



# Full wwPDB X-ray Structure Validation Report

Mar 31, 2014 – 06:26 PM BST

PDB ID : 2Y10  
Title : THE CRYSTAL STRUCTURE OF EF-TU AND TRP-TRNA-TRP BOUND  
TO A COGNATE CODON ON THE 70S RIBOSOME.  
Authors : Schmeing, T.M.; Voorhees, R.M.; Ramakrishnan, V.  
Deposited on : 2010-12-07  
Resolution : 3.10 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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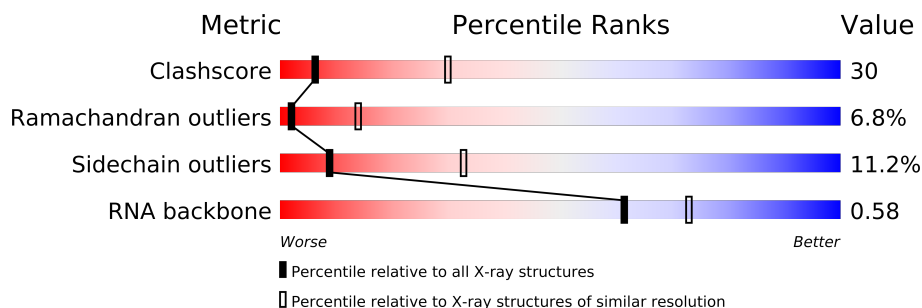
The following versions of software and data (see [references](#)) were used in the production of this report:

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

# 1 Overall quality at a glance

The reported resolution of this entry is 3.10 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	79885	1078 (3.16-3.04)
Ramachandran outliers	78287	1044 (3.16-3.04)
Sidechain outliers	78261	1044 (3.16-3.04)
RNA backbone	1838	1047 (3.60-2.60)

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.

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	A	1522	
2	B	256	
3	C	239	
4	D	209	
5	E	162	
6	F	101	
7	G	156	
8	H	138	
9	I	128	
10	J	105	
11	K	129	
12	L	131	
13	M	126	
14	N	61	
15	O	89	

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Mol	Chain	Length	Quality of chain
16	P	88	
17	Q	105	
18	R	88	
19	S	93	
20	T	106	
21	U	27	
22	V	76	
22	W	76	
23	X	27	
24	Y	77	
25	Z	405	

## 2 Entry composition

There are 28 unique types of molecules in this entry. The entry contains 59915 atoms, of which 0 are hydrogen and 0 are deuterium.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	1510	Total	C	N	O	P	0	0	0
			32451	14445	6010	10487	1509			

- Molecule 2 is a protein called 30S RIBOSOMAL PROTEIN S2.

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

- Molecule 3 is a protein called 30S RIBOSOMAL PROTEIN S3.

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

- Molecule 4 is a protein called 30S RIBOSOMAL PROTEIN S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	D	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

- Molecule 5 is a protein called 30S RIBOSOMAL PROTEIN S5.

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

- Molecule 6 is a protein called 30S RIBOSOMAL PROTEIN S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	F	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 7 is a protein called 30S RIBOSOMAL PROTEIN S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	G	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 8 is a protein called 30S RIBOSOMAL PROTEIN S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	H	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 9 is a protein called 30S RIBOSOMAL PROTEIN S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	I	127	Total	C	N	O	S	0	0	0
			1010	639	197	174				

- Molecule 10 is a protein called 30S RIBOSOMAL PROTEIN S10.

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

- Molecule 11 is a protein called 30S RIBOSOMAL PROTEIN S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	K	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			

- Molecule 12 is a protein called 30S RIBOSOMAL PROTEIN S12.

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

- Molecule 13 is a protein called 30S RIBOSOMAL PROTEIN S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	M	124	Total	C	N	O	S	0	0	0
			987	611	205	169	2			

- Molecule 14 is a protein called 30S RIBOSOMAL PROTEIN S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	N	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

- Molecule 15 is a protein called 30S RIBOSOMAL PROTEIN S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	O	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			

- Molecule 16 is a protein called 30S RIBOSOMAL PROTEIN S16.

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

- Molecule 17 is a protein called 30S RIBOSOMAL PROTEIN S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	Q	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			

- Molecule 18 is a protein called 30S RIBOSOMAL PROTEIN S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	R	70	Total	C	N	O	0	0	0
			574	367	112	95			

- Molecule 19 is a protein called 30S RIBOSOMAL PROTEIN S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	S	78	Total	C	N	O	S	0	0	0
			629	403	114	110	2			

- Molecule 20 is a protein called 30S RIBOSOMAL PROTEIN S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	T	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			

- Molecule 21 is a protein called 30S RIBOSOMAL PROTEIN THX.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	U	24	Total	C	N	O	0	0	0
			208	128	50	30			

- Molecule 22 is a RNA chain called E-SITE TRNA PHE OR P-SITE TRNA PHE.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	V	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
22	W	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			

- Molecule 23 is a RNA chain called MRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	X	17	Total	C	N	O	P	0	0	0
			362	164	68	114	16			

- Molecule 24 is a RNA chain called A-SITE TRNA TRP-TRNA TRP.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
24	Y	77	Total	C	N	O	P	S	0	0	0
			1645	742	289	536	76	2			

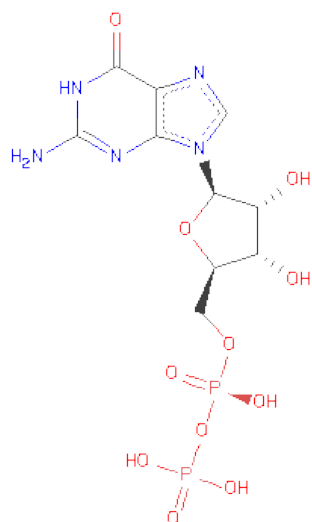
- Molecule 25 is a protein called ELONGATION FACTOR TU.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	Z	385	Total	C	N	O	S	0	0	0
			2984	1885	524	563	12			

- Molecule 26 is ZINC ION (three-letter code: ZN) (formula: Zn).

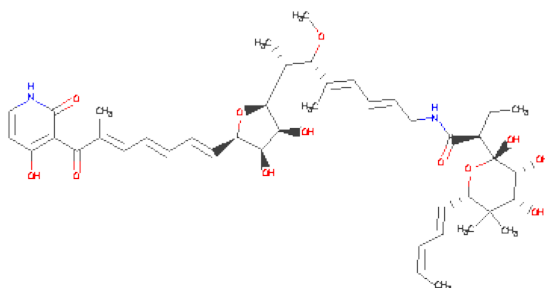
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
26	1	4	Total	Zn	0	0
			4	4		

- Molecule 27 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula: C<sub>10</sub>H<sub>15</sub>N<sub>5</sub>O<sub>11</sub>P<sub>2</sub>).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
27	Z	1	Total	C	N	O	P	0	0
			28	10	5	11	2		

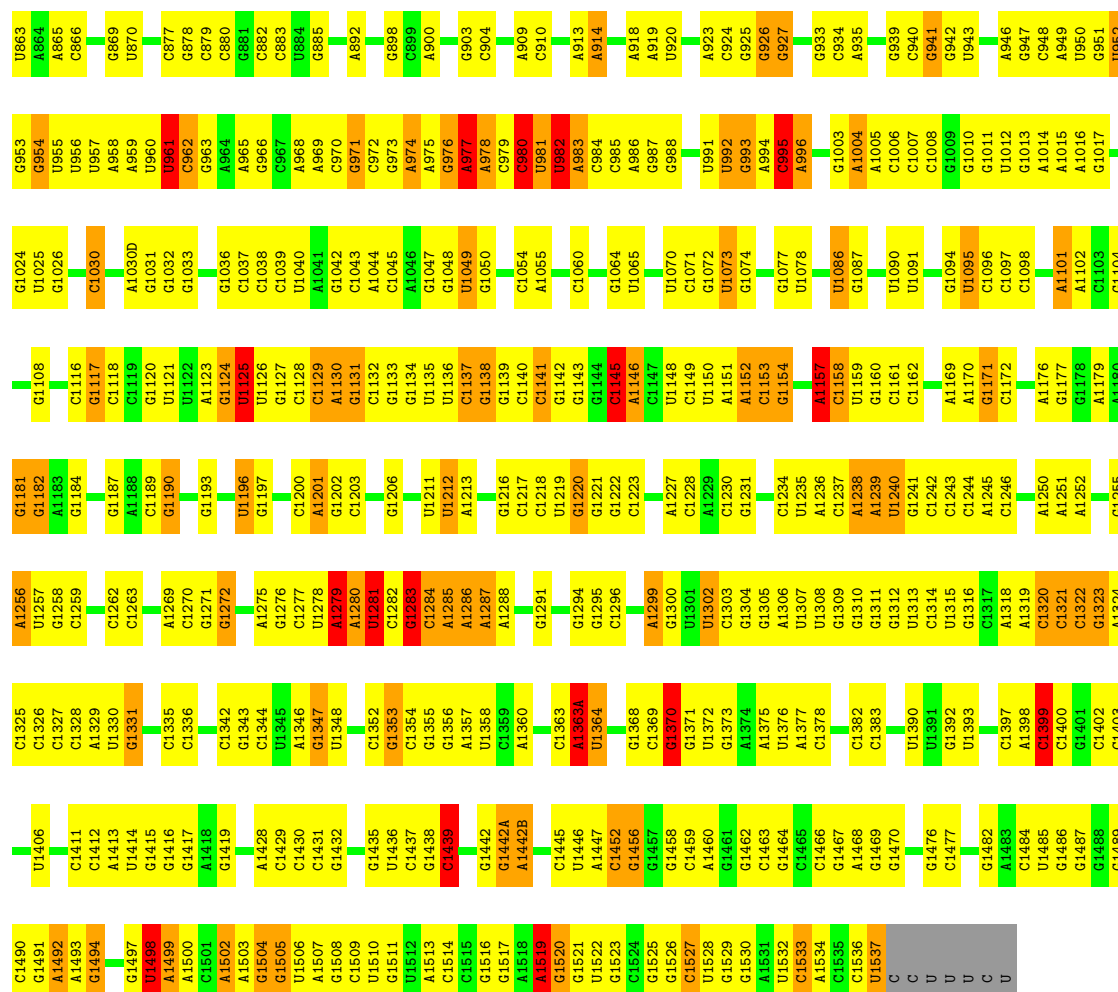
- Molecule 28 is KIRROMYCIN (three-letter code: KIR) (formula:  $C_{43}H_{60}N_2O_{12}$ ).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
28	Z	1	Total	C	N	O		0	0
			57	43	2	12			

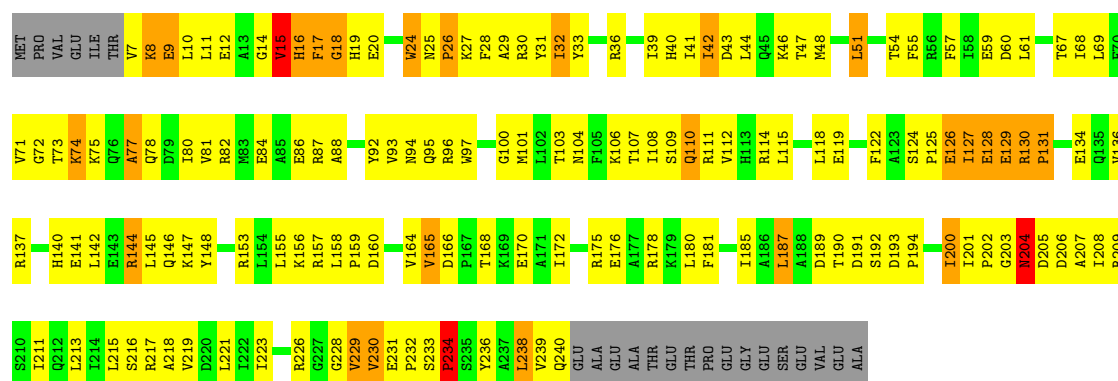






## • Molecule 2: 30S RIBOSOMAL PROTEIN S2

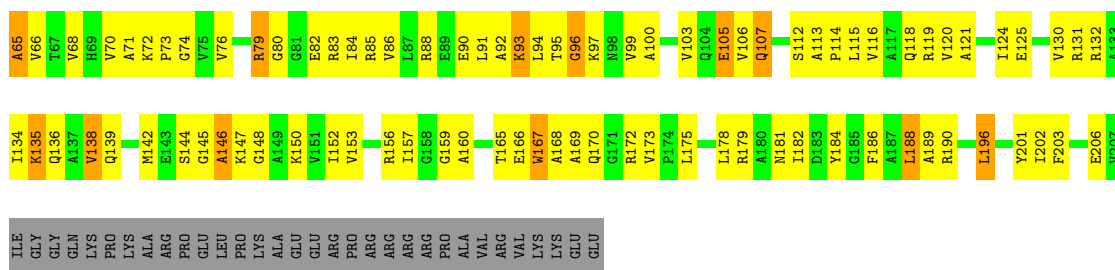
Chain B:



## • Molecule 3: 30S RIBOSOMAL PROTEIN S3

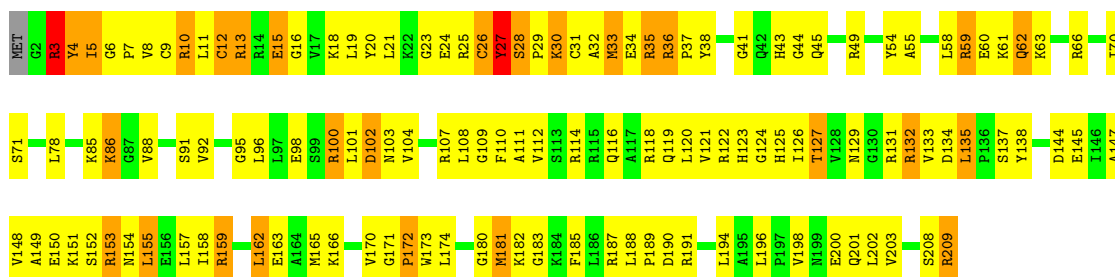
Chain C:





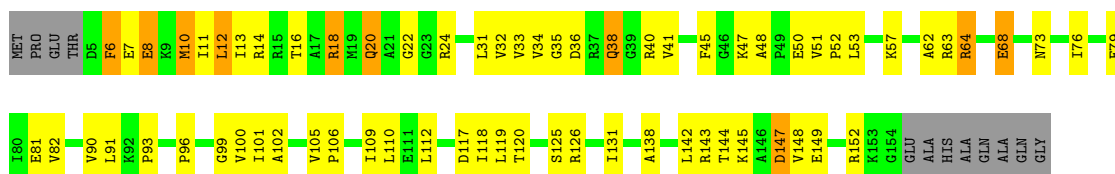
• Molecule 4: 30S RIBOSOMAL PROTEIN S4

Chain D:



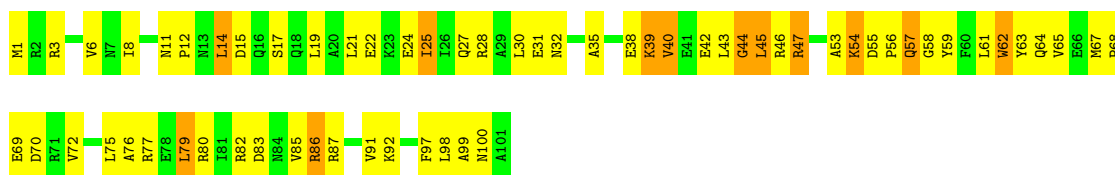
• Molecule 5: 30S RIBOSOMAL PROTEIN S5

Chain E:



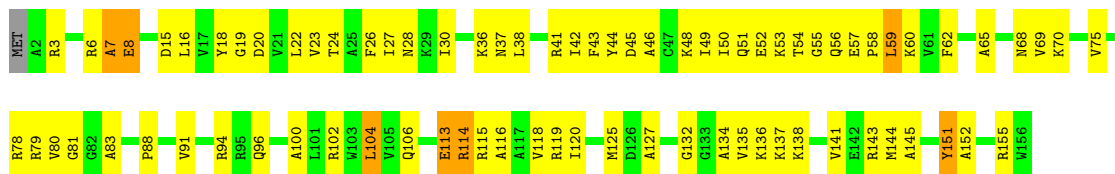
• Molecule 6: 30S RIBOSOMAL PROTEIN S6

Chain F:



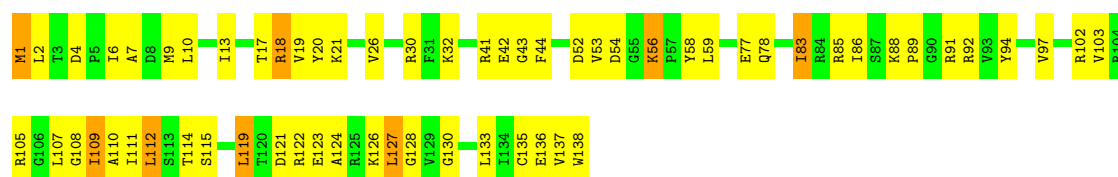
• Molecule 7: 30S RIBOSOMAL PROTEIN S7

Chain G:



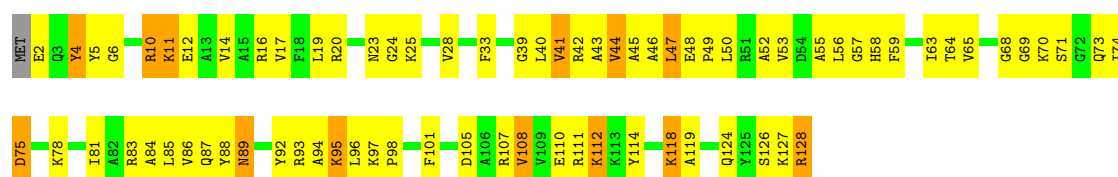
• Molecule 8: 30S RIBOSOMAL PROTEIN S8

Chain H:



• Molecule 9: 30S RIBOSOMAL PROTEIN S9

Chain I:



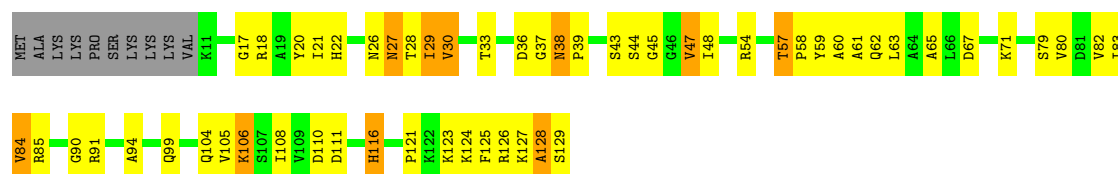
• Molecule 10: 30S RIBOSOMAL PROTEIN S10

Chain J:



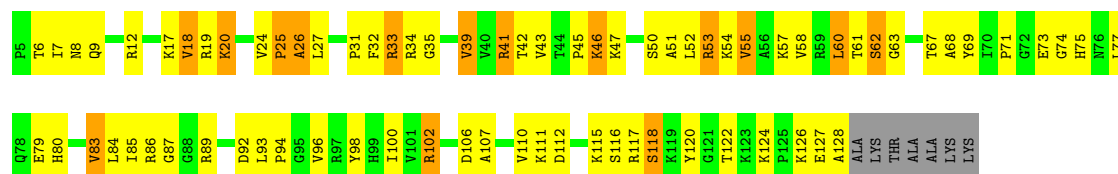
• Molecule 11: 30S RIBOSOMAL PROTEIN S11

Chain K:



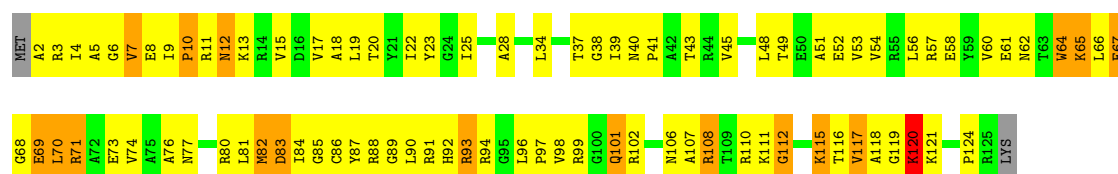
• Molecule 12: 30S RIBOSOMAL PROTEIN S12

Chain L:



• Molecule 13: 30S RIBOSOMAL PROTEIN S13

Chain M:



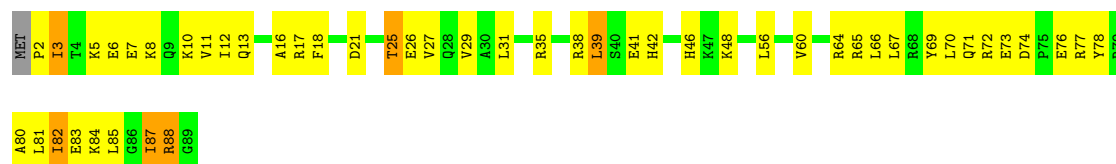
- Molecule 14: 30S RIBOSOMAL PROTEIN S14

Chain N:



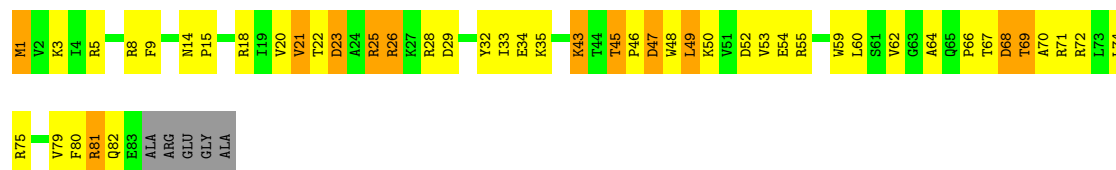
- Molecule 15: 30S RIBOSOMAL PROTEIN S15

Chain O:



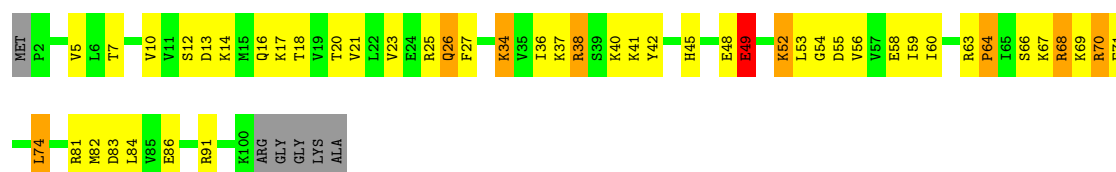
- Molecule 16: 30S RIBOSOMAL PROTEIN S16

Chain P:



- Molecule 17: 30S RIBOSOMAL PROTEIN S17

Chain Q:



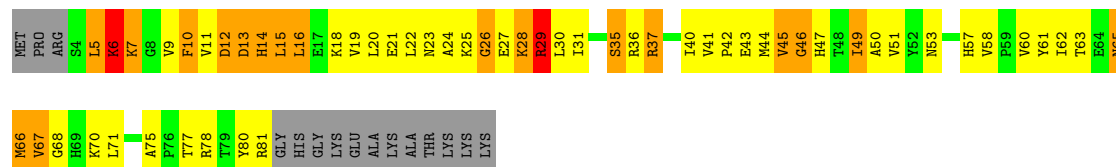
- Molecule 18: 30S RIBOSOMAL PROTEIN S18

Chain R:



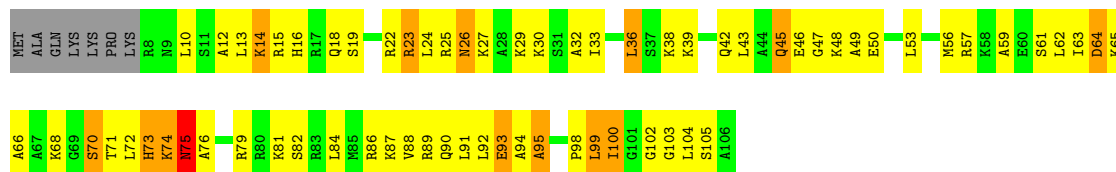
- Molecule 19: 30S RIBOSOMAL PROTEIN S19

Chain S:



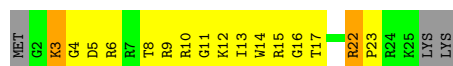
- Molecule 20: 30S RIBOSOMAL PROTEIN S20

Chain T:



- Molecule 21: 30S RIBOSOMAL PROTEIN THX

Chain U:



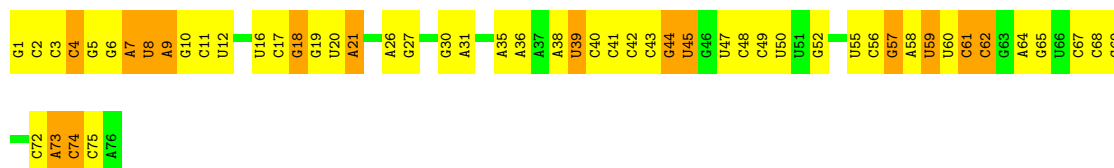
- Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE

Chain V:



- Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE

Chain W:



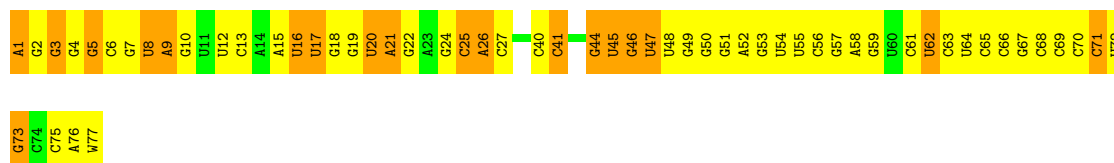
- Molecule 23: MRNA

Chain X:



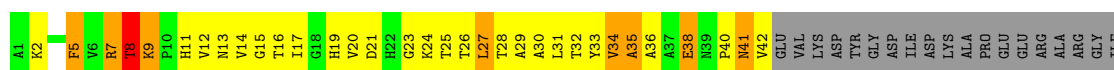
- Molecule 24: A-SITE TRNA TRP-TRNA TRP

Chain Y:



- Molecule 25: ELONGATION FACTOR TU

Chain Z:





## 4 Data and refinement statistics

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

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	290.20Å 269.20Å 404.00Å 90.00° 91.54° 90.00°	Depositor
Resolution (Å)	50.00 – 3.10	Depositor
% Data completeness (in resolution range)	99.8 (50.00-3.10)	Depositor
$R_{merge}$	0.02	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.36 (at 2.91Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, $R_{free}$	0.237 , 0.264	Depositor
Wilson B-factor (Å <sup>2</sup> )	79.7	Xtriage
Anisotropy	0.030	Xtriage
Estimated twinning fraction	0.026 for h,-k,-l	Xtriage
L-test for twinning	$\langle  L  \rangle = 0.45$ , $\langle L^2 \rangle = 0.27$	Xtriage
Outliers	1 of 1263345 reflections (0.000%)	Xtriage
Total number of atoms	59915	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	94.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 8.44% 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: OMC, GDP, ZN, H2U, KIR, MIA, 4SU, 7MG, 5MU, PSU

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	0.57	6/36325 (0.0%)	0.75	35/56695 (0.1%)
2	B	0.49	0/1935	0.69	0/2609
3	C	0.53	0/1636	0.72	1/2205 (0.0%)
4	D	0.45	0/1733	0.69	1/2318 (0.0%)
5	E	0.56	0/1162	0.75	0/1564
6	F	0.43	0/856	0.68	0/1154
7	G	0.45	0/1276	0.64	0/1709
8	H	0.48	0/1136	0.73	0/1527
9	I	0.45	0/1029	0.68	0/1379
10	J	0.44	0/807	0.73	0/1085
11	K	0.49	0/900	0.72	0/1213
12	L	0.49	0/986	0.77	0/1320
13	M	0.45	0/998	0.73	0/1336
14	N	0.62	0/501	0.81	0/664
15	O	0.47	0/745	0.67	0/992
16	P	0.43	0/716	0.70	0/963
17	Q	0.50	0/836	0.70	0/1117
18	R	0.50	0/579	0.66	0/768
19	S	0.47	0/642	0.71	0/865
20	T	0.40	0/765	0.66	0/1007
21	U	0.51	0/212	0.65	0/277
22	V	0.66	0/1809	0.83	1/2819 (0.0%)
22	W	0.55	0/1809	0.75	0/2819
23	X	0.69	0/406	0.87	2/631 (0.3%)
24	Y	0.49	1/1619 (0.1%)	0.70	0/2516
25	Z	0.67	3/3042 (0.1%)	0.76	7/4129 (0.2%)
All	All	0.55	10/64460 (0.0%)	0.74	47/95681 (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
1	A	4	59
22	V	0	3
23	X	0	2
All	All	4	64

All (10) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	Z	68	VAL	C-O	-19.95	0.85	1.23
25	Z	69	GLU	CG-CD	-8.39	1.39	1.51
24	Y	1	A	OP3-P	-7.07	1.52	1.61
1	A	858	G	C5-C6	-6.99	1.35	1.42
25	Z	68	VAL	CA-CB	-6.43	1.41	1.54
1	A	858	G	N1-C2	6.33	1.42	1.37
1	A	766	A	P-OP2	5.93	1.59	1.49
1	A	858	G	C5-C4	5.77	1.42	1.38
1	A	1125	U	O3'-P	5.37	1.67	1.61
1	A	1125	U	C3'-O3'	5.19	1.49	1.42

All (47) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1498	U	C2'-C3'-O3'	10.97	133.63	109.50
25	Z	68	VAL	O-C-N	-10.79	105.43	122.70
1	A	1363(A)	A	C2'-C3'-O3'	10.24	132.02	109.50
25	Z	68	VAL	CA-C-N	10.07	139.35	117.20
1	A	508	C	C2'-C3'-O3'	9.90	131.29	109.50
1	A	1399	C	C2'-C3'-O3'	9.21	129.77	109.50
25	Z	69	GLU	OE1-CD-OE2	8.86	133.93	123.30
1	A	115	G	C2'-C3'-O3'	8.47	128.14	109.50
4	D	12	CYS	CA-CB-SG	8.40	129.12	114.00
1	A	243	A	C2'-C3'-O3'	8.37	127.91	109.50
1	A	687	A	C2'-C3'-O3'	8.25	127.66	109.50
1	A	982	U	C2'-C3'-O3'	7.97	127.04	109.50
1	A	547	A	C2'-C3'-O3'	7.81	126.68	109.50
1	A	1101	A	C2'-C3'-O3'	7.68	126.40	109.50
1	A	961	U	N1-C1'-C2'	-7.67	103.56	112.00
1	A	60	A	C2'-C3'-O3'	7.54	126.08	109.50
1	A	792	A	C2'-C3'-O3'	7.09	125.10	109.50
1	A	495	A	C2'-C3'-O3'	6.83	124.63	113.70
1	A	995	C	N1-C1'-C2'	-6.80	104.52	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	980	C	N1-C1'-C2'	6.69	122.70	114.00
25	Z	69	GLU	CG-CD-OE1	-6.58	105.13	118.30
1	A	1283	G	N9-C1'-C2'	-6.46	104.90	112.00
22	V	59	U	N1-C1'-C2'	-6.29	105.08	112.00
1	A	686	U	N1-C1'-C2'	5.92	121.70	114.00
1	A	197	A	N9-C1'-C2'	5.84	121.59	114.00
1	A	266	G	C2'-C3'-O3'	5.81	123.00	113.70
23	X	27	A	C2'-C3'-O3'	5.70	122.82	113.70
1	A	1125	U	C4'-C3'-O3'	5.67	124.34	113.00
1	A	977	A	C5'-C4'-C3'	-5.66	106.94	116.00
3	C	196	LEU	CA-CB-CG	5.55	128.07	115.30
25	Z	68	VAL	C-N-CA	5.52	135.50	121.70
23	X	26	A	C5'-C4'-C3'	5.51	124.82	116.00
1	A	328	C	N1-C1'-C2'	5.50	121.14	114.00
1	A	1502	A	N9-C1'-C2'	5.49	121.14	114.00
1	A	1279	A	N9-C1'-C2'	5.46	121.10	114.00
1	A	189(H)	G	N9-C1'-C2'	-5.44	106.01	112.00
25	Z	288	VAL	CG1-CB-CG2	-5.36	102.33	110.90
1	A	245	C	N1-C1'-C2'	-5.35	106.11	112.00
1	A	1125	U	O4'-C1'-C2'	-5.25	100.55	105.80
1	A	347	G	N9-C1'-C2'	-5.23	106.25	112.00
25	Z	68	VAL	CA-CB-CG1	-5.22	103.06	110.90
1	A	484	G	N9-C1'-C2'	5.22	120.79	114.00
1	A	1145	C	C2'-C3'-O3'	5.14	121.92	113.70
1	A	858	G	N1-C6-O6	5.04	122.92	119.90
1	A	858	G	O4'-C1'-N9	-5.02	104.18	108.20
1	A	1399	C	C4'-C3'-O3'	5.02	123.05	113.00
1	A	836	G	C5'-C4'-C3'	5.01	124.01	116.00

All (4) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	A	508	C	C3'
1	A	1363(A)	A	C3'
1	A	1399	C	C3'
1	A	1498	U	C3'

All (64) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1073	U	Sidechain
1	A	1077	G	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1086	U	Sidechain
1	A	1125	U	Sidechain
1	A	1153	C	Sidechain
1	A	1157	A	Sidechain
1	A	1181	G	Sidechain
1	A	1190	G	Sidechain
1	A	1196	U	Sidechain
1	A	1220	G	Sidechain
1	A	1279	A	Sidechain
1	A	1281	U	Sidechain
1	A	1283	G	Sidechain
1	A	1370	G	Sidechain
1	A	1390	U	Sidechain
1	A	14	U	Sidechain
1	A	1406	U	Sidechain
1	A	1414	U	Sidechain
1	A	1439	C	Sidechain
1	A	1498	U	Sidechain
1	A	1504	G	Sidechain
1	A	1505	G	Sidechain
1	A	1516	G	Sidechain
1	A	1519	A	Sidechain
1	A	1527	C	Sidechain
1	A	1528	U	Sidechain
1	A	189(G)	G	Sidechain
1	A	189(H)	G	Sidechain
1	A	197	A	Sidechain
1	A	198	G	Sidechain
1	A	244	U	Sidechain
1	A	245	C	Sidechain
1	A	251	G	Sidechain
1	A	30	U	Sidechain
1	A	347	G	Sidechain
1	A	37	U	Sidechain
1	A	380	G	Sidechain
1	A	387	U	Sidechain
1	A	404	U	Sidechain
1	A	498	U	Sidechain
1	A	529	G	Sidechain
1	A	560	U	Sidechain
1	A	570	G	Sidechain
1	A	573	A	Sidechain

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Mol	Chain	Res	Type	Group
1	A	60	A	Sidechain
1	A	657	G	Sidechain
1	A	727	G	Sidechain
1	A	741	G	Sidechain
1	A	748	C	Sidechain
1	A	898	G	Sidechain
1	A	941	G	Sidechain
1	A	952	U	Sidechain
1	A	954	G	Sidechain
1	A	961	U	Sidechain
1	A	970	C	Sidechain
1	A	971	G	Sidechain
1	A	980	C	Sidechain
1	A	982	U	Sidechain
1	A	995	C	Sidechain
22	V	25	C	Sidechain
22	V	29	G	Sidechain
22	V	59	U	Sidechain
23	X	19	U	Sidechain
23	X	26	A	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	32451	0	16382	917	0
2	B	1900	0	1951	185	0
3	C	1612	0	1677	145	0
4	D	1703	0	1765	168	0
5	E	1146	0	1207	69	0
6	F	843	0	857	64	0
7	G	1257	0	1296	70	0
8	H	1116	0	1177	55	0
9	I	1010	0	1037	109	0
10	J	794	0	840	116	0
11	K	885	0	904	58	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
12	L	970	0	1057	99	0
13	M	987	0	1059	113	0
14	N	492	0	530	57	0
15	O	734	0	771	44	0
16	P	700	0	720	75	0
17	Q	823	0	891	60	0
18	R	574	0	644	46	0
19	S	629	0	652	76	0
20	T	763	0	861	97	0
21	U	208	0	221	25	0
22	V	1619	0	822	58	0
22	W	1619	0	822	73	0
23	X	362	0	184	15	0
24	Y	1645	0	853	131	0
25	Z	2984	0	2997	472	0
26	1	4	0	0	2	0
27	Z	28	0	12	15	0
28	Z	57	0	58	13	0
All	All	59915	0	42247	3095	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 30.

All (3095) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Z:355:LEU:CD2	25:Z:370:PHE:HB3	1.63	1.28
25:Z:2:LYS:O	25:Z:275:LYS:HE3	1.42	1.20
25:Z:355:LEU:HD23	25:Z:370:PHE:CB	1.72	1.18
25:Z:355:LEU:HB2	25:Z:356:PRO:CD	1.73	1.17
24:Y:25:C:H2'	24:Y:26:A:H5'	1.28	1.12
1:A:1305:G:H22	1:A:1331:G:H2'	1.14	1.11
15:O:87:ILE:HG22	15:O:88:ARG:H	1.10	1.11
22:V:46:G:H3'	22:V:47:U:H5''	1.13	1.10
24:Y:4:G:H2'	24:Y:5:G:H5''	1.28	1.10
24:Y:77:TRP:O	25:Z:273:HIS:HA	1.55	1.07
24:Y:24:G:H2'	24:Y:25:C:H5''	1.36	1.06
20:T:57:ARG:HH11	20:T:102:GLY:HA2	1.11	1.06
1:A:975:A:H4'	1:A:976:G:H5''	1.38	1.06
1:A:1003:G:H2'	1:A:1004:A:H4'	1.31	1.06
25:Z:355:LEU:HB2	25:Z:356:PRO:HD3	1.36	1.05
1:A:1532:U:H2'	1:A:1533:C:H5''	1.34	1.05
1:A:1281:U:H5'	1:A:1282:C:H5	1.19	1.04

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Z:29:ALA:O	25:Z:33:TYR:HD2	1.41	1.03
1:A:979:C:H3'	1:A:980:C:H5''	1.39	1.03
2:B:200:ILE:H	2:B:200:ILE:HD12	1.23	1.03
1:A:1271:G:H2'	1:A:1272:G:H5''	1.37	1.02
22:V:42:C:H5'	22:V:42:C:H6	1.24	1.02
7:G:54:THR:HG22	7:G:56:GLN:H	1.22	1.02
22:V:4:C:H2'	22:V:5:G:H5''	1.38	1.01
1:A:358:U:H4'	25:Z:234:ARG:C	1.79	1.01
1:A:1305:G:N2	1:A:1331:G:H2'	1.74	1.01
22:W:18:G:H1	22:W:55:U:H1'	1.26	1.01
25:Z:241:ARG:HB3	25:Z:241:ARG:HH11	1.23	0.99
2:B:165:VAL:HG23	2:B:166:ASP:H	1.22	0.99
19:S:16:LEU:HD12	19:S:16:LEU:H	1.28	0.98
24:Y:25:C:H2'	24:Y:26:A:C5'	1.94	0.97
25:Z:359:VAL:O	25:Z:362:VAL:HG23	1.64	0.97
24:Y:24:G:C2'	24:Y:25:C:H5''	1.95	0.97
4:D:59:ARG:HE	4:D:59:ARG:HA	1.27	0.97
1:A:452:A:HO2'	1:A:453:A:H8	1.06	0.97
24:Y:24:G:H2'	24:Y:25:C:C5'	1.94	0.96
14:N:22:THR:HB	14:N:33:VAL:HG21	1.45	0.96
1:A:150:C:H2'	1:A:151:A:H5''	1.45	0.96
4:D:28:SER:HB3	4:D:29:PRO:HD2	1.44	0.95
5:E:10:MET:HG3	5:E:13:ILE:HD11	1.48	0.95
13:M:101:GLN:H	13:M:101:GLN:HE21	1.15	0.95
4:D:26:CYS:HG	4:D:31:CYS:HG	1.07	0.95
1:A:858:G:C6	1:A:869:G:N7	2.34	0.94
24:Y:76:A:P	25:Z:274:ARG:HG3	2.07	0.94
20:T:57:ARG:NH1	20:T:102:GLY:HA2	1.83	0.94
22:V:46:G:H3'	22:V:47:U:C5'	1.98	0.94
24:Y:77:TRP:O	25:Z:273:HIS:CA	2.15	0.94
24:Y:4:G:C2'	24:Y:5:G:H5''	1.97	0.93
1:A:942:G:H21	9:I:124:GLN:NE2	1.65	0.93
22:V:41:C:H2'	22:V:42:C:H5''	1.47	0.93
1:A:351:G:H4'	1:A:352:C:OP2	1.67	0.93
1:A:367:U:C5'	25:Z:291:ARG:HE	1.82	0.92
10:J:40:LEU:HD23	10:J:40:LEU:H	1.33	0.92
24:Y:65:C:H4'	25:Z:341:GLN:HG2	1.49	0.92
1:A:1435:G:H2'	1:A:1436:U:C6	2.05	0.92
2:B:172:ILE:H	2:B:172:ILE:HD12	1.33	0.92
1:A:1281:U:H5'	1:A:1282:C:C5	2.06	0.91
24:Y:65:C:H4'	25:Z:341:GLN:CG	1.99	0.91
25:Z:89:ILE:O	25:Z:93:ILE:HG22	1.70	0.91

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Z:355:LEU:HD23	25:Z:370:PHE:HB3	0.92	0.91
1:A:1003:G:C2'	1:A:1004:A:H4'	2.00	0.90
25:Z:7:ARG:NH2	25:Z:281:ILE:HD11	1.87	0.90
24:Y:77:TRP:N	25:Z:285:ASN:O	2.05	0.90
5:E:11:ILE:HB	5:E:31:LEU:HD12	1.52	0.90
25:Z:277:LEU:HD13	25:Z:278:GLN:H	1.36	0.90
1:A:358:U:H1'	25:Z:233:GLY:HA2	1.54	0.90
25:Z:29:ALA:O	25:Z:33:TYR:CD2	2.25	0.89
6:F:97:PHE:HD1	18:R:31:LEU:HD21	1.37	0.89
13:M:23:TYR:HB3	13:M:67:GLU:HB3	1.51	0.89
9:I:4:TYR:CZ	9:I:88:TYR:HB2	2.07	0.89
9:I:17:VAL:HG11	9:I:81:ILE:HD13	1.53	0.89
1:A:975:A:C4'	1:A:976:G:H5''	2.03	0.89
24:Y:2:G:C2'	24:Y:3:G:H5''	2.03	0.89
9:I:16:ARG:HB2	9:I:64:THR:HB	1.55	0.89
12:L:20:LYS:H	12:L:20:LYS:HD3	1.38	0.89
24:Y:2:G:H2'	24:Y:3:G:H5''	1.52	0.89
25:Z:113:MET:HG3	25:Z:114:PRO:HD2	1.52	0.89
25:Z:7:ARG:HG2	25:Z:7:ARG:HH11	1.36	0.88
13:M:10:PRO:CB	13:M:18:ALA:HB1	2.03	0.88
1:A:1271:G:C2'	1:A:1272:G:H5''	2.02	0.88
20:T:45:GLN:HB3	20:T:91:LEU:HD13	1.56	0.88
3:C:8:ILE:HG23	3:C:16:ARG:HG2	1.56	0.87
16:P:53:VAL:HG23	16:P:54:GLU:H	1.40	0.87
25:Z:277:LEU:HD13	25:Z:278:GLN:N	1.89	0.87
4:D:194:LEU:HB3	4:D:196:LEU:HD13	1.57	0.87
22:V:41:C:C2'	22:V:42:C:H5''	2.04	0.86
13:M:10:PRO:HB2	13:M:18:ALA:HB1	1.54	0.86
4:D:158:ILE:O	4:D:162:LEU:HB2	1.74	0.86
1:A:706:A:O4'	11:K:29:ILE:HD11	1.73	0.86
19:S:16:LEU:HA	19:S:19:VAL:HB	1.58	0.86
17:Q:10:VAL:HG22	17:Q:55:ASP:H	1.39	0.86
1:A:1439:C:H41	1:A:1462:G:H1	1.23	0.86
17:Q:59:ILE:CG2	17:Q:71:PHE:HB3	2.06	0.85
9:I:19:LEU:HD11	9:I:59:PHE:HD2	1.41	0.85
4:D:23:GLY:HA3	4:D:112:VAL:HG22	1.58	0.85
1:A:1502:A:H2	1:A:1505:G:H1	1.25	0.85
8:H:7:ALA:HB2	8:H:85:ARG:HD3	1.59	0.85
14:N:13:THR:N	14:N:14:PRO:HD2	1.90	0.85
1:A:358:U:O3'	25:Z:235:GLY:HA2	1.76	0.85
1:A:358:U:H1'	25:Z:233:GLY:CA	2.07	0.85
15:O:82:ILE:HD13	15:O:83:GLU:N	1.92	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:V:4:C:C2'	22:V:5:G:H5''	2.06	0.85
2:B:114:ARG:HH11	2:B:118:LEU:HD21	1.41	0.85
7:G:18:TYR:HB3	7:G:59:LEU:HD22	1.57	0.85
10:J:32:ALA:HB2	10:J:76:ASN:HB2	1.57	0.85
12:L:102:ARG:NH1	12:L:110:VAL:HG22	1.92	0.85
13:M:49:THR:HG22	13:M:51:ALA:H	1.41	0.85
1:A:8:A:H62	4:D:208:SER:HB2	1.42	0.85
10:J:54:PHE:CZ	10:J:55:LYS:NZ	2.45	0.84
4:D:12:CYS:HA	4:D:19:LEU:HD12	1.58	0.84
12:L:102:ARG:HH11	12:L:102:ARG:HG2	1.42	0.84
18:R:32:ARG:HA	18:R:69:THR:HG21	1.57	0.84
8:H:42:GLU:HG3	8:H:109:ILE:HD12	1.60	0.84
1:A:1363(A):A:H4'	1:A:1364:U:H5''	1.59	0.84
1:A:353:A:H5'	1:A:353:A:H8	1.42	0.84
20:T:23:ARG:O	20:T:27:LYS:HB2	1.76	0.84
9:I:105:ASP:OD1	9:I:107:ARG:HD3	1.77	0.84
1:A:503:C:OP2	12:L:116:SER:HB3	1.77	0.84
22:W:43:C:H2'	22:W:44:G:H1'	1.60	0.83
15:O:87:ILE:HG22	15:O:88:ARG:N	1.92	0.83
1:A:453:A:H4'	16:P:72:ARG:HG3	1.59	0.83
4:D:100:ARG:HH21	4:D:118:ARG:HH12	1.26	0.83
16:P:20:VAL:HG21	16:P:32:TYR:HB2	1.61	0.83
25:Z:241:ARG:NH1	25:Z:241:ARG:HB3	1.93	0.83
10:J:4:ILE:HB	10:J:74:ILE:HD11	1.59	0.83
4:D:100:ARG:NH2	4:D:118:ARG:HH12	1.76	0.83
25:Z:277:LEU:CD1	25:Z:280:GLY:H	1.91	0.83
25:Z:163:PHE:HD1	25:Z:164:PRO:HD2	1.42	0.83
24:Y:25:C:C2'	24:Y:26:A:H5'	2.07	0.83
5:E:148:VAL:HG21	8:H:107:LEU:HD13	1.60	0.83
25:Z:274:ARG:HH11	25:Z:274:ARG:HG2	1.42	0.83
9:I:53:VAL:HG13	9:I:95:LYS:NZ	1.94	0.83
4:D:150:GLU:CD	4:D:151:LYS:H	1.83	0.82
3:C:5:ILE:H	3:C:5:ILE:CD1	1.92	0.82
21:U:6:ARG:HD3	21:U:15:ARG:NH1	1.95	0.82
14:N:57:ARG:HH11	14:N:57:ARG:HB2	1.44	0.82
25:Z:64:ASN:N	25:Z:64:ASN:HD22	1.73	0.82
1:A:502:G:OP1	12:L:118:SER:HB3	1.79	0.82
11:K:18:ARG:HH21	11:K:37:GLY:N	1.78	0.82
19:S:31:ILE:HG23	19:S:49:ILE:HA	1.61	0.82
25:Z:355:LEU:HB2	25:Z:356:PRO:HD2	1.61	0.82
25:Z:159:ASN:ND2	25:Z:166:ASP:OD1	2.12	0.82
25:Z:135:MET:HE3	25:Z:150:VAL:HG11	1.62	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:D:108:LEU:HD11	4:D:174:LEU:HD13	1.61	0.82
25:Z:274:ARG:NH1	25:Z:274:ARG:HG2	1.95	0.82
12:L:18:VAL:HG23	12:L:19:ARG:H	1.45	0.82
11:K:79:SER:OG	11:K:106:LYS:HD2	1.80	0.82
1:A:358:U:H4'	25:Z:235:GLY:N	1.94	0.81
25:Z:145:GLU:HG2	25:Z:149:LEU:HB2	1.61	0.81
1:A:367:U:H4'	25:Z:291:ARG:HE	1.45	0.81
2:B:75:LYS:HA	2:B:78:GLN:HE21	1.45	0.81
25:Z:277:LEU:HD12	25:Z:280:GLY:H	1.44	0.81
22:W:38:A:H2'	22:W:39:U:H5''	1.63	0.81
14:N:22:THR:CB	14:N:33:VAL:HG21	2.10	0.81
24:Y:76:A:OP2	25:Z:274:ARG:CG	2.28	0.81
12:L:33:ARG:HH11	12:L:62:SER:HB3	1.44	0.80
1:A:1305:G:H5'	21:U:4:GLY:HA3	1.64	0.80
1:A:1086:U:H2'	1:A:1087:G:H5'	1.62	0.80
1:A:1532:U:C2'	1:A:1533:C:H5''	2.09	0.80
25:Z:137:LYS:HG2	27:Z:1406:GDP:C2	2.16	0.80
25:Z:219:LYS:HB3	25:Z:244:ARG:HD2	1.64	0.80
1:A:1439:C:N4	1:A:1462:G:H1	1.80	0.80
25:Z:164:PRO:HB2	25:Z:167:GLU:OE2	1.82	0.80
1:A:1321:C:H3'	1:A:1322:C:H5''	1.62	0.80
1:A:1532:U:H2'	1:A:1533:C:C5'	2.12	0.80
8:H:114:THR:HG22	8:H:130:GLY:O	1.82	0.80
24:Y:41:C:H6	24:Y:41:C:H5'	1.44	0.80
1:A:975:A:H5''	1:A:976:G:H5''	1.64	0.80
1:A:1378:C:H4'	7:G:94:ARG:HH22	1.44	0.80
11:K:121:PRO:HG2	11:K:126:ARG:HB2	1.64	0.80
3:C:26:LYS:HE3	3:C:26:LYS:H	1.45	0.80
25:Z:2:LYS:O	25:Z:275:LYS:CE	2.29	0.80
24:Y:77:TRP:CA	25:Z:285:ASN:O	2.31	0.79
1:A:1096:C:H5''	2:B:137:ARG:HH21	1.46	0.79
11:K:126:ARG:HH11	11:K:126:ARG:HB3	1.47	0.79
4:D:187:ARG:HH11	4:D:187:ARG:HB3	1.45	0.79
1:A:358:U:H2'	1:A:359:U:C6	2.16	0.79
16:P:25:ARG:CB	16:P:25:ARG:HH11	1.96	0.79
2:B:7:VAL:O	2:B:11:LEU:HB2	1.82	0.79
3:C:5:ILE:HD13	3:C:5:ILE:N	1.98	0.79
17:Q:69:LYS:C	17:Q:70:ARG:HD2	2.03	0.79
25:Z:7:ARG:NH1	25:Z:7:ARG:HG2	1.98	0.79
22:W:57:G:C2'	22:W:58:A:H5'	2.11	0.79
13:M:101:GLN:HE21	13:M:101:GLN:N	1.81	0.79
3:C:16:ARG:HB2	3:C:16:ARG:HH11	1.47	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:T:26:ASN:HB2	20:T:71:THR:HG23	1.62	0.79
22:W:9:A:H2	22:W:45:U:O4	1.65	0.79
1:A:150:C:C2'	1:A:151:A:H5''	2.12	0.79
3:C:113:ALA:HB3	3:C:114:PRO:HD3	1.64	0.79
9:I:40:LEU:HD11	9:I:70:LYS:HG2	1.63	0.79
11:K:82:VAL:HG13	11:K:108:ILE:HA	1.64	0.79
1:A:368:U:OP2	25:Z:268:THR:HG21	1.82	0.79
2:B:168:THR:OG1	2:B:192:SER:HB2	1.82	0.79
25:Z:359:VAL:O	25:Z:362:VAL:CG2	2.31	0.78
2:B:204:ASN:ND2	2:B:206:ASP:H	1.81	0.78
1:A:1502:A:H2	1:A:1505:G:N1	1.79	0.78
16:P:25:ARG:CG	16:P:25:ARG:HH11	1.96	0.78
4:D:108:LEU:CD1	4:D:174:LEU:HD13	2.13	0.78
1:A:1030:C:H41	1:A:1032:G:H21	1.31	0.78
22:W:59:U:H2'	22:W:60:U:H5'	1.65	0.78
1:A:664:G:H22	1:A:741:G:H1	1.31	0.78
24:Y:76:A:P	25:Z:274:ARG:CG	2.72	0.78
25:Z:397:ALA:HB2	28:Z:1407:KIR:H252	1.64	0.78
25:Z:65:THR:CG2	25:Z:80:VAL:HG13	2.14	0.78
12:L:24:VAL:HG13	12:L:98:TYR:CE2	2.18	0.78
1:A:1218:C:H2'	1:A:1219:U:C6	2.18	0.78
1:A:722:A:N3	1:A:722:A:H2'	1.98	0.78
12:L:6:THR:OG1	12:L:9:GLN:HG3	1.82	0.78
13:M:119:GLY:O	13:M:120:LYS:HB2	1.82	0.78
25:Z:193:ASN:C	25:Z:195:TRP:H	1.82	0.78
24:Y:77:TRP:O	25:Z:273:HIS:N	2.16	0.78
17:Q:60:ILE:HB	17:Q:74:LEU:HD23	1.63	0.78
1:A:367:U:H4'	25:Z:291:ARG:NE	1.98	0.78
13:M:88:ARG:HG3	13:M:98:VAL:HG13	1.64	0.78
22:W:74:C:H5'	22:W:74:C:H6	1.49	0.78
25:Z:8:THR:OG1	25:Z:9:LYS:HG2	1.84	0.78
25:Z:7:ARG:HH22	25:Z:281:ILE:HD11	1.47	0.78
3:C:46:GLU:O	3:C:47:LEU:HB2	1.82	0.78
1:A:1277:C:HO2'	1:A:1279:A:H8	1.32	0.78
24:Y:25:C:H5'	24:Y:25:C:H6	1.49	0.77
2:B:114:ARG:NH1	2:B:118:LEU:HD21	1.98	0.77
19:S:29:ARG:HD2	19:S:30:LEU:N	1.99	0.77
1:A:723:U:C4	1:A:1537:U:H2'	2.18	0.77
24:Y:45:U:H3'	24:Y:46:7MG:H5''	1.65	0.77
1:A:975:A:H4'	1:A:976:G:C5'	2.15	0.77
1:A:1117:G:H5'	1:A:1117:G:H8	1.47	0.77
22:W:35:A:H2'	22:W:36:A:H8	1.50	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:24:VAL:HG11	12:L:27:LEU:HD22	1.67	0.77
5:E:50:GLU:HG3	5:E:52:PRO:HD2	1.66	0.77
4:D:120:LEU:HB3	4:D:126:ILE:HD11	1.67	0.77
22:V:42:C:H5'	22:V:42:C:C6	2.15	0.77
24:Y:76:A:OP2	25:Z:274:ARG:HG3	1.83	0.77
25:Z:191:GLY:HA2	25:Z:197:ASP:OD1	1.84	0.77
19:S:13:ASP:O	19:S:14:HIS:HB3	1.85	0.77
25:Z:70:TYR:O	25:Z:77:TYR:HB2	1.84	0.77
4:D:200:GLU:HG2	4:D:201:GLN:N	1.99	0.77
1:A:975:A:C5'	1:A:976:G:H5''	2.15	0.77
4:D:62:GLN:HA	4:D:62:GLN:HE21	1.50	0.77
2:B:75:LYS:HA	2:B:78:GLN:NE2	2.00	0.77
1:A:627:G:O2'	1:A:628:G:H5'	1.84	0.77
22:W:57:G:H2'	22:W:58:A:H5'	1.66	0.76
11:K:27:ASN:HD22	11:K:28:THR:H	1.33	0.76
1:A:265:G:H2'	1:A:266:G:H5''	1.67	0.76
1:A:1036:G:H5''	1:A:1037:C:C5	2.21	0.76
4:D:28:SER:HB3	4:D:29:PRO:CD	2.15	0.76
1:A:1152:A:H5''	10:J:13:HIS:CD2	2.21	0.76
22:W:4:C:H2'	22:W:5:G:C8	2.21	0.76
2:B:15:VAL:H	2:B:16:HIS:CE1	2.04	0.76
24:Y:9:A:H2	24:Y:44:G:HO2'	1.33	0.76
25:Z:19:HIS:ND1	25:Z:113:MET:HB3	1.99	0.76
16:P:20:VAL:HG23	16:P:34:GLU:O	1.85	0.76
25:Z:64:ASN:H	25:Z:64:ASN:HD22	1.30	0.76
25:Z:137:LYS:HA	27:Z:1406:GDP:N1	2.00	0.76
8:H:86:ILE:HD11	8:H:136:GLU:HG2	1.68	0.76
9:I:65:VAL:HG21	9:I:73:GLN:HB3	1.68	0.75
12:L:6:THR:H	12:L:9:GLN:HE21	1.33	0.75
1:A:1504:G:OP1	1:A:1507:A:H4'	1.85	0.75
1:A:1015:A:H2'	1:A:1016:A:C8	2.21	0.75
1:A:1281:U:H4'	1:A:1282:C:OP2	1.85	0.75
1:A:186:C:H2'	1:A:187:C:H6	1.51	0.75
24:Y:10:G:H1	24:Y:25:C:H42	1.34	0.75
16:P:25:ARG:HB2	16:P:25:ARG:HH11	1.50	0.75
11:K:67:ASP:OD1	11:K:71:LYS:HE3	1.87	0.75
6:F:67:MET:HB2	6:F:68:PRO:HD2	1.69	0.75
22:V:41:C:H2'	22:V:42:C:C5'	2.15	0.75
1:A:367:U:C4'	25:Z:291:ARG:HE	1.99	0.75
4:D:3:ARG:NH1	4:D:118:ARG:HD3	2.01	0.75
1:A:1493:A:H5''	1:A:1494:G:OP2	1.87	0.75
3:C:34:LEU:HD22	3:C:38:ARG:HE	1.49	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Z:93:ILE:HD11	28:Z:1407:KIR:H371	1.69	0.74
4:D:25:ARG:O	4:D:27:TYR:N	2.20	0.74
13:M:88:ARG:HG3	13:M:98:VAL:CG1	2.17	0.74
10:J:33:GLN:O	10:J:75:ILE:HG12	1.87	0.74
1:A:723:U:N3	1:A:1537:U:H2'	2.02	0.74
1:A:1129:C:O5'	1:A:1130:A:H5'	1.87	0.74
1:A:522:C:H41	12:L:53:ARG:HH22	1.34	0.74
25:Z:121:LEU:HD13	28:Z:1407:KIR:O4	1.88	0.74
1:A:1152:A:O2'	1:A:1153:C:H5'	1.86	0.74
10:J:78:ASN:HB2	10:J:81:THR:HG22	1.69	0.74
1:A:1321:C:H5''	1:A:1322:C:H5''	1.69	0.74
20:T:82:SER:O	20:T:86:ARG:HB2	1.88	0.74
1:A:963:G:H21	10:J:55:LYS:CE	1.99	0.74
1:A:1016:A:H2'	1:A:1017:G:O4'	1.88	0.74
25:Z:326:GLU:O	28:Z:1407:KIR:H101	1.87	0.74
22:V:61:C:H5'	22:V:62:C:OP2	1.88	0.74
1:A:192:U:H1'	20:T:103:GLY:HA2	1.70	0.74
24:Y:76:A:C6	25:Z:271:GLU:HG3	2.23	0.74
15:O:87:ILE:CG2	15:O:88:ARG:H	1.93	0.74
9:I:4:TYR:CD2	9:I:87:GLN:HB3	2.23	0.74
25:Z:263:ARG:HD2	25:Z:297:GLU:OE2	1.87	0.74
6:F:82:ARG:HB2	6:F:85:VAL:HG23	1.69	0.74
1:A:1116:C:O2'	9:I:108:VAL:HG21	1.88	0.73
25:Z:191:GLY:HA2	25:Z:197:ASP:CG	2.08	0.73
1:A:1003:G:N2	1:A:1039:C:H42	1.86	0.73
21:U:22:ARG:HH11	21:U:22:ARG:HG2	1.53	0.73
1:A:585:G:H4'	12:L:8:ASN:HD21	1.53	0.73
4:D:187:ARG:NH1	4:D:187:ARG:HB3	2.02	0.73
20:T:16:HIS:O	20:T:19:SER:HB3	1.89	0.73
13:M:108:ARG:HH11	13:M:108:ARG:HG3	1.52	0.73
1:A:1320:C:H5'	1:A:1320:C:H6	1.53	0.73
25:Z:139:ASP:O	25:Z:140:MET:HG2	1.86	0.73
1:A:677:U:H3	1:A:713:G:H22	1.34	0.73
24:Y:72:U:H2'	24:Y:73:G:H5''	1.71	0.73
8:H:9:MET:SD	8:H:32:LYS:HG2	2.28	0.73
3:C:5:ILE:HD13	3:C:5:ILE:H	1.53	0.73
25:Z:16:THR:HG23	25:Z:79:HIS:NE2	2.03	0.73
25:Z:301:GLY:HA3	25:Z:347:THR:HG23	1.71	0.73
7:G:45:ASP:O	7:G:49:ILE:HG12	1.89	0.73
1:A:192:U:C1'	20:T:103:GLY:HA2	2.19	0.72
4:D:18:LYS:HE3	4:D:31:CYS:CB	2.19	0.72
24:Y:45:U:H3'	24:Y:46:7MG:C5'	2.18	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Q:26:GLN:HB3	17:Q:37:LYS:HA	1.71	0.72
2:B:28:PHE:CD2	2:B:190:THR:HA	2.25	0.72
2:B:200:ILE:HD12	2:B:200:ILE:N	2.03	0.72
1:A:1149:C:H2'	1:A:1150:U:C6	2.24	0.72
5:E:34:VAL:HG12	5:E:62:ALA:HB1	1.71	0.72
12:L:110:VAL:H	12:L:122:THR:HG22	1.54	0.72
24:Y:51:G:O2'	25:Z:338:TYR:CD1	2.41	0.72
15:O:17:ARG:HH11	15:O:17:ARG:HG3	1.53	0.72
1:A:358:U:H4'	25:Z:234:ARG:CA	2.19	0.72
1:A:45:U:H2'	1:A:46:G:C8	2.25	0.72
1:A:59:A:H3'	1:A:331:G:H22	1.54	0.72
17:Q:67:LYS:O	17:Q:68:ARG:HB2	1.89	0.72
20:T:47:GLY:O	20:T:49:ALA:N	2.20	0.72
17:Q:52:LYS:H	17:Q:52:LYS:HD3	1.53	0.72
16:P:21:VAL:O	16:P:33:ILE:HB	1.90	0.72
2:B:124:SER:OG	2:B:125:PRO:HD2	1.90	0.72
13:M:65:LYS:H	13:M:65:LYS:HD3	1.52	0.72
24:Y:76:A:C4	25:Z:271:GLU:HB2	2.25	0.72
10:J:61:GLU:OE1	14:N:45:ARG:HD2	1.90	0.72
25:Z:349:VAL:HG23	25:Z:374:LEU:HD22	1.72	0.72
1:A:274:A:O2'	1:A:275:G:H8	1.73	0.72
17:Q:10:VAL:HG21	17:Q:52:LYS:O	1.89	0.71
4:D:3:ARG:HE	4:D:5:ILE:HG13	1.55	0.71
25:Z:281:ILE:HD12	25:Z:284:ASP:OD1	1.89	0.71
10:J:32:ALA:H	10:J:78:ASN:HD21	1.36	0.71
1:A:963:G:N3	10:J:55:LYS:NZ	2.33	0.71
16:P:74:LEU:HB3	16:P:79:VAL:HG21	1.71	0.71
7:G:16:LEU:HD13	9:I:42:ARG:HA	1.72	0.71
7:G:113:GLU:HG3	7:G:119:ARG:HB3	1.71	0.71
4:D:26:CYS:HG	26:1:4:ZN:ZN	1.00	0.71
4:D:8:VAL:HB	4:D:21:LEU:HD12	1.70	0.71
2:B:165:VAL:HG23	2:B:166:ASP:N	2.00	0.71
4:D:189:PRO:HB2	4:D:194:LEU:HD21	1.70	0.71
9:I:20:ARG:HG3	9:I:20:ARG:HH11	1.55	0.71
25:Z:117:ARG:HD3	25:Z:157:LEU:HD11	1.71	0.71
20:T:45:GLN:HE22	20:T:46:GLU:HG3	1.55	0.71
10:J:54:PHE:CD2	10:J:55:LYS:HD3	2.25	0.71
10:J:6:ILE:HD11	10:J:23:ILE:HG21	1.72	0.71
4:D:163:GLU:O	4:D:166:LYS:HG2	1.90	0.71
22:V:20:U:H3'	22:V:21:A:H5'	1.73	0.71
13:M:4:ILE:N	13:M:4:ILE:HD12	2.05	0.71
25:Z:272:MET:HE3	25:Z:284:ASP:HB2	1.72	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Z:19:HIS:HD2	25:Z:20:VAL:O	1.73	0.71
12:L:24:VAL:HG12	12:L:24:VAL:O	1.91	0.71
1:A:660:G:OP2	15:O:5:LYS:HE2	1.91	0.71
7:G:65:ALA:HB1	7:G:127:ALA:HB3	1.70	0.71
25:Z:274:ARG:HH11	25:Z:274:ARG:CG	2.03	0.71
1:A:8:A:N6	4:D:208:SER:HB2	2.05	0.71
1:A:731:G:OP1	1:A:766:A:H1'	1.90	0.71
24:Y:76:A:C5	25:Z:271:GLU:CD	2.64	0.71
5:E:7:GLU:O	5:E:8:GLU:HB3	1.90	0.71
25:Z:355:LEU:CB	25:Z:356:PRO:CD	2.60	0.71
10:J:54:PHE:CG	10:J:55:LYS:HD3	2.26	0.71
6:F:62:TRP:C	6:F:63:TYR:HD1	1.94	0.71
1:A:194:C:H2'	1:A:195:A:H5''	1.73	0.70
25:Z:323:LEU:H	25:Z:323:LEU:HD12	1.56	0.70
24:Y:8:4SU:H6	24:Y:8:4SU:H5''	1.73	0.70
9:I:92:TYR:O	9:I:96:LEU:HB2	1.91	0.70
15:O:71:GLN:O	15:O:71:GLN:HG2	1.89	0.70
24:Y:76:A:N7	25:Z:271:GLU:OE1	2.25	0.70
16:P:20:VAL:HG21	16:P:32:TYR:CB	2.22	0.70
4:D:78:LEU:HD22	4:D:96:LEU:HB3	1.73	0.70
1:A:1347:G:H2'	9:I:108:VAL:O	1.91	0.70
14:N:57:ARG:HH11	14:N:57:ARG:CB	2.04	0.70
25:Z:88:TYR:N	25:Z:88:TYR:HD1	1.89	0.70
3:C:25:GLY:C	3:C:27:LYS:H	1.94	0.70
22:V:20:U:H3'	22:V:21:A:C5'	2.21	0.70
4:D:43:HIS:O	4:D:45:GLN:N	2.24	0.70
19:S:62:ILE:HD12	19:S:66:MET:HG3	1.73	0.70
2:B:118:LEU:HB3	2:B:142:LEU:HD12	1.71	0.70
7:G:22:LEU:HD23	7:G:22:LEU:O	1.91	0.70
24:Y:77:TRP:HB2	25:Z:285:ASN:HB3	1.73	0.70
25:Z:164:PRO:O	25:Z:167:GLU:HG3	1.91	0.70
1:A:265:G:H5'	17:Q:64:PRO:O	1.91	0.70
25:Z:195:TRP:C	25:Z:197:ASP:H	1.94	0.70
1:A:176:C:H2'	1:A:177:C:H6	1.57	0.70
1:A:382:A:H2'	1:A:383:A:H8	1.56	0.70
25:Z:64:ASN:ND2	25:Z:64:ASN:N	2.36	0.70
19:S:29:ARG:HD2	19:S:30:LEU:H	1.57	0.70
19:S:45:VAL:HA	19:S:62:ILE:HG13	1.73	0.70
16:P:43:LYS:HA	16:P:48:TRP:HB3	1.71	0.70
15:O:27:VAL:O	15:O:31:LEU:HD13	1.92	0.70
3:C:26:LYS:H	3:C:26:LYS:CE	2.03	0.70
7:G:78:ARG:HG3	7:G:79:ARG:N	2.07	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:63:ARG:O	5:E:64:ARG:HB2	1.91	0.70
3:C:150:LYS:HG3	3:C:169:ALA:HB2	1.74	0.70
1:A:858:G:H8	1:A:858:G:C5'	2.05	0.69
8:H:112:LEU:N	8:H:112:LEU:HD23	2.06	0.69
3:C:95:THR:HG22	3:C:95:THR:O	1.90	0.69
9:I:19:LEU:HD21	9:I:59:PHE:CD2	2.28	0.69
22:W:38:A:C2'	22:W:39:U:H5''	2.22	0.69
25:Z:193:ASN:C	25:Z:195:TRP:N	2.45	0.69
19:S:42:PRO:O	19:S:44:MET:SD	2.50	0.69
1:A:559:A:P	5:E:126:ARG:HH22	2.16	0.69
6:F:43:LEU:H	6:F:43:LEU:HD22	1.57	0.69
6:F:45:LEU:H	6:F:59:TYR:HA	1.56	0.69
6:F:87:ARG:HH11	6:F:87:ARG:HG2	1.56	0.69
2:B:30:ARG:HH21	2:B:194:PRO:HG2	1.57	0.69
3:C:16:ARG:NH1	3:C:16:ARG:HB2	2.05	0.69
21:U:8:THR:O	21:U:12:LYS:HB2	1.92	0.69
19:S:49:ILE:H	19:S:49:ILE:HD12	1.58	0.69
1:A:1134:G:H2'	1:A:1135:U:H5'	1.73	0.69
15:O:17:ARG:NH1	15:O:77:ARG:NH1	2.40	0.69
25:Z:191:GLY:N	25:Z:197:ASP:OD1	2.26	0.69
13:M:22:ILE:HG21	13:M:66:LEU:HD23	1.74	0.69
1:A:149:A:H2'	1:A:150:C:C6	2.28	0.69
25:Z:324:LYS:HB2	25:Z:326:GLU:HG2	1.73	0.69
1:A:633:G:H5'	1:A:634:C:OP2	1.93	0.69
24:Y:61:C:C2'	24:Y:62:U:H5''	2.22	0.69
24:Y:76:A:OP2	25:Z:274:ARG:HG2	1.92	0.69
9:I:43:ALA:HA	9:I:74:ILE:HD13	1.72	0.69
1:A:1486:G:H2'	1:A:1487:G:O4'	1.93	0.69
3:C:79:ARG:HH11	3:C:79:ARG:HB2	1.58	0.69
14:N:6:LEU:HB3	14:N:23:ARG:NH2	2.08	0.69
20:T:72:LEU:O	20:T:73:HIS:O	2.10	0.69
6:F:25:ILE:HD13	6:F:25:ILE:O	1.91	0.69
2:B:157:ARG:HB3	2:B:157:ARG:NH1	2.08	0.69
21:U:3:LYS:HD3	21:U:14:TRP:CD1	2.28	0.69
25:Z:326:GLU:H	25:Z:326:GLU:CD	1.96	0.69
3:C:5:ILE:N	3:C:5:ILE:CD1	2.54	0.69
3:C:70:VAL:HG12	3:C:72:LYS:H	1.57	0.69
13:M:3:ARG:NH2	13:M:7:VAL:HG13	2.06	0.69
25:Z:126:VAL:HG12	25:Z:126:VAL:O	1.93	0.68
9:I:53:VAL:HG13	9:I:95:LYS:HZ1	1.57	0.68
25:Z:176:LEU:HD13	27:Z:1406:GDP:O2'	1.93	0.68
1:A:255:G:OP1	17:Q:69:LYS:HE2	1.93	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Z:191:GLY:CA	25:Z:197:ASP:OD1	2.40	0.68
25:Z:63:ILE:HA	25:Z:88:TYR:HE2	1.58	0.68
9:I:114:TYR:HE2	10:J:59:SER:HA	1.57	0.68
24:Y:6:C:O2'	24:Y:7:G:H5'	1.93	0.68
3:C:30:ARG:HH21	3:C:31:HIS:CE1	2.11	0.68
16:P:53:VAL:HG23	16:P:54:GLU:N	2.07	0.68
25:Z:151:GLU:HG2	25:Z:155:ARG:HE	1.58	0.68
14:N:57:ARG:NH1	14:N:57:ARG:CB	2.57	0.68
11:K:126:ARG:HB3	11:K:126:ARG:NH1	2.08	0.68
1:A:1129:C:N4	1:A:1135:U:H3	1.91	0.68
1:A:1368:G:OP2	9:I:112:LYS:HD3	1.93	0.68
1:A:1468:A:H2'	1:A:1469:G:O4'	1.93	0.68
24:Y:24:G:O2'	24:Y:25:C:H5''	1.93	0.68
5:E:12:LEU:HD23	5:E:13:ILE:N	2.09	0.68
1:A:954:G:H4'	13:M:120:LYS:HD2	1.76	0.68
13:M:83:ASP:CG	13:M:84:ILE:H	1.97	0.68
1:A:41:G:H2'	1:A:42:G:C8	2.28	0.68
8:H:18:ARG:CA	8:H:18:ARG:HH11	2.05	0.68
22:W:38:A:H3'	22:W:39:U:H5''	1.75	0.68
12:L:24:VAL:HG13	12:L:98:TYR:HE2	1.57	0.68
1:A:17:U:H2'	1:A:18:C:C6	2.29	0.68
4:D:129:ASN:ND2	4:D:145:GLU:H	1.91	0.68
1:A:1048:G:OP1	14:N:4:LYS:HB2	1.94	0.68
1:A:382:A:H2'	1:A:383:A:C8	2.28	0.68
25:Z:187:LYS:N	25:Z:187:LYS:HD2	2.08	0.68
1:A:961:U:HO2'	1:A:962:C:H6	1.40	0.68
22:W:38:A:H2'	22:W:39:U:C5'	2.24	0.68
20:T:57:ARG:HH11	20:T:102:GLY:CA	2.00	0.68
25:Z:251:ASP:O	25:Z:267:VAL:HG12	1.94	0.68
13:M:97:PRO:HA	13:M:110:ARG:HD3	1.74	0.68
1:A:1525:G:O2'	1:A:1526:G:H5'	1.94	0.68
1:A:358:U:H2'	1:A:359:U:H6	1.56	0.68
1:A:1439:C:N4	1:A:1462:G:N1	2.38	0.68
16:P:70:ALA:O	16:P:74:LEU:HD12	1.94	0.68
1:A:1216:G:OP1	14:N:2:ALA:HB3	1.94	0.68
13:M:5:ALA:HB2	13:M:66:LEU:HD23	1.76	0.68
1:A:1282:C:O2'	1:A:1283:G:H5'	1.93	0.68
1:A:250:A:H4'	1:A:251:G:O5'	1.94	0.68
25:Z:7:ARG:O	25:Z:8:THR:HG22	1.95	0.67
12:L:45:PRO:HG3	12:L:53:ARG:HD3	1.75	0.67
1:A:1492:A:OP1	12:L:47:LYS:HG2	1.95	0.67
25:Z:72:THR:HG22	25:Z:203:LEU:HD21	1.76	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:176:C:H2'	1:A:177:C:C6	2.30	0.67
1:A:1131:G:H1	1:A:1143:G:H21	1.42	0.67
1:A:1250:A:H4'	9:I:68:GLY:N	2.09	0.67
2:B:42:ILE:HD12	2:B:202:PRO:HB2	1.77	0.67
11:K:84:VAL:HG23	11:K:110:ASP:HA	1.76	0.67
1:A:865:A:H2	1:A:918:A:H4'	1.58	0.67
25:Z:271:GLU:HG2	25:Z:276:THR:HA	1.76	0.67
4:D:107:ARG:HH21	4:D:194:LEU:HD12	1.58	0.67
10:J:61:GLU:OE2	14:N:58:LYS:HE2	1.95	0.67
25:Z:195:TRP:O	25:Z:197:ASP:N	2.28	0.67
1:A:80:G:N1	1:A:90:U:H5'	2.10	0.67
22:V:52:G:H1	22:V:62:C:H42	1.39	0.67
10:J:9:ARG:HG3	10:J:69:ASN:OD1	1.95	0.67
17:Q:53:LEU:HD23	17:Q:54:GLY:N	2.10	0.67
1:A:1124:G:H5'	10:J:35:SER:HB2	1.76	0.67
25:Z:313:HIS:HB2	25:Z:380:LEU:HD12	1.77	0.67
1:A:1280:A:O2'	1:A:1281:U:OP1	2.12	0.67
1:A:706:A:C4'	11:K:29:ILE:HD11	2.24	0.67
1:A:266:G:H5''	1:A:267:C:H5	1.58	0.67
4:D:124:GLY:O	4:D:126:ILE:N	2.28	0.67
1:A:356:A:H2'	1:A:357:G:H8	1.60	0.67
12:L:110:VAL:H	12:L:122:THR:CG2	2.08	0.67
1:A:1534:A:H62	23:X:12:A:H2	1.42	0.67
2:B:131:PRO:HG2	2:B:134:GLU:HG2	1.77	0.67
7:G:57:GLU:O	7:G:60:LYS:HB3	1.95	0.67
17:Q:59:ILE:HG22	17:Q:71:PHE:HB3	1.76	0.66
10:J:75:ILE:HG13	10:J:76:ASN:H	1.59	0.66
11:K:85:ARG:HG2	11:K:111:ASP:O	1.95	0.66
1:A:1003:G:H2'	1:A:1004:A:C4'	2.18	0.66
9:I:88:TYR:O	9:I:89:ASN:HB2	1.96	0.66
25:Z:149:LEU:O	25:Z:152:MET:HB3	1.96	0.66
5:E:53:LEU:HD12	5:E:53:LEU:H	1.60	0.66
6:F:11:ASN:HB3	6:F:14:LEU:HD23	1.77	0.66
1:A:1314:C:OP2	19:S:6:LYS:HG3	1.96	0.66
1:A:1316:G:N2	1:A:1318:A:H3'	2.10	0.66
4:D:200:GLU:HG2	4:D:201:GLN:H	1.60	0.66
2:B:44:LEU:H	2:B:44:LEU:HD12	1.61	0.66
24:Y:76:A:C8	25:Z:271:GLU:OE1	2.48	0.66
13:M:87:TYR:HD1	19:S:81:ARG:HH22	1.43	0.66
7:G:38:LEU:HD12	7:G:38:LEU:O	1.95	0.66
25:Z:163:PHE:CD1	25:Z:164:PRO:HD2	2.29	0.66
25:Z:309:SER:O	25:Z:310:ILE:HG22	1.95	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:W:38:A:C3'	22:W:39:U:H5''	2.26	0.66
4:D:129:ASN:HD21	4:D:145:GLU:H	1.42	0.66
16:P:8:ARG:HB3	16:P:28:ARG:NH1	2.11	0.66
11:K:59:TYR:CZ	11:K:63:LEU:HD11	2.30	0.66
1:A:1318:A:H1'	19:S:37:ARG:HH21	1.61	0.66
25:Z:134:PHE:CD1	25:Z:202:LEU:HD22	2.30	0.66
24:Y:72:U:C3'	24:Y:73:G:H5''	2.25	0.66
24:Y:66:C:H2'	24:Y:67:G:C8	2.30	0.66
12:L:33:ARG:HD3	12:L:62:SER:HB3	1.78	0.66
1:A:186:C:H2'	1:A:187:C:C6	2.29	0.66
2:B:18:GLY:H	2:B:42:ILE:HG23	1.60	0.66
9:I:95:LYS:HZ2	9:I:96:LEU:HD13	1.61	0.66
1:A:713:G:H2'	1:A:714:G:C8	2.30	0.66
1:A:953:G:C5'	1:A:965:A:H61	2.09	0.66
2:B:44:LEU:HA	2:B:47:THR:HB	1.76	0.66
25:Z:26:THR:HG23	27:Z:1406:GDP:O2A	1.95	0.66
1:A:1125:U:H5''	1:A:1126:U:H5	1.61	0.66
10:J:38:ILE:CG1	10:J:71:LEU:HB3	2.26	0.66
24:Y:77:TRP:N	25:Z:273:HIS:H	1.93	0.65
17:Q:5:VAL:HG22	17:Q:60:ILE:HD12	1.77	0.65
1:A:45:U:H2'	1:A:46:G:H8	1.62	0.65
19:S:43:GLU:C	19:S:45:VAL:H	2.00	0.65
13:M:80:ARG:O	13:M:83:ASP:HB3	1.96	0.65
1:A:1285:A:H4'	1:A:1286:A:O5'	1.96	0.65
13:M:12:ASN:HD22	13:M:12:ASN:H	1.44	0.65
1:A:1104:G:O5'	2:B:111:ARG:HD2	1.97	0.65
12:L:39:VAL:HG12	12:L:57:LYS:HB3	1.77	0.65
11:K:57:THR:HG23	11:K:60:ALA:H	1.59	0.65
9:I:4:TYR:CE2	9:I:88:TYR:HB2	2.31	0.65
12:L:33:ARG:HG2	12:L:60:LEU:HD12	1.78	0.65
11:K:27:ASN:HD22	11:K:28:THR:N	1.92	0.65
1:A:1250:A:H4'	9:I:68:GLY:H	1.60	0.65
25:Z:27:LEU:HD12	25:Z:31:LEU:HG	1.76	0.65
12:L:110:VAL:CG2	12:L:120:TYR:HB3	2.26	0.65
3:C:5:ILE:HG12	3:C:10:PHE:HB2	1.77	0.65
22:W:30:G:H2'	22:W:31:A:H8	1.61	0.65
3:C:26:LYS:HE3	3:C:26:LYS:N	2.10	0.65
24:Y:61:C:H2'	24:Y:62:U:H5''	1.79	0.65
1:A:1157:A:H4'	1:A:1158:C:O5'	1.96	0.65
13:M:2:ALA:O	13:M:9:ILE:HA	1.97	0.65
13:M:10:PRO:HB3	13:M:18:ALA:HB1	1.79	0.65
1:A:1321:C:H5''	1:A:1322:C:C5'	2.26	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:51:VAL:HB	5:E:52:PRO:HD3	1.77	0.65
9:I:28:VAL:HG22	9:I:63:ILE:HB	1.79	0.65
2:B:119:GLU:O	2:B:122:PHE:HB3	1.96	0.65
1:A:1513:A:H2'	1:A:1514:C:C6	2.32	0.65
12:L:79:GLU:O	12:L:80:HIS:HB2	1.95	0.65
1:A:673:G:H2'	1:A:674:G:C8	2.30	0.65
3:C:16:ARG:CB	3:C:16:ARG:HH11	2.09	0.65
25:Z:107:SER:OG	25:Z:137:LYS:HD2	1.97	0.65
25:Z:88:TYR:N	25:Z:88:TYR:CD1	2.61	0.65
3:C:94:LEU:O	3:C:95:THR:HB	1.96	0.65
25:Z:270:VAL:HG13	25:Z:286:VAL:HG21	1.78	0.65
25:Z:324:LYS:HD3	25:Z:365:GLY:HA3	1.77	0.65
1:A:1065:U:H6	1:A:1190:G:H21	1.44	0.65
10:J:46:ARG:HH11	10:J:46:ARG:HG2	1.62	0.65
1:A:358:U:C4'	25:Z:234:ARG:C	2.61	0.65
25:Z:131:ILE:O	25:Z:168:VAL:HG13	1.96	0.65
11:K:38:ASN:HD22	11:K:38:ASN:N	1.95	0.65
4:D:59:ARG:HH21	4:D:62:GLN:HG3	1.62	0.65
16:P:20:VAL:HG21	16:P:32:TYR:CG	2.32	0.65
1:A:1325:C:P	21:U:15:ARG:NH2	2.70	0.65
2:B:96:ARG:HD3	2:B:148:TYR:HE1	1.62	0.65
22:V:42:C:C5'	22:V:42:C:H6	2.05	0.65
1:A:359:U:P	25:Z:235:GLY:HA2	2.37	0.65
5:E:144:THR:O	5:E:148:VAL:HG23	1.96	0.65
25:Z:152:MET:HE2	25:Z:156:ASP:HB2	1.79	0.65
18:R:58:LEU:HD22	18:R:62:GLU:HB3	1.79	0.65
1:A:405:U:H3'	1:A:406:G:H5'	1.79	0.65
24:Y:10:G:H1	24:Y:25:C:N4	1.95	0.64
13:M:9:ILE:N	13:M:9:ILE:HD12	2.12	0.64
24:Y:61:C:H2'	24:Y:62:U:C5'	2.27	0.64
1:A:882:C:O2'	1:A:883:C:H5'	1.97	0.64
1:A:950:U:H2'	1:A:951:G:C8	2.31	0.64
3:C:23:TYR:CD1	3:C:24:ALA:N	2.65	0.64
13:M:54:VAL:O	13:M:58:GLU:HG2	1.98	0.64
2:B:200:ILE:CD1	2:B:200:ILE:H	1.99	0.64
1:A:977:A:H2'	1:A:977:A:N3	2.11	0.64
24:Y:40:C:C2'	24:Y:41:C:H5''	2.26	0.64
1:A:723:U:O2	1:A:723:U:H2'	1.96	0.64
22:W:1:G:N3	22:W:1:G:H2'	2.11	0.64
14:N:23:ARG:HD2	14:N:28:GLY:O	1.98	0.64
1:A:953:G:H5'	1:A:965:A:H61	1.61	0.64
8:H:19:VAL:HG23	8:H:21:LYS:HG3	1.80	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:33:GLN:HB2	10:J:75:ILE:CD1	2.27	0.64
4:D:3:ARG:HH11	4:D:118:ARG:HD3	1.61	0.64
21:U:6:ARG:CD	21:U:15:ARG:NH1	2.60	0.64
22:W:6:G:N2	22:W:67:C:N3	2.44	0.64
1:A:950:U:H2'	1:A:951:G:H8	1.63	0.64
3:C:134:ILE:O	3:C:138:VAL:HG12	1.96	0.64
10:J:40:LEU:N	10:J:40:LEU:HD23	2.11	0.64
5:E:33:VAL:HG12	5:E:112:LEU:HD12	1.78	0.64
17:Q:18:THR:HG23	17:Q:69:LYS:NZ	2.12	0.64
1:A:108:G:H5'	1:A:109:A:H5''	1.80	0.64
1:A:358:U:C5'	25:Z:234:ARG:O	2.45	0.64
24:Y:72:U:C2'	24:Y:73:G:H5''	2.28	0.64
10:J:49:VAL:HG22	14:N:41:ARG:HB2	1.79	0.64
5:E:7:GLU:HG2	5:E:112:LEU:HD21	1.79	0.64
1:A:260:G:H2'	1:A:261:U:C6	2.33	0.64
1:A:1239:A:H4'	1:A:1240:U:O5'	1.98	0.64
1:A:1499:A:H1'	1:A:1520:G:H5'	1.80	0.64
4:D:98:GLU:HG2	4:D:189:PRO:HG3	1.80	0.64
1:A:1412:C:H2'	1:A:1413:A:C8	2.33	0.64
18:R:53:ARG:HH11	18:R:60:ALA:HA	1.62	0.64
24:Y:24:G:H2'	24:Y:25:C:H5'	1.80	0.64
24:Y:64:U:H4'	25:Z:392:GLY:H	1.61	0.64
7:G:6:ARG:HH21	7:G:94:ARG:HH12	1.43	0.64
1:A:473:G:H5''	16:P:81:ARG:NE	2.13	0.64
12:L:43:VAL:CG2	12:L:93:LEU:HD22	2.28	0.64
2:B:155:LEU:HD21	2:B:159:PRO:HG3	1.80	0.64
6:F:19:LEU:O	6:F:19:LEU:HD23	1.98	0.64
25:Z:90:LYS:HE3	25:Z:348:ASP:OD2	1.97	0.64
20:T:30:LYS:HD3	20:T:72:LEU:HD21	1.80	0.64
21:U:6:ARG:CZ	21:U:15:ARG:CZ	2.76	0.64
25:Z:145:GLU:OE2	25:Z:149:LEU:HD22	1.98	0.64
22:W:38:A:H2'	22:W:39:U:C4'	2.27	0.64
1:A:1217:C:OP1	14:N:9:LYS:HE3	1.98	0.64
1:A:1310:G:O2'	1:A:1311:G:H5'	1.97	0.64
3:C:16:ARG:HD3	3:C:17:ASP:H	1.63	0.63
1:A:963:G:H21	10:J:55:LYS:NZ	1.95	0.63
11:K:121:PRO:HG2	11:K:126:ARG:CB	2.28	0.63
1:A:189(H):G:O2'	1:A:189(I):G:H8	1.81	0.63
4:D:148:VAL:HG12	4:D:152:SER:HB2	1.79	0.63
1:A:487:A:H2'	1:A:488:C:O4'	1.97	0.63
22:V:47:U:H3'	22:V:48:C:H5'	1.80	0.63
2:B:114:ARG:HD3	2:B:114:ARG:O	1.99	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:115:LEU:HD13	2:B:145:LEU:HB3	1.78	0.63
1:A:346:G:H2'	1:A:346:G:N3	2.13	0.63
1:A:624:C:H2'	1:A:625:G:H8	1.64	0.63
5:E:101:ILE:O	5:E:120:THR:HB	1.99	0.63
20:T:50:GLU:H	20:T:99:LEU:HD12	1.64	0.63
3:C:32:LEU:HD22	3:C:59:ARG:NH1	2.12	0.63
13:M:87:TYR:HD1	19:S:81:ARG:NH2	1.96	0.63
16:P:18:ARG:HD3	16:P:35:LYS:HD2	1.80	0.63
24:Y:57:G:H2'	24:Y:58:A:H5'	1.80	0.63
6:F:97:PHE:O	18:R:31:LEU:HD23	1.98	0.63
12:L:110:VAL:HG23	12:L:120:TYR:HB3	1.81	0.63
25:Z:34:VAL:HG21	25:Z:199:ILE:HG21	1.79	0.63
10:J:29:ARG:O	10:J:30:SER:HB3	1.99	0.63
20:T:91:LEU:O	20:T:94:ALA:HB3	1.99	0.63
9:I:118:LYS:O	9:I:119:ALA:HB3	1.99	0.63
24:Y:16:H2U:H5'	24:Y:17:H2U:C5'	2.28	0.63
1:A:1228:C:OP1	13:M:115:LYS:HE3	1.99	0.63
1:A:1306:A:N6	1:A:1331:G:H1'	2.14	0.63
25:Z:234:ARG:O	25:Z:289:LEU:HD11	1.98	0.63
12:L:77:LEU:HD21	12:L:107:ALA:HA	1.81	0.63
24:Y:62:U:H5'	24:Y:62:U:H6	1.62	0.63
25:Z:187:LYS:HD2	25:Z:187:LYS:H	1.64	0.63
25:Z:9:LYS:HZ3	25:Z:73:ALA:C	2.01	0.63
1:A:452:A:O2'	1:A:453:A:H8	1.80	0.63
25:Z:267:VAL:HG23	25:Z:288:VAL:HG13	1.80	0.63
16:P:25:ARG:HG3	16:P:25:ARG:HH11	1.62	0.63
7:G:23:VAL:HG13	7:G:43:PHE:CE2	2.33	0.63
11:K:57:THR:CG2	11:K:60:ALA:H	2.11	0.63
11:K:33:THR:HG22	11:K:39:PRO:HA	1.79	0.63
7:G:7:ALA:O	7:G:8:GLU:HB2	1.99	0.63
24:Y:70:C:C2'	24:Y:71:C:H5'	2.29	0.63
24:Y:3:G:H5'	24:Y:3:G:H8	1.64	0.63
16:P:67:THR:HB	16:P:70:ALA:HB2	1.80	0.63
25:Z:196:VAL:HG13	25:Z:196:VAL:O	1.99	0.63
3:C:34:LEU:O	3:C:38:ARG:HG2	1.98	0.63
12:L:55:VAL:HG23	12:L:68:ALA:O	1.99	0.63
13:M:108:ARG:NH1	13:M:108:ARG:HG3	2.08	0.63
10:J:32:ALA:HB1	10:J:75:ILE:HG13	1.80	0.63
22:W:31:A:N1	22:W:39:U:O4	2.31	0.63
14:N:23:ARG:NH1	14:N:30:ALA:HB2	2.14	0.63
1:A:1438:G:C8	1:A:1464:G:N2	2.67	0.62
16:P:25:ARG:NH1	16:P:25:ARG:HB2	2.13	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:T:45:GLN:HE22	20:T:46:GLU:CG	2.12	0.62
7:G:15:ASP:HB3	7:G:20:ASP:H	1.64	0.62
7:G:23:VAL:O	7:G:27:ILE:HG13	1.99	0.62
12:L:25:PRO:C	12:L:27:LEU:H	2.02	0.62
16:P:49:LEU:HD12	16:P:50:LYS:N	2.14	0.62
13:M:17:VAL:O	13:M:20:THR:HB	1.99	0.62
13:M:15:VAL:HG11	13:M:48:LEU:HD11	1.81	0.62
12:L:75:HIS:HA	12:L:102:ARG:NH2	2.13	0.62
16:P:20:VAL:CG2	16:P:32:TYR:HB2	2.29	0.62
25:Z:193:ASN:HB2	25:Z:196:VAL:HB	1.80	0.62
1:A:1142:G:H2'	1:A:1143:G:O4'	1.98	0.62
1:A:946:A:H2'	1:A:947:G:C8	2.34	0.62
1:A:979:C:H3'	1:A:980:C:C5'	2.23	0.62
1:A:1319:A:H5'	1:A:1320:C:OP1	1.99	0.62
1:A:977:A:C2'	1:A:977:A:N3	2.62	0.62
3:C:26:LYS:CD	3:C:26:LYS:H	2.13	0.62
25:Z:191:GLY:CA	25:Z:197:ASP:CG	2.67	0.62
22:W:68:C:H2'	22:W:69:G:C8	2.34	0.62
16:P:8:ARG:O	16:P:9:PHE:HD1	1.83	0.62
24:Y:2:G:OP1	25:Z:90:LYS:HB3	1.99	0.62
2:B:14:GLY:O	2:B:15:VAL:HG13	2.00	0.62
18:R:25:THR:C	18:R:26:LEU:HD12	2.20	0.62
1:A:1456:G:O2'	20:T:39:LYS:NZ	2.32	0.62
1:A:963:G:H21	10:J:55:LYS:HE2	1.64	0.62
1:A:376:G:H5''	16:P:5:ARG:HB2	1.81	0.62
13:M:83:ASP:OD1	13:M:84:ILE:N	2.32	0.62
3:C:52:LEU:HD21	3:C:55:VAL:HG23	1.82	0.62
24:Y:24:G:C2'	24:Y:25:C:C5'	2.65	0.62
4:D:109:GLY:O	4:D:111:ALA:N	2.32	0.62
1:A:963:G:N2	10:J:55:LYS:HE2	2.14	0.62
7:G:15:ASP:O	7:G:19:GLY:HA2	2.00	0.62
1:A:1030(D):A:H62	1:A:1031:G:H21	1.48	0.62
3:C:50:ALA:HB1	3:C:70:VAL:HG11	1.81	0.62
1:A:1277:C:O2'	1:A:1279:A:H8	1.83	0.62
3:C:34:LEU:HD22	3:C:38:ARG:NE	2.13	0.62
20:T:86:ARG:O	20:T:90:GLN:HG3	1.99	0.62
2:B:97:TRP:HH2	2:B:176:GLU:CD	2.02	0.62
1:A:942:G:H21	9:I:124:GLN:HE22	1.44	0.62
24:Y:2:G:H2'	24:Y:3:G:C5'	2.29	0.62
1:A:1258:G:O2'	1:A:1259:C:H5'	1.99	0.62
4:D:121:VAL:O	4:D:134:ASP:HA	1.99	0.62
3:C:91:LEU:HB2	3:C:99:VAL:HG21	1.82	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:865:A:C2	1:A:918:A:H4'	2.33	0.62
1:A:755:G:OP2	15:O:65:ARG:HD2	1.99	0.62
21:U:9:ARG:HH12	21:U:23:PRO:HD2	1.65	0.62
20:T:50:GLU:OE2	20:T:100:ILE:HD13	1.99	0.62
20:T:70:SER:HA	20:T:73:HIS:CD2	2.35	0.62
14:N:27:CYS:HG	26:1:5:ZN:ZN	1.11	0.62
2:B:87:ARG:HB3	2:B:87:ARG:HH11	1.64	0.62
6:F:30:LEU:HD23	6:F:35:ALA:HB3	1.81	0.62
13:M:116:THR:O	13:M:118:ALA:N	2.33	0.62
2:B:204:ASN:HD22	2:B:205:ASP:N	1.98	0.62
1:A:353:A:H5'	1:A:353:A:C8	2.30	0.62
22:W:44:G:H3'	22:W:45:U:C5	2.35	0.62
25:Z:202:LEU:O	25:Z:206:ILE:HB	2.00	0.62
2:B:134:GLU:C	2:B:136:VAL:H	2.01	0.62
2:B:172:ILE:H	2:B:172:ILE:CD1	2.11	0.61
1:A:323:U:O3'	20:T:22:ARG:HD3	1.99	0.61
25:Z:313:HIS:CB	25:Z:380:LEU:HD12	2.30	0.61
1:A:532:A:N6	1:A:1206:G:O2'	2.32	0.61
25:Z:68:VAL:HG22	25:Z:69:GLU:N	2.15	0.61
16:P:21:VAL:HG22	16:P:21:VAL:O	2.00	0.61
1:A:1129:C:H41	1:A:1135:U:H3	1.46	0.61
21:U:5:ASP:O	21:U:11:GLY:HA3	2.00	0.61
13:M:64:TRP:O	13:M:66:LEU:HD13	2.00	0.61
24:Y:76:A:N1	25:Z:271:GLU:HG3	2.15	0.61
1:A:473:G:H2'	1:A:474:G:H8	1.65	0.61
5:E:45:PHE:CE2	5:E:47:LYS:HD2	2.34	0.61
3:C:7:PRO:O	3:C:11:ARG:HG2	1.99	0.61
7:G:48:LYS:O	7:G:52:GLU:HG2	1.99	0.61
1:A:299:G:H2'	1:A:300:A:C8	2.35	0.61
25:Z:368:VAL:HG12	25:Z:369:THR:N	2.15	0.61
5:E:36:ASP:OD1	5:E:38:GLN:N	2.33	0.61
13:M:97:PRO:CA	13:M:110:ARG:HD3	2.29	0.61
10:J:38:ILE:HG13	10:J:71:LEU:HB3	1.82	0.61
16:P:64:ALA:O	16:P:66:PRO:HD3	2.01	0.61
6:F:77:ARG:HH11	6:F:77:ARG:HG2	1.64	0.61
1:A:358:U:C5'	25:Z:234:ARG:C	2.68	0.61
13:M:11:ARG:HG2	13:M:12:ASN:ND2	2.16	0.61
19:S:10:PHE:CE1	19:S:70:LYS:HE2	2.35	0.61
10:J:94:VAL:HG12	10:J:95:GLU:N	2.15	0.61
13:M:58:GLU:O	13:M:62:ASN:HB2	2.00	0.61
25:Z:222:LEU:HD11	25:Z:303:VAL:HB	1.81	0.61
5:E:81:GLU:HG2	5:E:90:VAL:HG22	1.82	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Z:215:ARG:HD2	25:Z:283:GLY:HA3	1.83	0.61
5:E:18:ARG:HH11	5:E:18:ARG:HG3	1.66	0.61
25:Z:8:THR:OG1	25:Z:9:LYS:N	2.33	0.61
20:T:66:ALA:HB1	20:T:71:THR:HB	1.82	0.61
1:A:1347:G:N2	1:A:1373:G:H2'	2.16	0.61
22:W:68:C:H2'	22:W:69:G:H8	1.65	0.61
3:C:35:GLU:HG3	3:C:95:THR:OG1	1.99	0.61
2:B:215:LEU:O	2:B:219:VAL:HG23	2.00	0.61
21:U:6:ARG:CZ	21:U:15:ARG:NH2	2.63	0.61
24:Y:41:C:H5'	24:Y:41:C:C6	2.33	0.61
9:I:126:SER:O	9:I:128:ARG:HD2	2.01	0.61
19:S:24:ALA:O	19:S:25:LYS:HB2	2.00	0.61
1:A:1169:A:H2'	1:A:1170:A:C8	2.35	0.61
2:B:17:PHE:O	2:B:18:GLY:O	2.17	0.61
15:O:6:GLU:OE1	15:O:6:GLU:N	2.33	0.61
22:V:44:G:C3'	22:V:45:U:H5'	2.30	0.61
9:I:48:GLU:N	9:I:49:PRO:HD2	2.15	0.61
1:A:1256:A:H2	1:A:1277:C:H2'	1.65	0.61
1:A:542:G:OP1	4:D:10:ARG:NH2	2.33	0.61
16:P:9:PHE:HE2	16:P:18:ARG:CZ	2.14	0.61
1:A:96:U:H2'	1:A:97:G:C8	2.35	0.61
6:F:12:PRO:HG3	6:F:55:ASP:HB3	1.82	0.61
2:B:77:ALA:HB2	2:B:211:ILE:HD13	1.83	0.61
4:D:12:CYS:HA	4:D:19:LEU:CD1	2.29	0.61
10:J:34:VAL:HG22	10:J:74:ILE:HG22	1.82	0.61
21:U:6:ARG:NH1	21:U:15:ARG:NH2	2.48	0.61
3:C:139:GLN:NE2	3:C:170:GLN:HE22	1.99	0.61
1:A:657:G:O2'	1:A:658:G:H5'	2.01	0.60
1:A:636:U:H2'	1:A:637:G:H8	1.66	0.60
1:A:1438:G:N7	1:A:1464:G:N2	2.48	0.60
25:Z:143:ASP:OD2	25:Z:146:LEU:HB2	2.01	0.60
1:A:1086:U:H2'	1:A:1087:G:C5'	2.31	0.60
1:A:41:G:H2'	1:A:42:G:H8	1.64	0.60
1:A:738:C:H5''	6:F:69:GLU:HB2	1.82	0.60
1:A:202:U:H4'	1:A:203:U:OP2	2.01	0.60
2:B:80:ILE:HD12	2:B:80:ILE:H	1.66	0.60
1:A:1282:C:C2'	1:A:1283:G:H5'	2.31	0.60
2:B:44:LEU:HA	2:B:47:THR:CB	2.30	0.60
20:T:92:LEU:C	20:T:94:ALA:H	2.03	0.60
9:I:19:LEU:HD11	9:I:59:PHE:CD2	2.29	0.60
10:J:32:ALA:CB	10:J:76:ASN:HB2	2.31	0.60
8:H:44:PHE:CE2	8:H:109:ILE:HG21	2.37	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:I:40:LEU:C	9:I:42:ARG:H	2.04	0.60
17:Q:48:GLU:O	17:Q:49:GLU:C	2.39	0.60
25:Z:355:LEU:HD23	25:Z:370:PHE:CG	2.36	0.60
25:Z:355:LEU:CB	25:Z:356:PRO:HD3	2.20	0.60
3:C:50:ALA:O	3:C:70:VAL:HG13	2.01	0.60
19:S:45:VAL:HG23	19:S:46:GLY:N	2.16	0.60
13:M:116:THR:O	13:M:116:THR:HG22	2.01	0.60
17:Q:40:LYS:HD3	17:Q:42:TYR:CZ	2.36	0.60
4:D:88:VAL:O	4:D:92:VAL:HG23	2.01	0.60
4:D:100:ARG:O	4:D:104:VAL:HG23	2.01	0.60
1:A:255:G:H1'	17:Q:16:GLN:NE2	2.16	0.60
25:Z:139:ASP:CG	25:Z:177:LEU:HD11	2.21	0.60
1:A:1256:A:C2	1:A:1277:C:H2'	2.37	0.60
18:R:36:ASN:OD1	18:R:38:GLU:HG2	2.01	0.60
1:A:636:U:H2'	1:A:637:G:C8	2.36	0.60
1:A:955:U:O2'	1:A:956:U:H5'	2.02	0.60
1:A:266:G:C5'	1:A:267:C:C5	2.84	0.60
1:A:723:U:H3	1:A:1537:U:C2'	2.15	0.60
1:A:1313:U:OP2	19:S:6:LYS:HB3	2.02	0.60
25:Z:117:ARG:CD	25:Z:157:LEU:HD11	2.31	0.60
22:W:5:G:N2	22:W:68:C:O2	2.34	0.60
12:L:46:LYS:HG3	12:L:47:LYS:H	1.67	0.60
1:A:737:A:H2'	1:A:738:C:C6	2.36	0.60
10:J:48:THR:HG23	10:J:62:HIS:CD2	2.36	0.60
1:A:62:U:H2'	1:A:63:C:H5'	1.83	0.60
2:B:187:LEU:HD23	2:B:201:ILE:HG22	1.82	0.60
25:Z:152:MET:CE	25:Z:156:ASP:HB2	2.31	0.60
17:Q:67:LYS:O	17:Q:68:ARG:CB	2.49	0.60
4:D:126:ILE:HG22	4:D:127:THR:N	2.17	0.60
20:T:84:LEU:C	20:T:86:ARG:H	2.03	0.60
24:Y:16:H2U:H5'	24:Y:17:H2U:O5'	2.01	0.60
3:C:7:PRO:HG2	3:C:184:TYR:HB2	1.84	0.60
9:I:126:SER:O	9:I:127:LYS:HB3	2.02	0.60
25:Z:333:GLY:CA	25:Z:363:MET:HA	2.32	0.60
20:T:74:LYS:HG3	20:T:75:ASN:ND2	2.17	0.60
1:A:369:C:H6	1:A:369:C:H5'	1.67	0.60
25:Z:241:ARG:HB2	25:Z:285:ASN:ND2	2.17	0.60
12:L:102:ARG:HG2	12:L:102:ARG:NH1	2.15	0.60
1:A:1325:C:OP1	21:U:15:ARG:NH2	2.34	0.60
24:Y:40:C:H2'	24:Y:41:C:H5''	1.82	0.60
22:V:62:C:O2	22:V:62:C:H2'	2.00	0.60
14:N:23:ARG:HH11	14:N:30:ALA:HB2	1.67	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:59:TYR:CE1	11:K:63:LEU:HD11	2.36	0.60
2:B:82:ARG:O	2:B:86:GLU:HG3	2.01	0.60
18:R:73:ALA:HB3	18:R:79:LEU:HD12	1.84	0.60
10:J:8:LEU:HD22	10:J:96:ILE:HG22	1.84	0.60
4:D:30:LYS:C	4:D:32:ALA:H	2.05	0.59
10:J:75:ILE:HG13	10:J:76:ASN:N	2.17	0.59
24:Y:40:C:H2'	24:Y:41:C:C5'	2.32	0.59
1:A:542:G:H2'	1:A:543:C:H6	1.65	0.59
1:A:865:A:H5'	1:A:1078:U:O4	2.02	0.59
1:A:793:U:H3'	1:A:794:A:H5''	1.84	0.59
1:A:853:G:O2'	1:A:854:G:H5'	2.01	0.59
1:A:1117:G:H5'	1:A:1117:G:C8	2.34	0.59
22:W:39:U:O2	22:W:39:U:C5'	2.50	0.59
2:B:8:LYS:HB2	2:B:9:GLU:OE1	2.02	0.59
1:A:961:U:O2'	1:A:962:C:P	2.60	0.59
19:S:5:LEU:C	19:S:6:LYS:HD3	2.21	0.59
21:U:13:ILE:O	21:U:16:GLY:N	2.35	0.59
1:A:1296:C:H4'	1:A:1302:U:C5	2.37	0.59
7:G:115:ARG:O	7:G:118:VAL:HG22	2.02	0.59
8:H:56:LYS:HD2	8:H:56:LYS:N	2.16	0.59
14:N:32:SER:O	14:N:40:CYS:HA	2.02	0.59
1:A:1039:C:C6	1:A:1040:U:H5	2.20	0.59
21:U:6:ARG:NH1	21:U:15:ARG:HH22	2.00	0.59
25:Z:137:LYS:HA	27:Z:1406:GDP:HN1	1.67	0.59
25:Z:85:HIS:C	25:Z:87:ASP:H	2.04	0.59
4:D:18:LYS:HE3	4:D:31:CYS:HB2	1.84	0.59
2:B:172:ILE:HD12	2:B:172:ILE:N	2.14	0.59
16:P:67:THR:HG22	16:P:68:ASP:N	2.17	0.59
1:A:585:G:H4'	12:L:8:ASN:ND2	2.18	0.59
24:Y:16:H2U:H5'	24:Y:17:H2U:H5'	1.84	0.59
16:P:60:LEU:HD21	16:P:66:PRO:CG	2.31	0.59
25:Z:266:VAL:HB	25:Z:291:ARG:NH1	2.17	0.59
24:Y:1:A:H5'	25:Z:300:ARG:NH1	2.17	0.59
1:A:1064:G:N2	1:A:1190:G:H2'	2.18	0.59
25:Z:137:LYS:HE2	27:Z:1406:GDP:N3	2.17	0.59
1:A:260:G:H2'	1:A:261:U:H6	1.67	0.59
12:L:50:SER:O	12:L:51:ALA:HB2	2.03	0.59
2:B:111:ARG:HH11	2:B:111:ARG:HG2	1.67	0.59
25:Z:363:MET:HB3	25:Z:364:PRO:HD2	1.83	0.59
20:T:36:LEU:HD12	20:T:59:ALA:HB2	1.84	0.59
2:B:47:THR:HA	2:B:202:PRO:HG2	1.84	0.59
19:S:10:PHE:HE1	19:S:70:LYS:HE2	1.67	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:266:G:H5''	1:A:267:C:C5	2.36	0.59
7:G:46:ALA:O	7:G:50:ILE:HG12	2.02	0.59
25:Z:222:LEU:CD1	25:Z:303:VAL:HB	2.33	0.59
2:B:80:ILE:HD12	2:B:80:ILE:N	2.17	0.59
1:A:1330:U:H5'	1:A:1331:G:OP2	2.03	0.59
1:A:614:A:O2'	1:A:615:C:H5'	2.03	0.59
13:M:22:ILE:HB	13:M:25:ILE:HD12	1.85	0.59
25:Z:271:GLU:O	25:Z:286:VAL:HG23	2.02	0.59
12:L:20:LYS:HD3	12:L:20:LYS:N	2.14	0.59
13:M:15:VAL:HG12	13:M:45:VAL:HG22	1.84	0.59
1:A:838:G:C6	1:A:840:C:H1'	2.38	0.59
12:L:83:VAL:HG11	12:L:100:ILE:HD13	1.85	0.59
1:A:1497:G:H2'	1:A:1498:U:H5'	1.84	0.59
1:A:1190:G:OP1	3:C:5:ILE:HD12	2.02	0.59
6:F:87:ARG:HH11	6:F:87:ARG:CG	2.15	0.59
1:A:56:U:H2'	1:A:57:G:C8	2.37	0.59
17:Q:18:THR:HG23	17:Q:69:LYS:HZ3	1.67	0.59
7:G:70:LYS:HB3	7:G:96:GLN:HG2	1.85	0.59
1:A:192:U:O2'	20:T:57:ARG:HG3	2.03	0.58
1:A:924:C:H5'	1:A:1399:C:OP2	2.03	0.58
1:A:1325:C:P	21:U:15:ARG:HH21	2.25	0.58
1:A:1490:C:O2'	1:A:1491:G:H5'	2.03	0.58
1:A:1278:U:H5''	1:A:1279:A:O4'	2.02	0.58
1:A:187:C:O2	20:T:105:SER:HB3	2.04	0.58
1:A:344:A:H4'	1:A:345:C:OP1	2.03	0.58
11:K:105:VAL:O	11:K:105:VAL:HG23	2.02	0.58
4:D:16:GLY:O	4:D:33:MET:HE3	2.03	0.58
9:I:46:ALA:HB2	9:I:74:ILE:HG23	1.85	0.58
1:A:187:C:C2	20:T:105:SER:HB3	2.38	0.58
1:A:80:G:C2'	1:A:81:U:H5'	2.34	0.58
1:A:1240:U:OP1	7:G:116:ALA:HB2	2.03	0.58
15:O:3:ILE:O	15:O:3:ILE:HG13	2.03	0.58
2:B:47:THR:HG23	2:B:202:PRO:O	2.04	0.58
7:G:20:ASP:HB3	7:G:23:VAL:HG23	1.86	0.58
1:A:961:U:O2'	1:A:962:C:O5'	2.20	0.58
10:J:38:ILE:HD11	10:J:71:LEU:HB3	1.85	0.58
25:Z:333:GLY:HA3	25:Z:363:MET:HA	1.85	0.58
11:K:30:VAL:HG11	11:K:65:ALA:HA	1.85	0.58
1:A:242:C:H2'	1:A:243:A:H5'	1.86	0.58
1:A:358:U:H5''	25:Z:234:ARG:O	2.04	0.58
25:Z:19:HIS:CG	25:Z:115:GLN:HB2	2.37	0.58
1:A:1321:C:C3'	1:A:1322:C:H5''	2.33	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Z:101:GLY:HA3	25:Z:210:ILE:HD12	1.86	0.58
3:C:70:VAL:HG12	3:C:72:LYS:N	2.19	0.58
6:F:61:LEU:O	6:F:62:TRP:HB3	2.03	0.58
1:A:1275:A:O2'	1:A:1276:G:H5'	2.04	0.58
20:T:26:ASN:ND2	20:T:26:ASN:H	2.00	0.58
16:P:67:THR:HB	16:P:70:ALA:CB	2.33	0.58
13:M:82:MET:SD	13:M:83:ASP:N	2.76	0.58
18:R:26:LEU:CD2	18:R:39:VAL:HG13	2.34	0.58
1:A:1489:G:O2'	1:A:1490:C:H5'	2.04	0.58
21:U:22:ARG:HG2	21:U:22:ARG:NH1	2.14	0.58
25:Z:156:ASP:O	25:Z:160:GLN:HB3	2.04	0.58
25:Z:193:ASN:HB3	25:Z:196:VAL:H	1.68	0.58
9:I:111:ARG:HG2	9:I:112:LYS:N	2.17	0.58
24:Y:70:C:H2'	24:Y:71:C:H5'	1.85	0.58
15:O:74:ASP:OD1	15:O:76:GLU:HB3	2.04	0.58
1:A:434:U:H2'	1:A:435:C:C6	2.39	0.58
13:M:39:ILE:HD12	13:M:56:LEU:HD23	1.85	0.58
4:D:174:LEU:HD23	4:D:185:PHE:HA	1.86	0.58
7:G:16:LEU:CD1	9:I:42:ARG:HA	2.33	0.58
11:K:27:ASN:ND2	11:K:28:THR:N	2.51	0.58
1:A:1047:G:H5''	14:N:4:LYS:HG2	1.86	0.58
1:A:1356:G:H2'	1:A:1357:A:C8	2.38	0.58
1:A:1006:C:H2'	1:A:1007:C:C6	2.39	0.58
2:B:17:PHE:HD2	2:B:44:LEU:HD11	1.68	0.58
6:F:97:PHE:CD1	18:R:31:LEU:HD21	2.29	0.58
10:J:81:THR:HG23	10:J:82:ILE:H	1.67	0.58
16:P:71:ARG:HA	16:P:74:LEU:HD13	1.85	0.58
13:M:73:GLU:O	13:M:76:ALA:HB3	2.04	0.58
25:Z:362:VAL:O	25:Z:362:VAL:HG12	2.03	0.58
1:A:1347:G:C6	9:I:107:ARG:NH2	2.72	0.58
9:I:95:LYS:NZ	9:I:96:LEU:HD13	2.18	0.58
12:L:25:PRO:O	12:L:27:LEU:N	2.36	0.58
3:C:71:ALA:HA	3:C:106:VAL:HG22	1.86	0.58
2:B:155:LEU:HD22	2:B:157:ARG:O	2.04	0.58
1:A:961:U:O2'	1:A:962:C:H6	1.85	0.58
1:A:624:C:H2'	1:A:625:G:C8	2.39	0.58
2:B:92:TYR:HE2	2:B:94:ASN:ND2	2.02	0.57
12:L:102:ARG:HH11	12:L:110:VAL:HG22	1.67	0.57
13:M:49:THR:HB	13:M:52:GLU:HG3	1.85	0.57
8:H:86:ILE:HG21	8:H:133:LEU:HD23	1.86	0.57
25:Z:339:ARG:HE	25:Z:352:VAL:HG22	1.67	0.57
1:A:80:G:C3'	1:A:81:U:H5'	2.34	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1123:A:O2'	10:J:38:ILE:HG22	2.03	0.57
2:B:109:SER:C	2:B:111:ARG:H	2.06	0.57
1:A:1497:G:C2'	1:A:1498:U:H5'	2.35	0.57
1:A:1234:C:O2'	1:A:1235:U:H5'	2.03	0.57
3:C:116:VAL:HG21	3:C:202:ILE:HD11	1.86	0.57
25:Z:38:GLU:H	25:Z:38:GLU:CD	2.08	0.57
9:I:56:LEU:HD23	9:I:56:LEU:H	1.69	0.57
20:T:25:ARG:HG3	20:T:25:ARG:HH11	1.68	0.57
1:A:55:A:N1	25:Z:234:ARG:HD3	2.20	0.57
25:Z:301:GLY:HA2	25:Z:347:THR:OG1	2.03	0.57
17:Q:70:ARG:N	17:Q:70:ARG:HD2	2.19	0.57
24:Y:61:C:O2'	24:Y:62:U:H5''	2.04	0.57
25:Z:363:MET:HB3	25:Z:364:PRO:CD	2.33	0.57
10:J:96:ILE:H	10:J:96:ILE:HD13	1.68	0.57
4:D:70:ILE:HG22	4:D:71:SER:N	2.19	0.57
1:A:226:G:O2'	1:A:227:G:H5'	2.04	0.57
25:Z:69:GLU:HG2	25:Z:70:TYR:N	2.18	0.57
25:Z:20:VAL:HG12	25:Z:115:GLN:HG3	1.85	0.57
12:L:18:VAL:HG23	12:L:19:ARG:N	2.17	0.57
22:W:59:U:C2'	22:W:60:U:H5'	2.33	0.57
1:A:1151:A:HO2'	1:A:1152:A:H8	1.50	0.57
22:V:50:U:O2'	22:V:51:U:H5'	2.04	0.57
2:B:221:LEU:O	2:B:221:LEU:HD13	2.04	0.57
25:Z:195:TRP:CE3	25:Z:195:TRP:HA	2.39	0.57
1:A:1170:A:H2'	1:A:1171:G:O4'	2.05	0.57
2:B:101:MET:HA	2:B:108:ILE:HG13	1.86	0.57
3:C:92:ALA:O	3:C:96:GLY:HA2	2.03	0.57
9:I:47:LEU:HD12	9:I:47:LEU:H	1.68	0.57
25:Z:277:LEU:CD1	25:Z:278:GLN:N	2.65	0.57
1:A:1148:U:O3'	9:I:14:VAL:HG11	2.05	0.57
6:F:61:LEU:O	6:F:62:TRP:CB	2.53	0.57
25:Z:63:ILE:HA	25:Z:88:TYR:CE2	2.37	0.57
13:M:83:ASP:CG	13:M:84:ILE:N	2.57	0.57
1:A:1064:G:H21	1:A:1190:G:H2'	1.69	0.57
19:S:37:ARG:O	19:S:70:LYS:HD2	2.05	0.57
1:A:436:C:H2'	1:A:437:U:C6	2.39	0.57
25:Z:170:VAL:HG12	25:Z:170:VAL:O	2.03	0.57
25:Z:68:VAL:HG13	25:Z:69:GLU:H	1.69	0.57
2:B:72:GLY:O	2:B:94:ASN:HA	2.05	0.57
9:I:2:GLU:N	9:I:88:TYR:HH	2.01	0.57
14:N:57:ARG:HB3	14:N:57:ARG:NH1	2.19	0.57
7:G:37:ASN:HD21	9:I:40:LEU:HA	1.70	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Z:361:MET:HG3	25:Z:363:MET:HG3	1.86	0.57
1:A:562:C:H4'	1:A:563:A:H5'	1.85	0.57
9:I:4:TYR:HD2	9:I:87:GLN:HB3	1.70	0.57
16:P:5:ARG:HB3	16:P:67:THR:OG1	2.05	0.57
25:Z:143:ASP:HB3	25:Z:146:LEU:CB	2.35	0.57
13:M:82:MET:HB2	13:M:93:ARG:NH1	2.18	0.57
1:A:719:C:O2	18:R:50:ILE:HG12	2.05	0.57
25:Z:166:ASP:C	25:Z:167:GLU:HG2	2.25	0.57
12:L:24:VAL:CG1	12:L:27:LEU:HD22	2.34	0.57
24:Y:9:A:H2	24:Y:44:G:O2'	1.87	0.57
7:G:113:GLU:CG	7:G:119:ARG:HB3	2.35	0.57
19:S:45:VAL:HA	19:S:62:ILE:CG1	2.34	0.57
10:J:90:LEU:N	10:J:91:PRO:HD3	2.19	0.57
10:J:24:VAL:HG21	10:J:37:PRO:HG3	1.85	0.57
18:R:29:PHE:N	18:R:29:PHE:CD1	2.72	0.57
2:B:92:TYR:CE2	2:B:94:ASN:ND2	2.73	0.56
13:M:101:GLN:NE2	13:M:101:GLN:N	2.53	0.56
24:Y:65:C:H4'	25:Z:341:GLN:CD	2.25	0.56
25:Z:143:ASP:O	25:Z:147:LEU:HD23	2.04	0.56
25:Z:24:LYS:HZ3	27:Z:1406:GDP:PB	2.28	0.56
2:B:9:GLU:N	2:B:9:GLU:OE1	2.34	0.56
1:A:1134:G:C2'	1:A:1135:U:H5'	2.33	0.56
12:L:45:PRO:HD3	12:L:51:ALA:O	2.05	0.56
13:M:108:ARG:CG	13:M:108:ARG:HH11	2.18	0.56
16:P:28:ARG:HG2	16:P:29:ASP:OD1	2.05	0.56
6:F:15:ASP:OD2	6:F:17:SER:HB2	2.05	0.56
1:A:1211:U:H5'	1:A:1212:U:OP1	2.04	0.56
1:A:457:C:H2'	1:A:458:C:C6	2.40	0.56
1:A:148:G:H2'	1:A:149:A:H8	1.70	0.56
8:H:18:ARG:HH11	8:H:18:ARG:HA	1.68	0.56
1:A:189(J):G:O2'	1:A:189(K):U:H5'	2.06	0.56
22:W:11:C:O2'	22:W:12:U:H5'	2.05	0.56
25:Z:231:ILE:HG22	25:Z:231:ILE:O	2.05	0.56
1:A:1004:A:H2'	1:A:1005:A:H5'	1.86	0.56
25:Z:270:VAL:CG1	25:Z:286:VAL:HG21	2.34	0.56
10:J:40:LEU:HB2	10:J:41:PRO:HD2	1.87	0.56
25:Z:126:VAL:HG13	28:Z:1407:KIR:C47	2.35	0.56
20:T:45:GLN:NE2	20:T:46:GLU:HG3	2.20	0.56
1:A:59:A:H5'	1:A:60:A:H5''	1.87	0.56
4:D:170:VAL:HG12	4:D:171:GLY:N	2.19	0.56
22:W:39:U:H2'	22:W:40:C:H5'	1.87	0.56
22:W:30:G:H2'	22:W:31:A:C8	2.40	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1086:U:C2'	1:A:1087:G:H5'	2.32	0.56
1:A:1125:U:C6	1:A:1125:U:H3'	2.41	0.56
3:C:52:LEU:HD21	3:C:55:VAL:CG2	2.35	0.56
2:B:88:ALA:HB2	2:B:219:VAL:HG13	1.88	0.56
1:A:933:G:OP2	7:G:3:ARG:HB3	2.05	0.56
25:Z:311:THR:HB	25:Z:312:PRO:HD2	1.87	0.56
1:A:490:G:H2'	1:A:491:G:H8	1.70	0.56
14:N:13:THR:N	14:N:14:PRO:CD	2.66	0.56
10:J:4:ILE:HB	10:J:74:ILE:CD1	2.34	0.56
1:A:274:A:O2'	1:A:275:G:C8	2.54	0.56
1:A:1070:U:H2'	1:A:1071:C:C6	2.40	0.56
3:C:165:THR:O	3:C:165:THR:HG23	2.05	0.56
25:Z:279:GLU:HG2	25:Z:279:GLU:O	2.05	0.56
22:W:57:G:H2'	22:W:58:A:C5'	2.35	0.56
16:P:74:LEU:O	16:P:79:VAL:HG23	2.04	0.56
1:A:1127:G:O2'	1:A:1128:C:H5'	2.05	0.56
1:A:1128:C:O2'	1:A:1129:C:H5''	2.05	0.56
19:S:67:VAL:HG12	19:S:68:GLY:N	2.21	0.56
3:C:58:GLU:H	3:C:65:ALA:HB3	1.69	0.56
3:C:65:ALA:O	3:C:100:ALA:O	2.24	0.56
8:H:20:TYR:CE1	8:H:78:GLN:NE2	2.74	0.56
1:A:1039:C:H2'	1:A:1040:U:C5	2.39	0.56
24:Y:76:A:C2	25:Z:271:GLU:HG3	2.40	0.56
2:B:141:GLU:O	2:B:145:LEU:HD23	2.05	0.56
20:T:18:GLN:HG2	20:T:22:ARG:NH1	2.21	0.56
25:Z:164:PRO:CB	25:Z:167:GLU:OE2	2.53	0.56
2:B:109:SER:O	2:B:111:ARG:N	2.39	0.56
25:Z:75:ARG:HD2	25:Z:77:TYR:OH	2.05	0.56
12:L:75:HIS:CB	12:L:102:ARG:HH21	2.18	0.56
1:A:1116:C:C2'	1:A:1117:G:H5''	2.36	0.56
4:D:3:ARG:HG2	4:D:118:ARG:NE	2.21	0.56
25:Z:14:VAL:O	25:Z:79:HIS:HA	2.05	0.56
10:J:6:ILE:CD1	10:J:23:ILE:HG21	2.36	0.56
1:A:862:C:O2'	1:A:863:U:H5'	2.06	0.56
1:A:167:G:O2'	1:A:168:G:H5'	2.04	0.56
25:Z:358:GLY:C	25:Z:360:GLU:N	2.59	0.56
10:J:40:LEU:H	10:J:40:LEU:CD2	2.14	0.56
1:A:1320:C:H2'	1:A:1321:C:O4'	2.06	0.56
1:A:1158:C:C4	1:A:1160:G:H1'	2.40	0.56
1:A:475:G:O2'	1:A:476:G:H5'	2.06	0.56
4:D:132:ARG:O	4:D:132:ARG:HD2	2.06	0.56
13:M:6:GLY:HA3	13:M:67:GLU:OE2	2.05	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Z:272:MET:CG	25:Z:277:LEU:HD23	2.36	0.56
1:A:973:G:H1'	10:J:55:LYS:HE3	1.88	0.56
1:A:323:U:H5'	20:T:23:ARG:HB2	1.86	0.56
25:Z:158:LEU:O	25:Z:163:PHE:HB2	2.06	0.56
1:A:735:C:H2'	1:A:736:C:H6	1.71	0.56
8:H:17:THR:HB	8:H:78:GLN:OE1	2.06	0.56
1:A:1445:C:O2'	1:A:1446:U:H5'	2.06	0.56
22:W:18:G:H22	22:W:55:U:H6	1.52	0.56
25:Z:356:PRO:HB2	25:Z:359:VAL:CG2	2.36	0.55
1:A:1283:G:O2'	1:A:1284:C:P	2.64	0.55
5:E:10:MET:HB3	5:E:32:VAL:HG22	1.87	0.55
25:Z:324:LYS:HB2	25:Z:326:GLU:CG	2.36	0.55
9:I:40:LEU:HD11	9:I:70:LYS:CG	2.33	0.55
25:Z:313:HIS:CD2	25:Z:403:ILE:HD13	2.41	0.55
1:A:291:C:O2'	1:A:292:G:H5'	2.06	0.55
1:A:1004:A:H5''	1:A:1025:U:C2	2.40	0.55
13:M:101:GLN:H	13:M:101:GLN:NE2	1.96	0.55
17:Q:66:SER:OG	17:Q:69:LYS:HB2	2.07	0.55
13:M:120:LYS:HE3	13:M:121:LYS:H	1.70	0.55
25:Z:181:GLN:NE2	25:Z:193:ASN:ND2	2.54	0.55
1:A:1286:A:O2'	1:A:1287:A:H5''	2.06	0.55
1:A:429:U:H1'	1:A:430:A:H5''	1.88	0.55
7:G:102:ARG:O	7:G:106:GLN:HG3	2.05	0.55
13:M:2:ALA:HB1	13:M:4:ILE:HD11	1.89	0.55
1:A:858:G:C8	1:A:858:G:C5'	2.88	0.55
5:E:11:ILE:CG2	5:E:105:VAL:HG22	2.36	0.55
1:A:1392:G:O2'	1:A:1393:U:H5'	2.06	0.55
4:D:4:TYR:O	4:D:5:ILE:HB	2.06	0.55
22:W:73:A:H2'	22:W:74:C:H5''	1.88	0.55
4:D:121:VAL:HA	4:D:126:ILE:HD13	1.89	0.55
22:W:4:C:C4	22:W:5:G:O6	2.59	0.55
1:A:80:G:H3'	1:A:81:U:H5'	1.88	0.55
1:A:356:A:H2'	1:A:357:G:C8	2.40	0.55
1:A:447:G:H2'	1:A:485:G:N2	2.22	0.55
1:A:399:G:H2'	1:A:400:C:C6	2.42	0.55
4:D:59:ARG:HE	4:D:59:ARG:CA	2.06	0.55
7:G:28:ASN:OD1	7:G:36:LYS:HE2	2.05	0.55
22:W:72:C:H2'	22:W:73:A:O4'	2.07	0.55
9:I:11:LYS:O	9:I:11:LYS:HG2	2.05	0.55
11:K:20:TYR:CE2	11:K:83:ILE:HD12	2.42	0.55
25:Z:114:PRO:O	25:Z:117:ARG:HB2	2.07	0.55
10:J:4:ILE:N	10:J:4:ILE:HD12	2.21	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:S:29:ARG:HH11	19:S:30:LEU:HB2	1.71	0.55
13:M:90:LEU:HD12	19:S:81:ARG:HH21	1.71	0.55
1:A:1323:G:H2'	1:A:1324:A:C8	2.42	0.55
1:A:1072:G:H2'	1:A:1073:U:C6	2.41	0.55
1:A:1306:A:H61	1:A:1331:G:H1'	1.70	0.55
13:M:4:ILE:HD12	13:M:4:ILE:H	1.71	0.55
2:B:30:ARG:HG3	2:B:31:TYR:CD1	2.42	0.55
1:A:367:U:H4'	25:Z:291:ARG:CZ	2.36	0.55
11:K:18:ARG:HH21	11:K:36:ASP:C	2.08	0.55
25:Z:314:THR:HG23	25:Z:374:LEU:O	2.07	0.55
22:V:44:G:H3'	22:V:45:U:H5'	1.88	0.55
22:W:7:A:H5''	22:W:8:U:OP2	2.06	0.55
6:F:21:LEU:HD13	6:F:21:LEU:C	2.27	0.55
20:T:62:LEU:O	20:T:65:LYS:HB2	2.06	0.55
1:A:1330:U:H3'	1:A:1331:G:O4'	2.06	0.55
25:Z:5:PHE:C	25:Z:5:PHE:CD1	2.80	0.55
25:Z:168:VAL:O	25:Z:169:PRO:C	2.44	0.55
25:Z:177:LEU:O	25:Z:181:GLN:HG3	2.06	0.55
1:A:919:A:O2'	1:A:920:U:H5'	2.07	0.55
1:A:950:U:OP2	13:M:102:ARG:HD2	2.06	0.55
1:A:1007:C:O2'	1:A:1008:C:H5'	2.06	0.55
10:J:43:ARG:HB2	10:J:67:THR:HG23	1.89	0.55
4:D:59:ARG:NE	4:D:59:ARG:HA	2.11	0.55
5:E:12:LEU:HD21	5:E:14:ARG:HB3	1.89	0.55
25:Z:30:ALA:O	25:Z:34:VAL:HG23	2.06	0.55
2:B:42:ILE:HD13	2:B:203:GLY:HA2	1.89	0.55
21:U:17:THR:O	21:U:22:ARG:NH1	2.39	0.55
25:Z:219:LYS:HB3	25:Z:244:ARG:CD	2.35	0.55
15:O:31:LEU:O	15:O:35:ARG:HG3	2.07	0.55
2:B:229:VAL:HG12	2:B:230:VAL:N	2.21	0.55
1:A:1343:G:H2'	1:A:1344:C:C6	2.42	0.55
2:B:107:THR:O	2:B:110:GLN:HG2	2.07	0.55
5:E:38:GLN:OE1	5:E:38:GLN:HA	2.07	0.55
1:A:542:G:P	4:D:10:ARG:HH22	2.30	0.55
3:C:25:GLY:O	3:C:27:LYS:N	2.40	0.55
7:G:58:PRO:C	7:G:60:LYS:H	2.11	0.55
2:B:238:LEU:HG	2:B:239:VAL:N	2.22	0.55
2:B:144:ARG:HB2	2:B:144:ARG:HH11	1.72	0.55
25:Z:185:ASN:H	25:Z:185:ASN:HD22	1.55	0.55
13:M:6:GLY:O	13:M:8:GLU:N	2.40	0.54
25:Z:277:LEU:HD11	25:Z:280:GLY:H	1.72	0.54
19:S:16:LEU:O	19:S:19:VAL:N	2.40	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:W:9:A:C2	22:W:45:U:O4	2.55	0.54
19:S:31:ILE:CG2	19:S:49:ILE:HA	2.34	0.54
20:T:12:ALA:O	20:T:15:ARG:HB2	2.07	0.54
1:A:194:C:C2'	1:A:195:A:H5''	2.37	0.54
1:A:80:G:H3'	1:A:81:U:C5'	2.37	0.54
16:P:8:ARG:HB3	16:P:28:ARG:HH12	1.69	0.54
1:A:625:G:H2'	1:A:626:U:C6	2.42	0.54
6:F:30:LEU:HD23	6:F:30:LEU:O	2.06	0.54
1:A:736:C:H2'	1:A:737:A:C8	2.42	0.54
1:A:992:U:H4'	1:A:993:G:O5'	2.06	0.54
1:A:848:C:O2'	1:A:849:C:H5'	2.07	0.54
18:R:58:LEU:CD1	18:R:66:LEU:HD22	2.38	0.54
2:B:207:ALA:O	2:B:211:ILE:HG13	2.07	0.54
1:A:792:A:H4'	1:A:793:U:O5'	2.07	0.54
5:E:100:VAL:HG12	5:E:118:ILE:HG22	1.88	0.54
13:M:40:ASN:HD22	13:M:43:THR:HG23	1.72	0.54
2:B:39:ILE:HG22	2:B:40:HIS:N	2.22	0.54
4:D:159:ARG:HG3	4:D:159:ARG:HH11	1.71	0.54
16:P:53:VAL:CG2	16:P:54:GLU:H	2.17	0.54
1:A:1116:C:H2'	1:A:1117:G:H5''	1.88	0.54
10:J:38:ILE:CD1	10:J:71:LEU:HB3	2.37	0.54
25:Z:310:ILE:HG13	25:Z:381:GLU:HB2	1.90	0.54
25:Z:27:LEU:O	25:Z:27:LEU:HD12	2.07	0.54
25:Z:215:ARG:HG3	25:Z:215:ARG:HH11	1.73	0.54
22:V:44:G:H2'	22:V:45:U:H5'	1.89	0.54
1:A:841:U:H3'	1:A:848:C:O4'	2.07	0.54
4:D:157:LEU:N	4:D:157:LEU:HD12	2.22	0.54
25:Z:359:VAL:HG12	25:Z:362:VAL:CG2	2.37	0.54
25:Z:356:PRO:HB2	25:Z:359:VAL:HG21	1.90	0.54
1:A:384:G:H2'	1:A:385:C:C6	2.42	0.54
22:W:7:A:N6	22:W:49:C:H41	2.06	0.54
1:A:337:C:H2'	1:A:338:A:C8	2.42	0.54
19:S:22:LEU:O	19:S:22:LEU:HD13	2.07	0.54
4:D:95:GLY:HA3	4:D:188:LEU:HD21	1.90	0.54
1:A:1402:C:O2	1:A:1500:A:N1	2.41	0.54
8:H:119:LEU:HD12	8:H:124:ALA:CA	2.38	0.54
3:C:83:ARG:O	3:C:86:VAL:HG22	2.07	0.54
1:A:443:C:H2'	1:A:444:C:C6	2.43	0.54
1:A:269:C:H2'	1:A:270:A:H8	1.72	0.54
25:Z:7:ARG:NH1	25:Z:7:ARG:CG	2.65	0.54
25:Z:397:ALA:HB1	28:Z:1407:KIR:O27	2.08	0.54
25:Z:19:HIS:HA	25:Z:115:GLN:HB2	1.90	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:407:G:O2'	4:D:116:GLN:HG3	2.08	0.54
1:A:723:U:H3	1:A:1537:U:H2'	1.70	0.54
22:W:74:C:H5'	22:W:74:C:C6	2.37	0.54
12:L:8:ASN:HD22	17:Q:34:LYS:NZ	2.04	0.54
24:Y:51:G:O2'	25:Z:338:TYR:HD1	1.89	0.54
1:A:80:G:C6	1:A:90:U:H5'	2.42	0.54
1:A:1314:C:O2'	1:A:1315:U:H5'	2.06	0.54
1:A:1158:C:H2'	1:A:1181:G:H22	1.73	0.54
1:A:1116:C:H2'	1:A:1117:G:C5'	2.37	0.54
19:S:31:ILE:HG23	19:S:49:ILE:HG23	1.90	0.54
24:Y:72:U:H3'	24:Y:73:G:H5''	1.89	0.54
18:R:53:ARG:HG3	18:R:63:GLN:HE21	1.71	0.54
5:E:110:LEU:HD13	5:E:118:ILE:HD13	1.90	0.54
8:H:89:PRO:HA	8:H:92:ARG:NH1	2.22	0.54
3:C:175:LEU:H	3:C:175:LEU:HD12	1.72	0.54
9:I:10:ARG:HG3	9:I:75:ASP:HB3	1.90	0.54
1:A:67:C:H2'	1:A:68:G:C8	2.42	0.54
1:A:1382:C:H2'	1:A:1383:C:H6	1.73	0.54
25:Z:7:ARG:NH2	25:Z:281:ILE:CD1	2.67	0.54
25:Z:226:GLU:O	25:Z:300:ARG:HG2	2.06	0.54
22:W:38:A:H2'	22:W:39:U:O4'	2.07	0.54
25:Z:198:LYS:HA	25:Z:201:GLU:HB2	1.88	0.54
3:C:43:LEU:HD22	3:C:47:LEU:HD22	1.90	0.54
22:V:51:U:H2'	22:V:52:G:H8	1.72	0.54
13:M:3:ARG:HH21	13:M:7:VAL:HG13	1.71	0.54
19:S:6:LYS:O	19:S:7:LYS:HD3	2.08	0.54
7:G:7:ALA:O	7:G:8:GLU:CB	2.56	0.54
13:M:56:LEU:C	13:M:56:LEU:HD13	2.29	0.54
15:O:25:THR:O	15:O:29:VAL:HG23	2.06	0.54
1:A:1221:G:O2'	1:A:1222:G:H5'	2.08	0.54
24:Y:25:C:C5'	24:Y:25:C:H6	2.19	0.54
19:S:16:LEU:C	19:S:18:LYS:N	2.60	0.54
25:Z:347:THR:HG22	25:Z:348:ASP:H	1.73	0.54
4:D:170:VAL:HG12	4:D:171:GLY:H	1.73	0.54
25:Z:21:ASP:N	27:Z:1406:GDP:O1B	2.40	0.54
13:M:82:MET:CB	13:M:93:ARG:NH1	2.71	0.54
9:I:6:GLY:N	9:I:84:ALA:HB2	2.22	0.54
2:B:30:ARG:HG3	2:B:31:TYR:CE1	2.43	0.54
4:D:61:LYS:HB2	4:D:203:VAL:HG13	1.90	0.54
4:D:12:CYS:O	4:D:33:MET:HE2	2.08	0.54
11:K:44:SER:O	11:K:47:VAL:HG23	2.08	0.54
8:H:86:ILE:HG12	8:H:135:CYS:HA	1.89	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:659:U:O2'	1:A:660:G:H5'	2.08	0.54
1:A:1125:U:H5''	1:A:1126:U:C5	2.41	0.54
9:I:56:LEU:HG	9:I:57:GLY:H	1.73	0.54
1:A:992:U:H1'	1:A:993:G:C2	2.43	0.54
1:A:538:G:O2'	1:A:539:A:H5'	2.08	0.54
2:B:25:ASN:HB2	2:B:191:ASP:O	2.07	0.54
22:V:48:C:H6	22:V:48:C:OP2	1.91	0.53
22:V:5:G:H1	22:V:68:C:H42	1.54	0.53
3:C:68:VAL:HG13	3:C:70:VAL:HG23	1.90	0.53
6:F:82:ARG:HB2	6:F:85:VAL:CG2	2.37	0.53
25:Z:185:ASN:O	25:Z:185:ASN:ND2	2.40	0.53
2:B:126:GLU:O	2:B:129:GLU:HB2	2.08	0.53
3:C:131:ARG:HH11	3:C:166:GLU:HG3	1.73	0.53
3:C:145:GLY:O	3:C:146:ALA:O	2.25	0.53
20:T:53:LEU:O	20:T:57:ARG:HB2	2.09	0.53
2:B:28:PHE:O	2:B:32:ILE:HG22	2.09	0.53
1:A:56:U:H2'	1:A:57:G:H8	1.73	0.53
25:Z:143:ASP:HB3	25:Z:146:LEU:HB3	1.89	0.53
1:A:977:A:O2'	1:A:978:A:C5'	2.57	0.53
24:Y:45:U:C3'	24:Y:46:7MG:H5''	2.33	0.53
4:D:129:ASN:HD21	4:D:144:ASP:HA	1.74	0.53
1:A:613:C:H2'	1:A:614:A:H8	1.73	0.53
3:C:58:GLU:HB2	3:C:65:ALA:HB2	1.90	0.53
1:A:309:G:H1'	1:A:608:A:C2	2.43	0.53
1:A:1039:C:H2'	1:A:1040:U:C6	2.43	0.53
22:V:68:C:C2'	22:V:69:G:H5'	2.38	0.53
25:Z:90:LYS:NZ	25:Z:90:LYS:HB2	2.24	0.53
13:M:120:LYS:CE	13:M:120:LYS:HA	2.38	0.53
11:K:26:ASN:O	11:K:27:ASN:HB2	2.08	0.53
4:D:145:GLU:HA	4:D:183:GLY:O	2.09	0.53
2:B:103:THR:HG23	2:B:176:GLU:HG2	1.90	0.53
17:Q:27:PHE:CE1	17:Q:36:ILE:HD11	2.43	0.53
1:A:1038:C:O5'	1:A:1038:C:H6	1.92	0.53
25:Z:166:ASP:O	25:Z:167:GLU:HG2	2.08	0.53
1:A:1371:G:O3'	9:I:69:GLY:HA3	2.08	0.53
25:Z:193:ASN:CB	25:Z:196:VAL:H	2.22	0.53
1:A:1256:A:H1'	1:A:1258:G:C6	2.42	0.53
15:O:26:GLU:OE2	15:O:77:ARG:NH1	2.41	0.53
24:Y:67:G:H2'	24:Y:68:C:C6	2.43	0.53
10:J:48:THR:OG1	10:J:62:HIS:HD2	1.92	0.53
1:A:171:A:H2'	1:A:172:A:C8	2.44	0.53
3:C:85:ARG:NH1	3:C:88:ARG:HH12	2.04	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:143:ARG:HH12	8:H:77:GLU:CD	2.10	0.53
20:T:50:GLU:N	20:T:99:LEU:HD12	2.24	0.53
24:Y:76:A:C5	25:Z:271:GLU:OE1	2.62	0.53
17:Q:58:GLU:HB3	17:Q:74:LEU:HB3	1.90	0.53
20:T:72:LEU:O	20:T:76:ALA:HB3	2.08	0.53
22:W:43:C:H2'	22:W:44:G:C1'	2.33	0.53
9:I:49:PRO:O	9:I:53:VAL:HG22	2.08	0.53
1:A:1378:C:H4'	7:G:94:ARG:NH2	2.19	0.53
3:C:112:SER:HB3	3:C:115:LEU:HD12	1.90	0.53
5:E:53:LEU:N	5:E:53:LEU:HD12	2.23	0.53
1:A:1152:A:H2'	1:A:1153:C:C6	2.43	0.53
1:A:473:G:H5''	16:P:81:ARG:HE	1.74	0.53
7:G:143:ARG:CD	22:W:41:C:O3'	2.57	0.53
7:G:143:ARG:HD2	22:W:41:C:O3'	2.09	0.53
13:M:66:LEU:O	13:M:70:LEU:HB2	2.09	0.53
25:Z:68:VAL:HG13	25:Z:69:GLU:N	2.24	0.53
2:B:29:ALA:HA	2:B:32:ILE:CG2	2.38	0.53
25:Z:233:GLY:O	25:Z:234:ARG:HD2	2.09	0.53
5:E:11:ILE:HG21	5:E:105:VAL:HG22	1.91	0.53
9:I:69:GLY:O	9:I:73:GLN:HG3	2.09	0.53
10:J:16:LEU:CD1	10:J:70:ARG:HG3	2.38	0.53
1:A:542:G:H2'	1:A:543:C:C6	2.43	0.53
1:A:1157:A:H1'	1:A:1181:G:N2	2.24	0.53
1:A:625:G:H2'	1:A:626:U:H6	1.73	0.53
24:Y:77:TRP:HA	25:Z:285:ASN:O	2.09	0.53
19:S:16:LEU:O	19:S:20:LEU:N	2.42	0.53
12:L:75:HIS:HD2	12:L:77:LEU:H	1.57	0.53
4:D:100:ARG:HH21	4:D:118:ARG:NH1	2.01	0.53
25:Z:166:ASP:C	25:Z:167:GLU:CG	2.77	0.53
3:C:22:TRP:NE1	3:C:36:ASP:OD2	2.40	0.53
15:O:2:PRO:O	15:O:3:ILE:C	2.47	0.53
1:A:490:G:H2'	1:A:491:G:C8	2.43	0.53
7:G:141:VAL:O	7:G:144:MET:HB2	2.08	0.53
1:A:1415:G:O2'	1:A:1416:G:H5'	2.09	0.53
1:A:711:G:O2'	1:A:712:A:H5'	2.09	0.53
1:A:1442(B):A:OP1	1:A:1442(B):A:H3'	2.09	0.53
1:A:555:C:H2'	1:A:556:C:C6	2.44	0.53
25:Z:317:GLU:HG3	25:Z:404:LEU:HD21	1.91	0.53
24:Y:76:A:OP1	25:Z:274:ARG:CD	2.57	0.53
25:Z:300:ARG:O	25:Z:302:GLN:N	2.41	0.53
10:J:54:PHE:CD1	10:J:55:LYS:HD3	2.44	0.53
2:B:7:VAL:HG13	2:B:11:LEU:CD1	2.39	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:266:G:H5'	1:A:268:C:H41	1.74	0.53
25:Z:101:GLY:HA3	25:Z:210:ILE:CD1	2.39	0.53
5:E:6:PHE:HB3	5:E:35:GLY:O	2.09	0.53
12:L:39:VAL:CG1	12:L:57:LYS:HB3	2.39	0.53
18:R:53:ARG:HG3	18:R:63:GLN:NE2	2.24	0.53
5:E:142:LEU:O	5:E:143:ARG:HD3	2.08	0.53
25:Z:340:PRO:HG2	25:Z:342:PHE:CE1	2.43	0.53
25:Z:7:ARG:O	25:Z:8:THR:CG2	2.57	0.53
1:A:1202:G:O2'	1:A:1203:C:H5'	2.09	0.53
5:E:11:ILE:HD12	5:E:31:LEU:CD1	2.38	0.53
11:K:44:SER:H	11:K:47:VAL:HG23	1.73	0.53
12:L:110:VAL:N	12:L:122:THR:HG22	2.23	0.53
4:D:150:GLU:OE1	4:D:150:GLU:N	2.42	0.53
4:D:126:ILE:HD12	4:D:126:ILE:N	2.24	0.53
1:A:1127:G:H1	1:A:1145:C:N4	2.07	0.53
25:Z:87:ASP:HB2	25:Z:88:TYR:CD1	2.42	0.53
5:E:11:ILE:HD11	5:E:33:VAL:HG21	1.91	0.53
4:D:150:GLU:CG	4:D:151:LYS:N	2.72	0.53
1:A:1190:G:P	3:C:5:ILE:HD12	2.49	0.53
25:Z:195:TRP:C	25:Z:197:ASP:N	2.62	0.53
9:I:11:LYS:O	9:I:12:GLU:HB2	2.09	0.53
25:Z:332:THR:O	25:Z:363:MET:HE2	2.09	0.53
20:T:64:ASP:OD1	20:T:81:LYS:HD2	2.09	0.53
1:A:332:G:O2'	1:A:333:G:H5'	2.08	0.53
25:Z:272:MET:HB2	25:Z:277:LEU:HD23	1.91	0.52
5:E:90:VAL:C	5:E:91:LEU:HD12	2.28	0.52
1:A:737:A:H2'	1:A:738:C:H6	1.73	0.52
6:F:69:GLU:O	6:F:72:VAL:HG12	2.08	0.52
3:C:173:VAL:O	3:C:175:LEU:HD12	2.09	0.52
8:H:97:VAL:HG21	8:H:128:GLY:HA2	1.91	0.52
12:L:69:TYR:O	12:L:71:PRO:HD3	2.10	0.52
20:T:24:LEU:O	20:T:24:LEU:HD12	2.09	0.52
24:Y:75:C:O2	24:Y:75:C:O4'	2.26	0.52
20:T:45:GLN:CB	20:T:91:LEU:HD13	2.36	0.52
4:D:108:LEU:HB3	4:D:110:PHE:HE1	1.75	0.52
3:C:35:GLU:HG2	3:C:59:ARG:HH22	1.75	0.52
1:A:757:U:H2'	1:A:758:G:O4'	2.09	0.52
7:G:132:GLY:O	7:G:136:LYS:HG2	2.10	0.52
25:Z:269:GLY:O	25:Z:288:VAL:HA	2.10	0.52
17:Q:59:ILE:HG21	17:Q:71:PHE:HB3	1.89	0.52
1:A:1158:C:O2	1:A:1158:C:C2'	2.57	0.52
1:A:333:G:O2'	1:A:334:C:H5'	2.10	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:858:G:C6	1:A:869:G:C8	2.96	0.52
10:J:33:GLN:HB2	10:J:75:ILE:HD13	1.91	0.52
25:Z:164:PRO:O	25:Z:168:VAL:HG23	2.10	0.52
10:J:61:GLU:OE2	14:N:49:HIS:HE1	1.92	0.52
1:A:1125:U:C3'	1:A:1125:U:C6	2.91	0.52
25:Z:224:PRO:HA	25:Z:303:VAL:HG12	1.91	0.52
3:C:90:GLU:O	3:C:93:LYS:HB3	2.10	0.52
2:B:61:LEU:HD23	2:B:68:ILE:HD11	1.92	0.52
25:Z:124:ARG:HG3	25:Z:124:ARG:HH11	1.74	0.52
25:Z:270:VAL:HG22	25:Z:288:VAL:HG22	1.90	0.52
13:M:12:ASN:HD22	13:M:12:ASN:N	2.02	0.52
1:A:261:U:O2	1:A:263:A:C8	2.62	0.52
1:A:1151:A:O2'	1:A:1152:A:H8	1.92	0.52
22:W:5:G:C6	22:W:6:G:C5	2.97	0.52
1:A:946:A:H2'	1:A:947:G:H8	1.73	0.52
2:B:87:ARG:HH12	2:B:223:ILE:HD11	1.75	0.52
2:B:80:ILE:CD1	2:B:80:ILE:H	2.23	0.52
1:A:66:G:H4'	1:A:173:U:C5	2.44	0.52
8:H:10:LEU:HD22	8:H:83:ILE:HD11	1.92	0.52
8:H:6:ILE:N	8:H:6:ILE:HD12	2.24	0.52
1:A:367:U:C5'	25:Z:291:ARG:NE	2.62	0.52
18:R:31:LEU:HD23	18:R:31:LEU:H	1.74	0.52
9:I:43:ALA:O	9:I:45:ALA:N	2.43	0.52
18:R:29:PHE:N	18:R:29:PHE:HD1	2.08	0.52
11:K:61:ALA:HB2	11:K:90:GLY:HA3	1.92	0.52
1:A:402:G:O2'	1:A:403:C:H5'	2.10	0.52
2:B:164:VAL:HG12	2:B:165:VAL:N	2.25	0.52
4:D:9:CYS:SG	4:D:26:CYS:SG	3.07	0.52
10:J:40:LEU:HG	10:J:69:ASN:HB2	1.91	0.52
25:Z:324:LYS:O	25:Z:325:LYS:C	2.48	0.52
20:T:22:ARG:O	20:T:26:ASN:ND2	2.42	0.52
4:D:150:GLU:CD	4:D:151:LYS:N	2.59	0.52
11:K:27:ASN:HD21	11:K:45:GLY:H	1.57	0.52
12:L:51:ALA:C	12:L:52:LEU:HD22	2.30	0.52
5:E:6:PHE:HD2	5:E:36:ASP:HB3	1.74	0.52
6:F:22:GLU:O	6:F:25:ILE:HG22	2.10	0.52
3:C:157:ILE:CD1	3:C:166:GLU:HB2	2.40	0.52
10:J:45:ARG:NE	14:N:36:PHE:CD2	2.78	0.52
9:I:83:ARG:O	9:I:86:VAL:HG12	2.10	0.52
17:Q:82:MET:O	17:Q:86:GLU:HG2	2.10	0.52
7:G:69:VAL:HG21	7:G:104:LEU:CD1	2.39	0.52
2:B:33:TYR:HB2	2:B:43:ASP:HB2	1.90	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Z:126:VAL:HG13	28:Z:1407:KIR:H471	1.91	0.52
13:M:92:HIS:CE1	13:M:98:VAL:HG21	2.44	0.52
1:A:1036:G:H5''	1:A:1037:C:H5	1.71	0.52
15:O:26:GLU:HB3	15:O:81:LEU:HD23	1.91	0.52
13:M:97:PRO:N	13:M:110:ARG:HD3	2.24	0.52
9:I:10:ARG:HD3	9:I:10:ARG:C	2.30	0.52
20:T:29:LYS:O	20:T:33:ILE:HG13	2.10	0.52
1:A:521:G:H4'	12:L:73:GLU:HG3	1.90	0.52
24:Y:2:G:O2'	24:Y:3:G:H5''	2.10	0.52
8:H:44:PHE:HE2	8:H:109:ILE:HG21	1.75	0.52
20:T:26:ASN:O	20:T:30:LYS:HB2	2.09	0.52
5:E:145:LYS:O	5:E:149:GLU:HG3	2.10	0.52
25:Z:338:TYR:O	25:Z:353:VAL:HG23	2.10	0.52
11:K:57:THR:OG1	11:K:58:PRO:HD2	2.09	0.52
1:A:434:U:H2'	1:A:435:C:H6	1.73	0.52
7:G:143:ARG:HD3	22:W:42:C:OP1	2.10	0.52
1:A:188:C:O4'	20:T:89:ARG:NH1	2.43	0.52
5:E:68:GLU:O	5:E:68:GLU:HG3	2.10	0.52
1:A:57:G:H2'	1:A:58:C:O4'	2.10	0.52
4:D:55:ALA:O	4:D:59:ARG:HG2	2.09	0.52
25:Z:325:LYS:O	25:Z:328:GLY:N	2.43	0.52
8:H:4:ASP:OD2	8:H:85:ARG:NE	2.38	0.52
3:C:34:LEU:HG	14:N:25:VAL:HG11	1.92	0.52
22:V:63:G:H2'	22:V:64:A:O4'	2.10	0.52
20:T:26:ASN:HB3	20:T:71:THR:OG1	2.10	0.51
19:S:10:PHE:CZ	19:S:37:ARG:O	2.63	0.51
12:L:43:VAL:HG21	12:L:93:LEU:HD22	1.92	0.51
24:Y:68:C:H2'	24:Y:69:C:C6	2.45	0.51
22:W:20:U:O2'	22:W:21:A:H4'	2.11	0.51
25:Z:389:ARG:HG2	25:Z:389:ARG:HH11	1.75	0.51
12:L:41:ARG:CZ	12:L:41:ARG:HB2	2.40	0.51
1:A:979:C:C3'	1:A:980:C:H5''	2.26	0.51
1:A:544:G:OP1	4:D:59:ARG:NH2	2.43	0.51
14:N:12:ARG:HH11	14:N:12:ARG:HB3	1.74	0.51
1:A:390:C:O3'	16:P:28:ARG:NH2	2.44	0.51
1:A:197:A:H4'	1:A:198:G:O5'	2.10	0.51
1:A:1241:G:H2'	1:A:1242:C:C6	2.45	0.51
25:Z:17:ILE:HG13	25:Z:104:LEU:HA	1.92	0.51
6:F:42:GLU:O	6:F:42:GLU:HG2	2.11	0.51
2:B:200:ILE:HG22	2:B:201:ILE:H	1.76	0.51
16:P:53:VAL:HG23	16:P:54:GLU:HG2	1.92	0.51
12:L:102:ARG:HH12	12:L:110:VAL:HG22	1.72	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:43:LEU:N	6:F:43:LEU:HD22	2.23	0.51
1:A:1498:U:H4'	1:A:1519:A:C2	2.45	0.51
1:A:484:G:H4'	1:A:485:G:O5'	2.10	0.51
1:A:1327:C:O2'	1:A:1328:C:H5'	2.10	0.51
20:T:94:ALA:O	20:T:95:ALA:HB3	2.10	0.51
25:Z:139:ASP:OD2	25:Z:177:LEU:HD11	2.10	0.51
20:T:86:ARG:HH11	20:T:86:ARG:HG3	1.75	0.51
13:M:77:ASN:O	13:M:81:LEU:HD23	2.09	0.51
22:V:5:G:H5'	22:V:5:G:H8	1.74	0.51
25:Z:98:GLN:HG2	25:Z:226:GLU:OE2	2.11	0.51
1:A:924:C:H2'	1:A:925:G:C8	2.46	0.51
7:G:59:LEU:HG	7:G:59:LEU:O	2.10	0.51
9:I:95:LYS:HD3	9:I:96:LEU:N	2.25	0.51
15:O:17:ARG:HH11	15:O:77:ARG:NH1	2.08	0.51
1:A:542:G:H5'	4:D:41:GLY:HA3	1.93	0.51
3:C:32:LEU:HD22	3:C:59:ARG:HH11	1.73	0.51
1:A:1402:C:H2'	1:A:1403:C:O4'	2.11	0.51
1:A:269:C:H2'	1:A:270:A:C8	2.46	0.51
25:Z:295:ARG:NH1	25:Z:295:ARG:HG2	2.25	0.51
15:O:39:LEU:HD13	15:O:56:LEU:HB2	1.92	0.51
24:Y:1:A:H5'	25:Z:300:ARG:CZ	2.40	0.51
9:I:19:LEU:C	9:I:19:LEU:HD23	2.31	0.51
9:I:93:ARG:C	9:I:95:LYS:H	2.14	0.51
25:Z:205:ALA:HA	25:Z:208:GLU:OE2	2.10	0.51
10:J:16:LEU:HD11	10:J:70:ARG:HG2	1.93	0.51
1:A:1152:A:OP1	10:J:68:HIS:CD2	2.64	0.51
3:C:22:TRP:CE2	14:N:54:PRO:HG2	2.45	0.51
3:C:134:ILE:HD11	3:C:153:VAL:HB	1.93	0.51
1:A:635:G:O2'	1:A:636:U:H5'	2.10	0.51
2:B:129:GLU:O	2:B:130:ARG:O	2.28	0.51
25:Z:221:PHE:HE1	25:Z:242:ILE:HD13	1.75	0.51
1:A:668:G:O2'	15:O:46:HIS:HD2	1.94	0.51
4:D:36:ARG:C	4:D:38:TYR:H	2.14	0.51
25:Z:279:GLU:O	25:Z:280:GLY:C	2.49	0.51
25:Z:69:GLU:CG	25:Z:70:TYR:N	2.73	0.51
22:V:4:C:C3'	22:V:5:G:H5''	2.40	0.51
1:A:858:G:N1	1:A:869:G:C8	2.78	0.51
10:J:40:LEU:HD23	10:J:69:ASN:O	2.11	0.51
25:Z:324:LYS:HD3	25:Z:365:GLY:CA	2.41	0.51
25:Z:90:LYS:HZ2	25:Z:90:LYS:HB2	1.76	0.51
20:T:72:LEU:O	20:T:73:HIS:C	2.49	0.51
3:C:35:GLU:CG	3:C:59:ARG:HH22	2.24	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:T:65:LYS:O	20:T:68:LYS:HB2	2.11	0.51
1:A:1329:A:P	13:M:28:ALA:HB3	2.51	0.51
3:C:40:ARG:O	3:C:44:GLU:HG3	2.11	0.51
1:A:707:C:H2'	1:A:708:C:H6	1.76	0.51
1:A:1193:G:OP2	3:C:167:TRP:HZ3	1.94	0.51
1:A:222:U:H2'	1:A:223:U:C6	2.45	0.51
25:Z:317:GLU:HA	25:Z:370:PHE:O	2.11	0.51
1:A:55:A:H2'	1:A:56:U:H5'	1.93	0.51
19:S:16:LEU:C	19:S:18:LYS:H	2.13	0.51
24:Y:76:A:C6	25:Z:271:GLU:CG	2.93	0.51
2:B:114:ARG:HD2	2:B:141:GLU:OE2	2.11	0.51
10:J:81:THR:C	10:J:83:GLU:H	2.14	0.51
22:W:39:U:H5'	22:W:39:U:O2	2.09	0.51
17:Q:45:HIS:HA	17:Q:69:LYS:HZ1	1.76	0.51
1:A:1288:A:N1	1:A:1371:G:H1'	2.26	0.51
22:W:3:C:H2'	22:W:4:C:O4'	2.10	0.51
22:V:59:U:O2'	22:V:60:U:O4'	2.26	0.51
12:L:126:LYS:O	12:L:128:ALA:N	2.42	0.51
2:B:74:LYS:NZ	2:B:74:LYS:HB3	2.26	0.51
1:A:1305:G:C5'	21:U:4:GLY:HA3	2.40	0.51
2:B:31:TYR:CD2	2:B:202:PRO:HG3	2.46	0.51
1:A:358:U:H4'	25:Z:234:ARG:N	2.26	0.51
9:I:19:LEU:HD23	9:I:20:ARG:N	2.26	0.51
1:A:973:G:OP1	10:J:57:LYS:NZ	2.37	0.51
9:I:43:ALA:C	9:I:45:ALA:H	2.15	0.51
4:D:7:PRO:HB2	4:D:10:ARG:HD2	1.91	0.51
3:C:35:GLU:O	3:C:39:ILE:HG13	2.10	0.51
1:A:1141:C:O2'	1:A:1142:G:H5'	2.11	0.51
16:P:8:ARG:C	16:P:9:PHE:HD1	2.13	0.51
1:A:137:C:H42	1:A:226:G:H1	1.59	0.51
5:E:143:ARG:NH1	8:H:77:GLU:OE1	2.43	0.51
1:A:509:A:H5'	4:D:54:TYR:HD2	1.76	0.51
1:A:1307:U:H2'	1:A:1308:U:C6	2.45	0.51
25:Z:350:THR:HG22	25:Z:351:GLY:H	1.75	0.51
14:N:21:TYR:N	14:N:21:TYR:CD1	2.79	0.51
2:B:44:LEU:HD12	2:B:44:LEU:N	2.25	0.51
4:D:32:ALA:C	4:D:34:GLU:H	2.12	0.51
25:Z:160:GLN:O	25:Z:160:GLN:HG3	2.10	0.51
4:D:187:ARG:CB	4:D:187:ARG:HH11	2.22	0.51
1:A:1030:C:N4	1:A:1032:G:H21	2.04	0.51
1:A:723:U:O4	1:A:1537:U:H2'	2.11	0.51
18:R:59:SER:H	18:R:62:GLU:HB2	1.76	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:782:A:H2'	1:A:783:C:H5'	1.93	0.51
24:Y:26:A:H2'	24:Y:27:C:O4'	2.11	0.50
19:S:11:VAL:CG1	19:S:16:LEU:HD11	2.40	0.50
25:Z:368:VAL:HG12	25:Z:369:THR:H	1.75	0.50
9:I:85:LEU:C	9:I:87:GLN:H	2.14	0.50
1:A:963:G:N2	10:J:55:LYS:NZ	2.59	0.50
1:A:1363(A):A:C4'	1:A:1364:U:H5''	2.38	0.50
1:A:1325:C:H4'	21:U:17:THR:HG21	1.92	0.50
1:A:723:U:O2'	1:A:724:G:H5'	2.10	0.50
15:O:17:ARG:O	15:O:18:PHE:HB3	2.11	0.50
6:F:63:TYR:N	6:F:63:TYR:CD1	2.79	0.50
23:X:11:U:H3'	23:X:12:A:C8	2.47	0.50
1:A:555:C:H2'	1:A:556:C:H6	1.75	0.50
1:A:828:A:H2'	1:A:829:G:O4'	2.11	0.50
2:B:180:LEU:O	2:B:181:PHE:HB2	2.11	0.50
25:Z:67:HIS:CD2	25:Z:67:HIS:H	2.29	0.50
25:Z:359:VAL:HG12	25:Z:362:VAL:HG22	1.92	0.50
4:D:61:LYS:NZ	4:D:62:GLN:NE2	2.59	0.50
25:Z:263:ARG:HE	25:Z:293:VAL:HG22	1.75	0.50
5:E:6:PHE:HB3	5:E:35:GLY:C	2.32	0.50
6:F:63:TYR:HD1	6:F:63:TYR:N	2.08	0.50
6:F:43:LEU:H	6:F:43:LEU:CD2	2.21	0.50
6:F:43:LEU:O	6:F:44:GLY:O	2.29	0.50
2:B:157:ARG:HH11	2:B:157:ARG:HB3	1.76	0.50
24:Y:68:C:H2'	24:Y:69:C:H6	1.76	0.50
25:Z:130:TYR:CE2	25:Z:211:PRO:HD2	2.46	0.50
13:M:11:ARG:H	13:M:45:VAL:HG11	1.75	0.50
1:A:1392:G:N2	1:A:1502:A:H8	2.09	0.50
20:T:26:ASN:HD22	20:T:26:ASN:N	2.08	0.50
4:D:100:ARG:NH1	4:D:137:SER:HA	2.26	0.50
5:E:147:ASP:OD1	5:E:147:ASP:N	2.45	0.50
8:H:18:ARG:HB2	8:H:18:ARG:NH1	2.27	0.50
1:A:390:C:H4'	16:P:28:ARG:HH21	1.76	0.50
1:A:1411:C:H2'	1:A:1412:C:C6	2.46	0.50
1:A:1328:C:O2'	1:A:1329:A:H5'	2.11	0.50
1:A:1510:U:H2'	1:A:1511:G:C8	2.47	0.50
25:Z:267:VAL:CG2	25:Z:288:VAL:HG13	2.42	0.50
25:Z:90:LYS:O	25:Z:93:ILE:HG23	2.12	0.50
25:Z:200:TRP:O	25:Z:204:ASP:CB	2.60	0.50
4:D:202:LEU:O	4:D:202:LEU:HD13	2.11	0.50
12:L:53:ARG:HD2	12:L:53:ARG:N	2.27	0.50
1:A:598:U:H4'	8:H:94:TYR:CD2	2.47	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:662:G:H2'	1:A:663:A:C8	2.46	0.50
25:Z:68:VAL:O	25:Z:69:GLU:HB3	2.11	0.50
1:A:1532:U:C3'	1:A:1533:C:H5''	2.41	0.50
1:A:57:G:H2'	1:A:58:C:C6	2.46	0.50
19:S:16:LEU:HB3	19:S:20:LEU:HG	1.94	0.50
4:D:34:GLU:O	4:D:35:ARG:HB2	2.10	0.50
25:Z:267:VAL:HG23	25:Z:288:VAL:CG1	2.42	0.50
1:A:1437:C:N3	1:A:1438:G:N7	2.60	0.50
1:A:1439:C:N4	1:A:1463:C:N3	2.59	0.50
1:A:255:G:O6	1:A:266:G:O6	2.29	0.50
22:W:60:U:O2	22:W:60:U:C2'	2.60	0.50
22:W:73:A:C2'	22:W:74:C:H5''	2.42	0.50
13:M:96:LEU:HB3	13:M:97:PRO:HD2	1.92	0.50
25:Z:178:ALA:HB1	25:Z:199:ILE:HD12	1.94	0.50
3:C:23:TYR:CG	3:C:24:ALA:N	2.79	0.50
19:S:21:GLU:HG3	19:S:22:LEU:N	2.25	0.50
7:G:69:VAL:HG12	7:G:100:ALA:HA	1.93	0.50
3:C:124:ILE:HG12	3:C:130:VAL:HG22	1.93	0.50
1:A:454:C:H5''	1:A:455:C:C5	2.46	0.50
1:A:280:C:O2	17:Q:38:ARG:HG3	2.11	0.50
9:I:24:GLY:C	9:I:25:LYS:HD2	2.31	0.50
9:I:41:VAL:O	9:I:41:VAL:HG12	2.11	0.50
25:Z:301:GLY:HA3	25:Z:347:THR:CG2	2.39	0.50
17:Q:52:LYS:H	17:Q:52:LYS:CD	2.22	0.50
12:L:102:ARG:CG	12:L:102:ARG:NH1	2.73	0.50
7:G:15:ASP:OD1	7:G:16:LEU:N	2.45	0.50
10:J:16:LEU:HD11	10:J:70:ARG:CG	2.41	0.50
14:N:15:LYS:HB3	14:N:16:PHE:CE2	2.47	0.50
8:H:9:MET:O	8:H:13:ILE:HG12	2.12	0.50
1:A:1181:G:H2'	1:A:1182:G:C4	2.47	0.50
2:B:87:ARG:HB3	2:B:87:ARG:NH1	2.26	0.50
1:A:637:G:O2'	1:A:638:G:H5'	2.12	0.50
8:H:83:ILE:HG13	8:H:137:VAL:HG22	1.93	0.50
1:A:707:C:H2'	1:A:708:C:C6	2.46	0.50
1:A:695:A:H2'	1:A:696:A:C8	2.47	0.50
1:A:603:U:H2'	1:A:604:G:H8	1.76	0.50
1:A:520:A:N1	1:A:536:C:H1'	2.26	0.50
1:A:620:C:H2'	1:A:621:A:O4'	2.12	0.50
1:A:748:C:H4'	1:A:749:C:O5'	2.11	0.50
1:A:102:G:O2'	1:A:103:C:H5'	2.11	0.50
9:I:58:HIS:ND1	9:I:58:HIS:O	2.44	0.50
1:A:1270:C:H2'	1:A:1271:G:H8	1.76	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:17:LYS:HD3	12:L:18:VAL:H	1.77	0.50
5:E:50:GLU:HB3	5:E:53:LEU:HD13	1.94	0.50
15:O:27:VAL:O	15:O:31:LEU:CD1	2.59	0.50
18:R:36:ASN:HD21	18:R:39:VAL:HB	1.77	0.50
25:Z:35:ALA:HA	25:Z:38:GLU:OE2	2.11	0.50
17:Q:36:ILE:HG13	17:Q:36:ILE:O	2.11	0.50
3:C:107:GLN:CD	3:C:107:GLN:N	2.64	0.50
8:H:30:ARG:CZ	8:H:30:ARG:HB3	2.42	0.50
20:T:87:LYS:O	20:T:91:LEU:HG	2.11	0.50
2:B:112:VAL:O	2:B:115:LEU:HB3	2.12	0.50
10:J:3:LYS:N	10:J:77:PRO:HD3	2.27	0.50
20:T:26:ASN:ND2	20:T:26:ASN:N	2.57	0.50
16:P:23:ASP:OD1	16:P:25:ARG:NH1	2.44	0.50
4:D:108:LEU:HB3	4:D:110:PHE:CE1	2.45	0.50
3:C:25:GLY:C	3:C:27:LYS:N	2.61	0.50
11:K:57:THR:HG22	11:K:60:ALA:CB	2.42	0.50
1:A:347:G:H21	1:A:348:G:H1'	1.76	0.50
10:J:42:THR:HG22	10:J:43:ARG:N	2.27	0.50
1:A:158:G:O2'	1:A:159:G:H5'	2.12	0.50
6:F:38:GLU:O	6:F:39:LYS:O	2.30	0.50
4:D:58:LEU:O	4:D:58:LEU:HD22	2.12	0.50
24:Y:1:A:H2'	24:Y:2:G:H8	1.76	0.50
1:A:1392:G:H21	1:A:1502:A:H8	1.60	0.50
10:J:54:PHE:CE2	10:J:55:LYS:HD3	2.47	0.50
20:T:14:LYS:O	20:T:18:GLN:HB2	2.11	0.50
1:A:664:G:P	18:R:64:ARG:HH21	2.35	0.50
24:Y:52:A:C2'	24:Y:53:G:H5'	2.42	0.50
25:Z:342:PHE:N	25:Z:342:PHE:CD1	2.79	0.50
5:E:102:ALA:HB1	5:E:106:PRO:HG2	1.94	0.50
1:A:1176:A:H2'	1:A:1177:G:C8	2.47	0.50
8:H:121:ASP:OD1	8:H:122:ARG:N	2.45	0.50
3:C:189:ALA:HB3	3:C:196:LEU:HB2	1.93	0.50
24:Y:76:A:OP1	25:Z:274:ARG:NE	2.45	0.49
7:G:50:ILE:HD12	7:G:125:MET:HG3	1.93	0.49
16:P:43:LYS:HA	16:P:48:TRP:CB	2.41	0.49
6:F:45:LEU:HA	6:F:58:GLY:O	2.12	0.49
1:A:458:C:H2'	1:A:460:G:H8	1.77	0.49
6:F:99:ALA:O	6:F:100:ASN:HB2	2.12	0.49
1:A:1508:G:O2'	1:A:1509:C:H5'	2.12	0.49
17:Q:7:THR:O	17:Q:23:VAL:HG13	2.11	0.49
1:A:631:G:H2'	1:A:632:A:C8	2.47	0.49
2:B:213:LEU:C	2:B:213:LEU:HD23	2.32	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:Y:76:A:H2'	25:Z:274:ARG:HA	1.94	0.49
25:Z:113:MET:CG	25:Z:114:PRO:HD2	2.34	0.49
1:A:963:G:N2	10:J:55:LYS:HZ1	2.09	0.49
25:Z:323:LEU:H	25:Z:323:LEU:CD1	2.22	0.49
2:B:95:GLN:O	2:B:96:ARG:HD2	2.13	0.49
18:R:26:LEU:N	18:R:26:LEU:HD12	2.26	0.49
22:V:53:G:H2'	22:V:54:U:H6	1.77	0.49
1:A:124:G:H2'	1:A:125:U:O4'	2.12	0.49
19:S:27:GLU:O	19:S:28:LYS:O	2.30	0.49
1:A:807:A:H2'	1:A:808:C:C6	2.47	0.49
1:A:1354:C:H2'	1:A:1355:G:H8	1.77	0.49
3:C:159:GLY:O	3:C:160:ALA:C	2.51	0.49
3:C:15:THR:HG21	3:C:181:ASN:HA	1.94	0.49
8:H:53:VAL:HB	8:H:58:TYR:CD1	2.47	0.49
12:L:102:ARG:HH11	12:L:102:ARG:CG	2.16	0.49
25:Z:135:MET:O	25:Z:138:VAL:HG23	2.12	0.49
2:B:7:VAL:CG1	2:B:217:ARG:HH22	2.25	0.49
5:E:53:LEU:H	5:E:53:LEU:CD1	2.25	0.49
22:W:5:G:O6	22:W:6:G:C6	2.65	0.49
22:V:51:U:H2'	22:V:52:G:C8	2.47	0.49
6:F:11:ASN:HB3	6:F:14:LEU:CD2	2.42	0.49
2:B:109:SER:C	2:B:111:ARG:N	2.65	0.49
1:A:476:G:H2'	1:A:477:A:H8	1.78	0.49
4:D:159:ARG:HG3	4:D:159:ARG:NH1	2.27	0.49
1:A:198:G:O2'	1:A:199:G:H8	1.95	0.49
7:G:75:VAL:HG13	7:G:145:ALA:HB2	1.93	0.49
1:A:534:U:H5'	1:A:534:U:H6	1.77	0.49
1:A:980:C:H5'	1:A:981:U:C5	2.48	0.49
19:S:11:VAL:HG13	19:S:16:LEU:HD11	1.93	0.49
1:A:383:A:H2'	1:A:384:G:H5'	1.94	0.49
1:A:160:A:H1'	1:A:344:A:C5	2.48	0.49
22:W:52:G:O6	22:W:62:C:N4	2.45	0.49
7:G:80:VAL:O	7:G:83:ALA:HB3	2.13	0.49
4:D:62:GLN:HA	4:D:62:GLN:NE2	2.25	0.49
1:A:367:U:H4'	25:Z:291:ARG:NH2	2.26	0.49
9:I:16:ARG:NH1	9:I:64:THR:HG21	2.27	0.49
9:I:53:VAL:HG13	9:I:95:LYS:HZ2	1.72	0.49
1:A:1189:C:O3'	3:C:5:ILE:HD12	2.11	0.49
1:A:254:G:OP1	17:Q:67:LYS:O	2.30	0.49
3:C:91:LEU:O	3:C:94:LEU:O	2.30	0.49
24:Y:61:C:H2'	24:Y:62:U:H5'	1.94	0.49
13:M:116:THR:O	13:M:117:VAL:C	2.48	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1073:U:O2'	1:A:1074:G:H5'	2.13	0.49
3:C:173:VAL:HG12	3:C:175:LEU:CD1	2.43	0.49
1:A:1222:G:OP1	19:S:77:THR:HG21	2.12	0.49
25:Z:254:GLU:CD	25:Z:307:PRO:HA	2.33	0.49
1:A:1372:U:OP1	9:I:71:SER:HB3	2.12	0.49
1:A:1272:G:H8	1:A:1272:G:H5'	1.77	0.49
1:A:8:A:C2	4:D:209:ARG:HB3	2.47	0.49
1:A:1326:C:P	21:U:12:LYS:HZ2	2.36	0.49
24:Y:44:G:H4'	24:Y:45:U:OP2	2.12	0.49
18:R:36:ASN:CG	18:R:36:ASN:O	2.51	0.49
1:A:1171:G:H2'	1:A:1172:C:C6	2.48	0.49
1:A:161:A:H2'	1:A:162:A:C8	2.47	0.49
25:Z:316:PHE:CE1	25:Z:372:VAL:HB	2.48	0.49
20:T:56:MET:HG3	20:T:88:VAL:HG21	1.95	0.49
1:A:775:G:O2'	1:A:776:G:H5'	2.13	0.49
1:A:1203:C:OP1	14:N:3:ARG:HD3	2.12	0.49
25:Z:135:MET:HE3	25:Z:150:VAL:CG1	2.40	0.49
25:Z:219:LYS:CB	25:Z:244:ARG:HD2	2.39	0.49
2:B:8:LYS:O	2:B:12:GLU:HG3	2.13	0.49
10:J:6:ILE:HG22	10:J:98:ILE:HD12	1.95	0.49
1:A:1216:G:H2'	1:A:1217:C:H6	1.77	0.49
1:A:156:G:O2'	1:A:157:G:H5'	2.13	0.49
3:C:121:ALA:O	3:C:125:GLU:HG3	2.12	0.49
1:A:272:C:O2'	1:A:273:A:H5'	2.13	0.49
1:A:826:C:H2'	1:A:827:U:H6	1.78	0.49
17:Q:25:ARG:HG3	17:Q:25:ARG:O	2.12	0.49
13:M:4:ILE:N	13:M:4:ILE:CD1	2.74	0.49
25:Z:92:MET:HG3	25:Z:93:ILE:N	2.26	0.49
1:A:59:A:H3'	1:A:331:G:N2	2.25	0.49
2:B:7:VAL:N	2:B:10:LEU:HD12	2.28	0.49
3:C:43:LEU:HD13	3:C:68:VAL:HG23	1.95	0.49
1:A:714:G:H2'	1:A:715:A:C8	2.47	0.49
14:N:4:LYS:O	14:N:7:ILE:HG12	2.13	0.49
22:V:44:G:C2'	22:V:45:U:H5'	2.43	0.49
1:A:67:C:O2'	1:A:171:A:H1'	2.12	0.49
1:A:1369:C:H2'	1:A:1370:G:C8	2.48	0.49
20:T:50:GLU:HB2	20:T:99:LEU:CD1	2.43	0.49
14:N:19:ARG:O	14:N:20:ALA:O	2.31	0.49
2:B:54:THR:HG21	2:B:201:ILE:HD11	1.94	0.49
1:A:358:U:O4'	25:Z:233:GLY:C	2.51	0.49
1:A:972:C:O3'	10:J:57:LYS:HG2	2.13	0.49
16:P:5:ARG:HE	16:P:22:THR:CG2	2.26	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:I:40:LEU:O	9:I:42:ARG:N	2.39	0.49
3:C:73:PRO:HD3	3:C:105:GLU:HG3	1.94	0.49
10:J:16:LEU:CD1	10:J:70:ARG:CG	2.91	0.49
10:J:5:ARG:HG3	10:J:73:ASP:OD2	2.12	0.49
1:A:67:C:OP1	1:A:199:G:H5''	2.13	0.49
1:A:1442(A):G:HO2'	1:A:1442(B):A:P	2.34	0.49
1:A:603:U:H2'	1:A:604:G:C8	2.48	0.49
2:B:233:SER:O	2:B:234:PRO:C	2.51	0.49
6:F:53:ALA:O	6:F:54:LYS:HB2	2.12	0.49
7:G:41:ARG:HG2	7:G:41:ARG:HH11	1.78	0.49
2:B:73:THR:HG22	2:B:94:ASN:C	2.33	0.49
4:D:18:LYS:HE3	4:D:31:CYS:HB3	1.94	0.49
1:A:858:G:H5''	1:A:858:G:H8	1.77	0.49
20:T:45:GLN:NE2	20:T:46:GLU:CG	2.75	0.49
2:B:118:LEU:CB	2:B:142:LEU:HD12	2.41	0.49
1:A:954:G:H21	1:A:1227:A:H62	1.59	0.49
3:C:68:VAL:O	3:C:68:VAL:HG12	2.13	0.49
4:D:86:LYS:HE3	4:D:86:LYS:HA	1.95	0.49
14:N:26:ARG:HH11	14:N:47:LEU:HD21	1.78	0.49
1:A:939:G:H2'	1:A:940:C:C6	2.48	0.49
1:A:580:U:H2'	1:A:581:G:O4'	2.12	0.49
2:B:189:ASP:HB2	2:B:205:ASP:OD1	2.12	0.48
7:G:54:THR:HG22	7:G:56:GLN:N	2.07	0.48
4:D:28:SER:CB	4:D:29:PRO:CD	2.88	0.48
24:Y:76:A:C5	25:Z:271:GLU:CG	2.96	0.48
22:W:26:A:H61	22:W:44:G:H1	1.61	0.48
25:Z:145:GLU:O	25:Z:146:LEU:C	2.51	0.48
25:Z:65:THR:HG23	25:Z:80:VAL:HG13	1.90	0.48
3:C:43:LEU:HD13	3:C:68:VAL:CG2	2.43	0.48
22:V:62:C:OP1	22:V:62:C:H4'	2.12	0.48
25:Z:28:THR:O	25:Z:32:THR:HG23	2.13	0.48
1:A:417:C:O2'	1:A:418:C:H5'	2.12	0.48
1:A:592:G:H2'	1:A:593:G:H8	1.77	0.48
4:D:133:VAL:HG11	4:D:138:TYR:CD1	2.47	0.48
1:A:1523:G:OP1	11:K:123:LYS:HD2	2.12	0.48
16:P:14:ASN:N	16:P:15:PRO:HD3	2.28	0.48
3:C:103:VAL:O	3:C:103:VAL:HG12	2.12	0.48
4:D:11:LEU:O	4:D:12:CYS:C	2.52	0.48
4:D:31:CYS:SG	4:D:31:CYS:O	2.71	0.48
1:A:1342:C:O2'	9:I:124:GLN:HG3	2.13	0.48
25:Z:301:GLY:CA	25:Z:347:THR:HG23	2.42	0.48
4:D:126:ILE:CG2	4:D:127:THR:N	2.76	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:559:A:OP1	5:E:126:ARG:NH2	2.44	0.48
16:P:9:PHE:CE2	16:P:18:ARG:CZ	2.94	0.48
7:G:151:TYR:OH	11:K:54:ARG:HD3	2.13	0.48
11:K:127:LYS:O	11:K:129:SER:N	2.46	0.48
1:A:1202:G:C2	14:N:42:ILE:HG21	2.48	0.48
10:J:55:LYS:N	10:J:55:LYS:CD	2.76	0.48
25:Z:155:ARG:O	25:Z:159:ASN:ND2	2.44	0.48
9:I:95:LYS:C	9:I:95:LYS:HD3	2.34	0.48
4:D:173:TRP:CD1	4:D:174:LEU:HG	2.48	0.48
13:M:120:LYS:HE3	13:M:120:LYS:HA	1.95	0.48
19:S:65:ASN:C	19:S:67:VAL:H	2.17	0.48
6:F:87:ARG:NH1	6:F:87:ARG:CG	2.72	0.48
13:M:91:ARG:HD3	13:M:97:PRO:O	2.12	0.48
1:A:918:A:H2'	1:A:919:A:C8	2.48	0.48
1:A:539:A:H2'	1:A:540:G:C8	2.49	0.48
25:Z:350:THR:HG22	25:Z:351:GLY:N	2.28	0.48
1:A:505:G:H5'	1:A:534:U:H2'	1.96	0.48
1:A:418:C:H2'	1:A:419:C:C6	2.48	0.48
3:C:12:LEU:O	3:C:13:GLY:C	2.49	0.48
1:A:323:U:H2'	1:A:324:G:O4'	2.14	0.48
16:P:21:VAL:HG21	16:P:59:TRP:CD2	2.49	0.48
25:Z:249:VAL:HG13	25:Z:268:THR:HA	1.94	0.48
2:B:134:GLU:C	2:B:136:VAL:N	2.67	0.48
25:Z:31:LEU:HD23	25:Z:199:ILE:HG23	1.95	0.48
1:A:429:U:H4'	1:A:430:A:O5'	2.12	0.48
2:B:209:ARG:HH11	2:B:239:VAL:HG11	1.79	0.48
1:A:277:C:O2'	1:A:278:G:H5'	2.14	0.48
1:A:451:A:N6	1:A:480:U:H2'	2.28	0.48
13:M:67:GLU:O	13:M:69:GLU:N	2.45	0.48
24:Y:76:A:H2	25:Z:270:VAL:CA	2.25	0.48
17:Q:10:VAL:HG23	17:Q:53:LEU:HA	1.95	0.48
9:I:20:ARG:HG3	9:I:20:ARG:NH1	2.27	0.48
5:E:148:VAL:CG2	8:H:107:LEU:HD13	2.36	0.48
21:U:12:LYS:HG2	21:U:22:ARG:HB3	1.94	0.48
1:A:1030:C:H41	1:A:1032:G:N2	2.06	0.48
1:A:186:C:C2	1:A:187:C:C5	3.01	0.48
5:E:18:ARG:HG3	5:E:18:ARG:NH1	2.27	0.48
1:A:201:C:H42	1:A:216:G:H1	1.61	0.48
1:A:370:C:O2'	1:A:371:G:H5'	2.13	0.48
1:A:471:G:H21	16:P:82:GLN:NE2	2.11	0.48
1:A:1484:C:O2'	1:A:1485:U:H5'	2.14	0.48
18:R:28:GLU:O	18:R:28:GLU:HG3	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1031:G:H2'	1:A:1032:G:O4'	2.13	0.48
1:A:44:G:C2	1:A:45:U:H1'	2.48	0.48
10:J:6:ILE:O	10:J:6:ILE:HG13	2.13	0.48
1:A:1124:G:C5'	10:J:35:SER:HB2	2.43	0.48
2:B:97:TRP:CH2	2:B:176:GLU:CD	2.86	0.48
3:C:11:ARG:NH2	3:C:182:ILE:HD12	2.29	0.48
5:E:20:GLN:NE2	5:E:22:GLY:H	2.12	0.48
10:J:47:PHE:CE1	14:N:37:PHE:HE2	2.31	0.48
1:A:981:U:H5'	14:N:21:TYR:CE1	2.49	0.48
2:B:17:PHE:CD2	2:B:44:LEU:HD11	2.48	0.48
1:A:1271:G:C3'	1:A:1272:G:H5''	2.42	0.48
25:Z:94:THR:HG22	25:Z:95:GLY:N	2.29	0.48
9:I:19:LEU:CD1	9:I:59:PHE:HD2	2.19	0.48
3:C:114:PRO:O	3:C:118:GLN:HG3	2.13	0.48
12:L:93:LEU:HB2	12:L:96:VAL:HB	1.95	0.48
24:Y:6:C:H42	24:Y:67:G:H1	1.60	0.48
1:A:1534:A:N6	23:X:12:A:C2	2.77	0.48
1:A:1220:G:O2'	1:A:1221:G:H5'	2.13	0.48
3:C:82:GLU:OE1	3:C:82:GLU:N	2.47	0.48
12:L:86:ARG:HG2	12:L:87:GLY:N	2.27	0.48
25:Z:266:VAL:HB	25:Z:291:ARG:HH12	1.79	0.48
25:Z:318:ALA:HB1	25:Z:399:VAL:O	2.14	0.48
3:C:16:ARG:CD	3:C:17:ASP:H	2.26	0.48
1:A:264:U:H4'	17:Q:63:ARG:HD3	1.94	0.48
1:A:722:A:HO2'	1:A:724:G:H8	1.60	0.48
4:D:182:LYS:HB3	4:D:183:GLY:H	1.55	0.48
18:R:29:PHE:H	18:R:29:PHE:HD1	1.62	0.48
1:A:166:G:O2'	1:A:167:G:H5'	2.13	0.48
2:B:236:TYR:C	2:B:238:LEU:N	2.65	0.48
1:A:1270:C:H2'	1:A:1271:G:C8	2.48	0.48
5:E:33:VAL:HG21	5:E:109:ILE:HG12	1.96	0.48
20:T:27:LYS:HD3	20:T:27:LYS:O	2.13	0.48
5:E:144:THR:N	5:E:147:ASP:OD1	2.47	0.48
10:J:6:ILE:HG12	10:J:72:VAL:HB	1.95	0.48
13:M:97:PRO:HA	13:M:110:ARG:CD	2.44	0.48
1:A:167:G:H2'	1:A:168:G:O4'	2.14	0.48
2:B:18:GLY:O	2:B:19:HIS:HB2	2.14	0.48
4:D:61:LYS:HZ3	4:D:62:GLN:NE2	2.12	0.48
1:A:501:C:OP1	12:L:117:ARG:NH2	2.47	0.48
16:P:71:ARG:HA	16:P:74:LEU:CD1	2.44	0.48
1:A:723:U:N3	1:A:1537:U:C2'	2.73	0.48
2:B:95:GLN:HG3	2:B:147:LYS:O	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Z:104:LEU:CD2	25:Z:120:ILE:HD11	2.44	0.48
1:A:142:G:N3	1:A:196:A:H2	2.12	0.48
1:A:106:C:O2	1:A:379:C:H4'	2.14	0.48
25:Z:355:LEU:HD13	25:Z:356:PRO:HD2	1.96	0.47
25:Z:226:GLU:HG3	25:Z:240:GLY:HA2	1.95	0.47
20:T:92:LEU:C	20:T:94:ALA:N	2.67	0.47
1:A:407:G:H2'	1:A:408:A:C8	2.48	0.47
12:L:75:HIS:HA	12:L:102:ARG:HH22	1.79	0.47
22:W:43:C:C3'	22:W:44:G:O4'	2.62	0.47
25:Z:159:ASN:C	25:Z:161:TYR:H	2.16	0.47
3:C:70:VAL:HG21	3:C:76:VAL:HG11	1.96	0.47
1:A:191:G:C4	20:T:105:SER:HB2	2.48	0.47
12:L:43:VAL:HG23	12:L:93:LEU:HD22	1.94	0.47
22:V:59:U:H2'	22:V:60:U:C6	2.49	0.47
3:C:95:THR:HG23	3:C:97:LYS:HD2	1.95	0.47
23:X:11:U:C2'	23:X:12:A:OP1	2.62	0.47
1:A:391:G:H5''	16:P:8:ARG:NE	2.29	0.47
6:F:69:GLU:HG2	6:F:70:ASP:N	2.28	0.47
25:Z:230:THR:CG2	25:Z:295:ARG:HD2	2.44	0.47
22:W:18:G:N1	22:W:55:U:H1'	2.10	0.47
4:D:12:CYS:O	4:D:33:MET:CE	2.62	0.47
9:I:17:VAL:CG1	9:I:81:ILE:HD13	2.37	0.47
1:A:1438:G:N7	1:A:1464:G:C2	2.82	0.47
10:J:81:THR:C	10:J:83:GLU:N	2.68	0.47
4:D:101:LEU:O	4:D:104:VAL:N	2.47	0.47
22:W:39:U:OP2	22:W:39:U:H4'	2.13	0.47
1:A:1319:A:OP1	19:S:10:PHE:CE1	2.67	0.47
7:G:44:TYR:C	7:G:46:ALA:N	2.67	0.47
15:O:81:LEU:CD1	15:O:85:LEU:HD12	2.44	0.47
1:A:542:G:P	4:D:10:ARG:NH2	2.87	0.47
13:M:84:ILE:HG22	13:M:84:ILE:O	2.14	0.47
1:A:473:G:H2'	1:A:474:G:C8	2.48	0.47
25:Z:358:GLY:C	25:Z:360:GLU:H	2.16	0.47
11:K:124:LYS:HD2	11:K:125:PHE:CZ	2.50	0.47
1:A:237:C:O2'	1:A:238:G:H5'	2.13	0.47
3:C:147:LYS:HB2	3:C:203:PHE:CD2	2.49	0.47
2:B:48:MET:HA	2:B:51:LEU:HB2	1.97	0.47
13:M:2:ALA:HB1	13:M:4:ILE:CD1	2.44	0.47
2:B:28:PHE:CE2	2:B:190:THR:HG22	2.49	0.47
1:A:1316:G:O3'	14:N:18:VAL:HG22	2.14	0.47
1:A:266:G:H5'	1:A:267:C:C5	2.50	0.47
1:A:1313:U:OP1	19:S:6:LYS:HB2	2.12	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:46:ARG:CG	10:J:46:ARG:HH11	2.27	0.47
1:A:346:G:O2'	1:A:347:G:P	2.72	0.47
9:I:110:GLU:HG2	9:I:119:ALA:HB1	1.95	0.47
3:C:15:THR:CG2	3:C:181:ASN:HA	2.44	0.47
1:A:1060:C:H4'	10:J:52:GLY:N	2.30	0.47
25:Z:366:ASP:C	25:Z:367:ASN:HD22	2.17	0.47
1:A:313:A:H2'	1:A:314:C:C6	2.50	0.47
1:A:1044:A:H2'	1:A:1045:C:O5'	2.14	0.47
25:Z:137:LYS:HG2	27:Z:1406:GDP:N1	2.28	0.47
1:A:927:G:OP2	1:A:927:G:H4'	2.14	0.47
10:J:7:LYS:HG3	10:J:71:LEU:HD13	1.95	0.47
2:B:122:PHE:HA	2:B:127:ILE:HD11	1.97	0.47
1:A:486:U:O2'	1:A:487:A:H5'	2.13	0.47
8:H:110:ALA:HB3	8:H:121:ASP:HB3	1.96	0.47
1:A:141:A:H1'	1:A:182:U:O2	2.14	0.47
7:G:152:ALA:O	7:G:155:ARG:HB2	2.15	0.47
13:M:57:ARG:O	13:M:61:GLU:HB2	2.14	0.47
25:Z:277:LEU:CD1	25:Z:279:GLU:H	2.26	0.47
24:Y:49:G:O2'	24:Y:50:G:H5'	2.14	0.47
20:T:39:LYS:O	20:T:43:LEU:HG	2.13	0.47
1:A:956:U:O2'	1:A:957:U:H5'	2.13	0.47
11:K:99:GLN:HG2	11:K:105:VAL:HG21	1.95	0.47
25:Z:256:VAL:HG13	25:Z:262:THR:HG21	1.95	0.47
18:R:67:ALA:O	18:R:71:LYS:HG3	2.14	0.47
1:A:1238:A:C8	1:A:1303:C:H1'	2.49	0.47
13:M:19:LEU:HB3	13:M:25:ILE:HG21	1.95	0.47
25:Z:272:MET:CE	25:Z:284:ASP:HB2	2.42	0.47
22:V:5:G:H8	22:V:5:G:C5'	2.28	0.47
10:J:54:PHE:CG	10:J:55:LYS:N	2.81	0.47
4:D:3:ARG:HG2	4:D:3:ARG:HH11	1.79	0.47
16:P:3:LYS:O	16:P:21:VAL:HA	2.15	0.47
25:Z:143:ASP:OD1	25:Z:144:PRO:HD2	2.14	0.47
2:B:15:VAL:N	2:B:16:HIS:CE1	2.79	0.47
1:A:1251:A:H4'	9:I:12:GLU:OE1	2.14	0.47
1:A:369:C:H5'	1:A:369:C:C6	2.47	0.47
1:A:1445:C:C2'	1:A:1446:U:H5'	2.45	0.47
22:W:7:A:C6	22:W:49:C:N4	2.79	0.47
3:C:173:VAL:HG12	3:C:175:LEU:HD11	1.97	0.47
1:A:892:A:O2'	1:A:1415:G:H4'	2.15	0.47
20:T:63:ILE:HG21	20:T:81:LYS:HG3	1.96	0.47
9:I:86:VAL:O	9:I:86:VAL:HG22	2.14	0.47
1:A:277:C:OP1	17:Q:41:LYS:HE2	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:46:LYS:C	2:B:48:MET:N	2.66	0.47
15:O:69:TYR:CZ	15:O:73:GLU:HG3	2.50	0.47
1:A:681:C:O2'	1:A:682:G:H5'	2.14	0.47
2:B:57:PHE:HE2	2:B:185:ILE:HD11	1.78	0.47
25:Z:355:LEU:HD23	25:Z:370:PHE:CD2	2.49	0.47
24:Y:5:G:H5'	24:Y:5:G:H8	1.80	0.47
20:T:49:ALA:O	20:T:53:LEU:HD13	2.15	0.47
1:A:1282:C:H2'	1:A:1283:G:H5'	1.97	0.47
18:R:30:ASP:C	18:R:32:ARG:H	2.17	0.47
1:A:321:A:O2'	1:A:322:C:H5'	2.15	0.47
16:P:20:VAL:HG22	16:P:21:VAL:N	2.28	0.47
19:S:29:ARG:NH1	19:S:30:LEU:HB2	2.30	0.47
12:L:32:PHE:HB3	12:L:84:LEU:HD11	1.95	0.47
1:A:977:A:O2'	1:A:978:A:H5''	2.15	0.47
2:B:77:ALA:CB	2:B:211:ILE:HD13	2.44	0.47
1:A:197:A:N6	1:A:221:C:C5'	2.77	0.47
25:Z:104:LEU:HD21	25:Z:120:ILE:HD11	1.97	0.47
1:A:879:C:O2'	1:A:880:C:H5'	2.14	0.47
1:A:511:C:C2	1:A:512:U:C5	3.03	0.47
22:V:75:C:H2'	22:V:76:A:O4'	2.14	0.47
5:E:99:GLY:O	5:E:117:ASP:HA	2.13	0.47
1:A:1466:C:H2'	1:A:1467:G:O4'	2.14	0.47
1:A:1294:G:O2'	1:A:1295:G:H5'	2.15	0.47
6:F:79:LEU:HD23	6:F:79:LEU:O	2.15	0.47
3:C:186:PHE:CE2	3:C:188:LEU:HD23	2.50	0.47
5:E:40:ARG:HG2	5:E:40:ARG:HH11	1.79	0.47
1:A:913:A:H4'	1:A:914:A:H4'	1.96	0.47
6:F:3:ARG:HH11	6:F:3:ARG:HG3	1.80	0.47
13:M:4:ILE:HG22	13:M:5:ALA:N	2.30	0.47
25:Z:328:GLY:O	25:Z:329:GLY:O	2.33	0.47
1:A:1347:G:C5	9:I:107:ARG:NH2	2.83	0.47
1:A:1316:G:H4'	14:N:18:VAL:HG13	1.95	0.47
6:F:61:LEU:HB3	6:F:63:TYR:HE1	1.80	0.47
10:J:35:SER:OG	10:J:73:ASP:HB2	2.14	0.47
1:A:540:G:H2'	1:A:541:G:O4'	2.15	0.47
1:A:858:G:H5''	1:A:858:G:C8	2.49	0.47
24:Y:1:A:H2'	24:Y:2:G:C8	2.50	0.47
17:Q:53:LEU:HD23	17:Q:54:GLY:H	1.79	0.47
1:A:1438:G:N1	1:A:1439:C:C4	2.83	0.47
3:C:106:VAL:HG23	3:C:106:VAL:O	2.14	0.47
1:A:1015:A:H2'	1:A:1016:A:H8	1.76	0.47
15:O:31:LEU:N	15:O:31:LEU:HD12	2.30	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:H:18:ARG:HH11	8:H:18:ARG:CB	2.28	0.47
18:R:36:ASN:ND2	18:R:39:VAL:HB	2.29	0.47
1:A:328:C:H4'	1:A:329:A:H5'	1.97	0.47
9:I:97:LYS:N	9:I:98:PRO:CD	2.78	0.47
8:H:103:VAL:HG12	8:H:108:GLY:HA3	1.96	0.47
25:Z:277:LEU:HD11	25:Z:280:GLY:N	2.30	0.47
1:A:359:U:OP1	25:Z:235:GLY:HA2	2.15	0.47
2:B:72:GLY:HA2	2:B:165:VAL:HG22	1.97	0.47
18:R:32:ARG:CA	18:R:69:THR:HG21	2.39	0.47
1:A:1320:C:H5''	19:S:70:LYS:HG3	1.97	0.47
1:A:1277:C:H2'	1:A:1278:U:H5'	1.97	0.47
22:V:60:U:H5''	22:V:61:C:H5	1.79	0.47
2:B:69:LEU:CD1	2:B:71:VAL:HG22	2.45	0.47
1:A:1216:G:O2'	1:A:1217:C:H5'	2.15	0.47
1:A:346:G:C2'	1:A:346:G:N3	2.78	0.47
2:B:97:TRP:CZ3	2:B:176:GLU:OE2	2.68	0.47
2:B:60:ASP:O	2:B:61:LEU:C	2.54	0.47
15:O:8:LYS:O	15:O:12:ILE:HG13	2.15	0.47
22:V:57:G:H2'	22:V:58:A:H5'	1.97	0.47
20:T:93:GLU:O	20:T:93:GLU:HG2	2.15	0.47
20:T:53:LEU:H	20:T:53:LEU:HD12	1.80	0.46
1:A:1004:A:C3'	1:A:1005:A:H5'	2.45	0.46
25:Z:19:HIS:HA	25:Z:115:GLN:CB	2.44	0.46
4:D:3:ARG:HE	4:D:5:ILE:CG1	2.26	0.46
17:Q:45:HIS:HA	17:Q:69:LYS:NZ	2.30	0.46
25:Z:196:VAL:CG1	25:Z:196:VAL:O	2.64	0.46
1:A:1152:A:OP1	10:J:68:HIS:HD2	1.99	0.46
6:F:62:TRP:C	6:F:63:TYR:CD1	2.83	0.46
13:M:83:ASP:C	13:M:85:GLY:H	2.16	0.46
1:A:1269:A:H2	1:A:1312:G:N3	2.13	0.46
19:S:6:LYS:HD3	19:S:6:LYS:N	2.30	0.46
1:A:1006:C:N4	1:A:1024:G:H21	2.13	0.46
10:J:90:LEU:N	10:J:91:PRO:CD	2.78	0.46
8:H:119:LEU:HD12	8:H:124:ALA:N	2.30	0.46
3:C:157:ILE:HD11	3:C:166:GLU:HB2	1.96	0.46
23:X:26:A:H3'	23:X:27:A:C8	2.50	0.46
2:B:44:LEU:HA	2:B:47:THR:OG1	2.14	0.46
1:A:453:A:C4'	16:P:72:ARG:HG3	2.38	0.46
14:N:12:ARG:NH1	14:N:14:PRO:HG2	2.31	0.46
12:L:17:LYS:HD3	12:L:18:VAL:HG22	1.97	0.46
1:A:1152:A:H2'	1:A:1153:C:H6	1.81	0.46
14:N:25:VAL:HG23	14:N:38:GLY:O	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:473:G:H5'	16:P:81:ARG:HG3	1.95	0.46
10:J:29:ARG:HG2	10:J:29:ARG:O	2.14	0.46
1:A:135:C:O2	16:P:1:MET:HB3	2.15	0.46
1:A:304:U:O2'	1:A:305:G:H5'	2.16	0.46
13:M:107:ALA:O	13:M:111:LYS:HG3	2.15	0.46
1:A:82:U:H6	1:A:83:U:H5	1.63	0.46
1:A:586:C:O2'	1:A:587:G:H5'	2.15	0.46
6:F:47:ARG:O	6:F:47:ARG:HG3	2.15	0.46
1:A:858:G:H8	1:A:858:G:O5'	1.97	0.46
1:A:375:U:OP1	16:P:69:THR:HG21	2.15	0.46
16:P:20:VAL:CG2	16:P:21:VAL:N	2.78	0.46
16:P:25:ARG:NH1	16:P:25:ARG:HG3	2.24	0.46
3:C:5:ILE:H	3:C:5:ILE:HD12	1.74	0.46
2:B:8:LYS:O	2:B:10:LEU:N	2.49	0.46
1:A:1256:A:C2	1:A:1278:U:H5'	2.50	0.46
1:A:1145:C:O2'	1:A:1146:A:O5'	2.28	0.46
25:Z:339:ARG:HE	25:Z:352:VAL:CG2	2.28	0.46
1:A:189(I):G:O2'	1:A:189(J):G:H5'	2.15	0.46
9:I:6:GLY:CA	9:I:84:ALA:HB2	2.45	0.46
22:W:64:A:H2'	22:W:65:G:H8	1.79	0.46
1:A:148:G:H2'	1:A:149:A:C8	2.51	0.46
5:E:11:ILE:HD12	5:E:31:LEU:HD11	1.97	0.46
9:I:85:LEU:C	9:I:85:LEU:HD12	2.35	0.46
7:G:18:TYR:CD2	7:G:59:LEU:HB2	2.51	0.46
2:B:7:VAL:HG13	2:B:11:LEU:HD12	1.97	0.46
1:A:952:U:O2'	1:A:953:G:H5'	2.14	0.46
1:A:1158:C:O2	1:A:1158:C:H2'	2.15	0.46
1:A:347:G:N2	1:A:348:G:H1'	2.29	0.46
6:F:30:LEU:HD21	6:F:65:VAL:HG11	1.96	0.46
4:D:85:LYS:HG2	4:D:86:LYS:N	2.31	0.46
13:M:74:VAL:HA	13:M:77:ASN:HD22	1.79	0.46
3:C:14:ILE:CG1	3:C:15:THR:N	2.78	0.46
6:F:75:LEU:O	6:F:79:LEU:HB2	2.15	0.46
18:R:40:LEU:O	18:R:42:ARG:N	2.49	0.46
1:A:594:G:C2'	1:A:595:G:H5'	2.45	0.46
25:Z:40:PRO:O	25:Z:41:ASN:CB	2.62	0.46
4:D:180:GLY:O	4:D:181:MET:C	2.54	0.46
21:U:12:LYS:HG2	21:U:22:ARG:CB	2.45	0.46
12:L:33:ARG:O	12:L:84:LEU:HD22	2.15	0.46
17:Q:69:LYS:O	17:Q:70:ARG:HD2	2.15	0.46
1:A:1255:G:H3'	1:A:1279:A:H61	1.80	0.46
20:T:84:LEU:C	20:T:86:ARG:N	2.68	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1048:G:P	14:N:4:LYS:HB2	2.54	0.46
18:R:53:ARG:NH1	18:R:60:ALA:HA	2.30	0.46
4:D:152:SER:O	4:D:154:ASN:N	2.48	0.46
1:A:625:G:O2'	1:A:626:U:H5'	2.15	0.46
25:Z:189:ARG:HB2	25:Z:192:GLU:OE2	2.16	0.46
13:M:8:GLU:OE1	13:M:22:ILE:HG13	2.15	0.46
24:Y:64:U:C4'	25:Z:392:GLY:H	2.27	0.46
8:H:85:ARG:HG3	8:H:85:ARG:HH11	1.79	0.46
2:B:114:ARG:HH11	2:B:118:LEU:CD2	2.21	0.46
1:A:973:G:H3'	1:A:974:A:H5''	1.97	0.46
20:T:18:GLN:HG2	20:T:22:ARG:HH12	1.79	0.46
12:L:25:PRO:C	12:L:27:LEU:N	2.68	0.46
15:O:16:ALA:C	15:O:18:PHE:H	2.16	0.46
25:Z:187:LYS:CD	25:Z:187:LYS:H	2.29	0.46
20:T:61:SER:O	20:T:65:LYS:HG2	2.15	0.46
23:X:27:A:H8	23:X:27:A:OP2	1.98	0.46
1:A:1352:C:H2'	1:A:1353:G:C8	2.51	0.46
15:O:7:GLU:O	15:O:11:VAL:HG23	2.14	0.46
2:B:187:LEU:CD1	2:B:205:ASP:HA	2.46	0.46
1:A:1373:G:H5''	7:G:36:LYS:HB2	1.98	0.46
1:A:375:U:C2	1:A:376:G:C8	3.04	0.46
1:A:263:A:OP2	20:T:79:ARG:NH1	2.49	0.46
25:Z:65:THR:HG22	25:Z:80:VAL:HG13	1.95	0.46
3:C:135:LYS:O	3:C:138:VAL:HG13	2.16	0.46
6:F:72:VAL:HG22	6:F:72:VAL:O	2.15	0.46
1:A:137:C:H2'	1:A:137:C:O2	2.15	0.46
2:B:239:VAL:O	2:B:240:GLN:HB3	2.15	0.46
1:A:499:A:H4'	1:A:500:G:H5'	1.98	0.46
24:Y:20:H2U:H4'	24:Y:21:A:O5'	2.16	0.46
1:A:567:G:H2'	1:A:568:G:O4'	2.16	0.46
25:Z:355:LEU:CD2	25:Z:370:PHE:CD2	2.98	0.46
20:T:53:LEU:N	20:T:53:LEU:HD12	2.31	0.46
20:T:53:LEU:HD22	20:T:100:ILE:O	2.16	0.46
4:D:5:ILE:HG22	4:D:5:ILE:O	2.14	0.46
1:A:266:G:O2'	1:A:267:C:OP2	2.29	0.46
22:W:4:C:N4	22:W:5:G:O6	2.49	0.46
9:I:114:TYR:CE2	10:J:59:SER:HA	2.44	0.46
25:Z:378:VAL:O	25:Z:380:LEU:HG	2.16	0.46
3:C:107:GLN:NE2	3:C:107:GLN:H	2.13	0.46
6:F:38:GLU:O	6:F:39:LYS:C	2.53	0.46
25:Z:372:VAL:HG12	25:Z:373:GLU:N	2.31	0.46
11:K:125:PHE:C	11:K:127:LYS:H	2.18	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:312:C:H2'	1:A:313:A:C8	2.51	0.46
5:E:24:ARG:NH1	23:X:27:A:N3	2.63	0.46
1:A:516:U:C4	1:A:517:G:C6	3.04	0.46
4:D:119:GLN:HG3	4:D:123:HIS:CD2	2.50	0.46
19:S:51:VAL:O	19:S:57:HIS:HA	2.16	0.46
20:T:98:PRO:O	20:T:99:LEU:O	2.33	0.46
24:Y:3:G:H5'	24:Y:3:G:C8	2.48	0.46
4:D:187:ARG:HG2	4:D:188:LEU:N	2.30	0.46
22:W:1:G:C2	22:W:73:A:C2	3.04	0.46
5:E:6:PHE:CD1	5:E:6:PHE:N	2.83	0.46
1:A:1499:A:O2'	1:A:1500:A:H5'	2.16	0.46
1:A:1442(A):G:O2'	1:A:1442(B):A:OP2	2.31	0.46
1:A:414:A:H2'	1:A:415:A:O4'	2.15	0.46
3:C:60:ALA:H	3:C:63:ASN:HD21	1.64	0.46
1:A:987:G:O2'	1:A:988:G:H5'	2.15	0.46
1:A:397:A:C8	1:A:548:G:OP2	2.69	0.46
5:E:152:ARG:HB3	8:H:43:GLY:HA3	1.98	0.46
20:T:50:GLU:HB2	20:T:99:LEU:HD13	1.98	0.46
25:Z:300:ARG:C	25:Z:302:GLN:H	2.18	0.46
1:A:963:G:N2	10:J:55:LYS:CE	2.71	0.46
25:Z:25:THR:HB	27:Z:1406:GDP:O2B	2.15	0.46
11:K:126:ARG:C	11:K:128:ALA:N	2.68	0.46
11:K:48:ILE:HD11	11:K:67:ASP:HB2	1.98	0.46
12:L:51:ALA:O	12:L:52:LEU:HD22	2.15	0.46
24:Y:62:U:H2'	24:Y:63:C:O4'	2.16	0.46
11:K:59:TYR:O	11:K:62:GLN:HB3	2.15	0.46
9:I:56:LEU:CD2	9:I:56:LEU:H	2.29	0.46
1:A:1242:C:O2'	1:A:1243:C:H5'	2.16	0.46
1:A:519:C:H2'	1:A:520:A:O4'	2.16	0.46
25:Z:162:GLU:OE2	28:Z:1407:KIR:H151	2.15	0.45
1:A:1392:G:N2	1:A:1502:A:C8	2.83	0.45
1:A:1399:C:C2	1:A:1502:A:N6	2.84	0.45
25:Z:143:ASP:HB3	25:Z:146:LEU:HB2	1.98	0.45
1:A:978:A:C5	1:A:1319:A:C2	3.04	0.45
3:C:50:ALA:O	3:C:70:VAL:CG1	2.63	0.45
5:E:6:PHE:HB2	5:E:34:VAL:HG22	1.98	0.45
19:S:43:GLU:C	19:S:45:VAL:N	2.69	0.45
4:D:149:ALA:HB3	4:D:152:SER:OG	2.16	0.45
12:L:34:ARG:HG2	12:L:35:GLY:N	2.31	0.45
1:A:1097:C:O2'	1:A:1098:C:H5'	2.16	0.45
1:A:678:U:H2'	1:A:679:C:C6	2.49	0.45
4:D:135:LEU:HD13	4:D:135:LEU:N	2.32	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Z:11:HIS:O	25:Z:12:VAL:HG13	2.17	0.45
25:Z:325:LYS:HE3	25:Z:331:HIS:CG	2.52	0.45
12:L:110:VAL:HG21	12:L:120:TYR:HB3	1.95	0.45
1:A:59:A:N3	1:A:59:A:H2'	2.31	0.45
9:I:48:GLU:N	9:I:49:PRO:CD	2.80	0.45
25:Z:147:LEU:H	25:Z:147:LEU:HD22	1.81	0.45
25:Z:375:ILE:HG13	25:Z:376:LYS:HG3	1.98	0.45
1:A:1308:U:OP2	13:M:99:ARG:HG3	2.16	0.45
5:E:76:ILE:HG13	5:E:93:PRO:HG3	1.99	0.45
1:A:427:U:OP1	4:D:13:ARG:NH2	2.49	0.45
4:D:60:GLU:OE1	4:D:60:GLU:HA	2.17	0.45
15:O:21:ASP:C	15:O:21:ASP:OD1	2.52	0.45
24:Y:25:C:C2'	24:Y:26:A:C5'	2.78	0.45
4:D:20:TYR:HD1	4:D:26:CYS:O	1.99	0.45
4:D:12:CYS:SG	4:D:31:CYS:SG	3.14	0.45
24:Y:76:A:C6	25:Z:271:GLU:CD	2.89	0.45
25:Z:251:ASP:HB2	25:Z:267:VAL:CG1	2.47	0.45
5:E:112:LEU:HA	5:E:112:LEU:HD23	1.71	0.45
25:Z:155:ARG:HG2	25:Z:165:GLY:O	2.16	0.45
25:Z:191:GLY:HA3	25:Z:197:ASP:OD2	2.16	0.45
10:J:8:LEU:CD2	10:J:96:ILE:HG22	2.46	0.45
9:I:5:TYR:CG	9:I:6:GLY:N	2.85	0.45
24:Y:21:A:H5'	24:Y:22:G:OP1	2.16	0.45
17:Q:83:ASP:CG	17:Q:84:LEU:N	2.68	0.45
6:F:76:ALA:O	6:F:80:ARG:HG3	2.17	0.45
13:M:22:ILE:CB	13:M:25:ILE:HD12	2.47	0.45
1:A:1004:A:C2'	1:A:1005:A:H5'	2.47	0.45
1:A:858:G:C5	1:A:869:G:N7	2.82	0.45
12:L:43:VAL:HG22	12:L:55:VAL:CG1	2.47	0.45
13:M:89:GLY:O	13:M:93:ARG:HD2	2.16	0.45
4:D:145:GLU:HG3	4:D:145:GLU:O	2.15	0.45
1:A:1309:G:O2'	1:A:1310:G:H5'	2.17	0.45
2:B:239:VAL:O	2:B:240:GLN:CB	2.65	0.45
2:B:39:ILE:CG2	2:B:40:HIS:N	2.79	0.45
7:G:69:VAL:HG21	7:G:104:LEU:HD13	1.99	0.45
12:L:41:ARG:HB2	12:L:41:ARG:NH1	2.31	0.45
8:H:126:LYS:O	8:H:127:LEU:HD22	2.16	0.45
1:A:245:C:O2'	1:A:246:A:P	2.75	0.45
11:K:17:GLY:O	11:K:80:VAL:HA	2.17	0.45
25:Z:5:PHE:CD1	25:Z:277:LEU:HD22	2.52	0.45
4:D:59:ARG:NH2	4:D:62:GLN:HG3	2.29	0.45
4:D:23:GLY:O	4:D:27:TYR:HD2	1.99	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:32:ALA:CB	10:J:76:ASN:H	2.29	0.45
16:P:22:THR:HG23	16:P:23:ASP:N	2.32	0.45
25:Z:145:GLU:O	25:Z:149:LEU:N	2.39	0.45
7:G:65:ALA:HB1	7:G:127:ALA:CB	2.41	0.45
1:A:390:C:H2'	1:A:391:G:C8	2.52	0.45
2:B:103:THR:CG2	2:B:176:GLU:HG2	2.46	0.45
24:Y:52:A:O2'	24:Y:53:G:H5'	2.17	0.45
1:A:458:C:H2'	1:A:460:G:C8	2.51	0.45
22:V:57:G:C2'	22:V:58:A:H5'	2.47	0.45
1:A:818:G:O2'	1:A:819:A:H5'	2.17	0.45
22:V:14:A:H2'	22:V:15:G:H5'	1.99	0.45
22:V:5:G:H5'	22:V:5:G:C8	2.52	0.45
22:W:57:G:O2'	22:W:58:A:H5'	2.15	0.45
4:D:12:CYS:SG	4:D:26:CYS:SG	3.15	0.45
25:Z:345:ARG:C	25:Z:347:THR:H	2.19	0.45
17:Q:10:VAL:HG23	17:Q:54:GLY:H	1.80	0.45
16:P:22:THR:OG1	16:P:26:ARG:HG3	2.16	0.45
19:S:49:ILE:O	19:S:60:VAL:HG12	2.16	0.45
9:I:70:LYS:O	9:I:73:GLN:HB2	2.17	0.45
1:A:1256:A:H2	1:A:1278:U:H5'	1.80	0.45
10:J:94:VAL:HG12	10:J:95:GLU:H	1.80	0.45
24:Y:50:G:O2'	25:Z:339:ARG:HD2	2.16	0.45
25:Z:129:PRO:HB2	25:Z:130:TYR:CE2	2.52	0.45
13:M:68:GLY:H	13:M:71:ARG:CG	2.28	0.45
1:A:310:G:H2'	1:A:311:C:H6	1.82	0.45
1:A:1042:G:O2'	1:A:1043:C:H5'	2.16	0.45
19:S:15:LEU:O	19:S:19:VAL:HG23	2.16	0.45
1:A:367:U:H5'	25:Z:291:ARG:HE	1.77	0.45
25:Z:327:GLU:HA	28:Z:1407:KIR:H101	1.98	0.45
25:Z:90:LYS:HA	25:Z:93:ILE:CG2	2.46	0.45
9:I:20:ARG:HH11	9:I:20:ARG:CG	2.26	0.45
1:A:972:C:H4'	10:J:57:LYS:HB2	1.98	0.45
9:I:53:VAL:C	9:I:55:ALA:H	2.20	0.45
4:D:171:GLY:C	4:D:173:TRP:H	2.19	0.45
3:C:32:LEU:O	3:C:35:GLU:HB3	2.16	0.45
11:K:110:ASP:HB2	18:R:88:LYS:HG3	1.99	0.45
1:A:735:C:H2'	1:A:736:C:C6	2.51	0.45
1:A:61:G:H2'	1:A:62:U:O4'	2.17	0.45
2:B:229:VAL:CG1	2:B:230:VAL:N	2.80	0.45
13:M:40:ASN:ND2	13:M:43:THR:HG23	2.31	0.45
1:A:1054:C:H4'	1:A:1055:A:O5'	2.16	0.45
1:A:179:A:H2'	1:A:180:U:C6	2.52	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:V:22:G:O2'	22:V:23:A:H5'	2.16	0.45
12:L:42:THR:HG23	12:L:42:THR:O	2.16	0.45
1:A:192:U:H1'	20:T:103:GLY:CA	2.44	0.45
2:B:165:VAL:CG2	2:B:166:ASP:N	2.71	0.45
9:I:48:GLU:HG3	9:I:101:PHE:CZ	2.52	0.45
19:S:35:SER:C	19:S:37:ARG:H	2.21	0.45
22:V:61:C:H2'	22:V:61:C:O2	2.17	0.45
3:C:35:GLU:CD	3:C:95:THR:HG23	2.38	0.45
12:L:57:LYS:HA	12:L:67:THR:HA	1.97	0.45
1:A:719:C:C2	18:R:50:ILE:HG12	2.51	0.45
3:C:152:ILE:HG12	3:C:167:TRP:HB2	1.99	0.45
14:N:32:SER:HB3	14:N:41:ARG:HG2	1.98	0.45
22:V:5:G:H1	22:V:68:C:N4	2.14	0.45
1:A:858:G:C8	1:A:858:G:OP2	2.70	0.45
10:J:57:LYS:C	10:J:58:ASP:O	2.53	0.45
22:W:44:G:O4'	22:W:44:G:P	2.75	0.45
21:U:6:ARG:HD3	21:U:15:ARG:HH12	1.74	0.45
22:W:39:U:C2'	22:W:40:C:H5'	2.47	0.45
19:S:66:MET:O	19:S:67:VAL:C	2.54	0.45
18:R:44:LEU:CD1	18:R:50:ILE:HD13	2.47	0.45
4:D:36:ARG:HH11	4:D:36:ARG:CG	2.29	0.45
9:I:24:GLY:O	9:I:25:LYS:HD2	2.17	0.45
1:A:349:A:O2'	1:A:350:G:H5'	2.16	0.45
2:B:24:TRP:CZ3	2:B:26:PRO:HA	2.51	0.45
25:Z:284:ASP:N	25:Z:284:ASP:OD1	2.50	0.45
4:D:32:ALA:C	4:D:34:GLU:N	2.70	0.45
4:D:194:LEU:HD22	4:D:194:LEU:N	2.32	0.45
11:K:29:ILE:HB	11:K:44:SER:HB3	1.99	0.45
1:A:376:G:H4'	16:P:5:ARG:HH11	1.82	0.45
1:A:926:G:H5''	1:A:927:G:O5'	2.16	0.45
1:A:1015:A:H4'	14:N:15:LYS:NZ	2.32	0.45
1:A:647:C:O2'	1:A:648:A:H5'	2.17	0.45
24:Y:15:A:H8	24:Y:15:A:O5'	2.00	0.45
1:A:358:U:H5'	25:Z:234:ARG:O	2.16	0.44
4:D:30:LYS:C	4:D:32:ALA:N	2.71	0.44
4:D:111:ALA:HA	4:D:116:GLN:OE1	2.16	0.44
1:A:255:G:H1'	17:Q:16:GLN:HE21	1.81	0.44
25:Z:193:ASN:O	25:Z:195:TRP:N	2.50	0.44
25:Z:206:ILE:O	25:Z:210:ILE:HG22	2.17	0.44
1:A:659:U:H2'	1:A:660:G:H8	1.82	0.44
1:A:736:C:H2'	1:A:737:A:H8	1.82	0.44
3:C:82:GLU:CD	3:C:82:GLU:N	2.70	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:412:A:H4'	1:A:413:G:H8	1.82	0.44
14:N:24:CYS:N	14:N:29:ARG:O	2.38	0.44
1:A:1291:G:H4'	9:I:39:GLY:HA3	1.99	0.44
1:A:942:G:H2'	1:A:943:U:H6	1.82	0.44
25:Z:126:VAL:CG1	25:Z:126:VAL:O	2.64	0.44
10:J:33:GLN:H	10:J:75:ILE:HD11	1.81	0.44
1:A:1285:A:OP1	1:A:1285:A:H8	2.00	0.44
6:F:46:ARG:NH2	18:R:38:GLU:OE1	2.50	0.44
3:C:136:GLN:O	3:C:139:GLN:HB3	2.17	0.44
22:W:11:C:H2'	22:W:12:U:H6	1.82	0.44
22:V:75:C:H2'	22:V:76:A:C1'	2.47	0.44
5:E:96:PRO:HA	5:E:117:ASP:OD2	2.17	0.44
1:A:1118:C:H1'	1:A:1179:A:C4	2.52	0.44
1:A:358:U:O3'	25:Z:235:GLY:CA	2.56	0.44
13:M:12:ASN:ND2	13:M:12:ASN:N	2.65	0.44
1:A:322:C:O2'	20:T:23:ARG:HB2	2.17	0.44
13:M:120:LYS:NZ	13:M:120:LYS:HA	2.32	0.44
20:T:13:LEU:C	20:T:15:ARG:N	2.71	0.44
25:Z:28:THR:HG23	25:Z:79:HIS:CE1	2.51	0.44
25:Z:87:ASP:HB2	25:Z:88:TYR:HD1	1.82	0.44
19:S:45:VAL:C	19:S:47:HIS:H	2.21	0.44
1:A:1131:G:N3	1:A:1132:C:N4	2.65	0.44
2:B:111:ARG:NH1	2:B:111:ARG:HG2	2.31	0.44
25:Z:34:VAL:C	25:Z:36:ALA:H	2.21	0.44
10:J:62:HIS:HB2	14:N:59:ALA:HB3	1.98	0.44
15:O:29:VAL:HG11	15:O:67:LEU:HD21	1.99	0.44
19:S:58:VAL:HG11	19:S:75:ALA:HA	2.00	0.44
1:A:38:G:C2	1:A:397:A:C2	3.06	0.44
1:A:1375:A:H2'	1:A:1376:U:O4'	2.17	0.44
25:Z:334:PHE:N	25:Z:334:PHE:CD1	2.85	0.44
5:E:119:LEU:HA	5:E:119:LEU:HD23	1.83	0.44
24:Y:26:A:H2'	24:Y:27:C:H6	1.83	0.44
2:B:204:ASN:HD22	2:B:206:ASP:H	1.59	0.44
19:S:11:VAL:O	19:S:11:VAL:HG22	2.17	0.44
9:I:4:TYR:HA	9:I:87:GLN:HG2	2.00	0.44
1:A:376:G:H4'	16:P:5:ARG:NH1	2.32	0.44
19:S:10:PHE:HD2	19:S:12:ASP:OD1	2.00	0.44
11:K:63:LEU:HD12	11:K:63:LEU:H	1.83	0.44
1:A:1222:G:O2'	1:A:1223:C:H5'	2.18	0.44
1:A:783:C:O2'	1:A:784:C:H5'	2.18	0.44
4:D:119:GLN:HG3	4:D:123:HIS:NE2	2.33	0.44
25:Z:96:ALA:O	25:Z:99:MET:HG2	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:441:A:H3'	1:A:442:C:C6	2.52	0.44
1:A:909:A:H2'	1:A:910:C:O4'	2.17	0.44
1:A:824:C:H1'	8:H:1:MET:HE2	1.99	0.44
18:R:87:ARG:HH11	18:R:87:ARG:CB	2.31	0.44
1:A:979:C:O2	14:N:19:ARG:HG2	2.17	0.44
19:S:16:LEU:O	19:S:18:LYS:N	2.50	0.44
4:D:30:LYS:HB3	4:D:35:ARG:NH1	2.33	0.44
24:Y:76:A:H2	25:Z:270:VAL:HA	1.82	0.44
1:A:973:G:C4	10:J:55:LYS:HE2	2.53	0.44
25:Z:166:ASP:N	25:Z:166:ASP:OD1	2.50	0.44
25:Z:64:ASN:N	25:Z:83:PRO:HG2	2.32	0.44
25:Z:197:ASP:O	25:Z:201:GLU:N	2.51	0.44
1:A:1152:A:H5'	10:J:70:ARG:NH2	2.31	0.44
1:A:658:G:H2'	1:A:659:U:C6	2.53	0.44
16:P:9:PHE:CE2	16:P:18:ARG:NE	2.85	0.44
1:A:1411:C:H2'	1:A:1412:C:H6	1.81	0.44
13:M:118:ALA:HB3	22:V:29:G:H5'	1.99	0.44
16:P:60:LEU:HD21	16:P:66:PRO:HG3	1.98	0.44
13:M:40:ASN:HB3	13:M:43:THR:HG23	1.99	0.44
1:A:197:A:C6	1:A:221:C:H4'	2.53	0.44
3:C:166:GLU:HA	3:C:166:GLU:OE1	2.16	0.44
13:M:68:GLY:N	13:M:71:ARG:HG3	2.33	0.44
1:A:1230:C:O2'	1:A:1231:G:H5'	2.17	0.44
17:Q:12:SER:HB3	17:Q:20:THR:OG1	2.17	0.44
1:A:1458:G:H2'	1:A:1459:C:C6	2.52	0.44
19:S:36:ARG:NH1	19:S:53:ASN:HA	2.32	0.44
3:C:179:ARG:HD2	3:C:206:GLU:OE2	2.17	0.44
24:Y:77:TRP:N	25:Z:272:MET:HA	2.33	0.44
25:Z:12:VAL:HG23	25:Z:77:TYR:CD1	2.52	0.44
2:B:92:TYR:HE2	2:B:94:ASN:HD21	1.65	0.44
25:Z:397:ALA:CB	28:Z:1407:KIR:H252	2.40	0.44
3:C:6:HIS:CD2	3:C:8:ILE:HB	2.53	0.44
16:P:53:VAL:CG2	16:P:54:GLU:N	2.77	0.44
1:A:59:A:H1'	1:A:354:G:N2	2.32	0.44
1:A:59:A:C5'	1:A:60:A:H5''	2.47	0.44
25:Z:200:TRP:O	25:Z:204:ASP:HB2	2.17	0.44
25:Z:206:ILE:C	25:Z:208:GLU:H	2.19	0.44
10:J:94:VAL:CG1	10:J:95:GLU:N	2.80	0.44
3:C:30:ARG:HH21	3:C:31:HIS:HE1	1.60	0.44
1:A:863:U:H6	1:A:866:C:H41	1.65	0.44
23:X:11:U:O2	23:X:11:U:H2'	2.17	0.44
25:Z:27:LEU:HD11	25:Z:31:LEU:HD11	2.00	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Z:27:LEU:O	25:Z:30:ALA:HB3	2.18	0.44
13:M:37:THR:O	13:M:39:ILE:HG13	2.17	0.44
3:C:84:ILE:HG23	3:C:85:ARG:HH11	1.83	0.44
20:T:89:ARG:NH1	20:T:104:LEU:HD21	2.32	0.44
25:Z:125:GLN:HE22	25:Z:394:THR:HB	1.83	0.44
1:A:470:C:C2'	1:A:471:G:OP1	2.65	0.44
1:A:995:C:HO2'	1:A:996:A:H8	1.66	0.44
7:G:26:PHE:O	7:G:30:ILE:HG12	2.18	0.44
1:A:35:G:H2'	1:A:36:C:C6	2.53	0.44
13:M:34:LEU:HD13	13:M:41:PRO:HA	2.00	0.44
14:N:41:ARG:NH2	14:N:42:ILE:HD11	2.32	0.44
2:B:28:PHE:CE2	2:B:190:THR:HA	2.53	0.44
1:A:858:G:O2'	1:A:859:A:H5'	2.17	0.44
8:H:44:PHE:CE2	8:H:109:ILE:CG2	3.00	0.44
3:C:70:VAL:CG1	3:C:71:ALA:N	2.81	0.44
1:A:1036:G:H3'	1:A:1037:C:C6	2.53	0.44
6:F:1:MET:HA	6:F:67:MET:O	2.18	0.44
11:K:21:ILE:HB	11:K:84:VAL:HG12	2.00	0.44
11:K:33:THR:HB	11:K:38:ASN:O	2.18	0.44
18:R:59:SER:OG	18:R:62:GLU:HG3	2.18	0.44
15:O:39:LEU:HD23	15:O:39:LEU:O	2.18	0.44
1:A:782:A:C2'	1:A:783:C:H5'	2.47	0.44
6:F:53:ALA:O	6:F:54:LYS:CB	2.66	0.44
1:A:178:C:O2'	1:A:179:A:H5'	2.18	0.44
12:L:61:THR:C	12:L:63:GLY:H	2.21	0.44
5:E:82:VAL:HG21	5:E:138:ALA:HA	1.99	0.44
15:O:48:LYS:HD3	15:O:48:LYS:HA	1.78	0.44
2:B:31:TYR:HD2	2:B:202:PRO:HG3	1.83	0.44
25:Z:117:ARG:NE	25:Z:157:LEU:HD11	2.32	0.44
25:Z:159:ASN:C	25:Z:161:TYR:N	2.71	0.44
1:A:723:U:O2	1:A:723:U:C2'	2.65	0.44
1:A:659:U:H2'	1:A:660:G:C8	2.52	0.44
1:A:861:G:O2'	1:A:862:C:H5'	2.18	0.44
14:N:60:SER:O	14:N:61:TRP:HB3	2.18	0.44
25:Z:330:ARG:HH11	25:Z:330:ARG:HG2	1.83	0.44
3:C:131:ARG:HH11	3:C:166:GLU:CG	2.31	0.44
1:A:1262:C:H2'	1:A:1263:C:C6	2.52	0.44
1:A:189:G:O2'	1:A:189(A):C:H5'	2.17	0.44
24:Y:54:5MU:H73	24:Y:55:PSU:C2	2.52	0.44
1:A:294:U:H2'	1:A:295:C:H6	1.83	0.44
1:A:836:G:C6	1:A:851:G:C6	3.06	0.44
25:Z:2:LYS:C	25:Z:275:LYS:HE3	2.29	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:4:ILE:H	13:M:4:ILE:CD1	2.31	0.44
24:Y:64:U:O2'	25:Z:341:GLN:NE2	2.51	0.44
12:L:117:ARG:HB3	12:L:122:THR:OG1	2.17	0.44
4:D:3:ARG:HG2	4:D:118:ARG:HE	1.83	0.44
1:A:130:A:H1'	1:A:263:A:O2'	2.17	0.44
1:A:628:G:O2'	1:A:629:G:H5'	2.17	0.44
12:L:7:ILE:HG21	17:Q:34:LYS:HB2	2.00	0.44
7:G:44:TYR:O	7:G:45:ASP:C	2.57	0.44
4:D:6:GLY:O	4:D:7:PRO:C	2.56	0.44
21:U:10:ARG:O	21:U:11:GLY:C	2.54	0.44
4:D:91:SER:O	4:D:92:VAL:C	2.54	0.44
24:Y:52:A:H2'	24:Y:53:G:H5'	1.99	0.44
1:A:153:C:H42	1:A:168:G:H1	1.65	0.44
1:A:1459:C:O2'	1:A:1460:A:H5'	2.17	0.44
1:A:1012:U:O2'	1:A:1013:G:H5'	2.18	0.44
2:B:28:PHE:HE2	2:B:190:THR:HG22	1.83	0.43
25:Z:385:ARG:HA	25:Z:399:VAL:HA	2.00	0.43
17:Q:10:VAL:HG23	17:Q:54:GLY:N	2.33	0.43
17:Q:58:GLU:O	17:Q:59:ILE:HD13	2.18	0.43
17:Q:5:VAL:HG22	17:Q:60:ILE:CD1	2.45	0.43
25:Z:82:CYS:HA	25:Z:83:PRO:HD3	1.88	0.43
19:S:29:ARG:O	19:S:31:ILE:HG22	2.17	0.43
25:Z:136:ASN:HA	25:Z:173:GLY:O	2.17	0.43
7:G:20:ASP:HB3	7:G:23:VAL:CG2	2.47	0.43
25:Z:65:THR:HG23	25:Z:80:VAL:CG1	2.47	0.43
13:M:83:ASP:OD1	13:M:85:GLY:N	2.51	0.43
1:A:1315:U:O2	1:A:1360:A:H2	2.01	0.43
9:I:50:LEU:O	9:I:56:LEU:HB3	2.18	0.43
15:O:56:LEU:O	15:O:60:VAL:HG23	2.17	0.43
10:J:47:PHE:CE1	14:N:37:PHE:CE2	3.06	0.43
5:E:48:ALA:HB2	5:E:57:LYS:NZ	2.33	0.43
24:Y:76:A:C2	25:Z:270:VAL:CA	3.01	0.43
25:Z:318:ALA:O	25:Z:369:THR:HA	2.18	0.43
13:M:49:THR:O	13:M:53:VAL:HG23	2.18	0.43
4:D:101:LEU:O	4:D:102:ASP:C	2.56	0.43
1:A:1065:U:C6	1:A:1190:G:N3	2.87	0.43
1:A:1065:U:H6	1:A:1190:G:N2	2.12	0.43
3:C:73:PRO:O	3:C:76:VAL:HG22	2.18	0.43
22:V:59:U:HO2'	22:V:60:U:H6	1.65	0.43
1:A:656:C:O2'	1:A:657:G:H5'	2.18	0.43
25:Z:323:LEU:HD12	25:Z:323:LEU:N	2.26	0.43
18:R:53:ARG:HH11	18:R:60:ALA:CA	2.31	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:R:25:THR:HG22	18:R:25:THR:O	2.17	0.43
1:A:1171:G:H2'	1:A:1172:C:H6	1.83	0.43
18:R:50:ILE:CD1	18:R:70:ILE:HG21	2.48	0.43
8:H:88:LYS:HB3	8:H:89:PRO:HD2	2.00	0.43
1:A:332:G:H2'	1:A:333:G:H8	1.83	0.43
5:E:20:GLN:HE21	5:E:20:GLN:HB3	1.52	0.43
1:A:1376:U:H2'	1:A:1377:A:C8	2.53	0.43
15:O:80:ALA:O	15:O:84:LYS:HG3	2.18	0.43
1:A:746:A:O2'	1:A:747:C:H5'	2.18	0.43
18:R:31:LEU:H	18:R:31:LEU:CD2	2.31	0.43
25:Z:19:HIS:CE1	25:Z:113:MET:CG	3.02	0.43
11:K:43:SER:HA	11:K:47:VAL:HG21	2.00	0.43
25:Z:145:GLU:CG	25:Z:149:LEU:HB2	2.40	0.43
1:A:1127:G:H1	1:A:1145:C:H42	1.65	0.43
20:T:15:ARG:O	20:T:19:SER:HB2	2.17	0.43
15:O:71:GLN:HB2	15:O:78:TYR:CD1	2.54	0.43
1:A:1286:A:H1'	1:A:1287:A:H4'	1.99	0.43
10:J:29:ARG:O	10:J:30:SER:CB	2.66	0.43
25:Z:333:GLY:HA2	25:Z:363:MET:HA	2.00	0.43
4:D:155:LEU:O	4:D:159:ARG:HG2	2.19	0.43
1:A:222:U:H2'	1:A:223:U:H6	1.82	0.43
1:A:774:G:O2'	1:A:775:G:H5'	2.18	0.43
1:A:441:A:H3'	1:A:442:C:H6	1.83	0.43
1:A:605:U:O2'	1:A:606:G:H5'	2.18	0.43
1:A:718:G:O6	18:R:74:ARG:NH1	2.52	0.43
2:B:42:ILE:CD1	2:B:202:PRO:HB2	2.45	0.43
24:Y:76:A:C2	25:Z:271:GLU:N	2.86	0.43
17:Q:63:ARG:O	17:Q:64:PRO:C	2.57	0.43
4:D:127:THR:N	4:D:147:ALA:O	2.50	0.43
12:L:53:ARG:HB2	12:L:93:LEU:HD21	2.00	0.43
6:F:22:GLU:HA	6:F:25:ILE:HG22	2.00	0.43
7:G:38:LEU:O	7:G:42:ILE:HG13	2.18	0.43
13:M:118:ALA:HB3	22:V:29:G:C5'	2.49	0.43
4:D:85:LYS:HD3	4:D:92:VAL:HG11	1.99	0.43
18:R:44:LEU:HD21	18:R:79:LEU:HD13	1.99	0.43
1:A:337:C:H2'	1:A:338:A:H8	1.83	0.43
1:A:509:A:H5'	4:D:54:TYR:CD2	2.52	0.43
15:O:69:TYR:CE1	15:O:73:GLU:HG3	2.53	0.43
4:D:15:GLU:HG2	4:D:63:LYS:HG3	2.00	0.43
20:T:53:LEU:HB3	20:T:102:GLY:HA3	2.00	0.43
9:I:52:ALA:HB3	9:I:95:LYS:NZ	2.33	0.43
12:L:24:VAL:CG1	12:L:24:VAL:O	2.60	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Z:195:TRP:HE3	25:Z:195:TRP:HA	1.82	0.43
4:D:200:GLU:C	4:D:202:LEU:H	2.21	0.43
1:A:1153:C:O2'	1:A:1154:G:H5''	2.19	0.43
20:T:10:LEU:C	20:T:12:ALA:H	2.22	0.43
23:X:13:A:H8	23:X:13:A:OP2	2.00	0.43
1:A:1286:A:O2'	1:A:1287:A:C5'	2.66	0.43
1:A:552:U:O3'	12:L:87:GLY:HA3	2.19	0.43
22:V:18:G:H2'	22:V:57:G:N2	2.33	0.43
25:Z:40:PRO:O	25:Z:41:ASN:HB3	2.19	0.43
1:A:639:G:O2'	1:A:640:A:H5'	2.19	0.43
25:Z:141:VAL:O	25:Z:141:VAL:HG23	2.19	0.43
1:A:976:G:OP1	14:N:32:SER:N	2.49	0.43
13:M:15:VAL:HA	13:M:18:ALA:HB3	2.00	0.43
13:M:10:PRO:HB2	13:M:45:VAL:HG21	2.00	0.43
1:A:320:C:H2'	1:A:321:A:C8	2.54	0.43
9:I:93:ARG:O	9:I:95:LYS:N	2.51	0.43
25:Z:138:VAL:HG21	25:Z:173:GLY:N	2.33	0.43
5:E:45:PHE:CD2	5:E:47:LYS:HD2	2.54	0.43
1:A:1508:G:H2'	1:A:1509:C:H6	1.83	0.43
1:A:547:A:H4'	1:A:548:G:O5'	2.17	0.43
13:M:68:GLY:H	13:M:71:ARG:HG3	1.84	0.43
1:A:995:C:O2'	1:A:996:A:H8	2.02	0.43
24:Y:26:A:C5	24:Y:27:C:C5	3.06	0.43
19:S:19:VAL:O	19:S:23:ASN:N	2.52	0.43
25:Z:368:VAL:CG1	25:Z:369:THR:N	2.82	0.43
13:M:11:ARG:O	13:M:13:LYS:N	2.51	0.43
11:K:44:SER:N	11:K:47:VAL:HG23	2.33	0.43
10:J:54:PHE:CE1	10:J:55:LYS:CE	3.01	0.43
22:W:9:A:O2'	22:W:10:G:N7	2.50	0.43
19:S:29:ARG:O	19:S:30:LEU:C	2.57	0.43
9:I:40:LEU:C	9:I:42:ARG:N	2.70	0.43
19:S:6:LYS:HG2	19:S:7:LYS:HE3	2.01	0.43
1:A:189(D):C:O2	1:A:189(H):G:C6	2.72	0.43
2:B:25:ASN:O	2:B:27:LYS:N	2.52	0.43
1:A:600:C:H4'	8:H:128:GLY:O	2.17	0.43
2:B:233:SER:HB2	2:B:234:PRO:HD2	2.00	0.43
1:A:371:G:N2	1:A:374:A:N6	2.67	0.43
2:B:84:GLU:OE1	2:B:216:SER:HA	2.18	0.43
1:A:1090:U:H2'	1:A:1091:U:C6	2.54	0.43
6:F:56:PRO:HD2	6:F:57:GLN:HE21	1.83	0.43
1:A:575:G:H4'	1:A:576:G:O5'	2.19	0.43
5:E:131:ILE:HD13	5:E:131:ILE:HA	1.87	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1283:G:O2'	1:A:1284:C:C6	2.72	0.43
25:Z:327:GLU:HA	28:Z:1407:KIR:C10	2.48	0.43
25:Z:64:ASN:N	25:Z:83:PRO:CG	2.81	0.43
9:I:43:ALA:C	9:I:45:ALA:N	2.72	0.43
12:L:25:PRO:O	12:L:26:ALA:HB3	2.19	0.43
3:C:22:TRP:CZ2	14:N:54:PRO:HG2	2.54	0.43
1:A:865:A:H2	1:A:918:A:C4'	2.29	0.43
25:Z:378:VAL:O	25:Z:380:LEU:N	2.52	0.43
2:B:97:TRP:CH2	2:B:176:GLU:OE2	2.72	0.43
1:A:201:C:H2'	1:A:202:U:H3'	2.01	0.43
9:I:6:GLY:HA3	9:I:84:ALA:HB2	2.00	0.43
1:A:1243:C:H2'	1:A:1244:C:C6	2.54	0.43
3:C:80:GLY:C	3:C:82:GLU:OE2	2.57	0.43
22:V:68:C:O2'	22:V:69:G:H5'	2.19	0.43
25:Z:348:ASP:O	25:Z:348:ASP:CG	2.57	0.43
2:B:115:LEU:HB2	2:B:145:LEU:HD12	2.00	0.43
1:A:376:G:P	16:P:67:THR:HG21	2.59	0.43
16:P:67:THR:CG2	16:P:68:ASP:N	2.81	0.43
27:Z:1406:GDP:O2B	27:Z:1406:GDP:O1A	2.36	0.43
3:C:70:VAL:HG12	3:C:71:ALA:N	2.33	0.43
22:V:49:C:H2'	22:V:50:U:H6	1.84	0.43
1:A:676:A:H2'	1:A:677:U:C6	2.54	0.43
2:B:95:GLN:C	2:B:96:ARG:HD2	2.38	0.43
1:A:476:G:H2'	1:A:477:A:C8	2.53	0.43
4:D:148:VAL:CG1	4:D:152:SER:HB2	2.48	0.43
1:A:189:G:C6	1:A:189(A):C:C4	3.07	0.43
6:F:91:VAL:HG12	6:F:92:LYS:N	2.34	0.43
1:A:22:G:H4'	1:A:885:G:C8	2.54	0.43
1:A:820:U:H4'	1:A:821:G:OP2	2.18	0.43
8:H:26:VAL:HG13	8:H:59:LEU:HB2	1.99	0.43
1:A:1137:C:H4'	1:A:1138:G:N2	2.34	0.43
1:A:359:U:H2'	1:A:360:A:C8	2.54	0.43
14:N:12:ARG:HH11	14:N:14:PRO:HG2	1.84	0.43
14:N:57:ARG:CG	14:N:58:LYS:N	2.82	0.43
12:L:33:ARG:HD3	12:L:62:SER:CB	2.47	0.43
24:Y:40:C:H2'	24:Y:41:C:H5'	1.99	0.43
12:L:45:PRO:HG3	12:L:53:ARG:CD	2.47	0.43
25:Z:352:VAL:HG12	25:Z:353:VAL:N	2.34	0.43
7:G:22:LEU:HD22	7:G:62:PHE:CZ	2.54	0.43
3:C:22:TRP:CH2	3:C:32:LEU:HB2	2.54	0.43
24:Y:61:C:C2'	24:Y:62:U:C5'	2.88	0.43
2:B:69:LEU:HB2	2:B:159:PRO:CG	2.49	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Q:17:LYS:HA	17:Q:49:GLU:HG2	2.01	0.43
4:D:70:ILE:CG2	4:D:71:SER:N	2.81	0.43
3:C:165:THR:O	3:C:165:THR:CG2	2.66	0.43
1:A:878:G:C5'	8:H:89:PRO:HG2	2.49	0.43
3:C:175:LEU:HD21	3:C:201:TYR:CE2	2.54	0.43
19:S:50:ALA:HB1	19:S:57:HIS:HB3	2.00	0.43
1:A:294:U:H2'	1:A:295:C:C6	2.54	0.43
1:A:665:A:H2'	1:A:732:C:O2	2.19	0.43
3:C:190:ARG:HH11	3:C:190:ARG:HG3	1.83	0.43
7:G:68:ASN:O	7:G:138:LYS:HD2	2.18	0.43
7:G:114:ARG:HG2	7:G:114:ARG:H	1.74	0.43
2:B:32:ILE:HA	2:B:42:ILE:HA	2.01	0.42
22:W:18:G:O4'	22:W:58:A:C2	2.72	0.42
1:A:151:A:H2'	1:A:152:A:O4'	2.19	0.42
24:Y:76:A:H1'	25:Z:287:GLY:HA3	2.00	0.42
25:Z:19:HIS:CD2	25:Z:20:VAL:N	2.87	0.42
4:D:151:LYS:HG2	4:D:151:LYS:O	2.19	0.42
9:I:40:LEU:HD12	9:I:74:ILE:HD11	2.00	0.42
1:A:1030(D):A:H62	1:A:1031:G:N2	2.13	0.42
25:Z:191:GLY:CA	25:Z:197:ASP:OD2	2.67	0.42
1:A:190:U:H2'	1:A:191:G:H8	1.83	0.42
20:T:13:LEU:O	20:T:16:HIS:N	2.50	0.42
1:A:1216:G:H5''	14:N:5:ALA:HB2	2.01	0.42
1:A:1269:A:C2	1:A:1313:U:O4'	2.72	0.42
1:A:1286:A:O2'	1:A:1287:A:P	2.77	0.42
1:A:475:G:H2'	1:A:476:G:H8	1.83	0.42
6:F:12:PRO:HG3	6:F:55:ASP:CB	2.48	0.42
2:B:77:ALA:O	2:B:81:VAL:HG23	2.19	0.42
1:A:797:C:O2'	1:A:798:G:H5'	2.19	0.42
1:A:802:A:H2'	1:A:803:G:O4'	2.19	0.42
12:L:111:LYS:O	12:L:112:ASP:HB2	2.19	0.42
17:Q:91:ARG:HB2	17:Q:91:ARG:HH11	1.84	0.42
6:F:86:ARG:H	6:F:86:ARG:HG2	1.68	0.42
24:Y:25:C:O2'	24:Y:26:A:H5'	2.19	0.42
22:V:47:U:HO2'	22:V:48:C:C5'	2.32	0.42
25:Z:77:TYR:OH	25:Z:207:ASP:HB3	2.19	0.42
1:A:367:U:H4'	25:Z:291:ARG:HH21	1.83	0.42
10:J:40:LEU:N	10:J:40:LEU:CD2	2.78	0.42
1:A:353:A:H2'	1:A:354:G:OP2	2.19	0.42
25:Z:131:ILE:HG12	25:Z:163:PHE:CE1	2.53	0.42
1:A:1190:G:OP1	3:C:4:LYS:HA	2.18	0.42
2:B:15:VAL:C	2:B:16:HIS:CG	2.92	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1015:A:C6	1:A:1016:A:C6	3.07	0.42
12:L:53:ARG:NH1	12:L:92:ASP:OD2	2.46	0.42
2:B:127:ILE:HG22	2:B:128:GLU:N	2.33	0.42
3:C:139:GLN:O	3:C:142:MET:HB2	2.19	0.42
1:A:173:U:H5''	1:A:197:A:O4'	2.18	0.42
7:G:143:ARG:HD3	22:W:41:C:O3'	2.19	0.42
3:C:107:GLN:H	3:C:107:GLN:CD	2.21	0.42
1:A:827:U:N3	1:A:870:U:C4	2.87	0.42
1:A:1120:G:H2'	1:A:1121:U:C6	2.55	0.42
22:V:71:G:C2'	22:V:72:C:H5'	2.49	0.42
1:A:1476:G:H2'	1:A:1477:C:C6	2.55	0.42
7:G:134:ALA:O	7:G:135:VAL:C	2.58	0.42
2:B:200:ILE:O	2:B:201:ILE:HG13	2.19	0.42
4:D:9:CYS:HA	4:D:12:CYS:SG	2.59	0.42
10:J:81:THR:HG23	10:J:82:ILE:N	2.34	0.42
5:E:145:LYS:HA	8:H:107:LEU:HD22	2.02	0.42
1:A:130:A:C8	17:Q:63:ARG:HG3	2.55	0.42
1:A:190:U:O2'	1:A:191:G:H5'	2.20	0.42
22:V:62:C:C2'	22:V:62:C:O2	2.66	0.42
1:A:275:G:H5'	17:Q:14:LYS:HD2	2.01	0.42
4:D:163:GLU:C	4:D:165:MET:H	2.23	0.42
25:Z:85:HIS:C	25:Z:87:ASP:N	2.71	0.42
23:X:12:A:H2'	23:X:13:A:O5'	2.19	0.42
1:A:1286:A:O2'	1:A:1287:A:OP2	2.32	0.42
18:R:53:ARG:NH1	18:R:60:ALA:CA	2.82	0.42
1:A:298:A:H2'	1:A:299:G:O4'	2.19	0.42
2:B:77:ALA:HB2	2:B:211:ILE:CD1	2.49	0.42
1:A:202:U:O2'	1:A:203:U:OP1	2.36	0.42
1:A:403:C:O2'	1:A:404:U:H5'	2.18	0.42
1:A:312:C:H2'	1:A:313:A:H8	1.84	0.42
3:C:60:ALA:N	3:C:63:ASN:OD1	2.52	0.42
17:Q:56:VAL:HG23	17:Q:81:ARG:HG3	2.01	0.42
1:A:1428:A:H2'	1:A:1429:C:C6	2.54	0.42
1:A:219:C:H2'	1:A:220:G:O4'	2.19	0.42
4:D:122:ARG:HA	4:D:122:ARG:HD2	1.85	0.42
1:A:358:U:C1'	25:Z:233:GLY:CA	2.91	0.42
3:C:106:VAL:HG21	3:C:115:LEU:HD11	2.01	0.42
23:X:16:A:H5''	23:X:17:U:OP2	2.20	0.42
22:V:59:U:O2'	22:V:60:U:O5'	2.37	0.42
2:B:158:LEU:HA	2:B:159:PRO:HD3	1.82	0.42
20:T:32:ALA:O	20:T:36:LEU:HB2	2.19	0.42
20:T:36:LEU:O	20:T:36:LEU:HD13	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:781:A:H2'	1:A:782:A:H5'	2.00	0.42
1:A:454:C:H5''	1:A:455:C:H5	1.83	0.42
25:Z:41:ASN:O	25:Z:42:VAL:HG23	2.19	0.42
1:A:811:C:H4'	1:A:900:A:N6	2.34	0.42
1:A:720:C:H2'	1:A:721:G:C8	2.54	0.42
24:Y:25:C:H2'	24:Y:26:A:O5'	2.19	0.42
1:A:1281:U:C5'	1:A:1282:C:H5	2.07	0.42
4:D:58:LEU:O	4:D:62:GLN:HG2	2.20	0.42
25:Z:90:LYS:HA	25:Z:93:ILE:HG21	2.02	0.42
11:K:22:HIS:HB3	11:K:29:ILE:HG12	2.00	0.42
10:J:82:ILE:O	10:J:82:ILE:HG22	2.20	0.42
22:W:9:A:C2	22:W:45:U:C4	3.06	0.42
12:L:58:VAL:HG12	12:L:60:LEU:HD22	2.01	0.42
4:D:120:LEU:HB3	4:D:126:ILE:CD1	2.45	0.42
4:D:121:VAL:CA	4:D:126:ILE:HD13	2.49	0.42
1:A:1145:C:H1'	1:A:1146:A:C8	2.54	0.42
12:L:92:ASP:O	12:L:94:PRO:HD3	2.20	0.42
12:L:39:VAL:HG13	12:L:39:VAL:O	2.19	0.42
3:C:134:ILE:HG22	3:C:168:ALA:HB3	2.01	0.42
2:B:80:ILE:N	2:B:80:ILE:CD1	2.82	0.42
1:A:538:G:H3'	12:L:115:LYS:NZ	2.35	0.42
2:B:226:ARG:HD2	2:B:226:ARG:C	2.39	0.42
1:A:131:C:H2'	1:A:132:C:H6	1.84	0.42
2:B:30:ARG:HH21	2:B:194:PRO:CG	2.30	0.42
8:H:7:ALA:CB	8:H:85:ARG:HD3	2.39	0.42
13:M:49:THR:C	13:M:51:ALA:N	2.72	0.42
14:N:57:ARG:HG2	14:N:58:LYS:N	2.35	0.42
1:A:189(E):U:O2'	1:A:189(F):U:H5'	2.19	0.42
22:W:35:A:N1	23:X:17:U:O4	2.51	0.42
12:L:46:LYS:HB2	12:L:92:ASP:O	2.19	0.42
1:A:1239:A:H62	1:A:1299:A:N6	2.17	0.42
2:B:221:LEU:HD13	2:B:221:LEU:C	2.40	0.42
20:T:33:ILE:HG13	20:T:33:ILE:H	1.64	0.42
25:Z:124:ARG:NH1	25:Z:124:ARG:HG3	2.34	0.42
25:Z:295:ARG:HG2	25:Z:295:ARG:HH11	1.84	0.42
4:D:190:ASP:CG	4:D:191:ARG:N	2.73	0.42
1:A:1049:U:H1'	1:A:1201:A:N7	2.33	0.42
2:B:106:LYS:HB2	2:B:106:LYS:NZ	2.33	0.42
2:B:203:GLY:O	2:B:204:ASN:C	2.57	0.42
1:A:974:A:OP1	1:A:974:A:H8	2.03	0.42
16:P:71:ARG:HD3	16:P:75:ARG:NH2	2.34	0.42
9:I:78:LYS:HZ1	9:I:101:PHE:HE1	1.68	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:11:LEU:O	2:B:16:HIS:CE1	2.73	0.42
25:Z:190:ARG:NH1	25:Z:200:TRP:CE3	2.86	0.42
1:A:191:G:H1'	20:T:105:SER:HA	2.01	0.42
19:S:40:ILE:HD13	19:S:62:ILE:HD13	2.01	0.42
2:B:69:LEU:HB2	2:B:159:PRO:HG2	2.01	0.42
1:A:1157:A:HO2'	1:A:1158:C:P	2.43	0.42
1:A:1299:A:N3	1:A:1299:A:H5''	2.35	0.42
1:A:1452:C:H4'	1:A:1456:G:N2	2.35	0.42
2:B:223:ILE:HG13	2:B:223:ILE:H	1.66	0.42
1:A:436:C:H2'	1:A:437:U:H6	1.84	0.42
20:T:33:ILE:HG21	20:T:63:ILE:HG12	2.01	0.42
2:B:61:LEU:HD11	2:B:160:ASP:CB	2.50	0.42
25:Z:389:ARG:HG2	25:Z:394:THR:HA	2.01	0.42
1:A:958:A:C6	1:A:959:A:N1	2.88	0.42
1:A:1536:C:H6	1:A:1536:C:O5'	2.02	0.42
25:Z:355:LEU:HB3	25:Z:370:PHE:CB	2.50	0.42
4:D:34:GLU:O	4:D:35:ARG:CB	2.68	0.42
25:Z:89:ILE:O	25:Z:92:MET:HB3	2.19	0.42
1:A:324:G:OP1	20:T:70:SER:HB2	2.20	0.42
24:Y:40:C:C2'	24:Y:41:C:C5'	2.94	0.42
25:Z:201:GLU:O	25:Z:205:ALA:HB3	2.19	0.42
1:A:1133:G:C4	1:A:1142:G:N2	2.87	0.42
9:I:56:LEU:HG	9:I:57:GLY:N	2.34	0.42
3:C:14:ILE:HG12	3:C:15:THR:N	2.34	0.42
7:G:81:GLY:C	7:G:83:ALA:H	2.22	0.42
1:A:303:A:H2'	1:A:304:U:O4'	2.20	0.42
18:R:87:ARG:HB3	18:R:87:ARG:NH1	2.35	0.42
1:A:1137:C:O2'	1:A:1138:G:N2	2.52	0.42
1:A:154:C:H2'	1:A:155:C:C6	2.54	0.42
1:A:976:G:H5'	1:A:1358:U:O2'	2.20	0.42
10:J:54:PHE:CZ	10:J:55:LYS:CE	3.02	0.42
9:I:95:LYS:NZ	9:I:96:LEU:CD1	2.83	0.42
1:A:1153:C:O2'	1:A:1154:G:C5'	2.68	0.42
15:O:17:ARG:HG3	15:O:17:ARG:NH1	2.26	0.42
1:A:1125:U:H1'	10:J:5:ARG:NH2	2.35	0.42
19:S:6:LYS:C	19:S:7:LYS:HE3	2.40	0.42
25:Z:34:VAL:O	25:Z:36:ALA:N	2.51	0.42
24:Y:70:C:O2'	24:Y:71:C:H5'	2.20	0.42
3:C:132:ARG:O	3:C:136:GLN:HG3	2.20	0.42
1:A:124:G:C6	1:A:125:U:C4	3.07	0.42
7:G:75:VAL:O	7:G:75:VAL:HG23	2.19	0.42
1:A:552:U:O2	12:L:31:PRO:HB3	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:V:14:A:C2'	22:V:15:G:H5'	2.50	0.42
17:Q:91:ARG:NH1	17:Q:91:ARG:HB2	2.34	0.42
1:A:131:C:H2'	1:A:132:C:C6	2.54	0.42
1:A:697:U:H2'	1:A:698:G:H5'	2.02	0.42
16:P:52:ASP:CG	16:P:55:ARG:HB2	2.41	0.42
25:Z:194:GLU:HG3	25:Z:194:GLU:H	1.44	0.42
25:Z:13:ASN:ND2	25:Z:241:ARG:HD2	2.35	0.42
1:A:367:U:H5'	25:Z:291:ARG:HD2	2.02	0.42
1:A:367:U:C4'	25:Z:291:ARG:NE	2.70	0.42
10:J:3:LYS:HG2	10:J:75:ILE:O	2.20	0.42
1:A:375:U:P	16:P:69:THR:HG21	2.60	0.42
25:Z:26:THR:N	27:Z:1406:GDP:O2A	2.53	0.42
1:A:1318:A:HO2'	19:S:10:PHE:HE2	1.67	0.42
1:A:266:G:C5'	1:A:267:C:H5	2.21	0.42
13:M:120:LYS:HA	13:M:120:LYS:HZ1	1.85	0.42
4:D:6:GLY:O	4:D:8:VAL:HG13	2.20	0.42
1:A:865:A:O2'	1:A:866:C:H5'	2.20	0.42
1:A:953:G:H5''	1:A:965:A:H61	1.83	0.42
1:A:189(K):U:H2'	1:A:189(L):G:C8	2.54	0.42
1:A:538:G:H3'	12:L:115:LYS:HZ2	1.84	0.42
13:M:111:LYS:O	13:M:112:GLY:O	2.38	0.42
1:A:515:G:H2'	1:A:516:U:O4'	2.20	0.42
17:Q:81:ARG:HH21	17:Q:84:LEU:HD11	1.84	0.42
1:A:652:U:C2	1:A:752:G:N2	2.88	0.42
1:A:948:C:O2'	1:A:949:A:H5'	2.19	0.42
1:A:675:A:H1'	11:K:116:HIS:ND1	2.34	0.42
13:M:25:ILE:HD11	13:M:66:LEU:HD21	2.02	0.41
1:A:1347:G:O2'	1:A:1348:U:P	2.78	0.41
3:C:3:ASN:HB2	3:C:4:LYS:H	1.63	0.41
1:A:1322:C:OP2	1:A:1322:C:H6	2.03	0.41
1:A:522:C:H41	12:L:53:ARG:NH2	2.09	0.41
1:A:1526:G:C6	1:A:1527:C:N4	2.88	0.41
2:B:87:ARG:HH12	2:B:223:ILE:CD1	2.33	0.41
6:F:35:ALA:HB1	6:F:65:VAL:HB	2.02	0.41
24:Y:53:G:OP1	25:Z:332:THR:OG1	2.27	0.41
19:S:77:THR:HG23	19:S:78:ARG:HG3	2.02	0.41
25:Z:354:GLN:O	25:Z:371:THR:HB	2.19	0.41
1:A:1095:U:P	1:A:1108:G:H1	2.43	0.41
18:R:68:LYS:HE2	18:R:68:LYS:HB2	1.89	0.41
25:Z:272:MET:CB	25:Z:277:LEU:HD23	2.50	0.41
1:A:376:G:O3'	16:P:5:ARG:NH1	2.51	0.41
25:Z:163:PHE:C	25:Z:165:GLY:H	2.23	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:I:48:GLU:H	9:I:49:PRO:HD2	1.84	0.41
25:Z:24:LYS:HG3	27:Z:1406:GDP:O3B	2.20	0.41
19:S:70:LYS:O	19:S:71:LEU:C	2.57	0.41
1:A:740:U:O2'	1:A:741:G:H5'	2.20	0.41
12:L:46:LYS:CG	12:L:47:LYS:H	2.33	0.41
1:A:1160:G:C6	1:A:1181:G:O6	2.73	0.41
2:B:59:GLU:HB2	2:B:221:LEU:HD11	2.02	0.41
1:A:1442:G:H2'	1:A:1442(A):G:H5'	2.02	0.41
2:B:57:PHE:CE2	2:B:185:ILE:HD11	2.55	0.41
1:A:500:G:H5''	12:L:124:LYS:NZ	2.35	0.41
1:A:514:C:O2'	1:A:515:G:H5'	2.21	0.41
1:A:1236:A:H2'	1:A:1237:C:C6	2.55	0.41
1:A:377:G:H2'	1:A:378:G:C8	2.55	0.41
2:B:142:LEU:HD21	2:B:146:GLN:OE1	2.19	0.41
10:J:81:THR:O	10:J:83:GLU:N	2.53	0.41
10:J:61:GLU:OE2	14:N:49:HIS:CE1	2.72	0.41
4:D:171:GLY:HA2	4:D:172:PRO:HD3	1.87	0.41
25:Z:174:SER:OG	27:Z:1406:GDP:O6	2.37	0.41
25:Z:176:LEU:O	25:Z:180:GLU:HG3	2.19	0.41
24:Y:40:C:O2'	24:Y:41:C:H5''	2.19	0.41
22:W:2:C:N4	22:W:3:C:N4	2.69	0.41
10:J:35:SER:OG	10:J:73:ASP:CB	2.68	0.41
14:N:59:ALA:HB1	14:N:61:TRP:CZ3	2.56	0.41
20:T:62:LEU:HA	20:T:65:LYS:HG3	2.02	0.41
10:J:86:MET:O	10:J:86:MET:HG2	2.20	0.41
2:B:175:ARG:NH1	2:B:175:ARG:HB3	2.36	0.41
25:Z:355:LEU:CD2	25:Z:370:PHE:HD2	2.34	0.41
19:S:11:VAL:HG11	19:S:16:LEU:HD21	2.03	0.41
5:E:12:LEU:CD2	5:E:13:ILE:N	2.80	0.41
25:Z:385:ARG:HD3	28:Z:1407:KIR:H301	2.02	0.41
3:C:73:PRO:O	3:C:74:GLY:C	2.56	0.41
14:N:15:LYS:HB3	14:N:16:PHE:CD2	2.55	0.41
13:M:86:CYS:O	13:M:87:TYR:C	2.59	0.41
1:A:346:G:O2'	1:A:347:G:O5'	2.39	0.41
25:Z:185:ASN:N	25:Z:185:ASN:HD22	2.14	0.41
1:A:993:G:H4'	1:A:994:A:OP2	2.20	0.41
1:A:877:C:O2'	1:A:878:G:H5'	2.20	0.41
11:K:124:LYS:HD2	11:K:125:PHE:CE2	2.55	0.41
5:E:93:PRO:HD2	8:H:105:ARG:HH21	1.85	0.41
1:A:1161:C:H2'	1:A:1162:C:H6	1.86	0.41
1:A:903:G:H2'	1:A:904:C:C6	2.55	0.41
1:A:743:U:H2'	1:A:744:C:C6	2.55	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1010:G:H2'	1:A:1011:G:H8	1.85	0.41
22:V:41:C:C3'	22:V:42:C:H5''	2.51	0.41
25:Z:94:THR:O	25:Z:98:GLN:NE2	2.54	0.41
12:L:20:LYS:CD	12:L:20:LYS:H	2.14	0.41
11:K:27:ASN:ND2	11:K:28:THR:H	2.04	0.41
1:A:1014:A:H2'	1:A:1015:A:C8	2.55	0.41
4:D:163:GLU:C	4:D:165:MET:N	2.74	0.41
6:F:6:VAL:O	6:F:62:TRP:HA	2.21	0.41
7:G:22:LEU:HD22	7:G:62:PHE:CE2	2.56	0.41
3:C:79:ARG:O	3:C:79:ARG:HG3	2.21	0.41
8:H:18:ARG:CB	8:H:18:ARG:NH1	2.84	0.41
11:K:57:THR:HG22	11:K:60:ALA:HB2	2.02	0.41
16:P:60:LEU:HD21	16:P:66:PRO:HG2	2.00	0.41
2:B:238:LEU:CG	2:B:239:VAL:N	2.83	0.41
8:H:137:VAL:HG12	8:H:138:TRP:N	2.36	0.41
25:Z:221:PHE:CD1	25:Z:247:VAL:HG13	2.56	0.41
1:A:781:A:C3'	1:A:782:A:H5'	2.50	0.41
25:Z:315:LYS:HE2	25:Z:315:LYS:HB3	1.83	0.41
25:Z:315:LYS:HG2	25:Z:372:VAL:O	2.21	0.41
1:A:123:C:OP1	1:A:312:C:H5'	2.21	0.41
23:X:26:A:H3'	23:X:27:A:O4'	2.21	0.41
6:F:91:VAL:CG1	6:F:92:LYS:N	2.83	0.41
16:P:45:THR:O	16:P:47:ASP:N	2.43	0.41
1:A:983:A:H5'	1:A:984:C:OP2	2.20	0.41
1:A:1003:G:H21	1:A:1039:C:H42	1.63	0.41
25:Z:325:LYS:O	25:Z:326:GLU:C	2.59	0.41
5:E:11:ILE:HD11	5:E:33:VAL:CG2	2.48	0.41
1:A:407:G:H2'	1:A:408:A:H8	1.84	0.41
25:Z:28:THR:HG23	25:Z:79:HIS:ND1	2.35	0.41
1:A:46:G:O2'	1:A:365:U:H1'	2.20	0.41
7:G:119:ARG:O	7:G:120:ILE:C	2.58	0.41
25:Z:323:LEU:CD1	25:Z:396:GLY:HA2	2.50	0.41
10:J:35:SER:O	10:J:36:GLY:O	2.38	0.41
1:A:1312:G:O2'	1:A:1313:U:H5'	2.21	0.41
1:A:1157:A:H1'	1:A:1181:G:C2	2.56	0.41
1:A:347:G:O2'	1:A:348:G:C5'	2.69	0.41
1:A:1006:C:H2'	1:A:1007:C:H6	1.81	0.41
2:B:40:HIS:C	2:B:41:ILE:HD12	2.41	0.41
15:O:70:LEU:C	15:O:72:ARG:H	2.22	0.41
20:T:38:LYS:O	20:T:42:GLN:HB2	2.21	0.41
1:A:50:A:H4'	1:A:51:A:H5'	2.03	0.41
24:Y:26:A:C4	24:Y:27:C:C6	3.09	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1303:C:N4	1:A:1304:G:C6	2.89	0.41
20:T:57:ARG:HD3	20:T:102:GLY:HA2	2.02	0.41
17:Q:59:ILE:HG22	17:Q:71:PHE:CD2	2.56	0.41
10:J:55:LYS:HD3	10:J:55:LYS:H	1.86	0.41
20:T:71:THR:O	20:T:72:LEU:HD23	2.21	0.41
2:B:7:VAL:O	2:B:11:LEU:CB	2.62	0.41
25:Z:15:GLY:HA2	25:Z:79:HIS:CD2	2.55	0.41
19:S:43:GLU:O	19:S:45:VAL:N	2.48	0.41
6:F:11:ASN:CB	6:F:14:LEU:HD23	2.48	0.41
1:A:477:A:O2'	1:A:479:C:H5'	2.20	0.41
2:B:215:LEU:O	2:B:218:ALA:HB3	2.21	0.41
2:B:100:GLY:O	2:B:104:ASN:N	2.50	0.41
22:W:7:A:C5	22:W:49:C:H5	2.38	0.41
1:A:1242:C:O5'	1:A:1242:C:H6	2.04	0.41
2:B:106:LYS:HG3	2:B:106:LYS:H	1.64	0.41
1:A:1521:G:H2'	1:A:1522:U:C6	2.56	0.41
3:C:148:GLY:HA3	3:C:172:ARG:O	2.20	0.41
12:L:54:LYS:N	12:L:54:LYS:HD2	2.35	0.41
2:B:55:PHE:N	2:B:55:PHE:CD1	2.89	0.41
24:Y:4:G:C3'	24:Y:5:G:H5''	2.50	0.41
4:D:29:PRO:O	4:D:30:LYS:CB	2.69	0.41
25:Z:300:ARG:C	25:Z:302:GLN:N	2.73	0.41
25:Z:19:HIS:HB2	25:Z:116:THR:OG1	2.21	0.41
1:A:923:A:C6	1:A:924:C:C4	3.09	0.41
16:P:22:THR:HA	16:P:33:ILE:H	1.86	0.41
9:I:93:ARG:C	9:I:95:LYS:N	2.73	0.41
25:Z:145:GLU:O	25:Z:148:ASP:N	2.53	0.41
1:A:189(F):U:O2	17:Q:63:ARG:NH2	2.54	0.41
25:Z:65:THR:CG2	25:Z:80:VAL:CG1	2.92	0.41
25:Z:197:ASP:HA	25:Z:200:TRP:HB2	2.03	0.41
1:A:1036:G:H3'	1:A:1037:C:H6	1.86	0.41
19:S:61:TYR:O	19:S:66:MET:HE2	2.20	0.41
25:Z:187:LYS:CD	25:Z:187:LYS:N	2.82	0.41
1:A:1250:A:H2'	1:A:1251:A:C8	2.56	0.41
24:Y:52:A:O2'	25:Z:330:ARG:NH1	2.27	0.41
1:A:198:G:O2'	1:A:199:G:P	2.78	0.41
4:D:36:ARG:NH1	4:D:36:ARG:HG2	2.35	0.41
1:A:1354:C:O2'	1:A:1355:G:H5'	2.20	0.41
17:Q:21:VAL:O	17:Q:41:LYS:HA	2.20	0.41
1:A:685:G:O2'	1:A:686:U:H5'	2.21	0.41
25:Z:7:ARG:C	25:Z:8:THR:CG2	2.89	0.41
4:D:11:LEU:HD22	4:D:66:ARG:HD3	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:D:98:GLU:CG	4:D:189:PRO:HG3	2.49	0.41
22:W:26:A:O2'	22:W:27:G:H5'	2.21	0.41
16:P:71:ARG:HG3	16:P:80:PHE:CZ	2.56	0.41
12:L:18:VAL:O	12:L:19:ARG:CB	2.69	0.41
1:A:1032:G:H2'	1:A:1033:G:C8	2.56	0.41
25:Z:210:ILE:O	25:Z:210:ILE:HG23	2.21	0.41
24:Y:44:G:H1'	24:Y:45:U:C6	2.56	0.41
4:D:121:VAL:N	4:D:126:ILE:HD13	2.36	0.41
20:T:13:LEU:O	20:T:15:ARG:N	2.54	0.41
1:A:48:C:H5''	1:A:365:U:O4	2.21	0.41
1:A:426:G:H4'	4:D:41:GLY:O	2.21	0.41
7:G:78:ARG:CG	7:G:79:ARG:N	2.82	0.41
11:K:63:LEU:HD12	11:K:63:LEU:N	2.35	0.41
25:Z:222:LEU:HA	25:Z:304:LEU:O	2.21	0.41
1:A:563:A:H5''	1:A:566:G:N2	2.36	0.41
1:A:668:G:O2'	15:O:46:HIS:CD2	2.73	0.41
22:W:61:C:O2'	22:W:62:C:C6	2.73	0.41
1:A:940:C:O2'	1:A:941:G:H5'	2.21	0.41
13:M:106:ASN:O	13:M:107:ALA:HB3	2.20	0.41
19:S:51:VAL:HB	19:S:75:ALA:HB2	2.01	0.41
1:A:78:G:N2	1:A:91:C:N4	2.69	0.41
4:D:103:ASN:OD1	4:D:114:ARG:NE	2.39	0.41
1:A:1431:C:H2'	1:A:1432:G:H5'	2.02	0.41
1:A:423:G:H2'	1:A:424:G:H5'	2.03	0.41
1:A:966:G:C4	22:V:34:G:H4'	2.56	0.41
1:A:985:C:O2'	1:A:986:A:H5'	2.21	0.41
1:A:622:A:C8	1:A:623:C:C5	3.09	0.41
13:M:25:ILE:HD11	13:M:60:VAL:HG11	2.03	0.41
25:Z:385:ARG:HD3	28:Z:1407:KIR:H452	2.03	0.41
5:E:7:GLU:HB3	5:E:112:LEU:HD22	2.02	0.41
9:I:16:ARG:HG3	9:I:16:ARG:HH11	1.86	0.41
17:Q:59:ILE:HG22	17:Q:71:PHE:HD2	1.86	0.41
1:A:408:A:H4'	4:D:112:VAL:HG11	2.03	0.41
8:H:4:ASP:OD2	8:H:7:ALA:HB2	2.21	0.41
20:T:27:LYS:C	20:T:27:LYS:HD3	2.42	0.41
9:I:65:VAL:O	9:I:65:VAL:HG13	2.21	0.41
1:A:1218:C:H2'	1:A:1219:U:C5	2.53	0.41
4:D:78:LEU:HD23	4:D:78:LEU:HA	1.91	0.41
3:C:95:THR:CG2	3:C:95:THR:O	2.60	0.41
2:B:157:ARG:CB	2:B:157:ARG:HH11	2.33	0.41
1:A:474:G:O2'	1:A:475:G:H5'	2.20	0.41
1:A:1211:U:O4'	1:A:1211:U:O2	2.39	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Z:358:GLY:O	25:Z:360:GLU:N	2.53	0.41
7:G:41:ARG:HG2	7:G:41:ARG:NH1	2.36	0.41
1:A:418:C:H2'	1:A:419:C:H6	1.86	0.41
1:A:1331:G:OP2	13:M:23:TYR:CD2	2.74	0.40
20:T:99:LEU:O	20:T:100:ILE:C	2.58	0.40
4:D:174:LEU:CD2	4:D:185:PHE:HA	2.50	0.40
3:C:106:VAL:O	3:C:106:VAL:CG2	2.70	0.40
1:A:926:G:O2'	23:X:16:A:N3	2.46	0.40
24:Y:47:U:O2'	24:Y:50:G:OP1	2.36	0.40
1:A:731:G:H5'	1:A:766:A:H4'	2.02	0.40
1:A:1251:A:H2'	1:A:1252:A:C8	2.55	0.40
11:K:21:ILE:HD13	11:K:94:ALA:HB3	2.03	0.40
3:C:139:GLN:HE22	3:C:170:GLN:HE22	1.67	0.40
10:J:48:THR:OG1	10:J:62:HIS:CD2	2.72	0.40
1:A:160:A:H2'	1:A:161:A:O4'	2.21	0.40
1:A:398:C:H2'	1:A:399:G:H8	1.87	0.40
1:A:338:A:H2'	1:A:339:C:C6	2.56	0.40
8:H:6:ILE:CD1	8:H:6:ILE:N	2.84	0.40
15:O:39:LEU:O	15:O:42:HIS:HB3	2.21	0.40
8:H:41:ARG:NH1	8:H:123:GLU:OE2	2.53	0.40
15:O:64:ARG:HH11	15:O:64:ARG:HG3	1.85	0.40
3:C:53:ALA:O	3:C:54:ARG:HB2	2.21	0.40
1:A:1304:G:C6	1:A:1305:G:C6	3.09	0.40
22:V:68:C:H2'	22:V:69:G:H5'	2.03	0.40
1:A:58:C:H2'	1:A:58:C:O2	2.21	0.40
1:A:1435:G:H2'	1:A:1436:U:C5	2.52	0.40
2:B:142:LEU:C	2:B:142:LEU:HD23	2.41	0.40
25:Z:166:ASP:O	25:Z:167:GLU:CB	2.69	0.40
12:L:32:PHE:CB	12:L:84:LEU:HD11	2.51	0.40
25:Z:171:ILE:HG13	25:Z:202:LEU:HA	2.02	0.40
6:F:8:ILE:HG23	6:F:85:VAL:HG13	2.02	0.40
12:L:8:ASN:O	12:L:12:ARG:HG3	2.22	0.40
25:Z:14:VAL:HG23	25:Z:79:HIS:CD2	2.56	0.40
15:O:5:LYS:HD2	15:O:5:LYS:HA	1.88	0.40
3:C:94:LEU:HD12	3:C:94:LEU:C	2.41	0.40
1:A:1123:A:H4'	10:J:36:GLY:HA3	2.03	0.40
6:F:11:ASN:O	6:F:14:LEU:HD23	2.21	0.40
1:A:1314:C:H2'	1:A:1315:U:C6	2.57	0.40
19:S:25:LYS:O	19:S:26:GLY:C	2.60	0.40
20:T:36:LEU:HD12	20:T:59:ALA:CB	2.51	0.40
25:Z:229:PHE:O	25:Z:236:THR:HA	2.21	0.40
1:A:1417:G:C6	1:A:1482:G:C6	3.10	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Z:69:GLU:OE1	25:Z:273:HIS:CD2	2.75	0.40
2:B:200:ILE:HG22	2:B:201:ILE:N	2.35	0.40
7:G:54:THR:HG22	7:G:55:GLY:N	2.35	0.40
1:A:858:G:C8	1:A:858:G:C4'	3.05	0.40
2:B:118:LEU:HD13	2:B:142:LEU:HB2	2.02	0.40
3:C:3:ASN:O	3:C:4:LYS:HB2	2.21	0.40
1:A:1316:G:N1	1:A:1319:A:OP2	2.47	0.40
1:A:267:C:P	17:Q:67:LYS:HB2	2.61	0.40
22:W:74:C:O2'	22:W:75:C:H5'	2.21	0.40
10:J:16:LEU:HD23	10:J:94:VAL:HG13	2.04	0.40
1:A:383:A:C2'	1:A:384:G:H5'	2.51	0.40
8:H:111:ILE:C	8:H:112:LEU:HD23	2.41	0.40
3:C:99:VAL:O	3:C:99:VAL:HG23	2.21	0.40
19:S:42:PRO:O	19:S:44:MET:N	2.51	0.40
13:M:89:GLY:C	13:M:91:ARG:N	2.74	0.40
23:X:12:A:C2'	23:X:13:A:O5'	2.69	0.40
4:D:149:ALA:O	4:D:153:ARG:HG3	2.22	0.40
1:A:227:G:H2'	1:A:228:A:O4'	2.21	0.40
2:B:104:ASN:O	2:B:108:ILE:HG12	2.22	0.40
1:A:1211:U:H1'	1:A:1213:A:C2	2.55	0.40
1:A:511:C:HO2'	1:A:512:U:H6	1.65	0.40
1:A:1429:C:H2'	1:A:1430:C:C6	2.56	0.40
1:A:51:A:H4'	1:A:52:G:C5'	2.52	0.40
11:K:91:ARG:HD2	11:K:91:ARG:C	2.41	0.40
4:D:196:LEU:C	4:D:198:VAL:H	2.25	0.40
9:I:52:ALA:HB3	9:I:95:LYS:HZ3	1.86	0.40
25:Z:176:LEU:HB2	27:Z:1406:GDP:C5	2.57	0.40
2:B:8:LYS:C	2:B:10:LEU:N	2.74	0.40
4:D:127:THR:HB	4:D:147:ALA:O	2.21	0.40
15:O:16:ALA:C	15:O:18:PHE:N	2.74	0.40
3:C:36:ASP:OD1	3:C:57:ILE:HG21	2.21	0.40
6:F:22:GLU:C	6:F:24:GLU:N	2.75	0.40
2:B:230:VAL:HG23	2:B:231:GLU:N	2.36	0.40
1:A:125:U:H2'	1:A:126:G:C8	2.56	0.40
1:A:373:A:O2'	1:A:374:A:H5'	2.21	0.40
1:A:1431:C:C2'	1:A:1432:G:H5'	2.52	0.40
1:A:617:G:H1	1:A:623:C:H42	1.69	0.40
2:B:204:ASN:HD22	2:B:204:ASN:C	2.23	0.40
1:A:1148:U:O4'	9:I:16:ARG:HD3	2.20	0.40
25:Z:19:HIS:CD2	25:Z:20:VAL:O	2.62	0.40
22:W:9:A:H2	22:W:45:U:C4	2.35	0.40
24:Y:66:C:H4'	25:Z:375:ILE:HD11	2.04	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:94:ARG:HE	19:S:81:ARG:C	2.25	0.40
11:K:38:ASN:N	11:K:38:ASN:ND2	2.66	0.40
1:A:189(C):C:H2'	1:A:189(D):C:O4'	2.22	0.40
18:R:36:ASN:OD1	18:R:39:VAL:HG23	2.22	0.40
9:I:33:PHE:CE2	9:I:47:LEU:HD21	2.57	0.40
7:G:88:PRO:HB2	7:G:145:ALA:HB1	2.03	0.40
1:A:827:U:C2	1:A:870:U:C4	3.10	0.40
1:A:1245:A:H2'	1:A:1246:C:C6	2.56	0.40
1:A:256:U:H2'	1:A:257:G:C8	2.57	0.40
25:Z:214:VAL:O	25:Z:214:VAL:HG13	2.22	0.40
6:F:40:VAL:O	6:F:40:VAL:HG13	2.22	0.40
2:B:193:ASP:OD1	2:B:193:ASP:O	2.39	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles

### 5.3.1 Protein backbone ⓘ

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	B	232/256 (91%)	161 (69%)	48 (21%)	23 (10%)	1	6
3	C	204/239 (85%)	169 (83%)	22 (11%)	13 (6%)	2	15
4	D	206/209 (99%)	149 (72%)	39 (19%)	18 (9%)	1	9
5	E	148/162 (91%)	136 (92%)	10 (7%)	2 (1%)	16	58
6	F	99/101 (98%)	72 (73%)	18 (18%)	9 (9%)	1	8
7	G	153/156 (98%)	127 (83%)	22 (14%)	4 (3%)	8	41
8	H	136/138 (99%)	123 (90%)	11 (8%)	2 (2%)	15	57
9	I	125/128 (98%)	83 (66%)	34 (27%)	8 (6%)	2	15
10	J	96/105 (91%)	69 (72%)	21 (22%)	6 (6%)	2	16
11	K	117/129 (91%)	98 (84%)	18 (15%)	1 (1%)	25	71
12	L	122/131 (93%)	104 (85%)	10 (8%)	8 (7%)	2	15
13	M	122/126 (97%)	85 (70%)	27 (22%)	10 (8%)	1	10

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	N	58/61 (95%)	42 (72%)	9 (16%)	7 (12%)	1	4
15	O	86/89 (97%)	75 (87%)	9 (10%)	2 (2%)	10	45
16	P	81/88 (92%)	58 (72%)	17 (21%)	6 (7%)	2	11
17	Q	97/105 (92%)	85 (88%)	7 (7%)	5 (5%)	3	21
18	R	68/88 (77%)	55 (81%)	11 (16%)	2 (3%)	7	38
19	S	76/93 (82%)	48 (63%)	15 (20%)	13 (17%)	0	0
20	T	97/106 (92%)	67 (69%)	22 (23%)	8 (8%)	1	10
21	U	22/27 (82%)	17 (77%)	4 (18%)	1 (4%)	4	24
25	Z	381/405 (94%)	263 (69%)	80 (21%)	38 (10%)	1	6
All	All	2726/2942 (93%)	2086 (76%)	454 (17%)	186 (7%)	2	14

All (186) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	B	15	VAL
2	B	18	GLY
2	B	130	ARG
2	B	234	PRO
3	C	12	LEU
3	C	45	LYS
3	C	47	LEU
3	C	146	ALA
4	D	26	CYS
4	D	27	TYR
4	D	30	LYS
4	D	35	ARG
4	D	44	GLY
4	D	125	HIS
5	E	64	ARG
6	F	39	LYS
6	F	44	GLY
6	F	64	GLN
7	G	7	ALA
7	G	8	GLU
8	H	2	LEU
9	I	23	ASN
9	I	41	VAL
9	I	89	ASN
9	I	108	VAL

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Mol	Chain	Res	Type
9	I	118	LYS
10	J	30	SER
10	J	55	LYS
12	L	46	LYS
12	L	127	GLU
13	M	12	ASN
13	M	83	ASP
13	M	117	VAL
14	N	14	PRO
14	N	15	LYS
14	N	59	ALA
15	O	3	ILE
19	S	5	LEU
19	S	6	LYS
19	S	12	ASP
19	S	14	HIS
19	S	26	GLY
19	S	28	LYS
19	S	67	VAL
20	T	48	LYS
20	T	73	HIS
20	T	75	ASN
20	T	99	LEU
25	Z	41	ASN
25	Z	69	GLU
25	Z	130	TYR
25	Z	141	VAL
25	Z	167	GLU
25	Z	196	VAL
25	Z	211	PRO
25	Z	280	GLY
25	Z	329	GLY
2	B	8	LYS
2	B	77	ALA
2	B	110	GLN
2	B	127	ILE
2	B	129	GLU
2	B	230	VAL
2	B	238	LEU
3	C	26	LYS
4	D	3	ARG
4	D	153	ARG

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Mol	Chain	Res	Type
4	D	181	MET
6	F	45	LEU
6	F	62	TRP
9	I	44	VAL
9	I	94	ALA
10	J	27	ALA
10	J	36	GLY
11	K	128	ALA
12	L	39	VAL
13	M	7	VAL
13	M	67	GLU
14	N	16	PHE
14	N	20	ALA
14	N	22	THR
17	Q	13	ASP
17	Q	68	ARG
20	T	95	ALA
25	Z	8	THR
25	Z	35	ALA
25	Z	146	LEU
25	Z	169	PRO
25	Z	300	ARG
25	Z	301	GLY
25	Z	310	ILE
25	Z	374	LEU
25	Z	379	ALA
2	B	9	GLU
2	B	20	GLU
2	B	126	GLU
2	B	128	GLU
2	B	153	ARG
2	B	204	ASN
2	B	232	PRO
3	C	65	ALA
4	D	4	TYR
6	F	54	LYS
6	F	79	LEU
7	G	53	LYS
12	L	62	SER
13	M	112	GLY
13	M	120	LYS
16	P	26	ARG

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Mol	Chain	Res	Type
16	P	47	ASP
16	P	68	ASP
16	P	81	ARG
17	Q	34	LYS
17	Q	49	GLU
18	R	41	LYS
19	S	29	ARG
19	S	46	GLY
21	U	3	LYS
25	Z	23	GLY
25	Z	65	THR
25	Z	85	HIS
25	Z	191	GLY
25	Z	285	ASN
25	Z	326	GLU
2	B	165	VAL
3	C	93	LYS
3	C	96	GLY
4	D	102	ASP
8	H	83	ILE
12	L	25	PRO
16	P	49	LEU
18	R	31	LEU
19	S	9	VAL
19	S	35	SER
20	T	93	GLU
25	Z	72	THR
25	Z	128	VAL
25	Z	186	PRO
25	Z	190	ARG
25	Z	330	ARG
3	C	15	THR
3	C	61	ALA
3	C	144	SER
3	C	156	ARG
4	D	13	ARG
4	D	28	SER
4	D	155	LEU
4	D	159	ARG
5	E	8	GLU
6	F	28	ARG
6	F	40	VAL

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Mol	Chain	Res	Type
13	M	124	PRO
14	N	60	SER
17	Q	64	PRO
19	S	80	TYR
20	T	70	SER
25	Z	68	VAL
25	Z	79	HIS
2	B	131	PRO
4	D	5	ILE
7	G	59	LEU
9	I	11	LYS
10	J	91	PRO
12	L	26	ALA
16	P	46	PRO
20	T	14	LYS
25	Z	126	VAL
25	Z	276	THR
3	C	66	VAL
13	M	10	PRO
19	S	45	VAL
25	Z	93	ILE
25	Z	359	VAL
2	B	26	PRO
4	D	172	PRO
25	Z	355	LEU
25	Z	356	PRO
4	D	37	PRO
10	J	39	PRO
12	L	18	VAL
13	M	38	GLY
2	B	229	VAL
12	L	74	GLY
15	O	87	ILE
25	Z	34	VAL
2	B	228	GLY

### 5.3.2 Protein sidechains ⓘ

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	B	202/220 (92%)	181 (90%)	21 (10%)	10	36
3	C	160/188 (85%)	141 (88%)	19 (12%)	8	27
4	D	180/181 (99%)	162 (90%)	18 (10%)	11	38
5	E	115/123 (94%)	102 (89%)	13 (11%)	9	32
6	F	90/90 (100%)	80 (89%)	10 (11%)	9	33
7	G	126/127 (99%)	118 (94%)	8 (6%)	25	66
8	H	119/119 (100%)	107 (90%)	12 (10%)	11	38
9	I	98/99 (99%)	90 (92%)	8 (8%)	17	53
10	J	88/92 (96%)	77 (88%)	11 (12%)	7	25
11	K	90/99 (91%)	80 (89%)	10 (11%)	9	33
12	L	104/108 (96%)	92 (88%)	12 (12%)	8	31
13	M	99/101 (98%)	88 (89%)	11 (11%)	9	33
14	N	49/50 (98%)	42 (86%)	7 (14%)	5	19
15	O	79/80 (99%)	70 (89%)	9 (11%)	8	31
16	P	72/74 (97%)	64 (89%)	8 (11%)	9	33
17	Q	94/97 (97%)	88 (94%)	6 (6%)	25	65
18	R	61/77 (79%)	51 (84%)	10 (16%)	3	12
19	S	69/80 (86%)	56 (81%)	13 (19%)	2	9
20	T	76/82 (93%)	68 (90%)	8 (10%)	10	35
21	U	19/22 (86%)	18 (95%)	1 (5%)	32	72
25	Z	322/338 (95%)	279 (87%)	43 (13%)	6	22
All	All	2312/2447 (94%)	2054 (89%)	258 (11%)	9	33

All (258) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	B	15	VAL
2	B	16	HIS
2	B	17	PHE
2	B	24	TRP
2	B	32	ILE
2	B	36	ARG
2	B	42	ILE
2	B	51	LEU
2	B	67	THR
2	B	74	LYS

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Mol	Chain	Res	Type
2	B	93	VAL
2	B	140	HIS
2	B	144	ARG
2	B	156	LYS
2	B	170	GLU
2	B	178	ARG
2	B	187	LEU
2	B	200	ILE
2	B	204	ASN
2	B	208	ILE
2	B	234	PRO
3	C	3	ASN
3	C	5	ILE
3	C	14	ILE
3	C	16	ARG
3	C	20	SER
3	C	21	ARG
3	C	26	LYS
3	C	46	GLU
3	C	52	LEU
3	C	79	ARG
3	C	105	GLU
3	C	107	GLN
3	C	119	ARG
3	C	120	VAL
3	C	135	LYS
3	C	138	VAL
3	C	167	TRP
3	C	178	LEU
3	C	188	LEU
4	D	3	ARG
4	D	10	ARG
4	D	15	GLU
4	D	24	GLU
4	D	27	TYR
4	D	33	MET
4	D	36	ARG
4	D	49	ARG
4	D	59	ARG
4	D	62	GLN
4	D	86	LYS
4	D	100	ARG

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Mol	Chain	Res	Type
4	D	127	THR
4	D	131	ARG
4	D	132	ARG
4	D	135	LEU
4	D	162	LEU
4	D	209	ARG
5	E	6	PHE
5	E	10	MET
5	E	12	LEU
5	E	16	THR
5	E	18	ARG
5	E	20	GLN
5	E	38	GLN
5	E	41	VAL
5	E	68	GLU
5	E	73	ASN
5	E	79	GLU
5	E	125	SER
5	E	147	ASP
6	F	14	LEU
6	F	25	ILE
6	F	27	GLN
6	F	31	GLU
6	F	32	ASN
6	F	47	ARG
6	F	57	GLN
6	F	83	ASP
6	F	86	ARG
6	F	98	LEU
7	G	24	THR
7	G	51	GLN
7	G	91	VAL
7	G	104	LEU
7	G	113	GLU
7	G	114	ARG
7	G	137	LYS
7	G	151	TYR
8	H	1	MET
8	H	18	ARG
8	H	52	ASP
8	H	54	ASP
8	H	56	LYS

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Mol	Chain	Res	Type
8	H	91	ARG
8	H	102	ARG
8	H	109	ILE
8	H	112	LEU
8	H	115	SER
8	H	119	LEU
8	H	127	LEU
9	I	4	TYR
9	I	10	ARG
9	I	44	VAL
9	I	47	LEU
9	I	75	ASP
9	I	95	LYS
9	I	112	LYS
9	I	128	ARG
10	J	9	ARG
10	J	22	LYS
10	J	40	LEU
10	J	49	VAL
10	J	55	LYS
10	J	67	THR
10	J	73	ASP
10	J	78	ASN
10	J	81	THR
10	J	96	ILE
10	J	97	GLU
11	K	27	ASN
11	K	29	ILE
11	K	30	VAL
11	K	38	ASN
11	K	47	VAL
11	K	57	THR
11	K	84	VAL
11	K	104	GLN
11	K	106	LYS
11	K	116	HIS
12	L	20	LYS
12	L	33	ARG
12	L	41	ARG
12	L	53	ARG
12	L	55	VAL
12	L	60	LEU

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Mol	Chain	Res	Type
12	L	83	VAL
12	L	85	ILE
12	L	89	ARG
12	L	102	ARG
12	L	106	ASP
12	L	118	SER
13	M	64	TRP
13	M	65	LYS
13	M	69	GLU
13	M	70	LEU
13	M	71	ARG
13	M	82	MET
13	M	93	ARG
13	M	101	GLN
13	M	108	ARG
13	M	115	LYS
13	M	120	LYS
14	N	13	THR
14	N	14	PRO
14	N	18	VAL
14	N	21	TYR
14	N	22	THR
14	N	29	ARG
14	N	41	ARG
15	O	10	LYS
15	O	13	GLN
15	O	25	THR
15	O	38	ARG
15	O	39	LEU
15	O	41	GLU
15	O	66	LEU
15	O	82	ILE
15	O	88	ARG
16	P	1	MET
16	P	21	VAL
16	P	23	ASP
16	P	25	ARG
16	P	43	LYS
16	P	45	THR
16	P	62	VAL
16	P	69	THR
17	Q	26	GLN

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Mol	Chain	Res	Type
17	Q	38	ARG
17	Q	49	GLU
17	Q	52	LYS
17	Q	70	ARG
17	Q	74	LEU
18	R	29	PHE
18	R	36	ASN
18	R	37	VAL
18	R	38	GLU
18	R	44	LEU
18	R	46	GLU
18	R	47	THR
18	R	54	ARG
18	R	59	SER
18	R	76	LEU
19	S	6	LYS
19	S	7	LYS
19	S	10	PHE
19	S	13	ASP
19	S	15	LEU
19	S	16	LEU
19	S	29	ARG
19	S	37	ARG
19	S	41	VAL
19	S	49	ILE
19	S	63	THR
19	S	65	ASN
19	S	66	MET
20	T	23	ARG
20	T	26	ASN
20	T	36	LEU
20	T	45	GLN
20	T	64	ASP
20	T	74	LYS
20	T	75	ASN
20	T	100	ILE
21	U	22	ARG
25	Z	5	PHE
25	Z	7	ARG
25	Z	8	THR
25	Z	9	LYS
25	Z	27	LEU

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Mol	Chain	Res	Type
25	Z	38	GLU
25	Z	63	ILE
25	Z	64	ASN
25	Z	82	CYS
25	Z	85	HIS
25	Z	88	TYR
25	Z	93	ILE
25	Z	114	PRO
25	Z	121	LEU
25	Z	130	TYR
25	Z	135	MET
25	Z	160	GLN
25	Z	163	PHE
25	Z	166	ASP
25	Z	167	GLU
25	Z	185	ASN
25	Z	189	ARG
25	Z	194	GLU
25	Z	196	VAL
25	Z	206	ILE
25	Z	218	ASP
25	Z	230	THR
25	Z	272	MET
25	Z	274	ARG
25	Z	275	LYS
25	Z	277	LEU
25	Z	284	ASP
25	Z	285	ASN
25	Z	291	ARG
25	Z	295	ARG
25	Z	324	LYS
25	Z	325	LYS
25	Z	326	GLU
25	Z	334	PHE
25	Z	335	PHE
25	Z	336	SER
25	Z	345	ARG
25	Z	347	THR

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (77) such sidechains are listed below:

Mol	Chain	Res	Type
2	B	40	HIS
2	B	45	GLN
2	B	76	GLN
2	B	78	GLN
2	B	94	ASN
2	B	95	GLN
2	B	204	ASN
3	C	6	HIS
3	C	28	GLN
3	C	31	HIS
3	C	118	GLN
3	C	123	GLN
3	C	139	GLN
4	D	62	GLN
4	D	74	GLN
4	D	77	ASN
4	D	129	ASN
4	D	161	ASN
5	E	20	GLN
5	E	73	ASN
6	F	27	GLN
6	F	32	ASN
6	F	64	GLN
6	F	73	ASN
6	F	84	ASN
6	F	94	GLN
6	F	100	ASN
7	G	13	GLN
7	G	37	ASN
7	G	86	GLN
8	H	82	HIS
9	I	31	GLN
9	I	124	GLN
10	J	13	HIS
10	J	56	HIS
10	J	62	HIS
10	J	68	HIS
10	J	78	ASN
11	K	27	ASN
11	K	38	ASN
11	K	93	GLN
11	K	117	ASN
12	L	8	ASN

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Mol	Chain	Res	Type
12	L	9	GLN
12	L	49	ASN
12	L	75	HIS
13	M	12	ASN
13	M	40	ASN
13	M	77	ASN
13	M	101	GLN
14	N	49	HIS
15	O	37	ASN
15	O	46	HIS
15	O	62	GLN
16	P	76	GLN
17	Q	16	GLN
18	R	63	GLN
19	S	14	HIS
19	S	47	HIS
20	T	9	ASN
20	T	18	GLN
20	T	26	ASN
20	T	42	GLN
20	T	45	GLN
20	T	75	ASN
25	Z	19	HIS
25	Z	64	ASN
25	Z	67	HIS
25	Z	98	GLN
25	Z	115	GLN
25	Z	125	GLN
25	Z	185	ASN
25	Z	193	ASN
25	Z	273	HIS
25	Z	285	ASN
25	Z	341	GLN
25	Z	367	ASN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1509/1522 (99%)	227 (15%)	43 (2%)
22	V	75/76 (98%)	22 (29%)	1 (1%)
22	W	75/76 (98%)	21 (28%)	2 (2%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
23	X	16/27 (59%)	6 (37%)	1 (6%)
24	Y	74/77 (96%)	25 (33%)	3 (4%)
All	All	1749/1778 (98%)	301 (17%)	50 (2%)

All (301) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	7	G
1	A	9	G
1	A	31	G
1	A	32	A
1	A	39	G
1	A	47	C
1	A	48	C
1	A	51	A
1	A	55	A
1	A	58	C
1	A	60	A
1	A	61	G
1	A	63	C
1	A	65	U
1	A	79	G
1	A	80	G
1	A	81	U
1	A	84	U
1	A	89	C
1	A	90	U
1	A	101	A
1	A	116	A
1	A	120	A
1	A	121	C
1	A	131	C
1	A	144	G
1	A	146	G
1	A	147	G
1	A	151	A
1	A	172	A
1	A	173	U
1	A	182	U
1	A	189(I)	G
1	A	195	A
1	A	197	A

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Mol	Chain	Res	Type
1	A	198	G
1	A	199	G
1	A	202	U
1	A	203	U
1	A	204	U
1	A	216	G
1	A	244	U
1	A	246	A
1	A	247	G
1	A	251	G
1	A	267	C
1	A	275	G
1	A	289	G
1	A	328	C
1	A	332	G
1	A	345	C
1	A	346	G
1	A	347	G
1	A	348	G
1	A	352	C
1	A	353	A
1	A	354	G
1	A	367	U
1	A	369	C
1	A	372	C
1	A	373	A
1	A	397	A
1	A	412	A
1	A	413	G
1	A	414	A
1	A	422	C
1	A	429	U
1	A	430	A
1	A	439	A
1	A	452	A
1	A	454	C
1	A	471	G
1	A	484	G
1	A	485	G
1	A	496	A
1	A	499	A
1	A	508	C

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Mol	Chain	Res	Type
1	A	509	A
1	A	511	C
1	A	518	C
1	A	527	G
1	A	531	U
1	A	532	A
1	A	534	U
1	A	548	G
1	A	559	A
1	A	561	U
1	A	562	C
1	A	572	A
1	A	573	A
1	A	576	G
1	A	577	G
1	A	588	G
1	A	632	A
1	A	653	A
1	A	665	A
1	A	688	G
1	A	701	C
1	A	702	A
1	A	721	G
1	A	722	A
1	A	723	U
1	A	731	G
1	A	734	G
1	A	748	C
1	A	749	C
1	A	755	G
1	A	777	A
1	A	787	A
1	A	793	U
1	A	794	A
1	A	816	A
1	A	817	C
1	A	828	A
1	A	839	U
1	A	840	C
1	A	841	U
1	A	848	C
1	A	859	A

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Mol	Chain	Res	Type
1	A	914	A
1	A	926	G
1	A	927	G
1	A	934	C
1	A	935	A
1	A	960	U
1	A	961	U
1	A	962	C
1	A	968	A
1	A	969	A
1	A	971	G
1	A	974	A
1	A	976	G
1	A	977	A
1	A	978	A
1	A	980	C
1	A	981	U
1	A	982	U
1	A	983	A
1	A	991	U
1	A	992	U
1	A	993	G
1	A	996	A
1	A	1004	A
1	A	1026	G
1	A	1030	C
1	A	1050	G
1	A	1094	G
1	A	1095	U
1	A	1101	A
1	A	1102	A
1	A	1117	G
1	A	1124	G
1	A	1125	U
1	A	1129	C
1	A	1130	A
1	A	1131	G
1	A	1136	U
1	A	1137	C
1	A	1138	G
1	A	1139	G
1	A	1140	C

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Mol	Chain	Res	Type
1	A	1141	C
1	A	1146	A
1	A	1152	A
1	A	1154	G
1	A	1158	C
1	A	1159	U
1	A	1171	G
1	A	1182	G
1	A	1184	G
1	A	1187	G
1	A	1196	U
1	A	1197	G
1	A	1200	C
1	A	1201	A
1	A	1212	U
1	A	1238	A
1	A	1240	U
1	A	1256	A
1	A	1257	U
1	A	1272	G
1	A	1280	A
1	A	1281	U
1	A	1284	C
1	A	1285	A
1	A	1286	A
1	A	1287	A
1	A	1299	A
1	A	1300	G
1	A	1302	U
1	A	1320	C
1	A	1321	C
1	A	1322	C
1	A	1323	G
1	A	1331	G
1	A	1335	C
1	A	1336	C
1	A	1346	A
1	A	1347	G
1	A	1353	G
1	A	1363	C
1	A	1363(A)	A
1	A	1364	U

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Mol	Chain	Res	Type
1	A	1370	G
1	A	1397	C
1	A	1398	A
1	A	1400	C
1	A	1419	G
1	A	1439	C
1	A	1442(A)	G
1	A	1442(B)	A
1	A	1447	A
1	A	1452	C
1	A	1456	G
1	A	1470	G
1	A	1492	A
1	A	1494	G
1	A	1499	A
1	A	1503	A
1	A	1506	U
1	A	1517	G
1	A	1519	A
1	A	1520	G
1	A	1529	G
1	A	1530	G
1	A	1533	C
1	A	1537	U
22	V	2	C
22	V	5	G
22	V	7	A
22	V	8	U
22	V	16	U
22	V	17	C
22	V	18	G
22	V	20	U
22	V	21	A
22	V	42	C
22	V	44	G
22	V	45	U
22	V	46	G
22	V	47	U
22	V	48	C
22	V	60	U
22	V	61	C
22	V	62	C

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Mol	Chain	Res	Type
22	V	63	G
22	V	68	C
22	V	74	C
22	V	76	A
22	W	4	C
22	W	8	U
22	W	9	A
22	W	16	U
22	W	17	C
22	W	18	G
22	W	19	G
22	W	21	A
22	W	39	U
22	W	44	G
22	W	45	U
22	W	47	U
22	W	48	C
22	W	50	U
22	W	56	C
22	W	57	G
22	W	59	U
22	W	61	C
22	W	62	C
22	W	73	A
22	W	74	C
23	X	12	A
23	X	13	A
23	X	16	A
23	X	17	U
23	X	22	U
23	X	27	A
24	Y	3	G
24	Y	5	G
24	Y	8	4SU
24	Y	9	A
24	Y	12	U
24	Y	13	C
24	Y	16	H2U
24	Y	17	H2U
24	Y	18	G
24	Y	19	G
24	Y	20	H2U

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Mol	Chain	Res	Type
24	Y	21	A
24	Y	25	C
24	Y	26	A
24	Y	41	C
24	Y	44	G
24	Y	45	U
24	Y	46	7MG
24	Y	47	U
24	Y	48	U
24	Y	56	C
24	Y	59	G
24	Y	62	U
24	Y	71	C
24	Y	73	G

All (50) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	30	U
1	A	60	A
1	A	79	G
1	A	115	G
1	A	119	A
1	A	197	A
1	A	202	U
1	A	243	A
1	A	250	A
1	A	266	G
1	A	274	A
1	A	344	A
1	A	351	G
1	A	353	A
1	A	428	G
1	A	429	U
1	A	484	G
1	A	495	A
1	A	508	C
1	A	534	U
1	A	547	A
1	A	560	U
1	A	575	G
1	A	576	G

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Mol	Chain	Res	Type
1	A	687	A
1	A	748	C
1	A	792	A
1	A	982	U
1	A	992	U
1	A	1049	U
1	A	1101	A
1	A	1117	G
1	A	1145	C
1	A	1157	A
1	A	1200	C
1	A	1239	A
1	A	1280	A
1	A	1285	A
1	A	1286	A
1	A	1363(A)	A
1	A	1399	C
1	A	1442(A)	G
1	A	1498	U
22	V	59	U
22	W	7	A
22	W	44	G
23	X	21	C
24	Y	16	H2U
24	Y	17	H2U
24	Y	20	H2U

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

9 non-standard protein/DNA/RNA residues are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z  > 2$	Counts	RMSZ	$\# Z  > 2$
24	H2U	Y	16	24	19,21,22	1.19	3 (15%)	27,30,33	1.76	4 (14%)
24	H2U	Y	17	24	19,21,22	1.19	3 (15%)	27,30,33	1.80	5 (18%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
24	H2U	Y	20	24	19,21,22	0.95	1 (5%)	27,30,33	1.79	4 (14%)
24	OMC	Y	32	-	20,22,23	1.27	2 (10%)	25,31,34	0.96	2 (8%)
24	MIA	Y	37	24	29,31,32	0.99	2 (6%)	41,44,47	1.57	6 (14%)
24	7MG	Y	46	24	24,26,27	2.50	3 (12%)	34,39,42	1.99	6 (17%)
24	5MU	Y	54	24	20,22,23	0.89	1 (5%)	25,32,35	1.41	2 (8%)
24	PSU	Y	55	24	19,21,22	1.98	1 (5%)	23,30,33	1.20	4 (17%)
24	4SU	Y	8	24	19,21,22	1.24	3 (15%)	23,30,33	24.53	1 (4%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	H2U	Y	16	24	-	0/8/38/39	0/2/2/2
24	H2U	Y	17	24	-	1/8/38/39	0/2/2/2
24	H2U	Y	20	24	-	0/8/38/39	0/2/2/2
24	OMC	Y	32	-	-	0/8/27/28	0/2/2/2
24	MIA	Y	37	24	-	0/16/33/34	0/1/3/3
24	7MG	Y	46	24	-	0/8/37/38	0/1/3/3
24	5MU	Y	54	24	-	0/6/25/26	0/2/2/2
24	PSU	Y	55	24	-	0/8/25/26	0/2/2/2
24	4SU	Y	8	24	-	0/6/25/26	0/2/2/2

All (19) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	Y	46	7MG	C8-N9	-10.13	1.38	1.46
24	Y	55	PSU	C6-N1	8.14	1.39	1.32
24	Y	46	7MG	C8-N7	-5.21	1.30	1.45
24	Y	32	OMC	C2-N1	3.74	1.42	1.38
24	Y	32	OMC	P-OP1	3.28	1.50	1.46
24	Y	46	7MG	P-OP1	3.09	1.50	1.46
24	Y	8	4SU	C5-C4	2.76	1.42	1.38
24	Y	16	H2U	C1'-N1	2.74	1.50	1.45
24	Y	8	4SU	P-OP1	2.62	1.49	1.46
24	Y	17	H2U	P-OP1	2.48	1.49	1.46
24	Y	17	H2U	C1'-N1	2.43	1.50	1.45
24	Y	20	H2U	P-OP1	2.25	1.49	1.46
24	Y	16	H2U	C6-N1	2.23	1.50	1.47
24	Y	17	H2U	C6-N1	2.19	1.50	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	Y	37	MIA	C6-C5	-2.19	1.39	1.44
24	Y	37	MIA	P-OP1	2.17	1.49	1.46
24	Y	8	4SU	C4-S4	2.15	1.71	1.67
24	Y	54	5MU	C6-C5	-2.10	1.34	1.40
24	Y	16	H2U	P-OP1	2.06	1.49	1.46

All (34) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	Y	8	4SU	C4-N3-C2	117.61	126.63	121.60
24	Y	46	7MG	N7-C8-N9	7.61	113.14	103.08
24	Y	37	MIA	C11-S10-C2	5.36	106.13	102.26
24	Y	20	H2U	C4-N3-C2	-5.06	121.45	125.83
24	Y	54	5MU	C6-N1-C2	-4.99	120.99	122.41
24	Y	17	H2U	C4-N3-C2	-4.58	121.86	125.83
24	Y	16	H2U	N3-C2-N1	4.55	121.17	116.71
24	Y	37	MIA	C12-C13-C14	4.48	129.19	114.44
24	Y	17	H2U	N3-C2-N1	4.48	121.10	116.71
24	Y	16	H2U	C4-N3-C2	-4.42	122.00	125.83
24	Y	16	H2U	C5-C4-N3	4.37	120.87	116.76
24	Y	20	H2U	C5-C4-N3	4.16	120.67	116.76
24	Y	17	H2U	C5-C4-N3	4.07	120.59	116.76
24	Y	20	H2U	N3-C2-N1	3.90	120.53	116.71
24	Y	46	7MG	C2-N3-C4	-3.89	112.08	117.61
24	Y	46	7MG	C4-C5-N7	3.40	110.73	106.82
24	Y	46	7MG	C6-N1-C2	3.27	125.24	119.51
24	Y	46	7MG	CM7-N7-C8	3.13	127.00	119.23
24	Y	37	MIA	C2-N3-C4	-3.12	110.72	115.24
24	Y	32	OMC	C2-N3-C4	3.09	120.05	115.57
24	Y	37	MIA	C12-N6-C6	2.79	126.90	123.25
24	Y	55	PSU	O3'-C3'-C2'	2.79	120.91	111.83
24	Y	37	MIA	C5-C6-N1	-2.71	117.49	120.45
24	Y	17	H2U	O3'-C3'-C2'	2.60	120.29	111.83
24	Y	55	PSU	O3'-C3'-C4'	2.55	118.61	111.08
24	Y	54	5MU	C5-C6-N1	2.45	123.97	121.59
24	Y	32	OMC	CM2-O2'-C2'	-2.38	108.12	114.56
24	Y	55	PSU	C5-C1'-C2'	-2.37	111.43	115.61
24	Y	37	MIA	C2-N1-C6	2.29	119.28	115.55
24	Y	17	H2U	O2-C2-N1	-2.23	120.30	123.25
24	Y	16	H2U	O2-C2-N1	-2.18	120.36	123.25
24	Y	46	7MG	C8-N7-C5	-2.18	104.38	108.81
24	Y	55	PSU	C4-N3-C2	-2.13	121.05	125.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	Y	20	H2U	O2-C2-N1	-2.09	120.49	123.25

There are no chirality outliers.

All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
24	Y	17	H2U	P-O5'-C5'-C4'

There are no ring outliers.

## 5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 5.6 Ligand geometry ⓘ

Of 6 ligands modelled in this entry, 4 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z  > 2$	Counts	RMSZ	$\# Z  > 2$
27	GDP	Z	1406	-	30,30,30	1.29	3 (10%)	44,47,47	2.05	8 (18%)
28	KIR	Z	1407	-	59,59,59	3.57	24 (40%)	82,84,84	1.76	19 (23%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
27	GDP	Z	1406	-	-	0/16/32/32	0/1/3/3
28	KIR	Z	1407	-	-	0/53/98/98	0/3/3/3

All (27) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
28	Z	1407	KIR	O18-C17	-13.17	1.23	1.44
28	Z	1407	KIR	O30-C30	-11.70	1.17	1.42
28	Z	1407	KIR	O34-C33	-10.94	1.29	1.44
28	Z	1407	KIR	C45-C28	5.66	1.61	1.54
28	Z	1407	KIR	C22-C21	5.19	1.38	1.34
28	Z	1407	KIR	C19-C20	5.00	1.62	1.53
28	Z	1407	KIR	C19-C17	4.64	1.64	1.54
28	Z	1407	KIR	C27-N26	4.38	1.43	1.33
28	Z	1407	KIR	C37-C38	4.19	1.39	1.32
28	Z	1407	KIR	C42-C19	3.79	1.61	1.53
28	Z	1407	KIR	O29-C29	3.62	1.48	1.40
28	Z	1407	KIR	C5-C4	3.56	1.46	1.39
28	Z	1407	KIR	C3-C4	3.54	1.48	1.41
28	Z	1407	KIR	C32-C33	3.34	1.59	1.54
28	Z	1407	KIR	C8-C7	3.34	1.56	1.47
28	Z	1407	KIR	C32-C31	3.32	1.61	1.55
27	Z	1406	GDP	C6-N1	3.24	1.42	1.37
28	Z	1407	KIR	O34-C29	3.00	1.49	1.43
28	Z	1407	KIR	C6-N1	2.93	1.39	1.33
28	Z	1407	KIR	C29-C28	2.86	1.62	1.55
28	Z	1407	KIR	C9-C8	2.65	1.41	1.34
28	Z	1407	KIR	C29-C30	2.61	1.58	1.54
28	Z	1407	KIR	C20-C21	2.52	1.55	1.51
27	Z	1406	GDP	C6-C5	-2.38	1.37	1.41
28	Z	1407	KIR	C16-C17	2.31	1.58	1.53
28	Z	1407	KIR	C44-C21	2.25	1.55	1.50
27	Z	1406	GDP	C8-N7	-2.02	1.30	1.34

All (27) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	Z	1406	GDP	C6-C5-N7	-9.83	132.82	134.14
28	Z	1407	KIR	C45-C28-C27	6.20	112.62	108.10
28	Z	1407	KIR	O29-C29-O34	-5.25	101.68	110.22
28	Z	1407	KIR	C3-C2-N1	4.54	119.23	115.40
27	Z	1406	GDP	PA-O3A-PB	-4.04	119.82	131.68
28	Z	1407	KIR	O34-C33-C32	4.03	115.69	112.04
27	Z	1406	GDP	O4'-C1'-N9	3.65	111.84	108.44
28	Z	1407	KIR	C48-C32-C47	-3.40	101.95	107.70
28	Z	1407	KIR	C3-C7-C8	3.32	125.77	120.15
28	Z	1407	KIR	C11-C10-C9	-3.20	116.28	123.36
27	Z	1406	GDP	C2-N3-C4	3.10	119.45	115.09

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	Z	1407	KIR	O34-C29-C28	3.09	113.03	104.50
28	Z	1407	KIR	O20-C20-C21	-2.78	107.05	111.07
27	Z	1406	GDP	C5-C4-N3	-2.73	121.98	125.94
27	Z	1406	GDP	C4-C5-N7	-2.72	107.19	109.52
28	Z	1407	KIR	C44-C21-C20	2.68	120.15	115.58
28	Z	1407	KIR	C23-C22-C21	-2.46	124.48	127.61
27	Z	1406	GDP	N3-C4-N9	2.42	130.46	126.91
28	Z	1407	KIR	O18-C17-C16	2.42	109.26	104.12
28	Z	1407	KIR	C22-C23-C24	-2.36	119.22	124.26
28	Z	1407	KIR	C29-C30-C31	-2.31	107.59	110.65
28	Z	1407	KIR	C48-C32-C31	2.25	113.05	109.11
27	Z	1406	GDP	O4'-C1'-C2'	-2.21	103.38	106.77
28	Z	1407	KIR	O7-C7-C3	-2.18	115.10	121.02
28	Z	1407	KIR	O30-C30-C29	2.12	111.72	108.50
28	Z	1407	KIR	O4-C4-C3	-2.06	119.65	121.72
28	Z	1407	KIR	C29-O34-C33	2.01	119.45	115.13

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

## 5.7 Other polymers ⓘ

There are no such residues in this entry.

## 5.8 Polymer linkage issues

There are no chain breaks in this entry.

## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

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

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

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

### 6.3 Carbohydrates ⓘ

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

### 6.4 Ligands ⓘ

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

### 6.5 Other polymers ⓘ

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