



# Full wwPDB X-ray Structure Validation Report ⓘ

Mar 1, 2014 – 04:39 AM GMT

PDB ID : 3DF4  
Title : Crystal structure of the bacterial ribosome from Escherichia coli in complex with hygromycin B. This file contains the 50S subunit of the second 70S ribosome. The entire crystal structure contains two 70S ribosomes.  
Authors : Borovinskaya, M.A.; Shoji, S.; Fredrick, K.; Cate, J.H.D.  
Deposited on : 2008-06-11  
Resolution : 3.50 Å(reported)

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

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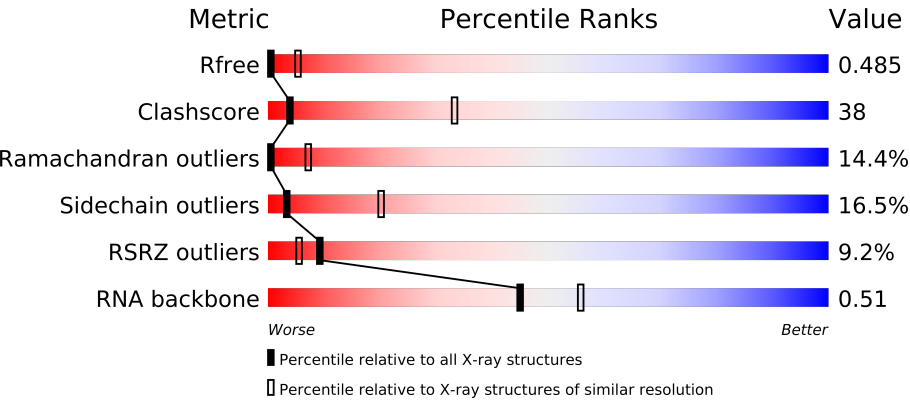
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467  
Mogul : 1.15 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 3.50 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	66092	1243 (3.70-3.30)
Clashscore	79885	1039 (3.66-3.34)
Ramachandran outliers	78287	1000 (3.66-3.34)
Sidechain outliers	78261	1000 (3.66-3.34)
RSRZ outliers	66119	1243 (3.70-3.30)
RNA backbone	1838	1007 (4.22-2.76)

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	V	94	
4	C	273	
5	D	209	
6	E	201	
7	F	178	
8	G	176	
9	H	149	
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	W	84	
23	X	63	
24	Y	58	
25	Z	78	
26	0	56	
27	1	54	
28	2	46	
29	3	64	
30	4	38	
31	I	141	

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

Mol	Type	Chain	Res	Geometry	Electron density
32	MG	B	3074	-	X
32	MG	B	3140	-	X
32	MG	B	3165	-	X
32	MG	B	3172	-	X
32	MG	B	3201	-	X
32	MG	B	3207	-	X
32	MG	B	3279	-	X
32	MG	B	3344	-	X
32	MG	B	3351	-	X
32	MG	B	3389	-	X
32	MG	B	3485	-	X
32	MG	B	3515	-	X
32	MG	B	3592	-	X

## 2 Entry composition

There are 34 unique types of molecules in this entry. The entry contains 90263 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 L25.

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

- Molecule 4 is a protein called 50S ribosomal protein L2.

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

- Molecule 5 is a protein called 50S ribosomal protein L3.

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

- Molecule 6 is a protein called 50S ribosomal protein L4.

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

- Molecule 7 is a protein called 50S ribosomal protein L5.

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

- Molecule 8 is a protein called 50S ribosomal protein L6.

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

- Molecule 9 is a protein called 50S ribosomal protein L9.

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

- 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 L27.

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

- Molecule 23 is a protein called 50S ribosomal protein L29.

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

- Molecule 24 is a protein called 50S ribosomal protein L30.

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

- Molecule 25 is a protein called 50S ribosomal protein L28.

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

- Molecule 26 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
26	0	56	Total	C	N	O	S		
			444	269	94	80	1	0	0

- Molecule 27 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
27	1	50	Total	C	N	O			
			409	263	75	71	0	0	0

- Molecule 28 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			

- Molecule 29 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			

- Molecule 30 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			

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

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

- Molecule 32 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
32	B	111	Total	Mg	0	0
			111	111		

- Molecule 33 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
33	4	1	Total	Zn	0	0
			1	1		

- Molecule 34 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
34	B	502	Total	O	0	0
			502	502		
34	C	5	Total	O	0	0
			5	5		
34	D	1	Total	O	0	0
			1	1		

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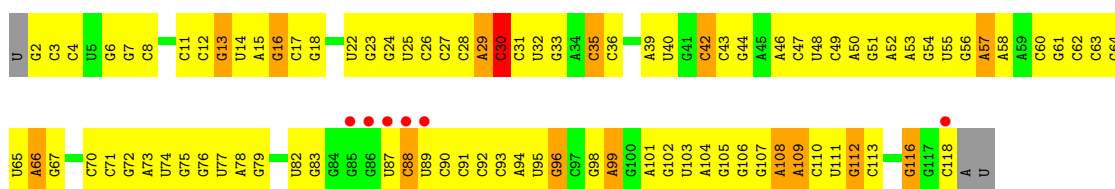
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
34	L	3	Total	O	0	0
			3	3		
34	2	1	Total	O	0	0
			1	1		

### 3 Residue-property plots

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

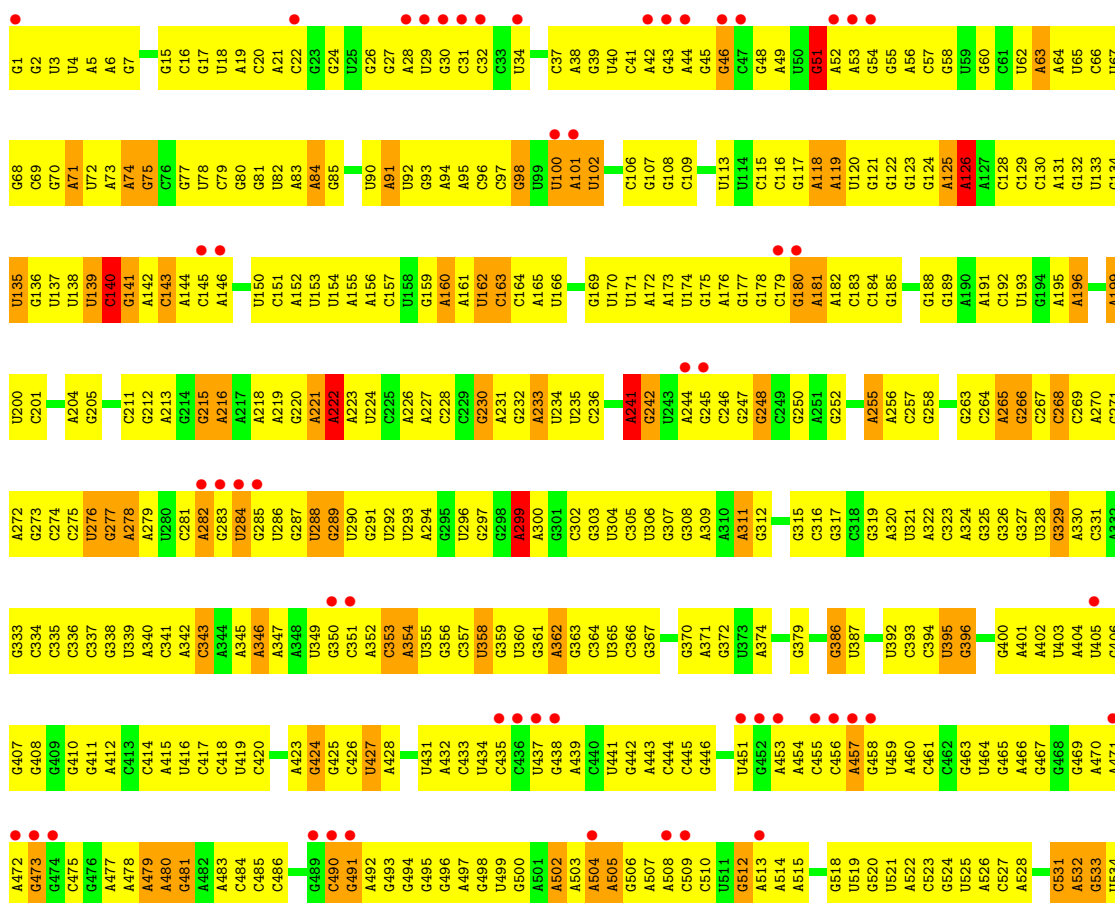
#### • Molecule 1: 5S ribosomal RNA

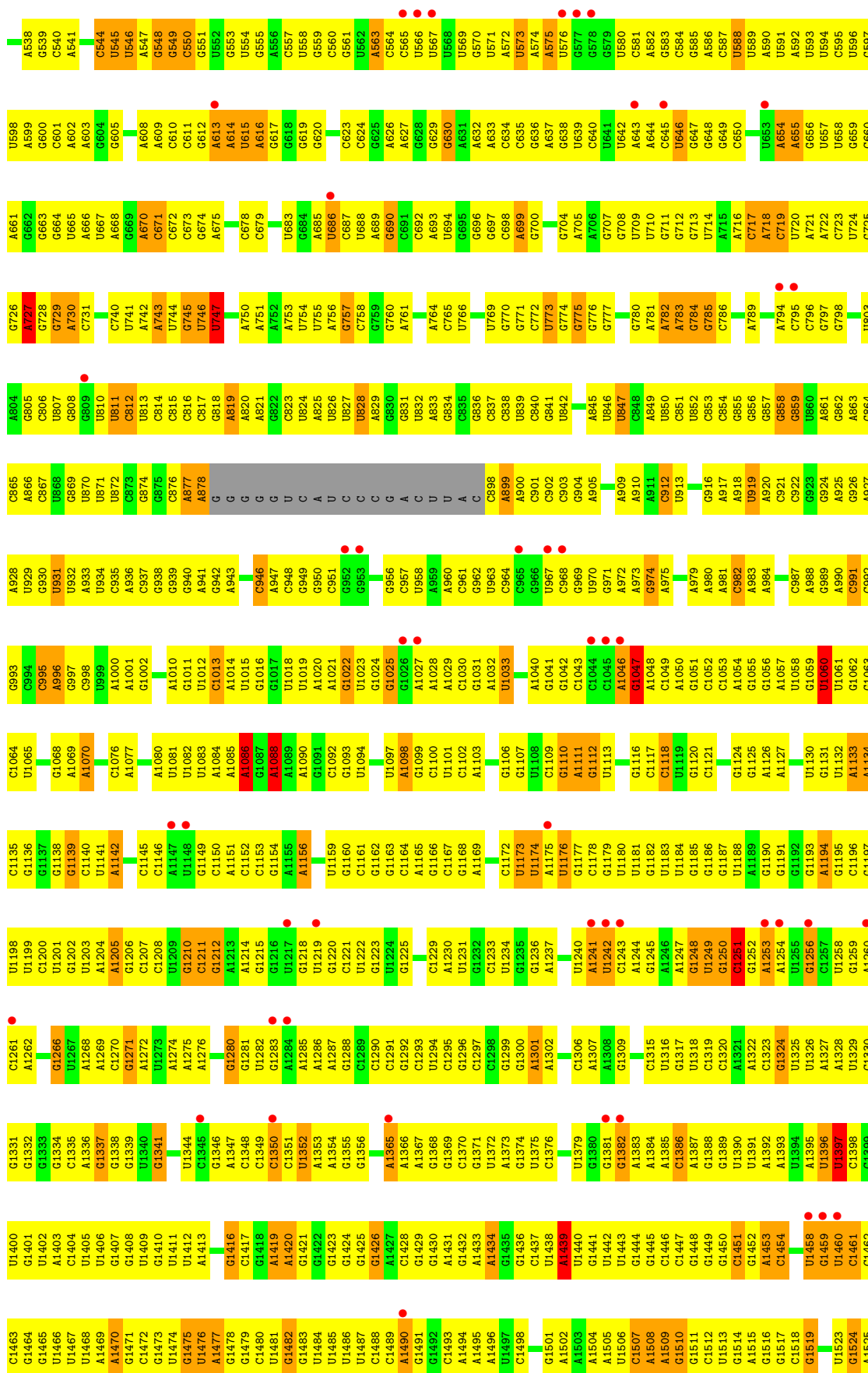
Chain A:



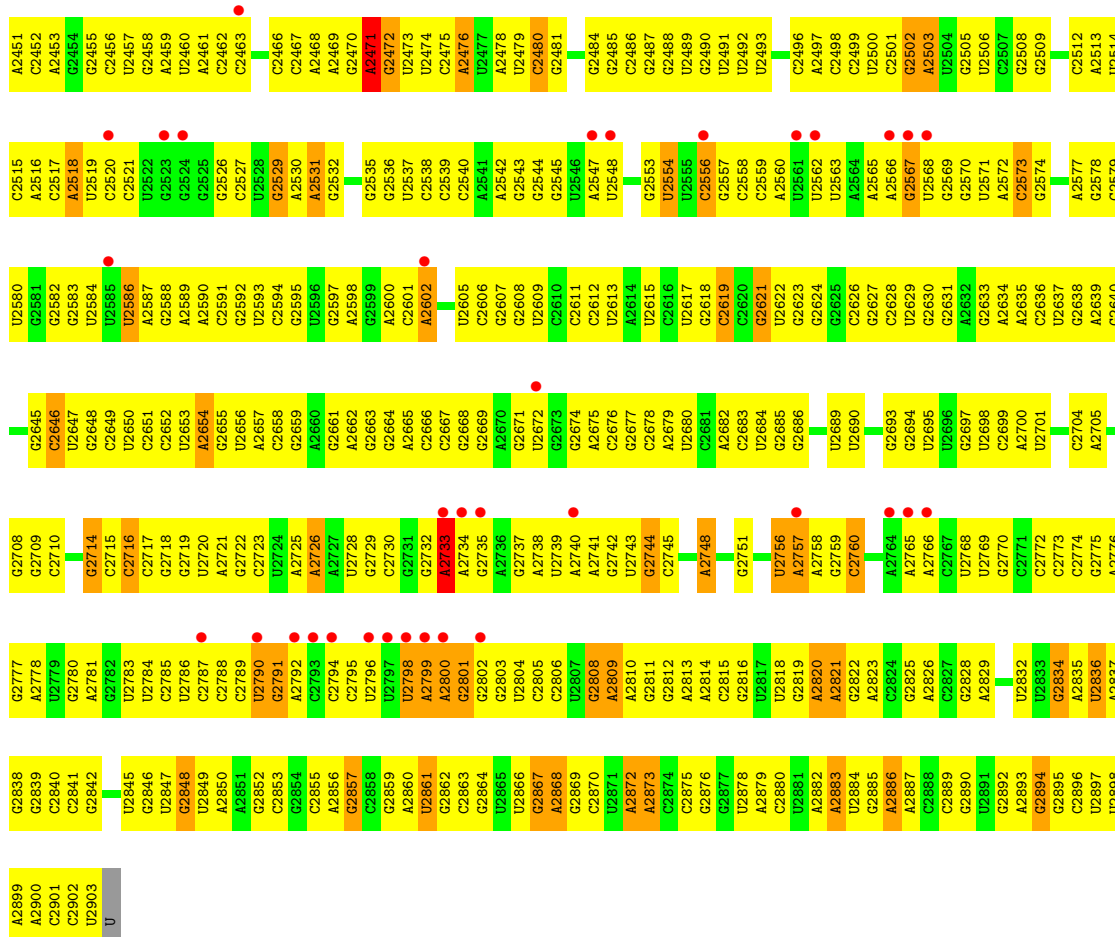
#### • Molecule 2: 23S ribosomal RNA

Chain B:



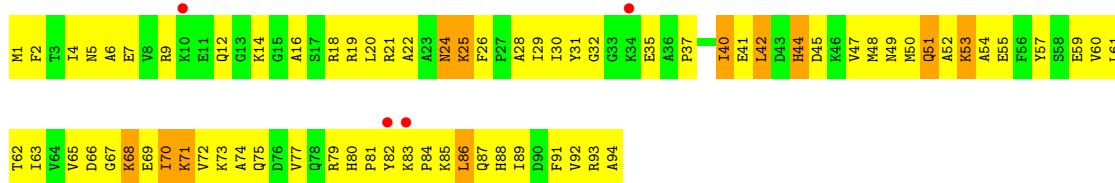






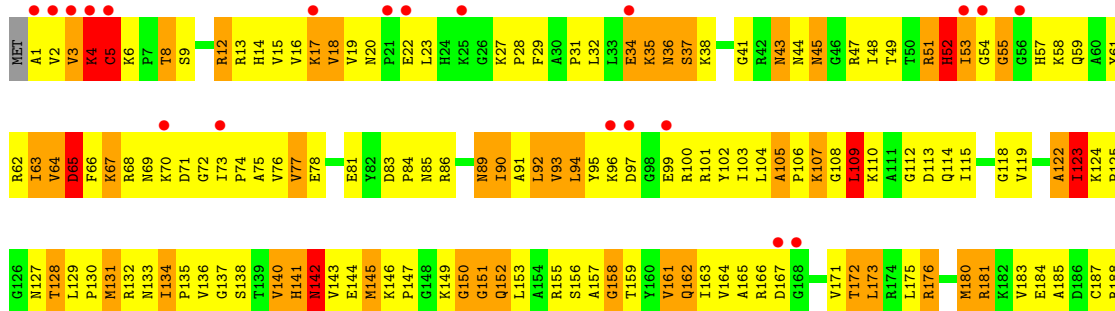
- Molecule 3: 50S ribosomal protein L25

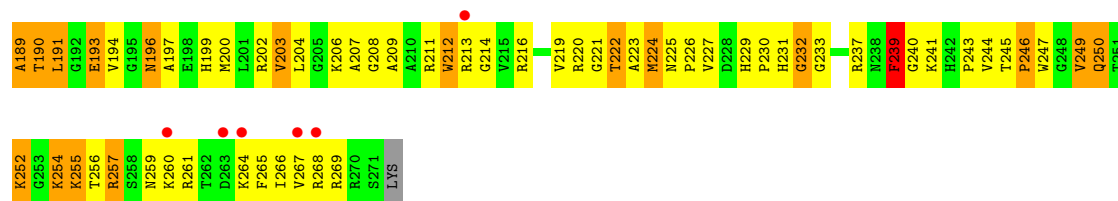
Chain V:



- Molecule 4: 50S ribosomal protein L2

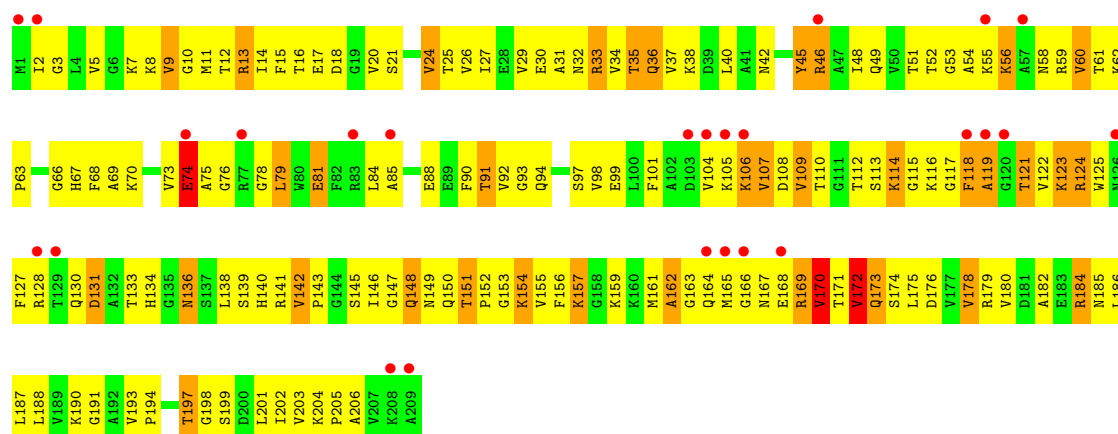
Chain C: 





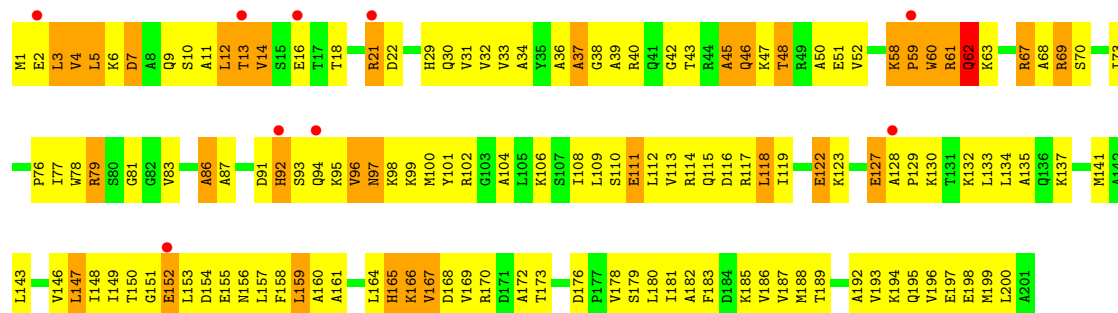
• Molecule 5: 50S ribosomal protein L3

Chain D:



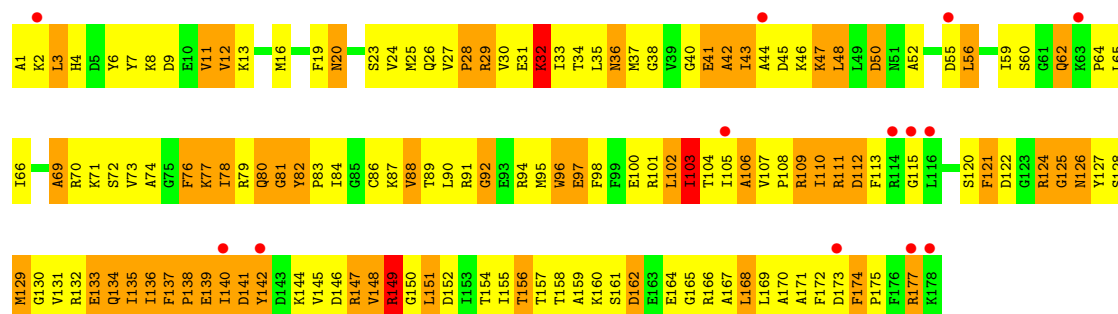
• Molecule 6: 50S ribosomal protein L4

Chain E:



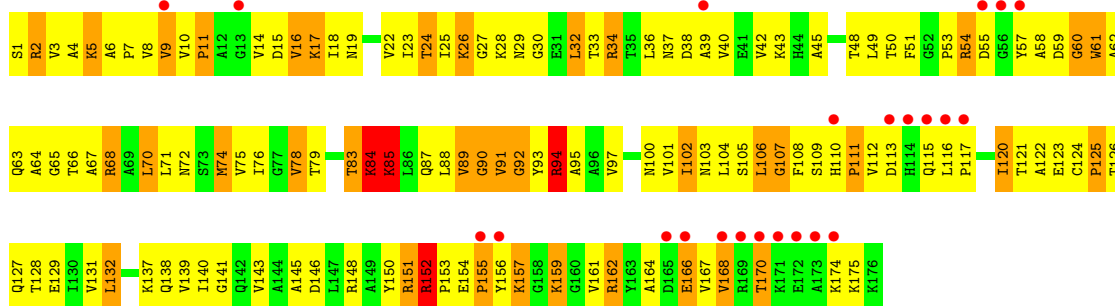
• Molecule 7: 50S ribosomal protein L5

Chain F:



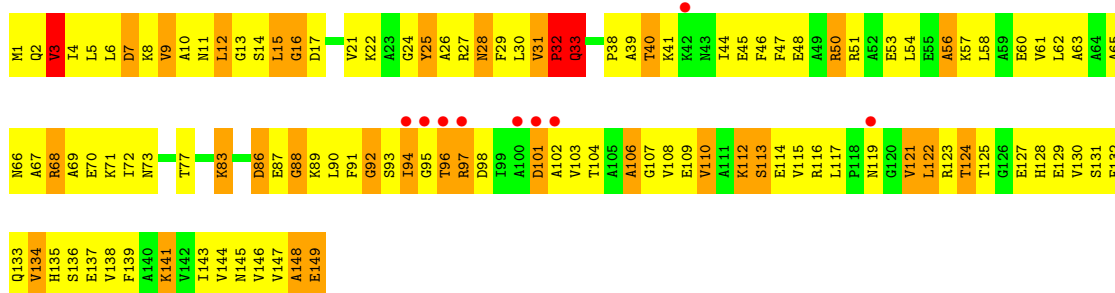
• Molecule 8: 50S ribosomal protein L6

Chain G:



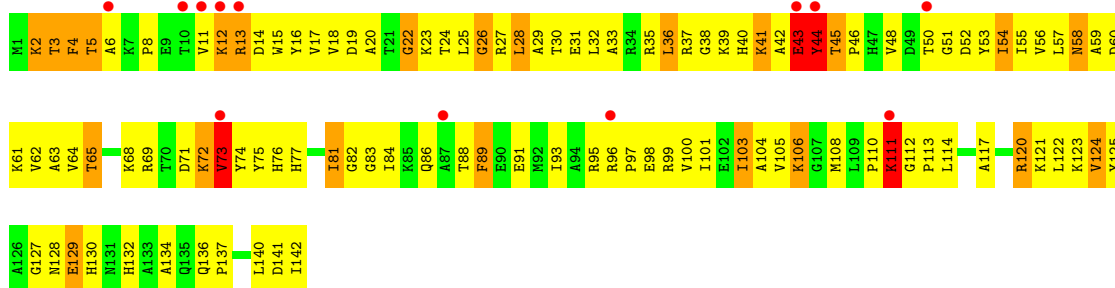
- Molecule 9: 50S ribosomal protein L9

Chain H:



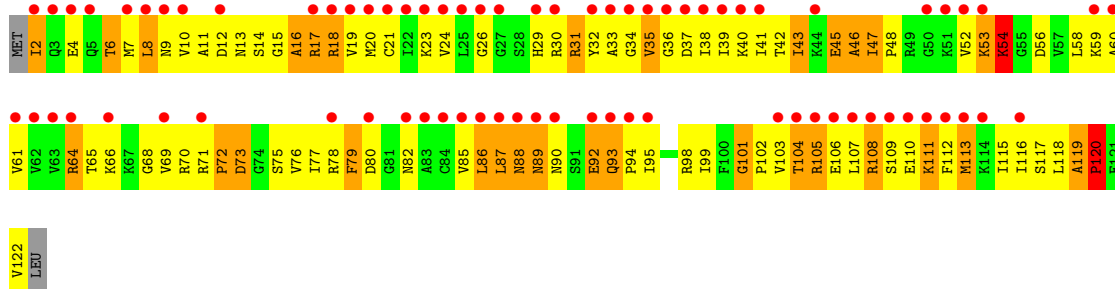
- Molecule 10: 50S ribosomal protein L13

Chain J:

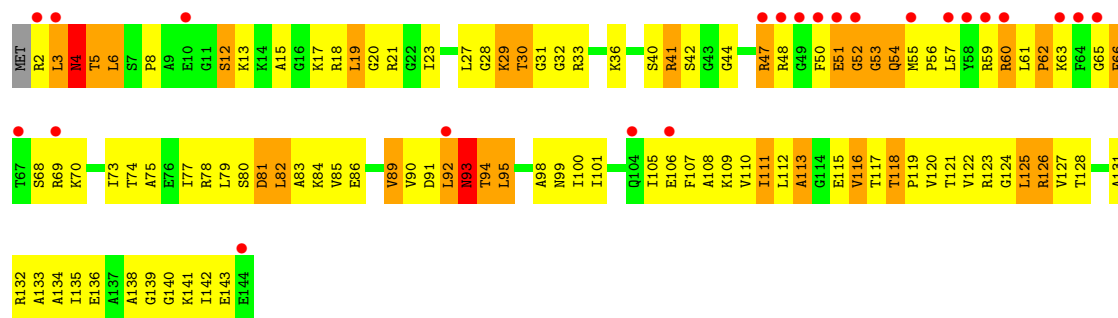


- Molecule 11: 50S ribosomal protein L14

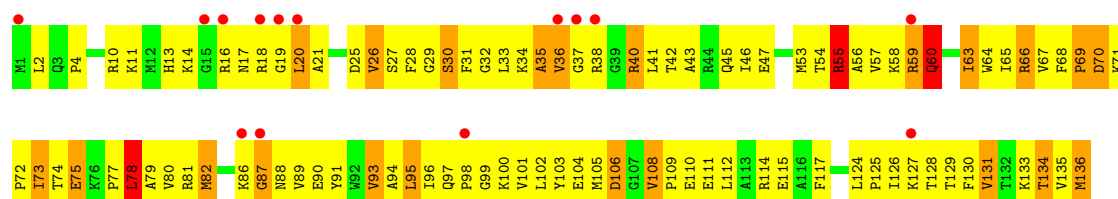
Chain K:



- Molecule 12: 50S ribosomal protein L15

Chain L: 

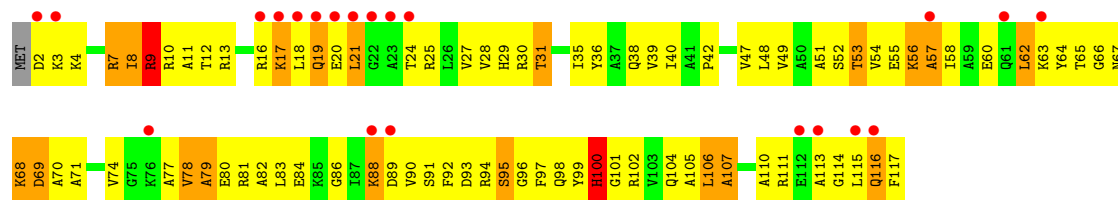
- Molecule 13: 50S ribosomal protein L16

Chain M: 

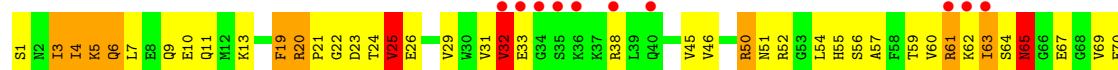
- Molecule 14: 50S ribosomal protein L17

Chain N: 

- Molecule 15: 50S ribosomal protein L18

Chain O: 

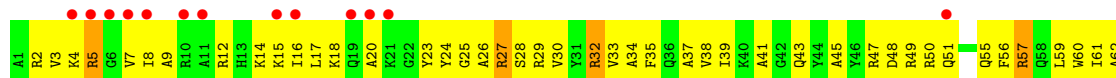
- Molecule 16: 50S ribosomal protein L19

Chain P: 



- Molecule 17: 50S ribosomal protein L20

Chain Q:



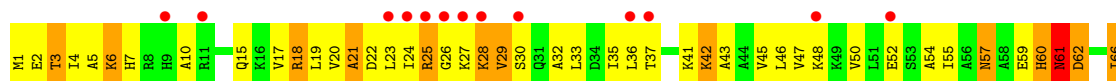
- Molecule 18: 50S ribosomal protein L21

Chain R:



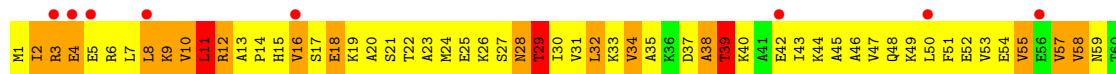
- Molecule 19: 50S ribosomal protein L22

Chain S:



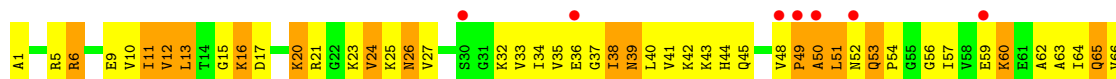
- Molecule 20: 50S ribosomal protein L23

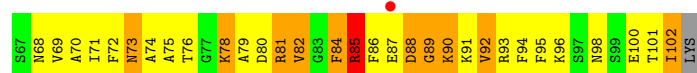
Chain T:



- Molecule 21: 50S ribosomal protein L24

Chain U:





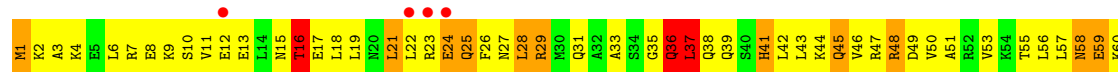
- Molecule 22: 50S ribosomal protein L27

Chain W:



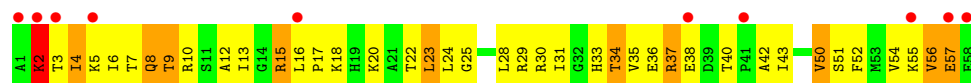
- Molecule 23: 50S ribosomal protein L29

Chain X:



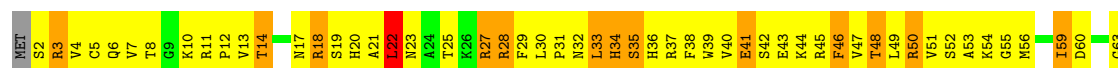
- Molecule 24: 50S ribosomal protein L30

Chain Y:



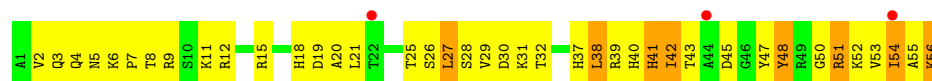
- Molecule 25: 50S ribosomal protein L28

Chain Z:



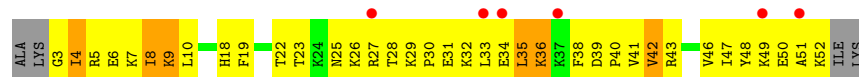
- Molecule 26: 50S ribosomal protein L32

Chain 0:



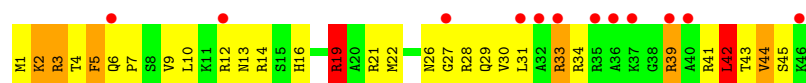
- Molecule 27: 50S ribosomal protein L33

Chain 1:



- Molecule 28: 50S ribosomal protein L34

Chain 2: 



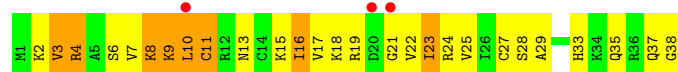
- Molecule 29: 50S ribosomal protein L35

Chain 3: 



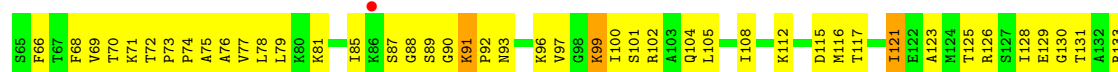
- Molecule 30: 50S ribosomal protein L36

Chain 4: 



- Molecule 31: 50S ribosomal protein L11

Chain I: 



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	208.70Å 379.50Å 739.30Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	70.00 – 3.50 137.77 – 3.50	Depositor EDS
% Data completeness (in resolution range)	62.1 (70.00-3.50) 62.3 (137.77-3.50)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	0.07	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.88 (at 3.49Å)	Xtriage
Refinement program	CNS	Depositor
R, $R_{free}$	0.269 , 0.318 0.469 , 0.485	Depositor DCC
$R_{free}$ test set	22206 reflections (4.89%)	DCC
Wilson B-factor (Å <sup>2</sup> )	117.9	Xtriage
Anisotropy	0.294	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.21 , 4.3	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle  L  \rangle = 0.50$ , $\langle L^2 \rangle = 0.33$	Xtriage
Outliers	0 of 454411 reflections	Xtriage
$F_o, F_c$ correlation	0.66	EDS
Total number of atoms	90263	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	56.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.15% 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	0.25	0/2803	0.75	1/4371 (0.0%)
2	B	0.28	7/68314 (0.0%)	0.78	49/106569 (0.0%)
3	V	0.25	0/766	0.43	0/1025
4	C	0.22	0/2121	0.47	0/2852
5	D	0.24	0/1586	0.47	0/2134
6	E	0.24	0/1571	0.49	0/2113
7	F	0.26	0/1444	0.51	0/1937
8	G	0.23	0/1343	0.46	0/1816
9	H	0.25	0/1122	0.46	0/1515
10	J	0.23	0/1152	0.47	0/1551
11	K	0.23	0/939	0.52	0/1258
12	L	0.23	0/1054	0.47	0/1403
13	M	0.25	0/1093	0.47	0/1460
14	N	0.24	0/973	0.51	0/1301
15	O	0.23	0/902	0.48	0/1209
16	P	0.24	0/929	0.48	0/1242
17	Q	0.25	0/960	0.46	0/1278
18	R	0.25	0/829	0.48	0/1107
19	S	0.22	0/864	0.49	0/1156
20	T	0.23	0/744	0.52	0/994
21	U	0.25	0/787	0.45	0/1051
22	W	0.27	0/603	0.48	0/797
23	X	0.23	0/510	0.51	0/677
24	Y	0.23	0/453	0.49	0/605
25	Z	0.25	0/635	0.51	0/848
26	0	0.22	0/450	0.52	0/599
27	1	0.27	0/416	0.47	0/554
28	2	0.26	0/380	0.49	0/498
29	3	0.24	0/513	0.46	0/676
30	4	0.22	0/303	0.46	0/397
31	I	0.25	0/1046	0.47	0/1410
All	All	0.27	7/97605 (0.0%)	0.72	50/146403 (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	38

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1086	A	C5-C6	-16.14	1.26	1.41
2	B	1088	A	C6-N1	-10.45	1.28	1.35
2	B	1060	U	C2-N3	7.89	1.43	1.37
2	B	1086	A	N3-C4	-7.04	1.30	1.34
2	B	1086	A	N7-C5	-6.41	1.35	1.39
2	B	2272	U	C2-N3	5.41	1.41	1.37
2	B	2267	A	C6-N6	-5.13	1.29	1.33

All (50) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2791	G	O5'-P-OP2	-31.41	73.01	110.70
2	B	2204	G	O5'-P-OP1	-29.65	75.12	110.70
2	B	2204	G	O5'-P-OP2	17.93	132.22	110.70
2	B	2791	G	O5'-P-OP1	15.06	128.77	110.70
2	B	2203	U	OP1-P-O3'	14.29	136.63	105.20
2	B	2790	U	OP2-P-O3'	14.20	136.44	105.20
2	B	1552	A	N9-C1'-C2'	-9.81	101.21	112.00
2	B	1088	A	N1-C6-N6	-8.31	113.61	118.60
2	B	1439	A	N9-C1'-C2'	-7.75	103.47	112.00
2	B	1060	U	C5-C4-O4	-7.35	121.49	125.90
2	B	773	U	C5'-C4'-C3'	-7.14	104.57	116.00
2	B	1086	A	C4-C5-C6	7.12	120.56	117.00
2	B	2272	U	N3-C4-O4	-7.05	114.47	119.40
2	B	2733	A	N9-C1'-C2'	-6.94	104.37	112.00
2	B	2135	A	N9-C1'-C2'	-6.63	104.71	112.00
2	B	745	G	C5'-C4'-C3'	-6.61	105.42	116.00
2	B	1350	C	C5'-C4'-C3'	-6.55	105.52	116.00
2	B	1088	A	C5-C6-N6	6.40	128.82	123.70
2	B	2480	C	C5'-C4'-C3'	6.11	125.77	116.00
2	B	1086	A	C6-C5-N7	-6.08	128.04	132.30
2	B	2199	A	C5'-C4'-C3'	-6.07	106.29	116.00
2	B	1251	C	C5'-C4'-C3'	-5.89	106.57	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2096	C	C5'-C4'-C3'	-5.88	106.60	116.00
2	B	690	G	C5'-C4'-C3'	-5.87	106.61	116.00
2	B	241	A	C5'-C4'-O4'	5.82	116.08	109.10
2	B	126	A	C5'-C4'-C3'	5.82	125.30	116.00
2	B	2203	U	O3'-P-O5'	-5.76	93.06	104.00
2	B	1397	U	C5'-C4'-C3'	-5.68	106.91	116.00
2	B	242	G	C4'-C3'-O3'	-5.68	97.48	109.40
2	B	2790	U	C4'-C3'-O3'	5.61	124.23	113.00
2	B	1086	A	C2-N3-C4	-5.61	107.79	110.60
2	B	1552	A	C4'-C3'-O3'	5.58	124.16	113.00
2	B	1060	U	N1-C2-O2	-5.57	118.90	122.80
2	B	2894	G	C5'-C4'-C3'	-5.57	107.09	116.00
2	B	1318	U	C5'-C4'-C3'	-5.56	107.10	116.00
2	B	2109	U	N1-C1'-C2'	-5.51	105.94	112.00
2	B	2619	C	C5'-C4'-C3'	-5.41	107.35	116.00
2	B	140	C	C5'-C4'-C3'	5.39	124.62	116.00
2	B	1654	A	C5'-C4'-C3'	-5.38	107.40	116.00
2	B	1280	G	C5'-C4'-C3'	-5.34	107.46	116.00
2	B	2471	A	C5'-C4'-C3'	-5.33	107.47	116.00
2	B	1060	U	N3-C2-O2	5.29	125.91	122.20
2	B	1382	G	C5'-C4'-C3'	5.28	124.45	116.00
2	B	2138	G	C5'-C4'-C3'	-5.28	107.55	116.00
2	B	1634	A	C5'-C4'-C3'	-5.26	107.58	116.00
2	B	2272	U	N1-C2-O2	-5.19	119.17	122.80
2	B	2716	C	C5'-C4'-C3'	5.17	124.27	116.00
2	B	747	U	C5'-C4'-C3'	5.05	124.08	116.00
1	A	30	C	C5'-C4'-C3'	-5.01	107.98	116.00
2	B	134	G	C5'-C4'-C3'	-5.00	108.00	116.00

There are no chirality outliers.

All (38) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	B	1047	G	Sidechain
2	B	1060	U	Sidechain
2	B	1086	A	Sidechain
2	B	1088	A	Sidechain
2	B	1439	A	Sidechain
2	B	1533	C	Sidechain
2	B	1538	G	Sidechain
2	B	1546	G	Sidechain
2	B	1572	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1645	G	Sidechain
2	B	1734	G	Sidechain
2	B	1792	G	Sidechain
2	B	1814	G	Sidechain
2	B	1828	G	Sidechain
2	B	2062	A	Sidechain
2	B	2109	U	Sidechain
2	B	2135	A	Sidechain
2	B	2136	G	Sidechain
2	B	2155	U	Sidechain
2	B	221	A	Sidechain
2	B	222	A	Sidechain
2	B	2272	U	Sidechain
2	B	2319	G	Sidechain
2	B	2471	A	Sidechain
2	B	2503	A	Sidechain
2	B	2638	G	Sidechain
2	B	2733	A	Sidechain
2	B	2848	G	Sidechain
2	B	2857	G	Sidechain
2	B	2868	A	Sidechain
2	B	299	A	Sidechain
2	B	356	G	Sidechain
2	B	427	U	Sidechain
2	B	51	G	Sidechain
2	B	630	G	Sidechain
2	B	727	A	Sidechain
2	B	729	G	Sidechain
2	B	757	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	111	0
2	B	60995	0	30677	2493	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	V	753	0	780	90	0
4	C	2082	0	2157	274	0
5	D	1565	0	1616	220	0
6	E	1552	0	1619	170	0
7	F	1420	0	1460	236	0
8	G	1323	0	1374	161	0
9	H	1111	0	1148	146	0
10	J	1129	0	1162	154	0
11	K	930	0	1000	134	0
12	L	1045	0	1117	155	0
13	M	1074	0	1157	112	0
14	N	960	0	1000	129	0
15	O	892	0	923	104	0
16	P	917	0	965	111	0
17	Q	947	0	1022	167	0
18	R	816	0	839	138	0
19	S	857	0	922	93	0
20	T	738	0	807	122	0
21	U	779	0	834	121	0
22	W	596	0	610	137	0
23	X	509	0	543	50	0
24	Y	449	0	491	50	0
25	Z	625	0	652	92	0
26	0	444	0	461	42	0
27	1	409	0	440	44	0
28	2	377	0	418	43	0
29	3	504	0	574	40	0
30	4	302	0	340	35	0
31	I	1032	0	1088	182	0
32	B	111	0	0	0	0
33	4	1	0	0	0	0
34	2	1	0	0	0	0
34	B	502	0	0	9	0
34	C	5	0	0	0	0
34	D	1	0	0	0	0
34	L	3	0	0	0	0
All	All	90263	0	59466	5596	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 38.

All (5596) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1099:G:H8	31:I:3:LYS:N	1.38	1.20
21:U:85:ARG:HD3	21:U:86:PHE:H	1.13	1.14
20:T:5:GLU:HA	20:T:8:LEU:HB2	1.25	1.13
2:B:545:U:H5''	2:B:546:U:H4'	1.25	1.08
2:B:1098:A:H3'	31:I:3:LYS:HA	1.38	1.05
2:B:1099:G:C8	31:I:3:LYS:N	2.26	1.04
10:J:58:ASN:HA	10:J:127:GLY:HA2	1.40	1.03
24:Y:8:GLN:HG2	24:Y:31:ILE:HA	1.40	1.02
2:B:1099:G:O5'	31:I:4:VAL:N	1.92	1.02
7:F:36:ASN:HD22	7:F:152:ASP:HB2	1.24	1.02
2:B:1098:A:H3'	31:I:3:LYS:CA	1.87	1.02
11:K:35:VAL:HG23	11:K:36:GLY:H	1.23	1.02
7:F:126:ASN:HD22	7:F:156:THR:HG23	1.20	1.01
2:B:1812:U:H1'	4:C:43:ASN:HD21	1.23	1.01
10:J:17:VAL:HG23	10:J:137:PRO:HB2	1.42	1.01
2:B:1338:G:H4'	20:T:18:GLU:HG3	1.40	1.01
14:N:29:VAL:HG12	14:N:83:LEU:HD21	1.40	1.00
17:Q:63:ARG:HH22	17:Q:96:ASP:HA	1.26	1.00
2:B:1244:A:H5''	12:L:8:PRO:HD3	1.41	1.00
2:B:137:U:H2'	2:B:138:U:O4'	1.59	1.00
21:U:80:ASP:HB3	21:U:96:LYS:H	1.22	1.00
4:C:77:VAL:HG23	4:C:112:GLY:H	1.23	1.00
2:B:1174:U:H1'	2:B:1176:U:H1'	1.43	0.99
9:H:127:GLU:HA	9:H:145:ASN:HA	1.44	0.99
14:N:2:ARG:HA	14:N:5:LYS:HD3	1.44	0.99
5:D:106:LYS:HB3	5:D:206:ALA:H	1.24	0.98
21:U:38:ILE:HG23	21:U:39:ASN:H	1.26	0.98
9:H:7:ASP:HA	9:H:15:LEU:HD22	1.45	0.98
12:L:79:LEU:HB2	12:L:113:ALA:HB3	1.45	0.97
4:C:144:GLU:HG3	4:C:151:GLY:H	1.23	0.97
10:J:112:GLY:H	10:J:113:PRO:HD2	1.28	0.97
2:B:1654:A:O2'	5:D:118:PHE:HB2	1.65	0.96
7:F:65:LEU:H	7:F:88:VAL:HG22	1.25	0.96
2:B:1420:A:H2'	2:B:2211:A:H62	1.28	0.95
12:L:29:LYS:HG3	12:L:30:THR:HG23	1.48	0.95
13:M:40:ARG:HD3	13:M:93:VAL:HG21	1.45	0.95
14:N:2:ARG:HG2	14:N:5:LYS:HB2	1.47	0.95
2:B:2502:G:H5'	2:B:2503:A:H5''	1.47	0.95
4:C:27:LYS:HG3	4:C:28:PRO:HD2	1.46	0.94
4:C:183:VAL:HG13	4:C:185:ALA:H	1.28	0.94
2:B:1099:G:H8	31:I:3:LYS:H	1.01	0.94
23:X:39:GLN:HB3	23:X:42:LEU:HD13	1.48	0.94
2:B:855:G:H21	22:W:23:LYS:HG2	1.33	0.93

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1283:G:H22	2:B:1286:A:H5'	1.29	0.93
25:Z:40:VAL:HG21	25:Z:43:GLU:HB3	1.50	0.93
19:S:24:ILE:HD11	19:S:36:LEU:HD11	1.48	0.93
5:D:106:LYS:HB3	5:D:206:ALA:N	1.84	0.93
14:N:37:THR:HG22	14:N:39:PRO:HD2	1.50	0.92
4:C:146:LYS:HB3	4:C:147:PRO:HD2	1.48	0.92
22:W:51:GLY:HA3	22:W:59:PHE:HB2	1.53	0.91
7:F:43:ILE:HG23	7:F:44:ALA:H	1.34	0.91
2:B:2365:G:H4'	22:W:59:PHE:HE1	1.34	0.91
31:I:11:GLN:HG2	31:I:55:PRO:HB3	1.52	0.91
7:F:62:GLN:HE22	7:F:90:LEU:HD13	1.33	0.91
9:H:131:SER:HB2	9:H:141:LYS:HA	1.52	0.91
9:H:31:VAL:HB	9:H:32:PRO:HD3	1.51	0.90
9:H:48:GLU:HB2	9:H:51:ARG:HH21	1.34	0.90
2:B:962:G:H21	2:B:2250:G:H22	1.13	0.90
7:F:3:LEU:HD21	7:F:172:PHE:HB3	1.53	0.90
5:D:5:VAL:H	5:D:32:ASN:HD21	1.11	0.90
2:B:1060:U:N3	2:B:1088:A:N7	2.20	0.90
22:W:9:THR:HG23	22:W:10:ARG:HD3	1.52	0.90
25:Z:6:GLN:HE22	25:Z:50:ARG:H	1.17	0.90
6:E:58:LYS:HD3	6:E:58:LYS:H	1.36	0.89
14:N:32:GLU:HG3	14:N:115:LEU:HD12	1.51	0.89
14:N:96:ARG:HH11	14:N:116:VAL:HG23	1.35	0.89
10:J:36:LEU:HD21	10:J:122:LEU:HB2	1.53	0.89
2:B:1024:G:H3'	2:B:1025:G:H5''	1.53	0.89
5:D:113:SER:HB3	5:D:168:GLU:H	1.37	0.89
2:B:79:C:HO2'	2:B:346:A:H8	1.20	0.89
2:B:117:G:H5'	2:B:126:A:H8	1.36	0.89
4:C:128:THR:HA	4:C:190:THR:HG22	1.53	0.89
19:S:26:GLY:H	19:S:71:VAL:HG13	1.34	0.89
3:V:44:HIS:HE1	3:V:86:LEU:H	1.20	0.89
7:F:11:VAL:HG12	7:F:12:VAL:H	1.36	0.88
10:J:72:LYS:HB2	10:J:89:PHE:HB2	1.53	0.88
2:B:858:G:N3	2:B:2268:A:H2'	1.88	0.88
2:B:27:G:H22	2:B:512:G:H2'	1.38	0.88
4:C:180:MET:HB2	4:C:268:ARG:HB2	1.56	0.88
9:H:31:VAL:HB	9:H:32:PRO:CD	2.04	0.88
2:B:2882:A:H4'	14:N:97:ILE:HD11	1.56	0.88
16:P:4:ILE:HG22	16:P:5:LYS:H	1.39	0.88
18:R:14:VAL:HG22	18:R:15:SER:H	1.36	0.87
27:1:7:LYS:HA	27:1:23:THR:HG22	1.57	0.87
2:B:2179:C:H2'	2:B:2179:C:O2	1.75	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:81:ARG:HH21	21:U:81:ARG:H	1.22	0.87
8:G:8:VAL:HG11	8:G:49:LEU:HB3	1.57	0.87
19:S:29:VAL:HG11	19:S:55:ILE:HD13	1.54	0.86
2:B:1084:A:H1'	2:B:1106:G:H5'	1.55	0.86
11:K:47:ILE:HG12	11:K:48:PRO:HD2	1.54	0.86
12:L:57:LEU:HD12	12:L:60:ARG:HH22	1.40	0.86
2:B:2787:C:H1'	5:D:63:PRO:HG3	1.58	0.86
2:B:1437:C:H2'	2:B:1438:U:C6	2.10	0.86
2:B:996:A:H4'	17:Q:91:ARG:HD2	1.56	0.86
18:R:19:THR:HG22	18:R:97:LYS:HA	1.58	0.86
5:D:29:VAL:HB	5:D:98:VAL:HG22	1.57	0.86
5:D:114:LYS:NZ	5:D:116:LYS:HZ2	1.73	0.86
17:Q:105:PHE:HA	17:Q:108:LEU:HD13	1.57	0.85
2:B:2269:G:H4'	22:W:19:ARG:HH12	1.41	0.85
5:D:148:GLN:HB2	5:D:152:PRO:HG2	1.58	0.85
20:T:11:LEU:HD22	20:T:11:LEU:H	1.42	0.85
5:D:14:ILE:HA	16:P:11:GLN:HE22	1.41	0.85
14:N:102:PHE:H	14:N:109:PRO:HA	1.39	0.85
16:P:20:ARG:HD2	16:P:21:PRO:HD2	1.58	0.85
22:W:18:LYS:HA	22:W:36:ILE:HG12	1.56	0.85
13:M:19:GLY:HA2	13:M:97:GLN:HB2	1.58	0.85
3:V:72:VAL:HG12	3:V:93:ARG:HA	1.55	0.85
6:E:31:VAL:HG21	6:E:104:ALA:HB2	1.59	0.85
12:L:6:LEU:HD23	12:L:6:LEU:H	1.42	0.85
15:O:11:ALA:HB3	15:O:96:GLY:H	1.42	0.85
13:M:55:ARG:HH21	13:M:55:ARG:HA	1.42	0.85
8:G:26:LYS:HA	8:G:32:LEU:H	1.40	0.84
11:K:71:ARG:HD2	11:K:105:ARG:HE	1.40	0.84
20:T:57:VAL:HG22	20:T:58:VAL:H	1.42	0.84
2:B:2769:U:H2'	2:B:2770:G:H8	1.43	0.84
13:M:19:GLY:H	13:M:38:ARG:HH12	1.26	0.84
20:T:29:THR:HA	20:T:86:THR:HA	1.59	0.84
5:D:114:LYS:HZ2	5:D:116:LYS:NZ	1.75	0.83
5:D:114:LYS:HZ2	5:D:116:LYS:HZ2	0.86	0.83
2:B:2743:U:H2'	2:B:2744:G:H5''	1.58	0.83
2:B:1099:G:H5''	31:I:3:LYS:N	1.93	0.83
20:T:39:THR:HG22	20:T:42:GLU:H	1.43	0.83
28:2:10:LEU:HD21	28:2:14:ARG:HH11	1.41	0.83
2:B:704:G:H2'	2:B:726:G:H22	1.41	0.83
2:B:2039:U:H2'	2:B:2040:G:H8	1.44	0.83
27:1:26:LYS:HD3	27:1:52:LYS:HB3	1.60	0.83
31:I:27:LEU:H	31:I:27:LEU:HD23	1.44	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:25:LEU:HD22	10:J:26:GLY:H	1.42	0.83
6:E:161:ALA:HA	6:E:164:LEU:HB2	1.61	0.83
3:V:72:VAL:HG21	3:V:91:PHE:HB3	1.61	0.82
7:F:42:ALA:H	7:F:48:LEU:HD11	1.43	0.82
14:N:101:GLY:HA2	14:N:110:MET:N	1.95	0.82
7:F:42:ALA:HA	7:F:48:LEU:HD21	1.60	0.82
2:B:979:A:H2'	2:B:982:C:H41	1.44	0.82
17:Q:63:ARG:NH2	17:Q:96:ASP:HA	1.95	0.82
9:H:68:ARG:HG3	9:H:134:VAL:HG21	1.58	0.82
2:B:62:U:H2'	2:B:63:A:O4'	1.80	0.82
2:B:1475:G:H1'	2:B:1514:G:O6	1.79	0.82
2:B:1099:G:P	31:I:3:LYS:HA	2.20	0.82
25:Z:33:LEU:HA	25:Z:52:SER:HA	1.62	0.82
2:B:1082:U:C4	2:B:1086:A:C2	2.67	0.82
6:E:147:LEU:HB3	6:E:186:VAL:HG23	1.62	0.81
20:T:53:VAL:HG11	20:T:87:LEU:HD13	1.59	0.81
31:I:121:ILE:HD13	31:I:121:ILE:H	1.45	0.81
11:K:24:VAL:HA	11:K:39:ILE:HD12	1.62	0.81
2:B:1060:U:C2	2:B:1088:A:N7	2.48	0.81
8:G:15:ASP:HB3	8:G:26:LYS:H	1.43	0.81
2:B:1509:A:H5'	2:B:1510:G:H5'	1.60	0.81
20:T:67:VAL:HB	20:T:76:ARG:HG2	1.62	0.81
9:H:86:ASP:HB2	9:H:89:LYS:HD3	1.62	0.81
9:H:135:HIS:HB3	9:H:138:VAL:HB	1.60	0.81
8:G:84:LYS:HG2	8:G:85:LYS:H	1.44	0.81
17:Q:79:ILE:HA	17:Q:82:LEU:HD12	1.60	0.81
2:B:1203:U:H1'	12:L:4:ASN:HD21	1.46	0.81
11:K:87:LEU:HB2	11:K:93:GLN:O	1.81	0.81
24:Y:35:VAL:HG22	24:Y:36:GLU:H	1.45	0.81
25:Z:7:VAL:HG13	25:Z:8:THR:HG23	1.62	0.80
16:P:23:ASP:HA	16:P:88:ARG:HA	1.62	0.80
16:P:57:ALA:HA	16:P:73:PHE:O	1.80	0.80
4:C:144:GLU:HA	4:C:151:GLY:HA2	1.63	0.80
2:B:2306:C:H3'	2:B:2307:G:H5'	1.63	0.80
31:I:21:PRO:HB2	31:I:22:PRO:HD3	1.64	0.80
10:J:81:ILE:HG23	10:J:82:GLY:H	1.44	0.80
28:2:30:VAL:HG22	28:2:33:ARG:HH22	1.47	0.80
2:B:2153:C:H2'	2:B:2154:A:H8	1.47	0.80
2:B:322:A:H5'	2:B:340:A:H1'	1.63	0.80
18:R:16:GLU:HA	18:R:98:ILE:HG22	1.63	0.80
2:B:479:A:O2'	2:B:481:G:H5'	1.82	0.80
14:N:38:LEU:HB3	14:N:39:PRO:HD3	1.63	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:86:LEU:H	11:K:86:LEU:HD23	1.45	0.80
2:B:1451:C:H4'	2:B:1452:G:H5'	1.64	0.80
2:B:1141:U:H4'	2:B:1142:A:O4'	1.81	0.80
14:N:97:ILE:HD12	14:N:98:LEU:H	1.46	0.80
8:G:40:VAL:HG22	8:G:64:ALA:HA	1.62	0.79
8:G:122:ALA:HB2	8:G:132:LEU:HB3	1.64	0.79
1:A:98:G:H1	3:V:14:LYS:HB2	1.47	0.79
2:B:1099:G:OP2	31:I:3:LYS:HA	1.81	0.79
17:Q:57:ARG:HB3	17:Q:57:ARG:HH11	1.46	0.79
3:V:66:ASP:HB2	3:V:68:LYS:HE3	1.64	0.79
7:F:141:ASP:HB3	7:F:144:LYS:HB3	1.62	0.79
13:M:60:GLN:NE2	13:M:60:GLN:H	1.80	0.79
4:C:140:VAL:HG12	4:C:141:HIS:H	1.46	0.79
2:B:532:A:H2'	17:Q:27:ARG:HH22	1.46	0.79
11:K:13:ASN:HD21	11:K:98:ARG:H	1.29	0.79
2:B:2356:U:H5''	22:W:16:GLU:HG3	1.64	0.79
2:B:1674:G:H21	2:B:1677:A:H61	1.27	0.79
1:A:104:A:H2'	1:A:105:G:O4'	1.81	0.79
21:U:85:ARG:HD3	21:U:86:PHE:N	1.96	0.79
2:B:90:U:H3'	2:B:91:A:H5''	1.64	0.79
16:P:97:TYR:O	16:P:100:ARG:HB2	1.83	0.78
4:C:161:VAL:HG12	4:C:162:GLN:H	1.49	0.78
2:B:899:A:H2'	2:B:900:A:O4'	1.82	0.78
1:A:116:G:H4'	15:O:54:VAL:HG22	1.64	0.78
4:C:226:PRO:HG3	4:C:233:GLY:H	1.47	0.78
2:B:958:U:H3	13:M:16:ARG:HB3	1.44	0.78
22:W:39:GLN:HG3	22:W:42:THR:HB	1.66	0.78
23:X:17:GLU:HB3	23:X:53:VAL:HG11	1.65	0.78
7:F:65:LEU:HD23	7:F:87:LYS:HD2	1.66	0.78
2:B:2365:G:H4'	22:W:59:PHE:CE1	2.17	0.78
2:B:1099:G:H8	31:I:3:LYS:CA	1.97	0.78
2:B:1729:U:H2'	2:B:1730:C:H4'	1.65	0.78
22:W:17:ALA:HA	22:W:35:ILE:HG23	1.64	0.77
31:I:45:THR:HA	31:I:48:ILE:HG22	1.66	0.77
18:R:60:LYS:H	18:R:100:GLY:HA3	1.50	0.77
22:W:39:GLN:HG2	22:W:40:ARG:N	1.98	0.77
3:V:75:GLN:HG2	3:V:92:VAL:HG23	1.66	0.77
18:R:24:LYS:HA	18:R:94:THR:HG23	1.66	0.77
2:B:1099:G:H5''	31:I:2:LYS:C	2.03	0.77
25:Z:30:LEU:H	25:Z:30:LEU:HD23	1.47	0.77
2:B:2734:A:H2'	2:B:2735:G:H5'	1.65	0.77
2:B:608:A:H2'	2:B:609:A:C8	2.20	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:918:A:H2'	2:B:919:U:H5'	1.66	0.77
2:B:172:A:H2'	2:B:173:A:C8	2.20	0.77
2:B:532:A:H3'	17:Q:27:ARG:HH12	1.50	0.77
16:P:88:ARG:HB2	16:P:112:ARG:NH1	2.00	0.77
30:4:16:ILE:HG12	30:4:25:VAL:HG22	1.66	0.77
2:B:1594:U:H2'	2:B:1595:C:C6	2.20	0.77
14:N:72:ASP:HB3	14:N:75:ILE:HG12	1.67	0.77
18:R:2:TYR:HB2	18:R:42:ALA:HB2	1.66	0.77
6:E:58:LYS:HE2	6:E:60:TRP:HD1	1.50	0.76
18:R:7:SER:HB2	18:R:22:LEU:HB3	1.68	0.76
2:B:1166:G:H2'	2:B:1167:C:C6	2.21	0.76
2:B:161:A:H3'	2:B:162:U:H5''	1.67	0.76
2:B:2305:U:H5''	7:F:130:GLY:HA3	1.68	0.76
9:H:31:VAL:O	9:H:33:GLN:N	2.18	0.76
2:B:354:A:H2'	2:B:355:U:C6	2.20	0.76
10:J:29:ALA:HA	10:J:32:LEU:HD12	1.67	0.76
9:H:133:GLN:HB3	9:H:139:PHE:HA	1.67	0.76
2:B:3:U:H2'	2:B:4:U:C6	2.20	0.76
10:J:112:GLY:H	10:J:113:PRO:CD	1.97	0.76
2:B:1283:G:N2	2:B:1286:A:H5'	2.01	0.76
2:B:62:U:H3'	2:B:63:A:C8	2.21	0.76
2:B:1019:U:H2'	2:B:1020:A:C8	2.20	0.76
16:P:1:SER:HA	16:P:4:ILE:HB	1.68	0.76
3:V:79:ARG:HA	3:V:86:LEU:HA	1.68	0.76
27:1:49:LYS:HG2	27:1:50:GLU:H	1.51	0.76
11:K:35:VAL:HG23	11:K:36:GLY:N	2.01	0.76
2:B:1437:C:H2'	2:B:1438:U:H6	1.49	0.76
2:B:1248:G:H2'	17:Q:2:ARG:HA	1.67	0.76
2:B:2021:C:OP1	26:0:8:THR:HG21	1.86	0.76
13:M:78:LEU:HD12	13:M:78:LEU:H	1.51	0.76
22:W:37:VAL:HG12	22:W:38:ARG:H	1.50	0.76
27:1:33:LEU:HB3	27:1:51:ALA:HB3	1.67	0.76
7:F:168:LEU:HD13	7:F:169:LEU:H	1.51	0.76
2:B:1099:G:P	31:I:4:VAL:H	2.09	0.75
13:M:21:ALA:HB1	13:M:100:LYS:HE2	1.68	0.75
13:M:11:LYS:HD3	13:M:86:LYS:HG2	1.68	0.75
16:P:13:LYS:HD3	16:P:76:HIS:HA	1.67	0.75
2:B:742:A:H2'	2:B:743:A:C8	2.21	0.75
7:F:65:LEU:N	7:F:88:VAL:HG22	1.99	0.75
2:B:2619:C:H5'	5:D:157:LYS:HD3	1.69	0.75
2:B:2010:G:H5''	19:S:42:LYS:HB2	1.68	0.75
21:U:84:PHE:O	21:U:85:ARG:HB2	1.86	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1469:A:H2'	2:B:1470:A:C8	2.21	0.75
31:I:9:LYS:HG2	31:I:57:VAL:HG13	1.69	0.75
2:B:287:G:H2'	2:B:288:U:C6	2.21	0.75
1:A:2:G:H2'	1:A:3:C:C6	2.21	0.75
6:E:157:LEU:HG	6:E:169:VAL:HG11	1.69	0.75
16:P:20:ARG:HE	16:P:91:VAL:HG21	1.50	0.75
21:U:42:LYS:HG3	21:U:57:ILE:HG21	1.67	0.75
2:B:2653:U:H3'	2:B:2654:A:H2'	1.69	0.75
12:L:109:LYS:HG2	12:L:126:ARG:HB2	1.67	0.75
31:I:72:THR:HG21	31:I:112:LYS:HA	1.69	0.75
11:K:38:ILE:HD13	11:K:61:VAL:HG12	1.67	0.75
2:B:877:A:N6	2:B:898:C:H2'	2.01	0.75
2:B:2756:U:H1'	2:B:2757:A:H5''	1.67	0.75
2:B:404:A:H4'	2:B:405:U:H5'	1.69	0.74
7:F:177:ARG:CZ	7:F:177:ARG:HA	2.16	0.74
2:B:1168:G:H2'	2:B:1169:A:C8	2.22	0.74
16:P:7:LEU:H	16:P:7:LEU:HD12	1.50	0.74
2:B:856:G:H1'	22:W:23:LYS:HB3	1.68	0.74
13:M:63:ILE:HG23	13:M:105:MET:HG3	1.68	0.74
20:T:28:ASN:HA	20:T:91:GLN:HE22	1.52	0.74
2:B:90:U:H3'	2:B:91:A:C5'	2.16	0.74
6:E:130:LYS:HB2	6:E:133:LEU:HG	1.67	0.74
2:B:2354:C:H4'	22:W:31:LEU:HD23	1.67	0.74
2:B:2901:C:H2'	2:B:2902:C:C6	2.23	0.74
17:Q:86:SER:HB3	18:R:51:VAL:HA	1.68	0.74
2:B:2579:C:O2'	5:D:136:ASN:HA	1.88	0.74
19:S:28:LYS:HD2	19:S:29:VAL:H	1.52	0.74
2:B:1082:U:N3	2:B:1086:A:C2	2.55	0.74
8:G:148:ARG:HA	8:G:161:VAL:HB	1.70	0.74
8:G:167:VAL:HG23	8:G:168:VAL:H	1.51	0.74
31:I:105:LEU:HD13	31:I:129:GLU:HG2	1.68	0.74
24:Y:54:VAL:HB	24:Y:56:VAL:HG23	1.68	0.74
2:B:2352:A:C6	22:W:30:VAL:HG11	2.21	0.74
2:B:2376:A:H1'	15:O:111:ARG:HH22	1.52	0.74
3:V:63:ILE:HB	3:V:70:ILE:HD11	1.70	0.74
8:G:126:THR:HB	8:G:129:GLU:HG3	1.68	0.74
10:J:77:HIS:HD2	10:J:84:ILE:H	1.36	0.74
2:B:2748:A:H1'	8:G:66:THR:HB	1.69	0.74
21:U:81:ARG:HH21	21:U:81:ARG:N	1.86	0.74
22:W:51:GLY:CA	22:W:59:PHE:HB2	2.17	0.74
2:B:1301:A:O2'	2:B:1302:A:H3'	1.87	0.74
2:B:224:U:O4	2:B:420:C:H5'	1.88	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:H:54:LEU:HD23	9:H:58:LEU:HD12	1.70	0.74
2:B:1097:U:H2'	2:B:1098:A:O4'	1.87	0.74
5:D:25:THR:HG21	5:D:193:VAL:HG22	1.68	0.74
5:D:51:THR:HG22	5:D:52:THR:H	1.53	0.74
2:B:571:U:H3'	18:R:80:ARG:NH1	2.03	0.74
24:Y:6:ILE:HA	24:Y:56:VAL:HG22	1.70	0.74
17:Q:27:ARG:HG2	17:Q:37:ALA:HB2	1.69	0.74
8:G:148:ARG:HD3	8:G:152:ARG:CZ	2.17	0.74
2:B:1454:C:H5'	14:N:63:ARG:HE	1.53	0.74
10:J:6:ALA:HB3	10:J:45:THR:HG21	1.70	0.73
2:B:2393:U:H5''	12:L:62:PRO:HG3	1.70	0.73
2:B:143:C:H2'	2:B:144:A:H8	1.52	0.73
7:F:48:LEU:H	7:F:48:LEU:HD23	1.52	0.73
14:N:33:ILE:HG22	14:N:114:GLU:HB2	1.69	0.73
2:B:2769:U:H2'	2:B:2770:G:C8	2.23	0.73
2:B:743:A:O2'	2:B:744:U:H5'	1.88	0.73
2:B:1868:C:H2'	2:B:1869:G:O4'	1.88	0.73
17:Q:8:ILE:H	17:Q:8:ILE:HD12	1.51	0.73
3:V:9:ARG:HH22	3:V:12:GLN:HA	1.54	0.73
4:C:156:SER:O	4:C:194:VAL:HG11	1.89	0.73
7:F:72:SER:HA	7:F:80:GLN:H	1.53	0.73
2:B:1925:C:H2'	2:B:1926:U:H5''	1.68	0.73
7:F:62:GLN:NE2	7:F:90:LEU:HD13	2.03	0.73
22:W:49:ASN:HB3	22:W:81:ILE:HD11	1.69	0.73
22:W:66:VAL:HA	22:W:81:ILE:HG22	1.70	0.73
25:Z:64:ILE:HD12	25:Z:64:ILE:H	1.51	0.73
2:B:171:U:H2'	2:B:172:A:C8	2.23	0.73
2:B:2258:C:H5'	2:B:2259:U:H5	1.54	0.73
2:B:2333:A:H4'	2:B:2334:U:H5''	1.69	0.73
17:Q:65:ASN:HB2	17:Q:75:TYR:HB2	1.70	0.73
2:B:580:U:H2'	2:B:581:C:H6	1.54	0.73
9:H:94:ILE:O	9:H:122:LEU:HB2	1.88	0.73
4:C:64:VAL:O	4:C:65:ASP:HB3	1.86	0.73
19:S:70:LYS:HD3	19:S:110:ARG:HA	1.69	0.73
4:C:91:ALA:HB2	4:C:105:ALA:HB2	1.71	0.73
17:Q:43:GLN:NE2	18:R:77:PHE:HB3	2.03	0.73
11:K:19:VAL:HG12	11:K:41:ILE:HG12	1.70	0.73
2:B:1080:A:H2'	2:B:1081:U:H6	1.52	0.73
2:B:38:A:O2'	6:E:43:THR:HA	1.89	0.73
7:F:8:LYS:HA	7:F:12:VAL:HG21	1.71	0.73
2:B:580:U:H2'	2:B:581:C:C6	2.24	0.73
8:G:37:ASN:HD22	8:G:40:VAL:HB	1.53	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2264:C:H41	22:W:11:ASN:HD21	1.36	0.73
23:X:3:ALA:HA	23:X:6:LEU:HD23	1.71	0.73
2:B:836:G:H2'	2:B:837:C:C6	2.23	0.73
2:B:1098:A:H2'	31:I:4:VAL:N	2.02	0.73
7:F:126:ASN:HB3	7:F:156:THR:HA	1.70	0.73
8:G:157:LYS:HB3	8:G:159:LYS:HG3	1.71	0.73
17:Q:65:ASN:HD21	17:Q:69:ARG:HH11	1.35	0.73
10:J:124:VAL:HG23	10:J:125:TYR:H	1.54	0.73
13:M:40:ARG:HB2	13:M:93:VAL:HG22	1.69	0.73
31:I:55:PRO:HD3	31:I:74:PRO:HD3	1.69	0.73
14:N:116:VAL:O	14:N:117:ASP:HB3	1.87	0.73
2:B:30:G:H2'	2:B:31:C:C6	2.24	0.73
9:H:67:ALA:O	9:H:70:GLU:HG3	1.89	0.73
2:B:2243:U:H2'	2:B:2244:U:C6	2.24	0.73
2:B:140:C:OP1	20:T:2:ILE:HG23	1.88	0.72
4:C:129:LEU:HD23	4:C:130:PRO:HD2	1.71	0.72
19:S:66:ILE:HD13	19:S:66:ILE:H	1.54	0.72
20:T:82:LYS:HD3	20:T:84:TYR:HE1	1.52	0.72
15:O:49:VAL:HG11	15:O:82:ALA:HA	1.71	0.72
17:Q:68:ALA:HB1	17:Q:73:ILE:HG23	1.71	0.72
3:V:44:HIS:CE1	3:V:86:LEU:H	2.07	0.72
13:M:34:LYS:HE2	13:M:99:GLY:HA2	1.70	0.72
8:G:166:GLU:HG2	8:G:168:VAL:HG23	1.71	0.72
3:V:62:THR:HA	3:V:71:LYS:HA	1.71	0.72
14:N:17:ARG:HA	14:N:20:MET:HB3	1.70	0.72
4:C:196:ASN:ND2	4:C:199:HIS:HB2	2.04	0.72
17:Q:107:ALA:HB1	18:R:48:LYS:HE2	1.71	0.72
2:B:2386:A:C2	22:W:38:ARG:HB3	2.24	0.72
16:P:91:VAL:HG23	16:P:92:ARG:H	1.53	0.72
3:V:62:THR:HG22	3:V:71:LYS:HG2	1.71	0.72
2:B:992:C:H4'	18:R:74:ILE:HD13	1.71	0.72
2:B:616:A:H3'	2:B:617:G:H8	1.54	0.72
21:U:24:VAL:HA	21:U:35:VAL:HA	1.72	0.72
2:B:855:G:N2	22:W:23:LYS:HG2	2.05	0.72
7:F:110:ILE:HA	7:F:111:ARG:CZ	2.18	0.72
2:B:1168:G:H2'	2:B:1169:A:H8	1.53	0.72
9:H:63:ALA:HA	9:H:66:ASN:HD22	1.52	0.72
2:B:878:A:H2'	2:B:878:A:N3	2.04	0.72
5:D:69:ALA:HA	5:D:73:VAL:HB	1.72	0.72
2:B:2292:U:H2'	2:B:2293:G:H8	1.52	0.72
2:B:28:A:H61	2:B:512:G:H1'	1.55	0.72
16:P:85:VAL:HG21	16:P:88:ARG:HH11	1.52	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:I:20:SER:HB3	31:I:21:PRO:HD3	1.69	0.72
11:K:15:GLY:HA3	11:K:52:VAL:HG23	1.70	0.72
11:K:99:ILE:HB	11:K:118:LEU:HD22	1.71	0.72
9:H:83:LYS:HG3	9:H:149:GLU:HG2	1.69	0.72
2:B:1412:U:H2'	2:B:1413:A:H8	1.55	0.72
2:B:1060:U:C4	2:B:1088:A:N6	2.58	0.72
2:B:2834:G:H1'	2:B:2883:A:N6	2.04	0.72
9:H:122:LEU:HD11	9:H:130:VAL:HG21	1.70	0.72
2:B:2241:A:H2'	2:B:2242:G:C8	2.25	0.72
2:B:2800:A:N3	2:B:2801:G:H1'	2.05	0.72
19:S:30:SER:HA	19:S:33:LEU:HD12	1.72	0.72
2:B:1099:G:O4'	31:I:3:LYS:C	2.27	0.72
7:F:126:ASN:HA	7:F:157:THR:HG22	1.72	0.72
17:Q:91:ARG:HH12	18:R:10:LYS:HB3	1.55	0.72
4:C:129:LEU:HD22	4:C:134:ILE:HG22	1.70	0.72
2:B:191:A:H2'	2:B:192:C:C6	2.24	0.72
2:B:1274:A:N3	2:B:1297:C:H1'	2.05	0.72
14:N:83:LEU:HA	14:N:86:ARG:HG3	1.70	0.71
20:T:73:ARG:HA	20:T:73:ARG:HH21	1.55	0.71
2:B:1464:G:H2'	2:B:1465:G:H8	1.53	0.71
10:J:112:GLY:N	10:J:113:PRO:HD2	2.04	0.71
13:M:19:GLY:HA2	13:M:98:PRO:HD2	1.73	0.71
4:C:43:ASN:ND2	4:C:44:ASN:H	1.88	0.71
19:S:24:ILE:HG22	19:S:71:VAL:HG11	1.72	0.71
2:B:1080:A:O2'	31:I:126:ARG:HD2	1.90	0.71
2:B:2867:G:H2'	2:B:2867:G:N3	2.04	0.71
2:B:2591:C:H2'	2:B:2592:G:C8	2.25	0.71
10:J:17:VAL:HG22	10:J:55:ILE:HD11	1.69	0.71
20:T:76:ARG:NH2	20:T:77:ARG:HB2	2.05	0.71
1:A:98:G:N1	3:V:14:LYS:HB2	2.04	0.71
1:A:32:U:H4'	1:A:52:A:H62	1.55	0.71
6:E:58:LYS:HE2	6:E:60:TRP:CD1	2.26	0.71
2:B:1440:U:H2'	2:B:1441:G:H8	1.55	0.71
21:U:26:ASN:HD21	21:U:34:ILE:HD12	1.54	0.71
17:Q:63:ARG:HH22	17:Q:96:ASP:CA	2.02	0.71
2:B:1447:C:H2'	2:B:1448:G:H8	1.56	0.71
2:B:329:G:H22	21:U:16:LYS:HE3	1.53	0.71
3:V:51:GLN:NE2	3:V:79:ARG:HH22	1.89	0.71
2:B:919:U:H2'	2:B:920:A:C8	2.25	0.71
4:C:81:GLU:HB2	4:C:90:ILE:HG22	1.71	0.71
2:B:2071:A:H2'	2:B:2072:C:C6	2.25	0.71
2:B:200:U:H5''	25:Z:22:LEU:O	1.90	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1354:A:H2'	2:B:1355:G:O4'	1.91	0.71
10:J:93:ILE:O	10:J:97:PRO:HG3	1.91	0.71
15:O:11:ALA:CB	15:O:96:GLY:H	2.03	0.71
2:B:742:A:H2'	2:B:743:A:H8	1.54	0.71
22:W:23:LYS:HD2	22:W:24:ARG:HB3	1.72	0.71
25:Z:59:ILE:HG22	25:Z:64:ILE:HA	1.73	0.71
13:M:66:ARG:CZ	13:M:101:VAL:HG11	2.20	0.71
2:B:62:U:H3'	2:B:63:A:H8	1.55	0.71
2:B:2328:A:H2'	2:B:2329:U:C6	2.25	0.71
2:B:1949:G:H2'	2:B:1950:G:C8	2.25	0.71
2:B:1857:G:H1'	2:B:1885:A:H61	1.56	0.71
2:B:362:A:H3'	2:B:363:G:H8	1.56	0.71
2:B:1287:A:OP1	14:N:104:ALA:HB3	1.91	0.70
20:T:15:HIS:H	20:T:32:LEU:HA	1.55	0.70
2:B:2438:U:O2'	2:B:2439:A:H5''	1.91	0.70
9:H:27:ARG:NH1	25:Z:60:ASP:HA	2.06	0.70
2:B:1001:A:H2'	2:B:1002:G:O4'	1.91	0.70
7:F:126:ASN:HA	7:F:157:THR:H	1.56	0.70
2:B:849:A:H2'	2:B:850:U:C6	2.26	0.70
2:B:27:G:N2	2:B:512:G:H2'	2.06	0.70
20:T:11:LEU:HD21	20:T:46:ALA:HB1	1.71	0.70
2:B:96:C:H4'	23:X:41:HIS:ND1	2.06	0.70
7:F:128:SER:HB3	7:F:154:THR:HG23	1.73	0.70
4:C:32:LEU:O	4:C:63:ILE:HG12	1.90	0.70
4:C:202:ARG:HH11	4:C:213:ARG:HE	1.38	0.70
2:B:2720:U:H5''	16:P:52:ARG:HH21	1.55	0.70
5:D:124:ARG:HA	5:D:165:MET:HE3	1.73	0.70
8:G:84:LYS:HB3	8:G:132:LEU:O	1.91	0.70
19:S:26:GLY:N	19:S:71:VAL:HG13	2.06	0.70
8:G:71:LEU:HA	8:G:74:MET:SD	2.31	0.70
4:C:35:LYS:HG2	4:C:36:ASN:H	1.54	0.70
2:B:2872:A:O2'	2:B:2873:A:H5''	1.92	0.70
27:1:46:VAL:HG22	27:1:47:ILE:H	1.53	0.70
26:0:32:THR:OG1	26:0:50:GLY:HA2	1.90	0.70
2:B:2794:C:H2'	2:B:2795:C:C6	2.26	0.70
2:B:215:G:H4'	2:B:216:A:H4'	1.74	0.70
2:B:2109:U:H2'	2:B:2110:G:H5''	1.73	0.70
3:V:21:ARG:HE	3:V:87:GLN:HB3	1.56	0.70
2:B:871:U:H2'	2:B:872:U:H6	1.56	0.70
2:B:2645:G:H3'	2:B:2646:C:H5'	1.74	0.70
6:E:192:ALA:HA	6:E:195:GLN:HE21	1.56	0.70
6:E:117:ARG:HH12	12:L:2:ARG:HB2	1.57	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2366:A:H4'	22:W:61:LYS:HE2	1.73	0.70
2:B:1592:C:H2'	2:B:1593:A:H8	1.57	0.70
20:T:32:LEU:H	20:T:83:ALA:HB3	1.56	0.70
7:F:34:THR:HA	7:F:89:THR:HA	1.74	0.70
2:B:591:U:H1'	29:3:1:PRO:N	2.06	0.70
21:U:38:ILE:HG23	21:U:39:ASN:N	2.05	0.70
2:B:27:G:H1'	2:B:513:A:N6	2.07	0.70
23:X:23:ARG:HD2	23:X:27:ASN:HD21	1.57	0.70
2:B:807:U:H2'	2:B:808:G:H8	1.56	0.70
2:B:1535:A:O2'	2:B:1536:C:H5'	1.92	0.70
2:B:458:G:N2	2:B:469:G:H2'	2.07	0.70
9:H:48:GLU:HB2	9:H:51:ARG:NH2	2.06	0.70
18:R:16:GLU:H	18:R:101:ILE:HG13	1.57	0.70
18:R:14:VAL:HG22	18:R:15:SER:N	2.07	0.70
10:J:77:HIS:CD2	10:J:84:ILE:H	2.10	0.70
2:B:773:U:H5'	2:B:774:G:OP2	1.92	0.70
10:J:117:ALA:HA	10:J:120:ARG:HD2	1.74	0.70
15:O:24:THR:HG22	15:O:42:PRO:HD3	1.73	0.69
2:B:1993:U:H4'	5:D:133:THR:CG2	2.22	0.69
10:J:18:VAL:HG22	10:J:19:ASP:H	1.55	0.69
10:J:45:THR:H	10:J:46:PRO:HD3	1.56	0.69
5:D:13:ARG:HD2	16:P:55:HIS:ND1	2.07	0.69
2:B:571:U:H3'	18:R:80:ARG:HH12	1.57	0.69
9:H:88:GLY:HA3	9:H:125:THR:OG1	1.93	0.69
2:B:350:G:H2'	2:B:351:C:O4'	1.92	0.69
2:B:45:G:H5'	2:B:46:G:H5'	1.73	0.69
2:B:142:A:H2'	2:B:143:C:C6	2.26	0.69
31:I:85:ILE:HD13	31:I:137:LEU:HD21	1.73	0.69
2:B:2732:G:H5'	2:B:2733:A:O4'	1.92	0.69
20:T:12:ARG:HA	23:X:29:ARG:HH22	1.58	0.69
19:S:15:GLN:HA	19:S:18:ARG:HG2	1.74	0.69
8:G:85:LYS:HB2	8:G:164:ALA:HB3	1.75	0.69
30:4:2:LYS:HE3	30:4:4:ARG:HH21	1.56	0.69
17:Q:81:GLY:HA2	17:Q:84:LYS:HB3	1.74	0.69
17:Q:26:ALA:HA	17:Q:29:ARG:HG2	1.75	0.69
8:G:53:PRO:HG3	8:G:61:TRP:HA	1.75	0.69
11:K:54:LYS:HD2	11:K:54:LYS:H	1.57	0.69
16:P:45:VAL:H	16:P:60:VAL:HB	1.56	0.69
2:B:2512:C:H2'	2:B:2513:A:O4'	1.92	0.69
9:H:96:THR:HG23	9:H:97:ARG:H	1.56	0.69
31:I:105:LEU:HD11	31:I:139:VAL:HG21	1.72	0.69
2:B:2722:G:H4'	14:N:4:ARG:HB2	1.73	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2097:A:H2'	2:B:2098:U:C6	2.28	0.69
2:B:721:A:H2'	2:B:722:A:C8	2.27	0.69
2:B:1911:U:H2'	2:B:1918:A:C2	2.28	0.69
2:B:1098:A:H2'	31:I:4:VAL:CA	2.21	0.69
2:B:140:C:H5'	2:B:141:G:N7	2.08	0.69
11:K:20:MET:O	11:K:41:ILE:HG13	1.93	0.69
2:B:1827:U:O2'	2:B:1828:G:H5'	1.93	0.69
2:B:674:G:H1'	6:E:69:ARG:HE	1.57	0.69
20:T:8:LEU:HD13	20:T:49:LYS:HD2	1.75	0.69
2:B:3:U:H2'	2:B:4:U:H6	1.57	0.69
2:B:1654:A:H2'	2:B:1655:A:H8	1.58	0.69
16:P:29:VAL:HG12	16:P:80:VAL:HA	1.75	0.69
9:H:53:GLU:OE2	9:H:54:LEU:HG	1.93	0.69
7:F:62:GLN:NE2	7:F:90:LEU:HA	2.08	0.69
4:C:145:MET:HB2	4:C:152:GLN:HE22	1.58	0.69
24:Y:23:LEU:HD13	24:Y:28:LEU:HB2	1.74	0.69
10:J:29:ALA:HA	10:J:32:LEU:HB2	1.75	0.69
10:J:20:ALA:HB1	10:J:23:LYS:HB2	1.73	0.69
2:B:973:A:H5''	18:R:81:LYS:HD2	1.75	0.69
21:U:34:ILE:HG12	21:U:63:ALA:HB2	1.75	0.69
18:R:71:LYS:HG2	18:R:73:LYS:NZ	2.08	0.69
2:B:479:A:N3	2:B:481:G:H5''	2.07	0.69
2:B:18:U:H2'	2:B:19:A:C8	2.28	0.69
22:W:24:ARG:HD3	22:W:65:LYS:HG2	1.73	0.68
2:B:278:A:H1'	2:B:362:A:C2	2.28	0.68
27:1:9:LYS:HD3	27:1:9:LYS:H	1.58	0.68
10:J:55:ILE:HB	10:J:123:LYS:HB2	1.74	0.68
8:G:43:LYS:HB2	8:G:50:THR:HB	1.73	0.68
13:M:59:ARG:NH1	13:M:60:GLN:HB3	2.08	0.68
2:B:2893:A:H5''	2:B:2894:G:H5'	1.74	0.68
14:N:19:ALA:HA	14:N:22:ARG:HB3	1.76	0.68
13:M:10:ARG:HE	13:M:89:VAL:HG21	1.58	0.68
19:S:52:GLU:HA	19:S:55:ILE:HG22	1.76	0.68
18:R:20:VAL:HG12	18:R:21:ARG:H	1.57	0.68
11:K:102:PRO:HA	11:K:120:PRO:HB3	1.74	0.68
2:B:1778:U:H2'	2:B:1784:A:H62	1.57	0.68
2:B:2199:A:H5'	2:B:2200:C:OP2	1.93	0.68
7:F:78:ILE:HA	7:F:82:TYR:CD1	2.29	0.68
17:Q:34:ALA:O	17:Q:37:ALA:HB3	1.93	0.68
10:J:25:LEU:HD13	10:J:26:GLY:N	2.08	0.68
15:O:67:ASN:H	15:O:70:ALA:HB3	1.57	0.68
2:B:1386:C:H2'	2:B:1387:A:C8	2.29	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:775:G:H4'	2:B:776:G:H5'	1.75	0.68
6:E:108:ILE:HD11	6:E:181:ILE:HB	1.75	0.68
9:H:2:GLN:O	9:H:3:VAL:HG22	1.94	0.68
9:H:94:ILE:HG13	9:H:98:ASP:HB3	1.75	0.68
2:B:2461:A:H2'	2:B:2462:C:C6	2.29	0.68
2:B:352:A:H3'	2:B:353:C:H6	1.59	0.68
24:Y:8:GLN:CG	24:Y:31:ILE:HA	2.19	0.68
16:P:3:ILE:HD13	16:P:7:LEU:HD11	1.74	0.68
2:B:858:G:H21	2:B:2268:A:H3'	1.59	0.68
2:B:499:U:H5'	21:U:44:HIS:HE1	1.58	0.68
4:C:74:PRO:HG2	4:C:96:LYS:HG3	1.76	0.68
23:X:31:GLN:HG2	23:X:37:LEU:HB2	1.75	0.68
4:C:14:HIS:O	4:C:203:VAL:HG11	1.93	0.68
31:I:73:PRO:HG2	31:I:78:LEU:HD21	1.74	0.68
26:O:38:LEU:HB3	26:O:41:HIS:NE2	2.09	0.68
2:B:2153:C:H2'	2:B:2154:A:C8	2.29	0.68
2:B:171:U:H2'	2:B:172:A:H8	1.57	0.68
21:U:86:PHE:HB2	21:U:92:VAL:HB	1.73	0.68
5:D:24:VAL:HG21	5:D:188:LEU:HB3	1.75	0.68
16:P:61:ARG:HD3	16:P:70:GLU:HG3	1.76	0.68
4:C:76:VAL:HA	4:C:113:ASP:O	1.94	0.68
13:M:4:PRO:HG3	13:M:68:PHE:HE2	1.59	0.68
8:G:103:ASN:HD21	8:G:111:PRO:HB3	1.58	0.68
2:B:143:C:H2'	2:B:144:A:C8	2.28	0.67
2:B:1592:C:H2'	2:B:1593:A:C8	2.29	0.67
3:V:20:LEU:HB3	3:V:25:LYS:O	1.94	0.67
2:B:2866:U:H4'	2:B:2867:G:H4'	1.75	0.67
2:B:277:G:H4'	2:B:278:A:C5	2.29	0.67
5:D:37:VAL:HG23	5:D:91:THR:HA	1.76	0.67
15:O:88:LYS:HD2	15:O:89:ASP:N	2.09	0.67
18:R:60:LYS:H	18:R:100:GLY:CA	2.07	0.67
2:B:2886:A:H3'	2:B:2887:A:H8	1.59	0.67
2:B:729:G:H2'	2:B:1775:U:H1'	1.76	0.67
2:B:1866:A:H2'	2:B:1867:G:O4'	1.94	0.67
2:B:222:A:N6	2:B:232:G:H1'	2.09	0.67
2:B:2108:A:N3	2:B:2108:A:H2'	2.09	0.67
12:L:116:VAL:HG13	12:L:117:THR:H	1.57	0.67
2:B:2400:G:O2'	2:B:2401:U:H5'	1.94	0.67
17:Q:63:ARG:HA	17:Q:66:ALA:HB3	1.75	0.67
2:B:2336:A:H61	22:W:40:ARG:CD	2.07	0.67
2:B:729:G:OP1	4:C:12:ARG:HB2	1.95	0.67
5:D:172:VAL:HG11	5:D:175:LEU:HD12	1.76	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:152:A:H2'	2:B:153:U:C6	2.30	0.67
2:B:181:A:H2'	2:B:182:A:C8	2.30	0.67
16:P:5:LYS:HA	16:P:5:LYS:HE2	1.75	0.67
14:N:49:GLU:OE2	14:N:95:THR:HG22	1.94	0.67
1:A:75:G:H1'	3:V:29:ILE:HG12	1.76	0.67
22:W:43:LYS:HD2	22:W:79:ILE:HD11	1.76	0.67
2:B:1447:C:H2'	2:B:1448:G:C8	2.29	0.67
2:B:2039:U:H2'	2:B:2040:G:C8	2.29	0.67
2:B:1486:U:H2'	2:B:1487:U:C6	2.28	0.67
10:J:57:LEU:HD11	10:J:129:GLU:H	1.58	0.67
10:J:32:LEU:O	10:J:36:LEU:HD23	1.95	0.67
16:P:19:PHE:O	16:P:20:ARG:HB2	1.93	0.67
11:K:71:ARG:HD2	11:K:105:ARG:NE	2.07	0.67
2:B:95:A:H4'	23:X:38:GLN:O	1.94	0.67
2:B:145:C:H2'	2:B:146:A:H8	1.59	0.67
4:C:127:ASN:O	4:C:190:THR:HA	1.95	0.67
2:B:1287:A:H3'	2:B:1288:G:N2	2.09	0.67
25:Z:6:GLN:HE22	25:Z:50:ARG:N	1.90	0.67
5:D:62:LYS:H	5:D:62:LYS:HD2	1.60	0.67
2:B:2298:A:OP1	7:F:70:ARG:HD3	1.94	0.67
19:S:81:SER:HA	19:S:99:ARG:HA	1.76	0.67
5:D:141:ARG:HG3	5:D:141:ARG:O	1.95	0.67
2:B:812:C:H4'	17:Q:12:ARG:HH22	1.59	0.67
7:F:16:MET:O	7:F:20:ASN:HA	1.95	0.67
2:B:2808:G:HO2'	2:B:2809:A:H8	1.43	0.67
2:B:2312:U:O2	7:F:38:GLY:HA3	1.95	0.67
29:3:41:ARG:HA	29:3:44:ARG:HH21	1.58	0.67
2:B:634:C:H2'	2:B:635:C:H6	1.59	0.67
2:B:636:G:H3'	12:L:128:THR:HG21	1.75	0.67
2:B:1461:C:H2'	2:B:1462:C:H6	1.58	0.67
21:U:81:ARG:H	21:U:81:ARG:NH2	1.93	0.67
14:N:24:MET:HE1	14:N:40:LYS:HD2	1.77	0.67
5:D:5:VAL:N	5:D:32:ASN:HD21	1.90	0.67
14:N:34:ILE:HB	14:N:113:ILE:HG22	1.77	0.67
2:B:163:C:H2'	2:B:164:C:O4'	1.94	0.67
5:D:33:ARG:NE	5:D:74:GLU:HB3	2.10	0.67
2:B:528:A:C2	2:B:2042:A:H2'	2.30	0.67
14:N:78:LYS:HG3	14:N:83:LEU:HG	1.76	0.67
2:B:1060:U:O2	2:B:1088:A:N7	2.27	0.67
27:1:32:LYS:HA	27:1:51:ALA:O	1.95	0.67
23:X:1:MET:HB3	23:X:4:LYS:HB3	1.77	0.67
6:E:127:GLU:HB2	6:E:133:LEU:HD13	1.77	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:309:A:H4'	21:U:15:GLY:CA	2.25	0.66
2:B:329:G:H1	21:U:16:LYS:HG2	1.60	0.66
4:C:36:ASN:HD21	4:C:85:ASN:ND2	1.93	0.66
2:B:361:G:O2'	2:B:362:A:H5'	1.94	0.66
12:L:101:ILE:HG22	12:L:105:ILE:HG13	1.77	0.66
2:B:545:U:C5	2:B:547:A:H5''	2.31	0.66
10:J:56:VAL:HG12	10:J:57:LEU:H	1.60	0.66
19:S:32:ALA:O	19:S:35:ILE:HB	1.95	0.66
9:H:48:GLU:HA	9:H:51:ARG:HE	1.60	0.66
20:T:54:GLU:HG3	20:T:90:GLY:H	1.58	0.66
11:K:17:ARG:HB3	11:K:45:GLU:HG3	1.75	0.66
13:M:66:ARG:NE	13:M:101:VAL:HG11	2.09	0.66
2:B:246:C:C2'	2:B:247:G:H5'	2.26	0.66
2:B:620:G:N3	2:B:620:G:H5'	2.10	0.66
22:W:77:LYS:O	22:W:78:PHE:HB2	1.95	0.66
19:S:17:VAL:C	19:S:19:LEU:H	1.99	0.66
3:V:40:ILE:H	3:V:40:ILE:HD13	1.60	0.66
2:B:1464:G:H2'	2:B:1465:G:C8	2.31	0.66
2:B:2591:C:H2'	2:B:2592:G:H8	1.60	0.66
2:B:812:C:H4'	17:Q:12:ARG:HH12	1.60	0.66
15:O:51:ALA:HB3	15:O:78:VAL:HG22	1.76	0.66
7:F:30:VAL:HG21	7:F:96:TRP:HE1	1.59	0.66
17:Q:104:ALA:HA	18:R:46:GLU:CD	2.16	0.66
27:1:26:LYS:HB2	27:1:52:LYS:HZ2	1.61	0.66
9:H:63:ALA:HA	9:H:66:ASN:ND2	2.10	0.66
6:E:47:LYS:HB3	6:E:51:GLU:HB2	1.78	0.66
2:B:414:C:H2'	2:B:415:A:C8	2.30	0.66
16:P:4:ILE:C	16:P:6:GLN:H	1.99	0.66
7:F:135:ILE:HD11	7:F:137:PHE:HB3	1.76	0.66
7:F:107:VAL:HG11	7:F:175:PRO:HG3	1.77	0.66
21:U:10:VAL:O	21:U:21:ARG:HA	1.96	0.66
2:B:2471:A:O2'	2:B:2472:G:H8	1.78	0.66
22:W:35:ILE:HA	22:W:57:THR:HG23	1.76	0.66
25:Z:6:GLN:NE2	25:Z:50:ARG:H	1.90	0.66
9:H:133:GLN:NE2	9:H:139:PHE:HB3	2.10	0.66
2:B:192:C:H2'	2:B:193:U:H5'	1.78	0.66
2:B:1124:G:H1'	30:4:38:GLY:OXT	1.94	0.66
2:B:575:A:O2'	2:B:576:U:H5'	1.95	0.66
2:B:460:A:H2'	2:B:461:C:O4'	1.96	0.66
18:R:78:ARG:HB3	18:R:83:TYR:HB3	1.77	0.66
21:U:82:VAL:HG13	21:U:93:ARG:HB3	1.78	0.66
10:J:43:GLU:O	10:J:45:THR:N	2.29	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:W:24:ARG:HA	22:W:66:VAL:H	1.61	0.66
6:E:58:LYS:O	6:E:60:TRP:N	2.29	0.66
12:L:56:PRO:HD2	12:L:59:ARG:HG3	1.78	0.66
2:B:1440:U:H2'	2:B:1441:G:C8	2.30	0.66
2:B:1676:A:H2'	2:B:1677:A:O4'	1.94	0.66
2:B:162:U:H4'	2:B:163:C:OP1	1.96	0.66
13:M:78:LEU:O	13:M:80:VAL:HG12	1.95	0.66
2:B:2352:A:H2'	2:B:2353:G:O4'	1.95	0.66
2:B:2292:U:H2'	2:B:2293:G:C8	2.29	0.66
2:B:784:G:N1	4:C:227:VAL:HG11	2.10	0.66
2:B:634:C:H2'	2:B:635:C:C6	2.31	0.66
2:B:2340:A:H2'	2:B:2341:G:H8	1.59	0.66
7:F:102:LEU:HD22	7:F:103:ILE:N	2.09	0.66
2:B:974:G:OP2	18:R:78:ARG:HD3	1.96	0.66
2:B:2144:G:N3	2:B:2146:C:H5'	2.11	0.66
2:B:1684:G:H2'	2:B:1685:C:C6	2.31	0.66
1:A:56:G:H4'	1:A:57:A:H5'	1.78	0.66
2:B:1099:G:C5'	31:I:3:LYS:N	2.59	0.66
7:F:87:LYS:HG3	7:F:88:VAL:H	1.60	0.66
2:B:2680:U:OP2	5:D:114:LYS:HB3	1.95	0.66
22:W:23:LYS:HD2	22:W:24:ARG:H	1.61	0.66
2:B:28:A:N6	2:B:512:G:H1'	2.11	0.66
2:B:1412:U:H2'	2:B:1413:A:C8	2.30	0.66
2:B:2073:C:H5''	4:C:227:VAL:HG12	1.78	0.66
4:C:16:VAL:HB	4:C:203:VAL:HB	1.77	0.66
2:B:222:A:H61	2:B:232:G:H1'	1.58	0.66
2:B:65:U:H2'	2:B:66:C:H6	1.61	0.66
2:B:445:C:O2'	2:B:446:G:H5'	1.96	0.66
19:S:4:ILE:HG22	19:S:106:VAL:HG13	1.77	0.66
5:D:107:VAL:H	5:D:205:PRO:HA	1.61	0.66
23:X:8:GLU:O	23:X:12:GLU:HB2	1.96	0.66
2:B:590:A:H2'	2:B:591:U:C6	2.31	0.66
2:B:718:A:H2'	2:B:719:C:H5'	1.77	0.66
4:C:16:VAL:H	4:C:203:VAL:HG12	1.60	0.66
6:E:98:LYS:HZ2	6:E:99:LYS:HG2	1.60	0.66
7:F:31:GLU:O	7:F:32:LYS:HD3	1.97	0.65
2:B:1000:A:H2'	2:B:1001:A:C8	2.31	0.65
2:B:1788:C:O2'	2:B:1789:A:H5'	1.97	0.65
2:B:2143:C:H3'	2:B:2144:G:H8	1.61	0.65
2:B:1098:A:OP2	31:I:3:LYS:HG2	1.97	0.65
2:B:1203:U:O4'	12:L:3:LEU:HD12	1.96	0.65
4:C:180:MET:HB3	4:C:267:VAL:HB	1.78	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1939:U:H6	2:B:1939:U:H5'	1.61	0.65
31:I:1:ALA:HB1	31:I:2:LYS:HD2	1.78	0.65
8:G:140:ILE:HA	8:G:143:VAL:HG22	1.79	0.65
11:K:60:ALA:HA	11:K:87:LEU:HD23	1.78	0.65
2:B:2649:C:H2'	2:B:2650:U:H6	1.61	0.65
17:Q:97:ILE:HG13	17:Q:105:PHE:HB2	1.77	0.65
22:W:23:LYS:HZ3	22:W:24:ARG:HG3	1.60	0.65
2:B:1722:A:H2'	2:B:1723:G:C8	2.31	0.65
2:B:2901:C:H2'	2:B:2902:C:H6	1.59	0.65
9:H:125:THR:HA	9:H:146:VAL:HB	1.77	0.65
16:P:45:VAL:N	16:P:60:VAL:HB	2.11	0.65
2:B:18:U:H2'	2:B:19:A:H8	1.62	0.65
2:B:2229:U:H2'	2:B:2230:G:H8	1.62	0.65
2:B:1241:A:H2'	2:B:1242:U:H5'	1.79	0.65
5:D:107:VAL:HG13	5:D:203:VAL:HG23	1.77	0.65
11:K:112:PHE:O	11:K:115:ILE:HG22	1.97	0.65
28:2:30:VAL:HA	28:2:33:ARG:NH2	2.11	0.65
2:B:2457:U:H2'	2:B:2458:G:H5'	1.77	0.65
4:C:4:LYS:HD2	4:C:5:CYS:N	2.12	0.65
5:D:182:ALA:O	5:D:184:ARG:HG2	1.96	0.65
2:B:1381:G:H2'	2:B:1382:G:H5'	1.79	0.65
7:F:134:GLN:NE2	7:F:136:ILE:HD13	2.11	0.65
2:B:784:G:O2'	2:B:785:G:H5''	1.97	0.65
2:B:2557:G:H2'	2:B:2558:C:C6	2.31	0.65
18:R:49:ILE:HD13	18:R:53:PHE:N	2.11	0.65
14:N:70:THR:HB	14:N:75:ILE:HD11	1.78	0.65
16:P:93:LYS:HB3	16:P:96:LEU:HD12	1.79	0.65
8:G:84:LYS:HG3	8:G:131:VAL:CA	2.27	0.65
2:B:1387:A:C4'	2:B:1469:A:H1'	2.26	0.65
21:U:25:LYS:HE3	21:U:36:GLU:HA	1.79	0.65
2:B:2086:U:H2'	2:B:2087:G:C8	2.32	0.65
2:B:2895:G:H2'	2:B:2896:C:C6	2.32	0.65
15:O:83:LEU:HD21	15:O:114:GLY:HA3	1.78	0.65
4:C:142:ASN:HA	4:C:153:LEU:O	1.97	0.65
13:M:21:ALA:CB	13:M:100:LYS:HG2	2.26	0.65
5:D:91:THR:HG23	5:D:92:VAL:H	1.60	0.65
4:C:173:LEU:HD13	4:C:173:LEU:H	1.60	0.65
2:B:2624:G:H1'	26:0:18:HIS:NE2	2.12	0.65
2:B:1028:A:H2'	2:B:1029:A:C8	2.31	0.65
12:L:112:LEU:HG	12:L:113:ALA:H	1.62	0.65
22:W:18:LYS:H	22:W:35:ILE:HG23	1.62	0.65
19:S:73:LYS:HE3	19:S:74:ILE:H	1.61	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1439:A:C6	2:B:1552:A:N7	2.65	0.65
15:O:7:ARG:HA	15:O:10:ARG:CZ	2.27	0.65
2:B:1674:G:H21	2:B:1677:A:N6	1.94	0.65
2:B:1911:U:H2'	2:B:1918:A:N1	2.11	0.65
6:E:69:ARG:O	6:E:70:SER:HB3	1.97	0.65
2:B:70:G:H3'	2:B:113:U:H4'	1.79	0.65
2:B:1346:G:O2'	2:B:1347:A:H5'	1.97	0.65
17:Q:60:TRP:O	17:Q:64:ILE:HG12	1.96	0.64
14:N:32:GLU:O	14:N:114:GLU:HA	1.97	0.64
3:V:80:HIS:CD2	3:V:83:LYS:H	2.15	0.64
16:P:52:ARG:HG2	16:P:52:ARG:HH11	1.62	0.64
2:B:807:U:H2'	2:B:808:G:C8	2.31	0.64
2:B:2693:G:H2'	2:B:2694:G:H8	1.61	0.64
11:K:68:GLY:HA3	11:K:78:ARG:HB3	1.77	0.64
13:M:60:GLN:HE21	13:M:60:GLN:H	1.44	0.64
2:B:1947:C:H2'	2:B:1948:G:H8	1.62	0.64
18:R:78:ARG:HH21	18:R:78:ARG:HG3	1.61	0.64
2:B:1771:C:H2'	2:B:1772:A:C8	2.32	0.64
2:B:106:C:H2'	2:B:107:G:H8	1.61	0.64
2:B:1324:G:H1'	2:B:1616:A:N6	2.12	0.64
2:B:155:A:H2'	2:B:156:A:H8	1.62	0.64
17:Q:63:ARG:HH12	17:Q:96:ASP:HA	1.63	0.64
17:Q:91:ARG:HG2	17:Q:93:ILE:HG22	1.79	0.64
12:L:141:LYS:HD3	12:L:142:ILE:H	1.61	0.64
5:D:118:PHE:O	5:D:119:ALA:HB3	1.97	0.64
2:B:2331:G:H21	2:B:2336:A:H8	1.44	0.64
19:S:36:LEU:HD22	19:S:36:LEU:H	1.62	0.64
2:B:962:G:H21	2:B:2250:G:N2	1.92	0.64
2:B:532:A:H3'	17:Q:27:ARG:NH1	2.11	0.64
2:B:173:A:H2'	2:B:174:U:C6	2.33	0.64
2:B:1856:U:H2'	2:B:1857:G:O4'	1.97	0.64
18:R:39:LEU:HA	18:R:53:PHE:HA	1.78	0.64
2:B:2502:G:H5'	2:B:2503:A:C5'	2.23	0.64
11:K:64:ARG:O	11:K:82:ASN:HA	1.98	0.64
2:B:1021:A:H61	2:B:1142:A:N6	1.95	0.64
2:B:2473:U:H2'	2:B:2473:U:O2	1.96	0.64
2:B:72:U:O2'	2:B:73:A:H5'	1.97	0.64
2:B:132:G:H2'	2:B:133:U:C6	2.32	0.64
2:B:1812:U:H2'	2:B:1813:G:H8	1.61	0.64
7:F:139:GLU:HG2	7:F:140:ILE:N	2.10	0.64
8:G:152:ARG:HG3	8:G:153:PRO:HD2	1.80	0.64
2:B:2425:A:H5'	2:B:2427:C:O4'	1.96	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:11:ILE:HG22	21:U:70:ALA:HB3	1.80	0.64
2:B:1690:A:H2'	2:B:1691:C:O4'	1.97	0.64
2:B:2182:U:H2'	2:B:2183:A:C8	2.32	0.64
2:B:365:U:H2'	2:B:366:C:C6	2.31	0.64
22:W:49:ASN:HB2	22:W:61:LYS:H	1.60	0.64
24:Y:16:LEU:HD22	24:Y:16:LEU:H	1.61	0.64
10:J:136:GLN:N	10:J:137:PRO:HD3	2.13	0.64
17:Q:104:ALA:HA	18:R:46:GLU:OE1	1.97	0.64
28:2:10:LEU:HD11	28:2:14:ARG:NH1	2.13	0.64
11:K:118:LEU:C	11:K:120:PRO:HD2	2.18	0.64
16:P:61:ARG:HH21	16:P:61:ARG:HB3	1.61	0.64
30:4:9:LYS:H	30:4:9:LYS:HD3	1.62	0.64
6:E:176:ASP:HB3	6:E:179:SER:HB2	1.80	0.64
2:B:2804:U:H2'	2:B:2805:C:H6	1.62	0.64
2:B:2213:U:O2	2:B:2213:U:H2'	1.95	0.64
6:E:189:THR:O	6:E:193:VAL:HG23	1.96	0.64
6:E:33:VAL:O	6:E:36:ALA:HB3	1.97	0.64
2:B:2269:G:C4'	22:W:19:ARG:HH12	2.11	0.64
20:T:38:ALA:HB3	20:T:81:LYS:NZ	2.12	0.64
5:D:34:VAL:HB	5:D:48:ILE:HD11	1.80	0.64
2:B:145:C:H2'	2:B:146:A:C8	2.32	0.64
2:B:1407:G:H2'	2:B:1408:G:H8	1.63	0.64
28:2:1:MET:HG2	28:2:2:LYS:H	1.63	0.64
2:B:1163:G:H4'	18:R:92:TRP:NE1	2.13	0.64
2:B:1100:C:H2'	2:B:1101:U:H6	1.62	0.64
5:D:113:SER:CB	5:D:168:GLU:H	2.10	0.64
8:G:132:LEU:H	8:G:132:LEU:HD23	1.63	0.64
28:2:33:ARG:HH21	28:2:33:ARG:CB	2.11	0.64
2:B:2443:C:H2'	2:B:2444:G:H8	1.63	0.64
2:B:1292:G:H2'	2:B:1293:C:C6	2.32	0.64
12:L:60:ARG:HH21	12:L:60:ARG:HB2	1.63	0.64
8:G:87:GLN:HE21	8:G:164:ALA:HA	1.63	0.64
5:D:51:THR:CG2	5:D:76:GLY:HA3	2.28	0.64
21:U:85:ARG:CD	21:U:86:PHE:H	2.02	0.63
2:B:2019:A:H2	2:B:2035:G:H22	1.44	0.63
14:N:101:GLY:HA2	14:N:110:MET:H	1.59	0.63
5:D:13:ARG:HH12	16:P:74:GLN:NE2	1.96	0.63
7:F:101:ARG:HA	7:F:105:ILE:HD13	1.78	0.63
2:B:720:U:H2'	2:B:721:A:C8	2.32	0.63
2:B:1486:U:H2'	2:B:1487:U:H6	1.62	0.63
2:B:2183:A:H2'	2:B:2184:A:C8	2.33	0.63
2:B:1047:G:H1'	2:B:1110:G:N2	2.12	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:7:G:H1'	15:O:38:GLN:HE22	1.63	0.63
10:J:13:ARG:O	10:J:52:ASP:HA	1.98	0.63
2:B:1060:U:O4	2:B:1088:A:N6	2.31	0.63
2:B:300:A:H2'	2:B:334:C:H1'	1.80	0.63
31:I:41:PHE:O	31:I:45:THR:HG23	1.98	0.63
2:B:189:G:H2'	2:B:205:G:N2	2.13	0.63
2:B:1935:G:H1'	2:B:1964:G:N2	2.13	0.63
1:A:28:C:OP1	15:O:31:THR:HG21	1.98	0.63
2:B:699:A:H4'	2:B:1634:A:N7	2.12	0.63
5:D:178:VAL:HG12	5:D:179:ARG:H	1.64	0.63
24:Y:6:ILE:HA	24:Y:56:VAL:HG13	1.79	0.63
10:J:89:PHE:HE1	10:J:93:ILE:HD13	1.64	0.63
12:L:57:LEU:O	12:L:61:LEU:HD13	1.98	0.63
11:K:43:ILE:HG21	11:K:46:ALA:HB2	1.80	0.63
15:O:40:ILE:HA	15:O:47:VAL:HA	1.80	0.63
1:A:46:A:H2'	1:A:47:C:O4'	1.98	0.63
2:B:2898:U:H2'	2:B:2899:A:H8	1.63	0.63
6:E:97:ASN:HD21	6:E:100:MET:HG3	1.62	0.63
2:B:1050:A:H2'	2:B:1051:G:O4'	1.98	0.63
1:A:15:A:H3'	1:A:15:A:OP2	1.97	0.63
2:B:2861:U:H2'	2:B:2862:G:H8	1.62	0.63
4:C:77:VAL:HG22	4:C:113:ASP:H	1.64	0.63
2:B:2353:G:H1'	22:W:30:VAL:CG1	2.28	0.63
5:D:68:PHE:HB3	5:D:73:VAL:HA	1.80	0.63
2:B:1857:G:HO2'	2:B:1858:A:H8	1.46	0.63
22:W:44:PHE:O	22:W:78:PHE:HA	1.98	0.63
21:U:27:VAL:HG23	21:U:33:VAL:HG12	1.80	0.63
2:B:548:G:N3	2:B:548:G:H2'	2.12	0.63
7:F:60:SER:HB2	7:F:62:GLN:OE1	1.99	0.63
2:B:1508:A:H5'	2:B:1509:A:N6	2.14	0.63
20:T:67:VAL:C	20:T:68:LYS:HD3	2.19	0.63
2:B:1735:A:H2'	2:B:1736:U:C6	2.34	0.63
23:X:26:PHE:HD1	23:X:27:ASN:HD22	1.44	0.63
2:B:1220:G:H2'	2:B:1221:C:C6	2.34	0.63
2:B:1812:U:H1'	4:C:43:ASN:ND2	2.06	0.63
10:J:37:ARG:HE	10:J:110:PRO:HG3	1.63	0.63
2:B:1654:A:H2'	2:B:1655:A:C8	2.33	0.63
8:G:89:VAL:HB	8:G:159:LYS:HA	1.81	0.63
2:B:195:A:H1'	2:B:250:G:N2	2.12	0.63
2:B:1205:A:H4'	2:B:1206:G:OP2	1.98	0.63
25:Z:71:LEU:HD13	25:Z:76:GLU:HB3	1.81	0.63
17:Q:86:SER:O	18:R:51:VAL:HA	1.99	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:V:28:ALA:HA	3:V:88:HIS:CE1	2.33	0.63
25:Z:40:VAL:CG2	25:Z:45:ARG:H	2.11	0.63
2:B:2428:G:H21	12:L:60:ARG:HE	1.47	0.63
28:2:27:GLY:O	28:2:30:VAL:HB	1.99	0.63
2:B:286:U:H2'	2:B:287:G:H8	1.63	0.63
20:T:32:LEU:N	20:T:83:ALA:HB3	2.13	0.63
1:A:6:G:H2'	1:A:7:G:H8	1.64	0.63
2:B:2080:A:H4'	25:Z:19:SER:OG	1.98	0.63
4:C:20:ASN:HB3	4:C:23:LEU:HD22	1.81	0.63
14:N:77:ALA:O	14:N:81:ASN:HB2	1.99	0.63
31:I:72:THR:HG22	31:I:115:ASP:OD2	1.98	0.63
31:I:78:LEU:HA	31:I:81:LYS:HE2	1.81	0.63
2:B:963:U:H5''	34:B:4621:HOH:O	1.99	0.63
2:B:1593:A:H2'	2:B:1594:U:C6	2.34	0.63
26:0:8:THR:HG23	26:0:11:LYS:H	1.64	0.63
2:B:1080:A:H2'	2:B:1081:U:C6	2.32	0.63
2:B:1796:U:H2'	2:B:1797:G:H8	1.63	0.63
2:B:594:U:H2'	2:B:595:C:H6	1.64	0.63
2:B:401:A:H2'	2:B:402:A:C8	2.33	0.63
24:Y:12:ALA:HA	24:Y:15:ARG:HD3	1.81	0.63
2:B:521:U:H2'	2:B:522:A:C8	2.34	0.63
15:O:17:LYS:O	15:O:21:LEU:HB2	1.99	0.63
2:B:581:C:H2'	2:B:582:A:C8	2.33	0.62
8:G:26:LYS:HZ2	8:G:26:LYS:HB3	1.64	0.62
11:K:7:MET:SD	11:K:20:MET:HB2	2.39	0.62
2:B:1080:A:H4'	31:I:126:ARG:HD3	1.81	0.62
2:B:414:C:H2'	2:B:415:A:H8	1.63	0.62
2:B:1287:A:N7	14:N:105:GLY:HA3	2.13	0.62
31:I:121:ILE:HD13	31:I:121:ILE:N	2.13	0.62
2:B:639:U:H2'	2:B:640:C:H6	1.64	0.62
2:B:2141:G:H2'	2:B:2142:A:C8	2.34	0.62
2:B:1853:A:N1	2:B:2087:G:H1'	2.14	0.62
1:A:29:A:H3'	1:A:30:C:H6	1.64	0.62
12:L:85:VAL:HG21	12:L:94:THR:HB	1.81	0.62
21:U:87:GLU:OE2	21:U:88:ASP:HB3	1.98	0.62
12:L:79:LEU:HD23	12:L:82:LEU:HD11	1.81	0.62
31:I:27:LEU:HD12	31:I:32:VAL:HG11	1.79	0.62
7:F:168:LEU:HD13	7:F:169:LEU:N	2.14	0.62
5:D:136:ASN:HD21	5:D:139:SER:C	2.03	0.62
9:H:53:GLU:HB2	9:H:57:LYS:HB3	1.82	0.62
2:B:784:G:C6	4:C:227:VAL:HG11	2.34	0.62
2:B:718:A:H3'	2:B:719:C:H6	1.64	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:D:8:LYS:HB2	5:D:201:LEU:HD21	1.80	0.62
2:B:2898:U:H2'	2:B:2899:A:C8	2.35	0.62
2:B:987:C:H2'	2:B:988:A:O4'	1.99	0.62
4:C:136:VAL:HG12	4:C:137:GLY:H	1.64	0.62
29:3:54:LEU:O	29:3:58:ILE:HG13	1.98	0.62
2:B:264:C:C2'	2:B:265:A:H5''	2.28	0.62
2:B:2841:C:H2'	2:B:2842:G:C8	2.34	0.62
20:T:7:LEU:HA	20:T:9:LYS:HZ1	1.62	0.62
21:U:71:ILE:HD11	21:U:82:VAL:HG22	1.82	0.62
10:J:40:HIS:ND1	10:J:41:LYS:HG3	2.14	0.62
5:D:109:VAL:HG11	5:D:193:VAL:HB	1.81	0.62
11:K:38:ILE:O	11:K:39:ILE:HD13	2.00	0.62
2:B:2654:A:N1	2:B:2665:A:H5''	2.14	0.62
8:G:89:VAL:HG12	8:G:90:GLY:H	1.64	0.62
2:B:1353:A:H2'	2:B:1354:A:C8	2.34	0.62
5:D:115:GLY:HA2	5:D:167:ASN:HB2	1.81	0.62
2:B:1341:G:N2	2:B:1398:C:H4'	2.13	0.62
2:B:545:U:H4'	2:B:550:C:O2	2.00	0.62
7:F:62:GLN:OE1	7:F:94:ARG:HG2	2.00	0.62
17:Q:57:ARG:CB	17:Q:57:ARG:HH11	2.12	0.62
17:Q:74:SER:OG	17:Q:77:LYS:HD3	2.00	0.62
9:H:41:LYS:O	9:H:44:ILE:HG12	1.99	0.62
5:D:105:LYS:HE3	5:D:176:ASP:OD1	1.99	0.62
2:B:1198:U:H2'	2:B:1199:U:C6	2.35	0.62
11:K:70:ARG:HB3	11:K:76:VAL:HG22	1.82	0.62
4:C:94:LEU:HA	4:C:100:ARG:HB3	1.80	0.62
13:M:71:LYS:HB3	13:M:93:VAL:HG12	1.81	0.62
16:P:24:THR:O	16:P:25:VAL:HG22	1.99	0.62
7:F:72:SER:HA	7:F:80:GLN:N	2.15	0.62
23:X:1:MET:HB3	23:X:4:LYS:HD3	1.80	0.62
2:B:2064:C:H2'	2:B:2065:C:C6	2.33	0.62
17:Q:14:LYS:O	17:Q:18:LYS:HB2	1.99	0.62
2:B:2102:G:H2'	2:B:2103:C:O4'	1.99	0.62
2:B:2834:G:H1'	2:B:2883:A:H61	1.63	0.62
11:K:104:THR:H	11:K:107:LEU:HD12	1.64	0.62
2:B:522:A:H2'	2:B:523:C:C6	2.35	0.62
13:M:64:TRP:HB2	13:M:104:GLU:HB2	1.81	0.62
17:Q:91:ARG:HH12	18:R:10:LYS:CB	2.12	0.62
2:B:557:C:H2'	2:B:558:U:C6	2.35	0.62
24:Y:7:THR:HB	24:Y:55:LYS:H	1.64	0.62
2:B:1549:A:H2'	2:B:1550:C:C6	2.34	0.62
15:O:67:ASN:HB3	15:O:70:ALA:HB2	1.82	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:O:111:ARG:HD2	15:O:117:PHE:O	2.00	0.62
2:B:1778:U:H2'	2:B:1784:A:N6	2.15	0.62
21:U:9:GLU:HG3	21:U:21:ARG:HD2	1.81	0.62
2:B:2443:C:H2'	2:B:2444:G:C8	2.35	0.62
2:B:946:C:H2'	2:B:947:A:H8	1.64	0.62
2:B:947:A:H2'	2:B:948:C:C6	2.35	0.62
2:B:2156:G:H2'	2:B:2157:G:H4'	1.81	0.62
2:B:1760:C:H2'	2:B:1761:C:O4'	1.98	0.62
10:J:40:HIS:CE1	10:J:41:LYS:HG3	2.35	0.62
4:C:70:LYS:HE2	4:C:99:GLU:HB3	1.82	0.62
22:W:39:GLN:NE2	22:W:43:LYS:HB2	2.14	0.62
3:V:80:HIS:CD2	3:V:83:LYS:HB2	2.35	0.62
11:K:71:ARG:HG3	11:K:105:ARG:HH21	1.65	0.62
2:B:704:G:H2'	2:B:726:G:N2	2.14	0.62
9:H:83:LYS:O	9:H:90:LEU:HA	2.00	0.62
4:C:36:ASN:HD21	4:C:85:ASN:HD21	1.46	0.62
6:E:188:MET:HG2	6:E:193:VAL:HG22	1.82	0.62
7:F:41:GLU:O	7:F:43:ILE:HG22	1.99	0.62
2:B:2815:C:H2'	2:B:2816:G:H8	1.65	0.62
2:B:1024:G:C3'	2:B:1025:G:H5''	2.28	0.62
2:B:62:U:O2'	2:B:63:A:H5'	1.98	0.62
2:B:321:U:OP2	6:E:130:LYS:HD3	2.00	0.62
1:A:32:U:H4'	1:A:52:A:N6	2.15	0.62
2:B:359:G:H2'	2:B:360:U:H5'	1.80	0.62
30:4:2:LYS:HG2	30:4:3:VAL:H	1.64	0.62
2:B:721:A:H2'	2:B:722:A:H8	1.65	0.62
2:B:1802:A:H2'	2:B:1803:A:C8	2.35	0.62
2:B:1485:U:H2'	2:B:1486:U:C6	2.35	0.62
2:B:64:A:H2'	2:B:65:U:C6	2.35	0.62
2:B:2895:G:H2'	2:B:2896:C:H6	1.64	0.62
2:B:1518:C:H2'	2:B:1519:G:C8	2.35	0.62
2:B:1149:G:H2'	2:B:1150:C:C6	2.34	0.62
2:B:1557:C:H3'	2:B:1558:C:H5''	1.82	0.62
2:B:63:A:OP2	2:B:63:A:H8	1.83	0.61
2:B:419:U:H2'	2:B:420:C:C6	2.35	0.61
2:B:37:C:O2'	6:E:45:ALA:HA	2.00	0.61
21:U:70:ALA:HB1	21:U:79:ALA:CB	2.30	0.61
2:B:155:A:H2'	2:B:156:A:C8	2.34	0.61
2:B:1013:C:H2'	2:B:1014:A:H8	1.64	0.61
2:B:441:U:H2'	2:B:442:G:H8	1.65	0.61
9:H:3:VAL:HG12	9:H:38:PRO:HA	1.81	0.61
5:D:113:SER:HB3	5:D:168:GLU:N	2.13	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:27:G:H1'	2:B:513:A:H61	1.63	0.61
2:B:2810:A:H2'	2:B:2811:G:O4'	1.99	0.61
7:F:37:MET:HB2	7:F:56:LEU:HD21	1.82	0.61
23:X:49:ASP:O	23:X:53:VAL:HG23	1.99	0.61
2:B:1373:A:H2'	2:B:1374:G:O4'	1.99	0.61
2:B:441:U:H2'	2:B:442:G:C8	2.36	0.61
15:O:53:THR:HB	15:O:65:THR:HG22	1.81	0.61
5:D:40:LEU:HA	5:D:45:TYR:N	2.14	0.61
2:B:443:A:C5	6:E:40:ARG:HD3	2.34	0.61
2:B:851:C:O2	24:Y:42:ALA:HB1	2.00	0.61
2:B:1591:A:H2'	2:B:1592:C:O4'	2.00	0.61
2:B:417:C:H2'	2:B:418:C:C6	2.36	0.61
7:F:71:LYS:HE2	7:F:73:VAL:HB	1.81	0.61
21:U:26:ASN:HD22	21:U:26:ASN:N	1.96	0.61
2:B:233:A:H61	2:B:428:A:N6	1.98	0.61
2:B:1100:C:OP2	31:I:2:LYS:HB3	2.00	0.61
31:I:128:ILE:HA	31:I:131:THR:HG23	1.81	0.61
14:N:9:GLN:HA	14:N:17:ARG:NE	2.15	0.61
4:C:202:ARG:HH11	4:C:213:ARG:NE	1.97	0.61
2:B:1917:U:H2'	2:B:1918:A:H5'	1.82	0.61
2:B:639:U:H2'	2:B:640:C:C6	2.35	0.61
2:B:2041:U:H2'	2:B:2042:A:C8	2.35	0.61
18:R:4:VAL:HG21	18:R:39:LEU:HG	1.81	0.61
2:B:402:A:H2'	2:B:403:U:O4'	1.99	0.61
2:B:1847:A:H4'	2:B:1848:A:C8	2.35	0.61
18:R:5:PHE:O	18:R:11:GLN:HA	2.00	0.61
12:L:19:LEU:O	12:L:21:ARG:HG2	2.00	0.61
2:B:2366:A:H2'	2:B:2367:G:O4'	2.01	0.61
2:B:1550:C:H2'	2:B:1551:A:C8	2.36	0.61
10:J:20:ALA:HA	10:J:23:LYS:HG2	1.81	0.61
13:M:36:VAL:HB	13:M:127:LYS:O	2.01	0.61
2:B:246:C:H2'	2:B:247:G:H5'	1.81	0.61
2:B:2472:G:H2'	2:B:2475:C:H42	1.66	0.61
2:B:401:A:H2'	2:B:402:A:H8	1.66	0.61
2:B:2415:G:H4'	12:L:66:PHE:HB2	1.81	0.61
2:B:1579:A:H2'	2:B:1580:A:C8	2.35	0.61
10:J:101:ILE:O	10:J:105:VAL:HG22	2.00	0.61
16:P:6:GLN:HA	16:P:9:GLN:HG2	1.82	0.61
4:C:145:MET:HB2	4:C:152:GLN:NE2	2.14	0.61
4:C:158:GLY:N	4:C:194:VAL:HG13	2.15	0.61
22:W:24:ARG:HD2	22:W:25:PHE:N	2.16	0.61
10:J:72:LYS:O	10:J:73:VAL:HG13	2.00	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:I:20:SER:O	31:I:25:PRO:HD2	2.00	0.61
8:G:152:ARG:NH1	8:G:162:ARG:HA	2.15	0.61
4:C:104:LEU:O	4:C:105:ALA:HB3	2.01	0.61
2:B:1461:C:H2'	2:B:1462:C:C6	2.34	0.61
2:B:1335:C:H2'	2:B:1336:A:H8	1.65	0.61
2:B:1152:C:O2'	2:B:1153:C:H5'	2.01	0.61
5:D:97:SER:HB3	5:D:99:GLU:HG2	1.81	0.61
20:T:45:ALA:HA	20:T:48:GLN:HB2	1.81	0.61
6:E:117:ARG:O	6:E:186:VAL:HG12	2.00	0.61
2:B:138:U:O3'	2:B:139:U:H3'	1.99	0.61
23:X:39:GLN:O	23:X:42:LEU:HB2	2.00	0.61
9:H:5:LEU:O	9:H:6:LEU:HD12	2.01	0.61
2:B:1550:C:H2'	2:B:1551:A:H8	1.66	0.61
27:1:29:LYS:HE2	27:1:31:GLU:OE1	2.00	0.61
31:I:25:PRO:O	31:I:29:GLN:HG3	2.00	0.61
31:I:42:ASN:HA	31:I:45:THR:OG1	1.99	0.61
2:B:2097:A:H2'	2:B:2098:U:H6	1.65	0.61
2:B:2457:U:C2'	2:B:2458:G:H5'	2.31	0.61
2:B:593:U:H2'	2:B:594:U:C6	2.35	0.61
29:3:51:LYS:HA	29:3:54:LEU:HB2	1.81	0.61
2:B:1871:A:H2'	2:B:1872:A:C8	2.35	0.61
2:B:1812:U:H2'	2:B:1813:G:C8	2.36	0.61
19:S:36:LEU:HB3	19:S:48:LYS:HB2	1.81	0.61
13:M:19:GLY:H	13:M:38:ARG:NH1	1.98	0.61
17:Q:86:SER:HB3	18:R:51:VAL:CA	2.30	0.61
5:D:136:ASN:HD21	5:D:140:HIS:N	1.99	0.61
15:O:94:ARG:O	15:O:97:PHE:HB2	2.00	0.61
21:U:11:ILE:O	21:U:12:VAL:HB	2.01	0.61
2:B:154:U:H2'	2:B:155:A:C8	2.35	0.61
2:B:2639:A:H2'	2:B:2640:G:O4'	2.00	0.61
2:B:1061:U:O4'	2:B:1070:A:H1'	2.00	0.61
2:B:2626:C:O2'	2:B:2627:G:H5'	2.00	0.61
2:B:2091:C:H1'	25:Z:34:HIS:CD2	2.35	0.61
14:N:34:ILE:O	14:N:112:TYR:HA	2.01	0.61
2:B:2353:G:N3	22:W:30:VAL:HG13	2.16	0.61
2:B:2529:G:H4'	8:G:174:LYS:CD	2.31	0.61
22:W:47:GLY:HA3	22:W:80:SER:HA	1.81	0.61
10:J:111:LYS:HB3	10:J:113:PRO:HD2	1.82	0.61
22:W:37:VAL:HG11	22:W:38:ARG:HH11	1.66	0.61
31:I:27:LEU:H	31:I:27:LEU:CD2	2.14	0.61
2:B:1133:A:H4'	2:B:1134:A:O5'	2.01	0.61
2:B:1164:C:H2'	2:B:1165:A:C8	2.36	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2088:A:H2'	2:B:2089:C:C6	2.36	0.61
10:J:24:THR:HA	10:J:63:ALA:HB3	1.83	0.60
7:F:104:THR:C	7:F:108:PRO:HG2	2.21	0.60
31:I:123:ALA:HA	31:I:126:ARG:HH12	1.66	0.60
2:B:360:U:H2'	2:B:361:G:O4'	2.01	0.60
2:B:17:G:H2'	2:B:18:U:C6	2.36	0.60
5:D:169:ARG:O	5:D:170:VAL:HG22	2.00	0.60
9:H:69:ALA:HB1	9:H:73:ASN:ND2	2.16	0.60
23:X:57:LEU:H	23:X:60:LYS:HG3	1.66	0.60
7:F:155:ILE:O	7:F:156:THR:HB	2.01	0.60
5:D:179:ARG:HB2	5:D:188:LEU:HD12	1.83	0.60
9:H:32:PRO:O	9:H:33:GLN:HB2	2.01	0.60
12:L:70:LYS:O	12:L:73:ILE:HG12	2.02	0.60
2:B:1199:U:H2'	2:B:1200:C:H6	1.66	0.60
2:B:2737:G:H2'	2:B:2738:A:C8	2.36	0.60
2:B:660:C:H2'	2:B:661:A:H8	1.66	0.60
2:B:2497:A:H5''	34:B:4620:HOH:O	2.01	0.60
21:U:95:PHE:CE1	21:U:102:ILE:HB	2.36	0.60
7:F:125:GLY:HA2	7:F:162:ASP:HA	1.81	0.60
4:C:75:ALA:O	4:C:114:GLN:HA	2.01	0.60
14:N:33:ILE:HD12	14:N:33:ILE:O	2.01	0.60
9:H:117:LEU:HB2	9:H:130:VAL:HG13	1.84	0.60
20:T:31:VAL:HA	20:T:84:TYR:H	1.66	0.60
2:B:1535:A:H3'	2:B:1536:C:H6	1.66	0.60
29:3:44:ARG:N	29:3:45:PRO:HD2	2.17	0.60
1:A:28:C:H2'	1:A:29:A:O4'	2.01	0.60
2:B:594:U:H2'	2:B:595:C:C6	2.36	0.60
2:B:1419:A:H2'	2:B:1421:G:N7	2.16	0.60
2:B:1015:U:H2'	2:B:1016:G:C8	2.36	0.60
2:B:1704:C:O2'	2:B:1705:A:H5'	2.02	0.60
2:B:395:U:H2'	2:B:396:G:N7	2.16	0.60
10:J:57:LEU:HD21	10:J:128:ASN:HA	1.84	0.60
10:J:8:PRO:HG3	10:J:48:VAL:HG22	1.84	0.60
22:W:35:ILE:HG13	22:W:57:THR:OG1	2.01	0.60
2:B:1060:U:C5	31:I:131:THR:HG22	2.36	0.60
2:B:1443:U:H2'	2:B:1444:G:C8	2.37	0.60
2:B:2078:C:H2'	2:B:2079:U:C6	2.36	0.60
7:F:90:LEU:C	7:F:91:ARG:HD3	2.21	0.60
14:N:85:PRO:HA	14:N:88:ALA:HB2	1.83	0.60
22:W:18:LYS:HG3	22:W:19:ARG:NE	2.16	0.60
22:W:37:VAL:HG13	22:W:55:ASP:O	2.02	0.60
14:N:103:ARG:HG2	14:N:104:ALA:H	1.66	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:2:33:ARG:HB2	28:2:33:ARG:HH21	1.65	0.60
2:B:172:A:H2'	2:B:173:A:H8	1.64	0.60
2:B:96:C:H4'	23:X:41:HIS:CE1	2.36	0.60
2:B:717:C:H3'	2:B:718:A:H5''	1.82	0.60
2:B:1291:C:O2'	2:B:1292:G:H5'	2.02	0.60
1:A:94:A:H2'	1:A:95:U:O4'	2.01	0.60
5:D:178:VAL:HB	5:D:188:LEU:HB2	1.83	0.60
2:B:2387:U:H1'	22:W:38:ARG:CZ	2.32	0.60
22:W:49:ASN:HD22	22:W:59:PHE:HB3	1.66	0.60
19:S:42:LYS:O	19:S:45:VAL:HG22	2.01	0.60
2:B:716:A:H2'	2:B:717:C:H5''	1.83	0.60
2:B:1843:C:H5''	4:C:250:GLN:HE21	1.67	0.60
2:B:2143:C:H3'	2:B:2144:G:C8	2.36	0.60
2:B:2229:U:H2'	2:B:2230:G:C8	2.37	0.60
2:B:2804:U:H2'	2:B:2805:C:C6	2.36	0.60
2:B:2899:A:H2'	2:B:2900:A:C8	2.36	0.60
2:B:1199:U:H2'	2:B:1200:C:C6	2.36	0.60
9:H:21:VAL:HG22	9:H:22:LYS:H	1.67	0.60
8:G:72:ASN:O	8:G:76:ILE:HG12	2.02	0.60
2:B:1513:U:O2'	2:B:1514:G:H5'	2.00	0.60
13:M:34:LYS:HB3	13:M:129:THR:HG22	1.82	0.60
2:B:191:A:H2'	2:B:192:C:H6	1.65	0.60
2:B:2645:G:H3'	2:B:2646:C:C5'	2.32	0.60
2:B:1484:U:H2'	2:B:1485:U:C6	2.36	0.60
2:B:1406:U:H2'	2:B:1407:G:C8	2.36	0.60
4:C:123:ILE:HD12	4:C:191:LEU:HD13	1.84	0.60
5:D:117:GLY:HA2	5:D:164:GLN:CD	2.21	0.60
2:B:1857:G:H1'	2:B:1885:A:N6	2.15	0.60
2:B:2720:U:H5''	16:P:52:ARG:NH2	2.16	0.60
2:B:592:A:H2'	2:B:593:U:C6	2.37	0.60
2:B:2103:C:H3'	2:B:2104:C:C2	2.37	0.60
5:D:55:LYS:NZ	5:D:59:ARG:HD2	2.17	0.60
19:S:90:LYS:HD2	19:S:92:ARG:HH12	1.65	0.60
4:C:76:VAL:HG12	4:C:114:GLN:HG2	1.84	0.60
8:G:68:ARG:HH12	8:G:72:ASN:HD22	1.49	0.60
2:B:2376:A:N1	15:O:92:PHE:HD2	2.00	0.60
2:B:1535:A:H5''	2:B:1536:C:H5	1.66	0.60
11:K:54:LYS:N	11:K:54:LYS:HD2	2.17	0.60
19:S:72:THR:OG1	19:S:108:SER:HB3	2.01	0.60
2:B:2852:G:H2'	2:B:2853:C:C6	2.37	0.60
4:C:141:HIS:CG	4:C:142:ASN:H	2.20	0.60
24:Y:35:VAL:HG22	24:Y:36:GLU:N	2.16	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:0:38:LEU:HD23	26:0:39:ARG:H	1.67	0.60
11:K:105:ARG:HD3	11:K:106:GLU:OE1	2.01	0.60
20:T:29:THR:CA	20:T:86:THR:HA	2.30	0.60
2:B:1082:U:N3	2:B:1086:A:C6	2.69	0.60
2:B:2458:G:H1'	2:B:2460:U:O4	2.02	0.60
10:J:100:VAL:O	10:J:104:ALA:HB2	2.02	0.60
2:B:1647:U:P	2:B:1647:U:H3'	2.42	0.60
14:N:62:ASN:N	14:N:62:ASN:HD22	1.99	0.60
8:G:2:ARG:H	8:G:5:LYS:HE2	1.67	0.60
24:Y:6:ILE:O	24:Y:34:THR:HG23	2.02	0.59
2:B:2834:G:H2'	2:B:2879:A:N6	2.17	0.59
11:K:60:ALA:HA	11:K:87:LEU:CD2	2.32	0.59
2:B:2025:C:H2'	2:B:2026:U:C6	2.37	0.59
2:B:1130:U:C2	2:B:2025:C:H5''	2.37	0.59
2:B:2392:A:H2'	2:B:2392:A:N3	2.17	0.59
2:B:233:A:H61	2:B:428:A:H61	1.48	0.59
2:B:1178:C:H2'	2:B:1179:G:H8	1.66	0.59
2:B:2031:A:C6	2:B:2498:C:H1'	2.37	0.59
2:B:196:A:H5''	12:L:47:ARG:HH12	1.66	0.59
4:C:131:MET:HE2	4:C:189:ALA:HB2	1.84	0.59
2:B:857:G:O2'	2:B:858:G:H5'	2.02	0.59
26:0:39:ARG:O	26:0:40:HIS:HB2	2.01	0.59
7:F:102:LEU:HA	7:F:106:ALA:CB	2.32	0.59
16:P:13:LYS:CD	16:P:76:HIS:HA	2.31	0.59
2:B:1993:U:H4'	5:D:133:THR:HG22	1.83	0.59
12:L:93:ASN:O	12:L:95:LEU:N	2.36	0.59
6:E:3:LEU:H	6:E:13:THR:H	1.50	0.59
2:B:1316:U:O2'	2:B:1317:G:H5'	2.02	0.59
23:X:48:ARG:O	23:X:51:ALA:HB3	2.02	0.59
2:B:2651:C:O2'	2:B:2652:C:H5'	2.03	0.59
2:B:712:G:H2'	2:B:713:G:O4'	2.03	0.59
6:E:104:ALA:O	6:E:108:ILE:HG22	2.01	0.59
14:N:24:MET:HG3	14:N:44:LEU:HD22	1.83	0.59
31:I:112:LYS:O	31:I:116:MET:HG3	2.02	0.59
2:B:125:A:O2'	28:2:13:ASN:HB3	2.02	0.59
2:B:1552:A:H2'	2:B:1553:A:H5'	1.83	0.59
11:K:37:ASP:O	11:K:61:VAL:HA	2.03	0.59
20:T:65:GLY:HA3	20:T:76:ARG:HH22	1.67	0.59
16:P:56:SER:O	16:P:74:GLN:HA	2.03	0.59
2:B:1993:U:H4'	5:D:133:THR:HG21	1.84	0.59
2:B:2037:A:H2'	2:B:2038:G:C8	2.37	0.59
4:C:1:ALA:HB3	4:C:19:VAL:HG23	1.84	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:106:G:H2'	1:A:107:G:O4'	2.03	0.59
7:F:66:ILE:HA	7:F:86:CYS:HB3	1.84	0.59
17:Q:91:ARG:CZ	18:R:11:GLN:H	2.15	0.59
12:L:4:ASN:N	12:L:4:ASN:ND2	2.50	0.59
2:B:1551:A:H3'	2:B:1552:A:H5''	1.83	0.59
8:G:34:ARG:HG2	8:G:34:ARG:HH11	1.67	0.59
2:B:1790:C:O2'	4:C:207:ALA:HB2	2.02	0.59
2:B:1771:C:H2'	2:B:1772:A:H8	1.65	0.59
2:B:1400:U:H2'	2:B:1401:G:H8	1.67	0.59
2:B:150:U:H2'	2:B:151:C:C6	2.37	0.59
7:F:62:GLN:CB	7:F:91:ARG:HE	2.14	0.59
2:B:1657:U:O2'	2:B:1658:C:H5'	2.01	0.59
13:M:40:ARG:HB2	13:M:93:VAL:CG2	2.32	0.59
25:Z:45:ARG:HE	25:Z:47:VAL:CG1	2.16	0.59
16:P:20:ARG:HB3	16:P:23:ASP:OD2	2.02	0.59
7:F:102:LEU:HD22	7:F:103:ILE:H	1.68	0.59
13:M:60:GLN:HG2	13:M:108:VAL:HG23	1.84	0.59
18:R:79:ARG:CD	18:R:80:ARG:HH21	2.15	0.59
18:R:4:VAL:HG23	18:R:39:LEU:H	1.68	0.59
2:B:2498:C:O2'	2:B:2499:C:H5'	2.02	0.59
15:O:2:ASP:OD2	15:O:4:LYS:HB3	2.03	0.59
2:B:1326:U:H2'	2:B:1327:A:H8	1.65	0.59
29:3:22:LYS:HA	29:3:47:ALA:O	2.01	0.59
6:E:29:HIS:O	6:E:33:VAL:HG23	2.03	0.59
6:E:111:GLU:HB3	12:L:2:ARG:HH12	1.65	0.59
21:U:35:VAL:O	21:U:38:ILE:HG22	2.02	0.59
12:L:80:SER:HA	12:L:115:GLU:HB2	1.84	0.59
19:S:28:LYS:HD2	19:S:29:VAL:N	2.18	0.59
3:V:24:ASN:O	3:V:44:HIS:HB2	2.02	0.59
2:B:1082:U:C2	2:B:1086:A:C6	2.90	0.59
7:F:111:ARG:NH2	7:F:113:PHE:HB2	2.17	0.59
2:B:2598:A:H5''	4:C:233:GLY:CA	2.32	0.59
7:F:34:THR:HG22	7:F:89:THR:HG22	1.83	0.59
2:B:722:A:H2'	2:B:723:C:C6	2.38	0.59
2:B:2772:C:H2'	2:B:2773:C:H6	1.68	0.59
6:E:48:THR:HG22	6:E:86:ALA:HB3	1.83	0.59
12:L:85:VAL:CG2	12:L:94:THR:HB	2.32	0.59
29:3:54:LEU:HG	29:3:58:ILE:HD11	1.84	0.59
2:B:2066:C:O2'	2:B:2067:G:H5'	2.02	0.59
2:B:1739:A:H2'	2:B:1740:G:O4'	2.02	0.59
7:F:36:ASN:HA	7:F:87:LYS:HA	1.84	0.59
7:F:40:GLY:HA2	7:F:84:ILE:HG23	1.85	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:V:80:HIS:HD2	3:V:83:LYS:H	1.49	0.59
2:B:2394:C:OP1	12:L:63:LYS:HG2	2.03	0.59
8:G:26:LYS:HG2	8:G:27:GLY:H	1.67	0.59
2:B:1723:G:N7	2:B:1737:G:N2	2.51	0.59
20:T:14:PRO:HD2	23:X:33:ALA:HB3	1.84	0.59
2:B:2241:A:H2'	2:B:2242:G:H8	1.68	0.59
2:B:309:A:H4'	21:U:15:GLY:HA2	1.85	0.59
2:B:1535:A:H5''	2:B:1536:C:C5	2.37	0.59
2:B:636:G:O5'	12:L:128:THR:HG22	2.03	0.59
2:B:65:U:H2'	2:B:66:C:C6	2.38	0.59
2:B:2784:U:H2'	2:B:2785:C:C6	2.37	0.59
2:B:630:G:N2	2:B:632:A:H3'	2.16	0.59
21:U:80:ASP:HB3	21:U:96:LYS:N	2.06	0.59
20:T:2:ILE:HD13	20:T:2:ILE:N	2.18	0.59
2:B:2359:C:H2'	2:B:2360:G:C8	2.38	0.59
8:G:137:LYS:HA	8:G:140:ILE:HD11	1.84	0.59
13:M:108:VAL:HG11	13:M:112:LEU:HD12	1.83	0.59
30:4:8:LYS:HG2	30:4:9:LYS:H	1.67	0.59
13:M:96:ILE:HD11	13:M:126:ILE:HG12	1.84	0.59
31:I:126:ARG:HH11	31:I:126:ARG:HB3	1.68	0.59
2:B:2722:G:H2'	2:B:2723:C:C6	2.38	0.59
15:O:88:LYS:HD2	15:O:89:ASP:HB2	1.85	0.59
2:B:967:U:H2'	2:B:968:C:C6	2.38	0.59
2:B:968:C:H2'	2:B:969:G:H8	1.66	0.59
1:A:43:C:H1'	7:F:91:ARG:HH21	1.68	0.59
20:T:18:GLU:C	20:T:20:ALA:H	2.06	0.59
6:E:108:ILE:HG13	12:L:2:ARG:NH2	2.18	0.59
4:C:171:VAL:HB	4:C:183:VAL:HG12	1.85	0.59
2:B:2061:G:H5''	2:B:2503:A:C2	2.37	0.59
2:B:2384:U:H5''	2:B:2386:A:OP1	2.03	0.59
2:B:856:G:C1'	22:W:23:LYS:HB3	2.33	0.59
2:B:2813:A:H2'	2:B:2814:A:C8	2.38	0.59
2:B:2179:C:C2'	2:B:2179:C:O2	2.48	0.59
2:B:825:A:H1'	12:L:54:GLN:HE21	1.68	0.59
10:J:25:LEU:HB2	10:J:62:VAL:CG2	2.33	0.59
9:H:117:LEU:HD22	9:H:130:VAL:HG13	1.85	0.59
2:B:37:C:H4'	2:B:451:U:OP1	2.02	0.59
2:B:2800:A:H2'	2:B:2801:G:O4'	2.02	0.59
5:D:92:VAL:O	5:D:94:GLN:N	2.36	0.59
1:A:6:G:H2'	1:A:7:G:C8	2.38	0.59
11:K:8:LEU:HD12	11:K:8:LEU:N	2.17	0.59
5:D:36:GLN:HG3	5:D:36:GLN:O	2.01	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:H:128:HIS:HB2	9:H:144:VAL:HG23	1.85	0.59
21:U:81:ARG:HB2	21:U:96:LYS:CG	2.33	0.59
17:Q:91:ARG:NH2	18:R:11:GLN:H	2.01	0.59
19:S:29:VAL:HG11	19:S:55:ILE:CD1	2.32	0.59
2:B:1551:A:H2'	2:B:1552:A:O4'	2.03	0.59
13:M:41:LEU:HB2	13:M:94:ALA:HB3	1.85	0.59
2:B:2354:C:H4'	22:W:31:LEU:CD2	2.32	0.59
2:B:1454:C:H5'	14:N:63:ARG:NE	2.18	0.59
2:B:2258:C:O2'	2:B:2426:A:H4'	2.02	0.59
2:B:2334:U:H1'	15:O:13:ARG:HA	1.85	0.59
2:B:782:A:H5'	2:B:783:A:C2	2.38	0.59
2:B:233:A:N6	2:B:428:A:H61	2.00	0.59
20:T:44:LYS:O	20:T:48:GLN:HG2	2.02	0.59
24:Y:2:LYS:HD3	24:Y:2:LYS:H	1.67	0.59
1:A:13:G:C2'	1:A:14:U:H5''	2.32	0.59
2:B:2758:A:H2'	2:B:2759:G:O4'	2.03	0.59
2:B:569:U:H2'	2:B:570:G:O4'	2.03	0.59
2:B:1098:A:H3'	31:I:3:LYS:C	2.24	0.58
24:Y:37:ARG:HG2	24:Y:43:ILE:HD11	1.85	0.58
7:F:43:ILE:HG23	7:F:44:ALA:N	2.13	0.58
22:W:9:THR:OG1	22:W:10:ARG:N	2.32	0.58
31:I:32:VAL:HG22	31:I:60:VAL:HG21	1.85	0.58
5:D:13:ARG:HD3	5:D:15:PHE:HE1	1.67	0.58
2:B:2264:C:H41	22:W:11:ASN:ND2	1.99	0.58
6:E:98:LYS:HZ1	6:E:99:LYS:HE2	1.68	0.58
2:B:2859:G:H2'	2:B:2860:A:C8	2.38	0.58
11:K:70:ARG:HA	11:K:76:VAL:HA	1.85	0.58
21:U:94:PHE:CB	21:U:101:THR:HA	2.33	0.58
2:B:2633:G:H2'	2:B:2634:A:O4'	2.02	0.58
2:B:2573:C:H3'	34:B:4531:HOH:O	2.03	0.58
8:G:59:ASP:O	8:G:63:GLN:HB2	2.03	0.58
17:Q:105:PHE:O	17:Q:109:VAL:HG23	2.03	0.58
25:Z:70:GLU:C	25:Z:72:ARG:H	2.05	0.58
2:B:825:A:H1'	12:L:54:GLN:NE2	2.18	0.58
2:B:1443:U:H2'	2:B:1444:G:H8	1.68	0.58
2:B:674:G:H4'	6:E:69:ARG:HB3	1.85	0.58
2:B:2468:A:H2'	2:B:2476:A:C6	2.38	0.58
18:R:39:LEU:CA	18:R:49:ILE:HG12	2.34	0.58
1:A:24:G:O2'	1:A:25:U:H5''	2.02	0.58
10:J:45:THR:N	10:J:46:PRO:HD3	2.18	0.58
4:C:75:ALA:HB2	4:C:95:TYR:HA	1.84	0.58
24:Y:40:THR:O	24:Y:43:ILE:HG22	2.03	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:78:U:H2'	2:B:79:C:C6	2.38	0.58
10:J:23:LYS:HE2	10:J:142:ILE:HA	1.86	0.58
11:K:2:ILE:HA	11:K:33:ALA:H	1.68	0.58
8:G:83:THR:HA	8:G:84:LYS:NZ	2.18	0.58
4:C:103:ILE:HG22	4:C:105:ALA:H	1.68	0.58
4:C:196:ASN:HD22	4:C:199:HIS:HB2	1.69	0.58
2:B:309:A:H4'	21:U:15:GLY:HA3	1.86	0.58
2:B:360:U:H2'	2:B:361:G:C1'	2.34	0.58
2:B:2884:U:H2'	2:B:2885:G:C8	2.38	0.58
2:B:57:C:H2'	2:B:58:G:O4'	2.03	0.58
2:B:2897:U:H2'	2:B:2898:U:C6	2.38	0.58
2:B:1281:G:H2'	2:B:1282:U:C6	2.37	0.58
2:B:2331:G:N2	2:B:2336:A:H8	2.00	0.58
22:W:17:ALA:HB1	22:W:36:ILE:HA	1.85	0.58
13:M:19:GLY:N	13:M:38:ARG:HH22	2.01	0.58
3:V:30:ILE:HG13	3:V:40:ILE:HD12	1.83	0.58
2:B:1018:U:O2'	2:B:1019:U:H5'	2.02	0.58
13:M:63:ILE:H	13:M:63:ILE:HD12	1.67	0.58
2:B:2848:G:H22	2:B:2867:G:N2	2.02	0.58
2:B:2472:G:O6	2:B:2476:A:H4'	2.04	0.58
24:Y:15:ARG:HD2	24:Y:15:ARG:N	2.18	0.58
18:R:28:ALA:O	18:R:63:VAL:HG21	2.03	0.58
2:B:176:A:O2'	2:B:177:G:H5'	2.03	0.58
2:B:1092:C:H2'	2:B:1093:G:H5'	1.86	0.58
26:O:53:VAL:O	26:O:54:ILE:HB	2.04	0.58
17:Q:79:ILE:O	17:Q:82:LEU:HB2	2.03	0.58
19:S:18:ARG:HB3	19:S:76:VAL:CG2	2.33	0.58
4:C:146:LYS:HB3	4:C:147:PRO:CD	2.28	0.58
25:Z:70:GLU:O	25:Z:71:LEU:HB3	2.03	0.58
20:T:57:VAL:HG13	20:T:58:VAL:N	2.18	0.58
3:V:70:ILE:HD13	3:V:70:ILE:H	1.69	0.58
17:Q:65:ASN:CB	17:Q:75:TYR:HB2	2.32	0.58
2:B:1485:U:H2'	2:B:1486:U:H6	1.69	0.58
6:E:46:GLN:HG3	6:E:87:ALA:HB3	1.85	0.58
2:B:2144:G:O2'	2:B:2146:C:H5''	2.03	0.58
2:B:2649:C:H2'	2:B:2650:U:C6	2.36	0.58
2:B:1381:G:C2'	2:B:1382:G:H5'	2.33	0.58
20:T:7:LEU:HA	20:T:9:LYS:NZ	2.19	0.58
5:D:176:ASP:HB2	5:D:190:LYS:HG2	1.85	0.58
1:A:95:U:H2'	1:A:96:G:C8	2.39	0.58
2:B:654:A:H2'	2:B:655:A:H5''	1.84	0.58
4:C:93:VAL:HG13	4:C:94:LEU:N	2.18	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:97:GLN:HB2	13:M:98:PRO:HD2	1.85	0.58
31:I:121:ILE:CD1	31:I:121:ILE:H	2.14	0.58
2:B:1450:G:H21	2:B:1452:G:H1	1.51	0.58
2:B:572:A:H5''	2:B:573:U:OP2	2.03	0.58
2:B:1678:A:H2'	2:B:1679:A:H8	1.68	0.58
2:B:1042:G:H2'	2:B:1043:C:C6	2.38	0.58
2:B:1429:G:O2'	2:B:1430:G:H5'	2.04	0.58
2:B:2377:A:H2'	2:B:2378:A:C8	2.39	0.58
12:L:51:GLU:HG2	29:3:56:LEU:HD21	1.85	0.58
10:J:16:TYR:O	10:J:55:ILE:HG12	2.03	0.58
2:B:996:A:C4'	17:Q:91:ARG:HD2	2.31	0.58
4:C:161:VAL:HG12	4:C:162:GLN:N	2.17	0.58
2:B:124:G:O2'	2:B:125:A:H5''	2.04	0.58
2:B:532:A:H4'	2:B:533:G:C8	2.38	0.58
2:B:2718:G:H4'	16:P:95:LYS:HB2	1.85	0.58
2:B:1487:U:H2'	2:B:1488:C:C6	2.38	0.58
18:R:78:ARG:NH2	18:R:78:ARG:HG3	2.18	0.58
2:B:1407:G:H2'	2:B:1408:G:C8	2.39	0.58
2:B:248:G:H5'	2:B:250:G:N7	2.18	0.58
2:B:2346:A:H3'	2:B:2347:C:H5''	1.84	0.58
28:2:3:ARG:HE	28:2:4:THR:HG22	1.69	0.58
2:B:929:U:O2	24:Y:25:GLY:HA2	2.02	0.58
2:B:370:G:O2'	2:B:423:A:H3'	2.04	0.58
2:B:2054:A:H2'	26:0:4:GLN:OE1	2.03	0.58
17:Q:26:ALA:HB1	17:Q:30:VAL:HB	1.85	0.58
27:1:8:ILE:HD12	27:1:51:ALA:HA	1.85	0.58
15:O:55:GLU:HB2	15:O:58:ILE:HD12	1.86	0.58
2:B:30:G:H2'	2:B:31:C:H6	1.66	0.58
14:N:9:GLN:O	14:N:11:ASN:N	2.37	0.58
2:B:352:A:H3'	2:B:353:C:C6	2.39	0.58
12:L:116:VAL:HG13	12:L:117:THR:N	2.19	0.58
28:2:34:ARG:HE	28:2:39:ARG:HG2	1.69	0.58
2:B:1882:U:O2'	2:B:1883:U:H5'	2.04	0.58
2:B:2271:G:H2'	2:B:2272:U:C6	2.39	0.58
12:L:109:LYS:O	12:L:111:ILE:HG12	2.04	0.58
25:Z:40:VAL:HG22	25:Z:45:ARG:H	1.67	0.58
9:H:133:GLN:HB3	9:H:139:PHE:CA	2.32	0.58
18:R:34:GLU:HA	18:R:59:ILE:O	2.03	0.58
2:B:730:A:O2'	2:B:731:C:H5'	2.04	0.58
2:B:2144:G:O2'	2:B:2145:C:H5'	2.03	0.58
2:B:2052:A:O4'	5:D:147:GLY:HA3	2.04	0.58
2:B:753:A:H2'	2:B:754:U:C6	2.39	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:F:11:VAL:HG12	7:F:12:VAL:N	2.15	0.58
6:E:106:LYS:HE2	6:E:200:LEU:HB3	1.86	0.58
2:B:2678:C:H2'	2:B:2679:A:H8	1.69	0.58
25:Z:65:ASP:HA	25:Z:68:LEU:HB2	1.85	0.58
20:T:11:LEU:HD22	20:T:11:LEU:N	2.15	0.58
2:B:1054:A:H2'	2:B:1055:G:H8	1.67	0.58
11:K:88:ASN:HB3	11:K:92:GLU:O	2.03	0.58
2:B:322:A:H5'	2:B:340:A:C1'	2.34	0.58
2:B:609:A:H2'	2:B:610:C:O4'	2.04	0.58
30:4:7:VAL:HG13	30:4:8:LYS:N	2.19	0.58
13:M:35:ALA:HB3	13:M:99:GLY:N	2.19	0.58
2:B:2291:U:H2'	2:B:2292:U:C6	2.39	0.58
15:O:35:ILE:CG1	15:O:102:ARG:HE	2.16	0.58
20:T:48:GLN:HE21	20:T:48:GLN:HA	1.69	0.58
2:B:2636:C:O5'	5:D:81:GLU:HB2	2.03	0.58
4:C:239:PHE:O	4:C:241:LYS:HG3	2.04	0.58
2:B:2194:U:H2'	2:B:2195:U:H6	1.69	0.58
2:B:2563:U:H2'	2:B:2565:A:OP2	2.03	0.58
20:T:50:LEU:C	20:T:52:GLU:H	2.06	0.58
22:W:23:LYS:HD2	22:W:24:ARG:N	2.19	0.57
22:W:50:VAL:HG23	22:W:61:LYS:HE3	1.86	0.57
2:B:1287:A:H3'	2:B:1288:G:H21	1.66	0.57
20:T:11:LEU:HA	20:T:34:VAL:HG12	1.85	0.57
8:G:84:LYS:HG2	8:G:85:LYS:N	2.18	0.57
5:D:136:ASN:OD1	5:D:139:SER:HB2	2.04	0.57
2:B:182:A:H2'	2:B:183:C:C6	2.38	0.57
2:B:1341:G:H3'	2:B:1397:U:O2	2.03	0.57
2:B:1400:U:H2'	2:B:1401:G:C8	2.37	0.57
29:3:30:HIS:O	29:3:31:ILE:HG12	2.04	0.57
2:B:833:A:H2'	2:B:834:G:C8	2.39	0.57
10:J:45:THR:HG21	10:J:50:THR:HG21	1.85	0.57
11:K:24:VAL:HG13	11:K:33:ALA:HB2	1.85	0.57
7:F:37:MET:CG	7:F:52:ALA:HB1	2.35	0.57
1:A:2:G:H2'	1:A:3:C:H6	1.65	0.57
2:B:2723:C:H5''	14:N:1:MET:HE2	1.86	0.57
5:D:34:VAL:CG1	5:D:94:GLN:H	2.17	0.57
18:R:4:VAL:CG2	18:R:39:LEU:HG	2.34	0.57
2:B:1164:C:H2'	2:B:1165:A:H8	1.69	0.57
2:B:2194:U:H2'	2:B:2195:U:C6	2.39	0.57
3:V:53:LYS:HA	3:V:53:LYS:HE2	1.85	0.57
4:C:71:ASP:OD2	4:C:118:GLY:HA2	2.03	0.57
23:X:45:GLN:O	23:X:47:ARG:N	2.36	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:I:99:LYS:H	31:I:99:LYS:HD3	1.69	0.57
2:B:1260:A:H2'	2:B:1261:C:C6	2.39	0.57
2:B:709:U:H2'	2:B:710:U:C6	2.39	0.57
2:B:2369:A:O2'	2:B:2370:G:H5'	2.04	0.57
5:D:117:GLY:O	5:D:164:GLN:HA	2.05	0.57
7:F:74:ALA:HB1	7:F:76:PHE:CD2	2.39	0.57
2:B:2393:U:O2'	2:B:2394:C:H5'	2.04	0.57
2:B:1166:G:H2'	2:B:1167:C:H6	1.67	0.57
5:D:53:GLY:C	5:D:76:GLY:HA2	2.24	0.57
5:D:133:THR:HG23	5:D:134:HIS:N	2.19	0.57
2:B:947:A:H2'	2:B:948:C:H6	1.69	0.57
10:J:103:ILE:HA	10:J:106:LYS:HB3	1.86	0.57
2:B:2784:U:H4'	5:D:42:ASN:O	2.05	0.57
2:B:553:G:O2'	2:B:554:U:H5'	2.05	0.57
2:B:1923:U:H2'	2:B:1924:C:C6	2.39	0.57
7:F:64:PRO:HA	7:F:88:VAL:CG2	2.35	0.57
2:B:1240:U:O2'	2:B:1241:A:H5''	2.03	0.57
12:L:30:THR:O	12:L:33:ARG:HG2	2.04	0.57
31:I:108:ILE:HG22	31:I:128:ILE:HD13	1.87	0.57
27:1:34:GLU:HA	27:1:48:TYR:O	2.04	0.57
2:B:1385:A:HO2'	2:B:1396:U:H6	1.53	0.57
6:E:155:GLU:HA	6:E:158:PHE:HB3	1.87	0.57
19:S:66:ILE:HG12	19:S:67:ASP:N	2.20	0.57
2:B:458:G:H22	2:B:469:G:H2'	1.67	0.57
2:B:722:A:H2'	2:B:723:C:H6	1.68	0.57
2:B:971:G:H2'	2:B:972:A:O4'	2.05	0.57
2:B:71:A:H5''	2:B:73:A:C8	2.40	0.57
2:B:654:A:H2'	2:B:654:A:N3	2.18	0.57
2:B:2150:C:H2'	2:B:2151:U:C6	2.39	0.57
23:X:19:LEU:O	23:X:24:GLU:HB2	2.04	0.57
2:B:2187:U:H2'	2:B:2188:U:C6	2.40	0.57
2:B:828:U:H4'	2:B:831:G:N1	2.18	0.57
5:D:179:ARG:HH11	5:D:179:ARG:HB3	1.68	0.57
2:B:2385:C:H2'	2:B:2386:A:H8	1.69	0.57
9:H:112:LYS:HA	9:H:132:PHE:CE1	2.39	0.57
2:B:2815:C:H2'	2:B:2816:G:C8	2.39	0.57
8:G:30:GLY:CA	8:G:78:VAL:HA	2.35	0.57
2:B:784:G:H5''	4:C:225:ASN:OD1	2.04	0.57
15:O:27:VAL:HG21	15:O:40:ILE:HD12	1.86	0.57
23:X:56:LEU:C	23:X:58:ASN:H	2.08	0.57
2:B:2539:C:O2'	2:B:2540:C:H5'	2.03	0.57
19:S:5:ALA:HB3	19:S:54:ALA:HB2	1.86	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:G:116:LEU:HD23	8:G:120:ILE:HD13	1.86	0.57
10:J:58:ASN:HA	10:J:127:GLY:CA	2.27	0.57
10:J:57:LEU:HG	10:J:128:ASN:H	1.68	0.57
17:Q:93:ILE:HG23	17:Q:94:LEU:HD22	1.86	0.57
12:L:79:LEU:HB3	12:L:115:GLU:O	2.04	0.57
2:B:566:U:H5''	12:L:29:LYS:NZ	2.19	0.57
19:S:18:ARG:HB3	19:S:76:VAL:HG22	1.87	0.57
11:K:105:ARG:HD2	11:K:122:VAL:CG1	2.34	0.57
2:B:770:G:H5''	28:2:10:LEU:HD12	1.86	0.57
6:E:161:ALA:HA	6:E:164:LEU:HD12	1.86	0.57
2:B:917:A:H2'	2:B:918:A:O4'	2.05	0.57
25:Z:20:HIS:O	25:Z:21:ALA:HB3	2.05	0.57
2:B:2199:A:H5''	2:B:2200:C:H5	1.70	0.57
23:X:56:LEU:O	23:X:57:LEU:HB3	2.04	0.57
2:B:1429:G:H2'	2:B:1430:G:H8	1.68	0.57
2:B:2700:A:H2'	2:B:2701:U:H6	1.70	0.57
2:B:1831:G:H2'	2:B:1832:C:C6	2.40	0.57
2:B:1098:A:H3'	31:I:3:LYS:CB	2.35	0.57
19:S:29:VAL:HG23	19:S:70:LYS:HA	1.86	0.57
2:B:573:U:O2'	2:B:574:A:H3'	2.04	0.57
2:B:2074:U:H2'	2:B:2075:U:C6	2.39	0.57
2:B:1914:C:H2'	2:B:1915:U:C6	2.39	0.57
2:B:2774:C:H2'	2:B:2775:G:O4'	2.04	0.57
7:F:30:VAL:HG21	7:F:96:TRP:NE1	2.20	0.57
2:B:1220:G:H2'	2:B:1221:C:H6	1.69	0.57
2:B:1015:U:H2'	2:B:1016:G:H8	1.70	0.57
2:B:820:A:H1'	2:B:943:A:O2'	2.04	0.57
2:B:2398:U:H2'	2:B:2399:G:H8	1.70	0.57
2:B:1640:A:H2'	2:B:1641:A:C8	2.39	0.57
2:B:1098:A:P	31:I:3:LYS:HG2	2.44	0.57
2:B:5:A:H2'	2:B:6:A:C8	2.40	0.57
10:J:15:TRP:HB3	10:J:137:PRO:HG3	1.87	0.57
17:Q:91:ARG:HH22	18:R:10:LYS:HB3	1.70	0.57
21:U:35:VAL:HB	21:U:38:ILE:HG21	1.85	0.57
2:B:2786:U:C5'	5:D:70:LYS:HG3	2.34	0.57
2:B:741:U:H2'	2:B:742:A:C8	2.40	0.57
19:S:41:LYS:NZ	19:S:41:LYS:HB3	2.20	0.57
9:H:94:ILE:HG13	9:H:98:ASP:CB	2.34	0.57
2:B:2801:G:H3'	2:B:2802:G:H8	1.69	0.57
2:B:2728:U:H2'	2:B:2729:G:H8	1.68	0.57
2:B:1684:G:H2'	2:B:1685:C:H6	1.68	0.57
2:B:1490:A:H2'	4:C:97:ASP:OD1	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:G:9:VAL:HA	8:G:48:THR:HG22	1.85	0.57
2:B:2094:A:H2'	2:B:2095:A:C8	2.39	0.57
8:G:155:PRO:HA	8:G:170:THR:HA	1.86	0.57
2:B:1714:U:H3'	2:B:1715:G:C5'	2.35	0.57
14:N:72:ASP:OD1	14:N:75:ILE:HG23	2.04	0.57
4:C:77:VAL:CG2	4:C:112:GLY:H	2.07	0.57
2:B:2385:C:H2'	2:B:2386:A:C8	2.40	0.57
26:O:38:LEU:HB3	26:O:41:HIS:CD2	2.39	0.57
13:M:54:THR:C	13:M:56:ALA:H	2.08	0.57
1:A:88:C:H2'	1:A:88:C:OP1	2.05	0.57
13:M:4:PRO:HG2	13:M:70:ASP:HA	1.85	0.57
2:B:2353:G:H1'	22:W:30:VAL:HG12	1.87	0.57
2:B:2460:U:H2'	2:B:2461:A:H8	1.70	0.57
2:B:521:U:H2'	2:B:522:A:H8	1.69	0.57
6:E:2:GLU:HA	6:E:13:THR:OG1	2.05	0.57
2:B:2008:C:H2'	2:B:2009:A:H8	1.70	0.57
24:Y:5:LYS:HG3	24:Y:57:GLU:HB2	1.85	0.57
2:B:2488:G:O2'	2:B:2489:U:H5'	2.05	0.57
10:J:13:ARG:HB3	10:J:53:TYR:HD2	1.68	0.57
2:B:1338:G:H4'	20:T:18:GLU:CG	2.24	0.57
2:B:850:U:H2'	2:B:851:C:C6	2.40	0.57
21:U:43:LYS:O	21:U:57:ILE:HA	2.04	0.57
4:C:66:PHE:HB2	4:C:150:GLY:O	2.05	0.57
2:B:2439:A:N7	2:B:2586:U:H4'	2.20	0.57
2:B:523:C:H4'	2:B:540:C:O2	2.04	0.57
2:B:2064:C:H2'	2:B:2065:C:H6	1.70	0.57
2:B:2355:G:O3'	22:W:20:LEU:HD13	2.05	0.57
2:B:2875:C:H2'	2:B:2876:G:H8	1.70	0.57
2:B:845:A:N1	2:B:847:U:H1'	2.20	0.57
2:B:548:G:C2'	2:B:548:G:N3	2.68	0.56
25:Z:40:VAL:CG2	25:Z:43:GLU:HB3	2.31	0.56
8:G:25:ILE:HG22	8:G:78:VAL:HG21	1.87	0.56
11:K:13:ASN:ND2	11:K:98:ARG:H	1.99	0.56
4:C:226:PRO:CG	4:C:233:GLY:H	2.17	0.56
2:B:1518:C:H2'	2:B:1519:G:H8	1.69	0.56
6:E:5:LEU:HB2	6:E:11:ALA:N	2.20	0.56
2:B:2189:U:H2'	2:B:2190:G:O4'	2.05	0.56
4:C:222:THR:HA	4:C:231:HIS:O	2.03	0.56
21:U:85:ARG:NE	21:U:85:ARG:HA	2.20	0.56
4:C:131:MET:HA	4:C:134:ILE:HG23	1.86	0.56
16:P:112:ARG:HB2	16:P:112:ARG:HH11	1.70	0.56
20:T:69:ARG:CZ	20:T:69:ARG:HA	2.36	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:286:U:H2'	2:B:287:G:C8	2.39	0.56
3:V:63:ILE:HD12	3:V:63:ILE:N	2.21	0.56
14:N:59:SER:O	14:N:63:ARG:HB2	2.05	0.56
4:C:221:GLY:C	4:C:223:ALA:H	2.08	0.56
2:B:1355:G:O2'	2:B:1356:G:H5'	2.04	0.56
4:C:243:PRO:O	4:C:250:GLN:HA	2.04	0.56
19:S:81:SER:HB3	19:S:99:ARG:HB3	1.86	0.56
2:B:2141:G:H2'	2:B:2142:A:H8	1.69	0.56
2:B:1406:U:H2'	2:B:1407:G:H8	1.68	0.56
2:B:1597:A:H5''	2:B:1598:A:H5'	1.85	0.56
2:B:1785:A:H2'	2:B:1787:A:N7	2.20	0.56
2:B:1567:G:H2'	4:C:84:PRO:HG3	1.87	0.56
2:B:601:C:H2'	2:B:602:A:H8	1.70	0.56
2:B:15:G:O2'	2:B:16:C:H5'	2.04	0.56
7:F:11:VAL:HG21	7:F:172:PHE:CE1	2.40	0.56
6:E:117:ARG:NH1	12:L:2:ARG:HB2	2.20	0.56
12:L:3:LEU:O	12:L:5:THR:N	2.39	0.56
4:C:161:VAL:O	4:C:162:GLN:HB2	2.04	0.56
2:B:2336:A:H61	22:W:40:ARG:CG	2.19	0.56
2:B:857:G:C2'	2:B:858:G:H5'	2.34	0.56
22:W:35:ILE:O	22:W:36:ILE:C	2.43	0.56
19:S:48:LYS:HE2	19:S:52:GLU:OE1	2.04	0.56
14:N:96:ARG:HH21	14:N:96:ARG:HG2	1.71	0.56
2:B:53:A:N6	2:B:117:G:H1'	2.21	0.56
3:V:44:HIS:NE2	3:V:85:LYS:HB2	2.19	0.56
2:B:1438:U:H2'	2:B:1439:A:O4'	2.06	0.56
14:N:102:PHE:N	14:N:109:PRO:HA	2.17	0.56
11:K:118:LEU:O	11:K:120:PRO:HD2	2.04	0.56
5:D:12:THR:HG22	5:D:13:ARG:H	1.69	0.56
2:B:899:A:H3'	2:B:900:A:H8	1.70	0.56
2:B:483:A:H4'	21:U:45:GLN:O	2.05	0.56
2:B:1080:A:H4'	31:I:126:ARG:CD	2.34	0.56
2:B:21:A:H2'	2:B:22:C:C6	2.40	0.56
19:S:1:MET:SD	19:S:62:ASP:HB2	2.45	0.56
2:B:2081:U:OP1	25:Z:19:SER:HB3	2.05	0.56
2:B:1061:U:H4'	2:B:1070:A:O3'	2.04	0.56
2:B:2088:A:H2'	2:B:2089:C:H6	1.71	0.56
2:B:570:G:H2'	2:B:2030:A:N7	2.19	0.56
6:E:5:LEU:HD12	6:E:10:SER:HB2	1.87	0.56
31:I:37:PHE:CZ	31:I:58:ILE:HD11	2.40	0.56
2:B:2137:U:O2'	2:B:2138:G:H5'	2.04	0.56
2:B:1965:C:H5''	2:B:1966:A:H2'	1.87	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:455:C:N3	2:B:473:G:H5'	2.21	0.56
2:B:1709:U:H2'	2:B:1710:G:C8	2.40	0.56
2:B:659:G:H21	6:E:30:GLN:NE2	2.03	0.56
10:J:124:VAL:O	10:J:125:TYR:HB2	2.04	0.56
2:B:2849:U:N3	2:B:2867:G:C8	2.74	0.56
2:B:1796:U:H2'	2:B:1797:G:C8	2.40	0.56
2:B:2370:G:H2'	2:B:2371:G:O4'	2.05	0.56
30:4:13:ASN:O	30:4:27:CYS:HA	2.06	0.56
30:4:13:ASN:HB3	30:4:28:SER:H	1.69	0.56
29:3:3:ILE:HG21	29:3:62:PRO:HG2	1.88	0.56
2:B:2469:A:H2'	2:B:2470:G:O4'	2.04	0.56
14:N:7:GLY:HA2	14:N:46:ARG:NH1	2.19	0.56
2:B:1098:A:C8	31:I:3:LYS:HB3	2.40	0.56
7:F:90:LEU:HD12	7:F:95:MET:HA	1.86	0.56
10:J:56:VAL:HG12	10:J:57:LEU:N	2.21	0.56
17:Q:94:LEU:C	17:Q:96:ASP:H	2.09	0.56
12:L:122:VAL:HG12	12:L:143:GLU:OE2	2.06	0.56
10:J:23:LYS:HE3	10:J:142:ILE:HG12	1.87	0.56
8:G:132:LEU:N	8:G:132:LEU:HD23	2.21	0.56
8:G:84:LYS:HG3	8:G:132:LEU:N	2.20	0.56
2:B:1259:G:H2'	2:B:1260:A:H8	1.69	0.56
2:B:1501:G:O2'	2:B:1502:A:H5'	2.05	0.56
17:Q:56:PHE:HA	17:Q:59:LEU:HB3	1.87	0.56
12:L:78:ARG:HG2	12:L:113:ALA:HB2	1.86	0.56
12:L:17:LYS:HD2	12:L:19:LEU:HD11	1.88	0.56
12:L:57:LEU:HA	12:L:60:ARG:NH2	2.21	0.56
9:H:90:LEU:HD22	9:H:122:LEU:O	2.06	0.56
2:B:782:A:N3	4:C:224:MET:HB3	2.21	0.56
1:A:76:G:O2'	1:A:77:U:H5'	2.05	0.56
21:U:12:VAL:HG22	21:U:69:VAL:HG12	1.88	0.56
21:U:17:ASP:HB3	21:U:20:LYS:HE3	1.87	0.56
2:B:2415:G:H2'	2:B:2416:C:C6	2.40	0.56
5:D:79:LEU:HD22	5:D:79:LEU:N	2.21	0.56
2:B:642:U:O2	2:B:644:A:H3'	2.05	0.56
2:B:1476:U:H4'	2:B:1732:C:O2'	2.05	0.56
2:B:996:A:H4'	17:Q:91:ARG:CD	2.32	0.56
22:W:36:ILE:HB	22:W:39:GLN:NE2	2.21	0.56
15:O:52:SER:OG	15:O:54:VAL:HG12	2.05	0.56
18:R:79:ARG:NE	18:R:80:ARG:HH21	2.04	0.56
2:B:871:U:H2'	2:B:872:U:C6	2.39	0.56
6:E:192:ALA:HA	6:E:195:GLN:NE2	2.20	0.56
5:D:8:LYS:CG	5:D:197:THR:H	2.19	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:184:C:H2'	2:B:185:G:H8	1.70	0.56
2:B:106:C:H2'	2:B:107:G:C8	2.41	0.56
6:E:40:ARG:NH2	6:E:92:HIS:NE2	2.54	0.56
18:R:31:GLU:H	18:R:63:VAL:CG2	2.18	0.56
2:B:845:A:C2	2:B:847:U:H1'	2.41	0.56
2:B:2412:A:H2'	2:B:2413:G:O4'	2.06	0.56
2:B:2389:G:H5''	2:B:2390:U:H5'	1.88	0.56
2:B:1747:U:H2'	2:B:1748:C:C6	2.41	0.56
14:N:103:ARG:CG	14:N:104:ALA:H	2.19	0.56
25:Z:35:SER:HA	25:Z:50:ARG:HA	1.87	0.56
2:B:1857:G:H2'	2:B:1884:G:N2	2.21	0.56
30:4:2:LYS:HG2	30:4:3:VAL:N	2.21	0.56
2:B:2339:C:H2'	2:B:2340:A:C8	2.40	0.56
2:B:1351:C:H2'	2:B:1352:U:O4'	2.05	0.56
8:G:10:VAL:HG13	8:G:16:VAL:HG21	1.88	0.56
2:B:781:A:OP1	4:C:216:ARG:NH2	2.39	0.56
2:B:1099:G:C8	31:I:3:LYS:CA	2.84	0.56
14:N:76:VAL:HA	14:N:79:LEU:HD12	1.88	0.56
17:Q:94:LEU:HD21	18:R:11:GLN:HB2	1.87	0.56
20:T:1:MET:HB2	20:T:2:ILE:HD13	1.88	0.56
4:C:143:VAL:HB	4:C:153:LEU:HB2	1.88	0.56
8:G:8:VAL:HG11	8:G:49:LEU:CB	2.34	0.56
2:B:1082:U:O4	2:B:1086:A:C2	2.57	0.56
27:1:35:LEU:O	27:1:36:LYS:HB2	2.05	0.56
2:B:2213:U:O2	2:B:2213:U:C2'	2.54	0.56
1:A:13:G:H2'	1:A:14:U:H5''	1.88	0.56
2:B:643:A:H61	2:B:2370:G:H1'	1.71	0.56
2:B:1709:U:H2'	2:B:1710:G:H8	1.69	0.56
2:B:670:A:H4'	12:L:42:SER:HB2	1.87	0.56
2:B:2600:A:O2'	2:B:2601:C:H5'	2.06	0.56
2:B:1320:C:H5	2:B:1329:U:H5''	1.71	0.56
6:E:137:LYS:HE2	6:E:141:MET:SD	2.46	0.56
2:B:49:A:H5''	2:B:51:G:O4'	2.05	0.56
12:L:78:ARG:HG2	12:L:113:ALA:CB	2.36	0.56
22:W:24:ARG:HD3	22:W:65:LYS:CG	2.35	0.56
3:V:80:HIS:HB3	3:V:83:LYS:O	2.06	0.56
16:P:88:ARG:HB2	16:P:112:ARG:CZ	2.35	0.56
8:G:74:MET:O	8:G:78:VAL:HG22	2.06	0.56
2:B:2666:C:O4'	2:B:2666:C:O2	2.20	0.56
2:B:2860:A:O5'	2:B:2860:A:H8	1.89	0.56
2:B:1397:U:H5''	2:B:1398:C:H5	1.70	0.56
31:I:5:GLN:O	31:I:6:ALA:HB3	2.05	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:Y:29:ARG:H	24:Y:33:HIS:HD2	1.54	0.56
6:E:18:THR:O	6:E:110:SER:HB2	2.05	0.56
22:W:64:GLY:HA2	22:W:84:GLU:HG2	1.86	0.55
5:D:29:VAL:O	5:D:185:ASN:HB3	2.05	0.55
3:V:31:TYR:HA	3:V:93:ARG:HH21	1.71	0.55
15:O:62:LEU:HD11	15:O:70:ALA:HA	1.88	0.55
2:B:2598:A:H5''	4:C:233:GLY:HA2	1.87	0.55
7:F:177:ARG:NH1	7:F:177:ARG:HA	2.21	0.55
3:V:4:ILE:O	3:V:63:ILE:HA	2.06	0.55
2:B:1163:G:H4'	18:R:92:TRP:HE1	1.69	0.55
9:H:1:MET:HB3	9:H:21:VAL:O	2.06	0.55
19:S:10:ALA:HB3	19:S:101:SER:OG	2.06	0.55
2:B:2836:U:H2'	2:B:2837:A:C8	2.40	0.55
19:S:6:LYS:HB2	19:S:103:ILE:O	2.06	0.55
11:K:11:ALA:HB3	11:K:85:VAL:HG22	1.88	0.55
2:B:299:A:N6	2:B:322:A:O2'	2.39	0.55
7:F:106:ALA:HA	7:F:135:ILE:HD13	1.89	0.55
31:I:45:THR:CA	31:I:48:ILE:HG22	2.35	0.55
2:B:1386:C:H2'	2:B:1387:A:H8	1.71	0.55
21:U:21:ARG:HG3	21:U:21:ARG:HH11	1.71	0.55
1:A:49:C:H2'	1:A:50:A:H8	1.71	0.55
29:3:55:GLY:HA2	29:3:58:ILE:HD12	1.89	0.55
2:B:2450:A:O2'	2:B:2451:A:H5'	2.06	0.55
8:G:10:VAL:O	8:G:10:VAL:HG12	2.05	0.55
3:V:65:VAL:C	3:V:67:GLY:H	2.09	0.55
2:B:2788:C:H2'	2:B:2789:C:C6	2.40	0.55
4:C:86:ARG:CZ	4:C:86:ARG:HB3	2.36	0.55
2:B:1458:U:H2'	2:B:1459:G:H5''	1.88	0.55
4:C:43:ASN:HB3	4:C:45:ASN:ND2	2.21	0.55
6:E:147:LEU:HD12	6:E:149:ILE:HB	1.87	0.55
7:F:42:ALA:HA	7:F:48:LEU:CD2	2.33	0.55
20:T:54:GLU:HG3	20:T:90:GLY:N	2.21	0.55
9:H:135:HIS:CG	9:H:136:SER:N	2.73	0.55
11:K:107:LEU:HB2	11:K:116:ILE:CG2	2.37	0.55
2:B:920:A:H2'	2:B:921:C:C6	2.41	0.55
2:B:289:G:H2'	2:B:290:U:C6	2.40	0.55
2:B:2756:U:H4'	2:B:2757:A:OP1	2.06	0.55
6:E:12:LEU:HD12	6:E:14:VAL:HG22	1.87	0.55
2:B:2313:C:H4'	7:F:87:LYS:HB3	1.87	0.55
17:Q:79:ILE:O	17:Q:79:ILE:HD13	2.06	0.55
16:P:4:ILE:HG22	16:P:5:LYS:N	2.15	0.55
2:B:558:U:OP1	10:J:114:LEU:HB2	2.06	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:I:17:ALA:O	31:I:18:ASN:CB	2.53	0.55
2:B:572:A:C2	2:B:2033:A:C2	2.94	0.55
2:B:870:U:O2'	2:B:871:U:H5'	2.06	0.55
11:K:79:PHE:HD2	16:P:69:VAL:HG12	1.72	0.55
2:B:936:A:H2'	2:B:937:C:C6	2.42	0.55
2:B:2015:A:C2	26:O:2:VAL:HG22	2.42	0.55
7:F:7:TYR:HA	7:F:11:VAL:CG2	2.36	0.55
2:B:6:A:O2'	2:B:7:G:H5'	2.06	0.55
2:B:138:U:H2'	2:B:140:C:O4'	2.06	0.55
2:B:1064:C:H5'	31:I:88:GLY:HA3	1.89	0.55
25:Z:66:THR:O	25:Z:69:ALA:HB3	2.06	0.55
2:B:2816:G:O3'	14:N:99:LYS:HE3	2.06	0.55
8:G:25:ILE:HD13	8:G:74:MET:HE2	1.88	0.55
2:B:919:U:H2'	2:B:920:A:H8	1.69	0.55
2:B:2024:G:O2'	2:B:2025:C:H5'	2.07	0.55
9:H:53:GLU:HA	9:H:57:LYS:HB3	1.89	0.55
2:B:45:G:H5'	2:B:46:G:OP1	2.07	0.55
30:4:3:VAL:HG23	30:4:4:ARG:H	1.72	0.55
2:B:1842:G:H2'	2:B:1843:C:C6	2.41	0.55
2:B:635:C:O2'	2:B:639:U:H5''	2.06	0.55
2:B:2340:A:H2'	2:B:2341:G:C8	2.41	0.55
20:T:7:LEU:O	20:T:7:LEU:HD13	2.07	0.55
2:B:1013:C:H2'	2:B:1014:A:C8	2.40	0.55
2:B:2415:G:H2'	2:B:2416:C:H6	1.72	0.55
6:E:110:SER:O	6:E:114:ARG:HG3	2.07	0.55
2:B:2836:U:H2'	2:B:2837:A:H8	1.71	0.55
2:B:2516:A:O2'	2:B:2517:C:H5'	2.07	0.55
8:G:115:GLN:H	8:G:115:GLN:CD	2.10	0.55
2:B:1838:C:N4	2:B:1898:U:H2'	2.21	0.55
21:U:90:LYS:HB3	21:U:92:VAL:HG23	1.87	0.55
18:R:3:ALA:O	18:R:13:ARG:HA	2.07	0.55
12:L:3:LEU:HA	12:L:6:LEU:HD21	1.88	0.55
18:R:62:GLU:O	18:R:96:VAL:HA	2.06	0.55
8:G:24:THR:HA	8:G:33:THR:O	2.07	0.55
8:G:30:GLY:HA3	8:G:78:VAL:HA	1.87	0.55
2:B:704:G:H1'	2:B:727:A:H61	1.72	0.55
2:B:1139:G:O2'	2:B:1140:C:H5'	2.06	0.55
2:B:2665:A:H2'	2:B:2666:C:O2	2.06	0.55
31:I:125:THR:O	31:I:129:GLU:HG3	2.07	0.55
15:O:107:ALA:O	15:O:111:ARG:HG3	2.07	0.55
2:B:782:A:N7	4:C:219:VAL:HG21	2.21	0.55
2:B:132:G:H2'	2:B:133:U:H6	1.70	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2101:A:O2'	2:B:2102:G:H5'	2.07	0.55
2:B:1335:C:H2'	2:B:1336:A:C8	2.42	0.55
2:B:394:C:H2'	2:B:395:U:O4'	2.07	0.55
2:B:296:U:H2'	2:B:297:G:H8	1.72	0.55
17:Q:71:ASN:HD22	17:Q:73:ILE:HG22	1.70	0.55
17:Q:63:ARG:NH1	17:Q:96:ASP:HA	2.20	0.55
4:C:130:PRO:HG2	4:C:133:ASN:ND2	2.22	0.55
2:B:2678:C:H2'	2:B:2679:A:C8	2.42	0.55
24:Y:6:ILE:N	24:Y:35:VAL:O	2.38	0.55
19:S:24:ILE:CD1	19:S:36:LEU:HD21	2.36	0.55
31:I:71:LYS:HB3	31:I:115:ASP:OD2	2.06	0.55
2:B:2674:G:H4'	11:K:30:ARG:HG3	1.88	0.55
2:B:228:C:O2	2:B:418:C:H4'	2.06	0.55
2:B:2648:G:H2'	2:B:2649:C:C6	2.41	0.55
2:B:1351:C:O2'	2:B:1571:A:H1'	2.07	0.55
2:B:660:C:H2'	2:B:661:A:C8	2.41	0.55
2:B:2008:C:H2'	2:B:2009:A:C8	2.42	0.55
2:B:1731:G:O2'	2:B:1732:C:H5''	2.06	0.55
2:B:1774:C:H2'	2:B:1774:C:O2	2.06	0.55
11:K:53:LYS:HD3	11:K:56:ASP:OD2	2.07	0.55
8:G:39:ALA:C	8:G:54:ARG:HB2	2.27	0.55
2:B:2863:C:O2'	2:B:2864:G:H5'	2.07	0.55
4:C:75:ALA:CB	4:C:95:TYR:HA	2.37	0.55
22:W:18:LYS:N	22:W:35:ILE:HG23	2.22	0.55
13:M:21:ALA:HB2	13:M:100:LYS:HG2	1.88	0.55
2:B:2720:U:H2'	2:B:2721:A:C8	2.42	0.55
2:B:2714:G:O2'	2:B:2715:C:H5'	2.05	0.55
2:B:1230:A:H2'	2:B:1231:U:C6	2.42	0.55
2:B:438:G:H2'	2:B:439:A:H8	1.72	0.55
4:C:43:ASN:HB3	4:C:45:ASN:HD22	1.71	0.55
10:J:55:ILE:CB	10:J:123:LYS:HB2	2.37	0.55
6:E:29:HIS:HA	6:E:32:VAL:HG22	1.89	0.55
9:H:131:SER:OG	9:H:132:PHE:N	2.40	0.55
25:Z:5:CYS:HB2	25:Z:10:LYS:HB2	1.89	0.55
3:V:80:HIS:HD2	3:V:82:TYR:H	1.54	0.55
2:B:2547:A:H2'	2:B:2548:U:C6	2.42	0.55
27:1:26:LYS:HD2	27:1:30:PRO:HA	1.89	0.55
20:T:69:ARG:HB2	20:T:75:GLY:N	2.22	0.55
13:M:35:ALA:HB2	13:M:100:LYS:HB2	1.89	0.55
31:I:129:GLU:HB3	31:I:133:ARG:HH12	1.71	0.55
9:H:94:ILE:HG22	9:H:122:LEU:HB3	1.88	0.55
4:C:105:ALA:HB1	4:C:109:LEU:HD11	1.87	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:X:23:ARG:HA	23:X:27:ASN:ND2	2.21	0.55
2:B:2106:U:H2'	2:B:2107:G:H8	1.72	0.55
2:B:496:G:H1'	19:S:61:ASN:HD21	1.71	0.55
18:R:39:LEU:HA	18:R:49:ILE:HG12	1.89	0.55
2:B:2803:G:H2'	2:B:2804:U:H6	1.72	0.55
18:R:68:ARG:NH2	18:R:90:ARG:HG2	2.22	0.55
2:B:2037:A:H2'	2:B:2038:G:H8	1.71	0.55
1:A:14:U:H5'	1:A:70:C:O2'	2.07	0.55
2:B:2247:A:H3'	34:B:4464:HOH:O	2.06	0.55
2:B:2704:C:H2'	2:B:2705:A:O4'	2.07	0.55
2:B:2216:G:H2'	2:B:2217:G:H8	1.72	0.55
2:B:1098:A:C2'	31:I:4:VAL:N	2.70	0.55
12:L:91:ASP:OD1	12:L:92:LEU:HG	2.07	0.55
8:G:8:VAL:CG1	8:G:49:LEU:HB3	2.32	0.55
2:B:1553:A:O2'	2:B:1554:U:H2'	2.06	0.55
2:B:1508:A:H5'	2:B:1509:A:C6	2.42	0.55
8:G:85:LYS:HB2	8:G:164:ALA:CB	2.36	0.55
7:F:134:GLN:C	7:F:136:ILE:H	2.10	0.55
13:M:126:ILE:N	13:M:126:ILE:HD12	2.22	0.55
22:W:31:LEU:N	22:W:60:ALA:HB3	2.22	0.55
2:B:2579:C:HO2'	5:D:136:ASN:HA	1.72	0.55
2:B:2455:G:H2'	2:B:2456:C:C6	2.42	0.55
5:D:8:LYS:HG2	5:D:197:THR:H	1.72	0.55
2:B:638:G:H2'	2:B:639:U:C6	2.42	0.55
21:U:66:VAL:O	21:U:69:VAL:HG22	2.07	0.55
2:B:189:G:H2'	2:B:205:G:H22	1.72	0.55
1:A:49:C:H2'	1:A:50:A:C8	2.42	0.55
2:B:596:U:H2'	2:B:597:G:H8	1.72	0.55
2:B:1495:A:O2'	2:B:1496:A:H5'	2.07	0.55
19:S:95:ARG:HG3	19:S:97:LEU:HD13	1.89	0.55
12:L:41:ARG:HH21	12:L:41:ARG:HG2	1.73	0.55
25:Z:41:GLU:O	25:Z:44:LYS:HD2	2.06	0.55
13:M:67:VAL:HG11	13:M:102:LEU:HD22	1.88	0.55
10:J:45:THR:OG1	10:J:48:VAL:HB	2.07	0.54
12:L:111:ILE:HG22	12:L:112:LEU:N	2.22	0.54
7:F:78:ILE:N	7:F:78:ILE:HD12	2.22	0.54
18:R:14:VAL:CG2	18:R:15:SER:H	2.16	0.54
8:G:34:ARG:HG2	8:G:34:ARG:NH1	2.21	0.54
2:B:321:U:OP2	6:E:130:LYS:HA	2.07	0.54
4:C:209:ALA:O	4:C:213:ARG:HB2	2.07	0.54
2:B:1198:U:H2'	2:B:1199:U:H6	1.72	0.54
2:B:1197:G:H2'	2:B:1198:U:H6	1.72	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:S:96:ILE:HG23	19:S:96:ILE:O	2.06	0.54
2:B:2828:G:O2'	2:B:2829:A:H5'	2.08	0.54
2:B:1531:C:H2'	2:B:1532:A:C8	2.42	0.54
2:B:823:C:O2'	2:B:824:U:H5'	2.07	0.54
17:Q:91:ARG:HB2	18:R:11:GLN:OE1	2.07	0.54
16:P:7:LEU:HA	16:P:10:GLU:HG2	1.88	0.54
13:M:17:ASN:HD21	13:M:95:LEU:HG	1.71	0.54
2:B:856:G:H2'	2:B:857:G:C8	2.41	0.54
25:Z:6:GLN:NE2	25:Z:50:ARG:N	2.54	0.54
25:Z:7:VAL:HG21	25:Z:59:ILE:CD1	2.37	0.54
5:D:62:LYS:HB2	5:D:63:PRO:HD3	1.89	0.54
2:B:1441:G:H2'	2:B:1442:U:C6	2.41	0.54
2:B:2741:A:H2'	2:B:2742:G:O4'	2.06	0.54
7:F:56:LEU:HD22	7:F:59:ILE:HD12	1.88	0.54
2:B:1925:C:C2'	2:B:1926:U:H5''	2.34	0.54
4:C:250:GLN:HG2	4:C:250:GLN:O	2.06	0.54
2:B:226:A:H1'	2:B:230:G:N2	2.22	0.54
2:B:2772:C:H2'	2:B:2773:C:C6	2.42	0.54
15:O:100:HIS:HA	15:O:104:GLN:HE21	1.71	0.54
2:B:2861:U:H2'	2:B:2862:G:C8	2.42	0.54
2:B:2840:C:H2'	2:B:2841:C:H6	1.72	0.54
8:G:36:LEU:HD22	8:G:36:LEU:N	2.22	0.54
6:E:21:ARG:HG3	6:E:22:ASP:N	2.21	0.54
31:I:2:LYS:NZ	31:I:2:LYS:HB3	2.22	0.54
17:Q:78:PHE:O	17:Q:82:LEU:HG	2.06	0.54
2:B:416:U:H2'	2:B:417:C:C6	2.42	0.54
23:X:6:LEU:C	23:X:8:GLU:H	2.10	0.54
2:B:2784:U:H2'	2:B:2785:C:H6	1.72	0.54
2:B:692:C:H2'	2:B:693:A:H8	1.72	0.54
3:V:42:LEU:HD11	3:V:89:ILE:HD11	1.88	0.54
18:R:8:GLY:HA3	18:R:23:GLU:HB2	1.88	0.54
27:1:25:ASN:OD1	27:1:27:ARG:HB2	2.07	0.54
31:I:1:ALA:CB	31:I:2:LYS:HD2	2.38	0.54
7:F:62:GLN:HG3	7:F:91:ARG:HH11	1.72	0.54
10:J:4:PHE:CG	10:J:5:THR:N	2.76	0.54
4:C:77:VAL:CG2	4:C:113:ASP:H	2.20	0.54
4:C:129:LEU:HD23	4:C:130:PRO:CD	2.35	0.54
2:B:1657:U:O2'	5:D:138:LEU:HD12	2.07	0.54
31:I:49:GLU:CB	31:I:52:LEU:HD12	2.38	0.54
25:Z:63:GLY:O	25:Z:67:VAL:HG23	2.07	0.54
3:V:35:GLU:OE1	3:V:93:ARG:HD3	2.07	0.54
11:K:71:ARG:CG	11:K:105:ARG:HH21	2.21	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:T:76:ARG:HH21	20:T:77:ARG:HB2	1.72	0.54
2:B:285:G:H2'	2:B:286:U:O4'	2.08	0.54
2:B:2333:A:H4'	2:B:2334:U:C5'	2.37	0.54
27:1:3:GLY:O	27:1:4:ILE:HG12	2.07	0.54
2:B:2615:U:C2	26:0:3:GLN:HA	2.43	0.54
2:B:2083:G:H2'	2:B:2084:C:H6	1.71	0.54
27:1:39:ASP:OD1	27:1:42:VAL:HG23	2.07	0.54
2:B:997:G:O2'	2:B:998:C:H5'	2.07	0.54
2:B:1268:A:H2'	2:B:1269:A:O4'	2.07	0.54
2:B:2364:C:H2'	2:B:2365:G:O4'	2.07	0.54
24:Y:37:ARG:HG3	24:Y:38:GLU:OE1	2.08	0.54
14:N:49:GLU:HB2	14:N:50:PRO:HD3	1.88	0.54
2:B:115:C:O2'	2:B:116:C:H5'	2.08	0.54
11:K:60:ALA:HB2	11:K:86:LEU:HA	1.90	0.54
7:F:102:LEU:O	7:F:103:ILE:HB	2.07	0.54
2:B:931:U:H3	2:B:1166:G:N2	2.06	0.54
2:B:497:A:H2'	2:B:498:G:O4'	2.07	0.54
2:B:2722:G:H2'	2:B:2723:C:H6	1.73	0.54
2:B:528:A:N1	2:B:2042:A:H2'	2.21	0.54
6:E:1:MET:O	6:E:13:THR:HA	2.07	0.54
2:B:1880:U:H2'	2:B:1881:C:C6	2.42	0.54
2:B:936:A:H2'	2:B:937:C:H6	1.72	0.54
2:B:927:A:H2'	2:B:928:A:C8	2.43	0.54
1:A:43:C:C4'	7:F:91:ARG:HD2	2.38	0.54
4:C:93:VAL:HG12	4:C:101:ARG:O	2.07	0.54
5:D:178:VAL:O	5:D:180:VAL:HG23	2.08	0.54
31:I:79:LEU:HD11	31:I:131:THR:OG1	2.07	0.54
8:G:26:LYS:HG2	8:G:27:GLY:N	2.23	0.54
4:C:89:ASN:O	4:C:105:ALA:HB3	2.07	0.54
2:B:1081:U:H5'	31:I:126:ARG:NH1	2.22	0.54
20:T:13:ALA:O	20:T:32:LEU:HB2	2.07	0.54
2:B:67:U:H2'	2:B:68:G:H8	1.72	0.54
15:O:47:VAL:HG12	15:O:48:LEU:H	1.72	0.54
4:C:122:ALA:O	4:C:123:ILE:C	2.46	0.54
19:S:83:LYS:HB3	19:S:95:ARG:NH1	2.22	0.54
29:3:7:ARG:O	29:3:11:LYS:HG3	2.08	0.54
2:B:794:A:H2'	2:B:795:C:H6	1.72	0.54
2:B:794:A:H2'	2:B:795:C:C6	2.43	0.54
2:B:1820:U:OP1	4:C:176:ARG:HD2	2.07	0.54
7:F:31:GLU:O	7:F:32:LYS:O	2.24	0.54
14:N:99:LYS:HB2	26:0:41:HIS:HB3	1.88	0.54
2:B:345:A:N3	2:B:346:A:N1	2.56	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2360:G:H4'	12:L:61:LEU:HD11	1.89	0.54
9:H:133:GLN:HB3	9:H:139:PHE:HB3	1.90	0.54
11:K:109:SER:C	11:K:111:LYS:H	2.11	0.54
1:A:88:C:H1'	1:A:89:U:C6	2.43	0.54
13:M:126:ILE:H	13:M:126:ILE:HD12	1.73	0.54
17:Q:4:LYS:HE3	17:Q:8:ILE:HD11	1.90	0.54
11:K:15:GLY:HA2	11:K:46:ALA:HA	1.88	0.54
2:B:1347:A:H2'	2:B:1348:C:O4'	2.08	0.54
1:A:50:A:OP1	15:O:68:LYS:HG3	2.06	0.54
2:B:265:A:O2'	2:B:266:G:H4'	2.08	0.54
12:L:65:GLY:O	12:L:66:PHE:HB3	2.08	0.54
2:B:1425:G:H2'	2:B:1426:G:C8	2.43	0.54
30:4:10:LEU:HD13	30:4:33:HIS:HA	1.90	0.54
10:J:18:VAL:HG12	10:J:54:ILE:HD11	1.89	0.54
14:N:29:VAL:O	14:N:78:LYS:HE3	2.08	0.54
2:B:2679:A:O2'	2:B:2680:U:H5'	2.08	0.54
2:B:587:C:O2'	12:L:19:LEU:HD13	2.08	0.54
22:W:49:ASN:HA	22:W:61:LYS:HB2	1.88	0.54
9:H:65:ALA:O	9:H:68:ARG:HB2	2.08	0.54
7:F:169:LEU:HB3	7:F:174:PHE:CD1	2.42	0.54
2:B:744:U:H2'	2:B:745:G:O4'	2.08	0.54
2:B:307:G:N2	2:B:309:A:H3'	2.23	0.54
2:B:308:G:H2'	2:B:309:A:O4'	2.08	0.54
5:D:175:LEU:HD21	5:D:191:GLY:O	2.08	0.54
21:U:70:ALA:HB1	21:U:79:ALA:HB2	1.90	0.54
2:B:1491:G:H5'	4:C:97:ASP:OD1	2.08	0.54
2:B:2487:G:H2'	2:B:2488:G:C8	2.42	0.54
4:C:57:HIS:ND1	4:C:58:LYS:N	2.55	0.54
2:B:2605:U:H2'	2:B:2606:C:C6	2.43	0.54
21:U:48:VAL:O	21:U:50:ALA:N	2.41	0.54
14:N:81:ASN:O	14:N:85:PRO:HD2	2.08	0.54
10:J:44:TYR:CE2	17:Q:59:LEU:HD11	2.43	0.54
17:Q:68:ALA:HA	17:Q:71:ASN:HB3	1.89	0.54
9:H:53:GLU:CA	9:H:57:LYS:HB3	2.38	0.54
5:D:51:THR:HG21	5:D:76:GLY:HA3	1.90	0.54
3:V:9:ARG:NH2	3:V:12:GLN:HA	2.21	0.54
2:B:45:G:C5'	2:B:46:G:H5'	2.37	0.54
2:B:2538:C:O2'	2:B:2539:C:H5'	2.08	0.54
2:B:2698:U:H2'	2:B:2699:C:C6	2.42	0.54
6:E:166:LYS:O	6:E:167:VAL:HB	2.07	0.54
2:B:303:G:H2'	2:B:304:U:C6	2.43	0.54
8:G:146:ASP:O	8:G:150:TYR:HD1	1.91	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:59:ALA:C	10:J:61:LYS:H	2.12	0.54
25:Z:53:ALA:O	25:Z:55:GLY:N	2.37	0.54
20:T:10:VAL:HG21	20:T:42:GLU:HG3	1.89	0.54
16:P:89:GLY:HA2	16:P:111:GLU:C	2.29	0.54
11:K:120:PRO:HA	16:P:65:ASN:ND2	2.23	0.54
10:J:84:ILE:HG23	10:J:84:ILE:O	2.08	0.54
2:B:2258:C:H4'	2:B:2259:U:OP2	2.06	0.54
25:Z:18:ARG:HG3	25:Z:22:LEU:HA	1.90	0.54
2:B:181:A:H2'	2:B:182:A:H8	1.73	0.54
2:B:2803:G:H2'	2:B:2804:U:C6	2.42	0.54
6:E:97:ASN:ND2	6:E:100:MET:HG3	2.23	0.54
13:M:103:TYR:O	13:M:104:GLU:HG3	2.08	0.54
2:B:1150:C:H2'	2:B:1151:A:H8	1.73	0.54
2:B:633:A:O5'	2:B:633:A:H8	1.89	0.54
6:E:4:VAL:HG12	6:E:6:LYS:H	1.73	0.54
21:U:41:VAL:O	21:U:59:GLU:HA	2.08	0.54
4:C:18:VAL:HG13	4:C:18:VAL:O	2.08	0.54
2:B:305:C:H2'	2:B:306:U:C6	2.43	0.54
16:P:103:THR:HG22	16:P:104:GLY:H	1.72	0.54
10:J:96:ARG:O	10:J:99:ARG:HG3	2.07	0.54
17:Q:78:PHE:CE2	17:Q:82:LEU:HD11	2.43	0.53
14:N:37:THR:HB	14:N:40:LYS:HG3	1.91	0.53
9:H:31:VAL:O	9:H:32:PRO:C	2.47	0.53
25:Z:77:LYS:O	25:Z:78:TYR:HB3	2.07	0.53
18:R:16:GLU:HA	18:R:98:ILE:O	2.08	0.53
16:P:89:GLY:HA2	16:P:112:ARG:N	2.23	0.53
27:1:6:GLU:H	27:1:6:GLU:CD	2.12	0.53
2:B:419:U:H2'	2:B:420:C:H6	1.71	0.53
9:H:95:GLY:H	9:H:98:ASP:HB2	1.72	0.53
2:B:275:C:H2'	2:B:276:U:C6	2.42	0.53
4:C:209:ALA:HA	4:C:212:TRP:NE1	2.23	0.53
2:B:2096:C:H2'	2:B:2097:A:C8	2.43	0.53
2:B:972:A:OP2	2:B:974:G:H5''	2.08	0.53
2:B:365:U:H2'	2:B:366:C:H6	1.73	0.53
2:B:2841:C:H2'	2:B:2842:G:H8	1.73	0.53
2:B:1178:C:H2'	2:B:1179:G:C8	2.42	0.53
28:2:34:ARG:HB3	28:2:39:ARG:HB2	1.89	0.53
2:B:1495:A:H2'	2:B:1496:A:C8	2.43	0.53
13:M:31:PHE:O	13:M:131:VAL:HG23	2.08	0.53
4:C:261:ARG:O	4:C:261:ARG:HG2	2.08	0.53
2:B:41:C:O2'	2:B:42:A:H5'	2.08	0.53
2:B:545:U:H3'	2:B:546:U:O3'	2.08	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:18:VAL:HG22	10:J:19:ASP:N	2.21	0.53
6:E:181:ILE:HG13	12:L:2:ARG:HB3	1.90	0.53
6:E:149:ILE:O	6:E:188:MET:HA	2.07	0.53
2:B:853:C:O2'	2:B:854:C:H5'	2.09	0.53
19:S:24:ILE:HD11	19:S:36:LEU:HD21	1.90	0.53
7:F:78:ILE:HA	7:F:82:TYR:CE1	2.43	0.53
2:B:126:A:H5'	28:2:19:ARG:CG	2.37	0.53
2:B:62:U:C2'	2:B:63:A:H5'	2.39	0.53
2:B:899:A:H3'	2:B:900:A:C8	2.43	0.53
2:B:819:A:H5'	2:B:973:A:N1	2.23	0.53
20:T:32:LEU:O	20:T:83:ALA:HB2	2.09	0.53
23:X:41:HIS:O	23:X:44:LYS:HB3	2.07	0.53
2:B:2512:C:OP2	5:D:128:ARG:HD2	2.09	0.53
2:B:1841:U:H2'	2:B:1842:G:H8	1.74	0.53
2:B:470:A:H61	20:T:72:GLN:NE2	2.06	0.53
2:B:2840:C:H2'	2:B:2841:C:C6	2.44	0.53
18:R:28:ALA:HB3	18:R:31:GLU:HB2	1.90	0.53
6:E:4:VAL:HG12	6:E:5:LEU:N	2.23	0.53
30:4:27:CYS:SG	30:4:29:ALA:HB3	2.48	0.53
3:V:77:VAL:CG1	13:M:136:MET:HB3	2.37	0.53
3:V:7:GLU:O	3:V:41:GLU:HG2	2.09	0.53
2:B:1930:G:H2'	2:B:1968:G:H1	1.73	0.53
12:L:119:PRO:HA	12:L:138:ALA:O	2.08	0.53
2:B:839:U:H2'	2:B:840:C:C6	2.42	0.53
2:B:477:A:H2'	2:B:478:A:C8	2.43	0.53
7:F:126:ASN:HB3	7:F:156:THR:CA	2.37	0.53
16:P:1:SER:O	16:P:5:LYS:HB2	2.09	0.53
31:I:52:LEU:HD22	31:I:81:LYS:HD3	1.90	0.53
9:H:31:VAL:CB	9:H:32:PRO:CD	2.81	0.53
16:P:88:ARG:HB2	16:P:112:ARG:HH12	1.74	0.53
20:T:27:SER:O	20:T:28:ASN:HB3	2.09	0.53
2:B:2023:C:O2'	2:B:2024:G:H5'	2.08	0.53
2:B:783:A:H2'	2:B:784:G:O5'	2.08	0.53
2:B:1917:U:C2'	2:B:1918:A:H5'	2.39	0.53
2:B:2885:G:N2	26:0:31:LYS:HG2	2.24	0.53
2:B:433:C:H2'	2:B:434:U:C6	2.43	0.53
2:B:598:U:H2'	2:B:599:A:H8	1.73	0.53
2:B:2508:G:H2'	2:B:2509:G:H8	1.73	0.53
2:B:2869:G:H2'	2:B:2870:C:O4'	2.09	0.53
2:B:564:C:O2'	2:B:565:C:H5'	2.08	0.53
12:L:4:ASN:N	12:L:4:ASN:HD22	2.04	0.53
16:P:98:TYR:C	16:P:100:ARG:H	2.11	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2239:G:O2'	2:B:2240:U:H5'	2.07	0.53
1:A:32:U:C4'	1:A:52:A:H62	2.21	0.53
2:B:2439:A:H4'	2:B:2440:C:O5'	2.08	0.53
2:B:812:C:H4'	17:Q:12:ARG:NH1	2.24	0.53
2:B:69:C:H2'	2:B:70:G:C8	2.42	0.53
2:B:596:U:H2'	2:B:597:G:C8	2.44	0.53
2:B:948:C:H2'	2:B:949:G:H8	1.73	0.53
2:B:1149:G:H2'	2:B:1150:C:H6	1.73	0.53
2:B:2537:U:H2'	2:B:2538:C:C6	2.44	0.53
2:B:1210:G:H5'	2:B:1212:G:H5''	1.91	0.53
1:A:35:C:O2	1:A:35:C:H3'	2.08	0.53
1:A:43:C:H4'	7:F:91:ARG:HD2	1.90	0.53
12:L:90:VAL:HB	12:L:122:VAL:HG13	1.89	0.53
13:M:71:LYS:HG2	13:M:73:ILE:HD11	1.90	0.53
13:M:71:LYS:HG2	13:M:93:VAL:HG12	1.89	0.53
22:W:49:ASN:O	22:W:50:VAL:HG13	2.07	0.53
31:I:54:ILE:HD13	31:I:55:PRO:N	2.23	0.53
8:G:17:LYS:O	8:G:23:ILE:HG23	2.09	0.53
2:B:1022:G:N2	2:B:1142:A:C2	2.76	0.53
9:H:88:GLY:O	9:H:124:THR:HA	2.08	0.53
2:B:1031:G:H4'	30:4:6:SER:OG	2.08	0.53
2:B:598:U:H2'	2:B:599:A:C8	2.44	0.53
2:B:2852:G:H2'	2:B:2853:C:H6	1.70	0.53
29:3:32:LEU:HA	29:3:35:LYS:HD2	1.90	0.53
2:B:2284:A:OP2	27:1:5:ARG:HG3	2.09	0.53
2:B:1320:C:C5	2:B:1329:U:H5''	2.44	0.53
4:C:2:VAL:HG23	4:C:3:VAL:H	1.74	0.53
2:B:81:G:H2'	2:B:82:U:O4'	2.08	0.53
2:B:93:G:H2'	2:B:94:A:O4'	2.09	0.53
25:Z:17:ASN:HB2	25:Z:25:THR:OG1	2.08	0.53
2:B:1526:C:H2'	2:B:1527:G:O4'	2.08	0.53
25:Z:39:TRP:HB2	25:Z:46:PHE:CE2	2.44	0.53
10:J:130:HIS:HD2	10:J:132:HIS:HB2	1.73	0.53
17:Q:63:ARG:CZ	17:Q:96:ASP:HA	2.39	0.53
12:L:110:VAL:HB	12:L:127:VAL:HG23	1.91	0.53
5:D:121:THR:C	5:D:123:LYS:H	2.09	0.53
2:B:2395:C:H2'	2:B:2396:G:O4'	2.08	0.53
2:B:1442:U:H2'	2:B:1443:U:C6	2.43	0.53
8:G:25:ILE:CG2	8:G:78:VAL:HG21	2.39	0.53
8:G:15:ASP:CB	8:G:26:LYS:H	2.16	0.53
2:B:1131:G:N2	2:B:2024:G:H21	2.06	0.53
2:B:192:C:C2'	2:B:193:U:H5'	2.37	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2795:C:H2'	2:B:2796:U:O4'	2.08	0.53
2:B:591:U:H1'	29:3:1:PRO:H3	1.72	0.53
2:B:2819:G:H2'	2:B:2821:A:N7	2.24	0.53
11:K:70:ARG:CB	11:K:76:VAL:HG22	2.38	0.53
2:B:1849:G:H2'	2:B:1850:G:H8	1.74	0.53
2:B:1872:A:H8	2:B:1872:A:O5'	1.92	0.53
2:B:633:A:OP1	12:L:68:SER:HB2	2.08	0.53
18:R:6:GLN:HE22	18:R:9:GLY:CA	2.22	0.53
17:Q:104:ALA:O	17:Q:105:PHE:HB3	2.09	0.53
2:B:2306:C:C3'	2:B:2307:G:H5'	2.35	0.53
31:I:79:LEU:HD12	31:I:135:MET:SD	2.48	0.53
25:Z:67:VAL:O	25:Z:70:GLU:HG3	2.09	0.53
2:B:1549:A:H2'	2:B:1550:C:H6	1.74	0.53
2:B:2740:A:H2'	2:B:2741:A:C8	2.43	0.53
8:G:122:ALA:HA	8:G:132:LEU:HA	1.90	0.53
1:A:89:U:O2	2:B:958:U:H2'	2.08	0.53
2:B:1733:G:H2'	2:B:1734:G:C8	2.43	0.53
13:M:2:LEU:HD23	13:M:46:ILE:HD11	1.90	0.53
22:W:30:VAL:HG13	22:W:30:VAL:O	2.08	0.53
2:B:276:U:H2'	2:B:278:A:N7	2.24	0.53
4:C:5:CYS:HB2	4:C:15:VAL:O	2.09	0.53
2:B:1381:G:H1'	2:B:1571:A:N1	2.24	0.53
2:B:2415:G:C4'	12:L:66:PHE:HB2	2.38	0.53
31:I:99:LYS:HD3	31:I:99:LYS:N	2.24	0.53
21:U:40:LEU:HD23	21:U:59:GLU:HG2	1.91	0.53
8:G:106:LEU:O	8:G:108:PHE:N	2.41	0.53
2:B:291:G:H2'	2:B:292:U:H6	1.74	0.53
7:F:122:ASP:OD2	7:F:126:ASN:HB2	2.08	0.53
6:E:149:ILE:HG23	6:E:188:MET:CA	2.39	0.53
2:B:2621:G:P	5:D:124:ARG:HH22	2.31	0.53
2:B:854:C:O2'	2:B:855:G:H5'	2.08	0.53
2:B:2305:U:H2'	2:B:2306:C:C6	2.44	0.53
2:B:1063:G:C5'	31:I:135:MET:HG2	2.39	0.53
3:V:24:ASN:HB3	3:V:44:HIS:HB3	1.91	0.53
7:F:106:ALA:HA	7:F:135:ILE:CD1	2.39	0.53
2:B:1032:A:H1'	30:4:23:ILE:HD13	1.91	0.53
13:M:94:ALA:O	13:M:96:ILE:HG23	2.09	0.53
2:B:2277:G:H5''	13:M:86:LYS:HB2	1.91	0.53
2:B:417:C:H2'	2:B:418:C:H6	1.72	0.53
6:E:176:ASP:OD1	6:E:178:VAL:HG12	2.09	0.53
2:B:2199:A:H3'	2:B:2200:C:H6	1.73	0.53
2:B:1570:A:H2'	2:B:1571:A:C8	2.44	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2821:A:OP2	5:D:115:GLY:HA3	2.08	0.53
2:B:1846:G:H2'	2:B:1847:A:O4'	2.08	0.53
2:B:934:U:H2'	2:B:935:C:C6	2.44	0.53
2:B:1576:U:O2'	2:B:1577:C:H5'	2.09	0.53
2:B:1821:A:H2'	2:B:1822:C:C6	2.43	0.53
2:B:1973:G:H2'	2:B:1974:C:C6	2.44	0.53
2:B:256:A:H2'	2:B:257:C:C6	2.44	0.53
2:B:1099:G:H4'	31:I:4:VAL:CG1	2.39	0.53
17:Q:68:ALA:O	17:Q:71:ASN:HB3	2.09	0.53
2:B:1244:A:O2'	2:B:1245:G:H5'	2.09	0.53
5:D:165:MET:HG2	5:D:166:GLY:N	2.24	0.53
2:B:513:A:H8	2:B:513:A:O5'	1.92	0.53
13:M:19:GLY:N	13:M:38:ARG:HH12	2.02	0.53
30:4:7:VAL:HG13	30:4:8:LYS:H	1.74	0.53
15:O:111:ARG:HD2	15:O:117:PHE:C	2.29	0.53
11:K:19:VAL:HG12	11:K:41:ILE:CG1	2.39	0.53
2:B:2846:G:H2'	2:B:2847:U:C6	2.43	0.53
6:E:150:THR:HG21	6:E:153:LEU:HA	1.91	0.53
23:X:23:ARG:O	23:X:27:ASN:N	2.41	0.53
2:B:1792:G:O2'	2:B:1793:C:H5'	2.09	0.53
5:D:172:VAL:HG12	5:D:173:GLN:N	2.23	0.53
19:S:57:ASN:O	19:S:61:ASN:HB2	2.09	0.53
21:U:41:VAL:HG22	21:U:60:LYS:O	2.09	0.53
2:B:1210:G:N3	2:B:1212:G:N2	2.56	0.53
2:B:1623:G:O2'	2:B:1624:U:H5'	2.08	0.53
21:U:64:ILE:HG13	21:U:65:GLN:N	2.23	0.53
7:F:12:VAL:O	7:F:16:MET:HG2	2.09	0.53
10:J:123:LYS:HG2	10:J:132:HIS:NE2	2.23	0.53
16:P:6:GLN:O	16:P:9:GLN:HG2	2.09	0.53
19:S:17:VAL:HG11	19:S:103:ILE:HG12	1.91	0.53
2:B:346:A:H2'	2:B:347:A:O4'	2.09	0.53
2:B:584:C:OP1	17:Q:5:ARG:HB3	2.07	0.53
3:V:72:VAL:HG21	3:V:91:PHE:CB	2.34	0.53
2:B:705:A:N6	2:B:726:G:O2'	2.41	0.53
7:F:28:PRO:HG3	7:F:159:ALA:HB2	1.90	0.53
2:B:2021:C:P	26:0:8:THR:HG21	2.49	0.53
6:E:128:ALA:H	6:E:133:LEU:CD1	2.22	0.53
2:B:1949:G:H2'	2:B:1950:G:H8	1.69	0.53
2:B:674:G:H1'	6:E:69:ARG:NE	2.24	0.53
4:C:12:ARG:HA	4:C:15:VAL:HG23	1.90	0.53
2:B:2774:C:OP1	5:D:169:ARG:HG3	2.08	0.53
6:E:46:GLN:HB3	6:E:86:ALA:HA	1.91	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:947:A:O2'	2:B:984:A:H2	1.92	0.53
6:E:5:LEU:HD22	6:E:122:GLU:HG3	1.91	0.53
2:B:1193:G:H2'	2:B:1194:A:H5''	1.90	0.53
21:U:81:ARG:HB2	21:U:96:LYS:HG3	1.91	0.52
16:P:6:GLN:O	16:P:10:GLU:HG2	2.10	0.52
16:P:3:ILE:CD1	16:P:7:LEU:HD11	2.38	0.52
2:B:851:C:H2'	2:B:852:U:H6	1.74	0.52
31:I:57:VAL:HG23	31:I:71:LYS:NZ	2.24	0.52
25:Z:69:ALA:HA	25:Z:72:ARG:NH2	2.24	0.52
2:B:581:C:H2'	2:B:582:A:H8	1.73	0.52
10:J:25:LEU:HB2	10:J:62:VAL:HG22	1.90	0.52
14:N:108:ALA:O	14:N:110:MET:HE3	2.09	0.52
2:B:418:C:H2'	2:B:419:U:C6	2.44	0.52
2:B:1947:C:H2'	2:B:1948:G:C8	2.44	0.52
2:B:2106:U:H2'	2:B:2107:G:C8	2.44	0.52
2:B:2471:A:O2'	2:B:2472:G:O5'	2.27	0.52
2:B:1771:C:O2'	2:B:1772:A:H5'	2.09	0.52
4:C:20:ASN:OD1	4:C:22:GLU:HG2	2.08	0.52
2:B:969:G:OP1	24:Y:17:PRO:HG3	2.08	0.52
2:B:832:U:H2'	2:B:833:A:C8	2.44	0.52
7:F:133:GLU:HA	7:F:150:GLY:HA2	1.90	0.52
2:B:909:A:H2'	2:B:912:C:H5	1.72	0.52
2:B:2597:G:H5'	4:C:240:GLY:HA3	1.92	0.52
14:N:8:ARG:HG2	14:N:10:LEU:HD22	1.91	0.52
21:U:82:VAL:CG1	21:U:93:ARG:HB3	2.39	0.52
10:J:125:TYR:HH	10:J:132:HIS:CE1	2.26	0.52
7:F:131:VAL:O	7:F:132:ARG:HB2	2.09	0.52
5:D:5:VAL:H	5:D:32:ASN:ND2	1.94	0.52
2:B:2882:A:C3'	2:B:2883:A:H5''	2.39	0.52
8:G:6:ALA:HB3	8:G:68:ARG:NE	2.24	0.52
20:T:29:THR:HA	20:T:86:THR:CA	2.35	0.52
20:T:28:ASN:CA	20:T:91:GLN:HE22	2.20	0.52
10:J:25:LEU:HD22	10:J:26:GLY:N	2.18	0.52
9:H:133:GLN:HB3	9:H:139:PHE:CB	2.39	0.52
2:B:931:U:H3	2:B:1166:G:H21	1.56	0.52
2:B:163:C:O4'	2:B:163:C:O2	2.25	0.52
2:B:2028:U:H2'	2:B:2029:G:C8	2.44	0.52
2:B:993:G:H1'	18:R:91:GLN:NE2	2.25	0.52
2:B:2886:A:H3'	2:B:2887:A:C8	2.42	0.52
1:A:54:G:H21	7:F:25:MET:HE3	1.75	0.52
2:B:989:G:OP2	24:Y:13:ILE:HD11	2.10	0.52
27:1:3:GLY:C	27:1:5:ARG:H	2.11	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:D:46:ARG:NH1	5:D:85:ALA:HA	2.24	0.52
5:D:7:LYS:O	5:D:9:VAL:HG12	2.08	0.52
8:G:19:ASN:HB2	8:G:22:VAL:HB	1.90	0.52
2:B:1332:G:HO2'	2:B:1609:A:H2	1.56	0.52
2:B:2092:U:H4'	2:B:2093:G:H5''	1.90	0.52
3:V:16:ALA:HA	3:V:19:ARG:HE	1.73	0.52
26:O:52:LYS:NZ	26:O:56:LYS:H	2.06	0.52
17:Q:59:LEU:O	17:Q:62:ALA:HB3	2.09	0.52
17:Q:71:ASN:ND2	17:Q:109:VAL:HG11	2.24	0.52
17:Q:71:ASN:ND2	17:Q:73:ILE:HG22	2.24	0.52
4:C:159:THR:O	4:C:194:VAL:HG12	2.09	0.52
5:D:114:LYS:HB2	5:D:116:LYS:HE3	1.91	0.52
31:I:75:ALA:O	31:I:79:LEU:HG	2.10	0.52
8:G:7:PRO:O	8:G:8:VAL:HB	2.09	0.52
2:B:2572:A:OP2	5:D:151:THR:HB	2.09	0.52
2:B:500:G:N2	2:B:502:A:H3'	2.24	0.52
11:K:20:MET:C	11:K:41:ILE:HG13	2.29	0.52
2:B:1790:C:H2'	2:B:1791:A:C8	2.44	0.52
2:B:812:C:H5''	2:B:1250:G:O2'	2.09	0.52
2:B:528:A:C2	2:B:2043:C:H4'	2.44	0.52
2:B:196:A:H2'	2:B:196:A:N3	2.24	0.52
2:B:75:G:H4'	23:X:48:ARG:HH22	1.75	0.52
2:B:1923:U:H2'	2:B:1924:C:H6	1.74	0.52
2:B:2015:A:N3	26:O:2:VAL:HG22	2.23	0.52
2:B:912:C:O2'	2:B:913:U:H5'	2.09	0.52
15:O:30:ARG:HG3	15:O:30:ARG:HH11	1.74	0.52
8:G:88:LEU:O	8:G:88:LEU:HD12	2.09	0.52
15:O:25:ARG:HD2	15:O:93:ASP:HB2	1.90	0.52
2:B:2659:G:N2	2:B:2661:G:H5''	2.23	0.52
2:B:2662:A:H2'	2:B:2663:G:O4'	2.09	0.52
26:O:5:ASN:O	26:O:7:PRO:HD3	2.09	0.52
10:J:42:ALA:O	10:J:44:TYR:N	2.43	0.52
13:M:97:GLN:HB2	13:M:98:PRO:CD	2.39	0.52
2:B:1021:A:H61	2:B:1142:A:H61	1.58	0.52
23:X:3:ALA:O	23:X:6:LEU:HB2	2.09	0.52
3:V:1:MET:O	3:V:62:THR:HG23	2.09	0.52
2:B:718:A:H3'	2:B:719:C:C6	2.42	0.52
2:B:729:G:C8	4:C:206:LYS:HE3	2.44	0.52
2:B:1196:C:H2'	2:B:1197:G:C8	2.44	0.52
16:P:31:VAL:HG12	16:P:38:ARG:O	2.09	0.52
2:B:2813:A:H2'	2:B:2814:A:H8	1.74	0.52
2:B:1442:U:H2'	2:B:1443:U:H6	1.73	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:105:ARG:HD2	11:K:122:VAL:HG11	1.91	0.52
5:D:13:ARG:HD3	5:D:15:PHE:CE1	2.45	0.52
2:B:1130:U:O2	2:B:2025:C:H5''	2.10	0.52
2:B:405:U:H4'	2:B:405:U:OP2	2.10	0.52
7:F:72:SER:CA	7:F:80:GLN:H	2.20	0.52
2:B:2592:G:H2'	2:B:2593:U:O4'	2.10	0.52
2:B:1828:G:O6	4:C:220:ARG:HD2	2.10	0.52
5:D:90:PHE:N	5:D:94:GLN:OE1	2.42	0.52
2:B:1854:A:N6	2:B:1888:G:H1'	2.24	0.52
2:B:1847:A:H4'	2:B:1848:A:H8	1.74	0.52
2:B:2529:G:H4'	8:G:174:LYS:HD2	1.90	0.52
2:B:753:A:H2'	2:B:754:U:H6	1.72	0.52
2:B:1642:G:O2'	2:B:1643:G:H5'	2.10	0.52
5:D:154:LYS:H	5:D:154:LYS:HD3	1.74	0.52
4:C:6:LYS:HB3	4:C:8:THR:HG22	1.92	0.52
2:B:2543:G:H8	2:B:2543:G:H5'	1.74	0.52
2:B:283:G:H2'	2:B:284:U:O4'	2.10	0.52
7:F:3:LEU:HD11	7:F:172:PHE:CG	2.45	0.52
2:B:138:U:H5''	2:B:139:U:OP1	2.09	0.52
5:D:116:LYS:HB3	5:D:118:PHE:CZ	2.44	0.52
22:W:17:ALA:HA	22:W:35:ILE:CG2	2.38	0.52
22:W:59:PHE:CE2	22:W:61:LYS:HG3	2.45	0.52
14:N:28:LEU:HD12	14:N:48:VAL:HG21	1.91	0.52
14:N:49:GLU:HA	14:N:94:TYR:HD2	1.74	0.52
14:N:106:ASP:C	14:N:108:ALA:H	2.12	0.52
11:K:101:GLY:HA2	16:P:65:ASN:HB2	1.92	0.52
28:2:30:VAL:HA	28:2:33:ARG:HH21	1.75	0.52
3:V:9:ARG:CZ	3:V:20:LEU:HD11	2.40	0.52
2:B:2298:A:H2'	2:B:2299:U:O4'	2.09	0.52
20:T:81:LYS:HG3	20:T:82:LYS:N	2.24	0.52
2:B:812:C:H4'	17:Q:12:ARG:NH2	2.23	0.52
2:B:2144:G:C2	2:B:2146:C:H5'	2.44	0.52
2:B:693:A:H2'	2:B:694:U:C6	2.44	0.52
2:B:2657:A:H2'	2:B:2658:C:O4'	2.10	0.52
2:B:100:U:OP1	2:B:100:U:H3'	2.09	0.52
2:B:1453:A:H4'	2:B:1453:A:OP1	2.10	0.52
2:B:1607:C:H4'	2:B:1608:A:O5'	2.09	0.52
12:L:92:LEU:HD21	12:L:123:ARG:NH1	2.25	0.52
2:B:587:C:N3	12:L:33:ARG:NH2	2.57	0.52
9:H:5:LEU:HD13	9:H:13:GLY:HA2	1.92	0.52
16:P:50:ARG:HB3	16:P:56:SER:HB3	1.92	0.52
2:B:161:A:C3'	2:B:162:U:H5''	2.37	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2617:U:C2'	2:B:2618:G:H5'	2.39	0.52
8:G:154:GLU:C	8:G:156:TYR:H	2.13	0.52
8:G:152:ARG:HH11	8:G:162:ARG:HA	1.75	0.52
14:N:63:ARG:O	14:N:66:ALA:HB3	2.09	0.52
20:T:59:ASN:O	20:T:84:TYR:HB2	2.10	0.52
2:B:2329:U:H2'	2:B:2330:G:C8	2.44	0.52
2:B:1826:G:H2'	2:B:1827:U:H6	1.75	0.52
12:L:73:ILE:O	12:L:105:ILE:HG23	2.09	0.52
2:B:946:C:H2'	2:B:947:A:C8	2.44	0.52
2:B:296:U:H2'	2:B:297:G:C8	2.44	0.52
2:B:2083:G:H2'	2:B:2084:C:C6	2.45	0.52
17:Q:71:ASN:HD21	17:Q:109:VAL:HG11	1.75	0.52
4:C:183:VAL:HG22	4:C:184:GLU:H	1.75	0.52
19:S:24:ILE:HG23	19:S:32:ALA:HB1	1.91	0.52
25:Z:63:GLY:HA3	25:Z:66:THR:OG1	2.10	0.52
2:B:582:A:H2'	2:B:583:G:H8	1.74	0.52
2:B:2548:U:H1'	11:K:23:LYS:NZ	2.24	0.52
8:G:84:LYS:H	8:G:85:LYS:HD2	1.75	0.52
10:J:81:ILE:HG23	10:J:82:GLY:N	2.21	0.52
7:F:104:THR:HB	7:F:105:ILE:HD12	1.92	0.52
31:I:126:ARG:NH1	31:I:126:ARG:HB3	2.24	0.52
2:B:1886:U:H2'	2:B:1887:C:C6	2.45	0.52
15:O:24:THR:O	15:O:90:VAL:HB	2.10	0.52
12:L:73:ILE:HD12	12:L:106:GLU:HB2	1.90	0.52
2:B:1219:U:H2'	2:B:1220:G:H8	1.73	0.52
2:B:1395:A:H4'	2:B:1397:U:C5	2.45	0.52
2:B:257:C:H2'	2:B:258:G:O4'	2.09	0.52
9:H:72:ILE:HG23	9:H:108:VAL:HG11	1.92	0.52
31:I:63:ASP:O	31:I:64:ARG:HB2	2.09	0.52
2:B:1979:U:O2'	2:B:1980:G:H5'	2.10	0.52
2:B:338:G:N2	2:B:339:U:H1'	2.24	0.52
2:B:1099:G:H5''	31:I:2:LYS:HB2	1.92	0.52
5:D:180:VAL:HG22	5:D:187:LEU:CD1	2.40	0.52
2:B:857:G:O2'	22:W:19:ARG:HD2	2.10	0.52
22:W:36:ILE:O	22:W:39:GLN:HB3	2.09	0.52
12:L:61:LEU:HD12	12:L:61:LEU:N	2.25	0.52
31:I:32:VAL:HG22	31:I:60:VAL:CG2	2.40	0.52
2:B:1387:A:H2'	2:B:1388:G:H8	1.73	0.52
2:B:2577:A:H5''	2:B:2578:G:H5'	1.90	0.52
25:Z:21:ALA:HB3	25:Z:23:ASN:HD21	1.73	0.52
2:B:182:A:H2'	2:B:183:C:H6	1.74	0.52
1:A:54:G:H21	7:F:25:MET:CE	2.22	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:30:C:O2	1:A:30:C:H2'	2.09	0.52
2:B:1221:C:O2'	2:B:1222:U:H5'	2.10	0.52
2:B:438:G:H2'	2:B:439:A:C8	2.45	0.52
8:G:93:TYR:C	8:G:94:ARG:HG3	2.29	0.52
2:B:1863:G:H2'	2:B:1864:U:O4'	2.09	0.52
2:B:1688:U:H2'	2:B:1698:A:N6	2.25	0.52
2:B:519:U:H2'	2:B:520:G:H8	1.74	0.52
2:B:1720:U:O2'	2:B:1721:G:H5'	2.10	0.52
5:D:16:THR:HB	5:D:18:ASP:OD1	2.10	0.52
2:B:1100:C:H2'	2:B:1101:U:C6	2.42	0.52
11:K:34:GLY:O	11:K:36:GLY:N	2.43	0.52
5:D:164:GLN:HG3	5:D:165:MET:N	2.23	0.52
2:B:2336:A:H61	22:W:40:ARG:HG3	1.74	0.52
19:S:17:VAL:C	19:S:19:LEU:N	2.64	0.52
2:B:964:C:O2'	2:B:2273:A:H1'	2.09	0.52
20:T:11:LEU:CD2	20:T:46:ALA:HB1	2.40	0.52
27:1:8:ILE:HD11	27:1:52:LYS:HG3	1.90	0.52
2:B:1482:G:H2'	2:B:1483:G:H8	1.75	0.52
31:I:45:THR:HA	31:I:48:ILE:CG2	2.40	0.52
2:B:1571:A:H2'	2:B:1572:A:C8	2.45	0.52
2:B:2805:C:O2'	2:B:2806:C:H5'	2.10	0.52
2:B:1373:A:H5''	2:B:2213:U:O4	2.10	0.52
2:B:2751:G:OP2	8:G:2:ARG:HD2	2.10	0.52
1:A:14:U:H4'	1:A:70:C:O2	2.09	0.52
2:B:1259:G:H2'	2:B:1260:A:C8	2.45	0.52
2:B:41:C:H2'	2:B:42:A:H8	1.74	0.52
22:W:32:ALA:C	22:W:34:SER:H	2.12	0.52
2:B:925:A:O2'	2:B:926:G:H5'	2.10	0.52
17:Q:90:ASP:O	17:Q:94:LEU:HB2	2.09	0.51
2:B:141:G:H3'	2:B:141:G:N3	2.24	0.51
14:N:2:ARG:HE	14:N:2:ARG:C	2.14	0.51
31:I:54:ILE:C	31:I:54:ILE:HD13	2.29	0.51
2:B:2786:U:H5''	5:D:70:LYS:HG3	1.92	0.51
2:B:2809:A:H2'	2:B:2810:A:C8	2.45	0.51
2:B:2570:G:H2'	2:B:2571:U:O4'	2.10	0.51
20:T:57:VAL:HG12	20:T:86:THR:OG1	2.09	0.51
6:E:161:ALA:CA	6:E:164:LEU:HB2	2.35	0.51
18:R:60:LYS:N	18:R:100:GLY:HA3	2.23	0.51
2:B:165:A:H2'	2:B:166:U:C6	2.45	0.51
3:V:70:ILE:HD13	3:V:70:ILE:N	2.23	0.51
2:B:245:G:H2'	2:B:246:C:H6	1.75	0.51
28:2:43:THR:O	28:2:44:VAL:C	2.47	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2151:U:O2'	2:B:2152:G:H5'	2.10	0.51
3:V:77:VAL:HA	3:V:89:ILE:HG22	1.90	0.51
2:B:2868:A:H2'	2:B:2869:G:C8	2.45	0.51
7:F:62:GLN:HE22	7:F:90:LEU:HA	1.75	0.51
17:Q:94:LEU:CD2	18:R:11:GLN:HB2	2.40	0.51
25:Z:40:VAL:HG22	25:Z:45:ARG:O	2.10	0.51
2:B:1063:G:H4'	31:I:135:MET:HG2	1.91	0.51
2:B:2674:G:H2'	2:B:2675:A:C8	2.46	0.51
9:H:135:HIS:CG	9:H:136:SER:H	2.29	0.51
2:B:299:A:H2'	2:B:300:A:C8	2.46	0.51
2:B:1021:A:H62	2:B:1141:U:H3	1.57	0.51
30:4:8:LYS:O	30:4:25:VAL:HG21	2.10	0.51
2:B:504:A:N3	2:B:504:A:H2'	2.24	0.51
2:B:1454:C:C5	14:N:64:ARG:HG2	2.45	0.51
18:R:49:ILE:HB	18:R:53:PHE:O	2.10	0.51
2:B:980:A:C6	2:B:981:A:N1	2.79	0.51
2:B:1260:A:H2'	2:B:1261:C:H6	1.75	0.51
13:M:134:THR:HG22	13:M:136:MET:H	1.74	0.51
22:W:45:HIS:HB3	22:W:52:CYS:HB2	1.92	0.51
2:B:545:U:H4'	2:B:550:C:C2	2.45	0.51
12:L:142:ILE:HG22	12:L:143:GLU:N	2.24	0.51
2:B:2336:A:N6	22:W:40:ARG:HG3	2.25	0.51
22:W:37:VAL:CG1	22:W:38:ARG:HH11	2.22	0.51
25:Z:68:LEU:HB3	25:Z:78:TYR:CE1	2.46	0.51
6:E:58:LYS:HD3	6:E:58:LYS:N	2.16	0.51
2:B:199:A:O2'	2:B:200:U:H5'	2.10	0.51
6:E:153:LEU:HG	6:E:154:ASP:N	2.25	0.51
2:B:720:U:H2'	2:B:721:A:H8	1.75	0.51
2:B:2728:U:H2'	2:B:2729:G:C8	2.45	0.51
2:B:495:G:H1'	19:S:57:ASN:ND2	2.25	0.51
2:B:154:U:H2'	2:B:155:A:H8	1.74	0.51
10:J:106:LYS:HA	10:J:106:LYS:HE3	1.93	0.51
2:B:526:A:N6	2:B:2626:C:H4'	2.26	0.51
2:B:644:A:N3	2:B:644:A:H2'	2.24	0.51
2:B:2411:A:H2'	2:B:2412:A:C8	2.45	0.51
21:U:48:VAL:HG13	21:U:48:VAL:O	2.10	0.51
4:C:53:ILE:O	4:C:53:ILE:HG23	2.10	0.51
2:B:2880:C:O4'	14:N:91:ALA:HB3	2.10	0.51
2:B:664:G:H2'	2:B:665:U:C6	2.45	0.51
25:Z:33:LEU:O	25:Z:34:HIS:CG	2.64	0.51
2:B:117:G:H5'	2:B:126:A:C8	2.29	0.51
3:V:57:TYR:HA	3:V:74:ALA:HB3	1.92	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2352:A:N1	22:W:30:VAL:HG11	2.25	0.51
18:R:80:ARG:O	18:R:81:LYS:HD3	2.11	0.51
2:B:836:G:H2'	2:B:837:C:H6	1.70	0.51
4:C:211:ARG:C	4:C:213:ARG:H	2.13	0.51
28:2:31:LEU:HD22	28:2:42:LEU:HD12	1.92	0.51
2:B:975:A:H1'	2:B:990:A:C2	2.45	0.51
2:B:948:C:H2'	2:B:949:G:C8	2.45	0.51
12:L:42:SER:C	12:L:44:GLY:H	2.13	0.51
2:B:693:A:OP1	4:C:38:LYS:HG2	2.11	0.51
2:B:1820:U:H4'	2:B:1821:A:OP2	2.11	0.51
16:P:103:THR:HG22	16:P:104:GLY:N	2.25	0.51
2:B:839:U:H2'	2:B:840:C:H6	1.76	0.51
5:D:9:VAL:O	5:D:9:VAL:HG13	2.11	0.51
2:B:188:G:OP1	25:Z:14:THR:HG23	2.10	0.51
22:W:70:VAL:O	22:W:70:VAL:HG22	2.11	0.51
2:B:1256:G:H21	6:E:77:ILE:HG22	1.74	0.51
2:B:281:C:H2'	2:B:282:A:C8	2.44	0.51
7:F:62:GLN:HG3	7:F:91:ARG:NH1	2.25	0.51
2:B:4:U:H2'	2:B:5:A:C8	2.45	0.51
6:E:29:HIS:NE2	12:L:8:PRO:HG3	2.24	0.51
4:C:141:HIS:NE2	4:C:194:VAL:HB	2.26	0.51
2:B:38:A:N3	6:E:43:THR:HB	2.25	0.51
2:B:200:U:O2'	25:Z:22:LEU:HD12	2.10	0.51
2:B:58:G:N3	2:B:73:A:H2	2.08	0.51
6:E:1:MET:HB2	6:E:16:GLU:HB2	1.91	0.51
2:B:2634:A:H2'	2:B:2635:A:C8	2.45	0.51
2:B:642:U:HO2'	2:B:643:A:H8	1.57	0.51
23:X:18:LEU:O	23:X:22:LEU:HB3	2.10	0.51
2:B:455:C:N3	2:B:472:A:H2'	2.26	0.51
2:B:1117:C:H2'	2:B:1118:C:C6	2.46	0.51
2:B:1565:C:H5''	4:C:17:LYS:HE2	1.92	0.51
2:B:544:C:H2'	2:B:545:U:C5	2.45	0.51
19:S:24:ILE:HD11	19:S:36:LEU:CD1	2.31	0.51
14:N:38:LEU:CB	14:N:39:PRO:HD3	2.38	0.51
7:F:47:LYS:HA	7:F:50:ASP:OD1	2.10	0.51
31:I:85:ILE:CD1	31:I:137:LEU:HD21	2.40	0.51
28:2:19:ARG:HG2	28:2:19:ARG:HH21	1.74	0.51
16:P:20:ARG:NE	16:P:91:VAL:HG21	2.22	0.51
9:H:65:ALA:HA	9:H:68:ARG:CG	2.40	0.51
7:F:134:GLN:HB3	7:F:149:ARG:HB3	1.93	0.51
2:B:877:A:H2'	2:B:900:A:N6	2.26	0.51
22:W:30:VAL:HA	22:W:60:ALA:O	2.10	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:19:VAL:C	11:K:41:ILE:HD11	2.31	0.51
6:E:182:ALA:O	6:E:183:PHE:HB2	2.11	0.51
2:B:2471:A:O2'	2:B:2472:G:C8	2.59	0.51
1:A:54:G:O2'	1:A:55:U:H5'	2.10	0.51
15:O:66:GLY:HA2	15:O:102:ARG:NE	2.26	0.51
2:B:1041:G:C2	2:B:1042:G:N7	2.79	0.51
8:G:10:VAL:CG1	8:G:16:VAL:HG21	2.40	0.51
2:B:2015:A:H2'	2:B:2016:U:O4'	2.10	0.51
2:B:2093:G:O5'	9:H:24:GLY:HA3	2.10	0.51
2:B:664:G:H2'	2:B:665:U:H6	1.76	0.51
2:B:813:U:H2'	2:B:814:C:H6	1.76	0.51
12:L:81:ASP:HA	12:L:84:LYS:HD2	1.92	0.51
1:A:109:A:H2'	1:A:110:C:O4'	2.10	0.51
4:C:43:ASN:HB2	4:C:49:THR:CG2	2.40	0.51
31:I:78:LEU:HD13	31:I:108:ILE:HG23	1.92	0.51
3:V:44:HIS:CE1	3:V:85:LYS:HB2	2.46	0.51
10:J:89:PHE:CE1	10:J:93:ILE:HD13	2.45	0.51
16:P:56:SER:HB2	16:P:75:THR:HB	1.93	0.51
7:F:102:LEU:HA	7:F:106:ALA:HB3	1.91	0.51
2:B:289:G:H2'	2:B:290:U:H6	1.76	0.51
2:B:973:A:O4'	2:B:1188:U:C6	2.64	0.51
2:B:1000:A:H2'	2:B:1001:A:H8	1.74	0.51
4:C:245:THR:C	4:C:247:TRP:H	2.14	0.51
2:B:1163:G:H4'	18:R:92:TRP:CD1	2.45	0.51
2:B:1219:U:H2'	2:B:1220:G:C8	2.46	0.51
2:B:2078:C:O2'	2:B:2079:U:H5'	2.11	0.51
9:H:1:MET:HE3	9:H:26:ALA:HB3	1.93	0.51
2:B:2398:U:H2'	2:B:2399:G:C8	2.45	0.51
15:O:110:ALA:HA	15:O:113:ALA:HB3	1.92	0.51
10:J:71:ASP:HA	10:J:88:THR:OG1	2.11	0.51
2:B:757:G:H2'	2:B:758:C:H5'	1.92	0.51
25:Z:2:SER:O	25:Z:4:VAL:HG13	2.11	0.51
1:A:42:C:C6	7:F:65:LEU:HD13	2.46	0.51
17:Q:59:LEU:HD13	17:Q:60:TRP:N	2.26	0.51
5:D:10:GLY:HA2	16:P:4:ILE:HD11	1.91	0.51
2:B:855:G:H21	22:W:23:LYS:CG	2.15	0.51
22:W:23:LYS:NZ	22:W:24:ARG:HG3	2.26	0.51
14:N:115:LEU:O	14:N:117:ASP:N	2.44	0.51
11:K:47:ILE:CG1	11:K:48:PRO:HD2	2.36	0.51
16:P:20:ARG:HB3	16:P:23:ASP:CG	2.32	0.51
11:K:115:ILE:HG23	11:K:116:ILE:N	2.26	0.51
15:O:36:TYR:HA	15:O:52:SER:HB3	1.92	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2070:A:H2'	2:B:2071:A:C8	2.46	0.51
2:B:1857:G:O2'	2:B:1858:A:H8	1.92	0.51
5:D:34:VAL:HG12	5:D:94:GLN:H	1.75	0.51
21:U:11:ILE:HD13	21:U:11:ILE:O	2.11	0.51
18:R:49:ILE:O	18:R:49:ILE:HD12	2.11	0.51
2:B:1046:A:H3'	2:B:1047:G:C5'	2.41	0.51
2:B:2634:A:H2'	2:B:2635:A:H8	1.76	0.51
2:B:1319:C:O2'	2:B:1320:C:H5'	2.11	0.51
2:B:2514:U:H2'	2:B:2515:C:C6	2.46	0.51
4:C:115:ILE:HA	4:C:124:LYS:NZ	2.26	0.51
2:B:1726:C:H2'	2:B:1727:C:C6	2.46	0.51
2:B:464:U:H2'	2:B:465:G:O4'	2.11	0.51
2:B:1098:A:C3'	31:I:4:VAL:N	2.73	0.51
2:B:1242:U:H2'	2:B:1243:C:C6	2.46	0.51
31:I:85:ILE:HD12	31:I:87:SER:O	2.10	0.51
2:B:2394:C:H2'	2:B:2395:C:C6	2.46	0.51
5:D:151:THR:HB	5:D:152:PRO:HD3	1.93	0.51
11:K:105:ARG:HD2	11:K:105:ARG:H	1.76	0.51
15:O:58:ILE:O	15:O:62:LEU:HB2	2.11	0.51
18:R:7:SER:HB2	18:R:22:LEU:CB	2.40	0.51
2:B:2258:C:H5'	2:B:2259:U:C5	2.40	0.51
9:H:94:ILE:HG22	9:H:122:LEU:CB	2.40	0.51
11:K:43:ILE:CG2	11:K:46:ALA:HB2	2.41	0.51
20:T:38:ALA:HB3	20:T:81:LYS:HZ3	1.74	0.51
23:X:26:PHE:HD1	23:X:27:ASN:ND2	2.07	0.51
2:B:1827:U:C2'	2:B:1828:G:H5'	2.41	0.51
2:B:2460:U:O5'	2:B:2460:U:H6	1.93	0.51
6:E:98:LYS:NZ	6:E:99:LYS:HG2	2.26	0.51
4:C:136:VAL:HG12	4:C:137:GLY:N	2.26	0.51
2:B:2283:C:H5''	2:B:2389:G:O2'	2.11	0.51
9:H:103:VAL:HG22	9:H:108:VAL:O	2.11	0.51
2:B:1584:U:H5''	2:B:1585:C:C5	2.46	0.51
8:G:123:GLU:O	8:G:125:PRO:HD3	2.11	0.51
2:B:2408:U:O2'	2:B:2409:G:H5'	2.11	0.51
19:S:23:LEU:HD21	26:O:21:LEU:HB3	1.92	0.51
1:A:51:G:OP1	15:O:63:LYS:HE3	2.11	0.51
2:B:1098:A:C4	31:I:3:LYS:O	2.63	0.51
7:F:62:GLN:HB2	7:F:91:ARG:HH11	1.75	0.51
10:J:44:TYR:O	10:J:45:THR:HB	2.10	0.51
2:B:1245:G:OP1	12:L:13:LYS:HE3	2.11	0.51
12:L:2:ARG:HG2	12:L:2:ARG:O	2.10	0.51
5:D:10:GLY:O	5:D:11:MET:HB2	2.11	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:124:GLY:N	12:L:143:GLU:HG3	2.24	0.51
12:L:110:VAL:HG23	12:L:126:ARG:O	2.11	0.51
4:C:142:ASN:CG	4:C:142:ASN:O	2.49	0.51
12:L:18:ARG:C	12:L:19:LEU:HD12	2.31	0.51
2:B:2269:G:H4'	22:W:19:ARG:NH1	2.20	0.51
10:J:25:LEU:O	10:J:27:ARG:N	2.43	0.51
10:J:64:VAL:HG22	10:J:68:LYS:HD3	1.93	0.51
4:C:91:ALA:CB	4:C:105:ALA:HB2	2.40	0.51
2:B:1792:G:P	4:C:204:LEU:HD12	2.51	0.51
2:B:460:A:H4'	20:T:72:GLN:HB2	1.92	0.51
12:L:135:ILE:HG12	12:L:140:GLY:CA	2.40	0.51
2:B:1742:U:H2'	2:B:1743:G:C8	2.45	0.51
2:B:1099:G:O2'	2:B:1100:C:H5'	2.11	0.50
7:F:86:CYS:O	7:F:88:VAL:HG23	2.12	0.50
4:C:43:ASN:HD22	4:C:44:ASN:H	1.59	0.50
17:Q:94:LEU:HD12	18:R:13:ARG:HB2	1.93	0.50
6:E:32:VAL:HG23	6:E:33:VAL:N	2.25	0.50
4:C:171:VAL:HG23	4:C:185:ALA:HB2	1.92	0.50
13:M:40:ARG:HB3	13:M:95:LEU:HD12	1.92	0.50
9:H:48:GLU:CB	9:H:51:ARG:HH21	2.15	0.50
2:B:1509:A:H5''	2:B:1509:A:C8	2.46	0.50
23:X:17:GLU:HB3	23:X:53:VAL:CG1	2.40	0.50
2:B:917:A:C2	2:B:918:A:H1'	2.46	0.50
8:G:148:ARG:HD3	8:G:152:ARG:NE	2.26	0.50
11:K:17:ARG:HB3	11:K:45:GLU:CG	2.40	0.50
2:B:2885:G:H2'	2:B:2886:A:C4'	2.41	0.50
5:D:8:LYS:HB2	5:D:201:LEU:HD11	1.93	0.50
21:U:11:ILE:HA	21:U:21:ARG:HG2	1.93	0.50
2:B:1401:G:H2'	2:B:1402:U:C6	2.46	0.50
11:K:8:LEU:HD12	11:K:8:LEU:H	1.76	0.50
2:B:1430:G:H2'	2:B:1431:A:O4'	2.10	0.50
2:B:942:G:H2'	2:B:943:A:H8	1.76	0.50
11:K:79:PHE:CD1	11:K:79:PHE:N	2.78	0.50
19:S:84:ARG:HB3	19:S:96:ILE:HG23	1.93	0.50
30:4:10:LEU:HD22	30:4:33:HIS:CD2	2.46	0.50
2:B:815:C:OP2	18:R:85:LYS:HE2	2.11	0.50
2:B:212:G:H2'	2:B:213:A:H8	1.76	0.50
5:D:35:THR:OG1	5:D:49:GLN:HG2	2.11	0.50
2:B:2838:G:H2'	2:B:2839:G:H8	1.76	0.50
2:B:623:C:H2'	2:B:624:C:C6	2.46	0.50
21:U:80:ASP:HB2	21:U:95:PHE:HD2	1.75	0.50
10:J:57:LEU:CD2	10:J:128:ASN:HA	2.40	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:128:THR:CA	4:C:190:THR:HG22	2.36	0.50
24:Y:37:ARG:HG2	24:Y:43:ILE:CD1	2.42	0.50
2:B:2811:G:O2'	2:B:2812:G:H5'	2.11	0.50
16:P:112:ARG:HB2	16:P:112:ARG:NH1	2.27	0.50
11:K:4:GLU:OE2	11:K:23:LYS:HD2	2.11	0.50
9:H:114:GLU:CB	9:H:133:GLN:HG3	2.40	0.50
15:O:111:ARG:HG2	15:O:117:PHE:CZ	2.47	0.50
4:C:209:ALA:HA	4:C:212:TRP:CE2	2.47	0.50
2:B:230:G:H2'	2:B:231:A:H8	1.75	0.50
6:E:48:THR:HG23	6:E:51:GLU:OE2	2.10	0.50
6:E:1:MET:HB3	6:E:14:VAL:O	2.11	0.50
2:B:832:U:O2	12:L:52:GLY:HA2	2.11	0.50
2:B:2875:C:H2'	2:B:2876:G:C8	2.46	0.50
2:B:1930:G:H2'	2:B:1968:G:N1	2.26	0.50
2:B:2544:G:O2'	2:B:2545:G:H5'	2.11	0.50
2:B:2798:U:H5''	2:B:2799:A:OP1	2.11	0.50
21:U:73:ASN:C	21:U:75:ALA:H	2.15	0.50
2:B:2567:G:H2'	2:B:2568:U:C6	2.46	0.50
20:T:4:GLU:OE1	20:T:5:GLU:HG2	2.11	0.50
9:H:113:SER:N	9:H:132:PHE:CZ	2.79	0.50
9:H:48:GLU:HA	9:H:51:ARG:NE	2.26	0.50
22:W:9:THR:HG23	22:W:10:ARG:CD	2.34	0.50
27:1:6:GLU:HB2	27:1:52:LYS:HZ3	1.77	0.50
2:B:1140:C:H2'	2:B:1141:U:H5'	1.94	0.50
2:B:920:A:H2'	2:B:921:C:H6	1.76	0.50
2:B:358:U:H2'	2:B:359:G:C8	2.46	0.50
2:B:591:U:H1'	29:3:1:PRO:H2	1.76	0.50
2:B:1197:G:O2'	2:B:1198:U:H5'	2.12	0.50
21:U:94:PHE:HA	21:U:101:THR:HA	1.93	0.50
2:B:1881:C:H2'	2:B:1882:U:O4'	2.12	0.50
2:B:2515:C:H2'	2:B:2516:A:H8	1.76	0.50
3:V:16:ALA:CA	3:V:19:ARG:HH21	2.24	0.50
2:B:2543:G:H2'	2:B:2544:G:C8	2.46	0.50
15:O:56:LYS:O	15:O:57:ALA:C	2.49	0.50
23:X:13:GLU:HA	23:X:16:THR:OG1	2.11	0.50
2:B:425:G:O2'	2:B:426:C:H5'	2.12	0.50
22:W:27:GLY:O	22:W:63:ASP:HA	2.11	0.50
1:A:60:C:H2'	1:A:61:G:H8	1.77	0.50
31:I:2:LYS:C	31:I:3:LYS:HD2	2.32	0.50
7:F:91:ARG:O	7:F:92:GLY:C	2.49	0.50
2:B:1060:U:O2	2:B:1088:A:C8	2.64	0.50
2:B:2849:U:H4'	2:B:2850:A:H5'	1.93	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2072:C:O2'	2:B:2073:C:H5'	2.11	0.50
2:B:1858:A:H2'	2:B:1859:U:O4'	2.11	0.50
2:B:2872:A:H1'	2:B:2873:A:C8	2.46	0.50
6:E:170:ARG:NH2	6:E:176:ASP:HB2	2.26	0.50
2:B:588:U:H2'	2:B:589:U:C6	2.46	0.50
2:B:1796:U:O2'	2:B:1797:G:H5'	2.11	0.50
4:C:246:PRO:HB2	4:C:247:TRP:CZ3	2.46	0.50
4:C:173:LEU:HD13	4:C:173:LEU:N	2.25	0.50
1:A:7:G:O2'	1:A:8:C:H5'	2.11	0.50
12:L:47:ARG:HH21	12:L:47:ARG:HB3	1.76	0.50
2:B:2421:G:N7	29:3:30:HIS:NE2	2.58	0.50
29:3:16:THR:C	29:3:18:LYS:H	2.14	0.50
2:B:1511:G:H2'	2:B:1512:C:H6	1.75	0.50
11:K:10:VAL:HG21	11:K:16:ALA:HA	1.92	0.50
2:B:1099:G:H3'	31:I:2:LYS:HA	1.93	0.50
7:F:33:ILE:HG12	7:F:155:ILE:HG13	1.94	0.50
1:A:43:C:O2'	7:F:91:ARG:HD2	2.12	0.50
14:N:55:ALA:HA	14:N:80:PHE:CE1	2.47	0.50
2:B:1064:C:H5''	31:I:87:SER:OG	2.11	0.50
10:J:36:LEU:HD13	10:J:121:LYS:HE3	1.93	0.50
5:D:148:GLN:HG3	5:D:152:PRO:CB	2.42	0.50
8:G:26:LYS:CA	8:G:32:LEU:H	2.16	0.50
20:T:57:VAL:HG22	20:T:58:VAL:N	2.20	0.50
20:T:66:LYS:N	20:T:76:ARG:NH2	2.59	0.50
2:B:288:U:C2'	2:B:289:G:H5'	2.41	0.50
1:A:3:C:H2'	1:A:4:C:C6	2.47	0.50
7:F:71:LYS:O	7:F:72:SER:HB3	2.11	0.50
9:H:27:ARG:CZ	25:Z:60:ASP:HA	2.41	0.50
2:B:1794:A:O2'	2:B:1795:C:H5'	2.12	0.50
2:B:204:A:H4'	2:B:205:G:OP1	2.11	0.50
8:G:116:LEU:HD23	8:G:121:THR:HA	1.94	0.50
2:B:1229:C:H2'	2:B:1230:A:C8	2.47	0.50
2:B:1210:G:C5'	2:B:1212:G:H5''	2.42	0.50
2:B:490:C:H3'	2:B:491:G:H5''	1.94	0.50
31:I:1:ALA:C	31:I:2:LYS:HD2	2.32	0.50
2:B:1812:U:O2'	4:C:43:ASN:ND2	2.44	0.50
17:Q:80:ASN:ND2	17:Q:81:GLY:H	2.09	0.50
13:M:73:ILE:HG13	13:M:93:VAL:HB	1.94	0.50
18:R:16:GLU:CA	18:R:98:ILE:HG22	2.39	0.50
18:R:19:THR:CG2	18:R:97:LYS:HD2	2.42	0.50
3:V:30:ILE:HG23	3:V:72:VAL:HG11	1.92	0.50
27:1:6:GLU:HB2	27:1:52:LYS:CE	2.42	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:T:68:LYS:O	20:T:69:ARG:CB	2.59	0.50
2:B:2294:G:P	15:O:94:ARG:HH11	2.35	0.50
2:B:1857:G:H2'	2:B:1884:G:H22	1.76	0.50
2:B:279:A:N6	2:B:361:G:O2'	2.44	0.50
6:E:67:ARG:HD2	6:E:68:ALA:O	2.11	0.50
2:B:1779:U:C5	2:B:1784:A:N7	2.79	0.50
2:B:1841:U:C2	2:B:1842:G:C8	3.00	0.50
2:B:2341:G:H2'	2:B:2342:C:C6	2.46	0.50
2:B:1047:G:H1'	2:B:1111:A:N6	2.27	0.50
20:T:9:LYS:O	20:T:9:LYS:HG2	2.12	0.50
6:E:5:LEU:CD1	6:E:10:SER:HB2	2.42	0.50
2:B:41:C:H2'	2:B:42:A:C8	2.45	0.50
2:B:688:U:O2'	2:B:689:A:H5'	2.12	0.50
5:D:56:LYS:HG3	5:D:58:ASN:HB2	1.93	0.50
2:B:696:G:O2'	2:B:697:G:H5'	2.11	0.50
2:B:475:C:H4'	2:B:509:C:H2'	1.94	0.50
7:F:62:GLN:HB2	7:F:91:ARG:HE	1.77	0.50
10:J:52:ASP:O	10:J:54:ILE:HG22	2.11	0.50
31:I:128:ILE:HA	31:I:131:THR:CG2	2.41	0.50
31:I:131:THR:O	31:I:135:MET:HG3	2.11	0.50
10:J:36:LEU:O	10:J:51:GLY:HA3	2.11	0.50
8:G:42:VAL:HG23	8:G:50:THR:O	2.12	0.50
8:G:51:PHE:CD2	8:G:68:ARG:HG2	2.47	0.50
5:D:149:ASN:C	5:D:152:PRO:HD2	2.32	0.50
2:B:2734:A:H2'	2:B:2735:G:C5'	2.40	0.50
27:1:29:LYS:N	27:1:30:PRO:HD3	2.26	0.50
11:K:18:ARG:O	11:K:45:GLU:HB2	2.11	0.50
2:B:992:C:H2'	2:B:993:G:H8	1.76	0.50
2:B:358:U:H6	2:B:358:U:O5'	1.94	0.50
2:B:2487:G:H2'	2:B:2488:G:H8	1.77	0.50
2:B:1747:U:H2'	2:B:1748:C:H6	1.76	0.50
2:B:2246:G:H2'	2:B:2247:A:C8	2.47	0.50
12:L:120:VAL:HG12	12:L:121:THR:N	2.27	0.50
2:B:817:C:H2'	2:B:818:G:O4'	2.12	0.50
2:B:1049:C:O2	2:B:1113:U:H4'	2.12	0.50
2:B:315:G:H2'	2:B:316:C:C6	2.46	0.50
2:B:2519:U:C6	2:B:2542:A:N6	2.80	0.50
17:Q:81:GLY:HA3	17:Q:116:LEU:CD1	2.42	0.50
4:C:77:VAL:HG23	4:C:112:GLY:N	2.08	0.50
5:D:117:GLY:O	5:D:119:ALA:N	2.44	0.50
2:B:2305:U:H4'	7:F:132:ARG:NE	2.27	0.50
9:H:31:VAL:CB	9:H:32:PRO:HD3	2.33	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:T:43:ILE:O	20:T:47:VAL:HG23	2.12	0.50
2:B:704:G:H1'	2:B:727:A:N6	2.26	0.50
8:G:87:GLN:HG2	8:G:164:ALA:HA	1.94	0.50
31:I:21:PRO:CB	31:I:22:PRO:HD3	2.38	0.50
7:F:107:VAL:N	7:F:108:PRO:CD	2.75	0.50
7:F:134:GLN:O	7:F:136:ILE:N	2.43	0.50
18:R:2:TYR:HB2	18:R:42:ALA:CB	2.40	0.50
15:O:51:ALA:CB	15:O:81:ARG:HH11	2.25	0.50
21:U:78:LYS:CD	21:U:79:ALA:H	2.24	0.50
2:B:1349:C:H2'	2:B:1350:C:H6	1.77	0.50
2:B:132:G:O2'	2:B:133:U:H5'	2.11	0.50
10:J:104:ALA:O	10:J:108:MET:HG2	2.12	0.50
2:B:2783:U:H2'	2:B:2784:U:C6	2.47	0.50
2:B:968:C:H2'	2:B:969:G:C8	2.46	0.50
28:2:34:ARG:NE	28:2:39:ARG:HG2	2.26	0.50
2:B:710:U:H2'	2:B:711:G:H8	1.77	0.50
2:B:1746:A:H2'	2:B:1747:U:C6	2.46	0.50
2:B:291:G:H2'	2:B:292:U:C6	2.46	0.50
8:G:93:TYR:O	8:G:94:ARG:HG3	2.12	0.50
9:H:77:THR:HG22	9:H:143:ILE:HB	1.92	0.50
31:I:102:ARG:HG3	31:I:141:ASP:HB2	1.94	0.50
2:B:1992:G:N2	2:B:1996:C:O2'	2.45	0.50
10:J:19:ASP:CG	10:J:57:LEU:HB3	2.31	0.50
16:P:3:ILE:HD13	16:P:3:ILE:C	2.32	0.50
4:C:119:VAL:HA	4:C:133:ASN:ND2	2.27	0.50
22:W:37:VAL:HG12	22:W:38:ARG:N	2.22	0.50
2:B:1283:G:N2	2:B:1285:A:H3'	2.27	0.50
7:F:43:ILE:HA	7:F:46:LYS:CE	2.42	0.50
2:B:1439:A:N7	2:B:1440:U:N1	2.59	0.50
11:K:61:VAL:HG11	11:K:112:PHE:CZ	2.47	0.50
7:F:111:ARG:HH22	7:F:113:PHE:HB2	1.76	0.50
2:B:1948:G:O2'	2:B:1949:G:H5'	2.12	0.50
4:C:250:GLN:CD	4:C:254:LYS:HG2	2.33	0.50
2:B:1487:U:H2'	2:B:1488:C:H6	1.76	0.50
2:B:156:A:O2'	2:B:157:C:H5'	2.12	0.50
2:B:747:U:OP2	19:S:90:LYS:NZ	2.43	0.50
1:A:71:C:H2'	1:A:72:G:O4'	2.11	0.50
2:B:1678:A:H2'	2:B:1679:A:C8	2.47	0.50
3:V:53:LYS:HD2	3:V:55:GLU:OE1	2.12	0.50
6:E:112:LEU:C	6:E:114:ARG:H	2.14	0.50
2:B:1838:C:H4'	2:B:1839:G:H8	1.76	0.50
2:B:2835:A:N6	2:B:2878:U:H2'	2.26	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2196:C:O2'	2:B:2197:U:H5'	2.11	0.50
21:U:81:ARG:HB2	21:U:96:LYS:HG2	1.94	0.49
7:F:155:ILE:HG22	7:F:156:THR:N	2.26	0.49
7:F:31:GLU:C	7:F:32:LYS:HD3	2.33	0.49
2:B:142:A:N3	20:T:2:ILE:HG22	2.27	0.49
2:B:2332:C:H1'	2:B:2336:A:C8	2.47	0.49
7:F:113:PHE:CZ	7:F:175:PRO:HB2	2.48	0.49
7:F:55:ASP:O	7:F:59:ILE:HG13	2.12	0.49
4:C:36:ASN:ND2	4:C:85:ASN:HD21	2.08	0.49
2:B:2556:C:H2'	2:B:2557:G:O4'	2.12	0.49
2:B:264:C:O2'	2:B:265:A:H5''	2.12	0.49
2:B:2216:G:H2'	2:B:2217:G:C8	2.47	0.49
2:B:1820:U:H3	4:C:197:ALA:HA	1.76	0.49
8:G:91:VAL:O	8:G:93:TYR:N	2.44	0.49
2:B:2234:G:O2'	2:B:2235:G:H5'	2.13	0.49
2:B:1145:C:O2'	2:B:1146:C:H5'	2.10	0.49
2:B:272:A:H2'	2:B:273:G:C8	2.47	0.49
2:B:7:G:H4'	10:J:15:TRP:CZ2	2.47	0.49
10:J:13:ARG:HB3	10:J:53:TYR:CD2	2.46	0.49
2:B:140:C:H5'	2:B:141:G:C5	2.47	0.49
5:D:108:ASP:OD2	5:D:206:ALA:HA	2.12	0.49
25:Z:56:MET:O	25:Z:59:ILE:HG12	2.12	0.49
14:N:117:ASP:OD2	14:N:117:ASP:C	2.51	0.49
18:R:61:ALA:HB1	18:R:96:VAL:HB	1.94	0.49
11:K:108:ARG:O	11:K:113:MET:HE3	2.12	0.49
13:M:35:ALA:O	13:M:36:VAL:HB	2.11	0.49
2:B:502:A:H5'	2:B:503:A:OP2	2.11	0.49
4:C:105:ALA:HB1	4:C:109:LEU:CD1	2.42	0.49
21:U:26:ASN:ND2	21:U:26:ASN:N	2.61	0.49
2:B:2143:C:N3	2:B:2144:G:H1'	2.26	0.49
18:R:39:LEU:HD23	18:R:39:LEU:N	2.26	0.49
29:3:54:LEU:CG	29:3:58:ILE:HD11	2.42	0.49
2:B:2684:U:H2'	2:B:2685:G:O4'	2.12	0.49
2:B:1511:G:H2'	2:B:1512:C:C6	2.48	0.49
2:B:861:A:H2'	2:B:862:G:O4'	2.12	0.49
2:B:311:A:H3'	2:B:312:G:H8	1.77	0.49
15:O:84:GLU:C	15:O:86:GLY:H	2.14	0.49
2:B:1541:C:H2'	2:B:1542:U:O4'	2.12	0.49
7:F:29:ARG:H	7:F:29:ARG:CD	2.25	0.49
12:L:142:ILE:HD12	12:L:142:ILE:N	2.28	0.49
4:C:131:MET:HE2	4:C:143:VAL:HG13	1.93	0.49
4:C:175:LEU:HD11	4:C:181:ARG:HG3	1.94	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:851:C:H2'	2:B:852:U:C6	2.48	0.49
2:B:2814:A:H2'	2:B:2815:C:C6	2.48	0.49
14:N:97:ILE:HD12	14:N:98:LEU:N	2.21	0.49
2:B:345:A:H1'	2:B:346:A:C2	2.48	0.49
2:B:2295:C:OP2	15:O:10:ARG:HG2	2.12	0.49
15:O:7:ARG:O	15:O:96:GLY:HA3	2.12	0.49
2:B:2598:A:OP1	4:C:233:GLY:HA3	2.12	0.49
4:C:90:ILE:HD12	4:C:102:TYR:HB3	1.93	0.49
5:D:69:ALA:CA	5:D:73:VAL:HB	2.41	0.49
1:A:52:A:OP1	1:A:52:A:H4'	2.12	0.49
2:B:785:G:H2'	2:B:786:C:C6	2.47	0.49
2:B:2328:A:H2'	2:B:2329:U:H6	1.73	0.49
6:E:153:LEU:HG	6:E:154:ASP:H	1.76	0.49
23:X:55:THR:O	23:X:58:ASN:HB3	2.12	0.49
2:B:2636:C:H2'	2:B:2637:U:C6	2.47	0.49
2:B:765:C:H2'	2:B:766:U:H6	1.77	0.49
10:J:75:TYR:CD1	10:J:86:GLN:HB3	2.47	0.49
10:J:44:TYR:CD2	17:Q:59:LEU:HD21	2.47	0.49
4:C:69:ASN:O	4:C:70:LYS:C	2.50	0.49
2:B:1655:A:H2'	2:B:1656:C:O4'	2.11	0.49
7:F:45:ASP:HB3	7:F:48:LEU:CD2	2.42	0.49
26:O:42:ILE:HG22	26:O:43:THR:O	2.12	0.49
26:O:43:THR:HG21	26:O:47:TYR:HB2	1.93	0.49
17:Q:26:ALA:C	17:Q:28:SER:H	2.14	0.49
18:R:95:ASP:O	18:R:96:VAL:HG13	2.13	0.49
10:J:64:VAL:HG11	10:J:69:ARG:HB2	1.92	0.49
9:H:114:GLU:HB3	9:H:133:GLN:HG3	1.94	0.49
16:P:50:ARG:HB3	16:P:57:ALA:H	1.77	0.49
3:V:75:GLN:OE1	3:V:75:GLN:HA	2.11	0.49
2:B:2461:A:H2'	2:B:2462:C:H6	1.77	0.49
2:B:175:G:O2'	2:B:176:A:H5'	2.12	0.49
2:B:1040:A:H2'	2:B:1041:G:O4'	2.12	0.49
1:A:91:C:H2'	1:A:92:C:H6	1.77	0.49
2:B:1083:U:H2'	2:B:1085:A:OP2	2.12	0.49
9:H:25:TYR:CG	9:H:30:LEU:HG	2.47	0.49
17:Q:80:ASN:O	17:Q:116:LEU:HD11	2.13	0.49
2:B:1175:A:H2'	2:B:1176:U:H5'	1.94	0.49
24:Y:4:ILE:HG22	24:Y:56:VAL:CG1	2.43	0.49
2:B:2882:A:H3'	2:B:2883:A:H5''	1.93	0.49
20:T:39:THR:HG23	20:T:39:THR:O	2.12	0.49
11:K:61:VAL:HG11	11:K:112:PHE:CE2	2.48	0.49
30:4:15:LYS:O	30:4:16:ILE:HB	2.13	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1386:C:OP2	2:B:1396:U:H5	1.94	0.49
8:G:89:VAL:HG12	8:G:90:GLY:N	2.27	0.49
2:B:274:C:H2'	2:B:275:C:O4'	2.13	0.49
6:E:48:THR:C	6:E:50:ALA:H	2.16	0.49
2:B:201:C:H1'	2:B:250:G:O6	2.13	0.49
2:B:263:G:H2'	2:B:264:C:O4'	2.11	0.49
2:B:1745:A:H2'	2:B:1746:A:O4'	2.12	0.49
2:B:1531:C:H2'	2:B:1532:A:H8	1.77	0.49
2:B:1210:G:H1'	2:B:1212:G:C2	2.48	0.49
2:B:1973:G:O2'	2:B:1974:C:H5'	2.13	0.49
17:Q:24:TYR:CG	17:Q:25:GLY:N	2.80	0.49
31:I:92:PRO:O	31:I:93:ASN:HB2	2.12	0.49
2:B:904:G:H2'	2:B:905:A:H8	1.78	0.49
2:B:1262:A:N3	26:O:6:LYS:HE3	2.27	0.49
7:F:91:ARG:HD3	7:F:91:ARG:N	2.27	0.49
5:D:187:LEU:O	5:D:188:LEU:HD23	2.13	0.49
22:W:19:ARG:CD	22:W:19:ARG:H	2.26	0.49
9:H:97:ARG:HB3	9:H:112:LYS:HG2	1.94	0.49
9:H:39:ALA:C	9:H:41:LYS:H	2.16	0.49
14:N:98:LEU:HG	26:O:42:ILE:HD11	1.95	0.49
2:B:2786:U:O2'	5:D:66:GLY:HA3	2.12	0.49
16:P:24:THR:HB	16:P:86:LYS:HB3	1.93	0.49
2:B:725:G:H2'	2:B:726:G:C1'	2.42	0.49
9:H:114:GLU:HB2	9:H:133:GLN:O	2.12	0.49
1:A:88:C:H1'	1:A:89:U:C5	2.47	0.49
18:R:35:PHE:C	18:R:58:VAL:HG23	2.33	0.49
9:H:27:ARG:HG2	9:H:27:ARG:HH21	1.78	0.49
4:C:4:LYS:HD2	4:C:5:CYS:H	1.75	0.49
2:B:2729:G:H2'	2:B:2730:C:C6	2.48	0.49
2:B:2636:C:O2'	2:B:2637:U:H5'	2.13	0.49
21:U:32:LYS:HG3	21:U:65:GLN:HA	1.95	0.49
15:O:56:LYS:C	15:O:60:GLU:HG2	2.33	0.49
2:B:1306:C:O2'	2:B:1307:A:H5'	2.12	0.49
7:F:19:PHE:CE2	7:F:164:GLU:HG2	2.47	0.49
16:P:26:GLU:HB3	16:P:84:SER:HB3	1.94	0.49
2:B:1099:G:C8	31:I:3:LYS:HB2	2.48	0.49
7:F:87:LYS:CG	7:F:88:VAL:H	2.24	0.49
14:N:75:ILE:O	14:N:79:LEU:HD12	2.12	0.49
18:R:10:LYS:N	18:R:10:LYS:HD2	2.27	0.49
24:Y:20:LYS:HA	24:Y:23:LEU:HB2	1.93	0.49
19:S:47:VAL:HG23	19:S:48:LYS:N	2.27	0.49
25:Z:7:VAL:HG23	25:Z:67:VAL:HG11	1.94	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:1:7:LYS:HD3	29:3:33:THR:HG21	1.94	0.49
2:B:2295:C:O2'	2:B:2296:U:H5'	2.12	0.49
2:B:1433:A:H2'	2:B:1434:A:O4'	2.12	0.49
15:O:106:LEU:HG	15:O:107:ALA:N	2.28	0.49
2:B:278:A:O3'	2:B:279:A:H8	1.95	0.49
2:B:19:A:H2'	2:B:20:C:C6	2.47	0.49
12:L:77:ILE:HG12	12:L:95:LEU:HD22	1.95	0.49
19:S:4:ILE:CG2	19:S:106:VAL:HG13	2.41	0.49
5:D:55:LYS:HB2	5:D:60:VAL:HG13	1.94	0.49
2:B:1838:C:H4'	2:B:1839:G:C8	2.48	0.49
21:U:40:LEU:HA	21:U:60:LYS:O	2.13	0.49
6:E:173:THR:HA	6:E:199:MET:HE1	1.95	0.49
2:B:616:A:H3'	2:B:617:G:C8	2.43	0.49
22:W:9:THR:O	22:W:10:ARG:HB2	2.12	0.49
25:Z:5:CYS:HG	25:Z:52:SER:HG	1.61	0.49
18:R:16:GLU:H	18:R:101:ILE:CG1	2.23	0.49
5:D:149:ASN:O	5:D:152:PRO:HD2	2.12	0.49
16:P:24:THR:N	16:P:87:ARG:O	2.46	0.49
27:1:33:LEU:HB3	27:1:51:ALA:CB	2.40	0.49
31:I:24:GLY:HA2	31:I:34:ILE:HD12	1.95	0.49
9:H:65:ALA:HB1	9:H:138:VAL:HG11	1.94	0.49
8:G:84:LYS:HG3	8:G:131:VAL:C	2.32	0.49
2:B:1168:G:O2'	2:B:1169:A:H5'	2.11	0.49
5:D:51:THR:HG23	5:D:78:GLY:O	2.12	0.49
7:F:71:LYS:HD3	7:F:73:VAL:O	2.13	0.49
2:B:37:C:H1'	6:E:45:ALA:HB2	1.93	0.49
14:N:12:ARG:HG3	14:N:13:ASN:H	1.78	0.49
2:B:1792:G:OP1	4:C:204:LEU:HD12	2.13	0.49
1:A:28:C:H2'	1:A:29:A:C8	2.48	0.49
2:B:1580:A:H2'	2:B:1581:G:O4'	2.13	0.49
5:D:36:GLN:HB3	5:D:67:HIS:HE1	1.78	0.49
2:B:655:A:H4'	2:B:656:G:H5'	1.95	0.49
8:G:11:PRO:O	8:G:14:VAL:HG22	2.13	0.49
2:B:2818:U:H4'	2:B:2837:A:O4'	2.13	0.49
2:B:1985:C:O2'	2:B:1986:C:H5'	2.13	0.49
2:B:2221:G:O2'	2:B:2222:C:H5'	2.13	0.49
18:R:72:VAL:HG23	18:R:89:HIS:O	2.12	0.49
21:U:53:GLN:N	21:U:54:PRO:CD	2.76	0.49
2:B:1099:G:H4'	31:I:4:VAL:HG12	1.95	0.49
7:F:126:ASN:ND2	7:F:156:THR:HG23	2.06	0.49
17:Q:89:ILE:C	17:Q:91:ARG:H	2.16	0.49
4:C:138:SER:O	4:C:162:GLN:HA	2.13	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:149:LYS:HD3	4:C:152:GLN:HE22	1.78	0.49
22:W:18:LYS:HG3	22:W:19:ARG:H	1.77	0.49
19:S:25:ARG:HE	19:S:74:ILE:CG2	2.25	0.49
2:B:2307:G:O6	7:F:40:GLY:HA3	2.12	0.49
11:K:113:MET:HA	11:K:116:ILE:HD11	1.95	0.49
7:F:103:ILE:HD11	7:F:174:PHE:HA	1.94	0.49
2:B:1033:U:H5	30:4:15:LYS:HE2	1.78	0.49
2:B:2756:U:C1'	2:B:2757:A:H5''	2.40	0.49
2:B:222:A:N1	2:B:233:A:H5''	2.28	0.49
2:B:2443:C:O2'	2:B:2444:G:H5'	2.13	0.49
2:B:1150:C:O2'	2:B:1151:A:H5'	2.12	0.49
2:B:303:G:H2'	2:B:304:U:H6	1.78	0.49
4:C:264:LYS:HG3	4:C:265:PHE:CD2	2.48	0.49
2:B:545:U:H5''	2:B:546:U:C4'	2.19	0.49
2:B:545:U:H2'	2:B:547:A:OP1	2.13	0.49
7:F:33:ILE:HB	7:F:90:LEU:HG	1.95	0.49
10:J:16:TYR:CD2	10:J:140:LEU:HD12	2.48	0.49
10:J:38:GLY:HA3	10:J:50:THR:O	2.13	0.49
2:B:138:U:H2'	2:B:140:C:C4'	2.42	0.49
12:L:125:LEU:H	12:L:143:GLU:HG3	1.78	0.49
2:B:626:A:H2'	12:L:78:ARG:NH1	2.28	0.49
22:W:51:GLY:N	22:W:59:PHE:HB2	2.28	0.49
25:Z:68:LEU:HB3	25:Z:78:TYR:HE1	1.76	0.49
26:0:47:TYR:O	26:0:48:TYR:HB2	2.12	0.49
14:N:90:ARG:HB3	14:N:94:TYR:HE1	1.78	0.49
31:I:19:PRO:HB2	31:I:22:PRO:HD2	1.95	0.49
8:G:154:GLU:CD	8:G:156:TYR:HB2	2.33	0.49
2:B:2240:U:O2'	2:B:2241:A:H5'	2.12	0.49
18:R:71:LYS:HG2	18:R:73:LYS:HZ1	1.76	0.49
2:B:2772:C:H4'	5:D:171:THR:HG21	1.95	0.49
2:B:1256:G:H21	6:E:77:ILE:CG2	2.26	0.49
23:X:21:LEU:H	23:X:21:LEU:HD23	1.78	0.49
2:B:2223:G:C2'	2:B:2224:G:H5'	2.43	0.49
29:3:15:LYS:HA	29:3:21:PHE:HA	1.95	0.49
11:K:35:VAL:H	11:K:65:THR:HG21	1.78	0.48
17:Q:91:ARG:HE	17:Q:94:LEU:HD23	1.77	0.48
7:F:79:ARG:HB2	7:F:82:TYR:CE2	2.48	0.48
14:N:90:ARG:HB3	14:N:94:TYR:CE1	2.48	0.48
2:B:1826:G:H2'	2:B:1827:U:C6	2.48	0.48
2:B:1794:A:H2'	2:B:1795:C:C6	2.48	0.48
5:D:171:THR:HG23	5:D:172:VAL:H	1.77	0.48
1:A:74:U:H2'	1:A:75:G:C8	2.48	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1939:U:O2	2:B:1967:C:H4'	2.13	0.48
2:B:1348:C:H2'	2:B:1349:C:H5'	1.94	0.48
4:C:239:PHE:HD1	4:C:241:LYS:H	1.59	0.48
2:B:2405:G:H1'	2:B:2412:A:H61	1.78	0.48
2:B:519:U:H2'	2:B:520:G:C8	2.48	0.48
2:B:685:A:H1'	2:B:688:U:O4	2.13	0.48
29:3:25:HIS:HB2	29:3:43:LEU:O	2.13	0.48
1:A:39:A:O2'	1:A:40:U:H5'	2.13	0.48
10:J:16:TYR:N	10:J:137:PRO:HB3	2.29	0.48
17:Q:60:TRP:C	17:Q:64:ILE:HG12	2.33	0.48
17:Q:80:ASN:ND2	17:Q:81:GLY:N	2.61	0.48
12:L:125:LEU:HD23	12:L:126:ARG:N	2.28	0.48
19:S:76:VAL:HG12	19:S:103:ILE:HA	1.95	0.48
2:B:1445:G:H2'	2:B:1446:C:O4'	2.13	0.48
2:B:1387:A:H5'	2:B:1469:A:H1'	1.95	0.48
20:T:14:PRO:HA	20:T:32:LEU:CB	2.44	0.48
2:B:1885:A:H2'	2:B:1886:U:O4'	2.14	0.48
2:B:2466:C:O2'	2:B:2467:C:H5'	2.12	0.48
2:B:1794:A:H2'	2:B:1795:C:H6	1.77	0.48
2:B:636:G:H3'	12:L:128:THR:CG2	2.42	0.48
2:B:796:C:O2'	2:B:797:G:H5'	2.13	0.48
2:B:492:A:H2'	2:B:493:G:O4'	2.13	0.48
2:B:1467:U:O2'	2:B:1468:U:H5'	2.13	0.48
4:C:43:ASN:HD22	4:C:44:ASN:N	2.11	0.48
5:D:106:LYS:O	5:D:107:VAL:HB	2.13	0.48
5:D:107:VAL:N	5:D:206:ALA:H	2.11	0.48
31:I:11:GLN:HA	31:I:55:PRO:HA	1.94	0.48
9:H:113:SER:N	9:H:132:PHE:HZ	2.11	0.48
13:M:55:ARG:HH22	13:M:58:LYS:HA	1.78	0.48
2:B:2675:A:N1	2:B:2732:G:O6	2.47	0.48
10:J:64:VAL:O	10:J:68:LYS:HD2	2.12	0.48
9:H:87:GLU:HB2	9:H:89:LYS:NZ	2.27	0.48
31:I:100:ILE:O	31:I:139:VAL:HA	2.14	0.48
2:B:2391:G:HO2'	2:B:2424:C:H41	1.61	0.48
2:B:2074:U:O2'	2:B:2075:U:H5'	2.13	0.48
2:B:1793:C:H2'	2:B:1794:A:C8	2.48	0.48
2:B:1290:C:O2'	2:B:1291:C:H5'	2.13	0.48
2:B:1292:G:H2'	2:B:1293:C:H6	1.77	0.48
1:A:30:C:H2'	1:A:31:C:H5'	1.95	0.48
2:B:2897:U:H2'	2:B:2898:U:H6	1.76	0.48
4:C:57:HIS:CG	4:C:58:LYS:H	2.31	0.48
2:B:2663:G:H2'	2:B:2664:G:O4'	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2708:G:O2'	2:B:2709:G:H5'	2.11	0.48
2:B:1098:A:C3'	31:I:3:LYS:HA	2.26	0.48
17:Q:56:PHE:O	17:Q:59:LEU:HB3	2.12	0.48
6:E:106:LYS:CE	6:E:200:LEU:HB3	2.42	0.48
6:E:188:MET:HE2	6:E:193:VAL:HG22	1.94	0.48
4:C:93:VAL:HG13	4:C:94:LEU:H	1.77	0.48
5:D:25:THR:HG21	5:D:193:VAL:CG2	2.39	0.48
9:H:47:PHE:CE1	9:H:51:ARG:HD3	2.48	0.48
2:B:1436:G:O2'	2:B:1437:C:H5'	2.13	0.48
3:V:14:LYS:HE3	3:V:18:ARG:NH2	2.29	0.48
15:O:67:ASN:O	15:O:69:ASP:N	2.46	0.48
2:B:1729:U:O4	2:B:1733:G:H1'	2.13	0.48
2:B:2617:U:O2'	2:B:2618:G:H5'	2.13	0.48
8:G:166:GLU:CG	8:G:168:VAL:HG23	2.43	0.48
5:D:33:ARG:HH21	5:D:33:ARG:HG2	1.78	0.48
4:C:64:VAL:HG11	4:C:66:PHE:CE2	2.49	0.48
4:C:35:LYS:HG2	4:C:36:ASN:N	2.25	0.48
16:P:52:ARG:HG2	16:P:52:ARG:NH1	2.27	0.48
2:B:2462:C:H2'	2:B:2463:C:C6	2.47	0.48
4:C:14:HIS:O	4:C:16:VAL:HG23	2.13	0.48
5:D:171:THR:HG23	5:D:172:VAL:N	2.28	0.48
12:L:95:LEU:HD12	12:L:95:LEU:H	1.78	0.48
2:B:2144:G:H2'	2:B:2145:C:O3'	2.13	0.48
26:O:18:HIS:HD1	26:O:18:HIS:H	1.61	0.48
4:C:259:ASN:C	4:C:261:ARG:H	2.16	0.48
2:B:559:G:H21	17:Q:51:GLN:NE2	2.11	0.48
2:B:1716:U:H2'	2:B:1717:A:H8	1.78	0.48
2:B:1369:G:O2'	2:B:1370:C:H5'	2.14	0.48
10:J:3:THR:HG21	17:Q:60:TRP:HE1	1.78	0.48
2:B:2336:A:H61	22:W:40:ARG:HD2	1.75	0.48
22:W:49:ASN:CB	22:W:61:LYS:H	2.25	0.48
25:Z:45:ARG:HE	25:Z:47:VAL:HG12	1.77	0.48
25:Z:5:CYS:SG	25:Z:8:THR:HG23	2.54	0.48
8:G:49:LEU:HD23	8:G:51:PHE:CZ	2.48	0.48
2:B:2811:G:OP1	5:D:61:THR:HB	2.12	0.48
8:G:25:ILE:N	8:G:25:ILE:HD12	2.29	0.48
2:B:1309:G:OP1	28:2:9:VAL:HG12	2.14	0.48
18:R:34:GLU:HB3	18:R:58:VAL:HG21	1.95	0.48
27:1:49:LYS:O	27:1:50:GLU:HB3	2.14	0.48
2:B:1247:A:O2'	2:B:1248:G:H5'	2.13	0.48
2:B:2590:A:H5''	4:C:237:ARG:NH2	2.28	0.48
2:B:1534:U:H2'	2:B:1536:C:C5	2.49	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:78:LYS:CG	21:U:79:ALA:H	2.27	0.48
2:B:69:C:H2'	2:B:70:G:H8	1.78	0.48
2:B:1199:U:H5''	34:B:4520:HOH:O	2.12	0.48
2:B:969:G:H2'	2:B:970:U:C6	2.49	0.48
2:B:48:G:HO2'	2:B:49:A:H2	1.61	0.48
2:B:1403:A:H2'	2:B:1404:C:C6	2.49	0.48
2:B:1266:G:OP1	26:O:15:ARG:NE	2.42	0.48
6:E:34:ALA:HA	6:E:94:GLN:NE2	2.28	0.48
2:B:1101:U:O2'	2:B:1102:C:H5'	2.13	0.48
7:F:121:PHE:HB3	7:F:127:TYR:CD2	2.49	0.48
1:A:42:C:C5	7:F:65:LEU:HD22	2.49	0.48
2:B:7:G:OP1	10:J:132:HIS:HE1	1.96	0.48
2:B:1799:G:C5	4:C:175:LEU:HD13	2.49	0.48
22:W:48:ALA:HB3	22:W:81:ILE:HG13	1.95	0.48
2:B:1063:G:H5'	31:I:135:MET:HG2	1.94	0.48
9:H:4:ILE:HG21	9:H:47:PHE:CE1	2.49	0.48
8:G:42:VAL:HA	8:G:50:THR:O	2.14	0.48
3:V:72:VAL:HG21	3:V:91:PHE:CG	2.48	0.48
20:T:29:THR:CG2	20:T:86:THR:HG22	2.44	0.48
3:V:61:LEU:O	3:V:71:LYS:HA	2.14	0.48
2:B:992:C:O2'	2:B:993:G:H5'	2.14	0.48
2:B:2867:G:C2'	2:B:2867:G:N3	2.74	0.48
5:D:171:THR:O	5:D:172:VAL:HG23	2.12	0.48
2:B:1460:U:H3'	2:B:1461:C:H5'	1.96	0.48
2:B:470:A:H61	20:T:72:GLN:HE22	1.60	0.48
2:B:2063:C:O2	2:B:2450:A:N1	2.47	0.48
20:T:50:LEU:HD22	20:T:50:LEU:N	2.28	0.48
8:G:10:VAL:HG23	8:G:48:THR:HA	1.96	0.48
2:B:659:G:H4'	6:E:95:LYS:CD	2.43	0.48
24:Y:29:ARG:H	24:Y:33:HIS:CD2	2.30	0.48
2:B:1048:A:P	2:B:1048:A:H8	2.36	0.48
2:B:950:G:H2'	2:B:951:C:C6	2.48	0.48
7:F:160:LYS:HG3	7:F:161:SER:N	2.29	0.48
19:S:20:VAL:C	19:S:22:ASP:H	2.16	0.48
21:U:98:ASN:OD1	21:U:100:GLU:HB2	2.13	0.48
2:B:544:C:H2'	2:B:545:U:C4	2.48	0.48
14:N:83:LEU:HA	14:N:86:ARG:HB2	1.94	0.48
17:Q:63:ARG:HH21	17:Q:64:ILE:HD13	1.78	0.48
2:B:141:G:H5''	2:B:141:G:N3	2.29	0.48
5:D:204:LYS:HB2	5:D:205:PRO:HD2	1.96	0.48
4:C:144:GLU:OE2	4:C:188:ARG:HG3	2.14	0.48
10:J:110:PRO:HB2	10:J:111:LYS:HE3	1.95	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:S:73:LYS:HE3	19:S:74:ILE:N	2.26	0.48
7:F:43:ILE:HA	7:F:46:LYS:HE2	1.96	0.48
2:B:1063:G:C4'	31:I:135:MET:HG2	2.44	0.48
2:B:1060:U:OP1	31:I:75:ALA:HB3	2.14	0.48
2:B:2034:U:O2'	2:B:2035:G:H5'	2.13	0.48
7:F:102:LEU:HD13	7:F:103:ILE:HB	1.94	0.48
18:R:79:ARG:NE	18:R:80:ARG:NH2	2.61	0.48
2:B:2589:A:H2'	2:B:2590:A:H8	1.78	0.48
2:B:2073:C:O2'	2:B:2074:U:H5'	2.13	0.48
2:B:1353:A:H2'	2:B:1354:A:H8	1.78	0.48
2:B:2436:G:O2'	2:B:2437:G:H5'	2.13	0.48
2:B:1789:A:P	4:C:220:ARG:HH11	2.36	0.48
2:B:471:A:OP1	6:E:79:ARG:NH1	2.47	0.48
17:Q:18:LYS:C	17:Q:20:ALA:H	2.15	0.48
9:H:26:ALA:C	9:H:28:ASN:H	2.15	0.48
5:D:55:LYS:HZ1	5:D:59:ARG:HD2	1.77	0.48
2:B:2271:G:H2'	2:B:2272:U:H6	1.77	0.48
2:B:2355:G:H4'	22:W:20:LEU:HD13	1.94	0.48
13:M:31:PHE:HB3	13:M:130:PHE:CZ	2.49	0.48
2:B:2233:U:H2'	2:B:2234:G:C8	2.48	0.48
6:E:118:LEU:O	6:E:119:ILE:HD13	2.13	0.48
2:B:1478:G:O2'	2:B:1479:G:H5'	2.14	0.48
10:J:48:VAL:HG12	10:J:50:THR:HG23	1.96	0.48
5:D:107:VAL:HA	5:D:204:LYS:O	2.14	0.48
5:D:118:PHE:O	5:D:119:ALA:CB	2.62	0.48
22:W:61:LYS:O	22:W:62:ALA:O	2.31	0.48
2:B:2428:G:H21	12:L:60:ARG:NE	2.09	0.48
20:T:40:LYS:HA	20:T:43:ILE:HB	1.95	0.48
20:T:23:ALA:C	20:T:25:GLU:H	2.17	0.48
8:G:84:LYS:HG3	8:G:131:VAL:HA	1.96	0.48
7:F:102:LEU:HA	7:F:106:ALA:HB2	1.96	0.48
18:R:20:VAL:HG12	18:R:21:ARG:N	2.26	0.48
2:B:2022:U:O2'	2:B:2617:U:H5'	2.14	0.48
4:C:106:PRO:O	4:C:109:LEU:HD13	2.14	0.48
6:E:192:ALA:O	6:E:196:VAL:HG23	2.14	0.48
2:B:2485:G:H5''	13:M:125:PRO:HG3	1.94	0.48
2:B:1405:U:H2'	2:B:1406:U:C6	2.49	0.48
12:L:51:GLU:HG2	29:3:56:LEU:CD2	2.43	0.48
2:B:1230:A:H2'	2:B:1231:U:H6	1.79	0.48
3:V:77:VAL:HG12	13:M:136:MET:HG2	1.94	0.48
2:B:324:A:H2'	2:B:325:G:O4'	2.14	0.48
2:B:1541:C:O2'	2:B:1542:U:H5'	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1786:A:H1'	2:B:1938:A:N6	2.29	0.48
2:B:1969:A:H2'	2:B:1972:G:H21	1.79	0.48
6:E:132:LYS:O	6:E:135:ALA:HB3	2.13	0.48
2:B:2301:C:H2'	2:B:2302:U:H6	1.79	0.48
4:C:43:ASN:ND2	4:C:44:ASN:N	2.60	0.48
12:L:3:LEU:O	12:L:5:THR:HG23	2.14	0.48
12:L:122:VAL:HB	12:L:143:GLU:OE1	2.13	0.48
22:W:43:LYS:HB3	22:W:79:ILE:HD11	1.96	0.48
9:H:131:SER:CB	9:H:141:LYS:HA	2.34	0.48
12:L:55:MET:HE2	12:L:56:PRO:HD2	1.94	0.48
9:H:135:HIS:HB3	9:H:138:VAL:CB	2.36	0.48
7:F:111:ARG:HD2	7:F:111:ARG:N	2.29	0.48
19:S:42:LYS:HG3	19:S:43:ALA:N	2.28	0.48
2:B:1181:U:H2'	2:B:1182:G:H8	1.78	0.48
2:B:1789:A:OP1	4:C:220:ARG:HD3	2.14	0.48
2:B:1485:U:O2'	2:B:1486:U:H5'	2.14	0.48
2:B:129:C:H2'	2:B:130:C:C6	2.49	0.48
2:B:1374:G:H2'	2:B:1375:U:C6	2.49	0.48
2:B:1163:G:O2'	2:B:1164:C:H5'	2.14	0.48
2:B:1196:C:H2'	2:B:1197:G:H8	1.78	0.48
13:M:30:SER:HA	13:M:133:LYS:HB2	1.95	0.48
28:2:3:ARG:HH21	28:2:3:ARG:HG2	1.78	0.48
12:L:135:ILE:HG12	12:L:140:GLY:HA3	1.96	0.48
2:B:1193:G:H2'	2:B:1194:A:O4'	2.14	0.48
2:B:924:G:H2'	2:B:925:A:H8	1.79	0.48
12:L:23:ILE:HD12	12:L:23:ILE:N	2.29	0.48
13:M:74:THR:O	13:M:75:GLU:HB2	2.14	0.48
7:F:36:ASN:ND2	7:F:152:ASP:HB2	2.08	0.48
17:Q:91:ARG:HB2	18:R:11:GLN:CD	2.35	0.48
4:C:76:VAL:CG1	4:C:114:GLN:HG2	2.44	0.48
2:B:1656:C:H2'	2:B:1657:U:H6	1.79	0.48
22:W:17:ALA:HB1	22:W:37:VAL:H	1.78	0.48
19:S:15:GLN:HA	19:S:18:ARG:CG	2.43	0.48
9:H:14:SER:C	9:H:16:GLY:N	2.67	0.48
2:B:979:A:H2'	2:B:982:C:N4	2.23	0.48
2:B:1508:A:H3'	2:B:1509:A:C2	2.49	0.48
31:I:100:ILE:O	31:I:139:VAL:HG13	2.14	0.48
17:Q:4:LYS:CE	17:Q:7:VAL:HG22	2.44	0.48
2:B:1274:A:C2	2:B:1297:C:H1'	2.49	0.48
2:B:2070:A:C2	2:B:2442:C:C2	3.02	0.48
2:B:589:U:H2'	2:B:590:A:C8	2.49	0.48
4:C:74:PRO:HG2	4:C:96:LYS:CG	2.43	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:102:G:O2'	1:A:103:U:H5'	2.14	0.48
12:L:75:ALA:HB3	12:L:108:ALA:HB2	1.96	0.48
12:L:93:ASN:O	12:L:95:LEU:HD12	2.14	0.48
18:R:4:VAL:O	18:R:38:VAL:HA	2.13	0.48
2:B:2405:G:H1'	2:B:2412:A:N6	2.29	0.48
2:B:1120:G:O2'	2:B:1121:C:H5'	2.14	0.48
2:B:1700:A:H2'	2:B:1701:A:H5'	1.96	0.48
2:B:675:A:H4'	6:E:62:GLN:HE22	1.79	0.48
2:B:137:U:O5'	2:B:137:U:H6	1.97	0.47
16:P:4:ILE:O	16:P:6:GLN:N	2.45	0.47
2:B:1060:U:OP2	31:I:74:PRO:HA	2.13	0.47
3:V:21:ARG:NE	3:V:87:GLN:HB3	2.28	0.47
2:B:1439:A:N7	2:B:1440:U:C6	2.82	0.47
16:P:25:VAL:HA	16:P:85:VAL:C	2.34	0.47
11:K:26:GLY:O	11:K:30:ARG:HD2	2.14	0.47
16:P:77:SER:O	16:P:80:VAL:HG12	2.14	0.47
2:B:1133:A:H5'	2:B:1134:A:OP1	2.13	0.47
2:B:785:G:H2'	2:B:786:C:H6	1.79	0.47
2:B:1842:G:H2'	2:B:1843:C:H6	1.78	0.47
2:B:1484:U:H2'	2:B:1485:U:H6	1.79	0.47
5:D:141:ARG:O	5:D:142:VAL:HG13	2.14	0.47
2:B:1222:U:O2'	2:B:1223:G:H5'	2.14	0.47
2:B:2379:G:H2'	2:B:2380:C:C6	2.49	0.47
2:B:2449:U:H4'	2:B:2450:A:OP1	2.14	0.47
23:X:43:LEU:O	23:X:47:ARG:HG3	2.14	0.47
1:A:35:C:H2'	1:A:36:C:O4'	2.14	0.47
2:B:1607:C:N4	2:B:1622:G:OP2	2.46	0.47
4:C:52:HIS:O	4:C:53:ILE:HB	2.14	0.47
17:Q:51:GLN:O	17:Q:55:GLN:HG3	2.13	0.47
2:B:991:C:H5'	2:B:991:C:H6	1.78	0.47
11:K:77:ILE:HD11	16:P:71:ARG:CZ	2.44	0.47
2:B:2286:G:H4'	2:B:2287:A:O4'	2.14	0.47
2:B:2559:C:H2'	2:B:2560:A:H8	1.79	0.47
17:Q:91:ARG:NH1	18:R:10:LYS:HB3	2.25	0.47
17:Q:111:LYS:H	18:R:48:LYS:HZ3	1.62	0.47
2:B:138:U:H2'	2:B:140:C:C1'	2.44	0.47
5:D:101:PHE:O	5:D:180:VAL:HG11	2.14	0.47
21:U:38:ILE:HG13	21:U:39:ASN:N	2.29	0.47
22:W:58:LEU:HG	22:W:79:ILE:HD12	1.95	0.47
2:B:2273:A:H2'	2:B:2274:A:C8	2.49	0.47
25:Z:7:VAL:HG11	25:Z:51:VAL:HG13	1.95	0.47
2:B:77:G:O2'	2:B:78:U:H5'	2.13	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:V:80:HIS:HA	3:V:87:GLN:OE1	2.14	0.47
3:V:30:ILE:O	3:V:37:PRO:HA	2.13	0.47
20:T:51:PHE:HB3	20:T:53:VAL:HG23	1.96	0.47
27:1:6:GLU:HB2	27:1:52:LYS:NZ	2.29	0.47
11:K:12:ASP:OD2	11:K:85:VAL:HG13	2.15	0.47
7:F:137:PHE:N	7:F:137:PHE:CD2	2.82	0.47
15:O:52:SER:C	15:O:54:VAL:H	2.17	0.47
13:M:86:LYS:HG3	13:M:87:GLY:N	2.29	0.47
2:B:1470:A:H3'	2:B:1471:G:H8	1.78	0.47
7:F:115:GLY:HA3	7:F:177:ARG:HB2	1.95	0.47
5:D:30:GLU:OE1	5:D:53:GLY:HA2	2.14	0.47
9:H:122:LEU:HD11	9:H:130:VAL:CG2	2.40	0.47
2:B:786:C:H5''	2:B:1780:A:N7	2.29	0.47
2:B:275:C:H2'	2:B:276:U:C1'	2.43	0.47
2:B:19:A:H2'	2:B:20:C:H6	1.79	0.47
4:C:245:THR:OG1	4:C:249:VAL:HG23	2.14	0.47
22:W:46:ALA:HB2	22:W:78:PHE:HD1	1.78	0.47
2:B:364:C:H2'	2:B:365:U:C6	2.49	0.47
1:A:70:C:O2'	1:A:71:C:H5'	2.14	0.47
8:G:94:ARG:HG2	8:G:127:GLN:HE21	1.80	0.47
15:O:28:VAL:HG12	15:O:93:ASP:O	2.14	0.47
2:B:2709:G:H2'	2:B:2710:C:C6	2.49	0.47
2:B:1190:G:OP1	12:L:32:GLY:HA2	2.14	0.47
4:C:229:HIS:ND1	4:C:230:PRO:HD2	2.28	0.47
2:B:1668:A:N3	2:B:1670:C:C4	2.82	0.47
2:B:531:C:O2'	2:B:563:A:H5''	2.13	0.47
21:U:51:LEU:HD22	21:U:52:ASN:OD1	2.14	0.47
2:B:335:C:H5''	21:U:81:ARG:NH1	2.29	0.47
2:B:335:C:O2'	2:B:336:C:H5'	2.14	0.47
17:Q:85:ALA:HB2	17:Q:115:ALA:HB1	1.95	0.47
17:Q:96:ASP:C	17:Q:98:ALA:H	2.18	0.47
20:T:2:ILE:HG13	20:T:3:ARG:CZ	2.44	0.47
4:C:68:ARG:HB3	4:C:128:THR:OG1	2.14	0.47
4:C:141:HIS:O	4:C:143:VAL:HG23	2.14	0.47
22:W:23:LYS:CG	22:W:24:ARG:N	2.76	0.47
25:Z:36:HIS:O	25:Z:48:THR:HA	2.15	0.47
2:B:2814:A:H2'	2:B:2815:C:H6	1.78	0.47
14:N:99:LYS:O	26:O:42:ILE:HG12	2.14	0.47
2:B:53:A:H61	2:B:117:G:H1'	1.79	0.47
20:T:43:ILE:O	20:T:46:ALA:HB3	2.13	0.47
11:K:120:PRO:HA	16:P:65:ASN:HD21	1.80	0.47
16:P:50:ARG:CB	16:P:56:SER:HB3	2.43	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:R:21:ARG:C	18:R:22:LEU:HD23	2.35	0.47
9:H:53:GLU:CB	9:H:57:LYS:HB3	2.44	0.47
2:B:247:G:H4'	2:B:386:G:C5	2.50	0.47
1:A:55:U:H2'	1:A:56:G:C8	2.48	0.47
2:B:1222:U:P	18:R:90:ARG:HH22	2.38	0.47
2:B:2065:C:H1'	2:B:2449:U:O2	2.13	0.47
14:N:54:LEU:HD11	14:N:62:ASN:HB3	1.96	0.47
2:B:754:U:H2'	2:B:755:U:C6	2.48	0.47
2:B:659:G:H4'	6:E:95:LYS:HD3	1.96	0.47
2:B:934:U:H2'	2:B:935:C:H6	1.80	0.47
2:B:1162:G:H1'	18:R:23:GLU:OE2	2.14	0.47
2:B:337:C:H2'	2:B:338:G:O4'	2.13	0.47
10:J:88:THR:HG22	10:J:91:GLU:OE1	2.14	0.47
2:B:1266:G:N2	2:B:2012:G:H2'	2.29	0.47
2:B:1970:A:H1'	2:B:1972:G:C8	2.48	0.47
2:B:2520:C:O2'	2:B:2521:C:H5'	2.14	0.47
2:B:1416:G:HO2'	2:B:1417:C:H6	1.60	0.47
2:B:2553:G:H2'	2:B:2554:U:H4'	1.96	0.47
15:O:9:ARG:HA	15:O:12:THR:OG1	2.13	0.47
14:N:83:LEU:HA	14:N:86:ARG:CG	2.44	0.47
18:R:5:PHE:HB2	18:R:37:GLU:OE1	2.14	0.47
2:B:140:C:H4'	2:B:141:G:C6	2.50	0.47
4:C:183:VAL:HG22	4:C:187:CYS:SG	2.54	0.47
31:I:76:ALA:HA	31:I:135:MET:SD	2.54	0.47
2:B:1444:G:H2'	2:B:1445:G:C8	2.49	0.47
11:K:98:ARG:C	11:K:99:ILE:HD12	2.35	0.47
2:B:1138:G:H2'	2:B:1139:G:O4'	2.14	0.47
7:F:141:ASP:O	7:F:144:LYS:N	2.47	0.47
13:M:69:PRO:HG2	13:M:70:ASP:H	1.79	0.47
13:M:69:PRO:HA	13:M:94:ALA:HA	1.95	0.47
14:N:58:ASP:O	14:N:59:SER:HB3	2.15	0.47
6:E:172:ALA:HB2	6:E:195:GLN:NE2	2.30	0.47
2:B:2840:C:O2'	2:B:2841:C:H5'	2.14	0.47
14:N:7:GLY:HA2	14:N:46:ARG:HH12	1.79	0.47
10:J:30:THR:O	10:J:33:ALA:HB3	2.15	0.47
31:I:35:MET:HE3	31:I:39:LYS:HG2	1.96	0.47
21:U:90:LYS:O	21:U:92:VAL:HG23	2.14	0.47
10:J:58:ASN:CA	10:J:127:GLY:HA2	2.29	0.47
5:D:187:LEU:HD12	5:D:188:LEU:H	1.79	0.47
4:C:140:VAL:CG2	4:C:163:ILE:HG12	2.45	0.47
2:B:2822:G:H5''	5:D:164:GLN:HE22	1.78	0.47
2:B:1064:C:H2'	2:B:1065:U:O4'	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:512:G:H4'	2:B:512:G:OP1	2.15	0.47
2:B:1551:A:C3'	2:B:1552:A:H5''	2.44	0.47
2:B:1057:A:H62	2:B:1086:A:H2'	1.80	0.47
2:B:1590:A:H2'	2:B:1591:A:C8	2.49	0.47
2:B:288:U:H2'	2:B:289:G:H5'	1.96	0.47
13:M:63:ILE:N	13:M:63:ILE:HD12	2.28	0.47
31:I:129:GLU:HB3	31:I:133:ARG:NH1	2.29	0.47
2:B:572:A:OP2	18:R:80:ARG:NH2	2.47	0.47
2:B:776:G:H4'	2:B:777:G:O5'	2.14	0.47
5:D:174:SER:O	5:D:175:LEU:HB2	2.14	0.47
2:B:1682:G:H2'	2:B:1683:U:C6	2.49	0.47
2:B:1557:C:H3'	2:B:1558:C:C5'	2.45	0.47
12:L:51:GLU:O	12:L:53:GLY:N	2.47	0.47
2:B:929:U:H1'	24:Y:25:GLY:O	2.14	0.47
2:B:2700:A:H2'	2:B:2701:U:C6	2.48	0.47
2:B:2247:A:H2'	2:B:2248:C:C6	2.50	0.47
2:B:2197:U:O2'	2:B:2198:A:H2'	2.14	0.47
31:I:10:LEU:HD12	31:I:10:LEU:O	2.13	0.47
2:B:1672:A:C6	2:B:1673:G:C6	3.02	0.47
2:B:335:C:H2'	2:B:336:C:H6	1.79	0.47
2:B:1203:U:H3'	2:B:1204:A:C5'	2.44	0.47
16:P:4:ILE:C	16:P:6:GLN:N	2.66	0.47
5:D:123:LYS:HD3	5:D:165:MET:SD	2.54	0.47
19:S:52:GLU:HA	19:S:55:ILE:CG2	2.43	0.47
2:B:28:A:O2'	2:B:583:G:H5'	2.15	0.47
20:T:54:GLU:HB3	20:T:88:LYS:HB2	1.95	0.47
11:K:59:LYS:HD2	11:K:89:ASN:O	2.15	0.47
31:I:18:ASN:HB2	31:I:38:CYS:SG	2.54	0.47
31:I:18:ASN:N	31:I:19:PRO:CD	2.77	0.47
2:B:1729:U:C2'	2:B:1730:C:H4'	2.39	0.47
8:G:148:ARG:HB2	8:G:152:ARG:HH11	1.79	0.47
2:B:37:C:O2'	2:B:38:A:H5'	2.15	0.47
2:B:2589:A:H2'	2:B:2590:A:C8	2.49	0.47
2:B:784:G:HO2'	2:B:785:G:H5''	1.79	0.47
2:B:184:C:H2'	2:B:185:G:C8	2.49	0.47
9:H:21:VAL:HG22	9:H:22:LYS:N	2.29	0.47
2:B:2635:A:H4'	5:D:79:LEU:HB2	1.96	0.47
2:B:692:C:H2'	2:B:693:A:C8	2.49	0.47
21:U:60:LYS:HE2	21:U:60:LYS:HA	1.97	0.47
8:G:95:ALA:HA	8:G:104:LEU:HD23	1.96	0.47
15:O:93:ASP:C	15:O:95:SER:H	2.16	0.47
2:B:241:A:OP1	2:B:241:A:H8	1.97	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:89:VAL:O	12:L:89:VAL:HG13	2.15	0.47
2:B:615:U:O4	6:E:39:ALA:HB2	2.14	0.47
2:B:269:C:H2'	2:B:270:A:H8	1.79	0.47
9:H:9:VAL:CG1	9:H:12:LEU:HG	2.45	0.47
31:I:2:LYS:O	31:I:3:LYS:HG3	2.14	0.47
2:B:547:A:H3'	2:B:547:A:OP1	2.13	0.47
17:Q:109:VAL:HG12	17:Q:113:LYS:HE3	1.97	0.47
17:Q:80:ASN:C	17:Q:82:LEU:H	2.18	0.47
5:D:116:LYS:HG3	5:D:165:MET:SD	2.54	0.47
22:W:18:LYS:HE3	22:W:19:ARG:NH2	2.29	0.47
1:A:82:U:O2'	1:A:83:G:H5'	2.14	0.47
2:B:2331:G:O2'	2:B:2332:C:H5'	2.15	0.47
24:Y:23:LEU:CD1	24:Y:28:LEU:HB2	2.43	0.47
24:Y:50:VAL:O	24:Y:54:VAL:HG22	2.15	0.47
19:S:71:VAL:O	19:S:71:VAL:HG22	2.13	0.47
19:S:47:VAL:HG12	19:S:103:ILE:HG21	1.97	0.47
7:F:74:ALA:HB3	7:F:77:LYS:O	2.15	0.47
25:Z:76:GLU:HG3	25:Z:77:LYS:H	1.79	0.47
14:N:114:GLU:CD	14:N:118:ARG:HH11	2.18	0.47
3:V:51:GLN:HB2	3:V:57:TYR:OH	2.13	0.47
2:B:580:U:O3'	17:Q:30:VAL:HG13	2.15	0.47
12:L:57:LEU:C	12:L:59:ARG:H	2.16	0.47
2:B:1439:A:N7	2:B:1440:U:C2	2.83	0.47
20:T:85:VAL:C	20:T:86:THR:HG23	2.35	0.47
11:K:85:VAL:HG21	11:K:115:ILE:HD11	1.97	0.47
20:T:68:LYS:N	20:T:68:LYS:HD3	2.29	0.47
31:I:17:ALA:O	31:I:18:ASN:HB3	2.13	0.47
31:I:129:GLU:CB	31:I:133:ARG:HH12	2.27	0.47
4:C:102:TYR:O	4:C:103:ILE:HG13	2.15	0.47
14:N:11:ASN:HA	14:N:11:ASN:HD22	1.55	0.47
2:B:993:G:H5''	17:Q:49:ARG:NH1	2.29	0.47
2:B:2848:G:H1	2:B:2867:G:N2	2.13	0.47
2:B:97:C:H2'	2:B:98:G:O4'	2.15	0.47
2:B:718:A:H5'	2:B:719:C:C5	2.50	0.47
2:B:20:C:H2'	2:B:21:A:H8	1.80	0.47
2:B:2892:G:H5''	2:B:2894:G:N2	2.30	0.47
2:B:728:G:O2'	2:B:730:A:H8	1.97	0.47
2:B:1998:A:OP2	5:D:141:ARG:NH2	2.48	0.47
21:U:10:VAL:HB	21:U:69:VAL:HB	1.95	0.47
19:S:60:HIS:O	19:S:61:ASN:CB	2.62	0.47
2:B:2085:U:O2'	2:B:2086:U:H5'	2.15	0.47
2:B:1324:G:H1'	2:B:1616:A:C6	2.49	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:E:97:ASN:OD1	6:E:97:ASN:N	2.47	0.47
2:B:2683:C:O2'	2:B:2684:U:H5'	2.14	0.47
2:B:1845:G:O2'	2:B:1846:G:H5'	2.15	0.47
1:A:95:U:H2'	1:A:96:G:H8	1.78	0.47
4:C:123:ILE:O	4:C:123:ILE:HG13	2.15	0.47
15:O:4:LYS:O	15:O:8:ILE:HG13	2.15	0.47
2:B:632:A:H2'	2:B:633:A:C8	2.49	0.47
18:R:31:GLU:H	18:R:63:VAL:HG22	1.80	0.47
2:B:657:U:H2'	2:B:658:U:C6	2.50	0.47
2:B:2094:A:H2'	2:B:2095:A:H8	1.79	0.47
31:I:37:PHE:HB2	31:I:66:PHE:CE2	2.50	0.47
2:B:2138:G:H2'	2:B:2139:U:O4'	2.14	0.47
2:B:2281:A:O2'	2:B:2282:G:H5'	2.15	0.47
6:E:137:LYS:O	6:E:141:MET:HG3	2.15	0.47
2:B:437:U:H2'	2:B:438:G:C8	2.50	0.47
27:1:39:ASP:OD1	27:1:41:VAL:HB	2.13	0.47
2:B:816:C:O2'	2:B:817:C:H5'	2.15	0.47
14:N:8:ARG:HB3	14:N:43:GLU:OE2	2.14	0.47
2:B:2655:G:O2'	2:B:2656:U:P	2.72	0.47
2:B:758:C:O2	2:B:1981:A:H2	1.98	0.47
2:B:2362:C:OP2	29:3:43:LEU:HD21	2.15	0.47
1:A:73:A:H2'	1:A:73:A:N3	2.29	0.47
12:L:100:ILE:HG12	12:L:100:ILE:O	2.15	0.47
2:B:1376:C:H3'	34:B:4096:HOH:O	2.14	0.47
2:B:235:U:H2'	2:B:236:C:C6	2.50	0.47
19:S:46:LEU:O	19:S:50:VAL:HG23	2.15	0.47
13:M:42:THR:O	13:M:45:GLN:HB2	2.14	0.47
2:B:956:G:C4'	13:M:82:MET:HE1	2.45	0.47
1:A:78:A:H2'	1:A:79:G:O4'	2.13	0.47
2:B:1253:A:H4'	2:B:1254:A:OP2	2.14	0.47
2:B:392:U:O2'	2:B:393:C:H5'	2.14	0.47
2:B:2583:G:H2'	2:B:2584:U:O4'	2.15	0.47
2:B:648:G:O2'	2:B:649:G:H5'	2.15	0.47
2:B:1299:G:H5''	2:B:1300:G:OP1	2.14	0.47
7:F:65:LEU:CD2	7:F:87:LYS:HD2	2.42	0.47
2:B:4:U:H2'	2:B:5:A:H8	1.80	0.47
10:J:98:GLU:HB3	10:J:124:VAL:HG21	1.96	0.47
17:Q:57:ARG:HA	17:Q:60:TRP:CE3	2.50	0.47
4:C:78:GLU:HB2	4:C:92:LEU:HD23	1.96	0.47
14:N:2:ARG:O	14:N:2:ARG:NE	2.45	0.47
2:B:1287:A:P	14:N:104:ALA:HB3	2.55	0.47
13:M:38:ARG:HG2	13:M:38:ARG:HH11	1.79	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:G:71:LEU:HD13	8:G:74:MET:SD	2.55	0.47
11:K:104:THR:H	11:K:107:LEU:CD1	2.28	0.47
8:G:140:ILE:HA	8:G:143:VAL:CG2	2.44	0.47
2:B:2258:C:O2'	2:B:2427:C:OP2	2.32	0.47
1:A:55:U:H2'	1:A:56:G:H8	1.79	0.47
15:O:68:LYS:H	15:O:102:ARG:HD3	1.79	0.47
2:B:1336:A:H3'	2:B:1337:G:H8	1.80	0.47
20:T:50:LEU:O	20:T:52:GLU:N	2.47	0.47
2:B:693:A:H2'	2:B:694:U:H6	1.80	0.47
12:L:132:ARG:O	12:L:135:ILE:HG22	2.14	0.47
2:B:292:U:O2'	2:B:293:U:H5'	2.14	0.47
21:U:53:GLN:CD	21:U:53:GLN:H	2.18	0.47
2:B:1599:U:H2'	2:B:1600:C:C6	2.49	0.47
2:B:406:G:O2'	2:B:407:G:H5'	2.15	0.47
9:H:92:GLY:O	9:H:93:SER:HB2	2.15	0.47
10:J:35:ARG:HA	10:J:40:HIS:CD2	2.50	0.47
5:D:104:VAL:HA	5:D:106:LYS:HZ1	1.80	0.47
4:C:129:LEU:CD2	4:C:133:ASN:HB2	2.45	0.47
2:B:663:G:OP1	12:L:17:LYS:HG2	2.15	0.47
1:A:83:G:H4'	24:Y:52:PHE:CD2	2.50	0.47
7:F:76:PHE:HD2	7:F:78:ILE:HD13	1.78	0.47
31:I:49:GLU:HB3	31:I:52:LEU:HD12	1.97	0.47
31:I:52:LEU:HD13	31:I:81:LYS:HZ3	1.79	0.47
2:B:2261:C:N4	22:W:10:ARG:HB3	2.30	0.47
2:B:532:A:H2'	17:Q:27:ARG:NH2	2.21	0.47
2:B:2569:G:O2'	2:B:2570:G:H5'	2.15	0.47
16:P:83:ILE:O	16:P:83:ILE:HD13	2.15	0.47
2:B:2526:G:H2'	2:B:2527:C:H6	1.80	0.47
2:B:2526:G:H5'	2:B:2742:G:O2'	2.15	0.47
2:B:770:G:O2'	2:B:771:G:H5'	2.13	0.47
11:K:119:ALA:HB3	11:K:120:PRO:HD3	1.97	0.47
7:F:103:ILE:HD11	7:F:174:PHE:CG	2.50	0.47
30:4:8:LYS:HG2	30:4:9:LYS:HD3	1.97	0.47
2:B:418:C:H2'	2:B:419:U:H6	1.80	0.47
20:T:15:HIS:O	20:T:16:VAL:C	2.51	0.47
2:B:277:G:H4'	2:B:278:A:N7	2.29	0.47
6:E:179:SER:HA	6:E:182:ALA:HB3	1.95	0.47
2:B:1324:G:C6	2:B:1331:G:C6	3.03	0.47
1:A:48:U:O2'	15:O:100:HIS:HE1	1.98	0.47
29:3:58:ILE:H	29:3:58:ILE:HG13	1.41	0.47
2:B:1419:A:H2'	2:B:1421:G:C8	2.49	0.47
2:B:753:A:O2'	2:B:754:U:H5'	2.13	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:G:14:VAL:O	8:G:16:VAL:HG23	2.14	0.47
2:B:1744:A:H2'	2:B:1745:A:C8	2.49	0.47
12:L:81:ASP:O	12:L:83:ALA:N	2.48	0.47
2:B:1541:C:H2'	2:B:1542:U:C6	2.50	0.47
2:B:1969:A:O2'	2:B:1972:G:N3	2.40	0.47
9:H:12:LEU:HG	9:H:12:LEU:O	2.15	0.47
6:E:73:ILE:O	6:E:73:ILE:HG12	2.15	0.47
2:B:2716:C:H2'	2:B:2717:C:C6	2.49	0.47
2:B:1893:C:H2'	2:B:1894:C:O4'	2.15	0.47
7:F:31:GLU:HB3	7:F:156:THR:O	2.14	0.47
7:F:3:LEU:HD11	7:F:172:PHE:CD1	2.50	0.47
17:Q:108:LEU:N	18:R:48:LYS:HD3	2.29	0.47
26:O:26:SER:HB3	26:O:39:ARG:NH2	2.29	0.47
14:N:116:VAL:O	14:N:117:ASP:CB	2.60	0.47
28:2:10:LEU:HD11	28:2:14:ARG:CZ	2.46	0.47
11:K:112:PHE:O	11:K:113:MET:C	2.53	0.47
9:H:89:LYS:N	9:H:89:LYS:HD2	2.30	0.47
17:Q:7:VAL:HG23	17:Q:8:ILE:N	2.30	0.47
9:H:125:THR:HA	9:H:146:VAL:CB	2.45	0.47
2:B:974:G:H1'	2:B:975:A:C8	2.50	0.47
2:B:540:C:O2'	2:B:541:A:H5'	2.15	0.47
2:B:2562:U:H2'	2:B:2563:U:H5'	1.97	0.47
8:G:106:LEU:O	8:G:108:PHE:HD1	1.98	0.47
16:P:31:VAL:O	16:P:32:VAL:HG12	2.14	0.47
2:B:862:G:H2'	2:B:863:A:O4'	2.15	0.47
9:H:25:TYR:CD1	9:H:30:LEU:HG	2.50	0.47
2:B:121:G:H2'	2:B:122:G:C8	2.49	0.47
2:B:392:U:H2'	2:B:393:C:H6	1.80	0.47
5:D:125:TRP:HA	5:D:125:TRP:CE3	2.50	0.47
2:B:218:A:O2'	2:B:219:A:H5'	2.15	0.47
2:B:2628:C:O2'	2:B:2781:A:H2'	2.15	0.47
4:C:41:GLY:O	4:C:48:ILE:HA	2.15	0.47
2:B:1294:U:C2'	2:B:1295:C:H5'	2.44	0.47
17:Q:64:ILE:HD12	17:Q:95:ALA:CB	2.45	0.46
2:B:1176:U:H2'	2:B:1177:G:C8	2.50	0.46
2:B:2386:A:H2'	2:B:2387:U:C6	2.51	0.46
2:B:1062:G:H2'	2:B:1063:G:H8	1.79	0.46
25:Z:35:SER:HA	25:Z:49:LEU:O	2.14	0.46
3:V:21:ARG:HE	3:V:87:GLN:CB	2.24	0.46
2:B:705:A:N6	2:B:726:G:H1'	2.30	0.46
27:1:33:LEU:HD12	27:1:34:GLU:N	2.30	0.46
2:B:499:U:H2'	2:B:500:G:O4'	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:G:148:ARG:HD3	8:G:152:ARG:NH1	2.29	0.46
3:V:1:MET:HG3	3:V:2:PHE:CD2	2.50	0.46
2:B:1354:A:OP1	4:C:35:LYS:HE2	2.14	0.46
2:B:2462:C:H2'	2:B:2463:C:H6	1.80	0.46
15:O:88:LYS:HB3	15:O:88:LYS:HE3	1.66	0.46
2:B:643:A:C5	2:B:644:A:N7	2.83	0.46
11:K:79:PHE:CD2	16:P:69:VAL:HG12	2.49	0.46
8:G:91:VAL:HG23	8:G:92:GLY:H	1.80	0.46
2:B:1477:A:H2'	2:B:1478:G:O4'	2.15	0.46
2:B:1936:A:H2	2:B:1943:U:C5	2.33	0.46
7:F:29:ARG:HB2	7:F:158:THR:HG21	1.97	0.46
5:D:114:LYS:HG3	5:D:116:LYS:HG2	1.96	0.46
9:H:44:ILE:O	9:H:48:GLU:HB3	2.16	0.46
2:B:962:G:N2	2:B:2250:G:H22	1.95	0.46
2:B:962:G:H2'	2:B:963:U:H6	1.80	0.46
2:B:1439:A:H1'	2:B:1553:A:N6	2.30	0.46
6:E:134:LEU:HD21	6:E:161:ALA:HB2	1.97	0.46
20:T:67:VAL:HG22	20:T:74:ILE:HD11	1.97	0.46
7:F:105:ILE:C	7:F:108:PRO:HD2	2.34	0.46
15:O:74:VAL:O	15:O:77:ALA:HB3	2.15	0.46
5:D:33:ARG:NH1	5:D:53:GLY:O	2.48	0.46
14:N:61:ALA:C	14:N:63:ARG:N	2.68	0.46
21:U:62:ALA:O	21:U:63:ALA:HB3	2.15	0.46
4:C:221:GLY:O	4:C:224:MET:HG3	2.15	0.46
6:E:176:ASP:O	6:E:180:LEU:HG	2.15	0.46
2:B:2339:C:H2'	2:B:2340:A:H8	1.79	0.46
15:O:100:HIS:HA	15:O:104:GLN:NE2	2.29	0.46
2:B:150:U:H2'	2:B:151:C:H6	1.78	0.46
2:B:1640:A:H2'	2:B:1641:A:H8	1.77	0.46
15:O:30:ARG:HG3	15:O:30:ARG:NH1	2.30	0.46
5:D:125:TRP:HE1	5:D:161:MET:H	1.63	0.46
13:M:90:GLU:OE1	13:M:90:GLU:HA	2.14	0.46
9:H:147:VAL:HG12	9:H:148:ALA:N	2.29	0.46
18:R:43:ASN:ND2	18:R:44:GLY:N	2.63	0.46
4:C:165:ALA:HB3	4:C:172:THR:HG23	1.96	0.46
31:I:2:LYS:N	31:I:2:LYS:HD2	2.31	0.46
2:B:1098:A:H2'	31:I:4:VAL:C	2.36	0.46
10:J:45:THR:HG23	10:J:45:THR:O	2.15	0.46
10:J:4:PHE:HB3	10:J:44:TYR:CD1	2.51	0.46
2:B:1245:G:H4'	6:E:33:VAL:HG13	1.96	0.46
2:B:1173:U:H2'	2:B:1174:U:C5	2.50	0.46
2:B:1174:U:H1'	2:B:1176:U:O2	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:D:116:LYS:HD2	5:D:123:LYS:HE2	1.97	0.46
20:T:54:GLU:CB	20:T:88:LYS:HB2	2.45	0.46
7:F:147:ARG:HD2	7:F:148:VAL:HG22	1.96	0.46
16:P:100:ARG:HB3	16:P:101:GLU:OE2	2.15	0.46
11:K:41:ILE:HG13	11:K:42:THR:H	1.80	0.46
13:M:101:VAL:HG22	13:M:101:VAL:O	2.15	0.46
2:B:19:A:O2'	2:B:20:C:H5'	2.15	0.46
2:B:431:U:O2'	2:B:432:A:H5'	2.15	0.46
2:B:1854:A:H2	2:B:2087:G:N3	2.13	0.46
26:O:18:HIS:C	26:O:20:ALA:H	2.19	0.46
20:T:48:GLN:HA	20:T:48:GLN:NE2	2.30	0.46
2:B:311:A:H3'	2:B:312:G:C8	2.50	0.46
15:O:84:GLU:C	15:O:86:GLY:N	2.69	0.46
1:A:91:C:O2'	1:A:92:C:H5'	2.15	0.46
2:B:1214:A:H2'	2:B:1215:G:H8	1.81	0.46
17:Q:35:PHE:O	17:Q:39:ILE:HG12	2.16	0.46
31:I:89:SER:HA	31:I:97:VAL:HG11	1.98	0.46
2:B:2630:G:H2'	2:B:2631:G:H8	1.81	0.46
2:B:510:C:O2'	2:B:1236:G:H5'	2.16	0.46
17:Q:92:LYS:O	17:Q:95:ALA:HB3	2.15	0.46
4:C:119:VAL:HG13	4:C:133:ASN:ND2	2.29	0.46
2:B:566:U:H5''	12:L:29:LYS:HZ2	1.79	0.46
11:K:105:ARG:H	11:K:105:ARG:CD	2.28	0.46
8:G:122:ALA:HA	8:G:131:VAL:O	2.15	0.46
2:B:2579:C:H1'	5:D:130:GLN:HE22	1.81	0.46
3:V:9:ARG:NE	3:V:20:LEU:HD11	2.29	0.46
9:H:70:GLU:CD	9:H:71:LYS:N	2.69	0.46
2:B:2075:U:H2'	2:B:2238:G:N2	2.29	0.46
2:B:1945:G:H2'	2:B:1946:U:C6	2.50	0.46
2:B:2720:U:H2'	2:B:2721:A:H8	1.80	0.46
2:B:1823:G:O2'	2:B:1824:G:H5'	2.15	0.46
2:B:233:A:N6	2:B:428:A:N6	2.62	0.46
1:A:75:G:H2'	1:A:76:G:C8	2.51	0.46
21:U:12:VAL:HA	21:U:69:VAL:HA	1.98	0.46
4:C:71:ASP:O	4:C:73:ILE:HG12	2.15	0.46
2:B:2355:G:H4'	22:W:20:LEU:CD1	2.45	0.46
2:B:454:A:H3'	2:B:455:C:H5'	1.97	0.46
2:B:839:U:H1'	2:B:1191:G:H1'	1.97	0.46
2:B:211:C:O2'	2:B:212:G:H5'	2.16	0.46
7:F:19:PHE:HE1	7:F:167:ALA:HB2	1.80	0.46
2:B:1126:A:H4'	2:B:1127:A:O5'	2.16	0.46
2:B:1958:C:H2'	2:B:1959:G:H8	1.81	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1749:A:H2'	2:B:1750:G:C8	2.50	0.46
13:M:29:GLY:HA2	13:M:106:ASP:HB2	1.97	0.46
2:B:39:G:H2'	2:B:40:U:C6	2.50	0.46
5:D:106:LYS:N	5:D:106:LYS:HD3	2.30	0.46
12:L:123:ARG:HD2	12:L:124:GLY:N	2.30	0.46
24:Y:50:VAL:HA	24:Y:52:PHE:CE1	2.51	0.46
2:B:2305:U:H2'	2:B:2306:C:O4'	2.16	0.46
2:B:1023:U:H2'	2:B:1024:G:H5'	1.98	0.46
17:Q:26:ALA:HA	17:Q:29:ARG:CG	2.45	0.46
8:G:33:THR:C	8:G:34:ARG:HD3	2.36	0.46
2:B:2674:G:H2'	2:B:2675:A:H8	1.80	0.46
11:K:40:LYS:NZ	11:K:59:LYS:HE3	2.31	0.46
13:M:35:ALA:HB3	13:M:99:GLY:H	1.78	0.46
2:B:1387:A:H2'	2:B:1388:G:C8	2.51	0.46
9:H:117:LEU:HD22	9:H:130:VAL:CG1	2.45	0.46
20:T:14:PRO:HA	20:T:32:LEU:HB2	1.97	0.46
2:B:1919:A:H2'	2:B:1919:A:N3	2.31	0.46
2:B:68:G:H2'	2:B:69:C:C6	2.51	0.46
2:B:596:U:O2'	2:B:597:G:H5'	2.15	0.46
2:B:1848:A:H2'	2:B:1849:G:C8	2.50	0.46
2:B:1010:A:N3	2:B:1153:C:H1'	2.30	0.46
23:X:56:LEU:O	23:X:58:ASN:N	2.42	0.46
9:H:26:ALA:C	9:H:28:ASN:N	2.68	0.46
2:B:1092:C:C2'	2:B:1093:G:H5'	2.45	0.46
2:B:1429:G:H2'	2:B:1430:G:C8	2.49	0.46
6:E:137:LYS:HG3	6:E:141:MET:SD	2.56	0.46
2:B:1458:U:C2'	2:B:1459:G:H5''	2.45	0.46
2:B:935:C:H2'	2:B:936:A:C8	2.50	0.46
12:L:132:ARG:O	12:L:136:GLU:HG2	2.15	0.46
15:O:18:LEU:HD23	15:O:25:ARG:CD	2.45	0.46
2:B:493:G:O2'	19:S:7:HIS:HA	2.15	0.46
2:B:485:C:O2'	2:B:486:C:H5'	2.15	0.46
21:U:86:PHE:CD2	21:U:92:VAL:HG21	2.50	0.46
10:J:58:ASN:C	10:J:60:ASP:H	2.18	0.46
2:B:5:A:H2'	2:B:6:A:H8	1.81	0.46
17:Q:64:ILE:HD12	17:Q:95:ALA:HB3	1.97	0.46
25:Z:5:CYS:SG	25:Z:7:VAL:HG12	2.56	0.46
2:B:771:G:O2'	2:B:772:C:H5'	2.16	0.46
2:B:63:A:OP2	2:B:63:A:H2'	2.15	0.46
2:B:1082:U:C2	2:B:1086:A:N1	2.83	0.46
9:H:87:GLU:HB2	9:H:89:LYS:HZ2	1.81	0.46
2:B:899:A:C2	2:B:900:A:H1'	2.51	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:S:41:LYS:O	19:S:42:LYS:C	2.54	0.46
2:B:2334:U:O3'	15:O:13:ARG:HB2	2.14	0.46
4:C:64:VAL:O	4:C:65:ASP:CB	2.62	0.46
13:M:101:VAL:HG13	13:M:101:VAL:O	2.16	0.46
2:B:2314:A:O4'	7:F:154:THR:HG21	2.16	0.46
2:B:2820:A:H4'	14:N:3:HIS:ND1	2.30	0.46
1:A:75:G:N1	1:A:102:G:N2	2.63	0.46
2:B:2379:G:C5'	15:O:21:LEU:HD11	2.46	0.46
2:B:1872:A:H2'	2:B:1873:G:O4'	2.15	0.46
2:B:754:U:H2'	2:B:755:U:H6	1.81	0.46
2:B:2489:U:O2'	2:B:2490:G:H5'	2.15	0.46
12:L:133:ALA:HA	12:L:136:GLU:HB2	1.98	0.46
3:V:16:ALA:HA	3:V:19:ARG:HH21	1.81	0.46
19:S:88:ARG:HH21	19:S:88:ARG:HG3	1.81	0.46
2:B:1547:C:H2'	2:B:1548:A:C8	2.50	0.46
2:B:2492:U:O2'	2:B:2493:U:H5'	2.15	0.46
2:B:1099:G:OP2	31:I:2:LYS:O	2.33	0.46
7:F:33:ILE:O	7:F:90:LEU:HB2	2.15	0.46
10:J:44:TYR:C	10:J:44:TYR:CD2	2.89	0.46
4:C:153:LEU:HD13	4:C:175:LEU:HD21	1.97	0.46
14:N:48:VAL:O	14:N:51:LEU:N	2.49	0.46
3:V:80:HIS:HB2	3:V:85:LYS:HG3	1.97	0.46
2:B:533:G:H5'	17:Q:23:TYR:CD2	2.51	0.46
20:T:40:LYS:O	20:T:43:ILE:HB	2.15	0.46
13:M:56:ALA:C	13:M:58:LYS:H	2.18	0.46
31:I:23:VAL:HG12	31:I:24:GLY:N	2.31	0.46
11:K:11:ALA:HB3	11:K:85:VAL:CG2	2.46	0.46
8:G:37:ASN:HD22	8:G:40:VAL:CB	2.25	0.46
7:F:139:GLU:O	7:F:141:ASP:N	2.49	0.46
2:B:877:A:N3	2:B:877:A:H2'	2.30	0.46
2:B:1733:G:H5'	2:B:1733:G:H8	1.81	0.46
18:R:59:ILE:HA	18:R:100:GLY:HA3	1.97	0.46
14:N:61:ALA:C	14:N:63:ARG:H	2.19	0.46
9:H:95:GLY:O	9:H:98:ASP:N	2.49	0.46
20:T:61:LEU:HD12	20:T:61:LEU:C	2.36	0.46
14:N:11:ASN:O	14:N:12:ARG:HB2	2.15	0.46
2:B:2849:U:H4'	2:B:2850:A:C5'	2.44	0.46
2:B:1999:C:H2'	2:B:2000:C:O4'	2.16	0.46
12:L:105:ILE:HG22	12:L:106:GLU:N	2.31	0.46
21:U:11:ILE:HB	21:U:72:PHE:HD1	1.81	0.46
28:2:21:ARG:HG2	28:2:31:LEU:HD21	1.98	0.46
2:B:2648:G:H2'	2:B:2649:C:H6	1.79	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:R:54:VAL:HG13	18:R:56:GLY:O	2.15	0.46
18:R:63:VAL:O	18:R:63:VAL:HG23	2.16	0.46
2:B:2148:G:O3'	2:B:2149:U:H6	1.99	0.46
2:B:2009:A:O4'	14:N:107:ASN:HB2	2.16	0.46
2:B:796:C:H2'	2:B:797:G:H8	1.79	0.46
15:O:3:LYS:H	15:O:3:LYS:HG2	1.50	0.46
9:H:60:GLU:C	9:H:62:LEU:N	2.68	0.46
7:F:33:ILE:H	7:F:95:MET:HG3	1.81	0.46
17:Q:111:LYS:HB2	17:Q:111:LYS:HZ2	1.81	0.46
6:E:181:ILE:HD13	12:L:3:LEU:HD23	1.97	0.46
5:D:107:VAL:HG12	5:D:109:VAL:HG23	1.98	0.46
2:B:582:A:H2'	2:B:583:G:C8	2.50	0.46
2:B:1054:A:H2'	2:B:1055:G:C8	2.49	0.46
11:K:119:ALA:O	11:K:120:PRO:O	2.33	0.46
7:F:102:LEU:O	7:F:103:ILE:CB	2.63	0.46
2:B:2023:C:H4'	2:B:2617:U:O3'	2.16	0.46
8:G:1:SER:O	8:G:3:VAL:N	2.49	0.46
30:4:2:LYS:HD3	30:4:4:ARG:HE	1.81	0.46
2:B:353:C:H2'	2:B:353:C:O2	2.15	0.46
2:B:2626:C:H2'	2:B:2627:G:C8	2.51	0.46
2:B:1745:A:H2'	2:B:1746:A:C8	2.51	0.46
2:B:623:C:H2'	2:B:624:C:H6	1.81	0.46
2:B:2223:G:H2'	2:B:2224:G:H5'	1.97	0.46
2:B:950:G:H2'	2:B:951:C:H6	1.81	0.46
9:H:60:GLU:O	9:H:62:LEU:HD23	2.16	0.46
31:I:69:VAL:HG23	31:I:69:VAL:O	2.15	0.46
2:B:2668:G:O2'	2:B:2669:G:H5'	2.16	0.46
10:J:128:ASN:O	10:J:129:GLU:HB3	2.16	0.46
2:B:1203:U:H3'	2:B:1204:A:H5''	1.98	0.46
2:B:558:U:OP1	10:J:113:PRO:HB2	2.16	0.46
12:L:17:LYS:O	12:L:18:ARG:HG2	2.16	0.46
2:B:852:U:H2'	2:B:853:C:C6	2.51	0.46
14:N:21:PHE:HA	14:N:24:MET:HB2	1.98	0.46
2:B:878:A:C2'	2:B:878:A:N3	2.77	0.46
2:B:730:A:H3'	34:B:4506:HOH:O	2.15	0.46
4:C:12:ARG:HA	4:C:15:VAL:CG2	2.46	0.46
18:R:49:ILE:CG2	18:R:54:VAL:HB	2.45	0.46
2:B:1849:G:H2'	2:B:1850:G:C8	2.50	0.46
18:R:31:GLU:O	18:R:63:VAL:HG22	2.16	0.46
2:B:1093:G:O2'	2:B:1094:U:H5'	2.16	0.46
28:2:3:ARG:HA	28:2:3:ARG:CZ	2.46	0.46
12:L:118:THR:O	12:L:120:VAL:HG23	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:64:ILE:HG13	21:U:68:ASN:HD22	1.81	0.46
2:B:1717:A:H2'	2:B:1718:G:O4'	2.16	0.46
19:S:85:ILE:HD12	19:S:85:ILE:N	2.31	0.46
2:B:60:G:C6	2:B:74:A:N6	2.84	0.46
1:A:16:G:O2'	1:A:17:C:H5'	2.16	0.46
6:E:146:VAL:HA	6:E:185:LYS:O	2.16	0.46
26:O:9:ARG:O	26:O:12:ARG:HB3	2.15	0.46
12:L:29:LYS:C	12:L:31:GLY:H	2.19	0.46
2:B:2386:A:N3	22:W:38:ARG:HB3	2.30	0.46
22:W:18:LYS:HA	22:W:18:LYS:HD2	1.71	0.46
22:W:65:LYS:N	22:W:84:GLU:HB3	2.31	0.46
25:Z:70:GLU:C	25:Z:72:ARG:N	2.69	0.46
3:V:48:MET:O	3:V:51:GLN:HG3	2.16	0.46
16:P:19:PHE:CE2	16:P:83:ILE:HD11	2.50	0.46
20:T:55:VAL:HG13	20:T:85:VAL:HG12	1.97	0.46
11:K:99:ILE:HD13	11:K:118:LEU:HD22	1.97	0.46
7:F:165:GLY:O	7:F:169:LEU:HD12	2.16	0.46
13:M:68:PHE:CG	13:M:69:PRO:HD2	2.51	0.46
2:B:418:C:O2'	2:B:419:U:H5'	2.16	0.46
9:H:119:ASN:ND2	9:H:121:VAL:HG22	2.31	0.46
2:B:1601:G:O2'	2:B:1602:U:H5'	2.15	0.46
2:B:129:C:H2'	2:B:130:C:H6	1.81	0.46
2:B:1846:G:N2	2:B:1848:A:N6	2.64	0.46
8:G:9:VAL:HA	8:G:48:THR:CG2	2.46	0.46
22:W:32:ALA:O	22:W:34:SER:N	2.48	0.46
2:B:1541:C:H2'	2:B:1542:U:H6	1.80	0.46
9:H:9:VAL:HG11	9:H:12:LEU:HG	1.98	0.46
2:B:1940:U:H5''	2:B:1940:U:O2	2.16	0.46
2:B:1506:U:H2'	2:B:1507:C:C6	2.51	0.46
2:B:1523:U:H5''	2:B:1524:G:C8	2.51	0.46
7:F:1:ALA:O	7:F:4:HIS:HB3	2.16	0.46
2:B:1365:A:O3'	25:Z:11:ARG:NH1	2.49	0.46
2:B:560:C:H2'	2:B:561:G:O4'	2.16	0.46
2:B:1100:C:H41	31:I:1:ALA:N	2.13	0.45
7:F:31:GLU:HB2	7:F:158:THR:HG22	1.98	0.45
14:N:29:VAL:HG21	14:N:75:ILE:HB	1.98	0.45
10:J:43:GLU:O	10:J:45:THR:HG22	2.16	0.45
23:X:39:GLN:HB2	23:X:42:LEU:HD22	1.98	0.45
14:N:24:MET:CE	14:N:40:LYS:HB3	2.45	0.45
7:F:83:PRO:O	7:F:84:ILE:HD12	2.16	0.45
2:B:1060:U:H5	31:I:131:THR:CG2	2.29	0.45
31:I:72:THR:CG2	31:I:112:LYS:HD2	2.46	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:27:G:HO2'	2:B:28:A:H8	1.57	0.45
18:R:61:ALA:CB	18:R:98:ILE:H	2.29	0.45
2:B:2547:A:H4'	11:K:29:HIS:CE1	2.51	0.45
11:K:107:LEU:C	11:K:109:SER:H	2.20	0.45
7:F:168:LEU:O	7:F:170:ALA:N	2.49	0.45
18:R:60:LYS:H	18:R:100:GLY:N	2.14	0.45
2:B:2580:U:H5'	5:D:136:ASN:H	1.81	0.45
2:B:571:U:O2'	2:B:573:U:O5'	2.34	0.45
20:T:61:LEU:HG	20:T:82:LYS:HB2	1.97	0.45
15:O:39:VAL:HB	15:O:49:VAL:HG22	1.98	0.45
2:B:2591:C:OP1	4:C:237:ARG:HG3	2.16	0.45
7:F:34:THR:OG1	7:F:154:THR:HB	2.16	0.45
7:F:23:SER:O	7:F:26:GLN:HB2	2.16	0.45
1:A:7:G:H5''	15:O:29:HIS:CD2	2.51	0.45
2:B:1197:G:H2'	2:B:1198:U:C6	2.51	0.45
2:B:2345:G:H4'	2:B:2346:A:O5'	2.16	0.45
2:B:1259:G:O2'	2:B:1260:A:H5'	2.16	0.45
8:G:102:ILE:HG13	8:G:116:LEU:HD11	1.98	0.45
8:G:10:VAL:CG2	8:G:48:THR:HA	2.46	0.45
6:E:141:MET:O	6:E:143:LEU:HG	2.16	0.45
2:B:935:C:H2'	2:B:936:A:H8	1.81	0.45
2:B:2553:G:H2'	2:B:2554:U:C4'	2.46	0.45
18:R:43:ASN:CG	18:R:45:GLU:H	2.18	0.45
14:N:14:SER:O	14:N:18:GLN:HB2	2.15	0.45
12:L:131:ALA:O	12:L:134:ALA:HB3	2.16	0.45
2:B:2500:U:H5'	2:B:2501:C:OP2	2.16	0.45
21:U:95:PHE:HE1	21:U:102:ILE:HB	1.81	0.45
1:A:42:C:C4	7:F:65:LEU:HD22	2.51	0.45
7:F:98:PHE:C	7:F:100:GLU:N	2.69	0.45
14:N:73:ASN:O	14:N:76:VAL:HG22	2.17	0.45
12:L:78:ARG:NH2	12:L:113:ALA:HB1	2.30	0.45
2:B:858:G:H21	2:B:2268:A:C3'	2.29	0.45
2:B:1283:G:H22	2:B:1286:A:C5'	2.13	0.45
25:Z:68:LEU:HD22	25:Z:78:TYR:CE1	2.52	0.45
8:G:33:THR:HG21	8:G:74:MET:HB3	1.98	0.45
10:J:20:ALA:CB	10:J:23:LYS:HB2	2.45	0.45
11:K:2:ILE:HD12	11:K:2:ILE:N	2.31	0.45
4:C:107:LYS:O	4:C:109:LEU:HD22	2.17	0.45
2:B:1463:C:H2'	2:B:1464:G:C8	2.51	0.45
2:B:98:G:H1	21:U:6:ARG:HH12	1.64	0.45
2:B:1915:U:H2'	2:B:1916:A:C8	2.52	0.45
2:B:434:U:H1'	2:B:435:C:H5	1.81	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:988:A:H3'	24:Y:13:ILE:HD11	1.97	0.45
3:V:77:VAL:HG23	3:V:89:ILE:CG2	2.47	0.45
2:B:1687:G:O2'	2:B:1688:U:H5'	2.15	0.45
1:A:60:C:O2'	1:A:61:G:H5'	2.17	0.45
2:B:1547:C:H2'	2:B:1548:A:H8	1.81	0.45
2:B:1052:C:O2'	2:B:1053:C:H5'	2.16	0.45
31:I:46:ASP:HA	31:I:50:LYS:HE2	1.97	0.45
2:B:244:A:H1'	2:B:255:A:N6	2.31	0.45
2:B:1544:A:H2'	2:B:1545:A:C8	2.51	0.45
20:T:62:VAL:HG12	20:T:63:VAL:H	1.82	0.45
10:J:35:ARG:HA	10:J:40:HIS:NE2	2.32	0.45
5:D:3:GLY:HA2	5:D:101:PHE:CZ	2.52	0.45
31:I:52:LEU:HD13	31:I:81:LYS:NZ	2.31	0.45
25:Z:77:LYS:HG3	25:Z:78:TYR:H	1.81	0.45
25:Z:68:LEU:HD22	25:Z:78:TYR:HE1	1.80	0.45
14:N:114:GLU:HG2	14:N:115:LEU:N	2.32	0.45
2:B:2548:U:H1'	11:K:23:LYS:HZ2	1.80	0.45
2:B:769:U:H2'	2:B:770:G:C8	2.51	0.45
7:F:135:ILE:HG13	7:F:137:PHE:H	1.81	0.45
18:R:22:LEU:HD12	18:R:25:LEU:HD23	1.97	0.45
31:I:138:VAL:HG12	31:I:139:VAL:N	2.32	0.45
5:D:51:THR:HG22	5:D:52:THR:N	2.27	0.45
1:A:32:U:H2'	1:A:33:G:C8	2.51	0.45
30:4:3:VAL:HB	30:4:37:GLN:HE22	1.81	0.45
2:B:717:C:C3'	2:B:718:A:H5''	2.46	0.45
1:A:76:G:H1	1:A:101:A:N6	2.15	0.45
15:O:51:ALA:HB3	15:O:78:VAL:HG13	1.97	0.45
2:B:55:G:H2'	2:B:56:A:H8	1.81	0.45
1:A:27:C:C2'	1:A:28:C:H5'	2.46	0.45
15:O:68:LYS:H	15:O:102:ARG:CD	2.30	0.45
2:B:2496:C:H2'	2:B:2497:A:H5'	1.98	0.45
2:B:1596:A:O2'	2:B:1597:A:H5'	2.17	0.45
2:B:1708:C:O2'	2:B:1709:U:H5'	2.17	0.45
2:B:256:A:H2'	2:B:257:C:H6	1.81	0.45
8:G:88:LEU:HD13	8:G:93:TYR:HB3	1.97	0.45
2:B:765:C:H2'	2:B:766:U:C6	2.51	0.45
18:R:43:ASN:HD21	18:R:45:GLU:HG2	1.81	0.45
2:B:2256:G:O2'	2:B:2257:U:H5'	2.16	0.45
2:B:2452:C:C4	2:B:2453:A:C6	3.04	0.45
2:B:160:A:H1'	2:B:2208:C:O2'	2.17	0.45
7:F:65:LEU:O	7:F:86:CYS:HA	2.16	0.45
14:N:83:LEU:O	14:N:86:ARG:HB2	2.17	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:E:187:VAL:HG12	6:E:188:MET:N	2.31	0.45
5:D:10:GLY:HA3	5:D:26:VAL:H	1.82	0.45
2:B:566:U:H2'	2:B:567:U:O4'	2.17	0.45
2:B:1059:G:N2	31:I:130:GLY:HA3	2.31	0.45
9:H:116:ARG:HB2	9:H:131:SER:OG	2.16	0.45
8:G:23:ILE:HG22	8:G:25:ILE:HD11	1.99	0.45
8:G:132:LEU:HD12	8:G:140:ILE:HG22	1.98	0.45
8:G:66:THR:O	8:G:70:LEU:HB2	2.16	0.45
2:B:2820:A:OP1	14:N:4:ARG:HA	2.16	0.45
23:X:23:ARG:HD2	23:X:27:ASN:ND2	2.28	0.45
20:T:12:ARG:HG2	23:X:29:ARG:HH12	1.81	0.45
2:B:56:A:H2'	2:B:57:C:C6	2.50	0.45
2:B:2236:U:O2'	2:B:2237:G:H5'	2.16	0.45
10:J:74:TYR:HE2	10:J:103:ILE:HD11	1.81	0.45
3:V:19:ARG:O	3:V:22:ALA:HB3	2.15	0.45
2:B:813:U:H2'	2:B:814:C:C6	2.52	0.45
2:B:465:G:H4'	28:2:16:HIS:CD2	2.51	0.45
4:C:264:LYS:HG3	4:C:265:PHE:HD2	1.81	0.45
34:B:4336:HOH:O	12:L:99:ASN:HA	2.15	0.45
30:4:17:VAL:HG11	30:4:19:ARG:HE	1.80	0.45
2:B:2725:A:HO2'	2:B:2726:A:P	2.39	0.45
2:B:902:C:H2'	2:B:903:C:C6	2.51	0.45
10:J:57:LEU:HG	10:J:128:ASN:N	2.31	0.45
6:E:149:ILE:HG23	6:E:188:MET:HA	1.99	0.45
4:C:129:LEU:HD21	4:C:133:ASN:HB2	1.99	0.45
2:B:2306:C:C5	2:B:2307:G:H2'	2.52	0.45
9:H:14:SER:C	9:H:16:GLY:H	2.18	0.45
2:B:2261:C:O2'	2:B:2262:U:H5'	2.17	0.45
17:Q:23:TYR:CD2	17:Q:23:TYR:N	2.83	0.45
2:B:1432:G:O2'	2:B:1433:A:H5'	2.17	0.45
19:S:41:LYS:O	19:S:43:ALA:N	2.49	0.45
8:G:156:TYR:O	8:G:157:LYS:HD2	2.17	0.45
21:U:26:ASN:ND2	21:U:34:ILE:HD12	2.28	0.45
2:B:274:C:H6	2:B:274:C:O5'	2.00	0.45
2:B:277:G:H4'	2:B:278:A:C6	2.51	0.45
6:E:48:THR:O	6:E:52:VAL:HG23	2.17	0.45
2:B:942:G:H2'	2:B:943:A:O4'	2.16	0.45
29:3:61:LEU:N	29:3:62:PRO:HD3	2.32	0.45
3:V:42:LEU:N	3:V:42:LEU:HD23	2.32	0.45
2:B:2655:G:N2	2:B:2664:G:H2'	2.32	0.45
2:B:121:G:H2'	2:B:122:G:H8	1.81	0.45
14:N:65:LEU:HD11	14:N:69:ARG:NH2	2.31	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:E:115:GLN:O	6:E:117:ARG:HG3	2.16	0.45
22:W:50:VAL:HG23	22:W:51:GLY:H	1.80	0.45
25:Z:70:GLU:O	25:Z:72:ARG:N	2.46	0.45
14:N:31:HIS:O	14:N:32:GLU:HB2	2.17	0.45
2:B:117:G:C5'	2:B:126:A:H8	2.20	0.45
2:B:1515:A:H2'	2:B:1516:G:O4'	2.16	0.45
2:B:1056:G:H5''	2:B:1057:A:H5'	1.98	0.45
11:K:109:SER:OG	11:K:111:LYS:HG2	2.17	0.45
2:B:1482:G:N2	2:B:1508:A:H1'	2.31	0.45
2:B:1737:G:H5'	2:B:1738:G:OP2	2.17	0.45
2:B:503:A:C2	2:B:505:A:C4	3.05	0.45
9:H:119:ASN:O	9:H:121:VAL:HG23	2.16	0.45
2:B:307:G:H2'	2:B:309:A:OP2	2.16	0.45
2:B:2109:U:C2	2:B:2110:G:H5''	2.51	0.45
2:B:990:A:H1'	2:B:1156:A:C2	2.52	0.45
2:B:2557:G:H2'	2:B:2558:C:H6	1.79	0.45
18:R:38:VAL:O	18:R:53:PHE:HB3	2.16	0.45
2:B:178:G:O2'	2:B:179:C:H5'	2.17	0.45
12:L:50:PHE:CE2	12:L:53:GLY:HA2	2.52	0.45
15:O:18:LEU:HD23	15:O:25:ARG:HD2	1.99	0.45
2:B:904:G:H2'	2:B:905:A:C8	2.51	0.45
2:B:2594:C:O2'	2:B:2595:G:H5'	2.17	0.45
21:U:85:ARG:HH11	21:U:86:PHE:N	2.14	0.45
21:U:85:ARG:NH1	21:U:86:PHE:N	2.65	0.45
7:F:11:VAL:HG21	7:F:172:PHE:HE1	1.81	0.45
6:E:157:LEU:O	6:E:160:ALA:HB3	2.17	0.45
2:B:140:C:OP1	20:T:2:ILE:HD12	2.16	0.45
4:C:144:GLU:HG3	4:C:151:GLY:N	2.08	0.45
4:C:185:ALA:C	4:C:187:CYS:H	2.19	0.45
31:I:57:VAL:HG23	31:I:71:LYS:HZ1	1.80	0.45
25:Z:65:ASP:O	25:Z:69:ALA:HB2	2.17	0.45
2:B:2428:G:H5''	2:B:2429:G:OP1	2.17	0.45
5:D:61:THR:OG1	5:D:63:PRO:HD2	2.17	0.45
2:B:1516:G:O2'	2:B:1517:G:H5'	2.16	0.45
2:B:1439:A:C5	2:B:1552:A:N6	2.85	0.45
5:D:148:GLN:CB	5:D:152:PRO:HG2	2.40	0.45
11:K:105:ARG:H	11:K:122:VAL:HG12	1.82	0.45
10:J:63:ALA:HA	10:J:69:ARG:HH22	1.81	0.45
5:D:15:PHE:HD1	5:D:15:PHE:H	1.63	0.45
2:B:1181:U:O2'	2:B:1182:G:H5'	2.16	0.45
22:W:28:GLU:H	22:W:31:LEU:HG	1.82	0.45
14:N:12:ARG:HG2	14:N:16:HIS:ND1	2.31	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:992:C:H2'	2:B:993:G:C8	2.52	0.45
9:H:125:THR:HA	9:H:146:VAL:CG1	2.45	0.45
2:B:2078:C:H2'	2:B:2079:U:H6	1.81	0.45
8:G:94:ARG:HA	8:G:128:THR:HG22	1.98	0.45
2:B:1606:C:H5''	2:B:1607:C:OP1	2.16	0.45
2:B:1565:C:H5''	4:C:17:LYS:CE	2.47	0.45
2:B:2050:C:H1'	5:D:161:MET:CE	2.47	0.45
2:B:219:A:O2'	2:B:220:G:H5'	2.17	0.45
11:K:95:ILE:O	11:K:95:ILE:HG13	2.17	0.45
24:Y:9:THR:HB	24:Y:10:ARG:H	1.59	0.45
2:B:2219:U:H2'	2:B:2220:U:C6	2.52	0.45
2:B:1390:U:O2'	2:B:1391:U:H5'	2.17	0.45
2:B:1472:C:H2'	2:B:1473:G:C8	2.52	0.45
7:F:64:PRO:HA	7:F:88:VAL:HG22	1.99	0.45
14:N:30:ARG:NH2	14:N:72:ASP:OD1	2.50	0.45
17:Q:111:LYS:HB2	18:R:48:LYS:HD2	1.98	0.45
5:D:108:ASP:N	5:D:204:LYS:O	2.49	0.45
5:D:180:VAL:HG22	5:D:187:LEU:HD12	1.99	0.45
12:L:115:GLU:OE1	12:L:115:GLU:N	2.49	0.45
9:H:41:LYS:O	9:H:45:GLU:HG3	2.17	0.45
3:V:26:PHE:CE2	3:V:44:HIS:HA	2.52	0.45
20:T:55:VAL:HG22	20:T:87:LEU:CD2	2.47	0.45
2:B:2733:A:H2'	2:B:2734:A:O4'	2.16	0.45
2:B:771:G:OP1	28:2:14:ARG:HD2	2.17	0.45
10:J:64:VAL:HG11	10:J:69:ARG:H	1.82	0.45
31:I:17:ALA:C	31:I:19:PRO:HD3	2.37	0.45
7:F:140:ILE:O	7:F:141:ASP:C	2.56	0.45
15:O:52:SER:H	15:O:55:GLU:HG3	1.82	0.45
9:H:61:VAL:C	9:H:63:ALA:H	2.20	0.45
11:K:6:THR:O	11:K:7:MET:HG2	2.17	0.45
20:T:13:ALA:O	20:T:33:LYS:N	2.50	0.45
20:T:38:ALA:HB3	20:T:81:LYS:HZ1	1.79	0.45
2:B:329:G:N1	21:U:16:LYS:HG2	2.31	0.45
27:1:46:VAL:HG13	27:1:47:ILE:N	2.32	0.45
2:B:2773:C:O2'	2:B:2774:C:H5'	2.16	0.45
21:U:11:ILE:HG12	21:U:20:LYS:O	2.17	0.45
18:R:70:GLU:O	18:R:90:ARG:HD2	2.16	0.45
2:B:826:U:H2'	2:B:828:U:O4'	2.16	0.45
2:B:2489:U:H2'	2:B:2490:G:O4'	2.17	0.45
2:B:1417:C:O5'	2:B:1588:G:H1'	2.16	0.45
2:B:135:U:H2'	2:B:136:G:C8	2.52	0.45
4:C:54:GLY:O	4:C:214:GLY:HA2	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:G:109:SER:O	8:G:110:HIS:HB3	2.17	0.45
17:Q:107:ALA:C	18:R:48:LYS:HD3	2.37	0.45
2:B:125:A:H4'	2:B:126:A:OP2	2.17	0.45
2:B:512:G:OP2	2:B:1234:U:O2'	2.31	0.45
15:O:7:ARG:HA	15:O:10:ARG:NH2	2.31	0.45
7:F:108:PRO:O	7:F:110:ILE:HG23	2.17	0.45
7:F:135:ILE:CD1	7:F:137:PHE:HB3	2.44	0.45
7:F:28:PRO:O	7:F:168:LEU:HG	2.17	0.45
4:C:107:LYS:N	4:C:193:GLU:O	2.50	0.45
27:1:36:LYS:HG2	27:1:47:ILE:HA	1.99	0.45
30:4:4:ARG:N	30:4:37:GLN:HE22	2.15	0.45
15:O:88:LYS:HD2	15:O:89:ASP:CB	2.46	0.45
2:B:2472:G:C2'	2:B:2475:C:H42	2.29	0.45
4:C:83:ASP:HB3	4:C:86:ARG:HG2	1.99	0.45
22:W:45:HIS:ND1	22:W:45:HIS:N	2.65	0.45
2:B:218:A:C2'	2:B:219:A:H5'	2.47	0.45
9:H:60:GLU:C	9:H:62:LEU:H	2.19	0.45
2:B:1669:A:H2'	2:B:1669:A:N3	2.31	0.45
2:B:1563:U:O2'	2:B:1564:C:H5'	2.16	0.45
11:K:35:VAL:HG12	11:K:69:VAL:CG2	2.46	0.45
2:B:2386:A:H2	22:W:38:ARG:HB3	1.80	0.45
2:B:962:G:H2'	2:B:963:U:C6	2.51	0.45
2:B:2808:G:O2'	2:B:2809:A:H8	1.98	0.45
2:B:2296:U:H4'	2:B:2297:A:OP1	2.16	0.45
28:2:6:GLN:NE2	28:2:6:GLN:HA	2.32	0.45
31:I:23:VAL:HG12	31:I:27:LEU:HD21	1.97	0.45
20:T:66:LYS:N	20:T:76:ARG:HH21	2.15	0.45
7:F:139:GLU:OE2	7:F:142:TYR:HA	2.17	0.45
6:E:128:ALA:O	6:E:133:LEU:HD12	2.16	0.45
5:D:130:GLN:HB2	5:D:139:SER:O	2.16	0.45
15:O:111:ARG:HG2	15:O:117:PHE:CE2	2.52	0.45
11:K:15:GLY:HA3	11:K:52:VAL:CG2	2.45	0.45
2:B:1666:G:H4'	11:K:6:THR:HG23	1.99	0.45
2:B:2591:C:O2'	2:B:2592:G:H5'	2.17	0.45
2:B:671:C:O2'	2:B:672:C:H5'	2.17	0.45
5:D:8:LYS:CA	5:D:201:LEU:HD11	2.47	0.45
2:B:1488:C:O2'	2:B:1489:C:H5'	2.16	0.45
22:W:77:LYS:HD3	22:W:77:LYS:HA	1.82	0.45
21:U:11:ILE:CG2	21:U:70:ALA:HB3	2.45	0.45
2:B:2473:U:C2'	2:B:2473:U:O2	2.65	0.45
2:B:264:C:H2'	2:B:265:A:H5''	1.98	0.45
2:B:2537:U:H2'	2:B:2538:C:H6	1.81	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:I:5:GLN:HB2	31:I:30:GLN:OE1	2.17	0.45
21:U:49:PRO:O	21:U:50:ALA:HB2	2.17	0.45
2:B:212:G:H2'	2:B:213:A:C8	2.52	0.45
2:B:561:G:O5'	2:B:561:G:H8	2.00	0.45
2:B:1877:A:H2'	2:B:1878:G:C8	2.52	0.45
3:V:60:VAL:HG22	3:V:73:LYS:HE2	1.99	0.45
2:B:750:A:H2'	2:B:751:A:H5''	1.99	0.45
2:B:2227:A:H5''	4:C:260:LYS:HD2	1.97	0.45
2:B:1904:G:H1'	2:B:1927:A:N1	2.32	0.45
21:U:86:PHE:CG	21:U:87:GLU:N	2.85	0.44
10:J:18:VAL:CG1	10:J:54:ILE:HD11	2.46	0.44
14:N:80:PHE:O	14:N:85:PRO:HD3	2.18	0.44
5:D:101:PHE:CZ	5:D:204:LYS:HA	2.51	0.44
2:B:1251:C:O2'	2:B:1252:G:H3'	2.17	0.44
2:B:2742:G:O2'	2:B:2743:U:H5'	2.17	0.44
16:P:75:THR:O	16:P:80:VAL:HG11	2.16	0.44
16:P:61:ARG:HD3	16:P:70:GLU:CG	2.45	0.44
2:B:1734:G:O2'	2:B:1735:A:H5'	2.17	0.44
2:B:921:C:H2'	2:B:922:C:C6	2.52	0.44
2:B:2578:G:O2'	2:B:2579:C:H5'	2.16	0.44
2:B:2439:A:C8	2:B:2586:U:H4'	2.52	0.44
2:B:673:C:H5''	6:E:76:PRO:HD2	1.99	0.44
2:B:2107:G:H3'	2:B:2108:A:H8	1.82	0.44
3:V:28:ALA:HA	3:V:88:HIS:ND1	2.32	0.44
2:B:522:A:H2'	2:B:523:C:H6	1.80	0.44
6:E:3:LEU:O	6:E:12:LEU:N	2.50	0.44
2:B:643:A:N7	2:B:644:A:N7	2.65	0.44
2:B:2215:C:H2'	2:B:2216:G:H8	1.81	0.44
3:V:89:ILE:HD12	3:V:89:ILE:O	2.17	0.44
2:B:817:C:O2'	2:B:839:U:H5''	2.16	0.44
16:P:31:VAL:CG1	16:P:38:ARG:HB2	2.48	0.44
31:I:102:ARG:HG3	31:I:141:ASP:CB	2.47	0.44
2:B:1505:A:H2'	2:B:1506:U:C6	2.52	0.44
2:B:1932:A:H2'	2:B:1933:G:O4'	2.17	0.44
6:E:108:ILE:HG13	12:L:2:ARG:HH22	1.80	0.44
17:Q:33:VAL:HG23	17:Q:34:ALA:H	1.81	0.44
18:R:14:VAL:HG21	18:R:98:ILE:HG12	2.00	0.44
31:I:27:LEU:N	31:I:27:LEU:HD23	2.22	0.44
11:K:113:MET:HE1	11:K:116:ILE:HD11	1.98	0.44
20:T:74:ILE:HG13	20:T:75:GLY:N	2.32	0.44
2:B:2027:G:O2'	2:B:2028:U:H5'	2.18	0.44
22:W:30:VAL:O	22:W:30:VAL:HG22	2.16	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:I:100:ILE:HG23	31:I:104:GLN:OE1	2.17	0.44
27:1:47:ILE:HD12	27:1:47:ILE:H	1.82	0.44
21:U:20:LYS:HB3	21:U:21:ARG:H	1.62	0.44
2:B:2230:G:H2'	2:B:2231:U:C6	2.52	0.44
2:B:131:A:H2'	2:B:132:G:H8	1.82	0.44
2:B:1374:G:O2'	2:B:1375:U:H5'	2.18	0.44
2:B:599:A:H2'	2:B:600:G:H8	1.83	0.44
2:B:265:A:O2'	2:B:266:G:C4'	2.64	0.44
2:B:2156:G:C2'	2:B:2157:G:H4'	2.45	0.44
6:E:38:GLY:C	6:E:40:ARG:H	2.19	0.44
10:J:101:ILE:O	10:J:104:ALA:HB3	2.16	0.44
1:A:94:A:O2'	1:A:95:U:H5'	2.17	0.44
2:B:746:U:O3'	19:S:90:LYS:NZ	2.49	0.44
2:B:2369:A:H2'	2:B:2370:G:H8	1.83	0.44
2:B:1641:A:H2'	2:B:1642:G:O4'	2.18	0.44
2:B:2869:G:H2'	2:B:2870:C:C6	2.52	0.44
2:B:1210:G:H5'	2:B:1212:G:O4'	2.17	0.44
21:U:13:LEU:HD12	21:U:68:ASN:O	2.17	0.44
4:C:6:LYS:O	4:C:8:THR:HG23	2.17	0.44
26:O:9:ARG:HB2	26:O:12:ARG:NH2	2.33	0.44
2:B:2611:C:O2'	2:B:2612:C:H5'	2.18	0.44
2:B:1874:C:H2'	2:B:1875:G:O4'	2.18	0.44
2:B:1098:A:O5'	31:I:3:LYS:HG2	2.17	0.44
7:F:121:PHE:HB2	7:F:126:ASN:O	2.18	0.44
7:F:126:ASN:CB	7:F:156:THR:HA	2.46	0.44
11:K:35:VAL:CG2	11:K:36:GLY:H	2.07	0.44
10:J:11:VAL:HG21	10:J:13:ARG:NH1	2.33	0.44
17:Q:57:ARG:HH12	17:Q:61:ILE:CD1	2.31	0.44
17:Q:81:GLY:O	17:Q:85:ALA:N	2.50	0.44
2:B:1244:A:H5''	12:L:8:PRO:CD	2.29	0.44
2:B:138:U:O2'	2:B:140:C:OP1	2.34	0.44
5:D:178:VAL:HB	5:D:188:LEU:CB	2.48	0.44
5:D:114:LYS:HZ1	5:D:116:LYS:HG3	1.81	0.44
22:W:19:ARG:NE	22:W:19:ARG:H	2.15	0.44
9:H:39:ALA:O	9:H:41:LYS:N	2.49	0.44
2:B:2262:U:O2'	2:B:2263:C:H5'	2.18	0.44
2:B:80:G:O5'	2:B:346:A:H1'	2.16	0.44
2:B:53:A:H2'	2:B:54:G:O4'	2.17	0.44
2:B:1444:G:H2'	2:B:1445:G:H8	1.82	0.44
2:B:2768:U:H2'	2:B:2769:U:O4'	2.17	0.44
2:B:2901:C:O2'	2:B:2902:C:H5'	2.18	0.44
7:F:71:LYS:HG2	7:F:71:LYS:O	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:221:GLY:O	4:C:223:ALA:N	2.51	0.44
6:E:150:THR:O	6:E:192:ALA:HB2	2.17	0.44
2:B:1225:G:P	18:R:71:LYS:HZ2	2.41	0.44
2:B:2199:A:H3'	2:B:2200:C:C6	2.52	0.44
2:B:1803:A:O3'	4:C:256:THR:HB	2.17	0.44
2:B:2886:A:H2'	2:B:2887:A:O4'	2.17	0.44
18:R:49:ILE:HD13	18:R:53:PHE:H	1.82	0.44
2:B:2282:G:H5''	2:B:2283:C:O4'	2.17	0.44
2:B:1161:C:H4'	18:R:8:GLY:O	2.17	0.44
5:D:7:LYS:HD2	5:D:198:GLY:HA2	2.00	0.44
2:B:1727:C:H2'	2:B:1728:C:H6	1.82	0.44
16:P:105:LYS:HD3	16:P:105:LYS:HA	1.81	0.44
31:I:70:THR:HG23	31:I:70:THR:O	2.17	0.44
2:B:2252:G:O2'	2:B:2253:G:H5'	2.17	0.44
29:3:6:VAL:HB	29:3:60:CYS:HB3	1.99	0.44
7:F:162:ASP:C	7:F:166:ARG:HH11	2.20	0.44
7:F:3:LEU:HD13	7:F:3:LEU:O	2.17	0.44
11:K:35:VAL:HG12	11:K:69:VAL:HG22	1.98	0.44
10:J:40:HIS:HE1	10:J:41:LYS:HE3	1.82	0.44
12:L:141:LYS:C	12:L:142:ILE:HD12	2.38	0.44
7:F:43:ILE:HG13	7:F:44:ALA:N	2.33	0.44
9:H:112:LYS:HA	9:H:132:PHE:HE1	1.81	0.44
20:T:65:GLY:HA3	20:T:76:ARG:NH2	2.33	0.44
1:A:116:G:H4'	15:O:54:VAL:CG2	2.40	0.44
2:B:1344:U:O2'	2:B:1385:A:H2'	2.18	0.44
7:F:70:ARG:HA	7:F:80:GLN:NE2	2.32	0.44
2:B:993:G:N3	18:R:91:GLN:NE2	2.57	0.44
2:B:714:U:H2'	2:B:716:A:OP2	2.18	0.44
13:M:10:ARG:HG3	13:M:10:ARG:HH21	1.83	0.44
2:B:246:C:O2'	2:B:247:G:H5'	2.17	0.44
2:B:67:U:H2'	2:B:68:G:C8	2.52	0.44
2:B:2693:G:H2'	2:B:2694:G:C8	2.48	0.44
2:B:108:G:O2'	2:B:109:C:H5'	2.17	0.44
2:B:2104:C:H3'	2:B:2104:C:H6	1.81	0.44
2:B:1092:C:H2'	2:B:1093:G:C5'	2.46	0.44
28:2:39:ARG:HH11	28:2:39:ARG:HG3	1.81	0.44
31:I:140:GLU:H	31:I:140:GLU:CD	2.21	0.44
2:B:1258:U:H2'	2:B:1259:G:C8	2.52	0.44
2:B:1711:A:O2'	2:B:1712:U:H5'	2.17	0.44
4:C:216:ARG:HH11	4:C:216:ARG:HG3	1.81	0.44
2:B:1525:A:H2'	2:B:1526:C:O4'	2.18	0.44
2:B:159:G:O2'	2:B:160:A:H5''	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2531:A:O2'	2:B:2532:G:H5'	2.17	0.44
9:H:101:ASP:O	9:H:104:THR:HB	2.17	0.44
27:1:18:HIS:NE2	27:1:40:PRO:HD2	2.31	0.44
2:B:1100:C:H41	31:I:1:ALA:H2	1.66	0.44
21:U:84:PHE:HE2	21:U:93:ARG:HG2	1.82	0.44
7:F:29:ARG:HD3	7:F:158:THR:OG1	2.17	0.44
4:C:140:VAL:HG12	4:C:141:HIS:N	2.22	0.44
22:W:23:LYS:HZ3	22:W:24:ARG:CG	2.27	0.44
7:F:46:LYS:NZ	7:F:83:PRO:HD2	2.33	0.44
14:N:31:HIS:C	14:N:33:ILE:H	2.21	0.44
14:N:33:ILE:C	14:N:34:ILE:HG13	2.38	0.44
31:I:21:PRO:HB2	31:I:22:PRO:CD	2.43	0.44
7:F:59:ILE:HG12	7:F:137:PHE:CE2	2.53	0.44
2:B:1593:A:H2'	2:B:1594:U:H6	1.78	0.44
2:B:1183:U:O2'	2:B:1184:U:H5'	2.18	0.44
8:G:154:GLU:OE1	8:G:157:LYS:HB2	2.18	0.44
9:H:57:LYS:HG3	9:H:58:LEU:N	2.32	0.44
5:D:33:ARG:NH2	5:D:33:ARG:HG2	2.32	0.44
3:V:71:LYS:HB2	3:V:94:ALA:OXT	2.16	0.44
2:B:1465:G:H2'	2:B:1466:U:C6	2.52	0.44
2:B:309:A:N3	2:B:329:G:O2'	2.45	0.44
2:B:2456:C:H2'	2:B:2457:U:O4'	2.17	0.44
19:S:4:ILE:CG2	19:S:106:VAL:HG22	2.48	0.44
19:S:60:HIS:ND1	19:S:60:HIS:O	2.50	0.44
19:S:61:ASN:HB3	19:S:62:ASP:H	1.56	0.44
26:0:18:HIS:N	26:0:18:HIS:HD1	2.16	0.44
2:B:2448:A:H4'	2:B:2449:U:OP2	2.16	0.44
2:B:1153:C:H2'	2:B:1154:G:O4'	2.17	0.44
2:B:2419:U:OP2	29:3:32:LEU:HD13	2.17	0.44
2:B:644:A:H2	2:B:646:U:O4	1.99	0.44
27:1:3:GLY:C	27:1:5:ARG:N	2.71	0.44
2:B:2246:G:H2'	2:B:2247:A:H8	1.83	0.44
2:B:1496:A:H2'	2:B:1498:C:C5	2.53	0.44
2:B:302:C:H2'	2:B:303:G:H8	1.83	0.44
18:R:6:GLN:HE22	18:R:9:GLY:C	2.21	0.44
2:B:188:G:H5''	25:Z:14:THR:CG2	2.47	0.44
18:R:75:VAL:O	18:R:76:LYS:HD2	2.17	0.44
2:B:1403:A:H2'	2:B:1404:C:H6	1.83	0.44
2:B:407:G:O2'	2:B:408:G:H5'	2.16	0.44
2:B:1904:G:O2'	2:B:1905:C:H5'	2.18	0.44
2:B:84:A:H4'	2:B:85:G:O5'	2.18	0.44
2:B:550:C:H2'	2:B:551:G:H8	1.82	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:F:98:PHE:C	7:F:100:GLU:H	2.20	0.44
6:E:200:LEU:N	6:E:200:LEU:HD22	2.33	0.44
12:L:125:LEU:HD23	12:L:126:ARG:H	1.82	0.44
22:W:23:LYS:O	22:W:66:VAL:HB	2.18	0.44
24:Y:3:THR:HB	24:Y:36:GLU:CG	2.48	0.44
2:B:1062:G:H2'	2:B:1063:G:C8	2.53	0.44
2:B:1063:G:O2'	31:I:88:GLY:HA3	2.17	0.44
25:Z:32:ASN:O	25:Z:33:LEU:O	2.35	0.44
2:B:2786:U:H5'	5:D:70:LYS:HG3	1.99	0.44
10:J:64:VAL:O	10:J:65:THR:HG22	2.17	0.44
8:G:84:LYS:HB2	8:G:132:LEU:H	1.83	0.44
5:D:51:THR:HG22	5:D:76:GLY:HA3	1.97	0.44
2:B:1535:A:C5'	2:B:1536:C:H5	2.30	0.44
2:B:231:A:H3'	2:B:232:G:C8	2.53	0.44
2:B:2730:C:H4'	5:D:174:SER:HB3	1.99	0.44
5:D:202:ILE:O	5:D:202:ILE:HG22	2.16	0.44
19:S:81:SER:CA	19:S:99:ARG:HA	2.46	0.44
12:L:75:ALA:HB2	12:L:101:ILE:HG23	2.00	0.44
2:B:1201:U:O2'	2:B:1202:G:H5'	2.18	0.44
2:B:179:C:H2'	2:B:180:G:O4'	2.17	0.44
2:B:601:C:O2	2:B:605:G:H4'	2.17	0.44
2:B:2247:A:H2'	2:B:2248:C:H6	1.83	0.44
2:B:2409:G:H2'	2:B:2410:G:O4'	2.16	0.44
2:B:2233:U:H2'	2:B:2234:G:H8	1.83	0.44
2:B:2049:G:O2'	2:B:2050:C:H5'	2.18	0.44
27:1:38:PHE:O	27:1:40:PRO:HD3	2.18	0.44
2:B:2304:G:H2'	2:B:2304:G:N3	2.31	0.44
28:2:26:ASN:HA	28:2:29:GLN:HB3	1.99	0.44
2:B:83:A:H5''	21:U:1:ALA:N	2.33	0.44
21:U:86:PHE:HE1	21:U:88:ASP:OD1	2.01	0.44
2:B:1286:A:H1'	2:B:1288:G:OP2	2.18	0.44
7:F:42:ALA:O	7:F:44:ALA:N	2.50	0.44
2:B:1754:A:OP1	16:P:93:LYS:HD3	2.18	0.44
8:G:28:LYS:O	8:G:30:GLY:N	2.50	0.44
10:J:20:ALA:CB	10:J:28:LEU:HD22	2.48	0.44
7:F:111:ARG:CD	7:F:111:ARG:N	2.80	0.44
2:B:2580:U:C5'	5:D:136:ASN:H	2.31	0.44
11:K:19:VAL:HG13	11:K:43:ILE:HA	1.99	0.44
2:B:2073:C:C5'	4:C:227:VAL:HG12	2.45	0.44
2:B:357:C:H2'	2:B:358:U:C6	2.53	0.44
2:B:729:G:H5''	2:B:730:A:H5''	1.98	0.44
5:D:171:THR:OG1	5:D:172:VAL:N	2.50	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2693:G:O2'	2:B:2694:G:H5'	2.18	0.44
2:B:2156:G:H2'	2:B:2157:G:C4'	2.45	0.44
2:B:2248:C:H2'	2:B:2249:U:O4'	2.18	0.44
2:B:1749:A:H2'	2:B:1750:G:H8	1.83	0.44
2:B:39:G:O2'	2:B:40:U:H5'	2.18	0.44
2:B:1537:G:H5''	2:B:1537:G:N3	2.33	0.44
18:R:86:GLN:HB2	18:R:86:GLN:HE21	1.53	0.44
2:B:1851:U:H2'	2:B:1852:U:H6	1.83	0.44
18:R:26:ASP:O	18:R:27:ILE:HD13	2.18	0.44
8:G:58:ALA:C	8:G:60:GLY:H	2.21	0.44
1:A:65:U:C2'	1:A:66:A:H5'	2.48	0.44
2:B:24:G:H1'	19:S:77:ASP:HB3	2.00	0.44
31:I:2:LYS:HB3	31:I:2:LYS:HZ2	1.83	0.44
21:U:89:GLY:O	21:U:90:LYS:HG3	2.17	0.44
2:B:4:U:O2'	2:B:5:A:H5'	2.17	0.44
17:Q:96:ASP:C	17:Q:98:ALA:N	2.70	0.44
6:E:148:ILE:HA	6:E:187:VAL:HB	1.99	0.44
22:W:18:LYS:H	22:W:35:ILE:CG2	2.29	0.44
31:I:78:LEU:HD23	31:I:81:LYS:HE2	2.00	0.44
26:O:41:HIS:N	26:O:41:HIS:CD2	2.85	0.44
14:N:118:ARG:HE	14:N:118:ARG:HB3	1.50	0.44
3:V:80:HIS:CD2	3:V:81:PRO:HD2	2.53	0.44
2:B:28:A:N6	2:B:512:G:O2'	2.51	0.44
2:B:2393:U:H2'	2:B:2394:C:C6	2.52	0.44
11:K:87:LEU:HB2	11:K:93:GLN:C	2.36	0.44
13:M:108:VAL:HG22	13:M:109:PRO:HD2	1.98	0.44
16:P:54:LEU:HD12	16:P:76:HIS:HB2	1.99	0.44
2:B:1387:A:H4'	2:B:1469:A:H1'	1.99	0.44
2:B:30:G:OP1	17:Q:4:LYS:HG2	2.17	0.44
4:C:63:ILE:HD13	4:C:63:ILE:HA	1.77	0.44
2:B:2646:C:H2'	2:B:2647:U:O4'	2.17	0.44
2:B:181:A:H1'	2:B:435:C:H5'	1.98	0.44
2:B:576:U:H5	34:B:4243:HOH:O	2.01	0.44
2:B:64:A:H2'	2:B:65:U:H6	1.79	0.44
2:B:107:G:O2'	2:B:108:G:H5'	2.17	0.44
2:B:1324:G:N1	2:B:1331:G:C6	2.86	0.44
2:B:600:G:H1'	6:E:100:MET:CG	2.48	0.44
2:B:540:C:H2'	2:B:541:A:H8	1.83	0.44
2:B:2450:A:C2'	2:B:2451:A:H5'	2.47	0.44
2:B:177:G:H3'	2:B:178:G:H8	1.83	0.44
2:B:538:A:N6	2:B:555:G:O2'	2.51	0.44
2:B:659:G:H21	6:E:30:GLN:CD	2.21	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:0:55:ALA:C	26:0:56:LYS:HG3	2.38	0.44
6:E:37:ALA:C	6:E:39:ALA:H	2.20	0.44
2:B:1599:U:H2'	2:B:1600:C:H6	1.82	0.44
2:B:52:A:C5	2:B:118:A:C2	3.06	0.44
2:B:101:A:O2'	2:B:102:U:P	2.75	0.44
2:B:859:G:HO2'	2:B:916:G:H1	1.65	0.44
1:A:43:C:H1'	7:F:91:ARG:NH2	2.31	0.44
6:E:101:TYR:O	6:E:104:ALA:HB3	2.17	0.44
5:D:11:MET:H	5:D:25:THR:HA	1.83	0.44
22:W:37:VAL:HB	22:W:38:ARG:HD3	2.00	0.44
9:H:14:SER:HB2	9:H:17:ASP:CB	2.47	0.44
25:Z:10:LYS:O	25:Z:31:PRO:HG2	2.18	0.44
25:Z:53:ALA:O	25:Z:54:LYS:HB3	2.18	0.44
20:T:39:THR:HG22	20:T:42:GLU:HG2	2.00	0.44
7:F:55:ASP:OD2	7:F:149:ARG:HD2	2.18	0.44
2:B:90:U:OP2	2:B:91:A:H3'	2.18	0.44
13:M:69:PRO:HA	13:M:94:ALA:CA	2.48	0.44
2:B:2277:G:C5'	13:M:86:LYS:HB2	2.48	0.44
2:B:2654:A:N6	2:B:2666:C:OP2	2.50	0.44
17:Q:7:VAL:O	17:Q:8:ILE:C	2.56	0.44
4:C:103:ILE:HG22	4:C:105:ALA:N	2.32	0.44
1:A:32:U:H2'	1:A:33:G:O4'	2.18	0.44
2:B:784:G:OP1	2:B:2588:G:H5''	2.18	0.44
16:P:46:VAL:HA	16:P:60:VAL:HG12	2.00	0.44
2:B:1843:C:H5''	4:C:250:GLN:NE2	2.30	0.44
15:O:51:ALA:CB	15:O:78:VAL:HG13	2.48	0.44
11:K:75:SER:HA	16:P:72:VAL:O	2.17	0.44
17:Q:18:LYS:C	17:Q:20:ALA:N	2.71	0.44
23:X:56:LEU:C	23:X:58:ASN:N	2.72	0.44
28:2:4:THR:O	28:2:5:PHE:HB2	2.16	0.44
23:X:24:GLU:O	23:X:28:LEU:HD23	2.18	0.44
2:B:1774:C:C2'	2:B:1774:C:O2	2.66	0.44
29:3:7:ARG:HG3	29:3:7:ARG:HH11	1.82	0.44
18:R:6:GLN:HE22	18:R:9:GLY:N	2.16	0.44
21:U:32:LYS:HD3	21:U:32:LYS:H	1.83	0.44
2:B:1563:U:H2'	2:B:1564:C:C6	2.53	0.44
2:B:1764:C:H2'	2:B:1765:U:H6	1.83	0.44
1:A:111:U:H2'	1:A:112:G:C8	2.53	0.44
7:F:62:GLN:HE21	7:F:91:ARG:NE	2.15	0.43
2:B:139:U:O2'	20:T:1:MET:HB3	2.18	0.43
4:C:77:VAL:HG23	4:C:77:VAL:O	2.18	0.43
4:C:78:GLU:OE1	4:C:94:LEU:HD22	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:W:35:ILE:HA	22:W:57:THR:HA	2.00	0.43
22:W:49:ASN:CB	22:W:61:LYS:HB2	2.48	0.43
24:Y:6:ILE:HG23	24:Y:56:VAL:HG22	1.99	0.43
25:Z:40:VAL:O	25:Z:42:SER:N	2.51	0.43
9:H:4:ILE:HG23	9:H:17:ASP:N	2.33	0.43
2:B:963:U:H2'	2:B:964:C:C6	2.52	0.43
25:Z:65:ASP:N	25:Z:65:ASP:OD2	2.51	0.43
5:D:148:GLN:HG3	5:D:152:PRO:HB3	1.98	0.43
2:B:704:G:O2'	2:B:727:A:N6	2.51	0.43
11:K:24:VAL:CG1	11:K:33:ALA:HB2	2.47	0.43
4:C:226:PRO:HA	4:C:232:GLY:HA3	2.00	0.43
2:B:2617:U:H2'	2:B:2618:G:H5'	1.99	0.43
2:B:483:A:H5'	21:U:44:HIS:O	2.18	0.43
15:O:116:GLN:O	15:O:117:PHE:HB3	2.18	0.43
2:B:1249:U:C4'	17:Q:3:VAL:HG21	2.47	0.43
11:K:7:MET:CE	11:K:18:ARG:HB3	2.48	0.43
5:D:34:VAL:HG23	5:D:48:ILE:HG13	2.00	0.43
5:D:91:THR:HG23	5:D:92:VAL:N	2.32	0.43
5:D:8:LYS:O	5:D:197:THR:HA	2.18	0.43
2:B:470:A:H2'	2:B:471:A:C8	2.53	0.43
1:A:30:C:H1'	1:A:58:A:N1	2.33	0.43
2:B:2496:C:C2'	2:B:2497:A:H5'	2.48	0.43
2:B:1315:C:O2'	2:B:1316:U:H5'	2.18	0.43
1:A:106:G:H2'	1:A:107:G:C8	2.53	0.43
2:B:1817:G:OP1	4:C:86:ARG:NH2	2.50	0.43
2:B:1495:A:H2'	2:B:1496:A:H8	1.82	0.43
18:R:76:LYS:HB2	18:R:85:LYS:HB3	2.00	0.43
2:B:2716:C:H2'	2:B:2717:C:H6	1.83	0.43
17:Q:38:VAL:O	17:Q:41:ALA:N	2.52	0.43
11:K:31:ARG:HH11	11:K:31:ARG:HG3	1.83	0.43
2:B:939:G:O2'	2:B:940:G:H5'	2.18	0.43
2:B:1767:G:O2'	2:B:1768:C:H5'	2.18	0.43
2:B:327:G:O2'	2:B:328:U:H5'	2.18	0.43
25:Z:27:ARG:CG	25:Z:28:ARG:N	2.81	0.43
13:M:53:MET:O	13:M:57:VAL:HG23	2.17	0.43
8:G:4:ALA:HA	8:G:65:GLY:HA2	2.00	0.43
14:N:70:THR:O	14:N:70:THR:OG1	2.36	0.43
17:Q:68:ALA:C	17:Q:71:ASN:HB3	2.38	0.43
17:Q:78:PHE:CZ	17:Q:82:LEU:HD11	2.53	0.43
25:Z:43:GLU:HG2	25:Z:43:GLU:O	2.18	0.43
7:F:79:ARG:O	7:F:81:GLY:N	2.51	0.43
25:Z:49:LEU:HB2	25:Z:51:VAL:HG23	2.00	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:V:48:MET:SD	3:V:85:LYS:HA	2.59	0.43
17:Q:33:VAL:HG23	17:Q:34:ALA:N	2.34	0.43
20:T:22:THR:O	20:T:25:GLU:HB3	2.18	0.43
2:B:1309:G:H4'	28:2:7:PRO:HB2	2.00	0.43
2:B:958:U:OP2	13:M:14:LYS:NZ	2.51	0.43
2:B:1182:G:H2'	2:B:1183:U:O4'	2.18	0.43
30:4:2:LYS:HD3	30:4:4:ARG:HG3	2.00	0.43
2:B:619:G:H2'	2:B:620:G:H5''	2.00	0.43
2:B:2860:A:H2'	2:B:2861:U:O4'	2.18	0.43
2:B:755:U:H2'	2:B:756:A:C8	2.53	0.43
2:B:538:A:H2'	2:B:539:G:O4'	2.18	0.43
12:L:135:ILE:HG12	12:L:140:GLY:HA2	2.00	0.43
8:G:104:LEU:HB3	8:G:106:LEU:HD21	1.99	0.43
7:F:19:PHE:CE1	7:F:167:ALA:HB2	2.53	0.43
2:B:493:G:H2'	2:B:494:G:O4'	2.17	0.43
2:B:2630:G:O2'	2:B:2631:G:H5'	2.18	0.43
2:B:484:C:H2'	2:B:485:C:H6	1.83	0.43
2:B:1472:C:H2'	2:B:1473:G:H8	1.82	0.43
13:M:135:VAL:HG12	13:M:135:VAL:O	2.18	0.43
2:B:2760:C:H2'	2:B:2760:C:O2	2.18	0.43
2:B:1322:A:C2'	2:B:1323:C:H5'	2.48	0.43
2:B:1528:A:H2'	2:B:1529:G:O4'	2.18	0.43
4:C:92:LEU:HG	4:C:93:VAL:H	1.82	0.43
4:C:157:ALA:C	4:C:159:THR:H	2.22	0.43
2:B:2211:A:OP2	2:B:2211:A:H4'	2.18	0.43
31:I:11:GLN:NE2	31:I:74:PRO:HG3	2.33	0.43
12:L:61:LEU:CD1	12:L:61:LEU:N	2.81	0.43
8:G:28:LYS:HG2	8:G:79:THR:HA	1.99	0.43
8:G:83:THR:C	8:G:84:LYS:HD3	2.39	0.43
2:B:1674:G:N2	2:B:1677:A:N1	2.67	0.43
15:O:67:ASN:H	15:O:70:ALA:CB	2.29	0.43
2:B:2025:C:H2'	2:B:2026:U:H6	1.78	0.43
2:B:1387:A:C5'	2:B:1469:A:H1'	2.48	0.43
20:T:32:LEU:H	20:T:83:ALA:CB	2.30	0.43
17:Q:45:ALA:O	17:Q:49:ARG:N	2.47	0.43
2:B:719:C:O2'	2:B:720:U:H5'	2.17	0.43
5:D:197:THR:C	5:D:199:SER:H	2.21	0.43
18:R:39:LEU:CA	18:R:53:PHE:HA	2.44	0.43
13:M:28:PHE:HB3	13:M:64:TRP:CE2	2.52	0.43
15:O:8:ILE:H	15:O:8:ILE:HG13	1.67	0.43
21:U:94:PHE:HB2	21:U:101:THR:HA	1.99	0.43
2:B:2697:G:H2'	2:B:2698:U:O4'	2.17	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:120:VAL:O	12:L:135:ILE:HD11	2.17	0.43
2:B:1973:G:H2'	2:B:1974:C:H6	1.83	0.43
2:B:1112:G:H2'	2:B:1113:U:O4'	2.18	0.43
1:A:64:G:O2'	1:A:65:U:H5'	2.19	0.43
2:B:102:U:O4'	2:B:102:U:P	2.76	0.43
2:B:1528:A:H2'	2:B:1529:G:H5'	2.00	0.43
30:4:18:LYS:HE3	30:4:21:GLY:HA2	2.00	0.43
2:B:2459:A:H2'	2:B:2459:A:N3	2.32	0.43
2:B:611:C:H2'	2:B:612:G:O4'	2.17	0.43
6:E:91:ASP:C	6:E:93:SER:H	2.21	0.43
2:B:1099:G:O5'	31:I:4:VAL:HG12	2.18	0.43
7:F:126:ASN:HB3	7:F:156:THR:CB	2.49	0.43
10:J:55:ILE:O	10:J:55:ILE:HG13	2.16	0.43
17:Q:94:LEU:C	17:Q:96:ASP:N	2.72	0.43
4:C:75:ALA:HB1	4:C:93:VAL:HG22	1.99	0.43
31:I:54:ILE:HD11	31:I:71:LYS:N	2.33	0.43
9:H:131:SER:OG	9:H:141:LYS:HE3	2.18	0.43
14:N:96:ARG:HG2	14:N:96:ARG:NH2	2.33	0.43
2:B:2572:A:P	5:D:151:THR:HB	2.59	0.43
2:B:2297:A:H61	2:B:2319:G:H1'	1.83	0.43
2:B:91:A:H1'	2:B:92:U:C6	2.54	0.43
2:B:1184:U:O2'	2:B:1185:G:H5'	2.19	0.43
2:B:96:C:H2'	2:B:97:C:H6	1.83	0.43
2:B:2315:G:H2'	2:B:2316:G:H8	1.83	0.43
2:B:2466:C:OP1	30:4:4:ARG:HB3	2.18	0.43
4:C:244:VAL:HB	4:C:249:VAL:H	1.82	0.43
2:B:183:C:O2'	2:B:184:C:H5'	2.19	0.43
2:B:1124:G:N3	30:4:38:GLY:O	2.51	0.43
2:B:699:A:H2'	2:B:700:G:O4'	2.19	0.43
2:B:2857:G:N2	2:B:2859:G:H3'	2.33	0.43
5:D:55:LYS:HE3	5:D:59:ARG:HB3	1.99	0.43
2:B:1042:G:H2'	2:B:1043:C:H6	1.82	0.43
2:B:937:C:H2'	2:B:938:G:H8	1.84	0.43
2:B:2249:U:H4'	2:B:2275:C:C5	2.54	0.43
29:3:11:LYS:C	29:3:12:ARG:HG3	2.38	0.43
2:B:1370:C:H2'	2:B:1371:G:O4'	2.19	0.43
2:B:1545:A:H2'	2:B:1546:G:O4'	2.19	0.43
2:B:1103:A:H2'	2:B:1103:A:N3	2.34	0.43
2:B:2766:A:N3	2:B:2766:A:H2'	2.33	0.43
7:F:24:VAL:O	7:F:27:VAL:HG22	2.18	0.43
2:B:708:G:N2	2:B:724:U:H1'	2.33	0.43
2:B:342:A:H2'	2:B:343:C:O4'	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:59:ALA:C	10:J:61:LYS:N	2.72	0.43
2:B:2676:C:O2'	2:B:2677:G:H5'	2.19	0.43
2:B:2677:G:H2'	2:B:2678:C:C6	2.53	0.43
19:S:25:ARG:HE	19:S:74:ILE:HG23	1.82	0.43
7:F:76:PHE:O	7:F:77:LYS:HB2	2.18	0.43
25:Z:33:LEU:HD23	25:Z:52:SER:HB3	2.01	0.43
25:Z:7:VAL:HG13	25:Z:8:THR:CG2	2.39	0.43
13:M:19:GLY:N	13:M:38:ARG:NH2	2.64	0.43
11:K:106:GLU:N	11:K:106:GLU:OE1	2.49	0.43
2:B:725:G:H2'	2:B:726:G:O4'	2.19	0.43
2:B:322:A:C2	2:B:340:A:C6	3.07	0.43
18:R:2:TYR:N	18:R:42:ALA:HB2	2.34	0.43
13:M:37:GLY:HA3	13:M:126:ILE:HG23	2.00	0.43
2:B:483:A:O2'	21:U:56:GLY:N	2.52	0.43
2:B:2748:A:H5'	8:G:3:VAL:HG21	2.00	0.43
2:B:29:U:H2'	2:B:30:G:C8	2.54	0.43
1:A:52:A:H3'	1:A:53:A:H8	1.82	0.43
2:B:277:G:H1'	2:B:361:G:O6	2.19	0.43
29:3:44:ARG:N	29:3:45:PRO:CD	2.82	0.43
2:B:2341:G:H2'	2:B:2342:C:H6	1.81	0.43
15:O:35:ILE:HG13	15:O:102:ARG:HE	1.81	0.43
2:B:2852:G:H2'	2:B:2853:C:O4'	2.18	0.43
2:B:2636:C:H2'	2:B:2637:U:H6	1.83	0.43
2:B:1708:C:H2'	2:B:1709:U:H6	1.83	0.43
2:B:2217:G:H2'	2:B:2218:G:H8	1.82	0.43
2:B:1930:G:C2'	2:B:1931:U:OP2	2.67	0.43
2:B:1742:U:H2'	2:B:1743:G:H8	1.82	0.43
2:B:2835:A:H61	2:B:2878:U:H2'	1.83	0.43
19:S:20:VAL:HG13	19:S:21:ALA:N	2.34	0.43
31:I:59:THR:O	31:I:59:THR:HG23	2.19	0.43
5:D:2:ILE:O	5:D:2:ILE:HD12	2.18	0.43
2:B:2320:U:H4'	2:B:2321:U:C2	2.54	0.43
19:S:6:LYS:HB3	19:S:104:THR:HA	2.01	0.43
14:N:116:VAL:HG13	14:N:116:VAL:O	2.19	0.43
17:Q:30:VAL:HG12	17:Q:33:VAL:HG22	1.99	0.43
12:L:54:GLN:O	12:L:56:PRO:HD3	2.18	0.43
2:B:1438:U:O2'	2:B:1439:A:H5'	2.18	0.43
20:T:58:VAL:O	20:T:58:VAL:HG13	2.18	0.43
2:B:2743:U:C2'	2:B:2744:G:H5''	2.37	0.43
9:H:87:GLU:CD	9:H:87:GLU:H	2.22	0.43
5:D:33:ARG:HE	5:D:74:GLU:HB3	1.83	0.43
17:Q:65:ASN:CG	17:Q:75:TYR:HB2	2.39	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2722:G:O2'	2:B:2723:C:H5'	2.19	0.43
27:1:46:VAL:HG22	27:1:47:ILE:HD12	2.01	0.43
20:T:12:ARG:HA	23:X:29:ARG:NH2	2.30	0.43
2:B:672:C:H2'	2:B:673:C:C6	2.54	0.43
2:B:1795:C:H2'	2:B:1796:U:C6	2.53	0.43
2:B:1797:G:O3'	4:C:255:LYS:O	2.37	0.43
5:D:34:VAL:CG2	5:D:48:ILE:HG13	2.49	0.43
5:D:8:LYS:HA	5:D:201:LEU:HD11	2.01	0.43
2:B:811:U:OP2	12:L:20:GLY:HA2	2.19	0.43
17:Q:9:ALA:O	17:Q:12:ARG:N	2.51	0.43
15:O:51:ALA:HB2	15:O:81:ARG:HH11	1.84	0.43
2:B:1030:C:O2'	2:B:1031:G:H5'	2.18	0.43
2:B:2485:G:O2'	2:B:2486:C:H5'	2.19	0.43
15:O:35:ILE:HG21	15:O:71:ALA:HB1	2.00	0.43
2:B:989:G:H5''	24:Y:13:ILE:HD11	2.00	0.43
13:M:32:GLY:HA2	13:M:117:PHE:CZ	2.54	0.43
2:B:1704:C:H2'	2:B:1705:A:H8	1.83	0.43
2:B:1831:G:H2'	2:B:1832:C:H6	1.82	0.43
2:B:2655:G:H1'	2:B:2656:U:H5	1.84	0.43
22:W:70:VAL:HG13	22:W:70:VAL:O	2.19	0.43
5:D:161:MET:O	5:D:162:ALA:C	2.57	0.43
2:B:39:G:H2'	2:B:40:U:H6	1.82	0.43
27:1:18:HIS:CG	27:1:19:PHE:N	2.86	0.43
3:V:49:ASN:O	3:V:52:ALA:HB3	2.17	0.43
2:B:463:G:N1	2:B:467:G:C6	2.87	0.43
14:N:79:LEU:HA	14:N:83:LEU:HD12	2.00	0.43
17:Q:63:ARG:HH12	17:Q:96:ASP:HB2	1.84	0.43
24:Y:23:LEU:HD23	24:Y:50:VAL:HG11	2.00	0.43
2:B:1059:G:H2'	2:B:1060:U:C5	2.53	0.43
25:Z:64:ILE:HG22	25:Z:68:LEU:CD1	2.48	0.43
2:B:2882:A:OP1	14:N:96:ARG:HD2	2.18	0.43
2:B:1025:G:OP1	2:B:1025:G:H8	2.01	0.43
2:B:533:G:H2'	2:B:534:U:C6	2.53	0.43
20:T:39:THR:O	20:T:40:LYS:HB3	2.18	0.43
6:E:134:LEU:CD2	6:E:161:ALA:HB2	2.49	0.43
20:T:69:ARG:NH1	20:T:69:ARG:HA	2.33	0.43
11:K:88:ASN:ND2	11:K:89:ASN:N	2.66	0.43
2:B:2391:G:HO2'	2:B:2392:A:P	2.41	0.43
2:B:2800:A:C2	2:B:2801:G:H1'	2.53	0.43
4:C:36:ASN:ND2	4:C:61:TYR:HB2	2.34	0.43
11:K:54:LYS:CD	11:K:54:LYS:H	2.28	0.43
2:B:1803:A:H4'	4:C:256:THR:OG1	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:R:39:LEU:H	18:R:39:LEU:HD23	1.82	0.43
10:J:103:ILE:HG13	10:J:104:ALA:N	2.33	0.43
2:B:2052:A:N7	5:D:146:ILE:HD11	2.34	0.43
2:B:1708:C:H2'	2:B:1709:U:C6	2.54	0.43
27:1:3:GLY:O	27:1:5:ARG:N	2.51	0.43
2:B:1930:G:H2'	2:B:1968:G:C6	2.54	0.43
22:W:70:VAL:CG2	22:W:75:ASN:HD21	2.32	0.43
21:U:73:ASN:ND2	21:U:74:ALA:N	2.67	0.43
1:A:91:C:H2'	1:A:92:C:C6	2.52	0.43
2:B:1027:A:N6	2:B:1126:A:H1'	2.33	0.43
2:B:43:G:H2'	2:B:44:A:O4'	2.19	0.43
21:U:86:PHE:HB3	21:U:90:LYS:O	2.19	0.43
4:C:45:ASN:ND2	4:C:45:ASN:H	2.15	0.43
17:Q:81:GLY:HA3	17:Q:116:LEU:HD11	2.00	0.43
17:Q:68:ALA:HB1	17:Q:73:ILE:CG2	2.46	0.43
4:C:70:LYS:HB2	4:C:101:ARG:NH2	2.33	0.43
2:B:1060:U:O4	31:I:131:THR:HG22	2.18	0.43
12:L:57:LEU:HD22	29:3:53:ASP:HB3	2.01	0.43
2:B:2571:U:O3'	5:D:151:THR:HB	2.18	0.43
28:2:9:VAL:HG13	28:2:10:LEU:N	2.34	0.43
11:K:64:ARG:NH2	16:P:67:GLU:HG3	2.34	0.43
7:F:107:VAL:HB	7:F:108:PRO:HD3	2.01	0.43
2:B:876:C:H2'	2:B:877:A:C1'	2.49	0.43
2:B:2618:G:H2'	2:B:2619:C:H6	1.84	0.43
20:T:83:ALA:O	20:T:84:TYR:HB2	2.19	0.43
2:B:2893:A:C5'	2:B:2894:G:H5'	2.47	0.43
2:B:523:C:O2'	2:B:524:G:H5'	2.18	0.43
5:D:59:ARG:HD3	5:D:59:ARG:O	2.19	0.43
12:L:47:ARG:HH21	12:L:47:ARG:CB	2.31	0.43
2:B:1897:G:O2'	2:B:1898:U:H5'	2.19	0.43
2:B:866:A:H61	2:B:913:U:C1'	2.32	0.43
2:B:2658:C:H2'	2:B:2659:G:H5'	2.00	0.43
9:H:110:VAL:O	9:H:110:VAL:HG22	2.17	0.43
2:B:426:C:O2'	2:B:427:U:H5'	2.17	0.43
9:H:56:ALA:O	9:H:60:GLU:HB3	2.18	0.43
2:B:560:C:H3'	2:B:561:G:C8	2.54	0.43
2:B:118:A:OP2	2:B:119:A:H5''	2.18	0.43
31:I:90:GLY:C	31:I:91:LYS:HD2	2.38	0.43
2:B:1994:C:O2'	2:B:1995:U:H5'	2.19	0.43
7:F:33:ILE:HG23	7:F:155:ILE:HD12	2.00	0.43
10:J:12:LYS:O	10:J:13:ARG:HB2	2.19	0.43
17:Q:94:LEU:O	17:Q:97:ILE:HG23	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:6:LEU:CD2	12:L:6:LEU:H	2.20	0.43
17:Q:26:ALA:C	17:Q:28:SER:N	2.72	0.43
13:M:38:ARG:HG3	13:M:98:PRO:HD3	2.00	0.43
11:K:64:ARG:HD2	11:K:102:PRO:O	2.19	0.43
22:W:16:GLU:CD	22:W:16:GLU:H	2.20	0.43
2:B:876:C:H2'	2:B:877:A:H1'	2.00	0.43
2:B:164:C:H2'	2:B:165:A:H5'	2.00	0.43
2:B:31:C:C4	2:B:32:C:C5	3.07	0.43
2:B:277:G:O5'	2:B:278:A:N7	2.51	0.43
2:B:2885:G:H2'	2:B:2886:A:H4'	2.01	0.43
2:B:495:G:H4'	19:S:4:ILE:O	2.19	0.43
2:B:1195:G:O2'	2:B:1196:C:H5'	2.19	0.43
2:B:2685:G:O2'	2:B:2686:G:H5'	2.19	0.43
2:B:443:A:H1'	2:B:1201:U:O4'	2.19	0.43
6:E:4:VAL:HA	6:E:11:ALA:HA	1.99	0.43
6:E:4:VAL:HG12	6:E:5:LEU:H	1.84	0.43
2:B:1229:C:H2'	2:B:1230:A:H8	1.81	0.43
8:G:95:ALA:HB3	8:G:124:CYS:SG	2.59	0.43
6:E:116:ASP:O	6:E:119:ILE:HD11	2.18	0.43
2:B:123:G:O3'	2:B:1376:C:H4'	2.19	0.43
4:C:34:GLU:O	4:C:34:GLU:HG3	2.19	0.43
7:F:31:GLU:HB2	7:F:158:THR:CG2	2.48	0.43
7:F:36:ASN:HD22	7:F:152:ASP:CB	2.12	0.43
7:F:87:LYS:C	7:F:88:VAL:HG23	2.39	0.43
17:Q:63:ARG:NH2	17:Q:95:ALA:O	2.52	0.43
17:Q:93:ILE:HG23	17:Q:94:LEU:H	1.84	0.43
2:B:1241:A:N3	2:B:1241:A:O4'	2.51	0.43
6:E:104:ALA:C	6:E:106:LYS:H	2.22	0.43
31:I:72:THR:OG1	31:I:73:PRO:HD2	2.18	0.43
10:J:29:ALA:O	10:J:32:LEU:HB2	2.19	0.43
4:C:180:MET:O	4:C:267:VAL:HG23	2.19	0.43
3:V:32:GLY:O	3:V:93:ARG:HB2	2.19	0.43
2:B:1474:U:H2'	2:B:1475:G:H5''	2.01	0.43
28:2:30:VAL:HG22	28:2:33:ARG:NH2	2.24	0.43
13:M:126:ILE:HG22	13:M:127:LYS:N	2.34	0.43
19:S:41:LYS:HB3	19:S:41:LYS:HZ2	1.82	0.43
9:H:83:LYS:HG3	9:H:149:GLU:CG	2.46	0.43
31:I:126:ARG:CB	31:I:126:ARG:NH1	2.82	0.43
14:N:13:ASN:OD1	14:N:16:HIS:HB2	2.19	0.43
2:B:1411:U:H2'	2:B:1412:U:C6	2.54	0.43
2:B:1946:U:O2'	2:B:1947:C:H5'	2.18	0.43
2:B:716:A:C2'	2:B:717:C:H5''	2.48	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:R:71:LYS:HG2	18:R:73:LYS:HZ3	1.83	0.43
2:B:1633:G:O2'	2:B:1634:A:H5''	2.19	0.43
1:A:15:A:OP1	1:A:108:A:H5'	2.19	0.43
20:T:7:LEU:C	20:T:9:LYS:H	2.21	0.43
13:M:26:VAL:HG22	13:M:133:LYS:HA	2.00	0.43
2:B:755:U:H2'	2:B:756:A:H8	1.83	0.43
2:B:2149:U:H2'	2:B:2150:C:O4'	2.18	0.43
2:B:2780:G:H4'	2:B:2781:A:OP2	2.18	0.43
23:X:59:GLU:N	23:X:59:GLU:OE2	2.52	0.43
2:B:864:G:O2'	2:B:865:C:H5'	2.18	0.43
2:B:930:G:H1'	24:Y:24:LEU:HD11	2.01	0.43
1:A:22:U:H2'	1:A:23:G:C8	2.54	0.43
2:B:1812:U:H4'	4:C:44:ASN:OD1	2.18	0.42
10:J:12:LYS:HG3	10:J:41:LYS:HZ3	1.83	0.42
2:B:616:A:H4'	6:E:101:TYR:CE2	2.54	0.42
6:E:148:ILE:O	6:E:148:ILE:HG22	2.18	0.42
4:C:138:SER:O	4:C:140:VAL:HG23	2.19	0.42
22:W:55:ASP:C	22:W:57:THR:H	2.22	0.42
9:H:40:THR:O	9:H:41:LYS:HB2	2.17	0.42
28:2:19:ARG:O	28:2:22:MET:HB2	2.19	0.42
2:B:2811:G:OP1	5:D:62:LYS:HD2	2.19	0.42
9:H:138:VAL:HG12	9:H:138:VAL:O	2.18	0.42
5:D:13:ARG:HH21	16:P:55:HIS:HA	1.84	0.42
16:P:100:ARG:O	16:P:102:ARG:N	2.51	0.42
31:I:96:LYS:HD3	31:I:138:VAL:HG21	2.00	0.42
18:R:79:ARG:O	18:R:81:LYS:HG2	2.19	0.42
2:B:2845:U:O2'	2:B:2846:G:H5'	2.19	0.42
2:B:1109:C:H2'	2:B:1110:G:C4	2.53	0.42
2:B:1205:A:N1	6:E:165:HIS:HB2	2.34	0.42
2:B:554:U:H2'	2:B:555:G:O4'	2.18	0.42
14:N:10:LEU:HD21	14:N:43:GLU:HG3	2.01	0.42
2:B:687:C:H2'	2:B:688:U:O4'	2.19	0.42
2:B:862:G:H2'	2:B:863:A:C8	2.54	0.42
4:C:164:VAL:O	4:C:165:ALA:HB2	2.19	0.42
2:B:2227:A:H2'	2:B:2228:G:O4'	2.19	0.42
2:B:1851:U:O2'	2:B:1852:U:H5'	2.19	0.42
8:G:60:GLY:O	8:G:62:ALA:N	2.52	0.42
2:B:1759:A:N3	2:B:1759:A:H2'	2.34	0.42
31:I:68:PHE:N	31:I:68:PHE:CD1	2.87	0.42
2:B:760:G:C2'	2:B:761:A:H5'	2.49	0.42
2:B:1270:C:H5''	2:B:1271:G:O5'	2.19	0.42
7:F:121:PHE:HE1	7:F:162:ASP:CB	2.33	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:55:ILE:CG2	10:J:123:LYS:HB2	2.49	0.42
5:D:138:LEU:N	5:D:138:LEU:HD22	2.34	0.42
24:Y:6:ILE:HD13	24:Y:56:VAL:CG1	2.49	0.42
19:S:24:ILE:HG23	19:S:32:ALA:CB	2.49	0.42
31:I:128:ILE:CA	31:I:131:THR:HG23	2.49	0.42
10:J:36:LEU:CD1	10:J:121:LYS:HE3	2.49	0.42
2:B:1106:G:H2'	2:B:1107:G:H8	1.83	0.42
2:B:2734:A:C2'	2:B:2735:G:H5'	2.44	0.42
15:O:92:PHE:HB2	15:O:117:PHE:CE1	2.55	0.42
6:E:152:GLU:O	6:E:153:LEU:HB3	2.18	0.42
5:D:110:THR:HG21	5:D:169:ARG:HH11	1.85	0.42
2:B:1683:U:O2'	2:B:1684:G:H5'	2.19	0.42
19:S:60:HIS:O	19:S:61:ASN:HB2	2.19	0.42
15:O:79:ALA:O	15:O:83:LEU:HD13	2.19	0.42
2:B:2081:U:P	25:Z:19:SER:HB3	2.59	0.42
2:B:1636:U:O2'	2:B:1637:A:H5'	2.18	0.42
2:B:1011:G:O2'	2:B:1013:C:H5''	2.19	0.42
2:B:656:G:O2'	2:B:657:U:H5'	2.19	0.42
9:H:103:VAL:HA	9:H:106:ALA:HB3	2.00	0.42
2:B:1479:G:O2'	2:B:1480:C:H5'	2.19	0.42
2:B:1214:A:H2'	2:B:1215:G:C8	2.54	0.42
2:B:1389:G:O2'	2:B:1390:U:H5'	2.19	0.42
2:B:1764:C:H2'	2:B:1765:U:C6	2.54	0.42
2:B:1891:G:H2'	2:B:1892:C:C6	2.54	0.42
2:B:1366:A:H2'	2:B:1367:A:O4'	2.20	0.42
2:B:2201:G:O2'	2:B:2202:U:H5'	2.20	0.42
20:T:18:GLU:C	20:T:20:ALA:N	2.71	0.42
17:Q:112:ALA:O	17:Q:113:LYS:C	2.57	0.42
17:Q:91:ARG:HE	17:Q:94:LEU:CD2	2.32	0.42
4:C:92:LEU:HD12	4:C:101:ARG:O	2.19	0.42
5:D:3:GLY:HA2	5:D:101:PHE:HZ	1.83	0.42
4:C:141:HIS:CG	4:C:142:ASN:N	2.87	0.42
12:L:29:LYS:C	12:L:31:GLY:N	2.72	0.42
2:B:2365:G:C4'	22:W:59:PHE:HE1	2.17	0.42
14:N:98:LEU:O	14:N:112:TYR:HB2	2.19	0.42
2:B:80:G:HO2'	2:B:294:A:H2	1.65	0.42
5:D:150:GLN:O	5:D:151:THR:C	2.58	0.42
11:K:71:ARG:HG3	11:K:105:ARG:NH2	2.33	0.42
9:H:133:GLN:HB2	9:H:138:VAL:O	2.19	0.42
8:G:140:ILE:HD12	8:G:141:GLY:N	2.34	0.42
2:B:2026:U:H2'	2:B:2027:G:H8	1.84	0.42
8:G:1:SER:HA	8:G:61:TRP:CZ3	2.55	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:F:72:SER:CB	7:F:80:GLN:H	2.32	0.42
2:B:21:A:H2'	2:B:22:C:H6	1.83	0.42
13:M:10:ARG:HH11	13:M:89:VAL:HG23	1.84	0.42
21:U:21:ARG:HG3	21:U:21:ARG:NH1	2.34	0.42
2:B:1028:A:N3	2:B:2486:C:O2'	2.41	0.42
2:B:2898:U:O2	10:J:134:ALA:HB1	2.19	0.42
24:Y:2:LYS:CD	24:Y:2:LYS:H	2.29	0.42
2:B:177:G:H3'	2:B:178:G:C8	2.54	0.42
2:B:423:A:H5''	2:B:424:G:H5'	2.00	0.42
8:G:175:LYS:HA	8:G:175:LYS:HD3	1.85	0.42
31:I:53:PRO:CG	31:I:77:VAL:HG11	2.49	0.42
2:B:1098:A:C3'	31:I:3:LYS:C	2.88	0.42
21:U:90:LYS:O	21:U:91:LYS:C	2.58	0.42
7:F:7:TYR:O	7:F:11:VAL:HB	2.19	0.42
17:Q:60:TRP:O	17:Q:63:ARG:HG3	2.18	0.42
17:Q:68:ALA:CA	17:Q:71:ASN:HB3	2.49	0.42
17:Q:93:ILE:O	17:Q:96:ASP:HB3	2.19	0.42
6:E:148:ILE:HA	6:E:187:VAL:CG2	2.49	0.42
5:D:101:PHE:HE1	5:D:203:VAL:HG13	1.85	0.42
5:D:109:VAL:HG11	5:D:193:VAL:CB	2.49	0.42
22:W:66:VAL:HG22	22:W:81:ILE:HG22	2.01	0.42
2:B:583:G:H2'	2:B:584:C:H6	1.84	0.42
16:P:89:GLY:N	16:P:112:ARG:NH1	2.67	0.42
20:T:30:ILE:O	20:T:85:VAL:HG23	2.20	0.42
2:B:2547:A:H2'	2:B:2548:U:H6	1.82	0.42
8:G:84:LYS:HG3	8:G:131:VAL:CB	2.50	0.42
7:F:169:LEU:O	7:F:174:PHE:HB2	2.20	0.42
31:I:12:VAL:HG13	31:I:41:PHE:CE2	2.55	0.42
18:R:7:SER:CA	18:R:22:LEU:HD13	2.49	0.42
2:B:1396:U:H5'	2:B:1396:U:O2	2.19	0.42
8:G:154:GLU:O	8:G:156:TYR:N	2.52	0.42
31:I:101:SER:OG	31:I:104:GLN:HG3	2.19	0.42
9:H:83:LYS:HD2	9:H:83:LYS:N	2.34	0.42
3:V:1:MET:HE3	3:V:2:PHE:H	1.83	0.42
2:B:740:C:H5''	2:B:1784:A:OP1	2.19	0.42
4:C:255:LYS:C	4:C:256:THR:HG23	2.39	0.42
2:B:2311:A:H3'	2:B:2312:U:C6	2.55	0.42
2:B:636:G:P	12:L:128:THR:HG22	2.59	0.42
2:B:974:G:H2'	2:B:974:G:N3	2.35	0.42
2:B:1372:U:O2'	2:B:1373:A:H5'	2.20	0.42
2:B:643:A:C2	27:I:43:ARG:HD2	2.54	0.42
8:G:9:VAL:HG12	8:G:11:PRO:HD3	2.01	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:E:21:ARG:NH2	6:E:21:ARG:HB2	2.34	0.42
2:B:814:C:OP1	18:R:85:LYS:HA	2.19	0.42
2:B:2300:C:H2'	2:B:2301:C:C6	2.55	0.42
8:G:107:GLY:HA3	8:G:151:ARG:NH2	2.34	0.42
10:J:111:LYS:CB	10:J:113:PRO:HD2	2.47	0.42
9:H:115:VAL:HG23	9:H:131:SER:O	2.19	0.42
26:0:41:HIS:O	26:0:42:ILE:O	2.36	0.42
2:B:1252:G:O4'	17:Q:32:ARG:HG2	2.20	0.42
18:R:66:HIS:CG	18:R:94:THR:HG22	2.54	0.42
2:B:1591:A:O2'	2:B:1592:C:H5'	2.19	0.42
2:B:1248:G:C5	17:Q:2:ARG:HD2	2.54	0.42
2:B:2376:A:N6	15:O:94:ARG:HD3	2.34	0.42
4:C:208:GLY:O	4:C:209:ALA:C	2.57	0.42
6:E:150:THR:HG22	6:E:170:ARG:O	2.20	0.42
30:4:2:LYS:CE	30:4:4:ARG:HE	2.33	0.42
15:O:78:VAL:HA	15:O:81:ARG:HB3	2.01	0.42
1:A:57:A:O2'	7:F:26:GLN:NE2	2.53	0.42
2:B:1937:A:N7	2:B:1939:U:H2'	2.34	0.42
2:B:2895:G:O2'	2:B:2896:C:H5'	2.20	0.42
1:A:8:C:O2'	15:O:40:ILE:HD13	2.19	0.42
11:K:76:VAL:HB	16:P:72:VAL:CG2	2.50	0.42
26:0:53:VAL:O	26:0:54:ILE:CB	2.67	0.42
29:3:30:HIS:O	29:3:31:ILE:O	2.38	0.42
2:B:1640:A:O2'	2:B:1641:A:H5'	2.19	0.42
2:B:1745:A:H2'	2:B:1746:A:H8	1.85	0.42
2:B:1496:A:H1'	2:B:1577:C:O2'	2.19	0.42
2:B:1984:G:O2'	2:B:1985:C:H5'	2.18	0.42
23:X:21:LEU:N	23:X:21:LEU:HD23	2.35	0.42
2:B:2012:G:OP1	19:S:98:LYS:HG2	2.20	0.42
2:B:2300:C:H2'	2:B:2301:C:H6	1.84	0.42
16:P:109:ILE:O	16:P:109:ILE:HD12	2.19	0.42
7:F:2:LYS:O	7:F:6:TYR:HB2	2.18	0.42
2:B:2855:C:O2'	2:B:2856:A:H5'	2.19	0.42
7:F:94:ARG:O	7:F:98:PHE:N	2.46	0.42
6:E:148:ILE:HB	6:E:169:VAL:HG12	2.00	0.42
2:B:850:U:O2'	24:Y:22:THR:HG22	2.18	0.42
24:Y:18:LYS:O	24:Y:22:THR:HG23	2.20	0.42
25:Z:30:LEU:H	25:Z:30:LEU:CD2	2.27	0.42
14:N:94:TYR:C	14:N:116:VAL:HG12	2.40	0.42
2:B:2786:U:H2'	2:B:2787:C:H6	1.84	0.42
2:B:1055:G:H2'	2:B:1056:G:O4'	2.20	0.42
2:B:743:A:C2'	2:B:744:U:H5'	2.49	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:416:U:H2'	2:B:417:C:H6	1.82	0.42
7:F:69:ALA:HB3	7:F:80:GLN:O	2.20	0.42
2:B:193:U:O3'	2:B:803:U:H4'	2.20	0.42
2:B:784:G:H1	4:C:227:VAL:HG11	1.80	0.42
2:B:2719:G:O2'	2:B:2846:G:H4'	2.19	0.42
2:B:1916:A:H2'	2:B:1917:U:O4'	2.20	0.42
6:E:68:ALA:O	6:E:69:ARG:C	2.58	0.42
2:B:1405:U:H2'	2:B:1406:U:H6	1.84	0.42
2:B:599:A:O2'	2:B:600:G:H5'	2.19	0.42
13:M:32:GLY:HA3	13:M:103:TYR:O	2.19	0.42
2:B:1870:C:H3'	2:B:1871:A:C8	2.54	0.42
2:B:629:G:O2'	2:B:630:G:H5'	2.20	0.42
2:B:1707:G:O2'	2:B:1708:C:H5'	2.19	0.42
2:B:659:G:N2	6:E:30:GLN:NE2	2.67	0.42
2:B:2411:A:H2'	2:B:2412:A:H8	1.84	0.42
2:B:2389:G:H5''	2:B:2390:U:O4'	2.19	0.42
16:P:62:LYS:O	16:P:63:ILE:HB	2.19	0.42
8:G:39:ALA:O	8:G:54:ARG:HB2	2.19	0.42
2:B:2828:G:H2'	2:B:2829:A:H8	1.85	0.42
2:B:518:G:H2'	2:B:519:U:C6	2.54	0.42
5:D:16:THR:HG22	5:D:17:GLU:N	2.35	0.42
4:C:124:LYS:HG2	4:C:125:PRO:N	2.35	0.42
2:B:1670:C:H2'	2:B:1671:U:O4'	2.19	0.42
2:B:1539:U:O2	2:B:1539:U:H2'	2.19	0.42
7:F:3:LEU:HB2	7:F:100:GLU:OE1	2.19	0.42
6:E:147:LEU:O	6:E:168:ASP:O	2.38	0.42
5:D:178:VAL:HG12	5:D:179:ARG:N	2.33	0.42
5:D:186:LEU:HD21	16:P:7:LEU:HD21	2.02	0.42
2:B:2363:G:O2'	2:B:2364:C:H5'	2.18	0.42
22:W:56:HIS:O	22:W:57:THR:C	2.57	0.42
14:N:28:LEU:HD21	14:N:113:ILE:HG23	2.02	0.42
2:B:584:C:N4	2:B:585:G:C6	2.87	0.42
31:I:27:LEU:HB2	31:I:32:VAL:HG21	2.01	0.42
10:J:20:ALA:C	10:J:22:GLY:N	2.73	0.42
11:K:87:LEU:HD12	11:K:92:GLU:C	2.40	0.42
16:P:54:LEU:HA	16:P:76:HIS:HD2	1.85	0.42
2:B:2757:A:N3	2:B:2757:A:H2'	2.34	0.42
9:H:117:LEU:HD13	9:H:130:VAL:HA	2.02	0.42
17:Q:49:ARG:HG2	17:Q:49:ARG:HH11	1.85	0.42
6:E:109:LEU:HD13	6:E:180:LEU:HD13	2.00	0.42
4:C:255:LYS:C	4:C:257:ARG:H	2.23	0.42
2:B:2349:G:OP2	29:3:41:ARG:HD3	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:95:LEU:HB2	12:L:101:ILE:CG1	2.49	0.42
2:B:70:G:H3'	2:B:113:U:C4'	2.49	0.42
2:B:1223:G:OP2	18:R:90:ARG:NH1	2.53	0.42
2:B:2282:G:OP1	2:B:2283:C:H1'	2.20	0.42
16:P:38:ARG:HB3	16:P:38:ARG:NH2	2.35	0.42
17:Q:24:TYR:CD1	17:Q:25:GLY:N	2.87	0.42
12:L:23:ILE:H	12:L:23:ILE:HD12	1.84	0.42
2:B:2602:A:H3'	2:B:2602:A:OP1	2.20	0.42
13:M:33:LEU:HD22	13:M:128:THR:HB	2.02	0.42
2:B:1921:G:O2'	2:B:1922:G:H5'	2.19	0.42
8:G:112:VAL:O	8:G:113:ASP:HB2	2.19	0.42
21:U:85:ARG:O	21:U:92:VAL:HB	2.20	0.42
2:B:548:G:O2'	2:B:549:G:H5''	2.20	0.42
7:F:11:VAL:HG13	7:F:171:ALA:HB1	2.01	0.42
7:F:33:ILE:HB	7:F:90:LEU:CG	2.49	0.42
7:F:90:LEU:HB3	7:F:95:MET:HB2	2.02	0.42
10:J:6:ALA:HB3	10:J:45:THR:CG2	2.44	0.42
4:C:119:VAL:HG13	4:C:133:ASN:HD21	1.84	0.42
4:C:153:LEU:HD22	4:C:175:LEU:HD22	2.01	0.42
25:Z:38:PHE:CE2	25:Z:51:VAL:HG21	2.55	0.42
14:N:33:ILE:HG22	14:N:114:GLU:CB	2.44	0.42
14:N:47:VAL:O	14:N:51:LEU:HD13	2.20	0.42
2:B:346:A:H3'	2:B:347:A:H8	1.84	0.42
2:B:26:G:H1'	2:B:514:A:N6	2.34	0.42
18:R:19:THR:HG22	18:R:97:LYS:HD2	2.01	0.42
16:P:89:GLY:N	16:P:112:ARG:HH12	2.17	0.42
27:1:10:LEU:HB3	27:1:48:TYR:HB3	2.02	0.42
7:F:109:ARG:HB3	7:F:135:ILE:HD12	2.00	0.42
13:M:108:VAL:CG1	13:M:112:LEU:HD12	2.49	0.42
2:B:1131:G:O2'	2:B:1133:A:N7	2.52	0.42
2:B:329:G:H1	21:U:16:LYS:HE3	1.84	0.42
25:Z:21:ALA:C	25:Z:22:LEU:HG	2.39	0.42
13:M:66:ARG:HB3	13:M:101:VAL:HG13	2.01	0.42
2:B:2721:A:H2'	2:B:2722:G:H8	1.84	0.42
2:B:2847:U:OP1	16:P:95:LYS:HD3	2.19	0.42
2:B:215:G:C4'	2:B:216:A:H4'	2.47	0.42
15:O:100:HIS:ND1	15:O:101:GLY:N	2.68	0.42
2:B:981:A:H4'	2:B:2037:A:H5'	2.02	0.42
2:B:2283:C:H2'	2:B:2284:A:H5'	2.01	0.42
2:B:2215:C:H2'	2:B:2216:G:C8	2.55	0.42
12:L:138:ALA:O	12:L:139:GLY:C	2.58	0.42
2:B:912:C:H2'	2:B:913:U:C6	2.54	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2838:G:C4	2:B:2839:G:C8	3.07	0.42
2:B:1891:G:H2'	2:B:1892:C:H6	1.85	0.42
23:X:35:GLY:O	23:X:36:GLN:C	2.57	0.42
19:S:2:GLU:O	19:S:3:THR:C	2.58	0.42
2:B:374:A:N6	2:B:400:G:H1'	2.35	0.42
2:B:1099:G:C8	31:I:3:LYS:CB	3.03	0.42
17:Q:71:ASN:ND2	17:Q:72:GLY:N	2.68	0.42
6:E:147:LEU:HD13	6:E:147:LEU:O	2.20	0.42
5:D:26:VAL:HG13	5:D:188:LEU:CD2	2.50	0.42
16:P:4:ILE:O	16:P:5:LYS:HB2	2.20	0.42
5:D:121:THR:C	5:D:123:LYS:N	2.72	0.42
2:B:850:U:O3'	24:Y:22:THR:HG22	2.19	0.42
22:W:18:LYS:HG3	22:W:19:ARG:CZ	2.49	0.42
2:B:2260:C:O2'	2:B:2261:C:H5'	2.20	0.42
2:B:26:G:H2'	2:B:27:G:C1'	2.50	0.42
2:B:1441:G:H2'	2:B:1442:U:H6	1.83	0.42
13:M:18:ARG:C	13:M:38:ARG:HH22	2.23	0.42
15:O:36:TYR:CD2	15:O:36:TYR:N	2.87	0.42
2:B:504:A:HO2'	2:B:505:A:P	2.42	0.42
2:B:321:U:O4'	6:E:159:LEU:HG	2.19	0.42
8:G:89:VAL:HG21	8:G:162:ARG:HH11	1.84	0.42
11:K:41:ILE:CG1	11:K:42:THR:N	2.82	0.42
30:4:3:VAL:O	30:4:4:ARG:HB2	2.19	0.42
2:B:1914:C:O2'	2:B:1915:U:C5'	2.68	0.42
5:D:27:ILE:HG23	5:D:201:LEU:HD12	2.02	0.42
19:S:57:ASN:HD22	19:S:57:ASN:HA	1.59	0.42
2:B:1028:A:N6	2:B:1125:G:H2'	2.35	0.42
13:M:124:LEU:HA	13:M:125:PRO:HD3	1.87	0.42
2:B:55:G:H2'	2:B:56:A:C8	2.55	0.42
2:B:1847:A:H1'	2:B:1848:A:N7	2.35	0.42
2:B:1401:G:H2'	2:B:1402:U:H6	1.85	0.42
2:B:969:G:H2'	2:B:970:U:H6	1.85	0.42
2:B:1280:G:C2'	2:B:1281:G:H5'	2.49	0.42
2:B:2419:U:H2'	2:B:2420:C:C6	2.55	0.42
2:B:1831:G:C6	2:B:1832:C:N4	2.88	0.42
2:B:1490:A:H2'	4:C:97:ASP:CG	2.41	0.42
2:B:1210:G:H5'	2:B:1212:G:C4'	2.49	0.42
2:B:2667:C:HO2'	8:G:108:PHE:HD2	1.68	0.42
12:L:98:ALA:O	12:L:99:ASN:C	2.59	0.42
2:B:227:A:H61	2:B:410:G:H1'	1.84	0.42
2:B:2622:U:O2'	2:B:2825:G:N7	2.53	0.42
2:B:1662:U:H2'	2:B:1663:G:O4'	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Q:87:VAL:HB	18:R:52:PRO:HG3	2.02	0.42
2:B:169:G:O2'	2:B:170:U:H5'	2.19	0.42
2:B:1:G:H2'	2:B:2:G:C8	2.54	0.42
17:Q:93:ILE:HG23	17:Q:94:LEU:N	2.35	0.42
4:C:128:THR:HG22	4:C:188:ARG:HB3	2.02	0.42
4:C:67:LYS:O	4:C:188:ARG:HD3	2.20	0.42
19:S:24:ILE:O	19:S:25:ARG:C	2.58	0.42
12:L:61:LEU:HD23	29:3:23:HIS:CG	2.55	0.42
2:B:1448:G:H2'	2:B:1449:G:H8	1.85	0.42
15:O:7:ARG:HH11	15:O:7:ARG:CG	2.33	0.42
11:K:99:ILE:HG12	11:K:115:ILE:HG13	2.01	0.42
7:F:134:GLN:HE21	7:F:134:GLN:HB3	1.62	0.42
2:B:404:A:H4'	2:B:405:U:C5'	2.44	0.42
18:R:79:ARG:HD2	18:R:80:ARG:HH21	1.84	0.42
1:A:32:U:H2'	1:A:33:G:H8	1.85	0.42
2:B:776:G:N1	2:B:2072:C:OP1	2.41	0.42
2:B:68:G:O2'	2:B:69:C:H5'	2.19	0.42
2:B:1637:A:H2'	2:B:1638:C:C6	2.55	0.42
2:B:441:U:O2'	2:B:442:G:H5'	2.20	0.42
2:B:936:A:O2'	2:B:937:C:H5'	2.20	0.42
2:B:256:A:O2'	2:B:257:C:H5'	2.19	0.42
8:G:18:ILE:HA	8:G:22:VAL:O	2.20	0.42
2:B:924:G:H2'	2:B:925:A:C8	2.54	0.42
5:D:35:THR:N	5:D:49:GLN:O	2.51	0.42
10:J:75:TYR:O	10:J:76:HIS:HB3	2.20	0.42
2:B:2301:C:H2'	2:B:2302:U:C6	2.55	0.42
2:B:234:U:H2'	2:B:235:U:H6	1.85	0.42
2:B:1207:C:H2'	2:B:1208:C:C6	2.55	0.42
2:B:841:G:O2'	2:B:842:U:H5'	2.20	0.42
21:U:71:ILE:HD11	21:U:81:ARG:O	2.19	0.41
7:F:65:LEU:HD23	7:F:87:LYS:CD	2.45	0.41
7:F:8:LYS:HA	7:F:12:VAL:CG2	2.45	0.41
10:J:35:ARG:HG3	10:J:40:HIS:HE2	1.85	0.41
2:B:1801:A:P	4:C:149:LYS:HZ3	2.43	0.41
24:Y:51:SER:HA	24:Y:54:VAL:CG2	2.50	0.41
16:P:86:LYS:HB3	16:P:87:ARG:H	1.54	0.41
11:K:105:ARG:HH11	11:K:122:VAL:CG1	2.33	0.41
2:B:2743:U:H2'	2:B:2744:G:C5'	2.41	0.41
2:B:1180:U:H2'	2:B:1181:U:O4'	2.20	0.41
9:H:90:LEU:HD12	9:H:90:LEU:N	2.35	0.41
11:K:6:THR:HG22	11:K:7:MET:H	1.84	0.41
2:B:451:U:C2	2:B:453:A:N7	2.88	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:O:49:VAL:HG11	15:O:82:ALA:CA	2.44	0.41
2:B:2586:U:H2'	2:B:2587:A:C8	2.54	0.41
2:B:2314:A:H2'	2:B:2315:G:H8	1.84	0.41
6:E:150:THR:OG1	6:E:151:GLY:N	2.52	0.41
6:E:59:PRO:O	6:E:67:ARG:NH2	2.53	0.41
5:D:110:THR:O	5:D:201:LEU:HA	2.20	0.41
2:B:1998:A:H2'	2:B:1999:C:H6	1.84	0.41
2:B:811:U:O2	2:B:1250:G:H3'	2.19	0.41
28:2:21:ARG:CD	28:2:43:THR:HG21	2.50	0.41
2:B:1187:G:H5''	18:R:83:TYR:CE2	2.55	0.41
18:R:39:LEU:HD22	18:R:53:PHE:CD1	2.55	0.41
29:3:49:VAL:HG11	29:3:54:LEU:HA	2.02	0.41
13:M:26:VAL:CG2	13:M:133:LYS:HA	2.50	0.41
2:B:1334:G:O2'	2:B:1335:C:H5'	2.20	0.41
20:T:45:ALA:HA	20:T:48:GLN:CG	2.50	0.41
30:4:11:CYS:HB3	30:4:33:HIS:HE1	1.84	0.41
12:L:118:THR:HA	12:L:119:PRO:HD3	1.91	0.41
4:C:115:ILE:HA	4:C:124:LYS:HZ1	1.84	0.41
2:B:1727:C:H2'	2:B:1728:C:O4'	2.20	0.41
29:3:14:LYS:O	29:3:15:LYS:C	2.58	0.41
2:B:649:G:H2'	2:B:650:C:C6	2.55	0.41
2:B:2219:U:H2'	2:B:2220:U:H6	1.85	0.41
2:B:612:G:H2'	2:B:614:A:H5''	2.01	0.41
15:O:19:GLN:HB3	15:O:19:GLN:HE21	1.62	0.41
2:B:1706:C:H2'	2:B:1757:A:OP2	2.19	0.41
2:B:2478:A:H2'	2:B:2479:U:O4'	2.20	0.41
2:B:1098:A:H3'	31:I:3:LYS:HB3	2.00	0.41
20:T:18:GLU:O	20:T:20:ALA:N	2.53	0.41
14:N:79:LEU:C	14:N:81:ASN:H	2.22	0.41
10:J:38:GLY:O	10:J:43:GLU:HB2	2.21	0.41
2:B:1173:U:H2'	2:B:1174:U:C6	2.56	0.41
16:P:4:ILE:HA	16:P:7:LEU:CD1	2.50	0.41
13:M:40:ARG:HD3	13:M:93:VAL:CG2	2.33	0.41
22:W:18:LYS:HE3	22:W:19:ARG:CD	2.51	0.41
24:Y:35:VAL:HG21	24:Y:37:ARG:NH2	2.34	0.41
25:Z:53:ALA:C	25:Z:55:GLY:H	2.19	0.41
2:B:2018:G:H2'	2:B:2019:A:H8	1.85	0.41
2:B:1552:A:H2'	2:B:1553:A:C5'	2.49	0.41
16:P:20:ARG:HG3	16:P:91:VAL:HG11	2.01	0.41
16:P:21:PRO:O	16:P:96:LEU:HD22	2.20	0.41
20:T:29:THR:HB	20:T:86:THR:HG22	2.03	0.41
28:2:6:GLN:HA	28:2:7:PRO:HD2	1.89	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:H:86:ASP:HB2	9:H:89:LYS:CD	2.42	0.41
8:G:84:LYS:CB	8:G:132:LEU:H	2.33	0.41
7:F:35:LEU:HD13	7:F:56:LEU:HD13	2.03	0.41
16:P:98:TYR:CE2	16:P:99:LEU:HD23	2.55	0.41
2:B:499:U:H5'	21:U:44:HIS:CE1	2.46	0.41
21:U:78:LYS:HD3	21:U:79:ALA:H	1.85	0.41
2:B:459:U:O2'	2:B:460:A:H5'	2.20	0.41
2:B:68:G:H2'	2:B:69:C:H6	1.85	0.41
2:B:1637:A:H5'	2:B:1760:C:O2'	2.20	0.41
18:R:6:GLN:HE21	18:R:6:GLN:C	2.23	0.41
8:G:91:VAL:HG23	8:G:92:GLY:N	2.36	0.41
15:O:56:LYS:O	15:O:60:GLU:HG2	2.20	0.41
2:B:1207:C:H2'	2:B:1208:C:H6	1.85	0.41
23:X:25:GLN:HE21	23:X:25:GLN:HB3	1.53	0.41
2:B:268:C:O2	2:B:268:C:H2'	2.19	0.41
4:C:166:ARG:HH21	4:C:166:ARG:HG3	1.85	0.41
7:F:124:ARG:HG2	7:F:124:ARG:HH11	1.85	0.41
2:B:2191:A:H2'	2:B:2192:U:O4'	2.20	0.41
20:T:17:SER:N	20:T:21:SER:OG	2.52	0.41
2:B:2013:A:H2'	2:B:2014:A:H5'	2.02	0.41
26:O:29:VAL:HG22	26:O:30:ASP:N	2.35	0.41
10:J:54:ILE:HD12	10:J:55:ILE:H	1.84	0.41
12:L:80:SER:HB3	12:L:115:GLU:CD	2.41	0.41
4:C:149:LYS:HD3	4:C:152:GLN:NE2	2.35	0.41
4:C:131:MET:HE3	4:C:187:CYS:O	2.19	0.41
2:B:2305:U:C1'	7:F:132:ARG:HA	2.50	0.41
7:F:42:ALA:O	7:F:43:ILE:C	2.58	0.41
2:B:2019:A:H4'	17:Q:33:VAL:HG11	2.02	0.41
5:D:150:GLN:O	5:D:153:GLY:N	2.53	0.41
20:T:25:GLU:HA	20:T:28:ASN:O	2.20	0.41
2:B:2733:A:C8	2:B:2733:A:H3'	2.55	0.41
15:O:52:SER:HA	15:O:74:VAL:CG1	2.50	0.41
2:B:1723:G:H2'	2:B:1724:G:H5'	2.02	0.41
2:B:921:C:H2'	2:B:922:C:H6	1.83	0.41
2:B:1168:G:C6	2:B:1182:G:C6	3.08	0.41
2:B:574:A:H1'	2:B:2055:C:C5	2.55	0.41
14:N:60:VAL:O	14:N:63:ARG:HB3	2.20	0.41
14:N:9:GLN:O	14:N:17:ARG:HD3	2.20	0.41
6:E:59:PRO:HB2	6:E:67:ARG:NH2	2.35	0.41
2:B:1040:A:O2'	2:B:1041:G:H5'	2.20	0.41
2:B:1430:G:H2'	2:B:1431:A:C8	2.55	0.41
2:B:833:A:H1'	12:L:52:GLY:N	2.35	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:937:C:H2'	2:B:938:G:C8	2.55	0.41
12:L:40:SER:C	12:L:41:ARG:HG3	2.39	0.41
2:B:1161:C:H2'	2:B:1162:G:H8	1.85	0.41
21:U:41:VAL:N	21:U:60:LYS:O	2.53	0.41
8:G:94:ARG:HH21	8:G:105:SER:H	1.68	0.41
17:Q:38:VAL:O	17:Q:39:ILE:C	2.56	0.41
6:E:9:GLN:HG3	6:E:9:GLN:O	2.21	0.41
21:U:23:LYS:HD2	21:U:23:LYS:H	1.86	0.41
2:B:2889:C:O2'	2:B:2890:G:H5'	2.20	0.41
2:B:1951:U:H2'	2:B:1953:A:OP2	2.19	0.41
23:X:46:VAL:O	23:X:50:VAL:HG23	2.19	0.41
21:U:88:ASP:CG	21:U:89:GLY:N	2.73	0.41
20:T:5:GLU:N	20:T:8:LEU:HD12	2.35	0.41
10:J:140:LEU:HD23	10:J:141:ASP:N	2.34	0.41
10:J:44:TYR:HB2	17:Q:63:ARG:HD2	2.01	0.41
17:Q:108:LEU:HA	18:R:48:LYS:HD3	2.01	0.41
4:C:144:GLU:CA	4:C:151:GLY:HA2	2.40	0.41
19:S:55:ILE:HD12	19:S:69:LEU:HD23	2.02	0.41
25:Z:7:VAL:CG2	25:Z:67:VAL:HG11	2.50	0.41
2:B:532:A:N3	2:B:532:A:H2'	2.34	0.41
5:D:62:LYS:N	5:D:63:PRO:CD	2.84	0.41
20:T:22:THR:O	20:T:26:LYS:N	2.44	0.41
2:B:2769:U:O2'	2:B:2770:G:H5'	2.20	0.41
20:T:68:LYS:HB2	20:T:68:LYS:HE3	1.81	0.41
5:D:15:PHE:HA	5:D:20:VAL:O	2.21	0.41
7:F:148:VAL:O	7:F:149:ARG:HG2	2.20	0.41
15:O:36:TYR:HA	15:O:52:SER:CB	2.50	0.41
13:M:100:LYS:HA	13:M:100:LYS:HD3	1.87	0.41
8:G:148:ARG:HA	8:G:161:VAL:CB	2.45	0.41
9:H:54:LEU:CD2	9:H:58:LEU:HD12	2.46	0.41
9:H:58:LEU:O	9:H:61:VAL:HG12	2.20	0.41
14:N:12:ARG:HA	14:N:12:ARG:HD2	1.72	0.41
1:A:32:U:H1'	1:A:52:A:N7	2.35	0.41
2:B:2437:G:H2'	2:B:2438:U:C6	2.56	0.41
23:X:23:ARG:O	23:X:27:ASN:HB2	2.20	0.41
2:B:1789:A:H2'	2:B:1790:C:O4'	2.20	0.41
2:B:1798:U:H5''	4:C:257:ARG:HB2	2.02	0.41
2:B:230:G:H2'	2:B:231:A:C8	2.55	0.41
5:D:201:LEU:C	5:D:202:ILE:HD12	2.41	0.41
2:B:460:A:P	28:2:41:ARG:HH12	2.44	0.41
13:M:26:VAL:HB	13:M:104:GLU:OE2	2.19	0.41
2:B:570:G:C4	2:B:2030:A:N7	2.88	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:I:99:LYS:HB2	31:I:140:GLU:OE1	2.20	0.41
21:U:32:LYS:HD3	21:U:32:LYS:N	2.34	0.41
2:B:325:G:O2'	2:B:326:G:H5'	2.20	0.41
17:Q:48:ASP:HA	17:Q:51:GLN:HG3	2.03	0.41
2:B:1716:U:H2'	2:B:1717:A:C8	2.56	0.41
2:B:235:U:H2'	2:B:236:C:H6	1.85	0.41
25:Z:11:ARG:HB3	25:Z:12:PRO:HD2	2.01	0.41
2:B:2219:U:O2'	2:B:2220:U:H5'	2.20	0.41
27:1:18:HIS:ND1	27:1:19:PHE:N	2.68	0.41
25:Z:27:ARG:HD2	25:Z:29:PHE:CE1	2.55	0.41
2:B:341:C:O2'	2:B:342:A:H5'	2.21	0.41
2:B:2607:G:O2'	2:B:2608:G:H5'	2.20	0.41
2:B:686:U:O4	28:2:12:ARG:HB2	2.20	0.41
6:E:194:LYS:O	6:E:197:GLU:HB3	2.21	0.41
2:B:506:G:H1'	2:B:507:A:C8	2.55	0.41
4:C:29:PHE:CE2	4:C:31:PRO:HG2	2.55	0.41
21:U:96:LYS:C	21:U:98:ASN:H	2.23	0.41
17:Q:63:ARG:HH12	17:Q:96:ASP:CA	2.32	0.41
2:B:2335:A:H2'	2:B:2336:A:H5''	2.02	0.41
2:B:2386:A:H4'	22:W:54:ARG:O	2.19	0.41
22:W:49:ASN:CA	22:W:61:LYS:HB2	2.50	0.41
24:Y:55:LYS:O	24:Y:56:VAL:C	2.59	0.41
19:S:73:LYS:HD2	19:S:73:LYS:HA	1.66	0.41
7:F:82:TYR:O	7:F:84:ILE:HD13	2.21	0.41
31:I:108:ILE:CG2	31:I:128:ILE:HD13	2.50	0.41
25:Z:51:VAL:HG12	25:Z:52:SER:N	2.36	0.41
2:B:346:A:O4'	2:B:346:A:N3	2.54	0.41
8:G:50:THR:HG22	8:G:51:PHE:N	2.36	0.41
11:K:117:SER:C	11:K:118:LEU:HD12	2.41	0.41
7:F:102:LEU:HD13	7:F:102:LEU:C	2.41	0.41
7:F:107:VAL:O	7:F:110:ILE:HG22	2.21	0.41
13:M:21:ALA:HB3	13:M:99:GLY:O	2.21	0.41
21:U:43:LYS:HD3	21:U:44:HIS:N	2.35	0.41
10:J:84:ILE:HG13	10:J:84:ILE:O	2.21	0.41
3:V:2:PHE:HD1	3:V:50:MET:HE2	1.86	0.41
2:B:2800:A:H2'	2:B:2801:G:C1'	2.50	0.41
2:B:2327:A:H2'	2:B:2328:A:C8	2.56	0.41
2:B:20:C:H2'	2:B:21:A:C8	2.55	0.41
1:A:27:C:H2'	1:A:28:C:H5'	2.02	0.41
2:B:661:A:H1'	12:L:12:SER:O	2.21	0.41
1:A:25:U:H3'	1:A:25:U:OP1	2.20	0.41
2:B:828:U:H2'	2:B:829:A:C8	2.54	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:V:77:VAL:HG12	13:M:136:MET:CE	2.50	0.41
4:C:58:LYS:HD2	4:C:58:LYS:HA	1.95	0.41
8:G:94:ARG:HB2	8:G:127:GLN:HG2	2.01	0.41
4:C:124:LYS:CG	4:C:125:PRO:HD2	2.50	0.41
2:B:2407:A:H2'	2:B:2408:U:C6	2.56	0.41
21:U:73:ASN:HD21	21:U:76:THR:H	1.67	0.41
2:B:1369:G:H2'	2:B:1370:C:O4'	2.20	0.41
29:3:26:ALA:O	29:3:27:ASN:C	2.59	0.41
30:4:22:VAL:O	30:4:24:ARG:N	2.54	0.41
2:B:1423:G:H2'	2:B:1424:G:H8	1.85	0.41
13:M:43:ALA:O	13:M:47:GLU:HB2	2.21	0.41
2:B:547:A:OP1	2:B:548:G:OP2	2.39	0.41
14:N:27:SER:O	14:N:30:ARG:HB2	2.20	0.41
17:Q:77:LYS:O	17:Q:80:ASN:HB3	2.20	0.41
2:B:1654:A:O2'	2:B:1655:A:H5'	2.21	0.41
13:M:40:ARG:NH2	13:M:73:ILE:HD12	2.35	0.41
22:W:18:LYS:CA	22:W:36:ILE:HG12	2.40	0.41
24:Y:40:THR:HG22	24:Y:42:ALA:H	1.86	0.41
19:S:24:ILE:CG2	19:S:71:VAL:HG11	2.44	0.41
7:F:74:ALA:C	7:F:76:PHE:H	2.23	0.41
2:B:1060:U:C1'	2:B:1062:G:H5'	2.50	0.41
31:I:54:ILE:HG23	31:I:54:ILE:O	2.19	0.41
28:2:19:ARG:NH2	28:2:19:ARG:HG2	2.35	0.41
3:V:24:ASN:O	3:V:26:PHE:N	2.54	0.41
11:K:47:ILE:HG23	11:K:48:PRO:CD	2.51	0.41
2:B:1446:C:H2'	2:B:1447:C:C6	2.55	0.41
8:G:71:LEU:O	8:G:75:VAL:HG23	2.21	0.41
2:B:2526:G:H2'	2:B:2527:C:C6	2.55	0.41
27:1:8:ILE:HG21	27:1:51:ALA:CB	2.51	0.41
11:K:13:ASN:HD21	11:K:98:ARG:N	2.08	0.41
11:K:33:ALA:CB	11:K:39:ILE:HD11	2.50	0.41
2:B:289:G:OP2	2:B:289:G:H3'	2.20	0.41
2:B:480:A:H2	2:B:499:U:O2	2.03	0.41
6:E:155:GLU:O	6:E:159:LEU:HB2	2.20	0.41
2:B:2069:G:O2'	2:B:2070:A:H5'	2.20	0.41
2:B:780:G:H2'	2:B:782:A:N7	2.35	0.41
6:E:109:LEU:O	6:E:113:VAL:HG23	2.21	0.41
6:E:154:ASP:C	6:E:156:ASN:H	2.23	0.41
2:B:182:A:O2'	2:B:183:C:H5'	2.20	0.41
2:B:183:C:O2	2:B:432:A:H2	2.04	0.41
6:E:3:LEU:H	6:E:13:THR:N	2.18	0.41
2:B:2052:A:C4	5:D:155:VAL:HG23	2.56	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:3:31:ILE:C	29:3:32:LEU:HG	2.41	0.41
2:B:1161:C:O2'	2:B:1162:G:H5'	2.20	0.41
7:F:133:GLU:HA	7:F:150:GLY:CA	2.51	0.41
2:B:866:A:O2'	2:B:867:C:H5'	2.20	0.41
15:O:16:ARG:C	15:O:18:LEU:N	2.74	0.41
25:Z:2:SER:O	25:Z:3:ARG:C	2.58	0.41
1:A:61:G:H2'	1:A:62:C:H6	1.84	0.41
2:B:697:G:H2'	2:B:698:C:C6	2.56	0.41
6:E:62:GLN:HB2	6:E:62:GLN:HE21	1.60	0.41
2:B:1295:C:H2'	2:B:1296:G:C8	2.55	0.41
1:A:112:G:O2'	1:A:113:C:H5'	2.19	0.41
2:B:319:G:H2'	2:B:320:A:O4'	2.21	0.41
7:F:11:VAL:CG1	7:F:12:VAL:H	2.18	0.41
17:Q:73:ILE:HD11	17:Q:77:LYS:HB3	2.03	0.41
2:B:1243:C:O2'	2:B:1244:A:H5'	2.21	0.41
4:C:156:SER:HB3	4:C:159:THR:HG21	2.02	0.41
13:M:73:ILE:HG21	13:M:91:TYR:CE2	2.56	0.41
22:W:35:ILE:O	22:W:37:VAL:N	2.53	0.41
22:W:24:ARG:HH11	22:W:65:LYS:HA	1.86	0.41
9:H:5:LEU:HD12	9:H:17:ASP:HB3	2.03	0.41
26:O:25:THR:O	26:O:39:ARG:NH2	2.53	0.41
2:B:116:C:O2'	2:B:126:A:C8	2.69	0.41
12:L:61:LEU:HA	12:L:62:PRO:HD3	1.92	0.41
8:G:34:ARG:HD3	8:G:34:ARG:N	2.35	0.41
7:F:105:ILE:O	7:F:109:ARG:HB2	2.20	0.41
7:F:37:MET:SD	7:F:52:ALA:HB1	2.60	0.41
22:W:15:SER:O	22:W:16:GLU:C	2.58	0.41
2:B:1248:G:C4	17:Q:2:ARG:HD2	2.56	0.41
2:B:2352:A:H8	2:B:2352:A:O5'	2.04	0.41
22:W:28:GLU:H	22:W:31:LEU:CD1	2.34	0.41
9:H:83:LYS:HD2	9:H:83:LYS:H	1.85	0.41
4:C:107:LYS:HB3	4:C:108:GLY:H	1.68	0.41
2:B:1666:G:O3'	11:K:6:THR:HG23	2.21	0.41
2:B:453:A:N3	2:B:457:A:O2'	2.53	0.41
19:S:66:ILE:CG1	19:S:67:ASP:N	2.84	0.41
3:V:1:MET:HE3	3:V:2:PHE:HA	2.02	0.41
3:V:62:THR:CG2	3:V:71:LYS:HG2	2.46	0.41
21:U:25:LYS:N	21:U:34:ILE:O	2.54	0.41
2:B:764:A:H5''	4:C:208:GLY:HA2	2.02	0.41
4:C:245:THR:O	4:C:247:TRP:N	2.53	0.41
2:B:810:U:O2'	12:L:20:GLY:HA3	2.21	0.41
2:B:246:C:H2'	2:B:247:G:C5'	2.50	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2143:C:H5''	2:B:2144:G:C8	2.55	0.41
19:S:61:ASN:HA	19:S:61:ASN:HD22	1.55	0.41
2:B:1572:A:O2'	2:B:1573:G:H5'	2.21	0.41
2:B:2623:G:O5'	2:B:2826:A:H1'	2.20	0.41
2:B:2694:G:H2'	2:B:2695:U:C6	2.55	0.41
2:B:1704:C:H2'	2:B:1705:A:C8	2.56	0.41
2:B:1280:G:H2'	2:B:1281:G:H5'	2.02	0.41
2:B:1258:U:H2'	2:B:1259:G:H8	1.85	0.41
2:B:2186:G:H2'	2:B:2187:U:O4'	2.21	0.41
6:E:21:ARG:HG3	6:E:22:ASP:O	2.21	0.41
2:B:324:A:H61	2:B:338:G:C2'	2.33	0.41
2:B:2301:C:O2'	2:B:2302:U:H5'	2.20	0.41
6:E:61:ARG:O	6:E:62:GLN:C	2.58	0.41
2:B:2208:C:O2'	2:B:2209:G:H5'	2.21	0.41
19:S:3:THR:O	19:S:3:THR:HG23	2.21	0.41
2:B:995:C:H42	10:J:2:LYS:HB2	1.86	0.41
2:B:1889:A:H2'	2:B:1890:A:C8	2.56	0.41
2:B:1901:A:OP2	4:C:252:LYS:NZ	2.53	0.41
2:B:2671:G:H2'	2:B:2672:U:C6	2.56	0.41
2:B:1099:G:N7	31:I:3:LYS:CD	2.84	0.41
14:N:82:GLU:HB3	14:N:83:LEU:H	1.63	0.41
10:J:45:THR:H	10:J:46:PRO:CD	2.28	0.41
17:Q:109:VAL:CG1	17:Q:113:LYS:HE3	2.50	0.41
2:B:1243:C:O2	12:L:4:ASN:HA	2.20	0.41
2:B:1174:U:H2'	2:B:1174:U:O2	2.20	0.41
2:B:2336:A:N6	22:W:40:ARG:CG	2.81	0.41
24:Y:6:ILE:HB	24:Y:35:VAL:HG12	2.03	0.41
9:H:14:SER:HB2	9:H:17:ASP:HB3	2.03	0.41
2:B:2262:U:H2'	2:B:2263:C:H6	1.86	0.41
2:B:514:A:N6	2:B:515:A:N6	2.68	0.41
2:B:2358:A:H61	12:L:54:GLN:HE22	1.68	0.41
2:B:2393:U:H5'	12:L:60:ARG:O	2.21	0.41
8:G:33:THR:HA	8:G:34:ARG:NH1	2.36	0.41
8:G:67:ALA:O	8:G:71:LEU:HD23	2.21	0.41
2:B:2675:A:H4'	11:K:29:HIS:HB2	2.02	0.41
2:B:2039:U:O2'	2:B:2040:G:H5'	2.21	0.41
10:J:20:ALA:HA	10:J:23:LYS:CG	2.50	0.41
10:J:24:THR:O	10:J:25:LEU:HB3	2.20	0.41
2:B:1475:G:H3'	2:B:1475:G:OP1	2.21	0.41
11:K:109:SER:O	11:K:111:LYS:N	2.54	0.41
3:V:2:PHE:HD2	3:V:59:GLU:OE1	2.03	0.41
2:B:191:A:O2'	2:B:192:C:H5'	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:221:GLY:C	4:C:223:ALA:N	2.73	0.41
2:B:275:C:H2'	2:B:276:U:O4'	2.20	0.41
2:B:2721:A:H2'	2:B:2722:G:C8	2.55	0.41
4:C:203:VAL:O	4:C:204:LEU:HB2	2.21	0.41
15:O:88:LYS:HA	15:O:115:LEU:HD13	2.03	0.41
22:W:44:PHE:CE2	22:W:76:ARG:HD3	2.56	0.41
20:T:72:GLN:H	20:T:72:GLN:HG2	1.68	0.41
2:B:1187:G:H5''	18:R:83:TYR:CZ	2.55	0.41
2:B:2623:G:O2'	2:B:2624:G:H5'	2.21	0.41
2:B:1636:U:H2'	2:B:1637:A:C8	2.56	0.41
5:D:38:LYS:HD3	5:D:45:TYR:OH	2.21	0.41
2:B:379:G:N1	2:B:396:G:C6	2.89	0.41
2:B:2751:G:H2'	2:B:2751:G:N3	2.35	0.41
28:2:39:ARG:HG3	28:2:39:ARG:NH1	2.36	0.41
2:B:2369:A:H2'	2:B:2370:G:C8	2.55	0.41
2:B:1577:C:H2'	2:B:1578:U:C6	2.55	0.41
15:O:63:LYS:HD2	15:O:64:TYR:HB2	2.03	0.41
2:B:316:C:O2'	2:B:317:G:H5'	2.20	0.41
2:B:1126:A:H4'	2:B:1127:A:C5'	2.50	0.41
2:B:1322:A:C5	2:B:1323:C:C5	3.09	0.41
31:I:91:LYS:N	31:I:91:LYS:HD2	2.35	0.41
4:C:132:ARG:O	4:C:132:ARG:HG3	2.20	0.41
2:B:667:U:H2'	2:B:668:A:O4'	2.21	0.41
2:B:466:A:N3	2:B:683:U:H1'	2.36	0.41
10:J:6:ALA:CB	10:J:45:THR:HG21	2.46	0.41
12:L:124:GLY:CA	12:L:143:GLU:HG3	2.50	0.41
2:B:858:G:C2	2:B:2268:A:C4	3.09	0.41
22:W:65:LYS:H	22:W:84:GLU:HB3	1.86	0.41
14:N:24:MET:HE1	14:N:40:LYS:HB3	2.03	0.41
4:C:146:LYS:CB	4:C:147:PRO:HD2	2.32	0.41
2:B:2305:U:C5	7:F:151:LEU:HA	2.56	0.41
7:F:81:GLY:O	7:F:82:TYR:C	2.59	0.41
25:Z:36:HIS:HB3	25:Z:38:PHE:CE2	2.56	0.41
10:J:72:LYS:HB3	10:J:73:VAL:H	1.52	0.41
2:B:1233:C:O2'	2:B:1234:U:H5'	2.21	0.41
8:G:49:LEU:HG	8:G:50:THR:H	1.86	0.41
2:B:2393:U:H5''	12:L:62:PRO:CG	2.44	0.41
5:D:151:THR:CB	5:D:152:PRO:HD3	2.51	0.41
20:T:27:SER:O	20:T:28:ASN:CB	2.69	0.41
27:1:28:THR:C	27:1:30:PRO:HD3	2.41	0.41
10:J:25:LEU:HA	10:J:28:LEU:HD23	2.03	0.41
2:B:1513:U:H2'	2:B:1514:G:O4'	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1736:U:H2'	2:B:1737:G:O4'	2.21	0.41
2:B:1032:A:H4'	30:4:16:ILE:HD13	2.01	0.41
9:H:50:ARG:HG3	9:H:54:LEU:HD11	2.03	0.41
2:B:1080:A:O2'	2:B:1081:U:H5'	2.21	0.41
4:C:109:LEU:O	4:C:110:LYS:C	2.59	0.41
5:D:68:PHE:CB	5:D:73:VAL:HG23	2.51	0.41
2:B:1463:C:H2'	2:B:1464:G:H8	1.85	0.41
2:B:783:A:C2'	2:B:784:G:O5'	2.68	0.41
2:B:1914:C:O2'	2:B:1915:U:H5'	2.21	0.41
2:B:2455:G:H2'	2:B:2456:C:H6	1.85	0.41
2:B:1824:G:O2'	2:B:1825:U:H5'	2.21	0.41
3:V:29:ILE:HD12	3:V:29:ILE:O	2.20	0.41
21:U:21:ARG:HD3	21:U:72:PHE:CG	2.56	0.41
28:2:41:ARG:O	28:2:42:LEU:C	2.59	0.41
2:B:2143:C:H3'	2:B:2144:G:O4'	2.21	0.41
2:B:1573:G:H2'	2:B:1574:C:H5'	2.02	0.41
2:B:1689:A:O2'	2:B:1690:A:H5'	2.20	0.41
2:B:1409:U:O2'	2:B:1410:G:H5'	2.21	0.41
1:A:49:C:O2'	1:A:50:A:H5'	2.21	0.41
2:B:597:G:H2'	2:B:598:U:C6	2.55	0.41
2:B:2081:U:H2'	2:B:2082:A:C8	2.56	0.41
2:B:524:G:O2'	2:B:525:U:H5'	2.20	0.41
12:L:47:ARG:HG3	12:L:48:ARG:N	2.36	0.41
4:C:72:GLY:O	4:C:73:ILE:HD13	2.20	0.41
2:B:942:G:O2'	2:B:943:A:H5'	2.21	0.41
6:E:112:LEU:C	6:E:114:ARG:N	2.75	0.41
2:B:2818:U:O5'	2:B:2837:A:H1'	2.21	0.41
3:V:42:LEU:HB2	3:V:47:VAL:HG21	2.02	0.41
29:3:7:ARG:HG3	29:3:7:ARG:NH1	2.36	0.41
2:B:1568:G:H4'	4:C:58:LYS:HB3	2.03	0.41
4:C:259:ASN:OD1	4:C:261:ARG:HB3	2.21	0.41
2:B:1210:G:H4'	2:B:1211:C:OP2	2.20	0.41
2:B:1862:G:O2'	2:B:1863:G:H5'	2.21	0.41
12:L:81:ASP:HA	12:L:84:LYS:CD	2.50	0.41
4:C:115:ILE:O	4:C:115:ILE:HG13	2.20	0.41
31:I:10:LEU:C	31:I:10:LEU:HD12	2.40	0.41
1:A:17:C:O2'	1:A:18:G:H5'	2.21	0.41
2:B:707:G:O2'	2:B:708:G:H5'	2.20	0.41
2:B:1058:U:H1'	31:I:117:THR:HG22	2.03	0.41
2:B:1159:U:O2'	2:B:1160:G:H5'	2.20	0.41
5:D:21:SER:HB2	11:K:73:ASP:HA	2.02	0.41
2:B:1392:A:H2'	2:B:1393:A:C8	2.56	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2212:A:C8	2:B:2214:C:N4	2.88	0.41
14:N:87:PHE:C	14:N:89:SER:H	2.25	0.41
2:B:1068:G:C6	2:B:1069:A:N6	2.89	0.41
2:B:1902:C:H2'	2:B:1903:G:O4'	2.19	0.41
2:B:2480:C:O2'	2:B:2481:G:H5'	2.21	0.41
2:B:1338:G:O2'	2:B:1339:G:H5'	2.21	0.41
17:Q:89:ILE:C	17:Q:91:ARG:N	2.74	0.41
2:B:1174:U:H2'	2:B:1176:U:OP2	2.21	0.41
14:N:49:GLU:N	14:N:50:PRO:CD	2.83	0.41
2:B:585:G:H2'	2:B:1251:C:H42	1.86	0.41
2:B:581:C:OP1	17:Q:32:ARG:HG3	2.21	0.41
16:P:85:VAL:HG21	16:P:88:ARG:NH1	2.29	0.41
8:G:24:THR:CG2	8:G:32:LEU:HD22	2.51	0.41
20:T:53:VAL:HG12	20:T:54:GLU:N	2.36	0.41
4:C:226:PRO:HG3	4:C:233:GLY:N	2.24	0.41
5:D:130:GLN:HE21	5:D:130:GLN:HB3	1.74	0.41
8:G:167:VAL:HG23	8:G:168:VAL:N	2.27	0.41
2:B:2391:G:O6	2:B:2427:C:H1'	2.21	0.41
2:B:453:A:H1'	2:B:457:A:O2'	2.21	0.41
3:V:1:MET:HE3	3:V:2:PHE:N	2.36	0.41
2:B:2590:A:O2'	2:B:2591:C:H5'	2.21	0.41
6:E:176:ASP:OD1	6:E:176:ASP:C	2.59	0.41
2:B:1911:U:O4	2:B:1918:A:H2'	2.21	0.41
4:C:16:VAL:N	4:C:203:VAL:HG12	2.33	0.41
4:C:51:ARG:NH2	4:C:246:PRO:HG2	2.36	0.41
2:B:729:G:C5	4:C:206:LYS:HB2	2.56	0.41
2:B:1939:U:C6	2:B:1939:U:H5'	2.49	0.41
2:B:1408:G:H2'	2:B:1409:U:C6	2.56	0.41
2:B:2082:A:N6	2:B:2237:G:H1'	2.36	0.41
1:A:93:C:O2'	1:A:94:A:H5'	2.21	0.41
6:E:12:LEU:HD11	6:E:14:VAL:HG13	2.02	0.41
6:E:122:GLU:O	6:E:123:LYS:HB2	2.20	0.41
8:G:101:VAL:HG12	8:G:115:GLN:HB3	2.02	0.41
2:B:1900:A:N1	2:B:1970:A:C6	2.89	0.41
21:U:51:LEU:O	21:U:52:ASN:C	2.60	0.41
2:B:269:C:C2	2:B:270:A:C8	3.09	0.41
2:B:1389:G:H2'	2:B:1390:U:O4'	2.21	0.41
4:C:54:GLY:O	4:C:55:GLY:C	2.59	0.41
2:B:678:C:H2'	2:B:679:C:H6	1.86	0.41
26:O:27:LEU:H	26:O:27:LEU:HD12	1.85	0.41
2:B:2776:A:H4'	2:B:2777:G:C5'	2.51	0.41
10:J:58:ASN:O	10:J:59:ALA:HB3	2.21	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:F:94:ARG:HD3	7:F:97:GLU:OE2	2.21	0.40
10:J:43:GLU:O	10:J:44:TYR:C	2.58	0.40
16:P:6:GLN:CA	16:P:9:GLN:HG2	2.48	0.40
4:C:189:ALA:C	4:C:190:THR:HG23	2.41	0.40
2:B:2331:G:N2	2:B:2385:C:C4	2.90	0.40
31:I:112:LYS:HB2	31:I:116:MET:SD	2.61	0.40
26:O:25:THR:O	26:O:26:SER:HB3	2.21	0.40
10:J:20:ALA:HB2	10:J:28:LEU:HD22	2.02	0.40
11:K:111:LYS:HD3	11:K:111:LYS:N	2.36	0.40
2:B:2745:C:O3'	8:G:141:GLY:HA3	2.21	0.40
13:M:2:LEU:O	13:M:69:PRO:HG3	2.21	0.40
2:B:2353:G:N3	22:W:30:VAL:CG1	2.81	0.40
8:G:152:ARG:HG3	8:G:153:PRO:CD	2.50	0.40
15:O:105:ALA:C	15:O:107:ALA:H	2.24	0.40
5:D:54:ALA:HA	5:D:76:GLY:N	2.35	0.40
2:B:1249:U:O4'	17:Q:3:VAL:HG21	2.20	0.40
2:B:2846:G:OP1	16:P:52:ARG:NH1	2.48	0.40
2:B:1777:U:O2'	2:B:1778:U:H5'	2.21	0.40
2:B:1798:U:OP1	4:C:257:ARG:HB2	2.21	0.40
2:B:1029:A:H2'	2:B:1030:C:O4'	2.21	0.40
2:B:1346:G:C6	2:B:1601:G:C6	3.08	0.40
2:B:2684:U:O4'	11:K:70:ARG:NH2	2.55	0.40
2:B:1635:A:H2'	2:B:1636:U:C5'	2.52	0.40
2:B:1703:G:H2'	2:B:1704:C:C6	2.56	0.40
2:B:2282:G:H5'	2:B:2389:G:H1'	2.03	0.40
31:I:5:GLN:O	31:I:6:ALA:CB	2.68	0.40
3:V:65:VAL:C	3:V:67:GLY:N	2.73	0.40
2:B:2016:U:C4	2:B:2017:U:C4	3.09	0.40
2:B:1742:U:O2'	2:B:1743:G:H5'	2.21	0.40
2:B:689:A:H2'	2:B:690:G:C8	2.57	0.40
17:Q:47:ARG:O	17:Q:51:GLN:HG3	2.21	0.40
2:B:957:C:N4	2:B:2459:A:C8	2.88	0.40
2:B:1159:U:H2'	2:B:1160:G:H8	1.85	0.40
2:B:2518:A:N3	2:B:2518:A:H5'	2.36	0.40
2:B:1810:A:H2'	2:B:1811:G:O4'	2.21	0.40
4:C:145:MET:HE1	4:C:153:LEU:HD21	2.03	0.40
5:D:117:GLY:O	5:D:118:PHE:C	2.59	0.40
13:M:71:LYS:HB3	13:M:93:VAL:O	2.21	0.40
19:S:36:LEU:HD22	19:S:36:LEU:N	2.33	0.40
7:F:45:ASP:C	7:F:47:LYS:H	2.25	0.40
25:Z:76:GLU:HG3	25:Z:77:LYS:N	2.36	0.40
2:B:126:A:H5'	28:2:19:ARG:HB2	2.03	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:64:VAL:HG22	10:J:68:LYS:CD	2.50	0.40
7:F:137:PHE:O	7:F:139:GLU:N	2.55	0.40
16:P:101:GLU:N	16:P:101:GLU:OE2	2.53	0.40
30:4:7:VAL:HG23	30:4:35:GLN:CB	2.51	0.40
2:B:2026:U:C2	2:B:2027:G:C8	3.08	0.40
2:B:2027:G:C6	2:B:2028:U:C4	3.09	0.40
2:B:2579:C:O5'	2:B:2579:C:H6	2.04	0.40
2:B:2376:A:O2'	15:O:111:ARG:NH2	2.54	0.40
9:H:57:LYS:O	9:H:61:VAL:N	2.50	0.40
2:B:2848:G:N2	2:B:2867:G:C2	2.89	0.40
4:C:254:LYS:HB3	4:C:255:LYS:H	1.72	0.40
2:B:2772:C:H4'	5:D:171:THR:CG2	2.51	0.40
28:2:21:ARG:HD3	28:2:43:THR:HG21	2.04	0.40
18:R:49:ILE:HG22	18:R:54:VAL:HB	2.02	0.40
1:A:47:C:H5'	1:A:48:U:OP2	2.21	0.40
6:E:38:GLY:C	6:E:40:ARG:N	2.75	0.40
20:T:45:ALA:HA	20:T:48:GLN:CB	2.50	0.40
2:B:1870:C:H2'	2:B:1871:A:C8	2.56	0.40
2:B:2536:G:H2'	2:B:2537:U:O4'	2.22	0.40
2:B:2699:C:H2'	2:B:2700:A:C8	2.56	0.40
2:B:2515:C:O2'	2:B:2516:A:H5'	2.20	0.40
2:B:818:G:H4'	2:B:838:C:O3'	2.22	0.40
21:U:65:GLN:HG2	21:U:65:GLN:H	1.54	0.40
9:H:108:VAL:HG12	9:H:110:VAL:HG12	2.03	0.40
2:B:2252:G:H2'	2:B:2253:G:C8	2.56	0.40
1:A:63:C:H2'	1:A:64:G:H8	1.86	0.40
2:B:613:A:H4'	2:B:614:A:OP2	2.21	0.40
5:D:2:ILE:H	5:D:2:ILE:HG13	1.69	0.40
2:B:666:A:O2'	2:B:667:U:H5'	2.21	0.40
2:B:1076:C:H2'	2:B:1077:A:C8	2.57	0.40
2:B:1076:C:H2'	2:B:1077:A:H8	1.86	0.40
12:L:74:THR:HA	12:L:107:PHE:O	2.21	0.40
1:A:42:C:O2'	7:F:91:ARG:NH1	2.54	0.40
2:B:1204:A:N1	2:B:1241:A:C2	2.89	0.40
6:E:29:HIS:O	6:E:32:VAL:HG22	2.21	0.40
2:B:1420:A:C2'	2:B:2211:A:H62	2.15	0.40
25:Z:40:VAL:HG22	25:Z:45:ARG:N	2.36	0.40
9:H:38:PRO:O	9:H:40:THR:HG23	2.22	0.40
18:R:101:ILE:O	18:R:101:ILE:HG22	2.22	0.40
27:1:22:THR:OG1	27:1:23:THR:N	2.53	0.40
10:J:25:LEU:HB2	10:J:62:VAL:HG21	2.02	0.40
11:K:60:ALA:CB	11:K:86:LEU:HA	2.51	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:86:LEU:H	11:K:86:LEU:CD2	2.23	0.40
1:A:98:G:HO2'	1:A:99:A:H5''	1.86	0.40
16:P:61:ARG:HE	16:P:100:ARG:HD2	1.87	0.40
18:R:7:SER:HA	18:R:22:LEU:HD13	2.02	0.40
1:A:3:C:H2'	1:A:4:C:H6	1.85	0.40
10:J:83:GLY:O	10:J:84:ILE:C	2.60	0.40
2:B:2846:G:H2'	2:B:2847:U:O4'	2.21	0.40
2:B:1805:A:H5''	4:C:247:TRP:CE2	2.55	0.40
4:C:4:LYS:HE3	4:C:13:ARG:O	2.22	0.40
2:B:2142:A:H2'	2:B:2143:C:O4'	2.22	0.40
2:B:2484:G:O2'	2:B:2485:G:H5'	2.21	0.40
1:A:49:C:OP1	15:O:101:GLY:HA3	2.22	0.40
4:C:20:ASN:O	4:C:23:LEU:HB2	2.22	0.40
17:Q:16:ILE:C	17:Q:18:LYS:H	2.24	0.40
29:3:31:ILE:CG1	29:3:35:LYS:HE3	2.51	0.40
4:C:86:ARG:HB3	4:C:86:ARG:NH1	2.36	0.40
8:G:39:ALA:HB2	8:G:57:TYR:CD2	2.57	0.40
2:B:689:A:H2'	2:B:690:G:H8	1.86	0.40
13:M:42:THR:H	13:M:45:GLN:HB2	1.87	0.40
2:B:1126:A:H4'	2:B:1127:A:H5''	2.03	0.40
2:B:1933:G:H2'	2:B:1934:C:H6	1.86	0.40
2:B:760:G:H2'	2:B:761:A:O4'	2.21	0.40
16:P:109:ILE:H	16:P:109:ILE:HG13	1.67	0.40
26:O:27:LEU:HB2	26:O:28:SER:H	1.65	0.40
1:A:43:C:C1'	7:F:91:ARG:HD2	2.51	0.40
10:J:45:THR:N	10:J:46:PRO:CD	2.83	0.40
12:L:123:ARG:HD2	12:L:123:ARG:C	2.41	0.40
4:C:184:GLU:O	4:C:185:ALA:HB3	2.21	0.40
19:S:26:GLY:O	19:S:28:LYS:N	2.54	0.40
2:B:2305:U:H1'	7:F:132:ARG:HA	2.03	0.40
7:F:74:ALA:CB	7:F:78:ILE:HD13	2.51	0.40
9:H:14:SER:O	9:H:16:GLY:N	2.54	0.40
14:N:99:LYS:O	26:O:41:HIS:HB2	2.21	0.40
3:V:80:HIS:HA	3:V:81:PRO:HD3	1.96	0.40
13:M:19:GLY:C	13:M:97:GLN:HG3	2.41	0.40
20:T:87:LEU:HB2	20:T:91:GLN:HG2	2.02	0.40
2:B:726:G:H5''	2:B:1432:G:O2'	2.22	0.40
2:B:63:A:OP2	2:B:63:A:C8	2.69	0.40
16:P:50:ARG:O	16:P:51:ASN:HB2	2.22	0.40
2:B:1022:G:N2	2:B:1142:A:N1	2.69	0.40
2:B:483:A:N7	2:B:497:A:H2	2.19	0.40
10:J:77:HIS:HD2	10:J:83:GLY:HA3	1.87	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Q:3:VAL:CG1	17:Q:4:LYS:N	2.84	0.40
2:B:329:G:N2	21:U:16:LYS:HE3	2.29	0.40
2:B:673:C:C2'	2:B:674:G:H5'	2.52	0.40
2:B:960:A:C4'	2:B:2457:U:H4'	2.51	0.40
4:C:249:VAL:O	4:C:250:GLN:C	2.59	0.40
2:B:130:C:O2'	2:B:131:A:H5'	2.21	0.40
2:B:1702:G:H2'	2:B:1703:G:O4'	2.21	0.40
23:X:22:LEU:O	23:X:24:GLU:N	2.52	0.40
2:B:1459:G:O5'	2:B:1459:G:N3	2.54	0.40
6:E:198:GLU:O	6:E:199:MET:C	2.60	0.40
6:E:34:ALA:CB	6:E:96:VAL:HG21	2.51	0.40
2:B:122:G:O2'	2:B:123:G:H5'	2.21	0.40
2:B:2582:G:O2'	2:B:2583:G:H5'	2.22	0.40
20:T:62:VAL:HG12	20:T:63:VAL:N	2.37	0.40
23:X:7:ARG:HA	23:X:7:ARG:HD2	1.84	0.40
3:V:5:ASN:O	3:V:6:ALA:HB2	2.22	0.40
31:I:14:ALA:HB3	31:I:51:GLY:H	1.87	0.40
2:B:1829:A:H3'	2:B:1830:C:H6	1.87	0.40
7:F:120:SER:OG	7:F:129:MET:HB3	2.22	0.40
6:E:102:ARG:O	6:E:106:LYS:HG3	2.21	0.40
25:Z:30:LEU:HA	25:Z:31:PRO:HD3	1.95	0.40
25:Z:54:LYS:C	25:Z:56:MET:N	2.75	0.40
25:Z:53:ALA:C	25:Z:55:GLY:N	2.75	0.40
14:N:52:ILE:HB	14:N:94:TYR:CD2	2.57	0.40
14:N:96:ARG:CG	14:N:98:LEU:HD13	2.52	0.40
2:B:78:U:H2'	2:B:79:C:H6	1.84	0.40
2:B:584:C:OP1	17:Q:5:ARG:CB	2.70	0.40
2:B:1437:C:O2'	2:B:1516:G:H4'	2.21	0.40
16:P:20:ARG:C	16:P:22:GLY:H	2.25	0.40
2:B:1481:U:H2'	2:B:1482:G:H4'	2.03	0.40
13:M:59:ARG:CZ	13:M:60:GLN:HB3	2.52	0.40
1:A:87:U:H2'	1:A:88:C:O5'	2.21	0.40
31:I:45:THR:O	31:I:48:ILE:HG22	2.21	0.40
8:G:145:ALA:O	8:G:148:ARG:HG3	2.20	0.40
9:H:121:VAL:C	9:H:122:LEU:HD22	2.41	0.40
9:H:90:LEU:HD13	9:H:123:ARG:C	2.42	0.40
9:H:117:LEU:HD13	9:H:130:VAL:HG22	2.03	0.40
2:B:1859:U:H2'	2:B:1860:G:C8	2.57	0.40
2:B:2314:A:H2'	2:B:2315:G:C8	2.56	0.40
2:B:1797:G:C6	2:B:1823:G:C6	3.09	0.40
2:B:1843:C:O2'	2:B:1844:C:H5'	2.21	0.40
2:B:182:A:H1'	2:B:434:U:H5'	2.02	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1998:A:H2'	2:B:1999:C:C6	2.56	0.40
2:B:2379:G:H5'	15:O:21:LEU:HD21	2.03	0.40
2:B:821:A:H2'	2:B:946:C:O4'	2.22	0.40
2:B:656:G:H2'	2:B:657:U:O4'	2.22	0.40
2:B:1710:G:H2'	2:B:1711:A:C8	2.57	0.40
16:P:62:LYS:HB3	16:P:69:VAL:CG2	2.51	0.40
2:B:2255:G:H2'	2:B:2256:G:O4'	2.22	0.40
2:B:901:C:H3'	2:B:902:C:H6	1.87	0.40
2:B:1328:A:H2'	2:B:1330:C:C4	2.56	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	V	92/94 (98%)	62 (67%)	24 (26%)	6 (6%)	2	29
4	C	269/273 (98%)	158 (59%)	65 (24%)	46 (17%)	0	4
5	D	207/209 (99%)	123 (59%)	52 (25%)	32 (16%)	0	5
6	E	199/201 (99%)	120 (60%)	56 (28%)	23 (12%)	1	12
7	F	176/178 (99%)	101 (57%)	41 (23%)	34 (19%)	0	3
8	G	174/176 (99%)	105 (60%)	36 (21%)	33 (19%)	0	3
9	H	147/149 (99%)	88 (60%)	32 (22%)	27 (18%)	0	3
10	J	140/142 (99%)	83 (59%)	40 (29%)	17 (12%)	1	11
11	K	119/123 (97%)	69 (58%)	27 (23%)	23 (19%)	0	3
12	L	141/144 (98%)	75 (53%)	40 (28%)	26 (18%)	0	3
13	M	134/136 (98%)	78 (58%)	35 (26%)	21 (16%)	0	5
14	N	118/127 (93%)	73 (62%)	32 (27%)	13 (11%)	1	13
15	O	114/117 (97%)	83 (73%)	20 (18%)	11 (10%)	1	17
16	P	112/114 (98%)	58 (52%)	36 (32%)	18 (16%)	0	5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
17	Q	115/117 (98%)	75 (65%)	32 (28%)	8 (7%)	2	26
18	R	101/103 (98%)	61 (60%)	29 (29%)	11 (11%)	1	13
19	S	108/110 (98%)	75 (69%)	20 (18%)	13 (12%)	1	11
20	T	91/100 (91%)	47 (52%)	23 (25%)	21 (23%)	0	1
21	U	100/103 (97%)	51 (51%)	35 (35%)	14 (14%)	0	8
22	W	77/84 (92%)	29 (38%)	22 (29%)	26 (34%)	0	0
23	X	61/63 (97%)	37 (61%)	14 (23%)	10 (16%)	0	5
24	Y	56/58 (97%)	40 (71%)	11 (20%)	5 (9%)	1	18
25	Z	75/78 (96%)	48 (64%)	19 (25%)	8 (11%)	1	13
26	0	54/56 (96%)	33 (61%)	16 (30%)	5 (9%)	1	18
27	1	48/54 (89%)	34 (71%)	12 (25%)	2 (4%)	4	43
28	2	44/46 (96%)	30 (68%)	8 (18%)	6 (14%)	0	8
29	3	62/64 (97%)	42 (68%)	14 (23%)	6 (10%)	1	16
30	4	36/38 (95%)	21 (58%)	9 (25%)	6 (17%)	0	5
31	I	139/141 (99%)	115 (83%)	19 (14%)	5 (4%)	5	49
All	All	3309/3398 (97%)	2014 (61%)	819 (25%)	476 (14%)	0	7

All (476) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	C	18	VAL
4	C	53	ILE
4	C	107	LYS
4	C	109	LEU
4	C	123	ILE
4	C	162	GLN
5	D	9	VAL
5	D	74	GLU
5	D	106	LYS
5	D	112	THR
5	D	118	PHE
5	D	122	VAL
5	D	169	ARG
5	D	170	VAL
5	D	172	VAL
6	E	7	ASP
6	E	62	GLN

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Mol	Chain	Res	Type
6	E	69	ARG
6	E	79	ARG
6	E	167	VAL
7	F	32	LYS
7	F	43	ILE
7	F	77	LYS
7	F	78	ILE
7	F	80	GLN
7	F	92	GLY
7	F	112	ASP
7	F	135	ILE
7	F	138	PRO
7	F	140	ILE
7	F	148	VAL
8	G	9	VAL
8	G	85	LYS
8	G	91	VAL
8	G	94	ARG
8	G	117	PRO
8	G	125	PRO
9	H	3	VAL
9	H	8	LYS
9	H	10	ALA
9	H	31	VAL
9	H	32	PRO
9	H	33	GLN
9	H	86	ASP
9	H	121	VAL
10	J	4	PHE
10	J	44	TYR
10	J	45	THR
10	J	73	VAL
11	K	18	ARG
11	K	31	ARG
11	K	35	VAL
11	K	89	ASN
11	K	92	GLU
11	K	119	ALA
11	K	120	PRO
12	L	36	LYS
12	L	81	ASP
12	L	89	VAL

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Mol	Chain	Res	Type
12	L	94	THR
12	L	111	ILE
12	L	116	VAL
13	M	30	SER
13	M	78	LEU
14	N	11	ASN
14	N	58	ASP
14	N	82	GLU
14	N	116	VAL
14	N	117	ASP
15	O	56	LYS
16	P	25	VAL
16	P	50	ARG
16	P	75	THR
16	P	100	ARG
18	R	7	SER
18	R	70	GLU
19	S	3	THR
19	S	27	LYS
19	S	42	LYS
19	S	59	GLU
19	S	61	ASN
20	T	16	VAL
20	T	39	THR
20	T	58	VAL
20	T	77	ARG
20	T	88	LYS
21	U	6	ARG
21	U	38	ILE
21	U	49	PRO
21	U	50	ALA
21	U	85	ARG
22	W	30	VAL
22	W	36	ILE
22	W	50	VAL
22	W	59	PHE
22	W	60	ALA
22	W	62	ALA
22	W	70	VAL
23	X	2	LYS
24	Y	2	LYS
24	Y	56	VAL

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Mol	Chain	Res	Type
25	Z	33	LEU
26	0	42	ILE
26	0	48	TYR
28	2	44	VAL
31	I	5	GLN
31	I	18	ASN
3	V	25	LYS
4	C	3	VAL
4	C	52	HIS
4	C	93	VAL
4	C	135	PRO
4	C	140	VAL
4	C	142	ASN
4	C	151	GLY
4	C	222	THR
4	C	232	GLY
4	C	239	PHE
5	D	24	VAL
5	D	93	GLY
5	D	107	VAL
5	D	119	ALA
5	D	121	THR
5	D	136	ASN
5	D	184	ARG
5	D	197	THR
6	E	42	GLY
6	E	45	ALA
6	E	165	HIS
7	F	11	VAL
7	F	36	ASN
7	F	141	ASP
7	F	142	TYR
7	F	149	ARG
8	G	2	ARG
8	G	84	LYS
8	G	89	VAL
8	G	92	GLY
8	G	107	GLY
8	G	170	THR
9	H	40	THR
9	H	96	THR
9	H	102	ALA

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Mol	Chain	Res	Type
9	H	106	ALA
9	H	109	GLU
9	H	110	VAL
9	H	113	SER
9	H	148	ALA
10	J	5	THR
10	J	41	LYS
10	J	43	GLU
10	J	81	ILE
10	J	124	VAL
10	J	129	GLU
11	K	108	ARG
11	K	110	GLU
11	K	113	MET
12	L	3	LEU
12	L	4	ASN
12	L	5	THR
12	L	28	GLY
12	L	29	LYS
12	L	51	GLU
12	L	52	GLY
12	L	93	ASN
12	L	113	ALA
13	M	20	LEU
13	M	36	VAL
13	M	59	ARG
13	M	69	PRO
13	M	79	ALA
13	M	134	THR
14	N	10	LEU
14	N	89	SER
14	N	100	CYS
14	N	101	GLY
15	O	57	ALA
15	O	68	LYS
15	O	79	ALA
15	O	107	ALA
16	P	20	ARG
16	P	32	VAL
16	P	84	SER
16	P	101	GLU
16	P	108	ARG

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Mol	Chain	Res	Type
17	Q	87	VAL
18	R	42	ALA
18	R	49	ILE
18	R	100	GLY
19	S	25	ARG
19	S	96	ILE
19	S	109	ASP
20	T	19	LYS
20	T	28	ASN
20	T	35	ALA
20	T	38	ALA
20	T	69	ARG
21	U	12	VAL
21	U	92	VAL
22	W	12	GLY
22	W	14	ASP
22	W	23	LYS
22	W	40	ARG
22	W	76	ARG
22	W	77	LYS
23	X	10	SER
23	X	36	GLN
25	Z	3	ARG
25	Z	77	LYS
26	0	51	ARG
27	1	4	ILE
28	2	42	LEU
29	3	31	ILE
3	V	71	LYS
4	C	17	LYS
4	C	34	GLU
4	C	35	LYS
4	C	37	SER
4	C	51	ARG
4	C	94	LEU
4	C	145	MET
4	C	190	THR
4	C	250	GLN
4	C	254	LYS
5	D	127	PHE
5	D	143	PRO
5	D	145	SER

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Mol	Chain	Res	Type
5	D	159	LYS
5	D	162	ALA
5	D	194	PRO
6	E	13	THR
6	E	81	GLY
6	E	86	ALA
6	E	97	ASN
6	E	127	GLU
6	E	166	LYS
7	F	9	ASP
7	F	28	PRO
7	F	42	ALA
7	F	81	GLY
7	F	125	GLY
8	G	11	PRO
8	G	32	LEU
8	G	38	ASP
8	G	61	TRP
8	G	159	LYS
9	H	7	ASP
9	H	11	ASN
9	H	12	LEU
9	H	56	ALA
9	H	88	GLY
10	J	14	ASP
10	J	72	LYS
10	J	111	LYS
11	K	72	PRO
12	L	82	LEU
13	M	35	ALA
13	M	60	GLN
13	M	77	PRO
14	N	98	LEU
15	O	9	ARG
15	O	95	SER
15	O	100	HIS
16	P	64	SER
17	Q	69	ARG
17	Q	72	GLY
17	Q	88	GLU
17	Q	91	ARG
18	R	24	LYS

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Mol	Chain	Res	Type
19	S	60	HIS
19	S	80	PRO
21	U	5	ARG
21	U	16	LYS
21	U	89	GLY
22	W	9	THR
22	W	13	ARG
22	W	17	ALA
22	W	61	LYS
22	W	82	GLU
23	X	62	GLY
24	Y	34	THR
25	Z	35	SER
28	2	5	PHE
29	3	6	VAL
30	4	8	LYS
31	I	23	VAL
3	V	44	HIS
4	C	59	GLN
4	C	64	VAL
4	C	92	LEU
4	C	122	ALA
4	C	131	MET
4	C	141	HIS
4	C	150	GLY
4	C	161	VAL
4	C	189	ALA
4	C	196	ASN
4	C	200	MET
5	D	31	ALA
5	D	75	ALA
6	E	92	HIS
7	F	20	ASN
7	F	41	GLU
7	F	82	TYR
7	F	103	ILE
7	F	106	ALA
7	F	110	ILE
8	G	45	ALA
8	G	78	VAL
8	G	83	THR
8	G	100	ASN

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Mol	Chain	Res	Type
8	G	102	ILE
8	G	111	PRO
8	G	151	ARG
9	H	9	VAL
9	H	92	GLY
11	K	14	SER
11	K	16	ALA
11	K	54	LYS
11	K	90	ASN
11	K	94	PRO
12	L	15	ALA
12	L	19	LEU
12	L	53	GLY
12	L	54	GLN
13	M	13	HIS
13	M	26	VAL
13	M	27	SER
13	M	55	ARG
13	M	87	GLY
13	M	106	ASP
14	N	70	THR
15	O	99	TYR
16	P	65	ASN
16	P	104	GLY
16	P	113	LEU
17	Q	17	LEU
19	S	21	ALA
20	T	8	LEU
20	T	11	LEU
20	T	18	GLU
20	T	29	THR
20	T	37	ASP
20	T	64	LYS
20	T	86	THR
22	W	21	GLY
22	W	34	SER
22	W	75	ASN
23	X	16	THR
23	X	45	GLN
23	X	58	ASN
24	Y	4	ILE
25	Z	22	LEU

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Mol	Chain	Res	Type
25	Z	34	HIS
26	0	19	ASP
27	1	36	LYS
29	3	50	SER
29	3	59	ALA
30	4	4	ARG
30	4	23	ILE
3	V	45	ASP
3	V	54	ALA
4	C	5	CYS
4	C	36	ASN
4	C	55	GLY
4	C	65	ASP
4	C	77	VAL
4	C	105	ALA
5	D	109	VAL
5	D	131	ASP
5	D	156	PHE
5	D	173	GLN
6	E	12	LEU
6	E	37	ALA
6	E	46	GLN
6	E	59	PRO
7	F	69	ALA
7	F	124	ARG
7	F	156	THR
8	G	97	VAL
8	G	157	LYS
8	G	168	VAL
9	H	16	GLY
9	H	91	PHE
9	H	107	GLY
10	J	13	ARG
10	J	26	GLY
10	J	58	ASN
11	K	17	ARG
11	K	45	GLU
11	K	46	ALA
11	K	73	ASP
11	K	93	GLN
11	K	101	GLY
12	L	12	SER

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Mol	Chain	Res	Type
12	L	30	THR
12	L	41	ARG
12	L	66	PHE
12	L	86	GLU
13	M	66	ARG
13	M	73	ILE
13	M	75	GLU
14	N	107	ASN
14	N	112	TYR
15	O	8	ILE
15	O	53	THR
16	P	59	THR
17	Q	27	ARG
18	R	57	GLY
18	R	82	HIS
18	R	98	ILE
21	U	24	VAL
22	W	29	SER
23	X	9	LYS
23	X	37	LEU
25	Z	18	ARG
26	0	54	ILE
28	2	45	SER
29	3	20	GLY
29	3	58	ILE
31	I	6	ALA
31	I	14	ALA
3	V	84	PRO
4	C	4	LYS
6	E	83	VAL
6	E	129	PRO
7	F	12	VAL
7	F	88	VAL
8	G	60	GLY
8	G	155	PRO
9	H	29	PHE
12	L	62	PRO
16	P	4	ILE
17	Q	32	ARG
18	R	9	GLY
19	S	18	ARG
19	S	29	VAL

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Mol	Chain	Res	Type
20	T	10	VAL
20	T	55	VAL
21	U	37	GLY
21	U	90	LYS
22	W	46	ALA
28	2	2	LYS
28	2	19	ARG
30	4	11	CYS
30	4	16	ILE
4	C	158	GLY
7	F	145	VAL
16	P	63	ILE
20	T	71	GLY
24	Y	50	VAL
30	4	3	VAL
4	C	246	PRO
5	D	60	VAL
6	E	4	VAL
6	E	96	VAL
7	F	136	ILE
22	W	22	VAL
22	W	53	GLY
5	D	178	VAL
8	G	16	VAL
8	G	152	ARG
13	M	72	PRO
16	P	91	VAL
22	W	37	VAL
25	Z	64	ILE
8	G	139	VAL
16	P	83	ILE
18	R	101	ILE
21	U	82	VAL
23	X	11	VAL
5	D	163	GLY
8	G	90	GLY
10	J	22	GLY
11	K	43	ILE
20	T	57	VAL

### 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	V	78/78 (100%)	69 (88%)	9 (12%)	8	39
4	C	216/218 (99%)	175 (81%)	41 (19%)	2	13
5	D	164/164 (100%)	140 (85%)	24 (15%)	5	27
6	E	165/165 (100%)	146 (88%)	19 (12%)	8	39
7	F	149/149 (100%)	115 (77%)	34 (23%)	1	7
8	G	137/137 (100%)	116 (85%)	21 (15%)	4	25
9	H	114/114 (100%)	93 (82%)	21 (18%)	2	14
10	J	116/116 (100%)	98 (84%)	18 (16%)	4	24
11	K	102/104 (98%)	79 (78%)	23 (22%)	1	8
12	L	102/103 (99%)	90 (88%)	12 (12%)	8	38
13	M	109/109 (100%)	88 (81%)	21 (19%)	2	12
14	N	100/103 (97%)	81 (81%)	19 (19%)	2	13
15	O	86/87 (99%)	69 (80%)	17 (20%)	2	11
16	P	99/99 (100%)	81 (82%)	18 (18%)	2	14
17	Q	89/89 (100%)	79 (89%)	10 (11%)	9	41
18	R	84/84 (100%)	70 (83%)	14 (17%)	3	19
19	S	93/93 (100%)	82 (88%)	11 (12%)	8	38
20	T	80/84 (95%)	62 (78%)	18 (22%)	1	8
21	U	83/84 (99%)	67 (81%)	16 (19%)	2	12
22	W	59/62 (95%)	42 (71%)	17 (29%)	0	4
23	X	55/55 (100%)	42 (76%)	13 (24%)	1	7
24	Y	48/48 (100%)	40 (83%)	8 (17%)	3	19
25	Z	67/68 (98%)	53 (79%)	14 (21%)	1	10
26	0	47/47 (100%)	40 (85%)	7 (15%)	4	26
27	1	45/48 (94%)	41 (91%)	4 (9%)	14	56
28	2	38/38 (100%)	32 (84%)	6 (16%)	4	23
29	3	51/51 (100%)	46 (90%)	5 (10%)	12	50

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
30	4	34/34 (100%)	32 (94%)	2 (6%)	28	75
31	I	109/109 (100%)	103 (94%)	6 (6%)	30	77
All	All	2719/2740 (99%)	2271 (84%)	448 (16%)	3	20

All (448) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	V	24	ASN
3	V	40	ILE
3	V	42	LEU
3	V	51	GLN
3	V	53	LYS
3	V	68	LYS
3	V	69	GLU
3	V	70	ILE
3	V	86	LEU
4	C	4	LYS
4	C	5	CYS
4	C	8	THR
4	C	9	SER
4	C	12	ARG
4	C	37	SER
4	C	43	ASN
4	C	45	ASN
4	C	47	ARG
4	C	52	HIS
4	C	62	ARG
4	C	63	ILE
4	C	65	ASP
4	C	67	LYS
4	C	89	ASN
4	C	90	ILE
4	C	109	LEU
4	C	123	ILE
4	C	128	THR
4	C	134	ILE
4	C	142	ASN
4	C	152	GLN
4	C	155	ARG
4	C	167	ASP
4	C	172	THR

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Mol	Chain	Res	Type
4	C	173	LEU
4	C	176	ARG
4	C	180	MET
4	C	181	ARG
4	C	191	LEU
4	C	193	GLU
4	C	203	VAL
4	C	212	TRP
4	C	224	MET
4	C	239	PHE
4	C	249	VAL
4	C	252	LYS
4	C	255	LYS
4	C	257	ARG
4	C	266	ILE
4	C	269	ARG
5	D	13	ARG
5	D	33	ARG
5	D	35	THR
5	D	36	GLN
5	D	45	TYR
5	D	46	ARG
5	D	56	LYS
5	D	74	GLU
5	D	79	LEU
5	D	81	GLU
5	D	84	LEU
5	D	88	GLU
5	D	91	THR
5	D	114	LYS
5	D	123	LYS
5	D	124	ARG
5	D	131	ASP
5	D	142	VAL
5	D	148	GLN
5	D	151	THR
5	D	154	LYS
5	D	157	LYS
5	D	170	VAL
5	D	172	VAL
6	E	3	LEU
6	E	5	LEU

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Mol	Chain	Res	Type
6	E	7	ASP
6	E	14	VAL
6	E	21	ARG
6	E	48	THR
6	E	58	LYS
6	E	60	TRP
6	E	61	ARG
6	E	62	GLN
6	E	63	LYS
6	E	67	ARG
6	E	78	TRP
6	E	111	GLU
6	E	118	LEU
6	E	122	GLU
6	E	147	LEU
6	E	152	GLU
6	E	159	LEU
7	F	3	LEU
7	F	13	LYS
7	F	29	ARG
7	F	32	LYS
7	F	47	LYS
7	F	48	LEU
7	F	50	ASP
7	F	56	LEU
7	F	62	GLN
7	F	76	PHE
7	F	96	TRP
7	F	97	GLU
7	F	102	LEU
7	F	103	ILE
7	F	109	ARG
7	F	111	ARG
7	F	112	ASP
7	F	121	PHE
7	F	126	ASN
7	F	129	MET
7	F	133	GLU
7	F	134	GLN
7	F	137	PHE
7	F	138	PRO
7	F	139	GLU

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Mol	Chain	Res	Type
7	F	146	ASP
7	F	147	ARG
7	F	149	ARG
7	F	151	LEU
7	F	162	ASP
7	F	168	LEU
7	F	173	ASP
7	F	174	PHE
7	F	177	ARG
8	G	5	LYS
8	G	17	LYS
8	G	24	THR
8	G	26	LYS
8	G	29	ASN
8	G	34	ARG
8	G	54	ARG
8	G	55	ASP
8	G	68	ARG
8	G	70	LEU
8	G	74	MET
8	G	84	LYS
8	G	85	LYS
8	G	94	ARG
8	G	106	LEU
8	G	120	ILE
8	G	132	LEU
8	G	138	GLN
8	G	152	ARG
8	G	162	ARG
8	G	166	GLU
9	H	3	VAL
9	H	15	LEU
9	H	25	TYR
9	H	28	ASN
9	H	32	PRO
9	H	33	GLN
9	H	46	PHE
9	H	50	ARG
9	H	68	ARG
9	H	83	LYS
9	H	94	ILE
9	H	97	ARG

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Mol	Chain	Res	Type
9	H	101	ASP
9	H	112	LYS
9	H	122	LEU
9	H	124	THR
9	H	129	GLU
9	H	134	VAL
9	H	137	GLU
9	H	141	LYS
9	H	149	GLU
10	J	2	LYS
10	J	3	THR
10	J	12	LYS
10	J	28	LEU
10	J	31	GLU
10	J	36	LEU
10	J	39	LYS
10	J	43	GLU
10	J	44	TYR
10	J	54	ILE
10	J	65	THR
10	J	73	VAL
10	J	89	PHE
10	J	95	ARG
10	J	103	ILE
10	J	106	LYS
10	J	111	LYS
10	J	120	ARG
11	K	2	ILE
11	K	6	THR
11	K	8	LEU
11	K	9	ASN
11	K	21	CYS
11	K	32	TYR
11	K	47	ILE
11	K	53	LYS
11	K	54	LYS
11	K	58	LEU
11	K	64	ARG
11	K	66	LYS
11	K	72	PRO
11	K	79	PHE
11	K	80	ASP

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Mol	Chain	Res	Type
11	K	86	LEU
11	K	87	LEU
11	K	88	ASN
11	K	103	VAL
11	K	104	THR
11	K	105	ARG
11	K	111	LYS
11	K	120	PRO
12	L	4	ASN
12	L	6	LEU
12	L	27	LEU
12	L	47	ARG
12	L	60	ARG
12	L	69	ARG
12	L	92	LEU
12	L	93	ASN
12	L	95	LEU
12	L	118	THR
12	L	125	LEU
12	L	126	ARG
13	M	20	LEU
13	M	25	ASP
13	M	40	ARG
13	M	55	ARG
13	M	60	GLN
13	M	63	ILE
13	M	65	ILE
13	M	70	ASP
13	M	78	LEU
13	M	81	ARG
13	M	82	MET
13	M	88	ASN
13	M	93	VAL
13	M	95	LEU
13	M	108	VAL
13	M	110	GLU
13	M	111	GLU
13	M	114	ARG
13	M	115	GLU
13	M	131	VAL
13	M	136	MET
14	N	1	MET

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Mol	Chain	Res	Type
14	N	2	ARG
14	N	11	ASN
14	N	18	GLN
14	N	28	LEU
14	N	29	VAL
14	N	35	LYS
14	N	48	VAL
14	N	51	LEU
14	N	62	ASN
14	N	69	ARG
14	N	71	ARG
14	N	82	GLU
14	N	86	ARG
14	N	98	LEU
14	N	107	ASN
14	N	112	TYR
14	N	118	ARG
14	N	120	GLU
15	O	7	ARG
15	O	9	ARG
15	O	17	LYS
15	O	19	GLN
15	O	20	GLU
15	O	21	LEU
15	O	31	THR
15	O	62	LEU
15	O	69	ASP
15	O	78	VAL
15	O	80	GLU
15	O	88	LYS
15	O	91	SER
15	O	98	GLN
15	O	100	HIS
15	O	106	LEU
15	O	116	GLN
16	P	3	ILE
16	P	5	LYS
16	P	6	GLN
16	P	19	PHE
16	P	25	VAL
16	P	32	VAL
16	P	33	GLU

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Mol	Chain	Res	Type
16	P	61	ARG
16	P	65	ASN
16	P	72	VAL
16	P	80	VAL
16	P	83	ILE
16	P	99	LEU
16	P	100	ARG
16	P	101	GLU
16	P	111	GLU
16	P	112	ARG
16	P	113	LEU
17	Q	5	ARG
17	Q	15	LYS
17	Q	50	ARG
17	Q	57	ARG
17	Q	63	ARG
17	Q	79	ILE
17	Q	83	LYS
17	Q	88	GLU
17	Q	96	ASP
17	Q	111	LYS
18	R	2	TYR
18	R	10	LYS
18	R	22	LEU
18	R	25	LEU
18	R	37	GLU
18	R	39	LEU
18	R	43	ASN
18	R	55	ASP
18	R	70	GLU
18	R	72	VAL
18	R	76	LYS
18	R	86	GLN
18	R	96	VAL
18	R	99	THR
19	S	6	LYS
19	S	28	LYS
19	S	37	THR
19	S	57	ASN
19	S	61	ASN
19	S	62	ASP
19	S	66	ILE

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Mol	Chain	Res	Type
19	S	84	ARG
19	S	86	MET
19	S	88	ARG
19	S	110	ARG
20	T	2	ILE
20	T	3	ARG
20	T	4	GLU
20	T	6	ARG
20	T	9	LYS
20	T	11	LEU
20	T	12	ARG
20	T	24	MET
20	T	29	THR
20	T	32	LEU
20	T	34	VAL
20	T	39	THR
20	T	64	LYS
20	T	68	LYS
20	T	69	ARG
20	T	70	HIS
20	T	76	ARG
20	T	81	LYS
21	U	11	ILE
21	U	13	LEU
21	U	20	LYS
21	U	26	ASN
21	U	39	ASN
21	U	51	LEU
21	U	53	GLN
21	U	60	LYS
21	U	65	GLN
21	U	73	ASN
21	U	78	LYS
21	U	81	ARG
21	U	84	PHE
21	U	85	ARG
21	U	88	ASP
21	U	102	ILE
22	W	10	ARG
22	W	11	ASN
22	W	16	GLU
22	W	19	ARG

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Mol	Chain	Res	Type
22	W	23	LYS
22	W	38	ARG
22	W	39	GLN
22	W	40	ARG
22	W	44	PHE
22	W	45	HIS
22	W	50	VAL
22	W	63	ASP
22	W	68	PHE
22	W	76	ARG
22	W	77	LYS
22	W	82	GLU
22	W	84	GLU
23	X	1	MET
23	X	15	ASN
23	X	16	THR
23	X	21	LEU
23	X	24	GLU
23	X	25	GLN
23	X	28	LEU
23	X	29	ARG
23	X	36	GLN
23	X	37	LEU
23	X	41	HIS
23	X	48	ARG
23	X	59	GLU
24	Y	2	LYS
24	Y	8	GLN
24	Y	9	THR
24	Y	15	ARG
24	Y	23	LEU
24	Y	30	ARG
24	Y	37	ARG
24	Y	57	GLU
25	Z	13	VAL
25	Z	14	THR
25	Z	22	LEU
25	Z	27	ARG
25	Z	28	ARG
25	Z	37	ARG
25	Z	41	GLU
25	Z	46	PHE

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Mol	Chain	Res	Type
25	Z	48	THR
25	Z	50	ARG
25	Z	59	ILE
25	Z	65	ASP
25	Z	70	GLU
25	Z	74	ARG
26	0	27	LEU
26	0	37	HIS
26	0	38	LEU
26	0	41	HIS
26	0	45	ASP
26	0	51	ARG
26	0	56	LYS
27	1	8	ILE
27	1	9	LYS
27	1	35	LEU
27	1	42	VAL
28	2	3	ARG
28	2	19	ARG
28	2	28	ARG
28	2	33	ARG
28	2	39	ARG
28	2	42	LEU
29	3	7	ARG
29	3	27	ASN
29	3	31	ILE
29	3	46	LYS
29	3	58	ILE
30	4	9	LYS
30	4	10	LEU
31	I	2	LYS
31	I	54	ILE
31	I	91	LYS
31	I	99	LYS
31	I	121	ILE
31	I	140	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (103) such sidechains are listed below:

Mol	Chain	Res	Type
3	V	44	HIS
3	V	51	GLN

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Mol	Chain	Res	Type
3	V	80	HIS
3	V	88	HIS
4	C	43	ASN
4	C	45	ASN
4	C	59	GLN
4	C	85	ASN
4	C	114	GLN
4	C	133	ASN
4	C	152	GLN
4	C	162	GLN
4	C	196	ASN
5	D	32	ASN
5	D	36	GLN
5	D	49	GLN
5	D	126	ASN
5	D	136	ASN
5	D	148	GLN
5	D	173	GLN
6	E	30	GLN
6	E	62	GLN
6	E	90	GLN
6	E	195	GLN
7	F	26	GLN
7	F	36	ASN
7	F	51	ASN
7	F	62	GLN
7	F	80	GLN
7	F	134	GLN
8	G	29	ASN
8	G	87	GLN
8	G	103	ASN
8	G	127	GLN
8	G	142	GLN
9	H	28	ASN
9	H	43	ASN
9	H	66	ASN
9	H	133	GLN
10	J	130	HIS
10	J	138	GLN
11	K	5	GLN
11	K	13	ASN
11	K	89	ASN

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Mol	Chain	Res	Type
12	L	4	ASN
12	L	54	GLN
12	L	104	GLN
13	M	17	ASN
13	M	60	GLN
13	M	88	ASN
14	N	11	ASN
14	N	23	ASN
14	N	62	ASN
14	N	107	ASN
15	O	19	GLN
15	O	38	GLN
15	O	61	GLN
15	O	100	HIS
15	O	104	GLN
16	P	11	GLN
16	P	40	GLN
16	P	74	GLN
16	P	76	HIS
16	P	114	ASN
17	Q	51	GLN
17	Q	71	ASN
17	Q	80	ASN
18	R	6	GLN
18	R	82	HIS
18	R	86	GLN
19	S	57	ASN
19	S	61	ASN
20	T	48	GLN
20	T	72	GLN
20	T	91	GLN
20	T	92	ASN
21	U	26	ASN
21	U	65	GLN
21	U	68	ASN
21	U	73	ASN
22	W	11	ASN
22	W	39	GLN
22	W	49	ASN
22	W	56	HIS
22	W	75	ASN
23	X	20	ASN

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Mol	Chain	Res	Type
23	X	25	GLN
23	X	27	ASN
23	X	31	GLN
23	X	58	ASN
24	Y	33	HIS
24	Y	48	ASN
25	Z	6	GLN
25	Z	23	ASN
25	Z	36	HIS
26	0	3	GLN
28	2	6	GLN
28	2	29	GLN
29	3	42	HIS
30	4	35	GLN
31	I	5	GLN
31	I	11	GLN
31	I	33	ASN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	116/120 (96%)	22 (18%)	0
2	B	2837/2904 (97%)	460 (16%)	21 (0%)
All	All	2953/3024 (97%)	482 (16%)	21 (0%)

All (482) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	11	C
1	A	12	C
1	A	13	G
1	A	16	G
1	A	26	C
1	A	29	A
1	A	30	C
1	A	35	C
1	A	42	C
1	A	44	G
1	A	57	A
1	A	66	A
1	A	67	G

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Mol	Chain	Res	Type
1	A	88	C
1	A	90	C
1	A	96	G
1	A	99	A
1	A	108	A
1	A	109	A
1	A	112	G
1	A	116	G
1	A	118	C
2	B	34	U
2	B	46	G
2	B	51	G
2	B	63	A
2	B	71	A
2	B	74	A
2	B	75	G
2	B	84	A
2	B	91	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	125	A
2	B	126	A
2	B	128	C
2	B	135	U
2	B	139	U
2	B	140	C
2	B	141	G
2	B	143	C
2	B	160	A
2	B	162	U
2	B	163	C
2	B	180	G
2	B	181	A
2	B	196	A
2	B	199	A
2	B	215	G
2	B	216	A

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Mol	Chain	Res	Type
2	B	221	A
2	B	222	A
2	B	223	A
2	B	230	G
2	B	233	A
2	B	241	A
2	B	242	G
2	B	248	G
2	B	252	G
2	B	255	A
2	B	265	A
2	B	266	G
2	B	267	C
2	B	268	C
2	B	271	G
2	B	276	U
2	B	277	G
2	B	278	A
2	B	282	A
2	B	284	U
2	B	288	U
2	B	289	G
2	B	299	A
2	B	311	A
2	B	323	C
2	B	329	G
2	B	330	A
2	B	331	C
2	B	333	G
2	B	343	C
2	B	346	A
2	B	349	U
2	B	353	C
2	B	354	A
2	B	358	U
2	B	362	A
2	B	367	G
2	B	371	A
2	B	372	G
2	B	386	G
2	B	387	U
2	B	395	U

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Mol	Chain	Res	Type
2	B	396	G
2	B	411	G
2	B	412	A
2	B	424	G
2	B	444	C
2	B	456	C
2	B	457	A
2	B	473	G
2	B	479	A
2	B	480	A
2	B	481	G
2	B	490	C
2	B	491	G
2	B	502	A
2	B	504	A
2	B	505	A
2	B	508	A
2	B	512	G
2	B	527	C
2	B	531	C
2	B	532	A
2	B	533	G
2	B	544	C
2	B	545	U
2	B	546	U
2	B	548	G
2	B	549	G
2	B	550	C
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	616	A
2	B	627	A
2	B	637	A
2	B	645	C
2	B	646	U

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Mol	Chain	Res	Type
2	B	647	G
2	B	654	A
2	B	655	A
2	B	671	C
2	B	686	U
2	B	699	A
2	B	717	C
2	B	718	A
2	B	719	C
2	B	727	A
2	B	730	A
2	B	743	A
2	B	746	U
2	B	747	U
2	B	775	G
2	B	782	A
2	B	783	A
2	B	784	G
2	B	785	G
2	B	789	A
2	B	798	G
2	B	805	G
2	B	806	C
2	B	811	U
2	B	812	C
2	B	819	A
2	B	827	U
2	B	828	U
2	B	846	U
2	B	847	U
2	B	859	G
2	B	869	G
2	B	874	G
2	B	877	A
2	B	878	A
2	B	899	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

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Mol	Chain	Res	Type
2	B	941	A
2	B	946	C
2	B	961	C
2	B	974	G
2	B	982	C
2	B	983	A
2	B	991	C
2	B	995	C
2	B	996	A
2	B	1012	U
2	B	1013	C
2	B	1022	G
2	B	1025	G
2	B	1033	U
2	B	1046	A
2	B	1047	G
2	B	1070	A
2	B	1088	A
2	B	1090	A
2	B	1098	A
2	B	1110	G
2	B	1111	A
2	B	1112	G
2	B	1116	G
2	B	1118	C
2	B	1132	U
2	B	1133	A
2	B	1134	A
2	B	1135	C
2	B	1136	G
2	B	1139	G
2	B	1142	A
2	B	1156	A
2	B	1172	C
2	B	1173	U
2	B	1174	U
2	B	1176	U
2	B	1186	G
2	B	1194	A
2	B	1205	A
2	B	1211	C
2	B	1212	G

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Mol	Chain	Res	Type
2	B	1218	G
2	B	1237	A
2	B	1241	A
2	B	1242	U
2	B	1248	G
2	B	1249	U
2	B	1250	G
2	B	1251	C
2	B	1253	A
2	B	1256	G
2	B	1266	G
2	B	1271	G
2	B	1272	A
2	B	1275	A
2	B	1276	A
2	B	1301	A
2	B	1324	G
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	1379	U
2	B	1383	A
2	B	1384	A
2	B	1386	C
2	B	1396	U
2	B	1397	U
2	B	1416	G
2	B	1419	A
2	B	1420	A
2	B	1426	G
2	B	1428	C
2	B	1434	A
2	B	1451	C
2	B	1453	A
2	B	1454	C
2	B	1458	U
2	B	1459	G
2	B	1460	U
2	B	1461	C

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Mol	Chain	Res	Type
2	B	1470	A
2	B	1475	G
2	B	1476	U
2	B	1477	A
2	B	1482	G
2	B	1490	A
2	B	1493	C
2	B	1494	A
2	B	1504	A
2	B	1507	C
2	B	1508	A
2	B	1509	A
2	B	1510	G
2	B	1519	G
2	B	1524	G
2	B	1535	A
2	B	1537	G
2	B	1540	G
2	B	1552	A
2	B	1558	C
2	B	1559	U
2	B	1560	G
2	B	1569	A
2	B	1578	U
2	B	1583	A
2	B	1584	U
2	B	1585	C
2	B	1608	A
2	B	1610	A
2	B	1613	G
2	B	1619	G
2	B	1634	A
2	B	1635	A
2	B	1647	U
2	B	1648	U
2	B	1674	G
2	B	1700	A
2	B	1714	U
2	B	1715	G
2	B	1723	G
2	B	1729	U
2	B	1730	C

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Mol	Chain	Res	Type
2	B	1733	G
2	B	1738	G
2	B	1756	G
2	B	1758	U
2	B	1764	C
2	B	1772	A
2	B	1773	A
2	B	1800	C
2	B	1816	C
2	B	1829	A
2	B	1848	A
2	B	1857	G
2	B	1870	C
2	B	1906	G
2	B	1913	A
2	B	1914	C
2	B	1915	U
2	B	1916	A
2	B	1926	U
2	B	1929	G
2	B	1930	G
2	B	1938	A
2	B	1939	U
2	B	1940	U
2	B	1955	U
2	B	1966	A
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	1996	C
2	B	1997	C
2	B	2022	U
2	B	2023	C
2	B	2031	A
2	B	2043	C
2	B	2055	C
2	B	2056	G
2	B	2060	A
2	B	2061	G

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Mol	Chain	Res	Type
2	B	2062	A
2	B	2069	G
2	B	2093	G
2	B	2095	A
2	B	2096	C
2	B	2100	G
2	B	2101	A
2	B	2102	G
2	B	2106	U
2	B	2107	G
2	B	2108	A
2	B	2109	U
2	B	2110	G
2	B	2144	G
2	B	2145	C
2	B	2147	A
2	B	2150	C
2	B	2155	U
2	B	2156	G
2	B	2157	G
2	B	2181	U
2	B	2188	U
2	B	2193	G
2	B	2198	A
2	B	2199	A
2	B	2203	U
2	B	2204	G
2	B	2211	A
2	B	2212	A
2	B	2213	U
2	B	2225	A
2	B	2238	G
2	B	2239	G
2	B	2266	A
2	B	2272	U
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

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Mol	Chain	Res	Type
2	B	2309	A
2	B	2311	A
2	B	2319	G
2	B	2321	U
2	B	2322	A
2	B	2324	U
2	B	2325	G
2	B	2333	A
2	B	2334	U
2	B	2335	A
2	B	2336	A
2	B	2345	G
2	B	2347	C
2	B	2357	G
2	B	2361	G
2	B	2383	G
2	B	2385	C
2	B	2392	A
2	B	2396	G
2	B	2402	U
2	B	2406	A
2	B	2423	U
2	B	2426	A
2	B	2427	C
2	B	2429	G
2	B	2430	A
2	B	2431	U
2	B	2435	A
2	B	2441	U
2	B	2446	G
2	B	2448	A
2	B	2472	G
2	B	2474	U
2	B	2476	A
2	B	2491	U
2	B	2502	G
2	B	2505	G
2	B	2506	U
2	B	2518	A
2	B	2529	G
2	B	2530	A
2	B	2531	A

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Mol	Chain	Res	Type
2	B	2535	G
2	B	2554	U
2	B	2556	C
2	B	2566	A
2	B	2567	G
2	B	2573	C
2	B	2574	G
2	B	2586	U
2	B	2602	A
2	B	2609	U
2	B	2613	U
2	B	2621	G
2	B	2629	U
2	B	2646	C
2	B	2654	A
2	B	2682	A
2	B	2689	U
2	B	2690	U
2	B	2714	G
2	B	2726	A
2	B	2739	U
2	B	2744	G
2	B	2748	A
2	B	2757	A
2	B	2760	C
2	B	2765	A
2	B	2778	A
2	B	2790	U
2	B	2791	G
2	B	2792	A
2	B	2798	U
2	B	2799	A
2	B	2800	A
2	B	2801	G
2	B	2808	G
2	B	2809	A
2	B	2820	A
2	B	2821	A
2	B	2823	A
2	B	2832	U
2	B	2834	G
2	B	2836	U

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Mol	Chain	Res	Type
2	B	2861	U
2	B	2867	G
2	B	2872	A
2	B	2873	A
2	B	2883	A
2	B	2886	A
2	B	2903	U

All (21) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
2	B	63	A
2	B	125	A
2	B	162	U
2	B	241	A
2	B	544	C
2	B	670	A
2	B	858	G
2	B	1133	A
2	B	1210	G
2	B	1419	A
2	B	1509	A
2	B	1914	C
2	B	2180	U
2	B	2213	U
2	B	2282	G
2	B	2286	G
2	B	2425	A
2	B	2430	A
2	B	2756	U
2	B	2808	G
2	B	2873	A

## 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 112 ligands modelled in this entry, 112 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%)	-0.03	6 (5%) 27 11	32, 75, 118, 180	0
2	B	2841/2904 (97%)	0.05	171 (6%) 21 9	5, 40, 139, 180	0
3	V	94/94 (100%)	0.02	4 (4%) 34 14	14, 86, 143, 180	0
4	C	271/273 (99%)	0.30	26 (9%) 8 5	5, 28, 81, 120	0
5	D	209/209 (100%)	0.54	25 (11%) 5 4	5, 42, 118, 180	0
6	E	201/201 (100%)	0.08	9 (4%) 32 14	5, 67, 135, 180	0
7	F	178/178 (100%)	0.29	13 (7%) 15 7	7, 101, 172, 180	0
8	G	176/176 (100%)	0.33	23 (13%) 4 3	24, 90, 161, 180	0
9	H	149/149 (100%)	0.03	9 (6%) 21 9	11, 100, 156, 180	0
10	J	142/142 (100%)	0.51	12 (8%) 11 6	5, 60, 119, 165	0
11	K	121/123 (98%)	2.64	74 (61%) 0 1	5, 35, 102, 145	0
12	L	143/144 (99%)	0.63	23 (16%) 2 2	5, 54, 118, 162	0
13	M	136/136 (100%)	0.35	14 (10%) 7 5	5, 51, 114, 168	0
14	N	120/127 (94%)	0.03	5 (4%) 35 14	5, 42, 86, 145	0
15	O	116/117 (99%)	0.89	21 (18%) 2 2	17, 78, 142, 180	0
16	P	114/114 (100%)	0.43	15 (13%) 4 3	5, 48, 107, 159	0
17	Q	117/117 (100%)	0.43	16 (13%) 4 3	5, 48, 116, 150	0
18	R	103/103 (100%)	-0.16	0 100 100	5, 73, 136, 180	0
19	S	110/110 (100%)	0.86	20 (18%) 2 2	5, 42, 116, 146	0
20	T	93/100 (93%)	0.58	12 (12%) 4 3	11, 64, 156, 180	0
21	U	102/103 (99%)	0.32	8 (7%) 13 7	10, 90, 154, 180	0
22	W	79/84 (94%)	1.29	19 (24%) 1 2	5, 75, 131, 174	0
23	X	63/63 (100%)	0.03	5 (7%) 13 7	17, 96, 147, 180	0
24	Y	58/58 (100%)	1.23	10 (17%) 2 2	10, 73, 129, 160	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
25	Z	77/78 (98%)	0.20	4 (5%) 26 11	5, 42, 107, 141	0
26	0	56/56 (100%)	0.21	3 (5%) 25 10	8, 52, 128, 160	0
27	1	50/54 (92%)	0.71	6 (12%) 5 4	43, 93, 138, 171	0
28	2	46/46 (100%)	1.41	12 (26%) 1 2	5, 28, 99, 180	0
29	3	64/64 (100%)	1.26	21 (32%) 1 1	5, 43, 112, 152	0
30	4	38/38 (100%)	0.44	3 (7%) 13 7	5, 68, 112, 150	0
31	I	141/141 (100%)	-0.39	1 (0%) 84 56	91, 160, 180, 180	0
All	All	6325/6422 (98%)	0.27	590 (9%) 9 5	5, 52, 150, 180	0

All (590) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
11	K	110	GLU	13.0
1	A	88	C	11.0
2	B	645	C	10.2
24	Y	1	ALA	10.0
11	K	111	LYS	9.2
24	Y	2	LYS	9.0
2	B	1490	A	8.6
24	Y	58	GLU	8.5
2	B	1046	A	8.4
15	O	20	GLU	7.8
7	F	178	LYS	7.7
11	K	113	MET	7.5
2	B	2547	A	7.3
11	K	108	ARG	6.5
11	K	60	ALA	6.4
2	B	405	U	6.4
22	W	41	GLY	6.4
15	O	23	ALA	6.3
2	B	1535	A	6.3
2	B	2423	U	6.2
16	P	33	GLU	6.2
2	B	455	C	6.2
2	B	2273	A	6.1
7	F	177	ARG	5.9
11	K	92	GLU	5.9
2	B	54	G	5.8
2	B	2566	A	5.8
15	O	116	GLN	5.8

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Mol	Chain	Res	Type	RSRZ
2	B	1459	G	5.8
11	K	105	ARG	5.7
2	B	2272	U	5.7
15	O	22	GLY	5.7
8	G	171	LYS	5.6
11	K	87	LEU	5.5
2	B	456	C	5.5
15	O	21	LEU	5.5
15	O	19	GLN	5.5
11	K	18	ARG	5.3
22	W	40	ARG	5.2
11	K	38	ILE	5.2
2	B	1045	C	5.2
2	B	1241	A	5.2
4	C	268	ARG	5.1
22	W	42	THR	5.1
11	K	3	GLN	5.1
15	O	17	LYS	5.1
2	B	2799	A	5.1
2	B	2422	C	5.1
15	O	24	THR	5.0
11	K	39	ILE	5.0
8	G	172	GLU	5.0
2	B	436	C	5.0
12	L	92	LEU	4.9
14	N	120	GLU	4.9
11	K	61	VAL	4.9
8	G	57	TYR	4.9
2	B	2213	U	4.9
21	U	49	PRO	4.9
2	B	1242	U	4.8
2	B	504	A	4.7
5	D	74	GLU	4.7
2	B	1175	A	4.7
12	L	10	GLU	4.7
2	B	180	G	4.7
21	U	87	GLU	4.7
2	B	1540	G	4.7
2	B	284	U	4.6
11	K	109	SER	4.6
10	J	44	TYR	4.6
11	K	59	LYS	4.6

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Mol	Chain	Res	Type	RSRZ
2	B	43	G	4.6
12	L	144	GLU	4.6
2	B	2424	C	4.6
11	K	8	LEU	4.6
19	S	28	LYS	4.6
25	Z	77	LYS	4.6
2	B	1460	U	4.5
20	T	93	LEU	4.5
11	K	25	LEU	4.5
19	S	30	SER	4.5
20	T	5	GLU	4.5
29	3	22	LYS	4.4
2	B	30	G	4.4
11	K	33	ALA	4.4
2	B	953	G	4.4
11	K	112	PHE	4.4
29	3	19	GLY	4.4
1	A	89	U	4.4
2	B	1537	G	4.3
12	L	2	ARG	4.3
17	Q	4	LYS	4.3
11	K	4	GLU	4.3
2	B	472	A	4.3
5	D	104	VAL	4.3
11	K	93	GLN	4.3
19	S	82	MET	4.3
2	B	2764	A	4.2
7	F	173	ASP	4.2
2	B	490	C	4.2
4	C	4	LYS	4.2
5	D	85	ALA	4.2
2	B	2524	G	4.2
21	U	50	ALA	4.2
13	M	59	ARG	4.2
11	K	114	LYS	4.2
5	D	166	GLY	4.2
17	Q	19	GLN	4.2
2	B	489	G	4.1
25	Z	76	GLU	4.1
22	W	69	GLU	4.1
9	H	97	ARG	4.1
11	K	107	LEU	4.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
27	1	27	ARG	4.1
2	B	1870	C	4.1
22	W	44	PHE	4.0
13	M	1	MET	4.0
6	E	152	GLU	4.0
5	D	120	GLY	4.0
12	L	65	GLY	4.0
22	W	13	ARG	4.0
8	G	173	ALA	4.0
13	M	37	GLY	3.9
25	Z	74	ARG	3.9
2	B	283	G	3.9
11	K	20	MET	3.9
22	W	43	LYS	3.9
2	B	244	A	3.9
2	B	2523	G	3.9
19	S	110	ARG	3.9
11	K	104	THR	3.9
20	T	3	ARG	3.9
4	C	263	ASP	3.9
29	3	14	LYS	3.9
3	V	10	LYS	3.8
11	K	88	ASN	3.8
2	B	458	G	3.8
2	B	2757	A	3.8
13	M	38	ARG	3.8
5	D	165	MET	3.8
2	B	179	C	3.7
19	S	27	LYS	3.7
11	K	21	CYS	3.7
2	B	1044	C	3.7
2	B	508	A	3.7
10	J	10	THR	3.7
2	B	965	C	3.7
4	C	99	GLU	3.7
11	K	24	VAL	3.7
5	D	1	MET	3.7
11	K	34	GLY	3.7
2	B	1148	U	3.7
2	B	2463	C	3.6
2	B	1253	A	3.6
2	B	1847	A	3.6

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Mol	Chain	Res	Type	RSRZ
16	P	34	GLY	3.6
2	B	473	G	3.6
2	B	101	A	3.6
24	Y	55	LYS	3.6
2	B	809	G	3.6
3	V	82	TYR	3.6
11	K	83	ALA	3.6
2	B	52	A	3.6
2	B	53	A	3.6
24	Y	3	THR	3.5
24	Y	57	GLU	3.5
11	K	84	CYS	3.5
5	D	106	LYS	3.5
11	K	23	LYS	3.5
11	K	69	VAL	3.5
8	G	168	VAL	3.5
8	G	166	GLU	3.5
1	A	87	U	3.5
1	A	85	G	3.5
29	3	18	LYS	3.5
2	B	968	C	3.5
5	D	103	ASP	3.5
22	W	84	GLU	3.5
11	K	40	LYS	3.5
20	T	70	HIS	3.5
11	K	37	ASP	3.5
2	B	1283	G	3.4
30	4	20	ASP	3.4
11	K	30	ARG	3.4
7	F	114	ARG	3.4
27	1	49	LYS	3.4
2	B	2734	A	3.4
5	D	46	ARG	3.4
11	K	86	LEU	3.4
4	C	34	GLU	3.4
10	J	12	LYS	3.4
2	B	1808	A	3.4
11	K	89	ASN	3.4
26	0	22	THR	3.4
24	Y	5	LYS	3.4
11	K	2	ILE	3.4
29	3	16	THR	3.4

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Mol	Chain	Res	Type	RSRZ
4	C	260	LYS	3.4
2	B	2190	G	3.3
2	B	29	U	3.3
22	W	48	ALA	3.3
2	B	577	G	3.3
2	B	1345	C	3.3
2	B	2568	U	3.3
11	K	29	HIS	3.3
12	L	49	GLY	3.3
30	4	21	GLY	3.3
2	B	491	G	3.3
2	B	1243	C	3.3
2	B	2672	U	3.2
2	B	1026	G	3.2
29	3	20	GLY	3.2
2	B	1530	G	3.2
2	B	2765	A	3.2
3	V	34	LYS	3.2
31	I	86	LYS	3.2
2	B	1254	A	3.2
12	L	69	ARG	3.2
4	C	97	ASP	3.2
12	L	51	GLU	3.2
5	D	119	ALA	3.2
2	B	31	C	3.2
12	L	67	THR	3.2
9	H	94	ILE	3.2
17	Q	21	LYS	3.2
11	K	90	ASN	3.2
17	Q	6	GLY	3.1
22	W	78	PHE	3.1
2	B	2567	G	3.1
2	B	1382	G	3.1
2	B	437	U	3.1
20	T	56	GLU	3.1
15	O	76	LYS	3.1
2	B	2733	A	3.1
16	P	36	LYS	3.1
17	Q	10	ARG	3.1
29	3	64	ALA	3.1
6	E	16	GLU	3.1
13	M	87	GLY	3.1

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Mol	Chain	Res	Type	RSRZ
4	C	25	LYS	3.1
12	L	63	LYS	3.1
15	O	2	ASP	3.1
4	C	96	LYS	3.1
22	W	45	HIS	3.1
22	W	26	GLY	3.1
2	B	351	C	3.0
19	S	25	ARG	3.0
11	K	7	MET	3.0
11	K	50	GLY	3.0
15	O	3	LYS	3.0
1	A	118	C	3.0
17	Q	20	ALA	3.0
29	3	7	ARG	3.0
19	S	24	ILE	3.0
29	3	12	ARG	3.0
11	K	26	GLY	3.0
2	B	47	C	3.0
2	B	1284	A	3.0
13	M	19	GLY	3.0
11	K	5	GLN	3.0
15	O	16	ARG	3.0
24	Y	38	GLU	3.0
2	B	46	G	3.0
10	J	87	ALA	3.0
11	K	32	TYR	3.0
27	1	34	GLU	3.0
4	C	3	VAL	3.0
17	Q	84	LYS	3.0
11	K	116	ILE	3.0
29	3	13	PHE	2.9
15	O	18	LEU	2.9
2	B	1217	U	2.9
16	P	107	ALA	2.9
8	G	116	LEU	2.9
12	L	3	LEU	2.9
23	X	63	ALA	2.9
16	P	102	ARG	2.9
29	3	49	VAL	2.9
8	G	165	ASP	2.9
21	U	52	ASN	2.9
10	J	11	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
29	3	15	LYS	2.9
15	O	89	ASP	2.9
11	K	35	VAL	2.9
2	B	565	C	2.9
11	K	51	LYS	2.9
5	D	129	THR	2.9
2	B	2797	U	2.8
5	D	105	LYS	2.8
20	T	4	GLU	2.8
19	S	37	THR	2.8
2	B	285	G	2.8
27	1	33	LEU	2.8
16	P	38	ARG	2.8
28	2	6	GLN	2.8
2	B	282	A	2.8
2	B	1666	G	2.8
16	P	62	LYS	2.8
2	B	578	G	2.8
4	C	267	VAL	2.8
29	3	63	TYR	2.8
2	B	513	A	2.8
15	O	61	GLN	2.8
2	B	2793	C	2.8
22	W	77	LYS	2.8
28	2	27	GLY	2.8
13	M	16	ARG	2.8
19	S	95	ARG	2.8
4	C	264	LYS	2.8
11	K	80	ASP	2.8
2	B	2602	A	2.8
5	D	128	ARG	2.8
2	B	2766	A	2.8
2	B	795	C	2.8
4	C	53	ILE	2.7
28	2	31	LEU	2.7
8	G	155	PRO	2.7
2	B	453	A	2.7
2	B	2266	A	2.7
2	B	2556	C	2.7
2	B	1	G	2.7
2	B	245	G	2.7
2	B	2798	U	2.7

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Mol	Chain	Res	Type	RSRZ
20	T	69	ARG	2.7
8	G	115	GLN	2.7
28	2	40	ALA	2.7
2	B	952	G	2.7
2	B	1381	G	2.7
23	X	23	ARG	2.7
2	B	643	A	2.7
11	K	27	GLY	2.7
2	B	350	G	2.7
14	N	118	ARG	2.7
6	E	2	GLU	2.7
2	B	1256	G	2.7
22	W	65	LYS	2.7
12	L	60	ARG	2.7
2	B	613	A	2.7
7	F	115	GLY	2.7
9	H	95	GLY	2.7
11	K	52	VAL	2.7
22	W	46	ALA	2.7
16	P	32	VAL	2.7
2	B	1027	A	2.7
4	C	21	PRO	2.7
4	C	213	ARG	2.7
5	D	83	ARG	2.7
11	K	85	VAL	2.7
2	B	2802	G	2.7
22	W	71	LYS	2.7
19	S	84	ARG	2.6
7	F	116	LEU	2.6
2	B	2275	C	2.6
8	G	55	ASP	2.6
21	U	59	GLU	2.6
19	S	83	LYS	2.6
2	B	474	G	2.6
26	0	44	ALA	2.6
2	B	2562	U	2.6
5	D	2	ILE	2.6
12	L	57	LEU	2.6
29	3	11	LYS	2.6
2	B	2740	A	2.6
4	C	1	ALA	2.6
2	B	42	A	2.6

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Mol	Chain	Res	Type	RSRZ
4	C	17	LYS	2.6
4	C	5	CYS	2.6
21	U	36	GLU	2.6
13	M	86	LYS	2.6
4	C	167	ASP	2.6
11	K	71	ARG	2.6
15	O	88	LYS	2.6
8	G	170	THR	2.6
28	2	32	ALA	2.6
5	D	208	LYS	2.6
2	B	1365	A	2.6
7	F	140	ILE	2.6
26	0	54	ILE	2.6
2	B	1989	G	2.5
16	P	35	SER	2.5
2	B	28	A	2.5
2	B	1536	C	2.5
19	S	26	GLY	2.5
2	B	1533	C	2.5
22	W	76	ARG	2.5
12	L	58	TYR	2.5
2	B	1869	G	2.5
25	Z	75	GLY	2.5
29	3	24	LYS	2.5
8	G	9	VAL	2.5
2	B	2790	U	2.5
10	J	73	VAL	2.5
5	D	164	GLN	2.5
7	F	44	ALA	2.5
9	H	100	ALA	2.5
2	B	566	U	2.5
2	B	2548	U	2.5
8	G	169	ARG	2.5
2	B	471	A	2.5
22	W	6	GLY	2.5
7	F	2	LYS	2.5
11	K	44	LYS	2.5
2	B	435	C	2.5
4	C	54	GLY	2.5
11	K	22	ILE	2.5
9	H	119	ASN	2.5
11	K	66	LYS	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
19	S	48	LYS	2.5
11	K	12	ASP	2.4
16	P	61	ARG	2.4
8	G	13	GLY	2.4
8	G	56	GLY	2.4
28	2	12	ARG	2.4
10	J	43	GLU	2.4
19	S	81	SER	2.4
19	S	70	LYS	2.4
6	E	128	ALA	2.4
2	B	967	U	2.4
2	B	2256	G	2.4
2	B	2585	U	2.4
11	K	9	ASN	2.4
3	V	83	LYS	2.4
20	T	42	GLU	2.4
12	L	104	GLN	2.4
2	B	653	U	2.4
1	A	86	G	2.4
10	J	6	ALA	2.4
13	M	15	GLY	2.4
11	K	53	LYS	2.4
23	X	12	GLU	2.4
19	S	23	LEU	2.4
2	B	1147	A	2.4
16	P	63	ILE	2.4
8	G	156	TYR	2.4
4	C	56	GLY	2.4
2	B	34	U	2.4
2	B	100	U	2.4
2	B	2191	A	2.4
2	B	2787	C	2.4
6	E	21	ARG	2.4
2	B	2357	G	2.4
9	H	42	LYS	2.4
30	4	10	LEU	2.4
11	K	82	ASN	2.4
2	B	686	U	2.4
5	D	209	ALA	2.4
12	L	47	ARG	2.4
12	L	106	GLU	2.4
28	2	39	ARG	2.4

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Mol	Chain	Res	Type	RSRZ
2	B	509	C	2.3
7	F	105	ILE	2.3
27	1	51	ALA	2.3
2	B	2193	G	2.3
17	Q	7	VAL	2.3
5	D	57	ALA	2.3
5	D	55	LYS	2.3
15	O	115	LEU	2.3
22	W	70	VAL	2.3
2	B	2147	A	2.3
9	H	96	THR	2.3
29	3	60	CYS	2.3
2	B	2794	C	2.3
4	C	22	GLU	2.3
2	B	794	A	2.3
14	N	110	MET	2.3
2	B	32	C	2.3
11	K	19	VAL	2.3
11	K	106	GLU	2.3
28	2	37	LYS	2.3
2	B	1458	U	2.3
2	B	457	A	2.3
2	B	1261	C	2.3
2	B	2146	C	2.3
10	J	13	ARG	2.3
16	P	87	ARG	2.3
2	B	2394	C	2.3
29	3	48	MET	2.3
20	T	16	VAL	2.3
13	M	98	PRO	2.3
10	J	111	LYS	2.3
11	K	62	VAL	2.3
14	N	101	GLY	2.3
29	3	51	LYS	2.3
28	2	33	ARG	2.3
5	D	168	GLU	2.3
28	2	36	ALA	2.3
28	2	35	ARG	2.3
24	Y	41	PRO	2.3
2	B	1350	C	2.2
21	U	48	VAL	2.2
2	B	567	U	2.2

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Mol	Chain	Res	Type	RSRZ
2	B	2265	U	2.2
11	K	63	VAL	2.2
12	L	52	GLY	2.2
2	B	452	G	2.2
8	G	110	HIS	2.2
2	B	2796	U	2.2
9	H	102	ALA	2.2
16	P	101	GLU	2.2
6	E	59	PRO	2.2
11	K	103	VAL	2.2
8	G	113	ASP	2.2
9	H	101	ASP	2.2
17	Q	5	ARG	2.2
2	B	22	C	2.2
2	B	145	C	2.2
15	O	57	ALA	2.2
4	C	73	ILE	2.2
4	C	70	LYS	2.2
23	X	22	LEU	2.2
2	B	146	A	2.2
2	B	2255	G	2.2
11	K	41	ILE	2.2
20	T	8	LEU	2.2
27	1	37	LYS	2.2
12	L	50	PHE	2.2
11	K	17	ARG	2.2
11	K	78	ARG	2.2
29	3	46	LYS	2.2
2	B	2520	C	2.2
14	N	32	GLU	2.2
4	C	2	VAL	2.2
2	B	2227	A	2.2
2	B	2735	G	2.2
17	Q	117	ALA	2.2
15	O	63	LYS	2.2
10	J	96	ARG	2.2
13	M	20	LEU	2.1
11	K	64	ARG	2.1
2	B	1859	U	2.1
12	L	59	ARG	2.1
19	S	9	HIS	2.1
13	M	36	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
24	Y	16	LEU	2.1
20	T	73	ARG	2.1
21	U	30	SER	2.1
7	F	55	ASP	2.1
15	O	112	GLU	2.1
29	3	9	ALA	2.1
29	3	23	HIS	2.1
8	G	117	PRO	2.1
17	Q	114	ALA	2.1
2	B	2274	A	2.1
12	L	48	ARG	2.1
7	F	63	LYS	2.1
8	G	39	ALA	2.1
11	K	36	GLY	2.1
2	B	44	A	2.1
2	B	1532	A	2.1
2	B	2800	A	2.1
8	G	114	HIS	2.1
19	S	52	GLU	2.1
17	Q	16	ILE	2.1
2	B	2189	U	2.1
5	D	118	PHE	2.1
17	Q	11	ALA	2.1
2	B	1260	A	2.1
8	G	174	LYS	2.1
17	Q	15	LYS	2.1
6	E	92	HIS	2.1
4	C	168	GLY	2.1
16	P	103	THR	2.1
17	Q	8	ILE	2.1
11	K	95	ILE	2.1
12	L	64	PHE	2.1
28	2	46	LYS	2.0
2	B	438	G	2.0
19	S	11	ARG	2.0
2	B	451	U	2.0
2	B	1542	U	2.0
7	F	142	TYR	2.0
11	K	94	PRO	2.0
2	B	2792	A	2.0
6	E	94	GLN	2.0
19	S	36	LEU	2.0

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Mol	Chain	Res	Type	RSRZ
2	B	1219	U	2.0
11	K	10	VAL	2.0
16	P	40	GLN	2.0
13	M	18	ARG	2.0
20	T	50	LEU	2.0
2	B	576	U	2.0
2	B	2561	U	2.0
5	D	126	ASN	2.0
13	M	127	LYS	2.0
15	O	113	ALA	2.0
17	Q	51	GLN	2.0
5	D	77	ARG	2.0
23	X	24	GLU	2.0
12	L	55	MET	2.0
6	E	13	THR	2.0
10	J	50	THR	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
32	MG	B	3389	1/1	0.31	14.30	146,146,146,146	0
32	MG	B	3351	1/1	0.37	14.16	112,112,112,112	0
32	MG	B	3344	1/1	0.33	8.89	180,180,180,180	0
32	MG	B	3592	1/1	0.36	4.46	23,23,23,23	0
32	MG	B	3165	1/1	0.82	4.32	24,24,24,24	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
32	MG	B	3140	1/1	0.27	3.37	63,63,63,63	0
32	MG	B	3207	1/1	0.71	2.98	55,55,55,55	0
32	MG	B	3485	1/1	0.38	2.98	85,85,85,85	0
32	MG	B	3074	1/1	0.29	2.77	51,51,51,51	0
32	MG	B	3172	1/1	0.29	2.70	88,88,88,88	0
32	MG	B	3201	1/1	0.44	2.50	52,52,52,52	0
32	MG	B	3279	1/1	0.27	2.20	28,28,28,28	0
32	MG	B	3515	1/1	0.60	1.91	37,37,37,37	0
32	MG	B	3104	1/1	0.27	1.70	22,22,22,22	0
32	MG	B	3308	1/1	0.23	1.24	35,35,35,35	0
32	MG	B	3570	1/1	0.28	0.87	5,5,5,5	0
32	MG	B	3040	1/1	0.14	0.78	18,18,18,18	0
32	MG	B	3110	1/1	0.19	0.55	5,5,5,5	0
32	MG	B	3069	1/1	0.22	0.45	9,9,9,9	0
32	MG	B	3184	1/1	0.21	0.45	8,8,8,8	0
32	MG	B	3152	1/1	0.22	0.40	34,34,34,34	0
32	MG	B	3127	1/1	0.20	0.39	25,25,25,25	0
32	MG	B	3274	1/1	0.28	0.34	14,14,14,14	0
32	MG	B	3189	1/1	0.30	0.17	63,63,63,63	0
32	MG	B	3598	1/1	0.29	0.15	10,10,10,10	0
32	MG	B	3257	1/1	0.40	0.06	24,24,24,24	0
32	MG	B	3021	1/1	0.22	-0.07	6,6,6,6	0
32	MG	B	3409	1/1	0.23	-0.13	11,11,11,11	0
32	MG	B	3239	1/1	0.30	-0.18	29,29,29,29	0
32	MG	B	3337	1/1	0.15	-0.58	151,151,151,151	0
32	MG	B	3525	1/1	0.12	-0.60	66,66,66,66	0
32	MG	B	3357	1/1	0.15	-0.60	69,69,69,69	0
32	MG	B	3609	1/1	0.22	-0.70	9,9,9,9	0
32	MG	B	3618	1/1	0.16	-0.70	38,38,38,38	0
32	MG	B	3474	1/1	0.25	-0.74	18,18,18,18	0
32	MG	B	3564	1/1	0.13	-0.80	13,13,13,13	0
32	MG	B	3492	1/1	0.17	-0.93	5,5,5,5	0
32	MG	B	3537	1/1	0.18	-0.93	89,89,89,89	0
32	MG	B	3544	1/1	0.13	-0.98	6,6,6,6	0
32	MG	B	3584	1/1	0.16	-1.01	33,33,33,33	0
32	MG	B	3440	1/1	0.13	-1.03	57,57,57,57	0
32	MG	B	3375	1/1	0.05	-1.07	20,20,20,20	0
32	MG	B	3286	1/1	0.13	-1.09	36,36,36,36	0
32	MG	B	3268	1/1	0.12	-1.10	24,24,24,24	0
32	MG	B	3052	1/1	0.10	-1.16	29,29,29,29	0
32	MG	B	3528	1/1	0.17	-1.19	11,11,11,11	0
33	ZN	4	3624	1/1	0.14	-1.20	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
32	MG	B	3058	1/1	0.29	-1.28	8,8,8,8	0
32	MG	B	3496	1/1	0.15	-1.29	5,5,5,5	0
32	MG	B	3220	1/1	0.14	-1.31	28,28,28,28	0
32	MG	B	3602	1/1	0.11	-1.36	37,37,37,37	0
32	MG	B	3382	1/1	0.19	-1.42	37,37,37,37	0
32	MG	B	3419	1/1	0.23	-1.46	16,16,16,16	0
32	MG	B	3579	1/1	0.15	-1.48	27,27,27,27	0
32	MG	B	3087	1/1	0.12	-1.52	33,33,33,33	0
32	MG	B	3425	1/1	0.21	-1.67	18,18,18,18	0
32	MG	B	3064	1/1	0.10	-1.68	17,17,17,17	0
32	MG	B	3457	1/1	0.08	-1.71	27,27,27,27	0
32	MG	B	3403	1/1	0.14	-1.73	5,5,5,5	0
32	MG	B	3014	1/1	0.12	-1.77	63,63,63,63	0
32	MG	B	3292	1/1	0.05	-1.77	90,90,90,90	0
32	MG	B	3327	1/1	0.09	-1.80	5,5,5,5	0
32	MG	B	3001	1/1	0.11	-1.81	5,5,5,5	0
32	MG	B	3553	1/1	0.07	-1.83	44,44,44,44	0
32	MG	B	3320	1/1	0.16	-1.85	26,26,26,26	0
32	MG	B	3370	1/1	0.08	-1.91	43,43,43,43	0
32	MG	B	3196	1/1	0.04	-1.94	9,9,9,9	0
32	MG	B	3480	1/1	0.07	-1.96	30,30,30,30	0
32	MG	B	3214	1/1	0.07	-1.99	30,30,30,30	0
32	MG	B	3033	1/1	0.07	-2.04	5,5,5,5	0
32	MG	B	3298	1/1	0.07	-2.07	23,23,23,23	0
32	MG	B	3364	1/1	0.06	-2.09	77,77,77,77	0
32	MG	B	3245	1/1	0.08	-2.17	6,6,6,6	0
32	MG	B	3026	1/1	0.04	-2.24	10,10,10,10	0
32	MG	B	3508	1/1	0.09	-2.33	25,25,25,25	0
32	MG	B	3446	1/1	0.10	-2.37	5,5,5,5	0
32	MG	B	3235	1/1	0.09	-2.41	5,5,5,5	0
32	MG	B	3332	1/1	0.10	-2.49	71,71,71,71	0
32	MG	B	3225	1/1	0.05	-2.54	5,5,5,5	0
32	MG	B	3614	1/1	0.10	-2.54	21,21,21,21	0
32	MG	B	3532	1/1	0.04	-2.56	29,29,29,29	0
32	MG	B	3146	1/1	0.10	-2.68	5,5,5,5	0
32	MG	B	3452	1/1	0.08	-2.68	54,54,54,54	0
32	MG	B	3559	1/1	0.08	-2.72	7,7,7,7	0
32	MG	B	3046	1/1	0.12	-2.85	6,6,6,6	0
32	MG	B	3301	1/1	0.11	-2.85	100,100,100,100	0
32	MG	B	3117	1/1	0.09	-2.86	5,5,5,5	0
32	MG	B	3431	1/1	0.10	-2.97	14,14,14,14	0
32	MG	B	3122	1/1	0.09	-3.00	11,11,11,11	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
32	MG	B	3179	1/1	0.09	-3.07	6,6,6,6	0
32	MG	B	3133	1/1	0.17	-3.13	32,32,32,32	0
32	MG	B	3575	1/1	0.12	-3.16	12,12,12,12	0
32	MG	B	3092	1/1	0.10	-3.28	15,15,15,15	0
32	MG	B	3504	1/1	0.08	-3.40	53,53,53,53	0
32	MG	B	3500	1/1	0.06	-3.41	11,11,11,11	0
32	MG	B	3081	1/1	0.06	-3.53	5,5,5,5	0
32	MG	B	3413	1/1	0.08	-3.68	45,45,45,45	0
32	MG	B	3512	1/1	0.07	-3.82	7,7,7,7	0
32	MG	B	3468	1/1	0.06	-3.97	10,10,10,10	0
32	MG	B	3547	1/1	0.07	-4.14	38,38,38,38	0
32	MG	B	3588	1/1	0.14	-4.73	23,23,23,23	0
32	MG	B	3229	1/1	0.04	-5.44	22,22,22,22	0
32	MG	B	3521	1/1	0.07	-5.48	13,13,13,13	0
32	MG	B	3436	1/1	0.04	-5.60	12,12,12,12	0
32	MG	B	3159	1/1	0.07	-5.96	6,6,6,6	0
32	MG	B	3463	1/1	0.12	-5.99	28,28,28,28	0
32	MG	B	3008	1/1	0.04	-6.22	12,12,12,12	0
32	MG	B	3396	1/1	0.09	-6.64	5,5,5,5	0
32	MG	B	3251	1/1	0.06	-6.71	5,5,5,5	0
32	MG	B	3099	1/1	0.06	-7.02	13,13,13,13	0
32	MG	B	3315	1/1	0.04	-8.23	19,19,19,19	0
32	MG	B	3262	1/1	0.06	-12.71	57,57,57,57	0

## 6.5 Other polymers ⓘ

There are no such residues in this entry.