	A	N7-C8-N9	5.54	116.57	113.80
1	1	341	A	C5-C6-N1	5.53	120.47	117.70
21	T	276	PRO	N-CA-CB	5.53	109.94	103.30
2	A	126	PRO	N-CA-CB	5.52	109.92	103.30
1	1	1467	C	N1-C2-O2	-5.51	115.59	118.90
1	1	1781	A	C8-N9-C4	-5.51	103.60	105.80
1	1	1118	G	C4-N9-C1'	-5.51	119.34	126.50
1	1	1134	C	C6-N1-C2	5.51	122.50	120.30
3	B	151	PRO	N-CA-CB	5.50	109.90	103.30
1	1	610	G	N9-C4-C5	-5.50	103.20	105.40
21	T	158	PRO	N-CA-CB	5.50	109.90	103.30
1	1	1788	G	C4-N9-C1'	-5.49	119.36	126.50
1	1	1677	C	C6-N1-C2	-5.49	118.10	120.30
1	1	1198	G	C5-C6-O6	5.49	131.89	128.60
1	1	374	U	N3-C4-C5	5.49	117.89	114.60
1	1	1072	C	C2-N1-C1'	5.49	124.83	118.80
1	1	322	G	C5-C6-O6	-5.48	125.31	128.60
1	1	1202	A	N1-C6-N6	-5.48	115.31	118.60
13	L	82	PRO	N-CA-CB	5.48	109.87	103.30
1	1	149	C	C6-N1-C1'	-5.47	114.23	120.80
1	1	1647	U	N1-C2-N3	-5.47	111.62	114.90
1	1	338	C	C6-N1-C1'	-5.47	114.24	120.80
1	1	981	U	C2-N1-C1'	5.46	124.26	117.70
1	1	1109	G	C4-C5-N7	5.46	112.99	110.80
1	1	1149	G	C2-N3-C4	5.46	114.63	111.90
1	1	373	G	N3-C4-N9	-5.45	122.73	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	479	C	C2-N1-C1'	-5.44	112.81	118.80
1	1	1455	G	N3-C4-C5	-5.44	125.88	128.60
11	J	35	PRO	N-CA-CB	5.44	109.82	103.30
1	1	1438	G	N1-C6-O6	5.43	123.16	119.90
2	A	152	PRO	N-CA-CB	5.43	109.82	103.30
1	1	1205	C	C2-N1-C1'	5.43	124.78	118.80
1	1	1673	G	N3-C4-C5	-5.43	125.88	128.60
1	1	1788	G	N3-C4-C5	5.43	131.32	128.60
1	1	1203	A	N1-C2-N3	5.43	132.01	129.30
1	1	967	A	C8-N9-C4	5.43	107.97	105.80
2	A	142	PRO	N-CA-CB	5.42	109.80	103.30
1	1	63	G	N7-C8-N9	-5.42	110.39	113.10
1	1	864	U	C5-C6-N1	5.42	125.41	122.70
1	1	867	G	C5-C6-O6	5.42	131.85	128.60
1	1	1535	U	C2-N1-C1'	5.42	124.20	117.70
1	1	1121	C	C6-N1-C1'	5.41	127.30	120.80
1	1	12	U	C5-C6-N1	-5.41	119.99	122.70
1	1	565	C	N3-C4-N4	-5.41	114.21	118.00
1	1	1775	U	N1-C2-O2	-5.41	119.01	122.80
1	1	391	A	N3-C4-C5	5.41	130.59	126.80
1	1	1348	A	C5-C6-N1	-5.41	115.00	117.70
7	F	95	PRO	N-CA-CB	5.41	109.79	103.30
1	1	883	C	C2-N1-C1'	5.40	124.74	118.80
1	1	1220	C	N1-C2-O2	5.40	122.14	118.90
1	1	1792	G	N3-C4-N9	5.40	129.24	126.00
1	1	1331	A	N1-C6-N6	-5.40	115.36	118.60
1	1	1459	C	C4-C5-C6	5.40	120.10	117.40
1	1	1553	G	C4-C5-N7	5.40	112.96	110.80
16	O	29	PRO	N-CA-CB	5.39	109.77	103.30
1	1	341	A	C6-N1-C2	-5.39	115.37	118.60
1	1	1600	A	C8-N9-C4	-5.38	103.65	105.80
1	1	869	A	C5-C6-N6	-5.38	119.39	123.70
1	1	406	U	C6-N1-C2	5.38	124.23	121.00
1	1	509	G	N9-C4-C5	5.38	107.55	105.40
1	1	300	A	N1-C6-N6	-5.37	115.38	118.60
1	1	577	G	N1-C6-O6	5.37	123.12	119.90
1	1	1046	G	C4-N9-C1'	5.36	133.47	126.50
1	1	975	C	C6-N1-C2	5.36	122.44	120.30
7	F	130	PRO	N-CA-CB	5.35	109.72	103.30
2	A	161	PRO	N-CA-CB	5.35	109.72	103.30
1	1	54	C	N3-C4-C5	5.34	124.04	121.90
1	1	423	G	N9-C4-C5	5.34	107.54	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	1450	U	N3-C2-O2	-5.34	118.46	122.20
1	1	408	C	C5-C4-N4	-5.34	116.46	120.20
1	1	517	U	N3-C2-O2	5.34	125.94	122.20
1	1	1620	C	C6-N1-C1'	-5.34	114.40	120.80
1	1	602	U	C2-N1-C1'	5.33	124.10	117.70
1	1	625	C	C6-N1-C1'	-5.32	114.41	120.80
1	1	1611	A	C5-N7-C8	-5.32	101.24	103.90
1	1	1139	A	C8-N9-C4	5.32	107.93	105.80
1	1	1385	G	C8-N9-C4	5.32	108.53	106.40
1	1	1789	G	N9-C4-C5	-5.31	103.28	105.40
1	1	1348	A	C3'-C2'-C1'	-5.31	97.25	101.50
1	1	1633	A	C8-N9-C4	-5.30	103.68	105.80
1	1	1645	G	C4-C5-N7	5.30	112.92	110.80
1	1	1431	C	N1-C2-O2	5.30	122.08	118.90
1	1	1761	U	C4-C5-C6	5.28	122.87	119.70
1	1	79	C	C6-N1-C2	-5.28	118.19	120.30
1	1	1135	U	C5-C6-N1	-5.28	120.06	122.70
1	1	1220	C	C5-C4-N4	-5.28	116.51	120.20
1	1	575	C	C6-N1-C2	5.27	122.41	120.30
1	1	1122	G	C8-N9-C4	5.27	108.51	106.40
1	1	1729	C	C2-N3-C4	-5.27	117.27	119.90
1	1	1166	A	C5-C6-N1	5.26	120.33	117.70
1	1	601	A	C5-C6-N6	-5.26	119.49	123.70
1	1	825	U	N3-C4-C5	-5.26	111.45	114.60
1	1	112	A	C3'-C2'-C1'	5.25	105.70	101.50
1	1	481	A	C5-C6-N6	5.25	127.90	123.70
1	1	802	G	N3-C4-N9	-5.25	122.85	126.00
1	1	1438	G	C5-C6-O6	-5.25	125.45	128.60
1	1	1127	G	N1-C6-O6	5.25	123.05	119.90
1	1	1620	C	C5-C6-N1	5.25	123.62	121.00
1	1	365	G	C5-C6-O6	-5.25	125.45	128.60
1	1	535	A	C5-C6-N1	-5.24	115.08	117.70
1	1	1463	C	N3-C4-C5	5.24	124.00	121.90
1	1	1126	G	N3-C2-N2	-5.24	116.23	119.90
1	1	1498	G	C6-N1-C2	-5.23	121.96	125.10
1	1	1277	G	C8-N9-C4	-5.23	104.31	106.40
1	1	802	G	N3-C4-C5	5.22	131.21	128.60
1	1	1438	G	N9-C4-C5	-5.22	103.31	105.40
1	1	365	G	C8-N9-C4	-5.21	104.31	106.40
1	1	1028	C	N1-C2-O2	5.21	122.03	118.90
1	1	1378	U	C2-N1-C1'	5.21	123.95	117.70
1	1	1009	U	N1-C2-O2	-5.20	119.16	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	B	225	LEU	N-CA-C	5.20	125.05	111.00
1	1	647	G	C8-N9-C1'	-5.19	120.25	127.00
1	1	1330	G	C8-N9-C4	-5.19	104.32	106.40
1	1	1408	G	C8-N9-C4	-5.19	104.33	106.40
1	1	1529	C	C5-C6-N1	-5.19	118.41	121.00
1	1	113	U	N1-C2-N3	5.19	118.01	114.90
1	1	687	G	N3-C4-N9	-5.18	122.89	126.00
1	1	1368	G	C6-C5-N7	-5.18	127.29	130.40
1	1	1244	A	N9-C4-C5	5.18	107.87	105.80
1	1	960	U	N3-C2-O2	-5.18	118.58	122.20
1	1	1765	A	C4-C5-C6	5.18	119.59	117.00
1	1	981	U	C6-N1-C1'	-5.17	113.96	121.20
1	1	437	A	C4-C5-C6	5.17	119.58	117.00
1	1	631	G	N3-C4-C5	-5.16	126.02	128.60
1	1	1634	C	C5-C6-N1	5.16	123.58	121.00
1	1	1787	C	C6-N1-C2	5.16	122.36	120.30
1	1	1777	G	C6-C5-N7	-5.15	127.31	130.40
1	1	1791	A	N1-C6-N6	5.15	121.69	118.60
1	1	577	G	C4-C5-N7	5.15	112.86	110.80
1	1	1030	A	C8-N9-C4	5.14	107.86	105.80
1	1	1453	G	N1-C6-O6	5.14	122.98	119.90
1	1	346	G	C5-C6-O6	-5.14	125.52	128.60
1	1	784	C	C6-N1-C1'	-5.14	114.63	120.80
1	1	1481	C	C5-C6-N1	5.14	123.57	121.00
1	1	1421	A	C4-C5-N7	-5.14	108.13	110.70
11	J	124	PRO	N-CA-CB	5.14	109.47	103.30
1	1	79	C	N1-C2-O2	5.13	121.98	118.90
1	1	1097	U	C5-C6-N1	-5.13	120.13	122.70
1	1	610	G	C5-C6-O6	-5.13	125.52	128.60
1	1	306	U	C6-N1-C2	5.13	124.08	121.00
11	J	126	PRO	N-CA-CB	5.13	109.46	103.30
1	1	330	G	C5-C6-O6	-5.13	125.52	128.60
1	1	1377	U	C2-N1-C1'	5.13	123.86	117.70
1	1	1438	G	N3-C4-N9	5.13	129.08	126.00
2	A	104	PRO	N-CA-CB	5.13	109.45	103.30
1	1	423	G	N3-C4-C5	-5.12	126.04	128.60
1	1	351	C	N1-C2-O2	-5.12	115.83	118.90
1	1	462	G	C4-N9-C1'	-5.12	119.84	126.50
1	1	1148	C	C6-N1-C2	-5.12	118.25	120.30
1	1	1455	G	C2-N3-C4	5.12	114.46	111.90
1	1	1778	G	C4-C5-N7	5.12	112.85	110.80
1	1	1335	U	C2-N1-C1'	5.12	123.84	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	1567	U	C3'-C2'-C1'	5.12	105.59	101.50
1	1	314	C	C6-N1-C2	5.11	122.34	120.30
1	1	1613	U	N1-C2-O2	5.11	126.38	122.80
1	1	439	U	C6-N1-C1'	-5.11	114.05	121.20
1	1	479	C	C6-N1-C1'	5.11	126.93	120.80
1	1	447	U	C3'-C2'-C1'	5.10	105.58	101.50
1	1	437	A	N3-C4-C5	-5.10	123.23	126.80
1	1	54	C	C2-N3-C4	-5.10	117.35	119.90
1	1	1786	G	N1-C6-O6	-5.10	116.84	119.90
1	1	1636	C	C5-C6-N1	-5.10	118.45	121.00
6	E	144	PRO	N-CA-CB	5.10	109.42	103.30
1	1	88	U	C5-C4-O4	5.09	128.96	125.90
1	1	1468	U	C5-C4-O4	-5.09	122.84	125.90
1	1	1777	G	C4-N9-C1'	5.09	133.12	126.50
1	1	1591	C	N3-C4-N4	-5.09	114.44	118.00
1	1	389	G	C5-C6-O6	-5.09	125.55	128.60
1	1	149	C	C2-N1-C1'	5.08	124.39	118.80
1	1	420	A	C2-N3-C4	-5.08	108.06	110.60
1	1	1604	U	C2-N1-C1'	5.08	123.79	117.70
1	1	986	G	C5-C6-N1	-5.08	108.96	111.50
1	1	1438	G	C4-N9-C1'	5.07	133.09	126.50
1	1	551	G	C4-C5-N7	5.07	112.83	110.80
1	1	45	U	C3'-C2'-C1'	5.07	105.56	101.50
1	1	1753	A	C8-N9-C4	5.06	107.83	105.80
1	1	1025	A	N9-C4-C5	5.06	107.83	105.80
1	1	686	C	C5-C4-N4	-5.06	116.66	120.20
1	1	62	A	C4-C5-N7	-5.06	108.17	110.70
1	1	389	G	C5-C6-N1	5.06	114.03	111.50
1	1	1033	C	C5-C6-N1	-5.06	118.47	121.00
1	1	1647	U	C2-N3-C4	5.06	130.03	127.00
1	1	1757	G	C4-C5-N7	5.05	112.82	110.80
1	1	1139	A	N9-C4-C5	-5.05	103.78	105.80
1	1	1428	G	C4-C5-N7	5.05	112.82	110.80
1	1	1006	C	N1-C2-O2	-5.05	115.87	118.90
1	1	1136	U	N1-C2-O2	5.05	126.33	122.80
1	1	1669	U	N1-C2-O2	-5.04	119.27	122.80
1	1	1124	A	C8-N9-C4	5.04	107.81	105.80
1	1	1365	C	N1-C2-O2	-5.04	115.88	118.90
1	1	1418	G	N7-C8-N9	5.04	115.62	113.10
1	1	1428	G	C6-C5-N7	-5.04	127.38	130.40
1	1	1547	A	N3-C4-C5	5.04	130.32	126.80
1	1	306	U	C2-N3-C4	-5.03	123.98	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	1008	G	C8-N9-C1'	-5.03	120.46	127.00
1	1	1429	G	N9-C4-C5	5.02	107.41	105.40
1	1	1579	U	C6-N1-C1'	-5.02	114.18	121.20
1	1	1097	U	C2-N1-C1'	-5.01	111.68	117.70
1	1	1422	A	C5-C6-N1	5.01	120.21	117.70
1	1	125	U	C3'-C2'-C1'	5.01	105.50	101.50
1	1	1653	C	N1-C2-O2	-5.01	115.90	118.90
1	1	1458	G	C8-N9-C4	-5.00	104.40	106.40

There are no chirality outliers.

All (6) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	B	224	PHE	Peptide
3	B	225	LEU	Peptide
17	P	28	ASN	Peptide
18	Q	41	ILE	Peptide
23	b	14	UNK	Peptide
24	c	63	UNK	Peptide

5.2 Close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	1	38107	0	61	3135	0
2	A	1090	0	0	72	0
3	B	1074	0	0	74	0
4	C	928	0	0	51	0
5	D	836	0	0	69	0
6	E	777	0	0	58	0
7	F	382	0	0	16	0
8	G	580	0	0	42	0
9	H	627	0	0	26	0
10	I	596	0	0	25	0
11	J	658	0	0	39	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
12	K	332	0	0	15	0
13	L	591	0	0	50	0
14	M	521	0	0	47	0
15	N	551	0	0	36	0
16	O	622	0	0	44	0
17	P	566	0	0	41	0
18	Q	332	0	0	9	0
19	R	230	0	0	3	0
20	S	190	0	0	36	0
21	T	1543	0	0	53	0
22	a	100	0	25	0	0
23	b	525	0	141	0	0
24	c	465	0	122	0	0
25	d	175	0	39	0	0
26	e	105	0	25	0	0
27	f	55	0	15	0	0
28	h	205	0	51	0	0
29	l	854	0	0	98	0
29	G	7	0	0	0	0
29	L	7	0	0	0	0
29	S	7	0	0	18	0
29	T	7	0	0	0	0
29	c	7	0	0	0	0
29	e	21	0	0	0	0
29	g	1575	0	0	0	0
All	All	55248	0	479	3920	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 75.

All (3920) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:825:U:C5	1:1:847:A:N1	1.82	1.45
1:1:243:G:C2	1:1:251:A:N1	2.07	1.22
1:1:66:U:N3	1:1:71:A:N6	1.92	1.18
1:1:992:A:C2	1:1:1012:U:N3	2.14	1.16
1:1:650:U:N3	1:1:684:A:N6	1.93	1.16
1:1:364:G:N2	1:1:381:C:C2	2.17	1.13
1:1:173:A:C5	1:1:174:U:C6	2.37	1.11
1:1:1631:A:C4	1:1:1638:G:N2	2.19	1.10
1:1:243:G:C2	1:1:251:A:C2	2.38	1.10
1:1:243:G:C6	1:1:251:A:N6	2.20	1.09

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:243:G:N2	1:1:251:A:C2	2.19	1.09
1:1:243:G:N1	1:1:251:A:C6	2.22	1.08
1:1:827:C:N3	1:1:846:G:O6	1.88	1.06
1:1:173:A:C6	1:1:174:U:C6	2.44	1.05
1:1:1499:G:O6	1:1:1508:U:O2	1.74	1.03
1:1:142:G:N2	1:1:173:A:N1	2.07	1.02
1:1:129:U:C5	1:1:264:G:C6	2.49	1.01
1:1:364:G:N2	1:1:381:C:N1	2.07	1.01
1:1:127:G:C6	1:1:179:A:C5	2.44	1.00
1:1:243:G:N1	1:1:250:C:N3	2.08	1.00
1:1:897:C:N3	1:1:914:G:N2	2.11	0.99
1:1:489:C:O2	1:1:498:G:N2	1.98	0.96
1:1:1092:A:C4	1:1:1094:G:C8	2.54	0.95
1:1:827:C:C2	1:1:846:G:O6	2.17	0.95
1:1:73:U:O4	1:1:80:A:N6	1.98	0.95
1:1:1753:A:N6	1:1:1754:A:N6	2.13	0.95
2:A:177:LEU:O	2:A:181:VAL:CB	2.14	0.94
1:1:938:G:N2	1:1:942:G:C4	2.35	0.94
1:1:1099:U:O2'	1:1:1100:G:C4	2.21	0.94
1:1:1458:G:C5'	1:1:1459:C:C5	2.51	0.93
1:1:59:C:C5	1:1:62:A:N6	2.36	0.93
1:1:827:C:C4	1:1:846:G:O6	2.20	0.93
1:1:978:A:N6	1:1:1024:U:N3	2.17	0.93
3:B:219:GLY:O	3:B:221:THR:N	2.01	0.93
1:1:1055:U:N3	1:1:1064:G:N1	2.17	0.92
1:1:1250:U:C4	1:1:1251:U:O4	2.22	0.92
1:1:322:G:C4'	1:1:323:A:OP1	2.17	0.92
1:1:243:G:C2	1:1:251:A:C6	2.57	0.92
1:1:540:G:C1'	1:1:541:A:OP1	2.18	0.92
1:1:468:A:N6	1:1:595:G:C5	2.38	0.92
1:1:1099:U:C5	1:1:1100:G:O6	2.24	0.91
1:1:829:A:O2'	1:1:830:U:OP2	1.90	0.90
1:1:1144:U:O4'	1:1:1300:A:C2	2.23	0.90
1:1:29:U:O2	1:1:597:G:O6	1.88	0.90
1:1:62:A:C2	1:1:63:G:N7	2.40	0.90
1:1:992:A:C2	1:1:1012:U:C2	2.60	0.89
1:1:1457:C:C5	1:1:1559:A:N6	2.40	0.89
1:1:1753:A:C6	1:1:1754:A:C6	2.61	0.89
1:1:861:U:C5	1:1:862:A:C8	2.60	0.88
1:1:825:U:O4	1:1:847:A:N6	2.05	0.88
1:1:361:C:N3	1:1:384:G:C2	2.41	0.88
1:1:1055:U:O2	1:1:1064:G:N2	2.06	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1763:A:OP2	1:1:1768:G:OP2	1.91	0.87
1:1:415:C:O2	1:1:418:G:N1	2.07	0.87
1:1:93:A:C4	1:1:399:A:C2	2.62	0.87
1:1:8:U:C5	1:1:1140:G:O6	2.28	0.86
1:1:1631:A:C5	1:1:1636:C:N4	2.43	0.86
1:1:228:G:C2	1:1:229:U:C2	2.63	0.86
1:1:1250:U:N3	1:1:1251:U:C4	2.44	0.86
1:1:825:U:C5	1:1:847:A:C6	2.63	0.86
1:1:14:C:P	3:B:161:LYS:O	2.34	0.86
1:1:1756:A:N6	29:1:1802:OHX:N5	2.23	0.86
1:1:1138:A:C2	1:1:1139:A:C5	2.64	0.85
1:1:1274:C:OP2	1:1:1428:G:P	2.34	0.85
1:1:643:G:N2	1:1:692:C:C2	2.44	0.85
1:1:71:A:N3	1:1:72:A:N7	2.24	0.85
1:1:357:G:C4	1:1:358:U:C5	2.65	0.85
1:1:1243:G:C5	1:1:1244:A:N6	2.45	0.85
1:1:776:G:C2	1:1:785:U:C2	2.64	0.84
1:1:555:A:C2	1:1:556:A:C2	2.66	0.84
1:1:1636:C:C2	1:1:1765:A:N6	2.46	0.84
1:1:175:G:N7	29:1:1820:OHX:N2	2.24	0.84
1:1:129:U:C5	1:1:264:G:C5	2.64	0.84
1:1:1600:A:O2'	1:1:1602:C:C5	2.30	0.84
1:1:1073:G:O6	1:1:1074:G:C6	2.29	0.84
1:1:1350:U:OP2	1:1:1351:G:C8	2.30	0.84
1:1:1580:C:O2'	1:1:1581:C:O4'	1.95	0.84
1:1:59:C:C6	1:1:62:A:N6	2.45	0.84
1:1:1100:G:C4'	1:1:1101:G:OP1	2.25	0.84
1:1:1099:U:C4	1:1:1100:G:O6	2.31	0.84
1:1:1722:A:C8	1:1:1723:U:C6	2.66	0.84
1:1:827:C:N3	1:1:846:G:C6	2.46	0.83
1:1:1770:U:C4	1:1:1793:G:N2	2.47	0.83
20:S:49:ASP:N	20:S:50:ILE:CA	2.41	0.83
6:E:80:LEU:CA	6:E:81:VAL:CB	2.57	0.83
21:T:301:LEU:CB	21:T:313:TRP:O	2.25	0.83
1:1:1123:C:C5	1:1:1124:A:C5	2.67	0.83
1:1:259:U:C5	1:1:261:U:O4	2.31	0.83
1:1:606:A:C8	1:1:608:U:C5	2.66	0.83
1:1:1631:A:O4'	1:1:1764:C:O2	1.97	0.82
1:1:186:C:N4	1:1:199:G:N1	2.27	0.82
1:1:1201:G:N3	1:1:1201:G:C3'	2.42	0.82
1:1:1274:C:OP2	1:1:1428:G:OP1	1.96	0.82
1:1:364:G:C2	1:1:381:C:C2	2.68	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1557:U:P	1:1:1560:U:O4	2.38	0.82
2:A:35:PRO:O	2:A:37:VAL:N	2.12	0.82
1:1:43:A:C2	1:1:378:A:N6	2.47	0.82
1:1:169:A:N7	1:1:171:A:N6	2.27	0.82
6:E:123:HIS:O	6:E:125:ALA:N	2.12	0.82
1:1:44:U:C5'	1:1:45:U:C5	2.63	0.82
1:1:776:G:C2	1:1:785:U:O2	2.33	0.81
1:1:1642:G:O6	29:1:1802:OHX:N3	2.13	0.81
1:1:62:A:N3	1:1:63:G:N7	2.29	0.81
1:1:1275:A:C8	1:1:1275:A:OP1	2.33	0.81
1:1:871:G:O2'	1:1:872:G:C8	2.34	0.81
1:1:125:U:H6	1:1:125:U:O5'	1.63	0.81
9:H:70:LYS:O	9:H:73:GLU:CB	2.29	0.81
1:1:106:U:C4	1:1:107:C:C4	2.68	0.81
1:1:1092:A:C5	1:1:1094:G:C8	2.69	0.81
1:1:1753:A:N1	1:1:1754:A:N1	2.29	0.81
1:1:1657:U:C4'	1:1:1658:G:O5'	2.29	0.80
1:1:1631:A:N3	1:1:1638:G:N2	2.28	0.80
1:1:61:A:C4'	1:1:62:A:O5'	2.29	0.80
1:1:1132:A:C2	1:1:1133:A:C8	2.68	0.80
1:1:1631:A:C2	1:1:1638:G:N3	2.48	0.80
14:M:128:GLY:O	14:M:130:ARG:N	2.14	0.80
1:1:1696:G:N2	1:1:1708:U:O2	2.14	0.80
3:B:185:LYS:O	3:B:188:LEU:N	2.15	0.80
17:P:132:LEU:N	17:P:133:LEU:CA	2.45	0.80
1:1:647:G:C2	1:1:687:G:C2	2.70	0.80
1:1:1468:U:O2'	1:1:1469:A:O5'	1.98	0.80
1:1:427:C:O4'	1:1:459:G:O2'	2.01	0.79
1:1:173:A:C2	1:1:174:U:C1'	2.64	0.79
1:1:1055:U:O4	1:1:1064:G:O6	2.01	0.79
1:1:1109:G:C2	1:1:1110:G:C8	2.70	0.79
1:1:353:A:N7	1:1:354:C:C5	2.50	0.79
1:1:741:C:O2'	1:1:742:U:O5'	2.00	0.79
1:1:1274:C:C6	1:1:1427:A:N7	2.50	0.79
1:1:647:G:N2	1:1:648:G:C2	2.50	0.79
1:1:1250:U:C4	1:1:1251:U:C4	2.70	0.79
1:1:1420:C:C5	1:1:1421:A:C8	2.71	0.79
1:1:361:C:N3	1:1:384:G:N2	2.30	0.78
13:L:65:GLU:O	13:L:68:ARG:N	2.15	0.78
1:1:374:U:C4	1:1:375:U:C5	2.71	0.78
1:1:1765:A:OP2	29:1:1841:OHX:N5	2.17	0.78
11:J:50:GLU:O	11:J:54:LEU:CB	2.32	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1765:A:OP2	29:1:1841:OHX:N1	2.17	0.78
1:1:1364:G:N7	1:1:1365:C:C5	2.53	0.77
1:1:1003:A:C8	1:1:1005:A:C5	2.71	0.77
1:1:1149:G:O6	1:1:1629:G:N1	2.17	0.77
1:1:647:G:N1	1:1:648:G:C6	2.52	0.77
1:1:328:A:N6	1:1:341:A:N6	2.32	0.77
1:1:1347:U:N3	1:1:1376:C:N4	2.32	0.77
6:E:55:ALA:O	6:E:58:ASP:N	2.18	0.77
20:S:42:CYS:O	20:S:44:ARG:N	2.17	0.77
1:1:1645:G:N2	1:1:1757:G:C4	2.52	0.77
1:1:625:C:O2'	1:1:939:A:N3	2.17	0.77
1:1:243:G:C6	1:1:251:A:C6	2.69	0.77
1:1:243:G:N3	1:1:251:A:N1	2.33	0.77
1:1:1388:A:C5	1:1:1411:A:C6	2.72	0.77
1:1:1636:C:N3	1:1:1765:A:N6	2.33	0.77
6:E:122:VAL:O	6:E:125:ALA:CB	2.32	0.77
1:1:1627:U:O2'	1:1:1628:U:C6	2.38	0.77
1:1:1631:A:C1'	1:1:1764:C:O2	2.33	0.77
1:1:1773:C:C2	1:1:1789:G:C2	2.73	0.77
1:1:231:U:O2	1:1:234:G:O6	2.03	0.77
1:1:356:G:C6	1:1:357:G:N7	2.53	0.77
1:1:1338:C:C2	1:1:1410:A:C2	2.73	0.76
20:S:23:VAL:O	29:S:534:OHX:N5	2.18	0.76
1:1:1584:G:C2	1:1:1585:U:OP1	2.38	0.76
1:1:647:G:C2	1:1:648:G:C6	2.73	0.76
1:1:1351:G:C5	1:1:1352:G:N7	2.53	0.76
1:1:778:G:N2	1:1:783:G:C5	2.53	0.76
1:1:1631:A:C6	1:1:1636:C:C5	2.73	0.76
1:1:1348:A:N3	1:1:1378:U:C6	2.52	0.76
3:B:133:LYS:O	3:B:135:SER:N	2.18	0.76
1:1:757:A:C4	1:1:758:U:C6	2.73	0.76
6:E:142:ASN:O	6:E:144:PRO:N	2.19	0.76
1:1:1281:G:C4	1:1:1282:U:C5	2.74	0.76
1:1:1557:U:O5'	1:1:1560:U:O4	2.04	0.76
9:H:100:ALA:O	9:H:104:ALA:CB	2.34	0.76
21:T:91:LEU:CB	21:T:101:GLN:O	2.34	0.76
1:1:65:A:C4'	1:1:66:U:OP1	2.34	0.76
1:1:1754:A:O2'	1:1:1755:A:P	2.44	0.76
1:1:364:G:N2	1:1:381:C:C6	2.54	0.75
1:1:1099:U:OP1	1:1:1099:U:C4'	2.35	0.75
1:1:402:C:N4	1:1:424:C:OP2	2.20	0.75
1:1:1560:U:O2	1:1:1560:U:C2'	2.35	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1632:C:O2'	1:1:1633:A:OP1	2.03	0.75
1:1:737:A:O2'	1:1:738:G:C8	2.40	0.75
1:1:1595:U:C6	1:1:1596:C:N3	2.55	0.75
1:1:977:A:C6	1:1:1025:A:C4	2.75	0.75
1:1:1032:G:N2	1:1:1033:C:C2	2.55	0.75
1:1:361:C:N4	1:1:384:G:N1	2.35	0.75
1:1:1046:G:C5	1:1:1073:G:N2	2.54	0.75
1:1:1274:C:OP2	1:1:1428:G:O5'	2.05	0.74
1:1:1243:G:C6	1:1:1244:A:N6	2.55	0.74
15:N:12:GLN:O	15:N:14:GLN:N	2.20	0.74
1:1:1139:A:C2'	1:1:1140:G:O5'	2.33	0.74
5:D:93:LEU:O	5:D:95:ASN:N	2.20	0.74
1:1:1480:G:C8	1:1:1480:G:C5'	2.70	0.74
1:1:846:G:O2'	1:1:847:A:O4'	2.06	0.74
1:1:871:G:N3	1:1:872:G:C8	2.55	0.74
1:1:1346:A:C8	1:1:1347:U:C6	2.74	0.74
1:1:448:C:C2'	1:1:449:C:C6	2.70	0.74
1:1:1466:G:C6	1:1:1467:C:N4	2.55	0.74
1:1:273:G:OP1	1:1:273:G:C8	2.40	0.74
1:1:151:G:N1	1:1:163:G:N2	2.36	0.74
1:1:992:A:N1	1:1:1012:U:C2	2.55	0.74
1:1:1132:A:N3	1:1:1133:A:C8	2.56	0.74
1:1:809:A:C2	1:1:810:G:N1	2.56	0.74
1:1:992:A:N1	1:1:1012:U:O2	2.20	0.74
6:E:62:ARG:N	6:E:63:ASP:CB	2.51	0.74
1:1:1756:A:C8	1:1:1756:A:O5'	2.41	0.74
1:1:86:A:O2'	1:1:147:A:N3	2.20	0.73
14:M:128:GLY:C	14:M:130:ARG:N	2.40	0.73
1:1:26:A:OP1	1:1:27:U:OP2	2.06	0.73
1:1:1099:U:O2'	1:1:1100:G:N9	2.21	0.73
1:1:258:C:O2'	1:1:259:U:C6	2.42	0.73
1:1:1599:C:O2'	1:1:1600:A:N3	2.21	0.73
1:1:605:A:N7	1:1:606:A:C6	2.56	0.73
1:1:1651:A:N3	1:1:1652:C:C6	2.57	0.73
1:1:331:A:C2	1:1:332:U:C2	2.77	0.73
1:1:1148:C:N3	1:1:1149:G:O6	2.21	0.73
15:N:17:GLN:CB	15:N:18:GLN:C	2.57	0.73
1:1:160:C:C2'	1:1:161:U:O4'	2.36	0.73
1:1:1109:G:C2	1:1:1110:G:N7	2.57	0.73
1:1:757:A:C5	1:1:758:U:C5	2.76	0.73
1:1:427:C:C6	1:1:427:C:C5'	2.72	0.72
1:1:314:C:N3	1:1:354:C:N4	2.36	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:556:A:C3'	1:1:558:U:OP2	2.36	0.72
1:1:272:U:N3	1:1:284:G:N1	2.37	0.72
1:1:62:A:C4'	1:1:63:G:OP2	2.37	0.72
1:1:643:G:C2	1:1:692:C:N3	2.57	0.72
1:1:551:G:C2	1:1:552:G:C5	2.77	0.72
1:1:686:C:C2'	1:1:687:G:C8	2.71	0.72
1:1:33:U:O2	1:1:468:A:C2	2.42	0.72
1:1:1142:A:O2'	1:1:1143:A:O4'	2.07	0.72
1:1:1333:C:C2	1:1:1419:G:N2	2.58	0.72
1:1:1160:A:C4	1:1:1161:C:C5	2.77	0.72
7:F:129:ARG:O	7:F:131:ILE:N	2.21	0.72
1:1:55:A:O2'	1:1:56:U:P	2.47	0.72
1:1:416:A:C4'	1:1:417:A:OP2	2.37	0.72
1:1:1246:C:C5	1:1:1247:U:C5	2.77	0.72
1:1:1201:G:C4	1:1:1202:A:O4'	2.42	0.72
17:P:109:ARG:N	17:P:110:LYS:CA	2.52	0.72
29:1:1816:OHX:N2	29:1:1903:OHX:N4	2.38	0.72
1:1:114:C:C5	1:1:248:U:O4	2.43	0.72
1:1:1753:A:N1	1:1:1754:A:C6	2.58	0.72
1:1:34:G:C6	1:1:475:A:N6	2.57	0.72
1:1:1663:G:C5	1:1:1664:C:C5	2.78	0.72
1:1:1244:A:N3	1:1:1244:A:C2'	2.51	0.72
1:1:1101:G:OP2	1:1:1101:G:C8	2.43	0.72
1:1:1524:A:C2'	1:1:1525:A:C8	2.72	0.72
13:L:71:GLN:O	13:L:75:ASN:N	2.23	0.72
1:1:1003:A:C8	1:1:1005:A:C6	2.78	0.72
1:1:379:U:OP2	1:1:380:U:OP2	2.08	0.72
1:1:1364:G:C5	1:1:1365:C:C5	2.78	0.72
1:1:365:G:C6	1:1:377:G:C6	2.78	0.71
1:1:1073:G:C6	1:1:1074:G:C6	2.78	0.71
1:1:606:A:C5	1:1:608:U:C5	2.77	0.71
14:M:126:GLU:O	14:M:128:GLY:N	2.22	0.71
20:S:24:CYS:CB	29:S:534:OHX:N2	2.53	0.71
5:D:195:ALA:O	5:D:198:LEU:N	2.23	0.71
6:E:66:ASP:C	6:E:68:LYS:N	2.44	0.71
4:C:67:ASN:O	4:C:71:LEU:CB	2.38	0.71
1:1:1109:G:O6	1:1:1136:U:O4	2.08	0.71
1:1:1385:G:N3	1:1:1386:G:C8	2.58	0.71
1:1:993:A:OP1	1:1:1777:G:N2	2.24	0.71
1:1:1102:G:C2'	1:1:1103:U:O5'	2.37	0.71
1:1:169:A:C5	1:1:171:A:C6	2.78	0.71
1:1:115:G:N2	1:1:334:G:N2	2.37	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:825:U:O2'	1:1:826:U:C6	2.44	0.71
1:1:825:U:C4	1:1:847:A:N6	2.58	0.71
15:N:12:GLN:C	15:N:14:GLN:N	2.39	0.71
18:Q:46:LYS:O	18:Q:50:ILE:CB	2.39	0.71
1:1:802:G:C6	1:1:803:A:N1	2.59	0.71
1:1:221:A:C5	1:1:833:U:C5	2.79	0.71
1:1:1584:G:C8	11:J:123:ARG:N	2.59	0.71
1:1:1259:U:C6	1:1:1259:U:O5'	2.44	0.71
1:1:93:A:N3	1:1:399:A:C2	2.59	0.70
1:1:468:A:N6	1:1:595:G:C6	2.59	0.70
1:1:1348:A:C2	1:1:1378:U:C6	2.79	0.70
1:1:1170:G:O6	1:1:1574:G:C6	2.44	0.70
1:1:951:A:C2'	1:1:952:A:O5'	2.38	0.70
1:1:772:G:C5	1:1:773:C:N3	2.58	0.70
1:1:1110:G:O2'	1:1:1111:G:O5'	2.08	0.70
1:1:1338:C:C1'	1:1:1410:A:N3	2.55	0.70
1:1:1304:G:N7	1:1:1305:U:C5	2.59	0.70
1:1:269:G:C6	1:1:287:G:N1	2.60	0.70
1:1:1118:G:O2'	1:1:1119:G:O5'	2.09	0.70
1:1:1273:G:C4'	1:1:1274:C:C5'	2.70	0.70
1:1:1244:A:C2	1:1:1245:G:N9	2.60	0.70
1:1:1045:C:C2'	1:1:1045:C:O2	2.40	0.70
1:1:1579:U:C4	1:1:1580:C:N4	2.59	0.70
1:1:1645:G:O2'	1:1:1646:C:O5'	2.10	0.70
1:1:1594:G:C6	1:1:1595:U:N3	2.60	0.70
16:O:98:GLN:O	16:O:100:GLY:N	2.25	0.70
1:1:362:G:O6	1:1:382:C:N4	2.23	0.70
1:1:127:G:O6	1:1:179:A:N1	2.24	0.70
1:1:1118:G:C2	1:1:1119:G:C4	2.80	0.70
1:1:272:U:O4	1:1:284:G:O6	2.10	0.70
1:1:1097:U:O2'	1:1:1098:U:C5'	2.39	0.70
1:1:357:G:C5	1:1:358:U:C5	2.79	0.70
1:1:1132:A:C2	1:1:1133:A:N7	2.60	0.70
1:1:1388:A:C6	1:1:1411:A:C5	2.79	0.70
1:1:351:C:N3	7:F:102:LYS:O	2.24	0.70
1:1:377:G:O2'	1:1:378:A:OP2	2.10	0.70
1:1:1656:U:C5'	1:1:1657:U:O5'	2.40	0.70
1:1:1592:A:C4	1:1:1605:G:N2	2.59	0.70
1:1:1334:U:C2	1:1:1335:U:C6	2.79	0.70
1:1:1614:A:C2	1:1:1616:G:OP2	2.43	0.70
1:1:518:A:N1	1:1:535:A:N3	2.40	0.70
1:1:1497:U:C2	1:1:1498:G:C8	2.80	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:767:U:O2'	1:1:768:C:C6	2.44	0.70
10:I:17:TYR:CB	10:I:18:ARG:CB	2.70	0.70
1:1:350:U:C4'	1:1:352:A:C8	2.75	0.69
1:1:1468:U:O2'	1:1:1469:A:O4'	2.10	0.69
1:1:1745:G:O2'	1:1:1746:A:C8	2.45	0.69
1:1:1631:A:N6	1:1:1636:C:C5	2.60	0.69
1:1:105:A:C2	29:1:1812:OHX:N6	2.60	0.69
1:1:1104:U:C5	1:1:1105:C:C5	2.80	0.69
1:1:1137:A:C2	1:1:1138:A:C5	2.80	0.69
1:1:410:A:C2	1:1:411:C:C2	2.80	0.69
1:1:1778:G:N1	1:1:1779:U:C4	2.60	0.69
1:1:17:C:C2	1:1:18:C:C5	2.81	0.69
1:1:1075:C:C4	1:1:1076:A:C6	2.80	0.69
1:1:1007:C:O2	1:1:1007:C:C2'	2.40	0.69
1:1:142:G:C5	1:1:266:A:C6	2.80	0.69
1:1:1099:U:C6	1:1:1100:G:C6	2.80	0.69
1:1:1207:C:O2	1:1:1455:G:N1	2.25	0.69
2:A:139:VAL:O	2:A:141:ILE:N	2.26	0.69
1:1:1003:A:N7	1:1:1005:A:N1	2.39	0.69
1:1:55:A:O2'	1:1:56:U:O5'	2.08	0.69
1:1:310:C:C2'	1:1:311:U:O5'	2.41	0.69
17:P:132:LEU:CB	17:P:134:ALA:O	2.40	0.69
1:1:1481:C:C5	1:1:1482:C:C2	2.80	0.69
1:1:978:A:N1	1:1:1024:U:O2	2.26	0.69
1:1:329:G:N3	1:1:330:G:C8	2.61	0.69
1:1:1429:G:C4	1:1:1430:U:C5	2.79	0.69
1:1:871:G:C4	1:1:872:G:C8	2.80	0.69
1:1:1684:U:O4	1:1:1721:A:C2	2.44	0.69
1:1:539:G:N2	1:1:543:C:N3	2.41	0.69
1:1:1114:G:O2'	1:1:1115:U:OP2	2.11	0.69
1:1:862:A:C8	1:1:963:A:C6	2.80	0.69
1:1:1141:G:C3'	1:1:1142:A:C5'	2.70	0.69
29:1:1816:OHX:N1	29:1:1903:OHX:N3	2.40	0.69
1:1:388:G:C2	1:1:389:G:C8	2.80	0.69
1:1:390:G:N2	1:1:391:A:C5	2.60	0.69
1:1:1670:G:N2	1:1:1732:A:N6	2.41	0.69
1:1:105:A:N1	29:1:1812:OHX:N4	2.41	0.69
1:1:1092:A:C4	1:1:1094:G:N7	2.60	0.69
1:1:963:A:O2'	1:1:964:U:C6	2.45	0.69
1:1:1116:A:C6	1:1:1117:U:C4	2.80	0.69
1:1:1250:U:O4	1:1:1251:U:O4	2.10	0.69
1:1:1597:A:C6	1:1:1598:U:N3	2.60	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:G:125:LEU:O	8:G:126:ALA:C	2.31	0.69
1:1:760:A:C2	1:1:791:A:C4	2.81	0.69
1:1:313:U:C5	1:1:1118:G:C2	2.80	0.69
1:1:605:A:N6	1:1:606:A:N6	2.40	0.69
1:1:1457:C:C4	1:1:1559:A:N6	2.60	0.68
1:1:1163:A:N6	1:1:1164:G:C6	2.60	0.68
1:1:1274:C:O2'	1:1:1275:A:OP2	2.11	0.68
1:1:378:A:OP1	1:1:378:A:C8	2.47	0.68
1:1:446:A:C5	1:1:447:U:C5	2.81	0.68
1:1:1094:G:C2	1:1:1095:U:C4	2.82	0.68
1:1:341:A:C4	1:1:342:C:C5	2.81	0.68
1:1:867:G:C4	1:1:868:G:C8	2.81	0.68
1:1:523:G:C4	1:1:524:U:O4	2.45	0.68
1:1:989:U:C2'	1:1:990:C:C6	2.76	0.68
1:1:610:G:C2	1:1:614:C:C2	2.82	0.68
1:1:1378:U:C5'	1:1:1379:C:C6	2.77	0.68
2:A:17:LEU:C	2:A:19:ALA:N	2.41	0.68
3:B:239:PRO:O	3:B:241:ASP:N	2.27	0.68
1:1:59:C:N4	1:1:89:G:C2	2.61	0.68
1:1:1046:G:C5	1:1:1073:G:C2	2.81	0.68
1:1:1515:A:C8	15:N:58:LEU:CB	2.77	0.68
16:O:85:ASP:O	16:O:87:GLU:N	2.27	0.68
1:1:1457:C:C6	1:1:1559:A:N6	2.61	0.68
1:1:1269:U:O4'	1:1:1269:U:O2	2.07	0.68
1:1:1112:G:N2	1:1:1134:C:C4	2.62	0.68
11:J:93:HIS:CB	11:J:94:GLN:CA	2.72	0.68
1:1:1558:U:C6	1:1:1559:A:C2	2.82	0.68
29:1:1816:OHX:N1	29:1:1903:OHX:N4	2.42	0.68
1:1:1024:U:OP1	1:1:1127:G:O2'	2.11	0.68
1:1:1046:G:C6	1:1:1073:G:C2	2.82	0.68
1:1:1388:A:N7	1:1:1411:A:N6	2.42	0.68
3:B:236:PRO:O	3:B:237:VAL:C	2.30	0.68
1:1:1560:U:O2	1:1:1561:U:C5	2.47	0.68
29:1:1816:OHX:N2	29:1:1903:OHX:N6	2.41	0.68
13:L:121:ALA:O	13:L:124:GLY:N	2.26	0.68
1:1:96:G:N1	1:1:387:A:N6	2.42	0.67
1:1:127:G:O6	1:1:179:A:C6	2.28	0.67
1:1:1244:A:C2	1:1:1245:G:C8	2.82	0.67
3:B:106:ASP:O	3:B:108:ASN:N	2.27	0.67
1:1:825:U:C6	1:1:847:A:N1	2.58	0.67
1:1:97:C:O2	1:1:425:A:O2'	2.13	0.67
1:1:1239:U:C5	1:1:1241:G:C6	2.81	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:766:U:C4	1:1:769:A:N7	2.62	0.67
8:G:108:ASP:O	8:G:111:ALA:N	2.27	0.67
1:1:1728:A:C5	1:1:1729:C:C5	2.81	0.67
1:1:364:G:C8	1:1:377:G:N2	2.62	0.67
1:1:1138:A:N3	1:1:1139:A:C8	2.62	0.67
1:1:1174:C:C2	1:1:1466:G:C2	2.82	0.67
5:D:108:LEU:C	5:D:110:ALA:N	2.48	0.67
1:1:1651:A:C2	1:1:1652:C:C6	2.81	0.67
1:1:1324:G:C6	1:1:1325:A:N7	2.62	0.67
1:1:1761:U:O2'	1:1:1762:A:OP2	2.12	0.67
1:1:267:U:C2'	1:1:267:U:O2	2.41	0.67
1:1:288:A:N3	1:1:289:U:C5	2.63	0.67
1:1:512:A:O2'	1:1:513:U:O5'	2.13	0.67
1:1:1302:U:OP2	1:1:1302:U:C6	2.48	0.67
16:O:8:ALA:O	16:O:12:ASN:CB	2.42	0.67
1:1:1778:G:C2	1:1:1779:U:C5	2.83	0.67
1:1:1109:G:N3	1:1:1110:G:C8	2.63	0.67
1:1:1138:A:C2	1:1:1139:A:N7	2.61	0.67
1:1:72:A:C6	1:1:82:U:O2	2.48	0.67
1:1:977:A:C4	1:1:1025:A:C2	2.81	0.67
1:1:330:G:C4	1:1:331:A:C8	2.83	0.67
1:1:838:G:N7	29:1:1824:OHX:N6	2.42	0.67
1:1:1678:A:C2	1:1:1725:U:N3	2.63	0.67
29:1:1816:OHX:N5	29:1:1903:OHX:N6	2.43	0.67
1:1:1416:G:C5	1:1:1417:A:C8	2.82	0.67
1:1:647:G:N1	1:1:687:G:N1	2.42	0.67
1:1:647:G:N2	1:1:648:G:N1	2.42	0.67
1:1:364:G:C2	1:1:381:C:N3	2.62	0.67
1:1:401:A:C2	1:1:404:G:C8	2.82	0.67
1:1:1584:G:N3	1:1:1585:U:OP1	2.28	0.67
8:G:94:LYS:O	8:G:98:VAL:CB	2.43	0.67
14:M:60:SER:C	14:M:62:ALA:N	2.48	0.67
1:1:542:A:O2'	1:1:543:C:O5'	2.13	0.67
1:1:243:G:N2	1:1:251:A:N3	2.41	0.67
1:1:1466:G:C4	1:1:1467:C:C5	2.83	0.67
1:1:1475:A:C5	1:1:1476:C:C5	2.83	0.67
1:1:1651:A:C2	1:1:1652:C:C5	2.82	0.67
1:1:553:G:C6	1:1:554:C:N3	2.63	0.67
1:1:1047:G:O6	1:1:1071:U:O4	2.13	0.67
1:1:824:G:O3'	1:1:825:U:O2	2.12	0.66
1:1:25:C:C4	1:1:367:A:C1'	2.78	0.66
1:1:610:G:N2	1:1:614:C:N3	2.44	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:694:U:C5'	1:1:695:U:C5	2.79	0.66
1:1:1255:G:O4'	1:1:1255:G:OP2	2.12	0.66
3:B:238:SER:O	3:B:240:LEU:N	2.28	0.66
6:E:143:ILE:O	6:E:145:SER:N	2.28	0.66
1:1:827:C:C2	1:1:846:G:C6	2.82	0.66
1:1:289:U:OP1	1:1:453:U:OP2	2.13	0.66
1:1:979:A:N3	1:1:1775:U:O2'	2.28	0.66
1:1:395:U:O4	1:1:396:G:C6	2.48	0.66
1:1:1109:G:C2'	1:1:1110:G:C5'	2.74	0.66
29:1:1816:OHX:N5	29:1:1903:OHX:N3	2.43	0.66
29:1:1865:OHX:N3	29:1:1910:OHX:N4	2.43	0.66
1:1:162:A:C3'	1:1:163:G:C8	2.79	0.66
1:1:1631:A:C6	1:1:1632:C:O2	2.49	0.66
1:1:446:A:C4	1:1:447:U:C5	2.84	0.66
1:1:1099:U:C5	1:1:1100:G:C6	2.82	0.66
1:1:1140:G:C2	1:1:1141:G:C8	2.84	0.66
1:1:539:G:N3	1:1:543:C:N3	2.44	0.66
1:1:1632:C:C2	1:1:1633:A:N7	2.63	0.66
1:1:100:A:OP2	1:1:101:U:OP2	2.13	0.66
1:1:385:A:OP2	1:1:385:A:C8	2.49	0.66
1:1:1351:G:C4	1:1:1352:G:C8	2.83	0.66
29:1:1845:OHX:N1	29:1:1873:OHX:N4	2.44	0.66
10:I:25:LEU:O	10:I:28:MET:N	2.28	0.66
1:1:71:A:C6	1:1:83:G:N1	2.64	0.66
1:1:50:C:C4	1:1:424:C:C5	2.84	0.66
1:1:199:G:C4	1:1:200:A:N7	2.63	0.66
9:H:22:SER:O	9:H:24:ASN:N	2.29	0.66
1:1:1196:A:O2'	1:1:1197:C:OP2	2.14	0.66
1:1:814:A:C4	1:1:816:G:N2	2.64	0.66
1:1:1657:U:N3	29:1:1863:OHX:N2	2.43	0.66
14:M:134:ARG:O	14:M:137:ALA:N	2.28	0.66
1:1:515:A:OP2	29:1:1846:OHX:N1	2.28	0.66
6:E:130:THR:O	6:E:132:ARG:N	2.28	0.66
1:1:756:A:C5	1:1:757:A:N7	2.63	0.66
1:1:1269:U:N3	1:1:1432:U:O4'	2.29	0.66
20:S:38:ILE:C	20:S:40:ARG:N	2.48	0.66
1:1:1727:G:C6	1:1:1728:A:N6	2.64	0.66
9:H:99:GLN:O	9:H:103:ARG:CB	2.44	0.66
1:1:1003:A:N7	1:1:1005:A:C2	2.64	0.66
1:1:992:A:C4	1:1:1013:A:C2	2.83	0.66
1:1:841:U:C4	1:1:842:C:C4	2.84	0.66
1:1:1552:U:N3	1:1:1553:G:C4	2.63	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:606:A:N7	1:1:608:U:C5	2.63	0.66
29:1:1865:OHX:N5	29:1:1910:OHX:N1	2.44	0.66
1:1:252:U:O2'	1:1:253:A:O5'	2.14	0.66
1:1:250:C:OP2	1:1:250:C:C3'	2.44	0.66
1:1:687:G:N2	1:1:688:G:C4	2.64	0.66
1:1:126:A:N6	1:1:292:U:C2	2.64	0.66
1:1:1025:A:O2'	1:1:1773:C:O2'	2.13	0.66
1:1:1138:A:N3	1:1:1139:A:N7	2.44	0.66
1:1:1255:G:C4'	1:1:1256:A:OP1	2.44	0.66
1:1:1202:A:N6	1:1:1457:C:OP1	2.30	0.65
1:1:228:G:O2'	1:1:229:U:C6	2.49	0.65
29:1:1845:OHX:N1	29:1:1873:OHX:N3	2.44	0.65
1:1:789:A:C4	1:1:790:U:C6	2.83	0.65
1:1:1750:A:C5	1:1:1751:C:C5	2.83	0.65
1:1:175:G:C5	29:1:1820:OHX:N2	2.64	0.65
1:1:289:U:O2	1:1:289:U:C2'	2.43	0.65
1:1:1691:A:C6	1:1:1713:G:C2	2.84	0.65
6:E:99:LEU:O	6:E:101:VAL:N	2.29	0.65
1:1:16:G:C2	1:1:17:C:C4	2.84	0.65
1:1:1348:A:O5'	1:1:1348:A:C8	2.48	0.65
21:T:35:SER:CB	21:T:43:ILE:O	2.45	0.65
1:1:290:G:O2'	1:1:291:G:C8	2.50	0.65
1:1:636:A:N1	1:1:860:U:C4	2.64	0.65
1:1:1165:G:O6	1:1:1166:A:N6	2.30	0.65
1:1:1250:U:N3	1:1:1251:U:N3	2.45	0.65
1:1:228:G:C5	1:1:229:U:C4	2.84	0.65
1:1:776:G:N1	1:1:785:U:C2	2.65	0.65
1:1:1402:G:C4	1:1:1403:C:C5	2.84	0.65
1:1:509:G:C4	1:1:510:G:N7	2.64	0.65
1:1:1455:G:C5	1:1:1456:C:N3	2.64	0.65
1:1:1583:A:O2'	1:1:1584:G:C5'	2.45	0.65
13:L:44:ASN:O	13:L:48:LYS:CB	2.44	0.65
5:D:215:ASP:O	5:D:218:GLU:N	2.30	0.65
1:1:48:G:C6	1:1:432:G:N2	2.65	0.65
1:1:729:G:C5	1:1:730:G:C8	2.85	0.65
2:A:171:GLY:O	2:A:173:ILE:N	2.29	0.65
1:1:27:U:C2	1:1:28:A:C8	2.85	0.65
1:1:1388:A:C6	1:1:1412:G:C6	2.85	0.65
4:C:27:ARG:O	4:C:29:LEU:N	2.29	0.65
1:1:450:U:C2	1:1:451:A:N7	2.64	0.65
1:1:14:C:OP2	3:B:162:CYS:C	2.35	0.65
1:1:1663:G:C4	1:1:1664:C:C5	2.84	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1446:A:O2'	1:1:1448:G:N7	2.30	0.65
1:1:1178:G:N2	1:1:1462:G:C4	2.65	0.65
1:1:1149:G:C4'	1:1:1150:G:OP1	2.44	0.65
1:1:259:U:C4	1:1:261:U:O4	2.50	0.65
3:B:138:PRO:O	3:B:140:ARG:N	2.29	0.65
1:1:827:C:C2'	1:1:828:U:C2	2.79	0.65
4:C:64:ARG:O	4:C:68:GLU:CB	2.45	0.65
1:1:1297:G:N1	1:1:1300:A:OP2	2.30	0.65
1:1:1474:G:C2	1:1:1475:A:C5	2.85	0.65
14:M:67:MET:O	14:M:69:LYS:N	2.30	0.65
1:1:1632:C:O2'	1:1:1633:A:C8	2.50	0.64
1:1:295:A:C2	1:1:296:U:C2	2.84	0.64
1:1:127:G:O6	1:1:179:A:C2	2.50	0.64
9:H:22:SER:C	9:H:24:ASN:N	2.50	0.64
3:B:126:ARG:O	3:B:128:GLY:N	2.30	0.64
1:1:887:A:C1'	9:H:122:PRO:CB	2.75	0.64
1:1:609:U:C5'	1:1:610:G:C5	2.80	0.64
1:1:169:A:C4	1:1:171:A:N7	2.65	0.64
1:1:329:G:C2'	1:1:330:G:C8	2.80	0.64
2:A:17:LEU:O	2:A:20:ALA:N	2.29	0.64
1:1:528:U:C4'	1:1:529:A:O4'	2.45	0.64
18:Q:57:TYR:CB	18:Q:58:ARG:CA	2.75	0.64
1:1:207:U:C2	1:1:208:U:C5	2.85	0.64
1:1:209:U:C2	1:1:210:A:C8	2.86	0.64
6:E:71:PHE:O	6:E:75:ALA:CB	2.46	0.64
1:1:814:A:C5	1:1:816:G:C2	2.84	0.64
14:M:60:SER:O	14:M:62:ALA:N	2.30	0.64
9:H:63:ALA:O	9:H:65:GLN:N	2.30	0.64
1:1:1733:C:C4	1:1:1734:U:C4	2.84	0.64
1:1:1777:G:C5	1:1:1778:G:N7	2.66	0.64
1:1:183:U:C4'	1:1:184:C:OP1	2.46	0.64
1:1:1646:C:O2	1:1:1646:C:C2'	2.43	0.64
1:1:544:A:O2'	1:1:545:A:P	2.55	0.64
1:1:986:G:N3	1:1:987:G:C8	2.65	0.64
1:1:1634:C:C4'	1:1:1635:A:O5'	2.46	0.64
1:1:650:U:C4	1:1:684:A:N6	2.65	0.64
1:1:469:C:OP1	1:1:469:C:N3	2.29	0.64
1:1:1047:G:N1	1:1:1071:U:N3	2.46	0.64
1:1:977:A:C6	1:1:1025:A:N3	2.66	0.64
1:1:985:G:C4	1:1:986:G:N7	2.65	0.64
1:1:985:G:C6	1:1:986:G:C6	2.85	0.64
1:1:1147:A:C2	1:1:1148:C:C2	2.86	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1631:A:C2'	1:1:1632:C:O4'	2.46	0.64
1:1:1778:G:C6	1:1:1779:U:C4	2.86	0.64
1:1:177:U:OP2	1:1:177:U:C6	2.50	0.64
1:1:1594:G:O6	1:1:1595:U:N3	2.31	0.64
8:G:137:PRO:O	8:G:141:TYR:N	2.31	0.64
1:1:105:A:N1	29:1:1812:OHX:N3	2.45	0.64
1:1:362:G:C6	1:1:363:G:C5	2.85	0.64
1:1:1107:G:O2'	1:1:1108:G:P	2.55	0.64
1:1:469:C:OP1	1:1:469:C:C2	2.51	0.64
1:1:1377:U:C6	1:1:1377:U:O5'	2.51	0.64
1:1:1311:U:O2	1:1:1313:A:C8	2.50	0.64
1:1:246:G:O6	1:1:247:A:C2	2.51	0.64
1:1:1552:U:O4	1:1:1553:G:C6	2.51	0.64
1:1:607:G:N7	1:1:613:G:C4	2.66	0.64
1:1:1179:G:C6	1:1:1180:C:C2	2.86	0.64
1:1:1497:U:C4	1:1:1498:G:N7	2.66	0.64
1:1:89:G:C2	1:1:90:C:C2	2.85	0.64
1:1:1683:C:P	1:1:1684:U:OP1	2.56	0.64
1:1:1112:G:N7	1:1:1113:A:N7	2.45	0.64
20:S:25:SER:O	20:S:27:HIS:N	2.30	0.64
1:1:1542:G:OP2	1:1:1542:G:C8	2.51	0.64
1:1:142:G:C6	1:1:266:A:C5	2.86	0.63
1:1:288:A:C4	1:1:289:U:C5	2.86	0.63
20:S:23:VAL:C	29:S:534:OHX:N1	2.51	0.63
17:P:127:VAL:CA	17:P:129:GLY:N	2.62	0.63
1:1:326:G:O6	1:1:337:G:O6	2.16	0.63
1:1:1579:U:C2	1:1:1580:C:C5	2.86	0.63
1:1:390:G:N2	1:1:391:A:C6	2.67	0.63
1:1:704:C:C4'	1:1:705:U:OP1	2.46	0.63
3:B:56:ILE:O	3:B:59:HIS:N	2.32	0.63
1:1:1636:C:C4	1:1:1765:A:N6	2.66	0.63
1:1:199:G:C6	1:1:200:A:N6	2.67	0.63
1:1:1472:C:C1'	1:1:1473:U:OP2	2.45	0.63
1:1:1348:A:C5'	15:N:12:GLN:N	2.61	0.63
1:1:1481:C:C6	1:1:1482:C:C2	2.86	0.63
1:1:772:G:C6	1:1:773:C:N3	2.66	0.63
8:G:91:LEU:O	8:G:95:ALA:CB	2.47	0.63
1:1:66:U:O2'	1:1:67:A:P	2.56	0.63
1:1:1734:U:C2	1:1:1735:U:C5	2.87	0.63
2:A:219:THR:O	2:A:220:THR:O	2.16	0.63
1:1:1433:G:N2	1:1:1434:U:C5	2.67	0.63
1:1:166:C:C4	1:1:167:U:O4	2.52	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1204:A:C3'	1:1:1205:C:C5'	2.77	0.63
1:1:322:G:O4'	1:1:323:A:C8	2.52	0.63
1:1:1358:G:C6	1:1:1359:C:N4	2.67	0.63
13:L:78:HIS:O	13:L:80:LYS:N	2.31	0.63
16:O:62:VAL:O	16:O:63:VAL:CB	2.45	0.63
1:1:289:U:O2	1:1:290:G:C8	2.52	0.63
1:1:643:G:C2	1:1:692:C:C2	2.86	0.63
5:D:93:LEU:O	5:D:96:SER:N	2.32	0.63
1:1:1523:G:OP2	1:1:1524:A:OP2	2.16	0.63
1:1:986:G:C4	1:1:987:G:C8	2.87	0.63
5:D:161:ASP:CA	5:D:162:VAL:CB	2.77	0.63
1:1:849:C:C4	1:1:850:A:N7	2.67	0.63
1:1:1003:A:N7	1:1:1005:A:C6	2.66	0.63
20:S:21:CYS:O	20:S:23:VAL:O	2.16	0.63
1:1:1525:A:C2	1:1:1526:A:C4	2.87	0.63
11:J:46:PHE:C	11:J:48:VAL:N	2.52	0.63
1:1:1314:U:O2'	1:1:1315:U:P	2.56	0.63
1:1:897:C:C2	1:1:914:G:N2	2.67	0.63
1:1:610:G:C2	1:1:614:C:N3	2.67	0.63
1:1:22:A:C6	1:1:604:A:N1	2.67	0.63
3:B:139:ILE:O	3:B:141:ARG:N	2.32	0.63
1:1:938:G:N2	1:1:942:G:C5	2.67	0.63
1:1:223:U:O2	1:1:838:G:N2	2.31	0.63
1:1:1075:C:N4	1:1:1076:A:N6	2.46	0.63
1:1:1685:G:N2	1:1:1686:C:C2	2.67	0.63
1:1:114:C:C4	1:1:248:U:C4	2.87	0.62
1:1:863:A:C8	1:1:865:A:C8	2.86	0.62
1:1:1683:C:O2'	1:1:1684:U:N3	2.32	0.62
3:B:128:GLY:O	3:B:131:ILE:N	2.32	0.62
1:1:802:G:C5	1:1:803:A:N1	2.67	0.62
1:1:521:A:C3'	1:1:523:G:C8	2.82	0.62
17:P:104:LEU:O	17:P:105:ALA:CB	2.46	0.62
1:1:198:A:O2'	1:1:199:G:C8	2.52	0.62
1:1:1472:C:C5	1:1:1474:G:C2	2.86	0.62
1:1:1685:G:N2	1:1:1718:G:N2	2.47	0.62
1:1:1719:A:O3'	1:1:1720:G:C8	2.52	0.62
1:1:246:G:C6	1:1:247:A:C2	2.87	0.62
1:1:1435:G:C4'	1:1:1436:A:OP2	2.46	0.62
1:1:617:U:O4'	1:1:1031:U:O2	2.17	0.62
1:1:702:G:N2	1:1:703:G:C2	2.67	0.62
1:1:380:U:C2'	1:1:381:C:C6	2.82	0.62
1:1:198:A:O2'	1:1:199:G:O4'	2.16	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:18:C:C2	1:1:19:A:C8	2.88	0.62
1:1:1473:U:O4'	1:1:1473:U:O2	2.17	0.62
20:S:23:VAL:O	20:S:24:CYS:O	2.17	0.62
20:S:38:ILE:N	29:S:534:OHX:N3	2.47	0.62
1:1:477:A:C4	1:1:539:G:O6	2.52	0.62
13:L:72:ILE:O	13:L:77:THR:N	2.32	0.62
3:B:239:PRO:C	3:B:241:ASP:N	2.53	0.62
1:1:1378:U:C4	11:J:19:VAL:CB	2.82	0.62
1:1:1330:G:C4	1:1:1331:A:C8	2.86	0.62
1:1:1525:A:C2'	1:1:1526:A:C8	2.83	0.62
1:1:285:G:C6	1:1:286:C:C4	2.87	0.62
4:C:104:SER:O	4:C:107:PHE:N	2.31	0.62
1:1:1145:U:O2'	3:B:89:GLN:O	2.17	0.62
1:1:313:U:C5	1:1:1118:G:N1	2.67	0.62
4:C:16:VAL:O	4:C:18:TYR:N	2.33	0.62
29:1:1865:OHX:N5	29:1:1910:OHX:N4	2.47	0.62
1:1:940:A:N3	1:1:941:A:C8	2.67	0.62
20:S:37:ASN:O	29:S:534:OHX:N5	2.32	0.62
1:1:1284:C:O2	1:1:1286:U:C4	2.53	0.62
5:D:180:ARG:O	5:D:182:ALA:N	2.33	0.62
1:1:1153:G:OP2	1:1:1153:G:C8	2.53	0.62
1:1:1149:G:C2	1:1:1150:G:N7	2.67	0.62
1:1:1764:C:OP1	1:1:1771:U:C4'	2.47	0.62
1:1:120:U:O4	1:1:297:U:O4	2.18	0.62
1:1:365:G:C6	1:1:377:G:O6	2.53	0.62
1:1:1066:C:C4	1:1:1067:C:C5	2.88	0.62
1:1:202:A:C6	1:1:203:U:O4	2.52	0.62
1:1:899:G:N2	1:1:915:A:C2	2.67	0.62
1:1:332:U:C5'	1:1:333:A:OP2	2.47	0.62
1:1:1540:G:C4	1:1:1541:G:C8	2.88	0.62
1:1:100:A:C2	1:1:101:U:C2	2.87	0.62
1:1:534:A:C2'	1:1:535:A:C8	2.83	0.62
1:1:268:C:N3	1:1:288:A:C2	2.68	0.61
1:1:169:A:C5	1:1:171:A:C5	2.88	0.61
1:1:1597:A:C5	1:1:1598:U:N3	2.68	0.61
1:1:790:U:C2	1:1:791:A:C8	2.88	0.61
1:1:989:U:C4	1:1:990:C:N4	2.68	0.61
1:1:1541:G:C6	1:1:1542:G:C6	2.87	0.61
1:1:1172:G:C4	1:1:1173:C:C5	2.88	0.61
1:1:47:A:C2	1:1:100:A:C4	2.89	0.61
1:1:965:U:O2'	1:1:966:A:OP1	2.17	0.61
3:B:165:VAL:CA	3:B:166:THR:CB	2.78	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1645:G:N1	1:1:1757:G:C6	2.68	0.61
1:1:1525:A:C6	1:1:1526:A:C6	2.88	0.61
29:1:1839:OHX:N1	29:1:1895:OHX:N4	2.47	0.61
1:1:701:U:O4	1:1:702:G:N3	2.32	0.61
1:1:1172:G:C6	1:1:1173:C:N4	2.69	0.61
1:1:1486:G:O6	1:1:1520:U:O2	2.18	0.61
1:1:916:U:C5	1:1:917:U:C4	2.89	0.61
1:1:1552:U:O2	1:1:1552:U:C2'	2.48	0.61
20:S:38:ILE:N	29:S:534:OHX:N6	2.48	0.61
1:1:1575:G:C2	1:1:1576:A:C4	2.89	0.61
1:1:1545:A:OP1	13:L:133:VAL:N	2.33	0.61
1:1:172:C:N3	1:1:173:A:C8	2.68	0.61
1:1:57:G:C5	1:1:58:U:C5	2.89	0.61
1:1:489:C:C2	1:1:498:G:N2	2.69	0.61
1:1:1203:A:C4	1:1:1555:A:N1	2.69	0.61
1:1:1793:G:O2'	1:1:1794:A:P	2.57	0.61
1:1:1757:G:C6	1:1:1758:U:C4	2.88	0.61
29:1:1839:OHX:N1	29:1:1895:OHX:N3	2.48	0.61
1:1:1619:C:C2	1:1:1620:C:C5	2.88	0.61
1:1:445:A:N3	1:1:446:A:C8	2.68	0.61
1:1:1753:A:N6	1:1:1754:A:C6	2.68	0.61
1:1:1586:A:C5	1:1:1611:A:C2	2.89	0.61
1:1:39:A:C5	1:1:467:G:N2	2.67	0.61
1:1:1402:G:C6	1:1:1403:C:C4	2.88	0.61
17:P:127:VAL:CB	17:P:129:GLY:N	2.63	0.61
1:1:1433:G:N2	1:1:1434:U:C4	2.68	0.61
1:1:1294:G:O2'	1:1:1321:A:N1	2.33	0.61
1:1:611:U:C5'	1:1:612:U:OP2	2.49	0.61
1:1:333:A:C6	1:1:334:G:C6	2.88	0.61
1:1:417:A:C4'	1:1:418:G:O5'	2.49	0.61
1:1:1597:A:N7	1:1:1598:U:C4	2.68	0.61
1:1:1728:A:C4	1:1:1729:C:C5	2.89	0.61
8:G:67:THR:O	8:G:71:ILE:CB	2.48	0.61
1:1:1150:G:O2'	1:1:1766:A:C2	2.54	0.61
1:1:452:A:C2	1:1:454:U:O5'	2.54	0.61
1:1:862:A:C4	1:1:963:A:N6	2.68	0.61
1:1:1437:U:O2	1:1:1437:U:C2'	2.40	0.61
1:1:1349:G:O2'	1:1:1350:U:OP2	2.19	0.61
1:1:1482:C:O2'	1:1:1483:A:O5'	2.19	0.61
1:1:544:A:O2'	1:1:545:A:O5'	2.18	0.61
1:1:1179:G:N2	1:1:1461:C:N4	2.47	0.61
1:1:1575:G:C6	1:1:1576:A:C6	2.88	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1543:A:C2	1:1:1544:U:C1'	2.83	0.61
17:P:86:PHE:C	17:P:88:PRO:N	2.53	0.61
1:1:1007:C:C5'	1:1:1008:G:OP2	2.49	0.61
1:1:647:G:N1	1:1:648:G:O6	2.34	0.61
1:1:649:U:O4	1:1:685:A:N1	2.34	0.61
1:1:1246:C:C4	1:1:1247:U:C5	2.88	0.61
1:1:381:C:C2	1:1:382:C:C5	2.88	0.61
1:1:330:G:N3	1:1:331:A:C8	2.69	0.61
1:1:225:A:C4	1:1:226:A:C8	2.88	0.61
1:1:1796:C:OP2	1:1:1797:A:C8	2.54	0.61
20:S:41:GLN:N	29:S:534:OHX:N4	2.49	0.61
1:1:553:G:N2	1:1:572:C:N3	2.49	0.61
1:1:1129:U:C5	1:1:1130:G:N7	2.68	0.61
1:1:1634:C:O5'	1:1:1634:C:C6	2.54	0.61
1:1:401:A:O2'	1:1:402:C:O2'	2.19	0.61
1:1:127:G:C5	1:1:179:A:C5	2.89	0.61
2:A:169:SER:C	2:A:171:GLY:N	2.45	0.61
1:1:1466:G:C6	1:1:1467:C:C4	2.88	0.61
1:1:1075:C:C4	1:1:1076:A:N1	2.69	0.61
6:E:82:ARG:C	6:E:84:GLY:N	2.54	0.61
1:1:1757:G:C2'	1:1:1758:U:O5'	2.49	0.61
1:1:1254:U:O2'	1:1:1255:G:P	2.58	0.61
1:1:1336:A:C6	1:1:1416:G:C6	2.88	0.61
1:1:245:U:C2	1:1:247:A:OP2	2.54	0.61
1:1:1575:G:N3	1:1:1575:G:C2'	2.64	0.61
3:B:163:GLY:O	3:B:165:VAL:N	2.34	0.60
1:1:1756:A:N6	29:1:1802:OHX:N2	2.49	0.60
1:1:1391:A:N1	1:1:1409:G:N2	2.49	0.60
1:1:37:U:OP1	1:1:531:C:O2'	2.19	0.60
1:1:1291:G:N2	1:1:1324:G:N1	2.49	0.60
1:1:426:G:N1	1:1:427:C:C4	2.70	0.60
1:1:897:C:N3	1:1:914:G:C2	2.69	0.60
1:1:1118:G:C6	1:1:1119:G:C6	2.89	0.60
1:1:1683:C:O5'	1:1:1684:U:OP1	2.18	0.60
1:1:34:G:C5	1:1:475:A:N6	2.69	0.60
8:G:127:ARG:O	8:G:129:TYR:N	2.34	0.60
16:O:80:ASN:O	16:O:123:GLY:O	2.19	0.60
8:G:83:GLU:O	8:G:84:ILE:CB	2.49	0.60
1:1:1781:A:C2	1:1:1782:A:C2	2.89	0.60
1:1:44:U:O5'	1:1:45:U:C5	2.54	0.60
1:1:635:A:C2	1:1:863:A:C8	2.88	0.60
1:1:1684:U:O2	1:1:1684:U:C3'	2.49	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1650:U:C3'	1:1:1651:A:C8	2.84	0.60
1:1:1575:G:C4'	1:1:1575:G:OP1	2.49	0.60
1:1:142:G:N2	1:1:173:A:C6	2.68	0.60
1:1:63:G:C6	1:1:88:U:O2	2.54	0.60
14:M:62:ALA:C	14:M:64:HIS:N	2.55	0.60
3:B:142:GLY:O	3:B:149:GLY:O	2.19	0.60
16:O:94:LEU:O	16:O:95:PRO:CB	2.50	0.60
21:T:19:TRP:O	21:T:38:ARG:N	2.34	0.60
7:F:110:HIS:CA	7:F:111:VAL:CB	2.80	0.60
1:1:365:G:C2	1:1:366:A:C8	2.88	0.60
1:1:1497:U:C4	1:1:1511:U:C2	2.90	0.60
1:1:63:G:O4'	1:1:170:U:C2	2.54	0.60
1:1:1348:A:C3'	1:1:1348:A:C8	2.84	0.60
1:1:605:A:C5	1:1:606:A:C6	2.90	0.60
1:1:374:U:C2	1:1:375:U:C6	2.89	0.60
1:1:1385:G:C2	1:1:1386:G:C8	2.88	0.60
12:K:55:THR:O	12:K:59:LYS:N	2.33	0.60
1:1:873:U:N3	1:1:874:C:C4	2.70	0.60
11:J:35:PRO:O	11:J:37:THR:N	2.34	0.60
1:1:830:U:C2	1:1:831:U:C5	2.90	0.60
1:1:1508:U:O4	29:1:1811:OHX:N5	2.34	0.60
7:F:95:PRO:O	7:F:96:LYS:C	2.40	0.60
1:1:1375:A:C2'	1:1:1376:C:C6	2.84	0.60
1:1:207:U:N3	1:1:208:U:C5	2.69	0.60
1:1:310:C:C3'	1:1:310:C:C6	2.85	0.60
1:1:1042:G:C2	1:1:1043:A:C4	2.89	0.60
6:E:54:ARG:O	6:E:55:ALA:O	2.19	0.60
1:1:1028:C:O2'	1:1:1029:U:OP2	2.19	0.60
1:1:1237:G:C4	1:1:1238:A:C8	2.90	0.60
1:1:1455:G:C4	1:1:1456:C:N3	2.69	0.60
1:1:1110:G:C2	1:1:1111:G:C4	2.90	0.60
1:1:1600:A:C4'	1:1:1600:A:OP1	2.48	0.60
1:1:1585:U:C5	1:1:1610:G:N2	2.69	0.60
1:1:1673:G:C5	1:1:1674:C:C5	2.90	0.60
1:1:1542:G:N2	1:1:1568:C:C2'	2.65	0.60
4:C:105:MET:O	4:C:108:LYS:N	2.35	0.60
9:H:44:GLY:O	9:H:46:MET:N	2.35	0.60
1:1:624:G:C4	1:1:1027:A:C2	2.90	0.60
1:1:614:C:C2	1:1:615:A:C8	2.89	0.60
29:1:1865:OHX:N3	29:1:1910:OHX:N1	2.50	0.60
1:1:1065:A:C5	1:1:1066:C:C4	2.90	0.60
1:1:1543:A:C8	1:1:1569:A:N6	2.70	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:M:101:ASN:O	14:M:103:LYS:N	2.35	0.60
1:1:183:U:C5	1:1:184:C:C4	2.90	0.60
1:1:1752:U:C2'	1:1:1753:A:C8	2.85	0.60
1:1:975:C:C2	1:1:976:G:C8	2.89	0.60
1:1:340:U:C2	1:1:341:A:C8	2.90	0.60
1:1:814:A:C4	1:1:816:G:C2	2.90	0.60
1:1:634:G:C2	1:1:966:A:C6	2.90	0.60
1:1:1309:C:C2'	1:1:1310:U:O5'	2.50	0.60
1:1:1219:A:C5'	1:1:1220:C:C5	2.84	0.60
15:N:45:ALA:C	15:N:47:GLN:N	2.53	0.60
1:1:123:G:C6	1:1:295:A:N6	2.69	0.59
1:1:129:U:C5	1:1:264:G:O6	2.54	0.59
1:1:129:U:H5	1:1:264:G:C5	2.17	0.59
1:1:1185:U:C5	1:1:1458:G:C8	2.90	0.59
1:1:59:C:N4	1:1:89:G:C4	2.70	0.59
1:1:357:G:C5	1:1:358:U:C4	2.90	0.59
5:D:59:VAL:C	5:D:61:TYR:N	2.56	0.59
1:1:1631:A:C5	1:1:1632:C:C2	2.89	0.59
1:1:1767:G:O2'	1:1:1768:G:OP2	2.20	0.59
1:1:525:A:OP1	1:1:526:A:N7	2.35	0.59
4:C:95:GLY:O	4:C:96:LEU:CB	2.49	0.59
1:1:1607:G:C6	1:1:1608:U:C4	2.90	0.59
2:A:54:TRP:O	2:A:57:LEU:N	2.35	0.59
10:I:21:ASP:O	10:I:23:GLU:N	2.34	0.59
1:1:264:G:C3'	1:1:265:A:C5'	2.80	0.59
1:1:454:U:O2'	1:1:455:C:O4'	2.20	0.59
1:1:1753:A:C6	1:1:1754:A:N6	2.66	0.59
4:C:21:LEU:O	4:C:23:GLU:N	2.36	0.59
1:1:1076:A:N7	1:1:1077:C:C6	2.70	0.59
1:1:1675:C:O2'	1:1:1678:A:C8	2.55	0.59
1:1:524:U:C2'	1:1:527:A:C2	2.86	0.59
1:1:391:A:C6	1:1:392:G:C5	2.91	0.59
5:D:162:VAL:O	5:D:164:PRO:N	2.35	0.59
12:K:53:TYR:O	12:K:56:HIS:CB	2.50	0.59
1:1:71:A:C2	1:1:72:A:N6	2.71	0.59
1:1:1458:G:N3	1:1:1458:G:C2'	2.65	0.59
1:1:971:A:C8	1:1:972:G:C8	2.91	0.59
1:1:1631:A:N9	1:1:1638:G:N2	2.48	0.59
1:1:295:A:C2	1:1:296:U:O2	2.56	0.59
1:1:330:G:C8	1:1:330:G:OP2	2.55	0.59
1:1:417:A:C8	1:1:417:A:O5'	2.55	0.59
1:1:605:A:C5	1:1:606:A:N1	2.70	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1329:A:C8	1:1:1330:G:C8	2.90	0.59
1:1:1338:C:N1	1:1:1410:A:C2	2.70	0.59
1:1:1586:A:C4	1:1:1611:A:C2	2.90	0.59
1:1:542:A:O2'	1:1:543:C:P	2.61	0.59
1:1:986:G:O2'	1:1:987:G:O5'	2.20	0.59
1:1:891:A:N1	1:1:922:G:C6	2.70	0.59
14:M:7:ARG:O	14:M:8:ASP:CB	2.51	0.59
1:1:1118:G:C6	1:1:1119:G:C5	2.90	0.59
1:1:556:A:O2'	1:1:590:C:O4'	2.20	0.59
3:B:245:ASP:C	3:B:247:ALA:N	2.55	0.59
6:E:111:THR:O	6:E:113:VAL:N	2.36	0.59
1:1:1634:C:C2'	1:1:1634:C:O2	2.50	0.59
1:1:402:C:O2	1:1:403:G:C4'	2.50	0.59
1:1:55:A:C5	1:1:426:G:C6	2.90	0.59
1:1:755:A:C5	1:1:756:A:C5	2.90	0.59
1:1:206:A:N3	1:1:262:U:C4	2.71	0.59
1:1:57:G:C6	1:1:58:U:C5	2.90	0.59
1:1:1144:U:O4'	1:1:1300:A:N1	2.35	0.59
1:1:26:A:C2	1:1:600:U:N3	2.70	0.59
1:1:13:C:O3'	3:B:161:LYS:O	2.19	0.59
1:1:1793:G:O2'	1:1:1794:A:O5'	2.20	0.59
3:B:185:LYS:O	3:B:186:LYS:C	2.41	0.59
13:L:65:GLU:O	13:L:67:GLU:N	2.36	0.59
1:1:1362:U:C3'	1:1:1363:U:O4'	2.50	0.59
1:1:1483:A:C8	1:1:1524:A:N7	2.70	0.59
1:1:1232:U:O2	1:1:1233:G:C8	2.56	0.59
5:D:169:ASN:O	5:D:172:ILE:N	2.36	0.59
1:1:1294:G:C2	1:1:1295:G:C8	2.91	0.59
16:O:102:VAL:O	16:O:104:LEU:N	2.36	0.59
21:T:213:SER:O	21:T:220:ILE:CA	2.50	0.59
1:1:963:A:O2'	1:1:964:U:P	2.61	0.59
1:1:8:U:O2'	29:1:1892:OHX:N2	2.35	0.59
1:1:607:G:C4'	1:1:608:U:OP2	2.50	0.59
1:1:1306:C:O4'	1:1:1306:C:O2	2.18	0.59
1:1:985:G:C5	1:1:986:G:N7	2.70	0.59
1:1:1575:G:N1	1:1:1576:A:C4	2.71	0.59
6:E:151:ASP:O	6:E:153:GLU:N	2.36	0.59
1:1:365:G:C5	1:1:377:G:N1	2.71	0.59
7:F:95:PRO:O	7:F:97:TYR:N	2.36	0.59
1:1:333:A:C2	1:1:334:G:C4	2.91	0.59
1:1:1297:G:N2	1:1:1301:U:C2	2.71	0.59
1:1:1275:A:N6	1:1:1431:C:N3	2.51	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:22:A:C6	1:1:604:A:C6	2.91	0.59
1:1:1583:A:N3	1:1:1585:U:N3	2.51	0.59
3:B:122:ALA:O	3:B:125:ILE:N	2.35	0.59
1:1:1336:A:C6	1:1:1416:G:O6	2.56	0.59
1:1:388:G:N3	1:1:389:G:C8	2.71	0.59
5:D:59:VAL:O	5:D:61:TYR:N	2.36	0.59
1:1:302:U:C4	1:1:303:U:O2	2.56	0.59
1:1:1559:A:O2'	1:1:1560:U:O4'	2.21	0.59
1:1:168:A:C6	1:1:169:A:N6	2.71	0.59
1:1:866:G:C2	1:1:867:G:C8	2.91	0.59
1:1:1613:U:N3	1:1:1614:A:C8	2.71	0.59
1:1:901:G:C6	1:1:902:G:C2	2.90	0.59
1:1:1000:C:C5	1:1:1003:A:OP2	2.56	0.58
1:1:1508:U:O4	29:1:1811:OHX:N6	2.36	0.58
1:1:1754:A:O2'	1:1:1755:A:O5'	2.20	0.58
1:1:61:A:OP1	1:1:62:A:C8	2.56	0.58
1:1:1142:A:C2	1:1:1143:A:C4	2.91	0.58
1:1:1365:C:C2'	1:1:1366:U:O4'	2.51	0.58
29:1:1845:OHX:N5	29:1:1873:OHX:N3	2.50	0.58
1:1:1584:G:C5	11:J:123:ARG:O	2.55	0.58
29:1:1839:OHX:N5	29:1:1895:OHX:N6	2.50	0.58
8:G:93:LYS:O	8:G:96:VAL:N	2.35	0.58
1:1:629:U:C2'	1:1:630:A:C8	2.86	0.58
16:O:53:ILE:O	16:O:60:LYS:N	2.36	0.58
1:1:846:G:O2'	1:1:847:A:O5'	2.20	0.58
1:1:105:A:C2	29:1:1812:OHX:N3	2.71	0.58
1:1:1754:A:O2'	1:1:1755:A:OP2	2.20	0.58
1:1:1475:A:C4	1:1:1476:C:C6	2.91	0.58
1:1:272:U:O2	1:1:284:G:N2	2.36	0.58
1:1:479:C:C3'	1:1:480:G:C8	2.86	0.58
1:1:426:G:C6	1:1:427:C:N4	2.71	0.58
1:1:1521:G:N1	29:1:1855:OHX:N4	2.52	0.58
1:1:795:U:C5	1:1:796:A:C5	2.92	0.58
1:1:85:A:O2'	1:1:86:A:C8	2.56	0.58
1:1:1760:G:C5	1:1:1761:U:C5	2.91	0.58
1:1:647:G:C2	1:1:687:G:N2	2.71	0.58
1:1:50:C:C2	1:1:424:C:C5	2.92	0.58
1:1:1209:C:C2	1:1:1455:G:N2	2.72	0.58
1:1:1120:U:C2	1:1:1121:C:C5	2.92	0.58
1:1:1044:U:O2	1:1:1044:U:C2'	2.50	0.58
1:1:697:C:C3'	1:1:698:U:C5'	2.82	0.58
1:1:743:U:C5	1:1:809:A:C2	2.91	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:L:116:LEU:O	13:L:118:LYS:N	2.36	0.58
9:H:118:VAL:O	9:H:119:THR:C	2.42	0.58
1:1:1006:C:C6	1:1:1007:C:C5	2.92	0.58
1:1:1627:U:O2'	1:1:1628:U:O5'	2.21	0.58
1:1:1092:A:N3	1:1:1094:G:N7	2.51	0.58
1:1:1199:G:C5	1:1:1200:G:C1'	2.87	0.58
1:1:64:U:C2'	1:1:64:U:O2	2.51	0.58
1:1:350:U:OP1	1:1:351:C:O2'	2.21	0.58
1:1:1720:G:C5	1:1:1721:A:C4	2.91	0.58
1:1:534:A:C3'	1:1:535:A:C8	2.86	0.58
1:1:1653:C:N4	1:1:1654:G:C6	2.70	0.58
1:1:23:G:C5	1:1:24:U:C5	2.91	0.58
13:L:26:ILE:O	13:L:27:LYS:O	2.21	0.58
1:1:1345:A:N7	1:1:1347:U:N3	2.51	0.58
29:1:1845:OHX:N2	29:1:1873:OHX:N6	2.51	0.58
1:1:1410:A:N6	1:1:1411:A:C2	2.72	0.58
1:1:1305:U:OP2	1:1:1306:C:N4	2.36	0.58
1:1:480:G:C4	1:1:481:A:C8	2.91	0.58
1:1:1540:G:C5	1:1:1541:G:C5	2.92	0.58
1:1:1228:G:N7	1:1:1229:G:N7	2.51	0.58
1:1:1082:C:C5	1:1:1083:G:N7	2.71	0.58
1:1:1762:A:OP1	1:1:1763:A:OP2	2.22	0.58
1:1:487:G:C2	1:1:488:G:N7	2.71	0.58
1:1:635:A:C4	1:1:863:A:C8	2.92	0.58
1:1:776:G:C6	1:1:785:U:N3	2.72	0.58
1:1:1598:U:C5	1:1:1599:C:C5	2.92	0.58
1:1:955:A:C2	1:1:956:C:C2	2.91	0.58
1:1:374:U:C4	1:1:375:U:C4	2.91	0.58
13:L:75:ASN:O	13:L:78:HIS:O	2.22	0.58
1:1:1541:G:C5	1:1:1542:G:C6	2.92	0.58
8:G:138:ASN:O	8:G:140:LYS:N	2.36	0.58
1:1:847:A:C2'	1:1:848:C:C5'	2.82	0.58
1:1:426:G:C2	1:1:427:C:C5	2.92	0.58
1:1:1032:G:N3	1:1:1033:C:C6	2.72	0.58
4:C:21:LEU:O	4:C:22:ASN:C	2.42	0.58
1:1:1756:A:N7	29:1:1802:OHX:N2	2.52	0.58
1:1:643:G:N1	1:1:692:C:C4	2.72	0.58
1:1:1685:G:N3	1:1:1719:A:C2	2.72	0.58
1:1:1723:U:C2	1:1:1724:U:C6	2.91	0.58
5:D:92:ARG:O	5:D:94:THR:N	2.37	0.58
1:1:272:U:C4'	1:1:273:G:OP2	2.51	0.58
9:H:42:VAL:O	9:H:43:THR:O	2.21	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1778:G:N1	1:1:1779:U:C5	2.71	0.58
1:1:361:C:C2	1:1:384:G:N2	2.71	0.58
1:1:1137:A:N3	1:1:1138:A:C8	2.72	0.58
1:1:776:G:N1	1:1:785:U:N3	2.52	0.58
6:E:55:ALA:O	6:E:56:ALA:C	2.42	0.58
1:1:1255:G:O3'	1:1:1257:U:OP1	2.21	0.58
1:1:529:A:OP2	1:1:529:A:C8	2.57	0.58
10:I:20:VAL:O	10:I:24:LYS:C	2.42	0.58
1:1:1150:G:N2	1:1:1795:U:OP1	2.37	0.58
1:1:1780:G:C6	1:1:1781:A:C6	2.92	0.58
1:1:269:G:C4	1:1:270:C:C5	2.91	0.58
1:1:1199:G:N1	1:1:1201:G:OP1	2.37	0.58
1:1:1026:A:C2	1:1:1792:G:C4	2.92	0.58
1:1:112:A:N6	1:1:303:U:O2	2.36	0.58
16:O:17:ALA:O	16:O:20:THR:N	2.37	0.58
1:1:1263:G:C4	1:1:1264:G:C8	2.91	0.58
1:1:1150:G:O2'	1:1:1766:A:N1	2.37	0.57
1:1:1632:C:O2'	1:1:1633:A:O4'	2.21	0.57
1:1:1636:C:C4'	1:1:1637:C:OP2	2.51	0.57
1:1:365:G:C2'	1:1:366:A:O5'	2.51	0.57
1:1:1645:G:C2'	1:1:1646:C:O5'	2.51	0.57
1:1:629:U:O2	1:1:971:A:C2	2.57	0.57
1:1:971:A:C8	1:1:972:G:N7	2.72	0.57
2:A:130:ALA:O	2:A:132:ALA:N	2.37	0.57
1:1:1636:C:N4	1:1:1638:G:C2	2.72	0.57
1:1:184:C:C5	1:1:202:A:C2	2.92	0.57
1:1:1199:G:N2	1:1:1201:G:OP2	2.36	0.57
1:1:1022:C:C4'	1:1:1124:A:N6	2.67	0.57
13:L:124:GLY:C	13:L:126:ARG:N	2.55	0.57
14:M:57:ARG:O	14:M:58:ALA:CB	2.51	0.57
9:H:57:PRO:O	9:H:60:ALA:N	2.37	0.57
5:D:58:LEU:O	5:D:61:TYR:N	2.36	0.57
21:T:180:ALA:CB	21:T:190:ALA:O	2.53	0.57
1:1:720:G:C4'	1:1:721:U:OP1	2.52	0.57
1:1:58:U:O2'	1:1:451:A:N3	2.37	0.57
1:1:1197:C:C4'	1:1:1197:C:OP1	2.52	0.57
1:1:1121:C:C2	1:1:1127:G:N1	2.72	0.57
1:1:1244:A:C2	1:1:1245:G:C1'	2.87	0.57
1:1:774:A:C5	1:1:787:G:N2	2.73	0.57
1:1:48:G:C5	1:1:432:G:N2	2.73	0.57
1:1:653:C:C5	1:1:654:C:C5	2.91	0.57
2:A:130:ALA:C	2:A:132:ALA:N	2.57	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:167:U:C5'	1:1:167:U:C6	2.88	0.57
1:1:361:C:N4	1:1:384:G:C6	2.72	0.57
4:C:69:LEU:O	4:C:72:LEU:N	2.38	0.57
1:1:1281:G:C2'	1:1:1282:U:C6	2.88	0.57
1:1:160:C:O2'	1:1:161:U:O5'	2.23	0.57
1:1:472:U:C5	1:1:473:A:C8	2.93	0.57
1:1:545:A:O2'	1:1:546:U:C6	2.58	0.57
1:1:989:U:C4	1:1:990:C:C4	2.93	0.57
2:A:54:TRP:O	2:A:55:GLU:C	2.42	0.57
1:1:1322:A:C5	1:1:1323:C:C5	2.93	0.57
1:1:1050:G:C6	1:1:1051:G:C4	2.92	0.57
1:1:66:U:C4	1:1:71:A:N6	2.72	0.57
1:1:635:A:C5	1:1:863:A:N7	2.72	0.57
1:1:1573:A:C4'	1:1:1574:G:C5'	2.83	0.57
1:1:210:A:C6	1:1:211:U:C4	2.93	0.57
1:1:1764:C:C6	1:1:1764:C:C5'	2.88	0.57
1:1:1781:A:N1	1:1:1782:A:C2	2.72	0.57
1:1:335:U:C5'	1:1:336:G:OP2	2.52	0.57
1:1:17:C:C2	1:1:18:C:C6	2.92	0.57
1:1:1770:U:N3	1:1:1793:G:N2	2.52	0.57
1:1:1526:A:OP2	1:1:1527:C:C5	2.57	0.57
1:1:1651:A:C2	1:1:1652:C:C4	2.92	0.57
1:1:1160:A:C2'	1:1:1161:C:C6	2.87	0.57
1:1:173:A:C6	1:1:174:U:N1	2.73	0.57
1:1:1557:U:OP2	1:1:1560:U:O4	2.22	0.57
1:1:15:U:C2	1:1:16:G:C8	2.92	0.57
1:1:620:A:C5	1:1:621:A:N1	2.73	0.57
1:1:954:G:C5	1:1:955:A:N7	2.72	0.57
1:1:1169:G:C2	1:1:1577:A:C6	2.92	0.57
21:T:282:SER:O	21:T:284:ALA:N	2.38	0.57
1:1:1449:U:C2'	1:1:1450:U:O5'	2.53	0.57
1:1:1002:G:N2	1:1:1760:G:O3'	2.38	0.57
1:1:295:A:N3	1:1:296:U:O4'	2.38	0.57
1:1:1497:U:C5	1:1:1498:G:N7	2.72	0.57
1:1:915:A:N7	1:1:916:U:C4	2.72	0.57
1:1:89:G:N2	1:1:90:C:C2	2.73	0.57
1:1:328:A:C6	1:1:341:A:C6	2.93	0.57
1:1:26:A:C2'	1:1:27:U:C6	2.87	0.57
1:1:1141:G:N3	1:1:1142:A:C8	2.73	0.57
1:1:1272:U:O4	1:1:1431:C:O2	2.23	0.57
1:1:1348:A:C5	1:1:1379:C:C4	2.93	0.57
1:1:873:U:N3	1:1:874:C:N4	2.52	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:B:65:GLU:O	3:B:66:PHE:CB	2.53	0.57
2:A:106:SER:C	2:A:108:THR:N	2.58	0.57
1:1:88:U:C5	1:1:89:G:N7	2.72	0.57
1:1:1377:U:O2	1:1:1378:U:C4'	2.52	0.57
1:1:809:A:C6	1:1:810:G:O6	2.58	0.57
15:N:58:LEU:O	15:N:59:PRO:CB	2.53	0.57
1:1:1051:G:C2	1:1:1052:U:N3	2.73	0.57
1:1:940:A:C2	1:1:941:A:C4	2.93	0.56
1:1:1794:A:C6	1:1:1796:C:N4	2.73	0.56
6:E:82:ARG:O	6:E:148:VAL:O	2.23	0.56
3:B:124:ALA:O	3:B:125:ILE:C	2.41	0.56
1:1:772:G:N7	1:1:773:C:N4	2.53	0.56
1:1:1727:G:N1	1:1:1728:A:C6	2.72	0.56
1:1:129:U:H5	1:1:264:G:C6	2.14	0.56
1:1:173:A:N1	1:1:174:U:C1'	2.68	0.56
1:1:447:U:O2'	1:1:448:C:O4'	2.22	0.56
1:1:1475:A:C6	1:1:1476:C:C4	2.94	0.56
4:C:98:ALA:O	4:C:100:ALA:N	2.38	0.56
1:1:1522:U:C2'	1:1:1523:G:O5'	2.53	0.56
1:1:829:A:O2'	1:1:830:U:P	2.63	0.56
1:1:757:A:C5	1:1:758:U:C6	2.94	0.56
1:1:445:A:N6	1:1:461:G:N2	2.53	0.56
1:1:448:C:C2	1:1:449:C:C5	2.93	0.56
1:1:635:A:OP1	1:1:636:A:OP2	2.23	0.56
1:1:618:U:C2'	1:1:619:A:C5'	2.83	0.56
1:1:15:U:O4'	1:1:619:A:N1	2.38	0.56
1:1:1756:A:N6	29:1:1802:OHX:N6	2.53	0.56
1:1:1245:G:C5	1:1:1246:C:C5	2.93	0.56
17:P:132:LEU:N	17:P:133:LEU:C	2.58	0.56
1:1:1371:A:N1	1:1:1372:U:C4	2.74	0.56
20:S:41:GLN:CB	29:S:534:OHX:N3	2.68	0.56
1:1:553:G:C5	1:1:554:C:C4	2.93	0.56
1:1:526:A:N3	1:1:526:A:C2'	2.68	0.56
1:1:521:A:C2	1:1:523:G:C6	2.94	0.56
1:1:25:C:C3'	1:1:25:C:C6	2.88	0.56
8:G:81:ALA:O	8:G:82:PRO:CB	2.54	0.56
8:G:51:GLY:CA	8:G:53:LEU:N	2.69	0.56
1:1:908:U:C5	1:1:909:U:C6	2.94	0.56
1:1:1085:G:N2	1:1:1089:U:C2	2.73	0.56
1:1:243:G:N3	1:1:251:A:C2	2.72	0.56
1:1:1779:U:O2'	1:1:1780:G:P	2.63	0.56
1:1:265:A:N7	1:1:290:G:N2	2.53	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:B:213:ALA:O	3:B:215:PHE:N	2.37	0.56
1:1:541:A:C8	1:1:541:A:OP2	2.59	0.56
1:1:32:U:O2	1:1:468:A:N6	2.39	0.56
1:1:1714:A:C6	1:1:1715:G:C2	2.93	0.56
29:1:1845:OHX:N5	29:1:1873:OHX:N6	2.54	0.56
5:D:191:ALA:O	5:D:195:ALA:N	2.38	0.56
5:D:195:ALA:O	5:D:196:GLU:C	2.44	0.56
1:1:521:A:C4'	1:1:522:U:OP1	2.54	0.56
1:1:524:U:O2	1:1:524:U:C3'	2.54	0.56
1:1:524:U:C4	1:1:527:A:C5	2.93	0.56
1:1:518:A:N6	1:1:535:A:C4	2.73	0.56
1:1:1750:A:C6	1:1:1751:C:C4	2.93	0.56
9:H:60:ALA:O	9:H:63:ALA:CB	2.54	0.56
1:1:108:A:C2'	1:1:109:G:C8	2.89	0.56
1:1:1263:G:C6	1:1:1264:G:C4	2.92	0.56
8:G:88:LEU:O	8:G:90:TYR:N	2.39	0.56
8:G:46:THR:O	8:G:47:PRO:CB	2.53	0.56
1:1:1622:G:C6	1:1:1623:C:C4	2.93	0.56
1:1:1788:G:C8	1:1:1788:G:OP2	2.57	0.56
1:1:1006:C:C5	1:1:1007:C:C5	2.93	0.56
1:1:991:G:N2	1:1:1014:G:C6	2.73	0.56
1:1:1636:C:C4	1:1:1638:G:C2	2.93	0.56
1:1:173:A:N7	1:1:174:U:C6	2.72	0.56
1:1:1200:G:C4'	1:1:1201:G:OP2	2.53	0.56
1:1:1351:G:C5	1:1:1352:G:C8	2.94	0.56
15:N:14:GLN:O	15:N:15:GLN:CB	2.53	0.56
1:1:1365:C:C4	1:1:1366:U:C5	2.93	0.56
1:1:1260:U:OP1	1:1:1444:A:N1	2.39	0.56
1:1:878:G:C6	1:1:951:A:N1	2.74	0.56
1:1:520:A:C4	1:1:521:A:N7	2.74	0.56
1:1:524:U:N3	1:1:527:A:C6	2.73	0.56
16:O:106:THR:O	16:O:107:SER:C	2.43	0.56
4:C:56:GLN:O	4:C:59:LEU:N	2.38	0.56
1:1:825:U:C5	1:1:847:A:N6	2.73	0.56
1:1:966:A:O2'	1:1:967:A:O5'	2.23	0.56
1:1:1597:A:C5	1:1:1598:U:C4	2.93	0.56
15:N:12:GLN:O	15:N:13:GLU:C	2.43	0.56
1:1:1123:C:C2'	1:1:1124:A:O5'	2.53	0.56
20:S:38:ILE:O	20:S:40:ARG:N	2.39	0.56
13:L:71:GLN:O	13:L:72:ILE:C	2.41	0.56
16:O:96:ALA:O	16:O:98:GLN:N	2.37	0.56
6:E:131:GLN:O	6:E:133:HIS:N	2.38	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:252:U:O2'	1:1:253:A:P	2.63	0.56
11:J:40:GLU:O	11:J:42:GLU:N	2.39	0.56
1:1:1786:G:C6	1:1:1787:C:N4	2.73	0.56
1:1:1005:A:C5	1:1:1006:C:C4	2.93	0.56
1:1:1778:G:C6	1:1:1779:U:C5	2.94	0.56
1:1:298:C:C3'	1:1:298:C:C6	2.89	0.56
1:1:452:A:N1	1:1:454:U:C6	2.74	0.56
1:1:940:A:C2	1:1:941:A:C8	2.93	0.56
1:1:977:A:C5	1:1:1025:A:C2	2.93	0.56
1:1:837:G:C2	1:1:838:G:C4	2.94	0.56
1:1:1683:C:O3'	1:1:1684:U:C2	2.59	0.56
1:1:1657:U:C2	29:1:1863:OHX:N5	2.74	0.56
1:1:1331:A:C2'	1:1:1332:C:O5'	2.53	0.56
1:1:1368:G:C6	1:1:1369:U:C4	2.94	0.56
1:1:1369:U:O4	29:1:1873:OHX:N5	2.39	0.56
1:1:389:G:C5	1:1:390:G:C5	2.94	0.56
11:J:46:PHE:O	11:J:48:VAL:N	2.37	0.56
4:C:74:GLN:O	4:C:75:LYS:C	2.44	0.56
1:1:1588:G:C6	1:1:1589:C:C4	2.94	0.56
11:J:96:TYR:O	11:J:97:VAL:CB	2.53	0.56
1:1:85:A:O2'	1:1:86:A:P	2.64	0.56
1:1:1765:A:P	29:1:1841:OHX:N3	2.78	0.56
1:1:96:G:N2	1:1:387:A:N1	2.53	0.56
1:1:440:U:O2'	1:1:441:A:OP1	2.22	0.56
1:1:623:A:C2	1:1:1105:C:O2'	2.59	0.56
1:1:1205:C:C6	1:1:1206:U:O2	2.59	0.56
1:1:328:A:C4	1:1:329:G:C8	2.94	0.56
1:1:1110:G:O2'	1:1:1111:G:O4'	2.24	0.56
1:1:227:U:O2'	1:1:228:G:OP2	2.23	0.56
1:1:515:A:N6	1:1:537:G:N1	2.54	0.56
1:1:1113:A:C2	1:1:1115:U:O4	2.59	0.56
1:1:1165:G:C6	1:1:1166:A:C6	2.94	0.56
4:C:76:ARG:O	4:C:78:LYS:N	2.39	0.56
1:1:316:A:C6	1:1:317:C:C5	2.93	0.56
1:1:1149:G:N2	1:1:1150:G:O6	2.39	0.56
29:1:1821:OHX:N3	29:1:1891:OHX:N4	2.54	0.56
1:1:1517:U:O2	15:N:17:GLN:N	2.39	0.56
8:G:126:ALA:O	8:G:129:TYR:N	2.38	0.56
8:G:88:LEU:C	8:G:90:TYR:N	2.57	0.56
1:1:1778:G:C2	1:1:1779:U:C6	2.93	0.56
1:1:1100:G:N3	1:1:1100:G:O4'	2.39	0.56
1:1:1063:U:C2	1:1:1064:G:C8	2.94	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:811:A:O2'	1:1:858:G:C8	2.59	0.56
1:1:1723:U:C4	1:1:1724:U:C4	2.94	0.56
1:1:1725:U:O5'	1:1:1725:U:C6	2.59	0.56
1:1:1332:C:O2'	1:1:1333:C:C6	2.59	0.56
1:1:545:A:N6	1:1:593:U:O2'	2.39	0.56
1:1:509:G:C2'	1:1:510:G:C8	2.89	0.56
1:1:210:A:C4	1:1:211:U:C5	2.94	0.56
17:P:126:LYS:O	17:P:127:VAL:CB	2.54	0.56
12:K:54:THR:O	12:K:55:THR:C	2.45	0.56
1:1:1147:A:C6	1:1:1148:C:C4	2.93	0.55
1:1:1149:G:N3	1:1:1150:G:N7	2.53	0.55
1:1:364:G:C2	1:1:381:C:C4	2.94	0.55
1:1:755:A:C4'	1:1:756:A:OP1	2.53	0.55
1:1:693:U:C2'	1:1:694:U:OP1	2.54	0.55
1:1:1467:C:C5'	1:1:1602:C:OP1	2.54	0.55
1:1:604:A:C6	1:1:605:A:C6	2.94	0.55
1:1:606:A:C4	1:1:608:U:C5	2.95	0.55
1:1:1585:U:N3	1:1:1611:A:C2	2.74	0.55
13:L:76:PRO:O	13:L:81:ILE:N	2.39	0.55
5:D:164:PRO:O	5:D:167:ARG:N	2.38	0.55
1:1:1172:G:C6	1:1:1173:C:C4	2.95	0.55
16:O:37:PHE:O	16:O:39:GLN:N	2.39	0.55
1:1:1391:A:C4	1:1:1392:U:C5	2.93	0.55
1:1:276:C:O2'	1:1:277:U:P	2.63	0.55
1:1:515:A:OP2	29:1:1846:OHX:N3	2.39	0.55
1:1:1165:G:C6	1:1:1166:A:C5	2.95	0.55
10:I:124:THR:O	10:I:125:PRO:CB	2.55	0.55
7:F:85:VAL:O	7:F:86:ILE:O	2.24	0.55
1:1:297:U:C2'	1:1:298:C:O5'	2.55	0.55
1:1:130:C:C4	1:1:131:C:O2'	2.60	0.55
1:1:1039:A:O2'	1:1:1040:G:P	2.64	0.55
2:A:172:LEU:O	2:A:176:LEU:CB	2.54	0.55
7:F:97:TYR:O	7:F:98:ASN:CB	2.54	0.55
1:1:13:C:C5'	3:B:161:LYS:O	2.55	0.55
1:1:1713:G:N2	1:1:1714:A:C8	2.74	0.55
1:1:1416:G:C4	1:1:1417:A:C8	2.94	0.55
16:O:119:LYS:O	16:O:121:VAL:N	2.39	0.55
13:L:96:LYS:CB	13:L:97:ASP:CA	2.84	0.55
1:1:1005:A:N7	1:1:1006:C:C4	2.74	0.55
1:1:648:G:C2	1:1:649:U:C5	2.95	0.55
3:B:215:PHE:O	3:B:217:ALA:N	2.40	0.55
1:1:860:U:O4	1:1:861:U:N3	2.40	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:B:133:LYS:C	3:B:135:SER:N	2.60	0.55
1:1:475:A:N1	1:1:476:U:O2	2.40	0.55
1:1:1254:U:O2'	1:1:1255:G:O5'	2.25	0.55
1:1:201:G:N1	1:1:202:A:C2	2.75	0.55
1:1:57:G:C6	1:1:91:G:N1	2.74	0.55
1:1:1753:A:C2	1:1:1754:A:N1	2.74	0.55
1:1:1183:A:N6	1:1:1184:A:N1	2.55	0.55
1:1:335:U:C3'	1:1:336:G:C8	2.89	0.55
1:1:1583:A:N3	1:1:1585:U:C4	2.74	0.55
1:1:778:G:N2	1:1:783:G:C6	2.75	0.55
1:1:5:U:O2'	1:1:553:G:O3'	2.25	0.55
5:D:196:GLU:O	5:D:197:GLU:CB	2.54	0.55
1:1:214:G:O2'	1:1:215:A:OP1	2.24	0.55
1:1:112:A:O2'	1:1:113:U:O5'	2.24	0.55
1:1:317:C:N4	1:1:318:U:O4	2.39	0.55
1:1:139:C:C5	1:1:176:C:N3	2.74	0.55
1:1:196:G:O2'	1:1:197:A:O5'	2.24	0.55
1:1:162:A:C2	1:1:163:G:C4	2.95	0.55
1:1:50:C:N3	1:1:424:C:C5	2.75	0.55
4:C:11:LEU:O	4:C:14:ASP:N	2.40	0.55
1:1:1240:U:C2'	1:1:1241:G:C5'	2.85	0.55
1:1:1074:G:O6	1:1:1075:C:C4	2.60	0.55
1:1:1374:C:C4	1:1:1375:A:C6	2.94	0.55
1:1:1720:G:O4'	1:1:1720:G:P	2.65	0.55
11:J:54:LEU:C	11:J:56:GLY:N	2.58	0.55
12:K:50:ILE:O	12:K:54:THR:N	2.39	0.55
16:O:112:ASP:O	16:O:114:GLU:N	2.40	0.55
6:E:157:ASP:O	6:E:159:ALA:N	2.40	0.55
1:1:1251:U:C2'	1:1:1252:C:O4'	2.55	0.55
1:1:328:A:C2	1:1:329:G:C4	2.95	0.55
1:1:224:C:C2'	1:1:225:A:C8	2.90	0.55
1:1:620:A:OP2	1:1:621:A:OP2	2.25	0.55
14:M:125:SER:O	14:M:126:GLU:C	2.45	0.55
1:1:741:C:C2'	1:1:741:C:O2	2.54	0.55
5:D:109:LYS:O	5:D:113:ILE:N	2.40	0.55
1:1:539:G:C2	1:1:543:C:N3	2.75	0.55
13:L:80:LYS:C	13:L:82:PRO:N	2.57	0.55
1:1:1334:U:N3	1:1:1335:U:C5	2.75	0.55
1:1:245:U:N3	1:1:247:A:OP2	2.40	0.55
17:P:58:GLY:O	17:P:59:ILE:O	2.25	0.55
2:A:109:ASN:O	2:A:111:ILE:O	2.25	0.55
1:1:162:A:C2'	1:1:163:G:C8	2.89	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:687:G:C2	1:1:688:G:C8	2.95	0.55
1:1:395:U:N3	1:1:396:G:C4	2.74	0.55
1:1:44:U:OP2	1:1:45:U:O4	2.25	0.55
1:1:1032:G:C6	1:1:1104:U:C4	2.95	0.55
1:1:1409:G:C8	1:1:1411:A:OP2	2.59	0.55
1:1:1672:G:N1	1:1:1673:G:C6	2.75	0.55
1:1:1750:A:C4	1:1:1751:C:C6	2.95	0.55
1:1:480:G:N2	1:1:508:U:N3	2.55	0.55
5:D:215:ASP:O	5:D:216:GLU:C	2.44	0.55
13:L:112:ASP:C	13:L:114:GLU:N	2.58	0.55
1:1:763:G:C6	1:1:764:U:O4	2.60	0.55
1:1:1277:G:O6	1:1:1278:G:C2	2.59	0.55
1:1:295:A:C4'	1:1:296:U:OP1	2.55	0.55
1:1:1498:G:C2	1:1:1499:G:C8	2.95	0.55
1:1:940:A:C4	1:1:941:A:C8	2.95	0.55
1:1:314:C:O2	1:1:354:C:N3	2.40	0.55
1:1:556:A:O3'	1:1:558:U:OP2	2.23	0.55
20:S:40:ARG:CB	29:S:534:OHX:N6	2.70	0.55
1:1:1112:G:C5	1:1:1113:A:N7	2.75	0.55
1:1:1402:G:C5	1:1:1403:C:C5	2.95	0.55
11:J:40:GLU:C	11:J:42:GLU:N	2.60	0.55
1:1:195:G:C1'	1:1:196:G:OP1	2.55	0.55
2:A:88:LYS:O	2:A:90:ALA:N	2.40	0.55
1:1:78:A:C4'	1:1:79:C:OP2	2.54	0.55
1:1:807:A:C2	1:1:808:U:C2	2.94	0.55
15:N:102:ARG:C	15:N:104:THR:N	2.60	0.55
1:1:57:G:C4	1:1:91:G:N2	2.75	0.55
1:1:964:U:O4'	1:1:965:U:C2	2.59	0.55
1:1:555:A:C3'	1:1:555:A:OP2	2.55	0.55
1:1:871:G:C6	1:1:957:G:C6	2.95	0.55
1:1:1584:G:N1	11:J:125:GLU:O	2.39	0.55
1:1:551:G:N1	1:1:552:G:C5	2.75	0.55
1:1:551:G:C2	1:1:552:G:N7	2.75	0.55
1:1:877:G:C2	1:1:878:G:C8	2.94	0.55
1:1:1325:A:C2	1:1:1326:A:C5	2.95	0.55
1:1:210:A:C5	1:1:211:U:C5	2.95	0.55
1:1:1537:C:C5'	1:1:1538:U:OP1	2.54	0.55
1:1:1065:A:C2'	1:1:1066:C:C6	2.90	0.55
1:1:1569:A:C4	1:1:1570:A:C8	2.95	0.55
12:K:27:ASP:O	12:K:29:GLN:N	2.39	0.55
1:1:749:U:C4	1:1:750:U:O4	2.60	0.55
1:1:180:A:C5	1:1:181:A:C2	2.95	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:L:101:LEU:O	13:L:102:ALA:CB	2.55	0.55
1:1:298:C:C5	1:1:299:A:C8	2.95	0.54
1:1:1039:A:N7	1:1:1091:A:C2	2.75	0.54
1:1:1580:C:C4'	1:1:1581:C:OP1	2.55	0.54
1:1:1583:A:C2	1:1:1585:U:C4	2.95	0.54
1:1:1478:G:C2'	1:1:1479:A:O4'	2.55	0.54
1:1:1398:U:C2'	1:1:1399:C:O5'	2.55	0.54
20:S:46:LYS:O	20:S:48:ASN:N	2.40	0.54
2:A:50:VAL:O	2:A:53:THR:N	2.40	0.54
15:N:75:GLY:O	15:N:76:SER:CB	2.54	0.54
1:1:47:A:C8	1:1:425:A:C5	2.96	0.54
1:1:287:G:C6	1:1:288:A:C6	2.95	0.54
1:1:15:U:C1'	1:1:619:A:C2	2.90	0.54
1:1:1599:C:O2	1:1:1600:A:C2	2.60	0.54
1:1:1259:U:C2'	1:1:1260:U:O5'	2.55	0.54
1:1:1310:U:C2'	1:1:1311:U:O5'	2.55	0.54
1:1:181:A:C6	1:1:182:A:N1	2.75	0.54
1:1:567:A:N6	1:1:568:G:C4	2.75	0.54
1:1:95:G:O2'	1:1:460:A:O2'	2.24	0.54
18:Q:87:GLY:O	18:Q:88:ILE:CB	2.55	0.54
1:1:1002:G:C2	1:1:1003:A:N1	2.75	0.54
1:1:118:U:O2	1:1:299:A:C2	2.61	0.54
1:1:615:A:C6	1:1:1107:G:C6	2.95	0.54
1:1:63:G:C5	1:1:64:U:C6	2.95	0.54
1:1:10:G:C2	1:1:11:A:C4	2.95	0.54
1:1:1110:G:O2'	1:1:1111:G:C5'	2.56	0.54
1:1:224:C:N4	1:1:838:G:N1	2.55	0.54
1:1:1345:A:C8	1:1:1346:A:N7	2.76	0.54
1:1:1783:C:C2	1:1:1784:C:C5	2.95	0.54
1:1:236:A:C2	1:1:237:C:N3	2.76	0.54
1:1:906:A:OP2	9:H:49:LYS:O	2.26	0.54
1:1:1005:A:N7	1:1:1006:C:C5	2.75	0.54
1:1:1760:G:C6	1:1:1761:U:C5	2.96	0.54
1:1:1497:U:O4	1:1:1511:U:C2	2.60	0.54
4:C:14:ASP:C	4:C:16:VAL:N	2.61	0.54
1:1:374:U:N3	1:1:375:U:C5	2.75	0.54
1:1:477:A:C5	1:1:539:G:O6	2.60	0.54
1:1:1653:C:C4	1:1:1654:G:C6	2.95	0.54
1:1:39:A:C4	1:1:467:G:N2	2.75	0.54
1:1:575:C:N4	1:1:576:G:C6	2.76	0.54
11:J:14:LYS:O	11:J:15:SER:CB	2.55	0.54
1:1:47:A:N1	1:1:100:A:C5	2.76	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1250:U:C2	1:1:1251:U:N3	2.76	0.54
1:1:636:A:N1	1:1:860:U:O4	2.40	0.54
1:1:1138:A:C2	1:1:1139:A:C8	2.95	0.54
1:1:871:G:O6	1:1:957:G:O6	2.26	0.54
1:1:1591:C:O2'	1:1:1592:A:O5'	2.25	0.54
1:1:551:G:N3	1:1:552:G:C8	2.75	0.54
1:1:545:A:C5	1:1:594:A:N7	2.75	0.54
1:1:1383:G:C2'	1:1:1384:A:O5'	2.56	0.54
1:1:25:C:N4	1:1:367:A:C1'	2.70	0.54
1:1:891:A:C6	1:1:922:G:C6	2.95	0.54
1:1:112:A:C4'	1:1:113:U:OP1	2.55	0.54
20:S:47:ALA:O	20:S:48:ASN:CB	2.55	0.54
1:1:1327:C:O3'	4:C:158:ILE:CB	2.56	0.54
2:A:67:ILE:O	2:A:69:ASN:N	2.40	0.54
1:1:451:A:C2	1:1:454:U:O4	2.60	0.54
1:1:32:U:N3	1:1:468:A:N6	2.55	0.54
1:1:1429:G:C5	1:1:1430:U:C5	2.95	0.54
1:1:478:A:N1	1:1:479:C:C4	2.75	0.54
1:1:1632:C:C2	1:1:1633:A:C8	2.96	0.54
1:1:402:C:C2'	1:1:403:G:C5'	2.86	0.54
3:B:215:PHE:C	3:B:217:ALA:N	2.57	0.54
1:1:11:A:N1	1:1:1143:A:N1	2.55	0.54
1:1:22:A:N6	1:1:604:A:N6	2.55	0.54
1:1:1335:U:C2	1:1:1336:A:N7	2.76	0.54
1:1:1164:G:C2	1:1:1165:G:C4	2.95	0.54
4:C:158:ILE:O	4:C:160:SER:N	2.40	0.54
1:1:129:U:C5	29:1:1820:OHX:N3	2.76	0.54
1:1:1035:G:N2	1:1:1101:G:C4	2.76	0.54
1:1:1046:G:C4	1:1:1073:G:N2	2.75	0.54
14:M:130:ARG:O	14:M:134:ARG:N	2.40	0.54
3:B:131:ILE:C	3:B:133:LYS:N	2.61	0.54
3:B:132:ALA:O	3:B:133:LYS:O	2.25	0.54
1:1:1734:U:C4	1:1:1735:U:O4	2.61	0.54
1:1:1623:C:N3	1:1:1624:C:C5	2.75	0.54
2:A:48:ILE:O	2:A:50:VAL:N	2.40	0.54
8:G:101:HIS:O	8:G:105:ASN:N	2.40	0.54
1:1:1554:U:C5	1:1:1555:A:C8	2.96	0.54
1:1:1274:C:C6	1:1:1427:A:N6	2.75	0.54
20:S:41:GLN:CB	29:S:534:OHX:N4	2.71	0.54
1:1:1534:G:C4'	1:1:1536:G:O6	2.56	0.54
1:1:1314:U:O2'	1:1:1315:U:OP2	2.25	0.54
1:1:617:U:O4'	1:1:1031:U:C2	2.61	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:K:48:ASN:O	12:K:52:GLY:N	2.41	0.54
14:M:28:LEU:C	14:M:30:VAL:N	2.61	0.54
1:1:149:C:C2	1:1:150:U:C5	2.96	0.54
1:1:1000:C:C6	1:1:1002:G:OP2	2.61	0.54
1:1:898:A:N6	1:1:914:G:N2	2.56	0.54
1:1:26:A:C2	1:1:600:U:O2	2.61	0.54
1:1:1378:U:O5'	1:1:1379:C:C5'	2.56	0.54
1:1:1382:A:N3	1:1:1383:G:C8	2.76	0.54
5:D:131:GLN:O	5:D:135:ASP:CB	2.56	0.54
3:B:206:THR:O	3:B:209:ASN:N	2.41	0.54
1:1:125:U:O2'	1:1:126:A:C5'	2.56	0.53
1:1:1243:G:N7	1:1:1244:A:N6	2.54	0.53
1:1:1244:A:N1	1:1:1245:G:C4	2.76	0.53
20:S:38:ILE:CB	29:S:534:OHX:N6	2.71	0.53
1:1:160:C:O2'	1:1:161:U:P	2.66	0.53
1:1:553:G:C6	1:1:554:C:C4	2.96	0.53
9:H:3:ASN:O	9:H:4:VAL:CB	2.56	0.53
1:1:42:G:O4'	1:1:437:A:C8	2.61	0.53
14:M:67:MET:O	14:M:69:LYS:C	2.47	0.53
15:N:71:PRO:O	15:N:72:ASN:CB	2.56	0.53
1:1:749:U:O2	1:1:801:G:C4	2.61	0.53
1:1:1192:C:C6	1:1:1193:A:C8	2.97	0.53
1:1:1005:A:C8	1:1:1006:C:C5	2.96	0.53
1:1:1146:G:C8	1:1:1635:A:C2	2.96	0.53
1:1:1630:U:C4'	1:1:1765:A:OP1	2.56	0.53
1:1:396:G:C2'	1:1:397:A:O5'	2.57	0.53
1:1:439:U:C1'	1:1:440:U:OP1	2.57	0.53
1:1:1682:U:C2	1:1:1683:C:C4	2.96	0.53
1:1:1724:U:C2'	1:1:1725:U:C5	2.91	0.53
2:A:8:ASP:C	2:A:10:THR:N	2.58	0.53
1:1:738:G:C2'	1:1:739:G:C8	2.91	0.53
1:1:743:U:O2'	1:1:744:U:P	2.66	0.53
1:1:304:U:O2	1:1:304:U:C2'	2.56	0.53
14:M:24:ARG:O	14:M:25:GLN:CB	2.56	0.53
1:1:1146:G:C6	1:1:1633:A:N6	2.76	0.53
1:1:136:C:O2'	1:1:137:U:OP1	2.26	0.53
1:1:173:A:N6	1:1:174:U:C6	2.76	0.53
1:1:454:U:O2'	1:1:455:C:P	2.66	0.53
17:P:129:GLY:O	17:P:130:VAL:CB	2.56	0.53
14:M:27:LYS:O	14:M:29:GLU:N	2.41	0.53
2:A:186:GLY:CA	2:A:187:ALA:CB	2.86	0.53
10:I:33:PHE:C	10:I:35:LYS:N	2.61	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:166:C:N4	1:1:167:U:O4	2.42	0.53
1:1:1634:C:C5	1:1:1634:C:OP1	2.62	0.53
1:1:394:C:N4	1:1:401:A:N6	2.57	0.53
1:1:126:A:C6	1:1:292:U:C2	2.96	0.53
1:1:1032:G:C6	1:1:1104:U:O4	2.62	0.53
1:1:642:G:C6	1:1:643:G:C5	2.97	0.53
1:1:315:A:C5	1:1:350:U:C5	2.97	0.53
1:1:1241:G:O3'	1:1:1242:A:C8	2.62	0.53
1:1:1347:U:C4'	1:1:1348:A:OP2	2.57	0.53
1:1:1682:U:C2	1:1:1683:C:N4	2.77	0.53
1:1:1656:U:C6	1:1:1656:U:OP2	2.61	0.53
1:1:772:G:C5	1:1:773:C:C4	2.96	0.53
1:1:72:A:C2	1:1:73:U:C6	2.96	0.53
1:1:400:A:C4'	1:1:401:A:C5'	2.86	0.53
1:1:488:G:C2	1:1:489:C:O2	2.61	0.53
1:1:1107:G:O2'	1:1:1108:G:OP1	2.27	0.53
1:1:1183:A:C6	1:1:1184:A:N1	2.77	0.53
1:1:1197:C:O2	1:1:1197:C:C2'	2.56	0.53
1:1:1196:A:C4'	1:1:1197:C:C5'	2.86	0.53
1:1:8:U:O2'	29:1:1892:OHX:N5	2.41	0.53
1:1:222:A:N7	1:1:223:U:C5	2.77	0.53
1:1:15:U:O4'	1:1:619:A:C2	2.61	0.53
1:1:1363:U:C2'	1:1:1364:G:C1'	2.87	0.53
1:1:1370:U:N3	1:1:1371:A:C8	2.77	0.53
6:E:100:LYS:O	6:E:104:PHE:N	2.41	0.53
1:1:1149:G:N2	1:1:1150:G:N7	2.56	0.53
1:1:126:A:N1	1:1:292:U:C1'	2.71	0.53
1:1:129:U:C4	1:1:264:G:C5	2.96	0.53
1:1:1056:U:C4	1:1:1057:U:C2	2.96	0.53
1:1:816:G:N7	1:1:817:A:C4	2.77	0.53
1:1:226:A:O2'	1:1:227:U:C6	2.62	0.53
1:1:22:A:C2	1:1:604:A:C2	2.96	0.53
1:1:607:G:N7	1:1:613:G:C5	2.76	0.53
1:1:737:A:O2'	1:1:738:G:OP2	2.27	0.53
5:D:108:LEU:O	5:D:110:ALA:N	2.42	0.53
1:1:473:A:N6	1:1:474:A:C2	2.77	0.53
1:1:789:A:C4	1:1:790:U:C5	2.96	0.53
1:1:1325:A:C2	1:1:1326:A:N7	2.77	0.53
1:1:39:A:N7	1:1:467:G:N1	2.57	0.53
9:H:64:ALA:O	9:H:69:ALA:N	2.42	0.53
1:1:1155:G:C6	1:1:1156:C:N4	2.77	0.53
1:1:824:G:C6	1:1:850:A:N3	2.77	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1209:C:C2	1:1:1210:C:C5	2.96	0.53
1:1:89:G:C4	1:1:90:C:C6	2.96	0.53
1:1:1075:C:N4	1:1:1076:A:C6	2.77	0.53
3:B:237:VAL:O	3:B:238:SER:C	2.46	0.53
1:1:1750:A:C5	1:1:1751:C:C4	2.96	0.53
1:1:195:G:O2'	1:1:196:G:C5'	2.57	0.53
5:D:128:ASN:O	5:D:130:ILE:N	2.42	0.53
1:1:1489:U:C5	1:1:1513:G:C2	2.96	0.53
1:1:450:U:C2'	1:1:451:A:C8	2.91	0.53
1:1:452:A:C2'	1:1:453:U:C5'	2.87	0.53
1:1:915:A:OP2	1:1:915:A:C8	2.62	0.53
1:1:1107:G:O2'	1:1:1108:G:O5'	2.27	0.53
1:1:620:A:C4	1:1:621:A:C2	2.97	0.53
1:1:1239:U:O2'	1:1:1240:U:C6	2.62	0.53
1:1:1022:C:O2'	1:1:1125:A:N1	2.42	0.53
1:1:1336:A:C5'	1:1:1337:A:OP2	2.56	0.53
1:1:988:A:C2	1:1:989:U:C1'	2.92	0.53
1:1:215:A:N7	1:1:216:U:C4	2.77	0.53
4:C:151:LYS:O	4:C:152:PHE:CB	2.56	0.53
2:A:203:PHE:O	2:A:205:ARG:N	2.42	0.53
1:1:652:G:O6	1:1:683:C:N3	2.41	0.53
1:1:50:C:C4	1:1:424:C:C6	2.97	0.53
1:1:485:A:O2'	1:1:486:G:C8	2.61	0.53
1:1:624:G:C8	1:1:1027:A:C6	2.97	0.53
1:1:59:C:C4	1:1:62:A:N6	2.75	0.53
1:1:866:G:N2	1:1:965:U:C5	2.76	0.53
1:1:1469:A:C6	1:1:1470:C:N4	2.77	0.53
1:1:1689:A:C2'	1:1:1689:A:N3	2.72	0.53
1:1:1124:A:N6	1:1:1125:A:C6	2.77	0.53
2:A:20:ALA:O	2:A:22:THR:N	2.42	0.53
1:1:544:A:C8	1:1:544:A:OP1	2.62	0.53
1:1:760:A:N6	1:1:761:G:C2	2.76	0.53
1:1:23:G:C5	1:1:24:U:C4	2.97	0.53
1:1:302:U:N3	1:1:303:U:O2	2.42	0.53
1:1:647:G:N2	1:1:687:G:C2	2.76	0.53
1:1:624:G:C1'	1:1:1027:A:C4	2.92	0.53
1:1:1358:G:O2'	14:M:129:GLN:O	2.26	0.53
6:E:68:LYS:C	6:E:70:LEU:N	2.60	0.53
2:A:86:VAL:O	2:A:88:LYS:N	2.42	0.53
1:1:1667:A:C2	1:1:1668:G:C5	2.96	0.53
2:A:116:LYS:O	2:A:117:GLU:CB	2.56	0.53
1:1:1002:G:N1	1:1:1003:A:N1	2.56	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1147:A:C4	1:1:1148:C:C6	2.97	0.52
1:1:381:C:O2'	1:1:755:A:N1	2.42	0.52
1:1:93:A:OP2	1:1:403:G:OP1	2.27	0.52
1:1:290:G:N2	1:1:291:G:C2	2.77	0.52
1:1:445:A:C2	1:1:446:A:C5	2.97	0.52
1:1:169:A:C6	1:1:171:A:C6	2.97	0.52
1:1:340:U:N3	1:1:341:A:N7	2.57	0.52
1:1:833:U:C2'	1:1:833:U:O2	2.57	0.52
1:1:511:A:C4'	1:1:512:A:OP2	2.56	0.52
1:1:1539:G:O2'	1:1:1540:G:C5'	2.57	0.52
1:1:1542:G:N2	1:1:1568:C:C6	2.78	0.52
17:P:101:GLU:O	17:P:127:VAL:CB	2.57	0.52
1:1:193:U:C4'	1:1:194:U:OP2	2.56	0.52
17:P:69:ARG:O	17:P:70:LYS:C	2.47	0.52
1:1:1150:G:O2'	1:1:1151:A:OP1	2.27	0.52
1:1:1771:U:C2	1:1:1772:C:C5	2.97	0.52
1:1:1198:G:C3'	1:1:1199:G:C5'	2.87	0.52
1:1:1203:A:C5	1:1:1555:A:N1	2.77	0.52
1:1:59:C:N4	1:1:89:G:N3	2.57	0.52
1:1:871:G:O6	1:1:957:G:C6	2.62	0.52
1:1:1719:A:C2'	1:1:1720:G:C5	2.92	0.52
1:1:1720:G:C6	1:1:1721:A:C4	2.97	0.52
2:A:11:PRO:O	2:A:13:ASP:N	2.42	0.52
1:1:1332:C:O2'	1:1:1333:C:O5'	2.27	0.52
1:1:1354:G:C6	1:1:1355:C:C4	2.97	0.52
1:1:283:U:C2'	1:1:284:G:O4'	2.56	0.52
16:O:24:GLN:CB	16:O:63:VAL:O	2.57	0.52
1:1:873:U:C4	1:1:874:C:N4	2.77	0.52
1:1:1394:G:OP1	21:T:282:SER:N	2.43	0.52
15:N:101:LYS:O	15:N:103:ILE:N	2.43	0.52
1:1:250:C:OP2	1:1:251:A:OP2	2.27	0.52
1:1:1003:A:C8	1:1:1005:A:C4	2.98	0.52
1:1:366:A:C2	1:1:376:C:C2	2.98	0.52
1:1:129:U:H5	29:1:1820:OHX:N3	2.08	0.52
1:1:1203:A:C2	1:1:1556:A:C1'	2.92	0.52
1:1:1118:G:N1	1:1:1119:G:C5	2.77	0.52
5:D:99:MET:C	5:D:101:GLY:N	2.63	0.52
1:1:1382:A:C4	1:1:1383:G:N7	2.78	0.52
1:1:1417:A:OP1	29:1:1908:OHX:N5	2.42	0.52
1:1:1180:C:C4	1:1:1181:U:C5	2.97	0.52
5:D:179:ALA:O	5:D:180:ARG:C	2.47	0.52
1:1:1575:G:N2	1:1:1576:A:C1'	2.72	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1263:G:C5	1:1:1264:G:C8	2.96	0.52
1:1:1784:C:C2	1:1:1785:U:C6	2.97	0.52
1:1:492:A:N1	1:1:495:C:OP2	2.42	0.52
1:1:895:G:N1	1:1:917:U:O4	2.42	0.52
1:1:1205:C:C5	1:1:1206:U:O2	2.63	0.52
1:1:313:U:C6	1:1:1118:G:C2	2.98	0.52
1:1:836:U:C2'	1:1:837:G:C8	2.92	0.52
1:1:1722:A:OP1	1:1:1722:A:O3'	2.27	0.52
1:1:524:U:C2	1:1:527:A:N1	2.77	0.52
1:1:1566:U:C2'	1:1:1567:U:C5'	2.88	0.52
1:1:565:C:C2	1:1:576:G:C6	2.97	0.52
5:D:65:ARG:O	5:D:87:CYS:C	2.48	0.52
17:P:27:ASN:O	17:P:28:ASN:CB	2.56	0.52
1:1:1628:U:C2'	1:1:1629:G:C8	2.93	0.52
1:1:1097:U:O2'	1:1:1097:U:O2	2.28	0.52
1:1:1045:C:C2'	1:1:1046:G:OP1	2.57	0.52
1:1:1682:U:C6	1:1:1682:U:OP2	2.62	0.52
1:1:607:G:N7	1:1:613:G:C8	2.78	0.52
20:S:23:VAL:O	29:S:534:OHX:N1	2.43	0.52
1:1:1591:C:O2'	1:1:1592:A:C5'	2.58	0.52
1:1:271:A:C2	1:1:285:G:C6	2.98	0.52
1:1:515:A:C2'	1:1:516:G:OP1	2.57	0.52
1:1:547:U:O2'	1:1:596:C:O2	2.27	0.52
1:1:1385:G:C4	1:1:1386:G:C8	2.97	0.52
8:G:127:ARG:C	8:G:129:TYR:N	2.63	0.52
1:1:989:U:N3	1:1:990:C:C4	2.77	0.52
16:O:37:PHE:C	16:O:39:GLN:N	2.62	0.52
21:T:84:SER:C	21:T:86:ASP:N	2.61	0.52
5:D:45:LYS:O	5:D:46:TRP:CB	2.58	0.52
10:I:45:PHE:CB	10:I:46:ALA:CA	2.88	0.52
1:1:920:U:OP2	1:1:920:U:C6	2.63	0.52
1:1:178:U:O4'	1:1:178:U:OP1	2.28	0.52
1:1:151:G:C2	1:1:164:A:C2	2.98	0.52
1:1:1001:A:C8	1:1:1002:G:N7	2.78	0.52
1:1:1760:G:C4	1:1:1761:U:C5	2.98	0.52
1:1:1781:A:O5'	1:1:1781:A:C8	2.62	0.52
1:1:1753:A:C2	1:1:1754:A:C2	2.97	0.52
1:1:1188:G:O2'	1:1:1430:U:OP1	2.27	0.52
1:1:557:G:O2'	1:1:558:U:C4'	2.57	0.52
6:E:54:ARG:O	6:E:58:ASP:CB	2.58	0.52
1:1:1282:U:C2	1:1:1283:U:C5	2.98	0.52
1:1:1590:G:C6	1:1:1591:C:N4	2.78	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1609:U:C6	1:1:1609:U:C5'	2.92	0.52
9:H:49:LYS:O	9:H:51:ASP:N	2.43	0.52
1:1:561:G:C6	1:1:585:A:N1	2.78	0.52
4:C:144:ALA:O	4:C:145:ALA:CB	2.56	0.52
1:1:1176:G:C6	1:1:1177:C:C4	2.98	0.52
2:A:201:LEU:O	2:A:202:TYR:CB	2.58	0.52
1:1:828:U:C5	1:1:829:A:C6	2.98	0.52
1:1:850:A:N1	1:1:851:U:C4	2.78	0.52
1:1:996:U:C2'	1:1:996:U:O2	2.57	0.52
1:1:1499:G:O6	1:1:1508:U:C2	2.59	0.52
1:1:1559:A:C2'	1:1:1559:A:N3	2.69	0.52
1:1:1030:A:N7	1:1:1792:G:C6	2.78	0.52
29:1:1821:OHX:N3	29:1:1891:OHX:N3	2.58	0.52
1:1:556:A:O4'	1:1:556:A:OP1	2.26	0.52
1:1:1348:A:C2	1:1:1379:C:C6	2.98	0.52
1:1:1685:G:N2	1:1:1686:C:N3	2.58	0.52
6:E:81:VAL:O	6:E:82:ARG:O	2.28	0.52
1:1:738:G:O2'	1:1:739:G:O4'	2.26	0.52
1:1:1332:C:O2	1:1:1333:C:C6	2.62	0.52
1:1:1165:G:C5	1:1:1166:A:N7	2.77	0.52
1:1:629:U:O2	1:1:971:A:C4	2.63	0.52
1:1:819:G:N1	1:1:853:G:N2	2.58	0.52
14:M:10:ALA:O	14:M:13:ASP:N	2.43	0.52
1:1:601:A:C6	1:1:602:U:C4	2.97	0.52
1:1:1006:C:OP1	29:1:1804:OHX:N5	2.43	0.52
1:1:452:A:N1	1:1:454:U:OP2	2.43	0.52
1:1:62:A:C2	1:1:63:G:C5	2.98	0.52
1:1:1110:G:C8	1:1:1110:G:C5'	2.93	0.52
1:1:1429:G:C6	1:1:1430:U:C4	2.98	0.52
2:A:19:ALA:O	2:A:20:ALA:C	2.48	0.52
1:1:1388:A:C5	1:1:1411:A:N6	2.78	0.52
1:1:743:U:C4	1:1:809:A:N3	2.78	0.52
6:E:59:LEU:O	6:E:61:THR:N	2.43	0.52
1:1:1744:A:N6	1:1:1745:G:C6	2.77	0.52
20:S:26:SER:O	20:S:28:THR:N	2.42	0.52
1:1:932:U:O4'	1:1:933:A:N3	2.43	0.52
1:1:932:U:O4'	1:1:933:A:C2	2.62	0.52
10:I:75:PRO:O	10:I:93:VAL:O	2.28	0.52
4:C:66:ILE:O	4:C:68:GLU:N	2.42	0.52
1:1:867:G:C2	1:1:868:G:C4	2.98	0.52
1:1:418:G:N2	1:1:419:G:C4	2.78	0.52
1:1:1042:G:C6	1:1:1043:A:C6	2.97	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1073:G:C6	1:1:1074:G:C5	2.98	0.52
1:1:1377:U:O2	1:1:1378:U:C1'	2.57	0.52
1:1:1684:U:C4	1:1:1721:A:C2	2.98	0.52
1:1:537:G:N2	1:1:538:A:C1'	2.73	0.52
13:L:78:HIS:O	13:L:79:TYR:C	2.49	0.52
1:1:1232:U:P	1:1:1258:U:O2'	2.68	0.52
11:J:35:PRO:C	11:J:37:THR:N	2.64	0.52
1:1:1227:A:C4'	1:1:1230:A:C6	2.93	0.52
1:1:563:U:C5'	1:1:564:G:OP2	2.58	0.52
21:T:39:ASP:O	21:T:40:LYS:CB	2.58	0.52
1:1:1778:G:C6	1:1:1779:U:O4	2.63	0.52
1:1:104:A:C5'	1:1:105:A:OP2	2.58	0.52
1:1:1094:G:O2'	1:1:1095:U:C6	2.63	0.52
1:1:1560:U:C6	1:1:1560:U:O5'	2.63	0.52
1:1:1116:A:C5	1:1:1117:U:C4	2.98	0.52
1:1:257:A:C2'	1:1:258:C:C5'	2.87	0.52
1:1:518:A:C6	1:1:535:A:N3	2.77	0.52
1:1:1478:G:O2'	1:1:1479:A:O4'	2.28	0.52
12:K:46:LEU:C	12:K:48:ASN:N	2.63	0.52
1:1:602:U:C2	1:1:603:U:C5	2.98	0.52
8:G:114:ARG:O	8:G:117:LEU:N	2.43	0.52
1:1:188:A:N6	1:1:189:C:O2	2.43	0.51
1:1:269:G:C2	1:1:287:G:C2	2.98	0.51
1:1:1201:G:C5	1:1:1202:A:O4'	2.63	0.51
1:1:32:U:O2	1:1:595:G:C2	2.63	0.51
20:S:41:GLN:CB	29:S:534:OHX:N1	2.73	0.51
1:1:989:U:C2	1:1:990:C:C5	2.99	0.51
6:E:73:GLY:C	6:E:75:ALA:N	2.62	0.51
2:A:52:LYS:C	2:A:54:TRP:N	2.62	0.51
10:I:115:TYR:O	10:I:118:GLU:CB	2.59	0.51
10:I:80:MET:C	10:I:82:ASN:N	2.64	0.51
1:1:826:U:O2	1:1:847:A:N1	2.44	0.51
1:1:850:A:C2	1:1:851:U:C2	2.98	0.51
1:1:248:U:C4'	1:1:249:U:OP1	2.58	0.51
1:1:1150:G:C6	1:1:1151:A:C4	2.98	0.51
1:1:1777:G:C4	1:1:1778:G:C8	2.99	0.51
1:1:380:U:O2	1:1:380:U:C2'	2.57	0.51
1:1:1109:G:N1	1:1:1110:G:C5	2.78	0.51
1:1:840:U:O2'	1:1:841:U:P	2.68	0.51
1:1:640:U:C4	1:1:641:G:C6	2.98	0.51
1:1:1240:U:C3'	1:1:1241:G:C5'	2.89	0.51
1:1:1374:C:C3'	1:1:1375:A:C8	2.93	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1358:G:N3	1:1:1358:G:C2'	2.73	0.51
1:1:1694:A:C4'	1:1:1695:G:OP1	2.58	0.51
1:1:1584:G:N3	1:1:1584:G:C2'	2.73	0.51
1:1:1285:U:O2	1:1:1286:U:C5	2.64	0.51
1:1:775:G:N2	1:1:786:C:C2	2.78	0.51
1:1:1728:A:C4	1:1:1729:C:C6	2.97	0.51
1:1:721:U:C4'	1:1:722:G:OP2	2.58	0.51
14:M:15:ILE:O	14:M:19:ALA:N	2.43	0.51
1:1:649:U:C4	1:1:685:A:N1	2.77	0.51
1:1:426:G:C6	1:1:427:C:C4	2.98	0.51
1:1:439:U:C5	1:1:465:G:N2	2.79	0.51
1:1:738:G:O2'	1:1:739:G:C8	2.63	0.51
1:1:739:G:N3	1:1:740:A:N7	2.59	0.51
3:B:235:LEU:O	3:B:236:PRO:C	2.49	0.51
1:1:922:G:O2'	1:1:923:A:C8	2.64	0.51
16:O:116:ALA:C	16:O:118:ARG:N	2.55	0.51
1:1:1327:C:O2'	4:C:158:ILE:CB	2.58	0.51
18:Q:41:ILE:C	18:Q:43:ASP:N	2.64	0.51
17:P:89:ASN:O	17:P:90:ASP:CB	2.58	0.51
1:1:1697:G:O6	1:1:1709:C:N3	2.42	0.51
1:1:148:A:C8	1:1:149:C:C5	2.99	0.51
1:1:647:G:C2	1:1:687:G:N1	2.78	0.51
1:1:44:U:OP1	1:1:47:A:OP2	2.29	0.51
1:1:1204:A:C2'	1:1:1204:A:N3	2.73	0.51
1:1:333:A:C2	1:1:334:G:C2	2.99	0.51
1:1:837:G:C5	29:1:1824:OHX:N6	2.78	0.51
1:1:1431:C:C3'	1:1:1432:U:C5'	2.89	0.51
1:1:1591:C:O2'	1:1:1592:A:P	2.68	0.51
1:1:40:A:C2'	1:1:41:A:C8	2.93	0.51
16:O:117:ARG:O	16:O:118:ARG:O	2.28	0.51
5:D:65:ARG:O	5:D:88:PRO:N	2.43	0.51
14:M:17:ALA:O	14:M:20:SER:N	2.44	0.51
1:1:876:G:C8	1:1:944:A:C2	2.98	0.51
21:T:116:ASP:N	21:T:121:MET:O	2.43	0.51
1:1:991:G:N2	1:1:1014:G:O6	2.43	0.51
1:1:130:C:O2	1:1:136:C:N3	2.44	0.51
1:1:1498:G:C2	1:1:1510:U:O2	2.63	0.51
1:1:1092:A:C2	1:1:1094:G:N7	2.79	0.51
1:1:1203:A:C4'	1:1:1204:A:OP2	2.57	0.51
1:1:1458:G:C2	1:1:1459:C:N4	2.79	0.51
1:1:860:U:N3	1:1:861:U:C2	2.79	0.51
1:1:1109:G:N1	1:1:1136:U:N3	2.59	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1140:G:C2	1:1:1141:G:N7	2.78	0.51
1:1:353:A:C6	1:1:354:C:C2	2.99	0.51
1:1:1346:A:C2	15:N:13:GLU:O	2.63	0.51
1:1:1579:U:N3	1:1:1580:C:C4	2.79	0.51
1:1:1721:A:O5'	1:1:1722:A:O5'	2.28	0.51
20:S:41:GLN:N	29:S:534:OHX:N3	2.58	0.51
1:1:743:U:O2'	1:1:744:U:O5'	2.29	0.51
29:1:1839:OHX:N3	29:1:1895:OHX:N3	2.59	0.51
1:1:921:U:C2	1:1:922:G:N7	2.79	0.51
1:1:1489:U:C5	1:1:1513:G:N1	2.79	0.51
16:O:78:ARG:O	16:O:79:PHE:CB	2.58	0.51
1:1:991:G:O2'	1:1:1013:A:N6	2.44	0.51
1:1:395:U:O4	1:1:396:G:N1	2.43	0.51
1:1:1087:A:C3'	1:1:1088:A:C8	2.94	0.51
1:1:1347:U:O2'	1:1:1348:A:N6	2.43	0.51
3:B:188:LEU:O	3:B:189:GLN:C	2.48	0.51
1:1:1258:U:C2'	1:1:1259:U:O4'	2.59	0.51
1:1:23:G:C6	1:1:24:U:C4	2.98	0.51
5:D:182:ALA:O	5:D:184:PHE:N	2.43	0.51
1:1:1237:G:C5	1:1:1238:A:N7	2.79	0.51
13:L:98:TYR:O	13:L:99:HIS:CB	2.59	0.51
19:R:7:VAL:O	19:R:8:THR:C	2.49	0.51
1:1:168:A:C6	1:1:169:A:C6	2.99	0.51
1:1:600:U:OP1	17:P:108:GLY:N	2.44	0.51
1:1:1109:G:N1	1:1:1110:G:N7	2.59	0.51
29:1:1821:OHX:N3	29:1:1891:OHX:N1	2.59	0.51
1:1:1348:A:O5'	15:N:10:GLU:O	2.28	0.51
1:1:1122:G:N2	1:1:1126:G:C5	2.78	0.51
14:M:58:ALA:O	14:M:62:ALA:CB	2.59	0.51
1:1:41:A:C2	1:1:438:A:C5	2.99	0.51
1:1:207:U:N3	1:1:208:U:C4	2.79	0.51
1:1:795:U:O2	1:1:795:U:O4'	2.27	0.51
1:1:1513:G:C2'	1:1:1514:U:OP1	2.59	0.51
1:1:1221:A:C4	1:1:1222:C:C5	2.98	0.51
1:1:158:U:O2'	1:1:159:U:P	2.69	0.51
1:1:129:U:O2'	1:1:130:C:OP1	2.29	0.51
1:1:62:A:OP2	1:1:62:A:C3'	2.59	0.51
1:1:1087:A:N6	1:1:1088:A:N6	2.59	0.51
1:1:1139:A:OP2	29:1:1892:OHX:N6	2.43	0.51
1:1:1719:A:O2'	1:1:1720:G:C4	2.64	0.51
1:1:1645:G:C2	1:1:1757:G:C4	2.98	0.51
1:1:1584:G:C8	11:J:123:ARG:O	2.63	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1483:A:C5'	1:1:1521:G:O2'	2.59	0.51
1:1:520:A:C4	1:1:521:A:C8	2.99	0.51
1:1:478:A:C2	1:1:510:G:N2	2.79	0.51
1:1:1733:C:C4	1:1:1734:U:C5	2.99	0.51
1:1:948:G:C6	1:1:949:C:N4	2.79	0.51
15:N:31:VAL:O	15:N:35:GLU:N	2.44	0.51
1:1:463:U:C2	1:1:464:A:C8	2.99	0.51
1:1:84:A:C2'	1:1:85:A:C5'	2.89	0.51
1:1:402:C:C2	1:1:403:G:C4'	2.94	0.51
1:1:428:A:C2	1:1:440:U:O2	2.64	0.51
1:1:1662:G:C2	1:1:1663:G:C5	2.98	0.51
1:1:389:G:C4	1:1:390:G:N7	2.78	0.51
1:1:23:G:O2'	1:1:368:U:OP1	2.29	0.51
1:1:40:A:C8	1:1:41:A:N7	2.79	0.51
1:1:1400:A:N1	1:1:1401:A:C2	2.79	0.51
1:1:1569:A:N3	1:1:1570:A:C8	2.79	0.51
1:1:1763:A:C3'	1:1:1764:C:C5'	2.88	0.51
1:1:123:G:C5	1:1:124:A:C8	2.99	0.51
1:1:130:C:C2	1:1:177:U:OP1	2.64	0.51
1:1:174:U:O2	1:1:174:U:C2'	2.58	0.51
1:1:942:G:OP1	1:1:977:A:C1'	2.59	0.51
1:1:866:G:N3	1:1:867:G:C8	2.79	0.51
1:1:353:A:C5	1:1:354:C:C6	2.99	0.51
1:1:1721:A:O5'	1:1:1721:A:C8	2.64	0.51
1:1:1365:C:C4	1:1:1366:U:C6	2.98	0.51
1:1:1410:A:N7	1:1:1411:A:C5	2.79	0.51
1:1:986:G:O2'	1:1:987:G:C8	2.63	0.51
4:C:108:LYS:O	4:C:109:LEU:C	2.49	0.51
1:1:1172:G:C5	1:1:1173:C:C4	2.99	0.51
17:P:86:PHE:O	17:P:88:PRO:N	2.44	0.51
1:1:749:U:OP1	16:O:82:LYS:CB	2.58	0.51
1:1:492:A:N3	1:1:494:U:C6	2.79	0.51
21:T:227:ALA:O	21:T:228:LYS:C	2.50	0.51
1:1:883:C:O2	1:1:883:C:C2'	2.59	0.51
20:S:19:ARG:O	20:S:20:GLN:O	2.28	0.51
3:B:150:GLN:O	3:B:152:HIS:N	2.44	0.51
21:T:194:GLY:O	21:T:195:HIS:O	2.29	0.51
5:D:185:ARG:O	5:D:187:ILE:N	2.44	0.51
1:1:149:C:C3'	1:1:150:U:C6	2.94	0.50
1:1:757:A:C4	1:1:758:U:C5	2.98	0.50
1:1:1035:G:C2'	1:1:1036:A:O4'	2.59	0.50
1:1:1203:A:C2	1:1:1555:A:C2	2.99	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:29:U:C2	1:1:597:G:O6	2.63	0.50
1:1:963:A:O2'	1:1:964:U:O5'	2.29	0.50
1:1:1026:A:C2	1:1:1792:G:N3	2.79	0.50
1:1:1030:A:O2'	1:1:1030:A:N3	2.44	0.50
1:1:1689:A:N6	1:1:1716:C:C2	2.79	0.50
14:M:112:GLY:O	14:M:113:ILE:CB	2.59	0.50
1:1:737:A:O2'	1:1:738:G:N7	2.44	0.50
1:1:1392:U:C5'	1:1:1392:U:C6	2.94	0.50
1:1:1281:G:C5	1:1:1282:U:C5	2.99	0.50
1:1:1671:A:C4	1:1:1731:A:C2	2.99	0.50
5:D:212:LYS:C	5:D:214:LYS:N	2.63	0.50
1:1:705:U:O4	1:1:734:A:C2	2.64	0.50
1:1:601:A:C5	1:1:602:U:C4	3.00	0.50
13:L:33:THR:C	13:L:35:ILE:N	2.64	0.50
1:1:365:G:C4	1:1:377:G:N1	2.80	0.50
1:1:200:A:C2	1:1:201:G:C4	3.00	0.50
1:1:1091:A:C4'	1:1:1092:A:O5'	2.59	0.50
1:1:28:A:C2	1:1:29:U:C2	2.99	0.50
1:1:549:G:C2	1:1:550:A:C8	2.99	0.50
1:1:1599:C:O2'	1:1:1600:A:C2	2.64	0.50
1:1:1521:G:O6	29:1:1855:OHX:N2	2.44	0.50
1:1:1166:A:C6	1:1:1167:G:C8	3.00	0.50
1:1:766:U:C5	1:1:769:A:OP2	2.64	0.50
1:1:1179:G:N2	1:1:1461:C:C4	2.80	0.50
1:1:1537:C:O2'	1:1:1540:G:O6	2.29	0.50
14:M:28:LEU:O	14:M:30:VAL:N	2.45	0.50
1:1:1512:G:C6	1:1:1513:G:C6	2.99	0.50
1:1:1225:U:C5	1:1:1226:A:C5	3.00	0.50
1:1:982:U:O4	1:1:983:A:N6	2.44	0.50
1:1:185:U:C2	1:1:201:G:N2	2.79	0.50
1:1:1107:G:C6	1:1:1108:G:O6	2.64	0.50
1:1:1209:C:C4	1:1:1455:G:N2	2.78	0.50
1:1:168:A:C3'	1:1:169:A:C8	2.94	0.50
1:1:641:G:C2	1:1:642:G:C5	2.99	0.50
1:1:1645:G:C2	1:1:1757:G:C2	3.00	0.50
3:B:122:ALA:O	3:B:123:GLY:C	2.49	0.50
1:1:1591:C:C2'	1:1:1591:C:O2	2.54	0.50
1:1:478:A:C2	1:1:479:C:C2	2.99	0.50
13:L:46:VAL:O	13:L:48:LYS:N	2.44	0.50
1:1:48:G:C6	1:1:432:G:C2	2.99	0.50
1:1:1169:G:N2	1:1:1577:A:C5	2.80	0.50
1:1:1211:A:C5	1:1:1212:G:N7	2.80	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:P:95:PHE:O	17:P:97:ASP:N	2.44	0.50
1:1:1772:C:C2'	1:1:1772:C:O2	2.59	0.50
1:1:994:G:C6	1:1:1011:G:N2	2.79	0.50
1:1:397:A:N6	1:1:398:G:C2	2.79	0.50
1:1:427:C:O2'	1:1:428:A:O4'	2.30	0.50
1:1:1498:G:C2	1:1:1499:G:N7	2.79	0.50
1:1:1032:G:C2	1:1:1033:C:C2	2.99	0.50
1:1:627:C:C2	1:1:973:A:C2	2.99	0.50
1:1:1030:A:N6	1:1:1792:G:N7	2.59	0.50
1:1:809:A:C2	1:1:810:G:C2	2.99	0.50
1:1:1384:A:C4	1:1:1385:G:C8	3.00	0.50
8:G:70:LYS:O	8:G:71:ILE:C	2.49	0.50
1:1:1340:U:C2	1:1:1342:C:C5	3.00	0.50
1:1:206:A:C4	1:1:262:U:C4	2.99	0.50
1:1:268:C:N4	1:1:288:A:C2	2.79	0.50
1:1:813:U:C2'	1:1:813:U:O2	2.59	0.50
1:1:817:A:C2	1:1:855:A:C2	3.00	0.50
1:1:1242:A:C2	1:1:1243:G:C2	2.99	0.50
1:1:572:C:N4	1:1:573:C:N4	2.58	0.50
1:1:772:G:C5	1:1:773:C:N4	2.79	0.50
1:1:791:A:C4	1:1:792:U:C5	2.99	0.50
13:L:48:LYS:C	13:L:50:ALA:N	2.65	0.50
1:1:1308:G:C4	1:1:1309:C:C5	3.00	0.50
1:1:1622:G:C5	1:1:1623:C:C5	3.00	0.50
16:O:75:ILE:O	16:O:76:SER:O	2.30	0.50
1:1:679:U:C4	1:1:680:U:C4	2.99	0.50
10:I:86:VAL:CB	10:I:87:PRO:CA	2.90	0.50
1:1:1001:A:N7	1:1:1002:G:C5	2.80	0.50
1:1:169:A:C4	1:1:171:A:C5	3.00	0.50
1:1:89:G:N3	1:1:90:C:C6	2.80	0.50
1:1:1297:G:N2	1:1:1301:U:N1	2.60	0.50
4:C:14:ASP:O	4:C:16:VAL:O	2.30	0.50
1:1:556:A:C5'	1:1:558:U:OP2	2.60	0.50
1:1:1282:U:C2	1:1:1283:U:C6	3.00	0.50
1:1:34:G:O6	1:1:474:A:C2	2.64	0.50
29:1:1839:OHX:N5	29:1:1895:OHX:N4	2.60	0.50
10:I:17:TYR:CB	10:I:18:ARG:CA	2.90	0.50
1:1:1536:G:N3	1:1:1536:G:C2'	2.75	0.50
1:1:891:A:C6	1:1:922:G:O6	2.64	0.50
1:1:492:A:N1	1:1:496:G:C2	2.79	0.50
11:J:83:GLN:O	11:J:84:ALA:C	2.49	0.50
1:1:387:A:C2	1:1:426:G:OP2	2.64	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:974:A:C2	1:1:975:C:C2	3.00	0.50
1:1:1558:U:C3'	1:1:1558:U:C6	2.95	0.50
1:1:61:A:C2'	1:1:61:A:N3	2.75	0.50
1:1:1250:U:C2	1:1:1251:U:C4	2.99	0.50
1:1:329:G:C2	1:1:330:G:C5	3.00	0.50
1:1:814:A:N1	1:1:858:G:C2	2.80	0.50
1:1:644:C:N4	1:1:691:C:N4	2.59	0.50
1:1:1075:C:N3	1:1:1076:A:N1	2.60	0.50
1:1:518:A:C8	1:1:519:C:C5'	2.95	0.50
1:1:213:A:N6	1:1:214:G:C2	2.80	0.50
1:1:209:U:N3	1:1:210:A:N7	2.60	0.50
1:1:575:C:C5'	1:1:576:G:OP2	2.59	0.50
2:A:210:VAL:O	2:A:212:GLN:N	2.45	0.50
4:C:162:GLN:O	4:C:165:ASN:C	2.50	0.50
1:1:647:G:C6	1:1:687:G:N1	2.80	0.50
1:1:106:U:C5	1:1:107:C:C4	3.00	0.50
1:1:439:U:C4	1:1:465:G:C2	3.00	0.50
1:1:269:G:C6	1:1:270:C:N4	2.79	0.50
1:1:1087:A:O2'	1:1:1142:A:O2'	2.30	0.50
1:1:1138:A:N1	1:1:1139:A:C6	2.80	0.50
1:1:221:A:C4	1:1:833:U:C5	3.00	0.50
1:1:1274:C:C2'	1:1:1274:C:O2	2.59	0.50
1:1:1603:U:O2	1:1:1603:U:C2'	2.60	0.50
1:1:1660:A:C5	1:1:1661:U:C5	3.00	0.50
29:1:1839:OHX:N3	29:1:1895:OHX:N6	2.59	0.50
1:1:530:C:C5'	1:1:531:C:OP2	2.60	0.50
1:1:1654:G:N2	1:1:1745:G:C4	2.79	0.50
8:G:107:LYS:O	8:G:109:LYS:N	2.45	0.50
1:1:906:A:OP2	9:H:50:ALA:C	2.50	0.50
14:M:17:ALA:C	14:M:19:ALA:N	2.63	0.50
21:T:138:GLY:O	21:T:139:GLN:C	2.50	0.50
1:1:586:G:C5	1:1:587:C:C4	2.99	0.50
17:P:76:LEU:O	17:P:80:GLY:N	2.45	0.50
1:1:648:G:N1	1:1:649:U:C4	2.79	0.50
1:1:172:C:C4	1:1:173:A:C8	3.00	0.50
4:C:66:ILE:O	4:C:67:ASN:C	2.48	0.50
1:1:812:A:C5	1:1:858:G:N7	2.80	0.50
1:1:619:A:P	1:1:620:A:OP2	2.70	0.50
1:1:310:C:N4	1:1:357:G:C6	2.80	0.50
1:1:1410:A:N7	1:1:1411:A:C4	2.80	0.50
8:G:129:TYR:C	8:G:131:THR:N	2.61	0.50
5:D:212:LYS:O	5:D:214:LYS:N	2.44	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:933:A:N6	1:1:935:U:O2	2.45	0.50
1:1:845:G:N7	29:1:1842:OHX:N5	2.59	0.50
1:1:583:C:C2	1:1:584:C:C6	3.00	0.50
1:1:1280:C:O2'	15:N:70:THR:CB	2.60	0.50
1:1:995:A:C5'	1:1:996:U:OP2	2.60	0.49
1:1:131:C:C2'	1:1:131:C:O2	2.60	0.49
1:1:1199:G:C4	1:1:1200:G:O4'	2.65	0.49
1:1:1203:A:N1	1:1:1556:A:C4	2.80	0.49
1:1:333:A:O2'	1:1:334:G:O5'	2.30	0.49
1:1:1138:A:O2'	1:1:1139:A:C5'	2.60	0.49
1:1:1791:A:C5'	1:1:1791:A:C8	2.95	0.49
1:1:1644:C:C6	1:1:1644:C:OP2	2.64	0.49
1:1:1521:G:C6	29:1:1855:OHX:N2	2.80	0.49
1:1:1590:G:C2'	1:1:1591:C:C5	2.95	0.49
5:D:112:ARG:O	5:D:113:ILE:C	2.50	0.49
1:1:553:G:N2	1:1:571:G:N2	2.60	0.49
1:1:1727:G:C2	1:1:1728:A:C5	3.00	0.49
1:1:708:C:O4'	1:1:731:C:N3	2.45	0.49
4:C:117:ARG:O	4:C:118:ALA:C	2.51	0.49
1:1:647:G:N1	1:1:687:G:C6	2.81	0.49
1:1:379:U:O3'	1:1:379:U:P	2.70	0.49
1:1:96:G:N1	1:1:97:C:C4	2.80	0.49
1:1:198:A:O2'	1:1:199:G:O5'	2.30	0.49
1:1:8:U:O2'	29:1:1892:OHX:N1	2.45	0.49
1:1:357:G:C6	1:1:358:U:C4	3.00	0.49
1:1:1728:A:C6	1:1:1729:C:C4	3.00	0.49
1:1:706:A:C5	1:1:707:A:C6	3.00	0.49
1:1:1129:U:C5'	1:1:1130:G:OP2	2.60	0.49
1:1:718:U:C5	1:1:722:G:C5	3.00	0.49
3:B:62:PRO:CA	3:B:63:VAL:CB	2.90	0.49
1:1:1398:U:O2'	1:1:1399:C:O5'	2.30	0.49
1:1:568:G:C2	1:1:569:C:C6	3.00	0.49
1:1:1493:A:C2'	1:1:1493:A:N3	2.73	0.49
5:D:153:GLY:CA	5:D:154:ALA:CB	2.90	0.49
2:A:79:ARG:O	2:A:82:GLY:N	2.45	0.49
1:1:1148:C:C2	1:1:1149:G:O6	2.65	0.49
1:1:1637:C:C4'	1:1:1637:C:OP2	2.60	0.49
1:1:399:A:O2'	1:1:401:A:C8	2.65	0.49
1:1:186:C:N4	1:1:187:G:C6	2.80	0.49
1:1:269:G:N1	1:1:287:G:C2	2.80	0.49
1:1:954:G:N7	1:1:955:A:N7	2.60	0.49
1:1:1378:U:C2	1:1:1379:C:O4'	2.64	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1713:G:N2	1:1:1714:A:N9	2.59	0.49
1:1:605:A:C8	1:1:606:A:C2	3.01	0.49
20:S:37:ASN:CB	20:S:38:ILE:CA	2.90	0.49
1:1:1590:G:C2	1:1:1591:C:C4	3.00	0.49
1:1:1112:G:C8	1:1:1113:A:C8	3.00	0.49
1:1:887:A:C4	1:1:888:U:C5	3.01	0.49
1:1:1180:C:C2	1:1:1181:U:C6	3.00	0.49
5:D:163:SER:O	5:D:165:LEU:N	2.44	0.49
1:1:701:U:O4	1:1:702:G:C2	2.64	0.49
1:1:1052:U:N3	1:1:1053:G:N7	2.60	0.49
1:1:1002:G:C6	1:1:1003:A:N1	2.81	0.49
1:1:402:C:N3	1:1:403:G:O4'	2.45	0.49
1:1:55:A:N7	1:1:426:G:C6	2.80	0.49
9:H:13:VAL:N	9:H:14:PHE:CB	2.75	0.49
1:1:1455:G:C6	1:1:1456:C:N3	2.80	0.49
1:1:169:A:C5	1:1:171:A:N6	2.81	0.49
1:1:320:U:C4'	1:1:321:C:OP1	2.60	0.49
1:1:359:A:OP1	1:1:359:A:N3	2.45	0.49
1:1:737:A:N3	1:1:738:G:C5	2.80	0.49
1:1:1653:C:C4	1:1:1654:G:C5	3.00	0.49
1:1:1575:G:C6	1:1:1576:A:C5	3.01	0.49
1:1:746:A:C6	1:1:806:A:N1	2.81	0.49
1:1:753:A:C6	1:1:754:A:N6	2.80	0.49
17:P:118:PRO:O	17:P:120:VAL:N	2.45	0.49
9:H:39:ILE:O	9:H:40:ALA:CB	2.59	0.49
1:1:1636:C:N4	1:1:1638:G:N2	2.60	0.49
1:1:100:A:N1	1:1:101:U:C4	2.81	0.49
1:1:203:U:C4'	1:1:204:G:OP1	2.60	0.49
1:1:1092:A:N9	1:1:1094:G:C8	2.79	0.49
1:1:1204:A:C5	1:1:1205:C:N3	2.80	0.49
1:1:63:G:C8	1:1:63:G:OP1	2.66	0.49
1:1:327:U:N3	1:1:328:A:N7	2.61	0.49
1:1:635:A:C4	1:1:863:A:N7	2.81	0.49
1:1:865:A:N1	1:1:965:U:O4	2.46	0.49
1:1:1689:A:N6	1:1:1715:G:C2	2.81	0.49
1:1:1584:G:N1	11:J:125:GLU:N	2.61	0.49
1:1:778:G:N2	1:1:783:G:C4	2.80	0.49
8:G:129:TYR:O	8:G:132:VAL:N	2.46	0.49
5:D:166:ARG:O	5:D:168:VAL:N	2.45	0.49
1:1:1227:A:C8	1:1:1229:G:OP2	2.66	0.49
1:1:1292:G:C4	1:1:1293:U:C5	3.00	0.49
1:1:824:G:C4'	1:1:825:U:C5'	2.91	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1146:G:C6	1:1:1147:A:C5	3.01	0.49
1:1:651:G:C2	1:1:684:A:N7	2.81	0.49
1:1:379:U:C2	1:1:380:U:C5	3.01	0.49
1:1:838:G:C6	1:1:839:U:C4	3.00	0.49
1:1:1419:G:C2'	1:1:1420:C:O5'	2.61	0.49
1:1:1372:U:O2'	1:1:1373:C:OP1	2.30	0.49
1:1:1584:G:C2	11:J:125:GLU:N	2.80	0.49
1:1:783:G:C2'	1:1:784:C:O5'	2.61	0.49
1:1:1481:C:C1'	1:1:1482:C:O5'	2.61	0.49
13:L:79:TYR:O	13:L:80:LYS:CB	2.59	0.49
1:1:773:C:O2	1:1:774:A:C8	2.65	0.49
1:1:520:A:C5	1:1:521:A:N7	2.80	0.49
1:1:1737:G:C6	1:1:1738:U:C4	3.01	0.49
11:J:10:PHE:N	11:J:18:ALA:O	2.46	0.49
14:M:118:PRO:O	14:M:119:LYS:O	2.30	0.49
1:1:141:U:O4'	1:1:141:U:O2	2.30	0.49
1:1:148:A:N6	1:1:167:U:C2	2.80	0.49
1:1:1631:A:C6	1:1:1632:C:C2	3.01	0.49
1:1:488:G:O2'	1:1:489:C:C6	2.66	0.49
1:1:1197:C:C5'	1:1:1198:G:OP2	2.61	0.49
1:1:1455:G:C2	1:1:1456:C:O2	2.65	0.49
1:1:862:A:N9	1:1:963:A:N6	2.59	0.49
1:1:1428:G:O5'	1:1:1429:G:OP2	2.31	0.49
1:1:314:C:C2	1:1:354:C:N4	2.80	0.49
1:1:1378:U:C3'	1:1:1379:C:C5'	2.91	0.49
1:1:22:A:N1	1:1:604:A:C6	2.81	0.49
1:1:809:A:C6	1:1:810:G:C6	3.01	0.49
6:E:130:THR:O	6:E:131:GLN:C	2.50	0.49
1:1:1536:G:C4	1:1:1538:U:O2	2.65	0.49
1:1:1776:A:C6	1:1:1786:G:O6	2.65	0.49
1:1:1211:A:C6	1:1:1212:G:N7	2.81	0.49
15:N:97:VAL:C	15:N:99:ILE:N	2.65	0.49
6:E:106:GLU:O	6:E:108:ARG:N	2.45	0.49
1:1:1418:G:N7	29:1:1803:OHX:N5	2.61	0.49
15:N:28:SER:O	15:N:87:HIS:O	2.30	0.49
1:1:1190:C:C4'	1:1:1191:U:OP1	2.60	0.49
1:1:243:G:C6	1:1:250:C:N3	2.81	0.49
1:1:166:C:C4	1:1:167:U:C4	3.01	0.49
1:1:1633:A:C1'	1:1:1634:C:OP2	2.60	0.49
1:1:58:U:O2	1:1:58:U:C2'	2.60	0.49
1:1:624:G:C5	1:1:625:C:C5	3.00	0.49
1:1:1199:G:C6	1:1:1200:G:C1'	2.96	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1559:A:O2'	1:1:1560:U:C6	2.66	0.49
1:1:978:A:OP2	1:1:978:A:C8	2.66	0.49
1:1:1144:U:C1'	1:1:1300:A:C2	2.96	0.49
1:1:690:G:N1	1:1:691:C:C4	2.81	0.49
1:1:356:G:C2	1:1:357:G:C8	3.00	0.49
1:1:1682:U:C2	1:1:1683:C:C5	3.01	0.49
1:1:1123:C:C5	1:1:1124:A:C4	3.00	0.49
4:C:97:SER:O	4:C:99:VAL:N	2.45	0.49
1:1:475:A:C2	1:1:476:U:O2	2.66	0.49
1:1:1663:G:C4	1:1:1664:C:C6	3.00	0.49
1:1:527:A:P	1:1:528:U:C3'	3.01	0.49
1:1:1066:C:C2	1:1:1067:C:C6	3.01	0.49
1:1:1263:G:C2	1:1:1264:G:C1'	2.96	0.49
6:E:24:LEU:O	6:E:27:GLU:N	2.46	0.49
1:1:1631:A:C4	1:1:1632:C:C1'	2.96	0.49
1:1:1011:G:OP2	29:1:1872:OHX:N6	2.46	0.49
1:1:648:G:O2'	1:1:649:U:O5'	2.30	0.49
1:1:47:A:O2'	1:1:100:A:O4'	2.31	0.49
1:1:125:U:C4'	1:1:126:A:OP1	2.60	0.49
1:1:175:G:N2	1:1:266:A:OP1	2.45	0.49
1:1:269:G:C6	1:1:270:C:C4	3.01	0.49
1:1:327:U:C2	1:1:328:A:C8	3.01	0.49
1:1:32:U:C2	1:1:468:A:N6	2.81	0.49
1:1:225:A:O2'	1:1:226:A:P	2.71	0.49
1:1:691:C:O2'	1:1:692:C:P	2.70	0.49
1:1:555:A:C1'	1:1:556:A:OP1	2.61	0.49
1:1:558:U:C4	1:1:559:C:N4	2.80	0.49
1:1:1042:G:C2'	1:1:1043:A:O4'	2.61	0.49
1:1:956:C:N4	1:1:957:G:O6	2.46	0.49
1:1:1388:A:N6	1:1:1411:A:N7	2.61	0.49
16:O:88:LYS:O	16:O:91:ALA:N	2.45	0.49
1:1:479:C:O3'	1:1:480:G:O4'	2.31	0.49
1:1:1733:C:N4	1:1:1734:U:O4	2.46	0.49
1:1:1211:A:C4	1:1:1212:G:C8	3.01	0.49
1:1:1339:C:O2'	1:1:1340:U:C5'	2.61	0.49
17:P:76:LEU:O	17:P:77:ILE:C	2.51	0.49
1:1:1407:U:C5	1:1:1408:G:C8	3.01	0.49
1:1:1530:C:C2	1:1:1531:G:C8	3.01	0.49
1:1:106:U:C4	1:1:107:C:N3	2.80	0.49
1:1:97:C:C4	1:1:98:U:C5	3.00	0.49
1:1:812:A:N6	1:1:859:A:C8	2.81	0.49
1:1:863:A:C4	1:1:865:A:C8	3.00	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:863:A:C8	1:1:865:A:N7	2.81	0.49
1:1:1086:A:C8	1:1:1087:A:N7	2.80	0.49
1:1:1138:A:C4	1:1:1139:A:N7	2.81	0.49
1:1:1683:C:C6	1:1:1719:A:N6	2.81	0.49
1:1:606:A:C6	1:1:608:U:O4	2.66	0.49
20:S:38:ILE:O	20:S:41:GLN:N	2.46	0.49
1:1:1526:A:C8	1:1:1526:A:O5'	2.66	0.49
1:1:1318:G:N2	1:1:1319:A:N3	2.61	0.49
1:1:1541:G:C6	1:1:1542:G:O6	2.65	0.49
16:O:39:GLN:O	16:O:41:MET:N	2.46	0.49
1:1:1176:G:C6	1:1:1177:C:N4	2.81	0.49
3:B:208:GLU:O	3:B:212:LYS:CB	2.61	0.49
16:O:74:VAL:CB	16:O:128:PHE:O	2.61	0.49
12:K:66:VAL:O	12:K:67:ARG:C	2.50	0.49
21:T:267:PRO:O	21:T:269:TYR:N	2.46	0.49
16:O:4:SER:O	16:O:5:SER:CB	2.61	0.49
1:1:646:C:C3'	1:1:647:G:C5'	2.91	0.48
1:1:377:G:O2'	1:1:378:A:P	2.71	0.48
1:1:450:U:C4	1:1:451:A:N6	2.81	0.48
1:1:611:U:C5	1:1:612:U:C5	3.01	0.48
1:1:1183:A:C6	1:1:1184:A:C6	3.01	0.48
1:1:1602:C:C5'	1:1:1603:U:OP2	2.61	0.48
1:1:1720:G:C5	1:1:1721:A:C5	3.00	0.48
6:E:79:ARG:O	6:E:81:VAL:CB	2.60	0.48
1:1:1363:U:C2'	1:1:1364:G:C8	2.96	0.48
1:1:283:U:C3'	1:1:284:G:C4'	2.91	0.48
1:1:1649:G:N7	29:1:1884:OHX:N3	2.61	0.48
1:1:1310:U:O2'	1:1:1311:U:O5'	2.30	0.48
8:G:69:ASN:O	8:G:70:LYS:C	2.51	0.48
1:1:931:C:C2'	1:1:932:U:OP1	2.61	0.48
1:1:1547:A:C5'	1:1:1548:G:OP2	2.61	0.48
4:C:156:PHE:O	4:C:157:LEU:CB	2.60	0.48
1:1:71:A:C2	1:1:72:A:N7	2.79	0.48
1:1:1147:A:C5	1:1:1148:C:C5	3.01	0.48
1:1:649:U:O4	1:1:685:A:C6	2.66	0.48
1:1:401:A:C2	1:1:404:G:N7	2.80	0.48
1:1:404:G:C4	1:1:405:C:C5	3.01	0.48
1:1:973:A:C2	1:1:974:A:N7	2.82	0.48
1:1:977:A:N6	1:1:1025:A:C4	2.81	0.48
1:1:145:A:N6	1:1:146:U:C4	2.81	0.48
1:1:1119:G:C4	1:1:1120:U:C5	3.01	0.48
1:1:814:A:C8	1:1:816:G:N3	2.81	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1598:U:C4	1:1:1599:C:C5	3.00	0.48
1:1:1580:C:C2'	1:1:1581:C:C6	2.96	0.48
3:B:188:LEU:O	3:B:191:ALA:N	2.46	0.48
1:1:1367:G:O6	29:1:1845:OHX:N6	2.46	0.48
1:1:194:U:C4'	1:1:195:G:O5'	2.60	0.48
1:1:100:A:C6	1:1:101:U:C4	3.02	0.48
1:1:103:A:C5	1:1:360:A:C2	3.02	0.48
1:1:96:G:C6	1:1:97:C:C4	3.01	0.48
1:1:454:U:O2'	1:1:455:C:O5'	2.30	0.48
1:1:610:G:N2	1:1:614:C:C4	2.81	0.48
1:1:1556:A:C2'	1:1:1560:U:C4	2.97	0.48
1:1:1560:U:OP2	1:1:1560:U:C5	2.66	0.48
1:1:313:U:C5	1:1:1118:G:C6	3.01	0.48
1:1:1348:A:OP1	15:N:12:GLN:O	2.30	0.48
1:1:1388:A:C5	1:1:1412:G:C6	3.01	0.48
1:1:1112:G:C8	1:1:1113:A:N7	2.81	0.48
17:P:127:VAL:CA	17:P:128:SER:C	2.81	0.48
17:P:44:GLY:O	17:P:45:GLY:C	2.52	0.48
4:C:121:GLY:O	4:C:124:ARG:N	2.47	0.48
1:1:1766:A:O2'	1:1:1767:G:O5'	2.30	0.48
1:1:1777:G:C6	1:1:1778:G:C5	3.02	0.48
1:1:991:G:O6	29:1:1872:OHX:N2	2.46	0.48
1:1:199:G:C5	1:1:200:A:N7	2.81	0.48
1:1:610:G:O2'	1:1:611:U:OP2	2.31	0.48
1:1:87:C:C2'	1:1:87:C:O2	2.56	0.48
1:1:1375:A:C2'	1:1:1376:C:N1	2.77	0.48
1:1:544:A:P	1:1:544:A:C8	3.07	0.48
1:1:1112:G:C6	1:1:1113:A:N6	2.81	0.48
13:L:124:GLY:O	13:L:127:HIS:N	2.46	0.48
6:E:93:LEU:O	6:E:96:VAL:N	2.46	0.48
16:O:39:GLN:O	16:O:40:VAL:C	2.50	0.48
1:1:1784:C:C2	1:1:1785:U:C5	3.01	0.48
1:1:1192:C:C4	1:1:1193:A:C5	3.02	0.48
1:1:587:C:C2'	1:1:588:U:O4'	2.61	0.48
12:K:23:LYS:CB	12:K:64:GLY:O	2.62	0.48
1:1:824:G:C5'	1:1:825:U:OP1	2.61	0.48
1:1:106:U:N3	1:1:107:C:C2	2.81	0.48
1:1:380:U:O2'	1:1:381:C:O5'	2.30	0.48
1:1:486:G:O6	1:1:487:G:C5	2.66	0.48
1:1:1025:A:N7	1:1:1027:A:C4	2.81	0.48
1:1:1196:A:C4'	1:1:1197:C:O5'	2.62	0.48
1:1:1116:A:C6	1:1:1117:U:N3	2.81	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:329:G:C2	1:1:330:G:C8	3.01	0.48
1:1:640:U:C5	1:1:641:G:C6	3.02	0.48
1:1:1073:G:N1	1:1:1074:G:C2	2.82	0.48
1:1:778:G:C2	1:1:783:G:C6	3.01	0.48
1:1:283:U:O3'	1:1:284:G:C4'	2.60	0.48
1:1:528:U:C4'	1:1:529:A:O5'	2.62	0.48
1:1:1478:G:C4	1:1:1479:A:C8	3.01	0.48
1:1:906:A:OP2	9:H:50:ALA:O	2.31	0.48
1:1:713:A:C6	1:1:726:C:O2	2.66	0.48
15:N:61:LYS:CB	15:N:86:ILE:O	2.62	0.48
1:1:869:A:C5	1:1:870:C:C5	3.01	0.48
2:A:42:PRO:O	2:A:44:GLY:N	2.46	0.48
21:T:297:ASP:O	21:T:298:GLY:C	2.52	0.48
1:1:454:U:O4	1:1:456:A:C4	2.67	0.48
1:1:57:G:C5	1:1:91:G:C2	3.01	0.48
1:1:1032:G:C2'	1:1:1033:C:O5'	2.62	0.48
1:1:1206:U:C6	1:1:1207:C:C6	3.01	0.48
1:1:89:G:C6	1:1:90:C:C4	3.01	0.48
1:1:1120:U:C2	1:1:1121:C:C6	3.02	0.48
4:C:23:GLU:O	4:C:26:THR:N	2.46	0.48
1:1:221:A:C6	1:1:833:U:O4	2.66	0.48
1:1:1790:A:O2'	1:1:1792:G:N2	2.46	0.48
1:1:1466:G:C5	1:1:1467:C:N4	2.82	0.48
1:1:1523:G:C4'	1:1:1524:A:OP2	2.61	0.48
1:1:5:U:C2	1:1:20:G:N2	2.81	0.48
7:F:129:ARG:O	7:F:130:PRO:C	2.51	0.48
1:1:544:A:C8	1:1:544:A:OP2	2.67	0.48
1:1:1334:U:C4	1:1:1335:U:C5	3.01	0.48
1:1:1535:U:O2'	1:1:1536:G:N2	2.47	0.48
1:1:1219:A:C4'	1:1:1220:C:C5	2.97	0.48
2:A:51:GLY:O	2:A:54:TRP:N	2.47	0.48
1:1:807:A:C5'	1:1:807:A:C8	2.97	0.48
5:D:66:GLN:N	5:D:87:CYS:N	2.61	0.48
13:L:17:LEU:O	13:L:21:ASN:O	2.31	0.48
1:1:169:A:O2'	1:1:171:A:C8	2.67	0.48
1:1:330:G:C2	1:1:331:A:C8	3.01	0.48
1:1:228:G:C6	1:1:229:U:N3	2.81	0.48
1:1:353:A:N6	1:1:354:C:N3	2.61	0.48
1:1:1346:A:O4'	1:1:1346:A:P	2.72	0.48
1:1:551:G:O4'	1:1:581:U:O2	2.32	0.48
1:1:528:U:O2	1:1:528:U:O4'	2.32	0.48
1:1:704:C:C1'	1:1:705:U:OP1	2.61	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:63:ILE:C	2:A:65:ALA:N	2.67	0.48
1:1:1452:U:C4	1:1:1453:G:N7	2.82	0.48
10:I:73:PRO:O	10:I:74:ALA:CB	2.62	0.48
1:1:829:A:C1'	1:1:830:U:O5'	2.62	0.48
1:1:93:A:C6	1:1:398:G:C6	3.01	0.48
1:1:418:G:N2	1:1:419:G:C5	2.82	0.48
1:1:619:A:O5'	1:1:620:A:OP2	2.31	0.48
1:1:1275:A:C8	1:1:1438:G:N2	2.81	0.48
1:1:1691:A:N7	1:1:1692:G:C4	2.82	0.48
1:1:1359:C:C2	1:1:1360:A:C8	3.02	0.48
1:1:1392:U:C2'	1:1:1393:C:C6	2.97	0.48
1:1:1524:A:N3	1:1:1590:G:O2'	2.47	0.48
1:1:551:G:N1	1:1:552:G:C6	2.82	0.48
1:1:1613:U:C2'	1:1:1613:U:O2	2.61	0.48
1:1:518:A:C2'	1:1:519:C:C5'	2.92	0.48
8:G:108:ASP:O	8:G:111:ALA:CB	2.61	0.48
1:1:986:G:C4'	1:1:987:G:OP1	2.62	0.48
3:B:57:PHE:C	3:B:59:HIS:N	2.67	0.48
1:1:929:A:N6	1:1:930:A:C2	2.82	0.48
17:P:79:ASN:O	17:P:81:LYS:N	2.47	0.48
1:1:825:U:C5	1:1:826:U:C2	3.02	0.48
1:1:1781:A:C6	1:1:1782:A:C6	3.01	0.48
1:1:107:C:O2'	1:1:362:G:N3	2.47	0.48
1:1:975:C:C4	1:1:976:G:C5	3.01	0.48
1:1:1183:A:C5	1:1:1184:A:C6	3.02	0.48
1:1:1552:U:N3	1:1:1553:G:C5	2.80	0.48
1:1:1122:G:C2	1:1:1126:G:C6	3.02	0.48
1:1:607:G:C8	1:1:613:G:C4	3.02	0.48
1:1:1584:G:N2	1:1:1585:U:OP1	2.47	0.48
1:1:551:G:C2	1:1:552:G:C8	3.01	0.48
1:1:539:G:N3	1:1:543:C:C4	2.82	0.48
1:1:545:A:N7	1:1:594:A:N7	2.61	0.48
1:1:526:A:OP1	1:1:527:A:N6	2.47	0.48
1:1:1540:G:OP2	1:1:1541:G:OP2	2.31	0.48
2:A:162:CYS:O	2:A:163:ASN:CB	2.62	0.48
1:1:1185:U:C1'	1:1:1186:U:OP2	2.62	0.48
1:1:1202:A:OP1	1:1:1203:A:OP2	2.31	0.48
1:1:605:A:N7	1:1:606:A:C5	2.82	0.48
1:1:477:A:C2	1:1:512:A:N1	2.81	0.48
5:D:212:LYS:O	5:D:215:ASP:N	2.47	0.48
1:1:795:U:C5	1:1:796:A:C4	3.02	0.48
1:1:1512:G:C4	1:1:1513:G:C8	3.01	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:723:G:N1	1:1:724:C:C4	2.82	0.48
7:F:93:TYR:O	7:F:94:ILE:CB	2.61	0.48
5:D:204:GLY:C	5:D:206:SER:N	2.66	0.48
3:B:42:GLY:O	3:B:43:ARG:C	2.52	0.48
8:G:77:SER:C	8:G:79:GLY:N	2.67	0.48
1:1:248:U:O2	1:1:248:U:O4'	2.30	0.47
1:1:651:G:C4	1:1:684:A:N6	2.81	0.47
1:1:103:A:C6	1:1:360:A:C2	3.02	0.47
1:1:461:G:O2'	1:1:462:G:O5'	2.32	0.47
1:1:863:A:N9	1:1:865:A:C8	2.82	0.47
1:1:868:G:N1	1:1:960:U:N3	2.62	0.47
1:1:8:U:C4	1:1:1140:G:O6	2.66	0.47
1:1:1246:C:C4	1:1:1247:U:C4	3.01	0.47
1:1:1471:A:N3	1:1:1474:G:O2'	2.46	0.47
1:1:782:U:C4'	1:1:783:G:O5'	2.62	0.47
1:1:1402:G:N3	1:1:1403:C:C6	2.82	0.47
1:1:887:A:C2	1:1:888:U:C2	3.02	0.47
1:1:1622:G:C5	1:1:1623:C:C4	3.02	0.47
1:1:316:A:C2	1:1:349:U:O2	2.67	0.47
1:1:929:A:N7	1:1:930:A:N7	2.62	0.47
1:1:152:U:C2	1:1:163:G:N2	2.82	0.47
1:1:1779:U:O2'	1:1:1780:G:O5'	2.31	0.47
1:1:450:U:O2	1:1:450:U:C2'	2.62	0.47
1:1:450:U:N3	1:1:451:A:N6	2.63	0.47
2:A:169:SER:O	2:A:170:ILE:C	2.52	0.47
1:1:1104:U:C5	1:1:1105:C:C6	3.02	0.47
1:1:116:U:C2	1:1:117:U:C5	3.02	0.47
1:1:1087:A:C6	1:1:1088:A:C6	3.02	0.47
3:B:165:VAL:CB	3:B:166:THR:CB	2.92	0.47
1:1:549:G:N1	1:1:550:A:C5	2.81	0.47
1:1:1791:A:O2'	1:1:1793:G:C5'	2.62	0.47
1:1:410:A:C6	1:1:411:C:C4	3.02	0.47
1:1:478:A:N1	1:1:510:G:C2	2.82	0.47
1:1:708:C:C2	1:1:731:C:C2	3.02	0.47
2:A:51:GLY:O	2:A:54:TRP:CB	2.62	0.47
1:1:1786:G:C4	1:1:1787:C:C5	3.02	0.47
5:D:65:ARG:O	5:D:66:GLN:CB	2.62	0.47
1:1:1224:A:C6	1:1:1225:U:O4	2.67	0.47
21:T:27:ALA:O	21:T:28:GLY:O	2.32	0.47
21:T:53:LYS:C	21:T:55:GLY:N	2.67	0.47
1:1:666:U:C2'	1:1:666:U:O2	2.61	0.47
1:1:70:C:C4	1:1:71:A:N6	2.82	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1764:C:C2'	1:1:1767:G:N7	2.77	0.47
1:1:53:G:C6	1:1:54:C:C5	3.02	0.47
1:1:186:C:N4	1:1:187:G:C5	2.82	0.47
1:1:289:U:O2	1:1:290:G:O4'	2.31	0.47
1:1:1499:G:C6	1:1:1508:U:O2	2.62	0.47
1:1:1039:A:O2'	1:1:1040:G:O5'	2.32	0.47
10:I:33:PHE:O	10:I:35:LYS:N	2.47	0.47
4:C:80:ALA:C	4:C:82:GLY:N	2.68	0.47
1:1:827:C:O2'	1:1:828:U:O4'	2.33	0.47
1:1:243:G:C5	1:1:251:A:N6	2.80	0.47
1:1:1637:C:O2'	1:1:1638:G:OP1	2.32	0.47
1:1:292:U:O5'	1:1:292:U:C6	2.67	0.47
1:1:1498:G:C6	1:1:1510:U:N3	2.83	0.47
1:1:639:U:O2'	1:1:640:U:OP2	2.33	0.47
1:1:356:G:C6	1:1:357:G:C8	3.02	0.47
1:1:1358:G:N1	1:1:1359:C:N4	2.62	0.47
1:1:283:U:C3'	1:1:284:G:C5'	2.92	0.47
1:1:521:A:O2'	1:1:522:U:C5	2.67	0.47
14:M:62:ALA:O	14:M:64:HIS:N	2.47	0.47
1:1:1538:U:C5	1:1:1540:G:C8	3.03	0.47
1:1:718:U:C5'	1:1:719:U:OP2	2.63	0.47
17:P:95:PHE:O	17:P:96:VAL:C	2.52	0.47
10:I:11:VAL:O	10:I:13:LYS:N	2.47	0.47
7:F:132:SER:O	7:F:133:LYS:C	2.52	0.47
1:1:125:U:H6	1:1:125:U:C5'	2.27	0.47
2:A:176:LEU:O	2:A:177:LEU:C	2.52	0.47
1:1:342:C:C2'	1:1:342:C:O2	2.61	0.47
1:1:1299:G:C6	1:1:1300:A:N6	2.83	0.47
1:1:690:G:C2'	1:1:691:C:C5'	2.92	0.47
15:N:12:GLN:CB	15:N:14:GLN:O	2.63	0.47
1:1:1722:A:C4'	1:1:1722:A:OP1	2.62	0.47
1:1:809:A:N1	1:1:810:G:N1	2.62	0.47
13:L:70:VAL:O	13:L:74:GLN:C	2.52	0.47
1:1:989:U:C2	1:1:990:C:C6	3.03	0.47
1:1:1734:U:N3	1:1:1735:U:C4	2.82	0.47
2:A:48:ILE:O	2:A:49:ASN:C	2.52	0.47
2:A:50:VAL:O	2:A:53:THR:CB	2.63	0.47
1:1:820:U:C2'	1:1:821:U:O5'	2.62	0.47
1:1:74:U:O2'	1:1:75:U:P	2.72	0.47
1:1:241:U:O2'	1:1:242:U:N3	2.48	0.47
1:1:1631:A:C6	1:1:1636:C:N4	2.81	0.47
4:C:46:THR:O	4:C:85:VAL:N	2.47	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:940:A:C2	1:1:941:A:N9	2.82	0.47
1:1:1035:G:N1	1:1:1101:G:C5	2.83	0.47
1:1:1207:C:C2	1:1:1455:G:N1	2.83	0.47
1:1:1042:G:N1	1:1:1043:A:C6	2.83	0.47
1:1:1379:C:O2	1:1:1379:C:C2'	2.63	0.47
1:1:1660:A:C4	1:1:1661:U:C6	3.02	0.47
1:1:273:G:C4	1:1:274:G:C8	3.02	0.47
1:1:743:U:C2	1:1:744:U:C6	3.01	0.47
1:1:1170:G:C6	1:1:1574:G:C5	3.02	0.47
1:1:408:C:O2	1:1:1731:A:O2'	2.31	0.47
1:1:1543:A:C8	1:1:1569:A:C6	3.03	0.47
13:L:32:LEU:O	13:L:38:VAL:CB	2.63	0.47
5:D:199:ILE:C	5:D:201:ALA:N	2.67	0.47
21:T:74:THR:O	21:T:77:GLY:N	2.47	0.47
1:1:755:A:C6	1:1:756:A:C6	3.02	0.47
1:1:206:A:C2	1:1:262:U:C4	3.02	0.47
1:1:127:G:O6	1:1:179:A:C5	2.59	0.47
1:1:1039:A:O4'	1:1:1081:A:N6	2.48	0.47
1:1:1096:C:C2	1:1:1098:U:OP2	2.68	0.47
1:1:168:A:C2'	1:1:169:A:C8	2.98	0.47
1:1:867:G:N3	1:1:868:G:C8	2.82	0.47
1:1:225:A:C2	1:1:226:A:C4	3.02	0.47
1:1:836:U:N3	1:1:837:G:C5	2.83	0.47
1:1:643:G:N2	1:1:692:C:N3	2.62	0.47
1:1:1239:U:C5	1:1:1241:G:C5	3.02	0.47
1:1:1466:G:C5	1:1:1467:C:C4	3.03	0.47
1:1:1349:G:C4'	1:1:1350:U:C5'	2.92	0.47
14:M:130:ARG:O	14:M:131:ASP:C	2.53	0.47
1:1:1644:C:C2'	1:1:1645:G:O5'	2.63	0.47
1:1:1596:C:O4'	1:1:1596:C:O2	2.27	0.47
1:1:552:G:N1	1:1:553:G:C2	2.83	0.47
1:1:544:A:C2	1:1:545:A:C8	3.02	0.47
6:E:66:ASP:O	6:E:68:LYS:N	2.47	0.47
1:1:1673:G:N7	1:1:1674:C:C5	2.83	0.47
1:1:760:A:C4	1:1:791:A:C2	3.03	0.47
16:O:88:LYS:C	16:O:90:THR:N	2.67	0.47
1:1:1402:G:C5	1:1:1403:C:C4	3.02	0.47
1:1:209:U:C5'	1:1:210:A:OP2	2.63	0.47
1:1:1536:G:C2	1:1:1538:U:N3	2.82	0.47
1:1:1295:G:C1'	1:1:1321:A:C2	2.98	0.47
17:P:87:VAL:O	17:P:88:PRO:C	2.53	0.47
1:1:921:U:O2'	1:1:922:G:C5'	2.62	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1450:U:OP2	29:1:1885:OHX:N6	2.47	0.47
2:A:61:ALA:O	2:A:65:ALA:N	2.47	0.47
1:1:587:C:O5'	1:1:587:C:C6	2.68	0.47
1:1:1452:U:C2	1:1:1453:G:C8	3.03	0.47
1:1:1564:U:C2'	1:1:1565:C:C6	2.98	0.47
1:1:1018:U:C2'	1:1:1019:A:C8	2.98	0.47
15:N:116:VAL:O	15:N:117:VAL:CB	2.62	0.47
3:B:148:LEU:O	3:B:195:ASP:CB	2.63	0.47
1:1:850:A:C6	1:1:851:U:C4	3.03	0.47
1:1:1632:C:O2'	1:1:1633:A:P	2.73	0.47
1:1:98:U:C2'	1:1:98:U:O2	2.63	0.47
1:1:89:G:C4	1:1:90:C:C5	3.02	0.47
1:1:320:U:OP1	1:1:321:C:O2'	2.32	0.47
1:1:350:U:O4'	1:1:352:A:C4	2.67	0.47
1:1:1376:C:C2'	1:1:1377:U:C5	2.98	0.47
1:1:1377:U:O2	1:1:1378:U:O4'	2.33	0.47
1:1:1378:U:P	1:1:1379:C:OP2	2.73	0.47
1:1:1720:G:C2'	1:1:1721:A:C5'	2.92	0.47
1:1:1797:A:C2	1:1:1799:U:O4	2.68	0.47
1:1:1124:A:C6	1:1:1125:A:C6	3.03	0.47
1:1:743:U:C5	1:1:809:A:N3	2.82	0.47
1:1:571:G:C2'	1:1:571:G:N3	2.78	0.47
1:1:521:A:C3'	1:1:523:G:N7	2.78	0.47
20:S:25:SER:O	20:S:26:SER:C	2.53	0.47
1:1:337:G:C5'	1:1:338:C:C5	2.98	0.47
1:1:1235:C:C2	1:1:1236:A:C8	3.02	0.47
1:1:180:A:C4	1:1:181:A:N3	2.83	0.47
17:P:92:CYS:C	17:P:94:ASN:N	2.68	0.47
1:1:648:G:N1	1:1:649:U:C5	2.83	0.47
1:1:55:A:C2	1:1:403:G:C5	3.03	0.47
1:1:188:A:N9	1:1:198:A:N6	2.63	0.47
1:1:975:C:N4	1:1:976:G:C6	2.83	0.47
1:1:1200:G:O3'	1:1:1201:G:O4'	2.33	0.47
1:1:1250:U:O2	1:1:1251:U:C2	2.68	0.47
1:1:813:U:O2'	1:1:814:A:P	2.73	0.47
1:1:1374:C:C4	1:1:1375:A:N1	2.82	0.47
1:1:1683:C:O2'	1:1:1684:U:C4	2.68	0.47
1:1:1122:G:N2	1:1:1126:G:C6	2.83	0.47
2:A:8:ASP:O	2:A:11:PRO:N	2.47	0.47
11:J:54:LEU:O	11:J:56:GLY:N	2.47	0.47
1:1:1650:U:C2'	1:1:1651:A:C8	2.98	0.47
1:1:513:U:C5	1:1:538:A:C6	3.03	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:952:A:C2	1:1:953:G:C8	3.03	0.47
1:1:789:A:C5	1:1:790:U:C5	3.03	0.47
1:1:1575:G:C5'	1:1:1576:A:OP2	2.62	0.47
1:1:934:C:C2'	1:1:934:C:O2	2.63	0.47
1:1:563:U:C4	1:1:564:G:C6	3.02	0.47
13:L:53:ASP:O	13:L:56:LYS:N	2.48	0.47
21:T:216:LYS:C	21:T:218:GLY:N	2.68	0.47
1:1:198:A:C2	1:1:199:G:N3	2.83	0.47
1:1:184:C:N4	1:1:202:A:N1	2.62	0.47
1:1:1647:U:C4	1:1:1754:A:N6	2.82	0.47
1:1:635:A:C4	1:1:863:A:C5	3.03	0.47
1:1:1109:G:C5	1:1:1137:A:N6	2.83	0.47
1:1:557:G:OP1	1:1:558:U:O4'	2.33	0.47
1:1:1552:U:O2'	1:1:1598:U:O4'	2.33	0.47
1:1:1330:G:C5	1:1:1331:A:N7	2.83	0.47
16:O:23:ARG:O	16:O:24:GLN:O	2.32	0.47
5:D:166:ARG:O	5:D:169:ASN:N	2.48	0.47
1:1:1050:G:C4	1:1:1051:G:C1'	2.97	0.47
1:1:830:U:C2'	1:1:830:U:O2	2.62	0.46
1:1:98:U:C2	1:1:99:C:C5	3.03	0.46
1:1:1117:U:C2	1:1:1118:G:C8	3.03	0.46
1:1:26:A:C2	1:1:600:U:C2	3.03	0.46
1:1:959:U:C1'	1:1:960:U:OP1	2.63	0.46
1:1:839:U:O4'	1:1:839:U:O2	2.34	0.46
1:1:589:C:C2	1:1:590:C:C5	3.03	0.46
1:1:1076:A:N7	1:1:1077:C:C5	2.84	0.46
1:1:1718:G:N1	1:1:1719:A:N7	2.63	0.46
1:1:1660:A:C6	1:1:1661:U:C4	3.03	0.46
3:B:134:LEU:O	3:B:136:VAL:N	2.48	0.46
1:1:1590:G:N3	1:1:1591:C:C5	2.84	0.46
13:L:76:PRO:C	13:L:78:HIS:N	2.68	0.46
1:1:1383:G:O6	1:1:1384:A:N6	2.49	0.46
1:1:1308:G:C6	1:1:1309:C:C4	3.04	0.46
3:B:149:GLY:C	3:B:151:PRO:N	2.67	0.46
14:M:103:LYS:C	14:M:105:LEU:N	2.68	0.46
19:R:33:LEU:O	19:R:34:GLU:CB	2.62	0.46
5:D:117:THR:O	5:D:121:ILE:CB	2.63	0.46
4:C:166:ASP:O	4:C:167:PHE:CB	2.63	0.46
21:T:48:THR:O	21:T:49:GLY:C	2.54	0.46
21:T:128:ASP:O	21:T:129:LYS:CB	2.63	0.46
1:1:992:A:C2	1:1:1012:U:O2	2.62	0.46
1:1:998:A:C8	1:1:999:U:C5	3.03	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1497:U:C4	1:1:1511:U:O2	2.69	0.46
1:1:614:C:C4	1:1:615:A:N7	2.84	0.46
1:1:1196:A:N3	1:1:1196:A:O4'	2.48	0.46
1:1:1240:U:P	1:1:1241:G:OP2	2.73	0.46
1:1:1330:G:C4	1:1:1331:A:N7	2.83	0.46
1:1:1745:G:O6	29:1:1887:OHX:N6	2.48	0.46
1:1:1671:A:C8	1:1:1731:A:N6	2.83	0.46
1:1:390:G:N2	1:1:407:A:N6	2.63	0.46
16:O:85:ASP:O	16:O:86:ILE:C	2.53	0.46
1:1:208:U:O3'	1:1:209:U:O4'	2.34	0.46
1:1:705:U:C5	1:1:706:A:N6	2.83	0.46
1:1:705:U:O2'	1:1:706:A:C8	2.68	0.46
1:1:1051:G:N3	1:1:1052:U:N3	2.63	0.46
1:1:74:U:O2'	1:1:75:U:C5'	2.62	0.46
1:1:217:A:C1'	1:1:218:A:P	3.03	0.46
1:1:278:U:C3'	1:1:278:U:O2	2.63	0.46
3:B:201:ASN:O	3:B:202:GLY:C	2.52	0.46
1:1:243:G:C4	1:1:251:A:N1	2.83	0.46
1:1:650:U:C2'	1:1:651:G:C5'	2.94	0.46
1:1:104:A:C6	1:1:106:U:C2	3.04	0.46
1:1:365:G:O6	1:1:377:G:O6	2.33	0.46
1:1:406:U:C6	1:1:406:U:OP2	2.68	0.46
1:1:43:A:N1	1:1:378:A:N6	2.64	0.46
1:1:627:C:N4	1:1:628:G:C6	2.83	0.46
1:1:1096:C:C2'	1:1:1096:C:O2	2.63	0.46
1:1:1201:G:OP2	1:1:1201:G:C4	2.68	0.46
1:1:1270:G:C6	1:1:1271:G:N7	2.84	0.46
1:1:1682:U:O2	1:1:1683:C:C4	2.69	0.46
1:1:1691:A:N6	1:1:1713:G:C2	2.84	0.46
1:1:1416:G:C6	1:1:1417:A:C5	3.04	0.46
1:1:1654:G:C2	1:1:1745:G:C4	3.02	0.46
1:1:1673:G:C8	1:1:1674:C:C5	3.04	0.46
1:1:985:G:O6	1:1:986:G:O6	2.33	0.46
1:1:1535:U:OP1	1:1:1536:G:C5	2.68	0.46
1:1:192:U:N3	1:1:195:G:O6	2.47	0.46
5:D:65:ARG:CB	5:D:87:CYS:CB	2.94	0.46
1:1:824:G:C6	1:1:850:A:C2	3.03	0.46
1:1:828:U:C4	1:1:829:A:N6	2.84	0.46
1:1:243:G:N3	1:1:244:A:C8	2.83	0.46
1:1:151:G:N2	1:1:163:G:N2	2.64	0.46
1:1:72:A:N1	1:1:81:G:O6	2.49	0.46
1:1:397:A:N6	1:1:398:G:N1	2.64	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:44:U:C3'	1:1:45:U:C5'	2.93	0.46
1:1:265:A:N7	1:1:290:G:C2	2.83	0.46
1:1:1120:U:O2	1:1:1121:C:C6	2.68	0.46
1:1:1045:C:O2'	1:1:1046:G:P	2.73	0.46
1:1:1683:C:OP2	1:1:1684:U:P	2.74	0.46
1:1:1358:G:N1	1:1:1359:C:C4	2.83	0.46
1:1:1595:U:C6	1:1:1596:C:C2	3.03	0.46
5:D:96:SER:O	5:D:100:ASN:N	2.48	0.46
1:1:512:A:N3	1:1:512:A:O2'	2.48	0.46
1:1:1751:C:O2	1:1:1751:C:C2'	2.62	0.46
1:1:1181:U:C2	1:1:1182:U:C6	3.03	0.46
1:1:1607:G:C4	1:1:1608:U:C5	3.03	0.46
3:B:243:TYR:O	3:B:245:ASP:N	2.48	0.46
1:1:111:U:C6	1:1:304:U:O4	2.69	0.46
1:1:1776:A:C6	1:1:1786:G:C6	3.04	0.46
1:1:1155:G:C4	1:1:1156:C:C5	3.03	0.46
1:1:1493:A:OP2	1:1:1494:C:P	2.74	0.46
1:1:752:A:N6	1:1:753:A:N6	2.63	0.46
21:T:175:ASP:O	21:T:176:LYS:CB	2.64	0.46
5:D:143:ARG:O	5:D:144:GLU:CB	2.62	0.46
16:O:29:PRO:O	16:O:30:SER:CB	2.63	0.46
21:T:99:THR:O	21:T:100:TYR:O	2.33	0.46
1:1:1151:A:C4	1:1:1152:A:C8	3.04	0.46
1:1:381:C:N3	1:1:382:C:C5	2.84	0.46
1:1:1107:G:C3'	1:1:1108:G:N2	2.78	0.46
1:1:615:A:C2	1:1:616:G:C8	3.04	0.46
1:1:384:G:C6	1:1:385:A:C6	3.04	0.46
4:C:61:GLU:C	4:C:63:GLY:N	2.69	0.46
1:1:16:G:C2'	1:1:17:C:C6	2.99	0.46
1:1:14:C:OP1	3:B:163:GLY:N	2.49	0.46
1:1:1419:G:C6	1:1:1420:C:O2	2.68	0.46
4:C:69:LEU:O	4:C:70:THR:C	2.53	0.46
1:1:1391:A:C8	1:1:1412:G:C6	3.04	0.46
11:J:125:GLU:O	11:J:126:PRO:O	2.34	0.46
5:D:93:LEU:C	5:D:95:ASN:N	2.68	0.46
1:1:1527:C:C2	1:1:1528:U:C5	3.04	0.46
1:1:1651:A:C2	1:1:1652:C:C2	3.04	0.46
6:E:68:LYS:O	6:E:69:ARG:C	2.54	0.46
1:1:1671:A:C8	1:1:1731:A:C6	3.03	0.46
1:1:986:G:C2'	1:1:987:G:C8	2.98	0.46
1:1:1265:G:C8	1:1:1265:G:O5'	2.68	0.46
2:A:79:ARG:O	2:A:83:GLN:N	2.49	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:G:49:GLN:CA	8:G:50:ILE:CB	2.94	0.46
21:T:42:LEU:O	21:T:60:SER:CA	2.64	0.46
1:1:1550:A:C4	1:1:1551:U:C5	3.04	0.46
1:1:248:U:O2'	1:1:249:U:C5'	2.63	0.46
1:1:364:G:N2	1:1:381:C:C1'	2.79	0.46
1:1:1099:U:O2'	1:1:1100:G:C1'	2.63	0.46
1:1:866:G:C2	1:1:867:G:N7	2.83	0.46
1:1:1274:C:O2'	1:1:1275:A:P	2.74	0.46
3:B:107:SER:CA	3:B:190:LEU:O	2.64	0.46
1:1:1388:A:C6	1:1:1411:A:C6	3.03	0.46
1:1:581:U:O2	1:1:581:U:C2'	2.61	0.46
6:E:96:VAL:O	6:E:99:LEU:C	2.53	0.46
1:1:40:A:C8	1:1:41:A:C8	3.02	0.46
1:1:438:A:O5'	1:1:438:A:C8	2.69	0.46
8:G:82:PRO:O	8:G:83:GLU:C	2.54	0.46
3:B:65:GLU:C	3:B:68:ILE:CB	2.84	0.46
1:1:138:A:O2'	1:1:139:C:P	2.73	0.46
14:M:26:GLY:O	14:M:28:LEU:N	2.48	0.46
16:O:125:ILE:O	16:O:127:GLY:N	2.48	0.46
1:1:1761:U:C2'	1:1:1762:A:OP2	2.64	0.46
1:1:184:C:C4	1:1:202:A:C2	3.04	0.46
1:1:939:A:C2	1:1:940:A:C4	3.04	0.46
1:1:1209:C:N3	1:1:1455:G:N2	2.63	0.46
6:E:122:VAL:O	6:E:123:HIS:C	2.53	0.46
1:1:1420:C:C6	1:1:1420:C:C3'	2.99	0.46
1:1:1354:G:C5	1:1:1355:C:C5	3.02	0.46
1:1:514:G:C2	1:1:515:A:C8	3.03	0.46
1:1:514:G:C4	1:1:515:A:C8	3.03	0.46
6:E:96:VAL:O	6:E:99:LEU:N	2.48	0.46
1:1:887:A:N3	1:1:888:U:C6	2.84	0.46
1:1:629:U:C2	1:1:971:A:C6	3.03	0.46
5:D:44:ASN:O	5:D:46:TRP:N	2.49	0.46
1:1:601:A:C5	1:1:602:U:C5	3.04	0.46
7:F:132:SER:O	7:F:134:THR:N	2.49	0.46
1:1:910:C:N4	1:1:911:U:C4	2.84	0.46
15:N:40:ASN:O	15:N:41:ILE:CB	2.63	0.46
8:G:134:VAL:O	8:G:135:LEU:C	2.54	0.46
1:1:150:U:C4'	1:1:151:G:OP2	2.64	0.46
1:1:291:G:C2'	1:1:292:U:C6	2.99	0.46
1:1:895:G:C6	1:1:896:U:N3	2.84	0.46
1:1:1040:G:N2	1:1:1079:U:O2	2.49	0.46
2:A:181:VAL:O	2:A:182:LEU:C	2.52	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1032:G:C4	1:1:1033:C:C5	3.04	0.46
1:1:977:A:N6	1:1:1025:A:N9	2.63	0.46
1:1:1054:U:C2	1:1:1055:U:C6	3.04	0.46
1:1:329:G:C4	1:1:330:G:N7	2.84	0.46
1:1:1274:C:P	1:1:1428:G:OP1	2.73	0.46
1:1:1428:G:C2	1:1:1429:G:N7	2.84	0.46
1:1:642:G:O6	1:1:643:G:C6	2.68	0.46
1:1:690:G:C6	1:1:691:C:C4	3.03	0.46
1:1:550:A:C4'	1:1:556:A:C6	2.99	0.46
1:1:871:G:O2'	1:1:872:G:O4'	2.33	0.46
1:1:1348:A:C3'	1:1:1349:G:C5'	2.94	0.46
1:1:1675:C:C4	1:1:1678:A:N6	2.84	0.46
1:1:1685:G:C4	1:1:1719:A:N1	2.84	0.46
1:1:1713:G:C2'	1:1:1713:G:N3	2.78	0.46
1:1:1714:A:N1	1:1:1715:G:C2	2.84	0.46
1:1:1369:U:O4	29:1:1873:OHX:N2	2.49	0.46
1:1:1645:G:N1	1:1:1757:G:C5	2.84	0.46
1:1:1483:A:C4	1:1:1524:A:C6	3.04	0.46
1:1:533:U:C3'	1:1:534:A:C8	2.99	0.46
1:1:391:A:N1	1:1:392:G:C5	2.84	0.46
1:1:1291:G:C8	1:1:1291:G:O5'	2.69	0.46
17:P:103:LEU:O	17:P:104:LEU:O	2.33	0.46
1:1:1227:A:C8	1:1:1229:G:P	3.09	0.46
2:A:65:ALA:C	2:A:67:ILE:N	2.69	0.46
1:1:1176:G:C4	1:1:1464:G:C2	3.03	0.46
1:1:980:G:O6	29:1:1833:OHX:N2	2.49	0.46
3:B:83:ILE:O	3:B:99:LYS:O	2.34	0.46
1:1:1008:G:C2	1:1:1009:U:C1'	2.98	0.46
1:1:44:U:C5'	1:1:45:U:O4	2.64	0.46
1:1:483:A:OP2	1:1:483:A:C8	2.69	0.46
1:1:487:G:N3	1:1:488:G:N7	2.63	0.46
1:1:975:C:C4	1:1:976:G:N7	2.84	0.46
1:1:328:A:C6	1:1:341:A:N6	2.84	0.46
1:1:329:G:C4	1:1:330:G:C8	3.03	0.46
1:1:591:A:C2'	1:1:592:A:C8	2.99	0.46
1:1:1351:G:C6	1:1:1352:G:N7	2.84	0.46
1:1:1364:G:C5	1:1:1365:C:C6	3.03	0.46
1:1:1758:U:C4	1:1:1759:C:N4	2.84	0.46
1:1:1567:U:C2'	1:1:1568:C:O4'	2.64	0.46
1:1:1237:G:C4	1:1:1238:A:N7	2.84	0.46
2:A:54:TRP:O	2:A:56:LYS:N	2.49	0.46
1:1:1786:G:C5	1:1:1787:C:N4	2.84	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:138:A:O2'	1:1:139:C:OP2	2.34	0.46
1:1:192:U:C2	1:1:192:U:OP1	2.69	0.46
1:1:883:C:N4	1:1:945:U:N3	2.64	0.46
1:1:1407:U:C6	1:1:1408:G:C8	3.04	0.46
21:T:135:THR:O	21:T:137:LYS:N	2.48	0.46
11:J:62:ASN:O	11:J:63:ILE:CB	2.64	0.46
1:1:1504:G:C6	1:1:1505:A:C6	3.04	0.46
1:1:824:G:O6	1:1:850:A:N3	2.49	0.46
1:1:441:A:OP2	1:1:459:G:N2	2.49	0.46
1:1:1195:C:OP1	1:1:1197:C:C1'	2.64	0.46
1:1:324:U:O2	1:1:346:G:O2'	2.34	0.46
1:1:966:A:C2'	1:1:967:A:O5'	2.64	0.46
1:1:1683:C:OP2	1:1:1684:U:OP2	2.34	0.46
1:1:375:U:O2	1:1:375:U:C2'	2.64	0.46
13:L:44:ASN:O	13:L:45:LEU:C	2.55	0.46
1:1:1308:G:C5	1:1:1309:C:C5	3.04	0.46
1:1:1536:G:C5	1:1:1538:U:O2	2.68	0.46
5:D:183:ALA:O	5:D:184:PHE:CB	2.64	0.46
1:1:196:G:C6	1:1:197:A:C2	3.04	0.46
1:1:575:C:C5	1:1:576:G:N7	2.84	0.46
17:P:44:GLY:C	17:P:46:SER:N	2.68	0.46
1:1:869:A:C2'	1:1:870:C:O4'	2.63	0.46
3:B:97:ARG:O	3:B:98:PHE:CB	2.63	0.46
1:1:1341:A:N3	1:1:1341:A:C2'	2.78	0.46
1:1:153:G:C2	1:1:162:A:C5	3.03	0.45
1:1:685:A:O2'	1:1:686:C:O5'	2.33	0.45
1:1:96:G:C6	1:1:97:C:N4	2.84	0.45
1:1:289:U:N3	1:1:290:G:C8	2.84	0.45
1:1:445:A:C2	1:1:446:A:C8	3.04	0.45
1:1:895:G:N2	1:1:917:U:N3	2.64	0.45
1:1:898:A:C2	1:1:915:A:N6	2.84	0.45
2:A:173:ILE:C	2:A:175:TYR:N	2.67	0.45
1:1:1186:U:C1'	1:1:1208:A:C2	2.99	0.45
1:1:1207:C:C4	1:1:1208:A:N6	2.84	0.45
1:1:328:A:N1	1:1:341:A:C6	2.84	0.45
1:1:839:U:C4	1:1:840:U:O4	2.69	0.45
1:1:353:A:N6	1:1:354:C:C2	2.84	0.45
1:1:604:A:C6	1:1:605:A:N1	2.84	0.45
1:1:1389:C:C4	1:1:1391:A:O4'	2.69	0.45
1:1:1649:G:N7	29:1:1884:OHX:N1	2.64	0.45
1:1:551:G:C4	1:1:552:G:N7	2.84	0.45
1:1:529:A:O2'	1:1:530:C:P	2.74	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:210:A:N6	1:1:256:A:N6	2.64	0.45
1:1:750:U:C2'	1:1:751:G:C5'	2.94	0.45
1:1:800:U:C2	1:1:801:G:N7	2.85	0.45
1:1:1478:G:C2	1:1:1479:A:C4	3.04	0.45
1:1:1155:G:C2	1:1:1156:C:C4	3.04	0.45
17:P:80:GLY:O	17:P:81:LYS:C	2.53	0.45
3:B:72:LEU:O	3:B:74:PRO:N	2.50	0.45
5:D:52:GLU:O	5:D:53:VAL:C	2.54	0.45
18:Q:94:LYS:C	18:Q:96:SER:N	2.69	0.45
1:1:148:A:C5'	1:1:149:C:OP2	2.64	0.45
1:1:150:U:C5'	1:1:151:G:OP2	2.64	0.45
1:1:993:A:C6	1:1:1012:U:C2	3.04	0.45
1:1:1151:A:C6	1:1:1152:A:N7	2.84	0.45
1:1:289:U:C2	1:1:290:G:C8	3.04	0.45
1:1:1557:U:O2	1:1:1558:U:C6	2.69	0.45
1:1:168:A:N6	1:1:169:A:N6	2.65	0.45
1:1:978:A:N6	1:1:1024:U:C4	2.83	0.45
1:1:469:C:P	1:1:469:C:C2	3.09	0.45
1:1:837:G:C4	1:1:838:G:C8	3.04	0.45
1:1:1075:C:N3	1:1:1076:A:C2	2.84	0.45
13:L:65:GLU:O	13:L:66:LEU:C	2.55	0.45
1:1:1281:G:C6	1:1:1282:U:C4	3.03	0.45
1:1:1591:C:O5'	1:1:1591:C:C6	2.69	0.45
1:1:1591:C:C2'	1:1:1592:A:C8	3.00	0.45
1:1:274:G:C4	1:1:275:C:C5	3.04	0.45
1:1:809:A:N1	1:1:810:G:C6	2.85	0.45
1:1:708:C:C4	1:1:731:C:C5	3.04	0.45
5:D:164:PRO:O	5:D:166:ARG:N	2.49	0.45
1:1:1065:A:C5	1:1:1066:C:C5	3.03	0.45
1:1:112:A:C6	1:1:303:U:O2	2.70	0.45
1:1:1705:C:N4	1:1:1706:C:C4	2.85	0.45
1:1:1629:G:C2'	1:1:1630:U:O4'	2.64	0.45
1:1:648:G:C6	1:1:649:U:C5	3.04	0.45
1:1:119:A:OP2	1:1:120:U:C5	2.69	0.45
1:1:1198:G:OP2	1:1:1199:G:N7	2.50	0.45
1:1:1116:A:C5	1:1:1117:U:C5	3.04	0.45
1:1:1138:A:N1	1:1:1139:A:C5	2.83	0.45
1:1:224:C:O2'	1:1:225:A:C8	2.69	0.45
1:1:1272:U:O4	1:1:1431:C:C2	2.69	0.45
1:1:312:A:C2	1:1:314:C:C2	3.04	0.45
1:1:353:A:C8	1:1:354:C:C5	3.04	0.45
1:1:1246:C:C6	1:1:1247:U:C5	3.03	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1657:U:N3	29:1:1863:OHX:N5	2.65	0.45
5:D:89:ILE:O	5:D:90:ILE:C	2.54	0.45
1:1:1481:C:C4'	1:1:1482:C:OP1	2.64	0.45
1:1:1649:G:C2'	1:1:1650:U:C6	2.99	0.45
1:1:1232:U:O2	1:1:1232:U:C3'	2.64	0.45
1:1:1734:U:C2'	1:1:1735:U:C6	2.99	0.45
1:1:1065:A:C8	1:1:1066:C:C5	3.04	0.45
2:A:54:TRP:C	2:A:56:LYS:N	2.68	0.45
1:1:1277:G:C6	1:1:1278:G:C2	3.05	0.45
1:1:800:U:O2	1:1:800:U:C2'	2.62	0.45
1:1:852:C:C4	1:1:853:G:C2	3.04	0.45
16:O:30:SER:O	16:O:34:ILE:CB	2.64	0.45
21:T:63:GLY:O	21:T:64:HIS:C	2.54	0.45
1:1:879:G:C6	1:1:880:C:C4	3.04	0.45
1:1:824:G:N1	1:1:850:A:C2	2.84	0.45
1:1:848:C:N3	1:1:849:C:C4	2.85	0.45
1:1:1771:U:C2	1:1:1772:C:C6	3.04	0.45
1:1:1765:A:OP2	29:1:1841:OHX:N3	2.50	0.45
1:1:104:A:N6	1:1:106:U:C2	2.84	0.45
1:1:119:A:O4'	1:1:397:A:C1'	2.64	0.45
1:1:55:A:O2'	1:1:403:G:N1	2.50	0.45
1:1:142:G:C6	1:1:266:A:N7	2.84	0.45
1:1:938:G:C2	1:1:942:G:C6	3.04	0.45
17:P:107:PHE:O	17:P:108:GLY:C	2.54	0.45
29:1:1821:OHX:N5	29:1:1891:OHX:N1	2.64	0.45
1:1:1347:U:O2'	1:1:1348:A:N7	2.49	0.45
2:A:13:ASP:O	2:A:14:ALA:CB	2.65	0.45
1:1:1364:G:C6	1:1:1365:C:C4	3.05	0.45
1:1:774:A:C6	1:1:787:G:C2	3.04	0.45
1:1:1541:G:C5	1:1:1542:G:O6	2.69	0.45
1:1:1294:G:N2	1:1:1295:G:C4	2.84	0.45
1:1:1294:G:N7	29:1:1866:OHX:N3	2.65	0.45
1:1:1236:A:C2	1:1:1237:G:C4	3.05	0.45
16:O:107:SER:N	16:O:122:SER:O	2.49	0.45
1:1:819:G:N1	1:1:854:U:N3	2.65	0.45
14:M:13:ASP:C	14:M:15:ILE:N	2.70	0.45
21:T:116:ASP:O	21:T:118:LYS:N	2.49	0.45
3:B:195:ASP:O	3:B:196:VAL:O	2.34	0.45
1:1:657:U:O2'	1:1:661:A:N6	2.50	0.45
1:1:133:U:C1'	1:1:134:U:OP1	2.64	0.45
14:M:116:ILE:O	14:M:117:SER:O	2.34	0.45
1:1:828:U:C5	1:1:829:A:N6	2.85	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:830:U:O2'	1:1:831:U:C6	2.70	0.45
1:1:1001:A:C5	1:1:1002:G:C5	3.04	0.45
1:1:55:A:C3'	1:1:56:U:C5'	2.95	0.45
1:1:290:G:C2'	1:1:291:G:C8	2.99	0.45
1:1:89:G:C5	1:1:90:C:C5	3.05	0.45
1:1:1120:U:N3	1:1:1121:C:C5	2.84	0.45
1:1:330:G:C5	1:1:331:A:N7	2.85	0.45
1:1:9:U:N3	1:1:11:A:OP2	2.50	0.45
3:B:126:ARG:C	3:B:128:GLY:N	2.68	0.45
1:1:275:C:C4	1:1:276:C:N4	2.84	0.45
1:1:1672:G:C2	1:1:1673:G:C6	3.05	0.45
4:C:92:GLN:O	4:C:94:ARG:N	2.49	0.45
1:1:703:G:N2	1:1:735:C:C2	2.84	0.45
2:A:145:ALA:O	2:A:160:ILE:CA	2.65	0.45
12:K:38:ILE:O	12:K:39:ALA:O	2.35	0.45
17:P:114:LYS:CB	17:P:115:GLY:CA	2.94	0.45
2:A:2:SER:C	2:A:4:PRO:N	2.70	0.45
1:1:1765:A:C4'	1:1:1766:A:OP2	2.65	0.45
1:1:381:C:C5'	1:1:382:C:OP2	2.65	0.45
1:1:386:G:C2'	1:1:387:A:O5'	2.65	0.45
1:1:1351:G:C6	1:1:1352:G:C5	3.04	0.45
6:E:82:ARG:O	6:E:84:GLY:N	2.50	0.45
1:1:1125:A:N7	1:1:1126:G:C1'	2.79	0.45
1:1:1329:A:C8	1:1:1330:G:N7	2.85	0.45
6:E:55:ALA:O	6:E:58:ASP:CB	2.65	0.45
1:1:1391:A:N7	1:1:1412:G:C6	2.84	0.45
1:1:1283:U:C2	1:1:1284:C:C5	3.04	0.45
1:1:553:G:C5	1:1:554:C:N3	2.84	0.45
1:1:1334:U:C2	1:1:1335:U:C5	3.05	0.45
1:1:1727:G:C2	1:1:1728:A:C6	3.05	0.45
1:1:192:U:C6	1:1:192:U:C3'	3.00	0.45
1:1:818:C:N4	1:1:854:U:C4	2.85	0.45
1:1:587:C:C4	1:1:588:U:C4	3.04	0.45
1:1:1002:G:C4	1:1:1003:A:C2	3.05	0.45
1:1:1631:A:N7	1:1:1636:C:N4	2.65	0.45
1:1:649:U:C2	1:1:650:U:C6	3.05	0.45
1:1:123:G:O6	1:1:295:A:N6	2.50	0.45
1:1:93:A:C2	1:1:399:A:N1	2.84	0.45
1:1:205:U:O4	1:1:206:A:N6	2.50	0.45
1:1:1206:U:O4	1:1:1455:G:O6	2.34	0.45
1:1:87:C:C3'	1:1:88:U:C5'	2.94	0.45
1:1:1109:G:C3'	1:1:1110:G:C5'	2.95	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:838:G:C6	1:1:839:U:N3	2.85	0.45
1:1:1270:G:C2	1:1:1271:G:C8	3.05	0.45
1:1:310:C:C6	1:1:310:C:C4'	2.99	0.45
1:1:357:G:C4	1:1:358:U:C6	3.04	0.45
1:1:555:A:C2	1:1:556:A:N1	2.85	0.45
1:1:1043:A:C6	1:1:1044:U:O4	2.70	0.45
1:1:1686:C:C4	1:1:1687:U:C4	3.05	0.45
1:1:1720:G:N7	1:1:1721:A:C5	2.85	0.45
1:1:1693:A:N1	1:1:1708:U:N3	2.65	0.45
1:1:1483:A:C4	1:1:1524:A:C5	3.05	0.45
1:1:1592:A:C5	1:1:1605:G:C2	3.05	0.45
1:1:472:U:C6	1:1:473:A:C8	3.04	0.45
1:1:1167:G:N1	1:1:1168:U:C4	2.85	0.45
6:E:99:LEU:O	6:E:102:GLU:N	2.50	0.45
1:1:1402:G:C4	1:1:1403:C:C6	3.04	0.45
1:1:1310:U:O5'	1:1:1310:U:C6	2.70	0.45
1:1:735:C:O2	1:1:735:C:O4'	2.33	0.45
3:B:146:THR:O	3:B:147:ASN:C	2.55	0.45
1:1:1237:G:N3	1:1:1238:A:C8	2.85	0.45
1:1:1623:C:C2	1:1:1624:C:C6	3.05	0.45
1:1:763:G:C4	1:1:764:U:C5	3.05	0.45
11:J:43:ILE:O	11:J:45:ARG:N	2.50	0.45
8:G:142:GLU:C	8:G:144:ALA:N	2.70	0.45
13:L:29:VAL:O	13:L:43:SER:CB	2.65	0.45
1:1:43:A:C2'	1:1:44:U:C5'	2.95	0.45
1:1:198:A:C1'	1:1:199:G:P	3.05	0.45
1:1:1092:A:C8	1:1:1094:G:C8	3.05	0.45
1:1:622:A:C4'	1:1:623:A:OP1	2.65	0.45
1:1:1203:A:N3	1:1:1555:A:C2	2.85	0.45
1:1:63:G:O2'	1:1:169:A:O3'	2.35	0.45
1:1:855:A:O2'	1:1:856:A:C5'	2.64	0.45
1:1:635:A:C5	1:1:863:A:C8	3.05	0.45
1:1:220:A:N6	1:1:221:A:N6	2.64	0.45
1:1:604:A:N1	1:1:605:A:C2	2.85	0.45
1:1:271:A:C2	1:1:285:G:C5	3.05	0.45
1:1:36:C:C2	1:1:473:A:C2	3.05	0.45
1:1:515:A:N3	1:1:515:A:C2'	2.80	0.45
1:1:1382:A:C4	1:1:1383:G:C8	3.04	0.45
1:1:1304:G:N7	1:1:1305:U:C4	2.85	0.45
1:1:765:G:C4'	1:1:766:U:OP1	2.64	0.45
1:1:39:A:C8	1:1:467:G:N2	2.85	0.45
1:1:1403:C:OP1	1:1:1414:U:OP1	2.35	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:986:G:O6	29:1:1807:OHX:N2	2.50	0.45
1:1:1172:G:C5	1:1:1173:C:C5	3.05	0.45
21:T:53:LYS:O	21:T:55:GLY:N	2.50	0.45
21:T:135:THR:C	21:T:137:LYS:N	2.69	0.45
21:T:240:VAL:O	21:T:241:PHE:O	2.34	0.45
1:1:430:G:C5	1:1:431:C:C5	3.04	0.45
1:1:993:A:C4	1:1:1012:U:O2	2.70	0.45
1:1:57:G:C6	1:1:91:G:C6	3.05	0.45
1:1:973:A:N3	1:1:974:A:N7	2.65	0.45
1:1:1455:G:N3	1:1:1456:C:O2	2.50	0.45
1:1:1138:A:C6	1:1:1139:A:N6	2.85	0.45
1:1:1274:C:C5	1:1:1427:A:N7	2.83	0.45
1:1:1431:C:C2	1:1:1437:U:O4	2.70	0.45
1:1:1689:A:C6	1:1:1716:C:C2	3.05	0.45
1:1:1411:A:C5'	1:1:1412:G:OP2	2.64	0.45
1:1:1284:C:O2	1:1:1286:U:N3	2.49	0.45
1:1:1522:U:OP1	1:1:1522:U:C6	2.69	0.45
1:1:24:U:C6	1:1:24:U:C5'	2.99	0.45
1:1:215:A:O5'	1:1:215:A:C8	2.69	0.45
6:E:96:VAL:O	6:E:97:LEU:C	2.54	0.45
1:1:1540:G:C6	1:1:1541:G:C5	3.05	0.45
1:1:1294:G:C6	29:1:1866:OHX:N4	2.85	0.45
1:1:1227:A:C8	1:1:1229:G:C5'	3.00	0.45
11:J:42:GLU:O	11:J:44:LEU:N	2.50	0.45
10:I:125:PRO:O	10:I:127:ARG:N	2.50	0.45
2:A:111:ILE:O	2:A:112:THR:CB	2.65	0.45
10:I:115:TYR:O	10:I:118:GLU:N	2.50	0.45
21:T:216:LYS:O	21:T:218:GLY:N	2.50	0.45
1:1:825:U:C6	1:1:826:U:C2	3.05	0.45
1:1:1149:G:O6	1:1:1629:G:C2	2.70	0.45
1:1:119:A:C2'	1:1:120:U:O5'	2.65	0.45
1:1:402:C:C2	1:1:403:G:O4'	2.70	0.45
1:1:426:G:C2	1:1:427:C:C6	3.04	0.45
1:1:266:A:O3'	1:1:267:U:O4'	2.35	0.45
1:1:269:G:C5	1:1:270:C:C5	3.05	0.45
1:1:1116:A:C6	1:1:1131:A:C8	3.04	0.45
1:1:333:A:N1	1:1:334:G:C6	2.85	0.45
1:1:333:A:C2	1:1:334:G:N3	2.85	0.45
1:1:1720:G:C8	1:1:1721:A:C8	3.05	0.45
1:1:1657:U:C4	29:1:1863:OHX:N1	2.84	0.45
1:1:1332:C:O2'	1:1:1333:C:P	2.75	0.45
1:1:1370:U:C4	1:1:1371:A:N7	2.85	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1257:U:O2'	1:1:1258:U:C5'	2.64	0.45
1:1:1225:U:C5	1:1:1226:A:C6	3.05	0.45
5:D:144:GLU:CA	5:D:160:VAL:O	2.65	0.45
11:J:106:LYS:O	11:J:109:PHE:N	2.50	0.45
12:K:11:ARG:O	12:K:15:ALA:N	2.50	0.45
7:F:89:ALA:O	7:F:90:TYR:O	2.35	0.45
1:1:148:A:O5'	1:1:149:C:C5	2.71	0.44
1:1:1631:A:C2	1:1:1632:C:C1'	3.01	0.44
1:1:379:U:OP1	1:1:379:U:O3'	2.35	0.44
1:1:1183:A:N3	1:1:1210:C:O2'	2.50	0.44
1:1:862:A:C8	1:1:963:A:N6	2.85	0.44
1:1:221:A:N7	1:1:832:U:O4	2.50	0.44
1:1:1428:G:C2	1:1:1429:G:C5	3.04	0.44
1:1:643:G:C2	1:1:692:C:C4	3.05	0.44
1:1:642:G:C6	1:1:643:G:C6	3.05	0.44
1:1:1346:A:O4'	1:1:1346:A:OP1	2.34	0.44
1:1:1684:U:C5	1:1:1721:A:C2	3.05	0.44
1:1:1330:G:C2'	1:1:1331:A:C8	3.00	0.44
1:1:1584:G:N7	11:J:123:ARG:O	2.50	0.44
1:1:1592:A:C2'	1:1:1593:A:C8	3.00	0.44
1:1:1517:U:O2	15:N:16:GLN:C	2.55	0.44
1:1:36:C:N3	1:1:472:U:O4	2.49	0.44
1:1:518:A:C3'	1:1:519:C:C5'	2.95	0.44
1:1:568:G:N1	1:1:569:C:C4	2.86	0.44
1:1:1783:C:N4	1:1:1784:C:N4	2.66	0.44
5:D:223:SER:O	5:D:225:ARG:N	2.50	0.44
13:L:108:LYS:O	13:L:111:ASP:CB	2.65	0.44
1:1:1765:A:OP1	29:1:1841:OHX:N3	2.50	0.44
1:1:363:G:N1	1:1:382:C:C4	2.85	0.44
1:1:202:A:C5	1:1:203:U:O4	2.70	0.44
2:A:175:TYR:O	2:A:177:LEU:N	2.50	0.44
1:1:63:G:C6	1:1:64:U:C5	3.05	0.44
1:1:1056:U:C4	1:1:1063:U:N3	2.85	0.44
1:1:361:C:C4	1:1:384:G:C2	3.05	0.44
1:1:1109:G:C6	1:1:1110:G:N7	2.86	0.44
1:1:842:C:C2'	1:1:843:U:C6	3.01	0.44
1:1:17:C:N3	1:1:18:C:C5	2.86	0.44
1:1:1717:G:C6	1:1:1718:G:C2	3.04	0.44
1:1:1444:A:C5'	1:1:1446:A:N7	2.80	0.44
1:1:1170:G:C6	1:1:1574:G:C6	3.06	0.44
1:1:1324:G:C6	1:1:1325:A:C8	3.04	0.44
6:E:94:ASP:O	6:E:95:TYR:C	2.55	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:929:A:C6	1:1:930:A:C4	3.05	0.44
13:L:39:GLY:O	13:L:43:SER:N	2.49	0.44
1:1:413:U:C2	1:1:421:A:C2	3.06	0.44
1:1:1636:C:N3	1:1:1765:A:C6	2.85	0.44
1:1:652:G:N1	1:1:683:C:C2	2.85	0.44
1:1:1753:A:C3'	1:1:1754:A:C5'	2.96	0.44
1:1:1251:U:C2	1:1:1252:C:C6	3.06	0.44
1:1:357:G:C2'	1:1:358:U:C6	3.01	0.44
1:1:1245:G:C5	1:1:1246:C:C6	3.06	0.44
1:1:1214:U:O5'	1:1:1245:G:N2	2.50	0.44
1:1:1681:A:C8	1:1:1682:U:N3	2.86	0.44
1:1:1391:A:N3	1:1:1392:U:C5	2.85	0.44
1:1:1336:A:N1	1:1:1416:G:C6	2.85	0.44
1:1:389:G:C4	1:1:390:G:C8	3.06	0.44
1:1:1167:G:C6	1:1:1168:U:C4	3.06	0.44
4:C:93:ASP:O	4:C:95:GLY:N	2.50	0.44
1:1:437:A:C5'	1:1:438:A:OP1	2.65	0.44
1:1:478:A:C2	1:1:479:C:C4	3.05	0.44
1:1:1607:G:C2	1:1:1608:U:C6	3.05	0.44
14:M:4:VAL:O	14:M:7:ARG:N	2.50	0.44
21:T:236:ALA:O	21:T:237:GLN:CB	2.64	0.44
15:N:23:ARG:O	15:N:24:ILE:C	2.55	0.44
1:1:151:G:C2	1:1:163:G:N2	2.85	0.44
1:1:649:U:O2'	1:1:650:U:P	2.75	0.44
1:1:55:A:O2'	1:1:56:U:OP1	2.36	0.44
1:1:1097:U:C2'	1:1:1098:U:C5'	2.96	0.44
1:1:1186:U:O4'	1:1:1208:A:C2	2.70	0.44
1:1:1201:G:N7	1:1:1202:A:N3	2.64	0.44
1:1:321:C:N4	1:1:341:A:OP2	2.50	0.44
1:1:636:A:C2	1:1:861:U:O2	2.70	0.44
1:1:1141:G:C2	1:1:1142:A:C5	3.05	0.44
1:1:838:G:C2	1:1:839:U:C6	3.05	0.44
1:1:537:G:C2'	1:1:537:G:N3	2.81	0.44
1:1:388:G:C2	1:1:389:G:N7	2.85	0.44
1:1:1569:A:C2	1:1:1570:A:C8	3.06	0.44
16:O:112:ASP:O	16:O:113:HIS:C	2.55	0.44
2:A:132:ALA:O	2:A:136:ALA:N	2.51	0.44
1:1:217:A:O2'	1:1:218:A:OP2	2.35	0.44
2:A:25:GLY:O	2:A:26:ALA:CB	2.65	0.44
12:K:20:TYR:O	12:K:21:TYR:CB	2.66	0.44
1:1:4:C:C2'	1:1:4:C:O2	2.66	0.44
4:C:7:LYS:O	4:C:8:LYS:O	2.35	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:328:A:N3	1:1:329:G:C8	2.86	0.44
1:1:339:C:C2	1:1:340:U:C6	3.06	0.44
1:1:812:A:C2	1:1:858:G:O6	2.71	0.44
1:1:1600:A:C8	1:1:1602:C:C5	3.05	0.44
1:1:1046:G:C8	1:1:1073:G:N2	2.85	0.44
14:M:129:GLN:O	14:M:133:ASP:CB	2.65	0.44
1:1:1693:A:N3	1:1:1694:A:N7	2.65	0.44
20:S:37:ASN:C	29:S:534:OHX:N3	2.70	0.44
1:1:1285:U:C4'	1:1:1286:U:OP1	2.66	0.44
1:1:1167:G:C6	1:1:1168:U:O4	2.70	0.44
2:A:106:SER:O	2:A:108:THR:N	2.50	0.44
1:1:139:C:C4	1:1:176:C:C2	3.05	0.44
1:1:569:C:C2'	1:1:570:A:O5'	2.65	0.44
4:C:135:GLU:CA	4:C:152:PHE:O	2.65	0.44
5:D:55:ASP:O	5:D:56:ALA:C	2.56	0.44
11:J:69:VAL:O	11:J:70:THR:CB	2.65	0.44
21:T:187:GLN:O	21:T:189:GLU:N	2.51	0.44
1:1:732:G:O2'	1:1:733:A:C8	2.71	0.44
1:1:824:G:O2'	1:1:825:U:C2	2.71	0.44
1:1:150:U:C2'	1:1:150:U:O2	2.66	0.44
1:1:488:G:O2'	1:1:489:C:P	2.76	0.44
1:1:837:G:N1	1:1:838:G:C5	2.85	0.44
3:B:160:GLY:O	3:B:161:LYS:CB	2.66	0.44
1:1:1716:C:C2	1:1:1717:G:C8	3.05	0.44
21:T:301:LEU:O	21:T:312:VAL:CA	2.65	0.44
1:1:1392:U:C2	1:1:1393:C:C5	3.05	0.44
20:S:21:CYS:O	20:S:22:ARG:C	2.56	0.44
1:1:1381:U:C5	1:1:1382:A:N7	2.85	0.44
1:1:767:U:O2'	1:1:768:C:C5	2.70	0.44
1:1:389:G:C2'	1:1:390:G:C8	3.01	0.44
1:1:1575:G:C2	1:1:1576:A:N9	2.86	0.44
16:O:13:ALA:O	16:O:17:ALA:CB	2.66	0.44
3:B:62:PRO:CB	3:B:63:VAL:CB	2.95	0.44
1:1:237:C:O2'	1:1:238:U:P	2.76	0.44
2:A:65:ALA:O	2:A:67:ILE:N	2.50	0.44
8:G:65:VAL:O	8:G:68:GLY:N	2.51	0.44
1:1:148:A:N6	1:1:167:U:N3	2.66	0.44
1:1:151:G:C6	1:1:164:A:N1	2.86	0.44
1:1:1008:G:N1	1:1:1009:U:C2	2.86	0.44
1:1:1109:G:C2	1:1:1110:G:C5	3.06	0.44
3:B:203:LYS:O	3:B:205:ARG:N	2.51	0.44
1:1:1756:A:C6	29:1:1802:OHX:N5	2.82	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1239:U:C5	1:1:1241:G:O6	2.70	0.44
1:1:1683:C:O4'	1:1:1721:A:N1	2.50	0.44
1:1:1584:G:C3'	1:1:1584:G:C4	2.97	0.44
1:1:284:G:C4'	1:1:285:G:OP1	2.65	0.44
1:1:775:G:C2	1:1:786:C:N3	2.86	0.44
1:1:302:U:O4	1:1:303:U:O2	2.35	0.44
1:1:1623:C:C2	1:1:1624:C:C5	3.05	0.44
1:1:1623:C:C4	1:1:1624:C:C5	3.05	0.44
1:1:601:A:C5'	1:1:602:U:OP2	2.66	0.44
4:C:119:ALA:C	4:C:121:GLY:N	2.68	0.44
6:E:26:ALA:O	6:E:29:LYS:N	2.50	0.44
2:A:70:PRO:O	2:A:71:GLU:CB	2.65	0.44
1:1:451:A:N6	1:1:456:A:N6	2.65	0.44
1:1:895:G:N2	1:1:917:U:C4	2.85	0.44
1:1:1204:A:C4'	1:1:1204:A:OP1	2.64	0.44
1:1:978:A:C6	1:1:1024:U:N3	2.85	0.44
1:1:1140:G:N3	1:1:1141:G:C8	2.86	0.44
1:1:621:A:O2'	1:1:1106:U:O2'	2.36	0.44
1:1:356:G:OP2	29:1:1821:OHX:N6	2.51	0.44
1:1:739:G:C2'	1:1:740:A:C8	3.01	0.44
1:1:546:U:C2'	1:1:547:U:C6	3.00	0.44
21:T:111:MET:O	21:T:112:SER:CB	2.66	0.44
1:1:1058:U:C2	1:1:1060:U:OP2	2.71	0.44
9:H:33:LEU:O	9:H:34:SER:C	2.56	0.44
11:J:12:LYS:CB	11:J:16:ALA:O	2.66	0.44
1:1:826:U:O2	1:1:847:A:C2	2.71	0.44
1:1:993:A:C5	1:1:1012:U:O2	2.71	0.44
1:1:1039:A:C5	1:1:1091:A:C2	3.06	0.44
1:1:1086:A:C2	1:1:1141:G:N3	2.86	0.44
1:1:11:A:C8	1:1:11:A:O5'	2.71	0.44
1:1:618:U:OP1	1:1:1030:A:C2	2.70	0.44
1:1:1718:G:C2	1:1:1719:A:N7	2.86	0.44
1:1:1793:G:O2'	1:1:1794:A:OP2	2.36	0.44
1:1:1390:U:O4'	1:1:1413:U:C2	2.71	0.44
1:1:1663:G:C6	1:1:1664:C:C4	3.06	0.44
1:1:527:A:OP1	1:1:528:U:C3'	2.66	0.44
1:1:1113:A:N3	1:1:1115:U:C5	2.86	0.44
1:1:708:C:N3	1:1:731:C:C6	2.86	0.44
1:1:1434:U:O3'	1:1:1435:G:C3'	2.66	0.44
1:1:1486:G:C6	1:1:1487:A:C5	3.06	0.44
1:1:719:U:O2	1:1:719:U:C3'	2.66	0.44
1:1:723:G:N2	1:1:724:C:C2	2.86	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:121:GLY:O	4:C:122:VAL:C	2.56	0.44
1:1:926:A:C5	1:1:927:C:C6	3.05	0.44
18:Q:45:GLU:O	18:Q:48:ASP:N	2.50	0.44
6:E:117:GLY:O	6:E:118:LEU:C	2.56	0.44
6:E:156:ILE:O	6:E:158:PHE:N	2.51	0.44
21:T:280:GLY:O	21:T:281:TYR:CB	2.66	0.44
1:1:725:U:C2'	1:1:725:U:O2	2.65	0.44
1:1:1287:A:N3	1:1:1288:G:C1'	2.81	0.44
1:1:651:G:N2	1:1:652:G:C6	2.85	0.43
1:1:498:G:N3	1:1:499:U:O4	2.51	0.43
1:1:977:A:C5	1:1:1025:A:C4	3.06	0.43
1:1:1056:U:C5	1:1:1057:U:C4	3.06	0.43
1:1:350:U:C5'	1:1:352:A:O4'	2.66	0.43
1:1:1043:A:C4	1:1:1044:U:C5	3.06	0.43
1:1:1681:A:C8	1:1:1682:U:C2	3.06	0.43
1:1:1658:G:OP1	1:1:1659:A:OP2	2.35	0.43
1:1:1659:A:C2	1:1:1660:A:C8	3.06	0.43
1:1:1604:U:C3'	1:1:1605:G:C5'	2.96	0.43
1:1:1113:A:C2	1:1:1115:U:C4	3.05	0.43
1:1:1671:A:N6	1:1:1672:G:C2	2.85	0.43
1:1:827:C:C2	1:1:828:U:N3	2.86	0.43
1:1:267:U:P	1:1:267:U:O4'	2.75	0.43
1:1:449:C:C2	1:1:450:U:C5	3.06	0.43
1:1:57:G:C6	1:1:91:G:C2	3.06	0.43
1:1:1557:U:O2	1:1:1557:U:C3'	2.66	0.43
1:1:340:U:C2	1:1:341:A:N7	2.85	0.43
1:1:220:A:C5	1:1:221:A:N7	2.86	0.43
1:1:14:C:C2	1:1:15:U:C5	3.06	0.43
1:1:590:C:C2	1:1:591:A:N7	2.86	0.43
1:1:1044:U:O2	1:1:1045:C:C5	2.71	0.43
1:1:1046:G:N7	1:1:1073:G:N2	2.67	0.43
1:1:1347:U:C4	1:1:1376:C:N4	2.86	0.43
1:1:1720:G:O3'	29:1:1864:OHX:N5	2.51	0.43
1:1:572:C:C5'	1:1:573:C:OP2	2.66	0.43
1:1:1112:G:N2	1:1:1134:C:N3	2.67	0.43
1:1:509:G:C5	1:1:510:G:N7	2.86	0.43
1:1:1608:U:C2	1:1:1609:U:C5	3.06	0.43
6:E:31:ALA:O	6:E:34:PHE:CB	2.67	0.43
1:1:1484:G:N2	1:1:1485:C:C2	2.86	0.43
6:E:49:LEU:O	6:E:50:SER:C	2.55	0.43
1:1:1798:U:O4'	1:1:1798:U:O2	2.34	0.43
5:D:39:GLU:CA	5:D:40:ILE:CB	2.96	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:85:A:O2'	1:1:86:A:OP2	2.37	0.43
1:1:200:A:O2'	1:1:201:G:P	2.76	0.43
1:1:454:U:O2'	1:1:455:C:C6	2.71	0.43
1:1:127:G:C5	1:1:179:A:N7	2.86	0.43
1:1:1773:C:N1	1:1:1789:G:N2	2.65	0.43
1:1:63:G:C6	1:1:64:U:C6	3.06	0.43
1:1:63:G:C6	1:1:88:U:C2	3.06	0.43
1:1:328:A:C2'	1:1:329:G:C8	3.01	0.43
1:1:341:A:C5	1:1:342:C:C5	3.07	0.43
17:P:107:PHE:O	17:P:108:GLY:O	2.35	0.43
1:1:1602:C:C2'	1:1:1602:C:O2	2.66	0.43
1:1:1720:G:C8	1:1:1721:A:N7	2.87	0.43
29:1:1845:OHX:N2	29:1:1873:OHX:N4	2.65	0.43
1:1:1389:C:N4	1:1:1391:A:C1'	2.81	0.43
1:1:1650:U:C2	1:1:1651:A:N7	2.86	0.43
1:1:1649:G:C4	1:1:1650:U:C5	3.06	0.43
8:G:127:ARG:O	8:G:131:THR:N	2.51	0.43
4:C:93:ASP:O	4:C:94:ARG:C	2.56	0.43
1:1:1433:G:O6	15:N:71:PRO:CB	2.67	0.43
1:1:702:G:C2	1:1:703:G:C6	3.06	0.43
1:1:1237:G:C6	1:1:1238:A:C5	3.07	0.43
1:1:1237:G:N1	1:1:1238:A:C5	2.86	0.43
1:1:108:A:C3'	1:1:109:G:C8	3.00	0.43
1:1:109:G:O2'	1:1:796:A:N1	2.52	0.43
1:1:1051:G:N2	1:1:1052:U:O2	2.50	0.43
1:1:1051:G:N3	1:1:1052:U:C2	2.86	0.43
1:1:1587:A:C6	1:1:1588:G:N7	2.86	0.43
1:1:190:C:N4	1:1:192:U:O4	2.51	0.43
1:1:195:G:C4'	1:1:196:G:OP1	2.66	0.43
1:1:869:A:C4	1:1:870:C:C6	3.06	0.43
6:E:21:SER:O	6:E:25:ASP:N	2.51	0.43
15:N:21:LYS:N	15:N:92:ASP:CA	2.81	0.43
14:M:115:GLU:O	14:M:122:ARG:CA	2.66	0.43
1:1:827:C:C4'	1:1:828:U:OP1	2.66	0.43
1:1:250:C:O2'	1:1:251:A:O4'	2.37	0.43
1:1:1002:G:C5	1:1:1003:A:C2	3.07	0.43
1:1:628:G:N2	1:1:970:A:OP2	2.51	0.43
1:1:1096:C:O2	1:1:1098:U:OP2	2.35	0.43
1:1:1558:U:C6	1:1:1559:A:N3	2.86	0.43
1:1:169:A:C8	1:1:171:A:N6	2.85	0.43
1:1:323:A:O2'	1:1:324:U:C5'	2.67	0.43
1:1:1042:G:C6	1:1:1043:A:C5	3.06	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1579:U:O4	1:1:1580:C:N4	2.51	0.43
6:E:123:HIS:C	6:E:125:ALA:N	2.71	0.43
20:S:23:VAL:CB	29:S:534:OHX:N1	2.80	0.43
18:Q:42:LEU:O	18:Q:46:LYS:N	2.52	0.43
1:1:478:A:C2	1:1:510:G:C2	3.07	0.43
1:1:1294:G:N3	1:1:1295:G:C8	2.86	0.43
11:J:35:PRO:O	11:J:38:LEU:N	2.51	0.43
1:1:1228:G:C5	1:1:1229:G:C8	3.05	0.43
1:1:946:U:C2'	1:1:946:U:O2	2.66	0.43
21:T:215:GLY:O	21:T:218:GLY:N	2.52	0.43
1:1:1287:A:O2'	1:1:1288:G:C8	2.71	0.43
1:1:204:G:N2	1:1:264:G:C2	2.86	0.43
4:C:7:LYS:O	4:C:8:LYS:C	2.56	0.43
2:A:175:TYR:C	2:A:177:LEU:N	2.71	0.43
1:1:623:A:N1	1:1:1105:C:C4'	2.81	0.43
1:1:145:A:N1	1:1:171:A:N1	2.66	0.43
1:1:26:A:C8	1:1:26:A:OP2	2.72	0.43
1:1:634:G:C2	1:1:966:A:C5	3.06	0.43
1:1:1086:A:N7	1:1:1087:A:C5	2.87	0.43
1:1:9:U:C2	1:1:11:A:OP2	2.71	0.43
1:1:832:U:C3'	1:1:833:U:C5'	2.97	0.43
1:1:359:A:N3	1:1:359:A:C2'	2.82	0.43
1:1:550:A:O4'	1:1:556:A:C2	2.72	0.43
1:1:1552:U:C5'	1:1:1553:G:OP2	2.66	0.43
1:1:1377:U:C2'	1:1:1378:U:C4'	2.96	0.43
1:1:1124:A:N6	1:1:1125:A:N1	2.65	0.43
1:1:1592:A:C4	1:1:1593:A:C8	3.06	0.43
1:1:1115:U:C2'	1:1:1115:U:O2	2.65	0.43
1:1:407:A:C4	1:1:408:C:C5	3.06	0.43
8:G:126:ALA:O	8:G:127:ARG:C	2.57	0.43
16:O:85:ASP:O	16:O:88:LYS:N	2.51	0.43
1:1:702:G:N1	1:1:703:G:C6	2.86	0.43
1:1:1151:A:C2	1:1:1152:A:C8	3.07	0.43
1:1:1777:G:C6	1:1:1778:G:N7	2.87	0.43
1:1:123:G:N1	1:1:295:A:C6	2.86	0.43
1:1:295:A:O2'	1:1:296:U:O5'	2.37	0.43
1:1:93:A:C4	1:1:399:A:N3	2.86	0.43
1:1:204:G:N2	1:1:205:U:O2	2.51	0.43
1:1:269:G:C6	1:1:287:G:C2	3.06	0.43
1:1:60:U:O5'	1:1:454:U:O4'	2.37	0.43
1:1:896:U:C5	1:1:897:C:C4	3.06	0.43
1:1:938:G:N2	1:1:942:G:N3	2.65	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1116:A:C2	1:1:1117:U:C2	3.06	0.43
1:1:228:G:N1	1:1:229:U:C2	2.87	0.43
1:1:13:C:O2'	1:1:1298:U:N3	2.51	0.43
1:1:1723:U:C4	1:1:1724:U:C5	3.07	0.43
6:E:121:SER:O	6:E:122:VAL:C	2.57	0.43
1:1:1594:G:C6	1:1:1595:U:C2	3.06	0.43
5:D:91:GLU:O	5:D:92:ARG:C	2.56	0.43
1:1:1521:G:N1	29:1:1855:OHX:N6	2.67	0.43
1:1:1525:A:C2	1:1:1526:A:C5	3.06	0.43
1:1:528:U:O5'	1:1:529:A:C4'	2.66	0.43
11:J:92:TYR:CB	11:J:93:HIS:O	2.67	0.43
1:1:478:A:C2	1:1:479:C:N3	2.87	0.43
1:1:1219:A:N3	1:1:1219:A:O5'	2.51	0.43
1:1:1477:G:C2'	1:1:1478:G:C5'	2.96	0.43
1:1:948:G:C4	1:1:949:C:C5	3.07	0.43
3:B:152:HIS:C	3:B:154:LEU:N	2.71	0.43
1:1:133:U:C1'	1:1:134:U:P	3.06	0.43
4:C:102:ALA:O	4:C:106:LYS:CB	2.66	0.43
6:E:38:ASN:O	6:E:39:LYS:O	2.37	0.43
19:R:28:VAL:O	19:R:29:ARG:CB	2.66	0.43
1:1:73:U:C4	1:1:80:A:N6	2.82	0.43
1:1:1781:A:N1	1:1:1782:A:N1	2.66	0.43
1:1:623:A:O2'	1:1:624:G:C5'	2.66	0.43
1:1:1035:G:C6	1:1:1101:G:C6	3.07	0.43
1:1:1198:G:OP1	1:1:1200:G:N2	2.51	0.43
1:1:1201:G:N3	1:1:1201:G:O5'	2.52	0.43
1:1:1142:A:C2'	1:1:1143:A:O4'	2.67	0.43
1:1:841:U:O4	1:1:842:C:C4	2.72	0.43
1:1:1241:G:N3	1:1:1243:G:C8	2.87	0.43
1:1:558:U:N3	1:1:559:C:C4	2.87	0.43
1:1:782:U:C1'	1:1:783:G:OP2	2.67	0.43
1:1:276:C:O2'	1:1:277:U:O5'	2.37	0.43
1:1:1650:U:C2	1:1:1651:A:C8	3.06	0.43
1:1:551:G:C4'	1:1:581:U:O2	2.67	0.43
1:1:34:G:C4	1:1:35:U:C5	3.07	0.43
1:1:985:G:C6	1:1:986:G:O6	2.72	0.43
1:1:1265:G:C5	1:1:1266:U:C5	3.07	0.43
1:1:1265:G:C6	1:1:1266:U:C4	3.06	0.43
1:1:844:A:N7	29:1:1842:OHX:N2	2.66	0.43
1:1:1492:A:C1'	1:1:1493:A:O5'	2.67	0.43
1:1:1442:U:N3	1:1:1443:U:O4	2.52	0.43
1:1:755:A:C4	1:1:756:A:C8	3.06	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:446:A:C6	1:1:447:U:C4	3.07	0.43
1:1:976:G:C5'	1:1:977:A:OP1	2.66	0.43
1:1:615:A:N1	1:1:1107:G:C6	2.87	0.43
1:1:1196:A:O4'	1:1:1197:C:O5'	2.37	0.43
1:1:1685:G:C2	1:1:1719:A:N1	2.87	0.43
1:1:1686:C:C4	1:1:1687:U:O4	2.71	0.43
1:1:1723:U:N3	1:1:1724:U:C5	2.86	0.43
13:L:62:THR:O	13:L:65:GLU:CB	2.66	0.43
1:1:1366:U:O4	29:1:1845:OHX:N6	2.52	0.43
20:S:24:CYS:O	29:S:534:OHX:N2	2.52	0.43
6:E:61:THR:CB	6:E:62:ARG:CA	2.96	0.43
6:E:61:THR:CB	6:E:62:ARG:O	2.67	0.43
1:1:1254:U:O2'	1:1:1255:G:OP2	2.37	0.43
8:G:109:LYS:C	8:G:111:ALA:N	2.71	0.43
1:1:1324:G:O6	1:1:1325:A:N7	2.52	0.43
1:1:985:G:C6	1:1:986:G:C5	3.07	0.43
1:1:903:U:O4	9:H:50:ALA:O	2.36	0.43
1:1:819:G:N1	1:1:853:G:C2	2.87	0.43
17:P:79:ASN:C	17:P:81:LYS:N	2.72	0.43
21:T:297:ASP:O	21:T:299:GLN:N	2.52	0.43
1:1:1484:G:N3	1:1:1606:C:O2'	2.52	0.43
12:K:7:LYS:C	12:K:9:VAL:N	2.72	0.43
11:J:137:ARG:O	11:J:138:PHE:O	2.37	0.43
1:1:1760:G:O2'	1:1:1781:A:N1	2.52	0.43
1:1:647:G:C6	1:1:687:G:C6	3.07	0.43
9:H:25:ASP:O	9:H:26:THR:CB	2.66	0.43
1:1:898:A:N6	1:1:914:G:C2	2.87	0.43
1:1:614:C:N3	1:1:615:A:C8	2.87	0.43
1:1:1201:G:OP2	1:1:1201:G:C5	2.72	0.43
1:1:1118:G:C4	1:1:1119:G:C8	3.07	0.43
2:A:13:ASP:C	2:A:17:LEU:O	2.57	0.43
1:1:740:A:N1	1:1:741:C:C4	2.87	0.43
1:1:1671:A:C4	1:1:1731:A:N1	2.87	0.43
8:G:93:LYS:O	8:G:94:LYS:C	2.57	0.43
4:C:56:GLN:C	4:C:58:VAL:N	2.69	0.43
1:1:139:C:C5	1:1:176:C:C2	3.06	0.43
2:A:84:ARG:O	2:A:86:VAL:N	2.52	0.43
1:1:180:A:O2'	1:1:181:A:C8	2.71	0.43
21:T:86:ASP:O	21:T:87:LYS:CB	2.66	0.43
8:G:117:LEU:C	8:G:119:GLU:N	2.70	0.43
3:B:154:LEU:CB	3:B:169:LEU:C	2.87	0.43
17:P:52:ILE:O	17:P:74:VAL:CB	2.67	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1068:C:C2	1:1:1069:A:C8	3.06	0.43
1:1:104:A:C5	1:1:106:U:C6	3.06	0.43
1:1:125:U:C6	1:1:125:U:C5'	3.02	0.43
1:1:1116:A:C5	1:1:1131:A:N7	2.87	0.43
1:1:1121:C:O2	1:1:1127:G:C2	2.72	0.43
1:1:328:A:N1	1:1:329:G:C5	2.87	0.43
1:1:1429:G:N3	1:1:1430:U:C6	2.87	0.43
1:1:692:C:N3	1:1:693:U:N3	2.67	0.43
1:1:1346:A:N7	1:1:1347:U:N1	2.67	0.43
1:1:1364:G:C3'	1:1:1365:C:C5'	2.96	0.43
14:M:69:LYS:O	14:M:70:GLN:CB	2.66	0.43
1:1:247:A:C8	1:1:247:A:C3'	3.01	0.43
3:B:147:ASN:C	3:B:149:GLY:N	2.72	0.43
10:I:19:GLY:C	10:I:21:ASP:N	2.73	0.43
1:1:718:U:C5	1:1:722:G:C6	3.07	0.43
1:1:929:A:N7	1:1:930:A:C5	2.87	0.43
1:1:747:C:C2	1:1:748:U:C5	3.07	0.43
14:M:138:GLN:O	14:M:142:GLU:CB	2.67	0.43
10:I:78:THR:O	10:I:79:HIS:C	2.57	0.43
21:T:288:HIS:O	21:T:289:ALA:C	2.56	0.43
13:L:134:ARG:O	13:L:135:GLY:C	2.58	0.43
1:1:756:A:C4	1:1:757:A:C8	3.06	0.42
1:1:174:U:N3	1:1:175:G:N3	2.67	0.42
1:1:262:U:C4	1:1:263:C:C4	3.06	0.42
1:1:1201:G:C2'	1:1:1202:A:C4'	2.97	0.42
1:1:1558:U:C6	1:1:1559:A:C5'	3.02	0.42
1:1:168:A:C5	1:1:169:A:N6	2.87	0.42
1:1:1118:G:N3	1:1:1119:G:C8	2.87	0.42
1:1:468:A:O3'	1:1:469:C:C4	2.72	0.42
1:1:225:A:N1	1:1:836:U:O2	2.52	0.42
1:1:838:G:O6	29:1:1824:OHX:N5	2.52	0.42
1:1:841:U:C4	1:1:842:C:N3	2.87	0.42
1:1:259:U:O2'	1:1:260:U:OP1	2.37	0.42
1:1:1369:U:O2	1:1:1370:U:N3	2.52	0.42
1:1:1515:A:C6	15:N:16:GLN:O	2.72	0.42
1:1:476:U:OP1	1:1:477:A:O2'	2.36	0.42
1:1:1232:U:OP1	1:1:1258:U:O2'	2.37	0.42
1:1:888:U:C5'	1:1:889:U:OP2	2.67	0.42
5:D:164:PRO:C	5:D:166:ARG:N	2.72	0.42
1:1:1294:G:C4	1:1:1295:G:C8	3.07	0.42
1:1:716:C:N4	1:1:720:G:C2	2.87	0.42
1:1:930:A:C5'	1:1:931:C:OP2	2.67	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:I:115:TYR:O	10:I:116:LEU:C	2.57	0.42
21:T:27:ALA:O	21:T:28:GLY:C	2.57	0.42
1:1:1503:A:C2	10:I:13:LYS:CB	3.02	0.42
9:H:17:ALA:N	9:H:80:HIS:O	2.51	0.42
14:M:35:ASP:O	14:M:36:ILE:CB	2.68	0.42
1:1:1118:G:C2	1:1:1119:G:N9	2.87	0.42
1:1:1118:G:C2	1:1:1119:G:C5	3.06	0.42
1:1:332:U:N3	1:1:335:U:OP2	2.52	0.42
1:1:228:G:C4	1:1:229:U:C5	3.07	0.42
1:1:1683:C:O2	1:1:1720:G:N7	2.51	0.42
1:1:737:A:C2	1:1:738:G:C5	3.07	0.42
1:1:1480:G:C2	1:1:1528:U:C2	3.07	0.42
1:1:1160:A:C6	1:1:1161:C:N4	2.87	0.42
1:1:1662:G:O2'	1:1:1663:G:C5'	2.67	0.42
1:1:1336:A:N6	1:1:1416:G:O6	2.52	0.42
13:L:50:ALA:C	13:L:52:VAL:N	2.71	0.42
1:1:1462:G:C6	1:1:1463:C:C4	3.08	0.42
1:1:629:U:O2	1:1:971:A:N3	2.52	0.42
1:1:795:U:C6	1:1:796:A:C8	3.07	0.42
13:L:114:GLU:C	13:L:116:LEU:N	2.70	0.42
1:1:749:U:N3	1:1:801:G:C6	2.87	0.42
1:1:1494:C:C2'	1:1:1495:C:O5'	2.67	0.42
20:S:51:GLY:O	20:S:52:PHE:C	2.58	0.42
16:O:7:LEU:C	16:O:9:ASP:N	2.73	0.42
1:1:243:G:N1	1:1:251:A:C5	2.85	0.42
1:1:101:U:C2'	1:1:102:U:O5'	2.68	0.42
1:1:288:A:O2'	1:1:289:U:P	2.78	0.42
1:1:1508:U:C4	29:1:1811:OHX:N6	2.87	0.42
1:1:1458:G:C2	1:1:1459:C:C4	3.07	0.42
1:1:333:A:N1	1:1:334:G:N1	2.67	0.42
1:1:33:U:C1'	1:1:468:A:C2	3.03	0.42
1:1:1428:G:C2	1:1:1429:G:C8	3.07	0.42
1:1:311:U:O2'	1:1:312:A:O5'	2.36	0.42
1:1:356:G:C6	1:1:357:G:C5	3.07	0.42
1:1:1213:G:O2'	1:1:1245:G:N2	2.53	0.42
1:1:1241:G:C2	1:1:1243:G:O5'	2.73	0.42
1:1:1657:U:C1'	1:1:1658:G:OP2	2.68	0.42
14:M:132:LEU:O	14:M:133:ASP:C	2.57	0.42
3:B:124:ALA:O	3:B:126:ARG:N	2.53	0.42
1:1:1521:G:O6	29:1:1855:OHX:N6	2.51	0.42
1:1:283:U:C5'	1:1:284:G:OP2	2.67	0.42
1:1:802:G:C2	1:1:803:A:C2	3.07	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1573:A:O4'	1:1:1574:G:C2	2.72	0.42
1:1:524:U:C2	1:1:527:A:C2	3.07	0.42
1:1:1047:G:N2	1:1:1071:U:O2	2.53	0.42
1:1:1065:A:C6	1:1:1066:C:C4	3.07	0.42
1:1:1066:C:N3	1:1:1067:C:C6	2.88	0.42
1:1:1486:G:C6	1:1:1487:A:C6	3.07	0.42
1:1:1575:G:N2	1:1:1576:A:O4'	2.52	0.42
1:1:908:U:C5	1:1:909:U:C5	3.07	0.42
1:1:568:G:C2	1:1:569:C:C5	3.07	0.42
15:N:32:LYS:O	15:N:34:LEU:N	2.52	0.42
1:1:503:G:C5	1:1:504:U:C6	3.07	0.42
5:D:136:ALA:C	5:D:138:THR:N	2.72	0.42
1:1:885:G:C2	1:1:886:U:N3	2.86	0.42
1:1:156:A:C6	1:1:157:A:C6	3.08	0.42
1:1:1765:A:P	29:1:1841:OHX:N5	2.92	0.42
1:1:201:G:C2	1:1:202:A:C2	3.07	0.42
2:A:172:LEU:O	2:A:176:LEU:N	2.52	0.42
1:1:1032:G:C2	1:1:1033:C:C4	3.07	0.42
1:1:1201:G:C4	1:1:1201:G:C3'	3.00	0.42
1:1:1209:C:N3	1:1:1210:C:C5	2.88	0.42
1:1:1138:A:C2	1:1:1139:A:C4	3.07	0.42
1:1:16:G:O2'	1:1:17:C:O4'	2.37	0.42
1:1:1045:C:O2'	1:1:1046:G:OP1	2.37	0.42
1:1:1074:G:N7	29:1:1849:OHX:N1	2.67	0.42
3:B:185:LYS:O	3:B:187:LEU:N	2.52	0.42
1:1:1382:A:C2	1:1:1383:G:C5	3.07	0.42
1:1:1170:G:N7	1:1:1574:G:C8	2.87	0.42
1:1:337:G:O5'	1:1:337:G:C8	2.72	0.42
1:1:922:G:O2'	1:1:923:A:OP2	2.37	0.42
1:1:1192:C:OP2	1:1:1193:A:O2'	2.37	0.42
1:1:1512:G:C5	1:1:1513:G:N7	2.87	0.42
6:E:136:VAL:O	6:E:137:GLY:C	2.58	0.42
1:1:646:C:C2'	1:1:647:G:C5'	2.98	0.42
1:1:204:G:C2	1:1:205:U:C2	3.07	0.42
1:1:267:U:OP2	1:1:267:U:C6	2.73	0.42
1:1:898:A:N6	1:1:912:U:C2	2.87	0.42
1:1:1025:A:N7	1:1:1027:A:N9	2.68	0.42
1:1:321:C:O2'	1:1:322:G:C5'	2.67	0.42
1:1:1275:A:C6	1:1:1438:G:C6	3.08	0.42
1:1:1378:U:O2	1:1:1378:U:C2'	2.67	0.42
1:1:1366:U:C4	1:1:1367:G:N7	2.87	0.42
5:D:113:ILE:O	5:D:114:ILE:C	2.56	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1651:A:N1	1:1:1652:C:C4	2.87	0.42
1:1:1306:C:C4	1:1:1319:A:N1	2.88	0.42
1:1:434:G:N2	1:1:437:A:C2	2.87	0.42
5:D:60:ASP:O	5:D:61:TYR:CB	2.67	0.42
21:T:139:GLN:O	21:T:141:LEU:N	2.52	0.42
1:1:632:U:C2'	1:1:633:U:O5'	2.67	0.42
1:1:249:U:C6	1:1:249:U:P	3.13	0.42
1:1:151:G:C6	1:1:164:A:C6	3.07	0.42
1:1:1636:C:C4	1:1:1638:G:N3	2.88	0.42
1:1:104:A:N7	1:1:106:U:C5	2.88	0.42
1:1:446:A:C6	1:1:447:U:C5	3.08	0.42
1:1:940:A:N1	1:1:941:A:C5	2.87	0.42
1:1:938:G:C2	1:1:942:G:C5	3.08	0.42
1:1:1250:U:C2	1:1:1251:U:C2	3.08	0.42
1:1:469:C:O2'	1:1:470:A:C2	2.73	0.42
1:1:1474:G:C4	1:1:1475:A:N7	2.88	0.42
1:1:871:G:C6	1:1:957:G:N1	2.88	0.42
1:1:1348:A:P	15:N:12:GLN:O	2.78	0.42
20:S:42:CYS:O	20:S:45:GLU:N	2.53	0.42
20:S:38:ILE:N	29:S:534:OHX:N5	2.67	0.42
1:1:273:G:O2'	1:1:274:G:P	2.77	0.42
1:1:1573:A:C4'	1:1:1574:G:OP2	2.68	0.42
1:1:760:A:C6	1:1:791:A:C6	3.08	0.42
1:1:1538:U:C6	1:1:1538:U:C3'	3.02	0.42
1:1:78:A:OP1	1:1:78:A:C2	2.72	0.42
1:1:1783:C:N3	1:1:1784:C:C5	2.88	0.42
1:1:492:A:N7	1:1:494:U:OP2	2.53	0.42
1:1:853:G:C6	1:1:854:U:O4	2.73	0.42
15:N:31:VAL:O	15:N:32:LYS:C	2.58	0.42
1:1:715:U:N3	1:1:724:C:N4	2.68	0.42
6:E:26:ALA:C	6:E:28:LEU:N	2.72	0.42
14:M:99:SER:CA	14:M:102:ARG:CB	2.98	0.42
13:L:24:GLY:O	13:L:25:ASN:CB	2.67	0.42
5:D:208:SER:CB	5:D:209:TYR:CA	2.98	0.42
1:1:86:A:O4'	1:1:148:A:O2'	2.38	0.42
1:1:102:U:O4	1:1:360:A:C8	2.72	0.42
1:1:1096:C:C2'	1:1:1100:G:OP2	2.68	0.42
1:1:328:A:C6	1:1:329:G:C5	3.07	0.42
1:1:549:G:N3	1:1:550:A:C8	2.88	0.42
1:1:1793:G:C4	1:1:1794:A:C8	3.07	0.42
1:1:606:A:N9	1:1:608:U:C5	2.88	0.42
9:H:71:CYS:C	9:H:73:GLU:N	2.73	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:J:53:LEU:O	11:J:56:GLY:N	2.52	0.42
3:B:130:ILE:O	3:B:133:LYS:CB	2.68	0.42
1:1:514:G:N7	1:1:538:A:C2	2.87	0.42
1:1:433:C:N4	1:1:434:G:C6	2.88	0.42
1:1:1401:A:N7	1:1:1402:G:N9	2.68	0.42
1:1:889:U:O2'	1:1:890:C:C5'	2.68	0.42
1:1:195:G:N2	1:1:196:G:C4	2.87	0.42
1:1:713:A:C6	1:1:714:G:C8	3.07	0.42
17:P:43:PHE:O	17:P:45:GLY:N	2.53	0.42
5:D:132:VAL:O	5:D:136:ALA:N	2.53	0.42
10:I:109:PRO:O	10:I:110:GLU:C	2.58	0.42
13:L:105:VAL:O	13:L:106:GLU:C	2.57	0.42
1:1:248:U:C1'	1:1:249:U:OP1	2.68	0.42
1:1:1150:G:C2'	1:1:1151:A:O5'	2.68	0.42
1:1:44:U:C5'	1:1:45:U:C4	3.03	0.42
1:1:142:G:C4	1:1:266:A:N6	2.87	0.42
1:1:1753:A:C2'	1:1:1753:A:N3	2.83	0.42
1:1:1297:G:C2	1:1:1301:U:N3	2.87	0.42
1:1:1467:C:O2'	1:1:1468:U:C5'	2.68	0.42
1:1:1075:C:N4	1:1:1076:A:N1	2.67	0.42
1:1:1347:U:O3'	1:1:1348:A:N7	2.52	0.42
2:A:11:PRO:O	2:A:14:ALA:N	2.53	0.42
14:M:130:ARG:C	14:M:132:LEU:N	2.72	0.42
1:1:1365:C:N4	1:1:1366:U:C5	2.88	0.42
1:1:1390:U:C2'	1:1:1391:A:OP2	2.67	0.42
1:1:774:A:C2	1:1:775:G:C1'	3.02	0.42
1:1:389:G:C5	1:1:390:G:C6	3.07	0.42
14:M:58:ALA:C	14:M:60:SER:N	2.71	0.42
1:1:1400:A:C2	1:1:1401:A:C4	3.08	0.42
1:1:1179:G:C6	1:1:1180:C:N3	2.88	0.42
1:1:1545:A:OP1	13:L:132:ARG:CA	2.68	0.42
2:A:84:ARG:C	2:A:86:VAL:N	2.73	0.42
1:1:806:A:C4	1:1:807:A:N7	2.88	0.42
14:M:29:GLU:O	14:M:30:VAL:C	2.58	0.42
3:B:206:THR:O	3:B:207:LEU:C	2.57	0.42
1:1:1512:G:C6	1:1:1513:G:C5	3.08	0.42
1:1:1667:A:C4	1:1:1668:G:N7	2.87	0.42
12:K:19:ARG:O	12:K:21:TYR:N	2.53	0.42
18:Q:66:VAL:C	18:Q:68:ARG:N	2.72	0.42
1:1:1558:U:C2'	1:1:1559:A:C2	3.03	0.42
1:1:590:C:C2	1:1:591:A:C8	3.07	0.42
1:1:1691:A:N6	1:1:1713:G:C4	2.88	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:M:111:ILE:O	14:M:113:ILE:N	2.53	0.42
1:1:1645:G:C6	1:1:1757:G:C6	3.07	0.42
1:1:1334:U:O2	1:1:1334:U:C2'	2.67	0.42
13:L:121:ALA:C	13:L:123:ARG:N	2.73	0.42
1:1:209:U:C4	1:1:210:A:N7	2.88	0.42
1:1:1176:G:N3	1:1:1464:G:C2	2.88	0.42
1:1:929:A:C5	1:1:930:A:C5	3.07	0.42
8:G:112:LYS:O	8:G:114:ARG:N	2.53	0.42
13:L:35:ILE:O	13:L:36:LYS:C	2.58	0.42
16:O:29:PRO:O	16:O:57:ARG:O	2.37	0.42
13:L:43:SER:O	13:L:47:CYS:CB	2.67	0.42
1:1:747:C:C4	1:1:748:U:C4	3.07	0.42
21:T:95:ALA:C	21:T:97:GLY:N	2.73	0.42
1:1:1617:U:O2'	1:1:1618:C:C5'	2.68	0.42
10:I:27:GLU:O	10:I:29:SER:N	2.53	0.42
1:1:1149:G:N2	1:1:1151:A:C6	2.88	0.42
1:1:649:U:C6	1:1:650:U:C5	3.08	0.42
1:1:363:G:C2	1:1:382:C:N3	2.88	0.42
1:1:387:A:N3	1:1:402:C:C5	2.88	0.42
1:1:55:A:C5	1:1:403:G:C2	3.08	0.42
1:1:129:U:C6	1:1:264:G:O6	2.72	0.42
1:1:445:A:C2	1:1:446:A:N7	2.88	0.42
1:1:1498:G:N2	1:1:1499:G:C8	2.88	0.42
1:1:1097:U:O2	1:1:1097:U:C2'	2.67	0.42
1:1:841:U:C5	1:1:842:C:C5	3.07	0.42
1:1:355:G:C2	1:1:356:G:N9	2.88	0.42
1:1:1245:G:N7	1:1:1246:C:C5	2.88	0.42
1:1:955:A:C4'	1:1:1074:G:O2'	2.67	0.42
13:L:64:GLU:O	13:L:65:GLU:O	2.37	0.42
1:1:1592:A:C5	1:1:1605:G:N2	2.88	0.42
1:1:519:C:C2	1:1:520:A:C8	3.08	0.42
1:1:760:A:C2	1:1:791:A:N3	2.88	0.42
1:1:707:A:C4	1:1:731:C:N4	2.88	0.42
16:O:14:ILE:O	16:O:15:ASN:C	2.58	0.42
8:G:114:ARG:C	8:G:116:ILE:N	2.72	0.42
1:1:752:A:C6	1:1:753:A:C6	3.08	0.42
1:1:74:U:O2'	1:1:75:U:OP2	2.37	0.42
1:1:1742:U:C2	1:1:1743:U:C6	3.07	0.42
6:E:42:ILE:O	6:E:45:ILE:CB	2.68	0.42
21:T:13:LEU:N	21:T:310:ILE:O	2.52	0.42
11:J:131:GLY:O	11:J:132:LYS:C	2.59	0.42
1:1:114:C:N4	1:1:250:C:O4'	2.53	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:999:U:C2	1:1:1000:C:O2	2.72	0.41
1:1:362:G:O6	1:1:363:G:C6	2.73	0.41
1:1:380:U:O2'	1:1:381:C:O4'	2.38	0.41
1:1:382:C:C2'	1:1:382:C:O2	2.68	0.41
1:1:487:G:N2	1:1:488:G:C5	2.88	0.41
1:1:1556:A:N1	1:1:1560:U:O2'	2.53	0.41
1:1:116:U:O2'	1:1:333:A:N3	2.53	0.41
1:1:1275:A:C8	1:1:1438:G:C2	3.08	0.41
1:1:356:G:C4	1:1:357:G:C8	3.08	0.41
1:1:356:G:C5	1:1:357:G:C8	3.07	0.41
1:1:1472:C:O2	1:1:1472:C:C2'	2.67	0.41
1:1:1333:C:C2	1:1:1419:G:C2	3.07	0.41
1:1:1282:U:N3	1:1:1283:U:C5	2.88	0.41
1:1:1535:U:N3	5:D:186:ASN:O	2.53	0.41
1:1:1172:G:C5	1:1:1173:C:N4	2.87	0.41
2:A:86:VAL:O	2:A:87:LEU:C	2.58	0.41
1:1:1667:A:N1	1:1:1668:G:C6	2.87	0.41
17:P:48:HIS:O	17:P:49:ALA:CB	2.68	0.41
6:E:33:GLU:O	6:E:35:GLY:N	2.54	0.41
1:1:105:A:C6	29:1:1812:OHX:N4	2.88	0.41
1:1:53:G:C5	1:1:54:C:C5	3.08	0.41
1:1:757:A:N7	1:1:758:U:C5	2.89	0.41
1:1:1554:U:C5'	1:1:1555:A:OP2	2.68	0.41
1:1:1121:C:N3	1:1:1127:G:C6	2.88	0.41
1:1:856:A:C2'	1:1:856:A:N3	2.83	0.41
1:1:1109:G:C4	1:1:1137:A:N1	2.88	0.41
1:1:350:U:O4'	1:1:352:A:C5	2.73	0.41
1:1:1351:G:C2'	1:1:1352:G:O4'	2.68	0.41
1:1:24:U:O2'	1:1:25:C:C6	2.73	0.41
1:1:1181:U:C2'	1:1:1182:U:O5'	2.68	0.41
1:1:1533:C:C5'	1:1:1534:G:OP2	2.68	0.41
1:1:704:C:O4'	1:1:705:U:OP1	2.37	0.41
5:D:166:ARG:O	5:D:167:ARG:C	2.58	0.41
1:1:902:G:C8	1:1:902:G:O5'	2.74	0.41
16:O:14:ILE:O	16:O:17:ALA:N	2.53	0.41
2:A:96:THR:O	2:A:97:PRO:O	2.38	0.41
2:A:167:LYS:O	2:A:168:HIS:CB	2.67	0.41
1:1:65:A:O2'	1:1:70:C:N4	2.53	0.41
1:1:267:U:O4	1:1:268:C:N3	2.53	0.41
1:1:461:G:C2	1:1:462:G:C5	3.08	0.41
9:H:11:SER:CB	9:H:12:GLN:CA	2.98	0.41
1:1:612:U:OP1	1:1:1100:G:N2	2.53	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:330:G:C4	1:1:331:A:N7	2.88	0.41
1:1:33:U:C6	1:1:33:U:C3'	3.03	0.41
1:1:1139:A:C2'	1:1:1140:G:C5'	2.97	0.41
1:1:1269:U:C4'	1:1:1270:G:O5'	2.68	0.41
1:1:641:G:C2	1:1:642:G:N7	2.88	0.41
1:1:1246:C:C5	1:1:1247:U:C4	3.08	0.41
1:1:1602:C:C2	1:1:1603:U:C6	3.07	0.41
1:1:1347:U:C2	1:1:1349:G:O6	2.73	0.41
1:1:1717:G:O6	1:1:1718:G:N2	2.53	0.41
1:1:1719:A:O3'	1:1:1720:G:O4'	2.38	0.41
1:1:1255:G:P	1:1:1255:G:O4'	2.78	0.41
1:1:1317:C:OP2	29:1:1839:OHX:N6	2.53	0.41
1:1:518:A:N6	1:1:535:A:N9	2.68	0.41
1:1:407:A:C5	1:1:408:C:C5	3.08	0.41
1:1:1325:A:N3	1:1:1326:A:N7	2.67	0.41
16:O:105:THR:O	16:O:106:THR:O	2.39	0.41
1:1:586:G:C2'	1:1:587:C:O5'	2.68	0.41
1:1:880:C:C2	1:1:881:A:C8	3.07	0.41
13:L:109:LEU:O	13:L:110:ARG:C	2.58	0.41
1:1:1501:C:C2'	1:1:1502:G:C5'	2.98	0.41
1:1:804:A:C4	1:1:805:U:C5	3.08	0.41
1:1:1267:G:C2	1:1:1268:G:C4	3.08	0.41
1:1:123:G:N1	1:1:295:A:N6	2.68	0.41
1:1:381:C:O2'	1:1:756:A:C2	2.74	0.41
1:1:755:A:C4	1:1:756:A:C5	3.09	0.41
1:1:1092:A:C2	1:1:1094:G:C5	3.09	0.41
1:1:1141:G:C4	1:1:1142:A:C8	3.08	0.41
6:E:59:LEU:C	6:E:61:THR:N	2.73	0.41
1:1:545:A:C2	1:1:546:U:C2	3.07	0.41
1:1:1662:G:C2	1:1:1663:G:N7	2.89	0.41
8:G:69:ASN:O	8:G:71:ILE:N	2.54	0.41
16:O:112:ASP:O	16:O:115:GLU:N	2.52	0.41
1:1:1776:A:C2	1:1:1786:G:C5	3.08	0.41
1:1:1277:G:C6	1:1:1278:G:N3	2.88	0.41
1:1:946:U:N3	1:1:947:U:C4	2.88	0.41
17:P:46:SER:C	17:P:48:HIS:N	2.74	0.41
15:N:20:ILE:CB	15:N:21:LYS:CA	2.99	0.41
17:P:123:LYS:O	17:P:124:VAL:O	2.38	0.41
17:P:137:LYS:O	17:P:138:GLU:O	2.38	0.41
1:1:823:G:O2'	1:1:824:G:P	2.79	0.41
1:1:243:G:N2	1:1:251:A:C4	2.88	0.41
1:1:296:U:C6	1:1:297:U:C5	3.09	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:93:A:C8	1:1:398:G:C2'	3.03	0.41
1:1:172:C:C2	1:1:173:A:C8	3.09	0.41
1:1:1207:C:O2	1:1:1455:G:C2	2.73	0.41
1:1:1131:A:N3	1:1:1131:A:C2'	2.84	0.41
1:1:813:U:O2'	1:1:814:A:OP1	2.38	0.41
1:1:812:A:C6	1:1:859:A:C5	3.08	0.41
1:1:868:G:O6	1:1:960:U:O4	2.38	0.41
1:1:221:A:N7	1:1:832:U:C4	2.88	0.41
1:1:1042:G:C4	1:1:1043:A:C8	3.08	0.41
1:1:737:A:C2	1:1:738:G:C6	3.09	0.41
1:1:20:G:C4'	1:1:571:G:C2	3.04	0.41
1:1:552:G:C6	1:1:553:G:N1	2.89	0.41
1:1:391:A:C2	1:1:392:G:C4	3.08	0.41
1:1:1398:U:O2'	1:1:1399:C:C3'	2.69	0.41
1:1:1190:C:N3	1:1:1194:A:C2	2.89	0.41
1:1:413:U:N3	1:1:421:A:C2	2.88	0.41
1:1:926:A:C5	1:1:927:C:C5	3.09	0.41
21:T:93:ASP:O	21:T:95:ALA:N	2.53	0.41
1:1:1742:U:C4	1:1:1743:U:C5	3.09	0.41
8:G:150:VAL:O	8:G:151:ASN:O	2.39	0.41
8:G:42:ARG:O	8:G:45:LEU:N	2.54	0.41
4:C:174:HIS:O	4:C:175:VAL:CB	2.68	0.41
3:B:45:VAL:O	3:B:46:LYS:CB	2.68	0.41
15:N:68:ARG:CA	15:N:79:TRP:CA	2.99	0.41
1:1:65:A:C2	1:1:84:A:N6	2.89	0.41
1:1:80:A:C2	1:1:81:G:C5	3.08	0.41
1:1:1146:G:C6	1:1:1147:A:C6	3.09	0.41
1:1:1780:G:C5	1:1:1781:A:C5	3.09	0.41
1:1:647:G:C2	1:1:648:G:N1	2.87	0.41
1:1:103:A:N7	1:1:360:A:C6	2.89	0.41
1:1:198:A:C1'	1:1:199:G:OP1	2.68	0.41
1:1:144:U:C4	1:1:145:A:C8	3.08	0.41
1:1:328:A:C2	1:1:329:G:C5	3.08	0.41
1:1:469:C:P	1:1:469:C:N3	2.93	0.41
1:1:1297:G:C3'	1:1:1297:G:C8	3.03	0.41
1:1:1297:G:N2	1:1:1301:U:C6	2.88	0.41
1:1:859:A:C4'	1:1:860:U:OP2	2.67	0.41
1:1:1087:A:C5	1:1:1088:A:C5	3.08	0.41
1:1:12:U:C2	1:1:1143:A:C2	3.09	0.41
1:1:13:C:C4	1:1:14:C:C5	3.09	0.41
1:1:312:A:C6	1:1:315:A:N7	2.89	0.41
1:1:1348:A:N3	1:1:1379:C:C6	2.88	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:1679:G:O6	1:1:1724:U:O2	2.38	0.41
1:1:276:C:O2'	1:1:277:U:OP2	2.38	0.41
1:1:536:C:C4	1:1:537:G:N7	2.89	0.41
1:1:1750:A:N7	1:1:1751:C:C5	2.88	0.41
6:E:100:LYS:O	6:E:101:VAL:C	2.58	0.41
1:1:210:A:C6	1:1:256:A:C6	3.08	0.41
1:1:1308:G:C4	1:1:1309:C:C6	3.09	0.41
1:1:111:U:O4	1:1:112:A:N6	2.53	0.41
1:1:1623:C:C2'	1:1:1623:C:O2	2.68	0.41
1:1:1587:A:C4	1:1:1588:G:C8	3.09	0.41
14:M:27:LYS:C	14:M:29:GLU:N	2.74	0.41
1:1:1221:A:C2'	1:1:1222:C:C6	3.04	0.41
1:1:158:U:O2'	1:1:159:U:O5'	2.38	0.41
21:T:140:CYS:O	21:T:141:LEU:C	2.59	0.41
12:K:67:ARG:O	12:K:68:GLY:C	2.58	0.41
21:T:267:PRO:C	21:T:269:TYR:N	2.73	0.41
1:1:51:A:C6	1:1:52:U:C2	3.09	0.41
1:1:85:A:C4	1:1:86:A:C8	3.09	0.41
1:1:1631:A:N6	1:1:1632:C:O2	2.53	0.41
1:1:647:G:C6	1:1:648:G:O6	2.74	0.41
1:1:425:A:C2'	1:1:426:G:OP2	2.68	0.41
1:1:175:G:C8	29:1:1820:OHX:N2	2.88	0.41
1:1:265:A:C8	1:1:290:G:N2	2.89	0.41
1:1:287:G:O6	1:1:288:A:N6	2.54	0.41
1:1:341:A:N3	1:1:342:C:C6	2.88	0.41
1:1:28:A:C4	1:1:29:U:C5	3.08	0.41
1:1:1139:A:OP2	29:1:1892:OHX:N5	2.54	0.41
1:1:1602:C:C3'	1:1:1603:U:C6	3.03	0.41
1:1:1345:A:C2'	1:1:1346:A:N7	2.84	0.41
1:1:1682:U:N3	1:1:1683:C:N4	2.69	0.41
1:1:1687:U:C5	1:1:1688:U:C2	3.08	0.41
5:D:107:LYS:O	5:D:108:LEU:O	2.39	0.41
1:1:1231:U:O2'	1:1:1232:U:P	2.79	0.41
1:1:706:A:C5	1:1:707:A:C5	3.09	0.41
4:C:104:SER:O	4:C:105:MET:C	2.58	0.41
1:1:891:A:N6	1:1:922:G:O6	2.53	0.41
1:1:195:G:C1'	1:1:196:G:P	3.09	0.41
5:D:122:ASN:O	5:D:123:VAL:C	2.59	0.41
1:1:1635:A:C8	1:1:1635:A:O5'	2.74	0.41
1:1:401:A:N3	1:1:404:G:N7	2.69	0.41
1:1:173:A:N6	1:1:174:U:C5	2.88	0.41
1:1:1054:U:C2	1:1:1055:U:C5	3.09	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:321:C:C2'	1:1:322:G:C5'	2.99	0.41
1:1:222:A:OP2	1:1:833:U:C6	2.74	0.41
1:1:838:G:C2	1:1:839:U:N1	2.89	0.41
1:1:620:A:C5	1:1:621:A:C2	3.09	0.41
1:1:1269:U:C2	1:1:1432:U:O4'	2.74	0.41
1:1:1363:U:N3	1:1:1364:G:C5	2.89	0.41
5:D:89:ILE:O	5:D:91:GLU:N	2.53	0.41
1:1:520:A:C2'	1:1:521:A:C8	3.03	0.41
1:1:1047:G:C4	1:1:1048:G:C8	3.08	0.41
3:B:59:HIS:CB	3:B:61:LEU:O	2.68	0.41
1:1:1085:G:N7	29:1:1810:OHX:N2	2.69	0.41
1:1:1218:G:N2	1:1:1443:U:O2'	2.53	0.41
11:J:74:HIS:O	11:J:75:VAL:C	2.59	0.41
21:T:256:THR:O	21:T:259:GLY:N	2.54	0.41
21:T:268:GLN:O	21:T:270:LEU:N	2.53	0.41
5:D:220:VAL:O	5:D:222:LYS:N	2.54	0.41
21:T:6:VAL:O	21:T:7:LEU:C	2.59	0.41
1:1:827:C:O2	1:1:828:U:O2	2.39	0.41
1:1:827:C:O2'	1:1:828:U:OP1	2.38	0.41
1:1:72:A:C2	1:1:73:U:N1	2.89	0.41
1:1:70:C:N4	1:1:71:A:N6	2.68	0.41
1:1:1151:A:N3	1:1:1152:A:C8	2.89	0.41
1:1:1631:A:N3	1:1:1632:C:C1'	2.84	0.41
1:1:1765:A:C2	1:1:1768:G:N2	2.88	0.41
1:1:405:C:C2	1:1:406:U:C5	3.09	0.41
1:1:295:A:N1	1:1:296:U:O2	2.54	0.41
1:1:1094:G:C2'	1:1:1095:U:C5	3.03	0.41
1:1:1035:G:N1	1:1:1101:G:C6	2.89	0.41
1:1:611:U:O2	7:F:96:LYS:CA	2.69	0.41
1:1:1205:C:OP2	1:1:1455:G:O6	2.39	0.41
1:1:1185:U:C4'	1:1:1186:U:OP2	2.68	0.41
1:1:1454:G:N2	1:1:1455:G:C1'	2.84	0.41
1:1:1458:G:OP1	13:L:138:THR:O	2.39	0.41
1:1:507:U:P	1:1:540:G:O6	2.79	0.41
1:1:225:A:N3	1:1:226:A:C8	2.88	0.41
3:B:163:GLY:CA	3:B:203:LYS:CB	2.99	0.41
1:1:1599:C:O2	1:1:1600:A:N1	2.54	0.41
1:1:1045:C:N4	1:1:1075:C:N3	2.69	0.41
1:1:1474:G:N1	1:1:1475:A:C6	2.89	0.41
1:1:1348:A:C8	1:1:1349:G:C5'	3.04	0.41
1:1:1681:A:C5'	1:1:1682:U:OP2	2.68	0.41
1:1:607:G:C5'	1:1:613:G:N2	2.83	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:607:G:N7	1:1:613:G:N9	2.69	0.41
1:1:741:C:O2'	1:1:742:U:O4'	2.38	0.41
20:S:38:ILE:O	20:S:39:CYS:C	2.58	0.41
1:1:552:G:C6	1:1:553:G:C6	3.09	0.41
1:1:529:A:OP2	1:1:529:A:O4'	2.39	0.41
1:1:1744:A:N6	1:1:1745:G:N1	2.68	0.41
11:J:91:ALA:O	11:J:92:TYR:CB	2.69	0.41
1:1:1749:A:C2'	1:1:1750:A:O5'	2.68	0.41
1:1:986:G:C8	1:1:986:G:O5'	2.74	0.41
1:1:704:C:C2	1:1:705:U:C5	3.09	0.41
1:1:1607:G:N3	1:1:1608:U:C6	2.89	0.41
16:O:102:VAL:N	16:O:113:HIS:CB	2.83	0.41
1:1:1776:A:C2	1:1:1786:G:C6	3.08	0.41
1:1:806:A:C6	1:1:807:A:N6	2.89	0.41
1:1:753:A:O2'	1:1:754:A:O5'	2.38	0.41
13:L:108:LYS:O	13:L:109:LEU:C	2.59	0.41
1:1:747:C:C2	1:1:748:U:C6	3.09	0.41
8:G:42:ARG:O	8:G:43:LYS:C	2.59	0.41
2:A:103:THR:O	2:A:104:PRO:C	2.59	0.41
1:1:282:C:C2'	1:1:282:C:O2	2.69	0.41
18:Q:80:LEU:O	18:Q:83:LEU:N	2.54	0.41
1:1:147:A:C5	1:1:148:A:C5	3.09	0.41
1:1:340:U:C4	1:1:341:A:N7	2.89	0.41
1:1:345:U:C4'	1:1:346:G:OP1	2.69	0.41
1:1:1141:G:C2	1:1:1142:A:C8	3.08	0.41
1:1:1429:G:C4	1:1:1430:U:C6	3.09	0.41
1:1:1552:U:O2	1:1:1553:G:C1'	2.69	0.41
1:1:1345:A:C2'	1:1:1346:A:C5	3.04	0.41
1:1:22:A:C5	1:1:604:A:N1	2.89	0.41
1:1:1364:G:C2'	1:1:1365:C:C5'	2.99	0.41
1:1:1744:A:C6	1:1:1745:G:C6	3.09	0.41
1:1:1672:G:C6	1:1:1673:G:O6	2.74	0.41
2:A:52:LYS:O	2:A:54:TRP:N	2.54	0.41
1:1:111:U:C6	1:1:304:U:C4	3.09	0.41
1:1:720:G:C1'	1:1:721:U:O5'	2.69	0.41
1:1:945:U:O2	1:1:946:U:C6	2.74	0.41
1:1:1015:U:OP1	29:1:1833:OHX:N5	2.54	0.41
11:J:106:LYS:O	11:J:108:ALA:N	2.54	0.41
2:A:68:PRO:C	2:A:70:PRO:N	2.73	0.41
21:T:3:SER:O	21:T:4:ASN:C	2.60	0.41
1:1:1764:C:OP2	1:1:1771:U:C5'	2.70	0.40
1:1:648:G:C2	1:1:649:U:C6	3.09	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:121:U:C2'	1:1:122:U:O5'	2.69	0.40
1:1:268:C:C4	1:1:288:A:C2	3.09	0.40
1:1:1560:U:O5'	1:1:1560:U:N1	2.55	0.40
1:1:341:A:C6	1:1:342:C:N4	2.89	0.40
1:1:223:U:C5'	1:1:224:C:OP2	2.69	0.40
1:1:228:G:C2	1:1:229:U:O2	2.74	0.40
1:1:1241:G:C4	1:1:1243:G:OP2	2.73	0.40
3:B:188:LEU:O	3:B:190:LEU:N	2.54	0.40
1:1:1527:C:C2'	1:1:1527:C:O2	2.69	0.40
1:1:551:G:C2	1:1:552:G:C4	3.10	0.40
13:L:71:GLN:O	13:L:74:GLN:N	2.54	0.40
1:1:1317:C:C4	1:1:1318:G:C5	3.10	0.40
1:1:519:C:N4	1:1:534:A:N1	2.69	0.40
1:1:1401:A:N7	1:1:1402:G:C8	2.89	0.40
1:1:1414:U:O2	1:1:1414:U:O4'	2.39	0.40
1:1:1540:G:C6	1:1:1541:G:C4	3.09	0.40
1:1:190:C:N4	1:1:192:U:N3	2.69	0.40
10:I:116:LEU:O	10:I:118:GLU:N	2.55	0.40
21:T:224:ASN:O	21:T:228:LYS:N	2.54	0.40
1:1:1224:A:C2	1:1:1225:U:N3	2.89	0.40
1:1:1705:C:C5	1:1:1706:C:C5	3.09	0.40
11:J:102:LYS:C	11:J:104:GLU:N	2.74	0.40
1:1:94:U:O2	1:1:94:U:O4'	2.38	0.40
1:1:647:G:C2	1:1:648:G:C5	3.09	0.40
1:1:295:A:C2	1:1:296:U:C1'	3.04	0.40
1:1:103:A:C5	1:1:360:A:N1	2.89	0.40
1:1:396:G:N2	1:1:398:G:C3'	2.84	0.40
1:1:97:C:C2	1:1:98:U:C6	3.10	0.40
1:1:263:C:O3'	1:1:264:G:O4'	2.38	0.40
1:1:456:A:C6	1:1:457:G:C5	3.09	0.40
1:1:461:G:C2	1:1:462:G:C4	3.09	0.40
1:1:1275:A:N6	1:1:1431:C:C4	2.90	0.40
1:1:1658:G:N1	1:1:1659:A:C5	2.89	0.40
1:1:542:A:O2'	1:1:544:A:C5'	2.70	0.40
1:1:518:A:N6	1:1:535:A:C1'	2.83	0.40
1:1:1291:G:N2	1:1:1324:G:N2	2.69	0.40
7:F:110:HIS:CB	7:F:111:VAL:CB	2.99	0.40
1:1:195:G:O4'	1:1:196:G:OP1	2.40	0.40
1:1:77:U:O2'	1:1:78:A:P	2.80	0.40
1:1:567:A:C6	1:1:568:G:C4	3.09	0.40
1:1:819:G:O2'	1:1:820:U:P	2.79	0.40
1:1:933:A:O2'	1:1:934:C:OP1	2.39	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:P:97:ASP:O	17:P:98:GLU:C	2.59	0.40
11:J:105:LEU:O	11:J:106:LYS:C	2.59	0.40
4:C:134:CYS:CB	4:C:187:LYS:O	2.70	0.40
1:1:1146:G:C2'	1:1:1147:A:O5'	2.70	0.40
1:1:295:A:C2	1:1:296:U:O4'	2.75	0.40
1:1:50:C:C5	1:1:424:C:C5	3.09	0.40
1:1:1497:U:N3	1:1:1511:U:O2	2.55	0.40
1:1:914:G:C4'	1:1:915:A:O5'	2.69	0.40
1:1:916:U:C5	1:1:917:U:N3	2.89	0.40
1:1:63:G:O4'	1:1:170:U:N3	2.54	0.40
1:1:868:G:N2	1:1:960:U:O2	2.55	0.40
1:1:416:A:O4'	1:1:416:A:N3	2.54	0.40
1:1:1109:G:C4	1:1:1110:G:N7	2.89	0.40
1:1:13:C:C4'	3:B:161:LYS:O	2.70	0.40
1:1:358:U:C5'	1:1:359:A:P	3.09	0.40
1:1:1466:G:C5	1:1:1467:C:C5	3.09	0.40
1:1:1470:C:C2'	1:1:1471:A:OP1	2.69	0.40
1:1:1073:G:O6	1:1:1074:G:O6	2.37	0.40
1:1:1722:A:N7	1:1:1723:U:C1'	2.84	0.40
1:1:1658:G:OP1	1:1:1659:A:P	2.79	0.40
1:1:1354:G:O6	29:1:1873:OHX:N5	2.55	0.40
1:1:1335:U:N3	1:1:1336:A:N7	2.69	0.40
1:1:1671:A:N3	1:1:1731:A:C2	2.89	0.40
1:1:988:A:C2	1:1:989:U:N1	2.89	0.40
4:C:27:ARG:C	4:C:29:LEU:N	2.75	0.40
6:E:94:ASP:C	6:E:96:VAL:N	2.74	0.40
1:1:1181:U:N3	1:1:1182:U:C5	2.89	0.40
1:1:1542:G:C2	1:1:1568:C:C6	3.10	0.40
1:1:704:C:O2'	1:1:705:U:C6	2.73	0.40
1:1:734:A:C8	1:1:734:A:OP1	2.75	0.40
1:1:1486:G:C6	1:1:1520:U:O2	2.74	0.40
1:1:112:A:O2'	1:1:113:U:C6	2.74	0.40
1:1:1776:A:N1	1:1:1786:G:C6	2.89	0.40
1:1:1175:U:O2'	1:1:1176:G:O5'	2.39	0.40
1:1:945:U:C2	1:1:946:U:C5	3.10	0.40
1:1:1529:C:N4	1:1:1530:C:N4	2.69	0.40
1:1:733:A:N3	1:1:733:A:C2'	2.83	0.40
1:1:577:G:OP1	1:1:578:U:OP1	2.39	0.40
7:F:80:MET:O	7:F:81:HIS:C	2.59	0.40
1:1:826:U:C2'	1:1:827:C:C6	3.04	0.40
1:1:198:A:N3	1:1:199:G:O4'	2.54	0.40
1:1:1497:U:C4	1:1:1498:G:C5	3.09	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:1:483:A:C2	1:1:484:C:C5	3.09	0.40
1:1:1094:G:N3	1:1:1095:U:C5	2.89	0.40
1:1:974:A:C2	1:1:975:C:C6	3.10	0.40
3:B:217:ALA:C	3:B:219:GLY:N	2.73	0.40
1:1:327:U:C4	1:1:328:A:N7	2.89	0.40
1:1:860:U:O2	1:1:861:U:O4'	2.39	0.40
1:1:1142:A:C5'	1:1:1142:A:C8	3.05	0.40
1:1:837:G:O6	29:1:1824:OHX:N5	2.54	0.40
2:A:10:THR:C	2:A:14:ALA:O	2.60	0.40
14:M:113:ILE:CB	14:M:125:SER:N	2.85	0.40
1:1:1366:U:C2	1:1:1367:G:C8	3.10	0.40
1:1:1515:A:C2'	1:1:1516:A:C5'	2.99	0.40
1:1:1516:A:C8	15:N:16:GLN:CB	3.05	0.40
1:1:1417:A:OP1	29:1:1908:OHX:N1	2.54	0.40
1:1:525:A:P	1:1:526:A:N7	2.95	0.40
1:1:530:C:C2'	1:1:531:C:C6	3.05	0.40
1:1:1730:A:O2'	1:1:1731:A:O4'	2.39	0.40
1:1:986:G:O2'	1:1:987:G:C5'	2.69	0.40
5:D:164:PRO:O	5:D:165:LEU:C	2.59	0.40
1:1:922:G:N2	1:1:923:A:C4	2.90	0.40
16:O:114:GLU:O	16:O:117:ARG:N	2.55	0.40
2:A:132:ALA:O	2:A:133:ILE:C	2.60	0.40
1:1:1666:U:C4	1:1:1736:G:C2	3.09	0.40
1:1:369:A:C5'	1:1:370:A:OP2	2.70	0.40
1:1:500:C:O2	1:1:501:U:C5	2.74	0.40
10:I:59:LYS:O	10:I:63:ALA:CB	2.69	0.40
1:1:122:U:O4	1:1:123:G:O6	2.39	0.40
1:1:399:A:C5	1:1:401:A:C6	3.10	0.40
1:1:484:C:C5	1:1:485:A:C8	3.10	0.40
1:1:614:C:N3	1:1:615:A:N7	2.69	0.40
1:1:1203:A:C2	1:1:1556:A:N3	2.89	0.40
1:1:959:U:O4'	1:1:959:U:P	2.79	0.40
1:1:690:G:O6	1:1:691:C:N4	2.55	0.40
1:1:351:C:C2	7:F:102:LYS:O	2.75	0.40
1:1:1714:A:N1	1:1:1715:G:N2	2.69	0.40
1:1:1358:G:O2'	14:M:129:GLN:C	2.60	0.40
1:1:698:U:C2	1:1:741:C:N4	2.89	0.40
1:1:1365:C:OP2	1:1:1366:U:OP2	2.40	0.40
1:1:539:G:O2'	1:1:542:A:C8	2.74	0.40
1:1:802:G:C6	1:1:803:A:C2	3.09	0.40
1:1:304:U:C2	1:1:305:C:C6	3.10	0.40
1:1:1264:G:N2	1:1:1265:G:C4	2.89	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:79:TYR:O	4:C:81:PRO:N	2.54	0.40
1:1:1491:U:O2'	1:1:1492:A:C8	2.74	0.40
1:1:1742:U:C4	1:1:1743:U:C4	3.09	0.40
1:1:709:C:O2'	1:1:710:U:C4'	2.70	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	A	218/252 (86%)	75 (34%)	68 (31%)	75 (34%)	0	0
3	B	217/254 (85%)	85 (39%)	54 (25%)	78 (36%)	0	0
4	C	187/240 (78%)	72 (38%)	56 (30%)	59 (32%)	0	0
5	D	165/225 (73%)	55 (33%)	46 (28%)	64 (39%)	0	0
6	E	153/197 (78%)	48 (31%)	54 (35%)	51 (33%)	0	0
7	F	75/156 (48%)	32 (43%)	18 (24%)	25 (33%)	0	0
8	G	115/151 (76%)	46 (40%)	38 (33%)	31 (27%)	0	1
9	H	126/137 (92%)	52 (41%)	38 (30%)	36 (29%)	0	1
10	I	119/142 (84%)	38 (32%)	40 (34%)	41 (34%)	0	0
11	J	132/143 (92%)	57 (43%)	33 (25%)	42 (32%)	0	0
12	K	65/136 (48%)	27 (42%)	16 (25%)	22 (34%)	0	0
13	L	116/146 (80%)	48 (41%)	34 (29%)	34 (29%)	0	1
14	M	100/144 (69%)	38 (38%)	28 (28%)	34 (34%)	0	0
15	N	109/121 (90%)	49 (45%)	30 (28%)	30 (28%)	0	1
16	O	125/130 (96%)	48 (38%)	40 (32%)	37 (30%)	0	1
17	P	114/145 (79%)	48 (42%)	24 (21%)	42 (37%)	0	0
18	Q	65/108 (60%)	28 (43%)	21 (32%)	16 (25%)	0	2
19	R	45/67 (67%)	17 (38%)	12 (27%)	16 (36%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
20	S	37/56 (66%)	8 (22%)	14 (38%)	15 (40%)	0	0
21	T	309/319 (97%)	180 (58%)	71 (23%)	58 (19%)	0	4
All	All	2592/3269 (79%)	1051 (40%)	735 (28%)	806 (31%)	0	0

All (806) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	A	11	PRO
2	A	13	ASP
2	A	14	ALA
2	A	21	ASN
2	A	24	LEU
2	A	36	TYR
2	A	40	ALA
2	A	41	ARG
2	A	42	PRO
2	A	43	ASP
2	A	45	VAL
2	A	49	ASN
2	A	65	ALA
2	A	70	PRO
2	A	71	GLU
2	A	94	GLY
2	A	97	PRO
2	A	113	ARG
2	A	117	GLU
2	A	118	PRO
2	A	121	VAL
2	A	124	THR
2	A	126	PRO
2	A	140	ASN
2	A	143	VAL
2	A	159	ALA
2	A	160	ILE
2	A	161	PRO
2	A	163	ASN
2	A	172	LEU
2	A	187	ALA
2	A	193	GLN
2	A	194	PRO
2	A	202	TYR

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Mol	Chain	Res	Type
2	A	204	TYR
2	A	220	THR
3	B	37	PRO
3	B	38	VAL
3	B	59	HIS
3	B	62	PRO
3	B	66	PHE
3	B	68	ILE
3	B	73	LEU
3	B	74	PRO
3	B	84	LYS
3	B	85	PRO
3	B	125	ILE
3	B	126	ARG
3	B	133	LYS
3	B	134	LEU
3	B	135	SER
3	B	136	VAL
3	B	139	ILE
3	B	140	ARG
3	B	143	TYR
3	B	147	ASN
3	B	151	PRO
3	B	159	THR
3	B	164	SER
3	B	165	VAL
3	B	166	THR
3	B	189	GLN
3	B	193	VAL
3	B	196	VAL
3	B	209	ASN
3	B	220	ASN
3	B	225	LEU
3	B	234	PRO
3	B	235	LEU
3	B	236	PRO
3	B	237	VAL
3	B	238	SER
3	B	239	PRO
3	B	240	LEU
3	B	243	TYR
4	C	8	LYS

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Mol	Chain	Res	Type
4	C	9	ARG
4	C	16	VAL
4	C	22	ASN
4	C	28	GLU
4	C	37	VAL
4	C	43	PRO
4	C	66	ILE
4	C	69	LEU
4	C	70	THR
4	C	76	ARG
4	C	79	TYR
4	C	80	ALA
4	C	81	PRO
4	C	94	ARG
4	C	96	LEU
4	C	98	ALA
4	C	100	ALA
4	C	131	ALA
4	C	136	VAL
4	C	145	ALA
4	C	152	PHE
4	C	157	LEU
4	C	162	GLN
4	C	163	PRO
4	C	167	PHE
4	C	168	ILE
4	C	174	HIS
4	C	175	VAL
5	D	40	ILE
5	D	46	TRP
5	D	53	VAL
5	D	57	SER
5	D	61	TYR
5	D	66	GLN
5	D	87	CYS
5	D	88	PRO
5	D	90	ILE
5	D	91	GLU
5	D	92	ARG
5	D	93	LEU
5	D	94	THR
5	D	128	ASN

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Mol	Chain	Res	Type
5	D	129	PRO
5	D	160	VAL
5	D	162	VAL
5	D	163	SER
5	D	164	PRO
5	D	182	ALA
5	D	184	PHE
5	D	187	ILE
5	D	195	ALA
5	D	216	GLU
6	E	39	LYS
6	E	41	GLU
6	E	55	ALA
6	E	56	ALA
6	E	64	GLU
6	E	67	PRO
6	E	81	VAL
6	E	82	ARG
6	E	83	VAL
6	E	85	VAL
6	E	99	LEU
6	E	100	LYS
6	E	106	GLU
6	E	112	GLN
6	E	121	SER
6	E	122	VAL
6	E	124	HIS
6	E	130	THR
6	E	131	GLN
6	E	132	ARG
6	E	140	ILE
6	E	141	VAL
6	E	143	ILE
6	E	146	PHE
6	E	152	SER
6	E	153	GLU
6	E	169	PRO
6	E	174	ARG
7	F	70	ILE
7	F	80	MET
7	F	83	THR
7	F	86	ILE

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Mol	Chain	Res	Type
7	F	90	TYR
7	F	94	ILE
7	F	95	PRO
7	F	98	ASN
7	F	111	VAL
7	F	112	SER
7	F	113	PRO
7	F	125	VAL
7	F	130	PRO
7	F	133	LYS
8	G	46	THR
8	G	47	PRO
8	G	50	ILE
8	G	62	GLN
8	G	65	VAL
8	G	69	ASN
8	G	71	ILE
8	G	82	PRO
8	G	84	ILE
8	G	85	PRO
8	G	86	GLU
8	G	126	ALA
8	G	132	VAL
8	G	135	LEU
8	G	136	PRO
8	G	137	PRO
9	H	4	VAL
9	H	23	PHE
9	H	26	THR
9	H	40	ALA
9	H	42	VAL
9	H	43	THR
9	H	50	ALA
9	H	64	ALA
9	H	65	GLN
9	H	67	VAL
9	H	79	VAL
9	H	94	PRO
9	H	96	PRO
9	H	101	ALA
9	H	122	PRO
9	H	128	LYS

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Mol	Chain	Res	Type
10	I	11	VAL
10	I	13	LYS
10	I	23	GLU
10	I	38	PRO
10	I	51	SER
10	I	53	PRO
10	I	61	ARG
10	I	68	PRO
10	I	73	PRO
10	I	75	PRO
10	I	80	MET
10	I	85	ILE
10	I	86	VAL
10	I	121	ILE
10	I	125	PRO
11	J	34	SER
11	J	35	PRO
11	J	36	ILE
11	J	38	LEU
11	J	42	GLU
11	J	57	LEU
11	J	61	SER
11	J	63	ILE
11	J	70	THR
11	J	74	HIS
11	J	85	ILE
11	J	97	VAL
11	J	105	LEU
11	J	118	ILE
11	J	126	PRO
11	J	136	SER
12	K	22	PRO
12	K	26	LEU
12	K	29	GLN
12	K	38	ILE
12	K	39	ALA
12	K	44	LYS
12	K	60	ARG
12	K	65	PRO
12	K	69	ILE
13	L	18	LEU
13	L	27	LYS

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Mol	Chain	Res	Type
13	L	65	GLU
13	L	66	LEU
13	L	71	GLN
13	L	72	ILE
13	L	74	GLN
13	L	75	ASN
13	L	79	TYR
13	L	80	LYS
13	L	81	ILE
13	L	98	TYR
13	L	99	HIS
13	L	102	ALA
13	L	117	LYS
13	L	118	LYS
14	M	2	PRO
14	M	4	VAL
14	M	8	ASP
14	M	9	VAL
14	M	25	GLN
14	M	36	ILE
14	M	68	ARG
14	M	110	LYS
14	M	111	ILE
14	M	113	ILE
14	M	117	SER
14	M	119	LYS
14	M	125	SER
14	M	126	GLU
14	M	127	ASN
14	M	129	GLN
15	N	13	GLU
15	N	14	GLN
15	N	15	GLN
15	N	24	ILE
15	N	31	VAL
15	N	45	ALA
15	N	50	LEU
15	N	55	PRO
15	N	59	PRO
15	N	72	ASN
15	N	76	SER
15	N	93	LEU

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Mol	Chain	Res	Type
15	N	96	PRO
15	N	108	ILE
15	N	113	ASP
15	N	117	VAL
16	O	5	SER
16	O	24	GLN
16	O	27	ILE
16	O	28	ARG
16	O	29	PRO
16	O	30	SER
16	O	31	SER
16	O	38	LEU
16	O	63	VAL
16	O	76	SER
16	O	77	PRO
16	O	79	PHE
16	O	85	ASP
16	O	86	ILE
16	O	95	PRO
16	O	97	ARG
16	O	99	PHE
16	O	100	GLY
16	O	103	ILE
16	O	106	THR
16	O	118	ARG
16	O	120	HIS
16	O	126	LEU
17	P	37	ALA
17	P	48	HIS
17	P	49	ALA
17	P	59	ILE
17	P	64	PRO
17	P	70	LYS
17	P	78	LYS
17	P	87	VAL
17	P	90	ASP
17	P	104	LEU
17	P	105	ALA
17	P	108	GLY
17	P	119	GLY
17	P	124	VAL
17	P	127	VAL

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Mol	Chain	Res	Type
17	P	130	VAL
17	P	135	LEU
17	P	138	GLU
18	Q	42	LEU
18	Q	57	TYR
18	Q	71	ILE
18	Q	85	LYS
18	Q	88	ILE
18	Q	90	LYS
18	Q	91	PRO
18	Q	97	LYS
19	R	10	ALA
19	R	14	LYS
19	R	15	VAL
19	R	34	GLU
19	R	39	THR
19	R	44	VAL
20	S	20	GLN
20	S	24	CYS
20	S	26	SER
20	S	27	HIS
20	S	34	TYR
20	S	43	PHE
20	S	48	ASN
21	T	2	ALA
21	T	48	THR
21	T	66	HIS
21	T	100	TYR
21	T	119	ALA
21	T	189	GLU
21	T	195	HIS
21	T	198	ASN
21	T	241	PHE
21	T	247	PRO
21	T	269	TYR
21	T	281	TYR
21	T	295	SER
2	A	26	ALA
2	A	85	ALA
2	A	89	PHE
2	A	116	LYS
2	A	128	SER

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Mol	Chain	Res	Type
2	A	131	GLN
2	A	148	ASP
2	A	164	ASN
2	A	171	GLY
2	A	177	LEU
2	A	189	VAL
2	A	192	THR
2	A	198	MET
2	A	207	PRO
2	A	211	GLU
2	A	212	GLN
3	B	40	LYS
3	B	63	VAL
3	B	69	ILE
3	B	75	GLY
3	B	124	ALA
3	B	127	ALA
3	B	150	GLN
3	B	154	LEU
3	B	161	LYS
3	B	167	VAL
3	B	185	LYS
3	B	186	LYS
3	B	213	ALA
3	B	214	ALA
3	B	224	PHE
4	C	17	PHE
4	C	18	TYR
4	C	55	THR
4	C	61	GLU
4	C	65	ARG
4	C	74	GLN
4	C	77	PHE
4	C	95	GLY
4	C	99	VAL
4	C	130	GLY
4	C	142	LEU
4	C	143	ARG
4	C	153	ALA
4	C	159	HIS
4	C	193	ALA
5	D	43	PHE

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Mol	Chain	Res	Type
5	D	56	ALA
5	D	60	ASP
5	D	64	VAL
5	D	89	ILE
5	D	108	LEU
5	D	113	ILE
5	D	122	ASN
5	D	140	THR
5	D	144	GLU
5	D	153	GLY
5	D	166	ARG
5	D	167	ARG
5	D	181	GLU
5	D	183	ALA
5	D	197	GLU
5	D	211	ILE
5	D	215	ASP
6	E	38	ASN
6	E	63	ASP
6	E	66	ASP
6	E	88	GLU
6	E	113	VAL
6	E	133	HIS
6	E	137	GLY
6	E	139	GLN
6	E	170	GLY
7	F	96	LYS
7	F	109	VAL
7	F	121	ASP
7	F	127	GLN
8	G	52	VAL
8	G	54	LEU
8	G	58	HIS
8	G	128	TYR
9	H	6	GLN
9	H	19	ILE
9	H	25	ASP
9	H	28	VAL
9	H	45	GLY
9	H	97	GLY
9	H	124	ASP
10	I	22	LEU

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Mol	Chain	Res	Type
10	I	28	MET
10	I	32	ASP
10	I	34	VAL
10	I	35	LYS
10	I	45	PHE
10	I	65	LEU
10	I	113	GLY
11	J	43	ILE
11	J	62	ASN
11	J	92	TYR
11	J	98	ASP
11	J	104	GLU
11	J	107	LYS
11	J	129	PHE
12	K	33	ARG
12	K	47	ARG
12	K	56	HIS
12	K	63	LYS
12	K	68	GLY
13	L	47	CYS
13	L	84	TRP
13	L	101	LEU
14	M	28	LEU
14	M	29	GLU
14	M	51	GLU
14	M	54	PHE
14	M	58	ALA
14	M	102	ARG
14	M	103	LYS
14	M	121	GLY
14	M	122	ARG
15	N	33	GLN
15	N	37	VAL
15	N	84	MET
15	N	116	VAL
16	O	22	LYS
16	O	56	HIS
16	O	62	VAL
16	O	68	ARG
16	O	72	CYS
16	O	113	HIS
17	P	32	ARG

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Mol	Chain	Res	Type
17	P	33	LEU
17	P	41	SER
17	P	42	PRO
17	P	100	ASP
17	P	114	LYS
17	P	122	PHE
17	P	129	GLY
17	P	139	LYS
18	Q	41	ILE
18	Q	66	VAL
18	Q	86	GLU
19	R	28	VAL
19	R	29	ARG
19	R	41	VAL
19	R	45	LYS
20	S	16	LYS
20	S	39	CYS
20	S	40	ARG
20	S	44	ARG
20	S	47	ALA
20	S	49	ASP
20	S	52	PHE
21	T	21	THR
21	T	28	GLY
21	T	49	GLY
21	T	59	ARG
21	T	95	ALA
21	T	108	SER
21	T	112	SER
21	T	140	CYS
21	T	149	ASP
21	T	176	LYS
21	T	186	PHE
21	T	188	ILE
21	T	196	ASN
21	T	202	LEU
21	T	203	THR
21	T	231	MET
21	T	237	GLN
21	T	244	ALA
21	T	270	LEU
21	T	283	LYS

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Mol	Chain	Res	Type
21	T	298	GLY
2	A	12	GLU
2	A	38	PHE
2	A	88	LYS
2	A	153	SER
2	A	165	ARG
2	A	168	HIS
2	A	203	PHE
3	B	97	ARG
3	B	98	PHE
3	B	158	THR
3	B	182	PRO
3	B	195	ASP
3	B	202	GLY
3	B	228	ASN
3	B	244	SER
4	C	42	THR
4	C	60	GLY
4	C	67	ASN
4	C	82	GLY
4	C	104	SER
4	C	134	CYS
5	D	55	ASP
5	D	125	THR
5	D	165	LEU
5	D	205	SER
5	D	207	THR
6	E	87	SER
6	E	91	LYS
6	E	107	ARG
6	E	134	ILE
7	F	81	HIS
8	G	55	ARG
8	G	63	ALA
8	G	89	TYR
8	G	108	ASP
8	G	138	ASN
9	H	3	ASN
9	H	34	SER
9	H	38	THR
9	H	48	VAL
9	H	73	GLU

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Mol	Chain	Res	Type
10	I	17	TYR
10	I	18	ARG
10	I	92	SER
10	I	116	LEU
11	J	47	LYS
11	J	56	GLY
11	J	88	GLY
11	J	110	THR
11	J	114	ARG
11	J	125	GLU
11	J	138	PHE
12	K	28	PHE
13	L	36	LYS
13	L	46	VAL
14	M	120	GLY
15	N	97	VAL
15	N	101	LYS
16	O	41	MET
16	O	94	LEU
16	O	107	SER
17	P	28	ASN
17	P	81	LYS
17	P	128	SER
18	Q	59	TYR
18	Q	75	LEU
18	Q	80	LEU
19	R	8	THR
19	R	25	VAL
19	R	43	ASN
20	S	22	ARG
21	T	10	ARG
21	T	54	PHE
21	T	90	ARG
21	T	91	LEU
21	T	117	LYS
21	T	129	LYS
21	T	139	GLN
21	T	200	ASN
21	T	217	ASP
21	T	265	LEU
21	T	268	GLN
21	T	289	ALA

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Mol	Chain	Res	Type
21	T	318	ALA
2	A	53	THR
2	A	68	PRO
2	A	82	GLY
2	A	83	GLN
2	A	107	PHE
2	A	145	ALA
2	A	158	VAL
2	A	199	PRO
3	B	45	VAL
3	B	46	LYS
3	B	71	THR
3	B	169	LEU
3	B	206	THR
3	B	233	GLN
4	C	68	GLU
4	C	97	SER
4	C	115	ILE
4	C	125	TYR
4	C	158	ILE
5	D	58	LEU
5	D	138	THR
5	D	148	ARG
5	D	157	ARG
5	D	186	ASN
5	D	196	GLU
5	D	212	LYS
5	D	219	ARG
6	E	52	ILE
6	E	60	LEU
6	E	180	LYS
7	F	119	VAL
7	F	140	VAL
8	G	70	LYS
8	G	81	ALA
8	G	110	ASP
9	H	32	ASP
9	H	80	HIS
9	H	110	LEU
9	H	117	ASP
10	I	12	PHE
10	I	36	LEU

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Mol	Chain	Res	Type
10	I	52	LYS
10	I	55	GLY
10	I	63	ALA
10	I	67	ALA
10	I	70	ASN
10	I	90	ILE
11	J	28	LEU
11	J	46	PHE
11	J	51	PRO
11	J	90	VAL
11	J	99	GLU
11	J	106	LYS
11	J	134	ALA
12	K	11	ARG
12	K	40	THR
12	K	67	ARG
13	L	29	VAL
13	L	44	ASN
13	L	58	ALA
13	L	76	PRO
13	L	82	PRO
13	L	83	ALA
13	L	136	GLN
14	M	5	SER
14	M	52	GLY
14	M	70	GLN
14	M	134	ARG
15	N	34	LEU
15	N	41	ILE
15	N	49	ASN
15	N	70	THR
15	N	103	ILE
16	O	46	TYR
16	O	81	VAL
16	O	83	ILE
17	P	95	PHE
17	P	137	LYS
17	P	141	GLU
18	Q	84	GLU
19	R	32	PHE
19	R	38	ARG
21	T	57	PRO

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Mol	Chain	Res	Type
21	T	63	GLY
21	T	94	VAL
21	T	105	GLY
21	T	243	LEU
21	T	291	SER
2	A	25	GLY
2	A	81	PHE
2	A	119	ARG
2	A	195	TRP
3	B	61	LEU
3	B	95	ARG
3	B	138	PRO
3	B	146	THR
3	B	153	SER
4	C	93	ASP
4	C	164	VAL
5	D	45	LYS
5	D	65	ARG
5	D	213	LYS
5	D	214	LYS
5	D	221	ALA
6	E	34	PHE
6	E	101	VAL
6	E	123	HIS
7	F	101	GLU
7	F	115	PHE
7	F	135	VAL
7	F	137	PHE
8	G	77	SER
8	G	142	GLU
8	G	150	VAL
10	I	20	VAL
10	I	74	ALA
11	J	15	SER
12	K	21	TYR
12	K	43	SER
12	K	66	VAL
13	L	16	ARG
13	L	56	LYS
13	L	61	LEU
13	L	120	ARG
13	L	135	GLY

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Mol	Chain	Res	Type
16	O	104	LEU
17	P	91	GLY
21	T	158	PRO
21	T	286	GLU
3	B	123	GLY
4	C	29	LEU
4	C	146	ARG
5	D	170	GLN
9	H	87	GLY
10	I	76	VAL
11	J	33	GLY
11	J	84	ALA
12	K	20	TYR
14	M	61	VAL
14	M	114	VAL
15	N	118	VAL
17	P	69	ARG
17	P	88	PRO
17	P	118	PRO
19	R	37	SER
21	T	136	ILE
21	T	138	GLY
3	B	160	GLY
6	E	35	GLY
6	E	144	PRO
9	H	115	ILE
10	I	105	VAL
11	J	39	VAL
14	M	124	ILE
15	N	58	LEU
17	P	44	GLY
2	A	104	PRO
5	D	114	ILE
9	H	13	VAL
9	H	74	VAL
10	I	126	VAL
16	O	25	VAL
17	P	96	VAL
17	P	102	VAL
18	Q	40	VAL
2	A	144	ILE
3	B	56	ILE

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Mol	Chain	Res	Type
3	B	171	PRO
3	B	216	VAL
5	D	121	ILE
5	D	152	GLY
21	T	20	VAL
2	A	37	VAL
6	E	73	GLY
11	J	50	GLU
13	L	105	VAL
17	P	125	VAL
2	A	152	PRO
6	E	42	ILE
10	I	117	GLY
14	M	26	GLY
15	N	42	VAL
17	P	77	ILE

5.3.2 Protein sidechains ⓘ

There are no protein residues with a non-rotameric sidechain to report in this entry.

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	1	1787/1800 (99%)	1003 (56%)	148 (8%)

All (1003) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	1	2	A
1	1	3	U
1	1	4	C
1	1	7	G
1	1	8	U
1	1	13	C
1	1	17	C
1	1	20	G
1	1	21	U
1	1	22	A
1	1	24	U
1	1	25	C

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Mol	Chain	Res	Type
1	1	26	A
1	1	27	U
1	1	31	C
1	1	34	G
1	1	35	U
1	1	40	A
1	1	41	A
1	1	42	G
1	1	45	U
1	1	46	A
1	1	47	A
1	1	48	G
1	1	50	C
1	1	51	A
1	1	54	C
1	1	56	U
1	1	57	G
1	1	58	U
1	1	59	C
1	1	60	U
1	1	61	A
1	1	62	A
1	1	63	G
1	1	64	U
1	1	65	A
1	1	66	U
1	1	67	A
1	1	68	A
1	1	69	G
1	1	70	C
1	1	71	A
1	1	72	A
1	1	75	U
1	1	76	A
1	1	77	U
1	1	78	A
1	1	79	C
1	1	80	A
1	1	81	G
1	1	82	U
1	1	83	G
1	1	86	A

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Mol	Chain	Res	Type
1	1	88	U
1	1	99	C
1	1	100	A
1	1	102	U
1	1	104	A
1	1	105	A
1	1	106	U
1	1	111	U
1	1	112	A
1	1	113	U
1	1	114	C
1	1	115	G
1	1	117	U
1	1	119	A
1	1	120	U
1	1	121	U
1	1	122	U
1	1	123	G
1	1	124	A
1	1	125	U
1	1	126	A
1	1	128	U
1	1	129	U
1	1	130	C
1	1	131	C
1	1	132	U
1	1	133	U
1	1	134	U
1	1	135	A
1	1	136	C
1	1	137	U
1	1	138	A
1	1	139	C
1	1	140	A
1	1	141	U
1	1	143	G
1	1	144	U
1	1	145	A
1	1	146	U
1	1	147	A
1	1	148	A
1	1	149	C

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Mol	Chain	Res	Type
1	1	150	U
1	1	151	G
1	1	156	A
1	1	158	U
1	1	159	U
1	1	160	C
1	1	161	U
1	1	162	A
1	1	166	C
1	1	167	U
1	1	168	A
1	1	169	A
1	1	170	U
1	1	171	A
1	1	172	C
1	1	173	A
1	1	174	U
1	1	177	U
1	1	178	U
1	1	179	A
1	1	180	A
1	1	181	A
1	1	184	C
1	1	187	G
1	1	191	C
1	1	192	U
1	1	193	U
1	1	194	U
1	1	195	G
1	1	196	G
1	1	197	A
1	1	198	A
1	1	199	G
1	1	200	A
1	1	201	G
1	1	204	G
1	1	208	U
1	1	209	U
1	1	211	U
1	1	212	U
1	1	213	A
1	1	215	A

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Mol	Chain	Res	Type
1	1	218	A
1	1	219	A
1	1	220	A
1	1	224	C
1	1	226	A
1	1	227	U
1	1	228	G
1	1	229	U
1	1	233	C
1	1	234	G
1	1	238	U
1	1	241	U
1	1	242	U
1	1	243	G
1	1	244	A
1	1	245	U
1	1	246	G
1	1	249	U
1	1	250	C
1	1	252	U
1	1	253	A
1	1	254	A
1	1	255	U
1	1	256	A
1	1	257	A
1	1	259	U
1	1	260	U
1	1	261	U
1	1	262	U
1	1	263	C
1	1	264	G
1	1	265	A
1	1	266	A
1	1	267	U
1	1	270	C
1	1	271	A
1	1	272	U
1	1	273	G
1	1	274	G
1	1	276	C
1	1	277	U
1	1	278	U

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Mol	Chain	Res	Type
1	1	280	U
1	1	282	C
1	1	283	U
1	1	284	G
1	1	285	G
1	1	289	U
1	1	295	A
1	1	296	U
1	1	297	U
1	1	298	C
1	1	299	A
1	1	302	U
1	1	308	C
1	1	309	C
1	1	310	C
1	1	311	U
1	1	312	A
1	1	314	C
1	1	316	A
1	1	320	U
1	1	321	C
1	1	322	G
1	1	323	A
1	1	324	U
1	1	327	U
1	1	330	G
1	1	331	A
1	1	332	U
1	1	333	A
1	1	334	G
1	1	335	U
1	1	337	G
1	1	338	C
1	1	340	U
1	1	341	A
1	1	350	U
1	1	351	C
1	1	352	A
1	1	354	C
1	1	359	A
1	1	360	A
1	1	361	C

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Mol	Chain	Res	Type
1	1	365	G
1	1	366	A
1	1	368	U
1	1	369	A
1	1	370	A
1	1	373	G
1	1	374	U
1	1	375	U
1	1	376	C
1	1	378	A
1	1	379	U
1	1	381	C
1	1	382	C
1	1	383	G
1	1	385	A
1	1	387	A
1	1	390	G
1	1	393	C
1	1	394	C
1	1	395	U
1	1	396	G
1	1	399	A
1	1	400	A
1	1	401	A
1	1	402	C
1	1	403	G
1	1	404	G
1	1	406	U
1	1	411	C
1	1	415	C
1	1	416	A
1	1	417	A
1	1	418	G
1	1	419	G
1	1	421	A
1	1	424	C
1	1	425	A
1	1	426	G
1	1	427	C
1	1	428	A
1	1	434	G
1	1	437	A

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Mol	Chain	Res	Type
1	1	438	A
1	1	439	U
1	1	440	U
1	1	441	A
1	1	444	C
1	1	445	A
1	1	446	A
1	1	447	U
1	1	448	C
1	1	449	C
1	1	451	A
1	1	452	A
1	1	453	U
1	1	454	U
1	1	455	C
1	1	458	G
1	1	459	G
1	1	462	G
1	1	464	A
1	1	467	G
1	1	468	A
1	1	469	C
1	1	470	A
1	1	475	A
1	1	477	A
1	1	482	U
1	1	485	A
1	1	486	G
1	1	487	G
1	1	488	G
1	1	489	C
1	1	490	C
1	1	493	U
1	1	494	U
1	1	495	C
1	1	496	G
1	1	498	G
1	1	500	C
1	1	504	U
1	1	505	A
1	1	506	A
1	1	510	G

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Mol	Chain	Res	Type
1	1	511	A
1	1	512	A
1	1	513	U
1	1	514	G
1	1	515	A
1	1	516	G
1	1	517	U
1	1	519	C
1	1	521	A
1	1	522	U
1	1	523	G
1	1	524	U
1	1	526	A
1	1	527	A
1	1	528	U
1	1	529	A
1	1	530	C
1	1	531	C
1	1	533	U
1	1	535	A
1	1	537	G
1	1	538	A
1	1	539	G
1	1	540	G
1	1	541	A
1	1	542	A
1	1	543	C
1	1	544	A
1	1	545	A
1	1	546	U
1	1	548	G
1	1	550	A
1	1	551	G
1	1	554	C
1	1	555	A
1	1	556	A
1	1	557	G
1	1	558	U
1	1	560	U
1	1	561	G
1	1	563	U
1	1	564	G

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Mol	Chain	Res	Type
1	1	565	C
1	1	568	G
1	1	570	A
1	1	572	C
1	1	574	G
1	1	578	U
1	1	579	A
1	1	580	A
1	1	585	A
1	1	594	A
1	1	595	G
1	1	596	C
1	1	599	A
1	1	601	A
1	1	602	U
1	1	605	A
1	1	607	G
1	1	608	U
1	1	609	U
1	1	610	G
1	1	611	U
1	1	612	U
1	1	614	C
1	1	615	A
1	1	616	G
1	1	619	A
1	1	620	A
1	1	622	A
1	1	623	A
1	1	624	G
1	1	626	U
1	1	630	A
1	1	633	U
1	1	635	A
1	1	638	U
1	1	639	U
1	1	640	U
1	1	647	G
1	1	649	U
1	1	650	U
1	1	653	C
1	1	656	G

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Mol	Chain	Res	Type
1	1	659	C
1	1	660	G
1	1	662	U
1	1	663	U
1	1	665	U
1	1	666	U
1	1	667	U
1	1	681	U
1	1	682	C
1	1	683	C
1	1	685	A
1	1	686	C
1	1	691	C
1	1	692	C
1	1	693	U
1	1	694	U
1	1	696	C
1	1	697	C
1	1	698	U
1	1	700	C
1	1	702	G
1	1	703	G
1	1	705	U
1	1	708	C
1	1	709	C
1	1	710	U
1	1	713	A
1	1	714	G
1	1	715	U
1	1	718	U
1	1	719	U
1	1	720	G
1	1	721	U
1	1	722	G
1	1	725	U
1	1	726	C
1	1	727	U
1	1	728	U
1	1	729	G
1	1	731	C
1	1	732	G
1	1	733	A

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Mol	Chain	Res	Type
1	1	734	A
1	1	735	C
1	1	736	C
1	1	737	A
1	1	738	G
1	1	739	G
1	1	742	U
1	1	743	U
1	1	744	U
1	1	750	U
1	1	751	G
1	1	754	A
1	1	756	A
1	1	765	G
1	1	766	U
1	1	767	U
1	1	774	A
1	1	775	G
1	1	778	G
1	1	779	U
1	1	780	A
1	1	781	U
1	1	782	U
1	1	783	G
1	1	787	G
1	1	789	A
1	1	790	U
1	1	793	A
1	1	794	U
1	1	803	A
1	1	808	U
1	1	811	A
1	1	812	A
1	1	813	U
1	1	814	A
1	1	815	G
1	1	816	G
1	1	818	C
1	1	819	G
1	1	820	U
1	1	821	U
1	1	822	U

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Mol	Chain	Res	Type
1	1	823	G
1	1	824	G
1	1	825	U
1	1	826	U
1	1	828	U
1	1	829	A
1	1	830	U
1	1	831	U
1	1	832	U
1	1	834	G
1	1	839	U
1	1	840	U
1	1	841	U
1	1	842	C
1	1	844	A
1	1	847	A
1	1	848	C
1	1	850	A
1	1	856	A
1	1	857	U
1	1	858	G
1	1	860	U
1	1	861	U
1	1	862	A
1	1	863	A
1	1	864	U
1	1	865	A
1	1	872	G
1	1	873	U
1	1	876	G
1	1	880	C
1	1	881	A
1	1	883	C
1	1	886	U
1	1	888	U
1	1	891	A
1	1	893	U
1	1	894	U
1	1	896	U
1	1	897	C
1	1	899	G
1	1	901	G

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Mol	Chain	Res	Type
1	1	902	G
1	1	903	U
1	1	904	G
1	1	905	A
1	1	906	A
1	1	909	U
1	1	910	C
1	1	911	U
1	1	912	U
1	1	913	G
1	1	914	G
1	1	915	A
1	1	916	U
1	1	920	U
1	1	922	G
1	1	923	A
1	1	927	C
1	1	929	A
1	1	932	U
1	1	933	A
1	1	934	C
1	1	935	U
1	1	938	G
1	1	939	A
1	1	942	G
1	1	943	C
1	1	944	A
1	1	952	A
1	1	959	U
1	1	960	U
1	1	961	U
1	1	964	U
1	1	965	U
1	1	966	A
1	1	967	A
1	1	975	C
1	1	976	G
1	1	977	A
1	1	978	A
1	1	979	A
1	1	981	U
1	1	987	G

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Mol	Chain	Res	Type
1	1	988	A
1	1	992	A
1	1	993	A
1	1	995	A
1	1	996	U
1	1	998	A
1	1	1000	C
1	1	1003	A
1	1	1004	U
1	1	1005	A
1	1	1007	C
1	1	1008	G
1	1	1010	C
1	1	1019	A
1	1	1027	A
1	1	1028	C
1	1	1029	U
1	1	1030	A
1	1	1032	G
1	1	1033	C
1	1	1036	A
1	1	1039	A
1	1	1040	G
1	1	1044	U
1	1	1045	C
1	1	1046	G
1	1	1048	G
1	1	1049	U
1	1	1057	U
1	1	1058	U
1	1	1059	U
1	1	1060	U
1	1	1066	C
1	1	1071	U
1	1	1072	C
1	1	1073	G
1	1	1074	G
1	1	1075	C
1	1	1077	C
1	1	1079	U
1	1	1080	U
1	1	1082	C

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Mol	Chain	Res	Type
1	1	1087	A
1	1	1089	U
1	1	1090	C
1	1	1091	A
1	1	1092	A
1	1	1093	A
1	1	1094	G
1	1	1095	U
1	1	1096	C
1	1	1097	U
1	1	1098	U
1	1	1099	U
1	1	1100	G
1	1	1101	G
1	1	1103	U
1	1	1107	G
1	1	1108	G
1	1	1109	G
1	1	1110	G
1	1	1111	G
1	1	1112	G
1	1	1113	A
1	1	1114	G
1	1	1115	U
1	1	1119	G
1	1	1123	C
1	1	1124	A
1	1	1126	G
1	1	1129	U
1	1	1136	U
1	1	1137	A
1	1	1138	A
1	1	1139	A
1	1	1140	G
1	1	1141	G
1	1	1142	A
1	1	1143	A
1	1	1145	U
1	1	1146	G
1	1	1147	A
1	1	1149	G
1	1	1150	G

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Mol	Chain	Res	Type
1	1	1151	A
1	1	1152	A
1	1	1153	G
1	1	1154	G
1	1	1158	C
1	1	1160	A
1	1	1161	C
1	1	1162	C
1	1	1166	A
1	1	1167	G
1	1	1168	U
1	1	1178	G
1	1	1179	G
1	1	1181	U
1	1	1185	U
1	1	1186	U
1	1	1189	A
1	1	1190	C
1	1	1191	U
1	1	1193	A
1	1	1194	A
1	1	1196	A
1	1	1197	C
1	1	1198	G
1	1	1199	G
1	1	1200	G
1	1	1201	G
1	1	1202	A
1	1	1203	A
1	1	1204	A
1	1	1205	C
1	1	1206	U
1	1	1207	C
1	1	1208	A
1	1	1211	A
1	1	1217	A
1	1	1218	G
1	1	1219	A
1	1	1220	C
1	1	1222	C
1	1	1225	U
1	1	1228	G

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Mol	Chain	Res	Type
1	1	1229	G
1	1	1230	A
1	1	1231	U
1	1	1232	U
1	1	1234	A
1	1	1235	C
1	1	1238	A
1	1	1239	U
1	1	1240	U
1	1	1242	A
1	1	1243	G
1	1	1244	A
1	1	1245	G
1	1	1248	C
1	1	1254	U
1	1	1255	G
1	1	1256	A
1	1	1257	U
1	1	1258	U
1	1	1259	U
1	1	1260	U
1	1	1264	G
1	1	1266	U
1	1	1268	G
1	1	1270	G
1	1	1273	G
1	1	1274	C
1	1	1275	A
1	1	1276	U
1	1	1280	C
1	1	1283	U
1	1	1284	C
1	1	1286	U
1	1	1287	A
1	1	1288	G
1	1	1290	U
1	1	1297	G
1	1	1302	U
1	1	1306	C
1	1	1310	U
1	1	1311	U
1	1	1312	A

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Mol	Chain	Res	Type
1	1	1314	U
1	1	1315	U
1	1	1316	G
1	1	1321	A
1	1	1324	G
1	1	1325	A
1	1	1326	A
1	1	1331	A
1	1	1332	C
1	1	1333	C
1	1	1335	U
1	1	1336	A
1	1	1337	A
1	1	1340	U
1	1	1341	A
1	1	1342	C
1	1	1345	A
1	1	1346	A
1	1	1347	U
1	1	1349	G
1	1	1350	U
1	1	1351	G
1	1	1352	G
1	1	1353	U
1	1	1354	G
1	1	1355	C
1	1	1358	G
1	1	1359	C
1	1	1360	A
1	1	1361	U
1	1	1362	U
1	1	1363	U
1	1	1364	G
1	1	1365	C
1	1	1366	U
1	1	1367	G
1	1	1368	G
1	1	1369	U
1	1	1371	A
1	1	1373	C
1	1	1374	C
1	1	1378	U

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Mol	Chain	Res	Type
1	1	1379	C
1	1	1380	U
1	1	1383	G
1	1	1384	A
1	1	1388	A
1	1	1390	U
1	1	1391	A
1	1	1392	U
1	1	1397	U
1	1	1398	U
1	1	1399	C
1	1	1400	A
1	1	1401	A
1	1	1402	G
1	1	1407	U
1	1	1408	G
1	1	1409	G
1	1	1410	A
1	1	1412	G
1	1	1413	U
1	1	1414	U
1	1	1415	U
1	1	1418	G
1	1	1419	G
1	1	1420	C
1	1	1422	A
1	1	1427	A
1	1	1428	G
1	1	1429	G
1	1	1431	C
1	1	1432	U
1	1	1433	G
1	1	1434	U
1	1	1435	G
1	1	1436	A
1	1	1438	G
1	1	1443	U
1	1	1445	G
1	1	1446	A
1	1	1447	C
1	1	1448	G
1	1	1449	U

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Mol	Chain	Res	Type
1	1	1450	U
1	1	1453	G
1	1	1454	G
1	1	1455	G
1	1	1456	C
1	1	1458	G
1	1	1459	C
1	1	1460	A
1	1	1461	C
1	1	1466	G
1	1	1467	C
1	1	1468	U
1	1	1469	A
1	1	1471	A
1	1	1472	C
1	1	1473	U
1	1	1474	G
1	1	1477	G
1	1	1478	G
1	1	1479	A
1	1	1481	C
1	1	1482	C
1	1	1483	A
1	1	1484	G
1	1	1485	C
1	1	1486	G
1	1	1490	C
1	1	1491	U
1	1	1492	A
1	1	1493	A
1	1	1494	C
1	1	1503	A
1	1	1505	A
1	1	1506	G
1	1	1509	C
1	1	1510	U
1	1	1514	U
1	1	1515	A
1	1	1516	A
1	1	1517	U
1	1	1518	C
1	1	1519	U

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Mol	Chain	Res	Type
1	1	1521	G
1	1	1522	U
1	1	1523	G
1	1	1524	A
1	1	1533	C
1	1	1534	G
1	1	1535	U
1	1	1536	G
1	1	1537	C
1	1	1538	U
1	1	1539	G
1	1	1540	G
1	1	1541	G
1	1	1542	G
1	1	1545	A
1	1	1547	A
1	1	1548	G
1	1	1550	A
1	1	1551	U
1	1	1553	G
1	1	1554	U
1	1	1555	A
1	1	1556	A
1	1	1557	U
1	1	1558	U
1	1	1559	A
1	1	1560	U
1	1	1565	C
1	1	1568	C
1	1	1570	A
1	1	1572	G
1	1	1573	A
1	1	1574	G
1	1	1575	G
1	1	1576	A
1	1	1581	C
1	1	1583	A
1	1	1584	G
1	1	1587	A
1	1	1590	G
1	1	1591	C
1	1	1592	A

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Mol	Chain	Res	Type
1	1	1599	C
1	1	1600	A
1	1	1601	G
1	1	1602	C
1	1	1605	G
1	1	1607	G
1	1	1609	U
1	1	1610	G
1	1	1611	A
1	1	1613	U
1	1	1614	A
1	1	1615	C
1	1	1616	G
1	1	1618	C
1	1	1623	C
1	1	1624	C
1	1	1625	C
1	1	1627	U
1	1	1628	U
1	1	1630	U
1	1	1631	A
1	1	1632	C
1	1	1633	A
1	1	1634	C
1	1	1635	A
1	1	1636	C
1	1	1637	C
1	1	1638	G
1	1	1639	C
1	1	1642	G
1	1	1644	C
1	1	1645	G
1	1	1646	C
1	1	1650	U
1	1	1654	G
1	1	1656	U
1	1	1657	U
1	1	1658	G
1	1	1659	A
1	1	1664	C
1	1	1665	U
1	1	1667	A

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Mol	Chain	Res	Type
1	1	1668	G
1	1	1673	G
1	1	1674	C
1	1	1675	C
1	1	1676	U
1	1	1677	C
1	1	1678	A
1	1	1680	G
1	1	1681	A
1	1	1682	U
1	1	1683	C
1	1	1684	U
1	1	1685	G
1	1	1688	U
1	1	1689	A
1	1	1691	A
1	1	1692	G
1	1	1693	A
1	1	1695	G
1	1	1696	G
1	1	1698	G
1	1	1700	C
1	1	1701	A
1	1	1706	C
1	1	1707	A
1	1	1710	U
1	1	1711	C
1	1	1716	C
1	1	1719	A
1	1	1720	G
1	1	1722	A
1	1	1728	A
1	1	1731	A
1	1	1739	C
1	1	1742	U
1	1	1744	A
1	1	1746	A
1	1	1748	G
1	1	1754	A
1	1	1755	A
1	1	1757	G
1	1	1758	U

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Mol	Chain	Res	Type
1	1	1759	C
1	1	1760	G
1	1	1762	A
1	1	1763	A
1	1	1764	C
1	1	1766	A
1	1	1767	G
1	1	1768	G
1	1	1769	U
1	1	1770	U
1	1	1772	C
1	1	1773	C
1	1	1774	G
1	1	1777	G
1	1	1779	U
1	1	1780	G
1	1	1782	A
1	1	1783	C
1	1	1788	G
1	1	1792	G
1	1	1793	G
1	1	1794	A
1	1	1795	U
1	1	1797	A
1	1	1798	U

All (148) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	1	24	U
1	1	40	A
1	1	45	U
1	1	61	A
1	1	62	A
1	1	65	A
1	1	67	A
1	1	68	A
1	1	71	A
1	1	78	A
1	1	80	A
1	1	103	A
1	1	112	A

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Mol	Chain	Res	Type
1	1	114	C
1	1	121	U
1	1	125	U
1	1	133	U
1	1	135	A
1	1	137	U
1	1	139	C
1	1	150	U
1	1	160	C
1	1	167	U
1	1	183	U
1	1	191	C
1	1	195	G
1	1	198	A
1	1	203	U
1	1	211	U
1	1	217	A
1	1	241	U
1	1	243	G
1	1	248	U
1	1	254	A
1	1	262	U
1	1	263	C
1	1	270	C
1	1	272	U
1	1	284	G
1	1	290	G
1	1	295	A
1	1	310	C
1	1	320	U
1	1	322	G
1	1	351	C
1	1	358	U
1	1	380	U
1	1	386	G
1	1	399	A
1	1	400	A
1	1	416	A
1	1	417	A
1	1	427	C
1	1	438	A
1	1	439	U

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Mol	Chain	Res	Type
1	1	447	U
1	1	511	A
1	1	515	A
1	1	521	A
1	1	525	A
1	1	528	U
1	1	540	G
1	1	541	A
1	1	555	A
1	1	577	G
1	1	594	A
1	1	607	G
1	1	622	A
1	1	659	C
1	1	699	U
1	1	704	C
1	1	720	G
1	1	721	U
1	1	750	U
1	1	755	A
1	1	765	G
1	1	782	U
1	1	807	A
1	1	820	U
1	1	827	C
1	1	829	A
1	1	842	C
1	1	846	G
1	1	859	A
1	1	913	G
1	1	914	G
1	1	932	U
1	1	959	U
1	1	963	A
1	1	964	U
1	1	986	G
1	1	1003	A
1	1	1045	C
1	1	1091	A
1	1	1094	G
1	1	1097	U
1	1	1100	G

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Mol	Chain	Res	Type
1	1	1107	G
1	1	1110	G
1	1	1139	A
1	1	1142	A
1	1	1149	G
1	1	1150	G
1	1	1185	U
1	1	1190	C
1	1	1196	A
1	1	1200	G
1	1	1202	A
1	1	1203	A
1	1	1204	A
1	1	1207	C
1	1	1255	G
1	1	1269	U
1	1	1274	C
1	1	1285	U
1	1	1305	U
1	1	1344	A
1	1	1349	G
1	1	1392	U
1	1	1435	G
1	1	1458	G
1	1	1472	C
1	1	1478	G
1	1	1480	G
1	1	1481	C
1	1	1492	A
1	1	1513	G
1	1	1522	U
1	1	1539	G
1	1	1560	U
1	1	1567	U
1	1	1573	A
1	1	1574	G
1	1	1580	C
1	1	1591	C
1	1	1609	U
1	1	1633	A
1	1	1634	C
1	1	1636	C

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Mol	Chain	Res	Type
1	1	1645	G
1	1	1657	U
1	1	1694	A
1	1	1754	A
1	1	1761	U
1	1	1764	C
1	1	1779	U
1	1	1791	A
1	1	1793	G

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

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

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry ⓘ

355 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
29	OHX	1	1801	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1802	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1803	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1804	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1805	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1806	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1807	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1808	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1809	-	0,6,6	0.00	-	0,15,15	0.00	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
29	OHX	1	1810	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1811	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1812	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1813	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1814	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1815	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1816	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1817	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1818	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1819	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1820	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1821	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1822	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1823	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1824	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1825	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1826	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1827	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1828	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1829	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1830	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1831	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1832	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1833	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1834	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1835	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1836	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1837	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1838	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1839	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1840	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1841	1	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1842	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1843	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1844	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1845	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1846	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1847	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1848	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1849	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1850	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1851	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1852	-	0,6,6	0.00	-	0,15,15	0.00	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
29	OHX	1	1853	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1854	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1855	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1856	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1857	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1858	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1859	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1860	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1861	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1862	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1863	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1864	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1865	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1866	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1867	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1868	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1869	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1870	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1871	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1872	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1873	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1874	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1875	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1876	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1877	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1878	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1879	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1880	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1881	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1882	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1883	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1884	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1885	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1886	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1887	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1888	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1889	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1890	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1891	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1892	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1893	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1894	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1895	-	0,6,6	0.00	-	0,15,15	0.00	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
29	OHX	1	1896	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1897	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1898	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1899	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1900	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1901	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1902	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1903	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1904	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1905	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1906	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1907	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1908	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1909	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1910	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1911	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1912	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1913	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1914	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1915	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1916	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1917	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1918	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1919	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1920	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1921	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	1	1922	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	G	189	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	L	277	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	S	534	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	T	433	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	c	100	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	e	305	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	e	564	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	e	670	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	1	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	106	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	109	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	11	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	116	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	119	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	120	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	130	-	0,6,6	0.00	-	0,15,15	0.00	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
29	OHX	g	133	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	135	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	137	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	138	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	139	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	14	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	140	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	144	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	146	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	148	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	149	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	15	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	151	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	158	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	160	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	161	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	17	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	170	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	171	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	173	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	18	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	181	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	183	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	188	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	19	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	191	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	193	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	195	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	196	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	197	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	200	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	204	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	211	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	216	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	221	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	222	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	227	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	228	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	23	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	240	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	241	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	245	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	246	-	0,6,6	0.00	-	0,15,15	0.00	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
29	OHX	g	248	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	253	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	258	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	259	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	265	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	266	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	267	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	270	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	271	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	273	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	279	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	282	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	286	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	288	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	289	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	295	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	299	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	3	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	30	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	307	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	309	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	312	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	317	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	323	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	327	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	328	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	33	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	331	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	333	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	336	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	338	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	343	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	345	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	348	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	35	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	351	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	353	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	354	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	356	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	357	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	36	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	366	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	369	-	0,6,6	0.00	-	0,15,15	0.00	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
29	OHX	g	370	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	375	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	377	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	378	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	38	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	381	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	384	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	387	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	388	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	395	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	398	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	399	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	40	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	400	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	401	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	402	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	406	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	407	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	414	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	419	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	420	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	422	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	424	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	425	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	427	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	430	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	432	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	441	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	445	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	451	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	456	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	457	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	461	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	465	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	466	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	469	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	471	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	476	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	478	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	483	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	489	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	49	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	490	-	0,6,6	0.00	-	0,15,15	0.00	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
29	OHX	g	492	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	496	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	499	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	503	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	504	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	507	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	513	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	514	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	515	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	518	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	52	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	520	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	521	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	528	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	532	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	535	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	536	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	54	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	540	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	547	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	55	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	550	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	551	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	552	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	553	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	554	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	56	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	569	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	571	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	575	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	576	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	577	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	580	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	581	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	588	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	589	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	590	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	593	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	6	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	603	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	607	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	61	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	611	-	0,6,6	0.00	-	0,15,15	0.00	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
29	OHX	g	613	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	614	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	620	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	621	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	622	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	625	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	627	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	634	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	638	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	641	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	643	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	650	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	66	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	661	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	664	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	665	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	67	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	671	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	678	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	680	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	681	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	689	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	690	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	692	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	693	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	694	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	698	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	699	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	7	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	70	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	700	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	705	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	706	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	707	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	711	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	72	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	81	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	82	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	83	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	85	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	86	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	9	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	91	-	0,6,6	0.00	-	0,15,15	0.00	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
29	OHX	g	96	-	0,6,6	0.00	-	0,15,15	0.00	-
29	OHX	g	98	-	0,6,6	0.00	-	0,15,15	0.00	-

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the chemical component dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	OHX	1	1801	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1802	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1803	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1804	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1805	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1806	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1807	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1808	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1809	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1810	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1811	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1812	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1813	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1814	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1815	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1816	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1817	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1818	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1819	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1820	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1821	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1822	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1823	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1824	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1825	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1826	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1827	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1828	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1829	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1830	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1831	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1832	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1833	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1834	-	-	0/0/0/0	0/0/0/0

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	OHX	1	1835	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1836	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1837	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1838	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1839	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1840	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1841	1	-	0/0/0/0	0/0/0/0
29	OHX	1	1842	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1843	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1844	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1845	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1846	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1847	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1848	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1849	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1850	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1851	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1852	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1853	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1854	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1855	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1856	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1857	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1858	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1859	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1860	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1861	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1862	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1863	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1864	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1865	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1866	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1867	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1868	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1869	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1870	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1871	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1872	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1873	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1874	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1875	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1876	-	-	0/0/0/0	0/0/0/0

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	OHX	1	1877	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1878	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1879	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1880	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1881	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1882	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1883	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1884	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1885	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1886	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1887	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1888	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1889	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1890	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1891	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1892	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1893	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1894	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1895	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1896	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1897	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1898	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1899	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1900	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1901	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1902	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1903	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1904	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1905	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1906	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1907	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1908	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1909	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1910	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1911	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1912	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1913	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1914	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1915	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1916	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1917	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1918	-	-	0/0/0/0	0/0/0/0

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	OHX	1	1919	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1920	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1921	-	-	0/0/0/0	0/0/0/0
29	OHX	1	1922	-	-	0/0/0/0	0/0/0/0
29	OHX	G	189	-	-	0/0/0/0	0/0/0/0
29	OHX	L	277	-	-	0/0/0/0	0/0/0/0
29	OHX	S	534	-	-	0/0/0/0	0/0/0/0
29	OHX	T	433	-	-	0/0/0/0	0/0/0/0
29	OHX	c	100	-	-	0/0/0/0	0/0/0/0
29	OHX	e	305	-	-	0/0/0/0	0/0/0/0
29	OHX	e	564	-	-	0/0/0/0	0/0/0/0
29	OHX	e	670	-	-	0/0/0/0	0/0/0/0
29	OHX	g	1	-	-	0/0/0/0	0/0/0/0
29	OHX	g	106	-	-	0/0/0/0	0/0/0/0
29	OHX	g	109	-	-	0/0/0/0	0/0/0/0
29	OHX	g	11	-	-	0/0/0/0	0/0/0/0
29	OHX	g	116	-	-	0/0/0/0	0/0/0/0
29	OHX	g	119	-	-	0/0/0/0	0/0/0/0
29	OHX	g	120	-	-	0/0/0/0	0/0/0/0
29	OHX	g	130	-	-	0/0/0/0	0/0/0/0
29	OHX	g	133	-	-	0/0/0/0	0/0/0/0
29	OHX	g	135	-	-	0/0/0/0	0/0/0/0
29	OHX	g	137	-	-	0/0/0/0	0/0/0/0
29	OHX	g	138	-	-	0/0/0/0	0/0/0/0
29	OHX	g	139	-	-	0/0/0/0	0/0/0/0
29	OHX	g	14	-	-	0/0/0/0	0/0/0/0
29	OHX	g	140	-	-	0/0/0/0	0/0/0/0
29	OHX	g	144	-	-	0/0/0/0	0/0/0/0
29	OHX	g	146	-	-	0/0/0/0	0/0/0/0
29	OHX	g	148	-	-	0/0/0/0	0/0/0/0
29	OHX	g	149	-	-	0/0/0/0	0/0/0/0
29	OHX	g	15	-	-	0/0/0/0	0/0/0/0
29	OHX	g	151	-	-	0/0/0/0	0/0/0/0
29	OHX	g	158	-	-	0/0/0/0	0/0/0/0
29	OHX	g	160	-	-	0/0/0/0	0/0/0/0
29	OHX	g	161	-	-	0/0/0/0	0/0/0/0
29	OHX	g	17	-	-	0/0/0/0	0/0/0/0
29	OHX	g	170	-	-	0/0/0/0	0/0/0/0
29	OHX	g	171	-	-	0/0/0/0	0/0/0/0
29	OHX	g	173	-	-	0/0/0/0	0/0/0/0
29	OHX	g	18	-	-	0/0/0/0	0/0/0/0
29	OHX	g	181	-	-	0/0/0/0	0/0/0/0

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	OHX	g	183	-	-	0/0/0/0	0/0/0/0
29	OHX	g	188	-	-	0/0/0/0	0/0/0/0
29	OHX	g	19	-	-	0/0/0/0	0/0/0/0
29	OHX	g	191	-	-	0/0/0/0	0/0/0/0
29	OHX	g	193	-	-	0/0/0/0	0/0/0/0
29	OHX	g	195	-	-	0/0/0/0	0/0/0/0
29	OHX	g	196	-	-	0/0/0/0	0/0/0/0
29	OHX	g	197	-	-	0/0/0/0	0/0/0/0
29	OHX	g	200	-	-	0/0/0/0	0/0/0/0
29	OHX	g	204	-	-	0/0/0/0	0/0/0/0
29	OHX	g	211	-	-	0/0/0/0	0/0/0/0
29	OHX	g	216	-	-	0/0/0/0	0/0/0/0
29	OHX	g	221	-	-	0/0/0/0	0/0/0/0
29	OHX	g	222	-	-	0/0/0/0	0/0/0/0
29	OHX	g	227	-	-	0/0/0/0	0/0/0/0
29	OHX	g	228	-	-	0/0/0/0	0/0/0/0
29	OHX	g	23	-	-	0/0/0/0	0/0/0/0
29	OHX	g	240	-	-	0/0/0/0	0/0/0/0
29	OHX	g	241	-	-	0/0/0/0	0/0/0/0
29	OHX	g	245	-	-	0/0/0/0	0/0/0/0
29	OHX	g	246	-	-	0/0/0/0	0/0/0/0
29	OHX	g	248	-	-	0/0/0/0	0/0/0/0
29	OHX	g	253	-	-	0/0/0/0	0/0/0/0
29	OHX	g	258	-	-	0/0/0/0	0/0/0/0
29	OHX	g	259	-	-	0/0/0/0	0/0/0/0
29	OHX	g	265	-	-	0/0/0/0	0/0/0/0
29	OHX	g	266	-	-	0/0/0/0	0/0/0/0
29	OHX	g	267	-	-	0/0/0/0	0/0/0/0
29	OHX	g	270	-	-	0/0/0/0	0/0/0/0
29	OHX	g	271	-	-	0/0/0/0	0/0/0/0
29	OHX	g	273	-	-	0/0/0/0	0/0/0/0
29	OHX	g	279	-	-	0/0/0/0	0/0/0/0
29	OHX	g	282	-	-	0/0/0/0	0/0/0/0
29	OHX	g	286	-	-	0/0/0/0	0/0/0/0
29	OHX	g	288	-	-	0/0/0/0	0/0/0/0
29	OHX	g	289	-	-	0/0/0/0	0/0/0/0
29	OHX	g	295	-	-	0/0/0/0	0/0/0/0
29	OHX	g	299	-	-	0/0/0/0	0/0/0/0
29	OHX	g	3	-	-	0/0/0/0	0/0/0/0
29	OHX	g	30	-	-	0/0/0/0	0/0/0/0
29	OHX	g	307	-	-	0/0/0/0	0/0/0/0
29	OHX	g	309	-	-	0/0/0/0	0/0/0/0

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	OHX	g	312	-	-	0/0/0/0	0/0/0/0
29	OHX	g	317	-	-	0/0/0/0	0/0/0/0
29	OHX	g	323	-	-	0/0/0/0	0/0/0/0
29	OHX	g	327	-	-	0/0/0/0	0/0/0/0
29	OHX	g	328	-	-	0/0/0/0	0/0/0/0
29	OHX	g	33	-	-	0/0/0/0	0/0/0/0
29	OHX	g	331	-	-	0/0/0/0	0/0/0/0
29	OHX	g	333	-	-	0/0/0/0	0/0/0/0
29	OHX	g	336	-	-	0/0/0/0	0/0/0/0
29	OHX	g	338	-	-	0/0/0/0	0/0/0/0
29	OHX	g	343	-	-	0/0/0/0	0/0/0/0
29	OHX	g	345	-	-	0/0/0/0	0/0/0/0
29	OHX	g	348	-	-	0/0/0/0	0/0/0/0
29	OHX	g	35	-	-	0/0/0/0	0/0/0/0
29	OHX	g	351	-	-	0/0/0/0	0/0/0/0
29	OHX	g	353	-	-	0/0/0/0	0/0/0/0
29	OHX	g	354	-	-	0/0/0/0	0/0/0/0
29	OHX	g	356	-	-	0/0/0/0	0/0/0/0
29	OHX	g	357	-	-	0/0/0/0	0/0/0/0
29	OHX	g	36	-	-	0/0/0/0	0/0/0/0
29	OHX	g	366	-	-	0/0/0/0	0/0/0/0
29	OHX	g	369	-	-	0/0/0/0	0/0/0/0
29	OHX	g	370	-	-	0/0/0/0	0/0/0/0
29	OHX	g	375	-	-	0/0/0/0	0/0/0/0
29	OHX	g	377	-	-	0/0/0/0	0/0/0/0
29	OHX	g	378	-	-	0/0/0/0	0/0/0/0
29	OHX	g	38	-	-	0/0/0/0	0/0/0/0
29	OHX	g	381	-	-	0/0/0/0	0/0/0/0
29	OHX	g	384	-	-	0/0/0/0	0/0/0/0
29	OHX	g	387	-	-	0/0/0/0	0/0/0/0
29	OHX	g	388	-	-	0/0/0/0	0/0/0/0
29	OHX	g	395	-	-	0/0/0/0	0/0/0/0
29	OHX	g	398	-	-	0/0/0/0	0/0/0/0
29	OHX	g	399	-	-	0/0/0/0	0/0/0/0
29	OHX	g	40	-	-	0/0/0/0	0/0/0/0
29	OHX	g	400	-	-	0/0/0/0	0/0/0/0
29	OHX	g	401	-	-	0/0/0/0	0/0/0/0
29	OHX	g	402	-	-	0/0/0/0	0/0/0/0
29	OHX	g	406	-	-	0/0/0/0	0/0/0/0
29	OHX	g	407	-	-	0/0/0/0	0/0/0/0
29	OHX	g	414	-	-	0/0/0/0	0/0/0/0
29	OHX	g	419	-	-	0/0/0/0	0/0/0/0

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	OHX	g	420	-	-	0/0/0/0	0/0/0/0
29	OHX	g	422	-	-	0/0/0/0	0/0/0/0
29	OHX	g	424	-	-	0/0/0/0	0/0/0/0
29	OHX	g	425	-	-	0/0/0/0	0/0/0/0
29	OHX	g	427	-	-	0/0/0/0	0/0/0/0
29	OHX	g	430	-	-	0/0/0/0	0/0/0/0
29	OHX	g	432	-	-	0/0/0/0	0/0/0/0
29	OHX	g	441	-	-	0/0/0/0	0/0/0/0
29	OHX	g	445	-	-	0/0/0/0	0/0/0/0
29	OHX	g	451	-	-	0/0/0/0	0/0/0/0
29	OHX	g	456	-	-	0/0/0/0	0/0/0/0
29	OHX	g	457	-	-	0/0/0/0	0/0/0/0
29	OHX	g	461	-	-	0/0/0/0	0/0/0/0
29	OHX	g	465	-	-	0/0/0/0	0/0/0/0
29	OHX	g	466	-	-	0/0/0/0	0/0/0/0
29	OHX	g	469	-	-	0/0/0/0	0/0/0/0
29	OHX	g	471	-	-	0/0/0/0	0/0/0/0
29	OHX	g	476	-	-	0/0/0/0	0/0/0/0
29	OHX	g	478	-	-	0/0/0/0	0/0/0/0
29	OHX	g	483	-	-	0/0/0/0	0/0/0/0
29	OHX	g	489	-	-	0/0/0/0	0/0/0/0
29	OHX	g	49	-	-	0/0/0/0	0/0/0/0
29	OHX	g	490	-	-	0/0/0/0	0/0/0/0
29	OHX	g	492	-	-	0/0/0/0	0/0/0/0
29	OHX	g	496	-	-	0/0/0/0	0/0/0/0
29	OHX	g	499	-	-	0/0/0/0	0/0/0/0
29	OHX	g	503	-	-	0/0/0/0	0/0/0/0
29	OHX	g	504	-	-	0/0/0/0	0/0/0/0
29	OHX	g	507	-	-	0/0/0/0	0/0/0/0
29	OHX	g	513	-	-	0/0/0/0	0/0/0/0
29	OHX	g	514	-	-	0/0/0/0	0/0/0/0
29	OHX	g	515	-	-	0/0/0/0	0/0/0/0
29	OHX	g	518	-	-	0/0/0/0	0/0/0/0
29	OHX	g	52	-	-	0/0/0/0	0/0/0/0
29	OHX	g	520	-	-	0/0/0/0	0/0/0/0
29	OHX	g	521	-	-	0/0/0/0	0/0/0/0
29	OHX	g	528	-	-	0/0/0/0	0/0/0/0
29	OHX	g	532	-	-	0/0/0/0	0/0/0/0
29	OHX	g	535	-	-	0/0/0/0	0/0/0/0
29	OHX	g	536	-	-	0/0/0/0	0/0/0/0
29	OHX	g	54	-	-	0/0/0/0	0/0/0/0
29	OHX	g	540	-	-	0/0/0/0	0/0/0/0

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	OHX	g	547	-	-	0/0/0/0	0/0/0/0
29	OHX	g	55	-	-	0/0/0/0	0/0/0/0
29	OHX	g	550	-	-	0/0/0/0	0/0/0/0
29	OHX	g	551	-	-	0/0/0/0	0/0/0/0
29	OHX	g	552	-	-	0/0/0/0	0/0/0/0
29	OHX	g	553	-	-	0/0/0/0	0/0/0/0
29	OHX	g	554	-	-	0/0/0/0	0/0/0/0
29	OHX	g	56	-	-	0/0/0/0	0/0/0/0
29	OHX	g	569	-	-	0/0/0/0	0/0/0/0
29	OHX	g	571	-	-	0/0/0/0	0/0/0/0
29	OHX	g	575	-	-	0/0/0/0	0/0/0/0
29	OHX	g	576	-	-	0/0/0/0	0/0/0/0
29	OHX	g	577	-	-	0/0/0/0	0/0/0/0
29	OHX	g	580	-	-	0/0/0/0	0/0/0/0
29	OHX	g	581	-	-	0/0/0/0	0/0/0/0
29	OHX	g	588	-	-	0/0/0/0	0/0/0/0
29	OHX	g	589	-	-	0/0/0/0	0/0/0/0
29	OHX	g	590	-	-	0/0/0/0	0/0/0/0
29	OHX	g	593	-	-	0/0/0/0	0/0/0/0
29	OHX	g	6	-	-	0/0/0/0	0/0/0/0
29	OHX	g	603	-	-	0/0/0/0	0/0/0/0
29	OHX	g	607	-	-	0/0/0/0	0/0/0/0
29	OHX	g	61	-	-	0/0/0/0	0/0/0/0
29	OHX	g	611	-	-	0/0/0/0	0/0/0/0
29	OHX	g	613	-	-	0/0/0/0	0/0/0/0
29	OHX	g	614	-	-	0/0/0/0	0/0/0/0
29	OHX	g	620	-	-	0/0/0/0	0/0/0/0
29	OHX	g	621	-	-	0/0/0/0	0/0/0/0
29	OHX	g	622	-	-	0/0/0/0	0/0/0/0
29	OHX	g	625	-	-	0/0/0/0	0/0/0/0
29	OHX	g	627	-	-	0/0/0/0	0/0/0/0
29	OHX	g	634	-	-	0/0/0/0	0/0/0/0
29	OHX	g	638	-	-	0/0/0/0	0/0/0/0
29	OHX	g	641	-	-	0/0/0/0	0/0/0/0
29	OHX	g	643	-	-	0/0/0/0	0/0/0/0
29	OHX	g	650	-	-	0/0/0/0	0/0/0/0
29	OHX	g	66	-	-	0/0/0/0	0/0/0/0
29	OHX	g	661	-	-	0/0/0/0	0/0/0/0
29	OHX	g	664	-	-	0/0/0/0	0/0/0/0
29	OHX	g	665	-	-	0/0/0/0	0/0/0/0
29	OHX	g	67	-	-	0/0/0/0	0/0/0/0
29	OHX	g	671	-	-	0/0/0/0	0/0/0/0

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	OHX	g	678	-	-	0/0/0/0	0/0/0/0
29	OHX	g	680	-	-	0/0/0/0	0/0/0/0
29	OHX	g	681	-	-	0/0/0/0	0/0/0/0
29	OHX	g	689	-	-	0/0/0/0	0/0/0/0
29	OHX	g	690	-	-	0/0/0/0	0/0/0/0
29	OHX	g	692	-	-	0/0/0/0	0/0/0/0
29	OHX	g	693	-	-	0/0/0/0	0/0/0/0
29	OHX	g	694	-	-	0/0/0/0	0/0/0/0
29	OHX	g	698	-	-	0/0/0/0	0/0/0/0
29	OHX	g	699	-	-	0/0/0/0	0/0/0/0
29	OHX	g	7	-	-	0/0/0/0	0/0/0/0
29	OHX	g	70	-	-	0/0/0/0	0/0/0/0
29	OHX	g	700	-	-	0/0/0/0	0/0/0/0
29	OHX	g	705	-	-	0/0/0/0	0/0/0/0
29	OHX	g	706	-	-	0/0/0/0	0/0/0/0
29	OHX	g	707	-	-	0/0/0/0	0/0/0/0
29	OHX	g	711	-	-	0/0/0/0	0/0/0/0
29	OHX	g	72	-	-	0/0/0/0	0/0/0/0
29	OHX	g	81	-	-	0/0/0/0	0/0/0/0
29	OHX	g	82	-	-	0/0/0/0	0/0/0/0
29	OHX	g	83	-	-	0/0/0/0	0/0/0/0
29	OHX	g	85	-	-	0/0/0/0	0/0/0/0
29	OHX	g	86	-	-	0/0/0/0	0/0/0/0
29	OHX	g	9	-	-	0/0/0/0	0/0/0/0
29	OHX	g	91	-	-	0/0/0/0	0/0/0/0
29	OHX	g	96	-	-	0/0/0/0	0/0/0/0
29	OHX	g	98	-	-	0/0/0/0	0/0/0/0

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

EDS was not executed - this section will therefore be empty.

6.2 Non-standard residues in protein, DNA, RNA chains ⓘ

EDS was not executed - this section will therefore be empty.

6.3 Carbohydrates ⓘ

EDS was not executed - this section will therefore be empty.

6.4 Ligands ⓘ

EDS was not executed - this section will therefore be empty.

6.5 Other polymers ⓘ

EDS was not executed - this section will therefore be empty.