



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 20, 2026 – 05:15 PM UTC

PDB ID : 4V49 / pdb_00004v49
Title : Crystal Structure of a Streptomycin Dependent Ribosome from E. Coli 70S Ribosome.
Authors : Vila-Sanjurjo, A.; Ridgeway, W.K.; Seymaner, V.; Zhang, W.; Santoso, S.; Yu, K.; Cate, J.H.D.
Deposited on : 2003-06-13
Resolution : 8.70 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity	:	4-5-2 with Phenix2.0
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

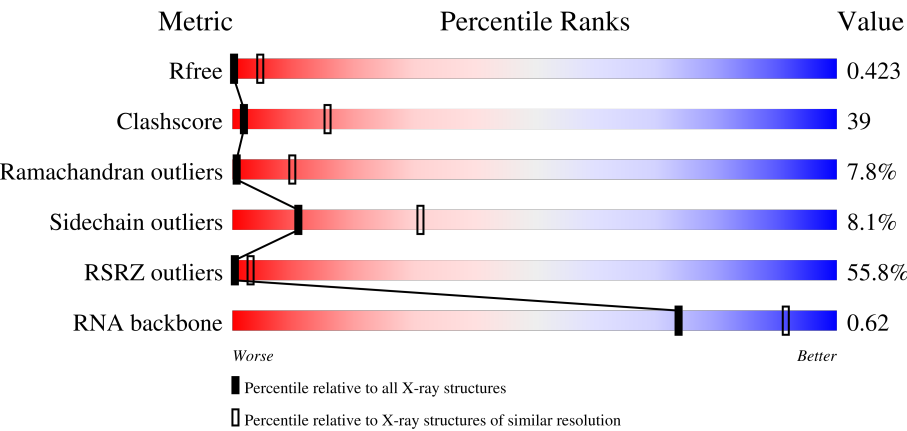
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 8.70 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R _{free}	180053	1168 (11.50-4.00)
Clashscore	190562	1001 (11.50-4.06)
Ramachandran outliers	187476	1055 (11.50-4.00)
Sidechain outliers	187428	1018 (11.50-4.00)
RSRZ outliers	180081	1162 (11.50-4.00)
RNA backbone	3983	1057 (11.50-3.10)

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 of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1527	27% 23%57%15%5%
2	AV	76	13% 37%41%12%11%
2	AW	76	78% 63%22%8%7%
3	AU	18	22% 44%6%50%

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Mol	Chain	Length	Quality of chain
4	AB	234	
5	AC	206	
6	AD	208	
7	AE	150	
8	AF	101	
9	AG	155	
10	AH	138	
11	AI	127	
12	AJ	98	
13	AK	119	
14	AL	124	
15	AM	125	
16	AN	60	
17	AO	88	
18	AP	83	
19	AQ	104	
20	AR	73	
21	AS	80	
22	AT	99	
23	B0	2887	
24	B9	118	
25	BA	270	
26	BB	205	
27	BC	197	
28	BD	178	

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Mol	Chain	Length	Quality of chain
29	BE	177	81% 100%
30	BF	52	94% 100%
31	BG	143	45% 98%
32	BH	143	96% 100%
33	BI	132	97% 99%
34	BJ	141	78% 99%
35	BK	124	98% 100%
36	BL	114	97% 99%
37	BM	111	100% 100%
38	BN	125	91% 99%
39	BO	117	79% 100%
40	BP	100	79% 100%
41	BQ	130	100% 100%
42	BR	93	96% 100%
43	BS	113	99% 100%
44	BT	173	91% 100%
45	BU	86	100% 99%
46	BV	16	100%
47	BW	65	88% 100%
48	BX	55	95% 100%
49	BY	73	95% 100%
50	BZ	58	88% 100%
51	B1	53	96% 100%
52	B2	46	87% 100%
53	B3	63	59% 100%

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Mol	Chain	Length	Quality of chain
54	B4	35	97% 100%
55	B5	217	85% 94% 6%

2 Entry composition [i](#)

There are 55 unique types of molecules in this entry. The entry contains 122017 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 16S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1527	Total	C	N	O	P	0	0	0
			32819	14610	6085	10597	1527			

- Molecule 2 is a RNA chain called tRNA-Phe.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AV	76	Total	C	N	O	P	0	0	0
			1625	725	293	531	76			
2	AW	76	Total	C	N	O	P	0	0	0
			1625	725	293	531	76			

- Molecule 3 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AU	9	Total	C	N	O	P	0	0	0
			176	81	24	62	9			

- Molecule 4 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AB	234	Total	C	N	O	S	0	0	0
			1900	1213	341	341	5			

- Molecule 5 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AC	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			

- Molecule 6 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AD	208	Total	C	N	O	S	0	0	0
			1702	1066	339	290	7			

- Molecule 7 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AE	150	Total	C	N	O	S	0	0	0
			1146	724	217	201	4			

- Molecule 8 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AF	101	Total	C	N	O	S	0	0	0
			842	531	155	153	3			

- Molecule 9 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AG	155	Total	C	N	O	S	0	0	0
			1256	781	252	217	6			

- Molecule 10 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AH	138	Total	C	N	O	S	0	0	0
			1115	705	215	192	3			

- Molecule 11 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AI	127	Total	C	N	O		0	0	0
			1010	639	198	173				

- Molecule 12 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AJ	98	Total	C	N	O	S	0	0	0
			794	499	156	138	1			

- Molecule 13 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AK	119	Total	C	N	O	S	0	0	0
			884	549	168	164	3			

- Molecule 14 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AL	124	Total	C	N	O	S	0	0	0
			970	611	195	163	1			

- Molecule 15 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AM	125	Total	C	N	O	S	0	0	0
			996	617	207	170	2			

- Molecule 16 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AN	60	Total	C	N	O	S	0	0	0
			491	312	104	71	4			

- Molecule 17 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AO	88	Total	C	N	O	S	0	0	0
			733	459	147	125	2			

- Molecule 18 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	AP	83	Total	C	N	O	S	0	0	0
			700	443	139	117	1			

- Molecule 19 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AQ	104	Total	C	N	O	S	0	0	0
			856	547	161	146	2			

- Molecule 20 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
20	AR	73	Total	C	N	O	0	0	0
			596	380	118	98			

- Molecule 21 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AS	80	Total	C	N	O	S	0	0	0
			647	414	119	112	2			

- Molecule 22 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AT	99	Total	C	N	O	S	0	0	0
			762	469	162	129	2			

- Molecule 23 is a RNA chain called 23S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	B0	2825	Total	C	N	O	P	0	0	0
			60636	27047	11191	19573	2825			

- Molecule 24 is a RNA chain called 5S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	B9	118	Total	C	N	O	P	0	0	0
			2519	1124	464	813	118			

- Molecule 25 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
25	BA	270	Total C	0	0	270
			270 270			

- Molecule 26 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
26	BB	205	Total C	0	0	205
			205 205			

- Molecule 27 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
27	BC	197	Total C 197 197	0	0	197

- Molecule 28 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
28	BD	178	Total C 178 178	0	0	178

- Molecule 29 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
29	BE	177	Total C 177 177	0	0	177

- Molecule 30 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
30	BF	52	Total C 52 52	0	0	52

- Molecule 31 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
31	BG	143	Total C 143 143	0	0	143

- Molecule 32 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
32	BH	143	Total C 143 143	0	0	143

- Molecule 33 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
33	BI	132	Total C 132 132	0	0	132

- Molecule 34 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
34	BJ	141	Total	C	0	0	141
			141	141			

- Molecule 35 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
35	BK	124	Total	C	0	0	124
			124	124			

- Molecule 36 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
36	BL	114	Total	C	0	0	114
			114	114			

- Molecule 37 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
37	BM	111	Total	C	0	0	111
			111	111			

- Molecule 38 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
38	BN	125	Total	C	0	0	125
			125	125			

- Molecule 39 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
39	BO	117	Total	C	0	0	117
			117	117			

- Molecule 40 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
40	BP	100	Total	C	0	0	100
			100	100			

- Molecule 41 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
41	BQ	130	Total C 130 130	0	0	130

- Molecule 42 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
42	BR	93	Total C 93 93	0	0	93

- Molecule 43 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
43	BS	113	Total C 113 113	0	0	113

- Molecule 44 is a protein called general stress protein Ctc.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
44	BT	173	Total C 173 173	0	0	173

- Molecule 45 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
45	BU	86	Total C 86 86	0	0	86

- Molecule 46 is a protein called 50S RIBOSOMAL PROTEIN L28.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
46	BV	16	Total C 16 16	0	0	16

- Molecule 47 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
47	BW	65	Total C 65 65	0	0	65

- Molecule 48 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
48	BX	55	Total C 55 55	0	0	55

- Molecule 49 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
49	BY	73	Total C 73 73	0	0	73

- Molecule 50 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
50	BZ	58	Total C 58 58	0	0	58

- Molecule 51 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
51	B1	53	Total C 53 53	0	0	53

- Molecule 52 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
52	B2	46	Total C 46 46	0	0	46

- Molecule 53 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
53	B3	63	Total C 63 63	0	0	63

- Molecule 54 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
54	B4	35	Total C 35 35	0	0	35

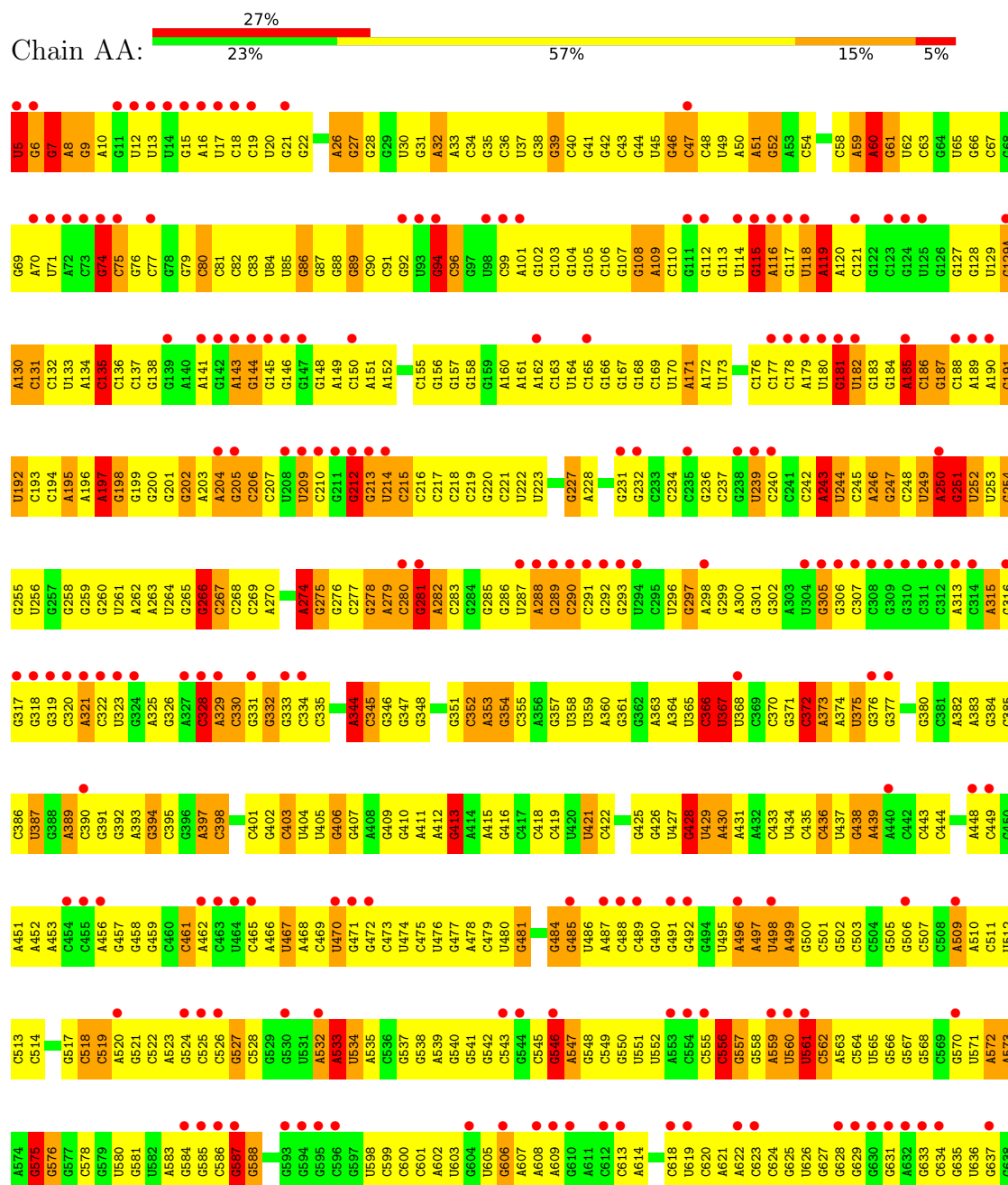
- Molecule 55 is a protein called 50S ribosomal protein L1P.

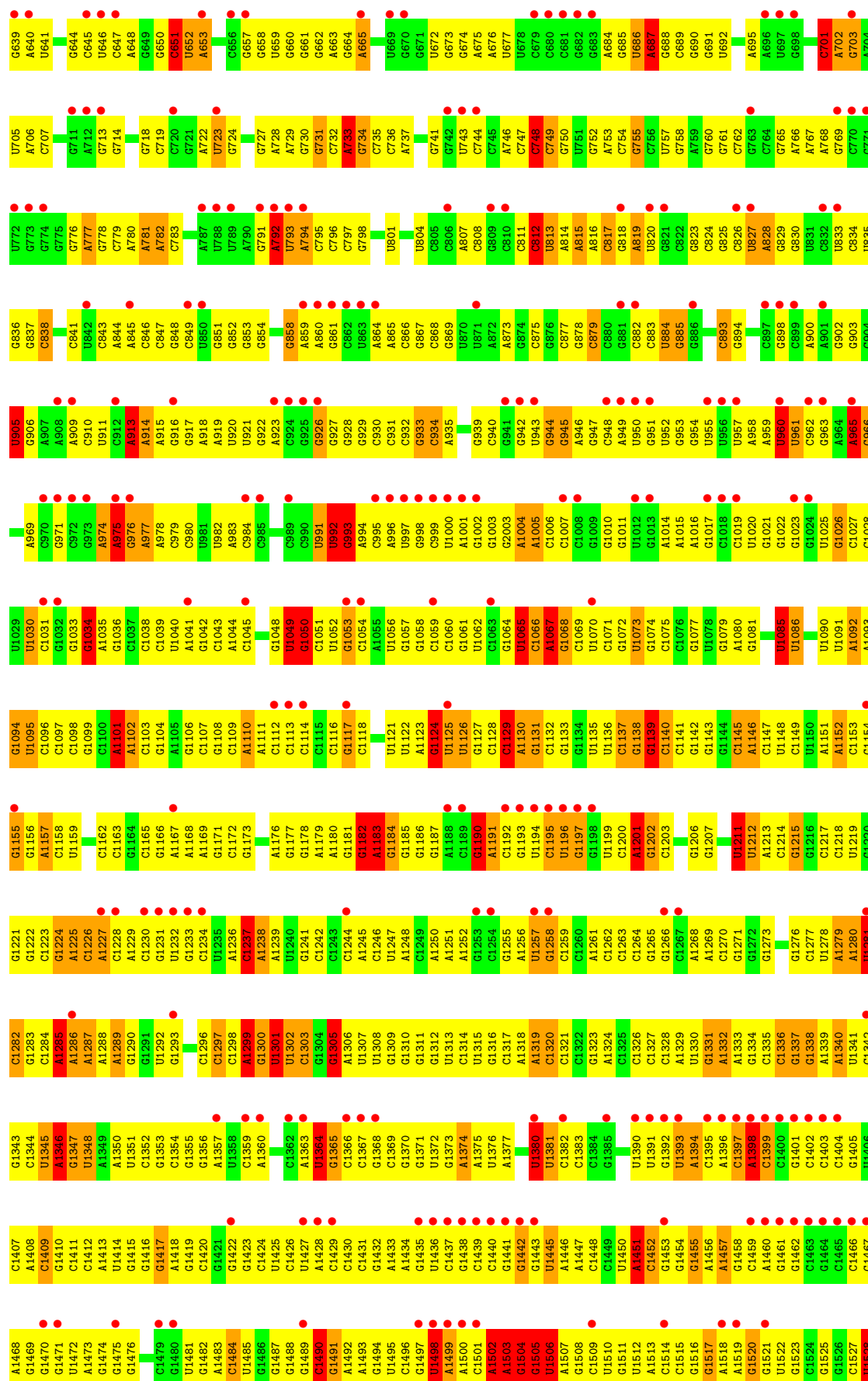
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
55	B5	217	Total 217	C 217	0	0	217

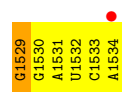
3 Residue-property plots

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

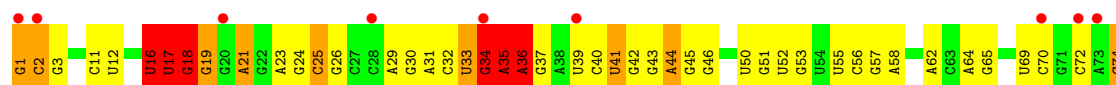
• Molecule 1: 16S RIBOSOMAL RNA



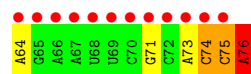
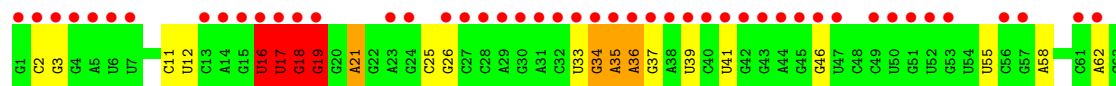
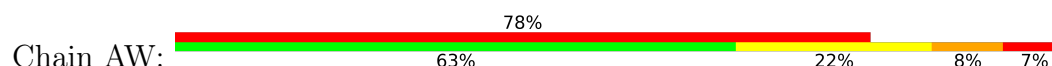




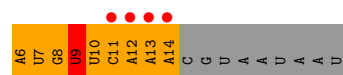
• Molecule 2: tRNA-Phe



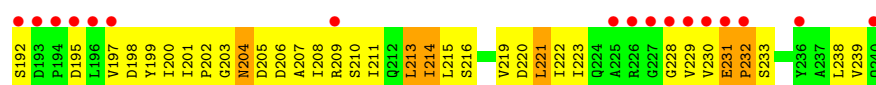
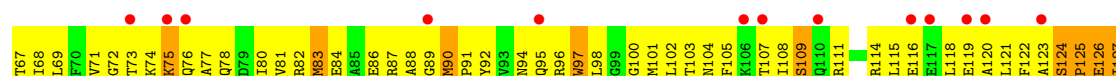
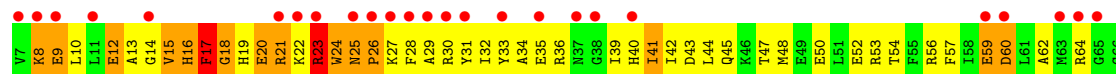
• Molecule 2: tRNA-Phe



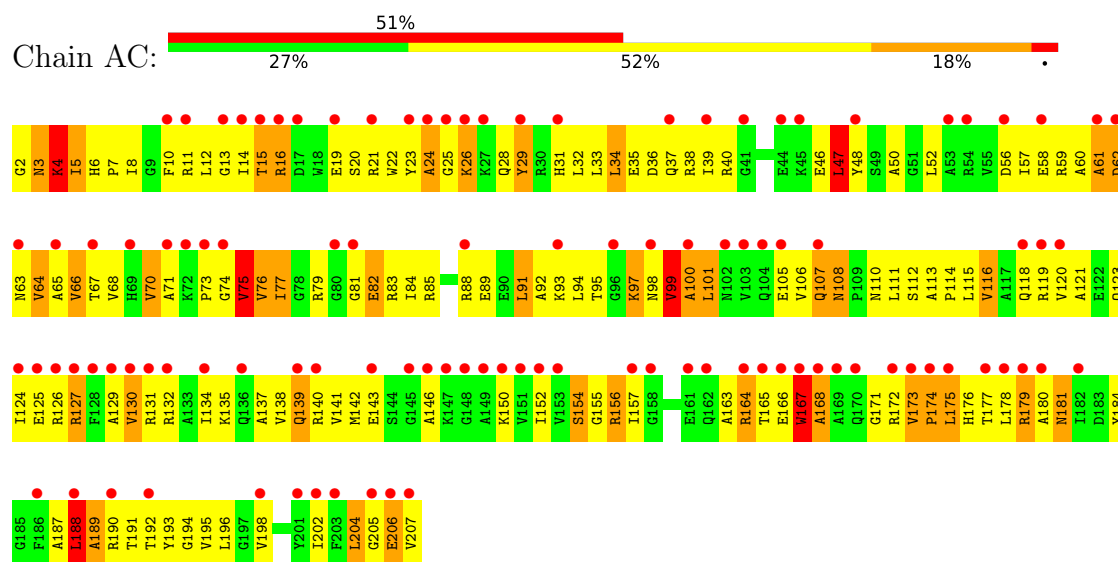
• Molecule 3: mRNA



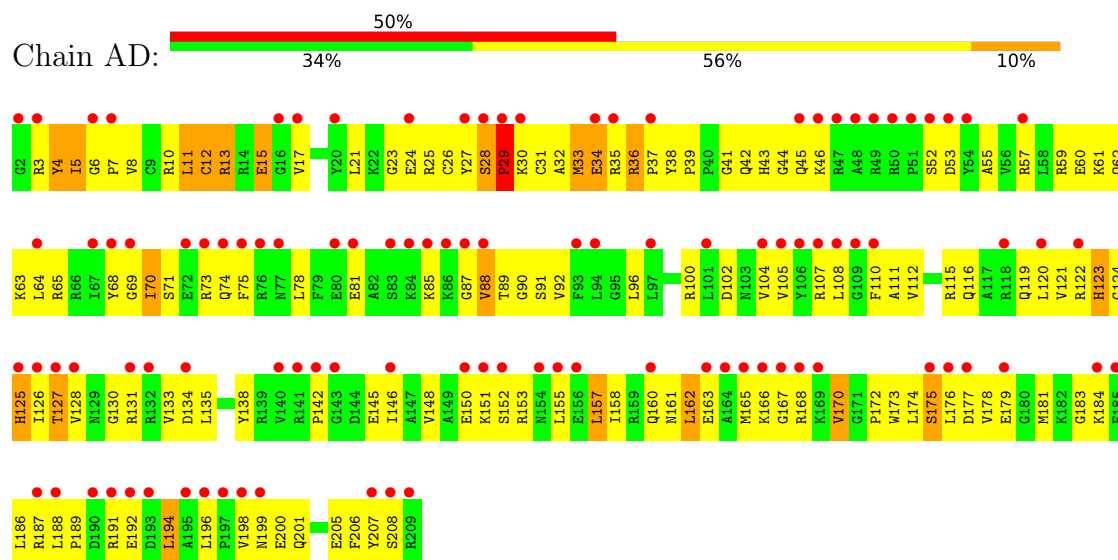
• Molecule 4: 30S ribosomal protein S2



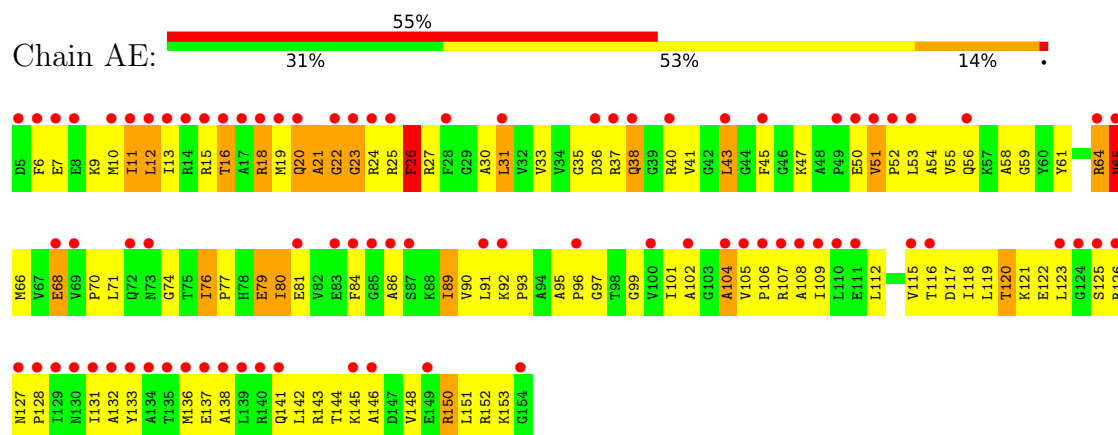
• Molecule 5: 30S ribosomal protein S3



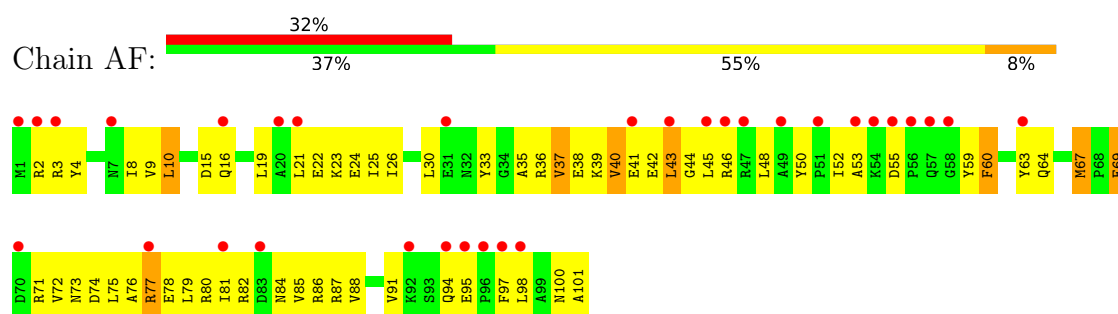
• Molecule 6: 30S ribosomal protein S4



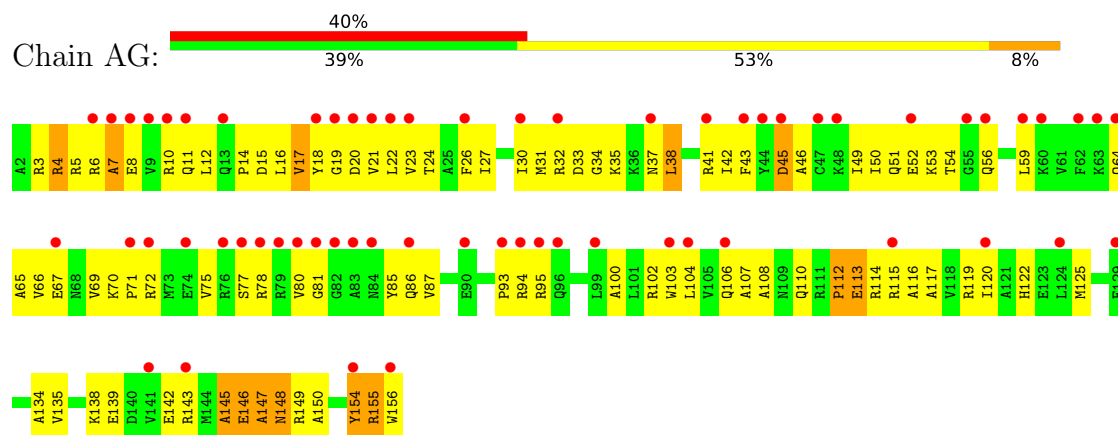
• Molecule 7: 30S ribosomal protein S5



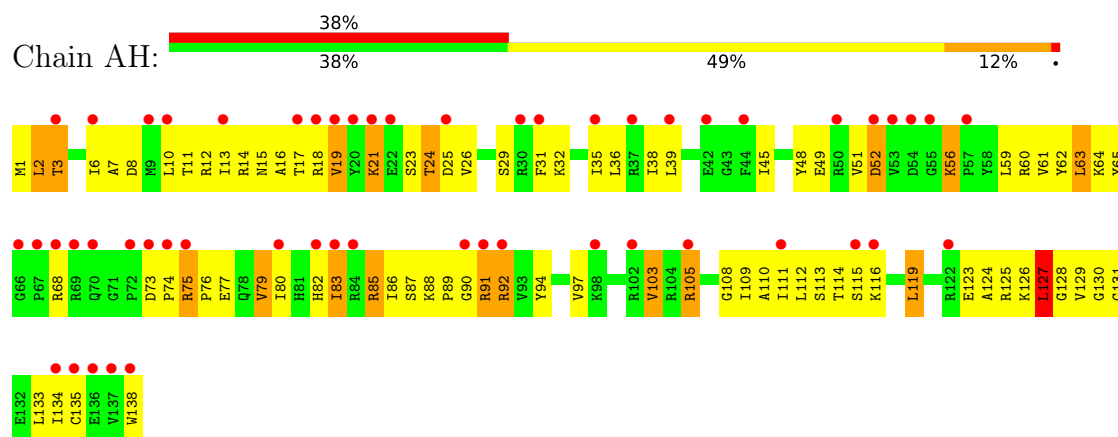
• Molecule 8: 30S ribosomal protein S6



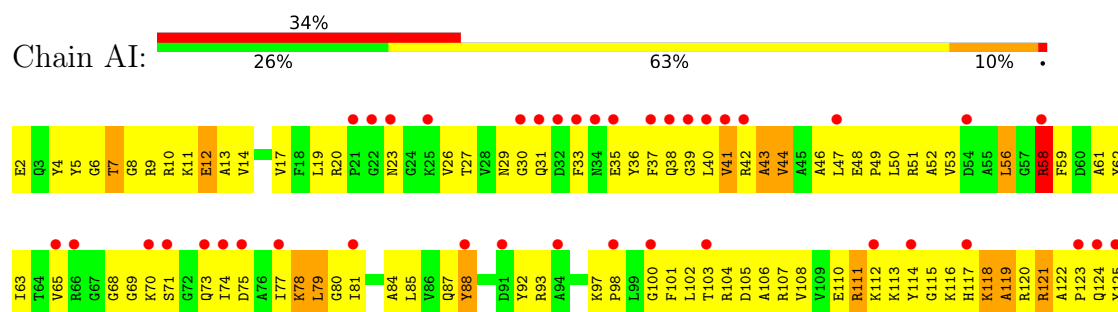
• Molecule 9: 30S ribosomal protein S7



• Molecule 10: 30S ribosomal protein S8

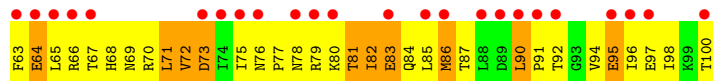
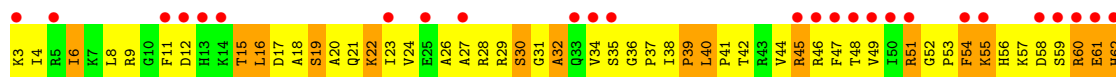
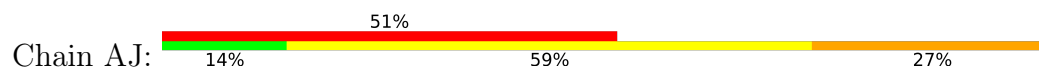


• Molecule 11: 30S ribosomal protein S9

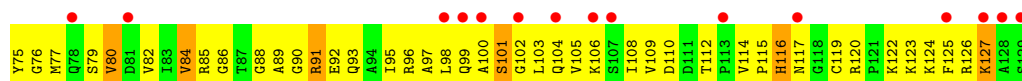
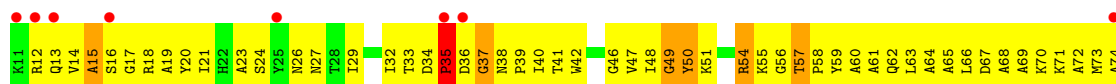




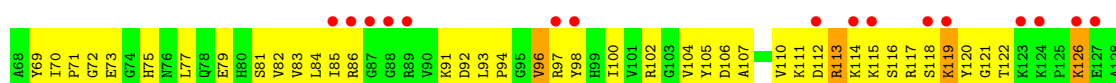
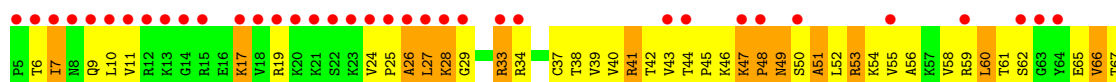
• Molecule 12: 30S ribosomal protein S10



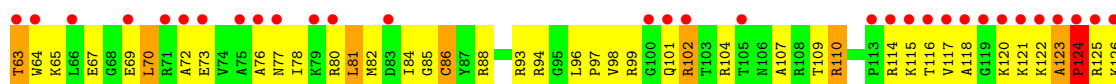
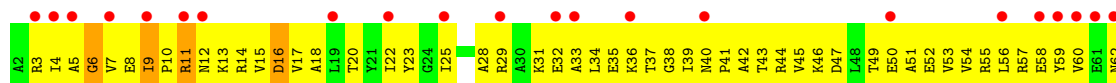
• Molecule 13: 30S ribosomal protein S11



• Molecule 14: 30S ribosomal protein S12

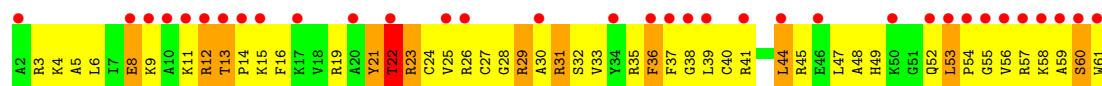


• Molecule 15: 30S ribosomal protein S13

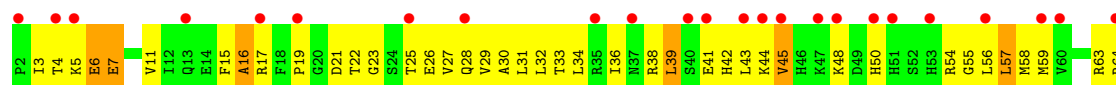


• Molecule 16: 30S ribosomal protein S14

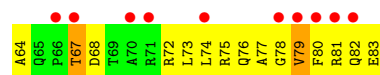
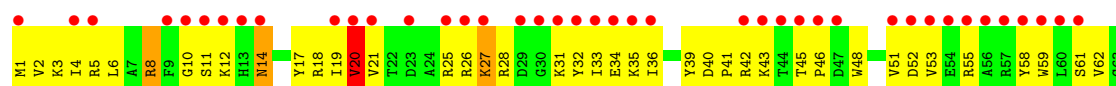




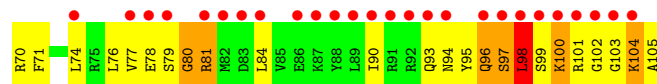
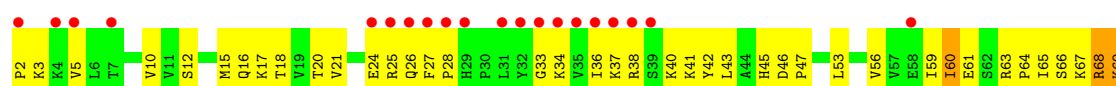
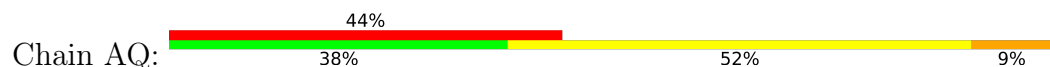
• Molecule 17: 30S ribosomal protein S15



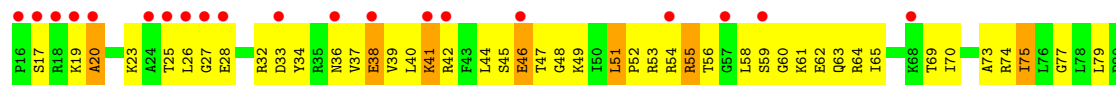
• Molecule 18: 30S ribosomal protein S16



• Molecule 19: 30S ribosomal protein S17

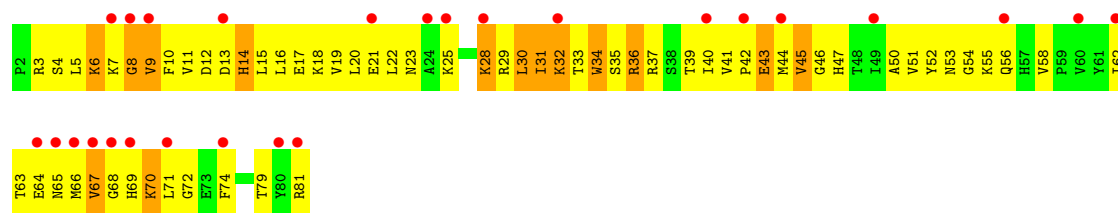


• Molecule 20: 30S ribosomal protein S18

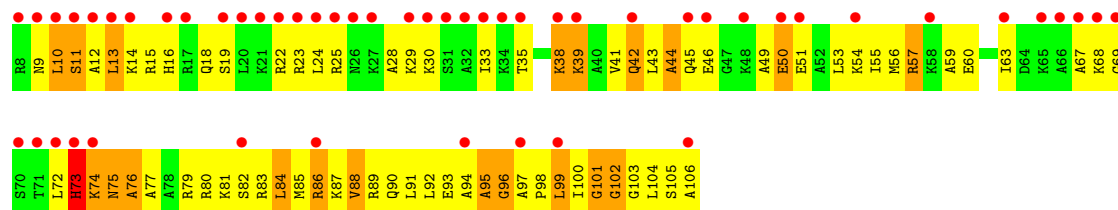


• Molecule 21: 30S ribosomal protein S19

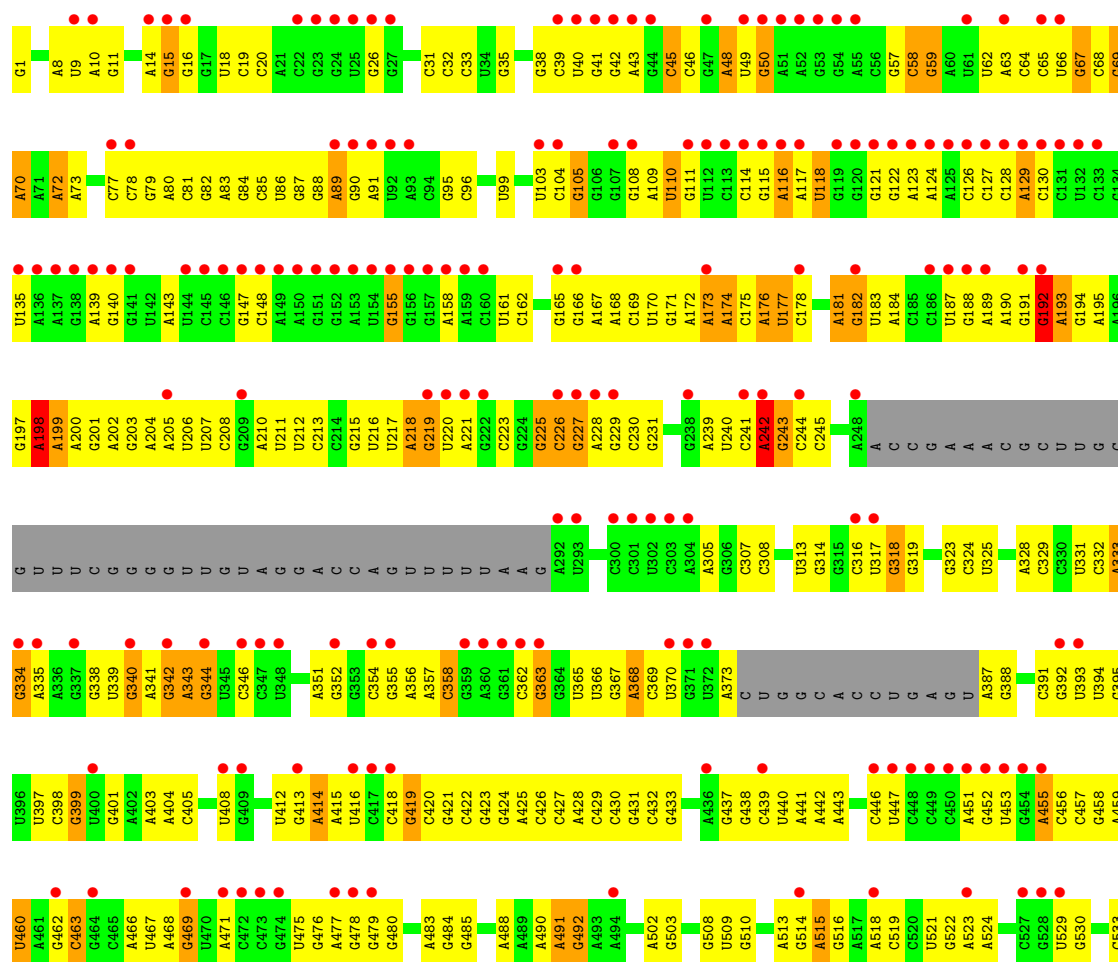
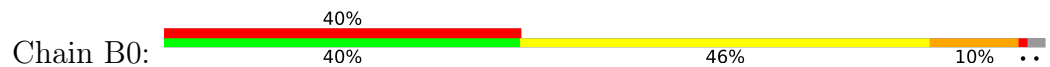


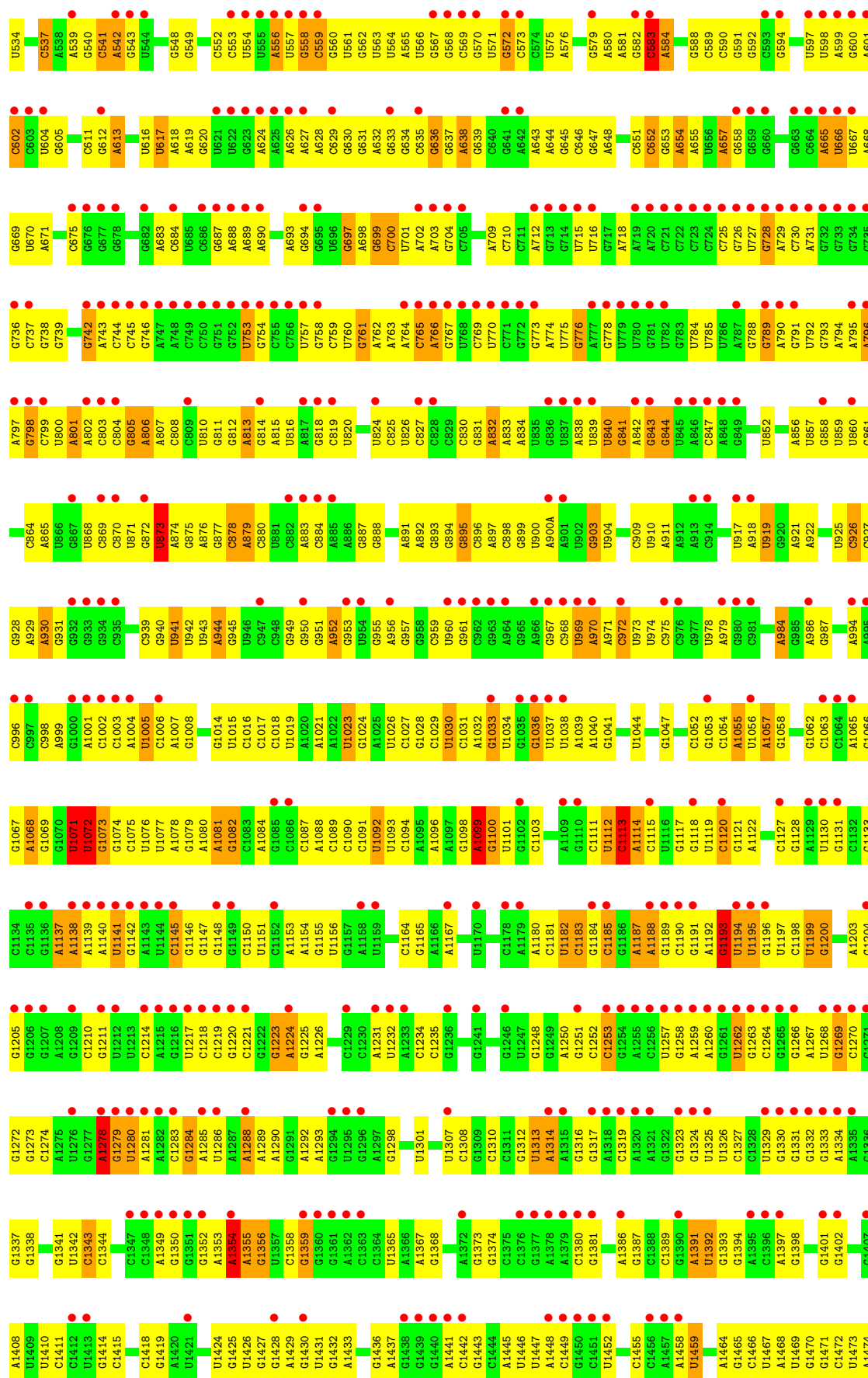


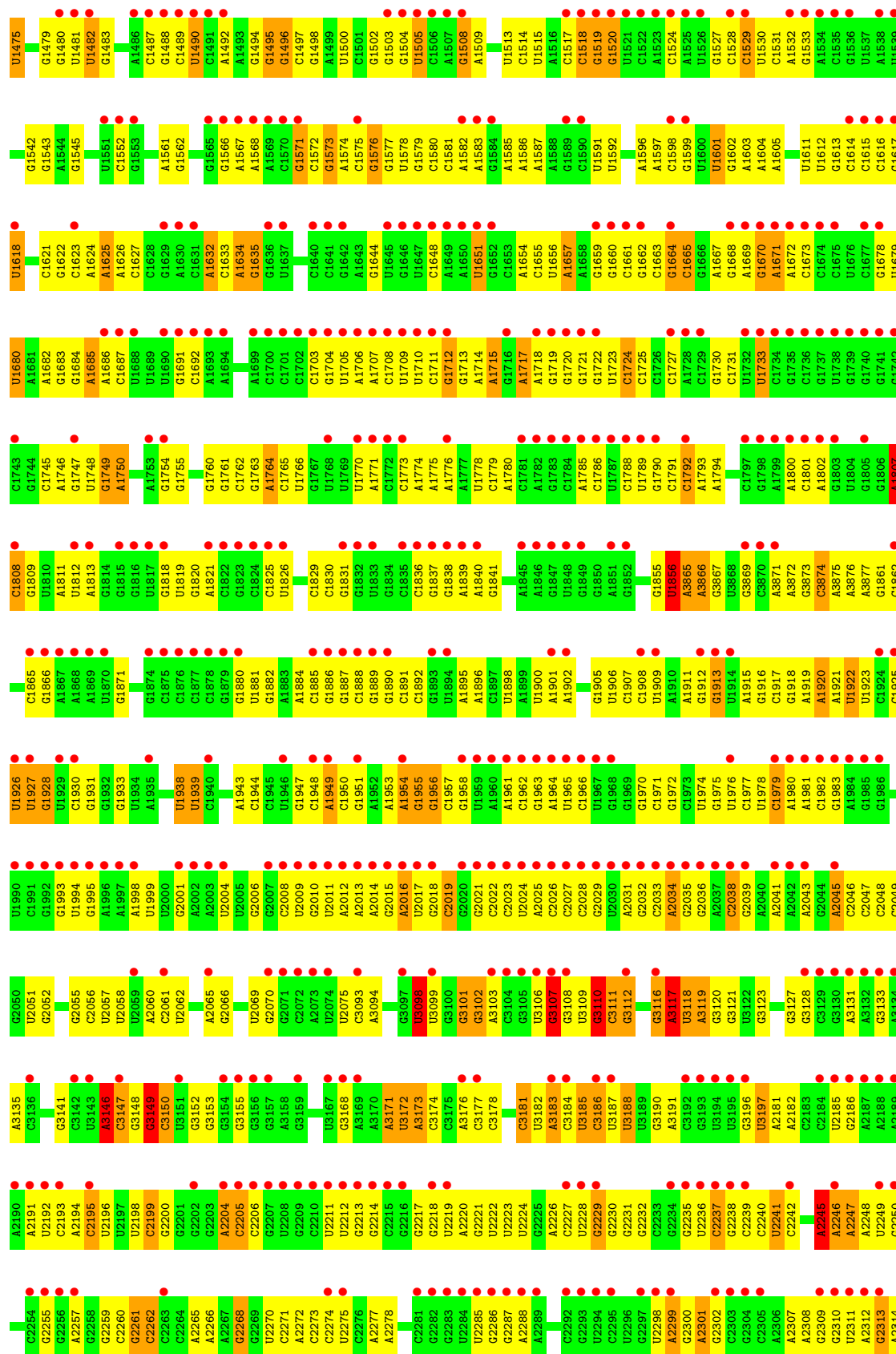
● Molecule 22: 30S ribosomal protein S20

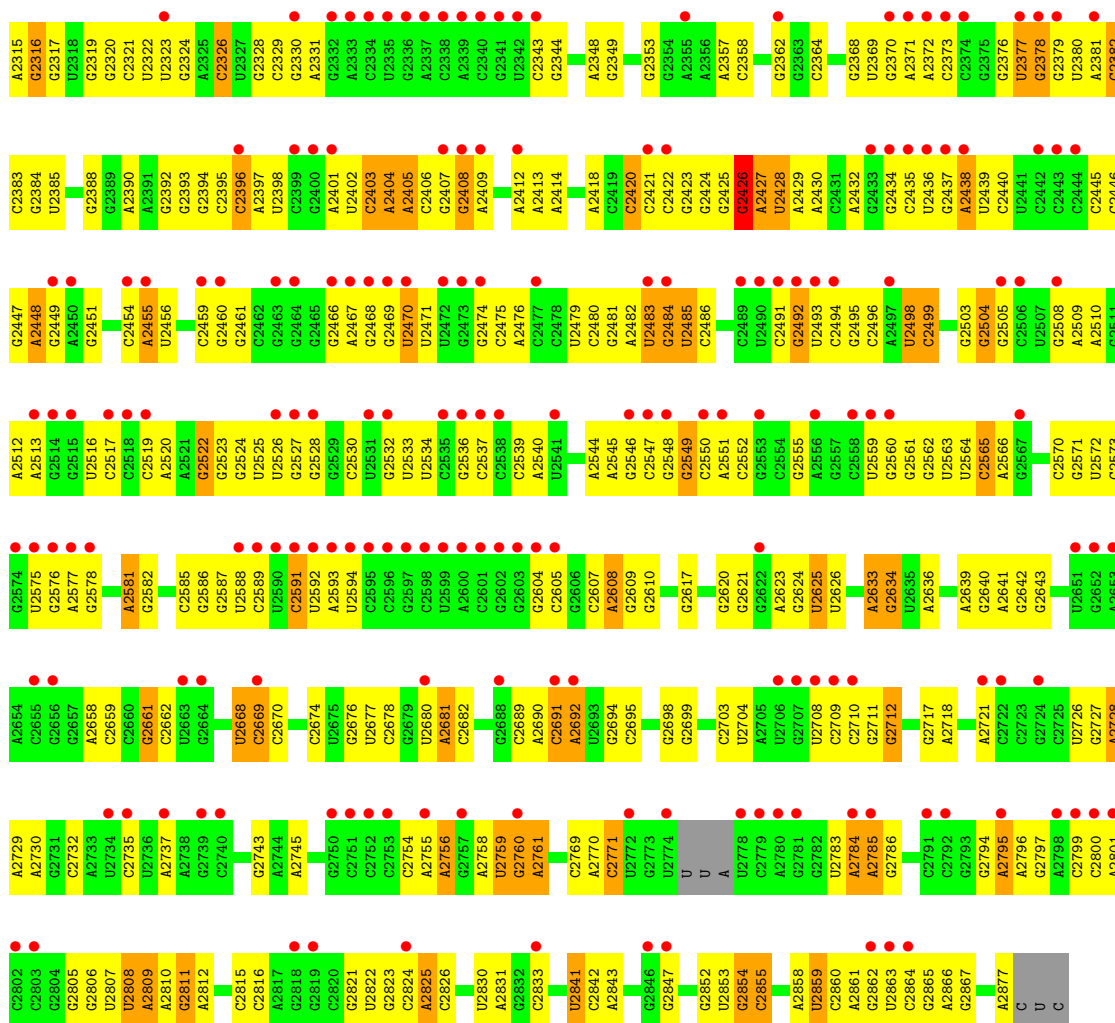


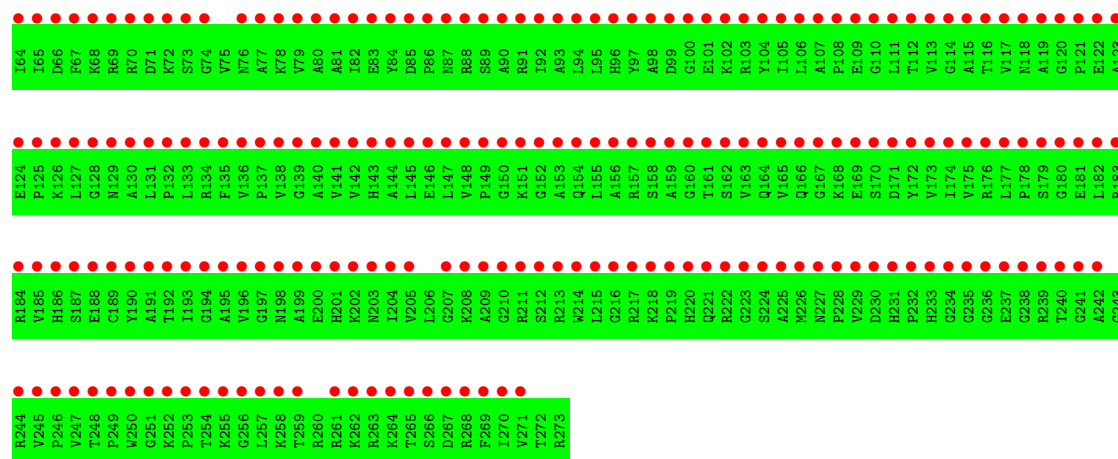
● Molecule 23: 23S RIBOSOMAL RNA



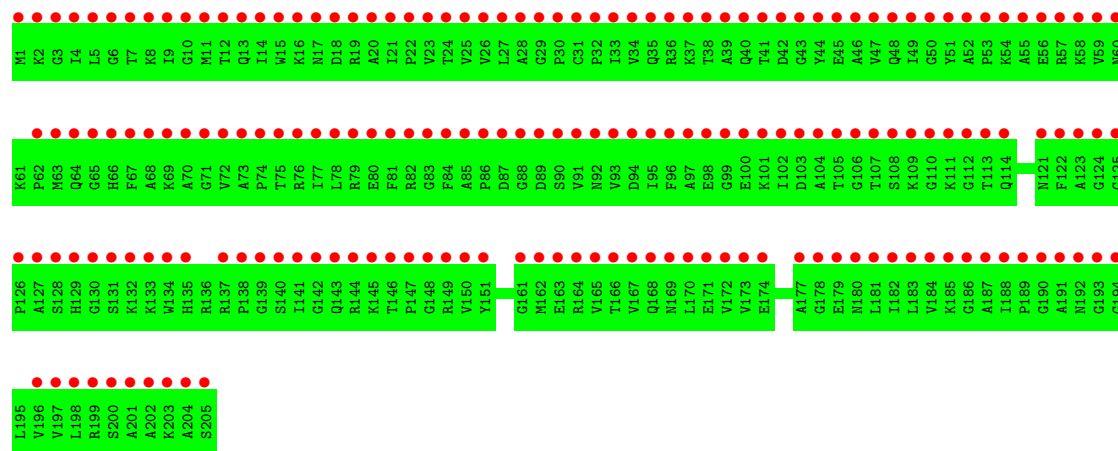




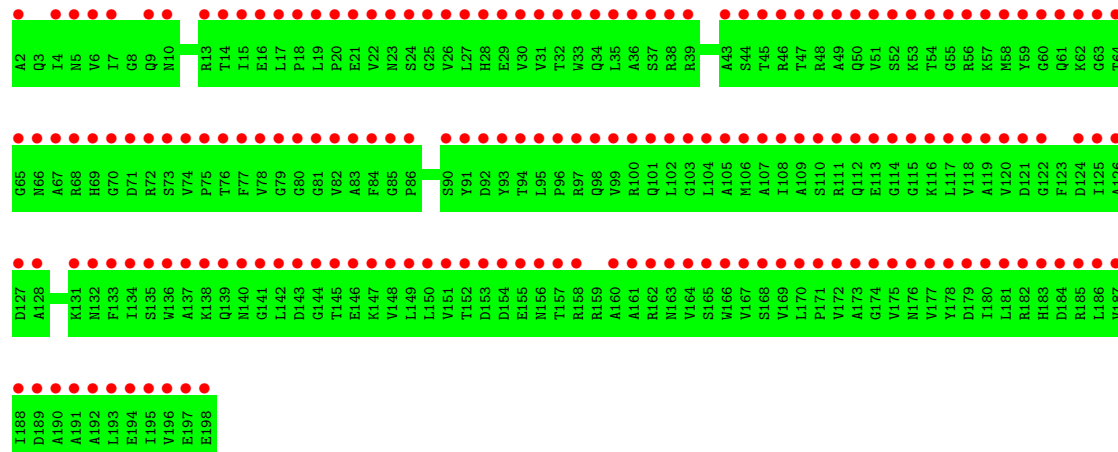




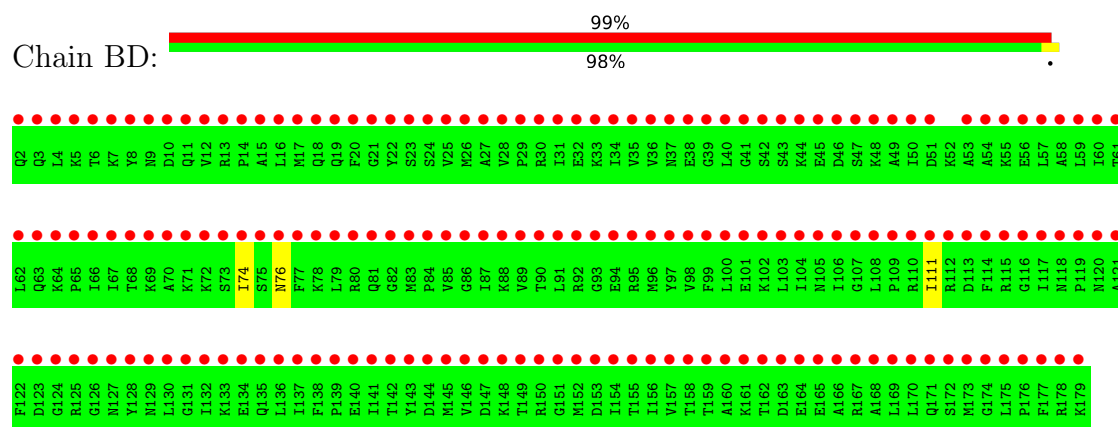
• Molecule 26: 50S ribosomal protein L3



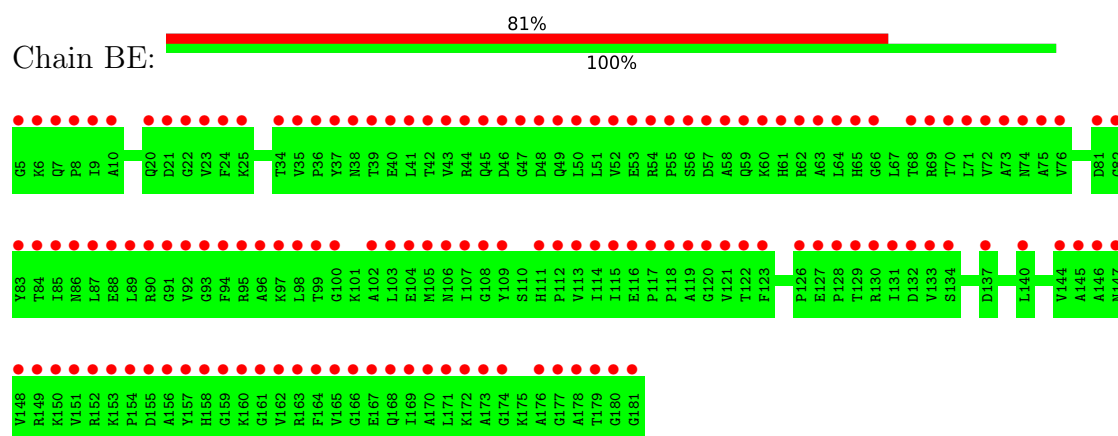
• Molecule 27: 50S ribosomal protein L4



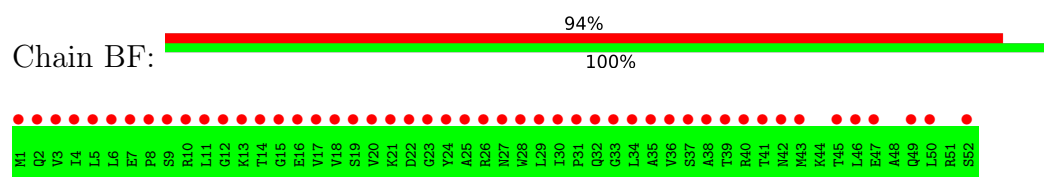
• Molecule 28: 50S ribosomal protein L5



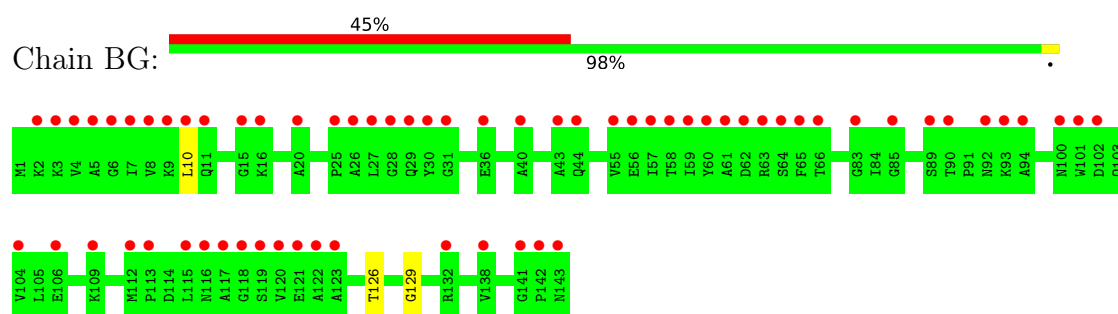
• Molecule 29: 50S ribosomal protein L6



• Molecule 30: 50S ribosomal protein L9



• Molecule 31: 50S ribosomal protein L11



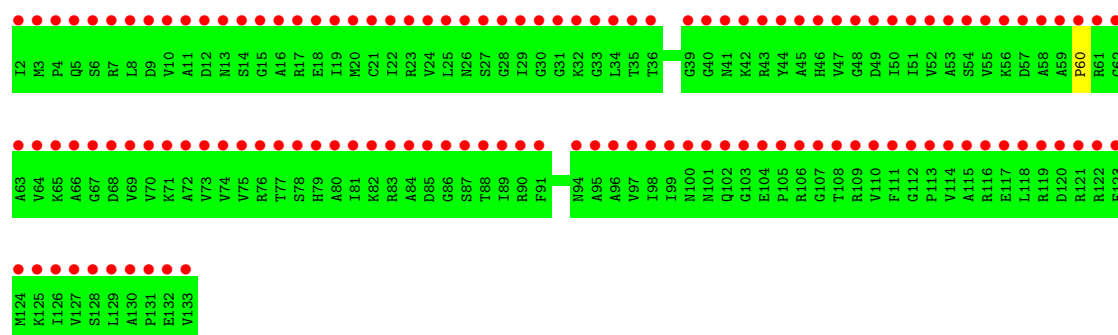
• Molecule 32: 50S ribosomal protein L13





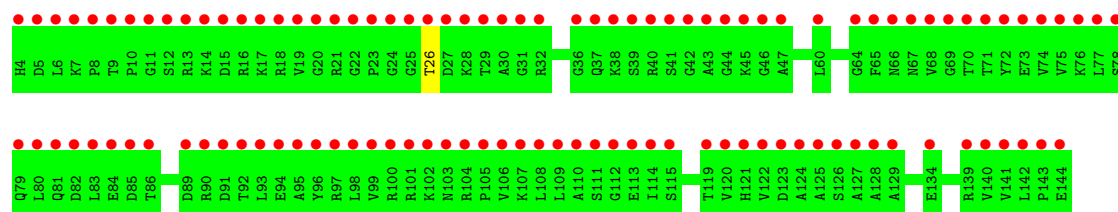
• Molecule 33: 50S ribosomal protein L14

Chain BI: 97%
99%



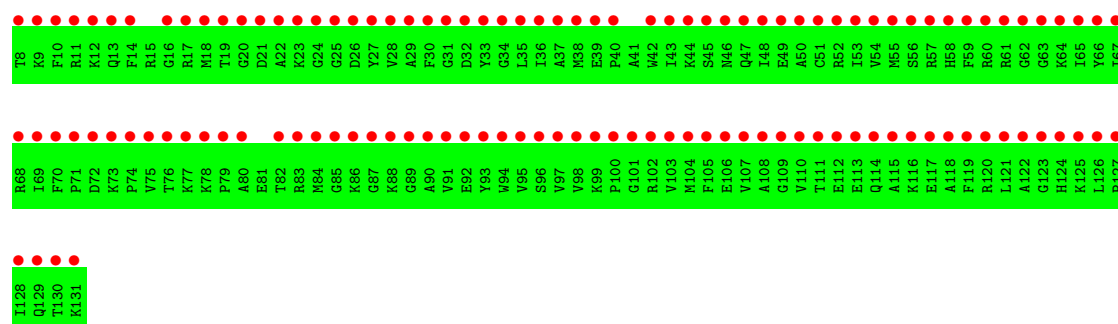
• Molecule 34: 50S ribosomal protein L15

Chain BJ: 78%
99%

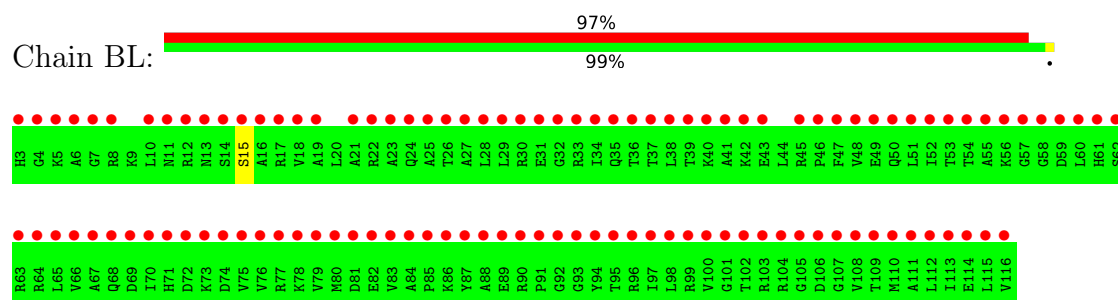


• Molecule 35: 50S ribosomal protein L16

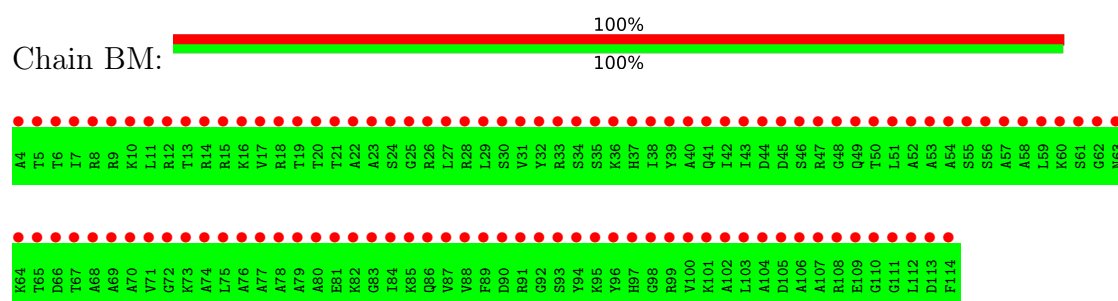
Chain BK: 98%
100%



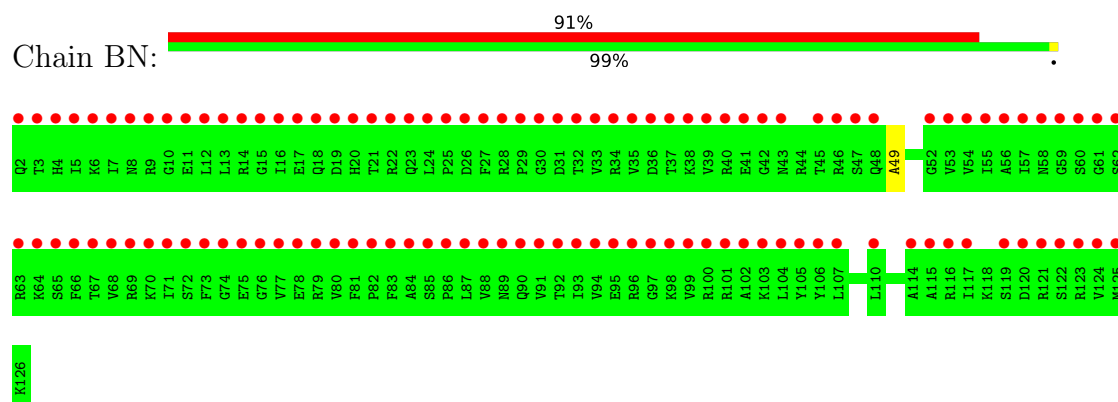
- Molecule 36: 50S ribosomal protein L17



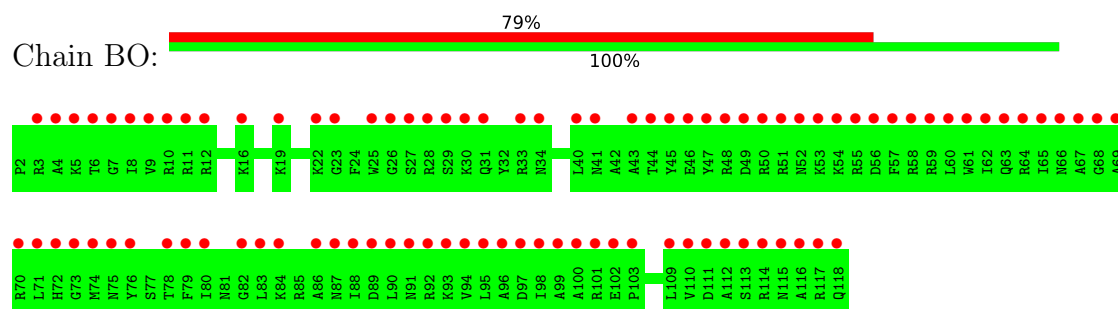
- Molecule 37: 50S ribosomal protein L18



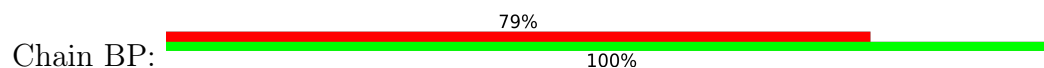
- Molecule 38: 50S ribosomal protein L19

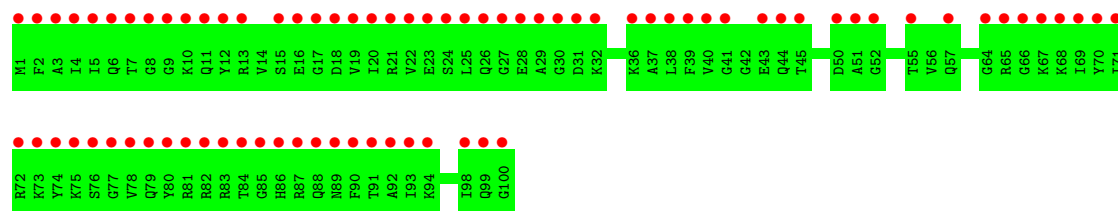


- Molecule 39: 50S ribosomal protein L20

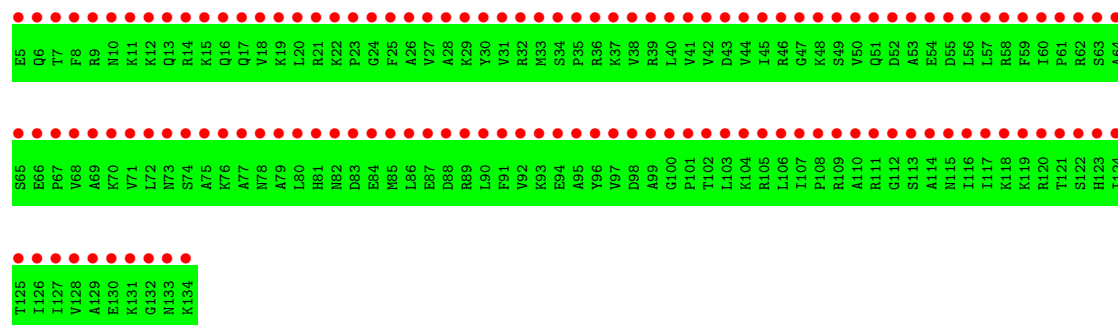


- Molecule 40: 50S ribosomal protein L21

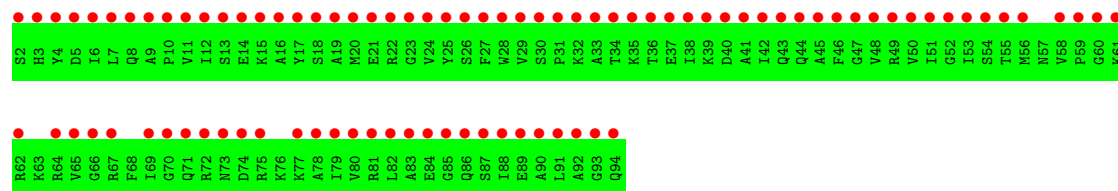




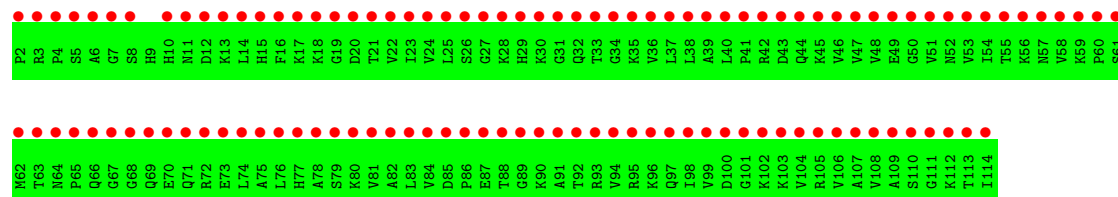
● Molecule 41: 50S ribosomal protein L22



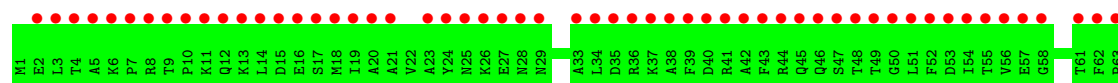
● Molecule 42: 50S ribosomal protein L23

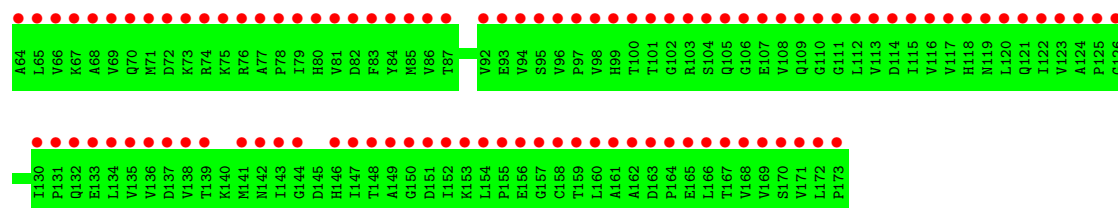


● Molecule 43: 50S ribosomal protein L24

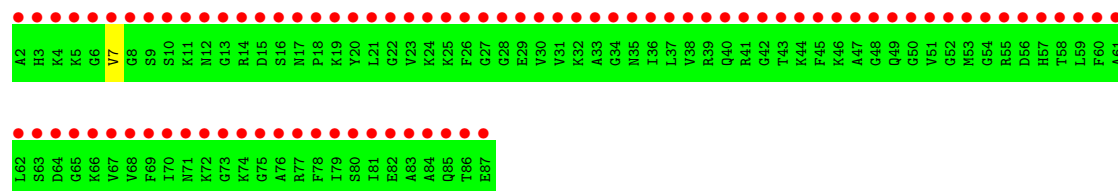


● Molecule 44: general stress protein Ctc





• Molecule 45: 50S ribosomal protein L27

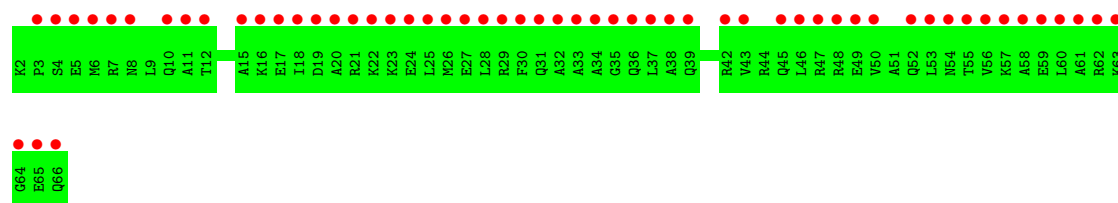


• Molecule 46: 50S RIBOSOMAL PROTEIN L28

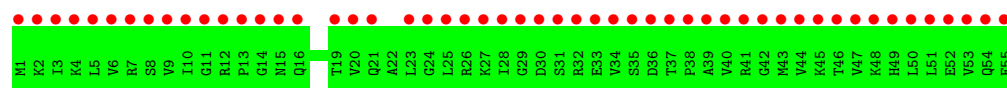


There are no outlier residues recorded for this chain.

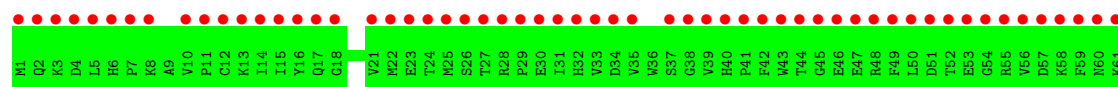
• Molecule 47: 50S ribosomal protein L29

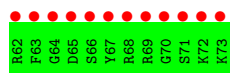


• Molecule 48: 50S ribosomal protein L30

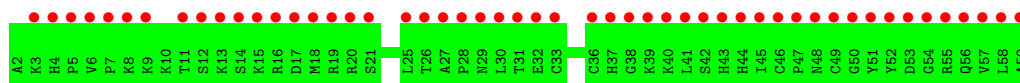


• Molecule 49: 50S ribosomal protein L31

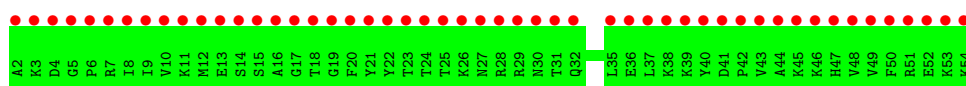




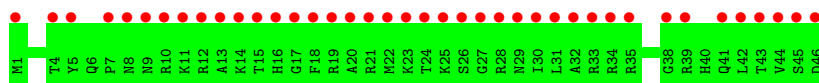
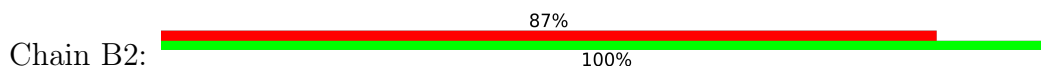
- Molecule 50: 50S ribosomal protein L32



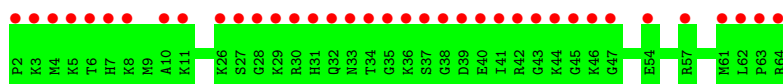
- Molecule 51: 50S ribosomal protein L33



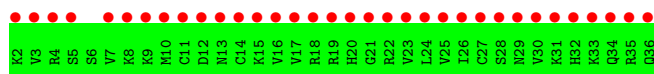
- Molecule 52: 50S ribosomal protein L34



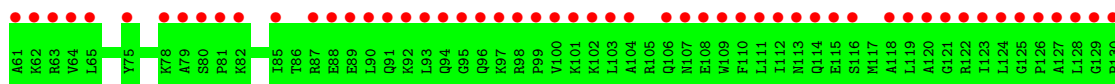
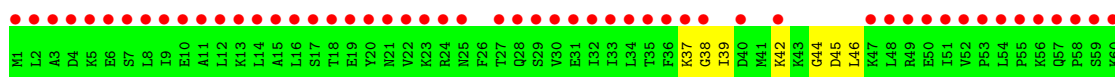
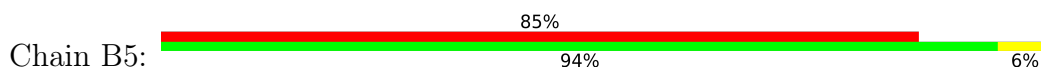
- Molecule 53: 50S ribosomal protein L35



- Molecule 54: 50S ribosomal protein L36



- Molecule 55: 50S ribosomal protein L1P





4 Data and refinement statistics

Property	Value	Source
Space group	I 4 2 2	Depositor
Cell constants a, b, c, α , β , γ	682.32Å 682.32Å 386.36Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	70.00 – 8.70 70.00 – 8.70	Depositor EDS
% Data completeness (in resolution range)	98.5 (70.00-8.70) 91.6 (70.00-8.70)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.15	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.97 (at 8.45Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.394 , 0.415 0.384 , 0.423	Depositor DCC
R_{free} test set	1966 reflections (5.23%)	wwPDB-VP
Wilson B-factor (Å ²)	443.4	Xtriage
Anisotropy	0.381	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.00 , 0.0	EDS
L-test for twinning ²	$\langle L \rangle = 0.46$, $\langle L^2 \rangle = 0.29$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.85	EDS
Total number of atoms	122017	wwPDB-VP
Average B, all atoms (Å ²)	641.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 7.48% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	AA	1.23	68/36688 (0.2%)	1.21	295/57135 (0.5%)
2	AV	1.56	14/1817 (0.8%)	1.56	31/2831 (1.1%)
2	AW	1.10	9/1816 (0.5%)	1.56	19/2827 (0.7%)
3	AU	18.66	15/188 (8.0%)	5.19	17/274 (6.2%)
4	AB	0.45	0/1935	1.07	13/2609 (0.5%)
5	AC	0.45	0/1636	1.01	9/2205 (0.4%)
6	AD	0.45	0/1732	0.96	7/2318 (0.3%)
7	AE	0.63	0/1162	1.19	10/1564 (0.6%)
8	AF	0.42	0/855	0.95	4/1154 (0.3%)
9	AG	0.42	0/1275	1.00	7/1709 (0.4%)
10	AH	0.58	0/1135	1.13	9/1527 (0.6%)
11	AI	0.42	0/1028	0.95	5/1378 (0.4%)
12	AJ	0.44	0/807	1.08	6/1085 (0.6%)
13	AK	0.52	0/899	1.07	4/1213 (0.3%)
14	AL	1.05	1/986 (0.1%)	1.12	5/1320 (0.4%)
15	AM	0.67	1/1007 (0.1%)	1.75	5/1347 (0.4%)
16	AN	0.44	0/500	1.21	7/664 (1.1%)
17	AO	0.47	0/744	0.95	3/992 (0.3%)
18	AP	0.52	0/716	1.17	8/963 (0.8%)
19	AQ	0.54	0/869	1.07	1/1159 (0.1%)
20	AR	0.43	0/602	0.96	4/799 (0.5%)
21	AS	0.43	0/661	1.09	5/890 (0.6%)
22	AT	0.51	0/764	1.12	7/1006 (0.7%)
23	B0	0.43	15/67885 (0.0%)	0.63	65/105852 (0.1%)
24	B9	0.57	1/2815 (0.0%)	0.67	3/4384 (0.1%)
All	All	1.06	124/130522 (0.1%)	0.95	549/199205 (0.3%)

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.

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Mol	Chain	#Chirality outliers	#Planarity outliers
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Mol	Chain	#Chirality outliers	#Planarity outliers
1	AA	2	40
2	AV	0	7
2	AW	0	7
23	B0	0	5
All	All	2	59

All (124) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	AU	8	G	C6-O6	116.77	3.57	1.24
3	AU	14	A	C6-N6	111.89	3.57	1.33
3	AU	13	A	C6-N6	111.88	3.57	1.33
3	AU	6	A	C6-N6	111.82	3.57	1.33
3	AU	12	A	C6-N6	111.72	3.57	1.33
1	AA	135	C	O3'-P	-67.12	0.60	1.61
1	AA	214	U	O3'-P	-58.77	0.72	1.61
1	AA	893	C	O3'-P	-48.95	0.87	1.61
1	AA	436	C	O3'-P	-48.51	0.88	1.61
1	AA	905	U	O3'-P	-42.91	0.96	1.61
1	AA	556	C	O3'-P	-39.36	1.02	1.61
1	AA	733	A	O3'-P	37.94	2.18	1.61
1	AA	115	G	O3'-P	37.86	2.17	1.61
1	AA	1331	G	O3'-P	37.84	2.17	1.61
1	AA	1393	U	O3'-P	-37.36	1.05	1.61
23	B0	3107	G	O3'-P	35.48	2.14	1.61
1	AA	367	U	O3'-P	35.27	2.14	1.61
1	AA	1034	G	O3'-P	34.77	2.13	1.61
1	AA	212	G	O3'-P	34.45	2.12	1.61
2	AV	25	C	O3'-P	34.14	2.12	1.61
23	B0	3098	U	O3'-P	34.06	2.12	1.61
1	AA	94	G	O3'-P	-32.69	1.12	1.61
23	B0	3106	U	O3'-P	-32.45	1.12	1.61
1	AA	288	A	O3'-P	31.61	2.08	1.61
1	AA	827	U	O3'-P	31.19	2.08	1.61
1	AA	1211	U	O3'-P	31.05	2.07	1.61
1	AA	118	U	O3'-P	30.36	2.06	1.61
3	AU	11	C	O3'-P	29.34	2.05	1.61
1	AA	239	U	O3'-P	-28.95	1.17	1.61
14	AL	19	ARG	C-N	-28.55	0.94	1.33
1	AA	403	C	O3'-P	-28.28	1.18	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AV	36	A	O3'-P	-28.22	1.18	1.61
1	AA	1409	C	O3'-P	-27.73	1.19	1.61
23	B0	3183	A	O3'-P	27.54	2.02	1.61
24	B9	73	C	O3'-P	27.19	2.02	1.61
1	AA	375	U	O3'-P	27.10	2.01	1.61
1	AA	74	G	O3'-P	-27.00	1.20	1.61
1	AA	576	G	O3'-P	-26.81	1.21	1.61
1	AA	1155	G	O3'-P	26.54	2.00	1.61
23	B0	3149	G	O3'-P	25.18	1.99	1.61
1	AA	89	G	O3'-P	25.10	1.98	1.61
1	AA	1490	C	O3'-P	-24.92	1.23	1.61
1	AA	651	C	O3'-P	-24.48	1.24	1.61
1	AA	1398	A	O3'-P	24.31	1.97	1.61
1	AA	804	U	O3'-P	-23.75	1.25	1.61
1	AA	546	G	O3'-P	23.35	1.96	1.61
23	B0	3102	G	O3'-P	-23.10	1.26	1.61
1	AA	59	A	O3'-P	-22.81	1.26	1.61
1	AA	776	G	O3'-P	-22.73	1.27	1.61
1	AA	1297	C	O3'-P	22.64	1.95	1.61
1	AA	606	G	O3'-P	22.57	1.95	1.61
23	B0	1856	U	O3'-P	21.75	1.93	1.61
2	AV	74	C	O3'-P	-21.59	1.28	1.61
1	AA	1335	C	O3'-P	21.47	1.93	1.61
2	AW	75	C	O3'-P	-21.39	1.29	1.61
1	AA	387	U	O3'-P	21.21	1.93	1.61
1	AA	1110	A	O3'-P	-20.68	1.30	1.61
1	AA	394	G	O3'-P	-20.52	1.30	1.61
2	AV	75	C	O3'-P	-20.52	1.30	1.61
1	AA	26	A	O3'-P	-20.47	1.30	1.61
1	AA	206	C	O3'-P	20.09	1.91	1.61
1	AA	1383	C	O3'-P	-19.80	1.31	1.61
1	AA	461	C	O3'-P	-19.76	1.31	1.61
23	B0	3188	U	O3'-P	19.67	1.90	1.61
2	AW	33	U	O3'-P	-19.21	1.32	1.61
1	AA	227	G	O3'-P	-18.66	1.33	1.61
1	AA	1457	A	O3'-P	-17.73	1.34	1.61
1	AA	1455	G	O3'-P	-17.69	1.34	1.61
23	B0	3141	G	O3'-P	17.20	1.86	1.61
1	AA	1182	G	O3'-P	17.08	1.86	1.61
1	AA	631	G	O3'-P	16.94	1.86	1.61
23	B0	3101	G	O3'-P	16.78	1.86	1.61
1	AA	278	G	O3'-P	16.55	1.85	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1345	U	O3'-P	-16.36	1.36	1.61
1	AA	1374	A	O3'-P	16.09	1.85	1.61
1	AA	1237	C	O3'-P	16.04	1.85	1.61
15	AM	86	CYS	C-N	15.87	1.53	1.33
2	AW	34	G	O3'-P	15.79	1.84	1.61
1	AA	274	A	O3'-P	-15.69	1.37	1.61
1	AA	1067	A	O3'-P	-15.16	1.38	1.61
23	B0	3190	G	O3'-P	14.70	1.83	1.61
1	AA	587	G	O3'-P	14.55	1.82	1.61
23	B0	3874	C	O3'-P	13.57	1.81	1.61
2	AV	44	A	O3'-P	-13.45	1.41	1.61
2	AV	33	U	O3'-P	-13.38	1.41	1.61
2	AV	72	C	O3'-P	-12.63	1.42	1.61
1	AA	1445	U	O3'-P	-12.45	1.42	1.61
23	B0	3186	C	O3'-P	-12.34	1.42	1.61
1	AA	754	C	O3'-P	11.65	1.78	1.61
1	AA	470	U	O3'-P	-11.59	1.43	1.61
1	AA	944	G	O3'-P	-10.93	1.44	1.61
2	AW	25	C	O3'-P	-10.55	1.45	1.61
1	AA	499	A	O3'-P	10.35	1.76	1.61
3	AU	9	U	O3'-P	-9.82	1.46	1.61
3	AU	10	U	O3'-P	-9.78	1.46	1.61
3	AU	13	A	O3'-P	-9.77	1.46	1.61
3	AU	6	A	O3'-P	-9.76	1.46	1.61
3	AU	12	A	O3'-P	-9.74	1.46	1.61
3	AU	7	U	O3'-P	-9.67	1.46	1.61
1	AA	869	G	O3'-P	-9.61	1.46	1.61
1	AA	1033	G	O3'-P	8.49	1.73	1.61
23	B0	3866	A	O3'-P	8.47	1.73	1.61
2	AV	16	U	C5-C6	8.42	1.50	1.34
2	AW	16	U	C5-C6	8.37	1.50	1.34
1	AA	1505	G	O3'-P	-8.21	1.48	1.61
1	AA	109	A	O3'-P	8.13	1.73	1.61
2	AW	17	U	C5-C6	7.75	1.49	1.34
2	AV	17	U	C5-C6	7.70	1.49	1.34
1	AA	46	G	O3'-P	7.35	1.72	1.61
2	AV	58	A	C6-N6	7.17	1.48	1.33
2	AW	58	A	C6-N6	7.13	1.48	1.33
3	AU	8	G	O3'-P	-7.12	1.50	1.61
1	AA	933	G	O3'-P	6.54	1.71	1.61
1	AA	79	G	O3'-P	-6.51	1.51	1.61
2	AV	35	A	O3'-P	6.45	1.70	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	AU	8	G	C2-N2	-6.03	1.22	1.34
2	AW	46	G	C8-N7	5.92	1.42	1.30
2	AV	46	G	C8-N7	5.88	1.42	1.30
1	AA	143	A	O3'-P	5.40	1.69	1.61
23	B0	1113	C	P-OP2	5.25	1.59	1.49
3	AU	11	C	C4-N4	-5.14	1.23	1.33
2	AV	76	A	C2'-O2'	5.13	1.50	1.42
2	AW	16	U	N1-C6	5.06	1.48	1.38
2	AV	16	U	N1-C6	5.03	1.48	1.38

All (549) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	499	A	O3'-P-O5'	-40.97	42.55	104.00
1	AA	884	U	P-O3'-C3'	-38.67	62.19	120.20
1	AA	556	C	O3'-P-O5'	36.58	158.87	104.00
3	AU	8	G	C5-C6-O6	-35.55	21.96	128.60
1	AA	239	U	O3'-P-O5'	-35.13	51.30	104.00
1	AA	884	U	O3'-P-O5'	-35.04	51.44	104.00
3	AU	6	A	C5-C6-N6	-33.90	22.02	123.70
3	AU	14	A	C5-C6-N6	-33.89	22.03	123.70
3	AU	12	A	C5-C6-N6	-33.88	22.05	123.70
3	AU	13	A	C5-C6-N6	-33.88	22.07	123.70
23	B0	3098	U	P-O3'-C3'	33.85	170.98	120.20
1	AA	587	G	O3'-P-O5'	33.42	154.13	104.00
1	AA	288	A	O3'-P-O5'	-32.86	54.71	104.00
2	AW	35	A	P-O3'-C3'	32.55	169.03	120.20
1	AA	274	A	OP1-P-O3'	-31.10	14.71	108.00
2	AV	74	C	O3'-P-O5'	30.99	150.49	104.00
15	AM	86	CYS	CA-C-N	30.88	161.41	120.65
15	AM	86	CYS	C-N-CA	30.88	161.41	120.65
1	AA	239	U	P-O3'-C3'	-30.81	73.99	120.20
1	AA	576	G	P-O3'-C3'	-30.65	74.22	120.20
1	AA	26	A	P-O3'-C3'	-30.62	74.27	120.20
23	B0	3190	G	P-O3'-C3'	30.31	165.66	120.20
1	AA	733	A	P-O3'-C3'	30.09	165.33	120.20
15	AM	86	CYS	O-C-N	-29.91	85.80	122.89
1	AA	246	A	O3'-P-O5'	-29.77	59.35	104.00
1	AA	436	C	P-O3'-C3'	-29.41	76.08	120.20
2	AW	25	C	P-O3'-C3'	-28.59	77.31	120.20
1	AA	246	A	P-O3'-C3'	-28.27	77.80	120.20
1	AA	1393	U	O3'-P-O5'	-27.21	63.19	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1297	C	P-O3'-C3'	27.17	160.96	120.20
1	AA	1183	A	P-O3'-C3'	-26.38	80.63	120.20
1	AA	1398	A	OP2-P-O3'	-25.99	30.02	108.00
1	AA	74	G	P-O3'-C3'	25.99	159.18	120.20
23	B0	3106	U	O3'-P-O5'	-25.94	65.09	104.00
23	B0	1856	U	O3'-P-O5'	-25.82	65.28	104.00
1	AA	115	G	P-O3'-C3'	-25.10	82.55	120.20
2	AW	34	G	O3'-P-O5'	25.05	141.57	104.00
1	AA	561	U	O3'-P-O5'	24.31	140.47	104.00
1	AA	185	A	OP2-P-O3'	-23.72	36.84	108.00
1	AA	499	A	P-O3'-C3'	-23.64	84.74	120.20
24	B9	73	C	O3'-P-O5'	23.23	138.85	104.00
2	AW	25	C	OP1-P-O3'	23.04	177.13	108.00
1	AA	1398	A	P-O3'-C3'	-22.94	85.79	120.20
1	AA	576	G	O3'-P-O5'	22.79	138.18	104.00
23	B0	3101	G	O3'-P-O5'	-22.67	69.99	104.00
1	AA	606	G	O3'-P-O5'	-22.61	70.08	104.00
1	AA	1335	C	P-O3'-C3'	22.55	154.03	120.20
1	AA	546	G	O3'-P-O5'	21.92	136.87	104.00
3	AU	8	G	P-O3'-C3'	21.77	152.85	120.20
1	AA	46	G	O3'-P-O5'	-21.64	71.54	104.00
1	AA	278	G	P-O3'-C3'	-21.53	87.91	120.20
2	AV	33	U	P-O3'-C3'	21.48	152.41	120.20
1	AA	214	U	O3'-P-O5'	-21.41	71.89	104.00
2	AV	35	A	P-O3'-C3'	21.36	152.24	120.20
23	B0	3107	G	P-O3'-C3'	21.32	152.18	120.20
23	B0	3107	G	O3'-P-O5'	-21.26	72.11	104.00
1	AA	394	G	O3'-P-O5'	20.74	135.11	104.00
1	AA	1345	U	P-O3'-C3'	20.64	151.15	120.20
23	B0	1856	U	P-O3'-C3'	20.45	150.87	120.20
23	B0	3149	G	O3'-P-O5'	20.27	134.40	104.00
1	AA	1305	G	O3'-P-O5'	-20.22	73.67	104.00
2	AV	36	A	O3'-P-O5'	20.05	134.08	104.00
1	AA	387	U	P-O3'-C3'	20.04	150.26	120.20
1	AA	185	A	O3'-P-O5'	19.89	133.84	104.00
2	AW	25	C	O3'-P-O5'	-19.55	74.68	104.00
1	AA	546	G	OP2-P-O3'	-19.49	49.54	108.00
1	AA	587	G	P-O3'-C3'	19.35	149.22	120.20
23	B0	3190	G	OP2-P-O3'	-19.32	50.03	108.00
1	AA	109	A	O3'-P-O5'	-19.25	75.13	104.00
1	AA	1297	C	O3'-P-O5'	19.10	132.65	104.00
1	AA	403	C	P-O3'-C3'	-18.94	91.78	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	651	C	O3'-P-O5'	18.71	132.06	104.00
1	AA	1237	C	O3'-P-O5'	-18.63	76.06	104.00
1	AA	143	A	P-O3'-C3'	-18.62	92.28	120.20
1	AA	1374	A	P-O3'-C3'	-18.59	92.32	120.20
1	AA	46	G	P-O3'-C3'	-18.56	92.36	120.20
23	B0	1856	U	OP2-P-O3'	18.51	163.52	108.00
1	AA	1211	U	O3'-P-O5'	18.49	131.73	104.00
1	AA	1409	C	P-O3'-C3'	-18.28	92.79	120.20
1	AA	278	G	O3'-P-O5'	-18.15	76.77	104.00
1	AA	375	U	O3'-P-O5'	-17.77	77.34	104.00
2	AV	72	C	O3'-P-O5'	17.66	130.50	104.00
23	B0	3098	U	OP1-P-O3'	17.62	160.85	108.00
1	AA	1505	G	P-O3'-C3'	-17.58	93.83	120.20
1	AA	631	G	P-O3'-C3'	-17.54	93.88	120.20
23	B0	1856	U	OP1-P-O3'	-17.46	55.60	108.00
1	AA	387	U	O3'-P-O5'	17.35	130.03	104.00
1	AA	436	C	O3'-P-O5'	17.34	130.01	104.00
23	B0	3874	C	P-O3'-C3'	-17.12	94.52	120.20
3	AU	8	G	O3'-P-O5'	17.02	129.53	104.00
1	AA	315	A	O3'-P-O5'	-16.89	78.67	104.00
1	AA	1457	A	O3'-P-O5'	16.86	129.29	104.00
1	AA	1455	G	P-O3'-C3'	16.79	145.39	120.20
1	AA	115	G	OP2-P-O3'	16.79	158.36	108.00
1	AA	94	G	P-O3'-C3'	16.61	145.11	120.20
1	AA	884	U	OP1-P-O3'	16.61	157.82	108.00
2	AW	25	C	OP2-P-O3'	-16.45	58.65	108.00
1	AA	118	U	O3'-P-O5'	-16.27	79.59	104.00
23	B0	1071	U	OP1-P-O3'	-16.19	59.44	108.00
1	AA	1305	G	P-O3'-C3'	-16.15	95.97	120.20
1	AA	26	A	OP2-P-O3'	16.06	156.17	108.00
1	AA	202	G	P-O3'-C3'	-15.97	96.25	120.20
23	B0	3098	U	O3'-P-O5'	-15.94	80.08	104.00
1	AA	1505	G	OP2-P-O3'	15.93	155.79	108.00
1	AA	1155	G	P-O3'-C3'	-15.84	96.44	120.20
1	AA	546	G	P-O3'-C3'	15.76	143.84	120.20
23	B0	3106	U	P-O3'-C3'	15.69	143.74	120.20
1	AA	26	A	OP1-P-O3'	-15.63	61.11	108.00
1	AA	576	G	OP1-P-O3'	-15.52	61.43	108.00
1	AA	1183	A	OP1-P-O3'	15.48	154.44	108.00
1	AA	143	A	O3'-P-O5'	-15.47	80.79	104.00
1	AA	1110	A	O3'-P-O5'	-15.44	80.84	104.00
1	AA	869	G	P-O3'-C3'	15.17	142.95	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	AV	36	A	OP2-P-O3'	-15.08	62.76	108.00
1	AA	436	C	OP1-P-O3'	-14.95	63.16	108.00
1	AA	556	C	P-O3'-C3'	-14.92	97.82	120.20
1	AA	89	G	O3'-P-O5'	14.91	126.37	104.00
2	AV	25	C	O3'-P-O5'	-14.82	81.77	104.00
24	B9	73	C	P-O3'-C3'	-14.77	98.04	120.20
1	AA	1182	G	P-O3'-C3'	-14.65	98.23	120.20
1	AA	1498	U	C2'-C3'-O3'	14.59	131.38	109.50
1	AA	556	C	OP2-P-O3'	-14.57	64.29	108.00
1	AA	1409	C	O3'-P-O5'	-14.50	82.25	104.00
1	AA	461	C	P-O3'-C3'	14.49	141.94	120.20
1	AA	274	A	P-O3'-C3'	14.35	141.72	120.20
23	B0	3190	G	OP1-P-O3'	14.31	150.92	108.00
1	AA	1505	G	O3'-P-O5'	-14.23	82.66	104.00
1	AA	733	A	OP2-P-O3'	-14.16	65.51	108.00
1	AA	115	G	OP1-P-O3'	-13.94	66.17	108.00
1	AA	243	A	C2'-C3'-O3'	13.89	130.33	109.50
1	AA	869	G	O3'-P-O5'	13.80	124.70	104.00
1	AA	893	C	O3'-P-O5'	-13.77	83.35	104.00
1	AA	109	A	P-O3'-C3'	13.76	140.84	120.20
1	AA	59	A	OP1-P-O3'	-13.72	66.85	108.00
1	AA	893	C	P-O3'-C3'	-13.63	99.75	120.20
1	AA	1490	C	OP2-P-O3'	-13.55	67.36	108.00
1	AA	905	U	P-O3'-C3'	13.51	140.46	120.20
1	AA	212	G	OP2-P-O3'	-13.47	67.58	108.00
1	AA	181	G	C2'-C3'-O3'	13.39	129.58	109.50
1	AA	227	G	O3'-P-O5'	-13.38	83.93	104.00
1	AA	559	A	C2'-C3'-O3'	13.35	129.52	109.50
2	AV	33	U	O3'-P-O5'	-13.34	83.99	104.00
1	AA	1455	G	O3'-P-O5'	-13.23	84.15	104.00
1	AA	1033	G	P-O3'-C3'	13.18	139.97	120.20
1	AA	1409	C	OP2-P-O3'	13.17	147.51	108.00
1	AA	202	G	O3'-P-O5'	-13.15	84.28	104.00
23	B0	3874	C	O3'-P-O5'	12.87	123.31	104.00
1	AA	733	A	O3'-P-O5'	12.85	123.28	104.00
5	AC	167	TRP	N-CA-C	12.80	119.28	108.78
1	AA	1398	A	OP1-P-O3'	12.67	146.00	108.00
23	B0	3866	A	O3'-P-O5'	-12.57	85.14	104.00
1	AA	46	G	OP1-P-O3'	12.48	145.44	108.00
23	B0	3098	U	OP2-P-O3'	-12.37	70.89	108.00
2	AV	34	G	O3'-P-O5'	12.17	122.25	104.00
1	AA	631	G	OP2-P-O3'	12.15	144.44	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	214	U	P-O3'-C3'	12.06	138.29	120.20
1	AA	1297	C	OP1-P-O3'	-12.06	71.82	108.00
1	AA	1393	U	OP1-P-O3'	12.02	144.05	108.00
1	AA	1034	G	P-O3'-C3'	-11.93	102.31	120.20
23	B0	3866	A	P-O3'-C3'	11.91	138.07	120.20
14	AL	26	ALA	N-CA-C	-11.91	99.52	113.21
23	B0	3101	G	OP2-P-O3'	11.86	143.59	108.00
1	AA	1393	U	P-O3'-C3'	-11.84	102.44	120.20
1	AA	1183	A	OP2-P-O3'	-11.79	72.64	108.00
1	AA	1490	C	P-O3'-C3'	11.78	137.87	120.20
1	AA	1528	U	C2'-C3'-O3'	11.77	127.16	109.50
1	AA	79	G	O3'-P-O5'	11.75	121.63	104.00
1	AA	606	G	P-O3'-C3'	-11.68	102.67	120.20
1	AA	1067	A	P-O3'-C3'	-11.57	102.84	120.20
23	B0	3183	A	O3'-P-O5'	11.55	121.32	104.00
1	AA	366	C	C2'-C3'-O3'	11.54	126.81	109.50
1	AA	1345	U	OP1-P-O3'	-11.48	73.55	108.00
23	B0	3107	G	OP1-P-O3'	11.48	142.45	108.00
1	AA	74	G	OP2-P-O3'	-11.46	73.64	108.00
1	AA	1182	G	OP2-P-O3'	11.43	142.30	108.00
1	AA	687	A	C2'-C3'-O3'	11.30	126.45	109.50
2	AW	35	A	O3'-P-O5'	-11.28	87.09	104.00
1	AA	1190	G	O3'-P-O5'	11.26	120.89	104.00
1	AA	575	G	C2'-C3'-O3'	11.26	126.39	109.50
1	AA	1345	U	O3'-P-O5'	11.23	120.85	104.00
1	AA	266	G	C2'-C3'-O3'	11.16	126.24	109.50
1	AA	1110	A	P-O3'-C3'	-11.08	103.58	120.20
1	AA	60	A	C2'-C3'-O3'	11.03	126.05	109.50
1	AA	79	G	P-O3'-C3'	-10.99	103.72	120.20
1	AA	499	A	OP2-P-O3'	10.90	140.72	108.00
1	AA	1505	G	OP1-P-O3'	-10.87	75.39	108.00
1	AA	1183	A	O3'-P-O5'	-10.82	87.77	104.00
23	B0	1071	U	OP2-P-O3'	-10.69	75.94	108.00
1	AA	1528	U	C4'-C3'-O3'	10.65	125.37	109.40
1	AA	1335	C	OP1-P-O3'	-10.58	76.26	108.00
2	AW	33	U	P-O3'-C3'	10.58	136.07	120.20
1	AA	792	A	C2'-C3'-O3'	10.54	125.32	109.50
2	AW	75	C	P-O3'-C3'	10.50	135.95	120.20
1	AA	893	C	OP2-P-O3'	10.49	139.47	108.00
1	AA	631	G	OP1-P-O3'	-10.48	76.55	108.00
1	AA	278	G	OP2-P-O3'	10.48	139.43	108.00
2	AW	73	A	P-O3'-C3'	-10.39	104.62	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1331	G	P-O3'-C3'	10.36	135.75	120.20
1	AA	587	G	OP1-P-O3'	-10.34	76.98	108.00
23	B0	1112	U	C4'-C3'-O3'	-10.25	97.63	113.00
1	AA	89	G	P-O3'-C3'	-10.18	104.93	120.20
22	AT	13	LEU	N-CA-C	-10.10	100.10	111.82
2	AW	33	U	O3'-P-O5'	-10.09	88.87	104.00
1	AA	1110	A	OP2-P-O3'	10.02	138.07	108.00
2	AV	44	A	O3'-P-O5'	-9.95	89.08	104.00
1	AA	227	G	P-O3'-C3'	9.93	135.10	120.20
13	AK	37	GLY	N-CA-C	9.90	125.37	113.79
23	B0	3135	A	O3'-P-O5'	-9.88	89.17	104.00
7	AE	23	GLY	N-CA-C	9.84	124.54	110.46
2	AV	75	C	P-O3'-C3'	9.83	134.95	120.20
1	AA	1067	A	C2'-C3'-O3'	9.79	124.19	109.50
2	AV	35	A	OP1-P-O3'	9.75	137.24	108.00
16	AN	31	ARG	N-CA-C	9.73	124.20	111.75
1	AA	115	G	C2'-C3'-O3'	9.71	124.06	109.50
1	AA	1182	G	OP1-P-O3'	-9.69	78.94	108.00
1	AA	118	U	OP2-P-O3'	9.66	136.98	108.00
1	AA	884	U	OP2-P-O3'	-9.64	79.08	108.00
2	AV	75	C	O3'-P-O5'	9.64	118.46	104.00
1	AA	115	G	O3'-P-O5'	-9.61	89.58	104.00
1	AA	7	G	C2'-C3'-O3'	9.60	123.90	109.50
1	AA	372	C	C2'-C3'-O3'	9.60	123.90	109.50
1	AA	274	A	O3'-P-O5'	9.58	118.37	104.00
1	AA	1490	C	O3'-P-O5'	9.58	118.37	104.00
1	AA	754	C	P-O3'-C3'	9.54	134.51	120.20
1	AA	1237	C	OP2-P-O3'	9.51	136.53	108.00
2	AW	76	A	P-O5'-C5'	-9.38	106.83	120.90
1	AA	181	G	C4'-C3'-O3'	9.37	123.46	109.40
1	AA	288	A	OP1-P-O3'	9.32	135.95	108.00
1	AA	212	G	OP1-P-O3'	9.30	135.89	108.00
1	AA	59	A	P-O3'-C3'	9.29	134.13	120.20
1	AA	776	G	O3'-P-O5'	-9.29	90.07	104.00
1	AA	239	U	OP1-P-O3'	9.25	135.76	108.00
1	AA	403	C	OP1-P-O3'	-9.22	80.33	108.00
1	AA	315	A	OP2-P-O3'	9.18	135.55	108.00
1	AA	94	G	OP2-P-O3'	-9.14	80.56	108.00
17	AO	45	VAL	N-CA-C	-9.07	96.40	109.29
1	AA	428	G	C2'-C3'-O3'	9.03	123.05	109.50
16	AN	8	GLU	N-CA-C	-9.00	101.83	113.17
1	AA	143	A	OP1-P-O3'	8.98	134.94	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	651	C	OP2-P-O3'	-8.96	81.13	108.00
23	B0	3101	G	P-O3'-C3'	-8.95	106.78	120.20
1	AA	74	G	OP1-P-O3'	8.91	134.74	108.00
1	AA	1374	A	OP1-P-O3'	-8.89	81.33	108.00
14	AL	19	ARG	O-C-N	-8.80	112.89	123.27
1	AA	59	A	O3'-P-O5'	8.79	117.18	104.00
1	AA	1033	G	OP2-P-O3'	-8.76	81.72	108.00
1	AA	1299	A	N9-C1'-C2'	8.74	125.12	112.00
23	B0	1112	U	C2'-C3'-O3'	-8.74	100.59	113.70
4	AB	13	ALA	N-CA-C	-8.72	102.55	113.01
1	AA	944	G	P-O3'-C3'	8.72	133.27	120.20
1	AA	1380	U	C2'-C3'-O3'	8.72	122.57	109.50
1	AA	1335	C	O3'-P-O5'	8.64	116.96	104.00
23	B0	3102	G	P-O3'-C3'	-8.61	107.28	120.20
1	AA	561	U	P-O3'-C3'	-8.59	107.32	120.20
2	AV	1	G	P-O3'-C3'	8.57	133.06	120.20
23	B0	3186	C	P-O3'-C3'	8.53	133.00	120.20
1	AA	1305	G	OP2-P-O3'	8.53	133.58	108.00
1	AA	484	G	C2'-C3'-O3'	8.43	122.14	109.50
2	AV	74	C	OP2-P-O3'	-8.43	82.71	108.00
23	B0	3149	G	OP2-P-O3'	-8.42	82.73	108.00
2	AV	33	U	OP1-P-O3'	8.40	133.20	108.00
2	AW	34	G	OP2-P-O3'	-8.38	82.85	108.00
23	B0	1072	U	O5'-P-OP1	-8.27	83.19	108.00
23	B0	3866	A	OP1-P-O3'	8.27	132.80	108.00
1	AA	1337	G	OP1-P-O3'	8.26	132.77	108.00
1	AA	387	U	OP2-P-O3'	-8.25	83.26	108.00
1	AA	1409	C	OP1-P-O3'	-8.21	83.36	108.00
1	AA	1033	G	O3'-P-O5'	8.21	116.31	104.00
9	AG	154	TYR	N-CA-C	-8.16	101.48	112.26
1	AA	461	C	OP2-P-O3'	-8.13	83.62	108.00
1	AA	960	U	C2'-C3'-O3'	8.12	121.68	109.50
23	B0	903	G	O3'-P-O5'	-8.12	91.82	104.00
2	AV	35	A	OP2-P-O3'	-8.02	83.95	108.00
13	AK	116	HIS	N-CA-C	-8.01	101.35	112.25
4	AB	59	GLU	N-CA-C	-8.00	102.51	111.07
18	AP	27	LYS	N-CA-C	-8.00	99.96	110.43
1	AA	1337	G	O3'-P-O5'	-7.99	92.01	104.00
1	AA	1331	G	O3'-P-O5'	7.89	115.84	104.00
7	AE	21	ALA	N-CA-C	-7.88	100.42	110.19
23	B0	3186	C	O3'-P-O5'	7.87	115.80	104.00
1	AA	905	U	O3'-P-O5'	-7.77	92.34	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1155	G	OP1-P-O3'	-7.77	84.68	108.00
4	AB	190	THR	N-CA-C	7.76	121.68	111.75
2	AV	34	G	OP2-P-O3'	-7.75	84.77	108.00
1	AA	1224	G	C2'-C3'-O3'	7.74	121.11	109.50
1	AA	559	A	C4'-C3'-O3'	7.74	121.01	109.40
23	B0	3149	G	P-O3'-C3'	-7.70	108.65	120.20
1	AA	202	G	OP2-P-O3'	7.67	131.02	108.00
9	AG	145	ALA	N-CA-C	-7.66	99.78	110.35
1	AA	367	U	O3'-P-O5'	-7.66	92.52	104.00
2	AV	72	C	OP1-P-O3'	-7.54	85.37	108.00
1	AA	804	U	O3'-P-O5'	7.53	115.30	104.00
1	AA	118	U	P-O3'-C3'	-7.52	108.92	120.20
9	AG	147	ALA	N-CA-C	-7.51	103.50	114.39
1	AA	913	A	C2'-C3'-O3'	7.49	120.73	109.50
2	AW	35	A	OP1-P-O3'	7.49	130.46	108.00
23	B0	1807	A	C2'-C3'-O3'	7.46	120.69	109.50
4	AB	154	LEU	N-CA-C	7.46	119.05	111.07
1	AA	394	G	OP2-P-O3'	-7.45	85.65	108.00
1	AA	561	U	OP2-P-O3'	-7.45	85.65	108.00
4	AB	187	LEU	N-CA-C	-7.42	96.46	108.41
7	AE	64	ARG	N-CA-C	-7.42	97.59	109.76
2	AW	75	C	OP2-P-O3'	7.40	130.19	108.00
21	AS	14	HIS	N-CA-C	-7.39	102.38	111.40
16	AN	21	TYR	N-CA-C	7.38	120.33	107.49
1	AA	79	G	OP1-P-O3'	-7.38	85.86	108.00
1	AA	944	G	O3'-P-O5'	-7.35	92.97	104.00
1	AA	1301	U	C2'-C3'-O3'	7.35	120.53	109.50
23	B0	1113	C	C5'-C4'-C3'	-7.35	104.97	116.00
23	B0	3106	U	OP1-P-O3'	7.31	129.92	108.00
23	B0	3117	A	N9-C1'-C2'	7.30	122.94	112.00
1	AA	59	A	OP2-P-O3'	7.29	129.86	108.00
1	AA	1237	C	P-O3'-C3'	7.27	131.10	120.20
1	AA	250	A	C2'-C3'-O3'	7.23	120.35	109.50
1	AA	748	C	C2'-C3'-O3'	7.23	120.34	109.50
2	AV	76	A	C4'-C3'-O3'	-7.22	102.16	113.00
1	AA	1364	U	C2'-C3'-O3'	7.21	120.31	109.50
1	AA	1201	A	C2'-C3'-O3'	7.20	120.30	109.50
8	AF	77	ARG	N-CA-C	-7.19	103.38	111.07
1	AA	26	A	O3'-P-O5'	-7.18	93.23	104.00
1	AA	1503	A	C2'-C3'-O3'	7.17	120.26	109.50
23	B0	1071	U	O3'-P-O5'	7.15	114.73	104.00
2	AV	25	C	OP1-P-O3'	7.13	129.40	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1505	G	C2'-C3'-O3'	7.10	124.35	113.70
1	AA	5	U	C2'-C3'-O3'	7.10	120.14	109.50
20	AR	81	PHE	N-CA-C	-7.08	104.77	113.41
7	AE	20	GLN	N-CA-C	-7.05	98.64	109.14
1	AA	1457	A	OP2-P-O3'	-6.97	87.09	108.00
1	AA	827	U	P-O3'-C3'	6.95	130.62	120.20
1	AA	328	C	C2'-C3'-O3'	6.92	119.88	109.50
1	AA	1034	G	O3'-P-O5'	6.90	114.34	104.00
3	AU	8	G	N1-C6-O6	-6.89	99.22	119.90
10	AH	79	VAL	N-CA-C	-6.89	102.64	112.35
1	AA	1374	A	OP2-P-O3'	6.87	128.61	108.00
21	AS	70	LYS	N-CA-C	6.84	119.78	108.49
2	AV	74	C	P-O3'-C3'	-6.84	109.94	120.20
1	AA	1331	G	C2'-C3'-O3'	6.82	119.73	109.50
14	AL	119	LYS	N-CA-C	-6.79	99.25	110.17
2	AV	18	G	C5'-C4'-O4'	-6.76	98.96	109.10
2	AW	18	G	C5'-C4'-O4'	-6.75	98.97	109.10
2	AV	16	U	C2'-C3'-O3'	6.73	119.60	109.50
1	AA	509	A	C2'-C3'-O3'	6.72	123.77	113.70
9	AG	148	ASN	N-CA-C	-6.71	103.17	112.30
1	AA	197	A	N9-C1'-C2'	6.71	124.06	114.00
6	AD	33	MET	N-CA-C	-6.71	105.21	113.19
2	AW	16	U	C2'-C3'-O3'	6.70	119.55	109.50
13	AK	91	ARG	N-CA-C	-6.70	105.24	113.41
1	AA	1383	C	O3'-P-O5'	6.69	114.03	104.00
1	AA	94	G	OP1-P-O3'	6.65	127.95	108.00
7	AE	7	GLU	N-CA-C	-6.65	101.58	110.55
1	AA	965	A	C2'-C3'-O3'	6.65	119.47	109.50
2	AV	72	C	P-O3'-C3'	-6.64	110.23	120.20
22	AT	44	ALA	N-CA-C	-6.64	104.04	111.28
7	AE	76	ILE	CA-C-N	6.61	126.55	119.28
7	AE	76	ILE	C-N-CA	6.61	126.55	119.28
1	AA	606	G	OP1-P-O3'	6.60	127.80	108.00
9	AG	87	VAL	N-CA-C	6.59	114.30	108.63
1	AA	315	A	P-O3'-C3'	6.59	130.08	120.20
1	AA	905	U	OP1-P-O3'	6.58	127.75	108.00
1	AA	804	U	OP2-P-O3'	-6.57	88.28	108.00
1	AA	754	C	OP2-P-O3'	6.56	127.69	108.00
1	AA	1065	U	C2'-C3'-O3'	6.56	119.34	109.50
24	B9	73	C	OP1-P-O3'	-6.56	88.33	108.00
4	AB	105	PHE	N-CA-C	6.54	119.25	111.33
1	AA	754	C	OP1-P-O3'	-6.54	88.38	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1085	U	C2'-C3'-O3'	6.54	119.30	109.50
1	AA	944	G	OP1-P-O3'	6.53	127.59	108.00
5	AC	167	TRP	CB-CA-C	-6.51	107.70	117.07
1	AA	243	A	C4'-C3'-O3'	6.51	119.16	109.40
7	AE	26	PHE	N-CA-C	6.51	120.15	110.52
1	AA	1490	C	OP1-P-O3'	6.49	127.46	108.00
3	AU	14	A	N1-C6-N6	-6.49	99.14	118.60
1	AA	403	C	OP2-P-O3'	6.48	127.45	108.00
3	AU	6	A	N1-C6-N6	-6.48	99.17	118.60
23	B0	192	G	C2'-C3'-O3'	6.46	119.19	109.50
3	AU	13	A	N1-C6-N6	-6.45	99.25	118.60
3	AU	12	A	N1-C6-N6	-6.45	99.25	118.60
23	B0	2426	G	C2'-C3'-O3'	6.42	119.14	109.50
1	AA	1281	U	C2'-C3'-O3'	6.41	119.12	109.50
21	AS	54	GLY	N-CA-C	-6.39	98.02	113.18
5	AC	173	VAL	CA-C-N	6.39	127.82	119.84
5	AC	173	VAL	C-N-CA	6.39	127.82	119.84
8	AF	67	MET	N-CA-C	6.37	113.74	108.07
18	AP	67	THR	N-CA-C	-6.36	102.09	110.43
1	AA	587	G	OP2-P-O3'	-6.36	88.92	108.00
23	B0	1354	A	C2'-C3'-O3'	6.31	118.97	109.50
2	AW	36	A	O3'-P-O5'	6.30	113.44	104.00
14	AL	61	THR	N-CA-C	-6.28	105.58	113.18
10	AH	87	SER	N-CA-C	-6.28	100.99	110.28
2	AV	74	C	N1-C1'-C2'	6.26	121.40	112.00
23	B0	3117	A	C4'-C3'-O3'	-6.26	103.61	113.00
1	AA	1124	G	N9-C1'-C2'	6.26	121.39	112.00
4	AB	90	MET	N-CA-C	6.26	117.78	109.83
23	B0	2245	A	C2'-C3'-O3'	6.25	118.87	109.50
23	B0	242	A	C2'-C3'-O3'	6.24	118.86	109.50
1	AA	1337	G	P-O3'-C3'	-6.21	110.88	120.20
14	AL	66	VAL	N-CA-C	6.21	117.86	108.80
6	AD	41	GLY	N-CA-C	6.20	120.50	112.68
5	AC	93	LYS	N-CA-C	-6.18	105.79	113.15
1	AA	60	A	C4'-C3'-O3'	6.18	118.67	109.40
1	AA	119	A	C2'-C3'-O3'	6.13	118.69	109.50
23	B0	3186	C	OP2-P-O3'	-6.12	89.64	108.00
1	AA	869	G	OP2-P-O3'	-6.12	89.66	108.00
2	AV	35	A	O3'-P-O5'	-6.12	94.83	104.00
19	AQ	100	LYS	N-CA-C	-6.11	105.53	114.39
1	AA	1034	G	OP1-P-O3'	-6.10	89.71	108.00
1	AA	63	C	C5'-C4'-C3'	-6.09	106.86	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	AC	25	GLY	N-CA-C	6.09	119.68	110.18
2	AV	44	A	OP2-P-O3'	6.07	126.20	108.00
1	AA	533	A	C2'-C3'-O3'	6.06	118.59	109.50
1	AA	115	G	N9-C1'-C2'	6.03	123.04	114.00
22	AT	76	ALA	N-CA-C	-6.01	104.72	111.28
1	AA	1067	A	OP2-P-O3'	6.00	126.01	108.00
1	AA	1129	C	C2'-C3'-O3'	6.00	118.50	109.50
15	AM	11	ARG	N-CA-C	5.96	118.24	109.24
12	AJ	81	THR	N-CA-C	-5.95	104.71	111.07
1	AA	461	C	O3'-P-O5'	5.94	112.92	104.00
20	AR	46	GLU	N-CA-C	-5.94	105.17	113.37
21	AS	36	ARG	N-CA-C	-5.94	106.02	113.20
22	AT	88	VAL	N-CA-C	5.92	116.09	110.53
1	AA	1504	G	C2'-C3'-O3'	5.92	118.37	109.50
1	AA	631	G	O3'-P-O5'	-5.91	95.13	104.00
6	AD	12	CYS	N-CA-C	-5.91	104.02	111.11
12	AJ	51	ARG	N-CA-C	5.91	117.41	110.97
10	AH	75	ARG	CA-C-N	5.89	125.85	119.78
10	AH	75	ARG	C-N-CA	5.89	125.85	119.78
1	AA	413	G	C4'-C3'-O3'	-5.85	104.23	113.00
8	AF	60	PHE	N-CA-C	5.81	118.94	109.59
18	AP	77	ALA	N-CA-C	-5.80	106.82	112.97
17	AO	44	LYS	N-CA-C	-5.80	105.09	111.82
1	AA	701	C	C2'-C3'-O3'	5.79	118.19	109.50
15	AM	107	ALA	N-CA-C	-5.78	105.12	113.21
18	AP	25	ARG	N-CA-C	5.74	120.13	113.18
1	AA	281	G	C2'-C3'-O3'	5.74	118.11	109.50
2	AV	76	A	C3'-C2'-O2'	-5.72	102.11	110.70
12	AJ	62	HIS	N-CA-C	5.72	119.15	109.76
1	AA	993	G	N9-C1'-C2'	5.72	120.58	112.00
23	B0	173	A	C2'-C3'-O3'	5.70	118.05	109.50
6	AD	13	ARG	N-CA-C	5.69	117.16	111.07
1	AA	1067	A	OP1-P-O3'	-5.69	90.93	108.00
1	AA	1502	A	N9-C1'-C2'	5.68	122.52	114.00
1	AA	733	A	OP1-P-O3'	5.66	124.98	108.00
23	B0	583	C	C2'-C3'-O3'	5.66	117.98	109.50
1	AA	893	C	OP1-P-O3'	-5.64	91.08	108.00
1	AA	389	A	C5'-C4'-C3'	5.63	124.45	116.00
1	AA	1285	A	C2'-C3'-O3'	5.63	117.95	109.50
6	AD	11	LEU	N-CA-C	-5.63	104.77	111.69
1	AA	1211	U	OP2-P-O3'	-5.62	91.14	108.00
1	AA	413	G	N9-C1'-C2'	5.61	120.42	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	AI	63	ILE	N-CA-C	5.60	116.34	108.17
4	AB	45	GLN	N-CA-C	-5.59	105.28	111.71
10	AH	56	LYS	CA-C-N	5.58	125.86	119.83
10	AH	56	LYS	C-N-CA	5.58	125.86	119.83
23	B0	198	A	C2'-C3'-O3'	5.58	117.88	109.50
22	AT	69	GLY	N-CA-C	-5.57	104.05	112.41
1	AA	812	C	C2'-C3'-O3'	5.53	117.79	109.50
1	AA	556	C	OP1-P-O3'	-5.52	91.45	108.00
21	AS	34	TRP	N-CA-C	-5.51	106.32	113.16
1	AA	227	G	OP1-P-O3'	5.51	124.52	108.00
1	AA	266	G	C5'-C4'-C3'	-5.50	106.95	115.20
7	AE	51	VAL	CB-CA-C	-5.50	108.48	113.70
1	AA	1200	C	C2'-C3'-O3'	-5.48	105.47	113.70
4	AB	23	ARG	N-CA-C	-5.47	99.14	110.80
4	AB	186	ALA	N-CA-C	5.46	117.40	108.55
1	AA	1190	G	C2'-C3'-O3'	5.45	117.68	109.50
5	AC	167	TRP	CA-C-O	5.45	121.10	117.94
9	AG	115	ARG	N-CA-C	5.45	117.63	108.96
5	AC	99	VAL	N-CA-C	5.45	117.74	108.86
11	AI	118	LYS	N-CA-C	5.44	116.83	110.41
17	AO	5	LYS	N-CA-C	-5.44	105.35	111.28
18	AP	20	VAL	N-CA-C	5.44	117.92	108.95
16	AN	38	GLY	N-CA-C	-5.43	108.14	115.36
1	AA	46	G	OP2-P-O3'	-5.42	91.73	108.00
23	B0	3183	A	P-O3'-C3'	-5.41	112.09	120.20
6	AD	28	SER	CA-C-N	5.40	126.59	119.84
6	AD	28	SER	C-N-CA	5.40	126.59	119.84
22	AT	38	LYS	N-CA-C	-5.40	105.09	110.97
2	AV	21	A	C5'-C4'-C3'	5.39	124.08	116.00
16	AN	53	LEU	CA-C-N	5.37	126.55	119.84
16	AN	53	LEU	C-N-CA	5.37	126.55	119.84
2	AW	21	A	C5'-C4'-C3'	5.35	124.03	116.00
23	B0	1278	A	C2'-C3'-O3'	5.35	117.52	109.50
7	AE	11	ILE	N-CA-C	5.35	115.48	110.30
4	AB	109	SER	N-CA-C	-5.34	105.12	111.69
1	AA	375	U	OP2-P-O3'	5.33	124.00	108.00
1	AA	687	A	C4'-C3'-O3'	5.33	117.39	109.40
23	B0	1072	U	O5'-P-OP2	-5.33	92.02	108.00
12	AJ	18	ALA	N-CA-C	-5.32	104.38	111.24
3	AU	13	A	C2-N3-C4	5.32	126.55	110.60
3	AU	12	A	C2-N3-C4	5.31	126.53	110.60
1	AA	733	A	C1'-C2'-O2'	-5.30	103.84	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	B0	1113	C	C3'-C2'-O2'	5.30	118.65	110.70
3	AU	8	G	OP2-P-O3'	-5.30	92.11	108.00
1	AA	1299	A	C4'-C3'-O3'	-5.29	105.06	113.00
1	AA	661	G	C5'-C4'-C3'	-5.28	108.08	116.00
1	AA	1346	A	C2'-C3'-O3'	5.27	117.40	109.50
3	AU	6	A	C2-N3-C4	5.27	126.40	110.60
1	AA	214	U	OP1-P-O3'	5.26	123.79	108.00
1	AA	1050	G	C5'-C4'-C3'	5.26	123.90	116.00
16	AN	22	THR	N-CA-C	5.26	122.01	110.80
1	AA	1182	G	O3'-P-O5'	-5.26	96.11	104.00
3	AU	14	A	C2-N3-C4	5.26	126.38	110.60
1	AA	1139	G	N9-C1'-C2'	5.26	119.89	112.00
5	AC	4	LYS	N-CA-C	5.26	122.00	110.80
1	AA	975	A	C2'-C3'-O3'	5.25	117.38	109.50
1	AA	563	A	C4'-C3'-O3'	-5.25	105.13	113.00
2	AV	76	A	N9-C1'-C2'	5.25	119.87	112.00
23	B0	3146	A	C2'-C3'-O3'	5.24	117.36	109.50
13	AK	88	GLY	N-CA-C	5.23	118.38	110.75
22	AT	75	ASN	N-CA-C	-5.21	106.88	113.18
1	AA	1155	G	OP2-P-O3'	5.19	123.58	108.00
23	B0	3181	C	C4'-C3'-O3'	-5.19	105.22	113.00
1	AA	344	A	C2'-C3'-O3'	5.18	117.28	109.50
1	AA	108	G	P-O3'-C3'	5.18	127.97	120.20
23	B0	1193	G	C2'-C3'-O3'	5.18	121.47	113.70
1	AA	1101	A	C2'-C3'-O3'	5.17	117.26	109.50
18	AP	14	ASN	CA-C-N	5.17	125.08	119.76
18	AP	14	ASN	C-N-CA	5.17	125.08	119.76
1	AA	197	A	C2'-C3'-O3'	5.16	117.23	109.50
11	AI	61	ALA	N-CA-C	5.15	117.75	108.48
1	AA	1279	A	N9-C1'-C2'	5.15	119.72	112.00
1	AA	1305	G	N9-C1'-C2'	5.14	119.72	112.00
12	AJ	22	LYS	N-CA-C	-5.14	105.56	111.07
1	AA	1195	C	C4'-C3'-O3'	-5.14	105.29	113.00
20	AR	51	LEU	CA-C-N	5.13	125.11	120.03
20	AR	51	LEU	C-N-CA	5.13	125.11	120.03
23	B0	1113	C	P-O5'-C5'	-5.11	113.24	120.90
1	AA	1305	G	C4'-C3'-O3'	-5.10	105.35	113.00
4	AB	134	GLU	N-CA-C	-5.09	106.75	113.12
1	AA	992	U	C2'-C3'-O3'	5.09	117.14	109.50
12	AJ	55	LYS	N-CA-C	5.09	118.69	109.32
23	B0	3874	C	OP1-P-O3'	-5.07	92.80	108.00
10	AH	103	VAL	N-CA-C	5.06	116.20	109.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1335	C	OP2-P-O3'	5.05	123.15	108.00
18	AP	79	VAL	N-CA-C	-5.05	105.63	113.16
10	AH	135	CYS	N-CA-C	5.05	114.90	108.24
11	AI	87	GLN	N-CA-C	-5.05	105.78	111.28
1	AA	1451	A	C2'-C3'-O3'	5.04	117.06	109.50
10	AH	3	THR	N-CA-C	5.04	116.77	111.28
1	AA	1337	G	OP2-P-O3'	-5.04	92.89	108.00
23	B0	1072	U	N1-C1'-C2'	5.04	119.55	112.00
23	B0	3155	G	O3'-P-O5'	5.03	111.55	104.00
1	AA	1049	U	C2'-C3'-O3'	5.03	117.04	109.50
1	AA	1195	C	N1-C1'-C2'	5.03	119.54	112.00
9	AG	45	ASP	N-CA-C	-5.03	105.25	111.33
4	AB	233	SER	N-CA-C	5.02	116.16	109.93
23	B0	3110	G	O4'-C1'-C2'	5.02	110.82	105.80
8	AF	40	VAL	N-CA-C	5.01	114.86	107.75
11	AI	59	PHE	CB-CA-C	-5.00	108.15	114.40

All (2) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	AA	181	G	C3'
1	AA	1528	U	C3'

All (59) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1048	G	Sidechain
1	AA	1073	U	Sidechain
1	AA	1079	G	Sidechain
1	AA	1085	U	Sidechain
1	AA	1092	A	Sidechain
1	AA	1139	G	Sidechain
1	AA	12	U	Sidechain
1	AA	1281	U	Sidechain
1	AA	1289	A	Sidechain
1	AA	1293	G	Sidechain
1	AA	1299	A	Sidechain
1	AA	1301	U	Sidechain
1	AA	1305	G	Sidechain
1	AA	1340	A	Sidechain
1	AA	1360	A	Sidechain
1	AA	1506	U	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1525	G	Sidechain
1	AA	187	G	Sidechain
1	AA	191	G	Sidechain
1	AA	197	A	Sidechain
1	AA	231	G	Sidechain
1	AA	249	U	Sidechain
1	AA	250	A	Sidechain
1	AA	251	G	Sidechain
1	AA	254	G	Sidechain
1	AA	266	G	Sidechain
1	AA	274	A	Sidechain
1	AA	290	C	Sidechain
1	AA	297	G	Sidechain
1	AA	305	G	Sidechain
1	AA	380	G	Sidechain
1	AA	413	G	Sidechain
1	AA	481	G	Sidechain
1	AA	573	A	Sidechain
1	AA	575	G	Sidechain
1	AA	603	U	Sidechain
1	AA	727	G	Sidechain
1	AA	879	C	Sidechain
1	AA	898	G	Sidechain
1	AA	982	U	Sidechain
2	AV	16	U	Sidechain
2	AV	17	U	Sidechain
2	AV	18	G	Sidechain
2	AV	19	G	Sidechain
2	AV	39	U	Sidechain
2	AV	55	U	Sidechain
2	AV	62	A	Sidechain
2	AW	16	U	Sidechain
2	AW	17	U	Sidechain
2	AW	18	G	Sidechain
2	AW	19	G	Sidechain
2	AW	39	U	Sidechain
2	AW	55	U	Sidechain
2	AW	62	A	Sidechain
23	B0	1071	U	Sidechain
23	B0	1099	A	Sidechain
23	B0	3117	A	Sidechain
23	B0	3168	G	Sidechain

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Mol	Chain	Res	Type	Group
23	B0	873	U	Sidechain

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32819	0	16577	3647	5
2	AV	1625	0	821	138	0
2	AW	1625	0	819	98	0
3	AU	176	0	79	11	0
4	AB	1900	0	1951	247	0
5	AC	1612	0	1676	308	0
6	AD	1702	0	1767	239	4
7	AE	1146	0	1207	240	0
8	AF	842	0	857	84	4
9	AG	1256	0	1294	124	0
10	AH	1115	0	1177	127	0
11	AI	1010	0	1043	176	0
12	AJ	794	0	838	220	0
13	AK	884	0	903	194	0
14	AL	970	0	1055	161	0
15	AM	996	0	1071	148	0
16	AN	491	0	531	165	0
17	AO	733	0	771	61	0
18	AP	700	0	720	101	0
19	AQ	856	0	926	363	0
20	AR	596	0	667	84	0
21	AS	647	0	673	131	0
22	AT	762	0	848	268	0
23	B0	60636	0	30552	1928	8
24	B9	2519	0	1287	43	0
25	BA	270	0	0	0	0
26	BB	205	0	0	0	0
27	BC	197	0	0	0	0
28	BD	178	0	0	12	0
29	BE	177	0	0	0	0
30	BF	52	0	0	0	0
31	BG	143	0	0	6	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	BH	143	0	0	0	0
33	BI	132	0	0	3	0
34	BJ	141	0	0	1	0
35	BK	124	0	0	0	0
36	BL	114	0	0	1	0
37	BM	111	0	0	0	0
38	BN	125	0	0	1	0
39	BO	117	0	0	0	0
40	BP	100	0	0	0	0
41	BQ	130	0	0	0	0
42	BR	93	0	0	0	0
43	BS	113	0	0	0	0
44	BT	173	0	0	0	0
45	BU	86	0	0	1	0
46	BV	16	0	0	0	0
47	BW	65	0	0	0	0
48	BX	55	0	0	0	0
49	BY	73	0	0	0	0
50	BZ	58	0	0	0	0
51	B1	53	0	0	0	0
52	B2	46	0	0	0	0
53	B3	63	0	0	0	0
54	B4	35	0	0	0	0
55	B5	217	0	0	35	0
All	All	122017	0	70110	7502	12

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 39.

All (7502) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:293:G:H4'	1:AA:609:A:C2	1.16	1.69
1:AA:675:A:H1'	13:AK:116:HIS:CD2	1.26	1.66
1:AA:21:G:C1'	1:AA:914:A:H62	1.08	1.65
6:AD:88:VAL:CA	7:AE:97:GLY:HA3	1.24	1.64
23:B0:3128:G:H4'	23:B0:3174:C:C4'	1.23	1.64
1:AA:1458:G:C8	1:AA:1459:C:H2'	1.27	1.63
1:AA:1398:A:H5'	1:AA:1399:C:P	1.39	1.62
1:AA:1342:C:H5''	11:AI:125:TYR:CE1	1.21	1.62
2:AV:76:A:H5''	23:B0:2564:U:C6	1.12	1.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AW:74:C:C4	23:B0:2534:U:C5	1.85	1.61
1:AA:191:G:C6	1:AA:192:U:C2	1.90	1.59
12:AJ:62:HIS:HB3	16:AN:59:ALA:CB	1.28	1.59
12:AJ:62:HIS:CB	16:AN:59:ALA:HB3	1.16	1.58
23:B0:1856:U:C5	23:B0:3865:A:N6	1.69	1.56
1:AA:779:C:H4'	13:AK:120:ARG:CG	1.23	1.56
1:AA:1416:G:C3'	1:AA:1417:G:C5'	1.78	1.56
1:AA:216:C:C4'	1:AA:466:A:H61	1.20	1.54
19:AQ:105:ALA:H	23:B0:727:U:C1'	0.95	1.53
23:B0:891:A:C2	23:B0:892:A:C6	1.91	1.53
6:AD:88:VAL:CG1	7:AE:97:GLY:HA2	1.36	1.52
1:AA:256:U:C5'	19:AQ:17:LYS:HZ3	0.90	1.52
1:AA:6:G:C4	7:AE:119:LEU:CD1	1.93	1.51
1:AA:828:A:C2	4:AB:26:PRO:HG2	1.45	1.51
1:AA:130:A:C4'	1:AA:264:U:H5'	1.39	1.50
1:AA:161:A:C2	1:AA:348:G:O2'	1.64	1.50
23:B0:3867:G:N2	55:B5:44:GLY:CA	1.75	1.50
1:AA:323:U:C5'	22:AT:22:ARG:HB2	1.42	1.50
1:AA:94:G:O3'	1:AA:96:C:P	1.12	1.50
1:AA:923:A:C1'	1:AA:1398:A:N3	1.75	1.50
1:AA:189:A:C6	22:AT:104:LEU:O	1.65	1.49
1:AA:538:G:H5''	14:AL:114:LYS:CB	1.06	1.49
1:AA:21:G:H1'	1:AA:914:A:N6	1.28	1.48
1:AA:22:G:H1'	1:AA:913:A:C2	1.45	1.48
1:AA:538:G:C5'	14:AL:114:LYS:HB2	1.02	1.48
19:AQ:104:LYS:HB3	23:B0:727:U:C1'	1.14	1.48
1:AA:684:A:C1'	13:AK:38:ASN:HD22	1.24	1.48
1:AA:38:G:H5'	1:AA:547:A:N6	1.29	1.47
1:AA:456:A:N1	1:AA:477:G:H1'	1.25	1.47
1:AA:1342:C:C5'	11:AI:125:TYR:CE1	1.98	1.47
1:AA:835:U:C5'	20:AR:64:ARG:NH2	1.72	1.47
2:AV:56:C:C4'	28:BD:74:ILE:CA	1.89	1.47
1:AA:262:A:H5'	22:AT:74:LYS:CB	1.42	1.47
1:AA:255:G:C1'	19:AQ:16:GLN:HE21	1.28	1.46
1:AA:293:G:H4'	1:AA:609:A:N1	1.26	1.46
1:AA:322:C:H4'	22:AT:23:ARG:CD	1.39	1.46
1:AA:1060:C:C4'	12:AJ:52:GLY:HA3	1.44	1.46
1:AA:1342:C:O3'	11:AI:125:TYR:CE2	1.69	1.46
2:AV:56:C:H4'	28:BD:74:ILE:CA	0.98	1.45
1:AA:189:A:C5	22:AT:104:LEU:O	1.66	1.45
1:AA:265:G:H4'	19:AQ:65:ILE:C	1.41	1.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:191:G:N1	1:AA:192:U:C2	1.85	1.45
1:AA:255:G:H1'	19:AQ:16:GLN:NE2	1.21	1.45
1:AA:1416:G:H3'	1:AA:1417:G:C5'	1.33	1.45
1:AA:130:A:H5'	19:AQ:63:ARG:NE	1.31	1.45
1:AA:779:C:C4'	13:AK:120:ARG:HG2	1.47	1.45
1:AA:923:A:H1'	1:AA:1398:A:N3	1.21	1.45
1:AA:131:C:O2'	1:AA:262:A:C4	1.68	1.44
1:AA:762:C:H4'	23:B0:729:A:N1	1.12	1.44
1:AA:265:G:C5'	19:AQ:65:ILE:HA	1.46	1.44
1:AA:322:C:C4'	22:AT:23:ARG:HD2	1.48	1.44
1:AA:476:U:N1	1:AA:477:G:H5'	1.26	1.44
1:AA:21:G:C1'	1:AA:914:A:N6	1.79	1.43
2:AW:76:A:C1'	23:B0:2486:C:O4'	1.64	1.43
23:B0:3877:A:C8	23:B0:1861:G:C8	2.06	1.43
1:AA:1014:A:H5''	21:AS:14:HIS:CG	1.53	1.43
15:AM:7:VAL:HG12	28:BD:111:ILE:CA	1.49	1.43
1:AA:131:C:H1'	1:AA:262:A:C2	1.53	1.42
1:AA:131:C:H1'	1:AA:262:A:N3	1.32	1.42
1:AA:333:G:H1'	22:AT:16:HIS:CD2	1.55	1.42
1:AA:619:U:N3	6:AD:135:LEU:HG	1.29	1.42
1:AA:332:G:OP2	22:AT:10:LEU:CB	1.66	1.41
1:AA:6:G:C4	7:AE:119:LEU:HD11	1.49	1.41
1:AA:131:C:O2'	1:AA:262:A:C1'	1.67	1.41
1:AA:1060:C:O2'	12:AJ:56:HIS:CD2	1.70	1.41
1:AA:677:U:H1'	13:AK:119:CYS:SG	1.57	1.41
1:AA:190:A:H61	22:AT:104:LEU:N	1.13	1.40
1:AA:38:G:O4'	1:AA:547:A:C6	1.74	1.40
1:AA:190:A:N6	22:AT:104:LEU:H	1.17	1.39
1:AA:1015:A:H1'	1:AA:1219:U:C5'	1.52	1.39
1:AA:675:A:N3	13:AK:116:HIS:HB2	1.34	1.39
6:AD:57:ARG:NH2	7:AE:107:ARG:CD	1.86	1.39
23:B0:891:A:N1	23:B0:892:A:N6	1.70	1.39
1:AA:6:G:C5	7:AE:119:LEU:CD1	2.06	1.38
1:AA:256:U:H5'	19:AQ:17:LYS:NZ	1.07	1.38
1:AA:333:G:C1'	22:AT:16:HIS:CD2	2.06	1.38
1:AA:6:G:C2	7:AE:119:LEU:HD11	1.57	1.38
1:AA:320:C:O4'	1:AA:1434:A:C2	1.76	1.38
1:AA:116:A:N6	1:AA:313:A:H1'	1.36	1.38
19:AQ:105:ALA:N	23:B0:727:U:H1'	1.30	1.37
1:AA:1484:C:H4'	23:B0:1943:A:C1'	1.53	1.37
2:AV:76:A:C5'	23:B0:2564:U:C6	2.05	1.37

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1416:G:C3'	1:AA:1417:G:H5'	0.90	1.37
2:AW:76:A:N3	23:B0:2486:C:H1'	1.35	1.37
6:AD:88:VAL:HA	7:AE:97:GLY:CA	1.51	1.37
1:AA:675:A:C1'	13:AK:116:HIS:CD2	2.07	1.36
6:AD:88:VAL:HG13	7:AE:97:GLY:CA	1.51	1.36
1:AA:293:G:C4'	1:AA:609:A:N1	1.87	1.36
1:AA:923:A:H1'	1:AA:1398:A:C4	1.59	1.36
23:B0:3865:A:P	23:B0:2388:G:H21	1.48	1.36
1:AA:905:U:O3'	1:AA:906:G:P	0.96	1.36
1:AA:131:C:C1'	1:AA:262:A:N3	1.87	1.35
1:AA:116:A:H61	1:AA:313:A:C1'	1.40	1.35
23:B0:1072:U:H3	31:BG:10:LEU:CA	1.38	1.35
1:AA:707:C:OP1	13:AK:85:ARG:NH1	1.56	1.35
1:AA:191:G:C6	1:AA:192:U:N3	1.94	1.34
1:AA:216:C:H4'	1:AA:466:A:N6	1.03	1.34
2:AW:76:A:C4	23:B0:2562:G:N2	1.94	1.34
1:AA:323:U:H5''	22:AT:22:ARG:CB	1.58	1.34
1:AA:835:U:H5''	20:AR:64:ARG:NH2	1.03	1.34
2:AV:1:G:N2	2:AV:2:C:H41	1.22	1.34
1:AA:131:C:C2'	1:AA:262:A:N3	1.89	1.34
1:AA:397:A:N6	1:AA:547:A:N3	1.75	1.34
1:AA:1474:G:O2'	23:B0:1705:U:H4'	1.27	1.33
23:B0:2075:U:O3'	23:B0:3093:C:H5'	1.18	1.33
23:B0:3128:G:C4'	23:B0:3174:C:H4'	1.56	1.33
1:AA:265:G:C5'	19:AQ:65:ILE:CA	2.04	1.33
1:AA:1190:G:OP1	5:AC:4:LYS:HA	1.15	1.33
1:AA:131:C:O2'	1:AA:262:A:N3	1.57	1.33
23:B0:1098:G:H22	23:B0:1113:C:N4	1.25	1.32
1:AA:27:G:C6	1:AA:557:G:C6	2.15	1.32
1:AA:103:C:O2'	1:AA:171:A:N1	1.60	1.32
1:AA:265:G:H4'	19:AQ:65:ILE:CA	1.58	1.32
1:AA:265:G:C4'	19:AQ:65:ILE:C	2.02	1.32
1:AA:262:A:O3'	22:AT:75:ASN:CB	1.64	1.32
1:AA:994:A:C6	16:AN:5:ALA:HA	1.62	1.32
1:AA:1298:C:H2'	9:AG:114:ARG:NH1	1.44	1.32
1:AA:1459:C:OP1	22:AT:28:ALA:C	1.73	1.32
1:AA:1060:C:H4'	12:AJ:52:GLY:CA	1.59	1.32
2:AV:76:A:C5'	23:B0:2564:U:N1	1.76	1.32
1:AA:923:A:C1'	1:AA:1398:A:C4	2.09	1.31
2:AV:1:G:N2	2:AV:2:C:N4	1.77	1.31
23:B0:3128:G:O2'	23:B0:3174:C:C5'	1.75	1.31

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:323:U:P	22:AT:23:ARG:HA	1.69	1.31
1:AA:619:U:C4	6:AD:135:LEU:HD11	1.63	1.31
19:AQ:93:GLN:C	23:B0:726:G:O4'	1.65	1.31
23:B0:1856:U:C5	23:B0:3865:A:C6	2.17	1.31
1:AA:836:G:OP1	20:AR:61:LYS:CD	1.76	1.31
1:AA:191:G:C5	1:AA:192:U:C6	2.17	1.31
1:AA:253:U:C1'	1:AA:275:G:O2'	1.77	1.31
1:AA:322:C:O3'	22:AT:23:ARG:HB2	1.20	1.31
1:AA:619:U:N3	6:AD:135:LEU:CG	1.94	1.31
1:AA:1498:U:H4'	1:AA:1519:A:C2	1.63	1.31
1:AA:131:C:O2	1:AA:262:A:C2	1.83	1.30
1:AA:191:G:O6	1:AA:192:U:N3	1.62	1.30
12:AJ:61:GLU:HG3	16:AN:58:LYS:NZ	1.43	1.30
1:AA:828:A:N3	4:AB:26:PRO:HG2	1.44	1.30
1:AA:249:U:H2'	1:AA:250:A:P	1.69	1.30
23:B0:3866:A:O2'	55:B5:194:ALA:CA	1.79	1.30
2:AW:75:C:N4	23:B0:2532:G:O6	1.64	1.30
1:AA:323:U:C4'	22:AT:19:SER:HA	1.61	1.30
1:AA:779:C:H5'	13:AK:120:ARG:O	1.22	1.30
1:AA:836:G:OP1	20:AR:61:LYS:HD2	1.21	1.30
1:AA:1458:G:O3'	22:AT:24:LEU:CD1	1.80	1.30
1:AA:1504:G:OP1	1:AA:1507:A:H4'	1.13	1.30
19:AQ:101:ARG:HD3	23:B0:731:A:N1	1.46	1.30
1:AA:38:G:C5'	1:AA:547:A:N6	1.93	1.29
1:AA:293:G:C5'	1:AA:609:A:N1	1.94	1.29
1:AA:522:C:OP1	14:AL:120:TYR:CE2	1.84	1.29
1:AA:914:A:C2'	1:AA:915:A:O4'	1.77	1.29
1:AA:1298:C:H2'	9:AG:114:ARG:CZ	1.61	1.29
19:AQ:105:ALA:N	23:B0:727:U:C1'	1.80	1.29
1:AA:130:A:OP1	19:AQ:63:ARG:HB2	1.25	1.29
1:AA:323:U:O4'	22:AT:19:SER:HA	1.12	1.29
1:AA:619:U:C5	6:AD:135:LEU:HD11	1.64	1.29
19:AQ:101:ARG:NH1	23:B0:731:A:C2	2.00	1.29
1:AA:236:G:OP1	19:AQ:40:LYS:NZ	1.63	1.29
1:AA:323:U:OP1	22:AT:23:ARG:CA	1.81	1.29
23:B0:891:A:C2	23:B0:892:A:C5	2.21	1.29
1:AA:261:U:C6	22:AT:79:ARG:NH1	2.01	1.29
1:AA:1416:G:C2'	1:AA:1417:G:H5'	1.59	1.29
1:AA:403:C:O2'	1:AA:404:U:H5'	1.20	1.28
1:AA:933:G:OP2	9:AG:3:ARG:HD2	1.14	1.28
1:AA:323:U:OP1	22:AT:23:ARG:HA	1.28	1.28

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:332:G:OP1	22:AT:10:LEU:HG	1.19	1.28
1:AA:499:A:H1'	1:AA:500:G:O4'	1.30	1.28
1:AA:1398:A:C5'	1:AA:1399:C:P	2.19	1.28
1:AA:293:G:C4'	1:AA:609:A:C2	2.13	1.28
1:AA:322:C:O3'	22:AT:23:ARG:CB	1.81	1.28
1:AA:994:A:C2	16:AN:4:LYS:C	2.10	1.28
1:AA:1499:A:C1'	1:AA:1520:G:H5'	1.62	1.28
2:AW:71:G:H5''	23:B0:1925:C:O2	1.23	1.28
1:AA:191:G:C2	1:AA:192:U:H1'	1.68	1.27
1:AA:1394:A:C4	1:AA:1501:C:H4'	1.66	1.27
1:AA:619:U:O2	6:AD:133:VAL:HG13	1.26	1.27
1:AA:22:G:N2	1:AA:913:A:H2'	1.49	1.27
1:AA:994:A:C5	16:AN:5:ALA:HA	1.68	1.27
1:AA:836:G:P	20:AR:61:LYS:HD2	1.72	1.27
1:AA:131:C:P	1:AA:263:A:H4'	1.74	1.27
1:AA:923:A:C2	1:AA:1395:C:O2	1.87	1.27
1:AA:1495:U:O2'	23:B0:1902:A:C2	1.87	1.26
1:AA:255:G:C5'	19:AQ:17:LYS:HB2	1.64	1.26
1:AA:9:G:OP1	7:AE:122:GLU:HB2	1.10	1.26
1:AA:108:G:N2	22:AT:15:ARG:HH21	1.32	1.26
1:AA:265:G:H5'	19:AQ:64:PRO:O	1.09	1.26
1:AA:376:G:OP2	18:AP:67:THR:HG21	1.36	1.26
1:AA:1393:U:C2	1:AA:1395:C:C4	2.23	1.26
1:AA:128:G:H1'	19:AQ:61:GLU:OE1	1.21	1.26
1:AA:128:G:OP1	19:AQ:2:PRO:N	1.69	1.26
1:AA:232:G:N2	1:AA:263:A:C2	2.03	1.26
1:AA:265:G:H4'	19:AQ:65:ILE:N	1.51	1.26
1:AA:6:G:N3	7:AE:119:LEU:HD11	1.50	1.25
1:AA:397:A:N6	1:AA:547:A:H1'	1.50	1.25
1:AA:190:A:C6	22:AT:104:LEU:O	1.88	1.25
1:AA:1484:C:O3'	23:B0:1943:A:O2'	1.52	1.25
6:AD:88:VAL:HG22	7:AE:96:PRO:C	1.59	1.25
1:AA:333:G:H1'	22:AT:16:HIS:NE2	1.51	1.25
1:AA:189:A:C6	22:AT:104:LEU:C	2.03	1.25
1:AA:762:C:C4'	23:B0:729:A:N1	2.00	1.25
23:B0:1098:G:N2	23:B0:1113:C:H42	1.33	1.25
1:AA:161:A:H2	1:AA:348:G:O2'	0.90	1.25
1:AA:1342:C:O3'	11:AI:125:TYR:CZ	1.88	1.25
2:AV:75:C:OP2	23:B0:2581:A:C5'	1.83	1.25
2:AW:74:C:C4	23:B0:2534:U:C4	1.93	1.25
1:AA:46:G:O2'	1:AA:365:U:H1'	1.20	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:707:C:C5'	13:AK:85:ARG:HH12	1.48	1.25
1:AA:994:A:N1	16:AN:5:ALA:N	1.82	1.25
1:AA:323:U:C4'	22:AT:22:ARG:HB2	1.64	1.24
1:AA:994:A:C2	16:AN:5:ALA:HA	1.72	1.24
1:AA:905:U:C3'	1:AA:906:G:P	2.24	1.24
2:AV:75:C:OP2	23:B0:2581:A:H5'	1.36	1.24
1:AA:265:G:O3'	19:AQ:65:ILE:O	1.55	1.24
1:AA:619:U:O4	6:AD:135:LEU:CD2	1.85	1.24
1:AA:779:C:C4'	13:AK:120:ARG:CG	2.06	1.24
1:AA:262:A:C5'	22:AT:74:LYS:HB2	1.66	1.24
2:AW:71:G:H3'	23:B0:1925:C:O2'	1.28	1.24
1:AA:675:A:H1'	13:AK:116:HIS:CG	1.73	1.24
1:AA:994:A:C6	16:AN:5:ALA:CA	2.21	1.23
1:AA:130:A:O4'	1:AA:264:U:H5'	1.32	1.23
1:AA:236:G:P	19:AQ:40:LYS:NZ	2.11	1.23
1:AA:265:G:C5'	19:AQ:64:PRO:O	1.86	1.23
1:AA:923:A:O4'	1:AA:1398:A:C2	1.89	1.23
1:AA:1457:A:C8	1:AA:1459:C:C2	2.27	1.23
1:AA:131:C:O2'	1:AA:262:A:N9	1.71	1.23
1:AA:22:G:O2'	1:AA:913:A:C6	1.86	1.23
2:AW:75:C:N4	23:B0:2532:G:C6	2.03	1.23
23:B0:1856:U:H3'	23:B0:3865:A:C8	1.73	1.23
23:B0:1912:G:H4'	23:B0:1913:G:C8	1.72	1.23
1:AA:237:C:H5''	19:AQ:25:ARG:NH2	1.50	1.22
1:AA:1298:C:C2'	9:AG:114:ARG:NH1	2.01	1.22
1:AA:323:U:O4'	22:AT:19:SER:CA	1.87	1.22
1:AA:1234:C:C5'	1:AA:1365:G:OP1	1.88	1.22
1:AA:255:G:H5''	19:AQ:17:LYS:CB	1.69	1.22
1:AA:323:U:H5'	22:AT:19:SER:O	1.09	1.22
1:AA:922:G:C2	1:AA:1396:A:C4	2.28	1.22
1:AA:1256:A:H5'	1:AA:1258:G:C1'	1.70	1.22
1:AA:19:C:C1'	1:AA:916:G:H22	1.49	1.21
1:AA:1458:G:C8	1:AA:1459:C:C2'	2.22	1.21
23:B0:3110:G:OP1	23:B0:3148:G:C2'	1.88	1.21
1:AA:247:G:N2	1:AA:282:A:N3	1.88	1.21
1:AA:1044:A:H3'	1:AA:1045:C:C1'	1.54	1.21
1:AA:191:G:N3	1:AA:192:U:H1'	1.56	1.21
1:AA:255:G:O4'	19:AQ:16:GLN:HB2	1.38	1.21
1:AA:619:U:O4	6:AD:135:LEU:HD21	1.06	1.21
2:AW:76:A:O2'	23:B0:2485:U:H2'	1.07	1.21
23:B0:1856:U:C4	23:B0:3865:A:C6	2.29	1.21

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:249:U:C2'	1:AA:250:A:P	2.29	1.21
1:AA:264:U:C1'	19:AQ:64:PRO:HD2	1.68	1.21
15:AM:93:ARG:HD3	23:B0:900:U:O3'	1.35	1.21
23:B0:3149:G:O3'	23:B0:3150:C:P	1.98	1.21
1:AA:476:U:C6	1:AA:477:G:H5'	1.75	1.20
1:AA:815:A:H1'	1:AA:1527:C:O2'	1.36	1.20
2:AW:74:C:N3	23:B0:2534:U:C6	1.84	1.20
6:AD:88:VAL:HG22	7:AE:97:GLY:N	1.53	1.20
1:AA:89:G:O3'	1:AA:90:C:P	1.98	1.20
1:AA:202:G:C4'	1:AA:469:C:OP1	1.88	1.20
1:AA:38:G:O4'	1:AA:547:A:C5	1.94	1.20
1:AA:1054:C:N4	2:AW:34:G:O2'	1.73	1.20
2:AV:76:A:H2'	23:B0:2046:C:O2	1.40	1.20
1:AA:476:U:C2	1:AA:477:G:H5'	1.73	1.20
1:AA:1261:A:O4'	1:AA:1283:G:H4'	1.41	1.20
1:AA:202:G:H4'	1:AA:469:C:OP1	1.02	1.20
4:AB:77:ALA:HB2	4:AB:211:ILE:HD13	1.22	1.20
5:AC:59:ARG:O	12:AJ:92:THR:O	1.59	1.20
19:AQ:104:LYS:CB	23:B0:727:U:C1'	2.10	1.20
1:AA:436:C:N3	1:AA:437:U:C5	2.10	1.19
1:AA:456:A:C6	1:AA:477:G:H1'	1.76	1.19
1:AA:1501:C:OP1	1:AA:1508:G:H4'	1.42	1.19
1:AA:1305:G:O2'	1:AA:1306:A:H8	1.23	1.19
23:B0:3867:G:C2	55:B5:44:GLY:CA	2.25	1.19
1:AA:262:A:OP2	22:AT:76:ALA:HB2	1.39	1.19
1:AA:397:A:H62	1:AA:547:A:C1'	1.55	1.19
1:AA:521:G:H5'	14:AL:72:GLY:O	1.42	1.19
1:AA:538:G:H5''	14:AL:114:LYS:HB3	1.21	1.19
1:AA:816:A:P	1:AA:1527:C:H5'	1.82	1.19
23:B0:3110:G:OP1	23:B0:3148:G:O2'	1.58	1.19
1:AA:119:A:N7	1:AA:287:U:N3	1.89	1.19
1:AA:264:U:O2'	19:AQ:64:PRO:O	1.58	1.19
1:AA:675:A:HO2'	13:AK:116:HIS:CE1	1.58	1.19
1:AA:1422:G:H5''	33:BI:60:PRO:CA	1.71	1.19
23:B0:891:A:C2	23:B0:892:A:N6	2.04	1.19
1:AA:265:G:C4'	19:AQ:65:ILE:CA	2.21	1.18
1:AA:1155:G:O3'	1:AA:1156:G:P	2.01	1.18
24:B9:73:C:O3'	24:B9:74:A:P	2.01	1.18
1:AA:6:G:H8	7:AE:92:LYS:NZ	1.41	1.18
1:AA:619:U:C4	6:AD:135:LEU:CG	2.27	1.18
1:AA:1278:U:H5''	1:AA:1279:A:P	1.82	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1458:G:O3'	22:AT:24:LEU:HD11	1.01	1.18
23:B0:3128:G:C4'	23:B0:3174:C:C4'	2.16	1.18
1:AA:923:A:C1'	1:AA:1398:A:C2	2.27	1.18
1:AA:994:A:C4	16:AN:5:ALA:HA	1.77	1.18
23:B0:3875:A:H5'	55:B5:42:LYS:CA	1.72	1.18
1:AA:865:A:N3	1:AA:918:A:H4'	1.57	1.18
1:AA:994:A:N1	16:AN:5:ALA:CA	2.07	1.18
6:AD:57:ARG:NH2	7:AE:107:ARG:HD3	1.45	1.18
1:AA:292:G:C2'	1:AA:608:A:N6	2.07	1.17
1:AA:923:A:H2	1:AA:1395:C:O2	1.23	1.17
23:B0:3183:A:O3'	23:B0:3184:C:P	2.02	1.17
1:AA:619:U:C4	6:AD:135:LEU:CD1	2.26	1.17
1:AA:994:A:O2'	16:AN:11:LYS:HE3	1.43	1.17
1:AA:1015:A:H1'	1:AA:1219:U:C4'	1.74	1.17
1:AA:1394:A:N3	1:AA:1501:C:H4'	1.60	1.17
12:AJ:62:HIS:C	16:AN:59:ALA:H	1.52	1.17
19:AQ:96:GLN:NE2	23:B0:725:C:O2	1.75	1.17
1:AA:300:A:O2'	1:AA:564:C:N3	1.73	1.17
1:AA:375:U:O3'	1:AA:376:G:P	2.01	1.17
12:AJ:62:HIS:O	16:AN:59:ALA:N	1.77	1.17
1:AA:27:G:C5	1:AA:557:G:N1	2.13	1.17
1:AA:191:G:N1	1:AA:192:U:O2	1.78	1.17
1:AA:521:G:H5'	14:AL:72:GLY:C	1.52	1.17
1:AA:191:G:N3	1:AA:192:U:C1'	2.08	1.16
1:AA:994:A:C2	16:AN:5:ALA:CA	2.26	1.16
1:AA:6:G:C5	7:AE:119:LEU:HD12	1.70	1.16
1:AA:43:C:OP1	18:AP:12:LYS:HD2	1.46	1.16
1:AA:108:G:H22	22:AT:15:ARG:NH2	1.42	1.16
1:AA:130:A:OP1	19:AQ:63:ARG:CB	1.94	1.16
1:AA:755:G:H1'	10:AH:1:MET:HE3	1.27	1.16
2:AV:74:C:O3'	23:B0:2581:A:P	2.03	1.16
2:AV:75:C:P	23:B0:2581:A:H5''	1.84	1.16
1:AA:38:G:C4'	1:AA:547:A:N6	2.07	1.16
1:AA:236:G:OP1	19:AQ:40:LYS:CE	1.94	1.16
1:AA:256:U:C5'	19:AQ:17:LYS:NZ	1.74	1.16
1:AA:456:A:N6	1:AA:477:G:C4	2.14	1.16
1:AA:755:G:H1'	10:AH:1:MET:CE	1.74	1.16
1:AA:815:A:N9	1:AA:1527:C:H1'	1.61	1.16
1:AA:1473:A:H4'	23:B0:1719:G:O4'	1.44	1.16
1:AA:865:A:H1'	1:AA:918:A:O2'	1.43	1.16
1:AA:1261:A:C4'	1:AA:1283:G:H4'	1.75	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1473:A:H5'	23:B0:1719:G:H4'	1.19	1.16
2:AV:76:A:H5'	23:B0:2564:U:C1'	1.76	1.16
6:AD:57:ARG:HH22	7:AE:107:ARG:CD	1.50	1.16
19:AQ:94:ASN:HA	23:B0:726:G:C1'	1.76	1.16
1:AA:914:A:H2'	1:AA:915:A:O4'	0.99	1.15
23:B0:1098:G:N2	23:B0:1113:C:N4	1.89	1.15
1:AA:9:G:H8	7:AE:126:ARG:NH1	1.44	1.15
1:AA:323:U:C5'	22:AT:19:SER:O	1.93	1.15
2:AW:74:C:C5	23:B0:2533:U:N3	2.05	1.15
6:AD:57:ARG:HH21	7:AE:107:ARG:NE	1.43	1.15
1:AA:261:U:C6	22:AT:79:ARG:CZ	2.24	1.15
1:AA:456:A:N1	1:AA:477:G:C1'	2.10	1.15
1:AA:1014:A:C2	21:AS:34:TRP:CD1	2.34	1.15
6:AD:88:VAL:CA	7:AE:97:GLY:CA	2.15	1.15
19:AQ:93:GLN:O	23:B0:726:G:O4'	1.64	1.15
1:AA:922:G:N2	1:AA:1396:A:C4	2.14	1.15
1:AA:1498:U:C4'	1:AA:1519:A:H2	1.59	1.15
2:AV:76:A:C5'	23:B0:2564:U:C1'	2.25	1.15
1:AA:265:G:O3'	19:AQ:66:SER:HA	1.44	1.14
1:AA:1194:U:H4'	7:AE:22:GLY:HA2	1.15	1.14
1:AA:1416:G:O3'	1:AA:1417:G:H5'	1.41	1.14
19:AQ:94:ASN:HA	23:B0:726:G:H1'	1.25	1.14
1:AA:1081:G:OP1	7:AE:18:ARG:HB2	1.47	1.14
1:AA:1112:C:N3	5:AC:178:LEU:N	1.95	1.14
3:AU:11:C:O3'	3:AU:12:A:P	2.05	1.14
1:AA:236:G:P	19:AQ:40:LYS:HZ3	1.68	1.14
1:AA:1434:A:OP2	1:AA:1435:G:C8	2.00	1.14
1:AA:248:C:O2'	1:AA:283:C:H4'	1.47	1.14
1:AA:779:C:C1'	13:AK:120:ARG:HD2	1.77	1.14
1:AA:943:U:C1'	11:AI:124:GLN:HE22	1.60	1.13
1:AA:994:A:C2	16:AN:5:ALA:N	2.16	1.13
1:AA:1394:A:C2	1:AA:1501:C:C4'	2.30	1.13
2:AW:76:A:H4'	23:B0:2486:C:H5'	1.28	1.13
1:AA:37:U:C2'	1:AA:547:A:N1	2.11	1.13
1:AA:118:U:O3'	1:AA:119:A:P	2.06	1.13
1:AA:264:U:H1'	19:AQ:64:PRO:CD	1.76	1.13
1:AA:421:U:C6	5:AC:127:ARG:NH2	2.11	1.13
1:AA:1434:A:OP1	1:AA:1435:G:P	2.07	1.13
1:AA:1458:G:H8	1:AA:1459:C:C2'	1.57	1.13
23:B0:3866:A:H61	55:B5:44:GLY:CA	1.60	1.13
1:AA:27:G:C4	1:AA:557:G:C2	2.37	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:108:G:N2	22:AT:15:ARG:NH2	1.96	1.13
1:AA:403:C:O2'	1:AA:404:U:C5'	1.95	1.13
1:AA:684:A:C1'	13:AK:38:ASN:ND2	2.10	1.13
1:AA:1234:C:H5'	1:AA:1365:G:OP1	1.46	1.13
1:AA:1255:G:H1'	1:AA:1259:C:H1'	1.23	1.13
2:AW:76:A:H1'	23:B0:2486:C:C1'	1.78	1.13
23:B0:1861:G:OP2	55:B5:38:GLY:CA	1.97	1.13
1:AA:436:C:C2	1:AA:437:U:C6	2.36	1.13
1:AA:1346:A:H2'	9:AG:10:ARG:HH22	1.05	1.13
7:AE:79:GLU:OE2	10:AH:105:ARG:HD3	1.48	1.13
23:B0:1861:G:OP1	55:B5:37:LYS:CA	1.96	1.13
1:AA:131:C:OP1	1:AA:263:A:H4'	1.47	1.13
1:AA:216:C:H4'	1:AA:466:A:C6	1.83	1.12
1:AA:236:G:C5'	19:AQ:40:LYS:HZ3	1.62	1.13
1:AA:684:A:O4'	13:AK:38:ASN:ND2	1.81	1.13
1:AA:707:C:H5''	13:AK:85:ARG:NH1	1.62	1.13
1:AA:333:G:O4'	22:AT:16:HIS:CD2	2.01	1.12
1:AA:1342:C:H5''	11:AI:125:TYR:CZ	1.83	1.12
23:B0:1072:U:N3	31:BG:10:LEU:CA	2.12	1.12
1:AA:26:A:C2'	1:AA:27:G:H5'	1.77	1.12
1:AA:129:U:OP1	19:AQ:3:LYS:NZ	1.82	1.12
1:AA:436:C:C2	1:AA:437:U:C5	2.36	1.12
1:AA:323:U:P	22:AT:23:ARG:CA	2.37	1.12
1:AA:1211:U:O3'	1:AA:1212:U:P	2.07	1.12
23:B0:1066:G:N2	23:B0:1115:C:N3	1.96	1.12
1:AA:836:G:OP1	20:AR:61:LYS:CE	1.98	1.12
1:AA:943:U:H1'	11:AI:124:GLN:HE22	1.08	1.12
2:AW:76:A:H1'	23:B0:2486:C:C4'	1.79	1.12
1:AA:131:C:O2'	1:AA:262:A:H1'	1.29	1.12
1:AA:187:G:O2'	22:AT:105:SER:N	1.83	1.12
1:AA:288:A:O3'	1:AA:289:G:P	2.08	1.12
1:AA:335:C:O4'	1:AA:1434:A:H4'	1.48	1.12
1:AA:619:U:N3	6:AD:135:LEU:CD1	2.11	1.12
1:AA:1416:G:H3'	1:AA:1417:G:O5'	1.47	1.12
1:AA:1416:G:O3'	1:AA:1417:G:C5'	1.92	1.12
23:B0:891:A:H2	23:B0:892:A:C6	1.46	1.12
23:B0:3128:G:O2'	23:B0:3174:C:H5'	0.97	1.12
1:AA:130:A:O4'	1:AA:264:U:C5'	1.99	1.11
1:AA:19:C:H1'	1:AA:916:G:H22	1.10	1.11
1:AA:27:G:C5	1:AA:557:G:C2	2.38	1.11
1:AA:292:G:C2'	1:AA:608:A:H62	1.63	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:684:A:H1'	13:AK:38:ASN:HD22	1.05	1.11
1:AA:827:U:O3'	1:AA:828:A:P	2.07	1.11
1:AA:1392:G:H4'	1:AA:1531:A:H5'	1.25	1.11
2:AW:76:A:C2	23:B0:2532:G:N2	2.18	1.11
23:B0:3110:G:OP1	23:B0:3148:G:H2'	1.48	1.11
1:AA:828:A:C2	4:AB:26:PRO:CG	2.33	1.11
1:AA:1394:A:C2	1:AA:1501:C:H5'	1.85	1.11
1:AA:1499:A:H1'	1:AA:1520:G:C5'	1.78	1.11
9:AG:149:ARG:NH1	13:AK:59:TYR:CE1	2.18	1.11
14:AL:41:ARG:HG2	14:AL:42:THR:H	1.03	1.11
1:AA:191:G:O6	1:AA:192:U:C4	2.02	1.11
1:AA:264:U:O2'	19:AQ:63:ARG:C	1.93	1.11
1:AA:265:G:H5'	19:AQ:64:PRO:C	1.73	1.11
1:AA:1060:C:C4'	12:AJ:52:GLY:CA	2.23	1.11
1:AA:1484:C:O2'	23:B0:1943:A:H4'	1.51	1.11
2:AW:76:A:O2'	23:B0:2485:U:C2'	1.97	1.11
23:B0:1067:G:H5'	23:B0:1068:A:H5'	1.26	1.11
23:B0:1098:G:N2	23:B0:1113:C:N3	1.97	1.11
1:AA:1499:A:C1'	1:AA:1520:G:C5'	2.29	1.10
12:AJ:51:ARG:O	16:AN:45:ARG:NE	1.83	1.10
1:AA:130:A:H4'	1:AA:264:U:H5'	1.24	1.10
23:B0:1856:U:C4	23:B0:3865:A:N6	2.19	1.10
1:AA:186:C:H1'	22:AT:60:GLU:OE1	1.50	1.10
1:AA:253:U:O2'	19:AQ:15:MET:SD	2.09	1.10
1:AA:292:G:O2'	1:AA:608:A:N6	1.82	1.10
1:AA:319:G:H5'	1:AA:1468:A:H4'	1.16	1.10
1:AA:1483:A:H2'	1:AA:1484:C:C6	1.87	1.10
2:AV:12:U:OP1	23:B0:1891:C:O2'	1.68	1.10
1:AA:22:G:C1'	1:AA:913:A:C2	2.34	1.10
1:AA:1182:G:O2'	1:AA:1183:A:P	2.09	1.10
1:AA:131:C:OP1	1:AA:263:A:C5'	1.99	1.10
1:AA:322:C:C3'	22:AT:23:ARG:HB2	1.82	1.10
11:AI:8:GLY:HA2	11:AI:79:LEU:HD12	1.32	1.10
1:AA:267:C:OP2	19:AQ:67:LYS:CD	1.84	1.09
1:AA:1190:G:OP1	5:AC:4:LYS:CA	2.00	1.09
1:AA:249:U:C3'	1:AA:250:A:P	2.39	1.09
1:AA:798:G:OP1	13:AK:122:LYS:NZ	1.84	1.09
1:AA:1014:A:H1'	21:AS:34:TRP:HB2	1.30	1.09
23:B0:940:G:H3'	23:B0:941:U:H5''	1.19	1.09
1:AA:265:G:C4'	19:AQ:65:ILE:N	2.12	1.09
12:AJ:51:ARG:HB2	12:AJ:59:SER:HB3	1.34	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:263:A:P	22:AT:75:ASN:HB2	1.91	1.09
1:AA:815:A:C1'	1:AA:1527:C:C1'	2.26	1.09
1:AA:815:A:C1'	1:AA:1527:C:H1'	1.70	1.09
6:AD:57:ARG:HH21	7:AE:107:ARG:CZ	1.66	1.09
1:AA:130:A:C4'	1:AA:264:U:C5'	2.31	1.09
1:AA:1194:U:C4'	7:AE:22:GLY:HA2	1.82	1.09
1:AA:1504:G:OP1	1:AA:1507:A:C4'	2.00	1.09
2:AW:74:C:H42	23:B0:2533:U:C2'	1.48	1.09
7:AE:79:GLU:CD	10:AH:105:ARG:HD3	1.77	1.09
15:AM:93:ARG:CD	23:B0:900:U:O3'	2.01	1.09
1:AA:191:G:C5	1:AA:192:U:N1	2.20	1.08
1:AA:191:G:C4	1:AA:192:U:C1'	2.36	1.08
1:AA:320:C:H5'	1:AA:1434:A:N1	1.66	1.08
1:AA:406:G:N2	1:AA:437:U:C2	2.22	1.08
1:AA:619:U:C4	6:AD:135:LEU:HD21	1.87	1.08
1:AA:923:A:O4'	1:AA:1398:A:C6	2.05	1.08
2:AW:76:A:N3	23:B0:2562:G:N2	2.01	1.08
1:AA:264:U:C2'	19:AQ:64:PRO:O	2.00	1.08
23:B0:3875:A:C5'	55:B5:42:LYS:CA	2.32	1.08
1:AA:253:U:H1'	1:AA:275:G:O2'	0.91	1.08
1:AA:797:C:OP1	13:AK:124:LYS:HG3	1.53	1.08
6:AD:150:GLU:HG3	6:AD:153:ARG:HH21	1.19	1.08
23:B0:1098:G:N2	23:B0:1113:C:C4	2.21	1.08
23:B0:3865:A:P	23:B0:2388:G:N2	2.25	1.08
1:AA:265:G:O3'	19:AQ:65:ILE:C	1.96	1.08
1:AA:9:G:C5'	7:AE:126:ARG:HD3	1.82	1.08
1:AA:1394:A:N1	1:AA:1501:C:H5'	1.68	1.08
2:AV:25:C:O3'	2:AV:26:G:P	2.12	1.08
1:AA:69:G:O4'	1:AA:102:G:C2	2.07	1.07
1:AA:246:A:H4'	1:AA:247:G:H4'	1.36	1.07
1:AA:265:G:H5''	19:AQ:65:ILE:CA	1.73	1.07
1:AA:778:G:O2'	13:AK:120:ARG:N	1.87	1.07
1:AA:1054:C:N4	2:AW:34:G:HO2'	1.47	1.07
1:AA:1394:A:C2	1:AA:1501:C:C5'	2.36	1.07
2:AW:75:C:N3	23:B0:2532:G:N1	2.01	1.07
23:B0:225:G:H3'	23:B0:226:C:H5'	1.30	1.07
23:B0:1119:U:O4	23:B0:1120:C:N4	1.86	1.07
23:B0:3109:U:H5'	23:B0:3150:C:H5'	1.34	1.07
1:AA:128:G:H4'	19:AQ:3:LYS:HA	1.36	1.07
1:AA:190:A:N6	22:AT:104:LEU:C	2.12	1.07
1:AA:212:G:O3'	1:AA:213:G:P	2.12	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:538:G:H5'	14:AL:114:LYS:HB2	1.26	1.07
1:AA:675:A:O2'	13:AK:116:HIS:CE1	2.05	1.07
5:AC:58:GLU:HB3	12:AJ:92:THR:HG21	1.30	1.07
1:AA:6:G:C4	7:AE:119:LEU:HD13	1.88	1.07
1:AA:13:U:O4	1:AA:915:A:N7	1.87	1.07
1:AA:94:G:C3'	1:AA:96:C:P	2.41	1.07
1:AA:1484:C:H4'	23:B0:1943:A:H1'	1.29	1.07
1:AA:877:C:H5''	10:AH:88:LYS:HD3	1.37	1.07
2:AW:75:C:N4	23:B0:2532:G:N1	2.01	1.07
6:AD:36:ARG:H	6:AD:37:PRO:HD3	1.19	1.07
12:AJ:61:GLU:CG	16:AN:58:LYS:HZ2	1.66	1.07
1:AA:334:C:O2	1:AA:1434:A:O2'	1.70	1.07
1:AA:1298:C:O2'	9:AG:114:ARG:NH1	1.86	1.07
1:AA:265:G:C4'	19:AQ:64:PRO:C	2.28	1.06
1:AA:1044:A:H3'	1:AA:1045:C:H1'	1.34	1.06
2:AV:76:A:H3'	23:B0:2046:C:O2'	1.54	1.06
2:AW:76:A:C4'	23:B0:2486:C:H5'	1.84	1.06
6:AD:88:VAL:CB	7:AE:97:GLY:CA	2.33	1.06
23:B0:3128:G:H4'	23:B0:3174:C:O4'	1.53	1.06
1:AA:9:G:H5''	7:AE:126:ARG:HD3	1.33	1.06
1:AA:26:A:H2'	1:AA:27:G:H5'	1.12	1.06
1:AA:265:G:H4'	19:AQ:66:SER:N	1.68	1.06
1:AA:933:G:OP2	9:AG:3:ARG:CD	2.01	1.06
1:AA:820:U:O2	1:AA:873:A:C8	2.08	1.06
1:AA:1434:A:H3'	1:AA:1435:G:C4'	1.85	1.06
1:AA:1476:G:OP1	23:B0:1707:A:OP1	1.73	1.06
23:B0:1912:G:C4'	23:B0:1913:G:H8	1.68	1.06
1:AA:1394:A:N1	1:AA:1501:C:C5'	2.18	1.06
1:AA:1014:A:C5'	21:AS:14:HIS:CG	2.38	1.06
1:AA:1394:A:C2	1:AA:1501:C:H4'	1.90	1.06
1:AA:1498:U:C4'	1:AA:1519:A:C2	2.35	1.06
23:B0:3098:U:O3'	23:B0:3099:U:P	2.12	1.06
1:AA:262:A:C5'	22:AT:74:LYS:CB	2.28	1.05
1:AA:1393:U:O2	1:AA:1395:C:C4	2.05	1.05
1:AA:1474:G:H4'	23:B0:1717:A:H62	1.19	1.05
1:AA:1489:G:H2'	1:AA:1490:C:H5''	1.37	1.05
1:AA:9:G:C8	7:AE:126:ARG:NH1	2.24	1.05
1:AA:38:G:H4'	1:AA:498:U:O2	1.53	1.05
1:AA:104:G:H5'	1:AA:172:A:N1	1.72	1.05
1:AA:367:U:O3'	1:AA:368:U:P	2.14	1.05
1:AA:1034:G:O3'	1:AA:1035:A:P	2.13	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1499:A:H1'	1:AA:1520:G:H5'	1.10	1.05
15:AM:7:VAL:CG1	28:BD:111:ILE:CA	2.33	1.05
1:AA:21:G:O2'	1:AA:914:A:N6	1.89	1.05
1:AA:556:C:O2'	1:AA:557:G:H5'	1.54	1.05
1:AA:779:C:H4'	13:AK:120:ARG:CD	1.84	1.05
1:AA:619:U:C2	6:AD:135:LEU:CD1	2.39	1.05
1:AA:779:C:C5'	13:AK:120:ARG:O	2.05	1.05
1:AA:923:A:O4'	1:AA:1398:A:C4	2.04	1.05
1:AA:1108:G:H5''	5:AC:176:HIS:CE1	1.92	1.05
1:AA:1182:G:O2'	1:AA:1183:A:OP2	1.74	1.05
1:AA:1342:C:C4'	11:AI:125:TYR:CZ	2.40	1.05
1:AA:1474:G:O4'	23:B0:1718:A:N1	1.58	1.05
23:B0:3107:G:O3'	23:B0:3108:G:P	2.14	1.05
1:AA:9:G:OP1	7:AE:122:GLU:CB	2.04	1.05
1:AA:129:U:H5''	19:AQ:3:LYS:HZ1	1.18	1.05
6:AD:205:GLU:CG	7:AE:107:ARG:HH21	1.67	1.05
15:AM:84:ILE:HG21	21:AS:65:ASN:HD22	1.17	1.05
1:AA:322:C:O3'	22:AT:23:ARG:CA	2.03	1.04
1:AA:866:C:H5'	1:AA:919:A:H5'	1.37	1.04
1:AA:1459:C:OP1	22:AT:29:LYS:N	1.90	1.04
2:AW:76:A:C1'	23:B0:2486:C:C4'	2.32	1.04
1:AA:234:C:O2'	19:AQ:70:ARG:HG2	1.57	1.04
1:AA:499:A:N3	1:AA:500:G:H1'	1.70	1.04
23:B0:3877:A:H3'	23:B0:1861:G:C8	1.91	1.04
1:AA:994:A:C2	16:AN:4:LYS:O	2.10	1.04
1:AA:1015:A:H1'	1:AA:1219:U:H5'	1.34	1.04
1:AA:132:C:H5'	1:AA:262:A:C1'	1.88	1.04
23:B0:3866:A:N6	55:B5:44:GLY:CA	2.18	1.04
1:AA:320:C:C4'	1:AA:1434:A:C2	2.38	1.04
1:AA:923:A:O4'	1:AA:1398:A:C5	2.10	1.04
1:AA:923:A:C2'	1:AA:1398:A:H2'	1.87	1.04
1:AA:1109:C:OP2	5:AC:176:HIS:CD2	2.10	1.04
1:AA:1393:U:N3	1:AA:1395:C:N4	2.04	1.04
23:B0:3107:G:HO3'	23:B0:3108:G:P	1.80	1.04
1:AA:130:A:C5'	19:AQ:63:ARG:HE	1.70	1.03
1:AA:246:A:O3'	1:AA:247:G:C4'	2.05	1.03
1:AA:599:C:H4'	10:AH:130:GLY:C	1.82	1.03
1:AA:834:C:OP1	20:AR:53:ARG:NH2	1.90	1.03
1:AA:1044:A:C3'	1:AA:1045:C:C1'	2.34	1.03
23:B0:3866:A:C6	55:B5:45:ASP:CA	2.41	1.03
1:AA:94:G:HO3'	1:AA:96:C:P	1.13	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:323:U:OP1	22:AT:22:ARG:C	2.02	1.03
1:AA:865:A:C2	1:AA:918:A:H4'	1.93	1.03
1:AA:22:G:H21	1:AA:913:A:H2'	1.08	1.03
1:AA:319:G:H21	1:AA:1434:A:H1'	1.14	1.03
1:AA:476:U:N1	1:AA:477:G:C5'	2.22	1.03
4:AB:178:ARG:HH11	4:AB:178:ARG:HG3	1.21	1.03
23:B0:1888:C:H4'	23:B0:1911:A:H2	1.23	1.03
1:AA:299:G:N2	1:AA:566:G:N7	2.06	1.03
1:AA:1015:A:H1'	1:AA:1219:U:H4'	1.38	1.03
6:AD:57:ARG:HH22	7:AE:107:ARG:HD3	0.88	1.03
14:AL:75:HIS:HD2	14:AL:77:LEU:H	1.05	1.03
23:B0:1119:U:C4	23:B0:1120:C:N4	2.26	1.03
1:AA:131:C:C1'	1:AA:262:A:C2	2.32	1.03
1:AA:132:C:H5'	1:AA:262:A:O4'	1.58	1.03
1:AA:243:A:H4'	1:AA:244:U:H5'	1.37	1.03
1:AA:994:A:N1	16:AN:5:ALA:HA	1.65	1.03
6:AD:88:VAL:CB	7:AE:97:GLY:HA3	1.89	1.03
19:AQ:104:LYS:HG2	23:B0:726:G:C6	1.93	1.03
1:AA:473:C:OP1	18:AP:75:ARG:HD3	1.58	1.02
1:AA:707:C:H5''	13:AK:85:ARG:HH12	0.91	1.02
1:AA:1434:A:H3'	1:AA:1435:G:O4'	1.59	1.02
2:AW:71:G:C3'	23:B0:1925:C:O2'	2.07	1.02
1:AA:15:G:H1'	7:AE:19:MET:HE2	1.03	1.02
1:AA:332:G:OP2	22:AT:10:LEU:HB2	0.86	1.02
1:AA:923:A:H2	1:AA:1395:C:C2	1.75	1.02
1:AA:1331:G:O3'	1:AA:1332:A:P	2.17	1.02
1:AA:27:G:C6	1:AA:557:G:N1	2.27	1.02
1:AA:27:G:O6	1:AA:557:G:C6	2.10	1.02
1:AA:187:G:C2'	22:AT:105:SER:H	1.73	1.02
1:AA:835:U:H5''	20:AR:64:ARG:CZ	1.89	1.02
1:AA:922:G:N3	1:AA:1398:A:C2	2.27	1.02
23:B0:1096:A:O2'	23:B0:1115:C:H1'	1.56	1.02
1:AA:38:G:C1'	1:AA:547:A:C5	2.43	1.02
1:AA:131:C:OP1	1:AA:263:A:C4'	2.06	1.02
1:AA:254:G:C1'	19:AQ:15:MET:HB3	1.90	1.02
1:AA:262:A:H5'	22:AT:74:LYS:HB3	1.41	1.02
14:AL:60:LEU:HD11	14:AL:85:ILE:HD12	1.39	1.02
23:B0:1572:C:H2'	23:B0:1573:G:H5''	1.39	1.02
1:AA:22:G:O2'	1:AA:913:A:N6	1.92	1.02
1:AA:115:G:O3'	1:AA:116:A:P	2.17	1.02
1:AA:323:U:OP1	22:AT:23:ARG:N	1.93	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:733:A:O3'	1:AA:734:G:P	2.18	1.02
1:AA:865:A:C1'	1:AA:918:A:O2'	2.07	1.02
1:AA:922:G:C6	1:AA:1396:A:C6	2.48	1.02
1:AA:38:G:C4'	1:AA:547:A:C6	2.40	1.01
1:AA:190:A:N6	22:AT:104:LEU:N	1.87	1.01
1:AA:254:G:H1'	19:AQ:15:MET:HB3	1.37	1.01
1:AA:254:G:H4'	19:AQ:18:THR:CB	1.89	1.01
1:AA:1484:C:C4'	23:B0:1943:A:H1'	1.90	1.01
1:AA:173:U:H5'	1:AA:197:A:O4'	1.60	1.01
1:AA:1458:G:HO3'	22:AT:24:LEU:CD1	1.62	1.01
1:AA:1484:C:C5'	23:B0:1943:A:H1'	1.89	1.01
19:AQ:96:GLN:OE1	23:B0:725:C:H2'	1.59	1.01
22:AT:39:LYS:HD2	22:AT:55:ILE:HD13	1.41	1.01
1:AA:288:A:O2'	1:AA:289:G:O3'	1.77	1.01
1:AA:332:G:P	22:AT:10:LEU:CB	2.48	1.01
1:AA:762:C:H4'	23:B0:729:A:C6	1.94	1.01
1:AA:779:C:C4'	13:AK:120:ARG:CD	2.38	1.01
1:AA:864:A:N1	1:AA:917:G:O2'	1.94	1.01
1:AA:905:U:C5	1:AA:906:G:C5	2.48	1.01
1:AA:1393:U:O2	1:AA:1395:C:C5	2.13	1.01
19:AQ:94:ASN:N	23:B0:726:G:O4'	1.93	1.01
21:AS:28:LYS:HG2	21:AS:29:ARG:H	1.26	1.01
1:AA:922:G:N3	1:AA:1396:A:C2	2.28	1.01
1:AA:1014:A:H5''	21:AS:14:HIS:CB	1.90	1.01
1:AA:1086:U:H3	1:AA:1099:G:H22	1.08	1.01
1:AA:1194:U:C5'	7:AE:22:GLY:CA	2.39	1.01
1:AA:1256:A:C5'	1:AA:1258:G:H1'	1.90	1.01
19:AQ:94:ASN:N	23:B0:726:G:C4'	2.16	1.01
23:B0:3877:A:P	23:B0:1861:G:OP2	2.19	1.01
1:AA:265:G:O3'	19:AQ:66:SER:CA	2.07	1.01
1:AA:288:A:O3'	1:AA:289:G:O5'	1.74	1.01
1:AA:322:C:H4'	22:AT:23:ARG:CG	1.90	1.01
1:AA:619:U:C2	6:AD:135:LEU:HD12	1.95	1.01
1:AA:619:U:C6	6:AD:135:LEU:HD11	1.96	1.01
1:AA:815:A:N6	1:AA:1508:G:H21	1.56	1.01
1:AA:865:A:O2'	1:AA:918:A:O2'	1.78	1.01
1:AA:1014:A:H4'	21:AS:14:HIS:CD2	1.96	1.01
5:AC:5:ILE:HG23	12:AJ:51:ARG:HH12	1.26	1.01
23:B0:3128:G:C3'	23:B0:3174:C:H4'	1.90	1.01
1:AA:15:G:H1'	7:AE:19:MET:CE	1.90	1.00
1:AA:39:G:C5	1:AA:498:U:O4	2.15	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:256:U:H5'	19:AQ:17:LYS:HZ1	1.21	1.00
1:AA:521:G:C5'	14:AL:72:GLY:C	2.34	1.00
1:AA:542:G:OP1	6:AD:10:ARG:NH2	1.94	1.00
1:AA:815:A:H1'	1:AA:1527:C:C2'	1.91	1.00
1:AA:923:A:O4'	1:AA:1398:A:N1	1.95	1.00
1:AA:1015:A:C1'	1:AA:1219:U:C5'	2.39	1.00
1:AA:1340:A:H1'	2:AV:31:A:O2'	1.61	1.00
23:B0:2668:U:H4'	23:B0:2669:C:H5'	1.40	1.00
1:AA:104:G:H5'	1:AA:172:A:C2	1.97	1.00
1:AA:866:C:H5'	1:AA:919:A:C5'	1.92	1.00
1:AA:1484:C:H4'	23:B0:1943:A:O4'	1.60	1.00
2:AW:75:C:N4	23:B0:2532:G:H1	1.58	1.00
19:AQ:105:ALA:N	23:B0:727:U:O4'	1.92	1.00
23:B0:1252:C:H2'	23:B0:1253:C:H5''	1.43	1.00
24:B9:107:C:H3'	24:B9:108:G:P	2.01	1.00
1:AA:46:G:O2'	1:AA:365:U:C1'	2.08	1.00
1:AA:293:G:O5'	1:AA:609:A:N6	1.94	1.00
1:AA:922:G:C4	1:AA:1396:A:C2	2.48	1.00
1:AA:1014:A:N3	1:AA:1219:U:O2'	1.91	1.00
1:AA:265:G:H5''	19:AQ:65:ILE:HA	1.02	1.00
1:AA:1256:A:H5'	1:AA:1258:G:H1'	1.03	1.00
1:AA:1346:A:H2'	9:AG:10:ARG:NH2	1.74	1.00
6:AD:205:GLU:HB3	7:AE:107:ARG:NH2	1.75	1.00
1:AA:7:G:N2	7:AE:123:LEU:HD11	1.76	1.00
1:AA:191:G:C2	1:AA:192:U:C1'	2.45	1.00
1:AA:1497:G:O2'	1:AA:1518:A:N1	1.95	1.00
2:AW:75:C:O2	23:B0:2486:C:O2'	1.79	1.00
1:AA:59:A:H3'	1:AA:331:G:H22	1.26	0.99
1:AA:130:A:C2	1:AA:264:U:C4	2.50	0.99
1:AA:191:G:C4	1:AA:192:U:N1	2.29	0.99
1:AA:205:G:N2	1:AA:207:C:C5	2.30	0.99
1:AA:653:A:O4'	10:AH:56:LYS:HE2	1.61	0.99
2:AW:74:C:N4	23:B0:2533:U:C2'	2.23	0.99
2:AV:74:C:O3'	23:B0:2581:A:C5'	2.10	0.99
2:AW:74:C:N3	23:B0:2534:U:C5	1.88	0.99
23:B0:3110:G:OP1	23:B0:3149:G:H5'	1.62	0.99
1:AA:262:A:H5'	22:AT:74:LYS:HB2	1.00	0.99
1:AA:1474:G:O2'	23:B0:1705:U:C4'	2.10	0.99
12:AJ:62:HIS:ND1	16:AN:61:TRP:CZ3	2.30	0.99
15:AM:84:ILE:CG2	21:AS:65:ASN:HD22	1.74	0.99
1:AA:128:G:H5''	19:AQ:2:PRO:C	1.86	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1061:G:C5'	12:AJ:56:HIS:HB3	1.93	0.99
1:AA:1484:C:C3'	23:B0:1943:A:O2'	2.11	0.99
23:B0:3877:A:N3	23:B0:1861:G:N3	2.09	0.99
1:AA:397:A:N6	1:AA:547:A:C4	2.30	0.99
2:AV:75:C:P	23:B0:2581:A:C5'	2.49	0.99
2:AV:76:A:H5''	23:B0:2564:U:N1	1.02	0.99
1:AA:6:G:C5	7:AE:119:LEU:HD11	1.82	0.99
24:B9:107:C:O3'	24:B9:108:G:P	2.21	0.99
2:AW:75:C:C4	23:B0:2532:G:N1	2.30	0.99
1:AA:1484:C:C4'	23:B0:1943:A:C1'	2.40	0.99
2:AW:76:A:C2'	23:B0:2562:G:H22	1.76	0.99
23:B0:3866:A:N1	55:B5:45:ASP:CA	2.25	0.99
1:AA:391:G:H5'	18:AP:28:ARG:NH2	1.78	0.99
1:AA:1069:C:O4'	1:AA:1191:A:H2	1.44	0.99
1:AA:1393:U:C2	1:AA:1395:C:N4	2.29	0.99
1:AA:21:G:C2'	1:AA:914:A:N6	2.25	0.98
1:AA:1457:A:N9	1:AA:1459:C:C2	2.30	0.98
2:AW:74:C:H42	23:B0:2533:U:H2'	1.25	0.98
1:AA:189:A:OP2	22:AT:105:SER:CB	2.11	0.98
1:AA:255:G:O4'	19:AQ:16:GLN:CB	2.10	0.98
1:AA:161:A:H2	1:AA:348:G:C2'	1.75	0.98
1:AA:186:C:H4'	22:AT:81:LYS:CB	1.94	0.98
1:AA:188:C:O2	22:AT:106:ALA:O	1.79	0.98
1:AA:318:G:N2	1:AA:1433:A:H2	1.62	0.98
1:AA:974:A:OP1	16:AN:31:ARG:HG2	1.62	0.98
1:AA:1498:U:H4'	1:AA:1519:A:N1	1.78	0.98
1:AA:6:G:C6	7:AE:119:LEU:CD1	2.47	0.98
1:AA:1261:A:O2'	1:AA:1283:G:H5''	1.62	0.98
1:AA:473:C:OP1	18:AP:75:ARG:NH1	1.97	0.98
1:AA:1190:G:H3'	5:AC:3:ASN:HB2	1.46	0.98
1:AA:1292:U:OP2	9:AG:41:ARG:NH2	1.95	0.98
10:AH:113:SER:HB2	10:AH:134:ILE:HD11	1.43	0.98
1:AA:1060:C:H4'	12:AJ:52:GLY:HA3	1.00	0.98
1:AA:115:G:HO3'	1:AA:116:A:P	1.87	0.98
1:AA:191:G:C6	1:AA:192:U:C4	2.50	0.98
1:AA:397:A:H62	1:AA:547:A:H1'	0.85	0.98
1:AA:547:A:H4'	1:AA:548:G:P	2.04	0.98
2:AV:74:C:N4	23:B0:2231:G:N1	2.12	0.98
24:B9:114:C:H2'	24:B9:115:G:H5''	1.45	0.98
1:AA:1116:C:H2'	1:AA:1117:G:H5''	1.46	0.98
1:AA:677:U:C1'	13:AK:119:CYS:SG	2.52	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1199:U:H3'	23:B0:1200:G:H5''	1.44	0.97
1:AA:619:U:C4	6:AD:135:LEU:CD2	2.44	0.97
1:AA:38:G:O2'	1:AA:39:G:C8	2.17	0.97
1:AA:333:G:C1'	22:AT:16:HIS:HD2	1.78	0.97
1:AA:265:G:C5'	19:AQ:64:PRO:C	2.34	0.97
1:AA:476:U:C2	1:AA:477:G:C5'	2.30	0.97
23:B0:1119:U:C4	23:B0:1120:C:C4	2.52	0.97
23:B0:1861:G:H4'	55:B5:198:THR:CA	1.94	0.97
23:B0:2548:G:H2'	23:B0:2549:G:H5''	1.45	0.97
1:AA:128:G:OP1	19:AQ:2:PRO:CD	2.12	0.97
1:AA:203:A:O4'	1:AA:468:A:H4'	1.62	0.97
1:AA:293:G:O5'	1:AA:609:A:N1	1.96	0.97
1:AA:319:G:H5'	1:AA:1468:A:C4'	1.95	0.97
1:AA:684:A:H1'	13:AK:38:ASN:ND2	1.75	0.97
1:AA:191:G:N7	1:AA:192:U:C5	2.33	0.97
1:AA:278:G:N2	1:AA:279:A:H62	1.61	0.97
1:AA:1069:C:O2'	1:AA:1192:C:H1'	1.64	0.97
23:B0:1856:U:C3'	23:B0:3865:A:C8	2.47	0.97
19:AQ:101:ARG:HD3	23:B0:731:A:C6	2.00	0.97
1:AA:129:U:H5''	19:AQ:3:LYS:NZ	1.79	0.97
1:AA:522:C:H5''	14:AL:120:TYR:OH	1.63	0.97
1:AA:1342:C:C3'	11:AI:125:TYR:CZ	2.48	0.97
1:AA:1394:A:N3	1:AA:1501:C:C4'	2.27	0.97
1:AA:265:G:C3'	19:AQ:65:ILE:C	2.37	0.97
1:AA:1194:U:H5'	7:AE:22:GLY:HA3	1.47	0.97
15:AM:94:ARG:NH2	21:AS:81:ARG:HD3	1.80	0.97
23:B0:3118:U:H3	23:B0:3149:G:H5'	1.26	0.97
1:AA:1194:U:C5'	7:AE:22:GLY:HA2	1.95	0.96
1:AA:1459:C:OP1	22:AT:28:ALA:O	1.82	0.96
1:AA:865:A:N3	1:AA:918:A:C4'	2.28	0.96
1:AA:923:A:C2	1:AA:1395:C:C2	2.51	0.96
1:AA:979:C:O2	16:AN:19:ARG:NE	1.97	0.96
1:AA:264:U:H1'	19:AQ:64:PRO:HD2	0.98	0.96
1:AA:332:G:OP1	22:AT:10:LEU:CG	2.14	0.96
1:AA:279:A:OP2	19:AQ:95:TYR:HE2	1.47	0.96
1:AA:837:G:HO3'	1:AA:838:C:H6	1.09	0.96
1:AA:1392:G:H5'	1:AA:1531:A:H5''	1.44	0.96
12:AJ:45:ARG:HH22	16:AN:36:PHE:HD2	1.01	0.96
12:AJ:61:GLU:CG	16:AN:58:LYS:NZ	2.24	0.96
13:AK:54:ARG:HB3	13:AK:54:ARG:HH11	1.26	0.96
1:AA:38:G:H1'	1:AA:547:A:C4	2.01	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1392:G:H4'	1:AA:1531:A:C5'	1.95	0.96
1:AA:1434:A:O3'	1:AA:1435:G:H5'	1.64	0.96
2:AV:75:C:N3	23:B0:2230:G:N2	2.13	0.96
1:AA:249:U:O3'	1:AA:250:A:OP1	1.84	0.96
19:AQ:104:LYS:HE3	23:B0:729:A:N7	1.79	0.96
1:AA:46:G:HO2'	1:AA:365:U:H1'	1.23	0.96
1:AA:323:U:H5''	22:AT:22:ARG:HB2	0.97	0.96
1:AA:1256:A:N3	1:AA:1258:G:N1	2.14	0.96
2:AV:32:C:OP2	11:AI:127:LYS:HG3	1.63	0.96
2:AW:76:A:H2'	23:B0:2562:G:H22	1.27	0.96
23:B0:891:A:H2	23:B0:892:A:C5	1.67	0.96
1:AA:186:C:H4'	22:AT:81:LYS:HB3	1.48	0.96
1:AA:497:A:O2'	1:AA:498:U:P	2.23	0.96
1:AA:779:C:O2'	13:AK:120:ARG:CD	2.13	0.96
23:B0:2075:U:HO3'	23:B0:3093:C:H5'	1.23	0.96
1:AA:335:C:H1'	1:AA:1434:A:O4'	1.65	0.96
1:AA:837:G:O3'	1:AA:838:C:P	2.24	0.96
1:AA:1101:A:H4'	1:AA:1102:A:O5'	1.65	0.96
1:AA:1278:U:OP1	1:AA:1279:A:OP1	1.84	0.96
2:AV:74:C:N4	23:B0:2231:G:H1	1.64	0.96
23:B0:3877:A:O5'	23:B0:3877:A:H8	1.47	0.96
1:AA:323:U:H5''	22:AT:22:ARG:CA	1.96	0.95
23:B0:1912:G:H4'	23:B0:1913:G:H8	1.11	0.95
1:AA:1044:A:H2'	1:AA:1045:C:O2'	1.66	0.95
1:AA:1473:A:C5'	23:B0:1719:G:H4'	1.97	0.95
12:AJ:31:GLY:HA2	12:AJ:78:ASN:HD22	1.32	0.95
23:B0:1747:G:H4'	23:B0:1749:G:H1'	1.47	0.95
23:B0:3867:G:H5'	55:B5:193:LYS:CA	1.95	0.95
1:AA:815:A:C1'	1:AA:1527:C:O2'	2.12	0.95
1:AA:1060:C:H4'	12:AJ:52:GLY:N	1.81	0.95
5:AC:14:ILE:HG22	5:AC:15:THR:H	1.32	0.95
12:AJ:63:PHE:HA	16:AN:57:ARG:O	1.66	0.95
23:B0:2075:U:O3'	23:B0:3093:C:C5'	2.12	0.95
1:AA:191:G:C6	1:AA:192:U:N1	2.34	0.95
1:AA:1489:G:C2'	1:AA:1490:C:H5''	1.96	0.95
2:AW:76:A:N3	23:B0:2486:C:C1'	2.29	0.95
5:AC:52:LEU:H	5:AC:52:LEU:HD23	1.26	0.95
23:B0:1066:G:N1	23:B0:1115:C:N4	2.14	0.95
1:AA:191:G:N7	1:AA:192:U:C6	2.34	0.95
1:AA:236:G:P	19:AQ:40:LYS:HZ1	1.83	0.95
1:AA:1409:C:O2'	1:AA:1410:G:H5'	1.66	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AM:49:THR:HG22	15:AM:51:ALA:H	1.26	0.95
1:AA:675:A:H1'	13:AK:116:HIS:HD2	1.32	0.94
1:AA:825:G:H21	10:AH:11:THR:HG21	1.31	0.94
1:AA:130:A:O3'	1:AA:263:A:H4'	1.65	0.94
1:AA:279:A:OP2	19:AQ:95:TYR:CE2	2.19	0.94
1:AA:1238:A:O3'	1:AA:1239:A:P	2.25	0.94
1:AA:1320:C:H41	21:AS:37:ARG:HD3	1.32	0.94
1:AA:261:U:H6	22:AT:79:ARG:NH1	1.65	0.94
23:B0:367:G:H2'	23:B0:368:A:H5''	1.48	0.94
23:B0:3128:G:C5'	23:B0:3174:C:O2'	2.15	0.94
1:AA:191:G:C5	1:AA:192:U:C5	2.55	0.94
1:AA:288:A:O2'	1:AA:290:C:P	2.25	0.94
12:AJ:62:HIS:CE1	16:AN:61:TRP:CH2	2.55	0.94
19:AQ:105:ALA:C	23:B0:727:U:C4'	2.41	0.94
1:AA:65:U:O4'	1:AA:200:G:H4'	1.67	0.94
1:AA:254:G:O2'	19:AQ:16:GLN:O	1.86	0.94
1:AA:994:A:H2	16:AN:4:LYS:C	1.68	0.94
19:AQ:105:ALA:C	23:B0:727:U:H4'	1.93	0.94
1:AA:332:G:P	22:AT:10:LEU:HG	2.06	0.94
1:AA:922:G:N1	1:AA:1396:A:C5	2.36	0.94
4:AB:124:SER:HB2	4:AB:125:PRO:HD2	1.49	0.94
15:AM:93:ARG:CG	23:B0:900:U:O3'	2.16	0.94
8:AF:94:GLN:HE21	20:AR:32:ARG:HD3	1.32	0.94
23:B0:929:A:H3'	23:B0:930:A:H5''	1.47	0.94
1:AA:9:G:O5'	7:AE:126:ARG:NH1	2.00	0.94
1:AA:538:G:C5'	14:AL:114:LYS:CB	1.89	0.94
1:AA:905:U:O3'	1:AA:906:G:OP2	1.86	0.94
1:AA:1416:G:H2'	1:AA:1417:G:C4'	1.98	0.94
23:B0:3867:G:H21	55:B5:44:GLY:CA	1.59	0.94
1:AA:236:G:H5''	19:AQ:40:LYS:HZ3	1.32	0.94
4:AB:195:ASP:HB3	10:AH:74:PRO:CD	1.98	0.94
19:AQ:97:SER:HB2	19:AQ:102:GLY:C	1.93	0.94
19:AQ:105:ALA:H	23:B0:727:U:H1'	0.80	0.94
23:B0:2607:C:H3'	23:B0:2608:A:H5'	1.49	0.94
1:AA:320:C:O4'	1:AA:1434:A:H2	1.33	0.93
1:AA:675:A:N3	13:AK:116:HIS:CB	2.28	0.93
23:B0:3128:G:H5''	23:B0:3174:C:O2'	1.68	0.93
1:AA:6:G:N1	7:AE:119:LEU:HD11	1.82	0.93
1:AA:130:A:C8	19:AQ:63:ARG:HG3	2.03	0.93
1:AA:499:A:C1'	1:AA:500:G:O4'	2.17	0.93
1:AA:815:A:H1'	1:AA:1527:C:C1'	1.91	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:828:A:N3	4:AB:26:PRO:CG	2.28	0.93
1:AA:1305:G:N2	1:AA:1331:G:O2'	2.01	0.93
2:AW:75:C:O2'	23:B0:2486:C:H4'	1.67	0.93
1:AA:22:G:H1'	1:AA:913:A:N1	1.83	0.93
1:AA:293:G:O5'	1:AA:609:A:C6	2.21	0.93
1:AA:397:A:C5	1:AA:547:A:O2'	2.18	0.93
1:AA:437:U:O2'	6:AD:123:HIS:HD2	1.52	0.93
1:AA:522:C:OP1	14:AL:120:TYR:HE2	1.40	0.93
1:AA:664:G:H22	1:AA:741:G:H1	1.16	0.93
1:AA:923:A:O2'	1:AA:1398:A:H2'	1.68	0.93
2:AV:75:C:N4	23:B0:2231:G:C2	2.37	0.93
13:AK:54:ARG:O	13:AK:57:THR:HG22	1.66	0.93
1:AA:33:A:OP2	1:AA:398:C:H4'	1.68	0.93
1:AA:37:U:H2'	1:AA:547:A:N1	1.83	0.93
1:AA:104:G:C4'	1:AA:172:A:C2	2.51	0.93
1:AA:190:A:N6	22:AT:102:GLY:O	2.01	0.93
1:AA:202:G:H1'	1:AA:468:A:O2'	1.66	0.93
1:AA:323:U:O2'	22:AT:22:ARG:HD2	1.65	0.93
1:AA:922:G:N3	1:AA:1398:A:H2	1.64	0.93
1:AA:66:G:H5''	1:AA:199:G:O2'	1.69	0.93
1:AA:921:U:O4	1:AA:1396:A:N6	2.01	0.93
1:AA:1224:G:O3'	1:AA:1225:A:P	2.27	0.93
12:AJ:62:HIS:HB2	16:AN:59:ALA:HB3	1.51	0.93
5:AC:91:LEU:HD21	5:AC:99:VAL:HG13	1.48	0.93
23:B0:1066:G:N2	23:B0:1115:C:C2	2.36	0.93
24:B9:107:C:C3'	24:B9:108:G:P	2.57	0.93
1:AA:994:A:C6	16:AN:5:ALA:CB	2.50	0.93
1:AA:128:G:H5'	19:AQ:2:PRO:O	1.68	0.92
1:AA:190:A:N6	22:AT:104:LEU:CA	2.31	0.92
5:AC:195:VAL:O	5:AC:196:LEU:HD23	1.69	0.92
19:AQ:96:GLN:CD	23:B0:725:C:H1'	1.93	0.92
1:AA:1016:A:C1'	1:AA:1218:C:H4'	1.99	0.92
1:AA:1483:A:H2'	1:AA:1484:C:H6	1.28	0.92
1:AA:319:G:N2	1:AA:1434:A:H1'	1.82	0.92
1:AA:707:C:P	13:AK:85:ARG:NH1	2.41	0.92
1:AA:1329:A:P	15:AM:28:ALA:HB3	2.09	0.92
15:AM:40:ASN:HD22	15:AM:41:PRO:CD	1.82	0.92
23:B0:104:C:H2'	23:B0:105:G:H5''	1.49	0.92
1:AA:6:G:C8	7:AE:92:LYS:NZ	2.25	0.92
1:AA:191:G:C2	1:AA:192:U:C2	2.56	0.92
1:AA:893:C:O2'	1:AA:894:G:H5'	1.69	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1392:G:C5'	1:AA:1531:A:H5''	2.00	0.92
19:AQ:104:LYS:HE3	23:B0:729:A:C5	2.05	0.92
23:B0:226:C:HO2'	23:B0:227:G:H8	0.97	0.92
1:AA:130:A:C5'	19:AQ:63:ARG:NE	2.28	0.92
1:AA:323:U:C5'	22:AT:22:ARG:CB	2.28	0.92
1:AA:619:U:O2	6:AD:133:VAL:CG1	2.15	0.92
1:AA:1112:C:O2	5:AC:178:LEU:C	2.12	0.92
23:B0:1656:U:H2'	23:B0:1657:A:H5''	1.52	0.92
1:AA:922:G:C2	1:AA:1396:A:N3	2.37	0.92
2:AV:76:A:H5''	23:B0:2564:U:C1'	1.96	0.92
23:B0:1066:G:H1	23:B0:1115:C:N4	1.65	0.92
1:AA:619:U:H3	6:AD:135:LEU:HG	0.90	0.92
1:AA:848:G:O3'	1:AA:849:C:C5'	2.18	0.92
5:AC:131:ARG:HG2	5:AC:135:LYS:HE3	1.50	0.92
1:AA:232:G:N2	1:AA:263:A:H2	1.61	0.92
1:AA:264:U:O2'	19:AQ:64:PRO:N	2.02	0.92
1:AA:291:C:O3'	1:AA:292:G:P	2.28	0.92
1:AA:333:G:C1'	22:AT:16:HIS:NE2	2.22	0.92
1:AA:994:A:C2'	16:AN:11:LYS:HE3	1.93	0.92
1:AA:128:G:C1'	19:AQ:61:GLU:OE1	2.15	0.92
1:AA:266:G:H5'	19:AQ:66:SER:HA	1.52	0.92
1:AA:737:A:O2'	8:AF:73:ASN:ND2	2.03	0.92
1:AA:922:G:N2	1:AA:1396:A:N9	2.18	0.92
1:AA:1317:C:C6	16:AN:16:PHE:CD2	2.58	0.91
1:AA:1393:U:H2'	1:AA:1395:C:H5	1.35	0.91
21:AS:31:ILE:HG22	21:AS:32:LYS:H	1.34	0.91
1:AA:247:G:N3	1:AA:282:A:C2	2.37	0.91
1:AA:779:C:O2'	13:AK:120:ARG:HD3	1.71	0.91
7:AE:81:GLU:HG2	7:AE:90:VAL:HG22	1.52	0.91
23:B0:1090:C:O2'	31:BG:129:GLY:CA	2.19	0.91
1:AA:26:A:H2'	1:AA:27:G:C5'	1.98	0.91
1:AA:921:U:N3	1:AA:1396:A:N1	2.18	0.91
2:AV:1:G:H22	2:AV:2:C:N4	1.65	0.91
19:AQ:94:ASN:N	23:B0:726:G:H4'	1.83	0.91
23:B0:1182:U:H2'	23:B0:1183:C:H5''	1.49	0.91
1:AA:865:A:C2'	1:AA:918:A:O2'	2.17	0.91
12:AJ:45:ARG:NH2	16:AN:36:PHE:CD2	2.37	0.91
1:AA:94:G:C5	1:AA:96:C:C5	2.59	0.91
1:AA:320:C:C5'	1:AA:1434:A:N1	2.32	0.91
1:AA:932:C:H5''	9:AG:3:ARG:HD3	1.50	0.91
1:AA:1238:A:H2	1:AA:1241:G:HO2'	0.96	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:131:C:C2	1:AA:262:A:C2	2.58	0.91
1:AA:403:C:HO2'	1:AA:404:U:H5'	1.30	0.91
1:AA:816:A:OP1	1:AA:1527:C:H5'	1.70	0.91
1:AA:1342:C:O3'	11:AI:125:TYR:HE2	1.41	0.91
1:AA:1473:A:C4'	23:B0:1719:G:O4'	2.19	0.91
23:B0:3128:G:H4'	23:B0:3174:C:H4'	0.92	0.91
1:AA:6:G:C2	7:AE:119:LEU:CD1	2.52	0.91
1:AA:173:U:C5'	1:AA:197:A:O4'	2.19	0.91
1:AA:606:G:H3'	1:AA:607:A:H5'	1.52	0.91
1:AA:1305:G:O2'	1:AA:1306:A:C8	2.07	0.91
18:AP:58:TYR:O	18:AP:61:SER:HB3	1.68	0.91
1:AA:6:G:C6	7:AE:119:LEU:HD11	2.04	0.91
1:AA:15:G:O2'	7:AE:24:ARG:NH1	2.04	0.91
1:AA:19:C:H1'	1:AA:916:G:N2	1.85	0.91
1:AA:191:G:C4	1:AA:192:U:C6	2.59	0.91
1:AA:397:A:C6	1:AA:547:A:H1'	2.04	0.91
23:B0:892:A:H5'	23:B0:892:A:H8	1.35	0.91
23:B0:1066:G:C2	23:B0:1115:C:N3	2.39	0.91
1:AA:37:U:O2'	1:AA:547:A:N1	2.02	0.91
1:AA:191:G:C4	1:AA:192:U:O4'	2.18	0.91
1:AA:702:A:N1	23:B0:1838:G:H2'	1.86	0.91
1:AA:1392:G:C4'	1:AA:1531:A:C5'	2.49	0.91
2:AW:76:A:O4'	23:B0:2486:C:C4'	2.19	0.91
23:B0:1912:G:C4'	23:B0:1913:G:C8	2.47	0.91
1:AA:262:A:C5'	22:AT:75:ASN:H	1.84	0.91
1:AA:265:G:O4'	19:AQ:64:PRO:C	2.14	0.91
1:AA:299:G:N1	1:AA:566:G:O6	2.03	0.91
1:AA:1261:A:H4'	1:AA:1283:G:O3'	1.70	0.91
1:AA:1434:A:C3'	1:AA:1435:G:H5'	2.00	0.91
1:AA:1502:A:H2	1:AA:1505:G:H1	1.19	0.91
14:AL:41:ARG:HG2	14:AL:42:THR:N	1.83	0.91
1:AA:8:A:N6	6:AD:205:GLU:O	2.04	0.90
1:AA:779:C:C2'	13:AK:120:ARG:HD2	2.01	0.90
1:AA:1137:C:H4'	1:AA:1138:G:C2	2.05	0.90
1:AA:69:G:C1'	1:AA:102:G:C2	2.53	0.90
2:AV:41:U:H6	2:AV:41:U:H5'	1.34	0.90
4:AB:59:GLU:HG2	4:AB:221:LEU:HD11	1.51	0.90
1:AA:456:A:C2	1:AA:477:G:H1'	2.07	0.90
1:AA:1342:C:O3'	11:AI:125:TYR:OH	1.89	0.90
2:AV:75:C:C4	23:B0:2231:G:N2	2.39	0.90
1:AA:187:G:O2'	22:AT:104:LEU:HA	1.70	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1430:C:H5''	23:B0:1721:G:H4'	1.54	0.90
1:AA:1497:G:O2'	1:AA:1498:U:H5'	1.71	0.90
2:AV:33:U:C2	2:AV:35:A:H5'	2.06	0.90
2:AW:75:C:C4	23:B0:2533:U:O2	2.24	0.90
1:AA:255:G:C1'	19:AQ:16:GLN:HB2	2.02	0.90
1:AA:797:C:OP1	13:AK:124:LYS:CG	2.18	0.90
2:AW:76:A:H1'	23:B0:2486:C:O4'	0.72	0.90
1:AA:19:C:C1'	1:AA:916:G:N2	2.33	0.90
1:AA:267:C:OP2	19:AQ:67:LYS:HD2	1.08	0.90
1:AA:278:G:H21	1:AA:279:A:H62	1.16	0.90
1:AA:1057:G:H5''	5:AC:154:SER:HB2	1.53	0.90
1:AA:1061:G:H5'	12:AJ:56:HIS:HB3	1.52	0.90
1:AA:1155:G:C3'	1:AA:1156:G:P	2.58	0.90
11:AI:70:LYS:O	11:AI:74:ILE:HG13	1.72	0.90
23:B0:128:C:H2'	23:B0:129:A:H5''	1.51	0.90
1:AA:104:G:C4'	1:AA:172:A:H2	1.83	0.90
1:AA:456:A:N6	1:AA:477:G:N3	2.19	0.90
1:AA:1342:C:H5''	11:AI:125:TYR:HE1	1.09	0.90
2:AV:76:A:C3'	23:B0:2046:C:O2'	2.20	0.90
12:AJ:8:LEU:HD21	12:AJ:96:ILE:HG12	1.54	0.90
1:AA:1342:C:H4'	11:AI:125:TYR:CE2	2.05	0.90
23:B0:1856:U:H5	23:B0:3865:A:N6	1.28	0.90
1:AA:22:G:O2'	1:AA:913:A:N1	1.95	0.90
1:AA:323:U:C4'	22:AT:19:SER:CA	2.46	0.90
1:AA:476:U:C6	1:AA:477:G:C5'	2.54	0.90
1:AA:1430:C:C5'	23:B0:1721:G:H4'	2.02	0.90
1:AA:1505:G:O2'	1:AA:1506:U:OP2	1.87	0.90
1:AA:13:U:C4	1:AA:915:A:N7	2.38	0.90
1:AA:292:G:HO2'	1:AA:608:A:H62	1.16	0.90
1:AA:733:A:HO3'	1:AA:734:G:P	1.91	0.90
1:AA:905:U:O3'	1:AA:906:G:O5'	1.89	0.89
1:AA:1015:A:C1'	1:AA:1219:U:H5'	2.00	0.89
1:AA:1112:C:O2	5:AC:179:ARG:HB3	1.71	0.89
2:AV:75:C:OP2	23:B0:2581:A:H5''	1.62	0.89
2:AW:71:G:C5'	23:B0:1925:C:O2	2.16	0.89
1:AA:236:G:C5'	19:AQ:40:LYS:NZ	2.35	0.89
1:AA:236:G:H5''	19:AQ:40:LYS:NZ	1.87	0.89
1:AA:253:U:H1'	1:AA:275:G:C2'	2.02	0.89
1:AA:476:U:H2'	1:AA:477:G:H5''	1.54	0.89
19:AQ:104:LYS:HB3	23:B0:727:U:H1'	1.16	0.89
1:AA:1497:G:H1'	1:AA:1518:A:C2	2.07	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1497:G:N2	1:AA:1519:A:H1'	1.87	0.89
1:AA:835:U:OP1	20:AR:64:ARG:NH2	2.04	0.89
1:AA:1190:G:P	5:AC:4:LYS:HA	2.12	0.89
1:AA:436:C:O2	1:AA:437:U:C6	2.25	0.89
7:AE:51:VAL:HB	7:AE:52:PRO:HD3	1.55	0.89
1:AA:1060:C:O2'	12:AJ:56:HIS:HD2	1.24	0.89
1:AA:1416:G:O5'	1:AA:1417:G:P	2.30	0.89
1:AA:1447:A:O3'	1:AA:1448:C:P	2.29	0.89
2:AV:57:G:H5''	28:BD:76:ASN:CA	2.03	0.89
9:AG:149:ARG:CZ	13:AK:59:TYR:CE1	2.56	0.89
1:AA:1474:G:H4'	23:B0:1717:A:N6	1.86	0.89
14:AL:25:PRO:C	14:AL:27:LEU:H	1.79	0.89
1:AA:1427:U:O2'	23:B0:1704:G:H5''	1.70	0.89
1:AA:113:G:H1'	1:AA:354:G:H5'	1.55	0.89
1:AA:702:A:H5'	23:B0:1840:A:H5'	1.54	0.88
1:AA:932:C:C5'	9:AG:3:ARG:HD3	2.02	0.88
1:AA:943:U:H1'	11:AI:124:GLN:NE2	1.88	0.88
1:AA:1016:A:C5'	16:AN:15:LYS:HE3	2.02	0.88
1:AA:1261:A:H4'	1:AA:1283:G:C4'	2.02	0.88
23:B0:891:A:N1	23:B0:892:A:C6	2.25	0.88
1:AA:202:G:N3	1:AA:468:A:O2'	2.04	0.88
1:AA:1255:G:H2'	1:AA:1258:G:H21	1.36	0.88
1:AA:1261:A:C4'	1:AA:1283:G:C4'	2.51	0.88
1:AA:1416:G:H3'	1:AA:1417:G:P	2.13	0.88
23:B0:3111:C:H4'	23:B0:3112:G:OP1	1.73	0.88
1:AA:436:C:N3	1:AA:437:U:C4	2.41	0.88
1:AA:1109:C:P	5:AC:176:HIS:CD2	2.66	0.88
2:AW:76:A:N9	23:B0:2562:G:N2	2.21	0.88
7:AE:79:GLU:OE2	10:AH:105:ARG:CD	2.21	0.88
19:AQ:104:LYS:CB	23:B0:727:U:H1'	1.92	0.88
1:AA:130:A:H5'	19:AQ:63:ARG:CZ	2.04	0.88
1:AA:1298:C:C5	9:AG:114:ARG:HD3	2.08	0.88
4:AB:116:GLU:HG2	4:AB:153:ARG:HH12	1.39	0.88
12:AJ:65:LEU:HA	16:AN:55:GLY:O	1.73	0.88
1:AA:1495:U:O2'	23:B0:1902:A:H2	1.49	0.88
2:AW:74:C:H5	23:B0:2533:U:N3	1.23	0.88
1:AA:191:G:H21	22:AT:103:GLY:HA2	1.38	0.88
1:AA:994:A:N6	16:AN:5:ALA:HB2	1.88	0.88
1:AA:1015:A:N3	1:AA:1219:U:O4'	2.06	0.88
1:AA:1342:C:C3'	11:AI:125:TYR:CE2	2.55	0.88
19:AQ:101:ARG:CZ	23:B0:731:A:C2	2.57	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:253:U:H4'	1:AA:276:G:H4'	1.56	0.88
1:AA:619:U:C4	6:AD:135:LEU:HG	2.02	0.88
1:AA:779:C:H5'	13:AK:120:ARG:C	1.98	0.88
23:B0:3874:C:N4	23:B0:3875:A:C5	2.41	0.88
1:AA:262:A:O3'	22:AT:75:ASN:HB2	1.06	0.88
1:AA:1343:G:O3'	11:AI:122:ALA:HB3	1.73	0.88
8:AF:10:LEU:HD12	8:AF:59:TYR:HB3	1.55	0.88
23:B0:1888:C:H4'	23:B0:1911:A:C2	2.08	0.88
1:AA:1014:A:C1'	21:AS:34:TRP:HB2	2.02	0.88
2:AV:75:C:H4'	23:B0:2047:C:OP1	1.72	0.88
6:AD:36:ARG:N	6:AD:37:PRO:HD3	1.88	0.88
1:AA:588:G:C8	1:AA:753:A:C2	2.61	0.87
1:AA:893:C:C4	1:AA:894:G:N7	2.42	0.87
1:AA:922:G:N1	1:AA:1396:A:C6	2.42	0.87
6:AD:205:GLU:CG	7:AE:107:ARG:NH2	2.36	0.87
9:AG:149:ARG:NH2	13:AK:59:TYR:OH	2.07	0.87
19:AQ:104:LYS:C	23:B0:727:U:H1'	1.99	0.87
23:B0:665:A:H3'	23:B0:666:U:H5''	1.54	0.87
23:B0:1912:G:O3'	23:B0:1913:G:H3'	1.72	0.87
1:AA:254:G:H4'	19:AQ:18:THR:HB	1.52	0.87
23:B0:1856:U:H3'	23:B0:3865:A:H8	1.34	0.87
23:B0:3877:A:O2'	55:B5:198:THR:CA	2.22	0.87
23:B0:2633:A:H4'	23:B0:2634:G:H4'	1.54	0.87
1:AA:293:G:P	1:AA:609:A:H61	1.96	0.87
1:AA:587:G:OP1	10:AH:92:ARG:NH1	2.07	0.87
1:AA:1131:G:H1	1:AA:1143:G:H21	1.22	0.87
1:AA:1458:G:C8	1:AA:1459:C:C2	2.61	0.87
12:AJ:62:HIS:O	16:AN:58:LYS:HA	1.73	0.87
23:B0:1096:A:HO2'	23:B0:1115:C:H1'	1.37	0.87
1:AA:1483:A:C5	1:AA:1484:C:C4	2.63	0.87
24:B9:73:C:C3'	24:B9:74:A:P	2.63	0.87
1:AA:128:G:C5'	19:AQ:2:PRO:C	2.48	0.87
1:AA:820:U:C2	1:AA:873:A:N7	2.43	0.87
1:AA:835:U:H5'	20:AR:64:ARG:NH2	1.88	0.87
1:AA:1457:A:C8	1:AA:1459:C:N3	2.41	0.87
15:AM:3:ARG:HG2	15:AM:9:ILE:HG23	1.56	0.87
1:AA:1110:A:H2'	1:AA:1111:A:O4'	1.74	0.87
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.27	0.87
2:AW:76:A:O4'	23:B0:2486:C:H4'	1.74	0.87
1:AA:9:G:H8	7:AE:126:ARG:HH12	0.87	0.87
1:AA:923:A:O2'	1:AA:1398:A:C2'	2.21	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AQ:96:GLN:OE1	23:B0:725:C:C2'	2.17	0.87
21:AS:41:VAL:HG22	21:AS:44:MET:HE3	1.56	0.87
1:AA:19:C:C2'	1:AA:916:G:H22	1.87	0.87
1:AA:922:G:C2	1:AA:1396:A:C2	2.63	0.87
1:AA:922:G:C2	1:AA:1396:A:C5	2.62	0.87
1:AA:1458:G:C8	1:AA:1459:C:O2	2.28	0.87
4:AB:91:PRO:HG2	4:AB:155:LEU:HD23	1.54	0.87
23:B0:3877:A:H3'	23:B0:1861:G:H8	1.32	0.87
1:AA:232:G:H1'	1:AA:262:A:H61	1.39	0.86
1:AA:1340:A:O3'	2:AV:32:C:H4'	1.74	0.86
6:AD:205:GLU:CD	7:AE:107:ARG:HH21	1.81	0.86
23:B0:1119:U:N3	23:B0:1120:C:C4	2.42	0.86
23:B0:3877:A:C2	23:B0:1861:G:N3	2.12	0.86
23:B0:918:A:H2'	23:B0:919:U:H5''	1.57	0.86
1:AA:5:U:O4	7:AE:95:ALA:HB2	1.74	0.86
1:AA:250:A:H4'	1:AA:251:G:O5'	1.76	0.86
1:AA:473:C:OP1	18:AP:75:ARG:CZ	2.23	0.86
1:AA:651:C:N3	1:AA:652:U:C4	2.42	0.86
1:AA:1342:C:H4'	11:AI:125:TYR:CD2	2.09	0.86
23:B0:88:G:H3'	23:B0:89:A:H5''	1.57	0.86
1:AA:255:G:H5''	19:AQ:17:LYS:HB2	0.87	0.86
1:AA:538:G:H4'	14:AL:114:LYS:CE	2.04	0.86
1:AA:94:G:C6	1:AA:96:C:C4	2.63	0.86
1:AA:1318:A:H4'	21:AS:10:PHE:CD1	2.11	0.86
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.10	0.86
6:AD:205:GLU:CD	7:AE:107:ARG:NH2	2.34	0.86
1:AA:38:G:O2'	1:AA:39:G:H8	1.55	0.86
1:AA:69:G:C4	1:AA:102:G:C6	2.63	0.86
1:AA:130:A:O4'	1:AA:264:U:C4'	2.23	0.86
1:AA:905:U:HO3'	1:AA:906:G:P	1.15	0.86
1:AA:994:A:C5	16:AN:5:ALA:CA	2.53	0.86
2:AV:75:C:N4	23:B0:2230:G:H1	1.72	0.86
5:AC:58:GLU:HB3	12:AJ:92:THR:CG2	2.05	0.86
6:AD:205:GLU:CD	7:AE:107:ARG:HE	1.82	0.86
8:AF:30:LEU:HD23	8:AF:75:LEU:HD21	1.57	0.86
15:AM:10:PRO:HB2	15:AM:18:ALA:HB1	1.57	0.86
1:AA:836:G:OP1	20:AR:61:LYS:HE3	1.76	0.86
1:AA:1256:A:O4'	1:AA:1258:G:C4	2.29	0.86
12:AJ:22:LYS:HE2	12:AJ:90:LEU:HD12	1.57	0.86
1:AA:588:G:C5	1:AA:753:A:C4	2.63	0.86
1:AA:1298:C:C2'	9:AG:114:ARG:HH12	1.72	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:3098:U:HO3'	23:B0:3099:U:P	1.95	0.86
1:AA:69:G:N9	1:AA:102:G:C6	2.44	0.86
1:AA:260:G:C8	22:AT:83:ARG:NH1	2.26	0.86
1:AA:264:U:O2'	19:AQ:64:PRO:C	2.18	0.86
1:AA:473:C:OP1	18:AP:75:ARG:CD	2.23	0.86
1:AA:538:G:H4'	14:AL:114:LYS:HD3	1.58	0.86
9:AG:149:ARG:NH2	13:AK:59:TYR:CZ	2.44	0.86
1:AA:104:G:C5'	1:AA:172:A:C2	2.59	0.86
1:AA:1064:G:H4'	1:AA:1065:U:H5'	1.58	0.86
7:AE:115:VAL:HG11	7:AE:118:ILE:HG13	1.57	0.86
23:B0:1072:U:H4'	23:B0:1081:A:O2'	1.75	0.86
1:AA:288:A:O2'	1:AA:290:C:OP1	1.94	0.85
1:AA:322:C:O2'	22:AT:19:SER:C	2.18	0.85
1:AA:651:C:C4	1:AA:652:U:O4	2.29	0.85
1:AA:778:G:H4'	13:AK:119:CYS:HB3	1.56	0.85
2:AW:74:C:N4	23:B0:2534:U:C5	2.42	0.85
23:B0:3098:U:H2'	23:B0:3099:U:C6	2.10	0.85
1:AA:237:C:C5'	19:AQ:25:ARG:NH2	2.37	0.85
1:AA:958:A:C4	21:AS:55:LYS:HD2	2.10	0.85
1:AA:1060:C:O4'	12:AJ:52:GLY:HA3	1.77	0.85
5:AC:29:TYR:CE1	12:AJ:65:LEU:HD11	2.10	0.85
5:AC:52:LEU:HD21	5:AC:118:GLN:HE22	1.40	0.85
1:AA:27:G:C6	1:AA:557:G:C5	2.64	0.85
1:AA:522:C:P	14:AL:72:GLY:H	1.99	0.85
1:AA:1459:C:OP1	22:AT:29:LYS:CA	2.24	0.85
1:AA:556:C:O2'	1:AA:557:G:C5'	2.24	0.85
1:AA:67:C:H2'	1:AA:69:G:P	2.17	0.85
1:AA:260:G:H8	22:AT:83:ARG:HH12	1.25	0.85
2:AW:75:C:N3	23:B0:2532:G:N2	2.23	0.85
2:AW:76:A:N1	23:B0:2532:G:C2	2.44	0.85
1:AA:130:A:O4'	1:AA:264:U:O4'	1.94	0.85
1:AA:191:G:C2	1:AA:192:U:O2	2.30	0.85
1:AA:261:U:H6	22:AT:79:ARG:CZ	1.81	0.85
1:AA:292:G:H2'	1:AA:608:A:N6	1.90	0.85
1:AA:297:G:H4'	1:AA:557:G:H4'	1.59	0.85
1:AA:588:G:C5	1:AA:753:A:C5	2.65	0.85
1:AA:1499:A:O4'	1:AA:1520:G:C5'	2.24	0.85
19:AQ:101:ARG:CD	23:B0:731:A:N1	2.36	0.85
1:AA:332:G:P	22:AT:10:LEU:CG	2.64	0.85
1:AA:835:U:OP1	20:AR:60:GLY:C	2.19	0.85
1:AA:1181:G:O2'	1:AA:1184:G:H5'	1.75	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:70:VAL:HG21	5:AC:76:VAL:HG21	1.58	0.85
5:AC:110:ASN:HD21	5:AC:140:ARG:HB3	1.40	0.85
23:B0:542:A:H2'	23:B0:543:G:H5'	1.59	0.85
23:B0:1312:G:H5''	23:B0:1313:U:H5'	1.59	0.85
23:B0:3103:A:H61	23:B0:3186:C:H42	1.24	0.85
23:B0:3127:G:C4'	23:B0:3173:A:N1	2.33	0.85
1:AA:27:G:O6	1:AA:557:G:O6	1.95	0.85
1:AA:755:G:C1'	10:AH:1:MET:HE3	2.04	0.85
2:AV:32:C:OP2	11:AI:127:LYS:CG	2.24	0.85
12:AJ:62:HIS:ND1	16:AN:61:TRP:HZ3	1.74	0.85
1:AA:247:G:OP2	19:AQ:100:LYS:HE2	1.77	0.85
1:AA:865:A:O2'	1:AA:919:A:H5'	1.76	0.85
6:AD:150:GLU:HG3	6:AD:153:ARG:NH2	1.90	0.85
6:AD:205:GLU:CD	7:AE:107:ARG:NE	2.35	0.85
1:AA:187:G:H2'	22:AT:105:SER:HB3	1.57	0.85
1:AA:588:G:C4	1:AA:753:A:C6	2.64	0.85
1:AA:1255:G:C2'	1:AA:1258:G:H21	1.90	0.85
1:AA:1457:A:C4	1:AA:1459:C:O2	2.30	0.85
5:AC:64:VAL:HB	5:AC:99:VAL:HB	1.58	0.85
6:AD:205:GLU:CB	7:AE:107:ARG:NH2	2.39	0.85
1:AA:322:C:O2'	22:AT:19:SER:O	1.95	0.84
1:AA:994:A:C6	16:AN:5:ALA:HB2	2.10	0.84
1:AA:1342:C:C4'	11:AI:125:TYR:CE1	2.56	0.84
5:AC:190:ARG:HB3	5:AC:190:ARG:NH1	1.91	0.84
6:AD:88:VAL:CG2	7:AE:96:PRO:C	2.48	0.84
1:AA:27:G:N1	1:AA:557:G:C5	2.45	0.84
1:AA:128:G:H1'	19:AQ:61:GLU:CD	2.02	0.84
1:AA:1239:A:O2'	1:AA:1298:C:N4	2.08	0.84
4:AB:102:LEU:HD21	4:AB:162:ILE:HD11	1.57	0.84
5:AC:135:LYS:HE2	7:AE:50:GLU:OE2	1.77	0.84
1:AA:9:G:O5'	7:AE:126:ARG:HD3	1.77	0.84
1:AA:865:A:C2	1:AA:918:A:C4'	2.60	0.84
1:AA:1014:A:C5'	21:AS:14:HIS:CB	2.52	0.84
1:AA:1319:A:H5''	21:AS:5:LEU:HD21	1.58	0.84
6:AD:57:ARG:HH21	7:AE:107:ARG:CD	1.72	0.84
23:B0:3187:U:O3'	23:B0:3188:U:P	2.35	0.84
1:AA:21:G:C2'	1:AA:914:A:H62	1.88	0.84
1:AA:1270:C:O2'	1:AA:1314:C:H5'	1.77	0.84
1:AA:1484:C:O3'	23:B0:1943:A:C2'	2.25	0.84
7:AE:79:GLU:CD	10:AH:105:ARG:CD	2.50	0.84
23:B0:1098:G:H1	23:B0:1113:C:N4	1.75	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1953:A:H1'	23:B0:1955:G:H1'	1.58	0.84
1:AA:820:U:O2	1:AA:873:A:H8	1.59	0.84
1:AA:676:A:O4'	13:AK:115:PRO:HA	1.77	0.84
1:AA:779:C:H1'	13:AK:120:ARG:HD2	1.56	0.84
1:AA:1238:A:C2	1:AA:1241:G:O2'	2.31	0.84
1:AA:1495:U:O2'	23:B0:1902:A:N3	1.92	0.84
19:AQ:27:PHE:CZ	19:AQ:36:ILE:HD11	2.12	0.84
23:B0:1071:U:H3	23:B0:1099:A:H2	1.21	0.84
1:AA:69:G:H1'	1:AA:102:G:C4	2.13	0.84
5:AC:190:ARG:HB3	5:AC:190:ARG:HH11	1.43	0.84
6:AD:104:VAL:HG11	6:AD:146:ILE:HD12	1.58	0.84
6:AD:205:GLU:OE2	7:AE:107:ARG:NE	2.11	0.84
1:AA:323:U:C1'	22:AT:19:SER:HA	2.06	0.84
1:AA:1014:A:N3	21:AS:34:TRP:CD1	2.45	0.84
1:AA:1393:U:N3	1:AA:1395:C:C4	2.43	0.84
1:AA:1434:A:O3'	1:AA:1435:G:C5'	2.25	0.84
1:AA:6:G:C6	7:AE:119:LEU:HD12	2.10	0.84
1:AA:259:G:OP1	22:AT:83:ARG:HB3	1.78	0.84
1:AA:323:U:H4'	22:AT:19:SER:HA	1.60	0.84
1:AA:848:G:C2'	1:AA:849:C:O4'	2.26	0.84
1:AA:1108:G:H5''	5:AC:176:HIS:ND1	1.93	0.84
1:AA:1238:A:C3'	1:AA:1239:A:P	2.66	0.84
19:AQ:96:GLN:CD	23:B0:725:C:C1'	2.38	0.84
1:AA:26:A:C2'	1:AA:27:G:C5'	2.53	0.84
1:AA:1393:U:H2'	1:AA:1395:C:C5	2.12	0.84
1:AA:1505:G:H4'	1:AA:1506:U:O5'	1.76	0.84
11:AI:8:GLY:HA2	11:AI:79:LEU:CD1	2.08	0.84
23:B0:2548:G:C2'	23:B0:2549:G:H5''	2.08	0.84
1:AA:27:G:C2	1:AA:557:G:C4	2.65	0.83
1:AA:130:A:H4'	1:AA:264:U:C5'	2.04	0.83
1:AA:131:C:O3'	1:AA:262:A:O2'	1.95	0.83
1:AA:436:C:C4	1:AA:437:U:C5	2.66	0.83
1:AA:779:C:O4'	13:AK:120:ARG:HB3	1.78	0.83
1:AA:1499:A:O4'	1:AA:1520:G:H5'	1.78	0.83
2:AW:75:C:N3	23:B0:2532:G:C2	2.46	0.83
23:B0:616:U:H2'	23:B0:617:U:H5''	1.59	0.83
23:B0:847:C:H41	23:B0:955:G:H21	1.25	0.83
23:B0:2198:U:H3'	23:B0:2199:C:H5''	1.59	0.83
1:AA:27:G:C4	1:AA:557:G:N2	2.46	0.83
1:AA:131:C:P	1:AA:263:A:C4'	2.64	0.83
1:AA:1234:C:H5''	1:AA:1365:G:OP1	1.77	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AJ:19:SER:HB2	12:AJ:91:PRO:HG3	1.60	0.83
1:AA:7:G:H22	7:AE:123:LEU:HD11	1.37	0.83
1:AA:320:C:C4'	1:AA:1434:A:N1	2.40	0.83
1:AA:820:U:N3	1:AA:873:A:N7	2.27	0.83
1:AA:1459:C:P	22:AT:28:ALA:O	2.36	0.83
5:AC:172:ARG:HH12	5:AC:174:PRO:HG3	1.43	0.83
6:AD:61:LYS:HD2	6:AD:207:TYR:OH	1.79	0.83
23:B0:109:A:H3'	23:B0:110:U:H5''	1.60	0.83
1:AA:322:C:C5'	22:AT:23:ARG:HD2	2.09	0.83
1:AA:1393:U:C2	1:AA:1395:C:C5	2.66	0.83
1:AA:116:A:C6	1:AA:313:A:H1'	2.10	0.83
1:AA:216:C:H5'	1:AA:465:C:N4	1.93	0.83
1:AA:521:G:C5'	14:AL:72:GLY:O	2.25	0.83
1:AA:737:A:C2'	8:AF:73:ASN:ND2	2.42	0.83
1:AA:1126:U:OP2	1:AA:1281:U:O2	1.94	0.83
1:AA:1194:U:H5'	7:AE:22:GLY:CA	2.07	0.83
1:AA:1416:G:P	1:AA:1417:G:OP2	2.36	0.83
7:AE:105:VAL:HB	7:AE:106:PRO:HD3	1.60	0.83
8:AF:95:GLU:H	8:AF:95:GLU:CD	1.85	0.83
15:AM:50:GLU:O	15:AM:54:VAL:HG23	1.77	0.83
1:AA:37:U:O2'	1:AA:547:A:N6	2.11	0.83
1:AA:38:G:C4'	1:AA:547:A:H62	1.88	0.83
1:AA:436:C:O2'	1:AA:437:U:H5'	1.79	0.83
1:AA:914:A:H2'	1:AA:915:A:C1'	2.07	0.83
1:AA:1458:G:O3'	22:AT:24:LEU:CG	2.26	0.83
1:AA:1473:A:O2'	23:B0:1718:A:C2	2.32	0.83
1:AA:1497:G:C2'	1:AA:1498:U:H5'	2.08	0.83
1:AA:69:G:O4'	1:AA:102:G:N2	2.12	0.83
1:AA:131:C:C2	1:AA:262:A:H2	1.95	0.83
1:AA:653:A:N9	10:AH:56:LYS:HG2	1.93	0.83
1:AA:1015:A:O2'	1:AA:1219:U:H5'	1.79	0.83
1:AA:1342:C:C5'	11:AI:125:TYR:CZ	2.46	0.83
21:AS:55:LYS:HG2	21:AS:56:GLN:HE21	1.42	0.83
2:AW:74:C:N4	23:B0:2533:U:H2'	1.89	0.83
6:AD:25:ARG:C	6:AD:27:TYR:H	1.85	0.83
1:AA:264:U:H2'	19:AQ:64:PRO:O	1.78	0.83
1:AA:707:C:H4'	13:AK:20:TYR:CE2	2.13	0.83
1:AA:994:A:N3	16:AN:5:ALA:HA	1.92	0.83
1:AA:1255:G:H21	1:AA:1276:G:N2	1.76	0.83
6:AD:150:GLU:H	6:AD:150:GLU:CD	1.86	0.83
8:AF:36:ARG:HH12	8:AF:38:GLU:HG2	1.44	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:3877:A:N9	23:B0:1861:G:N9	2.26	0.83
1:AA:36:C:O2	1:AA:501:C:H4'	1.79	0.82
23:B0:1181:C:H2'	23:B0:1182:U:H5''	1.60	0.82
1:AA:22:G:C1'	1:AA:913:A:N1	2.41	0.82
1:AA:38:G:H1'	1:AA:547:A:C5	2.11	0.82
1:AA:293:G:H4'	1:AA:609:A:H2	1.00	0.82
1:AA:323:U:H5''	22:AT:23:ARG:N	1.94	0.82
1:AA:333:G:O2'	22:AT:16:HIS:NE2	2.11	0.82
1:AA:572:A:N3	1:AA:917:G:H1'	1.94	0.82
2:AV:11:C:H4'	23:B0:1892:C:O4'	1.78	0.82
2:AV:56:C:C3'	28:BD:74:ILE:CA	2.57	0.82
23:B0:1098:G:N1	23:B0:1113:C:N4	2.27	0.82
1:AA:112:G:N2	1:AA:354:G:H5'	1.94	0.82
1:AA:266:G:C5'	19:AQ:66:SER:HA	2.08	0.82
1:AA:323:U:C5'	22:AT:23:ARG:N	2.42	0.82
1:AA:1061:G:H5'	12:AJ:56:HIS:CB	1.88	0.82
5:AC:91:LEU:HD23	5:AC:92:ALA:N	1.94	0.82
1:AA:815:A:C4	1:AA:1527:C:H1'	2.15	0.82
16:AN:14:PRO:C	16:AN:16:PHE:H	1.86	0.82
1:AA:406:G:C4	1:AA:496:A:C5	2.67	0.82
1:AA:816:A:P	1:AA:1527:C:C5'	2.65	0.82
1:AA:1014:A:C2	21:AS:34:TRP:NE1	2.48	0.82
1:AA:1015:A:C1'	1:AA:1219:U:H4'	2.08	0.82
23:B0:653:G:H2'	23:B0:654:A:H4'	1.62	0.82
1:AA:1342:C:C5'	11:AI:125:TYR:CD1	2.62	0.82
1:AA:1473:A:H5'	23:B0:1719:G:C4'	2.07	0.82
23:B0:166:G:H21	23:B0:184:A:H62	1.27	0.82
1:AA:323:U:H4'	22:AT:22:ARG:HB2	1.60	0.82
1:AA:1112:C:O2	5:AC:178:LEU:O	1.98	0.82
2:AV:33:U:O2	2:AV:35:A:H3'	1.80	0.82
2:AV:76:A:H5'	23:B0:2564:U:H1'	1.61	0.82
12:AJ:62:HIS:O	16:AN:58:LYS:CA	2.27	0.82
1:AA:116:A:H61	1:AA:313:A:H1'	0.66	0.82
1:AA:131:C:H4'	1:AA:262:A:O2'	1.78	0.82
1:AA:1459:C:OP1	22:AT:29:LYS:HA	1.80	0.82
2:AV:25:C:H2'	2:AV:26:G:O4'	1.80	0.82
15:AM:78:ILE:HA	15:AM:81:LEU:HD21	1.62	0.82
19:AQ:94:ASN:CA	23:B0:726:G:O4'	2.27	0.82
23:B0:1964:A:H3'	23:B0:1965:U:H5'	1.60	0.82
1:AA:254:G:H21	19:AQ:16:GLN:CD	1.87	0.82
1:AA:437:U:O2'	6:AD:123:HIS:CD2	2.32	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AQ:104:LYS:CE	23:B0:729:A:N7	2.42	0.82
1:AA:38:G:H4'	1:AA:547:A:H62	1.43	0.82
1:AA:212:G:HO3'	1:AA:213:G:P	1.99	0.82
1:AA:376:G:P	18:AP:67:THR:HG21	2.19	0.82
1:AA:406:G:C5	1:AA:496:A:N7	2.48	0.82
1:AA:1256:A:C5'	1:AA:1258:G:C1'	2.50	0.82
1:AA:1501:C:OP1	1:AA:1508:G:C4'	2.27	0.82
7:AE:118:ILE:HG22	7:AE:119:LEU:N	1.95	0.82
1:AA:653:A:O5'	10:AH:56:LYS:CE	2.27	0.81
1:AA:893:C:N4	1:AA:894:G:O6	2.13	0.81
1:AA:1190:G:O2'	1:AA:1191:A:P	2.39	0.81
1:AA:1298:C:H2'	9:AG:114:ARG:NH2	1.94	0.81
2:AW:76:A:N3	23:B0:2562:G:C2	2.47	0.81
12:AJ:62:HIS:CB	16:AN:59:ALA:CB	2.11	0.81
20:AR:55:ARG:HB3	20:AR:55:ARG:NH1	1.95	0.81
21:AS:29:ARG:O	21:AS:30:LEU:HB2	1.80	0.81
23:B0:831:G:H21	23:B0:1203:A:H62	1.25	0.81
23:B0:1062:G:O3'	23:B0:1063:C:P	2.38	0.81
1:AA:335:C:O4'	1:AA:1434:A:C4'	2.26	0.81
1:AA:502:G:H1'	1:AA:550:G:H5'	1.63	0.81
1:AA:108:G:C8	22:AT:12:ALA:HB1	2.15	0.81
1:AA:877:C:H5''	10:AH:88:LYS:CD	2.09	0.81
1:AA:1015:A:C2'	1:AA:1219:U:H5'	2.10	0.81
1:AA:1060:C:C5'	12:AJ:52:GLY:CA	2.59	0.81
1:AA:1069:C:O4'	1:AA:1191:A:C2	2.32	0.81
1:AA:1194:U:H4'	7:AE:22:GLY:CA	2.07	0.81
1:AA:1416:G:C5'	1:AA:1417:G:P	2.68	0.81
9:AG:75:VAL:CG1	9:AG:86:GLN:HB3	2.10	0.81
23:B0:789:G:H21	23:B0:806:A:H62	1.25	0.81
23:B0:1856:U:C5	23:B0:3865:A:C5	2.67	0.81
23:B0:3118:U:N3	23:B0:3149:G:H5'	1.88	0.81
1:AA:236:G:O5'	19:AQ:40:LYS:NZ	2.08	0.81
1:AA:1256:A:H4'	1:AA:1258:G:C8	2.16	0.81
23:B0:3108:G:C2	23:B0:3109:U:C5	2.69	0.81
1:AA:45:U:OP1	1:AA:307:C:O2'	1.98	0.81
1:AA:323:U:O4'	22:AT:19:SER:CB	2.29	0.81
1:AA:406:G:C5	1:AA:496:A:C5	2.69	0.81
2:AV:75:C:N4	23:B0:2231:G:N2	2.29	0.81
23:B0:1034:U:H1'	23:B0:1133:G:H5''	1.61	0.81
1:AA:69:G:O2'	1:AA:101:A:H2	1.63	0.81
1:AA:319:G:O2'	1:AA:1434:A:N1	2.14	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:323:U:OP1	22:AT:22:ARG:O	1.97	0.81
4:AB:132:LYS:HA	4:AB:135:GLN:HB3	1.63	0.81
1:AA:69:G:C2'	1:AA:101:A:N1	2.44	0.81
1:AA:248:C:O2'	1:AA:283:C:C4'	2.28	0.81
1:AA:538:G:H4'	14:AL:114:LYS:CD	2.10	0.81
1:AA:919:A:C2	1:AA:1080:A:H2	1.97	0.81
5:AC:8:ILE:HG23	5:AC:16:ARG:HG2	1.60	0.81
6:AD:150:GLU:HA	6:AD:153:ARG:HE	1.44	0.81
17:AO:78:TYR:CZ	17:AO:82:ILE:HD11	2.15	0.81
1:AA:99:C:O2	1:AA:101:A:N7	2.14	0.81
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.15	0.81
1:AA:1394:A:C6	1:AA:1501:C:H5''	2.16	0.81
2:AV:12:U:OP1	23:B0:1891:C:H1'	1.81	0.81
6:AD:88:VAL:CG1	7:AE:97:GLY:CA	2.17	0.81
22:AT:43:LEU:HD13	22:AT:51:GLU:HG3	1.62	0.81
23:B0:1807:A:H4'	23:B0:1808:C:H5'	1.61	0.81
1:AA:131:C:C2'	1:AA:262:A:H1'	2.10	0.81
1:AA:131:C:O2	1:AA:262:A:H2	1.61	0.81
1:AA:190:A:H61	22:AT:104:LEU:CA	1.90	0.81
1:AA:237:C:H5''	19:AQ:25:ARG:CZ	2.11	0.81
1:AA:376:G:OP1	18:AP:5:ARG:HB2	1.80	0.81
1:AA:866:C:C5'	1:AA:919:A:H5'	2.11	0.81
1:AA:1484:C:C4'	23:B0:1943:A:O2'	2.29	0.81
23:B0:2227:C:H2'	23:B0:2228:U:H5'	1.63	0.81
1:AA:319:G:C5'	1:AA:1468:A:H4'	2.06	0.80
1:AA:619:U:O2'	6:AD:138:TYR:CE1	2.34	0.80
1:AA:1194:U:H5''	7:AE:22:GLY:O	1.81	0.80
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.44	0.80
1:AA:1392:G:C4'	1:AA:1531:A:H5'	2.06	0.80
1:AA:1483:A:C4	1:AA:1484:C:C5	2.69	0.80
2:AV:12:U:P	23:B0:1891:C:O2'	2.39	0.80
6:AD:205:GLU:HG2	7:AE:107:ARG:HH21	1.45	0.80
23:B0:878:C:H42	23:B0:921:A:H62	1.28	0.80
24:B9:73:C:HO3'	24:B9:74:A:P	2.03	0.80
1:AA:826:C:H1'	10:AH:15:ASN:ND2	1.96	0.80
1:AA:1015:A:O2'	1:AA:1219:U:C5'	2.28	0.80
1:AA:1499:A:H4'	1:AA:1520:G:O3'	1.81	0.80
4:AB:27:LYS:HD3	4:AB:195:ASP:OD2	1.82	0.80
4:AB:101:MET:HA	4:AB:108:ILE:HD12	1.63	0.80
1:AA:262:A:H5''	22:AT:75:ASN:H	1.45	0.80
1:AA:651:C:C4	1:AA:652:U:C4	2.69	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:995:C:O2	16:AN:4:LYS:HD3	1.80	0.80
1:AA:1014:A:C6	21:AS:34:TRP:CE2	2.70	0.80
1:AA:66:G:H4'	1:AA:199:G:H4'	1.63	0.80
1:AA:976:G:OP1	16:AN:32:SER:HA	1.82	0.80
1:AA:1155:G:H3'	1:AA:1156:G:P	2.21	0.80
1:AA:1422:G:OP1	33:BI:60:PRO:CA	2.30	0.80
1:AA:113:G:H1'	1:AA:354:G:C5'	2.12	0.80
1:AA:237:C:C5'	19:AQ:25:ARG:CZ	2.60	0.80
1:AA:526:C:OP1	14:AL:91:LYS:HE2	1.81	0.80
9:AG:75:VAL:HG11	9:AG:86:GLN:HB3	1.63	0.80
12:AJ:47:PHE:CE2	16:AN:37:PHE:CE1	2.70	0.80
1:AA:38:G:H5'	1:AA:547:A:H61	0.98	0.80
1:AA:755:G:H1'	10:AH:1:MET:HE1	1.60	0.80
1:AA:848:G:O2'	1:AA:849:C:O4'	1.99	0.80
6:AD:57:ARG:NH2	7:AE:107:ARG:HD2	1.94	0.80
15:AM:94:ARG:HH22	21:AS:81:ARG:NH1	1.79	0.80
1:AA:13:U:H1'	1:AA:914:A:H5'	1.63	0.80
1:AA:38:G:C5'	1:AA:547:A:H62	1.91	0.80
1:AA:59:A:H3'	1:AA:331:G:N2	1.94	0.80
1:AA:262:A:OP2	22:AT:76:ALA:CB	2.28	0.80
1:AA:305:G:O3'	1:AA:306:G:P	2.40	0.80
1:AA:815:A:N6	1:AA:1508:G:N2	2.28	0.80
1:AA:1111:A:N1	5:AC:177:THR:HA	1.95	0.80
2:AV:32:C:OP2	11:AI:127:LYS:CE	2.29	0.80
14:AL:67:THR:HG22	14:AL:96:VAL:HG13	1.63	0.80
19:AQ:95:TYR:C	19:AQ:97:SER:H	1.89	0.80
23:B0:225:G:H3'	23:B0:226:C:C5'	2.09	0.80
1:AA:994:A:H2	16:AN:4:LYS:O	1.56	0.80
1:AA:1285:A:H4'	1:AA:1286:A:O5'	1.82	0.80
2:AV:1:G:H22	2:AV:2:C:H41	1.25	0.80
2:AV:74:C:N3	23:B0:2231:G:N2	2.30	0.80
1:AA:104:G:H4'	1:AA:172:A:C2	2.17	0.80
1:AA:322:C:H4'	22:AT:23:ARG:HD2	0.80	0.80
1:AA:376:G:H5''	18:AP:5:ARG:HD2	1.61	0.80
1:AA:401:C:O2'	1:AA:621:A:C2	2.35	0.80
1:AA:1060:C:C2'	12:AJ:56:HIS:CD2	2.64	0.80
12:AJ:8:LEU:CD2	12:AJ:96:ILE:HG12	2.11	0.80
14:AL:28:LYS:HD2	14:AL:33:ARG:HH22	1.47	0.80
15:AM:22:ILE:HD12	15:AM:25:ILE:HD12	1.61	0.80
23:B0:1072:U:C4	31:BG:10:LEU:CA	2.64	0.80
1:AA:264:U:O2'	19:AQ:63:ARG:HD2	1.82	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:547:A:C4'	1:AA:548:G:P	2.70	0.80
1:AA:829:G:O2'	4:AB:24:TRP:NE1	2.14	0.80
1:AA:1016:A:H5'	16:AN:15:LYS:HE3	1.63	0.80
8:AF:30:LEU:HB3	8:AF:35:ALA:HB3	1.62	0.80
12:AJ:45:ARG:NH2	16:AN:36:PHE:CE2	2.50	0.80
1:AA:9:G:O5'	7:AE:126:ARG:CZ	2.30	0.79
1:AA:128:G:C5'	19:AQ:2:PRO:O	2.29	0.79
1:AA:132:C:H5'	1:AA:262:A:H1'	1.63	0.79
1:AA:188:C:C2	22:AT:105:SER:O	2.35	0.79
1:AA:914:A:C3'	1:AA:915:A:O4'	2.29	0.79
1:AA:1182:G:H5'	1:AA:1184:G:H5'	1.64	0.79
2:AW:76:A:C2	23:B0:2486:C:O2	2.34	0.79
9:AG:149:ARG:CZ	13:AK:59:TYR:CZ	2.65	0.79
1:AA:255:G:C4'	19:AQ:17:LYS:HB2	2.12	0.79
1:AA:1116:C:C2'	1:AA:1117:G:H5''	2.12	0.79
1:AA:1341:U:H5'	2:AV:32:C:H5''	1.64	0.79
10:AH:90:GLY:O	10:AH:91:ARG:HB2	1.83	0.79
1:AA:255:G:C1'	19:AQ:16:GLN:CB	2.60	0.79
1:AA:588:G:C8	1:AA:753:A:N3	2.50	0.79
1:AA:673:G:H2'	1:AA:674:G:C8	2.17	0.79
23:B0:3874:C:C4	23:B0:3875:A:C5	2.70	0.79
1:AA:323:U:C4'	22:AT:22:ARG:CB	2.53	0.79
2:AV:11:C:C5'	23:B0:1892:C:H4'	2.12	0.79
4:AB:195:ASP:HB3	10:AH:74:PRO:HD2	1.64	0.79
5:AC:15:THR:O	5:AC:16:ARG:HB2	1.82	0.79
5:AC:191:THR:HG22	5:AC:193:TYR:H	1.44	0.79
13:AK:54:ARG:HB3	13:AK:54:ARG:NH1	1.97	0.79
1:AA:779:C:C5'	13:AK:120:ARG:HG2	2.11	0.79
1:AA:865:A:C2'	1:AA:918:A:HO2'	1.94	0.79
1:AA:1490:C:H5'	1:AA:1490:C:H6	1.47	0.79
23:B0:1098:G:C2	23:B0:1113:C:N4	2.41	0.79
23:B0:3877:A:N9	23:B0:1861:G:C8	2.51	0.79
1:AA:131:C:H1'	1:AA:262:A:H2	1.41	0.79
1:AA:266:G:H5'	19:AQ:66:SER:CA	2.13	0.79
1:AA:707:C:C5'	13:AK:85:ARG:NH1	2.32	0.79
2:AW:74:C:H5	23:B0:2533:U:H3	0.83	0.79
23:B0:1572:C:C2'	23:B0:1573:G:H5''	2.11	0.79
1:AA:185:A:O2'	1:AA:186:C:P	2.41	0.79
1:AA:1190:G:OP1	5:AC:5:ILE:N	2.16	0.79
1:AA:1342:C:C4'	11:AI:125:TYR:CE2	2.65	0.79
1:AA:190:A:C5	22:AT:104:LEU:O	2.36	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:265:G:C5'	19:AQ:65:ILE:N	2.42	0.79
1:AA:1238:A:H2	1:AA:1241:G:O2'	1.64	0.79
1:AA:1416:G:O3'	1:AA:1417:G:H5''	1.81	0.79
19:AQ:93:GLN:NE2	23:B0:727:U:OP2	2.15	0.79
22:AT:54:LYS:HG3	22:AT:100:ILE:CD1	2.13	0.79
1:AA:265:G:O4'	19:AQ:64:PRO:CB	2.31	0.79
4:AB:84:GLU:OE1	4:AB:216:SER:HA	1.83	0.79
1:AA:160:A:N6	1:AA:347:G:H21	1.80	0.79
1:AA:323:U:H5''	22:AT:22:ARG:C	2.08	0.79
1:AA:779:C:C2'	13:AK:120:ARG:CD	2.59	0.79
1:AA:1410:G:C2	1:AA:1491:G:N1	2.51	0.79
1:AA:1434:A:C3'	1:AA:1435:G:C4'	2.60	0.79
1:AA:1484:C:O3'	23:B0:1943:A:C3'	2.31	0.79
1:AA:1499:A:O4'	1:AA:1520:G:H4'	1.82	0.79
5:AC:107:GLN:H	5:AC:107:GLN:CD	1.88	0.79
1:AA:322:C:O3'	22:AT:23:ARG:HA	1.74	0.78
1:AA:653:A:C4'	10:AH:56:LYS:HE2	2.13	0.78
1:AA:205:G:N2	1:AA:207:C:H5	1.80	0.78
1:AA:1416:G:C3'	1:AA:1417:G:P	2.69	0.78
12:AJ:47:PHE:CE2	16:AN:37:PHE:HE1	2.01	0.78
1:AA:189:A:OP2	22:AT:105:SER:HB2	1.83	0.78
1:AA:256:U:C5'	19:AQ:17:LYS:CE	2.61	0.78
1:AA:651:C:H2'	1:AA:652:U:C6	2.17	0.78
1:AA:815:A:C5	1:AA:1527:C:O2	2.36	0.78
1:AA:1014:A:C5'	21:AS:14:HIS:HB3	2.12	0.78
23:B0:471:A:H62	23:B0:480:G:H21	1.31	0.78
1:AA:212:G:O2'	1:AA:213:G:H5'	1.82	0.78
1:AA:318:G:N2	1:AA:1433:A:C2	2.49	0.78
21:AS:31:ILE:HG22	21:AS:32:LYS:N	1.99	0.78
1:AA:236:G:OP1	19:AQ:40:LYS:HE2	1.82	0.78
1:AA:619:U:O2'	6:AD:138:TYR:HE1	1.66	0.78
1:AA:825:G:N2	10:AH:11:THR:HG21	1.97	0.78
1:AA:923:A:C4'	1:AA:1398:A:C6	2.66	0.78
23:B0:895:G:H5'	23:B0:895:G:H8	1.48	0.78
1:AA:264:U:O2'	19:AQ:63:ARG:CG	2.31	0.78
1:AA:377:G:P	18:AP:3:LYS:NZ	2.56	0.78
1:AA:406:G:C6	1:AA:496:A:C8	2.72	0.78
1:AA:893:C:H2'	1:AA:894:G:H8	1.49	0.78
1:AA:1483:A:H2'	1:AA:1484:C:C5	2.19	0.78
6:AD:205:GLU:OE2	7:AE:107:ARG:CZ	2.32	0.78
7:AE:43:LEU:HD11	7:AE:132:ALA:HB1	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AG:66:VAL:HG12	9:AG:70:LYS:HE3	1.65	0.78
14:AL:126:LYS:H	14:AL:126:LYS:HD2	1.48	0.78
1:AA:9:G:OP2	7:AE:126:ARG:CZ	2.32	0.78
1:AA:43:C:OP1	18:AP:12:LYS:CD	2.30	0.78
1:AA:129:U:P	19:AQ:3:LYS:HZ2	2.05	0.78
1:AA:837:G:H2'	1:AA:838:C:C6	2.18	0.78
1:AA:1014:A:H5''	21:AS:14:HIS:HB3	1.65	0.78
1:AA:1090:U:O4'	1:AA:1169:A:H2	1.67	0.78
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.48	0.78
1:AA:1496:C:O2	1:AA:1517:G:N2	2.17	0.78
1:AA:1505:G:O2'	1:AA:1506:U:P	2.41	0.78
14:AL:70:ILE:HD13	14:AL:77:LEU:HD12	1.63	0.78
15:AM:84:ILE:CG2	21:AS:65:ASN:ND2	2.46	0.78
15:AM:93:ARG:HH11	23:B0:900:U:H5''	1.46	0.78
1:AA:22:G:N2	1:AA:913:A:C2'	2.42	0.78
1:AA:191:G:C8	1:AA:192:U:C6	2.71	0.78
1:AA:1343:G:P	11:AI:125:TYR:OH	2.41	0.78
2:AW:17:U:O4	23:B0:895:G:OP1	2.00	0.78
22:AT:54:LYS:HG3	22:AT:100:ILE:HD13	1.65	0.78
23:B0:403:A:H4'	23:B0:425:A:H5'	1.63	0.78
23:B0:1252:C:C2'	23:B0:1253:C:H5''	2.13	0.78
1:AA:188:C:N1	22:AT:105:SER:O	2.17	0.78
1:AA:262:A:H5''	22:AT:75:ASN:N	1.99	0.78
1:AA:1318:A:H4'	21:AS:10:PHE:CE1	2.19	0.78
1:AA:1458:G:N7	1:AA:1459:C:C2	2.52	0.78
5:AC:150:LYS:HE2	5:AC:152:ILE:HD11	1.66	0.78
23:B0:225:G:C3'	23:B0:226:C:H5'	2.13	0.78
23:B0:1679:U:H3'	23:B0:1680:U:H5''	1.66	0.78
1:AA:319:G:H21	1:AA:1434:A:C1'	1.93	0.78
1:AA:1014:A:C4	21:AS:34:TRP:CG	2.72	0.78
1:AA:1271:G:H5'	1:AA:1314:C:H5''	1.66	0.78
1:AA:1483:A:C4	1:AA:1484:C:C6	2.72	0.78
1:AA:1484:C:H5''	23:B0:1943:A:O2'	1.84	0.78
4:AB:8:LYS:O	4:AB:9:GLU:HB2	1.81	0.78
19:AQ:94:ASN:CA	23:B0:726:G:C1'	2.62	0.78
5:AC:5:ILE:CG2	12:AJ:51:ARG:HH12	1.96	0.77
6:AD:57:ARG:NH2	7:AE:107:ARG:CZ	2.47	0.77
14:AL:120:TYR:O	14:AL:122:THR:HG23	1.83	0.77
18:AP:21:VAL:HG21	18:AP:59:TRP:CD1	2.19	0.77
1:AA:13:U:H4'	1:AA:914:A:OP1	1.84	0.77
1:AA:923:A:N9	1:AA:1398:A:C2	2.52	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1342:C:H4'	11:AI:125:TYR:CZ	2.13	0.77
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.19	0.77
4:AB:77:ALA:HB2	4:AB:211:ILE:CD1	2.10	0.77
1:AA:186:C:C1'	22:AT:60:GLU:OE1	2.31	0.77
1:AA:243:A:C4'	1:AA:244:U:H5'	2.14	0.77
1:AA:929:G:P	1:AA:1533:C:H41	2.07	0.77
1:AA:1458:G:N9	1:AA:1459:C:H2'	1.95	0.77
5:AC:23:TYR:CE1	12:AJ:67:THR:HG23	2.19	0.77
5:AC:135:LYS:CE	7:AE:50:GLU:OE2	2.32	0.77
7:AE:64:ARG:O	7:AE:65:ASN:HB3	1.84	0.77
7:AE:151:LEU:HD11	10:AH:77:GLU:OE2	1.83	0.77
14:AL:41:ARG:CG	14:AL:42:THR:H	1.88	0.77
1:AA:15:G:C1'	7:AE:19:MET:HE2	2.00	0.77
1:AA:130:A:C6	1:AA:264:U:C2	2.72	0.77
1:AA:161:A:N3	1:AA:348:G:O2'	2.16	0.77
1:AA:545:C:O2'	1:AA:549:C:OP1	2.03	0.77
1:AA:1340:A:C1'	2:AV:31:A:O2'	2.33	0.77
1:AA:1416:G:C2'	1:AA:1417:G:C5'	2.40	0.77
1:AA:1434:A:H3'	1:AA:1435:G:C5'	2.14	0.77
1:AA:9:G:P	7:AE:126:ARG:CZ	2.72	0.77
1:AA:1305:G:C2'	1:AA:1306:A:H8	1.97	0.77
8:AF:100:ASN:HD22	20:AR:23:LYS:HG2	1.49	0.77
12:AJ:61:GLU:CD	16:AN:58:LYS:HZ3	1.92	0.77
23:B0:3118:U:N3	23:B0:3148:G:O2'	2.08	0.77
23:B0:2491:C:H2'	23:B0:2492:G:H5''	1.67	0.77
1:AA:13:U:C4'	1:AA:914:A:OP1	2.33	0.77
1:AA:923:A:O2'	1:AA:1398:A:H3'	1.85	0.77
1:AA:1498:U:O4'	1:AA:1519:A:H2	1.68	0.77
2:AW:75:C:C2	23:B0:2532:G:N2	2.53	0.77
23:B0:1067:G:H5'	23:B0:1068:A:C5'	2.11	0.77
23:B0:3185:U:H6	23:B0:3185:U:H5'	1.49	0.77
1:AA:89:G:C3'	1:AA:90:C:P	2.72	0.77
1:AA:397:A:C5	1:AA:547:A:H1'	2.19	0.77
1:AA:436:C:H2'	1:AA:437:U:H6	1.50	0.77
1:AA:1014:A:C4'	21:AS:14:HIS:CD2	2.68	0.77
17:AO:16:ALA:HB1	17:AO:21:ASP:HB3	1.64	0.77
1:AA:7:G:N3	7:AE:121:LYS:HG2	2.00	0.77
1:AA:69:G:O2'	1:AA:101:A:C2	2.37	0.77
1:AA:538:G:C4'	14:AL:114:LYS:HD3	2.15	0.77
1:AA:958:A:C2	21:AS:55:LYS:HB2	2.19	0.77
9:AG:95:ARG:HH11	9:AG:95:ARG:HG3	1.50	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AL:75:HIS:CD2	14:AL:77:LEU:H	1.97	0.77
23:B0:940:G:H3'	23:B0:941:U:C5'	2.07	0.77
1:AA:216:C:H5'	1:AA:465:C:H41	1.49	0.76
1:AA:848:G:O3'	1:AA:849:C:H5'	1.85	0.76
23:B0:894:G:H2'	23:B0:895:G:H5''	1.65	0.76
23:B0:2808:U:H3'	23:B0:2809:A:H5'	1.67	0.76
1:AA:421:U:N1	5:AC:127:ARG:NH2	2.33	0.76
4:AB:36:ARG:HD2	4:AB:41:ILE:HD12	1.68	0.76
23:B0:1856:U:C6	23:B0:3865:A:N7	2.53	0.76
23:B0:3128:G:C4'	23:B0:3174:C:O4'	2.29	0.76
1:AA:37:U:O2'	1:AA:547:A:C6	2.39	0.76
1:AA:234:C:HO2'	19:AQ:70:ARG:HG2	1.49	0.76
1:AA:762:C:H5'	23:B0:729:A:H61	1.51	0.76
14:AL:75:HIS:HD2	14:AL:77:LEU:N	1.82	0.76
23:B0:3109:U:C5'	23:B0:3150:C:H5'	2.15	0.76
1:AA:253:U:O2	1:AA:275:G:O2'	1.97	0.76
1:AA:265:G:O4'	19:AQ:64:PRO:HB2	1.85	0.76
1:AA:893:C:H2'	1:AA:894:G:C8	2.21	0.76
2:AV:75:C:OP1	23:B0:2581:A:H5''	1.84	0.76
14:AL:126:LYS:H	14:AL:126:LYS:CD	1.96	0.76
17:AO:17:ARG:HH11	17:AO:17:ARG:HG3	1.49	0.76
23:B0:1067:G:C5'	23:B0:1068:A:H5'	2.10	0.76
23:B0:3128:G:HO2'	23:B0:3174:C:C5'	1.76	0.76
1:AA:1409:C:C2	1:AA:1410:G:C8	2.74	0.76
1:AA:1483:A:O2'	1:AA:1484:C:P	2.43	0.76
4:AB:57:PHE:O	4:AB:60:ASP:HB3	1.85	0.76
1:AA:456:A:C6	1:AA:477:G:N3	2.54	0.76
1:AA:1014:A:N3	21:AS:34:TRP:CG	2.54	0.76
1:AA:1497:G:O2'	1:AA:1518:A:C2	2.36	0.76
1:AA:323:U:P	22:AT:23:ARG:N	2.56	0.76
1:AA:333:G:HO2'	22:AT:16:HIS:CE1	2.03	0.76
1:AA:452:A:H4'	18:AP:72:ARG:NH2	2.00	0.76
1:AA:588:G:C6	1:AA:753:A:C8	2.74	0.76
1:AA:653:A:C8	10:AH:56:LYS:HG2	2.21	0.76
1:AA:1428:A:O2'	23:B0:1703:C:H1'	1.86	0.76
1:AA:1473:A:O2'	23:B0:1718:A:C6	2.39	0.76
22:AT:14:LYS:O	22:AT:18:GLN:HG3	1.86	0.76
23:B0:1113:C:O3'	23:B0:1114:A:OP2	2.04	0.76
23:B0:1528:C:H2'	23:B0:1529:C:H5''	1.67	0.76
1:AA:188:C:C2	22:AT:89:ARG:NH1	2.45	0.76
1:AA:319:G:H2'	1:AA:1434:A:C2	2.21	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:893:C:C4	1:AA:894:G:C5	2.73	0.76
1:AA:1014:A:C5'	21:AS:14:HIS:CD2	2.69	0.76
1:AA:1226:C:H4'	1:AA:1227:A:OP1	1.84	0.76
1:AA:1321:C:H42	21:AS:37:ARG:CZ	1.98	0.76
2:AW:76:A:C2	23:B0:2532:G:C2	2.74	0.76
6:AD:162:LEU:HD13	6:AD:181:MET:HG2	1.68	0.76
11:AI:118:LYS:O	11:AI:119:ALA:HB3	1.85	0.76
19:AQ:94:ASN:HA	23:B0:726:G:O4'	1.83	0.76
20:AR:55:ARG:HB3	20:AR:55:ARG:HH11	1.50	0.76
1:AA:1505:G:HO2'	1:AA:1506:U:P	2.09	0.76
14:AL:59:ARG:HD3	14:AL:65:GLU:HG3	1.68	0.76
21:AS:40:ILE:HD13	21:AS:62:ILE:HD13	1.68	0.76
23:B0:357:A:H2'	23:B0:358:C:H5'	1.66	0.76
24:B9:107:C:H2'	24:B9:108:G:H5'	1.68	0.76
1:AA:249:U:H3'	1:AA:250:A:P	2.26	0.75
1:AA:1256:A:H5'	1:AA:1258:G:N9	2.00	0.75
2:AV:1:G:H21	2:AV:2:C:N4	1.81	0.75
5:AC:19:GLU:HB3	5:AC:40:ARG:HH21	1.50	0.75
5:AC:110:ASN:O	5:AC:111:LEU:HD23	1.85	0.75
19:AQ:97:SER:OG	19:AQ:103:GLY:HA2	1.85	0.75
23:B0:68:C:H1'	23:B0:72:A:H1'	1.68	0.75
1:AA:246:A:C4'	1:AA:247:G:H4'	2.16	0.75
1:AA:328:C:O2	1:AA:328:C:H2'	1.85	0.75
1:AA:826:C:H1'	10:AH:15:ASN:HD22	1.50	0.75
1:AA:866:C:H4'	1:AA:919:A:OP1	1.86	0.75
1:AA:1392:G:C4'	1:AA:1531:A:H5''	2.15	0.75
1:AA:1473:A:O4'	23:B0:1719:G:H1'	1.85	0.75
4:AB:139:LYS:O	4:AB:143:GLU:HG2	1.86	0.75
8:AF:86:ARG:O	8:AF:87:ARG:HG2	1.85	0.75
12:AJ:51:ARG:O	16:AN:45:ARG:CZ	2.34	0.75
23:B0:3874:C:N4	23:B0:3875:A:C6	2.54	0.75
23:B0:3874:C:C4	23:B0:3875:A:N7	2.54	0.75
23:B0:1919:A:H5''	23:B0:1920:A:O5'	1.86	0.75
1:AA:556:C:C2	1:AA:557:G:C8	2.73	0.75
1:AA:992:U:H4'	1:AA:993:G:O5'	1.86	0.75
1:AA:1206:G:H4'	5:AC:192:THR:O	1.86	0.75
1:AA:1405:G:N3	1:AA:1518:A:O2'	2.19	0.75
4:AB:16:HIS:NE2	4:AB:214:ILE:HG12	2.01	0.75
7:AE:79:GLU:OE1	10:AH:105:ARG:HD3	1.85	0.75
18:AP:74:LEU:O	18:AP:79:VAL:HG23	1.86	0.75
23:B0:3866:A:N6	55:B5:45:ASP:CA	2.49	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1025:U:H2'	1:AA:1026:G:C8	2.21	0.75
1:AA:1484:C:O2'	23:B0:1943:A:C4'	2.34	0.75
2:AV:76:A:H5'	23:B0:2564:U:O4'	1.87	0.75
23:B0:2806:G:H1'	23:B0:2858:A:H2'	1.68	0.75
1:AA:265:G:O3'	19:AQ:66:SER:N	2.18	0.75
1:AA:653:A:C8	10:AH:56:LYS:HB3	2.22	0.75
1:AA:820:U:O2	1:AA:873:A:N7	2.20	0.75
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.22	0.75
1:AA:1492:A:H2'	1:AA:1493:A:O4'	1.87	0.75
6:AD:88:VAL:CG2	7:AE:97:GLY:N	2.42	0.75
19:AQ:101:ARG:NH1	23:B0:731:A:N3	2.32	0.75
23:B0:1199:U:H3'	23:B0:1200:G:C5'	2.17	0.75
1:AA:69:G:C1'	1:AA:102:G:N1	2.50	0.75
1:AA:572:A:C2	1:AA:917:G:H1'	2.22	0.75
1:AA:676:A:O2'	13:AK:115:PRO:HB3	1.86	0.75
2:AW:74:C:C4	23:B0:2534:U:C6	2.50	0.75
4:AB:197:VAL:HB	4:AB:200:ILE:HG12	1.66	0.75
1:AA:292:G:C2'	1:AA:608:A:H61	1.98	0.75
5:AC:52:LEU:HD23	5:AC:52:LEU:N	2.02	0.75
6:AD:57:ARG:NH2	7:AE:107:ARG:NE	2.15	0.75
12:AJ:61:GLU:OE2	16:AN:58:LYS:NZ	2.19	0.75
1:AA:27:G:N9	1:AA:557:G:N2	2.34	0.75
1:AA:651:C:N4	1:AA:652:U:O4	2.20	0.75
1:AA:757:U:O2'	1:AA:879:C:H1'	1.87	0.75
1:AA:1075:C:OP1	4:AB:179:LYS:NZ	2.17	0.75
1:AA:1190:G:O2'	1:AA:1191:A:OP2	2.05	0.75
5:AC:50:ALA:HB1	5:AC:70:VAL:HG11	1.68	0.75
15:AM:49:THR:HG22	15:AM:51:ALA:N	2.02	0.75
1:AA:497:A:HO2'	1:AA:498:U:P	2.08	0.75
1:AA:893:C:C5	1:AA:894:G:N7	2.55	0.75
1:AA:1342:C:H4'	11:AI:125:TYR:CG	2.22	0.75
1:AA:1398:A:H5'	1:AA:1399:C:OP1	1.86	0.75
12:AJ:45:ARG:NH1	16:AN:36:PHE:CD2	2.54	0.75
24:B9:114:C:C2'	24:B9:115:G:H5''	2.17	0.75
1:AA:816:A:OP2	1:AA:1527:C:H5'	1.87	0.74
1:AA:1060:C:H5'	12:AJ:52:GLY:HA2	1.68	0.74
2:AW:75:C:C2'	23:B0:2486:C:O2'	2.34	0.74
12:AJ:82:ILE:O	12:AJ:86:MET:HB2	1.86	0.74
19:AQ:95:TYR:O	19:AQ:97:SER:N	2.19	0.74
19:AQ:96:GLN:CD	23:B0:725:C:O2	2.29	0.74
1:AA:848:G:H2'	1:AA:849:C:C1'	2.18	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:52:LEU:H	5:AC:52:LEU:CD2	2.00	0.74
13:AK:110:ASP:OD2	20:AR:88:LYS:NZ	2.20	0.74
23:B0:3877:A:C8	23:B0:1861:G:N7	2.23	0.74
1:AA:274:A:H2	1:AA:275:G:H1'	1.52	0.74
1:AA:421:U:C2	5:AC:127:ARG:NH2	2.42	0.74
1:AA:866:C:C5'	1:AA:919:A:C5'	2.65	0.74
1:AA:1256:A:O4'	1:AA:1258:G:C5	2.41	0.74
2:AV:76:A:C2'	23:B0:2046:C:O2	2.30	0.74
2:AW:76:A:C2'	23:B0:2485:U:H2'	2.17	0.74
4:AB:23:ARG:NH1	4:AB:24:TRP:N	2.35	0.74
5:AC:116:VAL:HG21	5:AC:202:ILE:HD11	1.68	0.74
15:AM:4:ILE:HG22	15:AM:5:ALA:N	2.00	0.74
23:B0:1856:U:H3'	23:B0:3865:A:N7	2.02	0.74
1:AA:1255:G:C1'	1:AA:1259:C:H1'	2.13	0.74
14:AL:24:VAL:HG13	14:AL:98:TYR:HE2	1.50	0.74
23:B0:1029:C:H2'	23:B0:1030:U:H5''	1.68	0.74
23:B0:1915:A:H62	23:B0:1951:G:H21	1.35	0.74
23:B0:3128:G:O3'	23:B0:3174:C:H4'	1.86	0.74
15:AM:93:ARG:HD3	23:B0:900:U:C3'	2.18	0.74
1:AA:9:G:O5'	7:AE:126:ARG:CD	2.35	0.74
1:AA:66:G:C5'	1:AA:199:G:O2'	2.34	0.74
1:AA:1497:G:H21	1:AA:1519:A:H1'	1.52	0.74
2:AW:76:A:C1'	23:B0:2562:G:H22	2.01	0.74
4:AB:95:GLN:O	4:AB:96:ARG:HD2	1.88	0.74
23:B0:221:A:H62	23:B0:231:G:H21	1.34	0.74
1:AA:188:C:H3'	22:AT:105:SER:OG	1.88	0.74
1:AA:323:U:C3'	22:AT:22:ARG:HB2	2.18	0.74
1:AA:922:G:N3	1:AA:1396:A:N3	2.35	0.74
1:AA:1343:G:H4'	11:AI:122:ALA:HB3	1.70	0.74
4:AB:23:ARG:HH11	4:AB:24:TRP:N	1.86	0.74
14:AL:27:LEU:O	14:AL:29:GLY:N	2.21	0.74
1:AA:476:U:H2'	1:AA:477:G:C5'	2.16	0.74
1:AA:1261:A:O2'	1:AA:1283:G:C5'	2.35	0.74
1:AA:1416:G:OP1	1:AA:1417:G:OP2	2.05	0.74
4:AB:91:PRO:HG3	4:AB:154:LEU:HB2	1.69	0.74
12:AJ:96:ILE:HG22	12:AJ:97:GLU:H	1.52	0.74
23:B0:67:G:N2	23:B0:72:A:H2'	2.02	0.74
1:AA:188:C:C3'	22:AT:105:SER:OG	2.35	0.74
1:AA:319:G:H2'	1:AA:1434:A:H2	1.52	0.74
1:AA:827:U:HO3'	1:AA:828:A:P	2.07	0.74
1:AA:1075:C:OP1	4:AB:179:LYS:CD	2.35	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AH:91:ARG:HG2	14:AL:7:ILE:HG21	1.70	0.74
15:AM:3:ARG:HA	15:AM:8:GLU:O	1.86	0.74
21:AS:16:LEU:O	21:AS:19:VAL:HG12	1.87	0.74
21:AS:17:GLU:O	21:AS:21:GLU:HG3	1.87	0.74
23:B0:1856:U:C6	23:B0:3865:A:C5	2.75	0.74
1:AA:297:G:C4'	1:AA:557:G:H4'	2.17	0.74
1:AA:578:C:O2'	1:AA:728:A:H1'	1.88	0.74
1:AA:923:A:C4'	1:AA:1398:A:C5	2.71	0.74
1:AA:1393:U:O2'	1:AA:1394:A:H2'	1.88	0.74
1:AA:1409:C:C2'	1:AA:1410:G:H5'	2.18	0.74
4:AB:72:GLY:HA3	4:AB:81:VAL:HG21	1.69	0.74
4:AB:178:ARG:HG3	4:AB:178:ARG:NH1	1.92	0.74
6:AD:64:LEU:HD12	6:AD:75:PHE:HZ	1.53	0.74
8:AF:69:GLU:HA	8:AF:72:VAL:HG23	1.70	0.74
1:AA:112:G:H21	1:AA:354:G:C5'	2.01	0.73
1:AA:161:A:H2'	1:AA:162:A:C8	2.23	0.73
1:AA:319:G:O2'	1:AA:1434:A:C2	2.41	0.73
9:AG:23:VAL:HG12	9:AG:27:ILE:HD11	1.70	0.73
10:AH:108:GLY:HA3	10:AH:138:TRP:HB3	1.70	0.73
23:B0:2636:A:H62	23:B0:2643:G:H21	1.36	0.73
1:AA:1321:C:N4	21:AS:37:ARG:NH1	2.35	0.73
1:AA:1434:A:OP2	1:AA:1435:G:N7	2.19	0.73
2:AW:76:A:C4	23:B0:2486:C:H1'	2.20	0.73
23:B0:109:A:C3'	23:B0:110:U:H5''	2.18	0.73
1:AA:353:A:H8	1:AA:353:A:H5'	1.53	0.73
1:AA:792:A:H4'	1:AA:793:U:H5''	1.68	0.73
1:AA:1256:A:N3	1:AA:1258:G:C6	2.57	0.73
1:AA:1279:A:H5''	1:AA:1280:A:OP1	1.88	0.73
1:AA:266:G:P	19:AQ:66:SER:HA	2.27	0.73
1:AA:538:G:C5'	14:AL:114:LYS:HD3	2.18	0.73
1:AA:848:G:O3'	1:AA:849:C:O5'	2.05	0.73
1:AA:893:C:C2	1:AA:894:G:C8	2.76	0.73
1:AA:1261:A:H4'	1:AA:1283:G:C3'	2.18	0.73
2:AV:76:A:H5''	23:B0:2564:U:C5	2.10	0.73
11:AI:44:VAL:HG13	11:AI:51:ARG:HH22	1.52	0.73
1:AA:249:U:HO3'	1:AA:250:A:P	2.10	0.73
1:AA:406:G:C2	1:AA:437:U:C2	2.77	0.73
1:AA:522:C:OP1	14:AL:120:TYR:CZ	2.41	0.73
1:AA:1270:C:O3'	1:AA:1314:C:C5'	2.37	0.73
1:AA:1270:C:O3'	1:AA:1314:C:H4'	1.88	0.73
23:B0:891:A:C6	23:B0:892:A:N6	2.56	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1912:G:O3'	23:B0:1913:G:C3'	2.36	0.73
23:B0:2522:G:H21	23:B0:2625:U:H5''	1.53	0.73
1:AA:130:A:C8	19:AQ:63:ARG:CG	2.72	0.73
1:AA:406:G:C8	1:AA:496:A:C4	2.76	0.73
1:AA:828:A:H2	4:AB:26:PRO:HG2	1.44	0.73
5:AC:59:ARG:H	12:AJ:92:THR:HG22	1.54	0.73
14:AL:27:LEU:HG	14:AL:28:LYS:H	1.53	0.73
1:AA:265:G:H1'	19:AQ:64:PRO:HB3	1.69	0.73
1:AA:292:G:C1'	1:AA:608:A:N6	2.50	0.73
1:AA:406:G:C5	1:AA:496:A:C8	2.77	0.73
1:AA:588:G:N9	1:AA:753:A:C2	2.56	0.73
4:AB:25:ASN:HD22	4:AB:25:ASN:C	1.97	0.73
11:AI:4:TYR:CE2	11:AI:88:TYR:HA	2.24	0.73
1:AA:262:A:H5''	22:AT:74:LYS:HB2	1.68	0.73
1:AA:476:U:C1'	1:AA:477:G:H5'	2.19	0.73
1:AA:1060:C:O2'	12:AJ:56:HIS:CG	2.41	0.73
5:AC:23:TYR:HE1	12:AJ:67:THR:HG23	1.52	0.73
12:AJ:62:HIS:CE1	16:AN:61:TRP:CZ3	2.77	0.73
1:AA:246:A:O3'	1:AA:247:G:O4'	2.06	0.73
1:AA:254:G:C5'	19:AQ:18:THR:HG21	2.19	0.73
1:AA:434:U:H2'	1:AA:435:C:C6	2.24	0.73
1:AA:922:G:C5	1:AA:1396:A:N1	2.56	0.73
1:AA:928:G:O3'	1:AA:1533:C:N4	2.21	0.73
1:AA:1064:G:H4'	1:AA:1065:U:C5'	2.18	0.73
12:AJ:45:ARG:CZ	16:AN:36:PHE:CE2	2.72	0.73
20:AR:45:SER:C	20:AR:47:THR:H	1.97	0.73
1:AA:27:G:C8	1:AA:557:G:N2	2.57	0.73
1:AA:397:A:N7	1:AA:547:A:C1'	2.39	0.73
1:AA:653:A:C1'	10:AH:56:LYS:HG2	2.19	0.73
12:AJ:61:GLU:OE2	16:AN:58:LYS:HD3	1.88	0.73
19:AQ:104:LYS:HG2	23:B0:726:G:C5	2.24	0.73
20:AR:26:LEU:HD12	20:AR:27:GLY:H	1.53	0.73
1:AA:391:G:H5'	18:AP:28:ARG:HH22	1.52	0.72
1:AA:1112:C:N3	5:AC:178:LEU:HB3	2.02	0.72
14:AL:48:PRO:HG2	14:AL:49:ASN:H	1.52	0.72
1:AA:130:A:C2	1:AA:263:A:C2	2.77	0.72
1:AA:735:C:H1'	20:AR:75:ILE:HD11	1.71	0.72
1:AA:1434:A:C3'	1:AA:1435:G:C5'	2.66	0.72
2:AV:32:C:OP2	11:AI:127:LYS:HE3	1.89	0.72
6:AD:205:GLU:CD	7:AE:107:ARG:CZ	2.62	0.72
10:AH:1:MET:HG2	10:AH:2:LEU:N	2.04	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AO:33:THR:HG23	17:AO:63:ARG:NH1	2.03	0.72
19:AQ:104:LYS:NZ	23:B0:730:C:N4	2.37	0.72
19:AQ:104:LYS:HB2	23:B0:726:G:C4	2.24	0.72
23:B0:3118:U:N3	23:B0:3149:G:C5'	2.51	0.72
1:AA:69:G:H1'	1:AA:102:G:C2	2.24	0.72
1:AA:819:A:C5	1:AA:1529:G:C2	2.77	0.72
1:AA:835:U:P	20:AR:64:ARG:HH21	2.11	0.72
1:AA:1483:A:N7	1:AA:1484:C:C4	2.57	0.72
6:AD:3:ARG:HH22	6:AD:74:GLN:CD	1.98	0.72
23:B0:552:C:H2'	23:B0:553:C:H4'	1.72	0.72
23:B0:1119:U:H2'	23:B0:1120:C:O4'	1.90	0.72
23:B0:1908:C:H2'	23:B0:1909:U:H4'	1.71	0.72
1:AA:104:G:O4'	1:AA:172:A:H2	1.72	0.72
1:AA:588:G:C4	1:AA:753:A:C5	2.77	0.72
1:AA:1503:A:C4	1:AA:1531:A:C2	2.77	0.72
6:AD:30:LYS:C	6:AD:32:ALA:H	1.97	0.72
19:AQ:59:ILE:HG23	19:AQ:71:PHE:HB3	1.69	0.72
23:B0:367:G:C2'	23:B0:368:A:H5''	2.19	0.72
23:B0:951:G:H2'	23:B0:952:A:H5''	1.70	0.72
1:AA:190:A:N6	22:AT:104:LEU:O	2.11	0.72
1:AA:685:G:OP1	13:AK:12:ARG:NH2	2.23	0.72
1:AA:748:C:H1'	1:AA:749:C:H5	1.53	0.72
1:AA:1111:A:N1	5:AC:177:THR:CB	2.52	0.72
1:AA:1409:C:C2'	1:AA:1410:G:C5'	2.67	0.72
2:AV:32:C:P	11:AI:127:LYS:HE3	2.29	0.72
7:AE:43:LEU:HB2	7:AE:136:MET:HE2	1.71	0.72
8:AF:26:ILE:HG21	8:AF:63:TYR:HE2	1.54	0.72
10:AH:1:MET:HG2	10:AH:2:LEU:H	1.54	0.72
1:AA:570:G:O2'	1:AA:819:A:H2'	1.89	0.72
1:AA:1488:G:H2'	1:AA:1489:G:C8	2.24	0.72
22:AT:10:LEU:O	22:AT:12:ALA:N	2.22	0.72
23:B0:3877:A:H2	23:B0:1861:G:N2	1.86	0.72
23:B0:2236:U:H2'	23:B0:2237:C:H5''	1.72	0.72
1:AA:132:C:H4'	22:AT:74:LYS:HD2	1.71	0.72
1:AA:216:C:O4'	1:AA:466:A:N1	2.22	0.72
1:AA:319:G:H4'	1:AA:1468:A:O4'	1.89	0.72
1:AA:501:C:H2'	1:AA:502:G:H8	1.53	0.72
1:AA:556:C:N3	1:AA:557:G:N7	2.38	0.72
1:AA:864:A:C2	1:AA:917:G:O2'	2.40	0.72
1:AA:914:A:C2'	1:AA:915:A:C4'	2.66	0.72
2:AW:71:G:H3'	23:B0:1925:C:C2'	2.19	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AL:24:VAL:HG13	14:AL:98:TYR:CE2	2.23	0.72
1:AA:9:G:OP2	7:AE:126:ARG:NH2	2.23	0.72
1:AA:27:G:N1	1:AA:557:G:C4	2.58	0.72
1:AA:38:G:C4'	1:AA:547:A:C5	2.68	0.72
1:AA:779:C:C4'	13:AK:120:ARG:CB	2.67	0.72
1:AA:1398:A:C4'	1:AA:1399:C:P	2.60	0.72
1:AA:1483:A:N9	1:AA:1484:C:C5	2.58	0.72
23:B0:762:A:H5'	23:B0:1284:G:H1'	1.71	0.72
1:AA:556:C:HO2'	1:AA:557:G:H5'	1.49	0.72
1:AA:1014:A:C2	1:AA:1219:U:H1'	2.25	0.72
1:AA:1281:U:H5'	1:AA:1282:C:C5	2.25	0.72
1:AA:1351:U:H2'	1:AA:1352:C:H6	1.55	0.72
19:AQ:96:GLN:NE2	23:B0:725:C:H1'	2.05	0.72
1:AA:815:A:N9	1:AA:1527:C:C1'	2.48	0.72
1:AA:1182:G:HO2'	1:AA:1183:A:P	2.00	0.72
1:AA:1256:A:C4'	1:AA:1258:G:C4	2.73	0.72
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.24	0.72
2:AV:75:C:N4	23:B0:2230:G:N1	2.37	0.72
5:AC:13:GLY:HA3	16:AN:57:ARG:HH21	1.54	0.72
23:B0:9:U:H3	23:B0:2608:A:H62	1.37	0.72
23:B0:2426:G:H5'	23:B0:2480:C:H41	1.55	0.72
1:AA:376:G:OP2	18:AP:67:THR:CG2	2.28	0.71
1:AA:403:C:N3	1:AA:404:U:C5	2.58	0.71
1:AA:778:G:O2'	13:AK:120:ARG:O	2.07	0.71
1:AA:1111:A:C6	5:AC:177:THR:HA	2.25	0.71
23:B0:1141:U:N3	23:B0:2008:C:H5''	2.04	0.71
23:B0:1966:C:H4'	23:B0:2585:C:H4'	1.71	0.71
1:AA:46:G:O2'	1:AA:365:U:O2'	2.07	0.71
1:AA:456:A:C6	1:AA:477:G:C1'	2.61	0.71
5:AC:23:TYR:HA	12:AJ:11:PHE:CE1	2.24	0.71
12:AJ:39:PRO:O	12:AJ:40:LEU:HB2	1.89	0.71
12:AJ:62:HIS:O	16:AN:58:LYS:C	2.33	0.71
13:AK:84:VAL:HG11	13:AK:95:ILE:HD11	1.70	0.71
19:AQ:45:HIS:HB2	19:AQ:65:ILE:HD13	1.71	0.71
19:AQ:101:ARG:NH1	23:B0:731:A:H2	1.84	0.71
23:B0:688:A:H62	23:B0:816:U:H3	1.38	0.71
23:B0:3123:G:O2'	55:B5:166:GLN:CA	2.38	0.71
23:B0:2503:G:C3'	23:B0:2504:G:H5''	2.21	0.71
1:AA:6:G:N3	7:AE:119:LEU:CD1	2.28	0.71
1:AA:21:G:O4'	1:AA:914:A:N6	2.22	0.71
1:AA:367:U:OP1	1:AA:395:C:O2	2.07	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:830:G:OP1	4:AB:22:LYS:HE2	1.90	0.71
1:AA:1065:U:H4'	1:AA:1066:C:O5'	1.89	0.71
1:AA:1238:A:H3'	1:AA:1239:A:P	2.30	0.71
4:AB:116:GLU:HG2	4:AB:153:ARG:NH1	2.04	0.71
11:AI:97:LYS:HG2	11:AI:102:LEU:HD12	1.72	0.71
23:B0:2503:G:H3'	23:B0:2504:G:H5''	1.72	0.71
1:AA:69:G:H2'	1:AA:101:A:N1	2.06	0.71
1:AA:293:G:H5'	1:AA:609:A:N1	2.01	0.71
1:AA:332:G:P	22:AT:10:LEU:HB2	2.13	0.71
1:AA:406:G:N9	1:AA:496:A:C6	2.58	0.71
1:AA:923:A:O2'	1:AA:1398:A:C3'	2.38	0.71
1:AA:977:A:H2'	1:AA:978:A:H5''	1.72	0.71
1:AA:1416:G:C5	1:AA:1417:G:H1'	2.25	0.71
1:AA:1458:G:OP2	1:AA:1459:C:C6	2.36	0.71
1:AA:1499:A:O2'	1:AA:1520:G:H5''	1.91	0.71
2:AW:76:A:H2	23:B0:2486:C:O2	1.71	0.71
20:AR:33:ASP:OD2	20:AR:36:ASN:HB2	1.90	0.71
23:B0:202:A:H2'	23:B0:203:G:O4'	1.89	0.71
1:AA:265:G:H5''	19:AQ:65:ILE:C	2.14	0.71
1:AA:893:C:N4	1:AA:894:G:C6	2.59	0.71
23:B0:1487:C:H2'	23:B0:1488:G:H8	1.56	0.71
23:B0:3866:A:C2'	55:B5:194:ALA:CA	2.67	0.71
1:AA:37:U:C1'	1:AA:547:A:N1	2.54	0.71
1:AA:236:G:H5''	19:AQ:42:TYR:OH	1.91	0.71
1:AA:265:G:C3'	19:AQ:65:ILE:O	2.38	0.71
1:AA:1256:A:C4'	1:AA:1258:G:N9	2.53	0.71
11:AI:65:VAL:HG21	11:AI:73:GLN:HB3	1.72	0.71
23:B0:3149:G:C3'	23:B0:3150:C:P	2.78	0.71
1:AA:46:G:C5	1:AA:366:C:C4	2.79	0.71
1:AA:278:G:H21	1:AA:279:A:N6	1.89	0.71
1:AA:829:G:HO2'	4:AB:24:TRP:HE1	1.37	0.71
1:AA:1014:A:C4	21:AS:34:TRP:CD2	2.79	0.71
1:AA:1112:C:N3	5:AC:178:LEU:CB	2.54	0.71
1:AA:1411:C:H2'	1:AA:1412:C:C6	2.26	0.71
2:AW:75:C:O2'	23:B0:2486:C:C4'	2.38	0.71
1:AA:130:A:C2	1:AA:264:U:C5	2.78	0.71
1:AA:197:A:H4'	1:AA:198:G:O5'	1.90	0.71
1:AA:262:A:H5'	22:AT:74:LYS:CG	2.20	0.71
1:AA:392:G:H2'	1:AA:393:A:H8	1.55	0.71
1:AA:914:A:H2'	1:AA:915:A:C4'	2.19	0.71
1:AA:1394:A:C6	1:AA:1501:C:C5'	2.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1410:G:C2	1:AA:1491:G:C2	2.78	0.71
1:AA:1489:G:C3'	1:AA:1490:C:H5''	2.21	0.71
12:AJ:62:HIS:C	16:AN:59:ALA:N	2.38	0.71
23:B0:57:G:H2'	23:B0:58:C:H5''	1.73	0.71
23:B0:2274:C:H2'	23:B0:2275:U:H5'	1.73	0.71
1:AA:263:A:P	22:AT:75:ASN:CB	2.66	0.71
1:AA:588:G:N7	1:AA:753:A:C4	2.59	0.71
1:AA:815:A:C4	1:AA:1527:C:O2	2.43	0.71
1:AA:815:A:C6	1:AA:1508:G:N2	2.59	0.71
1:AA:1190:G:HO2'	1:AA:1191:A:P	2.12	0.71
1:AA:1239:A:C2'	1:AA:1298:C:H42	2.03	0.71
1:AA:1430:C:H5'	23:B0:1721:G:C4'	2.21	0.71
2:AW:76:A:H2'	23:B0:2562:G:N2	2.02	0.71
12:AJ:45:ARG:NH1	16:AN:36:PHE:CE2	2.58	0.71
1:AA:195:A:O2'	1:AA:222:U:O2'	2.06	0.71
1:AA:223:U:H5''	22:AT:68:LYS:NZ	2.05	0.71
1:AA:651:C:C5	1:AA:752:G:O2'	2.43	0.71
1:AA:1473:A:C5'	23:B0:1719:G:C4'	2.65	0.71
1:AA:1491:G:H2'	1:AA:1492:A:C8	2.26	0.71
2:AW:75:C:O2'	23:B0:2486:C:O3'	2.08	0.71
6:AD:201:GLN:HE22	7:AE:99:GLY:HA2	1.56	0.71
11:AI:111:ARG:HD3	11:AI:112:LYS:N	2.06	0.71
12:AJ:65:LEU:O	12:AJ:65:LEU:HD23	1.91	0.71
15:AM:40:ASN:HB3	15:AM:43:THR:HG23	1.73	0.71
23:B0:1182:U:C2'	23:B0:1183:C:H5''	2.20	0.71
23:B0:1746:A:H2'	23:B0:1747:G:H5'	1.72	0.71
1:AA:107:G:C2'	1:AA:108:G:H5'	2.21	0.70
1:AA:254:G:N2	19:AQ:16:GLN:CD	2.49	0.70
1:AA:406:G:C6	1:AA:496:A:N7	2.59	0.70
1:AA:994:A:O2'	16:AN:8:GLU:HA	1.91	0.70
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.26	0.70
1:AA:1499:A:C1'	1:AA:1520:G:H5''	2.18	0.70
5:AC:195:VAL:C	5:AC:196:LEU:HD23	2.15	0.70
12:AJ:35:SER:HB2	12:AJ:72:VAL:O	1.90	0.70
12:AJ:78:ASN:O	12:AJ:80:LYS:N	2.24	0.70
1:AA:128:G:P	19:AQ:2:PRO:N	2.63	0.70
1:AA:254:G:H4'	19:AQ:18:THR:CG2	2.21	0.70
1:AA:779:C:O2'	13:AK:120:ARG:HD2	1.87	0.70
1:AA:1148:U:H2'	1:AA:1149:C:O4'	1.90	0.70
7:AE:102:ALA:HB1	7:AE:120:THR:HG21	1.73	0.70
20:AR:39:VAL:O	20:AR:42:ARG:HB2	1.90	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:3877:A:C8	23:B0:1861:G:N9	2.59	0.70
1:AA:131:C:OP1	1:AA:263:A:H5''	1.88	0.70
1:AA:265:G:C5'	19:AQ:65:ILE:C	2.50	0.70
1:AA:406:G:C4	1:AA:496:A:C6	2.79	0.70
1:AA:606:G:H3'	1:AA:607:A:C5'	2.21	0.70
1:AA:818:G:C3'	1:AA:819:A:H5''	2.21	0.70
1:AA:1413:A:H2	1:AA:1487:G:H22	1.39	0.70
1:AA:1483:A:C8	1:AA:1484:C:C5	2.79	0.70
1:AA:1484:C:C5'	23:B0:1943:A:O2'	2.39	0.70
21:AS:70:LYS:O	21:AS:72:GLY:N	2.24	0.70
23:B0:1002:C:H5'	23:B0:1200:G:OP2	1.90	0.70
23:B0:3874:C:C5	23:B0:3875:A:N7	2.59	0.70
23:B0:3098:U:C5	23:B0:3099:U:O4	2.44	0.70
23:B0:2680:U:H3'	23:B0:2681:A:H5'	1.72	0.70
1:AA:46:G:H2'	1:AA:366:C:H5	1.56	0.70
1:AA:419:C:H5''	1:AA:513:C:O4'	1.90	0.70
1:AA:438:G:H4'	1:AA:439:A:OP1	1.90	0.70
1:AA:499:A:H1'	1:AA:500:G:C4'	2.21	0.70
1:AA:1015:A:H1'	1:AA:1219:U:H5''	1.65	0.70
1:AA:1168:A:H2'	1:AA:1169:A:C8	2.27	0.70
1:AA:1309:G:P	15:AM:88:ARG:HH21	2.14	0.70
1:AA:1416:G:H2'	1:AA:1417:G:C5'	2.18	0.70
15:AM:40:ASN:HD22	15:AM:41:PRO:HD2	1.55	0.70
18:AP:20:VAL:HG11	18:AP:32:TYR:HB3	1.74	0.70
23:B0:1073:G:H1'	23:B0:1099:A:C2	2.27	0.70
1:AA:249:U:O3'	1:AA:250:A:P	2.46	0.70
1:AA:1014:A:N1	21:AS:34:TRP:NE1	2.40	0.70
1:AA:1485:U:P	23:B0:1943:A:O2'	2.49	0.70
1:AA:1485:U:P	23:B0:1944:C:H5'	2.32	0.70
17:AO:17:ARG:NH1	17:AO:77:ARG:NH1	2.40	0.70
21:AS:15:LEU:HD12	21:AS:16:LEU:N	2.06	0.70
1:AA:13:U:N3	1:AA:915:A:C8	2.60	0.70
1:AA:293:G:C4'	1:AA:609:A:H2	1.78	0.70
1:AA:588:G:H1'	1:AA:753:A:N1	2.07	0.70
1:AA:765:G:O3'	1:AA:766:A:P	2.50	0.70
1:AA:1342:C:H4'	11:AI:125:TYR:CE1	2.25	0.70
5:AC:52:LEU:HD21	5:AC:118:GLN:NE2	2.07	0.70
6:AD:28:SER:O	6:AD:30:LYS:N	2.25	0.70
8:AF:10:LEU:HD11	8:AF:59:TYR:HD2	1.54	0.70
23:B0:874:A:H62	23:B0:928:G:H21	1.39	0.70
1:AA:115:G:N2	1:AA:116:A:H62	1.89	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:223:U:H5''	22:AT:68:LYS:HZ2	1.56	0.70
1:AA:352:C:H4'	1:AA:354:G:OP1	1.91	0.70
1:AA:1034:G:C3'	1:AA:1035:A:P	2.80	0.70
1:AA:1151:A:C5'	12:AJ:41:PRO:HA	2.22	0.70
5:AC:6:HIS:CD2	5:AC:8:ILE:HB	2.27	0.70
23:B0:104:C:C2'	23:B0:105:G:H5''	2.22	0.70
1:AA:477:G:H2'	1:AA:478:A:H8	1.56	0.70
1:AA:893:C:H2'	1:AA:894:G:O4'	1.90	0.70
6:AD:150:GLU:CG	6:AD:153:ARG:HH21	2.02	0.70
23:B0:3101:G:H2'	23:B0:3102:G:O4'	1.90	0.70
1:AA:38:G:H4'	1:AA:547:A:N6	1.98	0.70
1:AA:112:G:H21	1:AA:354:G:C4'	2.05	0.70
1:AA:319:G:C2'	1:AA:1434:A:C2	2.75	0.70
1:AA:538:G:C5'	14:AL:114:LYS:CG	2.69	0.70
1:AA:1256:A:H4'	1:AA:1258:G:N9	2.06	0.70
1:AA:1342:C:H1'	11:AI:124:GLN:HB2	1.73	0.70
6:AD:88:VAL:HG22	7:AE:97:GLY:CA	2.21	0.70
11:AI:97:LYS:CG	11:AI:102:LEU:HD12	2.22	0.70
12:AJ:46:ARG:HH11	12:AJ:64:GLU:CB	2.05	0.70
15:AM:6:GLY:O	15:AM:7:VAL:HG22	1.91	0.70
19:AQ:24:GLU:OE2	19:AQ:37:LYS:HD3	1.92	0.70
1:AA:391:G:C5'	18:AP:28:ARG:HH22	2.05	0.70
1:AA:819:A:N7	1:AA:1529:G:N2	2.40	0.70
1:AA:1141:C:H2'	1:AA:1142:G:H8	1.57	0.70
1:AA:1181:G:H4'	1:AA:1184:G:O4'	1.92	0.70
1:AA:1255:G:N2	1:AA:1276:G:N2	2.39	0.70
1:AA:1319:A:H5''	21:AS:5:LEU:CD2	2.22	0.70
12:AJ:61:GLU:HG3	16:AN:58:LYS:HZ2	0.71	0.70
17:AO:39:LEU:HD13	17:AO:56:LEU:HB2	1.74	0.70
23:B0:3866:A:HO2'	55:B5:194:ALA:CA	2.03	0.70
23:B0:3128:G:H5'	23:B0:3174:C:O2'	1.91	0.70
1:AA:315:A:H5''	1:AA:317:G:OP2	1.91	0.69
1:AA:375:U:O2	18:AP:28:ARG:NE	2.24	0.69
15:AM:84:ILE:HG21	21:AS:65:ASN:ND2	2.01	0.69
21:AS:5:LEU:O	21:AS:6:LYS:HB2	1.92	0.69
22:AT:45:GLN:HA	22:AT:91:LEU:HD22	1.74	0.69
1:AA:21:G:H1'	1:AA:914:A:C6	2.19	0.69
1:AA:344:A:H4'	1:AA:345:C:OP2	1.91	0.69
1:AA:499:A:O2'	1:AA:500:G:C8	2.44	0.69
1:AA:1137:C:H4'	1:AA:1138:G:N2	2.06	0.69
1:AA:1320:C:H41	21:AS:37:ARG:CD	2.02	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1430:C:H4'	23:B0:1721:G:C5'	2.22	0.69
7:AE:151:LEU:CD1	10:AH:77:GLU:OE2	2.40	0.69
12:AJ:32:ALA:HB2	12:AJ:76:ASN:HD22	1.57	0.69
23:B0:814:G:H3'	23:B0:815:A:H5'	1.73	0.69
23:B0:892:A:H5'	23:B0:892:A:C8	2.24	0.69
1:AA:130:A:OP1	19:AQ:63:ARG:HB3	1.90	0.69
1:AA:837:G:O3'	1:AA:838:C:O5'	2.09	0.69
1:AA:923:A:O4'	1:AA:1398:A:N3	2.05	0.69
14:AL:126:LYS:HD2	14:AL:126:LYS:N	2.08	0.69
15:AM:94:ARG:HH22	21:AS:81:ARG:CZ	2.05	0.69
23:B0:3146:A:H4'	23:B0:3147:C:OP2	1.92	0.69
23:B0:2607:C:H3'	23:B0:2608:A:C5'	2.23	0.69
1:AA:186:C:O2	22:AT:60:GLU:OE1	2.09	0.69
1:AA:264:U:O2'	19:AQ:63:ARG:CD	2.37	0.69
1:AA:837:G:C2'	1:AA:838:C:C6	2.75	0.69
1:AA:905:U:C5	1:AA:906:G:C6	2.81	0.69
1:AA:1190:G:C3'	5:AC:3:ASN:HB2	2.22	0.69
2:AV:34:G:H8	2:AV:34:G:OP1	1.75	0.69
6:AD:70:ILE:HD11	6:AD:100:ARG:CZ	2.21	0.69
1:AA:115:G:O3'	1:AA:116:A:OP1	2.08	0.69
1:AA:187:G:O2'	22:AT:104:LEU:CA	2.40	0.69
1:AA:216:C:C4'	1:AA:466:A:C6	2.65	0.69
1:AA:522:C:C5'	14:AL:120:TYR:OH	2.39	0.69
1:AA:994:A:O3'	16:AN:11:LYS:HE2	1.92	0.69
1:AA:1409:C:C4	1:AA:1410:G:N7	2.60	0.69
2:AV:75:C:O2'	23:B0:2047:C:O5'	2.10	0.69
23:B0:1679:U:C3'	23:B0:1680:U:H5''	2.22	0.69
23:B0:1774:A:H1'	23:B0:2586:G:H21	1.58	0.69
1:AA:131:C:OP1	1:AA:263:A:H5'	1.89	0.69
1:AA:186:C:H1'	22:AT:60:GLU:CD	2.16	0.69
1:AA:248:C:H4'	1:AA:283:C:O2'	1.92	0.69
1:AA:254:G:H5''	19:AQ:18:THR:HG21	1.73	0.69
1:AA:377:G:OP1	18:AP:3:LYS:CE	2.39	0.69
1:AA:692:U:OP1	13:AK:124:LYS:HE3	1.92	0.69
1:AA:1255:G:H1'	1:AA:1259:C:C1'	2.14	0.69
5:AC:7:PRO:HG2	5:AC:184:TYR:HB2	1.73	0.69
23:B0:226:C:O2'	23:B0:227:G:H8	1.73	0.69
23:B0:1791:C:O2'	23:B0:1793:A:H5'	1.93	0.69
1:AA:323:U:C5'	22:AT:23:ARG:H	2.02	0.69
1:AA:675:A:C2	13:AK:116:HIS:HB2	2.25	0.69
1:AA:1149:C:O2'	1:AA:1280:A:N1	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1182:G:H4'	1:AA:1183:A:O5'	1.93	0.69
2:AV:12:U:OP1	23:B0:1891:C:Cl'	2.40	0.69
2:AW:76:A:C2	23:B0:2562:G:N3	2.61	0.69
5:AC:38:ARG:HH11	5:AC:38:ARG:HG3	1.58	0.69
15:AM:81:LEU:O	15:AM:86:CYS:HB3	1.92	0.69
23:B0:1004:A:H2'	23:B0:1005:U:H5''	1.74	0.69
23:B0:3874:C:C4	23:B0:3875:A:C8	2.81	0.69
23:B0:3108:G:O2'	23:B0:3109:U:OP2	2.09	0.69
23:B0:2495:G:H2'	23:B0:2496:C:C6	2.27	0.69
1:AA:19:C:C2'	1:AA:916:G:N2	2.54	0.69
1:AA:187:G:N3	22:AT:105:SER:HB2	2.08	0.69
1:AA:232:G:N2	1:AA:263:A:N3	2.24	0.69
1:AA:246:A:O3'	1:AA:247:G:H4'	1.92	0.69
1:AA:382:A:H2'	1:AA:383:A:C8	2.28	0.69
1:AA:427:U:H1'	1:AA:541:G:OP1	1.92	0.69
1:AA:828:A:H2	4:AB:26:PRO:CG	2.01	0.69
1:AA:954:G:H5''	15:AM:120:LYS:HD3	1.73	0.69
1:AA:1014:A:H5''	21:AS:14:HIS:CD2	2.19	0.69
1:AA:1061:G:H5''	12:AJ:56:HIS:HB3	1.75	0.69
1:AA:1337:G:H5''	1:AA:1338:G:OP1	1.93	0.69
4:AB:22:LYS:HD2	4:AB:35:GLU:OE1	1.93	0.69
5:AC:130:VAL:HG21	5:AC:157:ILE:HG23	1.75	0.69
6:AD:151:LYS:N	6:AD:151:LYS:HD2	2.08	0.69
12:AJ:30:SER:O	12:AJ:78:ASN:HB2	1.92	0.69
19:AQ:104:LYS:HE3	23:B0:729:A:C6	2.27	0.69
23:B0:1077:U:O2'	23:B0:1079:G:N7	2.21	0.69
23:B0:1428:G:H5''	23:B0:1429:A:H5'	1.73	0.69
23:B0:1749:G:O6	23:B0:2674:C:H4'	1.92	0.69
23:B0:1807:A:H4'	23:B0:1808:C:C5'	2.22	0.69
23:B0:2380:U:H2'	23:B0:2381:A:H5'	1.75	0.69
23:B0:2617:G:H22	23:B0:2755:A:H2'	1.57	0.69
1:AA:815:A:H62	1:AA:1508:G:H21	1.36	0.69
1:AA:939:G:H2'	1:AA:940:C:C6	2.28	0.69
1:AA:1270:C:O3'	1:AA:1314:C:H5''	1.93	0.69
6:AD:64:LEU:HD12	6:AD:75:PHE:CZ	2.28	0.69
15:AM:81:LEU:H	15:AM:81:LEU:HD23	1.56	0.69
23:B0:588:G:H4'	23:B0:2001:G:H4'	1.73	0.69
23:B0:1223:G:H21	23:B0:1225:G:H21	1.40	0.69
23:B0:2245:A:H5'	23:B0:2246:A:C8	2.27	0.69
1:AA:22:G:H21	1:AA:913:A:C2'	1.96	0.69
1:AA:401:C:H4'	1:AA:622:A:H1'	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:676:A:C4'	13:AK:115:PRO:HA	2.22	0.69
1:AA:905:U:C5	1:AA:906:G:N7	2.61	0.69
1:AA:1194:U:H5''	7:AE:22:GLY:CA	2.23	0.69
1:AA:1394:A:N1	1:AA:1501:C:H5''	2.06	0.69
8:AF:100:ASN:ND2	20:AR:23:LYS:HG2	2.08	0.69
12:AJ:30:SER:HB2	12:AJ:80:LYS:HB3	1.74	0.69
14:AL:47:LYS:HB2	14:AL:48:PRO:CD	2.23	0.69
23:B0:3867:G:C5'	55:B5:193:LYS:CA	2.72	0.69
1:AA:131:C:O2'	1:AA:262:A:C2'	2.40	0.68
1:AA:179:A:N6	1:AA:196:A:OP2	2.23	0.68
1:AA:377:G:OP1	18:AP:3:LYS:HD2	1.93	0.68
1:AA:496:A:H4'	1:AA:497:A:OP1	1.91	0.68
5:AC:180:ALA:O	5:AC:181:ASN:HB3	1.92	0.68
6:AD:199:ASN:ND2	6:AD:201:GLN:HB2	2.08	0.68
15:AM:11:ARG:HG2	15:AM:12:ASN:N	2.07	0.68
16:AN:22:THR:HB	16:AN:33:VAL:HG21	1.73	0.68
21:AS:41:VAL:HG23	21:AS:43:GLU:HG2	1.75	0.68
1:AA:256:U:H5''	19:AQ:17:LYS:NZ	1.99	0.68
1:AA:922:G:C4	1:AA:1396:A:N1	2.62	0.68
6:AD:64:LEU:HD23	6:AD:198:VAL:HG21	1.75	0.68
1:AA:943:U:C1'	11:AI:124:GLN:NE2	2.45	0.68
1:AA:1344:C:H4'	11:AI:120:ARG:HB3	1.74	0.68
1:AA:1484:C:H4'	23:B0:1943:A:C2'	2.23	0.68
2:AV:11:C:H5'	23:B0:1892:C:H4'	1.74	0.68
6:AD:157:LEU:CD2	6:AD:161:ASN:HD21	2.05	0.68
14:AL:25:PRO:C	14:AL:27:LEU:N	2.52	0.68
14:AL:47:LYS:CB	14:AL:48:PRO:CD	2.71	0.68
14:AL:55:VAL:HG12	14:AL:56:ALA:H	1.57	0.68
23:B0:1953:A:H1'	23:B0:1955:G:C1'	2.23	0.68
23:B0:2624:G:H4'	23:B0:2712:G:H2'	1.75	0.68
1:AA:216:C:C4'	1:AA:466:A:N1	2.57	0.68
1:AA:216:C:C4'	1:AA:466:A:N6	2.00	0.68
1:AA:266:G:P	19:AQ:65:ILE:O	2.51	0.68
1:AA:351:G:O3'	1:AA:352:C:P	2.51	0.68
1:AA:367:U:OP1	1:AA:395:C:H1'	1.93	0.68
1:AA:948:C:OP1	15:AM:109:THR:HG22	1.94	0.68
1:AA:1064:G:C4'	1:AA:1065:U:H5'	2.23	0.68
1:AA:1416:G:H2'	1:AA:1417:G:H4'	1.74	0.68
1:AA:1484:C:O3'	23:B0:1943:A:H4'	1.93	0.68
2:AV:76:A:H3'	23:B0:2046:C:C2'	2.23	0.68
2:AW:75:C:O2	23:B0:2532:G:N2	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:52:LEU:CD2	5:AC:118:GLN:HE22	2.05	0.68
19:AQ:66:SER:O	19:AQ:70:ARG:NH1	2.26	0.68
23:B0:939:C:H2'	23:B0:940:G:C8	2.28	0.68
23:B0:1838:G:H2'	23:B0:1839:A:H5'	1.75	0.68
23:B0:2058:U:H4'	23:B0:2575:U:H3	1.58	0.68
23:B0:2440:C:H1'	23:B0:2471:U:H3	1.56	0.68
23:B0:2691:C:H3'	23:B0:2692:A:H5''	1.74	0.68
1:AA:17:U:H2'	1:AA:18:C:C6	2.28	0.68
1:AA:39:G:C4	1:AA:498:U:O4	2.46	0.68
1:AA:105:G:H2'	1:AA:106:C:C6	2.29	0.68
1:AA:128:G:H4'	19:AQ:3:LYS:CA	2.20	0.68
1:AA:129:U:C5'	19:AQ:3:LYS:NZ	2.56	0.68
1:AA:266:G:C3'	19:AQ:67:LYS:H	2.06	0.68
1:AA:332:G:P	22:AT:10:LEU:HB3	2.33	0.68
1:AA:397:A:N7	1:AA:547:A:O2'	1.94	0.68
1:AA:798:G:P	13:AK:122:LYS:NZ	2.66	0.68
2:AV:12:U:P	23:B0:1891:C:HO2'	2.13	0.68
2:AV:57:G:C5'	28:BD:76:ASN:CA	2.72	0.68
6:AD:88:VAL:CG2	7:AE:97:GLY:CA	2.70	0.68
12:AJ:61:GLU:OE2	16:AN:58:LYS:CD	2.41	0.68
21:AS:43:GLU:CD	21:AS:43:GLU:H	2.00	0.68
23:B0:181:A:H4'	23:B0:182:G:H4'	1.76	0.68
23:B0:2377:U:H2'	23:B0:2378:G:C8	2.28	0.68
1:AA:5:U:O4	7:AE:95:ALA:CB	2.40	0.68
1:AA:104:G:C5'	1:AA:172:A:N1	2.55	0.68
1:AA:130:A:C2	1:AA:264:U:N3	2.61	0.68
1:AA:328:C:H4'	1:AA:329:A:O5'	1.94	0.68
1:AA:653:A:O5'	10:AH:56:LYS:HE2	1.93	0.68
1:AA:1281:U:H4'	1:AA:1282:C:OP2	1.92	0.68
1:AA:1342:C:H4'	11:AI:125:TYR:CD1	2.28	0.68
1:AA:1342:C:H5'	11:AI:125:TYR:CE1	2.24	0.68
2:AV:12:U:O2'	23:B0:1907:C:O4'	2.12	0.68
6:AD:205:GLU:HB3	7:AE:107:ARG:HH22	1.57	0.68
12:AJ:42:THR:HG23	12:AJ:67:THR:O	1.93	0.68
18:AP:34:GLU:OE2	18:AP:55:ARG:HD3	1.93	0.68
23:B0:940:G:C3'	23:B0:941:U:H5''	2.11	0.68
1:AA:322:C:C4'	22:AT:23:ARG:HB2	2.23	0.68
1:AA:512:U:H1'	6:AD:42:GLN:OE1	1.92	0.68
1:AA:626:U:OP1	18:AP:35:LYS:NZ	2.27	0.68
1:AA:954:G:C5'	15:AM:120:LYS:HD3	2.23	0.68
1:AA:1068:G:N2	1:AA:1191:A:N3	2.34	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1427:U:O2'	23:B0:1704:G:C5'	2.42	0.68
1:AA:1503:A:C2	1:AA:1531:A:H2	2.12	0.68
2:AW:71:G:H5''	23:B0:1925:C:C2	2.23	0.68
1:AA:191:G:N3	1:AA:192:U:O4'	2.25	0.68
1:AA:265:G:C3'	19:AQ:66:SER:N	2.57	0.68
1:AA:686:U:HO2'	1:AA:687:A:H8	1.41	0.68
1:AA:701:C:H5'	1:AA:703:G:O4'	1.93	0.68
11:AI:114:TYR:CE2	12:AJ:60:ARG:HG2	2.29	0.68
23:B0:2381:A:H4'	23:B0:2382:C:C5	2.29	0.68
1:AA:69:G:C1'	1:AA:101:A:N1	2.56	0.68
1:AA:586:C:H5''	10:AH:90:GLY:H	1.59	0.68
1:AA:1347:G:H3'	11:AI:108:VAL:O	1.93	0.68
1:AA:1459:C:O3'	22:AT:28:ALA:HB2	1.92	0.68
1:AA:1504:G:P	1:AA:1507:A:H4'	2.32	0.68
4:AB:187:LEU:HD12	4:AB:205:ASP:HA	1.74	0.68
23:B0:26:G:H21	23:B0:524:A:H62	1.41	0.68
1:AA:397:A:N7	1:AA:547:A:H1'	2.09	0.68
1:AA:436:C:C4	1:AA:437:U:C4	2.82	0.68
1:AA:865:A:H2	1:AA:918:A:H5'	1.58	0.68
1:AA:915:A:H2'	1:AA:916:G:H5'	1.76	0.68
1:AA:979:C:N3	16:AN:19:ARG:HG2	2.08	0.68
4:AB:124:SER:HB2	4:AB:125:PRO:CD	2.21	0.68
5:AC:190:ARG:HH11	5:AC:190:ARG:CB	2.07	0.68
23:B0:3877:A:C8	23:B0:3877:A:O5'	2.39	0.68
23:B0:3101:G:H1	23:B0:3188:U:H3	1.41	0.68
1:AA:265:G:C1'	19:AQ:64:PRO:CB	2.72	0.67
1:AA:600:C:H5'	10:AH:129:VAL:HA	1.75	0.67
1:AA:640:A:N3	10:AH:115:SER:CB	2.57	0.67
1:AA:1255:G:N2	1:AA:1276:G:H21	1.90	0.67
1:AA:1416:G:C5	1:AA:1417:G:C1'	2.76	0.67
5:AC:59:ARG:N	12:AJ:92:THR:HG22	2.07	0.67
8:AF:75:LEU:O	8:AF:79:LEU:HG	1.94	0.67
11:AI:93:ARG:HD3	11:AI:97:LYS:HE3	1.74	0.67
23:B0:1033:G:H22	23:B0:1150:C:H2'	1.58	0.67
23:B0:1955:G:H2'	23:B0:1956:G:H5'	1.76	0.67
1:AA:538:G:H5''	14:AL:114:LYS:CG	2.16	0.67
1:AA:1502:A:H2	1:AA:1505:G:N1	1.90	0.67
5:AC:26:LYS:H	5:AC:26:LYS:HD3	1.58	0.67
1:AA:375:U:O3'	1:AA:376:G:H5'	1.94	0.67
1:AA:653:A:C8	10:AH:56:LYS:CG	2.77	0.67
1:AA:778:G:C4'	13:AK:119:CYS:HB3	2.25	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:960:U:O3'	1:AA:961:U:P	2.53	0.67
7:AE:51:VAL:O	7:AE:55:VAL:HG23	1.93	0.67
19:AQ:67:LYS:HA	19:AQ:70:ARG:HH12	1.60	0.67
23:B0:1021:A:H1'	23:B0:1164:C:H1'	1.76	0.67
23:B0:3875:A:C4'	55:B5:42:LYS:CA	2.73	0.67
23:B0:2261:G:H4'	23:B0:2262:C:OP2	1.94	0.67
1:AA:538:G:O5'	14:AL:114:LYS:HB2	1.88	0.67
1:AA:587:G:O2'	1:AA:588:G:OP2	2.10	0.67
1:AA:848:G:H2'	1:AA:849:C:N1	2.08	0.67
1:AA:1278:U:C5'	1:AA:1279:A:P	2.73	0.67
21:AS:33:THR:HG22	21:AS:35:SER:H	1.60	0.67
23:B0:998:C:H2'	23:B0:999:A:O4'	1.94	0.67
23:B0:1181:C:C2'	23:B0:1182:U:H5''	2.23	0.67
23:B0:2381:A:H4'	23:B0:2382:C:H5	1.60	0.67
1:AA:69:G:C4	1:AA:102:G:O6	2.47	0.67
1:AA:130:A:C2	1:AA:263:A:N3	2.63	0.67
1:AA:650:G:O2'	1:AA:651:C:H5'	1.94	0.67
1:AA:691:G:C8	13:AK:26:ASN:ND2	2.63	0.67
5:AC:82:GLU:O	5:AC:85:ARG:HB3	1.94	0.67
8:AF:36:ARG:NH1	8:AF:38:GLU:HG2	2.08	0.67
15:AM:40:ASN:HD22	15:AM:41:PRO:N	1.91	0.67
15:AM:81:LEU:H	15:AM:81:LEU:CD2	2.08	0.67
21:AS:62:ILE:HD12	21:AS:66:MET:HG3	1.75	0.67
1:AA:212:G:O2'	1:AA:213:G:C5'	2.41	0.67
1:AA:320:C:H5'	1:AA:1434:A:C2	2.29	0.67
1:AA:797:C:OP1	13:AK:124:LYS:HB2	1.94	0.67
1:AA:1183:A:O2'	1:AA:1184:G:OP2	2.09	0.67
11:AI:93:ARG:NH1	11:AI:97:LYS:HZ1	1.93	0.67
23:B0:539:A:H62	23:B0:2024:U:H3	1.40	0.67
23:B0:1112:U:C2'	23:B0:1113:C:H5''	2.24	0.67
23:B0:2324:G:H4'	23:B0:2326:C:H5''	1.76	0.67
1:AA:376:G:H5''	18:AP:5:ARG:CD	2.24	0.67
20:AR:26:LEU:HD21	20:AR:39:VAL:CG2	2.25	0.67
1:AA:253:U:H4'	1:AA:276:G:C4'	2.25	0.67
1:AA:1067:A:N3	1:AA:1068:G:H1'	2.09	0.67
1:AA:1113:C:H1'	5:AC:178:LEU:HD21	1.77	0.67
5:AC:179:ARG:HD3	5:AC:206:GLU:HG2	1.76	0.67
23:B0:3875:A:H4'	55:B5:42:LYS:CA	2.24	0.67
23:B0:2508:G:H5''	23:B0:2509:A:H5''	1.76	0.67
1:AA:1455:G:H2'	1:AA:1456:A:O4'	1.95	0.67
9:AG:85:TYR:HD1	9:AG:154:TYR:HE1	1.42	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AK:14:VAL:HG21	13:AK:40:ILE:HD11	1.77	0.67
15:AM:34:LEU:HD13	15:AM:41:PRO:HA	1.77	0.67
23:B0:1926:U:O2'	23:B0:1928:G:H5'	1.95	0.67
23:B0:3110:G:P	23:B0:3149:G:H4'	2.34	0.67
1:AA:394:G:C6	1:AA:395:C:N4	2.63	0.67
1:AA:403:C:C2'	1:AA:404:U:C5'	2.72	0.67
1:AA:436:C:N4	1:AA:437:U:O4	2.27	0.67
1:AA:829:G:HO2'	4:AB:24:TRP:NE1	1.91	0.67
1:AA:1016:A:H2'	1:AA:1017:G:O4'	1.94	0.67
4:AB:18:GLY:HA2	4:AB:42:ILE:H	1.59	0.67
15:AM:33:ALA:HA	15:AM:59:TYR:HE2	1.59	0.67
16:AN:14:PRO:HB2	16:AN:16:PHE:O	1.95	0.67
23:B0:33:C:H42	23:B0:466:A:H61	1.41	0.67
23:B0:665:A:H3'	23:B0:666:U:C5'	2.24	0.67
1:AA:376:G:OP1	18:AP:67:THR:OG1	2.07	0.66
1:AA:865:A:O2'	1:AA:919:A:C5'	2.43	0.66
1:AA:929:G:P	1:AA:1533:C:N4	2.68	0.66
1:AA:994:A:C4	16:AN:5:ALA:CA	2.67	0.66
6:AD:36:ARG:H	6:AD:37:PRO:CD	2.02	0.66
8:AF:67:MET:HE2	8:AF:72:VAL:HG22	1.77	0.66
17:AO:33:THR:HG23	17:AO:63:ARG:HH12	1.59	0.66
19:AQ:76:LEU:HD23	19:AQ:76:LEU:C	2.20	0.66
23:B0:1112:U:H2'	23:B0:1113:C:H5''	1.75	0.66
23:B0:1473:U:H4'	23:B0:1474:A:C8	2.29	0.66
1:AA:130:A:H5'	19:AQ:63:ARG:HE	0.87	0.66
1:AA:662:G:H2'	1:AA:663:A:C8	2.30	0.66
1:AA:1057:G:O2'	1:AA:1058:G:H5'	1.95	0.66
1:AA:1270:C:O2'	1:AA:1314:C:C5'	2.43	0.66
2:AV:44:A:C2'	2:AV:45:G:H5'	2.25	0.66
2:AW:19:G:N7	23:B0:895:G:O2'	2.28	0.66
12:AJ:49:VAL:O	12:AJ:60:ARG:HA	1.95	0.66
23:B0:1223:G:H4'	23:B0:1224:A:O5'	1.96	0.66
23:B0:1312:G:H5'	23:B0:1314:A:H1'	1.77	0.66
23:B0:1856:U:C4	23:B0:3865:A:N1	2.62	0.66
1:AA:103:C:O2'	1:AA:171:A:C6	2.45	0.66
1:AA:292:G:N2	1:AA:608:A:C2	2.60	0.66
1:AA:606:G:C3'	1:AA:607:A:H5'	2.23	0.66
1:AA:1261:A:HO2'	1:AA:1283:G:H5''	1.59	0.66
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.30	0.66
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.59	0.66
12:AJ:96:ILE:HG22	12:AJ:97:GLU:N	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AO:55:GLY:O	17:AO:59:MET:HG3	1.94	0.66
19:AQ:97:SER:OG	19:AQ:103:GLY:CA	2.44	0.66
21:AS:28:LYS:HG2	21:AS:29:ARG:N	2.06	0.66
23:B0:1380:C:H2'	23:B0:1381:G:H5'	1.76	0.66
1:AA:835:U:P	20:AR:64:ARG:NH2	2.67	0.66
1:AA:1111:A:C2	5:AC:177:THR:OG1	2.48	0.66
1:AA:1346:A:C2'	9:AG:10:ARG:HH22	1.97	0.66
1:AA:1368:G:O2'	1:AA:1369:C:H5'	1.95	0.66
10:AH:6:ILE:HD11	10:AH:31:PHE:CD2	2.31	0.66
12:AJ:94:VAL:HG12	12:AJ:95:GLU:N	2.10	0.66
1:AA:320:C:C5'	1:AA:1434:A:C2	2.75	0.66
1:AA:371:G:O2'	1:AA:372:C:H5'	1.94	0.66
1:AA:702:A:O4'	23:B0:1840:A:OP1	2.12	0.66
1:AA:737:A:C2'	8:AF:73:ASN:HD21	2.09	0.66
6:AD:187:ARG:HH21	6:AD:188:LEU:HD12	1.60	0.66
11:AI:10:ARG:HG2	11:AI:75:ASP:HB2	1.76	0.66
14:AL:33:ARG:HD3	14:AL:62:SER:HB3	1.77	0.66
19:AQ:101:ARG:CZ	23:B0:731:A:H2	2.07	0.66
23:B0:1141:U:H3	23:B0:2008:C:H5''	1.61	0.66
23:B0:1529:C:H2'	23:B0:1530:U:O4'	1.94	0.66
1:AA:247:G:C2	1:AA:282:A:N3	2.63	0.66
1:AA:748:C:H1'	1:AA:749:C:C5	2.30	0.66
1:AA:848:G:HO3'	1:AA:849:C:C5'	2.01	0.66
1:AA:1112:C:N3	5:AC:178:LEU:CA	2.59	0.66
1:AA:1476:G:OP1	23:B0:1707:A:P	2.54	0.66
1:AA:1484:C:O3'	23:B0:1943:A:C4'	2.44	0.66
5:AC:107:GLN:H	5:AC:107:GLN:NE2	1.94	0.66
5:AC:172:ARG:NH1	5:AC:172:ARG:HB3	2.11	0.66
5:AC:188:LEU:O	5:AC:189:ALA:HB2	1.96	0.66
14:AL:27:LEU:C	14:AL:29:GLY:H	2.04	0.66
23:B0:1066:G:N1	23:B0:1115:C:C4	2.64	0.66
1:AA:216:C:C3'	1:AA:466:A:H61	2.04	0.66
1:AA:375:U:H2'	1:AA:376:G:O4'	1.96	0.66
1:AA:377:G:P	18:AP:3:LYS:HZ1	2.18	0.66
1:AA:427:U:O2'	1:AA:541:G:OP1	2.03	0.66
1:AA:978:A:C6	1:AA:1318:A:C6	2.84	0.66
5:AC:59:ARG:N	12:AJ:92:THR:CG2	2.59	0.66
7:AE:150:ARG:HH11	7:AE:150:ARG:HG3	1.60	0.66
9:AG:16:LEU:HG	11:AI:41:VAL:O	1.95	0.66
19:AQ:105:ALA:CA	23:B0:727:U:H4'	2.25	0.66
23:B0:897:A:N6	23:B0:898:C:N4	2.43	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:3149:G:O2'	23:B0:3150:C:H5'	1.96	0.66
1:AA:281:G:O2'	1:AA:282:A:OP2	2.12	0.66
1:AA:1016:A:O2'	1:AA:1218:C:H4'	1.96	0.66
1:AA:1340:A:H4'	2:AV:32:C:C4'	2.25	0.66
1:AA:1425:U:H2'	1:AA:1426:C:C6	2.31	0.66
6:AD:151:LYS:HD2	6:AD:151:LYS:H	1.60	0.66
13:AK:66:LEU:HB3	13:AK:70:LYS:HE3	1.77	0.66
20:AR:45:SER:OG	20:AR:49:LYS:HB2	1.94	0.66
23:B0:1978:U:H3'	23:B0:1979:C:H5''	1.77	0.66
1:AA:190:A:C6	22:AT:104:LEU:C	2.61	0.66
1:AA:586:C:H5''	10:AH:90:GLY:N	2.11	0.66
1:AA:893:C:C2'	1:AA:894:G:C5'	2.74	0.66
1:AA:1319:A:C5'	21:AS:5:LEU:HD21	2.24	0.66
6:AD:32:ALA:C	6:AD:34:GLU:H	2.04	0.66
22:AT:85:MET:HE3	22:AT:103:GLY:O	1.96	0.66
22:AT:87:LYS:O	22:AT:91:LEU:HD12	1.96	0.66
23:B0:439:C:H2'	23:B0:440:U:O4'	1.95	0.66
23:B0:515:A:H2'	23:B0:516:G:H5'	1.77	0.66
1:AA:186:C:C2	22:AT:60:GLU:OE1	2.49	0.66
1:AA:186:C:H5'	22:AT:81:LYS:HZ3	1.60	0.66
1:AA:247:G:P	19:AQ:100:LYS:HE2	2.36	0.66
1:AA:335:C:C1'	1:AA:1434:A:C4'	2.74	0.66
1:AA:394:G:C6	1:AA:395:C:C4	2.84	0.66
1:AA:427:U:OP1	6:AD:13:ARG:NH2	2.29	0.66
1:AA:526:C:P	14:AL:91:LYS:HE2	2.36	0.66
1:AA:538:G:C5'	14:AL:114:LYS:CD	2.74	0.66
1:AA:719:C:H1'	20:AR:49:LYS:HG2	1.78	0.66
1:AA:1317:C:C2	16:AN:16:PHE:CE2	2.84	0.66
1:AA:1473:A:O2'	23:B0:1718:A:N1	2.29	0.66
13:AK:14:VAL:O	13:AK:15:ALA:HB3	1.95	0.66
23:B0:1191:G:H2'	23:B0:1192:A:H8	1.61	0.66
23:B0:3197:U:O2'	23:B0:2181:A:P	2.53	0.66
1:AA:474:U:H2'	1:AA:475:C:C6	2.31	0.65
1:AA:524:G:H2'	1:AA:525:C:C6	2.31	0.65
5:AC:155:GLY:O	5:AC:156:ARG:HB2	1.96	0.65
6:AD:187:ARG:NH2	6:AD:188:LEU:HD12	2.10	0.65
7:AE:80:ILE:HD11	7:AE:91:LEU:HD12	1.76	0.65
12:AJ:90:LEU:H	12:AJ:91:PRO:HD2	1.61	0.65
19:AQ:104:LYS:HB2	23:B0:727:U:C6	2.29	0.65
23:B0:128:C:C2'	23:B0:129:A:H5''	2.23	0.65
1:AA:232:G:C2	1:AA:263:A:C2	2.83	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:685:G:O4'	13:AK:39:PRO:HG2	1.97	0.65
1:AA:779:C:O4'	13:AK:120:ARG:HD2	1.96	0.65
1:AA:865:A:H2	1:AA:918:A:C5'	2.08	0.65
4:AB:18:GLY:HA3	4:AB:41:ILE:HA	1.79	0.65
4:AB:74:LYS:HZ1	4:AB:206:ASP:HA	1.61	0.65
5:AC:172:ARG:HB3	5:AC:172:ARG:HH11	1.61	0.65
7:AE:40:ARG:HG2	7:AE:68:GLU:OE2	1.96	0.65
11:AI:26:VAL:HB	11:AI:33:PHE:HB2	1.76	0.65
15:AM:33:ALA:HA	15:AM:59:TYR:CE2	2.32	0.65
15:AM:94:ARG:CZ	21:AS:81:ARG:HD3	2.26	0.65
21:AS:17:GLU:HA	21:AS:20:LEU:HD11	1.78	0.65
23:B0:1471:G:H1	23:B0:2682:C:H42	1.44	0.65
1:AA:112:G:H21	1:AA:354:G:H5'	1.57	0.65
1:AA:173:U:C6	1:AA:197:A:C2	2.85	0.65
1:AA:322:C:H4'	22:AT:23:ARG:CB	2.25	0.65
1:AA:778:G:H4'	13:AK:119:CYS:CB	2.26	0.65
1:AA:797:C:OP1	13:AK:124:LYS:CB	2.44	0.65
1:AA:815:A:C4	1:AA:1527:C:C1'	2.72	0.65
1:AA:923:A:N9	1:AA:1398:A:N3	2.43	0.65
1:AA:929:G:OP1	1:AA:1533:C:N4	2.28	0.65
1:AA:1016:A:O2'	1:AA:1218:C:C4'	2.44	0.65
1:AA:1430:C:H4'	23:B0:1721:G:H5'	1.76	0.65
1:AA:1475:G:H2'	1:AA:1476:G:H8	1.62	0.65
12:AJ:38:ILE:CG1	12:AJ:71:LEU:HB3	2.26	0.65
19:AQ:104:LYS:CE	23:B0:729:A:H62	2.10	0.65
23:B0:1856:U:C3'	23:B0:3865:A:H8	1.99	0.65
1:AA:923:A:N3	1:AA:1395:C:O2	2.28	0.65
1:AA:1178:G:OP2	11:AI:97:LYS:NZ	2.28	0.65
1:AA:1402:C:H2'	1:AA:1403:C:O4'	1.97	0.65
5:AC:64:VAL:HB	5:AC:99:VAL:CB	2.27	0.65
7:AE:12:LEU:HD13	7:AE:31:LEU:HB2	1.77	0.65
23:B0:1098:G:H3'	23:B0:1099:A:H5''	1.79	0.65
23:B0:3128:G:HO2'	23:B0:3174:C:H5'	0.79	0.65
23:B0:2794:G:H3'	23:B0:2796:A:H62	1.61	0.65
1:AA:39:G:C8	1:AA:498:U:C4	2.85	0.65
1:AA:94:G:C4	1:AA:96:C:C5	2.84	0.65
1:AA:1111:A:N1	5:AC:177:THR:CA	2.59	0.65
1:AA:1182:G:H5'	1:AA:1184:G:C5'	2.26	0.65
1:AA:1321:C:H42	21:AS:37:ARG:NH1	1.94	0.65
1:AA:1495:U:H2'	1:AA:1496:C:C6	2.31	0.65
1:AA:1522:U:O2'	1:AA:1523:G:H5'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AB:84:GLU:HB3	4:AB:219:VAL:HG21	1.78	0.65
15:AM:65:LYS:HG3	15:AM:69:GLU:OE2	1.96	0.65
23:B0:542:A:C2'	23:B0:543:G:H5'	2.26	0.65
23:B0:1918:G:H4'	23:B0:1920:A:N3	2.10	0.65
23:B0:2236:U:C3'	23:B0:2237:C:H5''	2.26	0.65
1:AA:99:C:H1'	1:AA:101:A:OP2	1.96	0.65
1:AA:391:G:H5'	18:AP:28:ARG:HH21	1.57	0.65
1:AA:815:A:N6	1:AA:1529:G:O2'	2.29	0.65
1:AA:905:U:C4	1:AA:906:G:C5	2.84	0.65
4:AB:15:VAL:CG2	4:AB:209:ARG:HG3	2.26	0.65
4:AB:71:VAL:O	4:AB:165:VAL:HG23	1.96	0.65
6:AD:131:ARG:H	6:AD:131:ARG:HD2	1.62	0.65
13:AK:48:ILE:HG22	13:AK:49:GLY:H	1.61	0.65
23:B0:651:C:H2'	23:B0:652:C:H5''	1.78	0.65
23:B0:1472:C:C2'	23:B0:1473:U:H5'	2.27	0.65
23:B0:2822:U:H2'	23:B0:2823:G:O4'	1.97	0.65
1:AA:33:A:OP2	1:AA:398:C:C4'	2.43	0.65
1:AA:186:C:H5'	22:AT:81:LYS:HD3	1.77	0.65
1:AA:274:A:C2	1:AA:275:G:H1'	2.31	0.65
1:AA:393:A:OP2	18:AP:12:LYS:HE2	1.97	0.65
1:AA:677:U:H3	1:AA:713:G:H22	1.45	0.65
1:AA:918:A:H2'	1:AA:919:A:C8	2.32	0.65
1:AA:1422:G:C5'	33:BI:60:PRO:CA	2.63	0.65
1:AA:1430:C:C5'	23:B0:1721:G:C4'	2.73	0.65
4:AB:215:LEU:O	4:AB:219:VAL:HG23	1.97	0.65
5:AC:83:ARG:C	5:AC:85:ARG:H	2.04	0.65
14:AL:86:ARG:HH11	14:AL:86:ARG:HG3	1.61	0.65
20:AR:47:THR:HG23	20:AR:83:GLU:H	1.61	0.65
23:B0:2047:C:H42	23:B0:2425:G:H1	1.43	0.65
23:B0:3127:G:H4'	23:B0:3173:A:N1	2.10	0.65
1:AA:99:C:C1'	1:AA:101:A:OP2	2.17	0.65
1:AA:391:G:C5'	18:AP:28:ARG:NH2	2.57	0.65
1:AA:456:A:N6	1:AA:477:G:N9	2.45	0.65
1:AA:923:A:C1'	1:AA:1398:A:H2'	2.26	0.65
1:AA:1347:G:C4	11:AI:107:ARG:NH1	2.65	0.65
1:AA:1393:U:O2	1:AA:1395:C:C6	2.49	0.65
1:AA:1442:G:H2'	1:AA:1442:G:N3	2.11	0.65
1:AA:1497:G:H2'	1:AA:1498:U:H5'	1.78	0.65
4:AB:68:ILE:HB	4:AB:90:MET:HE3	1.79	0.65
7:AE:15:ARG:HD2	7:AE:15:ARG:O	1.96	0.65
8:AF:100:ASN:HD22	20:AR:23:LYS:CG	2.10	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AJ:61:GLU:OE2	16:AN:49:HIS:HE1	1.79	0.65
23:B0:3875:A:H1'	55:B5:44:GLY:CA	2.26	0.65
1:AA:130:A:N1	1:AA:264:U:N3	2.44	0.65
1:AA:261:U:H3'	22:AT:79:ARG:HH12	1.61	0.65
1:AA:619:U:C6	6:AD:135:LEU:CD1	2.76	0.65
1:AA:919:A:N3	1:AA:1080:A:H2	1.95	0.65
9:AG:50:ILE:O	9:AG:54:THR:HB	1.96	0.65
1:AA:922:G:C4	1:AA:1398:A:H2	2.14	0.65
1:AA:1153:C:H2'	1:AA:1154:G:H8	1.62	0.65
1:AA:1474:G:C4'	23:B0:1717:A:N6	2.57	0.65
1:AA:1484:C:O3'	23:B0:1943:A:O3'	2.15	0.65
2:AV:1:G:N2	2:AV:2:C:C4	2.61	0.65
4:AB:95:GLN:OE1	4:AB:95:GLN:HA	1.97	0.65
8:AF:21:LEU:O	8:AF:24:GLU:HB3	1.97	0.65
14:AL:55:VAL:HG12	14:AL:56:ALA:N	2.12	0.65
14:AL:110:VAL:O	14:AL:122:THR:HG21	1.97	0.65
15:AM:36:LYS:HD2	15:AM:59:TYR:CZ	2.32	0.65
23:B0:727:U:H2'	23:B0:728:G:H5''	1.78	0.65
23:B0:927:C:H2'	23:B0:928:G:O4'	1.97	0.65
23:B0:1119:U:H2'	23:B0:1120:C:C1'	2.27	0.65
23:B0:1656:U:C2'	23:B0:1657:A:H5''	2.25	0.65
1:AA:458:G:H2'	1:AA:459:G:H8	1.62	0.64
1:AA:1075:C:P	4:AB:179:LYS:HZ2	2.20	0.64
1:AA:1459:C:P	22:AT:28:ALA:C	2.80	0.64
7:AE:115:VAL:CG1	7:AE:118:ILE:HG13	2.25	0.64
19:AQ:101:ARG:HA	19:AQ:101:ARG:HE	1.62	0.64
22:AT:50:GLU:HG2	22:AT:100:ILE:HG13	1.79	0.64
23:B0:1472:C:H2'	23:B0:1473:U:H5'	1.79	0.64
23:B0:1811:A:O2'	23:B0:1812:U:H5''	1.97	0.64
1:AA:287:U:O2'	1:AA:288:A:H5'	1.97	0.64
1:AA:353:A:H5'	1:AA:353:A:C8	2.31	0.64
1:AA:392:G:H2'	1:AA:393:A:C8	2.32	0.64
1:AA:443:C:H2'	1:AA:444:C:H6	1.61	0.64
1:AA:1393:U:C4	1:AA:1395:C:N4	2.66	0.64
1:AA:1410:G:N3	1:AA:1491:G:C2	2.65	0.64
19:AQ:105:ALA:CA	23:B0:727:U:C4'	2.74	0.64
23:B0:1432:G:H21	23:B0:1596:A:H62	1.45	0.64
1:AA:499:A:N3	1:AA:500:G:C1'	2.53	0.64
1:AA:922:G:C6	1:AA:1396:A:N6	2.65	0.64
1:AA:1466:C:H2'	1:AA:1467:G:N7	2.13	0.64
23:B0:897:A:C6	23:B0:898:C:C4	2.85	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:69:G:N9	1:AA:102:G:N1	2.45	0.64
1:AA:921:U:C4	1:AA:1396:A:N1	2.65	0.64
1:AA:974:A:P	16:AN:29:ARG:HH22	2.20	0.64
1:AA:1111:A:H61	5:AC:176:HIS:C	2.05	0.64
5:AC:29:TYR:OH	16:AN:54:PRO:HG2	1.98	0.64
5:AC:177:THR:CG2	5:AC:180:ALA:HB2	2.28	0.64
7:AE:79:GLU:HG3	7:AE:93:PRO:HD2	1.79	0.64
23:B0:2422:C:H2'	23:B0:2423:G:H8	1.62	0.64
1:AA:522:C:H5''	14:AL:120:TYR:CZ	2.32	0.64
1:AA:1141:C:H2'	1:AA:1142:G:C8	2.33	0.64
1:AA:1256:A:H5'	1:AA:1258:G:C4	2.33	0.64
11:AI:114:TYR:CD2	12:AJ:60:ARG:HG2	2.32	0.64
13:AK:40:ILE:HG22	13:AK:41:THR:HG23	1.80	0.64
17:AO:17:ARG:CZ	17:AO:77:ARG:HH11	2.11	0.64
23:B0:1436:G:H1'	23:B0:1508:G:H21	1.60	0.64
1:AA:236:G:C5'	19:AQ:42:TYR:OH	2.44	0.64
1:AA:438:G:OP1	6:AD:125:HIS:HE1	1.79	0.64
1:AA:819:A:C8	1:AA:1529:G:N2	2.66	0.64
1:AA:828:A:H2	4:AB:26:PRO:CD	2.11	0.64
1:AA:922:G:N2	1:AA:1396:A:C1'	2.60	0.64
1:AA:1292:U:P	9:AG:41:ARG:NH2	2.70	0.64
5:AC:135:LYS:NZ	7:AE:50:GLU:OE2	2.30	0.64
9:AG:71:PRO:HD3	9:AG:103:TRP:CZ3	2.33	0.64
11:AI:49:PRO:O	11:AI:52:ALA:HB3	1.97	0.64
12:AJ:60:ARG:O	12:AJ:61:GLU:HB3	1.95	0.64
23:B0:1861:G:P	55:B5:37:LYS:CA	2.86	0.64
1:AA:37:U:O2'	1:AA:500:G:H4'	1.98	0.64
1:AA:204:A:H5''	1:AA:205:G:OP1	1.98	0.64
1:AA:248:C:O4'	1:AA:282:A:H2	1.81	0.64
1:AA:702:A:C5'	23:B0:1840:A:H5'	2.27	0.64
1:AA:818:G:H3'	1:AA:819:A:C5'	2.28	0.64
1:AA:1234:C:H1'	1:AA:1364:U:O2	1.97	0.64
7:AE:65:ASN:O	7:AE:65:ASN:CG	2.40	0.64
17:AO:29:VAL:HG12	17:AO:85:LEU:CD1	2.26	0.64
21:AS:64:GLU:O	21:AS:67:VAL:HG23	1.97	0.64
23:B0:1474:A:H2'	23:B0:1475:U:H5'	1.79	0.64
23:B0:3184:C:O2'	23:B0:3185:U:H5''	1.98	0.64
1:AA:260:G:H8	22:AT:83:ARG:NH1	1.86	0.64
1:AA:588:G:C6	1:AA:753:A:N7	2.66	0.64
1:AA:1040:U:H2'	1:AA:1041:A:C8	2.33	0.64
2:AW:11:C:O2'	23:B0:1898:U:C5'	2.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AE:115:VAL:HG11	7:AE:118:ILE:CG1	2.28	0.64
8:AF:9:VAL:HB	8:AF:87:ARG:HB2	1.80	0.64
13:AK:18:ARG:HB2	13:AK:33:THR:HG23	1.78	0.64
16:AN:22:THR:CB	16:AN:33:VAL:HG21	2.27	0.64
23:B0:891:A:N3	23:B0:892:A:C5	2.65	0.64
23:B0:894:G:C2'	23:B0:895:G:H5''	2.27	0.64
23:B0:1047:G:H1	23:B0:1130:U:H3	1.46	0.64
23:B0:1072:U:O4	31:BG:10:LEU:CA	2.46	0.64
1:AA:187:G:C2	22:AT:105:SER:HB2	2.33	0.64
1:AA:188:C:H3'	22:AT:105:SER:CB	2.27	0.64
1:AA:191:G:C6	1:AA:192:U:C5	2.86	0.64
1:AA:266:G:H3'	19:AQ:67:LYS:H	1.63	0.64
1:AA:292:G:N3	1:AA:608:A:N1	2.45	0.64
1:AA:393:A:O2'	1:AA:394:G:H5'	1.98	0.64
1:AA:922:G:H2'	1:AA:923:A:C8	2.32	0.64
1:AA:1131:G:H1	1:AA:1143:G:N2	1.95	0.64
5:AC:112:SER:HB2	5:AC:115:LEU:HD12	1.79	0.64
6:AD:70:ILE:HD11	6:AD:100:ARG:NE	2.13	0.64
16:AN:27:CYS:SG	16:AN:29:ARG:HB2	2.38	0.64
23:B0:2245:A:H5'	23:B0:2246:A:N7	2.12	0.64
23:B0:2690:A:OP2	23:B0:2694:G:H5'	1.98	0.64
1:AA:69:G:H1'	1:AA:102:G:C5	2.33	0.64
1:AA:118:U:C3'	1:AA:119:A:P	2.86	0.64
5:AC:155:GLY:O	5:AC:196:LEU:HD22	1.98	0.64
11:AI:48:GLU:N	11:AI:49:PRO:HD2	2.13	0.64
21:AS:40:ILE:HB	21:AS:67:VAL:O	1.98	0.64
23:B0:65:C:H2'	23:B0:66:U:O4'	1.97	0.64
23:B0:3876:A:H1'	55:B5:46:LEU:CA	2.28	0.64
1:AA:262:A:C5'	22:AT:74:LYS:HB3	2.12	0.63
1:AA:375:U:H1'	18:AP:28:ARG:NE	2.13	0.63
1:AA:816:A:OP2	1:AA:1527:C:C5'	2.45	0.63
1:AA:830:G:OP1	4:AB:22:LYS:CE	2.46	0.63
1:AA:837:G:O3'	1:AA:838:C:C6	2.49	0.63
1:AA:1499:A:O4'	1:AA:1520:G:C4'	2.46	0.63
5:AC:64:VAL:CB	5:AC:99:VAL:HB	2.27	0.63
9:AG:42:ILE:HG22	9:AG:120:ILE:HD12	1.79	0.63
18:AP:18:ARG:HD3	18:AP:35:LYS:HE3	1.79	0.63
21:AS:44:MET:O	21:AS:47:HIS:HB2	1.97	0.63
23:B0:1075:C:H2'	23:B0:1076:U:O4'	1.99	0.63
23:B0:2510:A:H61	23:B0:2641:A:H61	1.46	0.63
1:AA:38:G:C1'	1:AA:547:A:C4	2.72	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:375:U:C2'	18:AP:28:ARG:HD3	2.29	0.63
1:AA:1484:C:C2'	23:B0:1943:A:H4'	2.28	0.63
2:AV:76:A:C5'	23:B0:2564:U:O4'	2.42	0.63
2:AW:76:A:N1	23:B0:2532:G:N2	2.42	0.63
14:AL:27:LEU:C	14:AL:29:GLY:N	2.54	0.63
23:B0:1341:G:H22	23:B0:1664:G:H1	1.46	0.63
23:B0:1458:A:H3'	23:B0:1459:U:C5'	2.28	0.63
1:AA:33:A:OP2	1:AA:398:C:H5'	1.97	0.63
1:AA:322:C:C4'	22:AT:23:ARG:CG	2.73	0.63
1:AA:434:U:H2'	1:AA:435:C:H6	1.63	0.63
1:AA:762:C:C5'	23:B0:729:A:H61	2.12	0.63
1:AA:877:C:OP1	10:AH:88:LYS:HE2	1.97	0.63
1:AA:994:A:H1'	16:AN:8:GLU:HB3	1.80	0.63
1:AA:1298:C:C4	9:AG:114:ARG:HD3	2.33	0.63
1:AA:1346:A:C4	9:AG:10:ARG:NH2	2.67	0.63
5:AC:3:ASN:C	5:AC:4:LYS:HG2	2.23	0.63
7:AE:120:THR:CG2	7:AE:121:LYS:N	2.61	0.63
12:AJ:45:ARG:CZ	16:AN:36:PHE:CD2	2.81	0.63
19:AQ:104:LYS:HB3	23:B0:727:U:O4'	1.92	0.63
23:B0:1715:A:H1'	23:B0:1717:A:O4'	1.99	0.63
23:B0:2491:C:C2'	23:B0:2492:G:H5''	2.29	0.63
1:AA:168:G:O2'	1:AA:169:C:H5'	1.97	0.63
1:AA:188:C:N3	22:AT:106:ALA:HA	2.12	0.63
1:AA:473:C:OP1	18:AP:75:ARG:NE	2.30	0.63
1:AA:685:G:H4'	13:AK:39:PRO:O	1.99	0.63
1:AA:1015:A:N3	1:AA:1218:C:O2'	2.30	0.63
1:AA:1016:A:C2'	1:AA:1218:C:H4'	2.27	0.63
1:AA:1142:G:H2'	1:AA:1143:G:O4'	1.97	0.63
1:AA:1151:A:H5'	12:AJ:41:PRO:HA	1.81	0.63
1:AA:1416:G:C4	1:AA:1417:G:O4'	2.52	0.63
13:AK:18:ARG:HB2	13:AK:33:THR:CG2	2.28	0.63
1:AA:130:A:N3	1:AA:264:U:C6	2.65	0.63
1:AA:202:G:C1'	1:AA:468:A:O2'	2.45	0.63
1:AA:255:G:H1'	19:AQ:16:GLN:CB	2.27	0.63
1:AA:377:G:P	18:AP:3:LYS:HZ2	2.21	0.63
6:AD:148:VAL:HG11	6:AD:158:ILE:HG21	1.81	0.63
12:AJ:63:PHE:CA	16:AN:57:ARG:O	2.44	0.63
19:AQ:102:GLY:O	23:B0:726:G:N1	2.32	0.63
1:AA:21:G:H1'	1:AA:914:A:H62	0.46	0.63
1:AA:191:G:C2	1:AA:192:U:N1	2.66	0.63
2:AV:11:C:H4'	23:B0:1892:C:C1'	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AE:116:THR:HG23	7:AE:117:ASP:OD2	1.98	0.63
15:AM:93:ARG:HD3	23:B0:900:U:C4'	2.28	0.63
23:B0:3149:G:C2'	23:B0:3150:C:P	2.87	0.63
1:AA:13:U:C1'	1:AA:914:A:H5'	2.29	0.63
1:AA:39:G:C4	1:AA:498:U:C4	2.87	0.63
1:AA:212:G:O3'	1:AA:213:G:OP2	2.08	0.63
1:AA:237:C:H4'	19:AQ:25:ARG:NH1	2.14	0.63
1:AA:274:A:H2	1:AA:275:G:C1'	2.11	0.63
1:AA:1229:A:OP2	15:AM:114:ARG:HD3	1.99	0.63
5:AC:177:THR:HG23	5:AC:180:ALA:HB2	1.81	0.63
9:AG:114:ARG:HG2	9:AG:114:ARG:HH11	1.64	0.63
12:AJ:61:GLU:CD	16:AN:58:LYS:NZ	2.55	0.63
23:B0:2198:U:C3'	23:B0:2199:C:H5''	2.27	0.63
1:AA:188:C:C6	22:AT:105:SER:O	2.51	0.63
1:AA:243:A:H4'	1:AA:244:U:C5'	2.22	0.63
1:AA:255:G:C4'	19:AQ:16:GLN:CB	2.76	0.63
1:AA:1112:C:C2	5:AC:178:LEU:O	2.51	0.63
1:AA:1483:A:C6	1:AA:1484:C:C2	2.87	0.63
4:AB:74:LYS:NZ	4:AB:206:ASP:HA	2.13	0.63
4:AB:97:TRP:HH2	4:AB:176:GLU:CD	2.06	0.63
5:AC:58:GLU:CB	12:AJ:92:THR:HG21	2.19	0.63
6:AD:152:SER:HB3	6:AD:155:LEU:HD12	1.80	0.63
9:AG:26:PHE:CE2	9:AG:30:ILE:HD11	2.33	0.63
11:AI:111:ARG:HD3	11:AI:112:LYS:C	2.24	0.63
11:AI:118:LYS:O	11:AI:119:ALA:CB	2.45	0.63
19:AQ:69:LYS:C	19:AQ:70:ARG:HD2	2.24	0.63
23:B0:3183:A:C3'	23:B0:3184:C:P	2.87	0.63
1:AA:116:A:N6	1:AA:313:A:C4	2.67	0.63
1:AA:254:G:H1'	19:AQ:15:MET:CB	2.14	0.63
1:AA:733:A:O3'	1:AA:734:G:OP2	2.06	0.63
1:AA:836:G:OP2	20:AR:61:LYS:HD2	1.99	0.63
1:AA:1278:U:OP1	1:AA:1279:A:P	2.56	0.63
1:AA:1473:A:O4'	23:B0:1719:G:C1'	2.47	0.63
2:AW:11:C:O2'	23:B0:1898:U:H5'	1.98	0.63
6:AD:25:ARG:C	6:AD:27:TYR:N	2.55	0.63
7:AE:150:ARG:HG3	7:AE:150:ARG:NH1	2.14	0.63
12:AJ:30:SER:OG	12:AJ:81:THR:HA	1.99	0.63
18:AP:8:ARG:HB2	18:AP:28:ARG:NH1	2.14	0.63
21:AS:52:TYR:HA	21:AS:56:GLN:O	1.99	0.63
23:B0:514:G:H2'	23:B0:514:G:N3	2.12	0.63
23:B0:1464:A:H4'	23:B0:1545:G:H4'	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1711:C:H4'	23:B0:1712:G:C2	2.34	0.63
1:AA:262:A:C4'	22:AT:75:ASN:H	2.11	0.62
1:AA:265:G:C4'	19:AQ:66:SER:N	2.44	0.62
1:AA:1410:G:N1	1:AA:1491:G:C6	2.68	0.62
1:AA:1505:G:H4'	1:AA:1506:U:C5'	2.29	0.62
9:AG:155:ARG:O	9:AG:156:TRP:HB3	1.98	0.62
1:AA:69:G:C5	1:AA:102:G:O6	2.52	0.62
1:AA:191:G:C6	1:AA:192:U:C6	2.77	0.62
1:AA:375:U:O2'	18:AP:28:ARG:HD3	1.99	0.62
1:AA:546:G:OP1	6:AD:73:ARG:HB2	2.00	0.62
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.29	0.62
1:AA:1097:C:O2'	1:AA:1168:A:H1'	1.97	0.62
4:AB:73:THR:HB	4:AB:170:GLU:OE2	1.99	0.62
5:AC:13:GLY:HA3	16:AN:57:ARG:NH2	2.14	0.62
21:AS:39:THR:HA	21:AS:70:LYS:HG2	1.81	0.62
23:B0:3877:A:H5''	23:B0:1861:G:P	2.39	0.62
1:AA:1014:A:C5	21:AS:34:TRP:CE2	2.88	0.62
1:AA:1496:C:H1'	1:AA:1517:G:N2	2.14	0.62
4:AB:184:VAL:N	4:AB:198:ASP:OD2	2.32	0.62
19:AQ:21:VAL:HG21	19:AQ:59:ILE:HD11	1.82	0.62
1:AA:119:A:N7	1:AA:287:U:C4	2.68	0.62
1:AA:264:U:O2'	19:AQ:64:PRO:CA	2.47	0.62
1:AA:288:A:C2'	1:AA:289:G:O3'	2.48	0.62
1:AA:919:A:N3	1:AA:1080:A:C2	2.67	0.62
1:AA:1067:A:H4'	1:AA:1068:G:O5'	1.99	0.62
5:AC:120:VAL:O	5:AC:124:ILE:HG13	1.99	0.62
7:AE:102:ALA:CB	7:AE:120:THR:HG21	2.29	0.62
9:AG:23:VAL:O	9:AG:27:ILE:HG13	1.99	0.62
18:AP:45:THR:HB	18:AP:46:PRO:HD2	1.80	0.62
19:AQ:104:LYS:HZ1	23:B0:730:C:N4	1.97	0.62
1:AA:265:G:C1'	19:AQ:64:PRO:HB2	2.28	0.62
1:AA:401:C:O2'	1:AA:621:A:H2	1.81	0.62
1:AA:675:A:O4'	13:AK:116:HIS:CD2	2.53	0.62
1:AA:1132:C:H2'	1:AA:1133:G:H8	1.64	0.62
1:AA:1420:C:H4'	23:B0:1933:G:OP1	2.00	0.62
14:AL:33:ARG:CD	14:AL:62:SER:HB3	2.29	0.62
15:AM:84:ILE:C	15:AM:86:CYS:H	2.07	0.62
23:B0:1429:A:H62	23:B0:1601:U:H5''	1.65	0.62
23:B0:2236:U:C2'	23:B0:2237:C:H5''	2.29	0.62
23:B0:2607:C:H1'	23:B0:2761:A:H2'	1.79	0.62
23:B0:2756:A:H4'	23:B0:2758:A:OP1	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:255:G:H5''	19:AQ:17:LYS:CA	2.30	0.62
1:AA:320:C:H4'	1:AA:1434:A:N1	2.14	0.62
1:AA:448:A:H2'	1:AA:449:C:H6	1.64	0.62
1:AA:923:A:H5'	1:AA:1398:A:N6	2.15	0.62
1:AA:1347:G:O2'	1:AA:1348:U:OP2	2.16	0.62
1:AA:1483:A:N7	1:AA:1484:C:N4	2.48	0.62
4:AB:82:ARG:O	4:AB:86:GLU:HG3	1.98	0.62
5:AC:23:TYR:CD1	12:AJ:11:PHE:CE2	2.87	0.62
6:AD:57:ARG:NH2	7:AE:107:ARG:NH1	2.47	0.62
9:AG:139:GLU:O	9:AG:143:ARG:HG3	2.00	0.62
22:AT:50:GLU:HG3	22:AT:99:LEU:HD12	1.82	0.62
1:AA:815:A:O3'	1:AA:1527:C:H4'	1.99	0.62
4:AB:23:ARG:NH1	4:AB:23:ARG:C	2.58	0.62
11:AI:19:LEU:O	11:AI:20:ARG:HG3	1.99	0.62
14:AL:43:VAL:HG12	14:AL:44:THR:N	2.14	0.62
23:B0:1066:G:C6	23:B0:1115:C:N4	2.62	0.62
23:B0:1196:G:H2'	23:B0:1197:U:O4'	2.00	0.62
1:AA:113:G:C1'	1:AA:354:G:C5'	2.77	0.62
1:AA:186:C:H4'	22:AT:81:LYS:HB2	1.82	0.62
1:AA:292:G:H2'	1:AA:608:A:H61	1.58	0.62
1:AA:1347:G:O2'	1:AA:1348:U:P	2.57	0.62
1:AA:1501:C:P	1:AA:1508:G:H4'	2.39	0.62
4:AB:132:LYS:HG2	4:AB:135:GLN:OE1	1.99	0.62
4:AB:142:LEU:HD22	4:AB:146:GLN:NE2	2.15	0.62
8:AF:94:GLN:NE2	20:AR:32:ARG:HD3	2.09	0.62
16:AN:53:LEU:HB3	16:AN:56:VAL:HG21	1.81	0.62
1:AA:187:G:H2'	22:AT:105:SER:CB	2.30	0.62
1:AA:333:G:O4'	22:AT:16:HIS:HD2	1.74	0.62
1:AA:1106:G:OP1	5:AC:172:ARG:HG2	2.00	0.62
1:AA:1320:C:N4	21:AS:37:ARG:HD3	2.12	0.62
6:AD:61:LYS:NZ	6:AD:62:GLN:HE21	1.98	0.62
12:AJ:46:ARG:HH11	12:AJ:64:GLU:HB3	1.65	0.62
12:AJ:71:LEU:O	12:AJ:72:VAL:HB	2.00	0.62
14:AL:40:VAL:O	14:AL:40:VAL:HG12	1.99	0.62
15:AM:84:ILE:O	15:AM:86:CYS:N	2.32	0.62
17:AO:29:VAL:HG12	17:AO:85:LEU:HD11	1.82	0.62
21:AS:31:ILE:CG2	21:AS:32:LYS:H	2.10	0.62
23:B0:1528:C:C2'	23:B0:1529:C:H5''	2.30	0.62
23:B0:2571:G:H2'	23:B0:2572:U:C6	2.34	0.62
1:AA:13:U:O4'	1:AA:914:A:P	2.58	0.62
1:AA:74:G:H2'	1:AA:75:C:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:323:U:H5'	22:AT:23:ARG:H	1.65	0.62
1:AA:675:A:C1'	13:AK:116:HIS:CG	2.63	0.62
1:AA:905:U:C6	1:AA:906:G:N7	2.68	0.62
1:AA:932:C:H5'	9:AG:3:ARG:HD3	1.78	0.62
1:AA:1020:U:H2'	1:AA:1021:G:H8	1.63	0.62
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.35	0.62
1:AA:1473:A:O2'	23:B0:1718:A:C5	2.53	0.62
1:AA:1487:G:O2'	1:AA:1488:G:H5'	1.99	0.62
2:AW:76:A:C1'	23:B0:2562:G:N2	2.61	0.62
4:AB:186:ALA:HB3	4:AB:197:VAL:HG11	1.82	0.62
6:AD:148:VAL:CG1	6:AD:158:ILE:HD13	2.30	0.62
9:AG:78:ARG:HB2	9:AG:156:TRP:HZ3	1.65	0.62
19:AQ:76:LEU:HD23	19:AQ:77:VAL:N	2.15	0.62
23:B0:1580:C:H2'	23:B0:1581:C:C6	2.35	0.62
23:B0:2668:U:H4'	23:B0:2669:C:C5'	2.25	0.62
1:AA:254:G:O2'	19:AQ:15:MET:HB3	1.98	0.61
1:AA:837:G:O2'	1:AA:838:C:O4'	2.12	0.61
1:AA:1110:A:C2'	1:AA:1111:A:H5'	2.30	0.61
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.35	0.61
1:AA:1342:C:O2'	11:AI:124:GLN:HA	2.00	0.61
1:AA:1370:G:O2'	1:AA:1371:G:H5'	2.00	0.61
1:AA:1440:C:H2'	1:AA:1441:G:H5'	1.82	0.61
1:AA:1457:A:C5	1:AA:1459:C:O2	2.53	0.61
4:AB:12:GLU:C	4:AB:14:GLY:H	2.07	0.61
4:AB:115:LEU:HG	4:AB:153:ARG:NH2	2.14	0.61
6:AD:191:ARG:HD2	6:AD:191:ARG:O	2.00	0.61
22:AT:54:LYS:HE3	22:AT:100:ILE:HD11	1.82	0.61
23:B0:788:G:H5'	23:B0:790:A:H1'	1.81	0.61
23:B0:1250:A:O2'	23:B0:1251:G:H4'	2.00	0.61
1:AA:193:C:H2'	1:AA:194:C:C6	2.36	0.61
1:AA:254:G:O2'	19:AQ:16:GLN:N	2.33	0.61
1:AA:262:A:H4'	22:AT:75:ASN:H	1.64	0.61
1:AA:386:C:O2'	1:AA:387:U:H5'	2.00	0.61
1:AA:653:A:O4'	10:AH:56:LYS:HG2	2.00	0.61
1:AA:675:A:C4	13:AK:116:HIS:HB2	2.29	0.61
1:AA:812:C:O2'	1:AA:813:U:OP2	2.17	0.61
1:AA:1225:A:H2'	1:AA:1225:A:N3	2.14	0.61
2:AW:75:C:N3	23:B0:2533:U:O2	2.31	0.61
2:AW:75:C:O2'	23:B0:2486:C:C3'	2.48	0.61
4:AB:69:LEU:HD12	4:AB:155:LEU:HD11	1.82	0.61
11:AI:4:TYR:CZ	11:AI:88:TYR:HD1	2.17	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:973:U:H2'	23:B0:974:U:C6	2.35	0.61
23:B0:1147:G:H2'	23:B0:1148:G:C8	2.35	0.61
23:B0:2522:G:N2	23:B0:2625:U:H5''	2.15	0.61
1:AA:116:A:N6	1:AA:313:A:C1'	2.21	0.61
1:AA:128:G:OP1	19:AQ:2:PRO:HD3	1.96	0.61
1:AA:128:G:C1'	19:AQ:61:GLU:CD	2.70	0.61
1:AA:246:A:H1'	1:AA:247:G:C1'	2.30	0.61
1:AA:255:G:O3'	19:AQ:17:LYS:NZ	2.22	0.61
1:AA:406:G:N7	1:AA:496:A:C4	2.68	0.61
1:AA:1425:U:H2'	1:AA:1426:C:H6	1.65	0.61
2:AV:12:U:OP1	23:B0:1891:C:C2'	2.48	0.61
2:AW:76:A:N1	23:B0:2532:G:N1	2.48	0.61
4:AB:20:GLU:HG2	4:AB:189:ASP:OD2	1.99	0.61
4:AB:122:PHE:HE2	4:AB:139:LYS:HG2	1.65	0.61
7:AE:120:THR:HG23	7:AE:121:LYS:N	2.15	0.61
9:AG:149:ARG:NH1	13:AK:59:TYR:CD1	2.67	0.61
13:AK:74:ALA:C	13:AK:76:GLY:H	2.06	0.61
19:AQ:105:ALA:H	23:B0:727:U:C2'	1.99	0.61
23:B0:1920:A:H3'	23:B0:1920:A:OP2	2.01	0.61
1:AA:403:C:C2	1:AA:404:U:C6	2.89	0.61
1:AA:436:C:O2'	1:AA:437:U:C5'	2.47	0.61
1:AA:598:U:H4'	10:AH:94:TYR:CG	2.35	0.61
1:AA:1472:U:O2'	23:B0:1719:G:O2'	2.16	0.61
6:AD:23:GLY:HA3	6:AD:112:VAL:CG1	2.30	0.61
23:B0:116:A:N3	23:B0:155:G:H1'	2.15	0.61
23:B0:1518:C:H2'	23:B0:1519:G:C8	2.35	0.61
23:B0:2727:G:H1	23:B0:2735:C:H5''	1.64	0.61
1:AA:551:U:H2'	1:AA:552:U:H6	1.64	0.61
1:AA:691:G:H3'	13:AK:26:ASN:HD21	1.65	0.61
1:AA:1067:A:N3	1:AA:1068:G:C1'	2.64	0.61
1:AA:1112:C:C2	5:AC:178:LEU:N	2.68	0.61
1:AA:1484:C:H2'	1:AA:1485:U:H6	1.65	0.61
1:AA:1490:C:H6	1:AA:1490:C:C5'	2.13	0.61
4:AB:80:ILE:HD11	4:AB:208:ILE:HG23	1.81	0.61
13:AK:19:ALA:HB2	13:AK:80:VAL:HG11	1.82	0.61
19:AQ:104:LYS:CB	23:B0:726:G:C4	2.83	0.61
23:B0:2548:G:H2'	23:B0:2549:G:C5'	2.27	0.61
1:AA:837:G:C3'	1:AA:838:C:C6	2.83	0.61
1:AA:954:G:H21	1:AA:1227:A:H62	1.49	0.61
1:AA:1226:C:N4	15:AM:104:ARG:HD2	2.16	0.61
1:AA:1269:A:C2	1:AA:1313:U:C1'	2.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1473:A:C1'	23:B0:1719:G:H1'	2.30	0.61
2:AV:74:C:C4	23:B0:2231:G:N1	2.69	0.61
5:AC:50:ALA:O	5:AC:70:VAL:HG12	1.99	0.61
13:AK:48:ILE:HG22	13:AK:49:GLY:N	2.16	0.61
13:AK:84:VAL:CG1	13:AK:95:ILE:HD11	2.31	0.61
20:AR:52:PRO:O	20:AR:56:THR:HG23	2.00	0.61
1:AA:253:U:N1	1:AA:275:G:O2'	2.32	0.61
1:AA:300:A:H1'	1:AA:565:U:C2	2.36	0.61
1:AA:335:C:C1'	1:AA:1434:A:O4'	2.47	0.61
1:AA:905:U:H2'	1:AA:906:G:O4'	2.00	0.61
1:AA:1429:C:HO2'	23:B0:1720:G:HO2'	1.23	0.61
4:AB:97:TRP:HZ2	4:AB:102:LEU:HD13	1.66	0.61
9:AG:78:ARG:HB2	9:AG:156:TRP:CZ3	2.36	0.61
14:AL:46:LYS:HG2	14:AL:47:LYS:N	2.16	0.61
23:B0:3877:A:C3'	23:B0:1861:G:C8	2.76	0.61
1:AA:131:C:O3'	1:AA:262:A:H1'	2.01	0.61
1:AA:390:C:H2'	1:AA:391:G:H8	1.66	0.61
1:AA:501:C:H2'	1:AA:502:G:C8	2.34	0.61
1:AA:779:C:O2'	13:AK:120:ARG:NH1	2.31	0.61
2:AW:76:A:O4'	23:B0:2486:C:C5'	2.48	0.61
6:AD:61:LYS:NZ	6:AD:62:GLN:NE2	2.49	0.61
7:AE:80:ILE:CD1	7:AE:91:LEU:HB2	2.30	0.61
11:AI:44:VAL:HG12	11:AI:51:ARG:HH12	1.66	0.61
15:AM:10:PRO:O	15:AM:45:VAL:HG11	2.01	0.61
15:AM:54:VAL:O	15:AM:58:GLU:HG2	2.01	0.61
15:AM:84:ILE:HG22	21:AS:65:ASN:ND2	2.15	0.61
22:AT:96:GLY:O	22:AT:97:ALA:HB3	2.01	0.61
23:B0:1093:U:O4	23:B0:1094:C:C4	2.54	0.61
23:B0:2223:U:H2'	23:B0:2224:U:O4'	2.01	0.61
1:AA:37:U:H5'	1:AA:501:C:OP1	2.00	0.61
1:AA:179:A:N1	1:AA:196:A:N7	2.48	0.61
1:AA:265:G:H5'	19:AQ:65:ILE:N	2.10	0.61
1:AA:333:G:O2'	22:AT:16:HIS:CE1	2.52	0.61
1:AA:438:G:OP1	6:AD:125:HIS:CE1	2.54	0.61
1:AA:779:C:O4'	13:AK:120:ARG:CB	2.48	0.61
1:AA:796:C:OP1	13:AK:123:LYS:HE2	2.01	0.61
1:AA:1255:G:H2'	1:AA:1258:G:N2	2.13	0.61
2:AV:44:A:O2'	2:AV:45:G:H5'	2.00	0.61
5:AC:129:ALA:HB3	5:AC:132:ARG:HD2	1.82	0.61
14:AL:28:LYS:HD2	14:AL:33:ARG:HH12	1.65	0.61
22:AT:56:MET:HE3	22:AT:88:VAL:HG11	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:362:C:H2'	23:B0:363:G:H4'	1.82	0.61
23:B0:1094:C:O2'	23:B0:1096:A:H2	1.83	0.61
23:B0:3874:C:H2'	23:B0:3875:A:C5'	2.30	0.61
23:B0:3184:C:C2'	23:B0:3185:U:H5''	2.31	0.61
1:AA:27:G:C2	1:AA:557:G:N3	2.69	0.61
1:AA:266:G:H5'	19:AQ:67:LYS:N	2.15	0.61
1:AA:319:G:C5'	1:AA:1468:A:C4'	2.74	0.61
1:AA:377:G:OP1	18:AP:3:LYS:NZ	2.34	0.61
1:AA:953:G:H1'	15:AM:125:ARG:CB	2.31	0.61
1:AA:1492:A:OP1	14:AL:47:LYS:HA	2.00	0.61
4:AB:88:ALA:C	4:AB:90:MET:H	2.09	0.61
4:AB:114:ARG:NH1	4:AB:118:LEU:HD21	2.15	0.61
5:AC:47:LEU:HD23	5:AC:68:VAL:HG11	1.83	0.61
6:AD:25:ARG:O	6:AD:27:TYR:N	2.33	0.61
15:AM:40:ASN:ND2	15:AM:41:PRO:HD2	2.15	0.61
19:AQ:104:LYS:HE3	23:B0:729:A:N6	2.15	0.61
23:B0:181:A:H5''	23:B0:182:G:OP1	2.00	0.61
23:B0:891:A:N3	23:B0:892:A:N7	2.48	0.61
23:B0:1500:U:H3	23:B0:1520:G:H22	1.48	0.61
1:AA:102:G:N3	1:AA:151:A:H2	1.98	0.60
1:AA:247:G:C2	1:AA:282:A:C2	2.89	0.60
1:AA:456:A:C6	1:AA:477:G:C4	2.86	0.60
1:AA:476:U:C2'	1:AA:477:G:C5'	2.79	0.60
1:AA:651:C:C2	1:AA:652:U:C5	2.89	0.60
19:AQ:104:LYS:O	19:AQ:105:ALA:HB2	2.01	0.60
22:AT:43:LEU:HD12	22:AT:55:ILE:HD12	1.81	0.60
23:B0:161:U:H4'	23:B0:194:G:H21	1.66	0.60
1:AA:299:G:C2	1:AA:566:G:O6	2.55	0.60
1:AA:1190:G:C2'	1:AA:1191:A:OP2	2.50	0.60
1:AA:1434:A:H3'	1:AA:1435:G:H5'	1.75	0.60
1:AA:1470:G:O2'	1:AA:1471:G:H5'	2.02	0.60
1:AA:1483:A:C2'	1:AA:1484:C:C5	2.85	0.60
4:AB:140:HIS:O	4:AB:143:GLU:HB2	2.01	0.60
5:AC:60:ALA:O	5:AC:61:ALA:HB2	2.00	0.60
5:AC:191:THR:CG2	5:AC:192:THR:N	2.64	0.60
23:B0:1427:G:H2'	23:B0:1428:G:H5'	1.82	0.60
1:AA:39:G:N1	1:AA:404:U:C4	2.69	0.60
1:AA:675:A:O2'	13:AK:116:HIS:ND1	2.33	0.60
1:AA:893:C:N3	1:AA:894:G:C5	2.69	0.60
5:AC:191:THR:HG22	5:AC:192:THR:N	2.15	0.60
6:AD:157:LEU:HD22	6:AD:161:ASN:ND2	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AJ:30:SER:HB3	12:AJ:84:GLN:HE21	1.67	0.60
19:AQ:101:ARG:HA	19:AQ:101:ARG:NE	2.16	0.60
23:B0:317:U:C3'	23:B0:318:G:H5''	2.31	0.60
23:B0:1139:A:H1'	23:B0:2496:C:H5'	1.83	0.60
1:AA:46:G:C6	1:AA:366:C:C2	2.89	0.60
1:AA:293:G:C5'	1:AA:609:A:C6	2.81	0.60
1:AA:835:U:P	20:AR:60:GLY:HA3	2.40	0.60
1:AA:893:C:O2'	1:AA:894:G:C5'	2.47	0.60
1:AA:1247:U:O2'	1:AA:1248:A:H5'	2.02	0.60
1:AA:1256:A:C5'	1:AA:1258:G:N9	2.63	0.60
1:AA:1475:G:H2'	1:AA:1476:G:C8	2.36	0.60
4:AB:34:ALA:O	4:AB:41:ILE:N	2.31	0.60
5:AC:20:SER:HB3	5:AC:22:TRP:HE1	1.67	0.60
5:AC:26:LYS:HD3	5:AC:26:LYS:N	2.17	0.60
16:AN:11:LYS:O	16:AN:13:THR:N	2.35	0.60
19:AQ:104:LYS:CA	23:B0:727:U:H1'	2.30	0.60
23:B0:414:A:H2'	23:B0:415:A:O4'	2.01	0.60
23:B0:540:G:H2'	23:B0:541:C:H4'	1.82	0.60
23:B0:1352:G:H2'	23:B0:1353:A:H8	1.66	0.60
23:B0:1576:G:H8	23:B0:1576:G:OP2	1.85	0.60
1:AA:108:G:C8	22:AT:12:ALA:CB	2.83	0.60
1:AA:322:C:C4'	22:AT:23:ARG:CD	2.31	0.60
1:AA:848:G:H2'	1:AA:849:C:C6	2.36	0.60
1:AA:1297:C:P	15:AM:44:ARG:NH2	2.75	0.60
1:AA:1416:G:H5''	1:AA:1417:G:P	2.41	0.60
1:AA:1474:G:C2'	23:B0:1705:U:H4'	2.27	0.60
2:AV:40:C:H2'	2:AV:41:U:H5'	1.82	0.60
6:AD:162:LEU:HD13	6:AD:181:MET:HE2	1.82	0.60
7:AE:76:ILE:HD13	7:AE:142:LEU:HD11	1.84	0.60
18:AP:52:ASP:OD2	18:AP:55:ARG:HG3	2.00	0.60
23:B0:941:U:H2'	23:B0:942:U:O4'	2.02	0.60
23:B0:1763:G:H2'	23:B0:1764:A:H4'	1.83	0.60
23:B0:3877:A:C2	23:B0:1861:G:N2	2.20	0.60
1:AA:1003:G:H2'	1:AA:2003:G:C8	2.36	0.60
1:AA:1091:U:O2	1:AA:1093:A:C8	2.54	0.60
1:AA:1117:G:H5'	1:AA:1117:G:H8	1.66	0.60
1:AA:1434:A:OP1	1:AA:1435:G:OP2	2.19	0.60
4:AB:33:TYR:O	4:AB:34:ALA:HB2	2.01	0.60
4:AB:143:GLU:O	4:AB:147:LYS:HG3	2.00	0.60
13:AK:69:ALA:O	13:AK:73:MET:HG2	2.02	0.60
23:B0:742:G:H2'	23:B0:1766:U:H1'	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:18:C:O2	1:AA:918:A:C6	2.54	0.60
1:AA:227:G:H2'	1:AA:228:A:O4'	2.01	0.60
1:AA:333:G:C2'	22:AT:16:HIS:NE2	2.64	0.60
1:AA:377:G:OP2	18:AP:3:LYS:NZ	2.33	0.60
1:AA:991:U:O2'	1:AA:992:U:H5'	2.02	0.60
1:AA:1016:A:O4'	1:AA:1218:C:H4'	2.01	0.60
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.31	0.60
5:AC:33:LEU:HD11	16:AN:53:LEU:CD2	2.32	0.60
5:AC:79:ARG:HE	5:AC:82:GLU:HG2	1.66	0.60
9:AG:38:LEU:HD12	9:AG:38:LEU:O	2.01	0.60
16:AN:8:GLU:O	16:AN:11:LYS:HB2	2.02	0.60
23:B0:2783:U:H2'	23:B0:2785:A:N7	2.16	0.60
1:AA:259:G:OP2	22:AT:83:ARG:HG2	2.01	0.60
1:AA:317:G:OP1	1:AA:353:A:N6	2.21	0.60
1:AA:323:U:C3'	22:AT:22:ARG:CB	2.67	0.60
1:AA:375:U:O3'	1:AA:376:G:C5'	2.49	0.60
1:AA:651:C:O2'	1:AA:652:U:O5'	2.14	0.60
1:AA:905:U:C3'	1:AA:906:G:O5'	2.49	0.60
1:AA:923:A:C2	1:AA:1395:C:N3	2.69	0.60
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.36	0.60
2:AV:56:C:O3'	28:BD:74:ILE:CA	2.49	0.60
18:AP:4:ILE:HG13	18:AP:64:ALA:HB1	1.83	0.60
23:B0:83:A:H4'	23:B0:84:G:O4'	2.01	0.60
23:B0:1073:G:H1'	23:B0:1099:A:N1	2.17	0.60
23:B0:1127:C:H2'	23:B0:1128:G:H8	1.66	0.60
23:B0:1337:G:H1'	23:B0:1632:A:N6	2.17	0.60
1:AA:28:G:O2'	1:AA:296:U:H5''	2.01	0.60
1:AA:254:G:H4'	19:AQ:18:THR:HG21	1.83	0.60
1:AA:293:G:P	1:AA:609:A:N6	2.68	0.60
1:AA:425:G:O2'	1:AA:426:G:H5'	2.02	0.60
1:AA:919:A:C2	1:AA:1080:A:C2	2.84	0.60
1:AA:1014:A:C5	21:AS:34:TRP:CD2	2.89	0.60
4:AB:115:LEU:O	4:AB:119:GLU:HG3	2.00	0.60
14:AL:24:VAL:O	14:AL:24:VAL:HG12	2.02	0.60
18:AP:67:THR:HG22	18:AP:68:ASP:N	2.15	0.60
19:AQ:95:TYR:C	19:AQ:97:SER:N	2.58	0.60
23:B0:317:U:H2'	23:B0:318:G:H5''	1.82	0.60
23:B0:1194:U:H2'	23:B0:1195:U:C6	2.37	0.60
23:B0:1685:A:H1'	23:B0:1686:A:C5	2.36	0.60
23:B0:1686:A:H2'	23:B0:1686:A:N3	2.17	0.60
23:B0:3866:A:H1'	55:B5:194:ALA:CA	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1921:A:H2'	23:B0:1922:U:H5''	1.83	0.60
1:AA:187:G:O2'	22:AT:104:LEU:C	2.44	0.60
1:AA:216:C:C5'	1:AA:465:C:H41	2.14	0.60
1:AA:246:A:H1'	1:AA:247:G:H1'	1.84	0.60
1:AA:292:G:C2	1:AA:608:A:N1	2.70	0.60
1:AA:323:U:O4'	22:AT:19:SER:HB2	2.02	0.60
1:AA:345:C:OP1	38:BN:49:ALA:CA	2.50	0.60
1:AA:458:G:H2'	1:AA:459:G:C8	2.36	0.60
1:AA:1067:A:C4'	1:AA:1068:G:O5'	2.50	0.60
1:AA:1473:A:O2'	23:B0:1718:A:C4	2.55	0.60
2:AW:75:C:HO2'	23:B0:2486:C:C3'	2.15	0.60
6:AD:23:GLY:HA3	6:AD:112:VAL:HG12	1.84	0.60
7:AE:24:ARG:HG2	7:AE:24:ARG:HH11	1.66	0.60
9:AG:72:ARG:HG2	9:AG:142:GLU:OE1	2.02	0.60
10:AH:64:LYS:HG2	10:AH:79:VAL:HG21	1.84	0.60
24:B9:67:C:H2'	24:B9:68:A:H5'	1.84	0.60
1:AA:132:C:C5'	1:AA:262:A:O4'	2.43	0.59
1:AA:406:G:C8	1:AA:496:A:C5	2.90	0.59
1:AA:537:G:H5''	14:AL:113:ARG:CZ	2.32	0.59
1:AA:1016:A:H1'	1:AA:1218:C:H4'	1.79	0.59
2:AV:74:C:N3	23:B0:2231:G:C2	2.70	0.59
5:AC:6:HIS:HD2	5:AC:8:ILE:HB	1.66	0.59
23:B0:3127:G:N2	23:B0:3173:A:O2'	2.27	0.59
1:AA:246:A:H4'	1:AA:247:G:C4'	2.23	0.59
1:AA:274:A:C2	1:AA:275:G:C1'	2.85	0.59
1:AA:397:A:C8	1:AA:547:A:O2'	2.54	0.59
1:AA:402:G:H5'	1:AA:621:A:N3	2.17	0.59
1:AA:474:U:H2'	1:AA:475:C:H6	1.65	0.59
1:AA:513:C:O2'	1:AA:514:C:H5'	2.03	0.59
1:AA:538:G:H5'	14:AL:114:LYS:HD3	1.83	0.59
1:AA:653:A:O4'	10:AH:56:LYS:CE	2.46	0.59
1:AA:959:A:H3'	1:AA:960:U:H5''	1.82	0.59
1:AA:996:A:H2'	1:AA:997:U:C6	2.37	0.59
1:AA:1112:C:C2	5:AC:178:LEU:C	2.80	0.59
6:AD:33:MET:O	6:AD:37:PRO:HG3	2.02	0.59
18:AP:81:ARG:HG3	18:AP:83:GLU:HG2	1.84	0.59
21:AS:13:ASP:HA	21:AS:16:LEU:HB3	1.83	0.59
23:B0:366:U:H2'	23:B0:367:G:H8	1.67	0.59
23:B0:766:A:H2'	23:B0:767:G:C8	2.37	0.59
23:B0:1066:G:H21	23:B0:1096:A:H8	1.50	0.59
23:B0:1119:U:C2'	23:B0:1120:C:O4'	2.50	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:3128:G:C2'	23:B0:3174:C:H5'	2.22	0.59
23:B0:3148:G:C2'	23:B0:3149:G:H5'	2.33	0.59
23:B0:2691:C:H3'	23:B0:2692:A:C5'	2.32	0.59
1:AA:107:G:H2'	1:AA:108:G:H5'	1.83	0.59
1:AA:205:G:H21	1:AA:207:C:H5	1.44	0.59
1:AA:246:A:C2	1:AA:278:G:N3	2.71	0.59
1:AA:397:A:N6	1:AA:547:A:C1'	2.32	0.59
1:AA:815:A:O3'	1:AA:1527:C:C4'	2.50	0.59
1:AA:1430:C:C4'	23:B0:1721:G:H5'	2.31	0.59
5:AC:6:HIS:NE2	5:AC:8:ILE:HD12	2.17	0.59
7:AE:80:ILE:HD11	7:AE:91:LEU:HB2	1.83	0.59
12:AJ:15:THR:HG23	12:AJ:94:VAL:HG22	1.85	0.59
12:AJ:86:MET:HA	12:AJ:86:MET:HE3	1.84	0.59
23:B0:81:C:H2'	23:B0:82:G:O4'	2.02	0.59
23:B0:2185:U:H2'	23:B0:2186:G:C8	2.37	0.59
1:AA:109:A:H2'	1:AA:326:G:N2	2.17	0.59
1:AA:253:U:C2	1:AA:275:G:O2'	2.37	0.59
1:AA:265:G:H5'	19:AQ:65:ILE:HA	1.45	0.59
1:AA:393:A:OP1	18:AP:12:LYS:HD3	2.02	0.59
1:AA:600:C:C5'	10:AH:129:VAL:HA	2.32	0.59
1:AA:1381:U:O2'	1:AA:1382:C:H5'	2.02	0.59
5:AC:91:LEU:CD2	5:AC:99:VAL:HG13	2.27	0.59
12:AJ:60:ARG:N	12:AJ:60:ARG:HD2	2.17	0.59
15:AM:94:ARG:HH22	21:AS:81:ARG:HD3	1.65	0.59
23:B0:198:A:H5''	23:B0:199:A:H5'	1.82	0.59
23:B0:895:G:H5'	23:B0:895:G:C8	2.35	0.59
23:B0:3127:G:O2'	23:B0:3174:C:H1'	2.03	0.59
23:B0:3128:G:O2'	23:B0:3174:C:H5''	1.93	0.59
1:AA:69:G:C2'	1:AA:101:A:C2	2.85	0.59
1:AA:246:A:N3	1:AA:247:G:H1'	2.17	0.59
1:AA:619:U:C2	6:AD:135:LEU:HG	2.29	0.59
1:AA:737:A:H1'	8:AF:73:ASN:ND2	2.17	0.59
1:AA:1473:A:H4'	23:B0:1719:G:C4'	2.31	0.59
1:AA:1484:C:H5''	23:B0:1943:A:H1'	1.81	0.59
2:AV:74:C:O3'	23:B0:2581:A:OP2	2.20	0.59
6:AD:162:LEU:CD1	6:AD:181:MET:HE2	2.31	0.59
7:AE:118:ILE:HG22	7:AE:119:LEU:H	1.66	0.59
11:AI:79:LEU:HD23	11:AI:101:PHE:O	2.02	0.59
12:AJ:46:ARG:NH1	12:AJ:64:GLU:HG2	2.18	0.59
15:AM:125:ARG:HD2	15:AM:125:ARG:C	2.27	0.59
23:B0:860:U:C2'	23:B0:861:G:H5'	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:918:A:C2'	23:B0:919:U:H5''	2.30	0.59
23:B0:1057:A:H3'	23:B0:1058:G:C5'	2.32	0.59
23:B0:1147:G:H2'	23:B0:1148:G:H8	1.67	0.59
23:B0:1455:C:O2'	23:B0:1644:G:H5''	2.03	0.59
23:B0:2217:G:H4'	23:B0:2219:U:H5	1.68	0.59
1:AA:69:G:C1'	1:AA:102:G:C6	2.85	0.59
1:AA:248:C:O4'	1:AA:282:A:C2	2.55	0.59
1:AA:254:G:HO2'	1:AA:255:G:H5'	1.63	0.59
1:AA:518:C:H5''	1:AA:519:C:C6	2.38	0.59
1:AA:757:U:H4'	1:AA:878:G:N2	2.17	0.59
1:AA:1308:U:C5	15:AM:99:ARG:NH1	2.71	0.59
1:AA:1473:A:C4'	23:B0:1719:G:C4'	2.80	0.59
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.38	0.59
7:AE:122:GLU:O	7:AE:123:LEU:HD23	2.03	0.59
23:B0:241:C:O2'	23:B0:242:A:H5''	2.03	0.59
23:B0:3867:G:N3	55:B5:44:GLY:CA	2.62	0.59
23:B0:2018:G:H3'	23:B0:2019:C:C5'	2.32	0.59
1:AA:255:G:C1'	19:AQ:16:GLN:NE2	2.11	0.59
1:AA:435:C:H2'	1:AA:436:C:H6	1.67	0.59
1:AA:735:C:O2'	20:AR:75:ILE:HD12	2.03	0.59
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.17	0.59
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.37	0.59
2:AV:74:C:O3'	23:B0:2581:A:H5'	1.90	0.59
7:AE:118:ILE:CG2	7:AE:119:LEU:N	2.65	0.59
17:AO:11:VAL:HG21	17:AO:34:LEU:HD12	1.83	0.59
22:AT:57:ARG:HH21	22:AT:100:ILE:CG2	2.16	0.59
1:AA:99:C:O2	1:AA:101:A:C8	2.56	0.59
1:AA:131:C:C4'	1:AA:262:A:O2'	2.49	0.59
1:AA:254:G:H5'	19:AQ:43:LEU:HD13	1.85	0.59
1:AA:377:G:OP1	18:AP:3:LYS:CD	2.51	0.59
1:AA:406:G:N2	1:AA:437:U:O2	2.33	0.59
1:AA:705:U:O3'	1:AA:706:A:P	2.60	0.59
1:AA:737:A:C1'	8:AF:73:ASN:ND2	2.65	0.59
1:AA:921:U:O4	1:AA:1396:A:C6	2.56	0.59
1:AA:1064:G:H1'	1:AA:1190:G:H21	1.68	0.59
1:AA:1123:A:O2'	12:AJ:38:ILE:HG22	2.03	0.59
1:AA:1211:U:H5'	1:AA:1212:U:P	2.43	0.59
1:AA:1269:A:N1	1:AA:1313:U:O4'	2.35	0.59
1:AA:1484:C:C5'	23:B0:1943:A:C1'	2.74	0.59
4:AB:120:ALA:O	4:AB:124:SER:HB3	2.02	0.59
6:AD:151:LYS:H	6:AD:151:LYS:CD	2.16	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AG:51:GLN:OE1	9:AG:51:GLN:HA	2.02	0.59
16:AN:12:ARG:O	16:AN:14:PRO:N	2.36	0.59
1:AA:21:G:O2'	1:AA:914:A:C6	2.55	0.59
1:AA:258:G:O3'	22:AT:87:LYS:HE2	2.01	0.59
1:AA:686:U:O2'	1:AA:687:A:H8	1.84	0.59
1:AA:1069:C:HO2'	1:AA:1192:C:H1'	1.65	0.59
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.38	0.59
1:AA:1234:C:C4'	1:AA:1365:G:OP1	2.49	0.59
1:AA:1345:U:H5''	11:AI:120:ARG:HH11	1.67	0.59
2:AV:41:U:H2'	2:AV:42:G:O4'	2.03	0.59
4:AB:98:LEU:O	4:AB:101:MET:HG3	2.01	0.59
4:AB:101:MET:CA	4:AB:108:ILE:HD12	2.33	0.59
5:AC:47:LEU:CD1	5:AC:47:LEU:H	2.15	0.59
5:AC:64:VAL:HB	5:AC:99:VAL:CG2	2.33	0.59
8:AF:10:LEU:CD1	8:AF:59:TYR:HB3	2.29	0.59
9:AG:42:ILE:HG23	9:AG:117:ALA:HA	1.84	0.59
9:AG:122:HIS:HA	9:AG:125:MET:HE3	1.85	0.59
10:AH:83:ILE:HG23	10:AH:83:ILE:O	2.03	0.59
23:B0:67:G:H21	23:B0:72:A:H2'	1.67	0.59
23:B0:830:C:O2'	23:B0:852:U:H5''	2.03	0.59
23:B0:1621:C:H4'	23:B0:1626:A:H61	1.68	0.59
23:B0:2181:A:H2'	23:B0:2182:A:H5'	1.85	0.59
23:B0:2368:G:H5''	23:B0:2369:U:O4'	2.02	0.59
24:B9:25:G:H2'	24:B9:26:G:H5'	1.84	0.59
24:B9:67:C:C2'	24:B9:68:A:H5'	2.32	0.59
1:AA:20:U:H3	1:AA:915:A:N6	1.85	0.59
1:AA:39:G:O2'	1:AA:40:C:H5'	2.03	0.59
1:AA:265:G:C1'	19:AQ:64:PRO:HB3	2.33	0.59
1:AA:332:G:OP2	22:AT:10:LEU:CG	2.47	0.59
1:AA:1110:A:N6	1:AA:1111:A:C6	2.71	0.59
1:AA:1255:G:O2'	1:AA:1258:G:N2	2.35	0.59
2:AW:76:A:O4'	23:B0:2486:C:H5'	2.03	0.59
5:AC:10:PHE:CZ	5:AC:178:LEU:HD13	2.38	0.59
15:AM:81:LEU:HD23	15:AM:81:LEU:N	2.17	0.59
21:AS:25:LYS:H	21:AS:25:LYS:HD2	1.68	0.59
23:B0:576:A:H2	23:B0:580:A:H62	1.51	0.59
23:B0:1088:A:H2'	23:B0:1089:C:O4'	2.03	0.59
1:AA:104:G:C5'	1:AA:172:A:H2	2.09	0.58
1:AA:505:G:H2'	1:AA:506:G:C8	2.37	0.58
1:AA:547:A:P	1:AA:548:G:O5'	2.61	0.58
1:AA:736:C:H2'	1:AA:737:A:C8	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:815:A:C2	1:AA:1528:U:C6	2.91	0.58
1:AA:1109:C:P	5:AC:176:HIS:NE2	2.76	0.58
1:AA:1348:U:OP1	11:AI:110:GLU:HB3	2.03	0.58
1:AA:1392:G:O4'	1:AA:1531:A:H4'	2.02	0.58
1:AA:1497:G:H1'	1:AA:1518:A:H2	1.62	0.58
9:AG:95:ARG:HG3	9:AG:95:ARG:NH1	2.17	0.58
16:AN:24:CYS:HB3	16:AN:28:GLY:H	1.66	0.58
18:AP:51:VAL:O	18:AP:51:VAL:HG12	2.02	0.58
23:B0:191:G:O2'	23:B0:192:G:H5'	2.03	0.58
23:B0:1029:C:C2'	23:B0:1030:U:H5''	2.33	0.58
23:B0:3877:A:OP1	23:B0:1861:G:OP2	2.20	0.58
23:B0:2547:C:H2'	23:B0:2548:G:C8	2.38	0.58
23:B0:2727:G:O2'	23:B0:2728:A:H5''	2.03	0.58
1:AA:651:C:H2'	1:AA:652:U:H6	1.67	0.58
1:AA:1014:A:H5'	21:AS:14:HIS:CB	2.33	0.58
1:AA:1416:G:C2'	1:AA:1417:G:C4'	2.70	0.58
1:AA:1483:A:C8	1:AA:1484:C:C4	2.91	0.58
2:AV:41:U:H5'	2:AV:41:U:C6	2.26	0.58
4:AB:130:ARG:HD2	4:AB:131:PRO:HD2	1.85	0.58
6:AD:157:LEU:HD22	6:AD:161:ASN:HD21	1.67	0.58
12:AJ:45:ARG:O	12:AJ:64:GLU:HA	2.03	0.58
21:AS:5:LEU:O	21:AS:6:LYS:CB	2.52	0.58
23:B0:181:A:H4'	23:B0:182:G:C5'	2.33	0.58
23:B0:800:U:H3'	23:B0:804:C:N4	2.17	0.58
23:B0:877:G:H21	23:B0:926:C:H41	1.50	0.58
1:AA:113:G:C1'	1:AA:354:G:H5'	2.32	0.58
1:AA:234:C:O2'	19:AQ:70:ARG:CG	2.43	0.58
1:AA:323:U:H5'	22:AT:19:SER:C	2.15	0.58
1:AA:755:G:O2'	10:AH:1:MET:HE3	2.02	0.58
1:AA:798:G:P	13:AK:122:LYS:HZ3	2.26	0.58
1:AA:1130:A:H3'	1:AA:1130:A:OP2	2.02	0.58
1:AA:1317:C:C5	16:AN:16:PHE:CG	2.91	0.58
1:AA:1347:G:HO2'	1:AA:1348:U:P	2.25	0.58
1:AA:1441:G:H4'	1:AA:1442:G:N7	2.18	0.58
1:AA:1496:C:O2'	1:AA:1517:G:C6	2.56	0.58
4:AB:133:LYS:O	4:AB:137:ARG:HG3	2.04	0.58
4:AB:156:LYS:O	4:AB:156:LYS:HD3	2.03	0.58
11:AI:93:ARG:NH1	11:AI:97:LYS:NZ	2.51	0.58
22:AT:10:LEU:HD12	22:AT:12:ALA:HB3	1.85	0.58
23:B0:45:C:H5''	23:B0:192:G:N7	2.19	0.58
23:B0:1181:C:C3'	23:B0:1182:U:H5''	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:3098:U:C5	23:B0:3099:U:C4	2.90	0.58
1:AA:69:G:C8	1:AA:102:G:N1	2.72	0.58
1:AA:191:G:N2	22:AT:103:GLY:HA2	2.15	0.58
1:AA:1231:G:H5''	11:AI:126:SER:OG	2.04	0.58
12:AJ:3:LYS:N	12:AJ:77:PRO:HD3	2.18	0.58
12:AJ:81:THR:C	12:AJ:83:GLU:H	2.10	0.58
20:AR:47:THR:HG22	20:AR:48:GLY:N	2.18	0.58
23:B0:805:G:H5''	23:B0:806:A:O5'	2.03	0.58
23:B0:2547:C:H2'	23:B0:2548:G:H8	1.67	0.58
23:B0:2668:U:C4'	23:B0:2669:C:H5'	2.25	0.58
1:AA:130:A:O4'	19:AQ:63:ARG:HG3	2.02	0.58
1:AA:253:U:O4'	1:AA:276:G:O4'	2.21	0.58
1:AA:405:U:O3'	1:AA:406:G:P	2.62	0.58
1:AA:651:C:C4	1:AA:752:G:O2'	2.56	0.58
1:AA:676:A:O2'	13:AK:115:PRO:CB	2.52	0.58
1:AA:723:U:O2	1:AA:723:U:H2'	2.04	0.58
1:AA:1054:C:OP1	1:AA:1197:G:OP1	2.21	0.58
2:AV:74:C:N4	23:B0:2231:G:C6	2.68	0.58
4:AB:10:LEU:HD23	4:AB:48:MET:HG3	1.86	0.58
14:AL:55:VAL:CG1	14:AL:67:THR:HG23	2.33	0.58
23:B0:175:C:H1'	23:B0:2413:A:H61	1.69	0.58
23:B0:2045:A:H4'	23:B0:2421:C:OP2	2.03	0.58
23:B0:2236:U:H3'	23:B0:2237:C:H5''	1.85	0.58
23:B0:2422:C:H2'	23:B0:2423:G:C8	2.37	0.58
1:AA:66:G:H4'	1:AA:199:G:C4'	2.33	0.58
1:AA:254:G:N2	19:AQ:16:GLN:NE2	2.51	0.58
1:AA:322:C:H4'	22:AT:23:ARG:HB2	1.85	0.58
1:AA:390:C:H2'	1:AA:391:G:C8	2.38	0.58
1:AA:707:C:OP1	13:AK:85:ARG:CZ	2.44	0.58
1:AA:779:C:C3'	13:AK:120:ARG:CD	2.82	0.58
1:AA:1484:C:H4'	23:B0:1943:A:C4'	2.33	0.58
1:AA:1504:G:H3'	1:AA:1504:G:OP2	2.04	0.58
2:AV:57:G:H4'	28:BD:76:ASN:CA	2.33	0.58
11:AI:5:TYR:O	11:AI:84:ALA:HA	2.03	0.58
14:AL:92:ASP:O	14:AL:94:PRO:HD3	2.04	0.58
16:AN:9:LYS:C	16:AN:9:LYS:HD3	2.28	0.58
16:AN:44:LEU:C	16:AN:44:LEU:HD12	2.29	0.58
23:B0:1119:U:C4	23:B0:1120:C:C5	2.91	0.58
23:B0:3108:G:C2'	23:B0:3109:U:OP2	2.51	0.58
1:AA:46:G:C4	1:AA:366:C:C5	2.91	0.58
1:AA:1190:G:OP1	5:AC:4:LYS:C	2.47	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1484:C:C3'	23:B0:1943:A:H4'	2.34	0.58
5:AC:14:ILE:O	5:AC:16:ARG:N	2.36	0.58
5:AC:33:LEU:HD23	5:AC:33:LEU:C	2.29	0.58
12:AJ:47:PHE:CD2	16:AN:37:PHE:HE1	2.21	0.58
23:B0:2329:C:H2'	23:B0:2330:G:H5'	1.84	0.58
1:AA:265:G:C3'	19:AQ:66:SER:CA	2.82	0.58
1:AA:653:A:C8	10:AH:56:LYS:CB	2.87	0.58
1:AA:1014:A:C6	21:AS:34:TRP:CZ2	2.92	0.58
1:AA:1060:C:C5	5:AC:2:GLY:HA3	2.39	0.58
1:AA:1256:A:C5'	1:AA:1258:G:C4	2.87	0.58
4:AB:209:ARG:HE	4:AB:239:VAL:HG11	1.69	0.58
12:AJ:82:ILE:O	12:AJ:82:ILE:HG22	2.03	0.58
21:AS:40:ILE:HG21	21:AS:62:ILE:CD1	2.33	0.58
23:B0:3110:G:OP1	23:B0:3149:G:C5'	2.44	0.58
1:AA:18:C:H1'	1:AA:918:A:C2	2.39	0.58
1:AA:560:U:H4'	1:AA:561:U:H5''	1.83	0.58
1:AA:737:A:H1'	8:AF:73:ASN:CG	2.29	0.58
1:AA:757:U:H2'	1:AA:758:G:O4'	2.03	0.58
1:AA:817:C:H42	1:AA:1529:G:H1	1.51	0.58
1:AA:878:G:H5'	10:AH:89:PRO:HG2	1.85	0.58
1:AA:1261:A:C4'	1:AA:1283:G:O3'	2.48	0.58
14:AL:28:LYS:HD2	14:AL:33:ARG:NH2	2.16	0.58
15:AM:15:VAL:HG23	15:AM:43:THR:O	2.04	0.58
23:B0:653:G:H4'	23:B0:2328:G:H4'	1.86	0.58
23:B0:876:A:H2'	23:B0:877:G:C8	2.39	0.58
23:B0:3098:U:C4	23:B0:3099:U:O4	2.57	0.58
23:B0:2434:G:H2'	23:B0:2435:C:C6	2.39	0.58
23:B0:2491:C:C3'	23:B0:2492:G:H5''	2.34	0.58
23:B0:2858:A:H3'	23:B0:2859:U:H5'	1.85	0.58
24:B9:14:C:H4'	24:B9:17:A:N6	2.19	0.58
1:AA:6:G:N9	7:AE:119:LEU:HD13	2.19	0.58
1:AA:46:G:O2'	1:AA:365:U:C2'	2.52	0.58
1:AA:239:U:H5''	1:AA:240:C:OP1	2.02	0.58
1:AA:714:G:N3	1:AA:777:A:H1'	2.19	0.58
1:AA:812:C:O2'	1:AA:813:U:P	2.62	0.58
1:AA:1075:C:OP1	4:AB:179:LYS:HD3	2.04	0.58
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.39	0.58
1:AA:1223:C:OP1	1:AA:1224:G:H3'	2.04	0.58
1:AA:1248:A:O2'	11:AI:70:LYS:CE	2.52	0.58
1:AA:1496:C:O2'	1:AA:1517:G:N1	2.31	0.58
4:AB:134:GLU:C	4:AB:136:VAL:H	2.12	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AJ:24:VAL:HG12	12:AJ:28:ARG:HE	1.68	0.58
17:AO:17:ARG:NH1	17:AO:77:ARG:HH11	2.01	0.58
17:AO:87:ILE:O	17:AO:88:ARG:HB2	2.04	0.58
23:B0:2035:G:H2'	23:B0:2036:G:H8	1.69	0.58
1:AA:46:G:C2'	1:AA:365:U:HO2'	2.16	0.57
1:AA:264:U:O2'	19:AQ:63:ARG:HG2	1.82	0.57
1:AA:1194:U:H5''	7:AE:22:GLY:HA2	1.85	0.57
1:AA:1241:G:H2'	1:AA:1242:C:C6	2.39	0.57
11:AI:114:TYR:CZ	12:AJ:60:ARG:HB2	2.39	0.57
15:AM:13:LYS:O	15:AM:45:VAL:HG23	2.04	0.57
16:AN:29:ARG:HG2	16:AN:29:ARG:HH11	1.69	0.57
20:AR:25:THR:O	20:AR:26:LEU:HB2	2.04	0.57
20:AR:86:VAL:O	20:AR:87:ARG:HB2	2.03	0.57
22:AT:53:LEU:O	22:AT:57:ARG:HD2	2.04	0.57
23:B0:118:U:H1'	23:B0:143:A:C8	2.39	0.57
23:B0:331:U:H2'	23:B0:332:C:H5''	1.85	0.57
23:B0:2854:G:H4'	23:B0:2855:C:H5	1.69	0.57
1:AA:22:G:C2'	1:AA:913:A:N1	2.67	0.57
1:AA:119:A:C2	1:AA:240:C:C5	2.92	0.57
1:AA:135:C:C2'	1:AA:136:C:H5'	2.34	0.57
1:AA:702:A:N1	23:B0:1838:G:C2'	2.64	0.57
1:AA:2003:G:C2	1:AA:1004:A:H1'	2.39	0.57
1:AA:1250:A:H4'	11:AI:68:GLY:H	1.68	0.57
4:AB:16:HIS:NE2	4:AB:214:ILE:CG1	2.66	0.57
11:AI:7:THR:HG21	11:AI:9:ARG:NH1	2.19	0.57
11:AI:23:ASN:C	11:AI:23:ASN:HD22	2.12	0.57
16:AN:36:PHE:CD1	16:AN:36:PHE:O	2.58	0.57
23:B0:1195:U:H2'	23:B0:1196:G:C8	2.38	0.57
23:B0:1856:U:C2'	23:B0:3865:A:C8	2.87	0.57
1:AA:60:A:H4'	1:AA:61:G:O5'	2.03	0.57
1:AA:66:G:O3'	1:AA:199:G:H4'	2.04	0.57
1:AA:160:A:H61	1:AA:348:G:H1'	1.69	0.57
1:AA:192:U:O2'	1:AA:193:C:H5'	2.05	0.57
1:AA:266:G:H5'	19:AQ:66:SER:C	2.28	0.57
1:AA:619:U:N1	6:AD:135:LEU:CD1	2.66	0.57
1:AA:779:C:C4'	13:AK:120:ARG:HD2	2.22	0.57
1:AA:995:C:C2	16:AN:4:LYS:HD3	2.39	0.57
1:AA:1194:U:C4'	7:AE:22:GLY:CA	2.65	0.57
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.19	0.57
1:AA:1392:G:C5'	1:AA:1531:A:C5'	2.77	0.57
11:AI:11:LYS:O	11:AI:11:LYS:HG2	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AM:120:LYS:HE2	15:AM:123:ALA:HB2	1.86	0.57
16:AN:24:CYS:HB3	16:AN:28:GLY:N	2.19	0.57
21:AS:7:LYS:O	21:AS:7:LYS:HG3	2.04	0.57
23:B0:218:A:O2'	23:B0:219:G:H4'	2.05	0.57
23:B0:1188:A:H2'	23:B0:1189:G:O4'	2.02	0.57
1:AA:67:C:H2'	1:AA:69:G:OP2	2.03	0.57
1:AA:1416:G:C6	1:AA:1417:G:H1'	2.39	0.57
2:AV:36:A:H61	3:AU:6:A:N6	2.02	0.57
4:AB:76:GLN:HG3	4:AB:206:ASP:OD1	2.03	0.57
5:AC:10:PHE:CE2	5:AC:178:LEU:HD13	2.38	0.57
9:AG:15:ASP:OD1	9:AG:17:VAL:N	2.37	0.57
11:AI:46:ALA:HB1	11:AI:77:ILE:HG22	1.85	0.57
13:AK:40:ILE:HG23	13:AK:75:TYR:CD2	2.39	0.57
23:B0:521:U:H4'	23:B0:1248:G:O2'	2.04	0.57
23:B0:1916:G:H2'	23:B0:1917:C:C6	2.40	0.57
23:B0:3184:C:H2'	23:B0:3185:U:C5'	2.34	0.57
23:B0:2641:A:H2'	23:B0:2642:G:O4'	2.05	0.57
1:AA:69:G:H1'	1:AA:102:G:N3	2.20	0.57
1:AA:130:A:O3'	1:AA:263:A:C4'	2.48	0.57
1:AA:130:A:N9	1:AA:264:U:O4'	2.38	0.57
1:AA:185:A:H2'	1:AA:186:C:C6	2.39	0.57
1:AA:547:A:H5'	1:AA:548:G:P	2.45	0.57
1:AA:779:C:H4'	13:AK:120:ARG:HG2	0.60	0.57
1:AA:828:A:H2	4:AB:26:PRO:HD2	1.69	0.57
1:AA:957:U:H4'	21:AS:79:THR:HB	1.86	0.57
1:AA:1228:C:OP1	15:AM:115:LYS:HG3	2.03	0.57
2:AV:74:C:N4	23:B0:2232:G:C2	2.73	0.57
2:AV:75:C:C2	23:B0:2230:G:N2	2.70	0.57
5:AC:121:ALA:O	5:AC:125:GLU:HG3	2.04	0.57
5:AC:188:LEU:HD13	5:AC:195:VAL:HG13	1.86	0.57
5:AC:191:THR:HG21	5:AC:193:TYR:CZ	2.39	0.57
6:AD:201:GLN:NE2	7:AE:99:GLY:HA2	2.18	0.57
9:AG:149:ARG:HH12	13:AK:59:TYR:HE1	1.48	0.57
11:AI:5:TYR:CD2	11:AI:6:GLY:N	2.71	0.57
23:B0:879:A:C2'	23:B0:880:C:H5'	2.35	0.57
23:B0:1001:A:H62	23:B0:1200:G:H1'	1.69	0.57
23:B0:1187:A:H2'	23:B0:1188:A:H8	1.69	0.57
23:B0:3877:A:C5'	23:B0:1861:G:P	2.92	0.57
1:AA:205:G:N2	1:AA:207:C:C4	2.71	0.57
1:AA:546:G:H4'	1:AA:548:G:O3'	2.04	0.57
1:AA:675:A:C2'	13:AK:116:HIS:CD2	2.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:780:A:O2'	1:AA:781:A:H5''	2.05	0.57
1:AA:818:G:C3'	1:AA:819:A:C5'	2.83	0.57
1:AA:1297:C:OP1	15:AM:44:ARG:NH2	2.37	0.57
1:AA:1317:C:H2'	1:AA:1318:A:O4'	2.04	0.57
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.19	0.57
1:AA:1503:A:C4	1:AA:1531:A:H2	2.22	0.57
2:AV:44:A:H2'	2:AV:45:G:O4'	2.04	0.57
2:AW:76:A:C4'	23:B0:2486:C:C5'	2.71	0.57
4:AB:10:LEU:C	4:AB:12:GLU:H	2.12	0.57
6:AD:7:PRO:HG2	6:AD:10:ARG:HD2	1.87	0.57
8:AF:3:ARG:HH21	8:AF:64:GLN:NE2	2.01	0.57
12:AJ:61:GLU:CG	16:AN:58:LYS:HD2	2.34	0.57
14:AL:85:ILE:HG23	14:AL:98:TYR:HB3	1.86	0.57
19:AQ:59:ILE:HG22	19:AQ:71:PHE:CD1	2.39	0.57
23:B0:176:A:H5''	23:B0:177:U:H5	1.69	0.57
23:B0:1458:A:H3'	23:B0:1459:U:H5'	1.86	0.57
23:B0:1861:G:C4'	55:B5:198:THR:CA	2.76	0.57
23:B0:1947:G:OP1	23:B0:1947:G:H3'	2.05	0.57
23:B0:2726:U:H2'	23:B0:2727:G:O4'	2.05	0.57
1:AA:94:G:C5	1:AA:96:C:C4	2.91	0.57
1:AA:119:A:C4	1:AA:240:C:C4	2.93	0.57
1:AA:406:G:H1'	1:AA:496:A:C6	2.39	0.57
1:AA:411:A:N9	1:AA:413:G:H1'	2.19	0.57
1:AA:737:A:C1'	8:AF:73:ASN:HD21	2.18	0.57
1:AA:814:A:N6	1:AA:816:A:C2	2.73	0.57
1:AA:860:A:H2'	1:AA:861:G:O4'	2.03	0.57
1:AA:1474:G:H5''	23:B0:1717:A:N6	2.19	0.57
2:AV:64:A:H2'	2:AV:65:G:O4'	2.04	0.57
4:AB:144:ARG:HG3	4:AB:145:LEU:N	2.19	0.57
5:AC:29:TYR:CZ	16:AN:54:PRO:HG2	2.40	0.57
5:AC:83:ARG:C	5:AC:85:ARG:N	2.62	0.57
5:AC:135:LYS:HZ1	7:AE:50:GLU:CD	2.13	0.57
7:AE:79:GLU:CD	10:AH:105:ARG:NE	2.62	0.57
11:AI:9:ARG:HA	11:AI:13:ALA:O	2.05	0.57
19:AQ:104:LYS:NZ	23:B0:730:C:H42	2.02	0.57
23:B0:1517:C:H2'	23:B0:1518:C:C6	2.40	0.57
1:AA:538:G:H4'	14:AL:114:LYS:HE2	1.86	0.57
1:AA:818:G:C2'	1:AA:819:A:H5''	2.34	0.57
1:AA:1109:C:OP2	5:AC:176:HIS:CG	2.57	0.57
1:AA:1340:A:H4'	2:AV:32:C:H4'	1.86	0.57
2:AW:76:A:C2'	23:B0:2562:G:N2	2.60	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AH:17:THR:HG22	10:AH:63:LEU:HG	1.86	0.57
21:AS:10:PHE:C	21:AS:10:PHE:CD2	2.83	0.57
23:B0:59:G:N2	23:B0:73:A:H61	2.03	0.57
23:B0:369:C:H2'	23:B0:370:U:O4'	2.05	0.57
23:B0:804:C:O2'	23:B0:806:A:H4'	2.05	0.57
23:B0:1791:C:H1'	23:B0:1793:A:O4'	2.05	0.57
23:B0:1807:A:H5'	23:B0:1809:G:O4'	2.05	0.57
1:AA:131:C:H4'	1:AA:263:A:O4'	2.05	0.57
1:AA:382:A:H2'	1:AA:383:A:H8	1.70	0.57
1:AA:762:C:O2'	23:B0:729:A:C2	2.53	0.57
1:AA:893:C:O3'	1:AA:894:G:C5'	2.36	0.57
1:AA:958:A:C4	21:AS:55:LYS:CD	2.87	0.57
1:AA:1014:A:H2'	1:AA:1015:A:C8	2.39	0.57
1:AA:1178:G:P	11:AI:97:LYS:HZ2	2.28	0.57
1:AA:1261:A:C2'	1:AA:1283:G:H5''	2.35	0.57
1:AA:1394:A:C2	1:AA:1501:C:O4'	2.57	0.57
1:AA:1499:A:C4'	1:AA:1520:G:H4'	2.35	0.57
4:AB:15:VAL:HG11	4:AB:209:ARG:C	2.30	0.57
5:AC:33:LEU:HD11	16:AN:53:LEU:HD22	1.87	0.57
8:AF:2:ARG:CD	8:AF:69:GLU:HG2	2.35	0.57
8:AF:97:PHE:HB2	20:AR:32:ARG:CZ	2.34	0.57
10:AH:60:ARG:HH11	10:AH:60:ARG:HG3	1.70	0.57
11:AI:17:VAL:HG21	11:AI:80:GLY:HA3	1.86	0.57
11:AI:97:LYS:O	11:AI:100:GLY:N	2.36	0.57
23:B0:1358:C:H2'	23:B0:1359:G:C5'	2.34	0.57
1:AA:346:G:C2'	1:AA:347:G:H5'	2.35	0.57
1:AA:376:G:H5''	18:AP:5:ARG:CG	2.34	0.57
1:AA:505:G:H2'	1:AA:506:G:H8	1.69	0.57
1:AA:762:C:C4'	23:B0:729:A:H61	2.17	0.57
1:AA:994:A:N1	16:AN:4:LYS:C	2.38	0.57
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.40	0.57
1:AA:1255:G:C2'	1:AA:1258:G:N2	2.64	0.57
8:AF:80:ARG:NH1	8:AF:88:VAL:HB	2.19	0.57
10:AH:29:SER:OG	10:AH:32:LYS:HB2	2.05	0.57
12:AJ:31:GLY:HA2	12:AJ:78:ASN:ND2	2.12	0.57
21:AS:10:PHE:CD2	21:AS:11:VAL:N	2.73	0.57
1:AA:375:U:H1'	18:AP:28:ARG:CD	2.35	0.56
1:AA:406:G:C1'	1:AA:496:A:C6	2.88	0.56
1:AA:571:U:H5''	1:AA:819:A:C2	2.40	0.56
1:AA:657:G:H4'	17:AO:28:GLN:HG2	1.87	0.56
1:AA:828:A:C2	4:AB:26:PRO:CD	2.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:923:A:H5'	1:AA:1398:A:C6	2.40	0.56
1:AA:1374:A:H2'	1:AA:1375:A:H5'	1.87	0.56
1:AA:1414:U:O2'	1:AA:1415:G:H5'	2.05	0.56
4:AB:12:GLU:C	4:AB:14:GLY:N	2.59	0.56
5:AC:33:LEU:HD23	5:AC:33:LEU:O	2.04	0.56
6:AD:88:VAL:HA	7:AE:97:GLY:HA3	0.57	0.56
10:AH:103:VAL:HG21	10:AH:110:ALA:HB2	1.87	0.56
14:AL:47:LYS:CB	14:AL:48:PRO:HD3	2.35	0.56
15:AM:13:LYS:HD3	15:AM:17:VAL:HG11	1.86	0.56
23:B0:317:U:H3'	23:B0:318:G:H5''	1.86	0.56
23:B0:1289:A:H62	23:B0:1662:G:H1	1.53	0.56
23:B0:2268:G:H22	23:B0:2323:U:H4'	1.68	0.56
1:AA:130:A:N3	1:AA:264:U:C5	2.73	0.56
1:AA:923:A:H2'	1:AA:1398:A:H2'	1.81	0.56
1:AA:1111:A:H61	5:AC:177:THR:N	2.03	0.56
1:AA:1409:C:H2'	1:AA:1410:G:C5'	2.36	0.56
1:AA:1484:C:C4'	23:B0:1943:A:C2'	2.82	0.56
4:AB:115:LEU:HG	4:AB:153:ARG:HH21	1.69	0.56
6:AD:35:ARG:O	6:AD:36:ARG:HB2	2.04	0.56
6:AD:89:THR:N	7:AE:97:GLY:O	2.38	0.56
14:AL:26:ALA:O	14:AL:27:LEU:O	2.22	0.56
15:AM:117:VAL:HG12	15:AM:118:ALA:H	1.70	0.56
16:AN:3:ARG:NH1	16:AN:6:LEU:HD11	2.20	0.56
23:B0:1971:C:H2'	23:B0:1972:G:C8	2.40	0.56
23:B0:1976:U:H2'	23:B0:1977:C:H5'	1.87	0.56
1:AA:27:G:C6	1:AA:557:G:C2	2.87	0.56
1:AA:32:A:C5'	1:AA:398:C:O2'	2.53	0.56
1:AA:246:A:H1'	1:AA:247:G:O4'	2.05	0.56
1:AA:253:U:C4'	1:AA:276:G:C4'	2.83	0.56
1:AA:335:C:H1'	1:AA:1434:A:C4'	2.35	0.56
1:AA:403:C:C2	1:AA:404:U:C5	2.93	0.56
1:AA:675:A:C1'	13:AK:116:HIS:HD2	1.97	0.56
1:AA:974:A:P	16:AN:31:ARG:HG2	2.46	0.56
1:AA:1016:A:C4'	1:AA:1218:C:H4'	2.36	0.56
1:AA:1230:C:H1'	15:AM:126:LYS:HA	1.86	0.56
1:AA:1339:A:H2'	1:AA:1340:A:O4'	2.06	0.56
1:AA:1458:G:N7	1:AA:1459:C:O2	2.38	0.56
2:AV:11:C:H5''	23:B0:1892:C:H4'	1.87	0.56
2:AV:25:C:HO2'	23:B0:1905:G:HO2'	1.47	0.56
2:AW:12:U:H5'	23:B0:1898:U:H4'	1.86	0.56
2:AW:75:C:H2'	23:B0:2486:C:O2'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:7:PRO:CG	5:AC:184:TYR:HB2	2.35	0.56
5:AC:32:LEU:HD23	5:AC:32:LEU:O	2.05	0.56
6:AD:107:ARG:HH21	6:AD:194:LEU:HD12	1.70	0.56
10:AH:19:VAL:HG23	10:AH:21:LYS:HD3	1.86	0.56
11:AI:39:GLY:O	11:AI:40:LEU:HD23	2.05	0.56
14:AL:6:THR:OG1	14:AL:9:GLN:HG3	2.05	0.56
15:AM:31:LYS:O	15:AM:35:GLU:HB2	2.05	0.56
16:AN:3:ARG:O	16:AN:4:LYS:C	2.48	0.56
18:AP:17:TYR:HE1	18:AP:41:PRO:HG2	1.69	0.56
19:AQ:5:VAL:HG22	19:AQ:60:ILE:HG12	1.87	0.56
22:AT:67:ALA:HA	22:AT:73:HIS:H	1.70	0.56
23:B0:874:A:N6	23:B0:928:G:H21	2.03	0.56
23:B0:879:A:O2'	23:B0:880:C:H5'	2.05	0.56
23:B0:984:A:H2'	23:B0:1200:G:H22	1.71	0.56
23:B0:1923:U:H4'	23:B0:1948:C:H41	1.71	0.56
23:B0:2058:U:H4'	23:B0:2575:U:N3	2.20	0.56
23:B0:2270:U:H2'	23:B0:2271:C:C6	2.40	0.56
23:B0:2402:U:H5'	23:B0:2404:A:C5	2.41	0.56
1:AA:676:A:C1'	13:AK:115:PRO:HA	2.34	0.56
1:AA:1319:A:H5'	1:AA:1320:C:OP1	2.06	0.56
1:AA:1410:G:C2	1:AA:1491:G:C6	2.94	0.56
4:AB:126:GLU:HG2	4:AB:129:GLU:OE1	2.05	0.56
4:AB:178:ARG:NH1	4:AB:178:ARG:CG	2.67	0.56
6:AD:24:GLU:H	6:AD:112:VAL:CG1	2.19	0.56
12:AJ:12:ASP:HB3	12:AJ:15:THR:HB	1.88	0.56
15:AM:49:THR:HB	15:AM:52:GLU:HG3	1.86	0.56
23:B0:33:C:N4	23:B0:466:A:H61	2.03	0.56
23:B0:1092:U:H2'	23:B0:1093:U:C6	2.41	0.56
23:B0:1093:U:C4	23:B0:1094:C:C4	2.94	0.56
1:AA:173:U:O4'	1:AA:197:A:C4	2.59	0.56
1:AA:1329:A:OP1	15:AM:28:ALA:HB3	2.06	0.56
1:AA:1343:G:C4'	11:AI:122:ALA:HB3	2.35	0.56
1:AA:1351:U:H2'	1:AA:1352:C:C6	2.40	0.56
1:AA:1474:G:HO2'	1:AA:1475:G:H5'	1.69	0.56
5:AC:108:ASN:C	5:AC:110:ASN:H	2.12	0.56
8:AF:25:ILE:HD12	8:AF:82:ARG:HD2	1.88	0.56
10:AH:105:ARG:HH11	10:AH:105:ARG:HG3	1.71	0.56
17:AO:3:ILE:HG22	17:AO:7:GLU:HB3	1.86	0.56
20:AR:46:GLU:H	20:AR:46:GLU:CD	2.13	0.56
22:AT:94:ALA:O	22:AT:95:ALA:HB3	2.06	0.56
23:B0:368:A:H2'	23:B0:369:C:O4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:891:A:C2	23:B0:892:A:N7	2.71	0.56
23:B0:2466:G:H2'	23:B0:2467:A:C8	2.40	0.56
1:AA:89:G:C2'	1:AA:90:C:P	2.93	0.56
1:AA:448:A:H2'	1:AA:449:C:C6	2.40	0.56
1:AA:1086:U:H3	1:AA:1099:G:N2	1.91	0.56
1:AA:1269:A:N3	1:AA:1313:U:H1'	2.20	0.56
2:AV:74:C:C2	23:B0:2231:G:N2	2.74	0.56
18:AP:5:ARG:HB2	18:AP:67:THR:HG1	1.71	0.56
19:AQ:67:LYS:O	19:AQ:68:ARG:HB3	2.05	0.56
23:B0:584:A:H4'	23:B0:2479:U:H5'	1.87	0.56
23:B0:689:A:H2'	23:B0:690:A:H5'	1.87	0.56
23:B0:1103:C:OP1	23:B0:2454:C:O2'	2.23	0.56
1:AA:8:A:H5''	7:AE:121:LYS:HD3	1.88	0.56
1:AA:1004:A:H5''	1:AA:1025:U:C5	2.40	0.56
1:AA:1068:G:O2'	1:AA:1191:A:N1	2.37	0.56
1:AA:1187:G:N3	16:AN:60:SER:OG	2.38	0.56
1:AA:1194:U:H5''	7:AE:22:GLY:C	2.31	0.56
1:AA:1195:C:H3'	1:AA:1196:U:C5'	2.35	0.56
1:AA:1250:A:H5'	11:AI:68:GLY:O	2.04	0.56
4:AB:124:SER:CB	4:AB:125:PRO:HD2	2.32	0.56
5:AC:84:ILE:O	5:AC:88:ARG:HB2	2.05	0.56
12:AJ:81:THR:O	12:AJ:85:LEU:HG	2.06	0.56
13:AK:126:ARG:O	13:AK:127:LYS:C	2.48	0.56
14:AL:47:LYS:HB2	14:AL:48:PRO:HD2	1.88	0.56
15:AM:8:GLU:OE1	15:AM:22:ILE:HG12	2.05	0.56
21:AS:63:THR:HG22	21:AS:64:GLU:H	1.71	0.56
23:B0:795:A:H4'	23:B0:796:A:N7	2.20	0.56
23:B0:813:A:O2'	23:B0:815:A:H5'	2.05	0.56
23:B0:1057:A:H3'	23:B0:1058:G:H5'	1.87	0.56
23:B0:1669:A:H2'	23:B0:1670:G:H4'	1.87	0.56
23:B0:1825:C:O2'	23:B0:1826:U:H5'	2.06	0.56
23:B0:2503:G:H2'	23:B0:2504:G:H5''	1.88	0.56
1:AA:547:A:OP1	1:AA:548:G:O5'	2.23	0.56
1:AA:837:G:H2'	1:AA:838:C:N1	2.19	0.56
1:AA:946:A:H2'	1:AA:947:G:C8	2.40	0.56
1:AA:983:A:H5'	1:AA:984:C:OP2	2.06	0.56
1:AA:1092:A:OP2	9:AG:4:ARG:NH1	2.39	0.56
1:AA:1346:A:H4'	1:AA:1347:G:O5'	2.06	0.56
1:AA:1430:C:H5'	23:B0:1721:G:H4'	1.77	0.56
1:AA:1473:A:C4'	23:B0:1719:G:C1'	2.84	0.56
5:AC:46:GLU:O	5:AC:48:TYR:N	2.33	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AD:6:GLY:O	6:AD:8:VAL:HG23	2.06	0.56
10:AH:126:LYS:C	10:AH:128:GLY:H	2.14	0.56
15:AM:17:VAL:O	15:AM:20:THR:HB	2.05	0.56
19:AQ:103:GLY:O	19:AQ:104:LYS:O	2.24	0.56
22:AT:35:THR:O	22:AT:39:LYS:HB2	2.05	0.56
23:B0:1093:U:O4	23:B0:1094:C:N4	2.39	0.56
23:B0:1567:A:H2'	23:B0:1568:A:O4'	2.06	0.56
23:B0:3110:G:O2'	23:B0:3120:G:H5'	2.06	0.56
1:AA:237:C:H5''	19:AQ:25:ARG:HH21	1.57	0.56
1:AA:264:U:HO2'	19:AQ:63:ARG:HD2	1.69	0.56
1:AA:401:C:H4'	1:AA:622:A:C1'	2.36	0.56
1:AA:619:U:C2	6:AD:135:LEU:CG	2.79	0.56
1:AA:915:A:C2'	1:AA:916:G:H5'	2.35	0.56
1:AA:1255:G:O2'	1:AA:1258:G:C2	2.59	0.56
1:AA:1395:C:H4'	1:AA:1401:G:H21	1.70	0.56
5:AC:91:LEU:HD11	5:AC:99:VAL:HG13	1.87	0.56
7:AE:80:ILE:HD12	7:AE:80:ILE:O	2.05	0.56
12:AJ:62:HIS:HB2	16:AN:59:ALA:C	2.31	0.56
23:B0:1191:G:H2'	23:B0:1192:A:C8	2.41	0.56
23:B0:2402:U:H5'	23:B0:2404:A:N7	2.21	0.56
1:AA:254:G:C2'	19:AQ:15:MET:HB3	2.36	0.56
1:AA:866:C:C5'	1:AA:919:A:H5''	2.35	0.56
1:AA:1040:U:H2'	1:AA:1041:A:H8	1.70	0.56
1:AA:1042:G:O2'	1:AA:1043:C:H5'	2.06	0.56
1:AA:1147:C:H4'	11:AI:5:TYR:CE1	2.41	0.56
1:AA:1257:U:H4'	1:AA:1258:G:O5'	2.06	0.56
17:AO:41:GLU:HA	17:AO:41:GLU:OE2	2.05	0.56
22:AT:86:ARG:O	22:AT:90:GLN:HG3	2.05	0.56
23:B0:533:C:H2'	23:B0:534:U:O4'	2.06	0.56
23:B0:1426:U:H2'	23:B0:1427:G:O4'	2.05	0.56
1:AA:135:C:H2'	1:AA:136:C:H5'	1.88	0.55
1:AA:256:U:H5''	19:AQ:17:LYS:CE	2.33	0.55
1:AA:319:G:C4'	1:AA:1468:A:O4'	2.54	0.55
1:AA:411:A:C4	1:AA:413:G:H1'	2.41	0.55
1:AA:476:U:C5	1:AA:477:G:C5'	2.89	0.55
1:AA:893:C:C2'	1:AA:894:G:H5'	2.34	0.55
1:AA:1067:A:N3	1:AA:1068:G:N9	2.54	0.55
1:AA:1202:G:O2'	1:AA:1203:C:H5'	2.06	0.55
4:AB:98:LEU:HG	4:AB:101:MET:HE3	1.87	0.55
4:AB:223:ILE:HG21	4:AB:230:VAL:CG2	2.35	0.55
7:AE:12:LEU:C	7:AE:12:LEU:HD22	2.30	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AF:46:ARG:HB2	8:AF:60:PHE:HE1	1.71	0.55
12:AJ:51:ARG:HG2	16:AN:45:ARG:HH12	1.70	0.55
15:AM:40:ASN:ND2	15:AM:42:ALA:H	2.05	0.55
20:AR:53:ARG:HD3	20:AR:63:GLN:CB	2.36	0.55
21:AS:40:ILE:HG21	21:AS:62:ILE:HD11	1.88	0.55
23:B0:68:C:H2'	23:B0:69:G:C8	2.40	0.55
23:B0:2299:A:N3	23:B0:2299:A:H2'	2.21	0.55
1:AA:406:G:N1	1:AA:437:U:N3	2.54	0.55
1:AA:547:A:C5'	1:AA:548:G:P	2.94	0.55
1:AA:588:G:C6	1:AA:753:A:C5	2.94	0.55
1:AA:848:G:H2'	1:AA:849:C:O4'	2.04	0.55
1:AA:939:G:H2'	1:AA:940:C:H6	1.71	0.55
1:AA:1006:C:H2'	1:AA:1007:C:H6	1.72	0.55
1:AA:1297:C:P	15:AM:44:ARG:HH22	2.29	0.55
15:AM:29:ARG:HB3	15:AM:64:TRP:CH2	2.42	0.55
22:AT:82:SER:O	22:AT:86:ARG:HB2	2.07	0.55
23:B0:952:A:O2'	23:B0:1204:G:H4'	2.06	0.55
23:B0:2549:G:H2'	23:B0:2550:C:O4'	2.06	0.55
1:AA:26:A:N6	1:AA:558:G:H1'	2.21	0.55
1:AA:477:G:H2'	1:AA:478:A:C8	2.40	0.55
1:AA:1483:A:C5	1:AA:1484:C:C5	2.94	0.55
5:AC:3:ASN:ND2	5:AC:4:LYS:HE2	2.21	0.55
9:AG:116:ALA:HA	9:AG:119:ARG:NH2	2.21	0.55
9:AG:146:GLU:HA	9:AG:149:ARG:HB2	1.87	0.55
23:B0:1971:C:H2'	23:B0:1972:G:H8	1.70	0.55
23:B0:3116:G:H4'	23:B0:3117:A:OP1	2.04	0.55
23:B0:2755:A:O2'	23:B0:2756:A:H5'	2.06	0.55
23:B0:2759:U:H4'	23:B0:2760:G:OP2	2.05	0.55
1:AA:128:G:H5''	19:AQ:2:PRO:N	2.21	0.55
1:AA:130:A:C5	1:AA:264:U:C2	2.94	0.55
1:AA:254:G:C4'	19:AQ:18:THR:HG21	2.36	0.55
1:AA:292:G:H1'	1:AA:608:A:N6	2.21	0.55
1:AA:737:A:N3	8:AF:73:ASN:ND2	2.54	0.55
1:AA:843:C:H2'	1:AA:844:A:O4'	2.07	0.55
12:AJ:4:ILE:HA	12:AJ:100:THR:HA	1.88	0.55
14:AL:43:VAL:HG12	14:AL:44:THR:H	1.72	0.55
23:B0:26:G:N2	23:B0:524:A:H62	2.03	0.55
23:B0:3128:G:H5''	23:B0:3174:C:HO2'	1.68	0.55
1:AA:129:U:H5''	19:AQ:3:LYS:CE	2.37	0.55
1:AA:217:C:H4'	1:AA:469:C:O2	2.06	0.55
1:AA:335:C:C1'	1:AA:1434:A:H4'	2.33	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:551:U:H2'	1:AA:552:U:C6	2.41	0.55
1:AA:724:G:OP1	1:AA:854:G:O2'	2.24	0.55
1:AA:1090:U:O4'	1:AA:1169:A:C2	2.53	0.55
1:AA:1111:A:N6	5:AC:177:THR:HA	2.21	0.55
4:AB:17:PHE:CD1	4:AB:18:GLY:N	2.75	0.55
6:AD:24:GLU:HG2	6:AD:25:ARG:N	2.21	0.55
6:AD:176:LEU:HA	6:AD:183:GLY:HA2	1.87	0.55
6:AD:177:ASP:OD1	6:AD:179:GLU:HB2	2.07	0.55
14:AL:50:SER:O	14:AL:51:ALA:HB2	2.05	0.55
23:B0:597:U:H3	23:B0:683:A:H2'	1.71	0.55
23:B0:611:C:H2'	23:B0:612:G:O4'	2.07	0.55
23:B0:1316:G:H2'	23:B0:1317:G:C8	2.41	0.55
23:B0:3874:C:C5	23:B0:3875:A:C8	2.94	0.55
1:AA:6:G:N1	7:AE:119:LEU:CD1	2.59	0.55
1:AA:227:G:H2'	1:AA:228:A:C8	2.41	0.55
1:AA:264:U:O2'	19:AQ:63:ARG:O	2.21	0.55
1:AA:476:U:O2	1:AA:477:G:H4'	2.01	0.55
1:AA:923:A:C8	1:AA:1398:A:C2	2.94	0.55
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.07	0.55
1:AA:1416:G:HO3'	1:AA:1417:G:P	2.29	0.55
5:AC:58:GLU:H	5:AC:65:ALA:HB3	1.72	0.55
7:AE:15:ARG:O	7:AE:27:ARG:O	2.25	0.55
17:AO:70:LEU:HD11	17:AO:77:ARG:HB2	1.89	0.55
19:AQ:59:ILE:CG2	19:AQ:71:PHE:HB3	2.36	0.55
23:B0:784:U:H2'	23:B0:785:U:C6	2.41	0.55
23:B0:892:A:H2'	23:B0:893:G:O4'	2.07	0.55
23:B0:2261:G:H5''	23:B0:2262:C:O5'	2.06	0.55
23:B0:2727:G:C2'	23:B0:2728:A:H5''	2.36	0.55
1:AA:394:G:N1	1:AA:395:C:C4	2.75	0.55
1:AA:397:A:N7	1:AA:547:A:HO2'	1.45	0.55
1:AA:1059:C:O2'	12:AJ:53:PRO:HD3	2.06	0.55
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.41	0.55
1:AA:1270:C:HO2'	1:AA:1314:C:H5'	1.71	0.55
1:AA:1342:C:H5'	11:AI:125:TYR:CD1	2.42	0.55
1:AA:1474:G:O2'	23:B0:1705:U:O3'	2.25	0.55
2:AV:74:C:C4	23:B0:2232:G:C2	2.95	0.55
4:AB:15:VAL:HG22	4:AB:209:ARG:HG3	1.88	0.55
4:AB:17:PHE:HD1	4:AB:18:GLY:N	2.04	0.55
4:AB:74:LYS:HZ1	4:AB:206:ASP:CA	2.18	0.55
17:AO:87:ILE:O	17:AO:88:ARG:CB	2.54	0.55
18:AP:81:ARG:CG	18:AP:83:GLU:HG2	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AQ:18:THR:HG23	19:AQ:69:LYS:HE3	1.88	0.55
23:B0:223:C:H4'	23:B0:398:C:H1'	1.88	0.55
23:B0:582:G:H2'	23:B0:583:C:H3'	1.88	0.55
23:B0:805:G:H4'	23:B0:806:A:OP2	2.05	0.55
23:B0:951:G:C2'	23:B0:952:A:H5''	2.35	0.55
23:B0:1528:C:C3'	23:B0:1529:C:H5''	2.36	0.55
23:B0:2222:U:H2'	23:B0:2223:U:C6	2.41	0.55
1:AA:394:G:C4	1:AA:395:C:C5	2.95	0.55
1:AA:865:A:O2'	1:AA:919:A:C4'	2.54	0.55
1:AA:866:C:C4'	1:AA:919:A:H5'	2.36	0.55
1:AA:905:U:C6	1:AA:906:G:C8	2.95	0.55
1:AA:923:A:H1'	1:AA:1398:A:N9	2.18	0.55
1:AA:1268:A:H2'	1:AA:1269:A:C8	2.42	0.55
8:AF:76:ALA:O	8:AF:80:ARG:HG3	2.06	0.55
18:AP:21:VAL:O	18:AP:33:ILE:HB	2.07	0.55
23:B0:64:C:H2'	23:B0:65:C:C6	2.42	0.55
23:B0:3128:G:H4'	23:B0:3174:C:C1'	2.36	0.55
1:AA:46:G:C6	1:AA:366:C:N3	2.75	0.55
1:AA:166:G:O2'	1:AA:167:G:H5'	2.06	0.55
1:AA:212:G:O2'	1:AA:213:G:P	2.65	0.55
1:AA:255:G:C1'	19:AQ:16:GLN:HB3	2.37	0.55
1:AA:281:G:O2'	1:AA:282:A:P	2.65	0.55
1:AA:1234:C:H4'	1:AA:1364:U:H1'	1.89	0.55
1:AA:1271:G:H5'	1:AA:1314:C:OP1	2.07	0.55
1:AA:1409:C:H2'	1:AA:1410:G:H8	1.72	0.55
4:AB:17:PHE:CD1	4:AB:17:PHE:C	2.85	0.55
4:AB:17:PHE:HD1	4:AB:17:PHE:C	2.14	0.55
4:AB:33:TYR:HB2	4:AB:43:ASP:HB2	1.89	0.55
10:AH:36:LEU:HD12	10:AH:59:LEU:HD13	1.88	0.55
12:AJ:51:ARG:H	12:AJ:59:SER:HB2	1.72	0.55
17:AO:27:VAL:O	17:AO:31:LEU:HD13	2.07	0.55
18:AP:26:ARG:HD2	18:AP:31:LYS:O	2.06	0.55
19:AQ:68:ARG:N	19:AQ:70:ARG:NH1	2.55	0.55
23:B0:103:U:H2'	23:B0:104:C:C6	2.41	0.55
23:B0:121:G:O2'	23:B0:1389:C:H4'	2.05	0.55
23:B0:728:G:H2'	23:B0:729:A:O4'	2.06	0.55
23:B0:1975:G:H4'	23:B0:1976:U:H5	1.72	0.55
23:B0:2544:A:H2'	23:B0:2545:A:H4'	1.88	0.55
24:B9:45:C:H3'	24:B9:46:G:H5'	1.89	0.55
1:AA:141:A:O4'	1:AA:182:U:O2	2.25	0.55
1:AA:300:A:H1'	1:AA:565:U:N3	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:429:U:H2'	6:AD:25:ARG:NH1	2.22	0.55
1:AA:438:G:C4'	1:AA:439:A:OP1	2.53	0.55
1:AA:490:G:H2'	1:AA:491:G:H8	1.72	0.55
1:AA:588:G:C1'	1:AA:753:A:N1	2.69	0.55
1:AA:954:G:H2'	1:AA:955:U:C6	2.42	0.55
1:AA:1044:A:C3'	1:AA:1045:C:H1'	2.18	0.55
1:AA:1110:A:O2'	1:AA:1111:A:H5'	2.07	0.55
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.41	0.55
1:AA:1460:A:H2'	1:AA:1461:G:O4'	2.07	0.55
2:AV:75:C:C4	23:B0:2231:G:C2	2.90	0.55
4:AB:23:ARG:HD3	4:AB:23:ARG:N	2.22	0.55
5:AC:116:VAL:O	5:AC:120:VAL:HG23	2.07	0.55
6:AD:57:ARG:HB3	6:AD:206:PHE:HB2	1.88	0.55
15:AM:65:LYS:HE3	15:AM:69:GLU:OE2	2.07	0.55
19:AQ:79:SER:O	19:AQ:80:GLY:O	2.25	0.55
23:B0:942:U:C2'	23:B0:943:U:H5'	2.37	0.55
23:B0:1994:U:H2'	23:B0:1995:G:O4'	2.07	0.55
23:B0:2503:G:C2'	23:B0:2504:G:H5''	2.37	0.55
1:AA:54:C:H2'	1:AA:352:C:H41	1.71	0.54
1:AA:101:A:O2'	1:AA:102:G:H5'	2.07	0.54
1:AA:115:G:N2	1:AA:116:A:N6	2.55	0.54
1:AA:188:C:H3'	22:AT:105:SER:HB3	1.88	0.54
1:AA:676:A:H1'	13:AK:115:PRO:HB3	1.89	0.54
1:AA:825:G:H21	10:AH:11:THR:CG2	2.14	0.54
1:AA:1255:G:H21	1:AA:1276:G:H22	1.53	0.54
1:AA:1343:G:O3'	11:AI:122:ALA:CB	2.49	0.54
12:AJ:27:ALA:C	12:AJ:29:ARG:H	2.15	0.54
23:B0:1514:C:H2'	23:B0:1515:U:O4'	2.07	0.54
23:B0:3110:G:H4'	23:B0:3111:C:OP2	2.07	0.54
1:AA:46:G:C2'	1:AA:365:U:O2'	2.56	0.54
1:AA:302:G:O2'	1:AA:556:C:H5''	2.07	0.54
1:AA:425:G:H4'	6:AD:45:GLN:HE22	1.73	0.54
1:AA:522:C:P	14:AL:72:GLY:N	2.76	0.54
1:AA:779:C:O4'	13:AK:120:ARG:CG	2.56	0.54
1:AA:1026:G:O3'	1:AA:1027:C:P	2.65	0.54
1:AA:1060:C:OP1	16:AN:45:ARG:NH2	2.40	0.54
1:AA:1416:G:P	1:AA:1417:G:P	3.04	0.54
2:AV:29:A:O2'	2:AV:30:G:H5'	2.06	0.54
4:AB:47:THR:HA	4:AB:202:PRO:HG2	1.87	0.54
6:AD:30:LYS:C	6:AD:32:ALA:N	2.58	0.54
12:AJ:24:VAL:HG21	12:AJ:37:PRO:HD3	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AT:72:LEU:HD21	22:AT:80:ARG:CZ	2.38	0.54
23:B0:788:G:C5'	23:B0:790:A:H1'	2.37	0.54
23:B0:798:G:O2'	23:B0:1770:U:H4'	2.07	0.54
23:B0:1976:U:C2'	23:B0:1977:C:H5'	2.38	0.54
1:AA:9:G:H5''	7:AE:126:ARG:CD	2.22	0.54
1:AA:9:G:P	7:AE:126:ARG:NH1	2.80	0.54
1:AA:33:A:H2'	1:AA:34:C:H6	1.72	0.54
1:AA:161:A:H2	1:AA:348:G:C1'	2.19	0.54
1:AA:185:A:O2'	1:AA:186:C:O5'	2.24	0.54
1:AA:429:U:H2'	6:AD:25:ARG:HH12	1.73	0.54
1:AA:755:G:OP2	17:AO:65:ARG:HD2	2.07	0.54
1:AA:779:C:C4'	13:AK:120:ARG:HB3	2.36	0.54
1:AA:1147:C:H4'	11:AI:5:TYR:HE1	1.72	0.54
1:AA:1374:A:C2'	1:AA:1375:A:H5'	2.37	0.54
4:AB:21:ARG:HG3	4:AB:23:ARG:HD2	1.88	0.54
5:AC:59:ARG:O	12:AJ:92:THR:HG22	2.06	0.54
11:AI:7:THR:HG22	11:AI:8:GLY:N	2.22	0.54
11:AI:47:LEU:C	11:AI:49:PRO:HD2	2.32	0.54
23:B0:1187:A:H2'	23:B0:1188:A:C8	2.43	0.54
23:B0:1358:C:H2'	23:B0:1359:G:H5''	1.89	0.54
23:B0:3098:U:C2'	23:B0:3099:U:C6	2.89	0.54
1:AA:21:G:C4'	1:AA:914:A:H61	2.20	0.54
1:AA:46:G:H2'	1:AA:366:C:C5	2.39	0.54
1:AA:69:G:O2'	1:AA:70:A:H5'	2.08	0.54
1:AA:651:C:C2	1:AA:652:U:C4	2.95	0.54
1:AA:905:U:C4	1:AA:906:G:C4	2.94	0.54
1:AA:1232:U:OP1	11:AI:125:TYR:HA	2.06	0.54
1:AA:1305:G:C2'	1:AA:1306:A:C8	2.80	0.54
1:AA:1328:C:O3'	15:AM:28:ALA:HB3	2.08	0.54
1:AA:1434:A:C3'	1:AA:1435:G:H4'	2.38	0.54
2:AW:76:A:C2'	23:B0:2486:C:O4'	2.50	0.54
5:AC:91:LEU:HD21	5:AC:99:VAL:CG1	2.30	0.54
5:AC:174:PRO:HB2	5:AC:177:THR:HG22	1.89	0.54
6:AD:199:ASN:HD21	6:AD:201:GLN:HB2	1.71	0.54
7:AE:137:GLU:O	7:AE:141:GLN:HG3	2.07	0.54
10:AH:123:GLU:O	10:AH:127:LEU:HD23	2.05	0.54
12:AJ:4:ILE:HG12	12:AJ:100:THR:HB	1.90	0.54
12:AJ:51:ARG:O	16:AN:45:ARG:CD	2.55	0.54
15:AM:93:ARG:HH11	23:B0:900:U:C5'	2.19	0.54
19:AQ:26:GLN:HE21	19:AQ:37:LYS:HE2	1.71	0.54
20:AR:61:LYS:O	20:AR:65:ILE:HG13	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:873:U:H1'	23:B0:2246:A:OP1	2.07	0.54
23:B0:1356:G:H1'	23:B0:1613:G:C2	2.43	0.54
23:B0:1496:G:H1	23:B0:1527:G:H1	1.55	0.54
23:B0:3098:U:C4	23:B0:3099:U:C4	2.96	0.54
1:AA:39:G:C5	1:AA:498:U:C4	2.94	0.54
1:AA:407:G:O2'	6:AD:116:GLN:HG3	2.07	0.54
1:AA:1015:A:C1'	1:AA:1219:U:H5''	2.30	0.54
1:AA:1193:G:O2'	1:AA:1194:U:H5'	2.07	0.54
1:AA:1234:C:H4'	1:AA:1364:U:C1'	2.38	0.54
1:AA:1317:C:C5	16:AN:16:PHE:CD2	2.95	0.54
2:AV:16:U:H1'	2:AV:17:U:OP2	2.08	0.54
7:AE:21:ALA:O	7:AE:23:GLY:N	2.40	0.54
13:AK:13:GLN:HA	13:AK:75:TYR:O	2.08	0.54
15:AM:60:VAL:O	15:AM:63:THR:HG22	2.07	0.54
23:B0:918:A:H2'	23:B0:919:U:C5'	2.35	0.54
23:B0:1319:C:H41	23:B0:1622:G:H2'	1.73	0.54
23:B0:2437:G:H2'	23:B0:2469:G:C2	2.42	0.54
23:B0:2516:U:H2'	23:B0:2517:C:C6	2.42	0.54
1:AA:22:G:C2	1:AA:913:A:H2'	2.35	0.54
1:AA:86:G:H4'	1:AA:87:G:OP2	2.07	0.54
1:AA:173:U:H5''	1:AA:197:A:O4'	2.05	0.54
1:AA:278:G:N2	1:AA:279:A:N6	2.44	0.54
1:AA:300:A:H2'	1:AA:301:G:O4'	2.08	0.54
1:AA:778:G:H4'	13:AK:119:CYS:SG	2.48	0.54
1:AA:893:C:N1	1:AA:894:G:C8	2.76	0.54
1:AA:1497:G:C1'	1:AA:1518:A:C2	2.87	0.54
4:AB:195:ASP:HB3	10:AH:74:PRO:HD3	1.85	0.54
5:AC:38:ARG:HB3	5:AC:94:LEU:HD21	1.88	0.54
5:AC:130:VAL:O	5:AC:134:ILE:HG13	2.07	0.54
7:AE:104:ALA:O	7:AE:105:VAL:C	2.49	0.54
8:AF:4:TYR:OH	8:AF:69:GLU:HB3	2.07	0.54
15:AM:5:ALA:O	15:AM:6:GLY:C	2.51	0.54
17:AO:32:LEU:O	17:AO:36:ILE:HG13	2.07	0.54
19:AQ:90:ILE:HG23	23:B0:727:U:OP1	2.08	0.54
23:B0:357:A:C2'	23:B0:358:C:H5'	2.38	0.54
23:B0:635:C:H3'	23:B0:636:G:H5''	1.90	0.54
23:B0:2677:U:H2'	23:B0:2678:C:C6	2.43	0.54
1:AA:38:G:C4'	1:AA:498:U:O2	2.42	0.54
1:AA:38:G:H1'	1:AA:547:A:C8	2.43	0.54
1:AA:532:A:H2'	1:AA:533:A:H5''	1.89	0.54
1:AA:588:G:C1'	1:AA:753:A:C2	2.91	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:639:G:O2'	1:AA:640:A:H5'	2.08	0.54
1:AA:735:C:H1'	20:AR:75:ILE:CD1	2.38	0.54
1:AA:818:G:O2'	1:AA:819:A:H5''	2.08	0.54
1:AA:864:A:C2	1:AA:917:G:C2'	2.90	0.54
1:AA:977:A:C2	1:AA:1224:G:C6	2.95	0.54
1:AA:1261:A:O4'	1:AA:1283:G:C4'	2.34	0.54
1:AA:1339:A:C4	2:AV:31:A:O2'	2.44	0.54
1:AA:1402:C:O2	1:AA:1500:A:N1	2.41	0.54
1:AA:1458:G:C5	1:AA:1459:C:O2	2.61	0.54
1:AA:1474:G:C5'	23:B0:1717:A:N6	2.70	0.54
4:AB:33:TYR:HB3	4:AB:41:ILE:O	2.08	0.54
4:AB:67:THR:HG22	4:AB:68:ILE:N	2.21	0.54
23:B0:317:U:C2'	23:B0:318:G:H5''	2.38	0.54
23:B0:857:U:H2'	23:B0:858:G:H5'	1.89	0.54
23:B0:1615:C:H2'	23:B0:1616:C:C6	2.42	0.54
23:B0:1713:G:H2'	23:B0:1714:A:O4'	2.08	0.54
23:B0:2510:A:H61	23:B0:2641:A:N6	2.06	0.54
1:AA:203:A:H4'	1:AA:468:A:H5'	1.88	0.54
1:AA:300:A:O2'	1:AA:564:C:C2	2.58	0.54
1:AA:323:U:C4'	22:AT:19:SER:O	2.56	0.54
1:AA:403:C:C4	1:AA:404:U:C5	2.96	0.54
1:AA:403:C:C4	1:AA:404:U:H5	2.26	0.54
1:AA:438:G:H5'	6:AD:123:HIS:CG	2.43	0.54
1:AA:640:A:N3	10:AH:115:SER:HB2	2.23	0.54
1:AA:653:A:C5'	10:AH:56:LYS:HE2	2.38	0.54
1:AA:750:G:H1'	17:AO:22:THR:OG1	2.08	0.54
1:AA:778:G:O2'	13:AK:119:CYS:C	2.47	0.54
1:AA:1066:C:O2'	1:AA:1067:A:H5'	2.07	0.54
1:AA:1117:G:O3'	1:AA:1118:C:P	2.66	0.54
1:AA:1408:A:H4'	23:B0:1900:U:H3	1.73	0.54
5:AC:37:GLN:NE2	16:AN:52:GLN:OE1	2.40	0.54
8:AF:69:GLU:HA	8:AF:72:VAL:CG2	2.37	0.54
11:AI:85:LEU:O	11:AI:92:TYR:HD1	1.91	0.54
20:AR:86:VAL:O	20:AR:87:ARG:CB	2.55	0.54
23:B0:2227:C:C2'	23:B0:2228:U:H5'	2.35	0.54
23:B0:2446:C:H2'	23:B0:2447:G:C8	2.43	0.54
1:AA:35:G:H2'	1:AA:36:C:C6	2.43	0.54
1:AA:37:U:H2'	1:AA:547:A:C6	2.43	0.54
1:AA:299:G:N2	1:AA:566:G:C5	2.64	0.54
1:AA:476:U:C2'	1:AA:477:G:H5''	2.32	0.54
1:AA:685:G:C5'	13:AK:39:PRO:O	2.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.88	0.54
1:AA:1261:A:C5'	1:AA:1283:G:O3'	2.56	0.54
1:AA:1494:G:O2'	1:AA:1495:U:H5'	2.08	0.54
4:AB:187:LEU:HD23	4:AB:214:ILE:HG21	1.90	0.54
5:AC:139:GLN:O	5:AC:143:GLU:N	2.37	0.54
7:AE:80:ILE:HD13	7:AE:138:ALA:HB1	1.90	0.54
9:AG:113:GLU:HG2	9:AG:119:ARG:HG2	1.90	0.54
15:AM:8:GLU:OE1	15:AM:22:ILE:HA	2.08	0.54
18:AP:43:LYS:HB3	18:AP:48:TRP:CD1	2.43	0.54
22:AT:38:LYS:O	22:AT:39:LYS:C	2.51	0.54
23:B0:201:G:H2'	23:B0:202:A:C8	2.42	0.54
23:B0:319:G:H21	23:B0:340:G:H21	1.55	0.54
23:B0:3128:G:H5'	23:B0:3174:C:H1'	1.89	0.54
23:B0:3184:C:H2'	23:B0:3185:U:H5'	1.89	0.54
23:B0:2379:G:H2'	23:B0:2380:U:O4'	2.07	0.54
1:AA:476:U:H3'	1:AA:477:G:OP1	2.08	0.54
1:AA:826:C:O2'	10:AH:15:ASN:CB	2.56	0.54
1:AA:905:U:O4	1:AA:906:G:C2	2.61	0.54
1:AA:1184:G:H2'	1:AA:1185:G:H8	1.73	0.54
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.42	0.54
1:AA:1340:A:C3'	2:AV:32:C:H4'	2.38	0.54
6:AD:148:VAL:HG11	6:AD:158:ILE:HD13	1.89	0.54
9:AG:18:TYR:CE2	9:AG:59:LEU:HB2	2.42	0.54
9:AG:138:LYS:HE2	9:AG:142:GLU:OE1	2.08	0.54
11:AI:23:ASN:C	11:AI:23:ASN:ND2	2.66	0.54
12:AJ:62:HIS:CE1	16:AN:61:TRP:HH2	2.16	0.54
15:AM:37:THR:O	15:AM:37:THR:HG22	2.07	0.54
18:AP:11:SER:OG	18:AP:14:ASN:HB3	2.08	0.54
1:AA:264:U:C1'	19:AQ:64:PRO:CD	2.55	0.53
1:AA:332:G:OP2	22:AT:10:LEU:HB3	1.91	0.53
1:AA:743:U:H2'	1:AA:744:C:C6	2.43	0.53
1:AA:866:C:C4'	1:AA:919:A:OP1	2.55	0.53
1:AA:905:U:C3'	1:AA:906:G:OP2	2.51	0.53
1:AA:1068:G:OP2	1:AA:1068:G:H8	1.91	0.53
1:AA:1250:A:H4'	11:AI:68:GLY:N	2.23	0.53
1:AA:1344:C:H5'	11:AI:120:ARG:O	2.09	0.53
1:AA:1475:G:O3'	23:B0:1706:A:H5''	2.07	0.53
5:AC:112:SER:CB	5:AC:115:LEU:HD12	2.36	0.53
7:AE:76:ILE:O	7:AE:93:PRO:HB3	2.07	0.53
7:AE:101:ILE:O	7:AE:120:THR:HB	2.08	0.53
9:AG:69:VAL:HG12	9:AG:100:ALA:HA	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AG:116:ALA:HA	9:AG:119:ARG:CZ	2.37	0.53
10:AH:8:ASP:O	10:AH:12:ARG:HG3	2.08	0.53
10:AH:56:LYS:N	10:AH:56:LYS:HD2	2.23	0.53
10:AH:119:LEU:HD12	10:AH:124:ALA:HA	1.89	0.53
12:AJ:3:LYS:N	12:AJ:75:ILE:HA	2.22	0.53
19:AQ:27:PHE:CE1	19:AQ:36:ILE:HD11	2.42	0.53
21:AS:51:VAL:HG12	21:AS:52:TYR:N	2.23	0.53
23:B0:800:U:H3'	23:B0:804:C:H41	1.73	0.53
23:B0:968:C:H2'	23:B0:970:A:OP1	2.08	0.53
23:B0:1137:A:H5''	23:B0:1138:A:H5''	1.90	0.53
23:B0:1316:G:H2'	23:B0:1317:G:H8	1.72	0.53
23:B0:2241:U:H1'	23:B0:2307:A:H1'	1.90	0.53
23:B0:2246:A:H2'	23:B0:2246:A:N3	2.23	0.53
1:AA:193:C:H2'	1:AA:194:C:H6	1.72	0.53
1:AA:279:A:OP2	19:AQ:95:TYR:CZ	2.61	0.53
1:AA:620:C:H2'	1:AA:621:A:O4'	2.07	0.53
1:AA:818:G:H3'	1:AA:819:A:H5''	1.87	0.53
1:AA:1003:G:C2	1:AA:2003:G:C6	2.96	0.53
1:AA:1128:C:H2'	1:AA:1129:C:H5''	1.90	0.53
2:AV:16:U:O2'	2:AV:17:U:OP2	2.21	0.53
4:AB:18:GLY:CA	4:AB:42:ILE:H	2.20	0.53
5:AC:181:ASN:HD21	5:AC:204:LEU:HD12	1.72	0.53
7:AE:18:ARG:HG2	7:AE:19:MET:N	2.24	0.53
19:AQ:104:LYS:HD3	23:B0:729:A:H62	1.74	0.53
23:B0:45:C:H5''	23:B0:192:G:C8	2.43	0.53
23:B0:3196:G:O2'	23:B0:3197:U:P	2.66	0.53
23:B0:2316:G:H2'	23:B0:2317:G:H8	1.74	0.53
1:AA:255:G:C4'	19:AQ:17:LYS:CB	2.86	0.53
1:AA:317:G:P	1:AA:353:A:H61	2.29	0.53
1:AA:1038:C:H2'	1:AA:1039:C:C6	2.43	0.53
1:AA:1298:C:C6	9:AG:114:ARG:HD3	2.43	0.53
9:AG:71:PRO:HD3	9:AG:103:TRP:HZ3	1.74	0.53
14:AL:53:ARG:NH1	14:AL:92:ASP:OD2	2.42	0.53
20:AR:36:ASN:CG	20:AR:39:VAL:HG12	2.34	0.53
22:AT:67:ALA:HB2	22:AT:77:ALA:HB2	1.88	0.53
23:B0:239:A:H4'	23:B0:620:G:H5'	1.89	0.53
23:B0:658:G:H4'	23:B0:2331:A:H5'	1.90	0.53
23:B0:1217:U:H2'	23:B0:1218:C:C6	2.43	0.53
23:B0:1807:A:O2'	23:B0:1808:C:O5'	2.24	0.53
23:B0:2392:G:H2'	23:B0:2393:G:C8	2.44	0.53
23:B0:2483:U:H2'	23:B0:2484:G:H5'	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:2623:A:H2'	23:B0:2624:G:O4'	2.09	0.53
1:AA:397:A:N6	1:AA:547:A:N9	2.52	0.53
1:AA:588:G:N3	1:AA:753:A:C6	2.75	0.53
1:AA:685:G:C4'	13:AK:39:PRO:O	2.56	0.53
1:AA:1015:A:C2'	1:AA:1219:U:C5'	2.81	0.53
1:AA:1367:C:OP2	11:AI:112:LYS:NZ	2.41	0.53
1:AA:1405:G:H21	1:AA:1518:A:H1'	1.74	0.53
1:AA:1457:A:C8	1:AA:1459:C:O2	2.60	0.53
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.08	0.53
4:AB:75:LYS:O	4:AB:75:LYS:HD3	2.08	0.53
6:AD:32:ALA:C	6:AD:34:GLU:N	2.60	0.53
9:AG:6:ARG:O	9:AG:7:ALA:C	2.52	0.53
12:AJ:22:LYS:CE	12:AJ:90:LEU:HD12	2.33	0.53
14:AL:53:ARG:HG2	14:AL:69:TYR:HE1	1.73	0.53
17:AO:36:ILE:HA	17:AO:59:MET:HE3	1.91	0.53
19:AQ:104:LYS:CD	23:B0:729:A:H62	2.21	0.53
21:AS:42:PRO:O	21:AS:45:VAL:HG23	2.09	0.53
23:B0:412:U:H2'	23:B0:413:G:O4'	2.08	0.53
23:B0:757:U:O2'	23:B0:758:G:H5'	2.09	0.53
23:B0:1141:U:H5'	23:B0:2549:G:N2	2.23	0.53
1:AA:80:C:H2'	1:AA:81:C:C6	2.43	0.53
1:AA:130:A:C4	1:AA:264:U:N1	2.76	0.53
1:AA:252:U:H2'	1:AA:253:U:C6	2.44	0.53
1:AA:256:U:H5''	19:AQ:17:LYS:HE2	1.90	0.53
1:AA:300:A:H1'	1:AA:565:U:O2	2.09	0.53
1:AA:319:G:N3	1:AA:1434:A:N3	2.57	0.53
1:AA:960:U:H5'	1:AA:960:U:O2	2.08	0.53
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.08	0.53
2:AW:76:A:C2	23:B0:2562:G:C2	2.96	0.53
4:AB:73:THR:HG23	4:AB:95:GLN:O	2.09	0.53
5:AC:14:ILE:HG22	5:AC:15:THR:N	2.12	0.53
5:AC:135:LYS:NZ	7:AE:50:GLU:CD	2.67	0.53
7:AE:31:LEU:HD22	7:AE:43:LEU:CD2	2.39	0.53
11:AI:44:VAL:HG13	11:AI:51:ARG:NH2	2.23	0.53
15:AM:53:VAL:O	15:AM:57:ARG:HB2	2.08	0.53
23:B0:459:A:H1'	23:B0:466:A:N7	2.23	0.53
23:B0:1298:G:N2	23:B0:1341:G:H5''	2.23	0.53
23:B0:1861:G:P	55:B5:38:GLY:CA	2.96	0.53
23:B0:2494:C:H2'	23:B0:2495:G:C8	2.44	0.53
1:AA:254:G:O2'	19:AQ:16:GLN:C	2.52	0.53
1:AA:677:U:O2	13:AK:119:CYS:SG	2.67	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:814:A:O3'	1:AA:815:A:P	2.67	0.53
1:AA:864:A:H2	1:AA:917:G:C2'	2.22	0.53
1:AA:1309:G:P	15:AM:88:ARG:NH2	2.80	0.53
1:AA:1503:A:C4	1:AA:1531:A:N3	2.77	0.53
4:AB:32:ILE:HD13	4:AB:40:HIS:CD2	2.44	0.53
4:AB:97:TRP:CH2	4:AB:176:GLU:CD	2.85	0.53
4:AB:124:SER:O	4:AB:127:ILE:HG13	2.08	0.53
5:AC:113:ALA:HB3	5:AC:114:PRO:HD3	1.90	0.53
5:AC:150:LYS:CE	5:AC:152:ILE:HD11	2.37	0.53
6:AD:160:GLN:O	6:AD:163:GLU:HB3	2.08	0.53
8:AF:75:LEU:HD13	8:AF:75:LEU:C	2.34	0.53
10:AH:80:ILE:O	10:AH:80:ILE:HG22	2.08	0.53
11:AI:81:ILE:O	11:AI:85:LEU:HB2	2.08	0.53
13:AK:14:VAL:O	13:AK:15:ALA:CB	2.57	0.53
14:AL:55:VAL:HG11	14:AL:67:THR:HG23	1.91	0.53
23:B0:394:U:H2'	23:B0:395:G:H8	1.74	0.53
23:B0:1479:G:N2	23:B0:1543:G:H21	2.06	0.53
23:B0:1838:G:C2'	23:B0:1839:A:H5'	2.37	0.53
23:B0:2445:C:H2'	23:B0:2446:C:O4'	2.08	0.53
1:AA:9:G:O5'	7:AE:126:ARG:NE	2.41	0.53
1:AA:375:U:C3'	1:AA:376:G:P	2.96	0.53
1:AA:922:G:C2	1:AA:1396:A:C6	2.95	0.53
1:AA:1075:C:H5''	4:AB:179:LYS:NZ	2.23	0.53
1:AA:1343:G:P	11:AI:125:TYR:CE2	2.99	0.53
1:AA:1347:G:C2'	1:AA:1348:U:OP2	2.56	0.53
5:AC:32:LEU:HD21	5:AC:59:ARG:HD2	1.91	0.53
7:AE:79:GLU:OE1	10:AH:105:ARG:CD	2.53	0.53
9:AG:69:VAL:HG21	9:AG:104:LEU:HD21	1.89	0.53
10:AH:25:ASP:OD1	10:AH:60:ARG:HD3	2.09	0.53
12:AJ:44:VAL:HG22	12:AJ:66:ARG:HB3	1.91	0.53
14:AL:55:VAL:HG11	14:AL:67:THR:CG2	2.39	0.53
15:AM:102:ARG:NH1	15:AM:102:ARG:HB2	2.24	0.53
23:B0:616:U:C2'	23:B0:617:U:H5''	2.35	0.53
23:B0:917:U:H2'	23:B0:918:A:O4'	2.09	0.53
23:B0:1288:A:O2'	23:B0:1289:A:H5'	2.08	0.53
23:B0:1746:A:C2'	23:B0:1747:G:H5'	2.36	0.53
23:B0:2322:U:O2'	23:B0:2323:U:H5'	2.09	0.53
1:AA:7:G:H5'	1:AA:298:A:H5'	1.89	0.53
1:AA:66:G:C4'	1:AA:199:G:H4'	2.37	0.53
1:AA:94:G:C4	1:AA:96:C:C6	2.97	0.53
1:AA:101:A:H2'	1:AA:102:G:H8	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:191:G:O3'	1:AA:192:U:OP1	2.26	0.53
1:AA:1015:A:O2'	1:AA:1219:U:H5''	2.06	0.53
1:AA:1409:C:H2'	1:AA:1410:G:O4'	2.09	0.53
5:AC:138:VAL:HG21	5:AC:168:ALA:HB1	1.89	0.53
11:AI:17:VAL:HG11	11:AI:81:ILE:HA	1.90	0.53
14:AL:47:LYS:HB3	14:AL:48:PRO:HD3	1.91	0.53
16:AN:44:LEU:HD12	16:AN:44:LEU:O	2.08	0.53
23:B0:216:U:H5''	23:B0:601:A:N6	2.23	0.53
23:B0:513:A:H4'	23:B0:515:A:H5'	1.90	0.53
23:B0:1791:C:H2'	23:B0:1792:C:H5''	1.91	0.53
23:B0:3102:G:H2'	23:B0:3103:A:H8	1.74	0.53
23:B0:2470:U:O2'	23:B0:2471:U:H5'	2.08	0.53
1:AA:27:G:N7	1:AA:557:G:N1	2.54	0.53
1:AA:32:A:OP1	1:AA:398:C:H1'	2.08	0.53
1:AA:108:G:N7	22:AT:12:ALA:HB1	2.23	0.53
1:AA:217:C:H1'	1:AA:469:C:O2'	2.09	0.53
1:AA:953:G:H2'	1:AA:954:G:O4'	2.09	0.53
1:AA:977:A:C2'	1:AA:978:A:H5''	2.38	0.53
1:AA:1468:A:H2'	1:AA:1469:G:O4'	2.09	0.53
1:AA:1483:A:C6	1:AA:1484:C:N3	2.76	0.53
1:AA:1498:U:O4'	1:AA:1519:A:C2	2.55	0.53
5:AC:130:VAL:HG12	5:AC:134:ILE:HD11	1.91	0.53
8:AF:3:ARG:NH2	8:AF:64:GLN:NE2	2.57	0.53
14:AL:46:LYS:CG	14:AL:47:LYS:N	2.71	0.53
15:AM:94:ARG:NH2	21:AS:81:ARG:NH1	2.55	0.53
19:AQ:67:LYS:CA	19:AQ:70:ARG:HH12	2.21	0.53
20:AR:73:ALA:HB3	20:AR:79:LEU:HD12	1.91	0.53
22:AT:76:ALA:O	22:AT:80:ARG:HG2	2.09	0.53
23:B0:366:U:H2'	23:B0:367:G:C8	2.43	0.53
23:B0:605:G:H4'	23:B0:949:G:O2'	2.08	0.53
23:B0:1286:U:H5''	23:B0:1663:C:H42	1.73	0.53
23:B0:1730:G:H2'	23:B0:1731:C:C6	2.43	0.53
23:B0:1789:U:C2'	23:B0:1790:G:H5'	2.39	0.53
23:B0:2057:U:H1'	23:B0:2577:A:H1'	1.90	0.53
1:AA:9:G:C5'	7:AE:126:ARG:CD	2.71	0.53
1:AA:33:A:H2'	1:AA:34:C:C6	2.44	0.53
1:AA:150:C:C3'	1:AA:151:A:P	2.97	0.53
1:AA:386:C:C2'	1:AA:387:U:H5'	2.39	0.53
1:AA:475:C:H2'	1:AA:476:U:C6	2.44	0.53
1:AA:623:C:O2'	1:AA:624:C:H5'	2.09	0.53
1:AA:791:G:H2'	1:AA:792:A:H5'	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:835:U:OP2	20:AR:60:GLY:HA3	2.08	0.53
1:AA:1113:C:N1	5:AC:178:LEU:HD23	2.24	0.53
1:AA:1232:U:OP1	11:AI:126:SER:N	2.42	0.53
1:AA:1257:U:O2'	1:AA:1258:G:OP2	2.21	0.53
1:AA:1481:U:O2'	1:AA:1482:G:H5'	2.09	0.53
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.44	0.53
6:AD:57:ARG:HH21	7:AE:107:ARG:NH1	2.00	0.53
6:AD:126:ILE:HG22	6:AD:127:THR:N	2.23	0.53
15:AM:11:ARG:CG	15:AM:12:ASN:N	2.72	0.53
23:B0:192:G:C4'	23:B0:193:A:H4'	2.38	0.53
23:B0:665:A:OP2	23:B0:666:U:H5'	2.09	0.53
23:B0:1474:A:H3'	23:B0:1474:A:N3	2.23	0.53
23:B0:2010:G:H2'	23:B0:2011:U:O4'	2.09	0.53
23:B0:2025:A:H2'	23:B0:2026:C:H5''	1.91	0.53
24:B9:81:C:H2'	24:B9:82:U:O4'	2.09	0.53
1:AA:13:U:C4	1:AA:915:A:C8	2.97	0.52
1:AA:13:U:O4'	1:AA:914:A:OP1	2.27	0.52
1:AA:21:G:C1'	1:AA:914:A:H61	2.05	0.52
1:AA:188:C:C2	22:AT:106:ALA:HA	2.44	0.52
1:AA:370:C:O2'	1:AA:371:G:H5'	2.09	0.52
1:AA:545:C:O2'	1:AA:549:C:H5''	2.09	0.52
1:AA:621:A:H2'	1:AA:622:A:C8	2.44	0.52
1:AA:835:U:O5'	20:AR:64:ARG:NH2	2.39	0.52
1:AA:1003:G:N2	1:AA:1039:C:C2	2.77	0.52
1:AA:1211:U:C3'	1:AA:1212:U:P	2.96	0.52
1:AA:1347:G:C5	11:AI:107:ARG:NH1	2.78	0.52
1:AA:1359:C:C5	16:AN:35:ARG:CZ	2.92	0.52
1:AA:1495:U:HO2'	23:B0:1902:A:H2	1.19	0.52
15:AM:88:ARG:HG3	15:AM:98:VAL:CG1	2.40	0.52
16:AN:12:ARG:O	16:AN:13:THR:C	2.52	0.52
16:AN:14:PRO:C	16:AN:16:PHE:N	2.56	0.52
18:AP:19:ILE:HG22	18:AP:36:ILE:HG13	1.90	0.52
21:AS:53:ASN:HB2	21:AS:56:GLN:H	1.73	0.52
23:B0:468:A:H2'	23:B0:469:G:H4'	1.90	0.52
23:B0:669:G:H2'	23:B0:670:U:C6	2.44	0.52
23:B0:1289:A:O2'	23:B0:1290:A:H5'	2.09	0.52
1:AA:128:G:H5''	19:AQ:2:PRO:CA	2.37	0.52
1:AA:247:G:N2	1:AA:282:A:C2	2.69	0.52
1:AA:357:G:O2'	1:AA:358:U:H5'	2.10	0.52
1:AA:762:C:C4'	23:B0:729:A:N6	2.71	0.52
1:AA:976:G:OP1	16:AN:31:ARG:O	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1006:C:H2'	1:AA:1007:C:C6	2.44	0.52
1:AA:1121:U:H2'	1:AA:1122:U:H6	1.73	0.52
5:AC:23:TYR:CD2	5:AC:24:ALA:N	2.78	0.52
14:AL:82:VAL:N	14:AL:106:ASP:OD1	2.34	0.52
23:B0:579:G:H2'	23:B0:2013:A:N6	2.24	0.52
23:B0:2860:C:H2'	23:B0:2861:A:O4'	2.09	0.52
1:AA:115:G:N2	1:AA:117:G:O6	2.42	0.52
1:AA:134:A:H1'	1:AA:325:A:C4	2.44	0.52
1:AA:148:G:H2'	1:AA:149:A:H8	1.74	0.52
1:AA:186:C:C5'	22:AT:81:LYS:HZ3	2.21	0.52
1:AA:828:A:N3	4:AB:26:PRO:CB	2.72	0.52
1:AA:1393:U:O2	1:AA:1395:C:N3	2.42	0.52
5:AC:22:TRP:CZ2	16:AN:54:PRO:HG3	2.44	0.52
5:AC:77:ILE:HG22	5:AC:81:GLY:HA2	1.90	0.52
7:AE:74:GLY:HA3	7:AE:116:THR:HG22	1.92	0.52
13:AK:17:GLY:O	13:AK:80:VAL:HA	2.09	0.52
14:AL:42:THR:HG21	14:AL:52:LEU:HB3	1.91	0.52
19:AQ:45:HIS:HB2	19:AQ:65:ILE:CD1	2.37	0.52
19:AQ:104:LYS:HE3	23:B0:729:A:H62	1.74	0.52
23:B0:490:A:O2'	23:B0:491:A:H5'	2.09	0.52
23:B0:1278:A:H4'	23:B0:1279:G:O5'	2.08	0.52
23:B0:2329:C:C2'	23:B0:2330:G:H5'	2.39	0.52
1:AA:299:G:H2'	1:AA:300:A:C8	2.44	0.52
1:AA:476:U:C2'	1:AA:477:G:H5'	2.39	0.52
1:AA:1234:C:C4'	1:AA:1364:U:H1'	2.40	0.52
1:AA:1239:A:C2'	1:AA:1298:C:N4	2.68	0.52
1:AA:1424:C:O2'	1:AA:1425:U:H5'	2.09	0.52
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.44	0.52
1:AA:1435:G:H2'	1:AA:1436:U:H6	1.69	0.52
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.09	0.52
4:AB:213:LEU:C	4:AB:213:LEU:CD2	2.83	0.52
5:AC:20:SER:HB3	5:AC:22:TRP:NE1	2.24	0.52
6:AD:6:GLY:O	6:AD:7:PRO:C	2.50	0.52
14:AL:28:LYS:O	14:AL:29:GLY:C	2.50	0.52
19:AQ:104:LYS:CG	23:B0:726:G:C5	2.91	0.52
21:AS:13:ASP:O	21:AS:17:GLU:HG2	2.10	0.52
23:B0:839:U:H2'	23:B0:841:G:O4'	2.09	0.52
23:B0:841:G:H3'	23:B0:841:G:N3	2.24	0.52
23:B0:3875:A:O2'	55:B5:44:GLY:CA	2.57	0.52
23:B0:3098:U:C6	23:B0:3099:U:C5	2.98	0.52
23:B0:3148:G:H2'	23:B0:3149:G:H5'	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:2240:C:H2'	23:B0:2241:U:H5'	1.90	0.52
23:B0:2418:A:H4'	23:B0:2420:C:OP2	2.10	0.52
1:AA:13:U:C1'	1:AA:914:A:C5'	2.87	0.52
1:AA:134:A:H1'	1:AA:325:A:C5	2.44	0.52
1:AA:216:C:C5'	1:AA:466:A:H61	2.10	0.52
1:AA:252:U:H1'	1:AA:275:G:C2	2.44	0.52
1:AA:323:U:H4'	22:AT:19:SER:CA	2.30	0.52
1:AA:501:C:H1'	1:AA:549:C:H1'	1.91	0.52
1:AA:588:G:O6	1:AA:753:A:C8	2.62	0.52
1:AA:979:C:H2'	1:AA:980:C:H5'	1.91	0.52
1:AA:994:A:C5	16:AN:5:ALA:CB	2.89	0.52
1:AA:1202:G:H2'	1:AA:1203:C:O4'	2.10	0.52
1:AA:1317:C:N1	16:AN:16:PHE:CD2	2.77	0.52
1:AA:1409:C:N3	1:AA:1410:G:N7	2.57	0.52
4:AB:23:ARG:O	4:AB:24:TRP:O	2.27	0.52
13:AK:77:MET:HE3	13:AK:80:VAL:HG22	1.91	0.52
15:AM:117:VAL:HG12	15:AM:118:ALA:N	2.24	0.52
23:B0:509:U:H3	23:B0:513:A:H62	1.58	0.52
23:B0:860:U:H2'	23:B0:861:G:H5'	1.90	0.52
23:B0:942:U:O2'	23:B0:943:U:H5'	2.09	0.52
24:B9:50:U:H2'	24:B9:51:G:C8	2.44	0.52
1:AA:69:G:C8	1:AA:102:G:C6	2.96	0.52
1:AA:130:A:H2	1:AA:263:A:C2	2.25	0.52
1:AA:538:G:P	14:AL:114:LYS:HB2	2.49	0.52
1:AA:546:G:H5'	1:AA:549:C:OP1	2.09	0.52
1:AA:1027:C:O3'	1:AA:1028:C:P	2.68	0.52
1:AA:1097:C:HO2'	1:AA:1168:A:H1'	1.73	0.52
1:AA:1128:C:H1'	1:AA:1146:A:H61	1.75	0.52
2:AV:76:A:O3'	23:B0:2046:C:O2'	2.27	0.52
8:AF:43:LEU:CD2	8:AF:43:LEU:H	2.23	0.52
9:AG:85:TYR:HD1	9:AG:154:TYR:CE1	2.27	0.52
11:AI:48:GLU:OE1	11:AI:51:ARG:HD2	2.09	0.52
11:AI:127:LYS:N	11:AI:127:LYS:HD2	2.25	0.52
20:AR:19:LYS:O	20:AR:20:ALA:HB2	2.10	0.52
23:B0:176:A:H1'	23:B0:2221:G:H21	1.75	0.52
23:B0:1856:U:H2'	23:B0:3865:A:C8	2.45	0.52
23:B0:2533:U:H2'	23:B0:2534:U:C6	2.45	0.52
23:B0:2698:G:H2'	23:B0:2699:G:C8	2.45	0.52
1:AA:114:U:H1'	1:AA:353:A:H1'	1.91	0.52
1:AA:131:C:N1	1:AA:262:A:C2	2.77	0.52
1:AA:373:A:O2'	1:AA:374:A:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:476:U:C5	1:AA:477:G:O5'	2.62	0.52
1:AA:600:C:OP1	10:AH:97:VAL:HG12	2.10	0.52
1:AA:844:A:H2'	1:AA:845:A:C8	2.44	0.52
1:AA:921:U:O4	1:AA:1396:A:N1	2.43	0.52
1:AA:1296:C:C5'	15:AM:14:ARG:HD2	2.40	0.52
4:AB:26:PRO:O	4:AB:29:ALA:HB2	2.10	0.52
5:AC:94:LEU:HD22	5:AC:95:THR:HG23	1.92	0.52
8:AF:53:ALA:C	8:AF:55:ASP:H	2.18	0.52
12:AJ:27:ALA:HB1	12:AJ:81:THR:HG23	1.92	0.52
16:AN:33:VAL:HA	16:AN:40:CYS:HA	1.91	0.52
22:AT:50:GLU:O	22:AT:100:ILE:HD12	2.09	0.52
22:AT:93:GLU:HA	22:AT:93:GLU:OE2	2.09	0.52
23:B0:3866:A:N7	23:B0:3875:A:H2	2.07	0.52
23:B0:3877:A:C8	23:B0:3877:A:C3'	2.92	0.52
23:B0:3128:G:H5'	23:B0:3174:C:C1'	2.39	0.52
1:AA:21:G:N3	1:AA:914:A:N7	2.57	0.52
1:AA:239:U:C5'	1:AA:240:C:OP1	2.58	0.52
1:AA:473:C:O2'	1:AA:474:U:H5'	2.09	0.52
1:AA:819:A:N7	1:AA:1529:G:C2	2.77	0.52
1:AA:1038:C:H2'	1:AA:1039:C:H6	1.75	0.52
1:AA:1367:C:H5''	11:AI:114:TYR:HB2	1.91	0.52
1:AA:1426:C:H2'	1:AA:1427:U:C6	2.44	0.52
1:AA:1483:A:C5	1:AA:1484:C:N3	2.78	0.52
7:AE:127:ASN:O	7:AE:128:PRO:C	2.53	0.52
8:AF:8:ILE:HD11	8:AF:79:LEU:HD13	1.92	0.52
10:AH:14:ARG:O	10:AH:18:ARG:HD3	2.10	0.52
12:AJ:62:HIS:CB	16:AN:59:ALA:CA	2.87	0.52
15:AM:93:ARG:HD3	23:B0:900:U:H4'	1.92	0.52
23:B0:929:A:H3'	23:B0:930:A:C5'	2.30	0.52
23:B0:1018:C:H2'	23:B0:1019:U:C5	2.44	0.52
23:B0:3877:A:C8	23:B0:3877:A:H3'	2.45	0.52
23:B0:2401:A:H2'	23:B0:2403:C:C5	2.45	0.52
24:B9:107:C:C2'	24:B9:108:G:H5'	2.39	0.52
1:AA:755:G:C2'	10:AH:1:MET:HE3	2.39	0.52
1:AA:779:C:HO2'	13:AK:120:ARG:HH11	1.57	0.52
1:AA:1256:A:C4'	1:AA:1258:G:C8	2.90	0.52
1:AA:1397:C:H4'	1:AA:1398:A:OP2	2.09	0.52
1:AA:1505:G:C4'	1:AA:1506:U:O5'	2.41	0.52
4:AB:142:LEU:HD22	4:AB:146:GLN:HE22	1.73	0.52
4:AB:215:LEU:O	4:AB:216:SER:C	2.52	0.52
6:AD:88:VAL:HG13	7:AE:97:GLY:HA2	0.59	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AF:67:MET:CE	8:AF:72:VAL:HA	2.40	0.52
9:AG:42:ILE:CG2	9:AG:120:ILE:HD12	2.39	0.52
10:AH:24:THR:HG23	10:AH:61:VAL:HB	1.92	0.52
12:AJ:69:ASN:O	12:AJ:70:ARG:HD3	2.10	0.52
14:AL:119:LYS:O	14:AL:120:TYR:HB2	2.10	0.52
15:AM:73:GLU:O	15:AM:76:ALA:HB3	2.09	0.52
15:AM:77:ASN:O	15:AM:80:ARG:HB3	2.10	0.52
20:AR:45:SER:C	20:AR:47:THR:N	2.65	0.52
23:B0:476:G:H2'	23:B0:477:A:C8	2.45	0.52
23:B0:1325:U:H4'	23:B0:1326:U:C5	2.45	0.52
23:B0:1686:A:H2'	23:B0:1687:C:H5'	1.92	0.52
23:B0:1856:U:O4	23:B0:3865:A:N6	2.39	0.52
1:AA:36:C:O2'	1:AA:501:C:H5''	2.10	0.52
1:AA:163:C:O2'	1:AA:164:U:H5'	2.10	0.52
1:AA:170:U:C2'	1:AA:171:A:H5'	2.39	0.52
1:AA:376:G:C5'	18:AP:5:ARG:HD2	2.36	0.52
1:AA:406:G:H1'	1:AA:496:A:N6	2.25	0.52
1:AA:684:A:C4'	13:AK:38:ASN:ND2	2.73	0.52
1:AA:794:A:H2'	1:AA:795:C:C6	2.45	0.52
1:AA:853:G:O2'	1:AA:854:G:H5'	2.10	0.52
1:AA:1152:A:H2'	1:AA:1153:C:C6	2.45	0.52
1:AA:1251:A:H4'	11:AI:12:GLU:OE2	2.10	0.52
1:AA:1296:C:H5''	15:AM:14:ARG:HD2	1.91	0.52
1:AA:1428:A:C4'	23:B0:1704:G:H5'	2.40	0.52
1:AA:1458:G:O3'	22:AT:24:LEU:HD21	2.10	0.52
1:AA:1518:A:H2'	1:AA:1519:A:C8	2.45	0.52
7:AE:13:ILE:HG22	7:AE:30:ALA:CB	2.40	0.52
10:AH:49:GLU:HG2	10:AH:62:TYR:HE2	1.75	0.52
12:AJ:38:ILE:HG13	12:AJ:71:LEU:HB3	1.90	0.52
16:AN:57:ARG:HG2	16:AN:58:LYS:H	1.75	0.52
19:AQ:45:HIS:CB	19:AQ:65:ILE:HD13	2.39	0.52
23:B0:81:C:H4'	23:B0:307:C:H5'	1.92	0.52
23:B0:758:G:H2'	23:B0:759:C:H5'	1.92	0.52
23:B0:959:C:H5''	23:B0:972:C:O2'	2.10	0.52
23:B0:986:A:H2'	23:B0:987:G:H5'	1.92	0.52
23:B0:1029:C:C3'	23:B0:1030:U:H5''	2.40	0.52
23:B0:1140:A:H61	23:B0:2470:U:H6	1.58	0.52
23:B0:3093:C:C2	23:B0:2204:A:N6	2.78	0.52
23:B0:2245:A:H4'	23:B0:2246:A:O5'	2.10	0.52
24:B9:73:C:H3'	24:B9:74:A:P	2.48	0.52
1:AA:33:A:OP2	1:AA:398:C:C5'	2.57	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:277:C:OP1	19:AQ:41:LYS:HE3	2.10	0.51
1:AA:472:G:O2'	1:AA:473:C:H5'	2.10	0.51
1:AA:1129:C:O2'	1:AA:1130:A:OP2	2.24	0.51
1:AA:1241:G:H2'	1:AA:1242:C:H6	1.75	0.51
2:AV:41:U:H6	2:AV:41:U:C5'	2.13	0.51
2:AV:75:C:O2'	23:B0:2047:C:P	2.68	0.51
2:AV:76:A:OP1	23:B0:2564:U:O4'	2.28	0.51
5:AC:70:VAL:O	5:AC:106:VAL:HG23	2.09	0.51
7:AE:20:GLN:C	7:AE:21:ALA:O	2.50	0.51
7:AE:40:ARG:HG2	7:AE:40:ARG:HH11	1.76	0.51
8:AF:10:LEU:HD11	8:AF:59:TYR:CD2	2.41	0.51
12:AJ:22:LYS:NZ	12:AJ:91:PRO:HD3	2.25	0.51
23:B0:77:C:H2'	23:B0:78:C:C6	2.45	0.51
23:B0:441:A:H2'	23:B0:442:A:O4'	2.10	0.51
23:B0:451:A:H2'	23:B0:452:G:C8	2.45	0.51
23:B0:840:U:H4'	23:B0:841:G:C2	2.45	0.51
23:B0:1038:U:O2	23:B0:2466:G:H4'	2.10	0.51
23:B0:1431:U:H2'	23:B0:1432:G:O4'	2.09	0.51
1:AA:588:G:N9	1:AA:753:A:N1	2.58	0.51
1:AA:791:G:H2'	1:AA:792:A:C5'	2.40	0.51
1:AA:928:G:HO2'	1:AA:1533:C:H5	1.56	0.51
1:AA:1085:U:O3'	1:AA:1086:U:C6	2.64	0.51
1:AA:1191:A:H2'	1:AA:1192:C:C6	2.45	0.51
1:AA:1261:A:H4'	1:AA:1283:G:C5'	2.40	0.51
1:AA:1457:A:C4	1:AA:1459:C:C2	2.89	0.51
1:AA:1458:G:H8	1:AA:1458:G:O5'	1.91	0.51
5:AC:84:ILE:O	5:AC:84:ILE:HG12	2.10	0.51
5:AC:177:THR:HG23	5:AC:177:THR:O	2.10	0.51
6:AD:65:ARG:HB2	6:AD:75:PHE:CE1	2.45	0.51
11:AI:31:GLN:HB3	11:AI:35:GLU:HB3	1.92	0.51
13:AK:27:ASN:HA	13:AK:56:GLY:HA2	1.92	0.51
13:AK:62:GLN:HG3	13:AK:97:ALA:HB2	1.92	0.51
23:B0:230:C:H2'	23:B0:231:G:O4'	2.10	0.51
23:B0:513:A:C4'	23:B0:515:A:H5'	2.40	0.51
23:B0:652:C:H42	23:B0:657:A:H61	1.56	0.51
23:B0:864:C:H2'	23:B0:865:A:C8	2.46	0.51
23:B0:925:U:H4'	23:B0:926:C:C6	2.45	0.51
23:B0:1029:C:OP1	23:B0:1047:G:H4'	2.10	0.51
23:B0:1031:C:H1'	23:B0:1151:U:O2	2.09	0.51
23:B0:2038:C:H5'	23:B0:2039:G:H5'	1.91	0.51
1:AA:37:U:C1'	1:AA:547:A:C2	2.94	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:148:G:H2'	1:AA:149:A:C8	2.45	0.51
1:AA:246:A:N6	1:AA:281:G:H1'	2.24	0.51
1:AA:375:U:O3'	1:AA:376:G:O5'	2.28	0.51
1:AA:580:U:H2'	1:AA:581:G:O4'	2.11	0.51
1:AA:846:C:O2'	1:AA:847:C:H5'	2.10	0.51
1:AA:911:U:P	14:AL:97:ARG:HH21	2.33	0.51
1:AA:1021:G:C2	1:AA:1022:G:H1'	2.45	0.51
1:AA:1423:G:O2'	1:AA:1424:C:H5'	2.09	0.51
1:AA:1473:A:C2'	23:B0:1718:A:C2	2.93	0.51
6:AD:87:GLY:O	6:AD:88:VAL:C	2.53	0.51
7:AE:115:VAL:HG12	7:AE:116:THR:N	2.24	0.51
19:AQ:102:GLY:O	23:B0:726:G:C2	2.63	0.51
23:B0:215:G:H4'	23:B0:617:U:O2'	2.09	0.51
23:B0:341:A:H1'	23:B0:1223:G:O6	2.10	0.51
23:B0:1220:G:H2'	23:B0:1221:C:C6	2.45	0.51
23:B0:1807:A:H5'	23:B0:1809:G:C1'	2.40	0.51
23:B0:2217:G:H4'	23:B0:2219:U:C5	2.46	0.51
23:B0:2841:U:O2	23:B0:2843:A:H1'	2.11	0.51
1:AA:80:C:H2'	1:AA:81:C:H6	1.76	0.51
1:AA:572:A:H4'	1:AA:917:G:H5'	1.92	0.51
1:AA:605:U:O2'	1:AA:606:G:H5'	2.10	0.51
1:AA:707:C:H4'	13:AK:20:TYR:CD2	2.45	0.51
1:AA:828:A:H2'	1:AA:829:G:O4'	2.10	0.51
1:AA:943:U:O4'	11:AI:124:GLN:NE2	2.43	0.51
1:AA:974:A:OP2	16:AN:29:ARG:NH2	2.42	0.51
1:AA:999:C:H2'	1:AA:1000:U:C6	2.46	0.51
1:AA:1305:G:C8	1:AA:1305:G:OP2	2.64	0.51
2:AV:40:C:H2'	2:AV:41:U:C5'	2.40	0.51
4:AB:23:ARG:HH11	4:AB:23:ARG:C	2.16	0.51
5:AC:47:LEU:CD1	5:AC:47:LEU:N	2.74	0.51
11:AI:125:TYR:CD2	11:AI:125:TYR:N	2.78	0.51
12:AJ:39:PRO:O	12:AJ:40:LEU:CB	2.57	0.51
18:AP:42:ARG:O	18:AP:43:LYS:C	2.51	0.51
21:AS:50:ALA:HA	21:AS:58:VAL:O	2.10	0.51
23:B0:1712:G:H2'	23:B0:1713:G:H5'	1.91	0.51
23:B0:1818:G:H2'	23:B0:1819:U:C6	2.45	0.51
23:B0:2205:C:H2'	23:B0:2206:C:C6	2.46	0.51
1:AA:112:G:OP1	18:AP:27:LYS:HE3	2.11	0.51
1:AA:129:U:H5'	19:AQ:3:LYS:HE3	1.92	0.51
1:AA:261:U:H3'	22:AT:79:ARG:NH1	2.24	0.51
1:AA:322:C:C2'	22:AT:23:ARG:HB2	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:599:C:H4'	10:AH:131:GLY:N	2.22	0.51
1:AA:1113:C:C2	5:AC:178:LEU:CD2	2.94	0.51
1:AA:1167:A:H2'	1:AA:1168:A:C8	2.45	0.51
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.11	0.51
4:AB:166:ASP:OD2	4:AB:169:LYS:HB2	2.09	0.51
5:AC:97:LYS:O	5:AC:98:ASN:HB3	2.10	0.51
5:AC:154:SER:O	5:AC:165:THR:HA	2.09	0.51
8:AF:69:GLU:OE1	8:AF:69:GLU:N	2.44	0.51
11:AI:44:VAL:CG1	11:AI:51:ARG:HH12	2.23	0.51
12:AJ:23:ILE:HD12	12:AJ:23:ILE:N	2.26	0.51
15:AM:49:THR:CG2	15:AM:51:ALA:H	2.13	0.51
19:AQ:96:GLN:CD	19:AQ:96:GLN:O	2.54	0.51
19:AQ:105:ALA:C	23:B0:727:U:O3'	2.48	0.51
22:AT:39:LYS:HD2	22:AT:55:ILE:CD1	2.27	0.51
23:B0:192:G:H4'	23:B0:193:A:H4'	1.91	0.51
23:B0:1597:A:H2'	23:B0:1598:C:C6	2.46	0.51
23:B0:1625:A:H2'	23:B0:1625:A:N3	2.25	0.51
23:B0:1955:G:C2'	23:B0:1956:G:H5'	2.38	0.51
23:B0:2320:G:H2'	23:B0:2321:C:O4'	2.09	0.51
1:AA:588:G:C8	1:AA:753:A:C4	2.98	0.51
1:AA:760:G:H1	19:AQ:105:ALA:HB2	1.76	0.51
1:AA:1097:C:H2'	1:AA:1098:C:C6	2.45	0.51
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.46	0.51
1:AA:1329:A:O2'	1:AA:1330:U:H5'	2.11	0.51
2:AV:75:C:P	23:B0:2581:A:H5'	2.36	0.51
4:AB:121:LEU:O	4:AB:127:ILE:HG12	2.11	0.51
4:AB:126:GLU:O	4:AB:129:GLU:HB2	2.11	0.51
5:AC:34:LEU:HD23	5:AC:34:LEU:O	2.10	0.51
5:AC:167:TRP:O	5:AC:168:ALA:HB3	2.11	0.51
6:AD:8:VAL:HG13	6:AD:21:LEU:HD13	1.92	0.51
7:AE:15:ARG:O	7:AE:16:THR:O	2.28	0.51
7:AE:79:GLU:CD	10:AH:105:ARG:HE	2.18	0.51
12:AJ:51:ARG:HB2	12:AJ:59:SER:CB	2.23	0.51
22:AT:41:VAL:O	22:AT:45:GLN:HB2	2.10	0.51
22:AT:43:LEU:CD1	22:AT:55:ILE:HD12	2.40	0.51
23:B0:484:G:O2'	23:B0:485:G:H5'	2.11	0.51
23:B0:630:G:H2'	23:B0:631:G:H5'	1.92	0.51
23:B0:1210:C:H2'	23:B0:1211:G:O4'	2.09	0.51
23:B0:1251:G:H2'	23:B0:1252:C:C6	2.46	0.51
23:B0:1373:G:H1	23:B0:2192:U:H3	1.58	0.51
23:B0:2245:A:O2'	23:B0:2246:A:OP2	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:38:G:H1'	1:AA:547:A:N9	2.25	0.51
1:AA:160:A:N6	1:AA:347:G:N2	2.55	0.51
1:AA:650:G:C2'	1:AA:651:C:H5'	2.40	0.51
1:AA:707:C:H5''	13:AK:85:ARG:CZ	2.36	0.51
1:AA:893:C:HO2'	1:AA:894:G:H5'	1.72	0.51
1:AA:944:G:O6	1:AA:1337:G:H8	1.94	0.51
1:AA:2003:G:N1	1:AA:1004:A:H1'	2.25	0.51
1:AA:1014:A:H5'	21:AS:33:THR:HG23	1.93	0.51
1:AA:1021:G:C2'	1:AA:1022:G:H5'	2.40	0.51
1:AA:1044:A:C2'	1:AA:1045:C:O2'	2.51	0.51
1:AA:1059:C:O2'	1:AA:1060:C:H5'	2.11	0.51
1:AA:1404:C:O2	1:AA:1519:A:O2'	2.29	0.51
1:AA:1430:C:H4'	23:B0:1721:G:H5''	1.93	0.51
4:AB:33:TYR:HB3	4:AB:41:ILE:HG22	1.93	0.51
4:AB:186:ALA:HB3	4:AB:197:VAL:CG1	2.41	0.51
5:AC:79:ARG:HG2	5:AC:82:GLU:HG2	1.92	0.51
5:AC:134:ILE:HG21	5:AC:167:TRP:O	2.10	0.51
5:AC:188:LEU:CD1	5:AC:195:VAL:HG13	2.41	0.51
7:AE:12:LEU:CD1	7:AE:31:LEU:HB2	2.39	0.51
16:AN:22:THR:OG1	16:AN:33:VAL:HG21	2.11	0.51
23:B0:66:U:H2'	23:B0:67:G:C8	2.46	0.51
23:B0:604:U:H2'	23:B0:605:G:C8	2.46	0.51
23:B0:2404:A:H5''	23:B0:2405:A:H3'	1.93	0.51
1:AA:113:G:H1'	1:AA:354:G:H5''	1.91	0.51
1:AA:131:C:C4'	1:AA:263:A:O4'	2.58	0.51
1:AA:675:A:HO2'	13:AK:116:HIS:CD2	2.27	0.51
1:AA:692:U:H5	13:AK:26:ASN:OD1	1.93	0.51
1:AA:922:G:C6	1:AA:1396:A:N1	2.73	0.51
1:AA:1057:G:H5''	5:AC:154:SER:CB	2.34	0.51
1:AA:1067:A:C2'	1:AA:1068:G:OP2	2.58	0.51
1:AA:1110:A:C2'	1:AA:1111:A:C5'	2.89	0.51
1:AA:1248:A:O2'	11:AI:70:LYS:NZ	2.44	0.51
1:AA:1314:C:C5	21:AS:6:LYS:HD3	2.45	0.51
2:AW:76:A:N3	23:B0:2486:C:O2	2.43	0.51
7:AE:121:LYS:HE3	7:AE:123:LEU:HD21	1.93	0.51
15:AM:93:ARG:NH1	23:B0:900:U:H5''	2.22	0.51
23:B0:333:A:H1'	23:B0:351:A:C4	2.45	0.51
23:B0:795:A:H4'	23:B0:796:A:C8	2.46	0.51
23:B0:832:A:H2'	23:B0:833:A:O4'	2.11	0.51
23:B0:841:G:H4'	23:B0:844:G:N1	2.26	0.51
23:B0:1087:C:H2'	23:B0:1088:A:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1492:A:H2	23:B0:1531:C:H41	1.59	0.51
23:B0:1712:G:C2'	23:B0:1713:G:H5'	2.40	0.51
23:B0:2038:C:H5'	23:B0:2039:G:C5'	2.41	0.51
1:AA:130:A:N1	1:AA:264:U:C2	2.78	0.51
1:AA:203:A:O2'	1:AA:206:C:H4'	2.10	0.51
1:AA:497:A:O3'	1:AA:498:U:P	2.69	0.51
1:AA:619:U:C2	6:AD:135:LEU:HD11	2.29	0.51
1:AA:848:G:O3'	1:AA:849:C:O4'	2.29	0.51
1:AA:1094:G:H5''	1:AA:1095:U:H5	1.75	0.51
2:AV:69:U:H2'	2:AV:70:C:C6	2.46	0.51
4:AB:53:ARG:NH1	4:AB:53:ARG:HG2	2.26	0.51
4:AB:96:ARG:O	4:AB:98:LEU:HD23	2.11	0.51
6:AD:170:VAL:CG1	6:AD:174:LEU:HB2	2.39	0.51
7:AE:89:ILE:HD13	7:AE:90:VAL:H	1.75	0.51
9:AG:18:TYR:HD2	9:AG:59:LEU:HD22	1.76	0.51
9:AG:102:ARG:O	9:AG:106:GLN:HG3	2.10	0.51
11:AI:10:ARG:HG2	11:AI:75:ASP:CB	2.41	0.51
14:AL:45:PRO:HD3	14:AL:51:ALA:O	2.11	0.51
16:AN:28:GLY:O	16:AN:30:ALA:N	2.43	0.51
23:B0:18:U:H2'	23:B0:19:C:C6	2.46	0.51
23:B0:80:A:H2'	23:B0:81:C:O4'	2.11	0.51
23:B0:579:G:H2'	23:B0:2013:A:H62	1.75	0.51
23:B0:804:C:O2	23:B0:807:A:H5'	2.11	0.51
23:B0:1181:C:H2'	23:B0:1182:U:C5'	2.38	0.51
23:B0:1532:A:H2'	23:B0:1533:G:C8	2.46	0.51
23:B0:1611:U:H2'	23:B0:1612:U:O4'	2.11	0.51
24:B9:111:C:H5''	24:B9:112:A:H5''	1.93	0.51
1:AA:814:A:N7	1:AA:816:A:C6	2.79	0.51
1:AA:1298:C:O5'	9:AG:114:ARG:NH2	2.44	0.51
4:AB:69:LEU:C	4:AB:69:LEU:HD23	2.36	0.51
5:AC:38:ARG:HG3	5:AC:38:ARG:NH1	2.26	0.51
5:AC:139:GLN:HA	5:AC:139:GLN:NE2	2.25	0.51
6:AD:29:PRO:C	6:AD:30:LYS:HG3	2.35	0.51
6:AD:158:ILE:HG22	6:AD:181:MET:HE2	1.92	0.51
10:AH:38:ILE:HD12	10:AH:38:ILE:N	2.27	0.51
13:AK:65:ALA:HB3	13:AK:97:ALA:HB3	1.93	0.51
17:AO:3:ILE:CG2	17:AO:7:GLU:HB3	2.41	0.51
20:AR:87:ARG:HG2	20:AR:87:ARG:HH11	1.76	0.51
23:B0:394:U:H2'	23:B0:395:G:C8	2.45	0.51
23:B0:460:U:H3	23:B0:592:G:H1'	1.75	0.51
23:B0:942:U:H2'	23:B0:943:U:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:2011:U:H2'	23:B0:2012:A:C8	2.46	0.51
23:B0:2565:C:O2'	23:B0:2566:A:H5'	2.11	0.51
23:B0:2795:A:H2'	23:B0:2795:A:N3	2.24	0.51
1:AA:130:A:N3	1:AA:263:A:N3	2.59	0.50
1:AA:130:A:C4	1:AA:264:U:C6	2.99	0.50
1:AA:1021:G:H2'	1:AA:1022:G:O4'	2.11	0.50
4:AB:19:HIS:NE2	4:AB:206:ASP:HB3	2.26	0.50
5:AC:92:ALA:C	5:AC:94:LEU:H	2.17	0.50
11:AI:27:THR:HG23	11:AI:30:GLY:O	2.11	0.50
11:AI:46:ALA:HA	11:AI:78:LYS:HB2	1.93	0.50
12:AJ:20:ALA:O	12:AJ:24:VAL:HG23	2.11	0.50
13:AK:48:ILE:HD13	13:AK:63:LEU:HB3	1.93	0.50
19:AQ:104:LYS:CE	23:B0:729:A:N6	2.73	0.50
23:B0:635:C:C3'	23:B0:636:G:H5''	2.41	0.50
23:B0:1040:A:H2'	23:B0:1041:G:H5'	1.93	0.50
23:B0:1495:G:H2'	23:B0:1496:G:C8	2.47	0.50
23:B0:1586:A:H2'	23:B0:1587:A:C8	2.46	0.50
23:B0:1779:C:H2'	23:B0:1780:A:O4'	2.10	0.50
23:B0:2058:U:H5'	23:B0:2576:G:H1'	1.93	0.50
23:B0:2213:G:H2'	23:B0:2214:G:C8	2.46	0.50
23:B0:2321:C:O2'	23:B0:2353:G:H5''	2.11	0.50
23:B0:2769:C:O2'	23:B0:2770:A:H5'	2.11	0.50
1:AA:218:C:H2'	1:AA:219:C:H6	1.76	0.50
1:AA:470:U:H2'	1:AA:471:G:H8	1.77	0.50
1:AA:659:U:O2'	1:AA:660:G:H5'	2.11	0.50
1:AA:685:G:H5'	13:AK:39:PRO:O	2.11	0.50
1:AA:779:C:C2'	13:AK:120:ARG:HD3	2.34	0.50
1:AA:992:U:HO2'	1:AA:993:G:P	2.33	0.50
1:AA:1075:C:OP1	4:AB:179:LYS:HD2	2.10	0.50
1:AA:1416:G:N9	1:AA:1417:G:O4'	2.44	0.50
1:AA:1458:G:O3'	22:AT:24:LEU:CD2	2.58	0.50
4:AB:221:LEU:HD13	4:AB:221:LEU:O	2.11	0.50
5:AC:61:ALA:O	5:AC:63:ASN:N	2.44	0.50
6:AD:61:LYS:HZ1	6:AD:62:GLN:NE2	2.09	0.50
15:AM:93:ARG:HA	23:B0:900(A):A:H8	1.76	0.50
19:AQ:97:SER:O	19:AQ:98:LEU:C	2.54	0.50
23:B0:1661:C:O2'	23:B0:1662:G:H5'	2.11	0.50
23:B0:2272:A:H2'	23:B0:2273:C:C6	2.46	0.50
1:AA:215:C:O2'	1:AA:216:C:H5'	2.12	0.50
1:AA:255:G:O6	1:AA:266:G:O6	2.29	0.50
1:AA:443:C:H2'	1:AA:444:C:C6	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:824:C:H2'	1:AA:825:G:H8	1.76	0.50
1:AA:1102:A:H2'	1:AA:1103:C:C6	2.46	0.50
1:AA:1416:G:C4	1:AA:1417:G:C1'	2.94	0.50
4:AB:206:ASP:O	4:AB:207:ALA:HB3	2.11	0.50
5:AC:58:GLU:O	5:AC:59:ARG:HG2	2.11	0.50
5:AC:137:ALA:HA	5:AC:140:ARG:NH1	2.26	0.50
5:AC:139:GLN:CA	5:AC:139:GLN:HE21	2.23	0.50
6:AD:24:GLU:O	6:AD:25:ARG:HB3	2.10	0.50
6:AD:126:ILE:CG2	6:AD:127:THR:N	2.75	0.50
8:AF:26:ILE:HG21	8:AF:63:TYR:CE2	2.40	0.50
11:AI:17:VAL:CG2	11:AI:80:GLY:HA3	2.41	0.50
14:AL:46:LYS:HG2	14:AL:47:LYS:HG3	1.93	0.50
15:AM:102:ARG:HB2	15:AM:102:ARG:HH11	1.75	0.50
19:AQ:15:MET:HE1	19:AQ:43:LEU:HD22	1.92	0.50
23:B0:95:G:H2'	23:B0:96:C:C6	2.46	0.50
23:B0:429:C:H2'	23:B0:430:C:O4'	2.11	0.50
23:B0:689:A:H61	23:B0:815:A:H61	1.59	0.50
23:B0:798:G:H2'	23:B0:799:C:H5'	1.93	0.50
23:B0:3874:C:H2'	23:B0:3875:A:H5'	1.91	0.50
23:B0:2235:G:H2'	23:B0:2236:U:C6	2.46	0.50
1:AA:222:U:H2'	1:AA:223:U:C6	2.47	0.50
1:AA:375:U:O2'	18:AP:28:ARG:CD	2.59	0.50
1:AA:406:G:C2	1:AA:437:U:N3	2.80	0.50
1:AA:992:U:H2'	1:AA:1043:C:H5	1.77	0.50
1:AA:1194:U:O2'	1:AA:1195:C:H5'	2.12	0.50
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.47	0.50
1:AA:1306:A:H2'	1:AA:1307:U:O4'	2.12	0.50
1:AA:1337:G:H5''	1:AA:1338:G:P	2.51	0.50
1:AA:1440:C:C2'	1:AA:1441:G:H5'	2.41	0.50
4:AB:53:ARG:HG2	4:AB:53:ARG:HH11	1.75	0.50
5:AC:23:TYR:CE2	12:AJ:9:ARG:HD3	2.47	0.50
11:AI:112:LYS:C	11:AI:112:LYS:HD3	2.37	0.50
11:AI:120:ARG:O	11:AI:121:ARG:C	2.55	0.50
13:AK:32:ILE:CG2	13:AK:77:MET:HE2	2.42	0.50
15:AM:81:LEU:HD12	15:AM:88:ARG:HD3	1.93	0.50
18:AP:20:VAL:CG1	18:AP:32:TYR:HB3	2.40	0.50
18:AP:51:VAL:O	18:AP:51:VAL:CG1	2.60	0.50
19:AQ:78:GLU:HG3	19:AQ:78:GLU:O	2.12	0.50
23:B0:775:U:O2	23:B0:1445:A:H5''	2.11	0.50
24:B9:113:G:H2'	24:B9:114:C:C6	2.47	0.50
1:AA:37:U:C2'	1:AA:547:A:C6	2.88	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:39:G:C2	1:AA:404:U:C2	3.00	0.50
1:AA:113:G:C1'	1:AA:354:G:H5''	2.41	0.50
1:AA:130:A:C1'	1:AA:264:U:O4'	2.59	0.50
1:AA:149:A:O2'	1:AA:150:C:H5'	2.11	0.50
1:AA:556:C:H2'	1:AA:557:G:H8	1.77	0.50
1:AA:779:C:C3'	13:AK:120:ARG:HD3	2.42	0.50
1:AA:1343:G:C3'	11:AI:122:ALA:HB3	2.40	0.50
1:AA:1447:A:N7	1:AA:1456:A:H2	2.09	0.50
2:AV:11:C:C5'	23:B0:1892:C:C4'	2.88	0.50
12:AJ:71:LEU:O	12:AJ:72:VAL:CB	2.60	0.50
13:AK:82:VAL:HG23	13:AK:105:VAL:HG13	1.93	0.50
23:B0:127:C:H2'	23:B0:128:C:C6	2.47	0.50
23:B0:868:U:H2'	23:B0:869:C:C6	2.46	0.50
23:B0:897:A:C6	23:B0:898:C:N4	2.79	0.50
23:B0:1272:G:H2'	23:B0:1273:G:C8	2.46	0.50
23:B0:1727:C:H4'	23:B0:2833:C:O2	2.12	0.50
23:B0:1865:C:H2'	23:B0:1866:G:O4'	2.12	0.50
24:B9:107:C:O3'	24:B9:108:G:OP1	2.29	0.50
1:AA:7:G:O2'	7:AE:120:THR:O	2.12	0.50
1:AA:185:A:H2'	1:AA:186:C:C5	2.47	0.50
1:AA:205:G:N2	1:AA:207:C:N4	2.60	0.50
1:AA:279:A:H5''	1:AA:280:C:H3'	1.94	0.50
1:AA:499:A:C2'	1:AA:500:G:O4'	2.60	0.50
1:AA:527:G:O2'	1:AA:535:A:N1	2.32	0.50
1:AA:556:C:C4	1:AA:557:G:N7	2.79	0.50
1:AA:653:A:O5'	10:AH:56:LYS:NZ	2.44	0.50
1:AA:1025:U:OP1	1:AA:1025:U:H4'	2.11	0.50
1:AA:1035:A:H2'	1:AA:1036:G:H8	1.76	0.50
1:AA:1292:U:P	9:AG:41:ARG:HH22	2.24	0.50
1:AA:1367:C:OP1	11:AI:115:GLY:N	2.33	0.50
1:AA:1458:G:HO3'	22:AT:24:LEU:HD11	0.67	0.50
2:AV:30:G:O2'	2:AV:31:A:H5'	2.12	0.50
5:AC:23:TYR:HA	12:AJ:11:PHE:CD1	2.47	0.50
6:AD:61:LYS:HZ2	6:AD:62:GLN:HE21	1.59	0.50
10:AH:113:SER:HB2	10:AH:134:ILE:CD1	2.29	0.50
13:AK:23:ALA:CB	13:AK:91:ARG:HB2	2.42	0.50
23:B0:68:C:H2'	23:B0:69:G:H8	1.76	0.50
23:B0:168:A:H2'	23:B0:169:C:C6	2.47	0.50
23:B0:612:G:O3'	23:B0:613:A:H4'	2.11	0.50
23:B0:791:G:H2'	23:B0:792:U:C6	2.47	0.50
23:B0:897:A:O3'	23:B0:898:C:P	2.70	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1886:G:H2'	23:B0:1887:G:C8	2.46	0.50
1:AA:393:A:OP2	18:AP:12:LYS:CE	2.59	0.50
1:AA:619:U:N1	6:AD:135:LEU:HD11	2.25	0.50
1:AA:1014:A:H5''	21:AS:14:HIS:ND1	2.15	0.50
1:AA:1262:C:H42	1:AA:1273:G:H1	1.59	0.50
1:AA:1270:C:O3'	1:AA:1314:C:C4'	2.58	0.50
1:AA:1305:G:O2'	1:AA:1306:A:O4'	2.30	0.50
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.74	0.50
1:AA:1483:A:C2'	1:AA:1484:C:P	2.99	0.50
7:AE:144:THR:C	7:AE:146:ALA:N	2.67	0.50
8:AF:19:LEU:HD23	8:AF:19:LEU:C	2.36	0.50
11:AI:19:LEU:C	11:AI:20:ARG:HG3	2.37	0.50
11:AI:50:LEU:C	11:AI:52:ALA:N	2.69	0.50
14:AL:46:LYS:O	14:AL:47:LYS:C	2.54	0.50
23:B0:177:U:H2'	23:B0:178:C:C6	2.46	0.50
23:B0:1326:U:O2	23:B0:1326:U:H2'	2.10	0.50
1:AA:46:G:H2'	1:AA:365:U:O2'	2.12	0.50
1:AA:220:G:O2'	1:AA:221:C:H5'	2.12	0.50
1:AA:323:U:C1'	22:AT:19:SER:CB	2.90	0.50
1:AA:393:A:C2	1:AA:394:G:C8	3.00	0.50
1:AA:478:A:O2'	1:AA:479:C:H5'	2.11	0.50
1:AA:625:G:H2'	1:AA:626:U:C6	2.47	0.50
1:AA:1151:A:H5''	12:AJ:41:PRO:HA	1.93	0.50
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.47	0.50
4:AB:88:ALA:O	4:AB:90:MET:N	2.45	0.50
5:AC:171:GLY:O	5:AC:173:VAL:HG23	2.12	0.50
6:AD:8:VAL:HG11	6:AD:21:LEU:HB3	1.94	0.50
6:AD:78:LEU:HD22	6:AD:96:LEU:HB3	1.94	0.50
7:AE:92:LYS:HB3	7:AE:119:LEU:HB2	1.94	0.50
11:AI:9:ARG:HG2	11:AI:14:VAL:HG22	1.92	0.50
15:AM:40:ASN:ND2	15:AM:41:PRO:CD	2.62	0.50
16:AN:29:ARG:O	16:AN:33:VAL:HG13	2.11	0.50
22:AT:101:GLY:O	22:AT:102:GLY:O	2.30	0.50
23:B0:847:C:N4	23:B0:955:G:H21	2.03	0.50
23:B0:899:G:O2'	23:B0:900:U:H5'	2.12	0.50
23:B0:1052:C:H2'	23:B0:1053:G:C8	2.46	0.50
23:B0:1571:G:H2'	23:B0:1572:C:C6	2.46	0.50
23:B0:2383:C:H2'	23:B0:2384:G:O4'	2.11	0.50
1:AA:325:A:H2'	1:AA:326:G:O4'	2.12	0.50
1:AA:438:G:H5'	6:AD:123:HIS:CD2	2.46	0.50
1:AA:686:U:H1'	13:AK:42:TRP:HE1	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:893:C:C2'	1:AA:894:G:H8	2.23	0.50
1:AA:1107:C:OP1	5:AC:173:VAL:N	2.37	0.50
1:AA:1136:U:H5''	1:AA:1137:C:OP2	2.12	0.50
1:AA:1416:G:H2'	1:AA:1417:G:O4'	2.12	0.50
7:AE:21:ALA:C	7:AE:23:GLY:H	2.19	0.50
9:AG:69:VAL:HG12	9:AG:69:VAL:O	2.12	0.50
14:AL:115:LYS:O	14:AL:117:ARG:N	2.37	0.50
19:AQ:27:PHE:HB2	19:AQ:28:PRO:HD2	1.94	0.50
23:B0:165:G:H2'	23:B0:166:G:O4'	2.12	0.50
23:B0:192:G:H4'	23:B0:193:A:O5'	2.12	0.50
23:B0:212:U:H2'	23:B0:213:C:C6	2.47	0.50
23:B0:638:A:O2'	23:B0:639:G:H5'	2.12	0.50
23:B0:1747:G:H1'	23:B0:1749:G:N3	2.26	0.50
23:B0:2301:A:H2'	23:B0:2302:G:O4'	2.11	0.50
23:B0:2357:A:H2'	23:B0:2358:C:O4'	2.12	0.50
23:B0:2426:G:O6	23:B0:2479:U:H2'	2.11	0.50
1:AA:264:U:HO2'	19:AQ:64:PRO:C	2.00	0.49
1:AA:277:C:OP2	19:AQ:41:LYS:NZ	2.42	0.49
1:AA:1016:A:H1'	1:AA:1218:C:O2'	2.12	0.49
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.77	0.49
1:AA:1106:G:OP1	5:AC:172:ARG:CD	2.60	0.49
1:AA:1308:U:C5	15:AM:99:ARG:CZ	2.95	0.49
2:AW:64:A:C4'	23:B0:2461:G:O2'	2.60	0.49
5:AC:23:TYR:HE1	12:AJ:67:THR:CG2	2.23	0.49
6:AD:31:CYS:C	6:AD:33:MET:H	2.20	0.49
6:AD:81:GLU:O	6:AD:85:LYS:HG3	2.11	0.49
8:AF:9:VAL:HG22	8:AF:60:PHE:CE2	2.47	0.49
12:AJ:3:LYS:HA	12:AJ:75:ILE:HA	1.94	0.49
12:AJ:51:ARG:HG2	16:AN:45:ARG:NH1	2.27	0.49
13:AK:51:LYS:O	13:AK:55:LYS:HE3	2.11	0.49
13:AK:79:SER:OG	13:AK:106:LYS:HG2	2.12	0.49
21:AS:81:ARG:HG2	21:AS:81:ARG:O	2.11	0.49
23:B0:521:U:H2'	23:B0:522:G:H5'	1.93	0.49
23:B0:618:A:H2'	23:B0:619:A:O4'	2.11	0.49
23:B0:775:U:H4'	23:B0:776:G:C8	2.46	0.49
23:B0:1323:G:H2'	23:B0:1324:G:H4'	1.94	0.49
23:B0:1386:A:H2'	23:B0:1387:G:O4'	2.12	0.49
23:B0:1391:A:H2'	23:B0:1392:U:C6	2.47	0.49
23:B0:2310:G:H2'	23:B0:2311:U:O4'	2.12	0.49
23:B0:2324:G:C4'	23:B0:2326:C:H5''	2.42	0.49
23:B0:2658:A:H2'	23:B0:2659:C:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:160:A:H61	1:AA:347:G:H21	1.58	0.49
1:AA:255:G:C4'	19:AQ:16:GLN:HB3	2.42	0.49
1:AA:819:A:C5	1:AA:1529:G:N1	2.80	0.49
1:AA:1172:C:O2'	1:AA:1173:G:H5'	2.11	0.49
1:AA:1230:C:O2'	1:AA:1231:G:H5'	2.12	0.49
1:AA:1283:G:O2'	1:AA:1284:C:H5'	2.11	0.49
8:AF:48:LEU:HD13	8:AF:52:ILE:HG13	1.95	0.49
11:AI:36:TYR:HD2	11:AI:37:PHE:CE2	2.30	0.49
12:AJ:38:ILE:HG13	12:AJ:71:LEU:CB	2.42	0.49
16:AN:21:TYR:HE2	16:AN:23:ARG:NE	2.09	0.49
19:AQ:10:VAL:O	19:AQ:53:LEU:HD12	2.12	0.49
23:B0:597:U:H2'	23:B0:598:U:C6	2.47	0.49
23:B0:693:A:H2'	23:B0:694:G:C8	2.46	0.49
23:B0:971:A:H2	23:B0:2475:C:H1'	1.77	0.49
23:B0:1111:C:C4	23:B0:1112:U:C5	3.00	0.49
23:B0:1286:U:H5''	23:B0:1663:C:N4	2.27	0.49
23:B0:1683:G:C2'	23:B0:1684:G:H5'	2.43	0.49
23:B0:1949:A:H1'	23:B0:2572:U:C4'	2.42	0.49
23:B0:2313:G:H2'	23:B0:2314:A:H5'	1.94	0.49
23:B0:2435:C:H2'	23:B0:2436:U:C6	2.47	0.49
23:B0:2459:C:H2'	23:B0:2460:G:H5'	1.94	0.49
23:B0:2858:A:H3'	23:B0:2859:U:C5'	2.42	0.49
1:AA:61:G:H2'	1:AA:62:U:O4'	2.12	0.49
1:AA:212:G:O2'	1:AA:213:G:O5'	2.30	0.49
1:AA:491:G:H2'	1:AA:492:G:H8	1.78	0.49
1:AA:538:G:C8	14:AL:115:LYS:HE3	2.47	0.49
1:AA:675:A:O2'	13:AK:116:HIS:CD2	2.65	0.49
1:AA:836:G:P	20:AR:61:LYS:CD	2.65	0.49
1:AA:893:C:C4	1:AA:894:G:C6	2.99	0.49
1:AA:929:G:C5'	1:AA:1533:C:H41	2.25	0.49
1:AA:1458:G:C1'	1:AA:1459:C:H2'	2.41	0.49
1:AA:1503:A:N3	1:AA:1531:A:H2	2.09	0.49
2:AV:23:A:O2'	2:AV:24:G:H5'	2.12	0.49
2:AV:75:C:N4	23:B0:2231:G:N1	2.60	0.49
4:AB:132:LYS:O	4:AB:136:VAL:HG23	2.12	0.49
12:AJ:63:PHE:HE2	16:AN:58:LYS:HG2	1.76	0.49
14:AL:28:LYS:CD	14:AL:33:ARG:HH12	2.24	0.49
15:AM:84:ILE:C	15:AM:86:CYS:N	2.70	0.49
17:AO:36:ILE:HA	17:AO:59:MET:CE	2.42	0.49
23:B0:189:A:H2'	23:B0:190:A:C8	2.47	0.49
23:B0:568:G:H5''	23:B0:1019:U:H5'	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:652:C:H42	23:B0:657:A:N6	2.10	0.49
23:B0:1180:A:H2'	23:B0:1181:C:C6	2.47	0.49
23:B0:1223:G:O2'	23:B0:1224:A:OP2	2.26	0.49
23:B0:2536:G:H2'	23:B0:2537:C:C6	2.47	0.49
1:AA:46:G:C4	1:AA:366:C:C4	3.00	0.49
1:AA:245:C:O2	1:AA:283:C:N3	2.46	0.49
1:AA:430:A:C2'	1:AA:431:A:H5'	2.42	0.49
1:AA:722:A:H4'	1:AA:723:U:C5	2.48	0.49
1:AA:926:G:H22	3:AU:6:A:P	2.35	0.49
4:AB:35:GLU:HA	4:AB:39:ILE:O	2.13	0.49
4:AB:97:TRP:CH2	4:AB:173:ALA:HA	2.48	0.49
4:AB:168:THR:OG1	4:AB:192:SER:HB3	2.12	0.49
5:AC:179:ARG:HD2	5:AC:179:ARG:C	2.37	0.49
6:AD:36:ARG:N	6:AD:37:PRO:CD	2.66	0.49
12:AJ:32:ALA:HB2	12:AJ:76:ASN:HB2	1.94	0.49
23:B0:601:A:H3'	23:B0:602:C:C5'	2.42	0.49
23:B0:960:U:H2'	23:B0:961:G:C8	2.48	0.49
23:B0:1268:U:H5''	23:B0:1269:G:H5''	1.95	0.49
23:B0:1715:A:H1'	23:B0:1717:A:C1'	2.42	0.49
23:B0:1923:U:H4'	23:B0:1948:C:N4	2.27	0.49
23:B0:1993:G:H2'	23:B0:1994:U:C6	2.47	0.49
23:B0:2312:A:H4'	23:B0:2313:G:N7	2.26	0.49
23:B0:2321:C:H2'	23:B0:2322:U:O4'	2.12	0.49
23:B0:2805:G:O2'	23:B0:2806:G:H5'	2.12	0.49
1:AA:15:G:C8	1:AA:1396:A:O2'	2.64	0.49
1:AA:129:U:C5'	19:AQ:3:LYS:HE3	2.43	0.49
1:AA:323:U:C4'	22:AT:19:SER:C	2.85	0.49
1:AA:346:G:H2'	1:AA:347:G:H5'	1.94	0.49
1:AA:376:G:OP1	18:AP:67:THR:CB	2.60	0.49
1:AA:746:A:O2'	1:AA:747:C:H5'	2.11	0.49
1:AA:834:C:H2'	1:AA:835:U:C6	2.48	0.49
1:AA:847:C:O2'	1:AA:848:G:H5'	2.13	0.49
1:AA:1367:C:H5''	11:AI:114:TYR:CB	2.43	0.49
1:AA:1430:C:C5'	23:B0:1721:G:C5'	2.90	0.49
1:AA:1500:A:H4'	1:AA:1509:C:OP1	2.12	0.49
2:AW:75:C:O2'	23:B0:2486:C:O2'	2.30	0.49
5:AC:47:LEU:N	5:AC:47:LEU:HD12	2.27	0.49
6:AD:7:PRO:HB2	6:AD:10:ARG:HD2	1.93	0.49
7:AE:84:PHE:CE2	7:AE:133:TYR:HD1	2.31	0.49
8:AF:100:ASN:O	20:AR:28:GLU:HG3	2.13	0.49
12:AJ:61:GLU:CD	16:AN:58:LYS:CD	2.86	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:628:A:H2'	23:B0:629:C:C6	2.48	0.49
23:B0:703:A:H2'	23:B0:704:G:H8	1.77	0.49
23:B0:1007:A:H2'	23:B0:1008:G:C8	2.47	0.49
23:B0:1199:U:H2'	23:B0:1200:G:C8	2.46	0.49
23:B0:1218:C:H2'	23:B0:1219:C:C6	2.47	0.49
23:B0:2249:U:H2'	23:B0:2250:G:O4'	2.13	0.49
23:B0:2397:A:H2'	23:B0:2398:U:O4'	2.12	0.49
23:B0:2492:G:H2'	23:B0:2493:U:O4'	2.12	0.49
23:B0:2717:G:H2'	23:B0:2718:A:C8	2.48	0.49
1:AA:128:G:O3'	19:AQ:3:LYS:CG	2.61	0.49
1:AA:149:A:H2'	1:AA:150:C:C6	2.48	0.49
1:AA:161:A:C2	1:AA:348:G:C1'	2.95	0.49
1:AA:255:G:C4	19:AQ:16:GLN:NE2	2.80	0.49
1:AA:322:C:C4'	22:AT:23:ARG:CB	2.88	0.49
1:AA:489:C:H2'	1:AA:490:G:H8	1.77	0.49
1:AA:606:G:C3'	1:AA:607:A:C5'	2.88	0.49
1:AA:826:C:C1'	10:AH:15:ASN:HD22	2.21	0.49
1:AA:932:C:H5''	9:AG:3:ARG:CD	2.33	0.49
1:AA:1102:A:H2'	1:AA:1103:C:H6	1.77	0.49
1:AA:1121:U:H2'	1:AA:1122:U:C6	2.48	0.49
4:AB:12:GLU:HG2	4:AB:213:LEU:HD11	1.95	0.49
10:AH:13:ILE:O	10:AH:17:THR:HG23	2.13	0.49
23:B0:117:A:H4'	23:B0:118:U:C6	2.47	0.49
23:B0:1164:C:H2'	23:B0:1165:G:O4'	2.12	0.49
23:B0:1532:A:H2'	23:B0:1533:G:H8	1.77	0.49
23:B0:1949:A:O2'	23:B0:2572:U:H5'	2.12	0.49
23:B0:1998:A:H2'	23:B0:1999:U:H5'	1.94	0.49
23:B0:2274:C:C2'	23:B0:2275:U:H5'	2.40	0.49
1:AA:218:C:H2'	1:AA:219:C:C6	2.47	0.49
1:AA:261:U:O5'	22:AT:79:ARG:NH1	2.46	0.49
1:AA:269:C:H2'	1:AA:270:A:C8	2.48	0.49
1:AA:406:G:N9	1:AA:496:A:C5	2.81	0.49
1:AA:586:C:O2'	1:AA:587:G:H5'	2.12	0.49
1:AA:624:C:O2'	1:AA:625:G:H5'	2.13	0.49
1:AA:864:A:H2	1:AA:917:G:H2'	1.78	0.49
1:AA:866:C:C4'	1:AA:919:A:C5'	2.90	0.49
1:AA:923:A:H1'	1:AA:1398:A:H2'	1.93	0.49
1:AA:1060:C:HO2'	12:AJ:56:HIS:HD2	1.52	0.49
1:AA:1110:A:C6	1:AA:1111:A:C5	3.00	0.49
1:AA:1126:U:H1'	1:AA:1280:A:C6	2.48	0.49
1:AA:1413:A:O2'	1:AA:1414:U:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AB:213:LEU:C	4:AB:213:LEU:HD23	2.37	0.49
4:AB:230:VAL:HG13	4:AB:231:GLU:OE2	2.13	0.49
5:AC:112:SER:O	5:AC:116:VAL:HG23	2.11	0.49
12:AJ:65:LEU:O	12:AJ:65:LEU:CD2	2.59	0.49
14:AL:34:ARG:HG3	14:AL:34:ARG:O	2.13	0.49
14:AL:53:ARG:HB3	14:AL:93:LEU:HD11	1.94	0.49
16:AN:15:LYS:HB3	16:AN:16:PHE:CD1	2.47	0.49
17:AO:30:ALA:HA	17:AO:85:LEU:HD21	1.94	0.49
19:AQ:45:HIS:NE2	19:AQ:47:PRO:HG3	2.27	0.49
23:B0:427:C:H2'	23:B0:428:A:C8	2.47	0.49
23:B0:483:A:H2'	23:B0:484:G:H5'	1.93	0.49
23:B0:599:A:H2'	23:B0:600:G:C8	2.48	0.49
23:B0:879:A:H2'	23:B0:880:C:H5'	1.94	0.49
23:B0:1829:C:H2'	23:B0:1830:C:H5'	1.95	0.49
23:B0:3184:C:C2'	23:B0:3185:U:C5'	2.91	0.49
23:B0:2260:C:H4'	23:B0:2368:G:H21	1.77	0.49
23:B0:2821:G:H2'	23:B0:2822:U:C6	2.48	0.49
23:B0:2852:G:H2'	23:B0:2853:U:O4'	2.12	0.49
1:AA:184:G:H2'	1:AA:185:A:H8	1.77	0.49
1:AA:521:G:O2'	1:AA:522:C:H5'	2.12	0.49
1:AA:659:U:H2'	1:AA:660:G:O4'	2.13	0.49
1:AA:865:A:O2'	1:AA:919:A:O4'	2.29	0.49
1:AA:979:C:C2	16:AN:19:ARG:HG2	2.48	0.49
1:AA:1051:C:O2'	1:AA:1052:U:H5'	2.13	0.49
1:AA:1085:U:O3'	1:AA:1086:U:H6	1.95	0.49
1:AA:1238:A:N7	1:AA:1303:C:H1'	2.28	0.49
1:AA:1393:U:O2'	1:AA:1394:A:C2'	2.60	0.49
1:AA:1434:A:O3'	1:AA:1435:G:C4'	2.61	0.49
1:AA:1474:G:O2'	23:B0:1705:U:C3'	2.61	0.49
4:AB:134:GLU:C	4:AB:136:VAL:N	2.71	0.49
5:AC:116:VAL:O	5:AC:119:ARG:HB3	2.13	0.49
9:AG:108:ALA:O	9:AG:119:ARG:HB3	2.12	0.49
15:AM:78:ILE:O	15:AM:82:MET:HB2	2.12	0.49
18:AP:1:MET:HE3	18:AP:3:LYS:HG2	1.94	0.49
23:B0:807:A:H2'	23:B0:808:C:C6	2.48	0.49
23:B0:1223:G:H1'	23:B0:1225:G:C4	2.48	0.49
23:B0:3877:A:H1'	55:B5:196:VAL:CA	2.42	0.49
23:B0:1982:C:H2'	23:B0:1983:G:H8	1.78	0.49
1:AA:109:A:OP2	1:AA:110:C:H5	1.96	0.49
1:AA:209:U:H5'	1:AA:210:C:C5	2.48	0.49
1:AA:236:G:H4'	19:AQ:42:TYR:OH	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:255:G:C5'	19:AQ:17:LYS:CB	2.51	0.49
1:AA:397:A:C5	1:AA:547:A:C1'	2.89	0.49
1:AA:1108:G:OP1	5:AC:175:LEU:HB2	2.12	0.49
1:AA:1310:G:O2'	1:AA:1311:G:H5'	2.12	0.49
1:AA:1365:G:O2'	1:AA:1366:C:H5'	2.12	0.49
2:AV:75:C:H1'	23:B0:2047:C:H4'	1.94	0.49
2:AW:74:C:C5	23:B0:2534:U:C5	2.55	0.49
4:AB:44:LEU:HA	4:AB:47:THR:OG1	2.12	0.49
4:AB:102:LEU:CD2	4:AB:162:ILE:HD11	2.37	0.49
5:AC:3:ASN:HD22	5:AC:4:LYS:HG2	1.78	0.49
12:AJ:16:LEU:HD23	12:AJ:94:VAL:HG22	1.95	0.49
17:AO:4:THR:HB	17:AO:6:GLU:HG2	1.94	0.49
17:AO:25:THR:HG21	17:AO:70:LEU:HD23	1.94	0.49
19:AQ:68:ARG:O	19:AQ:69:LYS:HB2	2.13	0.49
21:AS:5:LEU:HD11	21:AS:70:LYS:NZ	2.28	0.49
23:B0:114:C:O2'	23:B0:124:A:H1'	2.12	0.49
23:B0:653:G:N2	23:B0:655:A:H1'	2.27	0.49
23:B0:1489:C:H3'	23:B0:1490:U:H5'	1.95	0.49
23:B0:1856:U:O4	23:B0:3865:A:C6	2.63	0.49
23:B0:1970:G:H2'	23:B0:1971:C:C6	2.48	0.49
1:AA:15:G:N7	1:AA:1396:A:O2'	2.44	0.49
1:AA:136:C:H2'	1:AA:137:C:H6	1.77	0.49
1:AA:237:C:H4'	19:AQ:25:ARG:CZ	2.43	0.49
1:AA:262:A:C4'	22:AT:74:LYS:HB3	2.42	0.49
1:AA:265:G:O2'	1:AA:266:G:H5'	2.13	0.49
1:AA:555:C:H2'	1:AA:556:C:C6	2.48	0.49
1:AA:942:G:O2'	1:AA:943:U:H5'	2.12	0.49
1:AA:959:A:H2'	1:AA:960:U:O4'	2.12	0.49
1:AA:1396:A:H4'	1:AA:1397:C:H5''	1.93	0.49
1:AA:1416:G:O3'	1:AA:1417:G:P	2.69	0.49
1:AA:1497:G:C1'	1:AA:1518:A:H2	2.26	0.49
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.12	0.49
2:AW:76:A:C1'	23:B0:2486:C:H4'	2.29	0.49
4:AB:30:ARG:HG3	4:AB:31:TYR:CD2	2.48	0.49
6:AD:38:TYR:CE1	6:AD:45:GLN:HG3	2.48	0.49
6:AD:105:VAL:HG13	6:AD:110:PHE:HB2	1.95	0.49
9:AG:38:LEU:O	9:AG:42:ILE:HG13	2.12	0.49
13:AK:60:ALA:O	13:AK:61:ALA:C	2.56	0.49
13:AK:124:LYS:HD2	13:AK:125:PHE:CE1	2.48	0.49
14:AL:83:VAL:HG22	14:AL:84:LEU:N	2.28	0.49
15:AM:94:ARG:NH2	21:AS:81:ARG:CD	2.65	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AP:52:ASP:OD2	18:AP:55:ARG:HB2	2.13	0.49
19:AQ:26:GLN:O	19:AQ:27:PHE:HB3	2.12	0.49
19:AQ:56:VAL:HG12	19:AQ:77:VAL:HB	1.95	0.49
21:AS:45:VAL:HG12	21:AS:46:GLY:N	2.26	0.49
23:B0:216:U:H2'	23:B0:217:U:O4'	2.12	0.49
23:B0:930:A:H4'	23:B0:930:A:OP1	2.11	0.49
23:B0:1380:C:C2'	23:B0:1381:G:H5'	2.41	0.49
23:B0:1617:G:H2'	23:B0:1618:U:H5'	1.95	0.49
23:B0:3102:G:H2'	23:B0:3103:A:C8	2.48	0.49
23:B0:2380:U:C2'	23:B0:2381:A:H5'	2.42	0.49
23:B0:2392:G:H2'	23:B0:2393:G:H8	1.77	0.49
1:AA:69:G:H1'	1:AA:102:G:C6	2.48	0.48
1:AA:94:G:H2'	1:AA:96:C:H6	1.78	0.48
1:AA:135:C:C5	1:AA:136:C:C5	3.01	0.48
1:AA:217:C:O2'	1:AA:218:C:H5'	2.12	0.48
1:AA:394:G:C5	1:AA:395:C:C5	3.01	0.48
1:AA:560:U:O2'	1:AA:561:U:OP2	2.27	0.48
1:AA:651:C:N4	1:AA:752:G:O2'	2.46	0.48
1:AA:707:C:P	13:AK:85:ARG:HH12	2.17	0.48
1:AA:942:G:H21	11:AI:124:GLN:CD	2.20	0.48
1:AA:1068:G:N3	1:AA:1191:A:C2	2.81	0.48
1:AA:1329:A:C2'	1:AA:1330:U:H5'	2.43	0.48
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.48	0.48
1:AA:1497:G:H2'	1:AA:1498:U:C5'	2.42	0.48
2:AW:75:C:C1'	23:B0:2486:C:O2'	2.61	0.48
5:AC:180:ALA:O	5:AC:181:ASN:CB	2.61	0.48
6:AD:57:ARG:NH2	6:AD:205:GLU:OE2	2.46	0.48
7:AE:31:LEU:HD22	7:AE:43:LEU:HD21	1.94	0.48
10:AH:60:ARG:HG3	10:AH:60:ARG:NH1	2.28	0.48
13:AK:58:PRO:HB2	13:AK:93:GLN:HG3	1.95	0.48
13:AK:74:ALA:C	13:AK:76:GLY:N	2.69	0.48
14:AL:119:LYS:O	14:AL:120:TYR:CB	2.61	0.48
15:AM:80:ARG:C	15:AM:82:MET:H	2.20	0.48
17:AO:39:LEU:HD12	17:AO:59:MET:HE2	1.94	0.48
23:B0:338:G:H1	23:B0:346:C:H42	1.60	0.48
23:B0:2809:A:C2'	23:B0:2810:A:H5'	2.43	0.48
1:AA:135:C:H2'	1:AA:136:C:C5'	2.43	0.48
1:AA:419:C:OP1	1:AA:513:C:H1'	2.13	0.48
1:AA:826:C:O2'	10:AH:15:ASN:HB2	2.12	0.48
1:AA:923:A:C5'	1:AA:1398:A:C6	2.95	0.48
1:AA:1067:A:O2'	1:AA:1068:G:OP2	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1165:C:O2'	1:AA:1166:G:H5'	2.12	0.48
1:AA:1255:G:O2'	1:AA:1259:C:N1	2.45	0.48
1:AA:1268:A:H1'	1:AA:1326:C:O2'	2.13	0.48
1:AA:1279:A:O2'	1:AA:1282:C:N4	2.46	0.48
1:AA:1286:A:H2'	1:AA:1287:A:H4'	1.96	0.48
1:AA:1319:A:P	21:AS:5:LEU:HD22	2.53	0.48
4:AB:144:ARG:HG3	4:AB:145:LEU:H	1.77	0.48
4:AB:144:ARG:O	4:AB:147:LYS:N	2.42	0.48
4:AB:188:ALA:O	4:AB:202:PRO:HA	2.13	0.48
6:AD:3:ARG:O	6:AD:5:ILE:HG13	2.13	0.48
6:AD:3:ARG:NH2	6:AD:74:GLN:OE1	2.44	0.48
6:AD:174:LEU:O	6:AD:175:SER:HB3	2.13	0.48
7:AE:13:ILE:HG13	7:AE:13:ILE:O	2.11	0.48
8:AF:38:GLU:O	8:AF:39:LYS:HB3	2.12	0.48
8:AF:43:LEU:HD22	8:AF:43:LEU:N	2.27	0.48
8:AF:46:ARG:HB2	8:AF:60:PHE:CE1	2.48	0.48
11:AI:111:ARG:HG3	11:AI:111:ARG:NH1	2.28	0.48
12:AJ:94:VAL:HG12	12:AJ:95:GLU:H	1.76	0.48
15:AM:93:ARG:NH1	23:B0:900:U:C5'	2.77	0.48
20:AR:39:VAL:HG13	20:AR:40:LEU:N	2.28	0.48
21:AS:32:LYS:HG3	21:AS:32:LYS:O	2.13	0.48
22:AT:29:LYS:O	22:AT:33:ILE:HG13	2.13	0.48
23:B0:58:C:H1'	23:B0:72:A:C8	2.48	0.48
23:B0:737:C:H2'	23:B0:738:G:O4'	2.14	0.48
23:B0:1099:A:H3'	23:B0:1100:G:H5'	1.94	0.48
23:B0:1895:A:H2'	23:B0:1896:A:O4'	2.13	0.48
23:B0:1949:A:H1'	23:B0:2572:U:H4'	1.95	0.48
23:B0:1964:A:H5''	23:B0:1965:U:OP2	2.13	0.48
24:B9:112:A:H2'	24:B9:113:G:C8	2.49	0.48
1:AA:27:G:C5	1:AA:557:G:N2	2.77	0.48
1:AA:46:G:N2	1:AA:366:C:O4'	2.45	0.48
1:AA:131:C:C3'	1:AA:262:A:O2'	2.61	0.48
1:AA:401:C:C4'	1:AA:622:A:H1'	2.42	0.48
1:AA:815:A:H1'	1:AA:1527:C:C4'	2.42	0.48
1:AA:1030:U:H5'	1:AA:1031:C:C5	2.48	0.48
1:AA:1112:C:C2	5:AC:178:LEU:HB3	2.48	0.48
1:AA:1270:C:H4'	1:AA:1314:C:H5'	1.95	0.48
1:AA:1346:A:H1'	1:AA:1348:U:C5	2.47	0.48
1:AA:1484:C:H5'	23:B0:1943:A:H1'	1.85	0.48
4:AB:25:ASN:O	4:AB:27:LYS:N	2.47	0.48
4:AB:204:ASN:ND2	4:AB:206:ASP:H	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:23:TYR:O	5:AC:24:ALA:HB2	2.14	0.48
6:AD:119:GLN:HG2	6:AD:123:HIS:CD2	2.47	0.48
7:AE:61:TYR:O	7:AE:64:ARG:O	2.29	0.48
17:AO:34:LEU:HD23	17:AO:34:LEU:O	2.12	0.48
23:B0:126:C:H2'	23:B0:127:C:C6	2.48	0.48
23:B0:742:G:H2'	23:B0:742:G:N3	2.29	0.48
23:B0:1190:C:H2'	23:B0:1191:G:C8	2.48	0.48
23:B0:1312:G:C5'	23:B0:1313:U:H5'	2.39	0.48
23:B0:1356:G:H5'	23:B0:1614:C:OP2	2.12	0.48
23:B0:2754:C:H2'	23:B0:2755:A:O4'	2.14	0.48
1:AA:18:C:C2	1:AA:918:A:C6	3.01	0.48
1:AA:43:C:OP1	18:AP:12:LYS:HB3	2.13	0.48
1:AA:170:U:O2'	1:AA:171:A:H5'	2.14	0.48
1:AA:170:U:H3'	1:AA:171:A:P	2.54	0.48
1:AA:265:G:H5'	19:AQ:65:ILE:CA	2.05	0.48
1:AA:266:G:HO2'	19:AQ:67:LYS:HD2	1.78	0.48
1:AA:421:U:H5'	1:AA:422:C:C5	2.48	0.48
1:AA:647:C:H2'	1:AA:648:A:H8	1.78	0.48
1:AA:1343:G:P	11:AI:125:TYR:HE2	2.37	0.48
2:AV:32:C:OP2	11:AI:127:LYS:HE2	2.11	0.48
4:AB:97:TRP:CZ2	4:AB:102:LEU:HD13	2.45	0.48
4:AB:111:ARG:HB3	4:AB:149:LEU:HD11	1.95	0.48
6:AD:7:PRO:CG	6:AD:10:ARG:HD2	2.43	0.48
9:AG:64:GLN:O	9:AG:67:GLU:HB3	2.14	0.48
14:AL:53:ARG:HG2	14:AL:93:LEU:HD11	1.95	0.48
15:AM:94:ARG:HH22	21:AS:81:ARG:CD	2.26	0.48
19:AQ:97:SER:HB2	19:AQ:103:GLY:N	2.26	0.48
23:B0:422:C:H2'	23:B0:423:G:H8	1.78	0.48
23:B0:1343:C:H2'	23:B0:1344:C:C6	2.48	0.48
23:B0:3869:G:H2'	23:B0:3871:A:OP2	2.13	0.48
23:B0:1930:C:H2'	23:B0:1931:G:H8	1.78	0.48
1:AA:128:G:P	19:AQ:2:PRO:CD	3.01	0.48
1:AA:178:C:O2'	1:AA:179:A:H5'	2.13	0.48
1:AA:1016:A:H1'	1:AA:1218:C:C4'	2.41	0.48
1:AA:1342:C:O2'	1:AA:1343:G:H5'	2.13	0.48
1:AA:1366:C:C2	1:AA:1367:C:C5	3.00	0.48
6:AD:151:LYS:N	6:AD:151:LYS:CD	2.75	0.48
7:AE:51:VAL:O	7:AE:54:ALA:HB3	2.13	0.48
9:AG:138:LYS:HD3	9:AG:138:LYS:C	2.39	0.48
12:AJ:6:ILE:HG23	12:AJ:98:ILE:HG12	1.94	0.48
22:AT:67:ALA:O	22:AT:73:HIS:ND1	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:31:C:H2'	23:B0:32:C:O4'	2.14	0.48
23:B0:703:A:H2'	23:B0:704:G:C8	2.49	0.48
23:B0:929:A:H2'	23:B0:930:A:H4'	1.95	0.48
23:B0:1301:U:H2'	23:B0:1664:G:H21	1.79	0.48
23:B0:2437:G:N2	23:B0:2469:G:H2'	2.28	0.48
23:B0:2504:G:H2'	23:B0:2505:G:C8	2.49	0.48
23:B0:2642:G:H2'	23:B0:2643:G:O4'	2.13	0.48
23:B0:2808:U:H3'	23:B0:2809:A:C5'	2.40	0.48
1:AA:38:G:C1'	1:AA:547:A:N7	2.76	0.48
1:AA:41:G:H2'	1:AA:42:G:C8	2.49	0.48
1:AA:143:A:O3'	1:AA:144:G:H8	1.96	0.48
1:AA:255:G:N9	19:AQ:16:GLN:NE2	2.60	0.48
1:AA:407:G:H5''	6:AD:115:ARG:HB3	1.95	0.48
1:AA:476:U:C6	1:AA:477:G:P	3.07	0.48
1:AA:1067:A:H1'	1:AA:1068:G:OP2	2.13	0.48
1:AA:1111:A:N1	5:AC:177:THR:OG1	2.45	0.48
1:AA:1394:A:N3	1:AA:1501:C:O4'	2.47	0.48
1:AA:1420:C:C4'	23:B0:1933:G:OP1	2.62	0.48
5:AC:23:TYR:HD1	12:AJ:11:PHE:CD2	2.30	0.48
5:AC:138:VAL:O	5:AC:142:MET:HB2	2.13	0.48
7:AE:11:ILE:HB	7:AE:31:LEU:HB3	1.93	0.48
7:AE:36:ASP:O	7:AE:37:ARG:HB2	2.13	0.48
7:AE:107:ARG:HG2	7:AE:108:ALA:N	2.29	0.48
8:AF:43:LEU:H	8:AF:43:LEU:HD22	1.77	0.48
10:AH:65:TYR:HA	10:AH:79:VAL:HG23	1.95	0.48
14:AL:45:PRO:HB2	14:AL:49:ASN:O	2.13	0.48
19:AQ:12:SER:HB3	19:AQ:20:THR:HB	1.95	0.48
23:B0:340:G:H1'	23:B0:488:A:C4	2.49	0.48
23:B0:477:A:H2'	23:B0:478:G:H5'	1.95	0.48
23:B0:490:A:C5	23:B0:492:G:H1'	2.48	0.48
23:B0:634:G:H2'	23:B0:635:C:C6	2.49	0.48
23:B0:2017:U:O2'	23:B0:2018:G:H5'	2.13	0.48
1:AA:38:G:O2'	1:AA:39:G:N7	2.46	0.48
1:AA:119:A:C2	1:AA:240:C:C6	3.01	0.48
1:AA:150:C:O3'	1:AA:151:A:P	2.71	0.48
1:AA:170:U:C3'	1:AA:171:A:P	3.02	0.48
1:AA:798:G:P	13:AK:122:LYS:HZ2	2.30	0.48
1:AA:819:A:C6	1:AA:1529:G:C6	3.02	0.48
1:AA:1106:G:OP1	5:AC:172:ARG:CG	2.62	0.48
1:AA:1106:G:OP1	5:AC:172:ARG:HD3	2.14	0.48
1:AA:1126:U:OP2	1:AA:1281:U:C2	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1152:A:OP1	12:AJ:68:HIS:ND1	2.44	0.48
5:AC:130:VAL:CG2	5:AC:157:ILE:HG23	2.41	0.48
10:AH:103:VAL:CG2	10:AH:110:ALA:HB2	2.43	0.48
20:AR:34:TYR:HA	20:AR:69:THR:HG23	1.93	0.48
20:AR:36:ASN:HD22	20:AR:38:GLU:HG2	1.78	0.48
22:AT:89:ARG:HE	22:AT:104:LEU:HD22	1.78	0.48
23:B0:1023:U:H1'	23:B0:1154:A:N7	2.28	0.48
23:B0:1231:A:H2'	23:B0:1232:U:O4'	2.13	0.48
23:B0:1418:C:H2'	23:B0:1419:G:H8	1.79	0.48
23:B0:2308:A:H2'	23:B0:2309:G:C8	2.48	0.48
1:AA:69:G:O4'	1:AA:102:G:N1	2.43	0.48
1:AA:427:U:C4'	1:AA:541:G:H5''	2.43	0.48
1:AA:556:C:C2'	1:AA:557:G:C5'	2.91	0.48
1:AA:825:G:H2'	1:AA:826:C:H6	1.78	0.48
1:AA:911:U:OP2	14:AL:97:ARG:NH2	2.46	0.48
1:AA:923:A:H4'	1:AA:1398:A:C5	2.49	0.48
1:AA:1418:A:H2'	1:AA:1419:G:O4'	2.12	0.48
1:AA:1503:A:N3	1:AA:1531:A:C2	2.82	0.48
1:AA:1505:G:C8	1:AA:1505:G:H3'	2.48	0.48
4:AB:59:GLU:O	4:AB:60:ASP:C	2.57	0.48
5:AC:35:GLU:O	5:AC:38:ARG:N	2.47	0.48
5:AC:173:VAL:N	5:AC:174:PRO:CD	2.76	0.48
11:AI:117:HIS:HB2	11:AI:121:ARG:HD2	1.94	0.48
14:AL:86:ARG:HG3	14:AL:86:ARG:NH1	2.28	0.48
18:AP:6:LEU:HB3	18:AP:17:TYR:CD2	2.49	0.48
23:B0:324:C:H2'	23:B0:325:U:O4'	2.14	0.48
23:B0:446:C:H2'	23:B0:447:U:C6	2.49	0.48
23:B0:951:G:C3'	23:B0:952:A:H5''	2.43	0.48
23:B0:1130:U:H2'	23:B0:1131:G:C8	2.48	0.48
23:B0:2319:G:H2'	23:B0:2320:G:C8	2.49	0.48
1:AA:6:G:C8	7:AE:92:LYS:CE	2.95	0.48
1:AA:131:C:N1	1:AA:262:A:H2	2.09	0.48
1:AA:406:G:C1'	1:AA:496:A:N1	2.77	0.48
1:AA:538:G:O2'	1:AA:539:A:H5'	2.13	0.48
1:AA:865:A:C2	1:AA:918:A:C5'	2.90	0.48
1:AA:893:C:N3	1:AA:894:G:N7	2.62	0.48
1:AA:1067:A:H1'	1:AA:1068:G:C8	2.49	0.48
1:AA:1162:C:H2'	1:AA:1163:C:H6	1.78	0.48
1:AA:1255:G:O2'	1:AA:1258:G:N3	2.46	0.48
1:AA:1533:C:O2'	1:AA:1534:A:H5'	2.14	0.48
4:AB:17:PHE:HA	4:AB:44:LEU:HD21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AD:111:ALA:HB1	6:AD:116:GLN:HB3	1.96	0.48
7:AE:71:LEU:HD21	7:AE:115:VAL:HG22	1.96	0.48
8:AF:67:MET:HE2	8:AF:72:VAL:HA	1.96	0.48
14:AL:110:VAL:O	14:AL:122:THR:CG2	2.62	0.48
21:AS:39:THR:HG22	21:AS:40:ILE:N	2.29	0.48
23:B0:974:U:H1'	23:B0:2229:G:N2	2.28	0.48
23:B0:1427:G:C2'	23:B0:1428:G:H5'	2.42	0.48
23:B0:2759:U:H5''	23:B0:2760:G:O5'	2.14	0.48
1:AA:119:A:C6	1:AA:240:C:C2	3.02	0.48
1:AA:436:C:C2'	1:AA:437:U:C5'	2.90	0.48
1:AA:662:G:H2'	1:AA:663:A:H8	1.79	0.48
1:AA:719:C:O2'	20:AR:49:LYS:HB3	2.14	0.48
4:AB:187:LEU:CD2	4:AB:214:ILE:HG13	2.43	0.48
7:AE:51:VAL:HB	7:AE:52:PRO:CD	2.37	0.48
14:AL:83:VAL:HG21	14:AL:100:ILE:HD13	1.95	0.48
18:AP:52:ASP:O	18:AP:52:ASP:CG	2.57	0.48
19:AQ:17:LYS:HA	19:AQ:46:ASP:O	2.14	0.48
23:B0:387:A:H2'	23:B0:388:G:O4'	2.14	0.48
23:B0:1028:G:H2'	23:B0:1029:C:C6	2.49	0.48
23:B0:2321:C:C2'	23:B0:2322:U:H5'	2.44	0.48
1:AA:131:C:C3'	1:AA:262:A:H1'	2.44	0.47
1:AA:255:G:H1'	19:AQ:16:GLN:HE21	0.39	0.47
1:AA:322:C:H5''	22:AT:23:ARG:HG3	1.95	0.47
1:AA:684:A:O3'	1:AA:685:G:P	2.72	0.47
1:AA:729:A:H2	1:AA:765:G:O4'	1.97	0.47
1:AA:768:A:H2'	1:AA:769:G:O4'	2.14	0.47
1:AA:1488:G:H2'	1:AA:1489:G:H8	1.77	0.47
4:AB:115:LEU:O	4:AB:115:LEU:HD12	2.13	0.47
5:AC:178:LEU:O	5:AC:179:ARG:CB	2.60	0.47
6:AD:127:THR:CG2	6:AD:128:VAL:N	2.75	0.47
11:AI:65:VAL:O	11:AI:65:VAL:HG13	2.13	0.47
12:AJ:27:ALA:HB2	12:AJ:85:LEU:HD21	1.96	0.47
17:AO:17:ARG:HG3	17:AO:17:ARG:NH1	2.23	0.47
23:B0:457:C:H2'	23:B0:458:G:O4'	2.13	0.47
23:B0:1825:C:C2'	23:B0:1826:U:H5'	2.44	0.47
23:B0:3110:G:P	23:B0:3149:G:H5'	2.53	0.47
23:B0:3171:A:H4'	23:B0:3172:U:OP1	2.13	0.47
23:B0:3176:A:H2'	23:B0:3177:C:C6	2.48	0.47
1:AA:36:C:HO2'	1:AA:501:C:H5''	1.79	0.47
1:AA:109:A:H5'	1:AA:110:C:C5	2.50	0.47
1:AA:119:A:C4	1:AA:240:C:N4	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:170:U:O3'	1:AA:171:A:P	2.72	0.47
1:AA:209:U:H5'	1:AA:210:C:H5	1.80	0.47
1:AA:236:G:H5''	19:AQ:40:LYS:CE	2.44	0.47
1:AA:319:G:H1'	1:AA:1433:A:N1	2.28	0.47
1:AA:518:C:H5''	1:AA:519:C:H6	1.78	0.47
1:AA:613:C:O2'	1:AA:614:A:H5'	2.14	0.47
1:AA:792:A:H4'	1:AA:793:U:C5'	2.40	0.47
1:AA:848:G:O3'	1:AA:849:C:P	2.72	0.47
1:AA:905:U:H3'	1:AA:906:G:P	2.42	0.47
1:AA:952:U:O2'	1:AA:953:G:H5'	2.14	0.47
1:AA:1014:A:H1'	21:AS:34:TRP:CB	2.22	0.47
1:AA:1416:G:C8	1:AA:1417:G:C8	3.02	0.47
2:AW:76:A:OP1	23:B0:2552:C:N3	2.47	0.47
8:AF:2:ARG:NE	8:AF:69:GLU:HG2	2.29	0.47
12:AJ:63:PHE:CE2	16:AN:58:LYS:HG2	2.49	0.47
12:AJ:94:VAL:CG1	12:AJ:95:GLU:N	2.77	0.47
13:AK:86:GLY:H	13:AK:112:THR:HG23	1.79	0.47
19:AQ:94:ASN:H	23:B0:726:G:H4'	1.73	0.47
23:B0:88:G:H3'	23:B0:89:A:C5'	2.37	0.47
23:B0:611:C:O2'	23:B0:612:G:H5'	2.14	0.47
23:B0:952:A:H2'	23:B0:953:G:O4'	2.14	0.47
23:B0:1002:C:H2'	23:B0:1003:C:C6	2.49	0.47
23:B0:1182:U:C3'	23:B0:1183:C:H5''	2.45	0.47
23:B0:1260:A:N6	23:B0:1262:U:H1'	2.29	0.47
23:B0:1572:C:C3'	23:B0:1573:G:H5''	2.43	0.47
23:B0:3093:C:C4	23:B0:2204:A:N7	2.82	0.47
23:B0:2407:G:H4'	23:B0:2408:G:C8	2.49	0.47
23:B0:2794:G:H2'	23:B0:2796:A:N7	2.29	0.47
1:AA:113:G:O4'	1:AA:354:G:H4'	2.14	0.47
1:AA:513:C:H2'	1:AA:514:C:C6	2.50	0.47
1:AA:826:C:O2'	10:AH:15:ASN:ND2	2.45	0.47
1:AA:913:A:O2'	1:AA:914:A:P	2.73	0.47
1:AA:914:A:H3'	1:AA:915:A:H8	1.79	0.47
4:AB:18:GLY:CA	4:AB:41:ILE:HA	2.44	0.47
4:AB:50:GLU:HB3	4:AB:200:ILE:O	2.15	0.47
5:AC:46:GLU:C	5:AC:48:TYR:H	2.22	0.47
6:AD:111:ALA:HB2	6:AD:120:LEU:HD12	1.96	0.47
9:AG:75:VAL:CG1	9:AG:86:GLN:HE21	2.27	0.47
9:AG:75:VAL:HG13	9:AG:86:GLN:HB3	1.95	0.47
13:AK:48:ILE:HD11	13:AK:64:ALA:HA	1.95	0.47
17:AO:64:ARG:NH2	23:B0:728:G:OP1	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AR:47:THR:HA	20:AR:83:GLU:HB2	1.96	0.47
22:AT:11:SER:C	22:AT:13:LEU:H	2.22	0.47
23:B0:646:C:H2'	23:B0:647:G:O4'	2.14	0.47
23:B0:831:G:N2	23:B0:1203:A:H62	2.01	0.47
23:B0:1313:U:C4	23:B0:1651:U:H5'	2.49	0.47
23:B0:1930:C:H2'	23:B0:1931:G:C8	2.49	0.47
23:B0:1938:U:C2'	23:B0:1939:U:H5'	2.44	0.47
1:AA:51:A:H4'	1:AA:52:G:C5'	2.45	0.47
1:AA:51:A:H4'	1:AA:52:G:O5'	2.15	0.47
1:AA:104:G:O4'	1:AA:172:A:C2	2.61	0.47
1:AA:180:U:H2'	1:AA:181:G:H5'	1.96	0.47
1:AA:190:A:C6	22:AT:102:GLY:O	2.67	0.47
1:AA:204:A:H4'	1:AA:205:G:O5'	2.15	0.47
1:AA:258:G:O3'	22:AT:87:LYS:CE	2.62	0.47
1:AA:278:G:O4'	1:AA:282:A:H1'	2.14	0.47
1:AA:600:C:OP1	10:AH:97:VAL:N	2.33	0.47
1:AA:625:G:H2'	1:AA:626:U:H6	1.79	0.47
1:AA:657:G:O2'	1:AA:658:G:H5'	2.14	0.47
1:AA:819:A:N6	1:AA:1529:G:C4	2.82	0.47
1:AA:1070:U:O2'	1:AA:1071:C:H5'	2.13	0.47
1:AA:1451:A:O2'	1:AA:1452:C:OP1	2.26	0.47
6:AD:196:LEU:C	6:AD:198:VAL:H	2.21	0.47
9:AG:23:VAL:HG12	9:AG:27:ILE:CD1	2.41	0.47
10:AH:6:ILE:HD12	10:AH:35:ILE:HD12	1.96	0.47
10:AH:114:THR:C	10:AH:116:LYS:H	2.22	0.47
12:AJ:39:PRO:HA	12:AJ:70:ARG:HH11	1.78	0.47
14:AL:27:LEU:HG	14:AL:28:LYS:N	2.25	0.47
14:AL:48:PRO:HG2	14:AL:49:ASN:N	2.25	0.47
15:AM:78:ILE:HA	15:AM:81:LEU:CD2	2.38	0.47
16:AN:21:TYR:HE2	16:AN:23:ARG:HE	1.63	0.47
20:AR:28:GLU:OE1	20:AR:28:GLU:N	2.46	0.47
20:AR:53:ARG:HD3	20:AR:63:GLN:HB3	1.95	0.47
23:B0:109:A:C2'	23:B0:110:U:H5''	2.44	0.47
23:B0:393:U:H2'	23:B0:394:U:C6	2.49	0.47
23:B0:598:U:H2'	23:B0:599:A:C8	2.49	0.47
23:B0:636:G:H2'	23:B0:637:G:H5'	1.95	0.47
23:B0:910:U:H2'	23:B0:911:A:H5'	1.95	0.47
23:B0:1071:U:N3	23:B0:1099:A:H2	2.02	0.47
23:B0:1279:G:HO2'	23:B0:1280:U:H6	1.62	0.47
23:B0:1598:C:H2'	23:B0:1599:G:O4'	2.14	0.47
23:B0:3866:A:C1'	55:B5:194:ALA:CA	2.92	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:2307:A:H2'	23:B0:2308:A:C8	2.49	0.47
23:B0:2437:G:C2	23:B0:2469:G:H2'	2.50	0.47
1:AA:130:A:C2	1:AA:264:U:C2	3.03	0.47
1:AA:264:U:H2'	19:AQ:64:PRO:HB2	1.96	0.47
1:AA:403:C:H2'	1:AA:404:U:H6	1.79	0.47
1:AA:435:C:O2'	1:AA:436:C:H5'	2.15	0.47
1:AA:538:G:H4'	14:AL:114:LYS:NZ	2.27	0.47
1:AA:665:A:C2	1:AA:732:C:C2	3.03	0.47
1:AA:762:C:C4'	23:B0:729:A:C6	2.74	0.47
1:AA:834:C:H2'	1:AA:835:U:H6	1.80	0.47
1:AA:1221:G:O2'	1:AA:1222:G:H5'	2.15	0.47
1:AA:1261:A:C4'	1:AA:1283:G:C5'	2.92	0.47
1:AA:1262:C:H2'	1:AA:1263:C:H6	1.79	0.47
1:AA:1394:A:C4	1:AA:1501:C:C4'	2.62	0.47
2:AW:11:C:O2'	23:B0:1898:U:H5''	2.14	0.47
2:AW:64:A:O4'	23:B0:2461:G:O2'	2.32	0.47
4:AB:15:VAL:HG12	4:AB:210:SER:HB2	1.97	0.47
5:AC:79:ARG:C	5:AC:81:GLY:H	2.21	0.47
5:AC:173:VAL:O	5:AC:173:VAL:HG12	2.14	0.47
8:AF:4:TYR:CZ	8:AF:72:VAL:HG21	2.49	0.47
9:AG:77:SER:O	9:AG:156:TRP:HZ3	1.97	0.47
15:AM:39:ILE:CD1	15:AM:56:LEU:HG	2.44	0.47
15:AM:97:PRO:HB2	15:AM:101:GLN:OE1	2.14	0.47
20:AR:46:GLU:CD	20:AR:46:GLU:N	2.72	0.47
20:AR:47:THR:HG22	20:AR:48:GLY:H	1.79	0.47
22:AT:94:ALA:O	22:AT:95:ALA:CB	2.63	0.47
23:B0:242:A:O2'	23:B0:243:G:P	2.72	0.47
23:B0:1365:U:H5'	23:B0:1587:A:H1'	1.96	0.47
23:B0:1489:C:H3'	23:B0:1490:U:C5'	2.45	0.47
23:B0:1494:G:H2'	23:B0:1495:G:C8	2.50	0.47
23:B0:2062:U:H4'	23:B0:2412:A:H2	1.78	0.47
23:B0:3181:C:H2'	23:B0:3182:U:C6	2.50	0.47
23:B0:2220:A:H2'	23:B0:2221:G:C8	2.48	0.47
23:B0:2455:A:O2'	23:B0:2456:U:H5'	2.15	0.47
23:B0:2799:C:H2'	23:B0:2800:C:O4'	2.14	0.47
1:AA:297:G:C5'	1:AA:557:G:H4'	2.44	0.47
1:AA:299:G:N2	1:AA:566:G:C6	2.78	0.47
1:AA:528:C:H5'	1:AA:535:A:C6	2.49	0.47
1:AA:1057:G:C2'	1:AA:1058:G:H5'	2.44	0.47
1:AA:1127:G:N2	1:AA:1147:C:N4	2.62	0.47
1:AA:1158:C:N3	1:AA:1181:G:N2	2.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1515:C:H2'	1:AA:1516:G:C8	2.50	0.47
7:AE:92:LYS:O	7:AE:118:ILE:HG23	2.15	0.47
7:AE:102:ALA:HB2	7:AE:120:THR:HB	1.97	0.47
8:AF:50:TYR:CE1	20:AR:77:GLY:HA2	2.49	0.47
9:AG:54:THR:HG22	9:AG:56:GLN:H	1.79	0.47
9:AG:112:PRO:O	9:AG:113:GLU:C	2.57	0.47
13:AK:33:THR:OG1	13:AK:37:GLY:C	2.58	0.47
14:AL:26:ALA:C	14:AL:27:LEU:O	2.57	0.47
15:AM:94:ARG:HH22	21:AS:81:ARG:HH11	1.61	0.47
16:AN:14:PRO:O	16:AN:16:PHE:N	2.44	0.47
19:AQ:104:LYS:CB	23:B0:726:G:C5	2.97	0.47
23:B0:404:A:H2'	23:B0:405:C:C6	2.50	0.47
23:B0:1074:G:O2'	23:B0:1075:C:H5'	2.15	0.47
23:B0:1101:U:O4	23:B0:1113:C:N4	2.48	0.47
23:B0:1286:U:H2'	23:B0:2692:A:H2	1.80	0.47
23:B0:1497:C:O2'	23:B0:1498:G:H5'	2.14	0.47
23:B0:1591:U:H2'	23:B0:1592:U:O4'	2.14	0.47
23:B0:1654:A:H2'	23:B0:1655:C:C6	2.49	0.47
23:B0:1918:G:H4'	23:B0:1920:A:C2	2.50	0.47
23:B0:1922:U:H1'	23:B0:2570:C:O2'	2.15	0.47
1:AA:37:U:H1'	1:AA:500:G:O2'	2.13	0.47
1:AA:155:C:H2'	1:AA:156:G:H8	1.79	0.47
1:AA:173:U:C2	1:AA:197:A:N1	2.82	0.47
1:AA:292:G:H21	1:AA:608:A:H2	1.51	0.47
1:AA:588:G:N7	1:AA:753:A:N3	2.63	0.47
1:AA:633:G:H2'	1:AA:634:C:C6	2.49	0.47
1:AA:702:A:C6	23:B0:1838:G:H2'	2.48	0.47
1:AA:707:C:H4'	13:AK:20:TYR:CZ	2.50	0.47
1:AA:780:A:C2	1:AA:801:U:C5	3.02	0.47
1:AA:893:C:C6	1:AA:894:G:N7	2.82	0.47
1:AA:947:G:H2'	1:AA:948:C:O4'	2.15	0.47
1:AA:992:U:O2'	1:AA:993:G:OP2	2.26	0.47
1:AA:1004:A:N6	1:AA:1035:A:H62	2.13	0.47
1:AA:1060:C:H5'	12:AJ:52:GLY:CA	2.27	0.47
1:AA:1114:C:O2	16:AN:60:SER:OG	2.29	0.47
1:AA:1128:C:O2'	1:AA:1130:A:C8	2.62	0.47
1:AA:1393:U:C2'	1:AA:1395:C:C5	2.93	0.47
2:AV:57:G:C4'	28:BD:76:ASN:CA	2.92	0.47
4:AB:78:GLN:O	4:AB:94:ASN:OD1	2.33	0.47
5:AC:19:GLU:HB3	5:AC:40:ARG:NH2	2.25	0.47
5:AC:100:ALA:O	5:AC:101:LEU:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AD:57:ARG:HH22	7:AE:107:ARG:HD2	1.60	0.47
7:AE:33:VAL:HG11	7:AE:109:ILE:HA	1.96	0.47
7:AE:148:VAL:O	7:AE:152:ARG:HG3	2.14	0.47
10:AH:75:ARG:HA	10:AH:76:PRO:HD3	1.70	0.47
11:AI:48:GLU:N	11:AI:49:PRO:CD	2.77	0.47
12:AJ:51:ARG:HA	16:AN:45:ARG:NH1	2.30	0.47
14:AL:28:LYS:HD2	14:AL:33:ARG:NH1	2.29	0.47
14:AL:42:THR:CG2	14:AL:52:LEU:HB3	2.44	0.47
18:AP:51:VAL:O	18:AP:52:ASP:C	2.58	0.47
19:AQ:101:ARG:HD3	23:B0:731:A:C2	2.36	0.47
22:AT:50:GLU:HG3	22:AT:99:LEU:CD1	2.45	0.47
23:B0:9:U:H2'	23:B0:10:A:C8	2.49	0.47
23:B0:367:G:C3'	23:B0:368:A:H5''	2.44	0.47
23:B0:619:A:H2'	23:B0:620:G:C8	2.49	0.47
23:B0:930:A:H3'	23:B0:931:G:H8	1.79	0.47
23:B0:1088:A:C2	23:B0:1099:A:C8	3.03	0.47
23:B0:1189:G:O2'	23:B0:1190:C:H5'	2.14	0.47
23:B0:1829:C:C2'	23:B0:1830:C:H5'	2.44	0.47
23:B0:1886:G:H2'	23:B0:1887:G:H8	1.79	0.47
23:B0:2008:C:H2'	23:B0:2009:U:C6	2.49	0.47
23:B0:2376:G:H2'	23:B0:2377:U:C6	2.50	0.47
24:B9:22:U:H2'	24:B9:23:G:H8	1.79	0.47
24:B9:80:A:H2'	24:B9:81:C:O4'	2.15	0.47
1:AA:27:G:N3	1:AA:557:G:N3	2.63	0.47
1:AA:41:G:H2'	1:AA:42:G:H8	1.79	0.47
1:AA:128:G:O3'	19:AQ:3:LYS:HG2	2.13	0.47
1:AA:247:G:OP2	19:AQ:100:LYS:CE	2.56	0.47
1:AA:264:U:C2'	19:AQ:64:PRO:N	2.77	0.47
1:AA:572:A:N3	1:AA:917:G:C1'	2.72	0.47
1:AA:672:U:O3'	1:AA:673:G:P	2.72	0.47
1:AA:975:A:H4'	1:AA:976:G:H5'	1.97	0.47
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.50	0.47
1:AA:1255:G:N3	1:AA:1259:C:O2	2.48	0.47
1:AA:1391:U:H1'	1:AA:1532:U:OP1	2.15	0.47
5:AC:79:ARG:HG2	5:AC:82:GLU:CG	2.45	0.47
13:AK:50:TYR:HD1	13:AK:60:ALA:HB2	1.80	0.47
15:AM:80:ARG:C	15:AM:82:MET:N	2.72	0.47
17:AO:41:GLU:O	17:AO:42:HIS:C	2.57	0.47
23:B0:38:G:H2'	23:B0:39:C:C6	2.49	0.47
23:B0:537:C:C6	23:B0:2759:U:H2'	2.50	0.47
23:B0:859:U:H4'	23:B0:860:U:C5	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:3149:G:O3'	23:B0:3150:C:OP2	2.33	0.47
23:B0:2238:G:H2'	23:B0:2239:C:C6	2.49	0.47
1:AA:88:G:O2'	1:AA:89:G:H5'	2.14	0.47
1:AA:129(A):G:O2'	1:AA:130:A:OP2	2.28	0.47
1:AA:141:A:C1'	1:AA:182:U:O2	2.63	0.47
1:AA:215:C:O2'	1:AA:465:C:N4	2.45	0.47
1:AA:300:A:H1'	1:AA:565:U:H3	1.79	0.47
1:AA:457:G:O2'	1:AA:458:G:H5'	2.15	0.47
1:AA:521:G:H4'	14:AL:73:GLU:CG	2.44	0.47
1:AA:560:U:O5'	1:AA:560:U:H6	1.98	0.47
1:AA:586:C:C5'	10:AH:90:GLY:N	2.78	0.47
1:AA:779:C:C5'	13:AK:120:ARG:C	2.75	0.47
1:AA:944:G:H3'	1:AA:945:G:H5'	1.97	0.47
1:AA:1001:A:H2'	1:AA:1002:G:H8	1.79	0.47
1:AA:1074:G:O3'	4:AB:103:THR:CG2	2.63	0.47
1:AA:1427:U:HO2'	23:B0:1704:G:H5''	1.77	0.47
1:AA:1428:A:O4'	23:B0:1704:G:H5'	2.15	0.47
4:AB:108:ILE:O	4:AB:108:ILE:HG22	2.13	0.47
5:AC:174:PRO:O	5:AC:177:THR:HG22	2.15	0.47
6:AD:63:LYS:O	6:AD:64:LEU:C	2.58	0.47
10:AH:23:SER:OG	10:AH:60:ARG:HD2	2.15	0.47
12:AJ:8:LEU:HD12	12:AJ:20:ALA:HB2	1.97	0.47
18:AP:20:VAL:CG1	18:AP:21:VAL:N	2.76	0.47
19:AQ:90:ILE:O	23:B0:726:G:H4'	2.15	0.47
22:AT:42:GLN:O	22:AT:42:GLN:NE2	2.47	0.47
23:B0:558:G:H5''	23:B0:559:C:C5	2.50	0.47
23:B0:810:U:H2'	23:B0:811:G:C8	2.49	0.47
23:B0:1789:U:H2'	23:B0:1790:G:H5'	1.95	0.47
23:B0:1974:U:H2'	23:B0:1975:G:H5''	1.95	0.47
23:B0:3098:U:H3'	23:B0:3099:U:C5	2.49	0.47
23:B0:3171:A:O2'	23:B0:3172:U:H6	1.98	0.47
1:AA:517:G:H5'	1:AA:519:C:C2	2.50	0.47
1:AA:932:C:C5'	9:AG:3:ARG:CD	2.86	0.47
1:AA:1491:G:OP1	14:AL:46:LYS:NZ	2.48	0.47
5:AC:188:LEU:O	5:AC:189:ALA:CB	2.59	0.47
6:AD:3:ARG:NE	6:AD:71:SER:HB3	2.30	0.47
6:AD:145:GLU:HG2	6:AD:184:LYS:HE2	1.96	0.47
8:AF:30:LEU:HB3	8:AF:35:ALA:CB	2.41	0.47
13:AK:80:VAL:HG21	13:AK:103:LEU:HD13	1.97	0.47
19:AQ:80:GLY:O	19:AQ:81:ARG:HB3	2.15	0.47
21:AS:10:PHE:HE2	21:AS:12:ASP:OD1	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:85:C:O2'	23:B0:86:U:H5'	2.15	0.47
23:B0:342:G:O2'	23:B0:343:A:OP1	2.27	0.47
23:B0:462:G:H2'	23:B0:463:C:H5'	1.97	0.47
23:B0:564:U:H2'	23:B0:565:A:C8	2.50	0.47
23:B0:1091:C:H4'	31:BG:126:THR:CA	2.44	0.47
23:B0:3185:U:H5'	23:B0:3185:U:C6	2.40	0.47
23:B0:2199:C:H2'	23:B0:2200:G:C8	2.50	0.47
23:B0:2429:A:O2'	23:B0:2430:A:H5'	2.16	0.47
1:AA:132:C:O2'	1:AA:133:U:H5'	2.15	0.46
1:AA:421:U:H5'	1:AA:422:C:H5	1.80	0.46
1:AA:521:G:H4'	14:AL:73:GLU:HG2	1.96	0.46
1:AA:1110:A:C5	1:AA:1111:A:C5	3.03	0.46
1:AA:1153:C:H2'	1:AA:1154:G:C8	2.46	0.46
1:AA:1300:G:O2'	1:AA:1301:U:P	2.73	0.46
1:AA:1410:G:N1	1:AA:1491:G:N1	2.63	0.46
4:AB:53:ARG:NH1	4:AB:199:TYR:CD2	2.82	0.46
4:AB:125:PRO:C	4:AB:127:ILE:H	2.22	0.46
7:AE:118:ILE:CG2	7:AE:119:LEU:H	2.27	0.46
9:AG:135:VAL:O	9:AG:139:GLU:HG3	2.15	0.46
11:AI:33:PHE:CE2	11:AI:47:LEU:HD11	2.50	0.46
13:AK:59:TYR:O	13:AK:62:GLN:HB3	2.15	0.46
14:AL:38:THR:HG22	14:AL:39:VAL:HG23	1.97	0.46
17:AO:77:ARG:O	17:AO:80:ALA:HB3	2.15	0.46
20:AR:59:SER:OG	20:AR:62:GLU:HG3	2.15	0.46
21:AS:15:LEU:HD12	21:AS:16:LEU:H	1.77	0.46
23:B0:351:A:H2'	23:B0:352:G:O4'	2.15	0.46
23:B0:1155:G:H2'	23:B0:1156:U:O4'	2.16	0.46
23:B0:1184:G:H2'	23:B0:1185:C:H5'	1.97	0.46
23:B0:1223:G:H5'	23:B0:1225:G:OP1	2.15	0.46
23:B0:3131:A:H5''	23:B0:3133:G:O4'	2.16	0.46
23:B0:3181:C:O3'	23:B0:3182:U:P	2.73	0.46
23:B0:2432:A:H4'	23:B0:2551:A:O2'	2.15	0.46
24:B9:34:C:H2'	24:B9:35:C:C6	2.50	0.46
1:AA:253:U:C2'	19:AQ:15:MET:SD	3.02	0.46
1:AA:538:G:C8	14:AL:115:LYS:CE	2.98	0.46
1:AA:743:U:H2'	1:AA:744:C:H6	1.79	0.46
1:AA:1190:G:H3'	5:AC:3:ASN:CB	2.33	0.46
1:AA:1195:C:H2'	1:AA:1197:G:H5'	1.96	0.46
1:AA:1445:U:O2'	1:AA:1446:A:H5'	2.15	0.46
4:AB:75:LYS:HE3	4:AB:78:GLN:OE1	2.14	0.46
5:AC:21:ARG:NH2	5:AC:56:ASP:OD2	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:23:TYR:CE1	12:AJ:67:THR:CG2	2.96	0.46
5:AC:167:TRP:O	5:AC:168:ALA:CB	2.63	0.46
8:AF:44:GLY:HA2	8:AF:59:TYR:CE1	2.51	0.46
9:AG:65:ALA:O	9:AG:66:VAL:C	2.58	0.46
9:AG:77:SER:O	9:AG:156:TRP:CZ3	2.69	0.46
11:AI:104:ARG:O	11:AI:105:ASP:C	2.59	0.46
14:AL:77:LEU:HD21	14:AL:107:ALA:HB2	1.97	0.46
18:AP:43:LYS:HG2	18:AP:48:TRP:CE2	2.50	0.46
23:B0:566:U:H2'	23:B0:567:G:C8	2.50	0.46
23:B0:1313:U:O4	23:B0:1651:U:H5'	2.15	0.46
23:B0:1445:A:H2'	23:B0:1446:U:O4'	2.14	0.46
23:B0:2560:G:H3'	23:B0:2560:G:N3	2.31	0.46
1:AA:214:U:H5'	1:AA:215:C:OP2	2.15	0.46
1:AA:265:G:C4'	19:AQ:64:PRO:O	2.46	0.46
1:AA:321:A:O2'	1:AA:322:C:H5'	2.15	0.46
1:AA:521:G:O4'	14:AL:73:GLU:OE2	2.33	0.46
1:AA:542:G:H2'	1:AA:543:C:H6	1.80	0.46
1:AA:599:C:H5'	10:AH:131:GLY:HA2	1.96	0.46
1:AA:1261:A:H4'	1:AA:1283:G:H5''	1.97	0.46
1:AA:1497:G:N2	1:AA:1519:A:N3	2.63	0.46
7:AE:18:ARG:HG2	7:AE:19:MET:H	1.81	0.46
14:AL:54:LYS:N	14:AL:54:LYS:HD2	2.30	0.46
23:B0:397:U:H2'	23:B0:398:C:C6	2.51	0.46
23:B0:1280:U:O2'	23:B0:1281:A:H5'	2.15	0.46
23:B0:1333:G:N2	23:B0:1344:C:H41	2.13	0.46
23:B0:1840:A:H2'	23:B0:1841:G:H5'	1.98	0.46
23:B0:3093:C:O2'	23:B0:3094:A:H5'	2.15	0.46
23:B0:2277:A:H2'	23:B0:2278:A:O4'	2.16	0.46
23:B0:2498:U:H5''	23:B0:2499:C:OP1	2.15	0.46
23:B0:2512:A:H2'	23:B0:2513:A:O4'	2.15	0.46
24:B9:22:U:H2'	24:B9:23:G:C8	2.50	0.46
1:AA:128:G:C5'	19:AQ:2:PRO:N	2.78	0.46
1:AA:130:A:N9	19:AQ:63:ARG:HG3	2.28	0.46
1:AA:406:G:C4	1:AA:496:A:N7	2.82	0.46
1:AA:619:U:N1	6:AD:135:LEU:HD12	2.26	0.46
1:AA:761:G:H4'	23:B0:726:G:H22	1.80	0.46
1:AA:1234:C:H4'	1:AA:1365:G:OP1	2.13	0.46
1:AA:1256:A:C2	1:AA:1258:G:N1	2.72	0.46
1:AA:1342:C:C4'	11:AI:125:TYR:CD1	2.93	0.46
1:AA:1481:U:H2'	1:AA:1482:G:O4'	2.15	0.46
1:AA:1499:A:C2'	1:AA:1520:G:H5''	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AV:76:A:C5'	23:B0:2564:U:C5	2.85	0.46
2:AV:76:A:C3'	23:B0:2046:C:C2'	2.91	0.46
5:AC:139:GLN:NE2	5:AC:139:GLN:CA	2.78	0.46
6:AD:24:GLU:CG	6:AD:25:ARG:N	2.77	0.46
7:AE:144:THR:O	7:AE:145:LYS:C	2.59	0.46
9:AG:20:ASP:OD1	9:AG:22:LEU:HB3	2.15	0.46
9:AG:21:VAL:HG23	9:AG:22:LEU:N	2.29	0.46
12:AJ:22:LYS:HE2	12:AJ:90:LEU:HB2	1.97	0.46
12:AJ:45:ARG:NH2	16:AN:36:PHE:HD2	1.84	0.46
13:AK:72:ALA:HB1	13:AK:77:MET:HG3	1.97	0.46
13:AK:93:GLN:HE21	13:AK:96:ARG:NH2	2.13	0.46
13:AK:100:ALA:O	13:AK:101:SER:C	2.57	0.46
14:AL:82:VAL:O	14:AL:106:ASP:HB2	2.15	0.46
15:AM:59:TYR:O	15:AM:63:THR:HB	2.15	0.46
17:AO:66:LEU:O	17:AO:69:TYR:HB3	2.15	0.46
23:B0:323:G:H2'	23:B0:324:C:C6	2.50	0.46
23:B0:584:A:H4'	23:B0:2479:U:C5'	2.45	0.46
23:B0:1947:G:P	23:B0:1947:G:H8	2.38	0.46
23:B0:2061:C:H1'	23:B0:2413:A:H1'	1.97	0.46
23:B0:3109:U:H5'	23:B0:3150:C:C5'	2.24	0.46
23:B0:2669:C:H41	36:BL:15:SER:CA	2.28	0.46
23:B0:2784:A:H4'	23:B0:2786:G:OP2	2.15	0.46
1:AA:253:U:H5'	1:AA:276:G:C1'	2.46	0.46
1:AA:390:C:H6	1:AA:390:C:O5'	1.99	0.46
1:AA:419:C:H5''	1:AA:513:C:C1'	2.44	0.46
1:AA:476:U:C4	1:AA:477:G:C5'	2.97	0.46
1:AA:961:U:OP1	1:AA:1223:C:H4'	2.15	0.46
1:AA:1056:U:O2'	1:AA:1057:G:H5'	2.14	0.46
1:AA:1152:A:O2'	1:AA:1153:C:H5'	2.16	0.46
1:AA:1300:G:O2'	1:AA:1301:U:H6	1.98	0.46
1:AA:1320:C:N3	21:AS:36:ARG:HG3	2.30	0.46
4:AB:10:LEU:C	4:AB:12:GLU:N	2.72	0.46
4:AB:129:GLU:O	4:AB:130:ARG:HB2	2.15	0.46
5:AC:28:GLN:O	5:AC:31:HIS:N	2.46	0.46
5:AC:129:ALA:HB3	5:AC:132:ARG:CD	2.45	0.46
9:AG:85:TYR:CD1	9:AG:154:TYR:HE1	2.28	0.46
9:AG:154:TYR:O	9:AG:156:TRP:N	2.49	0.46
9:AG:155:ARG:O	9:AG:156:TRP:CB	2.64	0.46
12:AJ:61:GLU:HG3	16:AN:58:LYS:CE	2.36	0.46
17:AO:83:GLU:OE1	17:AO:83:GLU:C	2.58	0.46
22:AT:63:ILE:HG23	22:AT:72:LEU:CD1	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:203:G:O2'	23:B0:204:A:H5'	2.15	0.46
23:B0:508:G:H22	23:B0:516:G:H22	1.63	0.46
23:B0:645:G:H2'	23:B0:646:C:C6	2.51	0.46
23:B0:670:U:H2'	23:B0:671:A:C8	2.50	0.46
23:B0:887:G:O2'	23:B0:888:G:H5'	2.15	0.46
23:B0:1912:G:O4'	23:B0:1913:G:H8	1.95	0.46
23:B0:3108:G:N3	23:B0:3109:U:C5	2.84	0.46
23:B0:2321:C:H2'	23:B0:2322:U:H5'	1.97	0.46
1:AA:58:C:O2'	1:AA:59:A:H5'	2.16	0.46
1:AA:127:G:OP1	1:AA:635:G:H1'	2.15	0.46
1:AA:201:G:H21	1:AA:469:C:H4'	1.81	0.46
1:AA:760:G:N1	19:AQ:105:ALA:HB2	2.31	0.46
1:AA:1064:G:H1'	1:AA:1190:G:N2	2.28	0.46
1:AA:1255:G:O2'	1:AA:1259:C:C2	2.58	0.46
1:AA:1466:C:H2'	1:AA:1467:G:C8	2.50	0.46
4:AB:142:LEU:HB3	4:AB:146:GLN:HE22	1.80	0.46
5:AC:59:ARG:O	12:AJ:92:THR:CG2	2.64	0.46
7:AE:35:GLY:HA3	7:AE:112:LEU:HB3	1.98	0.46
7:AE:143:ARG:HA	7:AE:143:ARG:HD3	1.71	0.46
10:AH:92:ARG:HG2	10:AH:94:TYR:OH	2.16	0.46
15:AM:46:LYS:HG3	15:AM:47:ASP:N	2.30	0.46
15:AM:51:ALA:O	15:AM:55:ARG:HG3	2.16	0.46
19:AQ:105:ALA:N	23:B0:727:U:C4'	2.78	0.46
21:AS:20:LEU:O	21:AS:23:ASN:HB2	2.15	0.46
22:AT:59:ALA:O	22:AT:63:ILE:HG13	2.14	0.46
23:B0:84:G:H2'	23:B0:85:C:C6	2.50	0.46
23:B0:753:U:H2'	23:B0:754:G:H5'	1.97	0.46
23:B0:831:G:H5'	23:B0:852:U:OP1	2.15	0.46
23:B0:1036:G:H1'	23:B0:1145:C:C4'	2.45	0.46
23:B0:1226:A:N1	23:B0:1250:A:H1'	2.30	0.46
23:B0:1358:C:H2'	23:B0:1359:G:H5'	1.97	0.46
23:B0:1414:G:H2'	23:B0:1415:C:C6	2.50	0.46
23:B0:2825:A:H2'	23:B0:2826:C:C6	2.51	0.46
24:B9:59:A:N3	24:B9:59:A:H2'	2.31	0.46
1:AA:7:G:O2'	7:AE:121:LYS:HB2	2.16	0.46
1:AA:15:G:HO2'	7:AE:24:ARG:NH1	2.10	0.46
1:AA:118:U:H3'	1:AA:119:A:P	2.56	0.46
1:AA:277:C:P	19:AQ:41:LYS:HZ1	2.36	0.46
1:AA:411:A:C6	1:AA:429:U:C4	3.04	0.46
1:AA:815:A:N1	1:AA:1528:U:N1	2.55	0.46
1:AA:905:U:O4	1:AA:906:G:N1	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:954:G:H2'	1:AA:955:U:H6	1.78	0.46
1:AA:1030:U:H5'	1:AA:1031:C:H5	1.80	0.46
1:AA:1245:A:H2'	1:AA:1246:C:C6	2.50	0.46
1:AA:1347:G:HO2'	1:AA:1373:G:H1	1.64	0.46
1:AA:1429:C:O2'	23:B0:1720:G:O2'	2.03	0.46
1:AA:1497:G:C2'	1:AA:1498:U:C5'	2.87	0.46
2:AV:33:U:O2	2:AV:35:A:H5'	2.13	0.46
4:AB:15:VAL:CG1	4:AB:209:ARG:HG3	2.46	0.46
4:AB:228:GLY:O	4:AB:229:VAL:C	2.58	0.46
6:AD:104:VAL:HG11	6:AD:146:ILE:CD1	2.37	0.46
6:AD:121:VAL:O	6:AD:134:ASP:HA	2.16	0.46
6:AD:130:GLY:O	6:AD:131:ARG:C	2.58	0.46
7:AE:68:GLU:O	7:AE:70:PRO:HD3	2.15	0.46
8:AF:101:ALA:HB2	20:AR:28:GLU:HB3	1.97	0.46
9:AG:15:ASP:O	9:AG:19:GLY:HA2	2.16	0.46
13:AK:84:VAL:HG23	13:AK:109:VAL:O	2.16	0.46
14:AL:60:LEU:HD21	14:AL:66:VAL:HG22	1.97	0.46
14:AL:71:PRO:O	14:AL:102:ARG:HD2	2.16	0.46
15:AM:39:ILE:HD12	15:AM:56:LEU:HG	1.98	0.46
18:AP:72:ARG:O	18:AP:72:ARG:HG2	2.16	0.46
23:B0:181:A:H4'	23:B0:182:G:C4'	2.44	0.46
23:B0:575:U:H2'	23:B0:576:A:C8	2.51	0.46
23:B0:1269:G:H2'	23:B0:1270:C:C6	2.50	0.46
23:B0:3876:A:H5''	55:B5:39:ILE:CA	2.45	0.46
23:B0:2021:G:H2'	23:B0:2022:C:C6	2.51	0.46
1:AA:255:G:C5'	19:AQ:17:LYS:CA	2.91	0.46
1:AA:322:C:C5'	22:AT:23:ARG:CD	2.86	0.46
1:AA:547:A:OP1	1:AA:548:G:P	2.74	0.46
1:AA:645:C:O2'	1:AA:646:U:H5'	2.16	0.46
1:AA:651:C:N4	1:AA:753:A:OP2	2.44	0.46
1:AA:676:A:H4'	13:AK:114:VAL:C	2.41	0.46
1:AA:778:G:HO2'	1:AA:779:C:H5'	1.80	0.46
1:AA:1314:C:C5	21:AS:6:LYS:CD	2.99	0.46
1:AA:1390:U:H2'	1:AA:1391:U:C6	2.51	0.46
5:AC:157:ILE:HD11	5:AC:166:GLU:HB2	1.97	0.46
6:AD:173:TRP:CD2	6:AD:189:PRO:HB3	2.51	0.46
9:AG:46:ALA:O	9:AG:50:ILE:HG13	2.15	0.46
9:AG:107:ALA:O	9:AG:110:GLN:HB2	2.16	0.46
14:AL:59:ARG:NH1	14:AL:65:GLU:HG2	2.30	0.46
21:AS:15:LEU:O	21:AS:19:VAL:N	2.48	0.46
21:AS:67:VAL:O	21:AS:69:HIS:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:313:U:H2'	23:B0:314:G:C8	2.51	0.46
23:B0:317:U:H3'	23:B0:318:G:C5'	2.46	0.46
23:B0:1921:A:C3'	23:B0:1922:U:H5''	2.46	0.46
1:AA:186:C:C5'	22:AT:81:LYS:NZ	2.69	0.46
1:AA:355:C:H5'	1:AA:389:A:OP2	2.16	0.46
1:AA:998:G:O2'	1:AA:999:C:H5'	2.15	0.46
1:AA:1039:C:O2'	1:AA:1040:U:H5'	2.16	0.46
1:AA:1237:C:H2'	1:AA:1336:C:C5	2.51	0.46
1:AA:1483:A:N3	1:AA:1484:C:C6	2.84	0.46
4:AB:100:GLY:O	4:AB:104:ASN:N	2.45	0.46
5:AC:64:VAL:CG2	5:AC:99:VAL:HB	2.45	0.46
8:AF:2:ARG:HD2	8:AF:69:GLU:HG2	1.96	0.46
11:AI:48:GLU:OE1	11:AI:48:GLU:HA	2.16	0.46
13:AK:16:SER:O	13:AK:35:PRO:HD3	2.16	0.46
13:AK:34:ASP:O	13:AK:36:ASP:N	2.48	0.46
17:AO:34:LEU:HD23	17:AO:34:LEU:C	2.40	0.46
19:AQ:66:SER:OG	19:AQ:69:LYS:HB3	2.15	0.46
20:AR:48:GLY:O	20:AR:74:ARG:NH2	2.41	0.46
21:AS:18:LYS:O	21:AS:18:LYS:HG2	2.16	0.46
23:B0:42:G:H2'	23:B0:43:A:O4'	2.16	0.46
23:B0:471:A:H62	23:B0:480:G:N2	2.07	0.46
23:B0:502:A:H2'	23:B0:503:G:O4'	2.15	0.46
23:B0:644:A:H2'	23:B0:645:G:H5'	1.98	0.46
23:B0:1193:G:H2'	23:B0:1194:U:C6	2.50	0.46
23:B0:3877:A:OP2	23:B0:1861:G:OP2	2.34	0.46
23:B0:2800:C:H2'	23:B0:2801:A:O4'	2.15	0.46
23:B0:2809:A:C6	23:B0:2854:G:H2'	2.50	0.46
1:AA:9:G:OP2	7:AE:126:ARG:NH1	2.48	0.46
1:AA:43:C:OP2	18:AP:12:LYS:NZ	2.48	0.46
1:AA:778:G:C4'	13:AK:119:CYS:SG	3.04	0.46
1:AA:847:C:H2'	1:AA:848:G:H8	1.81	0.46
1:AA:1090:U:C4'	1:AA:1169:A:C2	2.99	0.46
1:AA:1277:C:C2'	1:AA:1278:U:H5'	2.46	0.46
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.16	0.46
4:AB:19:HIS:HD2	4:AB:189:ASP:OD2	1.99	0.46
4:AB:22:LYS:O	4:AB:23:ARG:HG3	2.16	0.46
5:AC:131:ARG:O	5:AC:135:LYS:HG3	2.16	0.46
6:AD:152:SER:HA	6:AD:155:LEU:HG	1.97	0.46
6:AD:163:GLU:C	6:AD:165:MET:N	2.72	0.46
10:AH:91:ARG:HG3	14:AL:7:ILE:HG13	1.97	0.46
14:AL:37:CYS:O	14:AL:79:GLU:O	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AM:5:ALA:O	15:AM:8:GLU:N	2.45	0.46
15:AM:49:THR:O	15:AM:53:VAL:HG23	2.16	0.46
20:AR:36:ASN:ND2	20:AR:38:GLU:HG2	2.29	0.46
23:B0:556:A:H2'	23:B0:557:U:H5'	1.98	0.46
23:B0:590:C:H2'	23:B0:591:G:C8	2.51	0.46
23:B0:599:A:H2'	23:B0:600:G:H8	1.80	0.46
23:B0:1312:G:H5''	23:B0:1313:U:C5'	2.39	0.46
23:B0:1352:G:H2'	23:B0:1353:A:C8	2.49	0.46
23:B0:1586:A:H2'	23:B0:1587:A:H8	1.81	0.46
23:B0:1750:A:H1'	23:B0:2690:A:C2	2.51	0.46
23:B0:3874:C:C2'	23:B0:3875:A:H5'	2.46	0.46
23:B0:2448:A:H2'	23:B0:2449:G:O4'	2.16	0.46
24:B9:74:A:H2'	24:B9:75:A:C8	2.51	0.46
1:AA:19:C:H2'	1:AA:20:U:H6	1.80	0.45
1:AA:39:G:N9	1:AA:498:U:C4	2.85	0.45
1:AA:135:C:C2'	1:AA:136:C:C5'	2.94	0.45
1:AA:151:A:H2'	1:AA:152:A:O4'	2.15	0.45
1:AA:600:C:H4'	10:AH:128:GLY:O	2.16	0.45
1:AA:702:A:C2	23:B0:1838:G:C2'	2.99	0.45
1:AA:1049:U:H4'	1:AA:1050:G:OP2	2.16	0.45
1:AA:1230:C:H2'	1:AA:1231:G:H8	1.81	0.45
1:AA:1475:G:H5'	23:B0:1705:U:O3'	2.16	0.45
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.50	0.45
1:AA:1532:U:O5'	1:AA:1532:U:H6	2.00	0.45
2:AW:76:A:H2	23:B0:2532:G:N2	1.98	0.45
4:AB:88:ALA:C	4:AB:90:MET:N	2.71	0.45
4:AB:95:GLN:C	4:AB:96:ARG:HD2	2.40	0.45
4:AB:97:TRP:CH2	4:AB:176:GLU:OE2	2.69	0.45
6:AD:4:TYR:O	6:AD:5:ILE:HB	2.16	0.45
7:AE:102:ALA:HB2	7:AE:120:THR:CB	2.46	0.45
15:AM:36:LYS:C	15:AM:38:GLY:H	2.24	0.45
15:AM:62:ASN:O	15:AM:63:THR:HB	2.16	0.45
16:AN:53:LEU:HB3	16:AN:56:VAL:CG2	2.45	0.45
23:B0:162:C:H4'	23:B0:195:A:O2'	2.16	0.45
23:B0:403:A:H4'	23:B0:425:A:C5'	2.39	0.45
23:B0:689:A:H3'	23:B0:689:A:N3	2.31	0.45
23:B0:839:U:OP1	23:B0:2407:G:H3'	2.16	0.45
23:B0:1203:A:H2'	23:B0:1204:G:H5'	1.98	0.45
23:B0:1223:G:H1'	23:B0:1225:G:N3	2.31	0.45
23:B0:1683:G:H2'	23:B0:1684:G:O4'	2.16	0.45
23:B0:1684:G:H2'	23:B0:1974:U:O4	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:2429:A:H5''	23:B0:2476:A:C6	2.51	0.45
23:B0:2437:G:H2'	23:B0:2469:G:N2	2.31	0.45
23:B0:2640:G:H2'	23:B0:2641:A:O4'	2.16	0.45
1:AA:5:U:O2'	1:AA:6:G:P	2.73	0.45
1:AA:8:A:H62	6:AD:208:SER:HB2	1.82	0.45
1:AA:82:C:H2'	1:AA:83:C:O4'	2.17	0.45
1:AA:112:G:H4'	1:AA:389:A:H5''	1.96	0.45
1:AA:119:A:C2	1:AA:240:C:C4	3.04	0.45
1:AA:556:C:C2	1:AA:557:G:N7	2.84	0.45
1:AA:599:C:H4'	10:AH:130:GLY:CA	2.45	0.45
1:AA:702:A:C1'	23:B0:1840:A:OP1	2.64	0.45
1:AA:826:C:H2'	1:AA:827:U:H6	1.82	0.45
1:AA:905:U:C4	1:AA:906:G:C6	3.04	0.45
1:AA:934:C:C4	1:AA:1345:U:C5	3.04	0.45
1:AA:1250:A:H5''	11:AI:68:GLY:N	2.32	0.45
1:AA:1261:A:C4'	1:AA:1283:G:H5''	2.46	0.45
1:AA:1401:G:OP1	3:AU:9:U:OP2	2.34	0.45
1:AA:1515:C:H2'	1:AA:1516:G:H8	1.81	0.45
4:AB:23:ARG:CZ	4:AB:23:ARG:HB2	2.47	0.45
4:AB:83:MET:HG3	4:AB:238:LEU:CD1	2.46	0.45
5:AC:23:TYR:CG	5:AC:24:ALA:N	2.84	0.45
7:AE:80:ILE:CD1	7:AE:91:LEU:HD12	2.46	0.45
19:AQ:105:ALA:CA	23:B0:727:U:O4'	2.64	0.45
21:AS:22:LEU:CD1	21:AS:31:ILE:HD11	2.46	0.45
23:B0:508:G:H2'	23:B0:509:U:C6	2.50	0.45
23:B0:523:A:H2	23:B0:591:G:H4'	1.81	0.45
23:B0:629:C:H2'	23:B0:630:G:H5'	1.98	0.45
23:B0:715:U:H2'	23:B0:716:U:C6	2.51	0.45
23:B0:831:G:C2'	23:B0:832:A:H5''	2.46	0.45
23:B0:1199:U:H2'	23:B0:1200:G:H8	1.80	0.45
23:B0:3872:A:H2'	23:B0:3873:G:O4'	2.16	0.45
23:B0:2009:U:H2'	23:B0:2010:G:C8	2.51	0.45
23:B0:2610:G:C4'	23:B0:2866:A:H4'	2.47	0.45
1:AA:132:C:O2'	22:AT:74:LYS:NZ	2.48	0.45
1:AA:248:C:H4'	1:AA:283:C:H1'	1.98	0.45
1:AA:260:G:O2'	1:AA:261:U:H5'	2.16	0.45
1:AA:624:C:H2'	1:AA:625:G:H8	1.81	0.45
1:AA:690:G:H2'	1:AA:691:G:O4'	2.16	0.45
1:AA:909:A:H2'	1:AA:910:C:O4'	2.16	0.45
1:AA:1111:A:N1	5:AC:177:THR:HB	2.30	0.45
1:AA:1196:U:H4'	1:AA:1197:G:OP2	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1461:G:O2'	1:AA:1462:G:H5'	2.16	0.45
4:AB:32:ILE:HG21	4:AB:40:HIS:HD2	1.80	0.45
5:AC:108:ASN:OD1	5:AC:110:ASN:HB2	2.16	0.45
9:AG:143:ARG:O	9:AG:145:ALA:O	2.34	0.45
10:AH:45:ILE:HG13	10:AH:45:ILE:O	2.16	0.45
12:AJ:48:THR:OG1	12:AJ:62:HIS:CD2	2.69	0.45
12:AJ:53:PRO:O	12:AJ:54:PHE:O	2.34	0.45
15:AM:37:THR:HG23	15:AM:55:ARG:CB	2.46	0.45
16:AN:26:ARG:NH1	16:AN:47:LEU:HD21	2.32	0.45
23:B0:129:A:H2'	23:B0:130:C:C6	2.51	0.45
23:B0:560:G:H2'	23:B0:561:U:C6	2.52	0.45
23:B0:666:U:H2'	23:B0:668:A:OP1	2.16	0.45
23:B0:930:A:H3'	23:B0:931:G:C8	2.51	0.45
23:B0:1578:U:H2'	23:B0:1579:G:C8	2.51	0.45
23:B0:3108:G:HO2'	23:B0:3109:U:P	2.39	0.45
23:B0:2451:G:H2'	23:B0:2508:G:N2	2.32	0.45
1:AA:65:U:C1'	1:AA:200:G:H4'	2.47	0.45
1:AA:91:C:O2'	1:AA:92:G:H5'	2.15	0.45
1:AA:237:C:H5'	19:AQ:25:ARG:CZ	2.45	0.45
1:AA:258:G:H2'	1:AA:259:G:H8	1.82	0.45
1:AA:702:A:C8	23:B0:1840:A:C8	3.04	0.45
1:AA:882:C:O2'	1:AA:883:C:H5'	2.16	0.45
1:AA:951:G:O2'	1:AA:952:U:H5'	2.15	0.45
1:AA:1171:G:H2'	1:AA:1172:C:C6	2.51	0.45
1:AA:1225:A:H5'	1:AA:1226:C:OP2	2.16	0.45
1:AA:1410:G:C4	1:AA:1491:G:N2	2.84	0.45
1:AA:1483:A:H3'	1:AA:1484:C:H5	1.82	0.45
4:AB:52:GLU:O	4:AB:56:ARG:HB2	2.17	0.45
5:AC:11:ARG:NH1	5:AC:177:THR:O	2.50	0.45
5:AC:99:VAL:CG2	5:AC:100:ALA:N	2.80	0.45
5:AC:164:ARG:HB3	5:AC:164:ARG:HH11	1.80	0.45
6:AD:187:ARG:HA	6:AD:187:ARG:HD2	1.81	0.45
8:AF:33:TYR:HB2	8:AF:75:LEU:HD23	1.98	0.45
12:AJ:24:VAL:CG1	12:AJ:28:ARG:HE	2.29	0.45
12:AJ:30:SER:CB	12:AJ:84:GLN:HE21	2.29	0.45
12:AJ:62:HIS:HB2	16:AN:59:ALA:CB	2.23	0.45
22:AT:24:LEU:HD12	22:AT:24:LEU:O	2.17	0.45
23:B0:515:A:C2'	23:B0:516:G:H5'	2.43	0.45
23:B0:701:U:H2'	23:B0:702:A:O4'	2.15	0.45
23:B0:1349:A:H2'	23:B0:1350:G:C8	2.51	0.45
23:B0:3875:A:H5''	55:B5:42:LYS:CA	2.39	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1861:G:O2'	23:B0:1862:C:H5'	2.17	0.45
23:B0:2421:C:O2'	23:B0:2422:C:H5'	2.16	0.45
1:AA:265:G:H5''	19:AQ:65:ILE:O	2.17	0.45
1:AA:521:G:H4'	14:AL:73:GLU:N	2.31	0.45
1:AA:627:G:O2'	1:AA:628:G:H5'	2.17	0.45
1:AA:686:U:O2'	1:AA:687:A:C8	2.65	0.45
1:AA:953:G:H1'	15:AM:125:ARG:HB3	1.99	0.45
1:AA:1193:G:H4'	7:AE:25:ARG:HH21	1.80	0.45
1:AA:1233:G:OP1	11:AI:123:PRO:HB2	2.16	0.45
4:AB:42:ILE:HD12	4:AB:203:GLY:HA2	1.97	0.45
4:AB:62:ALA:C	4:AB:64:ARG:H	2.24	0.45
5:AC:60:ALA:O	5:AC:61:ALA:CB	2.63	0.45
5:AC:108:ASN:C	5:AC:110:ASN:N	2.73	0.45
5:AC:131:ARG:HA	5:AC:134:ILE:HD12	1.96	0.45
5:AC:154:SER:OG	5:AC:155:GLY:N	2.48	0.45
7:AE:15:ARG:NE	7:AE:26:PHE:CD2	2.84	0.45
7:AE:45:PHE:CD2	7:AE:47:LYS:HE3	2.51	0.45
9:AG:16:LEU:CG	11:AI:41:VAL:O	2.64	0.45
11:AI:36:TYR:CD2	11:AI:37:PHE:CE2	3.04	0.45
11:AI:40:LEU:O	11:AI:42:ARG:N	2.50	0.45
11:AI:117:HIS:C	11:AI:118:LYS:HG3	2.42	0.45
11:AI:121:ARG:HG2	11:AI:121:ARG:HH11	1.81	0.45
12:AJ:51:ARG:HG3	12:AJ:60:ARG:O	2.17	0.45
13:AK:48:ILE:O	13:AK:49:GLY:C	2.59	0.45
16:AN:12:ARG:O	16:AN:14:PRO:HD3	2.16	0.45
19:AQ:76:LEU:C	19:AQ:76:LEU:CD2	2.90	0.45
22:AT:100:ILE:C	22:AT:102:GLY:N	2.74	0.45
23:B0:211:U:C2'	23:B0:212:U:H5'	2.46	0.45
23:B0:307:C:H2'	23:B0:308:C:C6	2.51	0.45
23:B0:452:G:H2'	23:B0:453:U:O4'	2.16	0.45
23:B0:688:A:O2'	23:B0:2422:C:H4'	2.17	0.45
23:B0:1119:U:N3	23:B0:1120:C:N3	2.64	0.45
23:B0:1119:U:C5	23:B0:1120:C:C5	3.04	0.45
23:B0:1566:G:H4'	23:B0:1733:U:O4	2.16	0.45
23:B0:1678:G:H2'	23:B0:1679:U:C6	2.51	0.45
23:B0:2348:A:H2'	23:B0:2349:G:C8	2.52	0.45
23:B0:2708:U:H2'	23:B0:2709:C:C6	2.51	0.45
1:AA:37:U:H1'	1:AA:547:A:N1	2.31	0.45
1:AA:46:G:C2	1:AA:366:C:C6	3.05	0.45
1:AA:131:C:O2	1:AA:262:A:N1	2.38	0.45
1:AA:252:U:O2	1:AA:275:G:N3	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:393:A:C2'	1:AA:394:G:H5'	2.47	0.45
1:AA:401:C:HO2'	1:AA:621:A:H2	1.54	0.45
1:AA:542:G:P	6:AD:10:ARG:NH2	2.89	0.45
1:AA:644:G:O2'	1:AA:645:C:H5'	2.17	0.45
1:AA:675:A:O2'	13:AK:116:HIS:NE2	2.25	0.45
1:AA:1110:A:C6	1:AA:1111:A:C6	3.04	0.45
1:AA:1230:C:O2'	15:AM:126:LYS:HA	2.16	0.45
1:AA:1278:U:OP1	1:AA:1279:A:H5'	2.17	0.45
1:AA:1474:G:O2'	1:AA:1475:G:H5'	2.16	0.45
5:AC:23:TYR:CE2	12:AJ:9:ARG:CD	3.00	0.45
6:AD:8:VAL:HG21	6:AD:115:ARG:CZ	2.46	0.45
9:AG:75:VAL:HG12	9:AG:86:GLN:HE21	1.81	0.45
12:AJ:6:ILE:O	12:AJ:71:LEU:O	2.35	0.45
15:AM:120:LYS:HE2	15:AM:123:ALA:CB	2.47	0.45
16:AN:39:LEU:CD1	16:AN:47:LEU:HD12	2.46	0.45
17:AO:71:GLN:O	17:AO:72:ARG:C	2.59	0.45
21:AS:63:THR:HG22	21:AS:64:GLU:N	2.32	0.45
23:B0:419:G:O2'	23:B0:420:C:H5'	2.17	0.45
23:B0:604:U:H2'	23:B0:605:G:H8	1.82	0.45
23:B0:687:G:O2'	23:B0:688:A:H5'	2.17	0.45
23:B0:700:C:O2'	23:B0:801:A:H5'	2.17	0.45
23:B0:978:U:H2'	23:B0:979:A:C8	2.51	0.45
23:B0:1016:C:H2'	23:B0:1017:C:C6	2.52	0.45
23:B0:1278:A:O2'	23:B0:1279:G:P	2.75	0.45
23:B0:3171:A:O2'	23:B0:3172:U:C6	2.70	0.45
1:AA:65:U:C2	1:AA:200:G:O2'	2.61	0.45
1:AA:105:G:H2'	1:AA:106:C:H6	1.81	0.45
1:AA:439:A:C4	1:AA:497:A:C2	3.04	0.45
1:AA:470:U:H2'	1:AA:471:G:C8	2.51	0.45
1:AA:538:G:C4'	14:AL:114:LYS:CD	2.84	0.45
1:AA:735:C:O2'	1:AA:736:C:H5'	2.17	0.45
1:AA:782:A:H4'	1:AA:1514:C:O2'	2.16	0.45
1:AA:792:A:H1'	1:AA:794:A:N7	2.31	0.45
1:AA:1202:G:C2'	1:AA:1203:C:H5'	2.46	0.45
1:AA:1484:C:H2'	1:AA:1485:U:C6	2.50	0.45
1:AA:1515:C:O2'	1:AA:1516:G:H5'	2.16	0.45
4:AB:223:ILE:HG21	4:AB:230:VAL:HG23	1.99	0.45
11:AI:85:LEU:O	11:AI:92:TYR:CD1	2.69	0.45
15:AM:34:LEU:HD13	15:AM:41:PRO:CA	2.45	0.45
17:AO:87:ILE:CG2	17:AO:88:ARG:N	2.79	0.45
18:AP:55:ARG:O	18:AP:58:TYR:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AR:41:LYS:HG2	20:AR:41:LYS:O	2.13	0.45
20:AR:70:ILE:O	20:AR:74:ARG:HG3	2.17	0.45
23:B0:15:G:O2'	23:B0:16:G:H5'	2.17	0.45
23:B0:316:C:H2'	23:B0:317:U:C6	2.52	0.45
23:B0:611:C:C2'	23:B0:612:G:H5'	2.47	0.45
23:B0:1373:G:H2'	23:B0:1374:G:H5'	1.99	0.45
23:B0:1685:A:H1'	23:B0:1686:A:N7	2.32	0.45
23:B0:1745:C:H2'	23:B0:1746:A:O4'	2.16	0.45
23:B0:3873:G:O2'	23:B0:3874:C:H5'	2.17	0.45
23:B0:1921:A:C2'	23:B0:1922:U:H5''	2.46	0.45
1:AA:37:U:H1'	1:AA:547:A:C2	2.52	0.45
1:AA:119:A:C8	1:AA:287:U:O4	2.70	0.45
1:AA:129:U:C5'	19:AQ:3:LYS:CE	2.95	0.45
1:AA:191:G:N9	1:AA:192:U:C6	2.84	0.45
1:AA:242:C:H2'	1:AA:243:A:H5'	1.98	0.45
1:AA:265:G:O4'	19:AQ:64:PRO:CA	2.65	0.45
1:AA:321:A:H2'	1:AA:322:C:C6	2.52	0.45
1:AA:485:G:C2'	1:AA:486:U:OP2	2.65	0.45
1:AA:828:A:H5''	1:AA:859:A:C2	2.51	0.45
1:AA:920:U:H2'	1:AA:921:U:C6	2.52	0.45
1:AA:1019:C:O2'	1:AA:1020:U:H5'	2.17	0.45
1:AA:1342:C:C3'	11:AI:125:TYR:OH	2.58	0.45
1:AA:1394:A:C6	1:AA:1501:C:H4'	2.51	0.45
4:AB:8:LYS:O	4:AB:9:GLU:CB	2.60	0.45
7:AE:121:LYS:HE3	7:AE:123:LEU:CD2	2.46	0.45
11:AI:10:ARG:O	11:AI:11:LYS:C	2.60	0.45
12:AJ:30:SER:HB3	12:AJ:84:GLN:NE2	2.31	0.45
12:AJ:54:PHE:O	12:AJ:55:LYS:HG2	2.17	0.45
12:AJ:60:ARG:O	12:AJ:61:GLU:CB	2.61	0.45
13:AK:51:LYS:O	13:AK:55:LYS:CE	2.65	0.45
14:AL:85:ILE:HG23	14:AL:98:TYR:CB	2.46	0.45
16:AN:25:VAL:O	16:AN:25:VAL:HG13	2.16	0.45
23:B0:109:A:H3'	23:B0:110:U:C5'	2.41	0.45
23:B0:221:A:H62	23:B0:231:G:N2	2.10	0.45
23:B0:852:U:H3	23:B0:950:G:H1	1.64	0.45
23:B0:926:C:C2'	23:B0:927:C:H5'	2.47	0.45
23:B0:959:C:H2'	23:B0:960:U:C6	2.52	0.45
23:B0:1502:G:O2'	23:B0:1503:G:H5'	2.16	0.45
23:B0:2428:U:O2'	23:B0:2429:A:H5'	2.17	0.45
23:B0:2661:G:O2'	23:B0:2662:C:H5'	2.17	0.45
24:B9:66:G:H2'	24:B9:67:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:185:A:H2'	1:AA:186:C:H6	1.82	0.45
1:AA:547:A:C3'	1:AA:548:G:P	3.05	0.45
1:AA:814:A:H5'	1:AA:1511:G:H4'	1.98	0.45
1:AA:975:A:O5'	1:AA:976:G:H5'	2.17	0.45
1:AA:1051:C:H2'	1:AA:1052:U:H6	1.80	0.45
1:AA:1206:G:C6	1:AA:1207:G:C5	3.04	0.45
1:AA:1301:U:O2'	1:AA:1302:U:OP1	2.30	0.45
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.16	0.45
1:AA:1503:A:O2'	1:AA:1504:G:OP1	2.29	0.45
2:AV:16:U:C2'	2:AV:17:U:OP2	2.65	0.45
4:AB:92:TYR:CE1	4:AB:151:GLY:HA3	2.51	0.45
11:AI:121:ARG:C	11:AI:121:ARG:HD3	2.42	0.45
12:AJ:8:LEU:HD23	12:AJ:96:ILE:HG12	1.97	0.45
12:AJ:85:LEU:O	12:AJ:87:THR:N	2.50	0.45
18:AP:39:TYR:CZ	18:AP:41:PRO:HA	2.52	0.45
18:AP:75:ARG:O	18:AP:78:GLY:N	2.50	0.45
21:AS:45:VAL:C	21:AS:47:HIS:H	2.25	0.45
22:AT:42:GLN:O	22:AT:45:GLN:HB3	2.16	0.45
23:B0:8:A:H2'	23:B0:9:U:C6	2.52	0.45
23:B0:475:U:H2'	23:B0:476:G:O4'	2.17	0.45
23:B0:709:A:H2'	23:B0:710:C:C6	2.52	0.45
23:B0:874:A:H62	23:B0:928:G:N2	2.12	0.45
23:B0:925:U:H4'	23:B0:926:C:C5	2.52	0.45
23:B0:1199:U:C3'	23:B0:1200:G:H5''	2.32	0.45
23:B0:1793:A:H2'	23:B0:1794:A:C8	2.52	0.45
23:B0:2026:C:H2'	23:B0:2027:C:C6	2.52	0.45
23:B0:2181:A:C2'	23:B0:2182:A:H5'	2.47	0.45
23:B0:2454:C:H42	23:B0:2508:G:H22	1.64	0.45
23:B0:2539:C:H2'	23:B0:2540:A:C8	2.52	0.45
23:B0:2703:C:H2'	23:B0:2704:U:C6	2.51	0.45
23:B0:2830:U:H2'	23:B0:2831:A:C8	2.52	0.45
24:B9:40:C:H2'	24:B9:41:A:O4'	2.16	0.45
24:B9:94:G:O2'	24:B9:95:U:H5'	2.16	0.45
1:AA:15:G:H4'	7:AE:24:ARG:HH22	1.82	0.45
1:AA:102:G:O2'	1:AA:151:A:H2'	2.17	0.45
1:AA:173:U:C5	1:AA:198:G:N3	2.85	0.45
1:AA:227:G:C6	1:AA:228:A:C6	3.05	0.45
1:AA:397:A:H3'	1:AA:397:A:N3	2.32	0.45
1:AA:402:G:O4'	1:AA:621:A:C2	2.71	0.45
1:AA:513:C:H2'	1:AA:514:C:H6	1.81	0.45
1:AA:538:G:H5'	14:AL:114:LYS:CG	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:922:G:N2	1:AA:1396:A:N3	2.54	0.45
1:AA:958:A:O4'	21:AS:55:LYS:NZ	2.46	0.45
1:AA:974:A:C4	16:AN:31:ARG:NH2	2.85	0.45
1:AA:1131:G:H2'	1:AA:1132:C:C6	2.51	0.45
1:AA:1261:A:H5'	1:AA:1283:G:O2'	2.17	0.45
1:AA:1300:G:O2'	1:AA:1301:U:C6	2.70	0.45
3:AU:7:U:H2'	3:AU:8:G:C6	2.52	0.45
5:AC:23:TYR:CD1	12:AJ:11:PHE:CD2	3.05	0.45
7:AE:15:ARG:CD	7:AE:26:PHE:CD2	3.00	0.45
7:AE:115:VAL:HG11	7:AE:118:ILE:CD1	2.46	0.45
9:AG:12:LEU:N	9:AG:12:LEU:HD12	2.32	0.45
10:AH:116:LYS:NZ	10:AH:127:LEU:HD12	2.31	0.45
11:AI:111:ARG:HG3	11:AI:111:ARG:HH11	1.80	0.45
11:AI:114:TYR:HB2	12:AJ:60:ARG:NH1	2.31	0.45
15:AM:9:ILE:N	15:AM:9:ILE:HD12	2.32	0.45
15:AM:110:ARG:HG2	15:AM:110:ARG:HH11	1.82	0.45
22:AT:72:LEU:O	22:AT:73:HIS:O	2.35	0.45
23:B0:116:A:C2	23:B0:155:G:H1'	2.51	0.45
23:B0:241:C:C2'	23:B0:242:A:H5''	2.46	0.45
23:B0:626:A:O2'	23:B0:627:A:H5'	2.17	0.45
23:B0:838:A:H2'	23:B0:839:U:C6	2.52	0.45
23:B0:843:G:O2'	23:B0:844:G:OP1	2.31	0.45
23:B0:871:U:H1'	23:B0:2248:A:H5''	1.99	0.45
23:B0:1089:C:H1'	23:B0:1099:A:H8	1.82	0.45
23:B0:1504:G:O2'	23:B0:1505:U:H5'	2.17	0.45
23:B0:3108:G:H2'	23:B0:3109:U:OP2	2.16	0.45
23:B0:2555:G:H3'	23:B0:2555:G:N3	2.32	0.45
24:B9:36:A:H1'	24:B9:51:G:N2	2.32	0.45
1:AA:39:G:C6	1:AA:404:U:C4	3.05	0.44
1:AA:76:G:O2'	1:AA:77:C:H5'	2.17	0.44
1:AA:118:U:O3'	1:AA:119:A:C5'	2.65	0.44
1:AA:305:G:C3'	1:AA:306:G:P	3.05	0.44
1:AA:319:G:O2'	1:AA:320:C:H5'	2.16	0.44
1:AA:533:A:O2'	1:AA:534:U:P	2.75	0.44
1:AA:781:A:H2'	1:AA:782:A:H5'	1.98	0.44
1:AA:807:A:H2'	1:AA:808:C:C6	2.52	0.44
1:AA:848:G:C2'	1:AA:849:C:C1'	2.86	0.44
1:AA:1301:U:O2'	1:AA:1302:U:P	2.74	0.44
1:AA:1484:C:H5''	23:B0:1943:A:C2'	2.47	0.44
1:AA:1503:A:O2'	1:AA:1504:G:P	2.75	0.44
2:AV:74:C:O3'	23:B0:2581:A:O5'	2.34	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AU:9:U:H2'	3:AU:10:U:C6	2.52	0.44
6:AD:142:PRO:HG2	6:AD:187:ARG:NH1	2.32	0.44
6:AD:162:LEU:HD13	6:AD:181:MET:CE	2.46	0.44
11:AI:46:ALA:O	11:AI:49:PRO:HD2	2.17	0.44
12:AJ:29:ARG:C	12:AJ:84:GLN:HE22	2.24	0.44
12:AJ:75:ILE:HG22	12:AJ:76:ASN:N	2.32	0.44
18:AP:82:GLN:O	18:AP:83:GLU:C	2.59	0.44
19:AQ:18:THR:HG23	19:AQ:69:LYS:CE	2.47	0.44
19:AQ:81:ARG:HG3	19:AQ:81:ARG:O	2.17	0.44
20:AR:45:SER:HG	20:AR:49:LYS:HB2	1.80	0.44
20:AR:74:ARG:HB3	20:AR:81:PHE:CE1	2.51	0.44
23:B0:40:U:H2'	23:B0:41:G:C8	2.52	0.44
23:B0:857:U:C2'	23:B0:858:G:H5'	2.48	0.44
23:B0:926:C:H2'	23:B0:927:C:H5'	1.99	0.44
23:B0:1055:A:C2	23:B0:1121:G:H2'	2.52	0.44
23:B0:1273:G:H2'	23:B0:1274:C:C6	2.52	0.44
23:B0:1367:A:H2'	23:B0:1368:G:O4'	2.17	0.44
23:B0:2474:G:O2'	23:B0:2475:C:H5'	2.17	0.44
23:B0:2560:G:H4'	23:B0:2561:G:N7	2.32	0.44
1:AA:130:A:C8	1:AA:264:U:O4'	2.70	0.44
1:AA:254:G:C4'	19:AQ:18:THR:CB	2.73	0.44
1:AA:540:G:H2'	1:AA:541:G:O4'	2.18	0.44
1:AA:586:C:O3'	10:AH:89:PRO:CB	2.65	0.44
1:AA:1111:A:H2	5:AC:177:THR:HG1	1.51	0.44
1:AA:1112:C:O2	5:AC:179:ARG:CB	2.56	0.44
1:AA:1113:C:N1	5:AC:178:LEU:CD2	2.81	0.44
1:AA:1409:C:HO2'	1:AA:1410:G:H5'	1.78	0.44
2:AV:43:G:H2'	2:AV:44:A:C8	2.53	0.44
4:AB:54:THR:O	4:AB:57:PHE:HB3	2.18	0.44
4:AB:137:ARG:O	4:AB:140:HIS:HB2	2.16	0.44
5:AC:123:GLN:HE22	5:AC:140:ARG:NH2	2.16	0.44
6:AD:24:GLU:CG	6:AD:25:ARG:H	2.31	0.44
6:AD:39:PRO:HG2	6:AD:44:GLY:HA2	1.97	0.44
6:AD:162:LEU:HD13	6:AD:181:MET:CG	2.42	0.44
12:AJ:4:ILE:HG12	12:AJ:100:THR:CB	2.46	0.44
12:AJ:8:LEU:CD1	12:AJ:20:ALA:HB2	2.48	0.44
12:AJ:46:ARG:NH1	12:AJ:64:GLU:CG	2.80	0.44
13:AK:115:PRO:C	13:AK:117:ASN:H	2.25	0.44
18:AP:20:VAL:CG1	18:AP:32:TYR:CB	2.95	0.44
18:AP:20:VAL:HG13	18:AP:21:VAL:N	2.32	0.44
23:B0:431:G:H2'	23:B0:432:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:438:G:H2'	23:B0:439:C:C6	2.51	0.44
23:B0:455:A:H4'	23:B0:1214:C:O2'	2.17	0.44
23:B0:562:G:H2'	23:B0:563:U:O4'	2.17	0.44
23:B0:1436:G:H1'	23:B0:1508:G:N2	2.31	0.44
23:B0:3108:G:C2	23:B0:3109:U:C4	3.05	0.44
23:B0:2591:C:O2'	23:B0:2592:U:H5'	2.17	0.44
23:B0:2854:G:H3'	23:B0:2854:G:N3	2.33	0.44
1:AA:160:A:H61	1:AA:347:G:N2	2.15	0.44
1:AA:265:G:H1'	19:AQ:64:PRO:CB	2.35	0.44
1:AA:389:A:H2'	1:AA:390:C:C5'	2.48	0.44
1:AA:402:G:C4'	1:AA:621:A:C2	3.00	0.44
1:AA:1049:U:H1'	1:AA:1201:A:N7	2.31	0.44
1:AA:1289:A:H2'	1:AA:1290:G:H5'	2.00	0.44
1:AA:1353:G:H2'	1:AA:1354:C:H6	1.82	0.44
5:AC:6:HIS:CD2	5:AC:8:ILE:H	2.35	0.44
7:AE:13:ILE:HG22	7:AE:30:ALA:HB2	1.99	0.44
8:AF:40:VAL:CG2	8:AF:41:GLU:N	2.80	0.44
10:AH:73:ASP:OD2	10:AH:75:ARG:HB2	2.18	0.44
20:AR:51:LEU:HA	20:AR:52:PRO:HD3	1.80	0.44
23:B0:457:C:O2'	23:B0:458:G:H5'	2.16	0.44
23:B0:763:A:H2'	23:B0:764:A:H5''	2.00	0.44
23:B0:788:G:H5'	23:B0:790:A:N3	2.32	0.44
23:B0:1098:G:H22	23:B0:1113:C:N3	1.52	0.44
23:B0:1408:A:H1'	23:B0:1410:U:C5	2.52	0.44
23:B0:1436:G:H2'	23:B0:1437:A:C8	2.51	0.44
23:B0:1667:A:H2'	23:B0:1668:G:H8	1.83	0.44
23:B0:1708:C:H2'	23:B0:1709:U:O4'	2.18	0.44
23:B0:1785:A:H2'	23:B0:1786:C:C6	2.52	0.44
23:B0:1938:U:O2'	23:B0:1939:U:OP1	2.28	0.44
23:B0:1956:G:H2'	23:B0:1957:C:O4'	2.17	0.44
1:AA:8:A:H5''	7:AE:121:LYS:CD	2.47	0.44
1:AA:173:U:H5'	1:AA:197:A:C1'	2.45	0.44
1:AA:262:A:H5''	22:AT:76:ALA:N	2.32	0.44
1:AA:267:C:H2'	1:AA:268:C:C6	2.53	0.44
1:AA:384:G:H2'	1:AA:385:C:C6	2.53	0.44
1:AA:401:C:P	6:AD:73:ARG:HH21	2.38	0.44
1:AA:651:C:O2'	1:AA:652:U:P	2.72	0.44
1:AA:819:A:C6	1:AA:1529:G:C2	3.05	0.44
1:AA:933:G:OP2	9:AG:3:ARG:NE	2.48	0.44
1:AA:950:U:H2'	1:AA:951:G:C8	2.52	0.44
1:AA:977:A:H2'	1:AA:978:A:C5'	2.45	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1178:G:P	11:AI:97:LYS:NZ	2.89	0.44
2:AV:44:A:C2'	2:AV:45:G:C5'	2.96	0.44
5:AC:12:LEU:HA	5:AC:12:LEU:HD23	1.76	0.44
5:AC:123:GLN:HE22	5:AC:140:ARG:HH22	1.65	0.44
8:AF:30:LEU:CB	8:AF:35:ALA:HB3	2.41	0.44
15:AM:123:ALA:O	15:AM:124:PRO:C	2.60	0.44
20:AR:26:LEU:HD21	20:AR:39:VAL:HG23	2.00	0.44
23:B0:121:G:H2'	23:B0:122:G:O4'	2.18	0.44
23:B0:1023:U:H1'	23:B0:1154:A:C8	2.52	0.44
23:B0:1118:G:O2'	23:B0:1119:U:H5'	2.17	0.44
23:B0:1331:G:H2'	23:B0:1332:G:C8	2.52	0.44
23:B0:1452:U:H5''	23:B0:1533:G:H5'	2.00	0.44
23:B0:1659:G:H2'	23:B0:1660:G:C8	2.52	0.44
23:B0:1679:U:C2'	23:B0:1680:U:H5''	2.47	0.44
23:B0:2204:A:O2'	23:B0:2205:C:OP2	2.35	0.44
23:B0:2204:A:O2'	23:B0:2205:C:P	2.76	0.44
23:B0:2211:U:H2'	23:B0:2212:U:C6	2.52	0.44
23:B0:2312:A:H1'	23:B0:2314:A:C4	2.52	0.44
1:AA:69:G:O2'	1:AA:152:A:O2'	2.36	0.44
1:AA:253:U:C1'	1:AA:275:G:C2'	2.79	0.44
1:AA:253:U:C2	1:AA:275:G:H1'	2.52	0.44
1:AA:253:U:H2'	1:AA:254:G:C8	2.53	0.44
1:AA:675:A:O2'	13:AK:116:HIS:CG	2.71	0.44
1:AA:816:A:P	1:AA:1527:C:C4'	3.05	0.44
1:AA:928:G:O2'	1:AA:1533:C:H5	1.99	0.44
1:AA:962:C:H2'	1:AA:963:G:O4'	2.18	0.44
1:AA:1005:A:H2'	1:AA:1006:C:O4'	2.17	0.44
1:AA:1483:A:C8	1:AA:1484:C:N4	2.86	0.44
1:AA:1501:C:OP2	1:AA:1504:G:H2'	2.17	0.44
1:AA:1503:A:C5	1:AA:1531:A:N3	2.86	0.44
3:AU:6:A:H2'	3:AU:7:U:C6	2.53	0.44
4:AB:17:PHE:H	4:AB:44:LEU:HD21	1.83	0.44
4:AB:25:ASN:HD22	4:AB:27:LYS:H	1.65	0.44
6:AD:200:GLU:OE1	6:AD:200:GLU:N	2.46	0.44
7:AE:36:ASP:OD2	7:AE:40:ARG:HD3	2.18	0.44
7:AE:105:VAL:HB	7:AE:106:PRO:CD	2.40	0.44
12:AJ:81:THR:C	12:AJ:83:GLU:N	2.76	0.44
13:AK:40:ILE:HG23	13:AK:75:TYR:CE2	2.51	0.44
15:AM:84:ILE:HG13	15:AM:86:CYS:HB2	2.00	0.44
16:AN:9:LYS:HG3	16:AN:21:TYR:O	2.17	0.44
16:AN:23:ARG:HD3	16:AN:30:ALA:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AP:6:LEU:HB3	18:AP:17:TYR:HD2	1.81	0.44
21:AS:72:GLY:C	21:AS:74:PHE:H	2.25	0.44
23:B0:172:A:H4'	23:B0:228:A:H4'	2.00	0.44
23:B0:1226:A:C6	23:B0:1250:A:H1'	2.53	0.44
23:B0:1836:C:H2'	23:B0:1837:G:C8	2.53	0.44
24:B9:92:G:H2'	24:B9:93:G:H5'	1.99	0.44
1:AA:38:G:H4'	1:AA:547:A:N7	2.33	0.44
1:AA:130:A:C5'	1:AA:264:U:C5'	2.94	0.44
1:AA:203:A:H4'	1:AA:468:A:C5'	2.47	0.44
1:AA:600:C:O2'	1:AA:601:C:H5'	2.17	0.44
1:AA:686:U:O4	1:AA:703:G:H1'	2.17	0.44
1:AA:737:A:OP1	8:AF:91:VAL:HA	2.17	0.44
1:AA:884:U:O2'	1:AA:885:G:OP2	2.22	0.44
1:AA:913:A:O2'	1:AA:914:A:OP2	2.36	0.44
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.52	0.44
1:AA:1346:A:C2'	9:AG:10:ARG:NH2	2.63	0.44
1:AA:1420:C:H5'	23:B0:1933:G:OP1	2.17	0.44
1:AA:1430:C:C5'	23:B0:1721:G:H5'	2.48	0.44
2:AV:23:A:H2'	2:AV:24:G:C8	2.52	0.44
2:AV:50:U:O2'	2:AV:51:G:H5'	2.17	0.44
2:AW:64:A:H4'	23:B0:2461:G:O3'	2.17	0.44
5:AC:95:THR:C	5:AC:97:LYS:N	2.73	0.44
5:AC:99:VAL:HG22	5:AC:100:ALA:O	2.18	0.44
5:AC:113:ALA:N	5:AC:114:PRO:CD	2.80	0.44
6:AD:53:ASP:OD2	7:AE:104:ALA:HB1	2.18	0.44
6:AD:178:VAL:O	6:AD:178:VAL:HG12	2.18	0.44
7:AE:40:ARG:NH1	7:AE:68:GLU:OE2	2.49	0.44
9:AG:24:THR:HA	9:AG:27:ILE:HD12	2.00	0.44
9:AG:78:ARG:HG2	9:AG:80:VAL:HG23	1.99	0.44
10:AH:7:ALA:HB2	10:AH:85:ARG:HD2	1.99	0.44
11:AI:97:LYS:HG3	11:AI:102:LEU:HD12	1.96	0.44
12:AJ:3:LYS:CA	12:AJ:75:ILE:HA	2.48	0.44
12:AJ:22:LYS:HZ3	12:AJ:91:PRO:HD3	1.83	0.44
12:AJ:68:HIS:CD2	12:AJ:68:HIS:N	2.85	0.44
14:AL:7:ILE:O	14:AL:11:VAL:HG23	2.18	0.44
14:AL:117:ARG:HD2	14:AL:122:THR:OG1	2.17	0.44
16:AN:12:ARG:O	16:AN:14:PRO:CD	2.65	0.44
19:AQ:68:ARG:H	19:AQ:70:ARG:NH1	2.15	0.44
22:AT:30:LYS:O	22:AT:33:ILE:HB	2.18	0.44
22:AT:63:ILE:HD13	22:AT:80:ARG:CB	2.48	0.44
23:B0:354:C:H2'	23:B0:355:G:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:460:U:N3	23:B0:592:G:H1'	2.33	0.44
23:B0:1119:U:C3'	23:B0:1120:C:O4'	2.65	0.44
23:B0:1373:G:H22	23:B0:2192:U:H3	1.65	0.44
23:B0:1856:U:O4	23:B0:3865:A:N1	2.50	0.44
23:B0:1927:U:H3'	23:B0:1928:G:H5'	2.00	0.44
23:B0:1999:U:H5''	23:B0:2041:A:OP1	2.18	0.44
23:B0:2316:G:H2'	23:B0:2317:G:C8	2.50	0.44
1:AA:39:G:C6	1:AA:498:U:O4	2.67	0.44
1:AA:116:A:H2'	1:AA:117:G:O4'	2.17	0.44
1:AA:264:U:H2'	19:AQ:64:PRO:C	2.43	0.44
1:AA:383:A:H2'	1:AA:384:G:H5'	1.99	0.44
1:AA:433:C:O2'	1:AA:434:U:H5'	2.18	0.44
1:AA:456:A:C5	1:AA:477:G:N3	2.86	0.44
1:AA:499:A:C2	1:AA:500:G:H1'	2.46	0.44
1:AA:835:U:OP1	20:AR:60:GLY:CA	2.65	0.44
1:AA:975:A:H4'	1:AA:976:G:OP2	2.16	0.44
1:AA:1108:G:O3'	5:AC:176:HIS:NE2	2.51	0.44
1:AA:1279:A:O2'	1:AA:1281:U:OP2	2.33	0.44
1:AA:1299:A:C8	1:AA:1301:U:H1'	2.53	0.44
1:AA:1348:U:OP1	11:AI:110:GLU:CB	2.66	0.44
1:AA:1372:U:O2'	1:AA:1373:G:H5'	2.18	0.44
1:AA:1420:C:C5'	23:B0:1933:G:OP1	2.65	0.44
5:AC:126:ARG:C	5:AC:127:ARG:HG3	2.42	0.44
6:AD:8:VAL:HG11	6:AD:21:LEU:CB	2.47	0.44
11:AI:103:THR:HG22	11:AI:104:ARG:N	2.31	0.44
18:AP:80:PHE:O	18:AP:81:ARG:C	2.60	0.44
20:AR:37:VAL:O	20:AR:41:LYS:HB3	2.18	0.44
22:AT:10:LEU:C	22:AT:12:ALA:N	2.76	0.44
23:B0:117:A:O3'	23:B0:118:U:H3'	2.17	0.44
23:B0:242:A:O2'	23:B0:243:G:O4'	2.34	0.44
23:B0:415:A:O2'	23:B0:416:U:H5'	2.17	0.44
23:B0:432:C:H2'	23:B0:433:G:H8	1.83	0.44
23:B0:956:A:H2'	23:B0:956:A:N3	2.32	0.44
23:B0:1279:G:C2'	23:B0:1280:U:OP2	2.66	0.44
23:B0:1292:A:H2'	23:B0:1293:A:C8	2.53	0.44
23:B0:1459:U:H2'	23:B0:1475:U:O2'	2.16	0.44
23:B0:1604:A:H2'	23:B0:1605:A:O4'	2.18	0.44
23:B0:1724:C:H2'	23:B0:1725:C:C6	2.53	0.44
23:B0:1882:G:H21	23:B0:1885:C:N4	2.16	0.44
23:B0:2057:U:H2'	23:B0:2058:U:C6	2.52	0.44
23:B0:2242:C:H42	23:B0:2257:A:N6	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:18:C:C2	1:AA:918:A:N1	2.86	0.44
1:AA:45:U:H2'	1:AA:46:G:C8	2.53	0.44
1:AA:119:A:N1	1:AA:240:C:C2	2.86	0.44
1:AA:137:C:O2'	1:AA:138:G:H5'	2.18	0.44
1:AA:176:C:H2'	1:AA:177:C:H6	1.83	0.44
1:AA:223:U:C5'	22:AT:68:LYS:NZ	2.79	0.44
1:AA:427:U:O4'	1:AA:541:G:H5''	2.17	0.44
1:AA:436:C:H2'	1:AA:437:U:C6	2.41	0.44
1:AA:652:U:H2'	1:AA:752:G:N1	2.33	0.44
1:AA:676:A:H4'	13:AK:115:PRO:HA	1.98	0.44
1:AA:815:A:N1	1:AA:1528:U:C2	2.86	0.44
1:AA:1305:G:H22	1:AA:1331:G:C2'	2.31	0.44
1:AA:1457:A:C4	1:AA:1459:C:H1'	2.53	0.44
2:AV:56:C:C2'	28:BD:74:ILE:CA	2.96	0.44
4:AB:107:THR:C	4:AB:109:SER:N	2.75	0.44
5:AC:204:LEU:O	5:AC:205:GLY:C	2.59	0.44
6:AD:3:ARG:HA	6:AD:3:ARG:HD3	1.78	0.44
9:AG:145:ALA:C	9:AG:147:ALA:H	2.25	0.44
10:AH:86:ILE:HD12	10:AH:133:LEU:HD22	2.00	0.44
14:AL:46:LYS:CG	14:AL:47:LYS:H	2.29	0.44
18:AP:20:VAL:HG13	18:AP:32:TYR:HB2	2.00	0.44
19:AQ:97:SER:CB	19:AQ:102:GLY:C	2.78	0.44
23:B0:114:C:H4'	23:B0:124:A:O2'	2.17	0.44
23:B0:539:A:N6	23:B0:2024:U:H3	2.11	0.44
23:B0:548:G:H2'	23:B0:549:G:C8	2.53	0.44
23:B0:736:G:H2'	23:B0:737:C:O4'	2.17	0.44
23:B0:875:G:H2'	23:B0:876:A:O4'	2.18	0.44
23:B0:1288:A:H2'	23:B0:1289:A:O4'	2.17	0.44
23:B0:1326:U:H1'	23:B0:1626:A:N3	2.33	0.44
23:B0:1703:C:H2'	23:B0:1704:G:O4'	2.17	0.44
23:B0:1915:A:H62	23:B0:1951:G:N2	2.09	0.44
23:B0:2193:C:H2'	23:B0:2194:A:O4'	2.18	0.44
23:B0:2439:U:H2'	23:B0:2440:C:H5'	1.99	0.44
1:AA:46:G:N1	1:AA:366:C:C2	2.85	0.44
1:AA:94:G:C6	1:AA:96:C:N4	2.84	0.44
1:AA:227:G:C5	1:AA:228:A:C5	3.06	0.44
1:AA:248:C:C4'	1:AA:283:C:H1'	2.48	0.44
1:AA:292:G:N3	1:AA:608:A:C6	2.86	0.44
1:AA:598:U:H4'	10:AH:94:TYR:CD1	2.53	0.44
1:AA:865:A:H2'	1:AA:866:C:C6	2.53	0.44
1:AA:905:U:H5	1:AA:906:G:C6	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:974:A:P	16:AN:29:ARG:NH2	2.90	0.44
5:AC:47:LEU:H	5:AC:47:LEU:HD13	1.83	0.44
5:AC:134:ILE:HG22	5:AC:168:ALA:CB	2.48	0.44
9:AG:38:LEU:HD12	9:AG:42:ILE:HG13	2.00	0.44
13:AK:95:ILE:HD13	13:AK:108:ILE:HG21	1.99	0.44
17:AO:39:LEU:HD12	17:AO:59:MET:CE	2.48	0.44
18:AP:43:LYS:HA	18:AP:48:TRP:HB3	2.00	0.44
22:AT:100:ILE:O	22:AT:102:GLY:N	2.50	0.44
23:B0:181:A:C4'	23:B0:182:G:H4'	2.44	0.44
23:B0:192:G:O2'	23:B0:193:A:OP2	2.33	0.44
23:B0:529:U:H2'	23:B0:530:G:C8	2.53	0.44
23:B0:839:U:H5'	23:B0:2407:G:H2'	2.00	0.44
23:B0:1033:G:N2	23:B0:1150:C:H2'	2.30	0.44
23:B0:1188:A:H62	23:B0:1189:G:H21	1.66	0.44
23:B0:1313:U:H4'	23:B0:1314:A:O5'	2.18	0.44
23:B0:3872:A:H2'	23:B0:3873:G:H5'	2.00	0.44
23:B0:2022:C:H2'	23:B0:2023:C:C6	2.53	0.44
23:B0:3116:G:O3'	23:B0:3117:A:O4'	2.36	0.44
23:B0:2343:C:H2'	23:B0:2344:G:O4'	2.18	0.44
1:AA:38:G:C4'	1:AA:547:A:N7	2.81	0.43
1:AA:157:G:O2'	1:AA:158:G:H5'	2.18	0.43
1:AA:266:G:C5'	19:AQ:66:SER:CA	2.82	0.43
1:AA:266:G:C5'	19:AQ:67:LYS:H	2.31	0.43
1:AA:318:G:H22	1:AA:1433:A:H2	1.57	0.43
1:AA:583:A:H2'	1:AA:584:G:O4'	2.17	0.43
1:AA:1004:A:H5''	1:AA:1025:U:C4	2.53	0.43
1:AA:1053:G:O2'	1:AA:1199:U:H5	2.01	0.43
1:AA:1097:C:H2'	1:AA:1098:C:H6	1.82	0.43
1:AA:1269:A:C2	1:AA:1313:U:H1'	2.53	0.43
1:AA:1428:A:O2'	23:B0:1703:C:O2'	2.33	0.43
1:AA:1474:G:P	23:B0:1718:A:N3	2.90	0.43
1:AA:1496:C:H1'	1:AA:1517:G:H22	1.81	0.43
3:AU:12:A:H2'	3:AU:13:A:C6	2.52	0.43
2:AW:64:A:H4'	23:B0:2461:G:O2'	2.18	0.43
4:AB:119:GLU:OE1	4:AB:153:ARG:NH2	2.51	0.43
6:AD:25:ARG:HH21	6:AD:30:LYS:HD3	1.82	0.43
7:AE:40:ARG:NH1	7:AE:68:GLU:OE1	2.51	0.43
10:AH:103:VAL:HG21	10:AH:109:ILE:O	2.18	0.43
12:AJ:46:ARG:HH11	12:AJ:64:GLU:CG	2.31	0.43
13:AK:69:ALA:O	13:AK:70:LYS:C	2.60	0.43
14:AL:111:LYS:O	14:AL:112:ASP:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AL:115:LYS:C	14:AL:117:ARG:H	2.25	0.43
15:AM:7:VAL:O	15:AM:7:VAL:HG23	2.18	0.43
15:AM:23:TYR:CE2	15:AM:70:LEU:HD13	2.53	0.43
15:AM:110:ARG:HH11	15:AM:110:ARG:CG	2.31	0.43
17:AO:54:ARG:O	17:AO:58:MET:HG3	2.17	0.43
19:AQ:104:LYS:HZ1	23:B0:730:C:H42	1.62	0.43
19:AQ:104:LYS:O	19:AQ:105:ALA:CB	2.65	0.43
22:AT:42:GLN:HA	22:AT:45:GLN:HB2	1.99	0.43
23:B0:10:A:O2'	23:B0:11:G:H5'	2.18	0.43
23:B0:35:G:C1'	23:B0:466:A:H1'	2.48	0.43
23:B0:197:G:N2	23:B0:440:U:H2'	2.33	0.43
23:B0:198:A:H4'	23:B0:199:A:OP2	2.17	0.43
23:B0:207:U:H2'	23:B0:208:C:C6	2.52	0.43
23:B0:758:G:O2'	23:B0:761:G:H1'	2.18	0.43
23:B0:1259:A:H2'	23:B0:1260:A:C8	2.53	0.43
23:B0:1664:G:O5'	23:B0:1665:C:OP1	2.36	0.43
23:B0:3871:A:H2'	23:B0:3872:A:C8	2.53	0.43
23:B0:2033:C:H2'	23:B0:2034:A:O4'	2.17	0.43
23:B0:2065:A:H2'	23:B0:2066:G:O4'	2.18	0.43
23:B0:2265:A:H5''	23:B0:2266:A:O4'	2.18	0.43
1:AA:262:A:C5'	22:AT:75:ASN:N	2.60	0.43
1:AA:370:C:C2'	1:AA:371:G:H5'	2.48	0.43
1:AA:1371:G:OP1	11:AI:11:LYS:O	2.36	0.43
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.52	0.43
4:AB:92:TYR:CD1	4:AB:151:GLY:HA3	2.53	0.43
5:AC:188:LEU:HD13	5:AC:189:ALA:H	1.83	0.43
8:AF:75:LEU:O	8:AF:75:LEU:HD13	2.18	0.43
9:AG:18:TYR:CD2	9:AG:59:LEU:HB2	2.52	0.43
16:AN:29:ARG:HB3	16:AN:40:CYS:HB3	1.99	0.43
18:AP:67:THR:CG2	18:AP:68:ASP:N	2.81	0.43
23:B0:109:A:H2'	23:B0:110:U:H5''	2.00	0.43
23:B0:167:A:H62	23:B0:183:U:H3	1.66	0.43
23:B0:243:G:H2'	23:B0:244:C:O4'	2.18	0.43
23:B0:583:C:N3	23:B0:2016:A:H4'	2.32	0.43
23:B0:860:U:H2'	23:B0:860:U:O2	2.17	0.43
23:B0:925:U:H5''	23:B0:926:C:OP1	2.18	0.43
23:B0:944:A:H2'	23:B0:945:G:O4'	2.17	0.43
23:B0:1014:G:O2'	23:B0:1015:U:H5'	2.17	0.43
23:B0:1054:C:H2'	23:B0:1055:A:H5'	2.00	0.43
23:B0:1113:C:O3'	23:B0:1114:A:P	2.75	0.43
23:B0:1258:G:H2'	23:B0:1259:A:C8	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1283:C:OP1	23:B0:1284:G:H5'	2.17	0.43
23:B0:1358:C:C2'	23:B0:1359:G:H5''	2.48	0.43
23:B0:1429:A:H1'	23:B0:1603:A:C6	2.53	0.43
23:B0:1819:U:H5''	23:B0:1954:A:O3'	2.18	0.43
23:B0:1871:G:H2'	23:B0:1871:G:N3	2.33	0.43
23:B0:2069:U:H2'	23:B0:2070:G:C8	2.53	0.43
23:B0:2469:G:H4'	23:B0:2470:U:C6	2.54	0.43
23:B0:2498:U:H3'	23:B0:2498:U:OP1	2.17	0.43
23:B0:2680:U:H3'	23:B0:2681:A:C5'	2.43	0.43
23:B0:2867:G:H3'	23:B0:2867:G:N3	2.32	0.43
1:AA:189:A:OP2	22:AT:105:SER:HB3	2.13	0.43
1:AA:315:A:C5'	1:AA:317:G:OP2	2.64	0.43
1:AA:489:C:H2'	1:AA:490:G:C8	2.54	0.43
1:AA:652:U:O4	1:AA:752:G:O2'	2.28	0.43
1:AA:922:G:H21	1:AA:1396:A:C1'	2.29	0.43
1:AA:1229:A:H2'	1:AA:1230:C:H6	1.83	0.43
1:AA:1503:A:C5	1:AA:1531:A:C2	3.06	0.43
1:AA:1533:C:O2	1:AA:1533:C:H2'	2.17	0.43
2:AV:34:G:H3'	2:AV:35:A:H5''	2.00	0.43
2:AV:56:C:O2'	28:BD:74:ILE:CA	2.66	0.43
2:AV:74:C:N4	23:B0:2232:G:N1	2.66	0.43
3:AU:10:U:H2'	3:AU:11:C:C6	2.52	0.43
4:AB:83:MET:HG3	4:AB:238:LEU:HD11	2.00	0.43
4:AB:187:LEU:HD21	4:AB:214:ILE:HG13	2.00	0.43
5:AC:8:ILE:O	5:AC:11:ARG:N	2.47	0.43
5:AC:14:ILE:O	5:AC:15:THR:C	2.61	0.43
5:AC:28:GLN:O	5:AC:29:TYR:C	2.62	0.43
5:AC:191:THR:HB	5:AC:194:GLY:O	2.18	0.43
7:AE:24:ARG:NH1	7:AE:24:ARG:HG2	2.33	0.43
8:AF:15:ASP:O	8:AF:16:GLN:C	2.61	0.43
8:AF:22:GLU:OE2	8:AF:84:ASN:HB2	2.18	0.43
9:AG:38:LEU:HD11	9:AG:42:ILE:HD11	1.99	0.43
15:AM:22:ILE:HD12	15:AM:25:ILE:CD1	2.41	0.43
17:AO:87:ILE:HG22	17:AO:88:ARG:N	2.34	0.43
21:AS:10:PHE:C	21:AS:10:PHE:HD2	2.26	0.43
22:AT:10:LEU:C	22:AT:12:ALA:H	2.26	0.43
23:B0:712:A:H61	23:B0:746:G:H1'	1.83	0.43
23:B0:792:U:H2'	23:B0:793:G:O4'	2.19	0.43
23:B0:1065:A:O2'	23:B0:1066:G:H5'	2.18	0.43
23:B0:1482:U:H2'	23:B0:1483:G:C8	2.53	0.43
23:B0:1881:U:H2'	23:B0:1882:G:H5'	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1923:U:H1'	23:B0:1947:G:H4'	1.99	0.43
23:B0:2011:U:H2'	23:B0:2012:A:H8	1.83	0.43
1:AA:46:G:C8	1:AA:366:C:N4	2.86	0.43
1:AA:161:A:C2	1:AA:348:G:C2'	2.68	0.43
1:AA:197:A:H1'	1:AA:198:G:O4'	2.17	0.43
1:AA:253:U:C4'	1:AA:276:G:O4'	2.66	0.43
1:AA:665:A:C2	1:AA:732:C:H2'	2.53	0.43
1:AA:939:G:H5''	9:AG:102:ARG:NH2	2.34	0.43
1:AA:1263:C:H2'	1:AA:1264:C:H6	1.83	0.43
1:AA:1376:U:H2'	1:AA:1377:A:H8	1.80	0.43
3:AU:13:A:H2'	3:AU:14:A:C6	2.53	0.43
4:AB:8:LYS:HB2	4:AB:9:GLU:H	1.58	0.43
4:AB:10:LEU:CD2	4:AB:48:MET:HE2	2.48	0.43
5:AC:11:ARG:O	5:AC:14:ILE:O	2.36	0.43
6:AD:24:GLU:HG2	6:AD:25:ARG:H	1.82	0.43
6:AD:55:ALA:O	6:AD:59:ARG:HG2	2.19	0.43
6:AD:104:VAL:O	6:AD:105:VAL:C	2.59	0.43
6:AD:205:GLU:OE2	7:AE:107:ARG:NH2	2.48	0.43
7:AE:119:LEU:HD23	7:AE:119:LEU:HA	1.84	0.43
9:AG:16:LEU:CB	11:AI:41:VAL:HG12	2.49	0.43
10:AH:16:ALA:O	10:AH:21:LYS:HG2	2.18	0.43
11:AI:69:GLY:O	11:AI:73:GLN:HG3	2.18	0.43
12:AJ:27:ALA:CB	12:AJ:81:THR:HG23	2.47	0.43
12:AJ:30:SER:CB	12:AJ:80:LYS:HB3	2.44	0.43
13:AK:23:ALA:HB2	13:AK:91:ARG:HB2	1.99	0.43
13:AK:77:MET:CE	13:AK:80:VAL:HG22	2.48	0.43
13:AK:100:ALA:O	13:AK:102:GLY:N	2.51	0.43
19:AQ:104:LYS:CD	23:B0:729:A:N7	2.80	0.43
20:AR:58:LEU:HD22	20:AR:62:GLU:HB3	1.99	0.43
22:AT:63:ILE:HD13	22:AT:80:ARG:HB3	2.01	0.43
23:B0:437:G:O2'	23:B0:438:G:H5'	2.19	0.43
23:B0:826:U:H2'	23:B0:827:C:C6	2.53	0.43
23:B0:1196:G:C2'	23:B0:1197:U:H5'	2.48	0.43
23:B0:1257:U:H2'	23:B0:1258:G:C8	2.53	0.43
23:B0:1722:G:H2'	23:B0:1723:U:C6	2.54	0.43
1:AA:10:A:O2'	1:AA:507:C:H4'	2.17	0.43
1:AA:19:C:O2'	1:AA:572:A:N1	2.52	0.43
1:AA:141:A:H1'	1:AA:182:U:O2	2.18	0.43
1:AA:376:G:H5''	18:AP:5:ARG:HB2	1.99	0.43
1:AA:430:A:H2'	1:AA:431:A:H5'	1.99	0.43
1:AA:778:G:O2'	13:AK:120:ARG:CA	2.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AB:71:VAL:HB	4:AB:164:VAL:HG23	1.99	0.43
4:AB:137:ARG:HA	4:AB:140:HIS:HD2	1.84	0.43
5:AC:191:THR:HG21	5:AC:193:TYR:CE1	2.54	0.43
6:AD:89:THR:O	6:AD:90:GLY:C	2.61	0.43
7:AE:36:ASP:OD1	7:AE:38:GLN:N	2.39	0.43
11:AI:50:LEU:C	11:AI:52:ALA:H	2.26	0.43
12:AJ:45:ARG:NH2	16:AN:36:PHE:HE2	2.11	0.43
17:AO:82:ILE:O	17:AO:83:GLU:C	2.61	0.43
18:AP:40:ASP:HB3	18:AP:48:TRP:HB2	2.00	0.43
19:AQ:97:SER:O	19:AQ:98:LEU:HD12	2.19	0.43
21:AS:12:ASP:HB2	21:AS:35:SER:OG	2.19	0.43
23:B0:48:A:H4'	23:B0:50:G:O4'	2.18	0.43
23:B0:815:A:P	23:B0:815:A:H8	2.42	0.43
23:B0:1310:C:OP1	23:B0:2689:C:H4'	2.18	0.43
23:B0:1482:U:H2'	23:B0:1483:G:H8	1.83	0.43
23:B0:2035:G:H2'	23:B0:2036:G:C8	2.52	0.43
23:B0:2259:G:H2'	23:B0:2260:C:C6	2.53	0.43
23:B0:2378:G:H2'	23:B0:2379:G:H8	1.83	0.43
23:B0:2404:A:O2'	23:B0:2405:A:OP2	2.29	0.43
23:B0:2559:U:C2'	23:B0:2560:G:H5'	2.49	0.43
23:B0:2636:A:H62	23:B0:2643:G:N2	2.09	0.43
1:AA:188:C:O2	22:AT:106:ALA:C	2.56	0.43
1:AA:205:G:N2	1:AA:207:C:H41	2.15	0.43
1:AA:243:A:N6	1:AA:281:G:O2'	2.51	0.43
1:AA:297:G:H5'	1:AA:557:G:O4'	2.19	0.43
1:AA:402:G:H5'	1:AA:621:A:C2	2.54	0.43
1:AA:461:C:O2'	1:AA:462:A:H5'	2.19	0.43
1:AA:819:A:C6	1:AA:1529:G:N1	2.86	0.43
1:AA:961:U:C2'	1:AA:962:C:H5'	2.48	0.43
1:AA:1157:A:O4'	1:AA:1158:C:C2	2.72	0.43
1:AA:1458:G:C4	1:AA:1459:C:O2	2.72	0.43
1:AA:1459:C:H5''	22:AT:28:ALA:HB3	1.60	0.43
4:AB:124:SER:CB	4:AB:125:PRO:CD	2.90	0.43
5:AC:82:GLU:CD	5:AC:82:GLU:C	2.87	0.43
6:AD:10:ARG:HH11	6:AD:10:ARG:HG3	1.83	0.43
9:AG:148:ASN:C	9:AG:150:ALA:H	2.26	0.43
11:AI:78:LYS:HE2	11:AI:78:LYS:HB3	1.87	0.43
13:AK:32:ILE:HG21	13:AK:77:MET:HE2	2.01	0.43
23:B0:45:C:H2'	23:B0:46:C:C6	2.53	0.43
23:B0:69:G:O2'	23:B0:70:A:H4'	2.17	0.43
23:B0:491:A:H2'	23:B0:491:A:N3	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:931:G:N2	23:B0:2247:A:H5''	2.34	0.43
23:B0:969:U:O2'	23:B0:970:A:H5''	2.18	0.43
23:B0:1391:A:H2'	23:B0:1392:U:C5	2.54	0.43
23:B0:1424:U:H2'	23:B0:1425:G:C8	2.53	0.43
23:B0:1938:U:H3'	23:B0:2530:C:O2'	2.19	0.43
23:B0:2241:U:H4'	23:B0:2307:A:C2	2.54	0.43
23:B0:2436:U:H2'	23:B0:2437:G:O4'	2.18	0.43
23:B0:2586:G:H2'	23:B0:2587:G:O4'	2.19	0.43
1:AA:27:G:C4	1:AA:557:G:N3	2.81	0.43
1:AA:36:C:O2'	1:AA:501:C:OP1	2.32	0.43
1:AA:50:A:N6	1:AA:361:G:H4'	2.33	0.43
1:AA:118:U:O3'	1:AA:119:A:O5'	2.37	0.43
1:AA:265:G:O4'	19:AQ:64:PRO:O	2.35	0.43
1:AA:618:C:N3	1:AA:622:A:N6	2.67	0.43
1:AA:818:G:H3'	1:AA:819:A:H5'	2.01	0.43
1:AA:1060:C:O2'	1:AA:1061:G:H5'	2.18	0.43
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.45	0.43
1:AA:1131:G:H2'	1:AA:1132:C:H6	1.83	0.43
1:AA:1297:C:OP2	15:AM:44:ARG:NH2	2.51	0.43
4:AB:17:PHE:CA	4:AB:44:LEU:HD21	2.49	0.43
6:AD:8:VAL:CG1	6:AD:21:LEU:HD13	2.48	0.43
7:AE:80:ILE:HD12	7:AE:80:ILE:H	1.84	0.43
16:AN:29:ARG:HH11	16:AN:29:ARG:CG	2.32	0.43
22:AT:50:GLU:HG2	22:AT:100:ILE:CG1	2.48	0.43
23:B0:211:U:O2'	23:B0:212:U:H5'	2.19	0.43
23:B0:217:U:H5'	23:B0:633:G:O2'	2.18	0.43
23:B0:540:G:N7	23:B0:2018:G:H4'	2.33	0.43
23:B0:941:U:H2'	23:B0:942:U:C6	2.54	0.43
23:B0:1329:U:H2'	23:B0:1330:G:C8	2.54	0.43
23:B0:1401:G:H2'	23:B0:1402:G:H8	1.83	0.43
23:B0:2055:G:H2'	23:B0:2056:C:C6	2.54	0.43
24:B9:35:C:H2'	24:B9:36:A:O4'	2.19	0.43
1:AA:130:A:O3'	1:AA:263:A:O2'	2.36	0.43
1:AA:130:A:C6	1:AA:264:U:O2	2.71	0.43
1:AA:132:C:O3'	22:AT:74:LYS:NZ	2.52	0.43
1:AA:255:G:N3	19:AQ:16:GLN:NE2	2.62	0.43
1:AA:363:A:O2'	1:AA:364:A:H5'	2.18	0.43
1:AA:409:G:OP1	6:AD:24:GLU:O	2.36	0.43
1:AA:451:A:N6	1:AA:480:U:H2'	2.33	0.43
1:AA:762:C:H4'	23:B0:729:A:N6	2.28	0.43
1:AA:960:U:O2	1:AA:960:U:H2'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:991:U:O2	1:AA:993:G:H8	2.02	0.43
1:AA:1250:A:H4'	11:AI:68:GLY:CA	2.49	0.43
1:AA:1262:C:H2'	1:AA:1263:C:C6	2.54	0.43
1:AA:1317:C:C6	16:AN:16:PHE:CG	3.06	0.43
1:AA:1327:C:O2'	1:AA:1328:C:H5'	2.19	0.43
2:AV:50:U:C2'	2:AV:51:G:H5'	2.48	0.43
4:AB:74:LYS:HD2	4:AB:166:ASP:HB2	2.00	0.43
4:AB:107:THR:C	4:AB:109:SER:H	2.25	0.43
4:AB:204:ASN:HD22	4:AB:206:ASP:H	1.66	0.43
5:AC:26:LYS:N	5:AC:26:LYS:CD	2.78	0.43
6:AD:120:LEU:HD23	6:AD:125:HIS:CD2	2.54	0.43
6:AD:127:THR:HG23	6:AD:128:VAL:N	2.34	0.43
7:AE:118:ILE:HD13	7:AE:118:ILE:HG21	1.74	0.43
9:AG:108:ALA:O	9:AG:119:ARG:HD2	2.18	0.43
11:AI:78:LYS:HD3	11:AI:101:PHE:CD2	2.54	0.43
11:AI:106:ALA:O	11:AI:108:VAL:HG23	2.19	0.43
14:AL:41:ARG:HB3	14:AL:41:ARG:HH11	1.84	0.43
15:AM:33:ALA:HB2	15:AM:64:TRP:CH2	2.54	0.43
16:AN:12:ARG:C	16:AN:14:PRO:HD3	2.44	0.43
20:AR:25:THR:O	20:AR:25:THR:HG22	2.17	0.43
23:B0:70:A:OP2	23:B0:111:G:H4'	2.19	0.43
23:B0:798:G:C2'	23:B0:799:C:H5'	2.48	0.43
23:B0:1429:A:O2'	23:B0:1430:G:H4'	2.19	0.43
23:B0:1634:A:O2'	23:B0:1635:G:OP1	2.29	0.43
23:B0:2426:G:C5'	23:B0:2480:C:H41	2.28	0.43
23:B0:2468:G:H2'	23:B0:2469:G:O4'	2.19	0.43
23:B0:2728:A:H2'	23:B0:2729:A:O4'	2.18	0.43
1:AA:70:A:C2'	1:AA:71:U:H5'	2.48	0.43
1:AA:191:G:N2	1:AA:192:U:H1'	2.23	0.43
1:AA:255:G:H4'	19:AQ:17:LYS:CB	2.48	0.43
1:AA:564:C:H5'	14:AL:10:LEU:HD13	2.01	0.43
1:AA:640:A:C2'	1:AA:641:U:H5'	2.48	0.43
1:AA:676:A:O2'	13:AK:115:PRO:HG3	2.19	0.43
1:AA:782:A:H2'	1:AA:783:C:O4'	2.19	0.43
1:AA:858:G:O2'	1:AA:859:A:H5'	2.18	0.43
1:AA:977:A:H2	1:AA:1224:G:C6	2.37	0.43
1:AA:1010:G:O2'	1:AA:1011:G:H5'	2.18	0.43
1:AA:1125:U:H5''	1:AA:1126:U:H5	1.83	0.43
1:AA:1181:G:O2'	1:AA:1182:G:H5'	2.19	0.43
1:AA:1416:G:N7	1:AA:1417:G:N9	2.67	0.43
1:AA:1500:A:OP1	1:AA:1508:G:OP1	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:112:SER:HB2	5:AC:115:LEU:HB2	2.01	0.43
5:AC:139:GLN:O	5:AC:140:ARG:C	2.62	0.43
14:AL:41:ARG:CB	14:AL:41:ARG:NH1	2.82	0.43
14:AL:58:VAL:N	14:AL:66:VAL:O	2.47	0.43
17:AO:48:LYS:O	17:AO:50:HIS:N	2.50	0.43
22:AT:42:GLN:O	22:AT:46:GLU:HG3	2.19	0.43
23:B0:873:U:O2	23:B0:2246:A:H5''	2.18	0.43
23:B0:1393:G:O2'	23:B0:1394:G:H5'	2.19	0.43
23:B0:1561:A:H2'	23:B0:1562:G:O4'	2.19	0.43
23:B0:2424:G:H2'	23:B0:2425:G:O4'	2.19	0.43
1:AA:119:A:N3	1:AA:240:C:C4	2.87	0.43
1:AA:130:A:C5'	19:AQ:63:ARG:CZ	2.89	0.43
1:AA:255:G:H1'	19:AQ:16:GLN:CD	2.21	0.43
1:AA:409:G:H2'	1:AA:410:G:O4'	2.18	0.43
1:AA:1051:C:H2'	1:AA:1052:U:C6	2.53	0.43
1:AA:1075:C:H5''	4:AB:179:LYS:HZ1	1.82	0.43
1:AA:1126:U:H2'	1:AA:1127:G:O4'	2.19	0.43
1:AA:1181:G:H4'	1:AA:1184:G:C4'	2.49	0.43
1:AA:1186:G:H21	16:AN:61:TRP:C	2.27	0.43
1:AA:1230:C:H1'	15:AM:125:ARG:O	2.19	0.43
1:AA:1287:A:C2	1:AA:1353:G:H1'	2.54	0.43
1:AA:1353:G:H2'	1:AA:1354:C:C6	2.54	0.43
2:AW:76:A:C1'	23:B0:2486:C:C5'	2.97	0.43
4:AB:28:PHE:CD2	4:AB:190:THR:HA	2.54	0.43
4:AB:43:ASP:C	4:AB:43:ASP:OD1	2.61	0.43
5:AC:116:VAL:HG11	5:AC:141:VAL:HG21	2.01	0.43
6:AD:60:GLU:OE1	6:AD:60:GLU:HA	2.19	0.43
6:AD:198:VAL:HG12	6:AD:199:ASN:N	2.34	0.43
8:AF:100:ASN:ND2	20:AR:23:LYS:O	2.52	0.43
9:AG:38:LEU:HD12	9:AG:38:LEU:C	2.44	0.43
14:AL:70:ILE:CD1	14:AL:77:LEU:HD12	2.42	0.43
17:AO:78:TYR:CE2	17:AO:82:ILE:HD11	2.53	0.43
19:AQ:101:ARG:CD	23:B0:731:A:C2	3.00	0.43
21:AS:8:GLY:O	21:AS:9:VAL:C	2.62	0.43
23:B0:114:C:H2'	23:B0:115:G:O4'	2.19	0.43
23:B0:170:U:H2'	23:B0:171:G:H8	1.84	0.43
23:B0:572:G:H2'	23:B0:573:C:C6	2.54	0.43
23:B0:635:C:H2'	23:B0:636:G:H5''	2.00	0.43
23:B0:738:G:H2'	23:B0:739:G:O4'	2.18	0.43
23:B0:765:C:O2'	23:B0:766:A:O4'	2.36	0.43
23:B0:1039:A:H2'	23:B0:1040:A:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1411:C:O5'	23:B0:1411:C:H6	2.02	0.43
23:B0:1466:C:H2'	23:B0:1467:U:O4'	2.19	0.43
23:B0:2204:A:H1'	23:B0:2205:C:C5	2.53	0.43
23:B0:2475:C:C2'	23:B0:2476:A:H5'	2.49	0.43
23:B0:2572:U:H2'	23:B0:2573:C:C6	2.54	0.43
24:B9:108:G:O2'	24:B9:109:G:H5'	2.19	0.43
1:AA:150:C:H2'	1:AA:151:A:P	2.58	0.42
1:AA:160:A:H2'	1:AA:161:A:O4'	2.18	0.42
1:AA:169:C:O2'	1:AA:170:U:H5'	2.19	0.42
1:AA:246:A:H2	1:AA:278:G:N3	2.13	0.42
1:AA:452:A:O2'	1:AA:453:A:O4'	2.34	0.42
1:AA:628:G:H2'	1:AA:629:G:H8	1.84	0.42
1:AA:677:U:O2	1:AA:777:A:O2'	2.36	0.42
1:AA:685:G:P	13:AK:12:ARG:HH22	2.42	0.42
1:AA:1441:G:H4'	1:AA:1442:G:C8	2.54	0.42
4:AB:14:GLY:C	4:AB:15:VAL:HG23	2.44	0.42
6:AD:15:GLU:C	6:AD:17:VAL:N	2.76	0.42
12:AJ:17:ASP:O	12:AJ:21:GLN:HB2	2.19	0.42
14:AL:60:LEU:CD2	14:AL:66:VAL:HG22	2.49	0.42
15:AM:6:GLY:O	15:AM:7:VAL:CG2	2.65	0.42
17:AO:29:VAL:HG11	17:AO:67:LEU:HD21	2.00	0.42
19:AQ:45:HIS:CD2	19:AQ:47:PRO:HG3	2.54	0.42
19:AQ:60:ILE:HD13	19:AQ:61:GLU:N	2.34	0.42
23:B0:689:A:C2'	23:B0:690:A:H5'	2.48	0.42
23:B0:744:C:H2'	23:B0:745:C:C6	2.54	0.42
23:B0:842:A:H5'	23:B0:844:G:C5	2.54	0.42
23:B0:1307:U:H2'	23:B0:1308:C:O4'	2.19	0.42
23:B0:1429:A:N6	23:B0:1602:G:H5'	2.34	0.42
23:B0:3877:A:O5'	23:B0:1861:G:OP2	2.37	0.42
23:B0:3185:U:H2'	23:B0:3186:C:O4'	2.19	0.42
23:B0:2455:A:C2'	23:B0:2456:U:H5'	2.49	0.42
23:B0:2625:U:H2'	23:B0:2626:U:O4'	2.18	0.42
1:AA:107:G:O2'	1:AA:108:G:H5'	2.19	0.42
1:AA:117:G:O6	1:AA:289:G:H1'	2.18	0.42
1:AA:264:U:C2'	19:AQ:64:PRO:C	2.82	0.42
1:AA:418:C:H2'	1:AA:419:C:C6	2.54	0.42
1:AA:448:A:C4	1:AA:487:A:C2	3.07	0.42
1:AA:1269:A:H2	1:AA:1312:G:N3	2.17	0.42
1:AA:1308:U:P	15:AM:99:ARG:HG3	2.59	0.42
1:AA:1434:A:O3'	1:AA:1435:G:H4'	2.19	0.42
4:AB:116:GLU:CG	4:AB:153:ARG:NH1	2.80	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:50:ALA:O	5:AC:70:VAL:CG1	2.67	0.42
5:AC:70:VAL:O	5:AC:106:VAL:N	2.51	0.42
6:AD:157:LEU:CD2	6:AD:161:ASN:ND2	2.74	0.42
7:AE:6:PHE:CZ	7:AE:66:MET:HE2	2.53	0.42
12:AJ:61:GLU:OE2	16:AN:58:LYS:CE	2.66	0.42
12:AJ:72:VAL:O	12:AJ:73:ASP:HB2	2.18	0.42
17:AO:15:PHE:O	17:AO:16:ALA:C	2.61	0.42
19:AQ:59:ILE:CG2	19:AQ:71:PHE:CD1	3.02	0.42
23:B0:220:U:H2'	23:B0:221:A:O4'	2.19	0.42
23:B0:796:A:C2	23:B0:798:G:H1'	2.54	0.42
23:B0:1292:A:H2'	23:B0:1293:A:H8	1.84	0.42
23:B0:1626:A:H5''	23:B0:1627:C:OP2	2.19	0.42
23:B0:1788:C:H2'	23:B0:1789:U:C6	2.54	0.42
23:B0:1975:G:H4'	23:B0:1976:U:C5	2.53	0.42
23:B0:1982:C:H2'	23:B0:1983:G:C8	2.52	0.42
23:B0:2204:A:H4'	23:B0:2205:C:O4'	2.19	0.42
23:B0:2404:A:OP1	23:B0:2406:C:H5'	2.18	0.42
23:B0:2426:G:O2'	23:B0:2427:A:OP2	2.32	0.42
23:B0:2504:G:H2'	23:B0:2505:G:H8	1.83	0.42
23:B0:2639:A:H2'	23:B0:2640:G:O4'	2.20	0.42
1:AA:487:A:H2'	1:AA:488:C:O4'	2.19	0.42
1:AA:538:G:H5'	14:AL:114:LYS:CD	2.46	0.42
1:AA:778:G:O2'	1:AA:779:C:H5'	2.19	0.42
1:AA:796:C:OP2	13:AK:123:LYS:NZ	2.45	0.42
1:AA:926:G:H1	3:AU:6:A:P	2.43	0.42
1:AA:942:G:H2'	1:AA:943:U:H6	1.84	0.42
1:AA:1126:U:H2'	1:AA:1127:G:H8	1.84	0.42
1:AA:1397:C:O2'	1:AA:1398:A:P	2.77	0.42
4:AB:146:GLN:O	4:AB:150:SER:HB3	2.18	0.42
4:AB:219:VAL:O	4:AB:220:ASP:C	2.61	0.42
7:AE:64:ARG:O	7:AE:65:ASN:CB	2.60	0.42
7:AE:115:VAL:CG1	7:AE:116:THR:N	2.82	0.42
9:AG:95:ARG:NH1	9:AG:95:ARG:CG	2.80	0.42
12:AJ:15:THR:HG23	12:AJ:94:VAL:CG2	2.49	0.42
12:AJ:56:HIS:O	12:AJ:58:ASP:N	2.52	0.42
21:AS:3:ARG:O	21:AS:4:SER:HB3	2.19	0.42
22:AT:57:ARG:HE	22:AT:100:ILE:HG21	1.85	0.42
22:AT:86:ARG:O	22:AT:87:LYS:C	2.62	0.42
23:B0:338:G:O2'	23:B0:339:U:H5'	2.19	0.42
23:B0:569:C:H2'	23:B0:570:G:C8	2.53	0.42
23:B0:872:G:H2'	23:B0:928:G:N1	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1764:A:H2'	23:B0:1765:C:O4'	2.19	0.42
23:B0:1811:A:H1'	23:B0:1813:A:C5	2.53	0.42
23:B0:3877:A:P	23:B0:1861:G:P	3.16	0.42
23:B0:1981:A:H4'	23:B0:2704:U:O2'	2.19	0.42
1:AA:70:A:O2'	1:AA:71:U:H5'	2.19	0.42
1:AA:128:G:O4'	19:AQ:61:GLU:OE2	2.36	0.42
1:AA:244:U:C5	1:AA:894:G:C2	3.08	0.42
1:AA:418:C:H2'	1:AA:419:C:H6	1.84	0.42
1:AA:825:G:H2'	1:AA:826:C:C6	2.53	0.42
1:AA:875:C:O2'	10:AH:14:ARG:HD2	2.18	0.42
1:AA:974:A:OP1	1:AA:974:A:H8	2.03	0.42
1:AA:1014:A:N6	21:AS:34:TRP:CZ2	2.87	0.42
1:AA:1074:G:O3'	4:AB:103:THR:HG21	2.19	0.42
1:AA:1107:C:OP1	5:AC:174:PRO:N	2.53	0.42
1:AA:1135:U:O5'	1:AA:1135:U:H6	2.01	0.42
1:AA:1137:C:H4'	1:AA:1138:G:N1	2.33	0.42
1:AA:1244:C:O2'	1:AA:1245:A:H5'	2.19	0.42
1:AA:1266:G:N2	1:AA:1269:A:OP2	2.49	0.42
1:AA:1407:C:H2'	1:AA:1408:A:H8	1.85	0.42
1:AA:1446:A:C4	1:AA:1456:A:N1	2.87	0.42
1:AA:1458:G:N9	1:AA:1459:C:O2	2.52	0.42
1:AA:1505:G:H3'	1:AA:1505:G:H8	1.85	0.42
4:AB:33:TYR:O	4:AB:34:ALA:CB	2.67	0.42
4:AB:41:ILE:O	4:AB:41:ILE:HG22	2.18	0.42
4:AB:73:THR:O	4:AB:74:LYS:C	2.61	0.42
6:AD:25:ARG:HA	6:AD:28:SER:OG	2.19	0.42
7:AE:16:THR:HG23	7:AE:27:ARG:O	2.19	0.42
8:AF:40:VAL:HG22	8:AF:41:GLU:N	2.34	0.42
9:AG:15:ASP:OD2	9:AG:23:VAL:HG11	2.19	0.42
9:AG:31:MET:SD	9:AG:34:GLY:HA2	2.59	0.42
14:AL:27:LEU:O	14:AL:28:LYS:C	2.63	0.42
16:AN:23:ARG:C	16:AN:33:VAL:HG11	2.44	0.42
18:AP:4:ILE:CG1	18:AP:64:ALA:HB1	2.49	0.42
21:AS:17:GLU:HA	21:AS:20:LEU:CD1	2.49	0.42
21:AS:40:ILE:HG23	21:AS:44:MET:SD	2.59	0.42
23:B0:477:A:H2'	23:B0:478:G:O4'	2.20	0.42
23:B0:697:G:O2'	23:B0:698:A:H5'	2.20	0.42
23:B0:883:A:H2'	23:B0:884:C:O4'	2.19	0.42
23:B0:1017:C:H2'	23:B0:1018:C:O4'	2.19	0.42
23:B0:1223:G:H4'	23:B0:1224:A:C5'	2.49	0.42
23:B0:2492:G:H2'	23:B0:2493:U:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:2561:G:N3	23:B0:2561:G:H2'	2.35	0.42
23:B0:2771:C:H5	23:B0:2867:G:H22	1.66	0.42
1:AA:16:A:O2'	1:AA:17:U:H5'	2.18	0.42
1:AA:499:A:H1'	1:AA:500:G:C1'	2.40	0.42
1:AA:825:G:O2'	1:AA:826:C:H5'	2.20	0.42
1:AA:878:G:C5'	10:AH:89:PRO:HG2	2.48	0.42
1:AA:994:A:C4	16:AN:5:ALA:O	2.72	0.42
1:AA:1319:A:OP1	21:AS:5:LEU:CD2	2.68	0.42
1:AA:1399:C:C2	1:AA:1502:A:N6	2.86	0.42
1:AA:1438:G:H2'	1:AA:1439:C:C6	2.54	0.42
1:AA:1476:G:P	23:B0:1706:A:O3'	2.77	0.42
4:AB:22:LYS:C	4:AB:23:ARG:HG3	2.45	0.42
4:AB:187:LEU:HA	4:AB:201:ILE:HB	2.02	0.42
5:AC:193:TYR:HE1	5:AC:196:LEU:HD11	1.83	0.42
6:AD:8:VAL:CG1	6:AD:21:LEU:CD1	2.98	0.42
7:AE:131:ILE:HD13	7:AE:131:ILE:HA	1.93	0.42
8:AF:77:ARG:O	8:AF:81:ILE:HG13	2.18	0.42
18:AP:4:ILE:HG23	18:AP:36:ILE:HD11	2.01	0.42
21:AS:41:VAL:HB	21:AS:43:GLU:OE2	2.20	0.42
23:B0:19:C:H2'	23:B0:20:C:C6	2.54	0.42
23:B0:669:G:H2'	23:B0:670:U:O4'	2.20	0.42
23:B0:1313:U:O2'	23:B0:1314:A:P	2.78	0.42
23:B0:1480:G:C2'	23:B0:1481:U:H5'	2.49	0.42
23:B0:1775:A:H4'	23:B0:1776:A:C8	2.54	0.42
23:B0:1900:U:H3'	23:B0:1901:A:H8	1.85	0.42
23:B0:1957:C:O2'	23:B0:1958:G:H5'	2.20	0.42
23:B0:2437:G:H4'	23:B0:2438:A:N7	2.35	0.42
23:B0:2523:G:O2'	23:B0:2524:G:H5'	2.20	0.42
23:B0:2559:U:H2'	23:B0:2560:G:H5'	2.01	0.42
23:B0:2564:U:H5''	23:B0:2565:C:H5'	2.01	0.42
24:B9:73:C:H3'	24:B9:74:A:OP2	2.20	0.42
1:AA:38:G:H4'	1:AA:547:A:C5	2.54	0.42
1:AA:127:G:O3'	19:AQ:2:PRO:HD2	2.20	0.42
1:AA:359:U:O2'	1:AA:360:A:H5'	2.18	0.42
1:AA:376:G:P	18:AP:67:THR:CG2	3.01	0.42
1:AA:1195:C:H3'	1:AA:1196:U:H5''	2.02	0.42
5:AC:23:TYR:CZ	12:AJ:9:ARG:HD3	2.55	0.42
12:AJ:3:LYS:HG3	12:AJ:75:ILE:HG23	2.02	0.42
14:AL:60:LEU:HD21	14:AL:66:VAL:CG2	2.50	0.42
23:B0:833:A:H2'	23:B0:834:A:C8	2.55	0.42
23:B0:1672:A:H2'	23:B0:1673:C:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1679:U:H2'	23:B0:1680:U:H5''	2.02	0.42
23:B0:1855:G:H4'	23:B0:2390:A:H4'	2.00	0.42
24:B9:50:U:H2'	24:B9:51:G:H8	1.83	0.42
1:AA:69:G:H1'	1:AA:101:A:N1	2.34	0.42
1:AA:427:U:H4'	1:AA:541:G:H5''	2.01	0.42
1:AA:532:A:H2'	1:AA:533:A:C5'	2.48	0.42
1:AA:570:G:O2'	1:AA:819:A:C2'	2.63	0.42
1:AA:584:G:H2'	1:AA:585:G:C8	2.54	0.42
1:AA:647:C:H2'	1:AA:648:A:C8	2.54	0.42
1:AA:762:C:H5'	23:B0:729:A:N6	2.27	0.42
1:AA:811:C:H4'	1:AA:900:A:N6	2.34	0.42
1:AA:835:U:C5'	20:AR:64:ARG:CZ	2.71	0.42
1:AA:942:G:C2	1:AA:943:U:C6	3.07	0.42
1:AA:1228:C:H4'	15:AM:116:THR:HA	2.02	0.42
1:AA:1264:C:H2'	1:AA:1265:G:C8	2.55	0.42
1:AA:1288:A:H1'	1:AA:1353:G:O4'	2.20	0.42
1:AA:1434:A:P	1:AA:1435:G:C8	3.09	0.42
2:AV:76:A:O5'	23:B0:2564:U:C6	2.66	0.42
4:AB:23:ARG:C	4:AB:24:TRP:HD1	2.28	0.42
5:AC:57:ILE:O	5:AC:57:ILE:HG22	2.20	0.42
5:AC:64:VAL:HG12	5:AC:65:ALA:H	1.84	0.42
5:AC:70:VAL:HG12	5:AC:71:ALA:H	1.84	0.42
5:AC:79:ARG:NE	5:AC:82:GLU:HG2	2.34	0.42
5:AC:172:ARG:HH12	5:AC:174:PRO:CG	2.22	0.42
7:AE:79:GLU:OE2	10:AH:105:ARG:NE	2.51	0.42
8:AF:45:LEU:O	8:AF:46:ARG:HG2	2.20	0.42
10:AH:114:THR:C	10:AH:116:LYS:N	2.75	0.42
13:AK:85:ARG:NH1	13:AK:85:ARG:HG3	2.34	0.42
13:AK:86:GLY:H	13:AK:112:THR:CG2	2.32	0.42
13:AK:93:GLN:NE2	13:AK:96:ARG:NH2	2.67	0.42
19:AQ:104:LYS:HD2	23:B0:729:A:N7	2.35	0.42
21:AS:51:VAL:HG12	21:AS:52:TYR:H	1.85	0.42
23:B0:69:G:O2'	23:B0:70:A:P	2.78	0.42
23:B0:589:C:H2'	23:B0:590:C:C6	2.55	0.42
23:B0:738:G:C2'	23:B0:739:G:H5'	2.50	0.42
23:B0:841:G:N1	23:B0:2226:A:H4'	2.35	0.42
23:B0:1181:C:H3'	23:B0:1182:U:H5''	2.01	0.42
23:B0:1961:A:H2'	23:B0:1962:C:O4'	2.19	0.42
23:B0:2031:A:H2'	23:B0:2032:G:C8	2.54	0.42
23:B0:3110:G:P	23:B0:3149:G:C5'	3.08	0.42
23:B0:3110:G:C4'	23:B0:3111:C:OP2	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:2864:C:H2'	23:B0:2865:G:O4'	2.20	0.42
1:AA:232:G:C2	1:AA:263:A:H2	2.28	0.42
1:AA:292:G:C1'	1:AA:608:A:H61	2.28	0.42
1:AA:406:G:N7	1:AA:496:A:C5	2.88	0.42
1:AA:438:G:O2'	1:AA:495:U:O4	2.24	0.42
1:AA:537:G:H5''	14:AL:113:ARG:NE	2.33	0.42
1:AA:767:A:H2'	1:AA:768:A:O4'	2.20	0.42
1:AA:893:C:C6	1:AA:894:G:C8	3.08	0.42
1:AA:965:A:O2'	1:AA:966:G:C5'	2.67	0.42
1:AA:1217:C:O2'	1:AA:1218:C:H5'	2.19	0.42
1:AA:1320:C:N4	21:AS:37:ARG:CD	2.77	0.42
2:AV:74:C:C3'	23:B0:2581:A:P	2.67	0.42
4:AB:14:GLY:C	4:AB:15:VAL:CG2	2.92	0.42
5:AC:77:ILE:CG2	5:AC:81:GLY:HA2	2.50	0.42
7:AE:120:THR:HG23	7:AE:121:LYS:H	1.84	0.42
9:AG:69:VAL:O	9:AG:69:VAL:CG1	2.68	0.42
10:AH:68:ARG:HG2	10:AH:68:ARG:HH11	1.84	0.42
12:AJ:61:GLU:CD	16:AN:49:HIS:HE1	2.26	0.42
19:AQ:95:TYR:N	19:AQ:95:TYR:CD1	2.88	0.42
20:AR:26:LEU:CD1	20:AR:27:GLY:H	2.29	0.42
23:B0:509:U:H2'	23:B0:510:G:H5'	2.00	0.42
23:B0:583:C:H4'	23:B0:584:A:OP2	2.20	0.42
23:B0:903:G:C6	23:B0:904:U:C4	3.08	0.42
23:B0:1072:U:H4'	23:B0:1081:A:HO2'	1.80	0.42
23:B0:1112:U:H2'	23:B0:1112:U:O2	2.20	0.42
23:B0:3109:U:O3'	23:B0:3149:G:H4'	2.20	0.42
23:B0:2467:A:H2'	23:B0:2468:G:C8	2.55	0.42
23:B0:2633:A:H4'	23:B0:2634:G:C4'	2.39	0.42
24:B9:9:G:H2'	24:B9:10:U:O4'	2.20	0.42
1:AA:26:A:C5'	1:AA:27:G:OP2	2.67	0.42
1:AA:113:G:H4'	1:AA:354:G:O3'	2.18	0.42
1:AA:203:A:C4'	1:AA:468:A:H4'	2.46	0.42
1:AA:293:G:OP1	1:AA:609:A:N6	2.52	0.42
1:AA:456:A:C2	1:AA:477:G:C1'	2.87	0.42
1:AA:501:C:O4'	1:AA:548:G:N2	2.53	0.42
1:AA:628:G:O2'	1:AA:629:G:H5'	2.20	0.42
1:AA:841:C:N3	1:AA:845:A:N6	2.67	0.42
1:AA:1288:A:O4'	1:AA:1353:G:H4'	2.19	0.42
1:AA:1340:A:C4'	2:AV:32:C:H4'	2.50	0.42
1:AA:1398:A:C5'	1:AA:1399:C:OP1	2.55	0.42
4:AB:142:LEU:O	4:AB:143:GLU:C	2.63	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:206:GLU:O	5:AC:207:VAL:C	2.63	0.42
6:AD:53:ASP:OD2	7:AE:104:ALA:CB	2.68	0.42
6:AD:70:ILE:HD11	6:AD:100:ARG:CD	2.49	0.42
7:AE:43:LEU:N	7:AE:136:MET:HE2	2.35	0.42
7:AE:151:LEU:HD11	10:AH:77:GLU:CD	2.43	0.42
12:AJ:53:PRO:O	12:AJ:54:PHE:C	2.63	0.42
17:AO:27:VAL:O	17:AO:28:GLN:C	2.61	0.42
18:AP:39:TYR:CD2	18:AP:73:LEU:HD11	2.54	0.42
21:AS:20:LEU:HD12	21:AS:21:GLU:N	2.34	0.42
23:B0:332:C:H2'	23:B0:333:A:H5'	2.02	0.42
23:B0:391:C:H2'	23:B0:392:G:C8	2.54	0.42
23:B0:571:U:H2'	23:B0:581:A:H1'	2.02	0.42
23:B0:594:G:H21	23:B0:1267:A:H62	1.68	0.42
23:B0:814:G:H3'	23:B0:815:A:C5'	2.46	0.42
23:B0:877:G:N2	23:B0:926:C:H41	2.17	0.42
23:B0:1667:A:H2'	23:B0:1668:G:C8	2.55	0.42
23:B0:1912:G:OP1	23:B0:1913:G:H4'	2.19	0.42
23:B0:1938:U:O2'	23:B0:1939:U:H5'	2.20	0.42
23:B0:2393:G:H2'	23:B0:2394:G:H8	1.85	0.42
23:B0:2815:C:H2'	23:B0:2816:C:C6	2.55	0.42
1:AA:18:C:O2	1:AA:918:A:N1	2.52	0.42
1:AA:246:A:C3'	1:AA:247:G:H4'	2.50	0.42
1:AA:538:G:H5'	14:AL:114:LYS:CB	2.06	0.42
1:AA:602:A:C2	1:AA:637:G:C2	3.08	0.42
1:AA:640:A:O2'	1:AA:641:U:H5'	2.20	0.42
1:AA:692:U:O2	1:AA:695:A:C8	2.73	0.42
1:AA:730:G:C5	1:AA:731:G:H1'	2.54	0.42
1:AA:762:C:O2'	23:B0:729:A:H2	1.99	0.42
1:AA:851:G:H2'	1:AA:852:G:H8	1.84	0.42
1:AA:1129:C:O2'	1:AA:1130:A:P	2.78	0.42
1:AA:1402:C:H2'	1:AA:1403:C:H6	1.85	0.42
1:AA:1473:A:O3'	23:B0:1718:A:N3	2.53	0.42
6:AD:24:GLU:H	6:AD:112:VAL:HG11	1.85	0.42
6:AD:148:VAL:HG13	6:AD:158:ILE:HD13	2.01	0.42
9:AG:145:ALA:C	9:AG:147:ALA:N	2.78	0.42
11:AI:111:ARG:HD3	11:AI:111:ARG:C	2.45	0.42
12:AJ:55:LYS:O	12:AJ:56:HIS:HB2	2.19	0.42
14:AL:7:ILE:HD13	14:AL:7:ILE:HA	1.93	0.42
14:AL:43:VAL:CG1	14:AL:44:THR:N	2.81	0.42
15:AM:32:GLU:O	15:AM:35:GLU:N	2.53	0.42
15:AM:96:LEU:HB3	15:AM:97:PRO:HD2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AQ:40:LYS:HD3	19:AQ:42:TYR:OH	2.20	0.42
19:AQ:95:TYR:N	19:AQ:95:TYR:HD1	2.18	0.42
22:AT:44:ALA:HB2	22:AT:88:VAL:HG13	2.02	0.42
22:AT:80:ARG:O	22:AT:84:LEU:HB2	2.20	0.42
23:B0:334:G:N3	23:B0:344:G:H1'	2.35	0.42
23:B0:869:C:O2'	23:B0:870:C:H5'	2.19	0.42
23:B0:1040:A:C2'	23:B0:1041:G:H5'	2.49	0.42
23:B0:1080:A:H4'	23:B0:1081:A:C8	2.54	0.42
23:B0:1671:A:H2'	23:B0:1672:A:H8	1.85	0.42
23:B0:1747:G:H1'	23:B0:1749:G:C2	2.55	0.42
24:B9:25:G:C2'	24:B9:26:G:H5'	2.50	0.42
24:B9:106:U:O2'	24:B9:107:C:H5'	2.19	0.42
1:AA:39:G:C8	1:AA:498:U:N3	2.88	0.41
1:AA:413:G:N2	1:AA:428:G:H1'	2.34	0.41
1:AA:439:A:N6	1:AA:497:A:H1'	2.35	0.41
1:AA:877:C:O2	10:AH:3:THR:HG21	2.20	0.41
1:AA:951:G:C6	1:AA:1231:G:C6	3.08	0.41
1:AA:977:A:C2	1:AA:1224:G:C5	3.08	0.41
1:AA:1095:U:H2'	1:AA:1096:C:H6	1.83	0.41
1:AA:1489:G:H2'	1:AA:1490:C:C5'	2.27	0.41
4:AB:130:ARG:HB3	4:AB:134:GLU:OE1	2.20	0.41
5:AC:73:PRO:HD3	5:AC:105:GLU:HG3	2.03	0.41
7:AE:31:LEU:HA	7:AE:31:LEU:HD23	1.74	0.41
8:AF:19:LEU:HD21	8:AF:23:LYS:HD2	2.01	0.41
10:AH:111:ILE:O	10:AH:134:ILE:HB	2.20	0.41
23:B0:425:A:H2'	23:B0:426:C:O4'	2.20	0.41
23:B0:1188:A:H62	23:B0:1189:G:N2	2.17	0.41
23:B0:1762:C:H2'	23:B0:1763:G:C8	2.55	0.41
23:B0:2195:C:H2'	23:B0:2196:U:O4'	2.20	0.41
23:B0:2809:A:H2'	23:B0:2810:A:H5'	2.01	0.41
1:AA:145:G:O2'	1:AA:146:G:H5'	2.20	0.41
1:AA:255:G:H4'	19:AQ:17:LYS:N	2.17	0.41
1:AA:320:C:C1'	1:AA:1434:A:C2	2.93	0.41
1:AA:546:G:H4'	1:AA:548:G:H4'	2.01	0.41
1:AA:586:C:H5'	10:AH:90:GLY:CA	2.51	0.41
1:AA:833:U:H2'	1:AA:834:C:C6	2.55	0.41
1:AA:1016:A:C5'	16:AN:15:LYS:CE	2.87	0.41
1:AA:1233:G:OP1	11:AI:123:PRO:CB	2.69	0.41
1:AA:1264:C:H2'	1:AA:1265:G:H8	1.85	0.41
1:AA:1311:G:H2'	1:AA:1312:G:O4'	2.20	0.41
1:AA:1531:A:O5'	1:AA:1531:A:H8	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AV:52:U:O2'	2:AV:53:G:H5'	2.20	0.41
2:AV:74:C:C4	23:B0:2231:G:N2	2.88	0.41
5:AC:134:ILE:HG22	5:AC:168:ALA:HB3	2.01	0.41
8:AF:48:LEU:HD13	8:AF:52:ILE:CG1	2.50	0.41
8:AF:98:LEU:HD23	8:AF:98:LEU:HA	1.94	0.41
9:AG:23:VAL:HG13	9:AG:43:PHE:CE2	2.55	0.41
9:AG:93:PRO:HG2	9:AG:94:ARG:H	1.86	0.41
11:AI:56:LEU:O	11:AI:58:ARG:N	2.49	0.41
15:AM:16:ASP:O	15:AM:17:VAL:C	2.63	0.41
22:AT:53:LEU:HD13	22:AT:101:GLY:N	2.35	0.41
23:B0:167:A:H2'	23:B0:168:A:C8	2.55	0.41
23:B0:860:U:O2'	23:B0:861:G:H5'	2.20	0.41
23:B0:1082:G:H1'	23:B0:1100:G:H2'	2.03	0.41
23:B0:1196:G:H2'	23:B0:1197:U:H5'	2.00	0.41
23:B0:1448:A:H2'	23:B0:1449:C:C6	2.55	0.41
23:B0:2242:C:N4	23:B0:2257:A:H61	2.18	0.41
23:B0:2604:G:H2'	23:B0:2605:C:C6	2.55	0.41
23:B0:2694:G:H2'	23:B0:2695:C:C6	2.55	0.41
23:B0:2721:A:H62	23:B0:2743:G:H21	1.68	0.41
1:AA:143:A:H2	1:AA:220:G:H22	1.66	0.41
1:AA:255:G:H4'	19:AQ:17:LYS:HG3	2.02	0.41
1:AA:625:G:O2'	1:AA:626:U:H5'	2.20	0.41
1:AA:636:U:H2'	1:AA:637:G:C8	2.55	0.41
1:AA:757:U:OP1	1:AA:823:G:C4'	2.68	0.41
1:AA:812:C:OP1	1:AA:903:G:H1'	2.20	0.41
1:AA:865:A:N3	1:AA:918:A:O4'	2.53	0.41
1:AA:866:C:H2'	1:AA:867:G:O4'	2.20	0.41
1:AA:1067:A:C1'	1:AA:1068:G:OP2	2.69	0.41
1:AA:1262:C:N4	1:AA:1273:G:H1	2.18	0.41
1:AA:1405:G:H1'	1:AA:1519:A:C4'	2.50	0.41
5:AC:38:ARG:CB	5:AC:94:LEU:HD21	2.50	0.41
6:AD:205:GLU:O	6:AD:208:SER:HB2	2.20	0.41
10:AH:48:TYR:CD1	10:AH:48:TYR:C	2.98	0.41
11:AI:97:LYS:HB2	11:AI:98:PRO:HD3	2.01	0.41
12:AJ:32:ALA:HB2	12:AJ:75:ILE:O	2.19	0.41
12:AJ:63:PHE:CD2	16:AN:58:LYS:HA	2.55	0.41
12:AJ:63:PHE:CE1	16:AN:48:ALA:HB3	2.54	0.41
13:AK:57:THR:OG1	13:AK:58:PRO:HD2	2.20	0.41
14:AL:33:ARG:HD2	14:AL:62:SER:HB3	2.01	0.41
14:AL:55:VAL:CG1	14:AL:56:ALA:N	2.83	0.41
14:AL:104:VAL:HG12	14:AL:105:TYR:CD1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AO:26:GLU:HG3	17:AO:81:LEU:HG	2.02	0.41
17:AO:70:LEU:HD12	17:AO:78:TYR:HB2	2.01	0.41
18:AP:43:LYS:HA	18:AP:48:TRP:CB	2.50	0.41
20:AR:17:SER:HB2	20:AR:54:ARG:HH21	1.85	0.41
22:AT:23:ARG:NH1	22:AT:23:ARG:HG2	2.35	0.41
23:B0:328:A:O2'	23:B0:329:C:H5'	2.20	0.41
23:B0:895:G:H2'	23:B0:896:C:O4'	2.20	0.41
23:B0:1073:G:H2'	23:B0:1073:G:N3	2.35	0.41
23:B0:1447:U:H1'	23:B0:1577:G:H22	1.86	0.41
23:B0:1528:C:H3'	23:B0:1529:C:H5''	2.02	0.41
23:B0:1683:G:H2'	23:B0:1684:G:H5'	2.02	0.41
23:B0:3877:A:C1'	55:B5:196:VAL:CA	2.98	0.41
23:B0:1889:G:H2'	23:B0:1890:G:C8	2.55	0.41
23:B0:2459:C:C2'	23:B0:2460:G:H5'	2.51	0.41
23:B0:2676:G:H2'	23:B0:2677:U:C6	2.56	0.41
1:AA:19:C:O2'	1:AA:20:U:H5'	2.20	0.41
1:AA:21:G:C4'	1:AA:914:A:N6	2.81	0.41
1:AA:115:G:H1'	1:AA:116:A:C8	2.55	0.41
1:AA:162:A:H2'	1:AA:163:C:O4'	2.20	0.41
1:AA:522:C:O2'	1:AA:523:A:H5'	2.19	0.41
1:AA:550:G:O2'	1:AA:551:U:H5'	2.20	0.41
1:AA:588:G:C4	1:AA:753:A:N1	2.88	0.41
1:AA:848:G:HO3'	1:AA:849:C:P	2.41	0.41
1:AA:913:A:O2'	1:AA:914:A:O4'	2.26	0.41
1:AA:944:G:C3'	1:AA:945:G:H5'	2.50	0.41
1:AA:1061:G:C2'	1:AA:1062:U:H5'	2.50	0.41
1:AA:1112:C:C2	5:AC:178:LEU:CA	3.04	0.41
1:AA:1138:G:N1	1:AA:1140:C:C2	2.89	0.41
2:AV:34:G:OP1	2:AV:34:G:C8	2.64	0.41
9:AG:45:ASP:O	9:AG:49:ILE:HG13	2.20	0.41
10:AH:51:VAL:CG1	10:AH:52:ASP:N	2.83	0.41
10:AH:126:LYS:C	10:AH:128:GLY:N	2.73	0.41
11:AI:110:GLU:OE2	11:AI:113:LYS:NZ	2.53	0.41
13:AK:21:ILE:HD12	13:AK:95:ILE:HG12	2.01	0.41
13:AK:54:ARG:H	13:AK:54:ARG:HG2	1.47	0.41
13:AK:99:GLN:HG2	13:AK:105:VAL:HG21	2.02	0.41
13:AK:127:LYS:HA	13:AK:127:LYS:HD3	1.78	0.41
14:AL:48:PRO:CG	14:AL:49:ASN:H	2.25	0.41
23:B0:31:C:H5''	23:B0:1252:C:OP1	2.20	0.41
23:B0:601:A:H3'	23:B0:602:C:H5'	2.03	0.41
23:B0:773:G:H2'	23:B0:774:A:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1679:U:H3'	23:B0:1680:U:C5'	2.45	0.41
23:B0:3865:A:C4	23:B0:3875:A:N1	2.89	0.41
23:B0:1880:G:H2'	23:B0:1881:U:C6	2.55	0.41
23:B0:1912:G:O4'	23:B0:1913:G:C8	2.72	0.41
23:B0:2448:A:C2'	23:B0:2449:G:H5'	2.50	0.41
1:AA:252:U:O2	1:AA:275:G:C4	2.74	0.41
1:AA:262:A:H5''	22:AT:76:ALA:H	1.85	0.41
1:AA:285:G:O2'	1:AA:286:G:H5'	2.21	0.41
1:AA:382:A:C2	1:AA:383:A:C4	3.09	0.41
1:AA:449:C:O2	18:AP:42:ARG:HD2	2.20	0.41
1:AA:653:A:N9	10:AH:56:LYS:CG	2.73	0.41
1:AA:692:U:OP1	13:AK:124:LYS:CE	2.63	0.41
1:AA:844:A:H2'	1:AA:845:A:H8	1.86	0.41
1:AA:848:G:C3'	1:AA:849:C:O4'	2.68	0.41
1:AA:923:A:H1'	1:AA:1398:A:C2'	2.51	0.41
1:AA:1239:A:H2'	1:AA:1298:C:H42	1.83	0.41
1:AA:1453:G:H2'	1:AA:1454:G:O4'	2.21	0.41
10:AH:126:LYS:O	10:AH:128:GLY:N	2.54	0.41
13:AK:65:ALA:O	13:AK:68:ALA:HB3	2.20	0.41
15:AM:115:LYS:HZ2	15:AM:115:LYS:HB3	1.85	0.41
16:AN:39:LEU:HD11	16:AN:47:LEU:HD12	2.02	0.41
17:AO:74:ASP:CG	17:AO:77:ARG:HG3	2.46	0.41
23:B0:59:G:O6	23:B0:62:U:H2'	2.19	0.41
23:B0:567:G:H2'	23:B0:568:G:C8	2.56	0.41
23:B0:1055:A:H2	23:B0:1121:G:H2'	1.83	0.41
23:B0:1204:G:H2'	23:B0:1205:G:C8	2.55	0.41
23:B0:1579:G:H2'	23:B0:1580:C:C6	2.56	0.41
23:B0:1912:G:H3'	23:B0:1912:G:N3	2.35	0.41
23:B0:2440:C:H1'	23:B0:2471:U:N3	2.32	0.41
23:B0:2710:C:O2'	23:B0:2711:G:H5'	2.20	0.41
23:B0:2756:A:H1'	23:B0:2758:A:N7	2.36	0.41
23:B0:2796:A:H2'	23:B0:2797:G:O4'	2.20	0.41
1:AA:7:G:H5'	1:AA:298:A:O4'	2.20	0.41
1:AA:165:C:H2'	1:AA:166:G:H8	1.86	0.41
1:AA:322:C:O2'	22:AT:23:ARG:HB2	2.21	0.41
1:AA:419:C:H5''	1:AA:513:C:C4'	2.49	0.41
1:AA:456:A:C6	1:AA:477:G:N9	2.88	0.41
1:AA:944:G:C3'	1:AA:945:G:C5'	2.98	0.41
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.86	0.41
1:AA:1430:C:H5'	23:B0:1721:G:C5'	2.49	0.41
1:AA:1431:C:H2'	1:AA:1432:G:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1497:G:H21	1:AA:1519:A:C1'	2.26	0.41
2:AV:64:A:OP1	45:BU:7:VAL:CA	2.68	0.41
4:AB:60:ASP:O	4:AB:64:ARG:HB2	2.20	0.41
4:AB:127:ILE:C	4:AB:129:GLU:H	2.28	0.41
5:AC:61:ALA:O	5:AC:62:ASP:C	2.63	0.41
5:AC:74:GLY:O	5:AC:75:VAL:C	2.62	0.41
5:AC:134:ILE:HD13	5:AC:166:GLU:HB3	2.01	0.41
5:AC:187:ALA:O	5:AC:198:VAL:N	2.52	0.41
6:AD:62:GLN:HE22	6:AD:65:ARG:NH1	2.18	0.41
6:AD:167:GLY:O	6:AD:168:ARG:C	2.63	0.41
7:AE:80:ILE:HD12	7:AE:91:LEU:HB2	2.00	0.41
7:AE:86:ALA:C	7:AE:125:SER:HB3	2.45	0.41
9:AG:16:LEU:HG	11:AI:41:VAL:HG12	2.01	0.41
10:AH:125:ARG:HE	10:AH:125:ARG:HB2	1.68	0.41
11:AI:110:GLU:HG2	11:AI:113:LYS:NZ	2.35	0.41
11:AI:120:ARG:O	11:AI:122:ALA:N	2.53	0.41
13:AK:95:ILE:O	13:AK:95:ILE:HG22	2.20	0.41
13:AK:104:GLN:OE1	13:AK:106:LYS:HE2	2.19	0.41
16:AN:3:ARG:NH1	16:AN:6:LEU:CD1	2.84	0.41
19:AQ:95:TYR:HA	19:AQ:98:LEU:HD11	2.02	0.41
19:AQ:104:LYS:HB2	23:B0:726:G:C5	2.55	0.41
22:AT:53:LEU:C	22:AT:57:ARG:HD2	2.46	0.41
22:AT:54:LYS:HA	22:AT:57:ARG:HD3	2.02	0.41
23:B0:365:U:H2'	23:B0:366:U:C6	2.56	0.41
23:B0:643:A:H2'	23:B0:644:A:C8	2.56	0.41
23:B0:870:C:H2'	23:B0:871:U:C6	2.56	0.41
23:B0:974:U:H2'	23:B0:975:C:C6	2.55	0.41
23:B0:1007:A:H2'	23:B0:1008:G:H8	1.84	0.41
23:B0:1962:C:H2'	23:B0:1963:G:H8	1.84	0.41
1:AA:115:G:H1'	1:AA:116:A:N7	2.35	0.41
1:AA:259:G:H5''	22:AT:87:LYS:NZ	2.35	0.41
1:AA:689:C:OP1	13:AK:27:ASN:ND2	2.48	0.41
1:AA:737:A:H1'	8:AF:73:ASN:OD1	2.19	0.41
1:AA:867:G:O2'	1:AA:868:C:H5'	2.20	0.41
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.20	0.41
1:AA:1108:G:H5'	1:AA:1191:A:H4'	2.03	0.41
1:AA:1355:G:O2'	1:AA:1356:G:H5'	2.21	0.41
2:AV:75:C:N3	23:B0:2230:G:C2	2.86	0.41
4:AB:22:LYS:HD2	4:AB:35:GLU:CD	2.45	0.41
4:AB:90:MET:HE2	4:AB:222:ILE:HD13	2.03	0.41
5:AC:7:PRO:HG2	5:AC:184:TYR:CB	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:89:GLU:C	5:AC:91:LEU:N	2.76	0.41
6:AD:108:LEU:HA	6:AD:108:LEU:HD23	1.86	0.41
8:AF:42:GLU:C	8:AF:44:GLY:N	2.78	0.41
13:AK:86:GLY:N	13:AK:112:THR:HG23	2.35	0.41
15:AM:46:LYS:HE3	15:AM:46:LYS:HB2	1.86	0.41
17:AO:57:LEU:HA	17:AO:57:LEU:HD12	1.86	0.41
18:AP:19:ILE:HG22	18:AP:36:ILE:CG1	2.51	0.41
23:B0:128:C:C3'	23:B0:129:A:H5''	2.50	0.41
23:B0:178:C:H4'	23:B0:399:G:C2	2.56	0.41
23:B0:909:C:H2'	23:B0:910:U:H6	1.85	0.41
23:B0:1018:C:H2'	23:B0:1019:U:H5	1.86	0.41
23:B0:1332:G:H2'	23:B0:1333:G:O4'	2.21	0.41
23:B0:1354:A:O2'	23:B0:1355:A:OP1	2.29	0.41
23:B0:1915:A:H2'	23:B0:1916:G:O4'	2.21	0.41
23:B0:1948:C:H2'	23:B0:1949:A:N7	2.36	0.41
1:AA:182:U:OP2	1:AA:183:G:C8	2.74	0.41
1:AA:355:C:C5'	1:AA:389:A:OP2	2.69	0.41
1:AA:502:G:H2'	1:AA:503:C:C6	2.56	0.41
1:AA:948:C:O2'	1:AA:949:A:H5'	2.21	0.41
1:AA:2003:G:H2'	1:AA:1004:A:H4'	2.02	0.41
1:AA:1113:C:C1'	5:AC:178:LEU:HD21	2.46	0.41
1:AA:1263:C:H2'	1:AA:1264:C:C6	2.56	0.41
2:AV:11:C:H4'	23:B0:1892:C:C4'	2.50	0.41
4:AB:165:VAL:O	4:AB:187:LEU:O	2.38	0.41
6:AD:43:HIS:ND1	6:AD:46:LYS:NZ	2.69	0.41
7:AE:9:LYS:HG3	7:AE:112:LEU:HD11	2.03	0.41
10:AH:6:ILE:O	10:AH:10:LEU:HG	2.20	0.41
11:AI:42:ARG:O	11:AI:43:ALA:C	2.63	0.41
12:AJ:80:LYS:HA	12:AJ:83:GLU:HB2	2.03	0.41
13:AK:122:LYS:O	13:AK:123:LYS:C	2.63	0.41
14:AL:27:LEU:HB3	14:AL:62:SER:HB2	2.03	0.41
17:AO:43:LEU:C	17:AO:45:VAL:O	2.64	0.41
17:AO:74:ASP:OD1	17:AO:76:GLU:HB3	2.21	0.41
17:AO:81:LEU:HD22	17:AO:85:LEU:HD12	2.03	0.41
23:B0:139:A:H2'	23:B0:140:G:C8	2.56	0.41
23:B0:675:C:H5''	34:BJ:26:THR:CA	2.51	0.41
23:B0:753:U:C2'	23:B0:754:G:H5'	2.51	0.41
23:B0:1566:G:H2'	23:B0:1567:A:C8	2.56	0.41
23:B0:2395:C:H2'	23:B0:2396:C:C5'	2.51	0.41
1:AA:37:U:H4'	1:AA:500:G:O3'	2.20	0.41
1:AA:47:C:C6	1:AA:365:U:H2'	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:330:C:H6	1:AA:330:C:H5''	1.86	0.41
1:AA:367:U:C3'	1:AA:368:U:P	3.05	0.41
1:AA:371:G:C2'	1:AA:372:C:H5'	2.51	0.41
1:AA:406:G:C8	1:AA:496:A:C2	3.09	0.41
1:AA:757:U:OP1	1:AA:823:G:H4'	2.21	0.41
1:AA:824:C:H2'	1:AA:825:G:C8	2.56	0.41
1:AA:835:U:H5''	20:AR:64:ARG:NH1	2.30	0.41
1:AA:836:G:C6	1:AA:851:G:C6	3.09	0.41
1:AA:920:U:O4'	1:AA:1080:A:N1	2.54	0.41
1:AA:939:G:C6	1:AA:940:C:N4	2.89	0.41
1:AA:992:U:H2'	1:AA:1043:C:C5	2.54	0.41
1:AA:1059:C:O2'	12:AJ:53:PRO:CD	2.69	0.41
1:AA:1126:U:P	1:AA:1126:U:H6	2.43	0.41
1:AA:1152:A:H2'	1:AA:1153:C:H6	1.83	0.41
1:AA:1184:G:H2'	1:AA:1185:G:C8	2.56	0.41
1:AA:1278:U:H5''	1:AA:1279:A:O5'	2.17	0.41
1:AA:1390:U:H2'	1:AA:1391:U:H6	1.85	0.41
1:AA:1430:C:C4'	23:B0:1721:G:C5'	2.93	0.41
1:AA:1440:C:H2'	1:AA:1441:G:C5'	2.48	0.41
1:AA:1457:A:C8	1:AA:1459:C:C4	3.06	0.41
4:AB:15:VAL:HG11	4:AB:210:SER:N	2.36	0.41
4:AB:134:GLU:O	4:AB:138:LEU:HG	2.21	0.41
5:AC:77:ILE:O	5:AC:83:ARG:HB3	2.21	0.41
5:AC:79:ARG:CG	5:AC:82:GLU:HG2	2.51	0.41
6:AD:7:PRO:CB	6:AD:10:ARG:HD2	2.51	0.41
6:AD:91:SER:O	6:AD:92:VAL:C	2.64	0.41
7:AE:58:ALA:O	7:AE:59:GLY:C	2.63	0.41
10:AH:82:HIS:O	10:AH:83:ILE:HB	2.21	0.41
13:AK:46:GLY:O	13:AK:47:VAL:C	2.62	0.41
15:AM:37:THR:HG23	15:AM:55:ARG:HB2	2.03	0.41
18:AP:6:LEU:HD12	18:AP:6:LEU:N	2.36	0.41
21:AS:25:LYS:HD2	21:AS:25:LYS:N	2.34	0.41
23:B0:147:G:C2	23:B0:148:C:H1'	2.56	0.41
23:B0:187:U:H2'	23:B0:188:G:C8	2.56	0.41
23:B0:239:A:H2'	23:B0:240:U:O4'	2.20	0.41
23:B0:477:A:C2'	23:B0:478:G:H5'	2.51	0.41
23:B0:478:G:O2'	23:B0:479:G:H5'	2.20	0.41
23:B0:514:G:N3	23:B0:514:G:C2'	2.82	0.41
23:B0:644:A:C2'	23:B0:645:G:H5'	2.50	0.41
23:B0:658:G:H4'	23:B0:2331:A:C5'	2.50	0.41
23:B0:776:G:H3'	23:B0:776:G:N3	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:810:U:H2'	23:B0:811:G:H8	1.85	0.41
23:B0:811:G:O2'	23:B0:812:G:H5'	2.21	0.41
23:B0:831:G:H21	23:B0:1203:A:N6	2.04	0.41
23:B0:967:G:H1'	23:B0:970:A:H62	1.86	0.41
23:B0:1004:A:C2'	23:B0:1005:U:H5''	2.46	0.41
23:B0:1119:U:N3	23:B0:1120:C:N4	2.60	0.41
23:B0:1196:G:H2'	23:B0:1197:U:C5'	2.51	0.41
23:B0:1542:G:H21	23:B0:1561:A:H62	1.69	0.41
23:B0:1760:G:H2'	23:B0:1761:G:C8	2.56	0.41
23:B0:2018:G:H3'	23:B0:2019:C:H5'	2.03	0.41
23:B0:2028:C:O2'	23:B0:2029:G:H5'	2.21	0.41
23:B0:3177:C:O2'	23:B0:3178:C:H5'	2.19	0.41
23:B0:2212:U:H2'	23:B0:2213:G:C8	2.55	0.41
23:B0:2239:C:O2'	23:B0:2240:C:H5'	2.21	0.41
23:B0:2491:C:H2'	23:B0:2492:G:C5'	2.45	0.41
23:B0:2526:U:H2'	23:B0:2527:G:C8	2.55	0.41
23:B0:2562:G:H2'	23:B0:2563:U:O4'	2.20	0.41
23:B0:2620:G:H2'	23:B0:2621:G:H8	1.86	0.41
23:B0:2811:G:H2'	23:B0:2812:A:C8	2.55	0.41
1:AA:13:U:C2	1:AA:914:A:H3'	2.53	0.41
1:AA:38:G:H3'	1:AA:39:G:P	2.61	0.41
1:AA:562:C:O2'	14:AL:17:LYS:HE3	2.20	0.41
1:AA:930:C:O2'	1:AA:931:C:H5'	2.20	0.41
1:AA:952:U:H2'	1:AA:953:G:H8	1.85	0.41
1:AA:1053:G:C3'	1:AA:1054:C:C5'	2.99	0.41
1:AA:1060:C:C5'	12:AJ:52:GLY:N	2.84	0.41
1:AA:1213:A:N1	1:AA:1215:G:H1'	2.35	0.41
1:AA:1250:A:C5'	11:AI:68:GLY:O	2.67	0.41
1:AA:1314:C:H5	21:AS:6:LYS:HG3	1.85	0.41
1:AA:1315:U:H5	21:AS:6:LYS:NZ	2.19	0.41
1:AA:1350:A:P	11:AI:121:ARG:HG3	2.61	0.41
4:AB:14:GLY:O	4:AB:15:VAL:CG2	2.69	0.41
4:AB:53:ARG:NH1	4:AB:199:TYR:HD2	2.19	0.41
4:AB:125:PRO:HG2	4:AB:126:GLU:H	1.86	0.41
5:AC:174:PRO:HB2	5:AC:177:THR:CG2	2.50	0.41
5:AC:191:THR:HG22	5:AC:193:TYR:N	2.23	0.41
6:AD:68:TYR:O	6:AD:69:GLY:C	2.63	0.41
8:AF:33:TYR:HA	8:AF:71:ARG:NH2	2.36	0.41
12:AJ:96:ILE:CG2	12:AJ:97:GLU:H	2.25	0.41
13:AK:50:TYR:N	13:AK:50:TYR:CD2	2.84	0.41
14:AL:28:LYS:CG	14:AL:33:ARG:HH12	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AL:117:ARG:O	14:AL:118:SER:C	2.64	0.41
15:AM:63:THR:HG23	15:AM:64:TRP:CD2	2.56	0.41
15:AM:69:GLU:O	15:AM:72:ALA:HB3	2.21	0.41
17:AO:26:GLU:HA	17:AO:81:LEU:HD11	2.03	0.41
17:AO:38:ARG:O	17:AO:41:GLU:HB3	2.20	0.41
19:AQ:105:ALA:HA	23:B0:727:U:H4'	2.00	0.41
20:AR:39:VAL:CG1	20:AR:40:LEU:N	2.84	0.41
23:B0:108:G:H2'	23:B0:109:A:C8	2.56	0.41
23:B0:769:C:H2'	23:B0:770:U:O4'	2.21	0.41
23:B0:819:C:H2'	23:B0:820:U:C6	2.56	0.41
23:B0:856:A:H2'	23:B0:857:U:O4'	2.21	0.41
23:B0:878:C:N4	23:B0:921:A:H62	2.07	0.41
23:B0:1194:U:O2'	23:B0:1195:U:P	2.79	0.41
23:B0:1682:A:H2'	23:B0:1683:G:C8	2.56	0.41
23:B0:1906:U:H2'	23:B0:1907:C:C6	2.56	0.41
23:B0:2447:G:H2'	23:B0:2448:A:H5'	2.02	0.41
1:AA:216:C:C5'	1:AA:466:A:N6	2.77	0.40
1:AA:246:A:C4'	1:AA:247:G:C4'	2.91	0.40
1:AA:373:A:H2'	1:AA:374:A:H8	1.85	0.40
1:AA:427:U:C1'	1:AA:541:G:OP1	2.65	0.40
1:AA:502:G:H2'	1:AA:503:C:H6	1.84	0.40
1:AA:547:A:OP1	1:AA:548:G:OP1	2.39	0.40
1:AA:567:G:H2'	1:AA:568:G:O4'	2.21	0.40
1:AA:702:A:N7	23:B0:1839:A:O3'	2.51	0.40
1:AA:750:G:N3	17:AO:23:GLY:HA3	2.37	0.40
1:AA:864:A:H2'	1:AA:865:A:C8	2.56	0.40
1:AA:1091:U:OP1	1:AA:1172:C:H5'	2.20	0.40
1:AA:1124:G:C8	1:AA:1145:C:C5	3.09	0.40
1:AA:1285:A:O2'	1:AA:1286:A:OP2	2.36	0.40
1:AA:1350:A:C6	1:AA:1351:U:N3	2.89	0.40
1:AA:1372:U:OP1	11:AI:71:SER:HB3	2.21	0.40
1:AA:1426:C:H2'	1:AA:1427:U:H6	1.84	0.40
1:AA:1474:G:C1'	23:B0:1705:U:H4'	2.51	0.40
1:AA:1475:G:C3'	23:B0:1706:A:H4'	2.51	0.40
4:AB:156:LYS:HD3	4:AB:156:LYS:C	2.45	0.40
5:AC:65:ALA:O	5:AC:66:VAL:HB	2.21	0.40
5:AC:67:THR:O	5:AC:67:THR:HG22	2.21	0.40
5:AC:191:THR:HG21	5:AC:193:TYR:CE2	2.56	0.40
7:AE:24:ARG:O	7:AE:25:ARG:HG2	2.20	0.40
8:AF:48:LEU:HD13	8:AF:52:ILE:CD1	2.51	0.40
8:AF:79:LEU:O	8:AF:85:VAL:HG11	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AG:114:ARG:HH11	9:AG:114:ARG:CG	2.32	0.40
11:AI:114:TYR:C	11:AI:116:LYS:H	2.29	0.40
13:AK:98:LEU:HD23	13:AK:98:LEU:HA	1.82	0.40
14:AL:53:ARG:CB	14:AL:93:LEU:HD11	2.50	0.40
15:AM:96:LEU:O	15:AM:110:ARG:NH1	2.54	0.40
20:AR:44:LEU:HD22	20:AR:48:GLY:O	2.21	0.40
23:B0:820:U:H5'	23:B0:2424:G:H4'	2.04	0.40
23:B0:930:A:H5'	23:B0:931:G:C8	2.57	0.40
23:B0:1223:G:N2	23:B0:1225:G:H21	2.13	0.40
23:B0:1234:C:H2'	23:B0:1235:C:C6	2.57	0.40
23:B0:1686:A:C2'	23:B0:1687:C:H5'	2.52	0.40
23:B0:2023:C:H2'	23:B0:2024:U:C6	2.56	0.40
23:B0:2027:C:H2'	23:B0:2028:C:C6	2.55	0.40
23:B0:3127:G:N3	23:B0:3173:A:N3	2.69	0.40
23:B0:2240:C:H2'	23:B0:2241:U:C5'	2.50	0.40
23:B0:2522:G:O2'	23:B0:2523:G:H5'	2.21	0.40
23:B0:2524:G:H2'	23:B0:2525:U:O4'	2.21	0.40
1:AA:94:G:O6	1:AA:96:C:N4	2.55	0.40
1:AA:359:U:H2'	1:AA:360:A:C8	2.57	0.40
1:AA:467:U:O2	1:AA:467:U:H2'	2.21	0.40
1:AA:476:U:C6	1:AA:477:G:O5'	2.73	0.40
1:AA:519:C:H2'	1:AA:520:A:C8	2.56	0.40
1:AA:521:G:O4'	14:AL:73:GLU:CD	2.64	0.40
1:AA:883:C:O2'	1:AA:884:U:H5'	2.21	0.40
1:AA:893:C:C2	1:AA:894:G:N7	2.88	0.40
1:AA:913:A:H1'	1:AA:914:A:O4'	2.21	0.40
1:AA:1014:A:C6	21:AS:34:TRP:NE1	2.87	0.40
1:AA:1020:U:H2'	1:AA:1021:G:C8	2.50	0.40
1:AA:1056:U:H5'	5:AC:163:ALA:HB2	2.02	0.40
1:AA:1241:G:OP1	9:AG:35:LYS:NZ	2.53	0.40
1:AA:1346:A:C2	9:AG:10:ARG:CZ	3.03	0.40
1:AA:1415:G:O2'	1:AA:1416:G:H5'	2.21	0.40
1:AA:1459:C:OP2	22:AT:28:ALA:O	2.40	0.40
1:AA:1473:A:H1'	23:B0:1719:G:H1'	2.03	0.40
5:AC:33:LEU:C	5:AC:33:LEU:CD2	2.94	0.40
5:AC:110:ASN:ND2	5:AC:140:ARG:HB3	2.21	0.40
6:AD:88:VAL:C	7:AE:97:GLY:HA3	2.25	0.40
6:AD:124:GLY:C	6:AD:126:ILE:H	2.29	0.40
6:AD:194:LEU:N	6:AD:194:LEU:HD22	2.37	0.40
7:AE:118:ILE:HG22	7:AE:119:LEU:O	2.21	0.40
12:AJ:61:GLU:CD	16:AN:58:LYS:HD2	2.45	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AJ:75:ILE:O	12:AJ:76:ASN:HB2	2.21	0.40
14:AL:46:LYS:NZ	14:AL:47:LYS:HE3	2.36	0.40
18:AP:17:TYR:N	18:AP:17:TYR:CD1	2.89	0.40
22:AT:92:LEU:O	22:AT:96:GLY:HA3	2.21	0.40
23:B0:174:A:H2'	23:B0:175:C:O4'	2.21	0.40
23:B0:420:C:H2'	23:B0:421:G:C8	2.57	0.40
23:B0:552:C:C2'	23:B0:553:C:H4'	2.46	0.40
23:B0:699:G:H3'	23:B0:699:G:N3	2.35	0.40
23:B0:1474:A:C2'	23:B0:1475:U:H5'	2.47	0.40
23:B0:1770:U:H2'	23:B0:1774:A:H62	1.86	0.40
23:B0:2048:C:H2'	23:B0:2049:C:C6	2.56	0.40
23:B0:3119:A:O2'	23:B0:3121:G:OP2	2.35	0.40
23:B0:2236:U:H2'	23:B0:2237:C:C5'	2.47	0.40
24:B9:56:G:H2'	24:B9:57:U:O4'	2.22	0.40
24:B9:63:A:H2'	24:B9:64:C:C6	2.55	0.40
1:AA:43:C:H2'	1:AA:44:G:O4'	2.21	0.40
1:AA:131:C:H4'	1:AA:262:A:C2'	2.51	0.40
1:AA:155:C:H2'	1:AA:156:G:C8	2.57	0.40
1:AA:475:C:H2'	1:AA:476:U:H6	1.84	0.40
1:AA:958:A:N9	21:AS:55:LYS:HD2	2.33	0.40
1:AA:961:U:O2'	1:AA:962:C:H5'	2.20	0.40
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.50	0.40
1:AA:1129:C:OP1	11:AI:62:TYR:CE2	2.75	0.40
1:AA:1257:U:H4'	1:AA:1258:G:C5'	2.50	0.40
1:AA:1261:A:C1'	1:AA:1283:G:C5'	2.98	0.40
1:AA:1283:G:HO2'	1:AA:1284:C:H5'	1.86	0.40
1:AA:1286:A:H2'	1:AA:1287:A:O5'	2.21	0.40
1:AA:1392:G:H2'	1:AA:1393:U:H6	1.86	0.40
4:AB:14:GLY:O	4:AB:15:VAL:HG22	2.21	0.40
4:AB:90:MET:HA	4:AB:91:PRO:HD3	1.70	0.40
5:AC:35:GLU:O	5:AC:36:ASP:C	2.64	0.40
5:AC:107:GLN:CD	5:AC:107:GLN:N	2.65	0.40
6:AD:52:SER:O	6:AD:53:ASP:C	2.64	0.40
6:AD:163:GLU:O	6:AD:166:LYS:HG3	2.22	0.40
9:AG:41:ARG:O	9:AG:42:ILE:C	2.64	0.40
10:AH:18:ARG:N	10:AH:18:ARG:HD2	2.36	0.40
17:AO:34:LEU:C	17:AO:34:LEU:CD2	2.94	0.40
18:AP:1:MET:HE1	18:AP:3:LYS:HE2	2.02	0.40
19:AQ:63:ARG:O	19:AQ:64:PRO:C	2.63	0.40
23:B0:521:U:C2'	23:B0:522:G:H5'	2.51	0.40
23:B0:1337:G:H1'	23:B0:1632:A:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1354:A:C2	23:B0:1411:C:H4'	2.56	0.40
23:B0:2048:C:H2'	23:B0:2049:C:H6	1.87	0.40
23:B0:2370:G:H2'	23:B0:2371:A:H2	1.87	0.40
23:B0:2437:G:H2'	23:B0:2469:G:N1	2.37	0.40
23:B0:2532:G:H1'	23:B0:2561:G:N3	2.36	0.40
1:AA:322:C:O2	22:AT:19:SER:CB	2.70	0.40
1:AA:599:C:O2'	1:AA:600:C:H5'	2.22	0.40
1:AA:965:A:O2'	1:AA:966:G:P	2.80	0.40
1:AA:1061:G:C5'	12:AJ:56:HIS:CB	2.47	0.40
1:AA:1094:G:OP2	1:AA:1095:U:C5	2.74	0.40
1:AA:1104:G:OP1	4:AB:111:ARG:HD2	2.22	0.40
1:AA:1112:C:C4	5:AC:178:LEU:HB3	2.55	0.40
1:AA:1300:G:C2'	1:AA:1301:U:OP2	2.69	0.40
1:AA:1346:A:N6	1:AA:1375:A:OP2	2.48	0.40
1:AA:1499:A:C4'	1:AA:1520:G:C4'	2.99	0.40
2:AW:75:C:C4	23:B0:2533:U:C2	3.05	0.40
4:AB:16:HIS:CE1	4:AB:210:SER:HG	2.39	0.40
5:AC:91:LEU:HD11	5:AC:99:VAL:HG22	2.03	0.40
5:AC:126:ARG:O	5:AC:127:ARG:HB2	2.21	0.40
6:AD:11:LEU:O	6:AD:12:CYS:C	2.65	0.40
6:AD:100:ARG:HB3	6:AD:102:ASP:OD1	2.22	0.40
8:AF:74:ASP:O	8:AF:75:LEU:C	2.64	0.40
9:AG:104:LEU:HD23	9:AG:134:ALA:HB1	2.04	0.40
12:AJ:23:ILE:N	12:AJ:23:ILE:CD1	2.85	0.40
13:AK:67:ASP:OD2	13:AK:71:LYS:HE3	2.21	0.40
15:AM:40:ASN:ND2	15:AM:41:PRO:N	2.64	0.40
17:AO:17:ARG:NH1	17:AO:17:ARG:CG	2.84	0.40
19:AQ:93:GLN:O	19:AQ:96:GLN:HB3	2.22	0.40
23:B0:35:G:H1'	23:B0:466:A:H1'	2.04	0.40
23:B0:79:G:H1'	23:B0:356:A:C2	2.57	0.40
23:B0:211:U:H2'	23:B0:212:U:O4'	2.22	0.40
23:B0:340:G:O4'	23:B0:488:A:H1'	2.22	0.40
23:B0:718:A:N6	23:B0:739:G:H4'	2.37	0.40
23:B0:738:G:H2'	23:B0:739:G:H5'	2.02	0.40
23:B0:878:C:O2'	23:B0:879:A:P	2.80	0.40
23:B0:1026:U:H2'	23:B0:1027:C:C6	2.56	0.40
23:B0:1686:A:O2'	23:B0:2528:G:H5'	2.22	0.40
23:B0:3172:U:O2'	23:B0:3173:A:H5'	2.21	0.40
23:B0:3196:G:O3'	23:B0:3197:U:P	2.80	0.40
23:B0:2372:A:H2'	23:B0:2373:C:C6	2.56	0.40
23:B0:2519:C:H2'	23:B0:2520:A:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B9:110:U:O2'	24:B9:111:C:H5'	2.21	0.40
1:AA:202:G:C4'	1:AA:469:C:P	3.01	0.40
1:AA:264:U:H1'	19:AQ:64:PRO:N	2.33	0.40
1:AA:473:C:C2'	1:AA:474:U:H5'	2.52	0.40
1:AA:748:C:H6	1:AA:748:C:OP2	2.05	0.40
1:AA:1021:G:H2'	1:AA:1022:G:H5'	2.04	0.40
1:AA:1380:U:O2'	1:AA:1381:U:OP2	2.36	0.40
1:AA:1437:C:H2'	1:AA:1438:G:H8	1.86	0.40
4:AB:9:GLU:O	4:AB:48:MET:SD	2.80	0.40
4:AB:47:THR:HG23	4:AB:202:PRO:O	2.21	0.40
5:AC:70:VAL:C	5:AC:106:VAL:HG23	2.46	0.40
7:AE:76:ILE:HG23	7:AE:77:PRO:HD2	2.04	0.40
8:AF:48:LEU:HD13	8:AF:52:ILE:HD12	2.03	0.40
8:AF:78:GLU:HA	8:AF:81:ILE:CD1	2.51	0.40
9:AG:32:ARG:O	9:AG:33:ASP:HB2	2.22	0.40
12:AJ:3:LYS:CG	12:AJ:75:ILE:HG23	2.50	0.40
12:AJ:44:VAL:HG11	12:AJ:46:ARG:NH1	2.37	0.40
12:AJ:59:SER:O	12:AJ:60:ARG:HB2	2.20	0.40
18:AP:34:GLU:HG2	18:AP:35:LYS:N	2.36	0.40
18:AP:76:GLN:C	18:AP:78:GLY:H	2.28	0.40
19:AQ:84:LEU:HD23	19:AQ:84:LEU:HA	1.89	0.40
19:AQ:97:SER:O	19:AQ:99:SER:N	2.53	0.40
23:B0:57:G:C2'	23:B0:58:C:H5''	2.47	0.40
23:B0:70:A:H4'	23:B0:72:A:OP1	2.22	0.40
23:B0:1197:U:H2'	23:B0:1198:C:O4'	2.21	0.40
23:B0:1452:U:H5'	23:B0:1532:A:O2'	2.21	0.40
23:B0:3877:A:C8	23:B0:3877:A:C4'	3.04	0.40
23:B0:3877:A:O5'	23:B0:1861:G:P	2.80	0.40
23:B0:3184:C:H2'	23:B0:3185:U:H5''	1.98	0.40
23:B0:2809:A:N6	23:B0:2854:G:H2'	2.36	0.40
23:B0:2862:G:O2'	23:B0:2863:U:H5'	2.22	0.40

All (12) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AD:172:PRO:O	8:AF:15:ASP:CB[3_555]	1.18	1.02
1:AA:416:G:C4'	23:B0:3153:G:O2'[3_555]	1.79	0.41
1:AA:416:G:O2'	23:B0:3153:G:O2'[3_555]	1.87	0.33
6:AD:172:PRO:O	8:AF:15:ASP:CA[3_555]	1.87	0.33

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AD:186:LEU:CD1	8:AF:15:ASP:OD2[3_555]	1.91	0.29
23:B0:2769:C:C5	23:B0:2877:A:C6[16_555]	2.07	0.13
23:B0:2769:C:N4	23:B0:2877:A:N3[16_555]	2.08	0.12
1:AA:415:A:O2'	23:B0:3152:G:O2'[3_555]	2.13	0.07
23:B0:1:G:N3	23:B0:2770:A:N6[16_555]	2.14	0.06
1:AA:416:G:C3'	23:B0:3153:G:O2'[3_555]	2.17	0.03
6:AD:186:LEU:CD1	8:AF:15:ASP:CG[3_555]	2.17	0.03
1:AA:416:G:C4'	23:B0:3153:G:C1'[3_555]	2.19	0.01

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	
4	AB	232/234 (99%)	174 (75%)	34 (15%)	24 (10%)	0	6
5	AC	204/206 (99%)	135 (66%)	40 (20%)	29 (14%)	0	3
6	AD	206/208 (99%)	166 (81%)	31 (15%)	9 (4%)	2	17
7	AE	148/150 (99%)	130 (88%)	13 (9%)	5 (3%)	3	21
8	AF	99/101 (98%)	79 (80%)	19 (19%)	1 (1%)	12	49
9	AG	153/155 (99%)	127 (83%)	16 (10%)	10 (6%)	1	12
10	AH	136/138 (99%)	125 (92%)	7 (5%)	4 (3%)	3	23
11	AI	125/127 (98%)	89 (71%)	26 (21%)	10 (8%)	1	9
12	AJ	96/98 (98%)	59 (62%)	20 (21%)	17 (18%)	0	2
13	AK	117/119 (98%)	88 (75%)	20 (17%)	9 (8%)	1	10
14	AL	122/124 (98%)	98 (80%)	15 (12%)	9 (7%)	1	10
15	AM	123/125 (98%)	88 (72%)	27 (22%)	8 (6%)	1	12
16	AN	58/60 (97%)	40 (69%)	11 (19%)	7 (12%)	0	4
17	AO	86/88 (98%)	70 (81%)	11 (13%)	5 (6%)	1	14
18	AP	81/83 (98%)	65 (80%)	15 (18%)	1 (1%)	10	44

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
19	AQ	102/104 (98%)	84 (82%)	10 (10%)	8 (8%)	1	10
20	AR	71/73 (97%)	62 (87%)	7 (10%)	2 (3%)	4	24
21	AS	78/80 (98%)	48 (62%)	19 (24%)	11 (14%)	0	3
22	AT	97/99 (98%)	65 (67%)	20 (21%)	12 (12%)	0	4
All	All	2334/2372 (98%)	1792 (77%)	361 (16%)	181 (8%)	1	10

All (181) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	AB	9	GLU
4	AB	15	VAL
4	AB	16	HIS
4	AB	17	PHE
4	AB	21	ARG
4	AB	24	TRP
5	AC	4	LYS
5	AC	15	THR
5	AC	16	ARG
5	AC	26	LYS
5	AC	47	LEU
5	AC	61	ALA
5	AC	62	ASP
5	AC	97	LYS
5	AC	101	LEU
5	AC	146	ALA
5	AC	154	SER
5	AC	179	ARG
5	AC	189	ALA
6	AD	29	PRO
6	AD	36	ARG
7	AE	16	THR
7	AE	153	LYS
9	AG	7	ALA
9	AG	155	ARG
10	AH	24	THR
10	AH	83	ILE
10	AH	91	ARG
11	AI	88	TYR
12	AJ	32	ALA
12	AJ	39	PRO
12	AJ	54	PHE

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Mol	Chain	Res	Type
12	AJ	57	LYS
12	AJ	79	ARG
12	AJ	86	MET
13	AK	57	THR
13	AK	127	LYS
14	AL	27	LEU
14	AL	28	LYS
14	AL	47	LYS
15	AM	63	THR
15	AM	67	GLU
15	AM	121	LYS
15	AM	122	LYS
15	AM	124	PRO
16	AN	22	THR
16	AN	29	ARG
17	AO	88	ARG
19	AQ	69	LYS
19	AQ	80	GLY
19	AQ	81	ARG
19	AQ	96	GLN
19	AQ	98	LEU
19	AQ	104	LYS
20	AR	87	ARG
21	AS	6	LYS
21	AS	71	LEU
22	AT	11	SER
22	AT	73	HIS
4	AB	8	LYS
4	AB	18	GLY
4	AB	20	GLU
4	AB	97	TRP
4	AB	123	ALA
4	AB	232	PRO
5	AC	29	TYR
5	AC	156	ARG
5	AC	168	ALA
5	AC	181	ASN
5	AC	206	GLU
6	AD	4	TYR
6	AD	26	CYS
6	AD	88	VAL
6	AD	125	HIS

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Mol	Chain	Res	Type
7	AE	22	GLY
7	AE	104	ALA
8	AF	37	VAL
9	AG	52	GLU
11	AI	41	VAL
11	AI	58	ARG
12	AJ	30	SER
12	AJ	34	VAL
12	AJ	40	LEU
12	AJ	72	VAL
13	AK	15	ALA
13	AK	49	GLY
13	AK	50	TYR
13	AK	89	ALA
14	AL	41	ARG
14	AL	48	PRO
14	AL	51	ALA
14	AL	116	SER
14	AL	121	GLY
15	AM	6	GLY
15	AM	85	GLY
18	AP	10	GLY
20	AR	20	ALA
21	AS	9	VAL
21	AS	45	VAL
21	AS	67	VAL
21	AS	68	GLY
22	AT	9	ASN
22	AT	49	ALA
22	AT	95	ALA
22	AT	99	LEU
22	AT	102	GLY
4	AB	26	PRO
4	AB	60	ASP
4	AB	83	MET
4	AB	89	GLY
4	AB	204	ASN
6	AD	175	SER
7	AE	65	ASN
9	AG	5	ARG
10	AH	127	LEU
11	AI	56	LEU

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Mol	Chain	Res	Type
12	AJ	19	SER
12	AJ	60	ARG
12	AJ	61	GLU
12	AJ	90	LEU
13	AK	35	PRO
13	AK	101	SER
14	AL	49	ASN
16	AN	13	THR
16	AN	23	ARG
19	AQ	97	SER
21	AS	28	LYS
21	AS	30	LEU
21	AS	32	LYS
22	AT	74	LYS
4	AB	126	GLU
4	AB	165	VAL
5	AC	39	ILE
5	AC	100	ALA
5	AC	188	LEU
9	AG	4	ARG
9	AG	81	GLY
9	AG	112	PRO
11	AI	7	THR
11	AI	12	GLU
11	AI	119	ALA
15	AM	123	ALA
16	AN	12	ARG
16	AN	60	SER
17	AO	16	ALA
19	AQ	33	GLY
22	AT	50	GLU
4	AB	155	LEU
5	AC	24	ALA
5	AC	66	VAL
5	AC	127	ARG
6	AD	123	HIS
9	AG	53	LYS
11	AI	121	ARG
16	AN	36	PHE
17	AO	84	LYS
21	AS	31	ILE
4	AB	127	ILE

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Mol	Chain	Res	Type
4	AB	214	ILE
5	AC	108	ASN
5	AC	174	PRO
6	AD	5	ILE
11	AI	43	ALA
12	AJ	26	ALA
4	AB	124	SER
9	AG	14	PRO
12	AJ	82	ILE
22	AT	98	PRO
4	AB	125	PRO
5	AC	76	VAL
5	AC	77	ILE
9	AG	17	VAL
12	AJ	36	GLY
17	AO	82	ILE
21	AS	8	GLY
11	AI	44	VAL
17	AO	19	PRO
22	AT	96	GLY
22	AT	101	GLY
5	AC	75	VAL
13	AK	90	GLY

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	AB	202/202 (100%)	184 (91%)	18 (9%)	9	28
5	AC	160/160 (100%)	141 (88%)	19 (12%)	5	18
6	AD	180/180 (100%)	169 (94%)	11 (6%)	17	38
7	AE	115/115 (100%)	98 (85%)	17 (15%)	3	13
8	AF	90/90 (100%)	86 (96%)	4 (4%)	25	47
9	AG	126/126 (100%)	120 (95%)	6 (5%)	23	44

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
10	AH	119/119 (100%)	106 (89%)	13 (11%)	6	21
11	AI	98/98 (100%)	90 (92%)	8 (8%)	10	31
12	AJ	88/88 (100%)	79 (90%)	9 (10%)	7	23
13	AK	90/90 (100%)	83 (92%)	7 (8%)	11	32
14	AL	104/104 (100%)	95 (91%)	9 (9%)	9	29
15	AM	100/100 (100%)	93 (93%)	7 (7%)	14	35
16	AN	49/49 (100%)	47 (96%)	2 (4%)	27	49
17	AO	79/79 (100%)	72 (91%)	7 (9%)	9	28
18	AP	72/72 (100%)	67 (93%)	5 (7%)	14	36
19	AQ	96/96 (100%)	90 (94%)	6 (6%)	16	37
20	AR	64/64 (100%)	60 (94%)	4 (6%)	16	37
21	AS	71/71 (100%)	70 (99%)	1 (1%)	59	72
22	AT	76/76 (100%)	68 (90%)	8 (10%)	6	21
All	All	1979/1979 (100%)	1818 (92%)	161 (8%)	11	31

All (161) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	AB	12	GLU
4	AB	17	PHE
4	AB	23	ARG
4	AB	25	ASN
4	AB	41	ILE
4	AB	75	LYS
4	AB	87	ARG
4	AB	139	LYS
4	AB	155	LEU
4	AB	164	VAL
4	AB	165	VAL
4	AB	170	GLU
4	AB	178	ARG
4	AB	187	LEU
4	AB	213	LEU
4	AB	221	LEU
4	AB	231	GLU
4	AB	232	PRO
5	AC	3	ASN

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Mol	Chain	Res	Type
5	AC	5	ILE
5	AC	34	LEU
5	AC	47	LEU
5	AC	64	VAL
5	AC	70	VAL
5	AC	75	VAL
5	AC	82	GLU
5	AC	91	LEU
5	AC	99	VAL
5	AC	107	GLN
5	AC	116	VAL
5	AC	130	VAL
5	AC	139	GLN
5	AC	164	ARG
5	AC	167	TRP
5	AC	175	LEU
5	AC	188	LEU
5	AC	204	LEU
6	AD	15	GLU
6	AD	29	PRO
6	AD	34	GLU
6	AD	70	ILE
6	AD	122	ARG
6	AD	127	THR
6	AD	157	LEU
6	AD	162	LEU
6	AD	170	VAL
6	AD	192	GLU
6	AD	194	LEU
7	AE	10	MET
7	AE	12	LEU
7	AE	18	ARG
7	AE	26	PHE
7	AE	31	LEU
7	AE	38	GLN
7	AE	41	VAL
7	AE	43	LEU
7	AE	53	LEU
7	AE	56	GLN
7	AE	65	ASN
7	AE	68	GLU
7	AE	79	GLU

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Mol	Chain	Res	Type
7	AE	80	ILE
7	AE	89	ILE
7	AE	120	THR
7	AE	150	ARG
8	AF	10	LEU
8	AF	37	VAL
8	AF	43	LEU
8	AF	69	GLU
9	AG	8	GLU
9	AG	11	GLN
9	AG	37	ASN
9	AG	38	LEU
9	AG	113	GLU
9	AG	146	GLU
10	AH	2	LEU
10	AH	19	VAL
10	AH	21	LYS
10	AH	26	VAL
10	AH	39	LEU
10	AH	52	ASP
10	AH	63	LEU
10	AH	85	ARG
10	AH	92	ARG
10	AH	105	ARG
10	AH	112	LEU
10	AH	119	LEU
10	AH	127	LEU
11	AI	2	GLU
11	AI	29	ASN
11	AI	38	GLN
11	AI	53	VAL
11	AI	58	ARG
11	AI	78	LYS
11	AI	79	LEU
11	AI	111	ARG
12	AJ	6	ILE
12	AJ	15	THR
12	AJ	16	LEU
12	AJ	45	ARG
12	AJ	64	GLU
12	AJ	71	LEU
12	AJ	73	ASP

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Mol	Chain	Res	Type
12	AJ	83	GLU
12	AJ	95	GLU
13	AK	24	SER
13	AK	29	ILE
13	AK	35	PRO
13	AK	54	ARG
13	AK	80	VAL
13	AK	84	VAL
13	AK	92	GLU
14	AL	7	ILE
14	AL	17	LYS
14	AL	33	ARG
14	AL	53	ARG
14	AL	60	LEU
14	AL	81	SER
14	AL	96	VAL
14	AL	113	ARG
14	AL	126	LYS
15	AM	9	ILE
15	AM	16	ASP
15	AM	70	LEU
15	AM	81	LEU
15	AM	102	ARG
15	AM	110	ARG
15	AM	124	PRO
16	AN	41	ARG
16	AN	44	LEU
17	AO	6	GLU
17	AO	7	GLU
17	AO	39	LEU
17	AO	57	LEU
17	AO	70	LEU
17	AO	81	LEU
17	AO	83	GLU
18	AP	2	VAL
18	AP	8	ARG
18	AP	20	VAL
18	AP	53	VAL
18	AP	62	VAL
19	AQ	34	LYS
19	AQ	38	ARG
19	AQ	60	ILE

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Mol	Chain	Res	Type
19	AQ	68	ARG
19	AQ	74	LEU
19	AQ	98	LEU
20	AR	38	GLU
20	AR	41	LYS
20	AR	55	ARG
20	AR	75	ILE
21	AS	43	GLU
22	AT	10	LEU
22	AT	25	ARG
22	AT	39	LYS
22	AT	42	GLN
22	AT	57	ARG
22	AT	73	HIS
22	AT	84	LEU
22	AT	86	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (70) such sidechains are listed below:

Mol	Chain	Res	Type
4	AB	19	HIS
4	AB	25	ASN
4	AB	40	HIS
4	AB	94	ASN
4	AB	146	GLN
4	AB	204	ASN
4	AB	240	GLN
5	AC	3	ASN
5	AC	6	HIS
5	AC	31	HIS
5	AC	69	HIS
5	AC	104	GLN
5	AC	107	GLN
5	AC	110	ASN
5	AC	118	GLN
5	AC	123	GLN
5	AC	139	GLN
5	AC	181	ASN
6	AD	45	GLN
6	AD	62	GLN
6	AD	123	HIS
6	AD	125	HIS

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Mol	Chain	Res	Type
6	AD	161	ASN
6	AD	199	ASN
7	AE	38	GLN
7	AE	65	ASN
7	AE	73	ASN
8	AF	18	GLN
8	AF	27	GLN
8	AF	32	ASN
8	AF	57	GLN
8	AF	64	GLN
8	AF	73	ASN
8	AF	94	GLN
8	AF	100	ASN
9	AG	37	ASN
9	AG	86	GLN
9	AG	96	GLN
9	AG	106	GLN
10	AH	15	ASN
11	AI	3	GLN
11	AI	23	ASN
11	AI	124	GLN
12	AJ	69	ASN
12	AJ	76	ASN
12	AJ	78	ASN
12	AJ	84	GLN
13	AK	22	HIS
13	AK	26	ASN
13	AK	38	ASN
13	AK	62	GLN
13	AK	93	GLN
14	AL	49	ASN
14	AL	75	HIS
14	AL	80	HIS
15	AM	12	ASN
15	AM	40	ASN
15	AM	62	ASN
16	AN	49	HIS
17	AO	13	GLN
17	AO	37	ASN
19	AQ	16	GLN
19	AQ	26	GLN
19	AQ	93	GLN

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Mol	Chain	Res	Type
20	AR	36	ASN
21	AS	14	HIS
21	AS	53	ASN
21	AS	56	GLN
22	AT	18	GLN
22	AT	42	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1514/1527 (99%)	234 (15%)	90 (5%)
2	AV	75/76 (98%)	13 (17%)	3 (4%)
2	AW	75/76 (98%)	13 (17%)	3 (4%)
23	B0	2812/2887 (97%)	436 (15%)	56 (1%)
24	B9	117/118 (99%)	10 (8%)	0
3	AU	8/18 (44%)	1 (12%)	0
All	All	4601/4702 (97%)	707 (15%)	152 (3%)

All (707) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	6	G
1	AA	8	A
1	AA	9	G
1	AA	27	G
1	AA	31	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	49	U
1	AA	51	A
1	AA	52	G
1	AA	60	A
1	AA	61	G
1	AA	75	C
1	AA	80	C
1	AA	84	U
1	AA	85	U
1	AA	86	G
1	AA	96	C

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Mol	Chain	Res	Type
1	AA	116	A
1	AA	120	A
1	AA	121	C
1	AA	129(A)	G
1	AA	130	A
1	AA	131	C
1	AA	144	G
1	AA	171	A
1	AA	182	U
1	AA	186	C
1	AA	192	U
1	AA	195	A
1	AA	198	G
1	AA	205	G
1	AA	209	U
1	AA	213	G
1	AA	215	C
1	AA	244	U
1	AA	247	G
1	AA	250	A
1	AA	251	G
1	AA	252	U
1	AA	266	G
1	AA	267	C
1	AA	275	G
1	AA	280	C
1	AA	282	A
1	AA	289	G
1	AA	316	G
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	332	G
1	AA	344	A
1	AA	345	C
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	367	U
1	AA	373	A
1	AA	397	A

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Mol	Chain	Res	Type
1	AA	398	C
1	AA	406	G
1	AA	412	A
1	AA	413	G
1	AA	421	U
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	439	A
1	AA	467	U
1	AA	481	G
1	AA	484	G
1	AA	485	G
1	AA	497	A
1	AA	498	U
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	518	C
1	AA	519	C
1	AA	527	G
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	547	A
1	AA	557	G
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	562	C
1	AA	572	A
1	AA	573	A
1	AA	575	G
1	AA	576	G
1	AA	588	G
1	AA	652	U
1	AA	653	A
1	AA	665	A
1	AA	686	U
1	AA	687	A
1	AA	688	G
1	AA	702	A

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Mol	Chain	Res	Type
1	AA	703	G
1	AA	718	G
1	AA	723	U
1	AA	731	G
1	AA	734	G
1	AA	749	C
1	AA	755	G
1	AA	777	A
1	AA	781	A
1	AA	782	A
1	AA	793	U
1	AA	794	A
1	AA	813	U
1	AA	815	A
1	AA	817	C
1	AA	819	A
1	AA	828	A
1	AA	838	C
1	AA	858	G
1	AA	885	G
1	AA	902	G
1	AA	913	A
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	945	G
1	AA	960	U
1	AA	961	U
1	AA	966	G
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	1004	A
1	AA	1005	A

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Mol	Chain	Res	Type
1	AA	1023	G
1	AA	1026	G
1	AA	1030	U
1	AA	1034	G
1	AA	1050	G
1	AA	1053	G
1	AA	1065	U
1	AA	1066	C
1	AA	1067	A
1	AA	1068	G
1	AA	1085	U
1	AA	1086	U
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1102	A
1	AA	1117	G
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U
1	AA	1129	C
1	AA	1130	A
1	AA	1131	G
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1145	C
1	AA	1146	A
1	AA	1152	A
1	AA	1157	A
1	AA	1159	U
1	AA	1183	A
1	AA	1184	G
1	AA	1191	A
1	AA	1196	U
1	AA	1197	G
1	AA	1201	A
1	AA	1202	G
1	AA	1211	U
1	AA	1212	U
1	AA	1215	G

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Mol	Chain	Res	Type
1	AA	1225	A
1	AA	1226	C
1	AA	1227	A
1	AA	1238	A
1	AA	1258	G
1	AA	1280	A
1	AA	1281	U
1	AA	1282	C
1	AA	1285	A
1	AA	1286	A
1	AA	1287	A
1	AA	1299	A
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1303	C
1	AA	1305	G
1	AA	1320	C
1	AA	1332	A
1	AA	1336	C
1	AA	1338	G
1	AA	1347	G
1	AA	1348	U
1	AA	1363	A
1	AA	1364	U
1	AA	1365	G
1	AA	1381	U
1	AA	1394	A
1	AA	1398	A
1	AA	1399	C
1	AA	1417	G
1	AA	1442	G
1	AA	1443	G
1	AA	1452	C
1	AA	1484	C
1	AA	1490	C
1	AA	1491	G
1	AA	1499	A
1	AA	1502	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U

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Mol	Chain	Res	Type
1	AA	1517	G
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
2	AV	2	C
2	AV	3	G
2	AV	17	U
2	AV	18	G
2	AV	19	G
2	AV	21	A
2	AV	34	G
2	AV	35	A
2	AV	36	A
2	AV	37	G
2	AV	41	U
2	AV	75	C
2	AV	76	A
3	AU	9	U
2	AW	2	C
2	AW	3	G
2	AW	17	U
2	AW	18	G
2	AW	19	G
2	AW	21	A
2	AW	26	G
2	AW	35	A
2	AW	36	A
2	AW	37	G
2	AW	41	U
2	AW	74	C
2	AW	76	A
23	B0	14	A
23	B0	15	G
23	B0	45	C
23	B0	48	A
23	B0	49	U
23	B0	50	G
23	B0	58	C
23	B0	59	G
23	B0	63	A
23	B0	67	G
23	B0	70	A

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Mol	Chain	Res	Type
23	B0	72	A
23	B0	87	G
23	B0	89	A
23	B0	90	G
23	B0	91	A
23	B0	99	U
23	B0	105	G
23	B0	110	U
23	B0	116	A
23	B0	118	U
23	B0	123	A
23	B0	129	A
23	B0	135	U
23	B0	155	G
23	B0	158	A
23	B0	173	A
23	B0	174	A
23	B0	176	A
23	B0	177	U
23	B0	181	A
23	B0	182	G
23	B0	193	A
23	B0	199	A
23	B0	200	A
23	B0	205	A
23	B0	206	U
23	B0	210	A
23	B0	218	A
23	B0	219	G
23	B0	225	G
23	B0	226	C
23	B0	227	G
23	B0	229	G
23	B0	242	A
23	B0	243	G
23	B0	245	C
23	B0	305	A
23	B0	318	G
23	B0	333	A
23	B0	334	G
23	B0	335	A
23	B0	340	G

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Mol	Chain	Res	Type
23	B0	342	G
23	B0	343	A
23	B0	344	G
23	B0	358	C
23	B0	363	G
23	B0	368	A
23	B0	373	A
23	B0	399	G
23	B0	401	G
23	B0	408	U
23	B0	414	A
23	B0	418	C
23	B0	419	G
23	B0	424	G
23	B0	443	A
23	B0	455	A
23	B0	456	C
23	B0	460	U
23	B0	463	C
23	B0	467	U
23	B0	469	G
23	B0	491	A
23	B0	492	G
23	B0	515	A
23	B0	518	A
23	B0	519	C
23	B0	537	C
23	B0	541	C
23	B0	542	A
23	B0	554	U
23	B0	556	A
23	B0	558	G
23	B0	559	C
23	B0	572	G
23	B0	584	A
23	B0	602	C
23	B0	613	A
23	B0	617	U
23	B0	624	A
23	B0	632	A
23	B0	636	G
23	B0	638	A

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Mol	Chain	Res	Type
23	B0	648	A
23	B0	652	C
23	B0	654	A
23	B0	657	A
23	B0	665	A
23	B0	666	U
23	B0	667	U
23	B0	684	C
23	B0	697	G
23	B0	699	G
23	B0	700	C
23	B0	728	G
23	B0	742	G
23	B0	743	A
23	B0	753	U
23	B0	760	U
23	B0	761	G
23	B0	766	A
23	B0	776	G
23	B0	778	G
23	B0	789	G
23	B0	794	A
23	B0	796	A
23	B0	797	A
23	B0	798	G
23	B0	801	A
23	B0	802	A
23	B0	803	C
23	B0	806	A
23	B0	813	A
23	B0	818	G
23	B0	825	C
23	B0	832	A
23	B0	840	U
23	B0	841	G
23	B0	844	G
23	B0	873	U
23	B0	879	A
23	B0	895	G
23	B0	919	U
23	B0	922	A
23	B0	926	C

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Mol	Chain	Res	Type
23	B0	930	A
23	B0	941	U
23	B0	944	A
23	B0	952	A
23	B0	957	G
23	B0	969	U
23	B0	970	A
23	B0	972	C
23	B0	984	A
23	B0	994	A
23	B0	996	C
23	B0	1005	U
23	B0	1006	C
23	B0	1023	U
23	B0	1024	G
23	B0	1030	U
23	B0	1032	A
23	B0	1033	G
23	B0	1036	G
23	B0	1037	U
23	B0	1044	U
23	B0	1055	A
23	B0	1056	U
23	B0	1057	A
23	B0	1068	A
23	B0	1069	G
23	B0	1071	U
23	B0	1072	U
23	B0	1073	G
23	B0	1078	A
23	B0	1081	A
23	B0	1082	G
23	B0	1084	A
23	B0	1092	U
23	B0	1099	A
23	B0	1100	G
23	B0	1113	C
23	B0	1114	A
23	B0	1117	G
23	B0	1120	C
23	B0	1122	A
23	B0	1137	A

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Mol	Chain	Res	Type
23	B0	1138	A
23	B0	1142	G
23	B0	1145	C
23	B0	1146	G
23	B0	1153	A
23	B0	1167	A
23	B0	1182	U
23	B0	1183	C
23	B0	1185	C
23	B0	1188	A
23	B0	1194	U
23	B0	1195	U
23	B0	1199	U
23	B0	1200	G
23	B0	1224	A
23	B0	1253	C
23	B0	1262	U
23	B0	1264	C
23	B0	1266	G
23	B0	1269	G
23	B0	1278	A
23	B0	1279	G
23	B0	1280	U
23	B0	1284	G
23	B0	1285	A
23	B0	1288	A
23	B0	1314	A
23	B0	1327	C
23	B0	1334	A
23	B0	1338	G
23	B0	1342	U
23	B0	1343	C
23	B0	1355	A
23	B0	1356	G
23	B0	1359	G
23	B0	1391	A
23	B0	1392	U
23	B0	1397	A
23	B0	1398	G
23	B0	1433	A
23	B0	1441	A
23	B0	1442	C

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Mol	Chain	Res	Type
23	B0	1443	G
23	B0	1459	U
23	B0	1465	G
23	B0	1468	A
23	B0	1469	U
23	B0	1470	G
23	B0	1475	U
23	B0	1482	U
23	B0	1490	U
23	B0	1496	G
23	B0	1505	U
23	B0	1508	G
23	B0	1509	A
23	B0	1513	U
23	B0	1519	G
23	B0	1520	G
23	B0	1524	C
23	B0	1529	C
23	B0	1552	C
23	B0	1571	G
23	B0	1573	G
23	B0	1574	A
23	B0	1576	G
23	B0	1582	A
23	B0	1583	A
23	B0	1585	A
23	B0	1601	U
23	B0	1618	U
23	B0	1623	C
23	B0	1624	A
23	B0	1625	A
23	B0	1632	A
23	B0	1633	C
23	B0	1634	A
23	B0	1635	G
23	B0	1648	C
23	B0	1651	U
23	B0	1657	A
23	B0	1664	G
23	B0	1665	C
23	B0	1670	G
23	B0	1671	A

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Mol	Chain	Res	Type
23	B0	1680	U
23	B0	1685	A
23	B0	1691	G
23	B0	1692	C
23	B0	1710	U
23	B0	1712	G
23	B0	1715	A
23	B0	1717	A
23	B0	1724	C
23	B0	1733	U
23	B0	1748	U
23	B0	1749	G
23	B0	1750	A
23	B0	1754	G
23	B0	1755	G
23	B0	1764	A
23	B0	1771	A
23	B0	1773	C
23	B0	1778	U
23	B0	1792	C
23	B0	1800	A
23	B0	1801	C
23	B0	1802	A
23	B0	1807	A
23	B0	1808	C
23	B0	1821	A
23	B0	1831	G
23	B0	3865	A
23	B0	1884	A
23	B0	1913	G
23	B0	1920	A
23	B0	1922	U
23	B0	1926	U
23	B0	1927	U
23	B0	1928	G
23	B0	1938	U
23	B0	1939	U
23	B0	1949	A
23	B0	1950	C
23	B0	1954	A
23	B0	1955	G
23	B0	1956	G

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Mol	Chain	Res	Type
23	B0	1979	C
23	B0	1980	A
23	B0	2004	U
23	B0	2006	G
23	B0	2014	A
23	B0	2015	G
23	B0	2016	A
23	B0	2019	C
23	B0	2034	A
23	B0	2038	C
23	B0	2043	A
23	B0	2045	A
23	B0	2051	U
23	B0	2052	G
23	B0	2060	A
23	B0	3107	G
23	B0	3110	G
23	B0	3111	C
23	B0	3112	G
23	B0	3116	G
23	B0	3117	A
23	B0	3118	U
23	B0	3119	A
23	B0	3146	A
23	B0	3147	C
23	B0	3150	C
23	B0	3172	U
23	B0	3173	A
23	B0	3185	U
23	B0	3191	A
23	B0	3197	U
23	B0	2191	A
23	B0	2195	C
23	B0	2199	C
23	B0	2205	C
23	B0	2218	G
23	B0	2229	G
23	B0	2237	C
23	B0	2241	U
23	B0	2245	A
23	B0	2246	A
23	B0	2247	A

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Mol	Chain	Res	Type
23	B0	2255	G
23	B0	2262	C
23	B0	2268	G
23	B0	2285	U
23	B0	2286	G
23	B0	2287	G
23	B0	2288	A
23	B0	2298	U
23	B0	2299	A
23	B0	2300	G
23	B0	2301	A
23	B0	2313	G
23	B0	2315	A
23	B0	2316	G
23	B0	2326	C
23	B0	2362	G
23	B0	2364	C
23	B0	2378	G
23	B0	2382	C
23	B0	2385	U
23	B0	2396	C
23	B0	2403	C
23	B0	2405	A
23	B0	2408	G
23	B0	2409	A
23	B0	2414	A
23	B0	2420	C
23	B0	2427	A
23	B0	2428	U
23	B0	2438	A
23	B0	2448	A
23	B0	2455	A
23	B0	2470	U
23	B0	2481	G
23	B0	2482	A
23	B0	2483	U
23	B0	2484	G
23	B0	2485	U
23	B0	2492	G
23	B0	2498	U
23	B0	2499	C
23	B0	2504	G

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Mol	Chain	Res	Type
23	B0	2522	G
23	B0	2546	G
23	B0	2549	G
23	B0	2565	C
23	B0	2578	G
23	B0	2581	A
23	B0	2582	G
23	B0	2588	U
23	B0	2589	C
23	B0	2591	C
23	B0	2593	A
23	B0	2594	U
23	B0	2608	A
23	B0	2609	G
23	B0	2625	U
23	B0	2633	A
23	B0	2634	G
23	B0	2661	G
23	B0	2669	C
23	B0	2670	C
23	B0	2681	A
23	B0	2691	C
23	B0	2692	A
23	B0	2712	G
23	B0	2728	A
23	B0	2730	A
23	B0	2732	C
23	B0	2737	A
23	B0	2745	A
23	B0	2756	A
23	B0	2760	G
23	B0	2761	A
23	B0	2771	C
23	B0	2784	A
23	B0	2785	A
23	B0	2795	A
23	B0	2807	U
23	B0	2808	U
23	B0	2809	A
23	B0	2811	G
23	B0	2825	A
23	B0	2841	U

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Mol	Chain	Res	Type
23	B0	2842	C
23	B0	2847	G
23	B0	2854	G
23	B0	2855	C
23	B0	2859	U
24	B9	18	G
24	B9	26	G
24	B9	27	A
24	B9	28	A
24	B9	29	C
24	B9	31	A
24	B9	47	A
24	B9	77	G
24	B9	112	A
24	B9	115	G

All (152) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	5	U
1	AA	7	G
1	AA	30	U
1	AA	48	C
1	AA	51	A
1	AA	60	A
1	AA	74	G
1	AA	94	G
1	AA	115	G
1	AA	119	A
1	AA	129(A)	G
1	AA	135	C
1	AA	181	G
1	AA	185	A
1	AA	197	A
1	AA	204	A
1	AA	212	G
1	AA	243	A
1	AA	250	A
1	AA	251	G
1	AA	266	G
1	AA	274	A
1	AA	279	A

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Mol	Chain	Res	Type
1	AA	281	G
1	AA	328	C
1	AA	329	A
1	AA	344	A
1	AA	353	A
1	AA	366	C
1	AA	372	C
1	AA	428	G
1	AA	429	U
1	AA	438	G
1	AA	484	G
1	AA	496	A
1	AA	509	A
1	AA	518	C
1	AA	533	A
1	AA	546	G
1	AA	556	C
1	AA	559	A
1	AA	560	U
1	AA	575	G
1	AA	587	G
1	AA	651	C
1	AA	687	A
1	AA	701	C
1	AA	733	A
1	AA	748	C
1	AA	792	A
1	AA	812	C
1	AA	905	U
1	AA	913	A
1	AA	965	A
1	AA	975	A
1	AA	976	G
1	AA	992	U
1	AA	1049	U
1	AA	1065	U
1	AA	1067	A
1	AA	1085	U
1	AA	1101	A
1	AA	1129	C
1	AA	1145	C
1	AA	1182	G

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Mol	Chain	Res	Type
1	AA	1183	A
1	AA	1190	G
1	AA	1196	U
1	AA	1201	A
1	AA	1214	C
1	AA	1226	C
1	AA	1237	C
1	AA	1257	U
1	AA	1281	U
1	AA	1285	A
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1319	A
1	AA	1346	A
1	AA	1347	G
1	AA	1364	U
1	AA	1380	U
1	AA	1397	C
1	AA	1451	A
1	AA	1498	U
1	AA	1503	A
1	AA	1504	G
1	AA	1505	G
1	AA	1528	U
2	AV	16	U
2	AV	18	G
2	AV	35	A
2	AW	16	U
2	AW	18	G
2	AW	35	A
23	B0	69	G
23	B0	173	A
23	B0	181	A
23	B0	192	G
23	B0	198	A
23	B0	242	A
23	B0	342	G
23	B0	583	C
23	B0	765	C
23	B0	801	A
23	B0	805	G

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Mol	Chain	Res	Type
23	B0	824	U
23	B0	843	G
23	B0	878	C
23	B0	1071	U
23	B0	1141	U
23	B0	1187	A
23	B0	1193	G
23	B0	1194	U
23	B0	1223	G
23	B0	1263	G
23	B0	1278	A
23	B0	1279	G
23	B0	1313	U
23	B0	1354	A
23	B0	1495	G
23	B0	1518	C
23	B0	1519	G
23	B0	1575	C
23	B0	1633	C
23	B0	1634	A
23	B0	1664	G
23	B0	1807	A
23	B0	1820	G
23	B0	1856	U
23	B0	1938	U
23	B0	2015	G
23	B0	3098	U
23	B0	3107	G
23	B0	3110	G
23	B0	3111	C
23	B0	3116	G
23	B0	3118	U
23	B0	3146	A
23	B0	3149	G
23	B0	3171	A
23	B0	3172	U
23	B0	2204	A
23	B0	2245	A
23	B0	2261	G
23	B0	2377	U
23	B0	2404	A
23	B0	2426	G

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Mol	Chain	Res	Type
23	B0	2668	U
23	B0	2759	U
23	B0	2824	C

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	AA	108
23	B0	31
2	AW	4
2	AV	4
24	B9	2
3	AU	1
14	AL	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AA	1443:G	O3'	1445:U	P	10.46
1	AA	1459:C	O3'	1460:A	P	10.16
1	AA	1458:G	O3'	1459:C	P	8.01

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B0	1888:C	O3'	1889:G	P	6.63
1	B0	3180:U	O3'	3181:C	P	5.39
1	AA	455:C	O3'	456:A	P	5.28
1	B0	891:A	O3'	892:A	P	4.99
1	B0	3197:U	O3'	2181:A	P	4.97
1	AA	993:G	O3'	994:A	P	4.72
1	B0	3161:C	O3'	3162:G	P	4.56
1	AA	68:G	O3'	69:G	P	4.50
1	B0	910:U	O3'	911:A	P	4.44
1	AA	476:U	O3'	477:G	P	4.41
1	AA	1434:A	O3'	1435:G	P	4.39
1	AA	1044:A	O3'	1045:C	P	4.27
1	B0	3108:G	O3'	3109:U	P	4.23
1	B0	3126:A	O3'	3127:G	P	4.03
1	AA	1466:C	O3'	1467:G	P	3.96
1	AA	99:C	O3'	101:A	P	3.92
1	AA	1278:U	O3'	1279:A	P	3.65
1	AA	200:G	O3'	201:G	P	3.50
1	B0	2075:U	O3'	3093:C	P	3.50
1	AA	820:U	O3'	821:G	P	3.45
1	B0	1912:G	O3'	1913:G	P	3.36
1	AA	196:A	O3'	197:A	P	3.29
1	AA	397:A	O3'	398:C	P	3.28
1	AA	1256:A	O3'	1257:U	P	3.23
1	AA	337:C	O3'	338:A	P	3.13
1	B0	1116:U	O3'	1117:G	P	3.10
1	AA	919:A	O3'	920:U	P	3.05
1	AA	547:A	O3'	548:G	P	3.02
1	AA	396:G	O3'	397:A	P	3.00
1	AA	216:C	O3'	217:C	P	2.94
1	AA	717:C	O3'	718:G	P	2.91
1	AA	179:A	O3'	180:U	P	2.86
1	AA	38:G	O3'	39:G	P	2.81
1	B0	3877:A	O3'	1861:G	P	2.80
1	B0	3196:G	O3'	3197:U	P	2.80
1	B0	1113:C	O3'	1114:A	P	2.75
1	B0	3181:C	O3'	3182:U	P	2.73
1	AA	170:U	O3'	171:A	P	2.72
1	AA	672:U	O3'	673:G	P	2.72
1	AA	684:A	O3'	685:G	P	2.72
1	AA	848:G	O3'	849:C	P	2.72
1	AA	150:C	O3'	151:A	P	2.71

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B0	897:A	O3'	898:C	P	2.70
1	AA	497:A	O3'	498:U	P	2.69
1	AA	1416:G	O3'	1417:G	P	2.69
1	AA	1027:C	O3'	1028:C	P	2.68
1	AA	814:A	O3'	815:A	P	2.67
1	AA	1117:G	O3'	1118:C	P	2.66
1	AA	1026:G	O3'	1027:C	P	2.65
1	AA	405:U	O3'	406:G	P	2.62
1	AA	705:U	O3'	706:A	P	2.60
1	AA	960:U	O3'	961:U	P	2.53
1	AA	351:G	O3'	352:C	P	2.51
1	AA	765:G	O3'	766:A	P	2.50
1	AW	44:A	O3'	45:G	P	2.48
1	AA	249:U	O3'	250:A	P	2.46
1	AA	914:A	O3'	915:A	P	2.42
1	B0	1119:U	O3'	1120:C	P	2.42
1	AA	305:G	O3'	306:G	P	2.40
1	AA	1483:A	O3'	1484:C	P	2.39
1	B0	1062:G	O3'	1063:C	P	2.38
1	B0	3187:U	O3'	3188:U	P	2.35
1	AA	191:G	O3'	192:U	P	2.33
1	AA	1447:A	O3'	1448:C	P	2.29
1	AA	291:C	O3'	292:G	P	2.28
1	AA	1224:G	O3'	1225:A	P	2.27
1	AA	1238:A	O3'	1239:A	P	2.25
1	AA	837:G	O3'	838:C	P	2.24
1	B9	107:C	O3'	108:G	P	2.21
1	AA	733:A	O3'	734:G	P	2.18
1	AA	115:G	O3'	116:A	P	2.17
1	AA	1331:G	O3'	1332:A	P	2.17
1	AA	367:U	O3'	368:U	P	2.14
1	B0	3107:G	O3'	3108:G	P	2.14
1	AA	1034:G	O3'	1035:A	P	2.13
1	AA	212:G	O3'	213:G	P	2.12
1	AV	25:C	O3'	26:G	P	2.12
1	B0	3098:U	O3'	3099:U	P	2.12
1	AA	288:A	O3'	289:G	P	2.08
1	AA	827:U	O3'	828:A	P	2.07
1	AA	1211:U	O3'	1212:U	P	2.07
1	AA	118:U	O3'	119:A	P	2.06
1	AU	11:C	O3'	12:A	P	2.05
1	B0	3183:A	O3'	3184:C	P	2.02

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AA	375:U	O3'	376:G	P	2.01
1	AA	1155:G	O3'	1156:G	P	2.01
1	B9	73:C	O3'	74:A	P	2.01
1	AA	89:G	O3'	90:C	P	1.98
1	B0	3149:G	O3'	3150:C	P	1.98
1	AA	1398:A	O3'	1399:C	P	1.97
1	AA	546:G	O3'	547:A	P	1.96
1	AA	606:G	O3'	607:A	P	1.95
1	AA	1297:C	O3'	1298:C	P	1.95
1	AA	387:U	O3'	388:G	P	1.93
1	AA	1335:C	O3'	1336:C	P	1.93
1	B0	1856:U	O3'	3865:A	P	1.93
1	AA	206:C	O3'	207:C	P	1.91
1	B0	3188:U	O3'	3189:U	P	1.90
1	B0	3141:G	O3'	3142:C	P	1.87
1	AA	278:G	O3'	279:A	P	1.86
1	AA	631:G	O3'	632:A	P	1.86
1	AA	1182:G	O3'	1183:A	P	1.86
1	B0	3101:G	O3'	3102:G	P	1.86
1	AA	1237:C	O3'	1238:A	P	1.85
1	AA	1374:A	O3'	1375:A	P	1.85
1	AW	34:G	O3'	35:A	P	1.84
1	AA	587:G	O3'	588:G	P	1.83
1	B0	3190:G	O3'	3191:A	P	1.83
1	B0	3874:C	O3'	3875:A	P	1.81
1	AA	754:C	O3'	755:G	P	1.78
1	AA	499:A	O3'	500:G	P	1.76
1	AA	1067:A	O3'	1068:G	P	1.38
1	AA	274:A	O3'	275:G	P	1.37
1	AA	1345:U	O3'	1346:A	P	1.36
1	AA	1455:G	O3'	1456:A	P	1.34
1	AA	1457:A	O3'	1458:G	P	1.34
1	AA	227:G	O3'	228:A	P	1.33
1	AW	33:U	O3'	34:G	P	1.32
1	AA	461:C	O3'	462:A	P	1.31
1	AA	1383:C	O3'	1384:C	P	1.31
1	AA	26:A	O3'	27:G	P	1.30
1	AA	394:G	O3'	395:C	P	1.30
1	AA	1110:A	O3'	1111:A	P	1.30
1	AV	75:C	O3'	76:A	P	1.30
1	AW	75:C	O3'	76:A	P	1.29
1	AV	74:C	O3'	75:C	P	1.28

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AA	776:G	O3'	777:A	P	1.27
1	AA	59:A	O3'	60:A	P	1.26
1	B0	3102:G	O3'	3103:A	P	1.26
1	AA	804:U	O3'	805:C	P	1.25
1	AA	651:C	O3'	652:U	P	1.24
1	AA	1490:C	O3'	1491:G	P	1.23
1	AA	74:G	O3'	75:C	P	1.20
1	AA	576:G	O3'	577:G	P	1.20
1	AA	1409:C	O3'	1410:G	P	1.19
1	AA	403:C	O3'	404:U	P	1.18
1	AV	36:A	O3'	37:G	P	1.18
1	AA	239:U	O3'	240:C	P	1.17
1	AA	94:G	O3'	96:C	P	1.12
1	B0	3106:U	O3'	3107:G	P	1.12
1	AA	1393:U	O3'	1394:A	P	1.05
1	AA	556:C	O3'	557:G	P	1.02
1	AA	905:U	O3'	906:G	P	0.96
1	AL	19:ARG	C	20:LYS	N	0.94
1	AA	436:C	O3'	437:U	P	0.88
1	AA	893:C	O3'	894:G	P	0.87
1	AA	214:U	O3'	215:C	P	0.73
1	AA	135:C	O3'	136:C	P	0.60

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	AA	1527/1527 (100%)	1.46	409 (26%) 1 8	341, 531, 705, 847	0
2	AV	76/76 (100%)	0.76	10 (13%) 7 15	379, 379, 379, 379	0
2	AW	76/76 (100%)	4.27	59 (77%) 0 1	255, 255, 255, 255	76 (100%)
3	AU	9/18 (50%)	2.50	4 (44%) 0 4	379, 379, 379, 379	0
4	AB	234/234 (100%)	1.33	66 (28%) 1 7	496, 496, 496, 496	0
5	AC	206/206 (100%)	2.71	105 (50%) 0 3	264, 264, 264, 264	0
6	AD	208/208 (100%)	2.76	104 (50%) 0 3	479, 479, 479, 479	0
7	AE	150/150 (100%)	3.19	83 (55%) 0 3	669, 669, 669, 669	0
8	AF	101/101 (100%)	1.48	32 (31%) 1 6	640, 640, 640, 640	0
9	AG	155/155 (100%)	1.89	62 (40%) 1 5	406, 406, 406, 406	0
10	AH	138/138 (100%)	2.18	53 (38%) 1 5	647, 647, 647, 647	0
11	AI	127/127 (100%)	1.61	43 (33%) 1 6	426, 426, 426, 426	0
12	AJ	98/98 (100%)	3.66	50 (51%) 0 3	507, 507, 507, 507	0
13	AK	119/119 (100%)	1.20	23 (19%) 3 11	510, 510, 510, 510	0
14	AL	124/124 (100%)	2.24	52 (41%) 0 4	367, 367, 384, 384	0
15	AM	125/125 (100%)	2.01	53 (42%) 0 4	349, 454, 454, 454	0
16	AN	60/60 (100%)	3.77	34 (56%) 0 3	264, 264, 264, 264	0
17	AO	88/88 (100%)	2.01	35 (39%) 1 5	572, 572, 572, 572	0
18	AP	83/83 (100%)	3.01	51 (61%) 0 2	662, 662, 662, 662	0
19	AQ	104/104 (100%)	2.25	46 (44%) 0 4	670, 670, 670, 670	0
20	AR	73/73 (100%)	1.85	25 (34%) 1 6	640, 640, 640, 640	0
21	AS	80/80 (100%)	1.88	26 (32%) 1 6	545, 545, 545, 545	0
22	AT	99/99 (100%)	2.77	52 (52%) 0 3	744, 744, 744, 744	0
23	B0	2825/2887 (97%)	2.18	1163 (41%) 0 4	517, 737, 737, 936	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å ²)	Q<0.9
24	B9	118/118 (100%)	2.54	51 (43%)	0	4	772, 938, 938, 938	0
25	BA	270/270 (100%)	10.81	264 (97%)	0	1	737, 737, 737, 737	0
26	BB	205/205 (100%)	6.56	185 (90%)	0	1	737, 737, 737, 737	0
27	BC	197/197 (100%)	9.34	183 (92%)	0	1	737, 737, 737, 737	0
28	BD	178/178 (100%)	9.59	177 (99%)	0	1	938, 938, 938, 938	0
29	BE	177/177 (100%)	6.71	143 (80%)	0	1	737, 737, 737, 737	0
30	BF	52/52 (100%)	9.24	49 (94%)	0	1	737, 737, 737, 737	0
31	BG	143/143 (100%)	3.28	65 (45%)	0	4	907, 907, 907, 907	0
32	BH	143/143 (100%)	7.56	137 (95%)	0	1	737, 737, 737, 737	0
33	BI	132/132 (100%)	10.39	128 (96%)	0	1	737, 737, 737, 737	0
34	BJ	141/141 (100%)	7.21	110 (78%)	0	1	737, 737, 737, 737	0
35	BK	124/124 (100%)	8.23	121 (97%)	0	1	737, 737, 737, 737	0
36	BL	114/114 (100%)	8.64	111 (97%)	0	1	737, 737, 737, 737	0
37	BM	111/111 (100%)	11.31	111 (100%)	0	1	938, 938, 938, 938	0
38	BN	125/125 (100%)	5.96	114 (91%)	0	1	737, 737, 737, 737	0
39	BO	117/117 (100%)	4.65	93 (79%)	0	1	737, 737, 737, 737	0
40	BP	100/100 (100%)	4.55	79 (79%)	0	1	737, 737, 737, 737	0
41	BQ	130/130 (100%)	8.51	130 (100%)	0	1	737, 737, 737, 737	0
42	BR	93/93 (100%)	7.06	89 (95%)	0	1	737, 737, 737, 737	0
43	BS	113/113 (100%)	8.17	112 (99%)	0	1	737, 737, 737, 737	0
44	BT	173/173 (100%)	10.10	157 (90%)	0	1	737, 772, 772, 772	0
45	BU	86/86 (100%)	10.24	86 (100%)	0	1	737, 737, 737, 737	0
46	BV	0/16	-	-	-	-	-	-
47	BW	65/65 (100%)	6.27	57 (87%)	0	1	737, 737, 737, 737	0
48	BX	55/55 (100%)	6.59	52 (94%)	0	1	737, 737, 737, 737	0
49	BY	73/73 (100%)	7.31	69 (94%)	0	1	737, 737, 737, 737	0
50	BZ	58/58 (100%)	5.98	51 (87%)	0	1	737, 737, 737, 737	0
51	B1	53/53 (100%)	8.27	51 (96%)	0	1	737, 737, 737, 737	0
52	B2	46/46 (100%)	5.00	40 (86%)	0	1	737, 737, 737, 737	0
53	B3	63/63 (100%)	3.43	37 (58%)	0	3	737, 737, 737, 737	0
54	B4	35/35 (100%)	5.66	34 (97%)	0	1	737, 737, 737, 737	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
55	B5	213/217 (98%)	8.19	185 (86%) 0 1	940, 940, 940, 940	0
All	All	10588/10679 (99%)	4.03	5911 (55%) 0 3	255, 737, 938, 940	76 (0%)

All (5911) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
44	BT	149	ALA	52.7
44	BT	118	HIS	50.7
45	BU	85	GLN	48.7
37	BM	84	ILE	48.6
37	BM	113	ASP	46.7
55	B5	17	SER	44.1
44	BT	121	GLN	43.7
44	BT	148	THR	43.6
45	BU	86	THR	43.1
55	B5	120	ALA	42.2
44	BT	152	ILE	42.1
44	BT	119	ASN	41.3
44	BT	150	GLY	41.3
25	BA	227	ASN	40.5
36	BL	72	ASP	40.3
27	BC	69	HIS	39.8
25	BA	23	GLY	39.8
27	BC	61	GLN	39.7
37	BM	112	LEU	39.5
45	BU	84	ALA	39.3
55	B5	124	LEU	39.3
44	BT	103	ARG	38.1
44	BT	98	VAL	37.9
33	BI	108	THR	37.8
55	B5	13	LYS	37.7
37	BM	85	LYS	37.2
55	B5	91	GLN	37.2
36	BL	71	HIS	36.5
36	BL	74	ASP	36.4
44	BT	136	VAL	34.8
25	BA	228	PRO	34.2
27	BC	70	GLY	33.9
55	B5	119	LEU	33.1
55	B5	12	LEU	32.4
39	BO	118	GLN	31.7
26	BB	173	VAL	31.3

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Mol	Chain	Res	Type	RSRZ
34	BJ	85	ASP	31.3
41	BQ	5	GLU	31.1
55	B5	96	GLN	31.0
25	BA	269	PHE	30.9
30	BF	39	THR	30.8
27	BC	126	ALA	30.7
27	BC	60	GLY	30.4
27	BC	127	ASP	30.2
55	B5	114	GLN	29.8
45	BU	83	ALA	29.8
29	BE	36	PRO	29.4
48	BX	55	GLU	28.9
44	BT	162	ALA	28.8
25	BA	166	GLN	28.8
34	BJ	4	HIS	28.4
44	BT	153	LYS	27.6
34	BJ	12	SER	27.5
37	BM	111	GLY	27.5
34	BJ	84	GLU	27.3
23	B0	1801	C	27.1
44	BT	110	GLY	27.1
36	BL	67	ALA	26.9
27	BC	141	GLY	26.8
44	BT	117	VAL	26.7
31	BG	6	GLY	26.6
55	B5	93	LEU	26.6
55	B5	127	ALA	26.5
29	BE	116	GLU	26.5
33	BI	84	ALA	26.5
35	BK	88	LYS	26.5
44	BT	104	SER	26.4
37	BM	114	PHE	26.3
44	BT	173	PRO	26.2
25	BA	232	PRO	26.1
45	BU	82	GLU	25.9
45	BU	80	SER	25.9
27	BC	67	ALA	25.7
55	B5	100	VAL	25.5
25	BA	229	VAL	25.5
25	BA	235	GLY	25.4
55	B5	15	ALA	25.2
41	BQ	102	THR	25.0

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Mol	Chain	Res	Type	RSRZ
44	BT	160	LEU	25.0
25	BA	223	GLY	25.0
12	AJ	62	HIS	24.9
25	BA	114	GLY	24.7
23	B0	625	A	24.7
28	BD	46	ASP	24.6
44	BT	151	ASP	24.6
25	BA	226	MET	24.5
37	BM	86	GLN	24.4
27	BC	176	ASN	24.4
36	BL	15	SER	24.4
6	AD	49	ARG	24.2
55	B5	90	LEU	24.1
25	BA	22	SER	24.1
12	AJ	61	GLU	24.0
32	BH	68	PRO	23.9
45	BU	87	GLU	23.9
31	BG	7	ILE	23.9
55	B5	97	LYS	23.9
25	BA	115	ALA	23.9
36	BL	73	LYS	23.8
43	BS	19	GLY	23.8
23	B0	624	A	23.8
25	BA	167	GLY	23.4
55	B5	123	ILE	23.2
35	BK	87	GLY	23.1
55	B5	16	LEU	23.0
55	B5	121	GLY	23.0
25	BA	101	GLU	22.9
36	BL	13	ASN	22.9
44	BT	97	PRO	22.7
26	BB	87	ASP	22.7
27	BC	170	LEU	22.5
55	B5	125	GLY	22.5
44	BT	120	LEU	22.5
33	BI	16	ALA	22.5
45	BU	9	SER	22.5
41	BQ	7	THR	22.5
34	BJ	6	LEU	22.4
27	BC	23	ASN	22.4
41	BQ	119	LYS	22.4
27	BC	174	GLY	22.4

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Mol	Chain	Res	Type	RSRZ
44	BT	114	ASP	22.3
47	BW	35	GLY	22.3
25	BA	231	HIS	22.2
37	BM	81	GLU	22.2
34	BJ	11	GLY	22.1
25	BA	116	THR	22.0
41	BQ	6	GLN	22.0
19	AQ	101	ARG	21.9
25	BA	233	HIS	21.8
33	BI	125	LYS	21.7
55	B5	116	SER	21.6
33	BI	33	GLY	21.4
44	BT	154	LEU	21.4
27	BC	74	VAL	21.4
55	B5	94	GLN	21.4
41	BQ	17	GLN	21.2
27	BC	143	ASP	21.2
23	B0	623	G	21.1
27	BC	169	VAL	21.0
33	BI	17	ARG	21.0
26	BB	20	ALA	20.8
27	BC	151	VAL	20.8
23	B0	127	C	20.7
44	BT	164	PRO	20.7
27	BC	171	PRO	20.4
41	BQ	19	LYS	20.3
51	B1	24	THR	20.3
55	B5	10	GLU	20.3
33	BI	83	ARG	20.3
25	BA	270	ILE	20.3
25	BA	107	ALA	20.3
36	BL	30	ARG	20.2
35	BK	78	LYS	20.2
27	BC	71	ASP	20.2
32	BH	37	ASP	20.2
29	BE	97	LYS	20.0
25	BA	93	ALA	20.0
25	BA	24	LEU	20.0
26	BB	24	THR	20.0
43	BS	20	ASP	20.0
45	BU	8	GLY	19.8
23	B0	626	A	19.8

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Mol	Chain	Res	Type	RSRZ
40	BP	26	GLN	19.8
25	BA	108	PRO	19.8
34	BJ	7	LYS	19.8
55	B5	14	LEU	19.8
33	BI	18	GLU	19.6
27	BC	150	LEU	19.5
32	BH	38	GLU	19.5
55	B5	6	GLU	19.5
27	BC	66	ASN	19.4
39	BO	100	ALA	19.4
55	B5	7	SER	19.3
42	BR	94	GLN	19.3
25	BA	182	LEU	19.2
25	BA	128	GLY	19.2
26	BB	86	PRO	19.2
33	BI	80	ALA	19.1
49	BY	44	THR	19.1
25	BA	117	VAL	19.0
34	BJ	78	SER	19.0
27	BC	68	ARG	19.0
25	BA	168	LYS	18.9
25	BA	125	PRO	18.9
25	BA	238	GLY	18.9
33	BI	15	GLY	18.9
45	BU	47	ALA	18.9
55	B5	9	ILE	18.8
25	BA	230	ASP	18.8
23	B0	128	C	18.8
27	BC	64	THR	18.7
34	BJ	15	ASP	18.7
41	BQ	112	GLY	18.7
37	BM	24	SER	18.6
29	BE	180	GLY	18.6
27	BC	73	SER	18.6
25	BA	192	THR	18.6
44	BT	105	GLN	18.6
35	BK	111	THR	18.5
35	BK	85	GLY	18.5
33	BI	102	GLN	18.4
27	BC	80	GLY	18.4
16	AN	59	ALA	18.4
31	BG	29	GLN	18.4

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Mol	Chain	Res	Type	RSRZ
30	BF	37	SER	18.3
25	BA	103	ARG	18.3
22	AT	71	THR	18.3
31	BG	5	ALA	18.3
55	B5	92	LYS	18.3
37	BM	110	GLY	18.3
52	B2	28	ARG	18.3
55	B5	11	ALA	18.2
1	AA	210	C	18.2
25	BA	66	ASP	18.2
25	BA	240	THR	18.1
37	BM	25	GLY	18.1
28	BD	109	PRO	18.1
44	BT	161	ALA	18.0
55	B5	122	ARG	18.0
28	BD	94	GLU	17.9
44	BT	168	VAL	17.9
25	BA	225	ALA	17.9
1	AA	211	G	17.9
55	B5	95	GLY	17.9
36	BL	75	VAL	17.9
37	BM	45	ASP	17.8
34	BJ	5	ASP	17.8
35	BK	30	PHE	17.8
27	BC	108	ILE	17.8
25	BA	139	GLY	17.7
27	BC	175	VAL	17.7
34	BJ	122	VAL	17.7
25	BA	246	PRO	17.7
36	BL	14	SER	17.7
31	BG	8	VAL	17.7
28	BD	175	LEU	17.6
27	BC	198	GLU	17.6
35	BK	33	TYR	17.6
33	BI	58	ALA	17.6
28	BD	95	ARG	17.5
44	BT	106	GLY	17.5
33	BI	109	ARG	17.5
45	BU	63	SER	17.5
29	BE	72	VAL	17.4
33	BI	77	THR	17.4
23	B0	752	G	17.4

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Mol	Chain	Res	Type	RSRZ
43	BS	21	THR	17.4
50	BZ	37	HIS	17.4
28	BD	172	SER	17.4
31	BG	4	VAL	17.3
28	BD	105	ASN	17.3
25	BA	113	VAL	17.3
33	BI	81	ILE	17.3
35	BK	71	PRO	17.3
37	BM	80	ALA	17.2
32	BH	69	ASP	17.2
47	BW	33	ALA	17.2
36	BL	68	GLN	17.1
30	BF	11	LEU	17.1
34	BJ	10	PRO	17.1
30	BF	38	ALA	17.1
41	BQ	101	PRO	17.1
45	BU	43	THR	17.1
44	BT	123	VAL	17.1
43	BS	85	ASP	17.0
32	BH	123	PRO	17.0
25	BA	234	GLY	17.0
33	BI	12	ASP	17.0
27	BC	59	TYR	17.0
30	BF	49	GLN	17.0
28	BD	106	ILE	16.9
44	BT	122	ILE	16.9
28	BD	67	ILE	16.8
29	BE	148	VAL	16.8
30	BF	12	GLY	16.8
25	BA	143	HIS	16.7
35	BK	68	ARG	16.7
44	BT	138	VAL	16.7
33	BI	115	ALA	16.7
31	BG	30	TYR	16.7
52	B2	16	HIS	16.7
25	BA	213	ARG	16.7
39	BO	101	ARG	16.6
43	BS	51	VAL	16.6
36	BL	16	ALA	16.6
29	BE	113	VAL	16.6
47	BW	61	ALA	16.6
43	BS	114	ILE	16.5

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Mol	Chain	Res	Type	RSRZ
25	BA	214	TRP	16.5
23	B0	2015	G	16.5
37	BM	109	GLU	16.5
25	BA	104	TYR	16.5
42	BR	53	ILE	16.4
37	BM	23	ALA	16.3
33	BI	82	LYS	16.3
36	BL	81	ASP	16.3
28	BD	45	GLU	16.3
54	B4	24	LEU	16.2
27	BC	105	ALA	16.2
44	BT	77	ALA	16.2
51	B1	23	THR	16.2
25	BA	267	ASP	16.1
6	AD	48	ALA	16.1
28	BD	2	GLN	16.1
25	BA	34	THR	16.1
33	BI	89	ILE	16.1
23	B0	1648	C	16.0
29	BE	179	THR	16.0
33	BI	79	HIS	16.0
26	BB	89	ASP	16.0
47	BW	34	ALA	16.0
25	BA	112	THR	15.9
37	BM	107	ALA	15.9
27	BC	180	ILE	15.9
41	BQ	18	VAL	15.9
16	AN	58	LYS	15.9
35	BK	24	GLY	15.9
27	BC	107	ALA	15.8
33	BI	124	MET	15.8
25	BA	102	LYS	15.8
26	BB	174	GLU	15.8
29	BE	68	THR	15.8
44	BT	159	THR	15.7
37	BM	15	ARG	15.7
25	BA	181	GLU	15.7
27	BC	142	LEU	15.7
24	B9	91	A	15.7
37	BM	17	VAL	15.7
37	BM	21	THR	15.7
34	BJ	123	ASP	15.7

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Mol	Chain	Res	Type	RSRZ
44	BT	78	PRO	15.7
29	BE	82	GLY	15.7
25	BA	90	ALA	15.6
25	BA	268	ARG	15.6
34	BJ	76	LYS	15.6
33	BI	110	VAL	15.6
32	BH	122	HIS	15.6
27	BC	57	LYS	15.6
28	BD	32	GLU	15.6
29	BE	93	GLY	15.5
49	BY	57	ASP	15.5
29	BE	118	PRO	15.5
12	AJ	63	PHE	15.5
25	BA	105	ILE	15.5
27	BC	146	GLU	15.5
49	BY	62	ARG	15.5
45	BU	40	GLN	15.4
25	BA	18	THR	15.4
49	BY	28	ARG	15.4
26	BB	166	THR	15.4
28	BD	68	THR	15.4
44	BT	116	VAL	15.4
47	BW	65	GLU	15.4
37	BM	108	ARG	15.3
29	BE	107	ILE	15.3
28	BD	47	SER	15.3
29	BE	147	ASN	15.3
25	BA	216	GLY	15.2
44	BT	171	VAL	15.2
33	BI	76	ARG	15.2
25	BA	111	LEU	15.2
37	BM	48	GLY	15.2
38	BN	76	GLY	15.2
25	BA	158	SER	15.2
27	BC	104	LEU	15.2
34	BJ	39	SER	15.2
32	BH	124	GLU	15.1
7	AE	5	ASP	15.1
27	BC	24	SER	15.1
37	BM	77	ALA	15.1
28	BD	110	ARG	15.1
13	AK	129	SER	15.1

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Mol	Chain	Res	Type	RSRZ
25	BA	183	ARG	15.1
47	BW	3	PRO	15.1
25	BA	124	GLU	15.1
31	BG	9	LYS	15.1
28	BD	171	GLN	15.1
28	BD	158	THR	15.1
29	BE	37	TYR	15.1
45	BU	7	VAL	15.1
52	B2	27	GLY	15.0
44	BT	96	VAL	15.0
31	BG	3	LYS	15.0
25	BA	236	GLY	15.0
31	BG	93	LYS	15.0
12	AJ	65	LEU	15.0
28	BD	33	LYS	15.0
32	BH	167	LYS	14.9
55	B5	115	GLU	14.9
37	BM	83	GLY	14.9
43	BS	112	LYS	14.9
33	BI	113	PRO	14.9
51	B1	38	LYS	14.9
33	BI	34	LEU	14.9
41	BQ	55	ASP	14.8
27	BC	163	ASN	14.8
37	BM	20	THR	14.8
35	BK	31	GLY	14.8
37	BM	16	LYS	14.8
30	BF	52	SER	14.8
25	BA	106	LEU	14.8
27	BC	62	LYS	14.7
35	BK	76	THR	14.7
34	BJ	71	THR	14.7
29	BE	152	ARG	14.7
31	BG	10	LEU	14.7
43	BS	109	ALA	14.7
45	BU	44	LYS	14.6
41	BQ	10	ASN	14.6
50	BZ	38	GLY	14.6
16	AN	37	PHE	14.6
1	AA	209	U	14.6
55	B5	118	ALA	14.6
25	BA	56	GLY	14.6

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Mol	Chain	Res	Type	RSRZ
45	BU	61	ALA	14.6
27	BC	177	VAL	14.5
43	BS	33	THR	14.5
25	BA	95	LEU	14.5
6	AD	47	ARG	14.5
25	BA	129	ASN	14.5
36	BL	82	GLU	14.5
43	BS	61	SER	14.5
37	BM	76	ALA	14.5
51	B1	13	GLU	14.4
55	B5	126	PRO	14.4
28	BD	29	PRO	14.4
25	BA	92	ILE	14.4
41	BQ	29	LYS	14.4
27	BC	187	VAL	14.3
41	BQ	123	HIS	14.3
35	BK	114	GLN	14.3
45	BU	69	PHE	14.3
45	BU	81	ILE	14.3
25	BA	17	THR	14.3
44	BT	131	PRO	14.3
49	BY	43	TRP	14.3
37	BM	22	ALA	14.3
44	BT	155	PRO	14.3
25	BA	65	ILE	14.3
42	BR	93	GLY	14.3
35	BK	67	ILE	14.2
27	BC	179	ASP	14.2
25	BA	42	GLY	14.2
49	BY	56	VAL	14.2
33	BI	104	GLU	14.1
28	BD	84	PRO	14.1
36	BL	31	GLU	14.1
33	BI	10	VAL	14.1
27	BC	58	MET	14.1
25	BA	35	GLU	14.1
28	BD	10	ASP	14.1
28	BD	90	THR	14.1
23	B0	2592	U	14.1
27	BC	75	PRO	14.1
12	AJ	49	VAL	14.1
28	BD	43	SER	14.0

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Mol	Chain	Res	Type	RSRZ
28	BD	163	ASP	14.0
55	B5	197	GLU	14.0
43	BS	110	SER	14.0
53	B3	7	HIS	14.0
25	BA	25	THR	14.0
27	BC	77	PHE	14.0
34	BJ	105	PRO	14.0
28	BD	126	GLY	13.9
33	BI	66	ALA	13.9
42	BR	54	SER	13.9
49	BY	61	LYS	13.9
25	BA	96	HIS	13.9
51	B1	30	ASN	13.9
33	BI	87	SER	13.8
12	AJ	48	THR	13.8
42	BR	18	SER	13.8
23	B0	1568	A	13.8
40	BP	65	ARG	13.8
12	AJ	47	PHE	13.8
43	BS	35	LYS	13.8
55	B5	98	ARG	13.8
25	BA	41	GLY	13.8
29	BE	117	PRO	13.8
45	BU	48	GLY	13.7
29	BE	89	LEU	13.7
30	BF	19	SER	13.7
33	BI	88	THR	13.7
25	BA	127	LEU	13.7
54	B4	35	ARG	13.7
41	BQ	8	PHE	13.7
45	BU	56	ASP	13.7
25	BA	165	VAL	13.6
37	BM	61	SER	13.6
23	B0	2298	U	13.6
43	BS	32	GLN	13.6
41	BQ	52	ASP	13.6
44	BT	15	ASP	13.6
35	BK	66	TYR	13.6
17	AO	89	GLY	13.5
38	BN	36	ASP	13.5
25	BA	197	GLY	13.5
55	B5	213	VAL	13.5

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Mol	Chain	Res	Type	RSRZ
41	BQ	107	ILE	13.5
30	BF	16	GLU	13.5
41	BQ	14	ARG	13.5
49	BY	58	LYS	13.5
25	BA	30	GLU	13.5
33	BI	117	GLU	13.5
26	BB	25	VAL	13.5
27	BC	167	VAL	13.5
30	BF	18	VAL	13.5
34	BJ	9	THR	13.5
38	BN	83	PHE	13.4
41	BQ	100	GLY	13.4
33	BI	114	VAL	13.4
44	BT	134	LEU	13.4
41	BQ	51	GLN	13.4
45	BU	45	PHE	13.4
27	BC	145	THR	13.4
27	BC	183	HIS	13.3
2	AW	71	G	13.3
32	BH	33	ILE	13.3
33	BI	11	ALA	13.3
48	BX	30	ASP	13.3
52	B2	15	THR	13.3
24	B9	43	G	13.2
25	BA	20	ASP	13.2
29	BE	108	GLY	13.2
28	BD	16	LEU	13.2
45	BU	10	SER	13.2
50	BZ	18	MET	13.2
51	B1	31	THR	13.1
25	BA	62	TYR	13.1
42	BR	80	VAL	13.1
37	BM	46	SER	13.1
34	BJ	108	LEU	13.1
28	BD	123	ASP	13.1
33	BI	75	VAL	13.1
41	BQ	57	LEU	13.1
23	B0	1567	A	13.1
49	BY	65	ASP	13.1
29	BE	151	VAL	13.1
28	BD	174	GLY	13.1
32	BH	36	ASN	13.1

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Mol	Chain	Res	Type	RSRZ
34	BJ	106	VAL	13.1
38	BN	60	SER	13.0
55	B5	205	VAL	13.0
45	BU	66	LYS	13.0
25	BA	109	GLU	13.0
33	BI	31	GLY	13.0
41	BQ	53	ALA	13.0
37	BM	51	LEU	13.0
37	BM	12	ARG	13.0
37	BM	44	ASP	13.0
23	B0	2313	G	13.0
35	BK	86	LYS	13.0
6	AD	50	ARG	13.0
29	BE	71	LEU	13.0
26	BB	55	ALA	13.0
33	BI	47	VAL	13.0
25	BA	60	ARG	12.9
43	BS	89	GLY	12.9
44	BT	147	ILE	12.9
45	BU	46	LYS	12.9
43	BS	60	PRO	12.9
2	AW	70	C	12.9
43	BS	50	GLY	12.9
25	BA	91	ARG	12.9
42	BR	10	PRO	12.9
27	BC	173	ALA	12.9
30	BF	22	ASP	12.9
25	BA	47	GLY	12.8
29	BE	161	GLY	12.8
44	BT	143	ILE	12.8
28	BD	83	MET	12.8
53	B3	63	PRO	12.8
25	BA	193	ILE	12.8
47	BW	22	LYS	12.8
43	BS	113	THR	12.8
34	BJ	144	GLU	12.8
41	BQ	118	LYS	12.8
33	BI	19	ILE	12.8
33	BI	14	SER	12.8
52	B2	30	ILE	12.8
43	BS	36	VAL	12.7
41	BQ	117	ILE	12.7

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Mol	Chain	Res	Type	RSRZ
33	BI	43	ARG	12.7
28	BD	61	THR	12.7
28	BD	30	ARG	12.7
25	BA	191	ALA	12.7
33	BI	90	ARG	12.7
29	BE	114	ILE	12.7
32	BH	140	GLN	12.7
23	B0	2014	A	12.7
27	BC	172	VAL	12.7
25	BA	137	PRO	12.7
29	BE	115	ILE	12.7
34	BJ	100	ARG	12.7
37	BM	87	VAL	12.7
43	BS	34	GLY	12.7
25	BA	67	PHE	12.7
43	BS	86	PRO	12.6
30	BF	50	LEU	12.6
25	BA	19	ALA	12.6
55	B5	101	LYS	12.6
11	AI	126	SER	12.6
39	BO	117	ARG	12.6
33	BI	21	CYS	12.6
7	AE	38	GLN	12.6
25	BA	196	VAL	12.6
33	BI	6	SER	12.6
32	BH	87	GLN	12.6
25	BA	142	VAL	12.5
28	BD	17	MET	12.5
45	BU	78	PHE	12.5
44	BT	170	SER	12.5
42	BR	26	SER	12.5
47	BW	66	GLN	12.5
32	BH	34	PRO	12.5
28	BD	127	ASN	12.5
38	BN	30	GLY	12.5
35	BK	108	ALA	12.5
26	BB	8	LYS	12.5
25	BA	263	ARG	12.4
32	BH	31	THR	12.4
33	BI	126	ILE	12.4
25	BA	89	SER	12.4
29	BE	35	VAL	12.4

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Mol	Chain	Res	Type	RSRZ
43	BS	90	LYS	12.4
34	BJ	96	TYR	12.4
34	BJ	13	ARG	12.4
36	BL	59	ASP	12.4
25	BA	72	LYS	12.4
25	BA	73	SER	12.3
27	BC	92	ASP	12.3
41	BQ	20	LEU	12.3
41	BQ	54	GLU	12.3
9	AG	82	GLY	12.3
44	BT	99	HIS	12.3
30	BF	46	LEU	12.3
33	BI	13	ASN	12.3
35	BK	25	GLY	12.3
35	BK	22	ALA	12.3
29	BE	23	VAL	12.3
53	B3	33	ASN	12.3
33	BI	46	HIS	12.3
32	BH	32	TYR	12.2
51	B1	20	PHE	12.2
26	BB	205	SER	12.2
21	AS	7	LYS	12.2
37	BM	11	LEU	12.2
28	BD	13	ARG	12.2
28	BD	92	ARG	12.2
28	BD	164	GLU	12.2
7	AE	15	ARG	12.2
33	BI	78	SER	12.2
24	B9	90	C	12.2
27	BC	182	ARG	12.2
44	BT	163	ASP	12.2
28	BD	168	ALA	12.2
28	BD	157	VAL	12.2
49	BY	45	GLY	12.1
35	BK	51	CYS	12.1
55	B5	2	LEU	12.1
32	BH	91	THR	12.1
36	BL	76	VAL	12.1
37	BM	13	THR	12.1
38	BN	13	LEU	12.1
27	BC	149	LEU	12.1
26	BB	9	ILE	12.1

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Mol	Chain	Res	Type	RSRZ
35	BK	23	LYS	12.1
45	BU	62	LEU	12.1
29	BE	181	GLY	12.1
42	BR	79	ILE	12.1
38	BN	29	PRO	12.1
28	BD	91	LEU	12.0
28	BD	14	PRO	12.0
35	BK	34	GLY	12.0
37	BM	104	ALA	12.0
16	AN	34	TYR	12.0
47	BW	32	ALA	12.0
29	BE	162	VAL	12.0
55	B5	176	PRO	12.0
45	BU	65	GLY	12.0
25	BA	38	PRO	12.0
35	BK	77	LYS	12.0
36	BL	35	GLN	12.0
28	BD	159	THR	12.0
25	BA	80	ALA	12.0
43	BS	24	VAL	12.0
36	BL	54	THR	12.0
29	BE	112	PRO	11.9
34	BJ	95	ALA	11.9
36	BL	78	LYS	11.9
23	B0	2493	U	11.9
38	BN	37	THR	11.9
51	B1	25	THR	11.9
28	BD	62	LEU	11.9
38	BN	31	ASP	11.9
28	BD	9	ASN	11.9
33	BI	20	MET	11.9
35	BK	104	MET	11.9
32	BH	71	THR	11.9
25	BA	63	ARG	11.9
28	BD	21	GLY	11.9
12	AJ	64	GLU	11.9
28	BD	12	VAL	11.8
38	BN	53	VAL	11.8
27	BC	178	TYR	11.8
42	BR	25	TYR	11.8
6	AD	86	LYS	11.8
25	BA	85	ASP	11.8

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Mol	Chain	Res	Type	RSRZ
55	B5	3	ALA	11.8
41	BQ	13	GLN	11.8
25	BA	237	GLU	11.8
43	BS	108	VAL	11.8
33	BI	44	TYR	11.8
25	BA	11	PRO	11.7
2	AW	34	G	11.7
27	BC	79	GLY	11.7
45	BU	64	ASP	11.7
25	BA	12	SER	11.7
41	BQ	103	LEU	11.7
55	B5	128	LEU	11.7
55	B5	212	ALA	11.7
29	BE	155	ASP	11.7
29	BE	90	ARG	11.7
49	BY	66	SER	11.7
38	BN	59	GLY	11.7
25	BA	10	THR	11.7
28	BD	101	GLU	11.7
33	BI	103	GLY	11.7
44	BT	69	VAL	11.7
49	BY	33	VAL	11.7
27	BC	117	LEU	11.7
26	BB	129	HIS	11.7
28	BD	82	GLY	11.6
43	BS	49	GLU	11.6
28	BD	15	ALA	11.6
37	BM	19	THR	11.6
25	BA	126	LYS	11.6
25	BA	94	LEU	11.6
28	BD	173	MET	11.6
51	B1	37	LEU	11.6
36	BL	62	SER	11.6
33	BI	116	ARG	11.6
40	BP	16	GLU	11.6
27	BC	181	LEU	11.5
30	BF	17	VAL	11.5
30	BF	36	VAL	11.5
38	BN	81	PHE	11.5
51	B1	15	SER	11.5
33	BI	129	LEU	11.5
25	BA	79	VAL	11.5

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Mol	Chain	Res	Type	RSRZ
26	BB	165	VAL	11.5
38	BN	68	VAL	11.5
25	BA	217	ARG	11.5
7	AE	73	ASN	11.5
28	BD	89	VAL	11.5
43	BS	84	VAL	11.5
44	BT	14	LEU	11.5
26	BB	201	ALA	11.5
42	BR	19	ALA	11.5
35	BK	26	ASP	11.5
34	BJ	91	ASP	11.5
25	BA	87	ASN	11.5
26	BB	52	ALA	11.4
43	BS	91	ALA	11.4
33	BI	97	VAL	11.4
25	BA	185	VAL	11.4
29	BE	92	VAL	11.4
55	B5	204	TYR	11.4
32	BH	67	ARG	11.4
27	BC	161	ALA	11.4
27	BC	184	ASP	11.4
7	AE	85	GLY	11.4
5	AC	153	VAL	11.4
25	BA	86	PRO	11.4
30	BF	3	VAL	11.4
28	BD	160	ALA	11.4
25	BA	134	ARG	11.4
32	BH	51	LEU	11.4
44	BT	135	VAL	11.4
25	BA	64	ILE	11.4
25	BA	97	TYR	11.3
48	BX	51	LEU	11.3
28	BD	78	LYS	11.3
28	BD	120	ASN	11.3
33	BI	96	ALA	11.3
23	B0	126	C	11.3
28	BD	18	GLN	11.3
44	BT	72	ASP	11.3
41	BQ	56	LEU	11.3
27	BC	144	GLY	11.3
55	B5	20	TYR	11.3
34	BJ	104	ARG	11.3

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Mol	Chain	Res	Type	RSRZ
26	BB	88	GLY	11.2
42	BR	22	ARG	11.2
27	BC	22	VAL	11.2
28	BD	28	VAL	11.2
28	BD	34	ILE	11.2
45	BU	67	VAL	11.2
28	BD	96	MET	11.2
34	BJ	16	ARG	11.2
42	BR	12	ILE	11.2
35	BK	32	ASP	11.2
34	BJ	44	GLY	11.2
28	BD	98	VAL	11.2
35	BK	65	ILE	11.2
37	BM	58	ALA	11.2
27	BC	103	GLY	11.2
42	BR	14	GLU	11.2
33	BI	36	THR	11.2
25	BA	71	ASP	11.2
49	BY	46	GLU	11.2
28	BD	162	THR	11.2
45	BU	68	VAL	11.2
16	AN	36	PHE	11.2
23	B0	765	C	11.2
25	BA	138	VAL	11.2
29	BE	61	HIS	11.1
41	BQ	58	ARG	11.1
41	BQ	9	ARG	11.1
35	BK	130	THR	11.1
37	BM	29	LEU	11.1
37	BM	105	ASP	11.1
55	B5	161	ASP	11.1
44	BT	165	GLU	11.1
29	BE	120	GLY	11.1
37	BM	60	LYS	11.1
26	BB	53	PRO	11.1
13	AK	128	ALA	11.1
25	BA	159	ALA	11.1
25	BA	110	GLY	11.1
44	BT	111	GLY	11.1
25	BA	29	PRO	11.0
32	BH	78	ASP	11.0
47	BW	19	ASP	11.0

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Mol	Chain	Res	Type	RSRZ
35	BK	131	LYS	11.0
28	BD	99	PHE	11.0
44	BT	70	GLN	11.0
29	BE	178	ALA	11.0
49	BY	53	GLU	11.0
45	BU	59	LEU	11.0
23	B0	2275	U	11.0
33	BI	131	PRO	11.0
28	BD	166	ALA	11.0
49	BY	67	TYR	11.0
33	BI	24	VAL	11.0
50	BZ	19	ARG	11.0
23	B0	1378	A	11.0
29	BE	157	TYR	11.0
32	BH	60	SER	11.0
35	BK	103	VAL	11.0
26	BB	56	GLU	11.0
28	BD	11	GLN	10.9
35	BK	107	VAL	10.9
25	BA	82	ILE	10.9
45	BU	57	HIS	10.9
44	BT	71	MET	10.9
19	AQ	86	GLU	10.9
44	BT	156	GLU	10.9
6	AD	195	ALA	10.9
25	BA	198	ASN	10.9
25	BA	59	LYS	10.9
35	BK	55	MET	10.9
28	BD	93	GLY	10.9
27	BC	81	GLY	10.9
43	BS	73	GLU	10.9
32	BH	64	GLY	10.9
33	BI	73	VAL	10.9
32	BH	85	ALA	10.9
43	BS	23	ILE	10.8
32	BH	89	ALA	10.8
34	BJ	43	ALA	10.8
44	BT	124	ALA	10.8
28	BD	176	PRO	10.8
33	BI	4	PRO	10.8
50	BZ	7	PRO	10.8
25	BA	252	LYS	10.8

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Mol	Chain	Res	Type	RSRZ
26	BB	104	ALA	10.8
25	BA	132	PRO	10.8
26	BB	100	GLU	10.8
34	BJ	14	LYS	10.8
26	BB	103	ASP	10.8
29	BE	145	ALA	10.8
41	BQ	92	VAL	10.8
32	BH	66	HIS	10.8
36	BL	12	ARG	10.8
5	AC	24	ALA	10.8
10	AH	54	ASP	10.8
41	BQ	115	ASN	10.8
55	B5	198	THR	10.8
37	BM	62	GLY	10.7
47	BW	64	GLY	10.7
27	BC	148	VAL	10.7
26	BB	167	VAL	10.7
43	BS	18	LYS	10.7
35	BK	56	SER	10.7
26	BB	99	GLY	10.7
35	BK	117	GLU	10.7
27	BC	37	SER	10.7
33	BI	67	GLY	10.7
42	BR	11	VAL	10.7
42	BR	52	GLY	10.7
37	BM	59	LEU	10.7
23	B0	733	G	10.7
5	AC	178	LEU	10.7
34	BJ	67	ASN	10.7
33	BI	7	ARG	10.7
40	BP	70	TYR	10.7
48	BX	31	SER	10.6
7	AE	13	ILE	10.6
37	BM	90	ASP	10.6
27	BC	27	LEU	10.6
34	BJ	77	LEU	10.6
27	BC	28	HIS	10.6
28	BD	19	GLN	10.6
44	BT	115	ILE	10.6
24	B9	92	G	10.6
28	BD	80	ARG	10.6
45	BU	58	THR	10.6

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Mol	Chain	Res	Type	RSRZ
29	BE	173	ALA	10.6
30	BF	25	ALA	10.6
25	BA	61	LEU	10.6
44	BT	137	ASP	10.6
26	BB	26	VAL	10.6
5	AC	10	PHE	10.6
36	BL	77	ARG	10.6
44	BT	76	ARG	10.6
28	BD	97	TYR	10.6
35	BK	54	VAL	10.6
50	BZ	47	PRO	10.5
33	BI	65	LYS	10.5
50	BZ	29	ASN	10.5
33	BI	107	GLY	10.5
51	B1	17	GLY	10.5
29	BE	131	ILE	10.5
28	BD	22	TYR	10.5
44	BT	40	ASP	10.5
26	BB	7	THR	10.5
43	BS	52	ASN	10.5
7	AE	110	LEU	10.5
26	BB	21	ILE	10.5
32	BH	141	GLY	10.5
44	BT	102	GLY	10.5
25	BA	170	SER	10.5
49	BY	64	GLY	10.5
55	B5	19	GLU	10.5
28	BD	177	PHE	10.5
37	BM	79	ALA	10.5
27	BC	154	ASP	10.5
27	BC	152	THR	10.5
41	BQ	69	ALA	10.5
28	BD	23	SER	10.5
30	BF	9	SER	10.5
55	B5	200	LEU	10.5
22	AT	11	SER	10.5
23	B0	2207	G	10.5
44	BT	47	SER	10.5
28	BD	8	TYR	10.5
30	BF	8	PRO	10.5
27	BC	78	VAL	10.4
41	BQ	128	VAL	10.4

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Mol	Chain	Res	Type	RSRZ
28	BD	108	LEU	10.4
26	BB	75	THR	10.4
36	BL	36	THR	10.4
43	BS	92	THR	10.4
41	BQ	66	GLU	10.4
25	BA	254	THR	10.4
49	BY	17	GLN	10.4
40	BP	31	ASP	10.4
23	B0	2312	A	10.4
23	B0	2601	C	10.4
36	BL	34	ILE	10.4
41	BQ	63	SER	10.4
23	B0	1772	C	10.4
29	BE	105	MET	10.4
25	BA	175	VAL	10.3
23	B0	731	A	10.3
27	BC	76	THR	10.3
47	BW	31	GLN	10.3
27	BC	194	GLU	10.3
41	BQ	133	ASN	10.3
26	BB	74	PRO	10.3
55	B5	1	MET	10.3
34	BJ	92	THR	10.3
41	BQ	91	PHE	10.3
23	B0	1524	C	10.3
38	BN	95	GLU	10.3
37	BM	103	LEU	10.3
26	BB	60	ASN	10.3
34	BJ	97	ARG	10.3
42	BR	81	ARG	10.3
27	BC	165	SER	10.3
32	BH	136	PRO	10.3
14	AL	5	PRO	10.2
12	AJ	45	ARG	10.2
27	BC	168	SER	10.2
39	BO	80	ILE	10.2
55	B5	104	ALA	10.2
37	BM	66	ASP	10.2
34	BJ	66	ASN	10.2
42	BR	13	SER	10.2
30	BF	33	GLY	10.2
25	BA	88	ARG	10.2

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Mol	Chain	Res	Type	RSRZ
28	BD	125	ARG	10.2
49	BY	70	GLY	10.2
51	B1	5	GLY	10.2
36	BL	111	ALA	10.1
26	BB	3	GLY	10.1
28	BD	107	GLY	10.1
23	B0	732	G	10.1
43	BS	111	GLY	10.1
49	BY	71	SER	10.1
50	BZ	31	THR	10.1
37	BM	72	GLY	10.1
26	BB	85	ALA	10.1
26	BB	108	SER	10.1
25	BA	174	ILE	10.1
37	BM	14	ARG	10.1
35	BK	58	HIS	10.1
44	BT	16	GLU	10.1
48	BX	6	VAL	10.1
23	B0	1279	G	10.1
33	BI	106	ARG	10.1
23	B0	3132	A	10.1
39	BO	115	ASN	10.1
25	BA	136	VAL	10.1
28	BD	103	LEU	10.1
37	BM	74	ALA	10.1
27	BC	138	LYS	10.0
32	BH	47	SER	10.0
39	BO	55	ARG	10.0
28	BD	128	TYR	10.0
32	BH	120	SER	10.0
40	BP	91	THR	10.0
5	AC	17	ASP	10.0
23	B0	2299	A	10.0
33	BI	45	ALA	10.0
43	BS	17	LYS	10.0
51	B1	44	ALA	10.0
42	BR	17	TYR	10.0
41	BQ	108	PRO	10.0
25	BA	184	ARG	10.0
32	BH	46	ALA	10.0
47	BW	15	ALA	10.0
35	BK	10	PHE	10.0

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Mol	Chain	Res	Type	RSRZ
47	BW	30	PHE	10.0
55	B5	217	ARG	10.0
41	BQ	49	SER	10.0
43	BS	107	ALA	10.0
25	BA	135	PHE	10.0
29	BE	88	GLU	10.0
44	BT	44	ARG	10.0
29	BE	60	LYS	10.0
25	BA	187	SER	9.9
32	BH	150	VAL	9.9
28	BD	104	ILE	9.9
26	BB	31	CYS	9.9
55	B5	35	THR	9.9
42	BR	23	GLY	9.9
28	BD	20	PHE	9.9
32	BH	84	ASN	9.9
28	BD	179	LYS	9.9
35	BK	62	GLY	9.9
55	B5	173	ASP	9.9
33	BI	111	PHE	9.9
36	BL	100	VAL	9.9
28	BD	118	ASN	9.9
28	BD	167	ARG	9.9
36	BL	63	ARG	9.9
48	BX	10	ILE	9.9
25	BA	172	TYR	9.9
21	AS	8	GLY	9.9
51	B1	4	ASP	9.9
42	BR	21	GLU	9.9
36	BL	32	GLY	9.9
32	BH	65	LYS	9.9
44	BT	107	GLU	9.9
26	BB	50	GLY	9.9
52	B2	17	GLY	9.9
25	BA	81	ALA	9.9
17	AO	44	LYS	9.9
25	BA	31	LYS	9.9
32	BH	94	LYS	9.9
34	BJ	120	VAL	9.9
5	AC	166	GLU	9.8
25	BA	241	GLY	9.8
33	BI	63	ALA	9.8

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Mol	Chain	Res	Type	RSRZ
54	B4	25	VAL	9.8
23	B0	1799	A	9.8
28	BD	6	THR	9.8
32	BH	151	TYR	9.8
32	BH	92	GLY	9.8
25	BA	122	GLU	9.8
26	BB	73	ALA	9.8
7	AE	135	THR	9.8
28	BD	77	PHE	9.8
34	BJ	42	GLY	9.8
29	BE	160	LYS	9.8
40	BP	69	ILE	9.8
50	BZ	32	GLU	9.8
41	BQ	104	LYS	9.8
49	BY	42	PHE	9.8
15	AM	124	PRO	9.8
26	BB	202	ALA	9.8
15	AM	62	ASN	9.7
40	BP	88	GLN	9.7
37	BM	73	LYS	9.7
38	BN	85	SER	9.7
25	BA	37	LEU	9.7
14	AL	25	PRO	9.7
23	B0	751	G	9.7
25	BA	36	ALA	9.7
43	BS	29	HIS	9.7
26	BB	128	SER	9.7
7	AE	139	LEU	9.7
25	BA	121	PRO	9.7
34	BJ	102	LYS	9.7
30	BF	23	GLY	9.7
34	BJ	101	ARG	9.7
28	BD	156	ILE	9.7
45	BU	70	ILE	9.7
47	BW	62	ARG	9.7
1	AA	322	C	9.7
14	AL	13	LYS	9.7
5	AC	169	ALA	9.6
23	B0	2591	C	9.6
50	BZ	30	LEU	9.6
29	BE	165	VAL	9.6
32	BH	61	ARG	9.6

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Mol	Chain	Res	Type	RSRZ
25	BA	9	TYR	9.6
9	AG	43	PHE	9.6
28	BD	50	ILE	9.6
25	BA	189	CYS	9.6
42	BR	73	ASN	9.6
49	BY	60	ASN	9.6
38	BN	33	VAL	9.6
28	BD	81	GLN	9.6
34	BJ	40	ARG	9.6
30	BF	21	LYS	9.6
41	BQ	122	SER	9.6
32	BH	62	ILE	9.6
26	BB	51	TYR	9.6
14	AL	127	GLU	9.6
28	BD	5	LYS	9.6
34	BJ	17	LYS	9.6
44	BT	39	PHE	9.6
28	BD	154	ILE	9.6
32	BH	86	ALA	9.6
54	B4	34	GLN	9.5
25	BA	39	LYS	9.5
35	BK	105	PHE	9.5
49	BY	49	PHE	9.5
39	BO	56	ASP	9.5
39	BO	4	ALA	9.5
35	BK	106	GLU	9.5
38	BN	82	PRO	9.5
23	B0	1361	G	9.5
51	B1	18	THR	9.5
7	AE	14	ARG	9.5
34	BJ	45	LYS	9.5
25	BA	118	ASN	9.5
41	BQ	50	VAL	9.5
41	BQ	127	ILE	9.5
38	BN	35	VAL	9.5
29	BE	104	GLU	9.5
47	BW	36	GLN	9.4
9	AG	62	PHE	9.4
38	BN	12	LEU	9.4
27	BC	34	GLN	9.4
27	BC	106	MET	9.4
42	BR	4	TYR	9.4

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Mol	Chain	Res	Type	RSRZ
26	BB	131	SER	9.4
25	BA	194	GLY	9.4
27	BC	63	GLY	9.4
23	B0	583	C	9.4
25	BA	131	LEU	9.4
28	BD	112	ARG	9.4
35	BK	29	ALA	9.4
42	BR	27	PHE	9.4
49	BY	63	PHE	9.4
2	AW	72	C	9.4
51	B1	14	SER	9.4
30	BF	20	VAL	9.4
40	BP	67	LYS	9.4
51	B1	45	LYS	9.4
28	BD	155	THR	9.4
28	BD	116	GLY	9.4
28	BD	124	GLY	9.4
35	BK	52	ARG	9.4
38	BN	34	ARG	9.4
26	BB	49	ILE	9.4
37	BM	91	ARG	9.4
25	BA	83	GLU	9.4
35	BK	70	PHE	9.4
35	BK	93	TYR	9.4
42	BR	88	ILE	9.4
55	B5	42	LYS	9.4
41	BQ	132	GLY	9.3
28	BD	4	LEU	9.3
28	BD	111	ILE	9.3
50	BZ	8	LYS	9.3
34	BJ	143	PRO	9.3
22	AT	70	SER	9.3
33	BI	35	THR	9.3
33	BI	5	GLN	9.3
36	BL	64	ARG	9.3
37	BM	70	ALA	9.3
55	B5	188	ASN	9.3
33	BI	56	LYS	9.3
27	BC	65	GLY	9.3
28	BD	69	LYS	9.3
42	BR	91	LEU	9.3
1	AA	1193	G	9.3

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Mol	Chain	Res	Type	RSRZ
25	BA	40	THR	9.3
34	BJ	8	PRO	9.3
35	BK	79	PRO	9.3
25	BA	133	LEU	9.3
1	AA	1464	G	9.3
34	BJ	103	ASN	9.2
39	BO	52	ASN	9.2
39	BO	79	PHE	9.2
33	BI	55	VAL	9.2
14	AL	12	ARG	9.2
25	BA	162	SER	9.2
41	BQ	113	SER	9.2
10	AH	72	PRO	9.2
52	B2	14	LYS	9.2
41	BQ	121	THR	9.2
36	BL	99	ARG	9.2
42	BR	24	VAL	9.2
48	BX	54	GLN	9.2
49	BY	73	LYS	9.2
55	B5	191	GLU	9.2
18	AP	46	PRO	9.2
36	BL	39	THR	9.2
41	BQ	109	ARG	9.2
26	BB	23	VAL	9.2
23	B0	1616	C	9.2
23	B0	2492	G	9.2
22	AT	69	GLY	9.1
38	BN	9	ARG	9.1
23	B0	622	U	9.1
27	BC	26	VAL	9.1
47	BW	29	ARG	9.1
37	BM	49	GLN	9.1
49	BY	59	PHE	9.1
44	BT	169	VAL	9.1
28	BD	152	MET	9.1
16	AN	44	LEU	9.1
28	BD	100	LEU	9.1
25	BA	130	ALA	9.1
43	BS	82	ALA	9.1
26	BB	171	GLU	9.1
54	B4	33	LYS	9.1
36	BL	113	ILE	9.1

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Mol	Chain	Res	Type	RSRZ
48	BX	46	THR	9.1
35	BK	109	GLY	9.1
12	AJ	60	ARG	9.1
33	BI	32	LYS	9.1
27	BC	31	VAL	9.1
40	BP	89	ASN	9.1
31	BG	25	PRO	9.1
23	B0	124	A	9.1
5	AC	151	VAL	9.1
4	AB	195	ASP	9.1
40	BP	68	LYS	9.1
26	BB	130	GLY	9.1
26	BB	193	GLY	9.1
30	BF	15	GLY	9.1
40	BP	66	GLY	9.1
41	BQ	105	ARG	9.1
29	BE	156	ALA	9.1
25	BA	190	TYR	9.0
40	BP	86	HIS	9.0
29	BE	166	GLY	9.0
42	BR	40	ASP	9.0
16	AN	13	THR	9.0
35	BK	112	GLU	9.0
23	B0	1144	U	9.0
9	AG	81	GLY	9.0
5	AC	124	ILE	9.0
26	BB	54	LYS	9.0
48	BX	52	GLU	9.0
54	B4	21	GLY	9.0
35	BK	115	ALA	9.0
37	BM	106	ALA	9.0
6	AD	77	ASN	9.0
32	BH	40	ASN	9.0
55	B5	129	GLY	9.0
37	BM	69	ALA	9.0
55	B5	203	ILE	9.0
37	BM	75	LEU	9.0
44	BT	172	LEU	9.0
23	B0	449	C	9.0
50	BZ	17	ASP	9.0
44	BT	41	ARG	9.0
1	AA	1233	G	9.0

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Mol	Chain	Res	Type	RSRZ
27	BC	137	ALA	9.0
35	BK	118	ALA	9.0
28	BD	134	GLU	9.0
35	BK	69	ILE	9.0
28	BD	75	SER	9.0
42	BR	42	ILE	8.9
37	BM	96	TYR	8.9
31	BG	56	GLU	8.9
43	BS	39	ALA	8.9
27	BC	164	VAL	8.9
23	B0	2602	G	8.9
41	BQ	21	ARG	8.9
43	BS	25	LEU	8.9
25	BA	266	SER	8.9
55	B5	4	ASP	8.9
32	BH	88	VAL	8.9
45	BU	60	PHE	8.9
32	BH	35	LYS	8.9
28	BD	121	ALA	8.9
26	BB	64	GLN	8.9
29	BE	133	VAL	8.9
42	BR	92	ALA	8.9
49	BY	47	GLU	8.9
36	BL	26	THR	8.9
28	BD	31	ILE	8.9
32	BH	70	PHE	8.9
55	B5	8	LEU	8.9
5	AC	150	LYS	8.9
44	BT	157	GLY	8.9
28	BD	178	ARG	8.9
55	B5	36	PHE	8.9
26	BB	132	LYS	8.9
51	B1	22	TYR	8.9
37	BM	31	VAL	8.9
25	BA	152	GLY	8.9
32	BH	152	ALA	8.9
23	B0	2434	G	8.8
26	BB	125	GLY	8.8
25	BA	8	PRO	8.8
49	BY	52	THR	8.8
37	BM	100	VAL	8.8
51	B1	21	TYR	8.8

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Mol	Chain	Res	Type	RSRZ
33	BI	48	GLY	8.8
43	BS	16	PHE	8.8
37	BM	82	LYS	8.8
38	BN	94	VAL	8.8
43	BS	47	VAL	8.8
32	BH	55	ALA	8.8
37	BM	47	ARG	8.8
42	BR	64	ARG	8.8
47	BW	18	ILE	8.8
32	BH	50	PRO	8.8
43	BS	22	VAL	8.8
44	BT	93	GLU	8.8
37	BM	30	SER	8.8
27	BC	147	LYS	8.8
36	BL	53	THR	8.8
42	BR	46	PHE	8.8
23	B0	1964	A	8.8
35	BK	102	ARG	8.8
44	BT	113	VAL	8.7
25	BA	32	ALA	8.7
29	BE	57	ASP	8.7
55	B5	206	LYS	8.7
36	BL	33	ARG	8.7
5	AC	168	ALA	8.7
26	BB	71	GLY	8.7
41	BQ	129	ALA	8.7
27	BC	157	THR	8.7
25	BA	251	GLY	8.7
28	BD	60	ILE	8.7
28	BD	165	GLU	8.7
31	BG	57	ILE	8.7
38	BN	75	GLU	8.7
32	BH	54	LEU	8.7
54	B4	23	VAL	8.7
7	AE	52	PRO	8.7
39	BO	53	LYS	8.7
45	BU	42	GLY	8.7
32	BH	39	GLN	8.7
41	BQ	34	SER	8.7
25	BA	199	ALA	8.7
28	BD	42	SER	8.7
16	AN	12	ARG	8.6

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Mol	Chain	Res	Type	RSRZ
22	AT	8	ARG	8.6
43	BS	81	VAL	8.6
4	AB	37	ASN	8.6
33	BI	91	PHE	8.6
36	BL	70	ILE	8.6
38	BN	4	HIS	8.6
23	B0	1570	C	8.6
36	BL	27	ALA	8.6
27	BC	54	THR	8.6
41	BQ	94	GLU	8.6
43	BS	38	LEU	8.6
55	B5	215	VAL	8.6
6	AD	192	GLU	8.6
47	BW	60	LEU	8.6
23	B0	972	C	8.6
37	BM	92	GLY	8.6
23	B0	1812	U	8.6
49	BY	34	ASP	8.6
41	BQ	73	ASN	8.6
37	BM	40	ALA	8.6
44	BT	95	SER	8.6
6	AD	51	PRO	8.6
31	BG	92	ASN	8.6
48	BX	3	ILE	8.6
35	BK	110	VAL	8.6
51	B1	49	VAL	8.6
29	BE	38	ASN	8.6
38	BN	105	TYR	8.6
26	BB	105	THR	8.5
34	BJ	111	SER	8.5
41	BQ	30	TYR	8.5
6	AD	73	ARG	8.5
23	B0	2016	A	8.5
36	BL	114	GLU	8.5
10	AH	6	ILE	8.5
23	B0	303	C	8.5
28	BD	122	PHE	8.5
49	BY	55	ARG	8.5
55	B5	216	LYS	8.5
25	BA	239	ARG	8.5
26	BB	48	GLN	8.5
23	B0	730	C	8.5

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Mol	Chain	Res	Type	RSRZ
23	B0	1451	C	8.5
37	BM	97	HIS	8.5
37	BM	101	LYS	8.5
34	BJ	68	VAL	8.5
26	BB	198	LEU	8.5
35	BK	60	ARG	8.5
50	BZ	46	CYS	8.5
27	BC	35	LEU	8.5
26	BB	10	GLY	8.5
32	BH	130	ALA	8.5
5	AC	132	ARG	8.5
10	AH	102	ARG	8.5
29	BE	167	GLU	8.5
44	BT	43	PHE	8.5
26	BB	200	SER	8.5
50	BZ	39	LYS	8.5
39	BO	89	ASP	8.5
25	BA	33	LEU	8.4
25	BA	48	ARG	8.4
18	AP	25	ARG	8.4
28	BD	129	ASN	8.4
25	BA	146	GLU	8.4
10	AH	137	VAL	8.4
36	BL	95	THR	8.4
44	BT	142	ASN	8.4
33	BI	74	VAL	8.4
48	BX	4	LYS	8.4
52	B2	21	ARG	8.4
23	B0	1649	A	8.4
38	BN	54	VAL	8.4
26	BB	182	ILE	8.4
41	BQ	116	ILE	8.4
33	BI	30	GLY	8.4
43	BS	31	GLY	8.4
28	BD	170	LEU	8.4
28	BD	151	GLY	8.4
28	BD	36	VAL	8.4
32	BH	82	VAL	8.4
43	BS	37	LEU	8.4
23	B0	2600	A	8.4
25	BA	45	ASN	8.4
33	BI	53	ALA	8.4

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Mol	Chain	Res	Type	RSRZ
28	BD	119	PRO	8.4
34	BJ	36	GLY	8.4
2	AW	51	G	8.4
32	BH	45	ASP	8.3
35	BK	59	PHE	8.3
39	BO	51	ARG	8.3
44	BT	109	GLN	8.3
28	BD	88	LYS	8.3
25	BA	144	ALA	8.3
34	BJ	79	GLN	8.3
44	BT	45	GLN	8.3
48	BX	29	GLY	8.3
25	BA	84	TYR	8.3
23	B0	1866	G	8.3
23	B0	601	A	8.3
15	AM	113	PRO	8.3
28	BD	117	ILE	8.3
42	BR	16	ALA	8.3
9	AG	60	LYS	8.3
32	BH	29	VAL	8.3
8	AF	54	LYS	8.3
2	AW	65	G	8.3
5	AC	167	TRP	8.3
36	BL	3	HIS	8.3
52	B2	29	ASN	8.3
23	B0	802	A	8.3
23	B0	2191	A	8.3
32	BH	42	VAL	8.2
25	BA	164	GLN	8.2
25	BA	171	ASP	8.2
27	BC	188	ILE	8.2
6	AD	154	ASN	8.2
32	BH	149	LYS	8.2
36	BL	37	THR	8.2
32	BH	77	GLY	8.2
10	AH	83	ILE	8.2
26	BB	126	PRO	8.2
39	BO	57	PHE	8.2
39	BO	50	ARG	8.2
32	BH	80	VAL	8.2
1	AA	129(A)	G	8.2
25	BA	161	THR	8.2

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Mol	Chain	Res	Type	RSRZ
51	B1	36	GLU	8.2
35	BK	61	ARG	8.2
36	BL	112	LEU	8.2
34	BJ	113	GLU	8.2
7	AE	136	MET	8.2
26	BB	30	PRO	8.2
29	BE	7	GLN	8.2
41	BQ	98	ASP	8.2
25	BA	195	ALA	8.2
28	BD	70	ALA	8.2
29	BE	149	ARG	8.2
30	BF	10	ARG	8.2
1	AA	324	G	8.2
29	BE	87	LEU	8.2
25	BA	188	GLU	8.1
25	BA	218	LYS	8.1
33	BI	64	VAL	8.1
36	BL	29	LEU	8.1
38	BN	79	ARG	8.1
48	BX	41	ARG	8.1
23	B0	447	U	8.1
30	BF	2	GLN	8.1
33	BI	68	ASP	8.1
36	BL	79	VAL	8.1
30	BF	26	ARG	8.1
50	BZ	44	HIS	8.1
41	BQ	130	GLU	8.1
45	BU	29	GLU	8.1
29	BE	158	HIS	8.1
32	BH	137	LYS	8.1
55	B5	143	ASP	8.1
43	BS	65	PRO	8.1
29	BE	96	ALA	8.1
29	BE	159	GLY	8.1
26	BB	42	ASP	8.1
41	BQ	67	PRO	8.1
45	BU	41	ARG	8.1
23	B0	302	U	8.1
33	BI	22	ILE	8.0
42	BR	5	ASP	8.0
51	B1	2	ALA	8.0
28	BD	169	LEU	8.0

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Mol	Chain	Res	Type	RSRZ
37	BM	55	SER	8.0
43	BS	88	THR	8.0
26	BB	145	LYS	8.0
30	BF	40	ARG	8.0
45	BU	39	ARG	8.0
10	AH	35	ILE	8.0
26	BB	4	ILE	8.0
29	BE	177	GLY	8.0
6	AD	151	LYS	8.0
27	BC	166	TRP	8.0
41	BQ	120	ARG	8.0
44	BT	112	LEU	8.0
51	B1	52	GLU	8.0
23	B0	2208	U	8.0
26	BB	192	ASN	8.0
23	B0	129	A	8.0
43	BS	15	HIS	8.0
1	AA	1463	C	8.0
28	BD	153	ASP	8.0
32	BH	117	GLU	8.0
32	BH	90	LEU	7.9
29	BE	58	ALA	7.9
41	BQ	11	LYS	7.9
24	B9	81	C	7.9
17	AO	88	ARG	7.9
27	BC	56	ARG	7.9
39	BO	95	LEU	7.9
43	BS	83	LEU	7.9
54	B4	36	GLN	7.9
36	BL	85	PRO	7.9
14	AL	24	VAL	7.9
45	BU	79	ILE	7.9
37	BM	67	THR	7.9
28	BD	115	ARG	7.9
30	BF	5	LEU	7.9
51	B1	51	ARG	7.9
32	BH	44	VAL	7.9
42	BR	51	ILE	7.9
44	BT	81	VAL	7.9
4	AB	231	GLU	7.9
7	AE	7	GLU	7.9
25	BA	200	GLU	7.9

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Mol	Chain	Res	Type	RSRZ
5	AC	130	VAL	7.9
26	BB	18	ASP	7.9
48	BX	53	VAL	7.9
51	B1	47	HIS	7.9
33	BI	54	SER	7.9
34	BJ	26	THR	7.9
35	BK	28	VAL	7.9
14	AL	14	GLY	7.9
49	BY	48	ARG	7.9
55	B5	145	SER	7.9
7	AE	133	TYR	7.9
29	BE	59	GLN	7.9
34	BJ	112	GLY	7.9
27	BC	100	ARG	7.9
25	BA	54	ILE	7.9
30	BF	43	MET	7.9
6	AD	167	GLY	7.9
40	BP	9	GLY	7.9
51	B1	19	GLY	7.9
23	B0	1566	G	7.8
23	B0	1734	C	7.8
36	BL	110	MET	7.8
20	AR	38	GLU	7.8
25	BA	147	LEU	7.8
38	BN	32	THR	7.8
42	BR	9	ALA	7.8
28	BD	132	ILE	7.8
28	BD	76	ASN	7.8
33	BI	95	ALA	7.8
37	BM	63	ASN	7.8
29	BE	62	ARG	7.8
32	BH	57	LEU	7.8
29	BE	164	PHE	7.8
29	BE	119	ALA	7.8
27	BC	44	SER	7.8
38	BN	2	GLN	7.8
53	B3	8	LYS	7.8
27	BC	30	VAL	7.8
34	BJ	110	ALA	7.8
2	AW	5	A	7.8
23	B0	1954	A	7.8
34	BJ	99	VAL	7.8

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Mol	Chain	Res	Type	RSRZ
36	BL	38	LEU	7.8
32	BH	63	ARG	7.8
49	BY	72	LYS	7.8
55	B5	214	LYS	7.8
1	AA	323	U	7.8
42	BR	36	THR	7.8
45	BU	49	GLN	7.8
35	BK	35	LEU	7.8
23	B0	744	C	7.8
22	AT	66	ALA	7.7
19	AQ	87	LYS	7.7
32	BH	81	VAL	7.7
37	BM	71	VAL	7.7
33	BI	3	MET	7.7
47	BW	26	MET	7.7
38	BN	96	ARG	7.7
47	BW	63	LYS	7.7
55	B5	137	PRO	7.7
26	BB	84	PHE	7.7
43	BS	11	ASN	7.7
25	BA	256	GLY	7.7
2	AW	37	G	7.7
27	BC	99	VAL	7.7
23	B0	149	A	7.7
47	BW	27	GLU	7.7
39	BO	54	LYS	7.7
30	BF	4	ILE	7.7
38	BN	7	ILE	7.7
23	B0	1995	G	7.7
52	B2	32	ALA	7.7
55	B5	18	THR	7.7
49	BY	29	PRO	7.7
45	BU	73	GLY	7.7
23	B0	1771	A	7.7
23	B0	3130	G	7.7
18	AP	4	ILE	7.7
39	BO	65	ILE	7.7
19	AQ	102	GLY	7.7
4	AB	193	ASP	7.7
29	BE	20	GLN	7.7
26	BB	77	ILE	7.7
29	BE	111	HIS	7.7

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Mol	Chain	Res	Type	RSRZ
31	BG	143	ASN	7.7
27	BC	72	ARG	7.6
23	B0	1218	C	7.6
50	BZ	59	ALA	7.6
35	BK	48	ILE	7.6
34	BJ	65	PHE	7.6
29	BE	69	ARG	7.6
33	BI	23	ARG	7.6
16	AN	20	ALA	7.6
23	B0	772	G	7.6
23	B0	745	C	7.6
49	BY	51	ASP	7.6
25	BA	253	PRO	7.6
37	BM	27	LEU	7.6
23	B0	1615	C	7.6
45	BU	30	VAL	7.6
32	BH	138	GLY	7.6
48	BX	5	LEU	7.6
26	BB	72	VAL	7.6
23	B0	2400	G	7.6
49	BY	24	THR	7.6
38	BN	8	ASN	7.6
26	BB	2	LYS	7.6
28	BD	44	LYS	7.6
32	BH	48	GLY	7.6
2	AW	69	U	7.6
26	BB	199	ARG	7.6
41	BQ	72	LEU	7.6
48	BX	50	LEU	7.6
2	AW	35	A	7.6
29	BE	85	ILE	7.6
36	BL	97	ILE	7.6
44	BT	139	THR	7.6
27	BC	110	SER	7.6
48	BX	45	LYS	7.6
35	BK	63	GLY	7.6
6	AD	29	PRO	7.6
26	BB	188	ILE	7.6
28	BD	102	LYS	7.5
33	BI	42	LYS	7.5
1	AA	290	C	7.5
27	BC	25	GLY	7.5

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Mol	Chain	Res	Type	RSRZ
29	BE	91	GLY	7.5
26	BB	82	ARG	7.5
35	BK	47	GLN	7.5
27	BC	32	THR	7.5
32	BH	121	LYS	7.5
55	B5	211	LYS	7.5
23	B0	2023	C	7.5
28	BD	143	TYR	7.5
33	BI	62	GLY	7.5
28	BD	38	GLU	7.5
38	BN	55	ILE	7.5
5	AC	207	VAL	7.5
7	AE	86	ALA	7.5
25	BA	50	THR	7.5
36	BL	94	TYR	7.5
36	BL	49	GLU	7.5
23	B0	3155	G	7.5
15	AM	122	LYS	7.5
42	BR	20	MET	7.5
39	BO	9	VAL	7.5
43	BS	48	VAL	7.5
25	BA	153	ALA	7.5
35	BK	122	ALA	7.5
37	BM	18	ARG	7.5
23	B0	146	C	7.5
29	BE	34	THR	7.5
29	BE	56	SER	7.5
32	BH	127	ILE	7.5
38	BN	57	ILE	7.5
33	BI	94	ASN	7.5
34	BJ	80	LEU	7.5
44	BT	68	ALA	7.5
23	B0	473	C	7.5
34	BJ	69	GLY	7.5
40	BP	27	GLY	7.5
34	BJ	41	SER	7.5
41	BQ	65	SER	7.5
45	BU	38	VAL	7.5
11	AI	34	ASN	7.5
24	B9	82	U	7.5
33	BI	50	ILE	7.5
22	AT	35	THR	7.4

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Mol	Chain	Res	Type	RSRZ
7	AE	132	ALA	7.4
42	BR	41	ALA	7.4
25	BA	43	ARG	7.4
35	BK	57	ARG	7.4
33	BI	2	ILE	7.4
38	BN	71	ILE	7.4
26	BB	63	MET	7.4
7	AE	8	GLU	7.4
23	B0	2401	A	7.4
1	AA	1231	G	7.4
45	BU	11	LYS	7.4
32	BH	58	ILE	7.4
23	B0	140	G	7.4
23	B0	2778	U	7.4
25	BA	163	VAL	7.4
15	AM	61	GLU	7.4
38	BN	67	THR	7.4
43	BS	30	LYS	7.4
1	AA	1232	U	7.4
32	BH	153	GLY	7.4
23	B0	448	C	7.4
28	BD	87	ILE	7.4
38	BN	6	LYS	7.4
43	BS	100	ASP	7.4
36	BL	80	MET	7.4
55	B5	202	ASN	7.4
23	B0	3131	A	7.4
28	BD	39	GLY	7.4
35	BK	89	GLY	7.4
27	BC	158	ARG	7.4
6	AD	64	LEU	7.4
42	BR	7	LEU	7.4
7	AE	124	GLY	7.3
33	BI	57	ASP	7.3
25	BA	220	HIS	7.3
23	B0	3156	G	7.3
27	BC	162	ARG	7.3
45	BU	32	LYS	7.3
25	BA	150	GLY	7.3
6	AD	27	TYR	7.3
9	AG	67	GLU	7.3
32	BH	164	GLN	7.3

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Mol	Chain	Res	Type	RSRZ
48	BX	33	GLU	7.3
55	B5	163	PRO	7.3
36	BL	55	ALA	7.3
10	AH	135	CYS	7.3
43	BS	106	VAL	7.3
25	BA	169	GLU	7.3
27	BC	197	GLU	7.3
25	BA	186	HIS	7.3
25	BA	255	LYS	7.3
10	AH	70	GLN	7.3
6	AD	190	ASP	7.3
43	BS	94	VAL	7.3
42	BR	15	LYS	7.3
26	BB	146	THR	7.3
38	BN	3	THR	7.3
41	BQ	28	ALA	7.3
24	B9	47	A	7.3
55	B5	192	ASN	7.3
26	BB	183	LEU	7.3
7	AE	109	ILE	7.3
36	BL	106	ASP	7.3
38	BN	19	ASP	7.3
38	BN	26	ASP	7.3
39	BO	49	ASP	7.3
42	BR	55	THR	7.3
26	BB	1	MET	7.3
25	BA	55	GLY	7.3
29	BE	5	GLY	7.3
33	BI	8	LEU	7.3
32	BH	43	VAL	7.2
32	BH	49	VAL	7.2
37	BM	102	ALA	7.2
23	B0	729	A	7.2
33	BI	49	ASP	7.2
39	BO	6	THR	7.2
50	BZ	14	SER	7.2
1	AA	117	G	7.2
5	AC	102	ASN	7.2
6	AD	131	ARG	7.2
8	AF	95	GLU	7.2
26	BB	204	ALA	7.2
41	BQ	99	ALA	7.2

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Mol	Chain	Res	Type	RSRZ
32	BH	168	THR	7.2
36	BL	101	GLY	7.2
51	B1	35	LEU	7.2
27	BC	101	GLN	7.2
32	BH	145	HIS	7.2
29	BE	132	ASP	7.2
40	BP	84	THR	7.2
43	BS	12	ASP	7.2
55	B5	201	ARG	7.2
39	BO	94	VAL	7.2
7	AE	83	GLU	7.2
33	BI	72	ALA	7.2
42	BR	78	ALA	7.2
23	B0	665	A	7.2
4	AB	227	GLY	7.2
18	AP	26	ARG	7.2
35	BK	53	ILE	7.2
44	BT	100	THR	7.2
35	BK	72	ASP	7.2
37	BM	35	SER	7.2
23	B0	2210	C	7.2
51	B1	11	LYS	7.2
5	AC	175	LEU	7.2
25	BA	145	LEU	7.2
39	BO	61	TRP	7.2
6	AD	168	ARG	7.2
11	AI	114	TYR	7.2
1	AA	1113	C	7.2
28	BD	136	LEU	7.2
22	AT	42	GLN	7.2
27	BC	185	ARG	7.2
48	BX	44	VAL	7.2
50	BZ	57	VAL	7.2
51	B1	48	VAL	7.1
49	BY	50	LEU	7.1
44	BT	17	SER	7.1
23	B0	1143	A	7.1
23	B0	1260	A	7.1
55	B5	50	GLU	7.1
18	AP	80	PHE	7.1
27	BC	133	PHE	7.1
28	BD	35	VAL	7.1

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Mol	Chain	Res	Type	RSRZ
51	B1	12	MET	7.1
52	B2	31	LEU	7.1
39	BO	67	ALA	7.1
23	B0	2008	C	7.1
25	BA	46	ARG	7.1
36	BL	50	GLN	7.1
22	AT	26	ASN	7.1
1	AA	124	G	7.1
37	BM	93	SER	7.1
6	AD	108	LEU	7.1
55	B5	53	PRO	7.1
37	BM	5	THR	7.1
31	BG	142	PRO	7.1
38	BN	69	ARG	7.1
26	BB	5	LEU	7.1
27	BC	45	THR	7.1
36	BL	4	GLY	7.1
25	BA	123	ALA	7.1
29	BE	176	ALA	7.1
23	B0	1270	C	7.1
43	BS	74	LEU	7.1
33	BI	85	ASP	7.1
49	BY	69	ARG	7.0
27	BC	186	LEU	7.0
34	BJ	38	LYS	7.0
47	BW	25	LEU	7.0
23	B0	2211	U	7.0
2	AW	66	A	7.0
33	BI	112	GLY	7.0
41	BQ	16	GLN	7.0
25	BA	58	HIS	7.0
38	BN	58	ASN	7.0
24	B9	25	G	7.0
23	B0	2311	U	7.0
49	BY	54	GLY	7.0
14	AL	21	LYS	7.0
25	BA	209	ALA	7.0
41	BQ	64	ALA	7.0
39	BO	97	ASP	7.0
40	BP	18	ASP	7.0
50	BZ	4	HIS	7.0
26	BB	22	PRO	7.0

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Mol	Chain	Res	Type	RSRZ
38	BN	10	GLY	7.0
23	B0	2780	A	7.0
32	BH	83	ILE	7.0
16	AN	53	LEU	7.0
32	BH	41	TRP	7.0
23	B0	1837	G	7.0
30	BF	13	LYS	7.0
7	AE	56	GLN	7.0
51	B1	6	PRO	7.0
25	BA	57	GLY	7.0
38	BN	61	GLY	7.0
23	B0	1800	A	7.0
44	BT	79	ILE	7.0
35	BK	101	GLY	7.0
36	BL	28	LEU	6.9
41	BQ	48	LYS	6.9
41	BQ	131	LYS	6.9
9	AG	11	GLN	6.9
23	B0	121	G	6.9
34	BJ	142	LEU	6.9
1	AA	996	A	6.9
23	B0	2370	G	6.9
54	B4	19	ARG	6.9
15	AM	123	ALA	6.9
37	BM	52	ALA	6.9
40	BP	92	ALA	6.9
27	BC	140	ASN	6.9
30	BF	32	GLN	6.9
29	BE	40	GLU	6.9
26	BB	6	GLY	6.9
29	BE	153	LYS	6.9
36	BL	57	GLY	6.9
23	B0	450	C	6.9
23	B0	734	G	6.9
37	BM	68	ALA	6.9
40	BP	24	SER	6.9
55	B5	40	ASP	6.9
26	BB	172	VAL	6.9
55	B5	154	SER	6.9
25	BA	13	ARG	6.9
26	BB	189	PRO	6.9
23	B0	1003	C	6.9

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Mol	Chain	Res	Type	RSRZ
23	B0	2779	C	6.9
1	AA	212	G	6.9
2	AW	42	G	6.9
23	B0	1617	G	6.9
25	BA	141	VAL	6.9
32	BH	148	LEU	6.9
50	BZ	40	LYS	6.9
43	BS	97	GLN	6.9
26	BB	133	LYS	6.9
43	BS	59	LYS	6.9
55	B5	34	LEU	6.9
6	AD	53	ASP	6.8
26	BB	15	TRP	6.8
43	BS	26	SER	6.8
32	BH	133	GLY	6.8
43	BS	46	VAL	6.8
32	BH	59	ALA	6.8
6	AD	84	LYS	6.8
28	BD	71	LYS	6.8
44	BT	11	LYS	6.8
43	BS	63	THR	6.8
17	AO	68	ARG	6.8
37	BM	33	ARG	6.8
28	BD	144	ASP	6.8
47	BW	45	GLN	6.8
51	B1	10	VAL	6.8
22	AT	9	ASN	6.8
28	BD	65	PRO	6.8
28	BD	86	GLY	6.8
33	BI	128	SER	6.8
26	BB	80	GLU	6.8
39	BO	96	ALA	6.8
51	B1	27	ASN	6.8
25	BA	160	GLY	6.8
28	BD	7	LYS	6.8
37	BM	4	ALA	6.8
41	BQ	126	ILE	6.8
54	B4	4	ARG	6.8
38	BN	52	GLY	6.8
10	AH	10	LEU	6.8
42	BR	28	TRP	6.8
48	BX	25	LEU	6.8

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Mol	Chain	Res	Type	RSRZ
23	B0	803	C	6.8
38	BN	18	GLN	6.8
4	AB	229	VAL	6.8
4	AB	230	VAL	6.8
19	AQ	37	LYS	6.8
26	BB	69	LYS	6.8
41	BQ	93	LYS	6.8
28	BD	27	ALA	6.8
36	BL	52	ILE	6.8
30	BF	24	TYR	6.8
32	BH	135	LEU	6.8
36	BL	109	THR	6.7
25	BA	140	ALA	6.7
38	BN	56	ALA	6.7
33	BI	25	LEU	6.7
34	BJ	121	HIS	6.7
50	BZ	41	LEU	6.7
23	B0	61	U	6.7
53	B3	2	PRO	6.7
28	BD	66	ILE	6.7
42	BR	82	LEU	6.7
43	BS	28	LYS	6.7
48	BX	2	LYS	6.7
25	BA	74	GLY	6.7
11	AI	94	ALA	6.7
24	B9	89	G	6.7
40	BP	87	ARG	6.7
50	BZ	16	ARG	6.7
7	AE	20	GLN	6.7
22	AT	30	LYS	6.7
22	AT	58	LYS	6.7
38	BN	120	ASP	6.7
35	BK	74	PRO	6.7
6	AD	164	ALA	6.7
23	B0	111	G	6.7
23	B0	3104	C	6.7
41	BQ	62	ARG	6.7
42	BR	45	ALA	6.7
55	B5	185	ALA	6.7
23	B0	2209	G	6.7
16	AN	56	VAL	6.7
29	BE	134	SER	6.7

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Mol	Chain	Res	Type	RSRZ
53	B3	31	HIS	6.7
32	BH	139	ARG	6.7
44	BT	36	ARG	6.7
30	BF	7	GLU	6.7
27	BC	17	LEU	6.7
33	BI	130	ALA	6.7
37	BM	28	ARG	6.7
40	BP	90	PHE	6.7
40	BP	85	GLY	6.7
25	BA	51	SER	6.7
19	AQ	89	LEU	6.7
21	AS	71	LEU	6.7
38	BN	104	LEU	6.7
55	B5	187	LEU	6.7
26	BB	81	PHE	6.7
1	AA	633	G	6.6
7	AE	10	MET	6.7
23	B0	714	G	6.6
23	B0	2536	G	6.6
37	BM	38	ILE	6.6
37	BM	26	ARG	6.6
31	BG	16	LYS	6.6
28	BD	25	VAL	6.6
38	BN	80	VAL	6.6
26	BB	44	TYR	6.6
34	BJ	18	ARG	6.6
51	B1	26	LYS	6.6
23	B0	598	U	6.6
25	BA	49	ILE	6.6
28	BD	137	ILE	6.6
23	B0	961	G	6.6
28	BD	59	LEU	6.6
29	BE	103	LEU	6.6
51	B1	32	GLN	6.6
29	BE	172	LYS	6.6
51	B1	16	ALA	6.6
55	B5	189	ALA	6.6
15	AM	60	VAL	6.6
36	BL	66	VAL	6.6
37	BM	56	SER	6.6
42	BR	65	VAL	6.6
28	BD	51	ASP	6.6

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Mol	Chain	Res	Type	RSRZ
25	BA	262	LYS	6.6
42	BR	44	GLN	6.6
23	B0	753	U	6.6
31	BG	58	THR	6.6
35	BK	50	ALA	6.6
36	BL	6	ALA	6.6
14	AL	22	SER	6.6
48	BX	35	SER	6.6
26	BB	124	GLY	6.6
48	BX	7	ARG	6.6
48	BX	48	LYS	6.6
19	AQ	24	GLU	6.6
33	BI	132	GLU	6.6
25	BA	201	HIS	6.6
32	BH	144	MET	6.6
35	BK	84	MET	6.6
2	AW	67	A	6.6
40	BP	10	LYS	6.6
2	AW	30	G	6.6
43	BS	57	ASN	6.6
51	B1	42	PRO	6.6
23	B0	518	A	6.6
45	BU	20	TYR	6.6
25	BA	224	SER	6.6
2	AW	41	U	6.6
37	BM	57	ALA	6.5
10	AH	91	ARG	6.5
48	BX	11	GLY	6.5
28	BD	114	PHE	6.5
34	BJ	124	ALA	6.5
37	BM	54	ALA	6.5
23	B0	766	A	6.5
28	BD	37	ASN	6.5
29	BE	150	LYS	6.5
37	BM	32	TYR	6.5
24	B9	24	U	6.5
38	BN	14	ARG	6.5
39	BO	58	ARG	6.5
27	BC	115	GLY	6.5
28	BD	54	ALA	6.5
34	BJ	83	LEU	6.5
39	BO	8	ILE	6.5

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Mol	Chain	Res	Type	RSRZ
53	B3	39	ASP	6.5
55	B5	135	PRO	6.5
7	AE	127	ASN	6.5
32	BH	73	ASN	6.5
35	BK	46	ASN	6.5
39	BO	64	ARG	6.5
38	BN	84	ALA	6.5
39	BO	60	LEU	6.5
55	B5	51	ILE	6.5
25	BA	151	LYS	6.5
29	BE	55	PRO	6.5
48	BX	42	GLY	6.5
14	AL	11	VAL	6.5
35	BK	113	GLU	6.5
41	BQ	25	PHE	6.5
36	BL	83	VAL	6.5
26	BB	102	ILE	6.5
7	AE	145	LYS	6.5
32	BH	93	LYS	6.5
53	B3	40	GLU	6.5
27	BC	109	ALA	6.5
28	BD	149	THR	6.5
32	BH	159	SER	6.5
48	BX	32	ARG	6.5
36	BL	58	GLY	6.4
39	BO	5	LYS	6.4
36	BL	23	ALA	6.4
25	BA	178	PRO	6.4
26	BB	19	ARG	6.4
27	BC	38	ARG	6.4
38	BN	28	ARG	6.4
29	BE	168	GLN	6.4
23	B0	2435	C	6.4
34	BJ	75	VAL	6.4
23	B0	1332	G	6.4
24	B9	94	G	6.4
49	BY	40	HIS	6.4
38	BN	25	PRO	6.4
31	BG	89	SER	6.4
37	BM	39	TYR	6.4
26	BB	148	GLY	6.4
23	B0	92	U	6.4

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Mol	Chain	Res	Type	RSRZ
5	AC	188	LEU	6.4
23	B0	750	C	6.4
35	BK	45	SER	6.4
32	BH	158	HIS	6.4
16	AN	57	ARG	6.4
33	BI	61	ARG	6.4
23	B0	158	A	6.4
23	B0	1457	A	6.4
23	B0	2037	A	6.4
35	BK	9	LYS	6.4
40	BP	1	MET	6.4
51	B1	54	LYS	6.4
23	B0	301	C	6.4
23	B0	2206	C	6.4
49	BY	23	GLU	6.4
37	BM	78	ALA	6.4
23	B0	474	G	6.4
33	BI	9	ASP	6.4
13	AK	11	LYS	6.4
33	BI	51	ILE	6.4
33	BI	98	ILE	6.4
37	BM	42	ILE	6.4
35	BK	27	TYR	6.4
25	BA	157	ARG	6.4
28	BD	79	LEU	6.4
28	BD	130	LEU	6.4
22	AT	29	LYS	6.4
23	B0	122	G	6.4
23	B0	528	G	6.4
32	BH	72	PRO	6.4
1	AA	1188	A	6.4
5	AC	158	GLY	6.4
7	AE	125	SER	6.4
9	AG	77	SER	6.4
27	BC	82	VAL	6.3
43	BS	4	PRO	6.3
23	B0	1142	G	6.3
2	AW	36	A	6.3
23	B0	597	U	6.3
9	AG	18	TYR	6.3
15	AM	116	THR	6.3
34	BJ	37	GLN	6.3

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Mol	Chain	Res	Type	RSRZ
32	BH	166	LEU	6.3
38	BN	11	GLU	6.3
44	BT	19	ILE	6.3
23	B0	91	A	6.3
26	BB	83	GLY	6.3
23	B0	446	C	6.3
10	AH	98	LYS	6.3
28	BD	138	PHE	6.3
32	BH	79	PHE	6.3
41	BQ	88	ASP	6.3
42	BR	47	GLY	6.3
43	BS	62	MET	6.3
47	BW	4	SER	6.3
49	BY	12	CYS	6.3
1	AA	205	G	6.3
53	B3	28	GLY	6.3
23	B0	1876	C	6.3
37	BM	8	ARG	6.3
43	BS	95	ARG	6.3
32	BH	146	THR	6.3
55	B5	52	VAL	6.3
7	AE	53	LEU	6.3
38	BN	15	GLY	6.3
49	BY	68	ARG	6.3
26	BB	197	VAL	6.3
4	AB	63	MET	6.3
21	AS	68	GLY	6.3
45	BU	75	GLY	6.3
35	BK	119	PHE	6.3
18	AP	23	ASP	6.3
27	BC	121	ASP	6.3
48	BX	9	VAL	6.3
29	BE	154	PRO	6.3
31	BG	141	GLY	6.2
43	BS	96	LYS	6.2
28	BD	24	SER	6.2
23	B0	1262	U	6.2
55	B5	184	ILE	6.2
26	BB	13	GLN	6.2
29	BE	53	GLU	6.2
2	AW	38	A	6.2
28	BD	131	GLY	6.2

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Mol	Chain	Res	Type	RSRZ
48	BX	26	ARG	6.2
19	AQ	97	SER	6.2
51	B1	9	ILE	6.2
33	BI	105	PRO	6.2
23	B0	1259	A	6.2
33	BI	41	ASN	6.2
38	BN	73	PHE	6.2
45	BU	71	ASN	6.2
17	AO	45	VAL	6.2
45	BU	31	VAL	6.2
42	BR	2	SER	6.2
23	B0	1254	G	6.2
19	AQ	100	LYS	6.2
53	B3	36	LYS	6.2
5	AC	105	GLU	6.2
51	B1	40	TYR	6.2
26	BB	70	ALA	6.2
44	BT	21	ALA	6.2
1	AA	280	C	6.2
1	AA	314	C	6.2
10	AH	39	LEU	6.2
43	BS	79	SER	6.2
14	AL	126	LYS	6.2
29	BE	6	LYS	6.2
25	BA	7	ARG	6.2
18	AP	29	ASP	6.2
23	B0	154	U	6.2
25	BA	99	ASP	6.2
34	BJ	27	ASP	6.2
23	B0	764	A	6.2
48	BX	34	VAL	6.2
30	BF	14	THR	6.2
4	AB	196	LEU	6.2
19	AQ	38	ARG	6.2
23	B0	1360	G	6.2
23	B0	1488	G	6.2
4	AB	232	PRO	6.2
45	BU	6	GLY	6.2
50	BZ	50	GLY	6.2
29	BE	127	GLU	6.2
25	BA	78	LYS	6.2
12	AJ	59	SER	6.2

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Mol	Chain	Res	Type	RSRZ
55	B5	57	GLN	6.2
38	BN	97	GLY	6.2
1	AA	313	A	6.2
10	AH	73	ASP	6.2
32	BH	118	ALA	6.2
25	BA	203	ASN	6.2
23	B0	960	U	6.1
25	BA	28	ARG	6.1
4	AB	27	LYS	6.1
23	B0	1253	C	6.1
55	B5	130	PRO	6.1
41	BQ	33	MET	6.1
2	AW	31	A	6.1
23	B0	728	G	6.1
23	B0	1258	G	6.1
23	B0	1362	A	6.1
23	B0	715	U	6.1
33	BI	120	ASP	6.1
26	BB	76	ARG	6.1
29	BE	54	ARG	6.1
37	BM	7	ILE	6.1
42	BR	50	VAL	6.1
30	BF	29	LEU	6.1
51	B1	8	ILE	6.1
53	B3	35	GLY	6.1
23	B0	188	G	6.1
28	BD	142	THR	6.1
28	BD	48	LYS	6.1
23	B0	145	C	6.1
27	BC	29	GLU	6.1
5	AC	120	VAL	6.1
40	BP	71	ILE	6.1
50	BZ	45	ILE	6.1
26	BB	109	LYS	6.1
51	B1	41	ASP	6.1
29	BE	8	PRO	6.1
36	BL	65	LEU	6.1
38	BN	27	PHE	6.1
5	AC	143	GLU	6.1
28	BD	161	LYS	6.1
44	BT	48	THR	6.0
26	BB	57	ARG	6.0

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Mol	Chain	Res	Type	RSRZ
36	BL	115	LEU	6.0
25	BA	247	VAL	6.0
32	BH	131	VAL	6.0
38	BN	124	VAL	6.0
38	BN	98	LYS	6.0
2	AW	73	A	6.0
6	AD	68	TYR	6.0
43	BS	75	ALA	6.0
32	BH	30	LYS	6.0
34	BJ	94	GLU	6.0
29	BE	65	HIS	6.0
28	BD	150	ARG	6.0
40	BP	29	ALA	6.0
6	AD	166	LYS	6.0
43	BS	58	VAL	6.0
23	B0	1711	C	6.0
27	BC	49	ALA	6.0
43	BS	78	ALA	6.0
23	B0	2009	U	6.0
22	AT	72	LEU	6.0
26	BB	147	PRO	6.0
5	AC	149	ALA	6.0
41	BQ	32	ARG	6.0
23	B0	2190	A	6.0
26	BB	101	LYS	6.0
31	BG	2	LYS	6.0
43	BS	80	LYS	6.0
54	B4	3	VAL	6.0
55	B5	160	LYS	6.0
23	B0	1710	U	6.0
26	BB	78	LEU	6.0
41	BQ	46	ARG	6.0
12	AJ	80	LYS	6.0
23	B0	2371	A	6.0
23	B0	2491	C	6.0
53	B3	34	THR	6.0
30	BF	35	ALA	6.0
50	BZ	28	PRO	6.0
4	AB	64	ARG	5.9
27	BC	155	GLU	5.9
29	BE	86	ASN	5.9
34	BJ	107	LYS	5.9

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Mol	Chain	Res	Type	RSRZ
35	BK	90	ALA	5.9
48	BX	49	HIS	5.9
25	BA	177	LEU	5.9
23	B0	1925	C	5.9
11	AI	33	PHE	5.9
38	BN	16	ILE	5.9
6	AD	197	PRO	5.9
42	BR	83	ALA	5.9
33	BI	52	VAL	5.9
49	BY	41	PRO	5.9
33	BI	100	ASN	5.9
42	BR	3	HIS	5.9
2	AW	14	A	5.9
48	BX	1	MET	5.9
7	AE	140	ARG	5.9
25	BA	176	ARG	5.9
35	BK	12	LYS	5.9
39	BO	114	ARG	5.9
44	BT	46	GLN	5.9
27	BC	119	ALA	5.9
44	BT	9	THR	5.9
14	AL	18	VAL	5.9
26	BB	66	HIS	5.9
33	BI	101	ASN	5.9
23	B0	726	G	5.9
23	B0	2036	G	5.9
39	BO	109	LEU	5.9
1	AA	1465	C	5.9
25	BA	202	LYS	5.9
28	BD	147	ASP	5.9
34	BJ	19	VAL	5.9
49	BY	27	THR	5.9
1	AA	289	G	5.9
23	B0	1216	G	5.9
6	AD	152	SER	5.9
5	AC	134	ILE	5.9
23	B0	1708	C	5.9
23	B0	1808	C	5.9
23	B0	2022	C	5.9
42	BR	43	GLN	5.9
48	BX	47	VAL	5.9
12	AJ	3	LYS	5.9

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Mol	Chain	Res	Type	RSRZ
1	AA	311	C	5.9
2	AW	6	U	5.9
47	BW	28	LEU	5.9
29	BE	39	THR	5.9
32	BH	129	HIS	5.9
53	B3	11	LYS	5.9
26	BB	33	ILE	5.9
35	BK	36	ILE	5.9
23	B0	664	C	5.9
48	BX	40	VAL	5.9
32	BH	160	ALA	5.9
52	B2	22	MET	5.9
37	BM	95	LYS	5.8
43	BS	77	HIS	5.8
23	B0	1450	G	5.8
23	B0	1380	C	5.8
28	BD	57	LEU	5.8
36	BL	98	LEU	5.8
42	BR	60	GLY	5.8
55	B5	38	GLY	5.8
42	BR	90	ALA	5.8
44	BT	10	PRO	5.8
15	AM	121	LYS	5.8
37	BM	10	LYS	5.8
14	AL	6	THR	5.8
16	AN	22	THR	5.8
7	AE	51	VAL	5.8
23	B0	472	C	5.8
23	B0	1458	A	5.8
24	B9	80	A	5.8
18	AP	36	ILE	5.8
43	BS	87	GLU	5.8
43	BS	98	ILE	5.8
41	BQ	31	VAL	5.8
55	B5	103	LEU	5.8
23	B0	1456	C	5.8
33	BI	59	ALA	5.8
26	BB	58	LYS	5.8
1	AA	12	U	5.8
39	BO	92	ARG	5.8
25	BA	271	VAL	5.8
44	BT	80	HIS	5.8

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Mol	Chain	Res	Type	RSRZ
25	BA	210	GLY	5.8
23	B0	1396	C	5.8
27	BC	36	ALA	5.8
23	B0	713	G	5.8
23	B0	2010	G	5.8
27	BC	53	LYS	5.8
42	BR	39	LYS	5.8
19	AQ	99	SER	5.8
38	BN	66	PHE	5.8
21	AS	81	ARG	5.8
23	B0	1139	A	5.8
38	BN	5	ILE	5.8
27	BC	55	GLY	5.8
11	AI	54	ASP	5.8
55	B5	136	THR	5.8
28	BD	72	LYS	5.8
5	AC	190	ARG	5.8
23	B0	1817	U	5.8
23	B0	1334	A	5.8
50	BZ	56	GLN	5.8
35	BK	49	GLU	5.8
39	BO	25	TRP	5.8
51	B1	39	LYS	5.8
22	AT	10	LEU	5.8
23	B0	1507	A	5.8
25	BA	44	ASN	5.8
25	BA	21	PHE	5.7
43	BS	93	ARG	5.7
23	B0	2071	G	5.7
35	BK	13	GLN	5.7
51	B1	3	LYS	5.7
45	BU	27	GLY	5.7
31	BG	61	ALA	5.7
1	AA	1498	U	5.7
12	AJ	92	THR	5.7
1	AA	281	G	5.7
1	AA	792	A	5.7
51	B1	43	VAL	5.7
25	BA	5	LYS	5.7
23	B0	1792	C	5.7
23	B0	2494	C	5.7
55	B5	146	GLU	5.7

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Mol	Chain	Res	Type	RSRZ
49	BY	39	VAL	5.7
23	B0	1678	G	5.7
55	B5	164	GLN	5.7
6	AD	28	SER	5.7
27	BC	156	ASN	5.7
32	BH	128	GLU	5.7
26	BB	32	PRO	5.7
23	B0	1846	A	5.7
11	AI	32	ASP	5.7
47	BW	58	ALA	5.7
38	BN	63	ARG	5.7
19	AQ	28	PRO	5.7
55	B5	55	PRO	5.7
1	AA	1000	U	5.7
45	BU	28	GLY	5.7
17	AO	72	ARG	5.7
54	B4	11	CYS	5.7
23	B0	1282	A	5.7
23	B0	2212	U	5.7
5	AC	177	THR	5.7
9	AG	26	PHE	5.7
53	B3	62	LEU	5.7
26	BB	43	GLY	5.7
1	AA	1395	C	5.7
15	AM	120	LYS	5.6
28	BD	73	SER	5.6
52	B2	26	SER	5.6
53	B3	27	SER	5.6
23	B0	2599	U	5.6
23	B0	767	G	5.6
23	B0	2378	G	5.6
35	BK	21	ASP	5.6
49	BY	25	MET	5.6
28	BD	40	LEU	5.6
50	BZ	33	CYS	5.6
6	AD	146	ILE	5.6
27	BC	39	ARG	5.6
30	BF	30	ILE	5.6
35	BK	83	ARG	5.6
39	BO	78	THR	5.6
51	B1	46	LYS	5.6
25	BA	249	PRO	5.6

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Mol	Chain	Res	Type	RSRZ
35	BK	40	PRO	5.6
41	BQ	35	PRO	5.6
48	BX	13	PRO	5.6
37	BM	34	SER	5.6
20	AR	41	LYS	5.6
25	BA	68	LYS	5.6
31	BG	94	ALA	5.6
36	BL	19	ALA	5.6
5	AC	104	GLN	5.6
12	AJ	67	THR	5.6
32	BH	56	THR	5.6
13	AK	36	ASP	5.6
55	B5	54	LEU	5.6
23	B0	1980	A	5.6
30	BF	27	ASN	5.6
43	BS	5	SER	5.6
14	AL	26	ALA	5.6
50	BZ	6	VAL	5.6
23	B0	2038	C	5.6
8	AF	97	PHE	5.6
30	BF	31	PRO	5.6
7	AE	24	ARG	5.6
6	AD	87	GLY	5.6
16	AN	9	LYS	5.6
41	BQ	22	LYS	5.6
41	BQ	47	GLY	5.6
41	BQ	97	VAL	5.6
45	BU	21	LEU	5.6
2	AW	32	C	5.6
23	B0	3129	C	5.6
35	BK	8	THR	5.6
27	BC	18	PRO	5.6
32	BH	154	GLU	5.6
41	BQ	36	ARG	5.6
36	BL	41	ALA	5.6
2	AW	2	C	5.6
2	AW	40	C	5.6
26	BB	168	GLN	5.6
29	BE	24	PHE	5.6
23	B0	582	G	5.6
25	BA	261	ARG	5.6
45	BU	24	LYS	5.6

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Mol	Chain	Res	Type	RSRZ
38	BN	17	GLU	5.6
36	BL	116	VAL	5.5
28	BD	145	MET	5.5
26	BB	181	LEU	5.5
2	AW	56	C	5.5
26	BB	67	PHE	5.5
29	BE	94	PHE	5.5
55	B5	162	GLN	5.5
18	AP	27	LYS	5.5
25	BA	6	TYR	5.5
23	B0	2029	G	5.5
6	AD	34	GLU	5.5
2	AW	47	U	5.5
23	B0	1481	U	5.5
55	B5	182	ASN	5.5
32	BH	132	PHE	5.5
42	BR	62	ARG	5.5
50	BZ	5	PRO	5.5
41	BQ	125	THR	5.5
44	BT	42	ALA	5.5
47	BW	59	GLU	5.5
31	BG	59	ILE	5.5
1	AA	1112	C	5.5
23	B0	1982	C	5.5
40	BP	72	ARG	5.5
2	AW	33	U	5.5
23	B0	1525	A	5.5
23	B0	736	G	5.5
25	BA	248	THR	5.5
30	BF	1	MET	5.5
41	BQ	110	ALA	5.5
53	B3	38	GLY	5.5
40	BP	93	ILE	5.5
23	B0	2598	C	5.5
9	AG	93	PRO	5.5
55	B5	99	PRO	5.5
2	AW	57	G	5.5
55	B5	112	ILE	5.5
18	AP	11	SER	5.5
23	B0	1449	C	5.5
12	AJ	90	LEU	5.5
35	BK	97	VAL	5.5

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Mol	Chain	Res	Type	RSRZ
28	BD	41	GLY	5.5
48	BX	19	THR	5.5
24	B9	95	U	5.5
41	BQ	96	TYR	5.5
26	BB	169	ASN	5.5
41	BQ	87	GLU	5.5
48	BX	37	THR	5.5
54	B4	20	HIS	5.5
55	B5	27	THR	5.5
43	BS	72	ARG	5.5
23	B0	2285	U	5.4
26	BB	190	GLY	5.4
35	BK	129	GLN	5.4
6	AD	163	GLU	5.4
2	AW	3	G	5.4
36	BL	102	THR	5.4
37	BM	50	THR	5.4
35	BK	98	VAL	5.4
12	AJ	89	ASP	5.4
38	BN	106	TYR	5.4
13	AK	16	SER	5.4
23	B0	1569	A	5.4
23	B0	1981	A	5.4
23	B0	2288	A	5.4
28	BD	135	GLN	5.4
37	BM	98	GLY	5.4
55	B5	59	SER	5.4
39	BO	83	LEU	5.4
23	B0	1889	G	5.4
48	BX	20	VAL	5.4
23	B0	1865	C	5.4
18	AP	58	TYR	5.4
33	BI	60	PRO	5.4
4	AB	65	GLY	5.4
17	AO	47	LYS	5.4
34	BJ	82	ASP	5.4
14	AL	50	SER	5.4
41	BQ	68	VAL	5.4
34	BJ	70	THR	5.4
23	B0	2537	C	5.4
35	BK	116	LYS	5.4
10	AH	80	ILE	5.4

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Mol	Chain	Res	Type	RSRZ
22	AT	45	GLN	5.4
9	AG	76	ARG	5.4
23	B0	1647	U	5.4
40	BP	76	SER	5.4
42	BR	37	GLU	5.4
7	AE	16	THR	5.4
23	B0	54	G	5.4
23	B0	995	A	5.4
23	B0	1630	A	5.4
26	BB	191	ALA	5.4
42	BR	66	GLY	5.4
44	BT	82	ASP	5.4
48	BX	36	ASP	5.4
27	BC	21	GLU	5.4
18	AP	30	GLY	5.4
23	B0	49	U	5.4
23	B0	159	A	5.4
43	BS	67	GLY	5.4
11	AI	124	GLN	5.4
29	BE	106	ASN	5.4
23	B0	1875	C	5.4
23	B0	2254	C	5.4
42	BR	6	ILE	5.4
23	B0	917	U	5.4
38	BN	102	ALA	5.4
5	AC	173	VAL	5.3
1	AA	291	C	5.3
23	B0	675	C	5.3
1	AA	116	A	5.3
23	B0	2333	A	5.3
53	B3	32	GLN	5.3
23	B0	2334	C	5.3
29	BE	47	GLY	5.3
32	BH	147	ARG	5.3
43	BS	41	PRO	5.3
50	BZ	13	LYS	5.3
50	BZ	49	CYS	5.3
7	AE	84	PHE	5.3
18	AP	9	PHE	5.3
41	BQ	59	PHE	5.3
20	AR	28	GLU	5.3
48	BX	24	GLY	5.3

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Mol	Chain	Res	Type	RSRZ
43	BS	99	VAL	5.3
26	BB	185	LYS	5.3
33	BI	71	LYS	5.3
44	BT	12	GLN	5.3
5	AC	25	GLY	5.3
15	AM	72	ALA	5.3
17	AO	86	GLY	5.3
24	B9	114	C	5.3
32	BH	103	TYR	5.3
27	BC	90	SER	5.3
18	AP	79	VAL	5.3
28	BD	146	VAL	5.3
37	BM	88	VAL	5.3
22	AT	68	LYS	5.3
36	BL	42	LYS	5.3
1	AA	951	G	5.3
2	AW	16	U	5.3
35	BK	121	LEU	5.3
19	AQ	96	GLN	5.3
1	AA	312	C	5.3
19	AQ	32	TYR	5.3
32	BH	126	VAL	5.3
41	BQ	61	PRO	5.3
10	AH	82	HIS	5.3
54	B4	26	ILE	5.3
20	AR	16	PRO	5.3
23	B0	2589	C	5.3
26	BB	186	GLY	5.3
55	B5	30	VAL	5.3
31	BG	27	LEU	5.3
32	BH	95	LEU	5.3
10	AH	111	ILE	5.3
51	B1	28	ARG	5.2
14	AL	20	LYS	5.2
34	BJ	141	VAL	5.2
55	B5	5	LYS	5.2
23	B0	131	C	5.2
29	BE	126	PRO	5.2
33	BI	118	LEU	5.2
39	BO	91	ASN	5.2
18	AP	44	THR	5.2
18	AP	56	ALA	5.2

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Mol	Chain	Res	Type	RSRZ
43	BS	27	GLY	5.2
23	B0	1845	A	5.2
33	BI	99	ILE	5.2
54	B4	14	CYS	5.2
20	AR	54	ARG	5.2
39	BO	66	ASN	5.2
25	BA	173	VAL	5.2
26	BB	38	THR	5.2
1	AA	1403	C	5.2
23	B0	1575	C	5.2
26	BB	149	ARG	5.2
33	BI	70	VAL	5.2
1	AA	471	G	5.2
9	AG	59	LEU	5.2
23	B0	2597	G	5.2
25	BA	15	GLN	5.2
26	BB	194	GLY	5.2
35	BK	82	THR	5.2
38	BN	123	ARG	5.2
35	BK	96	SER	5.2
41	BQ	27	VAL	5.2
50	BZ	42	SER	5.2
55	B5	196	VAL	5.2
9	AG	124	LEU	5.2
19	AQ	74	LEU	5.2
23	B0	1994	U	5.2
23	B0	2213	G	5.2
27	BC	98	GLN	5.2
4	AB	194	PRO	5.2
23	B0	771	C	5.2
26	BB	62	PRO	5.2
26	BB	98	GLU	5.2
26	BB	140	SER	5.2
16	AN	10	ALA	5.2
39	BO	86	ALA	5.2
5	AC	201	TYR	5.2
1	AA	770	C	5.2
23	B0	659	G	5.2
23	B0	2021	G	5.2
27	BC	50	GLN	5.2
41	BQ	124	ILE	5.2
55	B5	190	ILE	5.2

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Mol	Chain	Res	Type	RSRZ
12	AJ	79	ARG	5.2
19	AQ	104	LYS	5.2
37	BM	99	ARG	5.2
41	BQ	76	LYS	5.2
5	AC	125	GLU	5.2
26	BB	90	SER	5.2
1	AA	962	C	5.1
23	B0	139	A	5.1
23	B0	157	G	5.1
23	B0	676	G	5.1
47	BW	57	LYS	5.1
27	BC	111	ARG	5.1
39	BO	70	ARG	5.1
43	BS	42	ARG	5.1
26	BB	28	ALA	5.1
34	BJ	20	GLY	5.1
49	BY	15	ILE	5.1
23	B0	756	C	5.1
23	B0	1798	G	5.1
24	B9	54	U	5.1
26	BB	41	THR	5.1
26	BB	179	GLU	5.1
55	B5	172	GLU	5.1
33	BI	40	GLY	5.1
41	BQ	95	ALA	5.1
22	AT	27	LYS	5.1
28	BD	148	LYS	5.1
23	B0	1506	C	5.1
23	B0	2459	C	5.1
51	B1	7	ARG	5.1
55	B5	153	ARG	5.1
1	AA	1443	G	5.1
23	B0	3133	G	5.1
23	B0	2218	G	5.1
23	B0	453	U	5.1
20	AR	25	THR	5.1
4	AB	29	ALA	5.1
33	BI	86	GLY	5.1
25	BA	70	ARG	5.1
27	BC	20	PRO	5.1
28	BD	113	ASP	5.1
29	BE	163	ARG	5.1

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Mol	Chain	Res	Type	RSRZ
42	BR	59	PRO	5.1
25	BA	154	GLN	5.1
16	AN	25	VAL	5.1
28	BD	85	VAL	5.1
22	AT	46	GLU	5.1
29	BE	70	THR	5.1
36	BL	84	ALA	5.1
49	BY	32	HIS	5.1
25	BA	27	LYS	5.1
53	B3	45	GLY	5.1
54	B4	22	ARG	5.1
23	B0	1962	C	5.1
25	BA	148	VAL	5.1
55	B5	28	GLN	5.1
23	B0	1993	G	5.1
33	BI	26	ASN	5.1
33	BI	123	PHE	5.1
28	BD	133	LYS	5.1
45	BU	25	LYS	5.1
55	B5	183	ALA	5.1
5	AC	23	TYR	5.1
25	BA	219	PRO	5.1
1	AA	554	C	5.1
23	B0	2215	C	5.1
45	BU	51	VAL	5.1
32	BH	76	GLN	5.1
1	AA	115	G	5.1
1	AA	310	G	5.1
23	B0	2007	G	5.1
28	BD	64	LYS	5.1
43	BS	68	GLY	5.1
1	AA	950	U	5.1
20	AR	18	ARG	5.1
8	AF	56	PRO	5.1
23	B0	2013	A	5.1
23	B0	2691	C	5.1
44	BT	141	MET	5.1
40	BP	11	GLN	5.1
31	BG	119	SER	5.0
38	BN	72	SER	5.0
43	BS	64	ASN	5.0
34	BJ	29	THR	5.0

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Mol	Chain	Res	Type	RSRZ
23	B0	1219	C	5.0
23	B0	1707	A	5.0
23	B0	2184	C	5.0
22	AT	39	LYS	5.0
42	BR	8	GLN	5.0
27	BC	193	LEU	5.0
38	BN	62	SER	5.0
40	BP	50	ASP	5.0
23	B0	667	U	5.0
23	B0	1716	G	5.0
25	BA	100	GLY	5.0
48	BX	43	MET	5.0
23	B0	2205	C	5.0
13	AK	127	LYS	5.0
26	BB	144	ARG	5.0
32	BH	108	GLY	5.0
53	B3	37	SER	5.0
26	BB	184	VAL	5.0
38	BN	39	VAL	5.0
55	B5	31	GLU	5.0
17	AO	37	ASN	5.0
23	B0	2692	A	5.0
36	BL	5	LYS	5.0
35	BK	11	ARG	5.0
38	BN	65	SER	5.0
38	BN	122	SER	5.0
6	AD	199	ASN	5.0
23	B0	996	C	5.0
23	B0	2028	C	5.0
55	B5	207	THR	5.0
45	BU	76	ALA	5.0
36	BL	105	GLY	5.0
47	BW	21	ARG	5.0
50	BZ	12	SER	5.0
5	AC	27	LYS	5.0
22	AT	51	GLU	5.0
41	BQ	37	LYS	5.0
55	B5	195	LYS	5.0
26	BB	39	ALA	5.0
55	B5	61	ALA	5.0
1	AA	631	G	5.0
23	B0	452	G	5.0

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Mol	Chain	Res	Type	RSRZ
41	BQ	83	ASP	5.0
49	BY	6	HIS	5.0
1	AA	1192	C	5.0
43	BS	55	THR	5.0
44	BT	49	THR	5.0
22	AT	67	ALA	5.0
7	AE	23	GLY	5.0
26	BB	142	GLY	5.0
36	BL	48	VAL	5.0
28	BD	26	MET	5.0
55	B5	37	LYS	5.0
7	AE	149	GLU	4.9
15	AM	64	TRP	4.9
11	AI	23	ASN	4.9
30	BF	41	THR	4.9
40	BP	77	GLY	4.9
45	BU	34	GLY	4.9
18	AP	19	ILE	4.9
23	B0	1452	U	4.9
8	AF	83	ASP	4.9
23	B0	1719	G	4.9
36	BL	45	ARG	4.9
7	AE	106	PRO	4.9
1	AA	190	A	4.9
1	AA	632	A	4.9
23	B0	994	A	4.9
26	BB	164	ARG	4.9
34	BJ	73	GLU	4.9
1	AA	771	G	4.9
23	B0	1722	G	4.9
15	AM	33	ALA	4.9
10	AH	9	MET	4.9
37	BM	43	ILE	4.9
23	B0	372	U	4.9
6	AD	187	ARG	4.9
14	AL	15	ARG	4.9
7	AE	137	GLU	4.9
27	BC	136	TRP	4.9
23	B0	754	G	4.9
33	BI	133	VAL	4.9
45	BU	15	ASP	4.9
26	BB	139	GLY	4.9

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Mol	Chain	Res	Type	RSRZ
34	BJ	46	GLY	4.9
7	AE	128	PRO	4.9
23	B0	1802	A	4.9
23	B0	3169	A	4.9
1	AA	1437	C	4.9
23	B0	1720	G	4.9
19	AQ	83	ASP	4.9
2	AW	68	U	4.9
23	B0	2024	U	4.9
43	BS	69	GLN	4.9
25	BA	149	PRO	4.9
43	BS	2	PRO	4.9
23	B0	1523	A	4.9
1	AA	681	C	4.9
5	AC	44	GLU	4.9
5	AC	180	ALA	4.9
26	BB	68	ALA	4.9
27	BC	102	LEU	4.9
29	BE	171	LEU	4.9
36	BL	107	GLY	4.9
5	AC	186	PHE	4.9
1	AA	1001	A	4.9
13	AK	106	LYS	4.9
35	BK	64	LYS	4.9
42	BR	48	VAL	4.9
44	BT	108	VAL	4.9
22	AT	73	HIS	4.8
29	BE	9	ILE	4.8
23	B0	1269	G	4.8
39	BO	27	SER	4.8
21	AS	13	ASP	4.8
35	BK	73	LYS	4.8
44	BT	37	LYS	4.8
38	BN	21	THR	4.8
49	BY	7	PRO	4.8
10	AH	13	ILE	4.8
35	BK	14	PHE	4.8
2	AW	1	G	4.8
23	B0	90	G	4.8
50	BZ	51	TYR	4.8
12	AJ	55	LYS	4.8
14	AL	123	LYS	4.8

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Mol	Chain	Res	Type	RSRZ
27	BC	189	ASP	4.8
51	B1	53	LYS	4.8
36	BL	46	PRO	4.8
55	B5	155	VAL	4.8
12	AJ	100	THR	4.8
20	AR	24	ALA	4.8
23	B0	1836	C	4.8
23	B0	1927	U	4.8
23	B0	2547	C	4.8
26	BB	29	GLY	4.8
29	BE	66	GLY	4.8
30	BF	47	GLU	4.8
35	BK	39	GLU	4.8
25	BA	264	LYS	4.8
36	BL	87	TYR	4.8
19	AQ	93	GLN	4.8
29	BE	52	VAL	4.8
1	AA	1227	A	4.8
18	AP	14	ASN	4.8
29	BE	42	THR	4.8
39	BO	23	GLY	4.8
40	BP	41	GLY	4.8
23	B0	1670	G	4.8
27	BC	118	VAL	4.8
38	BN	99	VAL	4.8
48	BX	8	SER	4.8
1	AA	788	U	4.8
23	B0	2551	A	4.8
11	AI	37	PHE	4.8
25	BA	26	LYS	4.8
4	AB	30	ARG	4.8
36	BL	104	ARG	4.8
43	BS	105	ARG	4.8
45	BU	37	LEU	4.8
54	B4	18	ARG	4.8
2	AW	15	G	4.8
6	AD	52	SER	4.8
19	AQ	26	GLN	4.8
32	BH	157	PRO	4.8
12	AJ	58	ASP	4.8
15	AM	75	ALA	4.8
23	B0	819	C	4.8

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Mol	Chain	Res	Type	RSRZ
43	BS	101	GLY	4.8
12	AJ	46	ARG	4.8
55	B5	88	GLU	4.8
1	AA	125	U	4.8
1	AA	11	G	4.8
1	AA	1032	G	4.8
55	B5	58	PRO	4.8
23	B0	1224	A	4.8
44	BT	132	GLN	4.8
38	BN	101	ARG	4.8
55	B5	49	ARG	4.8
15	AM	12	ASN	4.8
26	BB	196	VAL	4.8
44	BT	66	VAL	4.8
1	AA	794	A	4.7
23	B0	900(A)	A	4.7
23	B0	1721	G	4.7
2	AW	13	C	4.7
17	AO	40	SER	4.7
23	B0	65	C	4.7
23	B0	527	C	4.7
26	BB	27	LEU	4.7
23	B0	2590	U	4.7
43	BS	104	VAL	4.7
14	AL	7	ILE	4.7
37	BM	94	TYR	4.7
27	BC	84	PHE	4.7
1	AA	488	C	4.7
23	B0	1152	C	4.7
36	BL	103	ARG	4.7
19	AQ	90	ILE	4.7
40	BP	20	ILE	4.7
15	AM	76	ALA	4.7
34	BJ	23	PRO	4.7
23	B0	189	A	4.7
44	BT	73	LYS	4.7
23	B0	1590	C	4.7
23	B0	2548	G	4.7
33	BI	121	ARG	4.7
20	AR	17	SER	4.7
45	BU	16	SER	4.7
12	AJ	12	ASP	4.7

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Mol	Chain	Res	Type	RSRZ
5	AC	26	LYS	4.7
25	BA	4	LYS	4.7
25	BA	156	ALA	4.7
1	AA	1257	U	4.7
23	B0	3870	C	4.7
28	BD	3	GLN	4.7
55	B5	150	ARG	4.7
23	B0	413	G	4.7
26	BB	47	VAL	4.7
21	AS	49	ILE	4.7
50	BZ	21	SER	4.7
27	BC	93	TYR	4.7
5	AC	165	THR	4.7
29	BE	129	THR	4.7
23	B0	627	A	4.7
23	B0	968	C	4.7
32	BH	165	VAL	4.7
1	AA	74	G	4.7
1	AA	1023	G	4.7
23	B0	980	G	4.7
24	B9	113	G	4.7
44	BT	83	PHE	4.7
51	B1	50	PHE	4.7
6	AD	169	LYS	4.7
47	BW	24	GLU	4.7
3	AU	12	A	4.7
23	B0	123	A	4.7
19	AQ	94	ASN	4.7
36	BL	96	ARG	4.7
40	BP	83	ARG	4.7
55	B5	63	ARG	4.7
55	B5	199	ASN	4.7
32	BH	169	GLN	4.7
9	AG	156	TRP	4.7
34	BJ	98	LEU	4.7
18	AP	13	HIS	4.7
20	AR	87	ARG	4.7
23	B0	2708	U	4.7
35	BK	19	THR	4.7
55	B5	186	VAL	4.6
7	AE	129	ILE	4.6
23	B0	799	C	4.6

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Mol	Chain	Res	Type	RSRZ
27	BC	134	ILE	4.6
32	BH	74	MET	4.6
26	BB	122	PHE	4.6
23	B0	3105	G	4.6
43	BS	6	ALA	4.6
45	BU	33	ALA	4.6
53	B3	30	ARG	4.6
22	AT	50	GLU	4.6
23	B0	1138	A	4.6
28	BD	140	GLU	4.6
7	AE	11	ILE	4.6
44	BT	167	THR	4.6
1	AA	1367	C	4.6
8	AF	43	LEU	4.6
34	BJ	28	LYS	4.6
54	B4	31	LYS	4.6
1	AA	238	G	4.6
1	AA	818	G	4.6
23	B0	152	G	4.6
23	B0	182	G	4.6
24	B9	23	G	4.6
23	B0	400	U	4.6
27	BC	160	ALA	4.6
45	BU	55	ARG	4.6
15	AM	100	GLY	4.6
19	AQ	35	VAL	4.6
23	B0	1288	A	4.6
14	AL	124	LYS	4.6
25	BA	259	THR	4.6
38	BN	107	LEU	4.6
40	BP	73	LYS	4.6
44	BT	34	LEU	4.6
13	AK	117	ASN	4.6
26	BB	143	GLN	4.6
23	B0	1257	U	4.6
23	B0	138	G	4.6
23	B0	2214	G	4.6
23	B0	2433	G	4.6
8	AF	53	ALA	4.6
29	BE	144	VAL	4.6
23	B0	1281	A	4.6
23	B0	2025	A	4.6

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Mol	Chain	Res	Type	RSRZ
6	AD	150	GLU	4.6
44	BT	18	MET	4.6
10	AH	52	ASP	4.6
23	B0	725	C	4.6
23	B0	1489	C	4.6
18	AP	82	GLN	4.6
23	B0	1141	U	4.6
23	B0	1217	U	4.6
23	B0	1377	G	4.6
40	BP	37	ALA	4.6
52	B2	13	ALA	4.6
19	AQ	103	GLY	4.6
17	AO	41	GLU	4.6
23	B0	1256	C	4.6
23	B0	2059	U	4.6
55	B5	159	THR	4.6
14	AL	64	TYR	4.6
32	BH	142	ARG	4.6
23	B0	663	G	4.6
23	B0	2310	G	4.6
24	B9	121	G	4.6
55	B5	32	ILE	4.6
6	AD	2	GLY	4.6
43	BS	56	LYS	4.6
23	B0	125	A	4.6
49	BY	30	GLU	4.6
23	B0	737	C	4.6
1	AA	5	U	4.6
41	BQ	75	ALA	4.6
53	B3	41	ILE	4.6
55	B5	62	LYS	4.6
23	B0	979	A	4.6
23	B0	1838	G	4.6
23	B0	2381	A	4.6
33	BI	28	GLY	4.6
2	AW	50	U	4.6
40	BP	74	TYR	4.5
44	BT	74	ARG	4.5
36	BL	108	VAL	4.5
27	BC	116	LYS	4.5
36	BL	56	LYS	4.5
45	BU	19	LYS	4.5

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Mol	Chain	Res	Type	RSRZ
23	B0	1255	A	4.5
23	B0	1646	G	4.5
23	B0	1552	C	4.5
23	B0	2072	C	4.5
40	BP	28	GLU	4.5
1	AA	943	U	4.5
50	BZ	48	ASN	4.5
23	B0	1565	G	4.5
1	AA	999	C	4.5
5	AC	206	GLU	4.5
32	BH	125	ARG	4.5
42	BR	77	LYS	4.5
50	BZ	58	LEU	4.5
26	BB	106	GLY	4.5
38	BN	86	PRO	4.5
1	AA	506	G	4.5
23	B0	2781	G	4.5
7	AE	107	ARG	4.5
26	BB	45	GLU	4.5
47	BW	47	ARG	4.5
21	AS	40	ILE	4.5
22	AT	31	SER	4.5
27	BC	91	TYR	4.5
31	BG	64	SER	4.5
34	BJ	72	TYR	4.5
25	BA	77	ALA	4.5
27	BC	153	ASP	4.5
34	BJ	25	GLY	4.5
37	BM	6	THR	4.5
23	B0	918	A	4.5
5	AC	63	ASN	4.5
1	AA	73	C	4.5
5	AC	179	ARG	4.5
10	AH	122	ARG	4.5
55	B5	113	ASN	4.5
18	AP	31	LYS	4.5
23	B0	836	G	4.5
24	B9	88	C	4.5
25	BA	53	PHE	4.5
37	BM	53	ALA	4.5
36	BL	92	GLY	4.5
5	AC	174	PRO	4.5

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Mol	Chain	Res	Type	RSRZ
14	AL	47	LYS	4.5
22	AT	23	ARG	4.5
25	BA	52	ARG	4.5
9	AG	84	ASN	4.5
23	B0	749	C	4.5
1	AA	629	G	4.5
43	BS	7	GLY	4.5
8	AF	51	PRO	4.5
23	B0	2188	A	4.5
29	BE	98	LEU	4.5
23	B0	962	C	4.5
41	BQ	38	VAL	4.5
1	AA	293	G	4.5
20	AR	36	ASN	4.5
1	AA	723	U	4.5
42	BR	84	GLU	4.5
23	B0	451	A	4.4
26	BB	59	VAL	4.4
32	BH	155	THR	4.4
23	B0	1487	C	4.4
1	AA	1438	G	4.4
23	B0	53	G	4.4
23	B0	1589	G	4.4
23	B0	2035	G	4.4
24	B9	93	G	4.4
50	BZ	36	CYS	4.4
55	B5	89	GLU	4.4
39	BO	68	GLY	4.4
43	BS	13	LYS	4.4
43	BS	40	LEU	4.4
1	AA	975	A	4.4
5	AC	170	GLN	4.4
6	AD	209	ARG	4.4
23	B0	2187	A	4.4
25	BA	212	SER	4.4
23	B0	1709	U	4.4
32	BH	109	GLY	4.4
23	B0	150	A	4.4
52	B2	7	PRO	4.4
2	AW	7	U	4.4
55	B5	151	PHE	4.4
26	BB	187	ALA	4.4

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Mol	Chain	Res	Type	RSRZ
32	BH	143	ALA	4.4
7	AE	43	LEU	4.4
23	B0	798	G	4.4
38	BN	24	LEU	4.4
38	BN	64	LYS	4.4
55	B5	149	ASN	4.4
37	BM	9	ARG	4.4
1	AA	949	A	4.4
27	BC	196	VAL	4.4
40	BP	78	VAL	4.4
43	BS	71	GLN	4.4
37	BM	89	PHE	4.4
24	B9	44	C	4.4
19	AQ	7	THR	4.4
14	AL	27	LEU	4.4
43	BS	43	ASP	4.4
50	BZ	43	HIS	4.4
6	AD	3	ARG	4.4
39	BO	48	ARG	4.4
53	B3	42	ARG	4.4
23	B0	1782	A	4.4
30	BF	28	TRP	4.4
49	BY	16	TYR	4.4
54	B4	12	ASP	4.4
5	AC	157	ILE	4.4
38	BN	41	GLU	4.4
23	B0	371	G	4.4
23	B0	963	G	4.4
1	AA	189	A	4.4
2	AW	52	U	4.4
7	AE	105	VAL	4.4
9	AG	9	VAL	4.4
35	BK	94	TRP	4.4
25	BA	242	ALA	4.4
36	BL	25	ALA	4.4
47	BW	20	ALA	4.4
25	BA	14	ARG	4.4
21	AS	69	HIS	4.4
40	BP	64	GLY	4.4
23	B0	408	U	4.4
23	B0	1280	U	4.4
23	B0	1990	U	4.4

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Mol	Chain	Res	Type	RSRZ
23	B0	790	A	4.4
40	BP	79	GLN	4.4
23	B0	1623	C	4.3
23	B0	2340	C	4.3
24	B9	96	C	4.3
27	BC	83	ALA	4.3
34	BJ	47	ALA	4.3
14	AL	85	ILE	4.3
18	AP	42	ARG	4.3
2	AW	39	U	4.3
6	AD	198	VAL	4.3
21	AS	9	VAL	4.3
40	BP	45	THR	4.3
47	BW	55	THR	4.3
5	AC	58	GLU	4.3
23	B0	120	G	4.3
23	B0	1816	G	4.3
23	B0	3142	C	4.3
42	BR	49	ARG	4.3
16	AN	38	GLY	4.3
29	BE	43	VAL	4.3
8	AF	96	PRO	4.3
15	AM	63	THR	4.3
52	B2	24	THR	4.3
41	BQ	90	LEU	4.3
23	B0	2234	G	4.3
23	B0	2341	G	4.3
1	AA	1509	C	4.3
3	AU	11	C	4.3
41	BQ	114	ALA	4.3
23	B0	1926	U	4.3
25	BA	69	ARG	4.3
39	BO	10	ARG	4.3
6	AD	81	GLU	4.3
7	AE	68	GLU	4.3
10	AH	22	GLU	4.3
26	BB	16	LYS	4.3
48	BX	27	LYS	4.3
23	B0	2508	G	4.3
12	AJ	76	ASN	4.3
23	B0	130	C	4.3
32	BH	161	GLN	4.3

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Mol	Chain	Res	Type	RSRZ
40	BP	12	TYR	4.3
31	BG	31	GLY	4.3
52	B2	25	LYS	4.3
43	BS	10	HIS	4.3
9	AG	74	GLU	4.3
29	BE	99	THR	4.3
12	AJ	23	ILE	4.3
23	B0	1205	G	4.3
35	BK	37	ALA	4.3
23	B0	1640	C	4.3
23	B0	2518	C	4.3
41	BQ	89	ARG	4.3
31	BG	60	TYR	4.3
52	B2	8	ASN	4.3
4	AB	228	GLY	4.3
36	BL	93	GLY	4.3
12	AJ	88	LEU	4.3
35	BK	126	LEU	4.3
8	AF	92	LYS	4.3
9	AG	63	LYS	4.3
32	BH	170	PRO	4.3
23	B0	780	U	4.3
27	BC	33	TRP	4.3
32	BH	75	ILE	4.3
1	AA	656	C	4.3
23	B0	2330	G	4.3
5	AC	29	TYR	4.3
22	AT	13	LEU	4.3
36	BL	11	ASN	4.3
55	B5	170	GLY	4.3
23	B0	153	A	4.3
18	AP	21	VAL	4.3
15	AM	56	LEU	4.3
23	B0	3157	G	4.3
30	BF	34	LEU	4.3
52	B2	5	TYR	4.3
55	B5	110	PHE	4.3
9	AG	55	GLY	4.3
6	AD	24	GLU	4.2
45	BU	77	ARG	4.2
34	BJ	129	ALA	4.2
41	BQ	71	VAL	4.2

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Mol	Chain	Res	Type	RSRZ
55	B5	142	ALA	4.2
7	AE	116	THR	4.2
23	B0	2833	C	4.2
41	BQ	15	LYS	4.2
55	B5	175	LYS	4.2
23	B0	1893	G	4.2
23	B0	1913	G	4.2
23	B0	1867	A	4.2
48	BX	38	PRO	4.2
38	BN	119	SER	4.2
39	BO	69	ALA	4.2
39	BO	99	ALA	4.2
45	BU	2	ALA	4.2
30	BF	6	LEU	4.2
47	BW	23	LYS	4.2
50	BZ	15	LYS	4.2
11	AI	30	GLY	4.2
37	BM	65	THR	4.2
47	BW	12	THR	4.2
23	B0	967	G	4.2
26	BB	40	GLN	4.2
1	AA	368	U	4.2
25	BA	222	ARG	4.2
26	BB	79	ARG	4.2
27	BC	132	ASN	4.2
41	BQ	81	HIS	4.2
24	B9	14	C	4.2
36	BL	7	GLY	4.2
23	B0	1959	U	4.2
25	BA	215	LEU	4.2
29	BE	51	LEU	4.2
54	B4	17	VAL	4.2
5	AC	45	LYS	4.2
29	BE	73	ALA	4.2
54	B4	32	HIS	4.2
1	AA	596	C	4.2
1	AA	1054	C	4.2
54	B4	5	SER	4.2
20	AR	27	GLY	4.2
23	B0	2004	U	4.2
35	BK	128	ILE	4.2
2	AW	64	A	4.2

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Mol	Chain	Res	Type	RSRZ
23	B0	1869	A	4.2
23	B0	2257	A	4.2
25	BA	258	LYS	4.2
44	BT	13	LYS	4.2
49	BY	1	MET	4.2
55	B5	21	ASN	4.2
36	BL	61	HIS	4.2
1	AA	680	C	4.2
13	AK	102	GLY	4.2
23	B0	1979	C	4.2
23	B0	2477	C	4.2
9	AG	86	GLN	4.2
1	AA	485	G	4.2
23	B0	219	G	4.2
1	AA	321	A	4.2
6	AD	7	PRO	4.2
27	BC	16	GLU	4.2
44	BT	133	GLU	4.2
44	BT	130	ILE	4.2
52	B2	19	ARG	4.2
23	B0	355	G	4.2
36	BL	88	ALA	4.2
1	AA	463	C	4.1
23	B0	104	C	4.1
6	AD	208	SER	4.1
36	BL	17	ARG	4.1
22	AT	38	LYS	4.1
25	BA	221	GLN	4.1
55	B5	60	LYS	4.1
23	B0	689	A	4.1
23	B0	720	A	4.1
23	B0	687	G	4.1
23	B0	1220	G	4.1
26	BB	127	ALA	4.1
27	BC	85	GLY	4.1
45	BU	50	GLY	4.1
45	BU	12	ASN	4.1
19	AQ	27	PHE	4.1
23	B0	543	G	4.1
23	B0	1946	U	4.1
23	B0	2460	G	4.1
23	B0	2603	G	4.1

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Mol	Chain	Res	Type	RSRZ
8	AF	70	ASP	4.1
32	BH	52	GLY	4.1
2	AW	74	C	4.1
19	AQ	92	ARG	4.1
7	AE	65	ASN	4.1
8	AF	94	GLN	4.1
23	B0	1215	A	4.1
23	B0	1839	A	4.1
28	BD	139	PRO	4.1
42	BR	87	SER	4.1
14	AL	44	THR	4.1
1	AA	305	G	4.1
23	B0	2336	G	4.1
36	BL	69	ASP	4.1
14	AL	23	LYS	4.1
35	BK	17	ARG	4.1
12	AJ	97	GLU	4.1
4	AB	28	PHE	4.1
18	AP	66	PRO	4.1
23	B0	542	A	4.1
23	B0	2801	A	4.1
1	AA	584	G	4.1
39	BO	7	GLY	4.1
7	AE	25	ARG	4.1
44	BT	75	LYS	4.1
23	B0	724	C	4.1
1	AA	288	A	4.1
38	BN	90	GLN	4.1
41	BQ	106	LEU	4.1
35	BK	43	ILE	4.1
1	AA	145	G	4.1
23	B0	409	G	4.1
23	B0	1211	G	4.1
40	BP	21	ARG	4.1
1	AA	1429	C	4.1
40	BP	19	VAL	4.1
5	AC	128	PHE	4.1
55	B5	180	ALA	4.1
41	BQ	45	ILE	4.1
49	BY	14	ILE	4.1
5	AC	21	ARG	4.1
9	AG	78	ARG	4.1

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Mol	Chain	Res	Type	RSRZ
47	BW	56	VAL	4.1
1	AA	657	G	4.1
52	B2	18	PHE	4.1
2	AW	17	U	4.1
44	BT	146	HIS	4.0
21	AS	64	GLU	4.0
4	AB	11	LEU	4.0
11	AI	40	LEU	4.0
29	BE	41	LEU	4.0
29	BE	128	PRO	4.0
26	BB	121	ASN	4.0
26	BB	203	LYS	4.0
48	BX	21	GLN	4.0
23	B0	454	G	4.0
23	B0	1847	G	4.0
23	B0	2256	G	4.0
23	B0	2558	C	4.0
44	BT	35	ASP	4.0
26	BB	138	PRO	4.0
41	BQ	60	ILE	4.0
55	B5	33	ILE	4.0
41	BQ	39	ARG	4.0
41	BQ	78	ASN	4.0
40	BP	80	TYR	4.0
23	B0	1535	C	4.0
23	B0	1661	C	4.0
23	B0	1822	C	4.0
32	BH	119	LEU	4.0
13	AK	35	PRO	4.0
23	B0	63	A	4.0
4	AB	130	ARG	4.0
16	AN	26	ARG	4.0
43	BS	3	ARG	4.0
23	B0	1268	U	4.0
45	BU	22	GLY	4.0
6	AD	196	LEU	4.0
23	B0	1888	C	4.0
5	AC	182	ILE	4.0
23	B0	2593	A	4.0
40	BP	23	GLU	4.0
47	BW	17	GLU	4.0
10	AH	69	ARG	4.0

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Mol	Chain	Res	Type	RSRZ
35	BK	120	ARG	4.0
1	AA	239	U	4.0
35	BK	18	MET	4.0
18	AP	61	SER	4.0
23	B0	953	G	4.0
23	B0	1735	G	4.0
29	BE	63	ALA	4.0
23	B0	2281	C	4.0
26	BB	180	ASN	4.0
1	AA	1024	G	4.0
23	B0	570	G	4.0
9	AG	21	VAL	4.0
23	B0	1232	U	4.0
23	B0	1521	U	4.0
23	B0	1693	A	4.0
23	B0	2332	G	4.0
29	BE	95	ARG	4.0
26	BB	96	PHE	4.0
26	BB	110	GLY	4.0
40	BP	25	LEU	4.0
17	AO	5	LYS	4.0
23	B0	2669	C	4.0
31	BG	101	TRP	4.0
12	AJ	66	ARG	4.0
22	AT	86	ARG	4.0
32	BH	102	ARG	4.0
1	AA	144	G	4.0
1	AA	1368	G	4.0
17	AO	53	HIS	4.0
21	AS	66	MET	4.0
23	B0	2819	G	4.0
47	BW	37	LEU	3.9
1	AA	995	C	3.9
1	AA	1479	C	3.9
7	AE	138	ALA	3.9
44	BT	25	ASN	3.9
23	B0	1295	U	3.9
1	AA	696	A	3.9
20	AR	59	SER	3.9
20	AR	85	LEU	3.9
23	B0	156	G	3.9
23	B0	1265	G	3.9

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Mol	Chain	Res	Type	RSRZ
55	B5	181	GLU	3.9
36	BL	24	GLN	3.9
7	AE	40	ARG	3.9
23	B0	1848	U	3.9
23	B0	1965	U	3.9
15	AM	117	VAL	3.9
40	BP	22	VAL	3.9
23	B0	1314	A	3.9
27	BC	52	SER	3.9
23	B0	3107	G	3.9
27	BC	114	GLY	3.9
28	BD	141	ILE	3.9
23	B0	1825	C	3.9
23	B0	2033	C	3.9
10	AH	53	VAL	3.9
29	BE	121	VAL	3.9
42	BR	29	VAL	3.9
34	BJ	109	LEU	3.9
43	BS	45	LYS	3.9
25	BA	120	GLY	3.9
44	BT	84	TYR	3.9
5	AC	88	ARG	3.9
23	B0	602	C	3.9
23	B0	723	C	3.9
7	AE	91	LEU	3.9
22	AT	12	ALA	3.9
34	BJ	125	ALA	3.9
5	AC	72	LYS	3.9
44	BT	67	LYS	3.9
10	AH	90	GLY	3.9
54	B4	13	ASN	3.9
23	B0	1381	G	3.9
1	AA	793	U	3.9
14	AL	19	ARG	3.9
18	AP	20	VAL	3.9
23	B0	2454	C	3.9
42	BR	71	GLN	3.9
26	BB	11	MET	3.9
20	AR	88	LYS	3.9
1	AA	609	A	3.9
5	AC	41	GLY	3.9
41	BQ	24	GLY	3.9

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Mol	Chain	Res	Type	RSRZ
11	AI	77	ILE	3.9
18	AP	71	ARG	3.9
23	B0	1642	G	3.9
1	AA	1402	C	3.9
4	AB	240	GLN	3.9
23	B0	1002	C	3.9
23	B0	1190	C	3.9
23	B0	1784	C	3.9
17	AO	19	PRO	3.9
15	AM	32	GLU	3.9
2	AW	4	G	3.8
13	AK	125	PHE	3.8
23	B0	1351	G	3.8
23	B0	2250	G	3.8
23	B0	1271	C	3.8
31	BG	90	THR	3.8
45	BU	72	LYS	3.8
50	BZ	26	THR	3.8
37	BM	41	GLN	3.8
23	B0	2042	A	3.8
49	BY	11	PRO	3.8
45	BU	52	GLY	3.8
6	AD	110	PHE	3.8
12	AJ	11	PHE	3.8
20	AR	86	VAL	3.8
45	BU	3	HIS	3.8
39	BO	102	GLU	3.8
22	AT	74	LYS	3.8
1	AA	897	C	3.8
1	AA	1397	C	3.8
23	B0	1145	C	3.8
23	B0	1184	G	3.8
29	BE	25	LYS	3.8
23	B0	2535	C	3.8
16	AN	52	GLN	3.8
26	BB	107	THR	3.8
6	AD	142	PRO	3.8
23	B0	1379	A	3.8
23	B0	716	U	3.8
26	BB	141	ILE	3.8
35	BK	127	PRO	3.8
9	AG	41	ARG	3.8

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Mol	Chain	Res	Type	RSRZ
35	BK	95	VAL	3.8
27	BC	131	LYS	3.8
32	BH	134	MET	3.8
54	B4	10	MET	3.8
42	BR	33	ALA	3.8
47	BW	54	ASN	3.8
1	AA	898	G	3.8
1	AA	972	C	3.8
23	B0	781	G	3.8
23	B0	2255	G	3.8
6	AD	126	ILE	3.8
18	AP	59	TRP	3.8
5	AC	131	ARG	3.8
40	BP	82	ARG	3.8
6	AD	93	PHE	3.8
7	AE	130	ASN	3.8
1	AA	963	G	3.8
23	B0	155	G	3.8
23	B0	1056	U	3.8
23	B0	137	A	3.8
49	BY	38	GLY	3.8
10	AH	75	ARG	3.8
42	BR	35	LYS	3.8
23	B0	1991	C	3.8
23	B0	2192	U	3.8
55	B5	169	ILE	3.8
1	AA	1462	G	3.8
13	AK	78	GLN	3.8
23	B0	1204	G	3.8
23	B0	1712	G	3.8
10	AH	55	GLY	3.8
23	B0	1650	A	3.8
49	BY	18	GLY	3.8
14	AL	98	TYR	3.8
7	AE	108	ALA	3.8
23	B0	2030	U	3.8
23	B0	2335	U	3.8
55	B5	177	GLU	3.8
23	B0	52	A	3.8
23	B0	1352	G	3.8
23	B0	1662	G	3.8
27	BC	122	GLY	3.8

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Mol	Chain	Res	Type	RSRZ
32	BH	163	PRO	3.8
39	BO	63	GLN	3.8
16	AN	50	LYS	3.8
21	AS	67	VAL	3.8
41	BQ	70	LYS	3.8
53	B3	3	LYS	3.8
38	BN	45	THR	3.8
42	BR	34	THR	3.8
44	BT	101	THR	3.8
1	AA	287	U	3.8
6	AD	94	LEU	3.8
23	B0	1677	C	3.8
24	B9	13	C	3.8
36	BL	51	LEU	3.8
42	BR	74	ASP	3.8
26	BB	111	LYS	3.7
44	BT	50	GLY	3.7
21	AS	60	VAL	3.7
44	BT	125	PRO	3.7
1	AA	646	U	3.7
14	AL	10	LEU	3.7
40	BP	75	LYS	3.7
47	BW	49	GLU	3.7
9	AG	23	VAL	3.7
23	B0	1233	A	3.7
23	B0	2450	A	3.7
1	AA	146	G	3.7
1	AA	318	G	3.7
55	B5	80	SER	3.7
42	BR	32	LYS	3.7
5	AC	11	ARG	3.7
10	AH	136	GLU	3.7
11	AI	35	GLU	3.7
18	AP	57	ARG	3.7
23	B0	1669	A	3.7
35	BK	20	GLY	3.7
45	BU	18	PRO	3.7
5	AC	136	GLN	3.7
1	AA	774	G	3.7
1	AA	1470	G	3.7
23	B0	557	U	3.7
23	B0	660	G	3.7

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Mol	Chain	Res	Type	RSRZ
26	BB	92	ASN	3.7
15	AM	5	ALA	3.7
36	BL	86	LYS	3.7
23	B0	1674	C	3.7
23	B0	2799	C	3.7
38	BN	121	ARG	3.7
4	AB	181	PHE	3.7
23	B0	1728	A	3.7
5	AC	107	GLN	3.7
23	B0	969	U	3.7
23	B0	2017	U	3.7
47	BW	10	GLN	3.7
5	AC	98	ASN	3.7
23	B0	1963	G	3.7
23	B0	2282	G	3.7
23	B0	2527	G	3.7
42	BR	38	ILE	3.7
26	BB	46	ALA	3.7
14	AL	28	LYS	3.7
38	BN	103	LYS	3.7
40	BP	7	THR	3.7
55	B5	152	LYS	3.7
27	BC	6	VAL	3.7
25	BA	180	GLY	3.7
23	B0	688	A	3.7
1	AA	997	U	3.7
18	AP	74	LEU	3.7
27	BC	139	GLN	3.7
2	AW	43	G	3.7
23	B0	1261	G	3.7
23	B0	2847	G	3.7
31	BG	40	ALA	3.7
22	AT	54	LYS	3.7
38	BN	89	ASN	3.7
42	BR	30	SER	3.7
45	BU	35	ASN	3.7
5	AC	54	ARG	3.7
44	BT	158	CYS	3.7
1	AA	899	C	3.7
23	B0	3184	C	3.7
24	B9	12	C	3.7
24	B9	87	C	3.7

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Mol	Chain	Res	Type	RSRZ
7	AE	22	GLY	3.7
1	AA	14	U	3.7
23	B0	132	U	3.7
12	AJ	83	GLU	3.7
14	AL	48	PRO	3.7
40	BP	38	LEU	3.7
38	BN	93	ILE	3.7
34	BJ	81	GLN	3.7
5	AC	53	ALA	3.7
37	BM	64	LYS	3.7
23	B0	392	G	3.7
23	B0	1402	G	3.7
27	BC	135	SER	3.7
42	BR	67	ARG	3.7
1	AA	328	C	3.7
23	B0	1442	C	3.7
5	AC	148	GLY	3.7
41	BQ	80	LEU	3.7
27	BC	125	ILE	3.7
18	AP	12	LYS	3.7
1	AA	585	G	3.6
23	B0	1263	G	3.6
23	B0	2287	G	3.6
23	B0	2463	G	3.6
38	BN	22	ARG	3.6
25	BA	179	SER	3.6
1	AA	334	C	3.6
4	AB	9	GLU	3.6
43	BS	103	LYS	3.6
41	BQ	26	ALA	3.6
43	BS	66	GLN	3.6
33	BI	69	VAL	3.6
36	BL	47	PHE	3.6
23	B0	50	G	3.6
23	B0	1733	U	3.6
23	B0	2235	G	3.6
2	AW	49	C	3.6
4	AB	38	GLY	3.6
23	B0	2027	C	3.6
22	AT	33	ILE	3.6
40	BP	55	THR	3.6
15	AM	118	ALA	3.6

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Mol	Chain	Res	Type	RSRZ
54	B4	27	CYS	3.6
55	B5	87	ARG	3.6
6	AD	97	LEU	3.6
27	BC	19	LEU	3.6
23	B0	818	G	3.6
23	B0	1739	G	3.6
18	AP	10	GLY	3.6
23	B0	2519	C	3.6
26	BB	112	GLY	3.6
30	BF	42	ASN	3.6
1	AA	1500	A	3.6
19	AQ	5	VAL	3.6
26	BB	150	VAL	3.6
29	BE	140	LEU	3.6
1	AA	232	G	3.6
23	B0	1206	G	3.6
23	B0	1886	G	3.6
23	B0	1887	G	3.6
23	B0	3116	G	3.6
23	B0	2709	C	3.6
48	BX	28	ILE	3.6
26	BB	135	HIS	3.6
29	BE	170	ALA	3.6
31	BG	26	ALA	3.6
21	AS	44	MET	3.6
14	AL	115	LYS	3.6
38	BN	74	GLY	3.6
23	B0	1323	G	3.6
23	B0	2468	G	3.6
19	AQ	39	SER	3.6
39	BO	29	SER	3.6
15	AM	114	ARG	3.6
18	AP	32	TYR	3.6
40	BP	40	VAL	3.6
38	BN	87	LEU	3.6
27	BC	112	GLN	3.6
38	BN	23	GLN	3.6
1	AA	121	C	3.6
23	B0	1924	C	3.6
29	BE	137	ASP	3.6
1	AA	1480	G	3.6
1	AA	1497	G	3.6

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Mol	Chain	Res	Type	RSRZ
23	B0	1912	G	3.6
16	AN	39	LEU	3.6
16	AN	60	SER	3.6
44	BT	20	ALA	3.6
4	AB	110	GLN	3.6
23	B0	721	C	3.6
23	B0	1349	A	3.5
23	B0	600	G	3.5
25	BA	245	VAL	3.5
27	BC	95	LEU	3.5
44	BT	166	LEU	3.5
53	B3	64	ARG	3.5
54	B4	30	VAL	3.5
9	AG	13	GLN	3.5
9	AG	64	GLN	3.5
40	BP	100	GLY	3.5
23	B0	77	C	3.5
23	B0	2239	C	3.5
23	B0	2752	C	3.5
24	B9	97	C	3.5
6	AD	35	ARG	3.5
15	AM	19	LEU	3.5
23	B0	1448	A	3.5
44	BT	92	VAL	3.5
23	B0	151	G	3.5
25	BA	119	ALA	3.5
26	BB	97	ALA	3.5
11	AI	127	LYS	3.5
27	BC	15	ILE	3.5
38	BN	47	SER	3.5
23	B0	666	U	3.5
1	AA	1499	A	3.5
3	AU	14	A	3.5
21	AS	74	PHE	3.5
27	BC	97	ARG	3.5
6	AD	207	TYR	3.5
11	AI	125	TYR	3.5
20	AR	84	LYS	3.5
23	B0	1536	G	3.5
23	B0	3168	G	3.5
23	B0	2229	G	3.5
12	AJ	35	SER	3.5

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Mol	Chain	Res	Type	RSRZ
15	AM	119	GLY	3.5
1	AA	772	U	3.5
23	B0	3143	U	3.5
40	BP	57	GLN	3.5
23	B0	418	C	3.5
23	B0	2802	C	3.5
24	B9	29	C	3.5
23	B0	89	A	3.5
23	B0	2339	A	3.5
29	BE	102	ALA	3.5
1	AA	306	G	3.5
1	AA	377	G	3.5
1	AA	1253	G	3.5
23	B0	141	G	3.5
23	B0	1737	G	3.5
23	B0	2283	G	3.5
29	BE	81	ASP	3.5
7	AE	81	GLU	3.5
52	B2	9	ASN	3.5
23	B0	869	C	3.5
23	B0	2800	C	3.5
55	B5	22	VAL	3.5
2	AW	29	A	3.5
23	B0	292	A	3.5
54	B4	2	LYS	3.5
1	AA	682	G	3.5
23	B0	165	G	3.5
11	AI	39	GLY	3.5
34	BJ	22	GLY	3.5
35	BK	75	VAL	3.5
42	BR	72	ARG	3.5
55	B5	165	VAL	3.5
23	B0	347	C	3.5
23	B0	755	C	3.5
23	B0	1729	C	3.5
10	AH	67	PRO	3.5
23	B0	842	A	3.5
23	B0	1996	A	3.5
24	B9	27	A	3.5
53	B3	46	LYS	3.5
17	AO	51	HIS	3.5
23	B0	26	G	3.5

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Mol	Chain	Res	Type	RSRZ
23	B0	115	G	3.5
26	BB	134	TRP	3.5
35	BK	16	GLY	3.5
42	BR	85	GLY	3.5
43	BS	53	VAL	3.5
38	BN	125	MET	3.5
23	B0	804	C	3.5
1	AA	1428	A	3.5
6	AD	127	THR	3.5
23	B0	55	A	3.5
23	B0	1395	A	3.5
39	BO	44	THR	3.5
7	AE	104	ALA	3.5
44	BT	64	ALA	3.5
23	B0	2559	U	3.4
23	B0	1401	G	3.4
40	BP	17	GLY	3.4
45	BU	23	VAL	3.4
45	BU	74	LYS	3.4
23	B0	1179	A	3.4
23	B0	1835	C	3.4
44	BT	33	ALA	3.4
1	AA	833	U	3.4
1	AA	1391	U	3.4
23	B0	9	U	3.4
23	B0	2588	U	3.4
7	AE	126	ARG	3.4
12	AJ	13	HIS	3.4
16	AN	55	GLY	3.4
23	B0	568	G	3.4
23	B0	1324	G	3.4
23	B0	3128	G	3.4
5	AC	161	GLU	3.4
1	AA	1045	C	3.4
23	B0	362	C	3.4
23	B0	603	C	3.4
23	B0	2189	A	3.4
23	B0	2751	C	3.4
41	BQ	77	ALA	3.4
23	B0	554	U	3.4
23	B0	1833	U	3.4
32	BH	171	LEU	3.4

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Mol	Chain	Res	Type	RSRZ
9	AG	10	ARG	3.4
18	AP	51	VAL	3.4
36	BL	90	ARG	3.4
54	B4	9	LYS	3.4
1	AA	971	G	3.4
1	AA	13	U	3.4
1	AA	208	U	3.4
38	BN	100	ARG	3.4
40	BP	39	PHE	3.4
1	AA	595	G	3.4
23	B0	773	G	3.4
18	AP	52	ASP	3.4
23	B0	393	U	3.4
23	B0	883	A	3.4
23	B0	1159	U	3.4
23	B0	1582	A	3.4
23	B0	1736	C	3.4
23	B0	2774	U	3.4
31	BG	36	GLU	3.4
44	BT	38	ALA	3.4
49	BY	4	ASP	3.4
13	AK	104	GLN	3.4
14	AL	8	ASN	3.4
49	BY	13	LYS	3.4
5	AC	145	GLY	3.4
25	BA	16	MET	3.4
1	AA	832	C	3.4
1	AA	924	C	3.4
23	B0	241	C	3.4
23	B0	1553	G	3.4
23	B0	1740	G	3.4
43	BS	70	GLU	3.4
13	AK	81	ASP	3.4
5	AC	164	ARG	3.4
41	BQ	41	VAL	3.4
26	BB	65	GLY	3.4
27	BC	10	ASN	3.4
1	AA	827	U	3.4
23	B0	2490	U	3.4
1	AA	1286	A	3.4
27	BC	2	ALA	3.4
23	B0	16	G	3.4

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Mol	Chain	Res	Type	RSRZ
23	B0	1983	G	3.4
27	BC	86	PRO	3.4
41	BQ	23	PRO	3.4
5	AC	203	PHE	3.4
26	BB	35	GLN	3.4
32	BH	100	TYR	3.4
5	AC	103	VAL	3.4
6	AD	134	ASP	3.4
9	AG	45	ASP	3.4
34	BJ	74	VAL	3.4
13	AK	107	SER	3.4
33	BI	27	SER	3.4
43	BS	8	SER	3.4
5	AC	202	ILE	3.4
19	AQ	84	LEU	3.4
41	BQ	82	ASN	3.4
13	AK	100	ALA	3.3
23	B0	1824	C	3.3
23	B0	1840	A	3.3
23	B0	2195	C	3.3
1	AA	213	G	3.3
1	AA	1196	U	3.3
23	B0	1909	U	3.3
34	BJ	86	THR	3.3
39	BO	34	ASN	3.3
53	B3	10	ALA	3.3
2	AV	70	C	3.3
44	BT	63	PRO	3.3
17	AO	83	GLU	3.3
36	BL	43	GLU	3.3
44	BT	27	GLU	3.3
23	B0	735	G	3.3
23	B0	1085	G	3.3
43	BS	76	LEU	3.3
44	BT	4	THR	3.3
11	AI	70	LYS	3.3
39	BO	22	LYS	3.3
1	AA	787	A	3.3
23	B0	1315	A	3.3
23	B0	3186	C	3.3
6	AD	140	VAL	3.3
9	AG	72	ARG	3.3

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Mol	Chain	Res	Type	RSRZ
36	BL	91	PRO	3.3
39	BO	12	ARG	3.3
28	BD	56	GLU	3.3
1	AA	570	G	3.3
1	AA	871	U	3.3
23	B0	317	U	3.3
22	AT	19	SER	3.3
55	B5	47	LYS	3.3
16	AN	30	ALA	3.3
27	BC	47	THR	3.3
55	B5	134	PHE	3.3
1	AA	150	C	3.3
23	B0	981	C	3.3
23	B0	1063	C	3.3
23	B0	1930	C	3.3
23	B0	1286	U	3.3
23	B0	704	G	3.3
23	B0	934	G	3.3
23	B0	1036	G	3.3
23	B0	2484	G	3.3
50	BZ	54	GLY	3.3
10	AH	116	LYS	3.3
9	AG	47	CYS	3.3
47	BW	38	ALA	3.3
23	B0	882	C	3.3
23	B0	966	A	3.3
23	B0	1348	C	3.3
23	B0	604	U	3.3
38	BN	117	ILE	3.3
45	BU	36	ILE	3.3
23	B0	1148	G	3.3
11	AI	91	ASP	3.3
29	BE	123	PHE	3.3
7	AE	12	LEU	3.3
10	AH	3	THR	3.3
11	AI	98	PRO	3.3
23	B0	1614	C	3.3
23	B0	1706	A	3.3
29	BE	84	THR	3.3
11	AI	117	HIS	3.3
15	AM	59	TYR	3.3
4	AB	89	GLY	3.3

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Mol	Chain	Res	Type	RSRZ
4	AB	143	GLU	3.3
31	BG	121	GLU	3.3
1	AA	1461	G	3.3
6	AD	45	GLN	3.3
40	BP	6	GLN	3.3
54	B4	15	LYS	3.3
23	B0	1191	G	3.3
23	B0	1439	G	3.3
23	B0	1691	G	3.3
6	AD	107	ARG	3.3
18	AP	55	ARG	3.3
50	BZ	55	ARG	3.3
52	B2	20	ALA	3.3
41	BQ	86	LEU	3.3
16	AN	61	TRP	3.3
23	B0	66	U	3.3
23	B0	160	C	3.3
23	B0	779	U	3.3
23	B0	914	C	3.3
23	B0	2002	A	3.3
23	B0	2305	C	3.3
23	B0	2803	C	3.3
54	B4	29	ASN	3.2
11	AI	22	GLY	3.2
23	B0	612	G	3.2
23	B0	1815	G	3.2
11	AI	42	ARG	3.2
17	AO	60	VAL	3.2
23	B0	839	U	3.2
5	AC	14	ILE	3.2
23	B0	1781	C	3.2
23	B0	2538	C	3.2
27	BC	96	PRO	3.2
5	AC	147	LYS	3.2
40	BP	94	LYS	3.2
11	AI	38	GLN	3.2
1	AA	333	G	3.2
5	AC	71	ALA	3.2
23	B0	1660	G	3.2
34	BJ	93	LEU	3.2
23	B0	1787	U	3.2
35	BK	38	MET	3.2

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Mol	Chain	Res	Type	RSRZ
23	B0	599	A	3.2
1	AA	526	C	3.2
44	BT	6	LYS	3.2
5	AC	15	THR	3.2
39	BO	87	ASN	3.2
34	BJ	60	LEU	3.2
36	BL	60	LEU	3.2
44	BT	65	LEU	3.2
52	B2	12	ARG	3.2
54	B4	16	VAL	3.2
23	B0	641	G	3.2
3	AU	13	A	3.2
1	AA	634	C	3.2
6	AD	85	LYS	3.2
23	B0	1178	C	3.2
23	B0	1185	C	3.2
23	B0	1702	C	3.2
31	BG	62	ASP	3.2
31	BG	118	GLY	3.2
41	BQ	43	ASP	3.2
55	B5	132	GLY	3.2
23	B0	3106	U	3.2
23	B0	2436	U	3.2
26	BB	93	VAL	3.2
27	BC	46	ARG	3.2
34	BJ	90	ARG	3.2
38	BN	77	VAL	3.2
26	BB	114	GLN	3.2
34	BJ	114	ILE	3.2
1	AA	1198	G	3.2
18	AP	43	LYS	3.2
23	B0	2001	G	3.2
24	B9	66	G	3.2
23	B0	2497	A	3.2
50	BZ	3	LYS	3.2
1	AA	826	C	3.2
23	B0	1692	C	3.2
23	B0	2343	C	3.2
8	AF	55	ASP	3.2
1	AA	1194	U	3.2
19	AQ	91	ARG	3.2
47	BW	50	VAL	3.2

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Mol	Chain	Res	Type	RSRZ
12	AJ	86	MET	3.2
15	AM	73	GLU	3.2
41	BQ	84	GLU	3.2
44	BT	28	ASN	3.2
1	AA	791	G	3.2
1	AA	1013	G	3.2
23	B0	558	G	3.2
23	B0	746	G	3.2
23	B0	1136	G	3.2
23	B0	1149	G	3.2
17	AO	75	PRO	3.2
23	B0	2550	C	3.2
11	AI	41	VAL	3.2
23	B0	621	U	3.2
23	B0	1705	U	3.2
44	BT	56	VAL	3.2
49	BY	22	MET	3.2
18	AP	54	GLU	3.2
40	BP	51	ALA	3.2
4	AB	106	LYS	3.2
12	AJ	78	ASN	3.2
15	AM	101	GLN	3.2
27	BC	9	GLN	3.2
49	BY	3	LYS	3.2
52	B2	11	LYS	3.2
44	BT	29	ASN	3.2
23	B0	846	A	3.2
10	AH	57	PRO	3.2
23	B0	947	C	3.2
23	B0	1742	G	3.2
31	BG	113	PRO	3.2
22	AT	20	LEU	3.2
14	AL	88	GLY	3.2
23	B0	757	U	3.2
23	B0	1645	U	3.2
23	B0	1732	U	3.2
11	AI	66	ARG	3.2
12	AJ	51	ARG	3.2
14	AL	33	ARG	3.2
41	BQ	111	ARG	3.2
6	AD	67	ILE	3.2
17	AO	48	LYS	3.1

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Mol	Chain	Res	Type	RSRZ
29	BE	21	ASP	3.2
14	AL	9	GLN	3.1
1	AA	860	A	3.1
55	B5	25	ASN	3.1
1	AA	123	C	3.1
1	AA	188	C	3.1
2	AW	46	G	3.1
23	B0	2735	C	3.1
7	AE	28	PHE	3.1
23	B0	2011	U	3.1
19	AQ	33	GLY	3.1
34	BJ	140	VAL	3.1
38	BN	88	VAL	3.1
39	BO	28	ARG	3.1
28	BD	74	ILE	3.1
41	BQ	134	LYS	3.1
23	B0	2355	A	3.1
1	AA	214	U	3.1
1	AA	543	C	3.1
1	AA	850	U	3.1
1	AA	1440	C	3.1
2	AV	2	C	3.1
2	AW	28	C	3.1
23	B0	144	U	3.1
23	B0	220	U	3.1
1	AA	231	G	3.1
1	AA	376	G	3.1
12	AJ	5	ARG	3.1
23	B0	1584	G	3.1
34	BJ	21	ARG	3.1
53	B3	43	GLY	3.1
50	BZ	9	LYS	3.1
1	AA	923	A	3.1
1	AA	1534	A	3.1
27	BC	14	THR	3.1
23	B0	1170	U	3.1
8	AF	47	ARG	3.1
23	B0	847	C	3.1
23	B0	2792	C	3.1
31	BG	120	VAL	3.1
36	BL	18	VAL	3.1
36	BL	22	ARG	3.1

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Mol	Chain	Res	Type	RSRZ
44	BT	24	TYR	3.1
14	AL	87	GLY	3.1
1	AA	94	G	3.1
1	AA	942	G	3.1
23	B0	2757	G	3.1
40	BP	4	ILE	3.1
27	BC	43	ALA	3.1
5	AC	31	HIS	3.1
29	BE	50	LEU	3.1
5	AC	19	GLU	3.1
40	BP	43	GLU	3.1
13	AK	13	GLN	3.1
20	AR	33	ASP	3.1
29	BE	48	ASP	3.1
44	BT	53	ASP	3.1
49	BY	26	SER	3.1
55	B5	171	THR	3.1
9	AG	6	ARG	3.1
23	B0	1283	C	3.1
5	AC	74	GLY	3.1
22	AT	65	LYS	3.1
42	BR	61	LYS	3.1
1	AA	809	G	3.1
23	B0	1790	G	3.1
23	B0	2186	G	3.1
23	B0	2604	G	3.1
11	AI	47	LEU	3.1
48	BX	23	LEU	3.1
1	AA	93	U	3.1
1	AA	882	C	3.1
1	AA	1007	C	3.1
11	AI	71	SER	3.1
16	AN	14	PRO	3.1
31	BG	11	GLN	3.1
43	BS	44	GLN	3.1
11	AI	100	GLY	3.1
39	BO	93	LYS	3.1
23	B0	1350	G	3.1
10	AH	31	PHE	3.1
7	AE	37	ARG	3.1
9	AG	79	ARG	3.1
23	B0	304	A	3.1

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Mol	Chain	Res	Type	RSRZ
23	B0	1694	A	3.1
23	B0	3134	A	3.1
23	B0	3183	A	3.1
23	B0	2577	A	3.1
36	BL	89	GLU	3.1
40	BP	81	ARG	3.1
1	AA	178	C	3.1
12	AJ	75	ILE	3.1
38	BN	70	LYS	3.1
40	BP	32	LYS	3.1
23	B0	2193	C	3.1
11	AI	103	THR	3.1
31	BG	83	GLY	3.1
4	AB	120	ALA	3.1
7	AE	17	ALA	3.1
21	AS	24	ALA	3.1
1	AA	619	U	3.1
1	AA	861	G	3.1
23	B0	40	U	3.1
23	B0	1832	G	3.1
7	AE	6	PHE	3.1
15	AM	11	ARG	3.1
33	BI	127	VAL	3.1
23	B0	629	C	3.0
23	B0	2026	C	3.0
48	BX	16	GLN	3.0
7	AE	36	ASP	3.0
39	BO	111	ASP	3.0
23	B0	1551	U	3.0
23	B0	1738	U	3.0
23	B0	2323	U	3.0
1	AA	6	G	3.0
1	AA	763	G	3.0
23	B0	758	G	3.0
23	B0	1000	G	3.0
23	B0	1331	G	3.0
23	B0	1508	G	3.0
27	BC	5	ASN	3.0
6	AD	105	VAL	3.0
26	BB	91	VAL	3.0
39	BO	33	ARG	3.0
42	BR	75	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
47	BW	43	VAL	3.0
1	AA	1189	C	3.0
6	AD	6	GLY	3.0
6	AD	37	PRO	3.0
15	AM	69	GLU	3.0
16	AN	8	GLU	3.0
8	AF	16	GLN	3.0
8	AF	57	GLN	3.0
8	AF	98	LEU	3.0
23	B0	148	C	3.0
23	B0	300	C	3.0
23	B0	1518	C	3.0
1	AA	1012	U	3.0
9	AG	7	ALA	3.0
23	B0	41	G	3.0
23	B0	567	G	3.0
1	AA	72	A	3.0
23	B0	136	A	3.0
29	BE	174	GLY	3.0
1	AA	618	C	3.0
23	B0	2399	C	3.0
23	B0	2506	C	3.0
23	B0	2185	U	3.0
50	BZ	27	ALA	3.0
52	B2	43	THR	3.0
54	B4	28	SER	3.0
6	AD	191	ARG	3.0
39	BO	11	ARG	3.0
15	AM	77	ASN	3.0
23	B0	778	G	3.0
23	B0	2437	G	3.0
24	B9	11	G	3.0
39	BO	75	ASN	3.0
21	AS	42	PRO	3.0
35	BK	100	PRO	3.0
1	AA	165	C	3.0
1	AA	1018	C	3.0
23	B0	316	C	3.0
23	B0	770	U	3.0
23	B0	1363	C	3.0
23	B0	2074	U	3.0
23	B0	2605	C	3.0

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Mol	Chain	Res	Type	RSRZ
23	B0	2740	C	3.0
34	BJ	134	GLU	3.0
6	AD	74	GLN	3.0
47	BW	39	GLN	3.0
10	AH	25	ASP	3.0
14	AL	17	LYS	3.0
11	AI	128	ARG	3.0
32	BH	96	ASP	3.0
51	B1	29	ARG	3.0
39	BO	74	MET	3.0
23	B0	455	A	3.0
23	B0	712	A	3.0
23	B0	2652	G	3.0
44	BT	51	LEU	3.0
1	AA	17	U	3.0
21	AS	80	TYR	3.0
23	B0	3099	U	3.0
23	B0	1700	C	3.0
27	BC	191	ALA	3.0
39	BO	31	GLN	3.0
40	BP	36	LYS	3.0
54	B4	8	LYS	3.0
6	AD	141	ARG	3.0
8	AF	3	ARG	3.0
44	BT	55	THR	3.0
1	AA	703	G	3.0
1	AA	1041	A	3.0
2	AV	1	G	3.0
23	B0	901	A	3.0
23	B0	1001	A	3.0
23	B0	1140	A	3.0
44	BT	7	PRO	3.0
1	AA	1359	C	3.0
1	AA	1404	C	3.0
12	AJ	14	LYS	3.0
13	AK	99	GLN	3.0
32	BH	53	ARG	3.0
23	B0	1768	U	3.0
1	AA	204	A	3.0
2	AW	23	A	3.0
23	B0	494	A	3.0
23	B0	1583	A	3.0

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Mol	Chain	Res	Type	RSRZ
29	BE	100	GLY	3.0
4	AB	40	HIS	3.0
23	B0	1958	G	3.0
39	BO	76	TYR	3.0
1	AA	810	C	3.0
23	B0	2061	C	3.0
23	B0	2374	C	3.0
23	B0	2710	C	3.0
55	B5	56	LYS	3.0
20	AR	46	GLU	3.0
10	AH	37	ARG	3.0
12	AJ	96	ILE	2.9
25	BA	250	TRP	2.9
29	BE	64	LEU	2.9
44	BT	85	MET	2.9
23	B0	1826	U	2.9
26	BB	12	THR	2.9
44	BT	61	THR	2.9
1	AA	653	A	2.9
2	AV	73	A	2.9
23	B0	2246	A	2.9
24	B9	28	A	2.9
52	B2	46	ASP	2.9
10	AH	20	TYR	2.9
23	B0	27	G	2.9
23	B0	1786	C	2.9
23	B0	1879	G	2.9
55	B5	107	ASN	2.9
10	AH	50	ARG	2.9
10	AH	105	ARG	2.9
17	AO	73	GLU	2.9
26	BB	95	ILE	2.9
45	BU	53	MET	2.9
1	AA	957	U	2.9
23	B0	817	A	2.9
32	BH	97	ASP	2.9
53	B3	29	LYS	2.9
1	AA	916	G	2.9
1	AA	1031	C	2.9
15	AM	29	ARG	2.9
23	B0	2362	G	2.9
54	B4	7	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
6	AD	156	GLU	2.9
1	AA	1070	U	2.9
1	AA	553	A	2.9
1	AA	1357	A	2.9
14	AL	63	GLY	2.9
23	B0	956	A	2.9
23	B0	1901	A	2.9
55	B5	23	LYS	2.9
34	BJ	115	SER	2.9
15	AM	7	VAL	2.9
23	B0	827	C	2.9
23	B0	975	C	2.9
15	AM	25	ILE	2.9
15	AM	71	ARG	2.9
39	BO	116	ALA	2.9
50	BZ	20	ARG	2.9
1	AA	606	G	2.9
1	AA	842	U	2.9
4	AB	35	GLU	2.9
12	AJ	95	GLU	2.9
23	B0	1914	U	2.9
18	AP	35	LYS	2.9
43	BS	102	LYS	2.9
1	AA	532	A	2.9
10	AH	44	PHE	2.9
23	B0	228	A	2.9
23	B0	2795	A	2.9
34	BJ	24	GLY	2.9
29	BE	83	TYR	2.9
9	AG	104	LEU	2.9
15	AM	125	ARG	2.9
23	B0	186	C	2.9
23	B0	870	C	2.9
29	BE	169	ILE	2.9
30	BF	45	THR	2.9
43	BS	54	ILE	2.9
52	B2	4	THR	2.9
34	BJ	89	ASP	2.9
27	BC	113	GLU	2.9
16	AN	17	LYS	2.9
39	BO	19	LYS	2.9
47	BW	16	LYS	2.9

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Mol	Chain	Res	Type	RSRZ
6	AD	75	PHE	2.9
9	AG	19	GLY	2.9
23	B0	797	A	2.9
9	AG	120	ILE	2.9
1	AA	586	C	2.9
7	AE	19	MET	2.9
23	B0	722	C	2.9
23	B0	1120	C	2.9
23	B0	1526	U	2.9
23	B0	1894	U	2.9
23	B0	2284	U	2.9
23	B0	2443	C	2.9
19	AQ	29	HIS	2.9
41	BQ	74	SER	2.9
1	AA	821	G	2.9
23	B0	1428	G	2.9
22	AT	48	LYS	2.9
9	AG	103	TRP	2.9
44	BT	52	PHE	2.9
5	AC	80	GLY	2.9
23	B0	690	A	2.9
23	B0	2031	A	2.9
6	AD	132	ARG	2.9
7	AE	100	VAL	2.9
26	BB	36	ARG	2.9
38	BN	46	ARG	2.9
44	BT	54	ILE	2.9
18	AP	1	MET	2.9
23	B0	3195	U	2.9
23	B0	3192	C	2.9
23	B0	2237	C	2.9
25	BA	265	THR	2.9
27	BC	94	THR	2.9
55	B5	29	SER	2.9
5	AC	62	ASP	2.9
1	AA	319	G	2.9
1	AA	587	G	2.9
23	B0	572	G	2.9
23	B0	814	G	2.9
23	B0	1652	G	2.9
26	BB	161	GLY	2.9
44	BT	144	GLY	2.9

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Mol	Chain	Res	Type	RSRZ
23	B0	1699	A	2.8
39	BO	98	ILE	2.8
1	AA	956	U	2.8
23	B0	370	U	2.8
1	AA	912	C	2.8
23	B0	828	C	2.8
23	B0	1064	C	2.8
23	B0	1641	C	2.8
23	B0	1878	C	2.8
23	B0	2242	C	2.8
24	B9	45	C	2.8
5	AC	69	HIS	2.8
26	BB	113	THR	2.8
7	AE	45	PHE	2.8
23	B0	361	G	2.8
23	B0	791	G	2.8
23	B0	1599	G	2.8
23	B0	2032	G	2.8
23	B0	2464	G	2.8
41	BQ	40	LEU	2.8
4	AB	197	VAL	2.8
20	AR	42	ARG	2.8
19	AQ	82	MET	2.8
23	B0	529	U	2.8
23	B0	1672	A	2.8
23	B0	1821	A	2.8
23	B0	2219	U	2.8
32	BH	116	ARG	2.8
9	AG	71	PRO	2.8
28	BD	49	ALA	2.8
1	AA	18	C	2.8
23	B0	559	C	2.8
23	B0	2442	C	2.8
17	AO	50	HIS	2.8
39	BO	71	LEU	2.8
8	AF	41	GLU	2.8
23	B0	1754	G	2.8
23	B0	2216	G	2.8
23	B0	2302	G	2.8
10	AH	134	ILE	2.8
26	BB	178	GLY	2.8
38	BN	42	GLY	2.8

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Mol	Chain	Res	Type	RSRZ
55	B5	109	TRP	2.8
23	B0	2337	A	2.8
29	BE	10	ALA	2.8
31	BG	116	ASN	2.8
23	B0	78	C	2.8
23	B0	884	C	2.8
24	B9	5	C	2.8
24	B9	55	C	2.8
14	AL	118	SER	2.8
1	AA	1002	G	2.8
9	AG	20	ASP	2.8
13	AK	12	ARG	2.8
29	BE	22	GLY	2.8
1	AA	665	A	2.8
23	B0	2785	A	2.8
12	AJ	27	ALA	2.8
55	B5	147	TYR	2.8
42	BR	31	PRO	2.8
45	BU	4	LYS	2.8
2	AW	27	C	2.8
23	B0	133	C	2.8
23	B0	346	C	2.8
22	AT	99	LEU	2.8
55	B5	179	LEU	2.8
1	AA	180	U	2.8
4	AB	157	ARG	2.8
9	AG	95	ARG	2.8
23	B0	2483	U	2.8
40	BP	98	ILE	2.8
47	BW	42	ARG	2.8
1	AA	544	G	2.8
1	AA	1197	G	2.8
23	B0	209	G	2.8
23	B0	1196	G	2.8
23	B0	1294	G	2.8
6	AD	184	LYS	2.8
23	B0	43	A	2.8
23	B0	1354	A	2.8
23	B0	2012	A	2.8
23	B0	2034	A	2.8
23	B0	2202	G	2.8
23	B0	2293	G	2.8

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Mol	Chain	Res	Type	RSRZ
41	BQ	12	LYS	2.8
23	B0	935	C	2.8
23	B0	1948	C	2.8
24	B9	4	C	2.8
23	B0	2706	U	2.8
6	AD	128	VAL	2.8
15	AM	4	ILE	2.8
16	AN	41	ARG	2.8
25	BA	204	ILE	2.8
25	BA	205	VAL	2.8
38	BN	20	HIS	2.8
28	BD	55	LYS	2.8
32	BH	104	THR	2.8
1	AA	329	A	2.8
5	AC	37	GLN	2.8
23	B0	1718	A	2.8
23	B0	3871	A	2.8
23	B0	1960	A	2.8
40	BP	44	GLN	2.8
23	B0	678	G	2.8
1	AA	1019	C	2.8
23	B0	1522	C	2.8
39	BO	41	ASN	2.8
1	AA	118	U	2.8
45	BU	54	GLY	2.8
1	AA	179	A	2.8
1	AA	462	A	2.8
1	AA	1460	A	2.8
4	AB	107	THR	2.8
19	AQ	88	TYR	2.8
38	BN	78	GLU	2.8
38	BN	92	THR	2.8
23	B0	1333	G	2.8
23	B0	1818	G	2.8
23	B0	2846	G	2.8
55	B5	156	LEU	2.8
23	B0	244	C	2.8
23	B0	997	C	2.8
23	B0	1135	C	2.8
23	B0	1319	C	2.8
23	B0	1687	C	2.8
17	AO	35	ARG	2.7

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Mol	Chain	Res	Type	RSRZ
22	AT	22	ARG	2.7
26	BB	34	VAL	2.7
45	BU	14	ARG	2.7
47	BW	7	ARG	2.7
6	AD	69	GLY	2.7
9	AG	48	LYS	2.7
42	BR	70	GLY	2.7
9	AG	90	GLU	2.7
23	B0	642	A	2.7
23	B0	1671	A	2.7
28	BD	53	ALA	2.7
43	BS	14	LEU	2.7
44	BT	3	LEU	2.7
49	BY	2	GLN	2.7
1	AA	15	G	2.7
1	AA	317	G	2.7
23	B0	229	G	2.7
23	B0	344	G	2.7
23	B0	1504	G	2.7
23	B0	1519	G	2.7
23	B0	1831	G	2.7
23	B0	3159	G	2.7
1	AA	114	U	2.7
1	AA	240	C	2.7
1	AA	561	U	2.7
23	B0	2489	C	2.7
23	B0	2680	U	2.7
5	AC	152	ILE	2.7
6	AD	122	ARG	2.7
31	BG	63	ARG	2.7
39	BO	110	VAL	2.7
53	B3	44	LYS	2.7
18	AP	60	LEU	2.7
25	BA	257	LEU	2.7
32	BH	110	LEU	2.7
4	AB	236	TYR	2.7
23	B0	248	A	2.7
23	B0	360	A	2.7
23	B0	1492	A	2.7
25	BA	98	ALA	2.7
55	B5	168	PHE	2.7
1	AA	639	G	2.7

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Mol	Chain	Res	Type	RSRZ
1	AA	713	G	2.7
12	AJ	50	ILE	2.7
23	B0	1376	C	2.7
23	B0	1659	G	2.7
23	B0	1992	G	2.7
23	B0	2791	C	2.7
4	AB	23	ARG	2.7
32	BH	162	LYS	2.7
41	BQ	85	MET	2.7
17	AO	43	LEU	2.7
5	AC	100	ALA	2.7
23	B0	221	A	2.7
23	B0	1278	A	2.7
23	B0	1285	A	2.7
4	AB	76	GLN	2.7
6	AD	72	GLU	2.7
23	B0	1307	U	2.7
23	B0	1929	U	2.7
11	AI	65	VAL	2.7
15	AM	36	LYS	2.7
23	B0	44	G	2.7
23	B0	342	G	2.7
23	B0	933	G	2.7
23	B0	1491	C	2.7
23	B0	2018	G	2.7
23	B0	3136	C	2.7
23	B0	2303	C	2.7
35	BK	123	GLY	2.7
40	BP	8	GLY	2.7
50	BZ	25	LEU	2.7
23	B0	1753	A	2.7
9	AG	8	GLU	2.7
55	B5	81	PRO	2.7
32	BH	107	GLN	2.7
1	AA	75	C	2.7
1	AA	455	C	2.7
10	AH	68	ARG	2.7
18	AP	81	ARG	2.7
39	BO	30	LYS	2.7
55	B5	64	VAL	2.7
23	B0	1086	C	2.7
23	B0	1214	C	2.7

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Mol	Chain	Res	Type	RSRZ
1	AA	604	G	2.7
1	AA	998	G	2.7
1	AA	1017	G	2.7
23	B0	166	G	2.7
23	B0	594	G	2.7
23	B0	1189	G	2.7
23	B0	1520	G	2.7
23	B0	1533	G	2.7
1	AA	182	U	2.7
23	B0	768	U	2.7
1	AA	864	A	2.7
6	AD	125	HIS	2.7
6	AD	185	PHE	2.7
31	BG	20	ALA	2.7
8	AF	7	ASN	2.7
21	AS	65	ASN	2.7
23	B0	1167	A	2.7
23	B0	2784	A	2.7
18	AP	33	ILE	2.7
5	AC	198	VAL	2.7
6	AD	160	GLN	2.7
15	AM	115	LYS	2.7
38	BN	48	GLN	2.7
23	B0	439	C	2.7
13	AK	98	LEU	2.7
26	BB	170	LEU	2.7
49	BY	5	LEU	2.7
1	AA	491	G	2.7
1	AA	1442	G	2.7
1	AA	1521	G	2.7
23	B0	469	G	2.7
23	B0	2020	G	2.7
23	B0	3097	G	2.7
23	B0	2578	G	2.7
39	BO	26	GLY	2.7
23	B0	727	U	2.7
23	B0	1690	U	2.7
27	BC	128	ALA	2.7
1	AA	16	A	2.7
23	B0	205	A	2.7
23	B0	335	A	2.7
23	B0	556	A	2.7

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Mol	Chain	Res	Type	RSRZ
23	B0	1441	A	2.7
6	AD	30	LYS	2.7
8	AF	46	ARG	2.7
17	AO	17	ARG	2.7
39	BO	59	ARG	2.7
29	BE	49	GLN	2.7
1	AA	645	C	2.7
1	AA	989	C	2.7
23	B0	3093	C	2.7
23	B0	2444	C	2.7
38	BN	110	LEU	2.7
1	AA	71	U	2.7
1	AA	628	G	2.7
10	AH	66	GLY	2.7
23	B0	1668	G	2.7
53	B3	6	THR	2.7
26	BB	123	ALA	2.6
45	BU	26	PHE	2.7
1	AA	1396	A	2.6
42	BR	69	ILE	2.6
6	AD	118	ARG	2.6
27	BC	120	VAL	2.6
1	AA	1008	C	2.6
1	AA	1439	C	2.6
1	AA	1514	C	2.6
23	B0	1264	C	2.6
23	B0	1743	C	2.6
23	B0	2227	C	2.6
23	B0	555	U	2.6
23	B0	837	U	2.6
1	AA	610	G	2.6
1	AA	1155	G	2.6
1	AA	1435	G	2.6
18	AP	45	THR	2.6
34	BJ	64	GLY	2.6
44	BT	126	GLY	2.6
23	B0	15	G	2.6
23	B0	1390	G	2.6
23	B0	1158	A	2.6
23	B0	1335	A	2.6
23	B0	1486	A	2.6
23	B0	2467	A	2.6

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Mol	Chain	Res	Type	RSRZ
24	B9	86	A	2.6
8	AF	2	ARG	2.6
40	BP	13	ARG	2.6
52	B2	10	ARG	2.6
52	B2	39	ARG	2.6
1	AA	679	C	2.6
23	B0	553	C	2.6
23	B0	569	C	2.6
23	B0	1788	C	2.6
23	B0	2864	C	2.6
26	BB	163	GLU	2.6
1	AA	1436	U	2.6
23	B0	782	U	2.6
4	AB	22	LYS	2.6
5	AC	129	ALA	2.6
15	AM	79	LYS	2.6
22	AT	34	LYS	2.6
23	B0	464	G	2.6
23	B0	1480	G	2.6
23	B0	2528	G	2.6
55	B5	79	ALA	2.6
4	AB	33	TYR	2.6
23	B0	719	A	2.6
23	B0	777	A	2.6
23	B0	2372	A	2.6
52	B2	34	ARG	2.6
55	B5	75	TYR	2.6
14	AL	112	ASP	2.6
11	AI	73	GLN	2.6
23	B0	187	U	2.6
23	B0	416	U	2.6
23	B0	860	U	2.6
23	B0	1115	C	2.6
25	BA	76	ASN	2.6
55	B5	108	GLU	2.6
40	BP	2	PHE	2.6
11	AI	112	LYS	2.6
15	AM	22	ILE	2.6
21	AS	62	ILE	2.6
1	AA	976	G	2.6
1	AA	1471	G	2.6
4	AB	226	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
5	AC	126	ARG	2.6
9	AG	22	LEU	2.6
14	AL	62	SER	2.6
23	B0	3869	G	2.6
31	BG	102	ASP	2.6
23	B0	845	U	2.6
23	B0	2228	U	2.6
23	B0	2236	U	2.6
1	AA	612	C	2.6
23	B0	1221	C	2.6
11	AI	25	LYS	2.6
39	BO	73	GLY	2.6
49	BY	8	LYS	2.6
34	BJ	127	ALA	2.6
41	BQ	79	ALA	2.6
9	AG	99	LEU	2.6
19	AQ	98	LEU	2.6
23	B0	539	A	2.6
23	B0	1538	A	2.6
23	B0	1890	G	2.6
23	B0	1935	A	2.6
22	AT	82	SER	2.6
1	AA	320	C	2.6
23	B0	226	C	2.6
23	B0	3177	C	2.6
5	AC	39	ILE	2.6
52	B2	38	GLY	2.6
40	BP	3	ALA	2.6
42	BR	56	MET	2.6
47	BW	48	ARG	2.6
1	AA	845	A	2.6
23	B0	1397	A	2.6
23	B0	1961	A	2.6
1	AA	820	U	2.6
23	B0	514	G	2.6
23	B0	1637	U	2.6
23	B0	1783	G	2.6
23	B0	2249	U	2.6
1	AA	465	C	2.6
18	AP	47	ASP	2.6
23	B0	39	C	2.6
23	B0	1528	C	2.6

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Mol	Chain	Res	Type	RSRZ
23	B0	1631	C	2.6
23	B0	1703	C	2.6
23	B0	1797	C	2.6
31	BG	15	GLY	2.6
42	BR	86	GLN	2.6
38	BN	40	ARG	2.6
1	AA	789	U	2.6
23	B0	824	U	2.6
23	B0	848	A	2.6
23	B0	2651	U	2.6
1	AA	698	G	2.6
1	AA	941	G	2.6
23	B0	222	G	2.6
23	B0	579	G	2.6
23	B0	3154	G	2.6
23	B0	2688	G	2.6
24	B9	26	G	2.6
32	BH	111	LYS	2.5
52	B2	23	LYS	2.5
1	AA	1195	C	2.5
4	AB	60	ASP	2.5
14	AL	29	GLY	2.5
39	BO	90	LEU	2.5
4	AB	59	GLU	2.5
5	AC	127	ARG	2.5
23	B0	3167	U	2.5
23	B0	2594	U	2.5
1	AA	908	A	2.5
6	AD	20	TYR	2.5
23	B0	1386	A	2.5
23	B0	1949	A	2.5
5	AC	73	PRO	2.5
1	AA	711	G	2.5
4	AB	8	LYS	2.5
20	AR	19	LYS	2.5
23	B0	227	G	2.5
23	B0	1359	G	2.5
23	B0	2297	G	2.5
38	BN	38	LYS	2.5
55	B5	158	LYS	2.5
11	AI	74	ILE	2.5
15	AM	9	ILE	2.5

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Mol	Chain	Res	Type	RSRZ
1	AA	308	C	2.5
23	B0	2517	C	2.5
7	AE	64	ARG	2.5
10	AH	19	VAL	2.5
14	AL	59	ARG	2.5
18	AP	5	ARG	2.5
31	BG	55	VAL	2.5
42	BR	58	VAL	2.5
49	BY	21	VAL	2.5
4	AB	116	GLU	2.5
35	BK	80	ALA	2.5
1	AA	743	U	2.5
23	B0	103	U	2.5
1	AA	327	A	2.5
1	AA	487	A	2.5
6	AD	106	TYR	2.5
23	B0	436	A	2.5
23	B0	1813	A	2.5
23	B0	3103	A	2.5
26	BB	17	ASN	2.5
21	AS	28	LYS	2.5
55	B5	102	LYS	2.5
4	AB	73	THR	2.5
23	B0	789	G	2.5
23	B0	1629	G	2.5
23	B0	2532	G	2.5
49	BY	31	ILE	2.5
1	AA	613	C	2.5
10	AH	30	ARG	2.5
15	AM	3	ARG	2.5
31	BG	117	ALA	2.5
1	AA	464	U	2.5
6	AD	179	GLU	2.5
10	AH	42	GLU	2.5
17	AO	71	GLN	2.5
19	AQ	78	GLU	2.5
23	B0	743	A	2.5
23	B0	1004	A	2.5
25	BA	208	LYS	2.5
13	AK	113	PRO	2.5
12	AJ	74	ILE	2.5
1	AA	637	G	2.5

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Mol	Chain	Res	Type	RSRZ
1	AA	970	C	2.5
1	AA	984	C	2.5
1	AA	1362	C	2.5
1	AA	1385	G	2.5
1	AA	1459	C	2.5
6	AD	17	VAL	2.5
6	AD	143	GLY	2.5
23	B0	191	G	2.5
23	B0	462	G	2.5
23	B0	1440	G	2.5
31	BG	138	VAL	2.5
23	B0	954	U	2.5
23	B0	2294	U	2.5
44	BT	23	ALA	2.5
50	BZ	52	TYR	2.5
27	BC	195	ILE	2.5
9	AG	141	VAL	2.5
10	AH	84	ARG	2.5
1	AA	1366	C	2.5
23	B0	705	C	2.5
23	B0	1347	C	2.5
23	B0	1803	G	2.5
23	B0	3108	G	2.5
23	B0	2295	C	2.5
23	B0	2377	U	2.5
23	B0	2421	C	2.5
23	B0	2515	G	2.5
16	AN	2	ALA	2.5
47	BW	11	ALA	2.5
6	AD	83	SER	2.5
29	BE	45	GLN	2.5
1	AA	859	A	2.5
23	B0	117	A	2.5
23	B0	242	A	2.5
19	AQ	36	ILE	2.5
14	AL	89	ARG	2.5
22	AT	17	ARG	2.5
55	B5	157	VAL	2.5
23	B0	2470	U	2.5
1	AA	806	C	2.5
1	AA	849	C	2.5
4	AB	14	GLY	2.5

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Mol	Chain	Res	Type	RSRZ
10	AH	138	TRP	2.5
23	B0	3147	C	2.5
1	AA	142	G	2.5
5	AC	65	ALA	2.5
23	B0	858	G	2.5
23	B0	2560	G	2.5
23	B0	2760	G	2.5
24	B9	109	G	2.5
14	AL	119	LYS	2.5
15	AM	105	THR	2.5
35	BK	44	LYS	2.5
50	BZ	11	THR	2.5
55	B5	193	LYS	2.5
6	AD	101	LEU	2.5
7	AE	72	GLN	2.5
26	BB	151	TYR	2.5
47	BW	5	GLU	2.5
1	AA	141	A	2.5
2	AW	62	A	2.5
17	AO	87	ILE	2.5
23	B0	2204	A	2.5
23	B0	2455	A	2.5
15	AM	80	ARG	2.5
23	B0	2734	U	2.5
26	BB	137	ARG	2.5
52	B2	33	ARG	2.5
8	AF	58	GLY	2.5
29	BE	74	ASN	2.5
23	B0	1006	C	2.5
23	B0	1412	C	2.5
23	B0	1877	C	2.5
27	BC	190	ALA	2.5
29	BE	75	ALA	2.5
38	BN	115	ALA	2.5
1	AA	773	G	2.5
16	AN	15	LYS	2.5
22	AT	16	HIS	2.5
23	B0	1407	G	2.5
23	B0	1571	G	2.5
4	AB	154	LEU	2.4
9	AG	52	GLU	2.4
18	AP	34	GLU	2.4

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Mol	Chain	Res	Type	RSRZ
23	B0	2653	A	2.4
47	BW	52	GLN	2.4
5	AC	119	ARG	2.4
17	AO	59	MET	2.4
23	B0	1194	U	2.4
23	B0	2663	U	2.4
23	B0	2863	U	2.4
29	BE	76	VAL	2.4
52	B2	1	MET	2.4
55	B5	24	ARG	2.4
4	AB	75	LYS	2.4
16	AN	11	LYS	2.4
20	AR	20	ALA	2.4
6	AD	120	LEU	2.4
23	B0	108	G	2.4
23	B0	3112	G	2.4
23	B0	2379	G	2.4
23	B0	2514	G	2.4
17	AO	4	THR	2.4
31	BG	66	THR	2.4
39	BO	47	TYR	2.4
1	AA	909	A	2.4
4	AB	95	GLN	2.4
11	AI	31	GLN	2.4
23	B0	702	A	2.4
23	B0	1321	A	2.4
44	BT	57	GLU	2.4
1	AA	294	U	2.4
1	AA	1380	U	2.4
6	AD	104	VAL	2.4
12	AJ	34	VAL	2.4
23	B0	544	U	2.4
23	B0	1789	U	2.4
41	BQ	42	VAL	2.4
41	BQ	44	VAL	2.4
5	AC	205	GLY	2.4
19	AQ	34	LYS	2.4
44	BT	58	GLY	2.4
55	B5	78	LYS	2.4
1	AA	525	C	2.4
1	AA	555	C	2.4
1	AA	1234	C	2.4

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Mol	Chain	Res	Type	RSRZ
23	B0	684	C	2.4
31	BG	43	ALA	2.4
47	BW	53	LEU	2.4
9	AG	44	TYR	2.4
23	B0	1438	G	2.4
23	B0	2750	G	2.4
23	B0	748	A	2.4
23	B0	970	A	2.4
4	AB	119	GLU	2.4
23	B0	1490	U	2.4
23	B0	3187	U	2.4
17	AO	79	ARG	2.4
52	B2	41	GLN	2.4
49	BY	37	SER	2.4
53	B3	4	MET	2.4
1	AA	1254	C	2.4
1	AA	1267	C	2.4
7	AE	31	LEU	2.4
23	B0	354	C	2.4
23	B0	769	C	2.4
23	B0	1529	C	2.4
12	AJ	54	PHE	2.4
27	BC	7	ILE	2.4
1	AA	112	G	2.4
1	AA	292	G	2.4
1	AA	520	A	2.4
1	AA	593	G	2.4
1	AA	608	A	2.4
1	AA	960	U	2.4
2	AW	44	A	2.4
23	B0	238	G	2.4
23	B0	872	G	2.4
23	B0	1241	G	2.4
9	AG	143	ARG	2.4
23	B0	1532	A	2.4
23	B0	1534	A	2.4
23	B0	1874	G	2.4
23	B0	2289	A	2.4
23	B0	2531	U	2.4
29	BE	130	ARG	2.4
15	AM	58	GLU	2.4
19	AQ	58	GLU	2.4

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Mol	Chain	Res	Type	RSRZ
25	BA	207	GLY	2.4
1	AA	1228	C	2.4
6	AD	177	ASP	2.4
23	B0	2753	C	2.4
26	BB	14	ILE	2.4
23	B0	1276	U	2.4
1	AA	92	G	2.4
1	AA	524	G	2.4
1	AA	769	G	2.4
2	AV	20	G	2.4
2	AW	18	G	2.4
4	AB	21	ARG	2.4
5	AC	140	ARG	2.4
14	AL	55	VAL	2.4
23	B0	1984	A	2.4
23	B0	2707	G	2.4
23	B0	2721	A	2.4
26	BB	162	MET	2.4
33	BI	122	ARG	2.4
34	BJ	139	ARG	2.4
38	BN	116	ARG	2.4
5	AC	67	THR	2.4
11	AI	21	PRO	2.4
28	BD	63	GLN	2.4
55	B5	48	LEU	2.4
6	AD	109	GLY	2.4
39	BO	43	ALA	2.4
44	BT	62	PHE	2.4
1	AA	307	C	2.4
1	AA	489	C	2.4
1	AA	862	C	2.4
23	B0	2595	C	2.4
55	B5	85	ILE	2.4
11	AI	75	ASP	2.4
55	B5	178	ASP	2.4
2	AV	39	U	2.4
5	AC	172	ARG	2.4
6	AD	76	ARG	2.4
14	AL	34	ARG	2.4
14	AL	114	LYS	2.4
23	B0	51	A	2.4
23	B0	1065	A	2.4

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Mol	Chain	Res	Type	RSRZ
23	B0	2737	A	2.4
32	BH	98	LYS	2.4
37	BM	36	LYS	2.4
1	AA	1154	G	2.4
1	AA	1401	G	2.4
6	AD	155	LEU	2.4
23	B0	42	G	2.4
23	B0	867	G	2.4
23	B0	1747	G	2.4
23	B0	1852	G	2.4
8	AF	31	GLU	2.4
55	B5	141	THR	2.4
27	BC	192	ALA	2.4
1	AA	99	C	2.4
1	AA	1281	U	2.4
23	B0	1966	C	2.4
23	B0	1967	U	2.4
23	B0	2596	C	2.4
39	BO	62	ILE	2.4
5	AC	16	ARG	2.4
8	AF	77	ARG	2.4
29	BE	44	ARG	2.4
23	B0	116	A	2.4
32	BH	156	HIS	2.4
15	AM	40	ASN	2.4
45	BU	17	ASN	2.4
1	AA	147	G	2.3
1	AA	309	G	2.3
1	AA	594	G	2.3
1	AA	1392	G	2.3
23	B0	1805	G	2.3
23	B0	1849	G	2.3
23	B0	1985	G	2.3
23	B0	2474	G	2.3
23	B0	2576	G	2.3
39	BO	82	GLY	2.3
8	AF	49	ALA	2.3
29	BE	146	ALA	2.3
31	BG	123	ALA	2.3
23	B0	135	U	2.3
34	BJ	126	SER	2.3
7	AE	69	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
25	BA	211	ARG	2.3
34	BJ	32	ARG	2.3
8	AF	63	TYR	2.3
39	BO	45	TYR	2.3
1	AA	901	A	2.3
23	B0	471	A	2.3
23	B0	523	A	2.3
23	B0	703	A	2.3
23	B0	1372	A	2.3
1	AA	181	G	2.3
4	AB	128	GLU	2.3
5	AC	13	GLY	2.3
9	AG	56	GLN	2.3
23	B0	192	G	2.3
23	B0	1251	G	2.3
23	B0	2739	G	2.3
34	BJ	31	GLY	2.3
53	B3	47	GLY	2.3
23	B0	1325	U	2.3
23	B0	1505	U	2.3
44	BT	5	ALA	2.3
1	AA	1059	C	2.3
23	B0	113	C	2.3
23	B0	573	C	2.3
23	B0	1673	C	2.3
23	B0	1727	C	2.3
4	AB	156	LYS	2.3
39	BO	3	ARG	2.3
44	BT	26	LYS	2.3
23	B0	1785	A	2.3
23	B0	2043	A	2.3
31	BG	28	GLY	2.3
1	AA	742	G	2.3
1	AA	1422	G	2.3
1	AA	1489	G	2.3
2	AW	24	G	2.3
4	AB	117	GLU	2.3
31	BG	100	ASN	2.3
42	BR	89	GLU	2.3
1	AA	390	C	2.3
1	AA	1382	C	2.3
6	AD	46	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
10	AH	18	ARG	2.3
23	B0	114	C	2.3
23	B0	1701	C	2.3
23	B0	2373	C	2.3
23	B0	2722	C	2.3
23	B0	2824	C	2.3
44	BT	8	ARG	2.3
52	B2	42	LEU	2.3
1	AA	162	A	2.3
4	AB	167	PRO	2.3
10	AH	74	PRO	2.3
1	AA	560	U	2.3
11	AI	81	ILE	2.3
12	AJ	25	GLU	2.3
23	B0	1503	G	2.3
1	AA	235	C	2.3
1	AA	1466	C	2.3
7	AE	18	ARG	2.3
19	AQ	25	ARG	2.3
27	BC	48	ARG	2.3
36	BL	40	LYS	2.3
23	B0	1517	C	2.3
24	B9	39	C	2.3
17	AO	25	THR	2.3
1	AA	496	A	2.3
1	AA	1363	A	2.3
2	AV	76	A	2.3
23	B0	93	A	2.3
23	B0	1998	A	2.3
23	B0	2041	A	2.3
23	B0	1130	U	2.3
4	AB	160	ASP	2.3
4	AB	188	ALA	2.3
13	AK	74	ALA	2.3
22	AT	94	ALA	2.3
36	BL	21	ALA	2.3
5	AC	139	GLN	2.3
35	BK	91	VAL	2.3
39	BO	16	LYS	2.3
40	BP	99	GLN	2.3
44	BT	94	VAL	2.3
1	AA	630	G	2.3

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Mol	Chain	Res	Type	RSRZ
1	AA	1475	G	2.3
6	AD	176	LEU	2.3
17	AO	64	ARG	2.3
22	AT	25	ARG	2.3
23	B0	363	G	2.3
27	BC	13	ARG	2.3
31	BG	112	MET	2.3
47	BW	6	MET	2.3
1	AA	1400	C	2.3
23	B0	1773	C	2.3
23	B0	1188	A	2.3
23	B0	2065	A	2.3
23	B0	2073	A	2.3
4	AB	140	HIS	2.3
31	BG	85	GLY	2.3
5	AC	56	ASP	2.3
7	AE	102	ALA	2.3
10	AH	21	LYS	2.3
27	BC	51	VAL	2.3
39	BO	40	LEU	2.3
52	B2	35	ARG	2.3
6	AD	80	GLU	2.3
1	AA	449	C	2.3
1	AA	647	C	2.3
1	AA	973	G	2.3
1	AA	1117	G	2.3
23	B0	24	G	2.3
23	B0	107	G	2.3
23	B0	677	G	2.3
23	B0	682	G	2.3
23	B0	1033	G	2.3
23	B0	1207	G	2.3
23	B0	1317	G	2.3
23	B0	1598	C	2.3
23	B0	1741	G	2.3
23	B0	2449	G	2.3
23	B0	2818	G	2.3
24	B9	37	C	2.3
6	AD	54	TYR	2.3
1	AA	712	A	2.3
23	B0	10	A	2.3
23	B0	1318	A	2.3

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Mol	Chain	Res	Type	RSRZ
23	B0	1686	A	2.3
23	B0	1902	A	2.3
52	B2	45	SER	2.3
26	BB	37	LYS	2.3
35	BK	124	HIS	2.3
27	BC	124	ASP	2.3
7	AE	111	GLU	2.2
9	AG	96	GLN	2.3
16	AN	46	GLU	2.2
17	AO	13	GLN	2.3
1	AA	77	C	2.2
23	B0	1862	C	2.2
23	B0	1908	C	2.2
24	B9	35	C	2.2
24	B9	83	C	2.2
39	BO	46	GLU	2.2
44	BT	2	GLU	2.2
1	AA	139	G	2.2
1	AA	492	G	2.2
1	AA	886	G	2.2
1	AA	926	G	2.2
1	AA	1266	G	2.2
23	B0	359	G	2.2
23	B0	633	G	2.2
23	B0	694	G	2.2
23	B0	932	G	2.2
23	B0	1035	G	2.2
23	B0	2546	G	2.2
24	B9	115	G	2.2
9	AG	154	TYR	2.2
23	B0	1688	U	2.2
47	BW	8	ASN	2.2
1	AA	1398	A	2.2
23	B0	2412	A	2.2
4	AB	26	PRO	2.2
19	AQ	79	SER	2.2
40	BP	15	SER	2.2
4	AB	7	VAL	2.2
9	AG	83	ALA	2.2
18	AP	70	ALA	2.2
47	BW	46	LEU	2.2
49	BY	10	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
9	AG	115	ARG	2.2
48	BX	12	ARG	2.2
1	AA	47	C	2.2
1	AA	454	C	2.2
1	AA	1230	C	2.2
23	B0	593	C	2.2
23	B0	2396	C	2.2
1	AA	304	U	2.2
23	B0	1038	U	2.2
1	AA	1053	G	2.2
2	AW	53	G	2.2
23	B0	1823	G	2.2
23	B0	2070	G	2.2
23	B0	2238	G	2.2
23	B0	2505	G	2.2
21	AS	25	LYS	2.2
23	B0	913	A	2.2
23	B0	2438	A	2.2
34	BJ	119	THR	2.2
35	BK	125	LYS	2.2
53	B3	5	LYS	2.2
53	B3	26	LYS	2.2
5	AC	61	ALA	2.2
16	AN	54	PRO	2.2
18	AP	53	VAL	2.2
40	BP	52	GLY	2.2
9	AG	94	ARG	2.2
55	B5	131	ARG	2.2
1	AA	1125	U	2.2
1	AA	1393	U	2.2
5	AC	118	GLN	2.2
9	AG	129	GLU	2.2
23	B0	417	C	2.2
23	B0	1885	C	2.2
23	B0	2338	C	2.2
5	AC	48	TYR	2.2
7	AE	131	ILE	2.2
22	AT	63	ILE	2.2
22	AT	21	LYS	2.2
23	B0	478	G	2.2
23	B0	2469	G	2.2
29	BE	109	TYR	2.2

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Mol	Chain	Res	Type	RSRZ
55	B5	82	LYS	2.2
15	AM	66	LEU	2.2
20	AR	57	GLY	2.2
9	AG	32	ARG	2.2
10	AH	92	ARG	2.2
11	AI	58	ARG	2.2
23	B0	1212	U	2.2
23	B0	1413	U	2.2
23	B0	1482	U	2.2
23	B0	1870	U	2.2
23	B0	2472	U	2.2
24	B9	22	U	2.2
1	AA	1063	C	2.2
23	B0	2292	C	2.2
23	B0	2422	C	2.2
7	AE	50	GLU	2.2
9	AG	30	ILE	2.2
20	AR	68	LYS	2.2
26	BB	94	ASP	2.2
12	AJ	85	LEU	2.2
1	AA	21	G	2.2
1	AA	250	A	2.2
1	AA	456	A	2.2
23	B0	695	G	2.2
23	B0	1109	A	2.2
23	B0	2473	G	2.2
26	BB	177	ALA	2.2
28	BD	58	ALA	2.2
34	BJ	30	ALA	2.2
40	BP	30	GLY	2.2
48	BX	39	ALA	2.2
29	BE	122	THR	2.2
6	AD	175	SER	2.2
1	AA	19	C	2.2
1	AA	720	C	2.2
2	AW	75	C	2.2
15	AM	126	LYS	2.2
23	B0	2274	C	2.2
33	BI	29	ILE	2.2
31	BG	44	GLN	2.2
1	AA	143	A	2.2
1	AA	1167	A	2.2

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Mol	Chain	Res	Type	RSRZ
1	AA	1518	A	2.2
24	B9	65	A	2.2
35	BK	42	TRP	2.2
6	AD	16	GLY	2.2
6	AD	57	ARG	2.2
14	AL	97	ARG	2.2
23	B0	340	G	2.2
23	B0	1636	G	2.2
23	B0	2304	G	2.2
23	B0	2407	G	2.2
23	B0	2862	G	2.2
33	BI	119	ARG	2.2
48	BX	14	GLY	2.2
4	AB	25	ASN	2.2
23	B0	1651	U	2.2
23	B0	3194	U	2.2
39	BO	113	SER	2.2
11	AI	88	TYR	2.2
1	AA	448	A	2.2
1	AA	622	A	2.2
19	AQ	77	VAL	2.2
15	AM	83	ASP	2.2
23	B0	3176	A	2.2
24	B9	61	A	2.2
38	BN	91	VAL	2.2
49	BY	35	VAL	2.2
25	BA	244	ARG	2.2
29	BE	46	ASP	2.2
31	BG	122	ALA	2.2
32	BH	105	GLY	2.2
1	AA	111	G	2.2
1	AA	316	G	2.2
1	AA	546	G	2.2
1	AA	670	G	2.2
1	AA	1441	G	2.2
2	AW	26	G	2.2
7	AE	96	PRO	2.2
12	AJ	91	PRO	2.2
23	B0	843	G	2.2
23	B0	1968	G	2.2
23	B0	2622	G	2.2
23	B0	3151	U	2.2

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Mol	Chain	Res	Type	RSRZ
7	AE	123	LEU	2.2
1	AA	1501	C	2.2
9	AG	106	GLN	2.2
23	B0	2755	A	2.2
1	AA	331	G	2.1
1	AA	683	G	2.1
1	AA	1453	G	2.1
23	B0	950	G	2.1
23	B0	1110	G	2.1
23	B0	1266	G	2.1
23	B0	1330	G	2.1
23	B0	1951	G	2.1
19	AQ	4	LYS	2.1
21	AS	32	LYS	2.1
22	AT	14	LYS	2.1
48	BX	15	ASN	2.1
32	BH	112	THR	2.1
1	AA	948	C	2.1
24	B9	21	C	2.1
7	AE	141	GLN	2.1
1	AA	470	U	2.1
1	AA	669	U	2.1
1	AA	965	A	2.1
1	AA	1427	U	2.1
23	B0	1129	A	2.1
23	B0	1231	A	2.1
35	BK	92	GLU	2.1
7	AE	134	ALA	2.1
22	AT	106	ALA	2.1
23	B0	25	U	2.1
39	BO	103	PRO	2.1
55	B5	139	PRO	2.1
2	AV	34	G	2.1
2	AW	45	G	2.1
8	AF	45	LEU	2.1
23	B0	47	G	2.1
23	B0	352	G	2.1
23	B0	479	G	2.1
23	B0	1430	G	2.1
23	B0	1880	G	2.1
23	B0	2574	G	2.1
23	B0	2664	G	2.1

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Mol	Chain	Res	Type	RSRZ
1	AA	623	C	2.1
1	AA	744	C	2.1
18	AP	67	THR	2.1
4	AB	31	TYR	2.1
8	AF	1	MET	2.1
15	AM	102	ARG	2.1
1	AA	1390	U	2.1
12	AJ	33	GLN	2.1
23	B0	112	U	2.1
23	B0	1195	U	2.1
23	B0	1618	U	2.1
23	B0	1868	A	2.1
23	B0	2003	A	2.1
23	B0	2342	U	2.1
23	B0	2541	U	2.1
19	AQ	2	PRO	2.1
22	AT	24	LEU	2.1
39	BO	88	ILE	2.1
1	AA	472	G	2.1
1	AA	925	G	2.1
1	AA	1258	G	2.1
23	B0	23	G	2.1
23	B0	119	G	2.1
23	B0	1236	G	2.1
23	B0	3196	G	2.1
23	B0	2408	G	2.1
23	B0	2656	G	2.1
1	AA	985	C	2.1
7	AE	115	VAL	2.1
23	B0	22	C	2.1
24	B9	62	C	2.1
37	BM	37	HIS	2.1
53	B3	57	ARG	2.1
23	B0	1421	U	2.1
23	B0	2772	U	2.1
1	AA	185	A	2.1
5	AC	96	GLY	2.1
55	B5	106	GLN	2.1
7	AE	146	ALA	2.1
23	B0	838	A	2.1
17	AO	2	PRO	2.1
25	BA	155	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
6	AD	193	ASP	2.1
12	AJ	73	ASP	2.1
23	B0	658	G	2.1
23	B0	1131	G	2.1
23	B0	1664	G	2.1
23	B0	1986	G	2.1
23	B0	2039	G	2.1
23	B0	2553	G	2.1
23	B0	2567	G	2.1
6	AD	88	VAL	2.1
1	AA	955	U	2.1
2	AV	28	C	2.1
2	AW	61	C	2.1
23	B0	686	C	2.1
23	B0	1037	U	2.1
23	B0	1127	C	2.1
23	B0	1675	C	2.1
23	B0	1770	U	2.1
24	B9	67	C	2.1
10	AH	17	THR	2.1
1	AA	70	A	2.1
1	AA	440	A	2.1
6	AD	188	LEU	2.1
8	AF	20	ALA	2.1
39	BO	112	ALA	2.1
55	B5	111	LEU	2.1
9	AG	80	VAL	2.1
1	AA	98	U	2.1
23	B0	742	G	2.1
44	BT	86	VAL	2.1
1	AA	1519	A	2.1
7	AE	154	GLY	2.1
19	AQ	31	LEU	2.1
31	BG	109	LYS	2.1
23	B0	795	A	2.1
23	B0	964	A	2.1
23	B0	1776	A	2.1
23	B0	1997	A	2.1
23	B0	2513	A	2.1
5	AC	162	GLN	2.1
17	AO	28	GLN	2.1
27	BC	4	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
40	BP	5	ILE	2.1
21	AS	21	GLU	2.1
31	BG	106	GLU	2.1
53	B3	54	GLU	2.1
1	AA	697	U	2.1
4	AB	209	ARG	2.1
23	B0	348	U	2.1
23	B0	2575	U	2.1
52	B2	44	VAL	2.1
1	AA	1293	G	2.1
2	AW	19	G	2.1
23	B0	1209	G	2.1
23	B0	2286	G	2.1
1	AA	1114	C	2.1
2	AV	72	C	2.1
23	B0	2655	C	2.1
7	AE	92	LYS	2.1
31	BG	115	LEU	2.1
45	BU	5	LYS	2.1
1	AA	101	A	2.1
4	AB	225	ALA	2.1
22	AT	97	ALA	2.1
23	B0	986	A	2.1
23	B0	2409	A	2.1
33	BI	39	GLY	2.1
7	AE	87	SER	2.1
10	AH	115	SER	2.1
1	AA	498	U	2.1
36	BL	8	ARG	2.0
53	B3	61	MET	2.0
1	AA	177	C	2.0
1	AA	881	G	2.0
23	B0	147	G	2.0
23	B0	178	C	2.0
23	B0	809	C	2.0
23	B0	1053	G	2.0
23	B0	1229	C	2.0
23	B0	1246	G	2.0
23	B0	2263	C	2.0
23	B0	2309	G	2.0
23	B0	2724	G	2.0
35	BK	99	LYS	2.0

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Mol	Chain	Res	Type	RSRZ
50	BZ	53	ASP	2.0
1	AA	298	A	2.0
1	AA	640	A	2.0
5	AC	81	GLY	2.0
5	AC	146	ALA	2.0
18	AP	78	GLY	2.0
22	AT	32	ALA	2.0
31	BG	65	PHE	2.0
23	B0	14	A	2.0
23	B0	787	A	2.0
23	B0	1320	A	2.0
38	BN	114	ALA	2.0
55	B5	210	GLY	2.0
7	AE	49	PRO	2.0
21	AS	56	GLN	2.0
38	BN	43	ASN	2.0
1	AA	863	U	2.0
4	AB	192	SER	2.0
23	B0	1539	U	2.0
23	B0	1976	U	2.0
39	BO	84	LYS	2.0
23	B0	976	C	2.0
1	AA	1467	G	2.0
8	AF	81	ILE	2.0
13	AK	25	TYR	2.0
23	B0	849	G	2.0
23	B0	1118	G	2.0
23	B0	2466	G	2.0
24	B9	100	G	2.0
45	BU	13	GLY	2.0
1	AA	509	A	2.0
1	AA	559	A	2.0
23	B0	747	A	2.0
23	B0	2045	A	2.0
23	B0	2798	A	2.0
39	BO	72	HIS	2.0
11	AI	123	PRO	2.0
5	AC	192	THR	2.0
14	AL	43	VAL	2.0
23	B0	293	U	2.0
44	BT	87	THR	2.0
55	B5	166	GLN	2.0

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Mol	Chain	Res	Type	RSRZ
6	AD	165	MET	2.0
15	AM	50	GLU	2.0
5	AC	93	LYS	2.0
8	AF	21	LEU	2.0
17	AO	56	LEU	2.0
20	AR	26	LEU	2.0
36	BL	10	LEU	2.0
55	B5	65	LEU	2.0
55	B5	138	LEU	2.0
1	AA	1244	C	2.0
1	AA	1342	C	2.0
1	AA	1399	C	2.0
23	B0	635	C	2.0
23	B0	1940	C	2.0
1	AA	530	G	2.0
4	AB	123	ALA	2.0
1	AA	1360	A	2.0
23	B0	173	A	2.0
23	B0	334	G	2.0
23	B0	337	G	2.0
23	B0	477	A	2.0
23	B0	796	A	2.0
23	B0	885	A	2.0
23	B0	1102	G	2.0
23	B0	1296	G	2.0
23	B0	1704	G	2.0
23	B0	1851	A	2.0
23	B0	3193	G	2.0
34	BJ	128	ALA	2.0
23	B0	2556	A	2.0
23	B0	1329	U	2.0
23	B0	2526	U	2.0
31	BG	104	VAL	2.0
9	AG	37	ASN	2.0
14	AL	86	ARG	2.0
19	AQ	81	ARG	2.0
31	BG	132	ARG	2.0

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

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.