



# Full wwPDB X-ray Structure Validation Report ⓘ

Jun 16, 2014 – 05:54 PM BST

PDB ID : 4V4A  
Title : Crystal Structure of the Wild Type 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 : 9.50 Å(reported)

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

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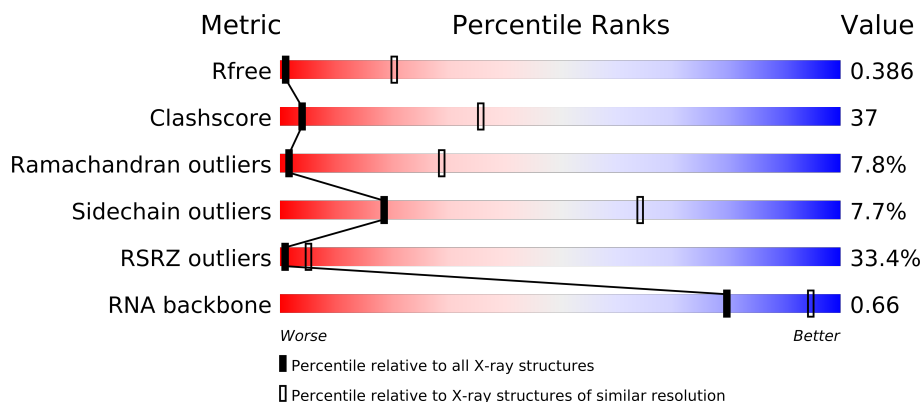
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467  
Mogul : 1.16 November 2013  
Xtriage (Phenix) : dev-1323  
EDS : stable23397  
Percentile statistics : 21963  
Refmac : 5.8.0049  
CCP4 : 6.3.0 (Settle)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)  
Validation Pipeline (wwPDB-VP) : stable23397

# 1 Overall quality at a glance

The reported resolution of this entry is 9.50 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))
$R_{free}$	66092	1106 (11.50-3.50)
Clashscore	79885	1010 (15.00-3.54)
Ramachandran outliers	78287	1304 (15.00-3.50)
Sidechain outliers	78261	1278 (15.00-3.50)
RSRZ outliers	66119	1105 (11.50-3.50)
RNA backbone	1838	1055 (11.50-2.80)

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

Mol	Chain	Length	Quality of chain
1	AA	1537	
2	AB	234	
3	AC	206	
4	AD	208	
5	AE	150	
6	AF	101	
7	AG	155	
8	AH	138	
9	AI	127	
10	AJ	98	
11	AK	119	
12	AL	124	

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Mol	Chain	Length	Quality of chain
13	AM	125	
14	AN	60	
15	AO	88	
16	AP	83	
17	AQ	104	
18	AR	73	
19	AS	80	
20	AT	99	
21	B0	2887	
22	B9	118	
23	BA	270	
24	BB	205	
25	BC	197	
26	BD	178	
27	BE	177	
28	BF	52	
29	BG	143	
30	BH	143	
31	BI	132	
32	BJ	141	
33	BK	124	
34	BL	114	
35	BM	111	
36	BN	125	
37	BO	117	
38	BP	100	
39	BQ	130	
40	BR	93	
41	BS	113	
42	BT	173	
43	BU	86	
44	BV	16	
45	BW	65	
46	BX	55	
47	BY	73	
48	BZ	58	
49	B1	53	
50	B2	46	
51	B3	63	
52	B4	35	
53	B5	217	

## 2 Entry composition

There are 53 unique types of molecules in this entry. The entry contains 118711 atoms, of which 0 are hydrogen and 0 are deuterium.

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

- Molecule 1 is a RNA chain called 16S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1533	Total	C	N	O	P	0	0	0
			32939	14664	6099	10643	1533			

- Molecule 2 is a protein called 30S ribosomal protein S2.

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

- Molecule 3 is a protein called 30S ribosomal protein S3.

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

- Molecule 4 is a protein called 30S ribosomal protein S4.

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

- Molecule 5 is a protein called 30S ribosomal protein S5.

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

- Molecule 6 is a protein called 30S ribosomal protein S6.

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

- Molecule 7 is a protein called 30S ribosomal protein S7.

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

- Molecule 8 is a protein called 30S ribosomal protein S8.

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

- Molecule 9 is a protein called 30S ribosomal protein S9.

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

- Molecule 10 is a protein called 30S ribosomal protein S10.

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

- Molecule 11 is a protein called 30S ribosomal protein S11.

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

- Molecule 12 is a protein called 30S ribosomal protein S12.

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

- Molecule 13 is a protein called 30S ribosomal protein S13.

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

- Molecule 14 is a protein called 30S ribosomal protein S14.

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

- Molecule 15 is a protein called 30S ribosomal protein S15.

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

- Molecule 16 is a protein called 30S ribosomal protein S16.

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

- Molecule 17 is a protein called 30S ribosomal protein S17.

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

- Molecule 18 is a protein called 30S ribosomal protein S18.

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

- Molecule 19 is a protein called 30S ribosomal protein S19.

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

- Molecule 20 is a protein called 30S ribosomal protein S20.

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

- Molecule 21 is a RNA chain called 23S RIBOSOMAL RNA.

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

- Molecule 22 is a RNA chain called 5S RIBOSOMAL RNA.

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

- Molecule 23 is a protein called 50S ribosomal protein L2.

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

- Molecule 24 is a protein called 50S ribosomal protein L3.

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

- Molecule 25 is a protein called 50S ribosomal protein L4.

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

- Molecule 26 is a protein called 50S ribosomal protein L5.

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

- Molecule 27 is a protein called 50S ribosomal protein L6.

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

- Molecule 28 is a protein called 50S ribosomal protein L9.

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

- Molecule 29 is a protein called 50S ribosomal protein L11.

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

- Molecule 30 is a protein called 50S ribosomal protein L13.

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

- Molecule 31 is a protein called 50S ribosomal protein L14.

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

- Molecule 32 is a protein called 50S ribosomal protein L15.

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

- Molecule 33 is a protein called 50S ribosomal protein L16.

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

- Molecule 34 is a protein called 50S ribosomal protein L17.

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

- Molecule 35 is a protein called 50S ribosomal protein L18.



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

- Molecule 36 is a protein called 50S ribosomal protein L19.

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

- Molecule 37 is a protein called 50S ribosomal protein L20.

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

- Molecule 38 is a protein called 50S ribosomal protein L21.

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

- Molecule 39 is a protein called 50S ribosomal protein L22.

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

- Molecule 40 is a protein called 50S ribosomal protein L23.

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

- Molecule 41 is a protein called 50S ribosomal protein L24.

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

- Molecule 42 is a protein called general stress protein Ctc.

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

- Molecule 43 is a protein called 50S ribosomal protein L27.

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

- Molecule 44 is a protein called 50S RIBOSOMAL PROTEIN L28.

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

- Molecule 45 is a protein called 50S ribosomal protein L29.

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

- Molecule 46 is a protein called 50S ribosomal protein L30.

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

- Molecule 47 is a protein called 50S ribosomal protein L31.

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

- Molecule 48 is a protein called 50S ribosomal protein L32.

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

- Molecule 49 is a protein called 50S ribosomal protein L33.

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

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

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

- Molecule 51 is a protein called 50S ribosomal protein L35.

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

- Molecule 52 is a protein called 50S ribosomal protein L36.

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

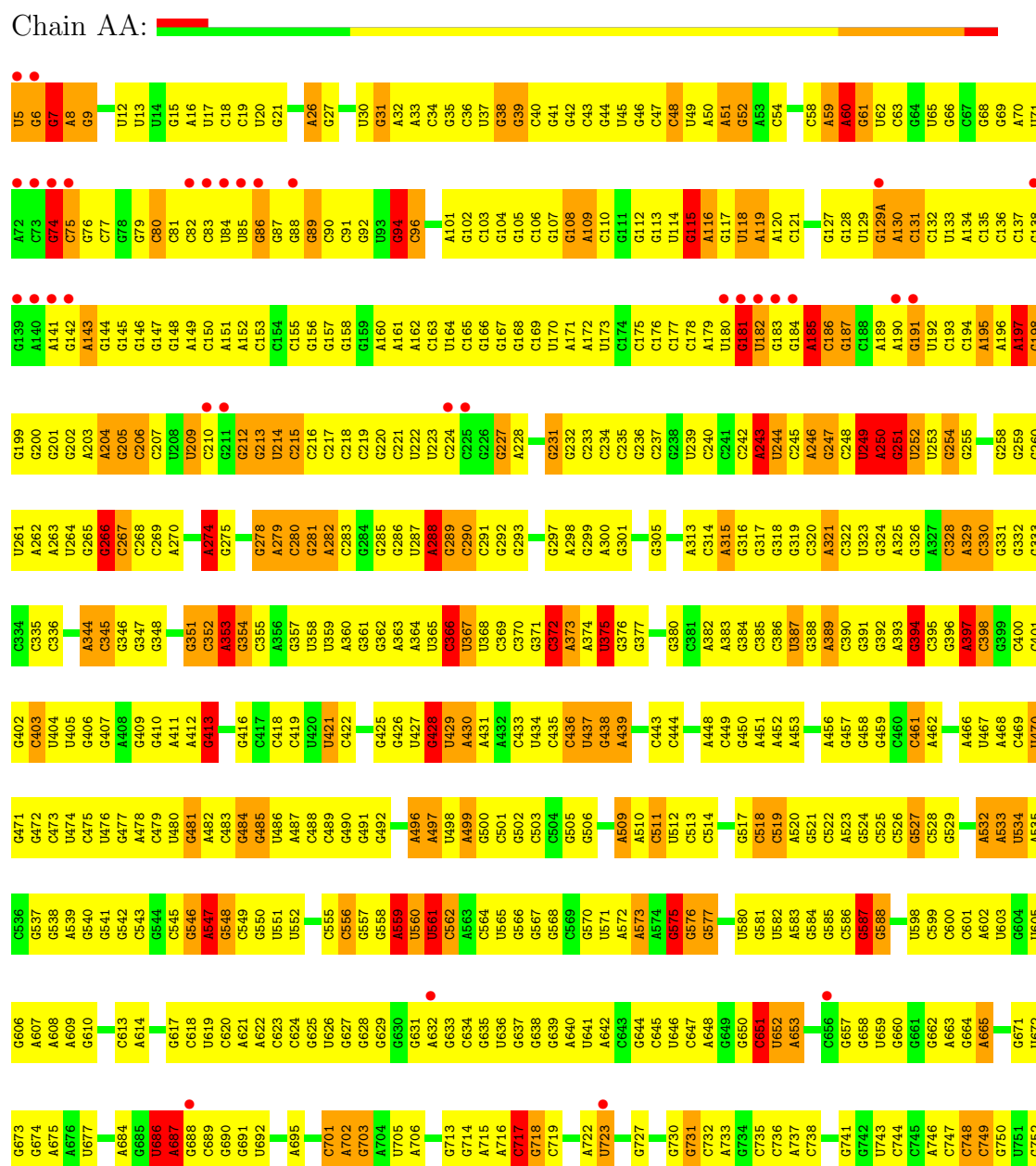
- Molecule 53 is a protein called 50S ribosomal protein L1P.

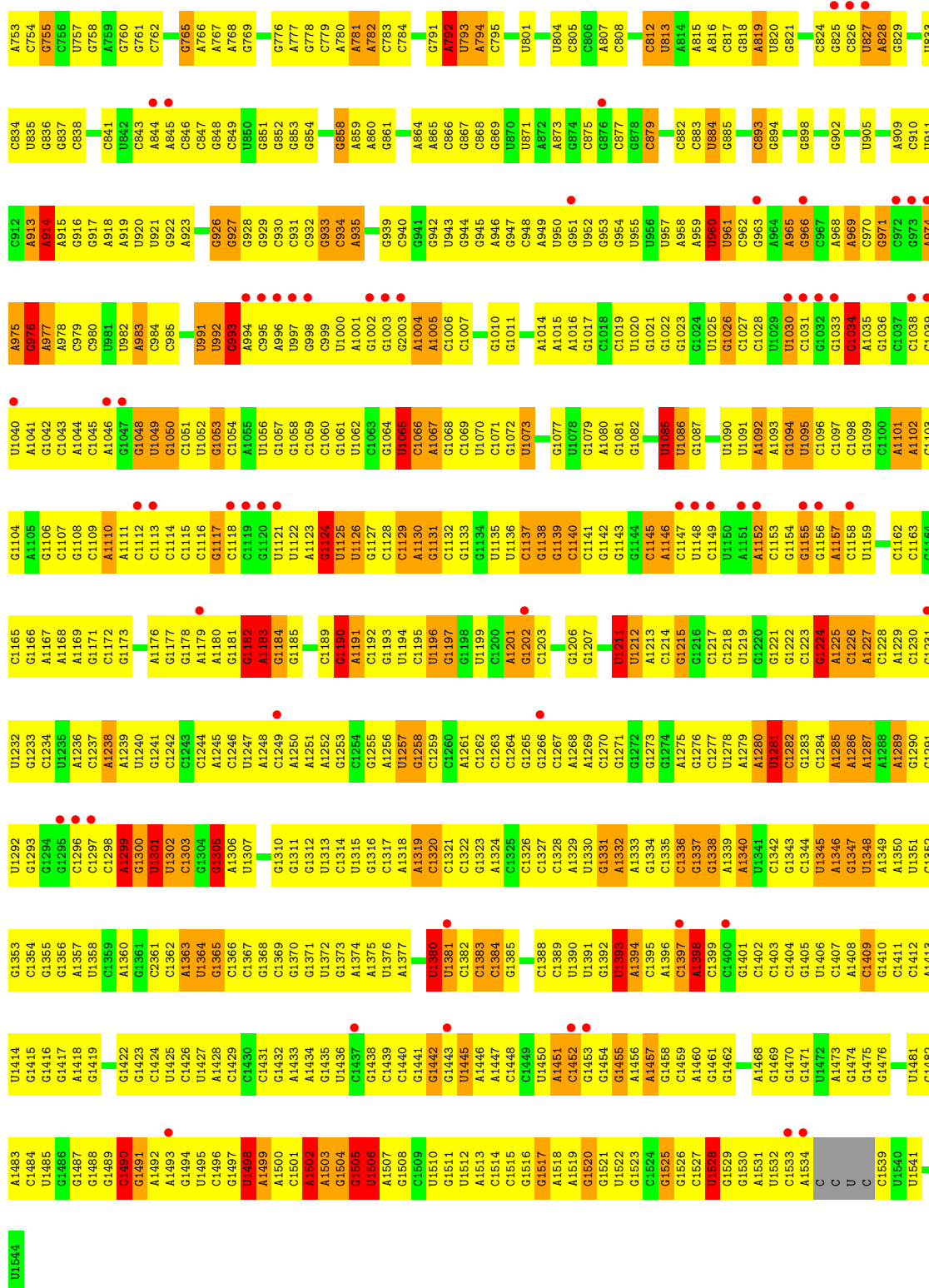
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
53	B5	217	Total C 217 217	0	0	217

### 3 Residue-property plots

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

#### • Molecule 1: 16S RIBOSOMAL RNA

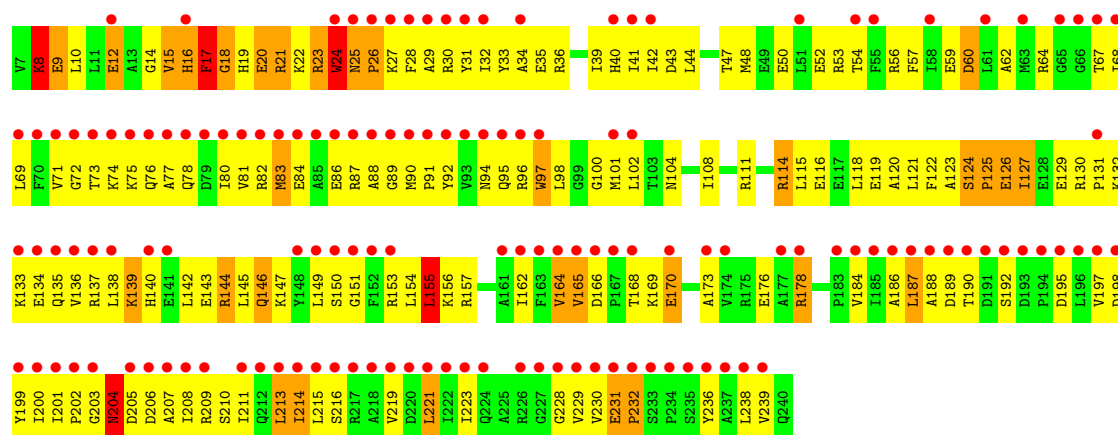




• Molecule 2: 30S ribosomal protein S2

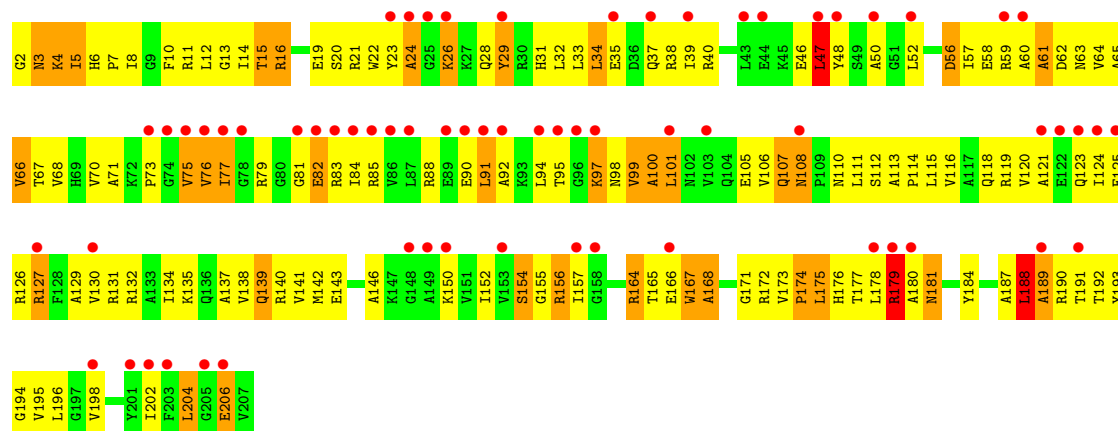
Chain AB:





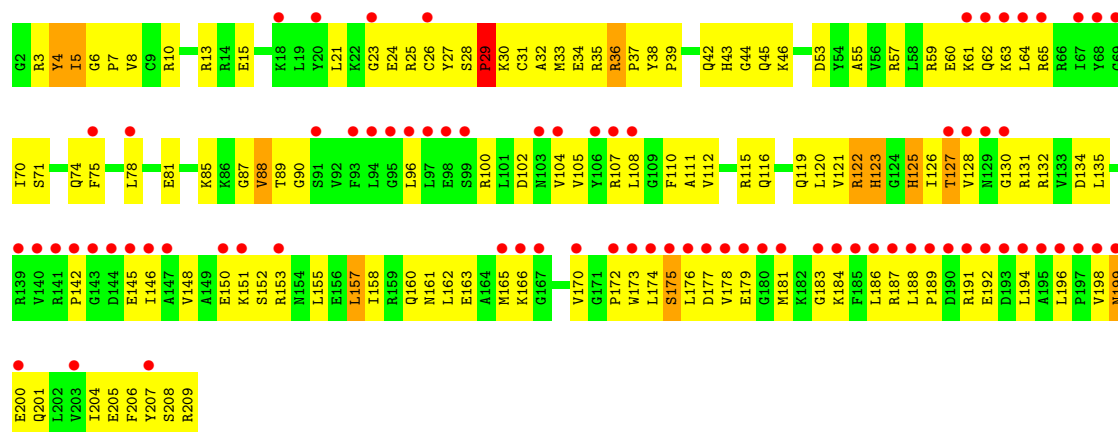
• Molecule 3: 30S ribosomal protein S3

Chain AC:



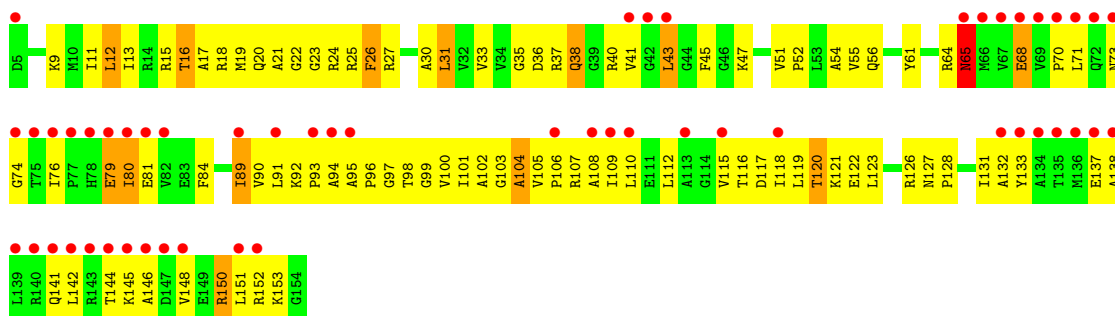
• Molecule 4: 30S ribosomal protein S4

Chain AD:



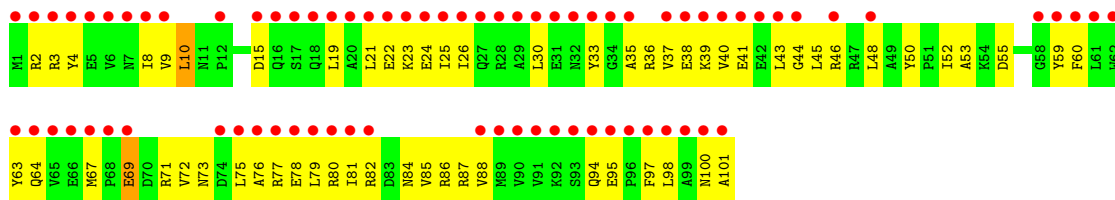
• Molecule 5: 30S ribosomal protein S5

Chain AE:



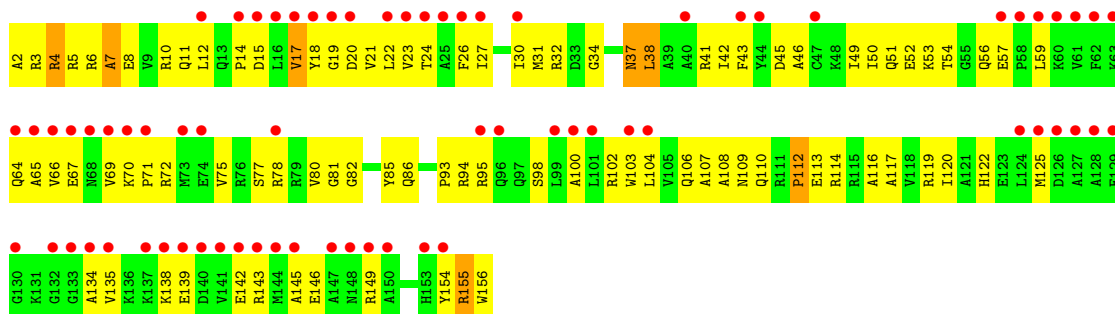
- Molecule 6: 30S ribosomal protein S6

Chain AF:



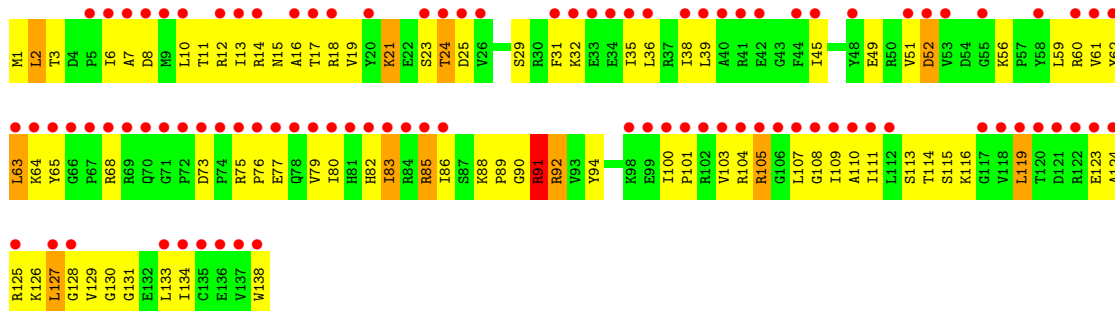
- Molecule 7: 30S ribosomal protein S7

Chain AG: 



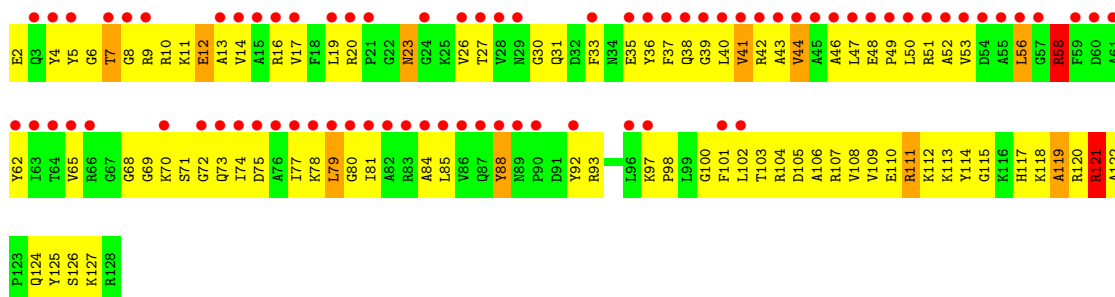
- Molecule 8: 30S ribosomal protein S8

Chain AH: 



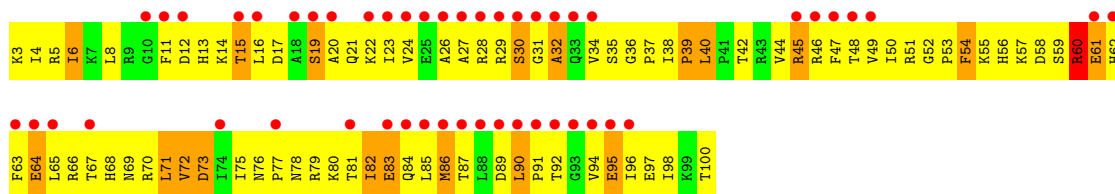
- Molecule 9: 30S ribosomal protein S9

Chain AI:



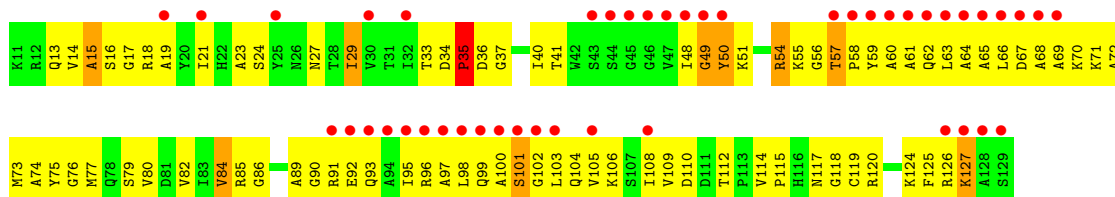
• Molecule 10: 30S ribosomal protein S10

Chain AJ:



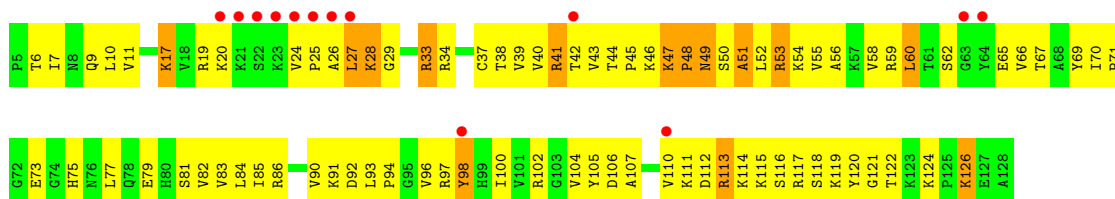
• Molecule 11: 30S ribosomal protein S11

Chain AK:



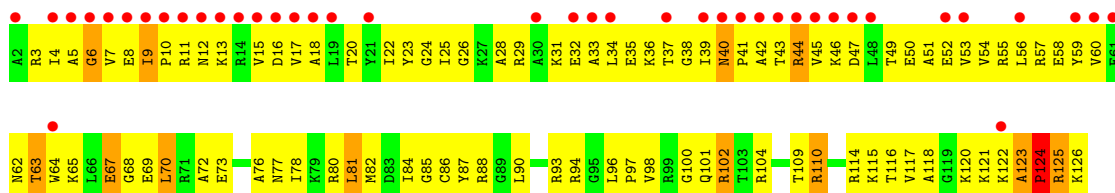
• Molecule 12: 30S ribosomal protein S12

Chain AL:



• Molecule 13: 30S ribosomal protein S13

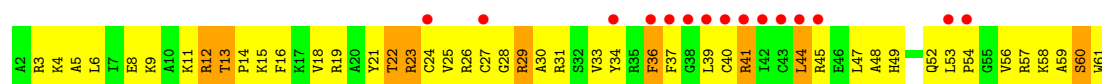
Chain AM:



• Molecule 14: 30S ribosomal protein S14

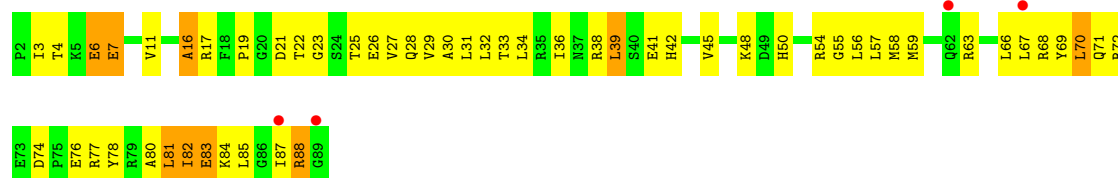
Chain AN:





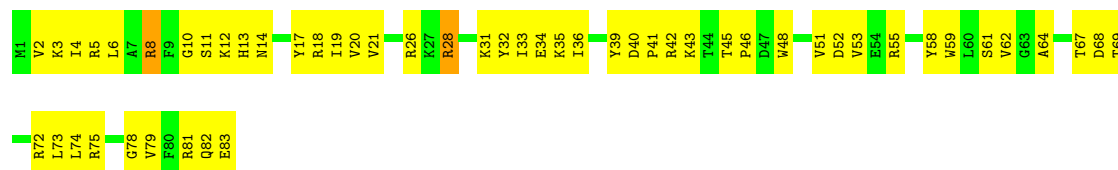
• Molecule 15: 30S ribosomal protein S15

Chain AO:



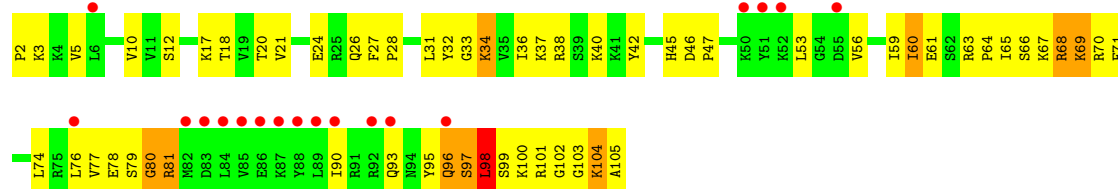
• Molecule 16: 30S ribosomal protein S16

Chain AP:



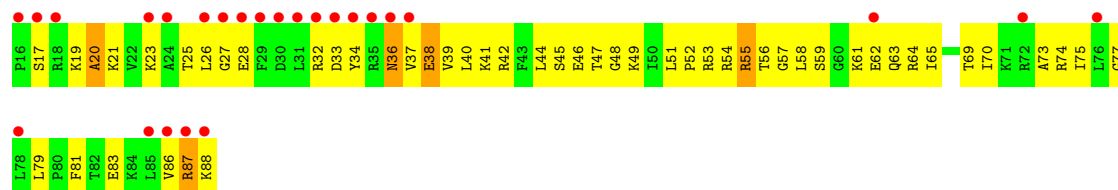
• Molecule 17: 30S ribosomal protein S17

Chain AQ:



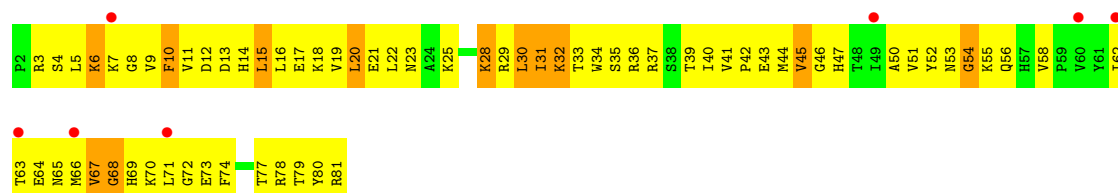
• Molecule 18: 30S ribosomal protein S18

Chain AR:



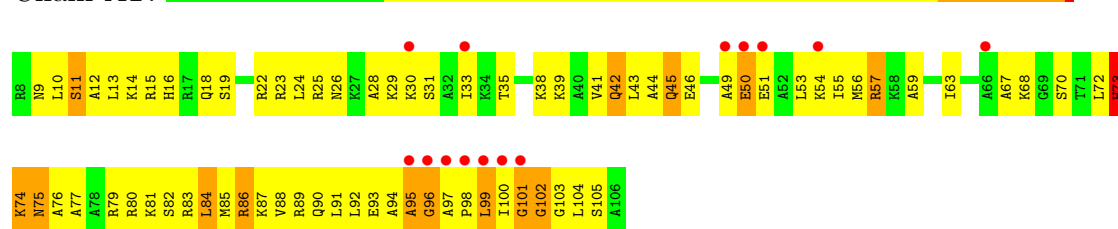
• Molecule 19: 30S ribosomal protein S19

Chain AS:



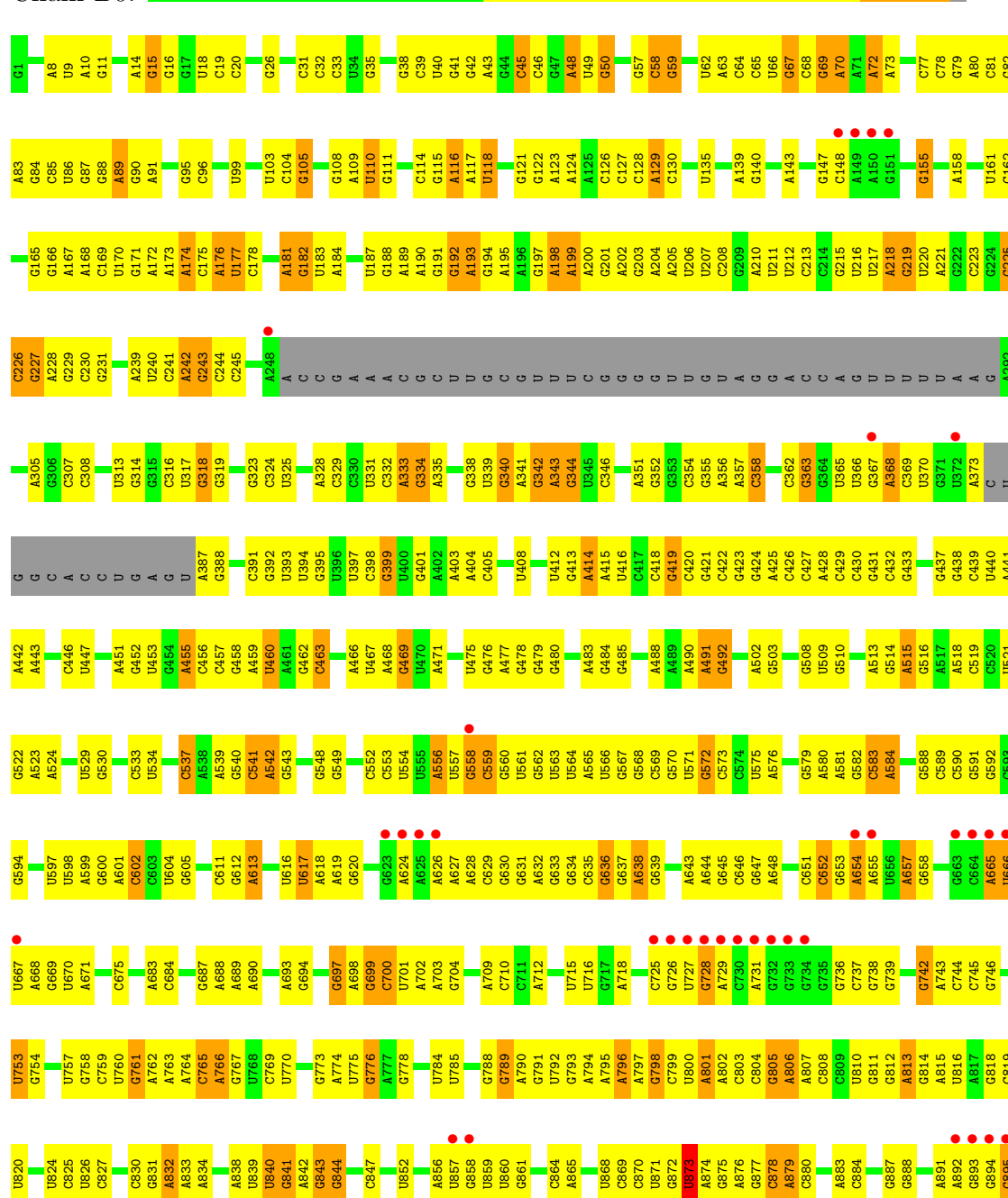
- Molecule 20: 30S ribosomal protein S20

Chain AT:



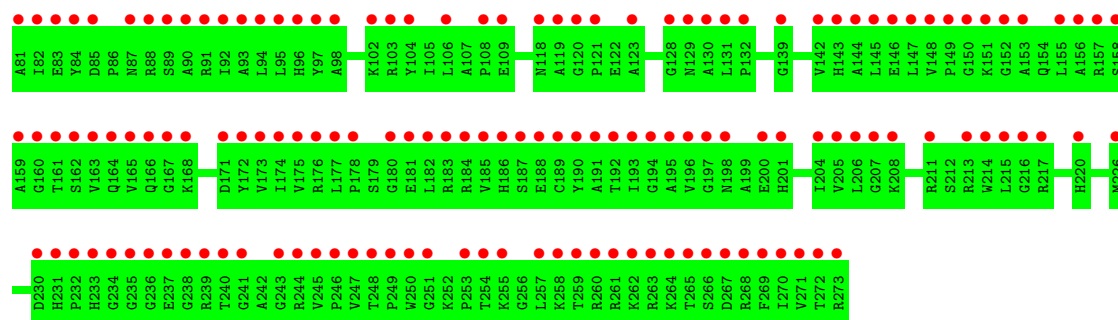
- Molecule 21: 23S RIBOSOMAL RNA

Chain B0:



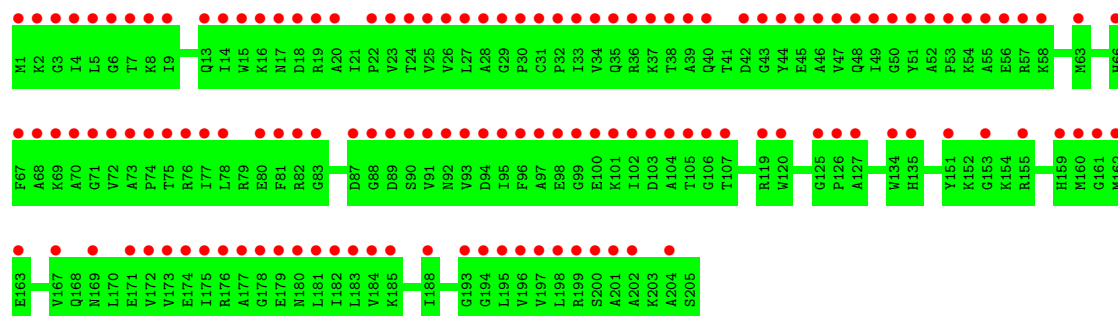
G2020	G2021	C2022	G2023	G2024	A2025	C2026	C2027	C2028	G2029	U2030	A2031	C2032	C2033	A2034	G2035	G2036	A2037	C2038	G2039	A2040	A2041	A2042	G2043	G2044	A2045	C2046	C2047	C2048	C2049	G2050	U2051	C1982	G1983		G2055	C2056	U2057	U2058	U2059	A1998	C2061	U2062		A2065	G2066		U2069	G2070		U2075	C3093	A3094		U3098	C3099	G3102	A3103																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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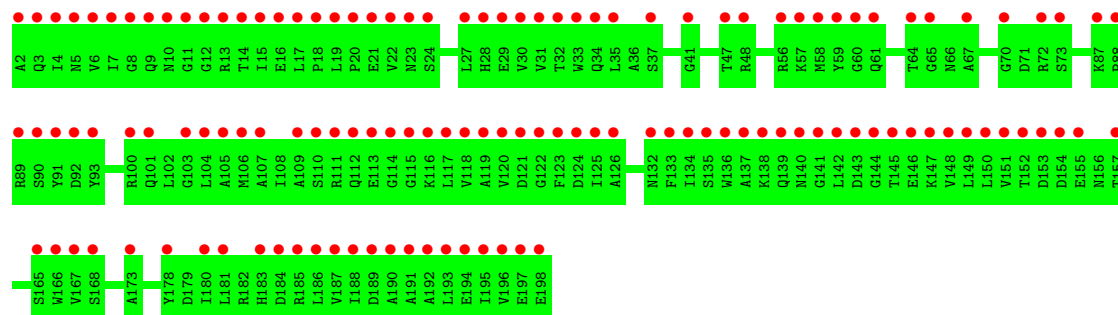
• Molecule 24: 50S ribosomal protein L3

Chain BB:



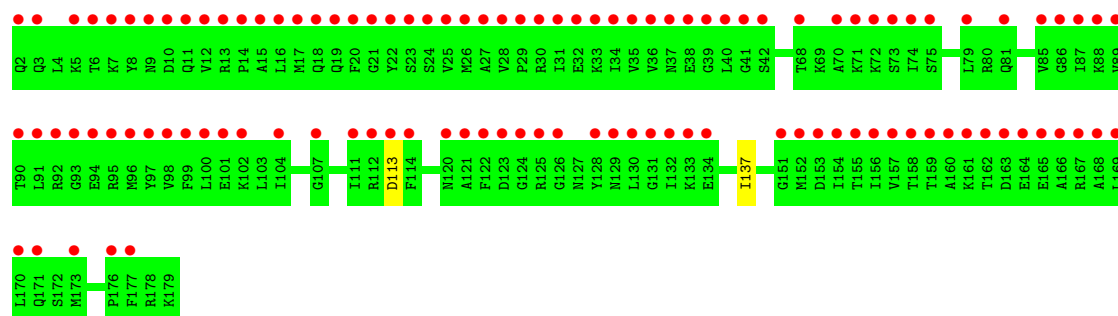
• Molecule 25: 50S ribosomal protein L4

Chain BC:



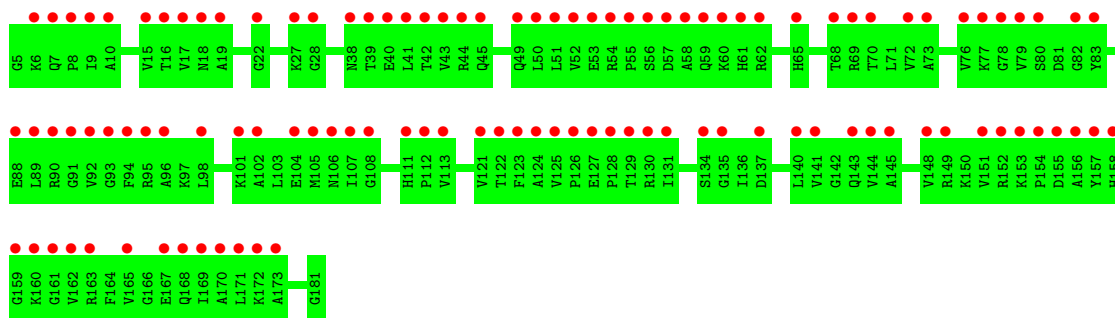
• Molecule 26: 50S ribosomal protein L5

Chain BD:



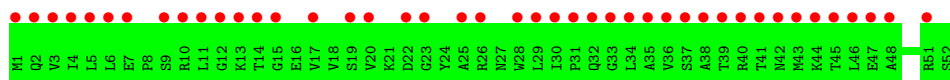
• Molecule 27: 50S ribosomal protein L6

Chain BE:



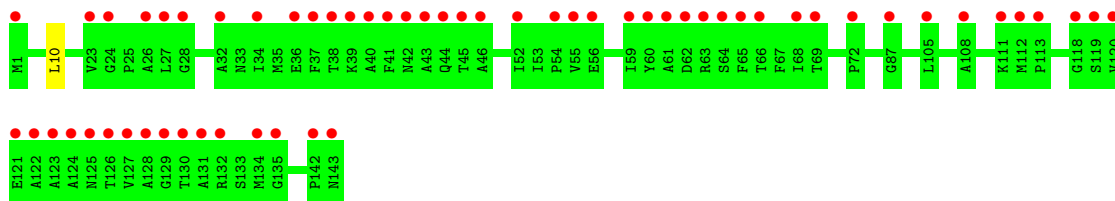
- Molecule 28: 50S ribosomal protein L9

Chain BF:



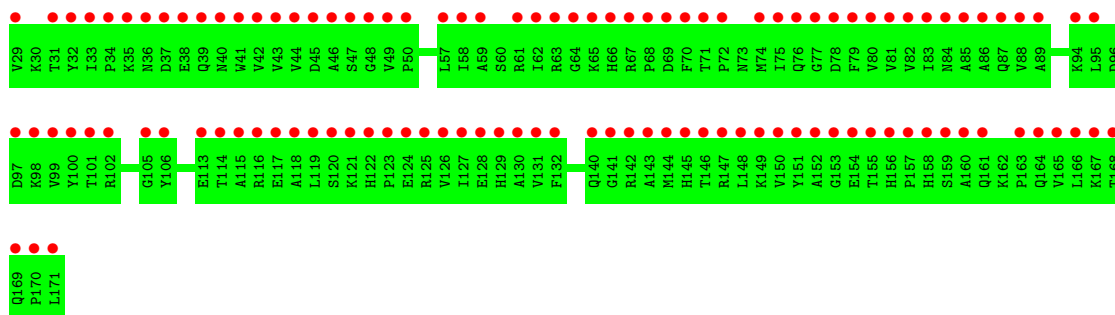
- Molecule 29: 50S ribosomal protein L11

Chain BG:



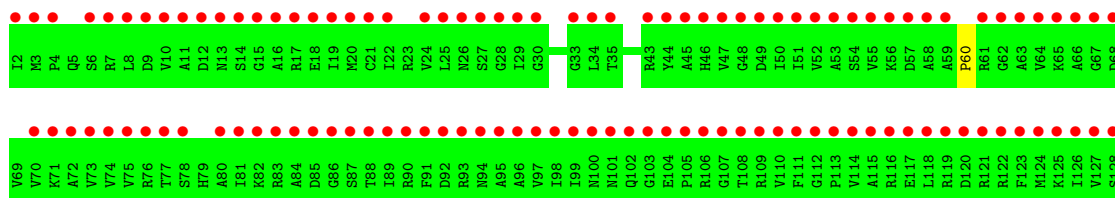
- Molecule 30: 50S ribosomal protein L13

Chain BH:



- Molecule 31: 50S ribosomal protein L14

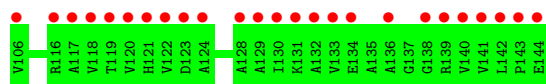
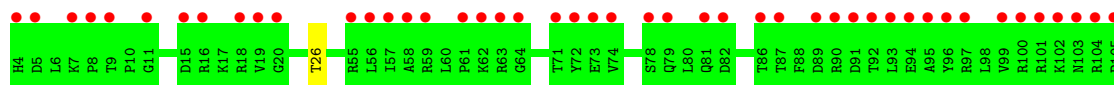
Chain BI:





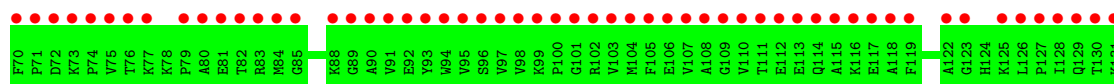
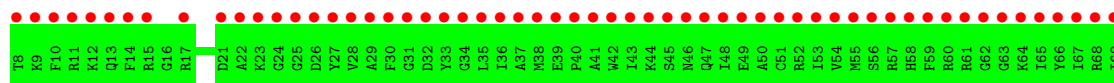
- Molecule 32: 50S ribosomal protein L15

Chain BJ:



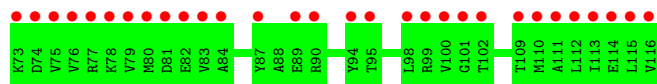
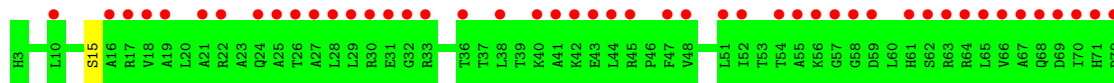
- Molecule 33: 50S ribosomal protein L16

Chain BK:



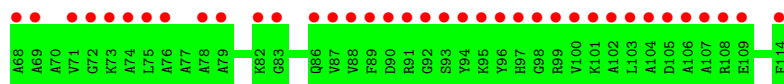
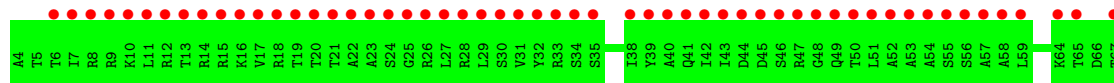
- Molecule 34: 50S ribosomal protein L17

Chain BL:



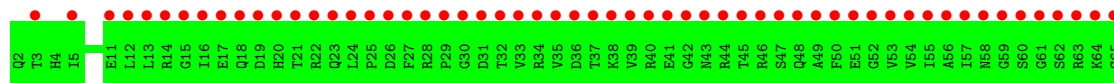
- Molecule 35: 50S ribosomal protein L18

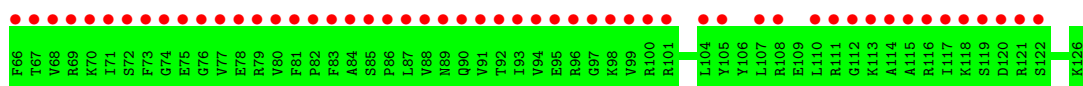
Chain BM:



- Molecule 36: 50S ribosomal protein L19

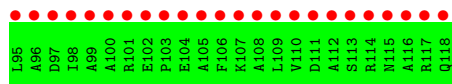
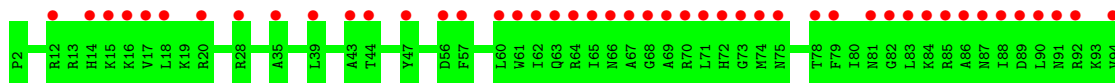
Chain BN:





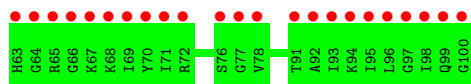
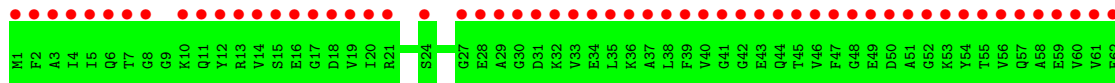
- Molecule 37: 50S ribosomal protein L20

Chain BO:



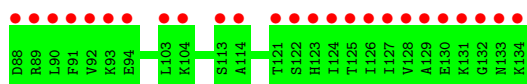
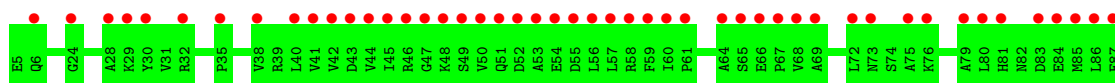
- Molecule 38: 50S ribosomal protein L21

Chain BP:



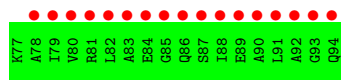
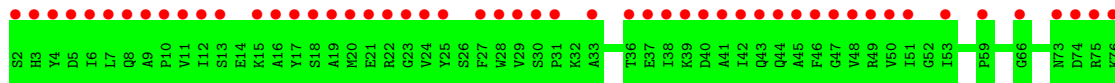
- Molecule 39: 50S ribosomal protein L22

Chain BQ:



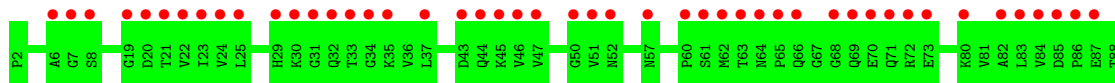
- Molecule 40: 50S ribosomal protein L23

Chain BR:

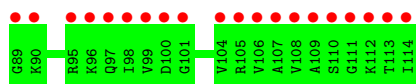


- Molecule 41: 50S ribosomal protein L24

Chain BS:

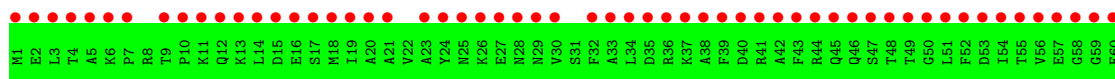






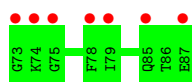
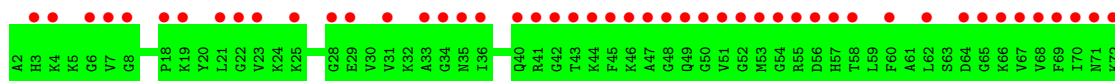
- Molecule 42: general stress protein Ctc

Chain BT:



- Molecule 43: 50S ribosomal protein L27

Chain BU:



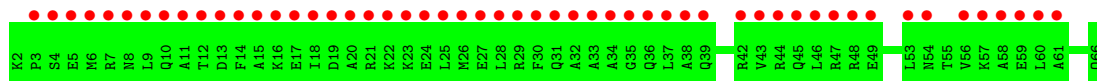
- Molecule 44: 50S RIBOSOMAL PROTEIN L28

Chain BV:

There are no outlier residues recorded for this chain.

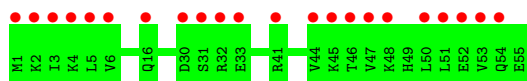
- Molecule 45: 50S ribosomal protein L29

Chain BW:



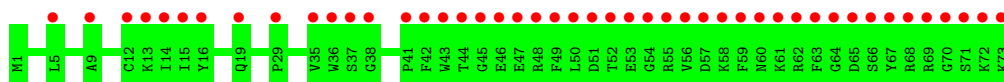
- Molecule 46: 50S ribosomal protein L30

Chain BX:



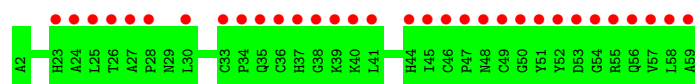
- Molecule 47: 50S ribosomal protein L31

Chain BY:



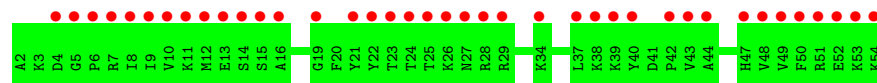
- Molecule 48: 50S ribosomal protein L32

Chain BZ:



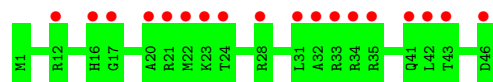
- Molecule 49: 50S ribosomal protein L33

Chain B1:



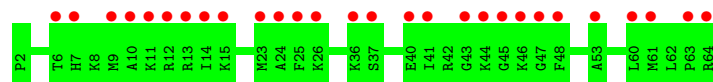
- Molecule 50: 50S ribosomal protein L34

Chain B2:



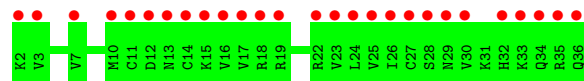
- Molecule 51: 50S ribosomal protein L35

Chain B3:



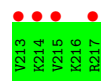
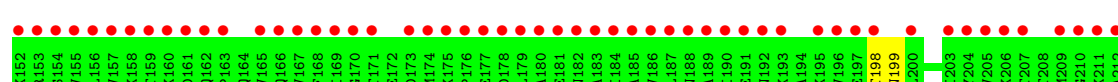
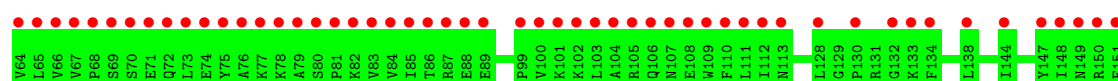
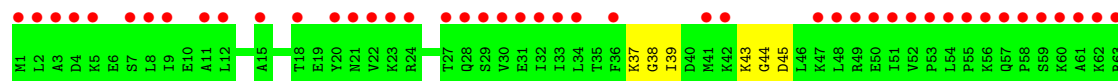
- Molecule 52: 50S ribosomal protein L36

Chain B4:



- Molecule 53: 50S ribosomal protein L1P

Chain B5:



## 4 Data and refinement statistics

Property	Value	Source
Space group	I 4 2 2	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	683.89Å 683.89Å 386.72Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	70.00 – 9.50 241.79 – 9.50	Depositor EDS
% Data completeness (in resolution range)	92.1 (70.00-9.50) 87.2 (241.79-9.50)	Depositor EDS
$R_{merge}$	0.14	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	9.49 (at 9.99Å)	Xtriage
Refinement program	CNS	Depositor
R, $R_{free}$	0.389 , 0.407 0.369 , 0.386	Depositor DCC
$R_{free}$ test set	1209 reflections (4.79%)	DCC
Wilson B-factor (Å <sup>2</sup> )	437.2	Xtriage
Anisotropy	0.460	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	-0.34 , 4859.5	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle  L  \rangle = 0.46$ , $\langle L^2 \rangle = 0.30$	Xtriage
Outliers	0 of 26821 reflections	Xtriage
$F_o, F_c$ correlation	0.95	EDS
Total number of atoms	118711	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	680.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 12.90% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

## 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	1.68	75/36823 (0.2%)	1.26	270/57351 (0.5%)
2	AB	0.37	0/1935	0.68	1/2609 (0.0%)
3	AC	0.38	0/1636	0.66	0/2205
4	AD	0.37	0/1732	0.63	0/2318
5	AE	0.49	0/1162	0.79	0/1564
6	AF	0.33	0/855	0.62	0/1154
7	AG	0.34	0/1275	0.62	0/1709
8	AH	0.44	0/1135	0.74	0/1527
9	AI	0.36	0/1028	0.62	0/1378
10	AJ	0.36	0/807	0.71	0/1085
11	AK	0.39	0/899	0.70	0/1213
12	AL	0.43	0/985	0.73	0/1317
13	AM	0.36	0/1006	0.67	0/1344
14	AN	0.40	0/500	0.78	0/664
15	AO	0.36	0/744	0.63	1/992 (0.1%)
16	AP	0.43	0/716	0.76	0/963
17	AQ	0.44	0/869	0.75	0/1159
18	AR	0.36	0/602	0.63	0/799
19	AS	0.35	0/661	0.72	1/890 (0.1%)
20	AT	0.39	0/764	0.73	0/1006
21	B0	0.50	17/67885 (0.0%)	0.75	48/105852 (0.0%)
22	B9	0.68	1/2815 (0.0%)	0.76	3/4384 (0.1%)
All	All	0.99	93/126834 (0.1%)	0.93	324/193483 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	AA	2	40
21	B0	0	5
All	All	2	45

All (93) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	59	A	O3'-P	-120.85	0.16	1.61
1	AA	1398	A	O3'-P	-86.38	0.57	1.61
1	AA	214	U	O3'-P	-73.42	0.73	1.61
1	AA	394	G	O3'-P	-71.42	0.75	1.61
1	AA	1505	G	O3'-P	-71.04	0.76	1.61
1	AA	1190	G	O3'-P	-65.50	0.82	1.61
1	AA	249	U	O3'-P	-57.73	0.91	1.61
1	AA	227	G	O3'-P	-51.89	0.98	1.61
1	AA	1331	G	O3'-P	48.56	2.19	1.61
1	AA	933	G	O3'-P	-48.37	1.03	1.61
1	AA	1155	G	O3'-P	44.40	2.14	1.61
21	B0	3107	G	O3'-P	44.23	2.14	1.61
1	AA	375	U	O3'-P	-43.87	1.08	1.61
1	AA	1034	G	O3'-P	43.47	2.13	1.61
1	AA	212	G	O3'-P	42.99	2.12	1.61
21	B0	3098	U	O3'-P	42.63	2.12	1.61
1	AA	118	U	O3'-P	41.73	2.11	1.61
1	AA	94	G	O3'-P	-40.94	1.12	1.61
21	B0	3106	U	O3'-P	-40.49	1.12	1.61
1	AA	765	G	O3'-P	40.04	2.09	1.61
21	B0	1856	U	O3'-P	37.56	2.06	1.61
1	AA	651	C	O3'-P	-37.05	1.16	1.61
1	AA	717	C	O3'-P	36.85	2.05	1.61
1	AA	1211	U	O3'-P	35.24	2.03	1.61
21	B0	3183	A	O3'-P	34.33	2.02	1.61
1	AA	288	A	O3'-P	-34.25	1.20	1.61
22	B9	73	C	O3'-P	33.99	2.02	1.61
1	AA	143	A	O3'-P	33.84	2.01	1.61
1	AA	74	G	O3'-P	-33.69	1.20	1.61
1	AA	274	A	O3'-P	-31.45	1.23	1.61
21	B0	3149	G	O3'-P	31.38	1.98	1.61
1	AA	89	G	O3'-P	31.37	1.98	1.61
1	AA	1110	A	O3'-P	-31.30	1.23	1.61
1	AA	351	G	O3'-P	30.52	1.97	1.61
1	AA	1409	C	O3'-P	-30.48	1.24	1.61
1	AA	576	G	O3'-P	-30.05	1.25	1.61
21	B0	3102	G	O3'-P	-28.84	1.26	1.61
1	AA	108	G	O3'-P	28.13	1.95	1.61
1	AA	1305	G	O3'-P	27.72	1.94	1.61
1	AA	914	A	O3'-P	27.55	1.94	1.61
1	AA	239	U	O3'-P	-26.48	1.29	1.61
1	AA	1238	A	O3'-P	25.23	1.91	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	206	C	O3'-P	25.07	1.91	1.61
1	AA	1337	G	O3'-P	24.68	1.90	1.61
1	AA	461	C	O3'-P	-24.66	1.31	1.61
21	B0	3188	U	O3'-P	24.57	1.90	1.61
1	AA	436	C	O3'-P	-24.35	1.31	1.61
1	AA	827	U	O3'-P	24.18	1.90	1.61
1	AA	561	U	O3'-P	-24.02	1.32	1.61
1	AA	38	G	O3'-P	23.63	1.89	1.61
1	AA	587	G	O3'-P	23.46	1.89	1.61
1	AA	1345	U	O3'-P	23.29	1.89	1.61
1	AA	733	A	O3'-P	22.74	1.88	1.61
1	AA	1455	G	O3'-P	-22.14	1.34	1.61
1	AA	1457	A	O3'-P	-22.12	1.34	1.61
1	AA	1335	C	O3'-P	-21.80	1.34	1.61
21	B0	3141	G	O3'-P	21.64	1.87	1.61
1	AA	1393	U	O3'-P	-21.48	1.35	1.61
21	B0	3101	G	O3'-P	20.96	1.86	1.61
1	AA	499	A	O3'-P	-20.48	1.36	1.61
1	AA	396	G	O3'-P	19.89	1.85	1.61
1	AA	115	G	O3'-P	19.70	1.84	1.61
21	B0	3190	G	O3'-P	18.30	1.83	1.61
1	AA	278	G	O3'-P	-18.25	1.39	1.61
1	AA	983	A	O3'-P	-17.55	1.40	1.61
1	AA	135	C	O3'-P	-17.50	1.40	1.61
1	AA	1383	C	O3'-P	-17.23	1.40	1.61
21	B0	3874	C	O3'-P	17.00	1.81	1.61
1	AA	869	G	O3'-P	16.03	1.80	1.61
21	B0	3186	C	O3'-P	-15.64	1.42	1.61
1	AA	1445	U	O3'-P	-15.43	1.42	1.61
1	AA	944	G	O3'-P	14.50	1.78	1.61
1	AA	470	U	O3'-P	-14.46	1.43	1.61
1	AA	315	A	O3'-P	14.28	1.78	1.61
1	AA	1224	G	O3'-P	-13.40	1.45	1.61
1	AA	387	U	O3'-P	-13.35	1.45	1.61
1	AA	1490	C	O3'-P	-12.70	1.46	1.61
1	AA	905	U	O3'-P	12.50	1.76	1.61
1	AA	884	U	O3'-P	-12.43	1.46	1.61
1	AA	960	U	O3'-P	11.95	1.75	1.61
1	AA	684	A	O3'-P	-11.45	1.47	1.61
1	AA	1033	G	O3'-P	10.70	1.74	1.61
21	B0	3866	A	O3'-P	10.65	1.74	1.61
1	AA	403	C	O3'-P	-8.95	1.50	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	109	A	O3'-P	8.36	1.71	1.61
1	AA	79	G	O3'-P	-8.03	1.51	1.61
1	AA	26	A	O3'-P	-7.84	1.51	1.61
1	AA	1183	A	O3'-P	-6.94	1.52	1.61
1	AA	556	C	O3'-P	-6.19	1.53	1.61
21	B0	1113	C	P-OP2	6.15	1.59	1.49
1	AA	754	C	O3'-P	-5.35	1.54	1.61
21	B0	1113	C	C3'-O3'	-5.34	1.34	1.42
21	B0	1112	U	C3'-O3'	-5.28	1.34	1.42

All (324) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	59	A	P-O3'-C3'	-58.31	49.73	119.70
21	B0	1856	U	O3'-P-O5'	-48.57	11.72	104.00
21	B0	3098	U	P-O3'-C3'	42.71	170.95	119.70
1	AA	1490	C	P-O3'-C3'	40.44	168.23	119.70
1	AA	651	C	P-O3'-C3'	-39.22	72.64	119.70
21	B0	3190	G	P-O3'-C3'	38.19	165.53	119.70
1	AA	933	G	P-O3'-C3'	-35.50	77.10	119.70
1	AA	1238	A	P-O3'-C3'	-35.04	77.65	119.70
1	AA	1383	C	P-O3'-C3'	-34.97	77.73	119.70
1	AA	436	C	P-O3'-C3'	-34.32	78.51	119.70
1	AA	351	G	O3'-P-O5'	33.23	167.14	104.00
1	AA	74	G	P-O3'-C3'	32.86	159.14	119.70
1	AA	185	A	OP2-P-O3'	-31.08	36.82	105.20
1	AA	59	A	OP2-P-O3'	-30.45	38.20	105.20
1	AA	403	C	P-O3'-C3'	-28.93	84.98	119.70
1	AA	274	A	O3'-P-O5'	-28.62	49.62	104.00
1	AA	143	A	P-O3'-C3'	-27.96	86.15	119.70
1	AA	1409	C	O3'-P-O5'	-27.46	51.83	104.00
1	AA	547	A	P-O3'-C3'	-27.30	86.94	119.70
1	AA	436	C	O3'-P-O5'	-27.04	52.62	104.00
1	AA	1183	A	P-O3'-C3'	-27.04	87.25	119.70
21	B0	3107	G	P-O3'-C3'	27.02	152.12	119.70
1	AA	1393	U	OP1-P-O3'	-26.70	46.47	105.20
21	B0	3098	U	OP1-P-O3'	25.26	160.77	105.20
21	B0	3190	G	OP2-P-O3'	-25.09	50.01	105.20
1	AA	351	G	P-O3'-C3'	24.61	149.23	119.70
1	AA	249	U	O3'-P-O5'	24.48	150.51	104.00
1	AA	1490	C	OP1-P-O3'	24.40	158.87	105.20
1	AA	1505	G	P-O3'-C3'	23.96	148.45	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	436	C	OP2-P-O3'	23.83	157.62	105.20
1	AA	1155	G	P-O3'-C3'	-22.99	92.11	119.70
1	AA	115	G	P-O3'-C3'	-22.94	92.17	119.70
21	B0	1072	U	O5'-P-OP1	-22.91	83.20	110.70
1	AA	651	C	O3'-P-O5'	22.36	146.47	104.00
1	AA	1383	C	O3'-P-O5'	21.74	145.31	104.00
1	AA	1335	C	P-O3'-C3'	21.63	145.65	119.70
1	AA	733	A	P-O3'-C3'	21.49	145.49	119.70
1	AA	1455	G	P-O3'-C3'	21.37	145.35	119.70
1	AA	94	G	P-O3'-C3'	21.22	145.17	119.70
1	AA	109	A	P-O3'-C3'	21.12	145.04	119.70
1	AA	1190	G	P-O3'-C3'	-21.07	94.42	119.70
21	B0	3874	C	P-O3'-C3'	-21.05	94.44	119.70
1	AA	651	C	OP1-P-O3'	-20.86	59.31	105.20
21	B0	1071	U	OP1-P-O3'	-20.80	59.45	105.20
21	B0	3190	G	OP1-P-O3'	20.75	150.84	105.20
1	AA	587	G	O3'-P-O5'	20.65	143.24	104.00
21	B0	3106	U	O3'-P-O5'	-20.47	65.10	104.00
1	AA	1238	A	O3'-P-O5'	20.25	142.47	104.00
21	B0	3106	U	P-O3'-C3'	20.00	143.70	119.70
1	AA	933	G	OP1-P-O3'	-19.91	61.39	105.20
1	AA	351	G	OP1-P-O3'	-19.71	61.83	105.20
1	AA	1490	C	OP2-P-O3'	-19.66	61.95	105.20
1	AA	202	G	P-O3'-C3'	-19.51	96.29	119.70
1	AA	1183	A	OP1-P-O3'	19.35	147.76	105.20
1	AA	375	U	P-O3'-C3'	19.30	142.87	119.70
1	AA	1211	U	P-O3'-C3'	-19.23	96.62	119.70
1	AA	59	A	OP1-P-O3'	19.09	147.19	105.20
1	AA	587	G	OP1-P-O3'	-19.02	63.36	105.20
1	AA	1393	U	P-O3'-C3'	-18.98	96.93	119.70
1	AA	905	U	P-O3'-C3'	18.97	142.46	119.70
1	AA	1383	C	OP1-P-O3'	-18.60	64.28	105.20
1	AA	461	C	P-O3'-C3'	18.46	141.86	119.70
22	B9	73	C	O3'-P-O5'	18.34	138.85	104.00
1	AA	1335	C	O3'-P-O5'	18.23	138.64	104.00
22	B9	73	C	P-O3'-C3'	-18.05	98.04	119.70
1	AA	249	U	OP2-P-O3'	-17.94	65.73	105.20
21	B0	3101	G	O3'-P-O5'	-17.88	70.03	104.00
1	AA	246	A	P-O3'-C3'	-17.62	98.56	119.70
1	AA	1182	G	OP2-P-O3'	17.61	143.94	105.20
21	B0	3101	G	OP2-P-O3'	17.52	143.74	105.20
1	AA	1224	G	O3'-P-O5'	17.38	137.03	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	278	G	P-O3'-C3'	-17.32	98.91	119.70
1	AA	143	A	O3'-P-O5'	-17.27	71.18	104.00
1	AA	212	G	OP2-P-O3'	-17.10	67.57	105.20
21	B0	3107	G	OP1-P-O3'	16.93	142.45	105.20
1	AA	754	C	P-O3'-C3'	-16.90	99.42	119.70
1	AA	1033	G	P-O3'-C3'	16.89	139.97	119.70
1	AA	214	U	O3'-P-O5'	-16.88	71.92	104.00
1	AA	1238	A	OP1-P-O3'	-16.82	68.20	105.20
21	B0	3107	G	O3'-P-O5'	-16.81	72.06	104.00
1	AA	288	A	O3'-P-O5'	-16.31	73.02	104.00
1	AA	1182	G	O3'-P-O5'	-16.26	73.11	104.00
1	AA	547	A	O3'-P-O5'	16.17	134.72	104.00
21	B0	3149	G	O3'-P-O5'	16.02	134.44	104.00
1	AA	185	A	O3'-P-O5'	15.72	133.86	104.00
1	AA	115	G	OP1-P-O3'	-15.68	70.69	105.20
1	AA	1190	G	O3'-P-O5'	15.63	133.69	104.00
21	B0	3098	U	OP2-P-O3'	-15.60	70.88	105.20
1	AA	214	U	P-O3'-C3'	15.59	138.41	119.70
1	AA	26	A	OP2-P-O3'	15.59	139.49	105.20
1	AA	288	A	OP1-P-O3'	15.43	139.15	105.20
1	AA	109	A	O3'-P-O5'	-15.40	74.75	104.00
21	B0	3866	A	P-O3'-C3'	15.31	138.07	119.70
1	AA	576	G	P-O3'-C3'	-15.18	101.48	119.70
21	B0	1072	U	O5'-P-OP2	-15.09	92.12	105.70
1	AA	1110	A	O3'-P-O5'	-15.07	75.37	104.00
1	AA	274	A	P-O3'-C3'	-15.06	101.63	119.70
1	AA	1505	G	O3'-P-O5'	-15.06	75.39	104.00
1	AA	754	C	O3'-P-O5'	14.90	132.32	104.00
1	AA	547	A	OP2-P-O3'	-14.82	72.59	105.20
1	AA	1183	A	OP2-P-O3'	-14.77	72.70	105.20
1	AA	315	A	OP2-P-O3'	14.69	137.51	105.20
1	AA	1331	G	P-O3'-C3'	14.66	137.30	119.70
1	AA	684	A	P-O3'-C3'	14.57	137.19	119.70
1	AA	26	A	O3'-P-O5'	-14.48	76.49	104.00
1	AA	1034	G	P-O3'-C3'	-14.48	102.33	119.70
1	AA	135	C	P-O3'-C3'	-14.39	102.43	119.70
1	AA	556	C	P-O3'-C3'	14.38	136.96	119.70
1	AA	74	G	OP2-P-O3'	-14.35	73.64	105.20
1	AA	403	C	OP1-P-O3'	-14.21	73.95	105.20
1	AA	893	C	O3'-P-O5'	-14.05	77.30	104.00
1	AA	1211	U	OP2-P-O3'	-14.02	74.35	105.20
1	AA	212	G	OP1-P-O3'	13.95	135.89	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1211	U	O3'-P-O5'	13.89	130.39	104.00
1	AA	960	U	OP1-P-O3'	13.86	135.70	105.20
1	AA	983	A	P-O3'-C3'	13.81	136.27	119.70
21	B0	1856	U	P-O3'-C3'	-13.44	103.57	119.70
1	AA	74	G	OP1-P-O3'	13.39	134.66	105.20
1	AA	1457	A	O3'-P-O5'	13.35	129.36	104.00
1	AA	1190	G	OP1-P-O3'	-13.34	75.85	105.20
21	B0	1071	U	OP2-P-O3'	-13.30	75.94	105.20
1	AA	717	C	O3'-P-O5'	-13.30	78.74	104.00
1	AA	79	G	P-O3'-C3'	-13.29	103.75	119.70
1	AA	387	U	OP1-P-O3'	13.17	134.18	105.20
1	AA	717	C	P-O3'-C3'	-13.14	103.93	119.70
1	AA	1224	G	OP2-P-O3'	-13.13	76.31	105.20
1	AA	556	C	OP2-P-O3'	-13.03	76.53	105.20
1	AA	288	A	P-O3'-C3'	13.00	135.30	119.70
1	AA	351	G	OP2-P-O3'	-13.00	76.60	105.20
21	B0	3098	U	O3'-P-O5'	-12.61	80.05	104.00
1	AA	403	C	OP2-P-O3'	12.54	132.79	105.20
1	AA	1110	A	OP2-P-O3'	12.54	132.78	105.20
21	B0	3866	A	OP1-P-O3'	12.52	132.75	105.20
1	AA	315	A	O3'-P-O5'	-12.40	80.44	104.00
1	AA	827	U	P-O3'-C3'	12.38	134.56	119.70
1	AA	375	U	OP1-P-O3'	12.37	132.41	105.20
1	AA	89	G	P-O3'-C3'	-12.23	105.02	119.70
1	AA	246	A	O3'-P-O5'	-12.20	80.83	104.00
1	AA	115	G	OP2-P-O3'	12.19	132.01	105.20
1	AA	1393	U	O3'-P-O5'	12.08	126.96	104.00
1	AA	227	G	P-O3'-C3'	-12.03	105.26	119.70
1	AA	1398	A	P-O3'-C3'	11.87	133.95	119.70
1	AA	396	G	P-O3'-C3'	11.87	133.94	119.70
1	AA	135	C	O3'-P-O5'	11.87	126.55	104.00
1	AA	89	G	O3'-P-O5'	11.82	126.45	104.00
1	AA	933	G	O3'-P-O5'	11.82	126.45	104.00
1	AA	1409	C	OP2-P-O3'	11.77	131.08	105.20
1	AA	202	G	OP2-P-O3'	11.72	130.97	105.20
1	AA	1345	U	O3'-P-O5'	11.71	126.26	104.00
1	AA	278	G	O3'-P-O5'	-11.62	81.92	104.00
1	AA	315	A	P-O3'-C3'	11.27	133.23	119.70
1	AA	274	A	OP2-P-O3'	11.24	129.92	105.20
1	AA	1155	G	OP1-P-O3'	-11.23	80.49	105.20
21	B0	3106	U	OP1-P-O3'	11.21	129.87	105.20
1	AA	94	G	OP2-P-O3'	-11.20	80.55	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	B0	3186	C	P-O3'-C3'	11.19	133.13	119.70
1	AA	436	C	OP1-P-O3'	-11.15	80.68	105.20
1	AA	143	A	OP1-P-O3'	11.11	129.64	105.20
1	AA	1224	G	P-O3'-C3'	-11.06	106.43	119.70
1	AA	246	A	OP2-P-O3'	11.06	129.53	105.20
1	AA	1305	G	O3'-P-O5'	-10.95	83.20	104.00
21	B0	3101	G	P-O3'-C3'	-10.85	106.68	119.70
1	AA	1033	G	OP2-P-O3'	-10.68	81.72	105.20
1	AA	1505	G	OP1-P-O3'	10.63	128.58	105.20
1	AA	905	U	OP1-P-O3'	10.55	128.41	105.20
1	AA	108	G	P-O3'-C3'	-10.55	107.04	119.70
1	AA	278	G	OP2-P-O3'	10.54	128.39	105.20
1	AA	394	G	P-O3'-C3'	10.51	132.31	119.70
1	AA	983	A	OP2-P-O3'	-10.48	82.13	105.20
1	AA	1455	G	O3'-P-O5'	-10.43	84.18	104.00
1	AA	202	G	O3'-P-O5'	-10.43	84.19	104.00
1	AA	983	A	OP1-P-O3'	10.43	128.14	105.20
21	B0	3102	G	P-O3'-C3'	-10.41	107.20	119.70
1	AA	94	G	OP1-P-O3'	10.38	128.03	105.20
1	AA	905	U	O3'-P-O5'	-10.23	84.56	104.00
21	B0	3149	G	OP2-P-O3'	-10.19	82.78	105.20
21	B0	3874	C	O3'-P-O5'	10.18	123.34	104.00
1	AA	1155	G	OP2-P-O3'	10.09	127.40	105.20
1	AA	684	A	OP1-P-O3'	10.08	127.37	105.20
1	AA	960	U	P-O3'-C3'	10.07	131.78	119.70
1	AA	1305	G	P-O3'-C3'	-9.97	107.73	119.70
1	AA	1498	U	C2'-C3'-O3'	9.96	131.40	109.50
21	B0	3866	A	O3'-P-O5'	-9.96	85.08	104.00
1	AA	914	A	OP2-P-O3'	9.95	127.08	105.20
1	AA	461	C	OP2-P-O3'	-9.83	83.58	105.20
1	AA	587	G	P-O3'-C3'	9.78	131.43	119.70
1	AA	243	A	C2'-C3'-O3'	9.45	130.29	109.50
1	AA	556	C	OP1-P-O3'	9.34	125.75	105.20
1	AA	499	A	O3'-P-O5'	-9.31	86.32	104.00
1	AA	79	G	O3'-P-O5'	9.26	121.59	104.00
1	AA	546	G	P-O3'-C3'	9.23	130.78	119.70
21	B0	3149	G	P-O3'-C3'	-9.23	108.62	119.70
1	AA	733	A	OP2-P-O3'	-9.20	84.95	105.20
1	AA	944	G	P-O3'-C3'	9.19	130.73	119.70
1	AA	559	A	C2'-C3'-O3'	9.17	129.68	109.50
1	AA	1337	G	OP1-P-O3'	9.16	125.36	105.20
21	B0	3183	A	O3'-P-O5'	9.14	121.37	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	181	G	C2'-C3'-O3'	9.13	129.58	109.50
1	AA	944	G	OP1-P-O3'	9.03	125.06	105.20
1	AA	869	G	P-O3'-C3'	9.01	130.51	119.70
1	AA	561	U	P-O3'-C3'	8.91	130.40	119.70
1	AA	79	G	OP1-P-O3'	-8.76	85.92	105.20
1	AA	561	U	O3'-P-O5'	8.75	120.62	104.00
1	AA	1393	U	OP2-P-O3'	8.69	124.32	105.20
1	AA	576	G	OP1-P-O3'	-8.64	86.18	105.20
1	AA	1299	A	N9-C1'-C2'	8.54	125.10	114.00
1	AA	214	U	OP1-P-O3'	8.52	123.95	105.20
1	AA	499	A	OP2-P-O3'	8.50	123.90	105.20
1	AA	26	A	P-O3'-C3'	-8.40	109.62	119.70
1	AA	1457	A	OP2-P-O3'	-8.27	87.00	105.20
1	AA	394	G	OP1-P-O3'	8.20	123.24	105.20
1	AA	239	U	OP2-P-O3'	8.17	123.18	105.20
1	AA	1345	U	P-O3'-C3'	8.16	129.49	119.70
1	AA	705	U	O3'-P-O5'	-8.13	88.56	104.00
1	AA	1305	G	OP2-P-O3'	8.11	123.04	105.20
1	AA	1528	U	C2'-C3'-O3'	8.04	127.18	109.50
1	AA	1110	A	P-O3'-C3'	-7.95	110.16	119.70
1	AA	366	C	C2'-C3'-O3'	7.84	126.76	109.50
21	B0	3135	A	O3'-P-O5'	-7.80	89.19	104.00
1	AA	933	G	OP2-P-O3'	7.71	122.17	105.20
1	AA	687	A	C2'-C3'-O3'	7.71	126.46	109.50
1	AA	1398	A	O3'-P-O5'	7.70	118.63	104.00
1	AA	197	A	N9-C1'-C2'	7.69	124.00	114.00
1	AA	575	G	C2'-C3'-O3'	7.68	126.39	109.50
22	B9	73	C	OP1-P-O3'	-7.67	88.33	105.20
1	AA	266	G	C2'-C3'-O3'	7.61	126.24	109.50
1	AA	1335	C	OP1-P-O3'	-7.58	88.52	105.20
1	AA	60	A	C2'-C3'-O3'	7.57	126.16	109.50
1	AA	461	C	OP1-P-O3'	7.56	121.84	105.20
1	AA	1455	G	OP1-P-O3'	7.52	121.75	105.20
1	AA	1490	C	O3'-P-O5'	-7.52	89.71	104.00
1	AA	546	G	O3'-P-O5'	7.48	118.21	104.00
1	AA	109	A	OP1-P-O3'	7.33	121.33	105.20
1	AA	375	U	O3'-P-O5'	-7.26	90.21	104.00
1	AA	792	A	C2'-C3'-O3'	7.21	125.37	109.50
1	AA	705	U	OP2-P-O3'	7.19	121.02	105.20
1	AA	960	U	OP2-P-O3'	-7.18	89.39	105.20
1	AA	387	U	O3'-P-O5'	-7.16	90.40	104.00
1	AA	1034	G	OP1-P-O3'	-7.05	89.69	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	B0	3186	C	OP2-P-O3'	-7.04	89.71	105.20
1	AA	884	U	O3'-P-O5'	-7.03	90.65	104.00
1	AA	1033	G	OP1-P-O3'	7.00	120.61	105.20
1	AA	115	G	N9-C1'-C2'	7.00	123.09	114.00
1	AA	561	U	OP1-P-O3'	-6.96	89.90	105.20
21	B0	3117	A	N9-C1'-C2'	6.92	122.99	114.00
21	B0	1113	C	C5'-C4'-C3'	-6.91	104.94	116.00
21	B0	3135	A	OP2-P-O3'	6.83	120.23	105.20
1	AA	397	A	P-O3'-C3'	6.72	127.76	119.70
1	AA	396	G	OP1-P-O3'	6.66	119.86	105.20
1	AA	1505	G	C2'-C3'-O3'	6.64	124.32	113.70
1	AA	733	A	OP1-P-O3'	6.60	119.73	105.20
1	AA	1067	A	C2'-C3'-O3'	6.58	124.23	113.70
1	AA	1502	A	N9-C1'-C2'	6.54	122.50	114.00
1	AA	135	C	OP1-P-O3'	-6.52	90.85	105.20
21	B0	3188	U	OP1-P-O3'	6.51	119.52	105.20
1	AA	115	G	C2'-C3'-O3'	6.49	124.08	113.70
1	AA	1033	G	O3'-P-O5'	6.47	116.30	104.00
21	B0	903	G	O3'-P-O5'	-6.45	91.75	104.00
1	AA	1345	U	OP1-P-O3'	-6.38	91.15	105.20
1	AA	372	C	C2'-C3'-O3'	6.35	123.86	113.70
1	AA	7	G	C2'-C3'-O3'	6.33	123.84	113.70
1	AA	944	G	O3'-P-O5'	-6.33	91.97	104.00
21	B0	3183	A	P-O3'-C3'	-6.31	112.13	119.70
1	AA	509	A	C2'-C3'-O3'	6.28	123.75	113.70
1	AA	108	G	OP1-P-O3'	6.25	118.96	105.20
1	AA	397	A	OP1-P-O3'	6.25	118.94	105.20
1	AA	684	A	OP2-P-O3'	-6.20	91.56	105.20
21	B0	3186	C	O3'-P-O5'	6.19	115.75	104.00
1	AA	1528	U	C4'-C3'-O3'	6.15	125.30	113.00
1	AA	827	U	OP1-P-O3'	6.12	118.66	105.20
1	AA	239	U	OP1-P-O3'	-6.11	91.76	105.20
1	AA	546	G	OP2-P-O3'	-6.09	91.80	105.20
1	AA	914	A	P-O3'-C3'	-6.04	112.45	119.70
19	AS	54	GLY	N-CA-C	-6.00	98.09	113.10
1	AA	893	C	OP2-P-O3'	5.86	118.09	105.20
1	AA	428	G	C2'-C3'-O3'	5.85	123.06	113.70
1	AA	387	U	OP2-P-O3'	-5.83	92.38	105.20
1	AA	869	G	OP2-P-O3'	-5.75	92.56	105.20
1	AA	63	C	C5'-C4'-C3'	-5.70	106.87	116.00
21	B0	1071	U	O3'-P-O5'	5.66	114.75	104.00
21	B0	3874	C	OP1-P-O3'	-5.66	92.75	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	266	G	C5'-C4'-C3'	-5.65	106.95	116.00
1	AA	1124	G	N9-C1'-C2'	5.65	121.34	114.00
1	AA	394	G	O3'-P-O5'	-5.62	93.33	104.00
21	B0	1112	U	C4'-C3'-O3'	-5.61	97.62	109.40
1	AA	733	A	O3'-P-O5'	5.60	114.64	104.00
1	AA	754	C	OP2-P-O3'	-5.58	92.93	105.20
1	AA	353	A	C5'-C4'-O4'	-5.56	102.43	109.10
1	AA	397	A	OP2-P-O3'	-5.55	92.98	105.20
1	AA	38	G	OP1-P-O3'	-5.55	93.00	105.20
1	AA	1380	U	C2'-C3'-O3'	5.54	122.56	113.70
1	AA	1445	U	OP2-P-O3'	5.51	117.31	105.20
1	AA	1065	U	C1'-O4'-C4'	-5.48	105.51	109.90
1	AA	375	U	OP2-P-O3'	-5.44	93.22	105.20
1	AA	717	C	OP1-P-O3'	5.44	117.17	105.20
1	AA	1034	G	O3'-P-O5'	5.43	114.32	104.00
15	AO	45	VAL	N-CA-C	-5.40	96.42	111.00
2	AB	187	LEU	N-CA-C	-5.38	96.46	111.00
1	AA	1085	U	N1-C1'-C2'	5.36	120.97	114.00
1	AA	1335	C	OP2-P-O3'	-5.36	93.42	105.20
1	AA	115	G	O3'-P-O5'	5.34	114.16	104.00
1	AA	1182	G	P-O3'-C3'	-5.30	113.34	119.70
1	AA	484	G	C2'-C3'-O3'	5.29	122.17	113.70
1	AA	389	A	C5'-C4'-C3'	5.28	124.44	116.00
1	AA	576	G	O3'-P-O5'	5.27	114.01	104.00
1	AA	227	G	OP1-P-O3'	-5.26	93.63	105.20
1	AA	89	G	OP1-P-O3'	-5.21	93.73	105.20
1	AA	717	C	OP2-P-O3'	5.21	116.66	105.20
1	AA	181	G	C4'-C3'-O3'	5.21	123.41	113.00
1	AA	1182	G	OP1-P-O3'	-5.20	93.77	105.20
1	AA	108	G	O4'-C1'-N9	5.18	112.35	108.20
1	AA	914	A	OP1-P-O3'	-5.17	93.83	105.20
1	AA	556	C	O3'-P-O5'	5.15	113.79	104.00
1	AA	499	A	P-O3'-C3'	-5.15	113.52	119.70
1	AA	686	U	C5'-C4'-C3'	-5.10	107.85	116.00
21	B0	1072	U	OP1-P-OP2	5.09	127.24	119.60
21	B0	3101	G	OP1-P-O3'	-5.09	94.00	105.20
1	AA	470	U	P-O3'-C3'	5.05	125.76	119.70
1	AA	993	G	N9-C1'-C2'	5.05	120.56	114.00
1	AA	239	U	P-O3'-C3'	-5.04	113.65	119.70
1	AA	976	G	C5'-C4'-O4'	5.02	115.13	109.10
1	AA	413	G	N9-C1'-C2'	5.00	120.51	114.00
1	AA	960	U	C2'-C3'-O3'	5.00	121.71	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	B0	3126	A	N9-C1'-C2'	5.00	120.51	114.00

All (2) chirality outliers are listed below:

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

All (45) 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
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

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Mol	Chain	Res	Type	Group
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
21	B0	1071	U	Sidechain
21	B0	1099	A	Sidechain
21	B0	3117	A	Sidechain
21	B0	3168	G	Sidechain
21	B0	873	U	Sidechain

## 5.2 Close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32939	0	16652	3455	1
2	AB	1900	0	1951	209	0
3	AC	1612	0	1675	286	0
4	AD	1702	0	1767	217	2
5	AE	1146	0	1207	255	0
6	AF	842	0	855	75	2
7	AG	1256	0	1296	138	2
8	AH	1115	0	1177	126	0
9	AI	1010	0	1043	183	0
10	AJ	794	0	839	206	2
11	AK	884	0	904	81	0
12	AL	970	0	1056	151	0
13	AM	996	0	1068	184	0
14	AN	491	0	529	153	0
15	AO	733	0	770	57	0
16	AP	700	0	720	78	0
17	AQ	856	0	925	239	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
18	AR	596	0	668	77	0
19	AS	647	0	673	156	0
20	AT	762	0	853	286	0
21	B0	60636	0	30557	1717	1
22	B9	2519	0	1287	43	0
23	BA	270	0	0	0	0
24	BB	205	0	0	0	0
25	BC	197	0	0	0	0
26	BD	178	0	0	4	0
27	BE	177	0	0	0	0
28	BF	52	0	0	0	0
29	BG	143	0	0	1	0
30	BH	143	0	0	0	0
31	BI	132	0	0	2	0
32	BJ	141	0	0	1	0
33	BK	124	0	0	0	0
34	BL	114	0	0	1	0
35	BM	111	0	0	0	0
36	BN	125	0	0	0	0
37	BO	117	0	0	0	0
38	BP	100	0	0	0	0
39	BQ	130	0	0	0	0
40	BR	93	0	0	0	0
41	BS	113	0	0	0	0
42	BT	173	0	0	0	0
43	BU	86	0	0	0	0
44	BV	16	0	0	0	0
45	BW	65	0	0	0	0
46	BX	55	0	0	0	0
47	BY	73	0	0	0	0
48	BZ	58	0	0	0	0
49	B1	53	0	0	0	0
50	B2	46	0	0	0	0
51	B3	63	0	0	0	0
52	B4	35	0	0	0	0
53	B5	217	0	0	22	0
All	All	118711	0	68472	6990	5

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 37.

All (6990) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1278:U:H5''	1:AA:1279:A:P	1.31	1.68
1:AA:1458:G:C8	1:AA:1459:C:H2'	1.27	1.63
1:AA:191:G:C6	1:AA:192:U:C2	1.90	1.60
1:AA:1475:G:H5''	21:B0:1706:A:C4'	1.13	1.60
1:AA:1475:G:C5'	21:B0:1706:A:H4'	1.32	1.59
21:B0:1861:G:H5'	53:B5:199:ASN:CA	1.09	1.56
1:AA:1256:A:H5'	1:AA:1258:G:C1'	1.26	1.56
1:AA:130:A:C2	1:AA:264:U:N1	1.72	1.55
21:B0:3109:U:C5'	21:B0:3150:C:H5'	1.13	1.55
1:AA:922:G:C2	1:AA:1396:A:C6	1.93	1.55
4:AD:89:THR:N	5:AE:97:GLY:HA3	1.21	1.54
1:AA:130:A:N1	1:AA:264:U:C2	1.76	1.53
1:AA:1261:A:C4'	1:AA:1283:G:H4'	1.37	1.52
1:AA:1475:G:C5'	21:B0:1706:A:C4'	1.83	1.52
17:AQ:104:LYS:CE	21:B0:729:A:H62	1.23	1.52
1:AA:130:A:C2	1:AA:264:U:C2	1.92	1.51
21:B0:3197:U:H3	21:B0:2204:A:N6	1.09	1.51
1:AA:94:G:O3'	1:AA:96:C:P	1.12	1.50
1:AA:6:G:C4	5:AE:119:LEU:HD11	1.42	1.50
1:AA:130:A:C4	1:AA:264:U:O4'	1.66	1.47
1:AA:1394:A:C6	1:AA:1501:C:H4'	1.48	1.47
1:AA:319:G:N3	1:AA:1434:A:N3	1.62	1.47
1:AA:112:G:H21	1:AA:354:G:C5'	1.23	1.47
1:AA:375:U:O3'	1:AA:376:G:P	1.08	1.46
1:AA:702:A:N1	21:B0:1838:G:C2'	1.78	1.46
1:AA:922:G:N2	1:AA:1396:A:C5	1.84	1.45
1:AA:112:G:N2	1:AA:354:G:H5'	1.21	1.45
1:AA:189:A:N6	20:AT:89:ARG:HH21	1.05	1.44
1:AA:191:G:N1	1:AA:192:U:C2	1.85	1.43
1:AA:189:A:C6	20:AT:89:ARG:NH2	1.86	1.42
1:AA:323:U:H5''	20:AT:23:ARG:N	1.34	1.42
1:AA:130:A:C4	1:AA:264:U:C1'	2.02	1.42
4:AD:57:ARG:NH2	5:AE:107:ARG:HD3	1.15	1.41
1:AA:1394:A:C5	1:AA:1501:C:H4'	1.53	1.41
17:AQ:104:LYS:HE3	21:B0:729:A:N6	1.12	1.40
1:AA:187:G:C2	20:AT:105:SER:HB2	1.56	1.40
21:B0:1861:G:C5'	53:B5:199:ASN:CA	1.96	1.39
1:AA:293:G:H4'	1:AA:609:A:C2	1.53	1.39
1:AA:51:A:N1	1:AA:314:C:H1'	1.32	1.39
1:AA:293:G:H4'	1:AA:609:A:N1	1.38	1.39
21:B0:3876:A:H1'	53:B5:45:ASP:CA	1.52	1.39
21:B0:1856:U:O5'	21:B0:3865:A:C8	1.76	1.39
1:AA:262:A:O2'	20:AT:75:ASN:ND2	1.56	1.39

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:AQ:104:LYS:N	21:B0:726:G:H21	1.20	1.38
1:AA:235:C:H5'	17:AQ:70:ARG:CG	1.52	1.38
1:AA:189:A:N6	20:AT:104:LEU:HB3	1.37	1.37
21:B0:3110:G:P	21:B0:3149:G:H4'	1.63	1.37
1:AA:187:G:O4'	20:AT:85:MET:CE	1.72	1.37
1:AA:1484:C:H4'	21:B0:1943:A:C1'	1.55	1.36
1:AA:1505:G:C3'	1:AA:1506:U:P	2.14	1.36
1:AA:319:G:N2	1:AA:1434:A:H1'	1.37	1.36
1:AA:261:U:C5	20:AT:79:ARG:CZ	2.07	1.36
1:AA:760:G:O6	17:AQ:105:ALA:HB2	1.20	1.35
1:AA:191:G:C6	1:AA:192:U:N3	1.94	1.35
21:B0:1856:U:C4	21:B0:3865:A:C2	1.89	1.34
4:AD:88:VAL:HG22	5:AE:96:PRO:CB	1.57	1.34
1:AA:319:G:O2'	1:AA:1434:A:N1	1.58	1.34
21:B0:1098:G:H22	21:B0:1113:C:N4	1.25	1.33
21:B0:891:A:C1'	21:B0:892:A:C8	2.07	1.33
1:AA:113:G:N3	1:AA:353:A:O2'	1.58	1.33
21:B0:3110:G:OP1	21:B0:3148:G:H2'	1.21	1.33
1:AA:436:C:H2'	1:AA:437:U:O4'	1.16	1.32
1:AA:436:C:C4	1:AA:437:U:C4	2.17	1.32
1:AA:538:G:P	12:AL:115:LYS:HG3	1.68	1.32
1:AA:186:C:O4'	20:AT:81:LYS:HE2	1.21	1.32
1:AA:1261:A:C4'	1:AA:1283:G:C4'	2.05	1.31
1:AA:190:A:C2	20:AT:101:GLY:CA	2.13	1.31
1:AA:1190:G:OP1	3:AC:4:LYS:CA	1.77	1.31
1:AA:216:C:C4'	1:AA:468:A:N3	1.79	1.31
1:AA:1256:A:N6	1:AA:1278:U:O2	1.62	1.30
1:AA:191:G:C5	1:AA:192:U:C6	2.17	1.30
1:AA:702:A:N1	21:B0:1838:G:H2'	0.98	1.30
21:B0:3197:U:H1'	21:B0:2181:A:N7	1.46	1.30
1:AA:6:G:O6	5:AE:94:ALA:HA	1.24	1.30
1:AA:402:G:H4'	1:AA:620:C:N3	1.43	1.30
1:AA:1405:G:O4'	1:AA:1519:A:H4'	1.25	1.30
1:AA:403:C:O2'	1:AA:404:U:H5'	1.15	1.30
21:B0:3197:U:N3	21:B0:2204:A:N6	1.79	1.30
1:AA:1182:G:H5'	1:AA:1184:G:C5'	1.62	1.30
1:AA:1394:A:C6	1:AA:1501:C:C4'	2.13	1.29
1:AA:19:C:O2	1:AA:916:G:N2	1.62	1.29
4:AD:89:THR:CB	5:AE:97:GLY:O	1.79	1.29
21:B0:891:A:O2'	21:B0:892:A:C5'	1.80	1.29
1:AA:1405:G:H1'	1:AA:1519:A:O4'	1.25	1.29
1:AA:1256:A:C5'	1:AA:1258:G:C1'	2.10	1.29

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1014:A:N3	1:AA:1219:U:O2'	1.65	1.29
1:AA:406:G:C4	1:AA:496:A:C6	2.21	1.29
1:AA:132:C:H5'	1:AA:262:A:C1'	1.62	1.29
1:AA:1255:G:H1'	1:AA:1259:C:C1'	1.63	1.28
21:B0:1856:U:H3'	21:B0:3865:A:C8	1.67	1.28
1:AA:1297:C:OP1	13:AM:44:ARG:NH2	1.64	1.28
1:AA:51:A:C2	1:AA:314:C:O2'	1.84	1.28
1:AA:130:A:C5	1:AA:264:U:H1'	1.68	1.28
1:AA:191:G:C2	1:AA:192:U:H1'	1.68	1.28
1:AA:406:G:C5	1:AA:496:A:C5	2.22	1.28
1:AA:189:A:N6	20:AT:104:LEU:CB	1.97	1.27
1:AA:190:A:N7	20:AT:105:SER:HA	1.46	1.27
1:AA:702:A:C2	21:B0:1838:G:C2'	2.11	1.27
1:AA:489:C:OP1	4:AD:132:ARG:NH2	1.66	1.27
1:AA:191:G:O6	1:AA:192:U:N3	1.63	1.27
1:AA:1044:A:H2'	1:AA:1045:C:O2'	1.16	1.26
21:B0:3108:G:H2'	21:B0:3109:U:C5	1.67	1.26
1:AA:760:G:N1	17:AQ:104:LYS:O	1.69	1.26
1:AA:436:C:C2	1:AA:437:U:C6	2.24	1.25
1:AA:130:A:C2	1:AA:264:U:C6	2.22	1.25
1:AA:132:C:C4'	1:AA:262:A:H1'	1.63	1.25
1:AA:760:G:O6	17:AQ:105:ALA:CB	1.85	1.25
1:AA:1277:C:O2'	1:AA:1279:A:C8	1.88	1.25
1:AA:1278:U:C5'	1:AA:1279:A:P	2.22	1.25
1:AA:112:G:C2	1:AA:354:G:H5'	1.70	1.25
1:AA:319:G:N2	1:AA:1434:A:C1'	1.99	1.25
1:AA:293:G:C4'	1:AA:609:A:N1	1.99	1.25
5:AE:79:GLU:OE1	8:AH:105:ARG:HD3	1.31	1.25
3:AC:59:ARG:O	10:AJ:92:THR:O	1.52	1.25
1:AA:1255:G:C1'	1:AA:1259:C:H1'	1.66	1.25
21:B0:891:A:H1'	21:B0:892:A:C8	1.51	1.25
21:B0:1098:G:N2	21:B0:1113:C:H42	1.33	1.25
1:AA:319:G:H21	1:AA:1434:A:C1'	1.46	1.24
1:AA:702:A:C6	21:B0:1838:G:H2'	1.70	1.24
1:AA:187:G:N3	20:AT:105:SER:HB2	1.50	1.24
1:AA:1416:G:H3'	1:AA:1417:G:P	1.76	1.24
13:AM:93:ARG:CG	21:B0:900(A):A:OP1	1.84	1.24
1:AA:1261:A:O4'	1:AA:1283:G:C4'	1.86	1.24
1:AA:1484:C:O2'	21:B0:1943:A:H4'	1.23	1.24
1:AA:476:U:H3'	1:AA:477:G:P	1.73	1.24
1:AA:476:U:C2	1:AA:477:G:O4'	1.91	1.24
1:AA:261:U:C4	20:AT:79:ARG:HD3	1.69	1.24

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1256:A:H5'	1:AA:1258:G:N9	1.52	1.24
1:AA:141:A:C2	1:AA:195:A:H2	1.56	1.24
21:B0:1856:U:O4	21:B0:3865:A:C2	1.86	1.24
1:AA:132:C:C5'	1:AA:262:A:H1'	1.68	1.24
13:AM:82:MET:CG	13:AM:93:ARG:HE	1.49	1.24
1:AA:922:G:C2	1:AA:1396:A:N1	2.06	1.23
1:AA:1261:A:O2'	1:AA:1283:G:H5''	1.33	1.23
1:AA:319:G:H2'	1:AA:1434:A:C2	1.73	1.23
1:AA:323:U:O3'	20:AT:22:ARG:HB3	1.36	1.23
1:AA:1224:G:O2'	1:AA:1225:A:OP1	1.53	1.23
1:AA:476:U:C4	1:AA:477:G:C8	2.26	1.23
1:AA:820:U:O2	1:AA:873:A:C8	1.89	1.23
4:AD:89:THR:N	5:AE:97:GLY:CA	2.01	1.23
1:AA:1416:G:C2'	1:AA:1417:G:H5'	1.68	1.23
21:B0:892:A:H1'	21:B0:911:A:C2	1.72	1.23
1:AA:217:C:O2'	1:AA:470:U:H5'	1.38	1.23
1:AA:1064:G:H1'	1:AA:1190:G:N2	1.52	1.23
1:AA:132:C:C4'	1:AA:262:A:C1'	2.17	1.23
1:AA:232:G:N3	1:AA:263:A:C2	2.06	1.23
4:AD:89:THR:HB	5:AE:97:GLY:O	1.06	1.23
1:AA:1457:A:C8	1:AA:1459:C:C2	2.27	1.23
1:AA:261:U:C4	20:AT:79:ARG:CD	2.22	1.23
1:AA:351:G:O3'	1:AA:352:C:P	1.97	1.23
1:AA:115:G:O2'	1:AA:116:A:OP2	1.57	1.23
1:AA:815:A:O2'	1:AA:1527:C:O4'	1.56	1.22
10:AJ:45:ARG:NH1	14:AN:36:PHE:CD2	2.03	1.22
1:AA:216:C:H1'	1:AA:468:A:O2'	1.09	1.22
1:AA:1014:A:C2	1:AA:1219:U:O2'	1.78	1.22
1:AA:1459:C:OP1	20:AT:31:SER:OG	1.55	1.22
1:AA:261:U:C5	20:AT:79:ARG:NE	2.06	1.22
1:AA:247:G:OP2	17:AQ:100:LYS:HE2	1.38	1.22
1:AA:89:G:O3'	1:AA:90:C:P	1.98	1.22
1:AA:1458:G:C8	1:AA:1459:C:C2'	2.22	1.21
1:AA:130:A:C8	17:AQ:63:ARG:HG3	1.75	1.21
21:B0:3110:G:OP2	21:B0:3149:G:H4'	1.04	1.21
21:B0:3149:G:O3'	21:B0:3150:C:P	1.98	1.21
1:AA:1405:G:H1'	1:AA:1519:A:C4'	1.70	1.21
1:AA:190:A:C2	20:AT:101:GLY:HA3	1.73	1.21
1:AA:1277:C:H1'	1:AA:1279:A:C8	1.74	1.20
1:AA:1459:C:H5''	20:AT:28:ALA:CB	1.72	1.20
1:AA:191:G:N3	1:AA:192:U:H1'	1.56	1.20
1:AA:44:G:OP2	16:AP:12:LYS:HB2	1.07	1.20

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:AD:89:THR:H	5:AE:97:GLY:CA	1.51	1.20
4:AD:57:ARG:NH2	5:AE:107:ARG:CD	2.05	1.20
21:B0:3110:G:P	21:B0:3149:G:C4'	2.29	1.19
1:AA:6:G:C4	5:AE:119:LEU:CD1	2.25	1.19
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.22	1.19
1:AA:1256:A:H4'	1:AA:1258:G:C8	1.76	1.19
1:AA:130:A:O4'	1:AA:264:U:C4'	1.90	1.19
1:AA:935:A:H1'	1:AA:1384:C:N3	1.56	1.19
1:AA:261:U:O4	20:AT:79:ARG:CD	1.91	1.19
1:AA:132:C:C5'	1:AA:262:A:C1'	2.21	1.19
1:AA:1256:A:C5'	1:AA:1258:G:H1'	1.67	1.18
1:AA:923:A:O4'	1:AA:1398:A:C2	1.94	1.18
17:AQ:104:LYS:HE2	21:B0:727:U:O2	1.39	1.18
1:AA:20:U:O2	1:AA:915:A:N6	1.75	1.18
1:AA:143:A:O3'	1:AA:144:G:P	2.01	1.18
22:B9:73:C:O3'	22:B9:74:A:P	2.01	1.18
17:AQ:104:LYS:N	21:B0:726:G:N2	1.88	1.18
1:AA:1497:G:N2	1:AA:1519:A:N3	1.89	1.18
1:AA:1342:C:O3'	9:AI:125:TYR:OH	1.60	1.18
1:AA:1261:A:H4'	1:AA:1283:G:C3'	1.73	1.18
1:AA:130:A:O4'	1:AA:264:U:H4'	1.42	1.18
1:AA:1261:A:H4'	1:AA:1283:G:C4'	1.67	1.18
21:B0:3183:A:O3'	21:B0:3184:C:P	2.02	1.18
1:AA:760:G:C6	17:AQ:105:ALA:HB2	1.78	1.18
1:AA:570:G:O2'	1:AA:819:A:H2'	1.44	1.18
1:AA:922:G:N2	1:AA:1396:A:C6	2.05	1.17
1:AA:112:G:N2	1:AA:354:G:C5'	1.90	1.17
1:AA:1475:G:C4'	21:B0:1706:A:H4'	1.74	1.17
1:AA:815:A:C2	1:AA:1528:U:O4'	1.97	1.17
21:B0:1098:G:N2	21:B0:1113:C:N4	1.89	1.17
1:AA:1231:G:OP1	9:AI:127:LYS:NZ	1.78	1.17
1:AA:1347:G:C5	9:AI:107:ARG:NH1	2.10	1.17
1:AA:1211:U:O3'	1:AA:1212:U:P	2.03	1.17
1:AA:261:U:O4	20:AT:79:ARG:HD2	1.41	1.17
1:AA:69:G:H5'	1:AA:152:A:C2	1.78	1.17
1:AA:232:G:N3	1:AA:263:A:H2	1.37	1.17
1:AA:323:U:O3'	20:AT:22:ARG:CB	1.92	1.17
1:AA:319:G:C2	1:AA:1434:A:N3	2.12	1.16
1:AA:103:C:O2'	1:AA:171:A:N1	1.73	1.16
1:AA:835:U:H5''	18:AR:64:ARG:NH2	1.58	1.16
1:AA:131:C:O2	1:AA:262:A:H2	1.25	1.16
1:AA:436:C:C2'	1:AA:437:U:O4'	1.94	1.16

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1495:U:O2'	21:B0:1902:A:N3	1.78	1.16
3:AC:29:TYR:CE1	10:AJ:65:LEU:HD11	1.79	1.16
21:B0:910:U:O2'	21:B0:911:A:H5'	1.42	1.16
10:AJ:62:HIS:CB	14:AN:59:ALA:HB3	1.76	1.16
1:AA:191:G:N1	1:AA:192:U:O2	1.78	1.15
1:AA:191:G:N3	1:AA:192:U:C1'	2.08	1.15
21:B0:1856:U:H3	21:B0:3877:A:N6	1.44	1.15
1:AA:1505:G:H4'	1:AA:1506:U:H5''	1.26	1.15
1:AA:19:C:N3	1:AA:916:G:N1	1.94	1.15
1:AA:367:U:C2	1:AA:369:C:C5	2.34	1.15
1:AA:1505:G:O3'	1:AA:1506:U:P	0.75	1.15
1:AA:1405:G:C1'	1:AA:1519:A:C4'	2.25	1.15
1:AA:1329:A:H5''	13:AM:26:GLY:H	1.09	1.15
1:AA:235:C:C5'	17:AQ:70:ARG:HG2	1.75	1.15
1:AA:141:A:C4'	1:AA:182:U:H1'	1.75	1.15
1:AA:1459:C:C5'	20:AT:28:ALA:HB1	1.76	1.15
1:AA:1459:C:H5''	20:AT:28:ALA:CA	1.77	1.15
1:AA:717:C:O3'	1:AA:718:G:P	2.05	1.15
1:AA:274:A:N3	1:AA:275:G:H1'	1.61	1.15
1:AA:1256:A:N3	1:AA:1258:G:C6	2.15	1.14
1:AA:375:U:HO3'	1:AA:376:G:P	1.15	1.14
21:B0:3876:A:C1'	53:B5:45:ASP:CA	2.25	1.14
1:AA:406:G:C6	1:AA:496:A:N7	2.15	1.14
1:AA:1298:C:C5	7:AG:114:ARG:HD3	1.82	1.14
1:AA:7:G:H5'	1:AA:298:A:H5'	1.25	1.14
1:AA:1458:G:H8	1:AA:1459:C:C2'	1.57	1.14
1:AA:960:U:H1'	1:AA:1222:G:O2'	1.44	1.14
1:AA:44:G:OP2	16:AP:12:LYS:CB	1.95	1.14
13:AM:88:ARG:HD2	19:AS:3:ARG:HH21	1.03	1.14
1:AA:1277:C:O2'	1:AA:1279:A:N9	1.79	1.14
1:AA:922:G:N1	1:AA:1396:A:N6	1.96	1.14
1:AA:1405:G:C1'	1:AA:1519:A:H4'	1.78	1.14
1:AA:452:A:OP1	16:AP:43:LYS:NZ	1.77	1.14
1:AA:293:G:P	1:AA:609:A:H61	1.71	1.13
1:AA:320:C:O4'	1:AA:1434:A:C2	2.00	1.13
1:AA:1347:G:C4	9:AI:107:ARG:NH1	2.16	1.13
1:AA:237:C:OP1	17:AQ:40:LYS:CD	1.95	1.13
21:B0:1861:G:OP2	53:B5:38:GLY:CA	1.97	1.13
1:AA:1261:A:H4'	1:AA:1283:G:O3'	1.45	1.13
1:AA:319:G:C2'	1:AA:1434:A:C2	2.31	1.13
1:AA:142:G:H21	1:AA:196:A:H1'	1.06	1.13
21:B0:1861:G:OP1	53:B5:37:LYS:CA	1.96	1.13

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:AQ:104:LYS:CE	21:B0:727:U:O2	1.97	1.13
1:AA:319:G:N3	1:AA:1434:A:C2	2.17	1.13
1:AA:323:U:C5'	20:AT:23:ARG:N	2.12	1.13
1:AA:293:G:O5'	1:AA:609:A:N6	1.81	1.13
1:AA:436:C:C4	1:AA:437:U:C5	2.37	1.13
1:AA:1234:C:H5'	1:AA:1365:G:OP1	1.49	1.13
1:AA:130:A:O4'	1:AA:264:U:C5'	1.97	1.12
21:B0:891:A:C2'	21:B0:892:A:C8	2.30	1.13
21:B0:891:A:O2'	21:B0:892:A:H5'	0.96	1.12
13:AM:93:ARG:HG2	21:B0:900(A):A:OP1	0.96	1.13
1:AA:421:U:C6	3:AC:127:ARG:NH2	1.99	1.13
13:AM:86:CYS:HG	13:AM:87:TYR:N	1.45	1.12
21:B0:1067:G:H5'	21:B0:1068:A:H5'	1.26	1.12
12:AL:19:ARG:C	12:AL:20:LYS:N	2.01	1.12
1:AA:1261:A:O4'	1:AA:1283:G:H4'	0.95	1.12
1:AA:323:U:OP1	20:AT:23:ARG:HA	1.49	1.12
21:B0:1066:G:N2	21:B0:1115:C:N3	1.96	1.12
1:AA:130:A:N9	1:AA:264:U:O4'	1.82	1.12
1:AA:922:G:N2	1:AA:1396:A:C4	2.16	1.12
1:AA:1398:A:H61	5:AE:21:ALA:HA	0.97	1.12
17:AQ:104:LYS:CG	21:B0:727:U:H1'	1.79	1.12
1:AA:191:G:O6	1:AA:192:U:C4	2.02	1.12
1:AA:406:G:C8	1:AA:496:A:C2	2.37	1.12
1:AA:755:G:H1'	8:AH:1:MET:HE3	1.24	1.12
1:AA:1483:A:C3'	1:AA:1484:C:OP2	1.97	1.12
1:AA:1298:C:N4	7:AG:114:ARG:HB3	1.65	1.12
1:AA:571:U:H5''	1:AA:819:A:C2	1.85	1.12
1:AA:922:G:N3	1:AA:1396:A:N1	1.98	1.11
1:AA:189:A:C5	20:AT:89:ARG:NH2	2.16	1.11
21:B0:3128:G:O2'	21:B0:3174:C:H5'	1.47	1.11
1:AA:761:G:H5''	17:AQ:102:GLY:HA3	1.33	1.11
1:AA:375:U:C3'	1:AA:376:G:P	2.36	1.11
21:B0:1098:G:N2	21:B0:1113:C:N3	1.97	1.11
21:B0:3109:U:H5'	21:B0:3150:C:H5'	1.15	1.11
4:AD:88:VAL:HG22	5:AE:96:PRO:HB3	1.20	1.11
1:AA:216:C:O2'	1:AA:468:A:H2'	1.48	1.11
1:AA:1261:A:O2'	1:AA:1283:G:C5'	1.99	1.11
1:AA:143:A:C3'	1:AA:144:G:P	2.38	1.11
1:AA:1419:G:H4'	21:B0:1932:G:O2'	1.50	1.11
1:AA:1256:A:N3	1:AA:1258:G:N1	1.97	1.10
1:AA:142:G:H1'	1:AA:195:A:N1	1.66	1.10
1:AA:223:U:H5'	20:AT:68:LYS:HZ1	1.02	1.10

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1329:A:H5'	13:AM:29:ARG:HG3	1.15	1.10
1:AA:1503:A:OP1	1:AA:1531:A:O2'	1.69	1.10
1:AA:1500:A:OP1	1:AA:1508:G:OP1	1.67	1.10
1:AA:186:C:O4'	20:AT:81:LYS:CE	1.98	1.10
1:AA:1318:A:H4'	19:AS:10:PHE:CE1	1.85	1.10
1:AA:1113:C:H1'	3:AC:178:LEU:HD21	1.33	1.10
5:AE:152:ARG:NH2	8:AH:107:LEU:O	1.82	1.10
1:AA:132:C:H4'	1:AA:262:A:O4'	1.50	1.10
1:AA:390:C:O3'	16:AP:28:ARG:NH2	1.83	1.10
1:AA:1416:G:C3'	1:AA:1417:G:H5'	1.81	1.10
1:AA:1475:G:OP1	21:B0:1706:A:H1'	1.49	1.10
21:B0:3110:G:OP2	21:B0:3149:G:C4'	1.98	1.10
1:AA:323:U:P	20:AT:23:ARG:HA	1.92	1.10
1:AA:1484:C:C4'	21:B0:1943:A:H1'	1.82	1.10
1:AA:1318:A:H4'	19:AS:10:PHE:CD1	1.86	1.10
1:AA:502:G:H1'	1:AA:550:G:H5'	1.32	1.10
1:AA:765:G:O3'	1:AA:766:A:P	2.09	1.10
10:AJ:51:ARG:HB2	10:AJ:59:SER:HB3	1.34	1.09
1:AA:1092:A:H5''	7:AG:4:ARG:NH2	1.67	1.09
1:AA:191:G:C5	1:AA:192:U:N1	2.20	1.09
1:AA:216:C:H4'	1:AA:468:A:C4	1.87	1.09
1:AA:1014:A:P	19:AS:14:HIS:HB3	1.91	1.09
21:B0:940:G:H3'	21:B0:941:U:H5''	1.19	1.09
12:AL:41:ARG:HG2	12:AL:42:THR:H	1.03	1.09
1:AA:130:A:N1	1:AA:264:U:O2	1.82	1.09
1:AA:355:C:C1'	1:AA:388:G:O2'	2.00	1.09
1:AA:1416:G:H2'	1:AA:1417:G:H5'	1.25	1.09
1:AA:1483:A:C5	1:AA:1484:C:C5	2.41	1.09
1:AA:1112:C:N3	3:AC:178:LEU:N	1.99	1.09
1:AA:130:A:N3	1:AA:264:U:N1	2.00	1.09
1:AA:118:U:O3'	1:AA:119:A:P	2.11	1.09
21:B0:1856:U:O4	21:B0:3865:A:N1	1.79	1.09
1:AA:130:A:N3	1:AA:264:U:C1'	2.16	1.09
21:B0:1856:U:O5'	21:B0:3865:A:N7	1.85	1.08
1:AA:835:U:OP1	18:AR:64:ARG:NH2	1.85	1.08
9:AI:8:GLY:HA2	9:AI:79:LEU:HD12	1.32	1.08
1:AA:1346:A:H2'	7:AG:10:ARG:HH22	1.09	1.08
1:AA:1256:A:O4'	1:AA:1258:G:C5	2.05	1.08
1:AA:191:G:C4	1:AA:192:U:C1'	2.36	1.08
21:B0:1098:G:N2	21:B0:1113:C:C4	2.21	1.08
1:AA:928:G:O3'	1:AA:1533:C:N4	1.85	1.08
1:AA:1398:A:H61	5:AE:21:ALA:CA	1.67	1.08

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:AD:88:VAL:HA	5:AE:96:PRO:C	1.74	1.08
1:AA:322:C:O2'	20:AT:23:ARG:HB2	1.53	1.08
1:AA:323:U:C5'	20:AT:23:ARG:CA	2.32	1.08
4:AD:150:GLU:HG3	4:AD:153:ARG:HH21	1.19	1.08
1:AA:261:U:OP2	20:AT:79:ARG:NH2	1.86	1.08
1:AA:130:A:C1'	1:AA:264:U:H5'	1.83	1.07
1:AA:6:G:N9	5:AE:119:LEU:CD1	2.17	1.07
21:B0:225:G:H3'	21:B0:226:C:H5'	1.30	1.07
1:AA:44:G:P	16:AP:12:LYS:HB2	1.93	1.07
1:AA:94:G:C3'	1:AA:96:C:P	2.41	1.07
1:AA:1256:A:C5'	1:AA:1258:G:N9	2.17	1.07
21:B0:1856:U:O2'	21:B0:3865:A:H5'	1.28	1.07
1:AA:132:C:O4'	1:AA:262:A:H1'	1.53	1.07
1:AA:403:C:O2'	1:AA:404:U:C5'	2.02	1.07
21:B0:3098:U:O3'	21:B0:3099:U:P	2.12	1.07
1:AA:212:G:O3'	1:AA:213:G:P	2.12	1.07
1:AA:599:C:H4'	8:AH:130:GLY:C	1.75	1.07
4:AD:36:ARG:H	4:AD:37:PRO:HD3	1.19	1.07
17:AQ:104:LYS:HG2	21:B0:726:G:C2	1.89	1.07
1:AA:142:G:H4'	1:AA:195:A:N6	1.68	1.07
1:AA:142:G:C1'	1:AA:195:A:N1	2.18	1.07
1:AA:1367:C:OP1	9:AI:115:GLY:N	1.86	1.07
1:AA:1211:U:H5'	1:AA:1212:U:P	1.94	1.07
1:AA:131:C:O2	1:AA:262:A:C2	2.07	1.06
17:AQ:101:ARG:NH1	21:B0:731:A:H2	1.52	1.06
1:AA:1475:G:H4'	21:B0:1706:A:C5'	1.86	1.06
1:AA:51:A:N1	1:AA:314:C:C1'	2.18	1.06
1:AA:1495:U:O2'	21:B0:1902:A:C2	2.06	1.06
1:AA:1181:G:H4'	1:AA:1184:G:O4'	1.55	1.06
1:AA:223:U:H5'	20:AT:68:LYS:NZ	1.70	1.06
1:AA:1034:G:O3'	1:AA:1035:A:P	2.13	1.06
21:B0:1856:U:H5''	21:B0:3865:A:OP1	1.53	1.06
17:AQ:104:LYS:HG3	21:B0:727:U:C2	1.90	1.06
1:AA:394:G:H2'	1:AA:395:C:H6	1.21	1.06
1:AA:133:U:H5'	20:AT:74:LYS:NZ	1.71	1.06
1:AA:130:A:N3	1:AA:264:U:C6	2.23	1.06
1:AA:130:A:N3	1:AA:264:U:O4'	1.87	1.06
1:AA:1016:A:C5'	14:AN:15:LYS:HE3	1.83	1.06
1:AA:1155:G:O3'	1:AA:1156:G:P	2.14	1.06
1:AA:132:C:H5'	1:AA:262:A:C2'	1.86	1.06
1:AA:189:A:N6	20:AT:89:ARG:NH2	1.87	1.06
1:AA:1459:C:OP1	20:AT:28:ALA:O	1.74	1.05

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:755:G:H1'	8:AH:1:MET:CE	1.85	1.05
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.10	1.05
1:AA:1459:C:C5'	20:AT:28:ALA:CB	2.34	1.05
21:B0:1856:U:O2'	21:B0:3865:A:C5'	2.04	1.05
1:AA:323:U:H5''	20:AT:23:ARG:CA	1.85	1.05
1:AA:421:U:C2	3:AC:127:ARG:NH2	2.11	1.05
1:AA:502:G:H4'	1:AA:550:G:H4'	1.35	1.05
21:B0:3107:G:O3'	21:B0:3108:G:P	2.14	1.05
1:AA:322:C:H4'	20:AT:23:ARG:CD	1.86	1.05
1:AA:216:C:C1'	1:AA:468:A:O2'	2.05	1.05
1:AA:994:A:O2'	14:AN:8:GLU:HA	1.55	1.05
13:AM:82:MET:HG2	13:AM:93:ARG:HE	1.19	1.05
1:AA:1255:G:H21	1:AA:1276:G:N2	1.54	1.05
1:AA:1489:G:H2'	1:AA:1490:C:H5''	1.37	1.05
1:AA:94:G:HO3'	1:AA:96:C:P	1.19	1.05
1:AA:189:A:H8	20:AT:105:SER:OG	0.91	1.05
1:AA:322:C:H4'	20:AT:23:ARG:HD2	1.33	1.05
1:AA:559:A:OP2	5:AE:126:ARG:NH2	1.90	1.05
1:AA:8:A:H1'	5:AE:103:GLY:HA2	1.35	1.05
21:B0:910:U:H2'	21:B0:911:A:P	1.95	1.05
1:AA:142:G:C4'	1:AA:195:A:H61	1.68	1.05
1:AA:571:U:H5'	1:AA:819:A:C4	1.91	1.05
1:AA:1255:G:N2	1:AA:1276:G:N2	2.04	1.04
1:AA:355:C:H1'	1:AA:388:G:O2'	1.55	1.04
1:AA:189:A:C6	20:AT:104:LEU:HB3	1.92	1.04
1:AA:187:G:C4'	20:AT:85:MET:HE1	1.86	1.04
1:AA:1394:A:C6	1:AA:1501:C:C5'	2.39	1.04
1:AA:1261:A:C2'	1:AA:1283:G:H5''	1.87	1.04
1:AA:323:U:H5'	20:AT:23:ARG:HB2	1.33	1.04
1:AA:1298:C:H2'	7:AG:114:ARG:HH12	1.23	1.04
10:AJ:62:HIS:HB2	14:AN:59:ALA:HB3	1.37	1.04
8:AH:91:ARG:CZ	17:AQ:32:TYR:O	2.04	1.04
1:AA:1474:G:C4'	21:B0:1718:A:H2	1.69	1.04
1:AA:131:C:H4'	1:AA:263:A:C4'	1.87	1.04
21:B0:3197:U:C1'	21:B0:2181:A:N7	2.20	1.04
1:AA:292:G:H1'	1:AA:608:A:N6	1.71	1.04
1:AA:142:G:C4'	1:AA:195:A:N6	2.21	1.04
1:AA:300:A:H1'	1:AA:565:U:O2	1.57	1.04
1:AA:189:A:H61	20:AT:104:LEU:CB	1.59	1.04
1:AA:1483:A:O3'	1:AA:1484:C:OP2	1.73	1.04
21:B0:891:A:O2'	21:B0:892:A:H8	1.40	1.04
1:AA:1061:G:O4'	10:AJ:56:HIS:CE1	2.11	1.04

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:421:U:N1	3:AC:127:ARG:NH2	2.04	1.04
1:AA:1296:C:O4'	1:AA:1302:U:C4	2.10	1.04
1:AA:236:G:H5''	17:AQ:42:TYR:HE2	1.16	1.04
1:AA:1256:A:O4'	1:AA:1258:G:C4	2.11	1.03
1:AA:262:A:O3'	20:AT:75:ASN:HB2	1.56	1.03
1:AA:1409:C:H2'	1:AA:1410:G:C8	1.93	1.03
1:AA:400:C:O2'	1:AA:622:A:O2'	1.73	1.03
13:AM:82:MET:HG3	13:AM:93:ARG:HE	1.22	1.03
1:AA:237:C:OP1	17:AQ:40:LYS:HD2	1.57	1.03
21:B0:3108:G:H2'	21:B0:3109:U:H5	0.89	1.03
1:AA:216:C:H4'	1:AA:468:A:N3	1.22	1.03
5:AE:79:GLU:CD	8:AH:105:ARG:HD3	1.76	1.03
1:AA:141:A:H4'	1:AA:182:U:C1'	1.87	1.03
1:AA:187:G:N2	20:AT:105:SER:HB2	1.71	1.03
1:AA:1014:A:C2	19:AS:34:TRP:CD1	2.46	1.03
1:AA:243:A:H4'	1:AA:244:U:H5'	1.36	1.03
20:AT:39:LYS:HD2	20:AT:55:ILE:HD13	1.41	1.03
1:AA:559:A:P	5:AE:126:ARG:HH22	1.81	1.03
21:B0:1096:A:O2'	21:B0:1115:C:H1'	1.56	1.03
17:AQ:104:LYS:HG3	21:B0:727:U:C1'	1.89	1.03
1:AA:994:A:H1'	14:AN:8:GLU:HB3	1.41	1.03
1:AA:261:U:H5	20:AT:79:ARG:NE	1.46	1.02
1:AA:760:G:C2	17:AQ:103:GLY:O	2.12	1.02
1:AA:406:G:C6	1:AA:496:A:C5	2.47	1.02
1:AA:223:U:C5'	20:AT:68:LYS:NZ	2.22	1.02
1:AA:735:C:O2'	18:AR:75:ILE:CD1	2.06	1.02
21:B0:3107:G:HO3'	21:B0:3108:G:P	1.81	1.02
17:AQ:103:GLY:C	21:B0:726:G:H21	1.60	1.02
1:AA:1483:A:C2'	1:AA:1484:C:P	2.48	1.02
1:AA:501:C:H1'	1:AA:549:C:H1'	1.37	1.02
1:AA:586:C:O3'	8:AH:89:PRO:HB2	1.58	1.02
1:AA:1475:G:H5''	21:B0:1706:A:O4'	1.58	1.02
21:B0:892:A:C1'	21:B0:911:A:C2	2.41	1.02
1:AA:502:G:C1'	1:AA:550:G:H5'	1.87	1.02
1:AA:1459:C:H5'	20:AT:28:ALA:HB1	1.37	1.02
1:AA:132:C:H5'	1:AA:262:A:O2'	1.59	1.02
1:AA:1319:A:H5''	19:AS:5:LEU:HD21	1.41	1.02
10:AJ:65:LEU:HD13	14:AN:36:PHE:CZ	1.94	1.02
1:AA:1346:A:C4	7:AG:10:ARG:NH2	2.27	1.02
21:B0:1572:C:H2'	21:B0:1573:G:H5''	1.39	1.02
1:AA:322:C:C4'	20:AT:23:ARG:HD2	1.88	1.02
1:AA:9:G:OP1	5:AE:122:GLU:HB2	1.59	1.02

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1190:G:OP1	3:AC:4:LYS:HA	0.85	1.02
1:AA:397:A:N7	1:AA:547:A:O2'	1.89	1.02
1:AA:1459:C:H5''	20:AT:28:ALA:HA	1.37	1.01
1:AA:1475:G:C5'	21:B0:1706:A:O4'	2.08	1.01
1:AA:702:A:C2	21:B0:1838:G:H2'	1.84	1.01
1:AA:8:A:H1'	5:AE:103:GLY:CA	1.89	1.01
1:AA:141:A:C2	1:AA:195:A:C2	2.48	1.01
1:AA:116:A:N1	1:AA:313:A:O2'	1.92	1.01
1:AA:406:G:C5	1:AA:496:A:C6	2.45	1.01
17:AQ:104:LYS:CD	21:B0:727:U:O2	2.08	1.01
1:AA:1109:C:OP2	3:AC:176:HIS:CD2	2.13	1.01
1:AA:957:U:H4'	19:AS:79:THR:HB	1.41	1.01
1:AA:1367:C:H5''	9:AI:114:TYR:HB2	1.41	1.01
10:AJ:51:ARG:HG2	14:AN:45:ARG:NH1	1.76	1.01
1:AA:1331:G:O3'	1:AA:1332:A:P	2.19	1.01
2:AB:178:ARG:HH11	2:AB:178:ARG:HG3	1.21	1.01
19:AS:28:LYS:HG2	19:AS:29:ARG:H	1.26	1.01
4:AD:88:VAL:CG2	5:AE:96:PRO:HB2	1.91	1.01
17:AQ:104:LYS:HG3	21:B0:727:U:N1	1.75	1.01
1:AA:376:G:O3'	16:AP:5:ARG:HD2	1.60	1.01
1:AA:217:C:O2'	1:AA:470:U:C5'	2.09	1.01
1:AA:143:A:H3'	1:AA:144:G:P	2.00	1.01
1:AA:394:G:H2'	1:AA:395:C:C6	1.95	1.01
1:AA:59:A:C6	1:AA:331:G:N3	2.28	1.01
1:AA:1256:A:C4'	1:AA:1258:G:C8	2.43	1.00
1:AA:1474:G:O4'	21:B0:1718:A:H2	1.41	1.00
4:AD:88:VAL:CG2	5:AE:96:PRO:CB	2.37	1.00
1:AA:5:U:C4	5:AE:95:ALA:CB	2.44	1.00
1:AA:186:C:C1'	20:AT:81:LYS:HE2	1.91	1.00
1:AA:1182:G:H5'	1:AA:1184:G:H5'	1.03	1.00
1:AA:1086:U:H3	1:AA:1099:G:H22	1.08	1.00
21:B0:2668:U:H4'	21:B0:2669:C:H5'	1.40	1.00
1:AA:1255:G:H2'	1:AA:1258:G:H21	1.21	1.00
1:AA:1256:A:C4'	1:AA:1258:G:N9	2.24	1.00
21:B0:3110:G:OP1	21:B0:3149:G:O4'	1.79	1.00
21:B0:1252:C:H2'	21:B0:1253:C:H5''	1.43	1.00
22:B9:107:C:H3'	22:B9:108:G:P	2.01	1.00
1:AA:1044:A:C2'	1:AA:1045:C:O2'	2.09	1.00
1:AA:1234:C:C5'	1:AA:1365:G:OP1	2.10	1.00
12:AL:75:HIS:HD2	12:AL:77:LEU:H	1.05	1.00
1:AA:706:A:H1'	11:AK:29:ILE:HD11	1.39	1.00
1:AA:51:A:H2	1:AA:314:C:O2'	1.26	1.00

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1190:G:P	3:AC:4:LYS:HA	2.01	1.00
12:AL:60:LEU:HD11	12:AL:85:ILE:HD12	1.40	1.00
21:B0:1856:U:C6	21:B0:3865:A:C8	2.34	1.00
1:AA:130:A:OP1	17:AQ:63:ARG:NE	1.93	1.00
1:AA:325:A:OP2	20:AT:70:SER:CB	2.08	1.00
1:AA:586:C:H5''	8:AH:90:GLY:N	1.75	1.00
1:AA:436:C:N4	1:AA:437:U:O4	1.94	1.00
1:AA:142:G:N2	1:AA:196:A:H1'	1.77	1.00
1:AA:714:G:H4'	1:AA:776:G:H4'	1.44	1.00
1:AA:319:G:C2'	1:AA:1434:A:N1	2.24	0.99
1:AA:1316:G:H4'	14:AN:18:VAL:HG11	1.40	0.99
1:AA:367:U:C2	1:AA:369:C:C4	2.50	0.99
1:AA:929:G:P	1:AA:1533:C:H41	1.84	0.99
1:AA:279:A:OP2	17:AQ:95:TYR:HE2	1.43	0.99
1:AA:189:A:O5'	20:AT:105:SER:OG	1.79	0.99
1:AA:191:G:C4	1:AA:192:U:N1	2.29	0.99
1:AA:1394:A:C2	1:AA:1501:C:O4'	2.15	0.99
1:AA:1087:G:OP1	1:AA:1389:C:H4'	1.61	0.99
1:AA:1329:A:H5'	13:AM:29:ARG:CG	1.92	0.99
1:AA:205:G:N2	1:AA:207:C:C5	2.30	0.99
21:B0:891:A:HO2'	21:B0:892:A:C5'	1.61	0.99
22:B9:107:C:O3'	22:B9:108:G:P	2.21	0.99
1:AA:292:G:C1'	1:AA:608:A:N6	2.26	0.99
1:AA:1457:A:N9	1:AA:1459:C:C2	2.30	0.99
4:AD:88:VAL:HG22	5:AE:96:PRO:HB2	1.42	0.99
1:AA:995:C:O2	14:AN:4:LYS:HD3	1.62	0.99
1:AA:130:A:C6	1:AA:264:U:O2	2.16	0.99
1:AA:6:G:N9	5:AE:119:LEU:HD11	1.72	0.99
1:AA:314:C:O2	1:AA:353:A:C2	2.16	0.99
1:AA:1298:C:P	7:AG:114:ARG:NH2	2.36	0.99
3:AC:59:ARG:O	10:AJ:92:THR:HG22	1.59	0.99
1:AA:1398:A:N6	5:AE:21:ALA:HA	1.77	0.98
13:AM:86:CYS:O	13:AM:90:LEU:HG	1.62	0.98
10:AJ:49:VAL:HG11	14:AN:41:ARG:O	1.62	0.98
1:AA:545:C:O2'	1:AA:549:C:OP1	1.81	0.98
11:AK:54:ARG:HH11	11:AK:54:ARG:HB3	1.26	0.98
21:B0:1856:U:C3'	21:B0:3865:A:C8	2.45	0.98
1:AA:236:G:H5''	17:AQ:42:TYR:CE2	1.98	0.98
1:AA:1261:A:C5'	1:AA:1283:G:O3'	2.11	0.98
1:AA:626:U:OP1	16:AP:35:LYS:NZ	1.96	0.98
1:AA:130:A:C1'	1:AA:264:U:C4'	2.42	0.98
1:AA:992:U:H2'	1:AA:1043:C:C5	1.98	0.98

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:762:C:H4'	21:B0:729:A:H61	1.28	0.98
1:AA:1329:A:OP1	13:AM:28:ALA:N	1.76	0.98
1:AA:587:G:O2'	1:AA:588:G:OP2	1.81	0.98
22:B9:114:C:H2'	22:B9:115:G:H5''	1.45	0.98
8:AH:113:SER:HB2	8:AH:134:ILE:HD11	1.43	0.98
1:AA:1116:C:H2'	1:AA:1117:G:H5''	1.46	0.98
1:AA:974:A:OP1	14:AN:31:ARG:HG2	1.64	0.98
21:B0:1856:U:O5'	21:B0:3865:A:H8	1.40	0.97
1:AA:262:A:C5'	20:AT:74:LYS:HB2	1.94	0.97
1:AA:1505:G:H4'	1:AA:1506:U:C5'	1.94	0.97
13:AM:80:ARG:NH2	19:AS:65:ASN:O	1.97	0.97
1:AA:237:C:OP1	17:AQ:40:LYS:HD3	1.59	0.97
21:B0:1199:U:H3'	21:B0:1200:G:H5''	1.44	0.97
1:AA:1503:A:O5'	1:AA:1531:A:H1'	1.64	0.97
1:AA:113:G:H1'	1:AA:353:A:O2'	1.65	0.97
1:AA:571:U:H4'	1:AA:819:A:C6	1.98	0.97
1:AA:191:G:C6	1:AA:192:U:C4	2.50	0.97
1:AA:927:G:O2'	1:AA:1532:U:H4'	1.63	0.97
1:AA:113:G:C4	1:AA:353:A:O2'	2.15	0.97
1:AA:994:A:C4	14:AN:5:ALA:O	2.18	0.97
1:AA:1092:A:C5'	7:AG:4:ARG:NH2	2.26	0.97
21:B0:1861:G:H4'	53:B5:198:THR:CA	1.94	0.97
1:AA:223:U:H5''	20:AT:68:LYS:HZ2	1.25	0.97
21:B0:2548:G:H2'	21:B0:2549:G:H5''	1.45	0.97
1:AA:143:A:O3'	1:AA:144:G:H8	1.45	0.97
1:AA:261:U:H5	20:AT:79:ARG:CZ	1.62	0.97
13:AM:88:ARG:HD2	19:AS:3:ARG:NH2	1.78	0.97
1:AA:1087:G:OP1	1:AA:1389:C:C4'	2.11	0.97
1:AA:1484:C:O2'	21:B0:1943:A:C4'	2.11	0.97
1:AA:319:G:H2'	1:AA:1434:A:H2	1.18	0.97
1:AA:323:U:H4'	20:AT:22:ARG:HB2	1.47	0.97
1:AA:351:G:O3'	1:AA:352:C:OP1	1.83	0.96
21:B0:1119:U:H3'	21:B0:1120:C:O5'	1.65	0.96
1:AA:293:G:C4'	1:AA:609:A:C2	2.40	0.96
1:AA:69:G:H5'	1:AA:152:A:H2	1.21	0.96
1:AA:187:G:C4'	20:AT:85:MET:CE	2.41	0.96
11:AK:110:ASP:OD2	18:AR:88:LYS:NZ	1.96	0.96
21:B0:3877:A:H8	21:B0:3877:A:O5'	1.47	0.96
1:AA:1394:A:N6	1:AA:1501:C:C5'	2.28	0.96
1:AA:116:A:N6	1:AA:313:A:N3	2.12	0.96
1:AA:187:G:C1'	20:AT:85:MET:HE1	1.94	0.96
1:AA:37:U:O2'	1:AA:500:G:H4'	1.66	0.96

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1459:C:P	20:AT:28:ALA:O	2.23	0.96
1:AA:190:A:H2	20:AT:101:GLY:HA2	1.28	0.96
1:AA:651:C:N4	1:AA:652:U:O4	1.98	0.96
1:AA:191:G:N7	1:AA:192:U:C5	2.33	0.96
4:AD:57:ARG:HH21	5:AE:107:ARG:HD3	1.20	0.96
1:AA:362:G:H4'	12:AL:28:LYS:NZ	1.79	0.96
1:AA:837:G:O3'	1:AA:838:C:P	2.23	0.96
1:AA:104:G:H5'	1:AA:172:A:N1	1.79	0.96
1:AA:191:G:N7	1:AA:192:U:C6	2.34	0.96
1:AA:187:G:O4'	20:AT:85:MET:HE1	0.79	0.96
1:AA:216:C:H1'	1:AA:468:A:HO2'	1.13	0.96
1:AA:837:G:HO3'	1:AA:838:C:H6	1.09	0.96
1:AA:1261:A:C4'	1:AA:1283:G:O3'	2.13	0.95
1:AA:926:G:C6	1:AA:1505:G:C6	2.54	0.95
1:AA:131:C:O2'	1:AA:262:A:C2'	2.14	0.95
21:B0:891:A:O3'	21:B0:892:A:OP2	1.83	0.95
1:AA:977:A:C2	1:AA:1224:G:C6	2.54	0.95
1:AA:143:A:H5'	1:AA:196:A:N6	1.80	0.95
1:AA:1101:A:H4'	1:AA:1102:A:O5'	1.65	0.95
1:AA:1255:G:N3	1:AA:1259:C:O2	1.99	0.95
1:AA:133:U:C5'	20:AT:74:LYS:NZ	2.28	0.95
1:AA:1394:A:C5	1:AA:1501:C:C4'	2.41	0.95
1:AA:112:G:N3	1:AA:354:G:H4'	1.81	0.95
1:AA:7:G:H5'	1:AA:298:A:C5'	1.96	0.95
1:AA:406:G:N3	1:AA:496:A:N6	2.14	0.95
21:B0:3128:G:O3'	21:B0:3174:C:H4'	1.66	0.95
21:B0:1747:G:H4'	21:B0:1749:G:H1'	1.47	0.95
1:AA:1110:A:H2'	1:AA:1111:A:O4'	1.64	0.95
1:AA:992:U:H2'	1:AA:1043:C:H5	1.32	0.95
3:AC:52:LEU:HD23	3:AC:52:LEU:H	1.26	0.95
1:AA:191:G:C2	1:AA:192:U:C1'	2.45	0.95
21:B0:1856:U:P	21:B0:3865:A:N7	2.39	0.95
1:AA:191:G:C5	1:AA:192:U:C5	2.55	0.95
21:B0:1066:G:N1	21:B0:1115:C:N4	2.15	0.95
1:AA:1489:G:C2'	1:AA:1490:C:H5''	1.96	0.95
10:AJ:62:HIS:HB3	14:AN:59:ALA:HB3	1.46	0.95
1:AA:651:C:N3	1:AA:652:U:C4	2.35	0.95
3:AC:14:ILE:HG22	3:AC:15:THR:H	1.32	0.95
1:AA:1342:C:O3'	9:AI:125:TYR:CZ	2.20	0.95
1:AA:933:G:C6	1:AA:935:A:C8	2.55	0.95
1:AA:191:G:C6	1:AA:192:U:N1	2.34	0.95
1:AA:762:C:H4'	21:B0:729:A:N1	1.81	0.95

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:189:A:N6	20:AT:104:LEU:CA	2.30	0.95
1:AA:323:U:H5'	20:AT:23:ARG:CB	1.95	0.95
21:B0:3109:U:C5'	21:B0:3150:C:C5'	2.09	0.95
1:AA:116:A:H61	1:AA:313:A:H1'	1.32	0.95
1:AA:436:C:C5	1:AA:437:U:C5	2.54	0.95
1:AA:1277:C:C1'	1:AA:1279:A:C8	2.50	0.94
1:AA:702:A:C6	21:B0:1839:A:O4'	2.08	0.94
1:AA:619:U:C2	4:AD:135:LEU:HG	2.02	0.94
21:B0:3110:G:OP1	21:B0:3148:G:C2'	2.15	0.94
1:AA:319:G:N2	1:AA:1434:A:C2'	2.29	0.94
1:AA:143:A:O4'	1:AA:196:A:C5	2.21	0.94
1:AA:1255:G:N2	1:AA:1276:G:H21	1.64	0.94
1:AA:762:C:C4'	21:B0:729:A:H61	1.79	0.94
1:AA:376:G:C2	1:AA:389:A:C2	2.54	0.94
1:AA:292:G:C2'	1:AA:608:A:N6	2.29	0.94
10:AJ:31:GLY:HA2	10:AJ:78:ASN:HD22	1.32	0.94
21:B0:367:G:H2'	21:B0:368:A:H5''	1.48	0.94
1:AA:315:A:O4'	1:AA:353:A:N1	2.01	0.94
1:AA:187:G:N3	20:AT:105:SER:CB	2.29	0.94
1:AA:436:C:N4	1:AA:437:U:C4	2.34	0.94
1:AA:394:G:C6	1:AA:395:C:C4	2.54	0.94
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.26	0.94
1:AA:761:G:C5'	17:AQ:102:GLY:HA3	1.97	0.94
1:AA:1416:G:O5'	1:AA:1417:G:P	2.25	0.94
1:AA:112:G:N2	1:AA:354:G:OP2	2.00	0.94
1:AA:190:A:H2	20:AT:101:GLY:CA	1.58	0.94
11:AK:54:ARG:O	11:AK:57:THR:HG22	1.66	0.94
1:AA:1374:A:O3'	1:AA:1375:A:P	2.26	0.94
1:AA:619:U:C4	4:AD:135:LEU:HD21	2.02	0.94
21:B0:3108:G:C2'	21:B0:3109:U:H5	1.80	0.94
1:AA:1483:A:H2'	1:AA:1484:C:P	2.06	0.94
1:AA:216:C:H1'	1:AA:468:A:C2'	1.98	0.94
1:AA:1296:C:H4'	1:AA:1302:U:C5	2.03	0.94
21:B0:929:A:H3'	21:B0:930:A:H5''	1.47	0.94
1:AA:5:U:C4	5:AE:95:ALA:HB2	2.03	0.94
1:AA:406:G:C4	1:AA:496:A:N6	2.35	0.94
1:AA:1269:A:C2	1:AA:1313:U:C1'	2.50	0.94
1:AA:651:C:N4	1:AA:752:G:O2'	2.01	0.94
1:AA:59:A:C4	1:AA:331:G:C2	2.55	0.94
21:B0:2607:C:H3'	21:B0:2608:A:H5'	1.49	0.94
6:AF:94:GLN:HE21	18:AR:32:ARG:HD3	1.32	0.94
1:AA:664:G:H22	1:AA:741:G:H1	1.16	0.94

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:AQ:104:LYS:CE	21:B0:729:A:N6	1.99	0.93
1:AA:319:G:H5'	1:AA:1468:A:C4'	1.98	0.93
1:AA:1298:C:OP2	7:AG:114:ARG:NH2	2.01	0.93
1:AA:59:A:N1	1:AA:331:G:C4	2.35	0.93
1:AA:762:C:H4'	21:B0:729:A:N6	1.82	0.93
1:AA:39:G:C5	1:AA:498:U:O4	2.20	0.93
1:AA:935:A:O4'	1:AA:1384:C:O2	1.87	0.93
1:AA:815:A:H2	1:AA:1528:U:O4'	1.33	0.93
10:AJ:49:VAL:HG13	14:AN:41:ARG:HB2	1.49	0.93
1:AA:586:C:O3'	8:AH:89:PRO:CB	2.15	0.93
1:AA:1392:G:H4'	1:AA:1531:A:C5'	1.98	0.93
1:AA:189:A:C6	20:AT:104:LEU:C	2.41	0.93
21:B0:892:A:C1'	21:B0:911:A:H2	1.81	0.93
1:AA:141:A:H2	1:AA:195:A:C2	1.83	0.93
1:AA:1505:G:O3'	1:AA:1506:U:OP2	1.85	0.93
21:B0:910:U:C2'	21:B0:911:A:P	2.56	0.93
1:AA:1406:U:O4'	1:AA:1518:A:H4'	1.66	0.93
21:B0:892:A:H1'	21:B0:911:A:H2	1.15	0.93
1:AA:141:A:H4'	1:AA:182:U:H1'	1.45	0.93
12:AL:41:ARG:HG2	12:AL:42:THR:N	1.83	0.93
1:AA:1248:A:O2'	9:AI:70:LYS:NZ	2.01	0.93
1:AA:244:U:O4	1:AA:893:C:N3	2.02	0.93
8:AH:91:ARG:HG2	12:AL:7:ILE:HG21	1.51	0.93
1:AA:737:A:H1'	6:AF:73:ASN:OD1	1.69	0.93
1:AA:112:G:N3	1:AA:354:G:C4'	2.31	0.93
1:AA:559:A:P	5:AE:126:ARG:NH2	2.42	0.93
1:AA:1416:G:H3'	1:AA:1417:G:C5'	1.97	0.93
1:AA:651:C:C4	1:AA:652:U:C4	2.56	0.93
22:B9:107:C:C3'	22:B9:108:G:P	2.57	0.93
1:AA:6:G:O6	5:AE:94:ALA:CA	2.15	0.93
1:AA:436:C:N3	1:AA:437:U:C4	2.37	0.93
1:AA:994:A:O2'	14:AN:11:LYS:HE3	1.69	0.93
1:AA:571:U:H5''	1:AA:819:A:N1	1.83	0.93
13:AM:40:ASN:HD22	13:AM:41:PRO:CD	1.82	0.93
1:AA:133:U:H5'	20:AT:74:LYS:HZ2	1.29	0.92
1:AA:922:G:N1	1:AA:1396:A:C6	2.31	0.92
3:AC:195:VAL:O	3:AC:196:LEU:HD23	1.68	0.92
1:AA:130:A:H1'	1:AA:264:U:H5'	1.48	0.92
1:AA:735:C:O2'	18:AR:75:ILE:HD12	1.69	0.92
3:AC:131:ARG:HG2	3:AC:135:LYS:HE3	1.50	0.92
21:B0:1066:G:N2	21:B0:1115:C:C2	2.36	0.92
1:AA:1296:C:C4'	1:AA:1302:U:C4	2.52	0.92

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:958:A:N9	19:AS:55:LYS:HD2	1.85	0.92
21:B0:104:C:H2'	21:B0:105:G:H5''	1.49	0.92
1:AA:191:G:C2	1:AA:192:U:C2	2.56	0.92
17:AQ:104:LYS:CD	21:B0:727:U:H1'	1.99	0.92
1:AA:1416:G:C6	1:AA:1417:G:H1'	2.03	0.92
13:AM:86:CYS:C	13:AM:87:TYR:N	2.23	0.92
9:AI:115:GLY:HA2	10:AJ:58:ASP:OD1	1.69	0.92
1:AA:333:G:O4'	20:AT:16:HIS:CD2	2.21	0.92
21:B0:226:C:HO2'	21:B0:227:G:H8	0.97	0.92
1:AA:1305:G:O2'	1:AA:1306:A:H8	1.51	0.92
2:AB:124:SER:HB2	2:AB:125:PRO:HD2	1.49	0.92
21:B0:1656:U:H2'	21:B0:1657:A:H5''	1.52	0.92
21:B0:1856:U:OP2	21:B0:3865:A:N7	2.02	0.92
1:AA:130:A:C6	1:AA:264:U:H1'	2.05	0.92
1:AA:651:C:C4	1:AA:652:U:C5	2.58	0.92
21:B0:3109:U:H5'	21:B0:3150:C:C5'	1.86	0.92
3:AC:91:LEU:HD21	3:AC:99:VAL:HG13	1.48	0.92
1:AA:476:U:C3'	1:AA:477:G:P	2.56	0.92
1:AA:1296:C:C4'	1:AA:1302:U:O4	2.18	0.92
17:AQ:104:LYS:CG	21:B0:727:U:C1'	2.47	0.92
1:AA:815:A:H2	1:AA:1528:U:C4'	1.82	0.92
1:AA:319:G:N2	1:AA:1434:A:N3	2.18	0.92
21:B0:1066:G:H1	21:B0:1115:C:N4	1.66	0.92
1:AA:1292:U:P	7:AG:41:ARG:HH22	1.91	0.92
19:AS:31:ILE:HG22	19:AS:32:LYS:H	1.34	0.92
1:AA:130:A:C1'	1:AA:264:U:C5'	2.47	0.91
1:AA:518:C:O2'	12:AL:50:SER:HB3	1.70	0.91
1:AA:1064:G:H1'	1:AA:1190:G:H21	1.14	0.91
5:AE:79:GLU:OE1	8:AH:105:ARG:CD	2.17	0.91
1:AA:835:U:C5'	18:AR:64:ARG:NH2	2.34	0.91
21:B0:1182:U:H2'	21:B0:1183:C:H5''	1.49	0.91
2:AB:59:GLU:HG2	2:AB:221:LEU:HD11	1.51	0.91
1:AA:1392:G:H4'	1:AA:1531:A:H5''	1.50	0.91
1:AA:94:G:C5	1:AA:96:C:C5	2.59	0.91
1:AA:1429:C:O2'	21:B0:1720:G:O2'	1.87	0.91
1:AA:189:A:H62	20:AT:89:ARG:HH21	1.12	0.91
1:AA:324:G:P	20:AT:22:ARG:HB3	2.10	0.91
21:B0:1062:G:O3'	21:B0:1063:C:P	2.28	0.91
21:B0:892:A:H5'	21:B0:892:A:H8	1.35	0.91
1:AA:292:G:C2'	1:AA:608:A:H62	1.82	0.91
1:AA:31:G:O6	1:AA:48:C:O4'	1.88	0.91
5:AE:81:GLU:HG2	5:AE:90:VAL:HG22	1.52	0.91

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1137:C:H4'	1:AA:1138:G:C2	2.05	0.91
1:AA:261:U:C5	20:AT:79:ARG:CD	2.51	0.91
1:AA:1409:C:H2'	1:AA:1410:G:H8	1.30	0.91
1:AA:1405:G:O4'	1:AA:1519:A:C4'	2.17	0.91
13:AM:82:MET:CG	13:AM:93:ARG:NE	2.34	0.91
16:AP:58:TYR:O	16:AP:61:SER:HB3	1.68	0.91
3:AC:23:TYR:HA	10:AJ:11:PHE:CD1	2.06	0.91
1:AA:1277:C:H1'	1:AA:1279:A:H8	1.10	0.91
1:AA:132:C:H5'	1:AA:262:A:H1'	1.33	0.91
1:AA:115:G:O2'	1:AA:116:A:P	2.28	0.91
1:AA:190:A:C2	20:AT:101:GLY:HA2	2.03	0.91
1:AA:848:G:O3'	1:AA:849:C:C5'	2.18	0.91
21:B0:3877:A:O3'	21:B0:1861:G:H3'	1.69	0.91
21:B0:3197:U:H3	21:B0:2204:A:H61	0.97	0.91
21:B0:1066:G:C2	21:B0:1115:C:N3	2.39	0.91
1:AA:1474:G:C4'	21:B0:1718:A:C2	2.54	0.90
1:AA:1484:C:H4'	21:B0:1943:A:H1'	0.92	0.90
1:AA:6:G:N3	5:AE:119:LEU:HD11	1.86	0.90
1:AA:293:G:C5'	1:AA:609:A:N1	2.33	0.90
1:AA:1497:G:O2'	1:AA:1498:U:H5'	1.71	0.90
1:AA:564:C:O4'	17:AQ:32:TYR:CD2	2.25	0.90
1:AA:1502:A:H2	1:AA:1505:G:H1	1.20	0.90
1:AA:1406:U:C4'	1:AA:1518:A:H4'	2.02	0.90
1:AA:190:A:N1	20:AT:104:LEU:HB2	1.84	0.90
9:AI:70:LYS:O	9:AI:74:ILE:HG13	1.72	0.90
1:AA:131:C:O3'	1:AA:262:A:O2'	1.88	0.90
1:AA:43:C:OP1	16:AP:13:HIS:HD2	1.55	0.90
1:AA:1346:A:H2'	7:AG:10:ARG:NH2	1.86	0.90
10:AJ:8:LEU:HD21	10:AJ:96:ILE:HG12	1.54	0.90
21:B0:128:C:H2'	21:B0:129:A:H5''	1.51	0.90
1:AA:191:G:C4	1:AA:192:U:O4'	2.18	0.90
1:AA:262:A:H5'	20:AT:74:LYS:HB2	1.53	0.90
1:AA:113:G:N3	1:AA:353:A:C2'	2.34	0.90
1:AA:994:A:C2'	14:AN:11:LYS:HE3	2.01	0.90
1:AA:1256:A:H5'	1:AA:1258:G:H1'	0.90	0.90
1:AA:191:G:C4	1:AA:192:U:C6	2.59	0.90
1:AA:922:G:N3	1:AA:1396:A:C2	2.39	0.90
4:AD:57:ARG:HH22	5:AE:107:ARG:HD3	1.29	0.90
1:AA:1182:G:C5'	1:AA:1184:G:H5'	1.98	0.90
1:AA:1368:G:OP2	9:AI:113:LYS:C	2.10	0.90
1:AA:322:C:O3'	20:AT:23:ARG:HG3	1.70	0.90
1:AA:7:G:C5'	1:AA:298:A:H5'	2.02	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1372:U:OP1	9:AI:71:SER:HB3	1.72	0.90
1:AA:1070:U:OP1	5:AE:25:ARG:NH1	2.05	0.90
1:AA:190:A:N1	20:AT:101:GLY:O	2.05	0.90
1:AA:1447:A:O3'	1:AA:1448:C:P	2.29	0.90
1:AA:9:G:OP1	5:AE:122:GLU:CB	2.19	0.89
1:AA:367:U:O2	1:AA:369:C:C5	2.25	0.89
1:AA:406:G:O6	1:AA:496:A:C8	2.25	0.89
1:AA:133:U:C5'	20:AT:74:LYS:HZ3	1.85	0.89
1:AA:1329:A:OP2	13:AM:28:ALA:N	1.93	0.89
1:AA:1155:G:C3'	1:AA:1156:G:P	2.61	0.89
1:AA:231:G:N2	1:AA:262:A:C2	2.41	0.89
1:AA:762:C:H4'	21:B0:729:A:C6	2.08	0.89
1:AA:319:G:H5'	1:AA:1468:A:H4'	1.54	0.89
1:AA:1483:A:C2'	1:AA:1484:C:OP2	2.19	0.89
1:AA:130:A:C2	1:AA:264:U:C1'	2.51	0.89
1:AA:113:G:C1'	1:AA:353:A:O2'	2.19	0.89
1:AA:1190:G:H3'	3:AC:3:ASN:HB2	1.51	0.89
1:AA:1329:A:C5'	13:AM:26:GLY:H	1.84	0.89
8:AH:91:ARG:NH1	17:AQ:32:TYR:O	2.04	0.89
21:B0:3111:C:H4'	21:B0:3112:G:OP1	1.73	0.89
1:AA:318:G:O2'	1:AA:1468:A:C4'	2.18	0.89
21:B0:891:A:HO2'	21:B0:892:A:H8	0.89	0.89
1:AA:571:U:C5'	1:AA:819:A:C5	2.56	0.89
10:AJ:45:ARG:NH1	14:AN:36:PHE:CE2	2.40	0.89
1:AA:935:A:C1'	1:AA:1384:C:N3	2.35	0.89
10:AJ:61:GLU:OE2	14:AN:49:HIS:HE1	1.55	0.89
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.55	0.89
1:AA:1416:G:H3'	1:AA:1417:G:H5'	1.50	0.89
1:AA:1224:G:O2'	1:AA:1225:A:P	2.31	0.89
1:AA:1297:C:O3'	1:AA:1298:C:P	2.31	0.89
1:AA:405:U:O3'	1:AA:406:G:P	2.30	0.89
1:AA:1015:A:H1'	1:AA:1219:U:C5'	2.02	0.89
1:AA:570:G:O3'	1:AA:819:A:O2'	1.91	0.89
1:AA:1060:C:OP1	14:AN:45:ARG:NH2	2.04	0.89
1:AA:130:A:C1'	1:AA:264:U:O4'	2.21	0.89
1:AA:355:C:O4'	1:AA:388:G:O2'	1.88	0.89
1:AA:826:C:H1'	8:AH:15:ASN:HD22	1.36	0.89
1:AA:113:G:O4'	1:AA:354:G:H5''	1.71	0.89
1:AA:394:G:C4	1:AA:395:C:C5	2.61	0.89
1:AA:261:U:C6	20:AT:79:ARG:CZ	2.56	0.88
1:AA:235:C:C5'	17:AQ:70:ARG:CG	2.42	0.88
17:AQ:97:SER:HB2	17:AQ:102:GLY:C	1.93	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1483:A:O2'	1:AA:1484:C:P	2.31	0.88
1:AA:142:G:O4'	1:AA:195:A:N1	2.06	0.88
1:AA:246:A:O3'	1:AA:247:G:C4'	2.19	0.88
1:AA:1367:C:H5''	9:AI:114:TYR:CB	2.02	0.88
1:AA:1060:C:O2'	10:AJ:56:HIS:CD2	2.25	0.88
1:AA:375:U:O3'	1:AA:376:G:OP2	1.89	0.88
1:AA:293:G:O5'	1:AA:609:A:C6	2.25	0.88
1:AA:8:A:N6	4:AD:205:GLU:O	2.06	0.88
1:AA:184:G:H4'	1:AA:224:C:O2'	1.73	0.88
1:AA:141:A:H2	1:AA:195:A:H2	0.94	0.88
1:AA:1371:G:OP1	9:AI:11:LYS:O	1.92	0.88
1:AA:1255:G:O2'	1:AA:1259:C:N1	2.07	0.88
21:B0:3110:G:OP1	21:B0:3149:G:C4'	2.22	0.88
1:AA:1298:C:C6	7:AG:114:ARG:NH1	2.42	0.88
1:AA:1211:U:C3'	1:AA:1212:U:P	2.61	0.88
1:AA:651:C:N3	1:AA:652:U:C5	2.41	0.88
21:B0:3874:C:N4	21:B0:3875:A:C5	2.41	0.88
1:AA:320:C:H5'	1:AA:1434:A:N1	1.88	0.88
1:AA:142:G:H1'	1:AA:195:A:C2	2.09	0.88
6:AF:10:LEU:HD12	6:AF:59:TYR:HB3	1.55	0.88
1:AA:581:G:O2'	17:AQ:105:ALA:O	1.89	0.88
1:AA:436:C:O2'	1:AA:437:U:H5'	1.72	0.88
1:AA:539:A:OP2	12:AL:115:LYS:HE2	1.74	0.88
1:AA:976:G:OP2	1:AA:1358:U:O2'	1.91	0.88
1:AA:538:G:P	12:AL:115:LYS:CG	2.60	0.88
1:AA:995:C:C2	14:AN:4:LYS:HB3	2.08	0.88
1:AA:923:A:O2'	1:AA:1398:A:H2'	1.73	0.88
1:AA:323:U:H5''	20:AT:22:ARG:C	1.94	0.88
1:AA:406:G:N7	1:AA:496:A:C4	2.41	0.88
17:AQ:104:LYS:HD2	21:B0:727:U:H1'	1.56	0.88
1:AA:184:G:C4'	1:AA:224:C:O2'	2.22	0.88
4:AD:36:ARG:N	4:AD:37:PRO:HD3	1.88	0.88
2:AB:116:GLU:HG2	2:AB:153:ARG:HH12	1.39	0.88
1:AA:132:C:OP1	20:AT:75:ASN:OD1	1.91	0.88
1:AA:6:G:C6	5:AE:94:ALA:HA	2.08	0.88
1:AA:538:G:OP2	12:AL:115:LYS:HG3	1.73	0.88
1:AA:1067:A:O3'	1:AA:1068:G:P	2.32	0.88
1:AA:142:G:C1'	1:AA:195:A:C6	2.57	0.88
21:B0:1096:A:HO2'	21:B0:1115:C:H1'	1.37	0.88
1:AA:760:G:C6	17:AQ:104:LYS:O	2.27	0.87
1:AA:394:G:C6	1:AA:395:C:N4	2.42	0.87
1:AA:1131:G:H1	1:AA:1143:G:H21	1.22	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:665:A:H3'	21:B0:666:U:H5''	1.54	0.87
1:AA:1261:A:C1'	1:AA:1283:G:C5'	2.52	0.87
3:AC:59:ARG:O	10:AJ:92:THR:CG2	2.22	0.87
21:B0:2633:A:H4'	21:B0:2634:G:H4'	1.54	0.87
1:AA:1255:G:H21	1:AA:1276:G:H22	1.21	0.87
1:AA:142:G:H1'	1:AA:195:A:C6	2.09	0.87
1:AA:68:G:H21	1:AA:152:A:H1'	1.38	0.87
1:AA:1457:A:C8	1:AA:1459:C:N3	2.41	0.87
1:AA:1369:C:OP2	9:AI:112:LYS:N	2.07	0.87
1:AA:923:A:C2	1:AA:1395:C:N3	2.42	0.87
1:AA:6:G:N2	5:AE:98:THR:HG23	1.89	0.87
1:AA:51:A:N6	1:AA:314:C:O2	2.07	0.87
1:AA:325:A:OP2	20:AT:70:SER:HB3	1.74	0.87
1:AA:141:A:C4'	1:AA:182:U:C1'	2.48	0.87
1:AA:196:A:O2'	1:AA:221:C:O2	1.92	0.87
22:B9:73:C:C3'	22:B9:74:A:P	2.63	0.87
21:B0:3128:G:O2'	21:B0:3174:C:C5'	2.21	0.87
1:AA:1292:U:P	7:AG:41:ARG:NH2	2.47	0.87
1:AA:1458:G:C8	1:AA:1459:C:C2	2.61	0.87
1:AA:130:A:C4	1:AA:264:U:H1'	1.86	0.87
1:AA:1261:A:H5'	1:AA:1283:G:O2'	1.74	0.87
1:AA:190:A:N7	20:AT:105:SER:CA	2.37	0.87
4:AD:57:ARG:HH21	5:AE:107:ARG:CD	1.76	0.87
1:AA:776:G:O3'	1:AA:777:A:P	2.33	0.87
1:AA:235:C:H5'	17:AQ:70:ARG:CD	2.04	0.87
1:AA:94:G:C6	1:AA:96:C:C4	2.63	0.87
1:AA:436:C:C2	1:AA:437:U:N1	2.42	0.87
1:AA:1108:G:H4'	1:AA:1191:A:O4'	1.75	0.87
1:AA:1316:G:H4'	14:AN:18:VAL:CG1	2.05	0.87
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.10	0.87
1:AA:1475:G:H5'	21:B0:1706:A:C4'	2.00	0.87
1:AA:1392:G:C4'	1:AA:1531:A:H5''	2.04	0.87
13:AM:82:MET:HG2	13:AM:93:ARG:NE	1.89	0.87
2:AB:91:PRO:HG2	2:AB:155:LEU:HD23	1.54	0.87
1:AA:1475:G:C5'	21:B0:1706:A:C5'	2.52	0.87
1:AA:131:C:O2'	1:AA:262:A:H2'	1.74	0.87
1:AA:1261:A:C4'	1:AA:1283:G:C5'	2.52	0.87
1:AA:402:G:H4'	1:AA:620:C:C4	2.09	0.87
13:AM:3:ARG:HG2	13:AM:9:ILE:HG23	1.56	0.87
1:AA:1458:G:C8	1:AA:1459:C:O2	2.28	0.86
1:AA:293:G:O5'	1:AA:609:A:N1	2.08	0.86
1:AA:1343:G:P	9:AI:125:TYR:OH	2.31	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:502:G:C4'	1:AA:550:G:H4'	2.03	0.86
1:AA:1255:G:H2'	1:AA:1258:G:N2	1.90	0.86
4:AD:88:VAL:HA	5:AE:96:PRO:O	1.73	0.86
1:AA:564:C:O4'	17:AQ:32:TYR:HD2	1.58	0.86
21:B0:918:A:H2'	21:B0:919:U:H5''	1.57	0.86
1:AA:1113:C:C1'	3:AC:178:LEU:HD21	2.05	0.86
12:AL:41:ARG:CG	12:AL:42:THR:H	1.88	0.86
21:B0:88:G:H3'	21:B0:89:A:H5''	1.57	0.86
10:AJ:22:LYS:HE2	10:AJ:90:LEU:HD12	1.57	0.86
21:B0:1856:U:H3'	21:B0:3865:A:H8	1.37	0.86
1:AA:261:U:C5	20:AT:79:ARG:NH1	2.43	0.86
1:AA:292:G:O2'	1:AA:608:A:N6	2.07	0.86
1:AA:1014:A:OP2	19:AS:14:HIS:HB3	1.73	0.86
1:AA:719:C:O2'	18:AR:49:LYS:HG2	1.74	0.86
1:AA:129:U:OP1	17:AQ:3:LYS:NZ	2.08	0.86
1:AA:132:C:H4'	1:AA:262:A:C1'	1.96	0.86
1:AA:1061:G:C1'	10:AJ:56:HIS:CE1	2.59	0.86
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.57	0.86
1:AA:1256:A:H5'	1:AA:1258:G:C4	2.09	0.86
1:AA:1416:G:H2'	1:AA:1417:G:C5'	2.06	0.86
1:AA:1014:A:H2	1:AA:1219:U:O2'	1.47	0.86
1:AA:250:A:H4'	1:AA:251:G:O5'	1.76	0.86
21:B0:1072:U:H4'	21:B0:1081:A:O2'	1.75	0.86
13:AM:93:ARG:HG2	21:B0:900(A):A:P	2.16	0.86
1:AA:571:U:H5'	1:AA:819:A:C5	2.10	0.86
21:B0:1119:U:C3'	21:B0:1120:C:O5'	2.22	0.86
6:AF:30:LEU:HD23	6:AF:75:LEU:HD21	1.57	0.86
1:AA:1064:G:H22	1:AA:1190:G:C2'	1.88	0.86
1:AA:1318:A:C4'	19:AS:10:PHE:CE1	2.59	0.86
1:AA:835:U:H5''	18:AR:64:ARG:HH22	1.39	0.86
1:AA:1155:G:H3'	1:AA:1156:G:P	2.15	0.86
12:AL:25:PRO:C	12:AL:27:LEU:H	1.79	0.86
2:AB:102:LEU:HD21	2:AB:162:ILE:HD11	1.57	0.86
3:AC:110:ASN:HD21	3:AC:140:ARG:HB3	1.40	0.86
1:AA:1256:A:C5'	1:AA:1258:G:C4	2.59	0.86
1:AA:1474:G:O4'	21:B0:1718:A:C2	2.28	0.86
1:AA:130:A:N7	17:AQ:63:ARG:HG3	1.91	0.86
5:AE:115:VAL:HG11	5:AE:118:ILE:HG13	1.57	0.86
1:AA:1067:A:O2'	1:AA:1093:A:O3'	1.92	0.86
1:AA:323:U:C5'	20:AT:23:ARG:HA	2.05	0.85
1:AA:826:C:H1'	8:AH:15:ASN:ND2	1.91	0.85
1:AA:1064:G:H4'	1:AA:1065:U:H5'	1.58	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:571:U:C5'	1:AA:819:A:C4	2.59	0.85
21:B0:3187:U:O3'	21:B0:3188:U:P	2.35	0.85
1:AA:1347:G:C6	9:AI:107:ARG:NH2	2.43	0.85
1:AA:1328:C:C5'	13:AM:28:ALA:HB1	2.03	0.85
1:AA:1092:A:H5''	7:AG:4:ARG:CZ	2.05	0.85
1:AA:640:A:N3	8:AH:115:SER:HB2	1.91	0.85
1:AA:588:G:C5	1:AA:753:A:C5	2.64	0.85
1:AA:104:G:H5'	1:AA:172:A:C2	2.10	0.85
3:AC:52:LEU:HD21	3:AC:118:GLN:HE22	1.40	0.85
1:AA:131:C:H4'	1:AA:263:A:H4'	1.59	0.85
1:AA:262:A:H5'	20:AT:74:LYS:CB	2.05	0.85
4:AD:88:VAL:C	5:AE:97:GLY:HA3	1.97	0.85
1:AA:9:G:C8	5:AE:126:ARG:NH1	2.44	0.85
3:AC:64:VAL:HB	3:AC:99:VAL:HB	1.59	0.85
3:AC:70:VAL:HG21	3:AC:76:VAL:HG21	1.58	0.85
21:B0:542:A:H2'	21:B0:543:G:H5'	1.59	0.85
21:B0:1312:G:H5''	21:B0:1313:U:H5'	1.59	0.85
1:AA:1092:A:H5''	7:AG:4:ARG:HH22	1.42	0.85
21:B0:3098:U:H2'	21:B0:3099:U:C6	2.10	0.85
1:AA:59:A:C5	1:AA:331:G:C2	2.64	0.85
1:AA:261:U:C6	20:AT:79:ARG:NH1	2.45	0.85
1:AA:375:U:O3'	1:AA:376:G:O5'	1.93	0.85
1:AA:702:A:H5'	21:B0:1840:A:H5'	1.58	0.85
1:AA:190:A:N1	20:AT:104:LEU:CB	2.34	0.85
21:B0:1098:G:H1	21:B0:1113:C:N4	1.75	0.85
1:AA:183:G:N2	1:AA:223:U:O2'	2.10	0.85
4:AD:150:GLU:HG3	4:AD:153:ARG:NH2	1.90	0.85
7:AG:149:ARG:NH1	11:AK:59:TYR:CE1	2.45	0.85
1:AA:186:C:H4'	20:AT:81:LYS:HB2	1.58	0.84
1:AA:1318:A:C5'	19:AS:10:PHE:CD1	2.60	0.84
1:AA:1419:G:H1'	21:B0:1932:G:H4'	1.58	0.84
1:AA:588:G:C4	1:AA:753:A:C6	2.65	0.84
3:AC:190:ARG:NH1	3:AC:190:ARG:HB3	1.91	0.84
1:AA:187:G:C2	20:AT:105:SER:CB	2.53	0.84
17:AQ:101:ARG:NH1	21:B0:731:A:C2	2.36	0.84
1:AA:804:U:O3'	1:AA:805:C:P	2.35	0.84
1:AA:130:A:C6	1:AA:264:U:C2	2.64	0.84
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	0.84	0.84
1:AA:1505:G:HO3'	1:AA:1506:U:P	0.97	0.84
21:B0:3098:U:HO3'	21:B0:3099:U:P	1.99	0.84
1:AA:1057:G:H5''	3:AC:154:SER:HB2	1.59	0.84
1:AA:191:G:C2	1:AA:192:U:O2	2.30	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:AQ:96:GLN:HG3	21:B0:725:C:O2'	1.76	0.84
21:B0:910:U:C2'	21:B0:911:A:H5'	2.07	0.84
1:AA:216:C:O2'	1:AA:469:C:O4'	1.93	0.84
1:AA:247:G:OP2	17:AQ:100:LYS:CE	2.24	0.84
1:AA:1115:C:H1'	14:AN:61:TRP:O	1.77	0.84
21:B0:1953:A:H1'	21:B0:1955:G:H1'	1.58	0.84
1:AA:994:A:O2'	14:AN:8:GLU:CA	2.25	0.84
1:AA:274:A:N3	1:AA:275:G:C1'	2.39	0.84
4:AD:104:VAL:HG11	4:AD:146:ILE:HD12	1.58	0.84
1:AA:1256:A:C4'	1:AA:1258:G:C4	2.60	0.84
1:AA:133:U:H5''	20:AT:74:LYS:HZ3	1.42	0.84
1:AA:923:A:C1'	1:AA:1398:A:C2	2.61	0.84
17:AQ:104:LYS:N	21:B0:726:G:C2	2.42	0.84
1:AA:1457:A:C4	1:AA:1459:C:O2	2.30	0.84
21:B0:1856:U:H3	21:B0:3877:A:H61	1.02	0.84
1:AA:190:A:C2	20:AT:101:GLY:O	2.30	0.84
17:AQ:27:PHE:CZ	17:AQ:36:ILE:HD11	2.12	0.84
1:AA:848:G:C2'	1:AA:849:C:O4'	2.26	0.84
10:AJ:65:LEU:HD13	14:AN:36:PHE:CE1	2.11	0.84
21:B0:3128:G:H4'	21:B0:3174:C:O4'	1.78	0.84
3:AC:190:ARG:HH11	3:AC:190:ARG:HB3	1.43	0.84
1:AA:130:A:O4'	1:AA:264:U:H5'	1.72	0.84
21:B0:891:A:C2'	21:B0:892:A:H8	1.81	0.84
3:AC:172:ARG:HH12	3:AC:174:PRO:HG3	1.43	0.84
1:AA:960:U:H1'	1:AA:1222:G:HO2'	1.40	0.84
1:AA:1298:C:H5	7:AG:114:ARG:HD3	1.42	0.84
9:AI:8:GLY:HA2	9:AI:79:LEU:CD1	2.07	0.84
21:B0:2548:G:C2'	21:B0:2549:G:H5''	2.08	0.84
1:AA:923:A:H2	1:AA:1395:C:N3	1.75	0.83
1:AA:1182:G:H5'	1:AA:1184:G:H5''	1.60	0.83
21:B0:3103:A:H61	21:B0:3186:C:H42	1.24	0.83
21:B0:616:U:H2'	21:B0:617:U:H5''	1.59	0.83
21:B0:2198:U:H3'	21:B0:2199:C:H5''	1.59	0.83
21:B0:847:C:H41	21:B0:955:G:H21	1.25	0.83
21:B0:1071:U:H3	21:B0:1099:A:H2	1.21	0.83
21:B0:910:U:C3'	21:B0:911:A:P	2.65	0.83
1:AA:1044:A:H2'	1:AA:1045:C:C2'	2.03	0.83
1:AA:640:A:N3	8:AH:115:SER:CB	2.41	0.83
4:AD:61:LYS:HD2	4:AD:207:TYR:OH	1.78	0.83
1:AA:262:A:H5'	20:AT:74:LYS:HG3	1.60	0.83
1:AA:19:C:O2	1:AA:916:G:C2	2.30	0.83
1:AA:935:A:C4'	1:AA:1384:C:O2	2.26	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:109:A:H3'	21:B0:110:U:H5''	1.60	0.83
1:AA:922:G:C2	1:AA:1396:A:N6	2.41	0.83
1:AA:394:G:C5	1:AA:395:C:C5	2.67	0.83
1:AA:1475:G:OP1	21:B0:1706:A:C1'	2.26	0.83
4:AD:88:VAL:CG2	5:AE:96:PRO:HB3	2.03	0.83
1:AA:582:U:C1'	17:AQ:105:ALA:HA	2.07	0.83
1:AA:1497:G:C2'	1:AA:1498:U:H5'	2.08	0.83
13:AM:7:VAL:HG13	26:BD:113:ASP:CA	2.08	0.83
19:AS:55:LYS:HG2	19:AS:56:GLN:HE21	1.42	0.83
13:AM:50:GLU:O	13:AM:54:VAL:HG23	1.77	0.83
1:AA:1277:C:C2'	1:AA:1279:A:C8	2.62	0.83
1:AA:246:A:O3'	1:AA:247:G:H4'	1.76	0.83
21:B0:3877:A:O3'	21:B0:1861:G:C3'	2.25	0.83
1:AA:1261:A:HO2'	1:AA:1283:G:H5''	1.44	0.83
1:AA:189:A:C8	20:AT:105:SER:OG	1.69	0.83
1:AA:436:C:C2	1:AA:437:U:C5	2.65	0.83
1:AA:104:G:C4'	1:AA:172:A:C2	2.61	0.83
1:AA:1328:C:H5''	13:AM:28:ALA:HB1	1.59	0.83
1:AA:1475:G:H4'	21:B0:1706:A:H5''	1.60	0.83
1:AA:717:C:HO3'	1:AA:718:G:P	1.96	0.83
1:AA:1419:G:H4'	21:B0:1932:G:HO2'	1.38	0.83
5:AE:148:VAL:HG21	8:AH:107:LEU:HD13	1.60	0.83
1:AA:15:G:H4'	5:AE:24:ARG:CZ	2.09	0.83
1:AA:1250:A:H4'	9:AI:68:GLY:N	1.94	0.83
6:AF:36:ARG:HH12	6:AF:38:GLU:HG2	1.43	0.83
1:AA:1256:A:N6	1:AA:1278:U:C2	2.46	0.82
1:AA:935:A:C1'	1:AA:1384:C:C2	2.62	0.82
1:AA:958:A:C8	19:AS:55:LYS:HD2	2.14	0.82
21:B0:1181:C:H2'	21:B0:1182:U:H5''	1.60	0.82
10:AJ:19:SER:HB2	10:AJ:91:PRO:HG3	1.60	0.82
21:B0:1098:G:N1	21:B0:1113:C:N4	2.27	0.82
1:AA:436:C:N3	1:AA:437:U:C5	2.45	0.82
1:AA:244:U:C5	1:AA:894:G:C2	2.67	0.82
3:AC:23:TYR:CE1	10:AJ:67:THR:HG23	2.15	0.82
1:AA:1237:C:O3'	1:AA:1238:A:P	2.38	0.82
1:AA:1182:G:C5'	1:AA:1184:G:C5'	2.53	0.82
3:AC:91:LEU:HD23	3:AC:92:ALA:N	1.94	0.82
1:AA:130:A:OP2	17:AQ:63:ARG:NH2	2.12	0.82
1:AA:1394:A:C6	1:AA:1501:C:H5'	2.14	0.82
21:B0:910:U:O2'	21:B0:911:A:C5'	2.24	0.82
13:AM:78:ILE:HA	13:AM:81:LEU:HD21	1.62	0.82
1:AA:274:A:H1'	1:AA:275:G:O4'	1.77	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:AE:105:VAL:HB	5:AE:106:PRO:HD3	1.60	0.82
1:AA:262:A:C2'	20:AT:75:ASN:ND2	2.41	0.82
10:AJ:45:ARG:CZ	14:AN:36:PHE:CD2	2.62	0.82
10:AJ:63:PHE:CZ	14:AN:48:ALA:HB3	2.13	0.82
21:B0:653:G:H2'	21:B0:654:A:H4'	1.62	0.82
1:AA:217:C:O3'	1:AA:470:U:O4'	1.98	0.82
21:B0:166:G:H21	21:B0:184:A:H62	1.27	0.82
1:AA:1409:C:H2'	1:AA:1410:G:O4'	1.79	0.82
1:AA:1044:A:H2'	1:AA:1045:C:HO2'	1.41	0.82
1:AA:473:C:OP1	16:AP:75:ARG:NH1	2.13	0.82
1:AA:1269:A:C2	1:AA:1313:U:H1'	2.12	0.82
1:AA:132:C:H5'	20:AT:75:ASN:ND2	1.94	0.82
1:AA:234:C:O3'	17:AQ:70:ARG:NE	2.12	0.82
1:AA:116:A:H61	1:AA:313:A:C1'	1.92	0.82
1:AA:436:C:H2'	1:AA:437:U:C6	2.14	0.82
1:AA:1405:G:O2'	1:AA:1519:A:H5'	1.80	0.82
1:AA:571:U:C5'	1:AA:819:A:C6	2.62	0.82
1:AA:394:G:C5	1:AA:395:C:C4	2.68	0.82
20:AT:43:LEU:HD13	20:AT:51:GLU:HG3	1.62	0.82
21:B0:1964:A:H3'	21:B0:1965:U:H5'	1.60	0.82
1:AA:1475:G:C4'	21:B0:1706:A:C5'	2.58	0.82
21:B0:3118:U:O4	21:B0:3149:G:C8	2.33	0.82
1:AA:189:A:H61	20:AT:104:LEU:CG	1.92	0.82
18:AR:55:ARG:NH1	18:AR:55:ARG:HB3	1.95	0.82
1:AA:132:C:C4'	1:AA:262:A:O4'	2.21	0.82
1:AA:436:C:N1	1:AA:437:U:C6	2.47	0.82
1:AA:1064:G:H22	1:AA:1190:G:H2'	1.42	0.82
1:AA:571:U:H5''	1:AA:819:A:C6	2.15	0.82
1:AA:112:G:N2	1:AA:354:G:P	2.53	0.81
1:AA:8:A:O4'	5:AE:103:GLY:N	2.12	0.81
1:AA:1483:A:C5	1:AA:1484:C:C4	2.68	0.81
1:AA:825:G:H21	8:AH:11:THR:HG21	1.45	0.81
21:B0:831:G:H21	21:B0:1203:A:H62	1.25	0.81
1:AA:130:A:C2	1:AA:264:U:N3	2.47	0.81
1:AA:760:G:C2	17:AQ:104:LYS:O	2.33	0.81
1:AA:190:A:C2	20:AT:101:GLY:C	2.54	0.81
1:AA:131:C:H1'	1:AA:263:A:H1'	1.62	0.81
21:B0:3197:U:C4	21:B0:2204:A:N6	2.49	0.81
19:AS:29:ARG:O	19:AS:30:LEU:HB2	1.80	0.81
1:AA:523:A:C2	12:AL:91:LYS:HB3	2.14	0.81
21:B0:789:G:H21	21:B0:806:A:H62	1.25	0.81
15:AO:78:TYR:CZ	15:AO:82:ILE:HD11	2.15	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1064:G:N2	1:AA:1190:G:C2'	2.43	0.81
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.15	0.81
7:AG:75:VAL:CG1	7:AG:86:GLN:HB3	2.10	0.81
1:AA:184:G:H5'	1:AA:224:C:O2'	1.81	0.81
1:AA:1224:G:C2'	1:AA:1225:A:OP1	2.26	0.81
1:AA:1318:A:C4'	19:AS:10:PHE:CD1	2.64	0.81
1:AA:223:U:C5'	20:AT:68:LYS:HZ2	1.87	0.81
1:AA:835:U:H5''	18:AR:64:ARG:CZ	2.11	0.81
1:AA:706:A:C1'	11:AK:29:ILE:HD11	2.11	0.81
1:AA:176:C:OP1	20:AT:29:LYS:NZ	2.11	0.81
21:B0:1034:U:H1'	21:B0:1133:G:H5''	1.61	0.81
4:AD:89:THR:HB	5:AE:97:GLY:C	1.98	0.81
1:AA:189:A:H61	20:AT:104:LEU:HB3	1.04	0.81
1:AA:218:C:OP1	1:AA:470:U:H4'	1.81	0.81
1:AA:1269:A:N3	1:AA:1313:U:H1'	1.96	0.81
21:B0:1119:U:C4	21:B0:1120:C:C5	2.69	0.81
2:AB:132:LYS:HA	2:AB:135:GLN:HB3	1.63	0.81
1:AA:1416:G:C4	1:AA:1417:G:O4'	2.34	0.81
1:AA:1416:G:C5	1:AA:1417:G:O4'	2.33	0.81
4:AD:150:GLU:HA	4:AD:153:ARG:HE	1.44	0.81
1:AA:1261:A:C2'	1:AA:1283:G:C5'	2.58	0.81
1:AA:406:G:N9	1:AA:496:A:N1	2.29	0.81
1:AA:600:C:C5'	8:AH:129:VAL:HA	2.11	0.81
1:AA:1305:G:N2	1:AA:1331:G:O2'	2.13	0.81
7:AG:75:VAL:HG11	7:AG:86:GLN:HB3	1.63	0.81
21:B0:1807:A:H4'	21:B0:1808:C:H5'	1.61	0.81
2:AB:101:MET:HA	2:AB:108:ILE:HD12	1.63	0.81
1:AA:9:G:H5'	5:AE:122:GLU:OE2	1.79	0.81
1:AA:1109:C:P	3:AC:176:HIS:CD2	2.74	0.81
13:AM:82:MET:HG3	13:AM:93:ARG:NE	1.96	0.81
1:AA:702:A:N1	21:B0:1839:A:O4'	2.14	0.81
1:AA:1368:G:OP2	9:AI:114:TYR:N	2.14	0.81
1:AA:1061:G:O4'	10:AJ:56:HIS:ND1	2.14	0.81
3:AC:23:TYR:CD1	10:AJ:11:PHE:CD2	2.69	0.81
21:B0:2227:C:H2'	21:B0:2228:U:H5'	1.63	0.81
5:AE:118:ILE:HG22	5:AE:119:LEU:N	1.95	0.80
22:B9:73:C:HO3'	22:B9:74:A:P	2.03	0.80
21:B0:878:C:H42	21:B0:921:A:H62	1.28	0.80
2:AB:27:LYS:HD3	2:AB:195:ASP:OD2	1.81	0.80
1:AA:1394:A:N6	1:AA:1501:C:H5''	1.95	0.80
1:AA:5:U:O4	5:AE:95:ALA:CB	2.29	0.80
1:AA:406:G:C6	1:AA:496:A:C8	2.69	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:518:C:HO2'	12:AL:50:SER:HB3	1.44	0.80
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.44	0.80
1:AA:1483:A:C4	1:AA:1484:C:C6	2.69	0.80
21:B0:3118:U:O4	21:B0:3149:G:H8	1.64	0.80
1:AA:1416:G:C6	1:AA:1417:G:C1'	2.64	0.80
3:AC:8:ILE:HG23	3:AC:16:ARG:HG2	1.60	0.80
13:AM:22:ILE:HD12	13:AM:25:ILE:HD12	1.61	0.80
10:AJ:8:LEU:CD2	10:AJ:96:ILE:HG12	2.11	0.80
1:AA:1285:A:H4'	1:AA:1286:A:O5'	1.82	0.80
1:AA:1255:G:C2'	1:AA:1258:G:H21	1.93	0.80
1:AA:926:G:C6	1:AA:1505:G:C5	2.69	0.80
1:AA:848:G:O2'	1:AA:849:C:O4'	1.99	0.80
21:B0:1098:G:C2	21:B0:1113:C:N4	2.41	0.80
1:AA:929:G:P	1:AA:1533:C:N4	2.54	0.80
3:AC:191:THR:HG22	3:AC:193:TYR:H	1.44	0.80
1:AA:130:A:H1'	1:AA:263:A:O2'	1.81	0.80
1:AA:1416:G:C3'	1:AA:1417:G:P	2.64	0.80
21:B0:225:G:H3'	21:B0:226:C:C5'	2.09	0.80
21:B0:1072:U:H3	29:BG:10:LEU:CA	1.95	0.80
6:AF:30:LEU:HB3	6:AF:35:ALA:HB3	1.62	0.80
1:AA:995:C:C2	14:AN:4:LYS:HD3	2.17	0.80
21:B0:1119:U:O3'	21:B0:1120:C:O5'	2.00	0.80
12:AL:28:LYS:HD2	12:AL:33:ARG:HH22	1.47	0.80
1:AA:319:G:O2'	1:AA:1434:A:C6	2.35	0.80
1:AA:1490:C:H2'	1:AA:1491:G:C8	2.17	0.80
1:AA:1298:C:C5	7:AG:114:ARG:CD	2.63	0.80
1:AA:367:U:O2	1:AA:369:C:C6	2.35	0.80
1:AA:59:A:C2	1:AA:331:G:C4	2.68	0.80
1:AA:974:A:P	14:AN:31:ARG:HG2	2.21	0.80
12:AL:67:THR:HG22	12:AL:96:VAL:HG13	1.63	0.80
1:AA:19:C:C2	1:AA:916:G:N1	2.43	0.80
1:AA:994:A:O3'	14:AN:11:LYS:HE2	1.82	0.80
1:AA:820:U:O2	1:AA:873:A:H8	1.14	0.80
1:AA:547:A:H4'	1:AA:548:G:O5'	1.53	0.80
3:AC:23:TYR:HA	10:AJ:11:PHE:CE1	2.17	0.80
1:AA:1484:C:H4'	21:B0:1943:A:C2'	2.10	0.79
1:AA:1329:A:O3'	13:AM:26:GLY:N	2.09	0.79
13:AM:88:ARG:CD	19:AS:3:ARG:HH21	1.89	0.79
1:AA:933:G:OP2	7:AG:3:ARG:HD2	1.82	0.79
1:AA:237:C:P	17:AQ:40:LYS:CD	2.69	0.79
1:AA:1269:A:N1	1:AA:1313:U:O4'	2.14	0.79
1:AA:1305:G:O2'	1:AA:1306:A:C8	2.30	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1116:C:C2'	1:AA:1117:G:H5''	2.12	0.79
1:AA:619:U:H2'	4:AD:135:LEU:CD1	2.11	0.79
1:AA:761:G:O4'	17:AQ:103:GLY:O	2.00	0.79
1:AA:1483:A:C4	1:AA:1484:C:C5	2.69	0.79
1:AA:1490:C:H6	1:AA:1490:C:H5'	1.47	0.79
21:B0:1119:U:O4	21:B0:1120:C:C4	2.36	0.79
1:AA:1261:A:H4'	1:AA:1283:G:C5'	2.11	0.79
1:AA:1314:C:H5	19:AS:6:LYS:HG3	1.44	0.79
21:B0:3874:C:C4	21:B0:3875:A:C5	2.70	0.79
1:AA:1261:A:C1'	1:AA:1283:G:H4'	2.12	0.79
1:AA:1211:U:C5'	1:AA:1212:U:P	2.71	0.79
10:AJ:62:HIS:HB3	14:AN:59:ALA:CB	2.11	0.79
1:AA:212:G:HO3'	1:AA:213:G:P	2.01	0.79
1:AA:1248:A:O2'	9:AI:70:LYS:CE	2.30	0.79
1:AA:191:G:C8	1:AA:192:U:C6	2.71	0.79
10:AJ:45:ARG:HH22	14:AN:36:PHE:HD2	1.30	0.79
8:AH:90:GLY:O	8:AH:91:ARG:HB2	1.82	0.79
21:B0:1572:C:C2'	21:B0:1573:G:H5''	2.11	0.79
21:B0:1856:U:O2	21:B0:3877:A:N1	2.15	0.79
1:AA:184:G:C5'	1:AA:224:C:O2'	2.30	0.79
1:AA:205:G:N2	1:AA:207:C:H5	1.80	0.79
1:AA:673:G:H2'	1:AA:674:G:C8	2.17	0.79
1:AA:1394:A:N1	1:AA:1501:C:H5'	1.98	0.79
1:AA:278:G:H21	1:AA:279:A:H62	1.30	0.79
1:AA:113:G:O2'	1:AA:353:A:H4'	1.82	0.79
3:AC:15:THR:O	3:AC:16:ARG:HB2	1.81	0.79
1:AA:244:U:C4	1:AA:894:G:C2	2.71	0.79
1:AA:1475:G:H4'	21:B0:1706:A:H4'	1.65	0.79
21:B0:1856:U:C2	21:B0:3877:A:N1	2.51	0.79
21:B0:1856:U:N3	21:B0:3877:A:N6	2.14	0.79
1:AA:315:A:H4'	1:AA:353:A:N6	1.98	0.79
1:AA:406:G:C8	1:AA:496:A:N1	2.51	0.79
1:AA:397:A:C8	1:AA:547:A:O3'	2.36	0.79
1:AA:108:G:C5	20:AT:15:ARG:HG3	2.17	0.79
4:AD:25:ARG:C	4:AD:27:TYR:H	1.85	0.79
1:AA:262:A:H5'	20:AT:74:LYS:CG	2.13	0.79
1:AA:323:U:H4'	20:AT:19:SER:O	1.82	0.79
1:AA:935:A:O4'	1:AA:1384:C:C2	2.36	0.79
1:AA:1346:A:C2'	7:AG:10:ARG:HH22	1.91	0.79
12:AL:126:LYS:H	12:AL:126:LYS:HD2	1.48	0.79
1:AA:1475:G:H5'	21:B0:1706:A:O4'	1.83	0.78
21:B0:1861:G:C4'	53:B5:199:ASN:CA	2.61	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:212:G:O2'	1:AA:213:G:H5'	1.82	0.78
1:AA:104:G:C4'	1:AA:172:A:H2	1.95	0.78
5:AE:43:LEU:HD11	5:AE:132:ALA:HB1	1.64	0.78
1:AA:1459:C:P	20:AT:31:SER:OG	2.41	0.78
1:AA:1474:G:H5'	21:B0:1718:A:N3	1.99	0.78
20:AT:54:LYS:HG3	20:AT:100:ILE:HD13	1.65	0.78
1:AA:185:A:O2'	1:AA:186:C:P	2.41	0.78
2:AB:77:ALA:HB2	2:AB:211:ILE:CD1	2.10	0.78
1:AA:184:G:C1'	1:AA:224:C:H4'	2.13	0.78
5:AE:79:GLU:CD	8:AH:105:ARG:CD	2.51	0.78
1:AA:1314:C:C5	19:AS:6:LYS:HE2	2.17	0.78
1:AA:1296:C:O4'	1:AA:1302:U:O4	2.01	0.78
21:B0:471:A:H62	21:B0:480:G:H21	1.31	0.78
20:AT:54:LYS:HG3	20:AT:100:ILE:CD1	2.13	0.78
1:AA:1416:G:C3'	1:AA:1417:G:C5'	2.54	0.78
1:AA:406:G:C5	1:AA:496:A:C4	2.71	0.78
12:AL:70:ILE:HD13	12:AL:77:LEU:HD12	1.63	0.78
11:AK:54:ARG:NH1	11:AK:54:ARG:HB3	1.97	0.78
1:AA:837:G:H2'	1:AA:838:C:C6	2.19	0.78
21:B0:891:A:C2'	21:B0:892:A:N7	2.36	0.78
1:AA:1112:C:O2	3:AC:178:LEU:C	2.21	0.78
4:AD:150:GLU:H	4:AD:150:GLU:CD	1.86	0.78
19:AS:31:ILE:HG22	19:AS:32:LYS:N	1.99	0.78
16:AP:21:VAL:HG21	16:AP:59:TRP:CD1	2.19	0.78
21:B0:895:G:H8	21:B0:895:G:H5'	1.48	0.78
1:AA:1256:A:C2	1:AA:1258:G:N1	2.47	0.78
1:AA:187:G:N2	20:AT:105:SER:CB	2.46	0.78
12:AL:120:TYR:O	12:AL:122:THR:HG23	1.83	0.78
1:AA:1016:A:O2'	1:AA:1218:C:H4'	1.84	0.78
1:AA:243:A:C4'	1:AA:244:U:H5'	2.14	0.78
1:AA:1211:U:H5'	1:AA:1212:U:O5'	1.84	0.78
2:AB:84:GLU:OE1	2:AB:216:SER:HA	1.83	0.78
1:AA:1458:G:N7	1:AA:1459:C:C2	2.52	0.78
1:AA:1394:A:N1	1:AA:1501:C:C4'	2.46	0.78
1:AA:279:A:H3'	17:AQ:95:TYR:CZ	2.19	0.78
14:AN:14:PRO:C	14:AN:16:PHE:H	1.86	0.78
13:AM:80:ARG:CZ	19:AS:65:ASN:O	2.32	0.78
21:B0:1252:C:C2'	21:B0:1253:C:H5''	2.13	0.78
2:AB:8:LYS:O	2:AB:9:GLU:HB2	1.81	0.78
21:B0:403:A:H4'	21:B0:425:A:H5'	1.63	0.78
1:AA:130:A:H2	1:AA:264:U:C6	1.98	0.78
1:AA:1232:U:OP1	9:AI:126:SER:N	2.17	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:89:G:C3'	1:AA:90:C:P	2.72	0.78
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.48	0.78
1:AA:367:U:N3	1:AA:369:C:N4	2.31	0.78
21:B0:225:G:C3'	21:B0:226:C:H5'	2.13	0.78
1:AA:714:G:H4'	1:AA:776:G:C4'	2.13	0.78
21:B0:1679:U:H3'	21:B0:1680:U:H5''	1.66	0.78
5:AE:64:ARG:O	5:AE:65:ASN:HB3	1.84	0.78
1:AA:1256:A:H4'	1:AA:1258:G:N9	1.95	0.78
4:AD:88:VAL:HA	5:AE:97:GLY:N	1.98	0.78
1:AA:476:U:O2	1:AA:477:G:O4'	1.99	0.78
15:AO:16:ALA:HB1	15:AO:21:ASP:HB3	1.65	0.78
21:B0:1067:G:H5'	21:B0:1068:A:C5'	2.11	0.77
1:AA:651:C:C2	1:AA:652:U:C5	2.72	0.77
3:AC:150:LYS:HE2	3:AC:152:ILE:HD11	1.66	0.77
17:AQ:104:LYS:CG	21:B0:727:U:C2	2.66	0.77
1:AA:323:U:O2'	20:AT:22:ARG:HD2	1.84	0.77
1:AA:436:C:C6	1:AA:437:U:C5	2.72	0.77
1:AA:216:C:O2'	1:AA:468:A:C2'	2.32	0.77
1:AA:1112:C:C2	3:AC:178:LEU:N	2.51	0.77
1:AA:1117:G:O2'	9:AI:106:ALA:HB2	1.85	0.77
1:AA:128:G:H4'	17:AQ:3:LYS:HG2	1.65	0.77
1:AA:1147:C:H4'	9:AI:5:TYR:HE1	1.46	0.77
1:AA:1181:G:O2'	1:AA:1184:G:H5'	1.83	0.77
1:AA:583:A:H5'	17:AQ:90:ILE:HG21	1.66	0.77
1:AA:190:A:C5	20:AT:105:SER:HA	2.19	0.77
1:AA:216:C:O2'	1:AA:468:A:N3	2.17	0.77
1:AA:130:A:P	17:AQ:63:ARG:HH21	2.07	0.77
1:AA:293:G:H4'	1:AA:609:A:H2	1.42	0.77
6:AF:100:ASN:HD22	18:AR:23:LYS:HG2	1.49	0.77
1:AA:1255:G:O2'	1:AA:1259:C:C2	2.34	0.77
1:AA:760:G:O6	17:AQ:105:ALA:HB1	1.84	0.77
1:AA:1226:C:H4'	1:AA:1227:A:OP1	1.84	0.77
1:AA:1092:A:C5'	7:AG:4:ARG:CZ	2.61	0.77
2:AB:197:VAL:HB	2:AB:200:ILE:HG12	1.66	0.77
21:B0:3109:U:H5'	21:B0:3150:C:C4'	2.15	0.77
21:B0:3185:U:H5'	21:B0:3185:U:H6	1.49	0.77
21:B0:1067:G:C5'	21:B0:1068:A:H5'	2.10	0.77
1:AA:848:G:O3'	1:AA:849:C:H5'	1.85	0.77
7:AG:66:VAL:HG12	7:AG:70:LYS:HE3	1.65	0.77
21:B0:2491:C:H2'	21:B0:2492:G:H5''	1.67	0.77
1:AA:314:C:O2	1:AA:353:A:H2	1.66	0.77
1:AA:7:G:H21	5:AE:121:LYS:HG2	1.50	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:935:A:H1'	1:AA:1384:C:C4	2.20	0.77
1:AA:46:G:O3'	1:AA:47:C:P	2.42	0.77
1:AA:922:G:C2	1:AA:1396:A:C2	2.73	0.77
10:AJ:61:GLU:OE2	14:AN:49:HIS:CE1	2.37	0.77
12:AL:75:HIS:CD2	12:AL:77:LEU:H	1.97	0.77
2:AB:57:PHE:O	2:AB:60:ASP:HB3	1.84	0.77
1:AA:577:G:H1'	1:AA:816:A:C2	2.19	0.77
1:AA:323:U:H5'	20:AT:23:ARG:CA	2.08	0.77
1:AA:236:G:C5'	17:AQ:42:TYR:HE2	1.94	0.77
21:B0:3128:G:H4'	21:B0:3174:C:C1'	2.14	0.77
21:B0:940:G:H3'	21:B0:941:U:C5'	2.07	0.77
6:AF:95:GLU:H	6:AF:95:GLU:CD	1.86	0.77
16:AP:74:LEU:O	16:AP:79:VAL:HG23	1.85	0.77
21:B0:1856:U:C5'	21:B0:3865:A:OP1	2.33	0.76
4:AD:205:GLU:OE1	5:AE:100:VAL:HB	1.85	0.76
1:AA:1409:C:C2'	1:AA:1410:G:H8	1.99	0.76
1:AA:142:G:O4'	1:AA:195:A:C6	2.37	0.76
21:B0:2808:U:H3'	21:B0:2809:A:H5'	1.67	0.76
7:AG:95:ARG:HH11	7:AG:95:ARG:HG3	1.50	0.76
1:AA:1277:C:O2	1:AA:1279:A:N7	2.19	0.76
1:AA:1458:G:N9	1:AA:1459:C:H2'	1.95	0.76
17:AQ:104:LYS:HG3	21:B0:727:U:H1'	1.55	0.76
21:B0:1094:C:HO2'	21:B0:1096:A:H2	1.31	0.76
1:AA:755:G:C1'	8:AH:1:MET:HE3	2.12	0.76
12:AL:75:HIS:HD2	12:AL:77:LEU:N	1.82	0.76
17:AQ:104:LYS:HZ3	21:B0:726:G:H1	1.32	0.76
1:AA:19:C:N3	1:AA:916:G:C6	2.54	0.76
1:AA:1016:A:H5'	14:AN:15:LYS:HE3	1.66	0.76
1:AA:367:U:O2	1:AA:369:C:C4	2.38	0.76
1:AA:6:G:N2	5:AE:98:THR:CG2	2.47	0.76
1:AA:293:G:P	1:AA:609:A:N6	2.54	0.76
1:AA:1014:A:C2	19:AS:34:TRP:CG	2.72	0.76
1:AA:935:A:H1'	1:AA:1384:C:C2	2.21	0.76
1:AA:1329:A:H5''	13:AM:26:GLY:N	1.94	0.76
18:AR:55:ARG:HH11	18:AR:55:ARG:HB3	1.50	0.76
21:B0:894:G:H2'	21:B0:895:G:H5''	1.65	0.76
1:AA:132:C:C5'	20:AT:75:ASN:ND2	2.48	0.76
1:AA:1108:G:H5'	1:AA:1191:A:H4'	1.67	0.76
1:AA:217:C:C2'	1:AA:470:U:H5'	2.15	0.76
1:AA:994:A:O2'	14:AN:8:GLU:CB	2.33	0.76
1:AA:1250:A:H4'	9:AI:68:GLY:CA	2.14	0.76
12:AL:126:LYS:H	12:AL:126:LYS:CD	1.96	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:AB:36:ARG:HD2	2:AB:41:ILE:HD12	1.68	0.76
4:AD:162:LEU:HD13	4:AD:181:MET:HG2	1.67	0.76
1:AA:1459:C:C5'	20:AT:28:ALA:CA	2.62	0.76
1:AA:132:C:C5'	1:AA:262:A:O4'	2.31	0.76
1:AA:262:A:OP2	20:AT:76:ALA:HB2	1.85	0.76
1:AA:761:G:H4'	17:AQ:102:GLY:C	2.06	0.76
1:AA:37:U:O2	1:AA:547:A:C2	2.39	0.76
17:AQ:104:LYS:CB	21:B0:727:U:H1'	2.16	0.76
1:AA:323:U:O3'	20:AT:22:ARG:HB2	1.83	0.76
1:AA:1182:G:O2'	1:AA:1183:A:OP2	2.04	0.76
1:AA:977:A:H2	1:AA:1224:G:C6	2.00	0.76
1:AA:1113:C:C1'	3:AC:178:LEU:CD2	2.62	0.76
20:AT:14:LYS:O	20:AT:18:GLN:HG3	1.86	0.76
21:B0:1528:C:H2'	21:B0:1529:C:H5''	1.67	0.76
1:AA:994:A:HO2'	14:AN:8:GLU:HA	1.50	0.76
1:AA:588:G:C8	1:AA:753:A:C2	2.74	0.76
6:AF:86:ARG:O	6:AF:87:ARG:HG2	1.85	0.76
6:AF:67:MET:HE1	6:AF:72:VAL:HA	1.67	0.76
17:AQ:97:SER:OG	17:AQ:103:GLY:HA2	1.85	0.76
1:AA:403:C:C2'	1:AA:404:U:H5'	2.14	0.76
19:AS:40:ILE:HD13	19:AS:62:ILE:HD13	1.68	0.76
22:B9:107:C:H2'	22:B9:108:G:H5'	1.68	0.76
1:AA:1428:A:H4'	21:B0:1703:C:O2'	1.85	0.76
3:AC:110:ASN:O	3:AC:111:LEU:HD23	1.85	0.76
15:AO:17:ARG:HH11	15:AO:17:ARG:HG3	1.49	0.76
1:AA:808:C:OP1	15:AO:48:LYS:HE3	1.86	0.76
21:B0:357:A:H2'	21:B0:358:C:H5'	1.66	0.76
1:AA:1114:C:O2	14:AN:60:SER:OG	2.04	0.76
21:B0:1113:C:O3'	21:B0:1114:A:OP2	2.04	0.75
1:AA:958:A:C4	19:AS:55:LYS:HD2	2.21	0.75
21:B0:68:C:H1'	21:B0:72:A:H1'	1.68	0.75
1:AA:322:C:O3'	20:AT:23:ARG:CG	2.33	0.75
21:B0:910:U:O3'	21:B0:911:A:P	2.45	0.75
1:AA:587:G:OP1	8:AH:89:PRO:HB3	1.86	0.75
2:AB:139:LYS:O	2:AB:143:GLU:HG2	1.86	0.75
1:AA:16:A:H4'	5:AE:17:ALA:H	1.51	0.75
21:B0:1919:A:H5''	21:B0:1920:A:O5'	1.86	0.75
21:B0:3874:C:N4	21:B0:3875:A:C6	2.54	0.75
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.22	0.75
1:AA:1261:A:H1'	1:AA:1283:G:H5'	1.67	0.75
1:AA:279:A:OP2	17:AQ:95:TYR:CE2	2.35	0.75
1:AA:1069:C:O2'	1:AA:1192:C:H1'	1.86	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1061:G:H1'	10:AJ:56:HIS:HE1	1.50	0.75
1:AA:1025:U:H2'	1:AA:1026:G:C8	2.21	0.75
2:AB:16:HIS:NE2	2:AB:214:ILE:HG12	2.02	0.75
1:AA:328:C:O2	1:AA:328:C:H2'	1.85	0.75
21:B0:3126:A:O4'	21:B0:3127:G:H5'	1.84	0.75
21:B0:3874:C:C4	21:B0:3875:A:N7	2.54	0.75
1:AA:234:C:O2'	17:AQ:64:PRO:HG3	1.87	0.75
1:AA:1261:A:C4'	1:AA:1283:G:H5''	2.15	0.75
1:AA:142:G:O4'	1:AA:195:A:N6	2.19	0.75
1:AA:501:C:H1'	1:AA:549:C:C1'	2.15	0.75
1:AA:15:G:H1'	5:AE:19:MET:CE	2.15	0.75
21:B0:2075:U:O2'	21:B0:3093:C:N1	2.18	0.75
21:B0:2806:G:H1'	21:B0:2858:A:H2'	1.68	0.75
17:AQ:95:TYR:C	17:AQ:97:SER:H	1.89	0.75
1:AA:323:U:C4'	20:AT:22:ARG:HB2	2.15	0.75
1:AA:8:A:O4'	5:AE:102:ALA:C	2.24	0.75
1:AA:436:C:H2'	1:AA:437:U:H6	1.49	0.75
1:AA:1064:G:N2	1:AA:1190:G:H2'	2.00	0.75
1:AA:1298:C:P	7:AG:114:ARG:HH22	2.09	0.75
9:AI:118:LYS:O	9:AI:119:ALA:HB3	1.85	0.75
21:B0:1199:U:H3'	21:B0:1200:G:C5'	2.17	0.75
12:AL:59:ARG:HD3	12:AL:65:GLU:HG3	1.68	0.75
1:AA:1492:A:H2'	1:AA:1493:A:O4'	1.87	0.75
21:B0:892:A:N3	21:B0:911:A:C4	2.54	0.75
1:AA:960:U:C1'	1:AA:1222:G:O2'	2.29	0.75
3:AC:52:LEU:HD23	3:AC:52:LEU:N	2.02	0.75
13:AM:49:THR:HG22	13:AM:51:ALA:N	2.02	0.75
3:AC:107:GLN:CD	3:AC:107:GLN:H	1.88	0.75
3:AC:19:GLU:HB3	3:AC:40:ARG:HH21	1.50	0.75
1:AA:132:C:O4'	1:AA:262:A:C1'	2.29	0.75
1:AA:6:G:C8	5:AE:119:LEU:HD12	2.21	0.75
1:AA:992:U:H4'	1:AA:993:G:O5'	1.86	0.75
10:AJ:45:ARG:NH2	14:AN:36:PHE:HD2	1.85	0.75
1:AA:31:G:C8	1:AA:48:C:C4	2.75	0.75
1:AA:6:G:C8	5:AE:119:LEU:CD1	2.69	0.75
1:AA:51:A:C6	1:AA:314:C:H1'	2.21	0.75
1:AA:1367:C:H5'	10:AJ:60:ARG:NH1	2.02	0.75
1:AA:835:U:P	18:AR:64:ARG:HH21	2.10	0.75
1:AA:995:C:O2	14:AN:4:LYS:CD	2.34	0.75
10:AJ:82:ILE:O	10:AJ:86:MET:HB2	1.87	0.75
1:AA:1297:C:HO3'	1:AA:1298:C:P	2.07	0.75
1:AA:250:A:N6	1:AA:275:G:C6	2.55	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1296:C:C4'	1:AA:1302:U:C5	2.69	0.75
22:B9:114:C:C2'	22:B9:115:G:H5''	2.17	0.75
21:B0:1856:U:O4	21:B0:3877:A:N6	2.20	0.74
1:AA:223:U:H5''	20:AT:68:LYS:NZ	1.94	0.74
13:AM:4:ILE:HG22	13:AM:5:ALA:N	2.00	0.74
8:AH:91:ARG:HA	17:AQ:34:LYS:HB2	1.68	0.74
1:AA:59:A:H61	1:AA:331:G:H1'	1.52	0.74
2:AB:72:GLY:HA3	2:AB:81:VAL:HG21	1.69	0.74
1:AA:1255:G:C1'	1:AA:1259:C:C1'	2.42	0.74
1:AA:761:G:HO2'	17:AQ:104:LYS:HZ2	1.32	0.74
21:B0:3197:U:O2	21:B0:2181:A:N6	2.20	0.74
1:AA:994:A:O3'	14:AN:11:LYS:CE	2.35	0.74
12:AL:24:VAL:HG13	12:AL:98:TYR:HE2	1.51	0.74
1:AA:1182:G:O2'	1:AA:1183:A:P	2.44	0.74
1:AA:1015:A:H1'	1:AA:1219:U:H5''	1.67	0.74
1:AA:1296:C:H4'	1:AA:1302:U:C4	2.18	0.74
1:AA:816:A:OP1	1:AA:1526:G:O2'	2.05	0.74
21:B0:1856:U:HO2'	21:B0:3865:A:H5'	1.49	0.74
1:AA:959:A:N1	1:AA:1221:G:O2'	2.19	0.74
1:AA:731:G:OP1	1:AA:766:A:H1'	1.88	0.74
1:AA:848:G:H2'	1:AA:849:C:C1'	2.18	0.74
21:B0:1029:C:H2'	21:B0:1030:U:H5''	1.68	0.74
21:B0:1915:A:H62	21:B0:1951:G:H21	1.35	0.74
1:AA:922:G:C6	1:AA:1396:A:N6	2.54	0.74
1:AA:112:G:C2	1:AA:354:G:C5'	2.55	0.74
1:AA:1113:C:H1'	3:AC:178:LEU:CD2	2.14	0.74
1:AA:1092:A:H4'	7:AG:4:ARG:NH2	2.02	0.74
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.69	0.74
1:AA:6:G:H2'	5:AE:119:LEU:CD1	2.18	0.74
1:AA:186:C:C4'	20:AT:81:LYS:HE2	2.18	0.74
1:AA:960:U:O2'	1:AA:1223:C:C5'	2.36	0.74
3:AC:58:GLU:HB3	10:AJ:92:THR:HG21	1.67	0.74
13:AM:3:ARG:HA	13:AM:8:GLU:O	1.86	0.74
12:AL:27:LEU:O	12:AL:29:GLY:N	2.21	0.74
21:B0:221:A:H62	21:B0:231:G:H21	1.34	0.74
3:AC:116:VAL:HG21	3:AC:202:ILE:HD11	1.67	0.74
1:AA:1277:C:O2'	1:AA:1279:A:C1'	2.35	0.74
21:B0:3118:U:C2	21:B0:3149:G:H5'	1.82	0.74
17:AQ:95:TYR:O	17:AQ:97:SER:N	2.20	0.74
1:AA:436:C:H2'	1:AA:437:U:C4'	2.13	0.74
4:AD:89:THR:H	5:AE:97:GLY:HA3	0.65	0.74
1:AA:403:C:C2'	1:AA:404:U:C5'	2.65	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:141:A:H1'	1:AA:182:U:N3	1.50	0.74
21:B0:1119:U:O4	21:B0:1120:C:N4	2.20	0.74
4:AD:64:LEU:HD12	4:AD:75:PHE:HZ	1.53	0.74
21:B0:67:G:N2	21:B0:72:A:H2'	2.02	0.74
19:AS:16:LEU:O	19:AS:19:VAL:HG12	1.87	0.74
1:AA:1126:U:H1'	1:AA:1280:A:C6	2.23	0.74
1:AA:1346:A:C2	7:AG:10:ARG:CZ	2.71	0.74
1:AA:719:C:O2'	18:AR:49:LYS:CG	2.34	0.74
1:AA:476:U:N3	1:AA:477:G:C8	2.56	0.74
1:AA:571:U:C4'	1:AA:819:A:C6	2.71	0.74
1:AA:677:U:O2	1:AA:777:A:O2'	2.05	0.74
1:AA:958:A:C8	19:AS:55:LYS:CD	2.71	0.74
2:AB:95:GLN:O	2:AB:96:ARG:HD2	1.88	0.74
19:AS:17:GLU:O	19:AS:21:GLU:HG3	1.87	0.74
10:AJ:47:PHE:CE2	14:AN:37:PHE:CE1	2.76	0.74
1:AA:815:A:H2	1:AA:1528:U:C5'	2.01	0.73
1:AA:377:G:OP1	16:AP:3:LYS:HD2	1.88	0.73
1:AA:1014:A:N1	19:AS:34:TRP:CD1	2.56	0.73
1:AA:1314:C:C5	19:AS:6:LYS:CD	2.71	0.73
1:AA:848:G:O3'	1:AA:849:C:O5'	2.05	0.73
1:AA:792:A:H4'	1:AA:793:U:H5''	1.68	0.73
21:B0:2636:A:H62	21:B0:2643:G:H21	1.36	0.73
1:AA:1147:C:H4'	9:AI:5:TYR:CE1	2.21	0.73
1:AA:815:A:N1	1:AA:1528:U:O4'	2.20	0.73
1:AA:1419:G:C1'	21:B0:1932:G:H4'	2.18	0.73
12:AL:27:LEU:HG	12:AL:28:LYS:H	1.53	0.73
1:AA:619:U:C2	4:AD:135:LEU:CG	2.71	0.73
21:B0:109:A:C3'	21:B0:110:U:H5''	2.18	0.73
2:AB:23:ARG:HH11	2:AB:24:TRP:N	1.86	0.73
7:AG:23:VAL:HG12	7:AG:27:ILE:HD11	1.70	0.73
1:AA:1279:A:H5''	1:AA:1280:A:OP1	1.88	0.73
21:B0:3865:A:OP1	21:B0:2389:G:H1'	1.88	0.73
1:AA:1232:U:P	9:AI:126:SER:HB3	2.28	0.73
1:AA:1367:C:H5'	10:AJ:60:ARG:HH12	1.53	0.73
1:AA:717:C:C3'	1:AA:718:G:P	2.75	0.73
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.23	0.73
6:AF:69:GLU:HA	6:AF:72:VAL:HG23	1.70	0.73
18:AR:26:LEU:HD12	18:AR:27:GLY:H	1.53	0.73
1:AA:218:C:P	1:AA:470:U:H4'	2.28	0.73
1:AA:1232:U:OP1	9:AI:125:TYR:C	2.27	0.73
1:AA:131:C:C4'	1:AA:263:A:O4'	2.36	0.73
10:AJ:96:ILE:HG22	10:AJ:97:GLU:H	1.52	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:AB:23:ARG:NH1	2:AB:24:TRP:N	2.35	0.73
8:AH:108:GLY:HA3	8:AH:138:TRP:HB3	1.70	0.73
9:AI:4:TYR:CE2	9:AI:88:TYR:HA	2.24	0.73
21:B0:2522:G:H21	21:B0:2625:U:H5''	1.53	0.73
1:AA:375:U:C2	1:AA:376:G:C8	2.76	0.73
1:AA:436:C:O2'	1:AA:437:U:C5'	2.34	0.73
1:AA:367:U:N3	1:AA:369:C:C4	2.55	0.73
1:AA:588:G:N2	1:AA:653:A:C2	2.55	0.73
1:AA:189:A:C5	20:AT:104:LEU:C	2.59	0.73
13:AM:86:CYS:SG	13:AM:87:TYR:N	2.60	0.73
21:B0:1119:U:H3'	21:B0:1120:C:P	2.28	0.73
1:AA:1251:A:H4'	9:AI:12:GLU:OE2	1.88	0.73
1:AA:161:A:H2'	1:AA:162:A:C8	2.23	0.73
15:AO:33:THR:HG23	15:AO:63:ARG:NH1	2.03	0.73
1:AA:319:G:H22	1:AA:1434:A:C2'	2.00	0.73
1:AA:992:U:O4	1:AA:1044:A:OP2	2.07	0.73
1:AA:141:A:H4'	1:AA:182:U:O4'	1.87	0.73
1:AA:1347:G:C5	9:AI:107:ARG:CZ	2.71	0.73
1:AA:108:G:O6	20:AT:15:ARG:HD2	1.89	0.73
1:AA:1278:U:H5''	1:AA:1279:A:O5'	1.88	0.73
1:AA:1068:G:N3	1:AA:1191:A:C2	2.57	0.73
12:AL:48:PRO:HG2	12:AL:49:ASN:H	1.52	0.73
21:B0:1856:U:C4	21:B0:3865:A:N3	2.34	0.73
1:AA:9:G:OP1	5:AE:122:GLU:CG	2.37	0.73
1:AA:434:U:H2'	1:AA:435:C:C6	2.24	0.73
1:AA:216:C:C5'	1:AA:466:A:N1	2.52	0.73
1:AA:586:C:H5''	8:AH:90:GLY:CA	2.19	0.73
1:AA:104:G:O4'	1:AA:172:A:H2	1.72	0.73
21:B0:1856:U:C4	21:B0:3877:A:N6	2.51	0.72
1:AA:1115:C:C1'	14:AN:61:TRP:HA	2.19	0.72
13:AM:3:ARG:HH22	26:BD:137:ILE:CA	2.02	0.72
8:AH:1:MET:HG2	8:AH:2:LEU:N	2.05	0.72
1:AA:131:C:H1'	1:AA:263:A:C1'	2.17	0.72
1:AA:132:C:OP1	20:AT:75:ASN:CG	2.28	0.72
1:AA:189:A:N6	20:AT:104:LEU:HD22	2.03	0.72
4:AD:57:ARG:CZ	5:AE:107:ARG:HD3	2.16	0.72
1:AA:1064:G:H4'	1:AA:1065:U:C5'	2.18	0.72
1:AA:1190:G:O2'	1:AA:1191:A:OP2	1.74	0.72
1:AA:1317:C:OP1	14:AN:16:PHE:HB3	1.90	0.72
1:AA:248:C:O4'	1:AA:282:A:H2	1.72	0.72
1:AA:501:C:H2'	1:AA:502:G:H8	1.53	0.72
1:AA:502:G:H4'	1:AA:550:G:C4'	2.16	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:825:G:N2	8:AH:11:THR:HG21	2.03	0.72
1:AA:401:C:O4'	1:AA:622:A:H1'	1.88	0.72
1:AA:200:G:H2'	1:AA:201:G:C8	2.25	0.72
21:B0:552:C:H2'	21:B0:553:C:H4'	1.72	0.72
1:AA:1458:G:OP2	1:AA:1459:C:C6	2.36	0.72
21:B0:1856:U:C5'	21:B0:3865:A:C8	2.71	0.72
1:AA:1410:G:C2	1:AA:1491:G:N1	2.57	0.72
1:AA:1015:A:N3	1:AA:1219:U:O4'	2.22	0.72
1:AA:249:U:C2'	1:AA:250:A:P	2.65	0.72
1:AA:1113:C:N1	3:AC:178:LEU:HD23	2.03	0.72
1:AA:397:A:C8	1:AA:547:A:O2'	2.33	0.72
9:AI:44:VAL:HG13	9:AI:51:ARG:HH22	1.52	0.72
21:B0:367:G:C2'	21:B0:368:A:H5''	2.19	0.72
21:B0:951:G:H2'	21:B0:952:A:H5''	1.70	0.72
6:AF:26:ILE:HG21	6:AF:63:TYR:HE2	1.54	0.72
1:AA:131:C:H4'	1:AA:263:A:O4'	1.89	0.72
1:AA:1064:G:H1'	1:AA:1190:G:H22	1.49	0.72
1:AA:1108:G:H5''	3:AC:176:HIS:CE1	2.24	0.72
1:AA:1347:G:C8	9:AI:107:ARG:NH1	2.57	0.72
1:AA:1277:C:O2'	1:AA:1279:A:O4'	2.07	0.72
1:AA:1484:C:C4'	21:B0:1943:A:C1'	2.52	0.72
1:AA:406:G:N9	1:AA:496:A:C6	2.57	0.72
1:AA:39:G:C8	1:AA:498:U:C4	2.78	0.72
1:AA:1061:G:H1'	10:AJ:56:HIS:CE1	2.24	0.72
1:AA:1329:A:C5'	13:AM:29:ARG:HG3	2.07	0.72
1:AA:600:C:H5'	8:AH:129:VAL:HA	1.72	0.72
3:AC:23:TYR:CD1	10:AJ:11:PHE:CE2	2.78	0.72
1:AA:227:G:O2'	1:AA:228:A:H5'	1.88	0.72
21:B0:2236:U:H2'	21:B0:2237:C:H5''	1.72	0.72
1:AA:1499:A:H1'	1:AA:1520:G:C5'	2.19	0.72
1:AA:319:G:H1'	1:AA:1433:A:N1	2.05	0.72
1:AA:1488:G:H2'	1:AA:1489:G:C8	2.24	0.72
2:AB:91:PRO:HG3	2:AB:154:LEU:HB2	1.69	0.72
1:AA:866:C:C4'	1:AA:919:A:H5'	2.20	0.72
1:AA:132:C:O3'	20:AT:74:LYS:HD2	1.90	0.72
1:AA:1392:G:H4'	1:AA:1531:A:H5'	1.72	0.72
21:B0:892:A:C4	21:B0:911:A:C2	2.77	0.72
10:AJ:51:ARG:HA	14:AN:45:ARG:HD2	1.69	0.72
1:AA:1418:A:H2	21:B0:1931:G:O2'	1.72	0.72
21:B0:762:A:H5'	21:B0:1284:G:H1'	1.71	0.72
21:B0:1856:U:C5'	21:B0:3865:A:H8	2.02	0.72
1:AA:131:C:C1'	1:AA:263:A:H1'	2.19	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.08	0.72
1:AA:582:U:H1'	17:AQ:105:ALA:HA	1.70	0.72
1:AA:5:U:N3	5:AE:95:ALA:HB3	2.04	0.72
2:AB:116:GLU:HG2	2:AB:153:ARG:NH1	2.04	0.72
17:AQ:59:ILE:HG23	17:AQ:71:PHE:HB3	1.70	0.72
21:B0:1856:U:C6	21:B0:3865:A:N9	2.31	0.72
1:AA:353:A:H5'	1:AA:353:A:H8	1.53	0.72
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.24	0.72
1:AA:1065:U:H4'	1:AA:1066:C:O5'	1.89	0.72
13:AM:84:ILE:HG21	19:AS:66:MET:HE2	1.71	0.72
21:B0:9:U:H3	21:B0:2608:A:H62	1.37	0.72
21:B0:2426:G:H5'	21:B0:2480:C:H41	1.55	0.72
20:AT:10:LEU:O	20:AT:12:ALA:N	2.22	0.72
9:AI:65:VAL:HG21	9:AI:73:GLN:HB3	1.72	0.72
1:AA:1281:U:H5'	1:AA:1282:C:C5	2.25	0.71
1:AA:261:U:C5	20:AT:79:ARG:HD3	2.21	0.71
1:AA:116:A:N6	1:AA:313:A:H1'	2.04	0.71
1:AA:324:G:O5'	20:AT:22:ARG:HD3	1.90	0.71
21:B0:1141:U:N3	21:B0:2008:C:H5''	2.04	0.71
21:B0:1119:U:C4	21:B0:1120:C:C4	2.78	0.71
21:B0:1908:C:H2'	21:B0:1909:U:H4'	1.71	0.71
21:B0:1966:C:H4'	21:B0:2585:C:H4'	1.71	0.71
1:AA:761:G:C5'	17:AQ:102:GLY:CA	2.68	0.71
1:AA:760:G:N3	17:AQ:103:GLY:O	2.22	0.71
1:AA:143:A:O3'	1:AA:144:G:C8	2.28	0.71
1:AA:933:G:C5	1:AA:935:A:N7	2.58	0.71
1:AA:102:G:O2'	1:AA:151:A:O2'	2.08	0.71
1:AA:104:G:C5'	1:AA:172:A:C2	2.73	0.71
18:AR:33:ASP:OD2	18:AR:36:ASN:HB2	1.90	0.71
3:AC:13:GLY:HA3	14:AN:57:ARG:HH21	1.54	0.71
1:AA:1351:U:H2'	1:AA:1352:C:H6	1.55	0.71
11:AK:84:VAL:HG11	11:AK:95:ILE:HD11	1.70	0.71
1:AA:748:C:H1'	1:AA:749:C:H5	1.53	0.71
21:B0:688:A:H62	21:B0:816:U:H3	1.38	0.71
21:B0:2503:G:C3'	21:B0:2504:G:H5''	2.21	0.71
17:AQ:104:LYS:HD2	21:B0:727:U:O2	1.89	0.71
1:AA:113:G:C1'	1:AA:354:G:H5''	2.21	0.71
1:AA:933:G:N1	1:AA:935:A:C8	2.58	0.71
8:AH:1:MET:HG2	8:AH:2:LEU:H	1.54	0.71
21:B0:3126:A:H4'	21:B0:3127:G:P	2.30	0.71
21:B0:2503:G:H3'	21:B0:2504:G:H5''	1.72	0.71
17:AQ:45:HIS:HB2	17:AQ:65:ILE:HD13	1.71	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:AI:97:LYS:HG2	9:AI:102:LEU:HD12	1.72	0.71
1:AA:977:A:H2'	1:AA:978:A:H5''	1.72	0.71
1:AA:818:G:N2	1:AA:873:A:OP1	2.23	0.71
21:B0:202:A:H2'	21:B0:203:G:O4'	1.89	0.71
1:AA:132:C:O3'	20:AT:74:LYS:CD	2.37	0.71
1:AA:260:G:N7	20:AT:83:ARG:NH2	2.37	0.71
1:AA:977:A:C8	1:AA:1223:C:C4	2.79	0.71
1:AA:866:C:H4'	1:AA:919:A:H5'	1.72	0.71
21:B0:1487:C:H2'	21:B0:1488:G:H8	1.56	0.71
1:AA:130:A:C2	1:AA:264:U:C5	2.77	0.71
21:B0:3149:G:C3'	21:B0:3150:C:P	2.78	0.71
1:AA:1411:C:H2'	1:AA:1412:C:C6	2.26	0.71
1:AA:1182:G:HO2'	1:AA:1183:A:P	2.13	0.71
1:AA:1503:A:C4	1:AA:1531:A:H2	2.08	0.71
1:AA:1261:A:C4'	1:AA:1283:G:C3'	2.47	0.71
5:AE:102:ALA:HB1	5:AE:120:THR:HG21	1.72	0.71
1:AA:1489:G:C3'	1:AA:1490:C:H5''	2.21	0.71
3:AC:59:ARG:N	10:AJ:92:THR:CG2	2.54	0.71
9:AI:111:ARG:HD3	9:AI:112:LYS:N	2.06	0.71
1:AA:59:A:C2	1:AA:331:G:C5	2.79	0.71
10:AJ:35:SER:HB2	10:AJ:72:VAL:O	1.90	0.71
1:AA:130:A:H2	1:AA:264:U:C5	2.07	0.71
1:AA:922:G:H5'	5:AE:20:GLN:NE2	2.05	0.71
1:AA:1405:G:H1'	1:AA:1519:A:C1'	2.21	0.71
1:AA:1405:G:O2'	1:AA:1518:A:O3'	2.09	0.71
1:AA:1060:C:O2'	10:AJ:56:HIS:CG	2.42	0.71
21:B0:57:G:H2'	21:B0:58:C:H5''	1.73	0.71
21:B0:3126:A:C4'	21:B0:3127:G:H5'	2.21	0.71
21:B0:2274:C:H2'	21:B0:2275:U:H5'	1.73	0.71
21:B0:1077:U:O2'	21:B0:1079:G:N7	2.21	0.71
1:AA:537:G:OP1	12:AL:113:ARG:NH2	2.23	0.71
1:AA:6:G:C2'	5:AE:119:LEU:HD13	2.20	0.71
1:AA:189:A:N6	20:AT:104:LEU:C	2.43	0.71
1:AA:1491:G:H2'	1:AA:1492:A:C8	2.26	0.71
1:AA:571:U:H4'	1:AA:819:A:N6	2.05	0.71
1:AA:933:G:OP2	7:AG:3:ARG:HB2	1.91	0.71
1:AA:1261:A:C1'	1:AA:1283:G:H5'	2.20	0.71
1:AA:760:G:N1	17:AQ:104:LYS:C	2.43	0.71
1:AA:352:C:H4'	1:AA:354:G:OP1	1.91	0.71
19:AS:70:LYS:O	19:AS:72:GLY:N	2.24	0.71
21:B0:3098:U:C5	21:B0:3099:U:O4	2.44	0.71
21:B0:1746:A:H2'	21:B0:1747:G:H5'	1.72	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:AM:40:ASN:HB3	13:AM:43:THR:HG23	1.72	0.71
21:B0:1182:U:C2'	21:B0:1183:C:H5''	2.20	0.71
1:AA:288:A:O2'	1:AA:289:G:O3'	2.05	0.71
1:AA:1413:A:H2	1:AA:1487:G:H22	1.39	0.70
1:AA:1406:U:O2	1:AA:1517:G:N2	2.24	0.70
1:AA:1014:A:C6	19:AS:34:TRP:CE2	2.79	0.70
3:AC:59:ARG:H	10:AJ:92:THR:HG22	1.56	0.70
1:AA:818:G:C3'	1:AA:819:A:H5''	2.21	0.70
1:AA:392:G:H2'	1:AA:393:A:H8	1.55	0.70
18:AR:39:VAL:O	18:AR:42:ARG:HB2	1.90	0.70
1:AA:227:G:C6	1:AA:228:A:C5	2.79	0.70
11:AK:77:MET:HE3	11:AK:80:VAL:HG22	1.73	0.70
1:AA:235:C:H4'	17:AQ:70:ARG:HB2	1.72	0.70
21:B0:3197:U:C2'	21:B0:2181:A:N7	2.51	0.70
1:AA:1409:C:C2	1:AA:1410:G:C8	2.79	0.70
21:B0:891:A:O2'	21:B0:892:A:C8	2.30	0.70
1:AA:436:C:C2'	1:AA:437:U:H6	2.03	0.70
1:AA:994:A:C4	14:AN:5:ALA:C	2.51	0.70
1:AA:44:G:OP1	16:AP:12:LYS:N	2.24	0.70
1:AA:1371:G:OP1	9:AI:11:LYS:HG2	1.91	0.70
13:AM:40:ASN:HD22	13:AM:41:PRO:HD2	1.55	0.70
1:AA:108:G:C6	20:AT:15:ARG:HG3	2.26	0.70
1:AA:1148:U:H2'	1:AA:1149:C:O4'	1.90	0.70
21:B0:3874:C:C5	21:B0:3875:A:N7	2.59	0.70
1:AA:761:G:H1'	17:AQ:104:LYS:O	1.91	0.70
1:AA:8:A:C1'	5:AE:103:GLY:N	2.53	0.70
21:B0:1073:G:H1'	21:B0:1099:A:C2	2.27	0.70
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.26	0.70
1:AA:1320:C:N3	19:AS:36:ARG:HG3	2.05	0.70
1:AA:142:G:H21	1:AA:196:A:C1'	1.95	0.70
10:AJ:65:LEU:HD13	14:AN:36:PHE:HZ	1.55	0.70
21:B0:1002:C:H5'	21:B0:1200:G:OP2	1.90	0.70
3:AC:52:LEU:CD2	3:AC:52:LEU:H	2.00	0.70
1:AA:107:G:C2'	1:AA:108:G:H5'	2.21	0.70
1:AA:288:A:H2'	1:AA:289:G:H4'	1.74	0.70
21:B0:2680:U:H3'	21:B0:2681:A:H5'	1.72	0.70
1:AA:599:C:H5'	8:AH:131:GLY:HA2	1.73	0.70
1:AA:586:C:H5''	8:AH:90:GLY:H	1.54	0.70
1:AA:344:A:H4'	1:AA:345:C:OP2	1.91	0.70
1:AA:1394:A:N6	1:AA:1501:C:H5'	2.06	0.70
1:AA:322:C:O2'	20:AT:23:ARG:CB	2.35	0.70
1:AA:438:G:H4'	1:AA:439:A:OP1	1.91	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1168:A:H2'	1:AA:1169:A:C8	2.26	0.70
1:AA:1015:A:N3	1:AA:1219:U:C4'	2.54	0.70
3:AC:52:LEU:HD21	3:AC:118:GLN:NE2	2.07	0.70
10:AJ:78:ASN:O	10:AJ:80:LYS:N	2.24	0.70
6:AF:10:LEU:HD11	6:AF:59:TYR:HD2	1.55	0.70
19:AS:15:LEU:HD12	19:AS:16:LEU:N	2.06	0.70
1:AA:919:A:O3'	1:AA:920:U:P	2.50	0.70
21:B0:3867:G:N3	53:B5:44:GLY:CA	2.55	0.70
1:AA:190:A:C6	20:AT:101:GLY:O	2.44	0.70
1:AA:292:G:C1'	1:AA:608:A:H61	2.00	0.70
1:AA:476:U:C5	1:AA:477:G:C8	2.80	0.70
1:AA:520:A:O2'	12:AL:73:GLU:OE2	2.07	0.70
1:AA:1250:A:C4'	9:AI:68:GLY:O	2.39	0.70
4:AD:28:SER:O	4:AD:30:LYS:N	2.25	0.70
4:AD:158:ILE:HG22	4:AD:181:MET:HE2	1.71	0.70
1:AA:686:U:HO2'	1:AA:687:A:H8	1.38	0.70
21:B0:874:A:H62	21:B0:928:G:H21	1.39	0.70
3:AC:6:HIS:CD2	3:AC:8:ILE:HB	2.27	0.70
1:AA:402:G:C1'	1:AA:620:C:H42	2.05	0.70
10:AJ:45:ARG:NH2	14:AN:36:PHE:CD2	2.60	0.70
1:AA:588:G:N7	1:AA:753:A:C4	2.60	0.70
1:AA:59:A:C5	1:AA:331:G:N2	2.60	0.70
1:AA:974:A:OP2	14:AN:29:ARG:NH2	2.25	0.70
21:B0:104:C:C2'	21:B0:105:G:H5''	2.22	0.70
17:AQ:24:GLU:OE2	17:AQ:37:LYS:HD3	1.92	0.70
15:AO:17:ARG:NH1	15:AO:77:ARG:NH1	2.40	0.70
1:AA:323:U:OP1	20:AT:23:ARG:CA	2.35	0.70
21:B0:892:A:C8	21:B0:892:A:H5'	2.24	0.70
10:AJ:65:LEU:O	10:AJ:65:LEU:HD23	1.91	0.70
4:AD:150:GLU:CG	4:AD:153:ARG:HH21	2.02	0.70
1:AA:521:G:OP1	12:AL:73:GLU:O	2.10	0.70
13:AM:11:ARG:HG2	13:AM:12:ASN:N	2.07	0.70
10:AJ:39:PRO:O	10:AJ:40:LEU:HB2	1.89	0.70
21:B0:3146:A:H4'	21:B0:3147:C:OP2	1.92	0.70
3:AC:180:ALA:O	3:AC:181:ASN:HB3	1.92	0.70
1:AA:954:G:H5''	13:AM:120:LYS:HD3	1.73	0.70
1:AA:587:G:O2'	1:AA:588:G:P	2.49	0.70
2:AB:178:ARG:NH1	2:AB:178:ARG:HG3	1.92	0.70
9:AI:97:LYS:CG	9:AI:102:LEU:HD12	2.22	0.70
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.74	0.70
1:AA:197:A:H4'	1:AA:198:G:O5'	1.90	0.70
1:AA:292:G:N3	1:AA:608:A:N1	2.40	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:436:C:H2'	1:AA:437:U:C1'	2.21	0.70
1:AA:19:C:N4	1:AA:916:G:O6	2.24	0.70
21:B0:3101:G:H2'	21:B0:3102:G:O4'	1.90	0.70
1:AA:1372:U:OP2	9:AI:11:LYS:HD3	1.92	0.70
1:AA:1034:G:C3'	1:AA:1035:A:P	2.80	0.70
1:AA:128:G:O3'	17:AQ:3:LYS:NZ	2.23	0.70
1:AA:476:U:C2	1:AA:477:G:C1'	2.75	0.69
3:AC:29:TYR:CE1	10:AJ:65:LEU:CD1	2.68	0.69
10:AJ:46:ARG:HH11	10:AJ:64:GLU:CB	2.05	0.69
1:AA:587:G:OP1	8:AH:92:ARG:NH1	2.23	0.69
10:AJ:30:SER:O	10:AJ:78:ASN:HB2	1.92	0.69
21:B0:1856:U:H3'	21:B0:3865:A:C2'	2.12	0.69
17:AQ:96:GLN:CG	21:B0:725:C:O2'	2.40	0.69
19:AS:5:LEU:O	19:AS:6:LYS:HB2	1.92	0.69
1:AA:477:G:H2'	1:AA:478:A:H8	1.56	0.69
13:AM:6:GLY:O	13:AM:7:VAL:HG22	1.92	0.69
1:AA:837:G:O3'	1:AA:838:C:O5'	2.09	0.69
1:AA:1141:C:H2'	1:AA:1142:G:H8	1.58	0.69
12:AL:126:LYS:HD2	12:AL:126:LYS:N	2.08	0.69
20:AT:45:GLN:HA	20:AT:91:LEU:HD22	1.74	0.69
21:B0:814:G:H3'	21:B0:815:A:H5'	1.73	0.69
21:B0:1912:G:H4'	21:B0:1913:G:H8	1.56	0.69
21:B0:3874:C:C4	21:B0:3875:A:C8	2.80	0.69
1:AA:262:A:C3'	20:AT:75:ASN:ND2	2.55	0.69
1:AA:190:A:C5	20:AT:105:SER:CA	2.75	0.69
1:AA:1314:C:C6	19:AS:6:LYS:HD3	2.26	0.69
13:AM:81:LEU:H	13:AM:81:LEU:HD23	1.56	0.69
13:AM:82:MET:HE2	21:B0:900(A):A:OP1	1.92	0.69
1:AA:586:C:C5'	8:AH:90:GLY:CA	2.69	0.69
21:B0:2607:C:H3'	21:B0:2608:A:C5'	2.23	0.69
16:AP:20:VAL:HG11	16:AP:32:TYR:HB3	1.74	0.69
3:AC:7:PRO:HG2	3:AC:184:TYR:HB2	1.73	0.69
1:AA:112:G:N3	1:AA:354:G:H5'	2.07	0.69
1:AA:375:U:H2'	1:AA:376:G:H8	1.57	0.69
1:AA:1416:G:C5	1:AA:1417:G:C1'	2.75	0.69
1:AA:496:A:H4'	1:AA:497:A:OP1	1.91	0.69
1:AA:476:U:O3'	1:AA:477:G:OP1	2.10	0.69
1:AA:141:A:O4'	1:AA:182:U:H1'	1.90	0.69
1:AA:714:G:H5'	1:AA:776:G:H5''	1.74	0.69
1:AA:619:U:H2'	4:AD:135:LEU:HD12	1.72	0.69
10:AJ:30:SER:HB2	10:AJ:80:LYS:HB3	1.74	0.69
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HD22	1.57	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:AD:70:ILE:HD11	4:AD:100:ARG:CZ	2.21	0.69
1:AA:1504:G:OP1	1:AA:1507:A:H4'	1.92	0.69
17:AQ:104:LYS:CB	21:B0:727:U:C1'	2.71	0.69
1:AA:318:G:O2'	1:AA:1468:A:H4'	1.93	0.69
3:AC:38:ARG:HG3	3:AC:38:ARG:HH11	1.58	0.69
13:AM:81:LEU:O	13:AM:86:CYS:HB3	1.92	0.69
1:AA:248:C:O2'	1:AA:283:C:H4'	1.92	0.69
1:AA:714:G:H4'	1:AA:776:G:C5'	2.22	0.69
1:AA:1137:C:H4'	1:AA:1138:G:N2	2.06	0.69
21:B0:1679:U:C3'	21:B0:1680:U:H5''	2.22	0.69
21:B0:1774:A:H1'	21:B0:2586:G:H21	1.58	0.69
17:AQ:66:SER:O	17:AQ:70:ARG:NH1	2.26	0.69
21:B0:892:A:N3	21:B0:911:A:N3	2.41	0.69
1:AA:216:C:H5'	1:AA:466:A:N1	2.08	0.69
21:B0:226:C:O2'	21:B0:227:G:H8	1.73	0.69
1:AA:59:A:C4	1:AA:331:G:N2	2.61	0.69
1:AA:837:G:C2'	1:AA:838:C:C6	2.75	0.69
3:AC:23:TYR:HE1	10:AJ:67:THR:HG23	1.55	0.69
21:B0:1791:C:O2'	21:B0:1793:A:H5'	1.93	0.69
1:AA:376:G:OP1	16:AP:6:LEU:HD13	1.92	0.69
1:AA:406:G:N2	1:AA:437:U:O2	2.25	0.69
1:AA:1064:G:C1'	1:AA:1190:G:N2	2.45	0.69
1:AA:1015:A:C2	1:AA:1219:U:O4'	2.45	0.69
3:AC:23:TYR:HD1	10:AJ:11:PHE:CD2	2.09	0.69
4:AD:151:LYS:HD2	4:AD:151:LYS:N	2.08	0.69
1:AA:939:G:H2'	1:AA:940:C:C6	2.28	0.69
21:B0:2495:G:H2'	21:B0:2496:C:C6	2.27	0.69
21:B0:1004:A:H2'	21:B0:1005:U:H5''	1.74	0.69
1:AA:1255:G:O3'	1:AA:1258:G:N3	2.26	0.69
4:AD:89:THR:OG1	5:AE:97:GLY:O	2.10	0.69
1:AA:51:A:C6	1:AA:314:C:O2	2.44	0.69
1:AA:355:C:H4'	1:AA:389:A:P	2.33	0.69
1:AA:375:U:H2'	1:AA:376:G:C8	2.26	0.69
1:AA:186:C:H4'	20:AT:81:LYS:CB	2.22	0.69
1:AA:992:U:HO2'	1:AA:993:G:P	2.16	0.69
3:AC:59:ARG:N	10:AJ:92:THR:HG22	2.08	0.69
19:AS:41:VAL:HG23	19:AS:43:GLU:HG2	1.75	0.69
1:AA:36:C:O2	1:AA:501:C:C5'	2.40	0.69
1:AA:1087:G:P	1:AA:1389:C:H4'	2.32	0.69
21:B0:1749:G:O6	21:B0:2674:C:H4'	1.92	0.69
3:AC:130:VAL:HG21	3:AC:157:ILE:HG23	1.75	0.69
10:AJ:42:THR:HG23	10:AJ:67:THR:O	1.93	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:AD:64:LEU:HD12	4:AD:75:PHE:CZ	2.28	0.69
21:B0:1807:A:H4'	21:B0:1808:C:C5'	2.22	0.69
12:AL:55:VAL:HG12	12:AL:56:ALA:H	1.57	0.69
21:B0:1428:G:H5''	21:B0:1429:A:H5'	1.73	0.69
21:B0:2380:U:H2'	21:B0:2381:A:H5'	1.75	0.69
21:B0:2617:G:H22	21:B0:2755:A:H2'	1.57	0.69
13:AM:87:TYR:N	19:AS:73:GLU:O	2.26	0.69
10:AJ:49:VAL:HG21	14:AN:44:LEU:HG	1.75	0.69
1:AA:587:G:H4'	8:AH:3:THR:O	1.93	0.69
12:AL:47:LYS:CB	12:AL:48:PRO:CD	2.71	0.69
21:B0:2245:A:H5'	21:B0:2246:A:C8	2.27	0.69
21:B0:1223:G:H21	21:B0:1225:G:H21	1.40	0.69
21:B0:588:G:H4'	21:B0:2001:G:H4'	1.73	0.69
1:AA:232:G:C2	1:AA:263:A:C2	2.81	0.69
1:AA:44:G:P	16:AP:12:LYS:H	2.16	0.69
1:AA:501:C:C1'	1:AA:549:C:H1'	2.20	0.69
4:AD:64:LEU:HD23	4:AD:198:VAL:HG21	1.75	0.69
1:AA:1250:A:H4'	9:AI:68:GLY:H	1.57	0.69
20:AT:56:MET:HE2	20:AT:88:VAL:HG11	1.74	0.69
4:AD:88:VAL:HG23	5:AE:96:PRO:HB2	1.72	0.68
4:AD:199:ASN:ND2	4:AD:201:GLN:HB2	2.08	0.68
2:AB:22:LYS:HD2	2:AB:35:GLU:OE1	1.93	0.68
1:AA:583:A:H5'	17:AQ:90:ILE:CG2	2.22	0.68
6:AF:100:ASN:ND2	18:AR:23:LYS:HG2	2.08	0.68
1:AA:105:G:H2'	1:AA:106:C:C6	2.29	0.68
1:AA:702:A:N6	21:B0:1838:G:N3	2.40	0.68
1:AA:1314:C:H5	19:AS:6:LYS:CG	2.05	0.68
21:B0:3101:G:H1	21:B0:3188:U:H3	1.41	0.68
1:AA:928:G:O2'	1:AA:1533:C:H5	1.75	0.68
3:AC:52:LEU:CD2	3:AC:118:GLN:HE22	2.05	0.68
4:AD:157:LEU:CD2	4:AD:161:ASN:HD21	2.05	0.68
1:AA:382:A:H2'	1:AA:383:A:C8	2.28	0.68
1:AA:376:G:N3	1:AA:389:A:C2	2.61	0.68
1:AA:324:G:P	20:AT:22:ARG:HD3	2.33	0.68
1:AA:119:A:C5	1:AA:240:C:C4	2.81	0.68
1:AA:599:C:H4'	8:AH:130:GLY:O	1.94	0.68
1:AA:651:C:C2	1:AA:652:U:C6	2.82	0.68
12:AL:47:LYS:HB2	12:AL:48:PRO:CD	2.23	0.68
16:AP:34:GLU:OE2	16:AP:55:ARG:HD3	1.93	0.68
5:AE:51:VAL:O	5:AE:55:VAL:HG23	1.93	0.68
21:B0:1953:A:H1'	21:B0:1955:G:C1'	2.23	0.68
21:B0:2624:G:H4'	21:B0:2712:G:H2'	1.75	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1281:U:H4'	1:AA:1282:C:OP2	1.92	0.68
1:AA:926:G:C5	1:AA:1505:G:C6	2.81	0.68
1:AA:992:U:C5	1:AA:1043:C:OP2	2.47	0.68
1:AA:247:G:P	17:AQ:100:LYS:HE2	2.33	0.68
10:AJ:63:PHE:CZ	14:AN:48:ALA:CB	2.76	0.68
1:AA:1115:C:H1'	14:AN:61:TRP:CA	2.23	0.68
21:B0:939:C:H2'	21:B0:940:G:C8	2.28	0.68
1:AA:129:U:P	17:AQ:3:LYS:NZ	2.66	0.68
1:AA:17:U:H2'	1:AA:18:C:C6	2.28	0.68
1:AA:328:C:H4'	1:AA:329:A:O5'	1.94	0.68
21:B0:2440:C:H1'	21:B0:2471:U:H3	1.56	0.68
21:B0:2691:C:H3'	21:B0:2692:A:H5''	1.74	0.68
21:B0:2058:U:H4'	21:B0:2575:U:H3	1.58	0.68
1:AA:191:G:N3	1:AA:192:U:O4'	2.25	0.68
1:AA:1503:A:C4	1:AA:1531:A:C2	2.81	0.68
1:AA:815:A:C2	1:AA:1528:U:H5'	2.29	0.68
1:AA:134:A:H1'	1:AA:325:A:C5	2.28	0.68
1:AA:1409:C:O2'	1:AA:1410:G:H5'	1.92	0.68
1:AA:406:G:C2	1:AA:496:A:N6	2.61	0.68
1:AA:394:G:O2'	1:AA:395:C:H5'	1.93	0.68
1:AA:948:C:OP1	13:AM:109:THR:HG22	1.94	0.68
14:AN:22:THR:HB	14:AN:33:VAL:HG21	1.73	0.68
18:AR:45:SER:C	18:AR:47:THR:H	1.97	0.68
21:B0:2075:U:O2'	21:B0:3093:C:C6	2.41	0.68
21:B0:2377:U:H2'	21:B0:2378:G:C8	2.28	0.68
21:B0:181:A:H4'	21:B0:182:G:H4'	1.76	0.68
21:B0:3118:U:C2	21:B0:3149:G:C5'	2.50	0.68
17:AQ:104:LYS:CA	21:B0:726:G:N2	2.56	0.68
1:AA:113:G:O4'	1:AA:354:G:C5'	2.42	0.68
1:AA:323:U:C4'	20:AT:19:SER:O	2.41	0.68
1:AA:954:G:C5'	13:AM:120:LYS:HD3	2.23	0.68
1:AA:1346:A:C4	7:AG:10:ARG:CZ	2.77	0.68
1:AA:1060:C:H5''	10:AJ:51:ARG:HB3	1.75	0.68
21:B0:940:G:C3'	21:B0:941:U:H5''	2.11	0.68
1:AA:1475:G:H5''	21:B0:1706:A:H4'	0.76	0.68
1:AA:1314:C:C5	19:AS:6:LYS:CE	2.77	0.68
13:AM:80:ARG:NE	19:AS:65:ASN:O	2.27	0.68
19:AS:62:ILE:HD12	19:AS:66:MET:HG3	1.75	0.68
1:AA:394:G:C2	1:AA:395:C:C2	2.81	0.68
1:AA:848:G:H2'	1:AA:849:C:N1	2.08	0.68
4:AD:3:ARG:HH22	4:AD:74:GLN:CD	1.97	0.68
1:AA:761:G:HO2'	21:B0:726:G:H22	1.42	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1298:C:H41	7:AG:114:ARG:HB3	1.54	0.68
10:AJ:51:ARG:HG2	14:AN:45:ARG:CZ	2.22	0.68
6:AF:75:LEU:O	6:AF:79:LEU:HG	1.94	0.68
4:AD:30:LYS:C	4:AD:32:ALA:H	1.97	0.68
9:AI:93:ARG:HD3	9:AI:97:LYS:HE3	1.75	0.68
21:B0:2381:A:H4'	21:B0:2382:C:C5	2.29	0.68
1:AA:1261:A:C3'	1:AA:1283:G:H5''	2.23	0.68
1:AA:292:G:H1'	1:AA:608:A:H62	1.59	0.68
1:AA:915:A:H2'	1:AA:916:G:H5'	1.76	0.68
1:AA:571:U:C5'	1:AA:819:A:C2	2.71	0.68
1:AA:43:C:OP1	16:AP:13:HIS:CD2	2.44	0.68
1:AA:46:G:H2'	1:AA:366:C:C5	2.28	0.68
1:AA:212:G:O2'	1:AA:213:G:C5'	2.41	0.68
21:B0:26:G:H21	21:B0:524:A:H62	1.41	0.68
1:AA:1342:C:H4'	9:AI:125:TYR:CE1	2.29	0.68
2:AB:187:LEU:HD12	2:AB:205:ASP:HA	1.74	0.68
21:B0:3875:A:C4'	53:B5:43:LYS:CA	2.72	0.67
1:AA:132:C:OP1	20:AT:75:ASN:ND2	2.27	0.67
1:AA:355:C:O2'	1:AA:388:G:H1'	1.93	0.67
1:AA:9:G:P	5:AE:122:GLU:HB2	2.33	0.67
1:AA:1417:G:H21	1:AA:1484:C:N4	1.90	0.67
13:AM:81:LEU:H	13:AM:81:LEU:CD2	2.08	0.67
3:AC:190:ARG:HH11	3:AC:190:ARG:CB	2.07	0.67
21:B0:1955:G:H2'	21:B0:1956:G:H5'	1.76	0.67
1:AA:583:A:C5'	17:AQ:90:ILE:HG21	2.23	0.67
2:AB:18:GLY:HA2	2:AB:42:ILE:H	1.59	0.67
21:B0:1033:G:H22	21:B0:1150:C:H2'	1.58	0.67
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.59	0.67
1:AA:1410:G:C2	1:AA:1491:G:C2	2.82	0.67
1:AA:476:U:C4	1:AA:477:G:N7	2.60	0.67
1:AA:59:A:N6	1:AA:331:G:H1'	2.07	0.67
3:AC:26:LYS:H	3:AC:26:LYS:HD3	1.58	0.67
1:AA:187:G:H5'	20:AT:85:MET:SD	2.35	0.67
10:AJ:45:ARG:CZ	14:AN:36:PHE:CE2	2.78	0.67
1:AA:108:G:C6	20:AT:15:ARG:CD	2.76	0.67
9:AI:93:ARG:NH1	9:AI:97:LYS:HZ1	1.92	0.67
21:B0:2261:G:H4'	21:B0:2262:C:OP2	1.94	0.67
21:B0:1021:A:H1'	21:B0:1164:C:H1'	1.76	0.67
1:AA:131:C:C1'	1:AA:263:A:C1'	2.72	0.67
1:AA:189:A:N6	20:AT:104:LEU:CD2	2.57	0.67
1:AA:1483:A:C6	1:AA:1484:C:C4	2.82	0.67
19:AS:33:THR:HG22	19:AS:35:SER:H	1.60	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:AM:93:ARG:CB	21:B0:900(A):A:OP1	2.43	0.67
21:B0:1181:C:C2'	21:B0:1182:U:H5''	2.23	0.67
6:AF:36:ARG:NH1	6:AF:38:GLU:HG2	2.08	0.67
1:AA:701:C:H5'	1:AA:703:G:O4'	1.94	0.67
21:B0:2381:A:H4'	21:B0:2382:C:H5	1.60	0.67
21:B0:998:C:H2'	21:B0:999:A:O4'	1.94	0.67
21:B0:1112:U:C2'	21:B0:1113:C:H5''	2.24	0.67
1:AA:1495:U:O2'	21:B0:1902:A:H2	1.74	0.67
1:AA:1315:U:H5	19:AS:6:LYS:HZ3	1.42	0.67
1:AA:1330:U:H5''	13:AM:23:TYR:O	1.95	0.67
1:AA:1016:A:H2'	1:AA:1017:G:O4'	1.93	0.67
1:AA:1455:G:H2'	1:AA:1456:A:O4'	1.95	0.67
18:AR:26:LEU:HD21	18:AR:39:VAL:CG2	2.25	0.67
21:B0:539:A:H62	21:B0:2024:U:H3	1.40	0.67
21:B0:2324:G:H4'	21:B0:2326:C:H5''	1.76	0.67
1:AA:761:G:H1'	17:AQ:104:LYS:HA	1.77	0.67
17:AQ:104:LYS:HG2	21:B0:726:G:N1	2.10	0.67
1:AA:1502:A:H2	1:AA:1505:G:N1	1.90	0.67
1:AA:1225:A:C4'	19:AS:78:ARG:HH11	2.07	0.67
3:AC:82:GLU:O	3:AC:85:ARG:HB3	1.94	0.67
1:AA:815:A:O2'	1:AA:1527:C:C4'	2.43	0.67
1:AA:933:G:C5	1:AA:935:A:C8	2.83	0.67
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.29	0.67
13:AM:7:VAL:CG1	26:BD:113:ASP:CA	2.73	0.67
7:AG:149:ARG:NH1	11:AK:59:TYR:CZ	2.62	0.67
21:B0:2508:G:H5''	21:B0:2509:A:H5''	1.76	0.67
21:B0:3877:A:C8	21:B0:3877:A:O5'	2.39	0.67
1:AA:1261:A:H5''	1:AA:1283:G:O3'	1.93	0.67
1:AA:315:A:H2	1:AA:354:G:OP2	1.77	0.67
1:AA:1064:G:C4'	1:AA:1065:U:H5'	2.23	0.67
14:AN:14:PRO:HB2	14:AN:16:PHE:O	1.95	0.67
1:AA:893:C:H2'	1:AA:894:G:C8	2.30	0.67
1:AA:1347:G:N7	9:AI:107:ARG:NH1	2.43	0.67
1:AA:929:G:OP1	1:AA:1533:C:N4	2.28	0.67
1:AA:976:G:OP1	14:AN:31:ARG:O	2.12	0.67
1:AA:362:G:H4'	12:AL:28:LYS:HZ2	1.57	0.67
13:AM:34:LEU:HD13	13:AM:41:PRO:HA	1.77	0.67
2:AB:124:SER:HB2	2:AB:125:PRO:CD	2.21	0.67
21:B0:1926:U:O2'	21:B0:1928:G:H5'	1.95	0.67
11:AK:14:VAL:HG21	11:AK:40:ILE:HD11	1.77	0.67
1:AA:1459:C:OP1	20:AT:28:ALA:C	2.33	0.67
1:AA:263:A:P	20:AT:75:ASN:HB2	2.34	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1483:A:H2'	1:AA:1484:C:OP2	1.90	0.67
1:AA:68:G:H2'	1:AA:69:G:P	2.35	0.67
1:AA:650:G:O2'	1:AA:651:C:H5'	1.94	0.67
1:AA:104:G:H4'	1:AA:172:A:C2	2.28	0.67
21:B0:665:A:H3'	21:B0:666:U:C5'	2.24	0.67
7:AG:85:TYR:HD1	7:AG:154:TYR:HE1	1.43	0.67
21:B0:33:C:H42	21:B0:466:A:H61	1.41	0.67
1:AA:815:A:C2	1:AA:1528:U:C4'	2.69	0.66
21:B0:3876:A:N9	53:B5:45:ASP:CA	2.57	0.66
1:AA:1483:A:C5	1:AA:1484:C:C6	2.81	0.66
1:AA:1368:G:O2'	1:AA:1369:C:H5'	1.95	0.66
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.29	0.66
1:AA:1092:A:C4'	7:AG:4:ARG:NH2	2.58	0.66
13:AM:40:ASN:HD22	13:AM:41:PRO:N	1.91	0.66
1:AA:921:U:H5'	1:AA:1082:G:H5'	1.76	0.66
15:AO:55:GLY:O	15:AO:59:MET:HG3	1.94	0.66
1:AA:371:G:O2'	1:AA:372:C:H5'	1.94	0.66
21:B0:1473:U:H4'	21:B0:1474:A:C8	2.29	0.66
1:AA:582:U:O4'	17:AQ:105:ALA:C	2.33	0.66
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.59	0.66
1:AA:1406:U:C1'	1:AA:1518:A:H4'	2.25	0.66
1:AA:835:U:P	18:AR:64:ARG:NH2	2.66	0.66
3:AC:179:ARG:HD3	3:AC:206:GLU:HG2	1.76	0.66
4:AD:36:ARG:H	4:AD:37:PRO:CD	2.02	0.66
1:AA:1296:C:H5'	1:AA:1302:U:O4	1.95	0.66
18:AR:45:SER:OG	18:AR:49:LYS:HB2	1.94	0.66
21:B0:1312:G:H5'	21:B0:1314:A:H1'	1.77	0.66
5:AE:12:LEU:HD13	5:AE:31:LEU:HB2	1.77	0.66
21:B0:1223:G:H4'	21:B0:1224:A:O5'	1.96	0.66
1:AA:662:G:H2'	1:AA:663:A:C8	2.30	0.66
17:AQ:104:LYS:HB3	21:B0:727:U:C1'	2.26	0.66
1:AA:1416:G:P	1:AA:1417:G:OP2	2.53	0.66
1:AA:436:C:C4	1:AA:437:U:O4	2.40	0.66
1:AA:1065:U:O4	1:AA:1189:C:C2	2.49	0.66
1:AA:37:U:OP1	12:AL:124:LYS:CB	2.43	0.66
9:AI:26:VAL:HB	9:AI:33:PHE:HB2	1.76	0.66
1:AA:1057:G:O2'	1:AA:1058:G:H5'	1.96	0.66
10:AJ:96:ILE:HG22	10:AJ:97:GLU:N	2.10	0.66
9:AI:10:ARG:HG2	9:AI:75:ASP:HB2	1.77	0.66
4:AD:187:ARG:HH21	4:AD:188:LEU:HD12	1.60	0.66
21:B0:1380:C:H2'	21:B0:1381:G:H5'	1.76	0.66
17:AQ:97:SER:OG	17:AQ:103:GLY:CA	2.44	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:51:A:H2'	1:AA:116:A:O4'	1.94	0.66
1:AA:315:A:H4'	1:AA:353:A:H61	1.59	0.66
4:AD:57:ARG:HH21	5:AE:107:ARG:NE	1.93	0.66
1:AA:8:A:C1'	5:AE:103:GLY:CA	2.69	0.66
1:AA:1270:C:O2'	1:AA:1314:C:H5'	1.95	0.66
1:AA:143:A:O4'	1:AA:196:A:C6	2.48	0.66
13:AM:33:ALA:HA	13:AM:59:TYR:HE2	1.60	0.66
21:B0:3128:G:O2'	21:B0:3174:C:C4'	2.44	0.66
1:AA:587:G:P	8:AH:89:PRO:HB3	2.35	0.66
1:AA:748:C:H1'	1:AA:749:C:C5	2.30	0.66
8:AH:6:ILE:HD11	8:AH:31:PHE:CD2	2.30	0.66
21:B0:3111:C:N3	21:B0:3148:G:OP2	2.26	0.66
21:B0:1066:G:N1	21:B0:1115:C:C4	2.64	0.66
21:B0:1141:U:H3	21:B0:2008:C:H5''	1.61	0.66
3:AC:195:VAL:C	3:AC:196:LEU:HD23	2.15	0.66
1:AA:108:G:C6	20:AT:15:ARG:NE	2.64	0.66
21:B0:1529:C:H2'	21:B0:1530:U:O4'	1.94	0.66
1:AA:524:G:H2'	1:AA:525:C:C6	2.31	0.66
21:B0:910:U:H2'	21:B0:911:A:O5'	1.94	0.66
1:AA:1406:U:H4'	1:AA:1518:A:H4'	1.76	0.66
1:AA:476:U:N3	1:AA:477:G:N9	2.43	0.66
1:AA:714:G:H5'	1:AA:776:G:C5'	2.24	0.66
21:B0:1119:U:C3'	21:B0:1120:C:P	2.84	0.66
3:AC:188:LEU:O	3:AC:189:ALA:HB2	1.96	0.66
15:AO:33:THR:HG23	15:AO:63:ARG:HH12	1.60	0.66
3:AC:172:ARG:HB3	3:AC:172:ARG:NH1	2.11	0.66
1:AA:1231:G:H5''	9:AI:126:SER:OG	1.95	0.66
1:AA:141:A:C5'	1:AA:182:U:H1'	2.25	0.66
1:AA:394:G:C4	1:AA:395:C:C6	2.84	0.66
10:AJ:90:LEU:H	10:AJ:91:PRO:HD2	1.61	0.66
3:AC:107:GLN:NE2	3:AC:107:GLN:H	1.94	0.66
1:AA:1255:G:C2'	1:AA:1258:G:N2	2.56	0.66
1:AA:131:C:C4'	1:AA:263:A:C4'	2.70	0.66
21:B0:910:U:H2'	21:B0:911:A:C5'	2.26	0.66
1:AA:1111:A:N1	3:AC:177:THR:HA	2.09	0.66
1:AA:218:C:P	1:AA:470:U:C4'	2.83	0.66
1:AA:993:G:C6	1:AA:1046:A:C6	2.83	0.66
1:AA:143:A:O3'	1:AA:144:G:O5'	2.13	0.66
1:AA:37:U:OP1	12:AL:124:LYS:HB3	1.96	0.66
12:AL:33:ARG:HD3	12:AL:62:SER:HB3	1.77	0.66
21:B0:1978:U:H3'	21:B0:1979:C:H5''	1.77	0.66
1:AA:1425:U:H2'	1:AA:1426:C:C6	2.31	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:66:G:H5''	1:AA:199:G:O2'	1.96	0.66
1:AA:1080:A:OP1	5:AE:47:LYS:HG2	1.96	0.66
1:AA:1503:A:N3	1:AA:1531:A:H2	1.93	0.66
1:AA:582:U:OP1	15:AO:68:ARG:NH2	2.25	0.66
1:AA:6:G:H2'	5:AE:119:LEU:HD13	1.78	0.66
1:AA:560:U:N3	5:AE:123:LEU:HD13	2.10	0.66
21:B0:1112:U:H2'	21:B0:1113:C:H5''	1.75	0.66
1:AA:1107:C:OP1	3:AC:173:VAL:N	2.25	0.66
10:AJ:38:ILE:CG1	10:AJ:71:LEU:HB3	2.26	0.66
4:AD:151:LYS:HD2	4:AD:151:LYS:H	1.60	0.66
5:AE:150:ARG:HG3	5:AE:150:ARG:HH11	1.60	0.66
10:AJ:94:VAL:HG12	10:AJ:95:GLU:N	2.11	0.66
21:B0:515:A:H2'	21:B0:516:G:H5'	1.77	0.66
21:B0:439:C:H2'	21:B0:440:U:O4'	1.95	0.66
1:AA:130:A:H2	1:AA:264:U:C4	2.15	0.66
4:AD:88:VAL:HA	5:AE:97:GLY:CA	2.25	0.66
1:AA:94:G:C4	1:AA:96:C:C5	2.84	0.66
1:AA:1319:A:C5'	19:AS:5:LEU:HD21	2.23	0.66
1:AA:362:G:H4'	12:AL:28:LYS:HZ1	1.59	0.66
10:AJ:47:PHE:CD2	14:AN:37:PHE:HE1	2.14	0.66
1:AA:161:A:H2	1:AA:348:G:H1'	1.60	0.66
20:AT:87:LYS:O	20:AT:91:LEU:HD12	1.96	0.66
4:AD:187:ARG:NH2	4:AD:188:LEU:HD12	2.10	0.66
1:AA:26:A:C2'	1:AA:27:G:H5'	2.26	0.66
21:B0:897:A:N6	21:B0:898:C:N4	2.43	0.66
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.29	0.66
21:B0:1191:G:H2'	21:B0:1192:A:H8	1.61	0.66
21:B0:3197:U:O2'	21:B0:2181:A:C8	2.25	0.65
1:AA:112:G:N2	1:AA:354:G:O5'	2.17	0.65
1:AA:436:C:O2	1:AA:437:U:C1'	2.44	0.65
3:AC:172:ARG:HH11	3:AC:172:ARG:HB3	1.61	0.65
1:AA:216:C:C1'	1:AA:468:A:C2'	2.70	0.65
10:AJ:60:ARG:O	10:AJ:61:GLU:HB3	1.96	0.65
1:AA:1296:C:H4'	1:AA:1302:U:H5	1.57	0.65
21:B0:128:C:C2'	21:B0:129:A:H5''	2.23	0.65
2:AB:15:VAL:CG2	2:AB:209:ARG:HG3	2.26	0.65
5:AE:80:ILE:HD11	5:AE:91:LEU:HD12	1.76	0.65
1:AA:926:G:C8	1:AA:1505:G:C2	2.83	0.65
1:AA:1190:G:H3'	3:AC:3:ASN:CB	2.24	0.65
13:AM:3:ARG:NH2	26:BD:137:ILE:CA	2.58	0.65
1:AA:173:U:H5'	1:AA:197:A:O4'	1.96	0.65
1:AA:877:C:H5''	8:AH:88:LYS:HD3	1.78	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:1471:G:H1	21:B0:2682:C:H42	1.44	0.65
1:AA:1475:G:H2'	1:AA:1476:G:H8	1.62	0.65
1:AA:1402:C:H2'	1:AA:1403:C:O4'	1.97	0.65
1:AA:927:G:O2'	1:AA:1532:U:C4'	2.41	0.65
1:AA:187:G:C4'	20:AT:85:MET:HE2	2.26	0.65
1:AA:1319:A:H5''	19:AS:5:LEU:CD2	2.21	0.65
1:AA:474:U:H2'	1:AA:475:C:C6	2.31	0.65
1:AA:244:U:C4	1:AA:893:C:N3	2.64	0.65
1:AA:935:A:C6	7:AG:3:ARG:NH2	2.64	0.65
1:AA:1329:A:C5'	13:AM:26:GLY:N	2.58	0.65
13:AM:65:LYS:HG3	13:AM:69:GLU:OE2	1.96	0.65
12:AL:86:ARG:HH11	12:AL:86:ARG:HG3	1.61	0.65
11:AK:48:ILE:HG22	11:AK:49:GLY:H	1.61	0.65
5:AE:40:ARG:HG2	5:AE:68:GLU:OE2	1.96	0.65
17:AQ:104:LYS:HB3	21:B0:727:U:H1'	1.79	0.65
3:AC:64:VAL:HB	3:AC:99:VAL:CB	2.27	0.65
1:AA:1329:A:H4'	13:AM:29:ARG:HD2	1.76	0.65
1:AA:1113:C:N1	3:AC:178:LEU:CD2	2.59	0.65
2:AB:25:ASN:C	2:AB:25:ASN:HD22	1.97	0.65
2:AB:215:LEU:O	2:AB:219:VAL:HG23	1.97	0.65
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.78	0.65
1:AA:1442:G:H2'	1:AA:1442:G:N3	2.11	0.65
21:B0:2794:G:H3'	21:B0:2796:A:H62	1.61	0.65
1:AA:436:C:N3	1:AA:437:U:N3	2.44	0.65
13:AM:33:ALA:HA	13:AM:59:TYR:CE2	2.32	0.65
19:AS:28:LYS:HG2	19:AS:29:ARG:N	2.06	0.65
1:AA:825:G:H21	8:AH:11:THR:CG2	2.10	0.65
21:B0:542:A:C2'	21:B0:543:G:H5'	2.26	0.65
21:B0:1918:G:H4'	21:B0:1920:A:N3	2.10	0.65
19:AS:17:GLU:HA	19:AS:20:LEU:HD11	1.78	0.65
21:B0:2236:U:C3'	21:B0:2237:C:H5''	2.26	0.65
1:AA:458:G:H2'	1:AA:459:G:H8	1.62	0.65
21:B0:1098:G:H3'	21:B0:1099:A:H5''	1.79	0.65
1:AA:992:U:O2'	1:AA:1043:C:N4	2.29	0.65
1:AA:933:G:O6	1:AA:935:A:C4	2.49	0.65
1:AA:212:G:O3'	1:AA:213:G:OP2	2.08	0.65
1:AA:619:U:C2	4:AD:135:LEU:CD1	2.80	0.65
3:AC:155:GLY:O	3:AC:156:ARG:HB2	1.96	0.65
1:AA:918:A:H2'	1:AA:919:A:C8	2.32	0.65
21:B0:1472:C:C2'	21:B0:1473:U:H5'	2.27	0.65
21:B0:2822:U:H2'	21:B0:2823:G:O4'	1.97	0.65
5:AE:15:ARG:HD2	5:AE:15:ARG:O	1.96	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:651:C:H2'	21:B0:652:C:H5''	1.78	0.65
1:AA:234:C:O2'	17:AQ:70:ARG:HG3	1.97	0.65
1:AA:923:A:O4'	1:AA:1398:A:H2	1.70	0.65
1:AA:353:A:C8	1:AA:353:A:H5'	2.31	0.65
1:AA:1483:A:N7	1:AA:1484:C:C5	2.65	0.65
1:AA:1497:G:H1'	1:AA:1518:A:C2	2.32	0.65
1:AA:1014:A:C4	19:AS:34:TRP:HB2	2.31	0.65
1:AA:977:A:N1	1:AA:1224:G:C5	2.64	0.65
10:AJ:49:VAL:O	10:AJ:60:ARG:HA	1.95	0.65
1:AA:677:U:H3	1:AA:713:G:H22	1.45	0.65
18:AR:47:THR:HG23	18:AR:83:GLU:H	1.61	0.65
6:AF:100:ASN:HD22	18:AR:23:LYS:CG	2.10	0.65
21:B0:2047:C:H42	21:B0:2425:G:H1	1.43	0.65
1:AA:1495:U:H2'	1:AA:1496:C:C6	2.31	0.65
2:AB:18:GLY:HA3	2:AB:41:ILE:HA	1.79	0.65
11:AK:14:VAL:O	11:AK:15:ALA:HB3	1.95	0.65
1:AA:1522:U:O2'	1:AA:1523:G:H5'	1.96	0.65
1:AA:1499:A:H1'	1:AA:1520:G:H5'	1.79	0.65
1:AA:319:G:H2'	1:AA:1434:A:N1	1.98	0.65
1:AA:1298:C:H2'	7:AG:114:ARG:NH1	2.05	0.65
1:AA:1296:C:C5'	1:AA:1302:U:O4	2.45	0.65
4:AD:131:ARG:H	4:AD:131:ARG:HD2	1.62	0.65
21:B0:727:U:H2'	21:B0:728:G:H5''	1.78	0.65
1:AA:6:G:C1'	5:AE:119:LEU:CD1	2.75	0.65
1:AA:377:G:P	16:AP:5:ARG:HD2	2.37	0.65
21:B0:892:A:N9	21:B0:911:A:C2	2.65	0.65
12:AL:110:VAL:O	12:AL:122:THR:HG21	1.97	0.65
1:AA:1347:G:N9	9:AI:107:ARG:NH1	2.45	0.65
1:AA:59:A:C5	1:AA:331:G:N3	2.61	0.65
21:B0:1656:U:C2'	21:B0:1657:A:H5''	2.25	0.65
12:AL:55:VAL:HG12	12:AL:56:ALA:N	2.12	0.65
1:AA:287:U:O2'	1:AA:288:A:H5'	1.97	0.65
21:B0:927:C:H2'	21:B0:928:G:O4'	1.97	0.65
7:AG:50:ILE:O	7:AG:54:THR:HB	1.96	0.65
6:AF:21:LEU:O	6:AF:24:GLU:HB3	1.97	0.65
1:AA:130:A:C4'	1:AA:264:U:C5'	2.75	0.64
1:AA:7:G:N2	5:AE:121:LYS:HG2	2.11	0.64
1:AA:1110:A:N6	1:AA:1111:A:C6	2.64	0.64
1:AA:1497:G:H2'	1:AA:1498:U:H5'	1.78	0.64
1:AA:959:A:H1'	1:AA:985:C:H1'	1.78	0.64
3:AC:29:TYR:OH	14:AN:54:PRO:HG2	1.97	0.64
1:AA:281:G:O2'	1:AA:282:A:OP2	2.12	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:AQ:101:ARG:HA	17:AQ:101:ARG:HE	1.62	0.64
21:B0:1472:C:H2'	21:B0:1473:U:H5'	1.79	0.64
1:AA:443:C:H2'	1:AA:444:C:H6	1.61	0.64
21:B0:1811:A:O2'	21:B0:1812:U:H5''	1.97	0.64
11:AK:66:LEU:HB3	11:AK:70:LYS:HE3	1.78	0.64
1:AA:1474:G:H4'	21:B0:1718:A:C2	2.32	0.64
1:AA:1483:A:C6	1:AA:1484:C:C2	2.85	0.64
1:AA:436:C:N3	1:AA:437:U:C6	2.62	0.64
1:AA:1318:A:H5'	19:AS:10:PHE:CD1	2.32	0.64
1:AA:476:U:O4	1:AA:477:G:N7	2.30	0.64
2:AB:71:VAL:O	2:AB:165:VAL:HG23	1.96	0.64
1:AA:1153:C:H2'	1:AA:1154:G:H8	1.62	0.64
21:B0:897:A:C6	21:B0:898:C:C4	2.85	0.64
7:AG:37:ASN:ND2	9:AI:41:VAL:HG23	2.12	0.64
21:B0:1432:G:H21	21:B0:1596:A:H62	1.45	0.64
1:AA:131:C:O2'	1:AA:262:A:O2'	2.16	0.64
19:AS:43:GLU:H	19:AS:43:GLU:CD	2.00	0.64
19:AS:44:MET:O	19:AS:47:HIS:HB2	1.97	0.64
1:AA:818:G:H3'	1:AA:819:A:C5'	2.27	0.64
1:AA:243:A:H4'	1:AA:244:U:C5'	2.22	0.64
1:AA:31:G:C6	1:AA:48:C:O4'	2.50	0.64
1:AA:588:G:C8	1:AA:753:A:C4	2.84	0.64
1:AA:1249:C:H1'	9:AI:70:LYS:HG3	1.79	0.64
11:AK:40:ILE:HG22	11:AK:41:THR:HG23	1.80	0.64
1:AA:51:A:N1	1:AA:314:C:O2'	2.23	0.64
19:AS:40:ILE:HB	19:AS:67:VAL:O	1.98	0.64
1:AA:1368:G:P	9:AI:112:LYS:O	2.56	0.64
1:AA:588:G:C4	1:AA:753:A:C5	2.83	0.64
21:B0:2422:C:H2'	21:B0:2423:G:H8	1.62	0.64
7:AG:42:ILE:HG22	7:AG:120:ILE:HD12	1.80	0.64
15:AO:29:VAL:HG12	15:AO:85:LEU:CD1	2.26	0.64
1:AA:1475:G:H4'	21:B0:1706:A:C4'	2.16	0.64
1:AA:760:G:N2	17:AQ:103:GLY:C	2.50	0.64
5:AE:115:VAL:CG1	5:AE:118:ILE:HG13	2.25	0.64
1:AA:112:G:N3	1:AA:354:G:C5'	2.59	0.64
1:AA:1190:G:O2'	1:AA:1191:A:O5'	2.12	0.64
3:AC:177:THR:CG2	3:AC:180:ALA:HB2	2.28	0.64
1:AA:588:G:C6	1:AA:753:A:N7	2.66	0.64
1:AA:735:C:O2'	18:AR:75:ILE:HD11	1.96	0.64
1:AA:59:A:C6	1:AA:331:G:C4	2.85	0.64
15:AO:17:ARG:CZ	15:AO:77:ARG:HH11	2.11	0.64
21:B0:2075:U:O2'	21:B0:3093:C:C1'	2.45	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:1436:G:H1'	21:B0:1508:G:H21	1.60	0.64
21:B0:1861:G:P	53:B5:37:LYS:CA	2.86	0.64
1:AA:130:A:P	17:AQ:63:ARG:HE	2.18	0.64
1:AA:103:C:O2'	1:AA:171:A:C6	2.50	0.64
1:AA:393:A:O2'	1:AA:394:G:H5'	1.98	0.64
1:AA:31:G:H1	1:AA:48:C:H5''	1.62	0.64
13:AM:36:LYS:HD2	13:AM:59:TYR:CZ	2.32	0.64
1:AA:36:C:O2'	1:AA:501:C:OP1	2.13	0.64
9:AI:49:PRO:O	9:AI:52:ALA:HB3	1.97	0.64
1:AA:1141:C:H2'	1:AA:1142:G:C8	2.33	0.64
3:AC:112:SER:HB2	3:AC:115:LEU:HD12	1.79	0.64
1:AA:262:A:C5'	20:AT:74:LYS:CB	2.66	0.64
1:AA:6:G:C5	5:AE:119:LEU:CD1	2.79	0.64
1:AA:375:U:OP1	16:AP:69:THR:OG1	2.03	0.64
20:AT:50:GLU:HG2	20:AT:100:ILE:HG13	1.79	0.64
1:AA:1014:A:C2	1:AA:1219:U:C2'	2.78	0.64
19:AS:64:GLU:O	19:AS:67:VAL:HG23	1.97	0.64
1:AA:141:A:N3	1:AA:195:A:C2	2.66	0.64
10:AJ:45:ARG:NH1	14:AN:36:PHE:HD2	1.87	0.64
1:AA:15:G:H4'	5:AE:24:ARG:NH2	2.13	0.64
21:B0:1474:A:H2'	21:B0:1475:U:H5'	1.79	0.64
1:AA:13:U:O2	1:AA:914:A:H3'	1.96	0.64
11:AK:18:ARG:HB2	11:AK:33:THR:HG23	1.78	0.64
1:AA:1256:A:N3	1:AA:1258:G:O6	2.30	0.64
5:AE:115:VAL:HG11	5:AE:118:ILE:CG1	2.28	0.64
1:AA:1409:C:C2'	1:AA:1410:G:C8	2.75	0.64
1:AA:994:A:N3	14:AN:5:ALA:O	2.31	0.64
1:AA:835:U:C5'	18:AR:64:ARG:HH22	2.03	0.64
1:AA:499:A:H4'	1:AA:500:G:H5'	1.79	0.64
1:AA:837:G:O3'	1:AA:838:C:C6	2.49	0.64
21:B0:1047:G:H1	21:B0:1130:U:H3	1.46	0.64
16:AP:45:THR:HB	16:AP:46:PRO:HD2	1.80	0.64
1:AA:1475:G:H4'	21:B0:1706:A:H5'	1.80	0.64
21:B0:3110:G:H5''	21:B0:3148:G:H1'	1.80	0.64
1:AA:926:G:C2	1:AA:1505:G:C8	2.86	0.64
21:B0:910:U:C2'	21:B0:911:A:C5'	2.76	0.64
1:AA:1040:U:H2'	1:AA:1041:A:C8	2.33	0.64
1:AA:204:A:H5''	1:AA:205:G:OP1	1.97	0.64
1:AA:976:G:N2	1:AA:2361:C:H2'	2.13	0.64
3:AC:155:GLY:O	3:AC:196:LEU:HD22	1.98	0.64
21:B0:894:G:C2'	21:B0:895:G:H5''	2.27	0.64
6:AF:9:VAL:HB	6:AF:87:ARG:HB2	1.80	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:2245:A:H5'	21:B0:2246:A:N7	2.12	0.64
7:AG:37:ASN:HD21	9:AI:41:VAL:HG23	1.62	0.64
21:B0:2690:A:OP2	21:B0:2694:G:H5'	1.98	0.64
1:AA:191:G:C2	1:AA:192:U:N1	2.66	0.64
1:AA:234:C:O2'	17:AQ:70:ARG:CG	2.45	0.64
1:AA:262:A:O3'	20:AT:75:ASN:CB	2.41	0.64
1:AA:5:U:O4	5:AE:95:ALA:HB1	1.99	0.64
1:AA:1109:C:OP2	3:AC:176:HIS:CG	2.51	0.64
1:AA:403:C:N3	1:AA:404:U:C5	2.66	0.64
1:AA:1086:U:H5''	1:AA:1389:C:OP1	1.96	0.64
14:AN:27:CYS:SG	14:AN:29:ARG:HB2	2.38	0.64
21:B0:65:C:H2'	21:B0:66:U:O4'	1.97	0.64
4:AD:70:ILE:HD11	4:AD:100:ARG:NE	2.13	0.64
1:AA:1394:A:N1	1:AA:1501:C:O4'	2.31	0.63
21:B0:1838:G:H2'	21:B0:1839:A:H5'	1.75	0.63
1:AA:9:G:N7	5:AE:126:ARG:NH1	2.45	0.63
1:AA:436:C:O2'	1:AA:437:U:O4'	2.16	0.63
1:AA:1044:A:C8	1:AA:1045:C:H1'	2.32	0.63
1:AA:367:U:O3'	1:AA:368:U:P	2.56	0.63
1:AA:392:G:H2'	1:AA:393:A:C8	2.32	0.63
1:AA:958:A:C2	19:AS:55:LYS:HB2	2.33	0.63
21:B0:2510:A:H61	21:B0:2641:A:H61	1.46	0.63
7:AG:71:PRO:HD3	7:AG:103:TRP:CZ3	2.33	0.63
21:B0:1075:C:H2'	21:B0:1076:U:O4'	1.99	0.63
1:AA:1503:A:OP1	1:AA:1531:A:C2'	2.46	0.63
1:AA:322:C:O3'	20:AT:23:ARG:CB	2.46	0.63
1:AA:933:G:C6	1:AA:935:A:N9	2.65	0.63
21:B0:3184:C:O2'	21:B0:3185:U:H5''	1.98	0.63
1:AA:587:G:HO2'	1:AA:588:G:P	2.22	0.63
14:AN:22:THR:CB	14:AN:33:VAL:HG21	2.27	0.63
1:AA:1131:G:H1	1:AA:1143:G:N2	1.95	0.63
2:AB:95:GLN:OE1	2:AB:95:GLN:HA	1.97	0.63
21:B0:1458:A:H3'	21:B0:1459:U:C5'	2.28	0.63
21:B0:1341:G:H22	21:B0:1664:G:H1	1.46	0.63
21:B0:1715:A:H1'	21:B0:1717:A:O4'	1.99	0.63
3:AC:64:VAL:CB	3:AC:99:VAL:HB	2.27	0.63
1:AA:1115:C:O4'	14:AN:61:TRP:HA	1.99	0.63
12:AL:25:PRO:C	12:AL:27:LEU:N	2.52	0.63
1:AA:1142:G:H2'	1:AA:1143:G:O4'	1.97	0.63
1:AA:108:G:O6	20:AT:15:ARG:CD	2.47	0.63
21:B0:2491:C:C2'	21:B0:2492:G:H5''	2.29	0.63
1:AA:173:U:C5'	1:AA:197:A:O4'	2.46	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1499:A:H1'	1:AA:1520:G:H5''	1.80	0.63
17:AQ:104:LYS:HE3	21:B0:729:A:H62	0.53	0.63
16:AP:8:ARG:HB2	16:AP:28:ARG:NH1	2.14	0.63
1:AA:1347:G:O2'	1:AA:1348:U:OP2	2.16	0.63
1:AA:1291:G:O3'	7:AG:41:ARG:NH2	2.31	0.63
11:AK:18:ARG:HB2	11:AK:33:THR:CG2	2.28	0.63
1:AA:635:G:O2'	17:AQ:2:PRO:HG2	1.98	0.63
21:B0:3149:G:C2'	21:B0:3150:C:P	2.87	0.63
1:AA:922:G:H2'	1:AA:923:A:C8	2.33	0.63
17:AQ:104:LYS:CG	21:B0:726:G:C2	2.75	0.63
1:AA:434:U:H2'	1:AA:435:C:H6	1.63	0.63
1:AA:994:A:N3	14:AN:5:ALA:C	2.42	0.63
16:AP:18:ARG:HD3	16:AP:35:LYS:HE3	1.79	0.63
1:AA:976:G:P	1:AA:1358:U:HO2'	2.18	0.63
1:AA:1249:C:H4'	9:AI:36:TYR:OH	1.98	0.63
4:AD:148:VAL:HG11	4:AD:158:ILE:HG21	1.81	0.63
1:AA:636:U:H5'	17:AQ:2:PRO:HG2	1.79	0.63
1:AA:168:G:O2'	1:AA:169:C:H5'	1.98	0.63
1:AA:74:G:H2'	1:AA:75:C:C6	2.34	0.63
2:AB:74:LYS:HZ1	2:AB:206:ASP:HA	1.63	0.63
21:B0:1856:U:N3	21:B0:3877:A:C6	2.56	0.63
1:AA:130:A:H1'	1:AA:263:A:HO2'	1.61	0.63
1:AA:253:U:OP1	17:AQ:67:LYS:NZ	2.31	0.63
1:AA:190:A:N3	20:AT:101:GLY:HA3	2.12	0.63
1:AA:926:G:N1	1:AA:1505:G:C5	2.66	0.63
5:AE:79:GLU:HG3	5:AE:93:PRO:HD2	1.79	0.63
1:AA:1314:C:C5	19:AS:6:LYS:HD3	2.33	0.63
1:AA:1346:A:N3	7:AG:10:ARG:CZ	2.62	0.63
8:AH:91:ARG:HD3	17:AQ:34:LYS:HB3	1.81	0.63
1:AA:1250:A:H5'	9:AI:68:GLY:O	1.98	0.63
2:AB:82:ARG:O	2:AB:86:GLU:HG3	1.98	0.63
1:AA:191:G:C6	1:AA:192:U:C6	2.77	0.63
1:AA:130:A:H1'	1:AA:264:U:C5'	2.19	0.63
1:AA:320:C:C5'	1:AA:1434:A:N1	2.61	0.63
5:AE:120:THR:CG2	5:AE:121:LYS:N	2.61	0.63
1:AA:926:G:C5	1:AA:1505:G:N1	2.66	0.63
1:AA:926:G:C8	1:AA:1505:G:N2	2.66	0.63
1:AA:402:G:C4'	1:AA:620:C:H42	2.11	0.63
1:AA:959:A:C4'	1:AA:985:C:H4'	2.28	0.63
21:B0:3183:A:C3'	21:B0:3184:C:P	2.87	0.63
1:AA:619:U:N1	4:AD:135:LEU:HD11	2.13	0.63
10:AJ:30:SER:OG	10:AJ:81:THR:HA	1.99	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:AS:52:TYR:HA	19:AS:56:GLN:O	1.99	0.63
21:B0:2198:U:C3'	21:B0:2199:C:H5''	2.27	0.63
3:AC:59:ARG:C	10:AJ:92:THR:CG2	2.66	0.63
1:AA:571:U:H4'	1:AA:819:A:C5	2.33	0.63
9:AI:118:LYS:O	9:AI:119:ALA:CB	2.45	0.63
1:AA:1367:C:C5'	10:AJ:60:ARG:NH1	2.61	0.63
1:AA:274:A:C2	1:AA:275:G:H1'	2.32	0.63
7:AG:26:PHE:CE2	7:AG:30:ILE:HD11	2.33	0.63
21:B0:1856:U:H6	21:B0:3865:A:C8	1.71	0.63
1:AA:261:U:P	20:AT:79:ARG:HH22	2.21	0.63
1:AA:323:U:O3'	20:AT:22:ARG:HD3	1.99	0.63
1:AA:1505:G:C3'	1:AA:1506:U:O5'	2.39	0.63
3:AC:177:THR:HG23	3:AC:180:ALA:HB2	1.81	0.63
1:AA:216:C:C2'	1:AA:468:A:N3	2.42	0.63
1:AA:402:G:C4'	1:AA:620:C:N3	2.39	0.63
1:AA:141:A:N3	1:AA:195:A:H2	1.96	0.63
1:AA:619:U:N3	4:AD:135:LEU:HG	2.13	0.63
1:AA:1292:U:OP2	7:AG:41:ARG:NH2	2.31	0.63
2:AB:186:ALA:HB3	2:AB:197:VAL:HG11	1.81	0.63
7:AG:155:ARG:O	7:AG:156:TRP:HB3	1.98	0.63
21:B0:514:G:H2'	21:B0:514:G:N3	2.12	0.63
4:AD:152:SER:HB3	4:AD:155:LEU:HD12	1.80	0.63
21:B0:1711:C:H4'	21:B0:1712:G:C2	2.34	0.63
21:B0:1464:A:H4'	21:B0:1545:G:H4'	1.81	0.63
1:AA:926:G:C5	1:AA:1505:G:C2	2.87	0.62
19:AS:39:THR:HA	19:AS:70:LYS:HG2	1.81	0.62
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.13	0.62
3:AC:120:VAL:O	3:AC:124:ILE:HG13	1.99	0.62
1:AA:542:G:OP1	4:AD:10:ARG:NH2	2.32	0.62
5:AE:116:THR:HG23	5:AE:117:ASP:OD2	1.98	0.62
1:AA:403:C:HO2'	1:AA:404:U:H5'	1.57	0.62
1:AA:586:C:H5'	8:AH:90:GLY:HA3	1.80	0.62
7:AG:23:VAL:O	7:AG:27:ILE:HG13	2.00	0.62
3:AC:13:GLY:HA3	14:AN:57:ARG:NH2	2.14	0.62
5:AE:150:ARG:NH1	5:AE:150:ARG:HG3	2.13	0.62
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.29	0.62
1:AA:1020:U:H2'	1:AA:1021:G:H8	1.63	0.62
3:AC:60:ALA:O	3:AC:61:ALA:HB2	2.00	0.62
1:AA:815:A:C4	1:AA:1527:C:H1'	2.34	0.62
17:AQ:104:LYS:CG	21:B0:727:U:O2	2.47	0.62
1:AA:375:U:N3	1:AA:376:G:C5	2.67	0.62
2:AB:73:THR:HB	2:AB:170:GLU:OE2	1.99	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:AQ:21:VAL:HG21	17:AQ:59:ILE:HD11	1.82	0.62
2:AB:142:LEU:HD22	2:AB:146:GLN:NE2	2.14	0.62
1:AA:325:A:OP2	20:AT:70:SER:OG	2.16	0.62
1:AA:218:C:OP1	1:AA:470:U:C4'	2.47	0.62
7:AG:114:ARG:HG2	7:AG:114:ARG:HH11	1.64	0.62
1:AA:599:C:H4'	8:AH:131:GLY:N	2.14	0.62
12:AL:33:ARG:CD	12:AL:62:SER:HB3	2.29	0.62
21:B0:892:A:N3	21:B0:911:A:C2	2.67	0.62
1:AA:1190:G:H4'	1:AA:1191:A:C5'	2.27	0.62
1:AA:1298:C:C4	7:AG:114:ARG:HD3	2.35	0.62
1:AA:244:U:N3	1:AA:894:G:C4	2.67	0.62
21:B0:2607:C:H1'	21:B0:2761:A:H2'	1.79	0.62
1:AA:1132:C:H2'	1:AA:1133:G:H8	1.64	0.62
21:B0:2236:U:C2'	21:B0:2237:C:H5''	2.29	0.62
21:B0:1429:A:H62	21:B0:1601:U:H5''	1.65	0.62
21:B0:2756:A:H4'	21:B0:2758:A:OP1	1.98	0.62
4:AD:88:VAL:CA	5:AE:97:GLY:HA3	2.28	0.62
1:AA:436:C:O2	1:AA:437:U:N1	2.32	0.62
1:AA:994:A:H1'	14:AN:8:GLU:CB	2.24	0.62
1:AA:1229:A:OP2	13:AM:114:ARG:HD3	1.99	0.62
21:B0:3183:A:HO3'	21:B0:3184:C:P	2.19	0.62
1:AA:600:C:H5''	8:AH:129:VAL:HA	1.81	0.62
1:AA:586:C:C5'	8:AH:90:GLY:N	2.60	0.62
1:AA:714:G:C5'	1:AA:776:G:H5'	2.30	0.62
2:AB:132:LYS:HG2	2:AB:135:GLN:OE1	1.99	0.62
19:AS:31:ILE:CG2	19:AS:32:LYS:H	2.10	0.62
1:AA:129:U:P	17:AQ:3:LYS:HZ2	2.23	0.62
1:AA:866:C:H4'	1:AA:919:A:C5'	2.30	0.62
9:AI:19:LEU:O	9:AI:20:ARG:HG3	1.99	0.62
1:AA:319:G:C4	1:AA:1434:A:C2	2.88	0.62
1:AA:336:C:O4'	1:AA:1433:A:H1'	1.99	0.62
14:AN:53:LEU:HB3	14:AN:56:VAL:HG21	1.81	0.62
1:AA:31:G:N2	1:AA:47:C:H4'	2.14	0.62
1:AA:837:G:O2'	1:AA:838:C:O4'	2.12	0.62
3:AC:23:TYR:CE1	10:AJ:11:PHE:CE2	2.88	0.62
17:AQ:76:LEU:HD23	17:AQ:77:VAL:N	2.15	0.62
12:AL:43:VAL:HG12	12:AL:44:THR:N	2.14	0.62
21:B0:1196:G:H2'	21:B0:1197:U:O4'	2.00	0.62
1:AA:6:G:C2'	5:AE:119:LEU:CD1	2.77	0.62
1:AA:1342:C:H4'	9:AI:125:TYR:CZ	2.34	0.62
13:AM:84:ILE:O	13:AM:86:CYS:N	2.32	0.62
1:AA:1349:A:OP1	9:AI:120:ARG:HB2	2.00	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:501:C:H2'	1:AA:502:G:C8	2.34	0.62
4:AD:148:VAL:CG1	4:AD:158:ILE:HD13	2.30	0.62
7:AG:139:GLU:O	7:AG:143:ARG:HG3	2.00	0.62
20:AT:54:LYS:HE3	20:AT:100:ILE:HD11	1.82	0.62
1:AA:1109:C:P	3:AC:176:HIS:NE2	2.72	0.62
6:AF:94:GLN:NE2	18:AR:32:ARG:HD3	2.09	0.62
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.35	0.62
4:AD:61:LYS:NZ	4:AD:62:GLN:HE21	1.98	0.62
21:B0:1528:C:C2'	21:B0:1529:C:H5''	2.30	0.62
2:AB:74:LYS:NZ	2:AB:206:ASP:HA	2.13	0.62
21:B0:2571:G:H2'	21:B0:2572:U:C6	2.34	0.62
5:AE:120:THR:HG23	5:AE:121:LYS:N	2.15	0.62
1:AA:1297:C:P	13:AM:44:ARG:NH2	2.71	0.62
1:AA:1320:C:H41	19:AS:37:ARG:HD3	1.65	0.62
1:AA:1211:U:O3'	1:AA:1212:U:OP2	2.17	0.62
8:AH:91:ARG:NH2	17:AQ:32:TYR:O	2.31	0.62
20:AT:43:LEU:HD12	20:AT:55:ILE:HD12	1.81	0.62
21:B0:2668:U:H4'	21:B0:2669:C:C5'	2.25	0.62
2:AB:115:LEU:HG	2:AB:153:ARG:NH2	2.14	0.62
5:AE:80:ILE:CD1	5:AE:91:LEU:HB2	2.30	0.62
1:AA:1440:C:H2'	1:AA:1441:G:H5'	1.82	0.62
4:AD:191:ARG:O	4:AD:191:ARG:HD2	2.00	0.62
21:B0:1580:C:H2'	21:B0:1581:C:C6	2.35	0.62
1:AA:1474:G:H5'	21:B0:1718:A:C2	2.34	0.61
1:AA:922:G:N2	1:AA:1396:A:C2	2.68	0.61
1:AA:51:A:N1	1:AA:314:C:C2'	2.63	0.61
1:AA:355:C:H4'	1:AA:389:A:OP2	1.99	0.61
5:AE:102:ALA:CB	5:AE:120:THR:HG21	2.28	0.61
1:AA:1409:C:C2'	1:AA:1410:G:O4'	2.47	0.61
1:AA:1416:G:H3'	1:AA:1417:G:O5'	2.00	0.61
10:AJ:63:PHE:HE1	14:AN:45:ARG:HA	1.63	0.61
1:AA:502:G:C4'	1:AA:550:G:C4'	2.77	0.61
8:AH:91:ARG:CG	12:AL:7:ILE:HG21	2.28	0.61
1:AA:735:C:H1'	18:AR:75:ILE:HD11	1.82	0.61
21:B0:1250:A:O2'	21:B0:1251:G:H4'	2.00	0.61
2:AB:122:PHE:HE2	2:AB:139:LYS:HG2	1.65	0.61
2:AB:69:LEU:HD12	2:AB:155:LEU:HD11	1.81	0.61
4:AD:23:GLY:HA3	4:AD:112:VAL:CG1	2.30	0.61
9:AI:4:TYR:CZ	9:AI:88:TYR:HD1	2.17	0.61
21:B0:788:G:H5'	21:B0:790:A:H1'	1.81	0.61
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.35	0.61
1:AA:193:C:H2'	1:AA:194:C:C6	2.35	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:1856:U:C4'	21:B0:3865:A:C8	2.83	0.61
1:AA:234:C:H4'	17:AQ:64:PRO:HG2	1.82	0.61
1:AA:1182:G:C5'	1:AA:1184:G:H5''	2.26	0.61
1:AA:969:A:H61	13:AM:126:LYS:HB2	1.65	0.61
1:AA:1370:G:O2'	1:AA:1371:G:H5'	2.00	0.61
1:AA:755:G:H1'	8:AH:1:MET:HE2	1.79	0.61
1:AA:119:A:C6	1:AA:240:C:C2	2.88	0.61
12:AL:27:LEU:C	12:AL:29:GLY:H	2.04	0.61
1:AA:15:G:C1'	5:AE:19:MET:HE2	2.30	0.61
21:B0:2522:G:N2	21:B0:2625:U:H5''	2.15	0.61
1:AA:386:C:O2'	1:AA:387:U:H5'	2.00	0.61
15:AO:29:VAL:HG12	15:AO:85:LEU:HD11	1.82	0.61
2:AB:20:GLU:HG2	2:AB:189:ASP:OD2	1.99	0.61
21:B0:973:U:H2'	21:B0:974:U:C6	2.35	0.61
21:B0:1147:G:H2'	21:B0:1148:G:C8	2.35	0.61
1:AA:778:G:O2'	11:AK:120:ARG:O	2.17	0.61
1:AA:1487:G:O2'	1:AA:1488:G:H5'	1.99	0.61
9:AI:114:TYR:CZ	10:AJ:60:ARG:HB2	2.36	0.61
21:B0:1066:G:C6	21:B0:1115:C:N4	2.62	0.61
1:AA:502:G:OP1	12:AL:118:SER:HB2	1.99	0.61
1:AA:837:G:C3'	1:AA:838:C:C6	2.83	0.61
3:AC:50:ALA:O	3:AC:70:VAL:HG12	1.99	0.61
21:B0:1920:A:H3'	21:B0:1920:A:OP2	2.01	0.61
1:AA:1425:U:H2'	1:AA:1426:C:H6	1.65	0.61
1:AA:448:A:H2'	1:AA:449:C:H6	1.64	0.61
2:AB:184:VAL:N	2:AB:198:ASP:OD2	2.32	0.61
1:AA:1490:C:H6	1:AA:1490:C:C5'	2.13	0.61
1:AA:1225:A:H1'	19:AS:78:ARG:HD3	1.82	0.61
1:AA:1347:G:O2'	1:AA:1348:U:P	2.57	0.61
1:AA:651:C:N4	1:AA:652:U:C4	2.66	0.61
1:AA:653:A:OP1	8:AH:56:LYS:NZ	2.33	0.61
1:AA:161:A:H2	1:AA:348:G:C1'	2.13	0.61
21:B0:116:A:N3	21:B0:155:G:H1'	2.15	0.61
21:B0:2727:G:H1	21:B0:2735:C:H5''	1.64	0.61
21:B0:1518:C:H2'	21:B0:1519:G:C8	2.35	0.61
18:AR:52:PRO:O	18:AR:56:THR:HG23	2.00	0.61
1:AA:812:C:O2'	1:AA:813:U:OP2	2.17	0.61
1:AA:1457:A:C5	1:AA:1459:C:O2	2.53	0.61
1:AA:235:C:C5'	17:AQ:70:ARG:CD	2.76	0.61
1:AA:112:G:H21	1:AA:354:G:P	2.22	0.61
1:AA:390:C:H2'	1:AA:391:G:H8	1.66	0.61
1:AA:538:G:H5''	12:AL:114:LYS:HB2	1.81	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1225:A:N3	1:AA:1225:A:H2'	2.14	0.61
1:AA:954:G:H21	1:AA:1227:A:H62	1.49	0.61
1:AA:588:G:H1'	1:AA:753:A:N1	2.16	0.61
21:B0:2548:G:H2'	21:B0:2549:G:C5'	2.27	0.61
1:AA:15:G:C1'	5:AE:19:MET:CE	2.77	0.61
2:AB:115:LEU:O	2:AB:119:GLU:HG3	2.00	0.61
1:AA:1483:A:H3'	1:AA:1484:C:OP2	1.98	0.61
1:AA:1405:G:C4'	1:AA:1519:A:H4'	2.29	0.61
10:AJ:46:ARG:HH11	10:AJ:64:GLU:HB3	1.65	0.61
21:B0:1093:U:O4	21:B0:1094:C:C4	2.54	0.61
1:AA:651:C:C4	1:AA:652:U:O4	2.51	0.61
11:AK:48:ILE:HG22	11:AK:49:GLY:N	2.16	0.61
3:AC:129:ALA:HB3	3:AC:132:ARG:HD2	1.82	0.61
20:AT:50:GLU:HG3	20:AT:99:LEU:HD12	1.82	0.61
1:AA:476:U:HO3'	1:AA:477:G:P	2.23	0.61
1:AA:179:A:O3'	1:AA:180:U:P	2.59	0.61
1:AA:933:G:C6	1:AA:935:A:C4	2.88	0.61
21:B0:1094:C:O2'	21:B0:1096:A:H2	1.83	0.61
12:AL:27:LEU:C	12:AL:29:GLY:N	2.54	0.61
2:AB:143:GLU:O	2:AB:147:LYS:HG3	2.00	0.61
13:AM:10:PRO:O	13:AM:45:VAL:HG11	2.01	0.61
17:AQ:76:LEU:C	17:AQ:76:LEU:HD23	2.20	0.61
12:AL:40:VAL:O	12:AL:40:VAL:HG12	1.99	0.61
1:AA:263:A:OP2	20:AT:79:ARG:NH1	2.32	0.61
1:AA:6:G:C1'	5:AE:119:LEU:HD13	2.31	0.61
1:AA:292:G:C2	1:AA:608:A:N1	2.68	0.61
1:AA:1484:C:H2'	1:AA:1485:U:H6	1.65	0.61
1:AA:186:C:O4'	20:AT:81:LYS:NZ	2.33	0.61
2:AB:97:TRP:HZ2	2:AB:102:LEU:HD13	1.66	0.61
4:AD:61:LYS:NZ	4:AD:62:GLN:NE2	2.48	0.61
3:AC:47:LEU:HD23	3:AC:68:VAL:HG11	1.83	0.61
21:B0:2223:U:H2'	21:B0:2224:U:O4'	2.01	0.61
21:B0:3874:C:H2'	21:B0:3875:A:C5'	2.30	0.61
21:B0:3108:G:C2'	21:B0:3109:U:C5	2.63	0.61
1:AA:244:U:O4	1:AA:893:C:C4	2.54	0.61
1:AA:933:G:C6	1:AA:935:A:C5	2.89	0.61
21:B0:3184:C:C2'	21:B0:3185:U:H5''	2.31	0.61
1:AA:1329:A:C3'	13:AM:26:GLY:N	2.63	0.61
1:AA:551:U:H2'	1:AA:552:U:H6	1.64	0.61
1:AA:586:C:O3'	8:AH:89:PRO:HB3	2.00	0.61
1:AA:333:G:O4'	20:AT:16:HIS:NE2	2.34	0.61
4:AD:25:ARG:O	4:AD:27:TYR:N	2.33	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:362:C:H2'	21:B0:363:G:H4'	1.82	0.61
1:AA:953:G:H1'	13:AM:125:ARG:CB	2.31	0.61
1:AA:1298:C:P	7:AG:114:ARG:HH21	2.20	0.61
1:AA:300:A:H1'	1:AA:565:U:C2	2.35	0.61
12:AL:28:LYS:HD2	12:AL:33:ARG:HH12	1.65	0.61
13:AM:54:VAL:O	13:AM:58:GLU:HG2	2.01	0.61
1:AA:1250:A:C5'	9:AI:68:GLY:O	2.49	0.61
21:B0:181:A:H5''	21:B0:182:G:OP1	2.00	0.61
7:AG:78:ARG:HB2	7:AG:156:TRP:HZ3	1.65	0.61
21:B0:1500:U:H3	21:B0:1520:G:H22	1.48	0.61
1:AA:923:A:H1'	1:AA:1398:A:N3	2.16	0.60
17:AQ:104:LYS:O	17:AQ:105:ALA:HB2	2.01	0.60
1:AA:292:G:C1'	1:AA:608:A:H62	2.03	0.60
1:AA:1484:C:HO2'	21:B0:1943:A:H4'	1.57	0.60
21:B0:892:A:C2	21:B0:911:A:C4	2.89	0.60
1:AA:436:C:N3	1:AA:437:U:C2	2.69	0.60
1:AA:476:U:N3	1:AA:477:G:C1'	2.64	0.60
1:AA:1112:C:O2	3:AC:178:LEU:O	2.19	0.60
9:AI:44:VAL:HG12	9:AI:51:ARG:HH12	1.66	0.60
11:AK:19:ALA:HB2	11:AK:80:VAL:HG11	1.82	0.60
3:AC:83:ARG:C	3:AC:85:ARG:H	2.04	0.60
21:B0:161:U:H4'	21:B0:194:G:H21	1.66	0.60
1:AA:1459:C:C5'	20:AT:28:ALA:HA	2.23	0.60
1:AA:351:G:O3'	1:AA:352:C:OP2	2.18	0.60
21:B0:3876:A:O2'	53:B5:39:ILE:CA	2.49	0.60
3:AC:20:SER:HB3	3:AC:22:TRP:HE1	1.67	0.60
10:AJ:49:VAL:CG1	14:AN:41:ARG:O	2.46	0.60
1:AA:59:A:C8	1:AA:331:G:N2	2.69	0.60
3:AC:191:THR:HG22	3:AC:192:THR:N	2.15	0.60
3:AC:191:THR:CG2	3:AC:192:THR:N	2.64	0.60
21:B0:1427:G:H2'	21:B0:1428:G:H5'	1.82	0.60
4:AD:157:LEU:HD22	4:AD:161:ASN:ND2	2.16	0.60
1:AA:1475:G:H2'	1:AA:1476:G:C8	2.36	0.60
1:AA:235:C:H4'	17:AQ:70:ARG:CB	2.31	0.60
1:AA:922:G:H4'	5:AE:20:GLN:HA	1.83	0.60
1:AA:8:A:C1'	5:AE:103:GLY:HA2	2.23	0.60
17:AQ:101:ARG:NE	17:AQ:101:ARG:HA	2.16	0.60
13:AM:40:ASN:ND2	13:AM:41:PRO:HD2	2.16	0.60
12:AL:46:LYS:HG2	12:AL:47:LYS:N	2.16	0.60
4:AD:32:ALA:C	4:AD:34:GLU:H	2.04	0.60
21:B0:1139:A:H1'	21:B0:2496:C:H5'	1.83	0.60
21:B0:317:U:C3'	21:B0:318:G:H5''	2.31	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:278:G:N2	1:AA:279:A:H62	1.99	0.60
17:AQ:93:GLN:O	21:B0:726:G:O4'	2.20	0.60
1:AA:319:G:H21	1:AA:1434:A:C2'	2.01	0.60
16:AP:67:THR:HG22	16:AP:68:ASP:N	2.15	0.60
1:AA:189:A:H61	20:AT:104:LEU:CD2	2.13	0.60
1:AA:1069:C:HO2'	1:AA:1192:C:H1'	1.64	0.60
1:AA:1318:A:C5'	19:AS:10:PHE:HD1	2.12	0.60
1:AA:1239:A:O2'	1:AA:1298:C:N4	2.34	0.60
13:AM:82:MET:HG3	13:AM:93:ARG:CG	2.32	0.60
1:AA:1115:C:H1'	14:AN:61:TRP:HA	1.84	0.60
10:AJ:30:SER:HB3	10:AJ:84:GLN:HE21	1.67	0.60
1:AA:848:G:H2'	1:AA:849:C:C6	2.36	0.60
1:AA:848:G:HO3'	1:AA:849:C:C5'	2.03	0.60
11:AK:84:VAL:CG1	11:AK:95:ILE:HD11	2.31	0.60
10:AJ:71:LEU:O	10:AJ:72:VAL:HB	2.00	0.60
21:B0:1576:G:H8	21:B0:1576:G:OP2	1.85	0.60
21:B0:414:A:H2'	21:B0:415:A:O4'	2.01	0.60
21:B0:1352:G:H2'	21:B0:1353:A:H8	1.66	0.60
21:B0:540:G:H2'	21:B0:541:C:H4'	1.82	0.60
1:AA:1277:C:C1'	1:AA:1279:A:H8	1.95	0.60
21:B0:1856:U:C3'	21:B0:3865:A:C2'	2.79	0.60
1:AA:1226:C:N4	13:AM:104:ARG:HD2	2.16	0.60
1:AA:1298:C:C2'	7:AG:114:ARG:HH12	2.06	0.60
5:AE:76:ILE:HD13	5:AE:142:LEU:HD11	1.84	0.60
1:AA:244:U:C5	1:AA:894:G:N2	2.69	0.60
21:B0:941:U:H2'	21:B0:942:U:O4'	2.02	0.60
1:AA:1003:G:H2'	1:AA:2003:G:C8	2.36	0.60
1:AA:1247:U:O2'	1:AA:1248:A:H5'	2.02	0.60
1:AA:1250:A:H4'	9:AI:68:GLY:O	2.01	0.60
1:AA:107:G:H2'	1:AA:108:G:H5'	1.83	0.60
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.31	0.60
21:B0:1763:G:H2'	21:B0:1764:A:H4'	1.83	0.60
1:AA:1470:G:O2'	1:AA:1471:G:H5'	2.02	0.60
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.36	0.60
2:AB:80:ILE:HD11	2:AB:208:ILE:HG23	1.81	0.60
1:AA:760:G:H1	17:AQ:105:ALA:CA	2.13	0.60
1:AA:760:G:H1	17:AQ:104:LYS:C	2.02	0.60
10:AJ:51:ARG:O	14:AN:45:ARG:CD	2.49	0.60
1:AA:1329:A:C5'	13:AM:29:ARG:CG	2.75	0.60
1:AA:119:A:C4	1:AA:240:C:C4	2.90	0.60
1:AA:1117:G:H5'	1:AA:1117:G:H8	1.66	0.60
3:AC:26:LYS:N	3:AC:26:LYS:HD3	2.17	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:AE:80:ILE:HD11	5:AE:91:LEU:HB2	1.83	0.60
21:B0:742:G:H2'	21:B0:1766:U:H1'	1.83	0.60
14:AN:11:LYS:O	14:AN:13:THR:N	2.35	0.60
1:AA:1368:G:O5'	9:AI:112:LYS:O	2.20	0.60
1:AA:1372:U:H5''	9:AI:71:SER:CB	2.31	0.60
1:AA:237:C:P	17:AQ:40:LYS:HD3	2.37	0.60
16:AP:52:ASP:OD2	16:AP:55:ARG:HG3	2.00	0.60
1:AA:425:G:O2'	1:AA:426:G:H5'	2.01	0.60
21:B0:2783:U:H2'	21:B0:2785:A:N7	2.16	0.60
1:AA:926:G:C4	1:AA:1505:G:C4	2.89	0.60
21:B0:1073:G:H1'	21:B0:1099:A:N1	2.17	0.60
1:AA:184:G:H5'	1:AA:224:C:HO2'	1.66	0.60
1:AA:1014:A:C2	1:AA:1219:U:H1'	2.37	0.60
1:AA:977:A:C2	1:AA:1224:G:C5	2.90	0.60
14:AN:8:GLU:O	14:AN:11:LYS:HB2	2.02	0.60
1:AA:250:A:N6	1:AA:275:G:O6	2.34	0.60
1:AA:619:U:O2	4:AD:135:LEU:HG	2.01	0.60
1:AA:619:U:C2	4:AD:135:LEU:HD11	2.36	0.60
4:AD:23:GLY:HA3	4:AD:112:VAL:HG12	1.83	0.60
3:AC:79:ARG:HE	3:AC:82:GLU:HG2	1.67	0.60
7:AG:78:ARG:HB2	7:AG:156:TRP:CZ3	2.36	0.60
7:AG:42:ILE:HG23	7:AG:117:ALA:HA	1.84	0.60
21:B0:1127:C:H2'	21:B0:1128:G:H8	1.66	0.60
21:B0:1337:G:H1'	21:B0:1632:A:N6	2.17	0.60
1:AA:861:G:P	8:AH:75:ARG:HH22	2.25	0.60
21:B0:83:A:H4'	21:B0:84:G:O4'	2.01	0.60
2:AB:114:ARG:NH1	2:AB:118:LEU:HD21	2.15	0.60
21:B0:3110:G:P	21:B0:3149:G:O4'	2.54	0.60
1:AA:1503:A:P	1:AA:1531:A:C1'	2.89	0.60
1:AA:1091:U:O2	1:AA:1093:A:C8	2.54	0.60
1:AA:1110:A:C5	1:AA:1111:A:C5	2.89	0.60
1:AA:1016:A:H5''	14:AN:15:LYS:HE3	1.78	0.60
1:AA:991:U:O2'	1:AA:992:U:H5'	2.02	0.60
1:AA:564:C:O4'	17:AQ:32:TYR:CE2	2.54	0.60
5:AE:24:ARG:HG2	5:AE:24:ARG:HH11	1.66	0.60
1:AA:1238:A:C2	1:AA:1241:G:H1'	2.37	0.60
5:AE:65:ASN:O	5:AE:65:ASN:CG	2.40	0.60
19:AS:13:ASP:HA	19:AS:16:LEU:HB3	1.84	0.60
1:AA:458:G:H2'	1:AA:459:G:C8	2.37	0.60
21:B0:1194:U:H2'	21:B0:1195:U:C6	2.37	0.60
21:B0:317:U:H2'	21:B0:318:G:H5''	1.82	0.60
21:B0:1685:A:H1'	21:B0:1686:A:C5	2.36	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:1686:A:N3	21:B0:1686:A:H2'	2.17	0.60
15:AO:11:VAL:HG21	15:AO:34:LEU:HD12	1.83	0.60
21:B0:1921:A:H2'	21:B0:1922:U:H5''	1.83	0.60
11:AK:69:ALA:O	11:AK:73:MET:HG2	2.02	0.60
10:AJ:60:ARG:HD2	10:AJ:60:ARG:N	2.17	0.60
10:AJ:51:ARG:CG	14:AN:45:ARG:NH1	2.60	0.60
1:AA:36:C:O2	1:AA:501:C:H5''	2.01	0.60
20:AT:96:GLY:O	20:AT:97:ALA:HB3	2.00	0.60
5:AE:151:LEU:HD11	8:AH:77:GLU:OE2	2.02	0.60
22:B9:67:C:H2'	22:B9:68:A:H5'	1.84	0.60
1:AA:233:C:O2'	1:AA:264:U:N3	2.31	0.59
1:AA:262:A:H4'	20:AT:75:ASN:ND2	2.17	0.59
1:AA:1261:A:O2'	1:AA:1283:G:H5'	1.97	0.59
1:AA:560:U:H4'	1:AA:561:U:H5''	1.83	0.59
3:AC:6:HIS:NE2	3:AC:8:ILE:HD12	2.17	0.59
3:AC:59:ARG:C	10:AJ:92:THR:HG22	2.21	0.59
3:AC:33:LEU:HD11	14:AN:53:LEU:CD2	2.32	0.59
21:B0:1066:G:H21	21:B0:1096:A:H8	1.50	0.59
1:AA:588:G:C1'	1:AA:753:A:N1	2.64	0.59
1:AA:714:G:C5'	1:AA:776:G:C5'	2.80	0.59
2:AB:98:LEU:O	2:AB:101:MET:HG3	2.01	0.59
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.37	0.59
7:AG:38:LEU:HD12	7:AG:38:LEU:O	2.01	0.59
1:AA:922:G:C4	1:AA:1396:A:N1	2.68	0.59
1:AA:762:C:C4'	21:B0:729:A:N1	2.63	0.59
1:AA:322:C:O2'	20:AT:23:ARG:CD	2.50	0.59
1:AA:436:C:C2'	1:AA:437:U:C6	2.82	0.59
1:AA:184:G:H4'	1:AA:224:C:O3'	2.01	0.59
13:AM:82:MET:SD	21:B0:900(A):A:OP1	2.61	0.59
1:AA:474:U:H2'	1:AA:475:C:H6	1.65	0.59
12:AL:24:VAL:O	12:AL:24:VAL:HG12	2.02	0.59
1:AA:974:A:P	14:AN:29:ARG:HH22	2.24	0.59
21:B0:366:U:H2'	21:B0:367:G:H8	1.67	0.59
2:AB:140:HIS:O	2:AB:143:GLU:HB2	2.01	0.59
4:AD:25:ARG:C	4:AD:27:TYR:N	2.55	0.59
2:AB:33:TYR:O	2:AB:34:ALA:HB2	2.02	0.59
21:B0:1912:G:N3	21:B0:1913:G:OP1	2.13	0.59
21:B0:2691:C:H3'	21:B0:2692:A:C5'	2.32	0.59
21:B0:766:A:H2'	21:B0:767:G:C8	2.37	0.59
1:AA:996:A:H2'	1:AA:997:U:C6	2.37	0.59
16:AP:81:ARG:HG3	16:AP:83:GLU:HG2	1.84	0.59
1:AA:761:G:H1'	17:AQ:104:LYS:CA	2.32	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:376:G:C2	1:AA:389:A:N1	2.71	0.59
1:AA:1225:A:O4'	19:AS:78:ARG:NH1	2.34	0.59
1:AA:1318:A:H5'	19:AS:10:PHE:CE1	2.37	0.59
1:AA:992:U:C2'	1:AA:1043:C:H41	2.15	0.59
1:AA:502:G:O4'	1:AA:550:G:H5'	2.02	0.59
1:AA:731:G:H5'	1:AA:766:A:H4'	1.83	0.59
4:AD:33:MET:O	4:AD:37:PRO:HG3	2.02	0.59
1:AA:714:G:C4'	1:AA:776:G:H4'	2.28	0.59
7:AG:95:ARG:NH1	7:AG:95:ARG:HG3	2.17	0.59
7:AG:51:GLN:HA	7:AG:51:GLN:OE1	2.02	0.59
21:B0:2185:U:H2'	21:B0:2186:G:C8	2.37	0.59
8:AH:64:LYS:HG2	8:AH:79:VAL:HG21	1.84	0.59
21:B0:81:C:H2'	21:B0:82:G:O4'	2.02	0.59
21:B0:3866:A:H61	53:B5:43:LYS:CA	2.15	0.59
1:AA:760:G:C2	17:AQ:103:GLY:C	2.75	0.59
1:AA:109:A:H2'	1:AA:326:G:N2	2.17	0.59
1:AA:1067:A:H2'	1:AA:1093:A:H4'	1.83	0.59
3:AC:6:HIS:HD2	3:AC:8:ILE:HB	1.66	0.59
1:AA:1496:C:O2'	1:AA:1517:G:O6	2.18	0.59
13:AM:93:ARG:CG	21:B0:900(A):A:P	2.86	0.59
10:AJ:46:ARG:NH1	10:AJ:64:GLU:HG2	2.18	0.59
1:AA:588:G:N9	1:AA:753:A:C6	2.70	0.59
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.17	0.59
21:B0:895:G:H5'	21:B0:895:G:C8	2.35	0.59
1:AA:1233:G:OP2	9:AI:124:GLN:HG2	2.01	0.59
21:B0:198:A:H5''	21:B0:199:A:H5'	1.82	0.59
1:AA:262:A:O3'	20:AT:75:ASN:ND2	2.36	0.59
1:AA:761:G:O2'	21:B0:726:G:N2	2.36	0.59
1:AA:538:G:OP1	12:AL:115:LYS:HG3	2.00	0.59
1:AA:1106:G:OP1	3:AC:172:ARG:HG2	2.02	0.59
21:B0:918:A:C2'	21:B0:919:U:H5''	2.30	0.59
21:B0:1147:G:H2'	21:B0:1148:G:H8	1.67	0.59
21:B0:1057:A:H3'	21:B0:1058:G:C5'	2.32	0.59
21:B0:860:U:C2'	21:B0:861:G:H5'	2.32	0.59
21:B0:1455:C:O2'	21:B0:1644:G:H5''	2.03	0.59
21:B0:2217:G:H4'	21:B0:2219:U:H5	1.68	0.59
18:AR:86:VAL:O	18:AR:87:ARG:HB2	2.03	0.59
1:AA:262:A:C4'	20:AT:75:ASN:ND2	2.66	0.59
1:AA:1500:A:O3'	1:AA:1508:G:H4'	2.03	0.59
1:AA:189:A:C6	20:AT:89:ARG:HH21	1.54	0.59
1:AA:406:G:N7	1:AA:496:A:C5	2.64	0.59
9:AI:115:GLY:CA	10:AJ:58:ASP:OD1	2.46	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:AJ:63:PHE:CE2	14:AN:48:ALA:HB1	2.38	0.59
1:AA:227:G:N1	1:AA:228:A:C4	2.71	0.59
10:AJ:15:THR:HG23	10:AJ:94:VAL:HG22	1.85	0.59
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.38	0.59
21:B0:2018:G:H3'	21:B0:2019:C:C5'	2.32	0.59
21:B0:241:C:O2'	21:B0:242:A:H5''	2.03	0.59
1:AA:1255:G:O2'	1:AA:1258:G:C2	2.56	0.59
17:AQ:104:LYS:HE2	21:B0:729:A:H62	1.52	0.59
5:AE:122:GLU:O	5:AE:123:LEU:HD23	2.03	0.59
1:AA:435:C:H2'	1:AA:436:C:H6	1.67	0.59
1:AA:1318:A:C5'	19:AS:10:PHE:CE1	2.86	0.59
21:B0:3128:G:H4'	21:B0:3174:C:C4'	2.33	0.59
3:AC:10:PHE:CZ	3:AC:178:LEU:HD13	2.38	0.59
9:AI:93:ARG:NH1	9:AI:97:LYS:NZ	2.51	0.59
1:AA:1381:U:O2'	1:AA:1382:C:H5'	2.02	0.59
11:AK:74:ALA:C	11:AK:76:GLY:H	2.06	0.59
20:AT:57:ARG:HH21	20:AT:100:ILE:CG2	2.16	0.59
1:AA:1404:C:O2	1:AA:1519:A:O2'	2.19	0.59
1:AA:39:G:O2'	1:AA:40:C:H5'	2.03	0.59
1:AA:1343:G:P	9:AI:125:TYR:HH	2.25	0.59
14:AN:12:ARG:O	14:AN:14:PRO:N	2.36	0.59
1:AA:1346:A:N3	7:AG:10:ARG:NH2	2.50	0.59
9:AI:79:LEU:HD23	9:AI:101:PHE:O	2.02	0.59
21:B0:3098:U:C5	21:B0:3099:U:C4	2.90	0.59
6:AF:10:LEU:CD1	6:AF:59:TYR:HB3	2.29	0.59
4:AD:151:LYS:CD	4:AD:151:LYS:H	2.16	0.59
3:AC:47:LEU:CD1	3:AC:47:LEU:H	2.15	0.59
1:AA:231:G:H22	1:AA:262:A:H2	1.49	0.59
21:B0:2181:A:H2'	21:B0:2182:A:H5'	1.85	0.59
4:AD:204:ILE:HG21	5:AE:99:GLY:HA3	1.85	0.59
1:AA:187:G:H4'	20:AT:85:MET:HE2	1.85	0.59
1:AA:184:G:O2'	1:AA:224:C:H5''	2.03	0.59
1:AA:119:A:C2	1:AA:240:C:C6	2.90	0.59
1:AA:677:U:H1'	11:AK:119:CYS:SG	2.43	0.59
1:AA:518:C:H5''	1:AA:519:C:C6	2.38	0.59
21:B0:830:C:O2'	21:B0:852:U:H5''	2.03	0.59
2:AB:34:ALA:O	2:AB:41:ILE:N	2.31	0.59
21:B0:67:G:H21	21:B0:72:A:H2'	1.67	0.59
21:B0:3126:A:C2	21:B0:3127:G:H1'	2.38	0.59
22:B9:67:C:C2'	22:B9:68:A:H5'	2.32	0.59
21:B0:2368:G:H5''	21:B0:2369:U:O4'	2.02	0.59
21:B0:1621:C:H4'	21:B0:1626:A:H61	1.68	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:B9:25:G:H2'	22:B9:26:G:H5'	1.84	0.59
1:AA:262:A:H5''	20:AT:74:LYS:HB2	1.80	0.59
1:AA:1395:C:H5'	1:AA:1401:G:H21	1.67	0.59
1:AA:190:A:C8	20:AT:105:SER:HA	2.34	0.59
1:AA:1505:G:C4'	1:AA:1506:U:C5'	2.77	0.59
1:AA:959:A:H3'	1:AA:960:U:H5''	1.82	0.59
3:AC:64:VAL:HB	3:AC:99:VAL:CG2	2.33	0.59
1:AA:935:A:H4'	1:AA:1384:C:O2	2.02	0.59
1:AA:46:G:O2'	1:AA:365:U:H1'	2.02	0.59
1:AA:686:U:O2'	1:AA:687:A:H8	1.84	0.59
4:AD:157:LEU:HD22	4:AD:161:ASN:HD21	1.66	0.59
1:AA:505:G:H2'	1:AA:506:G:C8	2.37	0.59
21:B0:576:A:H2	21:B0:580:A:H62	1.51	0.59
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.38	0.59
7:AG:72:ARG:HG2	7:AG:142:GLU:OE1	2.02	0.59
1:AA:1261:A:H4'	1:AA:1283:G:H5''	1.83	0.58
5:AE:118:ILE:CG2	5:AE:119:LEU:N	2.65	0.58
1:AA:1113:C:C6	3:AC:178:LEU:HD23	2.38	0.58
21:B0:2547:C:H2'	21:B0:2548:G:C8	2.38	0.58
21:B0:1029:C:C2'	21:B0:1030:U:H5''	2.33	0.58
1:AA:617:G:H4'	16:AP:45:THR:HG22	1.84	0.58
21:B0:2727:G:O2'	21:B0:2728:A:H5''	2.03	0.58
1:AA:757:U:H2'	1:AA:758:G:O4'	2.03	0.58
21:B0:191:G:O2'	21:B0:192:G:H5'	2.03	0.58
1:AA:922:G:H5'	5:AE:20:GLN:HE22	1.66	0.58
13:AM:81:LEU:HD23	13:AM:81:LEU:N	2.17	0.58
19:AS:5:LEU:O	19:AS:6:LYS:CB	2.51	0.58
1:AA:736:C:H2'	1:AA:737:A:C8	2.38	0.58
1:AA:1087:G:OP1	1:AA:1389:C:O4'	2.21	0.58
21:B0:800:U:H3'	21:B0:804:C:N4	2.17	0.58
21:B0:877:G:H21	21:B0:926:C:H41	1.50	0.58
21:B0:181:A:H4'	21:B0:182:G:C5'	2.33	0.58
1:AA:513:C:O2'	1:AA:514:C:H5'	2.03	0.58
1:AA:1130:A:H3'	1:AA:1130:A:OP2	2.02	0.58
21:B0:3110:G:H5''	21:B0:3148:G:C1'	2.34	0.58
21:B0:1088:A:H2'	21:B0:1089:C:O4'	2.03	0.58
1:AA:436:C:O2'	1:AA:437:U:C4'	2.51	0.58
3:AC:91:LEU:CD2	3:AC:99:VAL:HG13	2.27	0.58
9:AI:111:ARG:HD3	9:AI:112:LYS:C	2.24	0.58
10:AJ:51:ARG:O	14:AN:45:ARG:NE	2.36	0.58
1:AA:397:A:N7	1:AA:547:A:C2'	2.65	0.58
21:B0:1181:C:C3'	21:B0:1182:U:H5''	2.32	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:45:C:H5''	21:B0:192:G:N7	2.19	0.58
1:AA:1475:G:C5'	21:B0:1706:A:H5'	2.31	0.58
1:AA:1394:A:N1	1:AA:1501:C:C5'	2.59	0.58
1:AA:113:G:N3	1:AA:353:A:H1'	2.19	0.58
3:AC:14:ILE:O	3:AC:16:ARG:N	2.35	0.58
3:AC:3:ASN:C	3:AC:4:LYS:HG2	2.23	0.58
21:B0:2668:U:C4'	21:B0:2669:C:H5'	2.25	0.58
1:AA:205:G:H21	1:AA:207:C:H5	1.44	0.58
21:B0:2547:C:H2'	21:B0:2548:G:H8	1.67	0.58
21:B0:805:G:H5''	21:B0:806:A:O5'	2.03	0.58
16:AP:4:ILE:HG13	16:AP:64:ALA:HB1	1.83	0.58
8:AH:83:ILE:HG23	8:AH:83:ILE:O	2.03	0.58
1:AA:1475:G:C4'	21:B0:1706:A:H5'	2.32	0.58
1:AA:254:G:OP1	17:AQ:66:SER:OG	2.14	0.58
1:AA:761:G:H4'	17:AQ:102:GLY:O	2.03	0.58
1:AA:322:C:H4'	20:AT:23:ARG:NE	2.19	0.58
1:AA:9:G:OP1	5:AE:122:GLU:HG3	2.03	0.58
10:AJ:45:ARG:O	10:AJ:64:GLU:HA	2.03	0.58
1:AA:1061:G:C4'	10:AJ:56:HIS:ND1	2.66	0.58
1:AA:1211:U:C4'	1:AA:1212:U:P	2.91	0.58
1:AA:69:G:C5'	1:AA:152:A:C2	2.72	0.58
1:AA:367:U:O3'	1:AA:368:U:H5'	2.02	0.58
1:AA:619:U:N3	4:AD:135:LEU:HD21	2.18	0.58
2:AB:133:LYS:O	2:AB:137:ARG:HG3	2.04	0.58
21:B0:2236:U:H3'	21:B0:2237:C:H5''	1.85	0.58
21:B0:2045:A:H4'	21:B0:2421:C:OP2	2.03	0.58
21:B0:2422:C:H2'	21:B0:2423:G:C8	2.37	0.58
1:AA:1054:C:OP1	1:AA:1197:G:OP1	2.21	0.58
2:AB:156:LYS:O	2:AB:156:LYS:HD3	2.03	0.58
19:AS:25:LYS:HD2	19:AS:25:LYS:H	1.68	0.58
12:AL:92:ASP:O	12:AL:94:PRO:HD3	2.04	0.58
14:AN:24:CYS:HB3	14:AN:28:GLY:H	1.67	0.58
21:B0:175:C:H1'	21:B0:2413:A:H61	1.69	0.58
9:AI:5:TYR:O	9:AI:84:ALA:HA	2.03	0.58
21:B0:3877:A:H4'	53:B5:199:ASN:CA	2.33	0.58
1:AA:189:A:C6	20:AT:104:LEU:O	2.57	0.58
1:AA:1014:A:H2	1:AA:1219:U:C2'	2.13	0.58
1:AA:2003:G:C2	1:AA:1004:A:H1'	2.39	0.58
1:AA:15:G:C4'	5:AE:24:ARG:NH1	2.66	0.58
18:AR:47:THR:HG22	18:AR:48:GLY:N	2.18	0.58
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.06	0.58
20:AT:10:LEU:HD12	20:AT:12:ALA:HB3	1.85	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1255:G:H4'	1:AA:1258:G:O2'	2.03	0.58
1:AA:130:A:C4'	1:AA:264:U:H5'	2.33	0.58
17:AQ:69:LYS:C	17:AQ:70:ARG:HD2	2.24	0.58
1:AA:1503:A:P	1:AA:1531:A:H1'	2.44	0.58
1:AA:761:G:H1'	17:AQ:104:LYS:C	2.24	0.58
1:AA:391:G:O3'	16:AP:8:ARG:NH2	2.36	0.58
1:AA:216:C:O4'	1:AA:468:A:H1'	2.03	0.58
9:AI:11:LYS:O	9:AI:11:LYS:HG2	2.03	0.58
10:AJ:24:VAL:HG12	10:AJ:28:ARG:HE	1.68	0.58
1:AA:15:G:H4'	5:AE:24:ARG:NH1	2.19	0.58
2:AB:101:MET:CA	2:AB:108:ILE:HD12	2.33	0.58
12:AL:55:VAL:CG1	12:AL:67:THR:HG23	2.33	0.58
2:AB:16:HIS:NE2	2:AB:214:ILE:CG1	2.66	0.58
1:AA:723:U:H2'	1:AA:723:U:O2	2.04	0.58
15:AO:87:ILE:O	15:AO:88:ARG:HB2	2.04	0.58
21:B0:2329:C:H2'	21:B0:2330:G:H5'	1.84	0.58
1:AA:1504:G:H3'	1:AA:1504:G:OP2	2.04	0.58
4:AD:89:THR:N	5:AE:97:GLY:HA2	2.12	0.58
5:AE:118:ILE:HG22	5:AE:119:LEU:H	1.67	0.58
1:AA:5:U:O4	5:AE:95:ALA:HB2	2.00	0.58
20:AT:53:LEU:O	20:AT:57:ARG:HD2	2.04	0.58
1:AA:7:G:C6	1:AA:298:A:C2	2.91	0.58
1:AA:926:G:C2	1:AA:1505:G:C4	2.92	0.58
13:AM:120:LYS:HE2	13:AM:123:ALA:HB2	1.86	0.58
2:AB:120:ALA:O	2:AB:124:SER:HB3	2.02	0.58
16:AP:51:VAL:O	16:AP:51:VAL:HG12	2.02	0.58
1:AA:791:G:C5'	21:B0:1905:G:OP1	2.52	0.58
15:AO:36:ILE:HA	15:AO:59:MET:HE3	1.86	0.58
19:AS:7:LYS:O	19:AS:7:LYS:HG3	2.03	0.58
1:AA:923:A:H1'	1:AA:1398:A:C2	2.38	0.58
1:AA:189:A:N1	20:AT:104:LEU:HB3	2.19	0.58
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.39	0.58
1:AA:961:U:OP1	1:AA:1223:C:H4'	2.04	0.58
1:AA:968:A:C6	1:AA:1062:U:O2'	2.55	0.58
9:AI:46:ALA:HB1	9:AI:77:ILE:HG22	1.85	0.58
2:AB:130:ARG:HD2	2:AB:131:PRO:HD2	1.85	0.58
1:AA:1241:G:H2'	1:AA:1242:C:C6	2.39	0.58
21:B0:653:G:H4'	21:B0:2328:G:H4'	1.86	0.58
21:B0:2491:C:C3'	21:B0:2492:G:H5''	2.34	0.58
21:B0:2858:A:H3'	21:B0:2859:U:H5'	1.85	0.58
21:B0:876:A:H2'	21:B0:877:G:C8	2.39	0.58
21:B0:2434:G:H2'	21:B0:2435:C:C6	2.39	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:AK:40:ILE:HG23	11:AK:75:TYR:CD2	2.39	0.58
1:AA:1441:G:H4'	1:AA:1442:G:N7	2.19	0.58
1:AA:812:C:O2'	1:AA:813:U:P	2.62	0.58
22:B9:14:C:H4'	22:B9:17:A:N6	2.19	0.58
7:AG:122:HIS:HA	7:AG:125:MET:HE3	1.86	0.58
1:AA:113:G:N2	1:AA:353:A:H1'	2.19	0.58
1:AA:1505:G:C4'	1:AA:1506:U:O5'	2.52	0.58
21:B0:891:A:H2'	21:B0:892:A:C8	2.35	0.58
21:B0:891:A:H2'	21:B0:892:A:N7	2.17	0.58
1:AA:959:A:H4'	1:AA:985:C:H4'	1.86	0.58
13:AM:84:ILE:C	13:AM:86:CYS:H	2.08	0.58
1:AA:476:U:O4	1:AA:477:G:C5	2.57	0.58
1:AA:1329:A:OP1	13:AM:26:GLY:O	2.21	0.58
1:AA:38:G:H4'	1:AA:547:A:N6	2.19	0.58
21:B0:3098:U:C4	21:B0:3099:U:O4	2.57	0.58
13:AM:13:LYS:O	13:AM:45:VAL:HG23	2.04	0.58
15:AO:17:ARG:NH1	15:AO:77:ARG:HH11	2.01	0.58
1:AA:1114:C:O2'	14:AN:60:SER:O	2.14	0.58
10:AJ:3:LYS:N	10:AJ:77:PRO:HD3	2.18	0.58
21:B0:2035:G:H2'	21:B0:2036:G:H8	1.69	0.58
1:AA:355:C:C4'	1:AA:389:A:P	2.92	0.57
1:AA:538:G:OP1	12:AL:115:LYS:CG	2.50	0.57
1:AA:1181:G:O2'	1:AA:1184:G:C5'	2.52	0.57
1:AA:1014:A:N1	19:AS:34:TRP:NE1	2.52	0.57
21:B0:3128:G:HO2'	21:B0:3174:C:H5'	1.65	0.57
1:AA:300:A:C2	1:AA:566:G:O6	2.57	0.57
14:AN:29:ARG:HG2	14:AN:29:ARG:HH11	1.69	0.57
13:AM:15:VAL:HG23	13:AM:43:THR:O	2.04	0.57
21:B0:2854:G:H4'	21:B0:2855:C:H5	1.69	0.57
1:AA:227:G:C6	1:AA:228:A:C4	2.92	0.57
21:B0:118:U:H1'	21:B0:143:A:C8	2.39	0.57
21:B0:331:U:H2'	21:B0:332:C:H5''	1.85	0.57
21:B0:3866:A:N1	53:B5:44:GLY:CA	2.67	0.57
1:AA:815:A:H2	1:AA:1528:U:H5'	1.67	0.57
1:AA:8:A:C6	4:AD:209:ARG:HB2	2.39	0.57
1:AA:1223:C:OP1	1:AA:1224:G:H3'	2.04	0.57
21:B0:3184:C:H2'	21:B0:3185:U:C5'	2.35	0.57
10:AJ:62:HIS:CE1	14:AN:61:TRP:HH2	2.22	0.57
1:AA:502:G:OP1	12:AL:118:SER:CB	2.52	0.57
1:AA:15:G:H1'	5:AE:19:MET:HE2	1.86	0.57
1:AA:577:G:H1'	1:AA:816:A:N3	2.19	0.57
2:AB:74:LYS:HZ1	2:AB:206:ASP:CA	2.17	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:1195:U:H2'	21:B0:1196:G:C8	2.38	0.57
1:AA:512:U:H1'	4:AD:42:GLN:OE1	2.03	0.57
1:AA:390:C:H2'	1:AA:391:G:C8	2.38	0.57
1:AA:538:G:O5'	12:AL:115:LYS:HG3	2.04	0.57
1:AA:1342:C:H5''	9:AI:125:TYR:CE1	2.40	0.57
1:AA:818:G:C3'	1:AA:819:A:C5'	2.83	0.57
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.19	0.57
1:AA:60:A:H4'	1:AA:61:G:O5'	2.04	0.57
1:AA:108:G:C6	20:AT:15:ARG:CG	2.87	0.57
4:AD:30:LYS:C	4:AD:32:ALA:N	2.58	0.57
2:AB:10:LEU:HD23	2:AB:48:MET:HG3	1.86	0.57
18:AR:25:THR:O	18:AR:26:LEU:HB2	2.04	0.57
1:AA:346:G:C2'	1:AA:347:G:H5'	2.35	0.57
21:B0:1912:G:H4'	21:B0:1913:G:C8	2.38	0.57
21:B0:1188:A:H2'	21:B0:1189:G:O4'	2.02	0.57
2:AB:76:GLN:HG3	2:AB:206:ASP:OD1	2.03	0.57
4:AD:7:PRO:HG2	4:AD:10:ARG:HD2	1.87	0.57
1:AA:860:A:H2'	1:AA:861:G:O4'	2.03	0.57
3:AC:121:ALA:O	3:AC:125:GLU:HG3	2.04	0.57
21:B0:218:A:O2'	21:B0:219:G:H4'	2.05	0.57
1:AA:192:U:O2'	1:AA:193:C:H5'	2.05	0.57
1:AA:8:A:C5	4:AD:209:ARG:HA	2.39	0.57
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.18	0.57
14:AN:36:PHE:CD1	14:AN:36:PHE:O	2.58	0.57
1:AA:244:U:N3	1:AA:893:C:C2	2.70	0.57
1:AA:59:A:N1	1:AA:331:G:N3	2.46	0.57
12:AL:85:ILE:HG23	12:AL:98:TYR:HB3	1.86	0.57
3:AC:191:THR:HG21	3:AC:193:TYR:CZ	2.39	0.57
2:AB:144:ARG:HG3	2:AB:145:LEU:N	2.19	0.57
2:AB:115:LEU:HG	2:AB:153:ARG:HH21	1.69	0.57
1:AA:1237:C:H4'	1:AA:1334:G:N2	2.19	0.57
10:AJ:82:ILE:HG22	10:AJ:82:ILE:O	2.03	0.57
21:B0:1916:G:H2'	21:B0:1917:C:C6	2.40	0.57
21:B0:2641:A:H2'	21:B0:2642:G:O4'	2.05	0.57
1:AA:1152:A:H5'	10:AJ:70:ARG:HH22	1.68	0.57
21:B0:521:U:H4'	21:B0:1248:G:O2'	2.04	0.57
1:AA:130:A:N9	1:AA:264:U:C4'	2.63	0.57
1:AA:815:A:O2'	1:AA:1527:C:C1'	2.51	0.57
1:AA:185:A:H2'	1:AA:186:C:C6	2.40	0.57
1:AA:39:G:C6	1:AA:404:U:C4	2.92	0.57
1:AA:1014:A:H2'	1:AA:1015:A:C8	2.39	0.57
1:AA:1317:C:H2'	1:AA:1318:A:O4'	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1297:C:P	13:AM:44:ARG:HH22	2.27	0.57
3:AC:33:LEU:O	3:AC:33:LEU:HD23	2.04	0.57
9:AI:7:THR:HG21	9:AI:9:ARG:NH1	2.19	0.57
9:AI:9:ARG:HA	9:AI:13:ALA:O	2.05	0.57
1:AA:586:C:H5'	8:AH:90:GLY:CA	2.33	0.57
1:AA:205:G:N2	1:AA:207:C:C4	2.71	0.57
21:B0:1001:A:H62	21:B0:1200:G:H1'	1.69	0.57
21:B0:1119:U:H2'	21:B0:1120:C:O4'	2.03	0.57
21:B0:879:A:C2'	21:B0:880:C:H5'	2.35	0.57
21:B0:1187:A:H2'	21:B0:1188:A:H8	1.69	0.57
14:AN:24:CYS:HB3	14:AN:28:GLY:N	2.20	0.57
21:B0:1861:G:C4'	53:B5:198:THR:CA	2.76	0.57
1:AA:94:G:C5	1:AA:96:C:C4	2.91	0.57
19:AS:40:ILE:HG21	19:AS:62:ILE:CD1	2.33	0.57
1:AA:570:G:HO2'	1:AA:819:A:H2'	1.67	0.57
3:AC:10:PHE:CE2	3:AC:178:LEU:HD13	2.38	0.57
1:AA:651:C:C4	1:AA:752:G:O2'	2.57	0.57
12:AL:28:LYS:HD2	12:AL:33:ARG:NH2	2.17	0.57
17:AQ:59:ILE:HG22	17:AQ:71:PHE:CD1	2.39	0.57
1:AA:173:U:C6	1:AA:197:A:C2	2.93	0.57
21:B0:1458:A:H3'	21:B0:1459:U:H5'	1.86	0.57
21:B0:1947:G:H3'	21:B0:1947:G:OP1	2.05	0.57
21:B0:2726:U:H2'	21:B0:2727:G:O4'	2.05	0.57
21:B0:176:A:H5''	21:B0:177:U:H5	1.69	0.57
1:AA:130:A:C2	1:AA:264:U:C4	2.92	0.57
1:AA:261:U:O4	20:AT:79:ARG:HD3	1.75	0.57
1:AA:1321:C:H42	19:AS:37:ARG:CZ	2.17	0.57
2:AB:23:ARG:C	2:AB:23:ARG:NH1	2.58	0.57
1:AA:411:A:N9	1:AA:413:G:H1'	2.19	0.57
21:B0:1517:C:H2'	21:B0:1518:C:C6	2.40	0.57
1:AA:780:A:O2'	1:AA:781:A:H5''	2.05	0.57
1:AA:6:G:N1	5:AE:94:ALA:HB1	2.19	0.57
3:AC:29:TYR:CZ	14:AN:54:PRO:HG2	2.40	0.57
1:AA:1369:C:OP2	9:AI:111:ARG:HA	2.04	0.57
1:AA:1115:C:C1'	14:AN:61:TRP:CA	2.83	0.57
1:AA:450:G:H5''	16:AP:43:LYS:HZ2	1.70	0.57
1:AA:755:G:O2'	8:AH:1:MET:HB2	2.03	0.57
1:AA:642:A:N3	8:AH:113:SER:OG	2.37	0.57
21:B0:1119:U:O3'	21:B0:1120:C:P	2.63	0.57
21:B0:369:C:H2'	21:B0:370:U:O4'	2.05	0.57
21:B0:804:C:O2'	21:B0:806:A:H4'	2.05	0.57
21:B0:1807:A:H5'	21:B0:1809:G:O4'	2.05	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:AB:209:ARG:HE	2:AB:239:VAL:HG11	1.68	0.57
6:AF:2:ARG:CD	6:AF:69:GLU:HG2	2.35	0.57
21:B0:1791:C:H1'	21:B0:1793:A:O4'	2.05	0.57
1:AA:505:G:H2'	1:AA:506:G:H8	1.69	0.57
21:B0:59:G:N2	21:B0:73:A:H61	2.03	0.57
9:AI:17:VAL:HG21	9:AI:80:GLY:HA3	1.86	0.57
9:AI:5:TYR:CD2	9:AI:6:GLY:N	2.71	0.57
1:AA:234:C:H4'	17:AQ:64:PRO:CG	2.35	0.57
1:AA:9:G:C5'	5:AE:122:GLU:CD	2.73	0.57
1:AA:1409:C:C4	1:AA:1410:G:N7	2.72	0.57
1:AA:1483:A:N6	1:AA:1484:C:N3	2.53	0.57
1:AA:1230:C:H1'	13:AM:126:LYS:HA	1.86	0.57
1:AA:1270:C:O2'	1:AA:1314:C:C5'	2.53	0.57
1:AA:818:G:C2'	1:AA:819:A:H5''	2.34	0.57
1:AA:367:U:O3'	1:AA:368:U:C5'	2.52	0.57
1:AA:651:C:N4	1:AA:752:G:HO2'	2.03	0.57
6:AF:97:PHE:HB2	18:AR:32:ARG:CZ	2.34	0.57
8:AH:29:SER:OG	8:AH:32:LYS:HB2	2.04	0.57
21:B0:1358:C:H2'	21:B0:1359:G:C5'	2.34	0.57
6:AF:3:ARG:HH21	6:AF:64:GLN:NE2	2.02	0.57
1:AA:1458:G:N7	1:AA:1459:C:O2	2.38	0.57
1:AA:1475:G:H5'	21:B0:1706:A:H5'	1.86	0.57
20:AT:67:ALA:HA	20:AT:73:HIS:H	1.70	0.57
4:AD:205:GLU:HG2	5:AE:100:VAL:O	2.05	0.57
19:AS:10:PHE:CD2	19:AS:11:VAL:N	2.73	0.57
1:AA:1115:C:H1'	14:AN:61:TRP:C	2.25	0.57
1:AA:499:A:H1'	1:AA:500:G:O4'	2.04	0.57
1:AA:588:G:C8	1:AA:753:A:N3	2.72	0.57
14:AN:3:ARG:NH1	14:AN:6:LEU:HD11	2.20	0.57
12:AL:50:SER:O	12:AL:51:ALA:HB2	2.05	0.57
7:AG:15:ASP:OD1	7:AG:17:VAL:N	2.37	0.57
1:AA:1129:C:OP1	9:AI:62:TYR:CE2	2.58	0.57
8:AH:17:THR:HG22	8:AH:63:LEU:HG	1.86	0.57
1:AA:854:G:C8	1:AA:871:U:O4	2.58	0.57
1:AA:1125:U:H3	10:AJ:5:ARG:HH21	1.53	0.56
1:AA:926:G:C4	1:AA:1505:G:C2	2.93	0.56
1:AA:186:C:C1'	20:AT:81:LYS:CE	2.71	0.56
1:AA:31:G:H1	1:AA:48:C:C5'	2.17	0.56
4:AD:35:ARG:O	4:AD:36:ARG:HB2	2.04	0.56
12:AL:26:ALA:O	12:AL:27:LEU:O	2.22	0.56
3:AC:188:LEU:HD13	3:AC:195:VAL:HG13	1.86	0.56
3:AC:7:PRO:CG	3:AC:184:TYR:HB2	2.35	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:317:U:H3'	21:B0:318:G:H5''	1.86	0.56
9:AI:39:GLY:O	9:AI:40:LEU:HD23	2.05	0.56
6:AF:80:ARG:NH1	6:AF:88:VAL:HB	2.19	0.56
8:AH:60:ARG:HG3	8:AH:60:ARG:HH11	1.70	0.56
21:B0:1289:A:H62	21:B0:1662:G:H1	1.53	0.56
1:AA:1228:C:OP1	13:AM:115:LYS:HG3	2.03	0.56
21:B0:2268:G:H22	21:B0:2323:U:H4'	1.68	0.56
1:AA:1255:G:H1'	1:AA:1259:C:H1'	0.75	0.56
1:AA:132:C:P	20:AT:75:ASN:ND2	2.79	0.56
1:AA:927:G:H1'	1:AA:1532:U:H5'	1.88	0.56
1:AA:960:U:O2'	1:AA:1223:C:H4'	2.05	0.56
3:AC:33:LEU:HD11	14:AN:53:LEU:HD22	1.87	0.56
13:AM:13:LYS:HD3	13:AM:17:VAL:HG11	1.86	0.56
1:AA:382:A:H2'	1:AA:383:A:H8	1.70	0.56
8:AH:19:VAL:HG23	8:AH:21:LYS:HD3	1.86	0.56
13:AM:117:VAL:HG12	13:AM:118:ALA:H	1.71	0.56
21:B0:1971:C:H2'	21:B0:1972:G:C8	2.40	0.56
21:B0:1976:U:H2'	21:B0:1977:C:H5'	1.87	0.56
1:AA:665:A:N3	1:AA:732:C:H2'	2.20	0.56
1:AA:657:G:H4'	15:AO:28:GLN:HG2	1.86	0.56
1:AA:1392:G:C4'	1:AA:1531:A:C5'	2.72	0.56
4:AD:88:VAL:CA	5:AE:97:GLY:CA	2.83	0.56
1:AA:114:U:H1'	1:AA:353:A:H1'	1.87	0.56
1:AA:355:C:H5'	1:AA:389:A:OP1	2.05	0.56
1:AA:323:U:C5'	20:AT:23:ARG:H	2.12	0.56
1:AA:1414:U:O2'	1:AA:1415:G:H5'	2.04	0.56
1:AA:1108:G:H5''	3:AC:176:HIS:ND1	2.20	0.56
1:AA:1016:A:O2'	1:AA:1218:C:C4'	2.54	0.56
8:AH:105:ARG:HH11	8:AH:105:ARG:HG3	1.71	0.56
13:AM:80:ARG:HH21	19:AS:66:MET:HA	1.71	0.56
1:AA:143:A:O4'	1:AA:196:A:C4	2.57	0.56
21:B0:984:A:H2'	21:B0:1200:G:H22	1.71	0.56
2:AB:126:GLU:HG2	2:AB:129:GLU:OE1	2.05	0.56
21:B0:879:A:O2'	21:B0:880:C:H5'	2.05	0.56
4:AD:24:GLU:H	4:AD:112:VAL:CG1	2.19	0.56
2:AB:12:GLU:C	2:AB:14:GLY:N	2.59	0.56
21:B0:874:A:N6	21:B0:928:G:H21	2.03	0.56
21:B0:2058:U:H4'	21:B0:2575:U:N3	2.20	0.56
1:AA:1195:C:H3'	1:AA:1196:U:C5'	2.35	0.56
21:B0:1923:U:H4'	21:B0:1948:C:H41	1.71	0.56
15:AO:3:ILE:HG22	15:AO:7:GLU:HB3	1.86	0.56
4:AD:43:HIS:CE1	4:AD:46:LYS:HZ2	2.23	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:2270:U:H2'	21:B0:2271:C:C6	2.40	0.56
1:AA:1104:G:OP1	2:AB:111:ARG:HD2	2.05	0.56
21:B0:2402:U:H5'	21:B0:2404:A:C5	2.41	0.56
6:AF:25:ILE:HD12	6:AF:82:ARG:HD2	1.88	0.56
4:AD:107:ARG:HH21	4:AD:194:LEU:HD12	1.71	0.56
1:AA:1474:G:C5'	21:B0:1718:A:C2	2.88	0.56
21:B0:3197:U:H1'	21:B0:2181:A:C5	2.37	0.56
16:AP:17:TYR:HE1	16:AP:41:PRO:HG2	1.69	0.56
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.40	0.56
1:AA:1040:U:H2'	1:AA:1041:A:H8	1.70	0.56
1:AA:653:A:OP1	8:AH:56:LYS:CE	2.53	0.56
1:AA:59:A:P	1:AA:60:A:H5''	2.46	0.56
1:AA:1374:A:C3'	1:AA:1375:A:P	2.93	0.56
12:AL:47:LYS:HB2	12:AL:48:PRO:HD2	1.88	0.56
13:AM:17:VAL:O	13:AM:20:THR:HB	2.05	0.56
21:B0:33:C:N4	21:B0:466:A:H61	2.03	0.56
21:B0:3116:G:H4'	21:B0:3117:A:OP1	2.04	0.56
1:AA:911:U:OP2	12:AL:97:ARG:NH2	2.37	0.56
17:AQ:67:LYS:O	17:AQ:68:ARG:HB3	2.05	0.56
1:AA:315:A:O4'	1:AA:353:A:C6	2.59	0.56
1:AA:355:C:C5'	1:AA:389:A:OP2	2.54	0.56
14:AN:14:PRO:C	14:AN:16:PHE:N	2.56	0.56
3:AC:32:LEU:HD23	3:AC:32:LEU:O	2.05	0.56
1:AA:1319:A:H5'	1:AA:1320:C:OP1	2.06	0.56
1:AA:143:A:C1'	1:AA:196:A:C4	2.89	0.56
13:AM:8:GLU:OE1	13:AM:22:ILE:HG12	2.05	0.56
21:B0:1092:U:H2'	21:B0:1093:U:C6	2.41	0.56
21:B0:1093:U:C4	21:B0:1094:C:C4	2.94	0.56
21:B0:368:A:H2'	21:B0:369:C:O4'	2.06	0.56
21:B0:2466:G:H2'	21:B0:2467:A:C8	2.40	0.56
1:AA:1339:A:H2'	1:AA:1340:A:O4'	2.06	0.56
1:AA:191:G:C6	1:AA:192:U:C5	2.86	0.56
1:AA:187:G:H21	20:AT:105:SER:CB	2.17	0.56
1:AA:1417:G:N2	1:AA:1484:C:N4	2.52	0.56
1:AA:1405:G:H4'	1:AA:1519:A:H5'	1.88	0.56
1:AA:39:G:N7	1:AA:498:U:O4	2.38	0.56
19:AS:63:THR:HG22	19:AS:64:GLU:H	1.71	0.56
21:B0:584:A:H4'	21:B0:2479:U:H5'	1.87	0.56
21:B0:689:A:H2'	21:B0:690:A:H5'	1.87	0.56
4:AD:6:GLY:O	4:AD:8:VAL:HG23	2.06	0.56
1:AA:448:A:H2'	1:AA:449:C:C6	2.40	0.56
12:AL:6:THR:OG1	12:AL:9:GLN:HG3	2.05	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1394:A:N3	1:AA:1501:C:H1'	2.20	0.56
1:AA:189:A:H62	20:AT:104:LEU:CA	2.19	0.56
1:AA:293:G:H5'	1:AA:610:G:N3	2.21	0.56
1:AA:1483:A:N7	1:AA:1484:C:C4	2.74	0.56
1:AA:39:G:N1	1:AA:404:U:C4	2.74	0.56
1:AA:915:A:C2'	1:AA:916:G:H5'	2.35	0.56
3:AC:91:LEU:HD11	3:AC:99:VAL:HG13	1.86	0.56
1:AA:179:A:N6	1:AA:196:A:OP2	2.38	0.56
1:AA:933:G:C6	1:AA:935:A:N7	2.74	0.56
1:AA:1086:U:H3	1:AA:1099:G:N2	1.91	0.56
2:AB:88:ALA:C	2:AB:90:MET:H	2.09	0.56
1:AA:1351:U:H2'	1:AA:1352:C:C6	2.40	0.56
21:B0:2503:G:H2'	21:B0:2504:G:H5''	1.88	0.56
21:B0:813:A:O2'	21:B0:815:A:H5'	2.05	0.56
21:B0:795:A:H4'	21:B0:796:A:N7	2.20	0.56
5:AE:80:ILE:O	5:AE:80:ILE:HD12	2.05	0.56
21:B0:1057:A:H3'	21:B0:1058:G:H5'	1.87	0.56
21:B0:1669:A:H2'	21:B0:1670:G:H4'	1.87	0.56
21:B0:1825:C:O2'	21:B0:1826:U:H5'	2.06	0.56
13:AM:31:LYS:O	13:AM:35:GLU:HB2	2.05	0.56
1:AA:1255:G:O2'	1:AA:1258:G:N3	2.38	0.56
21:B0:3110:G:O2'	21:B0:3120:G:H5'	2.06	0.56
17:AQ:104:LYS:HE2	21:B0:727:U:C2	2.34	0.56
1:AA:292:G:N3	1:AA:608:A:C6	2.74	0.56
1:AA:977:A:C8	1:AA:1223:C:N3	2.74	0.56
1:AA:1267:C:O2	1:AA:1327:C:H4'	2.06	0.56
1:AA:546:G:H4'	1:AA:548:G:O3'	2.06	0.56
1:AA:1092:A:H4'	7:AG:4:ARG:HH21	1.69	0.56
12:AL:47:LYS:CB	12:AL:48:PRO:HD3	2.35	0.56
1:AA:108:G:N7	20:AT:15:ARG:HG3	2.20	0.56
9:AI:97:LYS:O	9:AI:100:GLY:N	2.36	0.56
8:AH:103:VAL:HG21	8:AH:110:ALA:HB2	1.87	0.56
17:AQ:5:VAL:HG22	17:AQ:60:ILE:HG12	1.87	0.56
3:AC:84:ILE:O	3:AC:88:ARG:HB2	2.05	0.56
21:B0:1567:A:H2'	21:B0:1568:A:O4'	2.06	0.56
1:AA:130:A:N7	17:AQ:63:ARG:CG	2.66	0.56
17:AQ:103:GLY:O	17:AQ:104:LYS:O	2.24	0.56
1:AA:113:G:N9	1:AA:353:A:O2'	2.37	0.56
1:AA:322:C:O2'	20:AT:23:ARG:HD2	2.04	0.56
1:AA:1483:A:O3'	1:AA:1484:C:P	2.62	0.56
1:AA:1368:G:OP2	9:AI:114:TYR:CA	2.54	0.56
21:B0:1093:U:O4	21:B0:1094:C:N4	2.39	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:551:U:H2'	1:AA:552:U:C6	2.41	0.56
1:AA:1004:A:H5''	1:AA:1025:U:C5	2.39	0.56
20:AT:35:THR:O	20:AT:39:LYS:HB2	2.05	0.56
1:AA:1202:G:O2'	1:AA:1203:C:H5'	2.06	0.56
1:AA:411:A:C4	1:AA:413:G:H1'	2.41	0.56
21:B0:1191:G:H2'	21:B0:1192:A:C8	2.41	0.56
21:B0:2402:U:H5'	21:B0:2404:A:N7	2.21	0.56
18:AR:53:ARG:HD3	18:AR:63:GLN:CB	2.36	0.56
15:AO:41:GLU:HA	15:AO:41:GLU:OE2	2.05	0.56
4:AD:88:VAL:C	5:AE:97:GLY:CA	2.67	0.56
17:AQ:104:LYS:HB3	21:B0:727:U:O4'	2.06	0.56
1:AA:335:C:C2	1:AA:1434:A:H1'	2.41	0.56
1:AA:1506:U:P	1:AA:1541:U:OP1	2.64	0.56
1:AA:965:A:C2	13:AM:124:PRO:HB2	2.40	0.56
1:AA:1042:G:O2'	1:AA:1043:C:H5'	2.06	0.56
5:AE:79:GLU:OE2	8:AH:105:ARG:HD3	2.04	0.56
19:AS:40:ILE:HG21	19:AS:62:ILE:HD11	1.88	0.56
1:AA:89:G:C2'	1:AA:90:C:P	2.94	0.56
1:AA:1346:A:N9	7:AG:10:ARG:NH2	2.54	0.56
1:AA:837:G:H2'	1:AA:838:C:N1	2.19	0.56
13:AM:40:ASN:ND2	13:AM:42:ALA:H	2.04	0.56
21:B0:1426:U:H2'	21:B0:1427:G:O4'	2.05	0.56
10:AJ:12:ASP:HB3	10:AJ:15:THR:HB	1.88	0.56
21:B0:533:C:H2'	21:B0:534:U:O4'	2.06	0.56
1:AA:923:A:C4'	1:AA:1398:A:C2	2.88	0.55
1:AA:926:G:C4	1:AA:1505:G:N3	2.74	0.55
1:AA:977:A:H1'	1:AA:1223:C:H42	1.69	0.55
1:AA:1298:C:C6	7:AG:114:ARG:CZ	2.89	0.55
1:AA:1346:A:H4'	1:AA:1347:G:O5'	2.06	0.55
1:AA:1347:G:C5	9:AI:107:ARG:NH2	2.74	0.55
13:AM:49:THR:HB	13:AM:52:GLU:HG3	1.86	0.55
21:B0:68:C:H2'	21:B0:69:G:C8	2.40	0.55
1:AA:812:C:HO2'	1:AA:813:U:P	2.27	0.55
21:B0:2299:A:N3	21:B0:2299:A:H2'	2.21	0.55
2:AB:223:ILE:HG21	2:AB:230:VAL:CG2	2.35	0.55
1:AA:1504:G:P	1:AA:1507:A:H4'	2.45	0.55
1:AA:1110:A:C6	1:AA:1111:A:C6	2.93	0.55
3:AC:3:ASN:ND2	3:AC:4:LYS:HE2	2.21	0.55
1:AA:402:G:H4'	1:AA:620:C:N4	2.20	0.55
1:AA:978:A:C6	1:AA:1318:A:C6	2.93	0.55
1:AA:1014:A:C6	19:AS:34:TRP:CD2	2.93	0.55
13:AM:29:ARG:HB3	13:AM:64:TRP:CH2	2.42	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:946:A:H2'	1:AA:947:G:C8	2.40	0.55
21:B0:2549:G:H2'	21:B0:2550:C:O4'	2.06	0.55
1:AA:848:G:H2'	1:AA:849:C:O4'	2.04	0.55
21:B0:952:A:O2'	21:B0:1204:G:H4'	2.06	0.55
2:AB:21:ARG:HG3	2:AB:23:ARG:HD2	1.88	0.55
6:AF:46:ARG:HB2	6:AF:60:PHE:HE1	1.71	0.55
17:AQ:59:ILE:CG2	17:AQ:71:PHE:HB3	2.36	0.55
16:AP:81:ARG:CG	16:AP:83:GLU:HG2	2.36	0.55
20:AT:86:ARG:O	20:AT:90:GLN:HG3	2.05	0.55
1:AA:166:G:O2'	1:AA:167:G:H5'	2.07	0.55
1:AA:1006:C:H2'	1:AA:1007:C:H6	1.72	0.55
21:B0:1856:U:P	21:B0:3865:A:C8	2.91	0.55
21:B0:3874:C:C5	21:B0:3875:A:C8	2.94	0.55
1:AA:1406:U:H1'	1:AA:1518:A:O4'	2.06	0.55
1:AA:1406:U:O4'	1:AA:1518:A:C4'	2.47	0.55
13:AM:125:ARG:C	13:AM:125:ARG:HD2	2.27	0.55
1:AA:397:A:H8	1:AA:547:A:O3'	1.87	0.55
1:AA:976:G:H22	1:AA:1362:C:H5''	1.71	0.55
21:B0:2755:A:O2'	21:B0:2756:A:H5'	2.06	0.55
1:AA:26:A:N6	1:AA:558:G:H1'	2.21	0.55
21:B0:1971:C:H2'	21:B0:1972:G:H8	1.70	0.55
21:B0:2759:U:H4'	21:B0:2760:G:OP2	2.05	0.55
1:AA:133:U:OP1	20:AT:74:LYS:HD3	2.06	0.55
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.72	0.55
1:AA:1112:C:O2	3:AC:178:LEU:N	2.38	0.55
10:AJ:81:THR:O	10:AJ:85:LEU:HG	2.06	0.55
1:AA:523:A:H2	12:AL:91:LYS:HB3	1.71	0.55
2:AB:12:GLU:C	2:AB:14:GLY:H	2.07	0.55
2:AB:17:PHE:HD1	2:AB:18:GLY:N	2.04	0.55
21:B0:26:G:N2	21:B0:524:A:H62	2.03	0.55
1:AA:26:A:H2'	1:AA:27:G:H5'	1.88	0.55
7:AG:116:ALA:HA	7:AG:119:ARG:NH2	2.21	0.55
1:AA:843:C:H2'	1:AA:844:A:O4'	2.07	0.55
3:AC:46:GLU:O	3:AC:48:TYR:N	2.33	0.55
4:AD:176:LEU:HA	4:AD:183:GLY:HA2	1.87	0.55
1:AA:1500:A:H5''	1:AA:1508:G:H5''	1.87	0.55
1:AA:1394:A:N6	1:AA:1501:C:H4'	2.13	0.55
1:AA:1496:C:H1'	1:AA:1517:G:N1	2.22	0.55
1:AA:489:C:P	4:AD:132:ARG:NH2	2.75	0.55
1:AA:212:G:O2'	1:AA:213:G:P	2.65	0.55
1:AA:995:C:N3	14:AN:4:LYS:HD3	2.22	0.55
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.41	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:808:C:OP1	15:AO:48:LYS:CE	2.53	0.55
13:AM:65:LYS:HE3	13:AM:69:GLU:OE2	2.07	0.55
20:AT:82:SER:O	20:AT:86:ARG:HB2	2.07	0.55
21:B0:1316:G:H2'	21:B0:1317:G:C8	2.41	0.55
21:B0:611:C:H2'	21:B0:612:G:O4'	2.07	0.55
8:AH:123:GLU:O	8:AH:127:LEU:HD23	2.05	0.55
4:AD:177:ASP:OD1	4:AD:179:GLU:HB2	2.07	0.55
21:B0:597:U:H3	21:B0:683:A:H2'	1.71	0.55
1:AA:1257:U:H4'	1:AA:1258:G:O5'	2.06	0.55
17:AQ:68:ARG:N	17:AQ:70:ARG:NH1	2.55	0.55
1:AA:490:G:H2'	1:AA:491:G:H8	1.72	0.55
1:AA:477:G:H2'	1:AA:478:A:C8	2.40	0.55
1:AA:571:U:C4'	1:AA:819:A:C5	2.89	0.55
10:AJ:31:GLY:HA2	10:AJ:78:ASN:ND2	2.12	0.55
10:AJ:24:VAL:HG21	10:AJ:37:PRO:HD3	1.88	0.55
4:AD:24:GLU:HG2	4:AD:25:ARG:N	2.21	0.55
21:B0:2261:G:H5''	21:B0:2262:C:O5'	2.06	0.55
21:B0:2727:G:C2'	21:B0:2728:A:H5''	2.36	0.55
1:AA:1376:U:OP1	7:AG:98:SER:OG	2.13	0.55
21:B0:784:U:H2'	21:B0:785:U:C6	2.41	0.55
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.06	0.55
1:AA:193:C:H2'	1:AA:194:C:H6	1.72	0.55
17:AQ:102:GLY:O	21:B0:726:G:N2	2.40	0.55
1:AA:6:G:C6	5:AE:94:ALA:CA	2.85	0.55
1:AA:314:C:C2	1:AA:353:A:H2	2.24	0.55
21:B0:892:A:H2'	21:B0:893:G:O4'	2.07	0.55
1:AA:954:G:H2'	1:AA:955:U:C6	2.42	0.55
1:AA:1014:A:N3	19:AS:34:TRP:CB	2.69	0.55
13:AM:93:ARG:HB3	21:B0:900(A):A:OP2	2.07	0.55
1:AA:1346:A:C2	7:AG:10:ARG:NH1	2.75	0.55
1:AA:1092:A:H5'	7:AG:4:ARG:CZ	2.36	0.55
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.07	0.55
21:B0:951:G:C2'	21:B0:952:A:H5''	2.35	0.55
21:B0:805:G:H4'	21:B0:806:A:OP2	2.05	0.55
21:B0:1528:C:C3'	21:B0:1529:C:H5''	2.36	0.55
21:B0:582:G:H2'	21:B0:583:C:H3'	1.88	0.55
5:AE:15:ARG:O	5:AE:27:ARG:O	2.25	0.55
21:B0:2222:U:H2'	21:B0:2223:U:C6	2.41	0.55
21:B0:223:C:H4'	21:B0:398:C:H1'	1.88	0.55
17:AQ:18:THR:HG23	17:AQ:69:LYS:HE3	1.89	0.55
1:AA:735:C:C1'	18:AR:75:ILE:HD11	2.37	0.55
7:AG:146:GLU:HA	7:AG:149:ARG:HB2	1.87	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:AO:70:LEU:HD11	15:AO:77:ARG:HB2	1.89	0.55
2:AB:33:TYR:HB2	2:AB:43:ASP:HB2	1.89	0.55
21:B0:64:C:H2'	21:B0:65:C:C6	2.42	0.55
12:AL:43:VAL:HG12	12:AL:44:THR:H	1.71	0.55
1:AA:1539:C:P	7:AG:82:GLY:HA2	2.46	0.55
5:AE:21:ALA:O	5:AE:23:GLY:N	2.40	0.55
21:B0:728:G:H2'	21:B0:729:A:O4'	2.06	0.55
1:AA:187:G:C1'	20:AT:85:MET:CE	2.71	0.55
1:AA:8:A:H1'	5:AE:103:GLY:N	2.21	0.55
1:AA:1416:G:N7	1:AA:1417:G:C8	2.75	0.55
1:AA:406:G:C8	1:AA:496:A:C6	2.95	0.55
1:AA:438:G:C4'	1:AA:439:A:OP1	2.53	0.55
1:AA:1314:C:H5	19:AS:6:LYS:CD	2.20	0.55
1:AA:46:G:O6	1:AA:394:G:O6	2.24	0.55
1:AA:237:C:P	17:AQ:40:LYS:HD2	2.40	0.55
1:AA:1112:C:N3	3:AC:178:LEU:CB	2.69	0.55
21:B0:103:U:H2'	21:B0:104:C:C6	2.41	0.55
1:AA:1251:A:H5'	9:AI:12:GLU:OE1	2.07	0.55
2:AB:47:THR:HA	2:AB:202:PRO:HG2	1.87	0.55
6:AF:76:ALA:O	6:AF:80:ARG:HG3	2.06	0.55
21:B0:1975:G:H4'	21:B0:1976:U:H5	1.72	0.55
21:B0:121:G:O2'	21:B0:1389:C:H4'	2.05	0.55
21:B0:2544:A:H2'	21:B0:2545:A:H4'	1.88	0.55
1:AA:1460:A:H2'	1:AA:1461:G:O4'	2.07	0.55
22:B9:45:C:H3'	22:B9:46:G:H5'	1.89	0.55
2:AB:67:THR:HG22	2:AB:68:ILE:N	2.21	0.55
1:AA:1255:G:O2'	1:AA:1259:C:C1'	2.55	0.55
1:AA:761:G:O2'	17:AQ:104:LYS:HA	2.06	0.55
1:AA:54:C:H2'	1:AA:352:C:H41	1.71	0.55
1:AA:1383:C:N3	1:AA:1384:C:C5	2.75	0.55
21:B0:942:U:C2'	21:B0:943:U:H5'	2.37	0.55
1:AA:1026:G:O3'	1:AA:1027:C:P	2.65	0.55
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.41	0.55
1:AA:429:U:H2'	4:AD:25:ARG:NH1	2.22	0.55
21:B0:3126:A:H4'	21:B0:3127:G:H5'	1.89	0.55
21:B0:2503:G:C2'	21:B0:2504:G:H5''	2.37	0.55
1:AA:939:G:H2'	1:AA:940:C:H6	1.71	0.55
1:AA:606:G:O3'	1:AA:607:A:H5'	2.06	0.55
21:B0:1994:U:H2'	21:B0:1995:G:O4'	2.07	0.55
17:AQ:79:SER:O	17:AQ:80:GLY:O	2.25	0.55
16:AP:26:ARG:HD2	16:AP:31:LYS:O	2.06	0.55
21:B0:3109:U:H5''	21:B0:3150:C:H5'	1.61	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:AQ:96:GLN:OE1	21:B0:726:G:C8	2.60	0.54
1:AA:113:G:N3	1:AA:353:A:C1'	2.70	0.54
1:AA:9:G:H5'	5:AE:122:GLU:CD	2.26	0.54
1:AA:1483:A:C8	1:AA:1484:C:C5	2.95	0.54
1:AA:184:G:H1'	1:AA:224:C:H4'	1.86	0.54
3:AC:174:PRO:HB2	3:AC:177:THR:HG22	1.89	0.54
9:AI:7:THR:HG22	9:AI:8:GLY:N	2.22	0.54
21:B0:3098:U:C4	21:B0:3099:U:C4	2.96	0.54
1:AA:59:A:O5'	1:AA:60:A:H5''	2.06	0.54
1:AA:537:G:H5''	12:AL:113:ARG:NH2	2.22	0.54
1:AA:1193:G:O2'	1:AA:1194:U:H5'	2.07	0.54
15:AO:87:ILE:O	15:AO:88:ARG:CB	2.54	0.54
21:B0:1514:C:H2'	21:B0:1515:U:O4'	2.07	0.54
1:AA:235:C:C5'	17:AQ:70:ARG:HD3	2.37	0.54
20:AT:67:ALA:HB2	20:AT:77:ALA:HB2	1.88	0.54
21:B0:3110:G:H4'	21:B0:3111:C:OP2	2.07	0.54
1:AA:1394:A:C4	1:AA:1501:C:C4'	2.91	0.54
4:AD:57:ARG:HB3	4:AD:206:PHE:HB2	1.88	0.54
1:AA:1014:A:N3	19:AS:34:TRP:HB2	2.22	0.54
1:AA:333:G:C1'	20:AT:16:HIS:NE2	2.70	0.54
5:AE:19:MET:HE1	5:AE:24:ARG:HH12	1.73	0.54
1:AA:429:U:H2'	4:AD:25:ARG:HH12	1.73	0.54
16:AP:21:VAL:O	16:AP:33:ILE:HB	2.07	0.54
1:AA:583:A:C5'	17:AQ:90:ILE:CG2	2.84	0.54
21:B0:798:G:O2'	21:B0:1770:U:H4'	2.07	0.54
21:B0:788:G:C5'	21:B0:790:A:H1'	2.37	0.54
1:AA:425:G:H4'	4:AD:45:GLN:HE22	1.73	0.54
21:B0:1976:U:C2'	21:B0:1977:C:H5'	2.38	0.54
1:AA:689:C:OP1	11:AK:55:LYS:HD3	2.05	0.54
15:AO:27:VAL:O	15:AO:31:LEU:HD13	2.07	0.54
1:AA:1126:U:H1'	1:AA:1280:A:N6	2.22	0.54
4:AD:88:VAL:HA	5:AE:97:GLY:HA3	1.85	0.54
1:AA:761:G:H5'	17:AQ:102:GLY:CA	2.37	0.54
1:AA:319:G:H5'	1:AA:1468:A:C5'	2.37	0.54
1:AA:620:C:H2'	1:AA:621:A:O4'	2.07	0.54
1:AA:69:G:O2'	1:AA:70:A:H5'	2.08	0.54
21:B0:3128:G:C3'	21:B0:3174:C:H4'	2.38	0.54
4:AD:199:ASN:HD21	4:AD:201:GLN:HB2	1.71	0.54
3:AC:116:VAL:O	3:AC:120:VAL:HG23	2.07	0.54
15:AO:32:LEU:O	15:AO:36:ILE:HG13	2.06	0.54
21:B0:1187:A:H2'	21:B0:1188:A:C8	2.43	0.54
21:B0:1358:C:H2'	21:B0:1359:G:H5''	1.89	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:AJ:4:ILE:HA	10:AJ:100:THR:HA	1.88	0.54
1:AA:1457:A:C8	1:AA:1459:C:O2	2.60	0.54
1:AA:406:G:C8	1:AA:496:A:N3	2.75	0.54
1:AA:406:G:N7	1:AA:496:A:N3	2.55	0.54
1:AA:403:C:C4	1:AA:404:U:C5	2.95	0.54
1:AA:1181:G:O3'	1:AA:1184:G:H5'	2.07	0.54
1:AA:818:G:H3'	1:AA:819:A:H5''	1.87	0.54
10:AJ:65:LEU:CD1	14:AN:36:PHE:CZ	2.81	0.54
10:AJ:51:ARG:HB2	10:AJ:59:SER:CB	2.23	0.54
17:AQ:101:ARG:HD3	21:B0:731:A:N1	2.23	0.54
1:AA:598:U:H4'	8:AH:94:TYR:CG	2.43	0.54
17:AQ:26:GLN:HE21	17:AQ:37:LYS:HE2	1.71	0.54
2:AB:15:VAL:HG22	2:AB:209:ARG:HG3	1.88	0.54
21:B0:873:U:H1'	21:B0:2246:A:OP1	2.07	0.54
21:B0:1496:G:H1	21:B0:1527:G:H1	1.55	0.54
8:AH:36:LEU:HD12	8:AH:59:LEU:HD13	1.88	0.54
1:AA:532:A:H2'	1:AA:533:A:H5''	1.89	0.54
21:B0:1356:G:H1'	21:B0:1613:G:C2	2.43	0.54
18:AR:61:LYS:O	18:AR:65:ILE:HG13	2.08	0.54
7:AG:18:TYR:CE2	7:AG:59:LEU:HB2	2.42	0.54
1:AA:1402:C:O2	1:AA:1500:A:N1	2.41	0.54
3:AC:14:ILE:HG22	3:AC:15:THR:N	2.12	0.54
1:AA:489:C:P	4:AD:132:ARG:HH22	2.31	0.54
1:AA:570:G:H4'	1:AA:819:A:O2'	2.07	0.54
1:AA:281:G:O2'	1:AA:282:A:P	2.66	0.54
10:AJ:63:PHE:CE1	14:AN:45:ARG:HA	2.41	0.54
1:AA:68:G:O2'	1:AA:152:A:C2	2.56	0.54
1:AA:35:G:H2'	1:AA:36:C:C6	2.43	0.54
8:AH:56:LYS:N	8:AH:56:LYS:HD2	2.23	0.54
10:AJ:81:THR:C	10:AJ:83:GLU:H	2.10	0.54
21:B0:918:A:H2'	21:B0:919:U:C5'	2.35	0.54
2:AB:187:LEU:HD23	2:AB:214:ILE:HG21	1.90	0.54
21:B0:2437:G:H2'	21:B0:2469:G:C2	2.42	0.54
1:AA:407:G:O2'	4:AD:116:GLN:HG3	2.08	0.54
7:AG:116:ALA:HA	7:AG:119:ARG:CZ	2.37	0.54
21:B0:2516:U:H2'	21:B0:2517:C:C6	2.42	0.54
21:B0:1319:C:H41	21:B0:1622:G:H2'	1.73	0.54
1:AA:132:C:C5'	1:AA:262:A:O2'	2.45	0.54
1:AA:113:G:C1'	1:AA:354:G:C5'	2.85	0.54
1:AA:390:C:H4'	16:AP:28:ARG:NH2	2.22	0.54
1:AA:1066:C:O2'	1:AA:1067:A:H5'	2.07	0.54
1:AA:1405:G:O2'	1:AA:1519:A:C5'	2.53	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1371:G:P	9:AI:11:LYS:HG2	2.48	0.54
1:AA:1372:U:H5''	9:AI:71:SER:HB3	1.90	0.54
13:AM:60:VAL:O	13:AM:63:THR:HG22	2.07	0.54
1:AA:1155:G:HO3'	1:AA:1156:G:P	2.27	0.54
1:AA:958:A:C4	19:AS:55:LYS:HB2	2.43	0.54
2:AB:17:PHE:CD1	2:AB:18:GLY:N	2.75	0.54
21:B0:357:A:C2'	21:B0:358:C:H5'	2.38	0.54
5:AE:137:GLU:O	5:AE:141:GLN:HG3	2.07	0.54
21:B0:635:C:H3'	21:B0:636:G:H5''	1.90	0.54
3:AC:37:GLN:NE2	14:AN:52:GLN:OE1	2.40	0.54
21:B0:2677:U:H2'	21:B0:2678:C:C6	2.43	0.54
1:AA:292:G:H2'	1:AA:609:A:N1	2.22	0.54
3:AC:91:LEU:HD21	3:AC:99:VAL:CG1	2.30	0.54
1:AA:179:A:HO3'	1:AA:180:U:P	2.31	0.54
1:AA:818:G:O2'	1:AA:819:A:H5''	2.08	0.54
1:AA:933:G:C2	1:AA:935:A:C8	2.95	0.54
10:AJ:51:ARG:H	10:AJ:59:SER:HB2	1.72	0.54
1:AA:1003:G:C2	1:AA:2003:G:C6	2.96	0.54
1:AA:1268:A:H2'	1:AA:1269:A:C8	2.41	0.54
3:AC:130:VAL:O	3:AC:134:ILE:HG13	2.07	0.54
2:AB:124:SER:CB	2:AB:125:PRO:HD2	2.31	0.54
1:AA:639:G:O2'	1:AA:640:A:H5'	2.08	0.54
4:AD:32:ALA:C	4:AD:34:GLU:N	2.60	0.54
21:B0:2510:A:H61	21:B0:2641:A:N6	2.06	0.54
11:AK:13:GLN:HA	11:AK:75:TYR:O	2.08	0.54
1:AA:1081:G:C8	5:AE:27:ARG:NH1	2.75	0.54
21:B0:1713:G:H2'	21:B0:1714:A:O4'	2.08	0.54
21:B0:317:U:C2'	21:B0:318:G:H5''	2.38	0.54
1:AA:1128:C:H2'	1:AA:1129:C:H5''	1.90	0.54
7:AG:113:GLU:HG2	7:AG:119:ARG:HG2	1.90	0.54
21:B0:857:U:H2'	21:B0:858:G:H5'	1.89	0.54
21:B0:1615:C:H2'	21:B0:1616:C:C6	2.42	0.54
1:AA:391:G:P	16:AP:28:ARG:HH22	2.31	0.54
1:AA:702:A:N6	21:B0:1838:G:C2	2.76	0.54
5:AE:101:ILE:O	5:AE:120:THR:HB	2.08	0.54
1:AA:1068:G:N2	1:AA:1191:A:N3	2.55	0.54
1:AA:403:C:C4	1:AA:404:U:H5	2.25	0.54
1:AA:1225:A:C4'	19:AS:78:ARG:NH1	2.70	0.54
1:AA:1367:C:OP2	9:AI:112:LYS:NZ	2.37	0.54
1:AA:1368:G:P	9:AI:114:TYR:N	2.80	0.54
1:AA:101:A:O2'	1:AA:102:G:H5'	2.07	0.54
16:AP:43:LYS:HB3	16:AP:48:TRP:CD1	2.43	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1038:C:H2'	1:AA:1039:C:C6	2.43	0.54
1:AA:619:U:N3	4:AD:135:LEU:CD2	2.71	0.54
21:B0:2227:C:C2'	21:B0:2228:U:H5'	2.35	0.54
4:AD:148:VAL:HG11	4:AD:158:ILE:HD13	1.88	0.54
14:AN:9:LYS:C	14:AN:9:LYS:HD3	2.28	0.54
21:B0:2446:C:H2'	21:B0:2447:G:C8	2.43	0.54
1:AA:1257:U:O2'	1:AA:1258:G:OP2	2.21	0.54
21:B0:1856:U:H3'	21:B0:3865:A:H2'	1.87	0.54
21:B0:1856:U:H3'	21:B0:3865:A:N9	1.78	0.54
20:AT:72:LEU:HD21	20:AT:80:ARG:CZ	2.38	0.54
1:AA:115:G:HO2'	1:AA:116:A:P	2.20	0.54
1:AA:401:C:C4'	1:AA:622:A:H1'	2.37	0.54
5:AE:76:ILE:O	5:AE:93:PRO:HB3	2.07	0.54
3:AC:33:LEU:C	3:AC:33:LEU:HD23	2.29	0.54
1:AA:394:G:O6	1:AA:395:C:N4	2.40	0.54
2:AB:23:ARG:HD3	2:AB:23:ARG:N	2.22	0.54
6:AF:4:TYR:OH	6:AF:69:GLU:HB3	2.07	0.54
10:AJ:47:PHE:CD2	14:AN:37:PHE:CE1	2.94	0.54
21:B0:201:G:H2'	21:B0:202:A:C8	2.42	0.54
21:B0:2379:G:H2'	21:B0:2380:U:O4'	2.07	0.54
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.88	0.54
1:AA:419:C:H5''	1:AA:513:C:O4'	2.08	0.54
12:AL:53:ARG:HG2	12:AL:69:TYR:HE1	1.73	0.54
9:AI:85:LEU:O	9:AI:92:TYR:HD1	1.91	0.54
1:AA:33:A:H2'	1:AA:34:C:H6	1.72	0.54
1:AA:750:G:H1'	15:AO:22:THR:OG1	2.08	0.54
16:AP:11:SER:OG	16:AP:14:ASN:HB3	2.08	0.54
2:AB:75:LYS:HD3	2:AB:75:LYS:O	2.08	0.54
21:B0:319:G:H21	21:B0:340:G:H21	1.55	0.54
1:AA:1475:G:H5'	21:B0:1706:A:C5'	2.31	0.54
1:AA:131:C:H4'	1:AA:263:A:C5'	2.37	0.54
1:AA:922:G:H1	1:AA:1396:A:N6	2.00	0.54
1:AA:187:G:H21	20:AT:105:SER:HA	1.72	0.54
1:AA:1494:G:O2'	1:AA:1495:U:H5'	2.08	0.54
1:AA:1496:C:H1'	1:AA:1517:G:H1	1.72	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:1016:A:C1'	1:AA:1218:C:H4'	2.37	0.54
1:AA:244:U:N3	1:AA:893:C:O2	2.41	0.54
1:AA:1383:C:C4	1:AA:1384:C:C5	2.96	0.54
13:AM:53:VAL:O	13:AM:57:ARG:HB2	2.08	0.54
19:AS:51:VAL:HG12	19:AS:52:TYR:N	2.23	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:AF:69:GLU:HA	6:AF:72:VAL:CG2	2.36	0.54
10:AJ:3:LYS:N	10:AJ:75:ILE:HA	2.22	0.54
18:AR:86:VAL:O	18:AR:87:ARG:CB	2.55	0.54
10:AJ:4:ILE:HG12	10:AJ:100:THR:HB	1.90	0.54
1:AA:743:U:H2'	1:AA:744:C:C6	2.43	0.54
12:AL:82:VAL:N	12:AL:106:ASP:OD1	2.34	0.54
1:AA:1458:G:C5	1:AA:1459:C:O2	2.61	0.53
21:B0:3877:A:OP1	21:B0:1861:G:OP2	2.21	0.53
1:AA:582:U:O4'	17:AQ:105:ALA:HA	2.08	0.53
1:AA:702:A:C6	21:B0:1838:G:C2'	2.63	0.53
1:AA:323:U:C3'	20:AT:22:ARG:HB2	2.38	0.53
3:AC:181:ASN:HD21	3:AC:204:LEU:HD12	1.72	0.53
1:AA:961:U:OP1	1:AA:1223:C:C4'	2.56	0.53
1:AA:43:C:H5''	16:AP:12:LYS:HB3	1.90	0.53
13:AM:37:THR:O	13:AM:37:THR:HG22	2.07	0.53
3:AC:138:VAL:HG21	3:AC:168:ALA:HB1	1.89	0.53
21:B0:800:U:H3'	21:B0:804:C:H41	1.73	0.53
21:B0:2246:A:H2'	21:B0:2246:A:N3	2.23	0.53
21:B0:1316:G:H2'	21:B0:1317:G:H8	1.72	0.53
21:B0:2241:U:H1'	21:B0:2307:A:H1'	1.90	0.53
21:B0:1137:A:H5''	21:B0:1138:A:H5''	1.90	0.53
21:B0:968:C:H2'	21:B0:970:A:OP1	2.08	0.53
1:AA:86:G:H4'	1:AA:87:G:OP2	2.07	0.53
21:B0:3196:G:O2'	21:B0:3197:U:P	2.66	0.53
1:AA:94:G:C4	1:AA:96:C:C6	2.97	0.53
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.08	0.53
3:AC:38:ARG:HB3	3:AC:94:LEU:HD21	1.88	0.53
1:AA:1329:A:C4'	13:AM:29:ARG:HD2	2.38	0.53
17:AQ:27:PHE:CE1	17:AQ:36:ILE:HD11	2.42	0.53
5:AE:31:LEU:HD22	5:AE:43:LEU:CD2	2.39	0.53
3:AC:150:LYS:CE	3:AC:152:ILE:HD11	2.38	0.53
3:AC:112:SER:CB	3:AC:115:LEU:HD12	2.36	0.53
21:B0:45:C:H5''	21:B0:192:G:C8	2.43	0.53
9:AI:81:ILE:O	9:AI:85:LEU:HB2	2.08	0.53
21:B0:2316:G:H2'	21:B0:2317:G:H8	1.74	0.53
1:AA:702:A:N6	21:B0:1839:A:O4'	2.40	0.53
14:AN:44:LEU:HD12	14:AN:44:LEU:C	2.29	0.53
13:AM:8:GLU:OE1	13:AM:22:ILE:HA	2.08	0.53
1:AA:717:C:H3'	1:AA:718:G:P	2.48	0.53
1:AA:501:C:O4'	1:AA:548:G:N2	2.41	0.53
1:AA:299:G:H2'	1:AA:300:A:C8	2.44	0.53
1:AA:619:U:N3	4:AD:135:LEU:CG	2.71	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:AL:46:LYS:CG	12:AL:47:LYS:N	2.71	0.53
2:AB:33:TYR:HB3	2:AB:41:ILE:O	2.08	0.53
21:B0:2623:A:H2'	21:B0:2624:G:O4'	2.09	0.53
7:AG:138:LYS:HE2	7:AG:142:GLU:OE1	2.08	0.53
12:AL:53:ARG:NH1	12:AL:92:ASP:OD2	2.42	0.53
21:B0:658:G:H4'	21:B0:2331:A:H5'	1.90	0.53
21:B0:1217:U:H2'	21:B0:1218:C:C6	2.43	0.53
21:B0:239:A:H4'	21:B0:620:G:H5'	1.89	0.53
21:B0:2483:U:H2'	21:B0:2484:G:H5'	1.91	0.53
21:B0:2392:G:H2'	21:B0:2393:G:C8	2.44	0.53
1:AA:80:C:H2'	1:AA:81:C:C6	2.43	0.53
1:AA:1503:A:C5'	1:AA:1531:A:H1'	2.38	0.53
1:AA:322:C:C2'	20:AT:23:ARG:HD2	2.37	0.53
1:AA:1068:G:OP2	1:AA:1068:G:H8	1.91	0.53
1:AA:960:U:O2'	1:AA:1223:C:H5''	2.07	0.53
1:AA:960:U:H5'	1:AA:960:U:O2	2.08	0.53
21:B0:3184:C:H2'	21:B0:3185:U:H5'	1.89	0.53
21:B0:3098:U:C2'	21:B0:3099:U:C6	2.89	0.53
1:AA:1269:A:N1	1:AA:1313:U:C4'	2.72	0.53
1:AA:300:A:H2'	1:AA:301:G:O4'	2.08	0.53
21:B0:1141:U:H5'	21:B0:2549:G:N2	2.23	0.53
1:AA:527:G:O2'	1:AA:535:A:N1	2.32	0.53
5:AE:80:ILE:HD13	5:AE:138:ALA:HB1	1.90	0.53
1:AA:33:A:H2'	1:AA:34:C:C6	2.44	0.53
21:B0:412:U:H2'	21:B0:413:G:O4'	2.08	0.53
7:AG:69:VAL:HG21	7:AG:104:LEU:HD21	1.90	0.53
21:B0:757:U:O2'	21:B0:758:G:H5'	2.09	0.53
21:B0:1861:G:P	53:B5:38:GLY:CA	2.96	0.53
1:AA:315:A:H5''	1:AA:317:G:OP2	2.08	0.53
1:AA:1110:A:C2'	1:AA:1111:A:H5'	2.38	0.53
1:AA:933:G:OP2	7:AG:3:ARG:CB	2.55	0.53
21:B0:3102:G:H2'	21:B0:3103:A:H8	1.74	0.53
1:AA:1238:A:C2	1:AA:1241:G:O2'	2.62	0.53
21:B0:2494:C:H2'	21:B0:2495:G:C8	2.44	0.53
21:B0:459:A:H1'	21:B0:466:A:N7	2.23	0.53
1:AA:21:G:H1'	1:AA:914:A:N6	2.22	0.53
21:B0:1298:G:N2	21:B0:1341:G:H5''	2.23	0.53
8:AH:8:ASP:O	8:AH:12:ARG:HG3	2.08	0.53
1:AA:1240:U:C4	7:AG:32:ARG:NH2	2.77	0.53
21:B0:3867:G:N2	53:B5:43:LYS:CA	2.72	0.53
17:AQ:67:LYS:CA	17:AQ:70:ARG:HH12	2.21	0.53
4:AD:89:THR:CB	5:AE:97:GLY:C	2.67	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:762:C:C5'	21:B0:729:A:H61	2.20	0.53
1:AA:376:G:N1	1:AA:389:A:N1	2.57	0.53
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.09	0.53
1:AA:953:G:H2'	1:AA:954:G:O4'	2.09	0.53
10:AJ:65:LEU:CD1	14:AN:36:PHE:CE1	2.89	0.53
5:AE:18:ARG:HG2	5:AE:19:MET:N	2.24	0.53
11:AK:14:VAL:O	11:AK:15:ALA:CB	2.57	0.53
1:AA:1081:G:OP2	5:AE:27:ARG:HD2	2.07	0.53
8:AH:25:ASP:OD1	8:AH:60:ARG:HD3	2.09	0.53
21:B0:2445:C:H2'	21:B0:2446:C:O4'	2.08	0.53
8:AH:119:LEU:HD12	8:AH:124:ALA:HA	1.90	0.53
4:AD:160:GLN:O	4:AD:163:GLU:HB3	2.08	0.53
21:B0:1479:G:N2	21:B0:1543:G:H21	2.06	0.53
21:B0:394:U:H2'	21:B0:395:G:H8	1.74	0.53
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.90	0.53
17:AQ:104:LYS:CB	21:B0:727:U:O4'	2.56	0.53
1:AA:6:G:H22	5:AE:98:THR:CG2	2.18	0.53
1:AA:315:A:C4'	1:AA:353:A:N6	2.70	0.53
1:AA:375:U:O2'	1:AA:376:G:H5'	2.08	0.53
1:AA:8:A:N6	4:AD:209:ARG:HB2	2.24	0.53
1:AA:1110:A:C6	1:AA:1111:A:C5	2.97	0.53
1:AA:1111:A:N1	3:AC:177:THR:CB	2.72	0.53
1:AA:1347:G:C2'	1:AA:1348:U:OP2	2.56	0.53
14:AN:44:LEU:HD12	14:AN:44:LEU:O	2.08	0.53
1:AA:1418:A:C2	21:B0:1931:G:O2'	2.60	0.53
1:AA:1296:C:C1'	1:AA:1302:U:C4	2.92	0.53
21:B0:1746:A:C2'	21:B0:1747:G:H5'	2.36	0.53
2:AB:124:SER:O	2:AB:127:ILE:HG13	2.08	0.53
2:AB:134:GLU:C	2:AB:136:VAL:H	2.12	0.53
21:B0:917:U:H2'	21:B0:918:A:O4'	2.09	0.53
21:B0:616:U:C2'	21:B0:617:U:H5''	2.35	0.53
12:AL:55:VAL:HG11	12:AL:67:THR:CG2	2.39	0.53
12:AL:55:VAL:HG11	12:AL:67:THR:HG23	1.91	0.53
1:AA:386:C:C2'	1:AA:387:U:H5'	2.39	0.53
21:B0:1288:A:O2'	21:B0:1289:A:H5'	2.08	0.53
21:B0:2322:U:O2'	21:B0:2323:U:H5'	2.09	0.53
19:AS:42:PRO:O	19:AS:45:VAL:HG23	2.09	0.53
2:AB:32:ILE:HD13	2:AB:40:HIS:CD2	2.44	0.53
1:AA:1481:U:O2'	1:AA:1482:G:H5'	2.09	0.53
1:AA:8:A:C1'	5:AE:102:ALA:C	2.77	0.53
1:AA:1330:U:C5'	13:AM:23:TYR:O	2.57	0.53
1:AA:1112:C:O2	3:AC:179:ARG:HB3	2.09	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:AC:130:VAL:HG12	3:AC:134:ILE:HD11	1.91	0.53
1:AA:791:G:H2'	1:AA:792:A:H5'	1.91	0.53
21:B0:1791:C:H2'	21:B0:1792:C:H5''	1.91	0.53
21:B0:2470:U:O2'	21:B0:2471:U:H5'	2.08	0.53
21:B0:513:A:H4'	21:B0:515:A:H5'	1.90	0.53
2:AB:142:LEU:HD22	2:AB:146:GLN:HE22	1.73	0.53
7:AG:69:VAL:HG12	7:AG:100:ALA:HA	1.90	0.53
21:B0:216:U:H5''	21:B0:601:A:N6	2.23	0.53
1:AA:1278:U:OP1	1:AA:1279:A:H5'	2.09	0.53
1:AA:252:U:H2'	1:AA:253:U:C6	2.44	0.53
1:AA:109:A:H5'	1:AA:110:C:C5	2.44	0.53
1:AA:1108:G:H4'	1:AA:1191:A:C4'	2.39	0.53
1:AA:1110:A:O2'	1:AA:1111:A:H5'	2.08	0.53
1:AA:20:U:C2	1:AA:915:A:N6	2.68	0.53
1:AA:101:A:H2'	1:AA:102:G:H8	1.74	0.53
9:AI:48:GLU:OE1	9:AI:51:ARG:HD2	2.09	0.53
1:AA:59:A:H2'	1:AA:331:G:H1	1.73	0.53
21:B0:366:U:H2'	21:B0:367:G:C8	2.43	0.53
2:AB:73:THR:HG23	2:AB:95:GLN:O	2.09	0.53
2:AB:18:GLY:CA	2:AB:42:ILE:H	2.20	0.53
21:B0:1286:U:H5''	21:B0:1663:C:H42	1.73	0.53
21:B0:2057:U:H1'	21:B0:2577:A:H1'	1.90	0.53
7:AG:71:PRO:HD3	7:AG:103:TRP:HZ3	1.73	0.53
13:AM:117:VAL:HG12	13:AM:118:ALA:N	2.24	0.53
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.23	0.53
8:AH:80:ILE:O	8:AH:80:ILE:HG22	2.08	0.53
13:AM:102:ARG:HB2	13:AM:102:ARG:NH1	2.24	0.53
21:B0:1789:U:C2'	21:B0:1790:G:H5'	2.39	0.53
21:B0:605:G:H4'	21:B0:949:G:O2'	2.08	0.53
21:B0:1730:G:H2'	21:B0:1731:C:C6	2.43	0.53
1:AA:1416:G:P	1:AA:1417:G:P	3.07	0.53
1:AA:184:G:O4'	1:AA:224:C:H4'	2.08	0.53
1:AA:1329:A:H5'	13:AM:29:ARG:CD	2.39	0.53
1:AA:976:G:H22	1:AA:2361:C:H2'	1.72	0.53
21:B0:2010:G:H2'	21:B0:2011:U:O4'	2.09	0.53
21:B0:665:A:OP2	21:B0:666:U:H5'	2.09	0.53
1:AA:128:G:H4'	17:AQ:3:LYS:CG	2.38	0.53
21:B0:1474:A:N3	21:B0:1474:A:H3'	2.23	0.53
21:B0:192:G:C4'	21:B0:193:A:H4'	2.38	0.53
1:AA:979:C:H2'	1:AA:980:C:H5'	1.91	0.53
18:AR:73:ALA:HB3	18:AR:79:LEU:HD12	1.91	0.53
21:B0:2025:A:H2'	21:B0:2026:C:H5''	1.91	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:B9:81:C:H2'	22:B9:82:U:O4'	2.09	0.53
1:AA:191:G:H21	20:AT:103:GLY:HA2	1.73	0.52
21:B0:3877:A:C3'	21:B0:1861:G:H3'	2.39	0.52
1:AA:1397:C:H4'	1:AA:1398:A:OP2	2.08	0.52
1:AA:1416:G:OP2	1:AA:1417:G:OP2	2.26	0.52
3:AC:32:LEU:HD21	3:AC:59:ARG:HD2	1.91	0.52
12:AL:42:THR:HG21	12:AL:52:LEU:HB3	1.92	0.52
1:AA:623:C:O2'	1:AA:624:C:H5'	2.09	0.52
12:AL:47:LYS:HB3	12:AL:48:PRO:HD3	1.91	0.52
11:AK:17:GLY:O	11:AK:80:VAL:HA	2.09	0.52
6:AF:3:ARG:NH2	6:AF:64:GLN:NE2	2.57	0.52
21:B0:1289:A:O2'	21:B0:1290:A:H5'	2.09	0.52
9:AI:23:ASN:C	9:AI:23:ASN:HD22	2.12	0.52
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.44	0.52
21:B0:468:A:H2'	21:B0:469:G:H4'	1.90	0.52
21:B0:669:G:H2'	21:B0:670:U:C6	2.44	0.52
1:AA:1394:A:N3	1:AA:1501:C:C1'	2.73	0.52
1:AA:923:A:C1'	1:AA:1398:A:N3	2.70	0.52
1:AA:1468:A:H2'	1:AA:1469:G:O4'	2.10	0.52
1:AA:376:G:H5''	16:AP:5:ARG:HB2	1.91	0.52
13:AM:88:ARG:HG3	13:AM:98:VAL:CG1	2.40	0.52
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.44	0.52
1:AA:826:C:O2'	8:AH:15:ASN:CB	2.57	0.52
1:AA:1435:G:H2'	1:AA:1436:U:H6	1.69	0.52
17:AQ:45:HIS:HB2	17:AQ:65:ILE:CD1	2.37	0.52
3:AC:77:ILE:HG22	3:AC:81:GLY:HA2	1.90	0.52
2:AB:166:ASP:OD2	2:AB:169:LYS:HB2	2.09	0.52
9:AI:17:VAL:HG11	9:AI:81:ILE:HA	1.90	0.52
1:AA:373:A:O2'	1:AA:374:A:H5'	2.09	0.52
21:B0:579:G:H2'	21:B0:2013:A:N6	2.24	0.52
10:AJ:44:VAL:HG22	10:AJ:66:ARG:HB3	1.91	0.52
21:B0:2860:C:H2'	21:B0:2861:A:O4'	2.09	0.52
3:AC:139:GLN:O	3:AC:143:GLU:N	2.37	0.52
1:AA:760:G:N1	17:AQ:105:ALA:HB2	2.20	0.52
21:B0:891:A:O2'	21:B0:892:A:P	2.68	0.52
21:B0:910:U:H2'	21:B0:911:A:H5'	1.83	0.52
1:AA:142:G:H4'	1:AA:195:A:H61	1.35	0.52
3:AC:20:SER:HB3	3:AC:22:TRP:NE1	2.24	0.52
1:AA:104:G:C5'	1:AA:172:A:N1	2.64	0.52
19:AS:13:ASP:O	19:AS:17:GLU:HG2	2.10	0.52
13:AM:11:ARG:CG	13:AM:12:ASN:N	2.72	0.52
1:AA:370:C:O2'	1:AA:371:G:H5'	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.09	0.52
21:B0:2329:C:C2'	21:B0:2330:G:H5'	2.39	0.52
21:B0:490:A:O2'	21:B0:491:A:H5'	2.09	0.52
21:B0:1278:A:H4'	21:B0:1279:G:O5'	2.08	0.52
20:AT:76:ALA:O	20:AT:80:ARG:HG2	2.09	0.52
20:AT:50:GLU:O	20:AT:100:ILE:HD12	2.09	0.52
1:AA:621:A:H2'	1:AA:622:A:C8	2.44	0.52
1:AA:977:A:C2'	1:AA:978:A:H5'	2.38	0.52
13:AM:78:ILE:HA	13:AM:81:LEU:CD2	2.38	0.52
1:AA:118:U:HO3'	1:AA:119:A:P	2.29	0.52
1:AA:588:G:C5	1:AA:753:A:N7	2.78	0.52
1:AA:714:G:C4'	1:AA:776:G:C5'	2.86	0.52
3:AC:23:TYR:CD2	3:AC:24:ALA:N	2.78	0.52
1:AA:108:G:N1	20:AT:15:ARG:NE	2.57	0.52
1:AA:227:G:C4	1:AA:228:A:C8	2.98	0.52
21:B0:2240:C:H2'	21:B0:2241:U:H5'	1.90	0.52
1:AA:148:G:H2'	1:AA:149:A:H8	1.74	0.52
1:AA:357:G:O2'	1:AA:358:U:H5'	2.09	0.52
1:AA:175:C:H4'	20:AT:25:ARG:HD2	1.91	0.52
1:AA:983:A:H2	1:AA:984:C:C5	2.28	0.52
11:AK:27:ASN:HA	11:AK:56:GLY:HA2	1.92	0.52
21:B0:841:G:N3	21:B0:841:G:H3'	2.24	0.52
21:B0:839:U:H2'	21:B0:841:G:O4'	2.09	0.52
21:B0:2418:A:H4'	21:B0:2420:C:OP2	2.10	0.52
1:AA:130:A:H1'	1:AA:264:U:O4'	2.09	0.52
5:AE:74:GLY:HA3	5:AE:116:THR:HG22	1.92	0.52
5:AE:115:VAL:HG12	5:AE:116:THR:N	2.24	0.52
1:AA:324:G:OP1	20:AT:22:ARG:HB3	2.09	0.52
1:AA:1016:A:H1'	1:AA:1218:C:H4'	1.91	0.52
9:AI:127:LYS:HD2	9:AI:127:LYS:N	2.25	0.52
1:AA:1315:U:H5	19:AS:6:LYS:NZ	2.08	0.52
21:B0:942:U:O2'	21:B0:943:U:H5'	2.09	0.52
1:AA:1003:G:N2	1:AA:1039:C:C2	2.77	0.52
1:AA:1038:C:H2'	1:AA:1039:C:H6	1.75	0.52
14:AN:3:ARG:O	14:AN:4:LYS:C	2.48	0.52
13:AM:49:THR:CG2	13:AM:51:ALA:H	2.13	0.52
6:AF:8:ILE:HD11	6:AF:79:LEU:HD13	1.92	0.52
21:B0:509:U:H3	21:B0:513:A:H62	1.58	0.52
21:B0:860:U:H2'	21:B0:861:G:H5'	1.90	0.52
16:AP:19:ILE:HG22	16:AP:36:ILE:HG13	1.90	0.52
1:AA:1006:C:H2'	1:AA:1007:C:C6	2.44	0.52
22:B9:50:U:H2'	22:B9:51:G:C8	2.44	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1121:U:H2'	1:AA:1122:U:H6	1.73	0.52
1:AA:1064:G:OP2	1:AA:1385:G:O2'	2.27	0.52
19:AS:10:PHE:C	19:AS:10:PHE:CD2	2.83	0.52
1:AA:246:A:N6	1:AA:281:G:H1'	2.24	0.52
1:AA:935:A:C4'	1:AA:1384:C:C2	2.91	0.52
10:AJ:62:HIS:CE1	14:AN:61:TRP:CH2	2.97	0.52
1:AA:588:G:C6	1:AA:753:A:C8	2.98	0.52
1:AA:300:A:H2	1:AA:566:G:O6	1.93	0.52
1:AA:1202:G:H2'	1:AA:1203:C:O4'	2.10	0.52
1:AA:860:A:H4'	8:AH:75:ARG:NH1	2.25	0.52
1:AA:1128:C:H1'	1:AA:1146:A:H61	1.75	0.52
21:B0:176:A:H1'	21:B0:2221:G:H21	1.75	0.52
20:AT:93:GLU:HA	20:AT:93:GLU:OE2	2.09	0.52
21:B0:2533:U:H2'	21:B0:2534:U:C6	2.45	0.52
13:AM:73:GLU:O	13:AM:76:ALA:HB3	2.09	0.52
21:B0:2698:G:H2'	21:B0:2699:G:C8	2.45	0.52
1:AA:1409:C:C2'	1:AA:1410:G:C5'	2.87	0.52
1:AA:1483:A:C6	1:AA:1484:C:N3	2.77	0.52
21:B0:891:A:HO2'	21:B0:892:A:H5'	0.70	0.52
3:AC:22:TRP:CZ2	14:AN:54:PRO:HG3	2.44	0.52
1:AA:1086:U:O3'	1:AA:1389:C:C5'	2.57	0.52
19:AS:53:ASN:HB2	19:AS:56:GLN:H	1.73	0.52
6:AF:10:LEU:HD11	6:AF:59:TYR:CD2	2.41	0.52
2:AB:23:ARG:O	2:AB:24:TRP:O	2.27	0.52
2:AB:15:VAL:HG11	2:AB:209:ARG:C	2.30	0.52
1:AA:163:C:O2'	1:AA:164:U:H5'	2.10	0.52
3:AC:83:ARG:C	3:AC:85:ARG:N	2.63	0.52
1:AA:1424:C:O2'	1:AA:1425:U:H5'	2.09	0.52
1:AA:1129:C:O2'	1:AA:1130:A:OP2	2.24	0.52
6:AF:43:LEU:CD2	6:AF:43:LEU:H	2.23	0.52
1:AA:1255:G:O2'	1:AA:1259:C:C6	2.62	0.52
1:AA:1256:A:C5'	1:AA:1258:G:O4'	2.55	0.52
21:B0:3866:A:N7	21:B0:3875:A:H2	2.07	0.52
1:AA:320:C:C4'	1:AA:1434:A:N1	2.73	0.52
1:AA:355:C:H5'	1:AA:389:A:P	2.50	0.52
1:AA:322:C:C3'	20:AT:23:ARG:HD2	2.39	0.52
3:AC:94:LEU:HD22	3:AC:95:THR:HG23	1.92	0.52
1:AA:1234:C:H1'	1:AA:1364:U:O2	2.10	0.52
1:AA:1348:U:OP1	9:AI:110:GLU:HB3	2.10	0.52
22:B9:107:C:C2'	22:B9:108:G:H5'	2.39	0.52
14:AN:33:VAL:HA	14:AN:40:CYS:HA	1.91	0.52
21:B0:929:A:H3'	21:B0:930:A:C5'	2.30	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:AB:10:LEU:C	2:AB:12:GLU:H	2.12	0.52
1:AA:791:G:H2'	1:AA:792:A:C5'	2.40	0.52
1:AA:794:A:H2'	1:AA:795:C:C6	2.45	0.52
2:AB:26:PRO:O	2:AB:29:ALA:HB2	2.10	0.52
18:AR:19:LYS:O	18:AR:20:ALA:HB2	2.10	0.52
21:B0:2401:A:H2'	21:B0:2403:C:C5	2.45	0.52
21:B0:1018:C:H2'	21:B0:1019:U:C5	2.44	0.52
1:AA:1458:G:O5'	1:AA:1458:G:H8	1.91	0.52
1:AA:189:A:H61	20:AT:104:LEU:HD22	1.71	0.52
1:AA:1483:A:C6	1:AA:1484:C:C5	2.97	0.52
1:AA:1191:A:H2'	1:AA:1192:C:C6	2.45	0.52
13:AM:77:ASN:O	13:AM:80:ARG:HB3	2.10	0.52
1:AA:475:C:H2'	1:AA:476:U:C6	2.44	0.52
1:AA:1027:C:O3'	1:AA:1028:C:P	2.68	0.52
3:AC:154:SER:O	3:AC:165:THR:HA	2.09	0.52
1:AA:1238:A:H2	1:AA:1241:G:H1'	1.75	0.52
1:AA:1152:A:H2'	1:AA:1153:C:C6	2.45	0.52
7:AG:42:ILE:CG2	7:AG:120:ILE:HD12	2.39	0.52
21:B0:1686:A:H2'	21:B0:1687:C:H5'	1.92	0.52
21:B0:1325:U:H4'	21:B0:1326:U:C5	2.45	0.52
1:AA:828:A:H2'	1:AA:829:G:O4'	2.10	0.52
8:AH:24:THR:HG23	8:AH:61:VAL:HB	1.92	0.52
8:AH:49:GLU:HG2	8:AH:62:TYR:HE2	1.75	0.52
21:B0:476:G:H2'	21:B0:477:A:C8	2.45	0.52
1:AA:1256:A:C1'	1:AA:1258:G:C5	2.92	0.52
1:AA:1457:A:C4	1:AA:1459:C:C2	2.89	0.52
21:B0:1856:U:C3'	21:B0:3865:A:H8	2.03	0.52
1:AA:131:C:C4'	1:AA:263:A:H4'	2.34	0.52
1:AA:6:G:C5	5:AE:119:LEU:HD12	2.44	0.52
1:AA:190:A:N1	20:AT:101:GLY:C	2.58	0.52
4:AD:208:SER:OG	5:AE:101:ILE:HG12	2.10	0.52
1:AA:926:G:N2	1:AA:1505:G:C8	2.78	0.52
12:AL:119:LYS:O	12:AL:120:TYR:HB2	2.10	0.52
1:AA:476:U:O4	1:AA:477:G:C8	2.55	0.52
1:AA:143:A:H4'	1:AA:144:G:C8	2.45	0.52
1:AA:244:U:O2	1:AA:894:G:H1'	2.10	0.52
22:B9:73:C:H3'	22:B9:74:A:P	2.48	0.52
1:AA:2003:G:N1	1:AA:1004:A:H1'	2.25	0.52
10:AJ:22:LYS:CE	10:AJ:90:LEU:HD12	2.33	0.52
3:AC:70:VAL:O	3:AC:106:VAL:HG23	2.09	0.52
5:AE:12:LEU:HD22	5:AE:12:LEU:C	2.30	0.52
1:AA:808:C:OP2	15:AO:48:LYS:HE2	2.10	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:1029:C:C3'	21:B0:1030:U:H5''	2.40	0.52
10:AJ:38:ILE:HG13	10:AJ:71:LEU:HB3	1.90	0.52
21:B0:2245:A:H4'	21:B0:2246:A:O5'	2.10	0.52
21:B0:1140:A:H61	21:B0:2470:U:H6	1.58	0.52
1:AA:1423:G:O2'	1:AA:1424:C:H5'	2.09	0.52
1:AA:26:A:C3'	1:AA:27:G:C5'	2.86	0.52
5:AE:40:ARG:HG2	5:AE:40:ARG:HH11	1.75	0.52
21:B0:81:C:H4'	21:B0:307:C:H5'	1.92	0.52
1:AA:853:G:O2'	1:AA:854:G:H5'	2.10	0.52
21:B0:758:G:H2'	21:B0:759:C:H5'	1.92	0.52
21:B0:959:C:H5''	21:B0:972:C:O2'	2.10	0.52
21:B0:986:A:H2'	21:B0:987:G:H5'	1.92	0.52
1:AA:203:A:O2'	1:AA:206:C:H4'	2.10	0.52
1:AA:131:C:C1'	1:AA:263:A:O4'	2.58	0.51
1:AA:130:A:C5	1:AA:264:U:C1'	2.43	0.51
1:AA:320:C:O4'	1:AA:1434:A:N1	2.40	0.51
4:AD:205:GLU:HB3	5:AE:107:ARG:NH2	2.25	0.51
1:AA:1097:C:H2'	1:AA:1098:C:C6	2.45	0.51
1:AA:1518:A:H2'	1:AA:1519:A:C8	2.45	0.51
1:AA:1085:U:O3'	1:AA:1086:U:C6	2.64	0.51
1:AA:1253:G:O2'	1:AA:1356:G:H5'	2.09	0.51
4:AD:65:ARG:HB2	4:AD:75:PHE:CE1	2.45	0.51
5:AE:12:LEU:CD1	5:AE:31:LEU:HB2	2.39	0.51
14:AN:57:ARG:HG2	14:AN:58:LYS:H	1.75	0.51
21:B0:1038:U:O2	21:B0:2466:G:H4'	2.10	0.51
3:AC:79:ARG:HG2	3:AC:82:GLU:HG2	1.92	0.51
21:B0:1431:U:H2'	21:B0:1432:G:O4'	2.09	0.51
1:AA:844:A:H2'	1:AA:845:A:C8	2.45	0.51
1:AA:80:C:H2'	1:AA:81:C:H6	1.75	0.51
1:AA:148:G:H2'	1:AA:149:A:C8	2.45	0.51
21:B0:840:U:H4'	21:B0:841:G:C2	2.45	0.51
8:AH:14:ARG:O	8:AH:18:ARG:HD3	2.10	0.51
21:B0:77:C:H2'	21:B0:78:C:C6	2.45	0.51
21:B0:441:A:H2'	21:B0:442:A:O4'	2.10	0.51
21:B0:451:A:H2'	21:B0:452:G:C8	2.45	0.51
1:AA:116:A:N1	1:AA:314:C:O4'	2.43	0.51
12:AL:115:LYS:O	12:AL:117:ARG:N	2.37	0.51
3:AC:177:THR:O	3:AC:177:THR:HG23	2.10	0.51
21:B0:1119:U:O4	21:B0:1120:C:C5	2.62	0.51
10:AJ:22:LYS:NZ	10:AJ:91:PRO:HD3	2.25	0.51
21:B0:1029:C:OP1	21:B0:1047:G:H4'	2.10	0.51
21:B0:230:C:H2'	21:B0:231:G:O4'	2.10	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:925:U:H4'	21:B0:926:C:C6	2.45	0.51
21:B0:513:A:C4'	21:B0:515:A:H5'	2.40	0.51
21:B0:652:C:H42	21:B0:657:A:H61	1.56	0.51
3:AC:47:LEU:N	3:AC:47:LEU:CD1	2.74	0.51
3:AC:84:ILE:HG12	3:AC:84:ILE:O	2.10	0.51
21:B0:1031:C:H1'	21:B0:1151:U:O2	2.09	0.51
21:B0:864:C:H2'	21:B0:865:A:C8	2.46	0.51
1:AA:999:C:H2'	1:AA:1000:U:C6	2.46	0.51
21:B0:2038:C:H5'	21:B0:2039:G:H5'	1.91	0.51
5:AE:13:ILE:HG22	5:AE:30:ALA:CB	2.40	0.51
11:AK:126:ARG:O	11:AK:127:LYS:C	2.48	0.51
1:AA:923:A:HO2'	1:AA:1398:A:H2'	1.74	0.51
1:AA:8:A:N7	4:AD:208:SER:CB	2.74	0.51
1:AA:293:G:O3'	1:AA:610:G:H1'	2.10	0.51
1:AA:402:G:C4'	1:AA:620:C:N4	2.72	0.51
1:AA:473:C:O2'	1:AA:474:U:H5'	2.09	0.51
1:AA:501:C:O2	1:AA:549:C:H4'	2.09	0.51
1:AA:119:A:C2	1:AA:240:C:C5	2.98	0.51
3:AC:108:ASN:C	3:AC:110:ASN:H	2.12	0.51
21:B0:215:G:H4'	21:B0:617:U:O2'	2.09	0.51
21:B0:1807:A:H5'	21:B0:1809:G:C1'	2.40	0.51
2:AB:33:TYR:HB3	2:AB:41:ILE:HG22	1.93	0.51
17:AQ:45:HIS:CB	17:AQ:65:ILE:HD13	2.39	0.51
21:B0:341:A:H1'	21:B0:1223:G:O6	2.10	0.51
21:B0:2217:G:H4'	21:B0:2219:U:C5	2.46	0.51
21:B0:1220:G:H2'	21:B0:1221:C:C6	2.45	0.51
21:B0:2841:U:O2	21:B0:2843:A:H1'	2.11	0.51
2:AB:53:ARG:NH1	2:AB:53:ARG:HG2	2.26	0.51
1:AA:191:G:O3'	1:AA:192:U:OP1	2.26	0.51
21:B0:2205:C:H2'	21:B0:2206:C:C6	2.46	0.51
1:AA:375:U:C4	1:AA:376:G:N7	2.79	0.51
1:AA:68:G:N2	1:AA:152:A:H1'	2.16	0.51
1:AA:249:U:O2'	1:AA:250:A:P	2.68	0.51
21:B0:3098:U:C6	21:B0:3099:U:C5	2.97	0.51
1:AA:1305:G:OP2	1:AA:1305:G:C8	2.64	0.51
14:AN:22:THR:OG1	14:AN:33:VAL:HG21	2.10	0.51
2:AB:186:ALA:HB3	2:AB:197:VAL:CG1	2.41	0.51
1:AA:1426:C:H2'	1:AA:1427:U:C6	2.44	0.51
21:B0:1712:G:H2'	21:B0:1713:G:H5'	1.91	0.51
18:AR:46:GLU:CD	18:AR:46:GLU:H	2.13	0.51
7:AG:102:ARG:O	7:AG:106:GLN:HG3	2.10	0.51
21:B0:1818:G:H2'	21:B0:1819:U:C6	2.45	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:234:C:O2'	17:AQ:70:ARG:HG2	2.10	0.51
1:AA:580:U:H2'	1:AA:581:G:O4'	2.11	0.51
1:AA:319:G:C1'	1:AA:1434:A:C2	2.93	0.51
1:AA:375:U:C3'	1:AA:376:G:OP2	2.52	0.51
1:AA:538:G:OP2	12:AL:115:LYS:CG	2.53	0.51
1:AA:1191:A:OP1	3:AC:3:ASN:ND2	2.43	0.51
1:AA:1406:U:C1'	1:AA:1518:A:C4'	2.88	0.51
1:AA:1367:C:O3'	9:AI:114:TYR:HB3	2.11	0.51
1:AA:397:A:N7	1:AA:547:A:H1'	2.25	0.51
3:AC:167:TRP:O	3:AC:168:ALA:HB3	2.10	0.51
1:AA:958:A:C6	19:AS:55:LYS:HB2	2.45	0.51
1:AA:528:C:H41	12:AL:49:ASN:CG	2.13	0.51
21:B0:1955:G:C2'	21:B0:1956:G:H5'	2.38	0.51
1:AA:1238:A:H2	1:AA:1241:G:HO2'	1.51	0.51
2:AB:206:ASP:O	2:AB:207:ALA:HB3	2.11	0.51
4:AD:8:VAL:HG13	4:AD:21:LEU:HD13	1.92	0.51
21:B0:192:G:H4'	21:B0:193:A:H4'	1.91	0.51
21:B0:2320:G:H2'	21:B0:2321:C:O4'	2.09	0.51
1:AA:979:C:O2	14:AN:19:ARG:NE	2.44	0.51
10:AJ:23:ILE:HD12	10:AJ:23:ILE:N	2.26	0.51
21:B0:1625:A:H2'	21:B0:1625:A:N3	2.25	0.51
21:B0:1597:A:H2'	21:B0:1598:C:C6	2.46	0.51
1:AA:262:A:H4'	20:AT:75:ASN:H	1.75	0.51
21:B0:1087:C:H2'	21:B0:1088:A:O4'	2.11	0.51
1:AA:1167:A:H2'	1:AA:1168:A:C8	2.45	0.51
1:AA:1182:G:H4'	1:AA:1183:A:O5'	2.10	0.51
1:AA:472:G:O2'	1:AA:473:C:H5'	2.10	0.51
1:AA:650:G:C2'	1:AA:651:C:H5'	2.40	0.51
21:B0:1251:G:H2'	21:B0:1252:C:C6	2.46	0.51
1:AA:1241:G:H2'	1:AA:1242:C:H6	1.75	0.51
21:B0:2245:A:O2'	21:B0:2246:A:OP2	2.24	0.51
2:AB:19:HIS:NE2	2:AB:206:ASP:HB3	2.26	0.51
1:AA:1021:G:C2'	1:AA:1022:G:H5'	2.40	0.51
21:B0:1210:C:H2'	21:B0:1211:G:O4'	2.09	0.51
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.46	0.51
1:AA:1422:G:H5''	31:BI:60:PRO:CA	2.41	0.51
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.11	0.51
8:AH:126:LYS:C	8:AH:128:GLY:H	2.14	0.51
21:B0:630:G:H2'	21:B0:631:G:H5'	1.92	0.51
21:B0:1373:G:H1	21:B0:2192:U:H3	1.58	0.51
21:B0:484:G:O2'	21:B0:485:G:H5'	2.11	0.51
1:AA:8:A:N6	4:AD:209:ARG:H	2.08	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1192:C:P	3:AC:4:LYS:HZ3	2.33	0.51
1:AA:1231:G:H5''	9:AI:126:SER:CB	2.41	0.51
9:AI:44:VAL:CG1	9:AI:51:ARG:HH12	2.23	0.51
10:AJ:27:ALA:HB1	10:AJ:81:THR:HG23	1.92	0.51
1:AA:846:C:O2'	1:AA:847:C:H5'	2.10	0.51
1:AA:848:G:O3'	1:AA:849:C:O4'	2.29	0.51
10:AJ:20:ALA:O	10:AJ:24:VAL:HG23	2.11	0.51
1:AA:640:A:C2	8:AH:115:SER:HB3	2.45	0.51
21:B0:66:U:H2'	21:B0:67:G:C8	2.46	0.51
1:AA:757:U:O2'	1:AA:879:C:H1'	2.11	0.51
21:B0:2404:A:H5''	21:B0:2405:A:H3'	1.93	0.51
21:B0:604:U:H2'	21:B0:605:G:C8	2.46	0.51
9:AI:27:THR:HG23	9:AI:30:GLY:O	2.11	0.51
1:AA:1256:A:H5''	1:AA:1258:G:C1'	2.31	0.51
1:AA:292:G:HO2'	1:AA:608:A:H62	1.52	0.51
1:AA:406:G:N7	1:AA:496:A:C2	2.76	0.51
1:AA:39:G:C2	1:AA:404:U:C2	2.99	0.51
3:AC:97:LYS:O	3:AC:98:ASN:HB3	2.10	0.51
1:AA:246:A:N3	1:AA:247:G:H1'	2.25	0.51
10:AJ:48:THR:O	14:AN:34:TYR:OH	2.28	0.51
1:AA:1329:A:O2'	1:AA:1330:U:H5'	2.11	0.51
1:AA:37:U:O2	1:AA:547:A:H2	1.89	0.51
20:AT:43:LEU:CD1	20:AT:55:ILE:HD12	2.40	0.51
11:AK:62:GLN:HG3	11:AK:97:ALA:HB2	1.92	0.51
21:B0:832:A:H2'	21:B0:833:A:O4'	2.11	0.51
10:AJ:69:ASN:O	10:AJ:70:ARG:HD3	2.10	0.51
21:B0:795:A:H4'	21:B0:796:A:C8	2.46	0.51
9:AI:10:ARG:HG2	9:AI:75:ASP:CB	2.41	0.51
21:B0:1712:G:C2'	21:B0:1713:G:H5'	2.40	0.51
1:AA:1021:G:C2	1:AA:1022:G:H1'	2.46	0.51
21:B0:333:A:H1'	21:B0:351:A:C4	2.45	0.51
3:AC:139:GLN:HA	3:AC:139:GLN:NE2	2.25	0.51
21:B0:841:G:H4'	21:B0:844:G:N1	2.26	0.51
21:B0:2038:C:H5'	21:B0:2039:G:C5'	2.41	0.51
9:AI:31:GLN:HB3	9:AI:35:GLU:HB3	1.91	0.51
21:B0:1492:A:H2	21:B0:1531:C:H41	1.59	0.51
1:AA:292:G:HO2'	1:AA:608:A:N6	2.08	0.51
9:AI:125:TYR:N	9:AI:125:TYR:CD2	2.78	0.51
1:AA:1059:C:O2'	1:AA:1060:C:H5'	2.11	0.51
1:AA:394:G:O2'	1:AA:395:C:C5'	2.58	0.51
9:AI:46:ALA:HA	9:AI:78:LYS:HB2	1.93	0.51
1:AA:652:U:O4	1:AA:752:G:O2'	2.28	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:B9:111:C:H5''	22:B9:112:A:H5''	1.93	0.51
3:AC:188:LEU:CD1	3:AC:195:VAL:HG13	2.41	0.51
2:AB:126:GLU:O	2:AB:129:GLU:HB2	2.11	0.51
21:B0:1181:C:H2'	21:B0:1182:U:C5'	2.38	0.51
21:B0:804:C:O2	21:B0:807:A:H5'	2.11	0.51
6:AF:69:GLU:OE1	6:AF:69:GLU:N	2.44	0.51
9:AI:93:ARG:HH11	9:AI:97:LYS:HZ1	1.55	0.51
21:B0:80:A:H2'	21:B0:81:C:O4'	2.11	0.51
14:AN:28:GLY:O	14:AN:30:ALA:N	2.43	0.51
21:B0:579:G:H2'	21:B0:2013:A:H62	1.75	0.51
3:AC:34:LEU:HD23	3:AC:34:LEU:O	2.11	0.51
21:B0:1611:U:H2'	21:B0:1612:U:O4'	2.11	0.51
21:B0:1532:A:H2'	21:B0:1533:G:C8	2.46	0.51
21:B0:18:U:H2'	21:B0:19:C:C6	2.46	0.51
1:AA:376:G:N2	1:AA:389:A:C4	2.79	0.51
1:AA:436:C:N1	1:AA:437:U:C5	2.76	0.51
1:AA:1090:U:O4'	1:AA:1169:A:H2	1.93	0.51
1:AA:1094:G:H5''	1:AA:1095:U:H5	1.75	0.51
1:AA:470:U:H2'	1:AA:471:G:H8	1.76	0.51
3:AC:59:ARG:C	10:AJ:92:THR:HG23	2.30	0.51
1:AA:31:G:N1	1:AA:48:C:C5'	2.74	0.51
1:AA:1112:C:N3	3:AC:178:LEU:HB3	2.26	0.51
21:B0:942:U:H2'	21:B0:943:U:O4'	2.11	0.51
21:B0:2011:U:H2'	21:B0:2012:A:C8	2.46	0.51
1:AA:958:A:C8	19:AS:55:LYS:HD3	2.46	0.51
1:AA:333:G:C4'	20:AT:16:HIS:CD2	2.94	0.51
1:AA:605:U:O2'	1:AA:606:G:H5'	2.10	0.51
21:B0:394:U:H2'	21:B0:395:G:C8	2.45	0.51
1:AA:884:U:H4'	1:AA:885:G:H5''	1.92	0.51
21:B0:2795:A:N3	21:B0:2795:A:H2'	2.24	0.51
21:B0:2565:C:O2'	21:B0:2566:A:H5'	2.11	0.51
19:AS:50:ALA:HA	19:AS:58:VAL:O	2.10	0.51
4:AD:170:VAL:CG1	4:AD:174:LEU:HB2	2.39	0.51
21:B0:460:U:H3	21:B0:592:G:H1'	1.75	0.51
1:AA:1126:U:O4'	1:AA:1280:A:C5	2.64	0.50
21:B0:3874:C:H2'	21:B0:3875:A:H5'	1.91	0.50
1:AA:1394:A:C4	1:AA:1501:C:C1'	2.93	0.50
1:AA:762:C:H5'	17:AQ:104:LYS:NZ	2.26	0.50
1:AA:1483:A:C2	1:AA:1484:C:C6	2.99	0.50
1:AA:1484:C:C5'	21:B0:1943:A:H1'	2.39	0.50
1:AA:248:C:O4'	1:AA:282:A:C2	2.59	0.50
1:AA:367:U:H1'	1:AA:369:C:C6	2.46	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:AC:134:ILE:HG21	3:AC:167:TRP:O	2.11	0.50
2:AB:121:LEU:O	2:AB:127:ILE:HG12	2.11	0.50
12:AL:45:PRO:HD3	12:AL:51:ALA:O	2.11	0.50
1:AA:1250:A:C4'	9:AI:68:GLY:H	2.24	0.50
21:B0:1807:A:O2'	21:B0:1808:C:O5'	2.24	0.50
4:AD:24:GLU:O	4:AD:25:ARG:HB3	2.10	0.50
2:AB:17:PHE:C	2:AB:17:PHE:HD1	2.14	0.50
2:AB:17:PHE:CD1	2:AB:17:PHE:C	2.85	0.50
20:AT:41:VAL:O	20:AT:45:GLN:HB2	2.10	0.50
21:B0:2058:U:H5'	21:B0:2576:G:H1'	1.93	0.50
21:B0:2321:C:O2'	21:B0:2353:G:H5''	2.11	0.50
15:AO:3:ILE:CG2	15:AO:7:GLU:HB3	2.41	0.50
21:B0:1495:G:H2'	21:B0:1496:G:C8	2.47	0.50
21:B0:635:C:C3'	21:B0:636:G:H5''	2.41	0.50
1:AA:875:C:O2'	8:AH:14:ARG:HD2	2.11	0.50
21:B0:1586:A:H2'	21:B0:1587:A:C8	2.46	0.50
21:B0:1040:A:H2'	21:B0:1041:G:H5'	1.93	0.50
21:B0:1779:C:H2'	21:B0:1780:A:O4'	2.10	0.50
21:B0:2213:G:H2'	21:B0:2214:G:C8	2.46	0.50
21:B0:2769:C:O2'	21:B0:2770:A:H5'	2.11	0.50
1:AA:319:G:C2	1:AA:1434:A:H1'	2.33	0.50
1:AA:7:G:N3	5:AE:121:LYS:HG2	2.27	0.50
3:AC:38:ARG:HG3	3:AC:38:ARG:NH1	2.26	0.50
1:AA:244:U:C4	1:AA:894:G:N3	2.79	0.50
1:AA:1347:G:C8	9:AI:107:ARG:HB3	2.47	0.50
3:AC:137:ALA:HA	3:AC:140:ARG:NH1	2.26	0.50
2:AB:96:ARG:O	2:AB:98:LEU:HD23	2.11	0.50
1:AA:227:G:C6	1:AA:228:A:C6	2.99	0.50
10:AJ:3:LYS:HA	10:AJ:75:ILE:HA	1.94	0.50
21:B0:897:A:C6	21:B0:898:C:N4	2.79	0.50
18:AR:87:ARG:HH11	18:AR:87:ARG:HG2	1.76	0.50
21:B0:1661:C:O2'	21:B0:1662:G:H5'	2.11	0.50
4:AD:126:ILE:CG2	4:AD:127:THR:N	2.75	0.50
8:AH:38:ILE:N	8:AH:38:ILE:HD12	2.27	0.50
21:B0:2272:A:H2'	21:B0:2273:C:C6	2.46	0.50
1:AA:659:U:O2'	1:AA:660:G:H5'	2.11	0.50
1:AA:760:G:H1	17:AQ:105:ALA:HA	1.76	0.50
3:AC:171:GLY:O	3:AC:173:VAL:HG23	2.11	0.50
1:AA:403:C:C2	1:AA:404:U:C6	2.98	0.50
1:AA:367:U:OP1	1:AA:394:G:N2	2.44	0.50
1:AA:31:G:N1	1:AA:48:C:H5''	2.26	0.50
4:AD:61:LYS:HZ1	4:AD:62:GLN:NE2	2.09	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1251:A:H4'	9:AI:12:GLU:CD	2.31	0.50
1:AA:227:G:C5	1:AA:228:A:C5	2.99	0.50
21:B0:2235:G:H2'	21:B0:2236:U:C6	2.46	0.50
10:AJ:39:PRO:O	10:AJ:40:LEU:CB	2.57	0.50
21:B0:689:A:H61	21:B0:815:A:H61	1.59	0.50
21:B0:798:G:H2'	21:B0:799:C:H5'	1.93	0.50
3:AC:139:GLN:CA	3:AC:139:GLN:HE21	2.23	0.50
21:B0:95:G:H2'	21:B0:96:C:C6	2.46	0.50
1:AA:1262:C:H42	1:AA:1273:G:H1	1.59	0.50
21:B0:429:C:H2'	21:B0:430:C:O4'	2.11	0.50
1:AA:1458:G:OP1	20:AT:28:ALA:HA	2.10	0.50
1:AA:131:C:O4'	1:AA:263:A:C1'	2.59	0.50
1:AA:375:U:H2'	1:AA:376:G:O4'	2.12	0.50
1:AA:994:A:O2'	14:AN:8:GLU:HB2	2.08	0.50
1:AA:476:U:O3'	1:AA:477:G:P	2.67	0.50
1:AA:394:G:N1	1:AA:395:C:N3	2.60	0.50
1:AA:1113:C:C2	3:AC:178:LEU:CD2	2.94	0.50
1:AA:1307:U:H5'	13:AM:109:THR:HG21	1.94	0.50
22:B9:113:G:H2'	22:B9:114:C:C6	2.47	0.50
1:AA:958:A:C6	19:AS:55:LYS:CB	2.94	0.50
2:AB:221:LEU:O	2:AB:221:LEU:HD13	2.11	0.50
1:AA:1447:A:N7	1:AA:1456:A:H2	2.09	0.50
1:AA:824:C:H2'	1:AA:825:G:H8	1.76	0.50
6:AF:26:ILE:HG21	6:AF:63:TYR:CE2	2.40	0.50
5:AE:15:ARG:O	5:AE:16:THR:O	2.28	0.50
11:AK:51:LYS:O	11:AK:55:LYS:HE3	2.11	0.50
7:AG:18:TYR:HD2	7:AG:59:LEU:HD22	1.76	0.50
21:B0:775:U:O2	21:B0:1445:A:H5''	2.11	0.50
1:AA:130:A:P	17:AQ:63:ARG:NH2	2.81	0.50
5:AE:121:LYS:HE3	5:AE:123:LEU:HD21	1.93	0.50
1:AA:215:C:O2'	1:AA:216:C:H5'	2.12	0.50
1:AA:244:U:C4	1:AA:894:G:C4	2.99	0.50
1:AA:1370:G:H3'	9:AI:109:VAL:HG21	1.93	0.50
1:AA:1048:G:H1'	1:AA:1215:G:H4'	1.92	0.50
1:AA:397:A:N6	1:AA:547:A:C2	2.79	0.50
1:AA:1092:A:H5''	7:AG:4:ARG:NH1	2.25	0.50
1:AA:1306:A:H2'	1:AA:1307:U:O4'	2.12	0.50
22:B9:107:C:O3'	22:B9:108:G:OP1	2.29	0.50
1:AA:976:G:OP2	1:AA:1358:U:H1'	2.12	0.50
13:AM:40:ASN:ND2	13:AM:41:PRO:CD	2.63	0.50
2:AB:132:LYS:O	2:AB:136:VAL:HG23	2.11	0.50
21:B0:127:C:H2'	21:B0:128:C:C6	2.47	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:AB:88:ALA:O	2:AB:90:MET:N	2.45	0.50
4:AD:61:LYS:HZ2	4:AD:62:GLN:HE21	1.59	0.50
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.47	0.50
5:AE:104:ALA:O	5:AE:105:VAL:C	2.49	0.50
1:AA:227:G:N2	1:AA:228:A:H1'	2.27	0.50
4:AD:8:VAL:HG11	4:AD:21:LEU:HB3	1.94	0.50
3:AC:61:ALA:O	3:AC:63:ASN:N	2.44	0.50
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.47	0.50
21:B0:868:U:H2'	21:B0:869:C:C6	2.46	0.50
21:B0:1865:C:H2'	21:B0:1866:G:O4'	2.12	0.50
21:B0:1727:C:H4'	21:B0:2833:C:O2	2.12	0.50
21:B0:1272:G:H2'	21:B0:1273:G:C8	2.46	0.50
1:AA:279:A:H5''	1:AA:280:C:H3'	1.94	0.50
1:AA:7:G:H5'	1:AA:298:A:C4'	2.41	0.50
21:B0:1111:C:C4	21:B0:1112:U:C5	3.00	0.50
1:AA:538:G:OP1	12:AL:115:LYS:CB	2.59	0.50
1:AA:216:C:C1'	1:AA:468:A:HO2'	2.02	0.50
1:AA:205:G:N2	1:AA:207:C:N4	2.60	0.50
12:AL:28:LYS:CD	12:AL:33:ARG:HH12	2.24	0.50
1:AA:1102:A:H2'	1:AA:1103:C:C6	2.46	0.50
5:AE:89:ILE:HD13	5:AE:90:VAL:H	1.75	0.50
11:AK:65:ALA:HB3	11:AK:97:ALA:HB3	1.93	0.50
21:B0:68:C:H2'	21:B0:69:G:H8	1.76	0.50
21:B0:897:A:O3'	21:B0:898:C:P	2.70	0.50
1:AA:1194:U:O2'	1:AA:1195:C:H5'	2.12	0.50
1:AA:1021:G:H2'	1:AA:1022:G:O4'	2.11	0.50
21:B0:612:G:O3'	21:B0:613:A:H4'	2.11	0.50
13:AM:102:ARG:HB2	13:AM:102:ARG:HH11	1.75	0.50
21:B0:1886:G:H2'	21:B0:1887:G:C8	2.46	0.50
21:B0:791:G:H2'	21:B0:792:U:C6	2.47	0.50
21:B0:168:A:H2'	21:B0:169:C:C6	2.47	0.50
1:AA:1503:A:P	1:AA:1531:A:O4'	2.69	0.50
17:AQ:104:LYS:HG2	21:B0:726:G:N3	2.24	0.50
1:AA:1409:C:N1	1:AA:1410:G:C8	2.80	0.50
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.77	0.50
1:AA:1097:C:O2'	1:AA:1168:A:H1'	2.11	0.50
3:AC:58:GLU:O	3:AC:59:ARG:HG2	2.11	0.50
1:AA:222:U:H2'	1:AA:223:U:C6	2.47	0.50
1:AA:1025:U:H4'	1:AA:1025:U:OP1	2.11	0.50
1:AA:1035:A:H2'	1:AA:1036:G:H8	1.77	0.50
1:AA:848:G:C2'	1:AA:849:C:C1'	2.86	0.50
2:AB:102:LEU:CD2	2:AB:162:ILE:HD11	2.37	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:227:G:C2'	1:AA:228:A:C5'	2.89	0.50
11:AK:48:ILE:HD13	11:AK:63:LEU:HB3	1.93	0.50
1:AA:1440:C:C2'	1:AA:1441:G:H5'	2.41	0.50
21:B0:1326:U:O2	21:B0:1326:U:H2'	2.10	0.50
21:B0:177:U:H2'	21:B0:178:C:C6	2.46	0.50
9:AI:17:VAL:CG2	9:AI:80:GLY:HA3	2.41	0.50
19:AS:45:VAL:HG12	19:AS:46:GLY:N	2.26	0.50
1:AA:971:G:N1	1:AA:1363:A:OP2	2.42	0.50
1:AA:131:C:O4'	1:AA:263:A:O4'	2.29	0.50
1:AA:7:G:C2	1:AA:298:A:C6	2.99	0.50
21:B0:891:A:C2	21:B0:893:G:C5	3.00	0.50
1:AA:185:A:H2'	1:AA:186:C:C5	2.47	0.50
1:AA:1223:C:OP1	1:AA:1225:A:H8	1.95	0.50
1:AA:491:G:H2'	1:AA:492:G:H8	1.77	0.50
10:AJ:50:ILE:HB	14:AN:41:ARG:CD	2.42	0.50
1:AA:546:G:H5'	1:AA:549:C:OP1	2.11	0.50
21:B0:1571:G:H2'	21:B0:1572:C:C6	2.46	0.50
12:AL:46:LYS:HG2	12:AL:47:LYS:HG3	1.93	0.50
2:AB:97:TRP:CH2	2:AB:176:GLU:CD	2.85	0.50
21:B0:847:C:N4	21:B0:955:G:H21	2.03	0.50
1:AA:346:G:H2'	1:AA:347:G:H5'	1.94	0.50
1:AA:1539:C:OP1	7:AG:82:GLY:HA2	2.12	0.50
21:B0:1052:C:H2'	21:B0:1053:G:C8	2.46	0.50
1:AA:1337:G:H5''	1:AA:1338:G:OP1	2.12	0.50
21:B0:2383:C:H2'	21:B0:2384:G:O4'	2.11	0.50
21:B0:899:G:O2'	21:B0:900:U:H5'	2.12	0.50
21:B0:3877:A:C4'	21:B0:1861:G:O4'	2.55	0.50
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.74	0.50
1:AA:815:A:H1'	1:AA:1527:C:O2'	2.10	0.50
1:AA:1283:G:O2'	1:AA:1284:C:H5'	2.11	0.50
9:AI:9:ARG:HG2	9:AI:14:VAL:HG22	1.92	0.50
1:AA:625:G:H2'	1:AA:626:U:C6	2.47	0.50
14:AN:29:ARG:O	14:AN:33:VAL:HG13	2.11	0.50
21:B0:1747:G:H1'	21:B0:1749:G:N3	2.26	0.50
1:AA:523:A:N6	12:AL:90:VAL:CG1	2.75	0.50
1:AA:129:U:P	17:AQ:3:LYS:HZ1	2.32	0.50
21:B0:165:G:H2'	21:B0:166:G:O4'	2.12	0.50
21:B0:2426:G:O6	21:B0:2479:U:H2'	2.11	0.50
7:AG:85:TYR:HD1	7:AG:154:TYR:CE1	2.27	0.50
21:B0:192:G:H4'	21:B0:193:A:O5'	2.12	0.50
21:B0:212:U:H2'	21:B0:213:C:C6	2.47	0.50
17:AQ:78:GLU:O	17:AQ:78:GLU:HG3	2.12	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:2357:A:H2'	21:B0:2358:C:O4'	2.12	0.50
4:AD:78:LEU:HD22	4:AD:96:LEU:HB3	1.94	0.50
21:B0:638:A:O2'	21:B0:639:G:H5'	2.12	0.50
11:AK:79:SER:OG	11:AK:106:LYS:HG2	2.12	0.50
21:B0:2301:A:H2'	21:B0:2302:G:O4'	2.11	0.50
1:AA:255:G:O6	1:AA:266:G:O6	2.29	0.49
1:AA:323:U:O3'	20:AT:22:ARG:CD	2.60	0.49
1:AA:218:C:H2'	1:AA:219:C:H6	1.76	0.49
1:AA:478:A:O2'	1:AA:479:C:H5'	2.11	0.49
1:AA:393:A:C2	1:AA:394:G:C8	3.00	0.49
13:AM:5:ALA:O	13:AM:6:GLY:C	2.51	0.49
16:AP:51:VAL:O	16:AP:51:VAL:CG1	2.60	0.49
21:B0:2324:G:C4'	21:B0:2326:C:H5''	2.42	0.49
14:AN:21:TYR:HE2	14:AN:23:ARG:NE	2.09	0.49
21:B0:521:U:H2'	21:B0:522:G:H5'	1.93	0.49
21:B0:618:A:H2'	21:B0:619:A:O4'	2.11	0.49
21:B0:775:U:H4'	21:B0:776:G:C8	2.46	0.49
15:AO:4:THR:HB	15:AO:6:GLU:HG2	1.93	0.49
4:AD:81:GLU:O	4:AD:85:LYS:HG3	2.11	0.49
21:B0:1323:G:H2'	21:B0:1324:G:H4'	1.94	0.49
21:B0:2658:A:H2'	21:B0:2659:C:C6	2.47	0.49
2:AB:168:THR:OG1	2:AB:192:SER:HB3	2.12	0.49
21:B0:1386:A:H2'	21:B0:1387:G:O4'	2.12	0.49
21:B0:2310:G:H2'	21:B0:2311:U:O4'	2.12	0.49
21:B0:1391:A:H2'	21:B0:1392:U:C6	2.47	0.49
1:AA:116:A:C2	1:AA:314:C:O4'	2.65	0.49
1:AA:325:A:H2'	1:AA:326:G:O4'	2.12	0.49
1:AA:436:C:C2	1:AA:437:U:C2	3.00	0.49
1:AA:184:G:H2'	1:AA:185:A:H8	1.77	0.49
1:AA:1111:A:N1	3:AC:177:THR:CA	2.73	0.49
1:AA:951:G:H1'	1:AA:970:C:O2'	2.12	0.49
1:AA:220:G:O2'	1:AA:221:C:H5'	2.12	0.49
1:AA:1329:A:H3'	13:AM:26:GLY:HA3	1.94	0.49
9:AI:47:LEU:C	9:AI:49:PRO:HD2	2.32	0.49
10:AJ:27:ALA:C	10:AJ:29:ARG:H	2.15	0.49
9:AI:36:TYR:HD2	9:AI:37:PHE:CE2	2.30	0.49
21:B0:2858:A:H3'	21:B0:2859:U:C5'	2.42	0.49
21:B0:2435:C:H2'	21:B0:2436:U:C6	2.47	0.49
21:B0:1286:U:H5''	21:B0:1663:C:N4	2.27	0.49
1:AA:443:C:H2'	1:AA:444:C:C6	2.43	0.49
21:B0:1949:A:H1'	21:B0:2572:U:C4'	2.42	0.49
3:AC:47:LEU:N	3:AC:47:LEU:HD12	2.26	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:1683:G:C2'	21:B0:1684:G:H5'	2.43	0.49
7:AG:108:ALA:O	7:AG:119:ARG:HB3	2.12	0.49
21:B0:597:U:H2'	21:B0:598:U:C6	2.47	0.49
21:B0:693:A:H2'	21:B0:694:G:C8	2.46	0.49
11:AK:23:ALA:CB	11:AK:91:ARG:HB2	2.42	0.49
21:B0:2459:C:H2'	21:B0:2460:G:H5'	1.94	0.49
21:B0:971:A:H2	21:B0:2475:C:H1'	1.77	0.49
11:AK:82:VAL:HG23	11:AK:105:VAL:HG13	1.93	0.49
21:B0:2313:G:H2'	21:B0:2314:A:H5'	1.94	0.49
1:AA:1322:C:H5''	13:AM:100:GLY:HA3	1.95	0.49
1:AA:218:C:H2'	1:AA:219:C:C6	2.47	0.49
1:AA:1015:A:H1'	1:AA:1219:U:H5'	1.89	0.49
1:AA:992:U:HO2'	1:AA:1043:C:H41	1.60	0.49
1:AA:143:A:H5'	1:AA:196:A:C6	2.45	0.49
1:AA:1296:C:H4'	1:AA:1302:U:O4	2.03	0.49
1:AA:619:U:H2'	4:AD:135:LEU:HD11	1.90	0.49
21:B0:1180:A:H2'	21:B0:1181:C:C6	2.47	0.49
17:AQ:26:GLN:O	17:AQ:27:PHE:HB3	2.12	0.49
21:B0:1223:G:O2'	21:B0:1224:A:OP2	2.26	0.49
21:B0:652:C:H42	21:B0:657:A:N6	2.10	0.49
21:B0:568:G:H5''	21:B0:1019:U:H5'	1.93	0.49
21:B0:2536:G:H2'	21:B0:2537:C:C6	2.47	0.49
1:AA:1172:C:O2'	1:AA:1173:G:H5'	2.11	0.49
21:B0:189:A:H2'	21:B0:190:A:C8	2.47	0.49
21:B0:1715:A:H1'	21:B0:1717:A:C1'	2.42	0.49
21:B0:3110:G:OP2	21:B0:3149:G:C5'	2.56	0.49
17:AQ:97:SER:HB2	17:AQ:103:GLY:N	2.26	0.49
17:AQ:104:LYS:HA	21:B0:726:G:N2	2.28	0.49
1:AA:134:A:H1'	1:AA:325:A:C4	2.47	0.49
1:AA:39:G:C4	1:AA:498:U:O4	2.62	0.49
1:AA:959:A:H4'	1:AA:985:C:C4'	2.42	0.49
13:AM:84:ILE:CD1	19:AS:66:MET:HB3	2.42	0.49
1:AA:968:A:C8	1:AA:1062:U:H4'	2.47	0.49
1:AA:766:A:H2	1:AA:1525:G:HO2'	1.54	0.49
1:AA:1102:A:H2'	1:AA:1103:C:H6	1.77	0.49
6:AF:9:VAL:HG22	6:AF:60:PHE:CE2	2.47	0.49
21:B0:2805:G:O2'	21:B0:2806:G:H5'	2.12	0.49
3:AC:112:SER:O	3:AC:116:VAL:HG23	2.11	0.49
1:AA:160:A:H61	1:AA:347:G:H21	1.60	0.49
10:AJ:38:ILE:HG13	10:AJ:71:LEU:CB	2.42	0.49
15:AO:36:ILE:HA	15:AO:59:MET:CE	2.42	0.49
1:AA:173:U:O4'	1:AA:197:A:C4	2.66	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:AJ:16:LEU:HD23	10:AJ:94:VAL:HG22	1.95	0.49
21:B0:1923:U:H4'	21:B0:1948:C:N4	2.27	0.49
1:AA:722:A:H4'	1:AA:723:U:C5	2.48	0.49
21:B0:2321:C:H2'	21:B0:2322:U:O4'	2.12	0.49
21:B0:1993:G:H2'	21:B0:1994:U:C6	2.47	0.49
21:B0:601:A:H3'	21:B0:602:C:C5'	2.42	0.49
1:AA:149:A:O2'	1:AA:150:C:H5'	2.11	0.49
21:B0:960:U:H2'	21:B0:961:G:C8	2.48	0.49
21:B0:2312:A:H4'	21:B0:2313:G:N7	2.26	0.49
21:B0:1268:U:H5''	21:B0:1269:G:H5''	1.95	0.49
1:AA:1413:A:O2'	1:AA:1414:U:H5'	2.12	0.49
1:AA:1505:G:H4'	1:AA:1506:U:O5'	2.13	0.49
1:AA:1183:A:O2'	1:AA:1184:G:OP2	2.28	0.49
14:AN:15:LYS:HB3	14:AN:16:PHE:CD1	2.47	0.49
5:AE:79:GLU:CD	8:AH:105:ARG:NE	2.65	0.49
13:AM:84:ILE:CG2	19:AS:66:MET:HE2	2.42	0.49
1:AA:245:C:O2	1:AA:283:C:N3	2.46	0.49
1:AA:1369:C:P	9:AI:111:ARG:HG2	2.52	0.49
4:AD:36:ARG:N	4:AD:37:PRO:CD	2.66	0.49
1:AA:1085:U:O3'	1:AA:1086:U:H6	1.95	0.49
21:B0:1199:U:H2'	21:B0:1200:G:C8	2.46	0.49
1:AA:958:A:C5	19:AS:55:LYS:HB2	2.47	0.49
1:AA:1136:U:H5''	1:AA:1137:C:OP2	2.12	0.49
1:AA:1238:A:N7	1:AA:1303:C:H1'	2.28	0.49
21:B0:2492:G:H2'	21:B0:2493:U:O4'	2.12	0.49
1:AA:18:C:O2	1:AA:917:G:N1	2.41	0.49
4:AD:7:PRO:HB2	4:AD:10:ARG:HD2	1.93	0.49
2:AB:230:VAL:HG13	2:AB:231:GLU:OE2	2.13	0.49
21:B0:1218:C:H2'	21:B0:1219:C:C6	2.47	0.49
7:AG:69:VAL:HG12	7:AG:69:VAL:O	2.11	0.49
1:AA:149:A:H2'	1:AA:150:C:C6	2.47	0.49
2:AB:53:ARG:HH11	2:AB:53:ARG:HG2	1.76	0.49
21:B0:628:A:H2'	21:B0:629:C:C6	2.48	0.49
1:AA:430:A:C2'	1:AA:431:A:H5'	2.42	0.49
21:B0:2717:G:H2'	21:B0:2718:A:C8	2.48	0.49
21:B0:2249:U:H2'	21:B0:2250:G:O4'	2.13	0.49
21:B0:703:A:H2'	21:B0:704:G:H8	1.77	0.49
1:AA:746:A:O2'	1:AA:747:C:H5'	2.11	0.49
21:B0:2397:A:H2'	21:B0:2398:U:O4'	2.12	0.49
21:B0:1007:A:H2'	21:B0:1008:G:C8	2.47	0.49
17:AQ:104:LYS:N	21:B0:726:G:N3	2.37	0.49
1:AA:375:U:N3	1:AA:376:G:N7	2.59	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:AT:101:GLY:O	20:AT:102:GLY:O	2.30	0.49
1:AA:323:U:H5''	20:AT:23:ARG:HA	1.73	0.49
1:AA:559:A:OP1	5:AE:126:ARG:CZ	2.61	0.49
1:AA:1230:C:O2'	1:AA:1231:G:H5'	2.13	0.49
1:AA:933:G:N1	1:AA:935:A:N9	2.61	0.49
1:AA:1365:G:O2'	1:AA:1366:C:H5'	2.12	0.49
1:AA:834:C:H2'	1:AA:835:U:C6	2.48	0.49
1:AA:31:G:H2'	1:AA:48:C:N4	2.28	0.49
1:AA:36:C:O2	1:AA:501:C:H4'	2.12	0.49
1:AA:564:C:C2	17:AQ:31:LEU:HD11	2.47	0.49
6:AF:100:ASN:O	18:AR:28:GLU:HG3	2.13	0.49
1:AA:577:G:O4'	1:AA:816:A:C5	2.66	0.49
2:AB:44:LEU:HA	2:AB:47:THR:OG1	2.12	0.49
17:AQ:45:HIS:NE2	17:AQ:47:PRO:HG3	2.27	0.49
21:B0:2274:C:C2'	21:B0:2275:U:H5'	2.40	0.49
21:B0:1164:C:H2'	21:B0:1165:G:O4'	2.12	0.49
21:B0:1949:A:O2'	21:B0:2572:U:H5'	2.12	0.49
21:B0:117:A:H4'	21:B0:118:U:C6	2.47	0.49
21:B0:1532:A:H2'	21:B0:1533:G:H8	1.77	0.49
1:AA:1051:C:O2'	1:AA:1052:U:H5'	2.13	0.49
18:AR:41:LYS:HG2	18:AR:41:LYS:O	2.13	0.49
5:AE:84:PHE:CE2	5:AE:133:TYR:HD1	2.31	0.49
21:B0:1998:A:H2'	21:B0:1999:U:H5'	1.94	0.49
1:AA:136:C:H2'	1:AA:137:C:H6	1.77	0.49
1:AA:1458:G:C1'	1:AA:1459:C:H2'	2.41	0.49
1:AA:582:U:O4'	17:AQ:105:ALA:CA	2.61	0.49
5:AE:92:LYS:HB3	5:AE:119:LEU:HB2	1.94	0.49
1:AA:185:A:O2'	1:AA:186:C:O5'	2.24	0.49
1:AA:960:U:O2'	1:AA:1223:C:H5'	2.12	0.49
1:AA:489:C:H2'	1:AA:490:G:H8	1.77	0.49
1:AA:847:C:O2'	1:AA:848:G:H5'	2.12	0.49
15:AO:25:THR:HG21	15:AO:70:LEU:HD23	1.94	0.49
21:B0:879:A:H2'	21:B0:880:C:H5'	1.94	0.49
5:AE:11:ILE:HB	5:AE:31:LEU:HB3	1.93	0.49
2:AB:12:GLU:HG2	2:AB:213:LEU:HD11	1.95	0.49
5:AE:61:TYR:O	5:AE:64:ARG:O	2.29	0.49
3:AC:116:VAL:O	3:AC:119:ARG:HB3	2.13	0.49
21:B0:2821:G:H2'	21:B0:2822:U:C6	2.48	0.49
21:B0:2260:C:H4'	21:B0:2368:G:H21	1.77	0.49
21:B0:599:A:H2'	21:B0:600:G:C8	2.48	0.49
4:AD:127:THR:CG2	4:AD:128:VAL:N	2.75	0.49
21:B0:483:A:H2'	21:B0:484:G:H5'	1.93	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:AQ:10:VAL:O	17:AQ:53:LEU:HD12	2.12	0.49
6:AF:48:LEU:HD13	6:AF:52:ILE:HG13	1.95	0.49
11:AK:85:ARG:HG3	11:AK:85:ARG:HH11	1.77	0.49
21:B0:427:C:H2'	21:B0:428:A:C8	2.47	0.49
2:AB:30:ARG:HG3	2:AB:31:TYR:CD2	2.48	0.49
21:B0:2852:G:H2'	21:B0:2853:U:O4'	2.12	0.49
21:B0:1829:C:H2'	21:B0:1830:C:H5'	1.95	0.49
1:AA:1277:C:HO2'	1:AA:1279:A:N9	1.48	0.49
1:AA:5:U:C4	5:AE:95:ALA:HB3	2.34	0.49
1:AA:51:A:C8	1:AA:114:U:O2'	2.64	0.49
1:AA:559:A:OP1	5:AE:126:ARG:NH2	2.45	0.49
19:AS:5:LEU:HD11	19:AS:70:LYS:NZ	2.28	0.49
1:AA:1112:C:C2	3:AC:178:LEU:HB3	2.46	0.49
1:AA:61:G:H2'	1:AA:62:U:O4'	2.13	0.49
2:AB:144:ARG:O	2:AB:147:LYS:N	2.42	0.49
2:AB:97:TRP:CH2	2:AB:173:ALA:HA	2.48	0.49
21:B0:807:A:H2'	21:B0:808:C:C6	2.48	0.49
21:B0:1223:G:H1'	21:B0:1225:G:C4	2.48	0.49
15:AO:30:ALA:HA	15:AO:85:LEU:HD21	1.94	0.49
1:AA:1121:U:H2'	1:AA:1122:U:C6	2.48	0.49
12:AL:34:ARG:O	12:AL:34:ARG:HG3	2.13	0.49
21:B0:1982:C:H2'	21:B0:1983:G:H8	1.78	0.49
11:AK:124:LYS:HD2	11:AK:125:PHE:CE1	2.48	0.49
21:B0:1856:U:C5'	21:B0:3865:A:P	2.96	0.49
1:AA:253:U:P	17:AQ:67:LYS:HZ3	2.36	0.49
17:AQ:68:ARG:O	17:AQ:69:LYS:HB2	2.13	0.49
1:AA:235:C:H5''	17:AQ:70:ARG:HD3	1.95	0.49
21:B0:3110:G:P	21:B0:3149:G:C5'	3.00	0.49
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.12	0.49
1:AA:1504:G:OP1	1:AA:1507:A:C4'	2.59	0.49
20:AT:89:ARG:HE	20:AT:104:LEU:HD22	1.78	0.49
13:AM:82:MET:CE	21:B0:900(A):A:OP1	2.58	0.49
1:AA:367:U:H3	1:AA:369:C:N4	2.11	0.49
1:AA:394:G:N1	1:AA:395:C:C4	2.80	0.49
1:AA:1328:C:C5'	13:AM:28:ALA:CB	2.85	0.49
11:AK:58:PRO:HB2	11:AK:93:GLN:HG3	1.95	0.49
1:AA:521:G:O2'	1:AA:522:C:H5'	2.12	0.49
17:AQ:27:PHE:HB2	17:AQ:28:PRO:HD2	1.94	0.49
21:B0:653:G:N2	21:B0:655:A:H1'	2.27	0.49
2:AB:35:GLU:HA	2:AB:39:ILE:O	2.13	0.49
16:AP:20:VAL:CG1	16:AP:32:TYR:HB3	2.40	0.49
4:AD:3:ARG:O	4:AD:5:ILE:HG13	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:AD:38:TYR:CE1	4:AD:45:GLN:HG3	2.48	0.49
8:AH:13:ILE:O	8:AH:17:THR:HG23	2.13	0.49
21:B0:1970:G:H2'	21:B0:1971:C:C6	2.48	0.49
9:AI:23:ASN:C	9:AI:23:ASN:ND2	2.66	0.49
21:B0:1489:C:H3'	21:B0:1490:U:H5'	1.95	0.49
19:AS:81:ARG:O	19:AS:81:ARG:HG2	2.11	0.49
21:B0:1895:A:H2'	21:B0:1896:A:O4'	2.13	0.49
1:AA:555:C:H2'	1:AA:556:C:C6	2.48	0.49
1:AA:556:C:O2'	1:AA:557:G:H5'	2.13	0.49
1:AA:942:G:O2'	1:AA:943:U:H5'	2.12	0.49
21:B0:114:C:O2'	21:B0:124:A:H1'	2.12	0.49
1:AA:926:G:C2	1:AA:1505:G:N9	2.80	0.49
1:AA:403:C:H4'	4:AD:122:ARG:CZ	2.42	0.49
1:AA:1342:C:C5'	9:AI:125:TYR:CE1	2.96	0.49
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.48	0.49
1:AA:1329:A:O3'	13:AM:25:ILE:CA	2.49	0.49
1:AA:59:A:C2	1:AA:331:G:C2	3.01	0.49
8:AH:113:SER:HB2	8:AH:134:ILE:CD1	2.29	0.49
21:B0:930:A:H4'	21:B0:930:A:OP1	2.11	0.49
3:AC:138:VAL:O	3:AC:142:MET:HB2	2.13	0.49
2:AB:144:ARG:HG3	2:AB:145:LEU:H	1.77	0.49
12:AL:45:PRO:HB2	12:AL:49:ASN:O	2.13	0.49
20:AT:29:LYS:O	20:AT:33:ILE:HG13	2.13	0.49
2:AB:188:ALA:O	2:AB:202:PRO:HA	2.13	0.49
21:B0:2380:U:C2'	21:B0:2381:A:H5'	2.42	0.49
4:AD:3:ARG:NH2	4:AD:74:GLN:OE1	2.43	0.49
21:B0:1380:C:C2'	21:B0:1381:G:H5'	2.41	0.49
17:AQ:56:VAL:HG12	17:AQ:77:VAL:HB	1.95	0.49
12:AL:53:ARG:HB3	12:AL:93:LEU:HD11	1.95	0.49
21:B0:2392:G:H2'	21:B0:2393:G:H8	1.77	0.49
21:B0:216:U:H2'	21:B0:217:U:O4'	2.12	0.49
1:AA:659:U:H2'	1:AA:660:G:O4'	2.13	0.49
21:B0:1617:G:H2'	21:B0:1618:U:H5'	1.95	0.49
4:AD:105:VAL:HG13	4:AD:110:PHE:HB2	1.95	0.49
21:B0:3869:G:H2'	21:B0:3871:A:OP2	2.13	0.48
1:AA:1396:A:H4'	1:AA:1397:C:H5''	1.93	0.48
1:AA:1261:A:H5'	1:AA:1283:G:O3'	2.07	0.48
1:AA:323:U:P	20:AT:23:ARG:CA	2.84	0.48
4:AD:57:ARG:NH2	4:AD:205:GLU:OE2	2.46	0.48
1:AA:977:A:N1	1:AA:1224:G:C4	2.81	0.48
1:AA:893:C:H2'	1:AA:894:G:O4'	2.12	0.48
9:AI:117:HIS:HB2	9:AI:121:ARG:HD2	1.94	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1329:A:H4'	13:AM:24:GLY:O	2.13	0.48
1:AA:1329:A:C2'	1:AA:1330:U:H5'	2.43	0.48
1:AA:1310:G:O2'	1:AA:1311:G:H5'	2.12	0.48
1:AA:586:C:O2'	1:AA:587:G:H5'	2.13	0.48
1:AA:624:C:O2'	1:AA:625:G:H5'	2.13	0.48
21:B0:2809:A:C2'	21:B0:2810:A:H5'	2.43	0.48
1:AA:65:U:O4'	1:AA:200:G:H4'	2.12	0.48
1:AA:227:G:H2'	1:AA:228:A:C5'	2.43	0.48
10:AJ:71:LEU:O	10:AJ:72:VAL:CB	2.60	0.48
2:AB:204:ASN:ND2	2:AB:206:ASP:H	2.11	0.48
4:AD:174:LEU:O	4:AD:175:SER:HB3	2.13	0.48
21:B0:338:G:H1	21:B0:346:C:H42	1.60	0.48
1:AA:1030:U:H5'	1:AA:1031:C:C5	2.48	0.48
1:AA:265:G:O2'	1:AA:266:G:H5'	2.13	0.48
1:AA:315:A:C2	1:AA:354:G:OP2	2.62	0.48
1:AA:291:C:O3'	1:AA:292:G:P	2.71	0.48
1:AA:141:A:H5'	1:AA:182:U:H1'	1.95	0.48
21:B0:3184:C:C2'	21:B0:3185:U:C5'	2.91	0.48
1:AA:1346:A:H1'	1:AA:1348:U:C5	2.47	0.48
13:AM:88:ARG:CD	19:AS:3:ARG:NH2	2.61	0.48
1:AA:1418:A:H2'	1:AA:1419:G:O4'	2.12	0.48
1:AA:212:G:O2'	1:AA:213:G:O5'	2.30	0.48
22:B9:112:A:H2'	22:B9:113:G:C8	2.49	0.48
1:AA:619:U:C6	4:AD:135:LEU:HD11	2.47	0.48
16:AP:52:ASP:OD2	16:AP:55:ARG:HB2	2.13	0.48
2:AB:97:TRP:CZ2	2:AB:102:LEU:HD13	2.45	0.48
21:B0:1964:A:H5''	21:B0:1965:U:OP2	2.13	0.48
21:B0:58:C:H1'	21:B0:72:A:C8	2.48	0.48
18:AR:39:VAL:HG13	18:AR:40:LEU:N	2.28	0.48
4:AD:7:PRO:CG	4:AD:10:ARG:HD2	2.42	0.48
21:B0:1949:A:H1'	21:B0:2572:U:H4'	1.95	0.48
8:AH:60:ARG:HG3	8:AH:60:ARG:NH1	2.28	0.48
6:AF:43:LEU:N	6:AF:43:LEU:HD22	2.27	0.48
1:AA:784:C:H4'	21:B0:1829:C:OP1	2.13	0.48
18:AR:34:TYR:HA	18:AR:69:THR:HG23	1.93	0.48
21:B0:737:C:H2'	21:B0:738:G:O4'	2.14	0.48
1:AA:1279:A:O2'	1:AA:1282:C:N4	2.46	0.48
1:AA:702:A:O4'	21:B0:1840:A:OP1	2.29	0.48
12:AL:119:LYS:O	12:AL:120:TYR:CB	2.61	0.48
1:AA:402:G:C2'	1:AA:620:C:H42	2.26	0.48
1:AA:1497:G:H2'	1:AA:1498:U:C5'	2.42	0.48
13:AM:78:ILE:O	13:AM:82:MET:HB2	2.12	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:AL:28:LYS:O	12:AL:29:GLY:C	2.50	0.48
21:B0:126:C:H2'	21:B0:127:C:C6	2.48	0.48
5:AE:51:VAL:O	5:AE:54:ALA:HB3	2.13	0.48
21:B0:1312:G:C5'	21:B0:1313:U:H5'	2.39	0.48
6:AF:38:GLU:O	6:AF:39:LYS:HB3	2.12	0.48
1:AA:161:A:H2	1:AA:348:G:HO2'	1.55	0.48
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HB2	1.94	0.48
21:B0:2754:C:H2'	21:B0:2755:A:O4'	2.14	0.48
21:B0:1190:C:H2'	21:B0:1191:G:C8	2.48	0.48
21:B0:742:G:H2'	21:B0:742:G:N3	2.29	0.48
21:B0:1356:G:H5'	21:B0:1614:C:OP2	2.12	0.48
1:AA:269:C:H2'	1:AA:270:A:C8	2.48	0.48
1:AA:1451:A:O2'	1:AA:1452:C:OP1	2.26	0.48
17:AQ:12:SER:HB3	17:AQ:20:THR:HB	1.95	0.48
12:AL:83:VAL:HG21	12:AL:100:ILE:HD13	1.95	0.48
1:AA:113:G:C2	1:AA:353:A:H1'	2.47	0.48
1:AA:390:C:C3'	16:AP:28:ARG:NH2	2.76	0.48
1:AA:1485:U:H5'	21:B0:1943:A:O3'	2.13	0.48
21:B0:1099:A:H3'	21:B0:1100:G:H5'	1.94	0.48
3:AC:180:ALA:O	3:AC:181:ASN:CB	2.61	0.48
3:AC:3:ASN:HD22	3:AC:4:LYS:HG2	1.78	0.48
1:AA:954:G:H2'	1:AA:955:U:H6	1.78	0.48
1:AA:959:A:H2'	1:AA:960:U:O4'	2.12	0.48
10:AJ:45:ARG:CZ	14:AN:36:PHE:HD2	2.12	0.48
21:B0:3102:G:H2'	21:B0:3103:A:C8	2.48	0.48
21:B0:1930:C:H2'	21:B0:1931:G:H8	1.78	0.48
1:AA:35:G:O2'	12:AL:118:SER:O	2.21	0.48
1:AA:528:C:H5'	1:AA:535:A:C6	2.49	0.48
1:AA:1286:A:H2'	1:AA:1287:A:H4'	1.96	0.48
5:AE:31:LEU:HD22	5:AE:43:LEU:HD21	1.94	0.48
6:AF:46:ARG:HB2	6:AF:60:PHE:CE1	2.48	0.48
10:AJ:6:ILE:HG23	10:AJ:98:ILE:HG12	1.94	0.48
12:AL:53:ARG:HG2	12:AL:93:LEU:HD11	1.95	0.48
2:AB:111:ARG:HB3	2:AB:149:LEU:HD11	1.95	0.48
12:AL:83:VAL:HG22	12:AL:84:LEU:N	2.28	0.48
4:AD:119:GLN:HG2	4:AD:123:HIS:CD2	2.48	0.48
21:B0:1343:C:H2'	21:B0:1344:C:C6	2.48	0.48
21:B0:422:C:H2'	21:B0:423:G:H8	1.78	0.48
1:AA:209:U:H5'	1:AA:210:C:C5	2.48	0.48
1:AA:1459:C:H5''	20:AT:28:ALA:HB2	1.84	0.48
1:AA:216:C:O2'	1:AA:468:A:C4	2.66	0.48
1:AA:1342:C:O2'	1:AA:1343:G:H5'	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:456:A:C2	1:AA:477:G:H1'	2.48	0.48
1:AA:1366:C:C2	1:AA:1367:C:C5	3.00	0.48
9:AI:111:ARG:HG3	9:AI:111:ARG:NH1	2.28	0.48
1:AA:421:U:H5'	1:AA:422:C:C5	2.49	0.48
1:AA:588:G:N9	1:AA:753:A:N1	2.61	0.48
21:B0:31:C:H2'	21:B0:32:C:O4'	2.14	0.48
21:B0:929:A:H2'	21:B0:930:A:H4'	1.95	0.48
19:AS:32:LYS:O	19:AS:32:LYS:HG3	2.13	0.48
3:AC:23:TYR:O	3:AC:24:ALA:HB2	2.14	0.48
21:B0:2808:U:H3'	21:B0:2809:A:C5'	2.40	0.48
6:AF:67:MET:CE	6:AF:72:VAL:HA	2.40	0.48
21:B0:2642:G:H2'	21:B0:2643:G:O4'	2.13	0.48
18:AR:36:ASN:CG	18:AR:39:VAL:HG12	2.34	0.48
21:B0:2504:G:H2'	21:B0:2505:G:C8	2.49	0.48
4:AD:151:LYS:CD	4:AD:151:LYS:N	2.75	0.48
21:B0:2437:G:N2	21:B0:2469:G:H2'	2.28	0.48
10:AJ:94:VAL:CG1	10:AJ:95:GLU:N	2.77	0.48
5:AE:36:ASP:O	5:AE:37:ARG:HB2	2.13	0.48
21:B0:1301:U:H2'	21:B0:1664:G:H21	1.79	0.48
15:AO:34:LEU:O	15:AO:34:LEU:HD23	2.12	0.48
8:AH:65:TYR:HA	8:AH:79:VAL:HG23	1.95	0.48
6:AF:43:LEU:H	6:AF:43:LEU:HD22	1.76	0.48
21:B0:703:A:H2'	21:B0:704:G:C8	2.49	0.48
7:AG:6:ARG:O	7:AG:7:ALA:C	2.52	0.48
1:AA:647:C:H2'	1:AA:648:A:H8	1.78	0.48
1:AA:130:A:C6	1:AA:264:U:C1'	2.84	0.48
20:AT:67:ALA:O	20:AT:73:HIS:ND1	2.47	0.48
1:AA:279:A:P	17:AQ:95:TYR:HE2	2.35	0.48
1:AA:94:G:H2'	1:AA:96:C:H6	1.79	0.48
1:AA:322:C:C2'	20:AT:23:ARG:HB2	2.42	0.48
1:AA:1505:G:C3'	1:AA:1506:U:OP2	2.51	0.48
1:AA:1505:G:H3'	1:AA:1505:G:C8	2.48	0.48
21:B0:891:A:N1	21:B0:893:G:C5	2.81	0.48
1:AA:1108:G:OP1	3:AC:175:LEU:HB2	2.14	0.48
1:AA:1271:G:H5'	1:AA:1314:C:H5''	1.96	0.48
1:AA:571:U:C5'	1:AA:819:A:N3	2.75	0.48
10:AJ:62:HIS:ND1	14:AN:61:TRP:CH2	2.82	0.48
3:AC:178:LEU:O	3:AC:179:ARG:CB	2.60	0.48
20:AT:38:LYS:O	20:AT:39:LYS:C	2.51	0.48
3:AC:130:VAL:CG2	3:AC:157:ILE:HG23	2.41	0.48
1:AA:1070:U:O2'	1:AA:1071:C:H5'	2.13	0.48
2:AB:115:LEU:HD12	2:AB:115:LEU:O	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:AP:20:VAL:CG1	16:AP:21:VAL:N	2.76	0.48
7:AG:38:LEU:O	7:AG:42:ILE:HG13	2.12	0.48
21:B0:2017:U:O2'	21:B0:2018:G:H5'	2.13	0.48
21:B0:634:G:H2'	21:B0:635:C:C6	2.49	0.48
21:B0:340:G:H1'	21:B0:488:A:C4	2.49	0.48
21:B0:490:A:C5	21:B0:492:G:H1'	2.48	0.48
21:B0:477:A:H2'	21:B0:478:G:H5'	1.95	0.48
5:AE:13:ILE:HG13	5:AE:13:ILE:O	2.12	0.48
11:AK:86:GLY:H	11:AK:112:THR:HG23	1.79	0.48
1:AA:1165:C:O2'	1:AA:1166:G:H5'	2.12	0.48
7:AG:64:GLN:O	7:AG:67:GLU:HB3	2.14	0.48
1:AA:1501:C:OP1	1:AA:1508:G:H4'	2.13	0.48
4:AD:88:VAL:CA	5:AE:96:PRO:O	2.54	0.48
17:AQ:104:LYS:NZ	21:B0:729:A:N6	2.61	0.48
1:AA:6:G:H22	5:AE:98:THR:HG23	1.74	0.48
1:AA:41:G:H2'	1:AA:42:G:C8	2.49	0.48
1:AA:1312:G:N7	19:AS:4:SER:HB3	2.29	0.48
1:AA:1533:C:O2'	1:AA:1534:A:H5'	2.14	0.48
7:AG:149:ARG:CZ	11:AK:59:TYR:CZ	2.97	0.48
1:AA:792:A:H4'	1:AA:793:U:C5'	2.39	0.48
1:AA:407:G:H5''	4:AD:115:ARG:HB3	1.96	0.48
21:B0:2308:A:H2'	21:B0:2309:G:C8	2.48	0.48
1:AA:983:A:C2	1:AA:984:C:C5	3.01	0.48
21:B0:1418:C:H2'	21:B0:1419:G:H8	1.79	0.48
21:B0:1231:A:H2'	21:B0:1232:U:O4'	2.13	0.48
21:B0:1023:U:H1'	21:B0:1154:A:N7	2.28	0.48
5:AE:20:GLN:C	5:AE:21:ALA:O	2.51	0.48
1:AA:6:G:H2'	5:AE:119:LEU:CD2	2.44	0.48
1:AA:406:G:N2	1:AA:437:U:C2	2.82	0.48
1:AA:538:G:O2'	1:AA:539:A:H5'	2.13	0.48
1:AA:1110:A:C2'	1:AA:1111:A:C5'	2.92	0.48
3:AC:173:VAL:N	3:AC:174:PRO:CD	2.76	0.48
10:AJ:65:LEU:CD2	10:AJ:65:LEU:O	2.59	0.48
1:AA:38:G:C4'	1:AA:547:A:N6	2.77	0.48
1:AA:588:G:C5	1:AA:753:A:C4	3.02	0.48
1:AA:995:C:O2	14:AN:4:LYS:CG	2.62	0.48
1:AA:15:G:O4'	5:AE:24:ARG:NH1	2.44	0.48
1:AA:825:G:H2'	1:AA:826:C:H6	1.78	0.48
21:B0:951:G:C3'	21:B0:952:A:H5''	2.43	0.48
6:AF:67:MET:HE2	6:AF:72:VAL:HG22	1.96	0.48
21:B0:1130:U:H2'	21:B0:1131:G:C8	2.48	0.48
18:AR:36:ASN:HD22	18:AR:38:GLU:HG2	1.79	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:173:U:H5''	1:AA:197:A:O4'	2.13	0.48
21:B0:2319:G:H2'	21:B0:2320:G:C8	2.49	0.48
1:AA:1162:C:H2'	1:AA:1163:C:H6	1.78	0.48
21:B0:324:C:H2'	21:B0:325:U:O4'	2.14	0.48
21:B0:446:C:H2'	21:B0:447:U:C6	2.49	0.48
21:B0:3176:A:H2'	21:B0:3177:C:C6	2.48	0.48
1:AA:761:G:C1'	17:AQ:103:GLY:O	2.62	0.48
5:AE:71:LEU:HD21	5:AE:115:VAL:HG22	1.96	0.48
1:AA:335:C:C2'	1:AA:1434:A:H5'	2.38	0.48
1:AA:376:G:P	16:AP:6:LEU:HB2	2.54	0.48
1:AA:926:G:H2'	1:AA:1505:G:N3	2.28	0.48
1:AA:1014:A:C5	19:AS:34:TRP:CD2	3.01	0.48
20:AT:39:LYS:HD2	20:AT:55:ILE:CD1	2.27	0.48
1:AA:714:G:H5'	1:AA:776:G:H5'	1.93	0.48
2:AB:18:GLY:CA	2:AB:41:ILE:HA	2.44	0.48
21:B0:1427:G:C2'	21:B0:1428:G:H5'	2.42	0.48
1:AA:26:A:C3'	1:AA:27:G:H5'	2.43	0.48
4:AD:111:ALA:HB1	4:AD:116:GLN:HB3	1.96	0.48
4:AD:6:GLY:O	4:AD:7:PRO:C	2.50	0.48
21:B0:974:U:H1'	21:B0:2229:G:N2	2.28	0.48
21:B0:2759:U:H5''	21:B0:2760:G:O5'	2.14	0.48
13:AM:97:PRO:HB2	13:AM:101:GLN:OE1	2.14	0.48
1:AA:376:G:N1	1:AA:389:A:C6	2.82	0.48
1:AA:8:A:O4'	5:AE:102:ALA:CA	2.62	0.48
1:AA:292:G:H2'	1:AA:609:A:C6	2.49	0.48
1:AA:1111:A:H61	3:AC:176:HIS:C	2.17	0.48
14:AN:12:ARG:O	14:AN:13:THR:C	2.52	0.48
1:AA:586:C:C3'	8:AH:89:PRO:HB2	2.43	0.48
1:AA:1250:A:H4'	9:AI:68:GLY:C	2.35	0.48
2:AB:108:ILE:HG22	2:AB:108:ILE:O	2.13	0.48
2:AB:25:ASN:O	2:AB:27:LYS:N	2.47	0.48
21:B0:1028:G:H2'	21:B0:1029:C:C6	2.49	0.48
21:B0:2321:C:C2'	21:B0:2322:U:H5'	2.44	0.48
1:AA:768:A:H2'	1:AA:769:G:O4'	2.14	0.48
21:B0:387:A:H2'	21:B0:388:G:O4'	2.14	0.48
1:AA:1277:C:O2'	1:AA:1279:A:C4	2.52	0.47
1:AA:232:G:C2	1:AA:263:A:H2	2.18	0.47
1:AA:355:C:C5'	1:AA:389:A:P	3.02	0.47
1:AA:323:U:OP1	20:AT:26:ASN:HB2	2.13	0.47
1:AA:7:G:C2	5:AE:121:LYS:HG2	2.49	0.47
1:AA:39:G:C5	1:AA:498:U:C4	3.02	0.47
3:AC:35:GLU:O	3:AC:38:ARG:N	2.47	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:AJ:27:ALA:HB2	10:AJ:85:LEU:HD21	1.96	0.47
2:AB:213:LEU:C	2:AB:213:LEU:CD2	2.82	0.47
2:AB:17:PHE:HA	2:AB:44:LEU:HD21	1.95	0.47
10:AJ:39:PRO:HA	10:AJ:70:ARG:HH11	1.78	0.47
12:AL:86:ARG:HG3	12:AL:86:ARG:NH1	2.28	0.47
21:B0:1825:C:C2'	21:B0:1826:U:H5'	2.44	0.47
2:AB:53:ARG:NH1	2:AB:199:TYR:CD2	2.82	0.47
21:B0:457:C:H2'	21:B0:458:G:O4'	2.13	0.47
1:AA:155:C:H2'	1:AA:156:G:H8	1.79	0.47
1:AA:1398:A:N6	5:AE:21:ALA:CA	2.52	0.47
1:AA:113:G:O2'	1:AA:353:A:C4'	2.58	0.47
5:AE:107:ARG:HG2	5:AE:108:ALA:N	2.29	0.47
21:B0:1071:U:N3	21:B0:1099:A:H2	2.02	0.47
1:AA:538:G:OP1	12:AL:115:LYS:N	2.47	0.47
1:AA:186:C:H1'	20:AT:81:LYS:HE2	1.88	0.47
1:AA:1014:A:C2	1:AA:1219:U:C1'	2.97	0.47
1:AA:119:A:N6	1:AA:240:C:C2	2.81	0.47
21:B0:1572:C:C3'	21:B0:1573:G:H5''	2.43	0.47
1:AA:204:A:H4'	1:AA:205:G:O5'	2.15	0.47
21:B0:1002:C:H2'	21:B0:1003:C:C6	2.49	0.47
1:AA:526:C:OP2	12:AL:91:LYS:HE2	2.13	0.47
21:B0:1182:U:C3'	21:B0:1183:C:H5''	2.45	0.47
2:AB:90:MET:HA	2:AB:91:PRO:HD3	1.70	0.47
21:B0:88:G:H3'	21:B0:89:A:C5'	2.37	0.47
10:AJ:22:LYS:HZ3	10:AJ:91:PRO:HD3	1.79	0.47
18:AR:47:THR:HA	18:AR:83:GLU:HB2	1.96	0.47
21:B0:952:A:H2'	21:B0:953:G:O4'	2.14	0.47
20:AT:42:GLN:O	20:AT:42:GLN:NE2	2.47	0.47
21:B0:2794:G:H2'	21:B0:2796:A:N7	2.29	0.47
1:AA:657:G:O2'	1:AA:658:G:H5'	2.13	0.47
18:AR:53:ARG:HD3	18:AR:63:GLN:HB3	1.95	0.47
21:B0:611:C:O2'	21:B0:612:G:H5'	2.14	0.47
21:B0:2407:G:H4'	21:B0:2408:G:C8	2.49	0.47
21:B0:1260:A:N6	21:B0:1262:U:H1'	2.29	0.47
1:AA:253:U:P	17:AQ:67:LYS:NZ	2.87	0.47
5:AE:92:LYS:O	5:AE:118:ILE:HG23	2.15	0.47
16:AP:6:LEU:HB3	16:AP:17:TYR:CD2	2.49	0.47
1:AA:1409:C:N3	1:AA:1410:G:C5	2.83	0.47
1:AA:41:G:H2'	1:AA:42:G:H8	1.79	0.47
1:AA:1221:G:O2'	1:AA:1222:G:H5'	2.15	0.47
1:AA:180:U:H2'	1:AA:181:G:H5'	1.96	0.47
1:AA:834:C:H2'	1:AA:835:U:H6	1.79	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:394:G:C5	1:AA:395:C:N4	2.79	0.47
21:B0:1930:C:H2'	21:B0:1931:G:C8	2.49	0.47
1:AA:1113:C:C1'	3:AC:178:LEU:HD23	2.42	0.47
5:AE:148:VAL:O	5:AE:152:ARG:HG3	2.14	0.47
3:AC:23:TYR:OH	10:AJ:67:THR:HG21	2.14	0.47
21:B0:1313:U:C4	21:B0:1651:U:H5'	2.49	0.47
21:B0:831:G:N2	21:B0:1203:A:H62	2.01	0.47
2:AB:215:LEU:O	2:AB:216:SER:C	2.52	0.47
18:AR:28:GLU:OE1	18:AR:28:GLU:N	2.46	0.47
8:AH:6:ILE:HD12	8:AH:35:ILE:HD12	1.97	0.47
11:AK:48:ILE:HD11	11:AK:64:ALA:HA	1.95	0.47
4:AD:111:ALA:HB2	4:AD:120:LEU:HD12	1.96	0.47
1:AA:1233:G:OP1	9:AI:124:GLN:N	2.43	0.47
1:AA:780:A:C2	1:AA:801:U:C5	3.02	0.47
17:AQ:17:LYS:HA	17:AQ:46:ASP:O	2.14	0.47
21:B0:646:C:H2'	21:B0:647:G:O4'	2.14	0.47
21:B0:1938:U:C2'	21:B0:1939:U:H5'	2.44	0.47
7:AG:21:VAL:HG23	7:AG:22:LEU:N	2.29	0.47
1:AA:1127:G:N2	1:AA:1147:C:N4	2.62	0.47
1:AA:1261:A:C5'	1:AA:1283:G:C3'	2.85	0.47
1:AA:926:G:N7	1:AA:1505:G:N1	2.63	0.47
3:AC:173:VAL:HG12	3:AC:173:VAL:O	2.14	0.47
1:AA:178:C:O2'	1:AA:179:A:H5'	2.13	0.47
1:AA:236:G:O3'	17:AQ:42:TYR:OH	2.31	0.47
12:AL:27:LEU:HG	12:AL:28:LYS:N	2.25	0.47
12:AL:48:PRO:HG2	12:AL:49:ASN:N	2.25	0.47
1:AA:848:G:O3'	1:AA:849:C:P	2.72	0.47
5:AE:51:VAL:HB	5:AE:52:PRO:CD	2.37	0.47
21:B0:109:A:C2'	21:B0:110:U:H5''	2.44	0.47
10:AJ:47:PHE:CZ	14:AN:37:PHE:CE1	3.02	0.47
21:B0:2437:G:C2	21:B0:2469:G:H2'	2.50	0.47
7:AG:54:THR:HG22	7:AG:56:GLN:H	1.80	0.47
14:AN:21:TYR:HE2	14:AN:23:ARG:HE	1.63	0.47
21:B0:598:U:H2'	21:B0:599:A:C8	2.49	0.47
21:B0:636:G:H2'	21:B0:637:G:H5'	1.95	0.47
21:B0:2307:A:H2'	21:B0:2308:A:C8	2.49	0.47
21:B0:393:U:H2'	21:B0:394:U:C6	2.49	0.47
21:B0:1598:C:H2'	21:B0:1599:G:O4'	2.14	0.47
1:AA:1262:C:H2'	1:AA:1263:C:H6	1.79	0.47
1:AA:264:U:O2'	17:AQ:63:ARG:HD3	2.13	0.47
1:AA:1501:C:P	1:AA:1508:G:C5'	3.02	0.47
1:AA:1503:A:OP1	1:AA:1531:A:C1'	2.62	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:113:G:C2'	1:AA:353:A:O2'	2.63	0.47
1:AA:315:A:C2	1:AA:353:A:H2'	2.50	0.47
1:AA:1488:G:H2'	1:AA:1489:G:H8	1.78	0.47
1:AA:435:C:O2'	1:AA:436:C:H5'	2.15	0.47
1:AA:959:A:H1'	1:AA:985:C:C1'	2.44	0.47
19:AS:39:THR:HG22	19:AS:40:ILE:N	2.29	0.47
10:AJ:49:VAL:CG1	14:AN:41:ARG:HB2	2.34	0.47
6:AF:75:LEU:C	6:AF:75:LEU:HD13	2.34	0.47
3:AC:19:GLU:HB3	3:AC:40:ARG:NH2	2.25	0.47
1:AA:160:A:N6	1:AA:347:G:H21	2.13	0.47
11:AK:80:VAL:HG21	11:AK:103:LEU:HD13	1.97	0.47
21:B0:242:A:O2'	21:B0:243:G:P	2.72	0.47
21:B0:2220:A:H2'	21:B0:2221:G:C8	2.48	0.47
8:AH:103:VAL:CG2	8:AH:110:ALA:HB2	2.44	0.47
21:B0:1494:G:H2'	21:B0:1495:G:C8	2.50	0.47
21:B0:1365:U:H5'	21:B0:1587:A:H1'	1.96	0.47
21:B0:1489:C:H3'	21:B0:1490:U:C5'	2.45	0.47
21:B0:3181:C:H2'	21:B0:3182:U:C6	2.50	0.47
21:B0:2799:C:H2'	21:B0:2800:C:O4'	2.14	0.47
21:B0:2455:A:O2'	21:B0:2456:U:H5'	2.15	0.47
21:B0:2062:U:H4'	21:B0:2412:A:H2	1.78	0.47
21:B0:3171:A:H4'	21:B0:3172:U:OP1	2.13	0.47
1:AA:131:C:O2'	1:AA:263:A:O4'	2.32	0.47
1:AA:113:G:H1'	1:AA:354:G:H5''	1.97	0.47
1:AA:560:U:O2'	1:AA:561:U:OP2	2.27	0.47
1:AA:1065:U:O4	1:AA:1189:C:N3	2.47	0.47
1:AA:1192:C:P	3:AC:4:LYS:NZ	2.88	0.47
1:AA:1405:G:C4'	1:AA:1519:A:H5'	2.44	0.47
1:AA:994:A:N9	14:AN:5:ALA:O	2.48	0.47
1:AA:994:A:C1'	14:AN:8:GLU:HB3	2.29	0.47
1:AA:1004:A:N6	1:AA:1035:A:H62	2.13	0.47
1:AA:518:C:H5''	1:AA:519:C:H6	1.78	0.47
18:AR:47:THR:HG22	18:AR:48:GLY:H	1.79	0.47
7:AG:75:VAL:CG1	7:AG:86:GLN:HE21	2.27	0.47
2:AB:15:VAL:HG12	2:AB:210:SER:HB2	1.97	0.47
2:AB:187:LEU:CD2	2:AB:214:ILE:HG13	2.43	0.47
6:AF:2:ARG:NE	6:AF:69:GLU:HG2	2.29	0.47
21:B0:1918:G:H4'	21:B0:1920:A:C2	2.50	0.47
7:AG:23:VAL:HG12	7:AG:27:ILE:CD1	2.41	0.47
9:AI:65:VAL:HG13	9:AI:65:VAL:O	2.13	0.47
21:B0:1286:U:H2'	21:B0:2692:A:H2	1.80	0.47
1:AA:913:A:O2'	1:AA:914:A:P	2.72	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:AH:75:ARG:HA	8:AH:76:PRO:HD3	1.71	0.47
21:B0:1922:U:H1'	21:B0:2570:C:O2'	2.15	0.47
1:AA:513:C:H2'	1:AA:514:C:C6	2.49	0.47
21:B0:1279:G:HO2'	21:B0:1280:U:H6	1.62	0.47
21:B0:404:A:H2'	21:B0:405:C:C6	2.50	0.47
21:B0:1497:C:O2'	21:B0:1498:G:H5'	2.14	0.47
1:AA:613:C:O2'	1:AA:614:A:H5'	2.14	0.47
21:B0:1591:U:H2'	21:B0:1592:U:O4'	2.14	0.47
21:B0:1654:A:H2'	21:B0:1655:C:C6	2.49	0.47
6:AF:53:ALA:C	6:AF:55:ASP:H	2.18	0.47
1:AA:1256:A:O3'	1:AA:1257:U:H5'	2.15	0.47
1:AA:235:C:C5'	17:AQ:70:ARG:CB	2.92	0.47
1:AA:131:C:O2'	1:AA:262:A:N3	2.42	0.47
20:AT:59:ALA:O	20:AT:63:ILE:HG13	2.14	0.47
1:AA:189:A:H8	20:AT:105:SER:HG	0.47	0.47
1:AA:321:A:O2'	1:AA:322:C:H5'	2.15	0.47
21:B0:1101:U:O4	21:B0:1113:C:N4	2.48	0.47
21:B0:1088:A:C2	21:B0:1099:A:C8	3.03	0.47
1:AA:406:G:N1	1:AA:496:A:N7	2.61	0.47
1:AA:1515:C:H2'	1:AA:1516:G:C8	2.50	0.47
1:AA:1405:G:N3	1:AA:1519:A:H1'	2.29	0.47
1:AA:1495:U:HO2'	21:B0:1902:A:H2	1.38	0.47
1:AA:952:U:O2'	1:AA:953:G:H5'	2.14	0.47
1:AA:1318:A:H5''	19:AS:10:PHE:CD1	2.48	0.47
3:AC:100:ALA:O	3:AC:101:LEU:HB2	2.14	0.47
13:AM:80:ARG:NH2	19:AS:69:HIS:HE2	2.11	0.47
21:B0:3185:U:C6	21:B0:3185:U:H5'	2.40	0.47
10:AJ:63:PHE:CE2	14:AN:48:ALA:CB	2.96	0.47
1:AA:968:A:N9	1:AA:1062:U:H4'	2.29	0.47
12:AL:42:THR:CG2	12:AL:52:LEU:HB3	2.44	0.47
1:AA:625:G:H2'	1:AA:626:U:H6	1.79	0.47
21:B0:2008:C:H2'	21:B0:2009:U:C6	2.49	0.47
21:B0:367:G:C3'	21:B0:368:A:H5''	2.44	0.47
21:B0:930:A:H3'	21:B0:931:G:H8	1.79	0.47
21:B0:9:U:H2'	21:B0:10:A:C8	2.49	0.47
11:AK:59:TYR:O	11:AK:62:GLN:HB3	2.15	0.47
15:AO:17:ARG:HG3	15:AO:17:ARG:NH1	2.23	0.47
2:AB:50:GLU:HB3	2:AB:200:ILE:O	2.15	0.47
1:AA:577:G:C1'	1:AA:816:A:C2	2.95	0.47
6:AF:4:TYR:CZ	6:AF:72:VAL:HG21	2.49	0.47
1:AA:791:G:H5''	21:B0:1905:G:OP1	2.14	0.47
21:B0:2376:G:H2'	21:B0:2377:U:C6	2.50	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:66:G:C5'	1:AA:199:G:O2'	2.63	0.47
21:B0:1189:G:O2'	21:B0:1190:C:H5'	2.14	0.47
21:B0:1074:G:O2'	21:B0:1075:C:H5'	2.15	0.47
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.50	0.47
1:AA:911:U:P	12:AL:97:ARG:HH21	2.38	0.47
2:AB:75:LYS:HE3	2:AB:78:GLN:OE1	2.14	0.47
1:AA:743:U:H2'	1:AA:744:C:H6	1.79	0.47
21:B0:619:A:H2'	21:B0:620:G:C8	2.49	0.47
22:B9:80:A:H2'	22:B9:81:C:O4'	2.15	0.47
3:AC:139:GLN:CA	3:AC:139:GLN:NE2	2.78	0.47
1:AA:1118:C:H1'	1:AA:1179:A:C8	2.50	0.47
21:B0:1886:G:H2'	21:B0:1887:G:H8	1.79	0.47
21:B0:1829:C:C2'	21:B0:1830:C:H5'	2.44	0.47
13:AM:94:ARG:HH22	19:AS:81:ARG:NH1	2.12	0.47
21:B0:3171:A:O2'	21:B0:3172:U:H6	1.98	0.47
22:B9:22:U:H2'	22:B9:23:G:H8	1.79	0.47
13:AM:39:ILE:CD1	13:AM:56:LEU:HG	2.45	0.47
11:AK:50:TYR:HD1	11:AK:60:ALA:HB2	1.79	0.47
1:AA:130:A:H5'	17:AQ:63:ARG:CZ	2.45	0.47
1:AA:51:A:H4'	1:AA:52:G:C5'	2.45	0.47
21:B0:1838:G:C2'	21:B0:1839:A:H5'	2.37	0.47
1:AA:323:U:H1'	20:AT:19:SER:HB2	1.95	0.47
5:AE:102:ALA:HB2	5:AE:120:THR:HB	1.97	0.47
1:AA:1497:G:C2'	1:AA:1498:U:C5'	2.87	0.47
1:AA:1231:G:O3'	9:AI:126:SER:OG	2.32	0.47
1:AA:1014:A:N3	19:AS:34:TRP:CG	2.82	0.47
16:AP:42:ARG:O	16:AP:43:LYS:C	2.51	0.47
1:AA:59:A:C2	1:AA:331:G:C6	3.03	0.47
10:AJ:8:LEU:HD12	10:AJ:20:ALA:HB2	1.97	0.47
2:AB:23:ARG:C	2:AB:23:ARG:HH11	2.16	0.47
1:AA:227:G:HO2'	1:AA:228:A:H5'	1.80	0.47
1:AA:1178:G:OP2	9:AI:97:LYS:NZ	2.48	0.47
3:AC:79:ARG:HG2	3:AC:82:GLU:CG	2.45	0.47
21:B0:859:U:H4'	21:B0:860:U:C5	2.49	0.47
21:B0:537:C:C6	21:B0:2759:U:H2'	2.50	0.47
21:B0:2238:G:H2'	21:B0:2239:C:C6	2.49	0.47
1:AA:209:U:H5'	1:AA:210:C:H5	1.80	0.47
5:AE:127:ASN:O	5:AE:128:PRO:C	2.53	0.47
21:B0:38:G:H2'	21:B0:39:C:C6	2.49	0.47
4:AD:145:GLU:HG2	4:AD:184:LYS:HE2	1.96	0.47
6:AF:50:TYR:CE1	18:AR:77:GLY:HA2	2.49	0.47
14:AN:14:PRO:O	14:AN:16:PHE:N	2.44	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:248:C:HO2'	1:AA:283:C:H4'	1.80	0.47
1:AA:88:G:O2'	1:AA:89:G:H5'	2.14	0.47
9:AI:33:PHE:CE2	9:AI:47:LEU:HD11	2.50	0.47
1:AA:1300:G:O2'	1:AA:1301:U:P	2.73	0.47
1:AA:947:G:H2'	1:AA:948:C:O4'	2.15	0.47
12:AL:28:LYS:HD2	12:AL:33:ARG:NH1	2.29	0.47
1:AA:1057:G:C2'	1:AA:1058:G:H5'	2.45	0.47
1:AA:528:C:H41	12:AL:49:ASN:ND2	2.13	0.47
10:AJ:22:LYS:HE2	10:AJ:90:LEU:HB2	1.97	0.47
1:AA:719:C:O2'	18:AR:49:LYS:HD3	2.15	0.47
15:AO:77:ARG:O	15:AO:80:ALA:HB3	2.15	0.47
1:AA:227:G:C2	1:AA:228:A:C4	3.03	0.47
8:AH:23:SER:OG	8:AH:60:ARG:HD2	2.15	0.47
21:B0:1974:U:H2'	21:B0:1975:G:H5''	1.95	0.47
20:AT:94:ALA:O	20:AT:95:ALA:CB	2.63	0.47
21:B0:1789:U:H2'	21:B0:1790:G:H5'	1.95	0.47
21:B0:810:U:H2'	21:B0:811:G:C8	2.49	0.47
21:B0:558:G:H5''	21:B0:559:C:C5	2.50	0.47
3:AC:21:ARG:NH2	3:AC:56:ASP:OD2	2.48	0.47
5:AE:33:VAL:HG11	5:AE:109:ILE:HA	1.96	0.47
1:AA:232:G:N2	1:AA:263:A:C2	2.82	0.47
1:AA:1261:A:H5'	1:AA:1284:C:H5'	1.96	0.47
20:AT:50:GLU:HG3	20:AT:99:LEU:CD1	2.45	0.47
1:AA:1111:A:N6	3:AC:176:HIS:HB3	2.30	0.47
1:AA:571:U:P	1:AA:819:A:HO2'	2.29	0.47
1:AA:246:A:H4'	1:AA:247:G:H4'	1.96	0.47
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.77	0.47
1:AA:975:A:H4'	1:AA:976:G:H5'	1.97	0.47
6:AF:30:LEU:HB3	6:AF:35:ALA:CB	2.41	0.47
21:B0:2199:C:H2'	21:B0:2200:G:C8	2.50	0.47
2:AB:142:LEU:HB3	2:AB:146:GLN:HE22	1.80	0.47
21:B0:85:C:O2'	21:B0:86:U:H5'	2.15	0.47
1:AA:606:G:O3'	1:AA:607:A:P	2.73	0.47
21:B0:2429:A:O2'	21:B0:2430:A:H5'	2.16	0.47
15:AO:66:LEU:O	15:AO:69:TYR:HB3	2.15	0.47
1:AA:633:G:H2'	1:AA:634:C:C6	2.50	0.47
21:B0:342:G:O2'	21:B0:343:A:OP1	2.27	0.47
21:B0:462:G:H2'	21:B0:463:C:H5'	1.97	0.47
21:B0:564:U:H2'	21:B0:565:A:C8	2.50	0.47
1:AA:1256:A:O4'	1:AA:1258:G:N7	2.48	0.46
1:AA:1474:G:O2'	1:AA:1475:G:H5'	2.15	0.46
1:AA:235:C:C4'	17:AQ:70:ARG:HG2	2.43	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:927:G:H4'	1:AA:1503:A:N7	2.30	0.46
4:AD:87:GLY:O	4:AD:88:VAL:C	2.53	0.46
1:AA:355:C:H4'	1:AA:388:G:O3'	2.15	0.46
1:AA:926:G:N3	1:AA:1505:G:C4	2.83	0.46
3:AC:174:PRO:O	3:AC:177:THR:HG22	2.15	0.46
1:AA:1321:C:N4	19:AS:37:ARG:NH1	2.61	0.46
10:AJ:51:ARG:O	14:AN:45:ARG:HD3	2.15	0.46
21:B0:3129:C:H5'	21:B0:3174:C:H5''	1.97	0.46
1:AA:119:A:C4	1:AA:240:C:C5	3.03	0.46
21:B0:3098:U:H3'	21:B0:3099:U:C5	2.49	0.46
1:AA:564:C:N3	17:AQ:31:LEU:HD11	2.30	0.46
18:AR:45:SER:C	18:AR:47:THR:N	2.64	0.46
1:AA:719:C:H1'	18:AR:49:LYS:HG2	1.97	0.46
21:B0:1223:G:H5'	21:B0:1225:G:OP1	2.15	0.46
1:AA:457:G:O2'	1:AA:458:G:H5'	2.16	0.46
21:B0:351:A:H2'	21:B0:352:G:O4'	2.15	0.46
22:B9:34:C:H2'	22:B9:35:C:C6	2.50	0.46
21:B0:1155:G:H2'	21:B0:1156:U:O4'	2.16	0.46
21:B0:2432:A:H4'	21:B0:2551:A:O2'	2.15	0.46
21:B0:1184:G:H2'	21:B0:1185:C:H5'	1.97	0.46
5:AE:118:ILE:CG2	5:AE:119:LEU:H	2.28	0.46
3:AC:59:ARG:N	10:AJ:92:THR:HG21	2.30	0.46
9:AI:44:VAL:HG13	9:AI:51:ARG:NH2	2.24	0.46
1:AA:1305:G:HO2'	1:AA:1306:A:H8	0.68	0.46
1:AA:517:G:H5'	1:AA:519:C:C2	2.50	0.46
6:AF:44:GLY:HA2	6:AF:59:TYR:CE1	2.51	0.46
21:B0:1313:U:O4	21:B0:1651:U:H5'	2.15	0.46
1:AA:1152:A:H5''	10:AJ:13:HIS:CD2	2.50	0.46
7:AG:77:SER:O	7:AG:156:TRP:HZ3	1.98	0.46
7:AG:77:SER:O	7:AG:156:TRP:CZ3	2.69	0.46
17:AQ:80:GLY:O	17:AQ:81:ARG:HB3	2.15	0.46
21:B0:566:U:H2'	21:B0:567:G:C8	2.50	0.46
21:B0:1445:A:H2'	21:B0:1446:U:O4'	2.14	0.46
21:B0:3181:C:O3'	21:B0:3182:U:P	2.73	0.46
21:B0:2560:G:N3	21:B0:2560:G:H3'	2.31	0.46
18:AR:59:SER:OG	18:AR:62:GLU:HG3	2.15	0.46
1:AA:1001:A:H2'	1:AA:1002:G:H8	1.79	0.46
3:AC:28:GLN:O	3:AC:31:HIS:N	2.46	0.46
1:AA:675:A:C2	11:AK:118:GLY:HA3	2.51	0.46
1:AA:130:A:N1	1:AA:264:U:N3	2.48	0.46
1:AA:132:C:O2'	1:AA:133:U:H5'	2.15	0.46
21:B0:3149:G:O3'	21:B0:3150:C:OP2	2.33	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1503:A:O4'	1:AA:1531:A:N3	2.48	0.46
1:AA:375:U:O4	1:AA:376:G:O6	2.33	0.46
21:B0:1840:A:H2'	21:B0:1841:G:H5'	1.98	0.46
1:AA:951:G:O2'	1:AA:952:U:H5'	2.15	0.46
1:AA:1320:C:O2	19:AS:72:GLY:HA3	2.14	0.46
1:AA:1372:U:H5''	9:AI:71:SER:HB2	1.98	0.46
8:AH:92:ARG:HG2	8:AH:94:TYR:OH	2.16	0.46
10:AJ:30:SER:CB	10:AJ:80:LYS:HB3	2.44	0.46
3:AC:167:TRP:O	3:AC:168:ALA:CB	2.63	0.46
1:AA:1445:U:O2'	1:AA:1446:A:H5'	2.15	0.46
4:AD:24:GLU:CG	4:AD:25:ARG:N	2.77	0.46
4:AD:29:PRO:C	4:AD:30:LYS:HG3	2.35	0.46
1:AA:161:A:C2	1:AA:348:G:O2'	2.66	0.46
7:AG:46:ALA:O	7:AG:50:ILE:HG13	2.15	0.46
7:AG:135:VAL:O	7:AG:139:GLU:HG3	2.15	0.46
21:B0:397:U:H2'	21:B0:398:C:C6	2.51	0.46
21:B0:1280:U:O2'	21:B0:1281:A:H5'	2.15	0.46
21:B0:1333:G:N2	21:B0:1344:C:H41	2.13	0.46
7:AG:20:ASP:OD1	7:AG:22:LEU:HB3	2.16	0.46
22:B9:22:U:H2'	22:B9:23:G:C8	2.50	0.46
21:B0:2512:A:H2'	21:B0:2513:A:O4'	2.15	0.46
21:B0:2277:A:H2'	21:B0:2278:A:O4'	2.16	0.46
21:B0:3131:A:H5''	21:B0:3133:G:O4'	2.16	0.46
21:B0:2498:U:H5''	21:B0:2499:C:OP1	2.15	0.46
12:AL:71:PRO:O	12:AL:102:ARG:HD2	2.16	0.46
1:AA:91:C:O2'	1:AA:92:G:H5'	2.15	0.46
1:AA:1277:C:C2'	1:AA:1278:U:H5'	2.45	0.46
1:AA:1475:G:H5''	21:B0:1706:A:C1'	2.42	0.46
1:AA:112:G:H2'	1:AA:354:G:H4'	1.96	0.46
19:AS:10:PHE:HE2	19:AS:12:ASP:OD1	1.97	0.46
1:AA:1298:C:N4	7:AG:114:ARG:CB	2.56	0.46
1:AA:1368:G:OP2	9:AI:114:TYR:HA	2.15	0.46
1:AA:151:A:H2'	1:AA:152:A:O4'	2.15	0.46
1:AA:59:A:N3	1:AA:331:G:C2	2.82	0.46
1:AA:58:C:O2'	1:AA:59:A:H5'	2.16	0.46
21:B0:2669:C:H41	34:BL:15:SER:CA	2.28	0.46
1:AA:15:G:N3	5:AE:19:MET:HG2	2.30	0.46
3:AC:110:ASN:ND2	3:AC:140:ARG:HB3	2.21	0.46
18:AR:36:ASN:ND2	18:AR:38:GLU:HG2	2.30	0.46
1:AA:227:G:C2	1:AA:228:A:H1'	2.51	0.46
21:B0:584:A:H4'	21:B0:2479:U:C5'	2.45	0.46
11:AK:72:ALA:HB1	11:AK:77:MET:HG3	1.97	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:AE:68:GLU:O	5:AE:70:PRO:HD3	2.15	0.46
1:AA:1195:C:H2'	1:AA:1197:G:H5'	1.96	0.46
21:B0:1947:G:P	21:B0:1947:G:H8	2.38	0.46
21:B0:2061:C:H1'	21:B0:2413:A:H1'	1.97	0.46
1:AA:127:G:N2	17:AQ:61:GLU:OE1	2.30	0.46
2:AB:78:GLN:O	2:AB:94:ASN:OD1	2.33	0.46
12:AL:82:VAL:O	12:AL:106:ASP:HB2	2.15	0.46
1:AA:1481:U:H2'	1:AA:1482:G:O4'	2.15	0.46
21:B0:323:G:H2'	21:B0:324:C:C6	2.50	0.46
7:AG:107:ALA:O	7:AG:110:GLN:HB2	2.16	0.46
13:AM:46:LYS:HG3	13:AM:47:ASP:N	2.30	0.46
21:B0:2784:A:H4'	21:B0:2786:G:OP2	2.15	0.46
1:AA:232:G:H1'	1:AA:263:A:N1	2.31	0.46
1:AA:375:U:H3'	1:AA:376:G:OP2	2.15	0.46
21:B0:891:A:O2'	21:B0:892:A:OP2	2.33	0.46
1:AA:1015:A:H1'	1:AA:1219:U:H4'	1.97	0.46
1:AA:1112:C:N3	3:AC:178:LEU:CA	2.78	0.46
1:AA:397:A:N7	1:AA:547:A:O3'	2.49	0.46
9:AI:48:GLU:OE1	9:AI:48:GLU:HA	2.16	0.46
1:AA:719:C:O2'	18:AR:49:LYS:CD	2.63	0.46
2:AB:97:TRP:CH2	2:AB:176:GLU:OE2	2.69	0.46
2:AB:15:VAL:CG1	2:AB:209:ARG:HG3	2.46	0.46
21:B0:2075:U:C2'	21:B0:3093:C:C6	2.98	0.46
7:AG:15:ASP:O	7:AG:19:GLY:HA2	2.16	0.46
21:B0:203:G:O2'	21:B0:204:A:H5'	2.15	0.46
4:AD:3:ARG:NE	4:AD:71:SER:HB3	2.31	0.46
21:B0:508:G:H22	21:B0:516:G:H22	1.63	0.46
2:AB:19:HIS:HD2	2:AB:189:ASP:OD2	1.99	0.46
21:B0:2321:C:H2'	21:B0:2322:U:H5'	1.97	0.46
21:B0:670:U:H2'	21:B0:671:A:C8	2.50	0.46
13:AM:94:ARG:HH22	19:AS:81:ARG:HH11	1.64	0.46
21:B0:645:G:H2'	21:B0:646:C:C6	2.51	0.46
19:AS:18:LYS:HG2	19:AS:18:LYS:O	2.16	0.46
21:B0:887:G:O2'	21:B0:888:G:H5'	2.15	0.46
21:B0:1856:U:O2	21:B0:3877:A:C2	2.68	0.46
17:AQ:97:SER:O	17:AQ:98:LEU:C	2.54	0.46
1:AA:51:A:H4'	1:AA:52:G:O5'	2.15	0.46
1:AA:184:G:O2'	1:AA:224:C:H4'	2.15	0.46
1:AA:19:C:N3	1:AA:916:G:O6	2.48	0.46
1:AA:993:G:N1	1:AA:1046:A:C5	2.84	0.46
1:AA:69:G:O2'	1:AA:153:C:H5'	2.15	0.46
10:AJ:48:THR:OG1	10:AJ:62:HIS:CD2	2.69	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1039:C:O2'	1:AA:1040:U:H5'	2.16	0.46
1:AA:1300:G:O2'	1:AA:1301:U:H6	1.98	0.46
21:B0:1226:A:N1	21:B0:1250:A:H1'	2.30	0.46
13:AM:51:ALA:O	13:AM:55:ARG:HG3	2.16	0.46
18:AR:48:GLY:O	18:AR:74:ARG:NH2	2.41	0.46
21:B0:831:G:H5'	21:B0:852:U:OP1	2.15	0.46
11:AK:84:VAL:HG23	11:AK:109:VAL:O	2.16	0.46
21:B0:84:G:H2'	21:B0:85:C:C6	2.50	0.46
21:B0:1358:C:H2'	21:B0:1359:G:H5'	1.97	0.46
12:AL:54:LYS:N	12:AL:54:LYS:HD2	2.30	0.46
22:B9:59:A:N3	22:B9:59:A:H2'	2.31	0.46
21:B0:1414:G:H2'	21:B0:1415:C:C6	2.50	0.46
21:B0:1036:G:H1'	21:B0:1145:C:C4'	2.45	0.46
21:B0:2825:A:H2'	21:B0:2826:C:C6	2.51	0.46
21:B0:753:U:H2'	21:B0:754:G:H5'	1.97	0.46
1:AA:690:G:H2'	1:AA:691:G:O4'	2.15	0.46
17:AQ:63:ARG:HG2	17:AQ:64:PRO:HD2	1.97	0.46
17:AQ:96:GLN:O	17:AQ:96:GLN:CD	2.54	0.46
1:AA:322:C:H4'	20:AT:23:ARG:CG	2.42	0.46
1:AA:1097:C:H4'	1:AA:1168:A:O2'	2.15	0.46
1:AA:1314:C:C4	19:AS:6:LYS:HE2	2.50	0.46
16:AP:43:LYS:HG2	16:AP:48:TRP:CE2	2.50	0.46
1:AA:1086:U:O3'	1:AA:1389:C:H4'	2.16	0.46
12:AL:60:LEU:HD21	12:AL:66:VAL:HG22	1.97	0.46
1:AA:1056:U:O2'	1:AA:1057:G:H5'	2.14	0.46
3:AC:188:LEU:O	3:AC:189:ALA:CB	2.59	0.46
1:AA:1237:C:H2'	1:AA:1336:C:C5	2.51	0.46
1:AA:411:A:C6	1:AA:429:U:C4	3.04	0.46
6:AF:101:ALA:HB2	18:AR:28:GLU:HB3	1.97	0.46
1:AA:227:G:C2'	1:AA:228:A:H5'	2.46	0.46
21:B0:181:A:H4'	21:B0:182:G:C4'	2.44	0.46
21:B0:2021:G:H2'	21:B0:2022:C:C6	2.51	0.46
1:AA:542:G:H2'	1:AA:543:C:H6	1.81	0.46
21:B0:575:U:H2'	21:B0:576:A:C8	2.51	0.46
1:AA:1128:C:O2'	1:AA:1130:A:C8	2.62	0.46
21:B0:1269:G:H2'	21:B0:1270:C:C6	2.50	0.46
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.16	0.46
12:AL:38:THR:HG22	12:AL:39:VAL:HG23	1.97	0.46
1:AA:1390:U:H2'	1:AA:1391:U:C6	2.51	0.46
1:AA:560:U:H6	1:AA:560:U:O5'	1.98	0.46
1:AA:8:A:N7	4:AD:208:SER:HB2	2.30	0.46
1:AA:1416:G:H3'	1:AA:1417:G:OP1	2.13	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:214:U:H5'	1:AA:215:C:OP2	2.15	0.46
1:AA:1497:G:N2	1:AA:1519:A:C2	2.76	0.46
3:AC:92:ALA:C	3:AC:94:LEU:H	2.17	0.46
19:AS:67:VAL:O	19:AS:69:HIS:N	2.49	0.46
9:AI:121:ARG:HG2	9:AI:121:ARG:HH11	1.81	0.46
13:AM:59:TYR:O	13:AM:63:THR:HB	2.15	0.46
2:AB:129:GLU:O	2:AB:130:ARG:HB2	2.15	0.46
5:AE:18:ARG:HG2	5:AE:19:MET:H	1.81	0.46
2:AB:69:LEU:HD23	2:AB:69:LEU:C	2.36	0.46
1:AA:1152:A:O2'	1:AA:1153:C:H5'	2.16	0.46
10:AJ:94:VAL:HG12	10:AJ:95:GLU:H	1.76	0.46
3:AC:60:ALA:O	3:AC:61:ALA:CB	2.63	0.46
21:B0:317:U:H3'	21:B0:318:G:C5'	2.46	0.46
21:B0:1921:A:C3'	21:B0:1922:U:H5''	2.46	0.46
21:B0:313:U:H2'	21:B0:314:G:C8	2.51	0.46
1:AA:909:A:H2'	1:AA:910:C:O4'	2.16	0.46
11:AK:34:ASP:O	11:AK:36:ASP:N	2.48	0.46
4:AD:173:TRP:CD2	4:AD:189:PRO:HB3	2.51	0.46
1:AA:191:G:C5	1:AA:192:U:C4	2.92	0.46
1:AA:234:C:C4'	17:AQ:64:PRO:HG2	2.44	0.46
1:AA:926:G:O6	1:AA:1505:G:C6	2.68	0.46
14:AN:53:LEU:HB3	14:AN:56:VAL:CG2	2.45	0.46
1:AA:421:U:H5'	1:AA:422:C:H5	1.80	0.46
9:AI:50:LEU:C	9:AI:52:ALA:N	2.69	0.46
1:AA:714:G:N3	1:AA:777:A:H1'	2.31	0.46
1:AA:523:A:C2	12:AL:91:LYS:CB	2.95	0.46
4:AD:104:VAL:HG11	4:AD:146:ILE:CD1	2.37	0.46
21:B0:471:A:H62	21:B0:480:G:N2	2.07	0.46
21:B0:2809:A:C6	21:B0:2854:G:H2'	2.50	0.46
21:B0:1193:G:H2'	21:B0:1194:U:C6	2.50	0.46
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.50	0.46
1:AA:998:G:O2'	1:AA:999:C:H5'	2.15	0.46
21:B0:644:A:H2'	21:B0:645:G:H5'	1.98	0.46
21:B0:2800:C:H2'	21:B0:2801:A:O4'	2.15	0.46
13:AM:39:ILE:HD12	13:AM:56:LEU:HG	1.98	0.46
5:AE:35:GLY:HA3	5:AE:112:LEU:HB3	1.97	0.46
21:B0:502:A:H2'	21:B0:503:G:O4'	2.15	0.46
1:AA:1245:A:H2'	1:AA:1246:C:C6	2.50	0.46
21:B0:42:G:H2'	21:B0:43:A:O4'	2.16	0.46
1:AA:1149:C:O2'	1:AA:1280:A:N1	2.47	0.46
20:AT:63:ILE:HG23	20:AT:72:LEU:CD1	2.46	0.46
21:B0:3110:G:OP1	21:B0:3149:G:C5'	2.64	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1532:U:H6	1:AA:1532:U:O5'	2.00	0.46
1:AA:336:C:H5'	1:AA:1433:A:O2'	2.15	0.46
1:AA:1111:A:C6	3:AC:177:THR:HA	2.51	0.46
1:AA:1225:A:H5'	1:AA:1226:C:OP2	2.16	0.46
1:AA:1342:C:C4'	9:AI:125:TYR:CZ	2.99	0.46
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.16	0.46
1:AA:820:U:O3'	1:AA:821:G:P	2.74	0.46
1:AA:244:U:C2	1:AA:894:G:H1'	2.51	0.46
22:B9:74:A:H2'	22:B9:75:A:C8	2.51	0.46
9:AI:114:TYR:CG	10:AJ:60:ARG:HG2	2.51	0.46
1:AA:1371:G:P	9:AI:11:LYS:HE2	2.55	0.46
10:AJ:60:ARG:O	10:AJ:61:GLU:CB	2.61	0.46
8:AH:91:ARG:HG3	12:AL:7:ILE:HG13	1.98	0.46
12:AL:77:LEU:HD21	12:AL:107:ALA:HB2	1.97	0.46
11:AK:93:GLN:HE21	11:AK:96:ARG:NH2	2.13	0.46
1:AA:1206:G:H4'	3:AC:192:THR:O	2.16	0.46
12:AL:46:LYS:O	12:AL:47:LYS:C	2.54	0.46
21:B0:1312:G:H5''	21:B0:1313:U:C5'	2.39	0.46
6:AF:2:ARG:HD2	6:AF:69:GLU:HG2	1.96	0.46
19:AS:15:LEU:O	19:AS:19:VAL:N	2.48	0.46
1:AA:1153:C:H2'	1:AA:1154:G:C8	2.46	0.46
1:AA:913:A:O2'	1:AA:914:A:O4'	2.26	0.46
21:B0:1750:A:H1'	21:B0:2690:A:C2	2.51	0.46
4:AD:152:SER:HA	4:AD:155:LEU:HG	1.97	0.46
21:B0:1352:G:H2'	21:B0:1353:A:C8	2.49	0.46
21:B0:599:A:H2'	21:B0:600:G:H8	1.80	0.46
21:B0:2448:A:H2'	21:B0:2449:G:O4'	2.16	0.46
21:B0:1586:A:H2'	21:B0:1587:A:H8	1.81	0.46
1:AA:1171:G:H2'	1:AA:1172:C:C6	2.51	0.46
1:AA:645:C:O2'	1:AA:646:U:H5'	2.16	0.46
21:B0:590:C:H2'	21:B0:591:G:C8	2.51	0.46
1:AA:934:C:C4	1:AA:1345:U:C5	3.04	0.46
21:B0:556:A:H2'	21:B0:557:U:H5'	1.98	0.46
6:AF:19:LEU:C	6:AF:19:LEU:HD23	2.36	0.46
1:AA:1459:C:OP1	20:AT:28:ALA:HA	2.16	0.45
1:AA:131:C:O4'	1:AA:263:A:H1'	2.16	0.45
1:AA:1501:C:P	1:AA:1508:G:H4'	2.56	0.45
1:AA:760:G:C6	17:AQ:105:ALA:CB	2.66	0.45
1:AA:390:C:O5'	1:AA:390:C:H6	1.99	0.45
1:AA:324:G:H5'	20:AT:70:SER:HG	1.80	0.45
1:AA:1106:G:OP1	3:AC:172:ARG:CG	2.64	0.45
1:AA:401:C:H4'	1:AA:622:A:O4'	2.17	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:AC:64:VAL:CG2	3:AC:99:VAL:HB	2.45	0.45
9:AI:112:LYS:C	9:AI:112:LYS:HD3	2.36	0.45
10:AJ:51:ARG:HG2	14:AN:45:ARG:HH12	1.73	0.45
13:AM:5:ALA:O	13:AM:8:GLU:N	2.45	0.45
13:AM:49:THR:O	13:AM:53:VAL:HG23	2.16	0.45
21:B0:1203:A:H2'	21:B0:1204:G:H5'	1.98	0.45
21:B0:403:A:H4'	21:B0:425:A:C5'	2.39	0.45
21:B0:3093:C:O2'	21:B0:3094:A:H5'	2.15	0.45
21:B0:2640:G:H2'	21:B0:2641:A:O4'	2.16	0.45
20:AT:42:GLN:O	20:AT:45:GLN:HB3	2.16	0.45
21:B0:689:A:N3	21:B0:689:A:H3'	2.31	0.45
21:B0:1223:G:H1'	21:B0:1225:G:N3	2.31	0.45
1:AA:105:G:H2'	1:AA:106:C:H6	1.81	0.45
21:B0:2437:G:H2'	21:B0:2469:G:N2	2.31	0.45
21:B0:1683:G:H2'	21:B0:1684:G:O4'	2.16	0.45
21:B0:1684:G:H2'	21:B0:1974:U:O4	2.16	0.45
21:B0:839:U:OP1	21:B0:2407:G:H3'	2.16	0.45
21:B0:2429:A:H5''	21:B0:2476:A:C6	2.51	0.45
12:AL:37:CYS:O	12:AL:79:GLU:O	2.34	0.45
8:AH:45:ILE:HG13	8:AH:45:ILE:O	2.16	0.45
21:B0:162:C:H4'	21:B0:195:A:O2'	2.16	0.45
1:AA:1394:A:C2	1:AA:1501:C:C4'	2.93	0.45
1:AA:1503:A:O2'	1:AA:1504:G:OP1	2.29	0.45
1:AA:51:A:N6	1:AA:313:A:C2	2.84	0.45
5:AE:121:LYS:HE3	5:AE:123:LEU:CD2	2.46	0.45
1:AA:217:C:O2'	1:AA:470:U:P	2.71	0.45
5:AE:79:GLU:CD	8:AH:105:ARG:HE	2.19	0.45
9:AI:111:ARG:HG3	9:AI:111:ARG:HH11	1.80	0.45
9:AI:120:ARG:O	9:AI:121:ARG:C	2.55	0.45
1:AA:1115:C:O4'	14:AN:61:TRP:CB	2.64	0.45
8:AH:91:ARG:HD3	17:AQ:34:LYS:CB	2.45	0.45
1:AA:59:A:H5''	1:AA:60:A:C5'	2.47	0.45
21:B0:1199:U:H2'	21:B0:1200:G:H8	1.80	0.45
21:B0:2009:U:H2'	21:B0:2010:G:C8	2.51	0.45
3:AC:154:SER:OG	3:AC:155:GLY:N	2.48	0.45
3:AC:131:ARG:O	3:AC:135:LYS:HG3	2.16	0.45
3:AC:157:ILE:HD11	3:AC:166:GLU:HB2	1.97	0.45
21:B0:831:G:C2'	21:B0:832:A:H5''	2.46	0.45
2:AB:42:ILE:HD12	2:AB:203:GLY:HA2	1.97	0.45
19:AS:20:LEU:O	19:AS:23:ASN:HB2	2.15	0.45
4:AD:187:ARG:HA	4:AD:187:ARG:HD2	1.81	0.45
21:B0:508:G:H2'	21:B0:509:U:C6	2.50	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1196:U:H4'	1:AA:1197:G:OP2	2.15	0.45
21:B0:629:C:H2'	21:B0:630:G:H5'	1.98	0.45
21:B0:523:A:H2	21:B0:591:G:H4'	1.81	0.45
21:B0:715:U:H2'	21:B0:716:U:C6	2.51	0.45
21:B0:2610:G:C4'	21:B0:2866:A:H4'	2.47	0.45
21:B0:3872:A:H2'	21:B0:3873:G:O4'	2.17	0.45
21:B0:3874:C:C2'	21:B0:3875:A:H5'	2.46	0.45
17:AQ:66:SER:OG	17:AQ:69:LYS:HB3	2.15	0.45
1:AA:5:U:O2'	1:AA:6:G:P	2.73	0.45
5:AE:115:VAL:HG11	5:AE:118:ILE:CD1	2.46	0.45
4:AD:204:ILE:CG2	5:AE:99:GLY:HA3	2.46	0.45
1:AA:319:G:O2'	1:AA:320:C:H5'	2.16	0.45
1:AA:293:G:C4'	1:AA:609:A:H2	2.11	0.45
1:AA:926:G:C2	1:AA:1505:G:C5	3.04	0.45
1:AA:926:G:C5	1:AA:1505:G:C5	3.04	0.45
1:AA:184:G:H4'	1:AA:224:C:C3'	2.46	0.45
3:AC:11:ARG:NH1	3:AC:177:THR:O	2.50	0.45
1:AA:1515:C:H2'	1:AA:1516:G:H8	1.81	0.45
1:AA:143:A:H1'	1:AA:196:A:C4	2.52	0.45
10:AJ:65:LEU:CD1	14:AN:36:PHE:HZ	2.26	0.45
1:AA:242:C:H2'	1:AA:243:A:H5'	1.98	0.45
1:AA:244:U:O4	1:AA:894:G:C6	2.70	0.45
1:AA:546:G:O2'	1:AA:548:G:H4'	2.17	0.45
1:AA:59:A:C5'	1:AA:60:A:C5'	2.94	0.45
1:AA:619:U:C2'	4:AD:135:LEU:HD12	2.45	0.45
21:B0:930:A:H3'	21:B0:931:G:C8	2.51	0.45
19:AS:22:LEU:CD1	19:AS:31:ILE:HD11	2.46	0.45
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.84	0.45
21:B0:129:A:H2'	21:B0:130:C:C6	2.51	0.45
1:AA:826:C:H2'	1:AA:827:U:H6	1.82	0.45
21:B0:666:U:H2'	21:B0:668:A:OP1	2.16	0.45
3:AC:108:ASN:OD1	3:AC:110:ASN:HB2	2.16	0.45
12:AL:59:ARG:NH1	12:AL:65:GLU:HG2	2.31	0.45
10:AJ:6:ILE:O	10:AJ:71:LEU:O	2.35	0.45
4:AD:4:TYR:O	4:AD:5:ILE:HB	2.17	0.45
21:B0:2451:G:H2'	21:B0:2508:G:N2	2.32	0.45
21:B0:1578:U:H2'	21:B0:1579:G:C8	2.51	0.45
11:AK:16:SER:O	11:AK:35:PRO:HD3	2.16	0.45
2:AB:52:GLU:O	2:AB:56:ARG:HB2	2.17	0.45
21:B0:560:G:H2'	21:B0:561:U:C6	2.52	0.45
14:AN:26:ARG:NH1	14:AN:47:LEU:HD21	2.32	0.45
1:AA:82:C:H2'	1:AA:83:C:O4'	2.17	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:1861:G:O2'	21:B0:1862:C:H5'	2.17	0.45
21:B0:3873:G:O2'	21:B0:3874:C:H5'	2.16	0.45
1:AA:1394:A:C4	1:AA:1501:C:H1'	2.52	0.45
1:AA:335:C:C2	1:AA:1434:A:C1'	2.99	0.45
1:AA:1409:C:C2	1:AA:1410:G:N7	2.84	0.45
1:AA:1485:U:OP1	21:B0:1944:C:OP1	2.26	0.45
1:AA:926:G:N7	1:AA:1505:G:C2	2.84	0.45
1:AA:1065:U:C4	1:AA:1189:C:N3	2.84	0.45
1:AA:1515:C:O2'	1:AA:1516:G:H5'	2.16	0.45
1:AA:1230:C:H2'	1:AA:1231:G:H8	1.81	0.45
14:AN:12:ARG:O	14:AN:14:PRO:HD3	2.16	0.45
13:AM:93:ARG:HA	21:B0:900(A):A:H5'	1.97	0.45
1:AA:143:A:H1'	1:AA:196:A:N9	2.31	0.45
1:AA:1367:C:C5'	10:AJ:60:ARG:HH12	2.20	0.45
10:AJ:51:ARG:HG3	10:AJ:60:ARG:O	2.17	0.45
1:AA:958:A:C2	19:AS:54:GLY:O	2.70	0.45
12:AL:46:LYS:CG	12:AL:47:LYS:H	2.29	0.45
1:AA:847:C:H2'	1:AA:848:G:H8	1.81	0.45
2:AB:23:ARG:HB2	2:AB:23:ARG:CZ	2.47	0.45
4:AD:162:LEU:HD13	4:AD:181:MET:CE	2.46	0.45
21:B0:2421:C:O2'	21:B0:2422:C:H5'	2.16	0.45
21:B0:515:A:C2'	21:B0:516:G:H5'	2.43	0.45
18:AR:51:LEU:HA	18:AR:52:PRO:HD3	1.80	0.45
21:B0:3171:A:O2'	21:B0:3172:U:C6	2.70	0.45
14:AN:39:LEU:CD1	14:AN:47:LEU:HD12	2.46	0.45
7:AG:12:LEU:N	7:AG:12:LEU:HD12	2.32	0.45
21:B0:701:U:H2'	21:B0:702:A:O4'	2.15	0.45
21:B0:1349:A:H2'	21:B0:1350:G:C8	2.51	0.45
1:AA:1049:U:H4'	1:AA:1050:G:OP2	2.15	0.45
1:AA:191:G:N9	1:AA:192:U:C6	2.84	0.45
1:AA:260:G:O2'	1:AA:261:U:H5'	2.16	0.45
1:AA:6:G:H1	5:AE:94:ALA:HB1	1.79	0.45
1:AA:375:U:C2	1:AA:376:G:N7	2.84	0.45
1:AA:7:G:H5'	1:AA:298:A:O4'	2.16	0.45
1:AA:9:G:H5''	5:AE:122:GLU:OE1	2.16	0.45
1:AA:1409:C:C4	1:AA:1410:G:C5	3.04	0.45
1:AA:470:U:H2'	1:AA:471:G:C8	2.51	0.45
1:AA:1014:A:C4	19:AS:34:TRP:CG	3.04	0.45
1:AA:1014:A:N6	19:AS:34:TRP:CZ2	2.84	0.45
3:AC:99:VAL:CG2	3:AC:100:ALA:N	2.80	0.45
19:AS:63:THR:HG22	19:AS:64:GLU:N	2.32	0.45
1:AA:1319:A:H5'	19:AS:70:LYS:NZ	2.30	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:AJ:54:PHE:O	10:AJ:55:LYS:HG2	2.17	0.45
1:AA:586:C:C5'	8:AH:90:GLY:HA3	2.40	0.45
1:AA:624:C:H2'	1:AA:625:G:H8	1.81	0.45
3:AC:131:ARG:HA	3:AC:134:ILE:HD12	1.96	0.45
10:AJ:96:ILE:CG2	10:AJ:97:GLU:N	2.79	0.45
6:AF:30:LEU:CB	6:AF:35:ALA:HB3	2.41	0.45
1:AA:640:A:C2	8:AH:115:SER:CB	2.99	0.45
1:AA:108:G:O6	20:AT:15:ARG:CG	2.64	0.45
21:B0:1678:G:H2'	21:B0:1679:U:C6	2.51	0.45
19:AS:15:LEU:HD12	19:AS:16:LEU:H	1.77	0.45
1:AA:227:G:O6	1:AA:228:A:C6	2.69	0.45
21:B0:688:A:O2'	21:B0:2422:C:H4'	2.17	0.45
5:AE:15:ARG:CD	5:AE:26:PHE:CD2	2.99	0.45
21:B0:307:C:H2'	21:B0:308:C:C6	2.51	0.45
15:AO:87:ILE:CG2	15:AO:88:ARG:N	2.79	0.45
1:AA:781:A:H2'	1:AA:782:A:H5'	1.98	0.45
21:B0:1566:G:H4'	21:B0:1733:U:O4	2.16	0.45
7:AG:18:TYR:CD2	7:AG:59:LEU:HB2	2.52	0.45
21:B0:452:G:H2'	21:B0:453:U:O4'	2.16	0.45
21:B0:211:U:C2'	21:B0:212:U:H5'	2.46	0.45
1:AA:1051:C:H2'	1:AA:1052:U:H6	1.80	0.45
3:AC:164:ARG:HH11	3:AC:164:ARG:HB3	1.80	0.45
21:B0:2708:U:H2'	21:B0:2709:C:C6	2.51	0.45
21:B0:2348:A:H2'	21:B0:2349:G:C8	2.52	0.45
1:AA:133:U:H5''	20:AT:74:LYS:NZ	2.09	0.45
5:AE:21:ALA:C	5:AE:23:GLY:H	2.19	0.45
1:AA:114:U:C1'	1:AA:353:A:H1'	2.46	0.45
1:AA:1314:C:C5	19:AS:6:LYS:HG3	2.36	0.45
13:AM:62:ASN:O	13:AM:63:THR:HB	2.16	0.45
1:AA:735:C:O2'	1:AA:736:C:H5'	2.17	0.45
10:AJ:30:SER:CB	10:AJ:84:GLN:HE21	2.29	0.45
1:AA:958:A:C5	19:AS:55:LYS:CB	2.99	0.45
7:AG:75:VAL:HG12	7:AG:86:GLN:HE21	1.81	0.45
2:AB:213:LEU:C	2:AB:213:LEU:HD23	2.37	0.45
2:AB:8:LYS:O	2:AB:9:GLU:CB	2.60	0.45
1:AA:161:A:C2	1:AA:348:G:H1'	2.47	0.45
21:B0:687:G:O2'	21:B0:688:A:H5'	2.17	0.45
4:AD:8:VAL:HG21	4:AD:115:ARG:CZ	2.46	0.45
11:AK:74:ALA:C	11:AK:76:GLY:N	2.69	0.45
1:AA:513:C:H2'	1:AA:514:C:H6	1.80	0.45
9:AI:40:LEU:O	9:AI:42:ARG:N	2.50	0.45
21:B0:604:U:H2'	21:B0:605:G:H8	1.82	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:1278:A:O2'	21:B0:1279:G:P	2.75	0.45
21:B0:1016:C:H2'	21:B0:1017:C:C6	2.52	0.45
1:AA:828:A:H5''	1:AA:859:A:C2	2.51	0.45
1:AA:1030:U:H5'	1:AA:1031:C:H5	1.80	0.45
1:AA:627:G:O2'	1:AA:628:G:H5'	2.17	0.45
21:B0:978:U:H2'	21:B0:979:A:C8	2.51	0.45
21:B0:419:G:O2'	21:B0:420:C:H5'	2.17	0.45
21:B0:2370:G:HO2'	21:B0:2371:A:H2	1.62	0.45
21:B0:700:C:O2'	21:B0:801:A:H5'	2.17	0.45
17:AQ:68:ARG:H	17:AQ:70:ARG:NH1	2.15	0.45
21:B0:3118:U:O2	21:B0:3149:G:H5'	2.09	0.45
16:AP:39:TYR:CZ	16:AP:41:PRO:HA	2.52	0.45
1:AA:439:A:C4	1:AA:497:A:C2	3.04	0.45
1:AA:217:C:O2'	1:AA:470:U:O5'	2.34	0.45
1:AA:1497:G:H1'	1:AA:1518:A:H2	1.76	0.45
1:AA:1230:C:O2'	13:AM:126:LYS:HA	2.16	0.45
10:AJ:46:ARG:NH1	10:AJ:64:GLU:CG	2.80	0.45
1:AA:1346:A:C6	7:AG:10:ARG:NE	2.84	0.45
1:AA:1301:U:O2'	1:AA:1302:U:OP1	2.30	0.45
1:AA:1202:G:C2'	1:AA:1203:C:H5'	2.46	0.45
21:B0:1745:C:H2'	21:B0:1746:A:O4'	2.16	0.45
13:AM:37:THR:HG23	13:AM:55:ARG:CB	2.46	0.45
10:AJ:24:VAL:CG1	10:AJ:28:ARG:HE	2.29	0.45
6:AF:33:TYR:HB2	6:AF:75:LEU:HD23	1.98	0.45
2:AB:25:ASN:C	2:AB:25:ASN:ND2	2.68	0.45
1:AA:792:A:H1'	1:AA:794:A:N7	2.32	0.45
11:AK:40:ILE:HG23	11:AK:75:TYR:CE2	2.51	0.45
7:AG:85:TYR:CD1	7:AG:154:TYR:HE1	2.28	0.45
7:AG:154:TYR:O	7:AG:156:TRP:N	2.49	0.45
5:AE:80:ILE:CD1	5:AE:91:LEU:HD12	2.46	0.45
9:AI:19:LEU:C	9:AI:20:ARG:HG3	2.37	0.45
21:B0:316:C:H2'	21:B0:317:U:C6	2.52	0.45
1:AA:1376:U:OP2	7:AG:94:ARG:NH2	2.49	0.45
21:B0:1685:A:H1'	21:B0:1686:A:N7	2.32	0.45
21:B0:1921:A:C2'	21:B0:1922:U:H5''	2.46	0.45
1:AA:419:C:OP1	1:AA:513:C:H1'	2.16	0.45
21:B0:611:C:C2'	21:B0:612:G:H5'	2.47	0.45
1:AA:1461:G:O2'	1:AA:1462:G:H5'	2.16	0.45
21:B0:1373:G:H2'	21:B0:1374:G:H5'	1.99	0.45
1:AA:644:G:O2'	1:AA:645:C:H5'	2.17	0.45
21:B0:15:G:O2'	21:B0:16:G:H5'	2.17	0.45
2:AB:83:MET:HG3	2:AB:238:LEU:CD1	2.46	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:76:G:O2'	1:AA:77:C:H5'	2.17	0.45
1:AA:323:U:C1'	20:AT:19:SER:HB2	2.47	0.45
5:AE:102:ALA:HB2	5:AE:120:THR:CB	2.46	0.45
1:AA:1483:A:C6	1:AA:1484:C:C6	3.04	0.45
21:B0:1089:C:H1'	21:B0:1099:A:H8	1.82	0.45
12:AL:110:VAL:O	12:AL:122:THR:CG2	2.62	0.45
1:AA:39:G:C4	1:AA:498:U:C4	3.05	0.45
1:AA:19:C:H2'	1:AA:20:U:H6	1.80	0.45
1:AA:993:G:C2	1:AA:1046:A:C4	3.05	0.45
2:AB:178:ARG:NH1	2:AB:178:ARG:CG	2.67	0.45
1:AA:975:A:O5'	1:AA:976:G:H5'	2.17	0.45
9:AI:36:TYR:CD2	9:AI:37:PHE:CE2	3.04	0.45
2:AB:137:ARG:O	2:AB:140:HIS:HB2	2.16	0.45
18:AR:74:ARG:HB3	18:AR:81:PHE:CE1	2.51	0.45
21:B0:109:A:H3'	21:B0:110:U:C5'	2.41	0.45
21:B0:852:U:H3	21:B0:950:G:H1	1.64	0.45
21:B0:221:A:H62	21:B0:231:G:N2	2.10	0.45
21:B0:926:C:C2'	21:B0:927:C:H5'	2.47	0.45
1:AA:1019:C:O2'	1:AA:1020:U:H5'	2.17	0.45
22:B9:66:G:H2'	22:B9:67:C:C6	2.52	0.45
1:AA:533:A:O2'	1:AA:534:U:P	2.75	0.45
21:B0:959:C:H2'	21:B0:960:U:C6	2.52	0.45
1:AA:882:C:O2'	1:AA:883:C:H5'	2.16	0.45
21:B0:2428:U:O2'	21:B0:2429:A:H5'	2.17	0.45
21:B0:1502:G:O2'	21:B0:1503:G:H5'	2.16	0.45
2:AB:92:TYR:CE1	2:AB:151:GLY:HA3	2.52	0.45
5:AE:144:THR:C	5:AE:146:ALA:N	2.67	0.45
21:B0:2661:G:O2'	21:B0:2662:C:H5'	2.17	0.45
1:AA:131:C:O2'	1:AA:262:A:C1'	2.64	0.45
21:B0:3111:C:C2	21:B0:3148:G:P	2.96	0.45
1:AA:1503:A:O2'	1:AA:1504:G:P	2.75	0.45
21:B0:2181:A:C2'	21:B0:2182:A:H5'	2.47	0.45
1:AA:187:G:H21	20:AT:105:SER:CA	2.29	0.45
1:AA:187:G:H21	20:AT:105:SER:HB2	1.65	0.45
1:AA:1506:U:OP2	1:AA:1541:U:OP2	2.35	0.45
1:AA:1372:U:OP2	9:AI:11:LYS:CD	2.64	0.45
10:AJ:53:PRO:O	10:AJ:54:PHE:O	2.34	0.45
1:AA:1060:C:P	14:AN:45:ARG:HH21	2.40	0.45
21:B0:3129:C:H5'	21:B0:3174:C:C5'	2.47	0.45
1:AA:502:G:H1'	1:AA:550:G:C5'	2.23	0.45
4:AD:31:CYS:C	4:AD:33:MET:H	2.21	0.45
1:AA:737:A:H1'	6:AF:73:ASN:CG	2.35	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:AL:85:ILE:HG23	12:AL:98:TYR:CB	2.46	0.45
1:AA:975:A:H4'	1:AA:976:G:OP2	2.16	0.45
21:B0:1199:U:C3'	21:B0:1200:G:H5''	2.32	0.45
10:AJ:85:LEU:O	10:AJ:87:THR:N	2.50	0.45
21:B0:8:A:H2'	21:B0:9:U:C6	2.52	0.45
1:AA:1206:G:C6	1:AA:1207:G:C5	3.04	0.45
1:AA:15:G:H1'	5:AE:19:MET:SD	2.56	0.45
18:AR:70:ILE:O	18:AR:74:ARG:HG3	2.17	0.45
1:AA:1238:A:H2	1:AA:1241:G:O2'	1.99	0.45
1:AA:807:A:H2'	1:AA:808:C:C6	2.52	0.45
18:AR:25:THR:HG22	18:AR:25:THR:O	2.17	0.45
1:AA:160:A:H61	1:AA:347:G:N2	2.14	0.45
1:AA:920:U:H2'	1:AA:921:U:C6	2.52	0.45
21:B0:874:A:H62	21:B0:928:G:N2	2.12	0.45
21:B0:925:U:H4'	21:B0:926:C:C5	2.52	0.45
21:B0:1793:A:H2'	21:B0:1794:A:C8	2.52	0.45
21:B0:2454:C:H42	21:B0:2508:G:H22	1.64	0.45
7:AG:155:ARG:O	7:AG:156:TRP:CB	2.63	0.45
5:AE:15:ARG:NE	5:AE:26:PHE:CD2	2.84	0.45
7:AG:143:ARG:O	7:AG:145:ALA:O	2.34	0.45
3:AC:129:ALA:HB3	3:AC:132:ARG:CD	2.45	0.45
21:B0:2026:C:H2'	21:B0:2027:C:C6	2.52	0.45
21:B0:475:U:H2'	21:B0:476:G:O4'	2.17	0.45
16:AP:72:ARG:HG2	16:AP:72:ARG:O	2.16	0.45
13:AM:110:ARG:HG2	13:AM:110:ARG:HH11	1.82	0.45
1:AA:258:G:H2'	1:AA:259:G:H8	1.82	0.45
22:B9:94:G:O2'	22:B9:95:U:H5'	2.16	0.45
21:B0:2539:C:H2'	21:B0:2540:A:C8	2.52	0.45
21:B0:2703:C:H2'	21:B0:2704:U:C6	2.51	0.45
21:B0:709:A:H2'	21:B0:710:C:C6	2.52	0.45
21:B0:2830:U:H2'	21:B0:2831:A:C8	2.52	0.45
1:AA:485:G:C2'	1:AA:486:U:OP2	2.65	0.45
22:B9:40:C:H2'	22:B9:41:A:O4'	2.16	0.45
1:AA:115:G:H4'	1:AA:116:A:O5'	2.17	0.45
1:AA:321:A:H2'	1:AA:322:C:C6	2.52	0.45
1:AA:323:U:O2'	20:AT:22:ARG:CD	2.58	0.45
1:AA:1484:C:H2'	1:AA:1485:U:C6	2.50	0.45
1:AA:1064:G:N2	1:AA:1190:G:O2'	2.49	0.45
13:AM:120:LYS:HE2	13:AM:123:ALA:CB	2.47	0.45
3:AC:59:ARG:CA	10:AJ:92:THR:CG2	2.95	0.45
1:AA:1234:C:H5''	1:AA:1365:G:OP1	2.10	0.45
9:AI:46:ALA:O	9:AI:49:PRO:HD2	2.17	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:976:G:C8	1:AA:2361:C:N4	2.85	0.45
1:AA:1131:G:H2'	1:AA:1132:C:C6	2.51	0.45
2:AB:22:LYS:O	2:AB:23:ARG:HG3	2.16	0.45
16:AP:20:VAL:HG13	16:AP:21:VAL:N	2.32	0.45
2:AB:71:VAL:HB	2:AB:164:VAL:HG23	1.99	0.45
2:AB:36:ARG:HD2	2:AB:41:ILE:CD1	2.44	0.45
1:AA:686:U:O4	1:AA:703:G:H1'	2.17	0.45
1:AA:372:C:O2	1:AA:387:U:O4	2.34	0.45
4:AD:142:PRO:HG2	4:AD:187:ARG:NH1	2.32	0.45
21:B0:116:A:C2	21:B0:155:G:H1'	2.51	0.45
21:B0:241:C:C2'	21:B0:242:A:H5''	2.46	0.45
17:AQ:81:ARG:O	17:AQ:81:ARG:HG3	2.17	0.45
10:AJ:4:ILE:HG12	10:AJ:100:THR:CB	2.46	0.45
21:B0:838:A:H2'	21:B0:839:U:C6	2.52	0.45
21:B0:843:G:O2'	21:B0:844:G:OP1	2.31	0.45
22:B9:36:A:H1'	22:B9:51:G:N2	2.32	0.45
21:B0:871:U:H1'	21:B0:2248:A:H5''	1.99	0.45
1:AA:1049:U:H1'	1:AA:1201:A:N7	2.31	0.45
21:B0:2555:G:N3	21:B0:2555:G:H3'	2.32	0.45
14:AN:25:VAL:O	14:AN:25:VAL:HG13	2.16	0.45
21:B0:1504:G:O2'	21:B0:1505:U:H5'	2.17	0.45
21:B0:626:A:O2'	21:B0:627:A:H5'	2.17	0.45
1:AA:233:C:O2'	1:AA:264:U:C2	2.70	0.44
20:AT:72:LEU:O	20:AT:73:HIS:O	2.35	0.44
16:AP:6:LEU:HB3	16:AP:17:TYR:HD2	1.81	0.44
1:AA:1409:C:O2'	1:AA:1410:G:C5'	2.62	0.44
21:B0:1098:G:H22	21:B0:1113:C:N3	1.52	0.44
1:AA:436:C:O2	1:AA:437:U:H1'	2.17	0.44
1:AA:1231:G:C5'	9:AI:126:SER:OG	2.64	0.44
13:AM:80:ARG:NH2	19:AS:69:HIS:NE2	2.65	0.44
1:AA:1060:C:C5	3:AC:2:GLY:HA3	2.52	0.44
1:AA:1329:A:C5'	13:AM:29:ARG:HD2	2.46	0.44
1:AA:37:U:OP1	12:AL:124:LYS:HB2	2.16	0.44
1:AA:848:G:HO3'	1:AA:849:C:P	2.38	0.44
1:AA:826:C:O2'	8:AH:15:ASN:HB2	2.16	0.44
4:AD:24:GLU:CG	4:AD:25:ARG:H	2.31	0.44
4:AD:162:LEU:HD13	4:AD:181:MET:CG	2.42	0.44
21:B0:926:C:H2'	21:B0:927:C:H5'	1.99	0.44
1:AA:1376:U:H2'	1:AA:1377:A:H8	1.80	0.44
11:AK:51:LYS:O	11:AK:55:LYS:CE	2.65	0.44
21:B0:857:U:C2'	21:B0:858:G:H5'	2.48	0.44
2:AB:32:ILE:HG21	2:AB:40:HIS:HD2	1.81	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:1273:G:H2'	21:B0:1274:C:C6	2.52	0.44
21:B0:2474:G:O2'	21:B0:2475:C:H5'	2.17	0.44
21:B0:2560:G:H4'	21:B0:2561:G:N7	2.32	0.44
20:AT:24:LEU:O	20:AT:24:LEU:HD12	2.17	0.44
1:AA:1289:A:H2'	1:AA:1290:G:H5'	2.00	0.44
21:B0:1367:A:H2'	21:B0:1368:G:O4'	2.17	0.44
21:B0:1055:A:C2	21:B0:1121:G:H2'	2.52	0.44
4:AD:39:PRO:HG2	4:AD:44:GLY:HA2	1.97	0.44
21:B0:40:U:H2'	21:B0:41:G:C8	2.52	0.44
17:AQ:18:THR:HG23	17:AQ:69:LYS:CE	2.47	0.44
1:AA:112:G:HO2'	1:AA:113:G:H5'	1.81	0.44
1:AA:113:G:H1'	1:AA:354:G:C5'	2.47	0.44
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.16	0.44
1:AA:1372:U:OP1	9:AI:72:GLY:N	2.50	0.44
1:AA:1115:C:C1'	14:AN:61:TRP:HB2	2.47	0.44
13:AM:9:ILE:N	13:AM:9:ILE:HD12	2.31	0.44
1:AA:1301:U:O2'	1:AA:1302:U:P	2.74	0.44
13:AM:34:LEU:HD13	13:AM:41:PRO:CA	2.45	0.44
3:AC:123:GLN:HE22	3:AC:140:ARG:NH2	2.16	0.44
21:B0:2854:G:H3'	21:B0:2854:G:N3	2.33	0.44
5:AE:45:PHE:CD2	5:AE:47:LYS:HE3	2.52	0.44
21:B0:438:G:H2'	21:B0:439:C:C6	2.51	0.44
21:B0:1436:G:H1'	21:B0:1508:G:N2	2.31	0.44
21:B0:431:G:H2'	21:B0:432:C:C6	2.53	0.44
21:B0:455:A:H4'	21:B0:1214:C:O2'	2.17	0.44
21:B0:2591:C:O2'	21:B0:2592:U:H5'	2.17	0.44
21:B0:562:G:H2'	21:B0:563:U:O4'	2.17	0.44
1:AA:1275:A:H2	1:AA:1282:C:O2'	2.00	0.44
21:B0:3877:A:H4'	21:B0:1861:G:C5'	2.42	0.44
1:AA:129(A):G:O2'	1:AA:130:A:OP2	2.28	0.44
1:AA:1394:A:N3	1:AA:1501:C:O4'	2.47	0.44
1:AA:389:A:H2'	1:AA:390:C:C5'	2.48	0.44
1:AA:8:A:O4'	5:AE:102:ALA:HA	2.17	0.44
1:AA:559:A:OP1	5:AE:126:ARG:NH1	2.50	0.44
1:AA:1409:C:O2'	1:AA:1410:G:O4'	2.32	0.44
1:AA:185:A:H2'	1:AA:186:C:H6	1.82	0.44
1:AA:19:C:C4	1:AA:916:G:O6	2.70	0.44
16:AP:75:ARG:O	16:AP:78:GLY:N	2.49	0.44
1:AA:45:U:H2'	1:AA:46:G:C8	2.53	0.44
1:AA:397:A:N3	1:AA:397:A:H3'	2.32	0.44
1:AA:502:G:C1'	1:AA:550:G:C5'	2.78	0.44
1:AA:598:U:H4'	8:AH:94:TYR:CD2	2.52	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:1956:G:H2'	21:B0:1957:C:O4'	2.17	0.44
1:AA:1250:A:H5''	9:AI:68:GLY:N	2.32	0.44
2:AB:8:LYS:HB2	2:AB:9:GLU:H	1.58	0.44
10:AJ:3:LYS:CA	10:AJ:75:ILE:HA	2.48	0.44
10:AJ:75:ILE:HG22	10:AJ:76:ASN:N	2.32	0.44
21:B0:1436:G:H2'	21:B0:1437:A:C8	2.51	0.44
21:B0:788:G:H5'	21:B0:790:A:N3	2.32	0.44
9:AI:85:LEU:O	9:AI:92:TYR:CD1	2.69	0.44
2:AB:223:ILE:HG21	2:AB:230:VAL:HG23	1.99	0.44
8:AH:116:LYS:NZ	8:AH:127:LEU:HD12	2.31	0.44
21:B0:457:C:O2'	21:B0:458:G:H5'	2.16	0.44
21:B0:1938:U:O2'	21:B0:1939:U:OP1	2.28	0.44
11:AK:60:ALA:O	11:AK:61:ALA:C	2.56	0.44
21:B0:763:A:H2'	21:B0:764:A:H5''	2.00	0.44
21:B0:1785:A:H2'	21:B0:1786:C:C6	2.52	0.44
21:B0:1408:A:H1'	21:B0:1410:U:C5	2.52	0.44
21:B0:1708:C:H2'	21:B0:1709:U:O4'	2.18	0.44
9:AI:103:THR:HG22	9:AI:104:ARG:N	2.31	0.44
21:B0:1667:A:H2'	21:B0:1668:G:H8	1.83	0.44
1:AA:1457:A:C8	1:AA:1459:C:C4	3.06	0.44
21:B0:2204:A:O2'	21:B0:2205:C:OP2	2.35	0.44
21:B0:2204:A:O2'	21:B0:2205:C:P	2.76	0.44
1:AA:6:G:C6	5:AE:94:ALA:CB	3.00	0.44
1:AA:113:G:H5'	1:AA:354:G:O3'	2.17	0.44
1:AA:1409:C:C5	1:AA:1410:G:N7	2.85	0.44
12:AL:117:ARG:HD2	12:AL:122:THR:OG1	2.17	0.44
1:AA:970:C:C2	1:AA:1231:G:H1'	2.52	0.44
1:AA:950:U:H2'	1:AA:951:G:C8	2.52	0.44
1:AA:962:C:H2'	1:AA:963:G:O4'	2.18	0.44
1:AA:247:G:N2	1:AA:282:A:N3	2.46	0.44
1:AA:393:A:C2'	1:AA:394:G:H5'	2.47	0.44
1:AA:600:C:O2'	1:AA:601:C:H5'	2.17	0.44
1:AA:59:A:OP1	1:AA:60:A:H5''	2.17	0.44
10:AJ:30:SER:HB3	10:AJ:84:GLN:NE2	2.31	0.44
21:B0:1679:U:C2'	21:B0:1680:U:H5''	2.47	0.44
1:AA:583:A:H2'	1:AA:584:G:O4'	2.17	0.44
1:AA:1152:A:H5'	10:AJ:70:ARG:NH2	2.32	0.44
4:AD:8:VAL:HG11	4:AD:21:LEU:CB	2.47	0.44
21:B0:121:G:H2'	21:B0:122:G:O4'	2.18	0.44
5:AE:13:ILE:HG22	5:AE:30:ALA:HB2	1.99	0.44
21:B0:1452:U:H5''	21:B0:1533:G:H5'	2.00	0.44
21:B0:2211:U:H2'	21:B0:2212:U:C6	2.52	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:2312:A:H1'	21:B0:2314:A:C4	2.52	0.44
21:B0:1331:G:H2'	21:B0:1332:G:C8	2.52	0.44
21:B0:1023:U:H1'	21:B0:1154:A:C8	2.52	0.44
6:AF:40:VAL:CG2	6:AF:41:GLU:N	2.80	0.44
21:B0:1659:G:H2'	21:B0:1660:G:C8	2.52	0.44
1:AA:132:C:H5''	20:AT:75:ASN:ND2	2.32	0.44
1:AA:1501:C:OP1	1:AA:1508:G:C4'	2.66	0.44
1:AA:1501:C:OP2	1:AA:1504:G:H2'	2.17	0.44
1:AA:926:G:N1	1:AA:1505:G:N7	2.64	0.44
1:AA:1506:U:OP2	1:AA:1541:U:P	2.75	0.44
3:AC:6:HIS:CD2	3:AC:8:ILE:H	2.36	0.44
1:AA:1372:U:O2'	1:AA:1373:G:H5'	2.18	0.44
1:AA:394:G:N3	1:AA:395:C:C6	2.86	0.44
3:AC:179:ARG:C	3:AC:179:ARG:HD2	2.37	0.44
21:B0:1226:A:C6	21:B0:1250:A:H1'	2.53	0.44
16:AP:55:ARG:O	16:AP:58:TYR:HB3	2.17	0.44
10:AJ:8:LEU:CD1	10:AJ:20:ALA:HB2	2.48	0.44
3:AC:123:GLN:HE22	3:AC:140:ARG:HH22	1.65	0.44
1:AA:1353:G:H2'	1:AA:1354:C:H6	1.82	0.44
11:AK:95:ILE:HD13	11:AK:108:ILE:HG21	1.99	0.44
7:AG:38:LEU:HD11	7:AG:42:ILE:HD11	1.99	0.44
21:B0:172:A:H4'	21:B0:228:A:H4'	2.00	0.44
22:B9:92:G:H2'	22:B9:93:G:H5'	1.99	0.44
21:B0:1836:C:H2'	21:B0:1837:G:C8	2.53	0.44
1:AA:133:U:P	20:AT:74:LYS:HD3	2.57	0.44
1:AA:253:U:H2'	1:AA:254:G:C8	2.53	0.44
1:AA:254:G:O2'	1:AA:255:G:H5'	2.17	0.44
4:AD:90:GLY:H	5:AE:97:GLY:HA2	1.82	0.44
1:AA:116:A:H2'	1:AA:117:G:O4'	2.18	0.44
1:AA:113:G:N2	1:AA:353:A:C1'	2.80	0.44
1:AA:9:G:H8	5:AE:126:ARG:NH1	2.10	0.44
1:AA:1190:G:OP1	3:AC:4:LYS:CB	2.59	0.44
14:AN:12:ARG:O	14:AN:14:PRO:CD	2.65	0.44
3:AC:99:VAL:HG22	3:AC:100:ALA:O	2.18	0.44
13:AM:7:VAL:HG23	13:AM:7:VAL:O	2.18	0.44
1:AA:564:C:C6	17:AQ:32:TYR:HE2	2.36	0.44
1:AA:176:C:H2'	1:AA:177:C:H6	1.83	0.44
20:AT:30:LYS:O	20:AT:33:ILE:HB	2.18	0.44
18:AR:26:LEU:HD21	18:AR:39:VAL:HG23	2.00	0.44
1:AA:384:G:H2'	1:AA:385:C:C6	2.53	0.44
21:B0:1927:U:H3'	21:B0:1928:G:H5'	2.00	0.44
1:AA:1377:A:N3	7:AG:2:ALA:HB2	2.32	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1005:A:H2'	1:AA:1006:C:O4'	2.17	0.44
21:B0:2316:G:H2'	21:B0:2317:G:C8	2.50	0.44
21:B0:1373:G:H22	21:B0:2192:U:H3	1.65	0.44
21:B0:460:U:N3	21:B0:592:G:H1'	2.33	0.44
21:B0:1999:U:H5''	21:B0:2041:A:OP1	2.18	0.44
2:AB:92:TYR:CD1	2:AB:151:GLY:HA3	2.53	0.44
4:AD:178:VAL:HG12	4:AD:178:VAL:O	2.18	0.44
4:AD:200:GLU:N	4:AD:200:GLU:OE1	2.46	0.44
1:AA:540:G:H2'	1:AA:541:G:O4'	2.18	0.44
21:B0:354:C:H2'	21:B0:355:G:O4'	2.17	0.44
21:B0:3872:A:H2'	21:B0:3873:G:H5'	2.00	0.44
1:AA:702:A:H1'	21:B0:1839:A:OP1	2.17	0.44
1:AA:1410:G:N2	1:AA:1491:G:C2	2.85	0.44
21:B0:892:A:H1'	21:B0:911:A:N3	2.26	0.44
1:AA:217:C:P	1:AA:468:A:C2	3.11	0.44
1:AA:977:A:H2'	1:AA:978:A:C5'	2.46	0.44
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.53	0.44
13:AM:84:ILE:HG13	13:AM:86:CYS:HB2	2.00	0.44
1:AA:1059:C:O2'	10:AJ:52:GLY:HA2	2.18	0.44
13:AM:4:ILE:CG2	13:AM:5:ALA:N	2.72	0.44
1:AA:1004:A:H5''	1:AA:1025:U:C4	2.53	0.44
1:AA:59:A:N9	1:AA:331:G:N2	2.65	0.44
21:B0:1118:G:O2'	21:B0:1119:U:H5'	2.17	0.44
7:AG:149:ARG:NH1	11:AK:59:TYR:CD1	2.84	0.44
2:AB:25:ASN:HD22	2:AB:27:LYS:H	1.65	0.44
1:AA:865:A:H2'	1:AA:866:C:C6	2.53	0.44
1:AA:288:A:C2'	1:AA:289:G:H4'	2.47	0.44
20:AT:42:GLN:HA	20:AT:45:GLN:HB2	1.99	0.44
21:B0:2057:U:H2'	21:B0:2058:U:C6	2.52	0.44
21:B0:1459:U:H2'	21:B0:1475:U:O2'	2.16	0.44
1:AA:913:A:O2'	1:AA:914:A:OP2	2.36	0.44
21:B0:415:A:O2'	21:B0:416:U:H5'	2.17	0.44
8:AH:73:ASP:OD2	8:AH:75:ARG:HB2	2.18	0.44
21:B0:242:A:O2'	21:B0:243:G:O4'	2.34	0.44
14:AN:9:LYS:HG3	14:AN:21:TYR:O	2.17	0.44
14:AN:23:ARG:HD3	14:AN:30:ALA:HB2	2.00	0.44
21:B0:117:A:O3'	21:B0:118:U:H3'	2.17	0.44
21:B0:1279:G:C2'	21:B0:1280:U:OP2	2.66	0.44
11:AK:23:ALA:HB2	11:AK:91:ARG:HB2	2.00	0.44
18:AR:37:VAL:O	18:AR:41:LYS:HB3	2.18	0.44
21:B0:432:C:H2'	21:B0:433:G:H8	1.83	0.44
21:B0:2242:C:H42	21:B0:2257:A:N6	2.16	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:956:A:H2'	21:B0:956:A:N3	2.32	0.44
21:B0:1882:G:H21	21:B0:1885:C:N4	2.16	0.44
21:B0:1604:A:H2'	21:B0:1605:A:O4'	2.18	0.44
21:B0:1724:C:H2'	21:B0:1725:C:C6	2.53	0.44
8:AH:7:ALA:HB2	8:AH:85:ARG:HD2	1.99	0.44
8:AH:86:ILE:HD12	8:AH:133:LEU:HD22	2.00	0.44
21:B0:1292:A:H2'	21:B0:1293:A:C8	2.53	0.44
1:AA:132:C:O4'	1:AA:262:A:C4	2.71	0.44
1:AA:1503:A:O5'	1:AA:1531:A:C1'	2.50	0.44
1:AA:1501:C:P	1:AA:1508:G:H5'	2.58	0.44
1:AA:761:G:C1'	17:AQ:104:LYS:O	2.65	0.44
17:AQ:104:LYS:O	17:AQ:105:ALA:CB	2.65	0.44
4:AD:204:ILE:HG21	5:AE:98:THR:O	2.17	0.44
1:AA:702:A:N1	21:B0:1838:G:C3'	2.30	0.44
1:AA:189:A:H62	20:AT:104:LEU:HA	1.83	0.44
20:AT:100:ILE:O	20:AT:102:GLY:N	2.50	0.44
1:AA:1097:C:H2'	1:AA:1098:C:H6	1.82	0.44
5:AE:79:GLU:OE2	8:AH:105:ARG:CD	2.64	0.44
3:AC:29:TYR:CZ	10:AJ:65:LEU:CD1	3.01	0.44
1:AA:243:A:N6	1:AA:281:G:O2'	2.51	0.44
10:AJ:49:VAL:HG13	14:AN:41:ARG:CB	2.35	0.44
1:AA:70:A:C2'	1:AA:71:U:H5'	2.48	0.44
1:AA:652:U:H2'	1:AA:752:G:N1	2.33	0.44
12:AL:7:ILE:O	12:AL:11:VAL:HG23	2.18	0.44
10:AJ:27:ALA:CB	10:AJ:81:THR:HG23	2.47	0.44
2:AB:134:GLU:C	2:AB:136:VAL:N	2.71	0.44
2:AB:54:THR:O	2:AB:57:PHE:HB3	2.18	0.44
21:B0:1703:C:H2'	21:B0:1704:G:O4'	2.17	0.44
4:AD:25:ARG:HH21	4:AD:30:LYS:HD3	1.82	0.44
2:AB:187:LEU:HD21	2:AB:214:ILE:HG13	2.00	0.44
5:AE:64:ARG:O	5:AE:65:ASN:CB	2.60	0.44
21:B0:1915:A:H62	21:B0:1951:G:N2	2.09	0.44
21:B0:875:G:H2'	21:B0:876:A:O4'	2.18	0.44
15:AO:39:LEU:HD12	15:AO:59:MET:CE	2.48	0.44
21:B0:2439:U:H2'	21:B0:2440:C:H5'	1.99	0.44
21:B0:539:A:N6	21:B0:2024:U:H3	2.11	0.44
1:AA:21:G:H1'	1:AA:914:A:H61	1.82	0.44
21:B0:1326:U:H1'	21:B0:1626:A:N3	2.33	0.44
21:B0:1288:A:H2'	21:B0:1289:A:O4'	2.17	0.44
21:B0:3116:G:O3'	21:B0:3117:A:O4'	2.36	0.44
21:B0:114:C:H4'	21:B0:124:A:O2'	2.17	0.44
21:B0:736:G:H2'	21:B0:737:C:O4'	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:AK:50:TYR:N	11:AK:50:TYR:CD2	2.84	0.44
1:AA:267:C:H2'	1:AA:268:C:C6	2.53	0.44
1:AA:50:A:N6	1:AA:361:G:H4'	2.33	0.44
21:B0:2193:C:H2'	21:B0:2194:A:O4'	2.18	0.44
21:B0:548:G:H2'	21:B0:549:G:C8	2.53	0.44
1:AA:1503:A:N9	1:AA:1531:A:N3	2.66	0.44
1:AA:351:G:O2'	1:AA:352:C:OP1	2.25	0.44
20:AT:50:GLU:HG2	20:AT:100:ILE:CG1	2.47	0.44
21:B0:1113:C:O3'	21:B0:1114:A:P	2.75	0.44
1:AA:1067:A:HO2'	1:AA:1094:G:P	2.32	0.44
1:AA:1190:G:H4'	1:AA:1191:A:H5'	1.98	0.44
13:AM:80:ARG:C	13:AM:82:MET:H	2.20	0.44
13:AM:84:ILE:C	13:AM:86:CYS:N	2.70	0.44
1:AA:1320:C:P	19:AS:70:LYS:HZ2	2.41	0.44
1:AA:59:A:C5'	1:AA:60:A:H5''	2.48	0.44
1:AA:974:A:P	14:AN:29:ARG:NH2	2.89	0.44
14:AN:29:ARG:HB3	14:AN:40:CYS:HB3	1.99	0.44
21:B0:1313:U:H4'	21:B0:1314:A:O5'	2.18	0.44
1:AA:1250:A:C4'	9:AI:68:GLY:N	2.74	0.44
5:AE:105:VAL:HB	5:AE:106:PRO:CD	2.40	0.44
16:AP:20:VAL:HG13	16:AP:32:TYR:HB2	2.00	0.44
2:AB:17:PHE:H	2:AB:44:LEU:HD21	1.83	0.44
1:AA:197:A:H1'	1:AA:198:G:O4'	2.17	0.44
1:AA:383:A:H2'	1:AA:384:G:H5'	1.99	0.44
21:B0:181:A:C4'	21:B0:182:G:H4'	2.44	0.44
21:B0:1033:G:N2	21:B0:1150:C:H2'	2.30	0.44
21:B0:2022:C:H2'	21:B0:2023:C:C6	2.53	0.44
21:B0:1188:A:H62	21:B0:1189:G:H21	1.66	0.44
1:AA:1053:G:O2'	1:AA:1199:U:H5	2.01	0.44
20:AT:96:GLY:O	20:AT:97:ALA:CB	2.66	0.44
21:B0:192:G:O2'	21:B0:193:A:OP2	2.33	0.44
1:AA:1128:C:H5'	9:AI:16:ARG:NH1	2.33	0.44
3:AC:113:ALA:N	3:AC:114:PRO:CD	2.80	0.44
21:B0:839:U:H5'	21:B0:2407:G:H2'	2.00	0.44
1:AA:1422:G:OP1	31:BI:60:PRO:CA	2.66	0.44
21:B0:529:U:H2'	21:B0:530:G:C8	2.53	0.44
21:B0:2343:C:H2'	21:B0:2344:G:O4'	2.18	0.44
1:AA:94:G:C6	1:AA:96:C:N4	2.84	0.43
1:AA:6:G:H2'	5:AE:119:LEU:HD11	1.99	0.43
1:AA:335:C:O2	1:AA:1433:A:N3	2.51	0.43
21:B0:891:A:N1	21:B0:893:G:C6	2.86	0.43
1:AA:1190:G:C3'	3:AC:3:ASN:HB2	2.37	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1231:G:C4'	9:AI:126:SER:OG	2.66	0.43
21:B0:3128:G:H4'	21:B0:3174:C:H1'	1.97	0.43
1:AA:500:G:O2'	1:AA:548:G:N2	2.51	0.43
1:AA:1299:A:C8	1:AA:1301:U:H1'	2.53	0.43
21:B0:10:A:O2'	21:B0:11:G:H5'	2.18	0.43
7:AG:24:THR:HA	7:AG:27:ILE:HD12	2.00	0.43
1:AA:227:G:C2	1:AA:228:A:C1'	3.01	0.43
9:AI:97:LYS:HG3	9:AI:102:LEU:HD12	1.96	0.43
4:AD:3:ARG:HD3	4:AD:3:ARG:HA	1.78	0.43
21:B0:35:G:C1'	21:B0:466:A:H1'	2.48	0.43
21:B0:197:G:N2	21:B0:440:U:H2'	2.33	0.43
5:AE:36:ASP:OD2	5:AE:40:ARG:HD3	2.18	0.43
7:AG:38:LEU:HD12	7:AG:42:ILE:HG13	2.00	0.43
21:B0:1664:G:O5'	21:B0:1665:C:OP1	2.36	0.43
2:AB:146:GLN:O	2:AB:150:SER:HB3	2.18	0.43
21:B0:198:A:H4'	21:B0:199:A:OP2	2.17	0.43
8:AH:114:THR:C	8:AH:116:LYS:H	2.22	0.43
21:B0:758:G:O2'	21:B0:761:G:H1'	2.18	0.43
1:AA:137:C:O2'	1:AA:138:G:H5'	2.17	0.43
21:B0:1259:A:H2'	21:B0:1260:A:C8	2.53	0.43
21:B0:2065:A:H2'	21:B0:2066:G:O4'	2.18	0.43
21:B0:2265:A:H5''	21:B0:2266:A:O4'	2.18	0.43
21:B0:2033:C:H2'	21:B0:2034:A:O4'	2.17	0.43
21:B0:207:U:H2'	21:B0:208:C:C6	2.52	0.43
1:AA:1255:G:H22	1:AA:1276:G:H21	1.56	0.43
1:AA:1279:A:O2'	1:AA:1281:U:OP2	2.33	0.43
21:B0:3871:A:H2'	21:B0:3872:A:C8	2.54	0.43
1:AA:262:A:H4'	20:AT:74:LYS:HB3	2.00	0.43
1:AA:1398:A:C6	5:AE:21:ALA:HA	2.49	0.43
1:AA:114:U:O4'	1:AA:353:A:O4'	2.35	0.43
1:AA:433:C:O2'	1:AA:434:U:H5'	2.18	0.43
1:AA:184:G:C4'	1:AA:224:C:H4'	2.48	0.43
3:AC:11:ARG:O	3:AC:14:ILE:O	2.36	0.43
1:AA:1229:A:H2'	1:AA:1230:C:H6	1.84	0.43
1:AA:961:U:C2'	1:AA:962:C:H5'	2.48	0.43
19:AS:41:VAL:HG22	19:AS:44:MET:CE	2.49	0.43
13:AM:22:ILE:HD12	13:AM:25:ILE:CD1	2.41	0.43
21:B0:1065:A:O2'	21:B0:1066:G:H5'	2.19	0.43
3:AC:188:LEU:HD13	3:AC:189:ALA:H	1.83	0.43
3:AC:134:ILE:HG22	3:AC:168:ALA:CB	2.48	0.43
6:AF:75:LEU:HD13	6:AF:75:LEU:O	2.18	0.43
21:B0:109:A:H2'	21:B0:110:U:H5''	2.00	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:1283:C:OP1	21:B0:1284:G:H5'	2.17	0.43
21:B0:583:C:N3	21:B0:2016:A:H4'	2.32	0.43
21:B0:2680:U:H3'	21:B0:2681:A:C5'	2.43	0.43
21:B0:925:U:H5''	21:B0:926:C:OP1	2.18	0.43
21:B0:1429:A:H1'	21:B0:1603:A:C6	2.53	0.43
21:B0:2469:G:H4'	21:B0:2470:U:C6	2.54	0.43
3:AC:47:LEU:HD13	3:AC:47:LEU:H	1.83	0.43
21:B0:860:U:O2	21:B0:860:U:H2'	2.17	0.43
21:B0:243:G:H2'	21:B0:244:C:O4'	2.18	0.43
1:AA:1128:C:H4'	9:AI:16:ARG:NH1	2.33	0.43
21:B0:1358:C:C2'	21:B0:1359:G:H5''	2.48	0.43
8:AH:16:ALA:O	8:AH:21:LYS:HG2	2.18	0.43
1:AA:858:G:O2'	1:AA:859:A:H5'	2.18	0.43
21:B0:1819:U:H5''	21:B0:1954:A:O3'	2.18	0.43
21:B0:167:A:H62	21:B0:183:U:H3	1.66	0.43
1:AA:430:A:H2'	1:AA:431:A:H5'	1.99	0.43
21:B0:1258:G:H2'	21:B0:1259:A:C8	2.52	0.43
21:B0:2498:U:H3'	21:B0:2498:U:OP1	2.17	0.43
13:AM:110:ARG:CG	13:AM:110:ARG:HH11	2.31	0.43
21:B0:1054:C:H2'	21:B0:1055:A:H5'	2.00	0.43
21:B0:1871:G:N3	21:B0:1871:G:H2'	2.33	0.43
3:AC:12:LEU:HD23	3:AC:12:LEU:HA	1.76	0.43
21:B0:2069:U:H2'	21:B0:2070:G:C8	2.53	0.43
21:B0:1633:C:HO2'	21:B0:1634:A:P	2.40	0.43
2:AB:100:GLY:O	2:AB:104:ASN:N	2.44	0.43
21:B0:2867:G:N3	21:B0:2867:G:H3'	2.32	0.43
21:B0:1014:G:O2'	21:B0:1015:U:H5'	2.17	0.43
21:B0:944:A:H2'	21:B0:945:G:O4'	2.17	0.43
1:AA:1458:G:C4	1:AA:1459:C:O2	2.72	0.43
1:AA:235:C:C4'	17:AQ:70:ARG:CB	2.96	0.43
1:AA:1261:A:C1'	1:AA:1283:G:C4'	2.75	0.43
17:AQ:96:GLN:HG3	21:B0:725:C:HO2'	1.79	0.43
1:AA:538:G:OP1	12:AL:115:LYS:HB2	2.18	0.43
1:AA:451:A:N6	1:AA:480:U:H2'	2.33	0.43
1:AA:236:G:C5'	17:AQ:42:TYR:CE2	2.80	0.43
1:AA:205:G:N2	1:AA:207:C:H41	2.15	0.43
21:B0:2011:U:H2'	21:B0:2012:A:H8	1.83	0.43
3:AC:191:THR:HG21	3:AC:193:TYR:CE1	2.53	0.43
1:AA:640:A:C2'	1:AA:641:U:H5'	2.48	0.43
5:AE:31:LEU:HA	5:AE:31:LEU:HD23	1.74	0.43
21:B0:1923:U:H1'	21:B0:1947:G:H4'	1.99	0.43
8:AH:103:VAL:HG21	8:AH:109:ILE:O	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:792:U:H2'	21:B0:793:G:O4'	2.19	0.43
21:B0:1881:U:H2'	21:B0:1882:G:H5'	2.00	0.43
15:AO:54:ARG:O	15:AO:58:MET:HG3	2.17	0.43
1:AA:363:A:O2'	1:AA:364:A:H5'	2.18	0.43
21:B0:712:A:H61	21:B0:746:G:H1'	1.83	0.43
6:AF:22:GLU:OE2	6:AF:84:ASN:HB2	2.18	0.43
21:B0:1482:U:H2'	21:B0:1483:G:C8	2.53	0.43
20:AT:63:ILE:HD13	20:AT:80:ARG:CB	2.48	0.43
17:AQ:95:TYR:C	17:AQ:97:SER:N	2.58	0.43
1:AA:560:U:N3	5:AE:123:LEU:CD1	2.81	0.43
3:AC:8:ILE:O	3:AC:11:ARG:N	2.47	0.43
13:AM:93:ARG:CB	21:B0:900(A):A:P	3.07	0.43
10:AJ:46:ARG:HH11	10:AJ:64:GLU:CG	2.31	0.43
13:AM:23:TYR:CE2	13:AM:70:LEU:HD13	2.53	0.43
16:AP:43:LYS:HA	16:AP:48:TRP:HB3	2.00	0.43
1:AA:501:C:H5'	1:AA:548:G:H22	1.83	0.43
1:AA:738:C:O4'	6:AF:73:ASN:ND2	2.51	0.43
1:AA:529:G:O6	12:AL:49:ASN:ND2	2.51	0.43
5:AE:24:ARG:NH1	5:AE:24:ARG:HG2	2.32	0.43
2:AB:119:GLU:OE1	2:AB:153:ARG:NH2	2.51	0.43
2:AB:17:PHE:CA	2:AB:44:LEU:HD21	2.49	0.43
1:AA:16:A:O2'	1:AA:17:U:H5'	2.18	0.43
10:AJ:86:MET:HE3	10:AJ:86:MET:HA	2.01	0.43
21:B0:437:G:O2'	21:B0:438:G:H5'	2.19	0.43
21:B0:1196:G:C2'	21:B0:1197:U:H5'	2.48	0.43
7:AG:138:LYS:HD3	7:AG:138:LYS:C	2.39	0.43
1:AA:1128:C:C4'	9:AI:16:ARG:NH1	2.81	0.43
21:B0:1257:U:H2'	21:B0:1258:G:C8	2.53	0.43
18:AR:58:LEU:HD22	18:AR:62:GLU:HB3	1.99	0.43
1:AA:675:A:O2'	11:AK:114:VAL:O	2.36	0.43
10:AJ:68:HIS:CD2	10:AJ:68:HIS:N	2.85	0.43
21:B0:1722:G:H2'	21:B0:1723:U:C6	2.54	0.43
21:B0:826:U:H2'	21:B0:827:C:C6	2.53	0.43
11:AK:100:ALA:O	11:AK:102:GLY:N	2.51	0.43
4:AD:55:ALA:O	4:AD:59:ARG:HG2	2.19	0.43
12:AL:111:LYS:O	12:AL:112:ASP:HB2	2.18	0.43
1:AA:1256:A:HO3'	1:AA:1257:U:C5'	2.32	0.43
1:AA:319:G:H5'	1:AA:1468:A:H5'	2.01	0.43
1:AA:1405:G:C1'	1:AA:1519:A:O4'	2.21	0.43
1:AA:1517:G:N2	21:B0:1902:A:HO2'	2.15	0.43
1:AA:1181:G:O2'	1:AA:1182:G:H5'	2.19	0.43
13:AM:84:ILE:HD12	19:AS:66:MET:HB3	2.01	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1347:G:O6	9:AI:107:ARG:NH2	2.42	0.43
3:AC:191:THR:HB	3:AC:194:GLY:O	2.18	0.43
16:AP:52:ASP:O	16:AP:52:ASP:CG	2.57	0.43
4:AD:24:GLU:HG2	4:AD:25:ARG:H	1.82	0.43
16:AP:20:VAL:CG1	16:AP:32:TYR:CB	2.95	0.43
21:B0:2636:A:H62	21:B0:2643:G:N2	2.09	0.43
1:AA:227:G:H2'	1:AA:228:A:O4'	2.19	0.43
1:AA:1353:G:H2'	1:AA:1354:C:C6	2.54	0.43
21:B0:815:A:H8	21:B0:815:A:P	2.42	0.43
21:B0:2378:G:H2'	21:B0:2379:G:H8	1.83	0.43
3:AC:79:ARG:C	3:AC:81:GLY:H	2.21	0.43
5:AE:40:ARG:NH1	5:AE:68:GLU:OE1	2.51	0.43
4:AD:10:ARG:HH11	4:AD:10:ARG:HG3	1.83	0.43
21:B0:2259:G:H2'	21:B0:2260:C:C6	2.53	0.43
15:AO:87:ILE:HG22	15:AO:88:ARG:N	2.34	0.43
21:B0:2035:G:H2'	21:B0:2036:G:C8	2.52	0.43
21:B0:2559:U:C2'	21:B0:2560:G:H5'	2.49	0.43
2:AB:83:MET:HG3	2:AB:238:LEU:HD11	2.00	0.43
21:B0:1482:U:H2'	21:B0:1483:G:H8	1.83	0.43
21:B0:48:A:H4'	21:B0:50:G:O4'	2.18	0.43
21:B0:1310:C:OP1	21:B0:2689:C:H4'	2.18	0.43
17:AQ:97:SER:O	17:AQ:98:LEU:HD12	2.19	0.43
1:AA:375:U:C4	1:AA:376:G:C5	3.06	0.43
1:AA:216:C:H5''	1:AA:466:A:N1	2.30	0.43
1:AA:489:C:H2'	1:AA:490:G:C8	2.54	0.43
1:AA:1060:C:O2'	1:AA:1061:G:H5'	2.18	0.43
1:AA:1367:C:H5''	9:AI:114:TYR:HB3	1.97	0.43
11:AK:54:ARG:H	11:AK:54:ARG:HG2	1.47	0.43
21:B0:1119:U:P	21:B0:1120:C:OP2	2.76	0.43
21:B0:931:G:N2	21:B0:2247:A:H5''	2.34	0.43
2:AB:124:SER:CB	2:AB:125:PRO:CD	2.90	0.43
2:AB:59:GLU:O	2:AB:60:ASP:C	2.57	0.43
21:B0:69:G:O2'	21:B0:70:A:H4'	2.17	0.43
1:AA:921:U:H4'	1:AA:1082:G:OP1	2.18	0.43
21:B0:2586:G:H2'	21:B0:2587:G:O4'	2.19	0.43
21:B0:2436:U:H2'	21:B0:2437:G:O4'	2.18	0.43
7:AG:78:ARG:HG2	7:AG:80:VAL:HG23	1.99	0.43
4:AD:120:LEU:HD23	4:AD:125:HIS:CD2	2.54	0.43
4:AD:8:VAL:CG1	4:AD:21:LEU:HD13	2.48	0.43
21:B0:45:C:H2'	21:B0:46:C:C6	2.53	0.43
1:AA:782:A:H2'	1:AA:783:C:O4'	2.19	0.43
21:B0:2241:U:H4'	21:B0:2307:A:C2	2.54	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:969:U:O2'	21:B0:970:A:H5''	2.18	0.43
21:B0:491:A:N3	21:B0:491:A:H2'	2.34	0.43
21:B0:1391:A:H2'	21:B0:1392:U:C5	2.54	0.43
21:B0:1938:U:H3'	21:B0:2530:C:O2'	2.19	0.43
11:AK:98:LEU:HD23	11:AK:98:LEU:HA	1.82	0.43
21:B0:1424:U:H2'	21:B0:1425:G:C8	2.53	0.43
2:AB:28:PHE:CD2	2:AB:190:THR:HA	2.54	0.43
1:AA:1125:U:H5''	1:AA:1126:U:H5	1.83	0.43
1:AA:1474:G:H4'	21:B0:1717:A:N6	2.33	0.43
21:B0:1856:U:H5''	21:B0:3865:A:P	2.52	0.43
20:AT:63:ILE:HD13	20:AT:80:ARG:HB3	2.01	0.43
1:AA:7:G:H21	5:AE:121:LYS:CG	2.27	0.43
21:B0:3876:A:C4	53:B5:45:ASP:CA	3.02	0.43
1:AA:1157:A:O4'	1:AA:1158:C:C2	2.72	0.43
1:AA:961:U:OP1	1:AA:1223:C:C1'	2.67	0.43
1:AA:1231:G:O3'	9:AI:126:SER:CB	2.67	0.43
1:AA:1230:C:H1'	13:AM:125:ARG:O	2.19	0.43
1:AA:1327:C:O2'	1:AA:1328:C:H5'	2.19	0.43
21:B0:941:U:H2'	21:B0:942:U:C6	2.54	0.43
1:AA:1533:C:O2	1:AA:1533:C:H2'	2.17	0.43
1:AA:564:C:H5'	12:AL:10:LEU:HD13	2.01	0.43
1:AA:15:G:C1'	5:AE:24:ARG:NH1	2.82	0.43
1:AA:1131:G:H2'	1:AA:1132:C:H6	1.82	0.43
15:AO:78:TYR:CE2	15:AO:82:ILE:HD11	2.53	0.43
2:AB:41:ILE:O	2:AB:41:ILE:HG22	2.19	0.43
1:AA:160:A:H2'	1:AA:161:A:O4'	2.18	0.43
5:AE:80:ILE:HD12	5:AE:80:ILE:H	1.84	0.43
21:B0:540:G:N7	21:B0:2018:G:H4'	2.33	0.43
1:AA:836:G:OP1	18:AR:61:LYS:HD2	2.19	0.43
21:B0:217:U:H5'	21:B0:633:G:O2'	2.18	0.43
22:B9:35:C:H2'	22:B9:36:A:O4'	2.19	0.43
21:B0:211:U:O2'	21:B0:212:U:H5'	2.19	0.43
21:B0:1329:U:H2'	21:B0:1330:G:C8	2.54	0.43
1:AA:1010:G:O2'	1:AA:1011:G:H5'	2.18	0.43
1:AA:157:G:O2'	1:AA:158:G:H5'	2.19	0.43
21:B0:1401:G:H2'	21:B0:1402:G:H8	1.83	0.43
21:B0:2055:G:H2'	21:B0:2056:C:C6	2.54	0.43
17:AQ:104:LYS:CB	21:B0:726:G:N3	2.82	0.43
1:AA:315:A:C4'	1:AA:353:A:H61	2.25	0.43
1:AA:1485:U:P	21:B0:1943:A:O3'	2.77	0.43
21:B0:892:A:C4	21:B0:911:A:N1	2.87	0.43
1:AA:456:A:C6	1:AA:477:G:N3	2.86	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:AS:3:ARG:O	19:AS:4:SER:HB3	2.18	0.43
9:AI:78:LYS:HD3	9:AI:101:PHE:CD2	2.54	0.43
1:AA:59:A:H2'	1:AA:331:G:N1	2.33	0.43
3:AC:70:VAL:O	3:AC:106:VAL:N	2.51	0.43
2:AB:16:HIS:CE1	2:AB:210:SER:HG	2.37	0.43
21:B0:70:A:OP2	21:B0:111:G:H4'	2.19	0.43
3:AC:112:SER:HB2	3:AC:115:LEU:HB2	2.01	0.43
21:B0:2426:G:C5'	21:B0:2480:C:H41	2.28	0.43
21:B0:798:G:C2'	21:B0:799:C:H5'	2.48	0.43
21:B0:1429:A:O2'	21:B0:1430:G:H4'	2.19	0.43
21:B0:2468:G:H2'	21:B0:2469:G:O4'	2.19	0.43
21:B0:2728:A:H2'	21:B0:2729:A:O4'	2.18	0.43
1:AA:1051:C:H2'	1:AA:1052:U:C6	2.53	0.43
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.52	0.43
21:B0:1634:A:O2'	21:B0:1635:G:OP1	2.29	0.43
1:AA:1458:G:N9	1:AA:1459:C:O2	2.52	0.43
17:AQ:104:LYS:HB3	17:AQ:105:ALA:H	1.48	0.43
5:AE:115:VAL:CG1	5:AE:116:THR:N	2.82	0.43
20:AT:57:ARG:HE	20:AT:100:ILE:HG21	1.84	0.43
1:AA:618:C:N3	1:AA:622:A:N6	2.67	0.43
19:AS:12:ASP:HB2	19:AS:35:SER:OG	2.19	0.43
1:AA:818:G:H3'	1:AA:819:A:H5'	2.01	0.43
1:AA:932:C:H5''	7:AG:3:ARG:HD3	2.01	0.43
12:AL:26:ALA:C	12:AL:27:LEU:O	2.57	0.43
1:AA:958:A:C6	19:AS:55:LYS:HB3	2.53	0.43
17:AQ:45:HIS:CD2	17:AQ:47:PRO:HG3	2.54	0.43
1:AA:173:U:O4'	1:AA:197:A:C5	2.71	0.43
21:B0:873:U:O2	21:B0:2246:A:H5''	2.18	0.43
1:AA:370:C:C2'	1:AA:371:G:H5'	2.48	0.43
21:B0:2424:G:H2'	21:B0:2425:G:O4'	2.19	0.43
15:AO:29:VAL:HG11	15:AO:67:LEU:HD21	2.00	0.43
7:AG:112:PRO:O	7:AG:113:GLU:C	2.57	0.43
4:AD:127:THR:HG23	4:AD:128:VAL:N	2.34	0.43
1:AA:1262:C:H2'	1:AA:1263:C:C6	2.54	0.43
20:AT:11:SER:C	20:AT:13:LEU:H	2.23	0.43
21:B0:1561:A:H2'	21:B0:1562:G:O4'	2.19	0.43
21:B0:1393:G:O2'	21:B0:1394:G:H5'	2.19	0.43
21:B0:2204:A:H1'	21:B0:2205:C:C5	2.53	0.43
4:AD:205:GLU:HB3	5:AE:107:ARG:HH21	1.83	0.43
1:AA:1342:C:C4'	9:AI:125:TYR:CE1	3.00	0.43
3:AC:59:ARG:O	10:AJ:92:THR:C	2.45	0.43
22:B9:108:G:O2'	22:B9:109:G:H5'	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:AK:93:GLN:NE2	11:AK:96:ARG:NH2	2.67	0.43
1:AA:1137:C:H4'	1:AA:1138:G:N1	2.33	0.43
4:AD:198:VAL:HG12	4:AD:199:ASN:N	2.34	0.43
1:AA:409:G:OP1	4:AD:24:GLU:O	2.36	0.43
1:AA:409:G:H2'	1:AA:410:G:O4'	2.18	0.43
11:AK:21:ILE:HD12	11:AK:95:ILE:HG12	2.00	0.43
2:AB:74:LYS:HD2	2:AB:166:ASP:HB2	2.00	0.43
21:B0:2572:U:H2'	21:B0:2573:C:C6	2.54	0.43
21:B0:765:C:O2'	21:B0:766:A:O4'	2.36	0.43
21:B0:635:C:H2'	21:B0:636:G:H5''	2.00	0.43
21:B0:1039:A:H2'	21:B0:1040:A:C8	2.54	0.43
21:B0:2475:C:C2'	21:B0:2476:A:H5'	2.49	0.43
21:B0:114:C:H2'	21:B0:115:G:O4'	2.19	0.43
21:B0:738:G:H2'	21:B0:739:G:O4'	2.18	0.43
1:AA:628:G:H2'	1:AA:629:G:H8	1.84	0.43
1:AA:1438:G:H2'	1:AA:1439:C:C6	2.54	0.43
21:B0:1411:C:H6	21:B0:1411:C:O5'	2.02	0.43
21:B0:170:U:H2'	21:B0:171:G:H8	1.84	0.43
21:B0:1466:C:H2'	21:B0:1467:U:O4'	2.19	0.43
21:B0:572:G:H2'	21:B0:573:C:C6	2.54	0.43
1:AA:1126:U:H2'	1:AA:1127:G:O4'	2.19	0.42
1:AA:991:U:O2	1:AA:993:G:H8	2.02	0.42
1:AA:1346:A:C2'	7:AG:10:ARG:NH2	2.65	0.42
1:AA:1348:U:H4'	9:AI:120:ARG:HD2	2.00	0.42
1:AA:730:G:C5	1:AA:731:G:H1'	2.54	0.42
12:AL:41:ARG:HH11	12:AL:41:ARG:HB3	1.84	0.42
1:AA:1268:A:H1'	1:AA:1326:C:O2'	2.19	0.42
1:AA:735:C:HO2'	18:AR:75:ILE:CD1	2.28	0.42
9:AI:106:ALA:O	9:AI:108:VAL:HG23	2.19	0.42
2:AB:137:ARG:HA	2:AB:140:HIS:HD2	1.84	0.42
10:AJ:96:ILE:CG2	10:AJ:97:GLU:H	2.25	0.42
1:AA:15:G:N3	5:AE:19:MET:CG	2.82	0.42
21:B0:2625:U:H2'	21:B0:2626:U:O4'	2.18	0.42
9:AI:69:GLY:O	9:AI:73:GLN:HG3	2.18	0.42
20:AT:42:GLN:O	20:AT:46:GLU:HG3	2.19	0.42
21:B0:689:A:C2'	21:B0:690:A:H5'	2.48	0.42
21:B0:1429:A:N6	21:B0:1602:G:H5'	2.34	0.42
11:AK:33:THR:OG1	11:AK:37:GLY:C	2.58	0.42
1:AA:778:G:O2'	1:AA:779:C:H5'	2.19	0.42
17:AQ:60:ILE:HD13	17:AQ:61:GLU:N	2.34	0.42
21:B0:842:A:H5'	21:B0:844:G:C5	2.54	0.42
1:AA:1263:C:H2'	1:AA:1264:C:H6	1.83	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:2455:A:C2'	21:B0:2456:U:H5'	2.49	0.42
1:AA:1135:U:O5'	1:AA:1135:U:H6	2.01	0.42
4:AD:60:GLU:OE1	4:AD:60:GLU:HA	2.19	0.42
21:B0:1307:U:H2'	21:B0:1308:C:O4'	2.19	0.42
21:B0:744:C:H2'	21:B0:745:C:C6	2.54	0.42
1:AA:1393:U:C2	1:AA:1395:C:N4	2.87	0.42
17:AQ:104:LYS:NZ	21:B0:726:G:H1	2.09	0.42
21:B0:2204:A:H4'	21:B0:2205:C:O4'	2.19	0.42
1:AA:1483:A:N3	1:AA:1484:C:C6	2.87	0.42
1:AA:42:G:H21	1:AA:622:A:H2	1.66	0.42
1:AA:1158:C:N3	1:AA:1181:G:N2	2.61	0.42
19:AS:40:ILE:HG23	19:AS:44:MET:SD	2.59	0.42
21:B0:3185:U:H2'	21:B0:3186:C:O4'	2.19	0.42
12:AL:41:ARG:NH1	12:AL:41:ARG:CB	2.82	0.42
1:AA:714:G:H4'	1:AA:776:G:H5'	2.01	0.42
1:AA:974:A:OP1	1:AA:974:A:H8	2.03	0.42
2:AB:88:ALA:C	2:AB:90:MET:N	2.71	0.42
4:AD:196:LEU:C	4:AD:198:VAL:H	2.22	0.42
12:AL:55:VAL:CG1	12:AL:67:THR:CG2	2.97	0.42
6:AF:100:ASN:ND2	18:AR:23:LYS:O	2.52	0.42
21:B0:220:U:H2'	21:B0:221:A:O4'	2.19	0.42
21:B0:2639:A:H2'	21:B0:2640:G:O4'	2.20	0.42
18:AR:26:LEU:CD1	18:AR:27:GLY:H	2.29	0.42
17:AQ:59:ILE:CG2	17:AQ:71:PHE:CD1	3.02	0.42
21:B0:2426:G:O2'	21:B0:2427:A:OP2	2.32	0.42
21:B0:2504:G:H2'	21:B0:2505:G:H8	1.83	0.42
21:B0:796:A:C2	21:B0:798:G:H1'	2.54	0.42
4:AD:157:LEU:CD2	4:AD:161:ASN:ND2	2.74	0.42
21:B0:1626:A:H5''	21:B0:1627:C:OP2	2.19	0.42
1:AA:418:C:H2'	1:AA:419:C:C6	2.54	0.42
1:AA:854:G:H3'	1:AA:871:U:O4	2.19	0.42
21:B0:1975:G:H4'	21:B0:1976:U:C5	2.53	0.42
21:B0:2404:A:OP1	21:B0:2406:C:H5'	2.18	0.42
4:AD:163:GLU:C	4:AD:165:MET:N	2.72	0.42
21:B0:1788:C:H2'	21:B0:1789:U:C6	2.54	0.42
18:AR:46:GLU:CD	18:AR:46:GLU:N	2.72	0.42
11:AK:85:ARG:NH1	11:AK:85:ARG:HG3	2.34	0.42
21:B0:1982:C:H2'	21:B0:1983:G:C8	2.52	0.42
21:B0:1292:A:H2'	21:B0:1293:A:H8	1.84	0.42
1:AA:762:C:C4'	21:B0:729:A:N6	2.54	0.42
1:AA:1489:G:H2'	1:AA:1490:C:C5'	2.27	0.42
1:AA:1016:A:C5'	14:AN:15:LYS:CE	2.75	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1221:G:O3'	19:AS:77:THR:HG21	2.20	0.42
1:AA:977:A:C8	1:AA:1223:C:N4	2.87	0.42
10:AJ:56:HIS:O	10:AJ:58:ASP:N	2.52	0.42
13:AM:33:ALA:HB2	13:AM:64:TRP:CH2	2.54	0.42
16:AP:40:ASP:HB3	16:AP:48:TRP:HB2	2.00	0.42
12:AL:60:LEU:CD2	12:AL:66:VAL:HG22	2.49	0.42
21:B0:1080:A:H4'	21:B0:1081:A:C8	2.54	0.42
3:AC:50:ALA:O	3:AC:70:VAL:CG1	2.67	0.42
21:B0:872:G:H2'	21:B0:928:G:N1	2.35	0.42
10:AJ:15:THR:HG23	10:AJ:94:VAL:CG2	2.49	0.42
5:AE:16:THR:HG23	5:AE:27:ARG:O	2.19	0.42
21:B0:1811:A:H1'	21:B0:1813:A:C5	2.53	0.42
1:AA:1195:C:H3'	1:AA:1196:U:H5''	2.01	0.42
21:B0:1764:A:H2'	21:B0:1765:C:O4'	2.19	0.42
1:AA:1228:C:H4'	13:AM:116:THR:HA	2.02	0.42
1:AA:942:G:H2'	1:AA:943:U:H6	1.85	0.42
21:B0:338:G:O2'	21:B0:339:U:H5'	2.19	0.42
21:B0:1981:A:H4'	21:B0:2704:U:O2'	2.19	0.42
6:AF:40:VAL:HG22	6:AF:41:GLU:N	2.34	0.42
10:AJ:17:ASP:O	10:AJ:21:GLN:HB2	2.19	0.42
9:AI:56:LEU:O	9:AI:58:ARG:N	2.49	0.42
21:B0:569:C:H2'	21:B0:570:G:C8	2.53	0.42
7:AG:31:MET:SD	7:AG:34:GLY:HA2	2.59	0.42
1:AA:1397:C:O2'	1:AA:1398:A:P	2.77	0.42
1:AA:376:G:OP2	16:AP:67:THR:HG21	2.19	0.42
1:AA:1015:A:H1'	1:AA:1219:U:C4'	2.48	0.42
1:AA:1217:C:O2'	1:AA:1218:C:H5'	2.19	0.42
19:AS:41:VAL:HB	19:AS:43:GLU:OE2	2.19	0.42
1:AA:1371:G:OP2	9:AI:11:LYS:CE	2.68	0.42
1:AA:848:G:HO2'	1:AA:849:C:C4'	2.28	0.42
7:AG:65:ALA:O	7:AG:66:VAL:C	2.58	0.42
21:B0:2492:G:H2'	21:B0:2493:U:C6	2.54	0.42
2:AB:33:TYR:O	2:AB:34:ALA:CB	2.67	0.42
1:AA:808:C:P	15:AO:48:LYS:CE	3.07	0.42
3:AC:116:VAL:HG11	3:AC:141:VAL:HG21	2.01	0.42
19:AS:17:GLU:HA	19:AS:20:LEU:CD1	2.49	0.42
7:AG:15:ASP:OD2	7:AG:23:VAL:HG11	2.19	0.42
21:B0:1223:G:H4'	21:B0:1224:A:C5'	2.49	0.42
4:AD:8:VAL:CG1	4:AD:21:LEU:CD1	2.97	0.42
12:AL:43:VAL:CG1	12:AL:44:THR:N	2.81	0.42
1:AA:487:A:H2'	1:AA:488:C:O4'	2.19	0.42
1:AA:418:C:H2'	1:AA:419:C:H6	1.84	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:AP:4:ILE:HG23	16:AP:36:ILE:HD11	2.01	0.42
21:B0:1017:C:H2'	21:B0:1018:C:O4'	2.19	0.42
21:B0:477:A:H2'	21:B0:478:G:O4'	2.20	0.42
21:B0:2561:G:N3	21:B0:2561:G:H2'	2.35	0.42
1:AA:1244:C:O2'	1:AA:1245:A:H5'	2.19	0.42
21:B0:2771:C:H5	21:B0:2867:G:H22	1.66	0.42
5:AE:131:ILE:HD13	5:AE:131:ILE:HA	1.93	0.42
8:AH:68:ARG:HH11	8:AH:68:ARG:HG2	1.84	0.42
21:B0:697:G:O2'	21:B0:698:A:H5'	2.20	0.42
21:B0:883:A:H2'	21:B0:884:C:O4'	2.19	0.42
1:AA:1126:U:H2'	1:AA:1127:G:H8	1.85	0.42
1:AA:264:U:O2'	17:AQ:63:ARG:CD	2.68	0.42
1:AA:761:G:C5'	17:AQ:102:GLY:C	2.87	0.42
1:AA:1407:C:H2'	1:AA:1408:A:H8	1.85	0.42
1:AA:1505:G:H3'	1:AA:1505:G:H8	1.85	0.42
1:AA:1106:G:OP1	3:AC:172:ARG:CD	2.68	0.42
1:AA:1015:A:C2	1:AA:1218:C:O2'	2.73	0.42
1:AA:1231:G:O3'	9:AI:126:SER:HB3	2.19	0.42
3:AC:59:ARG:O	10:AJ:92:THR:HG23	2.13	0.42
1:AA:246:A:O3'	1:AA:247:G:O4'	2.36	0.42
1:AA:44:G:OP2	16:AP:12:LYS:CG	2.63	0.42
22:B9:73:C:H3'	22:B9:74:A:OP2	2.20	0.42
1:AA:452:A:O2'	1:AA:453:A:O4'	2.34	0.42
1:AA:1266:G:N2	1:AA:1269:A:OP2	2.49	0.42
1:AA:1086:U:O3'	1:AA:1389:C:H5''	2.20	0.42
12:AL:70:ILE:CD1	12:AL:77:LEU:HD12	2.42	0.42
1:AA:1446:A:C4	1:AA:1456:A:N1	2.87	0.42
21:B0:1313:U:O2'	21:B0:1314:A:P	2.78	0.42
21:B0:1957:C:O2'	21:B0:1958:G:H5'	2.20	0.42
4:AD:25:ARG:HA	4:AD:28:SER:OG	2.19	0.42
1:AA:583:A:H5''	17:AQ:90:ILE:HG21	2.01	0.42
21:B0:2523:G:O2'	21:B0:2524:G:H5'	2.20	0.42
21:B0:2437:G:H4'	21:B0:2438:A:N7	2.35	0.42
5:AE:80:ILE:HD12	5:AE:91:LEU:HB2	2.00	0.42
1:AA:1441:G:H4'	1:AA:1442:G:C8	2.54	0.42
1:AA:617:G:H4'	16:AP:45:THR:CG2	2.47	0.42
1:AA:448:A:C4	1:AA:487:A:C2	3.07	0.42
21:B0:669:G:H2'	21:B0:670:U:O4'	2.20	0.42
21:B0:19:C:H2'	21:B0:20:C:C6	2.54	0.42
21:B0:2564:U:H5''	21:B0:2565:C:H5'	2.01	0.42
1:AA:1264:C:H2'	1:AA:1265:G:C8	2.54	0.42
11:AK:104:GLN:OE1	11:AK:106:LYS:HE2	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:2559:U:H2'	21:B0:2560:G:H5'	2.01	0.42
1:AA:359:U:O2'	1:AA:360:A:H5'	2.18	0.42
1:AA:631:G:O3'	1:AA:632:A:P	2.77	0.42
21:B0:1775:A:H4'	21:B0:1776:A:C8	2.54	0.42
21:B0:1480:G:C2'	21:B0:1481:U:H5'	2.49	0.42
1:AA:1392:G:C5'	1:AA:1531:A:H5''	2.50	0.42
17:AQ:103:GLY:C	21:B0:726:G:N2	2.46	0.42
17:AQ:95:TYR:CD1	17:AQ:95:TYR:N	2.88	0.42
1:AA:1416:G:C3'	1:AA:1417:G:OP1	2.68	0.42
1:AA:1227:A:H5'	19:AS:80:TYR:OH	2.19	0.42
1:AA:992:U:H2'	1:AA:1043:C:C4	2.48	0.42
1:AA:833:U:H2'	1:AA:834:C:C6	2.55	0.42
10:AJ:62:HIS:ND1	14:AN:61:TRP:CZ3	2.85	0.42
1:AA:928:G:HO2'	1:AA:1533:C:H5	1.66	0.42
1:AA:1305:G:N2	1:AA:1331:G:HO2'	2.14	0.42
1:AA:333:G:O4'	20:AT:16:HIS:HD2	1.90	0.42
21:B0:833:A:H2'	21:B0:834:A:C8	2.55	0.42
21:B0:1679:U:H2'	21:B0:1680:U:H5''	2.02	0.42
19:AS:20:LEU:HD12	19:AS:21:GLU:N	2.34	0.42
10:AJ:72:VAL:O	10:AJ:73:ASP:HB2	2.18	0.42
1:AA:288:A:HO2'	1:AA:290:C:P	2.36	0.42
1:AA:1377:A:H2'	7:AG:2:ALA:HB3	2.02	0.42
15:AO:41:GLU:O	15:AO:42:HIS:C	2.57	0.42
7:AG:108:ALA:O	7:AG:119:ARG:HD2	2.18	0.42
22:B9:50:U:H2'	22:B9:51:G:H8	1.83	0.42
21:B0:1672:A:H2'	21:B0:1673:C:O4'	2.20	0.42
8:AH:51:VAL:CG1	8:AH:52:ASP:N	2.82	0.42
21:B0:1855:G:H4'	21:B0:2390:A:H4'	2.00	0.42
21:B0:3148:G:H2'	21:B0:3149:G:H5'	1.91	0.42
1:AA:762:C:H5'	17:AQ:104:LYS:HZ1	1.85	0.42
1:AA:117:G:N2	1:AA:313:A:H4'	2.34	0.42
1:AA:1399:C:C2	1:AA:1502:A:N6	2.86	0.42
1:AA:218:C:P	1:AA:470:U:O4'	2.78	0.42
1:AA:960:U:O2'	1:AA:1223:C:C4'	2.68	0.42
1:AA:960:U:O2	1:AA:960:U:H2'	2.19	0.42
1:AA:965:A:O2'	1:AA:966:G:C5'	2.67	0.42
1:AA:993:G:C2	1:AA:1046:A:C2	3.08	0.42
13:AM:6:GLY:O	13:AM:7:VAL:CG2	2.65	0.42
12:AL:60:LEU:HD21	12:AL:66:VAL:CG2	2.50	0.42
3:AC:193:TYR:HE1	3:AC:196:LEU:HD11	1.83	0.42
21:B0:1181:C:H3'	21:B0:1182:U:H5''	2.01	0.42
1:AA:107:G:O2'	1:AA:108:G:H5'	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:AD:24:GLU:H	4:AD:112:VAL:HG11	1.85	0.42
1:AA:584:G:H2'	1:AA:585:G:C8	2.54	0.42
21:B0:69:G:O2'	21:B0:70:A:P	2.78	0.42
1:AA:1152:A:H5''	10:AJ:13:HIS:HD2	1.85	0.42
1:AA:1376:U:OP1	7:AG:98:SER:CB	2.68	0.42
1:AA:1129:C:O2'	1:AA:1130:A:P	2.78	0.42
21:B0:841:G:N1	21:B0:2226:A:H4'	2.35	0.42
21:B0:738:G:C2'	21:B0:739:G:H5'	2.50	0.42
21:B0:589:C:H2'	21:B0:590:C:C6	2.55	0.42
21:B0:1961:A:H2'	21:B0:1962:C:O4'	2.19	0.42
1:AA:461:C:O2'	1:AA:462:A:H5'	2.19	0.42
21:B0:903:G:C6	21:B0:904:U:C4	3.08	0.42
21:B0:2031:A:H2'	21:B0:2032:G:C8	2.54	0.42
21:B0:2864:C:H2'	21:B0:2865:G:O4'	2.20	0.42
1:AA:1394:A:O2'	1:AA:1501:C:O2	2.37	0.42
1:AA:1394:A:H61	1:AA:1501:C:C5'	2.26	0.42
1:AA:1261:A:H5'	1:AA:1283:G:C3'	2.50	0.42
1:AA:51:A:N6	1:AA:313:A:H2	2.17	0.42
1:AA:109:A:OP2	1:AA:110:C:H5	2.02	0.42
1:AA:1064:G:C1'	1:AA:1190:G:H22	2.26	0.42
1:AA:39:G:N7	1:AA:498:U:C4	2.87	0.42
1:AA:960:U:C1'	1:AA:1222:G:HO2'	2.18	0.42
13:AM:80:ARG:C	13:AM:82:MET:N	2.73	0.42
1:AA:44:G:P	16:AP:12:LYS:CB	2.85	0.42
17:AQ:40:LYS:HD3	17:AQ:42:TYR:OH	2.20	0.42
21:B0:2633:A:H4'	21:B0:2634:G:C4'	2.39	0.42
3:AC:70:VAL:HG12	3:AC:71:ALA:H	1.84	0.42
11:AK:65:ALA:O	11:AK:68:ALA:HB3	2.20	0.42
4:AD:63:LYS:O	4:AD:64:LEU:C	2.58	0.42
1:AA:1237:C:H4'	1:AA:1334:G:H21	1.85	0.42
21:B0:583:C:H4'	21:B0:584:A:OP2	2.20	0.42
21:B0:2467:A:H2'	21:B0:2468:G:C8	2.55	0.42
3:AC:77:ILE:CG2	3:AC:81:GLY:HA2	2.50	0.42
21:B0:509:U:H2'	21:B0:510:G:H5'	2.00	0.42
2:AB:204:ASN:HD22	2:AB:206:ASP:H	1.66	0.42
1:AA:851:G:H2'	1:AA:852:G:H8	1.84	0.42
11:AK:100:ALA:O	11:AK:101:SER:C	2.57	0.42
3:AC:57:ILE:HG22	3:AC:57:ILE:O	2.20	0.42
22:B9:9:G:H2'	22:B9:10:U:O4'	2.20	0.42
1:AA:132:C:O4'	1:AA:262:A:N9	2.53	0.42
1:AA:815:A:C2	1:AA:1528:U:C5'	2.85	0.42
1:AA:8:A:C5	4:AD:209:ARG:CA	3.03	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1409:C:N4	1:AA:1410:G:O6	2.53	0.42
1:AA:1106:G:OP1	3:AC:172:ARG:HD3	2.19	0.42
1:AA:1014:A:C4	19:AS:34:TRP:CB	3.03	0.42
1:AA:1014:A:OP2	19:AS:14:HIS:CB	2.58	0.42
1:AA:70:A:O2'	1:AA:71:U:H5'	2.19	0.42
1:AA:1202:G:O4'	14:AN:29:ARG:HD3	2.19	0.42
19:AS:51:VAL:HG12	19:AS:52:TYR:H	1.85	0.42
1:AA:825:G:O2'	1:AA:826:C:H5'	2.20	0.42
12:AL:55:VAL:CG1	12:AL:56:ALA:N	2.83	0.42
4:AD:148:VAL:HG13	4:AD:158:ILE:HD13	2.01	0.42
21:B0:877:G:N2	21:B0:926:C:H41	2.17	0.42
21:B0:814:G:H3'	21:B0:815:A:C5'	2.46	0.42
4:AD:70:ILE:HD11	4:AD:100:ARG:CD	2.49	0.42
1:AA:169:C:O2'	1:AA:170:U:H5'	2.19	0.42
21:B0:332:C:H2'	21:B0:333:A:H5'	2.02	0.42
21:B0:2404:A:O2'	21:B0:2405:A:OP2	2.29	0.42
21:B0:2393:G:H2'	21:B0:2394:G:H8	1.85	0.42
1:AA:1264:C:H2'	1:AA:1265:G:H8	1.85	0.42
21:B0:1938:U:O2'	21:B0:1939:U:H5'	2.20	0.42
21:B0:1667:A:H2'	21:B0:1668:G:C8	2.55	0.42
8:AH:39:LEU:HD13	8:AH:39:LEU:HA	1.86	0.42
21:B0:2815:C:H2'	21:B0:2816:C:C6	2.55	0.42
21:B0:594:G:H21	21:B0:1267:A:H62	1.68	0.42
21:B0:571:U:H2'	21:B0:581:A:H1'	2.02	0.42
21:B0:391:C:H2'	21:B0:392:G:C8	2.54	0.42
1:AA:692:U:O2	1:AA:695:A:C8	2.73	0.42
1:AA:1277:C:O3'	1:AA:1279:A:H5'	2.20	0.42
17:AQ:95:TYR:HA	17:AQ:98:LEU:HD11	2.02	0.42
1:AA:319:G:O2'	1:AA:1434:A:C2	2.40	0.42
1:AA:560:U:H4'	1:AA:561:U:C5'	2.50	0.42
5:AE:120:THR:HG23	5:AE:121:LYS:H	1.84	0.42
1:AA:1095:U:H2'	1:AA:1096:C:H6	1.83	0.42
1:AA:1068:G:H5'	1:AA:1388:C:OP1	2.20	0.42
1:AA:1517:G:N2	21:B0:1902:A:O2'	2.53	0.42
5:AE:93:PRO:HG2	8:AH:105:ARG:NH2	2.35	0.42
13:AM:84:ILE:CG2	19:AS:66:MET:CE	2.98	0.42
21:B0:3184:C:H2'	21:B0:3185:U:H5''	1.98	0.42
9:AI:120:ARG:O	9:AI:122:ALA:N	2.53	0.42
1:AA:119:A:C8	1:AA:240:C:N4	2.88	0.42
21:B0:3098:U:O3'	21:B0:3099:U:OP2	2.15	0.42
22:B9:106:U:O2'	22:B9:107:C:H5'	2.19	0.42
12:AL:58:VAL:N	12:AL:66:VAL:O	2.47	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:AK:57:THR:OG1	11:AK:58:PRO:HD2	2.20	0.42
21:B0:1747:G:H1'	21:B0:1749:G:C2	2.55	0.42
2:AB:125:PRO:C	2:AB:127:ILE:H	2.22	0.42
1:AA:522:C:O2'	1:AA:523:A:H5'	2.19	0.42
1:AA:15:G:N9	5:AE:19:MET:HE2	2.35	0.42
1:AA:825:G:H2'	1:AA:826:C:C6	2.53	0.42
1:AA:640:A:O2'	1:AA:641:U:H5'	2.20	0.42
1:AA:413:G:N2	1:AA:428:G:H1'	2.34	0.42
6:AF:45:LEU:O	6:AF:46:ARG:HG2	2.20	0.42
15:AO:48:LYS:O	15:AO:50:HIS:N	2.50	0.42
21:B0:3126:A:H4'	21:B0:3127:G:OP1	2.19	0.42
21:B0:1912:G:H3'	21:B0:1912:G:N3	2.35	0.42
3:AC:79:ARG:NE	3:AC:82:GLU:HG2	2.34	0.42
1:AA:636:U:H2'	1:AA:637:G:C8	2.54	0.42
22:B9:25:G:C2'	22:B9:26:G:H5'	2.50	0.42
13:AM:32:GLU:O	13:AM:35:GLU:N	2.53	0.42
1:AA:606:G:H3'	1:AA:607:A:H5'	2.02	0.42
21:B0:1040:A:C2'	21:B0:1041:G:H5'	2.49	0.42
21:B0:869:C:O2'	21:B0:870:C:H5'	2.19	0.42
11:AK:99:GLN:HG2	11:AK:105:VAL:HG21	2.02	0.42
1:AA:767:A:H2'	1:AA:768:A:O4'	2.20	0.42
21:B0:1671:A:H2'	21:B0:1672:A:H8	1.85	0.42
2:AB:228:GLY:O	2:AB:229:VAL:C	2.58	0.42
6:AF:77:ARG:O	6:AF:81:ILE:HG13	2.19	0.42
21:B0:334:G:N3	21:B0:344:G:H1'	2.35	0.42
18:AR:17:SER:HB2	18:AR:54:ARG:HH21	1.85	0.42
21:B0:1900:U:H3'	21:B0:1901:A:H8	1.85	0.42
21:B0:3110:G:C4'	21:B0:3111:C:OP2	2.67	0.41
1:AA:927:G:O2'	1:AA:1532:U:C5'	2.67	0.41
1:AA:761:G:C4'	17:AQ:102:GLY:C	2.82	0.41
1:AA:189:A:N6	20:AT:104:LEU:HA	2.28	0.41
20:AT:54:LYS:HA	20:AT:57:ARG:HD3	2.02	0.41
21:B0:1112:U:O2	21:B0:1112:U:H2'	2.20	0.41
9:AI:110:GLU:OE2	9:AI:113:LYS:NZ	2.53	0.41
1:AA:625:G:O2'	1:AA:626:U:H5'	2.20	0.41
1:AA:976:G:C5	1:AA:2361:C:C4	3.08	0.41
2:AB:60:ASP:O	2:AB:64:ARG:HB2	2.20	0.41
2:AB:187:LEU:HA	2:AB:201:ILE:HB	2.01	0.41
21:B0:425:A:H2'	21:B0:426:C:O4'	2.20	0.41
21:B0:2809:A:H2'	21:B0:2810:A:H5'	2.01	0.41
10:AJ:32:ALA:HB2	10:AJ:75:ILE:O	2.19	0.41
20:AT:44:ALA:HB2	20:AT:88:VAL:HG13	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:1188:A:H62	21:B0:1189:G:N2	2.17	0.41
21:B0:1762:C:H2'	21:B0:1763:G:C8	2.55	0.41
16:AP:4:ILE:CG1	16:AP:64:ALA:HB1	2.49	0.41
7:AG:69:VAL:CG1	7:AG:69:VAL:O	2.68	0.41
8:AH:126:LYS:C	8:AH:128:GLY:N	2.73	0.41
1:AA:145:G:O2'	1:AA:146:G:H5'	2.20	0.41
7:AG:45:ASP:O	7:AG:49:ILE:HG13	2.20	0.41
21:B0:2195:C:H2'	21:B0:2196:U:O4'	2.20	0.41
3:AC:187:ALA:O	3:AC:198:VAL:N	2.51	0.41
21:B0:3875:A:H4'	53:B5:43:LYS:CA	2.51	0.41
20:AT:80:ARG:O	20:AT:84:LEU:HB2	2.20	0.41
1:AA:1182:G:O2'	1:AA:1183:A:C5'	2.69	0.41
3:AC:64:VAL:HG12	3:AC:65:ALA:H	1.84	0.41
1:AA:935:A:H4'	1:AA:1384:C:H1'	2.02	0.41
1:AA:1234:C:H4'	1:AA:1364:U:C1'	2.50	0.41
3:AC:191:THR:HG22	3:AC:193:TYR:N	2.23	0.41
3:AC:134:ILE:HG22	3:AC:168:ALA:HB3	2.01	0.41
2:AB:64:ARG:HB2	2:AB:64:ARG:HE	1.70	0.41
1:AA:162:A:H2'	1:AA:163:C:O4'	2.20	0.41
1:AA:866:C:H2'	1:AA:867:G:O4'	2.20	0.41
9:AI:97:LYS:HB2	9:AI:98:PRO:HD3	2.01	0.41
1:AA:1440:C:H2'	1:AA:1441:G:C5'	2.48	0.41
21:B0:2694:G:H2'	21:B0:2695:C:C6	2.55	0.41
21:B0:1196:G:H2'	21:B0:1197:U:H5'	2.00	0.41
21:B0:860:U:O2'	21:B0:861:G:H5'	2.20	0.41
21:B0:167:A:H2'	21:B0:168:A:C8	2.55	0.41
1:AA:628:G:O2'	1:AA:629:G:H5'	2.20	0.41
9:AI:104:ARG:O	9:AI:105:ASP:C	2.59	0.41
21:B0:2242:C:N4	21:B0:2257:A:H61	2.18	0.41
21:B0:2604:G:H2'	21:B0:2605:C:C6	2.55	0.41
21:B0:2721:A:H62	21:B0:2743:G:H21	1.68	0.41
21:B0:1448:A:H2'	21:B0:1449:C:C6	2.55	0.41
1:AA:1402:C:H2'	1:AA:1403:C:H6	1.85	0.41
17:AQ:95:TYR:N	17:AQ:95:TYR:HD1	2.18	0.41
16:AP:39:TYR:CD2	16:AP:73:LEU:HD11	2.54	0.41
4:AD:205:GLU:O	4:AD:208:SER:HB2	2.20	0.41
21:B0:1082:G:H1'	21:B0:1100:G:H2'	2.03	0.41
1:AA:439:A:N6	1:AA:497:A:H1'	2.35	0.41
1:AA:406:G:O6	1:AA:496:A:N7	2.31	0.41
1:AA:19:C:O2'	1:AA:20:U:H5'	2.20	0.41
10:AJ:55:LYS:O	10:AJ:56:HIS:HB2	2.19	0.41
1:AA:1311:G:H2'	1:AA:1312:G:O4'	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1087:G:P	1:AA:1389:C:C4'	3.01	0.41
15:AO:70:LEU:HD12	15:AO:78:TYR:HB2	2.01	0.41
21:B0:1528:C:H3'	21:B0:1529:C:H5''	2.02	0.41
10:AJ:3:LYS:HG3	10:AJ:75:ILE:HG23	2.02	0.41
7:AG:93:PRO:HG2	7:AG:94:ARG:H	1.85	0.41
15:AO:34:LEU:C	15:AO:34:LEU:HD23	2.40	0.41
21:B0:1683:G:H2'	21:B0:1684:G:H5'	2.02	0.41
21:B0:2676:G:H2'	21:B0:2677:U:C6	2.56	0.41
1:AA:1262:C:N4	1:AA:1273:G:H1	2.18	0.41
21:B0:2459:C:C2'	21:B0:2460:G:H5'	2.51	0.41
1:AA:942:G:C2	1:AA:943:U:C6	3.07	0.41
13:AM:67:GLU:HB3	13:AM:68:GLY:H	1.58	0.41
1:AA:1431:C:H2'	1:AA:1432:G:O4'	2.21	0.41
21:B0:328:A:O2'	21:B0:329:C:H5'	2.20	0.41
21:B0:1447:U:H1'	21:B0:1577:G:H22	1.86	0.41
1:AA:1531:A:O5'	1:AA:1531:A:H8	2.03	0.41
1:AA:953:G:H1'	13:AM:125:ARG:HB3	1.99	0.41
13:AM:82:MET:HG3	13:AM:93:ARG:HG3	2.02	0.41
1:AA:246:A:H1'	1:AA:247:G:H1'	2.02	0.41
9:AI:110:GLU:HG2	9:AI:113:LYS:NZ	2.35	0.41
1:AA:1372:U:OP2	9:AI:11:LYS:CE	2.68	0.41
1:AA:47:C:C6	1:AA:365:U:H2'	2.56	0.41
13:AM:36:LYS:C	13:AM:38:GLY:H	2.24	0.41
1:AA:397:A:H5'	1:AA:398:C:P	2.60	0.41
1:AA:550:G:O2'	1:AA:551:U:H5'	2.20	0.41
1:AA:1269:A:C6	1:AA:1313:U:H4'	2.56	0.41
1:AA:300:A:C1'	1:AA:565:U:O2	2.47	0.41
21:B0:31:C:H5''	21:B0:1252:C:OP1	2.20	0.41
8:AH:111:ILE:O	8:AH:134:ILE:HB	2.20	0.41
1:AA:1355:G:O2'	1:AA:1356:G:H5'	2.21	0.41
2:AB:145:LEU:HA	2:AB:145:LEU:HD23	1.84	0.41
2:AB:62:ALA:C	2:AB:64:ARG:H	2.23	0.41
1:AA:1138:G:N1	1:AA:1140:C:C2	2.89	0.41
21:B0:895:G:H2'	21:B0:896:C:O4'	2.20	0.41
21:B0:1679:U:H3'	21:B0:1680:U:C5'	2.45	0.41
7:AG:23:VAL:HG13	7:AG:43:PHE:CE2	2.55	0.41
1:AA:382:A:C2	1:AA:383:A:C4	3.08	0.41
15:AO:26:GLU:HG3	15:AO:81:LEU:HG	2.02	0.41
1:AA:532:A:H2'	1:AA:533:A:C5'	2.48	0.41
21:B0:2448:A:C2'	21:B0:2449:G:H5'	2.50	0.41
1:AA:1240:U:H5	7:AG:109:ASN:OD1	2.04	0.41
21:B0:601:A:H3'	21:B0:602:C:H5'	2.03	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:AF:48:LEU:HD13	6:AF:52:ILE:CG1	2.50	0.41
1:AA:647:C:H2'	1:AA:648:A:C8	2.54	0.41
13:AM:96:LEU:HB3	13:AM:97:PRO:HD2	2.01	0.41
21:B0:1880:G:H2'	21:B0:1881:U:C6	2.55	0.41
15:AO:83:GLU:C	15:AO:83:GLU:OE1	2.58	0.41
1:AA:1453:G:H2'	1:AA:1454:G:O4'	2.21	0.41
21:B0:773:G:H2'	21:B0:774:A:O4'	2.21	0.41
1:AA:1473:A:O2'	21:B0:1718:A:C2	2.66	0.41
21:B0:3865:A:C4	21:B0:3875:A:N1	2.89	0.41
1:AA:262:A:C4'	20:AT:74:LYS:CB	2.98	0.41
1:AA:355:C:C4'	1:AA:389:A:OP2	2.68	0.41
20:AT:100:ILE:C	20:AT:102:GLY:N	2.74	0.41
1:AA:8:A:C6	4:AD:209:ARG:CA	3.03	0.41
21:B0:1073:G:H2'	21:B0:1073:G:N3	2.35	0.41
1:AA:1190:G:OP1	3:AC:5:ILE:N	2.52	0.41
1:AA:1320:C:H41	19:AS:37:ARG:CD	2.32	0.41
13:AM:84:ILE:HD12	19:AS:74:PHE:HE2	1.86	0.41
1:AA:1112:C:C2	3:AC:178:LEU:CA	3.03	0.41
1:AA:38:G:O4'	1:AA:547:A:C6	2.73	0.41
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.20	0.41
3:AC:134:ILE:HD13	3:AC:166:GLU:HB3	2.01	0.41
4:AD:62:GLN:HE22	4:AD:65:ARG:NH1	2.18	0.41
21:B0:1204:G:H2'	21:B0:1205:G:C8	2.55	0.41
2:AB:10:LEU:C	2:AB:12:GLU:N	2.72	0.41
7:AG:95:ARG:NH1	7:AG:95:ARG:CG	2.80	0.41
1:AA:867:G:O2'	1:AA:868:C:H5'	2.20	0.41
21:B0:2756:A:H1'	21:B0:2758:A:N7	2.36	0.41
21:B0:2440:C:H1'	21:B0:2471:U:N3	2.32	0.41
21:B0:2796:A:H2'	21:B0:2797:G:O4'	2.20	0.41
1:AA:602:A:C2	1:AA:637:G:C2	3.08	0.41
21:B0:1579:G:H2'	21:B0:1580:C:C6	2.56	0.41
16:AP:19:ILE:HG22	16:AP:36:ILE:CG1	2.51	0.41
21:B0:59:G:O6	21:B0:62:U:H2'	2.19	0.41
1:AA:841:C:N3	1:AA:845:A:N6	2.67	0.41
21:B0:567:G:H2'	21:B0:568:G:C8	2.56	0.41
13:AM:46:LYS:HE3	13:AM:46:LYS:HB2	1.86	0.41
5:AE:9:LYS:HG3	5:AE:112:LEU:HD11	2.03	0.41
6:AF:19:LEU:HD21	6:AF:23:LYS:HD2	2.01	0.41
21:B0:1055:A:H2	21:B0:1121:G:H2'	1.83	0.41
21:B0:2710:C:O2'	21:B0:2711:G:H5'	2.20	0.41
1:AA:191:G:N2	1:AA:192:U:H1'	2.23	0.41
1:AA:1394:A:C2	1:AA:1501:C:C1'	3.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:AT:53:LEU:HD13	20:AT:101:GLY:N	2.35	0.41
1:AA:134:A:C1'	1:AA:325:A:C4	3.03	0.41
21:B0:909:C:H2'	21:B0:910:U:H6	1.85	0.41
3:AC:172:ARG:HH12	3:AC:174:PRO:CG	2.22	0.41
1:AA:1227:A:OP1	19:AS:80:TYR:CZ	2.74	0.41
1:AA:951:G:C6	1:AA:1231:G:C6	3.08	0.41
1:AA:977:A:H1'	1:AA:1223:C:N4	2.35	0.41
1:AA:1044:A:C2'	1:AA:1045:C:HO2'	2.18	0.41
1:AA:143:A:H2	1:AA:220:G:H22	1.66	0.41
1:AA:1213:A:N1	1:AA:1215:G:H1'	2.35	0.41
1:AA:502:G:H2'	1:AA:503:C:C6	2.56	0.41
1:AA:502:G:H2'	1:AA:503:C:H6	1.84	0.41
1:AA:1300:G:O2'	1:AA:1301:U:C6	2.70	0.41
14:AN:3:ARG:NH1	14:AN:6:LEU:CD1	2.84	0.41
21:B0:365:U:H2'	21:B0:366:U:C6	2.56	0.41
2:AB:215:LEU:HD23	2:AB:215:LEU:HA	1.90	0.41
6:AF:95:GLU:CD	6:AF:95:GLU:N	2.65	0.41
10:AJ:3:LYS:CG	10:AJ:75:ILE:HG23	2.50	0.41
1:AA:939:G:C6	1:AA:940:C:N4	2.89	0.41
4:AD:130:GLY:O	4:AD:131:ARG:C	2.58	0.41
21:B0:974:U:H2'	21:B0:975:C:C6	2.55	0.41
8:AH:126:LYS:O	8:AH:128:GLY:N	2.54	0.41
21:B0:870:C:H2'	21:B0:871:U:C6	2.56	0.41
21:B0:1007:A:H2'	21:B0:1008:G:H8	1.84	0.41
11:AK:86:GLY:H	11:AK:112:THR:CG2	2.32	0.41
21:B0:643:A:H2'	21:B0:644:A:C8	2.56	0.41
21:B0:1962:C:H2'	21:B0:1963:G:H8	1.84	0.41
3:AC:73:PRO:HD3	3:AC:105:GLU:HG3	2.03	0.41
21:B0:1889:G:H2'	21:B0:1890:G:C8	2.55	0.41
1:AA:285:G:O2'	1:AA:286:G:H5'	2.21	0.41
21:B0:3197:U:O2	21:B0:2181:A:C6	2.73	0.41
20:AT:23:ARG:NH1	20:AT:23:ARG:HG2	2.36	0.41
1:AA:1110:A:N6	1:AA:1111:A:N1	2.69	0.41
1:AA:1111:A:C2	3:AC:177:THR:OG1	2.71	0.41
1:AA:1225:A:H4'	19:AS:78:ARG:HH11	1.85	0.41
1:AA:367:U:O2	1:AA:369:C:C2	2.73	0.41
16:AP:43:LYS:HA	16:AP:48:TRP:CB	2.51	0.41
1:AA:651:C:C5	1:AA:652:U:C5	3.07	0.41
1:AA:653:A:OP1	8:AH:56:LYS:HE3	2.20	0.41
8:AH:91:ARG:HA	17:AQ:34:LYS:CB	2.46	0.41
20:AT:43:LEU:HD13	20:AT:51:GLU:CG	2.43	0.41
21:B0:128:C:C3'	21:B0:129:A:H5''	2.50	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:176:C:H2'	1:AA:177:C:C6	2.56	0.41
2:AB:95:GLN:C	2:AB:96:ARG:HD2	2.40	0.41
2:AB:14:GLY:O	2:AB:15:VAL:CG2	2.69	0.41
21:B0:1915:A:H2'	21:B0:1916:G:O4'	2.21	0.41
8:AH:6:ILE:O	8:AH:10:LEU:HG	2.20	0.41
1:AA:1426:C:H2'	1:AA:1427:U:H6	1.84	0.41
1:AA:13:U:O2	1:AA:914:A:C8	2.74	0.41
21:B0:1948:C:H2'	21:B0:1949:A:N7	2.36	0.41
21:B0:178:C:H4'	21:B0:399:G:C2	2.56	0.41
1:AA:511:C:O3'	4:AD:43:HIS:CE1	2.74	0.41
21:B0:1018:C:H2'	21:B0:1019:U:H5	1.86	0.41
21:B0:1332:G:H2'	21:B0:1333:G:O4'	2.21	0.41
14:AN:39:LEU:HD11	14:AN:47:LEU:HD12	2.02	0.41
21:B0:1354:A:O2'	21:B0:1355:A:OP1	2.29	0.41
1:AA:187:G:H2'	20:AT:105:SER:HB3	2.02	0.41
1:AA:323:U:C5'	20:AT:19:SER:O	2.69	0.41
1:AA:1416:G:N1	1:AA:1417:G:H1'	2.33	0.41
13:AM:86:CYS:O	13:AM:90:LEU:CG	2.49	0.41
13:AM:84:ILE:HG21	19:AS:65:ASN:ND2	2.35	0.41
1:AA:2003:G:H2'	1:AA:1004:A:H4'	2.02	0.41
1:AA:1305:G:C2'	1:AA:1306:A:H8	2.32	0.41
1:AA:948:C:O2'	1:AA:949:A:H5'	2.21	0.41
12:AL:28:LYS:CG	12:AL:33:ARG:HH12	2.34	0.41
12:AL:33:ARG:HD2	12:AL:62:SER:HB3	2.01	0.41
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.86	0.41
1:AA:1152:A:H2'	1:AA:1153:C:H6	1.83	0.41
15:AO:39:LEU:HD12	15:AO:59:MET:HE2	2.02	0.41
11:AK:48:ILE:O	11:AK:49:GLY:C	2.59	0.41
5:AE:36:ASP:OD1	5:AE:38:GLN:N	2.39	0.41
21:B0:1566:G:H2'	21:B0:1567:A:C8	2.56	0.41
21:B0:753:U:C2'	21:B0:754:G:H5'	2.51	0.41
5:AE:144:THR:O	5:AE:145:LYS:C	2.59	0.41
21:B0:675:C:H5''	32:BJ:26:THR:CA	2.51	0.41
21:B0:139:A:H2'	21:B0:140:G:C8	2.56	0.41
21:B0:2395:C:H2'	21:B0:2396:C:C5'	2.51	0.41
1:AA:1126:U:H6	1:AA:1126:U:P	2.43	0.41
21:B0:3110:G:P	21:B0:3148:G:H2'	2.45	0.41
1:AA:1394:A:C4	1:AA:1501:C:O4'	2.74	0.41
1:AA:1392:G:H2'	1:AA:1393:U:H6	1.86	0.41
17:AQ:97:SER:CB	17:AQ:102:GLY:C	2.78	0.41
1:AA:184:G:C2'	1:AA:224:C:H4'	2.51	0.41
1:AA:621:A:H2'	1:AA:622:A:H8	1.85	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1184:G:H2'	1:AA:1185:G:C8	2.56	0.41
1:AA:992:U:H2'	1:AA:1043:C:H41	1.85	0.41
3:AC:65:ALA:O	3:AC:66:VAL:HB	2.21	0.41
1:AA:1270:C:HO2'	1:AA:1314:C:H5'	1.86	0.41
14:AN:53:LEU:HA	14:AN:54:PRO:HD2	1.77	0.41
1:AA:1061:G:C2'	1:AA:1062:U:H5'	2.50	0.41
1:AA:1048:G:C1'	1:AA:1215:G:H4'	2.50	0.41
1:AA:1367:C:H5''	10:AJ:60:ARG:NH1	2.35	0.41
10:AJ:63:PHE:CE1	14:AN:48:ALA:HB3	2.53	0.41
1:AA:367:U:C4	1:AA:369:C:N4	2.89	0.41
1:AA:119:A:C5	1:AA:240:C:N3	2.89	0.41
1:AA:588:G:N1	1:AA:652:U:N3	2.69	0.41
12:AL:27:LEU:HB3	12:AL:62:SER:HB2	2.03	0.41
13:AM:37:THR:HG23	13:AM:55:ARG:HB2	2.03	0.41
2:AB:130:ARG:HB3	2:AB:134:GLU:OE1	2.20	0.41
12:AL:46:LYS:NZ	12:AL:47:LYS:HE3	2.36	0.41
12:AL:48:PRO:CG	12:AL:49:ASN:H	2.25	0.41
6:AF:33:TYR:HA	6:AF:71:ARG:NH2	2.36	0.41
3:AC:108:ASN:C	3:AC:110:ASN:N	2.73	0.41
21:B0:831:G:H21	21:B0:1203:A:N6	2.04	0.41
2:AB:15:VAL:HG11	2:AB:210:SER:N	2.36	0.41
2:AB:165:VAL:O	2:AB:187:LEU:O	2.38	0.41
21:B0:2491:C:H2'	21:B0:2492:G:C5'	2.45	0.41
1:AA:577:G:H1'	1:AA:816:A:C4	2.56	0.41
1:AA:16:A:C2'	1:AA:17:U:H5'	2.51	0.41
1:AA:1350:A:C6	1:AA:1351:U:N3	2.89	0.41
21:B0:1004:A:C2'	21:B0:1005:U:H5''	2.46	0.41
3:AC:79:ARG:CG	3:AC:82:GLU:HG2	2.51	0.41
1:AA:371:G:C2'	1:AA:372:C:H5'	2.51	0.41
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.50	0.41
5:AE:40:ARG:NH1	5:AE:68:GLU:OE2	2.49	0.41
21:B0:514:G:C2'	21:B0:514:G:N3	2.82	0.41
4:AD:7:PRO:CB	4:AD:10:ARG:HD2	2.51	0.41
21:B0:1196:G:H2'	21:B0:1197:U:C5'	2.51	0.41
21:B0:2018:G:H3'	21:B0:2019:C:H5'	2.03	0.41
20:AT:92:LEU:O	20:AT:96:GLY:HA3	2.21	0.41
8:AH:82:HIS:O	8:AH:83:ILE:HB	2.21	0.41
19:AS:25:LYS:N	19:AS:25:LYS:HD2	2.34	0.41
15:AO:38:ARG:O	15:AO:41:GLU:HB3	2.20	0.41
21:B0:967:G:H1'	21:B0:970:A:H62	1.86	0.41
21:B0:2239:C:O2'	21:B0:2240:C:H5'	2.21	0.41
21:B0:239:A:H2'	21:B0:240:U:O4'	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:658:G:H4'	21:B0:2331:A:C5'	2.50	0.41
21:B0:2028:C:O2'	21:B0:2029:G:H5'	2.21	0.41
21:B0:477:A:C2'	21:B0:478:G:H5'	2.51	0.41
21:B0:478:G:O2'	21:B0:479:G:H5'	2.20	0.41
11:AK:127:LYS:HD3	11:AK:127:LYS:HA	1.78	0.41
21:B0:2212:U:H2'	21:B0:2213:G:C8	2.55	0.41
21:B0:776:G:N3	21:B0:776:G:H3'	2.36	0.41
21:B0:3177:C:O2'	21:B0:3178:C:H5'	2.19	0.41
21:B0:644:A:C2'	21:B0:645:G:H5'	2.50	0.41
21:B0:810:U:H2'	21:B0:811:G:H8	1.85	0.41
21:B0:811:G:O2'	21:B0:812:G:H5'	2.21	0.41
21:B0:1542:G:H21	21:B0:1561:A:H62	1.69	0.41
21:B0:2811:G:H2'	21:B0:2812:A:C8	2.55	0.41
21:B0:187:U:H2'	21:B0:188:G:C8	2.56	0.41
21:B0:1760:G:H2'	21:B0:1761:G:C8	2.56	0.41
21:B0:2620:G:H2'	21:B0:2621:G:H8	1.86	0.41
21:B0:147:G:C2	21:B0:148:C:H1'	2.56	0.41
15:AO:74:ASP:OD1	15:AO:76:GLU:HB3	2.21	0.41
21:B0:2562:G:H2'	21:B0:2563:U:O4'	2.20	0.41
1:AA:562:C:O2'	12:AL:17:LYS:HE3	2.20	0.41
12:AL:104:VAL:HG12	12:AL:105:TYR:CD1	2.56	0.41
21:B0:2526:U:H2'	21:B0:2527:G:C8	2.55	0.41
1:AA:1257:U:H4'	1:AA:1258:G:C5'	2.50	0.41
4:AD:88:VAL:HG13	5:AE:97:GLY:N	2.36	0.41
17:AQ:97:SER:O	17:AQ:99:SER:N	2.53	0.41
1:AA:402:G:O2'	1:AA:620:C:N4	2.54	0.41
3:AC:95:THR:C	3:AC:97:LYS:N	2.73	0.41
1:AA:1320:C:OP1	19:AS:70:LYS:NZ	2.45	0.41
1:AA:1368:G:H3'	9:AI:112:LYS:HB3	2.03	0.41
10:AJ:50:ILE:HB	14:AN:41:ARG:HD3	2.03	0.41
1:AA:397:A:H5'	1:AA:398:C:OP1	2.21	0.41
12:AL:7:ILE:HA	12:AL:7:ILE:HD13	1.93	0.41
21:B0:1119:U:O5'	21:B0:1120:C:P	2.79	0.41
1:AA:958:A:N1	19:AS:54:GLY:C	2.75	0.41
2:AB:134:GLU:O	2:AB:138:LEU:HG	2.21	0.41
1:AA:848:G:C3'	1:AA:849:C:O4'	2.68	0.41
1:AA:824:C:H2'	1:AA:825:G:C8	2.56	0.41
21:B0:108:G:H2'	21:B0:109:A:C8	2.56	0.41
21:B0:878:C:N4	21:B0:921:A:H62	2.07	0.41
3:AC:150:LYS:HE2	3:AC:152:ILE:CD1	2.44	0.41
18:AR:39:VAL:CG1	18:AR:40:LEU:N	2.84	0.41
11:AK:95:ILE:O	11:AK:95:ILE:HG22	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:AC:7:PRO:HG2	3:AC:184:TYR:CB	2.45	0.41
10:AJ:75:ILE:O	10:AJ:76:ASN:HB2	2.21	0.41
21:B0:819:C:H2'	21:B0:820:U:C6	2.56	0.41
15:AO:26:GLU:HA	15:AO:81:LEU:HD11	2.03	0.41
21:B0:1194:U:O2'	21:B0:1195:U:P	2.79	0.41
16:AP:82:GLN:O	16:AP:83:GLU:C	2.59	0.41
1:AA:1128:C:H5'	9:AI:16:ARG:CZ	2.51	0.41
21:B0:1682:A:H2'	21:B0:1683:G:C8	2.56	0.41
1:AA:836:G:C6	1:AA:851:G:C6	3.09	0.41
21:B0:856:A:H2'	21:B0:857:U:O4'	2.21	0.41
21:B0:2447:G:H2'	21:B0:2448:A:H5'	2.02	0.41
1:AA:1263:C:H2'	1:AA:1264:C:C6	2.56	0.41
1:AA:359:U:H2'	1:AA:360:A:C8	2.56	0.41
4:AD:108:LEU:HD23	4:AD:108:LEU:HA	1.86	0.41
21:B0:769:C:H2'	21:B0:770:U:O4'	2.21	0.41
1:AA:930:C:O2'	1:AA:931:C:H5'	2.20	0.41
11:AK:67:ASP:OD2	11:AK:71:LYS:HE3	2.21	0.41
1:AA:1457:A:C4	1:AA:1459:C:H1'	2.53	0.40
1:AA:815:A:N6	1:AA:1508:G:H21	2.19	0.40
5:AE:110:LEU:HD13	5:AE:118:ILE:HD12	2.04	0.40
1:AA:292:G:C2'	1:AA:608:A:H61	2.23	0.40
1:AA:1342:C:O3'	9:AI:125:TYR:CE2	2.70	0.40
9:AI:117:HIS:C	9:AI:118:LYS:HG3	2.42	0.40
10:AJ:59:SER:O	10:AJ:60:ARG:HB2	2.20	0.40
1:AA:766:A:C2	1:AA:1525:G:H1'	2.56	0.40
9:AI:78:LYS:HB3	9:AI:78:LYS:HE2	1.87	0.40
21:B0:930:A:H5'	21:B0:931:G:C8	2.57	0.40
3:AC:191:THR:HG21	3:AC:193:TYR:CE2	2.56	0.40
1:AA:519:C:H2'	1:AA:520:A:C8	2.56	0.40
18:AR:44:LEU:HD22	18:AR:48:GLY:O	2.21	0.40
6:AF:79:LEU:O	6:AF:85:VAL:HG11	2.22	0.40
1:AA:1286:A:H2'	1:AA:1287:A:O5'	2.21	0.40
21:B0:2522:G:O2'	21:B0:2523:G:H5'	2.21	0.40
21:B0:2524:G:H2'	21:B0:2525:U:O4'	2.21	0.40
1:AA:864:A:H2'	1:AA:865:A:C8	2.56	0.40
21:B0:1223:G:N2	21:B0:1225:G:H21	2.13	0.40
21:B0:2023:C:H2'	21:B0:2024:U:C6	2.56	0.40
3:AC:77:ILE:O	3:AC:83:ARG:HB3	2.21	0.40
21:B0:820:U:H5'	21:B0:2424:G:H4'	2.04	0.40
21:B0:1686:A:C2'	21:B0:1687:C:H5'	2.52	0.40
7:AG:72:ARG:HH12	7:AG:138:LYS:NZ	2.19	0.40
12:AL:53:ARG:CB	12:AL:93:LEU:HD11	2.50	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:AD:194:LEU:N	4:AD:194:LEU:HD22	2.36	0.40
1:AA:165:C:H2'	1:AA:166:G:H8	1.86	0.40
1:AA:844:A:H2'	1:AA:845:A:H8	1.86	0.40
21:B0:2240:C:H2'	21:B0:2241:U:C5'	2.50	0.40
21:B0:2027:C:H2'	21:B0:2028:C:C6	2.55	0.40
1:AA:983:A:H2	1:AA:984:C:C6	2.40	0.40
2:AB:53:ARG:NH1	2:AB:199:TYR:HD2	2.19	0.40
10:AJ:23:ILE:CD1	10:AJ:23:ILE:N	2.85	0.40
8:AH:125:ARG:HB2	8:AH:125:ARG:HE	1.68	0.40
21:B0:1234:C:H2'	21:B0:1235:C:C6	2.57	0.40
8:AH:100:ILE:HA	8:AH:101:PRO:HD2	1.95	0.40
21:B0:1861:G:O4'	53:B5:199:ASN:CA	2.70	0.40
1:AA:234:C:H5''	17:AQ:70:ARG:HH21	1.87	0.40
21:B0:3111:C:C4	21:B0:3148:G:P	2.85	0.40
1:AA:1394:A:C8	1:AA:1501:C:O2'	2.68	0.40
16:AP:6:LEU:HD12	16:AP:6:LEU:N	2.36	0.40
1:AA:1415:G:O2'	1:AA:1416:G:H5'	2.22	0.40
1:AA:538:G:H3'	12:AL:115:LYS:HE2	2.03	0.40
1:AA:1406:U:H1'	1:AA:1518:A:C4'	2.51	0.40
1:AA:975:A:C2	1:AA:1357:A:H1'	2.56	0.40
2:AB:125:PRO:HG2	2:AB:126:GLU:H	1.86	0.40
5:AE:24:ARG:O	5:AE:25:ARG:HG2	2.20	0.40
1:AA:1237:C:C4'	1:AA:1334:G:H21	2.34	0.40
4:AD:23:GLY:HA3	4:AD:112:VAL:HG13	2.02	0.40
2:AB:14:GLY:O	2:AB:15:VAL:HG22	2.21	0.40
2:AB:47:THR:HG23	2:AB:202:PRO:O	2.22	0.40
21:B0:552:C:C2'	21:B0:553:C:H4'	2.46	0.40
21:B0:2236:U:H2'	21:B0:2237:C:C5'	2.47	0.40
1:AA:1123:A:O2'	10:AJ:38:ILE:HG22	2.21	0.40
21:B0:1770:U:H2'	21:B0:1774:A:H62	1.86	0.40
21:B0:1474:A:C2'	21:B0:1475:U:H5'	2.47	0.40
13:AM:69:GLU:O	13:AM:72:ALA:HB3	2.21	0.40
15:AO:81:LEU:HD22	15:AO:85:LEU:HD12	2.03	0.40
1:AA:637:G:O2'	1:AA:638:G:H5'	2.21	0.40
1:AA:1053:G:C3'	1:AA:1054:C:C5'	2.99	0.40
1:AA:1020:U:H2'	1:AA:1021:G:C8	2.50	0.40
1:AA:813:U:HO2'	1:AA:1511:G:HO2'	1.67	0.40
1:AA:1380:U:O2'	1:AA:1381:U:OP2	2.36	0.40
21:B0:174:A:H2'	21:B0:175:C:O4'	2.21	0.40
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.37	0.40
4:AD:163:GLU:O	4:AD:166:LYS:HG3	2.22	0.40
1:AA:155:C:H2'	1:AA:156:G:C8	2.57	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:3172:U:O2'	21:B0:3173:A:H5'	2.21	0.40
21:B0:420:C:H2'	21:B0:421:G:C8	2.57	0.40
21:B0:699:G:N3	21:B0:699:G:H3'	2.35	0.40
3:AC:67:THR:HG22	3:AC:67:THR:O	2.21	0.40
1:AA:1124:G:C8	1:AA:1145:C:C5	3.09	0.40
22:B9:56:G:H2'	22:B9:57:U:O4'	2.22	0.40
21:B0:2048:C:H2'	21:B0:2049:C:C6	2.56	0.40
22:B9:63:A:H2'	22:B9:64:C:C6	2.55	0.40
1:AA:1390:U:H2'	1:AA:1391:U:H6	1.85	0.40
1:AA:1394:A:H61	1:AA:1501:C:H5'	1.81	0.40
16:AP:17:TYR:N	16:AP:17:TYR:CD1	2.89	0.40
16:AP:67:THR:CG2	16:AP:68:ASP:N	2.81	0.40
1:AA:185:A:HO2'	1:AA:186:C:C5'	2.33	0.40
1:AA:1405:G:H4'	1:AA:1519:A:C5'	2.50	0.40
1:AA:965:A:O2'	1:AA:966:G:P	2.80	0.40
3:AC:64:VAL:H	3:AC:64:VAL:HG23	1.60	0.40
1:AA:43:C:H2'	1:AA:44:G:O4'	2.21	0.40
13:AM:63:THR:HG23	13:AM:64:TRP:CD2	2.56	0.40
3:AC:126:ARG:C	3:AC:127:ARG:HG3	2.42	0.40
21:B0:3128:G:H5''	21:B0:3174:C:O2'	2.22	0.40
1:AA:599:C:O2'	1:AA:600:C:H5'	2.22	0.40
1:AA:976:G:C6	1:AA:2361:C:C5	3.09	0.40
15:AO:17:ARG:CG	15:AO:17:ARG:NH1	2.85	0.40
2:AB:24:TRP:CG	2:AB:25:ASN:N	2.89	0.40
21:B0:2437:G:H2'	21:B0:2469:G:N1	2.37	0.40
1:AA:1021:G:H2'	1:AA:1022:G:H5'	2.04	0.40
21:B0:1337:G:H1'	21:B0:1632:A:C6	2.56	0.40
21:B0:521:U:C2'	21:B0:522:G:H5'	2.51	0.40
7:AG:104:LEU:HD23	7:AG:134:ALA:HB1	2.04	0.40
6:AF:48:LEU:HD13	6:AF:52:ILE:CD1	2.51	0.40
21:B0:2532:G:H1'	21:B0:2561:G:N3	2.36	0.40
21:B0:2370:G:H2'	21:B0:2371:A:H2	1.87	0.40
21:B0:1354:A:C2	21:B0:1411:C:H4'	2.56	0.40
21:B0:2048:C:H2'	21:B0:2049:C:H6	1.87	0.40
21:B0:1906:U:H2'	21:B0:1907:C:C6	2.56	0.40
1:AA:482:A:H2'	1:AA:483:C:O4'	2.21	0.40
1:AA:1126:U:C1'	1:AA:1280:A:C6	2.99	0.40
1:AA:8:A:C6	4:AD:209:ARG:CB	3.04	0.40
1:AA:1408:A:O2'	1:AA:1409:C:H5'	2.21	0.40
1:AA:1110:A:C3'	1:AA:1111:A:C5'	2.95	0.40
1:AA:961:U:O2'	1:AA:962:C:H5'	2.20	0.40
19:AS:67:VAL:HG12	19:AS:68:GLY:N	2.35	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:182:U:OP2	1:AA:183:G:C8	2.74	0.40
9:AI:121:ARG:HD3	9:AI:121:ARG:C	2.42	0.40
1:AA:450:G:C4'	16:AP:42:ARG:HG2	2.51	0.40
3:AC:126:ARG:O	3:AC:127:ARG:HB2	2.21	0.40
22:B9:110:U:O2'	22:B9:111:C:H5'	2.21	0.40
2:AB:134:GLU:HG2	2:AB:137:ARG:HH21	1.86	0.40
21:B0:878:C:O2'	21:B0:879:A:P	2.80	0.40
2:AB:9:GLU:O	2:AB:48:MET:SD	2.80	0.40
21:B0:69:G:HO2'	21:B0:70:A:P	2.45	0.40
4:AD:100:ARG:HB3	4:AD:102:ASP:OD1	2.22	0.40
21:B0:35:G:H1'	21:B0:466:A:H1'	2.04	0.40
10:AJ:12:ASP:OD1	10:AJ:14:LYS:N	2.50	0.40
1:AA:913:A:H1'	1:AA:914:A:O4'	2.21	0.40
21:B0:1686:A:O2'	21:B0:2528:G:H5'	2.22	0.40
21:B0:340:G:O4'	21:B0:488:A:H1'	2.22	0.40
1:AA:373:A:H2'	1:AA:374:A:H8	1.85	0.40
1:AA:147:G:O2'	1:AA:148:G:H5'	2.21	0.40
21:B0:211:U:H2'	21:B0:212:U:O4'	2.22	0.40
21:B0:718:A:N6	21:B0:739:G:H4'	2.37	0.40
21:B0:738:G:H2'	21:B0:739:G:H5'	2.02	0.40
21:B0:1026:U:H2'	21:B0:1027:C:C6	2.56	0.40
21:B0:79:G:H1'	21:B0:356:A:C2	2.57	0.40
21:B0:2519:C:H2'	21:B0:2520:A:O4'	2.21	0.40
1:AA:330:C:H5''	1:AA:330:C:H6	1.87	0.40
1:AA:715:A:H2'	1:AA:716:A:C8	2.57	0.40
15:AO:71:GLN:O	15:AO:72:ARG:C	2.59	0.40
21:B0:2372:A:H2'	21:B0:2373:C:C6	2.56	0.40
18:AR:21:LYS:HG3	18:AR:57:GLY:CA	2.51	0.40
1:AA:567:G:H2'	1:AA:568:G:O4'	2.21	0.40
21:B0:3196:G:O3'	21:B0:3197:U:P	2.80	0.40
1:AA:94:G:O6	1:AA:96:C:N4	2.55	0.40
5:AE:118:ILE:HG22	5:AE:119:LEU:O	2.21	0.40
5:AE:119:LEU:HD23	5:AE:119:LEU:HA	1.84	0.40
1:AA:112:G:N3	1:AA:354:G:O4'	2.55	0.40
1:AA:1110:A:H8	1:AA:1110:A:O5'	2.04	0.40
1:AA:952:U:H2'	1:AA:953:G:H8	1.85	0.40
13:AM:123:ALA:O	13:AM:124:PRO:C	2.60	0.40
1:AA:600:C:H4'	8:AH:129:VAL:HG12	2.04	0.40
1:AA:1300:G:C2'	1:AA:1301:U:OP2	2.70	0.40
19:AS:28:LYS:CG	19:AS:29:ARG:H	2.09	0.40
3:AC:134:ILE:CD1	3:AC:166:GLU:HB3	2.52	0.40
16:AP:51:VAL:O	16:AP:52:ASP:C	2.58	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:B0:2809:A:N6	21:B0:2854:G:H2'	2.36	0.40
21:B0:57:G:C2'	21:B0:58:C:H5''	2.47	0.40
21:B0:70:A:H4'	21:B0:72:A:OP1	2.22	0.40
1:AA:748:C:OP2	1:AA:748:C:H6	2.05	0.40
21:B0:1197:U:H2'	21:B0:1198:C:O4'	2.21	0.40
8:AH:18:ARG:HD2	8:AH:18:ARG:N	2.36	0.40
21:B0:1452:U:H5'	21:B0:1532:A:O2'	2.21	0.40
1:AA:883:C:O2'	1:AA:884:U:H5'	2.21	0.40
6:AF:48:LEU:HD13	6:AF:52:ILE:HD12	2.03	0.40
12:AL:83:VAL:HG22	12:AL:84:LEU:H	1.86	0.40
11:AK:86:GLY:N	11:AK:112:THR:HG23	2.35	0.40
1:AA:1001:A:H2'	1:AA:1002:G:C8	2.56	0.40
6:AF:78:GLU:HA	6:AF:81:ILE:CD1	2.51	0.40
6:AF:98:LEU:HD23	6:AF:98:LEU:HA	1.94	0.40
1:AA:671:G:H2'	1:AA:672:U:O4'	2.21	0.40
21:B0:2862:G:O2'	21:B0:2863:U:H5'	2.22	0.40
11:AK:115:PRO:C	11:AK:117:ASN:H	2.25	0.40

All (5) 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	Distance(Å)	Clash(Å)
4:AD:172:PRO:O	6:AF:15:ASP:CB[3.555]	1.83	0.37
1:AA:416:G:OP1	21:B0:3140:G:O2'[3.555]	1.99	0.21
7:AG:51:GLN:NE2	10:AJ:87:THR:OG1[4.555]	2.08	0.12
4:AD:186:LEU:CD1	6:AF:15:ASP:OD2[3.555]	2.14	0.06
7:AG:57:GLU:OE2	10:AJ:89:ASP:OD1[4.555]	2.14	0.06

## 5.3 Torsion angles

### 5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	AB	232/234 (99%)	174 (75%)	34 (15%)	24 (10%)	<b>1</b> <b>19</b>

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	AC	204/206 (99%)	135 (66%)	40 (20%)	29 (14%)	0	11
4	AD	206/208 (99%)	166 (81%)	31 (15%)	9 (4%)	4	47
5	AE	148/150 (99%)	130 (88%)	13 (9%)	5 (3%)	6	55
6	AF	99/101 (98%)	79 (80%)	19 (19%)	1 (1%)	22	80
7	AG	153/155 (99%)	127 (83%)	16 (10%)	10 (6%)	2	35
8	AH	136/138 (99%)	125 (92%)	7 (5%)	4 (3%)	7	58
9	AI	125/127 (98%)	88 (70%)	27 (22%)	10 (8%)	1	28
10	AJ	96/98 (98%)	59 (62%)	20 (21%)	17 (18%)	0	6
11	AK	117/119 (98%)	88 (75%)	20 (17%)	9 (8%)	1	29
12	AL	120/124 (97%)	96 (80%)	15 (12%)	9 (8%)	2	30
13	AM	121/125 (97%)	87 (72%)	26 (22%)	8 (7%)	2	35
14	AN	58/60 (97%)	40 (69%)	11 (19%)	7 (12%)	1	14
15	AO	86/88 (98%)	70 (81%)	11 (13%)	5 (6%)	3	38
16	AP	81/83 (98%)	65 (80%)	15 (18%)	1 (1%)	19	77
17	AQ	102/104 (98%)	84 (82%)	10 (10%)	8 (8%)	1	29
18	AR	71/73 (97%)	62 (87%)	7 (10%)	2 (3%)	8	59
19	AS	78/80 (98%)	48 (62%)	19 (24%)	11 (14%)	0	11
20	AT	97/99 (98%)	65 (67%)	20 (21%)	12 (12%)	1	14
All	All	2330/2372 (98%)	1788 (77%)	361 (16%)	181 (8%)	1	29

All (181) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	8	LYS
2	AB	9	GLU
2	AB	15	VAL
2	AB	16	HIS
2	AB	17	PHE
2	AB	21	ARG
2	AB	24	TRP
3	AC	4	LYS
3	AC	15	THR
3	AC	16	ARG
3	AC	26	LYS
3	AC	47	LEU
3	AC	61	ALA

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Mol	Chain	Res	Type
3	AC	62	ASP
3	AC	97	LYS
3	AC	101	LEU
3	AC	146	ALA
3	AC	154	SER
3	AC	179	ARG
3	AC	189	ALA
4	AD	29	PRO
4	AD	36	ARG
5	AE	16	THR
5	AE	153	LYS
7	AG	7	ALA
7	AG	155	ARG
8	AH	24	THR
8	AH	83	ILE
8	AH	91	ARG
9	AI	88	TYR
10	AJ	32	ALA
10	AJ	39	PRO
10	AJ	54	PHE
10	AJ	57	LYS
10	AJ	79	ARG
10	AJ	86	MET
11	AK	57	THR
11	AK	127	LYS
12	AL	27	LEU
12	AL	28	LYS
12	AL	47	LYS
13	AM	63	THR
13	AM	67	GLU
13	AM	121	LYS
13	AM	122	LYS
13	AM	124	PRO
14	AN	22	THR
14	AN	29	ARG
15	AO	88	ARG
17	AQ	69	LYS
17	AQ	80	GLY
17	AQ	81	ARG
17	AQ	96	GLN
17	AQ	98	LEU
17	AQ	104	LYS

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Mol	Chain	Res	Type
18	AR	87	ARG
19	AS	6	LYS
19	AS	71	LEU
20	AT	11	SER
20	AT	73	HIS
2	AB	18	GLY
2	AB	20	GLU
2	AB	97	TRP
2	AB	123	ALA
2	AB	232	PRO
3	AC	29	TYR
3	AC	156	ARG
3	AC	168	ALA
3	AC	181	ASN
3	AC	206	GLU
4	AD	4	TYR
4	AD	26	CYS
4	AD	88	VAL
4	AD	125	HIS
5	AE	22	GLY
5	AE	104	ALA
6	AF	37	VAL
7	AG	52	GLU
9	AI	41	VAL
9	AI	58	ARG
10	AJ	30	SER
10	AJ	34	VAL
10	AJ	40	LEU
10	AJ	72	VAL
11	AK	15	ALA
11	AK	49	GLY
11	AK	50	TYR
11	AK	89	ALA
12	AL	41	ARG
12	AL	48	PRO
12	AL	51	ALA
12	AL	116	SER
12	AL	121	GLY
13	AM	6	GLY
13	AM	85	GLY
16	AP	10	GLY
18	AR	20	ALA

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Mol	Chain	Res	Type
19	AS	9	VAL
19	AS	45	VAL
19	AS	67	VAL
19	AS	68	GLY
20	AT	9	ASN
20	AT	49	ALA
20	AT	95	ALA
20	AT	99	LEU
20	AT	102	GLY
2	AB	26	PRO
2	AB	60	ASP
2	AB	83	MET
2	AB	89	GLY
2	AB	204	ASN
4	AD	175	SER
5	AE	65	ASN
7	AG	5	ARG
8	AH	127	LEU
9	AI	56	LEU
10	AJ	19	SER
10	AJ	60	ARG
10	AJ	61	GLU
10	AJ	90	LEU
11	AK	35	PRO
11	AK	101	SER
12	AL	49	ASN
14	AN	13	THR
14	AN	23	ARG
17	AQ	97	SER
19	AS	28	LYS
19	AS	30	LEU
19	AS	32	LYS
20	AT	74	LYS
2	AB	126	GLU
2	AB	165	VAL
3	AC	39	ILE
3	AC	100	ALA
3	AC	188	LEU
7	AG	4	ARG
7	AG	81	GLY
7	AG	112	PRO
9	AI	7	THR

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Mol	Chain	Res	Type
9	AI	12	GLU
9	AI	119	ALA
13	AM	123	ALA
14	AN	12	ARG
14	AN	60	SER
15	AO	16	ALA
17	AQ	33	GLY
20	AT	50	GLU
2	AB	155	LEU
3	AC	24	ALA
3	AC	66	VAL
3	AC	127	ARG
4	AD	123	HIS
7	AG	53	LYS
9	AI	121	ARG
14	AN	36	PHE
15	AO	84	LYS
19	AS	31	ILE
2	AB	127	ILE
2	AB	214	ILE
3	AC	108	ASN
3	AC	174	PRO
4	AD	5	ILE
9	AI	43	ALA
10	AJ	26	ALA
2	AB	124	SER
3	AC	76	VAL
7	AG	14	PRO
10	AJ	82	ILE
20	AT	98	PRO
2	AB	125	PRO
3	AC	77	ILE
7	AG	17	VAL
10	AJ	36	GLY
15	AO	82	ILE
19	AS	8	GLY
20	AT	101	GLY
9	AI	44	VAL
15	AO	19	PRO
20	AT	96	GLY
3	AC	75	VAL
11	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	
2	AB	202/202 (100%)	180 (89%)	22 (11%)	9	46
3	AC	160/160 (100%)	142 (89%)	18 (11%)	9	43
4	AD	180/180 (100%)	172 (96%)	8 (4%)	39	82
5	AE	115/115 (100%)	100 (87%)	15 (13%)	6	36
6	AF	90/90 (100%)	88 (98%)	2 (2%)	64	91
7	AG	126/126 (100%)	122 (97%)	4 (3%)	51	87
8	AH	119/119 (100%)	109 (92%)	10 (8%)	16	60
9	AI	98/98 (100%)	90 (92%)	8 (8%)	17	61
10	AJ	88/88 (100%)	79 (90%)	9 (10%)	11	49
11	AK	90/90 (100%)	84 (93%)	6 (7%)	23	70
12	AL	104/104 (100%)	96 (92%)	8 (8%)	18	64
13	AM	100/100 (100%)	90 (90%)	10 (10%)	11	50
14	AN	49/49 (100%)	47 (96%)	2 (4%)	41	83
15	AO	79/79 (100%)	72 (91%)	7 (9%)	14	57
16	AP	72/72 (100%)	67 (93%)	5 (7%)	22	68
17	AQ	96/96 (100%)	90 (94%)	6 (6%)	25	72
18	AR	64/64 (100%)	61 (95%)	3 (5%)	36	80
19	AS	71/71 (100%)	68 (96%)	3 (4%)	40	82
20	AT	76/76 (100%)	69 (91%)	7 (9%)	13	55
All	All	1979/1979 (100%)	1826 (92%)	153 (8%)	18	64

All (153) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	8	LYS
2	AB	12	GLU
2	AB	17	PHE
2	AB	23	ARG
2	AB	24	TRP
2	AB	25	ASN

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Mol	Chain	Res	Type
2	AB	87	ARG
2	AB	114	ARG
2	AB	139	LYS
2	AB	144	ARG
2	AB	146	GLN
2	AB	155	LEU
2	AB	157	ARG
2	AB	164	VAL
2	AB	170	GLU
2	AB	178	ARG
2	AB	204	ASN
2	AB	213	LEU
2	AB	221	LEU
2	AB	231	GLU
2	AB	232	PRO
2	AB	236	TYR
3	AC	3	ASN
3	AC	5	ILE
3	AC	34	LEU
3	AC	47	LEU
3	AC	56	ASP
3	AC	75	VAL
3	AC	82	GLU
3	AC	90	GLU
3	AC	91	LEU
3	AC	99	VAL
3	AC	107	GLN
3	AC	139	GLN
3	AC	164	ARG
3	AC	167	TRP
3	AC	175	LEU
3	AC	179	ARG
3	AC	188	LEU
3	AC	204	LEU
4	AD	15	GLU
4	AD	29	PRO
4	AD	53	ASP
4	AD	122	ARG
4	AD	127	THR
4	AD	157	LEU
4	AD	192	GLU
4	AD	199	ASN

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Mol	Chain	Res	Type
5	AE	12	LEU
5	AE	26	PHE
5	AE	31	LEU
5	AE	38	GLN
5	AE	41	VAL
5	AE	43	LEU
5	AE	56	GLN
5	AE	65	ASN
5	AE	68	GLU
5	AE	73	ASN
5	AE	79	GLU
5	AE	80	ILE
5	AE	89	ILE
5	AE	120	THR
5	AE	150	ARG
6	AF	10	LEU
6	AF	69	GLU
7	AG	8	GLU
7	AG	11	GLN
7	AG	37	ASN
7	AG	38	LEU
8	AH	2	LEU
8	AH	21	LYS
8	AH	52	ASP
8	AH	63	LEU
8	AH	85	ARG
8	AH	91	ARG
8	AH	92	ARG
8	AH	104	ARG
8	AH	105	ARG
8	AH	119	LEU
9	AI	2	GLU
9	AI	23	ASN
9	AI	38	GLN
9	AI	53	VAL
9	AI	58	ARG
9	AI	79	LEU
9	AI	111	ARG
9	AI	121	ARG
10	AJ	6	ILE
10	AJ	15	THR
10	AJ	45	ARG

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Mol	Chain	Res	Type
10	AJ	60	ARG
10	AJ	64	GLU
10	AJ	71	LEU
10	AJ	73	ASP
10	AJ	83	GLU
10	AJ	95	GLU
11	AK	24	SER
11	AK	29	ILE
11	AK	35	PRO
11	AK	54	ARG
11	AK	84	VAL
11	AK	92	GLU
12	AL	17	LYS
12	AL	33	ARG
12	AL	53	ARG
12	AL	60	LEU
12	AL	81	SER
12	AL	98	TYR
12	AL	113	ARG
12	AL	126	LYS
13	AM	9	ILE
13	AM	16	ASP
13	AM	40	ASN
13	AM	44	ARG
13	AM	70	LEU
13	AM	81	LEU
13	AM	102	ARG
13	AM	110	ARG
13	AM	124	PRO
13	AM	125	ARG
14	AN	41	ARG
14	AN	44	LEU
15	AO	6	GLU
15	AO	7	GLU
15	AO	39	LEU
15	AO	57	LEU
15	AO	70	LEU
15	AO	81	LEU
15	AO	83	GLU
16	AP	2	VAL
16	AP	8	ARG
16	AP	28	ARG

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Mol	Chain	Res	Type
16	AP	53	VAL
16	AP	62	VAL
17	AQ	34	LYS
17	AQ	38	ARG
17	AQ	60	ILE
17	AQ	68	ARG
17	AQ	74	LEU
17	AQ	98	LEU
18	AR	36	ASN
18	AR	38	GLU
18	AR	55	ARG
19	AS	10	PHE
19	AS	15	LEU
19	AS	20	LEU
20	AT	42	GLN
20	AT	45	GLN
20	AT	57	ARG
20	AT	73	HIS
20	AT	75	ASN
20	AT	84	LEU
20	AT	86	ARG

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (57) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	19	HIS
2	AB	25	ASN
2	AB	40	HIS
2	AB	146	GLN
2	AB	204	ASN
3	AC	3	ASN
3	AC	6	HIS
3	AC	31	HIS
3	AC	69	HIS
3	AC	110	ASN
3	AC	118	GLN
3	AC	123	GLN
3	AC	139	GLN
3	AC	181	ASN
4	AD	45	GLN
4	AD	62	GLN
4	AD	123	HIS

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Mol	Chain	Res	Type
4	AD	161	ASN
4	AD	199	ASN
5	AE	20	GLN
5	AE	73	ASN
6	AF	18	GLN
6	AF	27	GLN
6	AF	32	ASN
6	AF	57	GLN
6	AF	64	GLN
6	AF	94	GLN
6	AF	100	ASN
7	AG	37	ASN
7	AG	86	GLN
8	AH	15	ASN
9	AI	23	ASN
9	AI	73	GLN
9	AI	124	GLN
10	AJ	56	HIS
10	AJ	76	ASN
10	AJ	78	ASN
10	AJ	84	GLN
11	AK	22	HIS
11	AK	62	GLN
11	AK	93	GLN
11	AK	117	ASN
12	AL	49	ASN
12	AL	75	HIS
13	AM	12	ASN
13	AM	40	ASN
13	AM	62	ASN
14	AN	49	HIS
15	AO	13	GLN
15	AO	37	ASN
16	AP	82	GLN
17	AQ	26	GLN
18	AR	36	ASN
19	AS	14	HIS
19	AS	53	ASN
19	AS	56	GLN
20	AT	42	GLN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1487/1537 (96%)	218 (14%)	89 (5%)
21	B0	2802/2887 (97%)	430 (15%)	55 (1%)
22	B9	116/118 (98%)	10 (8%)	0
All	All	4405/4542 (96%)	658 (14%)	144 (3%)

All (658) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	6	G
1	AA	8	A
1	AA	9	G
1	AA	31	G
1	AA	32	A
1	AA	39	G
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
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	182	U
1	AA	186	C
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

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Mol	Chain	Res	Type
1	AA	251	G
1	AA	252	U
1	AA	266	G
1	AA	267	C
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
1	AA	398	C
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	437	U
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	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

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Mol	Chain	Res	Type
1	AA	533	A
1	AA	534	U
1	AA	547	A
1	AA	548	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	577	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
1	AA	703	G
1	AA	718	G
1	AA	723	U
1	AA	731	G
1	AA	749	C
1	AA	755	G
1	AA	781	A
1	AA	782	A
1	AA	793	U
1	AA	794	A
1	AA	813	U
1	AA	817	C
1	AA	819	A
1	AA	828	A
1	AA	858	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

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Mol	Chain	Res	Type
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
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	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

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Mol	Chain	Res	Type
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
1	AA	1225	A
1	AA	1226	C
1	AA	1227	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	1384	C
1	AA	1394	A

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Mol	Chain	Res	Type
1	AA	1398	A
1	AA	1442	G
1	AA	1443	G
1	AA	1452	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
1	AA	1517	G
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
21	B0	14	A
21	B0	15	G
21	B0	45	C
21	B0	48	A
21	B0	49	U
21	B0	50	G
21	B0	58	C
21	B0	59	G
21	B0	63	A
21	B0	67	G
21	B0	70	A
21	B0	72	A
21	B0	87	G
21	B0	89	A
21	B0	90	G
21	B0	91	A
21	B0	99	U
21	B0	105	G
21	B0	110	U
21	B0	116	A
21	B0	118	U
21	B0	123	A
21	B0	129	A
21	B0	135	U
21	B0	155	G
21	B0	158	A
21	B0	173	A

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Mol	Chain	Res	Type
21	B0	174	A
21	B0	176	A
21	B0	177	U
21	B0	181	A
21	B0	182	G
21	B0	193	A
21	B0	199	A
21	B0	200	A
21	B0	205	A
21	B0	206	U
21	B0	210	A
21	B0	218	A
21	B0	219	G
21	B0	225	G
21	B0	226	C
21	B0	227	G
21	B0	229	G
21	B0	242	A
21	B0	243	G
21	B0	245	C
21	B0	305	A
21	B0	318	G
21	B0	333	A
21	B0	334	G
21	B0	335	A
21	B0	340	G
21	B0	342	G
21	B0	343	A
21	B0	344	G
21	B0	358	C
21	B0	363	G
21	B0	368	A
21	B0	373	A
21	B0	399	G
21	B0	401	G
21	B0	408	U
21	B0	414	A
21	B0	418	C
21	B0	419	G
21	B0	424	G
21	B0	443	A
21	B0	455	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
21	B0	456	C
21	B0	460	U
21	B0	463	C
21	B0	467	U
21	B0	469	G
21	B0	491	A
21	B0	492	G
21	B0	515	A
21	B0	518	A
21	B0	519	C
21	B0	537	C
21	B0	541	C
21	B0	542	A
21	B0	554	U
21	B0	556	A
21	B0	558	G
21	B0	559	C
21	B0	572	G
21	B0	584	A
21	B0	602	C
21	B0	613	A
21	B0	617	U
21	B0	624	A
21	B0	632	A
21	B0	636	G
21	B0	638	A
21	B0	648	A
21	B0	652	C
21	B0	654	A
21	B0	657	A
21	B0	665	A
21	B0	666	U
21	B0	667	U
21	B0	684	C
21	B0	697	G
21	B0	699	G
21	B0	700	C
21	B0	728	G
21	B0	742	G
21	B0	743	A
21	B0	753	U
21	B0	760	U

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Mol	Chain	Res	Type
21	B0	761	G
21	B0	766	A
21	B0	776	G
21	B0	778	G
21	B0	789	G
21	B0	794	A
21	B0	796	A
21	B0	797	A
21	B0	798	G
21	B0	801	A
21	B0	802	A
21	B0	803	C
21	B0	806	A
21	B0	813	A
21	B0	818	G
21	B0	825	C
21	B0	832	A
21	B0	840	U
21	B0	841	G
21	B0	844	G
21	B0	873	U
21	B0	879	A
21	B0	895	G
21	B0	919	U
21	B0	922	A
21	B0	926	C
21	B0	930	A
21	B0	941	U
21	B0	944	A
21	B0	952	A
21	B0	957	G
21	B0	969	U
21	B0	970	A
21	B0	972	C
21	B0	984	A
21	B0	994	A
21	B0	996	C
21	B0	1005	U
21	B0	1006	C
21	B0	1023	U
21	B0	1024	G
21	B0	1030	U

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Mol	Chain	Res	Type
21	B0	1032	A
21	B0	1033	G
21	B0	1036	G
21	B0	1037	U
21	B0	1044	U
21	B0	1055	A
21	B0	1056	U
21	B0	1057	A
21	B0	1068	A
21	B0	1069	G
21	B0	1071	U
21	B0	1072	U
21	B0	1073	G
21	B0	1078	A
21	B0	1081	A
21	B0	1082	G
21	B0	1084	A
21	B0	1092	U
21	B0	1099	A
21	B0	1100	G
21	B0	1113	C
21	B0	1122	A
21	B0	1137	A
21	B0	1138	A
21	B0	1142	G
21	B0	1145	C
21	B0	1146	G
21	B0	1153	A
21	B0	1167	A
21	B0	1182	U
21	B0	1183	C
21	B0	1185	C
21	B0	1188	A
21	B0	1194	U
21	B0	1195	U
21	B0	1199	U
21	B0	1200	G
21	B0	1224	A
21	B0	1253	C
21	B0	1262	U
21	B0	1264	C
21	B0	1266	G

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Mol	Chain	Res	Type
21	B0	1269	G
21	B0	1278	A
21	B0	1279	G
21	B0	1280	U
21	B0	1284	G
21	B0	1285	A
21	B0	1288	A
21	B0	1314	A
21	B0	1327	C
21	B0	1334	A
21	B0	1338	G
21	B0	1342	U
21	B0	1343	C
21	B0	1355	A
21	B0	1356	G
21	B0	1359	G
21	B0	1391	A
21	B0	1392	U
21	B0	1397	A
21	B0	1398	G
21	B0	1433	A
21	B0	1441	A
21	B0	1442	C
21	B0	1443	G
21	B0	1459	U
21	B0	1465	G
21	B0	1468	A
21	B0	1469	U
21	B0	1470	G
21	B0	1475	U
21	B0	1482	U
21	B0	1490	U
21	B0	1496	G
21	B0	1505	U
21	B0	1508	G
21	B0	1509	A
21	B0	1513	U
21	B0	1519	G
21	B0	1520	G
21	B0	1524	C
21	B0	1529	C
21	B0	1552	C

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Mol	Chain	Res	Type
21	B0	1571	G
21	B0	1573	G
21	B0	1574	A
21	B0	1576	G
21	B0	1582	A
21	B0	1583	A
21	B0	1585	A
21	B0	1601	U
21	B0	1618	U
21	B0	1623	C
21	B0	1624	A
21	B0	1625	A
21	B0	1632	A
21	B0	1633	C
21	B0	1634	A
21	B0	1635	G
21	B0	1648	C
21	B0	1651	U
21	B0	1657	A
21	B0	1664	G
21	B0	1665	C
21	B0	1670	G
21	B0	1671	A
21	B0	1680	U
21	B0	1685	A
21	B0	1691	G
21	B0	1692	C
21	B0	1710	U
21	B0	1712	G
21	B0	1715	A
21	B0	1717	A
21	B0	1724	C
21	B0	1733	U
21	B0	1748	U
21	B0	1749	G
21	B0	1750	A
21	B0	1754	G
21	B0	1755	G
21	B0	1764	A
21	B0	1771	A
21	B0	1773	C
21	B0	1778	U

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Mol	Chain	Res	Type
21	B0	1792	C
21	B0	1800	A
21	B0	1801	C
21	B0	1802	A
21	B0	1807	A
21	B0	1808	C
21	B0	1821	A
21	B0	1831	G
21	B0	3865	A
21	B0	1884	A
21	B0	1920	A
21	B0	1922	U
21	B0	1926	U
21	B0	1927	U
21	B0	1928	G
21	B0	1938	U
21	B0	1939	U
21	B0	1949	A
21	B0	1950	C
21	B0	1954	A
21	B0	1955	G
21	B0	1956	G
21	B0	1979	C
21	B0	1980	A
21	B0	2004	U
21	B0	2006	G
21	B0	2014	A
21	B0	2015	G
21	B0	2016	A
21	B0	2019	C
21	B0	2034	A
21	B0	2038	C
21	B0	2043	A
21	B0	2045	A
21	B0	2051	U
21	B0	2052	G
21	B0	2060	A
21	B0	3107	G
21	B0	3111	C
21	B0	3112	G
21	B0	3116	G
21	B0	3117	A

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Mol	Chain	Res	Type
21	B0	3118	U
21	B0	3119	A
21	B0	3146	A
21	B0	3147	C
21	B0	3150	C
21	B0	3172	U
21	B0	3173	A
21	B0	3185	U
21	B0	3191	A
21	B0	2191	A
21	B0	2195	C
21	B0	2199	C
21	B0	2205	C
21	B0	2218	G
21	B0	2229	G
21	B0	2237	C
21	B0	2241	U
21	B0	2245	A
21	B0	2246	A
21	B0	2247	A
21	B0	2255	G
21	B0	2262	C
21	B0	2268	G
21	B0	2285	U
21	B0	2286	G
21	B0	2287	G
21	B0	2288	A
21	B0	2298	U
21	B0	2299	A
21	B0	2300	G
21	B0	2301	A
21	B0	2313	G
21	B0	2315	A
21	B0	2316	G
21	B0	2326	C
21	B0	2362	G
21	B0	2364	C
21	B0	2378	G
21	B0	2382	C
21	B0	2385	U
21	B0	2396	C
21	B0	2403	C

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Mol	Chain	Res	Type
21	B0	2405	A
21	B0	2408	G
21	B0	2409	A
21	B0	2414	A
21	B0	2420	C
21	B0	2427	A
21	B0	2428	U
21	B0	2438	A
21	B0	2448	A
21	B0	2455	A
21	B0	2470	U
21	B0	2481	G
21	B0	2482	A
21	B0	2483	U
21	B0	2484	G
21	B0	2485	U
21	B0	2492	G
21	B0	2498	U
21	B0	2499	C
21	B0	2504	G
21	B0	2522	G
21	B0	2546	G
21	B0	2549	G
21	B0	2565	C
21	B0	2578	G
21	B0	2581	A
21	B0	2582	G
21	B0	2588	U
21	B0	2589	C
21	B0	2591	C
21	B0	2593	A
21	B0	2594	U
21	B0	2608	A
21	B0	2609	G
21	B0	2625	U
21	B0	2633	A
21	B0	2634	G
21	B0	2661	G
21	B0	2669	C
21	B0	2670	C
21	B0	2681	A
21	B0	2691	C

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Mol	Chain	Res	Type
21	B0	2692	A
21	B0	2712	G
21	B0	2728	A
21	B0	2730	A
21	B0	2732	C
21	B0	2737	A
21	B0	2745	A
21	B0	2756	A
21	B0	2760	G
21	B0	2761	A
21	B0	2771	C
21	B0	2784	A
21	B0	2785	A
21	B0	2795	A
21	B0	2807	U
21	B0	2808	U
21	B0	2809	A
21	B0	2811	G
21	B0	2825	A
21	B0	2841	U
21	B0	2842	C
21	B0	2847	G
21	B0	2854	G
21	B0	2855	C
21	B0	2859	U
22	B9	18	G
22	B9	26	G
22	B9	27	A
22	B9	28	A
22	B9	29	C
22	B9	31	A
22	B9	47	A
22	B9	77	G
22	B9	112	A
22	B9	115	G

All (144) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	5	U
1	AA	7	G
1	AA	30	U

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Mol	Chain	Res	Type
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	181	G
1	AA	185	A
1	AA	197	A
1	AA	204	A
1	AA	243	A
1	AA	249	U
1	AA	250	A
1	AA	251	G
1	AA	266	G
1	AA	279	A
1	AA	281	G
1	AA	288	A
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	375	U
1	AA	394	G
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	547	A
1	AA	559	A
1	AA	560	U
1	AA	575	G
1	AA	587	G
1	AA	651	C

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Mol	Chain	Res	Type
1	AA	687	A
1	AA	701	C
1	AA	717	C
1	AA	748	C
1	AA	792	A
1	AA	812	C
1	AA	913	A
1	AA	960	U
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	1085	U
1	AA	1101	A
1	AA	1129	C
1	AA	1145	C
1	AA	1182	G
1	AA	1190	G
1	AA	1196	U
1	AA	1201	A
1	AA	1214	C
1	AA	1224	G
1	AA	1226	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	1393	U
1	AA	1397	C
1	AA	1398	A
1	AA	1451	A
1	AA	1498	U
1	AA	1503	A

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Mol	Chain	Res	Type
1	AA	1504	G
1	AA	1528	U
21	B0	69	G
21	B0	173	A
21	B0	181	A
21	B0	192	G
21	B0	198	A
21	B0	242	A
21	B0	342	G
21	B0	583	C
21	B0	765	C
21	B0	801	A
21	B0	805	G
21	B0	824	U
21	B0	843	G
21	B0	878	C
21	B0	1071	U
21	B0	1141	U
21	B0	1187	A
21	B0	1193	G
21	B0	1194	U
21	B0	1223	G
21	B0	1263	G
21	B0	1278	A
21	B0	1279	G
21	B0	1313	U
21	B0	1354	A
21	B0	1495	G
21	B0	1518	C
21	B0	1519	G
21	B0	1575	C
21	B0	1633	C
21	B0	1634	A
21	B0	1664	G
21	B0	1807	A
21	B0	1820	G
21	B0	1938	U
21	B0	2015	G
21	B0	3098	U
21	B0	3107	G
21	B0	3110	G
21	B0	3111	C

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Mol	Chain	Res	Type
21	B0	3116	G
21	B0	3118	U
21	B0	3146	A
21	B0	3149	G
21	B0	3171	A
21	B0	3172	U
21	B0	2204	A
21	B0	2245	A
21	B0	2261	G
21	B0	2377	U
21	B0	2404	A
21	B0	2426	G
21	B0	2668	U
21	B0	2759	U
21	B0	2824	C

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

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

## 5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 5.6 Ligand geometry ⓘ

There are no ligands in this entry.

## 5.7 Other polymers ⓘ

There are no such residues in this entry.

## 5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	AA	82

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Mol	Chain	Number of breaks
21	B0	26
22	B9	2
12	AL	1
13	AM	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	9.14
1	AA	1458:G	O3'	1459:C	P	8.01
1	B0	1888:C	O3'	1889:G	P	6.96
1	AA	1459:C	O3'	1460:A	P	6.03
1	B0	3180:U	O3'	3181:C	P	5.42
1	AA	993:G	O3'	994:A	P	5.01
1	AA	1434:A	O3'	1435:G	P	4.54
1	B0	3197:U	O3'	2181:A	P	4.41
1	B0	2075:U	O3'	3093:C	P	4.27
1	AA	170:U	O3'	171:A	P	4.12
1	AA	150:C	O3'	151:A	P	4.08
1	B0	3108:G	O3'	3109:U	P	3.98
1	B0	3161:C	O3'	3162:G	P	3.90
1	AA	1466:C	O3'	1467:G	P	3.88
1	AA	1044:A	O3'	1045:C	P	3.70
1	AA	497:A	O3'	498:U	P	3.58
1	AA	196:A	O3'	197:A	P	3.53
1	AA	1278:U	O3'	1279:A	P	3.49
1	AA	455:C	O3'	456:A	P	3.48
1	AA	672:U	O3'	673:G	P	3.32
1	AA	1117:G	O3'	1118:C	P	3.27
1	AA	68:G	O3'	69:G	P	3.10
1	AA	1256:A	O3'	1257:U	P	3.10
1	B0	1116:U	O3'	1117:G	P	3.10
1	AA	1416:G	O3'	1417:G	P	3.08
1	AA	337:C	O3'	338:A	P	3.07
1	B0	3126:A	O3'	3127:G	P	3.07
1	B0	1912:G	O3'	1913:G	P	3.03
1	AA	216:C	O3'	217:C	P	3.00
1	AA	200:G	O3'	201:G	P	2.93
1	AA	99:C	O3'	101:A	P	2.89
1	B0	891:A	O3'	892:A	P	2.88
1	AA	305:G	O3'	306:G	P	2.83
1	AA	814:A	O3'	815:A	P	2.82
1	B0	3196:G	O3'	3197:U	P	2.80

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AA	631:G	O3'	632:A	P	2.77
1	B0	1113:C	O3'	1114:A	P	2.75
1	AA	820:U	O3'	821:G	P	2.74
1	AA	606:G	O3'	607:A	P	2.73
1	B0	3181:C	O3'	3182:U	P	2.73
1	AA	848:G	O3'	849:C	P	2.72
1	AA	291:C	O3'	292:G	P	2.71
1	B0	897:A	O3'	898:C	P	2.70
1	AA	1027:C	O3'	1028:C	P	2.68
1	AA	476:U	O3'	477:G	P	2.67
1	AA	1026:G	O3'	1027:C	P	2.65
1	B0	1119:U	O3'	1120:C	P	2.63
1	AA	1483:A	O3'	1484:C	P	2.62
1	AA	179:A	O3'	180:U	P	2.59
1	B0	3877:A	O3'	1861:G	P	2.59
1	AA	367:U	O3'	368:U	P	2.56
1	AA	919:A	O3'	920:U	P	2.50
1	B0	910:U	O3'	911:A	P	2.45
1	AA	46:G	O3'	47:C	P	2.42
1	AA	1237:C	O3'	1238:A	P	2.38
1	AA	804:U	O3'	805:C	P	2.35
1	B0	3187:U	O3'	3188:U	P	2.35
1	AA	191:G	O3'	192:U	P	2.33
1	AA	776:G	O3'	777:A	P	2.33
1	AA	1067:A	O3'	1068:G	P	2.32
1	AA	1297:C	O3'	1298:C	P	2.31
1	AA	405:U	O3'	406:G	P	2.30
1	AA	1447:A	O3'	1448:C	P	2.29
1	B0	1062:G	O3'	1063:C	P	2.28
1	AA	1374:A	O3'	1375:A	P	2.26
1	AA	837:G	O3'	838:C	P	2.23
1	AM	86:CYS	C	87:TYR	N	2.23
1	B9	107:C	O3'	108:G	P	2.21
1	AA	1331:G	O3'	1332:A	P	2.19
1	AA	1155:G	O3'	1156:G	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	B0	3098:U	O3'	3099:U	P	2.12
1	AA	118:U	O3'	119:A	P	2.11
1	AA	765:G	O3'	766:A	P	2.09
1	B0	1856:U	O3'	3865:A	P	2.06

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AA	717:C	O3'	718:G	P	2.05
1	AA	1211:U	O3'	1212:U	P	2.03
1	B0	3183:A	O3'	3184:C	P	2.02
1	AA	143:A	O3'	144:G	P	2.01
1	AL	19:ARG	C	20:LYS	N	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	351:G	O3'	352:C	P	1.97
1	AA	108:G	O3'	109:A	P	1.94
1	AA	914:A	O3'	915:A	P	1.94
1	AA	1305:G	O3'	1306:A	P	1.94
1	AA	206:C	O3'	207:C	P	1.91
1	AA	1238:A	O3'	1239:A	P	1.91
1	AA	1337:G	O3'	1338:G	P	1.90
1	B0	3188:U	O3'	3189:U	P	1.90
1	AA	576:G	O3'	577:G	P	1.25
1	AA	1409:C	O3'	1410:G	P	1.24
1	AA	274:A	O3'	275:G	P	1.23
1	AA	1110:A	O3'	1111:A	P	1.23
1	AA	74:G	O3'	75:C	P	1.20
1	AA	288:A	O3'	289:G	P	1.20
1	AA	651:C	O3'	652:U	P	1.16
1	AA	94:G	O3'	96:C	P	1.12
1	B0	3106:U	O3'	3107:G	P	1.12
1	AA	375:U	O3'	376:G	P	1.08
1	AA	933:G	O3'	934:C	P	1.03
1	AA	227:G	O3'	228:A	P	0.98
1	AA	249:U	O3'	250:A	P	0.91
1	AA	1190:G	O3'	1191:A	P	0.82
1	AA	394:G	O3'	395:C	P	0.75
1	AA	1505:G	O3'	1506:U	P	0.75
1	AA	214:U	O3'	215:C	P	0.73
1	AA	1398:A	O3'	1399:C	P	0.57
1	AA	59:A	O3'	60:A	P	0.16

## 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, 95<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	AA	1533/1537 (99%)	0.23	94 (6%) 21 26	207, 548, 819, 940	0
2	AB	234/234 (100%)	2.55	138 (58%) 0 4	754, 754, 754, 754	0
3	AC	206/206 (100%)	1.76	65 (31%) 1 5	378, 378, 378, 378	0
4	AD	208/208 (100%)	1.61	77 (37%) 1 5	709, 709, 709, 709	0
5	AE	150/150 (100%)	1.77	53 (35%) 1 5	756, 756, 756, 756	0
6	AF	101/101 (100%)	3.20	76 (75%) 0 3	748, 748, 748, 748	0
7	AG	155/155 (100%)	2.19	70 (45%) 1 4	374, 374, 374, 374	0
8	AH	138/138 (100%)	3.51	95 (68%) 0 4	856, 856, 856, 856	0
9	AI	127/127 (100%)	2.64	76 (59%) 0 4	439, 439, 439, 439	0
10	AJ	98/98 (100%)	2.37	49 (50%) 0 4	430, 430, 430, 430	0
11	AK	119/119 (100%)	2.04	45 (37%) 1 4	652, 652, 652, 652	0
12	AL	124/124 (100%)	0.74	13 (10%) 7 15	423, 541, 541, 541	0
13	AM	125/125 (100%)	1.51	41 (32%) 1 5	378, 572, 572, 572	0
14	AN	60/60 (100%)	1.33	15 (25%) 1 6	378, 378, 378, 378	0
15	AO	88/88 (100%)	0.94	4 (4%) 32 33	740, 740, 740, 740	0
16	AP	83/83 (100%)	-0.09	0 100 100	781, 781, 781, 781	0
17	AQ	104/104 (100%)	1.10	18 (17%) 2 8	857, 857, 857, 857	0
18	AR	73/73 (100%)	1.70	25 (34%) 1 5	748, 748, 748, 748	0
19	AS	80/80 (100%)	0.63	7 (8%) 10 19	633, 633, 633, 633	0
20	AT	99/99 (100%)	1.08	14 (14%) 3 10	940, 940, 940, 940	0
21	B0	2825/2887 (97%)	-0.32	100 (3%) 42 39	462, 737, 737, 940	0
22	B9	118/118 (100%)	-0.06	6 (5%) 27 30	772, 938, 938, 938	0
23	BA	270/270 (100%)	5.47	196 (72%) 0 3	737, 737, 737, 737	0
24	BB	205/205 (100%)	4.25	136 (66%) 0 4	737, 737, 737, 737	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
25	BC	197/197 (100%)	2.55	129 (65%) 0 4	737, 737, 737, 737	0
26	BD	178/178 (100%)	5.92	111 (62%) 0 4	938, 938, 938, 938	0
27	BE	177/177 (100%)	4.68	110 (62%) 0 4	737, 737, 737, 737	0
28	BF	52/52 (100%)	5.66	43 (82%) 0 3	737, 737, 737, 737	0
29	BG	143/143 (100%)	2.50	59 (41%) 1 4	907, 907, 907, 907	0
30	BH	143/143 (100%)	4.35	113 (79%) 0 3	737, 737, 737, 737	0
31	BI	132/132 (100%)	7.07	118 (89%) 0 2	737, 737, 737, 737	0
32	BJ	141/141 (100%)	2.63	71 (50%) 0 4	737, 737, 737, 737	0
33	BK	124/124 (100%)	9.13	114 (91%) 0 2	737, 737, 737, 737	0
34	BL	114/114 (100%)	3.43	77 (67%) 0 4	737, 737, 737, 737	0
35	BM	111/111 (100%)	6.72	92 (82%) 0 3	938, 938, 938, 938	0
36	BN	125/125 (100%)	7.36	110 (88%) 0 3	737, 737, 737, 737	0
37	BO	117/117 (100%)	3.04	70 (59%) 0 4	737, 737, 737, 737	0
38	BP	100/100 (100%)	3.46	80 (80%) 0 3	737, 737, 737, 737	0
39	BQ	130/130 (100%)	2.66	73 (56%) 0 4	737, 737, 737, 737	0
40	BR	93/93 (100%)	3.98	69 (74%) 0 3	737, 737, 737, 737	0
41	BS	113/113 (100%)	2.24	67 (59%) 0 4	737, 737, 737, 737	0
42	BT	173/173 (100%)	4.75	88 (50%) 0 4	737, 772, 772, 772	0
43	BU	86/86 (100%)	4.10	55 (63%) 0 4	737, 737, 737, 737	0
44	BV	0/16	-	-	-	-
45	BW	65/65 (100%)	3.72	53 (81%) 0 3	737, 737, 737, 737	0
46	BX	55/55 (100%)	3.06	22 (40%) 1 4	737, 737, 737, 737	0
47	BY	73/73 (100%)	4.16	46 (63%) 0 4	737, 737, 737, 737	0
48	BZ	58/58 (100%)	3.10	32 (55%) 0 4	737, 737, 737, 737	0
49	B1	53/53 (100%)	5.34	39 (73%) 0 3	737, 737, 737, 737	0
50	B2	46/46 (100%)	1.87	18 (39%) 1 4	737, 737, 737, 737	0
51	B3	63/63 (100%)	2.36	28 (44%) 1 4	737, 737, 737, 737	0
52	B4	35/35 (100%)	4.74	27 (77%) 0 3	737, 737, 737, 737	0
53	B5	217/217 (100%)	6.13	156 (71%) 0 3	940, 940, 940, 940	0
All	All	10437/10519 (99%)	1.92	3483 (33%) 1 5	207, 737, 938, 940	0

All (3483) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
26	BD	17	MET	31.7
26	BD	167	ARG	28.1
26	BD	165	GLU	27.5
26	BD	13	ARG	27.3
53	B5	81	PRO	26.6
53	B5	82	LYS	26.4
53	B5	107	ASN	26.3
26	BD	30	ARG	25.6
43	BU	47	ALA	25.0
26	BD	8	TYR	24.9
53	B5	63	ARG	24.5
26	BD	9	ASN	24.1
53	B5	106	GLN	24.1
33	BK	65	ILE	23.7
35	BM	104	ALA	23.0
26	BD	162	THR	22.8
33	BK	33	TYR	22.7
26	BD	31	ILE	22.5
33	BK	32	ASP	22.4
23	BA	82	ILE	22.3
33	BK	29	ALA	22.1
33	BK	105	PHE	22.1
33	BK	130	THR	21.6
32	BJ	141	VAL	21.5
26	BD	10	ASP	21.4
47	BY	65	ASP	20.9
26	BD	21	GLY	20.9
33	BK	106	GLU	20.8
23	BA	94	LEU	20.4
53	B5	83	VAL	20.2
33	BK	104	MET	20.1
49	B1	10	VAL	19.8
33	BK	127	PRO	19.8
27	BE	170	ALA	19.7
29	BG	40	ALA	19.7
43	BU	46	LYS	19.4
33	BK	108	ALA	19.1
26	BD	29	PRO	19.0
29	BG	119	SER	19.0
53	B5	65	LEU	19.0
26	BD	28	VAL	18.8
23	BA	65	ILE	18.7
28	BF	26	ARG	18.6

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Mol	Chain	Res	Type	RSRZ
53	B5	133	LYS	18.6
26	BD	163	ASP	18.4
26	BD	159	THR	18.3
31	BI	116	ARG	18.3
26	BD	32	GLU	18.3
53	B5	84	VAL	18.1
26	BD	7	LYS	18.1
26	BD	166	ALA	18.1
23	BA	143	HIS	18.1
26	BD	160	ALA	17.9
33	BK	129	GLN	17.9
23	BA	176	ARG	17.6
26	BD	20	PHE	17.6
28	BF	42	ASN	17.5
23	BA	68	LYS	17.5
53	B5	64	VAL	17.3
53	B5	108	GLU	17.3
36	BN	28	ARG	17.3
35	BM	106	ALA	17.1
53	B5	159	THR	17.0
42	BT	40	ASP	17.0
49	B1	51	ARG	17.0
35	BM	26	ARG	16.8
23	BA	32	ALA	16.8
26	BD	14	PRO	16.5
43	BU	45	PHE	16.4
23	BA	93	ALA	16.4
24	BB	174	GLU	16.4
53	B5	68	PRO	16.4
33	BK	9	LYS	16.3
33	BK	128	ILE	16.3
26	BD	40	LEU	16.2
27	BE	160	LYS	15.9
53	B5	86	THR	15.9
49	B1	11	LYS	15.9
42	BT	46	GLN	15.9
23	BA	35	GLU	15.8
53	B5	58	PRO	15.8
35	BM	101	LYS	15.7
26	BD	12	VAL	15.7
23	BA	189	CYS	15.7
26	BD	97	TYR	15.6

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Mol	Chain	Res	Type	RSRZ
26	BD	158	THR	15.5
53	B5	158	LYS	15.5
29	BG	43	ALA	15.5
23	BA	36	ALA	15.4
23	BA	26	LYS	15.3
42	BT	1	MET	15.3
47	BY	50	LEU	15.3
33	BK	8	THR	15.3
33	BK	107	VAL	15.2
33	BK	92	GLU	15.2
33	BK	56	SER	15.2
35	BM	103	LEU	15.2
23	BA	119	ALA	15.0
33	BK	131	LYS	15.0
42	BT	45	GLN	15.0
49	B1	53	LYS	14.9
26	BD	34	ILE	14.9
23	BA	272	THR	14.9
23	BA	69	ARG	14.9
23	BA	190	TYR	14.8
46	BX	1	MET	14.8
26	BD	161	LYS	14.8
42	BT	56	VAL	14.8
23	BA	182	LEU	14.7
36	BN	34	ARG	14.7
33	BK	112	GLU	14.7
23	BA	77	ALA	14.7
23	BA	91	ARG	14.6
42	BT	78	PRO	14.5
33	BK	90	ALA	14.5
28	BF	31	PRO	14.5
29	BG	44	GLN	14.5
53	B5	3	ALA	14.5
23	BA	192	THR	14.5
27	BE	152	ARG	14.4
53	B5	61	ALA	14.4
42	BT	61	THR	14.4
42	BT	76	ARG	14.4
33	BK	79	PRO	14.3
33	BK	89	GLY	14.3
31	BI	115	ALA	14.2
27	BE	128	PRO	14.2

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Mol	Chain	Res	Type	RSRZ
26	BD	164	GLU	14.2
35	BM	105	ASP	14.2
23	BA	269	PHE	14.2
28	BF	30	ILE	14.2
42	BT	59	GLY	14.1
27	BE	171	LEU	14.0
35	BM	100	VAL	14.0
42	BT	75	LYS	14.0
53	B5	53	PRO	14.0
23	BA	144	ALA	14.0
33	BK	81	GLU	13.9
42	BT	50	GLY	13.9
42	BT	44	ARG	13.9
53	B5	60	LYS	13.9
23	BA	81	ALA	13.9
33	BK	30	PHE	13.9
23	BA	174	ILE	13.8
43	BU	48	GLY	13.8
53	B5	189	ALA	13.8
27	BE	129	THR	13.8
42	BT	60	GLU	13.7
33	BK	27	TYR	13.7
26	BD	16	LEU	13.7
33	BK	49	GLU	13.7
36	BN	26	ASP	13.7
42	BT	36	ARG	13.7
23	BA	27	LYS	13.6
27	BE	44	ARG	13.5
26	BD	6	THR	13.5
31	BI	117	GLU	13.5
42	BT	53	ASP	13.5
31	BI	84	ALA	13.5
33	BK	99	LYS	13.5
28	BF	2	GLN	13.4
42	BT	54	ILE	13.4
26	BD	18	GLN	13.4
42	BT	77	ALA	13.4
31	BI	65	LYS	13.3
23	BA	97	TYR	13.3
36	BN	100	ARG	13.3
36	BN	29	PRO	13.2
36	BN	78	GLU	13.2

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Mol	Chain	Res	Type	RSRZ
27	BE	40	GLU	13.2
23	BA	16	MET	13.2
33	BK	109	GLY	13.2
42	BT	38	ALA	13.2
42	BT	52	PHE	13.2
27	BE	95	ARG	13.2
47	BY	72	LYS	13.2
33	BK	91	VAL	13.1
53	B5	174	MSE	13.1
36	BN	74	GLY	13.1
42	BT	55	THR	13.1
42	BT	85	MET	13.1
53	B5	157	VAL	13.1
33	BK	113	GLU	13.0
42	BT	71	MET	13.0
42	BT	51	LEU	13.0
35	BM	52	ALA	13.0
49	B1	12	MET	12.9
53	B5	186	VAL	12.9
28	BF	44	LYS	12.9
31	BI	46	HIS	12.9
53	B5	148	ILE	12.9
32	BJ	104	ARG	12.9
52	B4	27	CYS	12.9
49	B1	26	LYS	12.9
53	B5	73	LEU	12.9
29	BG	121	GLU	12.8
36	BN	98	LYS	12.8
23	BA	196	VAL	12.8
23	BA	95	LEU	12.7
53	B5	190	ILE	12.7
33	BK	93	TYR	12.7
33	BK	58	HIS	12.7
53	B5	183	ALA	12.7
31	BI	122	ARG	12.6
35	BM	75	LEU	12.6
52	B4	14	CYS	12.6
33	BK	34	GLY	12.6
36	BN	25	PRO	12.6
42	BT	3	LEU	12.6
23	BA	67	PHE	12.5
53	B5	185	ALA	12.5

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Mol	Chain	Res	Type	RSRZ
35	BM	76	ALA	12.5
35	BM	14	ARG	12.5
53	B5	181	GLU	12.5
42	BT	63	PRO	12.5
36	BN	27	PHE	12.5
27	BE	42	THR	12.4
42	BT	42	ALA	12.4
27	BE	163	ARG	12.4
33	BK	74	PRO	12.4
23	BA	146	GLU	12.4
36	BN	76	GLY	12.3
53	B5	62	LYS	12.3
29	BG	1	MET	12.3
23	BA	184	ARG	12.2
42	BT	41	ARG	12.2
33	BK	114	GLN	12.2
33	BK	38	MET	12.2
29	BG	120	VAL	12.2
23	BA	63	ARG	12.1
27	BE	55	PRO	12.1
36	BN	24	LEU	12.1
35	BM	13	THR	12.1
53	B5	54	LEU	12.1
33	BK	52	ARG	12.1
36	BN	86	PRO	12.0
35	BM	68	ALA	12.0
23	BA	164	GLN	12.0
53	B5	66	VAL	12.0
35	BM	27	LEU	12.0
8	AH	135	CYS	12.0
23	BA	25	THR	11.9
42	BT	28	ASN	11.9
23	BA	24	LEU	11.9
42	BT	57	GLU	11.9
31	BI	63	ALA	11.9
53	B5	52	VAL	11.9
33	BK	55	MET	11.9
24	BB	176	ARG	11.9
24	BB	17	ASN	11.9
23	BA	152	GLY	11.8
24	BB	178	GLY	11.8
31	BI	113	PRO	11.8

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Mol	Chain	Res	Type	RSRZ
42	BT	5	ALA	11.8
26	BD	124	GLY	11.8
42	BT	4	THR	11.8
33	BK	64	LYS	11.7
42	BT	62	PHE	11.7
26	BD	38	GLU	11.7
27	BE	7	GLN	11.7
36	BN	41	GLU	11.7
23	BA	197	GLY	11.7
35	BM	20	THR	11.7
26	BD	74	ILE	11.6
33	BK	101	GLY	11.6
35	BM	28	ARG	11.6
24	BB	98	GLU	11.6
23	BA	34	THR	11.6
27	BE	106	ASN	11.6
27	BE	41	LEU	11.5
42	BT	73	LYS	11.5
23	BA	120	GLY	11.5
36	BN	75	GLU	11.5
23	BA	92	ILE	11.5
35	BM	72	GLY	11.5
36	BN	43	ASN	11.5
36	BN	55	ILE	11.5
36	BN	16	ILE	11.5
33	BK	42	TRP	11.5
29	BG	64	SER	11.4
53	B5	153	ARG	11.4
35	BM	107	ALA	11.4
24	BB	182	ILE	11.4
35	BM	17	VAL	11.4
21	B0	665	A	11.4
36	BN	42	GLY	11.4
26	BD	11	GLN	11.4
49	B1	9	ILE	11.4
47	BY	51	ASP	11.3
31	BI	112	GLY	11.3
42	BT	43	PHE	11.3
31	BI	16	ALA	11.3
35	BM	57	ALA	11.3
24	BB	183	LEU	11.2
31	BI	62	GLY	11.2

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Mol	Chain	Res	Type	RSRZ
36	BN	79	ARG	11.2
42	BT	72	ASP	11.2
36	BN	23	GLN	11.2
48	BZ	59	ALA	11.2
42	BT	2	GLU	11.2
53	B5	150	ARG	11.2
53	B5	187	LEU	11.2
35	BM	53	ALA	11.2
23	BA	267	ASP	11.1
35	BM	97	HIS	11.1
36	BN	30	GLY	11.1
42	BT	47	SER	11.1
23	BA	130	ALA	11.0
36	BN	45	THR	11.0
31	BI	28	GLY	11.0
27	BE	54	ARG	11.0
33	BK	63	GLY	11.0
35	BM	42	ILE	10.9
36	BN	15	GLY	10.9
33	BK	69	ILE	10.9
53	B5	109	TRP	10.9
33	BK	43	ILE	10.9
36	BN	22	ARG	10.9
42	BT	33	ALA	10.9
36	BN	20	HIS	10.8
27	BE	56	SER	10.8
33	BK	71	PRO	10.8
49	B1	52	GLU	10.8
23	BA	66	ASP	10.8
24	BB	177	ALA	10.8
52	B4	11	CYS	10.8
27	BE	43	VAL	10.8
31	BI	101	ASN	10.8
31	BI	15	GLY	10.8
40	BR	92	ALA	10.7
28	BF	32	GLN	10.7
53	B5	152	LYS	10.7
33	BK	126	LEU	10.7
36	BN	93	ILE	10.7
36	BN	99	VAL	10.6
31	BI	111	PHE	10.6
53	B5	57	GLN	10.6

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Mol	Chain	Res	Type	RSRZ
23	BA	163	VAL	10.6
26	BD	156	ILE	10.6
27	BE	94	PHE	10.6
33	BK	37	ALA	10.6
35	BM	71	VAL	10.6
35	BM	16	LYS	10.6
23	BA	75	VAL	10.5
27	BE	153	LYS	10.5
36	BN	33	VAL	10.5
43	BU	50	GLY	10.5
36	BN	92	THR	10.5
33	BK	115	ALA	10.5
53	B5	2	LEU	10.5
53	B5	77	LYS	10.5
53	B5	50	GLU	10.5
53	B5	22	VAL	10.5
33	BK	111	THR	10.5
23	BA	70	ARG	10.5
53	B5	76	ALA	10.5
47	BY	73	LYS	10.5
27	BE	61	HIS	10.5
36	BN	17	GLU	10.5
27	BE	9	ILE	10.4
33	BK	116	LYS	10.4
36	BN	18	GLN	10.4
31	BI	126	ILE	10.4
36	BN	87	LEU	10.4
42	BT	39	PHE	10.4
46	BX	52	GLU	10.4
27	BE	169	ILE	10.4
31	BI	47	VAL	10.4
36	BN	118	LYS	10.3
46	BX	48	LYS	10.3
49	B1	8	ILE	10.3
27	BE	53	GLU	10.3
27	BE	149	ARG	10.3
42	BT	49	THR	10.3
24	BB	18	ASP	10.3
47	BY	49	PHE	10.3
40	BR	89	GLU	10.3
28	BF	14	THR	10.3
35	BM	44	ASP	10.3

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Mol	Chain	Res	Type	RSRZ
31	BI	44	TYR	10.3
23	BA	83	GLU	10.3
53	B5	151	PHE	10.3
27	BE	168	GLN	10.2
48	BZ	27	ALA	10.2
8	AH	74	PRO	10.2
42	BT	37	LYS	10.2
31	BI	120	ASP	10.2
24	BB	8	LYS	10.2
31	BI	106	ARG	10.1
53	B5	184	ILE	10.1
35	BM	32	TYR	10.1
43	BU	72	LYS	10.1
35	BM	90	ASP	10.1
35	BM	54	ALA	10.0
53	B5	182	ASN	10.0
36	BN	89	ASN	10.0
25	BC	198	GLU	10.0
36	BN	37	THR	10.0
29	BG	60	TYR	10.0
40	BR	91	LEU	10.0
43	BU	73	GLY	10.0
36	BN	35	VAL	9.9
53	B5	69	SER	9.9
23	BA	204	ILE	9.9
47	BY	67	TYR	9.9
30	BH	116	ARG	9.9
36	BN	114	ALA	9.9
23	BA	79	VAL	9.8
32	BJ	71	THR	9.8
49	B1	14	SER	9.8
31	BI	90	ARG	9.8
33	BK	51	CYS	9.8
23	BA	104	TYR	9.8
36	BN	46	ARG	9.8
31	BI	121	ARG	9.8
23	BA	71	ASP	9.8
31	BI	17	ARG	9.8
31	BI	72	ALA	9.8
46	BX	53	VAL	9.8
31	BI	57	ASP	9.8
33	BK	102	ARG	9.7

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Mol	Chain	Res	Type	RSRZ
26	BD	96	MET	9.7
36	BN	70	LYS	9.7
31	BI	11	ALA	9.7
31	BI	114	VAL	9.7
35	BM	55	SER	9.7
36	BN	77	VAL	9.7
53	B5	169	ILE	9.7
33	BK	36	ILE	9.7
26	BD	125	ARG	9.7
35	BM	92	GLY	9.7
27	BE	83	TYR	9.6
30	BH	38	GLU	9.6
53	B5	188	ASN	9.6
27	BE	73	ALA	9.6
33	BK	110	VAL	9.6
36	BN	40	ARG	9.6
48	BZ	58	LEU	9.6
24	BB	35	GLN	9.6
24	BB	24	THR	9.6
42	BT	65	LEU	9.6
49	B1	42	PRO	9.6
33	BK	46	ASN	9.5
23	BA	251	GLY	9.5
35	BM	29	LEU	9.5
36	BN	90	GLN	9.5
43	BU	44	LYS	9.5
43	BU	49	GLN	9.5
35	BM	91	ARG	9.5
42	BT	86	VAL	9.5
35	BM	56	SER	9.5
8	AH	81	HIS	9.5
23	BA	90	ALA	9.5
23	BA	17	THR	9.5
30	BH	168	THR	9.5
23	BA	153	ALA	9.5
31	BI	48	GLY	9.5
33	BK	70	PHE	9.5
51	B3	44	LYS	9.5
33	BK	48	ILE	9.4
35	BM	87	VAL	9.4
9	AI	43	ALA	9.4
27	BE	8	PRO	9.4

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Mol	Chain	Res	Type	RSRZ
36	BN	48	GLN	9.4
23	BA	185	VAL	9.4
28	BF	1	MET	9.4
53	B5	32	ILE	9.4
42	BT	64	ALA	9.4
53	B5	177	GLU	9.4
42	BT	18	MET	9.4
36	BN	21	THR	9.3
27	BE	57	ASP	9.3
48	BZ	49	CYS	9.3
30	BH	100	TYR	9.3
31	BI	100	ASN	9.3
27	BE	161	GLY	9.3
31	BI	103	GLY	9.3
23	BA	72	LYS	9.3
23	BA	183	ARG	9.3
23	BA	33	LEU	9.3
31	BI	50	ILE	9.3
27	BE	105	MET	9.3
31	BI	9	ASP	9.3
23	BA	263	ARG	9.3
28	BF	3	VAL	9.2
26	BD	15	ALA	9.2
53	B5	104	ALA	9.2
23	BA	250	TRP	9.2
36	BN	44	ARG	9.2
35	BM	102	ALA	9.2
33	BK	44	LYS	9.2
10	AJ	91	PRO	9.2
31	BI	49	ASP	9.2
30	BH	155	THR	9.2
29	BG	38	THR	9.1
53	B5	155	VAL	9.1
31	BI	129	LEU	9.1
53	B5	170	GLY	9.1
31	BI	119	ARG	9.1
51	B3	13	ARG	9.1
40	BR	94	GLN	9.1
36	BN	57	ILE	9.1
24	BB	95	ILE	9.1
36	BN	73	PHE	9.1
21	B0	664	C	9.1

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Mol	Chain	Res	Type	RSRZ
34	BL	30	ARG	9.1
37	BO	72	HIS	9.0
36	BN	38	LYS	9.0
30	BH	118	ALA	9.0
42	BT	84	TYR	9.0
53	B5	213	VAL	9.0
24	BB	97	ALA	9.0
42	BT	12	GLN	9.0
33	BK	35	LEU	9.0
27	BE	172	LYS	9.0
23	BA	31	LYS	9.0
28	BF	41	THR	9.0
27	BE	130	ARG	9.0
47	BY	62	ARG	9.0
32	BJ	140	VAL	9.0
31	BI	105	PRO	8.9
36	BN	113	LYS	9.0
53	B5	160	LYS	8.9
23	BA	198	ASN	8.9
23	BA	264	LYS	8.9
47	BY	61	LYS	8.9
8	AH	101	PRO	8.9
36	BN	111	ARG	8.9
31	BI	118	LEU	8.9
36	BN	31	ASP	8.9
24	BB	179	GLU	8.8
52	B4	34	GLN	8.8
28	BF	47	GLU	8.8
24	BB	16	LYS	8.8
27	BE	159	GLY	8.8
23	BA	15	GLN	8.8
28	BF	13	LYS	8.8
23	BA	268	ARG	8.8
24	BB	181	LEU	8.8
23	BA	175	VAL	8.8
53	B5	178	ASP	8.7
2	AB	235	SER	8.7
26	BD	101	GLU	8.7
31	BI	108	THR	8.7
23	BA	271	VAL	8.7
40	BR	90	ALA	8.7
33	BK	98	VAL	8.7

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Mol	Chain	Res	Type	RSRZ
43	BU	22	GLY	8.7
26	BD	37	ASN	8.7
36	BN	54	VAL	8.7
53	B5	89	GLU	8.7
26	BD	22	TYR	8.7
36	BN	120	ASP	8.7
35	BM	51	LEU	8.7
51	B3	12	ARG	8.7
26	BD	92	ARG	8.7
27	BE	45	GLN	8.7
39	BQ	134	LYS	8.7
53	B5	11	ALA	8.7
24	BB	25	VAL	8.6
31	BI	95	ALA	8.6
49	B1	54	LYS	8.6
24	BB	175	ILE	8.6
33	BK	31	GLY	8.6
29	BG	112	MET	8.6
53	B5	8	LEU	8.6
27	BE	51	LEU	8.6
31	BI	18	GLU	8.6
36	BN	71	ILE	8.6
23	BA	188	GLU	8.6
31	BI	45	ALA	8.6
42	BT	13	LYS	8.6
31	BI	109	ARG	8.6
33	BK	57	ARG	8.6
30	BH	39	GLN	8.5
31	BI	130	ALA	8.5
27	BE	127	GLU	8.5
24	BB	83	GLY	8.5
31	BI	107	GLY	8.5
35	BM	15	ARG	8.4
31	BI	12	ASP	8.4
53	B5	149	ASN	8.4
31	BI	96	ALA	8.4
31	BI	124	MET	8.4
36	BN	14	ARG	8.4
35	BM	95	LYS	8.4
36	BN	88	VAL	8.4
42	BT	48	THR	8.4
24	BB	199	ARG	8.4

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Mol	Chain	Res	Type	RSRZ
36	BN	121	ARG	8.4
53	B5	110	PHE	8.4
29	BG	122	ALA	8.4
53	B5	154	SER	8.4
53	B5	204	TYR	8.4
42	BT	23	ALA	8.4
36	BN	56	ALA	8.4
33	BK	94	TRP	8.4
26	BD	168	ALA	8.3
36	BN	119	SER	8.3
31	BI	104	GLU	8.3
36	BN	32	THR	8.3
5	AE	139	LEU	8.3
42	BT	34	LEU	8.3
30	BH	117	GLU	8.3
33	BK	97	VAL	8.3
24	BB	1	MET	8.3
47	BY	47	GLU	8.3
49	B1	50	PHE	8.3
23	BA	206	LEU	8.3
46	BX	2	LYS	8.3
31	BI	77	THR	8.3
46	BX	4	LYS	8.3
31	BI	99	ILE	8.3
52	B4	26	ILE	8.2
31	BI	64	VAL	8.2
9	AI	74	ILE	8.2
24	BB	31	CYS	8.2
26	BD	152	MET	8.2
32	BJ	91	ASP	8.2
8	AH	137	VAL	8.2
36	BN	110	LEU	8.2
42	BT	35	ASP	8.2
27	BE	77	LYS	8.2
53	B5	191	GLU	8.2
27	BE	50	LEU	8.2
32	BJ	139	ARG	8.1
35	BM	96	TYR	8.1
24	BB	102	ILE	8.1
31	BI	128	SER	8.1
52	B4	12	ASP	8.1
24	BB	14	ILE	8.1

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Mol	Chain	Res	Type	RSRZ
30	BH	154	GLU	8.1
27	BE	156	ALA	8.1
33	BK	103	VAL	8.1
30	BH	40	ASN	8.1
31	BI	14	SER	8.1
52	B4	24	LEU	8.1
24	BB	7	THR	8.0
33	BK	88	LYS	8.0
52	B4	29	ASN	8.0
42	BT	14	LEU	8.0
31	BI	21	CYS	8.0
36	BN	39	VAL	8.0
31	BI	92	ASP	8.0
31	BI	131	PRO	8.0
24	BB	27	LEU	8.0
28	BF	6	LEU	8.0
33	BK	53	ILE	8.0
26	BD	39	GLY	8.0
52	B4	25	VAL	8.0
46	BX	51	LEU	8.0
49	B1	13	GLU	8.0
9	AI	46	ALA	7.9
35	BM	38	ILE	7.9
24	BB	195	LEU	7.9
26	BD	33	LYS	7.9
31	BI	13	ASN	7.9
30	BH	127	ILE	7.9
26	BD	36	VAL	7.9
52	B4	13	ASN	7.9
33	BK	14	PHE	7.9
36	BN	80	VAL	7.9
23	BA	186	HIS	7.9
26	BD	5	LYS	7.9
31	BI	20	MET	7.9
53	B5	15	ALA	7.9
23	BA	131	LEU	7.9
23	BA	145	LEU	7.9
48	BZ	36	CYS	7.9
53	B5	48	LEU	7.9
21	B0	1489	C	7.9
7	AG	18	TYR	7.9
31	BI	98	ILE	7.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
6	AF	94	GLN	7.8
2	AB	194	PRO	7.8
23	BA	195	ALA	7.8
31	BI	76	ARG	7.8
24	BB	96	PHE	7.8
33	BK	125	LYS	7.8
35	BM	46	SER	7.8
36	BN	19	ASP	7.7
30	BH	169	GLN	7.7
31	BI	83	ARG	7.7
33	BK	73	LYS	7.7
8	AH	80	ILE	7.7
31	BI	123	PHE	7.7
53	B5	56	LYS	7.7
31	BI	73	VAL	7.7
31	BI	127	VAL	7.7
24	BB	92	ASN	7.7
43	BU	58	THR	7.7
31	BI	110	VAL	7.6
8	AH	83	ILE	7.6
6	AF	63	TYR	7.6
27	BE	88	GLU	7.6
42	BT	27	GLU	7.6
30	BH	122	HIS	7.6
36	BN	84	ALA	7.6
23	BA	231	HIS	7.6
31	BI	2	ILE	7.6
35	BM	43	ILE	7.6
35	BM	73	LYS	7.5
48	BZ	35	GLN	7.5
23	BA	106	LEU	7.5
24	BB	51	TYR	7.5
30	BH	123	PRO	7.5
27	BE	96	ALA	7.5
32	BJ	123	ASP	7.5
31	BI	75	VAL	7.5
2	AB	195	ASP	7.5
33	BK	72	ASP	7.5
33	BK	118	ALA	7.5
24	BB	82	ARG	7.4
32	BJ	90	ARG	7.4
30	BH	48	GLY	7.4

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Mol	Chain	Res	Type	RSRZ
24	BB	5	LEU	7.4
31	BI	19	ILE	7.4
31	BI	97	VAL	7.4
25	BC	59	TYR	7.4
31	BI	85	ASP	7.4
27	BE	90	ARG	7.4
31	BI	61	ARG	7.4
40	BR	22	ARG	7.4
47	BY	48	ARG	7.4
28	BF	43	MET	7.4
8	AH	82	HIS	7.4
26	BD	157	VAL	7.4
23	BA	265	THR	7.4
30	BH	58	ILE	7.4
23	BA	147	LEU	7.4
11	AK	128	ALA	7.4
34	BL	80	MET	7.4
42	BT	66	VAL	7.4
53	B5	99	PRO	7.4
24	BB	29	GLY	7.3
24	BB	101	LYS	7.3
32	BJ	103	ASN	7.3
40	BR	6	ILE	7.3
23	BA	132	PRO	7.3
31	BI	74	VAL	7.3
53	B5	161	ASP	7.3
31	BI	51	ILE	7.3
8	AH	107	LEU	7.3
53	B5	5	LYS	7.3
24	BB	73	ALA	7.3
33	BK	95	VAL	7.3
53	B5	180	ALA	7.3
31	BI	8	LEU	7.3
24	BB	38	THR	7.2
33	BK	45	SER	7.2
36	BN	72	SER	7.2
24	BB	72	VAL	7.2
8	AH	104	ARG	7.2
24	BB	37	LYS	7.2
37	BO	101	ARG	7.2
30	BH	158	HIS	7.2
24	BB	201	ALA	7.2

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Mol	Chain	Res	Type	RSRZ
40	BR	37	GLU	7.2
41	BS	63	THR	7.2
33	BK	60	ARG	7.2
35	BM	33	ARG	7.2
42	BT	79	ILE	7.2
2	AB	196	LEU	7.2
33	BK	117	GLU	7.2
32	BJ	105	PRO	7.2
42	BT	70	GLN	7.2
47	BY	37	SER	7.2
36	BN	13	LEU	7.2
34	BL	114	GLU	7.2
23	BA	173	VAL	7.2
30	BH	45	ASP	7.2
35	BM	74	ALA	7.2
36	BN	36	ASP	7.2
31	BI	71	LYS	7.2
53	B5	85	ILE	7.1
5	AE	78	HIS	7.1
35	BM	18	ARG	7.1
37	BO	73	GLY	7.1
8	AH	138	TRP	7.1
24	BB	93	VAL	7.1
24	BB	173	VAL	7.1
48	BZ	56	GLN	7.1
27	BE	58	ALA	7.1
42	BT	17	SER	7.1
53	B5	138	LEU	7.1
53	B5	179	LEU	7.1
18	AR	88	LYS	7.1
24	BB	28	ALA	7.1
53	B5	67	VAL	7.1
23	BA	194	GLY	7.1
30	BH	151	TYR	7.1
53	B5	206	LYS	7.1
11	AK	98	LEU	7.1
35	BM	12	ARG	7.0
40	BR	5	ASP	7.0
53	B5	156	LEU	7.0
47	BY	63	PHE	7.0
24	BB	26	VAL	7.0
6	AF	95	GLU	7.0

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Mol	Chain	Res	Type	RSRZ
45	BW	20	ALA	7.0
8	AH	76	PRO	7.0
34	BL	56	LYS	7.0
30	BH	156	HIS	7.0
43	BU	67	VAL	7.0
49	B1	24	THR	7.0
24	BB	94	ASP	7.0
7	AG	62	PHE	7.0
53	B5	80	SER	7.0
53	B5	88	GLU	7.0
1	AA	996	A	7.0
34	BL	57	GLY	7.0
36	BN	47	SER	7.0
35	BM	93	SER	7.0
5	AE	136	MET	7.0
42	BT	29	ASN	7.0
30	BH	121	LYS	7.0
40	BR	43	GLN	7.0
27	BE	91	GLY	7.0
31	BI	66	ALA	6.9
53	B5	70	SER	6.9
24	BB	53	PRO	6.9
33	BK	76	THR	6.9
36	BN	117	ILE	6.9
31	BI	125	LYS	6.9
36	BN	64	LYS	6.9
7	AG	65	ALA	6.9
24	BB	171	GLU	6.9
50	B2	23	LYS	6.9
40	BR	39	LYS	6.9
43	BU	43	THR	6.9
53	B5	171	THR	6.9
28	BF	15	GLY	6.9
24	BB	3	GLY	6.9
37	BO	116	ALA	6.9
29	BG	118	GLY	6.9
35	BM	49	GLN	6.9
23	BA	162	SER	6.9
24	BB	74	PRO	6.9
27	BE	52	VAL	6.9
24	BB	44	TYR	6.9
26	BD	155	THR	6.8

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Mol	Chain	Res	Type	RSRZ
8	AH	136	GLU	6.8
11	AK	129	SER	6.8
35	BM	21	THR	6.8
36	BN	60	SER	6.8
6	AF	26	ILE	6.8
31	BI	10	VAL	6.8
24	BB	4	ILE	6.8
30	BH	120	SER	6.8
36	BN	95	GLU	6.8
18	AR	32	ARG	6.8
30	BH	119	LEU	6.8
53	B5	23	LYS	6.8
33	BK	13	GLN	6.8
26	BD	126	GLY	6.8
52	B4	28	SER	6.8
8	AH	77	GLU	6.8
51	B3	10	ALA	6.8
51	B3	25	PHE	6.8
23	BA	129	ASN	6.8
34	BL	58	GLY	6.7
36	BN	91	VAL	6.7
40	BR	4	TYR	6.7
34	BL	87	TYR	6.7
49	B1	37	LEU	6.7
37	BO	103	PRO	6.7
47	BY	68	ARG	6.7
37	BO	74	MET	6.7
53	B5	205	VAL	6.7
23	BA	38	PRO	6.7
6	AF	99	ALA	6.7
45	BW	32	ALA	6.7
53	B5	112	ILE	6.7
8	AH	73	ASP	6.6
23	BA	89	SER	6.6
24	BB	198	LEU	6.6
34	BL	29	LEU	6.6
46	BX	5	LEU	6.6
30	BH	37	ASP	6.6
45	BW	12	THR	6.6
30	BH	67	ARG	6.6
31	BI	91	PHE	6.6
30	BH	44	VAL	6.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
53	B5	111	LEU	6.6
43	BU	55	ARG	6.6
40	BR	48	VAL	6.6
23	BA	233	HIS	6.6
24	BB	71	GLY	6.6
47	BY	57	ASP	6.6
52	B4	32	HIS	6.6
24	BB	2	LYS	6.6
31	BI	43	ARG	6.6
27	BE	78	GLY	6.6
21	B0	1601	U	6.6
32	BJ	56	LEU	6.6
31	BI	89	ILE	6.6
50	B2	22	MET	6.6
25	BC	21	GLU	6.6
37	BO	85	ARG	6.6
46	BX	3	ILE	6.6
13	AM	43	THR	6.6
51	B3	9	MET	6.6
35	BM	64	LYS	6.6
7	AG	59	LEU	6.6
5	AE	142	LEU	6.6
29	BG	42	ASN	6.5
37	BO	117	ARG	6.5
2	AB	193	ASP	6.5
36	BN	94	VAL	6.5
23	BA	108	PRO	6.5
36	BN	69	ARG	6.5
6	AF	29	ALA	6.5
43	BU	78	PHE	6.5
34	BL	115	LEU	6.5
42	BT	19	ILE	6.5
48	BZ	46	CYS	6.5
53	B5	214	LYS	6.5
8	AH	72	PRO	6.5
46	BX	41	ARG	6.5
30	BH	124	GLU	6.5
30	BH	69	ASP	6.5
8	AH	39	LEU	6.5
24	BB	180	ASN	6.5
36	BN	85	SER	6.5
8	AH	35	ILE	6.5

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Mol	Chain	Res	Type	RSRZ
27	BE	154	PRO	6.5
9	AI	55	ALA	6.5
26	BD	25	VAL	6.5
24	BB	6	GLY	6.5
38	BP	45	THR	6.5
36	BN	97	GLY	6.5
48	BZ	55	ARG	6.5
30	BH	85	ALA	6.5
34	BL	32	GLY	6.5
40	BR	23	GLY	6.5
24	BB	69	LYS	6.5
7	AG	15	ASP	6.4
37	BO	111	ASP	6.4
49	B1	39	LYS	6.4
5	AE	143	ARG	6.4
27	BE	155	ASP	6.4
31	BI	53	ALA	6.4
32	BJ	133	VAL	6.4
33	BK	40	PRO	6.4
35	BM	58	ALA	6.4
43	BU	33	ALA	6.4
52	B4	15	LYS	6.4
53	B5	87	ARG	6.4
27	BE	111	HIS	6.4
30	BH	167	LYS	6.4
49	B1	15	SER	6.4
26	BD	35	VAL	6.4
31	BI	70	VAL	6.4
2	AB	83	MET	6.4
36	BN	5	ILE	6.4
47	BY	45	GLY	6.4
8	AH	78	GLN	6.3
30	BH	36	ASN	6.3
24	BB	104	ALA	6.3
29	BG	134	MET	6.3
33	BK	80	ALA	6.3
45	BW	11	ALA	6.3
23	BA	37	LEU	6.3
30	BH	50	PRO	6.3
27	BE	107	ILE	6.3
27	BE	158	HIS	6.3
30	BH	76	GLN	6.3

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Mol	Chain	Res	Type	RSRZ
24	BB	70	ALA	6.3
30	BH	152	ALA	6.3
37	BO	87	ASN	6.3
6	AF	79	LEU	6.3
30	BH	166	LEU	6.3
40	BR	49	ARG	6.3
2	AB	84	GLU	6.3
26	BD	19	GLN	6.3
27	BE	18	ASN	6.3
27	BE	108	GLY	6.3
45	BW	10	GLN	6.3
47	BY	60	ASN	6.3
5	AE	70	PRO	6.3
53	B5	59	SER	6.3
7	AG	47	CYS	6.3
36	BN	67	THR	6.2
24	BB	89	ASP	6.2
24	BB	119	ARG	6.2
29	BG	124	ALA	6.2
8	AH	106	GLY	6.2
26	BD	91	LEU	6.2
52	B4	35	ARG	6.2
48	BZ	38	GLY	6.2
23	BA	150	GLY	6.2
45	BW	34	ALA	6.2
24	BB	52	ALA	6.2
34	BL	55	ALA	6.2
45	BW	7	ARG	6.2
28	BF	38	ALA	6.2
42	BT	9	THR	6.2
24	BB	184	VAL	6.2
47	BY	13	LYS	6.2
25	BC	16	GLU	6.2
43	BU	75	GLY	6.2
45	BW	16	LYS	6.1
21	B0	1648	C	6.1
49	B1	47	HIS	6.1
30	BH	47	SER	6.1
24	BB	32	PRO	6.1
26	BD	154	ILE	6.1
28	BF	33	GLY	6.1
30	BH	46	ALA	6.1

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Mol	Chain	Res	Type	RSRZ
24	BB	19	ARG	6.1
5	AE	144	THR	6.1
6	AF	62	TRP	6.1
36	BN	58	ASN	6.1
5	AE	138	ALA	6.1
40	BR	88	ILE	6.1
30	BH	125	ARG	6.1
26	BD	128	TYR	6.1
45	BW	27	GLU	6.1
24	BB	200	SER	6.1
24	BB	172	VAL	6.1
45	BW	6	MET	6.1
4	AD	196	LEU	6.1
8	AH	110	ALA	6.1
25	BC	197	GLU	6.1
15	AO	89	GLY	6.1
37	BO	108	ALA	6.1
39	BQ	51	GLN	6.1
33	BK	28	VAL	6.1
51	B3	40	GLU	6.1
8	AH	9	MET	6.1
43	BU	70	ILE	6.1
29	BG	36	GLU	6.1
30	BH	95	LEU	6.1
6	AF	30	LEU	6.1
23	BA	181	GLU	6.0
40	BR	8	GLN	6.0
41	BS	62	MET	6.0
24	BB	45	GLU	6.0
28	BF	45	THR	6.0
37	BO	118	GLN	6.0
34	BL	25	ALA	6.0
17	AQ	86	GLU	6.0
42	BT	15	ASP	6.0
28	BF	29	LEU	6.0
35	BM	41	GLN	6.0
23	BA	266	SER	6.0
27	BE	79	VAL	6.0
48	BZ	57	VAL	6.0
27	BE	126	PRO	6.0
29	BG	37	PHE	6.0
35	BM	88	VAL	6.0

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Mol	Chain	Res	Type	RSRZ
38	BP	57	GLN	6.0
38	BP	1	MET	6.0
47	BY	44	THR	6.0
47	BY	56	VAL	6.0
21	B0	624	A	6.0
23	BA	232	PRO	6.0
24	BB	91	VAL	6.0
30	BH	128	GLU	6.0
42	BT	83	PHE	6.0
7	AG	23	VAL	6.0
51	B3	14	ILE	6.0
33	BK	54	VAL	6.0
40	BR	17	TYR	6.0
30	BH	42	VAL	6.0
21	B0	897	A	6.0
23	BA	201	HIS	5.9
40	BR	86	GLN	5.9
23	BA	18	THR	5.9
32	BJ	89	ASP	5.9
23	BA	216	GLY	5.9
9	AI	45	ALA	5.9
17	AQ	89	LEU	5.9
35	BM	31	VAL	5.9
31	BI	80	ALA	5.9
30	BH	34	PRO	5.9
35	BM	108	ARG	5.9
25	BC	193	LEU	5.9
39	BQ	130	GLU	5.9
37	BO	102	GLU	5.9
35	BM	45	ASP	5.9
9	AI	77	ILE	5.9
46	BX	32	ARG	5.9
10	AJ	88	LEU	5.9
32	BJ	93	LEU	5.9
36	BN	59	GLY	5.9
53	B5	7	SER	5.9
24	BB	55	ALA	5.9
34	BL	109	THR	5.8
4	AD	142	PRO	5.8
8	AH	111	ILE	5.8
37	BO	109	LEU	5.8
37	BO	100	ALA	5.8

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Mol	Chain	Res	Type	RSRZ
35	BM	89	PHE	5.8
53	B5	72	GLN	5.8
42	BT	87	THR	5.8
43	BU	57	HIS	5.8
37	BO	104	GLU	5.8
24	BB	15	TRP	5.8
26	BD	41	GLY	5.8
38	BP	37	ALA	5.8
46	BX	54	GLN	5.8
40	BR	20	MET	5.8
30	BH	115	ALA	5.8
24	BB	39	ALA	5.8
9	AI	64	THR	5.8
34	BL	74	ASP	5.8
53	B5	102	LYS	5.8
30	BH	41	TRP	5.8
24	BB	46	ALA	5.8
36	BN	12	LEU	5.8
36	BN	116	ARG	5.7
34	BL	81	ASP	5.7
40	BR	47	GLY	5.7
31	BI	133	VAL	5.7
25	BC	60	GLY	5.7
13	AM	45	VAL	5.7
32	BJ	95	ALA	5.7
39	BQ	48	LYS	5.7
9	AI	50	LEU	5.7
21	B0	666	U	5.7
32	BJ	138	GLY	5.7
17	AQ	83	ASP	5.7
30	BH	157	PRO	5.7
30	BH	170	PRO	5.7
31	BI	58	ALA	5.7
35	BM	10	LYS	5.7
40	BR	29	VAL	5.7
31	BI	27	SER	5.7
36	BN	81	PHE	5.7
32	BJ	119	THR	5.7
27	BE	65	HIS	5.7
32	BJ	144	GLU	5.7
18	AR	35	ARG	5.7
24	BB	76	ARG	5.7

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Mol	Chain	Res	Type	RSRZ
2	AB	80	ILE	5.7
35	BM	83	GLY	5.7
24	BB	48	GLN	5.7
40	BR	44	GLN	5.7
30	BH	66	HIS	5.7
24	BB	88	GLY	5.7
27	BE	173	ALA	5.7
40	BR	87	SER	5.7
13	AM	10	PRO	5.7
42	BT	69	VAL	5.7
2	AB	233	SER	5.7
27	BE	16	THR	5.7
30	BH	164	GLN	5.7
13	AM	48	LEU	5.6
45	BW	13	ASP	5.6
39	BQ	58	ARG	5.6
31	BI	86	GLY	5.6
38	BP	100	GLY	5.6
21	B0	1488	G	5.6
27	BE	69	ARG	5.6
27	BE	101	LYS	5.6
21	B0	1525	A	5.6
33	BK	77	LYS	5.6
42	BT	58	GLY	5.6
53	B5	165	VAL	5.6
26	BD	90	THR	5.6
39	BQ	88	ASP	5.6
9	AI	37	PHE	5.6
23	BA	159	ALA	5.6
24	BB	196	VAL	5.6
30	BH	35	LYS	5.6
39	BQ	85	MET	5.6
34	BL	44	LEU	5.6
24	BB	103	ASP	5.6
39	BQ	59	PHE	5.6
24	BB	22	PRO	5.6
47	BY	52	THR	5.6
26	BD	121	ALA	5.6
34	BL	78	LYS	5.6
39	BQ	60	ILE	5.6
49	B1	21	TYR	5.6
36	BN	68	VAL	5.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
43	BU	34	GLY	5.6
23	BA	166	GLN	5.6
8	AH	109	ILE	5.5
47	BY	66	SER	5.5
30	BH	86	ALA	5.5
36	BN	3	THR	5.5
30	BH	165	VAL	5.5
37	BO	71	LEU	5.5
38	BP	38	LEU	5.5
23	BA	23	GLY	5.5
34	BL	101	GLY	5.5
45	BW	9	LEU	5.5
40	BR	25	TYR	5.5
40	BR	83	ALA	5.5
53	B5	34	LEU	5.5
53	B5	132	GLY	5.5
24	BB	197	VAL	5.5
31	BI	94	ASN	5.5
34	BL	94	TYR	5.5
35	BM	25	GLY	5.5
53	B5	212	ALA	5.5
24	BB	30	PRO	5.5
30	BH	126	VAL	5.5
53	B5	49	ARG	5.5
38	BP	13	ARG	5.5
21	B0	1188	A	5.5
5	AE	77	PRO	5.5
33	BK	47	GLN	5.5
37	BO	105	ALA	5.5
23	BA	96	HIS	5.5
46	BX	33	GLU	5.4
27	BE	93	GLY	5.4
29	BG	131	ALA	5.4
45	BW	23	LYS	5.4
34	BL	33	ARG	5.4
27	BE	134	SER	5.4
53	B5	33	ILE	5.4
43	BU	54	GLY	5.4
32	BJ	118	VAL	5.4
41	BS	70	GLU	5.4
2	AB	234	PRO	5.4
8	AH	125	ARG	5.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
18	AR	27	GLY	5.4
6	AF	7	ASN	5.4
26	BD	94	GLU	5.4
42	BT	24	TYR	5.4
53	B5	21	ASN	5.4
53	B5	51	ILE	5.4
6	AF	96	PRO	5.4
9	AI	49	PRO	5.4
10	AJ	27	ALA	5.4
32	BJ	121	HIS	5.4
53	B5	103	LEU	5.4
47	BY	53	GLU	5.4
21	B0	625	A	5.4
5	AE	80	ILE	5.4
47	BY	14	ILE	5.4
36	BN	65	SER	5.4
34	BL	95	THR	5.4
39	BQ	55	ASP	5.4
8	AH	44	PHE	5.4
37	BO	88	ILE	5.4
26	BD	89	VAL	5.4
28	BF	35	ALA	5.4
40	BR	45	ALA	5.4
34	BL	112	LEU	5.4
42	BT	11	LYS	5.4
23	BA	245	VAL	5.4
40	BR	3	HIS	5.4
5	AE	69	VAL	5.4
4	AD	144	ASP	5.4
9	AI	47	LEU	5.4
23	BA	64	ILE	5.3
34	BL	51	LEU	5.3
37	BO	70	ARG	5.3
24	BB	54	LYS	5.3
33	BK	10	PHE	5.3
2	AB	76	GLN	5.3
35	BM	114	PHE	5.3
2	AB	27	LYS	5.3
7	AG	17	VAL	5.3
10	AJ	33	GLN	5.3
36	BN	83	PHE	5.3
32	BJ	94	GLU	5.3

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Mol	Chain	Res	Type	RSRZ
34	BL	110	MET	5.3
40	BR	9	ALA	5.3
27	BE	104	GLU	5.3
45	BW	38	ALA	5.3
26	BD	153	ASP	5.3
39	BQ	104	LYS	5.3
38	BP	72	ARG	5.3
49	B1	7	ARG	5.3
11	AK	97	ALA	5.3
27	BE	92	VAL	5.3
36	BN	61	GLY	5.3
35	BM	94	TYR	5.3
30	BH	43	VAL	5.3
34	BL	43	GLU	5.3
23	BA	165	VAL	5.3
24	BB	80	GLU	5.3
39	BQ	87	GLU	5.3
7	AG	128	ALA	5.3
48	BZ	48	ASN	5.3
23	BA	88	ARG	5.3
30	BH	88	VAL	5.3
33	BK	119	PHE	5.3
34	BL	48	VAL	5.3
26	BD	151	GLY	5.3
31	BI	26	ASN	5.2
7	AG	127	ALA	5.2
32	BJ	142	LEU	5.2
27	BE	80	SER	5.2
30	BH	144	MET	5.2
27	BE	68	THR	5.2
7	AG	66	VAL	5.2
8	AH	68	ARG	5.2
45	BW	5	GLU	5.2
24	BB	90	SER	5.2
39	BQ	45	ILE	5.2
39	BQ	89	ARG	5.2
2	AB	77	ALA	5.2
21	B0	1490	U	5.2
23	BA	207	GLY	5.2
45	BW	17	GLU	5.2
47	BY	59	PHE	5.2
48	BZ	53	ASP	5.2

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Mol	Chain	Res	Type	RSRZ
21	B0	623	G	5.2
43	BU	36	ILE	5.2
24	BB	63	MET	5.2
53	B5	4	ASP	5.2
24	BB	13	GLN	5.2
11	AK	65	ALA	5.2
27	BE	38	ASN	5.2
2	AB	87	ARG	5.2
21	B0	898	C	5.2
34	BL	79	VAL	5.2
45	BW	15	ALA	5.2
49	B1	23	THR	5.2
33	BK	11	ARG	5.2
49	B1	25	THR	5.2
8	AH	100	ILE	5.2
37	BO	115	ASN	5.2
43	BU	65	GLY	5.2
24	BB	75	THR	5.2
33	BK	85	GLY	5.2
23	BA	215	LEU	5.2
24	BB	20	ALA	5.2
40	BR	21	GLU	5.2
23	BA	87	ASN	5.1
37	BO	69	ALA	5.1
32	BJ	102	LYS	5.1
34	BL	102	THR	5.1
38	BP	49	GLU	5.1
8	AH	108	GLY	5.1
26	BD	70	ALA	5.1
31	BI	93	ARG	5.1
23	BA	102	LYS	5.1
5	AE	79	GLU	5.1
33	BK	61	ARG	5.1
33	BK	100	PRO	5.1
6	AF	22	GLU	5.1
33	BK	41	ALA	5.1
37	BO	90	LEU	5.1
5	AE	137	GLU	5.1
24	BB	33	ILE	5.1
27	BE	15	VAL	5.1
43	BU	21	LEU	5.1
53	B5	79	ALA	5.1

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Mol	Chain	Res	Type	RSRZ
32	BJ	92	THR	5.1
35	BM	39	TYR	5.1
37	BO	112	ALA	5.1
9	AI	65	VAL	5.1
21	B0	896	C	5.1
32	BJ	132	ALA	5.1
49	B1	40	TYR	5.1
8	AH	121	ASP	5.1
7	AG	124	LEU	5.1
34	BL	26	THR	5.1
34	BL	28	LEU	5.1
40	BR	38	ILE	5.1
48	BZ	47	PRO	5.1
48	BZ	54	GLY	5.1
40	BR	10	PRO	5.1
24	BB	160	MET	5.1
38	BP	48	GLY	5.1
34	BL	73	LYS	5.1
39	BQ	40	LEU	5.1
2	AB	197	VAL	5.1
4	AD	143	GLY	5.1
25	BC	192	ALA	5.1
51	B3	46	LYS	5.1
23	BA	121	PRO	5.1
28	BF	25	ALA	5.1
39	BQ	54	GLU	5.1
8	AH	6	ILE	5.1
38	BP	50	ASP	5.1
25	BC	114	GLY	5.1
25	BC	72	ARG	5.1
28	BF	11	LEU	5.0
39	BQ	52	ASP	5.0
39	BQ	86	LEU	5.0
8	AH	75	ARG	5.0
24	BB	68	ALA	5.0
9	AI	82	ALA	5.0
38	BP	55	THR	5.0
40	BR	40	ASP	5.0
37	BO	107	LYS	5.0
53	B5	1	MET	5.0
2	AB	238	LEU	5.0
6	AF	6	VAL	5.0

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Mol	Chain	Res	Type	RSRZ
2	AB	212	GLN	5.0
31	BI	59	ALA	5.0
37	BO	86	ALA	5.0
30	BH	77	GLY	5.0
26	BD	98	VAL	5.0
45	BW	18	ILE	5.0
6	AF	61	LEU	5.0
6	AF	23	LYS	5.0
30	BH	149	LYS	5.0
46	BX	47	VAL	5.0
31	BI	29	ILE	5.0
40	BR	81	ARG	5.0
6	AF	40	VAL	5.0
2	AB	73	THR	5.0
38	BP	53	LYS	5.0
39	BQ	131	LYS	5.0
30	BH	74	MET	5.0
28	BF	22	ASP	5.0
43	BU	35	ASN	5.0
31	BI	67	GLY	5.0
45	BW	33	ALA	5.0
9	AI	73	GLN	5.0
49	B1	28	ARG	5.0
23	BA	80	ALA	5.0
39	BQ	66	GLU	5.0
42	BT	30	VAL	5.0
51	B3	11	LYS	5.0
30	BH	75	ILE	5.0
34	BL	22	ARG	5.0
6	AF	41	GLU	5.0
13	AM	41	PRO	4.9
18	AR	30	ASP	4.9
30	BH	80	VAL	4.9
48	BZ	51	TYR	4.9
8	AH	66	GLY	4.9
9	AI	85	LEU	4.9
30	BH	61	ARG	4.9
1	AA	1443	G	4.9
9	AI	92	TYR	4.9
18	AR	87	ARG	4.9
32	BJ	131	LYS	4.9
38	BP	36	LYS	4.9

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Mol	Chain	Res	Type	RSRZ
37	BO	89	ASP	4.9
39	BQ	84	GLU	4.9
31	BI	7	ARG	4.9
30	BH	153	GLY	4.9
34	BL	21	ALA	4.9
24	BB	66	HIS	4.9
32	BJ	116	ARG	4.9
34	BL	66	VAL	4.9
6	AF	98	LEU	4.9
37	BO	114	ARG	4.9
31	BI	55	VAL	4.9
23	BA	248	THR	4.9
3	AC	24	ALA	4.9
39	BQ	69	ALA	4.9
30	BH	78	ASP	4.9
21	B0	663	G	4.9
29	BG	108	ALA	4.9
35	BM	8	ARG	4.9
27	BE	167	GLU	4.9
34	BL	113	ILE	4.9
35	BM	59	LEU	4.9
8	AH	105	ARG	4.9
18	AR	34	TYR	4.9
9	AI	40	LEU	4.9
37	BO	95	LEU	4.9
24	BB	36	ARG	4.8
34	BL	75	VAL	4.8
38	BP	12	TYR	4.8
11	AK	64	ALA	4.8
40	BR	84	GLU	4.8
6	AF	97	PHE	4.8
38	BP	34	GLU	4.8
38	BP	99	GLN	4.8
53	B5	74	GLU	4.8
40	BR	82	LEU	4.8
30	BH	82	VAL	4.8
50	B2	21	ARG	4.8
27	BE	19	ALA	4.8
32	BJ	124	ALA	4.8
53	B5	203	ILE	4.8
6	AF	8	ILE	4.8
35	BM	99	ARG	4.8

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Mol	Chain	Res	Type	RSRZ
38	BP	52	GLY	4.8
2	AB	208	ILE	4.8
37	BO	97	ASP	4.8
13	AM	42	ALA	4.8
41	BS	71	GLN	4.8
28	BF	4	ILE	4.8
30	BH	68	PRO	4.8
39	BQ	53	ALA	4.8
45	BW	3	PRO	4.8
7	AG	16	LEU	4.8
34	BL	41	ALA	4.8
38	BP	44	GLN	4.8
39	BQ	56	LEU	4.8
4	AD	189	PRO	4.8
30	BH	131	VAL	4.8
6	AF	25	ILE	4.8
1	AA	129(A)	G	4.8
45	BW	26	MET	4.8
5	AE	140	ARG	4.8
9	AI	19	LEU	4.7
42	BT	6	LYS	4.7
43	BU	28	GLY	4.7
46	BX	45	LYS	4.7
48	BZ	39	LYS	4.7
10	AJ	34	VAL	4.7
23	BA	230	ASP	4.7
23	BA	273	ARG	4.7
32	BJ	100	ARG	4.7
39	BQ	44	VAL	4.7
48	BZ	24	ALA	4.7
37	BO	99	ALA	4.7
26	BD	93	GLY	4.7
9	AI	59	PHE	4.7
25	BC	20	PRO	4.7
25	BC	22	VAL	4.7
10	AJ	94	VAL	4.7
11	AK	59	TYR	4.7
42	BT	7	PRO	4.7
35	BM	19	THR	4.7
37	BO	96	ALA	4.7
13	AM	15	VAL	4.7
6	AF	89	MET	4.7

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Mol	Chain	Res	Type	RSRZ
10	AJ	32	ALA	4.7
26	BD	99	PHE	4.7
30	BH	83	ILE	4.7
43	BU	68	VAL	4.7
38	BP	43	GLU	4.7
38	BP	6	GLN	4.7
37	BO	84	LYS	4.7
46	BX	44	VAL	4.7
45	BW	24	GLU	4.7
23	BA	74	GLY	4.7
38	BP	65	ARG	4.7
47	BY	38	GLY	4.7
23	BA	161	THR	4.7
35	BM	50	THR	4.7
53	B5	113	ASN	4.7
34	BL	111	ALA	4.7
30	BH	84	ASN	4.7
35	BM	9	ARG	4.7
43	BU	7	VAL	4.7
23	BA	109	GLU	4.7
8	AH	120	THR	4.7
41	BS	6	ALA	4.7
25	BC	19	LEU	4.7
29	BG	39	LYS	4.7
24	BB	50	GLY	4.7
34	BL	42	LYS	4.7
37	BO	91	ASN	4.7
27	BE	89	LEU	4.7
23	BA	84	TYR	4.7
24	BB	34	VAL	4.7
23	BA	177	LEU	4.7
45	BW	28	LEU	4.7
25	BC	14	THR	4.7
30	BH	71	THR	4.7
8	AH	13	ILE	4.7
8	AH	38	ILE	4.7
34	BL	116	VAL	4.7
42	BT	81	VAL	4.7
32	BJ	130	ILE	4.6
46	BX	6	VAL	4.6
39	BQ	47	GLY	4.6
32	BJ	117	ALA	4.6

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Mol	Chain	Res	Type	RSRZ
40	BR	51	ILE	4.6
9	AI	42	ARG	4.6
23	BA	200	GLU	4.6
30	BH	65	LYS	4.6
2	AB	90	MET	4.6
31	BI	34	LEU	4.6
38	BP	54	TYR	4.6
22	B9	90	C	4.6
43	BU	56	ASP	4.6
8	AH	103	VAL	4.6
11	AK	103	LEU	4.6
26	BD	169	LEU	4.6
9	AI	14	VAL	4.6
25	BC	17	LEU	4.6
2	AB	92	TYR	4.6
9	AI	88	TYR	4.6
24	BB	49	ILE	4.6
40	BR	50	VAL	4.6
4	AD	64	LEU	4.6
25	BC	92	ASP	4.6
6	AF	5	GLU	4.6
21	B0	1187	A	4.6
38	BP	56	VAL	4.6
31	BI	82	LYS	4.6
37	BO	68	GLY	4.6
8	AH	10	LEU	4.6
21	B0	730	C	4.6
37	BO	17	VAL	4.6
42	BT	68	ALA	4.6
11	AK	63	LEU	4.6
46	BX	31	SER	4.6
48	BZ	26	THR	4.6
21	B0	1649	A	4.6
31	BI	24	VAL	4.6
40	BR	28	TRP	4.6
21	B0	1186	G	4.6
41	BS	64	ASN	4.6
39	BQ	57	LEU	4.6
40	BR	30	SER	4.6
53	B5	134	PHE	4.5
26	BD	23	SER	4.5
26	BD	134	GLU	4.5

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Mol	Chain	Res	Type	RSRZ
38	BP	27	GLY	4.5
38	BP	58	ALA	4.5
28	BF	40	ARG	4.5
30	BH	70	PHE	4.5
27	BE	76	VAL	4.5
32	BJ	106	VAL	4.5
29	BG	63	ARG	4.5
38	BP	30	GLY	4.5
23	BA	208	LYS	4.5
23	BA	118	ASN	4.5
29	BG	41	PHE	4.5
38	BP	7	THR	4.5
11	AK	60	ALA	4.5
38	BP	31	ASP	4.5
9	AI	44	VAL	4.5
6	AF	27	GLN	4.5
33	BK	96	SER	4.5
35	BM	35	SER	4.5
51	B3	24	ALA	4.5
27	BE	135	GLY	4.5
27	BE	162	VAL	4.5
29	BG	45	THR	4.5
39	BQ	41	VAL	4.5
2	AB	237	ALA	4.5
23	BA	58	HIS	4.5
21	B0	899	G	4.5
38	BP	59	GLU	4.5
4	AD	188	LEU	4.5
18	AR	78	LEU	4.5
34	BL	59	ASP	4.5
45	BW	31	GLN	4.5
23	BA	187	SER	4.5
29	BG	65	PHE	4.5
23	BA	191	ALA	4.5
39	BQ	46	ARG	4.5
26	BD	130	LEU	4.5
38	BP	67	LYS	4.5
40	BR	19	ALA	4.5
7	AG	57	GLU	4.5
14	AN	37	PHE	4.5
30	BH	81	VAL	4.5
6	AF	42	GLU	4.5

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Mol	Chain	Res	Type	RSRZ
34	BL	31	GLU	4.5
3	AC	124	ILE	4.5
35	BM	98	GLY	4.5
25	BC	139	GLN	4.5
27	BE	72	VAL	4.5
37	BO	16	LYS	4.5
11	AK	102	GLY	4.5
30	BH	142	ARG	4.5
23	BA	20	ASP	4.5
37	BO	65	ILE	4.5
9	AI	51	ARG	4.5
10	AJ	31	GLY	4.5
8	AH	36	LEU	4.5
10	AJ	20	ALA	4.5
37	BO	106	PHE	4.5
8	AH	79	VAL	4.5
31	BI	6	SER	4.5
40	BR	41	ALA	4.5
7	AG	58	PRO	4.4
40	BR	85	GLY	4.4
2	AB	29	ALA	4.4
38	BP	46	VAL	4.4
53	B5	167	VAL	4.4
40	BR	7	LEU	4.4
35	BM	65	THR	4.4
23	BA	255	LYS	4.4
45	BW	60	LEU	4.4
52	B4	10	MET	4.4
5	AE	141	GLN	4.4
4	AD	129	ASN	4.4
34	BL	84	ALA	4.4
43	BU	66	LYS	4.4
29	BG	113	PRO	4.4
1	AA	997	U	4.4
23	BA	54	ILE	4.4
53	B5	55	PRO	4.4
49	B1	49	VAL	4.4
4	AD	187	ARG	4.4
31	BI	87	SER	4.4
6	AF	64	GLN	4.4
31	BI	54	SER	4.4
47	BY	19	GLN	4.4

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Mol	Chain	Res	Type	RSRZ
23	BA	235	GLY	4.4
23	BA	249	PRO	4.4
45	BW	35	GLY	4.4
13	AM	18	ALA	4.4
38	BP	11	GLN	4.4
23	BA	76	ASN	4.4
27	BE	39	THR	4.4
36	BN	82	PRO	4.4
39	BQ	72	LEU	4.4
8	AH	134	ILE	4.4
8	AH	123	GLU	4.4
35	BM	78	ALA	4.4
53	B5	200	LEU	4.4
52	B4	33	LYS	4.4
9	AI	96	LEU	4.4
23	BA	62	TYR	4.4
34	BL	52	ILE	4.4
33	BK	62	GLY	4.4
46	BX	50	LEU	4.4
40	BR	18	SER	4.4
31	BI	30	GLY	4.4
34	BL	70	ILE	4.4
11	AK	47	VAL	4.3
23	BA	172	TYR	4.3
53	B5	197	GLU	4.3
5	AE	76	ILE	4.3
21	B0	1524	C	4.3
41	BS	65	PRO	4.3
33	BK	26	ASP	4.3
5	AE	67	VAL	4.3
30	BH	145	HIS	4.3
38	BP	70	TYR	4.3
40	BR	33	ALA	4.3
38	BP	51	ALA	4.3
35	BM	30	SER	4.3
1	AA	1032	G	4.3
13	AM	34	LEU	4.3
17	AQ	84	LEU	4.3
29	BG	123	ALA	4.3
6	AF	101	ALA	4.3
7	AG	44	TYR	4.3
21	B0	1428	G	4.3

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Mol	Chain	Res	Type	RSRZ
27	BE	60	LYS	4.3
4	AD	94	LEU	4.3
8	AH	20	TYR	4.3
33	BK	66	TYR	4.3
8	AH	102	ARG	4.3
25	BC	154	ASP	4.3
38	BP	41	GLY	4.3
4	AD	191	ARG	4.3
17	AQ	88	TYR	4.3
25	BC	101	GLN	4.3
34	BL	24	GLN	4.3
48	BZ	50	GLY	4.3
7	AG	26	PHE	4.3
37	BO	110	VAL	4.3
2	AB	178	ARG	4.3
23	BA	226	MET	4.3
13	AM	4	ILE	4.3
29	BG	32	ALA	4.3
36	BN	11	GLU	4.3
5	AE	135	THR	4.3
10	AJ	89	ASP	4.3
24	BB	185	LYS	4.3
21	B0	1506	C	4.3
40	BR	53	ILE	4.3
39	BQ	93	LYS	4.3
40	BR	75	ARG	4.3
9	AI	52	ALA	4.3
11	AK	48	ILE	4.3
2	AB	198	ASP	4.3
4	AD	185	PHE	4.3
34	BL	100	VAL	4.3
25	BC	113	GLU	4.3
30	BH	150	VAL	4.3
8	AH	119	LEU	4.3
45	BW	4	SER	4.3
1	AA	84	U	4.2
2	AB	200	ILE	4.2
6	AF	24	GLU	4.2
7	AG	134	ALA	4.2
10	AJ	47	PHE	4.2
23	BA	258	LYS	4.2
47	BY	70	GLY	4.2

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Mol	Chain	Res	Type	RSRZ
9	AI	15	ALA	4.2
9	AI	36	TYR	4.2
26	BD	132	ILE	4.2
8	AH	124	ALA	4.2
37	BO	64	ARG	4.2
45	BW	22	LYS	4.2
4	AD	197	PRO	4.2
53	B5	176	PRO	4.2
11	AK	69	ALA	4.2
38	BP	21	ARG	4.2
42	BT	74	ARG	4.2
4	AD	194	LEU	4.2
7	AG	138	LYS	4.2
25	BC	91	TYR	4.2
35	BM	24	SER	4.2
40	BR	27	PHE	4.2
32	BJ	101	ARG	4.2
47	BY	58	LYS	4.2
25	BC	194	GLU	4.2
33	BK	67	ILE	4.2
14	AN	43	CYS	4.2
33	BK	122	ALA	4.2
8	AH	112	LEU	4.2
26	BD	177	PHE	4.2
38	BP	47	PHE	4.2
30	BH	101	THR	4.2
33	BK	39	GLU	4.2
1	AA	1148	U	4.2
11	AK	50	TYR	4.2
25	BC	155	GLU	4.2
24	BB	99	GLY	4.2
2	AB	218	ALA	4.2
8	AH	122	ARG	4.2
30	BH	87	GLN	4.2
4	AD	193	ASP	4.2
14	AN	44	LEU	4.2
32	BJ	55	ARG	4.2
38	BP	60	VAL	4.2
7	AG	100	ALA	4.2
8	AH	17	THR	4.2
11	AK	67	ASP	4.2
27	BE	125	VAL	4.2

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Mol	Chain	Res	Type	RSRZ
36	BN	66	PHE	4.2
45	BW	30	PHE	4.2
3	AC	95	THR	4.2
4	AD	68	TYR	4.2
32	BJ	72	TYR	4.2
3	AC	47	LEU	4.1
39	BQ	125	THR	4.1
30	BH	159	SER	4.1
2	AB	151	GLY	4.1
23	BA	78	LYS	4.1
24	BB	58	LYS	4.1
51	B3	61	MET	4.1
11	AK	101	SER	4.1
47	BY	69	ARG	4.1
38	BP	3	ALA	4.1
17	AQ	87	LYS	4.1
21	B0	731	A	4.1
26	BD	133	LYS	4.1
30	BH	79	PHE	4.1
24	BB	155	ARG	4.1
37	BO	67	ALA	4.1
39	BQ	114	ALA	4.1
39	BQ	94	GLU	4.1
2	AB	220	ASP	4.1
1	AA	1118	C	4.1
8	AH	24	THR	4.1
11	AK	45	GLY	4.1
27	BE	112	PRO	4.1
3	AC	92	ALA	4.1
24	BB	40	GLN	4.1
30	BH	33	ILE	4.1
4	AD	141	ARG	4.1
31	BI	3	MET	4.1
38	BP	66	GLY	4.1
30	BH	31	THR	4.1
5	AE	147	ASP	4.1
25	BC	144	GLY	4.1
23	BA	270	ILE	4.1
27	BE	49	GLN	4.1
2	AB	85	ALA	4.1
25	BC	13	ARG	4.1
27	BE	151	VAL	4.1

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Mol	Chain	Res	Type	RSRZ
45	BW	36	GLN	4.1
53	B5	78	LYS	4.1
46	BX	30	ASP	4.1
7	AG	22	LEU	4.1
24	BB	162	MET	4.1
45	BW	29	ARG	4.1
41	BS	87	GLU	4.1
4	AD	186	LEU	4.1
11	AK	46	GLY	4.1
23	BA	149	PRO	4.1
34	BL	63	ARG	4.1
47	BY	43	TRP	4.1
2	AB	78	GLN	4.1
11	AK	62	GLN	4.1
8	AH	18	ARG	4.1
12	AL	25	PRO	4.1
38	BP	4	ILE	4.1
51	B3	43	GLY	4.1
35	BM	40	ALA	4.1
34	BL	83	VAL	4.1
37	BO	44	THR	4.1
9	AI	13	ALA	4.1
25	BC	24	SER	4.1
39	BQ	30	TYR	4.1
9	AI	53	VAL	4.1
37	BO	98	ILE	4.1
47	BY	41	PRO	4.1
48	BZ	34	PRO	4.1
10	AJ	19	SER	4.1
5	AE	151	LEU	4.0
38	BP	35	LEU	4.0
21	B0	667	U	4.0
51	B3	63	PRO	4.0
23	BA	151	LYS	4.0
23	BA	193	ILE	4.0
31	BI	4	PRO	4.0
25	BC	15	ILE	4.0
8	AH	84	ARG	4.0
23	BA	56	GLY	4.0
52	B4	23	VAL	4.0
10	AJ	65	LEU	4.0
33	BK	12	LYS	4.0

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Mol	Chain	Res	Type	RSRZ
7	AG	20	ASP	4.0
7	AG	43	PHE	4.0
24	BB	42	ASP	4.0
40	BR	16	ALA	4.0
7	AG	71	PRO	4.0
20	AT	96	GLY	4.0
38	BP	42	GLY	4.0
41	BS	61	SER	4.0
42	BT	16	GLU	4.0
25	BC	2	ALA	4.0
25	BC	191	ALA	4.0
53	B5	207	THR	4.0
3	AC	91	LEU	4.0
26	BD	88	LYS	4.0
30	BH	160	ALA	4.0
34	BL	76	VAL	4.0
9	AI	56	LEU	4.0
10	AJ	26	ALA	4.0
11	AK	99	GLN	4.0
25	BC	115	GLY	4.0
27	BE	124	ALA	4.0
38	BP	68	LYS	4.0
43	BU	8	GLY	4.0
2	AB	93	VAL	4.0
8	AH	85	ARG	4.0
5	AE	146	ALA	4.0
23	BA	42	GLY	4.0
20	AT	97	ALA	4.0
34	BL	98	LEU	4.0
40	BR	78	ALA	4.0
40	BR	80	VAL	4.0
23	BA	73	SER	4.0
21	B0	726	G	4.0
10	AJ	93	GLY	4.0
4	AD	97	LEU	4.0
4	AD	198	VAL	4.0
8	AH	65	TYR	4.0
25	BC	3	GLN	4.0
23	BA	246	PRO	4.0
6	AF	100	ASN	4.0
48	BZ	25	LEU	4.0
30	BH	141	GLY	4.0

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Mol	Chain	Res	Type	RSRZ
17	AQ	85	VAL	4.0
46	BX	16	GLN	4.0
1	AA	1534	A	4.0
25	BC	185	ARG	4.0
34	BL	27	ALA	4.0
7	AG	68	ASN	4.0
38	BP	14	VAL	4.0
48	BZ	52	TYR	4.0
8	AH	45	ILE	4.0
8	AH	69	ARG	4.0
10	AJ	28	ARG	4.0
14	AN	36	PHE	4.0
23	BA	103	ARG	4.0
32	BJ	120	VAL	4.0
8	AH	71	GLY	3.9
30	BH	64	GLY	3.9
31	BI	56	LYS	3.9
41	BS	29	HIS	3.9
53	B5	31	GLU	3.9
30	BH	148	LEU	3.9
39	BQ	90	LEU	3.9
38	BP	62	GLU	3.9
48	BZ	33	CYS	3.9
39	BQ	124	ILE	3.9
2	AB	74	LYS	3.9
34	BL	47	PHE	3.9
45	BW	19	ASP	3.9
25	BC	28	HIS	3.9
9	AI	81	ILE	3.9
4	AD	190	ASP	3.9
25	BC	9	GLN	3.9
20	AT	98	PRO	3.9
1	AA	1031	C	3.9
25	BC	58	MET	3.9
45	BW	25	LEU	3.9
3	AC	25	GLY	3.9
2	AB	236	TYR	3.9
35	BM	22	ALA	3.9
7	AG	61	VAL	3.9
37	BO	18	LEU	3.9
47	BY	64	GLY	3.9
13	AM	33	ALA	3.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
13	AM	56	LEU	3.9
25	BC	123	PHE	3.9
53	B5	18	THR	3.9
53	B5	47	LYS	3.9
23	BA	158	SER	3.9
25	BC	111	ARG	3.9
39	BQ	123	HIS	3.9
1	AA	5	U	3.9
26	BD	104	ILE	3.9
5	AE	68	GLU	3.9
25	BC	11	GLY	3.9
10	AJ	84	GLN	3.9
39	BQ	81	HIS	3.9
11	AK	95	ILE	3.9
25	BC	195	ILE	3.9
39	BQ	133	ASN	3.9
2	AB	239	VAL	3.9
10	AJ	29	ARG	3.9
26	BD	102	LYS	3.9
29	BG	68	ILE	3.9
38	BP	32	LYS	3.9
18	AR	29	PHE	3.9
6	AF	20	ALA	3.9
3	AC	87	LEU	3.9
23	BA	55	GLY	3.9
29	BG	143	ASN	3.9
30	BH	114	THR	3.9
2	AB	173	ALA	3.8
13	AM	40	ASN	3.8
25	BC	112	GLN	3.8
39	BQ	67	PRO	3.8
24	BB	105	THR	3.8
21	B0	732	G	3.8
26	BD	42	SER	3.8
37	BO	82	GLY	3.8
39	BQ	49	SER	3.8
45	BW	49	GLU	3.8
4	AD	140	VAL	3.8
7	AG	69	VAL	3.8
27	BE	62	ARG	3.8
39	BQ	129	ALA	3.8
47	BY	35	VAL	3.8

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Mol	Chain	Res	Type	RSRZ
30	BH	62	ILE	3.8
7	AG	130	GLY	3.8
42	BT	80	HIS	3.8
11	AK	66	LEU	3.8
53	B5	128	LEU	3.8
36	BN	52	GLY	3.8
11	AK	94	ALA	3.8
33	BK	59	PHE	3.8
25	BC	124	ASP	3.8
38	BP	91	THR	3.8
45	BW	46	LEU	3.8
38	BP	5	ILE	3.8
1	AA	1119	C	3.8
7	AG	135	VAL	3.8
9	AI	63	ILE	3.8
10	AJ	81	THR	3.8
13	AM	14	ARG	3.8
7	AG	67	GLU	3.8
40	BR	24	VAL	3.8
25	BC	145	THR	3.8
35	BM	47	ARG	3.8
25	BC	29	GLU	3.8
20	AT	95	ALA	3.8
31	BI	102	GLN	3.8
53	B5	144	ILE	3.8
13	AM	16	ASP	3.8
23	BA	167	GLY	3.8
50	B2	20	ALA	3.8
8	AH	86	ILE	3.8
47	BY	12	CYS	3.8
3	AC	84	ILE	3.8
48	BZ	28	PRO	3.8
50	B2	24	THR	3.8
4	AD	95	GLY	3.8
47	BY	54	GLY	3.8
2	AB	201	ILE	3.8
36	BN	112	GLY	3.8
38	BP	97	GLY	3.8
41	BS	31	GLY	3.8
47	BY	55	ARG	3.8
2	AB	88	ALA	3.8
3	AC	26	LYS	3.8

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Mol	Chain	Res	Type	RSRZ
6	AF	38	GLU	3.8
45	BW	14	PHE	3.8
38	BP	98	ILE	3.8
10	AJ	24	VAL	3.8
6	AF	75	LEU	3.8
38	BP	20	ILE	3.8
11	AK	68	ALA	3.8
2	AB	214	ILE	3.8
13	AM	8	GLU	3.8
5	AE	72	GLN	3.8
21	B0	2190	A	3.8
38	BP	63	HIS	3.8
47	BY	5	LEU	3.8
13	AM	13	LYS	3.7
36	BN	115	ALA	3.7
25	BC	4	ILE	3.7
37	BO	83	LEU	3.7
8	AH	34	GLU	3.7
13	AM	19	LEU	3.7
25	BC	183	HIS	3.7
25	BC	18	PRO	3.7
25	BC	146	GLU	3.7
3	AC	60	ALA	3.7
8	AH	25	ASP	3.7
25	BC	173	ALA	3.7
26	BD	75	SER	3.7
18	AR	28	GLU	3.7
27	BE	144	VAL	3.7
37	BO	94	VAL	3.7
43	BU	23	VAL	3.7
48	BZ	44	HIS	3.7
6	AF	33	TYR	3.7
30	BH	49	VAL	3.7
53	B5	147	TYR	3.7
38	BP	16	GLU	3.7
1	AA	995	C	3.7
52	B4	18	ARG	3.7
8	AH	7	ALA	3.7
25	BC	190	ALA	3.7
28	BF	48	ALA	3.7
38	BP	29	ALA	3.7
42	BT	26	LYS	3.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
2	AB	30	ARG	3.7
33	BK	83	ARG	3.7
34	BL	77	ARG	3.7
14	AN	40	CYS	3.7
34	BL	38	LEU	3.7
33	BK	50	ALA	3.7
7	AG	142	GLU	3.7
36	BN	107	LEU	3.7
45	BW	21	ARG	3.7
35	BM	48	GLY	3.7
14	AN	39	LEU	3.7
23	BA	214	TRP	3.7
7	AG	153	HIS	3.7
26	BD	27	ALA	3.7
34	BL	17	ARG	3.7
38	BP	19	VAL	3.7
8	AH	133	LEU	3.7
21	B0	558	G	3.7
34	BL	54	THR	3.7
37	BO	43	ALA	3.7
2	AB	170	GLU	3.7
29	BG	66	THR	3.7
43	BU	69	PHE	3.7
20	AT	99	LEU	3.7
30	BH	147	ARG	3.7
6	AF	78	GLU	3.7
33	BK	23	LYS	3.7
29	BG	34	ILE	3.7
31	BI	35	THR	3.7
6	AF	19	LEU	3.7
9	AI	48	GLU	3.7
41	BS	7	GLY	3.7
37	BO	35	ALA	3.7
3	AC	78	GLY	3.7
25	BC	122	GLY	3.7
2	AB	167	PRO	3.7
20	AT	100	ILE	3.7
30	BH	29	VAL	3.7
29	BG	69	THR	3.6
6	AF	39	LYS	3.6
43	BU	64	ASP	3.6
9	AI	39	GLY	3.6

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Mol	Chain	Res	Type	RSRZ
9	AI	61	ALA	3.6
48	BZ	45	ILE	3.6
25	BC	196	VAL	3.6
12	AL	21	LYS	3.6
37	BO	60	LEU	3.6
23	BA	85	ASP	3.6
53	B5	215	VAL	3.6
2	AB	216	SER	3.6
2	AB	28	PHE	3.6
8	AH	118	VAL	3.6
25	BC	116	LYS	3.6
1	AA	973	G	3.6
31	BI	68	ASP	3.6
34	BL	72	ASP	3.6
31	BI	132	GLU	3.6
45	BW	45	GLN	3.6
2	AB	152	PHE	3.6
2	AB	186	ALA	3.6
18	AR	33	ASP	3.6
39	BQ	65	SER	3.6
34	BL	18	VAL	3.6
5	AE	148	VAL	3.6
7	AG	104	LEU	3.6
9	AI	76	ALA	3.6
27	BE	121	VAL	3.6
30	BH	98	LYS	3.6
51	B3	60	LEU	3.6
42	BT	21	ALA	3.6
3	AC	94	LEU	3.6
37	BO	20	ARG	3.6
9	AI	26	VAL	3.6
38	BP	28	GLU	3.6
38	BP	69	ILE	3.6
49	B1	48	VAL	3.6
9	AI	84	ALA	3.6
48	BZ	37	HIS	3.6
7	AG	63	LYS	3.6
21	B0	1505	U	3.6
7	AG	125	MET	3.6
26	BD	71	LYS	3.6
28	BF	5	LEU	3.6
42	BT	67	LYS	3.6

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Mol	Chain	Res	Type	RSRZ
6	AF	32	ASN	3.6
24	BB	106	GLY	3.6
38	BP	96	LEU	3.6
10	AJ	15	THR	3.6
41	BS	32	GLN	3.6
2	AB	188	ALA	3.6
24	BB	202	ALA	3.6
49	B1	5	GLY	3.6
9	AI	78	LYS	3.6
21	B0	895	G	3.6
50	B2	31	LEU	3.6
6	AF	60	PHE	3.6
38	BP	2	PHE	3.6
38	BP	40	VAL	3.6
4	AD	98	GLU	3.5
4	AD	67	ILE	3.5
39	BQ	92	VAL	3.5
11	AK	127	LYS	3.5
13	AM	12	ASN	3.5
41	BS	99	VAL	3.5
53	B5	162	GLN	3.5
10	AJ	48	THR	3.5
10	AJ	92	THR	3.5
53	B5	217	ARG	3.5
2	AB	223	ILE	3.5
2	AB	232	PRO	3.5
4	AD	145	GLU	3.5
2	AB	31	TYR	3.5
2	AB	101	MET	3.5
29	BG	111	LYS	3.5
41	BS	109	ALA	3.5
9	AI	33	PHE	3.5
10	AJ	23	ILE	3.5
23	BA	220	HIS	3.5
6	AF	76	ALA	3.5
9	AI	75	ASP	3.5
3	AC	23	TYR	3.5
39	BQ	76	LYS	3.5
10	AJ	25	GLU	3.5
9	AI	72	GLY	3.5
18	AR	86	VAL	3.5
28	BF	12	GLY	3.5

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Mol	Chain	Res	Type	RSRZ
47	BY	15	ILE	3.5
39	BQ	103	LEU	3.5
9	AI	3	GLN	3.5
29	BG	26	ALA	3.5
34	BL	68	GLN	3.5
25	BC	186	LEU	3.5
36	BN	53	VAL	3.5
27	BE	157	TYR	3.5
27	BE	102	ALA	3.5
39	BQ	80	LEU	3.5
7	AG	64	GLN	3.5
13	AM	44	ARG	3.5
23	BA	61	LEU	3.5
2	AB	94	ASN	3.5
23	BA	205	VAL	3.5
25	BC	23	ASN	3.5
53	B5	24	ARG	3.5
53	B5	29	SER	3.5
21	B0	733	G	3.5
21	B0	905	G	3.5
24	BB	56	GLU	3.5
28	BF	23	GLY	3.5
53	B5	210	GLY	3.5
2	AB	215	LEU	3.5
5	AE	110	LEU	3.5
9	AI	4	TYR	3.5
33	BK	22	ALA	3.5
26	BD	73	SER	3.5
38	BP	93	ILE	3.5
33	BK	68	ARG	3.5
50	B2	46	ASP	3.5
2	AB	217	ARG	3.5
2	AB	219	VAL	3.5
37	BO	66	ASN	3.5
37	BO	75	ASN	3.5
25	BC	165	SER	3.5
26	BD	2	GLN	3.4
25	BC	12	GLY	3.4
38	BP	39	PHE	3.4
38	BP	15	SER	3.4
42	BT	10	PRO	3.4
10	AJ	87	THR	3.4

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Mol	Chain	Res	Type	RSRZ
21	B0	2298	U	3.4
10	AJ	45	ARG	3.4
53	B5	105	ARG	3.4
7	AG	24	THR	3.4
35	BM	67	THR	3.4
38	BP	95	ILE	3.4
2	AB	26	PRO	3.4
28	BF	17	VAL	3.4
39	BQ	68	VAL	3.4
43	BU	29	GLU	3.4
53	B5	41	MSE	3.4
37	BO	79	PHE	3.4
31	BI	25	LEU	3.4
25	BC	10	ASN	3.4
2	AB	66	GLY	3.4
33	BK	75	VAL	3.4
34	BL	67	ALA	3.4
3	AC	77	ILE	3.4
36	BN	101	ARG	3.4
2	AB	199	TYR	3.4
35	BM	11	LEU	3.4
41	BS	33	THR	3.4
21	B0	727	U	3.4
49	B1	38	LYS	3.4
13	AM	39	ILE	3.4
26	BD	95	ARG	3.4
32	BJ	97	ARG	3.4
49	B1	43	VAL	3.4
37	BO	113	SER	3.4
5	AE	81	GLU	3.4
10	AJ	22	LYS	3.4
25	BC	88	PRO	3.4
39	BQ	42	VAL	3.4
25	BC	110	SER	3.4
41	BS	86	PRO	3.4
25	BC	117	LEU	3.4
45	BW	57	LYS	3.4
3	AC	81	GLY	3.4
24	BB	67	PHE	3.4
2	AB	69	LEU	3.4
17	AQ	51	TYR	3.4
27	BE	131	ILE	3.4

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Mol	Chain	Res	Type	RSRZ
25	BC	142	LEU	3.4
7	AG	139	GLU	3.4
29	BG	135	GLY	3.4
10	AJ	67	THR	3.4
25	BC	106	MET	3.4
46	BX	46	THR	3.4
5	AE	91	LEU	3.4
18	AR	18	ARG	3.4
4	AD	178	VAL	3.4
25	BC	137	ALA	3.4
2	AB	72	GLY	3.4
34	BL	69	ASP	3.4
5	AE	132	ALA	3.4
11	AK	43	SER	3.4
4	AD	183	GLY	3.4
5	AE	152	ARG	3.4
25	BC	8	GLY	3.4
18	AR	24	ALA	3.3
26	BD	87	ILE	3.3
31	BI	88	THR	3.3
32	BJ	4	HIS	3.3
41	BS	101	GLY	3.3
45	BW	42	ARG	3.3
30	BH	132	PHE	3.3
38	BP	94	LYS	3.3
7	AG	101	LEU	3.3
18	AR	16	PRO	3.3
2	AB	131	PRO	3.3
8	AH	61	VAL	3.3
21	B0	148	C	3.3
53	B5	20	TYR	3.3
2	AB	192	SER	3.3
6	AF	35	ALA	3.3
35	BM	6	THR	3.3
23	BA	211	ARG	3.3
2	AB	25	ASN	3.3
8	AH	67	PRO	3.3
2	AB	65	GLY	3.3
23	BA	262	LYS	3.3
26	BD	114	PHE	3.3
4	AD	180	GLY	3.3
24	BB	57	ARG	3.3

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Mol	Chain	Res	Type	RSRZ
41	BS	100	ASP	3.3
51	B3	6	THR	3.3
25	BC	37	SER	3.3
21	B0	1491	C	3.3
24	BB	120	TRP	3.3
51	B3	64	ARG	3.3
11	AK	105	VAL	3.3
23	BA	180	GLY	3.3
29	BG	24	GLY	3.3
48	BZ	40	LYS	3.3
1	AA	73	C	3.3
9	AI	79	LEU	3.3
8	AH	42	GLU	3.3
27	BE	70	THR	3.3
37	BO	14	HIS	3.3
4	AD	20	TYR	3.3
27	BE	10	ALA	3.3
39	BQ	126	ILE	3.3
3	AC	83	ARG	3.3
38	BP	61	VAL	3.3
26	BD	86	GLY	3.3
13	AM	6	GLY	3.3
33	BK	24	GLY	3.3
36	BN	51	GLU	3.3
38	BP	64	GLY	3.3
18	AR	85	LEU	3.3
52	B4	17	VAL	3.3
23	BA	234	GLY	3.3
49	B1	6	PRO	3.3
9	AI	9	ARG	3.3
11	AK	49	GLY	3.3
51	B3	26	LYS	3.3
8	AH	53	VAL	3.3
32	BJ	99	VAL	3.3
1	AA	1120	G	3.3
21	B0	903	G	3.3
25	BC	188	ILE	3.3
1	AA	182	U	3.3
30	BH	59	ALA	3.3
11	AK	44	SER	3.3
2	AB	213	LEU	3.3
25	BC	143	ASP	3.3

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Mol	Chain	Res	Type	RSRZ
34	BL	71	HIS	3.3
40	BR	42	ILE	3.3
43	BU	6	GLY	3.3
23	BA	19	ALA	3.3
6	AF	59	TYR	3.3
13	AM	5	ALA	3.2
29	BG	127	VAL	3.2
45	BW	59	GLU	3.2
27	BE	137	ASP	3.2
43	BU	53	MET	3.2
8	AH	63	LEU	3.2
30	BH	57	LEU	3.2
30	BH	72	PRO	3.2
43	BU	79	ILE	3.2
38	BP	92	ALA	3.2
39	BQ	113	SER	3.2
23	BA	217	ARG	3.2
53	B5	175	LYS	3.2
6	AF	21	LEU	3.2
9	AI	28	VAL	3.2
41	BS	37	LEU	3.2
2	AB	231	GLU	3.2
6	AF	31	GLU	3.2
3	AC	50	ALA	3.2
42	BT	93	GLU	3.2
37	BO	92	ARG	3.2
40	BR	31	PRO	3.2
21	B0	1185	C	3.2
2	AB	185	ILE	3.2
25	BC	56	ARG	3.2
24	BB	81	PHE	3.2
45	BW	8	ASN	3.2
21	B0	2285	U	3.2
32	BJ	73	GLU	3.2
21	B0	1425	G	3.2
32	BJ	62	LYS	3.2
51	B3	47	GLY	3.2
39	BQ	75	ALA	3.2
47	BY	71	SER	3.2
25	BC	141	GLY	3.2
53	B5	166	GLN	3.2
10	AJ	49	VAL	3.2

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Mol	Chain	Res	Type	RSRZ
26	BD	72	LYS	3.2
36	BN	96	ARG	3.2
3	AC	191	THR	3.2
41	BS	43	ASP	3.2
6	AF	93	SER	3.2
30	BH	143	ALA	3.2
31	BI	52	VAL	3.2
42	BT	92	VAL	3.2
4	AD	107	ARG	3.2
33	BK	84	MET	3.2
35	BM	79	ALA	3.2
41	BS	66	GLN	3.2
6	AF	43	LEU	3.2
25	BC	181	LEU	3.2
28	BF	46	LEU	3.2
21	B0	1600	U	3.2
23	BA	123	ALA	3.2
28	BF	51	ARG	3.2
25	BC	6	VAL	3.2
30	BH	102	ARG	3.2
4	AD	128	VAL	3.2
24	BB	169	ASN	3.2
5	AE	134	ALA	3.2
8	AH	16	ALA	3.2
19	AS	66	MET	3.2
1	AA	1149	C	3.2
7	AG	74	GLU	3.2
23	BA	139	GLY	3.2
38	BP	71	ILE	3.2
39	BQ	50	VAL	3.2
13	AM	60	VAL	3.2
25	BC	121	ASP	3.2
32	BJ	96	TYR	3.2
2	AB	187	LEU	3.2
4	AD	96	LEU	3.2
9	AI	83	ARG	3.1
18	AR	26	LEU	3.2
30	BH	63	ARG	3.1
1	AA	183	G	3.1
9	AI	8	GLY	3.1
5	AE	66	MET	3.1
28	BF	20	VAL	3.1

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Mol	Chain	Res	Type	RSRZ
37	BO	61	TRP	3.1
2	AB	134	GLU	3.1
23	BA	30	GLU	3.1
25	BC	125	ILE	3.1
25	BC	189	ASP	3.1
2	AB	79	ASP	3.1
50	B2	41	GLN	3.1
21	B0	2195	C	3.1
41	BS	107	ALA	3.1
2	AB	174	VAL	3.1
23	BA	41	GLY	3.1
2	AB	32	ILE	3.1
9	AI	102	LEU	3.1
1	AA	72	A	3.1
1	AA	225	C	3.1
1	AA	1112	C	3.1
21	B0	1078	A	3.1
22	B9	91	A	3.1
32	BJ	8	PRO	3.1
34	BL	99	ARG	3.1
1	AA	688	G	3.1
7	AG	141	VAL	3.1
24	BB	47	VAL	3.1
35	BM	86	GLN	3.1
41	BS	111	GLY	3.1
25	BC	90	SER	3.1
25	BC	135	SER	3.1
43	BU	40	GLN	3.1
2	AB	148	TYR	3.1
29	BG	23	VAL	3.1
4	AD	184	LYS	3.1
39	BQ	6	GLN	3.1
27	BE	113	VAL	3.1
3	AC	43	LEU	3.1
25	BC	138	LYS	3.1
39	BQ	127	ILE	3.1
41	BS	69	GLN	3.1
11	AK	58	PRO	3.1
4	AD	176	LEU	3.1
28	BF	39	THR	3.1
30	BH	129	HIS	3.1
3	AC	29	TYR	3.1

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Mol	Chain	Res	Type	RSRZ
25	BC	27	LEU	3.1
26	BD	170	LEU	3.1
23	BA	243	GLY	3.1
21	B0	149	A	3.1
23	BA	28	ARG	3.1
49	B1	4	ASP	3.1
2	AB	184	VAL	3.1
11	AK	19	ALA	3.1
25	BC	57	LYS	3.1
32	BJ	129	ALA	3.1
1	AA	181	G	3.1
21	B0	1602	G	3.1
4	AD	151	LYS	3.1
32	BJ	58	ALA	3.1
30	BH	163	PRO	3.1
41	BS	85	ASP	3.1
1	AA	180	U	3.1
23	BA	98	ALA	3.1
28	BF	10	ARG	3.1
2	AB	16	HIS	3.1
35	BM	69	ALA	3.1
14	AN	34	TYR	3.1
25	BC	140	ASN	3.1
37	BO	39	LEU	3.0
6	AF	28	ARG	3.0
7	AG	129	GLU	3.0
2	AB	222	ILE	3.0
23	BA	156	ALA	3.0
25	BC	34	GLN	3.0
25	BC	64	THR	3.0
28	BF	36	VAL	3.0
29	BG	125	ASN	3.0
21	B0	1189	G	3.0
8	AH	98	LYS	3.0
3	AC	76	VAL	3.0
17	AQ	92	ARG	3.0
40	BR	2	SER	3.0
53	B5	30	VAL	3.0
34	BL	62	SER	3.0
41	BS	51	VAL	3.0
25	BC	157	THR	3.0
2	AB	68	ILE	3.0

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Mol	Chain	Res	Type	RSRZ
4	AD	146	ILE	3.0
27	BE	145	ALA	3.0
43	BU	60	PHE	3.0
37	BO	78	THR	3.0
18	AR	31	LEU	3.0
21	B0	725	C	3.0
25	BC	166	TRP	3.0
3	AC	125	GLU	3.0
32	BJ	59	ARG	3.0
21	B0	1536	G	3.0
2	AB	81	VAL	3.0
25	BC	7	ILE	3.0
18	AR	23	LYS	3.0
2	AB	137	ARG	3.0
41	BS	98	ILE	3.0
21	B0	1426	U	3.0
1	AA	1400	C	3.0
8	AH	58	TYR	3.0
21	B0	3146	A	3.0
27	BE	98	LEU	3.0
48	BZ	41	LEU	3.0
53	B5	71	GLU	3.0
23	BA	171	ASP	3.0
2	AB	91	PRO	3.0
25	BC	109	ALA	3.0
35	BM	23	ALA	3.0
42	BT	161	ALA	3.0
49	B1	16	ALA	3.0
3	AC	59	ARG	3.0
27	BE	17	VAL	3.0
52	B4	30	VAL	3.0
2	AB	166	ASP	3.0
47	BY	46	GLU	3.0
2	AB	162	ILE	3.0
2	AB	211	ILE	3.0
45	BW	56	VAL	3.0
12	AL	22	SER	3.0
7	AG	25	ALA	3.0
30	BH	99	VAL	3.0
32	BJ	86	THR	3.0
53	B5	196	VAL	3.0
2	AB	183	PRO	3.0

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Mol	Chain	Res	Type	RSRZ
26	BD	131	GLY	3.0
41	BS	60	PRO	3.0
9	AI	27	THR	3.0
24	BB	100	GLU	3.0
24	BB	107	THR	3.0
25	BC	149	LEU	3.0
50	B2	16	HIS	3.0
9	AI	60	ASP	3.0
28	BF	34	LEU	3.0
1	AA	83	C	3.0
13	AM	37	THR	3.0
23	BA	241	GLY	3.0
9	AI	41	VAL	2.9
38	BP	18	ASP	2.9
45	BW	43	VAL	2.9
23	BA	53	PHE	2.9
4	AD	150	GLU	2.9
6	AF	4	TYR	2.9
23	BA	155	LEU	2.9
3	AC	96	GLY	2.9
25	BC	105	ALA	2.9
40	BR	12	ILE	2.9
27	BE	123	PHE	2.9
11	AK	30	VAL	2.9
32	BJ	63	ARG	2.9
53	B5	75	TYR	2.9
49	B1	34	LYS	2.9
5	AE	5	ASP	2.9
25	BC	136	TRP	2.9
27	BE	140	LEU	2.9
41	BS	95	ARG	2.9
29	BG	46	ALA	2.9
4	AD	130	GLY	2.9
24	BB	23	VAL	2.9
43	BU	62	LEU	2.9
1	AA	85	U	2.9
2	AB	226	ARG	2.9
6	AF	46	ARG	2.9
23	BA	240	THR	2.9
27	BE	6	LYS	2.9
39	BQ	121	THR	2.9
25	BC	153	ASP	2.9

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Mol	Chain	Res	Type	RSRZ
2	AB	202	PRO	2.9
26	BD	24	SER	2.9
26	BD	26	MET	2.9
32	BJ	143	PRO	2.9
4	AD	63	LYS	2.9
25	BC	65	GLY	2.9
4	AD	173	TRP	2.9
40	BR	46	PHE	2.9
10	AJ	74	ILE	2.9
23	BA	128	GLY	2.9
29	BG	59	ILE	2.9
38	BP	33	VAL	2.9
23	BA	260	ARG	2.9
23	BA	261	ARG	2.9
1	AA	1179	A	2.9
9	AI	101	PHE	2.9
39	BQ	73	ASN	2.9
53	B5	12	LEU	2.9
4	AD	177	ASP	2.9
30	BH	89	ALA	2.9
41	BS	44	GLN	2.9
4	AD	174	LEU	2.9
25	BC	134	ILE	2.9
3	AC	85	ARG	2.9
41	BS	72	ARG	2.9
6	AF	17	SER	2.9
6	AF	67	MET	2.9
6	AF	88	VAL	2.9
2	AB	54	THR	2.9
7	AG	73	MET	2.9
8	AH	99	GLU	2.9
5	AE	109	ILE	2.9
41	BS	97	GLN	2.9
4	AD	167	GLY	2.9
25	BC	147	LYS	2.9
24	BB	159	HIS	2.9
39	BQ	83	ASP	2.9
2	AB	71	VAL	2.9
53	B5	36	PHE	2.9
1	AA	139	G	2.9
9	AI	24	GLY	2.9
34	BL	45	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
24	BB	194	GLY	2.9
25	BC	119	ALA	2.9
41	BS	110	SER	2.9
25	BC	184	ASP	2.8
1	AA	1533	C	2.8
30	BH	161	GLN	2.8
41	BS	113	THR	2.8
26	BD	129	ASN	2.8
25	BC	30	VAL	2.8
50	B2	32	ALA	2.8
25	BC	180	ILE	2.8
32	BJ	11	GLY	2.8
3	AC	48	TYR	2.8
11	AK	61	ALA	2.8
2	AB	228	GLY	2.8
7	AG	137	LYS	2.8
39	BQ	24	GLY	2.8
1	AA	184	G	2.8
23	BA	254	THR	2.8
29	BG	142	PRO	2.8
3	AC	157	ILE	2.8
2	AB	190	THR	2.8
2	AB	40	HIS	2.8
3	AC	127	ARG	2.8
4	AD	108	LEU	2.8
14	AN	53	LEU	2.8
40	BR	93	GLY	2.8
2	AB	75	LYS	2.8
31	BI	22	ILE	2.8
4	AD	127	THR	2.8
25	BC	152	THR	2.8
7	AG	70	LYS	2.8
53	B5	168	PHE	2.8
5	AE	93	PRO	2.8
7	AG	126	ASP	2.8
8	AH	26	VAL	2.8
39	BQ	128	VAL	2.8
22	B9	89	G	2.8
24	BB	163	GLU	2.8
25	BC	33	TRP	2.8
41	BS	73	GLU	2.8
2	AB	164	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
3	AC	189	ALA	2.8
53	B5	100	VAL	2.8
24	BB	134	TRP	2.8
41	BS	23	ILE	2.8
9	AI	7	THR	2.8
19	AS	60	VAL	2.8
21	B0	2355	A	2.8
37	BO	47	TYR	2.8
1	AA	1003	G	2.8
1	AA	1155	G	2.8
22	B9	43	G	2.8
2	AB	12	GLU	2.8
6	AF	91	VAL	2.8
9	AI	70	LYS	2.8
2	AB	138	LEU	2.8
25	BC	5	ASN	2.8
25	BC	89	ARG	2.8
29	BG	27	LEU	2.8
32	BJ	128	ALA	2.8
3	AC	158	GLY	2.8
9	AI	57	GLY	2.8
34	BL	82	GLU	2.8
41	BS	50	GLY	2.8
17	AQ	82	MET	2.8
7	AG	145	ALA	2.8
10	AJ	46	ARG	2.8
23	BA	60	ARG	2.8
19	AS	49	ILE	2.8
2	AB	70	PHE	2.8
21	B0	729	A	2.8
25	BC	167	VAL	2.8
41	BS	34	GLY	2.8
43	BU	71	ASN	2.8
51	B3	7	HIS	2.8
50	B2	42	LEU	2.8
6	AF	68	PRO	2.8
39	BQ	91	PHE	2.8
35	BM	109	GLU	2.8
8	AH	70	GLN	2.8
25	BC	187	VAL	2.8
3	AC	180	ALA	2.8
25	BC	132	ASN	2.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
8	AH	33	GLU	2.8
39	BQ	79	ALA	2.8
43	BU	42	GLY	2.8
10	AJ	77	PRO	2.8
8	AH	31	PHE	2.7
14	AN	38	GLY	2.7
50	B2	17	GLY	2.7
39	BQ	32	ARG	2.7
1	AA	1147	C	2.7
12	AL	23	LYS	2.7
4	AD	192	GLU	2.7
8	AH	12	ARG	2.7
9	AI	66	ARG	2.7
41	BS	112	LYS	2.7
2	AB	209	ARG	2.7
39	BQ	28	ALA	2.7
48	BZ	23	HIS	2.7
50	B2	43	THR	2.7
9	AI	17	VAL	2.7
1	AA	74	G	2.7
1	AA	2003	G	2.7
30	BH	106	TYR	2.7
24	BB	135	HIS	2.7
29	BG	128	ALA	2.7
21	B0	1567	A	2.7
53	B5	209	MSE	2.7
2	AB	89	GLY	2.7
4	AD	139	ARG	2.7
24	BB	161	GLY	2.7
39	BQ	35	PRO	2.7
2	AB	230	VAL	2.7
28	BF	9	SER	2.7
29	BG	62	ASP	2.7
30	BH	130	ALA	2.7
2	AB	163	PHE	2.7
7	AG	14	PRO	2.7
18	AR	72	ARG	2.7
41	BS	105	ARG	2.7
10	AJ	64	GLU	2.7
21	B0	1734	C	2.7
23	BA	237	GLU	2.7
41	BS	30	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
25	BC	61	GLN	2.7
1	AA	998	G	2.7
1	AA	1002	G	2.7
2	AB	141	GLU	2.7
7	AG	40	ALA	2.7
18	AR	76	LEU	2.7
32	BJ	57	ILE	2.7
34	BL	10	LEU	2.7
36	BN	49	ALA	2.7
37	BO	56	ASP	2.7
34	BL	36	THR	2.7
39	BQ	122	SER	2.7
1	AA	972	C	2.7
6	AF	37	VAL	2.7
10	AJ	85	LEU	2.7
25	BC	35	LEU	2.7
43	BU	18	PRO	2.7
36	BN	105	TYR	2.7
53	B5	27	THR	2.7
3	AC	121	ALA	2.7
7	AG	99	LEU	2.7
45	BW	44	ARG	2.7
52	B4	16	VAL	2.7
13	AM	2	ALA	2.7
25	BC	107	ALA	2.7
41	BS	68	GLY	2.7
41	BS	89	GLY	2.7
50	B2	28	ARG	2.7
11	AK	21	ILE	2.7
25	BC	178	TYR	2.7
53	B5	193	LYS	2.7
23	BA	22	SER	2.7
27	BE	143	GLN	2.7
53	B5	28	GLN	2.7
51	B3	36	LYS	2.7
2	AB	140	HIS	2.7
2	AB	136	VAL	2.7
6	AF	48	LEU	2.7
24	BB	77	ILE	2.7
13	AM	52	GLU	2.7
6	AF	18	GLN	2.7
36	BN	63	ARG	2.7

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Mol	Chain	Res	Type	RSRZ
43	BU	3	HIS	2.7
9	AI	80	GLY	2.7
14	AN	24	CYS	2.7
2	AB	95	GLN	2.7
39	BQ	43	ASP	2.7
3	AC	153	VAL	2.7
37	BO	15	LYS	2.7
40	BR	76	LYS	2.7
41	BS	114	ILE	2.7
3	AC	73	PRO	2.7
3	AC	82	GLU	2.7
5	AE	145	LYS	2.7
31	BI	81	ILE	2.7
1	AA	1158	C	2.6
23	BA	142	VAL	2.6
5	AE	113	ALA	2.6
8	AH	40	ALA	2.6
25	BC	118	VAL	2.6
11	AK	108	ILE	2.6
49	B1	19	GLY	2.6
30	BH	140	GLN	2.6
21	B0	1487	C	2.6
36	BN	108	ARG	2.6
24	BB	87	ASP	2.6
53	B5	192	ASN	2.6
11	AK	92	GLU	2.6
39	BQ	29	LYS	2.6
41	BS	83	LEU	2.6
2	AB	227	GLY	2.6
41	BS	21	THR	2.6
4	AD	195	ALA	2.6
48	BZ	30	LEU	2.6
6	AF	90	VAL	2.6
7	AG	27	ILE	2.6
26	BD	176	PRO	2.6
32	BJ	122	VAL	2.6
4	AD	200	GLU	2.6
8	AH	128	GLY	2.6
41	BS	96	LYS	2.6
32	BJ	136	ALA	2.6
34	BL	90	ARG	2.6
42	BT	20	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
38	BP	8	GLY	2.6
43	BU	52	GLY	2.6
17	AQ	93	GLN	2.6
26	BD	3	GLN	2.6
1	AA	1033	G	2.6
21	B0	2283	G	2.6
34	BL	61	HIS	2.6
23	BA	238	GLY	2.6
21	B0	904	U	2.6
1	AA	1249	C	2.6
5	AE	89	ILE	2.6
52	B4	3	VAL	2.6
2	AB	51	LEU	2.6
25	BC	168	SER	2.6
41	BS	104	VAL	2.6
2	AB	63	MET	2.6
4	AD	165	MET	2.6
21	B0	893	G	2.6
21	B0	2287	G	2.6
1	AA	827	U	2.6
1	AA	1030	U	2.6
11	AK	126	ARG	2.6
21	B0	900	U	2.6
1	AA	190	A	2.6
3	AC	75	VAL	2.6
26	BD	113	ASP	2.6
10	AJ	30	SER	2.6
13	AM	53	VAL	2.6
6	AF	69	GLU	2.6
23	BA	160	GLY	2.6
27	BE	59	GLN	2.6
34	BL	16	ALA	2.6
25	BC	148	VAL	2.6
2	AB	82	ARG	2.6
33	BK	123	GLY	2.6
2	AB	55	PHE	2.6
2	AB	165	VAL	2.6
5	AE	41	VAL	2.6
13	AM	30	ALA	2.6
29	BG	54	PRO	2.6
23	BA	239	ARG	2.6
41	BS	20	ASP	2.6

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Mol	Chain	Res	Type	RSRZ
50	B2	34	ARG	2.6
50	B2	35	ARG	2.6
1	AA	140	A	2.6
7	AG	103	TRP	2.6
26	BD	85	VAL	2.6
8	AH	55	GLY	2.6
3	AC	39	ILE	2.6
6	AF	15	ASP	2.6
3	AC	35	GLU	2.6
8	AH	5	PRO	2.6
14	AN	27	CYS	2.6
45	BW	48	ARG	2.5
52	B4	19	ARG	2.5
4	AD	179	GLU	2.5
1	AA	1297	C	2.5
41	BS	24	VAL	2.5
6	AF	44	GLY	2.5
10	AJ	10	GLY	2.5
3	AC	205	GLY	2.5
5	AE	75	THR	2.5
12	AL	26	ALA	2.5
40	BR	11	VAL	2.5
32	BJ	18	ARG	2.5
2	AB	149	LEU	2.5
10	AJ	16	LEU	2.5
2	AB	41	ILE	2.5
8	AH	14	ARG	2.5
24	BB	125	GLY	2.5
1	AA	845	A	2.5
1	AA	1493	A	2.5
5	AE	82	VAL	2.5
10	AJ	62	HIS	2.5
7	AG	60	LYS	2.5
25	BC	48	ARG	2.5
27	BE	122	THR	2.5
43	BU	4	LYS	2.5
27	BE	22	GLY	2.5
37	BO	62	ILE	2.5
37	BO	12	ARG	2.5
1	AA	825	G	2.5
1	AA	1151	A	2.5
26	BD	120	ASN	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
37	BO	81	ASN	2.5
53	B5	163	PRO	2.5
2	AB	207	ALA	2.5
10	AJ	18	ALA	2.5
6	AF	34	GLY	2.5
2	AB	150	SER	2.5
4	AD	65	ARG	2.5
38	BP	77	GLY	2.5
45	BW	54	ASN	2.5
9	AI	86	VAL	2.5
1	AA	210	C	2.5
26	BD	68	THR	2.5
41	BS	8	SER	2.5
30	BH	105	GLY	2.5
32	BJ	79	GLN	2.5
45	BW	61	ALA	2.5
51	B3	53	ALA	2.5
3	AC	86	VAL	2.5
7	AG	150	ALA	2.5
49	B1	22	TYR	2.5
1	AA	826	C	2.5
40	BR	74	ASP	2.5
43	BU	51	VAL	2.5
47	BY	36	TRP	2.5
2	AB	86	GLU	2.5
25	BC	126	ALA	2.5
3	AC	201	TYR	2.5
29	BG	126	THR	2.5
50	B2	33	ARG	2.5
8	AH	23	SER	2.5
11	AK	93	GLN	2.5
27	BE	27	LYS	2.5
32	BJ	5	ASP	2.5
8	AH	60	ARG	2.5
1	AA	1381	U	2.5
5	AE	106	PRO	2.5
9	AI	16	ARG	2.5
49	B1	44	ALA	2.5
1	AA	974	A	2.5
1	AA	1152	A	2.5
2	AB	168	THR	2.5
3	AC	37	GLN	2.5

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Mol	Chain	Res	Type	RSRZ
21	B0	1535	C	2.5
26	BD	112	ARG	2.5
32	BJ	16	ARG	2.5
4	AD	175	SER	2.5
12	AL	42	THR	2.5
5	AE	133	TYR	2.5
20	AT	49	ALA	2.5
24	BB	167	VAL	2.5
27	BE	28	GLY	2.5
2	AB	205	ASP	2.4
7	AG	140	ASP	2.4
26	BD	123	ASP	2.4
40	BR	36	THR	2.4
7	AG	133	GLY	2.4
3	AC	148	GLY	2.4
7	AG	144	MET	2.4
6	AF	65	VAL	2.4
2	AB	67	THR	2.4
3	AC	90	GLU	2.4
1	AA	6	G	2.4
1	AA	211	G	2.4
1	AA	1202	G	2.4
7	AG	96	GLN	2.4
1	AA	1296	C	2.4
21	B0	858	G	2.4
21	B0	1504	G	2.4
14	AN	41	ARG	2.4
23	BA	244	ARG	2.4
33	BK	17	ARG	2.4
52	B4	22	ARG	2.4
4	AD	93	PHE	2.4
6	AF	80	ARG	2.4
8	AH	48	TYR	2.4
21	B0	1523	A	2.4
8	AH	64	LYS	2.4
13	AM	11	ARG	2.4
29	BG	129	GLY	2.4
29	BG	132	ARG	2.4
4	AD	207	TYR	2.4
41	BS	22	VAL	2.4
43	BU	19	LYS	2.4
38	BP	17	GLY	2.4

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Mol	Chain	Res	Type	RSRZ
23	BA	257	LEU	2.4
2	AB	161	ALA	2.4
2	AB	191	ASP	2.4
21	B0	248	A	2.4
21	B0	1568	A	2.4
25	BC	73	SER	2.4
41	BS	82	ALA	2.4
8	AH	117	GLY	2.4
21	B0	902	U	2.4
21	B0	2284	U	2.4
42	BT	32	PHE	2.4
26	BD	171	GLN	2.4
5	AE	71	LEU	2.4
29	BG	105	LEU	2.4
5	AE	42	GLY	2.4
1	AA	723	U	2.4
7	AG	154	TYR	2.4
21	B0	2288	A	2.4
39	BQ	132	GLY	2.4
25	BC	133	PHE	2.4
29	BG	61	ALA	2.4
8	AH	32	LYS	2.4
41	BS	84	VAL	2.4
20	AT	51	GLU	2.4
2	AB	189	ASP	2.4
6	AF	16	GLN	2.4
32	BJ	15	ASP	2.4
2	AB	97	TRP	2.4
17	AQ	90	ILE	2.4
21	B0	150	A	2.4
6	AF	77	ARG	2.4
12	AL	20	LYS	2.4
38	BP	24	SER	2.4
8	AH	127	LEU	2.4
1	AA	141	A	2.4
13	AM	59	TYR	2.4
25	BC	87	LYS	2.4
30	BH	94	LYS	2.4
9	AI	90	PRO	2.4
25	BC	31	VAL	2.4
10	AJ	83	GLU	2.4
12	AL	27	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
51	B3	23	MET	2.4
21	B0	626	A	2.4
27	BE	141	VAL	2.4
32	BJ	74	VAL	2.4
3	AC	203	PHE	2.4
8	AH	8	ASP	2.4
3	AC	89	GLU	2.4
20	AT	33	ILE	2.4
53	B5	9	ILE	2.4
10	AJ	11	PHE	2.4
40	BR	73	ASN	2.4
53	B5	173	ASP	2.4
25	BC	93	TYR	2.4
4	AD	172	PRO	2.3
25	BC	120	VAL	2.3
29	BG	52	ILE	2.3
1	AA	1231	G	2.3
3	AC	108	ASN	2.3
17	AQ	50	LYS	2.3
34	BL	40	LYS	2.3
4	AD	170	VAL	2.3
41	BS	47	VAL	2.3
37	BO	57	PHE	2.3
17	AQ	55	ASP	2.3
30	BH	171	LEU	2.3
23	BA	253	PRO	2.3
45	BW	47	ARG	2.3
40	BR	15	LYS	2.3
11	AK	100	ALA	2.3
13	AM	9	ILE	2.3
45	BW	53	LEU	2.3
1	AA	994	A	2.3
21	B0	1057	A	2.3
26	BD	111	ILE	2.3
2	AB	96	ARG	2.3
7	AG	78	ARG	2.3
52	B4	7	VAL	2.3
20	AT	50	GLU	2.3
21	B0	734	G	2.3
25	BC	70	GLY	2.3
10	AJ	96	ILE	2.3
3	AC	44	GLU	2.3

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Mol	Chain	Res	Type	RSRZ
24	BB	153	GLY	2.3
1	AA	844	A	2.3
6	AF	81	ILE	2.3
14	AN	42	ILE	2.3
24	BB	204	ALA	2.3
26	BD	122	PHE	2.3
13	AM	46	LYS	2.3
7	AG	12	LEU	2.3
9	AI	87	GLN	2.3
17	AQ	76	LEU	2.3
18	AR	37	VAL	2.3
36	BN	122	SER	2.3
53	B5	42	LYS	2.3
3	AC	149	ALA	2.3
36	BN	62	SER	2.3
13	AM	17	VAL	2.3
42	BT	25	ASN	2.3
49	B1	29	ARG	2.3
21	B0	906	U	2.3
3	AC	198	VAL	2.3
23	BA	157	ARG	2.3
25	BC	32	THR	2.3
51	B3	15	LYS	2.3
24	BB	9	ILE	2.3
24	BB	188	ILE	2.3
39	BQ	64	ALA	2.3
49	B1	27	ASN	2.3
6	AF	92	LYS	2.3
52	B4	36	GLN	2.3
32	BJ	9	THR	2.3
2	AB	58	ILE	2.3
8	AH	62	TYR	2.3
10	AJ	95	GLU	2.3
12	AL	64	TYR	2.3
32	BJ	134	GLU	2.3
26	BD	81	GLN	2.3
28	BF	28	TRP	2.3
9	AI	29	ASN	2.3
12	AL	24	VAL	2.3
35	BM	7	ILE	2.3
42	BT	82	ASP	2.3
21	B0	728	G	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
2	AB	203	GLY	2.3
3	AC	74	GLY	2.3
11	AK	57	THR	2.3
38	BP	76	SER	2.3
3	AC	166	GLU	2.3
13	AM	61	GLU	2.3
21	B0	901	A	2.3
26	BD	100	LEU	2.3
28	BF	7	GLU	2.3
2	AB	206	ASP	2.3
6	AF	9	VAL	2.3
19	AS	62	ILE	2.3
43	BU	74	LYS	2.3
53	B5	211	LYS	2.3
15	AO	67	LEU	2.3
29	BG	87	GLY	2.3
2	AB	102	LEU	2.3
2	AB	133	LYS	2.3
25	BC	104	LEU	2.3
34	BL	19	ALA	2.3
10	AJ	61	GLU	2.3
39	BQ	38	VAL	2.3
47	BY	42	PHE	2.3
33	BK	15	ARG	2.3
25	BC	150	LEU	2.3
42	BT	94	VAL	2.3
45	BW	37	LEU	2.3
24	BB	43	GLY	2.3
14	AN	54	PRO	2.3
32	BJ	87	THR	2.3
1	AA	138	G	2.2
8	AH	41	ARG	2.2
11	AK	91	ARG	2.2
45	BW	39	GLN	2.2
15	AO	87	ILE	2.2
20	AT	54	LYS	2.2
25	BC	67	ALA	2.2
35	BM	82	LYS	2.2
4	AD	99	SER	2.2
1	AA	88	G	2.2
1	AA	966	G	2.2
32	BJ	19	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
2	AB	34	ALA	2.2
2	AB	221	LEU	2.2
4	AD	62	GLN	2.2
20	AT	101	GLY	2.2
34	BL	64	ARG	2.2
41	BS	35	LYS	2.2
4	AD	199	ASN	2.2
23	BA	236	GLY	2.2
21	B0	1526	U	2.2
38	BP	10	LYS	2.2
41	BS	106	VAL	2.2
5	AE	73	ASN	2.2
4	AD	26	CYS	2.2
5	AE	43	LEU	2.2
19	AS	71	LEU	2.2
21	B0	151	G	2.2
21	B0	1427	G	2.2
21	B0	892	A	2.2
31	BI	78	SER	2.2
2	AB	153	ARG	2.2
5	AE	108	ALA	2.2
34	BL	65	LEU	2.2
37	BO	63	GLN	2.2
3	AC	103	VAL	2.2
1	AA	963	G	2.2
8	AH	52	ASP	2.2
20	AT	30	LYS	2.2
40	BR	59	PRO	2.2
23	BA	247	VAL	2.2
3	AC	97	LYS	2.2
1	AA	1039	C	2.2
22	B9	44	C	2.2
6	AF	1	MET	2.2
6	AF	82	ARG	2.2
10	AJ	90	LEU	2.2
19	AS	63	THR	2.2
1	AA	632	A	2.2
2	AB	42	ILE	2.2
11	AK	32	ILE	2.2
12	AL	110	VAL	2.2
7	AG	148	ASN	2.2
21	B0	372	U	2.2

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Mol	Chain	Res	Type	RSRZ
1	AA	1397	C	2.2
30	BH	113	GLU	2.2
34	BL	89	GLU	2.2
9	AI	38	GLN	2.2
35	BM	34	SER	2.2
3	AC	130	VAL	2.2
1	AA	1453	G	2.2
13	AM	21	TYR	2.2
21	B0	1732	U	2.2
41	BS	19	GLY	2.2
3	AC	101	LEU	2.2
4	AD	18	LYS	2.2
6	AF	3	ARG	2.2
27	BE	165	VAL	2.2
36	BN	104	LEU	2.2
29	BG	56	GLU	2.2
6	AF	58	GLY	2.2
32	BJ	81	GLN	2.2
9	AI	20	ARG	2.2
28	BF	19	SER	2.2
1	AA	876	G	2.2
12	AL	63	GLY	2.2
1	AA	1121	U	2.2
21	B0	654	A	2.2
23	BA	148	VAL	2.2
29	BG	55	VAL	2.2
33	BK	21	ASP	2.2
33	BK	25	GLY	2.2
51	B3	48	PHE	2.2
11	AK	96	ARG	2.2
41	BS	45	LYS	2.2
53	B5	101	LYS	2.2
33	BK	82	THR	2.2
1	AA	75	C	2.2
1	AA	224	C	2.2
1	AA	1113	C	2.2
27	BE	148	VAL	2.2
9	AI	5	TYR	2.2
7	AG	19	GLY	2.2
29	BG	130	THR	2.2
4	AD	147	ALA	2.2
53	B5	195	LYS	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
4	AD	104	VAL	2.2
41	BS	108	VAL	2.2
15	AO	62	GLN	2.2
1	AA	86	G	2.2
1	AA	142	G	2.2
2	AB	224	GLN	2.2
5	AE	115	VAL	2.2
40	BR	79	ILE	2.2
1	AA	656	C	2.1
1	AA	1038	C	2.1
29	BG	28	GLY	2.1
32	BJ	20	GLY	2.1
1	AA	951	G	2.1
3	AC	52	LEU	2.1
18	AR	62	GLU	2.1
21	B0	1424	U	2.1
21	B0	3132	A	2.1
24	BB	127	ALA	2.1
29	BG	72	PRO	2.1
32	BJ	61	PRO	2.1
43	BU	31	VAL	2.1
7	AG	30	ILE	2.1
9	AI	35	GLU	2.1
17	AQ	6	LEU	2.1
53	B5	198	THR	2.1
23	BA	213	ARG	2.1
36	BN	50	PHE	2.1
38	BP	78	VAL	2.1
1	AA	1040	U	2.1
7	AG	147	ALA	2.1
13	AM	47	ASP	2.1
5	AE	118	ILE	2.1
7	AG	149	ARG	2.1
25	BC	103	GLY	2.1
5	AE	94	ALA	2.1
21	B0	857	U	2.1
37	BO	28	ARG	2.1
9	AI	89	ASN	2.1
21	B0	367	G	2.1
4	AD	203	VAL	2.1
24	BB	126	PRO	2.1
5	AE	74	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
6	AF	66	GLU	2.1
32	BJ	64	GLY	2.1
51	B3	45	GLY	2.1
4	AD	75	PHE	2.1
9	AI	54	ASP	2.1
3	AC	202	ILE	2.1
26	BD	79	LEU	2.1
2	AB	135	GLN	2.1
47	BY	16	TYR	2.1
32	BJ	7	LYS	2.1
2	AB	61	LEU	2.1
13	AM	7	VAL	2.1
4	AD	103	ASN	2.1
7	AG	132	GLY	2.1
25	BC	41	GLY	2.1
45	BW	58	ALA	2.1
4	AD	166	LYS	2.1
10	AJ	86	MET	2.1
13	AM	122	LYS	2.1
41	BS	90	LYS	2.1
30	BH	97	ASP	2.1
50	B2	12	ARG	2.1
24	BB	78	LEU	2.1
5	AE	95	ALA	2.1
13	AM	32	GLU	2.1
21	B0	3116	G	2.1
26	BD	107	GLY	2.1
4	AD	78	LEU	2.1
17	AQ	96	GLN	2.1
23	BA	259	THR	2.1
2	AB	229	VAL	2.1
26	BD	173	MET	2.1
1	AA	1046	A	2.1
12	AL	98	TYR	2.1
43	BU	25	LYS	2.1
1	AA	1047	G	2.1
1	AA	1156	G	2.1
1	AA	1295	G	2.1
43	BU	41	ARG	2.1
30	BH	146	THR	2.1
47	BY	29	PRO	2.1
1	AA	1437	C	2.1

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Mol	Chain	Res	Type	RSRZ
4	AD	61	LYS	2.1
2	AB	177	ALA	2.1
9	AI	62	TYR	2.1
11	AK	25	TYR	2.1
21	B0	2778	U	2.1
52	B4	2	LYS	2.1
23	BA	45	ASN	2.1
53	B5	130	PRO	2.1
25	BC	151	VAL	2.1
4	AD	106	TYR	2.1
4	AD	153	ARG	2.1
39	BQ	61	PRO	2.1
21	B0	2779	C	2.1
23	BA	21	PHE	2.1
4	AD	23	GLY	2.1
51	B3	37	SER	2.1
21	B0	1429	A	2.0
23	BA	59	LYS	2.0
1	AA	191	G	2.0
23	BA	178	PRO	2.0
25	BC	47	THR	2.0
32	BJ	82	ASP	2.0
3	AC	150	LYS	2.0
20	AT	66	ALA	2.0
21	B0	2537	C	2.0
3	AC	206	GLU	2.0
9	AI	97	LYS	2.0
21	B0	655	A	2.0
21	B0	2289	A	2.0
23	BA	168	LYS	2.0
28	BF	37	SER	2.0
32	BJ	78	SER	2.0
41	BS	80	LYS	2.0
43	BU	85	GLN	2.0
14	AN	45	ARG	2.0
25	BC	100	ARG	2.0
1	AA	1266	G	2.0
3	AC	122	GLU	2.0
21	B0	3112	G	2.0
6	AF	74	ASP	2.0
13	AM	64	TRP	2.0
24	BB	151	TYR	2.0

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Mol	Chain	Res	Type	RSRZ
41	BS	46	VAL	2.0
18	AR	17	SER	2.0
18	AR	36	ASN	2.0
3	AC	178	LEU	2.0
1	AA	1452	C	2.0
17	AQ	52	LYS	2.0
21	B0	1790	G	2.0
22	B9	92	G	2.0
30	BH	32	TYR	2.0
10	AJ	63	PHE	2.0
8	AH	51	VAL	2.0
7	AG	143	ARG	2.0
31	BI	33	GLY	2.0
19	AS	7	LYS	2.0
3	AC	123	GLN	2.0
40	BR	13	SER	2.0
3	AC	179	ARG	2.0
6	AF	12	PRO	2.0
7	AG	95	ARG	2.0
40	BR	66	GLY	2.0
1	AA	82	C	2.0
21	B0	894	G	2.0
43	BU	87	GLU	2.0
47	BY	9	ALA	2.0
2	AB	24	TRP	2.0
4	AD	69	GLY	2.0
24	BB	193	GLY	2.0
27	BE	82	GLY	2.0
4	AD	91	SER	2.0
41	BS	57	ASN	2.0
4	AD	181	MET	2.0
10	AJ	12	ASP	2.0
51	B3	41	ILE	2.0
5	AE	65	ASN	2.0
6	AF	2	ARG	2.0
9	AI	21	PRO	2.0
41	BS	25	LEU	2.0
41	BS	52	ASN	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 ⓘ

There are no carbohydrates in this entry.

### 6.4 Ligands ⓘ

There are no ligands in this entry.

### 6.5 Other polymers ⓘ

There are no such residues in this entry.