



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 28, 2014 – 05:54 AM GMT

PDB ID : 2I2T  
Title : Crystal Structure of Ribosome with messenger RNA and the Anticodon stem-loop of P-site tRNA. This file contains the 50s subunit of one 70s ribosome. The entire crystal structure contains two 70s ribosomes and is described in remark 400.  
Authors : Berk, V.; Zhang, W.; Pai, R.D.; Cate, J.H.D.  
Deposited on : 2006-08-16  
Resolution : 3.22 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:

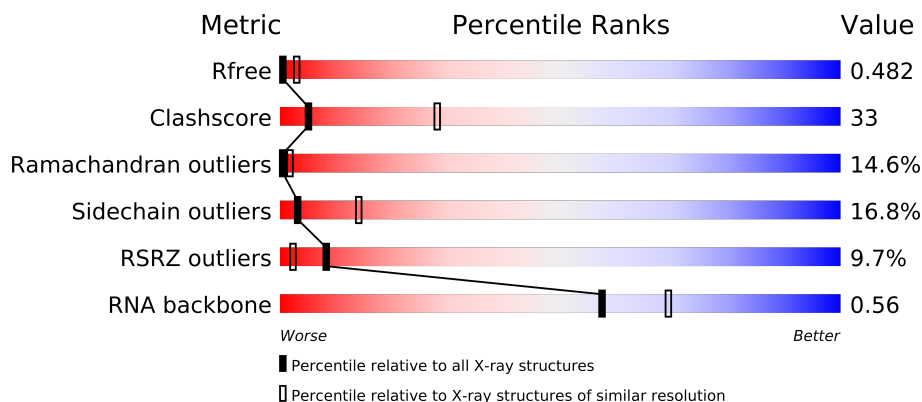
MolProbity : 4.02b-467  
Mogul : 1.15 2013  
Xtriage (Phenix) : dev-1323  
EDS : stable22639  
Percentile statistics : 21963  
Refmac : 5.8.0049  
CCP4 : 6.3.0 (Settle)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)  
Validation Pipeline (wwPDB-VP) : stable22683



# 1 Overall quality at a glance

The reported resolution of this entry is 3.22 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	1205 (3.30-3.14)
Clashscore	79885	1072 (3.28-3.16)
Ramachandran outliers	78287	1052 (3.28-3.16)
Sidechain outliers	78261	1051 (3.28-3.16)
RSRZ outliers	66119	1206 (3.30-3.14)
RNA backbone	1838	1004 (3.74-2.70)

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	A	120	
2	B	2904	
3	C	272	
4	D	209	
5	E	201	
6	F	178	
7	G	176	
8	H	149	
9	I	141	
10	J	142	
11	K	123	
12	L	144	

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Mol	Chain	Length	Quality of chain
13	M	136	
14	N	127	
15	O	117	
16	P	114	
17	Q	117	
18	R	103	
19	S	110	
20	T	100	
21	U	103	
22	V	94	
23	W	84	
24	X	77	
25	Y	63	
26	Z	58	
27	0	56	
28	1	54	
29	2	46	
30	3	64	
31	4	38	

The following table lists non-polymeric compounds that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Geometry	Electron density
33	MG	B	2918	-	X
33	MG	B	2929	-	X
33	MG	B	2935	-	X
33	MG	B	2949	-	X
33	MG	B	2955	-	X
33	MG	B	2961	-	X
33	MG	B	2962	-	X
33	MG	B	2983	-	X
33	MG	B	2991	-	X
33	MG	B	2997	-	X
33	MG	B	3006	-	X
33	MG	B	3019	-	X



## 2 Entry composition

There are 34 unique types of molecules in this entry. The entry contains 90315 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 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	117	Total	C	N	O	P	0	0	0
			2507	1116	459	815	117			

- Molecule 2 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	2841	Total	C	N	O	P	0	0	0
			60995	27210	11229	19715	2841			

- Molecule 3 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	C	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			

- Molecule 4 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	D	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			

- Molecule 5 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	E	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			

- Molecule 6 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	F	178	Total	C	N	O	S	0	0	0
			1420	905	251	258	6			



- Molecule 7 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	G	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			

- Molecule 8 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	H	149	Total	C	N	O	S	0	0	0
			1111	699	197	214	1			

- Molecule 9 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	I	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			

- Molecule 10 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	J	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			

- Molecule 11 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	K	121	Total	C	N	O	S	0	0	0
			930	582	179	164	5			

- Molecule 12 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	L	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			

- Molecule 13 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	M	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			

- Molecule 14 is a protein called 50S ribosomal protein L17.



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	N	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			

- Molecule 15 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	O	116	Total	C	N	O		0	0	0
			892	552	178	162				

- Molecule 16 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	P	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			

- Molecule 17 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	Q	117	Total	C	N	O		0	0	0
			947	604	192	151				

- Molecule 18 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	R	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			

- Molecule 19 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	S	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			

- Molecule 20 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	T	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			

- Molecule 21 is a protein called 50S ribosomal protein L24.



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	U	102	Total	C	N	O			
			779	492	146	141	0	0	0

- Molecule 22 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	V	94	Total	C	N	O	S			
			753	479	137	134	3	0	0	0

- Molecule 23 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	W	79	Total	C	N	O	S			
			596	367	120	108	1	0	0	0

- Molecule 24 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	X	77	Total	C	N	O	S			
			625	388	129	106	2	0	0	0

- Molecule 25 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	Y	63	Total	C	N	O	S			
			509	313	99	95	2	0	0	0

- Molecule 26 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	Z	58	Total	C	N	O	S			
			449	281	87	79	2	0	0	0

- Molecule 27 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	0	56	Total	C	N	O	S			
			444	269	94	80	1	0	0	0

- Molecule 28 is a protein called 50S ribosomal protein L33.



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
28	1	50	Total	C	N	O	0	0	0
			409	263	75	71			

- Molecule 29 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			

- Molecule 30 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			

- Molecule 31 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			

- Molecule 32 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
32	4	1	Total	Zn	0	0
			1	1		

- Molecule 33 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
33	B	118	Total	Mg	0	0
			118	118		
33	J	1	Total	Mg	0	0
			1	1		

- Molecule 34 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
34	2	1	Total	O	0	0
			1	1		
34	4	5	Total	O	0	0
			5	5		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
34	B	532	Total 532	O 532	0	0
34	C	8	Total 8	O 8	0	0
34	E	3	Total 3	O 3	0	0
34	J	3	Total 3	O 3	0	0
34	L	2	Total 2	O 2	0	0
34	N	2	Total 2	O 2	0	0

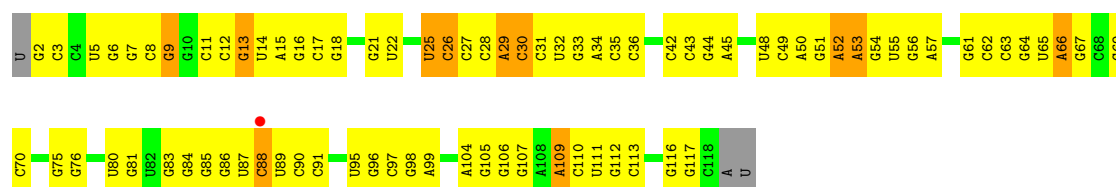


### 3 Residue-property plots

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.

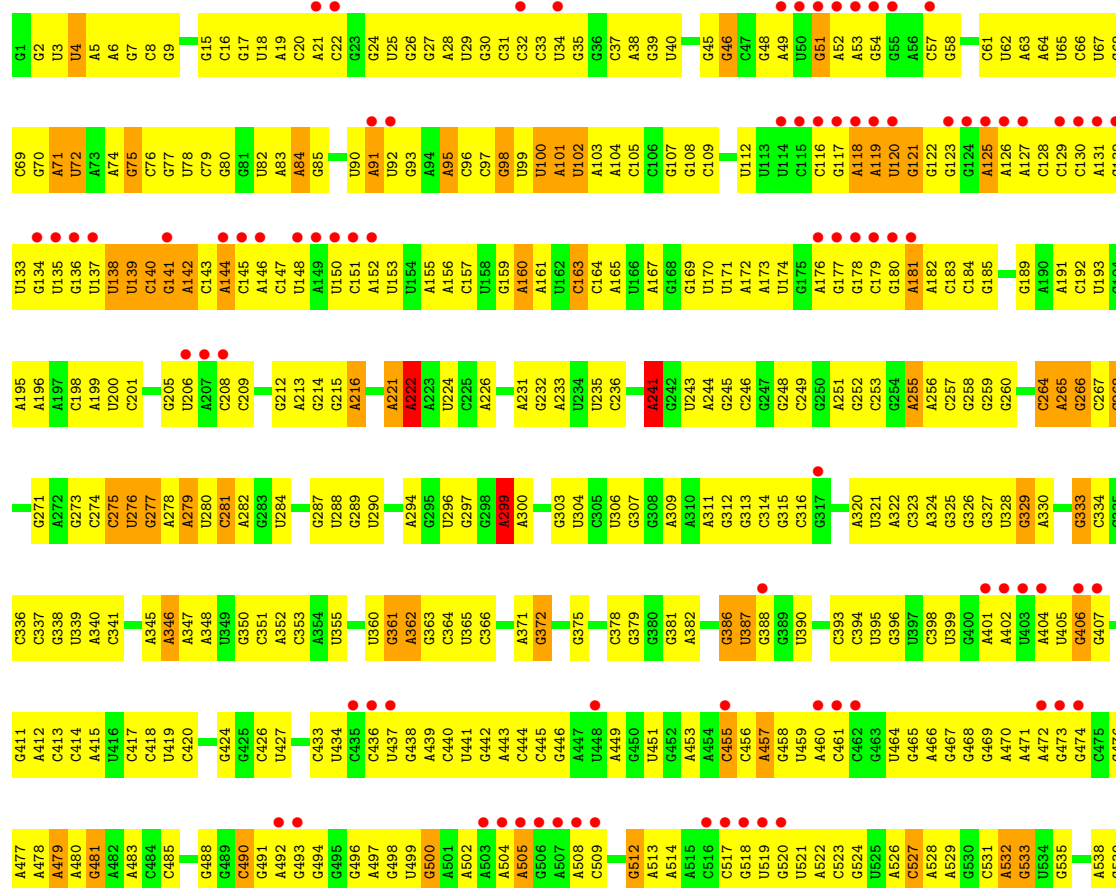
#### • Molecule 1: 5S ribosomal RNA

Chain A: 

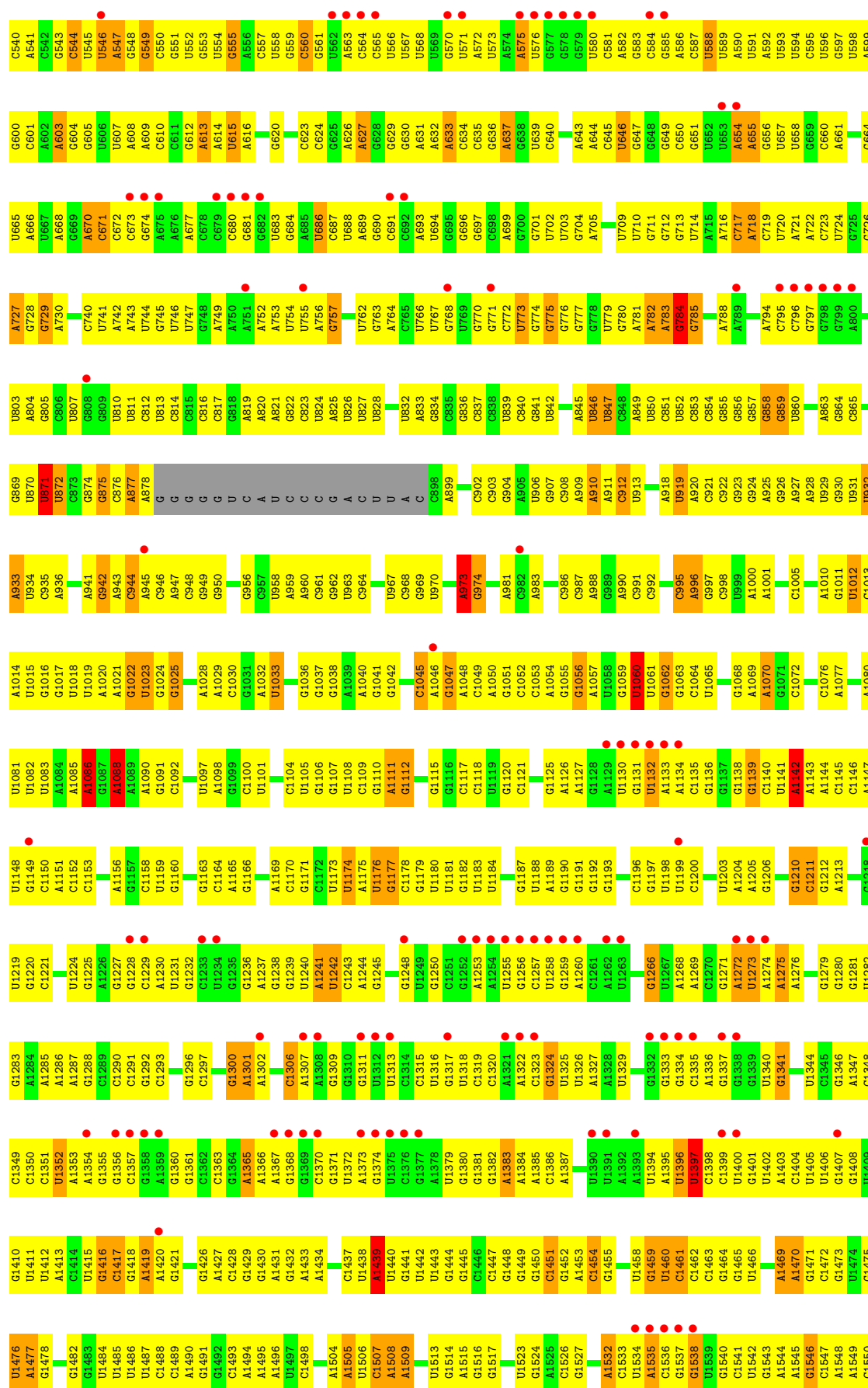


#### • Molecule 2: 23S ribosomal RNA

Chain B: 



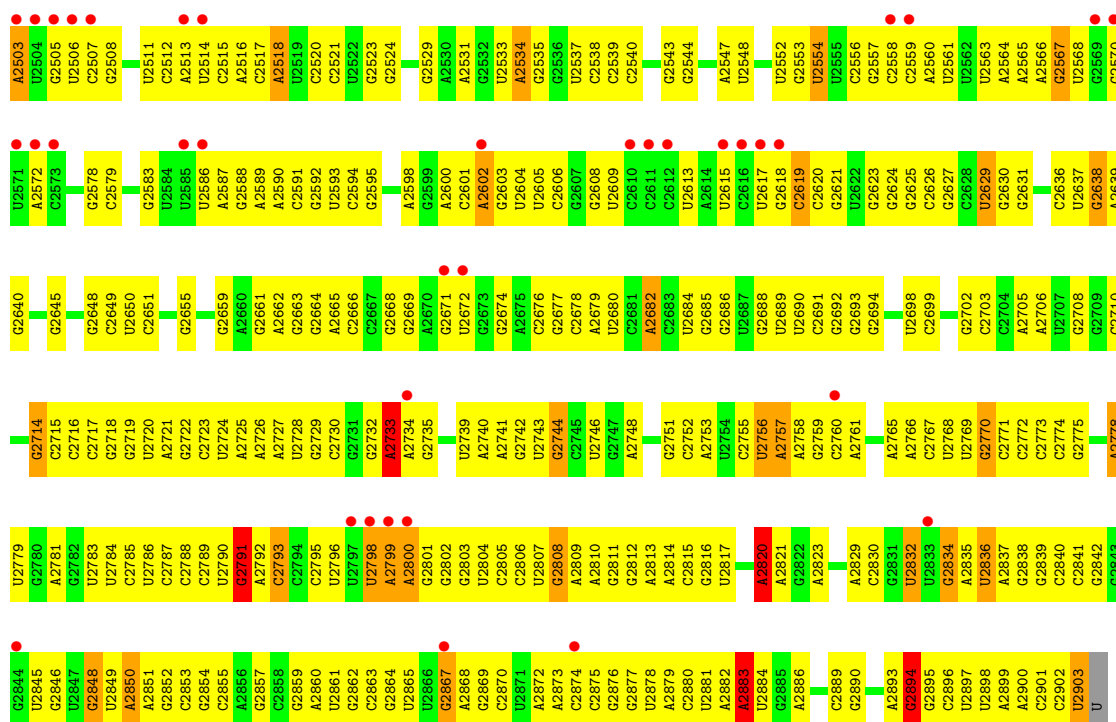






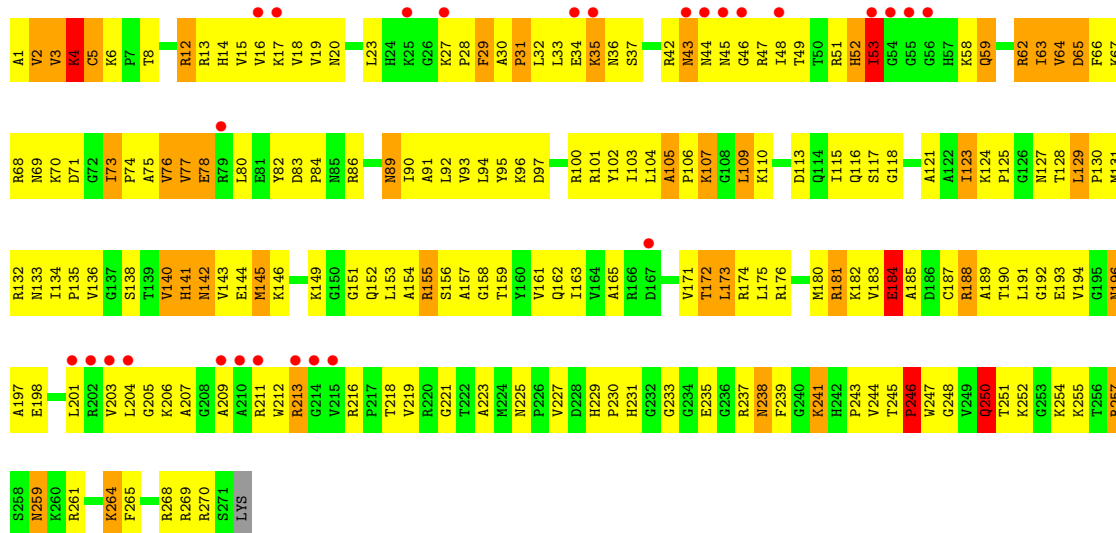






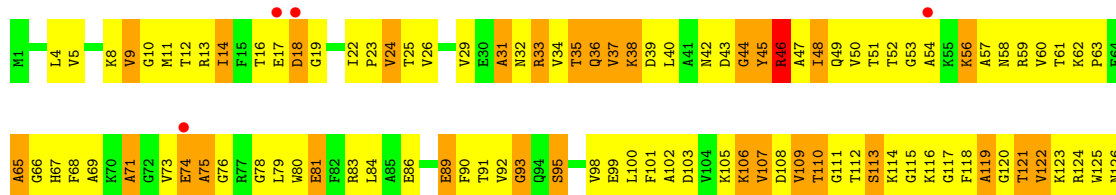
### • Molecule 3: 50S ribosomal protein L2

Chain C:

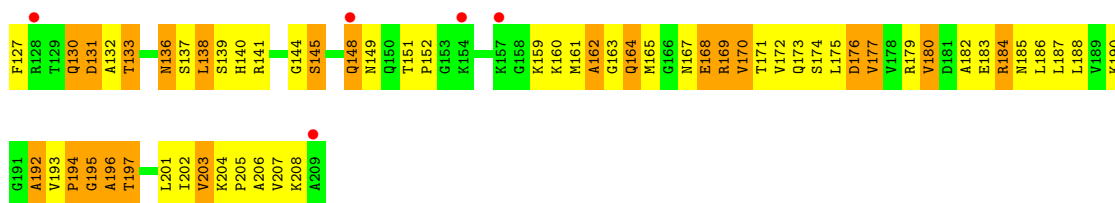


### • Molecule 4: 50S ribosomal protein L3

Chain D:

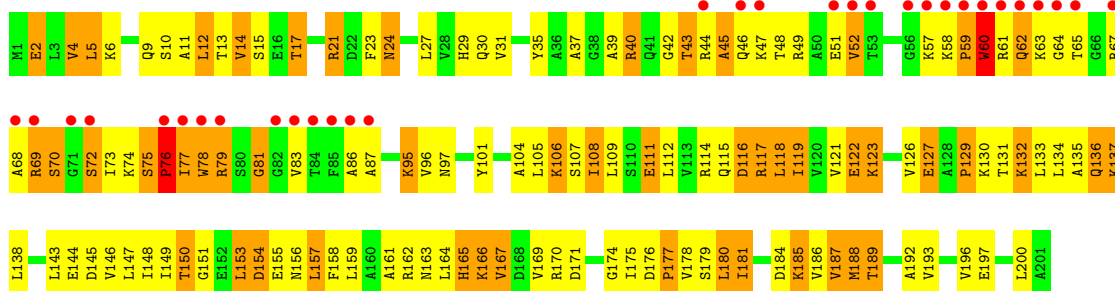






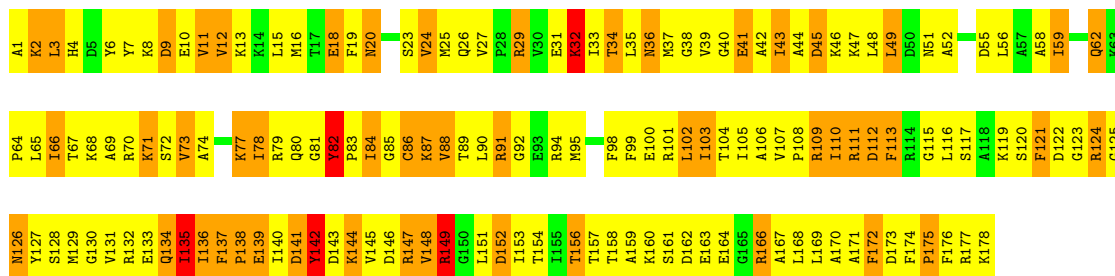
• Molecule 5: 50S ribosomal protein L4

Chain E:



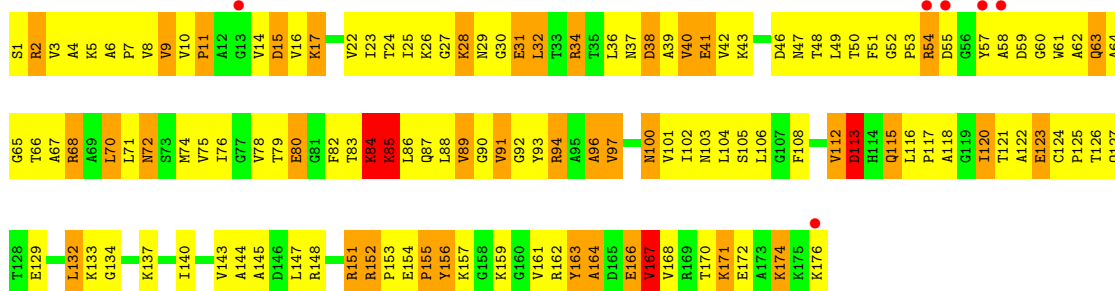
• Molecule 6: 50S ribosomal protein L5

Chain F:



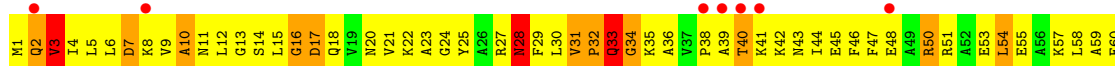
• Molecule 7: 50S ribosomal protein L6

Chain G:



• Molecule 8: 50S ribosomal protein L9

Chain H:

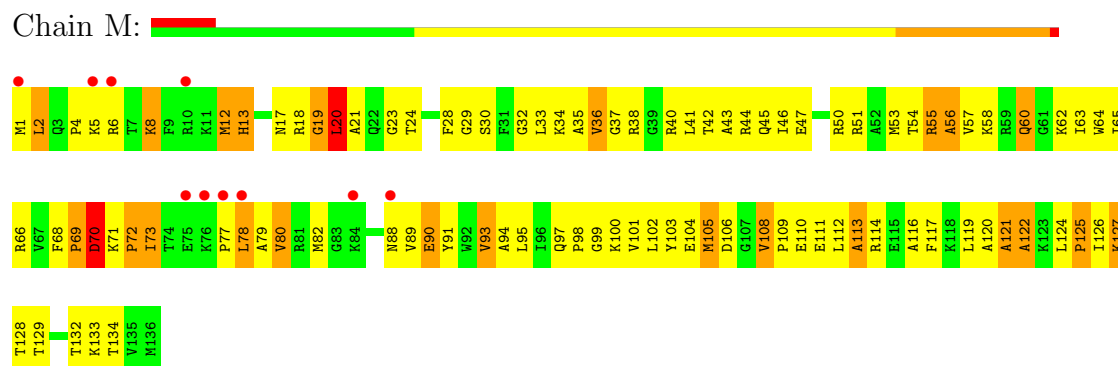




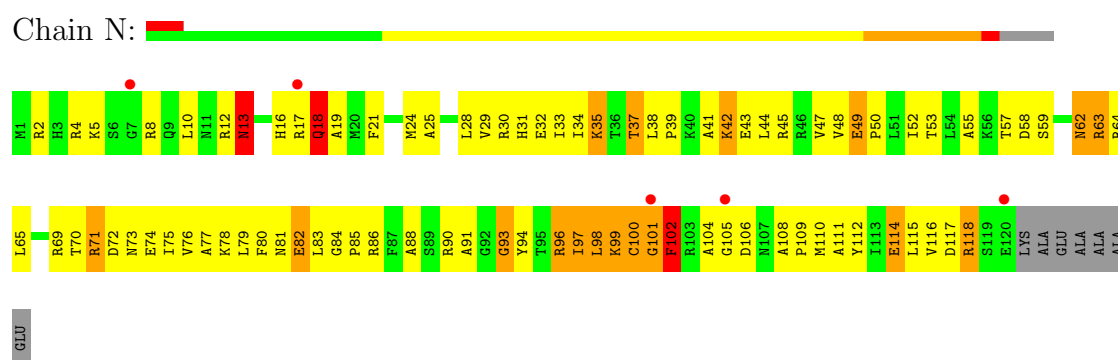




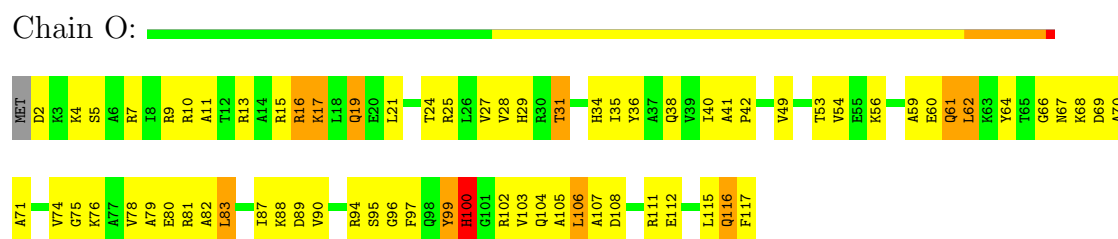
- Molecule 13: 50S ribosomal protein L16



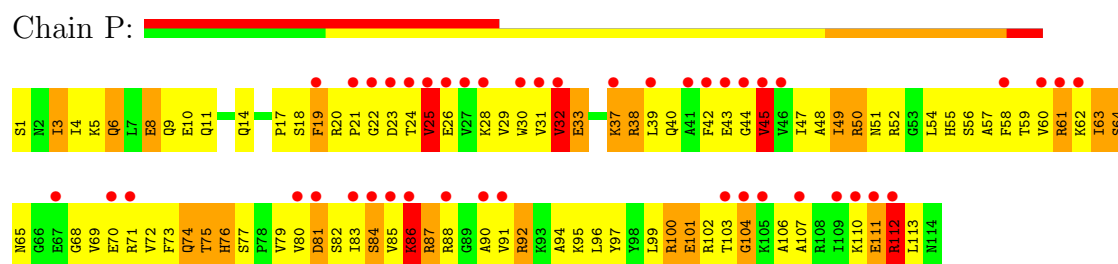
- Molecule 14: 50S ribosomal protein L17



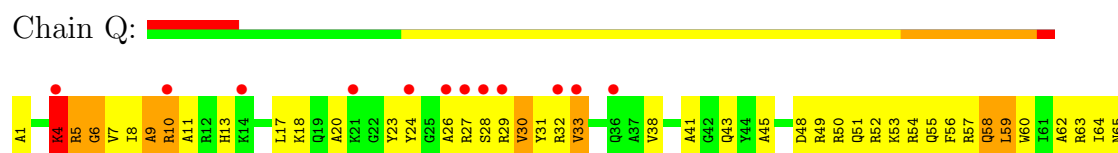
- Molecule 15: 50S ribosomal protein L18



- Molecule 16: 50S ribosomal protein L19



- Molecule 17: 50S ribosomal protein L20

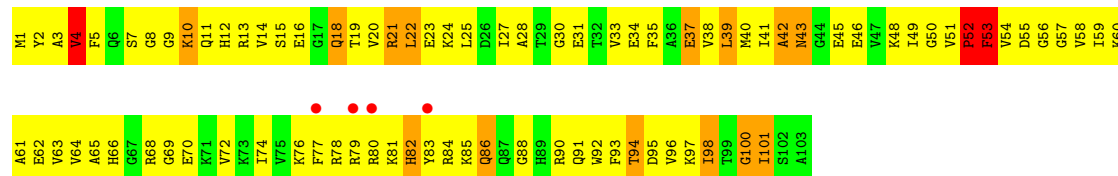






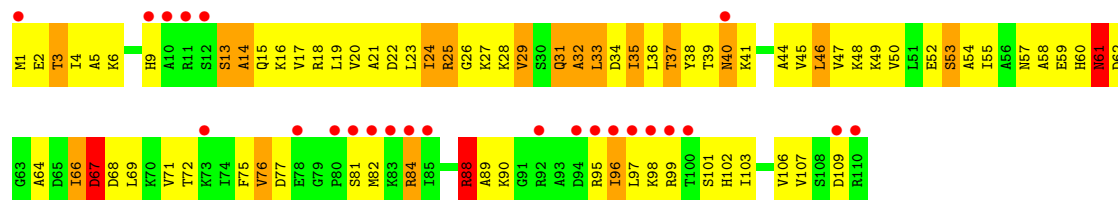
• Molecule 18: 50S ribosomal protein L21

Chain R:



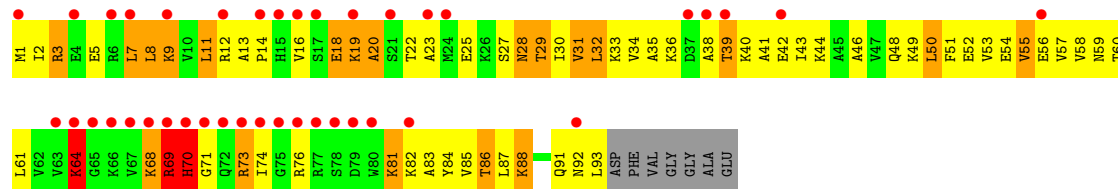
• Molecule 19: 50S ribosomal protein L22

Chain S:



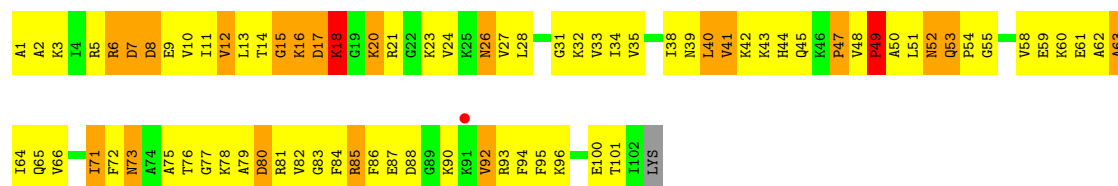
• Molecule 20: 50S ribosomal protein L23

Chain T:



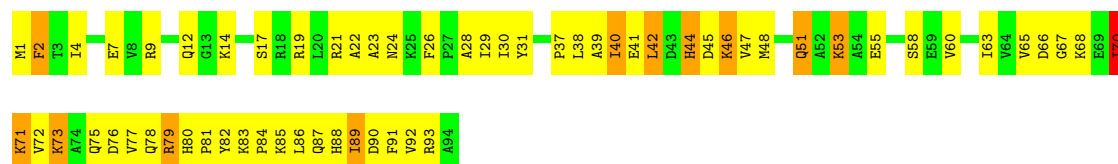
• Molecule 21: 50S ribosomal protein L24

Chain U:



• Molecule 22: 50S ribosomal protein L25

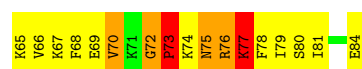
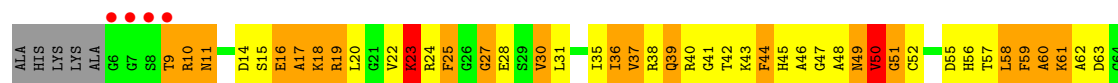
Chain V:



• Molecule 23: 50S ribosomal protein L27



Chain W:



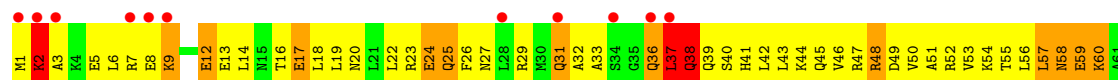
- Molecule 24: 50S ribosomal protein L28

Chain X:



- Molecule 25: 50S ribosomal protein L29

Chain Y:



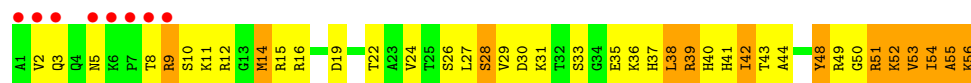
- Molecule 26: 50S ribosomal protein L30

Chain Z:



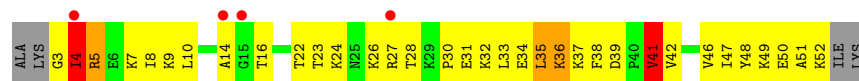
- Molecule 27: 50S ribosomal protein L32

Chain 0:



- Molecule 28: 50S ribosomal protein L33

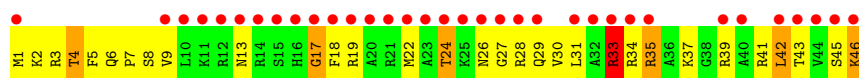
Chain 1:



- Molecule 29: 50S ribosomal protein L34

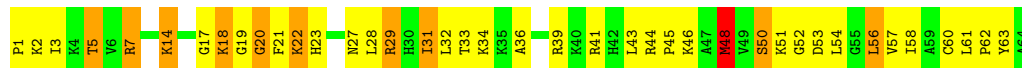
Chain 2:





- Molecule 30: 50S ribosomal protein L35

Chain 3:



- Molecule 31: 50S ribosomal protein L36

Chain 4:





## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	211.78Å 395.22Å 744.38Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	70.00 – 3.22 184.07 – 3.22	Depositor EDS
% Data completeness (in resolution range)	(Not available) (70.00-3.22) 75.7 (184.07-3.22)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.11 (at 3.19Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, $R_{free}$	0.287 , 0.320 0.482 , 0.482	Depositor DCC
$R_{free}$ test set	37268 reflections (4.95%)	DCC
Wilson B-factor (Å <sup>2</sup> )	80.0	Xtriage
Anisotropy	0.720	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.19 , 12.4	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle  L  \rangle = 0.47$ , $\langle L^2 \rangle = 0.30$	Xtriage
Outliers	1 of 753156 reflections (0.000%)	Xtriage
$F_o, F_c$ correlation	0.62	EDS
Total number of atoms	90315	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	81.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.47% 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 ⓘ

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z  > 5$	RMSZ	$\# Z  > 5$
1	A	0.24	0/2803	0.72	0/4371
2	B	0.27	7/68314 (0.0%)	0.77	53/106569 (0.0%)
3	C	0.22	0/2121	0.52	0/2852
4	D	0.25	0/1586	0.60	0/2134
5	E	0.24	0/1571	0.61	2/2113 (0.1%)
6	F	0.26	0/1444	0.59	0/1937
7	G	0.23	0/1343	0.52	0/1816
8	H	0.28	0/1122	0.56	1/1515 (0.1%)
9	I	0.24	0/1046	0.46	0/1410
10	J	0.24	0/1152	0.59	0/1551
11	K	0.25	0/939	0.81	2/1258 (0.2%)
12	L	0.23	0/1054	0.58	0/1403
13	M	0.26	0/1093	0.56	0/1460
14	N	0.25	0/973	0.62	0/1301
15	O	0.24	0/902	0.55	0/1209
16	P	0.25	0/929	0.60	0/1242
17	Q	0.26	0/960	0.65	0/1278
18	R	0.26	0/829	0.58	0/1107
19	S	0.23	0/864	0.61	1/1156 (0.1%)
20	T	0.23	0/744	0.73	2/994 (0.2%)
21	U	0.26	0/787	0.56	0/1051
22	V	0.25	0/766	0.46	0/1025
23	W	0.31	0/603	0.65	0/797
24	X	0.25	0/635	0.58	0/848
25	Y	0.24	0/510	0.64	0/677
26	Z	0.24	0/453	0.55	0/605
27	0	0.23	0/450	0.65	0/599
28	1	0.27	0/416	0.55	0/554
29	2	0.26	0/380	0.58	0/498
30	3	0.26	0/513	0.66	2/676 (0.3%)
31	4	0.24	0/303	0.54	0/397
All	All	0.26	7/97605 (0.0%)	0.73	63/146403 (0.0%)



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

Mol	Chain	#Chirality outliers	#Planarity outliers
2	B	0	37

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1086	A	C5-C6	-16.31	1.26	1.41
2	B	1088	A	C6-N1	-10.43	1.28	1.35
2	B	1060	U	C2-N3	7.75	1.43	1.37
2	B	1086	A	N3-C4	-6.90	1.30	1.34
2	B	1086	A	N7-C5	-6.28	1.35	1.39
2	B	2267	A	C5-C6	-5.14	1.36	1.41
2	B	2820	A	C4'-C3'	-5.00	1.47	1.52

All (63) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2791	G	O5'-P-OP1	-28.43	76.59	110.70
2	B	2204	G	O5'-P-OP2	-27.54	77.65	110.70
2	B	2204	G	O5'-P-OP1	18.07	132.38	110.70
2	B	2791	G	O5'-P-OP2	17.30	131.46	110.70
2	B	2203	U	OP2-P-O3'	14.24	136.52	105.20
2	B	2790	U	OP1-P-O3'	14.21	136.46	105.20
2	B	973	A	C5'-C4'-C3'	-9.44	100.89	116.00
11	K	118	ALA	N-CA-C	8.87	134.94	111.00
2	B	773	U	C5'-C4'-C3'	-8.56	102.31	116.00
2	B	1567	G	C5'-C4'-C3'	-8.46	102.46	116.00
2	B	1088	A	N1-C6-N6	-8.29	113.63	118.60
2	B	1552	A	N9-C1'-C2'	-8.08	103.11	112.00
2	B	2283	C	O5'-P-OP2	-8.02	98.49	105.70
2	B	1060	U	C5-C4-O4	-7.39	121.47	125.90
2	B	1439	A	N9-C1'-C2'	-7.24	104.04	112.00
2	B	1086	A	C4-C5-C6	7.17	120.58	117.00
2	B	241	A	C5'-C4'-C3'	-7.14	104.58	116.00
2	B	560	C	C5'-C4'-C3'	-7.01	104.78	116.00
2	B	1324	G	C5'-C4'-C3'	-6.86	105.02	116.00
2	B	1088	A	C5-C6-N6	6.44	128.85	123.70
20	T	69	ARG	N-CA-C	6.30	128.00	111.00
2	B	871	U	C5'-C4'-C3'	-6.28	105.95	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	K	91	GLU	N-CA-C	6.28	127.96	111.00
2	B	2272	U	C5-C4-O4	-6.23	122.16	125.90
2	B	1086	A	C6-C5-N7	-6.13	128.01	132.30
2	B	1926	U	C5'-C4'-C3'	-6.13	106.19	116.00
30	3	48	MET	N-CA-C	6.10	127.47	111.00
2	B	2733	A	N9-C1'-C2'	-6.07	105.32	112.00
2	B	944	C	C5'-C4'-C3'	-5.99	106.42	116.00
8	H	86	ASP	CB-CG-OD2	-5.85	113.03	118.30
2	B	2894	G	N9-C1'-C2'	-5.85	105.57	112.00
2	B	785	G	C5'-C4'-C3'	-5.80	106.73	116.00
2	B	872	U	C5'-C4'-C3'	-5.78	106.76	116.00
5	E	60	TRP	N-CA-C	5.70	126.39	111.00
20	T	70	HIS	N-CA-C	5.66	126.29	111.00
2	B	1060	U	N1-C2-O2	-5.63	118.86	122.80
2	B	2471	A	C5'-C4'-C3'	-5.63	107.00	116.00
2	B	1086	A	C2-N3-C4	-5.61	107.80	110.60
2	B	1397	U	C5'-C4'-C3'	-5.60	107.04	116.00
2	B	2199	A	C5'-C4'-C3'	-5.60	107.05	116.00
2	B	2194	U	C5'-C4'-C3'	-5.57	107.09	116.00
2	B	2790	U	O3'-P-O5'	-5.51	93.53	104.00
2	B	2430	A	N9-C1'-C2'	5.42	121.05	114.00
30	3	50	SER	N-CA-C	5.42	125.63	111.00
2	B	2625	G	C5'-C4'-C3'	-5.40	107.36	116.00
2	B	275	C	N1-C1'-C2'	-5.40	106.06	112.00
2	B	783	A	C4'-C3'-O3'	5.39	123.77	113.00
2	B	745	G	C5'-C4'-C3'	-5.32	107.49	116.00
2	B	784	G	C1'-O4'-C4'	-5.31	105.65	109.90
2	B	2267	A	N9-C1'-C2'	-5.31	106.16	112.00
2	B	784	G	C5'-C4'-O4'	5.29	115.45	109.10
2	B	2282	G	C5'-C4'-C3'	-5.28	107.56	116.00
2	B	1060	U	N3-C2-O2	5.26	125.89	122.20
5	E	59	PRO	N-CA-C	-5.23	98.50	112.10
2	B	2619	C	C5'-C4'-C3'	-5.23	107.64	116.00
2	B	456	C	C5'-C4'-C3'	-5.22	107.65	116.00
2	B	1865	U	O4'-C1'-N1	5.18	112.35	108.20
2	B	1306	C	C5'-C4'-C3'	5.16	124.25	116.00
2	B	375	G	C5'-C4'-C3'	-5.13	107.79	116.00
2	B	2267	A	C5-C6-N6	-5.06	119.65	123.70
2	B	1363	C	C5'-C4'-C3'	-5.06	107.90	116.00
19	S	53	SER	N-CA-C	-5.03	97.42	111.00
2	B	2283	C	C5'-C4'-C3'	-5.02	107.97	116.00

There are no chirality outliers.



All (37) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	B	1060	U	Sidechain
2	B	1086	A	Sidechain
2	B	1088	A	Sidechain
2	B	1111	A	Sidechain
2	B	1142	A	Sidechain
2	B	1419	A	Sidechain
2	B	1426	G	Sidechain
2	B	1439	A	Sidechain
2	B	1546	G	Sidechain
2	B	1572	A	Sidechain
2	B	1721	G	Sidechain
2	B	1728	C	Sidechain
2	B	1814	G	Sidechain
2	B	1828	G	Sidechain
2	B	2062	A	Sidechain
2	B	221	A	Sidechain
2	B	222	A	Sidechain
2	B	2272	U	Sidechain
2	B	2336	A	Sidechain
2	B	2471	A	Sidechain
2	B	2503	A	Sidechain
2	B	2638	G	Sidechain
2	B	2733	A	Sidechain
2	B	2770	G	Sidechain
2	B	2834	G	Sidechain
2	B	2848	G	Sidechain
2	B	2857	G	Sidechain
2	B	2883	A	Sidechain
2	B	299	A	Sidechain
2	B	361	G	Sidechain
2	B	500	G	Sidechain
2	B	51	G	Sidechain
2	B	630	G	Sidechain
2	B	633	A	Sidechain
2	B	727	A	Sidechain
2	B	729	G	Sidechain
2	B	942	G	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	A	2507	0	1270	87	0
2	B	60995	0	30678	2077	0
3	C	2082	0	2157	217	0
4	D	1565	0	1616	219	0
5	E	1552	0	1619	163	0
6	F	1420	0	1460	254	0
7	G	1323	0	1374	181	0
8	H	1111	0	1148	196	0
9	I	1032	0	1088	108	0
10	J	1129	0	1162	155	0
11	K	930	0	1003	98	0
12	L	1045	0	1117	123	0
13	M	1074	0	1157	109	0
14	N	960	0	1000	103	0
15	O	892	0	923	77	0
16	P	917	0	965	115	0
17	Q	947	0	1022	133	0
18	R	816	0	839	111	0
19	S	857	0	922	95	0
20	T	738	0	807	109	0
21	U	779	0	834	111	0
22	V	753	0	780	75	0
23	W	596	0	610	149	0
24	X	625	0	655	79	0
25	Y	509	0	543	84	0
26	Z	449	0	491	47	0
27	0	444	0	461	45	0
28	1	409	0	440	31	0
29	2	377	0	418	32	0
30	3	504	0	574	49	0
31	4	302	0	340	27	0
32	4	1	0	0	0	0
33	B	118	0	0	0	0
33	J	1	0	0	0	0
34	2	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
34	4	5	0	0	0	0
34	B	532	0	0	7	0
34	C	8	0	0	0	0
34	E	3	0	0	0	0
34	J	3	0	0	0	0
34	L	2	0	0	1	0
34	N	2	0	0	0	0
All	All	90315	0	59473	4978	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 33.

All (4978) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:D:148:GLN:HG3	4:D:152:PRO:HG2	1.29	1.15
11:K:70:ARG:HB3	11:K:71:PRO:CD	1.76	1.14
14:N:101:GLY:HA2	14:N:110:MET:H	1.06	1.13
2:B:855:G:H21	23:W:23:LYS:HG2	1.05	1.09
15:O:49:VAL:HG21	15:O:82:ALA:HB2	1.35	1.06
5:E:46:GLN:HG3	5:E:87:ALA:HB3	1.32	1.04
2:B:95:A:H4'	25:Y:38:GLN:HE22	1.16	1.04
19:S:82:MET:HB2	19:S:98:LYS:HB2	1.43	1.00
3:C:183:VAL:HG13	3:C:184:GLU:H	1.25	0.99
20:T:11:LEU:HD21	20:T:46:ALA:HB1	1.41	0.99
16:P:50:ARG:HB3	16:P:57:ALA:H	1.23	0.99
12:L:123:ARG:HA	12:L:143:GLU:HB3	1.44	0.99
3:C:128:THR:HA	3:C:190:THR:HA	1.43	0.99
14:N:83:LEU:HA	14:N:86:ARG:HB2	1.42	0.98
8:H:94:ILE:HG23	8:H:98:ASP:HB2	1.45	0.98
16:P:63:ILE:HA	16:P:68:GLY:HA2	1.42	0.98
2:B:2311:A:H1'	6:F:78:ILE:HD11	1.46	0.98
7:G:53:PRO:HG2	7:G:61:TRP:H	1.23	0.97
2:B:1654:A:O2'	4:D:118:PHE:HB3	1.62	0.97
11:K:70:ARG:CB	11:K:71:PRO:HD2	1.93	0.97
16:P:75:THR:HG23	16:P:76:HIS:H	1.29	0.97
23:W:23:LYS:HD2	23:W:24:ARG:HG3	1.47	0.97
8:H:103:VAL:HG21	8:H:110:VAL:HG13	1.47	0.97
11:K:70:ARG:HB3	11:K:71:PRO:HD2	0.98	0.96
23:W:39:GLN:HG3	23:W:42:THR:HB	1.47	0.96
17:Q:91:ARG:HE	17:Q:94:LEU:HD23	1.26	0.96
3:C:140:VAL:HG12	3:C:141:HIS:H	1.30	0.95
21:U:49:PRO:HA	21:U:53:GLN:HE21	1.32	0.95

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:T:29:THR:HA	20:T:86:THR:HA	1.48	0.95
13:M:35:ALA:HB3	13:M:99:GLY:H	1.31	0.95
19:S:47:VAL:HG12	19:S:103:ILE:HD13	1.49	0.94
6:F:66:ILE:HD11	6:F:83:PRO:HB3	1.48	0.94
8:H:31:VAL:HB	8:H:32:PRO:HD2	1.49	0.94
6:F:72:SER:HA	6:F:78:ILE:HG22	1.46	0.93
20:T:39:THR:HG21	20:T:42:GLU:HG2	1.48	0.93
7:G:30:GLY:HA3	7:G:78:VAL:HA	1.51	0.93
6:F:168:LEU:HD22	6:F:169:LEU:H	1.34	0.93
10:J:3:THR:HG21	17:Q:60:TRP:HE1	1.32	0.93
4:D:10:GLY:HA3	4:D:26:VAL:H	1.31	0.93
2:B:2355:G:H4'	23:W:20:LEU:HD13	1.49	0.92
31:4:7:VAL:HG13	31:4:8:LYS:H	1.33	0.92
4:D:33:ARG:HE	4:D:74:GLU:HB3	1.35	0.92
2:B:2336:A:N6	23:W:40:ARG:HD2	1.86	0.91
14:N:85:PRO:HA	14:N:88:ALA:HB2	1.52	0.91
3:C:144:GLU:HA	3:C:151:GLY:HA2	1.51	0.91
2:B:2882:A:H4'	14:N:97:ILE:HD11	1.52	0.91
2:B:855:G:N2	23:W:23:LYS:HG2	1.87	0.90
10:J:35:ARG:HE	10:J:140:LEU:HD11	1.36	0.90
27:0:27:LEU:HD11	27:0:36:LYS:HG2	1.51	0.90
14:N:101:GLY:HA2	14:N:110:MET:N	1.85	0.90
13:M:19:GLY:H	13:M:38:ARG:NH2	1.69	0.90
6:F:36:ASN:HA	6:F:87:LYS:HA	1.52	0.90
10:J:64:VAL:HG11	10:J:69:ARG:HB2	1.53	0.90
2:B:95:A:H4'	25:Y:38:GLN:NE2	1.87	0.90
6:F:69:ALA:HB1	6:F:78:ILE:HG23	1.54	0.90
2:B:1060:U:N3	2:B:1088:A:N7	2.20	0.90
2:B:2336:A:H62	23:W:40:ARG:HD2	1.37	0.90
4:D:46:ARG:HH12	4:D:86:GLU:H	1.20	0.89
8:H:14:SER:HB2	8:H:17:ASP:HB2	1.52	0.89
8:H:85:GLY:H	8:H:90:LEU:HA	1.38	0.89
22:V:70:ILE:HG12	22:V:71:LYS:H	1.38	0.89
24:X:63:ILE:HD12	24:X:63:ILE:H	1.38	0.88
9:I:129:GLU:HB3	9:I:133:ARG:HH12	1.35	0.88
23:W:49:ASN:HB2	23:W:60:ALA:HA	1.56	0.88
2:B:2305:U:H5''	6:F:130:GLY:HA3	1.53	0.88
2:B:1309:G:H4'	29:2:7:PRO:HB2	1.54	0.88
22:V:63:ILE:H	22:V:70:ILE:HG13	1.38	0.87
2:B:858:G:N3	2:B:2268:A:H2'	1.90	0.87
17:Q:87:VAL:HG11	18:R:52:PRO:HA	1.57	0.87
2:B:2619:C:O2	4:D:161:MET:HE1	1.75	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:19:GLY:H	13:M:38:ARG:HH21	1.16	0.87
2:B:279:A:N6	2:B:361:G:H1'	1.89	0.87
21:U:73:ASN:HD21	21:U:77:GLY:H	1.19	0.87
2:B:2144:G:H3'	2:B:2146:C:H5''	1.56	0.87
24:X:32:LEU:HD12	24:X:51:SER:HB3	1.55	0.87
2:B:1024:G:H3'	2:B:1025:G:H5''	1.56	0.86
2:B:870:U:H2'	2:B:871:U:H5''	1.57	0.86
2:B:71:A:H4'	2:B:72:U:H5'	1.55	0.86
5:E:108:ILE:HG12	12:L:2:ARG:HH22	1.40	0.86
9:I:27:LEU:H	9:I:27:LEU:HD23	1.40	0.86
19:S:22:ASP:HA	19:S:25:ARG:HH12	1.38	0.86
21:U:58:VAL:HG12	21:U:59:GLU:H	1.36	0.86
5:E:75:SER:O	5:E:77:ILE:N	2.09	0.86
14:N:37:THR:HG22	14:N:39:PRO:HD2	1.57	0.85
12:L:103:ILE:H	12:L:103:ILE:HD12	1.39	0.85
23:W:9:THR:HG23	23:W:10:ARG:HD3	1.55	0.85
23:W:24:ARG:HA	23:W:66:VAL:H	1.38	0.85
16:P:50:ARG:HB3	16:P:57:ALA:N	1.90	0.85
22:V:53:LYS:HD2	22:V:55:GLU:HG3	1.58	0.85
20:T:5:GLU:HA	20:T:8:LEU:HB2	1.58	0.85
2:B:2149:U:H2'	2:B:2150:C:C6	2.10	0.85
17:Q:30:VAL:HG22	17:Q:31:TYR:H	1.42	0.85
7:G:84:LYS:HG3	7:G:132:LEU:N	1.91	0.85
22:V:4:ILE:HB	22:V:63:ILE:HG13	1.57	0.84
4:D:8:LYS:HD3	4:D:197:THR:H	1.39	0.84
13:M:38:ARG:HH11	13:M:38:ARG:HB3	1.40	0.84
6:F:11:VAL:HG12	6:F:12:VAL:H	1.40	0.84
3:C:143:VAL:HB	3:C:153:LEU:HB2	1.57	0.84
13:M:127:LYS:H	13:M:127:LYS:HD3	1.42	0.84
7:G:43:LYS:HB2	7:G:50:THR:HB	1.58	0.83
2:B:2502:G:H5'	2:B:2503:A:H5''	1.59	0.83
17:Q:10:ARG:HA	17:Q:13:HIS:HB2	1.59	0.83
11:K:34:VAL:HG23	11:K:35:GLY:H	1.42	0.83
7:G:53:PRO:HG2	7:G:61:TRP:N	1.92	0.83
24:X:58:ILE:HD13	24:X:66:VAL:HG21	1.58	0.83
7:G:53:PRO:CG	7:G:61:TRP:H	1.90	0.83
17:Q:4:LYS:HE3	17:Q:7:VAL:H	1.42	0.83
4:D:184:ARG:HB2	4:D:186:LEU:HD13	1.60	0.83
16:P:57:ALA:HA	16:P:73:PHE:O	1.78	0.83
2:B:528:A:N1	2:B:2042:A:H2'	1.92	0.83
23:W:24:ARG:HD3	23:W:65:LYS:HD3	1.58	0.83
8:H:27:ARG:H	8:H:31:VAL:CG2	1.92	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:O:35:ILE:HD11	15:O:102:ARG:HE	1.43	0.83
21:U:34:ILE:HG12	21:U:63:ALA:HB2	1.60	0.83
6:F:177:ARG:HE	6:F:178:LYS:H	1.22	0.83
20:T:57:VAL:HG22	20:T:58:VAL:H	1.44	0.82
20:T:40:LYS:HZ2	20:T:60:THR:H	1.25	0.82
8:H:132:PHE:HB3	8:H:140:ALA:HB3	1.61	0.82
7:G:89:VAL:HB	7:G:159:LYS:HA	1.59	0.82
20:T:53:VAL:HG11	20:T:87:LEU:HD22	1.61	0.82
8:H:32:PRO:HG3	24:X:38:TRP:HB3	1.61	0.82
2:B:1060:U:C2	2:B:1088:A:N7	2.48	0.82
2:B:27:G:H22	2:B:512:G:H2'	1.43	0.82
26:Z:16:LEU:HD22	26:Z:16:LEU:H	1.45	0.82
2:B:1082:U:C4	2:B:1086:A:C2	2.67	0.82
20:T:29:THR:H	20:T:91:GLN:HE22	1.26	0.82
8:H:82:SER:HB2	8:H:146:VAL:HG22	1.60	0.82
2:B:140:C:H4'	2:B:141:G:C2	2.15	0.82
25:Y:7:ARG:HH21	25:Y:9:LYS:HD2	1.45	0.82
10:J:73:VAL:HG23	10:J:74:TYR:H	1.43	0.82
2:B:919:U:H2'	2:B:920:A:C8	2.15	0.82
20:T:11:LEU:HD22	20:T:11:LEU:H	1.45	0.81
18:R:25:LEU:HB3	18:R:27:ILE:HG12	1.61	0.81
13:M:19:GLY:N	13:M:38:ARG:HH21	1.76	0.81
2:B:1022:G:H22	2:B:1142:A:H2	1.26	0.81
2:B:1568:G:H4'	3:C:58:LYS:HB3	1.62	0.81
2:B:404:A:H4'	2:B:405:U:H5'	1.63	0.81
2:B:922:C:HO2'	23:W:25:PHE:HZ	1.29	0.81
10:J:46:PRO:HD3	17:Q:59:LEU:HD21	1.63	0.81
21:U:78:LYS:HG2	21:U:79:ALA:H	1.42	0.81
8:H:31:VAL:CB	8:H:32:PRO:HD2	2.10	0.81
8:H:83:LYS:HB3	8:H:90:LEU:HD23	1.62	0.81
28:1:33:LEU:H	28:1:51:ALA:HB3	1.45	0.81
8:H:7:ASP:HA	8:H:15:LEU:HD13	1.62	0.81
10:J:72:LYS:HB2	10:J:89:PHE:HB2	1.61	0.81
5:E:131:THR:HG22	5:E:161:ALA:H	1.46	0.81
4:D:10:GLY:CA	4:D:26:VAL:H	1.94	0.81
2:B:1141:U:H4'	2:B:1142:A:O4'	1.79	0.81
9:I:55:PRO:HD3	9:I:74:PRO:HD3	1.63	0.80
7:G:84:LYS:HG2	7:G:85:LYS:H	1.47	0.80
10:J:81:ILE:HG23	10:J:82:GLY:H	1.44	0.80
6:F:6:TYR:HE2	6:F:10:GLU:HB2	1.44	0.80
4:D:9:VAL:HG22	16:P:4:ILE:HD11	1.62	0.80
3:C:129:LEU:HD23	3:C:130:PRO:HD2	1.63	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2267:A:C8	2:B:2267:A:H3'	2.16	0.80
8:H:27:ARG:H	8:H:31:VAL:HG23	1.47	0.80
2:B:276:U:O2'	2:B:277:G:H4'	1.81	0.80
10:J:45:THR:H	10:J:46:PRO:HD3	1.47	0.80
2:B:279:A:H61	2:B:361:G:H1'	1.45	0.80
22:V:63:ILE:N	22:V:70:ILE:HG13	1.96	0.80
4:D:47:ALA:HB2	4:D:83:ARG:HD2	1.63	0.80
2:B:1012:U:O4	10:J:30:THR:HG21	1.81	0.80
2:B:275:C:H2'	2:B:276:U:H5'	1.63	0.80
7:G:120:ILE:HD11	7:G:132:LEU:HB2	1.64	0.80
13:M:37:GLY:HA3	13:M:127:LYS:HE2	1.64	0.79
12:L:19:LEU:HD23	12:L:31:GLY:HA3	1.62	0.79
7:G:157:LYS:HB3	7:G:159:LYS:HG3	1.62	0.79
19:S:4:ILE:HG22	19:S:106:VAL:HG13	1.62	0.79
9:I:21:PRO:HB2	9:I:22:PRO:HD3	1.63	0.79
2:B:704:G:H2'	2:B:726:G:H22	1.45	0.79
5:E:61:ARG:NH1	5:E:64:GLY:HA3	1.98	0.79
28:1:7:LYS:HA	28:1:23:THR:HG22	1.65	0.79
10:J:25:LEU:HD22	10:J:26:GLY:N	1.98	0.79
8:H:96:THR:HB	8:H:112:LYS:HA	1.65	0.79
6:F:163:GLU:C	6:F:166:ARG:HE	1.86	0.79
19:S:24:ILE:HG23	19:S:32:ALA:HB1	1.62	0.78
9:I:33:ASN:HD21	9:I:64:ARG:HH11	1.31	0.78
22:V:44:HIS:CE1	22:V:85:LYS:HB2	2.18	0.78
24:X:29:LEU:H	24:X:29:LEU:HD23	1.46	0.78
8:H:75:LEU:HD13	8:H:142:VAL:HG12	1.65	0.78
28:1:26:LYS:HD3	28:1:52:LYS:HZ3	1.48	0.78
10:J:1:MET:HG2	10:J:2:LYS:HG2	1.66	0.78
21:U:14:THR:HG21	21:U:64:ILE:HD13	1.64	0.78
11:K:63:ARG:HD2	11:K:101:PRO:O	1.83	0.78
2:B:222:A:N6	2:B:232:G:H1'	1.99	0.78
6:F:34:THR:HG23	6:F:89:THR:HG22	1.64	0.78
7:G:167:VAL:HG23	7:G:168:VAL:H	1.49	0.78
10:J:118:MET:HA	10:J:121:LYS:HE2	1.66	0.78
13:M:12:MET:HB2	13:M:72:PRO:HD2	1.66	0.78
2:B:1654:A:HO2'	4:D:118:PHE:HB3	1.48	0.78
15:O:7:ARG:HA	15:O:10:ARG:NH2	1.97	0.78
3:C:52:HIS:HA	3:C:216:ARG:HB2	1.66	0.78
10:J:106:LYS:HD3	10:J:116:ARG:HH11	1.48	0.77
4:D:151:THR:HB	4:D:152:PRO:HD3	1.66	0.77
3:C:83:ASP:HB2	3:C:90:ILE:HG12	1.66	0.77
24:X:32:LEU:H	24:X:51:SER:HB2	1.49	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:528:A:H2'	2:B:529:A:H5''	1.64	0.77
10:J:58:ASN:HA	10:J:127:GLY:HA2	1.65	0.77
20:T:73:ARG:HH21	20:T:73:ARG:HB3	1.49	0.77
10:J:41:LYS:NZ	10:J:51:GLY:HA2	1.99	0.77
2:B:1178:C:H2'	2:B:1179:G:H8	1.50	0.77
2:B:870:U:C2'	2:B:871:U:H5''	2.15	0.77
7:G:122:ALA:HB2	7:G:132:LEU:HB3	1.65	0.77
4:D:122:VAL:H	4:D:127:PHE:HB2	1.48	0.77
5:E:6:LYS:HB2	5:E:121:VAL:HG12	1.65	0.77
13:M:38:ARG:NH1	13:M:38:ARG:HB3	2.00	0.77
16:P:91:VAL:HG11	16:P:96:LEU:HD11	1.67	0.77
2:B:1469:A:H2'	2:B:1470:A:C8	2.20	0.77
2:B:2800:A:H2'	2:B:2801:G:O4'	1.85	0.77
2:B:2472:G:H2'	2:B:2475:C:H42	1.49	0.77
2:B:773:U:H5'	2:B:774:G:OP2	1.85	0.77
2:B:2021:C:OP1	27:0:8:THR:HG21	1.85	0.77
2:B:704:G:H1'	2:B:727:A:N6	2.00	0.77
22:V:30:ILE:HG12	22:V:91:PHE:HB2	1.67	0.76
2:B:2898:U:H2'	2:B:2899:A:H8	1.49	0.76
2:B:2314:A:H5'	6:F:34:THR:HG21	1.68	0.76
28:1:33:LEU:N	28:1:51:ALA:HB3	2.01	0.76
2:B:1178:C:H2'	2:B:1179:G:C8	2.21	0.76
2:B:2595:G:H1	3:C:238:ASN:HD21	1.32	0.76
5:E:5:LEU:HD12	5:E:10:SER:HB2	1.67	0.76
2:B:2012:G:H4'	19:S:96:ILE:HD11	1.67	0.76
18:R:76:LYS:HB2	18:R:85:LYS:HB3	1.66	0.76
20:T:40:LYS:NZ	20:T:60:THR:H	1.82	0.76
6:F:32:LYS:HA	6:F:95:MET:HG3	1.66	0.76
23:W:37:VAL:HG12	23:W:38:ARG:H	1.50	0.76
2:B:674:G:H2'	2:B:804:A:H61	1.50	0.76
2:B:832:U:H2'	2:B:833:A:H8	1.51	0.76
3:C:183:VAL:HG13	3:C:184:GLU:N	1.99	0.76
5:E:176:ASP:HB3	5:E:179:SER:HB2	1.67	0.76
14:N:49:GLU:HB2	14:N:50:PRO:HD3	1.66	0.76
2:B:364:C:H2'	2:B:365:U:H6	1.51	0.76
2:B:45:G:H5'	2:B:46:G:H5'	1.68	0.76
2:B:1639:C:H2'	2:B:1640:A:H5''	1.68	0.76
2:B:2898:U:H2'	2:B:2899:A:C8	2.22	0.75
2:B:1022:G:N2	2:B:1142:A:H2	1.84	0.75
15:O:111:ARG:HH11	15:O:112:GLU:HB2	1.51	0.75
30:3:22:LYS:H	30:3:48:MET:HB3	1.50	0.75
29:2:1:MET:HG2	29:2:2:LYS:H	1.51	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:93:VAL:HG12	3:C:101:ARG:O	1.85	0.75
20:T:38:ALA:HB2	20:T:81:LYS:HZ1	1.52	0.75
20:T:53:VAL:HG12	20:T:54:GLU:H	1.50	0.75
6:F:102:LEU:O	6:F:103:ILE:HG22	1.86	0.75
6:F:2:LYS:HD2	6:F:100:GLU:HG2	1.69	0.75
9:I:27:LEU:HD12	9:I:32:VAL:HG11	1.68	0.75
15:O:68:LYS:H	15:O:102:ARG:HD2	1.52	0.75
8:H:5:LEU:HD13	8:H:13:GLY:HA2	1.67	0.75
2:B:796:C:H2'	2:B:797:G:H8	1.52	0.75
10:J:12:LYS:HB2	10:J:41:LYS:HZ3	1.52	0.75
24:X:50:VAL:HG12	24:X:51:SER:H	1.51	0.75
7:G:100:ASN:H	7:G:100:ASN:HD22	1.32	0.75
7:G:101:VAL:HA	7:G:115:GLN:HA	1.68	0.75
2:B:670:A:H4'	2:B:671:C:H5'	1.66	0.75
17:Q:82:LEU:HD23	17:Q:112:ALA:HB2	1.69	0.75
2:B:222:A:H61	2:B:232:G:H1'	1.52	0.75
13:M:40:ARG:HD3	13:M:93:VAL:HG21	1.66	0.75
13:M:126:ILE:H	13:M:126:ILE:HD12	1.51	0.75
2:B:2098:U:H2'	2:B:2099:U:O4'	1.86	0.75
23:W:45:HIS:HB2	23:W:50:VAL:HG12	1.69	0.75
3:C:89:ASN:O	3:C:105:ALA:HB3	1.87	0.75
6:F:107:VAL:HG11	6:F:175:PRO:HG3	1.67	0.75
24:X:32:LEU:HD23	24:X:49:ARG:NH2	2.02	0.75
19:S:84:ARG:HB3	19:S:96:ILE:HG23	1.68	0.75
2:B:2365:G:HO2'	23:W:59:PHE:HE1	1.33	0.75
23:W:49:ASN:HB3	23:W:81:ILE:HG12	1.67	0.75
5:E:149:ILE:O	5:E:188:MET:HA	1.86	0.75
2:B:1936:A:H61	2:B:1963:U:H3	1.35	0.74
2:B:90:U:H3'	2:B:91:A:H5''	1.68	0.74
2:B:855:G:H21	23:W:23:LYS:CG	1.95	0.74
2:B:2144:G:H22	2:B:2147:A:H4'	1.53	0.74
15:O:62:LEU:HD11	15:O:70:ALA:HB2	1.69	0.74
6:F:110:ILE:HA	6:F:111:ARG:CZ	2.18	0.74
2:B:1082:U:N3	2:B:1086:A:C2	2.55	0.74
2:B:826:U:O2'	12:L:53:GLY:HA3	1.87	0.74
8:H:117:LEU:HD13	8:H:121:VAL:HG13	1.69	0.74
2:B:1714:U:H3'	2:B:1715:G:H5''	1.67	0.74
6:F:64:PRO:HA	6:F:88:VAL:CG2	2.18	0.74
7:G:100:ASN:N	7:G:100:ASN:HD22	1.81	0.74
2:B:136:G:H2'	2:B:137:U:C6	2.22	0.74
1:A:49:C:H2'	1:A:50:A:H8	1.52	0.74
2:B:1515:A:H2'	2:B:1516:G:O4'	1.87	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1021:A:H61	2:B:1142:A:N6	1.84	0.74
2:B:1283:G:H22	2:B:1286:A:H5'	1.52	0.74
4:D:37:VAL:HG22	4:D:48:ILE:HG13	1.68	0.74
3:C:80:LEU:HD11	3:C:109:LEU:HB2	1.67	0.74
2:B:1447:C:H2'	2:B:1448:G:H8	1.53	0.74
3:C:156:SER:O	3:C:194:VAL:HG11	1.87	0.74
3:C:93:VAL:HG13	3:C:94:LEU:H	1.53	0.74
8:H:9:VAL:HB	8:H:12:LEU:O	1.88	0.74
20:T:69:ARG:HG3	20:T:70:HIS:H	1.52	0.74
15:O:76:LYS:O	15:O:80:GLU:HG2	1.87	0.74
6:F:147:ARG:HG2	6:F:148:VAL:HG22	1.68	0.74
17:Q:4:LYS:HE3	17:Q:7:VAL:N	2.03	0.74
2:B:309:A:H4'	21:U:16:LYS:HZ1	1.52	0.74
6:F:35:LEU:HA	6:F:152:ASP:O	1.88	0.73
18:R:16:GLU:HA	18:R:98:ILE:HG22	1.68	0.73
8:H:94:ILE:HG21	8:H:99:ILE:HG12	1.70	0.73
9:I:77:VAL:HA	9:I:80:LYS:HE2	1.71	0.73
2:B:666:A:H4'	12:L:48:ARG:HD2	1.70	0.73
2:B:1381:G:H2'	2:B:1382:G:H5'	1.70	0.73
5:E:46:GLN:HG3	5:E:87:ALA:CB	2.15	0.73
2:B:704:G:H1'	2:B:727:A:H61	1.53	0.73
8:H:82:SER:H	8:H:146:VAL:HG13	1.53	0.73
4:D:46:ARG:NH1	4:D:86:GLU:H	1.86	0.73
21:U:41:VAL:HG13	21:U:62:ALA:HB2	1.71	0.73
10:J:23:LYS:HE3	10:J:142:ILE:HG12	1.70	0.73
2:B:2336:A:N6	23:W:40:ARG:NH1	2.36	0.73
9:I:106:GLN:O	9:I:110:GLN:HG3	1.89	0.73
10:J:106:LYS:HD3	10:J:116:ARG:NH1	2.04	0.73
2:B:320:A:H4'	2:B:322:A:N7	2.04	0.73
24:X:44:ARG:HG2	24:X:45:PHE:H	1.54	0.73
22:V:70:ILE:HG12	22:V:71:LYS:N	2.04	0.72
7:G:101:VAL:HG12	7:G:115:GLN:HB2	1.70	0.72
2:B:1063:G:O2'	9:I:88:GLY:HA3	1.89	0.72
9:I:122:GLU:O	9:I:126:ARG:HG3	1.90	0.72
1:A:11:C:H3'	1:A:12:C:H5''	1.71	0.72
2:B:1552:A:H2'	2:B:1553:A:H5'	1.70	0.72
2:B:2267:A:C8	2:B:2267:A:C3'	2.72	0.72
2:B:1437:C:H2'	2:B:1438:U:C6	2.24	0.72
2:B:581:C:H2'	2:B:582:A:C8	2.24	0.72
1:A:29:A:H3'	1:A:30:C:H6	1.54	0.72
10:J:41:LYS:HZ1	10:J:51:GLY:HA2	1.50	0.72
2:B:28:A:H61	2:B:512:G:H1'	1.54	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:D:113:SER:HB2	4:D:168:GLU:H	1.55	0.72
2:B:645:C:H3'	2:B:646:U:C5	2.24	0.72
17:Q:87:VAL:HG21	18:R:52:PRO:N	2.05	0.72
3:C:144:GLU:HG3	3:C:151:GLY:N	2.04	0.72
2:B:137:U:H3'	2:B:138:U:C5	2.24	0.72
2:B:307:G:N2	2:B:309:A:H3'	2.04	0.72
2:B:480:A:H3'	2:B:481:G:H5''	1.70	0.72
4:D:14:ILE:HA	16:P:11:GLN:HE22	1.53	0.72
4:D:105:LYS:HE3	4:D:176:ASP:HB3	1.71	0.72
18:R:25:LEU:H	18:R:94:THR:HG21	1.54	0.72
8:H:116:ARG:HG2	8:H:118:PRO:HD3	1.72	0.72
11:K:98:ILE:HD13	11:K:117:LEU:HD13	1.72	0.72
22:V:79:ARG:HA	22:V:86:LEU:HA	1.71	0.72
23:W:66:VAL:HA	23:W:81:ILE:HG22	1.71	0.72
10:J:45:THR:OG1	10:J:48:VAL:HB	1.90	0.72
11:K:51:VAL:HG11	11:K:57:LEU:HD11	1.71	0.72
28:1:39:ASP:HB3	28:1:48:TYR:OH	1.89	0.72
22:V:63:ILE:HG22	22:V:65:VAL:HG13	1.72	0.72
2:B:2065:C:H2'	2:B:2066:C:H6	1.55	0.72
23:W:36:ILE:O	23:W:39:GLN:HB3	1.90	0.71
2:B:832:U:H2'	2:B:833:A:C8	2.24	0.71
4:D:35:THR:HB	4:D:67:HIS:HE1	1.53	0.71
2:B:558:U:OP1	10:J:113:PRO:HG2	1.89	0.71
22:V:29:ILE:HG22	22:V:39:ALA:HA	1.72	0.71
17:Q:71:ASN:HD21	17:Q:106:THR:HG23	1.54	0.71
2:B:1779:U:H5	2:B:1784:A:N7	1.88	0.71
13:M:38:ARG:HG2	13:M:98:PRO:HD3	1.73	0.71
21:U:58:VAL:HG12	21:U:59:GLU:N	2.05	0.71
5:E:2:GLU:HG3	5:E:13:THR:N	2.05	0.71
2:B:1019:U:H2'	2:B:1020:A:C8	2.24	0.71
2:B:1060:U:C4	2:B:1088:A:N6	2.58	0.71
2:B:280:U:H3	2:B:360:U:H3	1.36	0.71
26:Z:6:ILE:O	26:Z:34:THR:HA	1.90	0.71
17:Q:105:PHE:HA	17:Q:108:LEU:HD12	1.72	0.71
17:Q:87:VAL:HG21	18:R:52:PRO:CD	2.21	0.71
2:B:2748:A:H5''	7:G:3:VAL:HG11	1.71	0.71
28:1:26:LYS:HD3	28:1:52:LYS:NZ	2.05	0.71
2:B:265:A:O2'	2:B:266:G:H4'	1.90	0.71
2:B:1812:U:H2'	2:B:1813:G:H8	1.55	0.71
23:W:40:ARG:HH11	23:W:40:ARG:HG3	1.54	0.71
6:F:42:ALA:HA	6:F:49:LEU:HD21	1.70	0.71
17:Q:97:ILE:HD11	17:Q:108:LEU:HD11	1.71	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:R:1:MET:HB3	18:R:101:ILE:HG21	1.72	0.71
12:L:62:PRO:HB3	30:3:29:ARG:NH2	2.06	0.71
1:A:104:A:H2'	1:A:105:G:O4'	1.90	0.71
2:B:856:G:H1'	23:W:23:LYS:HB3	1.73	0.71
2:B:1021:A:H62	2:B:1141:U:H3	1.39	0.71
22:V:76:ASP:H	22:V:90:ASP:HB2	1.55	0.71
20:T:60:THR:HB	20:T:81:LYS:HD2	1.73	0.71
9:I:20:SER:HB3	9:I:21:PRO:HD3	1.71	0.71
5:E:148:ILE:HB	5:E:169:VAL:HG12	1.71	0.71
2:B:851:C:H2'	2:B:852:U:C6	2.26	0.71
23:W:18:LYS:HA	23:W:36:ILE:HG13	1.72	0.71
20:T:32:LEU:H	20:T:83:ALA:HB3	1.56	0.71
2:B:996:A:H4'	17:Q:91:ARG:HG2	1.72	0.71
24:X:30:PRO:HB2	24:X:32:LEU:HD13	1.72	0.71
5:E:131:THR:HG22	5:E:161:ALA:N	2.05	0.71
2:B:1727:C:H2'	2:B:1728:C:C6	2.26	0.71
3:C:130:PRO:HG2	3:C:133:ASN:HD22	1.55	0.70
8:H:134:VAL:HG13	8:H:135:HIS:H	1.56	0.70
6:F:15:LEU:O	6:F:18:GLU:HB3	1.90	0.70
17:Q:29:ARG:O	17:Q:30:VAL:HB	1.91	0.70
2:B:992:C:H4'	18:R:74:ILE:HD13	1.72	0.70
2:B:1558:C:H4'	2:B:1559:U:H5'	1.74	0.70
2:B:710:U:H2'	2:B:711:G:H8	1.56	0.70
5:E:49:ARG:NH1	5:E:72:SER:HB2	2.07	0.70
8:H:132:PHE:O	8:H:140:ALA:HB3	1.91	0.70
18:R:4:VAL:HG23	18:R:39:LEU:H	1.56	0.70
4:D:51:THR:HG21	4:D:75:ALA:O	1.92	0.70
30:3:22:LYS:HA	30:3:48:MET:H	1.56	0.70
28:1:16:THR:HG21	28:1:39:ASP:OD2	1.91	0.70
2:B:102:U:C2	25:Y:2:LYS:HG2	2.26	0.70
21:U:35:VAL:HB	21:U:38:ILE:HG21	1.73	0.70
8:H:132:PHE:CE2	8:H:134:VAL:HB	2.27	0.70
31:4:3:VAL:HG23	31:4:4:ARG:H	1.56	0.70
2:B:2306:C:H3'	2:B:2307:G:C5'	2.21	0.70
2:B:1739:A:H2'	2:B:1740:G:O4'	1.91	0.70
2:B:654:A:H2'	2:B:655:A:H5''	1.72	0.70
20:T:8:LEU:HD21	20:T:46:ALA:HA	1.74	0.70
19:S:24:ILE:CG2	19:S:71:VAL:HG11	2.22	0.70
10:J:124:VAL:O	10:J:125:TYR:HB2	1.89	0.70
6:F:122:ASP:HB2	6:F:126:ASN:OD1	1.92	0.70
2:B:2183:A:H2'	2:B:2184:A:C8	2.26	0.70
2:B:2196:C:O2'	2:B:2197:U:H5'	1.92	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:R:51:VAL:HB	18:R:52:PRO:HD2	1.72	0.70
4:D:108:ASP:OD2	4:D:173:GLN:HA	1.91	0.70
21:U:39:ASN:HB3	21:U:62:ALA:N	2.06	0.70
2:B:962:G:H21	2:B:2250:G:H1	1.40	0.70
2:B:1746:A:H2'	2:B:1747:U:C6	2.27	0.70
20:T:29:THR:N	20:T:91:GLN:HE22	1.90	0.70
2:B:1179:G:H2'	2:B:1180:U:C6	2.27	0.70
23:W:27:GLY:HA2	23:W:31:LEU:HD12	1.74	0.70
2:B:639:U:H2'	2:B:640:C:C6	2.27	0.70
8:H:104:THR:HA	8:H:109:GLU:HG3	1.71	0.70
14:N:98:LEU:HD12	27:O:42:ILE:HD11	1.74	0.70
2:B:705:A:N6	2:B:726:G:H1'	2.06	0.70
12:L:79:LEU:HB2	12:L:113:ALA:H	1.57	0.70
2:B:95:A:C4'	25:Y:38:GLN:HE22	1.99	0.69
2:B:2306:C:H2'	2:B:2307:G:H21	1.55	0.69
14:N:116:VAL:HG13	14:N:117:ASP:H	1.57	0.69
4:D:34:VAL:HG21	4:D:90:PHE:O	1.93	0.69
21:U:85:ARG:NE	21:U:85:ARG:HA	2.07	0.69
2:B:1794:A:H2'	2:B:1795:C:C6	2.27	0.69
20:T:44:LYS:O	20:T:48:GLN:HG2	1.91	0.69
17:Q:87:VAL:HG12	17:Q:88:GLU:H	1.57	0.69
21:U:85:ARG:HD3	21:U:86:PHE:H	1.57	0.69
2:B:2356:U:H4'	23:W:16:GLU:HG3	1.72	0.69
4:D:107:VAL:H	4:D:205:PRO:HA	1.56	0.69
7:G:97:VAL:HG11	7:G:123:GLU:HA	1.74	0.69
20:T:12:ARG:HA	25:Y:29:ARG:HH12	1.57	0.69
22:V:70:ILE:HD13	22:V:70:ILE:N	2.07	0.69
11:K:111:PHE:O	11:K:114:ILE:HG22	1.92	0.69
2:B:2306:C:H2'	2:B:2307:G:N2	2.08	0.69
2:B:2377:A:H2'	2:B:2378:A:C8	2.27	0.69
1:A:32:U:H1'	1:A:52:A:N7	2.07	0.69
2:B:2353:G:H1'	23:W:30:VAL:CG1	2.23	0.69
23:W:18:LYS:HA	23:W:36:ILE:CG1	2.22	0.69
10:J:3:THR:HG21	17:Q:60:TRP:NE1	2.07	0.69
17:Q:104:ALA:HB1	18:R:46:GLU:OE2	1.93	0.69
4:D:5:VAL:H	4:D:32:ASN:HD21	1.39	0.69
19:S:24:ILE:HG22	19:S:71:VAL:HG11	1.74	0.69
2:B:2049:G:O2'	2:B:2050:C:H5'	1.93	0.69
3:C:15:VAL:HG22	3:C:205:GLY:HA3	1.75	0.69
20:T:55:VAL:HG22	20:T:87:LEU:HD23	1.74	0.69
20:T:87:LEU:HB2	20:T:91:GLN:HG2	1.75	0.69
3:C:144:GLU:HG3	3:C:151:GLY:H	1.58	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:100:ASN:ND2	7:G:101:VAL:H	1.90	0.69
2:B:151:C:H2'	2:B:152:A:C8	2.28	0.69
12:L:75:ALA:HB2	12:L:105:ILE:HD12	1.75	0.69
8:H:81:ALA:HB2	8:H:147:VAL:HB	1.75	0.69
6:F:91:ARG:HD3	6:F:91:ARG:N	2.08	0.69
4:D:106:LYS:HB3	4:D:206:ALA:HB3	1.73	0.69
2:B:151:C:H2'	2:B:152:A:H8	1.57	0.69
2:B:2073:C:H5''	3:C:227:VAL:HG12	1.74	0.69
25:Y:17:GLU:HB3	25:Y:53:VAL:HG11	1.73	0.69
26:Z:16:LEU:O	26:Z:19:HIS:HB2	1.93	0.69
2:B:364:C:H2'	2:B:365:U:C6	2.27	0.69
6:F:134:GLN:NE2	6:F:136:ILE:HD13	2.08	0.69
2:B:580:U:H2'	2:B:581:C:C6	2.28	0.69
2:B:2306:C:H42	6:F:38:GLY:HA3	1.57	0.69
20:T:12:ARG:NH2	25:Y:29:ARG:HE	1.91	0.69
24:X:26:ARG:O	24:X:27:ARG:HG2	1.93	0.69
30:3:28:LEU:HD22	30:3:43:LEU:HB3	1.75	0.69
2:B:1244:A:H5''	12:L:8:PRO:HD3	1.75	0.69
15:O:24:THR:HG22	15:O:42:PRO:HD3	1.75	0.69
2:B:2595:G:H1	3:C:238:ASN:ND2	1.90	0.69
21:U:81:ARG:HD2	21:U:96:LYS:HG3	1.74	0.69
7:G:23:ILE:HD11	7:G:42:VAL:HG11	1.75	0.68
2:B:1022:G:N2	2:B:1142:A:C2	2.62	0.68
20:T:50:LEU:H	20:T:50:LEU:HD22	1.59	0.68
2:B:2336:A:C6	23:W:40:ARG:HD2	2.28	0.68
16:P:45:VAL:H	16:P:60:VAL:CG1	2.06	0.68
5:E:74:LYS:O	5:E:76:PRO:HD3	1.91	0.68
7:G:54:ARG:HD3	7:G:55:ASP:H	1.58	0.68
7:G:106:LEU:HD13	7:G:151:ARG:HB2	1.76	0.68
4:D:33:ARG:HD3	4:D:51:THR:HB	1.76	0.68
4:D:186:LEU:HD21	16:P:3:ILE:HD11	1.74	0.68
14:N:73:ASN:HA	14:N:76:VAL:HG22	1.74	0.68
10:J:77:HIS:CD2	10:J:84:ILE:H	2.12	0.68
17:Q:60:TRP:O	17:Q:64:ILE:HG12	1.93	0.68
14:N:97:ILE:HD12	14:N:98:LEU:H	1.57	0.68
2:B:1060:U:O2	2:B:1088:A:N7	2.27	0.68
19:S:22:ASP:HA	19:S:25:ARG:NH1	2.06	0.68
2:B:1447:C:H2'	2:B:1448:G:C8	2.28	0.68
9:I:7:TYR:HB3	9:I:59:THR:HA	1.74	0.68
2:B:810:U:O4	12:L:30:THR:HG22	1.94	0.68
2:B:1203:U:H3'	2:B:1204:A:H5''	1.76	0.68
2:B:2292:U:H2'	2:B:2293:G:H8	1.59	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:124:LYS:HB3	3:C:127:ASN:ND2	2.08	0.68
20:T:11:LEU:CD2	20:T:46:ALA:HB1	2.22	0.68
2:B:2305:U:H1'	6:F:132:ARG:HA	1.73	0.68
7:G:157:LYS:HD3	7:G:159:LYS:HD2	1.74	0.68
2:B:1582:C:H2'	2:B:1583:A:O4'	1.92	0.68
2:B:849:A:H2'	2:B:850:U:C6	2.28	0.68
5:E:2:GLU:HG2	5:E:11:ALA:HB1	1.76	0.68
7:G:38:ASP:CG	7:G:39:ALA:H	1.96	0.68
3:C:28:PRO:HG2	3:C:33:LEU:HD11	1.75	0.68
23:W:77:LYS:O	23:W:78:PHE:HB2	1.94	0.68
31:4:7:VAL:HG23	31:4:35:GLN:HB2	1.75	0.68
7:G:126:THR:HG22	7:G:127:GLN:H	1.59	0.68
4:D:148:GLN:CG	4:D:152:PRO:HG2	2.18	0.68
23:W:17:ALA:HB1	23:W:36:ILE:HA	1.75	0.68
3:C:124:LYS:HE2	3:C:127:ASN:HD21	1.59	0.68
2:B:2336:A:N6	23:W:40:ARG:CD	2.57	0.68
2:B:2074:U:H2'	2:B:2075:U:C6	2.29	0.68
14:N:29:VAL:HG12	14:N:78:LYS:HD3	1.76	0.68
22:V:21:ARG:HE	22:V:87:GLN:HB3	1.59	0.68
2:B:2757:A:N1	7:G:66:THR:HG21	2.09	0.68
2:B:2328:A:H2'	2:B:2329:U:C6	2.29	0.68
2:B:2332:C:H4'	23:W:40:ARG:HE	1.59	0.68
2:B:2516:A:O2'	2:B:2517:C:H5'	1.93	0.68
2:B:2649:C:H2'	2:B:2650:U:H6	1.58	0.68
2:B:1534:U:H2'	2:B:1536:C:N3	2.08	0.68
2:B:2144:G:N2	2:B:2147:A:H4'	2.09	0.67
3:C:93:VAL:HG13	3:C:94:LEU:N	2.08	0.67
12:L:77:ILE:HG12	12:L:101:ILE:HD11	1.75	0.67
16:P:61:ARG:NH1	16:P:100:ARG:HA	2.10	0.67
2:B:2443:C:H2'	2:B:2444:G:H8	1.59	0.67
17:Q:56:PHE:C	17:Q:58:GLN:H	1.94	0.67
2:B:2286:G:H4'	2:B:2287:A:O4'	1.94	0.67
2:B:1169:A:H2'	2:B:1170:C:C6	2.29	0.67
2:B:83:A:N6	2:B:101:A:H5'	2.10	0.67
2:B:2064:C:H2'	2:B:2065:C:C6	2.29	0.67
1:A:75:G:H4'	22:V:29:ILE:HG21	1.76	0.67
2:B:1506:U:H2'	2:B:1507:C:C6	2.29	0.67
2:B:2771:C:H5''	4:D:207:VAL:HG11	1.76	0.67
2:B:172:A:H2'	2:B:173:A:H8	1.59	0.67
2:B:2365:G:H4'	23:W:59:PHE:CD1	2.28	0.67
17:Q:91:ARG:NH1	18:R:10:LYS:HB3	2.10	0.67
4:D:38:LYS:HZ1	4:D:42:ASN:HB2	1.58	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:71:LYS:HD3	13:M:95:LEU:HD13	1.76	0.67
15:O:7:ARG:HA	15:O:10:ARG:HH22	1.56	0.67
2:B:1386:C:H2'	2:B:1387:A:C8	2.29	0.67
15:O:105:ALA:C	15:O:107:ALA:H	1.95	0.67
2:B:309:A:H4'	21:U:15:GLY:HA3	1.75	0.67
21:U:15:GLY:HA3	21:U:16:LYS:HZ2	1.59	0.67
2:B:1381:G:C2'	2:B:1382:G:H5'	2.23	0.67
4:D:14:ILE:HG23	4:D:22:ILE:HB	1.75	0.67
12:L:6:LEU:HD23	12:L:6:LEU:H	1.58	0.67
2:B:651:G:OP1	30:3:18:LYS:HG3	1.94	0.67
5:E:48:THR:HG22	5:E:86:ALA:HB3	1.77	0.67
24:X:44:ARG:HG2	24:X:45:PHE:N	2.09	0.67
29:2:30:VAL:HA	29:2:33:ARG:NH2	2.10	0.67
7:G:145:ALA:HA	7:G:148:ARG:HE	1.58	0.67
2:B:1591:A:H2'	2:B:1592:C:C6	2.29	0.67
2:B:1174:U:O3'	2:B:1176:U:H1'	1.94	0.67
18:R:77:PHE:HD2	18:R:84:ARG:HG2	1.60	0.67
1:A:7:G:H1'	15:O:38:GLN:HE22	1.58	0.67
12:L:124:GLY:N	12:L:143:GLU:HG3	2.10	0.67
14:N:106:ASP:C	14:N:108:ALA:H	1.96	0.67
13:M:4:PRO:HG2	13:M:70:ASP:HA	1.77	0.67
8:H:94:ILE:HG23	8:H:98:ASP:CB	2.24	0.67
2:B:871:U:H2'	2:B:872:U:H6	1.59	0.67
2:B:710:U:H2'	2:B:711:G:C8	2.29	0.67
2:B:962:G:N2	2:B:2250:G:H1	1.91	0.67
21:U:81:ARG:HH21	21:U:81:ARG:HG3	1.59	0.67
2:B:215:G:H4'	2:B:216:A:H4'	1.77	0.67
2:B:181:A:H2'	2:B:182:A:C8	2.30	0.67
27:0:2:VAL:HG23	27:0:3:GLN:O	1.95	0.67
3:C:158:GLY:H	3:C:194:VAL:HG13	1.60	0.67
2:B:401:A:H2'	2:B:402:A:C8	2.29	0.67
9:I:10:LEU:HD13	9:I:12:VAL:HG13	1.75	0.67
2:B:1993:U:H4'	4:D:133:THR:HG21	1.77	0.67
6:F:69:ALA:CB	6:F:78:ILE:HG23	2.24	0.67
4:D:182:ALA:C	4:D:184:ARG:H	1.97	0.67
2:B:796:C:H2'	2:B:797:G:C8	2.29	0.67
24:X:39:VAL:HG21	24:X:42:GLU:HB3	1.77	0.67
12:L:78:ARG:HB3	12:L:113:ALA:HB2	1.77	0.67
12:L:79:LEU:HG	12:L:112:LEU:HA	1.74	0.67
16:P:45:VAL:H	16:P:60:VAL:HG13	1.60	0.67
29:2:33:ARG:HH21	29:2:33:ARG:HB2	1.60	0.67
2:B:2880:C:H1'	14:N:93:GLY:H	1.58	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1810:A:H2'	2:B:1811:G:O4'	1.93	0.67
2:B:1551:A:H3'	2:B:1552:A:H5''	1.76	0.67
2:B:2810:A:H2'	2:B:2811:G:O4'	1.95	0.67
2:B:2092:U:H4'	2:B:2093:G:O5'	1.95	0.67
5:E:175:ILE:HG13	5:E:180:LEU:HD21	1.77	0.66
1:A:98:G:H1	22:V:14:LYS:HB2	1.60	0.66
6:F:82:TYR:OH	6:F:84:ILE:HD13	1.95	0.66
3:C:171:VAL:HG23	3:C:185:ALA:HB2	1.76	0.66
8:H:81:ALA:HA	8:H:146:VAL:HA	1.75	0.66
24:X:37:PHE:HE2	24:X:50:VAL:HG21	1.60	0.66
16:P:6:GLN:O	16:P:10:GLU:HB2	1.95	0.66
2:B:1283:G:N2	2:B:1286:A:H5'	2.10	0.66
16:P:49:ILE:H	16:P:95:LYS:HE3	1.60	0.66
23:W:17:ALA:O	23:W:18:LYS:HB2	1.96	0.66
20:T:29:THR:CA	20:T:86:THR:HA	2.23	0.66
2:B:1138:G:H2'	2:B:1139:G:O4'	1.95	0.66
2:B:2472:G:O6	2:B:2476:A:H4'	1.96	0.66
14:N:47:VAL:O	14:N:50:PRO:HD2	1.94	0.66
2:B:309:A:H4'	21:U:16:LYS:NZ	2.10	0.66
2:B:594:U:H2'	2:B:595:C:C6	2.30	0.66
16:P:88:ARG:HB2	16:P:112:ARG:HH12	1.59	0.66
3:C:245:THR:O	3:C:247:TRP:N	2.27	0.66
13:M:6:ARG:HD2	13:M:8:LYS:NZ	2.10	0.66
2:B:2145:C:H5'	2:B:2147:A:OP2	1.96	0.66
6:F:11:VAL:HG12	6:F:12:VAL:N	2.09	0.66
25:Y:48:ARG:HB2	25:Y:48:ARG:HH11	1.60	0.66
3:C:229:HIS:ND1	3:C:230:PRO:HD2	2.10	0.66
1:A:49:C:H2'	1:A:50:A:C8	2.30	0.66
1:A:52:A:H2'	1:A:53:A:H8	1.59	0.66
2:B:1061:U:O4	9:I:10:LEU:HA	1.96	0.66
2:B:2743:U:H2'	2:B:2744:G:O4'	1.95	0.66
15:O:17:LYS:HE2	15:O:21:LEU:HD21	1.76	0.66
2:B:2022:U:O4	27:O:5:ASN:HB2	1.95	0.66
3:C:68:ARG:HB3	3:C:128:THR:HG21	1.78	0.66
8:H:90:LEU:HD22	8:H:123:ARG:HB2	1.78	0.66
10:J:93:ILE:O	10:J:97:PRO:HG3	1.96	0.66
3:C:16:VAL:H	3:C:203:VAL:HG12	1.59	0.66
2:B:2015:A:C2	27:O:2:VAL:HG12	2.31	0.66
18:R:19:THR:HG22	18:R:97:LYS:HA	1.77	0.66
2:B:2803:G:H2'	2:B:2804:U:C6	2.31	0.66
2:B:2151:U:H2'	2:B:2152:G:O4'	1.94	0.66
2:B:2336:A:N6	23:W:40:ARG:HH11	1.93	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:633:A:O5'	2:B:633:A:H8	1.79	0.66
25:Y:46:VAL:O	25:Y:50:VAL:HG23	1.95	0.66
19:S:17:VAL:C	19:S:19:LEU:H	1.99	0.66
11:K:75:VAL:H	16:P:72:VAL:HG23	1.59	0.66
2:B:2297:A:C2	2:B:2320:U:H4'	2.30	0.66
3:C:103:ILE:HG22	3:C:105:ALA:H	1.61	0.66
16:P:75:THR:HG23	16:P:76:HIS:N	2.06	0.66
2:B:322:A:H5'	2:B:340:A:H1'	1.77	0.66
2:B:1939:U:H6	2:B:1939:U:H5'	1.61	0.66
6:F:139:GLU:CD	6:F:140:ILE:H	1.99	0.66
16:P:59:THR:H	16:P:72:VAL:HA	1.60	0.66
2:B:2547:A:H2'	2:B:2548:U:C6	2.31	0.66
2:B:1000:A:H2'	2:B:1001:A:C8	2.31	0.66
6:F:82:TYR:CE1	6:F:84:ILE:HB	2.31	0.65
27:O:8:THR:HG23	27:O:11:LYS:H	1.61	0.65
5:E:147:LEU:HB3	5:E:186:VAL:HG23	1.77	0.65
19:S:40:ASN:ND2	19:S:40:ASN:H	1.92	0.65
2:B:2394:C:OP1	12:L:63:LYS:HG2	1.96	0.65
2:B:2267:A:H3'	2:B:2267:A:H8	1.62	0.65
12:L:79:LEU:HA	12:L:82:LEU:HD13	1.77	0.65
11:K:42:ILE:HD12	11:K:55:ASP:HB2	1.77	0.65
13:M:34:LYS:HB3	13:M:129:THR:HG22	1.77	0.65
4:D:114:LYS:HD2	4:D:116:LYS:HE3	1.77	0.65
9:I:129:GLU:HB3	9:I:133:ARG:NH1	2.09	0.65
2:B:27:G:N2	2:B:512:G:H2'	2.12	0.65
2:B:2071:A:H2'	2:B:2072:C:C6	2.32	0.65
19:S:37:THR:HG23	19:S:48:LYS:HE3	1.77	0.65
2:B:721:A:H2'	2:B:722:A:C8	2.32	0.65
2:B:705:A:H61	2:B:726:G:H1'	1.62	0.65
20:T:69:ARG:HH11	20:T:70:HIS:H	1.42	0.65
2:B:2742:G:OP1	31:4:36:ARG:HD2	1.95	0.65
13:M:32:GLY:HA2	13:M:104:GLU:HA	1.79	0.65
8:H:103:VAL:HB	8:H:108:VAL:O	1.97	0.65
2:B:2751:G:O4'	7:G:2:ARG:HD3	1.97	0.65
4:D:105:LYS:HA	4:D:177:VAL:HG22	1.79	0.65
25:Y:56:LEU:HA	25:Y:59:GLU:HG3	1.78	0.65
7:G:85:LYS:O	7:G:85:LYS:HG2	1.96	0.65
22:V:42:LEU:HD11	22:V:89:ILE:HD11	1.79	0.65
2:B:2803:G:H2'	2:B:2804:U:H6	1.61	0.65
2:B:2341:G:H2'	2:B:2342:C:C6	2.30	0.65
4:D:57:ALA:O	4:D:60:VAL:HG22	1.96	0.65
2:B:2185:U:H2'	2:B:2186:G:H8	1.62	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:922:C:O2'	23:W:25:PHE:HZ	1.79	0.65
10:J:44:TYR:CE1	17:Q:59:LEU:HD13	2.32	0.65
7:G:83:THR:HA	7:G:84:LYS:NZ	2.11	0.65
2:B:2135:A:C2	2:B:2136:G:H1'	2.31	0.65
2:B:155:A:H2'	2:B:156:A:C8	2.32	0.65
6:F:120:SER:HB3	6:F:127:TYR:CD2	2.32	0.65
8:H:68:ARG:HE	8:H:134:VAL:HG11	1.61	0.65
24:X:6:VAL:HG13	24:X:7:THR:HG23	1.78	0.65
23:W:10:ARG:O	23:W:11:ASN:HB2	1.95	0.65
9:I:25:PRO:O	9:I:29:GLN:HG2	1.97	0.65
2:B:2649:C:H2'	2:B:2650:U:C6	2.32	0.65
2:B:1536:C:H1'	2:B:1537:G:N2	2.12	0.65
24:X:36:ARG:HH21	24:X:36:ARG:HB3	1.61	0.65
14:N:12:ARG:HG3	14:N:13:ASN:H	1.61	0.65
3:C:20:ASN:HB2	3:C:23:LEU:HD13	1.77	0.65
25:Y:32:ALA:HB2	25:Y:37:LEU:HD12	1.78	0.65
3:C:183:VAL:CG1	3:C:184:GLU:H	2.07	0.65
12:L:124:GLY:H	12:L:143:GLU:CB	2.09	0.65
2:B:2336:A:H61	23:W:40:ARG:NH1	1.94	0.65
2:B:1469:A:H2'	2:B:1470:A:H8	1.60	0.65
2:B:90:U:H3'	2:B:91:A:C5'	2.26	0.65
14:N:72:ASP:O	14:N:76:VAL:HG13	1.96	0.65
2:B:172:A:H2'	2:B:173:A:C8	2.31	0.65
2:B:351:C:H2'	2:B:352:A:C8	2.31	0.65
19:S:20:VAL:O	19:S:23:LEU:HB2	1.97	0.65
2:B:742:A:H2'	2:B:743:A:C8	2.31	0.65
8:H:90:LEU:HD11	8:H:125:THR:N	2.11	0.65
7:G:148:ARG:HA	7:G:161:VAL:HB	1.78	0.65
3:C:53:ILE:O	3:C:53:ILE:HG23	1.97	0.65
9:I:105:LEU:HD11	9:I:139:VAL:HG11	1.78	0.65
2:B:39:G:H2'	2:B:40:U:C6	2.31	0.65
20:T:55:VAL:HA	20:T:87:LEU:HA	1.79	0.64
19:S:32:ALA:HA	19:S:35:ILE:HD11	1.77	0.64
2:B:363:G:H2'	2:B:364:C:C6	2.31	0.64
1:A:89:U:H1'	2:B:958:U:H2'	1.77	0.64
8:H:85:GLY:N	8:H:90:LEU:HA	2.09	0.64
2:B:1309:G:OP1	29:2:9:VAL:HG12	1.97	0.64
2:B:2142:A:N1	2:B:2148:G:N2	2.46	0.64
16:P:5:LYS:HA	16:P:8:GLU:HB2	1.78	0.64
2:B:668:A:H2'	2:B:670:A:H62	1.62	0.64
2:B:2185:U:H2'	2:B:2186:G:C8	2.32	0.64
2:B:4:U:H2'	2:B:5:A:C8	2.32	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:O:53:VAL:O	27:O:54:ILE:HB	1.97	0.64
20:T:32:LEU:N	20:T:83:ALA:HB3	2.12	0.64
8:H:31:VAL:O	8:H:32:PRO:C	2.36	0.64
5:E:181:ILE:HD11	12:L:2:ARG:C	2.17	0.64
2:B:1174:U:H4'	2:B:1176:U:O2	1.96	0.64
2:B:2438:U:O2'	2:B:2439:A:H5''	1.97	0.64
2:B:2415:G:H4'	12:L:66:PHE:HB2	1.79	0.64
2:B:1548:A:H2'	2:B:1549:A:C8	2.32	0.64
17:Q:73:ILE:HG13	17:Q:74:SER:H	1.62	0.64
3:C:173:LEU:HD22	3:C:173:LEU:H	1.61	0.64
8:H:135:HIS:HB3	8:H:138:VAL:HG23	1.80	0.64
7:G:23:ILE:HG21	7:G:71:LEU:HD11	1.78	0.64
3:C:216:ARG:HH11	3:C:216:ARG:HG3	1.63	0.64
25:Y:2:LYS:H	25:Y:2:LYS:HD2	1.60	0.64
2:B:182:A:H2'	2:B:183:C:C6	2.33	0.64
2:B:1287:A:OP1	14:N:104:ALA:HB3	1.97	0.64
22:V:80:HIS:CD2	22:V:83:LYS:H	2.16	0.64
2:B:2305:U:C5'	6:F:130:GLY:HA3	2.24	0.64
30:3:14:LYS:NZ	30:3:22:LYS:HG2	2.12	0.64
2:B:2306:C:H3'	2:B:2307:G:H5''	1.78	0.64
2:B:2877:G:O2'	2:B:2878:U:H5'	1.98	0.64
2:B:2537:U:H2'	2:B:2538:C:C6	2.32	0.64
8:H:85:GLY:H	8:H:90:LEU:CA	2.10	0.64
10:J:77:HIS:CD2	10:J:79:GLY:H	2.16	0.64
2:B:345:A:H1'	2:B:346:A:C2	2.32	0.64
20:T:22:THR:O	20:T:25:GLU:HB3	1.97	0.64
2:B:1395:A:H4'	2:B:1397:U:C5	2.33	0.64
2:B:2305:U:H5''	6:F:130:GLY:CA	2.27	0.64
7:G:100:ASN:ND2	7:G:100:ASN:H	1.94	0.64
5:E:58:LYS:HB2	5:E:60:TRP:CD1	2.33	0.64
10:J:25:LEU:HD22	10:J:26:GLY:H	1.60	0.64
2:B:45:G:C5'	2:B:46:G:H5'	2.28	0.64
2:B:580:U:H2'	2:B:581:C:H6	1.63	0.64
16:P:88:ARG:HB2	16:P:112:ARG:NH1	2.13	0.64
2:B:1842:G:H2'	2:B:1843:C:C6	2.33	0.64
15:O:11:ALA:HB2	15:O:96:GLY:H	1.63	0.64
2:B:1324:G:H1'	2:B:1616:A:N6	2.12	0.64
2:B:2498:C:O2'	2:B:2499:C:H5'	1.98	0.64
2:B:445:C:O2'	2:B:446:G:H5'	1.98	0.64
2:B:1024:G:C3'	2:B:1025:G:H5''	2.27	0.64
21:U:34:ILE:HG12	21:U:63:ALA:CB	2.28	0.64
2:B:703:U:H2'	2:B:704:G:O4'	1.98	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:14:HIS:O	3:C:203:VAL:HG11	1.98	0.64
11:K:107:ARG:HG3	11:K:107:ARG:O	1.96	0.64
2:B:2228:G:H2'	2:B:2229:U:C6	2.33	0.64
16:P:52:ARG:HG2	16:P:52:ARG:HH11	1.63	0.64
3:C:131:MET:HA	3:C:134:ILE:HG12	1.79	0.63
4:D:204:LYS:HG2	4:D:205:PRO:HD2	1.79	0.63
4:D:34:VAL:HG12	4:D:48:ILE:HD11	1.79	0.63
4:D:38:LYS:NZ	4:D:42:ASN:HB2	2.13	0.63
2:B:1639:C:C2'	2:B:1640:A:H5''	2.27	0.63
3:C:243:PRO:O	3:C:250:GLN:HA	1.98	0.63
2:B:1105:U:H2'	2:B:1106:G:H8	1.63	0.63
12:L:89:VAL:HA	12:L:121:THR:O	1.98	0.63
2:B:1273:U:H4'	2:B:1275:A:OP2	1.98	0.63
2:B:2645:G:H4'	2:B:2732:G:H2'	1.80	0.63
3:C:141:HIS:HB3	3:C:190:THR:OG1	1.98	0.63
8:H:94:ILE:HD12	8:H:98:ASP:HB2	1.80	0.63
10:J:24:THR:HA	10:J:63:ALA:HB3	1.78	0.63
2:B:2802:G:H2'	2:B:2803:G:H8	1.63	0.63
16:P:59:THR:OG1	16:P:72:VAL:HG12	1.98	0.63
2:B:1884:G:HO2'	2:B:1885:A:H8	1.46	0.63
8:H:3:VAL:HG12	8:H:38:PRO:HA	1.80	0.63
8:H:30:LEU:HA	8:H:35:LYS:HB2	1.78	0.63
2:B:2291:U:H2'	2:B:2292:U:C6	2.34	0.63
3:C:244:VAL:HG12	3:C:250:GLN:H	1.63	0.63
2:B:1683:U:H2'	2:B:1684:G:C8	2.34	0.63
2:B:559:G:H1'	17:Q:55:GLN:HE22	1.63	0.63
2:B:246:C:N4	30:3:7:ARG:HG2	2.13	0.63
1:A:109:A:H2'	1:A:110:C:H6	1.64	0.63
2:B:6:A:H1'	10:J:135:GLN:HE22	1.63	0.63
7:G:71:LEU:HA	7:G:74:MET:SD	2.39	0.63
6:F:168:LEU:HD22	6:F:169:LEU:N	2.12	0.63
31:4:15:LYS:O	31:4:16:ILE:HB	1.98	0.63
5:E:104:ALA:O	5:E:108:ILE:HG22	1.96	0.63
10:J:24:THR:O	10:J:25:LEU:HB3	1.99	0.63
18:R:34:GLU:HG2	18:R:60:LYS:HG2	1.80	0.63
2:B:1076:C:O3'	9:I:94:LYS:HE3	1.98	0.63
4:D:106:LYS:N	4:D:106:LYS:HD3	2.13	0.63
7:G:120:ILE:HD13	7:G:121:THR:N	2.12	0.63
2:B:29:U:O3'	17:Q:4:LYS:HE2	1.97	0.63
2:B:1470:A:H3'	2:B:1471:G:H8	1.62	0.63
6:F:124:ARG:HB3	6:F:126:ASN:ND2	2.13	0.63
13:M:78:LEU:O	13:M:80:VAL:HG12	1.99	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:W:39:GLN:CG	23:W:42:THR:HB	2.25	0.63
6:F:66:ILE:HA	6:F:85:GLY:O	1.98	0.63
10:J:43:GLU:O	10:J:45:THR:HG22	1.98	0.63
17:Q:91:ARG:CZ	18:R:11:GLN:H	2.12	0.63
7:G:102:ILE:O	7:G:113:ASP:HA	1.97	0.63
7:G:84:LYS:HG3	7:G:132:LEU:H	1.62	0.63
2:B:581:C:H2'	2:B:582:A:H8	1.62	0.63
2:B:1812:U:H1'	3:C:43:ASN:HD21	1.64	0.63
30:3:18:LYS:HD2	30:3:20:GLY:H	1.63	0.63
8:H:2:GLN:O	8:H:3:VAL:HG22	1.99	0.63
2:B:1041:G:H2'	2:B:1042:G:H8	1.64	0.63
13:M:23:GLY:O	13:M:101:VAL:HG12	1.97	0.63
2:B:2579:C:O2'	4:D:136:ASN:HA	1.98	0.63
23:W:23:LYS:CD	23:W:24:ARG:HG3	2.24	0.63
8:H:83:LYS:HD2	8:H:91:PHE:HB2	1.78	0.63
17:Q:87:VAL:HG21	18:R:52:PRO:HD3	1.80	0.63
7:G:28:LYS:HZ2	7:G:79:THR:HA	1.64	0.63
2:B:1550:C:H2'	2:B:1551:A:H8	1.63	0.63
2:B:1164:C:H2'	2:B:1165:A:C8	2.34	0.63
8:H:99:ILE:HG22	8:H:100:ALA:N	2.13	0.63
8:H:114:GLU:OE1	8:H:134:VAL:HA	1.98	0.63
2:B:6:A:H4'	10:J:131:ASN:O	1.99	0.63
13:M:17:ASN:O	13:M:18:ARG:HD2	1.99	0.63
24:X:53:LYS:HA	24:X:56:ARG:HD3	1.81	0.63
2:B:1285:A:H2'	2:B:1286:A:H5''	1.81	0.63
14:N:72:ASP:O	14:N:75:ILE:HG13	1.99	0.63
2:B:2835:A:H61	2:B:2878:U:H2'	1.63	0.63
8:H:44:ILE:HD12	8:H:45:GLU:HG3	1.81	0.63
1:A:109:A:H2'	1:A:110:C:C6	2.34	0.63
12:L:135:ILE:HG23	12:L:136:GLU:H	1.64	0.63
2:B:125:A:H1'	29:2:13:ASN:HB3	1.81	0.63
2:B:2874:C:H5''	14:N:4:ARG:NH2	2.14	0.63
2:B:1028:A:N6	2:B:1125:G:H2'	2.14	0.63
4:D:33:ARG:HH11	4:D:74:GLU:CG	2.13	0.62
2:B:2615:U:C2	27:0:3:GLN:HA	2.34	0.62
2:B:1854:A:N6	2:B:1888:G:H1'	2.14	0.62
2:B:1847:A:H1'	2:B:1848:A:C8	2.33	0.62
2:B:252:G:O2'	2:B:253:C:H5'	1.99	0.62
2:B:2314:A:H2'	2:B:2315:G:C8	2.35	0.62
2:B:1060:U:O4	2:B:1088:A:N6	2.31	0.62
13:M:68:PHE:CD1	13:M:69:PRO:HD2	2.33	0.62
11:K:39:LYS:NZ	11:K:88:ASN:HD21	1.97	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:W:24:ARG:HB2	23:W:65:LYS:HB3	1.81	0.62
21:U:90:LYS:HE2	21:U:92:VAL:HG22	1.80	0.62
9:I:18:ASN:N	9:I:19:PRO:HD2	2.14	0.62
13:M:71:LYS:HE3	13:M:73:ILE:HD11	1.81	0.62
2:B:674:G:H4'	5:E:69:ARG:HB3	1.81	0.62
2:B:78:U:H2'	2:B:79:C:C6	2.34	0.62
2:B:2662:A:H2'	2:B:2663:G:O4'	1.99	0.62
12:L:124:GLY:H	12:L:143:GLU:HG3	1.64	0.62
2:B:2902:C:O2'	2:B:2903:U:H5'	1.98	0.62
16:P:5:LYS:O	16:P:9:GLN:HG2	1.99	0.62
2:B:1283:G:N2	2:B:1285:A:H3'	2.14	0.62
2:B:2292:U:H2'	2:B:2293:G:C8	2.34	0.62
2:B:1405:U:H2'	2:B:1406:U:C6	2.35	0.62
2:B:224:U:O4	2:B:420:C:H5'	1.99	0.62
21:U:26:ASN:HD21	21:U:34:ILE:HD12	1.65	0.62
2:B:28:A:N6	2:B:512:G:H1'	2.15	0.62
2:B:1179:G:H2'	2:B:1180:U:H6	1.61	0.62
1:A:48:U:H2'	1:A:49:C:C6	2.35	0.62
2:B:559:G:H1'	17:Q:55:GLN:NE2	2.13	0.62
28:1:3:GLY:O	28:1:4:ILE:HG13	1.98	0.62
2:B:1802:A:H2'	2:B:1803:A:C8	2.34	0.62
7:G:30:GLY:HA3	7:G:78:VAL:HG12	1.82	0.62
4:D:53:GLY:C	4:D:76:GLY:HA2	2.19	0.62
9:I:11:GLN:HA	9:I:55:PRO:HA	1.80	0.62
21:U:14:THR:O	21:U:18:LYS:HA	2.00	0.62
2:B:2472:G:H2'	2:B:2475:C:N4	2.12	0.62
2:B:346:A:H2'	2:B:347:A:H5'	1.81	0.62
2:B:1028:A:H2'	2:B:1029:A:C8	2.34	0.62
2:B:1316:U:H2'	2:B:1317:G:H8	1.63	0.62
28:1:28:THR:O	28:1:30:PRO:HD3	1.99	0.62
21:U:45:GLN:HB2	21:U:58:VAL:HG23	1.81	0.62
10:J:55:ILE:O	10:J:55:ILE:HG13	1.99	0.62
13:M:12:MET:HE1	13:M:71:LYS:HD2	1.81	0.62
14:N:115:LEU:O	14:N:118:ARG:HB2	1.99	0.62
31:4:10:LEU:HD12	31:4:33:HIS:HA	1.82	0.62
2:B:163:C:H2'	2:B:164:C:H6	1.65	0.62
2:B:176:A:O2'	2:B:177:G:H5'	1.99	0.62
2:B:2147:A:O3'	2:B:2148:G:H8	1.83	0.62
14:N:12:ARG:HG2	14:N:16:HIS:ND1	2.15	0.62
2:B:1340:U:H5'	20:T:61:LEU:HD22	1.81	0.62
2:B:2591:C:H2'	2:B:2592:G:C8	2.35	0.62
16:P:56:SER:O	16:P:75:THR:HG22	2.00	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:4:U:H2'	2:B:5:A:H8	1.65	0.62
27:0:38:LEU:HD13	27:0:41:HIS:NE2	2.14	0.62
7:G:86:LEU:HD13	7:G:132:LEU:HD21	1.81	0.62
5:E:145:ASP:HA	5:E:166:LYS:O	2.00	0.62
2:B:2065:C:H2'	2:B:2066:C:C6	2.34	0.62
13:M:102:LEU:H	13:M:102:LEU:HD22	1.64	0.62
2:B:1593:A:H2'	2:B:1594:U:C6	2.35	0.62
2:B:1210:G:H5''	2:B:1211:C:H3'	1.82	0.62
2:B:1346:G:O2'	2:B:1347:A:H5'	2.00	0.62
2:B:2598:A:OP1	3:C:233:GLY:HA3	1.99	0.62
23:W:19:ARG:HH11	23:W:22:VAL:HG11	1.64	0.62
2:B:2902:C:O2'	2:B:2903:U:H6	1.83	0.62
6:F:62:GLN:CB	6:F:91:ARG:HH11	2.12	0.62
2:B:2728:U:H2'	2:B:2729:G:C8	2.35	0.62
19:S:36:LEU:HD22	19:S:36:LEU:H	1.65	0.62
10:J:105:VAL:HG21	10:J:122:LEU:HD13	1.82	0.62
2:B:315:G:H2'	2:B:316:C:C6	2.35	0.62
2:B:1054:A:H2'	2:B:1055:G:C8	2.35	0.62
2:B:2734:A:H2'	2:B:2735:G:H5'	1.81	0.62
20:T:48:GLN:HB2	20:T:49:LYS:HE3	1.82	0.61
6:F:49:LEU:H	6:F:49:LEU:HD22	1.64	0.61
2:B:72:U:H1'	25:Y:51:ALA:CB	2.30	0.61
6:F:7:TYR:O	6:F:11:VAL:HB	1.99	0.61
9:I:20:SER:O	9:I:25:PRO:HD2	2.00	0.61
26:Z:12:ALA:HA	26:Z:15:ARG:HD3	1.81	0.61
2:B:2792:A:H3'	2:B:2793:C:H5''	1.79	0.61
2:B:1580:A:H2'	2:B:1581:G:O4'	1.99	0.61
2:B:144:A:H2'	2:B:145:C:C6	2.34	0.61
2:B:1149:G:H2'	2:B:1150:C:C6	2.35	0.61
6:F:39:VAL:HG13	6:F:49:LEU:CD1	2.30	0.61
2:B:337:C:H2'	2:B:338:G:O4'	2.00	0.61
2:B:1181:U:H2'	2:B:1182:G:H8	1.66	0.61
14:N:33:ILE:O	14:N:34:ILE:HG13	2.00	0.61
2:B:5:A:H2'	2:B:6:A:C8	2.34	0.61
4:D:12:THR:HG22	4:D:13:ARG:H	1.65	0.61
4:D:13:ARG:HH12	16:P:74:GLN:HB3	1.64	0.61
21:U:73:ASN:ND2	21:U:77:GLY:H	1.96	0.61
2:B:1175:A:P	2:B:1176:U:H1'	2.40	0.61
2:B:1683:U:H2'	2:B:1684:G:H8	1.64	0.61
2:B:1210:G:H5'	2:B:1212:G:O4'	1.99	0.61
8:H:120:GLY:O	8:H:122:LEU:HD12	2.00	0.61
2:B:1231:U:H2'	2:B:1232:G:H8	1.65	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:264:LYS:HG3	3:C:265:PHE:HD2	1.66	0.61
4:D:202:ILE:HG22	4:D:203:VAL:N	2.14	0.61
2:B:2477:U:H2'	31:4:2:LYS:HE3	1.82	0.61
24:X:5:GLN:HE22	24:X:49:ARG:H	1.46	0.61
5:E:178:VAL:O	5:E:181:ILE:HG23	1.99	0.61
18:R:8:GLY:HA3	18:R:23:GLU:HG3	1.82	0.61
2:B:532:A:N7	2:B:2021:C:H2'	2.15	0.61
2:B:1266:G:N2	2:B:2012:G:H2'	2.15	0.61
2:B:721:A:H2'	2:B:722:A:H8	1.65	0.61
14:N:62:ASN:HD22	14:N:62:ASN:N	1.96	0.61
10:J:12:LYS:HB2	10:J:41:LYS:NZ	2.14	0.61
17:Q:94:LEU:CD1	18:R:13:ARG:HB2	2.30	0.61
2:B:2336:A:H62	23:W:40:ARG:CD	2.10	0.61
4:D:38:LYS:HZ2	4:D:38:LYS:HB2	1.65	0.61
18:R:25:LEU:H	18:R:94:THR:CG2	2.13	0.61
28:1:26:LYS:NZ	28:1:52:LYS:HB3	2.16	0.61
18:R:58:VAL:HG22	18:R:59:ILE:H	1.65	0.61
2:B:2093:G:O2'	2:B:2094:A:H5'	2.00	0.61
6:F:59:ILE:HD12	6:F:59:ILE:H	1.64	0.61
2:B:699:A:H4'	2:B:1634:A:N7	2.15	0.61
2:B:2557:G:H2'	2:B:2558:C:C6	2.35	0.61
26:Z:28:LEU:HA	26:Z:33:HIS:HD2	1.64	0.61
2:B:1049:C:H2'	2:B:1050:A:H8	1.65	0.61
2:B:1050:A:H2	2:B:2751:G:HO2'	1.46	0.61
2:B:280:U:H2'	2:B:281:C:C6	2.35	0.61
10:J:127:GLY:O	10:J:129:GLU:HG3	2.00	0.61
2:B:1856:U:H2'	2:B:1857:G:H5'	1.82	0.61
4:D:40:LEU:HD23	4:D:44:GLY:HA2	1.80	0.61
4:D:117:GLY:O	4:D:164:GLN:HA	2.00	0.61
9:I:89:SER:HA	9:I:97:VAL:HG21	1.82	0.61
12:L:124:GLY:H	12:L:143:GLU:CG	2.13	0.61
20:T:12:ARG:HB3	20:T:12:ARG:NH1	2.16	0.61
9:I:85:ILE:HD13	9:I:137:LEU:HD21	1.81	0.61
2:B:1654:A:H1'	2:B:2823:A:H5'	1.82	0.61
17:Q:107:ALA:HB3	18:R:46:GLU:OE1	2.00	0.61
6:F:107:VAL:HB	6:F:108:PRO:HD3	1.82	0.61
2:B:2728:U:H2'	2:B:2729:G:H8	1.66	0.61
7:G:162:ARG:HG2	7:G:163:TYR:N	2.16	0.61
2:B:1082:U:N3	2:B:1086:A:C6	2.69	0.61
2:B:1726:C:H2'	2:B:1727:C:C6	2.35	0.61
2:B:1203:U:H1'	12:L:4:ASN:ND2	2.16	0.61
2:B:1532:A:H2'	2:B:1533:C:C6	2.35	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1885:A:H2'	2:B:1886:U:O4'	2.00	0.61
11:K:37:ILE:HD13	11:K:60:VAL:HG12	1.83	0.61
17:Q:65:ASN:HD21	17:Q:69:ARG:NH1	1.97	0.61
2:B:2461:A:H2'	2:B:2462:C:C6	2.36	0.61
14:N:83:LEU:CA	14:N:86:ARG:HB2	2.24	0.61
6:F:98:PHE:O	6:F:102:LEU:HD12	2.01	0.61
10:J:35:ARG:HA	10:J:40:HIS:CD2	2.36	0.61
24:X:13:THR:HA	24:X:27:ARG:HA	1.82	0.61
3:C:23:LEU:HD23	3:C:82:TYR:HB2	1.82	0.61
2:B:1798:U:H5''	3:C:257:ARG:HB2	1.83	0.61
2:B:1526:C:H2'	2:B:1527:G:O4'	2.00	0.61
2:B:2103:C:H2'	2:B:2104:C:O4'	2.01	0.61
2:B:550:C:H2'	2:B:551:G:H8	1.65	0.61
4:D:11:MET:HE1	4:D:192:ALA:H	1.66	0.61
2:B:1060:U:C5	9:I:131:THR:HG22	2.36	0.61
25:Y:51:ALA:O	25:Y:55:THR:N	2.34	0.61
6:F:52:ALA:HA	6:F:149:ARG:HE	1.65	0.61
7:G:38:ASP:OD2	7:G:63:GLN:HG2	2.01	0.61
9:I:102:ARG:HB2	9:I:141:ASP:OD2	2.01	0.61
2:B:2102:G:H2'	2:B:2103:C:O4'	2.00	0.61
2:B:592:A:N3	30:3:3:ILE:HD11	2.16	0.61
3:C:62:ARG:O	3:C:63:ILE:HG12	2.01	0.60
6:F:48:LEU:HG	6:F:49:LEU:HD13	1.83	0.60
17:Q:87:VAL:HG12	17:Q:88:GLU:N	2.16	0.60
13:M:34:LYS:HG3	13:M:35:ALA:H	1.66	0.60
2:B:833:A:H2'	2:B:834:G:C8	2.36	0.60
2:B:2307:G:H4'	2:B:2308:G:H5''	1.83	0.60
8:H:41:LYS:HA	8:H:44:ILE:HG12	1.82	0.60
3:C:183:VAL:HG22	3:C:187:CYS:SG	2.41	0.60
4:D:12:THR:HG22	4:D:13:ARG:N	2.16	0.60
10:J:58:ASN:HD22	10:J:61:LYS:NZ	1.99	0.60
5:E:146:VAL:HG11	5:E:187:VAL:HG23	1.82	0.60
2:B:351:C:H2'	2:B:352:A:H8	1.64	0.60
6:F:29:ARG:HD3	6:F:158:THR:HG21	1.83	0.60
2:B:419:U:H5''	34:B:3164:HOH:O	2.00	0.60
2:B:1272:A:N7	2:B:1618:A:H1'	2.15	0.60
2:B:492:A:H2'	2:B:493:G:O4'	2.01	0.60
8:H:50:ARG:O	8:H:54:LEU:HG	2.01	0.60
20:T:87:LEU:HB2	20:T:91:GLN:HE21	1.66	0.60
16:P:56:SER:HB2	16:P:75:THR:HG21	1.81	0.60
7:G:3:VAL:O	7:G:68:ARG:HG3	2.00	0.60
24:X:70:LEU:HD13	24:X:75:GLU:HB3	1.83	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:140:C:H4'	2:B:141:G:N3	2.17	0.60
5:E:60:TRP:O	5:E:61:ARG:HB2	2.00	0.60
23:W:28:GLU:H	23:W:31:LEU:HG	1.66	0.60
2:B:75:G:H4'	25:Y:48:ARG:NH2	2.17	0.60
11:K:69:ARG:HB3	11:K:75:VAL:HA	1.83	0.60
2:B:1406:U:H2'	2:B:1407:G:H8	1.66	0.60
2:B:417:C:H2'	2:B:418:C:C6	2.35	0.60
2:B:417:C:H2'	2:B:418:C:H6	1.67	0.60
2:B:612:G:O2'	2:B:613:A:H2'	2.02	0.60
17:Q:91:ARG:HB3	17:Q:93:ILE:HG22	1.83	0.60
6:F:168:LEU:C	6:F:170:ALA:H	2.05	0.60
17:Q:30:VAL:HG13	17:Q:31:TYR:N	2.16	0.60
7:G:84:LYS:CG	7:G:85:LYS:H	2.15	0.60
30:3:14:LYS:HZ1	30:3:22:LYS:HG2	1.66	0.60
2:B:182:A:H2'	2:B:183:C:H6	1.66	0.60
1:A:98:G:N1	22:V:14:LYS:HB2	2.16	0.60
2:B:1316:U:H2'	2:B:1317:G:C8	2.37	0.60
2:B:2180:U:H2'	2:B:2181:U:H6	1.66	0.60
11:K:70:ARG:CB	11:K:71:PRO:CD	2.66	0.60
3:C:158:GLY:N	3:C:194:VAL:HG13	2.15	0.60
10:J:12:LYS:O	10:J:13:ARG:HB2	2.02	0.60
2:B:2590:A:O2'	2:B:2591:C:H5'	2.00	0.60
21:U:32:LYS:HA	21:U:65:GLN:HA	1.83	0.60
2:B:433:C:O2'	2:B:434:U:H5'	2.02	0.60
2:B:1488:C:O2'	2:B:1489:C:H5'	2.02	0.60
2:B:1372:U:H2'	2:B:1373:A:C8	2.37	0.60
23:W:38:ARG:HD3	23:W:38:ARG:N	2.17	0.60
6:F:84:ILE:O	6:F:84:ILE:HG13	2.00	0.60
17:Q:91:ARG:HH12	18:R:10:LYS:HB3	1.65	0.60
10:J:55:ILE:HB	10:J:123:LYS:HB2	1.84	0.60
5:E:58:LYS:O	5:E:60:TRP:N	2.35	0.60
2:B:1179:G:H2'	2:B:1180:U:O4'	2.02	0.60
15:O:74:VAL:O	15:O:78:VAL:HG23	2.01	0.60
21:U:3:LYS:HA	21:U:82:VAL:HG11	1.84	0.60
11:K:46:ILE:HG23	11:K:47:PRO:HD2	1.82	0.60
2:B:3:U:O2'	2:B:4:U:H6	1.83	0.60
24:X:32:LEU:H	24:X:51:SER:CB	2.15	0.60
2:B:919:U:H2'	2:B:920:A:H8	1.67	0.60
3:C:75:ALA:HB3	3:C:115:ILE:HB	1.82	0.60
31:4:1:MET:HE3	31:4:34:LYS:HG2	1.83	0.60
2:B:163:C:H2'	2:B:164:C:C6	2.36	0.60
2:B:1579:A:H2'	2:B:1580:A:C8	2.36	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:102:LEU:HA	6:F:106:ALA:HB3	1.84	0.60
31:4:7:VAL:HG13	31:4:8:LYS:N	2.11	0.60
2:B:137:U:H3'	2:B:138:U:C6	2.37	0.60
2:B:2799:A:H4'	2:B:2800:A:C8	2.37	0.60
2:B:1443:U:H2'	2:B:1444:G:C8	2.35	0.60
18:R:77:PHE:CD2	18:R:84:ARG:HG2	2.37	0.60
1:A:2:G:H2'	1:A:3:C:C6	2.37	0.60
23:W:39:GLN:NE2	23:W:43:LYS:HB2	2.16	0.60
20:T:31:VAL:HA	20:T:84:TYR:H	1.67	0.60
2:B:1805:A:N3	3:C:49:THR:CG2	2.64	0.60
2:B:2802:G:H2'	2:B:2803:G:C8	2.37	0.60
12:L:135:ILE:HG23	12:L:136:GLU:N	2.16	0.60
2:B:443:A:C8	5:E:40:ARG:HD3	2.36	0.60
2:B:923:G:N3	23:W:23:LYS:HE3	2.16	0.60
14:N:83:LEU:HD12	14:N:83:LEU:H	1.66	0.60
10:J:44:TYR:O	10:J:45:THR:HB	2.02	0.60
7:G:26:LYS:HG3	7:G:32:LEU:HD12	1.84	0.60
6:F:15:LEU:HD11	6:F:168:LEU:HD23	1.84	0.60
13:M:17:ASN:HB2	13:M:38:ARG:HH12	1.66	0.60
7:G:84:LYS:HD2	7:G:133:LYS:N	2.17	0.60
2:B:1794:A:H2'	2:B:1795:C:H6	1.66	0.60
2:B:967:U:H2'	2:B:968:C:C6	2.37	0.60
5:E:126:VAL:HG22	5:E:127:GLU:H	1.66	0.60
2:B:1656:C:H2'	2:B:1657:U:H6	1.67	0.60
20:T:30:ILE:HG23	20:T:85:VAL:HB	1.83	0.59
2:B:5:A:H2'	2:B:6:A:H8	1.67	0.59
17:Q:91:ARG:NE	17:Q:94:LEU:HD23	2.08	0.59
4:D:48:ILE:HD12	4:D:89:GLU:HG2	1.83	0.59
24:X:6:VAL:HG11	24:X:50:VAL:HG13	1.84	0.59
24:X:5:GLN:NE2	24:X:49:ARG:H	1.99	0.59
2:B:1056:G:H4'	2:B:1086:A:H8	1.67	0.59
2:B:480:A:H5'	21:U:43:LYS:HE2	1.83	0.59
12:L:79:LEU:HB3	12:L:115:GLU:O	2.01	0.59
2:B:1590:A:H2'	2:B:1591:A:C8	2.37	0.59
2:B:547:A:H5''	2:B:548:G:N7	2.17	0.59
2:B:296:U:H2'	2:B:297:G:H8	1.67	0.59
14:N:79:LEU:O	14:N:80:PHE:HB2	2.01	0.59
2:B:15:G:O2'	2:B:16:C:H5'	2.01	0.59
2:B:1711:A:H2'	2:B:1712:U:C6	2.37	0.59
8:H:81:ALA:N	8:H:147:VAL:HG23	2.16	0.59
6:F:74:ALA:HB3	6:F:77:LYS:O	2.03	0.59
6:F:6:TYR:CE2	6:F:10:GLU:HB2	2.31	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1936:A:N6	2:B:1963:U:N3	2.50	0.59
2:B:1439:A:C6	2:B:1552:A:N7	2.70	0.59
20:T:12:ARG:CZ	25:Y:29:ARG:HH11	2.15	0.59
12:L:3:LEU:O	12:L:5:THR:N	2.35	0.59
4:D:148:GLN:HG3	4:D:152:PRO:CG	2.19	0.59
7:G:30:GLY:CA	7:G:78:VAL:HA	2.29	0.59
8:H:116:ARG:O	8:H:130:VAL:HG12	2.02	0.59
21:U:24:VAL:HG22	21:U:35:VAL:HG22	1.84	0.59
2:B:634:C:H2'	2:B:635:C:C6	2.37	0.59
2:B:1230:A:H2'	2:B:1231:U:H6	1.67	0.59
8:H:58:LEU:O	8:H:61:VAL:HG12	2.02	0.59
2:B:1487:U:H2'	2:B:1488:C:C6	2.38	0.59
2:B:2520:C:C6	2:B:2567:G:H1'	2.37	0.59
5:E:150:THR:HA	5:E:189:THR:HG23	1.84	0.59
6:F:23:SER:C	6:F:25:MET:H	2.05	0.59
3:C:62:ARG:HD2	3:C:83:ASP:OD1	2.02	0.59
20:T:44:LYS:C	20:T:46:ALA:H	2.04	0.59
6:F:41:GLU:O	6:F:43:ILE:HG22	2.02	0.59
31:4:16:ILE:HG12	31:4:25:VAL:HG22	1.84	0.59
2:B:1060:U:OP2	9:I:74:PRO:HA	2.02	0.59
16:P:44:GLY:O	16:P:45:VAL:HG23	2.02	0.59
2:B:1842:G:H2'	2:B:1843:C:H6	1.67	0.59
23:W:67:LYS:O	23:W:68:PHE:HB2	2.03	0.59
7:G:171:LYS:HD3	7:G:172:GLU:H	1.67	0.59
14:N:65:LEU:HD21	14:N:69:ARG:NH1	2.17	0.59
7:G:24:THR:HG22	7:G:34:ARG:HA	1.85	0.59
2:B:1826:G:H2'	2:B:1827:U:H6	1.66	0.59
2:B:2039:U:H2'	2:B:2040:G:H8	1.67	0.59
2:B:141:G:OP2	2:B:142:A:N6	2.36	0.59
14:N:25:ALA:HA	14:N:44:LEU:HD11	1.84	0.59
14:N:96:ARG:HH11	14:N:116:VAL:HA	1.67	0.59
11:K:16:ARG:O	11:K:18:VAL:HG23	2.02	0.59
23:W:37:VAL:HG13	23:W:55:ASP:HB2	1.84	0.59
22:V:24:ASN:O	22:V:44:HIS:HB2	2.03	0.59
5:E:77:ILE:HG13	5:E:78:TRP:HE3	1.66	0.59
2:B:323:C:H5'	5:E:163:ASN:HD21	1.67	0.59
21:U:85:ARG:CD	21:U:86:PHE:H	2.16	0.59
2:B:1858:A:N6	2:B:1884:G:H1'	2.17	0.59
2:B:2257:U:O2'	2:B:2258:C:H5'	2.01	0.59
20:T:39:THR:HG23	20:T:41:ALA:H	1.68	0.59
8:H:68:ARG:NE	8:H:140:ALA:HB2	2.18	0.59
2:B:2336:A:C5	23:W:40:ARG:HD2	2.36	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:N:100:CYS:HA	27:O:41:HIS:HD1	1.68	0.59
21:U:73:ASN:HA	21:U:95:PHE:CZ	2.37	0.59
21:U:39:ASN:HB3	21:U:62:ALA:H	1.65	0.59
2:B:636:G:OP2	12:L:128:THR:HG22	2.03	0.59
2:B:152:A:H2'	2:B:153:U:C6	2.37	0.59
16:P:112:ARG:HB2	16:P:112:ARG:HH11	1.67	0.59
2:B:2806:C:H2'	2:B:2807:U:O4'	2.03	0.59
2:B:1230:A:H2'	2:B:1231:U:C6	2.37	0.59
2:B:2425:A:H5''	2:B:2426:A:H3'	1.85	0.59
2:B:754:U:H2'	2:B:755:U:C6	2.36	0.59
2:B:906:U:H4'	13:M:66:ARG:NH1	2.17	0.59
2:B:1097:U:H2'	2:B:1098:A:H5'	1.84	0.59
8:H:132:PHE:HB3	8:H:140:ALA:CB	2.31	0.59
6:F:102:LEU:HD22	6:F:103:ILE:N	2.18	0.59
4:D:33:ARG:HG2	4:D:33:ARG:O	2.01	0.59
5:E:58:LYS:HD3	5:E:58:LYS:N	2.18	0.59
2:B:145:C:H2'	2:B:146:A:C8	2.38	0.59
9:I:96:LYS:N	9:I:96:LYS:HD2	2.18	0.59
23:W:72:GLY:O	23:W:74:LYS:N	2.36	0.59
20:T:19:LYS:HG3	20:T:23:ALA:HB2	1.83	0.59
2:B:465:G:N2	2:B:684:G:H1'	2.18	0.59
4:D:119:ALA:HB1	4:D:124:ARG:HB2	1.85	0.59
7:G:66:THR:O	7:G:70:LEU:HB2	2.03	0.59
21:U:100:GLU:O	21:U:101:THR:HB	2.03	0.59
21:U:6:ARG:HG3	21:U:7:ASP:N	2.17	0.59
2:B:773:U:H4'	3:C:45:ASN:O	2.03	0.59
2:B:962:G:O2'	2:B:963:U:H5'	2.02	0.59
7:G:40:VAL:O	7:G:41:GLU:HB2	2.02	0.59
2:B:1241:A:H2'	2:B:1242:U:H5'	1.84	0.59
2:B:1591:A:H2'	2:B:1592:C:H6	1.67	0.59
3:C:2:VAL:HG23	3:C:3:VAL:H	1.65	0.59
30:3:23:HIS:O	30:3:46:LYS:HB2	2.03	0.59
2:B:1661:G:O2'	2:B:1662:U:H5'	2.02	0.59
16:P:97:TYR:C	16:P:99:LEU:H	2.06	0.59
1:A:42:C:C5	6:F:65:LEU:HD22	2.38	0.59
2:B:1857:G:H22	2:B:1884:G:H2'	1.67	0.59
2:B:2180:U:H2'	2:B:2181:U:C6	2.38	0.59
16:P:24:THR:O	16:P:25:VAL:HG22	2.02	0.59
1:A:61:G:H2'	1:A:62:C:H6	1.68	0.59
13:M:33:LEU:HD22	13:M:128:THR:HB	1.85	0.58
2:B:1082:U:C2	2:B:1086:A:C6	2.91	0.58
2:B:1437:C:H2'	2:B:1438:U:H6	1.68	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:93:TYR:HA	7:G:105:SER:O	2.02	0.58
2:B:2556:C:H2'	2:B:2557:G:O4'	2.02	0.58
2:B:729:G:C6	3:C:206:LYS:HB2	2.38	0.58
2:B:1411:U:H2'	2:B:1412:U:C6	2.38	0.58
2:B:2096:C:H2'	2:B:2097:A:H8	1.68	0.58
15:O:35:ILE:HG13	15:O:71:ALA:HB2	1.85	0.58
2:B:1550:C:H2'	2:B:1551:A:C8	2.38	0.58
2:B:100:U:H2'	2:B:100:U:OP1	2.03	0.58
29:2:29:GLN:O	29:2:33:ARG:HD3	2.02	0.58
18:R:19:THR:HG22	18:R:97:LYS:HG3	1.84	0.58
5:E:97:ASN:HD22	5:E:97:ASN:N	2.01	0.58
10:J:45:THR:N	10:J:46:PRO:HD3	2.16	0.58
10:J:4:PHE:CG	10:J:5:THR:N	2.67	0.58
18:R:66:HIS:ND1	18:R:94:THR:HG22	2.18	0.58
2:B:275:C:H2'	2:B:276:U:C5'	2.33	0.58
12:L:65:GLY:O	12:L:66:PHE:HB3	2.04	0.58
2:B:296:U:H2'	2:B:297:G:C8	2.38	0.58
2:B:414:C:H2'	2:B:415:A:H8	1.68	0.58
25:Y:1:MET:O	25:Y:5:GLU:HG2	2.04	0.58
12:L:110:VAL:HG23	12:L:126:ARG:O	2.03	0.58
2:B:287:G:H2'	2:B:288:U:C6	2.37	0.58
8:H:98:ASP:HA	8:H:101:ASP:OD2	2.04	0.58
17:Q:89:ILE:HB	18:R:11:GLN:HE22	1.68	0.58
23:W:40:ARG:NH1	23:W:40:ARG:HG3	2.17	0.58
7:G:84:LYS:HD2	7:G:133:LYS:HA	1.85	0.58
7:G:162:ARG:HD3	7:G:166:GLU:HG3	1.85	0.58
28:1:8:ILE:HD11	28:1:52:LYS:HE3	1.85	0.58
1:A:29:A:H3'	1:A:30:C:C6	2.38	0.58
2:B:265:A:H2'	2:B:266:G:O4'	2.03	0.58
2:B:1105:U:H2'	2:B:1106:G:C8	2.37	0.58
3:C:1:ALA:HB3	3:C:19:VAL:HG23	1.84	0.58
27:0:55:ALA:HB3	27:0:56:LYS:HZ1	1.67	0.58
23:W:35:ILE:O	23:W:36:ILE:C	2.42	0.58
3:C:140:VAL:HG12	3:C:141:HIS:N	2.09	0.58
10:J:44:TYR:CD1	17:Q:59:LEU:HD22	2.38	0.58
18:R:39:LEU:HB3	18:R:53:PHE:HA	1.86	0.58
14:N:99:LYS:HB2	27:0:41:HIS:HB2	1.84	0.58
9:I:27:LEU:H	9:I:27:LEU:CD2	2.15	0.58
7:G:100:ASN:ND2	7:G:100:ASN:N	2.52	0.58
2:B:102:U:O2	25:Y:2:LYS:HG2	2.04	0.58
21:U:80:ASP:OD2	21:U:96:LYS:HB2	2.03	0.58
21:U:81:ARG:NH2	21:U:81:ARG:HG3	2.18	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2591:C:H2'	2:B:2592:G:H8	1.68	0.58
2:B:1152:C:H3'	34:B:3067:HOH:O	2.03	0.58
6:F:25:MET:C	6:F:27:VAL:H	2.06	0.58
2:B:62:U:H3'	2:B:63:A:C8	2.39	0.58
2:B:184:C:H2'	2:B:185:G:H8	1.68	0.58
11:K:10:ALA:HB3	11:K:84:VAL:HG23	1.85	0.58
2:B:572:A:OP2	18:R:80:ARG:NH2	2.36	0.58
21:U:47:PRO:HB2	21:U:49:PRO:HD3	1.85	0.58
20:T:73:ARG:NH2	20:T:73:ARG:HB3	2.16	0.58
5:E:5:LEU:HD13	5:E:122:GLU:CD	2.24	0.58
12:L:47:ARG:HG3	12:L:50:PHE:HB2	1.85	0.58
2:B:1812:U:H2'	2:B:1813:G:C8	2.37	0.58
2:B:80:G:O5'	2:B:346:A:H1'	2.02	0.58
2:B:1412:U:H2'	2:B:1413:A:C8	2.39	0.58
2:B:1709:U:H2'	2:B:1710:G:C8	2.37	0.58
12:L:71:ALA:HA	12:L:74:THR:HB	1.85	0.58
2:B:2491:U:H5''	2:B:2570:G:H5'	1.86	0.58
12:L:2:ARG:HG2	12:L:2:ARG:O	2.04	0.58
10:J:105:VAL:O	10:J:108:MET:HB2	2.04	0.58
10:J:106:LYS:C	10:J:108:MET:H	2.07	0.58
2:B:365:U:H2'	2:B:366:C:C6	2.38	0.58
20:T:69:ARG:HH11	20:T:70:HIS:N	2.02	0.58
2:B:1130:U:C2	2:B:2025:C:H5''	2.38	0.58
2:B:2134:A:H2'	2:B:2135:A:C8	2.39	0.58
17:Q:69:ARG:HB2	17:Q:69:ARG:HH21	1.67	0.58
2:B:333:G:N3	2:B:333:G:H2'	2.19	0.58
29:2:24:THR:HG23	29:2:27:GLY:HA3	1.84	0.58
3:C:159:THR:O	3:C:194:VAL:HG12	2.04	0.58
2:B:2902:C:H1'	2:B:2903:U:H5'	1.85	0.58
6:F:168:LEU:HD13	6:F:169:LEU:N	2.19	0.58
4:D:10:GLY:O	4:D:11:MET:HB2	2.03	0.58
5:E:75:SER:O	5:E:77:ILE:HG12	2.04	0.58
17:Q:30:VAL:HG11	17:Q:33:VAL:HG23	1.85	0.58
2:B:1197:G:H2'	2:B:1198:U:H6	1.69	0.58
3:C:58:LYS:O	3:C:59:GLN:HB2	2.04	0.58
2:B:1558:C:H4'	2:B:1559:U:C5'	2.33	0.58
2:B:2443:C:H2'	2:B:2444:G:C8	2.39	0.58
2:B:1061:U:H4'	2:B:1070:A:O3'	2.04	0.58
2:B:518:G:H4'	19:S:18:ARG:NH2	2.19	0.58
2:B:1709:U:H2'	2:B:1710:G:H8	1.68	0.58
29:2:31:LEU:O	29:2:35:ARG:HB2	2.04	0.58
2:B:2243:U:H2'	2:B:2244:U:C6	2.39	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:D:69:ALA:C	4:D:71:ALA:H	2.07	0.58
2:B:1669:A:C8	11:K:4:GLN:HG3	2.38	0.58
13:M:109:PRO:C	13:M:111:GLU:H	2.07	0.58
16:P:3:ILE:HG23	16:P:4:ILE:HG13	1.85	0.58
2:B:582:A:H2'	2:B:583:G:H8	1.69	0.58
2:B:62:U:H2'	2:B:63:A:O4'	2.04	0.58
2:B:1032:A:H1'	31:4:23:ILE:HD13	1.85	0.58
2:B:1322:A:C2'	2:B:1323:C:H5'	2.34	0.58
2:B:1987:A:H2'	2:B:1988:G:H8	1.69	0.58
6:F:69:ALA:HB3	6:F:81:GLY:O	2.04	0.58
2:B:17:G:H2'	2:B:18:U:C6	2.39	0.58
2:B:2065:C:O2'	2:B:2066:C:H5'	2.03	0.58
2:B:609:A:H2'	2:B:610:C:O4'	2.03	0.58
12:L:49:GLY:O	12:L:51:GLU:HG3	2.03	0.58
2:B:459:U:O2'	2:B:460:A:H5'	2.02	0.58
23:W:47:GLY:C	23:W:49:ASN:H	2.08	0.57
7:G:15:ASP:HB3	7:G:26:LYS:H	1.67	0.57
25:Y:56:LEU:HA	25:Y:59:GLU:CG	2.33	0.57
15:O:68:LYS:N	15:O:102:ARG:HD2	2.17	0.57
7:G:153:PRO:HA	7:G:159:LYS:O	2.04	0.57
2:B:1082:U:O4	2:B:1086:A:C2	2.57	0.57
8:H:5:LEU:HD13	8:H:13:GLY:CA	2.34	0.57
2:B:833:A:H2'	2:B:834:G:H8	1.68	0.57
24:X:39:VAL:HG22	24:X:44:ARG:O	2.03	0.57
28:1:41:VAL:HG23	28:1:42:VAL:H	1.69	0.57
10:J:110:PRO:O	10:J:115:GLY:HA3	2.04	0.57
2:B:1355:G:O2'	2:B:1356:G:H5'	2.04	0.57
8:H:90:LEU:HD11	8:H:125:THR:CA	2.34	0.57
7:G:28:LYS:O	7:G:29:ASN:HB3	2.04	0.57
6:F:32:LYS:HG2	6:F:32:LYS:O	2.03	0.57
4:D:107:VAL:HG13	4:D:203:VAL:HG23	1.85	0.57
2:B:871:U:H2'	2:B:872:U:C6	2.38	0.57
2:B:18:U:P	17:Q:29:ARG:HH22	2.27	0.57
2:B:18:U:H2'	2:B:19:A:H8	1.69	0.57
2:B:320:A:H2'	5:E:131:THR:OG1	2.05	0.57
15:O:103:VAL:C	15:O:105:ALA:H	2.05	0.57
28:1:14:ALA:HB3	28:1:16:THR:HG22	1.85	0.57
20:T:12:ARG:HA	25:Y:29:ARG:NH1	2.20	0.57
16:P:52:ARG:HB2	16:P:55:HIS:O	2.04	0.57
2:B:1857:G:N2	2:B:1884:G:H2'	2.19	0.57
2:B:1406:U:H2'	2:B:1407:G:C8	2.38	0.57
10:J:28:LEU:HD23	10:J:29:ALA:N	2.19	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:X:19:HIS:O	24:X:20:ALA:HB3	2.04	0.57
2:B:864:G:O2'	2:B:865:C:H5'	2.04	0.57
2:B:1681:G:N3	2:B:1762:A:H2'	2.18	0.57
20:T:50:LEU:C	20:T:52:GLU:H	2.08	0.57
8:H:127:GLU:HA	8:H:144:VAL:O	2.04	0.57
8:H:141:LYS:N	8:H:141:LYS:HD3	2.18	0.57
4:D:172:VAL:O	4:D:173:GLN:HB2	2.05	0.57
6:F:7:TYR:HA	6:F:11:VAL:HB	1.85	0.57
14:N:114:GLU:HG2	14:N:115:LEU:N	2.18	0.57
2:B:1594:U:H2'	2:B:1595:C:C6	2.40	0.57
2:B:863:A:H2'	2:B:864:G:C8	2.39	0.57
2:B:127:A:OP2	29:2:46:LYS:HE3	2.03	0.57
2:B:2841:C:H2'	2:B:2842:G:H8	1.69	0.57
2:B:1641:A:H2'	2:B:1642:G:O4'	2.04	0.57
13:M:38:ARG:HG2	13:M:98:PRO:CD	2.34	0.57
2:B:139:U:H5''	2:B:140:C:C5	2.39	0.57
10:J:98:GLU:HB3	10:J:124:VAL:HG21	1.84	0.57
8:H:8:LYS:O	8:H:13:GLY:HA3	2.03	0.57
6:F:135:ILE:HD11	6:F:137:PHE:HB3	1.86	0.57
2:B:1484:U:H2'	2:B:1485:U:H6	1.70	0.57
2:B:2512:C:H2'	2:B:2513:A:O4'	2.05	0.57
2:B:1544:A:H2'	2:B:1545:A:C8	2.39	0.57
2:B:455:C:N3	2:B:472:A:H2'	2.19	0.57
2:B:2897:U:H2'	2:B:2898:U:C6	2.40	0.57
13:M:34:LYS:NZ	22:V:82:TYR:HA	2.19	0.57
22:V:80:HIS:HD2	22:V:82:TYR:H	1.51	0.57
6:F:101:ARG:NE	6:F:101:ARG:HA	2.20	0.57
6:F:167:ALA:O	6:F:170:ALA:HB3	2.04	0.57
2:B:18:U:H2'	2:B:19:A:C8	2.39	0.57
17:Q:7:VAL:O	17:Q:11:ALA:HB2	2.05	0.57
15:O:35:ILE:HD11	15:O:102:ARG:NE	2.17	0.57
8:H:7:ASP:CG	8:H:8:LYS:H	2.08	0.57
2:B:2471:A:O2'	2:B:2472:G:H8	1.85	0.57
6:F:137:PHE:N	6:F:137:PHE:CD2	2.71	0.57
2:B:742:A:H2'	2:B:743:A:H8	1.69	0.57
2:B:1373:A:H5'	2:B:2212:A:H1'	1.87	0.57
2:B:414:C:H2'	2:B:415:A:C8	2.40	0.57
28:1:47:ILE:HD12	28:1:47:ILE:H	1.68	0.57
5:E:192:ALA:O	5:E:196:VAL:HG23	2.05	0.57
2:B:2346:A:H3'	2:B:2347:C:H5''	1.86	0.57
2:B:2848:G:H1'	2:B:2868:A:N6	2.19	0.57
18:R:5:PHE:HB2	18:R:37:GLU:OE1	2.05	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2748:A:H4'	7:G:3:VAL:HG21	1.86	0.57
4:D:33:ARG:H	4:D:33:ARG:HD2	1.68	0.57
18:R:31:GLU:H	18:R:63:VAL:CG2	2.17	0.57
2:B:1559:U:H3'	2:B:1560:G:H5'	1.86	0.57
4:D:118:PHE:O	4:D:119:ALA:HB3	2.05	0.57
2:B:2:G:H2'	2:B:3:U:C6	2.39	0.57
7:G:9:VAL:O	7:G:11:PRO:HD3	2.05	0.57
2:B:2680:U:H5''	4:D:194:PRO:O	2.05	0.57
5:E:181:ILE:CD1	12:L:2:ARG:HE	2.18	0.57
2:B:2149:U:H2'	2:B:2150:C:H6	1.62	0.57
18:R:66:HIS:CE1	18:R:94:THR:HG22	2.40	0.57
2:B:582:A:H2'	2:B:583:G:C8	2.40	0.57
11:K:39:LYS:HZ2	11:K:88:ASN:HD21	1.50	0.57
2:B:1495:A:H2'	2:B:1496:A:C8	2.39	0.57
2:B:129:C:H4'	2:B:1348:C:O2'	2.04	0.57
19:S:58:ALA:O	19:S:64:ALA:HA	2.04	0.57
2:B:1188:U:O2'	2:B:1189:A:H5'	2.04	0.57
1:A:64:G:H2'	1:A:65:U:C6	2.40	0.57
16:P:62:LYS:HB3	16:P:69:VAL:HG22	1.86	0.57
2:B:2895:G:H2'	2:B:2896:C:C6	2.40	0.57
2:B:27:G:H1'	2:B:513:A:N6	2.19	0.57
10:J:25:LEU:HD23	10:J:101:ILE:HD13	1.87	0.57
2:B:850:U:O2	26:Z:46:MET:HE1	2.05	0.57
9:I:10:LEU:HD12	9:I:10:LEU:O	2.05	0.57
2:B:1395:A:H4'	2:B:1397:U:C4	2.39	0.57
12:L:116:VAL:HG13	12:L:117:THR:N	2.20	0.57
5:E:127:GLU:HG2	5:E:133:LEU:HD13	1.87	0.57
7:G:140:ILE:HA	7:G:143:VAL:HG22	1.87	0.57
2:B:841:G:O2'	2:B:842:U:H5'	2.05	0.57
2:B:1366:A:H2'	2:B:1367:A:O4'	2.05	0.57
8:H:80:ILE:HD12	8:H:101:ASP:HB3	1.87	0.57
2:B:2900:A:H2'	2:B:2901:C:C6	2.40	0.57
7:G:26:LYS:HE2	7:G:32:LEU:HD11	1.87	0.57
7:G:51:PHE:CD2	7:G:68:ARG:HG2	2.39	0.57
2:B:279:A:C2	2:B:362:A:H4'	2.40	0.57
2:B:45:G:H5'	2:B:46:G:OP1	2.05	0.57
6:F:144:LYS:HD2	6:F:144:LYS:H	1.70	0.57
1:A:54:G:H21	6:F:25:MET:CE	2.18	0.57
12:L:110:VAL:HB	12:L:127:VAL:HG23	1.86	0.57
18:R:43:ASN:ND2	18:R:45:GLU:H	2.03	0.57
2:B:2199:A:H3'	2:B:2200:C:H6	1.68	0.57
2:B:813:U:H2'	2:B:814:C:C6	2.40	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:103:ILE:HG13	6:F:175:PRO:HD2	1.87	0.57
25:Y:3:ALA:O	25:Y:6:LEU:HB2	2.03	0.57
2:B:930:G:H1'	26:Z:24:LEU:HD11	1.87	0.57
2:B:1407:G:H2'	2:B:1408:G:H8	1.69	0.57
2:B:1485:U:H2'	2:B:1486:U:H6	1.70	0.57
1:A:2:G:H2'	1:A:3:C:H6	1.69	0.57
2:B:2384:U:H5''	2:B:2386:A:OP1	2.05	0.56
8:H:31:VAL:CG1	8:H:32:PRO:HD2	2.34	0.56
6:F:113:PHE:CE1	6:F:116:LEU:HB2	2.40	0.56
6:F:32:LYS:H	6:F:95:MET:CE	2.18	0.56
28:1:33:LEU:HG	28:1:35:LEU:HD22	1.87	0.56
2:B:1439:A:C5	2:B:1552:A:N6	2.73	0.56
3:C:16:VAL:N	3:C:203:VAL:HG12	2.19	0.56
13:M:4:PRO:CG	13:M:70:ASP:HA	2.34	0.56
13:M:8:LYS:HA	13:M:8:LYS:HE3	1.87	0.56
2:B:743:A:O2'	2:B:744:U:H5'	2.05	0.56
20:T:64:LYS:H	20:T:64:LYS:HD2	1.69	0.56
12:L:85:VAL:HG22	12:L:94:THR:HG22	1.86	0.56
2:B:2815:C:H2'	2:B:2816:G:H8	1.70	0.56
2:B:2666:C:O4'	2:B:2666:C:O2	2.23	0.56
17:Q:57:ARG:HG2	17:Q:57:ARG:HH11	1.70	0.56
18:R:38:VAL:O	18:R:53:PHE:HB2	2.05	0.56
3:C:73:ILE:HB	3:C:95:TYR:HD2	1.70	0.56
12:L:90:VAL:HB	12:L:122:VAL:HG12	1.87	0.56
2:B:1948:G:O2'	2:B:1949:G:H5'	2.05	0.56
2:B:1300:G:H4'	2:B:1301:A:H5'	1.86	0.56
13:M:21:ALA:CB	13:M:100:LYS:HG2	2.35	0.56
13:M:21:ALA:HB1	13:M:100:LYS:HG2	1.87	0.56
2:B:851:C:H2'	2:B:852:U:H6	1.68	0.56
2:B:1799:G:N2	2:B:1818:U:O2'	2.39	0.56
12:L:93:ASN:O	12:L:95:LEU:N	2.32	0.56
8:H:132:PHE:HE2	8:H:134:VAL:HB	1.69	0.56
6:F:77:LYS:HG3	6:F:78:ILE:N	2.20	0.56
2:B:996:A:H1'	18:R:9:GLY:O	2.05	0.56
7:G:1:SER:O	7:G:3:VAL:N	2.38	0.56
25:Y:57:LEU:O	25:Y:60:LYS:HB3	2.04	0.56
2:B:1561:C:H2'	2:B:1562:U:C6	2.41	0.56
13:M:126:ILE:N	13:M:126:ILE:HD12	2.18	0.56
20:T:69:ARG:CG	20:T:70:HIS:H	2.15	0.56
10:J:20:ALA:HA	10:J:23:LYS:CG	2.36	0.56
11:K:113:LYS:O	11:K:117:LEU:HD12	2.06	0.56
26:Z:7:THR:O	26:Z:54:VAL:HA	2.06	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:4:ASN:N	12:L:4:ASN:ND2	2.53	0.56
2:B:1854:A:H2'	2:B:1855:U:H5'	1.85	0.56
17:Q:69:ARG:HB2	17:Q:69:ARG:NH2	2.21	0.56
2:B:460:A:P	29:2:41:ARG:HH12	2.29	0.56
5:E:21:ARG:HH21	5:E:21:ARG:HB2	1.70	0.56
9:I:58:ILE:HD12	9:I:58:ILE:N	2.19	0.56
22:V:73:LYS:NZ	22:V:73:LYS:HA	2.20	0.56
16:P:90:ALA:HB3	16:P:110:LYS:HB3	1.86	0.56
14:N:17:ARG:NH2	14:N:17:ARG:HB2	2.20	0.56
21:U:10:VAL:O	21:U:21:ARG:HD2	2.05	0.56
2:B:444:C:OP2	5:E:44:ARG:HD3	2.05	0.56
8:H:84:ALA:HA	8:H:90:LEU:HG	1.87	0.56
8:H:31:VAL:HB	8:H:32:PRO:CD	2.30	0.56
5:E:31:VAL:HG21	5:E:104:ALA:HB2	1.87	0.56
8:H:115:VAL:HA	8:H:131:SER:O	2.05	0.56
2:B:103:A:H2'	2:B:104:A:O4'	2.05	0.56
13:M:64:TRP:HB2	13:M:104:GLU:HB3	1.86	0.56
2:B:1889:A:H2'	2:B:1890:A:C8	2.41	0.56
27:0:55:ALA:O	27:0:56:LYS:HG2	2.04	0.56
19:S:99:ARG:HH11	19:S:99:ARG:HG3	1.71	0.56
2:B:2795:C:H2'	2:B:2796:U:O4'	2.05	0.56
2:B:118:A:OP2	2:B:119:A:H2'	2.05	0.56
11:K:62:VAL:HG12	11:K:63:ARG:HD3	1.86	0.56
18:R:55:ASP:CG	18:R:56:GLY:H	2.09	0.56
24:X:32:LEU:HD23	24:X:49:ARG:HH22	1.71	0.56
19:S:35:ILE:HG22	27:0:24:VAL:HG13	1.86	0.56
7:G:84:LYS:HD2	7:G:133:LYS:CA	2.35	0.56
16:P:8:GLU:HG3	16:P:54:LEU:HB3	1.88	0.56
14:N:24:MET:HG2	14:N:44:LEU:HD13	1.88	0.56
14:N:116:VAL:HG13	14:N:117:ASP:N	2.20	0.56
2:B:1203:U:H3'	2:B:1204:A:C5'	2.35	0.56
3:C:245:THR:O	3:C:248:GLY:N	2.39	0.56
2:B:607:U:O4	2:B:620:G:H5''	2.05	0.56
2:B:1349:C:H2'	2:B:1350:C:H6	1.70	0.56
18:R:68:ARG:HB3	18:R:90:ARG:HG2	1.87	0.56
8:H:104:THR:CA	8:H:109:GLU:HG3	2.35	0.56
10:J:45:THR:HG23	10:J:45:THR:O	2.05	0.56
6:F:32:LYS:HB2	6:F:90:LEU:O	2.05	0.56
4:D:51:THR:CG2	4:D:76:GLY:HA3	2.35	0.56
2:B:2834:G:H2'	2:B:2879:A:N6	2.20	0.56
2:B:281:C:H2'	2:B:282:A:H8	1.71	0.56
22:V:2:PHE:CZ	22:V:55:GLU:HB2	2.41	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1551:A:C3'	2:B:1552:A:H5''	2.35	0.56
2:B:171:U:H2'	2:B:172:A:C8	2.40	0.56
5:E:153:LEU:HD12	5:E:154:ASP:N	2.21	0.56
2:B:2046:G:H2'	2:B:2047:C:H6	1.70	0.56
2:B:1838:C:H4'	2:B:1839:G:H8	1.71	0.56
23:W:49:ASN:HA	23:W:61:LYS:H	1.70	0.56
20:T:50:LEU:O	20:T:51:PHE:HB2	2.05	0.56
4:D:120:GLY:O	4:D:124:ARG:HB3	2.04	0.56
18:R:41:ILE:O	18:R:46:GLU:HA	2.05	0.56
4:D:106:LYS:HB3	4:D:206:ALA:N	2.20	0.56
10:J:58:ASN:HD22	10:J:61:LYS:HZ2	1.53	0.56
2:B:1241:A:H5'	2:B:1241:A:N3	2.20	0.56
11:K:36:ASP:O	11:K:60:VAL:HA	2.06	0.56
2:B:863:A:H2'	2:B:864:G:H8	1.71	0.56
2:B:2836:U:H2'	2:B:2837:A:C8	2.41	0.56
9:I:75:ALA:HB2	9:I:112:LYS:HE2	1.86	0.56
4:D:49:GLN:HE21	4:D:79:LEU:HD12	1.71	0.56
3:C:156:SER:HB3	3:C:159:THR:HG21	1.87	0.56
6:F:39:VAL:HG12	6:F:40:GLY:N	2.20	0.56
17:Q:82:LEU:HB3	17:Q:88:GLU:OE1	2.06	0.56
2:B:2331:G:O2'	23:W:40:ARG:HB3	2.06	0.56
2:B:20:C:H2'	2:B:21:A:H8	1.71	0.56
25:Y:7:ARG:NH2	25:Y:9:LYS:H	2.04	0.56
8:H:5:LEU:O	8:H:6:LEU:HD12	2.04	0.56
2:B:273:G:H2'	2:B:274:C:C6	2.41	0.56
2:B:1387:A:H5'	2:B:1469:A:H1'	1.86	0.56
2:B:1386:C:H2'	2:B:1387:A:H8	1.68	0.56
2:B:91:A:H1'	2:B:92:U:C6	2.41	0.56
12:L:116:VAL:HG21	12:L:135:ILE:HA	1.88	0.56
2:B:969:G:H2'	2:B:970:U:C6	2.41	0.56
2:B:1862:G:O2'	2:B:1863:G:H5'	2.06	0.56
2:B:499:U:H2'	2:B:500:G:O4'	2.06	0.56
5:E:129:PRO:HD3	5:E:156:ASN:HD21	1.71	0.56
5:E:46:GLN:HB2	5:E:87:ALA:O	2.06	0.56
20:T:43:ILE:O	20:T:46:ALA:HB3	2.06	0.56
8:H:104:THR:HA	8:H:109:GLU:HA	1.88	0.56
18:R:2:TYR:CD2	18:R:13:ARG:HD2	2.41	0.56
22:V:1:MET:HG3	22:V:2:PHE:CD2	2.41	0.56
2:B:138:U:H2'	2:B:140:C:H1'	1.86	0.56
5:E:2:GLU:HG3	5:E:13:THR:H	1.71	0.56
28:1:16:THR:OG1	28:1:41:VAL:HG21	2.05	0.56
2:B:82:U:H2'	2:B:83:A:C8	2.41	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:594:U:H2'	2:B:595:C:H6	1.68	0.56
2:B:155:A:H2'	2:B:156:A:H8	1.70	0.56
8:H:43:ASN:HA	8:H:46:PHE:HB3	1.88	0.56
2:B:1354:A:H2'	2:B:1355:G:O4'	2.05	0.56
25:Y:40:SER:O	25:Y:43:LEU:HB2	2.06	0.56
23:W:50:VAL:O	23:W:59:PHE:HB3	2.06	0.56
2:B:1819:A:H5''	3:C:159:THR:HG21	1.88	0.56
20:T:28:ASN:HA	20:T:91:GLN:OE1	2.05	0.56
2:B:2729:G:H2'	2:B:2730:C:H6	1.71	0.56
6:F:64:PRO:HA	6:F:88:VAL:HG22	1.87	0.56
25:Y:20:ASN:O	25:Y:25:GLN:HB2	2.06	0.56
13:M:43:ALA:O	13:M:46:ILE:HG13	2.06	0.56
9:I:105:LEU:HD11	9:I:139:VAL:CG1	2.35	0.56
2:B:2537:U:H2'	2:B:2538:C:H6	1.70	0.56
2:B:1485:U:H2'	2:B:1486:U:C6	2.41	0.56
2:B:2563:U:H2'	2:B:2565:A:OP2	2.06	0.56
2:B:564:C:O2'	2:B:565:C:H5'	2.06	0.56
11:K:70:ARG:O	11:K:71:PRO:C	2.43	0.55
20:T:27:SER:O	20:T:28:ASN:HB3	2.06	0.55
18:R:3:ALA:O	18:R:13:ARG:HA	2.06	0.55
7:G:30:GLY:HA3	7:G:78:VAL:CA	2.32	0.55
7:G:58:ALA:C	7:G:60:GLY:H	2.09	0.55
13:M:38:ARG:CB	13:M:38:ARG:HH11	2.16	0.55
10:J:99:ARG:C	10:J:101:ILE:H	2.10	0.55
2:B:170:U:O2'	2:B:171:U:H5'	2.06	0.55
2:B:171:U:H2'	2:B:172:A:H8	1.71	0.55
2:B:1487:U:H2'	2:B:1488:C:H6	1.71	0.55
20:T:68:LYS:O	20:T:74:ILE:HG13	2.05	0.55
2:B:657:U:H2'	2:B:658:U:C6	2.41	0.55
23:W:59:PHE:HD2	23:W:60:ALA:N	2.04	0.55
6:F:69:ALA:HB1	6:F:78:ILE:CG2	2.33	0.55
18:R:9:GLY:H	18:R:10:LYS:HD2	1.72	0.55
22:V:17:SER:HB3	22:V:21:ARG:HH12	1.71	0.55
7:G:71:LEU:HD13	7:G:74:MET:SD	2.46	0.55
9:I:76:ALA:O	9:I:80:LYS:HG3	2.06	0.55
2:B:1198:U:O2'	17:Q:4:LYS:HB3	2.07	0.55
3:C:130:PRO:HA	3:C:188:ARG:HA	1.89	0.55
13:M:69:PRO:HA	13:M:94:ALA:HB2	1.88	0.55
2:B:2415:G:C4'	12:L:66:PHE:HB2	2.35	0.55
2:B:2845:U:O2'	2:B:2846:G:H5'	2.06	0.55
2:B:1853:A:N1	2:B:2087:G:H1'	2.21	0.55
28:1:4:ILE:HG13	28:1:5:ARG:N	2.21	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2841:C:H2'	2:B:2842:G:C8	2.42	0.55
4:D:29:VAL:O	4:D:185:ASN:HB3	2.06	0.55
22:V:40:ILE:H	22:V:40:ILE:HD13	1.70	0.55
30:3:27:ASN:HD22	30:3:27:ASN:N	2.03	0.55
11:K:97:ARG:N	11:K:97:ARG:HE	2.03	0.55
8:H:27:ARG:H	8:H:31:VAL:HG21	1.68	0.55
2:B:2327:A:H2'	2:B:2328:A:C8	2.41	0.55
11:K:13:SER:OG	11:K:51:VAL:HG23	2.06	0.55
2:B:2650:U:H2'	2:B:2651:C:C6	2.42	0.55
12:L:116:VAL:HG13	12:L:117:THR:H	1.71	0.55
16:P:28:LYS:O	16:P:81:ASP:HB3	2.06	0.55
2:B:1904:G:H1'	2:B:1927:A:N1	2.21	0.55
6:F:98:PHE:C	6:F:100:GLU:H	2.09	0.55
24:X:69:GLU:O	24:X:70:LEU:HB3	2.06	0.55
17:Q:4:LYS:HD3	17:Q:7:VAL:HG22	1.87	0.55
9:I:17:ALA:O	9:I:18:ASN:HB3	2.06	0.55
2:B:1443:U:H2'	2:B:1444:G:H8	1.72	0.55
2:B:1444:G:H2'	2:B:1445:G:H8	1.71	0.55
19:S:48:LYS:O	19:S:52:GLU:HG2	2.06	0.55
9:I:112:LYS:O	9:I:116:MET:HG3	2.06	0.55
2:B:973:A:OP1	2:B:973:A:H8	1.89	0.55
2:B:6:A:N3	10:J:135:GLN:NE2	2.54	0.55
10:J:64:VAL:HG22	10:J:68:LYS:HG3	1.87	0.55
2:B:360:U:H2'	2:B:361:G:O4'	2.06	0.55
2:B:1936:A:N6	2:B:1963:U:H3	2.02	0.55
13:M:46:ILE:HA	13:M:103:TYR:OH	2.05	0.55
2:B:2720:U:H5''	16:P:52:ARG:NH2	2.22	0.55
2:B:1593:A:H2'	2:B:1594:U:H6	1.70	0.55
9:I:14:ALA:HB1	9:I:50:LYS:HA	1.87	0.55
27:O:30:ASP:HB3	27:O:33:SER:O	2.07	0.55
18:R:91:GLN:HG3	18:R:92:TRP:H	1.72	0.55
21:U:48:VAL:O	21:U:50:ALA:N	2.39	0.55
24:X:2:ARG:HA	24:X:32:LEU:CD2	2.37	0.55
2:B:19:A:H2'	2:B:20:C:C6	2.41	0.55
2:B:2039:U:H2'	2:B:2040:G:C8	2.41	0.55
2:B:321:U:OP2	5:E:130:LYS:HA	2.06	0.55
18:R:61:ALA:HB2	18:R:98:ILE:HA	1.87	0.55
2:B:146:A:H2'	2:B:147:C:C6	2.41	0.55
2:B:2783:U:H2'	2:B:2784:U:C6	2.42	0.55
2:B:1790:C:O2'	3:C:207:ALA:HB2	2.07	0.55
2:B:324:A:H2'	2:B:325:G:O4'	2.07	0.55
2:B:1695:G:N7	3:C:13:ARG:NH2	2.55	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:P:31:VAL:O	16:P:32:VAL:HG12	2.07	0.55
4:D:149:ASN:O	4:D:152:PRO:HD2	2.06	0.55
4:D:151:THR:CB	4:D:152:PRO:HD3	2.35	0.55
2:B:2352:A:N1	23:W:30:VAL:HG11	2.22	0.55
3:C:145:MET:HE3	3:C:153:LEU:HD21	1.88	0.55
12:L:143:GLU:HG2	12:L:144:GLU:H	1.71	0.55
2:B:2896:C:H2'	2:B:2897:U:C6	2.42	0.55
17:Q:60:TRP:CZ2	17:Q:93:ILE:HB	2.42	0.55
1:A:43:C:H1'	6:F:91:ARG:HD2	1.89	0.55
2:B:2336:A:N7	23:W:40:ARG:HD2	2.22	0.55
2:B:281:C:H2'	2:B:282:A:C8	2.42	0.55
17:Q:7:VAL:HG23	17:Q:8:ILE:N	2.21	0.55
2:B:2040:G:H2'	2:B:2041:U:C6	2.42	0.55
2:B:75:G:H4'	25:Y:48:ARG:HH21	1.72	0.55
30:3:18:LYS:HD2	30:3:19:GLY:N	2.22	0.55
17:Q:43:GLN:NE2	18:R:77:PHE:HB3	2.21	0.55
1:A:7:G:H5''	15:O:29:HIS:CD2	2.42	0.55
2:B:1061:U:O4'	2:B:1070:A:H1'	2.06	0.55
2:B:2829:A:P	4:D:59:ARG:HH12	2.28	0.55
1:A:57:A:C5	6:F:25:MET:HG2	2.42	0.55
13:M:108:VAL:HG22	13:M:109:PRO:HD2	1.87	0.55
2:B:2603:G:O2'	2:B:2604:U:H5'	2.07	0.55
2:B:2627:G:O2'	2:B:2781:A:N1	2.37	0.55
23:W:37:VAL:C	23:W:39:GLN:H	2.09	0.55
7:G:75:VAL:HA	7:G:78:VAL:HG22	1.87	0.55
4:D:24:VAL:HG22	4:D:25:THR:H	1.72	0.55
24:X:67:LEU:HD22	24:X:77:TYR:CD1	2.42	0.55
26:Z:16:LEU:CD2	26:Z:16:LEU:H	2.18	0.55
2:B:1431:A:H2'	2:B:1432:G:C8	2.42	0.55
2:B:2294:G:O2'	2:B:2295:C:H5'	2.07	0.55
10:J:110:PRO:HB2	10:J:111:LYS:HD2	1.89	0.55
2:B:1170:C:H2'	2:B:1171:G:H8	1.72	0.55
2:B:2340:A:H2'	2:B:2341:G:H8	1.71	0.55
24:X:35:HIS:HD2	24:X:36:ARG:N	2.04	0.55
12:L:119:PRO:HA	12:L:139:GLY:O	2.07	0.55
2:B:771:G:O2'	2:B:772:C:H5'	2.07	0.55
2:B:2369:A:O2'	2:B:2370:G:H5'	2.06	0.55
7:G:104:LEU:HB2	7:G:112:VAL:HG11	1.88	0.55
2:B:2492:U:O2'	2:B:2493:U:H5'	2.05	0.55
2:B:2365:G:H4'	23:W:59:PHE:CE1	2.42	0.55
3:C:146:LYS:HG3	3:C:149:LYS:HE3	1.89	0.55
4:D:106:LYS:HB3	4:D:206:ALA:CB	2.37	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:115:ILE:HD12	11:K:116:SER:N	2.22	0.55
2:B:1747:U:H2'	2:B:1748:C:C6	2.42	0.55
11:K:53:LYS:HD2	11:K:53:LYS:H	1.72	0.55
2:B:2722:G:H4'	14:N:4:ARG:HB2	1.88	0.55
2:B:1108:U:H2'	2:B:1109:C:O4'	2.07	0.55
2:B:2698:U:H2'	2:B:2699:C:C6	2.42	0.55
13:M:50:ARG:O	13:M:53:MET:HB3	2.07	0.55
17:Q:96:ASP:C	17:Q:98:ALA:H	2.08	0.55
6:F:70:ARG:HD2	6:F:71:LYS:H	1.72	0.55
11:K:63:ARG:N	11:K:82:ALA:HB3	2.22	0.55
18:R:49:ILE:HB	18:R:53:PHE:O	2.07	0.55
2:B:2144:G:N3	2:B:2146:C:H4'	2.22	0.55
17:Q:4:LYS:HG2	17:Q:7:VAL:HG22	1.89	0.55
10:J:18:VAL:HG12	10:J:54:ILE:HD11	1.87	0.55
2:B:150:U:H2'	2:B:151:C:C6	2.41	0.55
21:U:32:LYS:HG2	21:U:65:GLN:HG2	1.88	0.55
22:V:28:ALA:O	22:V:40:ILE:HD13	2.07	0.55
16:P:31:VAL:HG11	16:P:38:ARG:NE	2.22	0.55
2:B:600:G:H2'	2:B:601:C:C6	2.42	0.55
2:B:522:A:H2'	2:B:523:C:C6	2.42	0.55
10:J:130:HIS:HD2	10:J:132:HIS:HB2	1.72	0.55
2:B:718:A:H3'	2:B:719:C:H6	1.72	0.55
2:B:2729:G:H2'	2:B:2730:C:C6	2.42	0.54
4:D:109:VAL:HA	4:D:202:ILE:O	2.07	0.54
2:B:2230:G:H4'	24:X:30:PRO:O	2.06	0.54
8:H:96:THR:HB	8:H:112:LYS:CA	2.34	0.54
6:F:134:GLN:HB2	6:F:149:ARG:HB2	1.88	0.54
6:F:134:GLN:HE22	6:F:136:ILE:HA	1.71	0.54
2:B:1548:A:H2'	2:B:1549:A:H8	1.70	0.54
4:D:22:ILE:HG22	4:D:23:PRO:O	2.07	0.54
2:B:2096:C:H2'	2:B:2097:A:C8	2.42	0.54
24:X:65:THR:O	24:X:68:ALA:HB3	2.08	0.54
2:B:540:C:H2'	2:B:541:A:H8	1.72	0.54
2:B:2353:G:H1'	23:W:30:VAL:HG13	1.89	0.54
23:W:59:PHE:CD2	23:W:60:ALA:N	2.75	0.54
8:H:128:HIS:H	8:H:144:VAL:HB	1.72	0.54
2:B:2314:A:H2'	2:B:2315:G:H8	1.71	0.54
4:D:10:GLY:HA3	4:D:26:VAL:N	2.13	0.54
4:D:45:TYR:O	4:D:46:ARG:HB2	2.05	0.54
7:G:83:THR:HA	7:G:84:LYS:HZ3	1.71	0.54
6:F:12:VAL:O	6:F:16:MET:N	2.33	0.54
2:B:30:G:H2'	2:B:31:C:C6	2.42	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2294:G:P	15:O:94:ARG:HH11	2.30	0.54
2:B:2181:U:H2'	2:B:2181:U:O2	2.07	0.54
1:A:54:G:O2'	1:A:55:U:H5'	2.06	0.54
9:I:109:ALA:HB1	9:I:124:MET:HG3	1.89	0.54
2:B:1319:C:O2'	2:B:1320:C:H5'	2.06	0.54
2:B:1015:U:H2'	2:B:1016:G:H8	1.72	0.54
2:B:2348:U:H1'	28:1:38:PHE:HE2	1.72	0.54
2:B:193:U:O3'	2:B:803:U:H4'	2.06	0.54
2:B:1351:C:H2'	2:B:1352:U:O4'	2.08	0.54
2:B:24:G:H1'	19:S:77:ASP:HB3	1.90	0.54
2:B:853:C:H2'	2:B:854:C:H6	1.72	0.54
23:W:30:VAL:HG13	23:W:30:VAL:O	2.07	0.54
17:Q:57:ARG:HA	17:Q:60:TRP:CE3	2.42	0.54
17:Q:78:PHE:CZ	17:Q:82:LEU:HD11	2.42	0.54
18:R:5:PHE:O	18:R:11:GLN:HA	2.06	0.54
31:4:7:VAL:HG23	31:4:35:GLN:CB	2.37	0.54
7:G:163:TYR:O	7:G:166:GLU:HB3	2.07	0.54
15:O:28:VAL:HG21	15:O:106:LEU:HD21	1.88	0.54
1:A:33:G:O2'	1:A:34:A:H5'	2.07	0.54
1:A:51:G:C2'	1:A:52:A:H5''	2.36	0.54
7:G:41:GLU:HB3	7:G:52:GLY:O	2.07	0.54
1:A:61:G:H2'	1:A:62:C:C6	2.42	0.54
2:B:2601:C:C3'	2:B:2602:A:H5''	2.38	0.54
2:B:2489:U:O2'	2:B:2490:G:H5'	2.06	0.54
23:W:51:GLY:HA3	23:W:59:PHE:CB	2.38	0.54
4:D:68:PHE:HB3	4:D:73:VAL:HG23	1.88	0.54
2:B:136:G:H2'	2:B:137:U:C5	2.42	0.54
10:J:25:LEU:HB2	10:J:62:VAL:HG21	1.89	0.54
2:B:1076:C:H5''	9:I:94:LYS:HZ1	1.73	0.54
2:B:753:A:H2'	2:B:754:U:C6	2.42	0.54
2:B:1015:U:H2'	2:B:1016:G:C8	2.42	0.54
2:B:2218:G:O2'	2:B:2219:U:H5'	2.08	0.54
2:B:2365:G:O2'	23:W:59:PHE:CE1	2.56	0.54
23:W:30:VAL:HA	23:W:60:ALA:O	2.08	0.54
2:B:3:U:HO2'	2:B:4:U:H6	1.47	0.54
10:J:65:THR:HG23	10:J:66:GLY:N	2.21	0.54
22:V:65:VAL:O	22:V:68:LYS:HG2	2.07	0.54
19:S:35:ILE:HA	27:O:24:VAL:CG1	2.38	0.54
2:B:2308:G:C8	2:B:2308:G:H5'	2.43	0.54
6:F:29:ARG:HH11	6:F:29:ARG:HB2	1.72	0.54
2:B:847:U:H6	2:B:934:U:H1'	1.72	0.54
2:B:1636:U:H2'	2:B:1637:A:C8	2.42	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2859:G:H2'	2:B:2860:A:C8	2.41	0.54
23:W:30:VAL:O	23:W:30:VAL:HG22	2.07	0.54
2:B:2365:G:O2'	23:W:59:PHE:HE1	1.88	0.54
4:D:118:PHE:CD1	4:D:119:ALA:N	2.75	0.54
17:Q:91:ARG:CB	17:Q:93:ILE:HG22	2.37	0.54
2:B:2305:U:C4	6:F:151:LEU:HA	2.43	0.54
6:F:7:TYR:O	6:F:12:VAL:HG23	2.08	0.54
24:X:76:LYS:HG3	24:X:77:TYR:H	1.71	0.54
6:F:177:ARG:NE	6:F:178:LYS:H	1.98	0.54
1:A:83:G:OP1	26:Z:16:LEU:HD21	2.07	0.54
6:F:6:TYR:HA	6:F:9:ASP:HB2	1.90	0.54
18:R:60:LYS:H	18:R:100:GLY:HA3	1.72	0.54
2:B:1547:C:H2'	2:B:1548:A:C8	2.43	0.54
2:B:78:U:H2'	2:B:79:C:H6	1.73	0.54
2:B:1404:C:O2'	2:B:1405:U:H5'	2.08	0.54
2:B:1400:U:H2'	2:B:1401:G:H8	1.73	0.54
2:B:2693:G:O2'	2:B:2694:G:H5'	2.06	0.54
23:W:58:LEU:HG	23:W:79:ILE:HD12	1.89	0.54
14:N:41:ALA:C	14:N:43:GLU:H	2.11	0.54
2:B:1420:A:H2'	2:B:2211:A:N6	2.23	0.54
2:B:2216:G:H2'	2:B:2217:G:C8	2.43	0.54
3:C:141:HIS:CG	3:C:142:ASN:H	2.25	0.54
3:C:154:ALA:HB2	3:C:161:VAL:HG23	1.90	0.54
2:B:1654:A:HO2'	4:D:118:PHE:CB	2.20	0.54
18:R:2:TYR:H	18:R:42:ALA:HB2	1.73	0.54
6:F:62:GLN:HG3	6:F:91:ARG:HH11	1.73	0.54
4:D:68:PHE:HB3	4:D:73:VAL:CG2	2.38	0.54
9:I:77:VAL:HA	9:I:80:LYS:CE	2.38	0.54
9:I:125:THR:O	9:I:129:GLU:HG3	2.07	0.54
2:B:2230:G:H2'	2:B:2231:U:C6	2.42	0.54
2:B:2033:A:H1'	2:B:2035:G:OP2	2.08	0.54
18:R:27:ILE:HG13	18:R:33:VAL:HG11	1.90	0.54
2:B:1563:U:H2'	2:B:1564:C:C6	2.43	0.54
1:A:30:C:H2'	1:A:31:C:H5'	1.90	0.54
14:N:72:ASP:OD2	14:N:74:GLU:HB3	2.08	0.54
14:N:102:PHE:N	14:N:102:PHE:CD1	2.75	0.54
2:B:1405:U:H2'	2:B:1406:U:H6	1.72	0.54
5:E:150:THR:HG21	5:E:153:LEU:HA	1.90	0.54
2:B:754:U:H2'	2:B:755:U:H6	1.71	0.54
1:A:95:U:H2'	1:A:96:G:H8	1.73	0.54
2:B:2078:C:O2'	2:B:2079:U:H5'	2.07	0.54
2:B:1930:G:H2'	2:B:1968:G:H1	1.73	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1461:C:O2'	2:B:1462:C:H5'	2.08	0.54
12:L:124:GLY:N	12:L:143:GLU:CG	2.71	0.54
8:H:90:LEU:HD22	8:H:123:ARG:C	2.28	0.54
8:H:127:GLU:HG3	8:H:143:ILE:HB	1.89	0.54
4:D:25:THR:HG21	4:D:193:VAL:HG22	1.88	0.54
21:U:5:ARG:NH2	21:U:93:ARG:HD3	2.23	0.54
2:B:1365:A:OP2	24:X:2:ARG:HG2	2.08	0.54
23:W:9:THR:OG1	23:W:10:ARG:N	2.41	0.54
7:G:154:GLU:O	7:G:156:TYR:N	2.40	0.54
6:F:134:GLN:NE2	6:F:136:ILE:HA	2.23	0.54
2:B:1444:G:O2'	2:B:1445:G:H5'	2.07	0.54
4:D:113:SER:HB2	4:D:168:GLU:N	2.22	0.54
21:U:35:VAL:HB	21:U:38:ILE:CG2	2.38	0.54
12:L:6:LEU:HD23	12:L:6:LEU:N	2.22	0.54
2:B:720:U:H2'	2:B:721:A:C8	2.43	0.54
2:B:1484:U:H2'	2:B:1485:U:C6	2.43	0.54
2:B:1411:U:H2'	2:B:1412:U:H6	1.71	0.54
7:G:82:PHE:HB2	7:G:134:GLY:O	2.07	0.54
2:B:794:A:H2'	2:B:795:C:C6	2.43	0.54
2:B:988:A:P	26:Z:11:SER:HB3	2.48	0.54
2:B:2360:G:H4'	12:L:61:LEU:HD11	1.88	0.54
2:B:457:A:N1	2:B:470:A:H5''	2.23	0.54
7:G:26:LYS:HG2	7:G:27:GLY:N	2.21	0.54
7:G:8:VAL:HG21	7:G:51:PHE:HE2	1.73	0.54
10:J:65:THR:HG22	10:J:68:LYS:CE	2.38	0.54
6:F:122:ASP:OD2	6:F:126:ASN:HB2	2.08	0.54
25:Y:19:LEU:O	25:Y:24:GLU:HB2	2.08	0.54
15:O:15:ARG:HH21	15:O:95:SER:HB3	1.72	0.54
12:L:92:LEU:HG	12:L:93:ASN:H	1.74	0.54
5:E:176:ASP:O	5:E:180:LEU:HD23	2.07	0.54
26:Z:16:LEU:HD22	26:Z:16:LEU:N	2.20	0.54
21:U:15:GLY:CA	21:U:16:LYS:HZ2	2.20	0.54
2:B:2880:C:O4'	14:N:91:ALA:HB3	2.08	0.54
2:B:2320:U:O2'	2:B:2322:A:N7	2.41	0.54
2:B:2341:G:H2'	2:B:2342:C:H6	1.71	0.54
2:B:549:G:H5''	2:B:550:C:C6	2.43	0.54
2:B:729:G:H4'	2:B:763:G:O5'	2.08	0.54
2:B:2600:A:O2'	2:B:2601:C:H5'	2.07	0.54
2:B:2248:C:H2'	2:B:2249:U:O4'	2.07	0.54
13:M:42:THR:C	13:M:44:ARG:H	2.10	0.54
23:W:23:LYS:HD2	23:W:24:ARG:N	2.23	0.53
10:J:13:ARG:H	10:J:41:LYS:NZ	2.06	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:R:51:VAL:O	18:R:52:PRO:C	2.46	0.53
8:H:27:ARG:HG2	8:H:27:ARG:HH21	1.72	0.53
7:G:70:LEU:O	7:G:74:MET:HG3	2.08	0.53
2:B:2328:A:H2'	2:B:2329:U:H6	1.73	0.53
17:Q:26:ALA:O	17:Q:30:VAL:HG12	2.08	0.53
2:B:136:G:H2'	2:B:137:U:H6	1.71	0.53
9:I:18:ASN:N	9:I:19:PRO:CD	2.71	0.53
2:B:2800:A:OP2	2:B:2800:A:H3'	2.08	0.53
11:K:110:LYS:HD3	11:K:110:LYS:H	1.71	0.53
2:B:1826:G:H2'	2:B:1827:U:C6	2.43	0.53
5:E:129:PRO:HD3	5:E:156:ASN:ND2	2.23	0.53
2:B:589:U:H2'	2:B:590:A:C8	2.42	0.53
5:E:37:ALA:C	5:E:39:ALA:H	2.11	0.53
23:W:37:VAL:HG13	23:W:55:ASP:O	2.08	0.53
2:B:38:A:N3	5:E:43:THR:HB	2.23	0.53
18:R:54:VAL:HG22	18:R:55:ASP:H	1.73	0.53
2:B:1141:U:OP2	10:J:65:THR:HG21	2.08	0.53
21:U:62:ALA:O	21:U:63:ALA:HB3	2.08	0.53
4:D:121:THR:HB	4:D:127:PHE:HB2	1.89	0.53
14:N:33:ILE:HG22	14:N:114:GLU:HB2	1.89	0.53
2:B:1549:A:H2'	2:B:1550:C:C6	2.44	0.53
11:K:112:MET:SD	11:K:115:ILE:HD11	2.49	0.53
7:G:40:VAL:HG12	7:G:52:GLY:O	2.08	0.53
17:Q:51:GLN:O	17:Q:54:ARG:HB2	2.09	0.53
8:H:58:LEU:C	8:H:60:GLU:H	2.10	0.53
2:B:712:G:H2'	2:B:713:G:O4'	2.07	0.53
2:B:2216:G:H2'	2:B:2217:G:H8	1.74	0.53
25:Y:18:LEU:HD13	25:Y:18:LEU:O	2.08	0.53
2:B:944:C:H5'	2:B:945:A:C5'	2.38	0.53
3:C:71:ASP:OD2	3:C:118:GLY:HA2	2.08	0.53
2:B:2395:C:H2'	2:B:2396:G:O4'	2.09	0.53
2:B:2679:A:O2'	2:B:2680:U:H5'	2.09	0.53
4:D:33:ARG:NE	4:D:74:GLU:HB3	2.14	0.53
5:E:69:ARG:O	5:E:70:SER:HB3	2.07	0.53
26:Z:15:ARG:HD2	26:Z:15:ARG:N	2.22	0.53
2:B:84:A:H4'	2:B:85:G:O5'	2.08	0.53
2:B:2538:C:H2'	2:B:2539:C:H6	1.72	0.53
2:B:1657:U:O2'	2:B:1658:C:H5'	2.08	0.53
2:B:1400:U:H2'	2:B:1401:G:C8	2.43	0.53
2:B:2702:G:H2'	2:B:2703:C:C6	2.44	0.53
2:B:159:G:O2'	2:B:160:A:H5''	2.07	0.53
5:E:108:ILE:CG1	12:L:2:ARG:HH22	2.17	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:115:GLN:HG2	7:G:116:LEU:N	2.23	0.53
2:B:1559:U:H3'	2:B:1560:G:C5'	2.38	0.53
15:O:67:ASN:H	15:O:70:ALA:HB3	1.73	0.53
2:B:1170:C:H2'	2:B:1171:G:C8	2.44	0.53
2:B:164:C:H2'	2:B:165:A:H5'	1.91	0.53
12:L:109:LYS:HD3	12:L:126:ARG:HB3	1.90	0.53
24:X:34:SER:HA	24:X:48:LEU:O	2.08	0.53
2:B:649:G:H2'	2:B:650:C:C6	2.43	0.53
10:J:54:ILE:HD12	10:J:55:ILE:N	2.22	0.53
28:1:10:LEU:HD21	28:1:35:LEU:HD21	1.91	0.53
2:B:634:C:H2'	2:B:635:C:H6	1.74	0.53
2:B:100:U:H1'	2:B:101:A:N1	2.23	0.53
2:B:83:A:H61	2:B:101:A:H5'	1.70	0.53
12:L:6:LEU:CD2	12:L:6:LEU:H	2.20	0.53
29:2:33:ARG:HH21	29:2:33:ARG:CB	2.22	0.53
2:B:2103:C:H3'	2:B:2104:C:C6	2.43	0.53
6:F:71:LYS:HG2	6:F:73:VAL:HG23	1.90	0.53
7:G:22:VAL:HG22	7:G:36:LEU:CD1	2.39	0.53
2:B:1737:G:H5'	2:B:1738:G:OP2	2.09	0.53
2:B:1655:A:H5'	4:D:118:PHE:CG	2.44	0.53
18:R:4:VAL:CG2	18:R:39:LEU:HG	2.38	0.53
6:F:161:SER:C	6:F:163:GLU:H	2.12	0.53
2:B:2331:G:H2'	2:B:2332:C:C6	2.44	0.53
9:I:11:GLN:O	9:I:11:GLN:HG3	2.08	0.53
2:B:1439:A:N7	2:B:1440:U:N1	2.57	0.53
19:S:9:HIS:H	19:S:102:HIS:CE1	2.27	0.53
2:B:1097:U:C2'	2:B:1098:A:H5'	2.37	0.53
6:F:70:ARG:HD2	6:F:71:LYS:N	2.24	0.53
1:A:95:U:H2'	1:A:96:G:C8	2.44	0.53
2:B:68:G:O2'	2:B:69:C:H5'	2.08	0.53
22:V:48:MET:O	22:V:51:GLN:HG3	2.09	0.53
2:B:1871:A:H8	2:B:1872:A:C5	2.26	0.53
14:N:38:LEU:HB3	14:N:39:PRO:HD3	1.89	0.53
2:B:923:G:H1'	23:W:23:LYS:HZ1	1.74	0.53
12:L:143:GLU:O	12:L:144:GLU:HB3	2.07	0.53
8:H:125:THR:HG23	8:H:126:GLY:N	2.24	0.53
17:Q:59:LEU:O	17:Q:62:ALA:HB3	2.09	0.53
18:R:2:TYR:CE2	18:R:13:ARG:HD2	2.44	0.53
13:M:19:GLY:C	13:M:20:LEU:HD22	2.29	0.53
10:J:64:VAL:O	10:J:68:LYS:HE3	2.07	0.53
2:B:1060:U:C4	9:I:131:THR:HG22	2.44	0.53
2:B:1060:U:O4	9:I:131:THR:HG22	2.08	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2620:C:O4'	4:D:161:MET:HE2	2.08	0.53
10:J:103:ILE:O	10:J:106:LYS:HB3	2.09	0.53
22:V:42:LEU:N	22:V:42:LEU:HD23	2.24	0.53
2:B:654:A:C2'	2:B:655:A:H5''	2.38	0.53
2:B:1244:A:O2'	2:B:1245:G:H5'	2.09	0.53
2:B:401:A:H2'	2:B:402:A:H8	1.71	0.53
9:I:100:ILE:O	9:I:139:VAL:HA	2.09	0.53
2:B:847:U:O4'	2:B:847:U:O2	2.27	0.53
2:B:2860:A:O5'	2:B:2860:A:H8	1.91	0.53
13:M:42:THR:HB	13:M:45:GLN:HG3	1.91	0.53
9:I:81:LYS:HG3	9:I:82:ALA:N	2.23	0.53
2:B:2045:C:H5''	27:O:14:MET:CE	2.38	0.53
3:C:30:ALA:N	3:C:31:PRO:HD2	2.24	0.53
2:B:852:U:H2'	2:B:853:C:C6	2.44	0.53
2:B:2387:U:H1'	23:W:38:ARG:CZ	2.39	0.53
23:W:59:PHE:O	23:W:60:ALA:HB3	2.09	0.53
16:P:73:PHE:C	16:P:75:THR:H	2.12	0.53
6:F:74:ALA:CB	6:F:78:ILE:HB	2.38	0.53
17:Q:104:ALA:HB1	18:R:46:GLU:CD	2.29	0.53
17:Q:88:GLU:CA	18:R:49:ILE:HD11	2.39	0.53
22:V:80:HIS:HD2	22:V:83:LYS:H	1.57	0.53
6:F:166:ARG:HD2	6:F:167:ALA:H	1.73	0.53
2:B:2061:G:H5''	2:B:2503:A:C2	2.44	0.53
15:O:71:ALA:HB3	15:O:102:ARG:HB3	1.91	0.53
2:B:1386:C:H5''	2:B:1396:U:O2	2.09	0.53
1:A:51:G:H2'	1:A:52:A:H5''	1.89	0.53
2:B:1507:C:O3'	2:B:1508:A:H4'	2.08	0.53
2:B:2392:A:H4'	30:3:27:ASN:HD21	1.73	0.53
2:B:1297:C:OP1	2:B:2710:C:H4'	2.09	0.53
2:B:212:G:O2'	2:B:213:A:H5'	2.09	0.53
19:S:13:SER:OG	19:S:14:ALA:N	2.42	0.53
3:C:162:GLN:NE2	3:C:174:ARG:HH21	2.07	0.53
2:B:2269:G:H4'	23:W:18:LYS:NZ	2.24	0.53
3:C:124:LYS:HG3	3:C:125:PRO:HD2	1.90	0.53
3:C:140:VAL:HA	3:C:191:LEU:HD12	1.91	0.53
20:T:38:ALA:O	20:T:39:THR:HB	2.09	0.53
2:B:2019:A:H2	2:B:2035:G:H22	1.57	0.53
2:B:2012:G:H4'	19:S:96:ILE:CD1	2.38	0.53
15:O:105:ALA:C	15:O:107:ALA:N	2.63	0.53
24:X:39:VAL:CG2	24:X:42:GLU:HB3	2.39	0.53
2:B:2297:A:N1	2:B:2320:U:H4'	2.24	0.53
4:D:56:LYS:C	4:D:58:ASN:H	2.12	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1545:A:H2'	2:B:1546:G:O4'	2.09	0.53
2:B:1736:U:H2'	2:B:1737:G:O4'	2.08	0.53
2:B:99:U:O4'	2:B:99:U:O2	2.26	0.53
2:B:1415:U:O2'	2:B:1416:G:H4'	2.08	0.53
2:B:2671:G:H2'	2:B:2672:U:C6	2.44	0.53
2:B:852:U:H2'	2:B:853:C:H6	1.73	0.53
14:N:99:LYS:HB2	27:O:41:HIS:CB	2.39	0.53
24:X:50:VAL:HG12	24:X:51:SER:N	2.21	0.53
10:J:114:LEU:O	10:J:118:MET:HG3	2.08	0.53
6:F:134:GLN:C	6:F:136:ILE:H	2.13	0.53
2:B:1441:G:H2'	2:B:1442:U:C6	2.44	0.53
2:B:1722:A:H2'	2:B:1723:G:C8	2.43	0.53
21:U:71:ILE:HD11	21:U:82:VAL:HG22	1.90	0.53
2:B:548:G:H4'	2:B:549:G:C4	2.43	0.53
2:B:2425:A:H5'	2:B:2427:C:O4'	2.09	0.53
23:W:41:GLY:HA2	23:W:44:PHE:CE2	2.44	0.53
18:R:78:ARG:HB3	18:R:83:TYR:HB3	1.91	0.53
6:F:41:GLU:O	6:F:43:ILE:N	2.41	0.52
10:J:119:PHE:C	10:J:121:LYS:H	2.12	0.52
2:B:2190:G:H2'	2:B:2191:A:C1'	2.39	0.52
8:H:9:VAL:HG22	8:H:35:LYS:HD2	1.90	0.52
2:B:1439:A:N1	2:B:1552:A:N7	2.57	0.52
2:B:1552:A:H2'	2:B:1553:A:C5'	2.39	0.52
2:B:2070:A:H2'	2:B:2071:A:O4'	2.07	0.52
8:H:22:LYS:C	8:H:24:GLY:H	2.11	0.52
2:B:1053:C:H2'	2:B:1054:A:H8	1.74	0.52
2:B:2488:G:O2'	2:B:2489:U:H5'	2.09	0.52
2:B:1930:G:H2'	2:B:1968:G:N1	2.24	0.52
2:B:327:G:H2'	2:B:328:U:C6	2.44	0.52
17:Q:85:ALA:HB2	17:Q:115:ALA:HB2	1.91	0.52
23:W:20:LEU:HD11	23:W:35:ILE:HG13	1.91	0.52
8:H:128:HIS:ND1	8:H:129:GLU:N	2.57	0.52
19:S:44:ALA:C	19:S:46:LEU:H	2.12	0.52
2:B:2329:U:H2'	2:B:2330:G:C8	2.45	0.52
14:N:97:ILE:HD12	14:N:98:LEU:N	2.24	0.52
16:P:4:ILE:HG22	16:P:5:LYS:H	1.73	0.52
2:B:581:C:OP1	17:Q:32:ARG:HG3	2.09	0.52
15:O:89:ASP:HA	15:O:116:GLN:O	2.09	0.52
2:B:1076:C:H5''	9:I:94:LYS:NZ	2.24	0.52
21:U:20:LYS:O	21:U:21:ARG:HG2	2.10	0.52
3:C:132:ARG:HG3	3:C:132:ARG:O	2.09	0.52
2:B:1573:G:H2'	2:B:1574:C:H5'	1.91	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:566:U:H2'	2:B:567:U:O4'	2.10	0.52
23:W:17:ALA:HA	23:W:35:ILE:HG22	1.91	0.52
23:W:50:VAL:HG23	23:W:61:LYS:HE3	1.91	0.52
8:H:98:ASP:N	8:H:98:ASP:OD1	2.42	0.52
6:F:43:ILE:HD12	6:F:46:LYS:HE2	1.91	0.52
6:F:172:PHE:O	6:F:174:PHE:N	2.43	0.52
2:B:2336:A:H4'	2:B:2337:G:OP1	2.09	0.52
22:V:42:LEU:HD12	22:V:47:VAL:HG21	1.91	0.52
2:B:1440:U:H2'	2:B:1441:G:H8	1.74	0.52
25:Y:41:HIS:O	25:Y:45:GLN:HG3	2.10	0.52
7:G:88:LEU:HD13	7:G:93:TYR:HB3	1.89	0.52
2:B:1041:G:H2'	2:B:1042:G:C8	2.43	0.52
21:U:32:LYS:HE2	21:U:65:GLN:HG2	1.91	0.52
12:L:55:MET:HA	12:L:55:MET:HE3	1.92	0.52
2:B:1585:C:H2'	2:B:1586:A:O4'	2.08	0.52
2:B:37:C:O2'	2:B:38:A:H5'	2.09	0.52
8:H:100:ALA:O	8:H:103:VAL:HG22	2.09	0.52
16:P:63:ILE:CA	16:P:68:GLY:HA2	2.28	0.52
19:S:26:GLY:H	19:S:71:VAL:HG13	1.74	0.52
5:E:146:VAL:HG12	5:E:147:LEU:H	1.73	0.52
4:D:113:SER:CB	4:D:168:GLU:H	2.22	0.52
2:B:1728:C:H2'	2:B:1730:C:O2	2.08	0.52
2:B:637:A:OP2	12:L:112:LEU:HD22	2.09	0.52
25:Y:42:LEU:HD12	25:Y:45:GLN:HB2	1.91	0.52
5:E:48:THR:H	5:E:51:GLU:HG3	1.73	0.52
2:B:2093:G:H1'	2:B:2198:A:C2	2.43	0.52
2:B:345:A:H1'	2:B:346:A:H2	1.73	0.52
2:B:1356:G:H2'	2:B:1357:C:C6	2.44	0.52
21:U:20:LYS:HG3	21:U:21:ARG:H	1.73	0.52
2:B:2078:C:H2'	2:B:2079:U:O4'	2.09	0.52
2:B:1100:C:H2'	2:B:1101:U:H6	1.73	0.52
2:B:255:A:H2'	2:B:256:A:O4'	2.09	0.52
2:B:2752:C:H2'	2:B:2753:A:O4'	2.09	0.52
11:K:25:GLY:HA3	11:K:29:ARG:HD2	1.91	0.52
22:V:9:ARG:CD	22:V:41:GLU:HB3	2.39	0.52
18:R:2:TYR:N	18:R:42:ALA:HB2	2.24	0.52
2:B:2748:A:O2'	7:G:62:ALA:HA	2.08	0.52
25:Y:55:THR:O	25:Y:59:GLU:HG3	2.09	0.52
5:E:11:ALA:O	5:E:12:LEU:HD22	2.09	0.52
21:U:12:VAL:HG21	21:U:38:ILE:HD11	1.91	0.52
2:B:1175:A:H3'	2:B:1176:U:H4'	1.91	0.52
8:H:39:ALA:C	8:H:41:LYS:H	2.12	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1785:A:H2'	2:B:1787:A:N7	2.24	0.52
2:B:1893:C:H2'	2:B:1894:C:O4'	2.09	0.52
1:A:21:G:H2'	1:A:22:U:C6	2.44	0.52
2:B:997:G:O2'	2:B:998:C:H5'	2.09	0.52
2:B:2849:U:H4'	2:B:2850:A:H5'	1.92	0.52
23:W:18:LYS:HD2	23:W:36:ILE:HD11	1.92	0.52
23:W:49:ASN:O	23:W:50:VAL:HG13	2.09	0.52
8:H:82:SER:N	8:H:146:VAL:HG13	2.22	0.52
8:H:85:GLY:O	8:H:86:ASP:HB2	2.10	0.52
8:H:90:LEU:HD13	8:H:123:ARG:O	2.10	0.52
13:M:37:GLY:CA	13:M:127:LYS:HE2	2.39	0.52
8:H:7:ASP:CG	8:H:8:LYS:N	2.62	0.52
2:B:727:A:OP1	2:B:1431:A:O2'	2.28	0.52
21:U:18:LYS:C	21:U:18:LYS:HD3	2.30	0.52
2:B:1547:C:H2'	2:B:1548:A:H8	1.74	0.52
2:B:2514:U:H2'	2:B:2515:C:C6	2.45	0.52
2:B:2804:U:H2'	2:B:2805:C:H6	1.74	0.52
17:Q:65:ASN:HD21	17:Q:69:ARG:CZ	2.23	0.52
14:N:55:ALA:HB1	14:N:84:GLY:HA2	1.90	0.52
2:B:934:U:H2'	2:B:935:C:C6	2.44	0.52
2:B:2008:C:H2'	2:B:2009:A:H8	1.75	0.52
11:K:65:LYS:HG3	11:K:80:GLY:H	1.74	0.52
13:M:120:ALA:O	13:M:122:ALA:N	2.43	0.52
2:B:553:G:H2'	2:B:554:U:O4'	2.09	0.52
14:N:109:PRO:O	14:N:110:MET:HE2	2.09	0.52
2:B:38:A:O2'	5:E:43:THR:HA	2.10	0.52
4:D:111:GLY:H	4:D:194:PRO:HG2	1.75	0.52
2:B:1060:U:O2	2:B:1088:A:C8	2.63	0.52
23:W:9:THR:HG23	23:W:10:ARG:CD	2.34	0.52
4:D:186:LEU:HD11	16:P:3:ILE:HG13	1.91	0.52
10:J:74:TYR:HE2	10:J:103:ILE:HD11	1.75	0.52
2:B:321:U:H5''	5:E:131:THR:HG23	1.92	0.52
2:B:340:A:H2'	2:B:341:C:O4'	2.10	0.52
14:N:45:ARG:O	14:N:49:GLU:HG3	2.09	0.52
26:Z:2:LYS:HG3	26:Z:4:ILE:HD11	1.91	0.52
2:B:2514:U:H2'	2:B:2515:C:H6	1.74	0.52
2:B:1535:A:H3'	2:B:1536:C:C6	2.45	0.52
19:S:15:GLN:HA	19:S:18:ARG:HG2	1.91	0.52
2:B:77:G:H2'	2:B:78:U:C6	2.45	0.52
2:B:2246:G:H2'	2:B:2247:A:C8	2.45	0.52
23:W:41:GLY:HA2	23:W:44:PHE:CD2	2.45	0.52
2:B:2674:G:H4'	11:K:29:ARG:HG3	1.92	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1958:C:O2'	2:B:1959:G:H5'	2.10	0.52
9:I:23:VAL:HG23	9:I:24:GLY:N	2.25	0.52
27:0:9:ARG:O	27:0:12:ARG:HB3	2.09	0.52
6:F:43:ILE:HA	6:F:46:LYS:NZ	2.25	0.52
17:Q:94:LEU:HD21	18:R:12:HIS:HA	1.91	0.52
22:V:21:ARG:NE	22:V:87:GLN:HB3	2.25	0.52
2:B:2682:A:H61	2:B:2728:U:H1'	1.75	0.52
6:F:65:LEU:HD23	6:F:87:LYS:HD2	1.91	0.52
19:S:24:ILE:HD11	19:S:36:LEU:HD21	1.91	0.52
2:B:20:C:H2'	2:B:21:A:C8	2.45	0.52
2:B:141:G:H5''	2:B:142:A:N7	2.24	0.52
20:T:1:MET:C	20:T:2:ILE:HD13	2.29	0.52
19:S:84:ARG:HB3	19:S:96:ILE:CG2	2.39	0.52
15:O:70:ALA:O	15:O:74:VAL:HG23	2.09	0.52
18:R:15:SER:O	18:R:18:GLN:HG3	2.10	0.52
2:B:102:U:O2'	25:Y:2:LYS:NZ	2.43	0.52
2:B:1796:U:H2'	2:B:1797:G:H8	1.73	0.52
12:L:30:THR:O	12:L:32:GLY:N	2.43	0.52
1:A:7:G:H5''	15:O:29:HIS:NE2	2.25	0.52
2:B:251:A:H2'	2:B:252:G:O4'	2.09	0.52
2:B:1356:G:H2'	2:B:1357:C:H6	1.74	0.52
2:B:2013:A:N3	19:S:88:ARG:NH1	2.57	0.52
17:Q:94:LEU:HD11	18:R:13:ARG:HB2	1.91	0.52
7:G:6:ALA:HB3	7:G:68:ARG:HD3	1.92	0.52
2:B:1139:G:O2'	2:B:1140:C:H5'	2.10	0.52
2:B:2144:G:H2'	2:B:2144:G:N3	2.24	0.52
9:I:17:ALA:O	9:I:18:ASN:CB	2.58	0.52
9:I:91:LYS:HB2	9:I:94:LYS:HD2	1.91	0.52
29:2:13:ASN:O	29:2:17:GLY:HA3	2.10	0.52
9:I:89:SER:HB2	9:I:136:GLY:HA3	1.91	0.52
2:B:571:U:H3'	18:R:80:ARG:NH2	2.25	0.52
6:F:8:LYS:HD3	6:F:8:LYS:O	2.10	0.52
2:B:2766:A:N3	2:B:2766:A:H2'	2.25	0.52
21:U:40:LEU:HA	21:U:60:LYS:O	2.09	0.52
2:B:1045:C:H5''	2:B:1047:G:C1'	2.40	0.52
2:B:1465:G:H2'	2:B:1466:U:C6	2.45	0.52
2:B:1921:G:O2'	2:B:1922:G:H5'	2.10	0.52
8:H:144:VAL:HG12	8:H:145:ASN:N	2.25	0.52
17:Q:91:ARG:HD3	18:R:11:GLN:OE1	2.10	0.52
6:F:108:PRO:O	6:F:110:ILE:HG23	2.09	0.52
6:F:166:ARG:CD	6:F:167:ALA:H	2.23	0.52
2:B:28:A:N6	2:B:512:G:O2'	2.43	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:513:A:H8	2:B:513:A:O5'	1.93	0.52
26:Z:50:VAL:HB	26:Z:53:MET:HB2	1.92	0.52
8:H:21:VAL:HG21	8:H:25:TYR:HD2	1.73	0.52
8:H:20:ASN:ND2	8:H:21:VAL:H	2.08	0.52
2:B:2213:U:H2'	2:B:2214:C:H5'	1.92	0.52
2:B:969:G:H2'	2:B:970:U:H6	1.74	0.52
29:2:26:ASN:C	29:2:28:ARG:H	2.14	0.52
2:B:2199:A:H5''	2:B:2200:C:H5	1.74	0.52
2:B:2082:A:H2'	2:B:2083:G:O4'	2.10	0.52
2:B:623:C:H2'	2:B:624:C:H6	1.74	0.52
3:C:117:SER:CB	3:C:128:THR:HB	2.40	0.51
8:H:32:PRO:O	8:H:33:GLN:HB2	2.09	0.51
5:E:106:LYS:HE3	5:E:200:LEU:HD12	1.91	0.51
2:B:528:A:C2	2:B:2043:C:H4'	2.45	0.51
13:M:68:PHE:CG	13:M:69:PRO:HD2	2.44	0.51
2:B:2070:A:H2'	2:B:2071:A:C8	2.45	0.51
24:X:36:ARG:HH21	24:X:36:ARG:CB	2.23	0.51
2:B:1394:U:O2'	2:B:1395:A:H5'	2.11	0.51
2:B:1858:A:H61	2:B:1884:G:H1'	1.75	0.51
5:E:153:LEU:HD22	5:E:171:ASP:HB2	1.92	0.51
2:B:1864:U:O2'	2:B:1865:U:H5'	2.10	0.51
2:B:1399:C:O2'	2:B:1400:U:H5'	2.10	0.51
7:G:82:PHE:CZ	7:G:137:LYS:HB2	2.45	0.51
9:I:52:LEU:HD21	9:I:81:LYS:HZ2	1.75	0.51
3:C:180:MET:HB2	3:C:268:ARG:H	1.75	0.51
2:B:65:U:H2'	2:B:66:C:H6	1.74	0.51
2:B:1258:U:H2'	2:B:1259:G:C8	2.45	0.51
5:E:119:ILE:N	5:E:119:ILE:HD13	2.25	0.51
23:W:17:ALA:HA	23:W:35:ILE:CG2	2.40	0.51
8:H:104:THR:HA	8:H:109:GLU:CG	2.38	0.51
2:B:2143:C:C4	2:B:2144:G:H1'	2.46	0.51
2:B:558:U:P	10:J:113:PRO:HG2	2.49	0.51
17:Q:56:PHE:C	17:Q:58:GLN:N	2.63	0.51
2:B:2805:C:O2'	2:B:2806:C:H5'	2.10	0.51
2:B:1163:G:O2'	2:B:1164:C:H5'	2.10	0.51
21:U:61:GLU:CD	21:U:61:GLU:H	2.13	0.51
2:B:823:C:O2'	2:B:824:U:H5'	2.10	0.51
2:B:208:C:H2'	2:B:209:C:C6	2.45	0.51
3:C:110:LYS:HB3	3:C:113:ASP:OD2	2.10	0.51
23:W:70:VAL:O	23:W:70:VAL:HG13	2.10	0.51
7:G:96:ALA:CB	7:G:103:ASN:HB3	2.40	0.51
10:J:5:THR:N	10:J:44:TYR:HE2	2.08	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:122:ALA:HA	7:G:132:LEU:HA	1.93	0.51
11:K:34:VAL:HG23	11:K:35:GLY:N	2.20	0.51
21:U:26:ASN:HD22	21:U:26:ASN:N	2.08	0.51
9:I:33:ASN:HD21	9:I:64:ARG:NH1	2.03	0.51
2:B:1180:U:H2'	2:B:1181:U:O4'	2.10	0.51
2:B:2800:A:H2'	2:B:2801:G:C4'	2.40	0.51
6:F:140:ILE:HG22	6:F:141:ASP:OD2	2.10	0.51
2:B:480:A:H2'	2:B:480:A:N3	2.25	0.51
12:L:4:ASN:N	12:L:4:ASN:HD22	2.08	0.51
2:B:1507:C:H5'	2:B:1508:A:OP2	2.11	0.51
17:Q:73:ILE:HG13	17:Q:74:SER:N	2.25	0.51
2:B:493:G:H2'	2:B:494:G:O4'	2.09	0.51
2:B:729:G:C5	3:C:206:LYS:HB2	2.46	0.51
2:B:1322:A:H2'	2:B:1323:C:H5'	1.91	0.51
2:B:1945:G:H2'	2:B:1946:U:C6	2.45	0.51
2:B:2046:G:H2'	2:B:2047:C:C6	2.46	0.51
2:B:523:C:O2'	2:B:524:G:H5'	2.09	0.51
15:O:56:LYS:O	15:O:60:GLU:HG2	2.10	0.51
9:I:3:LYS:HG2	9:I:4:VAL:N	2.25	0.51
2:B:2851:A:H2'	2:B:2852:G:C8	2.45	0.51
19:S:36:LEU:HA	19:S:39:THR:OG1	2.11	0.51
14:N:33:ILE:HG23	14:N:118:ARG:HD3	1.91	0.51
2:B:1725:U:H2'	2:B:1726:C:C6	2.45	0.51
2:B:1132:U:H5''	10:J:84:ILE:HD11	1.91	0.51
2:B:2688:G:H1'	2:B:2721:A:N6	2.26	0.51
2:B:464:U:H5'	29:2:5:PHE:CD2	2.45	0.51
11:K:83:CYS:O	11:K:84:VAL:HG23	2.10	0.51
2:B:956:G:N2	2:B:959:A:H3'	2.26	0.51
2:B:1268:A:H2'	2:B:1269:A:O4'	2.11	0.51
12:L:92:LEU:H	12:L:92:LEU:HD23	1.76	0.51
18:R:4:VAL:HA	18:R:12:HIS:O	2.10	0.51
24:X:76:LYS:CG	24:X:77:TYR:H	2.24	0.51
26:Z:19:HIS:C	26:Z:21:ALA:N	2.64	0.51
2:B:299:A:H2'	2:B:300:A:C8	2.46	0.51
2:B:1431:A:H2'	2:B:1432:G:H8	1.75	0.51
2:B:709:U:H2'	2:B:710:U:C6	2.46	0.51
2:B:1203:U:H1'	12:L:4:ASN:HD21	1.75	0.51
2:B:1537:G:C6	2:B:1538:G:H1'	2.45	0.51
2:B:1590:A:H2'	2:B:1591:A:H8	1.71	0.51
31:4:11:CYS:SG	31:4:13:ASN:HB2	2.50	0.51
6:F:59:ILE:HD12	6:F:59:ILE:N	2.25	0.51
27:0:55:ALA:HB3	27:0:56:LYS:NZ	2.25	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:49:A:OP1	2:B:51:G:H5'	2.11	0.51
2:B:859:G:H1'	2:B:860:U:H5	1.76	0.51
2:B:696:G:O2'	2:B:697:G:H5'	2.10	0.51
12:L:36:LYS:HB2	34:L:455:HOH:O	2.09	0.51
2:B:179:C:H2'	2:B:180:G:O4'	2.10	0.51
2:B:394:C:O2'	2:B:395:U:H5'	2.11	0.51
3:C:149:LYS:HD2	3:C:152:GLN:NE2	2.25	0.51
14:N:83:LEU:HA	14:N:86:ARG:CB	2.28	0.51
6:F:39:VAL:HG11	6:F:42:ALA:HB2	1.93	0.51
6:F:48:LEU:H	6:F:48:LEU:HD23	1.75	0.51
6:F:39:VAL:HG22	6:F:49:LEU:HD12	1.92	0.51
6:F:106:ALA:H	6:F:108:PRO:HD2	1.75	0.51
2:B:2834:G:H1'	2:B:2883:A:N6	2.25	0.51
4:D:46:ARG:O	4:D:84:LEU:HG	2.10	0.51
24:X:69:GLU:O	24:X:71:ARG:N	2.40	0.51
15:O:71:ALA:CB	15:O:102:ARG:HB3	2.41	0.51
22:V:30:ILE:O	22:V:37:PRO:HA	2.10	0.51
22:V:30:ILE:HG12	22:V:91:PHE:CB	2.38	0.51
1:A:28:C:H2'	1:A:29:A:C1'	2.41	0.51
11:K:108:SER:O	11:K:110:LYS:N	2.43	0.51
23:W:15:SER:O	23:W:16:GLU:C	2.49	0.51
14:N:102:PHE:HD1	14:N:102:PHE:N	2.09	0.51
2:B:1680:U:H2'	2:B:1681:G:O4'	2.10	0.51
9:I:49:GLU:CG	9:I:54:ILE:HD11	2.41	0.51
9:I:23:VAL:HG23	9:I:24:GLY:H	1.75	0.51
5:E:23:PHE:N	5:E:114:ARG:HH22	2.07	0.51
15:O:99:TYR:CE1	15:O:104:GLN:HG3	2.46	0.51
2:B:2281:A:O2'	2:B:2282:G:H5'	2.11	0.51
2:B:2027:G:O2'	2:B:2028:U:H5'	2.11	0.51
2:B:2052:A:H4'	4:D:148:GLN:O	2.11	0.51
23:W:19:ARG:NH1	23:W:22:VAL:HG11	2.26	0.51
23:W:37:VAL:HB	23:W:38:ARG:NH1	2.26	0.51
23:W:59:PHE:O	23:W:60:ALA:CB	2.59	0.51
16:P:50:ARG:CD	16:P:56:SER:HB3	2.41	0.51
8:H:94:ILE:HD12	8:H:98:ASP:CB	2.40	0.51
7:G:27:GLY:HA3	7:G:78:VAL:HB	1.91	0.51
6:F:107:VAL:N	6:F:108:PRO:CD	2.73	0.51
6:F:107:VAL:O	6:F:110:ILE:HG22	2.10	0.51
6:F:121:PHE:HB3	6:F:162:ASP:HB2	1.92	0.51
6:F:128:SER:HA	6:F:154:THR:HA	1.92	0.51
19:S:35:ILE:HA	27:O:24:VAL:HG13	1.93	0.51
2:B:527:C:O2	2:B:527:C:O4'	2.27	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:89:VAL:HG12	7:G:90:GLY:H	1.76	0.51
2:B:1439:A:N7	2:B:1440:U:C2	2.79	0.51
31:4:11:CYS:HB3	31:4:33:HIS:HE1	1.75	0.51
11:K:23:VAL:HG13	11:K:32:ALA:HB2	1.92	0.51
5:E:153:LEU:HB3	5:E:171:ASP:OD1	2.10	0.51
2:B:2626:C:O2'	2:B:2627:G:H5'	2.11	0.51
2:B:2078:C:H2'	2:B:2079:U:C6	2.46	0.51
2:B:1048:A:H1'	2:B:1112:G:N2	2.26	0.51
2:B:1258:U:O4'	5:E:79:ARG:HG3	2.10	0.51
4:D:101:PHE:O	4:D:180:VAL:HG11	2.10	0.51
2:B:2458:G:H8	2:B:2459:A:H62	1.58	0.51
5:E:109:LEU:C	5:E:111:GLU:H	2.13	0.51
1:A:35:C:H2'	1:A:36:C:O4'	2.11	0.51
4:D:137:SER:C	4:D:138:LEU:HD22	2.31	0.51
34:B:3163:HOH:O	5:E:81:GLY:HA2	2.09	0.51
20:T:9:LYS:H	20:T:9:LYS:HD3	1.75	0.51
2:B:1569:A:O2'	3:C:35:LYS:HD3	2.10	0.51
2:B:445:C:OP1	17:Q:1:ALA:HA	2.10	0.51
7:G:23:ILE:HG22	7:G:25:ILE:HD11	1.93	0.51
7:G:50:THR:HG22	7:G:51:PHE:N	2.26	0.51
24:X:10:ARG:HB3	24:X:11:PRO:HD2	1.93	0.51
2:B:364:C:O2'	2:B:365:U:H5'	2.10	0.51
6:F:147:ARG:O	6:F:147:ARG:HD2	2.11	0.51
18:R:59:ILE:HG12	18:R:101:ILE:HD13	1.93	0.51
19:S:15:GLN:O	19:S:19:LEU:HB2	2.10	0.51
2:B:77:G:H2'	2:B:78:U:H6	1.76	0.51
8:H:58:LEU:O	8:H:62:LEU:HG	2.11	0.51
2:B:1486:U:H2'	2:B:1487:U:H6	1.76	0.51
2:B:794:A:H2'	2:B:795:C:H6	1.76	0.51
2:B:2875:C:H2'	2:B:2876:G:H8	1.76	0.51
2:B:693:A:O2'	2:B:694:U:H5'	2.11	0.51
2:B:660:C:H2'	2:B:661:A:H8	1.76	0.51
27:O:16:ARG:HA	27:O:19:ASP:HB2	1.91	0.51
8:H:84:ALA:HA	8:H:90:LEU:HA	1.92	0.51
11:K:72:ASP:O	16:P:74:GLN:HG3	2.11	0.51
2:B:2144:G:C3'	2:B:2146:C:H5''	2.36	0.51
28:1:8:ILE:HD11	28:1:52:LYS:HG3	1.92	0.51
2:B:480:A:H3'	2:B:481:G:C5'	2.40	0.51
6:F:124:ARG:HA	6:F:159:ALA:O	2.11	0.51
25:Y:47:ARG:C	25:Y:49:ASP:H	2.14	0.51
2:B:181:A:H2'	2:B:182:A:H8	1.75	0.51
2:B:1152:C:H2'	2:B:1153:C:H6	1.74	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:264:LYS:HG3	3:C:265:PHE:CD2	2.46	0.51
7:G:144:ALA:O	7:G:147:LEU:HB2	2.11	0.51
14:N:17:ARG:HH21	14:N:17:ARG:HB2	1.75	0.51
30:3:27:ASN:N	30:3:27:ASN:ND2	2.59	0.51
15:O:27:VAL:HG21	15:O:40:ILE:HD12	1.92	0.51
2:B:1083:U:H2'	2:B:1085:A:OP2	2.11	0.51
2:B:2105:U:H2'	2:B:2106:U:O4'	2.11	0.51
2:B:631:A:H2'	2:B:632:A:O4'	2.11	0.51
2:B:2352:A:C6	23:W:30:VAL:HG11	2.46	0.51
20:T:40:LYS:HZ2	20:T:60:THR:N	2.02	0.51
14:N:82:GLU:HB3	14:N:83:LEU:HD12	1.92	0.51
14:N:83:LEU:N	14:N:83:LEU:HD12	2.26	0.51
4:D:120:GLY:HA2	4:D:162:ALA:HA	1.93	0.51
19:S:46:LEU:O	19:S:50:VAL:HG23	2.11	0.51
8:H:4:ILE:HG23	8:H:17:ASP:C	2.31	0.51
4:D:182:ALA:O	4:D:183:GLU:HB2	2.11	0.51
9:I:29:GLN:HA	9:I:29:GLN:HE21	1.75	0.51
2:B:1010:A:N3	2:B:1153:C:H1'	2.26	0.51
2:B:1231:U:H2'	2:B:1232:G:C8	2.45	0.51
2:B:2461:A:H2'	2:B:2462:C:H6	1.76	0.51
8:H:51:ARG:C	8:H:53:GLU:H	2.14	0.51
2:B:2868:A:H2'	2:B:2869:G:C8	2.46	0.51
2:B:2199:A:H3'	2:B:2200:C:C6	2.46	0.51
2:B:770:G:O2'	2:B:771:G:H5'	2.11	0.51
9:I:48:ILE:HG22	9:I:49:GLU:HG2	1.93	0.51
2:B:2886:A:C8	27:O:39:ARG:NH2	2.78	0.51
2:B:2543:G:H2'	2:B:2544:G:O4'	2.11	0.51
2:B:1807:G:H2'	2:B:1808:A:H5'	1.92	0.51
2:B:476:G:N2	2:B:478:A:H3'	2.26	0.51
23:W:23:LYS:O	23:W:66:VAL:HB	2.11	0.50
3:C:86:ARG:HE	3:C:90:ILE:HD11	1.76	0.50
6:F:103:ILE:HD11	6:F:174:PHE:HA	1.91	0.50
1:A:48:U:H2'	1:A:49:C:H6	1.74	0.50
2:B:1176:U:OP1	2:B:1176:U:H4'	2.10	0.50
2:B:1495:A:H1'	2:B:1579:A:H5'	1.93	0.50
18:R:91:GLN:HG3	18:R:92:TRP:N	2.26	0.50
2:B:526:A:N6	2:B:2626:C:H4'	2.25	0.50
2:B:2543:G:H2'	2:B:2544:G:C8	2.46	0.50
14:N:77:ALA:O	14:N:81:ASN:HB2	2.10	0.50
2:B:1882:U:O2'	2:B:1883:U:H5'	2.10	0.50
3:C:172:THR:HB	3:C:182:LYS:HG2	1.94	0.50
20:T:50:LEU:HD22	20:T:50:LEU:N	2.26	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:P:50:ARG:HD3	16:P:56:SER:HB3	1.93	0.50
22:V:80:HIS:HA	22:V:87:GLN:OE1	2.11	0.50
4:D:33:ARG:HH11	4:D:74:GLU:HG3	1.77	0.50
2:B:2263:C:H4'	2:B:2329:U:H4'	1.93	0.50
10:J:140:LEU:HD23	10:J:141:ASP:N	2.27	0.50
7:G:101:VAL:HG12	7:G:115:GLN:CB	2.40	0.50
16:P:8:GLU:HG3	16:P:54:LEU:CB	2.42	0.50
5:E:112:LEU:HD13	5:E:186:VAL:HG11	1.92	0.50
8:H:116:ARG:O	8:H:117:LEU:HG	2.11	0.50
10:J:20:ALA:HA	10:J:23:LYS:HG3	1.92	0.50
21:U:85:ARG:CZ	21:U:86:PHE:H	2.24	0.50
2:B:150:U:H2'	2:B:151:C:H6	1.76	0.50
2:B:850:U:O2'	26:Z:22:THR:HG22	2.11	0.50
2:B:2659:G:N2	2:B:2661:G:H5''	2.26	0.50
2:B:2520:C:O2'	2:B:2521:C:H5'	2.10	0.50
11:K:96:THR:HB	11:K:97:ARG:NE	2.26	0.50
2:B:70:G:H5'	2:B:112:U:O2	2.11	0.50
2:B:2886:A:N7	27:O:39:ARG:CZ	2.74	0.50
2:B:1935:G:H1'	2:B:1964:G:N2	2.25	0.50
2:B:836:G:H2'	2:B:837:C:C6	2.46	0.50
23:W:18:LYS:CA	23:W:36:ILE:HG13	2.40	0.50
3:C:86:ARG:NE	3:C:90:ILE:HD11	2.25	0.50
10:J:45:THR:H	10:J:46:PRO:CD	2.18	0.50
17:Q:90:ASP:HA	18:R:11:GLN:OE1	2.11	0.50
7:G:84:LYS:HG2	7:G:85:LYS:N	2.22	0.50
2:B:1197:G:H2'	2:B:1198:U:C6	2.46	0.50
4:D:121:THR:C	4:D:123:LYS:H	2.14	0.50
5:E:2:GLU:CG	5:E:11:ALA:HB1	2.40	0.50
6:F:141:ASP:HB2	6:F:144:LYS:CE	2.41	0.50
1:A:30:C:O2	1:A:30:C:H2'	2.12	0.50
3:C:204:LEU:HD22	3:C:209:ALA:HB1	1.93	0.50
14:N:106:ASP:C	14:N:108:ALA:N	2.64	0.50
15:O:11:ALA:HB2	15:O:96:GLY:N	2.26	0.50
2:B:125:A:OP2	29:2:19:ARG:NH2	2.44	0.50
9:I:89:SER:HA	9:I:97:VAL:CG2	2.41	0.50
8:H:50:ARG:HH11	8:H:50:ARG:HA	1.76	0.50
2:B:2180:U:O5'	2:B:2180:U:H6	1.94	0.50
2:B:2893:A:H4'	2:B:2894:G:H5'	1.93	0.50
30:3:31:ILE:HD11	30:3:34:LYS:CE	2.40	0.50
2:B:784:G:H5''	3:C:225:ASN:ND2	2.27	0.50
5:E:4:VAL:HG13	5:E:9:GLN:HA	1.93	0.50
4:D:130:GLN:HG3	4:D:140:HIS:O	2.12	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:816:C:O2'	2:B:817:C:H5'	2.12	0.50
8:H:40:THR:OG1	8:H:42:LYS:HB3	2.12	0.50
12:L:143:GLU:CG	12:L:144:GLU:H	2.24	0.50
10:J:43:GLU:O	10:J:44:TYR:C	2.49	0.50
18:R:2:TYR:O	18:R:41:ILE:HA	2.11	0.50
6:F:113:PHE:CZ	6:F:116:LEU:HB2	2.46	0.50
6:F:32:LYS:HA	6:F:95:MET:CG	2.40	0.50
6:F:33:ILE:HA	6:F:154:THR:O	2.11	0.50
6:F:62:GLN:CG	6:F:91:ARG:HH11	2.24	0.50
2:B:1024:G:H21	2:B:1144:A:C4'	2.24	0.50
4:D:34:VAL:CG1	4:D:48:ILE:HD11	2.41	0.50
2:B:1939:U:O2	2:B:1967:C:H4'	2.11	0.50
8:H:12:LEU:HG	8:H:12:LEU:O	2.09	0.50
11:K:112:MET:O	11:K:115:ILE:HG13	2.12	0.50
13:M:69:PRO:HG2	13:M:70:ASP:H	1.76	0.50
19:S:18:ARG:HB3	19:S:76:VAL:CG1	2.41	0.50
2:B:2228:G:H2'	2:B:2229:U:H6	1.76	0.50
2:B:2836:U:H2'	2:B:2837:A:H8	1.76	0.50
5:E:21:ARG:NH2	5:E:21:ARG:HB2	2.27	0.50
2:B:2360:G:H1'	12:L:60:ARG:HD2	1.92	0.50
2:B:1463:C:H2'	2:B:1464:G:C8	2.46	0.50
2:B:1220:G:H2'	2:B:1221:C:C6	2.47	0.50
2:B:396:G:OP2	24:X:9:LYS:HE2	2.12	0.50
2:B:2270:A:H2'	2:B:2271:G:O4'	2.11	0.50
3:C:141:HIS:CG	3:C:142:ASN:N	2.79	0.50
8:H:68:ARG:C	8:H:70:GLU:H	2.15	0.50
2:B:2141:G:H2'	2:B:2142:A:C8	2.46	0.50
21:U:58:VAL:CG1	21:U:59:GLU:H	2.15	0.50
7:G:85:LYS:HG3	7:G:164:ALA:HB3	1.93	0.50
7:G:90:GLY:HA2	7:G:159:LYS:HE3	1.94	0.50
2:B:134:G:O2'	2:B:135:U:H5'	2.11	0.50
2:B:1430:G:H2'	2:B:1431:A:C8	2.47	0.50
2:B:1181:U:H2'	2:B:1182:G:C8	2.46	0.50
5:E:2:GLU:HA	5:E:13:THR:H	1.76	0.50
2:B:1440:U:H2'	2:B:1441:G:C8	2.47	0.50
2:B:1746:A:H2'	2:B:1747:U:H6	1.76	0.50
12:L:78:ARG:HB3	12:L:113:ALA:CB	2.40	0.50
2:B:2050:C:H2'	2:B:2051:A:C8	2.47	0.50
7:G:94:ARG:HA	7:G:127:GLN:HG3	1.93	0.50
13:M:43:ALA:HB2	13:M:69:PRO:HB3	1.94	0.50
2:B:1317:G:H2'	2:B:1318:U:C6	2.46	0.50
2:B:2734:A:C2'	2:B:2735:G:H5'	2.42	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1412:U:H2'	2:B:1413:A:H8	1.74	0.50
13:M:50:ARG:HH11	13:M:51:ARG:NH1	2.09	0.50
2:B:688:U:O2'	2:B:689:A:H5'	2.11	0.50
2:B:2382:G:H21	30:3:41:ARG:NH2	2.08	0.50
2:B:1360:G:H2'	2:B:1361:G:H5'	1.92	0.50
2:B:1783:A:N1	2:B:2587:A:H2'	2.26	0.50
8:H:140:ALA:C	8:H:141:LYS:HD3	2.32	0.50
8:H:85:GLY:O	8:H:86:ASP:CB	2.56	0.50
2:B:3:U:O2'	2:B:4:U:P	2.69	0.50
19:S:47:VAL:HG12	19:S:103:ILE:HG21	1.93	0.50
2:B:1491:G:H5'	3:C:97:ASP:OD1	2.12	0.50
2:B:1562:U:H2'	2:B:1563:U:C6	2.46	0.50
10:J:25:LEU:C	10:J:25:LEU:HD13	2.32	0.50
2:B:1438:U:H2'	2:B:1439:A:O4'	2.12	0.50
2:B:2377:A:H2'	2:B:2378:A:H8	1.72	0.50
26:Z:25:GLY:HA3	26:Z:46:MET:CE	2.41	0.50
2:B:1174:U:H4'	2:B:1176:U:C2	2.45	0.50
2:B:1783:A:H5'	2:B:2608:G:H4'	1.92	0.50
11:K:40:ILE:HG23	11:K:41:THR:N	2.27	0.50
2:B:2716:C:H2'	2:B:2717:C:C6	2.46	0.50
6:F:31:GLU:HB3	6:F:156:THR:O	2.12	0.50
2:B:1224:U:H4'	18:R:88:GLY:O	2.11	0.50
17:Q:71:ASN:ND2	17:Q:106:THR:HG23	2.24	0.50
21:U:48:VAL:HG12	21:U:52:ASN:O	2.11	0.50
6:F:111:ARG:HD2	6:F:111:ARG:N	2.27	0.50
4:D:12:THR:H	4:D:24:VAL:HG12	1.75	0.50
13:M:72:PRO:O	13:M:73:ILE:HB	2.11	0.50
25:Y:2:LYS:O	25:Y:6:LEU:HD23	2.12	0.50
12:L:80:SER:HA	12:L:115:GLU:HB2	1.93	0.50
1:A:89:U:H1'	2:B:958:U:C2'	2.42	0.50
12:L:121:THR:HG22	12:L:141:LYS:HB2	1.94	0.50
2:B:1315:C:O2'	2:B:1316:U:H5'	2.12	0.50
16:P:99:LEU:HA	16:P:102:ARG:HG3	1.93	0.50
16:P:31:VAL:HG12	16:P:38:ARG:H	1.77	0.50
1:A:8:C:H5''	15:O:15:ARG:NH1	2.27	0.50
2:B:1735:A:H2'	2:B:1736:U:O4'	2.11	0.50
2:B:1922:G:O2'	2:B:1923:U:H5'	2.12	0.50
7:G:87:GLN:HA	7:G:129:GLU:HA	1.94	0.50
15:O:79:ALA:O	15:O:83:LEU:HB2	2.12	0.50
3:C:184:GLU:O	3:C:185:ALA:HB3	2.12	0.50
20:T:39:THR:HG21	20:T:42:GLU:CG	2.32	0.50
8:H:90:LEU:CD2	8:H:123:ARG:HB2	2.40	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:103:ILE:O	6:F:103:ILE:HG23	2.12	0.50
4:D:105:LYS:HA	4:D:177:VAL:CG2	2.41	0.50
4:D:174:SER:O	4:D:175:LEU:HB2	2.12	0.50
16:P:4:ILE:O	16:P:6:GLN:N	2.42	0.50
2:B:322:A:H1'	2:B:339:U:O2	2.11	0.50
2:B:1433:A:H2'	2:B:1434:A:O4'	2.12	0.50
2:B:704:G:C2'	2:B:726:G:H22	2.22	0.50
2:B:705:A:N6	2:B:726:G:O2'	2.45	0.50
10:J:99:ARG:HA	10:J:102:GLU:HB2	1.93	0.50
5:E:149:ILE:HG13	5:E:170:ARG:O	2.12	0.50
2:B:104:A:H2'	2:B:105:C:C6	2.47	0.50
13:M:41:LEU:HD11	13:M:102:LEU:HD12	1.94	0.50
2:B:1275:A:N3	2:B:1275:A:H2'	2.27	0.50
17:Q:51:GLN:O	17:Q:55:GLN:HG3	2.11	0.50
13:M:101:VAL:HG13	13:M:101:VAL:O	2.12	0.50
4:D:136:ASN:HD21	4:D:139:SER:C	2.15	0.50
2:B:1315:C:H2'	2:B:1316:U:C6	2.47	0.50
2:B:756:A:H2'	2:B:757:G:O4'	2.12	0.50
2:B:570:G:H2'	2:B:2030:A:N7	2.27	0.50
2:B:1322:A:O2'	2:B:1323:C:H5'	2.11	0.50
3:C:110:LYS:HB3	3:C:113:ASP:CG	2.32	0.50
2:B:1219:U:H2'	2:B:1220:G:C8	2.46	0.50
2:B:1690:A:H2'	2:B:1691:C:O4'	2.12	0.50
1:A:25:U:H4'	1:A:26:C:OP1	2.11	0.50
2:B:2469:A:H4'	13:M:55:ARG:HE	1.76	0.50
2:B:1281:G:H2'	2:B:1282:U:C6	2.46	0.50
26:Z:5:LYS:HB2	26:Z:57:GLU:HB2	1.94	0.50
20:T:41:ALA:C	20:T:43:ILE:H	2.14	0.50
17:Q:87:VAL:HB	18:R:50:GLY:O	2.12	0.50
21:U:92:VAL:HG12	21:U:93:ARG:O	2.12	0.50
24:X:2:ARG:HA	24:X:32:LEU:HD21	1.93	0.50
26:Z:19:HIS:C	26:Z:21:ALA:H	2.15	0.50
2:B:135:U:H2'	2:B:136:G:C8	2.47	0.50
2:B:300:A:H2'	2:B:334:C:H1'	1.93	0.50
5:E:57:LYS:C	5:E:58:LYS:HD3	2.32	0.50
15:O:62:LEU:HD12	15:O:64:TYR:H	1.77	0.50
10:J:84:ILE:HG13	10:J:84:ILE:O	2.12	0.50
11:K:9:VAL:HG21	11:K:14:GLY:O	2.12	0.50
2:B:2339:C:H2'	2:B:2340:A:C8	2.47	0.50
2:B:107:G:O2'	2:B:108:G:H5'	2.11	0.50
2:B:1173:U:O2	2:B:1173:U:H2'	2.12	0.50
1:A:76:G:H21	22:V:78:GLN:HE22	1.60	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:235:U:H2'	2:B:236:C:H6	1.77	0.50
2:B:1720:U:C2'	2:B:1721:G:H5'	2.42	0.50
2:B:2480:C:O2'	2:B:2481:G:H5'	2.11	0.50
14:N:8:ARG:HH11	14:N:42:LYS:HB3	1.77	0.50
3:C:123:ILE:HD12	3:C:135:PRO:CD	2.42	0.49
10:J:44:TYR:HD2	10:J:44:TYR:O	1.95	0.49
18:R:2:TYR:H	18:R:42:ALA:CB	2.25	0.49
2:B:72:U:H1'	25:Y:51:ALA:HB1	1.93	0.49
17:Q:4:LYS:HG3	17:Q:5:ARG:N	2.27	0.49
2:B:919:U:H6	2:B:919:U:O5'	1.94	0.49
3:C:246:PRO:HB2	3:C:247:TRP:CE3	2.47	0.49
2:B:2108:A:H4'	2:B:2151:U:H4'	1.93	0.49
3:C:74:PRO:HG2	3:C:96:LYS:CG	2.42	0.49
2:B:1145:C:O2'	2:B:1146:C:H5'	2.12	0.49
2:B:2531:A:P	7:G:174:LYS:HZ2	2.34	0.49
3:C:12:ARG:O	3:C:12:ARG:HD3	2.12	0.49
2:B:1454:C:C5	14:N:64:ARG:HG2	2.47	0.49
3:C:68:ARG:CB	3:C:128:THR:HG21	2.41	0.49
16:P:56:SER:CB	16:P:75:THR:HG21	2.43	0.49
16:P:58:PHE:CG	16:P:73:PHE:HB2	2.47	0.49
8:H:27:ARG:HG3	24:X:59:ASP:OD1	2.11	0.49
8:H:31:VAL:O	8:H:33:GLN:N	2.45	0.49
4:D:202:ILE:H	4:D:202:ILE:HD12	1.76	0.49
5:E:68:ALA:O	5:E:69:ARG:C	2.50	0.49
2:B:825:A:O2'	2:B:826:U:H5'	2.11	0.49
6:F:139:GLU:HB3	6:F:142:TYR:CD2	2.47	0.49
6:F:147:ARG:CZ	6:F:147:ARG:HB3	2.41	0.49
2:B:1805:A:N3	3:C:49:THR:HG21	2.27	0.49
2:B:2809:A:H2'	2:B:2810:A:C8	2.46	0.49
2:B:2665:A:O2'	2:B:2666:C:H5'	2.12	0.49
2:B:1237:A:H2'	2:B:1237:A:N3	2.27	0.49
5:E:15:SER:HB2	5:E:197:GLU:OE2	2.12	0.49
2:B:2881:U:H2'	2:B:2882:A:H8	1.77	0.49
2:B:2295:C:O2'	2:B:2296:U:H5'	2.12	0.49
2:B:1444:G:H2'	2:B:1445:G:C8	2.46	0.49
2:B:1533:C:H2'	2:B:1534:U:O4'	2.12	0.49
2:B:2811:G:O2'	2:B:2812:G:H5'	2.12	0.49
2:B:2086:U:H2'	2:B:2087:G:C8	2.48	0.49
2:B:588:U:H2'	2:B:589:U:C6	2.47	0.49
2:B:590:A:H2'	2:B:591:U:C6	2.47	0.49
2:B:1541:C:H2'	2:B:1542:U:O4'	2.11	0.49
3:C:146:LYS:HB2	3:C:149:LYS:HB2	1.94	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:H:94:ILE:HG13	8:H:99:ILE:HG12	1.94	0.49
11:K:63:ARG:O	11:K:81:ASN:HA	2.12	0.49
6:F:64:PRO:HA	6:F:88:VAL:HG21	1.94	0.49
2:B:1439:A:N7	2:B:1440:U:C6	2.80	0.49
4:D:35:THR:HB	4:D:67:HIS:CE1	2.42	0.49
2:B:2307:G:H4'	2:B:2308:G:C5'	2.42	0.49
15:O:116:GLN:O	15:O:117:PHE:HB3	2.12	0.49
2:B:170:U:H2'	2:B:171:U:C6	2.48	0.49
2:B:1275:A:N6	2:B:1296:G:H4'	2.26	0.49
2:B:2462:C:H2'	2:B:2463:C:C6	2.47	0.49
5:E:154:ASP:OD2	5:E:157:LEU:HD22	2.12	0.49
12:L:94:THR:O	12:L:98:ALA:N	2.45	0.49
9:I:124:MET:O	9:I:128:ILE:HG12	2.13	0.49
15:O:25:ARG:HE	15:O:27:VAL:HG22	1.77	0.49
3:C:74:PRO:HG2	3:C:96:LYS:HG2	1.92	0.49
2:B:2234:G:O2'	2:B:2235:G:H5'	2.12	0.49
2:B:1601:G:H2'	2:B:1602:U:O4'	2.13	0.49
22:V:19:ARG:O	22:V:22:ALA:HB3	2.12	0.49
23:W:50:VAL:HG23	23:W:61:LYS:CE	2.43	0.49
8:H:80:ILE:HD12	8:H:101:ASP:O	2.13	0.49
16:P:63:ILE:HA	16:P:68:GLY:CA	2.30	0.49
17:Q:104:ALA:O	17:Q:105:PHE:HB3	2.12	0.49
17:Q:106:THR:O	17:Q:109:VAL:HB	2.13	0.49
17:Q:88:GLU:HA	18:R:49:ILE:HD11	1.94	0.49
7:G:154:GLU:CD	7:G:159:LYS:HB2	2.33	0.49
2:B:27:G:H1'	2:B:513:A:H61	1.77	0.49
2:B:338:G:N2	2:B:339:U:H1'	2.27	0.49
2:B:309:A:C4'	21:U:16:LYS:HZ1	2.21	0.49
2:B:2290:G:H2'	2:B:2291:U:C6	2.47	0.49
2:B:929:U:H1'	26:Z:25:GLY:O	2.12	0.49
2:B:2199:A:H5'	2:B:2200:C:OP2	2.12	0.49
2:B:540:C:O2'	2:B:541:A:H5'	2.13	0.49
12:L:57:LEU:C	12:L:59:ARG:H	2.14	0.49
2:B:1540:G:H2'	2:B:1541:C:C6	2.46	0.49
2:B:2511:U:O5'	2:B:2511:U:H6	1.95	0.49
2:B:1011:G:H5''	17:Q:76:SER:OG	2.13	0.49
2:B:485:C:O2'	19:S:60:HIS:NE2	2.43	0.49
2:B:2772:C:H2'	2:B:2773:C:H6	1.76	0.49
23:W:24:ARG:HA	23:W:66:VAL:N	2.16	0.49
2:B:1819:A:OP1	3:C:154:ALA:HA	2.12	0.49
17:Q:20:ALA:HA	17:Q:23:TYR:CE1	2.48	0.49
2:B:231:A:H2'	2:B:232:G:O4'	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2471:A:O2'	2:B:2472:G:O5'	2.29	0.49
14:N:28:LEU:HD13	14:N:48:VAL:HG11	1.95	0.49
26:Z:25:GLY:HA3	26:Z:46:MET:HE1	1.94	0.49
2:B:2438:U:O3'	2:B:2439:A:H3'	2.13	0.49
8:H:39:ALA:O	8:H:41:LYS:N	2.45	0.49
2:B:289:G:H2'	2:B:290:U:C6	2.47	0.49
2:B:1274:A:N3	2:B:1297:C:H1'	2.28	0.49
2:B:554:U:H2'	2:B:555:G:O4'	2.13	0.49
2:B:874:G:H5'	2:B:875:G:OP2	2.13	0.49
2:B:1192:G:O2'	2:B:1193:G:H5'	2.13	0.49
2:B:1924:C:O2'	2:B:1925:C:H5'	2.12	0.49
2:B:1833:C:H2'	2:B:1834:U:H6	1.77	0.49
2:B:1344:U:O2	2:B:1385:A:H5'	2.12	0.49
3:C:68:ARG:NH2	3:C:103:ILE:HD13	2.28	0.49
16:P:50:ARG:HB2	16:P:56:SER:CB	2.42	0.49
6:F:39:VAL:CG1	6:F:84:ILE:HD12	2.41	0.49
2:B:1654:A:C2'	4:D:118:PHE:HB3	2.42	0.49
4:D:179:ARG:HB2	4:D:188:LEU:HG	1.94	0.49
2:B:2471:A:HO2'	2:B:2472:G:H8	1.51	0.49
2:B:2100:G:C6	2:B:2190:G:C6	3.01	0.49
2:B:1936:A:H2	2:B:1943:U:C5	2.31	0.49
1:A:32:U:H2'	1:A:33:G:H8	1.78	0.49
25:Y:46:VAL:N	25:Y:49:ASP:OD2	2.45	0.49
2:B:1169:A:H2'	2:B:1170:C:H6	1.77	0.49
15:O:29:HIS:HB3	15:O:36:TYR:HB2	1.95	0.49
2:B:39:G:H2'	2:B:40:U:H6	1.72	0.49
2:B:1315:C:H2'	2:B:1316:U:H6	1.77	0.49
8:H:120:GLY:O	8:H:122:LEU:N	2.46	0.49
26:Z:29:ARG:H	26:Z:33:HIS:CD2	2.31	0.49
2:B:1946:U:H2'	2:B:1947:C:C6	2.48	0.49
2:B:986:C:O2'	2:B:987:C:H5'	2.12	0.49
2:B:1258:U:C4'	5:E:79:ARG:HG3	2.43	0.49
4:D:132:ALA:HA	4:D:140:HIS:ND1	2.28	0.49
22:V:46:LYS:HA	22:V:46:LYS:HE3	1.93	0.49
12:L:64:PHE:N	12:L:64:PHE:CD2	2.79	0.49
2:B:1891:G:H2'	2:B:1892:C:H6	1.78	0.49
21:U:27:VAL:HA	21:U:33:VAL:HG12	1.95	0.49
10:J:3:THR:HB	10:J:44:TYR:OH	2.12	0.49
8:H:31:VAL:CB	8:H:32:PRO:CD	2.88	0.49
7:G:6:ALA:O	7:G:68:ARG:HD3	2.12	0.49
6:F:89:THR:O	6:F:91:ARG:CZ	2.61	0.49
4:D:42:ASN:O	4:D:43:ASP:HB2	2.13	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2037:A:H2'	2:B:2038:G:H8	1.76	0.49
10:J:122:LEU:HD21	10:J:124:VAL:HG13	1.95	0.49
23:W:28:GLU:N	23:W:31:LEU:HG	2.27	0.49
16:P:47:ILE:HD11	16:P:59:THR:HG22	1.95	0.49
2:B:2547:A:H4'	11:K:28:HIS:CE1	2.47	0.49
2:B:2393:U:H2'	2:B:2394:C:O4'	2.13	0.49
2:B:1486:U:H2'	2:B:1487:U:C6	2.47	0.49
5:E:95:LYS:NZ	5:E:97:ASN:HD22	2.11	0.49
16:P:77:SER:OG	16:P:79:VAL:HG22	2.12	0.49
2:B:599:A:H2'	2:B:600:G:H8	1.77	0.49
2:B:116:C:O2'	2:B:117:G:H5'	2.13	0.49
1:A:17:C:O2'	1:A:18:G:H5'	2.13	0.49
20:T:14:PRO:O	20:T:16:VAL:HG23	2.13	0.49
26:Z:41:PRO:HA	26:Z:44:ARG:HB3	1.95	0.49
2:B:2052:A:OP1	4:D:145:SER:HA	2.13	0.49
2:B:925:A:O2'	2:B:926:G:H5'	2.13	0.49
23:W:51:GLY:HA3	23:W:59:PHE:HB2	1.94	0.49
2:B:2365:G:H4'	23:W:59:PHE:HD1	1.73	0.49
8:H:128:HIS:HB3	8:H:144:VAL:CG2	2.43	0.49
8:H:89:LYS:HD2	8:H:90:LEU:H	1.78	0.49
6:F:69:ALA:HB2	6:F:82:TYR:HD1	1.77	0.49
18:R:3:ALA:O	18:R:4:VAL:HG13	2.13	0.49
7:G:23:ILE:HG22	7:G:25:ILE:CD1	2.42	0.49
21:U:94:PHE:CB	21:U:101:THR:HA	2.43	0.49
17:Q:24:TYR:O	17:Q:27:ARG:HB2	2.13	0.49
15:O:35:ILE:HD11	15:O:102:ARG:HH11	1.77	0.49
2:B:2099:U:H2'	2:B:2100:G:H8	1.78	0.49
19:S:18:ARG:HB3	19:S:76:VAL:HG11	1.94	0.49
2:B:2688:G:H1'	2:B:2721:A:H61	1.77	0.49
12:L:120:VAL:HG12	12:L:121:THR:H	1.78	0.49
11:K:46:ILE:HG23	11:K:47:PRO:CD	2.42	0.49
2:B:1410:G:O2'	2:B:1411:U:H5'	2.13	0.49
2:B:2796:U:H3'	2:B:2798:U:C5	2.48	0.49
1:A:8:C:O2'	15:O:40:ILE:HD13	2.13	0.49
2:B:1220:G:H2'	2:B:1221:C:H6	1.76	0.49
2:B:235:U:H2'	2:B:236:C:C6	2.47	0.49
21:U:31:GLY:O	21:U:66:VAL:HG12	2.13	0.49
2:B:1120:G:O2'	2:B:1121:C:H5'	2.13	0.49
14:N:90:ARG:HG2	14:N:94:TYR:HD1	1.77	0.49
17:Q:38:VAL:O	17:Q:41:ALA:HB3	2.12	0.49
2:B:615:U:O2	5:E:35:TYR:HA	2.13	0.49
2:B:1080:A:H2'	2:B:1081:U:H6	1.77	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:469:G:O6	29:2:37:LYS:HE3	2.13	0.49
2:B:2853:C:H2'	2:B:2854:G:H8	1.77	0.49
2:B:2840:C:H5''	14:N:53:THR:OG1	2.12	0.49
2:B:2273:A:H2'	2:B:2274:A:C8	2.48	0.49
18:R:4:VAL:HB	18:R:39:LEU:HG	1.95	0.49
6:F:104:THR:O	6:F:108:PRO:HG2	2.13	0.49
10:J:124:VAL:HG23	10:J:125:TYR:H	1.77	0.49
19:S:5:ALA:HB3	19:S:54:ALA:HB2	1.95	0.49
2:B:1429:G:H2'	2:B:1430:G:H8	1.78	0.49
10:J:56:VAL:HG12	10:J:57:LEU:N	2.27	0.49
3:C:93:VAL:HG11	3:C:101:ARG:HB3	1.94	0.49
2:B:2099:U:H2'	2:B:2100:G:C8	2.48	0.49
26:Z:50:VAL:O	26:Z:54:VAL:HG22	2.13	0.49
15:O:24:THR:OG1	15:O:90:VAL:HG12	2.12	0.49
2:B:2539:C:O2'	2:B:2540:C:H5'	2.13	0.49
2:B:146:A:H2'	2:B:147:C:H6	1.78	0.49
11:K:32:ALA:CB	11:K:38:ILE:HD11	2.43	0.49
2:B:418:C:H2'	2:B:419:U:C6	2.47	0.49
2:B:414:C:H1'	2:B:1864:U:H1'	1.93	0.49
27:O:33:SER:HB3	27:O:35:GLU:HG2	1.94	0.49
2:B:2247:A:O2'	2:B:2248:C:H5'	2.12	0.49
15:O:2:ASP:HB3	15:O:5:SER:OG	2.13	0.49
2:B:776:G:H4'	2:B:777:G:C5'	2.43	0.49
25:Y:8:GLU:OE1	25:Y:12:GLU:HB3	2.13	0.49
3:C:125:PRO:HA	3:C:191:LEU:O	2.13	0.48
4:D:119:ALA:HB2	4:D:165:MET:HB2	1.93	0.48
27:O:42:ILE:HD13	27:O:48:TYR:HB2	1.95	0.48
21:U:58:VAL:CG1	21:U:59:GLU:N	2.76	0.48
7:G:117:PRO:HD2	7:G:120:ILE:HG21	1.95	0.48
25:Y:7:ARG:HH21	25:Y:9:LYS:CD	2.21	0.48
2:B:274:C:H2'	2:B:275:C:O4'	2.13	0.48
2:B:1715:G:H2'	2:B:1715:G:OP1	2.13	0.48
2:B:557:C:H2'	2:B:558:U:C6	2.49	0.48
2:B:1723:G:H3'	2:B:1724:G:H8	1.78	0.48
7:G:148:ARG:HD3	7:G:152:ARG:HD3	1.95	0.48
1:A:6:G:O2'	1:A:7:G:H5'	2.13	0.48
13:M:41:LEU:HD13	13:M:46:ILE:HG22	1.95	0.48
2:B:1164:C:H2'	2:B:1165:A:H8	1.73	0.48
8:H:47:PHE:O	8:H:51:ARG:HG3	2.13	0.48
4:D:29:VAL:HB	4:D:98:VAL:HG13	1.94	0.48
2:B:987:C:H2'	2:B:988:A:O4'	2.13	0.48
3:C:174:ARG:HD3	3:C:180:MET:CE	2.43	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:623:C:H2'	2:B:624:C:C6	2.48	0.48
2:B:1258:U:H2'	2:B:1259:G:H8	1.78	0.48
10:J:92:MET:HB3	10:J:100:VAL:CG2	2.43	0.48
2:B:2787:C:H2'	2:B:2788:C:C6	2.47	0.48
2:B:191:A:H2'	2:B:192:C:C6	2.49	0.48
2:B:924:G:H4'	23:W:24:ARG:NH2	2.27	0.48
3:C:134:ILE:HD12	3:C:163:ILE:HG13	1.94	0.48
3:C:86:ARG:HD2	3:C:90:ILE:HD11	1.95	0.48
6:F:74:ALA:HB3	6:F:78:ILE:HB	1.95	0.48
10:J:44:TYR:CD2	10:J:44:TYR:O	2.67	0.48
13:M:36:VAL:HG21	13:M:129:THR:HB	1.94	0.48
4:D:43:ASP:C	4:D:45:TYR:H	2.16	0.48
24:X:2:ARG:HB2	24:X:11:PRO:HD3	1.94	0.48
25:Y:56:LEU:O	25:Y:57:LEU:CB	2.61	0.48
28:1:8:ILE:N	28:1:22:THR:O	2.42	0.48
20:T:12:ARG:O	20:T:13:ALA:HB2	2.11	0.48
25:Y:49:ASP:O	25:Y:53:VAL:HG23	2.14	0.48
13:M:102:LEU:HD22	13:M:102:LEU:N	2.26	0.48
2:B:2740:A:H2'	2:B:2741:A:C8	2.48	0.48
2:B:2661:G:H2'	2:B:2662:A:O4'	2.13	0.48
8:H:54:LEU:O	8:H:58:LEU:HB2	2.13	0.48
2:B:1656:C:P	4:D:141:ARG:HH11	2.36	0.48
4:D:78:GLY:C	4:D:79:LEU:HD22	2.33	0.48
2:B:598:U:H2'	2:B:599:A:C8	2.48	0.48
15:O:15:ARG:HH21	15:O:95:SER:CB	2.26	0.48
2:B:1259:G:O2'	2:B:1260:A:H5'	2.13	0.48
5:E:24:ASN:HD22	5:E:24:ASN:C	2.14	0.48
2:B:2367:G:O2'	2:B:2368:C:H5'	2.14	0.48
2:B:2304:G:H22	2:B:2312:U:H3	1.61	0.48
23:W:65:LYS:NZ	23:W:84:GLU:HB3	2.28	0.48
20:T:84:TYR:O	20:T:86:THR:HG23	2.13	0.48
17:Q:91:ARG:HB2	17:Q:94:LEU:HB2	1.95	0.48
2:B:2305:U:O4'	6:F:130:GLY:HA3	2.13	0.48
17:Q:29:ARG:O	17:Q:30:VAL:CB	2.59	0.48
7:G:117:PRO:O	7:G:120:ILE:HG22	2.14	0.48
4:D:182:ALA:C	4:D:184:ARG:N	2.66	0.48
3:C:95:TYR:C	3:C:97:ASP:H	2.16	0.48
2:B:2295:C:OP2	15:O:10:ARG:HG3	2.13	0.48
30:3:21:PHE:HE2	30:3:61:LEU:HD12	1.78	0.48
11:K:106:LEU:C	11:K:108:SER:H	2.16	0.48
2:B:2297:A:N6	2:B:2319:G:H1'	2.29	0.48
2:B:287:G:H2'	2:B:288:U:H6	1.76	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:17:THR:HB	5:E:21:ARG:HH22	1.78	0.48
2:B:198:C:H6	2:B:198:C:O5'	1.96	0.48
2:B:2889:C:O2'	2:B:2890:G:H5'	2.13	0.48
5:E:159:LEU:O	5:E:162:ARG:HB2	2.13	0.48
3:C:66:PHE:HB3	3:C:142:ASN:HD21	1.78	0.48
8:H:132:PHE:CD2	8:H:134:VAL:HB	2.47	0.48
7:G:8:VAL:O	7:G:9:VAL:HB	2.13	0.48
4:D:201:LEU:O	4:D:201:LEU:HD12	2.12	0.48
10:J:64:VAL:HG13	10:J:65:THR:N	2.27	0.48
7:G:83:THR:C	7:G:84:LYS:HD3	2.34	0.48
2:B:2037:A:H2'	2:B:2038:G:C8	2.49	0.48
2:B:981:A:H4'	2:B:2037:A:H5'	1.95	0.48
9:I:21:PRO:CB	9:I:22:PRO:HD3	2.39	0.48
11:K:109:GLU:HA	11:K:112:MET:HG2	1.94	0.48
2:B:558:U:O3'	10:J:111:LYS:HE2	2.14	0.48
2:B:929:U:O2'	2:B:930:G:H5'	2.13	0.48
12:L:137:ALA:C	12:L:139:GLY:H	2.14	0.48
2:B:1029:A:H2'	2:B:1030:C:O4'	2.13	0.48
1:A:62:C:O2'	1:A:63:C:H5'	2.13	0.48
2:B:2869:G:H2'	2:B:2870:C:C6	2.49	0.48
12:L:56:PRO:O	12:L:60:ARG:HB2	2.14	0.48
2:B:1219:U:H2'	2:B:1220:G:H8	1.78	0.48
15:O:61:GLN:HE21	15:O:61:GLN:N	2.11	0.48
2:B:1687:G:H2'	2:B:1688:U:C6	2.48	0.48
9:I:72:THR:HG21	9:I:111:THR:O	2.13	0.48
2:B:438:G:H2'	2:B:439:A:C8	2.48	0.48
3:C:157:ALA:HB1	3:C:196:ASN:HB2	1.95	0.48
19:S:55:ILE:O	19:S:59:GLU:HG2	2.12	0.48
22:V:80:HIS:CD2	22:V:81:PRO:HD2	2.48	0.48
6:F:91:ARG:C	6:F:95:MET:HB2	2.34	0.48
4:D:204:LYS:HG2	4:D:205:PRO:CD	2.43	0.48
4:D:54:ALA:HA	4:D:76:GLY:H	1.79	0.48
7:G:116:LEU:HD21	7:G:122:ALA:CB	2.43	0.48
7:G:86:LEU:HA	7:G:163:TYR:HB3	1.94	0.48
2:B:2041:U:H2'	2:B:2042:A:C8	2.47	0.48
20:T:2:ILE:HB	20:T:3:ARG:HD3	1.94	0.48
18:R:30:GLY:HA2	18:R:63:VAL:HG23	1.94	0.48
2:B:195:A:H5''	12:L:47:ARG:HH22	1.78	0.48
2:B:96:C:H4'	25:Y:41:HIS:CE1	2.48	0.48
2:B:100:U:H1'	2:B:101:A:C2	2.48	0.48
2:B:677:A:O2'	2:B:2071:A:H5'	2.13	0.48
3:C:173:LEU:HD22	3:C:181:ARG:O	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:184:C:H2'	2:B:185:G:C8	2.46	0.48
9:I:52:LEU:N	9:I:52:LEU:HD12	2.29	0.48
2:B:2849:U:C4	2:B:2867:G:H1'	2.48	0.48
5:E:155:GLU:O	5:E:159:LEU:HD13	2.13	0.48
2:B:2335:A:OP1	15:O:13:ARG:HD2	2.13	0.48
2:B:949:G:O2'	2:B:950:G:H5'	2.13	0.48
2:B:1961:C:O2'	2:B:1962:C:H5'	2.14	0.48
2:B:131:A:H2'	2:B:132:G:H8	1.77	0.48
2:B:990:A:H1'	2:B:1156:A:N3	2.28	0.48
22:V:31:TYR:O	22:V:92:VAL:HA	2.14	0.48
2:B:2000:C:O2'	2:B:2001:C:H5'	2.12	0.48
20:T:38:ALA:HB2	20:T:81:LYS:NZ	2.24	0.48
7:G:25:ILE:CG2	7:G:78:VAL:HG21	2.43	0.48
2:B:2316:G:H2'	2:B:2317:A:H8	1.78	0.48
4:D:12:THR:N	4:D:24:VAL:HG12	2.28	0.48
4:D:50:VAL:HG22	4:D:80:TRP:O	2.13	0.48
2:B:686:U:H2'	2:B:788:A:N1	2.27	0.48
2:B:825:A:H2'	2:B:826:U:O4'	2.13	0.48
5:E:29:HIS:NE2	12:L:8:PRO:HG3	2.28	0.48
7:G:145:ALA:CA	7:G:148:ARG:HE	2.26	0.48
12:L:120:VAL:HG12	12:L:121:THR:N	2.28	0.48
8:H:2:GLN:HB2	8:H:39:ALA:HB3	1.96	0.48
14:N:55:ALA:HA	14:N:80:PHE:CE1	2.48	0.48
14:N:55:ALA:CB	14:N:84:GLY:HA2	2.43	0.48
2:B:1032:A:O2'	2:B:1033:U:H5'	2.13	0.48
21:U:10:VAL:O	21:U:21:ARG:HA	2.13	0.48
2:B:2849:U:O4	2:B:2867:G:H8	1.96	0.48
2:B:2875:C:H2'	2:B:2876:G:C8	2.47	0.48
2:B:1720:U:O2'	2:B:1721:G:H5'	2.13	0.48
4:D:110:THR:HG23	4:D:171:THR:HA	1.94	0.48
2:B:1147:A:H2'	2:B:1148:U:C6	2.49	0.48
2:B:907:G:O2'	2:B:908:C:H5'	2.14	0.48
2:B:2267:A:H8	2:B:2268:A:OP1	1.96	0.48
3:C:83:ASP:HA	3:C:84:PRO:HD3	1.75	0.48
20:T:39:THR:HG23	20:T:40:LYS:N	2.28	0.48
20:T:57:VAL:HG13	20:T:58:VAL:N	2.27	0.48
8:H:104:THR:CA	8:H:109:GLU:HA	2.44	0.48
10:J:13:ARG:O	10:J:14:ASP:HB2	2.14	0.48
18:R:51:VAL:HB	18:R:52:PRO:CD	2.40	0.48
6:F:163:GLU:C	6:F:166:ARG:NE	2.64	0.48
4:D:172:VAL:CG1	4:D:175:LEU:HD11	2.43	0.48
17:Q:7:VAL:HG23	17:Q:8:ILE:H	1.78	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:138:U:H2'	2:B:140:C:C1'	2.44	0.48
21:U:86:PHE:CE1	21:U:88:ASP:HB3	2.49	0.48
7:G:38:ASP:CG	7:G:63:GLN:HG2	2.34	0.48
19:S:76:VAL:CG2	19:S:101:SER:HB2	2.44	0.48
2:B:350:G:O2'	2:B:351:C:H5'	2.13	0.48
2:B:1212:G:H1'	2:B:1236:G:N2	2.28	0.48
29:2:46:LYS:HD2	29:2:46:LYS:N	2.29	0.48
9:I:56:VAL:CG2	9:I:68:PHE:HB2	2.43	0.48
2:B:521:U:H2'	2:B:522:A:C8	2.48	0.48
17:Q:85:ALA:O	17:Q:86:SER:C	2.51	0.48
2:B:821:A:H5''	2:B:822:G:O5'	2.13	0.48
23:W:70:VAL:HA	23:W:76:ARG:O	2.14	0.48
19:S:66:ILE:HD13	19:S:66:ILE:H	1.78	0.48
2:B:53:A:H2'	2:B:54:G:O4'	2.14	0.48
11:K:94:ILE:HG23	11:K:94:ILE:O	2.14	0.48
5:E:134:LEU:O	5:E:138:LEU:HG	2.13	0.48
16:P:62:LYS:HD3	16:P:64:SER:HB2	1.95	0.48
8:H:27:ARG:N	8:H:31:VAL:HG23	2.23	0.48
6:F:161:SER:C	6:F:163:GLU:N	2.66	0.48
4:D:68:PHE:C	4:D:73:VAL:HB	2.34	0.48
2:B:2144:G:H3'	2:B:2146:C:C5'	2.37	0.48
5:E:176:ASP:OD1	5:E:178:VAL:HG12	2.14	0.48
2:B:483:A:H4'	21:U:45:GLN:O	2.13	0.48
17:Q:30:VAL:HG11	17:Q:33:VAL:CG2	2.43	0.48
17:Q:27:ARG:HA	17:Q:33:VAL:O	2.14	0.48
3:C:130:PRO:CG	3:C:133:ASN:HD22	2.24	0.48
10:J:27:ARG:C	10:J:30:THR:HG22	2.34	0.48
2:B:1266:G:H22	2:B:2012:G:H2'	1.76	0.48
2:B:1936:A:H3'	2:B:1937:A:H5'	1.96	0.48
2:B:1963:U:H6	2:B:1963:U:O5'	1.96	0.48
2:B:1551:A:H2'	2:B:1552:A:O4'	2.14	0.48
2:B:1728:C:O2	2:B:1729:U:H5	1.97	0.48
16:P:48:ALA:HA	16:P:95:LYS:HG3	1.96	0.48
2:B:288:U:O2'	2:B:289:G:H5'	2.14	0.48
2:B:2702:G:H2'	2:B:2703:C:H6	1.78	0.48
2:B:2233:U:H2'	2:B:2234:G:C8	2.49	0.48
2:B:436:C:O2'	2:B:437:U:H5'	2.13	0.48
2:B:1666:G:O2'	2:B:1667:G:H5'	2.13	0.48
5:E:132:LYS:O	5:E:135:ALA:HB3	2.14	0.48
2:B:467:G:O2'	2:B:468:G:H5'	2.14	0.48
2:B:856:G:H2'	2:B:857:G:C8	2.49	0.48
2:B:921:C:H2'	2:B:922:C:H6	1.78	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:145:MET:HB2	3:C:152:GLN:HE21	1.78	0.48
10:J:41:LYS:C	10:J:43:GLU:H	2.17	0.48
13:M:35:ALA:O	13:M:36:VAL:HB	2.14	0.48
6:F:119:LYS:HA	6:F:121:PHE:CE1	2.48	0.48
6:F:91:ARG:N	6:F:91:ARG:CD	2.74	0.48
6:F:99:PHE:HA	6:F:102:LEU:CD1	2.44	0.48
22:V:63:ILE:HD12	22:V:63:ILE:N	2.29	0.48
2:B:2041:U:H2'	2:B:2042:A:H8	1.78	0.48
21:U:26:ASN:ND2	21:U:26:ASN:N	2.62	0.48
3:C:69:ASN:HA	3:C:188:ARG:HH12	1.79	0.48
2:B:811:U:N3	12:L:21:ARG:NH2	2.62	0.48
19:S:4:ILE:HD12	19:S:5:ALA:N	2.29	0.48
5:E:61:ARG:HH12	5:E:64:GLY:HA3	1.77	0.48
1:A:75:G:H1'	22:V:29:ILE:HG12	1.96	0.48
13:M:102:LEU:CD2	13:M:102:LEU:H	2.25	0.48
17:Q:73:ILE:HD11	17:Q:77:LYS:HD3	1.95	0.48
31:4:11:CYS:HB3	31:4:33:HIS:CE1	2.48	0.48
7:G:24:THR:HG22	7:G:34:ARG:HB3	1.96	0.48
13:M:28:PHE:CE2	13:M:66:ARG:HD3	2.49	0.48
12:L:57:LEU:HD22	30:3:53:ASP:HB3	1.95	0.48
18:R:78:ARG:HH21	18:R:78:ARG:HG3	1.77	0.48
2:B:393:C:O2'	2:B:394:C:H5'	2.13	0.48
19:S:60:HIS:ND1	19:S:60:HIS:O	2.45	0.48
2:B:1866:A:H2'	2:B:1867:G:O4'	2.13	0.48
2:B:1878:G:H2'	2:B:1879:C:C6	2.49	0.48
4:D:125:TRP:CG	4:D:160:LYS:HB3	2.48	0.48
2:B:1576:U:O2'	2:B:1577:C:H5'	2.14	0.48
2:B:1476:U:H2'	2:B:1514:G:H22	1.77	0.48
8:H:81:ALA:CB	8:H:147:VAL:H	2.26	0.48
11:K:78:PHE:CD2	16:P:69:VAL:HG12	2.49	0.48
10:J:44:TYR:CG	17:Q:63:ARG:CZ	2.97	0.48
7:G:84:LYS:HB2	7:G:132:LEU:HG	1.95	0.48
15:O:7:ARG:HD2	15:O:97:PHE:CE1	2.48	0.48
2:B:1552:A:C2'	2:B:1553:A:H5'	2.41	0.48
2:B:645:C:H5'	2:B:645:C:H6	1.78	0.48
4:D:14:ILE:CA	16:P:11:GLN:HE22	2.24	0.48
5:E:49:ARG:HH11	5:E:72:SER:HB2	1.77	0.48
1:A:52:A:H2'	1:A:53:A:C8	2.45	0.48
11:K:14:GLY:HA2	11:K:45:ALA:HA	1.94	0.48
2:B:347:A:H2'	2:B:348:A:H8	1.79	0.48
2:B:1151:A:H4'	17:Q:80:ASN:CG	2.35	0.48
2:B:1454:C:H5'	14:N:63:ARG:NE	2.28	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1475:G:H4'	2:B:1476:U:O5'	2.14	0.48
2:B:947:A:H2'	2:B:948:C:C6	2.49	0.48
2:B:1036:G:O2'	2:B:1037:G:H5'	2.13	0.48
2:B:2813:A:H2'	2:B:2814:A:C8	2.49	0.48
13:M:1:MET:O	13:M:2:LEU:HB2	2.13	0.48
8:H:146:VAL:HG12	8:H:147:VAL:N	2.29	0.47
8:H:90:LEU:HD12	8:H:90:LEU:N	2.28	0.47
6:F:69:ALA:HB2	6:F:82:TYR:CD1	2.49	0.47
10:J:11:VAL:HG12	10:J:13:ARG:HG2	1.96	0.47
21:U:48:VAL:HG22	21:U:48:VAL:O	2.14	0.47
6:F:62:GLN:HG3	6:F:91:ARG:NH1	2.29	0.47
4:D:114:LYS:CD	4:D:116:LYS:HE3	2.41	0.47
2:B:2834:G:H2'	2:B:2879:A:H61	1.78	0.47
2:B:2142:A:C2	2:B:2148:G:N2	2.81	0.47
18:R:27:ILE:HG22	18:R:28:ALA:N	2.28	0.47
21:U:17:ASP:OD1	21:U:38:ILE:HA	2.14	0.47
2:B:2758:A:H4'	7:G:63:GLN:HE22	1.78	0.47
2:B:2732:G:H5'	2:B:2733:A:O4'	2.13	0.47
2:B:1987:A:H2'	2:B:1988:G:C8	2.49	0.47
2:B:1037:G:O2'	2:B:1038:G:H5'	2.13	0.47
2:B:672:C:H2'	2:B:673:C:C6	2.49	0.47
2:B:1334:G:O2'	2:B:1335:C:H5'	2.14	0.47
3:C:198:GLU:HA	3:C:201:LEU:HD23	1.94	0.47
2:B:2300:C:H2'	2:B:2301:C:C6	2.49	0.47
8:H:83:LYS:HG3	8:H:90:LEU:HB3	1.96	0.47
17:Q:87:VAL:HG13	17:Q:89:ILE:HD11	1.96	0.47
31:4:16:ILE:HG12	31:4:25:VAL:CG2	2.43	0.47
24:X:6:VAL:CG1	24:X:50:VAL:HG13	2.44	0.47
19:S:35:ILE:HG12	19:S:36:LEU:HD22	1.96	0.47
2:B:2261:C:N4	23:W:10:ARG:HB3	2.30	0.47
2:B:2038:G:H2'	2:B:2039:U:O4'	2.14	0.47
2:B:832:U:OP1	12:L:39:LYS:HG2	2.14	0.47
15:O:105:ALA:HA	15:O:108:ASP:OD2	2.14	0.47
18:R:58:VAL:HG22	18:R:59:ILE:N	2.28	0.47
2:B:1726:C:H2'	2:B:1727:C:H6	1.77	0.47
2:B:850:U:O2'	26:Z:22:THR:HA	2.14	0.47
13:M:41:LEU:C	13:M:43:ALA:H	2.18	0.47
2:B:1061:U:H5'	9:I:9:LYS:NZ	2.30	0.47
2:B:2804:U:H2'	2:B:2805:C:C6	2.49	0.47
2:B:347:A:H2'	2:B:348:A:C8	2.49	0.47
2:B:520:G:H2'	2:B:521:U:C6	2.49	0.47
12:L:57:LEU:HD12	12:L:61:LEU:HD13	1.95	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:42:THR:O	13:M:44:ARG:N	2.41	0.47
2:B:69:C:H2'	2:B:70:G:H8	1.79	0.47
2:B:2008:C:H2'	2:B:2009:A:C8	2.49	0.47
2:B:1259:G:H2'	2:B:1260:A:C8	2.49	0.47
30:3:31:ILE:HD11	30:3:34:LYS:HD3	1.96	0.47
2:B:131:A:H2'	2:B:132:G:C8	2.49	0.47
10:J:95:ARG:HD3	10:J:95:ARG:O	2.15	0.47
2:B:2405:G:H2'	2:B:2411:A:H62	1.79	0.47
2:B:680:C:H2'	2:B:681:G:C8	2.49	0.47
2:B:1199:U:H2'	2:B:1200:C:H6	1.78	0.47
2:B:855:G:N3	23:W:23:LYS:HE3	2.29	0.47
23:W:23:LYS:HD2	23:W:24:ARG:H	1.79	0.47
2:B:2230:G:H2'	2:B:2231:U:H6	1.78	0.47
21:U:9:GLU:O	21:U:72:PHE:HB2	2.14	0.47
5:E:61:ARG:HD2	5:E:61:ARG:HA	1.78	0.47
14:N:28:LEU:HA	14:N:34:ILE:HD12	1.97	0.47
11:K:108:SER:O	11:K:110:LYS:HG2	2.14	0.47
2:B:1018:U:O2'	2:B:1019:U:H5'	2.15	0.47
26:Z:47:ILE:HG23	26:Z:54:VAL:HG21	1.96	0.47
2:B:104:A:H2'	2:B:105:C:H6	1.78	0.47
20:T:12:ARG:NE	25:Y:29:ARG:HH11	2.11	0.47
3:C:211:ARG:C	3:C:213:ARG:H	2.17	0.47
25:Y:46:VAL:O	25:Y:49:ASP:HB2	2.14	0.47
8:H:3:VAL:HG23	8:H:36:ALA:HB1	1.97	0.47
2:B:2791:G:H2'	2:B:2792:A:O4'	2.14	0.47
5:E:150:THR:CG2	5:E:153:LEU:HA	2.44	0.47
2:B:485:C:HO2'	19:S:60:HIS:CE1	2.31	0.47
2:B:2772:C:H4'	4:D:171:THR:CG2	2.44	0.47
8:H:81:ALA:HA	8:H:146:VAL:CA	2.44	0.47
6:F:82:TYR:HA	6:F:83:PRO:HD3	1.72	0.47
2:B:6:A:H2'	2:B:7:G:C8	2.48	0.47
21:U:48:VAL:N	21:U:49:PRO:CD	2.78	0.47
2:B:2751:G:H2'	2:B:2751:G:N3	2.29	0.47
2:B:322:A:OP2	5:E:163:ASN:HB2	2.15	0.47
2:B:323:C:H2'	5:E:163:ASN:OD1	2.14	0.47
13:M:40:ARG:HB2	13:M:93:VAL:HG22	1.96	0.47
2:B:558:U:H5''	10:J:111:LYS:HD3	1.97	0.47
25:Y:42:LEU:HA	25:Y:45:GLN:HE21	1.79	0.47
3:C:246:PRO:HB2	3:C:247:TRP:CZ3	2.49	0.47
2:B:2393:U:O2'	2:B:2394:C:H5'	2.13	0.47
2:B:1889:A:H1'	2:B:2086:U:O2'	2.15	0.47
20:T:64:LYS:N	20:T:64:LYS:HD2	2.30	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2179:C:H2'	2:B:2180:U:C5	2.49	0.47
2:B:1657:U:H2'	2:B:1658:C:H6	1.79	0.47
2:B:2718:G:H5''	16:P:97:TYR:CD1	2.49	0.47
2:B:1460:U:H3'	2:B:1461:C:H5'	1.97	0.47
2:B:776:G:H4'	2:B:777:G:O5'	2.15	0.47
3:C:157:ALA:HB1	3:C:196:ASN:CB	2.43	0.47
11:K:48:ARG:HB3	11:K:49:GLY:H	1.53	0.47
2:B:2446:G:H2'	2:B:2447:G:H5''	1.96	0.47
2:B:2010:G:H2'	2:B:2011:U:H6	1.79	0.47
2:B:1451:C:H1'	2:B:1452:G:N7	2.29	0.47
14:N:37:THR:HA	14:N:110:MET:HE2	1.97	0.47
23:W:19:ARG:HE	23:W:19:ARG:HB2	1.48	0.47
23:W:37:VAL:HG12	23:W:38:ARG:N	2.25	0.47
8:H:146:VAL:HG12	8:H:147:VAL:H	1.79	0.47
2:B:2748:A:C4'	7:G:3:VAL:HG21	2.44	0.47
1:A:43:C:H2'	1:A:44:G:H5''	1.96	0.47
31:4:25:VAL:HB	31:4:35:GLN:HE21	1.80	0.47
25:Y:60:LYS:O	25:Y:60:LYS:HG2	2.14	0.47
2:B:584:C:OP1	17:Q:5:ARG:HB3	2.15	0.47
10:J:98:GLU:HB3	10:J:124:VAL:CG2	2.44	0.47
10:J:109:LEU:HD13	10:J:119:PHE:HB2	1.97	0.47
16:P:44:GLY:HA3	16:P:60:VAL:CG1	2.45	0.47
2:B:314:C:O2'	2:B:315:G:H5'	2.14	0.47
16:P:77:SER:O	16:P:80:VAL:HG12	2.14	0.47
2:B:1927:A:H2'	2:B:1928:A:C8	2.49	0.47
2:B:934:U:H2'	2:B:935:C:H6	1.79	0.47
2:B:589:U:H2'	2:B:590:A:H8	1.78	0.47
2:B:688:U:H5'	2:B:1780:A:N1	2.29	0.47
2:B:728:G:H4'	3:C:12:ARG:HG3	1.97	0.47
2:B:1750:G:O2'	2:B:1751:U:H5'	2.13	0.47
30:3:50:SER:C	30:3:52:GLY:H	2.17	0.47
23:W:24:ARG:O	23:W:24:ARG:HD2	2.14	0.47
2:B:1817:G:H5''	3:C:86:ARG:NH1	2.30	0.47
10:J:4:PHE:C	10:J:44:TYR:HE2	2.18	0.47
6:F:90:LEU:HB3	6:F:95:MET:HA	1.96	0.47
4:D:10:GLY:HA2	4:D:26:VAL:HG23	1.96	0.47
2:B:2882:A:H2'	2:B:2883:A:H5''	1.96	0.47
10:J:65:THR:HG22	10:J:68:LYS:HE3	1.97	0.47
4:D:48:ILE:HG22	4:D:84:LEU:HD23	1.95	0.47
21:U:39:ASN:CG	21:U:62:ALA:HB3	2.34	0.47
13:M:12:MET:HB2	13:M:72:PRO:CD	2.40	0.47
6:F:142:TYR:N	6:F:142:TYR:CD2	2.78	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1747:U:H2'	2:B:1748:C:H6	1.79	0.47
14:N:96:ARG:HH21	14:N:96:ARG:HG2	1.78	0.47
16:P:52:ARG:HG2	16:P:52:ARG:NH1	2.30	0.47
2:B:2722:G:H2'	2:B:2723:C:C6	2.49	0.47
13:M:105:MET:HG2	13:M:108:VAL:HG12	1.97	0.47
27:O:33:SER:C	27:O:35:GLU:H	2.18	0.47
2:B:2605:U:H2'	2:B:2606:C:C6	2.50	0.47
2:B:974:G:OP2	18:R:78:ARG:HD3	2.15	0.47
2:B:1048:A:H1'	2:B:1112:G:H21	1.79	0.47
31:4:9:LYS:N	31:4:9:LYS:HD3	2.30	0.47
2:B:2412:A:H2'	2:B:2413:G:O4'	2.15	0.47
11:K:100:GLY:O	11:K:119:PRO:HB2	2.14	0.47
19:S:31:GLN:O	19:S:33:LEU:N	2.42	0.47
2:B:2553:G:H2'	2:B:2554:U:C4'	2.45	0.47
3:C:67:LYS:HE3	3:C:149:LYS:O	2.14	0.47
3:C:131:MET:HE3	3:C:187:CYS:HB2	1.95	0.47
3:C:117:SER:HB3	3:C:128:THR:HB	1.96	0.47
8:H:127:GLU:OE2	8:H:143:ILE:HG21	2.15	0.47
6:F:39:VAL:HG13	6:F:49:LEU:HD11	1.96	0.47
6:F:79:ARG:O	6:F:81:GLY:N	2.47	0.47
6:F:39:VAL:HG12	6:F:84:ILE:HD12	1.97	0.47
16:P:62:LYS:O	16:P:63:ILE:HB	2.14	0.47
6:F:104:THR:HG22	6:F:105:ILE:HG23	1.97	0.47
9:I:79:LEU:HD11	9:I:131:THR:OG1	2.13	0.47
22:V:70:ILE:N	22:V:70:ILE:CD1	2.75	0.47
21:U:73:ASN:C	21:U:75:ALA:H	2.18	0.47
2:B:71:A:C4'	2:B:72:U:H5'	2.38	0.47
17:Q:23:TYR:HB3	17:Q:27:ARG:HB3	1.97	0.47
2:B:137:U:H3'	2:B:138:U:H5	1.74	0.47
2:B:142:A:OP2	2:B:142:A:H8	1.98	0.47
3:C:52:HIS:NE2	3:C:218:THR:HG23	2.28	0.47
16:P:96:LEU:N	16:P:96:LEU:HD12	2.30	0.47
2:B:532:A:H4'	2:B:533:G:C8	2.50	0.47
19:S:96:ILE:HG23	19:S:96:ILE:O	2.15	0.47
2:B:1279:G:H2'	2:B:1280:G:H8	1.79	0.47
3:C:75:ALA:HB1	3:C:93:VAL:HG23	1.96	0.47
6:F:148:VAL:O	6:F:149:ARG:HG2	2.14	0.47
4:D:112:THR:O	4:D:113:SER:HB2	2.14	0.47
2:B:1796:U:H2'	2:B:1797:G:C8	2.49	0.47
25:Y:23:ARG:O	25:Y:27:ASN:HB2	2.14	0.47
14:N:73:ASN:HA	14:N:76:VAL:CG2	2.45	0.47
2:B:1824:G:O2'	2:B:1825:U:H5'	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1685:C:H2'	2:B:1686:C:H6	1.79	0.47
2:B:1711:A:H2'	2:B:1712:U:H6	1.77	0.47
1:A:54:G:H21	6:F:25:MET:HE1	1.79	0.47
16:P:102:ARG:HB3	16:P:107:ALA:HB2	1.97	0.47
5:E:95:LYS:HZ1	5:E:97:ASN:HA	1.78	0.47
28:1:46:VAL:HG22	28:1:47:ILE:N	2.30	0.47
2:B:118:A:H5'	2:B:119:A:H8	1.80	0.47
2:B:1930:G:C2'	2:B:1931:U:OP2	2.63	0.47
2:B:457:A:H61	2:B:470:A:H5''	1.78	0.47
1:A:8:C:H2'	1:A:9:G:O4'	2.15	0.47
2:B:68:G:H2'	2:B:69:C:H6	1.80	0.47
2:B:1047:G:OP1	2:B:1047:G:H4'	2.14	0.47
2:B:1259:G:H2'	2:B:1260:A:H8	1.79	0.47
2:B:1080:A:O2'	2:B:1081:U:H5'	2.13	0.47
2:B:2417:C:O2'	2:B:2418:A:H5'	2.15	0.47
2:B:378:C:O2'	2:B:379:G:H5'	2.15	0.47
7:G:17:LYS:HA	7:G:17:LYS:HE3	1.96	0.47
2:B:1227:G:O2'	2:B:1228:G:H5'	2.14	0.47
2:B:2063:C:O2	2:B:2450:A:N1	2.48	0.47
2:B:1985:C:O2'	2:B:1986:C:H5'	2.15	0.47
19:S:89:ALA:O	19:S:90:LYS:HB2	2.14	0.47
2:B:545:U:H2'	2:B:546:U:H4'	1.95	0.47
3:C:171:VAL:O	3:C:183:VAL:HG12	2.15	0.47
20:T:57:VAL:HG22	20:T:58:VAL:N	2.23	0.47
8:H:81:ALA:HB2	8:H:147:VAL:CB	2.44	0.47
13:M:33:LEU:HD11	13:M:121:ALA:HB2	1.97	0.47
6:F:102:LEU:HD22	6:F:103:ILE:HB	1.97	0.47
9:I:32:VAL:HG13	9:I:66:PHE:CD2	2.49	0.47
6:F:13:LYS:O	6:F:16:MET:HB2	2.15	0.47
17:Q:9:ALA:C	17:Q:11:ALA:H	2.19	0.47
12:L:17:LYS:HD2	12:L:19:LEU:HD11	1.96	0.47
18:R:1:MET:O	18:R:15:SER:HB3	2.15	0.47
7:G:54:ARG:CD	7:G:55:ASP:H	2.26	0.47
2:B:1130:U:HO2'	2:B:1131:G:H8	1.62	0.47
2:B:2742:G:O2'	2:B:2743:U:H5'	2.15	0.47
2:B:156:A:H2'	2:B:157:C:H6	1.80	0.47
8:H:45:GLU:HA	8:H:48:GLU:HB3	1.97	0.47
2:B:2598:A:H5''	3:C:233:GLY:HA2	1.97	0.47
2:B:2783:U:H2'	2:B:2784:U:H6	1.77	0.47
2:B:1790:C:H2'	2:B:1791:A:C8	2.50	0.47
2:B:598:U:H2'	2:B:599:A:H8	1.80	0.47
2:B:2241:A:H2'	2:B:2242:G:C8	2.50	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2264:C:O2'	2:B:2265:U:H5'	2.15	0.47
23:W:18:LYS:HG3	23:W:19:ARG:H	1.80	0.47
23:W:30:VAL:HG23	23:W:59:PHE:CE2	2.50	0.47
3:C:138:SER:O	3:C:140:VAL:HG23	2.15	0.47
6:F:35:LEU:HD23	6:F:153:ILE:HG12	1.97	0.47
4:D:106:LYS:CB	4:D:206:ALA:HB3	2.44	0.47
2:B:2832:U:H5''	2:B:2834:G:O4'	2.15	0.47
2:B:1023:U:H2'	2:B:1024:G:H5'	1.96	0.47
25:Y:13:GLU:HG3	25:Y:57:LEU:CD2	2.45	0.47
17:Q:4:LYS:CD	17:Q:7:VAL:HG22	2.44	0.47
2:B:273:G:H2'	2:B:274:C:H6	1.79	0.47
5:E:58:LYS:O	5:E:59:PRO:C	2.51	0.47
9:I:62:ALA:C	9:I:64:ARG:H	2.19	0.47
23:W:28:GLU:H	23:W:31:LEU:CD1	2.28	0.47
2:B:61:C:P	25:Y:47:ARG:HH12	2.38	0.47
2:B:2318:G:C6	2:B:2319:G:N1	2.83	0.47
2:B:245:G:O2'	2:B:246:C:H5'	2.15	0.47
2:B:1410:G:H2'	2:B:1411:U:C6	2.50	0.47
5:E:97:ASN:ND2	5:E:97:ASN:N	2.62	0.47
2:B:1669:A:H8	11:K:4:GLN:HG3	1.78	0.47
2:B:1301:A:O2'	2:B:1302:A:H3'	2.15	0.47
2:B:1401:G:H2'	2:B:1402:U:C6	2.49	0.47
2:B:381:G:O2'	2:B:382:A:H5'	2.14	0.47
2:B:2691:C:O2'	2:B:2692:G:H5'	2.15	0.47
3:C:231:HIS:HA	3:C:241:LYS:HD3	1.96	0.47
2:B:560:C:H2'	2:B:561:G:O4'	2.15	0.47
3:C:91:ALA:CB	3:C:105:ALA:HB2	2.45	0.47
4:D:54:ALA:N	4:D:76:GLY:HA2	2.30	0.47
17:Q:4:LYS:CE	17:Q:7:VAL:HG13	2.45	0.47
10:J:81:ILE:HG23	10:J:82:GLY:N	2.22	0.47
2:B:709:U:H2'	2:B:710:U:H6	1.80	0.47
19:S:17:VAL:C	19:S:19:LEU:N	2.67	0.47
7:G:34:ARG:HH11	7:G:34:ARG:H	1.63	0.47
2:B:540:C:H2'	2:B:541:A:C8	2.49	0.47
2:B:1187:G:H5''	18:R:83:TYR:CE2	2.50	0.47
21:U:40:LEU:N	21:U:61:GLU:HA	2.30	0.47
2:B:178:G:O2'	2:B:179:C:H5'	2.15	0.47
22:V:78:GLN:HB2	22:V:88:HIS:HB3	1.96	0.47
2:B:2773:C:H2'	2:B:2774:C:H6	1.80	0.47
22:V:77:VAL:O	22:V:77:VAL:HG13	2.14	0.47
2:B:1758:U:H3'	2:B:1759:A:H8	1.80	0.47
15:O:16:ARG:O	15:O:19:GLN:HB3	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:903:C:H2'	2:B:904:G:H8	1.79	0.47
19:S:61:ASN:HA	19:S:61:ASN:HD22	1.55	0.47
2:B:643:A:C8	2:B:644:A:H8	2.32	0.47
2:B:2271:G:O2'	2:B:2272:U:H5'	2.14	0.46
8:H:135:HIS:ND1	8:H:138:VAL:HG22	2.29	0.46
16:P:63:ILE:HG22	16:P:63:ILE:O	2.15	0.46
6:F:72:SER:HA	6:F:78:ILE:CG2	2.32	0.46
4:D:51:THR:HG22	4:D:52:THR:N	2.29	0.46
27:O:48:TYR:CG	27:O:49:ARG:N	2.81	0.46
4:D:46:ARG:HH22	4:D:86:GLU:HA	1.78	0.46
6:F:11:VAL:CG1	6:F:12:VAL:H	2.20	0.46
2:B:363:G:H2'	2:B:364:C:H6	1.75	0.46
2:B:307:G:H2'	2:B:309:A:OP2	2.14	0.46
9:I:103:ALA:O	9:I:107:GLU:HG3	2.15	0.46
1:A:28:C:H2'	1:A:29:A:O4'	2.15	0.46
21:U:71:ILE:HD11	21:U:81:ARG:O	2.14	0.46
21:U:85:ARG:HD3	21:U:86:PHE:N	2.28	0.46
25:Y:23:ARG:C	25:Y:25:GLN:H	2.18	0.46
7:G:38:ASP:CG	7:G:39:ALA:N	2.64	0.46
7:G:91:VAL:O	7:G:93:TYR:N	2.49	0.46
7:G:93:TYR:O	7:G:94:ARG:HG3	2.15	0.46
15:O:11:ALA:CB	15:O:96:GLY:H	2.29	0.46
6:F:29:ARG:O	6:F:158:THR:HG23	2.15	0.46
2:B:2665:A:H2'	2:B:2666:C:O2	2.14	0.46
27:O:29:VAL:HA	27:O:35:GLU:O	2.14	0.46
2:B:1100:C:H2'	2:B:1101:U:C6	2.50	0.46
2:B:1110:G:N2	2:B:1111:A:N6	2.63	0.46
2:B:2155:U:H2'	2:B:2156:G:C8	2.49	0.46
3:C:64:VAL:O	3:C:102:TYR:O	2.33	0.46
20:T:92:ASN:C	20:T:93:LEU:HD22	2.36	0.46
6:F:55:ASP:O	6:F:58:ALA:HB3	2.15	0.46
30:3:60:CYS:C	30:3:62:PRO:HD3	2.35	0.46
2:B:268:C:O2	2:B:268:C:H2'	2.14	0.46
2:B:853:C:H2'	2:B:854:C:C6	2.48	0.46
6:F:39:VAL:CG1	6:F:42:ALA:HB2	2.46	0.46
10:J:41:LYS:CE	10:J:51:GLY:HA2	2.46	0.46
1:A:43:C:H4'	6:F:91:ARG:NE	2.30	0.46
2:B:2677:G:O2'	2:B:2678:C:H5'	2.15	0.46
10:J:81:ILE:HG12	10:J:82:GLY:N	2.29	0.46
4:D:14:ILE:HA	16:P:11:GLN:NE2	2.25	0.46
21:U:35:VAL:HB	21:U:38:ILE:CB	2.45	0.46
3:C:173:LEU:HD13	3:C:173:LEU:N	2.29	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:H:41:LYS:HA	8:H:44:ILE:CG2	2.45	0.46
8:H:44:ILE:CD1	8:H:45:GLU:HG3	2.45	0.46
2:B:753:A:H2'	2:B:754:U:H6	1.78	0.46
1:A:64:G:H2'	1:A:65:U:H6	1.80	0.46
2:B:1947:C:O2'	2:B:1948:G:H5'	2.14	0.46
2:B:601:C:O2'	2:B:605:G:H5''	2.15	0.46
2:B:2083:G:H2'	2:B:2084:C:C6	2.50	0.46
2:B:2523:G:O2'	2:B:2524:G:H5'	2.15	0.46
2:B:2436:G:O2'	2:B:2437:G:H5'	2.15	0.46
3:C:90:ILE:HG22	3:C:91:ALA:N	2.30	0.46
17:Q:101:ASP:HB3	17:Q:104:ALA:HB3	1.96	0.46
19:S:35:ILE:O	19:S:39:THR:HG23	2.14	0.46
4:D:186:LEU:CD2	16:P:3:ILE:HD11	2.42	0.46
2:B:2038:G:H2'	2:B:2039:U:C6	2.49	0.46
2:B:28:A:H1'	2:B:513:A:C2	2.50	0.46
9:I:19:PRO:HB2	9:I:22:PRO:HD2	1.97	0.46
2:B:102:U:H4'	2:B:103:A:OP1	2.15	0.46
2:B:215:G:C4'	2:B:216:A:H4'	2.45	0.46
2:B:350:G:H2'	2:B:351:C:O4'	2.14	0.46
12:L:90:VAL:HB	12:L:122:VAL:HA	1.97	0.46
17:Q:96:ASP:O	17:Q:99:VAL:HG23	2.14	0.46
2:B:807:U:OP2	12:L:36:LYS:HG2	2.16	0.46
21:U:13:LEU:HD12	21:U:13:LEU:N	2.31	0.46
2:B:2755:C:C4	31:4:19:ARG:NH1	2.83	0.46
23:W:37:VAL:CG1	23:W:55:ASP:HB2	2.45	0.46
23:W:59:PHE:HE2	23:W:61:LYS:HA	1.80	0.46
4:D:193:VAL:O	4:D:194:PRO:O	2.33	0.46
4:D:8:LYS:HD2	4:D:195:GLY:HA3	1.97	0.46
2:B:2337:G:N3	2:B:2337:G:H2'	2.31	0.46
7:G:153:PRO:O	7:G:155:PRO:HD3	2.15	0.46
2:B:2466:C:O2'	2:B:2467:C:H5'	2.15	0.46
2:B:479:A:O2'	2:B:481:G:H5'	2.15	0.46
2:B:593:U:H2'	2:B:594:U:C6	2.50	0.46
11:K:42:ILE:HG21	11:K:45:ALA:HB2	1.97	0.46
2:B:2069:G:O2'	2:B:2070:A:H5'	2.15	0.46
17:Q:69:ARG:CB	17:Q:69:ARG:HH21	2.29	0.46
5:E:40:ARG:HG3	5:E:40:ARG:NH1	2.29	0.46
16:P:38:ARG:C	16:P:39:LEU:HD12	2.35	0.46
2:B:2626:C:H2'	2:B:2627:G:O4'	2.15	0.46
7:G:104:LEU:HB2	7:G:112:VAL:CB	2.46	0.46
9:I:52:LEU:HD21	9:I:81:LYS:NZ	2.30	0.46
2:B:1571:A:H2'	2:B:1572:A:C8	2.50	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:97:C:O2'	2:B:918:A:H5''	2.15	0.46
2:B:857:G:O2'	2:B:858:G:H5'	2.14	0.46
2:B:2387:U:O4'	23:W:38:ARG:NH1	2.49	0.46
2:B:37:C:O2'	5:E:45:ALA:HA	2.16	0.46
2:B:1567:G:H3'	3:C:84:PRO:HG2	1.98	0.46
20:T:44:LYS:C	20:T:46:ALA:N	2.66	0.46
2:B:2895:G:H2'	2:B:2896:C:H6	1.80	0.46
2:B:2901:C:H2'	2:B:2902:C:H5'	1.96	0.46
10:J:5:THR:O	10:J:5:THR:HG23	2.15	0.46
2:B:870:U:C3'	2:B:871:U:H5''	2.46	0.46
25:Y:52:ARG:O	25:Y:55:THR:HB	2.14	0.46
21:U:45:GLN:HG3	21:U:58:VAL:HG21	1.97	0.46
16:P:5:LYS:HZ2	16:P:9:GLN:HB3	1.80	0.46
2:B:527:C:N4	2:B:2779:U:OP2	2.48	0.46
21:U:39:ASN:HB3	21:U:63:ALA:H	1.79	0.46
5:E:166:LYS:O	5:E:167:VAL:HB	2.15	0.46
12:L:19:LEU:O	12:L:21:ARG:HG2	2.16	0.46
28:1:26:LYS:HB2	28:1:52:LYS:NZ	2.31	0.46
2:B:1515:A:H4'	2:B:1556:C:O2'	2.15	0.46
6:F:141:ASP:HB2	6:F:144:LYS:HE2	1.97	0.46
2:B:83:A:H5''	21:U:1:ALA:N	2.31	0.46
1:A:5:U:O2'	1:A:6:G:H5'	2.16	0.46
2:B:2741:A:H2'	2:B:2742:G:O4'	2.15	0.46
2:B:2340:A:H2'	2:B:2341:G:C8	2.50	0.46
2:B:346:A:H5'	2:B:346:A:N3	2.30	0.46
2:B:2769:U:H2'	2:B:2770:G:H8	1.81	0.46
2:B:2769:U:H2'	2:B:2770:G:C8	2.49	0.46
2:B:1495:A:H2'	2:B:1496:A:H8	1.80	0.46
2:B:1149:G:H2'	2:B:1150:C:H6	1.80	0.46
2:B:1150:C:O2'	2:B:1151:A:H5'	2.16	0.46
11:K:59:ALA:HB1	11:K:84:VAL:O	2.16	0.46
2:B:813:U:H2'	2:B:814:C:H6	1.79	0.46
9:I:116:MET:SD	9:I:124:MET:HB2	2.56	0.46
21:U:40:LEU:HA	21:U:60:LYS:C	2.36	0.46
3:C:110:LYS:HD2	3:C:113:ASP:OD2	2.16	0.46
2:B:2772:C:H2'	2:B:2773:C:C6	2.50	0.46
6:F:24:VAL:O	6:F:24:VAL:HG22	2.16	0.46
2:B:1760:C:H2'	2:B:1761:C:O4'	2.15	0.46
2:B:226:A:H5'	2:B:257:C:O3'	2.15	0.46
2:B:909:A:H2'	2:B:912:C:H5	1.81	0.46
2:B:1190:G:H2'	2:B:1191:G:H8	1.80	0.46
8:H:29:PHE:O	8:H:33:GLN:HB3	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:D:202:ILE:CG2	4:D:203:VAL:N	2.78	0.46
4:D:5:VAL:HG21	4:D:80:TRP:CE3	2.51	0.46
5:E:177:PRO:O	5:E:181:ILE:HG22	2.15	0.46
2:B:2039:U:O2'	2:B:2040:G:H5'	2.16	0.46
10:J:55:ILE:CG2	10:J:123:LYS:HB2	2.46	0.46
5:E:60:TRP:HA	5:E:60:TRP:CE3	2.50	0.46
8:H:30:LEU:CA	8:H:35:LYS:HB2	2.46	0.46
2:B:1805:A:N3	3:C:49:THR:HG23	2.30	0.46
2:B:100:U:H1'	2:B:101:A:C6	2.50	0.46
2:B:108:G:H4'	2:B:347:A:H2	1.80	0.46
2:B:1886:U:H2'	2:B:1887:C:C6	2.50	0.46
2:B:145:C:H2'	2:B:146:A:H8	1.79	0.46
2:B:547:A:H5''	2:B:548:G:C8	2.50	0.46
5:E:189:THR:O	5:E:193:VAL:HG23	2.16	0.46
2:B:608:A:H2'	2:B:609:A:C8	2.51	0.46
10:J:28:LEU:O	10:J:31:GLU:HB3	2.14	0.46
2:B:1838:C:H4'	2:B:1839:G:C8	2.50	0.46
2:B:1734:G:H2'	2:B:1735:A:H8	1.81	0.46
2:B:1869:G:H2'	2:B:1871:A:OP2	2.16	0.46
2:B:1891:G:H2'	2:B:1892:C:C6	2.51	0.46
2:B:2139:U:H2'	2:B:2140:G:H8	1.80	0.46
2:B:2705:A:H2'	2:B:2706:A:O4'	2.16	0.46
2:B:2623:G:O2'	2:B:2624:G:H5'	2.15	0.46
2:B:2559:C:O2'	2:B:2560:A:H5'	2.16	0.46
2:B:629:G:OP1	30:3:17:GLY:N	2.48	0.46
23:W:46:ALA:HB2	23:W:78:PHE:HD1	1.81	0.46
2:B:7:G:H2'	2:B:8:C:O4'	2.15	0.46
10:J:44:TYR:O	10:J:45:THR:CB	2.63	0.46
18:R:38:VAL:HG13	18:R:54:VAL:HG12	1.97	0.46
4:D:193:VAL:O	4:D:194:PRO:C	2.54	0.46
21:U:93:ARG:O	21:U:94:PHE:HB3	2.15	0.46
2:B:21:A:H2'	2:B:22:C:C6	2.50	0.46
24:X:70:LEU:HD11	24:X:77:TYR:HB3	1.97	0.46
2:B:31:C:O2'	2:B:32:C:H5'	2.16	0.46
2:B:528:A:C2'	2:B:529:A:H5''	2.40	0.46
15:O:35:ILE:CD1	15:O:102:ARG:HH11	2.28	0.46
2:B:1082:U:C2	2:B:1086:A:N1	2.84	0.46
10:J:17:VAL:HG22	10:J:55:ILE:CG1	2.45	0.46
5:E:164:LEU:O	5:E:166:LYS:N	2.49	0.46
7:G:123:GLU:HG2	7:G:124:CYS:N	2.31	0.46
24:X:35:HIS:CD2	24:X:36:ARG:N	2.83	0.46
2:B:2720:U:H2'	2:B:2721:A:C8	2.50	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2845:U:H5''	16:P:51:ASN:O	2.16	0.46
2:B:1887:C:O2'	2:B:1888:G:H5'	2.16	0.46
5:E:127:GLU:OE2	5:E:133:LEU:HD22	2.15	0.46
22:V:73:LYS:HA	22:V:73:LYS:HZ2	1.81	0.46
5:E:14:VAL:HG23	5:E:15:SER:H	1.81	0.46
2:B:2788:C:H2'	2:B:2789:C:C6	2.50	0.46
2:B:1750:G:H2'	2:B:1751:U:C6	2.51	0.46
2:B:839:U:H2'	2:B:840:C:C6	2.51	0.46
2:B:2518:A:H2'	2:B:2518:A:N3	2.30	0.46
2:B:406:G:H2'	2:B:407:G:H8	1.81	0.46
10:J:75:TYR:CD1	10:J:86:GLN:HB2	2.50	0.46
2:B:1902:C:H2'	2:B:1903:G:O4'	2.16	0.46
10:J:47:HIS:ND1	10:J:48:VAL:HG23	2.31	0.46
18:R:4:VAL:HG21	18:R:40:MET:HB2	1.98	0.46
18:R:49:ILE:HD12	18:R:50:GLY:O	2.16	0.46
6:F:89:THR:C	6:F:90:LEU:HD22	2.36	0.46
27:O:28:SER:HB3	27:O:37:HIS:CE1	2.51	0.46
8:H:4:ILE:N	8:H:4:ILE:HD12	2.31	0.46
25:Y:54:LYS:O	25:Y:58:ASN:HB2	2.15	0.46
16:P:22:GLY:HA3	16:P:91:VAL:HG21	1.96	0.46
3:C:75:ALA:N	3:C:115:ILE:O	2.49	0.46
3:C:78:GLU:OE1	3:C:100:ARG:NE	2.47	0.46
4:D:113:SER:HB3	4:D:167:ASN:HA	1.96	0.46
2:B:1725:U:H2'	2:B:1726:C:H6	1.81	0.46
2:B:1729:U:C5	2:B:1731:G:N2	2.84	0.46
7:G:37:ASN:O	7:G:38:ASP:HB3	2.16	0.46
2:B:1505:A:H2'	2:B:1506:U:O4'	2.16	0.46
2:B:2808:G:H5'	2:B:2809:A:OP1	2.16	0.46
11:K:68:VAL:O	11:K:69:ARG:HB3	2.15	0.46
2:B:2297:A:H61	2:B:2319:G:H1'	1.80	0.46
24:X:36:ARG:HD3	24:X:47:THR:HB	1.97	0.46
2:B:1403:A:H2'	2:B:1404:C:C6	2.50	0.46
2:B:2602:A:H3'	2:B:2602:A:OP1	2.15	0.46
18:R:78:ARG:HB2	18:R:83:TYR:HD1	1.80	0.46
2:B:660:C:H2'	2:B:661:A:C8	2.50	0.46
2:B:2893:A:H4'	2:B:2894:G:C5'	2.46	0.46
2:B:458:G:N2	2:B:469:G:H2'	2.31	0.46
2:B:2553:G:C2	2:B:2583:G:H1'	2.51	0.46
2:B:2272:U:HO2'	2:B:2273:A:H8	1.64	0.46
2:B:2353:G:H1'	23:W:30:VAL:HG12	1.98	0.46
2:B:1818:U:HO2'	2:B:1819:A:P	2.39	0.46
8:H:83:LYS:HD2	8:H:91:PHE:CB	2.45	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:6:A:H2'	2:B:7:G:H8	1.80	0.46
6:F:113:PHE:HZ	6:F:175:PRO:HB2	1.81	0.46
14:N:99:LYS:HA	14:N:111:ALA:HA	1.97	0.46
22:V:4:ILE:O	22:V:63:ILE:HA	2.16	0.46
22:V:65:VAL:C	22:V:67:GLY:H	2.18	0.46
16:P:1:SER:HA	16:P:4:ILE:HD12	1.98	0.46
3:C:73:ILE:HB	3:C:95:TYR:CD2	2.51	0.46
2:B:2191:A:N3	2:B:2191:A:H2'	2.31	0.46
5:E:118:LEU:HD21	5:E:188:MET:CE	2.46	0.46
9:I:122:GLU:CD	9:I:122:GLU:H	2.18	0.46
2:B:1439:A:N6	2:B:1440:U:O2	2.42	0.46
2:B:2443:C:O2'	2:B:2444:G:H5'	2.16	0.46
3:C:255:LYS:C	3:C:257:ARG:H	2.18	0.46
12:L:68:SER:HB2	12:L:71:ALA:H	1.80	0.46
14:N:17:ARG:CB	14:N:17:ARG:HH21	2.28	0.46
2:B:1450:G:H1	2:B:1461:C:H42	1.64	0.46
2:B:2045:C:H5''	27:0:14:MET:SD	2.56	0.46
2:B:2886:A:N7	27:0:39:ARG:NH2	2.63	0.46
2:B:2480:C:H2'	2:B:2481:G:O4'	2.16	0.46
4:D:170:VAL:O	4:D:170:VAL:HG23	2.15	0.46
2:B:1051:G:H2'	2:B:1052:C:O4'	2.15	0.46
2:B:701:G:O2'	2:B:702:U:H5'	2.16	0.46
21:U:54:PRO:HG2	21:U:55:GLY:H	1.80	0.46
23:W:61:LYS:HB3	23:W:62:ALA:H	1.43	0.46
8:H:101:ASP:O	8:H:104:THR:HG23	2.16	0.46
17:Q:57:ARG:HG2	17:Q:57:ARG:NH1	2.30	0.46
21:U:47:PRO:HB2	21:U:53:GLN:HB2	1.98	0.46
13:M:97:GLN:HB2	13:M:98:PRO:HD2	1.98	0.46
4:D:36:GLN:HE21	4:D:38:LYS:HG2	1.81	0.46
19:S:35:ILE:H	19:S:35:ILE:HD13	1.80	0.46
2:B:1430:G:H2'	2:B:1431:A:H8	1.81	0.46
10:J:128:ASN:C	10:J:129:GLU:HG3	2.36	0.46
3:C:93:VAL:O	3:C:94:LEU:HB3	2.16	0.46
2:B:645:C:H3'	2:B:646:U:H5	1.75	0.46
2:B:603:A:H4'	2:B:604:G:O5'	2.16	0.46
25:Y:20:ASN:HB3	25:Y:50:VAL:HG22	1.98	0.46
2:B:2650:U:H2'	2:B:2651:C:H6	1.78	0.46
11:K:27:SER:O	11:K:28:HIS:HB2	2.16	0.46
2:B:79:C:HO2'	2:B:346:A:H8	1.63	0.46
8:H:1:MET:HB3	8:H:21:VAL:O	2.16	0.46
12:L:109:LYS:HB3	12:L:111:ILE:HG12	1.98	0.46
16:P:31:VAL:C	16:P:33:GLU:H	2.20	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2604:U:O2'	2:B:2605:U:H5'	2.15	0.46
20:T:14:PRO:HD2	25:Y:33:ALA:HB1	1.97	0.46
5:E:24:ASN:OD1	5:E:27:LEU:HB2	2.16	0.46
2:B:2221:G:O2'	2:B:2222:C:H5'	2.16	0.46
2:B:2564:A:OP1	2:B:2648:G:H4'	2.16	0.46
8:H:125:THR:HG23	8:H:126:GLY:H	1.81	0.45
2:B:8:C:H5''	10:J:53:TYR:OH	2.16	0.45
1:A:43:C:C1'	6:F:91:ARG:HD2	2.46	0.45
17:Q:10:ARG:CZ	17:Q:10:ARG:HB2	2.46	0.45
16:P:3:ILE:HD13	16:P:3:ILE:C	2.37	0.45
16:P:4:ILE:O	16:P:5:LYS:HB3	2.15	0.45
2:B:1561:C:H2'	2:B:1562:U:H6	1.79	0.45
3:C:75:ALA:HB1	3:C:93:VAL:CG2	2.47	0.45
24:X:40:GLU:C	24:X:42:GLU:H	2.20	0.45
2:B:1812:U:C1'	3:C:44:ASN:HD21	2.27	0.45
2:B:2297:A:H2	2:B:2320:U:H4'	1.77	0.45
5:E:133:LEU:HA	5:E:136:GLN:CD	2.37	0.45
2:B:288:U:H2'	2:B:289:G:C8	2.51	0.45
27:O:30:ASP:OD2	27:O:31:LYS:N	2.48	0.45
2:B:591:U:H1'	30:3:1:PRO:H3	1.81	0.45
2:B:1463:C:H2'	2:B:1464:G:H8	1.80	0.45
2:B:822:G:O6	2:B:943:A:H2	1.99	0.45
10:J:100:VAL:HG12	10:J:100:VAL:O	2.16	0.45
7:G:72:ASN:O	7:G:76:ILE:HG12	2.16	0.45
29:2:34:ARG:HD3	29:2:42:LEU:O	2.15	0.45
20:T:27:SER:O	20:T:28:ASN:CB	2.64	0.45
8:H:110:VAL:HG12	8:H:132:PHE:HE1	1.81	0.45
21:U:51:LEU:O	21:U:52:ASN:C	2.54	0.45
6:F:33:ILE:HG21	6:F:98:PHE:CE2	2.51	0.45
2:B:1560:G:H2'	2:B:1561:C:H6	1.81	0.45
2:B:1279:G:H2'	2:B:1280:G:C8	2.51	0.45
29:2:1:MET:HG2	29:2:2:LYS:N	2.27	0.45
24:X:28:PHE:CD1	24:X:28:PHE:N	2.84	0.45
7:G:39:ALA:HB1	7:G:57:TYR:CZ	2.51	0.45
2:B:170:U:H2'	2:B:171:U:H6	1.80	0.45
2:B:2684:U:H4'	11:K:75:VAL:CG2	2.45	0.45
12:L:118:THR:O	12:L:120:VAL:HG23	2.16	0.45
2:B:1151:A:O2'	2:B:1152:C:H5'	2.16	0.45
2:B:813:U:O2'	2:B:1225:G:H1'	2.16	0.45
16:P:31:VAL:CG1	16:P:38:ARG:HG2	2.46	0.45
2:B:519:U:O2'	2:B:520:G:H5'	2.16	0.45
8:H:97:ARG:N	8:H:97:ARG:HD3	2.31	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1716:U:H2'	2:B:1717:A:C8	2.50	0.45
2:B:1091:G:O2'	2:B:1092:C:H5'	2.16	0.45
3:C:89:ASN:HD22	3:C:89:ASN:HA	1.53	0.45
20:T:49:LYS:HB2	20:T:50:LEU:HD22	1.98	0.45
20:T:83:ALA:HB1	20:T:85:VAL:HG23	1.97	0.45
13:M:33:LEU:CD1	13:M:121:ALA:HB2	2.46	0.45
7:G:23:ILE:CG2	7:G:71:LEU:HD11	2.45	0.45
6:F:160:LYS:HG2	6:F:164:GLU:CD	2.37	0.45
9:I:74:PRO:O	9:I:77:VAL:HG22	2.15	0.45
2:B:2143:C:H2'	2:B:2144:G:H4'	1.98	0.45
19:S:36:LEU:HD22	19:S:36:LEU:N	2.30	0.45
11:K:33:GLY:O	11:K:35:GLY:N	2.49	0.45
13:M:73:ILE:HG13	13:M:93:VAL:HB	1.99	0.45
2:B:2189:U:H2'	2:B:2190:G:H8	1.81	0.45
26:Z:43:ILE:O	26:Z:47:ILE:HG12	2.16	0.45
23:W:28:GLU:H	23:W:31:LEU:CG	2.28	0.45
21:U:81:ARG:HB2	21:U:96:LYS:CG	2.47	0.45
13:M:62:LYS:HG2	13:M:64:TRP:CH2	2.52	0.45
2:B:1843:C:H2'	2:B:1844:C:C6	2.52	0.45
8:H:21:VAL:HG22	8:H:22:LYS:N	2.30	0.45
26:Z:28:LEU:HA	26:Z:33:HIS:CD2	2.49	0.45
2:B:968:C:O2'	2:B:969:G:H5'	2.16	0.45
2:B:755:U:H2'	2:B:756:A:C8	2.51	0.45
16:P:31:VAL:HG12	16:P:38:ARG:HG2	1.98	0.45
2:B:718:A:H2'	2:B:719:C:H5'	1.98	0.45
2:B:160:A:H2'	2:B:161:A:C8	2.52	0.45
7:G:96:ALA:HB3	7:G:103:ASN:O	2.16	0.45
2:B:2772:C:H4'	4:D:171:THR:HG21	1.99	0.45
19:S:61:ASN:HB3	19:S:62:ASP:H	1.47	0.45
2:B:1072:C:N3	2:B:1092:C:N4	2.64	0.45
2:B:1766:G:H2'	2:B:1767:G:H8	1.81	0.45
2:B:2533:U:H2'	2:B:2534:A:O4'	2.16	0.45
11:K:76:ILE:HG12	16:P:71:ARG:HD2	1.97	0.45
2:B:2724:U:H2'	2:B:2725:A:C8	2.51	0.45
2:B:857:G:N3	23:W:19:ARG:NH2	2.65	0.45
6:F:43:ILE:HA	6:F:46:LYS:HE2	1.97	0.45
7:G:62:ALA:O	7:G:66:THR:HG23	2.17	0.45
6:F:110:ILE:HD12	6:F:112:ASP:C	2.36	0.45
6:F:128:SER:HA	6:F:153:ILE:O	2.15	0.45
21:U:26:ASN:HD22	21:U:26:ASN:H	1.64	0.45
15:O:4:LYS:O	15:O:7:ARG:HB3	2.16	0.45
10:J:59:ALA:C	10:J:61:LYS:N	2.69	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:665:U:H2'	2:B:666:A:C8	2.52	0.45
2:B:2073:C:H5''	3:C:227:VAL:CG1	2.46	0.45
2:B:1508:A:H2'	2:B:1509:A:N3	2.31	0.45
2:B:1854:A:C2'	2:B:1855:U:H5'	2.46	0.45
9:I:135:MET:HG3	9:I:137:LEU:HG	1.98	0.45
2:B:550:C:H2'	2:B:551:G:C8	2.48	0.45
2:B:488:G:H1'	2:B:492:A:N6	2.30	0.45
2:B:2425:A:C5'	2:B:2426:A:H3'	2.46	0.45
20:T:19:LYS:HA	20:T:23:ALA:HB2	1.98	0.45
2:B:464:U:H2'	2:B:465:G:O4'	2.16	0.45
2:B:1668:A:O2'	2:B:1674:G:N7	2.38	0.45
2:B:2345:G:H4'	2:B:2346:A:O5'	2.17	0.45
2:B:782:A:N7	3:C:219:VAL:HG21	2.32	0.45
2:B:782:A:H4'	2:B:783:A:O5'	2.16	0.45
16:P:30:TRP:HA	16:P:38:ARG:O	2.15	0.45
2:B:2487:G:H2'	2:B:2488:G:H8	1.82	0.45
2:B:942:G:O2'	2:B:943:A:H5'	2.15	0.45
2:B:477:A:H2'	2:B:478:A:C8	2.52	0.45
11:K:94:ILE:HG13	11:K:94:ILE:O	2.16	0.45
2:B:2300:C:H2'	2:B:2301:C:H6	1.80	0.45
18:R:86:GLN:HE21	18:R:86:GLN:HB2	1.63	0.45
2:B:1764:C:O2'	2:B:1765:U:H5'	2.16	0.45
23:W:43:LYS:HD3	23:W:77:LYS:HG2	1.99	0.45
6:F:62:GLN:HB2	6:F:91:ARG:HH11	1.80	0.45
24:X:2:ARG:O	24:X:10:ARG:HA	2.17	0.45
9:I:29:GLN:HA	9:I:29:GLN:NE2	2.31	0.45
14:N:28:LEU:HD12	14:N:44:LEU:HD21	1.99	0.45
15:O:111:ARG:NH1	15:O:112:GLU:HB2	2.27	0.45
30:3:21:PHE:O	30:3:22:LYS:O	2.35	0.45
3:C:65:ASP:OD2	3:C:101:ARG:HD3	2.17	0.45
18:R:61:ALA:HB1	18:R:98:ILE:H	1.80	0.45
24:X:12:VAL:O	24:X:27:ARG:HB2	2.17	0.45
3:C:244:VAL:HA	3:C:251:THR:H	1.82	0.45
2:B:244:A:H2'	2:B:245:G:O4'	2.15	0.45
2:B:68:G:H2'	2:B:69:C:C6	2.52	0.45
2:B:69:C:H2'	2:B:70:G:C8	2.50	0.45
19:S:13:SER:OG	19:S:16:LYS:HB2	2.17	0.45
22:V:9:ARG:HD2	22:V:41:GLU:HB3	1.98	0.45
1:A:21:G:H2'	1:A:22:U:H6	1.81	0.45
2:B:1465:G:H2'	2:B:1466:U:O4'	2.17	0.45
29:2:18:PHE:HD2	29:2:43:THR:HG21	1.82	0.45
4:D:62:LYS:N	4:D:63:PRO:CD	2.79	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:Z:35:VAL:HG22	26:Z:36:GLU:N	2.32	0.45
23:W:18:LYS:HD2	23:W:19:ARG:HD3	1.99	0.45
13:M:117:PHE:O	13:M:121:ALA:N	2.48	0.45
2:B:2315:G:H2'	2:B:2316:G:H8	1.82	0.45
4:D:107:VAL:HG13	4:D:203:VAL:CG2	2.46	0.45
16:P:74:GLN:HA	16:P:74:GLN:OE1	2.17	0.45
4:D:38:LYS:NZ	4:D:38:LYS:HB2	2.30	0.45
5:E:176:ASP:HB3	5:E:179:SER:CB	2.44	0.45
2:B:141:G:H5''	2:B:142:A:C8	2.51	0.45
5:E:58:LYS:CD	5:E:58:LYS:N	2.79	0.45
3:C:93:VAL:CG1	3:C:94:LEU:N	2.78	0.45
8:H:9:VAL:CG2	8:H:35:LYS:HD2	2.47	0.45
6:F:125:GLY:HA3	6:F:159:ALA:HB3	1.98	0.45
7:G:41:GLU:OE1	7:G:54:ARG:HG2	2.17	0.45
2:B:928:A:H2'	2:B:929:U:C6	2.52	0.45
19:S:34:ASP:HA	19:S:37:THR:OG1	2.17	0.45
9:I:102:ARG:HD3	9:I:141:ASP:OD1	2.17	0.45
2:B:2720:U:H2'	2:B:2721:A:H8	1.82	0.45
2:B:1104:C:H2'	2:B:1105:U:C6	2.51	0.45
2:B:1854:A:H2	2:B:2087:G:N3	2.13	0.45
28:1:36:LYS:HA	28:1:47:ILE:HA	1.98	0.45
1:A:65:U:O2'	1:A:66:A:H5'	2.17	0.45
22:V:60:VAL:HA	22:V:73:LYS:NZ	2.32	0.45
2:B:2746:U:H5''	7:G:137:LYS:HG2	1.99	0.45
2:B:644:A:H2'	2:B:644:A:N3	2.31	0.45
2:B:1190:G:H2'	2:B:1191:G:C8	2.52	0.45
16:P:111:GLU:H	16:P:111:GLU:CD	2.19	0.45
2:B:2708:G:H1'	14:N:71:ARG:NH2	2.31	0.45
2:B:779:U:OP1	3:C:48:ILE:HG13	2.17	0.45
2:B:1908:C:O2'	2:B:1909:C:H5'	2.17	0.45
2:B:2668:G:O2'	2:B:2669:G:H5'	2.16	0.45
2:B:2267:A:C3'	2:B:2267:A:H8	2.22	0.45
2:B:924:G:O2'	2:B:925:A:H5'	2.16	0.45
25:Y:37:LEU:HD22	25:Y:39:GLN:H	1.81	0.45
3:C:124:LYS:HB3	3:C:127:ASN:HD22	1.81	0.45
8:H:68:ARG:NH1	8:H:72:ILE:HD12	2.32	0.45
6:F:43:ILE:HA	6:F:46:LYS:CE	2.47	0.45
10:J:134:ALA:HB3	10:J:135:GLN:NE2	2.32	0.45
7:G:25:ILE:HG22	7:G:78:VAL:HG21	1.99	0.45
2:B:2316:G:H2'	2:B:2317:A:C8	2.52	0.45
4:D:203:VAL:HG13	4:D:203:VAL:O	2.16	0.45
4:D:8:LYS:HB2	4:D:201:LEU:HD21	1.99	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:5:ARG:HB3	21:U:6:ARG:H	1.65	0.45
21:U:73:ASN:OD1	21:U:75:ALA:HB3	2.16	0.45
12:L:2:ARG:HE	12:L:2:ARG:HB3	1.48	0.45
19:S:36:LEU:CD2	19:S:36:LEU:H	2.29	0.45
17:Q:30:VAL:HG22	17:Q:31:TYR:N	2.20	0.45
17:Q:10:ARG:NH1	17:Q:10:ARG:HB2	2.32	0.45
18:R:23:GLU:O	18:R:25:LEU:HD12	2.17	0.45
21:U:14:THR:HG21	21:U:64:ILE:CD1	2.41	0.45
5:E:69:ARG:HB2	5:E:70:SER:H	1.63	0.45
11:K:114:ILE:HG23	11:K:115:ILE:N	2.32	0.45
25:Y:23:ARG:HD3	25:Y:27:ASN:HD21	1.82	0.45
2:B:1176:U:H3'	2:B:1177:G:C8	2.52	0.45
2:B:2661:G:H2'	2:B:2662:A:C8	2.51	0.45
2:B:2489:U:H2'	2:B:2490:G:O4'	2.16	0.45
2:B:213:A:H2'	2:B:214:G:C8	2.51	0.45
30:3:31:ILE:HG12	30:3:31:ILE:O	2.17	0.45
30:3:31:ILE:HD11	30:3:34:LYS:NZ	2.31	0.45
14:N:38:LEU:N	14:N:39:PRO:CD	2.79	0.45
25:Y:37:LEU:O	25:Y:38:GLN:HB2	2.16	0.45
16:P:58:PHE:CE2	16:P:75:THR:HB	2.51	0.45
8:H:103:VAL:HG23	8:H:104:THR:N	2.32	0.45
10:J:4:PHE:HB3	17:Q:63:ARG:HH22	1.82	0.45
18:R:39:LEU:HA	18:R:49:ILE:HG21	1.99	0.45
22:V:30:ILE:HD13	22:V:72:VAL:HG11	1.99	0.45
15:O:67:ASN:O	15:O:69:ASP:N	2.44	0.45
11:K:110:LYS:CD	11:K:110:LYS:H	2.28	0.45
26:Z:26:LEU:CD1	26:Z:47:ILE:HD13	2.47	0.45
20:T:13:ALA:O	20:T:33:LYS:N	2.49	0.45
24:X:26:ARG:HD3	24:X:27:ARG:N	2.32	0.45
3:C:244:VAL:HB	3:C:248:GLY:HA2	1.98	0.45
2:B:77:G:O2'	2:B:78:U:H5'	2.17	0.45
2:B:1210:G:OP1	2:B:1212:G:H5'	2.17	0.45
11:K:23:VAL:HA	11:K:38:ILE:HD12	1.98	0.45
2:B:24:G:O2'	2:B:25:U:H5'	2.16	0.45
2:B:956:G:H1'	13:M:82:MET:HE1	1.99	0.45
2:B:1380:G:H1'	2:B:1569:A:N6	2.31	0.45
6:F:109:ARG:O	6:F:109:ARG:HD2	2.16	0.45
2:B:1777:U:O2'	2:B:1778:U:H5'	2.17	0.45
6:F:45:ASP:CG	6:F:47:LYS:HD3	2.38	0.45
13:M:113:ALA:HA	13:M:116:ALA:HB3	1.99	0.45
20:T:56:GLU:OE1	20:T:88:LYS:HD3	2.17	0.45
23:W:46:ALA:O	23:W:80:SER:HA	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:3:THR:O	10:J:4:PHE:O	2.33	0.45
17:Q:82:LEU:HD22	17:Q:88:GLU:OE2	2.17	0.45
2:B:2680:U:OP2	4:D:114:LYS:HB3	2.16	0.45
2:B:1021:A:H61	2:B:1142:A:H61	1.59	0.45
2:B:1064:C:H2'	2:B:1065:U:O4'	2.17	0.45
2:B:686:U:H1'	29:2:6:GLN:O	2.17	0.45
7:G:84:LYS:CD	7:G:133:LYS:HA	2.47	0.45
17:Q:4:LYS:HE3	17:Q:6:GLY:CA	2.47	0.45
3:C:100:ARG:O	3:C:101:ARG:HB2	2.17	0.45
6:F:135:ILE:HG13	6:F:137:PHE:H	1.80	0.45
2:B:664:G:O2'	2:B:665:U:H5'	2.16	0.45
1:A:105:G:O2'	1:A:106:G:H5'	2.16	0.45
1:A:32:U:H2'	1:A:33:G:C8	2.52	0.45
7:G:127:GLN:HA	7:G:127:GLN:OE1	2.17	0.45
6:F:120:SER:OG	6:F:127:TYR:HA	2.17	0.45
14:N:16:HIS:C	14:N:18:GLN:H	2.21	0.45
1:A:55:U:H2'	1:A:56:G:C8	2.52	0.45
2:B:1837:C:H2'	2:B:1899:A:H61	1.81	0.45
2:B:1807:G:C2'	2:B:1808:A:H5'	2.47	0.45
2:B:438:G:H2'	2:B:439:A:H8	1.80	0.45
2:B:2552:U:C2	2:B:2554:U:H5'	2.52	0.45
2:B:2639:A:H2'	2:B:2640:G:O4'	2.16	0.45
2:B:2362:C:O2'	2:B:2363:G:H5'	2.17	0.45
2:B:2109:U:H2'	2:B:2110:G:O4'	2.16	0.45
23:W:39:GLN:O	23:W:56:HIS:HB3	2.17	0.45
14:N:82:GLU:HB3	14:N:83:LEU:H	1.65	0.45
8:H:83:LYS:CG	8:H:90:LEU:HB3	2.47	0.45
18:R:10:LYS:N	18:R:10:LYS:HD2	2.32	0.45
2:B:2331:G:H2'	2:B:2332:C:H6	1.82	0.45
14:N:100:CYS:HA	27:O:41:HIS:ND1	2.30	0.45
25:Y:13:GLU:HA	25:Y:16:THR:HB	1.98	0.45
10:J:36:LEU:HD12	10:J:118:MET:O	2.16	0.45
2:B:2294:G:OP1	15:O:10:ARG:HD3	2.17	0.45
3:C:216:ARG:NH1	3:C:216:ARG:HG3	2.31	0.45
5:E:118:LEU:HD23	5:E:186:VAL:O	2.17	0.45
31:4:3:VAL:HG23	31:4:4:ARG:N	2.27	0.45
16:P:23:ASP:O	16:P:45:VAL:HA	2.17	0.45
19:S:18:ARG:HA	19:S:21:ALA:HB3	1.99	0.45
2:B:2491:U:H5''	2:B:2570:G:C5'	2.47	0.45
2:B:713:G:H2'	2:B:714:U:C6	2.52	0.45
2:B:552:U:O2'	2:B:553:G:H5'	2.16	0.45
2:B:1047:G:C2'	2:B:1110:G:H1	2.29	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:Z:39:ASP:CG	26:Z:44:ARG:HH11	2.20	0.45
19:S:59:GLU:OE2	19:S:66:ILE:HG23	2.17	0.45
19:S:66:ILE:HA	19:S:69:LEU:HD22	1.99	0.45
2:B:1513:U:O2'	2:B:1514:G:H5'	2.17	0.45
2:B:201:C:OP1	24:X:17:ARG:NH1	2.50	0.45
2:B:2400:G:O2'	2:B:2401:U:H5'	2.17	0.45
2:B:587:C:N3	12:L:33:ARG:NH2	2.64	0.45
2:B:2016:U:H2'	2:B:2017:U:C6	2.51	0.45
2:B:543:G:H2'	2:B:544:C:C5'	2.47	0.45
17:Q:92:LYS:O	17:Q:95:ALA:HB3	2.16	0.45
2:B:2861:U:H2'	2:B:2862:G:H8	1.81	0.45
18:R:62:GLU:O	18:R:96:VAL:HA	2.17	0.45
12:L:125:LEU:H	12:L:143:GLU:HG3	1.82	0.44
4:D:203:VAL:HG22	4:D:203:VAL:O	2.17	0.44
4:D:4:LEU:HD22	4:D:4:LEU:N	2.32	0.44
31:4:15:LYS:O	31:4:16:ILE:CB	2.62	0.44
10:J:54:ILE:HD12	10:J:55:ILE:H	1.81	0.44
2:B:2838:G:H2'	2:B:2839:G:H8	1.82	0.44
2:B:1017:G:H2'	2:B:1018:U:H6	1.81	0.44
2:B:518:G:H4'	19:S:18:ARG:CZ	2.47	0.44
4:D:79:LEU:HD22	4:D:79:LEU:N	2.31	0.44
2:B:1014:A:H2'	2:B:1015:U:C6	2.52	0.44
2:B:538:A:N6	2:B:555:G:O2'	2.47	0.44
20:T:7:LEU:HD22	20:T:9:LYS:HE3	1.99	0.44
19:S:69:LEU:HB3	19:S:107:VAL:CG2	2.47	0.44
1:A:87:U:H2'	1:A:88:C:H5''	1.99	0.44
12:L:70:LYS:O	12:L:73:ILE:HG12	2.18	0.44
2:B:2208:C:O2'	2:B:2209:G:H5'	2.17	0.44
3:C:68:ARG:NH1	3:C:128:THR:OG1	2.50	0.44
20:T:57:VAL:HG12	20:T:86:THR:OG1	2.17	0.44
8:H:84:ALA:CA	8:H:90:LEU:HA	2.47	0.44
2:B:1654:A:O2'	4:D:118:PHE:CB	2.50	0.44
17:Q:93:ILE:HG23	17:Q:94:LEU:N	2.33	0.44
22:V:83:LYS:O	22:V:85:LYS:N	2.49	0.44
22:V:44:HIS:HE1	22:V:85:LYS:HB2	1.79	0.44
2:B:2748:A:H1'	7:G:66:THR:HG23	2.00	0.44
7:G:2:ARG:O	7:G:5:LYS:HB2	2.17	0.44
6:F:89:THR:OG1	6:F:91:ARG:NH2	2.50	0.44
2:B:1060:U:H5	9:I:131:THR:HG22	1.82	0.44
4:D:122:VAL:HA	4:D:127:PHE:O	2.16	0.44
2:B:265:A:C8	2:B:266:G:H1'	2.51	0.44
2:B:603:A:N6	2:B:655:A:O4'	2.50	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:68:VAL:HG12	11:K:69:ARG:H	1.82	0.44
11:K:69:ARG:HD3	11:K:75:VAL:HG22	1.99	0.44
2:B:2394:C:H5''	12:L:63:LYS:HD3	1.99	0.44
11:K:52:LYS:HD3	11:K:55:ASP:OD2	2.16	0.44
20:T:64:LYS:HE3	20:T:64:LYS:HA	1.98	0.44
2:B:2557:G:H2'	2:B:2558:C:H6	1.82	0.44
2:B:418:C:H2'	2:B:419:U:H6	1.82	0.44
1:A:55:U:H4'	6:F:23:SER:OG	2.18	0.44
16:P:80:VAL:O	16:P:82:SER:N	2.51	0.44
9:I:44:LYS:O	9:I:48:ILE:HG13	2.16	0.44
2:B:2366:A:H2'	2:B:2367:G:O4'	2.18	0.44
18:R:79:ARG:O	18:R:81:LYS:HG2	2.18	0.44
8:H:78:VAL:HG11	8:H:145:ASN:HB3	1.99	0.44
8:H:83:LYS:O	8:H:84:ALA:HB2	2.17	0.44
7:G:61:TRP:O	7:G:64:ALA:HB3	2.18	0.44
22:V:23:ALA:O	22:V:24:ASN:HB2	2.17	0.44
22:V:70:ILE:HD13	22:V:70:ILE:H	1.78	0.44
7:G:102:ILE:CD1	7:G:116:LEU:HD11	2.47	0.44
7:G:166:GLU:HG2	7:G:167:VAL:N	2.32	0.44
10:J:58:ASN:O	10:J:59:ALA:HB3	2.17	0.44
20:T:12:ARG:HB3	20:T:12:ARG:HH11	1.81	0.44
2:B:1241:A:N3	2:B:1241:A:O4'	2.50	0.44
9:I:12:VAL:HG23	9:I:41:PHE:CE2	2.53	0.44
2:B:1316:U:O2'	2:B:1317:G:H5'	2.16	0.44
14:N:52:ILE:O	14:N:55:ALA:HB3	2.16	0.44
16:P:102:ARG:HD2	16:P:106:ALA:O	2.17	0.44
2:B:2578:G:H4'	2:B:2578:G:OP2	2.17	0.44
16:P:103:THR:HG22	16:P:104:GLY:N	2.33	0.44
2:B:2630:G:H2'	2:B:2631:G:H8	1.81	0.44
10:J:42:ALA:O	10:J:44:TYR:N	2.51	0.44
6:F:111:ARG:CD	6:F:111:ARG:N	2.80	0.44
6:F:33:ILE:HG22	6:F:34:THR:N	2.32	0.44
4:D:74:GLU:OE1	4:D:74:GLU:HA	2.17	0.44
27:O:27:LEU:HB2	27:O:37:HIS:O	2.17	0.44
2:B:1365:A:OP1	24:X:2:ARG:HG3	2.18	0.44
10:J:72:LYS:HB3	10:J:73:VAL:H	1.61	0.44
10:J:73:VAL:O	10:J:87:ALA:O	2.35	0.44
2:B:92:U:H3'	2:B:93:G:H8	1.82	0.44
2:B:636:G:H5'	2:B:639:U:OP1	2.17	0.44
2:B:1241:A:H3'	2:B:1242:U:H6	1.82	0.44
12:L:3:LEU:HB3	12:L:4:ASN:H	1.69	0.44
7:G:39:ALA:HB1	7:G:57:TYR:CE1	2.52	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2816:G:O2'	2:B:2817:U:H5'	2.18	0.44
2:B:846:U:O2'	2:B:847:U:H5''	2.17	0.44
3:C:76:VAL:HA	3:C:113:ASP:O	2.18	0.44
2:B:132:G:O2'	2:B:133:U:H5'	2.17	0.44
2:B:779:U:O2'	2:B:780:G:H5'	2.16	0.44
2:B:2430:A:H5'	2:B:2431:U:OP2	2.16	0.44
16:P:86:LYS:HB3	16:P:87:ARG:H	1.57	0.44
2:B:259:G:H2'	2:B:260:G:H8	1.81	0.44
23:W:37:VAL:CG1	23:W:38:ARG:HH11	2.30	0.44
8:H:134:VAL:HG13	8:H:135:HIS:N	2.29	0.44
2:B:2896:C:H2'	2:B:2897:U:H6	1.79	0.44
13:M:34:LYS:HZ1	22:V:82:TYR:HA	1.81	0.44
7:G:67:ALA:O	7:G:71:LEU:N	2.50	0.44
6:F:62:GLN:NE2	6:F:91:ARG:HE	2.14	0.44
4:D:11:MET:HA	4:D:24:VAL:O	2.17	0.44
4:D:36:GLN:O	4:D:37:VAL:C	2.56	0.44
2:B:299:A:N6	2:B:322:A:O2'	2.49	0.44
2:B:1491:G:H4'	3:C:70:LYS:NZ	2.33	0.44
10:J:59:ALA:C	10:J:61:LYS:H	2.20	0.44
2:B:2468:A:H2'	2:B:2476:A:C6	2.53	0.44
8:H:10:ALA:O	8:H:12:LEU:N	2.50	0.44
6:F:136:ILE:HG22	6:F:136:ILE:O	2.17	0.44
26:Z:2:LYS:HE3	26:Z:4:ILE:HD11	1.97	0.44
2:B:636:G:H3'	12:L:128:THR:HG21	1.99	0.44
15:O:88:LYS:O	15:O:89:ASP:HB3	2.18	0.44
2:B:1656:C:OP1	4:D:141:ARG:NH1	2.51	0.44
2:B:2391:G:O6	2:B:2425:A:H8	1.99	0.44
2:B:1946:U:H2'	2:B:1947:C:H6	1.82	0.44
26:Z:11:SER:OG	26:Z:13:ILE:HG13	2.17	0.44
2:B:67:U:H2'	2:B:68:G:H8	1.82	0.44
3:C:30:ALA:C	3:C:32:LEU:H	2.20	0.44
2:B:1881:C:H2'	2:B:1882:U:O4'	2.16	0.44
2:B:816:C:H2'	2:B:817:C:H6	1.82	0.44
3:C:42:ARG:HG3	3:C:46:GLY:O	2.17	0.44
20:T:48:GLN:HA	20:T:48:GLN:NE2	2.32	0.44
8:H:99:ILE:HG23	8:H:144:VAL:HG13	1.98	0.44
10:J:38:GLY:O	10:J:43:GLU:HB2	2.18	0.44
6:F:117:SER:C	6:F:119:LYS:H	2.20	0.44
6:F:34:THR:HA	6:F:89:THR:HA	1.98	0.44
24:X:29:LEU:H	24:X:29:LEU:CD2	2.24	0.44
7:G:132:LEU:N	7:G:132:LEU:HD23	2.33	0.44
2:B:32:C:O2'	2:B:33:C:H5'	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1441:G:H2'	2:B:1442:U:H6	1.81	0.44
16:P:94:ALA:C	16:P:95:LYS:HD2	2.38	0.44
3:C:244:VAL:HG12	3:C:250:GLN:N	2.31	0.44
11:K:37:ILE:O	11:K:38:ILE:HD13	2.17	0.44
2:B:547:A:H3'	2:B:548:G:C8	2.53	0.44
5:E:126:VAL:HG22	5:E:127:GLU:N	2.31	0.44
2:B:1656:C:H2'	2:B:1657:U:C6	2.48	0.44
16:P:101:GLU:O	16:P:102:ARG:HG2	2.18	0.44
16:P:97:TYR:C	16:P:99:LEU:N	2.70	0.44
5:E:95:LYS:HZ2	5:E:95:LYS:HB3	1.83	0.44
29:2:24:THR:O	29:2:28:ARG:HB2	2.18	0.44
28:1:36:LYS:HA	28:1:46:VAL:O	2.18	0.44
2:B:160:A:N6	2:B:167:A:H1'	2.33	0.44
2:B:2716:C:H2'	2:B:2717:C:H6	1.82	0.44
29:2:37:LYS:HE2	29:2:39:ARG:NH2	2.32	0.44
19:S:66:ILE:HG12	19:S:67:ASP:N	2.31	0.44
13:M:90:GLU:OE1	13:M:90:GLU:HA	2.16	0.44
2:B:205:G:O2'	2:B:206:U:OP2	2.35	0.44
3:C:221:GLY:C	3:C:223:ALA:H	2.21	0.44
2:B:1905:C:O2'	2:B:1929:G:H1'	2.17	0.44
6:F:131:VAL:C	6:F:133:GLU:H	2.21	0.44
8:H:81:ALA:HA	8:H:147:VAL:N	2.33	0.44
6:F:101:ARG:HE	6:F:105:ILE:HD11	1.83	0.44
1:A:43:C:O4'	6:F:91:ARG:CZ	2.66	0.44
4:D:11:MET:H	4:D:25:THR:HA	1.83	0.44
7:G:85:LYS:HZ3	7:G:163:TYR:HB2	1.82	0.44
7:G:168:VAL:HG12	7:G:170:THR:CG2	2.48	0.44
6:F:177:ARG:NE	6:F:177:ARG:HA	2.33	0.44
7:G:154:GLU:OE2	7:G:159:LYS:HB2	2.18	0.44
2:B:654:A:C3'	2:B:655:A:H5''	2.47	0.44
6:F:124:ARG:HD2	6:F:159:ALA:O	2.18	0.44
2:B:1536:C:H1'	2:B:1537:G:H22	1.81	0.44
2:B:350:G:H2'	2:B:351:C:C6	2.52	0.44
2:B:1341:G:N2	2:B:1398:C:H4'	2.33	0.44
11:K:1:ILE:HA	11:K:32:ALA:H	1.82	0.44
2:B:547:A:H2'	2:B:547:A:N3	2.32	0.44
23:W:67:LYS:HG3	23:W:69:GLU:HG3	1.99	0.44
7:G:143:VAL:O	7:G:147:LEU:HG	2.17	0.44
2:B:1789:A:H2'	2:B:1790:C:O4'	2.18	0.44
2:B:713:G:H21	2:B:718:A:H2	1.64	0.44
2:B:2849:U:OP1	16:P:92:ARG:NH1	2.50	0.44
2:B:439:A:H2'	2:B:440:C:O4'	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1498:C:O4'	2:B:1577:C:H4'	2.18	0.44
30:3:36:ALA:HB3	30:3:39:ARG:HB2	1.99	0.44
16:P:26:GLU:HB3	16:P:84:SER:HB2	2.00	0.44
2:B:1158:C:H5''	26:Z:30:ARG:CG	2.47	0.44
2:B:2767:C:O2'	2:B:2768:U:H5'	2.18	0.44
2:B:2269:G:H4'	23:W:18:LYS:HZ1	1.82	0.44
23:W:37:VAL:O	23:W:38:ARG:HG2	2.17	0.44
7:G:10:VAL:O	7:G:11:PRO:O	2.36	0.44
4:D:107:VAL:N	4:D:205:PRO:HA	2.28	0.44
2:B:1139:G:O2'	2:B:1143:A:N1	2.49	0.44
2:B:323:C:C5'	5:E:163:ASN:HD21	2.31	0.44
5:E:164:LEU:HB2	5:E:167:VAL:HG12	2.00	0.44
5:E:5:LEU:HG	5:E:12:LEU:CD2	2.48	0.44
11:K:98:ILE:HG12	11:K:114:ILE:HG13	2.00	0.44
2:B:1204:A:N1	2:B:1241:A:C2	2.86	0.44
2:B:1287:A:O2'	2:B:1288:G:H5'	2.17	0.44
2:B:1076:C:H2'	2:B:1077:A:C8	2.53	0.44
2:B:1301:A:N3	2:B:1301:A:H2'	2.33	0.44
2:B:1047:G:O2'	2:B:1110:G:N1	2.43	0.44
2:B:208:C:H2'	2:B:209:C:H6	1.80	0.44
2:B:2851:A:H2'	2:B:2852:G:H8	1.83	0.44
2:B:378:C:C2'	2:B:379:G:H5'	2.48	0.44
2:B:2109:U:O2'	2:B:2110:G:H5'	2.17	0.44
14:N:2:ARG:HD2	14:N:5:LYS:HB2	2.00	0.44
23:W:37:VAL:HB	23:W:38:ARG:HD3	2.00	0.44
12:L:95:LEU:O	12:L:100:ILE:HG22	2.18	0.44
8:H:90:LEU:HD11	8:H:125:THR:HA	2.00	0.44
10:J:4:PHE:HB3	10:J:44:TYR:CE2	2.53	0.44
2:B:2676:C:O2'	2:B:2677:G:H5'	2.18	0.44
31:4:2:LYS:O	31:4:35:GLN:HA	2.18	0.44
2:B:2262:U:H4'	2:B:2328:A:C2	2.53	0.44
10:J:35:ARG:NE	10:J:140:LEU:HD11	2.18	0.44
2:B:1059:G:H2'	2:B:1060:U:C5	2.52	0.44
5:E:181:ILE:HD13	12:L:2:ARG:HE	1.83	0.44
7:G:166:GLU:CD	7:G:166:GLU:H	2.21	0.44
20:T:2:ILE:HB	20:T:3:ARG:HH11	1.82	0.44
18:R:25:LEU:HD13	18:R:94:THR:OG1	2.18	0.44
9:I:19:PRO:HG2	9:I:22:PRO:HB2	2.00	0.44
13:M:12:MET:CB	13:M:72:PRO:HD2	2.42	0.44
22:V:26:PHE:HE1	22:V:89:ILE:HG13	1.82	0.44
2:B:1516:G:O2'	2:B:1517:G:H5'	2.18	0.44
20:T:69:ARG:HA	20:T:69:ARG:HD2	1.82	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:15:GLY:C	21:U:16:LYS:HZ2	2.22	0.44
18:R:15:SER:O	18:R:16:GLU:C	2.56	0.44
2:B:1441:G:O2'	2:B:1442:U:H5'	2.17	0.44
7:G:145:ALA:HB1	7:G:148:ARG:HH21	1.82	0.44
14:N:13:ASN:OD1	14:N:13:ASN:N	2.49	0.44
2:B:1324:G:H1'	2:B:1616:A:C6	2.53	0.44
2:B:1674:G:N2	2:B:1677:A:N1	2.65	0.44
2:B:460:A:H2'	2:B:461:C:O4'	2.18	0.44
2:B:620:G:N3	2:B:620:G:H5'	2.33	0.44
2:B:2784:U:H2'	2:B:2785:C:C6	2.53	0.44
6:F:70:ARG:O	6:F:80:GLN:HA	2.18	0.44
19:S:13:SER:O	19:S:14:ALA:HB2	2.17	0.44
2:B:2853:C:H2'	2:B:2854:G:C8	2.53	0.44
2:B:1653:G:H3'	14:N:2:ARG:HG3	1.99	0.44
29:2:3:ARG:HA	29:2:3:ARG:NE	2.33	0.44
2:B:1126:A:H4'	2:B:1127:A:O5'	2.17	0.44
9:I:63:ASP:C	9:I:65:SER:H	2.21	0.44
31:4:30:GLU:HA	31:4:31:PRO:HD3	1.85	0.44
13:M:29:GLY:HA2	13:M:106:ASP:HB2	2.00	0.44
2:B:1292:G:H2'	2:B:1293:C:C6	2.53	0.44
3:C:124:LYS:HE2	3:C:127:ASN:ND2	2.31	0.43
10:J:13:ARG:O	10:J:52:ASP:HA	2.18	0.43
9:I:79:LEU:HD23	9:I:108:ILE:CD1	2.49	0.43
22:V:63:ILE:N	22:V:70:ILE:CG1	2.75	0.43
10:J:73:VAL:HG23	10:J:74:TYR:N	2.21	0.43
2:B:2838:G:H1'	14:N:45:ARG:CZ	2.48	0.43
2:B:796:C:O2'	2:B:797:G:H5'	2.18	0.43
25:Y:2:LYS:HD2	25:Y:2:LYS:N	2.31	0.43
2:B:2250:G:H8	2:B:2250:G:O5'	2.01	0.43
20:T:12:ARG:HG3	20:T:35:ALA:H	1.82	0.43
25:Y:29:ARG:HB2	25:Y:29:ARG:NH2	2.33	0.43
25:Y:17:GLU:HB3	25:Y:53:VAL:CG1	2.46	0.43
13:M:64:TRP:HB2	13:M:104:GLU:CB	2.48	0.43
12:L:89:VAL:O	12:L:89:VAL:HG13	2.17	0.43
17:Q:52:ARG:C	17:Q:54:ARG:H	2.22	0.43
27:O:52:LYS:HD3	27:O:52:LYS:O	2.18	0.43
2:B:2698:U:H2'	2:B:2699:C:H6	1.83	0.43
2:B:845:A:C2	2:B:847:U:H1'	2.52	0.43
2:B:932:U:H5'	2:B:933:A:OP1	2.18	0.43
30:3:31:ILE:HD11	30:3:34:LYS:CD	2.47	0.43
2:B:257:C:H2'	2:B:258:G:O4'	2.19	0.43
2:B:2206:C:O2'	2:B:2207:C:H5'	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2284:A:O2'	2:B:2285:C:H5'	2.18	0.43
20:T:29:THR:HG22	20:T:86:THR:HB	1.99	0.43
16:P:75:THR:CG2	16:P:76:HIS:H	2.12	0.43
8:H:128:HIS:HB3	8:H:144:VAL:HG21	2.00	0.43
7:G:3:VAL:HG23	7:G:4:ALA:N	2.33	0.43
6:F:168:LEU:C	6:F:170:ALA:N	2.71	0.43
4:D:107:VAL:HG21	4:D:177:VAL:HG13	2.00	0.43
14:N:98:LEU:C	14:N:99:LYS:HG2	2.38	0.43
19:S:24:ILE:HG23	19:S:32:ALA:CB	2.41	0.43
15:O:35:ILE:CG1	15:O:66:GLY:HA2	2.48	0.43
3:C:6:LYS:O	3:C:8:THR:N	2.44	0.43
13:M:72:PRO:O	13:M:91:TYR:O	2.36	0.43
2:B:2467:C:C2'	2:B:2468:A:H5'	2.48	0.43
2:B:665:U:H2'	2:B:666:A:H8	1.83	0.43
9:I:107:GLU:HA	9:I:110:GLN:OE1	2.18	0.43
2:B:2286:G:H5'	2:B:2286:G:C8	2.53	0.43
16:P:59:THR:N	16:P:72:VAL:HA	2.30	0.43
9:I:138:VAL:HG12	9:I:139:VAL:N	2.32	0.43
2:B:79:C:H2'	2:B:346:A:H8	1.82	0.43
2:B:1843:C:H2'	2:B:1844:C:H6	1.83	0.43
8:H:46:PHE:HD2	8:H:50:ARG:HH21	1.66	0.43
9:I:56:VAL:HG13	9:I:58:ILE:HD11	2.00	0.43
2:B:2359:C:H4'	30:3:53:ASP:OD2	2.19	0.43
2:B:2233:U:H2'	2:B:2234:G:H8	1.83	0.43
2:B:2333:A:H5'	2:B:2335:A:H1'	2.01	0.43
2:B:902:C:H2'	2:B:903:C:C6	2.53	0.43
19:S:57:ASN:O	19:S:61:ASN:HB2	2.17	0.43
2:B:839:U:H1'	2:B:1191:G:H1'	1.99	0.43
2:B:766:U:H2'	2:B:767:U:C6	2.53	0.43
2:B:877:A:H2'	2:B:899:A:N1	2.33	0.43
2:B:1183:U:H2'	2:B:1184:U:C6	2.53	0.43
2:B:2588:G:O2'	2:B:2589:A:H5'	2.18	0.43
12:L:28:GLY:HA3	18:R:82:HIS:NE2	2.33	0.43
23:W:23:LYS:CG	23:W:24:ARG:N	2.81	0.43
2:B:95:A:H4'	25:Y:38:GLN:CD	2.37	0.43
6:F:34:THR:OG1	6:F:154:THR:HB	2.19	0.43
2:B:1064:C:C5'	9:I:88:GLY:H	2.31	0.43
24:X:52:ALA:O	24:X:53:LYS:HB3	2.18	0.43
5:E:105:LEU:O	5:E:106:LYS:HG3	2.18	0.43
2:B:527:C:H1'	2:B:528:A:C5	2.53	0.43
19:S:95:ARG:O	19:S:96:ILE:O	2.36	0.43
2:B:1779:U:C5	2:B:1784:A:N7	2.78	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:Z:4:ILE:HG22	26:Z:6:ILE:HD11	2.00	0.43
26:Z:7:THR:HG22	26:Z:8:GLN:N	2.33	0.43
8:H:41:LYS:CA	8:H:44:ILE:HG12	2.48	0.43
2:B:1684:G:H2'	2:B:1685:C:C6	2.53	0.43
7:G:171:LYS:CD	7:G:172:GLU:HG2	2.48	0.43
3:C:1:ALA:HB3	3:C:19:VAL:CG2	2.48	0.43
2:B:2487:G:H2'	2:B:2488:G:C8	2.52	0.43
2:B:1257:C:O2'	5:E:79:ARG:HB2	2.18	0.43
2:B:1570:A:H5'	3:C:35:LYS:HG2	2.01	0.43
13:M:55:ARG:O	13:M:56:ALA:HB2	2.18	0.43
5:E:155:GLU:HA	5:E:158:PHE:HB3	2.00	0.43
2:B:2553:G:H2'	2:B:2554:U:H4'	2.01	0.43
18:R:20:VAL:HG12	18:R:21:ARG:N	2.34	0.43
2:B:1994:C:OP1	4:D:131:ASP:HA	2.18	0.43
23:W:25:PHE:H	23:W:66:VAL:HG23	1.83	0.43
5:E:44:ARG:HE	5:E:87:ALA:HB1	1.83	0.43
8:H:89:LYS:C	8:H:90:LEU:HD12	2.38	0.43
10:J:4:PHE:C	10:J:44:TYR:CE2	2.92	0.43
22:V:4:ILE:CB	22:V:63:ILE:HG13	2.39	0.43
2:B:2144:G:C4	2:B:2146:C:H4'	2.53	0.43
22:V:2:PHE:HZ	22:V:55:GLU:HB2	1.81	0.43
6:F:115:GLY:HA3	6:F:177:ARG:HD2	2.00	0.43
10:J:80:HIS:O	10:J:81:ILE:C	2.57	0.43
3:C:65:ASP:CG	3:C:101:ARG:HD3	2.39	0.43
2:B:2190:G:H2'	2:B:2191:A:O4'	2.18	0.43
2:B:1442:U:H2'	2:B:1443:U:C6	2.54	0.43
2:B:2183:A:H2'	2:B:2184:A:H8	1.76	0.43
2:B:930:G:C1'	26:Z:24:LEU:HD11	2.49	0.43
19:S:17:VAL:O	19:S:19:LEU:N	2.48	0.43
2:B:2547:A:H2'	2:B:2548:U:H6	1.79	0.43
2:B:2547:A:H5''	11:K:28:HIS:NE2	2.33	0.43
24:X:36:ARG:HH21	24:X:36:ARG:CG	2.31	0.43
2:B:1287:A:H3'	2:B:1288:G:N2	2.32	0.43
9:I:85:ILE:CD1	9:I:137:LEU:HD21	2.46	0.43
5:E:150:THR:OG1	5:E:151:GLY:N	2.52	0.43
17:Q:96:ASP:O	17:Q:98:ALA:N	2.44	0.43
2:B:1400:U:O2'	2:B:1401:G:H5'	2.18	0.43
2:B:1870:C:H5''	2:B:1871:A:C2	2.54	0.43
2:B:1416:G:O2'	2:B:1417:C:H6	2.01	0.43
5:E:119:ILE:HD11	5:E:185:LYS:HB3	2.00	0.43
2:B:960:A:H61	13:M:82:MET:CE	2.31	0.43
5:E:134:LEU:HA	5:E:137:LYS:CB	2.48	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2630:G:H2'	2:B:2631:G:C8	2.54	0.43
2:B:1973:G:H2'	2:B:1974:C:C6	2.53	0.43
2:B:241:A:O2'	30:3:2:LYS:NZ	2.52	0.43
8:H:64:ALA:C	8:H:66:ASN:H	2.22	0.43
2:B:2408:U:H2'	2:B:2409:G:H8	1.82	0.43
1:A:116:G:O2'	1:A:117:G:H5'	2.18	0.43
8:H:90:LEU:HD22	8:H:123:ARG:CB	2.46	0.43
17:Q:105:PHE:O	17:Q:109:VAL:HG23	2.19	0.43
13:M:35:ALA:O	13:M:128:THR:HA	2.18	0.43
7:G:11:PRO:HD2	7:G:14:VAL:HG21	2.00	0.43
7:G:8:VAL:HG22	7:G:68:ARG:HD2	2.00	0.43
4:D:159:LYS:O	4:D:161:MET:HG2	2.19	0.43
26:Z:16:LEU:HD23	26:Z:19:HIS:CD2	2.53	0.43
3:C:69:ASN:O	3:C:70:LYS:C	2.56	0.43
5:E:5:LEU:HB2	5:E:10:SER:HB2	2.00	0.43
2:B:1279:G:H4'	14:N:31:HIS:CD2	2.54	0.43
2:B:825:A:O2'	12:L:54:GLN:HB3	2.18	0.43
21:U:15:GLY:HA3	21:U:16:LYS:NZ	2.32	0.43
2:B:627:A:H61	12:L:112:LEU:HD21	1.84	0.43
2:B:1825:U:O4'	3:C:251:THR:HG21	2.18	0.43
2:B:2739:U:O2'	2:B:2740:A:H5'	2.18	0.43
2:B:2392:A:H4'	30:3:27:ASN:ND2	2.33	0.43
2:B:988:A:C8	26:Z:13:ILE:HD12	2.54	0.43
19:S:88:ARG:HH21	19:S:88:ARG:HG3	1.83	0.43
13:M:54:THR:O	13:M:56:ALA:N	2.51	0.43
2:B:437:U:H2'	2:B:438:G:C8	2.53	0.43
2:B:2010:G:H2'	2:B:2011:U:C6	2.54	0.43
4:D:61:THR:OG1	4:D:63:PRO:HD2	2.17	0.43
19:S:1:MET:HA	19:S:1:MET:CE	2.49	0.43
9:I:5:GLN:HG2	9:I:6:ALA:N	2.34	0.43
2:B:2455:G:H2'	2:B:2456:C:C6	2.53	0.43
2:B:2727:A:OP1	11:K:66:LYS:NZ	2.52	0.43
2:B:1829:A:H3'	2:B:1830:C:C6	2.53	0.43
25:Y:37:LEU:HD23	25:Y:37:LEU:HA	1.79	0.43
20:T:59:ASN:O	20:T:83:ALA:O	2.36	0.43
6:F:67:THR:OG1	6:F:85:GLY:HA3	2.19	0.43
6:F:39:VAL:HB	6:F:84:ILE:HD12	2.00	0.43
2:B:2899:A:H2'	2:B:2900:A:C8	2.54	0.43
19:S:47:VAL:O	19:S:50:VAL:HB	2.18	0.43
2:B:2748:A:H5''	7:G:3:VAL:HG21	2.01	0.43
2:B:279:A:H2'	2:B:280:U:H5'	1.99	0.43
2:B:2020:A:O2'	2:B:2021:C:H5'	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1714:U:H3'	2:B:1715:G:C5'	2.44	0.43
2:B:306:U:H2'	2:B:307:G:O4'	2.17	0.43
11:K:111:PHE:O	11:K:113:LYS:N	2.52	0.43
2:B:927:A:O2'	2:B:928:A:H5'	2.19	0.43
2:B:1317:G:H2'	2:B:1318:U:O4'	2.19	0.43
7:G:104:LEU:HB2	7:G:112:VAL:CG1	2.48	0.43
2:B:566:U:O2'	2:B:567:U:H5'	2.18	0.43
5:E:23:PHE:H	5:E:114:ARG:HH12	1.65	0.43
3:C:196:ASN:O	3:C:197:ALA:HB3	2.18	0.43
19:S:66:ILE:HD13	19:S:66:ILE:N	2.32	0.43
2:B:2405:G:H2'	2:B:2411:A:N6	2.32	0.43
2:B:2445:G:O2'	2:B:2446:G:H5'	2.19	0.43
15:O:16:ARG:HD3	15:O:19:GLN:NE2	2.34	0.43
2:B:2057:G:H2'	2:B:2058:A:O4'	2.19	0.43
3:C:4:LYS:HB3	3:C:5:CYS:H	1.45	0.43
2:B:2259:U:H2'	2:B:2260:C:H6	1.84	0.43
5:E:117:ARG:HG2	5:E:184:ASP:O	2.17	0.43
2:B:1623:G:O2'	2:B:1624:U:H5'	2.18	0.43
7:G:46:ASP:HB3	7:G:47:ASN:H	1.68	0.43
20:T:38:ALA:HB2	20:T:81:LYS:CE	2.49	0.43
10:J:51:GLY:O	10:J:52:ASP:O	2.37	0.43
18:R:49:ILE:HD13	18:R:53:PHE:O	2.18	0.43
6:F:104:THR:C	6:F:108:PRO:HG2	2.38	0.43
4:D:107:VAL:N	4:D:206:ALA:H	2.17	0.43
4:D:31:ALA:O	4:D:52:THR:HG23	2.18	0.43
4:D:68:PHE:HE2	4:D:75:ALA:O	2.02	0.43
24:X:52:ALA:O	24:X:54:GLY:N	2.46	0.43
18:R:31:GLU:H	18:R:63:VAL:HG22	1.84	0.43
2:B:1434:A:H62	2:B:1558:C:H42	1.67	0.43
15:O:10:ARG:HG2	15:O:10:ARG:O	2.19	0.43
4:D:121:THR:O	4:D:122:VAL:HB	2.18	0.43
1:A:32:U:O2'	1:A:52:A:N6	2.51	0.43
16:P:60:VAL:O	16:P:70:GLU:HA	2.18	0.43
2:B:2684:U:H4'	11:K:75:VAL:HG23	2.01	0.43
2:B:108:G:O2'	2:B:109:C:H5'	2.19	0.43
2:B:2719:G:H4'	2:B:2846:G:O3'	2.19	0.43
2:B:1076:C:H2'	2:B:1077:A:H8	1.82	0.43
11:K:1:ILE:HD12	11:K:1:ILE:N	2.33	0.43
2:B:1577:C:H2'	2:B:1578:U:O4'	2.19	0.43
2:B:2636:C:H2'	2:B:2637:U:H6	1.84	0.43
3:C:107:LYS:HD3	3:C:193:GLU:HB2	2.00	0.43
2:B:1821:A:H2'	2:B:1822:C:C6	2.54	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:857:G:C2'	2:B:858:G:H5'	2.48	0.43
20:T:81:LYS:HG3	20:T:82:LYS:N	2.34	0.43
11:K:62:VAL:CG1	11:K:102:VAL:HG12	2.48	0.43
10:J:43:GLU:O	10:J:45:THR:N	2.52	0.43
6:F:163:GLU:HG2	6:F:163:GLU:O	2.18	0.43
1:A:43:C:O2'	6:F:91:ARG:HD2	2.19	0.43
4:D:106:LYS:O	4:D:107:VAL:HB	2.18	0.43
2:B:2262:U:H2'	2:B:2263:C:H6	1.84	0.43
2:B:2329:U:H2'	2:B:2330:G:H8	1.84	0.43
2:B:1060:U:C1'	2:B:1062:G:H5'	2.49	0.43
5:E:104:ALA:O	5:E:106:LYS:N	2.47	0.43
2:B:483:A:O4'	21:U:44:HIS:HB3	2.19	0.43
4:D:184:ARG:NH2	16:P:6:GLN:HE22	2.17	0.43
10:J:72:LYS:HD3	10:J:73:VAL:HG22	2.00	0.43
8:H:6:LEU:O	8:H:7:ASP:HB2	2.19	0.43
14:N:28:LEU:O	14:N:32:GLU:N	2.52	0.43
15:O:41:ALA:HB1	15:O:42:PRO:HD2	2.01	0.43
2:B:83:A:H2'	2:B:84:A:N7	2.33	0.43
2:B:2720:U:H5''	16:P:52:ARG:HH21	1.84	0.43
2:B:1418:G:H2'	2:B:1579:A:H62	1.83	0.43
2:B:1579:A:H2'	2:B:1580:A:H8	1.79	0.43
6:F:23:SER:C	6:F:25:MET:N	2.71	0.43
2:B:1838:C:N4	2:B:1898:U:H2'	2.34	0.43
6:F:71:LYS:HG2	6:F:73:VAL:CG2	2.48	0.43
2:B:2215:C:H2'	2:B:2216:G:C8	2.54	0.43
2:B:1893:C:C2'	2:B:1894:C:H5'	2.49	0.43
2:B:476:G:H4'	2:B:502:A:N1	2.34	0.43
11:K:50:LYS:HD3	11:K:94:ILE:HD11	2.01	0.43
2:B:2623:G:H2'	2:B:2624:G:H8	1.84	0.43
2:B:57:C:H2'	2:B:58:G:O4'	2.18	0.43
18:R:7:SER:CB	18:R:22:LEU:HD13	2.49	0.43
2:B:1874:C:H2'	2:B:1875:G:O4'	2.19	0.43
27:O:50:GLY:O	27:O:51:ARG:C	2.57	0.43
2:B:740:C:O2'	2:B:741:U:H5'	2.19	0.43
1:A:112:G:H2'	1:A:113:C:H6	1.84	0.43
6:F:43:ILE:HA	6:F:46:LYS:HZ3	1.82	0.43
2:B:2898:U:O2	10:J:134:ALA:HB1	2.19	0.43
25:Y:56:LEU:C	25:Y:58:ASN:H	2.22	0.43
2:B:1180:U:O2'	2:B:1181:U:H5'	2.18	0.43
11:K:12:ASN:O	11:K:13:SER:HB3	2.19	0.43
2:B:1812:U:H4'	3:C:44:ASN:OD1	2.18	0.43
1:A:106:G:H2'	1:A:107:G:O4'	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:84:PHE:O	21:U:85:ARG:HB2	2.19	0.43
3:C:209:ALA:O	3:C:213:ARG:HB2	2.19	0.43
25:Y:41:HIS:O	25:Y:44:LYS:HB3	2.18	0.43
25:Y:44:LYS:HZ3	25:Y:48:ARG:NH2	2.16	0.43
7:G:88:LEU:O	7:G:88:LEU:HD12	2.19	0.43
13:M:6:ARG:HD2	13:M:8:LYS:HZ3	1.82	0.43
14:N:12:ARG:HG2	14:N:16:HIS:CG	2.54	0.43
17:Q:73:ILE:HG23	17:Q:74:SER:O	2.18	0.43
2:B:244:A:OP2	30:3:7:ARG:NH2	2.52	0.43
4:D:163:GLY:O	4:D:164:GLN:C	2.57	0.43
4:D:69:ALA:C	4:D:71:ALA:N	2.73	0.43
2:B:325:G:O2'	2:B:326:G:H5'	2.18	0.43
2:B:600:G:H2'	2:B:601:C:H6	1.82	0.43
2:B:517:C:OP2	27:0:9:ARG:NH2	2.52	0.43
30:3:50:SER:O	30:3:52:GLY:N	2.52	0.43
2:B:1829:A:H3'	2:B:1830:C:H6	1.83	0.43
2:B:122:G:O2'	2:B:123:G:H5'	2.19	0.43
6:F:1:ALA:CA	6:F:4:HIS:HB3	2.49	0.43
2:B:2561:U:O2	11:K:22:LYS:HE2	2.19	0.43
2:B:723:C:H2'	2:B:724:U:H6	1.84	0.43
2:B:1458:U:O3'	2:B:1459:G:H4'	2.19	0.43
3:C:86:ARG:CD	3:C:90:ILE:HD11	2.49	0.43
20:T:34:VAL:HG21	20:T:43:ILE:HD11	2.01	0.43
8:H:91:PHE:HB3	8:H:92:GLY:H	1.56	0.43
10:J:14:ASP:O	10:J:53:TYR:HB2	2.19	0.43
8:H:31:VAL:HG12	8:H:32:PRO:HD2	2.00	0.43
6:F:99:PHE:HD1	6:F:102:LEU:HD11	1.82	0.43
6:F:174:PHE:O	6:F:175:PRO:C	2.57	0.43
4:D:24:VAL:HG21	4:D:188:LEU:HB3	2.00	0.43
17:Q:17:LEU:HD11	17:Q:28:SER:O	2.19	0.43
2:B:1432:G:O2'	2:B:1433:A:H5'	2.18	0.43
30:3:21:PHE:CE2	30:3:61:LEU:HD12	2.53	0.43
13:M:126:ILE:H	13:M:126:ILE:CD1	2.24	0.43
2:B:329:G:C6	21:U:16:LYS:NZ	2.83	0.43
2:B:1438:U:C4	2:B:1552:A:N6	2.87	0.43
4:D:22:ILE:HA	4:D:23:PRO:HD3	1.90	0.43
2:B:426:C:O2'	2:B:427:U:H5'	2.19	0.43
21:U:3:LYS:HB3	21:U:82:VAL:HG21	2.00	0.43
2:B:152:A:H2'	2:B:153:U:H6	1.80	0.43
30:3:18:LYS:HD2	30:3:20:GLY:N	2.32	0.43
12:L:65:GLY:O	12:L:66:PHE:CB	2.67	0.43
2:B:1152:C:H2'	2:B:1153:C:C6	2.54	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:40:ARG:HG3	5:E:40:ARG:HH11	1.84	0.43
30:3:33:THR:HG23	30:3:34:LYS:N	2.34	0.43
2:B:2299:U:H2'	2:B:2300:C:C6	2.53	0.43
2:B:2449:U:H4'	2:B:2450:A:OP1	2.19	0.43
2:B:767:U:O2'	2:B:768:G:H5'	2.19	0.43
5:E:115:GLN:O	5:E:117:ARG:N	2.52	0.43
2:B:386:G:H4'	2:B:387:U:OP2	2.18	0.43
2:B:497:A:H2'	2:B:498:G:C8	2.54	0.43
2:B:1311:G:H21	2:B:1603:A:H62	1.66	0.43
2:B:1370:C:H2'	2:B:1371:G:O4'	2.18	0.43
20:T:81:LYS:HB2	20:T:81:LYS:NZ	2.32	0.42
8:H:81:ALA:CA	8:H:146:VAL:HA	2.45	0.42
4:D:119:ALA:CB	4:D:165:MET:HB2	2.49	0.42
2:B:2729:G:O2'	2:B:2730:C:H5'	2.18	0.42
4:D:65:ALA:O	4:D:68:PHE:HB2	2.19	0.42
2:B:1064:C:O2'	2:B:1065:U:H5'	2.19	0.42
6:F:11:VAL:HG13	6:F:171:ALA:CB	2.49	0.42
16:P:5:LYS:CA	16:P:8:GLU:HB2	2.47	0.42
5:E:161:ALA:HA	5:E:164:LEU:HD12	2.01	0.42
2:B:705:A:O2'	3:C:6:LYS:HG3	2.19	0.42
13:M:72:PRO:HB3	13:M:89:VAL:HG12	1.99	0.42
2:B:774:G:H5''	3:C:47:ARG:HH21	1.83	0.42
14:N:33:ILE:HG22	14:N:114:GLU:HG3	2.01	0.42
21:U:85:ARG:HA	21:U:85:ARG:HE	1.82	0.42
25:Y:23:ARG:O	25:Y:25:GLN:N	2.52	0.42
2:B:1533:C:H2'	2:B:1534:U:C6	2.54	0.42
2:B:1485:U:C2	2:B:1486:U:C5	3.07	0.42
2:B:1669:A:N3	2:B:1669:A:H2'	2.33	0.42
13:M:50:ARG:HD3	13:M:65:ILE:HD11	2.01	0.42
5:E:37:ALA:C	5:E:39:ALA:N	2.72	0.42
13:M:56:ALA:H	13:M:58:LYS:H	1.66	0.42
2:B:1476:U:O2'	2:B:1477:A:P	2.77	0.42
2:B:2240:U:O2'	2:B:2241:A:H5'	2.18	0.42
2:B:839:U:H2'	2:B:840:C:H6	1.83	0.42
9:I:63:ASP:O	9:I:65:SER:N	2.51	0.42
19:S:97:LEU:N	19:S:97:LEU:HD22	2.34	0.42
9:I:38:CYS:O	9:I:42:ASN:ND2	2.52	0.42
1:A:14:U:H5''	1:A:70:C:O2'	2.19	0.42
2:B:1754:A:H2'	2:B:1755:A:C8	2.54	0.42
2:B:1472:C:O2'	2:B:1473:G:H5'	2.18	0.42
3:C:123:ILE:HD12	3:C:135:PRO:HD2	2.00	0.42
21:U:49:PRO:HA	21:U:53:GLN:NE2	2.15	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:H:29:PHE:C	8:H:31:VAL:H	2.21	0.42
7:G:79:THR:HG22	7:G:80:GLU:N	2.33	0.42
7:G:7:PRO:O	7:G:8:VAL:HB	2.19	0.42
2:B:2881:U:H2'	2:B:2882:A:C8	2.52	0.42
2:B:2882:A:H2'	2:B:2883:A:O4'	2.19	0.42
4:D:34:VAL:O	4:D:34:VAL:HG23	2.17	0.42
22:V:38:LEU:HD21	22:V:65:VAL:HG21	2.00	0.42
2:B:686:U:O2	29:2:8:SER:HB3	2.18	0.42
24:X:53:LYS:O	24:X:57:VAL:HG23	2.19	0.42
2:B:2191:A:H5'	2:B:2192:U:OP2	2.19	0.42
6:F:134:GLN:HB2	6:F:149:ARG:CB	2.49	0.42
11:K:106:LEU:HD23	11:K:114:ILE:HD13	1.99	0.42
12:L:77:ILE:HG22	12:L:78:ARG:H	1.84	0.42
25:Y:23:ARG:HH11	25:Y:23:ARG:HG2	1.84	0.42
12:L:30:THR:OG1	12:L:30:THR:O	2.34	0.42
30:3:19:GLY:O	30:3:20:GLY:O	2.36	0.42
2:B:1824:G:O3'	3:C:246:PRO:HD3	2.19	0.42
22:V:58:SER:O	22:V:73:LYS:HE3	2.18	0.42
2:B:2786:U:O2'	4:D:66:GLY:HA3	2.19	0.42
2:B:1449:G:O2'	2:B:1450:G:H5'	2.19	0.42
2:B:2249:U:N3	2:B:2253:G:OP2	2.46	0.42
13:M:45:GLN:HE22	13:M:125:PRO:CG	2.32	0.42
22:V:9:ARG:NH2	22:V:12:GLN:HA	2.34	0.42
2:B:1360:G:C2'	2:B:1361:G:H5'	2.49	0.42
2:B:1333:G:O2'	2:B:1334:G:H5'	2.18	0.42
30:3:60:CYS:O	30:3:62:PRO:HD3	2.19	0.42
2:B:120:U:H4'	2:B:121:G:H5''	2.02	0.42
23:W:37:VAL:C	23:W:39:GLN:N	2.71	0.42
23:W:47:GLY:O	23:W:49:ASN:N	2.51	0.42
8:H:128:HIS:O	8:H:143:ILE:HA	2.19	0.42
6:F:87:LYS:CG	6:F:88:VAL:H	2.32	0.42
4:D:90:PHE:C	4:D:92:VAL:H	2.23	0.42
2:B:2305:U:C4'	6:F:130:GLY:HA3	2.49	0.42
21:U:73:ASN:O	21:U:75:ALA:N	2.47	0.42
9:I:27:LEU:HB2	9:I:32:VAL:HG21	2.01	0.42
19:S:24:ILE:HG22	19:S:25:ARG:N	2.34	0.42
19:S:71:VAL:O	19:S:71:VAL:HG22	2.19	0.42
17:Q:4:LYS:CG	17:Q:7:VAL:HG22	2.47	0.42
5:E:146:VAL:HG12	5:E:147:LEU:N	2.34	0.42
2:B:481:G:OP2	21:U:43:LYS:HD3	2.19	0.42
2:B:1017:G:H2'	2:B:1018:U:C6	2.54	0.42
2:B:1724:G:H2'	2:B:1725:U:C6	2.54	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:627:A:N6	12:L:112:LEU:HD21	2.34	0.42
2:B:1795:C:H2'	2:B:1796:U:C6	2.54	0.42
2:B:152:A:O2'	2:B:153:U:H5'	2.19	0.42
30:3:19:GLY:O	30:3:20:GLY:C	2.57	0.42
9:I:102:ARG:HB2	9:I:141:ASP:CG	2.40	0.42
2:B:2538:C:O2'	2:B:2539:C:H5'	2.20	0.42
2:B:346:A:H2'	2:B:347:A:C5'	2.47	0.42
2:B:2770:G:O5'	2:B:2770:G:H8	2.03	0.42
2:B:1682:G:H2'	2:B:1683:U:C6	2.55	0.42
11:K:1:ILE:HD12	11:K:1:ILE:H3	1.84	0.42
8:H:62:LEU:HD12	8:H:62:LEU:C	2.40	0.42
7:G:171:LYS:HD3	7:G:172:GLU:N	2.31	0.42
2:B:466:A:N3	2:B:683:U:H1'	2.35	0.42
27:O:55:ALA:C	27:O:56:LYS:HG2	2.40	0.42
2:B:127:A:H5''	2:B:128:C:O4'	2.20	0.42
2:B:2485:G:H5''	13:M:45:GLN:NE2	2.34	0.42
29:2:37:LYS:HE2	29:2:39:ARG:HH21	1.84	0.42
29:2:18:PHE:HB2	29:2:43:THR:OG1	2.20	0.42
16:P:20:ARG:HG3	16:P:21:PRO:HD2	2.00	0.42
2:B:490:C:OP2	2:B:490:C:H4'	2.20	0.42
2:B:2617:U:C4	2:B:2618:G:N7	2.88	0.42
2:B:97:C:H2'	2:B:98:G:O4'	2.18	0.42
2:B:2352:A:C2'	2:B:2353:G:H5'	2.49	0.42
23:W:84:GLU:H	23:W:84:GLU:HG2	1.61	0.42
2:B:444:C:O2'	2:B:445:C:H5'	2.18	0.42
4:D:36:GLN:HG3	4:D:36:GLN:O	2.18	0.42
2:B:76:C:O3'	25:Y:52:ARG:HG3	2.20	0.42
19:S:27:LYS:O	19:S:32:ALA:HB2	2.19	0.42
2:B:704:G:O2'	2:B:727:A:N6	2.53	0.42
2:B:2189:U:H2'	2:B:2190:G:C8	2.53	0.42
6:F:137:PHE:O	6:F:139:GLU:N	2.52	0.42
6:F:136:ILE:HG22	6:F:142:TYR:CD1	2.54	0.42
26:Z:6:ILE:HG21	26:Z:47:ILE:HD12	2.00	0.42
2:B:963:U:O2'	2:B:964:C:H5'	2.20	0.42
12:L:4:ASN:HB2	12:L:5:THR:H	1.59	0.42
13:M:32:GLY:CA	13:M:104:GLU:HA	2.49	0.42
2:B:2845:U:O3'	16:P:52:ARG:NH1	2.52	0.42
2:B:164:C:C2'	2:B:165:A:H5'	2.48	0.42
7:G:24:THR:HG22	7:G:34:ARG:CA	2.49	0.42
2:B:570:G:O2'	2:B:571:U:H5'	2.19	0.42
2:B:129:C:H2'	2:B:130:C:C6	2.54	0.42
2:B:1947:C:H2'	2:B:1948:G:H8	1.83	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:P:28:LYS:HE3	16:P:82:SER:O	2.18	0.42
2:B:2215:C:H2'	2:B:2216:G:H8	1.83	0.42
2:B:453:A:H1'	2:B:457:A:O2'	2.19	0.42
9:I:49:GLU:HG3	9:I:54:ILE:HD11	2.01	0.42
2:B:1213:A:C6	2:B:1237:A:H1'	2.55	0.42
2:B:2854:G:O2'	2:B:2855:C:H5'	2.20	0.42
2:B:903:C:H2'	2:B:904:G:C8	2.54	0.42
2:B:2636:C:O5'	4:D:81:GLU:HB2	2.20	0.42
2:B:1965:C:H5''	2:B:1966:A:H2'	2.00	0.42
2:B:48:G:H4'	2:B:52:A:O4'	2.20	0.42
2:B:398:C:H2'	2:B:399:U:O4'	2.20	0.42
2:B:2685:G:O2'	2:B:2686:G:H5'	2.20	0.42
23:W:23:LYS:CE	23:W:24:ARG:HG3	2.49	0.42
23:W:57:THR:O	23:W:59:PHE:N	2.52	0.42
3:C:183:VAL:HG13	3:C:185:ALA:H	1.83	0.42
8:H:85:GLY:HA3	8:H:91:PHE:CG	2.54	0.42
7:G:58:ALA:C	7:G:60:GLY:N	2.71	0.42
6:F:162:ASP:O	6:F:166:ARG:HG3	2.20	0.42
24:X:32:LEU:O	24:X:33:HIS:CG	2.72	0.42
5:E:5:LEU:HD22	5:E:122:GLU:N	2.34	0.42
2:B:2012:G:O3'	19:S:96:ILE:HD12	2.18	0.42
3:C:93:VAL:CG1	3:C:94:LEU:H	2.25	0.42
11:K:106:LEU:CD2	11:K:114:ILE:HD13	2.49	0.42
3:C:16:VAL:N	3:C:203:VAL:CG1	2.83	0.42
3:C:27:LYS:HB3	3:C:28:PRO:HD2	2.01	0.42
31:4:1:MET:CE	31:4:36:ARG:HB2	2.49	0.42
19:S:75:PHE:O	19:S:76:VAL:HB	2.20	0.42
16:P:47:ILE:HG12	16:P:59:THR:O	2.20	0.42
11:K:9:VAL:HG12	11:K:11:ASP:OD1	2.20	0.42
2:B:1340:U:O4	20:T:64:LYS:HD3	2.20	0.42
2:B:548:G:H4'	2:B:549:G:C2	2.54	0.42
2:B:1827:U:O2'	2:B:1828:G:H5'	2.19	0.42
10:J:130:HIS:CD2	10:J:132:HIS:HB2	2.54	0.42
2:B:67:U:H2'	2:B:68:G:C8	2.55	0.42
2:B:1624:U:O2'	2:B:1625:C:H5'	2.18	0.42
2:B:1313:U:O2	2:B:1313:U:C2'	2.67	0.42
16:P:19:PHE:HA	16:P:19:PHE:HD2	1.68	0.42
19:S:28:LYS:O	19:S:29:VAL:HG23	2.20	0.42
2:B:1704:C:O2'	2:B:1705:A:H5'	2.19	0.42
2:B:449:A:H3'	34:B:3162:HOH:O	2.19	0.42
17:Q:87:VAL:O	17:Q:88:GLU:HB3	2.18	0.42
2:B:1049:C:O2'	2:B:1050:A:H5'	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:108:PRO:C	6:F:110:ILE:H	2.23	0.42
6:F:3:LEU:HD23	6:F:100:GLU:OE2	2.18	0.42
4:D:33:ARG:HE	4:D:74:GLU:CB	2.20	0.42
2:B:1059:G:H2'	2:B:1060:U:C6	2.54	0.42
19:S:38:TYR:HB2	27:O:24:VAL:HG11	2.01	0.42
7:G:162:ARG:CG	7:G:166:GLU:HG3	2.50	0.42
21:U:78:LYS:HG2	21:U:79:ALA:N	2.20	0.42
28:1:26:LYS:HZ3	28:1:52:LYS:HB3	1.82	0.42
28:1:8:ILE:HA	28:1:8:ILE:HD13	1.85	0.42
13:M:72:PRO:HB3	13:M:89:VAL:CG1	2.50	0.42
5:E:122:GLU:H	5:E:122:GLU:HG2	1.62	0.42
2:B:1317:G:H2'	2:B:1318:U:H6	1.84	0.42
8:H:53:GLU:O	8:H:57:LYS:HG3	2.19	0.42
2:B:287:G:O2'	2:B:288:U:H5'	2.20	0.42
15:O:100:HIS:CA	15:O:104:GLN:HB2	2.50	0.42
2:B:2774:C:H2'	2:B:2775:G:O4'	2.19	0.42
2:B:1878:G:H2'	2:B:1879:C:H6	1.85	0.42
2:B:1653:G:O6	14:N:10:LEU:O	2.38	0.42
2:B:241:A:H1'	2:B:243:U:C6	2.54	0.42
2:B:303:G:H2'	2:B:304:U:C6	2.55	0.42
3:C:77:VAL:HG23	3:C:77:VAL:O	2.19	0.42
2:B:1845:G:O2'	2:B:1846:G:H5'	2.20	0.42
2:B:2760:C:O2'	2:B:2761:A:H5'	2.19	0.42
2:B:2863:C:O2'	2:B:2864:G:H5'	2.19	0.42
3:C:123:ILE:HG13	3:C:191:LEU:CD2	2.50	0.42
20:T:40:LYS:HE3	20:T:58:VAL:O	2.19	0.42
6:F:48:LEU:O	6:F:51:ASN:HB2	2.19	0.42
4:D:179:ARG:HG3	4:D:188:LEU:HD12	2.02	0.42
4:D:202:ILE:HG22	4:D:203:VAL:H	1.82	0.42
2:B:2147:A:H5'	2:B:2148:G:H5'	2.01	0.42
2:B:2231:U:OP1	24:X:29:LEU:HD23	2.20	0.42
5:E:108:ILE:C	5:E:108:ILE:HD13	2.40	0.42
16:P:5:LYS:C	16:P:5:LYS:HD3	2.40	0.42
19:S:4:ILE:HG22	19:S:106:VAL:HG22	2.02	0.42
13:M:71:LYS:HA	13:M:72:PRO:HD3	1.93	0.42
2:B:1255:U:C5	5:E:68:ALA:HA	2.54	0.42
15:O:28:VAL:CG2	15:O:106:LEU:HD21	2.49	0.42
11:K:109:GLU:O	11:K:111:PHE:N	2.53	0.42
12:L:78:ARG:NH2	12:L:113:ALA:HB1	2.35	0.42
2:B:2134:A:H2'	2:B:2135:A:H8	1.81	0.42
2:B:156:A:H2'	2:B:157:C:O4'	2.19	0.42
2:B:1397:U:H5"	2:B:1398:C:H5	1.84	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1684:G:H2'	2:B:1685:C:H6	1.85	0.42
2:B:245:G:H2'	2:B:246:C:H6	1.84	0.42
2:B:1212:G:H1'	2:B:1236:G:H22	1.84	0.42
2:B:1494:A:H2	2:B:1579:A:O4'	2.03	0.42
2:B:906:U:H4'	13:M:66:ARG:HH12	1.84	0.42
28:1:47:ILE:HD12	28:1:47:ILE:N	2.33	0.42
2:B:2345:G:N3	2:B:2381:A:H2'	2.35	0.42
9:I:109:ALA:HB1	9:I:124:MET:CG	2.49	0.42
2:B:770:G:H2'	2:B:771:G:H8	1.85	0.42
17:Q:96:ASP:C	17:Q:98:ALA:N	2.72	0.42
2:B:1636:U:H2'	2:B:1637:A:H8	1.84	0.42
9:I:52:LEU:O	9:I:54:ILE:HG13	2.20	0.42
3:C:29:PHE:CE2	3:C:31:PRO:HG2	2.54	0.42
2:B:859:G:O2'	2:B:860:U:OP2	2.38	0.42
5:E:107:SER:O	5:E:111:GLU:HB2	2.20	0.42
2:B:2241:A:O2'	2:B:2242:G:H5'	2.20	0.42
9:I:63:ASP:C	9:I:65:SER:N	2.73	0.42
3:C:18:VAL:HG13	3:C:18:VAL:O	2.20	0.42
13:M:63:ILE:HD12	13:M:63:ILE:N	2.35	0.42
2:B:2272:U:H6	2:B:2272:U:O5'	2.03	0.42
2:B:854:C:O2'	2:B:855:G:H5'	2.20	0.42
12:L:95:LEU:HD11	12:L:125:LEU:HD11	2.00	0.42
8:H:94:ILE:HG21	8:H:99:ILE:H	1.83	0.42
2:B:1655:A:H5'	4:D:118:PHE:CD1	2.54	0.42
5:E:176:ASP:OD1	5:E:176:ASP:C	2.58	0.42
19:S:71:VAL:O	19:S:71:VAL:HG13	2.20	0.42
7:G:100:ASN:ND2	7:G:101:VAL:N	2.64	0.42
18:R:14:VAL:HG22	18:R:15:SER:N	2.35	0.42
18:R:61:ALA:CB	18:R:98:ILE:HA	2.49	0.42
7:G:54:ARG:HA	7:G:54:ARG:HE	1.84	0.42
11:K:42:ILE:HG22	11:K:53:LYS:HA	2.02	0.42
3:C:173:LEU:HD23	3:C:175:LEU:HD21	2.02	0.42
2:B:2462:C:H2'	2:B:2463:C:H6	1.84	0.42
8:H:50:ARG:O	8:H:53:GLU:HB3	2.20	0.42
2:B:1864:U:C2'	2:B:1865:U:H5'	2.49	0.42
5:E:17:THR:O	5:E:21:ARG:HB2	2.20	0.42
2:B:1336:A:P	20:T:68:LYS:HZ1	2.42	0.42
2:B:2784:U:H2'	2:B:2785:C:H6	1.84	0.42
2:B:2489:U:C2'	2:B:2490:G:H5'	2.50	0.42
2:B:1401:G:H2'	2:B:1402:U:O4'	2.19	0.42
2:B:538:A:H2'	2:B:539:G:O4'	2.20	0.42
2:B:1454:C:H5'	14:N:63:ARG:CZ	2.49	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:134:LEU:HA	5:E:137:LYS:HB3	2.02	0.42
2:B:2207:C:O2'	2:B:2208:C:H5'	2.18	0.42
1:A:116:G:H4'	15:O:54:VAL:O	2.20	0.42
16:P:20:ARG:CD	16:P:21:PRO:HD2	2.50	0.42
2:B:690:G:H2'	2:B:691:C:O4'	2.18	0.42
30:3:54:LEU:HG	30:3:58:ILE:HD11	2.01	0.42
20:T:18:GLU:O	20:T:20:ALA:N	2.53	0.42
2:B:575:A:O2'	2:B:576:U:H5'	2.20	0.42
2:B:921:C:H2'	2:B:922:C:C6	2.55	0.42
20:T:81:LYS:HB2	20:T:81:LYS:HZ2	1.84	0.42
6:F:40:GLY:H	6:F:84:ILE:HD11	1.85	0.42
6:F:15:LEU:CD1	6:F:168:LEU:HD23	2.48	0.42
4:D:187:LEU:CD2	4:D:203:VAL:HG21	2.50	0.42
4:D:4:LEU:O	4:D:203:VAL:HG12	2.20	0.42
2:B:2331:G:H21	2:B:2336:A:H8	1.68	0.42
2:B:26:G:H2'	2:B:27:G:C1'	2.50	0.42
10:J:123:LYS:HB3	10:J:125:TYR:CE2	2.55	0.42
2:B:2191:A:H5'	2:B:2192:U:P	2.60	0.42
24:X:42:GLU:O	24:X:42:GLU:HG2	2.20	0.42
22:V:79:ARG:HB3	22:V:79:ARG:NH1	2.35	0.42
26:Z:8:GLN:HG2	26:Z:10:ARG:O	2.19	0.42
6:F:125:GLY:O	6:F:157:THR:HG22	2.20	0.42
21:U:85:ARG:NE	21:U:86:PHE:H	2.17	0.42
2:B:2356:U:C5'	23:W:16:GLU:HG3	2.50	0.42
2:B:173:A:H2'	2:B:174:U:C6	2.54	0.42
2:B:2815:C:H2'	2:B:2816:G:C8	2.51	0.42
11:K:96:THR:HB	11:K:97:ARG:CZ	2.50	0.42
16:P:29:VAL:HA	16:P:79:VAL:O	2.20	0.42
13:M:47:GLU:HB3	13:M:51:ARG:NH2	2.35	0.42
2:B:822:G:H2'	2:B:823:C:C6	2.55	0.42
4:D:62:LYS:HD2	4:D:62:LYS:HA	1.80	0.42
2:B:723:C:H2'	2:B:724:U:C6	2.55	0.42
2:B:2864:G:H2'	2:B:2865:U:O4'	2.20	0.42
2:B:1774:C:H2'	2:B:1774:C:O2	2.20	0.42
13:M:60:GLN:HG3	13:M:60:GLN:H	1.44	0.42
1:A:85:G:H2'	1:A:86:G:H8	1.85	0.42
20:T:39:THR:CG2	20:T:42:GLU:HG2	2.35	0.42
8:H:94:ILE:CG2	8:H:98:ASP:HB2	2.32	0.42
4:D:118:PHE:O	4:D:119:ALA:CB	2.68	0.42
6:F:168:LEU:CD2	6:F:169:LEU:H	2.18	0.42
4:D:111:GLY:HA2	4:D:201:LEU:HB3	2.02	0.42
4:D:32:ASN:O	4:D:95:SER:HA	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1064:C:H5''	9:I:88:GLY:H	1.85	0.42
9:I:129:GLU:CB	9:I:133:ARG:HH12	2.19	0.42
21:U:90:LYS:HE2	21:U:92:VAL:CG2	2.48	0.42
15:O:75:GLY:O	15:O:78:VAL:HB	2.19	0.42
18:R:100:GLY:O	18:R:101:ILE:HB	2.20	0.42
2:B:635:C:O2'	2:B:636:G:H5'	2.20	0.42
19:S:76:VAL:HA	19:S:102:HIS:O	2.20	0.42
2:B:2102:G:C2	2:B:2103:C:H1'	2.55	0.42
8:H:43:ASN:HA	8:H:46:PHE:CB	2.49	0.42
2:B:2567:G:H2'	2:B:2568:U:C6	2.54	0.42
1:A:65:U:C2'	1:A:66:A:H5'	2.50	0.42
2:B:2078:C:H2'	2:B:2079:U:H6	1.85	0.42
2:B:453:A:N3	2:B:457:A:O2'	2.53	0.42
7:G:36:LEU:HD22	7:G:36:LEU:N	2.35	0.42
34:B:3250:HOH:O	12:L:36:LYS:HD2	2.19	0.42
8:H:40:THR:C	8:H:42:LYS:H	2.22	0.42
2:B:1360:G:H2'	2:B:1361:G:C5'	2.50	0.42
2:B:680:C:H2'	2:B:681:G:H8	1.85	0.42
2:B:121:G:H2'	2:B:122:G:C8	2.55	0.42
2:B:1117:C:H2'	2:B:1118:C:C6	2.55	0.42
6:F:19:PHE:O	6:F:20:ASN:C	2.59	0.42
2:B:716:A:H2'	2:B:717:C:O4'	2.20	0.42
2:B:2024:G:OP2	2:B:2034:U:H4'	2.20	0.42
14:N:37:THR:CG2	14:N:39:PRO:HD2	2.38	0.41
2:B:923:G:O2'	2:B:924:G:H5'	2.20	0.41
23:W:39:GLN:HB2	23:W:42:THR:HB	2.01	0.41
5:E:45:ALA:C	5:E:46:GLN:HG2	2.41	0.41
12:L:124:GLY:CA	12:L:143:GLU:HG3	2.50	0.41
8:H:70:GLU:HB2	8:H:71:LYS:NZ	2.35	0.41
8:H:80:ILE:HG22	8:H:81:ALA:N	2.35	0.41
11:K:63:ARG:HG2	11:K:78:PHE:CE2	2.55	0.41
4:D:12:THR:O	4:D:24:VAL:HG12	2.19	0.41
4:D:51:THR:HG22	4:D:76:GLY:HA3	2.01	0.41
21:U:95:PHE:HB2	21:U:100:GLU:HB3	2.01	0.41
2:B:2146:C:H1'	2:B:2147:A:C1'	2.49	0.41
7:G:85:LYS:HE2	7:G:164:ALA:HB3	2.03	0.41
2:B:140:C:OP1	2:B:141:G:N7	2.53	0.41
10:J:99:ARG:C	10:J:101:ILE:N	2.72	0.41
4:D:122:VAL:N	4:D:127:PHE:HB2	2.24	0.41
14:N:24:MET:CE	14:N:44:LEU:HB2	2.50	0.41
6:F:139:GLU:HG2	6:F:140:ILE:HD12	2.02	0.41
6:F:143:ASP:OD1	6:F:144:LYS:HG3	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:264:C:C2'	2:B:265:A:H5''	2.50	0.41
2:B:172:A:O2'	2:B:173:A:H5'	2.19	0.41
5:E:47:LYS:HB3	5:E:51:GLU:HB2	2.02	0.41
2:B:2742:G:P	31:4:24:ARG:HH12	2.43	0.41
2:B:2645:G:C4'	2:B:2732:G:H2'	2.48	0.41
2:B:125:A:H5'	29:2:19:ARG:HD3	2.02	0.41
2:B:2590:A:H2'	2:B:2591:C:C6	2.55	0.41
2:B:1053:C:H2'	2:B:1054:A:C8	2.55	0.41
8:H:59:ALA:HA	8:H:62:LEU:HD21	2.02	0.41
9:I:14:ALA:CB	9:I:50:LYS:HA	2.49	0.41
2:B:1014:A:O2'	2:B:1015:U:H5'	2.20	0.41
2:B:2211:A:OP2	2:B:2211:A:H4'	2.19	0.41
2:B:2077:A:O2'	2:B:2078:C:H5'	2.19	0.41
25:Y:19:LEU:HB3	25:Y:24:GLU:OE1	2.20	0.41
25:Y:22:LEU:O	25:Y:24:GLU:N	2.47	0.41
2:B:64:A:H2'	2:B:65:U:C6	2.55	0.41
2:B:568:U:P	12:L:36:LYS:HE2	2.60	0.41
1:A:35:C:O2	1:A:35:C:O4'	2.38	0.41
2:B:2408:U:H2'	2:B:2409:G:C8	2.55	0.41
15:O:53:THR:O	15:O:59:ALA:HB2	2.19	0.41
2:B:2373:G:H2'	2:B:2374:C:C6	2.55	0.41
10:J:88:THR:HG22	10:J:91:GLU:OE1	2.20	0.41
2:B:2655:G:N2	2:B:2664:G:H2'	2.35	0.41
2:B:910:A:C6	2:B:911:A:C6	3.08	0.41
2:B:2386:A:H2'	2:B:2387:U:C6	2.55	0.41
3:C:141:HIS:HB2	3:C:192:GLY:O	2.20	0.41
2:B:1599:U:OP1	20:T:40:LYS:HB2	2.20	0.41
20:T:41:ALA:C	20:T:43:ILE:N	2.74	0.41
8:H:132:PHE:O	8:H:134:VAL:N	2.53	0.41
2:B:7:G:H2'	2:B:8:C:C6	2.56	0.41
6:F:103:ILE:H	6:F:107:VAL:HG23	1.85	0.41
4:D:74:GLU:O	4:D:75:ALA:C	2.58	0.41
21:U:39:ASN:C	21:U:62:ALA:H	2.23	0.41
26:Z:16:LEU:HD23	26:Z:19:HIS:NE2	2.35	0.41
10:J:55:ILE:CB	10:J:123:LYS:HB2	2.49	0.41
8:H:115:VAL:HB	8:H:130:VAL:HB	2.01	0.41
2:B:709:U:O2'	2:B:710:U:H5'	2.20	0.41
2:B:1535:A:H3'	2:B:1536:C:C5	2.55	0.41
16:P:61:ARG:HH12	16:P:100:ARG:HA	1.82	0.41
14:N:102:PHE:HE2	19:S:40:ASN:ND2	2.19	0.41
2:B:1229:C:H2'	2:B:1230:A:H8	1.85	0.41
2:B:1798:U:OP1	3:C:257:ARG:HB2	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2785:C:H2'	2:B:2786:U:H6	1.85	0.41
2:B:1957:C:H2'	2:B:1958:C:C6	2.54	0.41
2:B:672:C:O2'	2:B:673:C:H5'	2.20	0.41
2:B:1571:A:H2'	2:B:1572:A:H8	1.84	0.41
2:B:909:A:H2'	2:B:912:C:C5	2.55	0.41
3:C:77:VAL:HA	3:C:92:LEU:O	2.20	0.41
1:A:84:G:O2'	1:A:85:G:H5'	2.20	0.41
2:B:1849:G:H2'	2:B:1850:G:H8	1.85	0.41
34:B:3376:HOH:O	5:E:63:LYS:HE2	2.19	0.41
23:W:36:ILE:HG22	23:W:36:ILE:O	2.19	0.41
23:W:49:ASN:C	23:W:50:VAL:HG22	2.41	0.41
8:H:82:SER:O	8:H:83:LYS:HB2	2.20	0.41
6:F:90:LEU:HD22	6:F:90:LEU:N	2.35	0.41
4:D:8:LYS:HD3	4:D:196:ALA:N	2.35	0.41
9:I:32:VAL:HG22	9:I:60:VAL:CG2	2.51	0.41
7:G:163:TYR:N	7:G:163:TYR:CD2	2.88	0.41
2:B:513:A:O2'	2:B:514:A:H5'	2.20	0.41
5:E:60:TRP:HB3	5:E:61:ARG:H	1.25	0.41
2:B:1266:G:OP1	27:0:15:ARG:NE	2.48	0.41
30:3:14:LYS:O	30:3:21:PHE:O	2.38	0.41
5:E:169:VAL:C	5:E:170:ARG:HD2	2.41	0.41
15:O:62:LEU:HD11	15:O:70:ALA:CB	2.45	0.41
6:F:141:ASP:HB2	6:F:144:LYS:HE3	2.02	0.41
2:B:664:G:H2'	2:B:665:U:H6	1.84	0.41
2:B:2579:C:O5'	2:B:2579:C:H6	2.02	0.41
2:B:1229:C:H2'	2:B:1230:A:C8	2.56	0.41
2:B:2848:G:H1'	2:B:2868:A:H61	1.83	0.41
9:I:14:ALA:HA	9:I:45:THR:HG21	2.01	0.41
2:B:588:U:O2'	2:B:589:U:H5'	2.20	0.41
2:B:784:G:H5''	3:C:225:ASN:HD21	1.85	0.41
1:A:111:U:H2'	1:A:112:G:H8	1.85	0.41
2:B:690:G:O2'	2:B:691:C:H5'	2.20	0.41
2:B:1713:A:H8	2:B:1713:A:OP1	2.03	0.41
2:B:1306:C:H2'	2:B:1307:A:H8	1.85	0.41
2:B:596:U:H2'	2:B:597:G:C8	2.54	0.41
2:B:2419:U:OP2	30:3:32:LEU:HD13	2.20	0.41
16:P:62:LYS:CD	16:P:64:SER:HB2	2.50	0.41
6:F:169:LEU:HG	6:F:174:PHE:CD1	2.54	0.41
27:0:37:HIS:CG	27:0:43:THR:HG22	2.55	0.41
6:F:87:LYS:HG3	6:F:88:VAL:H	1.85	0.41
29:2:6:GLN:HA	29:2:7:PRO:HD2	1.93	0.41
5:E:108:ILE:O	5:E:108:ILE:HD13	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:D:184:ARG:HH12	16:P:6:GLN:CD	2.24	0.41
6:F:176:PHE:HB3	6:F:177:ARG:H	1.66	0.41
6:F:136:ILE:HG23	6:F:142:TYR:HB2	2.01	0.41
25:Y:45:GLN:O	25:Y:46:VAL:HB	2.20	0.41
24:X:12:VAL:HG23	24:X:28:PHE:HD1	1.85	0.41
2:B:2515:C:O2'	2:B:2516:A:H5'	2.20	0.41
2:B:2287:A:O2'	2:B:2288:A:H3'	2.19	0.41
4:D:56:LYS:HG3	4:D:59:ARG:H	1.86	0.41
2:B:156:A:H2'	2:B:157:C:C6	2.55	0.41
2:B:749:A:H1'	2:B:1618:A:OP1	2.20	0.41
5:E:127:GLU:H	5:E:127:GLU:CD	2.21	0.41
7:G:34:ARG:HD3	7:G:34:ARG:N	2.35	0.41
2:B:1837:C:O2	2:B:1927:A:H2	2.04	0.41
30:3:53:ASP:O	30:3:57:VAL:HG23	2.20	0.41
3:C:165:ALA:HB3	3:C:172:THR:CG2	2.50	0.41
11:K:41:THR:HG23	11:K:56:VAL:HG22	2.03	0.41
2:B:437:U:H2'	2:B:438:G:H8	1.84	0.41
19:S:66:ILE:H	19:S:66:ILE:CD1	2.34	0.41
2:B:189:G:H2'	2:B:205:G:N2	2.35	0.41
17:Q:45:ALA:O	17:Q:49:ARG:HB2	2.20	0.41
6:F:110:ILE:HD12	6:F:112:ASP:O	2.21	0.41
2:B:2336:A:H61	23:W:40:ARG:HH11	1.59	0.41
1:A:42:C:O2	6:F:88:VAL:HA	2.20	0.41
10:J:67:ASN:C	10:J:69:ARG:H	2.24	0.41
4:D:43:ASP:O	4:D:45:TYR:N	2.54	0.41
8:H:14:SER:C	8:H:16:GLY:N	2.73	0.41
2:B:138:U:C2	2:B:140:C:H1'	2.55	0.41
18:R:28:ALA:HB3	18:R:31:GLU:HG3	2.02	0.41
22:V:89:ILE:HD13	22:V:91:PHE:CE1	2.56	0.41
2:B:633:A:H2'	2:B:634:C:C5'	2.50	0.41
2:B:2830:C:OP2	4:D:59:ARG:NH2	2.53	0.41
28:1:3:GLY:C	28:1:5:ARG:H	2.24	0.41
13:M:57:VAL:HG13	13:M:108:VAL:HG21	2.02	0.41
2:B:820:A:H2'	2:B:821:A:O4'	2.20	0.41
5:E:24:ASN:ND2	5:E:24:ASN:C	2.74	0.41
2:B:1879:C:H2'	2:B:1880:U:O4'	2.21	0.41
2:B:596:U:H2'	2:B:597:G:H8	1.84	0.41
2:B:535:G:O4'	17:Q:48:ASP:HB3	2.20	0.41
34:B:3282:HOH:O	12:L:99:ASN:HB2	2.19	0.41
2:B:616:A:H4'	5:E:101:TYR:CE2	2.55	0.41
15:O:31:THR:HG23	15:O:34:HIS:O	2.20	0.41
25:Y:37:LEU:HD22	25:Y:38:GLN:H	1.85	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:134:ILE:HA	3:C:135:PRO:HD3	1.92	0.41
6:F:40:GLY:O	6:F:42:ALA:N	2.54	0.41
6:F:33:ILE:H	6:F:90:LEU:HB2	1.86	0.41
4:D:107:VAL:HG12	4:D:108:ASP:N	2.35	0.41
2:B:1022:G:N2	2:B:1024:G:C2	2.89	0.41
2:B:1057:A:H62	2:B:1086:A:H2'	1.85	0.41
15:O:108:ASP:HA	15:O:111:ARG:HB3	2.01	0.41
2:B:1549:A:H2'	2:B:1550:C:H6	1.85	0.41
26:Z:23:LEU:HD22	26:Z:50:VAL:HG11	2.02	0.41
25:Y:23:ARG:HD2	25:Y:27:ASN:OD1	2.21	0.41
15:O:17:LYS:O	15:O:21:LEU:HG	2.21	0.41
12:L:131:ALA:O	12:L:135:ILE:HG22	2.20	0.41
27:O:52:LYS:CE	27:O:55:ALA:HA	2.50	0.41
2:B:1737:G:H8	2:B:1737:G:OP2	2.04	0.41
2:B:1872:A:H8	2:B:1872:A:O5'	2.04	0.41
10:J:92:MET:HB3	10:J:100:VAL:HG22	2.01	0.41
17:Q:79:ILE:O	17:Q:79:ILE:HD13	2.21	0.41
2:B:441:U:H2'	2:B:442:G:C8	2.56	0.41
2:B:1818:U:C4	3:C:152:GLN:HB3	2.56	0.41
3:C:145:MET:HG3	3:C:152:GLN:NE2	2.36	0.41
11:K:63:ARG:H	11:K:82:ALA:HB3	1.85	0.41
6:F:43:ILE:HG23	6:F:44:ALA:N	2.36	0.41
18:R:37:GLU:O	18:R:39:LEU:HD23	2.20	0.41
18:R:53:PHE:HB2	18:R:54:VAL:H	1.62	0.41
7:G:28:LYS:O	7:G:30:GLY:N	2.51	0.41
6:F:35:LEU:CD1	6:F:90:LEU:HD21	2.51	0.41
4:D:45:TYR:N	4:D:45:TYR:CD1	2.88	0.41
22:V:1:MET:O	22:V:2:PHE:HB2	2.21	0.41
10:J:72:LYS:CB	10:J:89:PHE:HB2	2.43	0.41
2:B:336:C:O2'	2:B:337:C:H5'	2.20	0.41
2:B:274:C:H2'	2:B:275:C:C1'	2.50	0.41
2:B:781:A:OP1	3:C:216:ARG:NH2	2.54	0.41
5:E:5:LEU:HG	5:E:12:LEU:HD22	2.03	0.41
15:O:105:ALA:O	15:O:107:ALA:N	2.51	0.41
2:B:1936:A:C2	2:B:1943:U:H5	2.39	0.41
2:B:265:A:N6	2:B:427:U:O2'	2.53	0.41
16:P:44:GLY:HA3	16:P:60:VAL:HG11	2.03	0.41
2:B:1243:C:O2	12:L:4:ASN:HA	2.20	0.41
12:L:118:THR:HA	12:L:119:PRO:HD3	1.92	0.41
2:B:2087:G:O2'	2:B:2088:A:H5'	2.21	0.41
2:B:2463:C:O2'	2:B:2464:G:H5'	2.21	0.41
6:F:25:MET:C	6:F:27:VAL:N	2.73	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:16:ARG:HB3	11:K:17:ARG:H	1.46	0.41
2:B:128:C:H2'	2:B:129:C:H6	1.86	0.41
27:0:33:SER:CB	27:0:35:GLU:HG2	2.51	0.41
15:O:25:ARG:HE	15:O:27:VAL:CG2	2.34	0.41
13:M:124:LEU:HA	13:M:125:PRO:HD3	1.82	0.41
13:M:42:THR:C	13:M:44:ARG:N	2.73	0.41
2:B:213:A:O2'	2:B:214:G:H5'	2.21	0.41
2:B:1957:C:H2'	2:B:1958:C:H6	1.85	0.41
3:C:221:GLY:C	3:C:223:ALA:N	2.74	0.41
6:F:1:ALA:O	6:F:4:HIS:HB3	2.20	0.41
2:B:9:G:H2'	2:B:2629:U:O4	2.20	0.41
2:B:1326:U:H2'	2:B:1327:A:H8	1.86	0.41
3:C:259:ASN:C	3:C:261:ARG:H	2.24	0.41
20:T:48:GLN:CB	20:T:49:LYS:HE3	2.50	0.41
2:B:2621:G:O5'	4:D:124:ARG:NH2	2.54	0.41
7:G:28:LYS:NZ	7:G:79:THR:HA	2.34	0.41
4:D:32:ASN:HA	4:D:51:THR:O	2.21	0.41
4:D:90:PHE:O	4:D:92:VAL:N	2.54	0.41
22:V:63:ILE:O	22:V:70:ILE:HD12	2.21	0.41
24:X:66:VAL:HA	24:X:69:GLU:OE1	2.20	0.41
21:U:39:ASN:HD22	21:U:63:ALA:C	2.24	0.41
28:1:33:LEU:CG	28:1:35:LEU:HD22	2.51	0.41
10:J:99:ARG:HH11	10:J:99:ARG:HG2	1.85	0.41
12:L:128:THR:C	12:L:130:GLY:H	2.23	0.41
20:T:12:ARG:HH21	25:Y:29:ARG:HE	1.64	0.41
1:A:32:U:O2'	1:A:33:G:H5'	2.20	0.41
15:O:41:ALA:HB1	15:O:42:PRO:CD	2.51	0.41
7:G:106:LEU:HB2	7:G:108:PHE:CE1	2.56	0.41
9:I:83:ALA:N	9:I:100:ILE:HD11	2.35	0.41
2:B:2104:C:O5'	2:B:2104:C:H6	2.03	0.41
2:B:1657:U:H2'	2:B:1658:C:C6	2.54	0.41
1:A:55:U:H2'	1:A:56:G:H8	1.85	0.41
5:E:95:LYS:NZ	5:E:97:ASN:ND2	2.69	0.41
2:B:1107:G:O2'	2:B:1108:U:H5'	2.20	0.41
2:B:649:G:H2'	2:B:650:C:H6	1.81	0.41
2:B:381:G:C2'	2:B:382:A:H5'	2.51	0.41
2:B:406:G:H2'	2:B:407:G:C8	2.55	0.41
2:B:1829:A:H2'	2:B:1830:C:O4'	2.20	0.41
21:U:8:ASP:O	21:U:23:LYS:HA	2.20	0.41
17:Q:116:LEU:HG	17:Q:116:LEU:O	2.21	0.41
9:I:35:MET:SD	9:I:35:MET:C	2.98	0.41
2:B:1996:C:H5	11:K:31:TYR:HH	1.68	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:687:C:H5'	29:2:4:THR:O	2.21	0.41
25:Y:31:GLN:HG3	25:Y:36:GLN:HB2	2.01	0.41
30:3:5:THR:HG22	30:3:63:TYR:HD2	1.86	0.41
11:K:70:ARG:O	11:K:73:GLY:N	2.50	0.41
2:B:2269:G:O3'	23:W:18:LYS:HE3	2.20	0.41
23:W:50:VAL:O	23:W:52:CYS:N	2.53	0.41
2:B:37:C:H4'	2:B:451:U:OP1	2.21	0.41
3:C:116:GLN:HG2	3:C:117:SER:N	2.36	0.41
3:C:140:VAL:CG2	3:C:163:ILE:HG12	2.51	0.41
8:H:80:ILE:CD1	8:H:101:ASP:HB3	2.51	0.41
6:F:46:LYS:HA	6:F:49:LEU:HD23	2.03	0.41
17:Q:91:ARG:CD	18:R:11:GLN:HB2	2.51	0.41
17:Q:105:PHE:N	18:R:46:GLU:OE1	2.53	0.41
7:G:31:GLU:O	7:G:32:LEU:HB2	2.21	0.41
2:B:2313:C:H2'	2:B:2314:A:H8	1.86	0.41
2:B:2678:C:H2'	2:B:2679:A:C8	2.56	0.41
4:D:109:VAL:HG11	4:D:193:VAL:HG11	2.03	0.41
6:F:36:ASN:O	6:F:86:CYS:O	2.38	0.41
9:I:73:PRO:HA	9:I:74:PRO:HD3	1.99	0.41
2:B:1062:G:H2'	2:B:1063:G:H8	1.84	0.41
22:V:63:ILE:H	22:V:70:ILE:CG1	2.22	0.41
2:B:2144:G:N2	2:B:2148:G:C8	2.89	0.41
2:B:869:G:H2'	2:B:870:U:O4'	2.20	0.41
6:F:11:VAL:HG22	6:F:171:ALA:HB1	2.02	0.41
24:X:69:GLU:O	24:X:70:LEU:CB	2.67	0.41
24:X:76:LYS:HG3	24:X:77:TYR:N	2.35	0.41
21:U:78:LYS:CG	21:U:79:ALA:H	2.21	0.41
2:B:1562:U:H2'	2:B:1563:U:H6	1.85	0.41
10:J:97:PRO:O	10:J:99:ARG:N	2.54	0.41
2:B:2467:C:H2'	2:B:2468:A:H5'	2.03	0.41
14:N:118:ARG:HE	14:N:118:ARG:HB3	1.75	0.41
2:B:668:A:C2	2:B:670:A:C6	3.09	0.41
2:B:1937:A:N7	2:B:1939:U:H2'	2.35	0.41
20:T:69:ARG:HB3	20:T:70:HIS:CE1	2.56	0.41
18:R:35:PHE:HB2	18:R:59:ILE:HB	2.03	0.41
12:L:48:ARG:C	12:L:50:PHE:H	2.24	0.41
26:Z:15:ARG:HG2	26:Z:53:MET:SD	2.61	0.41
2:B:626:A:H2'	12:L:78:ARG:NH1	2.35	0.41
2:B:2377:A:H4'	15:O:117:PHE:O	2.21	0.41
2:B:61:C:OP2	25:Y:47:ARG:NH2	2.52	0.41
7:G:148:ARG:HA	7:G:161:VAL:CB	2.46	0.41
1:A:89:U:C1'	2:B:958:U:H2'	2.47	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1394:U:C2'	2:B:1395:A:H5'	2.50	0.41
9:I:91:LYS:O	9:I:94:LYS:HB2	2.21	0.41
2:B:1165:A:C2	2:B:1166:G:N7	2.89	0.41
2:B:1494:A:H2'	2:B:1495:A:C8	2.55	0.41
2:B:147:C:O2'	2:B:148:U:H5'	2.21	0.41
8:H:60:GLU:HA	8:H:63:ALA:HB2	2.01	0.41
8:H:58:LEU:C	8:H:60:GLU:N	2.74	0.41
2:B:413:C:H2'	2:B:414:C:C6	2.55	0.41
19:S:99:ARG:NH1	19:S:99:ARG:HG3	2.36	0.41
2:B:1460:U:H3'	2:B:1461:C:C5'	2.49	0.41
2:B:470:A:H2'	2:B:471:A:O4'	2.21	0.41
2:B:2849:U:H4'	2:B:2850:A:C5'	2.51	0.41
2:B:1147:A:H2'	2:B:1148:U:H6	1.83	0.41
5:E:138:LEU:HB3	5:E:143:LEU:HB2	2.03	0.41
2:B:496:G:H1'	19:S:61:ASN:HD21	1.86	0.41
26:Z:30:ARG:C	26:Z:32:GLY:H	2.24	0.41
2:B:1159:U:O2'	2:B:1160:G:H5'	2.21	0.41
2:B:2379:G:H2'	2:B:2380:C:C6	2.55	0.41
2:B:1040:A:H2	2:B:1115:G:H22	1.69	0.41
2:B:2714:G:H2'	2:B:2715:C:C6	2.56	0.41
30:3:44:ARG:N	30:3:45:PRO:HD2	2.35	0.41
1:A:13:G:H1	1:A:69:G:HO2'	1.64	0.41
2:B:2638:G:H1'	2:B:2778:A:N6	2.35	0.41
2:B:1742:U:O2'	2:B:1743:G:H5'	2.21	0.41
3:C:152:GLN:HA	3:C:155:ARG:HD2	2.02	0.41
16:P:62:LYS:HB3	16:P:69:VAL:CG2	2.50	0.41
6:F:77:LYS:HG3	6:F:78:ILE:H	1.86	0.41
10:J:41:LYS:O	17:Q:66:ALA:HB1	2.21	0.41
17:Q:101:ASP:O	17:Q:104:ALA:HB3	2.21	0.41
2:B:2756:U:H4'	2:B:2757:A:O5'	2.20	0.41
6:F:117:SER:OG	6:F:119:LYS:HD3	2.21	0.41
31:4:7:VAL:O	31:4:8:LYS:O	2.38	0.41
10:J:64:VAL:CG1	10:J:65:THR:N	2.83	0.41
9:I:11:GLN:NE2	9:I:74:PRO:HG2	2.35	0.41
24:X:4:CYS:C	24:X:6:VAL:H	2.24	0.41
6:F:11:VAL:O	6:F:12:VAL:HB	2.21	0.41
2:B:2061:G:C8	2:B:2501:C:H4'	2.56	0.41
2:B:141:G:C6	20:T:2:ILE:HD12	2.56	0.41
8:H:115:VAL:O	8:H:115:VAL:HG23	2.21	0.41
2:B:1017:G:O2'	2:B:1018:U:H5'	2.21	0.41
2:B:1813:G:N2	3:C:49:THR:HG22	2.36	0.41
3:C:211:ARG:HA	3:C:211:ARG:HD2	1.91	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Y:17:GLU:HA	25:Y:20:ASN:OD1	2.21	0.41
25:Y:45:GLN:O	25:Y:47:ARG:N	2.47	0.41
19:S:40:ASN:O	19:S:41:LYS:HG3	2.21	0.41
4:D:56:LYS:O	4:D:57:ALA:HB3	2.20	0.41
2:B:2031:A:C6	2:B:2498:C:H1'	2.56	0.41
2:B:995:C:P	17:Q:52:ARG:HH11	2.44	0.41
30:3:3:ILE:HG13	30:3:3:ILE:H	1.57	0.41
2:B:1488:C:C2'	2:B:1489:C:H5'	2.50	0.41
2:B:1464:G:H2'	2:B:1465:G:H8	1.85	0.41
2:B:267:C:H2'	2:B:268:C:C6	2.56	0.41
14:N:2:ARG:HA	14:N:5:LYS:HD2	2.03	0.41
3:C:107:LYS:HZ2	3:C:193:GLU:HB2	1.86	0.41
2:B:1313:U:O2	2:B:1313:U:H2'	2.21	0.41
2:B:2310:C:O5'	2:B:2310:C:H6	2.04	0.41
4:D:18:ASP:OD2	4:D:18:ASP:N	2.52	0.41
8:H:70:GLU:CB	8:H:71:LYS:HD3	2.51	0.40
7:G:3:VAL:C	7:G:5:LYS:H	2.25	0.40
6:F:87:LYS:O	6:F:88:VAL:HB	2.20	0.40
2:B:1025:G:OP1	2:B:1025:G:H8	2.04	0.40
2:B:2091:C:H1'	24:X:33:HIS:CD2	2.56	0.40
25:Y:57:LEU:N	25:Y:59:GLU:OE2	2.54	0.40
2:B:1196:C:H2'	2:B:1197:G:C8	2.56	0.40
2:B:1564:C:O5'	2:B:1564:C:H6	2.04	0.40
2:B:1279:G:OP2	14:N:35:LYS:HD2	2.21	0.40
14:N:31:HIS:C	14:N:33:ILE:H	2.25	0.40
29:2:1:MET:CG	29:2:2:LYS:H	2.27	0.40
2:B:2188:U:H2'	2:B:2189:U:O4'	2.22	0.40
2:B:1283:G:H1'	2:B:1329:U:O2	2.21	0.40
8:H:34:GLY:O	8:H:35:LYS:HG2	2.21	0.40
11:K:9:VAL:HG21	11:K:15:ALA:HA	2.03	0.40
2:B:1340:U:H5'	20:T:61:LEU:CD2	2.50	0.40
2:B:2592:G:O2'	2:B:2593:U:H5'	2.21	0.40
2:B:1151:A:H2'	2:B:1152:C:C6	2.56	0.40
2:B:289:G:O2'	2:B:290:U:H5'	2.20	0.40
12:L:51:GLU:HG2	30:3:56:LEU:HD21	2.03	0.40
2:B:2868:A:H2'	2:B:2869:G:H8	1.84	0.40
2:B:1542:U:O2'	2:B:1543:G:H5'	2.21	0.40
2:B:775:G:H4'	2:B:776:G:H5'	2.02	0.40
2:B:1716:U:H2'	2:B:1717:A:H8	1.87	0.40
2:B:1292:G:H2'	2:B:1293:C:H6	1.86	0.40
19:S:49:LYS:NZ	19:S:49:LYS:HB3	2.36	0.40
2:B:2507:C:H2'	2:B:2508:G:H8	1.86	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:312:G:H2'	2:B:313:G:H8	1.86	0.40
2:B:1239:G:H2'	2:B:1240:U:O4'	2.21	0.40
2:B:372:G:H5''	24:X:60:LYS:HD3	2.03	0.40
23:W:18:LYS:CD	23:W:36:ILE:HD11	2.50	0.40
20:T:29:THR:HB	20:T:86:THR:HG22	2.02	0.40
20:T:53:VAL:CG1	20:T:87:LEU:HD22	2.43	0.40
8:H:135:HIS:O	8:H:136:SER:C	2.58	0.40
8:H:70:GLU:HB2	8:H:71:LYS:HD3	2.04	0.40
8:H:70:GLU:C	8:H:71:LYS:HD3	2.41	0.40
17:Q:71:ASN:HB3	17:Q:72:GLY:H	1.51	0.40
7:G:60:GLY:O	7:G:62:ALA:N	2.49	0.40
7:G:3:VAL:HG23	7:G:65:GLY:HA3	2.03	0.40
2:B:2678:C:O2'	2:B:2679:A:H5'	2.21	0.40
2:B:2330:G:C2'	2:B:2331:G:H5'	2.51	0.40
2:B:1022:G:C2	2:B:1140:C:N3	2.89	0.40
21:U:73:ASN:OD1	21:U:76:THR:HG23	2.21	0.40
17:Q:17:LEU:HD13	17:Q:30:VAL:O	2.20	0.40
24:X:69:GLU:C	24:X:71:ARG:H	2.23	0.40
21:U:72:PHE:HA	21:U:78:LYS:O	2.21	0.40
28:1:34:GLU:O	28:1:35:LEU:HB3	2.21	0.40
8:H:15:LEU:N	8:H:15:LEU:HD22	2.36	0.40
30:3:22:LYS:HA	30:3:48:MET:N	2.31	0.40
15:O:75:GLY:HA3	15:O:106:LEU:O	2.21	0.40
2:B:1813:G:N3	3:C:49:THR:HG21	2.35	0.40
2:B:1745:A:H2'	2:B:1746:A:H8	1.85	0.40
2:B:637:A:O5'	12:L:112:LEU:HD21	2.21	0.40
21:U:3:LYS:N	21:U:84:PHE:HZ	2.20	0.40
25:Y:23:ARG:C	25:Y:25:GLN:N	2.75	0.40
3:C:53:ILE:CG2	3:C:53:ILE:O	2.69	0.40
12:L:135:ILE:CG2	12:L:136:GLU:N	2.84	0.40
2:B:749:A:N3	2:B:1618:A:H2'	2.35	0.40
2:B:200:U:H5''	24:X:21:LEU:O	2.22	0.40
2:B:2817:U:O2'	2:B:2837:A:H1'	2.21	0.40
22:V:7:GLU:O	22:V:40:ILE:HA	2.21	0.40
2:B:2492:U:H2'	2:B:2493:U:C6	2.56	0.40
22:V:9:ARG:HD3	22:V:41:GLU:HB3	2.03	0.40
2:B:2773:C:H5''	4:D:169:ARG:HB3	2.04	0.40
2:B:1068:G:C6	2:B:1069:A:N6	2.89	0.40
20:T:31:VAL:HA	20:T:83:ALA:HB3	2.03	0.40
6:F:51:ASN:HD22	6:F:51:ASN:N	2.19	0.40
18:R:4:VAL:O	18:R:38:VAL:HA	2.22	0.40
13:M:34:LYS:HZ3	13:M:34:LYS:HG2	1.75	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:H:27:ARG:NH2	8:H:27:ARG:HG2	2.37	0.40
6:F:161:SER:O	6:F:164:GLU:N	2.54	0.40
4:D:33:ARG:CD	4:D:51:THR:HB	2.50	0.40
2:B:2336:A:N6	23:W:40:ARG:CZ	2.84	0.40
2:B:2019:A:H4'	17:Q:33:VAL:HG21	2.03	0.40
11:K:33:GLY:O	11:K:34:VAL:C	2.60	0.40
25:Y:9:LYS:N	25:Y:9:LYS:HD2	2.37	0.40
10:J:57:LEU:CD2	10:J:128:ASN:HA	2.51	0.40
5:E:187:VAL:O	5:E:188:MET:HB3	2.22	0.40
6:F:147:ARG:NH1	6:F:147:ARG:HB3	2.36	0.40
3:C:203:VAL:O	3:C:205:GLY:N	2.52	0.40
3:C:203:VAL:O	3:C:204:LEU:HB2	2.20	0.40
2:B:1131:G:C5	10:J:77:HIS:ND1	2.88	0.40
5:E:47:LYS:HE2	5:E:52:VAL:HA	2.04	0.40
2:B:1176:U:H3'	2:B:1177:G:H8	1.86	0.40
19:S:37:THR:HG23	19:S:48:LYS:CE	2.49	0.40
2:B:1854:A:H62	2:B:1888:G:H1'	1.83	0.40
14:N:62:ASN:ND2	14:N:62:ASN:N	2.66	0.40
24:X:19:HIS:C	24:X:21:LEU:H	2.23	0.40
2:B:522:A:H2'	2:B:523:C:H6	1.85	0.40
2:B:718:A:H5'	2:B:719:C:C5	2.56	0.40
14:N:41:ALA:C	14:N:43:GLU:N	2.74	0.40
13:M:45:GLN:HE22	13:M:125:PRO:HG2	1.86	0.40
3:C:174:ARG:HD3	3:C:180:MET:HE1	2.02	0.40
19:S:88:ARG:HD2	19:S:88:ARG:HA	1.94	0.40
2:B:1465:G:H2'	2:B:1466:U:H6	1.86	0.40
2:B:2028:U:H2'	2:B:2029:G:O4'	2.21	0.40
5:E:14:VAL:HG23	5:E:15:SER:N	2.36	0.40
2:B:1199:U:H2'	2:B:1200:C:C6	2.55	0.40
15:O:19:GLN:HB3	15:O:19:GLN:HE21	1.57	0.40
20:T:92:ASN:HB3	20:T:93:LEU:HD22	2.03	0.40
2:B:1290:C:O2'	2:B:1291:C:H5'	2.21	0.40
7:G:46:ASP:C	7:G:48:THR:H	2.25	0.40
1:A:80:U:H2'	1:A:81:G:C8	2.56	0.40
19:S:2:GLU:O	19:S:3:THR:C	2.60	0.40
2:B:388:G:N7	2:B:390:U:H2'	2.37	0.40
4:D:16:THR:HG22	4:D:17:GLU:N	2.36	0.40
23:W:35:ILE:HG22	23:W:36:ILE:N	2.35	0.40
23:W:37:VAL:HG11	23:W:38:ARG:HH11	1.86	0.40
14:N:78:LYS:HG2	14:N:83:LEU:HD13	2.02	0.40
8:H:128:HIS:HB3	8:H:144:VAL:HB	2.03	0.40
2:B:2901:C:H2'	2:B:2901:C:O2	2.21	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2:G:O2'	2:B:3:U:H5'	2.21	0.40
10:J:44:TYR:C	10:J:44:TYR:CD2	2.95	0.40
10:J:4:PHE:O	10:J:5:THR:HB	2.21	0.40
17:Q:63:ARG:HA	17:Q:66:ALA:HB3	2.04	0.40
1:A:43:C:C2'	1:A:44:G:H5''	2.50	0.40
6:F:102:LEU:C	6:F:104:THR:N	2.75	0.40
2:B:2730:C:H4'	4:D:174:SER:HB3	2.04	0.40
4:D:92:VAL:O	4:D:93:GLY:C	2.60	0.40
24:X:10:ARG:CB	24:X:11:PRO:HD2	2.51	0.40
24:X:7:THR:HG21	24:X:54:GLY:HA2	2.04	0.40
10:J:106:LYS:C	10:J:108:MET:N	2.73	0.40
2:B:704:G:H2'	2:B:726:G:N2	2.23	0.40
3:C:6:LYS:C	3:C:8:THR:H	2.23	0.40
5:E:122:GLU:O	5:E:123:LYS:HB2	2.21	0.40
6:F:157:THR:C	6:F:159:ALA:H	2.25	0.40
5:E:29:HIS:CD2	12:L:8:PRO:HG3	2.57	0.40
2:B:2758:A:C2'	2:B:2759:G:H5'	2.51	0.40
7:G:94:ARG:CA	7:G:127:GLN:HG3	2.51	0.40
2:B:169:G:O2'	2:B:170:U:H5'	2.21	0.40
12:L:117:THR:HB	12:L:118:THR:H	1.68	0.40
2:B:2593:U:O2'	2:B:2594:C:H5'	2.21	0.40
2:B:143:C:N4	2:B:144:A:N6	2.69	0.40
23:W:72:GLY:HA3	23:W:73:PRO:HD3	1.99	0.40
2:B:1668:A:H4'	2:B:1669:A:O5'	2.22	0.40
13:M:109:PRO:C	13:M:111:GLU:N	2.74	0.40
2:B:1353:A:H2'	2:B:1354:A:C8	2.56	0.40
2:B:2869:G:H2'	2:B:2870:C:H6	1.86	0.40
2:B:500:G:H1'	2:B:505:A:N6	2.37	0.40
2:B:1789:A:OP1	3:C:219:VAL:HA	2.21	0.40
2:B:935:C:H2'	2:B:936:A:H8	1.87	0.40
2:B:457:A:H61	2:B:470:A:H3'	1.85	0.40
22:V:51:GLN:HB2	22:V:51:GLN:HE21	1.66	0.40
2:B:381:G:OP1	24:X:17:ARG:HD3	2.21	0.40
2:B:912:C:O2'	2:B:913:U:H5'	2.21	0.40
2:B:2820:A:OP2	14:N:2:ARG:NH2	2.54	0.40
25:Y:14:LEU:C	25:Y:14:LEU:HD13	2.42	0.40
2:B:1523:U:H6	2:B:1523:U:O5'	2.05	0.40
2:B:473:G:O2'	2:B:474:G:H5'	2.22	0.40
3:C:124:LYS:CG	3:C:125:PRO:HD2	2.52	0.40
3:C:141:HIS:O	3:C:143:VAL:N	2.53	0.40
20:T:50:LEU:HG	25:Y:26:PHE:CE1	2.56	0.40
16:P:50:ARG:HG2	16:P:57:ALA:O	2.22	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Q:90:ASP:H	18:R:39:LEU:HD11	1.86	0.40
13:M:35:ALA:HB3	13:M:99:GLY:N	2.15	0.40
13:M:35:ALA:O	13:M:36:VAL:CB	2.69	0.40
6:F:129:MET:HG3	6:F:153:ILE:HB	2.04	0.40
31:4:7:VAL:CG1	31:4:8:LYS:H	2.16	0.40
2:B:2834:G:H1'	2:B:2883:A:H61	1.85	0.40
13:M:97:GLN:HB2	13:M:98:PRO:CD	2.51	0.40
10:J:64:VAL:O	10:J:65:THR:HG22	2.21	0.40
4:D:45:TYR:HD1	4:D:45:TYR:N	2.19	0.40
22:V:70:ILE:CG1	22:V:71:LYS:H	2.21	0.40
24:X:32:LEU:HA	24:X:50:VAL:O	2.21	0.40
24:X:54:GLY:O	24:X:57:VAL:HB	2.20	0.40
2:B:585:G:O2'	5:E:77:ILE:HG22	2.22	0.40
2:B:30:G:OP1	17:Q:4:LYS:HD2	2.21	0.40
17:Q:4:LYS:HE2	17:Q:7:VAL:HG13	2.03	0.40
14:N:114:GLU:HG2	14:N:115:LEU:O	2.21	0.40
14:N:48:VAL:O	14:N:49:GLU:HG2	2.22	0.40
14:N:49:GLU:N	14:N:50:PRO:CD	2.84	0.40
21:U:2:ALA:O	21:U:3:LYS:C	2.60	0.40
11:K:68:VAL:HG11	11:K:105:GLU:OE1	2.21	0.40
2:B:2339:C:H2'	2:B:2340:A:H8	1.85	0.40
9:I:102:ARG:HA	9:I:105:LEU:HD12	2.02	0.40
8:H:24:GLY:O	8:H:28:ASN:HB2	2.21	0.40
8:H:1:MET:HG3	8:H:3:VAL:HG13	2.03	0.40
2:B:1383:A:H2	2:B:1405:U:O2	2.03	0.40
14:N:57:THR:HB	14:N:62:ASN:OD1	2.21	0.40
6:F:29:ARG:CB	6:F:29:ARG:HH11	2.35	0.40
23:W:74:LYS:O	23:W:75:ASN:HB3	2.22	0.40
2:B:1869:G:H1'	2:B:1872:A:H61	1.86	0.40
15:O:79:ALA:HA	15:O:115:LEU:HD13	2.02	0.40
2:B:1665:A:O2'	2:B:1666:G:H5'	2.22	0.40
2:B:2220:U:O2'	2:B:2221:G:H5'	2.22	0.40
2:B:1291:C:O2'	2:B:1292:G:H5'	2.22	0.40
2:B:723:C:O2'	2:B:724:U:H5'	2.22	0.40
2:B:2714:G:O2'	2:B:2715:C:H5'	2.22	0.40
26:Z:45:GLY:O	26:Z:48:ASN:HB3	2.22	0.40

There are no symmetry-related clashes.



## 5.3 Torsion angles

### 5.3.1 Protein backbone ⓘ

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	C	269/272 (99%)	166 (62%)	68 (25%)	35 (13%)	0	3
4	D	207/209 (99%)	113 (55%)	56 (27%)	38 (18%)	0	1
5	E	199/201 (99%)	126 (63%)	43 (22%)	30 (15%)	0	1
6	F	176/178 (99%)	97 (55%)	40 (23%)	39 (22%)	0	0
7	G	174/176 (99%)	94 (54%)	54 (31%)	26 (15%)	0	1
8	H	147/149 (99%)	69 (47%)	50 (34%)	28 (19%)	0	0
9	I	139/141 (99%)	118 (85%)	16 (12%)	5 (4%)	5	36
10	J	140/142 (99%)	88 (63%)	30 (21%)	22 (16%)	0	1
11	K	119/123 (97%)	75 (63%)	26 (22%)	18 (15%)	0	1
12	L	141/144 (98%)	81 (57%)	37 (26%)	23 (16%)	0	1
13	M	134/136 (98%)	77 (58%)	32 (24%)	25 (19%)	0	0
14	N	118/127 (93%)	75 (64%)	27 (23%)	16 (14%)	0	2
15	O	114/117 (97%)	85 (75%)	24 (21%)	5 (4%)	4	29
16	P	112/114 (98%)	71 (63%)	20 (18%)	21 (19%)	0	0
17	Q	115/117 (98%)	74 (64%)	28 (24%)	13 (11%)	1	4
18	R	101/103 (98%)	64 (63%)	24 (24%)	13 (13%)	0	3
19	S	108/110 (98%)	66 (61%)	26 (24%)	16 (15%)	0	1
20	T	91/100 (91%)	54 (59%)	23 (25%)	14 (15%)	0	1
21	U	100/103 (97%)	58 (58%)	27 (27%)	15 (15%)	0	1
22	V	92/94 (98%)	74 (80%)	11 (12%)	7 (8%)	2	12
23	W	77/84 (92%)	29 (38%)	23 (30%)	25 (32%)	0	0
24	X	75/77 (97%)	43 (57%)	26 (35%)	6 (8%)	1	11
25	Y	61/63 (97%)	37 (61%)	18 (30%)	6 (10%)	1	7
26	Z	56/58 (97%)	42 (75%)	11 (20%)	3 (5%)	3	24
27	0	54/56 (96%)	35 (65%)	8 (15%)	11 (20%)	0	0
28	1	48/54 (89%)	33 (69%)	7 (15%)	8 (17%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
29	2	44/46 (96%)	26 (59%)	13 (30%)	5 (11%)	1	4
30	3	62/64 (97%)	42 (68%)	15 (24%)	5 (8%)	1	10
31	4	36/38 (95%)	21 (58%)	11 (31%)	4 (11%)	1	5
All	All	3309/3396 (97%)	2033 (61%)	794 (24%)	482 (15%)	0	2

All (482) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	C	53	ILE
3	C	78	GLU
3	C	140	VAL
3	C	184	GLU
3	C	246	PRO
4	D	9	VAL
4	D	14	ILE
4	D	45	TYR
4	D	46	ARG
4	D	107	VAL
4	D	113	SER
4	D	162	ALA
4	D	169	ARG
4	D	170	VAL
4	D	192	ALA
4	D	194	PRO
4	D	196	ALA
5	E	45	ALA
5	E	69	ARG
5	E	73	ILE
5	E	76	PRO
5	E	165	HIS
5	E	187	VAL
6	F	32	LYS
6	F	77	LYS
6	F	84	ILE
6	F	110	ILE
6	F	113	PHE
6	F	124	ARG
6	F	138	PRO
6	F	142	TYR
6	F	149	ARG
6	F	173	ASP

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Mol	Chain	Res	Type
7	G	2	ARG
7	G	11	PRO
7	G	38	ASP
7	G	41	GLU
7	G	85	LYS
7	G	91	VAL
7	G	94	ARG
7	G	96	ALA
7	G	167	VAL
8	H	7	ASP
8	H	28	ASN
8	H	32	PRO
8	H	33	GLN
8	H	40	THR
8	H	54	LEU
8	H	72	ILE
8	H	84	ALA
8	H	91	PHE
8	H	121	VAL
9	I	18	ASN
10	J	4	PHE
10	J	5	THR
10	J	43	GLU
10	J	45	THR
10	J	52	ASP
10	J	81	ILE
10	J	111	LYS
11	K	16	ARG
11	K	34	VAL
11	K	70	ARG
11	K	71	PRO
11	K	91	GLU
11	K	109	GLU
11	K	112	MET
11	K	118	ALA
12	L	81	ASP
12	L	89	VAL
12	L	103	ILE
12	L	116	VAL
12	L	117	THR
12	L	135	ILE
12	L	143	GLU

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Mol	Chain	Res	Type
13	M	13	HIS
13	M	36	VAL
13	M	56	ALA
13	M	78	LEU
14	N	13	ASN
14	N	49	GLU
14	N	58	ASP
14	N	82	GLU
16	P	25	VAL
16	P	50	ARG
16	P	75	THR
16	P	84	SER
16	P	86	LYS
16	P	112	ARG
17	Q	30	VAL
17	Q	91	ARG
19	S	13	SER
19	S	14	ALA
19	S	25	ARG
19	S	61	ASN
19	S	76	VAL
19	S	88	ARG
19	S	96	ILE
20	T	18	GLU
20	T	19	LYS
20	T	20	ALA
20	T	28	ASN
20	T	36	LYS
20	T	39	THR
20	T	64	LYS
20	T	69	ARG
20	T	70	HIS
20	T	88	LYS
21	U	6	ARG
21	U	49	PRO
23	W	9	THR
23	W	16	GLU
23	W	30	VAL
23	W	36	ILE
23	W	50	VAL
23	W	59	PHE
23	W	60	ALA

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Mol	Chain	Res	Type
23	W	61	LYS
23	W	70	VAL
23	W	72	GLY
23	W	73	PRO
24	X	76	LYS
25	Y	2	LYS
25	Y	38	GLN
27	0	42	ILE
29	2	45	SER
30	3	22	LYS
30	3	48	MET
31	4	8	LYS
31	4	37	GLN
3	C	3	VAL
3	C	4	LYS
3	C	35	LYS
3	C	37	SER
3	C	63	ILE
3	C	77	VAL
3	C	121	ALA
3	C	141	HIS
3	C	189	ALA
3	C	238	ASN
3	C	239	PHE
3	C	250	GLN
3	C	254	LYS
4	D	31	ALA
4	D	93	GLY
4	D	102	ALA
4	D	109	VAL
4	D	115	GLY
4	D	119	ALA
4	D	121	THR
4	D	122	VAL
4	D	131	ASP
4	D	144	GLY
4	D	164	GLN
4	D	195	GLY
5	E	5	LEU
5	E	77	ILE
5	E	79	ARG
5	E	81	GLY

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Mol	Chain	Res	Type
5	E	116	ASP
6	F	71	LYS
6	F	78	ILE
6	F	92	GLY
6	F	112	ASP
6	F	145	VAL
6	F	148	VAL
6	F	175	PRO
7	G	15	ASP
7	G	89	VAL
7	G	92	GLY
7	G	118	ALA
7	G	155	PRO
7	G	156	TYR
7	G	164	ALA
8	H	3	VAL
8	H	10	ALA
8	H	11	ASN
8	H	34	GLY
8	H	81	ALA
8	H	99	ILE
8	H	136	SER
9	I	14	ALA
9	I	64	ARG
10	J	13	ARG
10	J	51	GLY
10	J	54	ILE
10	J	73	VAL
10	J	83	GLY
10	J	98	GLU
11	K	110	LYS
12	L	4	ASN
12	L	31	GLY
12	L	36	LYS
12	L	41	ARG
12	L	68	SER
12	L	111	ILE
13	M	2	LEU
13	M	24	THR
13	M	55	ARG
13	M	69	PRO
13	M	72	PRO

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Mol	Chain	Res	Type
13	M	121	ALA
13	M	134	THR
14	N	59	SER
14	N	63	ARG
14	N	100	CYS
14	N	101	GLY
14	N	105	GLY
15	O	83	LEU
15	O	87	ILE
16	P	32	VAL
16	P	45	VAL
16	P	65	ASN
16	P	76	HIS
16	P	85	VAL
16	P	113	LEU
17	Q	4	LYS
17	Q	6	GLY
17	Q	71	ASN
17	Q	86	SER
17	Q	97	ILE
18	R	42	ALA
18	R	43	ASN
18	R	52	PRO
18	R	70	GLU
19	S	3	THR
19	S	33	LEU
19	S	53	SER
19	S	67	ASP
20	T	29	THR
20	T	71	GLY
21	U	12	VAL
21	U	41	VAL
21	U	42	LYS
21	U	80	ASP
21	U	87	GLU
21	U	92	VAL
22	V	44	HIS
23	W	11	ASN
23	W	14	ASP
23	W	17	ALA
23	W	27	GLY
23	W	48	ALA

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Mol	Chain	Res	Type
23	W	58	LEU
23	W	76	ARG
24	X	17	ARG
24	X	27	ARG
24	X	32	LEU
25	Y	9	LYS
25	Y	37	LEU
27	0	40	HIS
27	0	51	ARG
27	0	55	ALA
30	3	20	GLY
30	3	31	ILE
31	4	7	VAL
31	4	16	ILE
3	C	36	ASN
3	C	237	ARG
3	C	270	ARG
4	D	44	GLY
4	D	65	ALA
4	D	95	SER
4	D	136	ASN
4	D	197	THR
5	E	30	GLN
5	E	43	THR
5	E	62	GLN
5	E	106	LYS
5	E	132	LYS
5	E	144	GLU
5	E	174	GLY
6	F	2	LYS
6	F	9	ASP
6	F	36	ASN
6	F	86	CYS
6	F	87	LYS
7	G	40	VAL
7	G	84	LYS
7	G	113	ASP
8	H	75	LEU
8	H	120	GLY
8	H	130	VAL
9	I	23	VAL
10	J	9	GLU

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Mol	Chain	Res	Type
10	J	12	LYS
10	J	41	LYS
10	J	72	LYS
11	K	5	THR
11	K	17	ARG
11	K	30	ARG
11	K	45	ALA
11	K	48	ARG
12	L	3	LEU
12	L	5	THR
12	L	19	LEU
12	L	28	GLY
12	L	104	GLN
12	L	115	GLU
13	M	20	LEU
13	M	80	VAL
13	M	113	ALA
13	M	132	THR
14	N	18	GLN
14	N	70	THR
15	O	16	ARG
15	O	99	TYR
15	O	100	HIS
16	P	33	GLU
16	P	37	LYS
16	P	42	PHE
16	P	81	ASP
17	Q	9	ALA
17	Q	18	LYS
17	Q	87	VAL
18	R	65	ALA
18	R	100	GLY
20	T	55	VAL
21	U	18	LYS
21	U	52	ASN
22	V	71	LYS
23	W	10	ARG
23	W	18	LYS
23	W	23	LYS
23	W	37	VAL
23	W	77	LYS
25	Y	24	GLU

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Mol	Chain	Res	Type
25	Y	36	GLN
27	0	44	ALA
28	1	27	ARG
28	1	35	LEU
28	1	37	LYS
3	C	65	ASP
3	C	196	ASN
3	C	259	ASN
4	D	71	ALA
4	D	75	ALA
4	D	91	THR
4	D	133	THR
4	D	145	SER
4	D	203	VAL
5	E	14	VAL
5	E	72	SER
5	E	123	LYS
5	E	188	MET
6	F	41	GLU
6	F	59	ILE
6	F	88	VAL
8	H	69	ALA
8	H	82	SER
8	H	107	GLY
8	H	113	SER
10	J	44	TYR
10	J	120	ARG
12	L	47	ARG
12	L	56	PRO
13	M	19	GLY
13	M	30	SER
13	M	70	ASP
13	M	77	PRO
13	M	110	GLU
13	M	122	ALA
14	N	42	LYS
16	P	64	SER
16	P	74	GLN
18	R	4	VAL
18	R	53	PHE
18	R	69	GLY
20	T	86	THR

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Mol	Chain	Res	Type
22	V	2	PHE
22	V	70	ILE
23	W	75	ASN
26	Z	4	ILE
26	Z	34	THR
26	Z	39	ASP
27	0	39	ARG
28	1	5	ARG
28	1	41	VAL
29	2	17	GLY
29	2	35	ARG
3	C	59	GLN
3	C	105	ALA
3	C	142	ASN
4	D	190	LYS
5	E	4	VAL
5	E	83	VAL
6	F	20	ASN
6	F	37	MET
6	F	73	VAL
6	F	82	TYR
6	F	139	GLU
7	G	9	VAL
7	G	97	VAL
7	G	125	PRO
7	G	152	ARG
8	H	2	GLN
8	H	23	ALA
10	J	125	TYR
11	K	92	GLN
11	K	119	PRO
12	L	66	PHE
12	L	86	GLU
13	M	73	ILE
13	M	79	ALA
13	M	133	LYS
14	N	98	LEU
14	N	102	PHE
17	Q	78	PHE
18	R	57	GLY
18	R	98	ILE
19	S	29	VAL

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Mol	Chain	Res	Type
19	S	72	THR
21	U	63	ALA
21	U	71	ILE
21	U	83	GLY
22	V	45	ASP
22	V	93	ARG
24	X	34	SER
27	0	26	SER
27	0	48	TYR
27	0	52	LYS
27	0	54	ILE
28	1	36	LYS
28	1	50	GLU
29	2	22	MET
29	2	33	ARG
3	C	29	PHE
3	C	34	GLU
3	C	123	ILE
3	C	136	VAL
5	E	96	VAL
5	E	167	VAL
5	E	177	PRO
6	F	66	ILE
6	F	136	ILE
7	G	32	LEU
9	I	49	GLU
10	J	10	THR
14	N	19	ALA
17	Q	81	GLY
18	R	24	LYS
19	S	32	ALA
21	U	15	GLY
21	U	47	PRO
23	W	51	GLY
24	X	30	PRO
30	3	51	LYS
3	C	76	VAL
5	E	42	GLY
5	E	129	PRO
6	F	11	VAL
6	F	12	VAL
6	F	24	VAL

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Mol	Chain	Res	Type
6	F	135	ILE
7	G	16	VAL
10	J	112	GLY
19	S	45	VAL
22	V	84	PRO
27	0	53	VAL
28	1	4	ILE
8	H	92	GLY
13	M	125	PRO
14	N	93	GLY
16	P	17	PRO
16	P	104	GLY
18	R	101	ILE
3	C	31	PRO
3	C	64	VAL
4	D	19	GLY
4	D	37	VAL
5	E	52	VAL
6	F	123	GLY
16	P	63	ILE
17	Q	33	VAL
3	C	106	PRO
6	F	43	ILE
6	F	103	ILE
7	G	112	VAL
8	H	16	GLY
11	K	102	VAL
11	K	84	VAL
19	S	24	ILE

### 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	
3	C	216/217 (100%)	182 (84%)	34 (16%)	4	17
4	D	164/164 (100%)	136 (83%)	28 (17%)	3	14
5	E	165/165 (100%)	130 (79%)	35 (21%)	1	8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	F	149/149 (100%)	116 (78%)	33 (22%)	1	6
7	G	137/137 (100%)	110 (80%)	27 (20%)	2	9
8	H	114/114 (100%)	85 (75%)	29 (25%)	1	2
9	I	109/109 (100%)	107 (98%)	2 (2%)	71	93
10	J	116/116 (100%)	100 (86%)	16 (14%)	5	24
11	K	102/104 (98%)	84 (82%)	18 (18%)	3	13
12	L	102/103 (99%)	87 (85%)	15 (15%)	4	21
13	M	109/109 (100%)	93 (85%)	16 (15%)	4	21
14	N	100/103 (97%)	85 (85%)	15 (15%)	4	20
15	O	86/87 (99%)	76 (88%)	10 (12%)	8	35
16	P	99/99 (100%)	76 (77%)	23 (23%)	1	5
17	Q	89/89 (100%)	73 (82%)	16 (18%)	2	12
18	R	84/84 (100%)	67 (80%)	17 (20%)	2	9
19	S	93/93 (100%)	79 (85%)	14 (15%)	4	19
20	T	80/84 (95%)	65 (81%)	15 (19%)	2	11
21	U	83/84 (99%)	69 (83%)	14 (17%)	3	14
22	V	78/78 (100%)	67 (86%)	11 (14%)	5	23
23	W	59/62 (95%)	49 (83%)	10 (17%)	3	14
24	X	67/67 (100%)	56 (84%)	11 (16%)	3	15
25	Y	55/55 (100%)	43 (78%)	12 (22%)	1	7
26	Z	48/48 (100%)	43 (90%)	5 (10%)	10	39
27	0	47/47 (100%)	40 (85%)	7 (15%)	4	20
28	1	45/48 (94%)	38 (84%)	7 (16%)	4	17
29	2	38/38 (100%)	33 (87%)	5 (13%)	6	27
30	3	51/51 (100%)	44 (86%)	7 (14%)	5	25
31	4	34/34 (100%)	29 (85%)	5 (15%)	4	21
All	All	2719/2738 (99%)	2262 (83%)	457 (17%)	3	14

All (457) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	C	2	VAL
3	C	4	LYS

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Mol	Chain	Res	Type
3	C	5	CYS
3	C	12	ARG
3	C	17	LYS
3	C	43	ASN
3	C	51	ARG
3	C	52	HIS
3	C	53	ILE
3	C	62	ARG
3	C	73	ILE
3	C	89	ASN
3	C	104	LEU
3	C	107	LYS
3	C	109	LEU
3	C	129	LEU
3	C	145	MET
3	C	155	ARG
3	C	172	THR
3	C	173	LEU
3	C	176	ARG
3	C	181	ARG
3	C	184	GLU
3	C	188	ARG
3	C	212	TRP
3	C	213	ARG
3	C	235	GLU
3	C	241	LYS
3	C	246	PRO
3	C	250	GLN
3	C	252	LYS
3	C	257	ARG
3	C	264	LYS
3	C	269	ARG
4	D	18	ASP
4	D	24	VAL
4	D	33	ARG
4	D	35	THR
4	D	36	GLN
4	D	38	LYS
4	D	39	ASP
4	D	46	ARG
4	D	48	ILE
4	D	56	LYS

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Mol	Chain	Res	Type
4	D	74	GLU
4	D	81	GLU
4	D	89	GLU
4	D	99	GLU
4	D	100	LEU
4	D	103	ASP
4	D	106	LYS
4	D	110	THR
4	D	126	ASN
4	D	130	GLN
4	D	138	LEU
4	D	148	GLN
4	D	168	GLU
4	D	176	ASP
4	D	177	VAL
4	D	180	VAL
4	D	184	ARG
4	D	208	LYS
5	E	2	GLU
5	E	12	LEU
5	E	17	THR
5	E	21	ARG
5	E	24	ASN
5	E	40	ARG
5	E	60	TRP
5	E	62	GLN
5	E	65	THR
5	E	67	ARG
5	E	70	SER
5	E	75	SER
5	E	76	PRO
5	E	78	TRP
5	E	95	LYS
5	E	108	ILE
5	E	111	GLU
5	E	116	ASP
5	E	117	ARG
5	E	118	LEU
5	E	119	ILE
5	E	122	GLU
5	E	127	GLU
5	E	136	GLN

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Mol	Chain	Res	Type
5	E	137	LYS
5	E	150	THR
5	E	153	LEU
5	E	154	ASP
5	E	157	LEU
5	E	165	HIS
5	E	166	LYS
5	E	180	LEU
5	E	181	ILE
5	E	185	LYS
5	E	189	THR
6	F	3	LEU
6	F	18	GLU
6	F	26	GLN
6	F	29	ARG
6	F	32	LYS
6	F	34	THR
6	F	45	ASP
6	F	49	LEU
6	F	56	LEU
6	F	62	GLN
6	F	68	LYS
6	F	82	TYR
6	F	91	ARG
6	F	94	ARG
6	F	102	LEU
6	F	109	ARG
6	F	111	ARG
6	F	121	PHE
6	F	126	ASN
6	F	134	GLN
6	F	135	ILE
6	F	137	PHE
6	F	138	PRO
6	F	141	ASP
6	F	142	TYR
6	F	144	LYS
6	F	146	ASP
6	F	147	ARG
6	F	149	ARG
6	F	152	ASP
6	F	156	THR

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Mol	Chain	Res	Type
6	F	166	ARG
6	F	172	PHE
7	G	17	LYS
7	G	28	LYS
7	G	31	GLU
7	G	34	ARG
7	G	49	LEU
7	G	54	ARG
7	G	59	ASP
7	G	63	GLN
7	G	68	ARG
7	G	70	LEU
7	G	72	ASN
7	G	80	GLU
7	G	84	LYS
7	G	85	LYS
7	G	100	ASN
7	G	113	ASP
7	G	115	GLN
7	G	120	ILE
7	G	123	GLU
7	G	132	LEU
7	G	151	ARG
7	G	163	TYR
7	G	166	GLU
7	G	167	VAL
7	G	171	LYS
7	G	174	LYS
7	G	176	LYS
8	H	3	VAL
8	H	17	ASP
8	H	18	GLN
8	H	28	ASN
8	H	31	VAL
8	H	33	GLN
8	H	50	ARG
8	H	55	GLU
8	H	71	LYS
8	H	75	LEU
8	H	76	GLU
8	H	77	THR
8	H	79	THR

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Mol	Chain	Res	Type
8	H	83	LYS
8	H	86	ASP
8	H	89	LYS
8	H	91	PHE
8	H	97	ARG
8	H	98	ASP
8	H	101	ASP
8	H	104	THR
8	H	109	GLU
8	H	110	VAL
8	H	122	LEU
8	H	123	ARG
8	H	130	VAL
8	H	131	SER
8	H	133	GLN
8	H	142	VAL
9	I	7	TYR
9	I	96	LYS
10	J	25	LEU
10	J	28	LEU
10	J	43	GLU
10	J	44	TYR
10	J	53	TYR
10	J	54	ILE
10	J	65	THR
10	J	76	HIS
10	J	86	GLN
10	J	95	ARG
10	J	106	LYS
10	J	111	LYS
10	J	124	VAL
10	J	129	GLU
10	J	131	ASN
10	J	136	GLN
11	K	1	ILE
11	K	9	VAL
11	K	20	CYS
11	K	31	TYR
11	K	40	ILE
11	K	51	VAL
11	K	52	LYS
11	K	53	LYS

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Mol	Chain	Res	Type
11	K	63	ARG
11	K	64	THR
11	K	70	ARG
11	K	77	ARG
11	K	86	LEU
11	K	97	ARG
11	K	104	ARG
11	K	110	LYS
11	K	111	PHE
11	K	113	LYS
12	L	4	ASN
12	L	6	LEU
12	L	36	LYS
12	L	47	ARG
12	L	54	GLN
12	L	55	MET
12	L	64	PHE
12	L	69	ARG
12	L	91	ASP
12	L	92	LEU
12	L	117	THR
12	L	118	THR
12	L	122	VAL
12	L	123	ARG
12	L	129	LYS
13	M	5	LYS
13	M	8	LYS
13	M	12	MET
13	M	13	HIS
13	M	20	LEU
13	M	60	GLN
13	M	70	ASP
13	M	88	ASN
13	M	90	GLU
13	M	93	VAL
13	M	105	MET
13	M	108	VAL
13	M	112	LEU
13	M	114	ARG
13	M	119	LEU
13	M	127	LYS
14	N	13	ASN

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Mol	Chain	Res	Type
14	N	18	GLN
14	N	21	PHE
14	N	30	ARG
14	N	35	LYS
14	N	37	THR
14	N	62	ASN
14	N	71	ARG
14	N	96	ARG
14	N	97	ILE
14	N	99	LYS
14	N	102	PHE
14	N	112	TYR
14	N	114	GLU
14	N	118	ARG
15	O	9	ARG
15	O	17	LYS
15	O	19	GLN
15	O	31	THR
15	O	61	GLN
15	O	62	LEU
15	O	81	ARG
15	O	100	HIS
15	O	106	LEU
15	O	116	GLN
16	P	3	ILE
16	P	6	GLN
16	P	8	GLU
16	P	14	GLN
16	P	18	SER
16	P	19	PHE
16	P	25	VAL
16	P	32	VAL
16	P	37	LYS
16	P	38	ARG
16	P	40	GLN
16	P	43	GLU
16	P	45	VAL
16	P	49	ILE
16	P	61	ARG
16	P	83	ILE
16	P	86	LYS
16	P	87	ARG

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Mol	Chain	Res	Type
16	P	92	ARG
16	P	100	ARG
16	P	101	GLU
16	P	111	GLU
16	P	112	ARG
17	Q	4	LYS
17	Q	5	ARG
17	Q	10	ARG
17	Q	50	ARG
17	Q	53	LYS
17	Q	58	GLN
17	Q	59	LEU
17	Q	69	ARG
17	Q	71	ASN
17	Q	79	ILE
17	Q	88	GLU
17	Q	91	ARG
17	Q	94	LEU
17	Q	100	PHE
17	Q	101	ASP
17	Q	102	LYS
18	R	4	VAL
18	R	10	LYS
18	R	18	GLN
18	R	21	ARG
18	R	22	LEU
18	R	37	GLU
18	R	39	LEU
18	R	48	LYS
18	R	52	PRO
18	R	53	PHE
18	R	64	VAL
18	R	72	VAL
18	R	82	HIS
18	R	86	GLN
18	R	93	PHE
18	R	94	THR
18	R	95	ASP
19	S	6	LYS
19	S	31	GLN
19	S	35	ILE
19	S	37	THR

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Mol	Chain	Res	Type
19	S	40	ASN
19	S	46	LEU
19	S	61	ASN
19	S	66	ILE
19	S	67	ASP
19	S	68	ASP
19	S	81	SER
19	S	84	ARG
19	S	88	ARG
19	S	109	ASP
20	T	3	ARG
20	T	7	LEU
20	T	8	LEU
20	T	9	LYS
20	T	11	LEU
20	T	31	VAL
20	T	32	LEU
20	T	50	LEU
20	T	64	LYS
20	T	68	LYS
20	T	69	ARG
20	T	70	HIS
20	T	73	ARG
20	T	76	ARG
20	T	81	LYS
21	U	7	ASP
21	U	8	ASP
21	U	11	ILE
21	U	16	LYS
21	U	17	ASP
21	U	18	LYS
21	U	20	LYS
21	U	26	ASN
21	U	28	LEU
21	U	40	LEU
21	U	49	PRO
21	U	53	GLN
21	U	73	ASN
21	U	85	ARG
22	V	40	ILE
22	V	42	LEU
22	V	46	LYS

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Mol	Chain	Res	Type
22	V	51	GLN
22	V	53	LYS
22	V	66	ASP
22	V	70	ILE
22	V	73	LYS
22	V	75	GLN
22	V	79	ARG
22	V	89	ILE
23	W	19	ARG
23	W	23	LYS
23	W	25	PHE
23	W	39	GLN
23	W	44	PHE
23	W	49	ASN
23	W	50	VAL
23	W	63	ASP
23	W	73	PRO
23	W	77	LYS
24	X	16	ASN
24	X	17	ARG
24	X	24	THR
24	X	26	ARG
24	X	27	ARG
24	X	28	PHE
24	X	34	SER
24	X	36	ARG
24	X	47	THR
24	X	64	ASP
24	X	77	TYR
25	Y	2	LYS
25	Y	12	GLU
25	Y	17	GLU
25	Y	25	GLN
25	Y	31	GLN
25	Y	37	LEU
25	Y	38	GLN
25	Y	48	ARG
25	Y	57	LEU
25	Y	58	ASN
25	Y	59	GLU
25	Y	60	LYS
26	Z	15	ARG

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Mol	Chain	Res	Type
26	Z	19	HIS
26	Z	30	ARG
26	Z	33	HIS
26	Z	37	ARG
27	0	9	ARG
27	0	10	SER
27	0	14	MET
27	0	22	THR
27	0	28	SER
27	0	38	LEU
27	0	56	LYS
28	1	4	ILE
28	1	9	LYS
28	1	24	LYS
28	1	31	GLU
28	1	32	LYS
28	1	41	VAL
28	1	49	LYS
29	2	4	THR
29	2	24	THR
29	2	33	ARG
29	2	42	LEU
29	2	46	LYS
30	3	5	THR
30	3	7	ARG
30	3	14	LYS
30	3	18	LYS
30	3	29	ARG
30	3	48	MET
30	3	56	LEU
31	4	9	LYS
31	4	15	LYS
31	4	24	ARG
31	4	28	SER
31	4	35	GLN

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (97) such sidechains are listed below:

Mol	Chain	Res	Type
3	C	20	ASN
3	C	43	ASN
3	C	52	HIS

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Mol	Chain	Res	Type
3	C	57	HIS
3	C	59	GLN
3	C	89	ASN
3	C	133	ASN
3	C	152	GLN
3	C	162	GLN
3	C	225	ASN
3	C	238	ASN
4	D	32	ASN
4	D	36	GLN
4	D	49	GLN
4	D	126	ASN
4	D	130	GLN
4	D	136	ASN
4	D	148	GLN
4	D	173	GLN
5	E	24	ASN
5	E	29	HIS
5	E	30	GLN
5	E	62	GLN
5	E	97	ASN
5	E	163	ASN
6	F	26	GLN
6	F	51	ASN
6	F	134	GLN
7	G	19	ASN
7	G	29	ASN
7	G	63	GLN
7	G	100	ASN
7	G	115	GLN
8	H	20	ASN
8	H	28	ASN
9	I	11	GLN
9	I	29	GLN
9	I	33	ASN
9	I	93	ASN
10	J	40	HIS
10	J	58	ASN
10	J	135	GLN
10	J	136	GLN
10	J	138	GLN
11	K	2	GLN

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Mol	Chain	Res	Type
11	K	4	GLN
11	K	87	ASN
11	K	88	ASN
12	L	4	ASN
12	L	54	GLN
12	L	99	ASN
13	M	3	GLN
14	N	11	ASN
14	N	62	ASN
15	O	19	GLN
15	O	34	HIS
15	O	38	GLN
15	O	61	GLN
15	O	67	ASN
16	P	6	GLN
16	P	11	GLN
16	P	40	GLN
16	P	65	ASN
17	Q	43	GLN
17	Q	51	GLN
17	Q	55	GLN
17	Q	71	ASN
18	R	43	ASN
18	R	86	GLN
19	S	40	ASN
19	S	57	ASN
19	S	61	ASN
20	T	48	GLN
20	T	91	GLN
20	T	92	ASN
21	U	26	ASN
21	U	39	ASN
21	U	53	GLN
21	U	65	GLN
22	V	44	HIS
22	V	51	GLN
22	V	80	HIS
22	V	88	HIS
23	W	39	GLN
23	W	49	ASN
24	X	5	GLN
24	X	35	HIS

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Mol	Chain	Res	Type
25	Y	25	GLN
25	Y	31	GLN
25	Y	38	GLN
25	Y	45	GLN
26	Z	33	HIS
27	0	3	GLN
27	0	5	ASN
29	2	13	ASN
30	3	27	ASN
31	4	35	GLN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	116/120 (96%)	19 (16%)	2 (1%)
2	B	2837/2904 (97%)	416 (14%)	13 (0%)
All	All	2953/3024 (97%)	435 (14%)	15 (0%)

All (435) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	9	G
1	A	13	G
1	A	15	A
1	A	16	G
1	A	25	U
1	A	26	C
1	A	27	C
1	A	29	A
1	A	30	C
1	A	45	A
1	A	52	A
1	A	53	A
1	A	66	A
1	A	67	G
1	A	88	C
1	A	90	C
1	A	91	C
1	A	99	A
1	A	109	A
2	B	4	U

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Mol	Chain	Res	Type
2	B	34	U
2	B	35	G
2	B	46	G
2	B	71	A
2	B	72	U
2	B	74	A
2	B	75	G
2	B	84	A
2	B	91	A
2	B	95	A
2	B	98	G
2	B	100	U
2	B	101	A
2	B	102	U
2	B	118	A
2	B	119	A
2	B	120	U
2	B	121	G
2	B	125	A
2	B	126	A
2	B	138	U
2	B	139	U
2	B	140	C
2	B	141	G
2	B	142	A
2	B	144	A
2	B	160	A
2	B	163	C
2	B	181	A
2	B	196	A
2	B	199	A
2	B	216	A
2	B	221	A
2	B	222	A
2	B	233	A
2	B	241	A
2	B	248	G
2	B	249	C
2	B	255	A
2	B	264	C
2	B	265	A
2	B	266	G

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Mol	Chain	Res	Type
2	B	268	C
2	B	271	G
2	B	276	U
2	B	277	G
2	B	278	A
2	B	279	A
2	B	281	C
2	B	284	U
2	B	294	A
2	B	299	A
2	B	311	A
2	B	329	G
2	B	330	A
2	B	333	G
2	B	346	A
2	B	353	C
2	B	355	U
2	B	362	A
2	B	371	A
2	B	372	G
2	B	386	G
2	B	387	U
2	B	406	G
2	B	411	G
2	B	412	A
2	B	424	G
2	B	455	C
2	B	457	A
2	B	479	A
2	B	481	G
2	B	490	C
2	B	491	G
2	B	504	A
2	B	505	A
2	B	508	A
2	B	509	C
2	B	512	G
2	B	527	C
2	B	531	C
2	B	532	A
2	B	533	G
2	B	544	C

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Mol	Chain	Res	Type
2	B	546	U
2	B	547	A
2	B	549	G
2	B	555	G
2	B	563	A
2	B	573	U
2	B	575	A
2	B	586	A
2	B	588	U
2	B	603	A
2	B	613	A
2	B	614	A
2	B	615	U
2	B	627	A
2	B	637	A
2	B	646	U
2	B	647	G
2	B	654	A
2	B	655	A
2	B	656	G
2	B	671	C
2	B	686	U
2	B	717	C
2	B	718	A
2	B	730	A
2	B	746	U
2	B	747	U
2	B	752	A
2	B	757	G
2	B	762	U
2	B	764	A
2	B	775	G
2	B	782	A
2	B	784	G
2	B	785	G
2	B	805	G
2	B	812	C
2	B	819	A
2	B	827	U
2	B	828	U
2	B	846	U
2	B	847	U

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Mol	Chain	Res	Type
2	B	858	G
2	B	859	G
2	B	871	U
2	B	875	G
2	B	876	C
2	B	877	A
2	B	878	A
2	B	910	A
2	B	912	C
2	B	919	U
2	B	931	U
2	B	932	U
2	B	933	A
2	B	941	A
2	B	946	C
2	B	961	C
2	B	973	A
2	B	974	G
2	B	983	A
2	B	991	C
2	B	995	C
2	B	996	A
2	B	1005	C
2	B	1012	U
2	B	1013	C
2	B	1022	G
2	B	1023	U
2	B	1025	G
2	B	1033	U
2	B	1045	C
2	B	1046	A
2	B	1047	G
2	B	1056	G
2	B	1062	G
2	B	1070	A
2	B	1088	A
2	B	1090	A
2	B	1112	G
2	B	1132	U
2	B	1133	A
2	B	1134	A
2	B	1135	C

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Mol	Chain	Res	Type
2	B	1136	G
2	B	1139	G
2	B	1142	A
2	B	1174	U
2	B	1176	U
2	B	1177	G
2	B	1205	A
2	B	1206	G
2	B	1211	C
2	B	1238	G
2	B	1241	A
2	B	1242	U
2	B	1248	G
2	B	1250	G
2	B	1253	A
2	B	1256	G
2	B	1266	G
2	B	1271	G
2	B	1272	A
2	B	1273	U
2	B	1275	A
2	B	1276	A
2	B	1300	G
2	B	1301	A
2	B	1325	U
2	B	1337	G
2	B	1341	G
2	B	1352	U
2	B	1365	A
2	B	1368	G
2	B	1374	G
2	B	1379	U
2	B	1383	A
2	B	1384	A
2	B	1396	U
2	B	1397	U
2	B	1416	G
2	B	1417	C
2	B	1419	A
2	B	1421	G
2	B	1427	A
2	B	1428	C

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Mol	Chain	Res	Type
2	B	1451	C
2	B	1453	A
2	B	1454	C
2	B	1455	G
2	B	1459	G
2	B	1460	U
2	B	1461	C
2	B	1469	A
2	B	1470	A
2	B	1476	U
2	B	1477	A
2	B	1478	G
2	B	1482	G
2	B	1490	A
2	B	1493	C
2	B	1504	A
2	B	1505	A
2	B	1507	C
2	B	1508	A
2	B	1509	A
2	B	1524	G
2	B	1532	A
2	B	1535	A
2	B	1538	G
2	B	1552	A
2	B	1559	U
2	B	1560	G
2	B	1567	G
2	B	1569	A
2	B	1578	U
2	B	1585	C
2	B	1608	A
2	B	1609	A
2	B	1610	A
2	B	1634	A
2	B	1635	A
2	B	1640	A
2	B	1647	U
2	B	1648	U
2	B	1654	A
2	B	1674	G
2	B	1700	A

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Mol	Chain	Res	Type
2	B	1714	U
2	B	1715	G
2	B	1729	U
2	B	1730	C
2	B	1731	G
2	B	1733	G
2	B	1738	G
2	B	1756	G
2	B	1758	U
2	B	1764	C
2	B	1773	A
2	B	1776	G
2	B	1781	U
2	B	1800	C
2	B	1801	A
2	B	1808	A
2	B	1816	C
2	B	1829	A
2	B	1870	C
2	B	1884	G
2	B	1896	G
2	B	1906	G
2	B	1913	A
2	B	1914	C
2	B	1915	U
2	B	1929	G
2	B	1930	G
2	B	1931	U
2	B	1937	A
2	B	1938	A
2	B	1939	U
2	B	1940	U
2	B	1955	U
2	B	1967	C
2	B	1970	A
2	B	1971	U
2	B	1972	G
2	B	1991	U
2	B	1993	U
2	B	1997	C
2	B	2020	A
2	B	2022	U

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Mol	Chain	Res	Type
2	B	2023	C
2	B	2031	A
2	B	2033	A
2	B	2043	C
2	B	2055	C
2	B	2056	G
2	B	2060	A
2	B	2061	G
2	B	2062	A
2	B	2069	G
2	B	2072	C
2	B	2100	G
2	B	2103	C
2	B	2105	U
2	B	2134	A
2	B	2135	A
2	B	2144	G
2	B	2145	C
2	B	2146	C
2	B	2147	A
2	B	2152	G
2	B	2154	A
2	B	2180	U
2	B	2182	U
2	B	2183	A
2	B	2187	U
2	B	2190	G
2	B	2191	A
2	B	2192	U
2	B	2193	G
2	B	2198	A
2	B	2203	U
2	B	2204	G
2	B	2212	A
2	B	2213	U
2	B	2214	C
2	B	2225	A
2	B	2238	G
2	B	2239	G
2	B	2266	A
2	B	2278	A
2	B	2279	G

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Mol	Chain	Res	Type
2	B	2283	C
2	B	2287	A
2	B	2288	A
2	B	2297	A
2	B	2305	U
2	B	2307	G
2	B	2308	G
2	B	2309	A
2	B	2320	U
2	B	2321	U
2	B	2322	A
2	B	2324	U
2	B	2325	G
2	B	2333	A
2	B	2336	A
2	B	2337	G
2	B	2347	C
2	B	2379	G
2	B	2383	G
2	B	2385	C
2	B	2396	G
2	B	2402	U
2	B	2403	C
2	B	2406	A
2	B	2423	U
2	B	2425	A
2	B	2426	A
2	B	2429	G
2	B	2430	A
2	B	2434	A
2	B	2441	U
2	B	2448	A
2	B	2472	G
2	B	2476	A
2	B	2478	A
2	B	2491	U
2	B	2498	C
2	B	2502	G
2	B	2505	G
2	B	2506	U
2	B	2518	A
2	B	2529	G

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Mol	Chain	Res	Type
2	B	2534	A
2	B	2535	G
2	B	2554	U
2	B	2566	A
2	B	2567	G
2	B	2572	A
2	B	2586	U
2	B	2602	A
2	B	2609	U
2	B	2613	U
2	B	2629	U
2	B	2682	A
2	B	2689	U
2	B	2690	U
2	B	2714	G
2	B	2726	A
2	B	2744	G
2	B	2757	A
2	B	2765	A
2	B	2778	A
2	B	2791	G
2	B	2793	C
2	B	2798	U
2	B	2799	A
2	B	2800	A
2	B	2808	G
2	B	2820	A
2	B	2821	A
2	B	2832	U
2	B	2836	U
2	B	2850	A
2	B	2867	G
2	B	2872	A
2	B	2873	A
2	B	2883	A
2	B	2884	U
2	B	2903	U

All (15) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	25	U

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Mol	Chain	Res	Type
1	A	66	A
2	B	670	A
2	B	784	G
2	B	858	G
2	B	1210	G
2	B	1608	A
2	B	1930	G
2	B	2282	G
2	B	2308	G
2	B	2336	A
2	B	2425	A
2	B	2430	A
2	B	2756	U
2	B	2894	G

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

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

## 5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 5.6 Ligand geometry ⓘ

Of 120 ligands modelled in this entry, 120 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

## 5.7 Other polymers ⓘ

There are no such residues in this entry.



## 5.8 Polymer linkage issues

There are no chain breaks in this entry.



## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

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	A	117/120 (97%)	0.18	1 (0%) 81 35	44, 75, 109, 180	0
2	B	2841/2904 (97%)	0.20	302 (10%) 7 2	13, 70, 147, 180	0
3	C	271/272 (99%)	0.34	27 (9%) 8 2	16, 66, 111, 151	0
4	D	209/209 (100%)	0.01	9 (4%) 34 7	25, 83, 146, 180	0
5	E	201/201 (100%)	0.43	31 (15%) 3 1	22, 78, 139, 172	0
6	F	178/178 (100%)	-0.22	0 100 100	49, 111, 174, 180	0
7	G	176/176 (100%)	-0.27	6 (3%) 43 9	47, 112, 165, 176	0
8	H	149/149 (100%)	0.07	7 (4%) 30 6	52, 131, 180, 180	0
9	I	141/141 (100%)	-0.25	2 (1%) 72 24	110, 167, 180, 180	0
10	J	142/142 (100%)	-0.03	9 (6%) 19 4	32, 86, 133, 180	0
11	K	121/123 (98%)	0.69	17 (14%) 3 1	32, 74, 148, 180	0
12	L	143/144 (99%)	-0.16	1 (0%) 84 40	27, 69, 121, 180	0
13	M	136/136 (100%)	0.09	10 (7%) 14 4	33, 65, 132, 168	0
14	N	120/127 (94%)	0.14	5 (4%) 35 7	43, 88, 131, 169	0
15	O	116/117 (99%)	-0.33	0 100 100	34, 77, 118, 138	0
16	P	114/114 (100%)	1.82	44 (38%) 1 0	43, 84, 145, 164	0
17	Q	117/117 (100%)	0.33	12 (10%) 7 2	34, 73, 135, 149	0
18	R	103/103 (100%)	-0.09	4 (3%) 37 8	44, 95, 146, 177	0
19	S	110/110 (100%)	1.17	24 (21%) 1 1	47, 84, 138, 180	0
20	T	93/100 (93%)	2.05	39 (41%) 1 0	44, 93, 163, 180	0
21	U	102/103 (99%)	-0.22	1 (0%) 79 31	48, 106, 162, 175	0
22	V	94/94 (100%)	0.04	0 100 100	37, 84, 140, 180	0
23	W	79/84 (94%)	-0.06	4 (5%) 27 5	6, 53, 116, 154	0
24	X	77/77 (100%)	0.73	10 (12%) 4 1	24, 63, 107, 157	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
25	Y	63/63 (100%)	0.96	13 (20%) 1 1	47, 108, 165, 180	0
26	Z	58/58 (100%)	-0.14	0 100 100	40, 74, 124, 150	0
27	0	56/56 (100%)	0.29	8 (14%) 3 1	35, 87, 152, 180	0
28	1	50/54 (92%)	0.03	4 (8%) 12 3	43, 72, 122, 140	0
29	2	46/46 (100%)	3.01	34 (73%) 0 0	42, 61, 97, 162	0
30	3	64/64 (100%)	-0.27	0 100 100	21, 56, 99, 136	0
31	4	38/38 (100%)	-0.18	0 100 100	36, 86, 126, 146	0
All	All	6325/6420 (98%)	0.23	624 (9%) 8 2	6, 77, 159, 180	0

All (624) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	B	2799	A	13.3
2	B	508	A	11.6
2	B	504	A	11.5
24	X	75	GLU	10.0
20	T	70	HIS	9.5
20	T	72	GLN	9.0
2	B	1420	A	8.8
19	S	82	MET	8.7
19	S	110	ARG	8.2
20	T	69	ARG	8.2
20	T	1	MET	7.8
2	B	2213	U	7.7
19	S	1	MET	7.6
20	T	73	ARG	7.5
3	C	34	GLU	7.4
19	S	109	ASP	7.3
16	P	26	GLU	7.3
2	B	2585	U	7.3
19	S	98	LYS	7.2
2	B	125	A	7.1
2	B	1536	C	7.1
25	Y	63	ALA	7.1
2	B	798	G	7.0
2	B	2102	G	6.9
24	X	73	ARG	6.9
24	X	74	GLY	6.8
2	B	53	A	6.8
29	2	13	ASN	6.8

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Mol	Chain	Res	Type	RSRZ
11	K	48	ARG	6.7
2	B	2506	U	6.7
2	B	1369	G	6.7
2	B	509	C	6.6
16	P	86	LYS	6.6
2	B	118	A	6.6
2	B	145	C	6.6
2	B	51	G	6.4
20	T	76	ARG	6.4
2	B	2797	U	6.3
5	E	57	LYS	6.3
5	E	61	ARG	6.2
2	B	507	A	6.2
2	B	208	C	6.2
2	B	518	G	6.2
2	B	1357	C	6.2
29	2	14	ARG	6.2
2	B	120	U	6.2
29	2	22	MET	6.2
20	T	71	GLY	6.1
2	B	2181	U	6.0
5	E	67	ARG	6.0
29	2	28	ARG	6.0
2	B	180	G	5.9
2	B	2573	C	5.9
19	S	97	LEU	5.8
2	B	2062	A	5.8
2	B	2442	C	5.8
16	P	84	SER	5.8
13	M	1	MET	5.7
2	B	1323	C	5.6
20	T	68	LYS	5.6
5	E	71	GLY	5.6
2	B	2505	G	5.5
2	B	119	A	5.5
29	2	24	THR	5.5
25	Y	7	ARG	5.5
29	2	23	ALA	5.5
2	B	1375	U	5.5
2	B	126	A	5.4
5	E	58	LYS	5.4
5	E	64	GLY	5.4

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Mol	Chain	Res	Type	RSRZ
2	B	2586	U	5.4
5	E	60	TRP	5.4
2	B	144	A	5.3
20	T	15	HIS	5.3
29	2	20	ALA	5.3
2	B	207	A	5.3
24	X	72	ALA	5.3
2	B	1370	C	5.2
19	S	11	ARG	5.2
2	B	124	G	5.2
2	B	1257	C	5.2
2	B	52	A	5.2
2	B	519	U	5.1
5	E	59	PRO	5.1
11	K	16	ARG	5.1
12	L	144	GLU	5.1
16	P	43	GLU	5.1
16	P	22	GLY	5.1
19	S	99	ARG	5.1
2	B	134	G	5.0
2	B	179	C	5.0
29	2	29	GLN	5.0
2	B	799	G	5.0
1	A	88	C	5.0
19	S	95	ARG	5.0
2	B	2059	A	5.0
19	S	81	SER	4.9
2	B	2101	A	4.9
2	B	2570	G	4.9
2	B	2104	C	4.9
5	E	56	GLY	4.9
2	B	435	C	4.9
2	B	680	C	4.9
29	2	19	ARG	4.9
16	P	28	LYS	4.9
2	B	1368	G	4.9
2	B	797	G	4.8
29	2	17	GLY	4.8
5	E	86	ALA	4.8
2	B	2867	G	4.8
2	B	2503	A	4.8
2	B	2602	A	4.8

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Mol	Chain	Res	Type	RSRZ
16	P	81	ASP	4.8
19	S	96	ILE	4.7
2	B	2063	C	4.6
7	G	13	GLY	4.6
2	B	2103	C	4.6
2	B	2874	C	4.6
2	B	1537	G	4.6
4	D	18	ASP	4.6
2	B	117	G	4.6
5	E	79	ARG	4.6
5	E	65	THR	4.6
2	B	1808	A	4.6
2	B	2671	G	4.5
2	B	2571	U	4.5
16	P	112	ARG	4.5
16	P	37	LYS	4.5
2	B	181	A	4.5
2	B	1333	G	4.5
3	C	213	ARG	4.5
5	E	47	LYS	4.5
2	B	1356	G	4.4
7	G	176	LYS	4.4
19	S	84	ARG	4.4
2	B	116	C	4.4
19	S	83	LYS	4.4
20	T	6	ARG	4.4
29	2	21	ARG	4.4
2	B	49	A	4.4
2	B	2257	U	4.4
2	B	1254	A	4.4
3	C	27	LYS	4.4
2	B	2616	C	4.4
3	C	214	GLY	4.4
5	E	72	SER	4.4
2	B	22	C	4.3
2	B	1374	G	4.3
5	E	62	GLN	4.3
16	P	45	VAL	4.3
2	B	1322	A	4.3
2	B	2058	A	4.3
2	B	137	U	4.2
2	B	577	G	4.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
11	K	50	LYS	4.2
2	B	2275	C	4.2
19	S	9	HIS	4.2
29	2	10	LEU	4.2
3	C	35	LYS	4.2
20	T	74	ILE	4.1
25	Y	31	GLN	4.1
16	P	85	VAL	4.1
2	B	21	A	4.1
2	B	57	C	4.1
2	B	1338	G	4.1
29	2	46	LYS	4.1
2	B	2513	A	4.1
2	B	546	U	4.1
2	B	2569	G	4.0
2	B	1662	U	4.0
23	W	6	GLY	4.0
3	C	211	ARG	4.0
20	T	7	LEU	4.0
2	B	564	C	4.0
29	2	33	ARG	4.0
18	R	79	ARG	4.0
2	B	1130	U	4.0
16	P	83	ILE	3.9
19	S	10	ALA	3.9
2	B	681	G	3.9
20	T	64	LYS	3.9
11	K	49	GLY	3.9
2	B	1399	C	3.9
8	H	2	GLN	3.9
2	B	206	U	3.9
3	C	43	ASN	3.9
29	2	25	LYS	3.9
16	P	88	ARG	3.8
20	T	77	ARG	3.8
19	S	12	SER	3.8
2	B	436	C	3.8
2	B	91	A	3.8
2	B	503	A	3.8
23	W	9	THR	3.8
2	B	2672	U	3.8
2	B	149	A	3.8

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Mol	Chain	Res	Type	RSRZ
2	B	401	A	3.8
2	B	563	A	3.8
8	H	40	THR	3.8
16	P	23	ASP	3.8
16	P	30	TRP	3.8
2	B	1129	A	3.8
2	B	1334	G	3.8
2	B	2061	G	3.8
29	2	31	LEU	3.8
3	C	79	ARG	3.8
2	B	2089	C	3.7
2	B	150	U	3.7
2	B	1535	A	3.7
2	B	2453	A	3.7
2	B	1337	G	3.7
2	B	131	A	3.7
16	P	107	ALA	3.7
2	B	2066	C	3.7
2	B	1252	G	3.7
4	D	209	ALA	3.7
16	P	61	ARG	3.7
2	B	1534	U	3.7
2	B	2443	C	3.7
2	B	1538	G	3.7
20	T	16	VAL	3.7
2	B	2249	U	3.6
2	B	565	C	3.6
2	B	506	G	3.6
2	B	1253	A	3.6
8	H	41	LYS	3.6
18	R	80	ARG	3.6
3	C	45	ASN	3.6
24	X	76	LYS	3.6
2	B	2422	C	3.6
2	B	127	A	3.6
2	B	317	G	3.6
2	B	1256	G	3.6
2	B	403	U	3.6
25	Y	36	GLN	3.6
2	B	1260	A	3.5
2	B	1258	U	3.5
2	B	461	C	3.5

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Mol	Chain	Res	Type	RSRZ
14	N	120	GLU	3.5
2	B	1308	A	3.5
2	B	1358	G	3.5
3	C	56	GLY	3.5
7	G	58	ALA	3.5
2	B	2798	U	3.5
2	B	2444	G	3.5
16	P	39	LEU	3.4
16	P	41	ALA	3.4
2	B	1134	A	3.4
20	T	66	LYS	3.4
11	K	47	PRO	3.4
2	B	2017	U	3.4
5	E	78	TRP	3.4
2	B	1367	A	3.4
20	T	4	GLU	3.4
20	T	65	GLY	3.4
9	I	1	ALA	3.4
2	B	2451	A	3.4
2	B	1218	G	3.4
29	2	18	PHE	3.4
23	W	7	GLY	3.4
2	B	130	C	3.4
20	T	75	GLY	3.4
25	Y	62	GLY	3.4
2	B	2423	U	3.4
29	2	27	GLY	3.4
17	Q	27	ARG	3.3
2	B	571	U	3.3
16	P	25	VAL	3.3
17	Q	32	ARG	3.3
2	B	1377	G	3.3
3	C	46	GLY	3.3
10	J	86	GLN	3.3
29	2	12	ARG	3.3
17	Q	10	ARG	3.3
27	0	9	ARG	3.3
2	B	2179	C	3.3
2	B	2617	U	3.3
11	K	69	ARG	3.3
2	B	136	G	3.3
27	0	8	THR	3.3

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Mol	Chain	Res	Type	RSRZ
2	B	2502	G	3.3
2	B	2504	U	3.3
2	B	2100	G	3.3
29	2	34	ARG	3.3
19	S	78	GLU	3.3
2	B	114	U	3.2
16	P	44	GLY	3.2
2	B	575	A	3.2
5	E	63	LYS	3.2
3	C	44	ASN	3.2
2	B	2018	G	3.2
25	Y	3	ALA	3.2
25	Y	1	MET	3.2
13	M	5	LYS	3.2
27	0	6	LYS	3.2
29	2	45	SER	3.2
3	C	25	LYS	3.2
17	Q	29	ARG	3.2
2	B	473	G	3.2
4	D	128	ARG	3.2
4	D	157	LYS	3.2
2	B	800	A	3.2
2	B	2028	U	3.2
3	C	54	GLY	3.2
2	B	151	C	3.2
7	G	57	TYR	3.1
16	P	109	ILE	3.1
27	0	3	GLN	3.1
20	T	9	LYS	3.1
16	P	70	GLU	3.1
16	P	103	THR	3.1
2	B	796	C	3.1
2	B	1391	U	3.1
2	B	517	C	3.1
2	B	2064	C	3.1
2	B	562	U	3.1
2	B	1132	U	3.1
2	B	1199	U	3.1
17	Q	28	SER	3.1
5	E	51	GLU	3.1
11	K	70	ARG	3.1
2	B	148	U	3.1

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Mol	Chain	Res	Type	RSRZ
20	T	23	ALA	3.1
2	B	2056	G	3.1
16	P	31	VAL	3.1
2	B	1263	U	3.1
14	N	105	GLY	3.1
2	B	1131	G	3.1
2	B	2057	G	3.1
2	B	460	A	3.1
2	B	2067	G	3.1
16	P	19	PHE	3.1
2	B	55	G	3.0
10	J	71	ASP	3.0
16	P	110	LYS	3.0
11	K	54	GLY	3.0
16	P	21	PRO	3.0
2	B	2110	G	3.0
10	J	9	GLU	3.0
19	S	80	PRO	3.0
2	B	674	G	3.0
5	E	46	GLN	3.0
2	B	2507	C	3.0
20	T	24	MET	3.0
2	B	2610	C	3.0
2	B	92	U	3.0
2	B	1311	G	3.0
2	B	2833	U	2.9
5	E	68	ALA	2.9
5	E	87	ALA	2.9
16	P	111	GLU	2.9
2	B	2088	A	2.9
2	B	1307	A	2.9
20	T	19	LYS	2.9
20	T	14	PRO	2.9
16	P	67	GLU	2.9
17	Q	4	LYS	2.9
2	B	2015	A	2.9
2	B	115	C	2.9
2	B	2611	C	2.9
2	B	50	U	2.9
2	B	1860	G	2.9
27	O	1	ALA	2.9
16	P	80	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
5	E	84	THR	2.9
13	M	6	ARG	2.8
2	B	1313	U	2.8
2	B	2844	G	2.8
2	B	462	C	2.8
19	S	100	THR	2.8
24	X	15	ASN	2.8
20	T	80	TRP	2.8
16	P	62	LYS	2.8
2	B	2190	G	2.8
17	Q	33	VAL	2.8
2	B	982	C	2.8
2	B	1259	G	2.8
14	N	7	GLY	2.8
29	2	35	ARG	2.8
2	B	132	G	2.8
29	2	9	VAL	2.8
20	T	39	THR	2.8
2	B	2618	G	2.8
2	B	1255	U	2.8
2	B	2212	A	2.8
16	P	42	PHE	2.8
4	D	17	GLU	2.8
25	Y	9	LYS	2.7
25	Y	37	LEU	2.7
3	C	202	ARG	2.7
2	B	1046	A	2.7
20	T	67	VAL	2.7
19	S	92	ARG	2.7
24	X	71	ARG	2.7
2	B	2491	U	2.7
18	R	77	PHE	2.7
2	B	493	G	2.7
2	B	2421	G	2.7
2	B	1335	C	2.7
20	T	42	GLU	2.7
3	C	209	ALA	2.7
16	P	32	VAL	2.7
16	P	46	VAL	2.7
3	C	210	ALA	2.7
17	Q	14	LYS	2.7
11	K	17	ARG	2.7

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Mol	Chain	Res	Type	RSRZ
16	P	24	THR	2.7
2	B	1312	U	2.7
2	B	1661	G	2.7
2	B	505	A	2.7
3	C	55	GLY	2.7
8	H	39	ALA	2.7
11	K	88	ASN	2.7
16	P	90	ALA	2.7
2	B	1272	A	2.7
2	B	1354	A	2.7
20	T	79	ASP	2.6
2	B	2256	G	2.6
8	H	8	LYS	2.6
2	B	407	G	2.6
2	B	1811	G	2.6
18	R	83	TYR	2.6
2	B	2760	C	2.6
5	E	52	VAL	2.6
2	B	2248	C	2.6
29	2	43	THR	2.6
2	B	520	G	2.6
3	C	203	VAL	2.6
10	J	75	TYR	2.6
2	B	579	G	2.6
29	2	32	ALA	2.6
19	S	85	ILE	2.6
2	B	578	G	2.6
2	B	1248	G	2.6
5	E	83	VAL	2.6
2	B	2572	A	2.6
13	M	10	ARG	2.6
2	B	437	U	2.6
3	C	215	VAL	2.6
3	C	204	LEU	2.6
2	B	448	U	2.6
2	B	771	G	2.5
2	B	1228	G	2.5
2	B	1390	U	2.5
2	B	2024	G	2.5
2	B	1359	A	2.5
25	Y	34	SER	2.5
19	S	73	LYS	2.5

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Mol	Chain	Res	Type	RSRZ
2	B	654	A	2.5
23	W	8	SER	2.5
2	B	32	C	2.5
11	K	76	ILE	2.5
11	K	103	THR	2.5
2	B	2800	A	2.5
13	M	78	LEU	2.5
2	B	135	U	2.5
5	E	82	GLY	2.5
20	T	78	SER	2.5
28	1	15	GLY	2.5
2	B	682	G	2.5
2	B	1646	C	2.5
5	E	69	ARG	2.5
3	C	16	VAL	2.5
29	2	26	ASN	2.5
2	B	54	G	2.5
2	B	1321	A	2.5
2	B	1376	C	2.5
19	S	40	ASN	2.5
3	C	17	LYS	2.5
2	B	795	C	2.5
3	C	167	ASP	2.5
27	0	2	VAL	2.5
29	2	16	HIS	2.5
2	B	146	A	2.5
27	0	7	PRO	2.5
2	B	388	G	2.5
17	Q	26	ALA	2.5
2	B	176	A	2.4
5	E	53	THR	2.4
2	B	570	G	2.4
4	D	148	GLN	2.4
2	B	755	U	2.4
2	B	1594	U	2.4
20	T	37	ASP	2.4
2	B	585	G	2.4
2	B	1622	G	2.4
20	T	21	SER	2.4
2	B	1273	U	2.4
2	B	2180	U	2.4
2	B	123	G	2.4

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Mol	Chain	Res	Type	RSRZ
3	C	201	LEU	2.4
5	E	44	ARG	2.4
3	C	53	ILE	2.4
16	P	58	PHE	2.4
16	P	104	GLY	2.4
25	Y	8	GLU	2.4
28	1	27	ARG	2.4
29	2	15	SER	2.4
2	B	1400	U	2.4
10	J	10	THR	2.4
2	B	177	G	2.4
2	B	679	C	2.4
2	B	2452	C	2.4
21	U	91	LYS	2.4
13	M	88	ASN	2.4
2	B	2189	U	2.4
11	K	104	ARG	2.4
2	B	402	A	2.4
2	B	675	A	2.4
13	M	77	PRO	2.3
17	Q	24	TYR	2.3
4	D	154	LYS	2.3
29	2	1	MET	2.3
2	B	2247	A	2.3
2	B	178	G	2.3
11	K	46	ILE	2.3
4	D	54	ALA	2.3
2	B	152	A	2.3
10	J	90	GLU	2.3
2	B	945	A	2.3
2	B	1274	A	2.3
20	T	38	ALA	2.3
29	2	39	ARG	2.3
16	P	105	LYS	2.3
27	0	5	ASN	2.3
2	B	584	C	2.3
5	E	76	PRO	2.3
20	T	56	GLU	2.3
7	G	54	ARG	2.3
11	K	68	VAL	2.3
2	B	1393	A	2.3
29	2	40	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
20	T	82	LYS	2.3
29	2	11	LYS	2.3
2	B	406	G	2.2
2	B	576	U	2.2
2	B	1317	G	2.2
4	D	74	GLU	2.2
8	H	48	GLU	2.2
2	B	2030	A	2.2
10	J	66	GLY	2.2
2	B	580	U	2.2
16	P	60	VAL	2.2
16	P	71	ARG	2.2
16	P	91	VAL	2.2
2	B	1302	A	2.2
24	X	14	GLY	2.2
2	B	2454	G	2.2
2	B	1714	U	2.2
24	X	25	LYS	2.2
19	S	94	ASP	2.2
11	K	105	GLU	2.2
2	B	472	A	2.2
17	Q	21	LYS	2.2
20	T	63	VAL	2.2
2	B	129	C	2.2
13	M	84	LYS	2.2
2	B	141	G	2.2
2	B	474	G	2.2
29	2	44	VAL	2.2
2	B	1332	G	2.2
5	E	85	PHE	2.2
2	B	2020	A	2.2
2	B	692	C	2.2
2	B	1233	C	2.2
10	J	67	ASN	2.2
2	B	492	A	2.2
2	B	1407	G	2.2
2	B	2490	G	2.2
20	T	92	ASN	2.1
20	T	17	SER	2.1
2	B	789	A	2.1
2	B	2445	G	2.1
2	B	1229	C	2.1

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Mol	Chain	Res	Type	RSRZ
20	T	12	ARG	2.1
2	B	2245	U	2.1
7	G	55	ASP	2.1
2	B	673	C	2.1
25	Y	28	LEU	2.1
17	Q	36	GLN	2.1
2	B	1234	U	2.1
8	H	38	PRO	2.1
2	B	2615	U	2.1
11	K	107	ARG	2.1
2	B	1149	G	2.1
14	N	101	GLY	2.1
2	B	2109	U	2.1
2	B	1133	A	2.1
2	B	1566	A	2.1
2	B	2009	A	2.1
13	M	75	GLU	2.1
2	B	691	C	2.1
2	B	2734	A	2.1
2	B	2027	G	2.1
28	1	4	ILE	2.1
2	B	455	C	2.1
2	B	34	U	2.1
2	B	2514	U	2.1
25	Y	2	LYS	2.1
2	B	808	G	2.1
2	B	2455	G	2.1
2	B	653	U	2.1
2	B	404	A	2.1
2	B	751	A	2.1
2	B	2065	C	2.1
2	B	2558	C	2.1
2	B	2559	C	2.1
10	J	72	LYS	2.1
13	M	76	LYS	2.1
28	1	14	ALA	2.1
9	I	20	SER	2.1
2	B	1373	A	2.0
24	X	70	LEU	2.0
2	B	516	C	2.0
2	B	2612	C	2.0
2	B	1861	G	2.0

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Mol	Chain	Res	Type	RSRZ
2	B	1262	A	2.0
16	P	27	VAL	2.0
2	B	768	G	2.0
2	B	2021	C	2.0
3	C	48	ILE	2.0
29	2	42	LEU	2.0
5	E	77	ILE	2.0
14	N	17	ARG	2.0

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

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

## 6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 6.4 Ligands ⓘ

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q < 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
33	MG	B	2935	1/1	0.57	5.99	83,83,83,83	0
33	MG	B	2961	1/1	2.21	4.87	100,100,100,100	0
33	MG	B	2929	1/1	0.71	4.83	63,63,63,63	0
33	MG	B	3006	1/1	0.46	3.93	71,71,71,71	0
33	MG	B	2955	1/1	0.63	2.54	94,94,94,94	0
33	MG	B	2991	1/1	0.27	2.25	63,63,63,63	0
33	MG	B	2983	1/1	0.62	2.18	46,46,46,46	0
33	MG	B	2918	1/1	0.35	2.15	76,76,76,76	0
33	MG	B	2997	1/1	0.71	1.87	120,120,120,120	0
33	MG	B	2924	1/1	0.27	1.72	45,45,45,45	0
33	MG	B	2996	1/1	0.29	1.66	62,62,62,62	0
33	MG	B	3019	1/1	0.51	1.56	106,106,106,106	0
33	MG	B	2951	1/1	0.16	1.12	131,131,131,131	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
33	MG	B	2962	1/1	0.55	1.02	62,62,62,62	0
33	MG	B	2907	1/1	0.50	0.82	20,20,20,20	0
33	MG	B	2964	1/1	0.14	0.40	33,33,33,33	0
33	MG	B	2970	1/1	0.19	0.35	51,51,51,51	0
33	MG	B	2954	1/1	0.45	0.33	54,54,54,54	0
33	MG	B	2949	1/1	0.65	0.31	60,60,60,60	0
33	MG	B	2985	1/1	0.37	0.24	85,85,85,85	0
33	MG	B	3004	1/1	0.17	0.14	128,128,128,128	0
33	MG	B	2930	1/1	0.26	0.05	26,26,26,26	0
33	MG	B	3010	1/1	0.16	-0.01	53,53,53,53	0
33	MG	B	2992	1/1	0.32	-0.01	76,76,76,76	0
33	MG	B	2909	1/1	0.17	-0.02	52,52,52,52	0
33	MG	B	2917	1/1	0.43	-0.03	52,52,52,52	0
33	MG	B	2928	1/1	0.20	-0.05	47,47,47,47	0
33	MG	B	3011	1/1	0.33	-0.06	86,86,86,86	0
33	MG	B	3012	1/1	0.23	-0.08	30,30,30,30	0
33	MG	B	2995	1/1	0.33	-0.33	44,44,44,44	0
33	MG	B	2975	1/1	0.32	-0.35	41,41,41,41	0
33	MG	B	2953	1/1	0.24	-0.37	40,40,40,40	0
33	MG	B	2994	1/1	0.16	-0.43	71,71,71,71	0
33	MG	B	2945	1/1	0.17	-0.44	28,28,28,28	0
33	MG	B	2925	1/1	0.13	-0.49	45,45,45,45	0
33	MG	B	2936	1/1	0.24	-0.52	53,53,53,53	0
33	MG	B	2979	1/1	0.45	-0.53	44,44,44,44	0
33	MG	B	2933	1/1	0.29	-0.54	81,81,81,81	0
33	MG	B	2932	1/1	0.45	-0.55	54,54,54,54	0
33	MG	B	2998	1/1	0.13	-0.58	81,81,81,81	0
33	MG	B	2969	1/1	0.14	-0.65	46,46,46,46	0
33	MG	B	2940	1/1	0.13	-0.65	52,52,52,52	0
33	MG	B	2923	1/1	0.20	-0.71	62,62,62,62	0
33	MG	B	3000	1/1	0.12	-0.76	49,49,49,49	0
33	MG	B	2937	1/1	0.12	-0.80	86,86,86,86	0
33	MG	B	2920	1/1	0.12	-0.80	91,91,91,91	0
33	MG	B	2963	1/1	0.31	-0.87	37,37,37,37	0
33	MG	B	3022	1/1	0.11	-0.90	113,113,113,113	0
33	MG	B	3018	1/1	0.11	-0.92	57,57,57,57	0
33	MG	B	2919	1/1	0.30	-0.93	69,69,69,69	0
32	ZN	4	101	1/1	0.11	-1.03	72,72,72,72	0
33	MG	B	2965	1/1	0.23	-1.03	57,57,57,57	0
33	MG	B	2960	1/1	0.17	-1.03	49,49,49,49	0
33	MG	B	2921	1/1	0.12	-1.06	35,35,35,35	0
33	MG	B	2938	1/1	0.11	-1.07	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
33	MG	B	3014	1/1	0.17	-1.21	56,56,56,56	0
33	MG	B	2926	1/1	0.09	-1.25	56,56,56,56	0
33	MG	B	2947	1/1	0.15	-1.28	107,107,107,107	0
33	MG	B	3015	1/1	0.18	-1.30	43,43,43,43	0
33	MG	B	3005	1/1	0.20	-1.32	50,50,50,50	0
33	MG	B	2977	1/1	0.32	-1.32	30,30,30,30	0
33	MG	B	2916	1/1	0.07	-1.42	32,32,32,32	0
33	MG	B	3007	1/1	0.08	-1.44	38,38,38,38	0
33	MG	B	2946	1/1	0.10	-1.45	90,90,90,90	0
33	MG	B	2944	1/1	0.05	-1.45	64,64,64,64	0
33	MG	B	2959	1/1	0.10	-1.47	72,72,72,72	0
33	MG	B	2948	1/1	0.18	-1.60	62,62,62,62	0
33	MG	B	2939	1/1	0.14	-1.60	40,40,40,40	0
33	MG	B	2988	1/1	0.10	-1.63	61,61,61,61	0
33	MG	B	2968	1/1	0.15	-1.70	63,63,63,63	0
33	MG	B	2987	1/1	0.15	-1.74	47,47,47,47	0
33	MG	B	2922	1/1	0.10	-1.75	42,42,42,42	0
33	MG	B	2912	1/1	0.06	-1.75	63,63,63,63	0
33	MG	B	3017	1/1	0.06	-1.78	41,41,41,41	0
33	MG	B	3002	1/1	0.08	-1.80	73,73,73,73	0
33	MG	B	3003	1/1	0.06	-1.85	41,41,41,41	0
33	MG	B	2958	1/1	0.07	-1.85	56,56,56,56	0
33	MG	B	2993	1/1	0.15	-1.87	51,51,51,51	0
33	MG	B	2989	1/1	0.05	-1.87	57,57,57,57	0
33	MG	B	2976	1/1	0.20	-2.03	58,58,58,58	0
33	MG	B	2972	1/1	0.11	-2.07	40,40,40,40	0
33	MG	B	2911	1/1	0.07	-2.12	115,115,115,115	0
33	MG	B	2915	1/1	0.08	-2.13	45,45,45,45	0
33	MG	B	2942	1/1	0.08	-2.15	125,125,125,125	0
33	MG	B	2967	1/1	0.09	-2.19	95,95,95,95	0
33	MG	B	2984	1/1	0.05	-2.20	65,65,65,65	0
33	MG	B	2913	1/1	0.05	-2.21	92,92,92,92	0
33	MG	B	2957	1/1	0.11	-2.22	43,43,43,43	0
33	MG	B	3016	1/1	0.08	-2.23	27,27,27,27	0
33	MG	B	2978	1/1	0.14	-2.28	25,25,25,25	0
33	MG	B	2966	1/1	0.05	-2.30	42,42,42,42	0
33	MG	B	2982	1/1	0.07	-2.31	71,71,71,71	0
33	MG	B	3020	1/1	0.02	-2.42	24,24,24,24	0
33	MG	B	2971	1/1	0.09	-2.44	39,39,39,39	0
33	MG	B	3001	1/1	0.11	-2.44	112,112,112,112	0
33	MG	B	2990	1/1	0.04	-2.51	50,50,50,50	0
33	MG	B	2956	1/1	0.07	-2.67	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
33	MG	B	2986	1/1	0.06	-2.70	80,80,80,80	0
33	MG	B	2943	1/1	0.05	-2.74	55,55,55,55	0
33	MG	B	2905	1/1	0.16	-2.76	57,57,57,57	0
33	MG	B	2973	1/1	0.04	-2.79	28,28,28,28	0
33	MG	B	2910	1/1	0.04	-2.90	35,35,35,35	0
33	MG	B	2952	1/1	0.10	-2.90	38,38,38,38	0
33	MG	B	2927	1/1	0.06	-2.98	15,15,15,15	0
33	MG	B	2931	1/1	0.04	-3.25	40,40,40,40	0
33	MG	B	3021	1/1	0.04	-3.49	82,82,82,82	0
33	MG	B	2941	1/1	0.03	-3.51	56,56,56,56	0
33	MG	B	3008	1/1	0.05	-3.56	38,38,38,38	0
33	MG	B	2934	1/1	0.12	-3.66	111,111,111,111	0
33	MG	B	2980	1/1	0.08	-3.70	56,56,56,56	0
33	MG	B	2906	1/1	0.04	-4.33	31,31,31,31	0
33	MG	B	3009	1/1	0.06	-4.33	64,64,64,64	0
33	MG	B	2999	1/1	0.06	-4.53	48,48,48,48	0
33	MG	B	2981	1/1	0.08	-4.68	50,50,50,50	0
33	MG	B	2950	1/1	0.10	-4.89	90,90,90,90	0
33	MG	B	2974	1/1	0.10	-5.10	52,52,52,52	0
33	MG	B	3013	1/1	0.07	-5.70	52,52,52,52	0
33	MG	B	2914	1/1	0.14	-10.36	95,95,95,95	0
33	MG	B	2908	1/1	0.04	-36.66	65,65,65,65	0
33	MG	J	216	1/1	1.18	-	160,160,160,160	0

## 6.5 Other polymers ⓘ

There are no such residues in this entry.